CONTRACT BETWEEN THE CITY OF AUSTIN ("City")
AND
Industrial Asphalt, LLC ("Contractor")
for
Asphaltic Concrete
MA 6200 GA190000012

The City accepts the Contractor's Offer (as referenced in Section 1.1.3 below) for the above requirement and enters into the following Contract.

This Contract is between Industrial Asphalt, LLC having offices at 9020 N Capital of TX HWY Bldg 2, Ste 250, Austin, TX 78759 and the City, a home-rule municipality incorporated by the State of Texas, and is effective as of the date executed by the City ("Effective Date").

Capitalized terms used but not defined herein have the meanings given them in Solicitation Number IFB 2200 MDP0261.

1.1 **This Contract is composed of the following documents:**

1.1.1 This Contract

1.1.2 The City's Solicitation, Invitation for Bid (IFB), 2200 MDP0261 including all documents incorporated by reference

1.1.3 Industrial Asphalt, LLC's Offer, dated July 5, 2018, including subsequent clarifications

1.2 **Order of Precedence**. Any inconsistency or conflict in the Contract documents shall be resolved by giving precedence in the following order:

1.2.1 This Contract

1.2.2 The City's Solicitation as referenced in Section 1.1.2, including all documents incorporated by reference

1.2.3 The Contractor's Offer as referenced in Section 1.1.3, including subsequent clarifications.

1.3 **Term of Contract.**

1.3.1 **Term of Contract**. The Contract shall commence upon execution, unless otherwise specified, and shall remain in effect for a term of sixty (60) months.

1.3.1.1 Upon expiration of the term or any period of extension, the Contractor agrees to hold over under the terms and conditions of this Contract for such a period of time as is reasonably necessary for the City to re-solicit and/or complete the deliverables due under the Contract (not to exceed 120 calendar days unless mutually agreed to in writing).

1.3.1.2 This is a sixty (60) month Contract. Prices are firm for the first twelve (12) months.

1.4 **Compensation.** The Contractors shall be paid a total Not-to-Exceed amount of $40,000,000 for the Contract term, divided between the Contractors. Payment shall be made upon successful completion of services or delivery of goods as outlined in each individual Delivery Order.

1.5 **Quantity of Work.** There is no guaranteed quantity of work for the period of the Contract and there are no minimum order quantities. Work will be on an as needed basis as specified by the City for each Delivery Order

This Contract (including any Exhibits) constitutes the entire agreement of the parties regarding the subject matter of this Contract and supersedes all prior and contemporaneous agreements and understandings, whether written or oral, relating to such subject matter. This Contract may be altered, amended, or modified only by a written instrument signed by the duly authorized representatives of both parties.

In witness whereof, the parties have caused a duly authorized representative to execute this Contract on the date set forth below.

Industrial Asphalt, LLC	**City of Austin**
Robert Sutton	Erin D'Vincent
Printed Name of Authorized Person	Printed Name of Authorized Person
Signature	Signature
Sales Manager	Procurement Supervisor
Title:	Title:
11/28/2018	12·5·18
Date:	Date:

CITY OF AUSTIN, TEXAS

Purchasing Office

INVITATION FOR BID (IFB)

OFFER SHEET

SOLICITATION NO: IFB 2200 MDP0261

DATE ISSUED: June 11, 2018

REQUISITION NO.: 18010900189

COMMODITY CODE: 7451413, 96239

FOR CONTRACTUAL AND TECHNICAL ISSUES CONTACT THE FOLLOWING AUTHORIZED CONTACT PERSON:

Michelle Pearson
Procurement Specialist II
Phone: (512) 974-2023

E-Mail: michelle.pearson@austintexas.gov

COMMODITY/SERVICE DESCRIPTION: Hotmix Asphaltic Concrete

PRE-BID CONFERENCE TIME AND DATE: June 18, 2018 @ 1:00 PM Central time

LOCATION: 124 W. 8th St., Ste. 310, Austin, TX 78701

BID DUE PRIOR TO: July 10, 2018 @ 2:00 PM Central time

BID OPENING TIME AND DATE: July 10, 2018 @ 3:00 PM Central time

COMPLIANCE PLAN DUE PRIOR TO: July 10, 2018 @ 2:00 PM Central time

LOCATION: MUNICIPAL BUILDING, 124 W 8th STREET RM 308, AUSTIN, TEXAS 78701

LIVE BID OPENING ONLINE:

For information on how to attend the Bid Opening online, please select this link:

http://www.austintexas.gov/department/bid-opening-webinars

When submitting a sealed Offer and/or Compliance Plan, use the proper address for the type of service desired, as shown below:

Address for US Mail (Only)	Address for FedEx, UPS, Hand Delivery or Courier Service
City of Austin	City of Austin, Municipal Building
Purchasing Office-Response Enclosed for Solicitation # IFB 2200 MDP0261	Purchasing Office-Response Enclosed for Solicitation # IFB 2200 MDP0261
P.O. Box 1088	124 W 8th Street, Rm 308
Austin, Texas 78767-8845	Austin, Texas 78701
	Reception Phone: (512) 974-2500

NOTE: Offers must be received and time stamped in the Purchasing Office prior to the Due Date and Time. It is the responsibility of the Offeror to ensure that their Offer arrives at the receptionist's desk in the Purchasing Office prior to the time and date indicated. Arrival at the City's mailroom, mail terminal, or post office box will not constitute the Offer arriving on time. See Section 0200 for additional solicitation instructions.

All Offers (including Compliance Plans) that are not submitted in a sealed envelope or container will not be considered.

The Vendor agrees, if this Offer is accepted within 120 calendar days after the Due Date, to fully comply in strict accordance with the Solicitation, specifications and provisions attached thereto for the amounts shown on the accompanying Offer.

SUBMIT 1 ORIGINAL AND 1 ELECTRONIC COPY (USB FLASH DRIVE) OF YOUR RESPONSE

*****SIGNATURE FOR SUBMITTAL REQUIRED ON PAGE 3 OF THIS DOCUMENT*****

This solicitation is comprised of the following required sections. Please ensure to carefully read each section including those incorporated by reference. By signing this document, you are agreeing to all the items contained herein and will be bound to all terms.

SECTION NO.	TITLE	PAGES
0100	STANDARD PURCHASE DEFINITIONS	*
0200	STANDARD SOLICITATION INSTRUCTIONS	*
0300	STANDARD PURCHASE TERMS AND CONDITIONS	*
0400	SUPPLEMENTAL PURCHASE PROVISIONS	8
0500	SPECIFICATION	4
0600	BID SHEET – Must be completed and returned with Offer	3
0605	LOCAL BUSINESS PRESENCE IDENTIFICATION FORM – Complete and return	2
0700	REFERENCE SHEET - Complete and return if required	2
0800	NON-DISCRIMINATION AND NON-RETALIATION CERTIFICATION – Complete and return	2
0805	NON-SUSPENSION OR DEBARMENT CERTIFICATION	*
0810	NON-COLLUSION, NON-CONFLICT OF INTEREST, AND ANTI-LOBBYING CERTIFICATION	*
0815	LIVING WAGES CONTRACTOR CERTIFICATION-Complete, sign and return	1
0835	NONRESIDENT BIDDER PROVISIONS – Complete and return	1
0900	MBE/WBE PROCUREMENT PROGRAM PACKAGE – Must be completed and returned	33
ATT-1	ATTACHMENT #1 TO SPECIFICATIONS – TABLE 5 CMA-SG	1
ATT-2	ATTACHMENT #2 TO SPECIFICATIONS – TABLE 6 CMA-WG	1
ATT-3	ATTACHMENT #3 TO SPECIFICATIONS – DMS-9202 (Stockpile Storage)	7
ATT-4	ATTACHMENT #4 TO SPECIFICATIONS – 301S	16
ATT-5	ATTACHMENT #5 TO SPECIFICATIONS – 340S	18
ATT-6	ATTACHMENT #6 TO SPECIFICATIONS – SP340S	8
ATT-7	ATTACHMENT #7 – CITY DELIVERY ZONE MAP	1

*** Documents are hereby incorporated into this Solicitation by reference, with the same force and effect as if they were incorporated in full text. The full text versions of the * Sections are available on the Internet at the following online address:**

http://www.austintexas.gov/financeonline/vendor_connection/index.cfm#STANDARDBIDDOCUMENTS

If you do not have access to the Internet, you may obtain a copy of these Sections from the City of Austin Purchasing Office located in the Municipal Building, 124 West 8th Street, Room #308 Austin, Texas 78701; phone (512) 974-2500. Please have the Solicitation number available so that the staff can select the proper documents. These documents can be mailed, expressed mailed, or faxed to you.

The undersigned, by his/her signature, represents that he/she is submitting a binding offer and is authorized to bind the respondent to fully comply with the solicitation document contained herein. The Respondent, by submitting and signing below, acknowledges that he/she has received and read the entire document packet sections defined above including all documents incorporated by reference, and agrees to be bound by the terms therein.

Company Name: Industrial Asphalt, LLC.

Company Address: 9020 N Capital of TX HWY Bldg 2 Ste 250

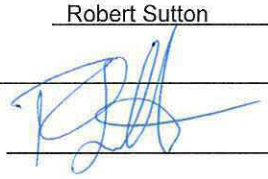
City, State, Zip: Austin, Texas 78759

Federal Tax ID No.

Printed Name of Officer or Authorized Representative: Robert Sutton

Title: Sales Manager

Signature of Officer or Authorized Representative:



Date: 07/05/2018

Email Address: Robert.Sutton@austinmaterials.com

Phone Number: 817-403-7146

*** Completed Bid Sheet, section 0600 must be submitted with this signed Offer Sheet to be considered for award**

CITY OF AUSTIN
PURCHASING OFFICE
STANDARD PURCHASE TERMS AND CONDITIONS

By submitting an Offer in response to the Solicitation, the Contractor agrees that the Contract shall be governed by the following terms and conditions. Unless otherwise specified in the Contract, Sections 3, 4, 5, 6, 7, 8, 20, 21, and 36 shall apply only to a Solicitation to purchase Goods, and Sections 9, 10, 11 and 22 shall apply only to a Solicitation to purchase Services to be performed principally at the City's premises or on public rights-of-way.

1. **CONTRACTOR'S OBLIGATIONS**. The Contractor shall fully and timely provide all Deliverables described in the Solicitation and in the Contractor's Offer in strict accordance with the terms, covenants, and conditions of the Contract and all applicable Federal, State, and local laws, rules, and regulations.

2. **EFFECTIVE DATE/TERM**. Unless otherwise specified in the Solicitation, this Contract shall be effective as of the date the contract is signed by the City, and shall continue in effect until all obligations are performed in accordance with the Contract.

3. **CONTRACTOR TO PACKAGE DELIVERABLES**: The Contractor will package Deliverables in accordance with good commercial practice and shall include a packing list showing the description of each item, the quantity and unit price Unless otherwise provided in the Specifications or Supplemental Terms and Conditions, each shipping container shall be clearly and permanently marked as follows: (a) The Contractor's name and address, (b) the City's name, address and purchase order or purchase release number and the price agreement number if applicable, (c) Container number and total number of containers, e.g. box 1 of 4 boxes, and (d) the number of the container bearing the packing list. The Contractor shall bear cost of packaging. Deliverables shall be suitably packed to secure lowest transportation costs and to conform with requirements of common carriers and any applicable specifications. The City's count or weight shall be final and conclusive on shipments not accompanied by packing lists.

4. **SHIPMENT UNDER RESERVATION PROHIBITED**: The Contractor is not authorized to ship the Deliverables under reservation and no tender of a bill of lading will operate as a tender of Deliverables.

5. **TITLE & RISK OF LOSS**: Title to and risk of loss of the Deliverables shall pass to the City only when the City actually receives and accepts the Deliverables.

6. **DELIVERY TERMS AND TRANSPORTATION CHARGES**: Deliverables shall be shipped F.O.B. point of delivery unless otherwise specified in the Supplemental Terms and Conditions. Unless otherwise stated in the Offer, the Contractor's price shall be deemed to include all delivery and transportation charges. The City shall have the right to designate what method of transportation shall be used to ship the Deliverables. The place of delivery shall be that set forth in the block of the purchase order or purchase release entitled "Receiving Agency".

7. **RIGHT OF INSPECTION AND REJECTION**: The City expressly reserves all rights under law, including, but not limited to the Uniform Commercial Code, to inspect the Deliverables at delivery before accepting them, and to reject defective or non-conforming Deliverables. If the City has the right to inspect the Contractor's, or the Contractor's Subcontractor's, facilities, or the Deliverables at the Contractor's, or the Contractor's Subcontractor's, premises, the Contractor shall furnish, or cause to be furnished, without additional charge, all reasonable facilities and assistance to the City to facilitate such inspection.

8. **NO REPLACEMENT OF DEFECTIVE TENDER**: Every tender or delivery of Deliverables must fully comply with all provisions of the Contract as to time of delivery, quality, and quantity. Any non-complying tender shall constitute a breach and the Contractor shall not have the right to substitute a conforming tender; provided, where the time for performance has not yet expired, the Contractor may notify the City of the intention to cure and may then make a conforming tender within the time allotted in the contract.

9. **PLACE AND CONDITION OF WORK**: The City shall provide the Contractor access to the sites where the Contractor is to perform the services as required in order for the Contractor to perform the services in a timely and efficient manner, in accordance with and subject to the applicable security laws, rules, and regulations. The Contractor acknowledges that it has satisfied itself as to the nature of the City's service requirements and specifications, the location and essential characteristics of the work sites, the quality and quantity of materials, equipment, labor and facilities necessary to perform the services, and any other condition or state of fact which could in any way affect performance of the Contractor's obligations under the contract. The Contractor hereby releases and holds the City

harmless from and against any liability or claim for damages of any kind or nature if the actual site or service conditions differ from expected conditions.

10. **WORKFORCE**

A. The Contractor shall employ only orderly and competent workers, skilled in the performance of the services which they will perform under the Contract.

B. The Contractor, its employees, subcontractors, and subcontractor's employees may not while engaged in participating or responding to a solicitation or while in the course and scope of delivering goods or services under a City of Austin contract or on the City's property .

i. use or possess a firearm, including a concealed handgun that is licensed under state law, except as required by the terms of the contract; or
ii. use or possess alcoholic or other intoxicating beverages, illegal drugs or controlled substances, nor may such workers be intoxicated, or under the influence of alcohol or drugs, on the job.

C. If the City or the City's representative notifies the Contractor that any worker is incompetent, disorderly or disobedient, has knowingly or repeatedly violated safety regulations, has possessed any firearms, or has possessed or was under the influence of alcohol or drugs on the job, the Contractor shall immediately remove such worker from Contract services, and may not employ such worker again on Contract services without the City's prior written consent.

11. **COMPLIANCE WITH HEALTH, SAFETY, AND ENVIRONMENTAL REGULATIONS**: The Contractor, its Subcontractors, and their respective employees, shall comply fully with all applicable federal, state, and local health, safety, and environmental laws, ordinances, rules and regulations in the performance of the services, including but not limited to those promulgated by the City and by the Occupational Safety and Health Administration (OSHA). In case of conflict, the most stringent safety requirement shall govern. The Contractor shall indemnify and hold the City harmless from and against all claims, demands, suits, actions, judgments, fines, penalties and liability of every kind arising from the breach of the Contractor's obligations under this paragraph.

12. **INVOICES**:

A. The Contractor shall submit separate invoices in duplicate on each purchase order or purchase release after each delivery. If partial shipments or deliveries are authorized by the City, a separate invoice must be sent for each shipment or delivery made.

B. **Proper Invoices must include a unique invoice number, the purchase order or delivery order number and the master agreement number if applicable, the Department's Name, and the name of the point of contact for the Department**. Invoices shall be itemized and transportation charges, if any, shall be listed separately. A copy of the bill of lading and the freight waybill, when applicable, shall be attached to the invoice. The Contractor's name and, if applicable, the tax identification number on the invoice must exactly match the information in the Vendor's registration with the City. Unless otherwise instructed in writing, the City may rely on the remittance address specified on the Contractor's invoice.

C. Invoices for labor shall include a copy of all time-sheets with trade labor rate and Deliverables order number clearly identified. Invoices shall also include a tabulation of work-hours at the appropriate rates and grouped by work order number. Time billed for labor shall be limited to hours actually worked at the work site.

D. Unless otherwise expressly authorized in the Contract, the Contractor shall pass through all Subcontract and other authorized expenses at actual cost without markup.

E. Federal excise taxes, State taxes, or City sales taxes must not be included in the invoiced amount. The City will furnish a tax exemption certificate upon request.

13. **PAYMENT**:

A. All proper invoices received by the City will be paid within thirty (30) calendar days of the City's receipt of the Deliverables or of the invoice, whichever is later.

B. **If payment is not timely made, (per paragraph A), interest shall accrue on the unpaid balance at the lesser of the rate specified in Texas Government Code Section 2251.025 or the maximum lawful rate; except, if payment is not timely made for a reason for which the City may withhold payment hereunder, interest shall not accrue until ten (10) calendar days after the grounds for withholding payment have been resolved.**

C. If partial shipments or deliveries are authorized by the City, the Contractor will be paid for the partial shipment or delivery, as stated above, provided that the invoice matches the shipment or delivery.

D. The City may withhold or set off the entire payment or part of any payment otherwise due the Contractor to such extent as may be necessary on account of:

i. delivery of defective or non-conforming Deliverables by the Contractor;
ii. third party claims, which are not covered by the insurance which the Contractor is required to provide, are filed or reasonable evidence indicating probable filing of such claims;
iii. failure of the Contractor to pay Subcontractors, or for labor, materials or equipment;
iv. damage to the property of the City or the City's agents, employees or contractors, which is not covered by insurance required to be provided by the Contractor;
v. reasonable evidence that the Contractor's obligations will not be completed within the time specified in the Contract, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay;
vi. failure of the Contractor to submit proper invoices with all required attachments and supporting documentation; or
vii. failure of the Contractor to comply with any material provision of the Contract Documents.

E. Notice is hereby given of Article VIII, Section 1 of the Austin City Charter which prohibits the payment of any money to any person, firm or corporation who is in arrears to the City for taxes, and of §2-8-3 of the Austin City Code concerning the right of the City to offset indebtedness owed the City.

F. Payment will be made by check unless the parties mutually agree to payment by credit card or electronic transfer of funds. The Contractor agrees that there shall be no additional charges, surcharges, or penalties to the City for payments made by credit card or electronic funds transfer.

G. The awarding or continuation of this contract is dependent upon the availability of funding. The City's payment obligations are payable only and solely from funds Appropriated and available for this contract. The absence of Appropriated or other lawfully available funds shall render the Contract null and void to the extent funds are not Appropriated or available and any Deliverables delivered but unpaid shall be returned to the Contractor. The City shall provide the Contractor written notice of the failure of the City to make an adequate Appropriation for any fiscal year to pay the amounts due under the Contract, or the reduction of any Appropriation to an amount insufficient to permit the City to pay its obligations under the Contract. In the event of non or inadequate appropriation of funds, there will be no penalty nor removal fees charged to the City.

14. **TRAVEL EXPENSES**: All travel, lodging and per diem expenses in connection with the Contract for which reimbursement may be claimed by the Contractor under the terms of the Solicitation will be reviewed against the City's Travel Policy as published and maintained by the City's Controller's Office and the Current United States General Services Administration Domestic Per Diem Rates (the "Rates") as published and maintained on the Internet at:

http://www.gsa.gov/portal/category/21287

No amounts in excess of the Travel Policy or Rates shall be paid. All invoices must be accompanied by copies of detailed itemized receipts (e.g. hotel bills, airline tickets). No reimbursement will be made for expenses not actually incurred. Airline fares in excess of coach or economy will not be reimbursed. Mileage charges may not exceed the amount permitted as a deduction in any year under the Internal Revenue Code or Regulations.

15. **FINAL PAYMENT AND CLOSE-OUT**:

A. If an MBE/WBE Program Compliance Plan is required by the Solicitation, and the Contractor has identified Subcontractors, the Contractor is required to submit a Contract Close-Out MBE/WBE Compliance Report to the Project manager or Contract manager no later than the 15th calendar day after completion of all work under the contract. Final payment, retainage, or both may be withheld if the Contractor is not in compliance with the requirements of the Compliance Plan as accepted by the City.

B. The making and acceptance of final payment will constitute:

i. a waiver of all claims by the City against the Contractor, except claims (1) which have been previously asserted in writing and not yet settled, (2) arising from defective work appearing after final inspection, (3) arising from failure of the Contractor to comply with the Contract or the terms of any warranty specified herein, (4) arising from the Contractor's continuing obligations under the Contract, including but not limited to indemnity and warranty obligations, or (5) arising under the City's right to audit; and

ii. a waiver of all claims by the Contractor against the City other than those previously asserted in writing and not yet settled.

16. **SPECIAL TOOLS & TEST EQUIPMENT**: If the price stated on the Offer includes the cost of any special tooling or special test equipment fabricated or required by the Contractor for the purpose of filling this order, such special tooling equipment and any process sheets related thereto shall become the property of the City and shall be identified by the Contractor as such.

17. **AUDITS and RECORDS**:

A. The Contractor agrees that the representatives of the Office of the City Auditor or other authorized representatives of the City shall have access to, and the right to audit, examine, or reproduce, any and all records of the Contractor related to the performance under this Contract. The Contractor shall retain all such records for a period of three (3) years after final payment on this Contract or until all audit and litigation matters that the City has brought to the attention of the Contractor are resolved, whichever is longer. The Contractor agrees to refund to the City any overpayments disclosed by any such audit.

B. Records Retention:

i. Contractor is subject to City Code chapter 2-11 (Records Management), and as it may subsequently be amended. For purposes of this subsection, a Record means all books, accounts, reports, files, and other data recorded or created by a Contractor in fulfillment of the Contract whether in digital or physical format, except a record specifically relating to the Contractor's internal administration.

ii. All Records are the property of the City. The Contractor may not dispose of or destroy a Record without City authorization and shall deliver the Records, in all requested formats and media, along with all finding aids and metadata, to the City at no cost when requested by the City

iii. The Contractor shall retain all Records for a period of three (3) years after final payment on this Contract or until all audit and litigation matters that the City has brought to the attention of the Contractor are resolved, whichever is longer.

C. The Contractor shall include sections A and B above in all subcontractor agreements entered into in connection with this Contract.

18. **SUBCONTRACTORS**:

A. If the Contractor identified Subcontractors in an MBE/WBE Program Compliance Plan or a No Goals Utilization Plan the Contractor shall comply with the provisions of Chapters 2-9A, 2-9B, 2-9C, and 2-9D, as applicable, of the Austin City Code and the terms of the Compliance Plan or Utilization Plan as approved by the City (the "Plan"). The Contractor shall not initially employ any Subcontractor except as provided in the Contractor's Plan. The Contractor shall not substitute any Subcontractor identified in the Plan, unless the substitute has been accepted by the City in writing in accordance with the provisions of Chapters 2-9A, 2-9B, 2-9C and 2-9D, as applicable. No acceptance by the City of any Subcontractor shall constitute a waiver of any rights or remedies of the City with respect to defective Deliverables provided by a Subcontractor. If a Plan has been approved, the Contractor is additionally required to submit a monthly Subcontract Awards and Expenditures Report to the Contract Manager and the Purchasing Office Contract Compliance Manager no later than the tenth calendar day of each month.

B. Work performed for the Contractor by a Subcontractor shall be pursuant to a written contract between the Contractor and Subcontractor. The terms of the subcontract may not conflict with the terms of the Contract, and shall contain provisions that:

i. require that all Deliverables to be provided by the Subcontractor be provided in strict accordance with the provisions, specifications and terms of the Contract;
ii. prohibit the Subcontractor from further subcontracting any portion of the Contract without the prior written consent of the City and the Contractor. The City may require, as a condition to such further subcontracting, that the Subcontractor post a payment bond in form, substance and amount acceptable to the City;
iii. require Subcontractors to submit all invoices and applications for payments, including any claims for additional payments, damages or otherwise, to the Contractor in sufficient time to enable the Contractor to include same with its invoice or application for payment to the City in accordance with the terms of the Contract;
iv. require that all Subcontractors obtain and maintain, throughout the term of their contract, insurance in the type and amounts specified for the Contractor, with the City being a named insured as its interest shall appear; and
v. require that the Subcontractor indemnify and hold the City harmless to the same extent as the Contractor is required to indemnify the City.

C. The Contractor shall be fully responsible to the City for all acts and omissions of the Subcontractors just as the Contractor is responsible for the Contractor's own acts and omissions. Nothing in the Contract shall create for the benefit of any such Subcontractor any contractual relationship between the City and any such Subcontractor, nor shall it create any obligation on the part of the City to pay or to see to the payment of any moneys due any such Subcontractor except as may otherwise be required by law.

D. The Contractor shall pay each Subcontractor its appropriate share of payments made to the Contractor not later than ten (10) calendar days after receipt of payment from the City.

19. **WARRANTY-PRICE**:

A. The Contractor warrants the prices quoted in the Offer are no higher than the Contractor's current prices on orders by others for like Deliverables under similar terms of purchase.

B. The Contractor certifies that the prices in the Offer have been arrived at independently without consultation, communication, or agreement for the purpose of restricting competition, as to any matter relating to such fees with any other firm or with any competitor.

C. In addition to any other remedy available, the City may deduct from any amounts owed to the Contractor, or otherwise recover, any amounts paid for items in excess of the Contractor's current prices on orders by others for like Deliverables under similar terms of purchase.

20. **WARRANTY – TITLE**: The Contractor warrants that it has good and indefeasible title to all Deliverables furnished under the Contract, and that the Deliverables are free and clear of all liens, claims, security interests and encumbrances. The Contractor shall indemnify and hold the City harmless from and against all adverse title claims to the Deliverables.

21. **WARRANTY – DELIVERABLES**: The Contractor warrants and represents that all Deliverables sold the City under the Contract shall be free from defects in design, workmanship or manufacture, and conform in all material respects to the specifications, drawings, and descriptions in the Solicitation, to any samples furnished by the Contractor, to the terms, covenants and conditions of the Contract, and to all applicable State, Federal or local laws, rules, and regulations, and industry codes and standards. Unless otherwise stated in the Solicitation, the Deliverables shall be new or recycled merchandise, and not used or reconditioned.

    A. Recycled Deliverables shall be clearly identified as such.

    B. The Contractor may not limit, exclude or disclaim the foregoing warranty or any warranty implied by law; and any attempt to do so shall be without force or effect.

    C. Unless otherwise specified in the Contract, the warranty period shall be at least one year from the date of acceptance of the Deliverables or from the date of acceptance of any replacement Deliverables. If during the warranty period, one or more of the above warranties are breached, the Contractor shall promptly upon receipt of demand either repair the non-conforming Deliverables, or replace the non-conforming Deliverables with fully conforming Deliverables, at the City's option and at no additional cost to the City. All costs incidental to such repair or replacement, including but not limited to, any packaging and shipping costs, shall be borne exclusively by the Contractor. The City shall endeavor to give the Contractor written notice of the breach of warranty within thirty (30) calendar days of discovery of the breach of warranty, but failure to give timely notice shall not impair the City's rights under this section.

    D. If the Contractor is unable or unwilling to repair or replace defective or non-conforming Deliverables as required by the City, then in addition to any other available remedy, the City may reduce the quantity of Deliverables it may be required to purchase under the Contract from the Contractor, and purchase conforming Deliverables from other sources. In such event, the Contractor shall pay to the City upon demand the increased cost, if any, incurred by the City to procure such Deliverables from another source.

    E. If the Contractor is not the manufacturer, and the Deliverables are covered by a separate manufacturer's warranty, the Contractor shall transfer and assign such manufacturer's warranty to the City. If for any reason the manufacturer's warranty cannot be fully transferred to the City, the Contractor shall assist and cooperate with the City to the fullest extent to enforce such manufacturer's warranty for the benefit of the City.

22. **WARRANTY – SERVICES**: The Contractor warrants and represents that all services to be provided the City under the Contract will be fully and timely performed in a good and workmanlike manner in accordance with generally accepted industry standards and practices, the terms, conditions, and covenants of the Contract, and all applicable Federal, State and local laws, rules or regulations.

    A. The Contractor may not limit, exclude or disclaim the foregoing warranty or any warranty implied by law, and any attempt to do so shall be without force or effect.

    B. Unless otherwise specified in the Contract, the warranty period shall be at least one year from the Acceptance Date. If during the warranty period, one or more of the above warranties are breached, the Contractor shall promptly upon receipt of demand perform the services again in accordance with above standard at no additional cost to the City. All costs incidental to such additional performance shall be borne by the Contractor. The City shall endeavor to give the Contractor written notice of the breach of warranty within thirty (30) calendar days of discovery of the breach warranty, but failure to give timely notice shall not impair the City's rights under this section.

    C. If the Contractor is unable or unwilling to perform its services in accordance with the above standard as required by the City, then in addition to any other available remedy, the City may reduce the amount of services it may be

required to purchase under the Contract from the Contractor, and purchase conforming services from other sources. In such event, the Contractor shall pay to the City upon demand the increased cost, if any, incurred by the City to procure such services from another source.

23. **ACCEPTANCE OF INCOMPLETE OR NON-CONFORMING DELIVERABLES**: If, instead of requiring immediate correction or removal and replacement of defective or non-conforming Deliverables, the City prefers to accept it, the City may do so. The Contractor shall pay all claims, costs, losses and damages attributable to the City's evaluation of and determination to accept such defective or non-conforming Deliverables. If any such acceptance occurs prior to final payment, the City may deduct such amounts as are necessary to compensate the City for the diminished value of the defective or non-conforming Deliverables. If the acceptance occurs after final payment, such amount will be refunded to the City by the Contractor.

24. **RIGHT TO ASSURANCE**: Whenever one party to the Contract in good faith has reason to question the other party's intent to perform, demand may be made to the other party for written assurance of the intent to perform. In the event that no assurance is given within the time specified after demand is made, the demanding party may treat this failure as an anticipatory repudiation of the Contract.

25. **STOP WORK NOTICE**: The City may issue an immediate Stop Work Notice in the event the Contractor is observed performing in a manner that is in violation of Federal, State, or local guidelines, or in a manner that is determined by the City to be unsafe to either life or property. Upon notification, the Contractor will cease all work until notified by the City that the violation or unsafe condition has been corrected. The Contractor shall be liable for all costs incurred by the City as a result of the issuance of such Stop Work Notice.

26. **DEFAULT**: The Contractor shall be in default under the Contract if the Contractor (a) fails to fully, timely and faithfully perform any of its material obligations under the Contract, (b) fails to provide adequate assurance of performance under Paragraph 24, (c) becomes insolvent or seeks relief under the bankruptcy laws of the United States or (d) makes a material misrepresentation in Contractor's Offer, or in any report or deliverable required to be submitted by the Contractor to the City.

27. **TERMINATION FOR CAUSE:**. In the event of a default by the Contractor, the City shall have the right to terminate the Contract for cause, by written notice effective ten (10) calendar days, unless otherwise specified, after the date of such notice, unless the Contractor, within such ten (10) day period, cures such default, or provides evidence sufficient to prove to the City's reasonable satisfaction that such default does not, in fact, exist. The City may place Contractor on probation for a specified period of time within which the Contractor must correct any non-compliance issues. Probation shall not normally be for a period of more than nine (9) months, however, it may be for a longer period, not to exceed one (1) year depending on the circumstances. If the City determines the Contractor has failed to perform satisfactorily during the probation period, the City may proceed with suspension. In the event of a default by the Contractor, the City may suspend or debar the Contractor in accordance with the "City of Austin Purchasing Office Probation, Suspension and Debarment Rules for Vendors" and remove the Contractor from the City's vendor list for up to five (5) years and any Offer submitted by the Contractor may be disqualified for up to five (5) years. In addition to any other remedy available under law or in equity, the City shall be entitled to recover all actual damages, costs, losses and expenses, incurred by the City as a result of the Contractor's default, including, without limitation, cost of cover, reasonable attorneys' fees, court costs, and prejudgment and post-judgment interest at the maximum lawful rate. All rights and remedies under the Contract are cumulative and are not exclusive of any other right or remedy provided by law.

28. **TERMINATION WITHOUT CAUSE**: The City shall have the right to terminate the Contract, in whole or in part, without cause any time upon thirty (30) calendar days' prior written notice. Upon receipt of a notice of termination, the Contractor shall promptly cease all further work pursuant to the Contract, with such exceptions, if any, specified in the notice of termination. The City shall pay the Contractor, to the extent of funds Appropriated or otherwise legally available for such purposes, for all goods delivered and services performed and obligations incurred prior to the date of termination in accordance with the terms hereof.

29. **FRAUD**: Fraudulent statements by the Contractor on any Offer or in any report or deliverable required to be submitted by the Contractor to the City shall be grounds for the termination of the Contract for cause by the City and may result in legal action.

30. **DELAYS**:

A. The City may delay scheduled delivery or other due dates by written notice to the Contractor if the City deems it is in its best interest. If such delay causes an increase in the cost of the work under the Contract, the City and the Contractor shall negotiate an equitable adjustment for costs incurred by the Contractor in the Contract price and execute an amendment to the Contract. The Contractor must assert its right to an adjustment within thirty (30) calendar days from the date of receipt of the notice of delay. Failure to agree on any adjusted price shall be handled under the Dispute Resolution process specified in paragraph 48. However, nothing in this provision shall excuse the Contractor from delaying the delivery as notified.

B. Neither party shall be liable for any default or delay in the performance of its obligations under this Contract if, while and to the extent such default or delay is caused by acts of God, fire, riots, civil commotion, labor disruptions, sabotage, sovereign conduct, or any other cause beyond the reasonable control of such Party. In the event of default or delay in contract performance due to any of the foregoing causes, then the time for completion of the services will be extended; provided, however, in such an event, a conference will be held within three (3) business days to establish a mutually agreeable period of time reasonably necessary to overcome the effect of such failure to perform.

31. **INDEMNITY**:

A. Definitions:

i. "Indemnified Claims" shall include any and all claims, demands, suits, causes of action, judgments and liability of every character, type or description, including all reasonable costs and expenses of litigation, mediation or other alternate dispute resolution mechanism, including attorney and other professional fees for:
(1) damage to or loss of the property of any person (including, but not limited to the City, the Contractor, their respective agents, officers, employees and subcontractors; the officers, agents, and employees of such subcontractors; and third parties); and/or
(2) death, bodily injury, illness, disease, worker's compensation, loss of services, or loss of income or wages to any person (including but not limited to the agents, officers and employees of the City, the Contractor, the Contractor's subcontractors, and third parties),

ii. "Fault" shall include the sale of defective or non-conforming Deliverables, negligence, willful misconduct, or a breach of any legally imposed strict liability standard.

B. **THE CONTRACTOR SHALL DEFEND (AT THE OPTION OF THE CITY), INDEMNIFY, AND HOLD THE CITY, ITS SUCCESSORS, ASSIGNS, OFFICERS, EMPLOYEES AND ELECTED OFFICIALS HARMLESS FROM AND AGAINST ALL INDEMNIFIED CLAIMS DIRECTLY ARISING OUT OF, INCIDENT TO, CONCERNING OR RESULTING FROM THE FAULT OF THE CONTRACTOR, OR THE CONTRACTOR'S AGENTS, EMPLOYEES OR SUBCONTRACTORS, IN THE PERFORMANCE OF THE CONTRACTOR'S OBLIGATIONS UNDER THE CONTRACT. NOTHING HEREIN SHALL BE DEEMED TO LIMIT THE RIGHTS OF THE CITY OR THE CONTRACTOR (INCLUDING, BUT NOT LIMITED TO, THE RIGHT TO SEEK CONTRIBUTION) AGAINST ANY THIRD PARTY WHO MAY BE LIABLE FOR AN INDEMNIFIED CLAIM.**

32. **INSURANCE**: (reference Section 0400 for specific coverage requirements). The following insurance requirement applies. (Revised March 2013).

A. General Requirements.

i. The Contractor shall at a minimum carry insurance in the types and amounts indicated in Section 0400, Supplemental Purchase Provisions, for the duration of the Contract, including extension options and hold over periods, and during any warranty period.

ii. The Contractor shall provide Certificates of Insurance with the coverages and endorsements required in Section 0400, Supplemental Purchase Provisions, to the City as verification of coverage prior to contract execution and within fourteen (14) calendar days after written request from the

City. Failure to provide the required Certificate of Insurance may subject the Offer to disqualification from consideration for award. The Contractor must also forward a Certificate of Insurance to the City whenever a previously identified policy period has expired, or an extension option or hold over period is exercised, as verification of continuing coverage.

iii. The Contractor shall not commence work until the required insurance is obtained and until such insurance has been reviewed by the City. Approval of insurance by the City shall not relieve or decrease the liability of the Contractor hereunder and shall not be construed to be a limitation of liability on the part of the Contractor.

iv. The City may request that the Contractor submit certificates of insurance to the City for all subcontractors prior to the subcontractors commencing work on the project.

v. The Contractor's and all subcontractors' insurance coverage shall be written by companies licensed to do business in the State of Texas at the time the policies are issued and shall be written by companies with A.M. Best ratings of B+VII or better.

vi. The "other" insurance clause shall not apply to the City where the City is an additional insured shown on any policy. It is intended that policies required in the Contract, covering both the City and the Contractor, shall be considered primary coverage as applicable.

vii. If insurance policies are not written for amounts specified in Section 0400, Supplemental Purchase Provisions, the Contractor shall carry Umbrella or Excess Liability Insurance for any differences in amounts specified. If Excess Liability Insurance is provided, it shall follow the form of the primary coverage.

viii. The City shall be entitled, upon request, at an agreed upon location, and without expense, to review certified copies of policies and endorsements thereto and may make any reasonable requests for deletion or revision or modification of particular policy terms, conditions, limitations, or exclusions except where policy provisions are established by law or regulations binding upon either of the parties hereto or the underwriter on any such policies.

ix. The City reserves the right to review the insurance requirements set forth during the effective period of the Contract and to make reasonable adjustments to insurance coverage, limits, and exclusions when deemed necessary and prudent by the City based upon changes in statutory law, court decisions, the claims history of the industry or financial condition of the insurance company as well as the Contractor.

x. The Contractor shall not cause any insurance to be canceled nor permit any insurance to lapse during the term of the Contract or as required in the Contract.

xi. The Contractor shall be responsible for premiums, deductibles and self-insured retentions, if any, stated in policies. Self-insured retentions shall be disclosed on the Certificate of Insurance.

xii. The Contractor shall provide the City thirty (30) calendar days' written notice of erosion of the aggregate limits below occurrence limits for all applicable coverages indicated within the Contract.

xiii. The insurance coverages specified in Section 0400, Supplemental Purchase Provisions, are required minimums and are not intended to limit the responsibility or liability of the Contractor.

B. Specific Coverage Requirements: Specific insurance requirements are contained in Section 0400, Supplemental Purchase Provisions

33. **CLAIMS**: If any claim, demand, suit, or other action is asserted against the Contractor which arises under or concerns the Contract, or which could have a material adverse affect on the Contractor's ability to perform thereunder, the Contractor shall give written notice thereof to the City within ten (10) calendar days after receipt of notice by the

Contractor. Such notice to the City shall state the date of notification of any such claim, demand, suit, or other action; the names and addresses of the claimant(s); the basis thereof; and the name of each person against whom such claim is being asserted. Such notice shall be delivered personally or by mail and shall be sent to the City and to the Austin City Attorney. Personal delivery to the City Attorney shall be to City Hall, 301 West 2nd Street, 4th Floor, Austin, Texas 78701, and mail delivery shall be to P.O. Box 1088, Austin, Texas 78767.

34. **NOTICES**: Unless otherwise specified, all notices, requests, or other communications required or appropriate to be given under the Contract shall be in writing and shall be deemed delivered three (3) business days after postmarked if sent by U.S. Postal Service Certified or Registered Mail, Return Receipt Requested. Notices delivered by other means shall be deemed delivered upon receipt by the addressee. Routine communications may be made by first class mail, telefax, or other commercially accepted means. Notices to the Contractor shall be sent to the address specified in the Contractor's Offer, or at such other address as a party may notify the other in writing. Notices to the City shall be addressed to the City at P.O. Box 1088, Austin, Texas 78767 and marked to the attention of the Contract Administrator.

35. **RIGHTS TO BID, PROPOSAL AND CONTRACTUAL MATERIAL**: All material submitted by the Contractor to the City shall become property of the City upon receipt. Any portions of such material claimed by the Contractor to be proprietary must be clearly marked as such. Determination of the public nature of the material is subject to the Texas Public Information Act, Chapter 552, Texas Government Code.

36. **NO WARRANTY BY CITY AGAINST INFRINGEMENTS**: The Contractor represents and warrants to the City that: (i) the Contractor shall provide the City good and indefeasible title to the Deliverables and (ii) the Deliverables supplied by the Contractor in accordance with the specifications in the Contract will not infringe, directly or contributorily, any patent, trademark, copyright, trade secret, or any other intellectual property right of any kind of any third party; that no claims have been made by any person or entity with respect to the ownership or operation of the Deliverables and the Contractor does not know of any valid basis for any such claims. The Contractor shall, at its sole expense, defend, indemnify, and hold the City harmless from and against all liability, damages, and costs (including court costs and reasonable fees of attorneys and other professionals) arising out of or resulting from: (i) any claim that the City's exercise anywhere in the world of the rights associated with the City's' ownership, and if applicable, license rights, and its use of the Deliverables infringes the intellectual property rights of any third party; or (ii) the Contractor's breach of any of Contractor's representations or warranties stated in this Contract. In the event of any such claim, the City shall have the right to monitor such claim or at its option engage its own separate counsel to act as co-counsel on the City's behalf. Further, Contractor agrees that the City's specifications regarding the Deliverables shall in no way diminish Contractor's warranties or obligations under this paragraph and the City makes no warranty that the production, development, or delivery of such Deliverables will not impact such warranties of Contractor.

37. **CONFIDENTIALITY**: In order to provide the Deliverables to the City, Contractor may require access to certain of the City's and/or its licensors' confidential information (including inventions, employee information, trade secrets, confidential know-how, confidential business information, and other information which the City or its licensors consider confidential) (collectively, "Confidential Information"). Contractor acknowledges and agrees that the Confidential Information is the valuable property of the City and/or its licensors and any unauthorized use, disclosure, dissemination, or other release of the Confidential Information will substantially injure the City and/or its licensors. The Contractor (including its employees, subcontractors, agents, or representatives) agrees that it will maintain the Confidential Information in strict confidence and shall not disclose, disseminate, copy, divulge, recreate, or otherwise use the Confidential Information without the prior written consent of the City or in a manner not expressly permitted under this Agreement, unless the Confidential Information is required to be disclosed by law or an order of any court or other governmental authority with proper jurisdiction, provided the Contractor promptly notifies the City before disclosing such information so as to permit the City reasonable time to seek an appropriate protective order. The Contractor agrees to use protective measures no less stringent than the Contractor uses within its own business to protect its own most valuable information, which protective measures shall under all circumstances be at least reasonable measures to ensure the continued confidentiality of the Confidential Information.

38. **PUBLICATIONS**: All published material and written reports submitted under the Contract must be originally developed material unless otherwise specifically provided in the Contract. When material not originally developed is included in a report in any form, the source shall be identified.

39. **ADVERTISING**: The Contractor shall not advertise or publish, without the City's prior consent, the fact that the City has entered into the Contract, except to the extent required by law.

40. **NO CONTINGENT FEES**: The Contractor warrants that no person or selling agency has been employed or retained to solicit or secure the Contract upon any agreement or understanding for commission, percentage, brokerage, or contingent fee, excepting bona fide employees of bona fide established commercial or selling agencies maintained by the Contractor for the purpose of securing business. For breach or violation of this warranty, the City shall have the right, in addition to any other remedy available, to cancel the Contract without liability and to deduct from any amounts owed to the Contractor, or otherwise recover, the full amount of such commission, percentage, brokerage or contingent fee.

41. **GRATUITIES**: The City may, by written notice to the Contractor, cancel the Contract without liability if it is determined by the City that gratuities were offered or given by the Contractor or any agent or representative of the Contractor to any officer or employee of the City of Austin with a view toward securing the Contract or securing favorable treatment with respect to the awarding or amending or the making of any determinations with respect to the performing of such contract. In the event the Contract is canceled by the City pursuant to this provision, the City shall be entitled, in addition to any other rights and remedies, to recover or withhold the amount of the cost incurred by the Contractor in providing such gratuities.

42. **PROHIBITION AGAINST PERSONAL INTEREST IN CONTRACTS**: No officer, employee, independent consultant, or elected official of the City who is involved in the development, evaluation, or decision-making process of the performance of any solicitation shall have a financial interest, direct or indirect, in the Contract resulting from that solicitation. Any willful violation of this section shall constitute impropriety in office, and any officer or employee guilty thereof shall be subject to disciplinary action up to and including dismissal. Any violation of this provision, with the knowledge, expressed or implied, of the Contractor shall render the Contract voidable by the City.

43. **INDEPENDENT CONTRACTOR**: The Contract shall not be construed as creating an employer/employee relationship, a partnership, or a joint venture. The Contractor's services shall be those of an independent contractor. The Contractor agrees and understands that the Contract does not grant any rights or privileges established for employees of the City.

44. **ASSIGNMENT-DELEGATION**: The Contract shall be binding upon and enure to the benefit of the City and the Contractor and their respective successors and assigns, provided however, that no right or interest in the Contract shall be assigned and no obligation shall be delegated by the Contractor without the prior written consent of the City. Any attempted assignment or delegation by the Contractor shall be void unless made in conformity with this paragraph. The Contract is not intended to confer rights or benefits on any person, firm or entity not a party hereto; it being the intention of the parties that there be no third party beneficiaries to the Contract.

45. **WAIVER**: No claim or right arising out of a breach of the Contract can be discharged in whole or in part by a waiver or renunciation of the claim or right unless the waiver or renunciation is supported by consideration and is in writing signed by the aggrieved party. No waiver by either the Contractor or the City of any one or more events of default by the other party shall operate as, or be construed to be, a permanent waiver of any rights or obligations under the Contract, or an express or implied acceptance of any other existing or future default or defaults, whether of a similar or different character.

46. **MODIFICATIONS**: The Contract can be modified or amended only by a writing signed by both parties. No pre-printed or similar terms on any the Contractor invoice, order or other document shall have any force or effect to change the terms, covenants, and conditions of the Contract.

47. **INTERPRETATION**: The Contract is intended by the parties as a final, complete and exclusive statement of the terms of their agreement. No course of prior dealing between the parties or course of performance or usage of the trade shall be relevant to supplement or explain any term used in the Contract. Although the Contract may have been substantially drafted by one party, it is the intent of the parties that all provisions be construed in a manner to be fair to both parties, reading no provisions more strictly against one party or the other. Whenever a term defined by the Uniform Commercial Code, as enacted by the State of Texas, is used in the Contract, the UCC definition shall control, unless otherwise defined in the Contract.

48. **DISPUTE RESOLUTION**:

A. If a dispute arises out of or relates to the Contract, or the breach thereof, the parties agree to negotiate prior to prosecuting a suit for damages. However, this section does not prohibit the filing of a lawsuit to toll the running of a statute of limitations or to seek injunctive relief. Either party may make a written request for a meeting between representatives of each party within fourteen (14) calendar days after receipt of the request or such later period as agreed by the parties. Each party shall include, at a minimum, one (1) senior level individual with decision-making authority regarding the dispute. The purpose of this and any subsequent meeting is to attempt in good faith to negotiate a resolution of the dispute. If, within thirty (30) calendar days after such meeting, the parties have not succeeded in negotiating a resolution of the dispute, they will proceed directly to mediation as described below. Negotiation may be waived by a written agreement signed by both parties, in which event the parties may proceed directly to mediation as described below.

B. If the efforts to resolve the dispute through negotiation fail, or the parties waive the negotiation process, the parties may select, within thirty (30) calendar days, a mediator trained in mediation skills to assist with resolution of the dispute. Should they choose this option, the City and the Contractor agree to act in good faith in the selection of the mediator and to give consideration to qualified individuals nominated to act as mediator. Nothing in the Contract prevents the parties from relying on the skills of a person who is trained in the subject matter of the dispute or a contract interpretation expert. If the parties fail to agree on a mediator within thirty (30) calendar days of initiation of the mediation process, the mediator shall be selected by the Travis County Dispute Resolution Center (DRC). The parties agree to participate in mediation in good faith for up to thirty (30) calendar days from the date of the first mediation session. The City and the Contractor will share the mediator's fees equally and the parties will bear their own costs of participation such as fees for any consultants or attorneys they may utilize to represent them or otherwise assist them in the mediation.

49. **JURISDICTION AND VENUE**: The Contract is made under and shall be governed by the laws of the State of Texas, including, when applicable, the Uniform Commercial Code as adopted in Texas, V.T.C.A., Bus. & Comm. Code, Chapter 1, excluding any rule or principle that would refer to and apply the substantive law of another state or jurisdiction. All issues arising from this Contract shall be resolved in the courts of Travis County, Texas and the parties agree to submit to the exclusive personal jurisdiction of such courts. The foregoing, however, shall not be construed or interpreted to limit or restrict the right or ability of the City to seek and secure injunctive relief from any competent authority as contemplated herein.

50. **INVALIDITY**: The invalidity, illegality, or unenforceability of any provision of the Contract shall in no way affect the validity or enforceability of any other portion or provision of the Contract. Any void provision shall be deemed severed from the Contract and the balance of the Contract shall be construed and enforced as if the Contract did not contain the particular portion or provision held to be void. The parties further agree to reform the Contract to replace any stricken provision with a valid provision that comes as close as possible to the intent of the stricken provision. The provisions of this section shall not prevent this entire Contract from being void should a provision which is the essence of the Contract be determined to be void.

51. **HOLIDAYS:** The following holidays are observed by the City:

Holiday	Date Observed
New Year's Day	January 1
Martin Luther King, Jr.'s Birthday	Third Monday in January
President's Day	Third Monday in February
Memorial Day	Last Monday in May
Independence Day	July 4
Labor Day	First Monday in September
Veteran's Day	November 11

Thanksgiving Day	Fourth Thursday in November
Friday after Thanksgiving	Friday after Thanksgiving
Christmas Eve	December 24
Christmas Day	December 25

If a Legal Holiday falls on Saturday, it will be observed on the preceding Friday. If a Legal Holiday falls on Sunday, it will be observed on the following Monday.

52. **SURVIVABILITY OF OBLIGATIONS:** All provisions of the Contract that impose continuing obligations on the parties, including but not limited to the warranty, indemnity, and confidentiality obligations of the parties, shall survive the expiration or termination of the Contract.

53. **NON-SUSPENSION OR DEBARMENT CERTIFICATION:**

The City of Austin is prohibited from contracting with or making prime or sub-awards to parties that are suspended or debarred or whose principals are suspended or debarred from Federal, State, or City of Austin Contracts. By accepting a Contract with the City, the Vendor certifies that its firm and its principals are not currently suspended or debarred from doing business with the Federal Government, as indicated by the General Services Administration List of Parties Excluded from Federal Procurement and Non-Procurement Programs, the State of Texas, or the City of Austin.

54. **EQUAL OPPORTUNITY**

A. **Equal Employment Opportunity:** No Contractor, or Contractor's agent, shall engage in any discriminatory employment practice as defined in Chapter 5-4 of the City Code. No Offer submitted to the City shall be considered, nor any Purchase Order issued, or any Contract awarded by the City unless the Offeror has executed and filed with the City Purchasing Office a current Non-Discrimination Certification. Non-compliance with Chapter 5-4 of the City Code may result in sanctions, including termination of the contract and the Contractor's suspension or debarment from participation on future City contracts until deemed compliant with Chapter 5-4.

B. **Americans with Disabilities Act (ADA) Compliance:** No Contractor, or Contractor's agent, shall engage in any discriminatory practice against individuals with disabilities as defined in the ADA, including but not limited to: employment, accessibility to goods and services, reasonable accommodations, and effective communications.

55. **BUY AMERICAN ACT-SUPPLIES (Applicable to certain Federally funded requirements)**

A. Definitions. As used in this paragraph –

i. "Component" means an article, material, or supply incorporated directly into an end product.

ii. "Cost of components" means -

(1) For components purchased by the Contractor, the acquisition cost, including transportation costs to the place of incorporation into the end product (whether or not such costs are paid to a domestic firm), and any applicable duty (whether or not a duty-free entry certificate is issued); or

(2) For components manufactured by the Contractor, all costs associated with the manufacture of the component, including transportation costs as described in paragraph (1) of this definition, plus allocable overhead costs, but excluding profit. Cost of components does not include any costs associated with the manufacture of the end product.

iii. "Domestic end product" means-

(1) An unmanufactured end product mined or produced in the United States; or

(2) An end product manufactured in the United States, if the cost of its components mined, produced, or manufactured in the United States exceeds 50 percent of the cost of all its components. Components of foreign origin of the same class or kind as those that the agency determines are not mined, produced, or manufactured in sufficient and reasonably available commercial quantities of a satisfactory quality are treated as domestic. Scrap generated, collected, and prepared for processing in the United States is considered domestic.

iv. "End product" means those articles, materials, and supplies to be acquired under the contract for public use.

v. "Foreign end product" means an end product other than a domestic end product.

vi. "United States" means the 50 States, the District of Columbia, and outlying areas.

B. The Buy American Act (41 U.S.C. 10a - 10d) provides a preference for domestic end products for supplies acquired for use in the United States.

C. The City does not maintain a list of foreign articles that will be treated as domestic for this Contract; but will consider for approval foreign articles as domestic for this product if the articles are on a list approved by another Governmental Agency. The Offeror shall submit documentation with their Offer demonstrating that the article is on an approved Governmental list.

D. The Contractor shall deliver only domestic end products except to the extent that it specified delivery of foreign end products in the provision of the Solicitation entitled "Buy American Act Certificate".

56. **PROHIBITION OF BOYCOTT ISRAEL VERIFICATION**

Pursuant to Texas Government Code §2270.002, the City is prohibited from contracting with any “company” for goods or services unless the following verification is included in this **Contract**.

A. For the purposes of this Section only, the terms “company” and “boycott Israel” have the meaning assigned by Texas Government Code §2270.001.

B. If the **Principal Artist** qualifies as a “company”, then the **Principal Artist** verifies that he:
i. does not “boycott Israel”; and
ii. will not “boycott Israel” during the term of this **Contract**.

C. The **Principal Artist’s** obligations under this Section, if any exist, will automatically cease or be reduced to the extent that the requirements of Texas Government Code Chapter 2270 are subsequently repealed, reduced, or declared unenforceable or invalid in whole or in part by any court or tribunal of competent jurisdiction or by the Texas Attorney General, without any further impact on the validity or continuity of this Contract.

CITY OF AUSTIN
PURCHASING OFFICE
SUPPLEMENTAL PURCHASE PROVISIONS

The following Supplemental Purchasing Provisions apply to this solicitation:

1. **EXPLANATIONS OR CLARIFICATIONS:** (reference paragraph 5 in Section 0200)

   All requests for explanations or clarifications must be submitted in writing to the Purchasing Office by writing to Michelle.Pearson@austintexas.gov at least five (5) business days before solicitation due date.

2. **INSURANCE:** If awarded the line item for product that is delivered, Insurance will be required.

   A. **General Requirements:** See Section 0300, Standard Purchase Terms and Conditions, paragraph 32, entitled Insurance, for general insurance requirements.

      i. The Contractor shall provide a Certificate of Insurance as verification of coverages required below to the City at the below address prior to contract execution and within 14 calendar days after written request from the City. Failure to provide the required Certificate of Insurance may subject the Offer to disqualification from consideration for award
      ii. The Contractor shall not commence work until the required insurance is obtained and until such insurance has been reviewed by the City. Approval of insurance by the City shall not relieve or decrease the liability of the Contractor hereunder and shall not be construed to be a limitation of liability on the part of the Contractor.
      iii. The Contractor must also forward a Certificate of Insurance to the City whenever a previously identified policy period has expired, or an extension option or holdover period is exercised, as verification of continuing coverage.
      iv. The Certificate of Insurance, and updates, shall be mailed to the following address:

         City of Austin Purchasing Office
         P. O. Box 1088
         Austin, Texas 78767

         OR

         PURInsuranceCompliance@austintexas.gov

   B. **Specific Coverage Requirements:** The Contractor shall at a minimum carry insurance in the types and amounts indicated below for the duration of the Contract, including extension options and hold over periods, and during any warranty period. These insurance coverages are required minimums and are not intended to limit the responsibility or liability of the Contractor.

      i. **Worker's Compensation and Employers' Liability Insurance:** Coverage shall be consistent with statutory benefits outlined in the Texas Worker's Compensation Act (Section 401). The minimum policy limits for Employer's Liability are $100,000 bodily injury each accident, $500,000 bodily injury by disease policy limit and $100,000 bodily injury by disease each employee.
         (1) The Contractor's policy shall apply to the State of Texas and include these endorsements in favor of the City of Austin:
            (a) Waiver of Subrogation, Form WC420304, or equivalent coverage
            (b) Thirty (30) days Notice of Cancellation, Form WC420601, or equivalent coverage
      ii. **Commercial General Liability Insurance:** The minimum bodily injury and property damage per occurrence are $500,000 for coverages A (Bodily Injury and Property Damage) and B (Personal and Advertising Injury).
         (1) The policy shall contain the following provisions:

(a) Contractual liability coverage for liability assumed under the Contract and all other Contracts related to the project.
(b) Contractor/Subcontracted Work.
(c) Products/Completed Operations Liability for the duration of the warranty period.
(d) If the project involves digging or drilling provisions must be included that provide Explosion, Collapse, and/or Underground Coverage.

(2) The policy shall also include these endorsements in favor of the City of Austin:
(a) Waiver of Subrogation, Endorsement CG 2404, or equivalent coverage
(b) Thirty (30) days Notice of Cancellation, Endorsement CG 0205, or equivalent coverage
(c) The City of Austin listed as an additional insured, Endorsement CG 2010, or equivalent coverage

iii. **Business Automobile Liability Insurance:** The Contractor shall provide coverage for all owned, non-owned and hired vehicles with a minimum combined single limit of $500,000 per occurrence for bodily injury and property damage. Alternate acceptable limits are $250,000 bodily injury per person, $500,000 bodily injury per occurrence and at least $100,000 property damage liability per accident.

(1) The policy shall include these endorsements in favor of the City of Austin:
(a) Waiver of Subrogation, Endorsement CA0444, or equivalent coverage
(b) Thirty (30) days Notice of Cancellation, Endorsement CA0244, or equivalent coverage
(c) The City of Austin listed as an additional insured, Endorsement CA2048, or equivalent coverage.

C. **Endorsements:** The specific insurance coverage endorsements specified above, or their equivalents must be provided. In the event that endorsements, which are the equivalent of the required coverage, are proposed to be substituted for the required coverage, copies of the equivalent endorsements must be provided for the City's review and approval.

3. **TERM OF CONTRACT:**

A. The Contract shall commence upon execution, unless otherwise specified, and shall remain in effect for an initial term of sixty (60) months.

B. Upon expiration of the initial term or any period of extension, the Contractor agrees to hold over under the terms and conditions of this Contract for such a period of time as is reasonably necessary for the City to re-solicit and/or complete the deliverables due under this Contract. Any hold over period will not exceed 120 calendar days unless mutually agreed on by both parties in writing.

C. Upon written notice to the Contractor from the City's Purchasing Officer or his designee and acceptance of the Contractor, the term of this contract shall be extended on the same terms and conditions for an additional period as indicated in paragraph A above.

D. Prices are firm and fixed for the first twelve (12) months. Thereafter, price changes are subject to the Economic Price Adjustment provisions of this Contract.

4. **QUANTITIES:** The quantities listed herein are estimates for the period of the Contract. The City reserves the right to purchase more or less of these quantities as may be required during the Contract term. Quantities will be as needed and specified by the City for each order. Unless specified in the solicitation, there are no minimum order quantities.

5. **DELIVERY REQUIREMENTS:**

A. Delivery locations for Hot Mix-Cold-Laid Asphaltic Concrete "Cold Mix" is divided into two (2) Zones and delivery locations will very within each Zone. Delivery shall be made to the site specified on the Purchase Order. Contractor's delivery price shall be based on the City of Austin Zone Map included in the solicitation.

B. Contractor shall make the materials available for Delivery or Pick Up during normal working hours as shown on each delivery order.

C. Delivery is to be made within three (3) working days after the order is placed (either verbally or in writing). All orders must be delivered complete unless arrangements for partial deliveries are made in advance.

D. The Contractor shall provide, with each delivery, a Shipping or Delivery Ticket showing the description of each item, the delivery location, quantity, and unit price.

E. The Contractor shall confirm the quantity to be delivered on all orders within two (2) hours of notification by phone from the City.

F. Unless requested by the City, deliveries shall not be made on City-recognized legal holidays (see paragraph 51 in Section 0300).

6. **INVOICES and PAYMENT:** (reference paragraphs 12 and 13 in Section 0300)

A. Contractor shall issue separate invoices for each order; invoices shall reference the delivery ticket or pick-up receipt. Attachments to invoices shall include, at a minimum, a copy of the related delivery ticket or pick-up receipt and a copy of the related weight certificate or receipt, if applicable.

B. Invoices shall contain a unique invoice number and the information required in Section 0300, paragraph 12, entitled "Invoices." Invoices received without all required information cannot be processed and will be returned to the vendor.

Invoices shall be mailed or e-mailed, and arrive within ten (10) days of invoice date, to the appropriate Bill To address and contact person designated on each Purchase Order. Invoices shall include, but are not limited to, the following:

- City's contract number/purchase order number
- Contractor's name on a professionally pre-printed form
- Contractor's address and phone number
- Remit To address
- Itemized product description and unit pricing for each item quantity
- Invoice amount total
- Date of delivery and location of delivery; or
- Date of pick-up and location of pick-up

C. The Contractor agrees to accept payment by either credit card, check or Electronic Funds Transfer (EFT) for all goods and/or services provided under the Contract. The Contractor shall factor the cost of processing credit card payments into the Offer. There shall be no additional charges, surcharges, or penalties to the City for payments made by credit card.

7. **MATERIALS SPECIFICATIONS/DESCRIPTIVE LITERATURE:**

A. If a solicitation refers to a Qualified Products List (QPL), Standard Products List (SPL) or a manufacturer's name and product, any Offeror offering products not referenced in the solicitation must submit as part of their Offer materials specifications/descriptive literature for the non-referenced product. Materials specifications/descriptive literature must be identified to show the item(s) in the Offer to which it applies.

B. Materials specifications/descriptive literature are defined as product manufacturer's catalog pages, "cut sheets" applicable tests results, or related detailed documents that specify material construction, performance parameters, and any industrial standards that are applicable such as ANSI, ASTM, ASME, SAE, NFPA, NBS, EIA, ESL, and NSA. The submitted materials specifications/descriptive literature must include the manufacturer's name and product number of the product being offered.

C. The failure of the materials specifications/descriptive literature to show that the product offered conforms to the requirements of the Solicitation shall result in rejection of the Offer.

D. Failure to submit the materials specifications/descriptive literature as part of the Offer may subject the Offer to disqualification from consideration for award.

8. **HAZARDOUS MATERIALS:**

A. If this Solicitation involves hazardous materials, the Offeror shall furnish with the Offer Material Safety Data Sheets (MSDS), (OSHA Form 20), on all chemicals and hazardous materials specifying the generic and trade name of product, product specification, and full hazard information including receiving and storage hazards. Instructions, special equipment needed for handling, information on approved containers, and instructions for the disposal of the material are also required.

B. Failure to submit the MSDS as part of the Offer may subject the Offer to disqualification from consideration for award.

C. The MSDS, instructions and information required in paragraph "A" must be included with each shipment under the contract.

D. Upon forty-eight (48) hours of the City's as-needed request, Contractor shall furnish material safety data sheets (OSHA form 20) specifying generic and trade name of product, product specification, full hazard information including receiving and storage hazards. Instructions and special equipment needed for handling, and instructions for disposal of material and containers are also required

E. In a continuing effort to comply with Environmental Protection Agency "Pollution Prevention Act of 1990, Public law 101-508," Federal Regulation Senate Bill "Waste Reduction Policy Act of 1991, SB 1099" and the Texas Water Code "Pollution Prevention:" Source Reduction and Waste Minimization, Chapter 335, Subchapter Q, SS335.471-335.480," the City of Austin reserves the right to request that Contractor provide any information related to the above stated laws and regulation within forty-eight (48) hours of the request.

9. **LIVING WAGES:**

The City's Living Wage Program, Rule R161-17.14, is located at:
http://www.austintexas.gov/edims/document.cfm?id=277854

A. The minimum wage required for all Contractor Employees (and all tiers of Subcontracting) directly assigned to this City Contract is $14.00 per hour, unless Published Wage Rates are included in this

solicitation. In addition, the City may stipulate higher wage rates in certain solicitations in order to assure quality and continuity of service.

B. The City requires Contractors submitting Offers on this Contract to provide a certification **(see the Living Wages Contractor Certification included in the Solicitation**) with their Offer certifying that all Contractor Employees (and all tiers of Subcontracting) directly assigned to this City Contract will be paid a minimum living wage equal to or greater than $14.00 per hour. The certification shall include a list of all Contractor Employees (and all tiers of Subcontracting) directly assigned to providing services under the resultant contract including their name and job title. The list shall be updated and provided to the City as necessary throughout the term of the Contract.

C. The Contractor shall maintain throughout the term of the resultant contract basic employment and wage information for each employee as required by the Fair Labor Standards Act (FLSA).

D. The Contractor shall provide to the Department's assigned Contract Manager with the first invoice, individual Employee Certifications for all Contractor Employees (and all tiers of Subcontracting) directly assigned to the contract. The City reserves the right to request individual Employee Certifications at any time during the contract term. Employee Certifications shall be signed by each Contractor Employee (and all tiers of Subcontracting) directly assigned to the contract. The Employee Certification form is available on-line at https://www.austintexas.gov/financeonline/vendor_connection/index.cfm.

E. Contractor shall submit employee certifications for Contractor Employees (and all tiers of Subcontracting) annually on the anniversary date of contract award with the respective invoice to verify that employees are paid the Living Wage throughout the term of the contract. The Employee Certification Forms shall be submitted for Contractor Employees (and all tiers of Subcontracting) added to the contract and/or to report any employee changes as they occur.

F. The Department's assigned Contract Manager will periodically review the employee data submitted by the Contractor to verify compliance with this Living Wage provision. The City retains the right to review employee records required in paragraph C above to verify compliance with this provision.

10. **NON-COLLUSION, NON-CONFLICT OF INTEREST, AND ANTI-LOBBYING:**

A. On November 10, 2011, the Austin City Council adopted Ordinance No. 20111110-052 amending Chapter 2.7, Article 6 of the City Code relating to Anti-Lobbying and Procurement. The policy defined in this Code applies to Solicitations for goods and/or services requiring City Council approval under City Charter Article VII, Section 15 (Purchase Procedures). During the No-Contact Period, Offerors or potential Offerors are prohibited from making a representation to anyone other than the Authorized Contact Person in the Solicitation as the contact for questions and comments regarding the Solicitation.

B. If during the No-Contact Period an Offeror makes a representation to anyone other than the Authorized Contact Person for the Solicitation, the Offeror's Offer is disqualified from further consideration except as permitted in the Ordinance.

C. If an Offeror has been disqualified under this article more than two times in a sixty (60) month period, the Purchasing Officer shall debar the Offeror from doing business with the City for a period not to exceed three (3) years, provided the Offeror is given written notice and a hearing in advance of the debarment.

D. The City requires Offerors submitting Offers on this Solicitation to certify that the Offeror has not in any way directly or indirectly made representations to anyone other than the Authorized Contact Person during the No-Contact Period as defined in the Ordinance. The text of the City Ordinance is posted on the Internet at: http://www.ci.austin.tx.us/edims/document.cfm?id=161145

11. **MONTHLY SUBCONTRACT AWARDS AND EXPENDITURES REPORT:** (reference paragraph 18 in Section 0300) (applicable when an MBE/WBE Compliance Plan is required)

A. The Contractor must submit a monthly Subcontract Awards and Expenditures Report to the Contract Manager(s) specified herein and to the Purchasing Office Contract Compliance Manager no later than the tenth calendar day of each month.

B. Mail the Purchasing Office Copy of the report to the following address:

City of Austin
Purchasing Office
Attn: Contract Compliance Manager
P. O. Box 1088
Austin, Texas 78767

12. **ECONOMIC PRICE ADJUSTMENT:**

A. **Price Adjustments:** Prices shown in this Contract shall remain firm for the first twelve (12) months of the Contract. After that, in recognition of the potential for fluctuation of the Contractor's cost, a price adjustment (increase or decrease) may be requested by either the City or the Contractor on the anniversary date of the Contract or as may otherwise be specified herein. The percentage change between the contract price and the requested price shall not exceed the percentage change between the specified index in effect on the date the solicitation closed and the most recent, non-preliminary data at the time the price adjustment is requested. The requested price adjustment shall not exceed fifteen percent (15%) for any single line item and in no event shall the total amount of the contract be automatically adjusted as a result of the change in one or more line items made pursuant to this provision. Prices for products or services unaffected by verifiable cost trends shall not be subject to adjustment.

B. **Effective Date:** Approved price adjustments will go into effect on the first day of the upcoming renewal period or anniversary date of contract award and remain in effect until contract expiration unless changed by subsequent amendment.

C. **Adjustments:** A request for price adjustment must be made in writing and submitted to the other Party prior to the yearly anniversary date of the Contract; adjustments may only be considered at that time unless otherwise specified herein. Requested adjustments must be solely for the purpose of accommodating changes in the Contractor's direct costs. Contractor shall provide an updated price listing once agreed to adjustment(s) have been approved by the parties.

D. **Indexes:** In most cases an index from the Bureau of Labor Standards (BLS) will be utilized; however, if there is more appropriate, industry recognized standard then that index may be selected.

i. The following definitions apply:
(1) **Base Period:** Month and year of the original contracted price (the solicitation close date).
(2) **Base Price:** Initial price quoted, proposed and/or contracted per unit of measure.
(3) **Adjusted Price:** Base Price after it has been adjusted in accordance with the applicable index change and instructions provided.

(4) **Change Factor:** The multiplier utilized to adjust the Base Price to the Adjusted Price.
(5) **Weight %:** The percent of the Base Price subject to adjustment based on an index change.

ii. **Adjustment-Request Review:** Each adjustment-request received will be reviewed and compared to changes in the index(es) identified below. Where applicable:
(1) Utilize final Compilation data instead of Preliminary data
(2) If the referenced index is no longer available shift up to the next higher category index.

iii. **Index Identification:** Complete table as they may apply.

Weight % of Base Price: 99%	
Database Name: Producer Price Index	
Series ID: pcu3241213241210	
☒ Not Seasonally Adjusted	☐ Seasonally Adjusted
Geographical Area: United States	
Description of Series ID: Asphalt paving mixtures & blocks	
This Index shall apply to the following items of the Bid Sheet : All	

Weight % of Base Price: 1%	
Database Name: Producer Price Index	
Series ID: pcu484110484110	
☒ Not Seasonally Adjusted	☐ Seasonally Adjusted
Geographical Area: United States	
Description of Series ID: General freight trucking, local	
This Index shall apply to the following items of the Bid Sheet: 2,4,5	

E. **Calculation:** Price adjustment will be calculated as follows:

Composite Indexes: Based on one or more weighted indexes reflecting pricing elements of a good or service. The weighted percentage for each index is defined in D iii. above.

For Each Index: Index at the time of calculation
Divided by each Index on solicitation close date
Equals change factor for each index
Multiply each Base Price of relevant line items by the percentage of price attributed to each index = weighted price
Multiply weighted price by change factor for each index
Equals the Adjusted Price for the portion of the Base Price subject to each Index
Add all adjusted prices for each item together
Equals Adjusted Price for each item

F. If the requested adjustment is not supported by the referenced index, the City, at its sole discretion, may consider approving an adjustment on fully documented market increases.

13. **INTERLOCAL PURCHASING AGREEMENTS:** (applicable to competitively procured goods/services contracts).

A. The City has entered into Interlocal Purchasing Agreements with other governmental entities, pursuant to the Interlocal Cooperation Act, Chapter 791 of the Texas Government Code. The Contractor agrees to offer the same prices and terms and conditions to other eligible governmental agencies that have an interlocal agreement with the City.

B. The City does not accept any responsibility or liability for the purchases by other governmental agencies through an interlocal cooperative agreement.

14. **CONTRACT MANAGER:** The following person(s) are designated as Contract Manager, and will act as the contact point between the City and the Contractor during the term of the Contract:

Darrell Richmond – AUSTIN WATER
512-972-0313
Darrell.Ricmond@austintexas.gov

Josephine Archer – WATERSHED PROTECTION
512-974-9735
Josephine.Archer@austintexas.gov

Lisa Escobedo – PUBLIC WORKS
512-974-8758
Lisa.Escobedo@austintexas.gov

Tyler Steinbarger – PUBLIC WORKS
512-974-8720
Tyler.Steinbarger@austintexas.gov

*Note: The above listed Contract Manager is not the authorized Contact Person for purposes of the **NON-COLLUSION, NON-CONFLICT OF INTEREST, AND ANTI-LOBBYING Provision** of this Section; and therefore, contact with the Contract Manager is prohibited during the no contact period.

Specifications

SOLICITATION NO. IFB 2200 MDP0261
Description: Hot Mix Asphaltic Concrete

1.0 PURPOSE

The City seeks Contractor(s) who meet the minimum requirements for Hot Mix–Cold Laid Asphaltic Concrete Material and Hot Mix Asphaltic Concrete (HMAC) Type B, C, C-SBS Polymer, & D to include H.M.A.C. with RAP and Warm Mixes. The material will be used for temporary pothole patching, street pavement repairs, street maintenance repairs, and street paving projects within the City of Austin.

2.0 BACKGROUND

Currently, the City has two contracts for HMAC, a primary and an alternate. If the primary vendor is unable to meet the ordering quantities when the order is placed, the City places an order with the alternate vendor. For the purposes of this new solicitation, only one solicitation will be issued for both the primary and alternate contract awards.

By submitting a bid, bidders acknowledge that if awarded the primary contract, they are not eligible for the alternate contract and agree to the same terms and conditions for both contracts. For the new contract, if the primary vendor is unable to meet the ordering quantities when the order is placed, the City will place the order with the alternate vendor.

Just to note, the historical spend on the alternate contract has been approximately $120,000 total since June 2012.

3.0 APPLICABLE SPECIFICATIONS

3.1 Hot Mix – Cold Laid Asphaltic Concrete **"Cold Mix"** shall meet the requirements of the following specification:

3.1.1 Texas Department of Transportation's 2004 Standard Specification for Construction and Maintenance of Highways, Streets, and Bridges, item 334, Hot Mix – Cold Laid Asphaltic Concrete Pavement, sections 334.1 through 334.5, Type D.

3.1.1.1 **Cold Mix Asphalt Summer Grade (CMA-SG).** Use only aggregate gradations II and III to produce CMA-SG. Use an asphaltic material to produce CMA-SG in accordance with Table 5. (ATTACHMENT #1)

3.1.1.2 **Cold Mix Winter-Grade (CMA-WG).** Use only aggregate gradations II and III to produce CMA-WG. Use an asphaltic material to produce CMA-WG in accordance with Table 6. (ATTACHMENT #2)

3.1.2 TxDOT DMS Section 3. 9202 Asphaltic Concrete Patching Materials (stockpile storage). (ATTACHMENT #3)

3.2 Hot Mix Asphaltic Concrete (HMAC) types provided shall meet the applicable requirements of the following specifications:

3.2.1 Item No. 301S Asphalt, Oils and Emulsions of the City of Austin Special Specifications, dated August 20, 2007. (ATTACHMENT #4)

3.2.2 Item No. 340S Hot Mix Asphaltic Concrete Pavement of the City of Austin Standard Specification dated July 1, 2009. (ATTACHMENT #5)

3.2.3 Item No. SP340S Dense-Graded Hot-Mix (QC/QA) of the City of Austin, dated April 02, 2018. (ATTACHMENT #6)

4.0 GENERAL REQUIREMENTS

4.1 The materials provided shall be subject to standard laboratory tests by the City's contracted testing laboratory. Materials that do not meet the specification requirements shall be rejected and no payment will be made.

4.2 The Contractor shall supply HMAC at an asphalt plant located within a twenty-five (25) mile radius of the State of Texas Capitol Building.

4.3 The submittal requirements of the bid should include:

A. A mix design submittal including the plant corrected Job Mix Formula (JMF) for the hot mix asphaltic concrete.

B. Certification that the aggregate materials meet appropriate quality requirements.

C. Particle size gradation and specific gravity tests on all aggregate materials.

D. Certification that the asphalt cements for paving materials meets appropriate quality materials.

4.4 All HMAC supplied shall be subject to standard laboratory tests by the City's contracted testing laboratory. HMAC that does not meet the City specifications shall be subject to the Pay Adjustment Acceptance schedule provided within in the City's Attachment Number 2 of Specifications, page 12, number 340S.12 "Acceptance Plan."

4.5 Special Specification – HMAC Type D –Thin Lift Mix shall include the following specifications:

A. Materials, Aggregate.

Warm mix additives may be used for thin lift mixes; however, NO RAP or RAS will be allowed in this thin lift mixture.

B. Materials, Asphalt Material, Paving Mixture.

Asphalt cement for paving mixture SS340-Type D THIN shall include a polymer modifier and conform to the requirements of AC-45P or PG76-22S.

C. Paving Mixtures, Types.

A new type designated "D-Thin" is hereby created for thin lift overlays of around 1" in thickness. And although TxDOT mixes are occasionally accepted in lieu of the City of Austin specified materials; absolutely no ¾" rock will be allowed in a Type D-thin mixture. While this requirement is already consistent with our normal City of Austin specification gradation, we note that the TxDOT specification allows up to 2% of the ¾" rock which will not be accepted in this 1" thin lift mixture.

5.0 CONTRACTOR REQUIREMENTS

5.1 Materials picked up shall be weighed on a State of Texas certified scale for basis of payment. Weigh ticket or receipt for pick-up orders shall be included with the invoice for that pick-up.

5.2 For Hot Mix Cold-Laid Asphaltic Concrete material, the Contractor shall have a material **pick-up** site location within two (2) miles of the limits of the City of Austin, Texas. Pick-up site shall be served by an all-weather roadway.

6.0 MATERIAL SAFETY DATA SHEET REQIREMENTS

6.1 **Most Current SDS for Contracts for Supply of Hazardous Chemicals**: With respect to all contracts under which the Contractor will deliver a "hazardous material" for which a “Safety Data Sheet” (“SDS”) is required under Texas Health & Safety Code, Sec. 502.006, as amended, the Contractor will provide, on or before the date of each delivery of the hazardous material, an electronic version of the most current "Safety Data Sheet" meeting the requirements set forth in Sec. 502.006, Texas Health & Safety Code. Each SDS provided shall bear the date when it was last revised.

6.2 The Contractor shall submit the required electronic copy of the SDS to the following City internet address: awumsds@austintexas.gov

6.3 Contractor’s failure to provide the City with the required electronic copy of the Safety Data Sheet on or before the date of each delivery of the hazardous material may constitute grounds for termination of the contract and may result in debarment from further participation in the City's procurement processes or other legal actions.

7.0 MATERIAL ORDERING REQUIREMENTS

HMAC Type B, C, C-SBS Polymer, & D to include HMAC with RAP and Warm Mixes:

7.1 **Weekly Forecast** – The City will provide a weekly HMAC forecast to the Contractor by 12:00 PM on Fridays for the upcoming week’s HMAC requirements. The forecast is the estimated usage and is subject to change depending on weather, project priority, labor availability, and equipment downtime. The City will notify the Contractor to confirm, add, or delete orders in the event of inclement weather.

7.2 **Next Day Order** – HMAC orders for the following day will be faxed or called into the Contractor by the City by 3:00 PM the preceding day. Weekend and Monday orders will be faxed or called into the Contractor by the City by 10:00 AM on the preceding Thursday. The City will call the Contractor same day to verify that the order was received and the material can be provided as requested. Thereafter, the Contractor shall be responsible for notifying the City when delays or unavailability of hot mix orders occur. Notification to the City shall be made by 4:00 PM same day.

7.3 The Contractor shall have the HMAC materials available for pick-up at the plant during the following normal working hours and days:

- Monday through Saturday 6:30 AM to 4:30 PM
- Sunday pick-up shall be available with three (3) working days advance notice.
- Pick-Up after normal working hours shall be available with two (2) working days advance notice.

7.4 There shall be no penalty for minimum order quantity for HMAC when the type of mix requested is already being produced. A forecast estimate will be provided to assist the Contractor in planning material requirements/usage; however, Hot Mix shall be made available on an as needed basis (in excess of the projected forecast in order to complete a project within stated normal working hours). The HMAC material shall be measured by the ton, (2000) pounds of the type actually picked up at the plant.

7.5 The Contractor shall provide Hot Mix service as outlined in the requirements below to ensure efficient and prompt service:

7.5.1 HMAC is currently batched and stored in the silo.

7.5.2 HMAC pickup shall be received in the order of vehicle arrival if the type of HMAC is currently being processed.

7.5.3 Once in line, City vehicles shall not be removed from the order in which they arrive. The City shall not provide payment for HMAC orders placed (confirmed) and not picked up due to the City vehicle(s) being removed from the waiting line, due to plant operations breakdown, or due to waiting periods longer than 30 minutes after arrival.

7.5.4 As part of bid submittal requirements, the City requests information for any and all additional costs associated with plant start-up and/or hourly fees for HMAC production after normal working hours and on Sundays.

8.0 CONTRACT ADMINISTRATION

8.1 Upon the City's request, Contractor shall participate in Coordination Meetings at a time and place mutually agreed upon.

BID SHEET
CITY OF AUSTIN
HOT MIX ASPHALTIC CONCRETE

SOLICITATION NO.: IFB 2200 MDP0261

BUYER: Michelle Pearson

Special Instructions: Offerors must use this Bid Sheet to submit pricing. Be advised that altering the bid sheet or taking exceptions to any portion of the solicitation may jeopardize acceptance of your Offer.

The quantities noted below are estimates and not a guarantee of actual volume. The City does not guarantee the purchase of the quantities listed, actual purchases may be more or less. Quantities are provided as a guide based on historical or anticipated usage. Order quantities will be as-needed and specified by the City for each order.

A bid of "0" (zero) will be interpreted by the City as a no-charge (free) item and the City will not expect to pay for that item. A bid of "no bid" or no response (space left blank) will be interpreted by the City that the Offeror does not wish to bid on that item. Be advised, a "no bid" or no response may be considered as non-responsive and may result in disqualification of the bid.

Prices offered on the bid sheet shall be all inclusive of fees not expressly allowed in Section 0500. The Offeror shall not charge separately for administrative, overhead, per diem, and shipping or transportation costs (travel time, fuel surcharges, mileage, stop-fee, etc.) to deliver services or items to the Austin, Texas area. The Offeror shall provide all tools, labor, travel, and equipment necessary to perform the services required under this contract.

The City reserves the right to make an award based on overall low cost or mulitiple awards based on individual or categories/groups of specific line items, cost, or any criteria or combination deemed most advantageous to the City.

CATEGORY 1 - SPECIFIED ITEMS FOR PICK-UP * PRIMARY CONTRACT ***

ITEM NO.	ITEM DESCRIPTION	UNIT OF MEASURE	ESTIMATED ANNUAL QUANTITY	UNIT PRICE	EXTENDED PRICE
1.1	HOT MIX COLD LAID ASPHALTIC CONCRETE IN ACCORDANCE WITH SECTION 0500 SPECIFICATIONS MFG. NAME & NO. Industrial Asphalt, LLC. 1.1039	TONS	5,000	$49.00	$245,000.00
1.2	Hot Mix Cold Laid Summer-Grade Type D, as per the attached Specification in Section 0500	TONS	375	$49.00	$18,375.00
1.3	Hot Mix Cold Laid Winter-Grade Type D, as per the attached Specification in Section 0500	TONS	125	$49.00	$6,125.00
1.4	SP 340 HMAC Type B	TONS	5,000	$40.00	$200,000.00
1.5	HMAC Type B SBS Polymer Modified - 5% Polymer (Item 340)	TONS	5,000	$50.00	$250,000.00
1.6	HMAC Type C (unmodified Item 340)	TONS	8,000	$51.50	$412,000.00
1.7	SP 340 HMAC Type C	TONS	10,000	$45.00	$450,000.00
1.8	WMA (Warm Mix) Type C (Item 340 with WMA additive)	TONS	6,500	$46.00	$299,00.00
1.9	HMAC Type C SBS Polymer Modified (unmodified Item 340)	TONS	12,500	$57.00	$712,500.00
1. 10	HMAC Type D (unmodified Item 340)	TONS	15,000	$53.50	$802,500.00
1.11	SP 340 HMAC Type D	TONS	45,000	$47.00	$2,115,000.00
1.12	WMA (Warm Mix) Type D (Item 340 with WMA additive)	TONS	16,500	$48.00	$792,000.00
1.13	HMAC Type D SBS Polymer Modified (unmodified Item 340)	TONS	12,500	$58.00	$725,000.00
1.14	HMAC Type D-Thin Special Specification	TONS	5,000	$53.50	$267,500.00
1.15	HMAC Type D-AR Thin Special Specification - Rubber Modified	TONS	5,000	$56.00	$280,000.00
				TOTAL =	$7,575,000.00

CATEGORY 2 - SPECIFIED ITEMS FOR DELIVERY * PRIMARY CONTRACT ***

ITEM NO.	ITEM DESCRIPTION	UNIT OF MEASURE	ESTIMATED ANNUAL QUANTITY	UNIT PRICE	EXTENDED PRICE

2.1	HOT MIX COLD LAID ASPHALTIC CONCRETE FOR DELIVERY MFG. NAME & NO. Industrial Asphalt, LLC. 1.1039	TONS	3,600	$61.00	$219,600.00
				TOTAL =	$219,600.00
				TOTAL EXTENDED PRICE FOR CATEGORIES 1 THRU 2 =	$7,794,600.00

CATEGORY 3 - SPECIFIED ITEMS FOR PICK-UP *** ALTERNATE CONTRACT ***					
ITEM NO.	ITEM DESCRIPTION	UNIT OF MEASURE	ESTIMATED ANNUAL QUANTITY	UNIT PRICE	EXTENDED PRICE
3.1	HOT MIX COLD LAID ASPHALTIC CONCRETE IN ACCORDANCE WITH SECTION 0500 SPECIFICATIONS MFG. NAME & NO. Industrial Asphalt, LLC. 1.1039	TONS	5,000	$50.00	$250,000.00
3.2	Hot Mix Cold Laid Summer-Grade Type D, as per the attached Specification in Section 0500	TONS	375	$50.00	$18,750.00
3.3	Hot Mix Cold Laid Winter-Grade Type D, as per the attached Specification in Section 0500	TONS	125	$50.00	$6,250.00
3.4	SP 340 HMAC Type B	TONS	5,000	$41.00	$205,000.00
3.5	HMAC Type B SBS Polymer Modified - 5% Polymer (Item 340)	TONS	5,000	$51.00	$255,000.00
3.6	HMAC Type C (unmodified Item 340)	TONS	8,000	$53.00	$424,000.00
3.7	SP 340 HMAC Type C	TONS	10,000	$46.00	$460,000.00
3.8	WMA (Warm Mix) Type C (Item 340 with WMA additive)	TONS	6,500	$47.00	$305,500.00
3.9	HMAC Type C SBS Polymer Modified (unmodified Item 340)	TONS	12,500	$58.00	$725,000.00
3. 10	HMAC Type D (unmodified Item 340)	TONS	15,000	$55.00	$825,000.00
3.11	SP 340 HMAC Type D	TONS	45,000	$48.00	$2,160,000.00
3.12	WMA (Warm Mix) Type D (Item 340 with WMA additive)	TONS	16,500	$49.00	$808,500.00
3.13	HMAC Type D SBS Polymer Modified (unmodified Item 340)	TONS	12,500	$60.00	$750,000.00
3.14	HMAC Type D-Thin Special Specification	TONS	5,000	$55.00	$275,000.00
3.15	HMAC Type D-AR Thin Special Specification - Rubber Modified	TONS	5,000	$58.00	$290,000.00
				TOTAL =	$7,758,000.00

CATEGORY 4 - SPECIFIED ITEMS FOR DELIVERY *** ALTERNATE CONTRACT ***					
ITEM NO.	ITEM DESCRIPTION	UNIT OF MEASURE	ESTIMATED ANNUAL QUANTITY	UNIT PRICE	EXTENDED PRICE
4.1	HOT MIX COLD LAID ASPHALTIC CONCRETE FOR DELIVERY MFG. NAME & NO. Industrial Asphalt, LLC. 1.1039	TONS	3,600	$62.00	$223,200.00
				TOTAL =	$223,200.00
				TOTAL EXTENDED PRICE FOR CATEGORIES 3 THRU 4 =	$7,981,000.00

CATEGORY 5 - ADDITIONAL PRODUCTS

The City reserves the right to purchase and add additional items not specified above to the contract. The percentage discount shall be the minimum discount offered for the category line throughout the term of the contract including any subsequent extension options, and are not subject to change. The invoice prices for these materials shall be based off the discount as indicated below. The percentage discount given should take into all costs (administrative, overhead, shipping charges, etc.). These costs shall be factored into the discount and shall not be paid separately.

Information in this Category will not be evaluated, and the City does not guarantee the purchase of any additional services.

ITEM NO.	ITEM DESCRIPTION	MINIMUM PERCENT DISCOUNT
5.1	Not Specified Mix(es) TXDOT	2.5%
ITEM NO.	**ITEM DESCRIPTION**	**PRICE**
5.2	Hourly Rate after 4:30 PM Monday - Saturday	$200.00
5.3	Start-Up Cost After 4:30 PM Monday - Saturday	$1000.00
5.4	Hourly Rate 7:30 AM - 4:30 PM Sundays	$200.00
5.5	Start-Up Cost 7:30 AM - 4:30 PM Sundays	$1000.00
5.6	Hot Mix Cold Laid Summer-Grade Type D (as per the attached Specification in Section 0500) per ton, delivered	$62.00
5.7	Hot Mix Cold Laid Winter-Grade Type D (as per the attached Specification in Section 0500) per ton, delivered	$62.00

BID SUBMITTAL REQUIREMENTS (CHECK TO CONFIRM INCLUDED WITH BID):

REFERENCE SECTION 3.2.2 (A, B, C, D) IN SECTION 0500 SPECIFICATIONS

- ✓ MIX DESIGN WITH PLANT CORRECTED JMF FOR HOT MIX
- ✓ CERTIFICATION OF QUALITY REQUIREMENTS FOR AGGREGATE MATERIALS
- ✓ PARTICLE SIZE GRADUATION & SPECIFIC GRAVITY TESTS ON ALL
- ✓ CERTIFICATION OF QUALITY REQUIREMENTS FOR ASPHALT CEMENTS FOR PAVING

COMPANY NAME:	Industrial Asphalt, LLC.
EMAIL ADDRESS:	Robert.Sutton@austinmaterials.com

Section 0605: Local Business Presence Identification

A firm (Offeror or Subcontractor) is considered to have a Local Business Presence if the firm is headquartered in the Austin Corporate City Limits, or has a branch office located in the Austin Corporate City Limits in operation for the last five (5) years, currently employs residents of the City of Austin, Texas, and will use employees that reside in the City of Austin, Texas, to support this Contract. The City defines headquarters as the administrative center where most of the important functions and full responsibility for managing and coordinating the business activities of the firm are located. The City defines branch office as a smaller, remotely located office that is separate from a firm's headquarters that offers the services requested and required under this solicitation.

OFFEROR MUST SUBMIT THE FOLLOWING INFORMATION FOR EACH LOCAL BUSINESS (INCLUDING THE OFFEROR, IF APPLICABLE) TO BE CONSIDERED FOR LOCAL PRESENCE.

NOTE: ALL FIRMS MUST BE IDENTIFIED ON THE MBE/WBE COMPLIANCE PLAN OR NO GOALS UTILIZATION PLAN (REFERENCE SECTION 0900).

USE ADDITIONAL PAGES AS NECESSARY

OFFEROR:

Name of Local Firm	Industrial Asphalt, LLC.	
Physical Address	9020 N Capital of TX HWY Bldg 2 Ste 250 Austin , Texas 78759	
Is your headquarters located in the Corporate City Limits? (circle one)	Yes	No
or		
Has your branch office been located in the Corporate City Limits for the last 5 years?	Yes	No
Will your business be providing additional economic development opportunities created by the contract award? (e.g., hiring, or employing residents of the City of Austin or increasing tax revenue?)	Yes	No

SUBCONTRACTOR(S):

Name of Local Firm	Juan DeAnda Trucking, LLC.	
Physical Address	5101 HWY 21 Maxwell, Texas 78656	
Is your headquarters located in the Corporate City Limits? (circle one)	Yes	No
or		
Has your branch office been located in the Corporate City Limits for the last 5 years	Yes	No

Will your business be providing additional economic development opportunities created by the contract award? (e.g., hiring, or employing residents of the City of Austin or increasing tax revenue?)	Yes	No

SUBCONTRACTOR(S):

Name of Local Firm		
Physical Address		
Is your headquarters located in the Corporate City Limits? (circle one)	Yes	No
or		
Has your branch office been located in the Corporate City Limits for the last 5 years	Yes	No
Will your business be providing additional economic development opportunities created by the contract award? (e.g., hiring, or employing residents of the City of Austin or increasing tax revenue?)	Yes	No

Section 0700: Reference Sheet

Responding Company Name Industrial Asphalt, LLC.

The City at its discretion may check references in order to determine the Offeror's experience and ability to provide the products and/or services described in this Solicitation. The Offeror shall furnish at least 3 complete and verifiable references. References shall consist of customers to whom the offeror has provided the same or similar services within the last 5 years. References shall indicate a record of positive past performance.

1. Company's Name Smith Paving
   Name and Title of Contact Casey Smith, President
   Project Name Panorama Ranch
   Present Address 501 Thompson Lane
   City, State, Zip Code Austin, Texas 7874
   Telephone Number (512) 233-4444 Fax Number (512) 208-4454
   Email Address Smithpaving99@yahoo.com

2. Company's Name Hays County transportation Department
   Name and Title of Contact Severa Pindea Valdez, Purchasing Agent
   Project Name Highroad/ PO#2018-1507
   Present Address 217 Yarrington Road
   City, State, Zip Code San Marcos, Texas 78666
   Telephone Number (512) 393-2174 Fax Number ( )
   Email Address Severa.pindea@co.hays.tx.us

3. Company's Name Travis County Bridge and Road
   Name and Title of Contact Wade Laursen, Purchasing Agent
   Project Name PO#4100104877
   Present Address 700 Lavaca Street, 8th Floor
   City, State, Zip Code Austin, Texas 78701
   Telephone Number (512) 854-1185 Fax Number ( )
   Email Address Wade.laursen@traviscountytx.gov

City of Austin, Texas
Section 0800
NON-DISCRIMINATION AND NON-RETALIATION CERTIFICATION

City of Austin, Texas

Equal Employment/Fair Housing Office

To: City of Austin, Texas,

I hereby certify that our firm complies with the Code of the City of Austin, Section 5-4-2 as reiterated below, and agrees:

(1) Not to engage in any discriminatory employment practice defined in this chapter.

(2) To take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without discrimination being practiced against them as defined in this chapter, including affirmative action relative to employment, promotion, demotion or transfer, recruitment or recruitment advertising, layoff or termination, rate of pay or other forms of compensation, and selection for training or any other terms, conditions or privileges of employment.

(3) To post in conspicuous places, available to employees and applicants for employment, notices to be provided by the Equal Employment/Fair Housing Office setting forth the provisions of this chapter.

(4) To state in all solicitations or advertisements for employees placed by or on behalf of the Contractor, that all qualified applicants will receive consideration for employment without regard to race, creed, color, religion, national origin, sexual orientation, gender identity, disability, sex or age.

(5) To obtain a written statement from any labor union or labor organization furnishing labor or service to Contractors in which said union or organization has agreed not to engage in any discriminatory employment practices as defined in this chapter and to take affirmative action to implement policies and provisions of this chapter.

(6) To cooperate fully with City and the Equal Employment/Fair Housing Office in connection with any investigation or conciliation effort of the Equal Employment/Fair Housing Office to ensure that the purpose of the provisions against discriminatory employment practices are being carried out.

(7) To require of all subcontractors having 15 or more employees who hold any subcontract providing for the expenditure of $2,000 or more in connection with any contract with the City subject to the terms of this chapter that they do not engage in any discriminatory employment practice as defined in this chapter

For the purposes of this Offer and any resulting Contract, Contractor adopts the provisions of the City's Minimum Standard Non-Discrimination and Non-Retaliation Policy set forth below.

City of Austin
Minimum Standard Non-Discrimination and Non-Retaliation in Employment Policy

As an Equal Employment Opportunity (EEO) employer, the Contractor will conduct its personnel activities in accordance with established federal, state and local EEO laws and regulations.

The Contractor will not discriminate against any applicant or employee based on race, creed, color, national origin, sex, age, religion, veteran status, gender identity, disability, or sexual orientation. This policy covers all aspects of employment, including hiring, placement, upgrading, transfer, demotion, recruitment, recruitment advertising, selection for training and apprenticeship, rates of pay or other forms of compensation, and layoff or termination.

The Contractor agrees to prohibit retaliation, discharge or otherwise discrimination against any employee or applicant for employment who has inquired about, discussed or disclosed their compensation.

Further, employees who experience discrimination, sexual harassment, or another form of harassment should immediately report it to their supervisor. If this is not a suitable avenue for addressing their compliant, employees are advised to contact another member of management or their human resources representative. No employee shall be discriminated against, harassed, intimidated, nor suffer any reprisal as a result of reporting a violation of this policy. Furthermore, any employee, supervisor, or manager who becomes aware of any such discrimination

or harassment should immediately report it to executive management or the human resources office to ensure that such conduct does not continue.

Contractor agrees that to the extent of any inconsistency, omission, or conflict with its current non-discrimination and non-retaliation employment policy, the Contractor has expressly adopted the provisions of the City's Minimum Non-Discrimination Policy contained in Section 5-4-2 of the City Code and set forth above, as the Contractor's Non-Discrimination Policy or as an amendment to such Policy and such provisions are intended to not only supplement the Contractor's policy, but will also supersede the Contractor's policy to the extent of any conflict.

UPON CONTRACT AWARD, THE CONTRACTOR SHALL PROVIDE THE CITY A COPY OF THE CONTRACTOR'S NON-DISCRIMINATION AND NON-RETALIATION POLICIES ON COMPANY LETTERHEAD, WHICH CONFORMS IN FORM, SCOPE, AND CONTENT TO THE CITY'S MINIMUM NON-DISCRIMINATION AND NON-RETALIATION POLICIES, AS SET FORTH HEREIN, **OR** THIS NON-DISCRIMINATION AND NON-RETALIATION POLICY, WHICH HAS BEEN ADOPTED BY THE CONTRACTOR FOR ALL PURPOSES WILL BE CONSIDERED THE CONTRACTOR'S NON-DISCRIMINATION AND NON-RETALIATION POLICY WITHOUT THE REQUIREMENT OF A SEPARATE SUBMITTAL.

Sanctions:

Our firm understands that non-compliance with Chapter 5-4 and the City's Non-Retaliation Policy may result in sanctions, including termination of the contract and suspension or debarment from participation in future City contracts until deemed compliant with the requirements of Chapter 5-4 and the Non-Retaliation Policy.

Term:

The Contractor agrees that this Section 0800 Non-Discrimination and Non-Retaliation Certificate of the Contractor's separate conforming policy, which the Contractor has executed and filed with the City, will remain in force and effect for one year from the date of filling. The Contractor further agrees that, in consideration of the receipt of continued Contract payment, the Contractor's Non-Discrimination and Non-Retaliation Policy will automatically renew from year-to-year for the term of the underlying Contract.

Dated this 5th day of July, 2018

CONTRACTOR Industrial Asphalt, LLC.

Authorized Signature

Title Sales Manager

Section 0835: Non-Resident Bidder Provisions

Company Name Industrial Asphalt , LLC.

A. Bidder must answer the following questions in accordance with Vernon's Texas Statues and Codes Annotated Government Code 2252.002, as amended:

Is the Bidder that is making and submitting this Bid a "Resident Bidder" or a "non-resident Bidder"?

Answer: Resident Bidder

(1) Texas Resident Bidder- A Bidder whose principle place of business is in Texas and includes a Contractor whose ultimate parent company or majority owner has its principal place of business in Texas.
(2) Nonresident Bidder- A Bidder who is not a Texas Resident Bidder.

B. If the Bidder id a "Nonresident Bidder" does the state, in which the Nonresident Bidder's principal place of business is located, have a law requiring a Nonresident Bidder of that state to bid a certain amount or percentage under the Bid of a Resident Bidder of that state in order for the nonresident Bidder of that state to be awarded a Contract on such bid in said state?

Answer: _____ Which State: _____

C. If the answer to Question B is "yes", then what amount or percentage must a Texas Resident Bidder bid under the bid price of a Resident Bidder of that state in order to be awarded a Contract on such bid in said state?

Answer: _____

CITY OF AUSTIN

CITY CODE CHAPTER 2-9D
COMMODITIES
MBE/WBE PROCUREMENT PROGRAM

Solicitation Name: Hot Mix Asphaltic Concrete

Solicitation Number: IFB 2200 MDP0261

Issue Date: 06/11/2018

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MBE/WBE GOALS

Annual/Project Participation Goals				Annual/Project Participation Subgoals		
MBE		%	OR	African American		%
WBE		%		Hispanic		%
Combined MBE/WBE	1.00	%		Asian/Native American	/	%
				WBE		%

OVERVIEW

This document should be read in conjunction with the City of Austin's Minority-owned and Women-owned Business Enterprise Procurement Program Ordinance for Commodities (Chapter 2-9D of the Austin City Code) and the Small and Minority Business Resources Department (SMBR) Rules. The definitions contained in Chapter 2-9D apply to this document. The City Code and Rules are amended from time to time and the Bidder is responsible for ensuring they have the most up to date version. The City Code and Rules are incorporated into this document by reference. Copies of Chapter 2-9D and SMBR Rules may be obtained online at http://www.austintexas.gov/smbrdocuments or from SMBR, 4201 Ed Bluestein, Austin, Texas 78721 (512) 974-7600.

Firms or individuals submitting responses to this Invitation for Bid agree to abide by the City's Minority-owned and Women-owned Business Enterprise (MBE/WBE) Procurement Program and Rules. The City's MBE/WBE Program is intended (1) to promote and encourage MBEs and WBEs to participate in business opportunities with the City of Austin; (2) to afford MBEs and WBEs an equal opportunity to compete for work on City contracts; and (3) to encourage contractors to provide subcontracting opportunities to certified MBEs and WBEs by soliciting such Firm for subcontracting opportunities. The City of Austin and its contractors shall not discriminate on the basis of race, color, national origin, disability, or gender in the award and performance of contracts.

The City encourages Bidders to achieve the MBE/WBE participation goals and subgoals for this contract. However, Bidders may comply with the City Code and Rules without achieving the participation goals so long as they make and document Good Faith Efforts that would allow MBE and WBE participation per Section 2-9D-21 of the City Code and Section 9.1 of the Rules. Bidders that do not meet the project's goals and subgoals are subject to Good Faith Efforts review.

Prior to the due date and time specified in the City's solicitation documents, all Bidders (including those Firms certified as MBE/WBEs) shall submit: (1) an *MBE/WBE Compliance Plan* (Appendix A) and (2) if it is anticipated the project goals will not be met, all appropriate documentation to demonstrate Good Faith Efforts to meet the project goals. Any questions regarding preparation of the *MBE/WBE Compliance Plan* should be directed to SMBR at SMBRComplianceDocuments@austintexas.gov. Such contact is not a violation of the Anti-Lobbying Ordinance.

The City has implemented Anti-Lobbying Ordinance (Chapter 2-7 of the Austin City Code). Under Chapter 2-7, there is a "no-contact" period from the date the City issues a solicitation until the contract is executed. During the "no-contact" period, a person responding to a City solicitation can speak only to the contract's authorized contact person regarding their solicitation response. Chapter 2-7 allows certain exceptions; for instance, a person responding to a City solicitation may speak to SMBR regarding this *MBE/WBE Compliance Plan.* See the full language of the City Code or solicitation documents for further details.

MBE/WBE COMPLIANCE PLAN INSTRUCTIONS
(See Appendix A)

If the *MBE/WBE Compliance Plan* and Good Faith Efforts documentation are not submitted prior to the due date specified in the solicitation documents, the bid will be deemed non-responsive and not be accepted for consideration.

SMBR may request written clarification of items listed on the *MBE/WBE Compliance Plan.* However, there will be no further opportunity for the Bidder to augment the MBE/WBE participation originally listed in the *MBE/WBE Compliance Plan* or to demonstrate Good Faith Efforts that were not made prior to the submission of the *MBE/WBE Compliance Plan.* Changes to the *MBE/WBE Compliance Plan* are permitted only after contract execution and only with prior written approval of SMBR.

Please type or clearly print all information, use "none" or "N/A" where appropriate, and sign and date the *MBE/WBE Compliance Plan* as indicated. ***MBE/WBE Compliance Plans* not complying with the *MBE/WBE Compliance Plan* Instructions shall be rejected as non-responsive. Submissions not utilizing the forms provided with the solicitation may render the submission nonresponsive or noncompliant.**

Section I Project Identification and Goals

This section includes the pre-printed Project Name, Project/Solicitation Number, and goals and/or subgoals. The Bidder does not need to fill in any information under Section I.

Section II Bidder Information

The Bidder should complete this section with its information and sign in the space provided. The portion of Section II marked as "Reserved for City of Austin SMBR Only" should be left blank.

Section III MBE/WBE Compliance Plan Summary

This section is a summary of subcontractor participation for this Bid. Bidder should complete Sections IV-VII, described below, before attempting to complete Section III. After completing Sections IV-VII, calculate the percentage of MBE/WBE participation for each goal and enter the information in the blanks provided. Because Section III is a summary, if there are any inconsistencies between Sections IV-VII and Section III, the calculations contained in Sections IV-VII will prevail. If the Bidder indicates that they do not anticipate meeting the goals with certified MBE/WBE firms, then the Bidder shall submit documentation detailing their Good Faith Efforts to meet the established MBE/WBE goals. The MBE/WBE Compliance Plan will be reviewed and approved by the Small and Minority Business Resources Department.

Section IV Disclosure of MBE and WBE Subcontractors

Please list all certified MBE/WBEs subcontractors using the legal name under which they are registered to do business with the City of Austin and the value of the work they will be performing themselves except for subcontractor(s) that will be performing the trucking or hauling scope of work (see Section VII below). Do not include the value of work that the MBE/WBE's subcontractors will be subcontracting to second-level subcontractors. By listing certified MBE and WBE Firms on the MBE/WBE Compliance Plan, the Bidder indicates that both parties acknowledge the price and scope of work and that they are prepared to contract for that price and scope if the City awards the project to the Bidder. Unit price subcontracts are acceptable if appropriate to the type of work being performed. A Letter of Intent (LOI) does not replace a binding contract between a prime contractor and a subcontractor.

Before completing Section IV of the *MBE/WBE Compliance Plan*, please read the following instructions regarding how to count MBE/WBE participation:

(A) Only the value of the work actually performed by the MBE/WBE shall be counted toward the goals. This includes:

(1) work performed by the MBE/WBE's own forces;

(2) the cost of supplies, materials, or equipment purchased, leased, or otherwise obtained by the MBE/WBE for the work of the contract (except that supplies, materials, and equipment purchased or leased from the prime contractor or its affiliate may not be counted toward the goal); and

(3) fees or commissions charged by an MBE/WBE for providing a bona fide service, such as professional, technical, consultant, or managerial services, or for providing bonds or insurance specifically required for the performance of a contract, provided the fee is reasonable and not excessive as compared with fees customarily allowed for similar services.

(B) When a Bidder purchases supplies, materials, or equipment from an MBE/WBE, the cost of those supplies, materials, or equipment shall be counted toward the goals as follows:

(1) If the supplies, materials, or equipment are obtained from an MBE/WBE that is a Manufacturer or Regular Dealer, 100 percent of the payment for the supplies, materials, or equipment shall be counted toward the goals.

(2) If the supplies, materials, or equipment are obtained from an MBE/WBE that is neither a Manufacturer nor a Regular Dealer, the cost of the materials and supplies themselves shall not be counted toward the goals. However, fees or commissions charged for assistance in the procurement of the materials and supplies, or fees or transportation charges for the delivery of materials or supplies required on a job site, may be counted toward the goals if the payment of such fees is a customary industry practice and such fees are reasonable and not excessive as compared with fees customarily allowed for similar services.

(C) When an MBE/WBE subcontractor listed on the MBE/WBE Compliance Plan subcontracts part of the work of its contract to another Firm, the value of that second-level subcontracted work may not be counted toward the goals based on the initial subcontractor's MBE/WBE certification. Please see Section VI for an explanation of how to count the value of second-level subcontractors' work.

(D) A Firm owned by a minority woman may be certified as both an MBE and a WBE (dual certified). On a single contract, the value of the work performed by a dual certified subcontractor may not be counted toward both the MBE and the WBE goals. The Bidder must decide whether to designate the dual certified subcontractor as an MBE or a WBE in the MBE/WBE Compliance Plan for the purpose of meeting the goals set for that contract. That designation may not be changed for the duration of the contract.

(E) When an MBE/WBE performs as a participant in a certified Joint Venture, only the portion of the contract value that is the result of the distinct, clearly defined portion of the work that the MBE/WBE performs with its own forces and for which it is at risk shall be counted towards the project goals. For more specific information regarding requirements and evaluations of certified MBE/WBE Joint Ventures, please see the City's MBE/WBE Procurement Program Rules or contact SMBR's Certification Division.

(F) Only expenditures to an MBE/WBE contractor that is performing a Commercially Useful Function shall be counted toward the project goals. If SMBR makes an initial determination that an MBE/WBE is not

performing a Commercially Useful Function given the type of work involved and normal industry practices, the MBE/WBE may present evidence to rebut this presumption.

(G) To be counted toward project goals, MBE/WBEs must be certified by SMBR prior to the due date to submit the MBE/WBE Compliance Plan as specified in the City's solicitation documents. A Firm that is certified as an MBE/WBE at the time that the MBE/WBE Compliance Plan is filed may cease to be a certified Firm before the contract is completed. Only the value of the work performed by such a Firm while it is certified may be counted toward the project goals.

Section V Disclosure of Non-Certified Subcontractors

Please list all known non-certified subcontractors, using the legal name under which they are registered to do business with the City of Austin, to be used in the performance of this contract. If Bidder will not use any non-certified Firms, please write "N/A" in the first box on this page.

The scopes of work indicated in Section V will be considered subcontracting opportunities for MBEs and WBEs, unless it is demonstrated that certified MBEs or WBEs are unavailable or do not possess the requirements in the technical portion of the solicitation to perform the work involved. If Bidder did not meet the project goals, Bidder must explain in the space provided why MBEs/WBEs were not used as subcontractors and ***submit documentation for the stated reason if applicable.*** If Bidder did meet the project goals, please indicate "Goals Met" in the space provided.

Section VI Disclosure of Second-Level Subcontractors

Please complete this section if Bidders knows that one or more of Bidder's subcontractors will subcontract part of the work of their contracts to second-level subcontractors. In the last line of each entry box, please write the name of the first-level subcontractor that will be subcontracting work to the second-level subcontractor. Identify second-level subcontractors by the legal name under which they will be registered to do business with the City. The first-level subcontractor should be listed in Section IV or Section V. If Bidder is not aware of any second-level subcontractors, please write "N/A" in the first box on this page.

As discussed in Section IV above, when an MBE/WBE subcontractor subcontracts part of the work of its contract to another Firm, the value of that second-level subcontractor work may not be counted toward the goals based on the initial subcontractor's MBE/WBE certification. The value of the second-level subcontractor work may be counted toward the project goals only based on the second-level subcontractor's own MBE/WBE certification, if any. Work that an MBE/WBE subcontracts to a non-certified firm does not count toward the goals. Work that an MBE/WBE subcontractor contracts to another certified firm shall not be counted twice towards the goal.

Section VII Disclosure of Primary and Alternate Trucking Subcontractors

Please complete this section if the project includes trucking or hauling services as a scope of work. Each time this scope of work is required on the project, Bidder must contact the Firm listed as the primary trucking subcontractor in this section. If the primary trucking subcontractor is not available or cannot perform the entirety of the work at the time required, Bidder may contact the alternate trucking subcontractors in the order that Bidder lists them in this section. Identify primary and alternate trucking subcontractors by the legal name under which they will be registered to do business with the City. Bidder must contact the primary trucking subcontractor at least 24 hours before the work is to be performed. Bidder will not need to submit a Request for Change to use the alternate trucking subcontractors if Bidder contacted the primary trucking subcontractor first and then proceeded to contact the alternates in the order Bidder listed them on this section.

For purposes of meeting the project goals or subgoals at the MBE/WBE Compliance Plan stage, the entire value of this scope of work shall be assigned to the primary trucking subcontractor. At contract closeout, MBE/WBE participation will be counted based on the actual usage of the primary and alternate trucking subcontractors.

Section VIII MBE/WBE Compliance Plan Checklist

Please complete the *MBE/WBE Compliance Plan Checklist* with the information requested if the stated project goal(s) are not met.

GOOD FAITH EFFORTS INSTRUCTIONS
(See *Appendices B and D)*

The Bidder has a responsibility to make a portion of the work available to MBE/WBE subcontractors so as to facilitate meeting the goals or subgoals. If the Bidder cannot achieve the goals or subgoals, documentation of the Bidder's Good Faith Efforts to achieve the goals or subgoals must be submitted at the same time as the MBE/WBE Compliance Plan. The SMBR Director will review the documentation provided and determine if the Bidder made sufficient Good Faith Efforts. That there may be some additional costs involved in soliciting and using MBEs and WBEs is not a sufficient reason for a Bidder's failure to meet the goals and subgoals, as long as such costs are reasonable. However, a Bidder is not required to accept a higher quote from a subcontractor in order to meet a goal or subgoal.

Contacting Potential MBE/WBE Subcontractors

The City has determined the scopes of work for this project and provided an Availability List of all the MBE and WBE firms certified to perform those scopes. The *Availability List* (Appendix D) is included with the solicitation documents and has two sections: *Vendors Within the Significant Local Business Presence (SLBP) Area* and *Vendors Outside the Significant Local Business Presence (SLBP) Area*. As part of Good Faith Efforts, Bidders ***must*** contact ***all*** firms listed in the *Vendors Within the SLBP Area* section. Please note that every firm on the Availability List – outside the SLBP – is City-certified as an MBE or WBE for purposes of meeting the project goals, and Bidders are encouraged to contact all the firms. If a Bidder identifies an additional scope of work for this project not identified in the solicitation, the Bidder must request from SMBR an Availability List for that scope of work and contact all firms, if any, on such list. The SMBR Director determines whether the Bidder has made sufficient Good Faith Efforts if goals or subgoals are not met.

The City neither warrants the capacity or availability of any Firm, nor does the City guarantee the performance of any Firm indicated on the availability list.

The availability list is sorted in numerical sequence by National Institute of Governmental Purchasing (NIGP) Commodity Code. It includes all certified MBE/WBE vendors for the scopes of work identified by the City as being potentially applicable to this project. However, the availability list is not a comprehensive identification of all areas of potential subcontracting opportunities. If a Bidder identifies one or more work areas that are appropriate subcontracting opportunities that not included on the availability list, the Bidder shall contact SMBR to request the availability list for MBE and WBE Firms in those areas. Requests for supplemental availability lists will be evaluated as a part of the Bidder's Good Faith Efforts to meet the goals.

If the Bidder believes any of the work areas on the availability list are not applicable to the project's scope of work or if the Bidder believes that the lists are inaccurate, the Bidder shall notify the authorized contact person of the concern immediately and prior to submission of the response to the solicitation. All Bidders will be notified in writing of any inaccuracy by addendum to the solicitation. Concerns about a particular MBEs/WBE's certification status may be addressed to SMBR at SMBRComplianceDocuments@austintexas.gov. If the Bidder wants to use a certified subcontractor that does not appear on this list, Bidder may request from SMBR or visit https://www.ci.austin.tx.us/financeonline/vendor_connection/search/vendors/certvendor.cfm for proof of certification and the specific work areas for which the subcontractor has been certified.

Appendix B provides a format for collecting required information from the subcontractors on the *Availability List.* The information must be obtained at least seven (7) business days prior to the submission of the *MBE/WBE Compliance Plan*; alternate formats may be acceptable as long as they gather the same required information. Included with the solicitation documents is an alphabetized list containing the names and addresses of the MBE/WBE Firms listed on the Appendix D. This list is in label format and is designed to facilitate the printing of mailing labels.

The following codes are used on the availability lists:

F	Female	M	Male
AA/B	African American	H	Hispanic
A/NA	Asian/Native American	W/C	Caucasian
LOC	A firm's two-digit location code (e.g., SL or TX)	AU	Austin
SL	Significant Local Business Presence (SLBP)	TX	Outside SLBP
MBE	A firm certified as a Minority-owned Business Enterprise	WBE	A firm certified as a Woman-owned Business Enterprise
MWB	A firm certified as both a Minority-owned & Woman-owned Business Enterprise	WMB	A firm certified as both a Woman-owned & Minority-owned Business Enterprise
MWDB	A firm certified as a Minority-owned, Woman-owned, and Disadvantaged Business Enterprise	WMDB	A firm certified as a Woman-owned, Minority-owned, and Disadvantaged Business Enterprise

Good Faith Efforts Review

If goals are not met, SMBR will examine the *MBE/WBE Compliance Plan* and the Good Faith Efforts documentation submitted with the *MBE/WBE Compliance Plan* to ensure that the Bidder made Good Faith Efforts to meet the project goals or subgoals. In determining whether the Bidder has made Good Faith Efforts, SMBR will consider, at a minimum, the Bidder's efforts to do the following:

(A) Solicit certified MBE/WBE subcontractors with a Significant Local Business Presence (SLBP) and request a response from those interested subcontractors who believe they have the capability to perform the work of the contract through at least two reasonable, available, and verifiable means. The Bidder must solicit this interest more than seven (7) business days prior to submission of the *MBE/WBE Compliance Plan* to allow sufficient time for the MBEs or WBEs to respond. (The date bids/proposals are due to the City should not be included in the seven day solicitation criteria). The Bidder must state a specific and verifiable reason for not contacting each certified Firm with a significant local business presence.

(B) Provide interested MBEs/WBEs with adequate information about the plans, specifications, and requirements of the contract, including addenda, in a timely manner, to assist them in responding and submitting a proposal.

(C) Negotiate in good faith with interested MBEs/WBEs that have submitted bids/proposals to the Bidder. An MBE/WBE that has submitted a bid to a Bidder but has not been contacted within five (5) business days of submission of the bid may contact SMBR to request a meeting with the Bidder. Evidence of good faith negotiation includes the names, addresses, and telephone numbers of MBEs/WBEs that were considered; a description of the information provided regarding the plans and specifications for the work selected for subcontracting; and evidence as to why additional agreements could not be reached for MBEs/WBEs to perform the work. Bid shopping is prohibited.

(D) Select portions of the work to be performed by MBEs/WBEs in order to increase the likelihood that the MBE/WBE goals or subgoals will be met. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate MBE/WBE participation, even when the Bidder might otherwise prefer to perform these work items with its own forces.

(E) Publish solicitation notice in a local publication (i.e. newspaper, trade association publication, or via electronic/social media).

(F) Use the services of available community organizations; minority persons/women consultants' or groups in the applicable field for the type of work described in this solicitation; local, state, and federal minority persons/women business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of MBEs/WBEs.

(G) Seek guidance from SMBR on any questions regarding compliance with this section.

The following factors may also be considered by SMBR in determining compliance through good faith efforts; however, they are not intended to be a mandatory checklist, nor are they intended to be exclusive or exhaustive:

(A) Whether the Bidder made efforts to assist interested MBEs/WBEs in obtaining bonding, lines of credit, or insurance as required by the City or consultant.

(B) Whether the Bidder made efforts to assist interested MBEs/WBEs in obtaining necessary equipment, supplies, materials, or related assistance or services.

In assessing minimum good faith efforts, SMBR may consider whether the Bidder sought assistance from SMBR on any questions related to compliance with this section. In addition, SMBR may also consider the performance of other Bidders successfully meeting the goals.

The ability or desire of a Bidder to perform the work of a contract with its own organization does not relieve the Bidder of the responsibility to make Good Faith Efforts.

Bidders may reject MBE/WBEs as unqualified only following thorough investigation of their capabilities. The MBE/WBE's membership or lack of membership in specific groups, organizations, or associations, and political or social affiliations (for example union or non-union employee status), are not legitimate causes for the rejection or non-solicitation of bids/proposals in the Bidder's efforts to meet the project goals or subgoals.

At a minimum, the following should be submitted to support Good Faith Effort documentation (documentation is not limited to this list):

- Fax logs, emails, and/or copies of documents sent to firms within the SLBP area
- Copies of written correspondence to certified firms (include names, addresses, and other identifying information)
- Phone logs with responses (*Phone contacts, alone, will not be sufficient.*)
- Lists and copies of letters sent by mail, hand delivered, or e-mailed
- Breakdown of negotiations made with certified firms
- Copies of advertisements with local newspapers, trade associations, Chambers of Commerce and/or any other public media
- Other communications regarding contacts with trade associations and Chambers of Commerce

The following additional Good Faith Efforts factors may also be considered:

- Copies of emails or phone logs regarding assistance in bonding, lines of credit, or insurance (as required by City or Consultant)
- Copies of emails or phone logs regarding assistance in obtaining equipment, supplies, materials, or services
- Copies of all proposals received in response to Bidder contacting other Firms

POST-AWARD INSTRUCTIONS
(See Appendix C)

Confirmation Letters

All Bidders are required to include copies of the confirmation letters received from subcontractors, confirming the Subcontractors' willingness to provide services should the contract be awarded.

Changes to the *MBE/WBE Compliance Plan* including additions, deletions, contract changes, or substitutions of subcontractors are permitted only after contract execution and only with prior written approval of SMBR. Request for changes to the *MBE/WBE Compliance Plan* must be submitted on the Request for Change of *MBE/WBE Compliance Plan* Form for all levels of subcontracting and must be approved by the SMBR Director prior to adding, deleting, changing or substituting any subcontractor.

Post-Award Monitoring

The City will monitor post-award compliance information regarding the use of certified MBE/WBE Firm(s) listed on the *MBE/WBE Compliance Plan.* The Bidder will be required to submit post award reports detailing the utilization of all subcontractors. The reports and other information regarding post-award compliance will be discussed with the successful Bidder. The following information on Payment Verification, Change Order/Contract Amendments, and Progressive Sanctions provides an overview of some of the post-award monitoring process.

- **Payment Verification**

Bidders are advised that the contract resulting from this solicitation includes a subcontractor payments clause. This clause requires all subcontractors to be paid within ten (10) calendar days from the date that the Bidder has been paid by the City for invoices submitted by subcontractors.

The Bidder shall submit a *Subcontractor/Supplier Awards and Expenditures Report* to the project manager and/or contract administrator at the time specified by the managing department. The report shall be in the format required by the City and shall include all awards and payments to subcontractors for goods and services provided under the contract during the previous month. This report may be used by the City to verify utilization of and payment to MBEs and WBEs.

The Bidder and/or any subcontractor whose subcontracts are being counted toward the MBE/WBE requirements shall allow the City access to records relating to the contract, including but not limited to, subcontracts, payroll records, tax information, and accounting records, for the purpose of determining whether the MBEs/WBEs are performing the scheduled subcontract work.

In determining achievement of MBE/WBE goals, the participation of an MBE/WBE subcontractor shall not be counted until the amount being counted toward the goal has been paid.

- **Change Order/Contract Amendments**

The goals on this contract shall also apply to change orders that require work beyond the scope(s) of trades originally required to accomplish the project. The Bidder is required to make Good Faith Efforts to obtain MBE/WBE participation for additional scopes of work.

Change orders that do not alter the type of trades originally required to accomplish the project may be undertaken using the subcontractors already under contract to the Bidder. Project managers will have automatic SMBR approval

to authorize any change order that **increases** the contract amount for an **existing** certified subcontractor and is **within** the existing scope being performed by that subcontractor.

- **Progressive Sanctions**

The successful Bidder's MBE/WBE Compliance Plan will be incorporated into the resulting contract with the City and shall be considered part of the consultant's performance requirements. Progressive sanctions may be imposed for failure to comply with Chapter 2-9D of the City Code, including:

- Providing false or misleading information in Good Faith Efforts documentation, post award compliance, or other Program operations;
- Substituting Subcontractors without first receiving approval for such substitutions, which may include the addition of an unapproved Subcontractor and failure to use a Subcontractor listed in the approved MBE/WBE Compliance Plan ; and
- Failure to comply with the approved MBE/WBE Compliance Plan without an approved Request for Change, an approved Change Order, or other approved change to the Contract.

Please refer to Section 2-9D-25 of the City Code and SMBR Rule 11.5 for additional information.

Appendix A

MBE/WBE COMPLIANCE PLAN

All applicable sections must be completed and submitted by the due date and time as indicated in the solicitation documents.

Section I — Project Identification and Goals

Project Name	Hot Mix Asphaltic Concrete
Solicitation Number	IFB 2200 MDP0261

Project Goals or Subgoals		
Combined MBE/WBE	1.00	%
MBE		%
African American		%
Hispanic		%
Asian/Native American	/	%
WBE		%

Section II — Bidder Company Information

Company Name	Industrial Asphalt, LLC.	
Address	9020 N Capital of TX HWY Bldg 2 Ste 250	
City, State Zip	Austin, Texas 78759	
Phone	512-251-3713	
Fax	512-251-3709	E-Mail Robert.Sutton@austinmaterials.com
Name of Contact Person	Robert Sutton	
Is your company registered on Vendor Connection?	Yes [X] No [ ] *If yes, provide Vendor Code* IND7079705 If No, please note: All vendors; subcontractors and consultants must register with COA's Vendor Connect prior to award. See Link for registration information at https://www.ci.austin.tx.us/financeonline/finance/index.cfm	
Is your company COA M/WBE certified?	Yes [ ] No [X] *If yes, please indicate:* MBE [ ] WBE [ ] MBE/WBE Joint Venture [ ]	

I certify that the information included in this *MBE/WBE Compliance Plan* is true and complete to the best of my knowledge and belief. I further understand and agree that this *MBE/WBE Compliance Plan* shall become a part of my contract with the City of Austin.

Robert Sutton, Sales Manager
Name and Title of Authorized Representative

Signature

07/05/2018
Date

For City of Austin SMBR Use Only:

I have reviewed this Compliance Plan and found that the Bidder ***HAS*** [ ] ***HAS NOT*** [ ] *complied as per the City Code Chapter 2-9D through GFE.*

Reviewing Counselor _____ Date _____

I have reviewed this Compliance Plan and have found the Bidder ***COMPLIANT*** [ ] ***NON-COMPLIANT*** [ ]

Director /Assistant Director _____ Date _____

Section III — MBE/WBE Compliance Plan Summary

Directions:

- For each subcontractor listed in Sections IV, V, VI or VII, fill in all blanks (if applicable).
- For project participation numbers use an EXACT number.
- Goal percentages should be based on the Base Bid amount only. Allowances are not included.
- Alternates are not recorded on this MBE/WBE Compliance Plan.
- If bidder is a certified M/WBE, include participation details in the Bidder box ONLY.
- MBE/WBE Compliance Plans not complying with these requirements shall be rejected as non-responsive.

Is the stated project goal of the solicitation met? *(If no, attach documentation of Good Faith Efforts)* Yes ☒ No ☐

PROPOSED PARTICIPATION GOALS

Use this section to calculate participation.
Include all details including the total dollar amount and percentage for each category where applicable.

	MBE/WBE Project Goal	Bidder Participation Goal	
African American	%	$	%
Hispanic	%	$	%
Asian/Native American	/ %	$	%
WBE	%	$	%
MBE	%	$	%
MBE/WBE Combined	1.00 %	$ 77,946.00	1.00 %
Non-Certified		$	%
Total Subcontractor Amount		$ 77,946.00	1.00 %
Bidder's Own Participation **(less any subcontracted amount)** Are you counting your own participation toward the goals? **(if yes, indicate below)** ☐ AA ☐ HIS ☐ A/NA ☐ WBE ☐ MBE		$ 7,716,654.00	99.00 %

Base Bid Amount (*Subs + Bidder amount*) $ 7,794,600.00 **100 %**

For SMBR Use Only:

Verified participation for each category:

African-American _____ % **Hispanic** _____ % **Asian/Native American** _____ % **WBE** _____ %

MBE _____ % **WBE** _____ % **Combined MBE/WBE** _____ %

Prime _____ % **Non-Certified** _____ %

Section IV — Disclosure of MBE and WBE Subcontractors

(Duplicate as Needed)

Note:

- Fill in all the blanks (use "none" or "N/A" where appropriate).
- MBE/WBE Compliance Plans not complying with these requirements shall be rejected as non-responsive.
- Fill in names of MBE/WBE certified Firms as registered with City of Austin Vendor Connection.
- Select either MBE or WBE for dually certified firms to indicate which certification will count towards the MBE or WBE goal.
- Contact SMBR to request an availability list of certified Firms for additional scopes of work that were not included on the original availability list.

Name of MBE/WBE Certified Firm	Juan DeAnda Trucking, LLC.	
City of Austin Certification Data	☒ MBE ☐ WBE Gender/ Ethnicity: Male/ Hispanic	
Vendor Code	VS0000027653	
Address/ City / State / Zip	PO Box 1311 San Marcos, Texas 78666	
Contact Person & Phone #	Juan DeAnda , (512)748-1537	
Fax & Email Address	(512)285-6596, Juandeandatruckingllc@gmail.com	
Commodity Codes	962-36	
Commodity Codes Descriptions	Hauling Services	
Amount of Subcontract	$ 77,946.00	1.00 %

Name of MBE/WBE Certified Firm		
City of Austin Certification Data	☐ MBE ☐ WBE Gender/ Ethnicity:	
Vendor Code		
Address/ City / State / Zip		
Contact Person & Phone #		
Fax & Email Address		
Commodity Codes		
Commodity Codes Descriptions		
Amount of Subcontract	$	%

Name of MBE/WBE Certified Firm		
City of Austin Certification Data	☐ MBE ☐ WBE Gender/ Ethnicity:	
Vendor Code		
Address/ City / State / Zip		
Contact Person & Phone #		
Fax & Email Address		
Commodity Codes		
Commodity Codes Descriptions		
Amount of Subcontract	$	%

Name of MBE/WBE Certified Firm		
City of Austin Certification Data	☐ MBE ☐ WBE Gender/ Ethnicity:	
Vendor Code		
Address/ City / State / Zip		
Contact Person & Phone #		
Fax & Email Address		
Commodity Codes		
Commodity Codes Descriptions		
Amount of Subcontract	$	%

Section V — Disclosure of Non-Certified Subcontractors
(Duplicate as Needed)

Note:
- Fill in all the blanks (use "none" or "N/A" where appropriate).
- MBE/WBE Compliance Plans not complying with these requirements shall be rejected as non-responsive.
- Fill in names of Second-Level Subcontractors as registered with the City of Austin.

Are Goals Met? **Yes** ☒ **No** ☐ **If no, state reason(s) below and attach documentation:**

Name of Non-Certified Subcontractor		
Vendor Code		
Address/ City / State / Zip		
Contact Person & Phone #		
Fax & Email Address		
Commodity Codes		
Commodity Codes Descriptions		
Amount of Subcontract	$	%
Reason Certified Firm not used		
Name of Non-Certified Subcontractor		
Vendor Code		
Address/ City / State / Zip		
Contact Person & Phone #		
Fax & Email Address		
Commodity Codes		
Commodity Codes Descriptions		
Amount of Subcontract	$	%
Reason Certified Firm not used		
Name of Non-Certified Subcontractor		
Vendor Code		
Address/ City / State / Zip		
Contact Person & Phone #		
Fax & Email Address		
Commodity Codes		
Commodity Codes Descriptions		
Amount of Subcontract	$	%
First-Level Subcontractor		
Reason Certified Firm not used		
Name of Non-Certified Subcontractor		
Vendor Code		
Address/ City / State / Zip		
Contact Person & Phone #		
Fax & Email Address		
Commodity Codes		
Commodity Codes Descriptions		
Amount of Subcontract	$	%
First-Level Subcontractor		
Reason Certified Firm not used		

Section VI — Disclosure of Second-Level Subcontractors
(Duplicate as Needed)

Note:
- Fill in all the blanks (use "none" or "N/A" where appropriate).
- MBE/WBE Compliance Plans not complying with these requirements shall be rejected as non-responsive.
- Fill in names of Second-Level Subcontractors as registered with the City of Austin.

Name of Second-Level Subcontractor		
City of Austin Certified? (choose one)	☐ No ☐ MBE ☐ WBE Gender/ Ethnicity:	
Vendor Code		
Address/ City / State / Zip		
Contact Person & Phone #		
Fax & Email Address		
Commodity Codes		
Commodity Codes Descriptions		
Amount of Subcontract	$	%
First-Level Subcontractor		
Name of Second-Level Subcontractor		
City of Austin Certified? (choose one)	☐ No ☐ MBE ☐ WBE Gender/ Ethnicity:	
Vendor Code		
Address/ City / State / Zip		
Contact Person & Phone #		
Fax & Email Address		
Commodity Codes		
Commodity Codes Descriptions		
Amount of Subcontract	$	%
First-Level Subcontractor		
Name of Second-Level Subcontractor		
City of Austin Certified? (choose one)	☐ No ☐ MBE ☐ WBE Gender/ Ethnicity:	
Vendor Code		
Address/ City / State / Zip		
Contact Person & Phone #		
Fax & Email Address		
Commodity Codes		
Commodity Codes Descriptions		
Amount of Subcontract	$	%
First-Level Subcontractor		
First-Level Subcontractor		
Name of Second-Level Subcontractor		
City of Austin Certified? (choose one)	☐ No ☐ MBE ☐ WBE Gender/ Ethnicity:	
Vendor Code		
Address/ City / State / Zip		
Contact Person & Phone #		
Fax & Email Address		
Commodity Codes		
Commodity Codes Descriptions		
Amount of Subcontract	$	%
First-Level Subcontractor		

Section VII — Disclosure of Primary and Alternate Trucking Subcontractors
(Duplicate as Needed)

Note:
- Fill in all the blanks (use "none" or "N/A" where appropriate).
- MBE/WBE Compliance Plan s not complying with these requirements shall be rejected as non-responsive.
- Fill in names of Primary and Alternate Trucking Subcontractors as registered with the City of Austin.

Primary Trucking Subcontractor	Juan DeAnda Trucking, LLC.	
City of Austin Certified? (choose one)	☐ No ☒ MBE ☐ WBE Gender/ Ethnicity: Male/Hispanic	
Vendor Code	VS0000027653	
Address/ City / State / Zip	PO Box 1311 San Marcos, Texas 78666	
Contact Person	Juan DeAnda	Phone #: (512) 748-1537
Commodity Codes	962-36	
Commodity Codes Descriptions	Hauling Services	
Amount of Subcontract	$ 77,946.00	1.00 %

Alternate Trucking Subcontractor	
City of Austin Certified? (choose one)	☐ No ☐ MBE ☐ WBE Gender/ Ethnicity:
Vendor Code	
Address/ City / State / Zip	
Contact Person	Phone #:
Commodity Codes	
Commodity Codes Descriptions	

Alternate Trucking Subcontractor	
City of Austin Certified? (choose one)	☐ No ☐ MBE ☐ WBE Gender/ Ethnicity:
Vendor Code	
Address/ City / State / Zip	
Contact Person	Phone #:
Commodity Codes	
Commodity Codes Descriptions	

Alternate Trucking Subcontractor	
City of Austin Certified? (choose one)	☐ No ☐ MBE ☐ WBE Gender/ Ethnicity:
Vendor Code	
Address/ City / State / Zip	
Contact Person	Phone #:
Commodity Codes	
Commodity Codes Descriptions	

Alternate Trucking Subcontractor	
City of Austin Certified? (choose one)	☐ No ☐ MBE ☐ WBE Gender/ Ethnicity:
Vendor Code	
Address/ City / State / Zip	
Contact Person	Phone #:
Commodity Codes	
Commodity Codes Descriptions	

Section VIII — MBE/WBE Compliance Plan Check List

Is the stated project goal of the solicitation met?

Yes ☒ No ☐

(If no, complete and submit Section VIII Compliance Plan Check List)

If the goals or subgoals were not achieved, all questions in Section VIII ***must*** be completed and **Good Faith Efforts documentation must be submitted with the MBE/WBE *Compliance Plan.*** The completion and submission of this form is not required if the above question is answered *Yes.*

Is the following documentation attached to support good faith effort requirements to achieve goals or subgoals?		
• Copy of written solicitation sent to MBE/WBEs in SLBP area 7 business days prior to the submission of this Compliance Plan	Yes ☐	No ☐
• Two separate methods of notices sent to MBE/WBEs in SLBP area Indicate notice types: fax transmittals emails phone log letters	Yes ☐	No ☐
• Copy of advertisements placed in local publication	Yes ☐	No ☐
• Copy of notices sent to Minority and Women organizations	Yes ☐	No ☐
• Documentation that demonstrates additional GFEs: o Efforts to assist interested MBEs/WBEs in obtaining bonding, lines of credit, or insurance as required by the City or contractor o Efforts to assist interested MBEs/WBEs in obtaining necessary equipment, supplies, materials, or related assistance or services o Efforts made to reach agreements with the MBE/WBEs who responded to Bidder's written notice	Yes ☐	No ☐

Were additional elements of work identified to achieve the goals or subgoals? Yes ☐ No ☐

If yes, please explain: _____

Was SMBR contacted for assistance? Yes ☐ No ☐

If yes, complete following:

Contact Person: _____

Date of Contact: _____

Summary of Request: _____

Were Minority or Women organizations contacted for additional assistance? Yes ☐ No ☐

If yes, complete following:

Organization(s): _____

Date of Contact: _____

Summary of Request _____

Appendix B

LETTER TO POTENTIAL SUBCONTRACTORS

_____ is soliciting Minority- and Women-Owned Business Enterprise participation for the following City of Austin project. Solicitation documents are available at our office or at One Texas Center, 505 Barton Springs Road, 10th Floor, Suite 1045 C-Congress Room.

Solicitation Name: _____
Solicitation Number: _____
Location of Pre-bid Conference (if any) _____
_____
_____
Response Due Date and Time: _____

This Project Includes the Following Scopes of Service:

- ☐ Asbestos Abatement
- ☐ Carpentry
- ☐ Carpeting
- ☐ Concrete
- ☐ Demolition Services
- ☐ Doors and Frames
- ☐ Drilling
- ☐ Drywall
- ☐ Electrical
- ☐ Excavation Services
- ☐ Fabricated Steel
- ☐ Flooring
- ☐ Glazing Services
- ☐ Hardware
- ☐ Heavy Construction Equipment
- ☐ Other _____
- ☐ HVAC
- ☐ Insulation
- ☐ Lab and Field Testing Services
- ☐ Landscaping
- ☐ Masonry
- ☐ Millwork
- ☐ Painting
- ☐ Paving and Resurfacing
- ☐ Plumbing
- ☐ Roofing
- ☐ Stone
- ☐ Tile
- ☐ Weather and Waterproofing
- ☐ Welding
- ☐ Windows
- ☐ Other _____

Contact our office for detailed information on the scopes of services to be subcontracted and the relevant terms and conditions of the contract.

Contact: _____ at _____ or _____
(Name) (Telephone) (Fax)

_____
(Email)

All Responses MUST be received by: _____

Appendix C

CONFIRMATION LETTER

Name of Prime Contractor: Industrial Asphalt, LLC.

Address: 9020 N. Capital of TX Hwy Bldg II Ste 250, Austin, TX, 78759
Street City State Zip Code

Telephone: (512) 251-3713 Fax: (512) 251-3709 Proposed Contract Amount: $ 7,794,600.00

Project/Solicitation Number: 2200 MDP0261

Project Name: Hotmix Asphaltic Concrete

Type of Agreement *(check one)*: ☒ Lump Sum ☐ Unit Price ☐ Commodity

Period of Performance: One Year Level of Subcontracting *(check one)*: ☒ 1st ☐ 2nd ☐ 3rd

Legal Name of Subcontractor*: Juan DeAnda Trucking LLC

Subcontractor* Vendor Code: VS0000027653

Address: P.O. Box 1311 San Marcos TX 78667
Street City State Zip Code

Telephone: (512) 748-1537 Fax: (____)_____ Proposed Subcontract Amount: $ 77,946.00

Commodity Code and description of work to be performed by Subcontractor Firm:
Hauling Services

The Prime Contractor and the Subcontractor listed above agree that the Prime Contractor has provided the Subcontractor with a copy of the City's prevailing wage requirements

Prime Contractor:

Industrial Asphalt, LLC
Legal Name of Firm, as registered with the City

Signature

Robert Sutton
Print Name

Sales Manager
Title

07/02/2018
Date

ADAM VILLALPANDO NOTARY PUBLIC STATE OF TEXAS NOTARY ID 13073655-0 07/14/2020

STATE OF Texas
COUNTY OF Hays
SUBSCRIBED AND SWORN TO before me on the 02 day of July, 2018.

Adam Villalpando
Notary Public

Subcontractor:

Juan DeAnda Trucking LLC
Legal Name of Firm, as registered with the City

Signature

Juan DeAnda
Print Name

Owner
Title

07/02/2018
Date

ADAM VILLALPANDO NOTARY PUBLIC STATE OF TEXAS NOTARY ID 13073655-0 07/14/2020

STATE OF Texas
COUNTY OF Hays
SUBSCRIBED AND SWORN TO before me on the 02 day of July, 2018.

Adam Villalpando
Notary Public

***Including Suppliers, Manufacturers, Alternates**

MBE/WBE PROCUREMENT PROGRAM SOLICITATION OVERVIEW

PROJECT DETAILS

Solicitation Number: IFB 2200 MDP0261
Project Name: Hot Mix Asphaltic Concrete
Funding Source: City **Estimated Total Cost:** $860,000
Project Description: Hot Mix–Cold Laid Asphaltic Concrete Material and Hot Mix Asphaltic Concrete (HMAC) Type B, C, C-SBS Polymer, & D to include H.M.A.C. with RAP and Warm Mixes

Approved Goal Determination:

MBE	African American	Hispanic	Asian/Native American	WBE	M/WBE Combined
--	--	--	--	--	**1.00%**

PROGRAM REQUIREMENTS

Counting Participation (2-9D-20)
Listing City certified firms on the Compliance Plan indicates that firms agree to both the price and scope of work. The Compliance Plan shall list all firms (certified and non-certified) that will participate on the contract.

- Only City of Austin certified MBE/WBE firms will be counted toward the goals.
- Certified MBE/WBE firms may count their own participation, less any amount subcontracted.
- A certification code of M/WBE or W/MBE may be counted towards the MBE or WBE goal, but not both.
- A firm with an MBE certification code can be counted towards the MBE goal or towards the appropriate ethnic subgoal. However, WBE certification code can only be counted toward the WBE goal.
- Use only the base bid amount or the proposal amount to calculate your MBE/WBE participation.

Compliance Plan Submission
Bids or responses will not be accepted for consideration, if the MBE/WBE Compliance Plan is not submitted prior to the deadline specified in the solicitation document.

- Section I Project information *(pre-entered)*.
- Section II Firm's identifying information, with signature of firm's authorized representative.
- Section III Compliance Plan Summary *(calculations must reflect Sections IV-VI)*.
- Section IV Disclosure of all certified firms, enter all requested information.
- Section V Disclosure of all non-certified firms, enter all requested information.
- Section VI Disclosure of all second-level subcontractors.
- Section VII Disclosure of Primary and Alternate Trucking subcontractors.
- Section VIII Compliance Plan Check List *(complete if goals are not met)*.

Good Faith Efforts (2-9D-21)
When bidder/respondent cannot meet the established goals, the responding firm shall provide documentation of the firm's good faith efforts to meet the goals.

- Notify all certified firms on the availability list not less than 7 business days prior to bid date using two separate reasonable and verifiable methods; i.e. fax, e-mail, mail or phone.
- Publish notice in local publication.
- Seek service of minority and women organizations.
- Select portions of work that will increase MBE/WBE opportunities.
- Negotiate with MBE/WBE firms in good faith.
- Assist MBE/WBE firms with bonding, lines of credit, and insurance.
- Documented justification for not meeting MBE/WBE goals *(provide GFE documentation with submission)*.
- Contact SMBR for assistance.

RESOURCES

SMALL & MINORITY BUSINESS RESOURCES DEPARTMENT

SMBR Representative
Cynthia Van Maanen
512-974-7736
Cynthia.VanMaanen@austintexas.gov

SMBR Certification Division
512-974-7645
SMBRCertification@austintexas.gov

SMBR Compliance Division
SMBRComplianceDocuments@austintexas.gov

SMBR Main Office
512-974-7600
512-974-7601

Go to http://www.austintexas.gov/SMBR for additional information and resources.

SMBR PLAN ROOM

Visit SMBR's Plan Room for viewing City of Austin project plans and specifications as well as other local, private, and public sector jobs located at SMBR Office located at 4201 Ed Bluestein Blvd., Austin, TX 78721.

Call (512) 974-7799 to make an appointment, schedule training or for more information, or visit http://www.austintexas.gov/department/smbr-plan-room for list of current projects available; cost $0. May be minimal fee for copying and printing plans and specifications sheets.

BONDING

In order to help our vendors overcome the challenges that can be associated with bonding, SMBR has a Bonding Financial Consultant to meet one-on-one with business owners to assist with their bonding needs.

Luke Ortega Luper, Bonding Financial Consultant
Phone: (512-974-7733
Email: Luke.Luper@austintexas.gov.
Website address: http://www.austintexas.gov/department/bonding

SMBR does not issue bonds; however, we do provide our bonding resource program as a free and confidential service to our business owners.

LOCAL MINORITY SERVICE ORGANIZATIONS

Name	Contact Name	Phone	Email
Asian Contractor Association	Aletta Banks	512-926-5400	asiancontractor@gmail.com
Austin Area Black Contractors Association	Alayne Johnson	512-467-6895	brc-pro@att.net
Business Investment Growth (BIG Austin)	Stacy Dukes-Rhone	512-928-8010	info@bigaustin.org
Business Resource Consultants (BRC)/(Bid Briefs)	Carol Hadnot	512-467-6894	brc-pro@att.net
Greater Austin Black Chamber of Commerce	Tam Hawkins	512-459-1181	admin@austinbcc.org
Greater Austin Asian Chamber of Commerce	Marina Ong Bhargava	512-407-8240	exec.admin@austinasianchamber.org
Greater Austin Hispanic Chamber of Commerce	Selina Aguirre	512-476-7502	saguirre@gahcc.org
U.S. Hispanic Contractors Association de Austin (USHCA)	Juan Oyervides	512-922-0507	info@ushca-austin.com

Additional contact information can be provided upon request.

AUSTIN MINORITY NEWSPAPERS

Name	Contact Name	Phone	Email
Capital City Argus News	Charles M. Miles	512-926-0348	CMilesArgus@yahoo.com
El Mundo Newspaper		512-476-8636	info@elmundonewspaper.com
La Prensa	Catherine Vasquez-Revilla	512-478-3090	laprensa@aol.com
Nokoa The Observer	Akwasi Evans	512-499-8713	akwasievans2013@gmail.com
The Villager	Tommy L. Wyatt	512-476-0082	vil3202@aol.com
World Journal Inc. of Texas	Sherry Wang		sherrywang1020@yahoo.com
/World Journal Chinese Daily News			

Additional contact information can be provided upon request.

MBE/WBE PROCUREMENT PROGRAM SOLICITATION OVERVIEW

PROJECT DETAILS

Solicitation Number: IFB 2200 MDP0261
Project Name: Hot Mix Asphaltic Concrete
Funding Source: City **Estimated Total Cost:** $860,000
Project Description: Hot Mix–Cold Laid Asphaltic Concrete Material and Hot Mix Asphaltic Concrete (HMAC) Type B, C, C-SBS Polymer, & D to include H.M.A.C. with RAP and Warm Mixes

Approved Goal Determination:

MBE	African American	Hispanic	Asian/Native American	WBE	**M/WBE Combined**
--	--	--	--	--	**1.00%**

PROGRAM REQUIREMENTS

Counting Participation (2-9D-20)
Listing City certified firms on the

- Section I Project information *(pre-entered)*.
- Section II Firm's identifying information, with signature of firm's authorized representative.
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Phone: (512-974-7733
Email: Luke.Luper@austintexas.gov.
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Business Resource Consultants (BRC)/(Bid Briefs)	Carol Hadnot	512-467-6894	brc-pro@att.net
Greater Austin Black Chamber of Commerce	Tam Hawkins	512-459-1181	admin@austinbcc.org
Greater Austin Asian Chamber of Commerce	Marina Ong Bhargava	512-407-8240	exec.admin@austinasianchamber.org
Greater Austin Hispanic Chamber of Commerce	Selina Aguirre	512-476-7502	saguirre@gahcc.org
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AUSTIN MINORITY NEWSPAPERS

Name	Contact Name	Phone	Email
Capital City Argus News	Charles M. Miles	512-926-0348	CMilesArgus@yahoo.com
El Mundo Newspaper		512-476-8636	info@elmundonewspaper.com
La Prensa	Catherine Vasquez-Revilla	512-478-3090	laprensa@aol.com
Nokoa The Observer	Akwasi Evans	512-499-8713	akwasievans2013@gmail.com
The Villager	Tommy L. Wyatt	512-476-0082	vil3202@aol.com
World Journal Inc. of Texas	Sherry Wang		sherrywang1020@yahoo.com
/World Journal Chinese Daily News			

Additional contact information can be provided upon request.

ADDENDUM
PURCHASING OFFICE
CITY OF AUSTIN, TEXAS

Solicitation: IFB 2200 MDP0261 **Addendum No: 2** **Date of Addendum: 06/22/2018**

This addendum is to incorporate the following question and answer and also clarification to the above referenced solicitation:

I. **Question:**

Q1. Does the monthly Subcontract Awards and Expenditures Report (Sub-K) have to be submitted via hard copy – or can it be sent electronically?
A1. SMBR has a copy that can be filled out electronically, but it must be submitted via hard copy to the Contract Manager.

II. **Clarification**: This is the second addendum. The first addendum did not include a page for signatures.

III. ALL OTHER TERMS AND CONDITIONS REMAIN THE SAME.

APPROVED BY: _____ 6/22/18
Michelle Pearson, Procurement Specialist II
Purchasing Office, 512-974-2023
Date

ACKNOWLEDGED BY:

Robert Sutton _____ 07/05/2018
Name
Authorized Signature
Date

RETURN ONE COPY OF THIS ADDENDUM TO THE PURCHASING OFFICE, CITY OF AUSTIN, WITH YOUR RESPONSE OR PRIOR TO THE SOLICIATION CLOSING DATE. FAILURE TO DO SO MAY CONSTITUTE GROUNDS FOR REJECTION.

ADDENDUM
PURCHASING OFFICE
CITY OF AUSTIN, TEXAS

Solicitation: IFB 2200 MDP0261 **Addendum No: 3** **Date of Addendum: 07/06/2018**

This addendum is to incorporate the following question and answer to the above referenced solicitation:

I. Question:

Q1. What is the City looking for on the bid sheet under item numbers 1.1, 2.1, 3.1, and 4.1 where the line indicates "MFG. NAME & NO.?"

A1. The City is asking for who manufactured the hotmix and the product number, if applicable.

II. ALL OTHER TERMS AND CONDITIONS REMAIN THE SAME.

APPROVED BY: _____ 7-6-18

Michelle Pearson, Procurement Specialist II — Date
Purchasing Office, 512-974-2023

ACKNOWLEDGED BY:

Robert Sutton _____ _____ 07-06-2018

Name — Authorized Signature — Date

RETURN ONE COPY OF THIS ADDENDUM TO THE PURCHASING OFFICE, CITY OF AUSTIN, WITH YOUR RESPONSE OR PRIOR TO THE SOLICIATION CLOSING DATE. FAILURE TO DO SO MAY CONSTITUTE GROUNDS FOR REJECTION.

ADDENDUM
PURCHASING OFFICE
CITY OF AUSTIN, TEXAS
Hot Mix Asphaltic Concrete

Solicitation: IFB 2200 MDP0261 **Addendum No: 4** **Date of Addendum: 7/10/2018**

This addendum is to incorporate the following changes to the above referenced solicitation:

I. **Extension:** The solicitation due date is hereby extended until Tuesday, July 17, 2018 at 2:00 PM.

II. ALL OTHER TERMS AND CONDITIONS REMAIN THE SAME.

APPROVED BY: _____ 7/10/18
Michelle Pearson, Procurement Specialist II
Purchasing Office, 512-974-2023

ACKNOWLEDGED BY:

Robert Sutton _____ _____ 07/10/2018
Name Authorized Signature Date

RETURN ONE COPY OF THIS ADDENDUM TO THE PURCHASING OFFICE, CITY OF AUSTIN, WITH YOUR RESPONSE OR PRIOR TO THE SOLICIATION CLOSING DATE. FAILURE TO DO SO MAY CONSTITUTE GROUNDS FOR REJECTION.

INDUSTRIAL
ASPHALT & AGGREGATES

New Design Name: 505-64B2020-17C
Old Design Name:
Design Date: 01/03/17
Revision Date: 11/06/17

City of Austin
Department of Public Works
Engineering Services Division
505 Barton Springs Road, Suite 900
Austin, Texas 78704

Attention: Bill Hadley, P.E., PhD.

Reference: Design of HMAC Type "B" for the following project:

Shown below is the plant-corrected job mix for the hot mix asphaltic concrete pavement used on the following project:

Name Of Project:

The job mix formula has been determined according to Texas Department of Transportation Standard Specifications Item 340. Hot Mix Asphaltic Concrete Pavement. The asphaltic concrete will be produced by

HMAC Producer: Industrial Asphalt & Aggregates, LLC
Plant Location: Buda, Texas

CERTIFICATION

This design dated 11/06/2017 has been prepared under my direction in accordance with TXDOT Construction Bulletin C-14, as modified by Test Method TEX-204-F and TXDOT Item 340.

Prepared by: Wade A Shaff
Certification: TXDOT Level II - # 45
TXDOT Level IA - # 49

JOB MIX FORMULA

Sieve Size		Percent Passing
1"		100.0
7/8"		98.4
5/8"		92.2
3/8"		76.0
#4		54.3
#10		34.5
#40		20.0
#80		11.9
#200		6.0
Vacuum Extraction	Asphalt Content (PG 64-22)	4.7%
Ignition Oven	Asphalt Content (PG 64-22)	4.9%

HMAC SUBMITTALS

All responsibility for the adequacy of this mix design rests with the Contractor who submitted it. In reviewing the submittal the COA must rely upon the adequacy of the work of the Design Professional whose certification appears herein.

☑ Reviewed ☐ See Annotations

Signature: [signature] Date: 1/10/18

Wade A Shaff #45
Wade A Shaff
Quality Materials Manager
Industrial Asphalt & Aggregates, LLC

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : COMBINED GRADATION

Refresh Workbook

File Version: 03/17/04 10:49:36

SAMPLE ID:	505-64B2020-17C	SAMPLE DATE:	1/3/2017
LOT NUMBER:		LETTING DATE:	rev 11-06-17
STATUS:		CONTROLLING CSJ:	
COUNTY:		SPEC YEAR:	1993
SAMPLED BY:	Wade A. Shaff # 45	SPEC ITEM:	340
SAMPLE LOCATION:	Plant Stockpiles	SPECIAL PROVISION:	
MATERIAL:	505-64B2020-17C	MIX TYPE:	Type_B
PRODUCER:	Industrial Asphalt and Aggregates, LLC Buda-Centex Plant		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:		STATION:		DIST. FROM CL:	

	BIN FRACTIONS						
	Bin No.1	Bin No.2	Bin No.3	Bin No.4	Bin No.5	Bin No.6	Bin No.7
Aggregate Source:	Industrial	Hays	Hays	Centex	Centex	Centex	
Aggregate Number:		1410508	1410508	1410507	1410507	1410507	
Sample ID:	RAP	Type "B"	Type "C"	Type "D"	Type "F"	Manufactured Screenings	Field Sand
Rap?, Asphalt%:	Yes 4.5						
Individual Bin (%):	20.0	13.0	8.0	17.0	17.0	20.0	5.0

Sieve Size:	Sieve Size: (mm)	Bin No.1 Cum.% Passing	Bin No.1 Wtd Cum. %	Bin No.2 Cum.% Passing	Bin No.2 Wtd Cum. %	Bin No.3 Cum.% Passing	Bin No.3 Wtd Cum. %	Bin No.4 Cum.% Passing	Bin No.4 Wtd Cum. %	Bin No.5 Cum.% Passing	Bin No.5 Wtd Cum. %	Bin No.6 Cum.% Passing	Bin No.6 Wtd Cum. %	Bin No.7 Cum.% Passing	Bin No.7 Wtd Cum. %	Combined Gradation Total Bin 100.0% Cum. % Passing	Lower & Upper Type_B Specification Limits		Within Spec's
1"	25.000	100.0	20.0	100.0	13.0	100.0	8.0	100.0	17.0	100.0	17.0	100.0	20.0	100.0	5.0	100.0	98.0	100.0	Yes
7/8"	22.400	100.0	20.0	81.1	10.5	100.0	8.0	100.0	17.0	100.0	17.0	100.0	20.0	100.0	5.0	97.5	95.0	100.0	Yes
5/8"	16.000	100.0	20.0	36.6	4.8	79.2	6.3	100.0	17.0	100.0	17.0	100.0	20.0	100.0	5.0	90.1	75.0	95.0	Yes
3/8"	9.500	93.2	18.6	4.9	0.6	4.5	0.4	73.8	12.5	99.8	17.0	100.0	20.0	100.0	5.0	74.1	60.0	80.0	Yes
No. 4	4.750	74.0	14.8	3.4	0.4	3.1	0.2	14.9	2.5	74.2	12.6	98.4	19.7	99.6	5.0	55.2	40.0	60.0	Yes
No. 10	2.000	52.4	10.5	2.9	0.4	2.8	0.2	4.6	0.8	11.2	1.9	78.5	15.7	96.7	4.8	34.3	27.0	40.0	Yes
No. 40	0.425	30.8	6.2	2.5	0.3	2.4	0.2	2.7	0.5	2.6	0.4	31.0	6.2	84.4	4.2	18.0	10.0	25.0	Yes
No. 80	0.180	16.6	3.3	2.2	0.3	2.2	0.2	2.4	0.4	2.1	0.4	15.7	3.1	28.1	1.4	9.1	3.0	13.0	Yes
No. 200	0.075	8.0	1.6	1.9	0.2	1.9	0.2	2.1	0.4	1.9	0.3	8.1	1.6	3.6	0.2	4.5	1.0	6.0	Yes

Not within specifications # Not cumulative

Asphalt Source & Grade:	Pelican	Binder Percent, (%):	4.6	Asphalt Spec. Grav.:	1.037

Remarks:

Test Method:	Tested By:	Tested Date:
Tx207		
Tx208		
Tx210		
Tx227		
Tx228		
Tx229		
Tx231		
Tx236		

Reviewed By:	Completed Date:

Authorized By:	Authorized Date:
Wade A Shaff #45	01/03/17

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : BULK GRAVITY

File Version: 03/17/04 10:49:36

SAMPLE ID:	505-64B2020-17C	SAMPLE DATE:	1/3/2017
LOT NUMBER:		LETTING DATE:	rev 11-06-17
STATUS:		CONTROLLING CSJ:	
COUNTY:		SPEC YEAR:	
SAMPLED BY:	Wade A. Shaff # 45	SPEC ITEM:	340
SAMPLE LOCATION:	Plant Stockpiles	SPECIAL PROVISION:	
MATERIAL:	505-64B2020-17C	MIX TYPE:	Type_B
PRODUCER:	Industrial Asphalt and Aggregates, LLC Buda-Centex Plant		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:		STATION:		DIST. FROM CL:	

	Bin No.1 = 20 %	Bin No.2 = 13 %	Bin No.3 = 8 %	Bin No.4 = 17 %	Bin No.5 = 17 %	Bin No.6 = 20 %	Bin No.7 = 5 %
Aggregate Source:	Industrial	Hays	Hays	Centex	Centex	Centex	
Aggregate Number:		1410508	1410508	1410507	1410507	1410507	
Sample ID:	RAP	Type "B"	Type "C"	Type "D"	Type "F"	Manufactured Screenin	Field Sand

Sieve Size: Passing		Retained	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG
	-	1"														
1"	-	7/8"			18.9	2.509										
7/8"	-	5/8"			44.5	2.509	20.8	2.521								
5/8"	-	3/8"	6.8	2.440	31.7	2.509	74.7	2.521	26.2	2.478	0.2	2.449				
3/8"	-	No. 4	19.2	2.440	1.5	2.509	1.4	2.521	58.9	2.478	25.6	2.449	1.6	2.535	0.4	2.615
No. 4	-	No. 10	21.6	2.440	0.5	2.509	0.3	2.521	10.3	2.478	63.0	2.449	19.9	2.535	2.9	2.615
No. 10	-	No. 40	21.6	2.440	0.4	2.509	0.4	2.521	1.9	2.478	8.6	2.449	47.5	2.535	12.3	2.615
No. 40	-	No. 80	14.2	2.440	0.3	2.509	0.2	2.521	0.3	2.478	0.5	2.449	15.3	2.535	56.3	2.615
No. 80	-	No. 200	8.6	2.440	0.3	2.509	0.3	2.521	0.3	2.478	0.2	2.449	7.6	2.535	24.5	2.615
No. 200	-	Pan	8.0	2.440	1.9	2.509	1.9	2.521	2.1	2.478	1.9	2.449	8.1	2.702	3.6	2.690
Totals			100.0	2.440	100.0	2.509	100.0	2.521	100.0	2.478	100.0	2.449	100.0	2.548	100.0	2.618

Combined Bulk Specific Gravity:	**2.494**

Specific Gravity of Asphalt:	**1.037**

Remarks:

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : SUMMARY SHEET

File Version: 03/17/04 10:49:36

SAMPLE ID:	505-64B2020-17C	SAMPLE DATE:	1/3/2017
LOT NUMBER:		LETTING DATE:	rev 11-06-17
STATUS:		CONTROLLING CSJ:	
COUNTY:		SPEC YEAR:	
SAMPLED BY:	Wade A. Shaff # 45	SPEC ITEM:	340
SAMPLE LOCATION:	Plant Stockpiles	SPECIAL PROVISION:	
MATERIAL:	505-64B2020-17C	MIX TYPE:	Type_B
PRODUCER:	Industrial Asphalt and Aggregates, LLC Buda-Centex Plant		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:		STATION:		DIST. FROM CL:	

Target Density:	96	Percent

								Static Creep		
Asphalt Content (%)	Specific Gravity Of Specimen (Ga)	Maximum Specific Gravity (Gr)	Effective Gravity (Ge)	Theo. Max. Specific Gravity (Gt)	Density from Gt (Percent)	VMA (Percent)	Hveem Stability (%)	Creep Stiffness (psi)	Perm. Strain X1000 (in/in)	Slope of SS Curve X 10^9 (in/in/Sec)
4.20	2.327	2.451	2.607	2.451	94.9	14.5	54			
4.70	2.346	2.432	2.605	2.434	96.4	14.2	49			
5.20	2.352	2.414	2.604	2.417	97.3	14.5	46			
5.70	2.366	2.405	2.613	2.400	98.6	14.4	36			
6.20	2.379			2.383	99.8	14.4	30			

Effective Specific Gravity:	2.607

Optimum Asphalt Content:	**4.6**
VMA @ Optimum AC:	**14.3**

Interpolated Values	
Specific Gravity (Ga):	**2.340**
Max. Specific Gravity (Gr):	**2.437**
Theo. Max. Specific Gravity (Gt):	**2.439**

Remarks:

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : MATERIAL PROPERTIES

File Version: 03/17/04 10:49:36

SAMPLE ID:	505-64B2020-17C	SAMPLE DATE:	1/3/2017
LOT NUMBER:		LETTING DATE:	rev 11-06-17
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MATERIAL:	505-64B2020-17C	MIX TYPE:	Type_B
PRODUCER:	Industrial Asphalt and Aggregates, LLC Buda-Centex Plant		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:		STATION:		DIST. FROM CL:	

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Aggregate Number:		1410508	1410508	1410507	1410507	1410507	
Sample ID:	RAP	Type "B"	Type "C"	Type "D"	Type "F"	Manufactured Screenings	Field Sand

Test Name	SiteManager Test Template	Test Method	Specification Requirement		Result	Sample ID	Result	Sample ID	Result	Sample ID	Result	Sample ID	Result	Sample ID	Result	Sample ID	Result	Sample ID
Stockpile																		
Decantation	Tx217	Tex-217-F	1.5	Max.	1.00		0.60		0.50		0.70		0.50		N/A		N/A	
Deleterious Mat'l	Tx217	Tex-217-F	1.5	Max.	0.00		0.00		0.00		0.00		0.00		N/A		N/A	
Surface Aggregate Classification	Tx4AgClas	Tex-438-A Tex-612-J	B	Min.	B		B		B		B		B		B		N/A	
Magnesium Sulfate Soundness	Tx411M	Tex-411-A	30	Max.			19.00		19.00		17.00		17.00		17.00		N/A	
LA Abrasion	Tx410	Tex-410-A	40	Max.			32.00		32.00		28.00		28.00		28.00		N/A	
Crushed Faces Count	Tx460	Tex-460-A		Min.			100.00		N/A		100.00		100.00		N/A		N/A	
Flakiness Index	Tx224	Tex-224-F		Max.														
Fine Aggregate																		
Bar Linear Shrinkage	Tx107	Tex-107-E	3	Max.											0.00		0.00	
Combined Aggregate																		
Sand Equivalent	Tx203	Tex-203-F	45	Min.													70.00	Combined Sample
Complete Mixture																		
Tensile Strength Ratio	Tx531	Tex-531-C		Min.														
Boiling Test	Tx530	Tex-530-C		Max.														
Draindown	Tx535	Tex-535-C		Max.														
User Defined Testing																		
Use this area to enter any test methods, specifications & test result that apply to this material(s) but are not not listed above.																		

Remarks:

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : Aggregate Classification

File Version: 03/17/04 10:49:36

SAMPLE ID:		SAMPLE DATE:	1/3/2017
LOT NUMBER:		LETTING DATE:	rev 11-06-17
STATUS:		CONTROLLING CSJ:	
COUNTY:		SPEC YEAR:	
SAMPLED BY:		SPEC ITEM:	340
SAMPLE LOCATION:		SPECIAL PROVISION:	
MATERIAL:		MIX TYPE:	Type_B
PRODUCER:	Industrial Asphalt and Aggregates, LLC Buda-Centex Plant		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:		STATION:		DIST. FROM CL:	

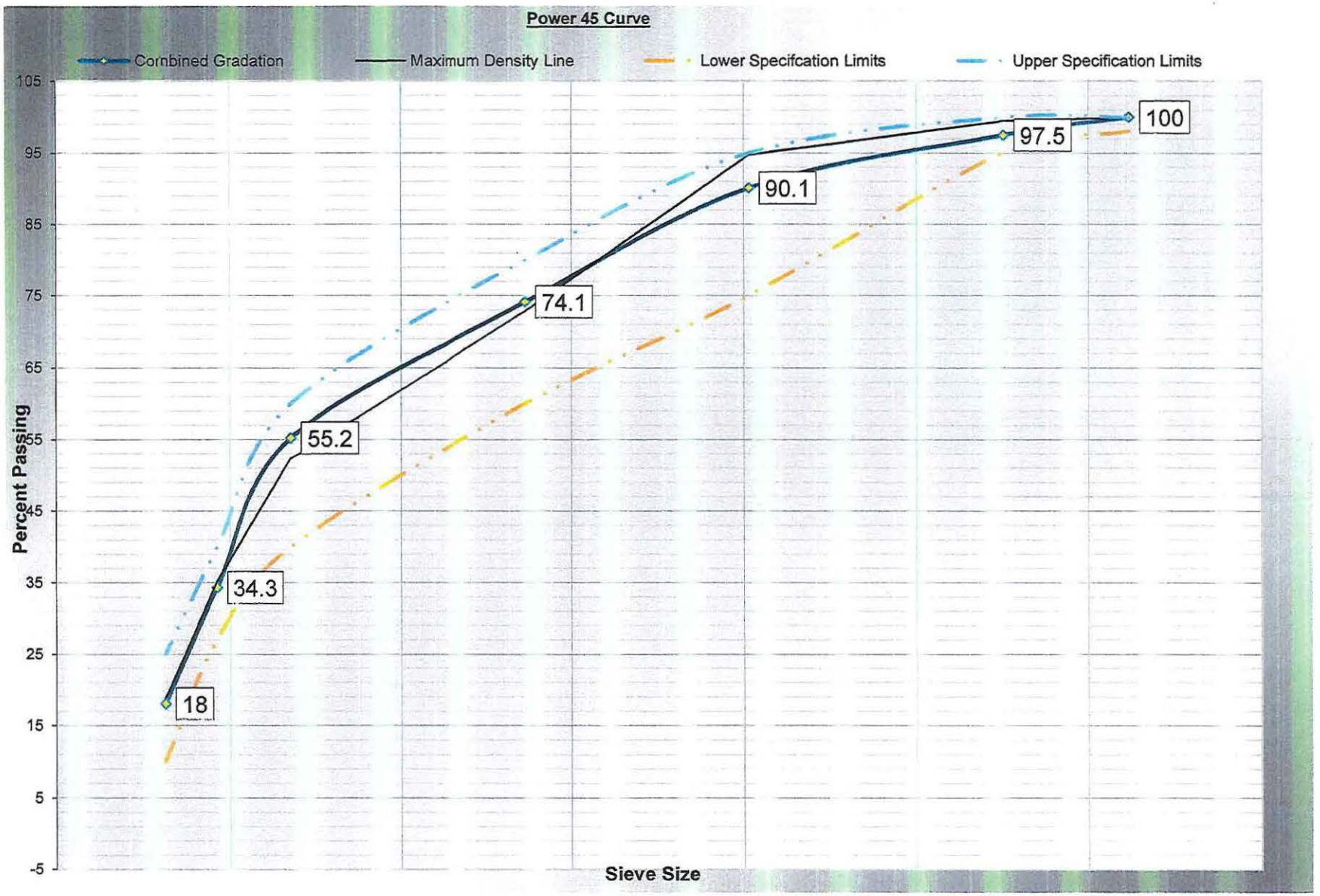
Aggregate Classification

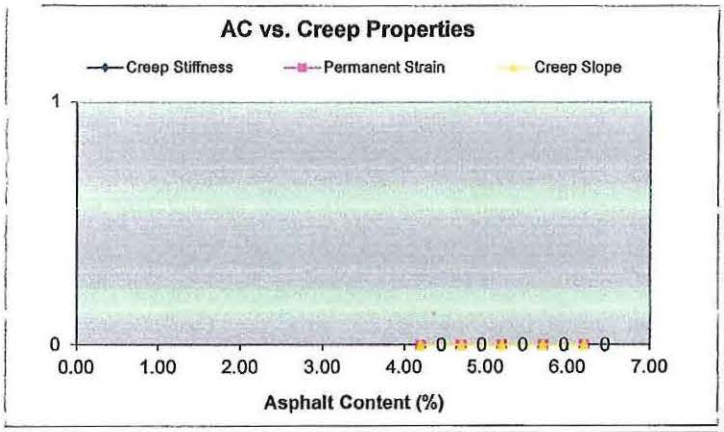
	Bin No.1 = 20 %	Bin No.2 = 13 %	Bin No.3 = 8 %	Bin No.4 = 17 %	Bin No.5 = 17 %	Bin No.6 = 20 %	Bin No.7 = 5 %
Aggregate Source:	Industrial	Hays	Hays	Centex	Centex	Centex	
Aggregate Number:		1410508	1410508	1410507	1410507	1410507	
Class (A) Rock (Y/N):							

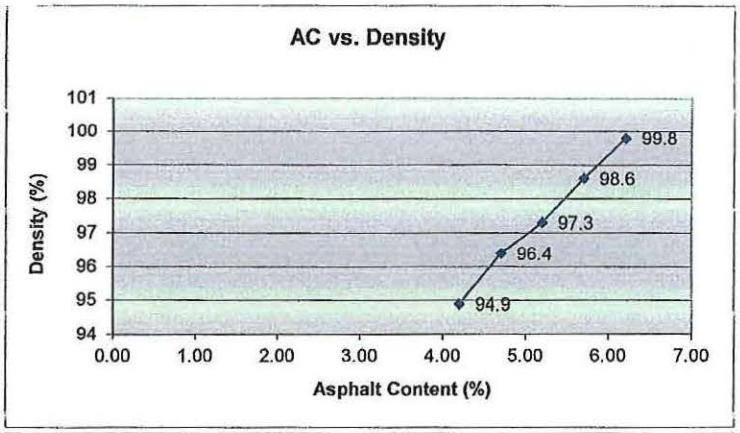
Sieve Size: Passing	-	Retained	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %
	-	1"	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1"	-	7/8"	0.0	2.5	0.0	0.0	0.0	0.0	0.0
7/8"	-	5/8"	0.0	5.7	1.7	0.0	0.0	0.0	0.0
5/8"	-	3/8"	1.4	4.2	5.9	4.5	0.0	0.0	0.0
3/8"	-	No. 4	3.8	0.2	0.2	10.0	4.4	0.3	0.0
No. 4	-	No. 10	4.3	0.0	0.0	1.7	10.7	4.0	0.2
No. 10	-	No. 40	4.3	0.1	0.0	0.3	1.5	9.5	0.6
No. 40	-	No. 80	2.9	0.0	0.0	0.1	0.0	3.1	2.8
No. 80	-	No. 200	1.7	0.1	0.0	0.0	0.1	1.5	1.2
No. 200	-	Pan	1.6	0.2	0.2	0.4	0.3	1.6	0.2
		Total:	20.0	13.0	8.0	17.0	17.0	20.0	5.0
		Percent of plus No. 4:	5.2	12.6	7.8	14.5	4.4	0.3	0.0

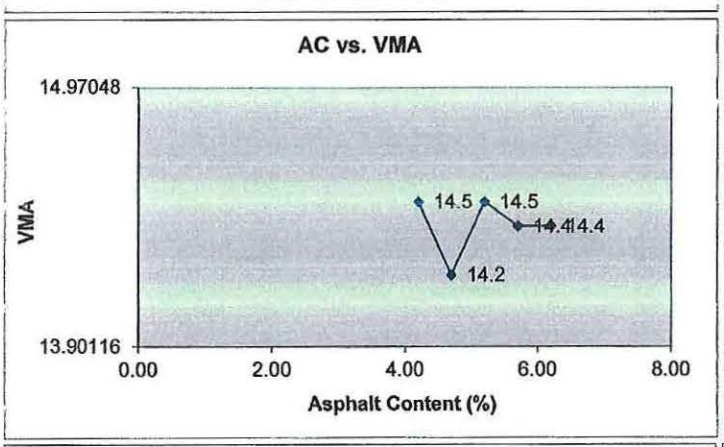
Percent of plus No. 4 from class (A) Rock:	0.0
Total Percent of plus No. 4:	44.8
Percent of plus No. 4 from class (A) Rock:	**0.0**

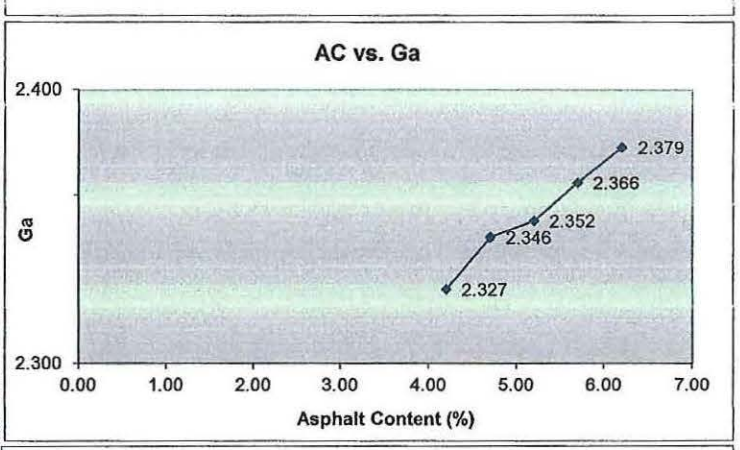
Remarks:

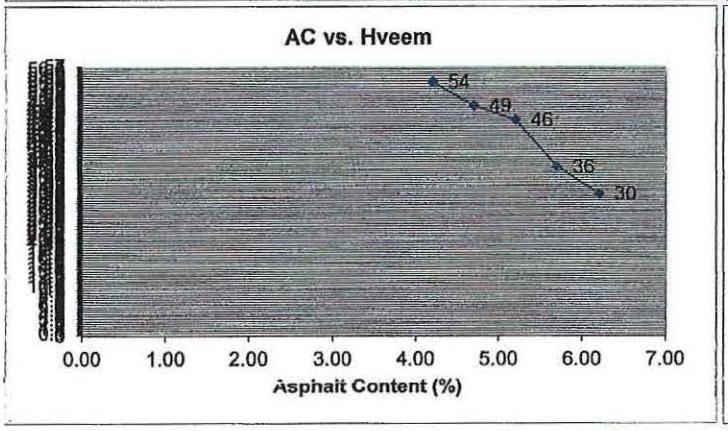

Power 45 Curve
Cornbined Gradation
Maximum Density Line
Lower Specifcation Limits
Upper Specification Limits
105
95
85
75
65
55
45
35
25
15
5
-5
Percent Passing
Sieve Size
18
34.3
55.2
74.1
90.1
97.5
100

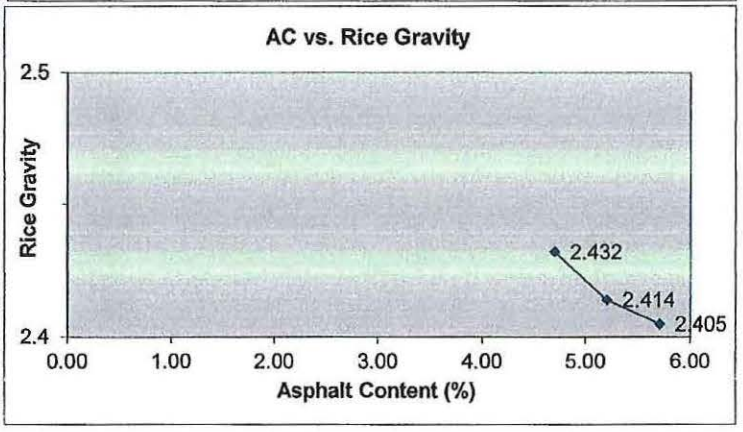

AC vs. Creep Properties
Creep Stiffness
Permanent Strain
Creep Slope
1
0
0.00 1.00 2.00 3.00 4.00 5.00 6.00 7.00
Asphalt Content (%)


AC vs. Density
Density (%)
101
100
99
98
97
96
95
94
99.8
98.6
97.3
96.4
94.9
0.00 1.00 2.00 3.00 4.00 5.00 6.00 7.00
Asphalt Content (%)


AC vs. VMA
VMA
14.97048
13.90116
14.5
14.5
14.4
14.4
14.2
0.00 2.00 4.00 6.00 8.00
Asphalt Content (%)


AC vs. Ga
Ga
2.400
2.300
2.379
2.366
2.352
2.346
2.327
0.00 1.00 2.00 3.00 4.00 5.00 6.00 7.00
Asphalt Content (%)


AC vs. Hveem
54
49
46
36
30
0.00 1.00 2.00 3.00 4.00 5.00 6.00 7.00
Asphalt Content (%)


AC vs. Rice Gravity
Rice Gravity
2.5
2.4
2.432
2.414
2.405
0.00 1.00 2.00 3.00 4.00 5.00 6.00
Asphalt Content (%)

INDUSTRIAL
ASPHALT & AGGREGATES

Design No.:	505-64B2020-TX
Design Date:	7/17/2017
Revision Date:	7/2/2018

Reference: Design of HMAC Type B HMA & WMA for the following project:

Shown below is the plant-corrected job mix for the hot mix asphaltic concrete pavement used on the following project:

Name Of Project: Various

The job mix formula has been determined according to Texas Department of Transportation Standard Specifications Item 340 & 341. Hot Mix Asphaltic Concrete Pavement. The asphaltic concrete will be produced by:

HMAC Producer: **Industrial Asphalt & Aggregate - Buda Centex**
Plant Location: **Buda, Texas**

CERTIFICATION

This design has been prepared under my direction in accordance with TXDOTspecification. Design meets or exceeds the design specification for Item 340 & 341.

Prepared by: Johnathan Killgore
Certification: TXDOT 1A - 2042, II - 834, 1B - 3225

JOB MIX FORMULA

Sieve Size		Design JMF	Current JMF
1"		98.2	99.0
3/4""		92.3	96.3
3/8"		72.2	74.9
#4		50.5	53.2
#8		34.9	34.7
#30		19.9	21.4
#50		13.4	16.2
#200		4.4	5.5
Ignition Oven	Asphalt Content (PG 64-22)	4.6%	4.6%
Target Compaction	96.0% Superpave Gyratory Compactor		

Johnathan Killgore

IA&A Johnathan Killgore
Quality Control Supervisor

TEXAS DEPARTMENT OF TRANSPORTATION

2014 HMACP MIXTURE DESIGN : COMBINED GRADATION

Refresh Workbook

TX2MIXDE14 - File Version: 11/23/16 12:28:51

SAMPLE ID:	505-64B2020-TX	SAMPLE DATE:	7/17/2017
LOT NUMBER:		LETTING DATE:	rev 07-02-18
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:	Various	SPEC YEAR:	2014
SAMPLED BY:	Johnathan Killgore 834	SPEC ITEM:	341
SAMPLE LOCATION:	Stockpiles at Plant	SPECIAL PROVISION:	
MATERIAL CODE:		MIX TYPE:	341-DG-B
MATERIAL NAME:	505-64B2020-TX		
PRODUCER:	Industrial Asphalt & Aggregates - Buda Centex		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:	Base	STATION:		DIST. FROM CL:	

WMA Additive in Design?	No
Target Discharge Temp., °F:	315
WMA TECHNOLOGY:	
WMA RATE:	UNITS:
CONTRACTOR DESIGN # :	505-64B2020-TX

Maximum Allowable, %	
Frac RAP:	40.0
Unfrac RAP:	10.0
RAS:	5.0
RB Ratio:	20.0

Recycled Binder, %	
Bin No.8 :	0.9
Bin No.9 :	0.0
Bin No.10 :	0.0
Total	*0.900*

Use this value in the QC/QA template>>

Ratio of Recycled to Total Binder, %
(based on binder percent (%) entered below in this worksheet)
19.6

	AGGREGATE BIN FRACTIONS							"RECYCLED MATERIALS"			
Aggregate	Bin No.1	Bin No.2	Bin No.3	Bin No.4	Bin No.5	Bin No.6	Bin No.7	Bin No.8	Bin No.9	Bin No.10	
Source:	Limestone_Dolomit	Limestone_Dolomit	Limestone_Dolomit	Limestone_Dolomit				Fractionated RAP			Material Type
Pit:	Ruby	Ruby	Ruby	Ruby							Material Source
Number:	1410607	1410607	1410607	1410607							RAS Type
Producer:	Centex Materials	Centex Materials	Centex Materials	Centex Materials	Mid-Tex						RAP/RAS Producer
Sample ID:	(57) Rock	Type D	Type F	Screenings	Field Sand			Fine 1/2"			Sample ID

															Recycled Asphalt Binder (%)							Combined Gradation		
															4.5									
Hydrated Lime?:															20.0	% of Tot. Mix		% of Tot. Mix		% of Tot. Mix	Total Bin	Lower & Upper Specification Limits		
Individual Bin (%):	30.0	Percent	10.0	Percent	15.0	Percent	20.0	Percent	5.0	Percent		Percent		Percent	20.0	% of Aggreg		% of Aggreg		% of Aggreg	100.0%			
Sieve Size:	Cum.% Passing	Wtd Cum. %	Cum.% Passing	Wtd Cum. %	Cum.% Passing	Wtd Cum. %	Cum.% Passing	Wtd Cum. %	Cum.% Passing	Wtd Cum. %	Cum.% Passing	Wtd Cum. %	Cum.% Passing	Wtd Cum. %	Cum.% Passing	Wtd Cum. %	Cum.% Passing	Wtd Cum. %	Cum.% Passing	Wtd Cum. %	Cum. % Passing	Lower	Upper	Within Spec's
1-1/2"	100.0	30.0	100.0	10.0	100.0	15.0	100.0	20.0	100.0	5.0					100.0	20.0					**100.0**	100.0	100.0	Yes
1"	94.0	28.2	100.0	10.0	100.0	15.0	100.0	20.0	100.0	5.0					100.0	20.0					**98.2**	98.0	100.0	Yes
3/4"	74.3	22.3	100.0	10.0	100.0	15.0	100.0	20.0	100.0	5.0					100.0	20.0					**92.3**	84.0	98.0	Yes
3/8"	23.6	7.1	75.4	7.5	100.0	15.0	100.0	20.0	100.0	5.0					87.8	17.6					**72.2**	60.0	80.0	Yes
No. 4	3.9	1.2	12.1	1.2	72.4	10.9	100.0	20.0	99.6	5.0					61.2	12.2					**50.5**	40.0	60.0	Yes
No. 8	2.5	0.8	3.8	0.4	16.5	2.5	88.3	17.7	97.0	4.9					43.7	8.7					**34.9**	29.0	43.0	Yes
No. 30	2.4	0.7	2.1	0.2	3.6	0.5	43.2	8.6	85.1	4.3					27.6	5.5					**19.9**	13.0	28.0	Yes
No. 50	2.2	0.7	1.8	0.2	2.7	0.4	26.4	5.3	55.9	2.8					20.4	4.1					**13.4**	6.0	20.0	Yes
No. 200	2.0	0.6	1.5	0.2	2.2	0.3	9.1	1.8	5.1	0.3					6.4	1.3					**4.4**	2.0	7.0	Yes

(Bold Italic) Not within specifications ***(Bold Italic)*** Not within specificaitons- Restricted Zone *(Italic)* Not cumulative

Lift Thickness, in:		Binder Substitution?	No	Binder Originally Specified:	PG 64-22	Substitute Binder:]
Asphalt Source:	Pelican, Valero, Martin			Binder Percent, (%):	4.6	Asphalt Spec. Grav.: 1.037
Antistripping Agent:				Percent, (%):		

Remarks:

Designed as HMA produced as HMA or WMA.

Combined Gradation

Notes:

7/6/2018

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : MATERIAL PROPERTIES

SAMPLE ID:	505-64B2020-TX	SAMPLE DATE:	7/17/2017
LOT NUMBER:		LETTING DATE:	rev 07-02-18
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:	Various	SPEC YEAR:	2014
SAMPLED BY:	Johnathan Killgore 834	SPEC ITEM:	341
SAMPLE LOCATION:	Stockpiles at Plant	SPECIAL PROVISION:	
MATERIAL CODE:		MIX TYPE:	341-DG-B
MATERIAL NAME:	505-64B2020-TX		
PRODUCER:	Industrial Asphalt & Aggregates - Buda Centex		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:	Base	STATION:		DIST. FROM CL:	CONTRACTOR DESIGN # : 505-64B2020-TX

	Bin No.1	Bin No.2	Bin No.3	Bin No.4	Bin No.5	Bin No.6	Bin No.7
Individual Bin (%):	Bin No.1 = 30 %	Bin No.2 = 10 %	Bin No.3 = 15 %	Bin No.4 = 20 %	Bin No.5 = 5 %		
Aggregate Source:	Limestone_Dolomite	Limestone_Dolomite	Limestone_Dolomite	Limestone_Dolomite			
Aggregate Number:	1410607	1410607	1410607	1410607			
Sample ID:	(57) Rock	Type D	Type F	Screenings	Field Sand		

Test Name	SiteManager Test Template	Test Method	Spec. Min or Max	Spec. Limit	Modified Spec. Limit	Result	Sample ID	Result	Sample ID	Result	Sample ID	Result	Sample ID	Result	Sample ID	Result	Sample ID	Result	Sample ID
Stockpile						Bin No.1		Bin No.2		Bin No.3		Bin No.4		Bin No.5		Bin No.6		Bin No.7	
Decantation	Tx217	Tex-217-F	Max.	1.5		0.60		0.80		0.60		N/A		N/A					
Deleterious Mat'l	Tx217	Tex-217-F	Max.	1.5		0.00		0.00		0.00		N/A		N/A					
Surface Aggregate Classification	Tx4AgClas	Tex-438-A, Tex-612-J	Min.			B		B		B		B		N/A					
Magnesium Sulfate Soundness	Tx411M	Tex-411-A	Max.	30		17.00		17.00		17.00		17.00		N/A					
LA Abrasion	Tx410	Tex-410-A	Max.	40		30.00		30.00		30.00		30.00		N/A					
Crushed Faces Count	Tx460	Tex-460-A	Min.	85		100.00		100.00		100.00		N/A		N/A					
Flat & Elongated	Tx280	Tex-280-F	Max.	10		0.00		0.00		0.00		N/A		N/A					
Micro-Deval Abrasion	Tx461	Tex-461-A	Use results to estimate the Mg Sulfate Soundness Loss			22.00		22.00		22.00		22.00		N/A					
Fine Aggregate						Bin No.1		Bin No.2		Bin No.3		Bin No.4		Bin No.5		Bin No.6		Bin No.7	
Bar Linear Shrinkage	Tx107	Tex-107-E	Max.	3								0.00		0.00					
Methylene Blue	-	AASHTO T330	Max.																
Combined Aggregate						Bin No.1		Bin No.2		Bin No.3		Bin No.4		Bin No.5		Bin No.6		Bin No.7	
Sand Equivalent	Tx203	Tex-203-F	Min.	45										70.00	Combined Sample				
User Defined Testing						Bin No.1		Bin No.2		Bin No.3		Bin No.4		Bin No.5		Bin No.6		Bin No.7	
Use this area to enter any test methods, specifications & test result that apply to this material(s) but are not not listed above. 1																			
2																			
3																			
4																			
5																			

Recycled Materials					Bin No.8		Bin No.9		Bin No.10	
Deleterious Mat'l	Tx217	Tex-217-F, Part III	Max.	0.5						
Decantation	Tx406	Tex-406-A, Part I	Max.	5						
Plasticity Index	Tx104-6	Tex-106-E	Max.	8						
User Defined Testing										

Remarks:

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : Aggregate Classification

SAMPLE ID:	505-64B2020-TX	SAMPLE DATE:	7/17/2017
LOT NUMBER:		LETTING DATE:	rev 07-02-18
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:	Various	SPEC YEAR:	2014
SAMPLED BY:	Johnathan Killgore 834	SPEC ITEM:	341
SAMPLE LOCATION:	Stockpiles at Plant	SPECIAL PROVISION:	
MATERIAL CODE:		MIX TYPE:	341-DG-B
MATERIAL NAME:	505-64B2020-TX		
PRODUCER:	Industrial Asphalt & Aggregates - Buda Centex		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:	Base	STATION:		DIST. FROM CL:		CONTRACTOR DESIGN # :	505-64B2020-TX

Aggregate Classification

		Bin No.1	Bin No.2	Bin No.3	Bin No.4	Bin No.5	Bin No.6	Bin No.7	Bin No.8	Bin No.9	Bin No.10
Individual Bin (%):		Bin No.1 = 30 %	Bin No.2 = 10 %	Bin No.3 = 15 %	Bin No.4 = 20 %	Bin No.5 = 5 %			Bin No.8 = 20 %		
Aggregate Source:		Limestone_Dolomite	Limestone_Dolomite	Limestone_Dolomite	Limestone_Dolomite				Fractionated RAP		
Aggregate Number:		1410607	1410607	1410607	1410607				Fine 1/2"		
Class (A) Rock (Y/N):		No	No	No	No						
Sieve Size:		Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %
Passing	Retained										
-	1-1/2"	0.0	0.0	0.0	0.0	0.0			0.0		
1-1/2"	1"	1.8	0.0	0.0	0.0	0.0			0.0		
1"	3/4"	5.9	0.0	0.0	0.0	0.0			0.0		
3/4"	3/8"	15.2	2.5	0.0	0.0	0.0			2.4		
3/8"	No. 4	5.9	6.3	4.1	0.0	0.0			5.3		
No. 4	No. 8	0.4	0.8	8.4	2.3	0.1			3.5		
No. 8	No. 30	0.0	0.2	1.9	9.0	0.6			3.2		
No. 30	No. 50	0.1	0.0	0.1	3.4	1.5			1.4		
No. 50	No. 200	0.1	0.0	0.1	3.5	2.5			2.8		
No. 200	Pan	0.6	0.2	0.3	1.8	0.3			1.3		
Total:		30.0	10.0	15.0	20.0	5.0			20.0		
Percent of plus No. 4		28.8	8.8	4.1	0.0	0.0			7.8		
Percent of plus No. 8		29.3	9.6	12.5	2.3	0.1			11.5		

Percent of plus No. 4 from class (A) Rock:	0.0
Total Percent of plus No. 4	49.5
Percent of plus No. 4 from class (A) Rock:	*0.0*

Percent of plus No. 8 from class (A) Rock:	0.0
Total Percent of plus No. 8	65.1
Percent of plus No. 8 from class (A) Rock:	0.0

Remarks:

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : BULK GRAVITY

SAMPLE ID:	505-64B2020-TX	SAMPLE DATE:	7/17/2017
LOT NUMBER:		LETTING DATE:	rev 07-02-18
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:	Various	SPEC YEAR:	2014
SAMPLED BY:	Johnathan Killgore 834	SPEC ITEM:	341
SAMPLE LOCATION:	Stockpiles at Plant	SPECIAL PROVISION:	
MATERIAL CODE:		MIX TYPE:	341-DG-B
MATERIAL NAME:	505-64B2020-TX		
PRODUCER:	Industrial Asphalt & Aggregates - Buda Centex		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:	Base	STATION:		DIST. FROM CL:		CONTRACTOR DESIGN # :	505-64B2020-TX

	Bin No.1	Bin No.2	Bin No.3	Bin No.4	Bin No.5	Bin No.6	Bin No.7	Bin No.8	Bin No.9	Bin No.10
Individual Bin (%):	Bin No.1 = 30 %	Bin No.2 = 10 %	Bin No.3 = 15 %	Bin No.4 = 20 %	Bin No.5 = 5 %			Bin No.8 = 20 %		
Aggregate Source:	Limestone_Dolomite	Limestone_Dolomite	Limestone_Dolomite	Limestone_Dolomite				Fractionated RAP		
Aggregate Number:	1410607	1410607	1410607	1410607						
Sample ID:	(57) Rock	Type D	Type F	Screenings	Field Sand			Fine 1/2"		

Sieve Size:		Individual		Individual		Individual		Individual		Individual		Individual		Individual		Individual		Individual		Individual	
Passing	Retained	Ret., %	Bulk SG	Ret., %	Bulk SG	Ret., %	Bulk SG	Ret., %	Bulk SG	Ret., %	Bulk SG	Ret., %	Bulk SG	Ret., %	Bulk SG	Ret., %	Bulk SG	Ret., %	Bulk SG	Ret., %	Bulk SG
	1-1/2"																				
1-1/2"	1"	6.0	2.545																		
1"	3/4"	19.7	2.545																		
3/4"	3/8"	50.7	2.545	24.6	2.550											12.2	2.450				
3/8"	No. 4	19.7	2.545	63.3	2.550	27.6	2.550			0.4	2.630					26.6	2.450				
No. 4	No. 8	1.4	2.545	8.3	2.550	55.9	2.550	11.7	2.600	2.6	2.630					17.5	2.450				
No. 8	No. 30	0.1	2.545	1.7	2.550	12.9	2.550	45.1	2.600	11.9	2.630					16.1	2.450				
No. 30	No. 50	0.2	2.545	0.3	2.550	0.9	2.550	16.8	2.600	29.2	2.630					7.2	2.450				
No. 50	No. 200	0.2	2.545	0.3	2.550	0.5	2.550	17.3	2.600	50.8	2.630					14.0	2.450				
No. 200	Pan	2.0	2.545	1.5	2.550	2.2	2.550	9.1	2.600	5.1	2.630					6.4	2.450				
Totals		100.0	2.545	100.0	2.550	100.0	2.550	100.0	2.600	100.0	2.630					100.0	2.450				

Combined Bulk Specific Gravity:	**2.541**
Coarse Agg. Combined BSG:	

Specific Gravity of Asphalt:	**1.037**

Remarks:

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : SUMMARY SHEET

SAMPLE ID:	505-64B2020-TX	SAMPLE DATE:	7/17/2017
LOT NUMBER:		LETTING DATE:	rev 07-02-18
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:	Various	SPEC YEAR:	2014
SAMPLED BY:	Johnathan Killgore 834	SPEC ITEM:	341
SAMPLE LOCATION:	Stockpiles at Plant	SPECIAL PROVISION:	
MATERIAL CODE:		MIX TYPE:	341-DG-B
MATERIAL NAME:	505-64B2020-TX		
PRODUCER:	Industrial Asphalt & Aggregates - Buda Centex		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:	Base	STATION:		DIST. FROM CL:		CONTRACTOR DESIGN # :	505-64B2020-TX

Target Density, %:	**96.0**
Number of Gyrations:	**50**

Note: This mix design requires an asphalt content of at least 4.5% to meet the Maximum Ratio of Recycled to Total Binder requirement.

TEST SPECIMENS								Mixture Evaluation @ Optimum Asphalt Content				
									Hamburg Wheel Tracking Test			Overlay Tester Min. Number of Cycles
Asphalt Content (%)	Binder Ratio (%)	Specific Gravity Of Specimen (Ga)	Maximum Specific Gravity (Gr)	Effective Gravity (Ge)	Theo. Max. Specific Gravity (Gt)	Density from Gt (Percent)	VMA (Percent)	Indirect Tensile Strength (psi)	Number of cycles	Rut depth (mm)		
4.0	22.5	2.297			2.445	93.9	14.9					
4.5	20.0	2.322	2.438	2.604	2.428	95.6	14.4					
5.0	18.0	2.347	2.406	2.586	2.411	97.3	14.0	166.9	15,000	10.2		
5.5	16.4	2.342	2.390	2.586	2.394	97.8	14.6					
6.0	15.0	2.347			2.378	98.7	14.9					

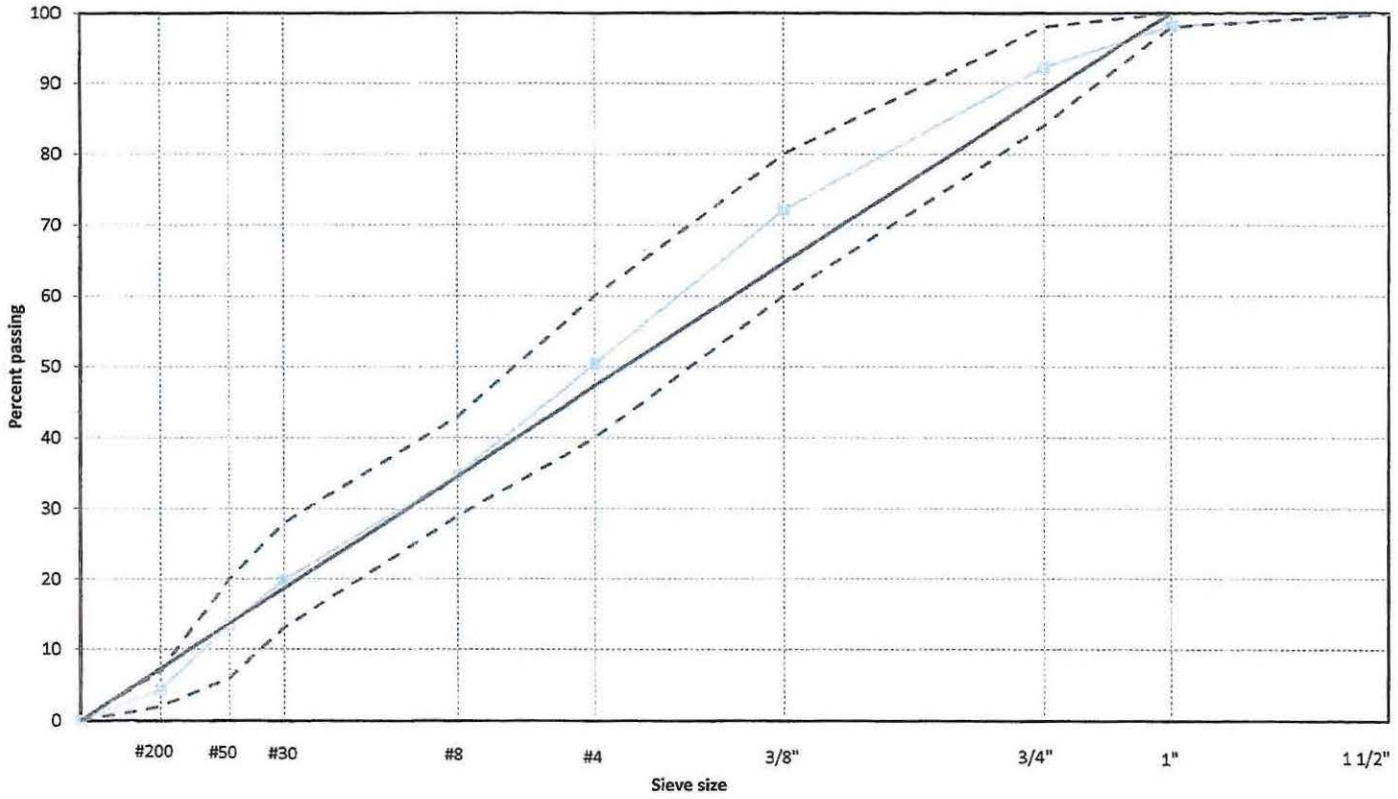
Effective Specific Gravity:	2.592
Optimum Asphalt Content :	4.6
Binder Ratio @ OAC:	19.6
VMA @ Optimum AC:	14.3

Estimated Percent of Stripping, %:	0

Interpolated Values	
Specific Gravity (Ga):	2.327
Max. Specific Gravity (Gr):	2.431
Theo. Max. Specific Gravity (Gt):	2.424

Mixing Temp,°F:	275
Molding Temp,°F:	250

Remarks:


100
90
80
70
60
50
40
30
20
10
0
Percent passing
#200
#50
#30
#8
#4
3/8"
3/4"
1"
1 1/2"
Sieve size

INDUSTRIAL
ASPHALT & AGGREGATES

Design No.: 505-64C1000
Design Date: 1/15/2018

Reference: Design of HMAC Type C HMA & WMA for the following project:

Shown below is the plant-corrected job mix for the hot mix asphaltic concrete pavement used on the following project:

Name Of Project: Various

The job mix formula has been determined according to Texas Department of Transportation Standard Specifications Item 340 & 341. Hot Mix Asphaltic Concrete Pavement. The asphaltic concrete will be produced by:

HMAC Producer: **Industrial Asphalt & Aggregate - Buda Centex**
Plant Location: **Buda, Texas**

CERTIFICATION

This design has been prepared under my direction in accordance with TXDOTspecification. Design meets or exceeds the design specification for Item 340 & 341.

Prepared by: Johnathan Killgore
Certification: TXDOT 1A - 2042, II - 834, 1B - 3225

JOB MIX FORMULA

Sieve Size	Design JMF	HMA & WMA Current JMF
1"	100.0	100.0
3/4""	99.6	99.0
3/8"	83.7	80.0
#4	57.0	56.0
#8	38.1	38.5
#30	21.7	21.6
#50	13.7	14.3
#200	5.0	5.2
Ignition Oven — Asphalt Content (PG 64-22)	5.0%	5.1%

Target Compaction 97.0% Texas Gyratory Compactor

Johnathan Killgore

IA&A Johnathan Killgore
Quality Control Supervisor

TEXAS DEPARTMENT OF TRANSPORTATION

2014 HMACP MIXTURE DESIGN : COMBINED GRADATION

Refresh Workbook — TX2MIXDE14 - File Version: 01/19/17 15:32:54

SAMPLE ID:	505-64C1000	SAMPLE DATE:	1/15/2018
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:	Various	SPEC YEAR:	2014
SAMPLED BY:	Johnathan Killgore	SPEC ITEM:	341
SAMPLE LOCATION:	Stockpiles at Plant	SPECIAL PROVISION:	
MATERIAL CODE:		MIX TYPE:	341-DG-C
MATERIAL NAME:	505-64C1000		
PRODUCER:	Industrial Asphalt & Aggregates - Buda Centex		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:	Surface	STATION:		DIST. FROM CL:	

WMA Additive in Design?	No
Target Discharge Temp., °F:	315
WMA TECHNOLOGY:	
WMA RATE:	UNITS:
CONTRACTOR DESIGN # :	505-64C1000

Maximum Allowable, %	
Frac RAP:	20.0
Unfrac RAP:	10.0
RAS:	5.0
RB Ratio:	20.0

Recycled Binder, %	
Bin No.8 :	0.0
Bin No.9 :	0.0
Bin No.10 :	0.0
Total	*0.0*

Use this value in the QC/QA template>>

Ratio of Recycled to Total Binder, %
(based on binder percent (%) entered below in this worksheet)
0.0

	AGGREGATE BIN FRACTIONS							"RECYCLED MATERIALS"			
Aggregate	Bin No.1	Bin No.2	Bin No.3	Bin No.4	Bin No.5	Bin No.6	Bin No.7	Bin No.8	Bin No.9	Bin No.10	
Source:	Limestone_Dolomit	Limestone_Dolomit	Limestone_Dolomit	Limestone_Dolomit							Material Type
Pit:	Ruby	Ruby	Ruby	Ruby							Material Source
Number:	1410607	1410607	1410607	1410607							RAS Type
Producer:	Centex Materials	Centex Materials	Centex Materials	Centex Materials							RAP/RAS Producer
Sample ID:	Type C	Type D	Type F	Mfg Sand	Field Sand						Sample ID

Recycled Asphalt Binder (%)

Combined Gradation

Hydrated Lime?:																% of Tot. Mix		% of Tot. Mix		% of Tot. Mix		Total Bin	Lower & Upper Specification Limits		
Individual Bin (%):	21.0	Percent	21.0	Percent	25.0	Percent	23.0	Percent	10.0	Percent		Percent		Percent		% of Aggreg		% of Aggreg		% of Aggreg		100.0%			
Sieve Size:	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum. % Passing	Lower	Upper	Within Spec's
1"	100.0	21.0	100.0	21.0	100.0	25.0	100.0	23.0	100.0	10.0													100.0	100.0	100.0	Yes
3/4"	98.2	20.6	100.0	21.0	100.0	25.0	100.0	23.0	100.0	10.0													99.6	95.0	100.0	Yes
3/8"	50.3	10.6	71.1	14.9	100.0	25.0	100.0	23.0	100.0	10.0													83.5	70.0	85.0	Yes
No. 4	8.2	1.7	11.9	2.5	78.5	19.6	99.6	22.9	99.8	10.0													56.7	43.0	63.0	Yes
No. 8	4.1	0.9	3.9	0.8	17.5	4.4	90.0	20.7	95.9	9.6													36.3	32.0	44.0	Yes
No. 30	2.2	0.5	1.8	0.4	2.3	0.6	44.7	10.3	79.7	8.0													19.7	14.0	28.0	Yes
No. 50	1.9	0.4	1.7	0.4	1.8	0.5	25.0	5.8	57.6	5.8													12.7	7.0	21.0	Yes
No. 200	1.5	0.3	1.5	0.3	1.5	0.4	8.7	2.0	11.1	1.1													4.1	2.0	7.0	Yes

(Bold Italic) Not within specifications ***(Bold Italic)*** Not within specificaitons- Restricted Zone *(Italic)* Not cumulative

Lift Thickness, in:	2.00	Binder Substitution?	Yes	Binder Originally Specified:	PG 70-22	Substitute Binder:	PG 64-22
Asphalt Source:	Pelican, Martin, Valero			Binder Percent, (%):	5.0	Asphalt Spec. Grav.:	1.033
Antistripping Agent:				Percent, (%):			

Remarks:

Designed as HMA, plant produced as HMA and WMA

Combined Gradation

Notes:

7/6/2018

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : MATERIAL PROPERTIES

SAMPLE ID:	505-64C1000	SAMPLE DATE:	43115
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:	Various	SPEC YEAR:	2014
SAMPLED BY:	Johnathan Killgore	SPEC ITEM:	341
SAMPLE LOCATION:	Stockpiles at Plant	SPECIAL PROVISION:	
MATERIAL CODE:	1.1074	MIX TYPE:	341-DG-C
MATERIAL NAME:	505-64C1000		
PRODUCER:	Industrial Asphalt & Aggregates - Buda Centex		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE/LIFT:	Surface	STATION:		DIST. FROM CL:		CONTRACTOR DESIGN # :	505-64C1000

	Bin No.1	Bin No.2	Bin No.3	Bin No.4	Bin No.5	Bin No.6	Bin No.7
Individual Bin (%):	Bin No.1 = 21 %	Bin No.2 = 21 %	Bin No.3 = 25 %	Bin No.4 = 23 %	Bin No.5 = 10 %		
Aggregate Source:	Limestone_Dolomite	Limestone_Dolomite	Limestone_Dolomite	Limestone_Dolomite			
Aggregate Number:	1410607	1410607	1410607	1410607			
Sample ID:	Type C	Type D	Type F	Mfg Sand	Field Sand		

Test Name	SiteManager Test Template	Test Method	Spec. Min or Max	Spec. Limit	Modified Spec. Limit	Result	Sample ID	Result	Sample ID	Result	Sample ID	Result	Sample ID	Result	Sample ID	Result	Sample ID	Result	Sample ID
Stockpile						Bin No.1		Bin No.2		Bin No.3		Bin No.4		Bin No.5		Bin No.6		Bin No.7	
Decantation	Tx217	Tex-217-F	Max.	1.5		0.90		0.90		0.90									
Deleterious Mat'l	Tx217	Tex-217-F	Max.	1.5		0.00		0.00		0.00									
Surface Aggregate Classification	Tx4AgClas	Tex-438-A, Tex-612-J	Min.			B		B		B		B		B					
Magnesium Sulfate Soundness	Tx411M	Tex-411-A	Max.	30		17.00		17.00		17.00		17.00		17.00					
LA Abrasion	Tx410	Tex-410-A	Max.	40		30.00		30.00		30.00		30.00		30.00					
Crushed Faces Count	Tx460	Tex-460-A	Min.	85		100.00		100.00		100.00									
Flat & Elongated	Tx280	Tex-280-F	Max.	10		0.00		0.00		0.00									
Micro-Deval Abrasion	Tx461	Tex-461-A	Use results to estimate the Mg Sulfate Soundness Loss			22.00		22.00		22.00		22.00		22.00					
Fine Aggregate						Bin No.1		Bin No.2		Bin No.3		Bin No.4		Bin No.5		Bin No.6		Bin No.7	
Bar Linear Shrinkage	Tx107	Tex-107-E	Max.	3								0.00		0.00					
Methylene Blue	-	AASHTO T330	Max.																
Combined Aggregate						Bin No.1		Bin No.2		Bin No.3		Bin No.4		Bin No.5		Bin No.6		Bin No.7	
Sand Equivalent	Tx203	Tex-203-F	Min.	45		88.00													
User Defined Testing						Bin No.1		Bin No.2		Bin No.3		Bin No.4		Bin No.5		Bin No.6		Bin No.7	
Use this area to enter any test methods, specifications & test result that apply to this material(s) but are not not listed above. 1																			
2																			
3																			
4																			
5																			
Recycled Materials						Bin No.8		Bin No.9		Bin No.10									
Deleterious Mat'l	Tx217	Tex-217-F, Part III	Max.	0.5															
Decantation	Tx406	Tex-406-A, Part I	Max.	5															
Plasticity Index	Tx104-6	Tex-106-E	Max.	8															
User Defined Testing																			

Remarks:

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : Aggregate Classification

SAMPLE ID:	505-64C1000	SAMPLE DATE:	43115.00
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:	Various	SPEC YEAR:	2014
SAMPLED BY:	Johnathan Killgore	SPEC ITEM:	341
SAMPLE LOCATION:	Stockpiles at Plant	SPECIAL PROVISION:	
MATERIAL CODE:	1.1074	MIX TYPE:	341-DG-C
MATERIAL NAME:	505-64C1000		
PRODUCER:	Industrial Asphalt & Aggregates - Buda Centex		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:	Surface	STATION:		DIST. FROM CL:		CONTRACTOR DESIGN # :	505-64C1000

Aggregate Classification

		Bin No.1	Bin No.2	Bin No.3	Bin No.4	Bin No.5	Bin No.6	Bin No.7	Bin No.8	Bin No.9	Bin No.10
Individual Bin (%):		Bin No.1 = 21 %	Bin No.2 = 21 %	Bin No.3 = 25 %	Bin No.4 = 23 %	Bin No.5 = 10 %					
Aggregate Source:		Limestone_Dolomite	Limestone_Dolomite	Limestone_Dolomite	Limestone_Dolomite						
Aggregate Number:		1410607	1410607	1410607	1410607						
Class (A) Rock (Y/N):		No	No	No	No	No					
Sieve Size:		Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %
Passing	Retained										
-	1"	0.0	0.0	0.0	0.0	0.0					
1"	3/4"	0.4	0.0	0.0	0.0	0.0					
3/4"	3/8"	10.1	6.1	0.0	0.0	0.0					
3/8"	No. 4	8.8	12.4	5.4	0.1	0.0					
No. 4	No. 8	0.9	1.7	15.3	2.2	0.4					
No. 8	No. 30	0.4	0.4	3.8	10.4	1.6					
No. 30	No. 50	0.1	0.0	0.1	4.5	2.2					
No. 50	No. 200	0.1	0.0	0.1	3.7	4.7					
No. 200	Pan	0.3	0.3	0.4	2.0	1.1					
Total:		21.0	21.0	25.0	23.0	10.0					
Percent of plus No. 4		19.3	18.5	5.4	0.1	0.0					
Percent of plus No. 8		20.1	20.2	20.6	2.3	0.4					

Percent of plus No. 4 from class (A) Rock:	0.0
Total Percent of plus No. 4	43.3
Percent of plus No. 4 from class (A) Rock:	0.0

Percent of plus No. 8 from class (A) Rock:	0.0
Total Percent of plus No. 8	83.7
Percent of plus No. 8 from class (A) Rock:	0.0

Remarks:

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : BULK GRAVITY

SAMPLE ID:	505-64C1000	SAMPLE DATE:	43115
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:	Various	SPEC YEAR:	2014
SAMPLED BY:	Johnathan Killgore	SPEC ITEM:	341
SAMPLE LOCATION:	Stockpiles at Plant	SPECIAL PROVISION:	
MATERIAL CODE:	1.1074	MIX TYPE:	341-DG-C
MATERIAL NAME:	505-64C1000		
PRODUCER:	Industrial Asphalt & Aggregates - Buda Centex		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:	Surface	STATION:		DIST. FROM CL:		CONTRACTOR DESIGN # :	505-64C1000

	Bin No.1	Bin No.2	Bin No.3	Bin No.4	Bin No.5	Bin No.6	Bin No.7	Bin No.8	Bin No.9	Bin No.10
Individual Bin (%):	Bin No.1 = 21 %	Bin No.2 = 21 %	Bin No.3 = 25 %	Bin No.4 = 23 %	Bin No.5 = 10 %					
Aggregate Source:	Limestone_Dolomite	Limestone_Dolomite	Limestone_Dolomite	Limestone_Dolomite						
Aggregate Number:	1410607	1410607	1410607	1410607						
Sample ID:	Type C	Type D	Type F	Mfg Sand	Field Sand					

Sieve Size:		Bin No.1		Bin No.2		Bin No.3		Bin No.4		Bin No.5		Bin No.6		Bin No.7		Bin No.8		Bin No.9		Bin No.10	
Passing	Retained	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG
	1"																				
1"	3/4"	1.8	2.550																		
3/4"	3/8"	47.9	2.550	28.9	2.550																
3/8"	No. 4	42.1	2.550	59.2	2.550	21.5	2.550	0.4	2.600	0.2	2.630										
No. 4	No. 8	4.1	2.550	8.0	2.550	61.0	2.550	9.6	2.600	3.9	2.630										
No. 8	No. 30	1.9	2.550	2.1	2.550	15.2	2.550	45.3	2.600	16.2	2.630										
No. 30	No. 50	0.3	2.550	0.1	2.550	0.5	2.550	19.7	2.600	22.1	2.630										
No. 50	No. 200	0.4	2.550	0.2	2.550	0.3	2.550	16.3	2.600	46.5	2.630										
No. 200	Pan	1.5	2.550	1.5	2.550	1.5	2.550	8.7	2.600	11.1	2.630										
Totals		100.0	2.550	100.0	2.550	100.0	2.550	100.0	2.600	100.0	2.630										

Combined Bulk Specific Gravity:	**2.569**
Coarse Agg. Combined BSG:	

Specific Gravity of Asphalt:	**1.033**

Remarks:

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : SUMMARY SHEET

SAMPLE ID:	505-64C1000	SAMPLE DATE:	43115
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:	Various	SPEC YEAR:	2014
SAMPLED BY:	Johnathan Killgore	SPEC ITEM:	341
SAMPLE LOCATION:	Stockpiles at Plant	SPECIAL PROVISION:	
MATERIAL CODE:	1.1074	MIX TYPE:	341-DG-C
MATERIAL NAME:	505-64C1000		
PRODUCER:	Industrial Asphalt & Aggregates - Buda Centex		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:	Surface	STATION:		DIST. FROM CL:		CONTRACTOR DESIGN # :	505-64C1000

Target Density, %:	**97.0**
Number of Gyrations:	

TEST SPECIMENS								Mixture Evaluation @ Optimum Asphalt Content				
									Hamburg Wheel Tracking Test			Overlay Tester Min. Number of Cycles
Asphalt Content (%)	Binder Ratio (%)	Specific Gravity Of Specimen (Ga)	Maximum Specific Gravity (Gr)	Effective Gravity (Ge)	Theo. Max. Specific Gravity (Gt)	Density from Gt (Percent)	VMA (Percent)	Indirect Tensile Strength (psi)	Number of cycles	Rut depth (mm)		
3.9	0.0	2.329	2.446	2.590	2.456	94.8	14.0					
4.4	0.0	2.336	2.430	2.591	2.439	95.8	14.2					
4.9	0.0	2.342	2.421	2.601	2.421	96.7	14.4	152	15,000	10.1		
5.4	0.0	2.350	2.410	2.608	2.404	97.7	14.5					
5.9	0.0	2.361	2.400	2.617	2.388	98.9	14.6					

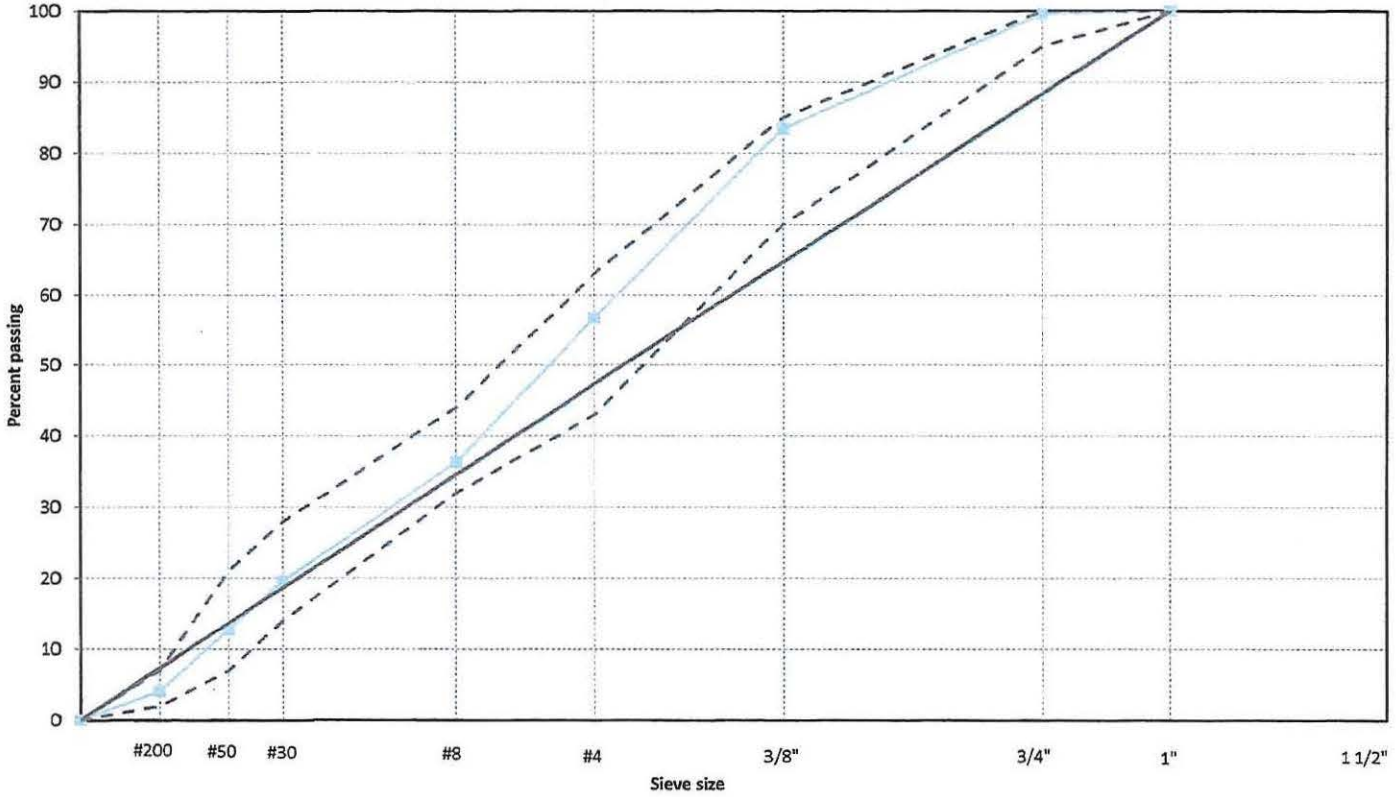
Effective Specific Gravity:	2.602
Optimum Asphalt Content :	5.0
Binder Ratio @ OAC:	0.0
VMA @ Optimum AC:	14.4

Estimated Percent of Stripping, %:	0

Interpolated Values	
Specific Gravity (Ga):	*2.344*
Max. Specific Gravity (Gr):	*2.418*
Theo. Max. Specific Gravity (Gt):	*2.417*

Mixing Temp,°F:	275
Molding Temp,°F:	250

Remarks:


100
90
80
70
60
50
40
30
20
10
0
Percent passing
#200
#50
#30
#8
#4
3/8"
3/4"
1"
1 1/2"
Sieve size

INDUSTRIAL
ASPHALT & AGGREGATES

New Design Name: 505-64C1020-17C
Old Design Name:
Design Date: 01/03/17
Revision Date: 11/06/17

City of Austin
Department of Public Works
Engineering Services Division
505 Barton Springs Road, Suite 900
Austin, Texas 78704

Attention: Bill Hadley, P.E., PhD.

Reference: Design of HMAC Type "C" for the following project:

Shown below is the plant-corrected job mix for the hot mix asphaltic concrete pavement used on the following project:

Name Of Project:

The job mix formula has been determined according to Texas Department of Transportation Standard Specifications Item 340. Hot Mix Asphaltic Concrete Pavement. The asphaltic concrete will be produced by

HMAC Producer: Industrial Asphalt & Aggregates, LLC
Plant Location: Buda, Texas

CERTIFICATION

This design dated 11/06/2017 has been prepared under my direction in accordance with TXDOT Construction Bulletin C-14, as modified by Test Method TEX-204-F and TXDOT Item 340.

Prepared by: Wade A Shaff
Certification: TXDOT Level II - # 45
TXDOT Level IA - # 49

JOB MIX FORMULA

Sieve Size		Percent Passing
7/8"		100
5/8"		98.0
3/8"		79.0
#4		68.9
#10		35.5
#40		21.2
#80		12.0
#200		5.0
Vacuum Extraction	Asphalt Content (PG 64-22)	4.8%
Ignition Oven	Asphalt Content (PG 64-22)	5.0%

HMAC SUBMITTALS

All responsibility for the adequacy of this mix design rests with the Contractor who submitted it. In reviewing the submittal the COA must rely upon the adequacy of the work of the Design Professional whose certification appears herein.

☒ Reviewed ☐ See Annotations

Signature: [signature] Date: 1/10/18

Wade A Shaff #45
Wade A Shaff
Quality Materials Manager
Industrial Asphalt & Aggregates, LLC
512-801-9238

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : COMBINED GRADATION

Refresh Workbook

File Version: 03/17/04 10:49:36

SAMPLE ID:	505-64C1020-17C	SAMPLE DATE:	01/03/2017
LOT NUMBER:		LETTING DATE:	rev 11-06-17
STATUS:		CONTROLLING CSJ:	
COUNTY:	Travis	SPEC YEAR:	1993
SAMPLED BY:	Wade A Shaff #45	SPEC ITEM:	340
SAMPLE LOCATION:	Plant Stockpiles	SPECIAL PROVISION:	
MATERIAL:	505-64C1020-17C	MIX TYPE:	Type_C
PRODUCER:	Industrial Asphalt and Aggregates, LLC Buda-Centex Plant		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:		STATION:		DIST. FROM CL:

	BIN FRACTIONS						
	Bin No.1	Bin No.2	Bin No.3	Bin No.4	Bin No.5	Bin No.6	Bin No.7
Aggregate Source:	Industrial	Centex	Centex	Centex	Mid-Tex		
Aggregate Number:	1410508	1410507	1410507	1410507			
Sample ID:	Type C	Type D	Type F	Screenings	Field Sand		
Rap?, Asphalt%:							
Individual Bin (%):	21.0	24.0	16.0	27.0	12.0		

Sieve Size:	Sieve Size: (mm)	Bin No.1 Cum.% Passing	Bin No.1 Wtd Cum. %	Bin No.2 Cum.% Passing	Bin No.2 Wtd Cum. %	Bin No.3 Cum.% Passing	Bin No.3 Wtd Cum. %	Bin No.4 Cum.% Passing	Bin No.4 Wtd Cum. %	Bin No.5 Cum.% Passing	Bin No.5 Wtd Cum. %	Bin No.6 Cum.% Passing	Bin No.6 Wtd Cum. %	Bin No.7 Cum.% Passing	Bin No.7 Wtd Cum. %	Combined Gradation Total Bin 100.0% Cum. % Passing	Lower & Upper Type_C Specification Limits		Within Spec's
7/8"	22.400	100.0	21.0	100.0	24.0	100.0	16.0	100.0	27.0	100.0	12.0		0.0		0.0	100.0	98.0	100.0	Yes
5/8"	16.000	79.2	16.6	100.0	24.0	100.0	16.0	100.0	27.0	100.0	12.0		0.0		0.0	95.6	95.0	100.0	Yes
3/8"	9.500	4.5	0.9	73.8	17.7	99.8	16.0	100.0	27.0	100.0	12.0		0.0		0.0	73.6	70.0	85.0	Yes
No. 4	4.750	3.1	0.7	14.9	3.6	74.2	11.9	98.4	26.6	99.6	12.0		0.0		0.0	54.8	43.0	63.0	Yes
No. 10	2.000	2.8	0.6	4.6	1.1	11.2	1.8	78.5	21.2	96.7	11.6		0.0		0.0	36.3	30.0	40.0	Yes
No. 40	0.425	2.4	0.5	2.7	0.6	2.6	0.4	31.0	8.4	84.4	10.1		0.0		0.0	20.0	10.0	25.0	Yes
No. 80	0.180	2.2	0.5	2.4	0.6	2.1	0.3	15.7	4.2	28.1	3.4		0.0		0.0	9.0	3.0	13.0	Yes
No. 200	0.075	1.9	0.4	2.1	0.5	1.9	0.3	8.1	2.2	3.6	0.4		0.0		0.0	3.8	1.0	6.0	Yes

Not within specifications # Not cumulative

Asphalt Source & Grade:	Pelican	Binder Percent, (%):	4.8	Asphalt Spec. Grav.:	1.037

Remarks:

Test Method:	Tested By:	Tested Date:
Tx207		
Tx208		
Tx210		
Tx227		
Tx228		
Tx229		
Tx231		
Tx236		

Reviewed By:	Completed Date:

Authorized By:	Authorized Date:
Wade A Shaff #45	01/03/17

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : BULK GRAVITY

File Version: 03/17/04 10:49:36

SAMPLE ID:	505-64C1020-17C	SAMPLE DATE:	01/03/2017
LOT NUMBER:		LETTING DATE:	rev 11-06-17
STATUS:		CONTROLLING CSJ:	
COUNTY:	Travis	SPEC YEAR:	Travis
SAMPLED BY:	Wade A Shaff #45	SPEC ITEM:	340
SAMPLE LOCATION:	Plant Stockpiles	SPECIAL PROVISION:	
MATERIAL:	505-64C1020-17C	MIX TYPE:	Type_C
PRODUCER:	Industrial Asphalt and Aggregates, LLC Buda-Centex Plant		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:		STATION:		DIST. FROM CL:	

			Bin No.1 = 21 %		Bin No.2 = 24 %		Bin No.3 = 16 %		Bin No.4 = 27 %		Bin No.5 = 12 %					
Aggregate Source:			Industrial		Centex		Centex		Centex		Mid-Tex					
Aggregate Number:			1410508		1410507		1410507		1410507							
Sample ID:			Type C		Type D		Type F		Screenings		Field Sand					
Sieve Size:			Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG
Passing	-	Retained														
	-	7/8"														
7/8"	-	5/8"	20.8	2.521												
5/8"	-	3/8"	74.7	2.521	26.2	2.486	0.2	2.450								
3/8"	-	No. 4	1.4	2.521	58.9	2.486	25.6	2.450	1.6	2.535	0.4	2.615				
No. 4	-	No. 10	0.3	2.521	10.3	2.486	63.0	2.450	19.9	2.535	2.9	2.615				
No. 10	-	No. 40	0.4	2.521	1.9	2.486	8.6	2.450	47.5	2.535	12.3	2.615				
No. 40	-	No. 80	0.2	2.521	0.3	2.486	0.5	2.450	15.3	2.535	56.3	2.615				
No. 80	-	No. 200	0.3	2.521	0.3	2.486	0.2	2.450	7.6	2.535	24.5	2.615				
No. 200	-	Pan	1.9	2.521	2.1	2.486	1.9	2.450	8.1	2.702	3.6	2.690				
Totals			100.0	2.521	100.0	2.486	100.0	2.450	100.0	2.548	100.0	2.618				

Combined Bulk Specific Gravity:	**2.519**

Specific Gravity of Asphalt:	**1.037**

Remarks:

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : SUMMARY SHEET

File Version: 03/17/04 10:49:36

SAMPLE ID:	505-64C1020-17C	SAMPLE DATE:	01/03/2017
LOT NUMBER:		LETTING DATE:	rev 11-06-17
STATUS:		CONTROLLING CSJ:	
COUNTY:	Travis	SPEC YEAR:	Travis
SAMPLED BY:	Wade A Shaff #45	SPEC ITEM:	340
SAMPLE LOCATION:	Plant Stockpiles	SPECIAL PROVISION:	
MATERIAL:	505-64C1020-17C	MIX TYPE:	Type_C
PRODUCER:	Industrial Asphalt and Aggregates, LLC Buda-Centex Plant		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:		STATION:		DIST. FROM CL:	

Target Density:	96	Percent

								Static Creep		
Asphalt Content (%)	Specific Gravity Of Specimen (Ga)	Maximum Specific Gravity (Gr)	Effective Gravity (Ge)	Theo. Max. Specific Gravity (Gt)	Density from Gt (Percent)	VMA (Percent)	Hveem Stability (%)	Creep Stiffness (psi)	Perm. Strain X1000 (in/in)	Slope of SS Curve X 10^9 (in/in/Sec)
4.30	2.316	2.464	2.626	2.461	94.1	15.5	51			
4.80	2.350	2.445	2.625	2.444	96.2	14.7	53			
5.30	2.365	2.433	2.631	2.426	97.5	14.6	52			
5.80	2.373	2.397	2.608	2.409	98.5	14.8	49			
6.30	2.361			2.392	98.7	15.6	46			

Effective Specific Gravity:	2.623

Optimum Asphalt Content:	**4.8**
VMA @ Optimum AC:	**14.8**

Interpolated Values	
Specific Gravity (Ga):	**2.346**
Max. Specific Gravity (Gr):	**2.447**
Theo. Max. Specific Gravity (Gt):	**2.446**

Remarks:

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : MATERIAL PROPERTIES

File Version: 03/17/04 10:49:35

SAMPLE ID:	505-64C1020-17C	SAMPLE DATE:	01/03/2017
LOT NUMBER:		LETTING DATE:	rev 11-06-17
STATUS:		CONTROLLING CSJ:	
COUNTY:	Travis	SPEC YEAR:	Travis
SAMPLED BY:	Wade A Shaff #45	SPEC ITEM:	340
SAMPLE LOCATION:	Plant Stockpiles	SPECIAL PROVISION:	
MATERIAL:	505-64C1020-17C	MIX TYPE:	Type_C
PRODUCER:	Industrial Asphalt and Aggregates, LLC Buda-Centex Plant		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:		STATION:		DIST. FROM CL:	

	Bin No.1 = 21 %	Bin No.2 = 24 %	Bin No.3 = 16 %	Bin No.4 = 27 %	Bin No.5 = 12 %		
Aggregate Source:	Industrial	Centex	Centex	Centex	Mid-Tex		
Aggregate Number:	1410508	1410507	1410507	1410507			
Sample ID:	Type C	Type D	Type F	Screenings	Field Sand		

Test Name	SiteManager Test Template	Test Method	Specification Requirement		Result	Sample ID	Result	Sample ID	Result	Sample ID	Result	Sample ID	Result	Sample ID	Result	Sample ID	Result	Sample ID
Stockpile																		
Decantation	Tx217	Tex-217-F	1.5	Max.	0.50		0.70		0.50		N/A		N/A					
Deleterious Mat'l	Tx217	Tex-217-F	1.5	Max.	0.00		0.00		0.00		N/A		N/A					
Surface Aggregate Classification	Tx4AgClas	Tex-438-A Tex-612-J	B	Min.	B		B		B		B		N/A					
Magnesium Sulfate Soundness	Tx411M	Tex-411-A	30	Max.	19.00		17.00		17.00		17.00		N/A					
LA Abrasion	Tx410	Tex-410-A	40	Max.	32.00		28.00		28.00		28.00		N/A					
Crushed Faces Count	Tx460	Tex-460-A		Min.	100.00		100.00		100.00		N/A		N/A					
Flakiness Index	Tx224	Tex-224-F		Max.	0.00		0.00		0.00		N/A		N/A					
Fine Aggregate																		
Bar Linear Shrinkage	Tx107	Tex-107-E	3	Max.							<1		<1					
Combined Aggregate																		
Sand Equivalent	Tx203	Tex-203-F	45	Min.									78.00					Combined Sample
Complete Mixture																		
Tensile Strength Ratio	Tx531	Tex-531-C		Min.														
Boiling Test	Tx530	Tex-530-C		Max.														
Draindown	Tx535	Tex-535-C		Max.														
User Defined Testing																		
Use this area to enter any test methods, specifications & test result that apply to this material(s) but are not not listed above.																		

Remarks:

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : Aggregate Classification

File Version: 03/17/04 10:49:36

SAMPLE ID:		SAMPLE DATE:	01/03/2017
LOT NUMBER:		LETTING DATE:	rev 11-06-17
STATUS:		CONTROLLING CSJ:	
COUNTY:		SPEC YEAR:	
SAMPLED BY:		SPEC ITEM:	340
SAMPLE LOCATION:		SPECIAL PROVISION:	
MATERIAL:		MIX TYPE:	Type_C
PRODUCER:	Industrial Asphalt and Aggregates, LLC Buda-Centex Plant		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:		STATION:		DIST. FROM CL:	

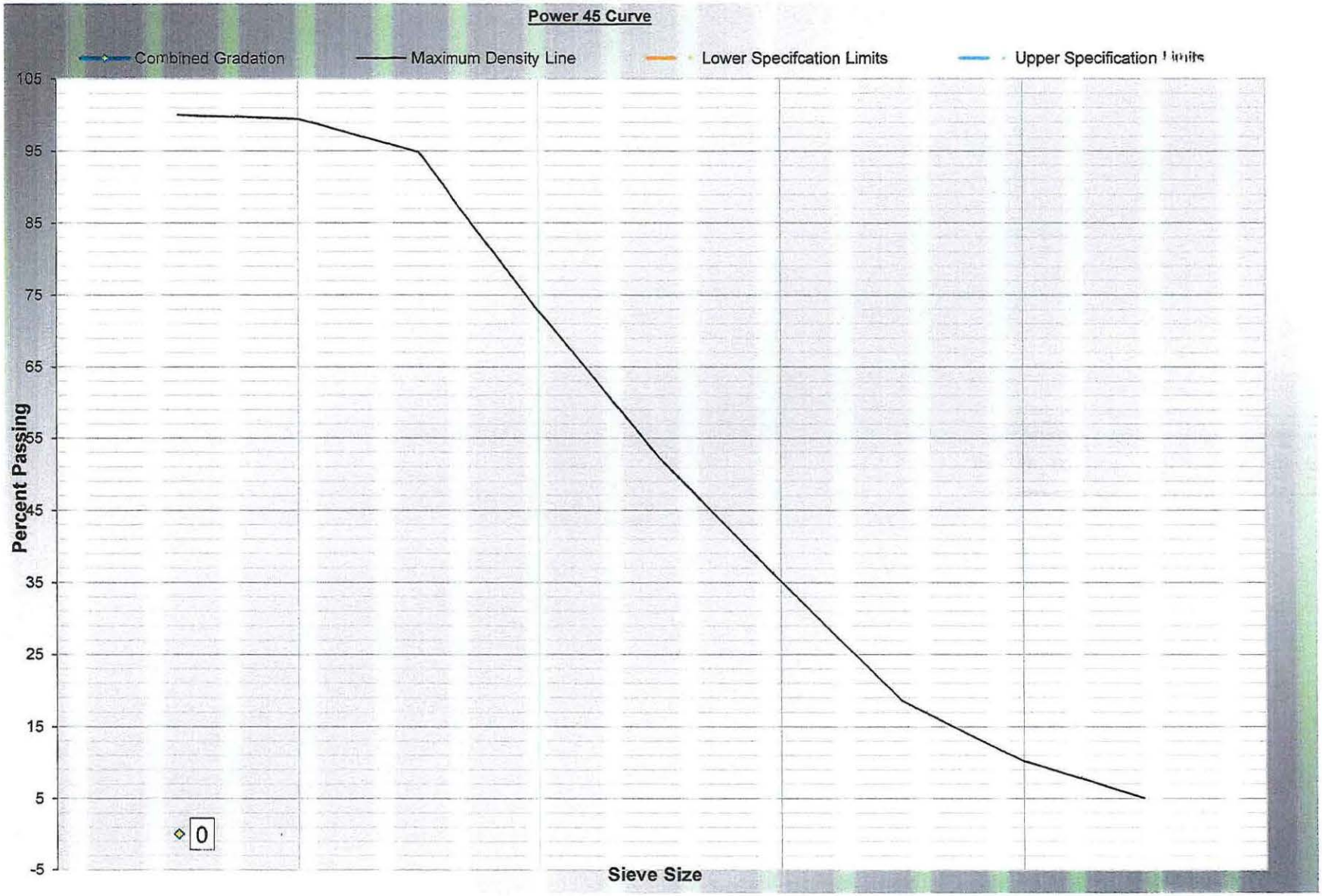
Aggregate Classification

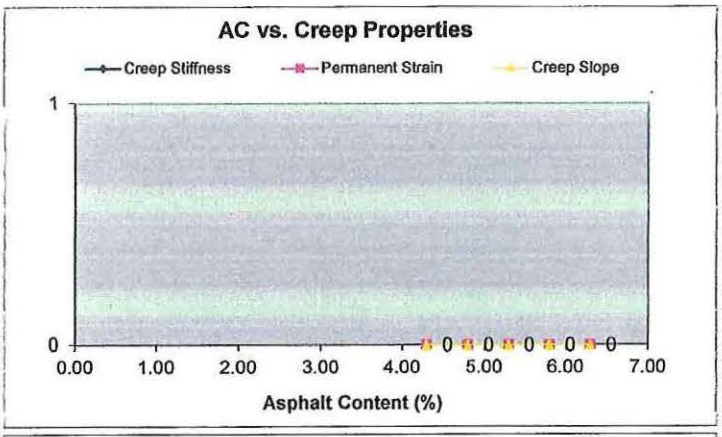
	Bin No.1 = 21 %	Bin No.2 = 24 %	Bin No.3 = 16 %	Bin No.4 = 27 %	Bin No.5 = 12 %		
Aggregate Source:	Industrial	Centex	Centex	Centex	Mid-Tex		
Aggregate Number:	1410508	1410507	1410507	1410507			
Class (A) Rock (Y/N):							

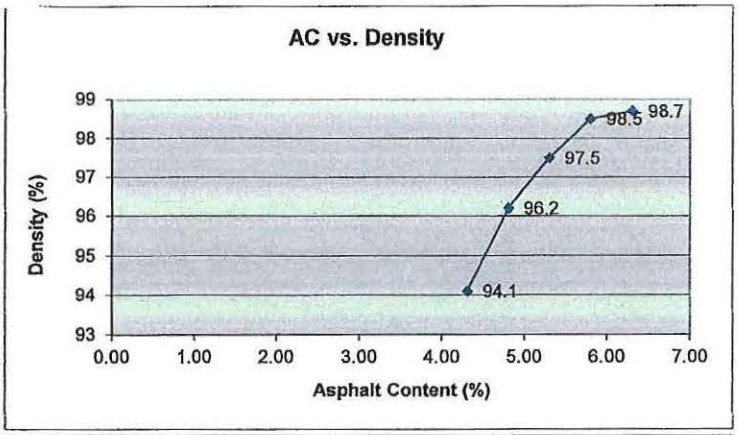
Sieve Size: Passing	-	Retained	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %
	-	7/8"	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7/8"	-	5/8"	4.4	0.0	0.0	0.0	0.0	0.0	0.0
5/8"	-	3/8"	15.7	6.3	0.0	0.0	0.0	0.0	0.0
3/8"	-	No. 4	0.2	14.1	4.1	0.4	0.0	0.0	0.0
No. 4	-	No. 10	0.1	2.5	10.1	5.4	0.4	0.0	0.0
No. 10	-	No. 40	0.1	0.5	1.4	12.8	1.5	0.0	0.0
No. 40	-	No. 80	0.0	0.0	0.1	4.2	6.7	0.0	0.0
No. 80	-	No. 200	0.1	0.1	0.0	2.0	3.0	0.0	0.0
No. 200	-	Pan	0.4	0.5	0.3	2.2	0.4	0.0	0.0
		Total:	21.0	24.0	16.0	27.0	12.0	0.0	0.0
		Percent of plus No. 4:	20.3	20.4	4.1	0.4	0.0	0.0	0.0

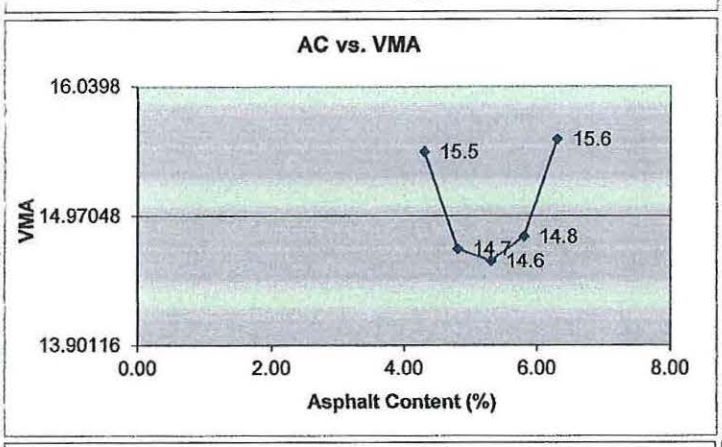
Percent of plus No. 4 from class (A) Rock:	0.0
Total Percent of plus No. 4:	45.2
Percent of plus No. 4 from class (A) Rock:	**0.0**

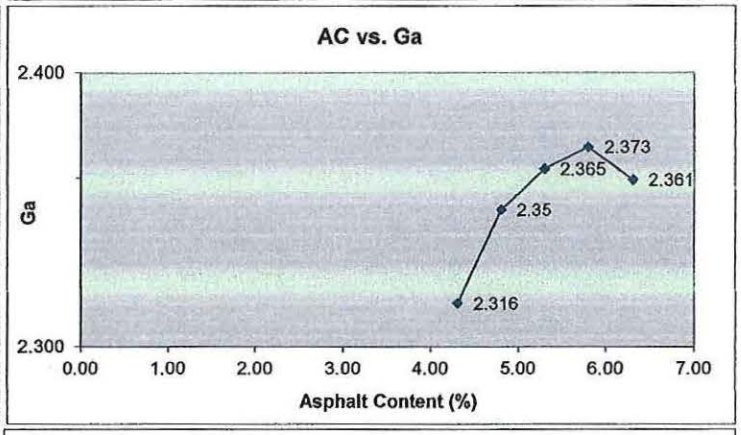
Remarks:

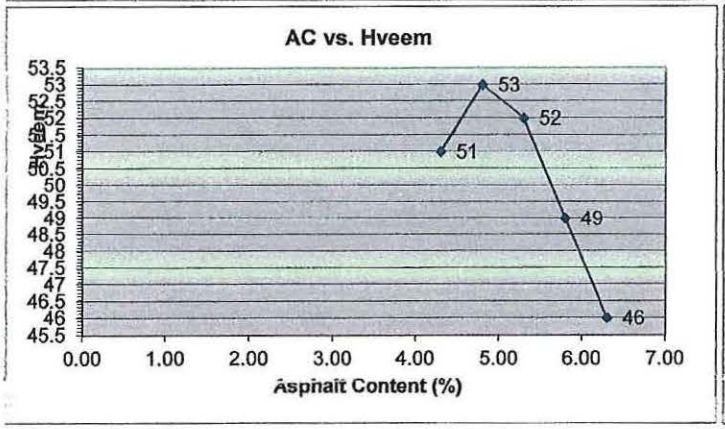

Power 45 Curve
Combined Gradation
Maximum Density Line
Lower Specifcation Limits
Upper Specification Limits
105
95
85
75
65
55
45
35
25
15
5
-5
Percent Passing
0
Sieve Size

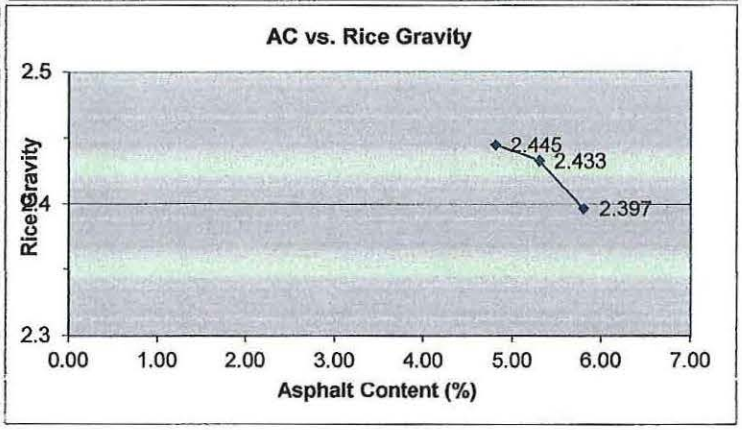

AC vs. Creep Properties
Creep Stiffness
Permanent Strain
Creep Slope
1
0
0.00
1.00
2.00
3.00
4.00
5.00
6.00
7.00
Asphalt Content (%)


AC vs. Density
Density (%)
99
98
97
96
95
94
93
98.7
98.5
97.5
96.2
94.1
0.00
1.00
2.00
3.00
4.00
5.00
6.00
7.00
Asphalt Content (%)


AC vs. VMA
VMA
16.0398
14.97048
13.90116
15.5
15.6
14.7
14.8
14.6
0.00
2.00
4.00
6.00
8.00
Asphalt Content (%)


AC vs. Ga
Ga
2.400
2.300
2.373
2.365
2.361
2.35
2.316
0.00
1.00
2.00
3.00
4.00
5.00
6.00
7.00
Asphalt Content (%)


AC vs. Hveem
53.5
53
52.5
52
51.5
51
50.5
50
49.5
49
48.5
48
47.5
47
46.5
46
45.5
53
52
51
49
46
0.00
1.00
2.00
3.00
4.00
5.00
6.00
7.00
Asphalt Content (%)


AC vs. Rice Gravity
Rice Gravity
2.5
2.4
2.3
2.445
2.433
2.397
0.00
1.00
2.00
3.00
4.00
5.00
6.00
7.00
Asphalt Content (%)

INDUSTRIAL
ASPHALT & AGGREGATES

Design No.: 505-64C1020-2
Design Date: 1/3/2018

Reference: Design of HMAC Type C HMA & WMA for the following project:

Shown below is the plant-corrected job mix for the hot mix asphaltic concrete pavement used on the following project:

Name Of Project: Various

The job mix formula has been determined according to Texas Department of Transportation Standard Specifications Item 340 & 341. Hot Mix Asphaltic Concrete Pavement. The asphaltic concrete will be produced by:

HMAC Producer: **Industrial Asphalt & Aggregate - Buda Centex**
Plant Location: **Buda, Texas**

CERTIFICATION

This design has been prepared under my direction in accordance with TXDOTspecification. Design meets or exceeds the design specification for Item 340 & 341.

Prepared by: Johnathan Killgore
Certification: TXDOT 1A - 2042, II - 834, 1B - 3225

JOB MIX FORMULA

Sieve Size	Design JMF	HMA & WMA Current JMF
1"	100.0	100.0
3/4""	99.6	99.0
3/8"	83.7	80.0
#4	57.0	55.9
#8	38.1	39.5
#30	21.7	21.8
#50	13.7	14.5
#200	5.0	5.3
Ignition Oven Asphalt Content (PG 64-22)	5.2%	5.1%

Target Compaction 97.0% Texas Gyratory Compactor

Johnathan Killgore

IA&A Johnathan Killgore
Quality Control Supervisor

TEXAS DEPARTMENT OF TRANSPORTATION

2014 HMACP MIXTURE DESIGN : COMBINED GRADATION

Refresh Workbook

TX2MIXDE14 - File Version: 01/19/17 15:32:54

SAMPLE ID:	505-64C1020-2	SAMPLE DATE:	1/9/17 rev 1/3/2018
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:	Various	SPEC YEAR:	2014
SAMPLED BY:	Johnathan Killgore	SPEC ITEM:	341
SAMPLE LOCATION:	Stockpiles at Plant	SPECIAL PROVISION:	
MATERIAL CODE:	1.1074	MIX TYPE:	341-DG-C
MATERIAL NAME:	505-64C1020-2		
PRODUCER:	Industrial Asphalt & Aggregates - Buda Centex		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:	Surface	STATION:		DIST. FROM CL:	

WMA Additive in Design?	No
Target Discharge Temp., °F:	315
WMA TECHNOLOGY:	
WMA RATE:	UNITS:
CONTRACTOR DESIGN # :	505-64C1020-2

Maximum Allowable, %	
Frac RAP:	20.0
Unfrac RAP:	10.0
RAS:	5.0
RB Ratio:	20.0

Recycled Binder, %	
Bin No.8 :	0.9
Bin No.9 :	0.0
Bin No.10 :	0.0
Total	*0.9*

Use this value in the QC/QA template>>

Ratio of Recycled to Total Binder, %
(based on binder percent (%) entered below in this worksheet)
17.2

	AGGREGATE BIN FRACTIONS							"RECYCLED MATERIALS"			
Aggregate	Bin No.1	Bin No.2	Bin No.3	Bin No.4	Bin No.5	Bin No.6	Bin No.7	Bin No.8	Bin No.9	Bin No.10	
Source:	Limestone_Dolomit	Limestone_Dolomit	Limestone_Dolomit	Limestone_Dolomit				Fractionated RAP			Material Type
Pit:	Ruby	Ruby	Ruby	Ruby							Material Source
Number:	1410607	1410607	1410607	1410607							RAS Type
Producer:	Centex Materials	Centex Materials	Centex Materials	Centex Materials							RAP/RAS Producer
Sample ID:	Type C	Type D	Type F	Mfg Sand	Field Sand			Fine 1/2"			Sample ID

															Recycled Asphalt Binder (%)							Combined Gradation			
															4.5										
Hydrated Lime?:															19.9	% of Tot. Mix		% of Tot. Mix		% of Tot. Mix	Total Bin	Lower & Upper Specification Limits			
Individual Bin (%):	21.0	Percent	16.0	Percent	18.0	Percent	17.0	Percent	8.0	Percent		Percent		Percent	20.0	% of Aggreg		% of Aggreg		% of Aggreg	100.0%				
Sieve Size:	Cum.% Passing	Wtd Cum. %	Cum.% Passing	Wtd Cum. %	Cum.% Passing	Wtd Cum. %	Cum.% Passing	Wtd Cum. %	Cum.% Passing	Wtd Cum. %	Cum.% Passing	Wtd Cum. %	Cum.% Passing	Wtd Cum. %	Cum.% Passing	Wtd Cum. %	Cum.% Passing	Wtd Cum. %	Cum.% Passing	Wtd Cum. %	Cum. % Passing	Lower	Upper	Within Spec's	
1"	100.0	21.0	100.0	16.0	100.0	18.0	100.0	17.0	100.0	8.0					100.0	20.0					100.0	100.0	100.0	Yes	
3/4"	98.2	20.6	100.0	16.0	100.0	18.0	100.0	17.0	100.0	8.0					100.0	20.0					99.6	95.0	100.0	Yes	
3/8"	50.3	10.6	71.1	11.4	100.0	18.0	100.0	17.0	100.0	8.0					93.6	18.7					83.7	70.0	85.0	Yes	
No. 4	8.2	1.7	11.9	1.9	78.5	14.1	99.6	16.9	99.8	8.0					71.4	14.3					57.0	43.0	63.0	Yes	
No. 8	4.1	0.9	3.9	0.6	17.5	3.2	90.0	15.3	95.9	7.7					52.6	10.5					38.1	32.0	44.0	Yes	
No. 30	2.2	0.5	1.8	0.3	2.3	0.4	44.7	7.6	79.7	6.4					32.8	6.6					21.7	14.0	28.0	Yes	
No. 50	1.9	0.4	1.7	0.3	1.8	0.3	25.0	4.3	57.6	4.6					19.0	3.8					13.7	7.0	21.0	Yes	
No. 200	1.5	0.3	1.5	0.2	1.5	0.3	8.7	1.5	11.1	0.9					9.0	1.8					5.0	2.0	7.0	Yes	

(Bold Italic) Not within specifications ***(Bold Italic)*** Not within specificaitons- Restricted Zone *(Italic)* Not cumulative

Lift Thickness, in:	2.00	Binder Substitution?	Yes	Binder Originally Specified:	PG 70-22	Substitute Binder: PG 64-22
Asphalt Source:	Pelican, Martin, Valero	Binder Percent, (%):	5.2	Asphalt Spec. Grav.:	1.033	
Antistripping Agent:		Percent, (%):				

Remarks:

Designed as HMA, plant produced as HMA and WMA

Combined Gradation

Notes:

7/6/2018

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : MATERIAL PROPERTIES

SAMPLE ID:	505-64C1020-2	SAMPLE DATE:	1/9/17 rev 1/3/2018
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:	Various	SPEC YEAR:	2014
SAMPLED BY:	Johnathan Kiligore	SPEC ITEM:	341
SAMPLE LOCATION:	Stockpiles at Plant	SPECIAL PROVISION:	
MATERIAL CODE:	1.1074	MIX TYPE:	341-DG-C
MATERIAL NAME:	505-64C1020-2		
PRODUCER:	Industrial Asphalt & Aggregates - Buda Centex		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:	Surface	STATION:		DIST. FROM CL:		CONTRACTOR DESIGN #:	505-64C1020-2

	Bin No.1	Bin No.2	Bin No.3	Bin No.4	Bin No.5	Bin No.6	Bin No.7
Individual Bin (%):	Bin No.1 = 21 %	Bin No.2 = 16 %	Bin No.3 = 18 %	Bin No.4 = 17 %	Bin No.5 = 8 %		
Aggregate Source:	Limestone_Dolomite	Limestone_Dolomite	Limestone_Dolomite	Limestone_Dolomite			
Aggregate Number:	1410607	1410607	1410607	1410607			
Sample ID:	Type C	Type D	Type F	Mfg Sand	Field Sand		

Test Name	SiteManager Test Template	Test Method	Spec. Min or Max	Spec. Limit	Modified Spec. Limit	Result	Sample ID	Result	Sample ID	Result	Sample ID	Result	Sample ID	Result	Sample ID	Result	Sample ID	Result	Sample ID
Stockpile						Bin No.1		Bin No.2		Bin No.3		Bin No.4		Bin No.5		Bin No.6		Bin No.7	
Decantation	Tx217	Tex-217-F	Max.	1.5		0.90		0.90		0.90									
Deleterious Mat'l	Tx217	Tex-217-F	Max.	1.5		0.00		0.00		0.00									
Surface Aggregate Classification	Tx4AgClas	Tex-438-A, Tex-612-J	Min.			B		B		B		B		B					
Magnesium Sulfate Soundness	Tx411M	Tex-411-A	Max.	30		17.00		17.00		17.00		17.00		17.00					
LA Abrasion	Tx410	Tex-410-A	Max.	40		30.00		30.00		30.00		30.00		30.00					
Crushed Faces Count	Tx460	Tex-460-A	Min.	85		100.00		100.00		100.00									
Flat & Elongated	Tx280	Tex-280-F	Max.	10		0.00		0.00		0.00									
Micro-Deval Abrasion	Tx461	Tex-461-A	Use results to estimate the Mg Sulfate Soundness Loss			22.00		22.00		22.00		22.00		22.00					
Fine Aggregate						Bin No.1		Bin No.2		Bin No.3		Bin No.4		Bin No.5		Bin No.6		Bin No.7	
Bar Linear Shrinkage	Tx107	Tex-107-E	Max.	3								0.00		0.00					
Methylene Blue	-	AASHTO T330	Max.																
Combined Aggregate						Bin No.1		Bin No.2		Bin No.3		Bin No.4		Bin No.5		Bin No.6		Bin No.7	
Sand Equivalent	Tx203	Tex-203-F	Min.	45		88.00													
User Defined Testing						Bin No.1		Bin No.2		Bin No.3		Bin No.4		Bin No.5		Bin No.6		Bin No.7	
Use this area to enter any test methods, specifications & test result that apply to this material(s) but are not not listed above. 1																			
2																			
3																			
4																			
5																			

Recycled Materials						Bin No.8		Bin No.9		Bin No.10	
Deleterious Mat'l	Tx217	Tex-217-F, Part III	Max.	0.5							
Decantation	Tx406	Tex-406-A, Part I	Max.	5							
Plasticity Index	Tx104-6	Tex-106-E	Max.	8							
User Defined Testing											

Remarks:

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : Aggregate Classification

SAMPLE ID:	505-64C1020-2	SAMPLE DATE:	1/9/17 rev 1/3/2018
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:	Various	SPEC YEAR:	2014
SAMPLED BY:	Johnathan Killgore	SPEC ITEM:	341
SAMPLE LOCATION:	Stockpiles at Plant	SPECIAL PROVISION:	
MATERIAL CODE:	1.1074	MIX TYPE:	341-DG-C
MATERIAL NAME:	505-64C1020-2		
PRODUCER:	Industrial Asphalt & Aggregates - Buda Centex		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:	Surface	STATION:		DIST. FROM CL:		CONTRACTOR DESIGN # :	505-64C1020-2

Aggregate Classification

		Bin No.1	Bin No.2	Bin No.3	Bin No.4	Bin No.5	Bin No.6	Bin No.7	Bin No.8	Bin No.9	Bin No.10
Individual Bin (%):		Bin No.1 = 21 %	Bin No.2 = 16 %	Bin No.3 = 18 %	Bin No.4 = 17 %	Bin No.5 = 8 %			Bin No.8 = 20 %		
Aggregate Source:		Limestone_Dolomite	Limestone_Dolomite	Limestone_Dolomite	Limestone_Dolomite				Fractionated RAP		
Aggregate Number:		1410607	1410607	1410607	1410607				Fine 1/2"		
Class (A) Rock (Y/N):		No	No	No	No	No					
Sieve Size:		Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %
Passing	Retained										
-	1"	0.0	0.0	0.0	0.0	0.0			0.0		
1"	3/4"	0.4	0.0	0.0	0.0	0.0			0.0		
3/4"	3/8"	10.1	4.6	0.0	0.0	0.0			1.3		
3/8"	No. 4	8.8	9.5	3.9	0.1	0.0			4.4		
No. 4	No. 8	0.9	1.3	11.0	1.6	0.3			3.8		
No. 8	No. 30	0.4	0.3	2.7	7.7	1.3			4.0		
No. 30	No. 50	0.1	0.0	0.1	3.3	1.8			2.8		
No. 50	No. 200	0.1	0.0	0.1	2.8	3.7			2.0		
No. 200	Pan	0.3	0.2	0.3	1.5	0.9			1.8		
Total:		21.0	16.0	18.0	17.0	8.0			20.0		
Percent of plus No. 4		19.3	14.1	3.9	0.1	0.0			5.7		
Percent of plus No. 8		20.1	15.4	14.9	1.7	0.3			9.5		

Percent of plus No. 4 from class (A) Rock:	0.0
Total Percent of plus No. 4	43.0
Percent of plus No. 4 from class (A) Rock:	*0.0*

Percent of plus No. 3 from class (A) Rock:	0.0
Total Percent of plus No. 8	61.9
Percent of plus No. 8 from class (A) Rock:	0.0

Remarks:

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : BULK GRAVITY

SAMPLE ID:	505-64C1020-2	SAMPLE DATE:	1/9/17 rev 1/3/2018
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:	Various	SPEC YEAR:	2014
SAMPLED BY:	Johnathan Killgore	SPEC ITEM:	341
SAMPLE LOCATION:	Stockpiles at Plant	SPECIAL PROVISION:	
MATERIAL CODE:	1.1074	MIX TYPE:	341-DG-C
MATERIAL NAME:	505-64C1020-2		
PRODUCER:	Industrial Asphalt & Aggregates - Buda Centex		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:	Surface	STATION:		DIST. FROM CL:		CONTRACTOR DESIGN # :	505-64C1020-2

	Bin No.1	Bin No.2	Bin No.3	Bin No.4	Bin No.5	Bin No.6	Bin No.7	Bin No.8	Bin No.9	Bin No.10
Individual Bin (%):	Bin No.1 = 21 %	Bin No.2 = 16 %	Bin No.3 = 18 %	Bin No.4 = 17 %	Bin No.5 = 8 %			Bin No.8 = 19.9 %		
Aggregate Source:	Limestone_Dolomite	Limestone_Dolomite	Limestone_Dolomite	Limestone_Dolomite				Fractionated RAP		
Aggregate Number:	1410607	1410607	1410607	1410607						
Sample ID:	Type C	Type D	Type F	Mfg Sand	Field Sand			Fine 1/2"		

Sieve Size:		Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG
Passing	Retained																				
	1"																				
1"	3/4"	1.8	2.550																		
3/4"	3/8"	47.9	2.550	28.9	2.550											6.4	2.450				
3/8"	No. 4	42.1	2.550	59.2	2.550	21.5	2.550	0.4	2.600	0.2	2.630					22.2	2.450				
No. 4	No. 8	4.1	2.550	8.0	2.550	61.0	2.550	9.6	2.600	3.9	2.630					18.8	2.450				
No. 8	No. 30	1.9	2.550	2.1	2.550	15.2	2.550	45.3	2.600	16.2	2.630					19.8	2.450				
No. 30	No. 50	0.3	2.550	0.1	2.550	0.5	2.550	19.7	2.600	22.1	2.630					13.8	2.450				
No. 50	No. 200	0.4	2.550	0.2	2.550	0.3	2.550	16.3	2.600	46.5	2.630					10.0	2.450				
No. 200	Pan	1.5	2.550	1.5	2.550	1.5	2.550	8.7	2.600	11.1	2.630					9.0	2.450				
Totals		100.0	2.550	100.0	2.550	100.0	2.550	100.0	2.600	100.0	2.630					100.0	2.450				

Combined Bulk Specific Gravity:	2.544
Coarse Agg. Combined BSG:	

Specific Gravity of Asphalt:	1.033

Remarks:

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : SUMMARY SHEET

SAMPLE ID:	505-64C1020-2	SAMPLE DATE:	1/9/17 rev 1/3/2018
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:	Various	SPEC YEAR:	2014
SAMPLED BY:	Johnathan Killgore	SPEC ITEM:	341
SAMPLE LOCATION:	Stockpiles at Plant	SPECIAL PROVISION:	
MATERIAL CODE:	1.1074	MIX TYPE:	341-DG-C
MATERIAL NAME:	505-64C1020-2		
PRODUCER:	Industrial Asphalt & Aggregates - Buda Centex		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:	Surface	STATION:		DIST. FROM CL:		CONTRACTOR DESIGN # :	505-64C1020-2

Target Density, %:	97.0
Number of Gyrations:	

Note: This mix design requires an asphalt content of at least 4.5% to meet the Maximum Ratio of Recycled to Total Binder requirement.

TEST SPECIMENS								Mixture Evaluation @ Optimum Asphalt Content				
									Hamburg Wheel Tracking Test			
Asphalt Content (%)	Binder Ratio (%)	Specific Gravity Of Specimen (Ga)	Maximum Specific Gravity (Gr)	Effective Gravity (Ge)	Theo. Max. Specific Gravity (Gt)	Density from Gt (Percent)	VMA (Percent)	Indirect Tensile Strength (psi)	Number of cycles	Rut depth (mm)		Overlay Tester Min. Number of Cycles
3.0	*29.9*	2.344	2.484	2.597	2.513	93.3	13.5					
4.4	*20.4*	2.352	2.464	2.632	2.462	95.5	14.5					
4.9	18.3	2.359	2.439	2.623	2.445	96.5	14.7	171	20,000	9.7		
5.4	16.6	2.366	2.437	2.642	2.427	97.5	14.9					
5.9	15.2	2.374	2.430	2.655	2.410	98.5	15.1					

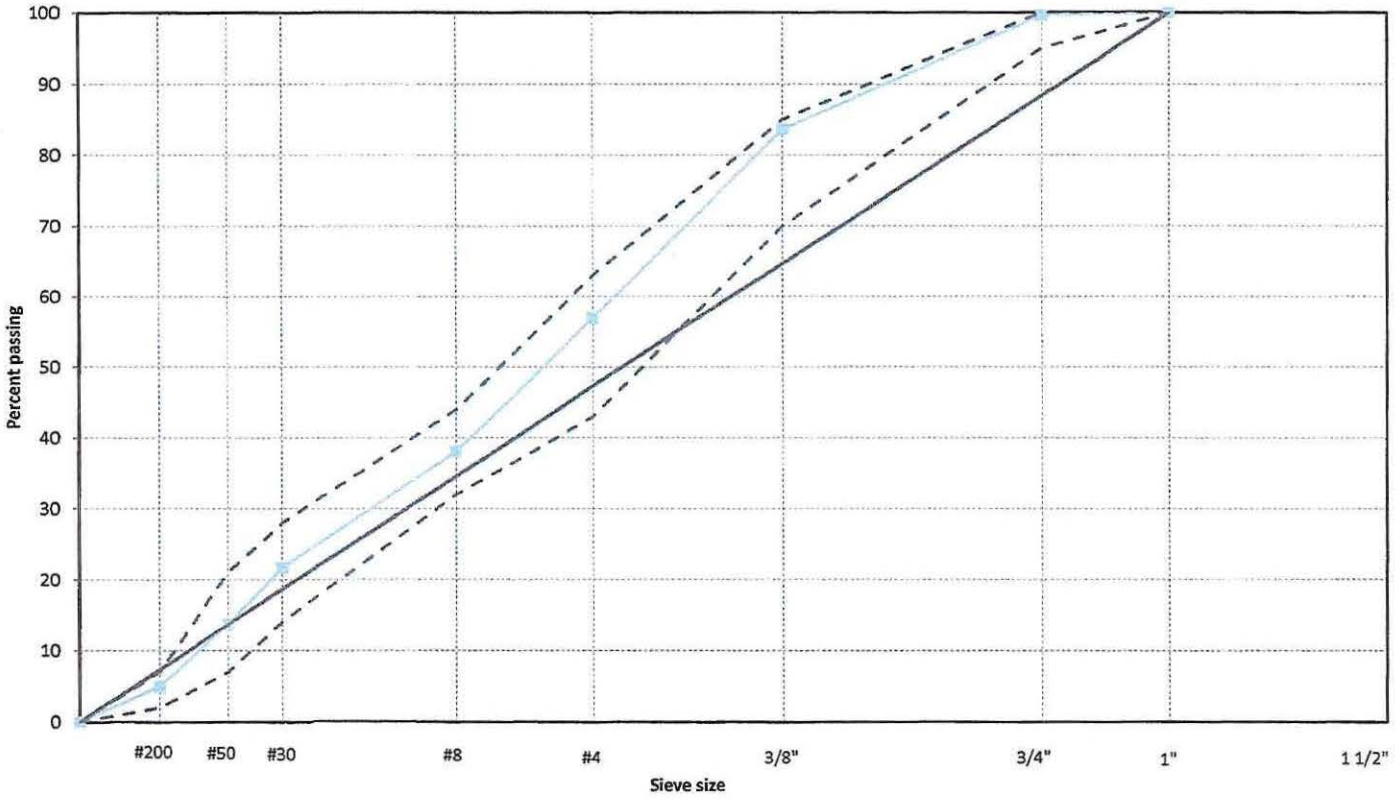
Effective Specific Gravity:	2.630
Optimum Asphalt Content :	5.2
Binder Ratio @ OAC:	17.2
VMA @ Optimum AC:	14.8

Interpolated Values	
Specific Gravity (Ga):	*2.363*
Max. Specific Gravity (Gr):	*2.438*
Theo. Max. Specific Gravity (Gt):	*2.436*

Estimated Percent of Stripping, %:	0

Mixing Temp,°F:	275
Molding Temp,°F:	250

Remarks:


100
90
80
70
60
50
40
30
20
10
0
Percent passing
#200
#50
#30
#8
#4
3/8"
3/4"
1"
1 1/2"
Sieve size

INDUSTRIAL
ASPHALT & AGGREGATES

Design No.: 505-64D1020
Design Date: 1/3/2018

Reference: Design of HMAC Type D HMA & WMA for the following project:

Shown below is the plant-corrected job mix for the hot mix asphaltic concrete pavement used on the following project:

Name Of Project: Various

The job mix formula has been determined according to Texas Department of Transportation Standard Specifications Item 340 & 341. Hot Mix Asphaltic Concrete Pavement. The asphaltic concrete will be produced by:

HMAC Producer: **Industrial Asphalt & Aggregate - Buda Centex**
Plant Location: **Buda, Texas**

CERTIFICATION

This design has been prepared under my direction in accordance with TXDOTspecification. Design meets or exceeds the design specification for Item 340 & 341.

Prepared by: Johnathan Killgore
Certification: TXDOT 1A - 2042, II - 834, 1B - 3225

JOB MIX FORMULA

Sieve Size	Design JMF	HMA & WMA Current JMF
3/4""	100.0	100.0
1/2"	99.0	98.4
3/8"	91.4	91.5
#4	64.2	65.0
#8	39.7	41.6
#30	21.6	23.0
#50	14.6	16.0
#200	4.5	4.5
Ignition Oven	Asphalt Content (PG 64-22)	5.3%	5.2%

Target Compaction 97.0% Texas Gyratory Compactor

Johnathan Killgore

IA&A Johnathan Killgore
Quality Control Supervisor

TEXAS DEPARTMENT OF TRANSPORTATION

2014 HMACP MIXTURE DESIGN : COMBINED GRADATION

Refresh Workbook

TX2MIXDE14 - File Version: 11/23/16 12:28:51

SAMPLE ID:	505-64D1020	SAMPLE DATE:	1/3/2017 Reviewed 01-03-201
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:	Various	SPEC YEAR:	2014
SAMPLED BY:	Wade A Shaff #45	SPEC ITEM:	340,341
SAMPLE LOCATION:	Stockpiles at Plant	SPECIAL PROVISION:	
MATERIAL CODE:		MIX TYPE:	341-DG-D
MATERIAL NAME:	505-64D1020		
PRODUCER:	Industrial Asphalt & Aggregates, LLC		
AREA ENGINEER:		PROJECT MANAGER:	
COURSE\LIFT:	Surface	STATION:	DIST. FROM CL:

WMA Additive in Design?	No
Target Discharge Temp., °F:	
WMA TECHNOLOGY:	
WMA RATE	UNITS
CONTRACTOR DESIGN # :	505-64D1020

Maximum Allowable, %	
Frac RAP:	20.0
Unfrac RAP:	10.0
RAS:	5.0
RB Ratio:	20.0

Recycled Binder, %	
Bin No.8 :	0.9
Bin No.9 :	0.0
Bin No.10 :	0.0
Total	*0.900*

Use this value in the QC/QA template>>

Ratio of Recycled to Total Binder, %
(based on binder percent (%) entered below in this worksheet)
17.0

	AGGREGATE BIN FRACTIONS							"RECYCLED MATERIALS"			
Aggregate	Bin No.1	Bin No.2	Bin No.3	Bin No.4	Bin No.5	Bin No.6	Bin No.7	Bin No.8	Bin No.9	Bin No.10	
Source:	Limestone_Dolomit	Limestone_Dolomit	Limestone_Dolomit					Fractionated RAP			Material Type
Pit:	Ruby	Ruby	Ruby								Material Source
Number:	1410607	1410607	1410607								RAS Type
Producer:	Centex Materials	Centex Materials	Centex Materials	Mid-Tex							RAP/RAS Producer
Sample ID:	Type D	Type F	Screenings	Field Sand				Fine 1/2"			Sample ID

															Recycled Asphalt Binder (%)							
															4.5							Combined Gradation
Hydrated Lime?:															19.8	% of Tot. Mix		% of Tot. Mix		% of Tot. Mix	Total Bin	Lower & Upper Specification Limits
Individual Bin (%):	27.0	Percent	28.0	Percent	20.0	Percent	5.0	Percent		Percent		Percent		Percent	20.0	% of Aggreg		% of Aggreg		% of Aggreg	100.0%	
Sieve Size:	Cum.% Passing	*Wtd Cum. %*	Cum.% Passing	*Wtd Cum. %*	Cum.% Passing	*Wtd Cum. %*	Cum.% Passing	*Wtd Cum. %*	Cum.% Passing	*Wtd Cum. %*	Cum.% Passing	*Wtd Cum. %*	Cum.% Passing	*Wtd Cum. %*	Cum.% Passing	*Wtd Cum. %*	Cum.% Passing	*Wtd Cum. %*	Cum.% Passing	*Wtd Cum. %*	Cum. % Passing	Lower	Upper	Within Spec's
3/4"	100.0	27.0	100.0	28.0	100.0	20.0	100.0	5.0							100.0	20.0					**100.0**	100.0	100.0	Yes
1/2"	96.3	26.0	100.0	28.0	100.0	20.0	100.0	5.0							100.0	20.0					**99.0**	98.0	100.0	Yes
3/8"	73.6	19.9	99.8	27.9	100.0	20.0	100.0	5.0							93.1	18.6					**91.4**	85.0	100.0	Yes
No. 4	14.9	4.0	74.6	20.9	98.7	19.7	99.7	5.0							73.0	14.6					**64.2**	50.0	70.0	Yes
No. 8	5.3	1.4	17.1	4.8	88.2	17.6	98.1	4.9							54.7	10.9					**39.7**	35.0	46.0	Yes
No. 30	2.9	0.8	3.9	1.1	40.6	8.1	92.0	4.6							34.9	7.0					**21.6**	15.0	29.0	Yes
No. 50	2.6	0.7	2.9	0.8	23.4	4.7	70.4	3.5							24.6	4.9					**14.6**	7.0	20.0	Yes
No. 200	2.1	0.6	2.3	0.6	7.9	1.6	3.5	0.2							7.8	1.6					**4.5**	2.0	7.0	Yes

(Bold Italic) Not within specifications ***(Bold Italic)*** Not within specificaitons- Restricted Zone *(Italic)* Not cumulative

Lift Thickness, in:		Binder Substitution?	No	Binder Originally Specified:	PG 64-22	Substitute Binder:
Asphalt Source:	Pelican			Binder Percent, (%):	5.3	Asphalt Spec. Grav.: 1.037
Antistripping Agent:				Percent, (%):		

Remarks:

Designed as HMA, plant produced as HMA and WMA

Combined Gradation

Notes:

#434

7/6/2018

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : MATERIAL PROPERTIES

SAMPLE ID:	505-64D1020	SAMPLE DATE:	1/3/2017 Reviewed 01-03-20
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:	Various	SPEC YEAR:	2014
SAMPLED BY:	Wade A Shaff #45	SPEC ITEM:	340,341
SAMPLE LOCATION:	Stockpiles at Plant	SPECIAL PROVISION:	
MATERIAL CODE:		MIX TYPE:	341-DG-D
MATERIAL NAME:	505-64D1020		
PRODUCER:	Industrial Asphalt & Aggregates, LLC		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:	Surface	STATION:		DIST. FROM CL:		CONTRACTOR DESIGN # :	505-64D1020

	Bin No.1	Bin No.2	Bin No.3	Bin No.4	Bin No.5	Bin No.6	Bin No.7
Individual Bin (%):	Bin No.1 = 27 %	Bin No.2 = 28 %	Bin No.3 = 20 %	Bin No.4 = 5 %			
Aggregate Source:	Limestone_Dolomite	Limestone_Dolomite	Limestone_Dolomite				
Aggregate Number:	1410607	1410607	1410607				
Sample ID:	Type D	Type F	Screenings	Field Sand			

Test Name	SiteManager Test Template	Test Method	Spec. Min or Max	Spec. Limit	Modified Spec. Limit	Result	Sample ID	Result	Sample ID	Result	Sample ID	Result	Sample ID	Result	Sample ID	Result	Sample ID	Result	Sample ID
Stockpile						Bin No.1		Bin No.2		Bin No.3		Bin No.4		Bin No.5		Bin No.6		Bin No.7	
Decantation	Tx217	Tex-217-F	Max.	1.5		0.40		0.50		N/A		N/A							
Deleterious Mat'l	Tx217	Tex-217-F	Max.	1.5		0.00		0.00		N/A		N/A							
Surface Aggregate Classification	Tx4AgClas	Tex-438-A, Tex-612-J	Min.			B		B		B		N/A							
Magnesium Sulfate Soundness	Tx411M	Tex-411-A	Max.	30		17.00		17.00		17.00		N/A							
LA Abrasion	Tx410	Tex-410-A	Max.	40		28.00		28.00		28.00		N/A							
Crushed Faces Count	Tx460	Tex-460-A	Min.	85		100.00		100.00		N/A		N/A							
Flat & Elongated	Tx280	Tex-280-F	Max.	10		0.00		0.00		N/A		N/A							
Micro-Deval Abrasion	Tx461	Tex-461-A	Use results to estimate the Mg Sulfate Soundness Loss			22.00		22.00		22.00		N/A							
Fine Aggregate						Bin No.1		Bin No.2		Bin No.3		Bin No.4		Bin No.5		Bin No.6		Bin No.7	
Bar Linear Shrinkage	Tx107	Tex-107-E	Max.	3						<1		<1							
Methylene Blue	-	AASHTO T330	Max.																
Combined Aggregate						Bin No.1		Bin No.2		Bin No.3		Bin No.4		Bin No.5		Bin No.6		Bin No.7	
Sand Equivalent	Tx203	Tex-203-F	Min.	45								83.00	Combined Sample						
User Defined Testing						Bin No.1		Bin No.2		Bin No.3		Bin No.4		Bin No.5		Bin No.6		Bin No.7	
Use this area to enter any test methods, specifications & test result that apply to this material(s) but are not not listed above. 1																			
2																			
3																			
4																			
5																			

Recycled Materials						Bin No.8		Bin No.9		Bin No.10	
Deleterious Mat'l	Tx217	Tex-217-F, Part III	Max.	0.5							
Decantation	Tx406	Tex-406-A, Part I	Max.	5							
Plasticity Index	Tx104-6	Tex-106-E	Max.	8							
User Defined Testing											

Remarks:

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : Aggregate Classification

SAMPLE ID:	505-64D1020	SAMPLE DATE:	1/3/2017 Reviewed 01-03-20
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:	Various	SPEC YEAR:	2014
SAMPLED BY:	Wade A Shaff #45	SPEC ITEM:	340,341
SAMPLE LOCATION:	Stockpiles at Plant	SPECIAL PROVISION:	
MATERIAL CODE:		MIX TYPE:	341-DG-D
MATERIAL NAME:	505-64D1020		
PRODUCER:	Industrial Asphalt & Aggregates, LLC		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:	Surface	STATION:		DIST. FROM CL:		CONTRACTOR DESIGN # :	505-64D1020

Aggregate Classification

		Bin No.1	Bin No.2	Bin No.3	Bin No.4	Bin No.5	Bin No.6	Bin No.7	Bin No.8	Bin No.9	Bin No.10
Individual Bin (%):		Bin No.1 = 27 %	Bin No.2 = 28 %	Bin No.3 = 20 %	Bin No.4 = 5 %				Bin No.8 = 20 %		
Aggregate Source:		Limestone_Dolomite	Limestone_Dolomite	Limestone_Dolomite					Fractionated RAP		
Aggregate Number:		1410607	1410607	1410607					Fine 1/2"		
Class (A) Rock (Y/N):		No	No	No							
Sieve Size:		Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %
Passing	Retained										
-	3/4"	0.0	0.0	0.0	0.0				0.0		
3/4"	1/2"	1.0	0.0	0.0	0.0				0.0		
1/2"	3/8"	6.1	0.1	0.0	0.0				1.4		
3/8"	No. 4	15.8	7.1	0.3	0.0				4.0		
No. 4	No. 8	2.6	16.1	2.1	0.1				3.7		
No. 8	No. 30	0.6	3.7	9.5	0.3				4.0		
No. 30	No. 50	0.1	0.3	3.4	1.1				2.1		
No. 50	No. 200	0.1	0.2	3.1	3.3				3.4		
No. 200	Pan	0.6	0.6	1.6	0.2				1.6		
Total:		27.0	28.0	20.0	5.0				20.0		
Percent of plus No. 4		23.0	7.1	0.3	0.0				5.4		
Percent of plus No. 8		25.6	23.2	2.4	0.1				9.1		

Percent of plus No. 4 from class (A) Rock:	0.0
Total Percent of plus No. 4	35.8
Percent of plus No. 4 from class (A) Rock:	*0.0*

Percent of plus No. 8 from class (A) Rock:	0.0
Total Percent of plus No. 8	60.3
Percent of plus No. 8 from class (A) Rock:	0.0

Remarks:

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : BULK GRAVITY

SAMPLE ID:	505-64D1020	SAMPLE DATE:	1/3/2017 Reviewed 01-03-20
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:	Various	SPEC YEAR:	2014
SAMPLED BY:	Wade A Shaff #45	SPEC ITEM:	340,341
SAMPLE LOCATION:	Stockpiles at Plant	SPECIAL PROVISION:	
MATERIAL CODE:		MIX TYPE:	341-DG-D
MATERIAL NAME:	505-64D1020		
PRODUCER:	Industrial Asphalt & Aggregates, LLC		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:	Surface	STATION:		DIST. FROM CL:		CONTRACTOR DESIGN # :	505-64D1020

	Bin No.1	Bin No.2	Bin No.3	Bin No.4	Bin No.5	Bin No.6	Bin No.7	Bin No.8	Bin No.9	Bin No.10
Individual Bin (%):	Bin No.1 = 27 %	Bin No.2 = 28 %	Bin No.3 = 20 %	Bin No.4 = 5 %				Bin No.8 = 19.8 %		
Aggregate Source:	Limestone_Dolomite	Limestone_Dolomite	Limestone_Dolomite					Fractionated RAP		
Aggregate Number:	1410607	1410607	1410607							
Sample ID:	Type D	Type F	Screenings	Field Sand				Fine 1/2"		

Sieve Size:		Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG
Passing	Retained																				
	3/4"																				
3/4"	1/2"	3.7	2.486																		
1/2"	3/8"	22.7	2.486	0.2	2.450											6.9	2.440				
3/8"	No. 4	58.7	2.486	25.2	2.450	1.3	2.535	0.3	2.615							20.1	2.440				
No. 4	No. 8	9.6	2.486	57.5	2.450	10.5	2.535	1.6	2.615							18.3	2.440				
No. 8	No. 30	2.4	2.486	13.2	2.450	47.6	2.535	6.1	2.615							19.8	2.440				
No. 30	No. 50	0.3	2.486	1.0	2.450	17.2	2.535	21.6	2.615							10.3	2.440				
No. 50	No. 200	0.5	2.486	0.6	2.450	15.5	2.535	66.9	2.615							16.8	2.440				
No. 200	Pan	2.1	2.486	2.3	2.450	7.9	2.702	3.5	2.690							7.8	2.440				
Totals		100.0	2.486	100.0	2.450	100.0	2.547	100.0	2.618							100.0	2.440				

Combined Bulk Specific Gravity:	2.485
Coarse Agg. Combined BSG:	

Specific Gravity of Asphalt:	1.037

Remarks:

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : SUMMARY SHEET

SAMPLE ID:	505-64D1020	SAMPLE DATE:	1/3/2017 Reviewed 01-03-201
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:	Various	SPEC YEAR:	2014
SAMPLED BY:	Wade A Shaff #45	SPEC ITEM:	340,341
SAMPLE LOCATION:	Stockpiles at Plant	SPECIAL PROVISION:	
MATERIAL CODE:		MIX TYPE:	341-DG-D
MATERIAL NAME:	505-64D1020		
PRODUCER:	Industrial Asphalt & Aggregates, LLC		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:	Surface	STATION:		DIST. FROM CL:		CONTRACTOR DESIGN # :	505-64D1020

Target Density, %:	**97.0**
Number of Gyrations:	

Note: This mix design requires an asphalt content of at least 4.5% to meet the Maximum Ratio of Recycled to Total Binder requirement.

TEST SPECIMENS								Mixture Evaluation @ Optimum Asphalt Content				
									Hamburg Wheel Tracking Test			
Asphalt Content (%)	Binder Ratio (%)	Specific Gravity Of Specimen (Ga)	Maximum Specific Gravity (Gr)	Effective Gravity (Ge)	Theo. Max. Specific Gravity (Gt)	Density from Gt (Percent)	VMA (Percent)	Indirect Tensile Strength (psi)	Number of cycles	Rut depth (mm)		Overlay Tester Min. Number of Cycles
4.3	*20.9*	2.318	2.464	2.626	2.459	94.3	15.4					
4.8	18.8	2.332	2.448	2.628	2.442	95.5	15.3					
5.3	17.0	2.350	2.424	2.620	2.425	96.9	15.1	181	20,000	9.6mm		
5.8	15.5	2.360	2.400	2.611	2.408	98.0	15.2					
6.3	14.3	2.366	2.389	2.619	2.391	99.0	15.4					

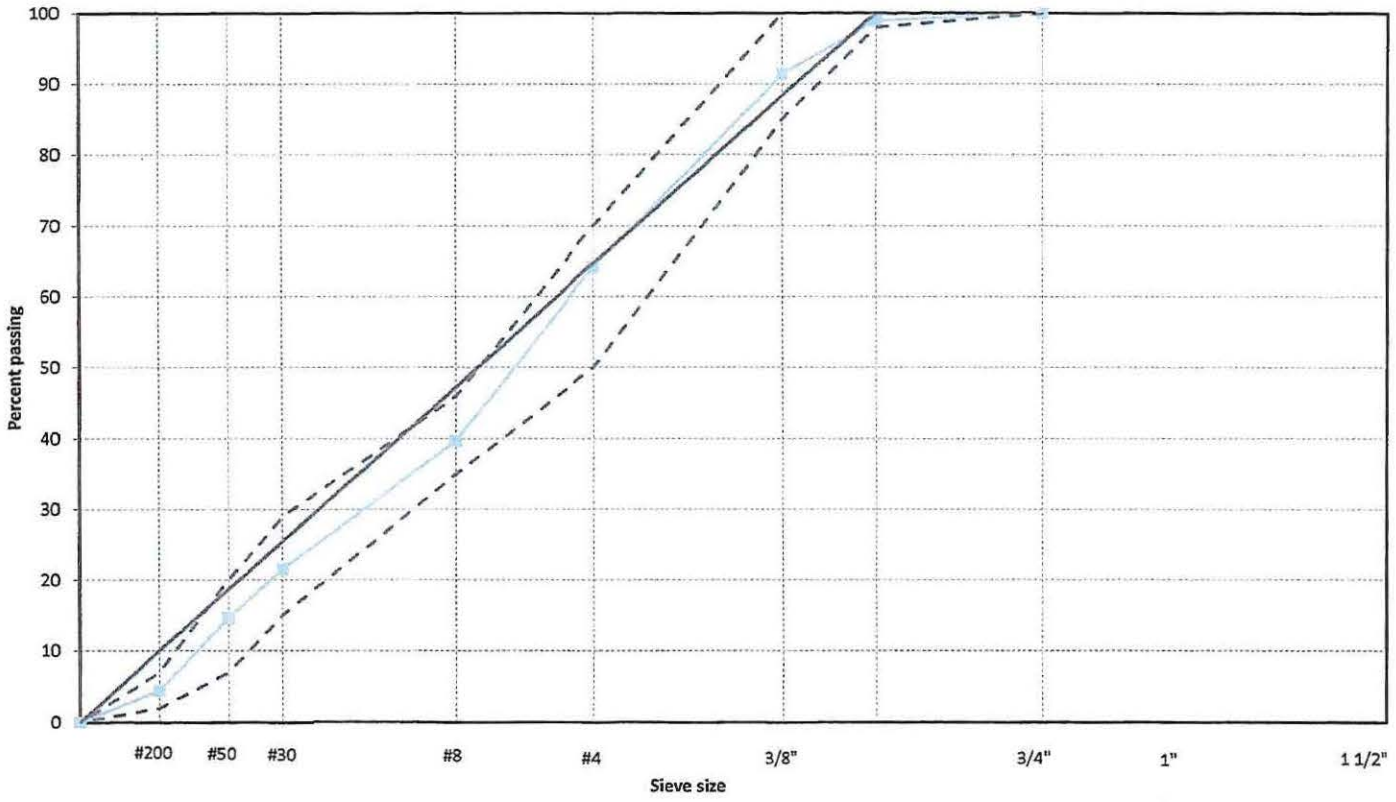
Effective Specific Gravity:	2.621
Optimum Asphalt Content :	5.3
Binder Ratio @ OAC:	17.0
VMA @ Optimum AC:	15.1

Estimated Percent of Stripping, %:	0

Interpolated Values	
Specific Gravity (Ga):	*2.351*
Max. Specific Gravity (Gr):	*2.422*
Theo. Max. Specific Gravity (Gt):	*2.423*

Mixing Temp,°F:	275
Molding Temp,°F:	250

Remarks:


100
90
80
70
60
50
40
30
20
10
0
Percent passing
#200
#50
#30
#8
#4
3/8"
3/4"
1"
1 1/2"
Sieve size

INDUSTRIAL
ASPHALT & AGGREGATES

New Design Name: 505-64D1020-17C
Old Design Name:
Design Date: 01/03/17
Revision Date: 11/06/17

City of Austin
Department of Public Works
Engineering Services Division
505 Barton Springs Road, Suite 900
Austin, Texas 78704

Attention: Bill Hadley, P.E., PhD.

Reference: Design of HMAC Type "D" for the following project.

Shown below is the plant-corrected job mix for the hot mix asphaltic concrete pavement used on the following project:

Name Of Project:

The job mix formula has been determined according to Texas Department of Transportation Standard Specifications Item 340. Hot Mix Asphaltic Concrete Pavement. The asphaltic concrete will be produced by

HMAC Producer: **Industrial Asphalt & Aggregate**
Plant Location: **Buda, Texas**

CERTIFICATION

This design dated 11/06/2017 has been prepared under my direction in accordance with TXDOT Construction Bulletin C-14, as modified by Test Method TEX-204-F and TXDOT Item 340.

Prepared by: Wade A Shaff
Certification: TXDOT II - # 45
TXDOT IA - # 49

JOB MIX FORMULA

	Sieve Size	Percent Passing
	1/2"	99.0
	3/8"	90.4
	#4	62.0
	#10	38.5
	#40	21.0
	#80	12.4
	#200	6.0
Vacuum Extraction	Asphalt Content (PG 64-22)	6.0%
Ignition Oven	Asphalt Content (PG 64-22)	6.2%

HMAC SUBMITTALS

All responsibility for the adequacy of this mix design rests with the Contractor who submitted it. In reviewing the submittal, the CO must rely upon the adequacy of the work of the Design Engineer whose certification appears hereon.

☐ Reviewed

Signature: Wade A Shaff 11/10/16

IA&A Wade A Shaff #45
Quality Materials Manager
Industrial Asphalt & Aggregates, LLC
512-601-9238

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : COMBINED GRADATION

Refresh Workbook

File Version: 03/17/04 10:49:36

SAMPLE ID:	505-64D1020-17C	SAMPLE DATE:	01/03/2017
LOT NUMBER:		LETTING DATE:	rev 11-06-17
STATUS:		CONTROLLING CSJ:	
COUNTY:	Travis	SPEC YEAR:	1993
SAMPLED BY:	Wade A Shaff #45	SPEC ITEM:	340
SAMPLE LOCATION:	Plant Stockpiles	SPECIAL PROVISION:	
MATERIAL:	505-64D1020-17C	MIX TYPE:	Type_D
PRODUCER:	Industrial Asphalt and Aggregates, LLC Buda-Centex Plant		
AREA ENGINEER:		PROJECT MANAGER:	
COURSE\LIFT:		STATION:	DIST. FROM CL:

Recycled Binder, %	
Bin No 6:	0.0
Bin No 7:	0.0
Total	0.0

Ratio of Recycled to Total Binder, %
0.0

	BIN FRACTIONS						
	Bin No.1	Bin No.2	Bin No.3	Bin No.4	Bin No.5	Bin No.6	Bin No.7
Aggregate Source:	Centex	Centex	Centex	Mid-Tex			
Aggregate Number:	1410507	1410507	1410507				
Sample ID:	Type D	Type F	Screenings	Field Sand			
Rap?, Asphalt%:							
Individual Bin (%):	32.0	26.0	30.0	12.0			

Sieve Size:	Sieve Size: (mm)	Bin No.1 Cum.% Passing	Bin No.1 Wtd Cum. %	Bin No.2 Cum.% Passing	Bin No.2 Wtd Cum. %	Bin No.3 Cum.% Passing	Bin No.3 Wtd Cum. %	Bin No.4 Cum.% Passing	Bin No.4 Wtd Cum. %	Bin No.5 Cum.% Passing	Bin No.5 Wtd Cum. %	Bin No.6 Cum.% Passing	Bin No.6 Wtd Cum. %	Bin No.7 Cum.% Passing	Bin No.7 Wtd Cum. %	Combined Gradation Total Bin Cum. % Passing	Lower & Upper Type_D Specification Limits		Within Spec's
1/2"	12.500	96.3	30.8	100.0	26.0	100.0	30.0	100.0	12.0		0.0		0.0		0.0	98.8	98.0	100.0	Yes
3/8"	9.500	73.8	23.6	99.8	25.9	100.0	30.0	100.0	12.0		0.0		0.0		0.0	91.5	85.0	100.0	Yes
No. 4	4.750	14.9	4.8	74.2	19.3	98.4	29.5	99.6	12.0		0.0		0.0		0.0	65.6	50.0	70.0	Yes
No. 10	2.000	4.6	1.5	11.2	2.9	78.5	23.6	96.7	11.6		0.0		0.0		0.0	39.6	32.0	42.0	Yes
No. 40	0.425	2.7	0.9	2.6	0.7	31.0	9.3	84.4	10.1		0.0		0.0		0.0	21.0	11.0	26.0	Yes
No. 80	0.180	2.4	0.8	2.1	0.5	15.7	4.7	28.1	3.4		0.0		0.0		0.0	9.4	4.0	14.0	Yes
No. 200	0.075	2.1	0.7	1.9	0.5	8.1	2.4	3.6	0.4		0.0		0.0		0.0	4.0	1.0	6.0	Yes

Not within specifications # Not cumulative

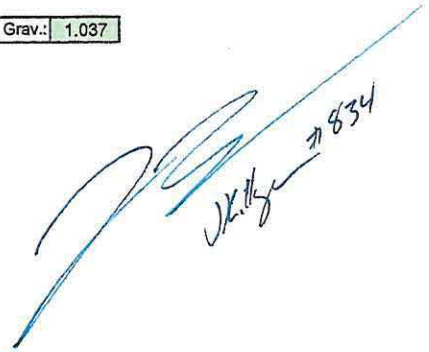
Asphalt Source & Grade:	Pelican	Binder Percent, (%):	5.0	Asphalt Spec. Grav.:	1.037

Remarks:

Test Method:	Tested By:	Tested Date:
Tx207		
Tx208		
Tx210		
Tx227		
Tx228		
Tx229		
Tx231		
Tx236		

Reviewed By:	Completed Date:

Authorized By:	Authorized Date:
Wade A. Shaff #45	01/03/17



TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : BULK GRAVITY

File Version: 03/17/04 10:49:36

SAMPLE ID:	505-64D1020-17C	SAMPLE DATE:	01/03/2017
LOT NUMBER:		LETTING DATE:	rev 11-06-17
STATUS:		CONTROLLING CSJ:	
COUNTY:	Travis	SPEC YEAR:	Travis
SAMPLED BY:	Wade A Shaff #45	SPEC ITEM:	340
SAMPLE LOCATION:	Plant Stockpiles	SPECIAL PROVISION:	
MATERIAL:	505-64D1020-17C	MIX TYPE:	Type_D
PRODUCER:	Industrial Asphalt and Aggregates, LLC Buda-Centex Plant		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:		STATION:		DIST. FROM CL:	

	Bin No.1 = 32 %	Bin No.2 = 26 %	Bin No.3 = 30 %	Bin No.4 = 12 %			
Aggregate Source:	Centex	Centex	Centex	Mid-Tex			
Aggregate Number:	1410507	1410507	1410507				
Sample ID:	Type D	Type F	Screenings	Field Sand			

Sieve Size: Passing		Retained	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG
	-	1/2"	3.7	2.486												
1/2"	-	3/8"	22.5	2.486	0.2	2.450										
3/8"	-	No. 4	58.9	2.486	25.6	2.450	1.6	2.535	0.4	2.615						
No. 4	-	No. 10	10.3	2.486	63.0	2.450	19.9	2.535	2.9	2.615						
No. 10	-	No. 40	1.9	2.486	8.6	2.450	47.5	2.535	12.3	2.615						
No. 40	-	No. 80	0.3	2.486	0.5	2.450	15.3	2.535	56.3	2.615						
No. 80	-	No. 200	0.3	2.486	0.2	2.450	7.6	2.535	24.5	2.615						
No. 200	-	Pan	2.1	2.486	1.9	2.450	8.1	2.702	3.6	2.690						
Totals			100.0	2.486	100.0	2.450	100.0	2.548	100.0	2.618						

Combined Bulk Specific Gravity:	**2.506**

Specific Gravity of Asphalt:	**1.037**

Remarks:

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : SUMMARY SHEET

File Version: 03/17/04 10:49:36

SAMPLE ID:	505-64D1020-17C	SAMPLE DATE:	01/03/2017
LOT NUMBER:		LETTING DATE:	rev 11-06-17
STATUS:		CONTROLLING CSJ:	
COUNTY:	Travis	SPEC YEAR:	Travis
SAMPLED BY:	Wade A Shaff #45	SPEC ITEM:	340
SAMPLE LOCATION:	Plant Stockpiles	SPECIAL PROVISION:	
MATERIAL:	505-64D1020-17C	MIX TYPE:	Type_D
PRODUCER:	Industrial Asphalt and Aggregates, LLC Buda-Centex Plant		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:		STATION:		DIST. FROM CL:	

Target Density:	96	Percent

								Static Creep		
Asphalt Content (%)	Specific Gravity Of Specimen (Ga)	Maximum Specific Gravity (Gr)	Effective Gravity (Ge)	Theo. Max. Specific Gravity (Gt)	Density from Gt (Percent)	VMA (Percent)	Hveem Stability (%)	Creep Stiffness (psi)	Perm. Strain X1000 (in/in)	Slope of SS Curve X 10^9 (in/in/Sec)
4.50	2.325	2.446	2.613	2.450	94.9	15.2	49			
5.00	2.339	2.439	2.626	2.433	96.1	15.1	52			
5.50	2.363	2.416	2.619	2.415	97.8	14.7	54			
6.00	2.378	2.396	2.615	2.399	99.1	14.6	52			
6.50	2.383			2.382	100.0	14.9	46			

Effective Specific Gravity:	2.618

Optimum Asphalt Content:	**5.0**
VMA @ Optimum AC:	**15.1**

Interpolated Values	
Specific Gravity (Ga):	**2.335**
Max. Specific Gravity (Gr):	**2.440**
Theo. Max. Specific Gravity (Gt):	**2.434**

Remarks:

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : MATERIAL PROPERTIES

File Version: 03/17/04 10:49:36

SAMPLE ID:	505-64D1020-17C	SAMPLE DATE:	01/03/2017
LOT NUMBER:		LETTING DATE:	rev 11-06-17
STATUS:		CONTROLLING CSJ:	
COUNTY:	Travis	SPEC YEAR:	Travis
SAMPLED BY:	Wade A Shaff #45	SPEC ITEM:	340
SAMPLE LOCATION:	Plant Stockpiles	SPECIAL PROVISION:	
MATERIAL:	505-64D1020-17C	MIX TYPE:	Type_D
PRODUCER:	Industrial Asphalt and Aggregates, LLC Buda-Centex Plant		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE/LIFT:		STATION:		DIST. FROM CL:	

	Bin No.1 = 32 %	Bin No.2 = 26 %	Bin No.3 = 30 %	Bin No.4 = 12 %			
Aggregate Source:	Centex	Centex	Centex	Mid-Tex			
Aggregate Number:	1410507	1410507	1410507				
Sample ID:	Type D	Type F	Screenings	Field Sand			

Test Name	SiteManager Test Template	Test Method	Specification Requirement		Result	Sample ID	Result	Sample ID	Result	Sample ID	Result	Sample ID	Result	Sample ID	Result	Sample ID	Result	Sample ID
Stockpile																		
Decantation	Tx217	Tex-217-F	1.5	Max.	0.70		0.50		N/A		N/A							
Deleterious Mat'l	Tx217	Tex-217-F	1.5	Max.	0.00		0.00		N/A		N/A							
Surface Aggregate Classification	Tx4AgClas	Tex-438-A Tex-612-J	B	Min.	B		B		B		N/A							
Magnesium Sulfate Soundness	Tx411M	Tex-411-A	30	Max.	17.00		17.00		17.00		N/A							
LA Abrasion	Tx410	Tex-410-A	40	Max.	28.00		28.00		28.00		N/A							
Crushed Faces Count	Tx460	Tex-460-A		Min.	100.00		100.00		N/A		N/A							
Flakiness Index	Tx224	Tex-224-F		Max.	0.00		0.00		N/A		N/A							
Fine Aggregate																		
Bar Linear Shrinkage	Tx107	Tex-107-E	3	Max.					<1		<1							
Combined Aggregate																		
Sand Equivalent	Tx203	Tex-203-F	45	Min.							85.00							Combined Sample
Complete Mixture																		
Tensile Strength Ratio	Tx531	Tex-531-C		Min.														
Boiling Test	Tx530	Tex-530-C		Max.														
Draindown	Tx535	Tex-535-C		Max.														
User Defined Testing																		
Use this area to enter any test methods, specifications & test result that apply to this material(s) but are not not listed above.																		

Remarks:

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : Aggregate Classification

File Version: 03/17/04 10:49:36

SAMPLE ID:		SAMPLE DATE:	01/03/2017
LOT NUMBER:		LETTING DATE:	rev 11-06-17
STATUS:		CONTROLLING CSJ:	
COUNTY:		SPEC YEAR:	
SAMPLED BY:		SPEC ITEM:	340
SAMPLE LOCATION:		SPECIAL PROVISION:	
MATERIAL:		MIX TYPE:	Type_D
PRODUCER:	Industrial Asphalt and Aggregates, LLC Buda-Centex Plant		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:		STATION:		DIST. FROM CL:	

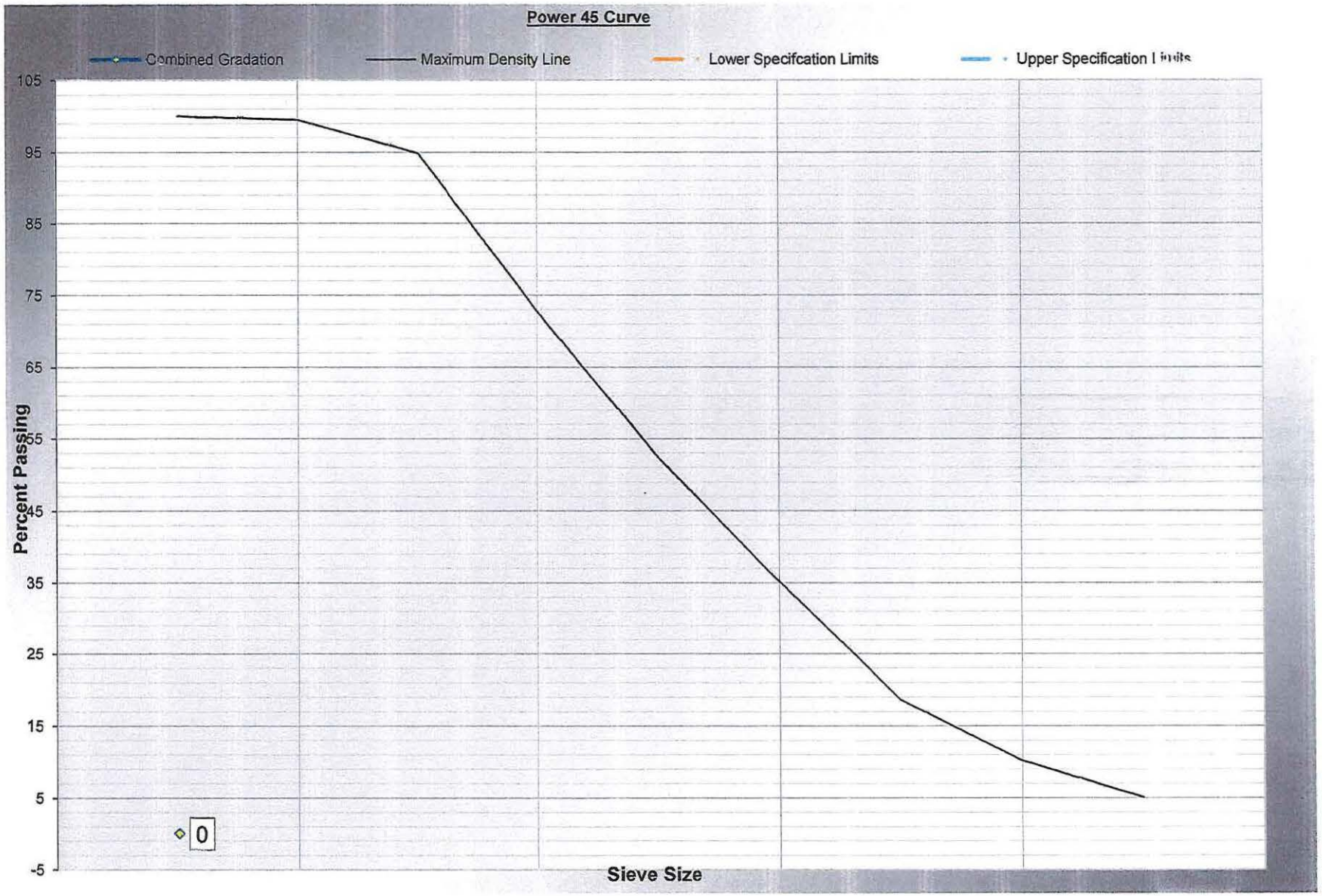
Aggregate Classification

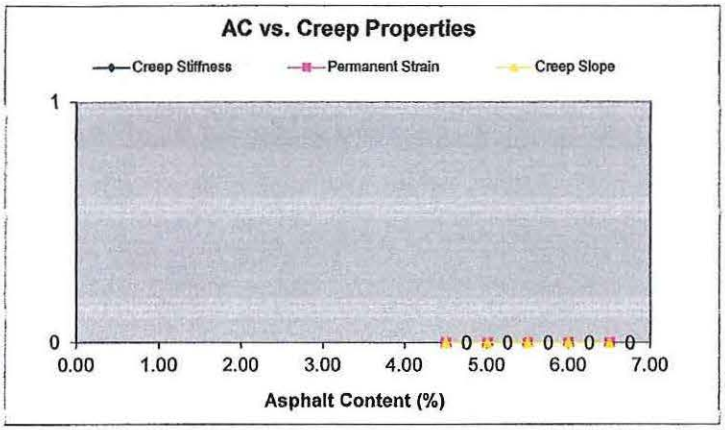
	Bin No.1 = 32 %	Bin No.2 = 26 %	Bin No.3 = 30 %	Bin No.4 = 12 %			
Aggregate Source:	Centex	Centex	Centex	Mid-Tex			
Aggregate Number:	1410507	1410507	1410507				
Class (A) Rock (Y/N):							

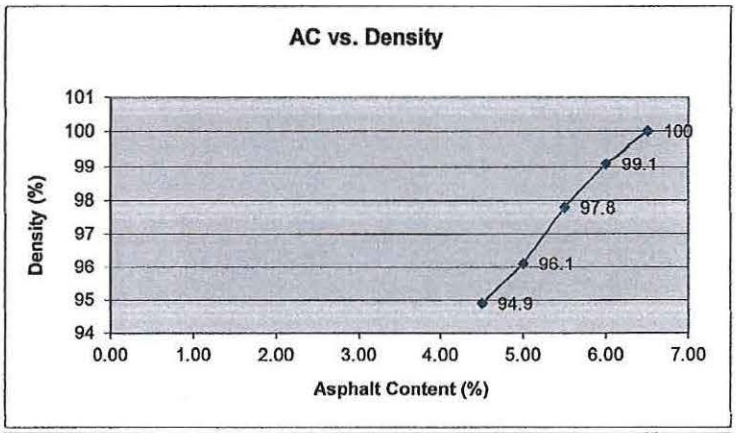
Sieve Size: Passing	-	Retained	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %
	-	1/2"	1.2	0.0	0.0	0.0	0.0	0.0	0.0
1/2"	-	3/8"	7.2	0.1	0.0	0.0	0.0	0.0	0.0
3/8"	-	No. 4	18.8	6.6	0.5	0.0	0.0	0.0	0.0
No. 4	-	No. 10	3.3	16.4	5.9	0.4	0.0	0.0	0.0
No. 10	-	No. 40	0.6	2.2	14.3	1.5	0.0	0.0	0.0
No. 40	-	No. 80	0.1	0.2	4.6	6.7	0.0	0.0	0.0
No. 80	-	No. 200	0.1	0.0	2.3	3.0	0.0	0.0	0.0
No. 200	-	Pan	0.7	0.5	2.4	0.4	0.0	0.0	0.0
Total:			32.0	26.0	30.0	12.0	0.0	0.0	0.0
Percent of plus No. 4:			27.2	6.7	0.5	0.0	0.0	0.0	0.0

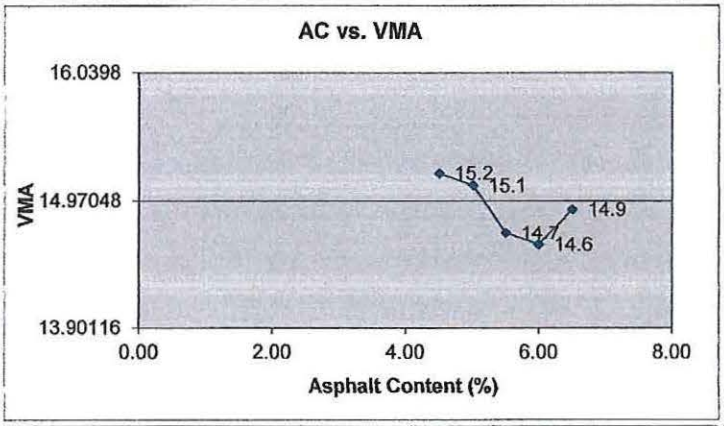
Percent of plus No. 4 from class (A) Rock:	0.0
Total Percent of plus No. 4:	34.4
Percent of plus No. 4 from class (A) Rock:	**0.0**

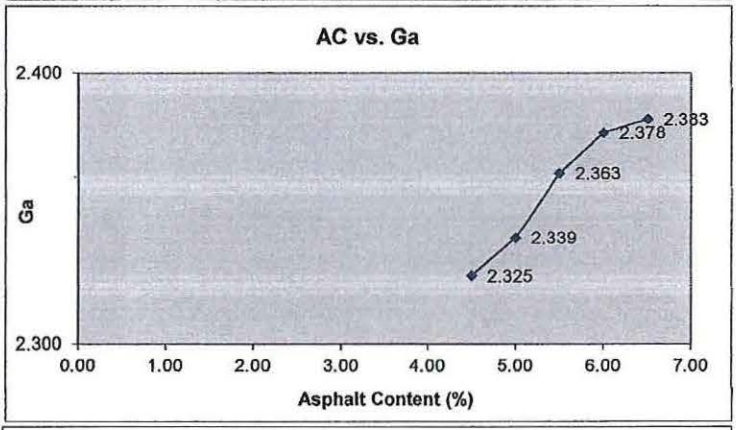
Remarks:

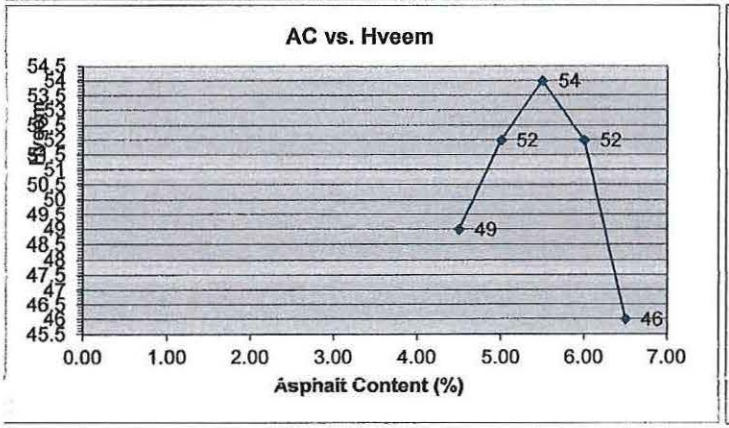

Power 45 Curve
Combined Gradation
Maximum Density Line
Lower Specifcation Limits
Upper Specification Limits
105
95
85
75
65
55
45
35
25
15
5
-5
Percent Passing
0
Sieve Size

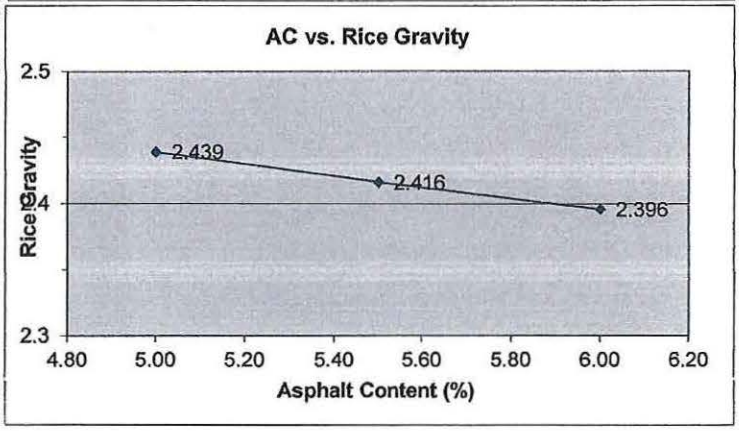

AC vs. Creep Properties
Creep Stiffness
Permanent Strain
Creep Slope
1
0
0.00 1.00 2.00 3.00 4.00 5.00 6.00 7.00
Asphalt Content (%)


AC vs. Density
Density (%)
101
100
99
98
97
96
95
94
100
99.1
97.8
96.1
94.9
0.00 1.00 2.00 3.00 4.00 5.00 6.00 7.00
Asphalt Content (%)


AC vs. VMA
VMA
16.0398
14.97048
13.90116
15.2
15.1
14.7
14.6
14.9
0.00 2.00 4.00 6.00 8.00
Asphalt Content (%)


AC vs. Ga
Ga
2.400
2.300
2.325
2.339
2.363
2.378
2.383
0.00 1.00 2.00 3.00 4.00 5.00 6.00 7.00
Asphalt Content (%)


AC vs. Hveem
49
52
54
52
46
0.00 1.00 2.00 3.00 4.00 5.00 6.00 7.00
Asphalt Content (%)


AC vs. Rice Gravity
Rice Gravity
2.5
2.4
2.3
2.439
2.416
2.396
4.80 5.00 5.20 5.40 5.60 5.80 6.00 6.20
Asphalt Content (%)

INDUSTRIAL
ASPHALT & AGGREGATES

Design No.: 505-64D1020-17C-Thin
Design Date: 1/3/2018

Reference: Design of HMAC Type D HMA for the following project:

Shown below is the plant-corrected job mix for the hot mix asphaltic concrete pavement used on the following project:

Name Of Project: Various

The job mix formula has been determined according to Texas Department of Transportation Standard Specifications Item 340 & 341. Hot Mix Asphaltic Concrete Pavement. The asphaltic concrete will be produced by:

HMAC Producer: **Industrial Asphalt & Aggregate - Buda Centex**
Plant Location: **Buda, Texas**

CERTIFICATION

This design has been prepared under my direction in accordance with TXDOTspecification. Design meets or exceeds the design specification for Item 340 & 341.

Prepared by: Johnathan Killgore
Certification: TXDOT 1A - 2042, II - 834, 1B - 3225

JOB MIX FORMULA

Sieve Size	Design JMF	Current JMF
3/4""	100.0	100.0
1/2"	98.8	99.0
3/8"	91.5	90.4
#4	65.6	62.0
#10	39.6	38.5
#40	21.0	21.0
#80	9.4	12.4
#200	4.0	5.0
Ignition Oven	Asphalt Content (PG 64-22)	5.1%	5.2%
Target Compaction	96.5% Texas Gyratory Compactor		

Johnathan Killgore

IA&A Johnathan Killgore
Quality Control Supervisor

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : COMBINED GRADATION

Refresh Workbook

File Version: 03/17/04 10:49:36

SAMPLE ID:	505-64D1020-17C-Thin	SAMPLE DATE:	01/03/2017
LOT NUMBER:		LETTING DATE:	
STATUS:		CONTROLLING CSJ:	
COUNTY:	Travis	SPEC YEAR:	1993
SAMPLED BY:	Wade A Shaff #45	SPEC ITEM:	340
SAMPLE LOCATION:	Plant Stockpiles	SPECIAL PROVISION:	
MATERIAL:	505-64D1020-17C-Thin	MIX TYPE:	Type_D
PRODUCER:	Industrial Asphalt and Aggregates, LLC Buda-Centex Plant		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:		STATION:		DIST. FROM CL:	

Recycled Binder, %	
Bin No 6:	0.0
Bin No 7:	0.0
Total	0.0

Ratio of Recycled to Total Binder, %
0.0

	BIN FRACTIONS						
	Bin No.1	Bin No.2	Bin No.3	Bin No.4	Bin No.5	Bin No.6	Bin No.7
Aggregate Source:	Centex	Centex	Centex	Mid-Tex			
Aggregate Number:	1410507	1410507	1410507				
Sample ID:	Type D	Type F	Screenings	Field Sand			
Rap?, Asphalt%:							
Individual Bin (%):	32.0	26.0	30.0	12.0			

Sieve Size:	Sieve Size: (mm)	Bin No.1 Cum.% Passing	Bin No.1 Wtd Cum. %	Bin No.2 Cum.% Passing	Bin No.2 Wtd Cum. %	Bin No.3 Cum.% Passing	Bin No.3 Wtd Cum. %	Bin No.4 Cum.% Passing	Bin No.4 Wtd Cum. %	Bin No.5 Cum.% Passing	Bin No.5 Wtd Cum. %	Bin No.6 Cum.% Passing	Bin No.6 Wtd Cum. %	Bin No.7 Cum.% Passing	Bin No.7 Wtd Cum. %	Combined Gradation Total Bin 100.0% Cum. % Passing	Lower & Upper Type_D Specification Limits		Within Spec's
1/2"	12.500	96.3	30.8	100.0	26.0	100.0	30.0	100.0	12.0		0.0		0.0		0.0	98.8	98.0	100.0	Yes
3/8"	9.500	73.8	23.6	99.8	25.9	100.0	30.0	100.0	12.0		0.0		0.0		0.0	91.5	85.0	100.0	Yes
No. 4	4.750	14.9	4.8	74.2	19.3	98.4	29.5	99.6	12.0		0.0		0.0		0.0	65.6	50.0	70.0	Yes
No. 10	2.000	4.6	1.5	11.2	2.9	78.5	23.6	96.7	11.6		0.0		0.0		0.0	39.6	32.0	42.0	Yes
No. 40	0.425	2.7	0.9	2.6	0.7	31.0	9.3	84.4	10.1		0.0		0.0		0.0	21.0	11.0	26.0	Yes
No. 80	0.180	2.4	0.8	2.1	0.5	15.7	4.7	28.1	3.4		0.0		0.0		0.0	9.4	4.0	14.0	Yes
No. 200	0.075	2.1	0.7	1.9	0.5	8.1	2.4	3.6	0.4		0.0		0.0		0.0	4.0	1.0	6.0	Yes

Not within specifications # Not cumulative

Asphalt Source & Grade:	Pelican	Binder Percent, (%):	5.1	Asphalt Spec. Grav.:	1.037

Remarks:

Test Method:	Tested By:	Tested Date:
Tx207		
Tx208		
Tx210		
Tx227		
Tx228		
Tx229		
Tx231		
Tx236		

Reviewed By:	Completed Date:

Authorized By:	Authorized Date:
Wade A. Shaff #45	01/03/17

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : BULK GRAVITY

File Version: 03/17/04 10:49:36

SAMPLE ID:	505-64D1020-17C-Thin	SAMPLE DATE:	01/03/2017
LOT NUMBER:		LETTING DATE:	
STATUS:		CONTROLLING CSJ:	
COUNTY:	Travis	SPEC YEAR:	Travis
SAMPLED BY:	Wade A Shaff #45	SPEC ITEM:	340
SAMPLE LOCATION:	Plant Stockpiles	SPECIAL PROVISION:	
MATERIAL:	505-64D1020-17C-Thin	MIX TYPE:	Type_D
PRODUCER:	Industrial Asphalt and Aggregates, LLC Buda-Centex Plant		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:		STATION:		DIST. FROM CL:	

	Bin No.1 = 32 %	Bin No.2 = 26 %	Bin No.3 = 30 %	Bin No.4 = 12 %			
Aggregate Source:	Centex	Centex	Centex	Mid-Tex			
Aggregate Number:	1410507	1410507	1410507				
Sample ID:	Type D	Type F	Screenings	Field Sand			

Sieve Size: Passing		Retained	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG
	-	1/2"	3.7	2.486												
1/2"	-	3/8"	22.5	2.486	0.2	2.450										
3/8"	-	No. 4	58.9	2.486	25.6	2.450	1.6	2.535	0.4	2.615						
No. 4	-	No. 10	10.3	2.486	63.0	2.450	19.9	2.535	2.9	2.615						
No. 10	-	No. 40	1.9	2.486	8.6	2.450	47.5	2.535	12.3	2.615						
No. 40	-	No. 80	0.3	2.486	0.5	2.450	15.3	2.535	56.3	2.615						
No. 80	-	No. 200	0.3	2.486	0.2	2.450	7.6	2.535	24.5	2.615						
No. 200	-	Pan	2.1	2.486	1.9	2.450	8.1	2.702	3.6	2.690						
Totals			100.0	2.486	100.0	2.450	100.0	2.548	100.0	2.618						

Combined Bulk Specific Gravity:	**2.506**

Specific Gravity of Asphalt:	**1.037**

Remarks:

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : SUMMARY SHEET

File Version: 03/17/04 10:49:36

SAMPLE ID:	505-64D1020-17C-Thin	SAMPLE DATE:	01/03/2017
LOT NUMBER:		LETTING DATE:	
STATUS:		CONTROLLING CSJ:	
COUNTY:	Travis	SPEC YEAR:	Travis
SAMPLED BY:	Wade A Shaff #45	SPEC ITEM:	340
SAMPLE LOCATION:	Plant Stockpiles	SPECIAL PROVISION:	
MATERIAL:	505-64D1020-17C-Thin	MIX TYPE:	Type_D
PRODUCER:	Industrial Asphalt and Aggregates, LLC Buda-Centex Plant		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:		STATION:		DIST. FROM CL:	

Target Density:	96.5	Percent

								Static Creep		
Asphalt Content (%)	Specific Gravity Of Specimen (Ga)	Maximum Specific Gravity (Gr)	Effective Gravity (Ge)	Theo. Max. Specific Gravity (Gt)	Density from Gt (Percent)	VMA (Percent)	Hveem Stability (%)	Creep Stiffness (psi)	Perm. Strain X1000 (in/in)	Slope of SS Curve X 10^9 (in/in/Sec)
4.50	2.325	2.446	2.613	2.450	94.9	15.2	49			
5.00	2.339	2.439	2.626	2.433	96.1	15.1	52			
5.50	2.363	2.416	2.619	2.415	97.8	14.7	54			
6.00	2.378	2.396	2.615	2.399	99.1	14.6	52			
6.50	2.383			2.382	100.0	14.9	46			

Effective Specific Gravity:	2.618

Optimum Asphalt Content:	**5.1**
VMA @ Optimum AC:	**15.0**

Interpolated Values	
Specific Gravity (Ga):	**2.344**
Max. Specific Gravity (Gr):	**2.434**
Theo. Max. Specific Gravity (Gt):	**2.429**

Remarks:

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : MATERIAL PROPERTIES

File Version: 03/17/04 10:49:36

SAMPLE ID:	505-64D1020-17C-Thin	SAMPLE DATE:	01/03/2017
LOT NUMBER:		LETTING DATE:	
STATUS:		CONTROLLING CSJ:	
COUNTY:	Travis	SPEC YEAR:	Travis
SAMPLED BY:	Wade A Shaff #45	SPEC ITEM:	340
SAMPLE LOCATION:	Plant Stockpiles	SPECIAL PROVISION:	
MATERIAL:	505-64D1020-17C-Thin	MIX TYPE:	Type_D
PRODUCER:	Industrial Asphalt and Aggregates, LLC Buda-Centex Plant		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:		STATION:		DIST. FROM CL:	

	Bin No.1 = 32 %	Bin No.2 = 26 %	Bin No.3 = 30 %	Bin No.4 = 12 %			
Aggregate Source:	Centex	Centex	Centex	Mid-Tex			
Aggregate Number:	1410507	1410507	1410507				
Sample ID:	Type D	Type F	Screenings	Field Sand			

Test Name	SiteManager Test Template	Test Method	Specification Requirement		Result	Sample ID	Result	Sample ID	Result	Sample ID	Result	Sample ID	Result	Sample ID	Result	Sample ID	Result	Sample ID
Stockpile																		
Decantation	Tx217	Tex-217-F	1.5	Max.	0.70		0.50		N/A		N/A							
Deleterious Mat'l	Tx217	Tex-217-F	1.5	Max.	0.00		0.00		N/A		N/A							
Surface Aggregate Classification	Tx4AgClas	Tex-438-A Tex-612-J	B	Min.	B		B		B		N/A							
Magnesium Sulfate Soundness	Tx411M	Tex-411-A	30	Max.	17.00		17.00		17.00		N/A							
LA Abrasion	Tx410	Tex-410-A	40	Max.	28.00		28.00		28.00		N/A							
Crushed Faces Count	Tx460	Tex-460-A		Min.	100.00		100.00		N/A		N/A							
Flakiness Index	Tx224	Tex-224-F		Max.	0.00		0.00		N/A		N/A							
Fine Aggregate																		
Bar Linear Shrinkage	Tx107	Tex-107-E	3	Max.					<1		<1							
Combined Aggregate																		
Sand Equivalent	Tx203	Tex-203-F	45	Min.							85.00							Combined Sample
Complete Mixture																		
Tensile Strength Ratio	Tx531	Tex-531-C		Min.														
Boiling Test	Tx530	Tex-530-C		Max.														
Draindown	Tx535	Tex-535-C		Max.														
User Defined Testing																		
Use this area to enter any test methods, speciafications & test result that apply to this material(s) but are not not listed above.																		

Remarks:

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : Aggregate Classification

File Version: 03/17/04 10:49:36

SAMPLE ID:		SAMPLE DATE:	01/03/2017
LOT NUMBER:		LETTING DATE:	
STATUS:		CONTROLLING CSJ:	
COUNTY:		SPEC YEAR:	
SAMPLED BY:		SPEC ITEM:	340
SAMPLE LOCATION:		SPECIAL PROVISION:	
MATERIAL:		MIX TYPE:	Type_D
PRODUCER:	Industrial Asphalt and Aggregates, LLC Buda-Centex Plant		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:		STATION:		DIST. FROM CL:	

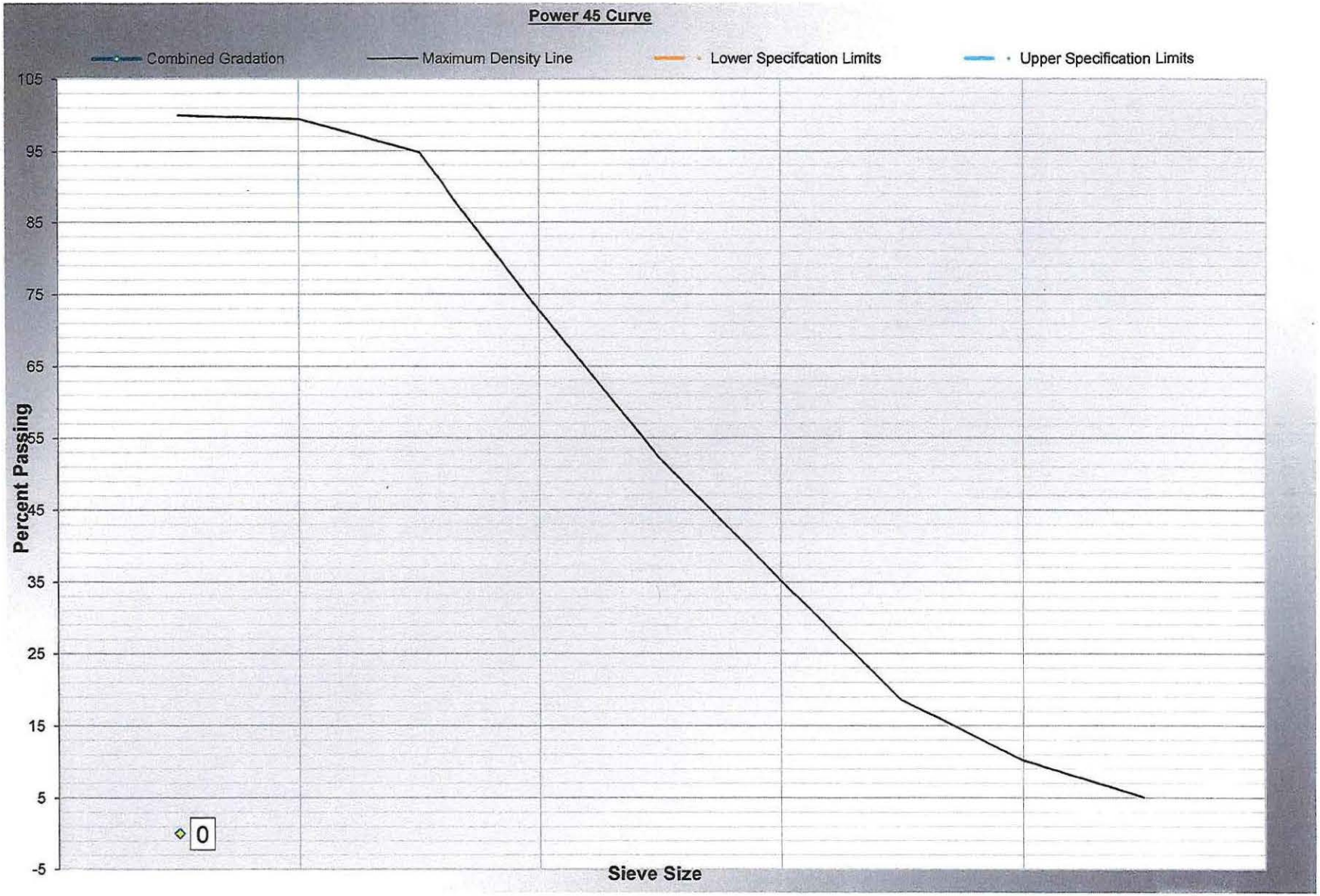
Aggregate Classification

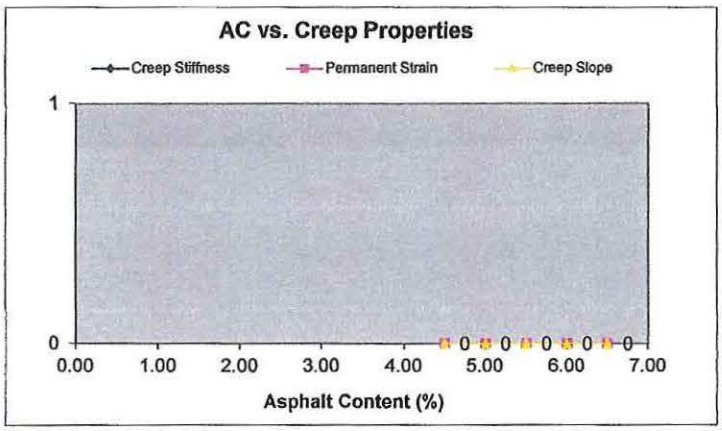
	Bin No.1 = 32 %	Bin No.2 = 26 %	Bin No.3 = 30 %	Bin No.4 = 12 %			
Aggregate Source:	Centex	Centex	Centex	Mid-Tex			
Aggregate Number:	1410507	1410507	1410507				
Class (A) Rock (Y/N):							

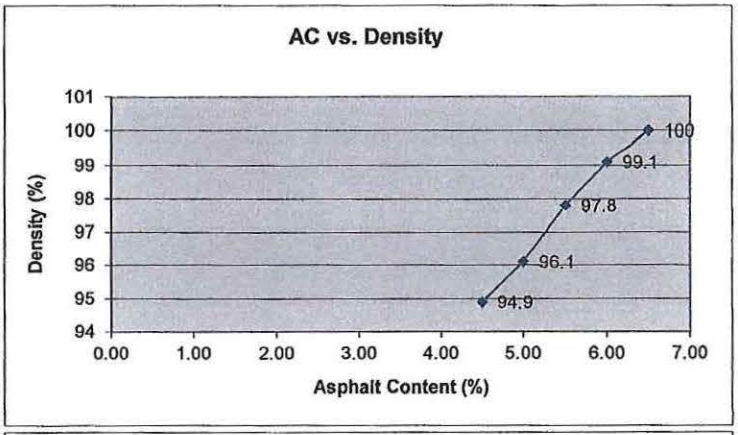
Sieve Size: Passing	-	Retained	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %
	-	1/2"	1.2	0.0	0.0	0.0	0.0	0.0	0.0
1/2"	-	3/8"	7.2	0.1	0.0	0.0	0.0	0.0	0.0
3/8"	-	No. 4	18.8	6.6	0.5	0.0	0.0	0.0	0.0
No. 4	-	No. 10	3.3	16.4	5.9	0.4	0.0	0.0	0.0
No. 10	-	No. 40	0.6	2.2	14.3	1.5	0.0	0.0	0.0
No. 40	-	No. 80	0.1	0.2	4.6	6.7	0.0	0.0	0.0
No. 80	-	No. 200	0.1	0.0	2.3	3.0	0.0	0.0	0.0
No. 200	-	Pan	0.7	0.5	2.4	0.4	0.0	0.0	0.0
Total:			32.0	26.0	30.0	12.0	0.0	0.0	0.0
Percent of plus No. 4:			27.2	6.7	0.5	0.0	0.0	0.0	0.0

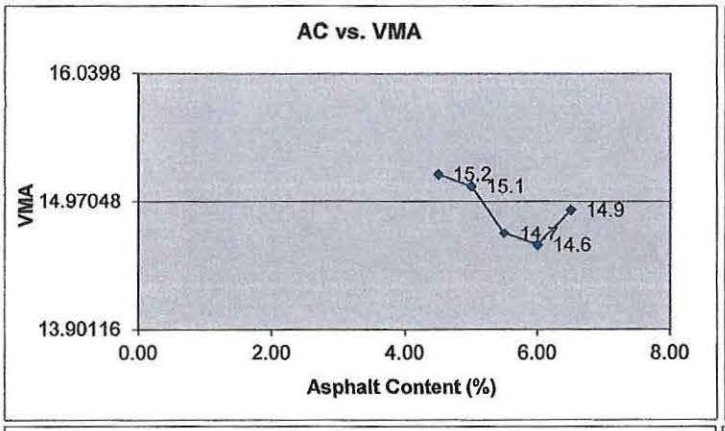
Percent of plus No. 4 from class (A) Rock:	0.0
Total Percent of plus No. 4:	34.4
Percent of plus No. 4 from class (A) Rock:	**0.0**

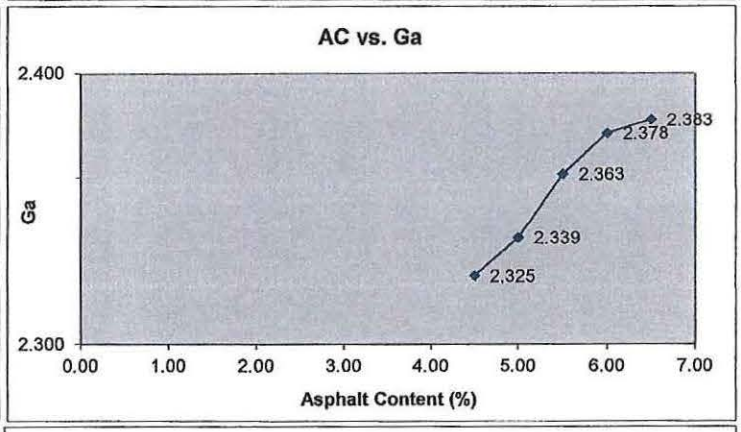
Remarks:

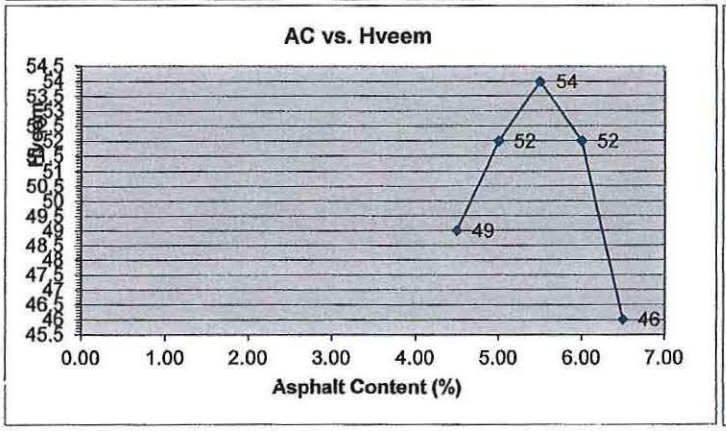

Power 45 Curve
Combined Gradation
Maximum Density Line
Lower Specifcation Limits
Upper Specification Limits
105
95
85
75
65
55
45
35
25
15
5
-5
Percent Passing
0
Sieve Size

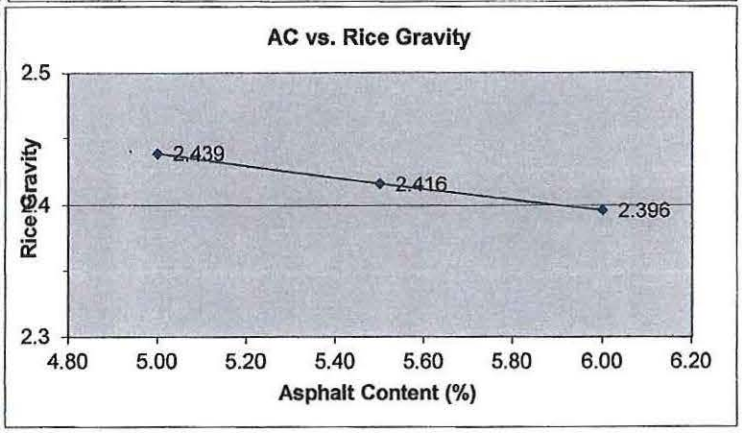

AC vs. Creep Properties
Creep Stiffness
Permanent Strain
Creep Slope
1
0
0.00
1.00
2.00
3.00
4.00
5.00
6.00
7.00
Asphalt Content (%)


AC vs. Density
Density (%)
101
100
99
98
97
96
95
94
100
99.1
97.8
96.1
94.9
0.00
1.00
2.00
3.00
4.00
5.00
6.00
7.00
Asphalt Content (%)


AC vs. VMA
VMA
16.0398
14.97048
13.90116
15.2
15.1
14.7
14.6
14.9
0.00
2.00
4.00
6.00
8.00
Asphalt Content (%)


AC vs. Ga
Ga
2.400
2.300
2.325
2.339
2.363
2.378
2.383
0.00
1.00
2.00
3.00
4.00
5.00
6.00
7.00
Asphalt Content (%)


AC vs. Hveem
54.5
49
52
54
52
46
0.00
1.00
2.00
3.00
4.00
5.00
6.00
7.00
Asphalt Content (%)


AC vs. Rice Gravity
Rice Gravity
2.5
2.3
2.439
2.416
2.396
4.80
5.00
5.20
5.40
5.60
5.80
6.00
6.20
Asphalt Content (%)

CONTRACT BETWEEN THE CITY OF AUSTIN ("City")
AND
Oldcastle Materials Texas, Inc. D/B/A APAC-Texas, Inc. ("Contractor")
for
Asphaltic Concrete
MA 6200 GA190000012

The City accepts the Contractor's Offer (as referenced in Section 1.1.3 below) for the above requirement and enters into the following Contract.

This Contract is between Oldcastle Materials Texas, Inc. D/B/A APAC-Texas, Inc having offices at 1320 Arrow Point Dr. Suite 600, Cedar Park, TX 78613 and the City, a home-rule municipality incorporated by the State of Texas, and is effective as of the date executed by the City ("Effective Date").

Capitalized terms used but not defined herein have the meanings given them in Solicitation Number IFB 2200 MDP0261.

1.1 **This Contract is composed of the following documents:**

1.1.1 This Contract

1.1.2 The City's Solicitation, Invitation for Bid (IFB), 2200 MDP0261 including all documents incorporated by reference

1.1.3 Oldcastle Materials Texas, Inc. D/B/A APAC-Texas, Inc.'s Offer, dated June 20, 2018, including subsequent clarifications

1.2 **Order of Precedence.** Any inconsistency or conflict in the Contract documents shall be resolved by giving precedence in the following order:

1.2.1 This Contract

1.2.2 The City's Solicitation as referenced in Section 1.1.2, including all documents incorporated by reference

1.2.3 The Contractor's Offer as referenced in Section 1.1.3, including subsequent clarifications.

1.3 **Term of Contract.**

1.3.1 **Term of Contract**. The Contract shall commence upon execution, unless otherwise specified, and shall remain in effect for a term of sixty (60) months.

1.3.1.1 Upon expiration of the term or any period of extension, the Contractor agrees to hold over under the terms and conditions of this Contract for such a period of time as is reasonably necessary for the City to re-solicit and/or complete the deliverables due under the Contract (not to exceed 120 calendar days unless mutually agreed to in writing).

1.3.1.2 This is a sixty (60) month Contract. Prices are firm for the first twelve (12) months.

1.4 **Compensation.** The Contractors shall be paid a total Not-to-Exceed amount of $40,000,000 for the Contract term, divided between the Contractors. Payment shall be made upon successful completion of services or delivery of goods as outlined in each individual Delivery Order.

1.5 **Quantity of Work.** There is no guaranteed quantity of work for the period of the Contract and there are no minimum order quantities. Work will be on an as needed basis as specified by the City for each Delivery Order

This Contract (including any Exhibits) constitutes the entire agreement of the parties regarding the subject matter of this Contract and supersedes all prior and contemporaneous agreements and understandings, whether written or oral, relating to such subject matter. This Contract may be altered, amended, or modified only by a written instrument signed by the duly authorized representatives of both parties.

In witness whereof, the parties have caused a duly authorized representative to execute this Contract on the date set forth below.

Oldcastle Materials Texas, Inc. D/B/A APAC-Texas, Inc.	**CITY OF AUSTIN**
Bailey Lewis	Erin D'Vincent
Printed Name of Authorized Person	Printed Name of Authorized Person
Signature	Signature
Sales Manager	Procurement Supervisor
Title:	Title:
11.26.2018	11.29.18
Date:	Date:

The undersigned, by his/her signature, represents that he/she is submitting a binding offer and is authorized to bind the respondent to fully comply with the solicitation document contained herein. The Respondent, by submitting and signing below, acknowledges that he/she has received and read the entire document packet sections defined above including all documents incorporated by reference, and agrees to be bound by the terms therein.

Company Name: Oldcastle Materials - Texas

Company Address: 1320 Arrow Point Dr., Suite 600

City, State, Zip: Cedar Park, TX 78613

Federal Tax ID No. [redacted]

Printed Name of Officer or Authorized Representative: Bailey Lewis

Title: Sales Manager

Signature of Officer or Authorized Representative:

Date: 6-20-2018

Email Address: Bailey.Lewis@oldcastlematerials.com / blewis@apac.com

Phone Number: Office 512-861-7100 / Cell 254-230-7378

*** Completed Bid Sheet, section 0600 must be submitted with this signed Offer Sheet to be considered for award**

BID SHEET
CITY OF AUSTIN
HOT MIX ASPHALTIC CONCRETE

SOLICITATION NO.: **IFB 2200 MDP0261**

BUYER: **Michelle Pearson**

Special Instructions: Offerors must use this Bid Sheet to submit pricing. Be advised that altering the bid sheet or taking exceptions to any portion of the solicitation may jeopardize acceptance of your Offer.

The quantities noted below are estimates and not a guarantee of actual volume. The City does not guarantee the purchase of the quantities listed, actual purchases may be more or less. Quantities are provided as a guide based on historical or anticipated usage. Order quantities will be as-needed and specified by the City for each order.

A bid of "0" (zero) will be interpreted by the City as a no-charge (free) item and the City will not expect to pay for that item. A bid of "no bid" or no response (space left blank) will be interpreted by the City that the Offeror does not wish to bid on that item. Be advised, a "no bid" or no response may be considered as non-responsive and may result in disqualification of the bid.

Prices offered on the bid sheet shall be all inclusive of fees not expressly allowed in Section 0500. The Offeror shall not charge separately for administrative, overhead, per diem, and shipping or transportation costs (travel time, fuel surcharges, mileage, stop-fee, etc.) to deliver services or items to the Austin, Texas area. The Offeror shall provide all tools, labor, travel, and equipment necessary to perform the services required under this contract.

The City reserves the right to make an award based on overall low cost or mulitiple awards based on individual or categories/groups of specific line items, cost, or any criteria or combination deemed most advantageous to the City.

CATEGORY 1 - SPECIFIED ITEMS FOR PICK-UP * PRIMARY CONTRACT *****

ITEM NO.	ITEM DESCRIPTION	UNIT OF MEASURE	ESTIMATED ANNUAL QUANTITY	UNIT PRICE	EXTENDED PRICE
1.1	HOT MIX COLD LAID ASPHALTIC CONCRETE IN ACCORDANCE WITH SECTION 0500 SPECIFICATIONS MFG. NAME & NO. Oldcastle Materials - TX	TONS	5,000	$60.00	$300,000.00
1.2	Hot Mix Cold Laid Summer-Grade Type D, as per the attached Specification in Section 0500	TONS	375	$60.00	$22,500.00
1.3	Hot Mix Cold Laid Winter-Grade Type D, as per the attached Specification in Section 0500	TONS	125	$60.00	$7,500.00
1.4	SP 340 HMAC Type B	TONS	5,000	$51.00	$255,000.00
1.5	HMAC Type B SBS Polymer Modified - 5% Polymer (Item 340)	TONS	5,000	$54.15	$270,750.00
1.6	HMAC Type C (unmodified Item 340)	TONS	8,000	$58.90	$471,200.00
1.7	SP 340 HMAC Type C	TONS	10,000	$53.75	$537,500.00
1.8	WMA (Warm Mix) Type C (Item 340 with WMA additive)	TONS	6,500	$53.75	$349,375.00
1.9	HMAC Type C SBS Polymer Modified (unmodified Item 340)	TONS	12,500	$70.15	$876,875.00
1. 10	HMAC Type D (unmodified Item 340)	TONS	15,000	$58.90	$883,500.00
1.11	SP 340 HMAC Type D	TONS	45,000	$53.75	$2,418,750.00
1.12	WMA (Warm Mix) Type D (Item 340 with WMA additive)	TONS	16,500	$59.72	$985,380.00
1.13	HMAC Type D SBS Polymer Modified (unmodified Item 340)	TONS	12,500	$70.15	$876,875.00
1.14	HMAC Type D-Thin Special Specification	TONS	5,000	$81.25	$406,250.00
1.15	HMAC Type D-AR Thin Special Specification - Rubber Modified	TONS	5,000	$85.00	$425,000.00
				TOTAL =	$9,086,455.00

CATEGORY 2 - SPECIFIED ITEMS FOR DELIVERY * PRIMARY CONTRACT *****

ITEM NO.	ITEM DESCRIPTION	UNIT OF MEASURE	ESTIMATED ANNUAL QUANTITY	UNIT PRICE	EXTENDED PRICE

2.1	HOT MIX COLD LAID ASPHALTIC CONCRETE FOR DELIVERY MFG. NAME & NO. Oldcastle Materials - TX	TONS	3,600	$250.00	$900,000.00
				TOTAL =	$900,000.00
				TOTAL EXTENDED PRICE FOR CATEGORIES 1 THRU 2 =	$9,986,455.00

CATEGORY 3 - SPECIFIED ITEMS FOR PICK-UP * ALTERNATE CONTRACT ***

ITEM NO.	ITEM DESCRIPTION	UNIT OF MEASURE	ESTIMATED ANNUAL QUANTITY	UNIT PRICE	EXTENDED PRICE
3.1	HOT MIX COLD LAID ASPHALTIC CONCRETE IN ACCORDANCE WITH SECTION 0500 SPECIFICATIONS MFG. NAME & NO. Oldcastle Materials - TX	TONS	5,000	$60.00	$300,000.00
3.2	Hot Mix Cold Laid Summer-Grade Type D, as per the attached Specification in Section 0500	TONS	375	$60.00	$22,500.00
3.3	Hot Mix Cold Laid Winter-Grade Type D, as per the attached Specification in Section 0500	TONS	125	$60.00	$7,500.00
3.4	SP 340 HMAC Type B	TONS	5,000	$51.00	$255,000.00
3.5	HMAC Type B SBS Polymer Modified - 5% Polymer (Item 340)	TONS	5,000	$54.15	$270,750.00
3.6	HMAC Type C (unmodified Item 340)	TONS	8,000	$58.90	$471,200.00
3.7	SP 340 HMAC Type C	TONS	10,000	$53.75	$537,500.00
3.8	WMA (Warm Mix) Type C (Item 340 with WMA additive)	TONS	6,500	$53.75	$349,375.00
3.9	HMAC Type C SBS Polymer Modified (unmodified Item 340)	TONS	12,500	$70.15	$876,875.00
3. 10	HMAC Type D (unmodified Item 340)	TONS	15,000	$58.90	$883,500.00
3.11	SP 340 HMAC Type D	TONS	45,000	$53.75	$2,418,750.00
3.12	WMA (Warm Mix) Type D (Item 340 with WMA additive)	TONS	16,500	$59.72	$985,380.00
3.13	HMAC Type D SBS Polymer Modified (unmodified Item 340)	TONS	12,500	$70.15	$876,875.00
3.14	HMAC Type D-Thin Special Specification	TONS	5,000	$81.25	$406,250.00
3.15	HMAC Type D-AR Thin Special Specification - Rubber Modified	TONS	5,000	$85.00	$425,000.00
				TOTAL =	$9,086,455.00

CATEGORY 4 - SPECIFIED ITEMS FOR DELIVERY * ALTERNATE CONTRACT ***

ITEM NO.	ITEM DESCRIPTION	UNIT OF MEASURE	ESTIMATED ANNUAL QUANTITY	UNIT PRICE	EXTENDED PRICE
4.1	HOT MIX COLD LAID ASPHALTIC CONCRETE FOR DELIVERY MFG. NAME & NO. Oldcastle Materials - TX	TONS	3,600	$250.00	$900,000.00
				TOTAL =	$900,000.00
				TOTAL EXTENDED PRICE FOR CATEGORIES 3 THRU 4 =	$9,986,455.00

CATEGORY 5 - ADDITIONAL PRODUCTS

The City reserves the right to purchase and add additional items not specified above to the contract. The percentage discount shall be the minimum discount offered for the category line throughout the term of the contract including any subsequent extension options, and are not subject to change. The invoice prices for these materials shall be based off the discount as indicated below. The percentage discount given should take into all costs (administrative, overhead, shipping charges, etc.). These costs shall be factored into the discount and shall not be paid separately.

Information in this Category will not be evaluated, and the City does not guarantee the purchase of any additional services.

ITEM NO.	ITEM DESCRIPTION	MINIMUM PERCENT DISCOUNT
5.1	Not Specified Mix(es) TXDOT	
ITEM NO.	**ITEM DESCRIPTION**	**PRICE**
5.2	Hourly Rate after 4:30 PM Monday - Saturday	
5.3	Start-Up Cost After 4:30 PM Monday - Saturday	$2,500.00
5.4	Hourly Rate 7:30 AM - 4:30 PM Sundays	
5.5	Start-Up Cost 7:30 AM - 4:30 PM Sundays	$2,500.00
5.6	Hot Mix Cold Laid Summer-Grade Type D (as per the attached Specification in Section 0500) per ton, delivered	$250.00
5.7	Hot Mix Cold Laid Winter-Grade Type D (as per the attached Specification in Section 0500) per ton, delivered	$250.00

BID SUBMITTAL REQUIREMENTS (CHECK TO CONFIRM INCLUDED WITH BID):

REFERENCE SECTION 3.2.2 (A, B, C, D) IN SECTION 0500 SPECIFICATIONS

- [X] MIX DESIGN WITH PLANT CORRECTED JMF FOR HOT MIX
- [X] CERTIFICATION OF QUALITY REQUIREMENTS FOR AGGREGATE MATERIALS
- [X] PARTICLE SIZE GRADUATION & SPECIFIC GRAVITY TESTS ON ALL
- [X] CERTIFICATION OF QUALITY REQUIREMENTS FOR ASPHALT CEMENTS FOR PAVING

COMPANY NAME:	Oldcastle Materials - Texas
EMAIL ADDRESS:	Bailey.Lewis@oldcastlematerials.com / blewis@apac.com

Section 0605: Local Business Presence Identification

A firm (Offeror or Subcontractor) is considered to have a Local Business Presence if the firm is headquartered in the Austin Corporate City Limits, or has a branch office located in the Austin Corporate City Limits in operation for the last five (5) years, currently employs residents of the City of Austin, Texas, and will use employees that reside in the City of Austin, Texas, to support this Contract. The City defines headquarters as the administrative center where most of the important functions and full responsibility for managing and coordinating the business activities of the firm are located. The City defines branch office as a smaller, remotely located office that is separate from a firm's headquarters that offers the services requested and required under this solicitation.

OFFEROR MUST SUBMIT THE FOLLOWING INFORMATION FOR EACH LOCAL BUSINESS (INCLUDING THE OFFEROR, IF APPLICABLE) TO BE CONSIDERED FOR LOCAL PRESENCE.

NOTE: ALL FIRMS MUST BE IDENTIFIED ON THE MBE/WBE COMPLIANCE PLAN OR NO GOALS UTILIZATION PLAN (REFERENCE SECTION 0900).

USE ADDITIONAL PAGES AS NECESSARY

OFFEROR:

Name of Local Firm	Oldcastle Materials - Texas	
Physical Address		
Is your headquarters located in the Corporate City Limits? (circle one)	Yes	(No)
or		
Has your branch office been located in the Corporate City Limits for the last 5 years?	(Yes)	No
Will your business be providing additional economic development opportunities created by the contract award? (e.g., hiring, or employing residents of the City of Austin or increasing tax revenue?)	Yes	(No)

SUBCONTRACTOR(S):

Name of Local Firm	Rami Transportation	
Physical Address	7719 Del Valley, TX 78617	
Is your headquarters located in the Corporate City Limits? (circle one)	Yes	(No)
or		
Has your branch office been located in the Corporate City Limits for the last 5 years	Yes	(No)

Will your business be providing additional economic development opportunities created by the contract award? (e.g., hiring, or employing residents of the City of Austin or increasing tax revenue?)	Yes	No

SUBCONTRACTOR(S):

Name of Local Firm	Texas Trucking, Inc.	
Physical Address	3900 Shell Rd., Georgetown, TX 78628	
Is your headquarters located in the Corporate City Limits? (circle one)	Yes	No
or		
Has your branch office been located in the Corporate City Limits for the last 5 years	Yes	No
Will your business be providing additional economic development opportunities created by the contract award? (e.g., hiring, or employing residents of the City of Austin or increasing tax revenue?)	Yes	No

Section 0700: Reference Sheet

Responding Company Name Oldcastle Materials - Texas

The City at its discretion may check references in order to determine the Offeror's experience and ability to provide the products and/or services described in this Solicitation. The Offeror shall furnish at least 3 complete and verifiable references. References shall consist of customers to whom the offeror has provided the same or similar services within the last 5 years. References shall indicate a record of positive past performance.

1. Company's Name: City of Austin, Public Works Department
   - Name and Title of Contact: Tyler Steinbarger - Program Manager
   - Project Name: Public Works Department
   - Present Address: 505 Barton Springs Rd. #1300
   - City, State, Zip Code: Austin, TX 78704
   - Telephone Number: (512) 974-7058 Fax Number ( )
   - Email Address: Tyler.Steinbarger@austintexas.gov

2. Company's Name: Texas Comptroller of Public Accounts
   - Name and Title of Contact: Gerard MacCrossan - Program Manager
   - Project Name: Asphaltic/Non-Asphaltic 304T-19-748S1
   - Present Address: 111 E. 17th St.
   - City, State, Zip Code: Austin, TX 78774
   - Telephone Number: (512) 463-4600 Fax Number ( )
   - Email Address: Gerard.MacCrossan@cpa.texas.gov

3. Company's Name: City of Round Rock Purchasing
   - Name and Title of Contact: Todd Keltgen - Project Manager
   - Project Name: Round Rock Overlay
   - Present Address: 221 E. Main St. #221
   - City, State, Zip Code: Round Rock, TX 78681
   - Telephone Number: (512) 218-7069 Fax Number ( )
   - Email Address: Vendors@roundrocktexas.gov

City of Austin, Texas
Section 0800
NON-DISCRIMINATION AND NON-RETALIATION CERTIFICATION

City of Austin, Texas

Equal Employment/Fair Housing Office

To: City of Austin, Texas,

I hereby certify that our firm complies with the Code of the City of Austin, Section 5-4-2 as reiterated below, and agrees:

(1) Not to engage in any discriminatory employment practice defined in this chapter.

(2) To take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without discrimination being practiced against them as defined in this chapter, including affirmative action relative to employment, promotion, demotion or transfer, recruitment or recruitment advertising, layoff or termination, rate of pay or other forms of compensation, and selection for training or any other terms, conditions or privileges of employment.

(3) To post in conspicuous places, available to employees and applicants for employment, notices to be provided by the Equal Employment/Fair Housing Office setting forth the provisions of this chapter.

(4) To state in all solicitations or advertisements for employees placed by or on behalf of the Contractor, that all qualified applicants will receive consideration for employment without regard to race, creed, color, religion, national origin, sexual orientation, gender identity, disability, sex or age.

(5) To obtain a written statement from any labor union or labor organization furnishing labor or service to Contractors in which said union or organization has agreed not to engage in any discriminatory employment practices as defined in this chapter and to take affirmative action to implement policies and provisions of this chapter.

(6) To cooperate fully with City and the Equal Employment/Fair Housing Office in connection with any investigation or conciliation effort of the Equal Employment/Fair Housing Office to ensure that the purpose of the provisions against discriminatory employment practices are being carried out.

(7) To require of all subcontractors having 15 or more employees who hold any subcontract providing for the expenditure of $2,000 or more in connection with any contract with the City subject to the terms of this chapter that they do not engage in any discriminatory employment practice as defined in this chapter

For the purposes of this Offer and any resulting Contract, Contractor adopts the provisions of the City's Minimum Standard Non-Discrimination and Non-Retaliation Policy set forth below.

City of Austin
Minimum Standard Non-Discrimination and Non-Retaliation in Employment Policy

As an Equal Employment Opportunity (EEO) employer, the Contractor will conduct its personnel activities in accordance with established federal, state and local EEO laws and regulations.

The Contractor will not discriminate against any applicant or employee based on race, creed, color, national origin, sex, age, religion, veteran status, gender identity, disability, or sexual orientation. This policy covers all aspects of employment, including hiring, placement, upgrading, transfer, demotion, recruitment, recruitment advertising, selection for training and apprenticeship, rates of pay or other forms of compensation, and layoff or termination.

The Contractor agrees to prohibit retaliation, discharge or otherwise discrimination against any employee or applicant for employment who has inquired about, discussed or disclosed their compensation.

Further, employees who experience discrimination, sexual harassment, or another form of harassment should immediately report it to their supervisor. If this is not a suitable avenue for addressing their compliant, employees are advised to contact another member of management or their human resources representative. No employee shall be discriminated against, harassed, intimidated, nor suffer any reprisal as a result of reporting a violation of this policy. Furthermore, any employee, supervisor, or manager who becomes aware of any such discrimination

or harassment should immediately report it to executive management or the human resources office to ensure that such conduct does not continue.

Contractor agrees that to the extent of any inconsistency, omission, or conflict with its current non-discrimination and non-retaliation employment policy, the Contractor has expressly adopted the provisions of the City's Minimum Non-Discrimination Policy contained in Section 5-4-2 of the City Code and set forth above, as the Contractor's Non-Discrimination Policy or as an amendment to such Policy and such provisions are intended to not only supplement the Contractor's policy, but will also supersede the Contractor's policy to the extent of any conflict.

UPON CONTRACT AWARD, THE CONTRACTOR SHALL PROVIDE THE CITY A COPY OF THE CONTRACTOR'S NON-DISCRIMINATION AND NON-RETALIATION POLICIES ON COMPANY LETTERHEAD, WHICH CONFORMS IN FORM, SCOPE, AND CONTENT TO THE CITY'S MINIMUM NON-DISCRIMINATION AND NON-RETALIATION POLICIES, AS SET FORTH HEREIN, **OR** THIS NON-DISCRIMINATION AND NON-RETALIATION POLICY, WHICH HAS BEEN ADOPTED BY THE CONTRACTOR FOR ALL PURPOSES WILL BE CONSIDERED THE CONTRACTOR'S NON-DISCRIMINATION AND NON-RETALIATION POLICY WITHOUT THE REQUIREMENT OF A SEPARATE SUBMITTAL.

Sanctions:

Our firm understands that non-compliance with Chapter 5-4 and the City's Non-Retaliation Policy may result in sanctions, including termination of the contract and suspension or debarment from participation in future City contracts until deemed compliant with the requirements of Chapter 5-4 and the Non-Retaliation Policy.

Term:

The Contractor agrees that this Section 0800 Non-Discrimination and Non-Retaliation Certificate of the Contractor's separate conforming policy, which the Contractor has executed and filed with the City, will remain in force and effect for one year from the date of filling. The Contractor further agrees that, in consideration of the receipt of continued Contract payment, the Contractor's Non-Discrimination and Non-Retaliation Policy will automatically renew from year-to-year for the term of the underlying Contract.

Dated this 20th day of June, 2018

CONTRACTOR Oldcastle Materials - TX

Authorized Signature

Title Sales Manager

Section 0815: Living Wages Contractor Certification

Pursuant to the Living Wages provision (reference Section 0400, Supplemental Purchase Provisions) the Contractor is required to pay to all employees of the Prime Contractor and all tiers of subcontractors directly assigned to this City contract a minimum Living Wage equal to or greater than $14.00 per hour.

(1) The below listed individuals are all known employees of the Prime Contractor and its subcontractors who are directly assigned to this contract, and all are compensated at wage rates equal to or greater than $14.00 per hour:

Employee Name	Employer	Prime or Sub	Your Normal Rate	Employee Job Title
Cody Hays	OMT	Prime	$36.00/Hr.	Plant Mgr.
Jeff Walker	OMT	Prime	$17.50/Hr.	Scale House
Magdal Flores	OMT	Prime	$18.00/Hr.	Loader Op.
Travis Bruner	OMT	Prime	$15.50/Hr.	Gen. Laborer
Arturo Rangel	OMT	Prime	$18.00/Hr.	Loader Op.

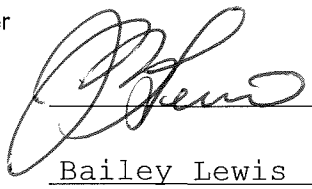
(2) All future employees of both the Prime Contractor and all tiers of subcontractors directly assigned to this Contract will be paid a minimum Living Wage equal to or greater than $14.00 per hour.

(3) Our firm will not retaliate against any employee of either the Prime Contractor or any tier of subcontractors claiming non-compliance with the Living Wage provision.

A Prime Contractor or subcontractor that violates this Living Wage provision shall pay each of its affected employees the amount of the deficiency for each day the violation continues. Willful or repeated violations of the provision by either the Prime Contractor or any tier of subcontractor, or fraudulent statements made on this certification, may result in termination of this Contract for Cause, subject the violating firm to possible suspension or debarment, or result in legal action.

I hereby certify that all the listed employees of both the Prime Contractor and all tiers of subcontractors who are directly assigned to this contract are paid a minimum Living Wage equal to or greater than $14.00 per hour.

Contractor's Name: Oldcastle Materials - Texas (OMT)

Signature of Officer or Authorized Representative:  Date: 6-20-2018

Printed Name: Bailey Lewis

Title: Sales Manager

Section 0835: Non-Resident Bidder Provisions

Company Name Oldcastle Materials - Texas

A. Bidder must answer the following questions in accordance with Vernon's Texas Statues and Codes Annotated Government Code 2252.002, as amended:

Is the Bidder that is making and submitting this Bid a "Resident Bidder" or a "non-resident Bidder"?

Answer: Resident Bidder

(1) Texas Resident Bidder- A Bidder whose principle place of business is in Texas and includes a Contractor whose ultimate parent company or majority owner has its principal place of business in Texas.
(2) Nonresident Bidder- A Bidder who is not a Texas Resident Bidder.

B. If the Bidder id a "Nonresident Bidder" does the state, in which the Nonresident Bidder's principal place of business is located, have a law requiring a Nonresident Bidder of that state to bid a certain amount or percentage under the Bid of a Resident Bidder of that state in order for the nonresident Bidder of that state to be awarded a Contract on such bid in said state?

Answer: N/A Which State: N/A

C. If the answer to Question B is "yes", then what amount or percentage must a Texas Resident Bidder bid under the bid price of a Resident Bidder of that state in order to be awarded a Contract on such bid in said state?

Answer: N/A

CITY OF AUSTIN

CITY CODE CHAPTER 2-9D
COMMODITIES
MBE/WBE PROCUREMENT PROGRAM

Solicitation Name: Hot Mix Asphaltic Concrete

Solicitation Number: IFB 2200 MDP0261

Issue Date: 06/11/2018

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MBE/WBE GOALS

Annual/Project Participation Goals				Annual/Project Participation Subgoals	
MBE		%	OR	African American	%
WBE		%		Hispanic	%
Combined MBE/WBE	1.00	%		Asian/Native American	/ %
				WBE	%

OVERVIEW

This document should be read in conjunction with the City of Austin's Minority-owned and Women-owned Business Enterprise Procurement Program Ordinance for Commodities (Chapter 2-9D of the Austin City Code) and the Small and Minority Business Resources Department (SMBR) Rules. The definitions contained in Chapter 2-9D apply to this document. The City Code and Rules are amended from time to time and the Bidder is responsible for ensuring they have the most up to date version. The City Code and Rules are incorporated into this document by reference. Copies of Chapter 2-9D and SMBR Rules may be obtained online at http://www.austintexas.gov/smbrdocuments or from SMBR, 4201 Ed Bluestein, Austin, Texas 78721 (512) 974-7600.

Firms or individuals submitting responses to this Invitation for Bid agree to abide by the City's Minority-owned and Women-owned Business Enterprise (MBE/WBE) Procurement Program and Rules. The City's MBE/WBE Program is intended (1) to promote and encourage MBEs and WBEs to participate in business opportunities with the City of Austin; (2) to afford MBEs and WBEs an equal opportunity to compete for work on City contracts; and (3) to encourage contractors to provide subcontracting opportunities to certified MBEs and WBEs by soliciting such Firm for subcontracting opportunities. The City of Austin and its contractors shall not discriminate on the basis of race, color, national origin, disability, or gender in the award and performance of contracts.

The City encourages Bidders to achieve the MBE/WBE participation goals and subgoals for this contract. However, Bidders may comply with the City Code and Rules without achieving the participation goals so long as they make and document Good Faith Efforts that would allow MBE and WBE participation per Section 2-9D-21 of the City Code and Section 9.1 of the Rules. Bidders that do not meet the project's goals and subgoals are subject to Good Faith Efforts review.

Prior to the due date and time specified in the City's solicitation documents, all Bidders (including those Firms certified as MBE/WBEs) shall submit: (1) an *MBE/WBE Compliance Plan* (Appendix A) and (2) if it is anticipated the project goals will not be met, all appropriate documentation to demonstrate Good Faith Efforts to meet the project goals. Any questions regarding preparation of the *MBE/WBE Compliance Plan* should be directed to SMBR at SMBRComplianceDocuments@austintexas.gov. Such contact is not a violation of the Anti-Lobbying Ordinance.

The City has implemented Anti-Lobbying Ordinance (Chapter 2-7 of the Austin City Code). Under Chapter 2-7, there is a "no-contact" period from the date the City issues a solicitation until the contract is executed. During the "no-contact" period, a person responding to a City solicitation can speak only to the contract's authorized contact person regarding their solicitation response. Chapter 2-7 allows certain exceptions; for instance, a person responding to a City solicitation may speak to SMBR regarding this *MBE/WBE Compliance Plan.* See the full language of the City Code or solicitation documents for further details.

MBE/WBE COMPLIANCE PLAN INSTRUCTIONS
(See Appendix A)

If the *MBE/WBE Compliance Plan* and Good Faith Efforts documentation are not submitted prior to the due date specified in the solicitation documents, the bid will be deemed non-responsive and not be accepted for consideration.

SMBR may request written clarification of items listed on the *MBE/WBE Compliance Plan.* However, there will be no further opportunity for the Bidder to augment the MBE/WBE participation originally listed in the *MBE/WBE Compliance Plan* or to demonstrate Good Faith Efforts that were not made prior to the submission of the *MBE/WBE Compliance Plan.* Changes to the *MBE/WBE Compliance Plan* are permitted only after contract execution and only with prior written approval of SMBR.

Please type or clearly print all information, use "none" or "N/A" where appropriate, and sign and date the *MBE/WBE Compliance Plan* as indicated. ***MBE/WBE Compliance Plans* not complying with the *MBE/WBE Compliance Plan* Instructions shall be rejected as non-responsive. Submissions not utilizing the forms provided with the solicitation may render the submission nonresponsive or noncompliant.**

Section I Project Identification and Goals

This section includes the pre-printed Project Name, Project/Solicitation Number, and goals and/or subgoals. The Bidder does not need to fill in any information under Section I.

Section II Bidder Information

The Bidder should complete this section with its information and sign in the space provided. The portion of Section II marked as "Reserved for City of Austin SMBR Only" should be left blank.

Section III MBE/WBE Compliance Plan Summary

This section is a summary of subcontractor participation for this Bid. Bidder should complete Sections IV-VII, described below, before attempting to complete Section III. After completing Sections IV-VII, calculate the percentage of MBE/WBE participation for each goal and enter the information in the blanks provided. Because Section III is a summary, if there are any inconsistencies between Sections IV-VII and Section III, the calculations contained in Sections IV-VII will prevail. If the Bidder indicates that they do not anticipate meeting the goals with certified MBE/WBE firms, then the Bidder shall submit documentation detailing their Good Faith Efforts to meet the established MBE/WBE goals. The MBE/WBE Compliance Plan will be reviewed and approved by the Small and Minority Business Resources Department.

Section IV Disclosure of MBE and WBE Subcontractors

Please list all certified MBE/WBEs subcontractors using the legal name under which they are registered to do business with the City of Austin and the value of the work they will be performing themselves except for subcontractor(s) that will be performing the trucking or hauling scope of work (see Section VII below). Do not include the value of work that the MBE/WBE's subcontractors will be subcontracting to second-level subcontractors. By listing certified MBE and WBE Firms on the MBE/WBE Compliance Plan, the Bidder indicates that both parties acknowledge the price and scope of work and that they are prepared to contract for that price and scope if the City awards the project to the Bidder. Unit price subcontracts are acceptable if appropriate to the type of work being performed. A Letter of Intent (LOI) does not replace a binding contract between a prime contractor and a subcontractor.

Before completing Section IV of the *MBE/WBE Compliance Plan*, please read the following instructions regarding how to count MBE/WBE participation:

(A) Only the value of the work actually performed by the MBE/WBE shall be counted toward the goals. This includes:

(1) work performed by the MBE/WBE's own forces;

(2) the cost of supplies, materials, or equipment purchased, leased, or otherwise obtained by the MBE/WBE for the work of the contract (except that supplies, materials, and equipment purchased or leased from the prime contractor or its affiliate may not be counted toward the goal); and

(3) fees or commissions charged by an MBE/WBE for providing a bona fide service, such as professional, technical, consultant, or managerial services, or for providing bonds or insurance specifically required for the performance of a contract, provided the fee is reasonable and not excessive as compared with fees customarily allowed for similar services.

(B) When a Bidder purchases supplies, materials, or equipment from an MBE/WBE, the cost of those supplies, materials, or equipment shall be counted toward the goals as follows:

(1) If the supplies, materials, or equipment are obtained from an MBE/WBE that is a Manufacturer or Regular Dealer, 100 percent of the payment for the supplies, materials, or equipment shall be counted toward the goals.

(2) If the supplies, materials, or equipment are obtained from an MBE/WBE that is neither a Manufacturer nor a Regular Dealer, the cost of the materials and supplies themselves shall not be counted toward the goals. However, fees or commissions charged for assistance in the procurement of the materials and supplies, or fees or transportation charges for the delivery of materials or supplies required on a job site, may be counted toward the goals if the payment of such fees is a customary industry practice and such fees are reasonable and not excessive as compared with fees customarily allowed for similar services.

(C) When an MBE/WBE subcontractor listed on the MBE/WBE Compliance Plan subcontracts part of the work of its contract to another Firm, the value of that second-level subcontracted work may not be counted toward the goals based on the initial subcontractor's MBE/WBE certification. Please see Section VI for an explanation of how to count the value of second-level subcontractors' work.

(D) A Firm owned by a minority woman may be certified as both an MBE and a WBE (dual certified). On a single contract, the value of the work performed by a dual certified subcontractor may not be counted toward both the MBE and the WBE goals. The Bidder must decide whether to designate the dual certified subcontractor as an MBE or a WBE in the MBE/WBE Compliance Plan for the purpose of meeting the goals set for that contract. That designation may not be changed for the duration of the contract.

(E) When an MBE/WBE performs as a participant in a certified Joint Venture, only the portion of the contract value that is the result of the distinct, clearly defined portion of the work that the MBE/WBE performs with its own forces and for which it is at risk shall be counted towards the project goals. For more specific information regarding requirements and evaluations of certified MBE/WBE Joint Ventures, please see the City's MBE/WBE Procurement Program Rules or contact SMBR's Certification Division.

(F) Only expenditures to an MBE/WBE contractor that is performing a Commercially Useful Function shall be counted toward the project goals. If SMBR makes an initial determination that an MBE/WBE is not

performing a Commercially Useful Function given the type of work involved and normal industry practices, the MBE/WBE may present evidence to rebut this presumption.

(G) To be counted toward project goals, MBE/WBEs must be certified by SMBR prior to the due date to submit the MBE/WBE Compliance Plan as specified in the City's solicitation documents. A Firm that is certified as an MBE/WBE at the time that the MBE/WBE Compliance Plan is filed may cease to be a certified Firm before the contract is completed. Only the value of the work performed by such a Firm while it is certified may be counted toward the project goals.

Section V Disclosure of Non-Certified Subcontractors

Please list all known non-certified subcontractors, using the legal name under which they are registered to do business with the City of Austin, to be used in the performance of this contract. If Bidder will not use any non-certified Firms, please write "N/A" in the first box on this page.

The scopes of work indicated in Section V will be considered subcontracting opportunities for MBEs and WBEs, unless it is demonstrated that certified MBEs or WBEs are unavailable or do not possess the requirements in the technical portion of the solicitation to perform the work involved. If Bidder did not meet the project goals, Bidder must explain in the space provided why MBEs/WBEs were not used as subcontractors and ***submit documentation for the stated reason if applicable.*** If Bidder did meet the project goals, please indicate "Goals Met" in the space provided.

Section VI Disclosure of Second-Level Subcontractors

Please complete this section if Bidders knows that one or more of Bidder's subcontractors will subcontract part of the work of their contracts to second-level subcontractors. In the last line of each entry box, please write the name of the first-level subcontractor that will be subcontracting work to the second-level subcontractor. Identify second-level subcontractors by the legal name under which they will be registered to do business with the City. The first-level subcontractor should be listed in Section IV or Section V. If Bidder is not aware of any second-level subcontractors, please write "N/A" in the first box on this page.

As discussed in Section IV above, when an MBE/WBE subcontractor subcontracts part of the work of its contract to another Firm, the value of that second-level subcontractor work may not be counted toward the goals based on the initial subcontractor's MBE/WBE certification. The value of the second-level subcontractor work may be counted toward the project goals only based on the second-level subcontractor's own MBE/WBE certification, if any. Work that an MBE/WBE subcontracts to a non-certified firm does not count toward the goals. Work that an MBE/WBE subcontractor contracts to another certified firm shall not be counted twice towards the goal.

Section VII Disclosure of Primary and Alternate Trucking Subcontractors

Please complete this section if the project includes trucking or hauling services as a scope of work. Each time this scope of work is required on the project, Bidder must contact the Firm listed as the primary trucking subcontractor in this section. If the primary trucking subcontractor is not available or cannot perform the entirety of the work at the time required, Bidder may contact the alternate trucking subcontractors in the order that Bidder lists them in this section. Identify primary and alternate trucking subcontractors by the legal name under which they will be registered to do business with the City. Bidder must contact the primary trucking subcontractor at least 24 hours before the work is to be performed. Bidder will not need to submit a Request for Change to use the alternate trucking subcontractors if Bidder contacted the primary trucking subcontractor first and then proceeded to contact the alternates in the order Bidder listed them on this section.

For purposes of meeting the project goals or subgoals at the MBE/WBE Compliance Plan stage, the entire value of this scope of work shall be assigned to the primary trucking subcontractor. At contract closeout, MBE/WBE participation will be counted based on the actual usage of the primary and alternate trucking subcontractors.

Section VIII MBE/WBE Compliance Plan Checklist

Please complete the *MBE/WBE Compliance Plan Checklist* with the information requested if the stated project goal(s) are not met.

GOOD FAITH EFFORTS INSTRUCTIONS
(See *Appendices B and D)*

The Bidder has a responsibility to make a portion of the work available to MBE/WBE subcontractors so as to facilitate meeting the goals or subgoals. If the Bidder cannot achieve the goals or subgoals, documentation of the Bidder's Good Faith Efforts to achieve the goals or subgoals must be submitted at the same time as the MBE/WBE Compliance Plan. The SMBR Director will review the documentation provided and determine if the Bidder made sufficient Good Faith Efforts. That there may be some additional costs involved in soliciting and using MBEs and WBEs is not a sufficient reason for a Bidder's failure to meet the goals and subgoals, as long as such costs are reasonable. However, a Bidder is not required to accept a higher quote from a subcontractor in order to meet a goal or subgoal.

Contacting Potential MBE/WBE Subcontractors

The City has determined the scopes of work for this project and provided an Availability List of all the MBE and WBE firms certified to perform those scopes. The *Availability List* (Appendix D) is included with the solicitation documents and has two sections: *Vendors Within the Significant Local Business Presence (SLBP) Area* and *Vendors Outside the Significant Local Business Presence (SLBP) Area.* As part of Good Faith Efforts, Bidders ***must*** contact ***all*** firms listed in the *Vendors Within the SLBP Area* section. Please note that every firm on the Availability List – outside the SLBP – is City-certified as an MBE or WBE for purposes of meeting the project goals, and Bidders are encouraged to contact all the firms. If a Bidder identifies an additional scope of work for this project not identified in the solicitation, the Bidder must request from SMBR an Availability List for that scope of work and contact all firms, if any, on such list. The SMBR Director determines whether the Bidder has made sufficient Good Faith Efforts if goals or subgoals are not met.

The City neither warrants the capacity or availability of any Firm, nor does the City guarantee the performance of any Firm indicated on the availability list.

The availability list is sorted in numerical sequence by National Institute of Governmental Purchasing (NIGP) Commodity Code. It includes all certified MBE/WBE vendors for the scopes of work identified by the City as being potentially applicable to this project. However, the availability list is not a comprehensive identification of all areas of potential subcontracting opportunities. If a Bidder identifies one or more work areas that are appropriate subcontracting opportunities that not included on the availability list, the Bidder shall contact SMBR to request the availability list for MBE and WBE Firms in those areas. Requests for supplemental availability lists will be evaluated as a part of the Bidder's Good Faith Efforts to meet the goals.

If the Bidder believes any of the work areas on the availability list are not applicable to the project's scope of work or if the Bidder believes that the lists are inaccurate, the Bidder shall notify the authorized contact person of the concern immediately and prior to submission of the response to the solicitation. All Bidders will be notified in writing of any inaccuracy by addendum to the solicitation. Concerns about a particular MBEs/WBE's certification status may be addressed to SMBR at SMBRComplianceDocuments@austintexas.gov. If the Bidder wants to use a certified subcontractor that does not appear on this list, Bidder may request from SMBR or visit https://www.ci.austin.tx.us/financeonline/vendor_connection/search/vendors/certvendor.cfm for proof of certification and the specific work areas for which the subcontractor has been certified.

Appendix B provides a format for collecting required information from the subcontractors on the *Availability List.* The information must be obtained at least seven (7) business days prior to the submission of the *MBE/WBE Compliance Plan*; alternate formats may be acceptable as long as they gather the same required information. Included with the solicitation documents is an alphabetized list containing the names and addresses of the MBE/WBE Firms listed on the Appendix D. This list is in label format and is designed to facilitate the printing of mailing labels.

The following codes are used on the availability lists:

F	Female	M	Male
AA/B	African American	H	Hispanic
A/NA	Asian/Native American	W/C	Caucasian
LOC	A firm's two-digit location code (e.g., SL or TX)	AU	Austin
SL	Significant Local Business Presence (SLBP)	TX	Outside SLBP
MBE	A firm certified as a Minority-owned Business Enterprise	WBE	A firm certified as a Woman-owned Business Enterprise
MWB	A firm certified as both a Minority-owned & Woman-owned Business Enterprise	WMB	A firm certified as both a Woman-owned & Minority-owned Business Enterprise
MWDB	A firm certified as a Minority-owned, Woman-owned, and Disadvantaged Business Enterprise	WMDB	A firm certified as a Woman-owned, Minority-owned, and Disadvantaged Business Enterprise

Good Faith Efforts Review

If goals are not met, SMBR will examine the *MBE/WBE Compliance Plan* and the Good Faith Efforts documentation submitted with the *MBE/WBE Compliance Plan* to ensure that the Bidder made Good Faith Efforts to meet the project goals or subgoals. In determining whether the Bidder has made Good Faith Efforts, SMBR will consider, at a minimum, the Bidder's efforts to do the following:

(A) Solicit certified MBE/WBE subcontractors with a Significant Local Business Presence (SLBP) and request a response from those interested subcontractors who believe they have the capability to perform the work of the contract through at least two reasonable, available, and verifiable means. The Bidder must solicit this interest more than seven (7) business days prior to submission of the *MBE/WBE Compliance Plan* to allow sufficient time for the MBEs or WBEs to respond. (The date bids/proposals are due to the City should not be included in the seven day solicitation criteria). The Bidder must state a specific and verifiable reason for not contacting each certified Firm with a significant local business presence.

(B) Provide interested MBEs/WBEs with adequate information about the plans, specifications, and requirements of the contract, including addenda, in a timely manner, to assist them in responding and submitting a proposal.

(C) Negotiate in good faith with interested MBEs/WBEs that have submitted bids/proposals to the Bidder. An MBE/WBE that has submitted a bid to a Bidder but has not been contacted within five (5) business days of submission of the bid may contact SMBR to request a meeting with the Bidder. Evidence of good faith negotiation includes the names, addresses, and telephone numbers of MBEs/WBEs that were considered; a description of the information provided regarding the plans and specifications for the work selected for subcontracting; and evidence as to why additional agreements could not be reached for MBEs/WBEs to perform the work. Bid shopping is prohibited.

(D) Select portions of the work to be performed by MBEs/WBEs in order to increase the likelihood that the MBE/WBE goals or subgoals will be met. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate MBE/WBE participation, even when the Bidder might otherwise prefer to perform these work items with its own forces.

(E) Publish solicitation notice in a local publication (i.e. newspaper, trade association publication, or via electronic/social media).

(F) Use the services of available community organizations; minority persons/women consultants' or groups in the applicable field for the type of work described in this solicitation; local, state, and federal minority persons/women business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of MBEs/WBEs.

(G) Seek guidance from SMBR on any questions regarding compliance with this section.

The following factors may also be considered by SMBR in determining compliance through good faith efforts; however, they are not intended to be a mandatory checklist, nor are they intended to be exclusive or exhaustive:

(A) Whether the Bidder made efforts to assist interested MBEs/WBEs in obtaining bonding, lines of credit, or insurance as required by the City or consultant.

(B) Whether the Bidder made efforts to assist interested MBEs/WBEs in obtaining necessary equipment, supplies, materials, or related assistance or services.

In assessing minimum good faith efforts, SMBR may consider whether the Bidder sought assistance from SMBR on any questions related to compliance with this section. In addition, SMBR may also consider the performance of other Bidders successfully meeting the goals.

The ability or desire of a Bidder to perform the work of a contract with its own organization does not relieve the Bidder of the responsibility to make Good Faith Efforts.

Bidders may reject MBE/WBEs as unqualified only following thorough investigation of their capabilities. The MBE/WBE's membership or lack of membership in specific groups, organizations, or associations, and political or social affiliations (for example union or non-union employee status), are not legitimate causes for the rejection or non-solicitation of bids/proposals in the Bidder's efforts to meet the project goals or subgoals.

At a minimum, the following should be submitted to support Good Faith Effort documentation (documentation is not limited to this list):

- Fax logs, emails, and/or copies of documents sent to firms within the SLBP area
- Copies of written correspondence to certified firms (include names, addresses, and other identifying information)
- Phone logs with responses (*Phone contacts, alone, will not be sufficient.*)
- Lists and copies of letters sent by mail, hand delivered, or e-mailed
- Breakdown of negotiations made with certified firms
- Copies of advertisements with local newspapers, trade associations, Chambers of Commerce and/or any other public media
- Other communications regarding contacts with trade associations and Chambers of Commerce

The following additional Good Faith Efforts factors may also be considered:

- Copies of emails or phone logs regarding assistance in bonding, lines of credit, or insurance (as required by City or Consultant)
- Copies of emails or phone logs regarding assistance in obtaining equipment, supplies, materials, or services
- Copies of all proposals received in response to Bidder contacting other Firms

POST-AWARD INSTRUCTIONS
(See Appendix C)

Confirmation Letters

All Bidders are required to include copies of the confirmation letters received from subcontractors, confirming the Subcontractors' willingness to provide services should the contract be awarded.

Changes to the *MBE/WBE Compliance Plan* including additions, deletions, contract changes, or substitutions of subcontractors are permitted only after contract execution and only with prior written approval of SMBR. Request for changes to the *MBE/WBE Compliance Plan* must be submitted on the Request for Change of *MBE/WBE Compliance Plan* Form for all levels of subcontracting and must be approved by the SMBR Director prior to adding, deleting, changing or substituting any subcontractor.

Post-Award Monitoring

The City will monitor post-award compliance information regarding the use of certified MBE/WBE Firm(s) listed on the *MBE/WBE Compliance Plan.* The Bidder will be required to submit post award reports detailing the utilization of all subcontractors. The reports and other information regarding post-award compliance will be discussed with the successful Bidder. The following information on Payment Verification, Change Order/Contract Amendments, and Progressive Sanctions provides an overview of some of the post-award monitoring process.

- **Payment Verification**

Bidders are advised that the contract resulting from this solicitation includes a subcontractor payments clause. This clause requires all subcontractors to be paid within ten (10) calendar days from the date that the Bidder has been paid by the City for invoices submitted by subcontractors.

The Bidder shall submit a *Subcontractor/Supplier Awards and Expenditures Report* to the project manager and/or contract administrator at the time specified by the managing department. The report shall be in the format required by the City and shall include all awards and payments to subcontractors for goods and services provided under the contract during the previous month. This report may be used by the City to verify utilization of and payment to MBEs and WBEs.

The Bidder and/or any subcontractor whose subcontracts are being counted toward the MBE/WBE requirements shall allow the City access to records relating to the contract, including but not limited to, subcontracts, payroll records, tax information, and accounting records, for the purpose of determining whether the MBEs/WBEs are performing the scheduled subcontract work.

In determining achievement of MBE/WBE goals, the participation of an MBE/WBE subcontractor shall not be counted until the amount being counted toward the goal has been paid.

- **Change Order/Contract Amendments**

The goals on this contract shall also apply to change orders that require work beyond the scope(s) of trades originally required to accomplish the project. The Bidder is required to make Good Faith Efforts to obtain MBE/WBE participation for additional scopes of work.

Change orders that do not alter the type of trades originally required to accomplish the project may be undertaken using the subcontractors already under contract to the Bidder. Project managers will have automatic SMBR approval

to authorize any change order that **increases** the contract amount for an **existing** certified subcontractor and is **within** the existing scope being performed by that subcontractor.

- **Progressive Sanctions**

The successful Bidder's MBE/WBE Compliance Plan will be incorporated into the resulting contract with the City and shall be considered part of the consultant's performance requirements. Progressive sanctions may be imposed for failure to comply with Chapter 2-9D of the City Code, including:

- Providing false or misleading information in Good Faith Efforts documentation, post award compliance, or other Program operations;
- Substituting Subcontractors without first receiving approval for such substitutions, which may include the addition of an unapproved Subcontractor and failure to use a Subcontractor listed in the approved MBE/WBE Compliance Plan ; and
- Failure to comply with the approved MBE/WBE Compliance Plan without an approved Request for Change, an approved Change Order, or other approved change to the Contract.

Please refer to Section 2-9D-25 of the City Code and SMBR Rule 11.5 for additional information.

MBE/WBE COMPLIANCE PLAN

All applicable sections must be completed and submitted by the due date and time as indicated in the solicitation documents.

Section I — Project Identification and Goals

Project Name	Hot Mix Asphaltic Concrete
Solicitation Number	IFB 2200 MDP0261

Project Goals or Subgoals	
Combined MBE/WBE	1.00 %
MBE	%
African American	%
Hispanic	%
Asian/Native American	/ %
WBE	%

Section II — Bidder Company Information

Company Name	Oldcastle Materials - Texas
Address	1320 Arrow Point Dr, Suite 600
City, State Zip	Cedar Park, TX 78613
Phone	512-861-7100
Fax	E-Mail Blewis@apac.com
Name of Contact Person	Bailey Lewis
Is your company registered on Vendor Connection?	Yes [X] No [ ] *If yes, provide Vendor Code* VC0000102792 AD001 If No, please note: All vendors; subcontractors and consultants must register with COA's Vendor Connect prior to award. See Link for registration information at https://www.ci.austin.tx.us/financeonline/finance/index.cfm
Is your company COA M/WBE certified?	Yes [ ] No [X] *If yes, please indicate:* MBE [ ] WBE [ ] MBE/WBE Joint Venture [ ]

I certify that the information included in this *MBE/WBE Compliance Plan* is true and complete to the best of my knowledge and belief. I further understand and agree that this *MBE/WBE Compliance Plan* shall become a part of my contract with the City of Austin.

Bailey Lewis - Sales Manager
Name and Title of Authorized Representative

Signature

6/20/2018
Date

For City of Austin SMBR Use Only:

I have reviewed this Compliance Plan and found that the Bidder ***HAS*** [ ] ***HAS NOT*** [ ] *complied as per the City Code Chapter 2-9D through GFE.*

Reviewing Counselor _____ Date _____

I have reviewed this Compliance Plan and have found the Bidder ***COMPLIANT*** [ ] ***NON-COMPLIANT*** [ ]

Director /Assistant Director _____ Date _____

Section III — MBE/WBE Compliance Plan Summary

Directions:

- For each subcontractor listed in Sections IV, V, VI or VII, fill in all blanks (if applicable).
- For project participation numbers use an EXACT number.
- Goal percentages should be based on the Base Bid amount only. Allowances are not included.
- Alternates are not recorded on this MBE/WBE Compliance Plan.
- If bidder is a certified M/WBE, include participation details in the Bidder box ONLY.
- MBE/WBE Compliance Plans not complying with these requirements shall be rejected as non-responsive.

Is the stated project goal of the solicitation met? *(If no, attach documentation of Good Faith Efforts)* Yes ☒ No ☐

PROPOSED PARTICIPATION GOALS

Use this section to calculate participation.
Include all details including the total dollar amount and percentage for each category where applicable.

	MBE/WBE Project Goal		Bidder Participation Goal	
African American		%	$	%
Hispanic		%	$	%
Asian/Native American	/	%	$	%
WBE		%	$	%
MBE		%	$	%
MBE/WBE Combined	1.00	%	$ 90,864.55	1.0 %
Non-Certified			$	%
Total Subcontractor Amount			$ 90,864.55	1.0 %
Bidder's Own Participation **(less any subcontracted amount)** Are you counting your own participation toward the goals? **(if yes, indicate below)** ☐ AA ☐ HIS ☐ A/NA ☐ WBE ☐ MBE			$	%

Base Bid Amount (*Subs + Bidder amount*) $ 9,086,455.00 **100 %**

For SMBR Use Only:

Verified participation for each category:

African-American _____ **%** **Hispanic** _____ **%** **Asian/Native American** _____ **%** **WBE** _____ **%**

MBE _____ **%** **WBE** _____ **%** **Combined MBE/WBE** _____ **%**

Prime _____ **%** **Non-Certified** _____ **%**

Section IV — Disclosure of MBE and WBE Subcontractors

(Duplicate as Needed)

Note:

- Fill in all the blanks (use "none" or "N/A" where appropriate).
- MBE/WBE Compliance Plans not complying with these requirements shall be rejected as non-responsive.
- Fill in names of MBE/WBE certified Firms as registered with City of Austin Vendor Connection.
- Select either MBE or WBE for dually certified firms to indicate which certification will count towards the MBE or WBE goal.
- Contact SMBR to request an availability list of certified Firms for additional scopes of work that were not included on the original availability list.

Name of MBE/WBE Certified Firm	None	
City of Austin Certification Data	☐ MBE ☐ WBE Gender/ Ethnicity:	
Vendor Code		
Address/ City / State / Zip		
Contact Person & Phone #		
Fax & Email Address		
Commodity Codes		
Commodity Codes Descriptions		
Amount of Subcontract	$	%

Name of MBE/WBE Certified Firm	None	
City of Austin Certification Data	☐ MBE ☐ WBE Gender/ Ethnicity:	
Vendor Code		
Address/ City / State / Zip		
Contact Person & Phone #		
Fax & Email Address		
Commodity Codes		
Commodity Codes Descriptions		
Amount of Subcontract	$	%

Name of MBE/WBE Certified Firm	None	
City of Austin Certification Data	☐ MBE ☐ WBE Gender/ Ethnicity:	
Vendor Code		
Address/ City / State / Zip		
Contact Person & Phone #		
Fax & Email Address		
Commodity Codes		
Commodity Codes Descriptions		
Amount of Subcontract	$	%

Name of MBE/WBE Certified Firm	None	
City of Austin Certification Data	☐ MBE ☐ WBE Gender/ Ethnicity:	
Vendor Code		
Address/ City / State / Zip		
Contact Person & Phone #		
Fax & Email Address		
Commodity Codes		
Commodity Codes Descriptions		
Amount of Subcontract	$	%

Section V — Disclosure of Non-Certified Subcontractors
(Duplicate as Needed)

Note:
- Fill in all the blanks (use "none" or "N/A" where appropriate).
- MBE/WBE Compliance Plans not complying with these requirements shall be rejected as non-responsive.
- Fill in names of Second-Level Subcontractors as registered with the City of Austin.

Are Goals Met? **Yes** [X] **No** [ ] **If no, state reason(s) below and attach documentation:**

Name of Non-Certified Subcontractor	None	
Vendor Code		
Address/ City / State / Zip		
Contact Person & Phone #		
Fax & Email Address		
Commodity Codes		
Commodity Codes Descriptions		
Amount of Subcontract	$	%
Reason Certified Firm not used		
Name of Non-Certified Subcontractor	None	
Vendor Code		
Address/ City / State / Zip		
Contact Person & Phone #		
Fax & Email Address		
Commodity Codes		
Commodity Codes Descriptions		
Amount of Subcontract	$	%
Reason Certified Firm not used		
Name of Non-Certified Subcontractor	None	
Vendor Code		
Address/ City / State / Zip		
Contact Person & Phone #		
Fax & Email Address		
Commodity Codes		
Commodity Codes Descriptions		
Amount of Subcontract	$	%
First-Level Subcontractor		
Reason Certified Firm not used		
Name of Non-Certified Subcontractor	None	
Vendor Code		
Address/ City / State / Zip		
Contact Person & Phone #		
Fax & Email Address		
Commodity Codes		
Commodity Codes Descriptions		
Amount of Subcontract	$	%
First-Level Subcontractor		
Reason Certified Firm not used		

Section VI — Disclosure of Second-Level Subcontractors

(Duplicate as Needed)

Note:

- Fill in all the blanks (use "none" or "N/A" where appropriate).
- MBE/WBE Compliance Plans not complying with these requirements shall be rejected as non-responsive.
- Fill in names of Second-Level Subcontractors as registered with the City of Austin.

Name of Second-Level Subcontractor	None	
City of Austin Certified? (choose one)	☐ No ☐ MBE ☐ WBE Gender/ Ethnicity:	
Vendor Code		
Address/ City / State / Zip		
Contact Person & Phone #		
Fax & Email Address		
Commodity Codes		
Commodity Codes Descriptions		
Amount of Subcontract	$	%
First-Level Subcontractor		
Name of Second-Level Subcontractor	None	
City of Austin Certified? (choose one)	☐ No ☐ MBE ☐ WBE Gender/ Ethnicity:	
Vendor Code		
Address/ City / State / Zip		
Contact Person & Phone #		
Fax & Email Address		
Commodity Codes		
Commodity Codes Descriptions		
Amount of Subcontract	$	%
First-Level Subcontractor		
Name of Second-Level Subcontractor	None	
City of Austin Certified? (choose one)	☐ No ☐ MBE ☐ WBE Gender/ Ethnicity:	
Vendor Code		
Address/ City / State / Zip		
Contact Person & Phone #		
Fax & Email Address		
Commodity Codes		
Commodity Codes Descriptions		
Amount of Subcontract	$	%
First-Level Subcontractor		
First-Level Subcontractor		
Name of Second-Level Subcontractor	None	
City of Austin Certified? (choose one)	☐ No ☐ MBE ☐ WBE Gender/ Ethnicity:	
Vendor Code		
Address/ City / State / Zip		
Contact Person & Phone #		
Fax & Email Address		
Commodity Codes		
Commodity Codes Descriptions		
Amount of Subcontract	$	%
First-Level Subcontractor		

Section VII — Disclosure of Primary and Alternate Trucking Subcontractors

(Duplicate as Needed)

Note:

- Fill in all the blanks (use "none" or "N/A" where appropriate).
- MBE/WBE Compliance Plan s not complying with these requirements shall be rejected as non-responsive.
- Fill in names of Primary and Alternate Trucking Subcontractors as registered with the City of Austin.

Primary Trucking Subcontractor	Rami Transportation, Inc.	
City of Austin Certified? (choose one)	☐ No ☒ MBE ☐ WBE Gender/ Ethnicity:	
Vendor Code	RAM8306287	
Address/ City / State / Zip	7719 Mcangus Rd	
Contact Person	Richard Angeles Phone #: 512-839-9627	
Commodity Codes	96239	
Commodity Codes Descriptions	Hauling Services	
Amount of Subcontract	$ 90,864.55	1.0 %

Alternate Trucking Subcontractor	Texas Trucking Co., Inc.
City of Austin Certified? (choose one)	☐ No ☒ MBE ☐ WBE Gender/ Ethnicity:
Vendor Code	TEX4863000
Address/ City / State / Zip	3900 Shell Rd., Georgetown, TX 78628
Contact Person	George Elizondo Phone #: 512-868-5558
Commodity Codes	96239
Commodity Codes Descriptions	Hauling Services

Alternate Trucking Subcontractor	None
City of Austin Certified? (choose one)	☐ No ☐ MBE ☐ WBE Gender/ Ethnicity:
Vendor Code	
Address/ City / State / Zip	
Contact Person	Phone #:
Commodity Codes	
Commodity Codes Descriptions	

Alternate Trucking Subcontractor	None
City of Austin Certified? (choose one)	☐ No ☐ MBE ☐ WBE Gender/ Ethnicity:
Vendor Code	
Address/ City / State / Zip	
Contact Person	Phone #:
Commodity Codes	
Commodity Codes Descriptions	

Alternate Trucking Subcontractor	None
City of Austin Certified? (choose one)	☐ No ☐ MBE ☐ WBE Gender/ Ethnicity:
Vendor Code	
Address/ City / State / Zip	
Contact Person	Phone #:
Commodity Codes	
Commodity Codes Descriptions	

Section VIII — MBE/WBE Compliance Plan Check List

Is the stated project goal of the solicitation met?

Yes [X] No [ ]

(If no, complete and submit Section VIII Compliance Plan Check List)

If the goals or subgoals were not achieved, all questions in Section VIII ***must*** be completed and **Good Faith Efforts documentation must be submitted with the MBE/WBE *Compliance Plan.*** The completion and submission of this form is not required if the above question is answered *Yes.*

Is the following documentation attached to support good faith effort requirements to achieve goals or subgoals?		
• Copy of written solicitation sent to MBE/WBEs in SLBP area 7 business days prior to the submission of this Compliance Plan	Yes [ ]	No [ ]
• Two separate methods of notices sent to MBE/WBEs in SLBP area Indicate notice types: fax transmittals emails phone log letters	Yes [ ]	No [ ]
• Copy of advertisements placed in local publication	Yes [ ]	No [ ]
• Copy of notices sent to Minority and Women organizations	Yes [ ]	No [ ]
• Documentation that demonstrates additional GFEs: o Efforts to assist interested MBEs/WBEs in obtaining bonding, lines of credit, or insurance as required by the City or contractor o Efforts to assist interested MBEs/WBEs in obtaining necessary equipment, supplies, materials, or related assistance or services o Efforts made to reach agreements with the MBE/WBEs who responded to Bidder's written notice	Yes [ ]	No [ ]

Were additional elements of work identified to achieve the goals or subgoals? Yes [ ] No [ ]

If yes, please explain: _____

Was SMBR contacted for assistance? Yes [ ] No [ ]

If yes, complete following:

Contact Person: _____

Date of Contact: _____

Summary of Request: _____

Were Minority or Women organizations contacted for additional assistance? Yes [ ] No [ ]

If yes, complete following:

Organization(s): _____

Date of Contact: _____

Summary of Request _____

Appendix B

LETTER TO POTENTIAL SUBCONTRACTORS

_____ is soliciting Minority- and Women-Owned Business Enterprise participation for the following City of Austin project. Solicitation documents are available at our office or at One Texas Center, 505 Barton Springs Road, 10th Floor, Suite 1045 C-Congress Room.

Solicitation Name: _____
Solicitation Number: _____
Location of Pre-bid Conference (if any) _____
_____
_____

Response Due Date and Time: _____

This Project Includes the Following Scopes of Service:

- ☐ Asbestos Abatement
- ☐ Carpentry
- ☐ Carpeting
- ☐ Concrete
- ☐ Demolition Services
- ☐ Doors and Frames
- ☐ Drilling
- ☐ Drywall
- ☐ Electrical
- ☐ Excavation Services
- ☐ Fabricated Steel
- ☐ Flooring
- ☐ Glazing Services
- ☐ Hardware
- ☐ Heavy Construction Equipment
- ☐ Other _____
- ☐ HVAC
- ☐ Insulation
- ☐ Lab and Field Testing Services
- ☐ Landscaping
- ☐ Masonry
- ☐ Millwork
- ☐ Painting
- ☐ Paving and Resurfacing
- ☐ Plumbing
- ☐ Roofing
- ☐ Stone
- ☐ Tile
- ☐ Weather and Waterproofing
- ☐ Welding
- ☐ Windows
- ☐ Other _____

Contact our office for detailed information on the scopes of services to be subcontracted and the relevant terms and conditions of the contract.

Contact: _____ at _____ or _____
(Name) (Telephone) (Fax)

_____
(Email)

All Responses MUST be received by: _____

Appendix C

CONFIRMATION LETTER

Name of Prime Contractor: _____

Address: _____
Street City State Zip Code

Telephone: (____)_____ Fax: (____)_____ Proposed Contract Amount: $

Project/Solicitation Number: ___ _____

Project Name: _____

Type of Agreement *(check one)*: ☐ Lump Sum ☐ Unit Price ☐ Commodity

Period of Performance: _____ Level of Subcontracting *(check one)*: ☐ 1st ☐ 2nd ☐ 3rd

Legal Name of Subcontractor*: _____

Subcontractor* Vendor Code: _____

Address: _____
Street City State Zip Code

Telephone: (____)_____ Fax: (____)_____ Proposed Subcontract Amount: $ _____

Commodity Code and description of work to be performed by Subcontractor Firm:

_____

_____

The Prime Contractor and the Subcontractor listed above agree that the Prime Contractor has provided the Subcontractor with a copy of the City's prevailing wage requirements

Prime Contractor:

_____
Legal Name of Firm, as registered with the City

_____
Signature

_____
Print Name

_____
Title

_____
Date

STATE OF _____
COUNTY OF _____
SUBSCRIBED AND SWORN TO before me on the _____ day of _____, 20____.

_____
Notary Public

Subcontractor:

_____
Legal Name of Firm, as registered with the City

_____
Signature

_____
Print Name

_____
Title

_____
Date

STATE OF _____
COUNTY OF _____
SUBSCRIBED AND SWORN TO before me on the _____ day of _____, 20____.

_____
Notary Public

***Including Suppliers, Manufacturers, Alternates**

Subcontract Vendor List - VCRCVS

Solicitation No.: IFB 2200 MDP0261 Hot Mix Asphaltic Concrete
Version No.: 1 **Phase: 1**

C Code & Description	Vend Code/Adr	Contact Information	W/MB Code	G/E	LCTN

Vendors Within the SLBP Area

7451413 ASPHALTIC CONCRETE PAVEMENT, HOT MIX-COLD LAID, IN

VS0000031989 Jeff T Ellison Po Box 3605 Pflugerville Tx 78691	Jeff Ellison jtecollc@gmail.com 512-934-1905 Fax: 5129909850	MB	M/African American	SL

7452114 ASPHALTIC CONCRETE, HOT MIX, IN ACCORDANCE WITH IT

VS0000031989 Jeff T Ellison Po Box 3605 Pflugerville Tx 78691	Jeff Ellison jtecollc@gmail.com 512-934-1905 Fax: 5129909850	MB	M/African American	SL
TEX4863000 TEXAS TRUCKING CO INC 3900 Shell Rd Georgetown Tx 78628-9249	GEORGE ELIZONDO GEORGETTC@YAHOO.COM 512-868-5558 Fax: 512-930-0298	MDB	M/Hispanic	SL

96239 Hauling Services

V00000913175 A. Garcia Trucking Inc 1000 Dacy Lane Kyle Tx 78640	Jorge Armando Garcia jaroadboring@yahoo.com 5125529301 Fax: 5122680974	MB	F/Hispanic	SL
VC0000102408 ALVIN WASHINGTON TRUCKING INC Po Box 14872 Austin Tx 78761	ALVIN WASHINGTON a.washingtontruckn@yahoo.com 512-339-2292 Fax: 512-339-7219	MB	M/African American	AU
VS0000021971 ANTONIO RAMOS LIZARDO 11105 Pearce Ln Del Valle Tx 78617	antonio ramos lizardotrucking@hotmail.com 512-779-2632 Fax: 512-385-7301	MB	M/Hispanic	AU
V00000931566 Alberto R Guerra 1302-A Highway 71 W Bastrop Tx 78602	Alberto R Guerra albertoguerra@riograndecargo.com 9565926522 Fax: 8777204070	MDB	M/Hispanic	SL
VC0000101882 BARBARA WHITE 9701 Wayside Blvd Austin Tx 78724	BARBARA WHITE bwbmwtrucking@gmail.com 512-626-7642 Fax: 512-933-9699	MWB	F/African American	AU
RAN8308638 BONIFACIO REYES RANGEL 2108 E 16th St Austin Tx 78702	BONIFACIO RANGEL mr.rangel@sbcglobal.net 512-276-0038 Fax: 512-469-0597	MDB	M/Hispanic	AU

Subcontract Vendor List - VCRCVS

Solicitation No.: IFB 2200 MDP0261 Hot Mix Asphaltic Concrete
Version No.: 1 **Phase: 1**

C Code & Description	Vend Code/Adr	Contact Information	W/MB Code	G/E	LCTN
	V00000915488 BRIDGET C THOMAS 2021 Airport Blvd Austin Tx 78722	BRIDGET C THOMAS bubblez.suddz.carwash@gmail.com 512-382-9285 Fax: 5123829299	MWDB	F/African American	AU
	VC0000102282 CMS 2 TRUCKING INC Po Box 141423 Austin Tx 78714-1423	SQUIRE ELLIOTT LHAULER@YAHOO.COM 512-431-1351	MDB	M/African American	AU
	VC0000103459 COMANCHE XPRESS LLC Po Box 144402 Austin Tx 78714	TROY JOHNSON COMANCHEEXPRESS@AUSTIN.RR.COM 512-771-2692 Fax: 512-904-0022	MDB	M/African American	AU
	V00000911561 Cantu Construction Inc 14806 Eilers Rd Austin Tx 78719	Thomas Cantu cantu-construction-inc@hotmail.com 512-844-5545 Fax: 5122439650	MDB	M/Hispanic	AU
	V00000911499 Cynthia Cueva-Luna Po Box 3560 Pflugerville Tx 78691	Cynthia Cueva-Luna alphatransportation@hotmail.com 512-769-0752 Fax: 8883554419	MWDB	F/Hispanic	SL
	V00000935995 Felis Balderas Sr. 6803 Viewing Place Austin Tx 78719	Felis Balderas f.balderasfamily@hotmail.com 5124481420 Fax: 5124481420	MDB	M/Hispanic	AU
	V00000946009 Fernandez Trucking 12221 Hulsey Rd Unit 2 Manor Tx 78653	Delia G Fernandez fernandeztruckingtx@gmail.com 9566506949	MDB	M/Hispanic	AU
	V00000939918 Fuego Transportation LLC 1912 Dry Season Trl. Austin Tx 78754	Fidel Fuentes fidelfu_1970@hotmail.com 5125635381 Fax: 5128329379	MB	M/Hispanic	AU
	VC0000102940 GARCIA J CONTRACTORS INC Po Box 1649 Buda Tx 78610	JUAN GARCIA garciajcontractors@gmail.com 512-965-4274 Fax: 8884181023	MDB	M/Hispanic	SL
	VS0000004462 Ivy Rosalva Cruz 7733 Marble Crest Dr. Austin Tx 78747	Ivy Cruz 512-577-6199	MWDB	F/Hispanic	AU
	JAR8315720 J A ROAD BORING 1000 Dacy Ln Kyle Tx 78640-5143	ARMANDO GARCIA jaroadboring@yahoo.com 512-268-4312 Fax: 512-268-0974	MB	M/Hispanic	SL

Subcontract Vendor List - VCRCVS

Solicitation No.: IFB 2200 MDP0261 Hot Mix Asphaltic Concrete
Version No.: 1 **Phase: 1**

C Code & Description	Vend Code/Adr	Contact Information	W/MB Code	G/E	LCTN
	JAG8307217 JAG TRUCKING INC 800 Private Rd 917 Georgetown Tx 78626	GILLY QUIROZ GILLY@JAGTRUCKING.COM 512-864-9906 Fax: 512-864-3121	MDB	M/Hispanic	SL
	V00000947205 JC TORRES LLC 2419 Hallie Lane Round Rock Tx 78664	Norma Alicia vazquez de Torres norma.vazquez@ni.com 5129255121	MDB	F/Hispanic	SL
	V00000929975 JIMMY ARREDONDO 130 Escondido Dr Del Valle Tx 78617	Jimmy Arredondo lonestartrucking@austin.rr.com 5128445976	MOB	M/Hispanic	AU
	VS0000027653 JUAN DEANDA TRUCKING LLC 5101 Hwy 21 Maxwell Tx 78656	JUAN DEANDA juandeandatruckingllc@yahoo.com 512-748-1537 Fax: 5122856596	MDB	M/Hispanic	LO
	JOH2629800 Johnson Hauling, LLC 1805 Elmira Austin Tx 78721	ULYSSES JOHNSON johnsonhauling@hpeprint.com 512-928-1060 Fax: 512-926-4180	MB	M/African American	AU
	V00000937626 L Contractors, LLC 5415 Mckinney Falls Pkwy Austin Tx 78744	Colby Leoni lcontractorsllc@gmail.com 8108692543 Fax: 7372108854	WDB	F/Caucasian	AU
	LIL7079660 LILLIE'S TRUCKING INC 1110 Radam Cir Austin Tx 78745-3018	LILLIE POLSTON email@notprovided.xxx 512-444-9562	WB	F/Caucasian	AU
	FLO7135160 LORRAINE FLORES 952 Skyline Rd Dale Tx 78616-2442	LORRAINE FLORES 512-844-6461 Fax: 512-243-1851	MWDB	F/Hispanic	SL
	V00000925782 Lewis Clark Trucking, LLC 14815 Avery Ranch Blvd Unit 2302 Austin Tx 78717	Duane Lewis Clark citytransportersinc@gmail.com 3134024398	MDB	M/African American	AU
	MAR7095015 MARIE'S TRUCKING 2314 Wagon Crossing Path Austin Tx 78744-4330	ANNA KELLOUGH mariekellough@yahoo.com 512-441-0775 Fax: 512-441-0549	MWDB	F/Asian	AU
	MEL8302760 MELENDREZ TRUCKING LLC 11608 Moore Rd Austin Tx 78719-9652	ADAM MELENDREZ meltrks@melendreztrucking.com 512-243-3977 Fax: 512-243-3947	MWDB	F/Hispanic	AU

Subcontract Vendor List - VCRCVS

Solicitation No.: IFB 2200 MDP0261 Hot Mix Asphaltic Concrete
Version No.: 1 **Phase: 1**

C Code & Description	Vend Code/Adr	Contact Information	W/MB Code	G/E	LCTN
	V00000934880 NDL TRANSPORT INC 902 Bodgers Dr Austin Tx 78753	Noe De Leon ndltransport1325@gmail.com 5123942783 Fax: 5128212532	MB	M/Hispanic	AU
	V00000935429 Oviedo Trucking LLC 3820 Julianas Way Round Rock Tx 78665	Adrian Oviedo oviedoadiran@yahoo.com 5123732019	MDB	M/Hispanic	AU
	VS0000016867 PANTHER CREEK TRANSPORTATION INC Po Box 2715 Georgetown Tx 78627	Natalia Taylor Natalia@panthercreektransportation.com 512-746-4224 Fax: 512-746-5103	MWDB	F/Hispanic	SL
	V00000931016 Pete Ignacio Balderas 7224 White Panda Run Del Valle Tx 78617	Pete Balderas pete.marybalderas@gmail.com 5127892776 Fax: 5127706237	MB	M/Hispanic	AU
	RAM8306287 RAMI TRANSPORTATION INC 7719 Mcangus Rd Del Valle Tx 78617-5911	DAMASO ROJO ramitrans@aol.com 512-845-8358 Fax: 512-247-6416	MDB	M/Hispanic	AU
	VC0000103438 RBR TRUCKING, INC. 9501 W. State Hwy 29 Liberty Hill Tx 78642	RONALD QUIROA rbr.trucking@yahoo.com 5128096214 Fax: 5122603354	MDB	M/Hispanic	SL
	V00000934972 RUBEN P ROCHA 8501 S Fm 973 Rd. Austin Tx 78719	Ruben Paul Rocha rubenrocha777@gmail.com 5129981633	MB	M/Hispanic	AU
	V00000943081 Ralph Anthony Wright 1716 Meander Dr Austin Tx 78721	Ralph A Wright wright_ralph@yahoo.com 5127913644 Fax: 5125240698	MDB	M/African American	AU
	V00000905724 Robert E Ashford P O Box 16478 Austin Tx 78761	Robert Earl Ashford ashnemtrucking@hotmail.com 512-247-1293	MDB	M/African American	AU
	V00000933636 Robert M Medel 10811 San Jose Venue Del Valle Tx 78617	Robert M Medel medeltrucking@yahoo.com 5128500827 Fax: 5122439414	MDB	M/Hispanic	AU
	SAM7042190 SAMMIE J KELLOUGH 2314 Wagon Crossing Path Austin Tx 78744-4330	SAMMIE J KELLOUGH kelloughj@aol.com 512-441-0775 Fax: 512-441-0549	MDB	M/African American	AU

Subcontract Vendor List - VCRCVS

Solicitation No.: IFB 2200 MDP0261 Hot Mix Asphaltic Concrete
Version No.: 1 **Phase: 1**

C Code & Description	Vend Code/Adr	Contact Information	W/MB Code	G/E	LCTN
	V00000916591 SERNA'S TRUCKING LLC P.O. Box 2100 Kyle Tx 78640	CLAUDIA SERNA serna.trucking@gmail.com 512-466-7084 Fax: 5123924726	MWDB	F/Hispanic	SL
	DOU8314208 SETO VARGAS UTILITIES INC 5300 Navarro Creek Rd Del Valle Tx 78617	SATURNINO VARGAS yeyevargas@yahoo.com 5125609972	MB	M/Hispanic	AU
	TEX4863000 TEXAS TRUCKING CO INC 3900 Shell Rd Georgetown Tx 78628-9249	GEORGE ELIZONDO GEORGETTC@YAHOO.COM 512-868-5558 Fax: 512-930-0298	MDB	M/Hispanic	SL
	TRI7012850 TRI RECYCLING INC Po Box 26499 Austin Tx 78755-0499	GERRY ACUNA trirecycle@aol.com 512-329-0172 Fax: 512-329-0174	MDB	M/Hispanic	AU
	V00000938729 Walkers Journey Trucking LLC 127 Adage Drive Pflugerville Tx 78660	Glyn Walker walkersjourneytrucking@gmail.com 5127692909	MWDB	F/African American	AU

Subcontract Vendor List - VCRCVS

Solicitation No.: IFB 2200 MDP0261 Hot Mix Asphaltic Concrete
Version No.: 1 **Phase: 1**

C Code & Description	Vend Code/Adr	Contact Information	W/MB Code	G/E	LCTN
Vendors Outside the SLBP Area					
96239 Hauling Services					
	V00000922619 BENITO MUNOZ Po Box 592656 San Antonio Tx 78259	5127498126 erikrmunoz@yahoo.com	MDB	M/Hispanic	TX
	VS0000027560 SAR Transportation, L.L.C. 11325 F.M. 156 South Justin Tx 76247	9402420666 9402420673 pam@sartrans.com	WDB	F/Caucasian	TX

Total in SLBP: 47
Total Outside SLBP: 2

GOOD FAITH EFFORTS INSTRUCTIONS (CITY OF AUSTIN ORDINANCE 2-9A-D)

At a minimum, the following should be submitted to support Good Faith Effort documentation:

- ❑ Solicitation sent to MBE/WBE firms **in the** Significant Local Business Presence (SLBP – 5 Counties include Travis, Hays, Williamson, Bastrop, and Caldwell) identified on the availability list for subcontracting opportunities not less than **7 business days** prior to bid date. Notices must be sent using two separate reasonable, available, and verifiable methods (e.g. email, fax, mail, or phone).
  - ❑ **Such as evidence of written notice includes copy of letters (solicitation notice) that was sent by email, fax, or mail.**
  - ❑ **Such as evidence of two separate methods used to notify MBE/WBEs include fax logs, email confirmations, copies of stamped envelopes/hand-delivered and/or phone logs (Phone contacts, alone, will not be sufficient.)**
- ❑ Written correspondence to certified vendors should include names, addresses, and other identifying information including your company's phone number, contact person, where to locate plans and specifications; and due date for responding.
- ❑ Take appropriate steps to follow up the initial solicitation with interested MBEs or WBEs.
  - ❑ **Submit copies of written responses from all respondents to your solicitation.**
  - ❑ **If interested MBEs or WBEs responded, document follow up on log of contacts and include date and contact information**
- ❑ Publish notice in a local publication such as newspaper, trade association publication, or via electronic/social media. *(Facebook Business Page, LinkedIn Business Profile, Twitter Business Account, or see below for a list of local minority trade publishers)*
  - ❑ Bidder/proposer must state a specific and verifiable reason for not contacting each certified firm with a SLBP.
    - ❑ **If MBEs and WBEs were not sent solicitation notices, document reason on log of contacts.**
  - ❑ Negotiate in good faith with interested MBEs and WBEs.
    - ❑ **If negotiated in good faith with interested MBEs and WBEs, document results on log of contacts.**
  - ❑ Contact SMBR for assistance (i.e. additional scopes identified or assistance with MBE/WBE Program requirements).
  - ❑ Not rejecting MBEs or WBEs as being unqualified without sound reasons.
  - ❑ Seeking the services of available minority and women community organizations *(See below)*
    - ❑ **Documentation of contacts with trade associations and Chambers of Commerce.**
  - ❑ Selecting portions of the work that will increase the likelihood that the MBE/WBE goals will be met.

The following additional Good Faith Efforts factors may also be considered:

- ❑ Efforts to assist MBE/WBEs in bonding, insurance, and financing where appropriate.
  - ❑ **If assistance was provided, document in log of contacts.**
- ❑ Efforts to assist MBE/WBEs in obtaining necessary equipment, supplies, and materials.
  - ❑ **If assistance was provided, document in log of contacts.**

In assessing minimum good faith efforts, SMBR may consider the performance of other Bidder/Proposers successfully meeting the goals.

FAILURE TO COMPLY WITH THE MBE/WBE PROCUREMENT ORDINANCE MAY RESULT IN A DETERMINATION OF NON-COMPLIANCE OR REJECTION OF YOUR REQUEST FOR CHANGE

SMALL & MINORITY BUSINESS RESOURCES CONTACT INFORMATION

Compliance	CERTIFICATION	MAIN OFFICE
512-974-7600	512-974-7645	512-974-7600
512-974-7601	512-974-7601	512-974-7622
Smbrcompliancedocments@austintexas.gov	smbrcertification@austintexas.gov	www.austintexas.gov/smbr

SMBR's Plan Room

The City of Austin's Small & Minority Business Resources (SMBR) Department has a Plan room for viewing City of Austin project plans and specifications as well as other local, private, and public sector jobs. In addition, SMBR and McGraw-Hill Dodge have partnered to provide contractors up-to-date construction project information, plans and specification through the Internet. Projects include public and private sector opportunities in 100 South and Central Texas counties.

Where is the Plan Room?
It's located at the offices of SMBR
4201 Ed Bluestein Blvd.
Austin, TX 78721

How much will it cost?

There are no fees to access the information. There are minimal fees for copying and printing of plan and specification sheets.

What are my next steps?

Attend a free one-hour orientation session to learn how to operate the on-line service. Call (512) 974-7799 to make an appointment or for more information.

For more information or to view a list of projects currently available in the Plan Room visit website at www.austintexas.gov/smbr under the Plan Room projects.

BONDING

Bonding is a type of protection that a governmental agency or prime contractor may require that your company have in order to work on a contract. A bonding application will take several days. Get started today. Be proactive by making an appointment to talk to SMBR's Bonding Financial Consultant, Luke Ortega Luper as soon as possible. He can be reached at (512-974-7733 or email him at Luke.Luper@austintexas.gov. You will also find past copies of his newsletters on our website at http://austintexas.gov/department/bonding.

Keep in mind that SMBR does not issue bonds; however, we do provide our bonding resource program as a free and confidential service to our business owners.

AUSTIN MINORITY NEWSPAPERS

Capital City Argus News
PO Box 140471
Austin, TX 78714-0471
512-926-0348 Fax: same as phone

Charles M. Miles
Email: CMilesArgus@yahoo.com

El Mundo Newspaper
2112 E. Cesar Chavez
Austin, TX 78702
512-476-8636

Email: info@elmundonewspaper.com

La Prensa
PO Box 6504
Austin, TX 78762-6504
512-478-3090 Fax: 512-482-6400

Catherine Vasquez-Revilla
Email: laprensa@aol.com

Nokoa The Observer
PO Box 1137
Austin, TX 78767
512-499-8713 Fax: same as phone

Akwasi Evans
Email: akwasievans2013@gmail.com

The Villager
4132 E. 12th Street
Austin, TX 78721
512-476-0082 Fax: 512-476-0179

Tommy L. Wyatt
Email: vil3202@aol.com

World Journal Inc. of Texas/World Journal Chinese Daily News
5855 Sovereign Dr. #C
Houston, TX 77036

Sherry Wang
Email: sherrywang1020@yahoo.com

LOCAL MINORITY SERVICE ORGANIZATIONS

Asian Contractor Association
4201 Ed Bluestein Blvd, 2nd floor
Austin, TX 78721
512-926-5400 Fax: 512-926-5410

Aletta Banks
www.acta-austin.com
Email: asiancontractor@gmail.com

Austin Area Black Contractors Association
6448 Highway 290 East, Suite E-107
Austin, TX 78723
512-467-6895 Fax: 512-467-9808

Carol Hadnot
www.abcatx.com
Email: brc-pro@att.net

Business Investment Growth (BIG Austin)
Capital Plaza Bank Office Building
5407 N. IH-35, Ste 200
Austin, TX 78723
512-928-8010 Fax: 512-926-2997

Stacy Dukes-Rhone
www.bigaustin.org
Email: info@bigaustin.org

Business Resource Consultants (BRC)/(Bid Briefs)
6448 Highway 290 East, Suite E-107
Austin, TX 78723
512-467-6894 Fax: 512-467-9808

Carol S. Hadnot
Email: brc-pro@att.net

Greater Austin Asian Chamber of Commerce
8001 Centre Park Drive, Suite 160
Austin, TX 78731
512-407-8240

Jodie Huynh
www.austinasianchamber.org
Email: jhuynh@austinasianchamber.org

Greater Austin Black Chamber of Commerce
African-American Heritage Center
912 E. 11th Street, Suite A
Austin, TX 78702
512-459-1181 Fax: 512-459-1183

Tam Hawkins
www.austinbcc.org
Email: admin@austinbcc.or

Greater Austin Hispanic Chamber of Commerce
3601 Far West Blvd, Suite 204
Austin, TX 78731
512-476-7502 Fax: 512-476-6417

Casilda Clarich
www.gahcc.org
Email: cclarich@gahcc.org

U.S. Hispanic Contractors Association de Austin (USHCA)
920 E. Dean Keeton Street
Austin, TX 78705
512-922-0507

Juan Oyervides
www.ushca-austin.com
Email: info@ushca-austin.com

A. Garcia Trucking Inc
1000 Dacy Lane
Kyle, Tx 78640

Alvin Washington Trucking Inc
Po Box 14872
Austin, Tx 78761

Antonio Ramos Lizardo
11105 Pearce Ln
Del Valle, Tx 78617

Alberto R Guerra
1302-A Highway 71 W
Bastrop, Tx 78602

Barbara White
9701 Wayside Blvd
Austin, Tx 78724

Benito Munoz
Po Box 592656
San Antonio, Tx 78259

Bonifacio Reyes Rangel
2108 E 16th St
Austin, Tx 78702

Bridget C Thomas
2021 Airport Blvd
Austin, Tx 78722

Cms 2 Trucking Inc
Po Box 141423
Austin, Tx 0

Comanche Xpress Llc
Po Box 144402
Austin, Tx 78714

Cantu Construction Inc
14806 Eilers Rd
Austin, Tx 78719

Cynthia Cueva-Luna
Po Box 3560
Pflugerville, Tx 78691

Felis Balderas Sr.
6803 Viewing Place
Austin, Tx 78719

Fernandez Trucking
12221 Hulsey Rd Unit 2
Manor, Tx 78653

Fuego Transportation Llc
1912 Dry Season Trl.
Austin, Tx 78754

Garcia J Contractors Inc
Po Box 1649
Buda, Tx 78610

Ivy Rosalva Cruz
7733 Marble Crest Dr.
Austin, Tx 78747

J A Road Boring
1000 Dacy Ln
Kyle, Tx 0

Jag Trucking Inc
800 Private Rd 917
Georgetown, Tx 78626

Jc Torres Llc
2419 Hallie Lane
Round Rock, Tx 78664

Jimmy Arredondo
130 Escondido Dr
Del Valle, Tx 78617

Juan Deanda Trucking Llc
5101 Hwy 21
Maxwell, Tx 78656

Jeff T Ellison
Po Box 3605
Pflugerville, Tx 78691

Johnson Hauling, Llc
1805 Elmira
Austin, Tx 78721

L Contractors, Llc
5415 Mckinney Falls Pkwy
Austin, Tx 78744

Lillie'S Trucking Inc
1110 Radam Cir
Austin, Tx 0

Lorraine Flores
952 Skyline Rd
Dale, Tx 0

Lewis Clark Trucking, Llc
14815 Avery Ranch Blvd Unit 2302
Austin, Tx 78717

Marie'S Trucking
2314 Wagon Crossing Path
Austin, Tx 0

Melendrez Trucking Llc
11608 Moore Rd
Austin, Tx 0

Ndl Transport Inc
902 Bodgers Dr
Austin, Tx 78753

Oviedo Trucking Llc
3820 Julianas Way
Round Rock, Tx 78665

Panther Creek Transportation Inc
Po Box 2715
Georgetown, Tx 78627

Pete Ignacio Balderas
7224 White Panda Run
Del Valle, Tx 78617

Rami Transportation Inc
7719 Mcangus Rd
Del Valle, Tx 0

Rbr Trucking, Inc.
9501 W. State Hwy 29
Liberty Hill, Tx 78642

Ruben P Rocha
8501 S Fm 973 Rd.
Austin, Tx 78719

Ralph Anthony Wright
1716 Meander Dr
Austin, Tx 78721

Robert E Ashford
P O Box 16478
Austin, Tx 78761

Robert M Medel
10811 San Jose Venue
Del Valle, Tx 78617

Sammie J Kellough
2314 Wagon Crossing Path
Austin, Tx 0

Sar Transportation, L.L.C.
11325 F.M. 156 South
Justin, Tx 76247

Serna'S Trucking Llc
P.O. Box 2100
Kyle, Tx 78640

Seto Vargas Utilities Inc
5300 Navarro Creek Rd
Del Valle, Tx 78617

Texas Trucking Co Inc
3900 Shell Rd
Georgetown, Tx 0

Tri Recycling Inc
Po Box 26499
Austin, Tx 0

Walkers Journey Trucking Llc
127 Adage Drive
Pflugerville, Tx 78660

MBE/WBE PROCUREMENT PROGRAM SOLICITATION OVERVIEW

PROJECT DETAILS

Solicitation Number: IFB 2200 MDP0261
Project Name: Hot Mix Asphaltic Concrete
Funding Source: City **Estimated Total Cost:** $860,000
Project Description: Hot Mix–Cold Laid Asphaltic Concrete Material and Hot Mix Asphaltic Concrete (HMAC) Type B, C, C-SBS Polymer, & D to include H.M.A.C. with RAP and Warm Mixes

Approved Goal Determination:

MBE	African American	Hispanic	Asian/Native American	WBE	**M/WBE Combined**
--	--	--	--	--	**1.00%**

PROGRAM REQUIREMENTS

Counting Participation (2-9D-20)
Listing City certified firms on the Compliance Plan indicates that firms agree to both the price and scope of work. The Compliance Plan shall list all firms (certified and non-certified) that will participate on the contract.

- Only City of Austin certified MBE/WBE firms will be counted toward the goals.
- Certified MBE/WBE firms may count their own participation, less any amount subcontracted.
- A certification code of M/WBE or W/MBE may be counted towards the MBE or WBE goal, but not both.
- A firm with an MBE certification code can be counted towards the MBE goal or towards the appropriate ethnic subgoal. However, WBE certification code can only be counted toward the WBE goal.
- Use only the base bid amount or the proposal amount to calculate your MBE/WBE participation.

Compliance Plan Submission
Bids or responses will not be accepted for consideration, if the MBE/WBE Compliance Plan is not submitted prior to the deadline specified in the solicitation document.

- Section I Project information *(pre-entered)*.
- Section II Firm's identifying information, with signature of firm's authorized representative.
- Section III Compliance Plan Summary *(calculations must reflect Sections IV-VI)*.
- Section IV Disclosure of all certified firms, enter all requested information.
- Section V Disclosure of all non-certified firms, enter all requested information.
- Section VI Disclosure of all second-level subcontractors.
- Section VII Disclosure of Primary and Alternate Trucking subcontractors.
- Section VIII Compliance Plan Check List *(complete if goals are not met)*.

Good Faith Efforts (2-9D-21)
When bidder/respondent cannot meet the established goals, the responding firm shall provide documentation of the firm's good faith efforts to meet the goals.

- Notify all certified firms on the availability list not less than 7 business days prior to bid date using two separate reasonable and verifiable methods; i.e. fax, e-mail, mail or phone.
- Publish notice in local publication.
- Seek service of minority and women organizations.
- Select portions of work that will increase MBE/WBE opportunities.
- Negotiate with MBE/WBE firms in good faith.
- Assist MBE/WBE firms with bonding, lines of credit, and insurance.
- Documented justification for not meeting MBE/WBE goals *(provide GFE documentation with submission)*.
- Contact SMBR for assistance.

RESOURCES

SMALL & MINORITY BUSINESS RESOURCES DEPARTMENT

SMBR Representative
Cynthia Van Maanen
512-974-7736
Cynthia.VanMaanen@austintexas.gov

SMBR Certification Division
512-974-7645
SMBRCertification@austintexas.gov

SMBR Compliance Division
SMBRComplianceDocuments@austintexas.gov

SMBR Main Office
512-974-7600
512-974-7601

Go to http://www.austintexas.gov/SMBR for additional information and resources.

SMBR PLAN ROOM

Visit SMBR's Plan Room for viewing City of Austin project plans and specifications as well as other local, private, and public sector jobs located at SMBR Office located at 4201 Ed Bluestein Blvd., Austin, TX 78721.

Call (512) 974-7799 to make an appointment, schedule training or for more information, or visit http://www.austintexas.gov/department/smbr-plan-room for list of current projects available; cost $0. May be minimal fee for copying and printing plans and specifications sheets.

BONDING

In order to help our vendors overcome the challenges that can be associated with bonding, SMBR has a Bonding Financial Consultant to meet one-on-one with business owners to assist with their bonding needs.

Luke Ortega Luper, Bonding Financial Consultant
Phone: (512-974-7733
Email: Luke.Luper@austintexas.gov.
Website address: http://www.austintexas.gov/department/bonding

SMBR does not issue bonds; however, we do provide our bonding resource program as a free and confidential service to our business owners.

LOCAL MINORITY SERVICE ORGANIZATIONS

Name	Contact Name	Phone	Email
Asian Contractor Association	Aletta Banks	512-926-5400	asiancontractor@gmail.com
Austin Area Black Contractors Association	Alayne Johnson	512-467-6895	brc-pro@att.net
Business Investment Growth (BIG Austin)	Stacy Dukes-Rhone	512-928-8010	info@bigaustin.org
Business Resource Consultants (BRC)/(Bid Briefs)	Carol Hadnot	512-467-6894	brc-pro@att.net
Greater Austin Black Chamber of Commerce	Tam Hawkins	512-459-1181	admin@austinbcc.org
Greater Austin Asian Chamber of Commerce	Marina Ong Bhargava	512-407-8240	exec.admin@austinasianchamber.org
Greater Austin Hispanic Chamber of Commerce	Selina Aguirre	512-476-7502	saguirre@gahcc.org
U.S. Hispanic Contractors Association de Austin (USHCA)	Juan Oyervides	512-922-0507	info@ushca-austin.com

Additional contact information can be provided upon request.

AUSTIN MINORITY NEWSPAPERS

Name	Contact Name	Phone	Email
Capital City Argus News	Charles M. Miles	512-926-0348	CMilesArgus@yahoo.com
El Mundo Newspaper		512-476-8636	info@elmundonewspaper.com
La Prensa	Catherine Vasquez-Revilla	512-478-3090	laprensa@aol.com
Nokoa The Observer	Akwasi Evans	512-499-8713	akwasievans2013@gmail.com
The Villager	Tommy L. Wyatt	512-476-0082	vil3202@aol.com
World Journal Inc. of Texas	Sherry Wang		sherrywang1020@yahoo.com
/World Journal Chinese Daily News			

Additional contact information can be provided upon request.

ADDENDUM
PURCHASING OFFICE
CITY OF AUSTIN, TEXAS

Solicitation: IFB 2200 MDP0261 **Addendum No: 2** **Date of Addendum: 06/22/2018**

This addendum is to incorporate the following question and answer and also clarification to the above referenced solicitation:

I. **Question:**

Q1. Does the monthly Subcontract Awards and Expenditures Report (Sub-K) have to be submitted via hard copy – or can it be sent electronically?
A1. SMBR has a copy that can be filled out electronically, but it must be submitted via hard copy to the Contract Manager.

II. **Clarification**: This is the second addendum. The first addendum did not include a page for signatures.

III. ALL OTHER TERMS AND CONDITIONS REMAIN THE SAME.

APPROVED BY: _____ 6/22/18
Michelle Pearson, Procurement Specialist II Date
Purchasing Office, 512-974-2023

ACKNOWLEDGED BY:

Bailey Lewis _____ 6.25.18
Name Authorized Signature Date

RETURN ONE COPY OF THIS ADDENDUM TO THE PURCHASING OFFICE, CITY OF AUSTIN, WITH YOUR RESPONSE OR PRIOR TO THE SOLICIATION CLOSING DATE. FAILURE TO DO SO MAY CONSTITUTE GROUNDS FOR REJECTION.

ADDENDUM
PURCHASING OFFICE
CITY OF AUSTIN, TEXAS

Solicitation: IFB 2200 MDP0261 **Addendum No: 3** **Date of Addendum: 07/06/2018**

This addendum is to incorporate the following question and answer to the above referenced solicitation:

I. **Question:**

Q1. What is the City looking for on the bid sheet under item numbers 1.1, 2.1, 3.1, and 4.1 where the line indicates "MFG. NAME & NO.?"
A1. The City is asking for who manufactured the hotmix and the product number, if applicable.

II. ALL OTHER TERMS AND CONDITIONS REMAIN THE SAME.

APPROVED BY: _____ 7-6-18
Michelle Pearson, Procurement Specialist II Date
Purchasing Office, 512-974-2023

ACKNOWLEDGED BY:

BAILEY LEWIS _____ 7.6.18
Name Authorized Signature Date

RETURN ONE COPY OF THIS ADDENDUM TO THE PURCHASING OFFICE, CITY OF AUSTIN, WITH YOUR RESPONSE OR PRIOR TO THE SOLICIATION CLOSING DATE. FAILURE TO DO SO MAY CONSTITUTE GROUNDS FOR REJECTION.

ADDENDUM
PURCHASING OFFICE
CITY OF AUSTIN, TEXAS
Hot Mix Asphaltic Concrete

Solicitation: IFB 2200 MDP0261 **Addendum No: 4** **Date of Addendum: 7/10/2018**

This addendum is to incorporate the following changes to the above referenced solicitation:

I. **Extension:** The solicitation due date is hereby extended until Tuesday, July 17, 2018 at 2:00 PM.

II. ALL OTHER TERMS AND CONDITIONS REMAIN THE SAME.

APPROVED BY: _____ 7/10/18
Michelle Pearson, Procurement Specialist II Date
Purchasing Office, 512-974-2023

ACKNOWLEDGED BY:

Bailey Lewis _____ 7-11-18
Name Authorized Signature Date

RETURN ONE COPY OF THIS ADDENDUM TO THE PURCHASING OFFICE, CITY OF AUSTIN, WITH YOUR RESPONSE OR PRIOR TO THE SOLICIATION CLOSING DATE. FAILURE TO DO SO MAY CONSTITUTE GROUNDS FOR REJECTION.

ATTACHMENT #1

Cold Mix Asphalt Summer Grade (CMA-SG). Use only aggregate gradations II and III to produce CMA-SG. Use an asphalt material to produce CMA-SG in accordance with Table 5.

Table 5
Asphalt Material Properties for CMA-SG

Property	Test Procedure	Min	Max
Viscosity, 77°F, Poises	D 4957[1]	3,000	5,000
Water, %	T 55	–	1.0
Flash point, T.O.C., °F	T 79	158	–
Distillation test:	T 78		
Distillate, percentage by volume of total distillate to 680°F			
to 437°F		0	0
to 500°F		0	5
to 600°F		30	70
Residue from distillation, volume %		78	100
Tests on distillation residue:			
Penetration, 100 g, 5 sec., 77°F	T 49	100	250
Float test, 140°F, sec.	T 50	1,200	–
Solubility in trichloroethylene, %	T 44	99.0	–

Note—Test procedures beginning with T are AASHTO procedures. Test procedures beginning with D are ASTM procedures.

1. Use a #200 modified Koppers viscometer at 300 mm of vacuum.

ATTACHMENT #2

Cold Mix Winter Grade (CMA-WG). Use only aggregate gradations II and III to produce CMA-WG. Use an asphalt material to produce CMA-WG in accordance with Table 6.

Table 6
Asphalt Material Properties for CMA-WG

Property	Test Procedure	Min	Max
Viscosity, 77°F, Poises	D 4957[1]	1,500	4,000
Water, %	T 55	–	1.0
Flash point, T.O.C., °F	T 79	158	–
Distillation test:	T 78		
Distillate, percentage by volume of total distillate to 680°F			
to 437°F		0	0
to 500°F		0	5
to 600°F		30	70
Residue from distillation, volume %		78	100
Tests on distillation residue:			
Penetration, 100 g, 5 sec., 77°F	T 49	100	250
Float test, 140°F, sec.	T 50	1,200	–
Solubility in trichloroethylene, %	T 44	99.0	–

Note—Test procedures beginning with T are AASHTO procedures. Test procedures beginning with D are ASTM procedures.

1. Use a #200 modified Koppers viscometer at 300 mm of vacuum.

Section 3. DMS-9202, Asphaltic Concrete Patching Material (Stockpile Storage)

Overview

Effective Date: July 1999.
This specification shall govern for an asphaltic concrete mixture intended primarily as a cool to cold weather stockpile patching mix for maintenance. It shall remain workable in the stockpile for six months and have good adhesion to wet surfaces. The length of satisfactory stockpiling and the lowest temperature at which it can be used will vary according to the type and grade of asphaltic binder specified. It is primarily a crushed-stone asphaltic-concrete with asphalt additives.
The Engineer will designate on the plans or requisition which of the following combinations of asphalt and aggregate may be supplied, meeting all requirements stated below:

	Asphalt							
Aggregate	**MC-250**	**MC-800**	**MC-800 w/Diesel**	**SCM I**	**SCM II**	**AES-300S**	**CMA SG**	**CMA WG**
Item 334	x	x	x	x		x		
Gradation I	x	x	x	x	x	x		
Gradation II	x	x	x	x	x	x	x	x
Gradation III							x	x

Materials

Asphaltic Material
The asphaltic material shall be an MC-250, MC-800, SCM I, SCM II, AES-300S, or CMA meeting the requirements below. The specific asphaltic material to be used shall be designated by the Engineer on the plans or requisition.

- MC-250 or MC-800 - The asphaltic materials shall comply with the requirements of Standard Specification "Item 300, Asphalts, Oils, and Emulsions. "
- SCM I (Special Cutback Material I)

Tests on SCM I			
Flash Point	Test Method Tex-512-C (see NOTE)	79 °C (174 °F) Minimum	
Water	Test Method Tex-501-C (see NOTE)	0.2% Maximum	
Kinematic Viscosity at 60 °C (140 °F)	Test Method Tex-529-C (see NOTE)	500 to 1,000 cSt	
Distillation expressed as a percent by volume of total distillate to 360 °C (680 °F)	Test Method Tex-515-C (see NOTE)	**Min.**	**Max.**
♦ Off at 225 °C (437 °F)		0	0
♦ Off at 260 °C (500 °F)		0	0.5
♦ Off at 315 °C (600 °F)		20	60
Residue at 360 °C (680 °F), Volume %		76	100
Tests on Distillation Residue			
Penetration at 25 °C (77 °F), 150 g, 5 sec	ASTM D 5 procedure, except using cones conforming to ASTM D 217. Also, the level of water in the transfer dish shall be lowered to less than the height of the sample and water decanted from top of sample before transferring from the bath to the penetrometer.	180 Minimum	
Ductility at 4 °C (39.2 °F), 1 cm/min	Test Method Tex-503-C (see NOTE)	100 cm (39 in.) Minimum	
Solubility in Trichloroethylene	Test Method Tex-507-C (see NOTE)	99% Minimum	

NOTE: Refer to Test Method "Tex-501-C et al, Test Methods for Various Bituminous Materials. "

♦ SCM II (Special Cutback Material II) - SCM II is allowed for Aggregate Gradations I and II only.

Tests on SCM II			
Flash Point	Test Method Tex-512-C (see NOTE)	79 °C (174 °F) Minimum	
Water	Test Method Tex-501-C (see NOTE)	0.2% Maximum	
Kinematic Viscosity at 60 °C (140 °F)	Test Method Tex-529-C (see NOTE)	1,000 to 2,000 cSt	
Distillation expressed as a percent by volume of total distillate to 360 °C (680 °F)	Test Method Tex-515-C (see NOTE)	**Min.**	**Max.**
♦ Off at 225 °C (437 °F)		0	0
♦ Off at 260 °C (500 °F)		0	0.5
♦ Off at 315 °C (600 °F)		15	50

Residue at 360 °C (680 °F), Volume %	82	100
Tests on Distillation Residue		
Penetration at 25 °C (77 °F), 150 g, 5 sec	ASTM D 5 procedure, except using cones conforming to ASTM D 217. Also, the level of water in the transfer dish shall be lowered to less than the height of the sample and water decanted from top of sample before transferring from the bath to the penetrometer.	180 Minimum
Ductility at 4 °C (39.2 °F), 1 cm/min	Test Method Tex-503-C (see NOTE)	100 cm (39 in.) Minimum
Solubility in Trichloroethylene	Test Method Tex-507-C (see NOTE)	99% Minimum

NOTE: Refer to Test Method "Tex-501-C et al, Test Methods for Various Bituminous Materials. "

- AES-300S - The emulsion shall be a high float, mixing-grade type utilizing a polymer-modified asphalt base.

Tests on AES-300S		
	Min.	**Max.**
Viscosity at 25 °C (77 °F), SSF	75	400
Sieve Test		0.1%
24-hour Storage Stability (NOTE 1)		1%
Stone Coating	Good	
Residue from Distillation @ 175 °C (347 °F)	65%	
Oil Portion from Distillation, mL of oil per 100 g emulsion		7%
Tests on Distillation Residue		
	Min.	**Max.**
Solubility in Trichloroethylene	97%	
Float @ 60 °C (140 °F), sec	1200	
Penetration @ 25 °C (77 °F), 100 g, 5 sec	300	
Tests on Cured Residue**		
Elastic Recovery @ 10 °C (50 °F)	30%	
**Method of Curing - Two rolling thin film containers of as-received cutback shall be poured and tested in accordance with ASTM D 2872.		
NOTE 1 - The undisturbed emulsion shall show no white milky substance at either the top of or bottom of the test cylinder after the 24-hour period.		

- Cold Mix Asphalt Summer Grade (CMA-SG) - CMA-SG is allowed for Aggregate Gradations II and III.

Tests on CMA-SG		
Flash Point	Test Method Tex-512-C (see NOTE)	70 °C (158 °F) Minimum
Water	Test Method Tex-501-C (see NOTE)	1.0% Maximum

Viscosity at 25 °C (77 °F)	ASTM D 4957 #200 Modified Koppers Viscometer at 300 mm of Vacuum	3,000 - 5,000 P

Distillation expressed as percent by volume of total distillate to 360 °C (680 °F)	Test Method Tex 515-C (see NOTE)	Min.	Max.
♦ Off at 225 °C (437 °F)		0	0
♦ Off at 260 °C (500 °F)		0	5
♦ Off at 315 °C (600 °F)		30	70
Residue at 360 °C (680 °F), Volume %		78	100

Tests on Distillation Residue		
Penetration at 25 °C (77 °F), 100 g, 5 sec	Test Method Tex-502-C (see NOTE)	100 - 250
Float Test at 60 °C (140 °F), sec	Test Method Tex-519-C (see NOTE)	1,200 Minimum
Solubility in Trichloroethylene	Test Method Tex-507-C (see NOTE)	99% Minimum

NOTE: Refer to Test Method "Tex-501-C et al, Test Methods for Various Bituminous Materials. "

♦ Cold Mix Winter Grade (CMA-WG) - CMA-WG is recommended for Aggregate Gradations II and III.

Tests on CMA-WG		
Flash Point	Test Method Tex-512-C (see NOTE)	70 °C (158 °F) Minimum
Water	Test Method Tex-501-C (see NOTE)	1.0% Maximum
Viscosity at 25 °C (77 °F)	ASTM D 4957 #200 Modified Koppers Viscometer at 300 mm of Vacuum	1,500 - 4,000 P

Distillation expressed as percent by volume of total distillate to 360 °C (680 °F)	Test Method Tex 515-C (see NOTE)	Min.	Max.
♦ Off at 225 °C (437 °F)		0	0
♦ Off at 260 °C (500 °F)		0	5
♦ Off at 315 °C (600 °F)		30	70
Residue at 360 °C (680 °F) Volume %		78	100

Tests on Distillation Residue		
Penetration at 25 °C (77 °F), 100 g, 5 sec	Test Method Tex-502-C (see NOTE)	100 - 250
Float Test at 60 °C (140 °F), sec	Test Method Tex-519-C (see NOTE)	1,200 Minimum
Solubility in Trichloroethylene	Test Method Tex-507-C (see	99% Minimum

	NOTE)	

NOTE: Refer to Test Method "Tex-501-C et al, Test Methods for Various Bituminous Materials. "

Asphaltic Additives

One or more asphalt additives to prevent stripping of the asphalt from the aggregate in the presence of water and promote bonding to damp or wet surfaces shall be incorporated into the mixture. The additive(s) shall be added to the asphalt material at the point of origin or be metered in at the mix plant to provide a uniform concentration of the agent(s). The type and amount of additive(s) used will be approved by the Engineer in the design stage based on the resistance to stripping, as described in 'Properties of the Mixture, ' and desired bonding and workability characteristics.

Distillate

When an MC-800 is designated as the asphaltic material to be used, the Engineer may also direct that distillate in amounts not to exceed five (5) percent by weight of the MC-800 be added in order to extend stockpile life and improve cold weather workability. The distillate shall meet the requirements for No. 1 or No. 2 diesel, ASTM D 975, with the exception that the maximum water content shall not be greater than 0.2 percent.

The distillate shall be metered into the mix plant separately from the MC-800, or with the permission of the Engineer, may be blended with the MC-800.

Aggregate

The aggregate shall meet the requirements for aggregate as specified in Standard Specification "**Item 334**, Hot Mix-Cold Laid Asphaltic Concrete Pavement. "

Properties of the Mixture

General Testing

When tested according to standard TxDOT test methods, the mixture shall comply with the following requirements:

General Testing Requirements		
	Min.	**Max.**
Asphalt Content, exclusive of volatiles, percent by weight	3.0	7.0
Hydrocarbon Volatile Content of mix, percent by weight	0.3	1.0
Moisture Content of mix (this requirement does not apply to mixtures produced at mixing temperatures of 79 °C [174 °F] or less), percent by weight		2.0
Hveem Stability at 60 °C (140 °F), percent (cured and molded in accordance with Test Method " Tex-206-F, Compacting Test Specimens of Bituminous Mixtures ")**	35	
The requirements for Hveem Stability are applicable to mixtures with "Item 334**, Hot Mix-Cold Laid Asphaltic Concrete Pavement, " gradations only.		

Mixture Design and Aggregate Gradation

One or more of the gradation types specified in Standard Specification "**Item 334**, Hot Mix-Cold Laid Concrete Pavement, " for optimum density mixtures or of the open mixture gradations shown below, shall be designated by the Engineer on the plans or requisition.

For mixtures to be produced with "**Item 334**, Hot Mix-Cold Laid Concrete Pavement, " gradation, the mixture should be designed in accordance with Test Method " Tex-204-F, Design of Bituminous Mixtures " and the asphalt content selected to result in laboratory density as follows:

Density (Percent)		
Minimum	**Maximum**	**Optimum**
93.5	96.5	95.0

For mixtures to be produced with Gradation I, II, or III below, the Engineer shall select the asphalt content within the range specified under Asphalt Content, above:

Percent Passing (by Weight)			
Sieve Size	**Gradation I**	**Gradation II**	**Gradation III**
3/4"			100
1/2"	100	100	70 - 90
3/8"	95 - 100	95 - 100	40 - 70
No. 4	90 - 100	17 - 40	10 - 30
No. 10	10 - 30	2 - 15	5 - 20
No. 40	0 - 25		0 - 10
No. 80	0 - 10		0 - 5
No. 200	0 - 5	0 - 3	0 - 4
AC %*		4.5 - 6.5	4.0 - 5.5
*Allowed asphalt content range			

Resistance to Water Damage

The as-received mix shall be evaluated for resistance to water damage by soaking a 100 gram representative sample of the total mixture in 200 milliliters (seven [7] fluid ounces) of distilled or de-ionized water at 60 ± 1 °C (140 ± 2 °F) for 24 ± 2 hours. The soaking test shall be accomplished in a glass beaker of approximately 400-milliliters (fourteen [14] fluid ounces). Upon completion of the 24-hour soaking period, the mixture shall be evaluated while submerged in the testing water. The material shall show no visible evidence of stripping.

Mixture Preparation

The mixture shall be plant mixed. All production equipment shall meet the requirements of Standard Specification "**Item 334**, Hot Mix-Cold Laid Concrete Pavement. " The asphaltic material shall be heated in accordance with Article 300.3, Storage, Heating, and Application Temperatures. The application temperature for SCM I and SCM II shall be 77 to 93 °C (170 to 200 °F) unless otherwise specified by the material supplier. The application temperature for AES-300S and CMA shall be as specified by the material supplier. The temperature of the bituminous mixture at the point of discharge from the mixer and the temperature of the aggregate, when mixed with bituminous material shall not exceed 93 °C (200 °F) unless otherwise approved by the Engineer. The mixture shall be mixed until all of the aggregate is uniformly coated.

ATTACHMENT #4

Item No. 301S
Asphalts, Oils and Emulsions

301S.1 Description

This item includes the requirements for cutback asphalts, emulsified asphalts, polymer modified asphalt cements, performance graded asphalt binders and other miscellaneous asphaltic materials and latex additives.

This specification is applicable for projects or work involving either inch-pound or SI units. Within the text the inch-pound units are given preference followed by SI units shown within parentheses.

301S.2 Submittals

Submittals shall include test results for each the materials described herein when specifically identified on the Drawings and/or referenced in associated standard specification items and standard details.

Submittals may include samples of the base asphalt cement and polymer additives.

301S.3 Materials

When tested in accordance with designated TxDoT, AASHTO and/or ASTM Test Methods, the various materials shall meet the applicable requirements of this specification.

A. Acronyms

The acronyms used in this specification are defined in the following table.

Table 1: Acronyms

Acronym	Definition	Acronym	Definition
Test Method Prefix Tex T D	 TxDOT AASHTO ASTM	Polymer Modifier SBR or L SBS TR P	 Styrene-Butadiene Rubber (Latex) Styrene-Butadiene-Styrene Block Copolymer Tire Rubber, from ambient temperature grinding of truck and passenger tires Polymer Modified
AC	Asphalt Cement	SS	Slow Setting
RC	Rapid Curing	H-suffix	Harder Residue (Lower Penetration)
MC	Medium Curing	AE	Asphalt Emulsion
SCM	Special Cutback Material	S-suffix	Stockpile Usage
HF	High Float	AE-P	Asphalt Emulsion Prime
C	Cationic	EAP&T	Emulsified Asphalt Prime and Tack
RS	Rapid Setting	PCE	Prime, Cure, and Erosion Control
MS	Medium Setting	PG	Performance Grade

B. Asphalt Cement

The material shall be homogeneous, free from water, shall not foam when heated to 350°F (177°C) and shall meet the requirements in Table 2.

Table 2: Asphalt Cement Requirements

Viscosity Grade		AC-10		AC-20		AC-30	
Property	Test Method	Min	Max	Min	Max	Min	Max
Viscosity: 140°F, poises (60°C, pascals)	T202	800 (80)	1200 (120)	1600 (160)	2400 (240)	2400 (240)	3600 (360)
Viscosity: 275°F, stokes (135°C, pascals)	T202	1.9 (.19)	-	2.5 (.25)	-	3.0 (.30)	-
Penetration: 77°F (25°C), 100g, 5s	T49	85	-	55	-	45	-
Flash Point, C.O.C. °F (°C)	T48	450 (232)	-	450 (232)	-	450 (232)	-
% Solubility trichloroethylene	T44	99.0	-	99.0	-	99.0	-
Spot test	Tex 509-C						
Viscosity: 140°F stokes (60°C pascals)	T202	-	3000 (300)	-	6000 (600)	-	9000 (900)
Ductility 77°F (25°C), 5 cm/min, cm	T202	100	-	70	-	50	-

C. Polymer Modified Asphalt Cement.

Polymer modified asphalt cement must be smooth, homogeneous, and shall comply with the requirements listed in Table 3.

Table 3: Polymer Modified Asphalt Cement Requirements

Polymer Modified Viscosity Grade		AC-5		AC-10		AC-15P		AC-45P*	
Polymer Type		SBR		SBR		SBS		SBS	
Property	Test Method	Min	Max	Min	Max	Min	Max	Min	Max
Polymer in % (solids basis)	Tex-533-C	2.0	-	2.0	-	3.0	-	3.0	-
Viscosity									
140°F, poise (60°C, pascals)	T 202	700 (70)	- -	1300 (130)	- -	1500 (150)	- -	4500 (450)	- -
275°F, poise (135°C, pascals)	T 202	- -	7.0 (0.7)	- -	8.0 (0.8)	- -	8.0 (0.8)	14.0 (1.4)	
Penetration, 77°F (25°C), 100 g, 5 s.	T 49	120	-	80	-	100	150	50	74
Ductility, 5cm/min., 39.2°F, cm	T 51	70	-	60	-	-	-	15	-
Elastic Recovery, 50°F (10°C), %	Tex-539-C	-	-	-	-	55	-		-
Polymer Separation, 48 hrs**.	Tex-540-C	None		None		None		None	
Flash Point, C.O.C., °F (°C),	T 48	425 (218)	- -	425 (218)	- -	425 (218)	- -	425 (218)	- -
Tests on Residue from Thin Film Oven Test: (T179)									
Retained Penetration Ratio, 77°F (25°C), % original	T 49	-	-	-	-	0.60	1.00	0.60	0.90

* The SBS block copolymer may be pre-blended with a polymer processing oil (up to a 1:1 ratio of polymer to oil) to aid the solution of the polymer in the asphalt.

** A 350-gram (0.77 pound) sample of the asphalt-SBS blend is stored for 48 hours at 325°F (163°C). Upon completion of the storage time, the sample is visually examined for separation of the SBS from the asphalt (smoothness and homogeneity). If a question still exists about the separation of the SBS, samples shall be taken from the top and bottom of the sample for Infrared Spectroscopy analysis. A difference of 0.4% or more in the concentration of the SBS between the top and bottom samples shall constitute separation.

D. Cutback Asphalt

Cutback Asphalt shall meet the requirements presented in tables 4, and 5 for the specified type and grade.

Table 4: RAPID CURING TYPE CUTBACK ASPHALT Requirements

Type-Grade		RC-250		RC-800		RC-3000	
Properties	Test Method	Min	Max	Min	Max	Min	Max
Water, percent	T55	-	0.2	-	0.2	-	0.2
Flash Point, T.O.C.,°F [°C]	T79	80 (27)	-	80 (27)	-	80 (27)	-
Kinematic viscosity @ 140°F, cst [60°C, mm^2/s]	T201	250	400	800	1600	3000	6000
Distillation Test:	T78						
Distillate, % by volume of total distillate to 680°F [360°C]:							
to 437°F [225°C]:		40	75	35	70	20	55
to 500°F [260°C]:		65	90	55	85	45	75
to 600°F [316°C]:		85	-	80	-	70	-
Residue from Distillation, Volume %		70	-	75	-	82	-
Tests of Distillation Residue:							
Penetration, 100g, 5 sec., 77°F [25°C], cm	T49	80	120	80	120	80	120
Ductility, 5 cm/min., 77°F, 5 cm/min., cm	T51	100	-	100	-	100	-
[25°C, 50 mm/min., mm]		1000	-	1000	-	1000	-
Solubility in trichloroethylene, %	T44	99.0	-	99.0	-	99.0	-
Spot Test	Tex 509-C	ALL NEGATIVE					

Table 5: MEDIUM CURING TYPE CUTBACK ASPHALT Requirements

Type		MC-30		MC-70		MC-250		MC-800		MC-3000	
Properties	Test Method	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
Water, %	T55	-	0.2	-	0.2	-	0.2	-	0.2	-	0.2
Flash Point, T.O.C.,°F [°C]	T79	100 [38]	-	100 [38]	-	150 [65]	-	150 [65]	-	150 [65]	-
Kinematic viscosity. @ 140°F. cst [60°C, mm^2/s]	T201	30	60	70	140	250	500	800	1600	3000	6000
Distillation Test:	T78										
Distillate, as % by volume to total distillate to 680°F[360°C]:, shall be as follows:											
to 437°F [225°C]:		-	25	-	20	-	10	-	-	-	-
to 500°F [260°C]:		40	70	20	60	15	55	-	35	-	15
to 600°F [316°C]:		75	93	65	90	60	87	45	80	15	75
Residue from 80°F [225°C] distillation											
Volume Percent		50	-	55	-	67	-	75	-	80	-
Tests on Distillation Residue:											
Penetration @ 77°F [25°C], 100g, s, 01mm:	T49	120	250	120	250	120	250	120	250	120	250
Ductility @ 77°F, 5 cm/min, cms	T51	100*	-	100*	-	100*	-	100*	-	100*	-
[25°C, 50 mm/min., mm]		1000*	-	1000*	-	1000*	-	1000*	-	1000*	-
% Solubility in trichloroethylene	T44	99.0	-	99.0	-	99.0	-	99.0	-	99.0	-
Spot Test	Tex 509-C	ALL NEGATIVE									

* If penetration of residue is more than 200 and the ductility at 77°F [25°C] is less than 100 cm [1000 mm], the material will be acceptable if its ductility at 60°F [16°C] is more than 100cm [1000 mm].

E. Emulsified Asphalt

The material shall be homogenous. It shall show no separation of asphalt after thorough mixing and shall meet the requirements for the specified type and grade presented in Tables 6, 7 and 8.

Table 6: ANIONIC EMULSION Requirements

	Type	Medium Setting		Slow Setting			
	Grade	MS-2		SS-1		SS-1h	
Property	Test Method	Min	Max	Min	Max	Min	Max
Furol Viscosity @ 77°F [25°C], sec.	T72	-	-	20	100	30	100
@ 122°F[50°C], sec		100	300	-	-	-	-
Sieve Test, %.	T59	-	0.1	-	0.1	-	0.1
Miscibility (Standard Test)	T59	-	-	Passing		Passing	
Cement Mixing, %	T59	-	-	-	2.0	-	2.0
% Demulsibility: 35 cc 0.02N $CaCl_2$	T59	-	30	-	-	-	-
Storage Stability 1 day, %	T59	-	1	-	1	-	1
Freezing Test, 3 Cycles*	T59	Passing		Passing		Passing	
Distillation Test	T59						
Distillation Residue, %		65	-	60	-	60	-
Distillate Oil Portion, %		-	½	-	½	-	½
Tests of Residue from Distillation:							
Penetration @ 77°F [25°C], 100g, 5s	T49	120	160	120	160	70	100
Solubility in Trichloroethylene, %	T44	97.5	-	97.5	-	97.5	-
Ductility @ 77F, 5 cm/min., cm	T51	100	-	100	-	80	-
[@ 25°C, 50 mm/min., mm]		1000	-	1000	-	800	-

* Applies only when Engineer or designated representative specifies the material for winter use.

Table 7: HIGH FLOAT ANIONIC EMULSION Requirements

	Type	Rapid Setting		Medium Setting	
	Grade	HFRS-2		AES-300	
Property	Test Method	Min	Max	Min	Max
Viscosity, Saybolt Furol	T72				
@ 77°F [25°C], sec.		-	-	75	400
@ 122°F [50°C], sec.		150	400	-	-
Oil Portion of Distillate, %	T59	-	2	-	7
Sieve Test, %	T59	-	0.1	-	0.1
Particle Charge	T59	positive		positive	
Coating Ability and Water Resistance:	T59				
Coating, dry aggregate		-	-	good	
Coating, after spraying		-	-	fair	
Coating, wet aggregate				fair	
Coating, after spraying				fair	
% Demulsibility: 35 ml 0.02 N $CaCl_2$	T59	50	-	-	-
Storage Stability Test, 1 day, %	T59	-	1	-	1
Distillation Test	T59				
Residue by Distillation, % by weight		65	-	65	-
Oil Distillate, by volume of emulsion, %		-	1/2	-	5
Tests on Residue from Distillation:					
Penetration at 77°F [25°C], 100 g, 5s	T49	100	140	300	-
Solubility in Trichloroethylene, %	T44	97.5	-	97.5	-
Ductility @ 77°F., 5 cm/min, cms	T51	100	-	-	-
[25°C., 50 mm/min, mm]		[1000}			

Float Test at 140°F [60°C], sec.	Tex 509-C	1200	-	1200	-

Table 8: CATIONIC EMULSION Requirements

Type		Rapid Setting				Medium Setting				Slow Setting			
Grade		CRS-2		CRS-2h		CMS-2		CMS-2s		CSS-1		CSS-1h	
Property	Test Method	Min	Max	Min	Max	Min.	Max	Min	Max	Min	Max	Min	Max
Viscosity, Saybolt Furol	T72												
@ 77°F [25°C], sec.		-	-	-	-	-	-	-	-	20	100	20	100
@ 122°F [50°C],sec.		150	400	150	400	100	300	100	300	-	-	-	-
Storage stability test, 1 day %	T59	-	1	-	1	-	1	-	1	-	1	-	1
% Demulsibility: *,**	T59	40	-	40	-	-	-	-	-	-	-	-	-
Coating, ability & water resistance	T59												
Coating, dry aggregate		-	-	-	-	good		good		-	-	-	-
Coating, after spraying		-	-	-	-	fair		fair		-	-	-	-
Coating, wet aggregate		-	-	-	-	fair		fair		-	-	-	-
Coating, after spraying		-	-	-	-	fair		fair		-	-	-	-
Particle charge test	T59	Positive		Positive		Positive		Positive		Positive		Positive	
Sieve test, %	T59	-	0.10	-	0.10	-	0.10	-	0.10	-	0.10	-	0.10
Cement Mixing test, %	T59	-	-	-	-	-	-	-	-	-	2.0	-	2.0
Distillation Test:	T59												
% Oil distillate, vol. of emulsion		-	1/2	-	1/2	-	7	-	5	-	1/2	-	1/2
Residue by Distillation,% by wgt		65	-	65	-	65	-	65	-	60	-	60	-
Tests on Residue from Distillation:													
Penetration,77°F [25°C], 100g, 5s.	T49	120	160	80	110	120	200	300	-	120	160	80	110
Ductility,	T51												
77°F, 5 cm/min, cm		100	-	80	-	100	-	-	-	100	-	80	-
[25°C, 50 mm/min, mm]		1000	-	800	-	1000	-	-	-	1000	-	800	-
% Solubility in trichloroethylene	T44	97.5	-	97.5	-	97.5	-	97.5	-	97.5	-	97.5	-

* At a level of 35 ml 0.8% sodium dioctyl sulfosuccinate.

** The demulsibility test shall be made within 30 days from date of shipment.

F. Polymer Modified Emulsions

The material shall be homogenous. It shall show no separation of asphalt after thorough mixing and shall meet the requirements for the specified type and grade presented in Tables 9 and 10.

G. Specialty Emulsions.

Specialty emulsions may be either asphaltic-based or resin-based and must meet the requirements included in Table 11.

H. Recycling Agent.

Recycling agent and emulsified recycling agent must meet the requirements of table 12. Additionally, recycling agent and residue from emulsified recycling agent, when added in the specified proportions to the recycled asphalt, must meet the properties specified on the drawings.

Table 9: Polymer Modified Emulsified Asphalt Requirements

Type-Grade	Rapid Setting				Medium Setting						Slow Setting	
	RS-1P		HFRS-2P		AES-150P		AES-300P		AES-300S		SS-1P	
Property Test Method	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
Viscosity, Saybolt Furol T 72												
77°F, sec.	-	-	-	-	75	400	75	400	75	400	30	100
122°F, sec.	50	200	150	400	-	-	-	-	-	-	-	-
Sieve Test, % T 59	-	0.1	-	0.1	-	0.1	-	0.1	-	0.1	-	0.1
Miscibility T 59	-		-		-		-		-		pass	
Coating Ability and Water Resistance: T59												
dry aggregate/after spray	-		-		good/fair		good/fair		good/fair		-	
wet aggregate/after spray	-		-		fair/fair		fair/fair		fair/fair		-	
Demulsibility, 35 ml of 0.02 N $CaCl_2$, % T 59	60	-	50	-	-	-	-	-	-	-	-	-
Storage Stability, 1 day, % T 59	-	1	-	1	-	1	-	1	-	1	-	1
Breaking Index, g Tex-542-C	-	80	-	-	-	-	-	-	-	-	-	-
Distillation Test:[1] T 59												
Residue by Distillation, % by wt.	65	-	65	-	65	-	65	-	65	-	60	-
Oil Distillate, % by vol of emulsion	-	3	-	0.5	-	3	-	5	-	7	-	0.5
Tests: Residue from Distillation:												
Polymer Content, wt. % (solids basis) Tex-533-C	-	-	3.0	-	-	-	-	-	-	-	3.0	-
Penetration, 77°F, (25°C) 100 g, 5 sec. T 49	225	300	90	140	150	300	300	-	300	-	100	140
Solubility in Trichloroethylene, % T 44	97.0	-	97.0	-	97.0	-	97.0	-	97.0	-	97.0	-
Viscosity, 140°F, poise 60°C, Pa-s T 202	-	-	1500	-	-	-	-	-	-	-	1300	-
Float Test, 140°F, sec. T 50	-	-	1200	-	1200	-	1200	-	1200	-	-	-
Ductility[2], 39.2°F, 5 cm/min., cm (4°C, 5 cm/min., mm) T 51	-	-	50 500	-	-	-	-	-	-	-	50 500	-
Elastic Recovery[2], 50°F,(10°C), % Tex-539-C	55	-	55	-	-	-	-	-	-	-	-	-
Tests on RTFO Curing of Distillation Residue: Tex-541-C												
Elastic Recovery, 50°F,(10°F) % Tex-539-C	-	-	-	-	50	-	50	-	30	-	-	-

[1] Exception to AASHTO T 59: Bring the temperature on the lower thermometer slowly to 350°F +/- 10°F. Maintain at this temperature for 20 min. Complete total distillation in 60 +/- 5 min. from the first application of heat.

[2] HFRS-2P must meet one of either the Ductility or Elastic Recovery.

Table 10: Polymer Modified Cationic Emulsified Asphalt Requirements

Type-Grade		Rapid Setting				Slow Setting	
		CRS-1P		CRS-2P		CSS-1P	
Property	Test Method	Min	Max	Min	Max	Min	Max
Viscosity, Saybolt Furol	T 72						
77°F (25°C), sec.		-	-	-	-	20	100
122°F (50°C), sec.		50	150	150	400	-	-
Sieve Test, %	T 59	-	0.1	-	0.1	-	0.1
Demulsibility, 35 ml of 0.8% sodium dioctyl sulfosuccinate, %	T 59	60	-	70	-	-	-
Storage Stability, 1 day, %	T 59	-	1	-	1	-	1
Breaking Index, g	Tex-542-C	-	80	-	-	-	-
Particle Charge	T 59	positive		positive		positive	
Distillation Test:[1]	T 59						
Residue by Distillation, % by wt.		65	-	65	-	62	-
Oil Distillate, % by volume of emulsion		-	3	-	0.5	-	0.5
Tests on Residue from Distillation:							
Polymer Content, wt. % (solids basis)	Tex-533-C	-	-	3.0	-	3.0	-
Penetration, 77°F (25°C), 100 g, 5 sec.	T 49	225	300	90	150	55	90
Viscosity, 140°F, poise (60°C, Pa-s)	T 202	-	-	1300	-	-	-
Solubility in Trichloroethylene, %	T 44	97.0	-	97.0	-	97.0	-
Softening Point, °F	T 53	-	-	-	-	135	-
Ductility, 77°F, 5 cm/min., cm (25°C, 5 cm/min., mm)	T 51	-	-	-	-	70 700	-
Ductility[2], 39.2°F, 5 cm/min., cm (4°C, 5 cm/min., mm)	T 51	-	-	50	-	-	-
Elastic Recovery[2], 50°F (10°C), %	Tex-539-C	45	-	55	-	-	-

[1] Exception to AASHTO T 59: Bring the temperature on the lower thermometer slowly to 350°F +/- 10°F. Maintain at this temperature for 20 min. Complete total distillation in 60 +/- 5 min. from the first application of heat.

[2] CRS-2P must meet one of either the Ductility or Elastic Recovery.

Table 11: Specialty Emulsion Requirements

Type-Grade		Medium Setting				Slow Setting	
		AE-P		EAP&T		PCE[1]	
Property	Test Method	Min	Max	Min	Max	Min	Max
Viscosity, Saybolt Furol	T 72						
77°F (25°C), sec.		-	-	-	-	10	100
122°F (50°C), sec.		15	150	-	-	-	-
Sieve Test, %	T 59	-	0.1	-	0.1	-	0.1
Miscibility[2]	T 59	-		pass		pass	
Demulsibility, 35 ml of 0.10 N $CaCl_2$, %	T 59	-	70	-	-	-	-
Storage Stability, 1 day, %	T 59	-	1	-	1	-	-
Particle Size[3], % by volume < 2.5 □m	Tex-238-F	-	-	90	-	-	-
Asphalt Emulsion Distillation to 500°F (260°C) followed by Cutback Asphalt Distillation of Residue to 680°F (360°C):	T 59 & T 78						
Residue after both Distillations, % by wt.		40	-	-	-	-	-
Total Oil Distillate from both distillations, % by volume of emulsion		25	40	-	-	-	-
Distillation:	T 59						
Residue by Distillation, % by wt.		-	-	60	-	-	-
Evaporation:[4]	T 59						
Residue by Evaporation, % by wt.		-	-	-	-	60	-
Tests on Residue after all Distillation(s):							
Viscosity, 140°F, poise (60°C, Pa-s)	T 202	-	-	800	-	-	-
Kinematic Viscosity, 140°F, cSt [60°C, mm^2/s]	T 201	-	-	-	-	100	350
Flash Point, C.O.C., °F [°C]	T 48	-	-	-	-	400 204	-
Solubility in Trichloroethylene, %	T 44	97.5	-	-	-	-	-
Float Test, 122°F (50°C), sec.	T 50	50	200	-	-	-	-

[1] Supply with each shipment of PCE:

a) a copy of a lab report from an approved analytical lab, signed by a lab official, indicating the PCE formulation does not meet any characteristics of a Resource Conservation Recovery Act (RCRA) hazardous waste;

b) a certification from the producer that the formulation supplied does not differ from the one tested and that no listed RCRA hazardous wastes or PCB's have been mixed with the product; and

c) a Materials Safety Data Sheet.

[2] Exception to AASHTO T 59: In dilution, use 350 ml of distilled or deionized water and a 1000-ml beaker.

[3] Tex-238-F, beginning at "Particle Size Analysis by Laser Diffraction," "Procedure" (using - medium: distilled or deionized water and dispersant: none), or other approved method.

[4] Exception to AASHTO T 59: Leave sample in the oven until foaming ceases, then cool and weigh.

Table 12: Recycling Agent and Emulsified Recycling Agent Requirements

Property	Test Method	Recycling Agent		Emulsified Recycling Agent	
		Min	Max	Min	Max
Viscosity, Saybolt Furol, 77°F, sec.	T 72	-	-	15	100
Sieve Test, %	T 59	-	-	-	0.1
Miscibility[1]	T 59	-		No Coagulation	
Evaporation Test:[2]	T 59				
Residue by Evaporation, % by wt.		-	-	60	-
Tests on Recycling Agent or Residue from Evaporation:					
Flash Point, C.O.C., °F	T 48	400	-	400	-
Kinematic Viscosity,	T 201				
140°F, cSt		75	200	75	200
275°F, cSt		-	10.0	-	10.0

[1]Exception to AASHTO T 59: Use 0.02 N $CaCl_2$ solution in place of water.

[2]Exception to AASHTO T 59: Maintain sample at 300°F until foaming ceases, then cool and weigh.

I. Crack Sealer

This section sets forth the requirements for a polymer modified emulsion suitable for sealing fine cracks, and a rubber asphalt compound suitable for sealing cracks of 1/8 inch [3 mm] or greater width.

1. Polymer Modified Asphalt Emulsion Crack Sealer

For cracks on the order of 1/8 inch [3 mm] width, HFRS-2P polymer modified emulsion as described in the table included in Section F, Polymer Modified Emulsions of this item may be used. Requirements for the polymer modified emulsion and rubber-asphalt crack-sealing compound are presented in Table 13.

Table 13: Polymer Modified Asphalt Emulsion Crack Sealer Requirements

Property	Test Methods	Min	Max
Rotational Viscosity, 77°F, cP	ASTM D 2196, Method A	10,000	25,000
Sieve Test, %	T 59	-	0.1
Storage Stability, 1 day, %	T 59	-	1
Evaporation	Tex-543-C		
Residue by Evaporation, % by wt.		65	-
Tests on Residue from Evaporation:			
Penetration, 77°F, 100 g, 5 sec.	T 49	35	75
Softening Point, °F	T 53	140	-
Ductility, 39.2°F, 5 cm/min., cm	T 51	100	-

2. Rubber-Asphalt Crack Sealing Compound

This specification item may be a proprietary product. The compound shall be capable of being melted and applied at a temperature of 400°F [200°C] or less by a suitable oil jacketed kettle equipped with a pressure pump, a hose and a nozzle. It shall contain no water or highly-volatile matter. It shall not be tracked by vehicular traffic once it cools to road pavement temperature.

The rubber-asphalt crack sealing compound shall meet requirements in Table 14.

Table 14: Rubber-Asphalt Crack Sealer Requirements

Property	Test Methods	Class A		Class B	
		Min	Max	Min	Max
CRM Content, Grade A or B, % by wt.	Tex-544-C	22	26	-	-
CRM Content, Grade B, % by wt.	Tex-544-C	-	-	13	17
Virgin Rubber Content[1], % by wt.		-	-	2	-
Flash Point[2], COC, °F	T 48	400	-	400	-
Penetration[3], 77°F, 150g, 5 sec.	T 49	30	50	30	50
Penetration[3], 32°F, 200g, 60 sec.	T 49	12	-	12	-
Softening Point, °F	T 53	-	-	170	-
Bond[4], 3 cycles, 20°F	Tex-525-C	-		Pass	

1 Provide certification that the min. % virgin-rubber was added.

2 Before passing the test flame over the cup, agitate the sealing compound with a 3/8 to 1/2 in. (9.5 to 12.7 mm) wide, square-end metal spatula in a manner so as to bring the material on the bottom of the cup to the surface, i.e., turn the material over. Start at one side of the thermometer, move around to the other, and then return to the starting point using 8 to 10 rapid circular strokes. Accomplish agitation in 3 to 4 sec. Pass the test flame over the cup immediately after stirring is completed.

3 Exception to AASHTO T 49: Substitute the cone specified in ASTM D 217 for the penetration needle.

4 No crack in the crack sealing materials or break in the bond between the sealer and the mortar blocks over 1/4 in. deep for any specimen after completion of the test.

a. Properties of Rubber Used in Sealer. The rubber shall be one of the following types;

1) Type I - Ground tire rubber.

2) Type II - A mixture of ground tire rubber and high natural reclaimed scrap rubber. The natural rubber content, determined by ASTM D 297, shall be a minimum of 25 percent.

b. Ground Rubber. The ground rubber shall comply with the following gradation requirements when tested by TxDoT Test Method Tex-200-F, Part I.

Table 15: Ground Rubber Gradation Requirements

Sieve Size		Percent Retained	
U.S.	SI	Type I	Type II
No. 8	2.36 mm	0	-
No. 10	2.00 mm	0-5	0
No. 30	600µm	90-100	50-70
No. 50	300µm	95-100	70-95
No. 100	150µm	-	95-100

The ground rubber shall be free from fabric, wire, cord or other contaminating materials.

c. Packaging. The rubber-asphalt crack sealing compound shall be packaged in boxes, which contain two (2) 30-35 pound [14-16 kilogram] blocks that are individually packaged in a liner made of polyethylene, or other packaging approved by the Engineer or designated representative.

J. Performance Graded Binders.

Performance graded binders must be smooth, homogeneous, show no separation when tested in accordance with Test Method Tex-540-C, and must meet the requirements in the following table.

Separation testing is not required if:

- a modifier is introduced separately at the mix plant either by injection in the asphalt line or mixer, or
- the binder is blended on site in continuously agitated tanks, or
- binder acceptance is based on field samples taken from an in-line sampling port at the hot mix plant after the addition of modifiers.

Table 16 Performance Graded Binder Requirements

Performance Grade	PG 58			PG 64				PG 70				PG 76				PG 82		
	-22	-28	-34	-16	-22	-28	-34	-16	-22	-28	-34	-16	-22	-28	-34	-16	-22	-28
Average 7-day Max Pavement Design Temperature, °C[1]	58			64				70				76				82		
Min Pavement Design Temperature, °C[1]	>-22	>-28	>-34	>-16	>-22	>-28	>-34	>-16	>-22	>-28	>-34	>-16	>-22	>-28	>-34	>-16	>-22	>-28
ORIGINAL BINDER																		
Flash Point, AASHTO T 48: Min,	230°C																	
Viscosity, AASHTO TP 48:[2,3] Max, 3.0 Pas, Test Temperature,	135°C																	
Dynamic Shear, AASHTO TP 5:[4] G*/sin (δ), Min, 1.00 kPa Test Temperature @ 10 rad/sec.,	58°C			64°C				70°C				76°C				82°C		
Elastic Recovery, ASTM D 6084, 50°F, % Min	-	-	30	-	-	30	50	-	30	50	60	30	50	60	70	50	60	70
ROLLING THIN FILM OVEN (Tex-541-C)																		
Mass Loss, Max, %	1.0																	
Dynamic Shear, AASHTO TP 5: G*/sin (δ), Min, 2.20 kPa Test Temperature @10 red/sec.,	58°C			64°C				70°C				76°C				82°C		
PRESSURE AGING VESSEL (PAV) RESIDUE (AASHTO PP 1)																		
PAV Aging Temperature	100°C																	
Dynamic Shear, AASHTO TP 5: G*/sin (δ), Max, 5000 kPa Test Temperature10 rad/sec., °C	25	22	19	28	25	22	19	28	25	22	19	28	25	22	19	28	25	22
Creep Stiffness, AASHTO TP 1:[5,6] S, Max, 300 mPa, M - value, Min, 0.300 Test Temperature @ 60 sec., °C	-12	-18	-24	-6	-12	-18	-24	-6	-12	-18	-24	-6	-12	-18	-24	-6	-12	-18
Direct Tension, AASHTO TP 3:[6] Failure Strain, Min, 1.0% Test Temperature @1.0 mm/min., °C	-12	-18	-24	-6	-12	-18	-24	-6	-12	-18	-24	-6	-12	-18	-24	-6	-12	-18

[1] Pavement temperatures are estimated from air temperatures using an algorithm contained in the PGEXCEL3.xls software program, may be provided by the Department or by following the procedures as outlined in AASHTO MP 2 and PP 28.

[2] This requirement may be waived at the Department's discretion if the supplier warrants that the asphalt binder can be adequately pumped, mixed and compacted at temperatures that meet all applicable safety, environmental, and constructability requirements. At test temperatures where the binder is a Newtonian fluid, any suitable standard means of viscosity measurement may be used, including capillary (AASTHO T 201 or T 202) or rotational viscometry (AASHTO TP 48).

[3] Viscosity at 135°C is an indicator of mixing and compaction temperatures that can be expected in the lab and field. High values may indicate high mixing and compaction temperatures. Additionally, significant variation can occur from batch to batch. Contractors should be aware that variation could significantly impact their mixing and compaction operations. Contractors are therefore responsible for addressing any constructability issues that may arise.

[4] For quality control of unmodified asphalt binder production, measurement of the viscosity of the original asphalt binder may be substituted for dynamic shear measurements of G*/sin (□) at test temperatures where the asphalt is a Newtonian fluid. Any suitable standard means of viscosity measurement may be used, including capillary (AASHTO T 201 or T 202) or rotational viscometry (AASHTO TP 48).

[5] Silicone beam molds, as described in AASHTO TP 1-93, are acceptable for use.

[6] If creep stiffness is below 300 mPa, direct tension test is not required. If creep stiffness is between 300 and 600 mPa, the direct tension failure strain requirement can be used instead of the creep stiffness requirement. The m-value requirement must be satisfied in both cases.

301S.4 Equipment.

All equipment necessary to transport, store, sample, heat, apply, and incorporate asphalts, oils, and emulsions shall be provided.

301S.5 Construction

Typical materials used for specific applications are identified in table 17. These are typical uses only and circumstances may require use of other material.

Table 17: Typical Material Use

Material Application	Typically Used Materials
Hot-Mixed, Hot-Laid Asphalt Mixtures	PG Binders, Modified PG Binders
Surface Treatment	AC-5, AC-10, AC-5 w/2% SBR, AC-10 w/2% SBR, AC-15P, AC-15-5TR, HFRS-2, MS-2, CRS-2, CRS-2H, HFRS-2P, CRS-2P,
Surface Treatment (Cool Weather)	RS-1P, CRS-1P, RC-250, RC-800, RC-3000, MC-250, MC-800, MC-3000, MC-2400L
Precoating	AC-5, AC-10, PG 64-22, SS-1, SS-1H, CSS-1, CSS-1H
Tack Coat	RC-250, SS-1, SS-1H, CSS-1, CSS-1H, EAP&T
Fog Seal	SS-1, SS-1H, CSS-1, CSS-1H
Hot-Mixed, Cold-Laid Asphalt Mixtures	AC-0.6, AC-1.5, AC-3, AES-300, AES-300P, CMS-2, CMS-2S
Patching Mix	MC-800, SCM I, SCM II, AES-300S
Recycling	AC-3, AES-150P, AES-300P, Recycling Agent, Emulsified Recycling Agent
Crack Sealing	SS-1P, Polymer Mod AE Crack Sealant, Rubber Asphalt Crack Sealers (Class A, Class B)
Prime	MC-30, AE-P, EAP&T, PCE
Curing Membrane	SS-1, SS-1H, CSS-1, CSS-1H, PCE
Erosion Control	SS-1, SS-1H, CSS-1, CSS-1H, PCE

301S.6 Storage, Heating and Application Temperatures

Asphaltic materials should be applied at the temperature, which provides proper and uniform distribution. Within practical limits higher temperatures than necessary to produce the desired results shall be avoided. Satisfactory application usually should be obtained within the recommended ranges shown below.

No material shall be heated above the following maximum temperatures:

Table:18 Recommended Temperature Ranges

	Recommended Range; °F [°C]	Maximum Temperature; °F [°C] for	
Type-Grade	Application/Mixing	Allowable Application	Storage
AC-5, 10,20,30	275-350 [135-177]	375 [191]	400 [204]
AC-5 or AC-10 + 2% SBR	300-375 [142-191]	390* [199]	375 [191]
AC-10 + 3% SBR, AC-45P	300-350 [142-191]	350 [177]	360 [182]
RC-250	125-180 [52-82]	200 [93]	200 [93]
RC-800	170-230 [77-110]	260 [127]	260 [127]
RC-3000	215-275 [102-135]	285 [141]	285 [141]
MC-30, AEP	70-150 [21-66]	175 [79]	175 [79]
MC-70	125-175 [52-79]	200 [93]	200 [93]
MC-250	125-210 [52-99]	240 [116]	240 [116]
MC-800, SCM I, SCM II	175-260 [79-127]	275 [135]	275 [135]
MC-3000 & MC-2400 Latex	225-275 [107-135]	290 [143]	290 [143]
HFRS-2, MS-2, CRS-2, CRS-2H, HFRS-2P, CRS-2P, CMS-2, CMS-2S, AES-300, AES-300S, AES-150P, AES-300P	120 - 160	180	180
SS-1, SS-1h, SS-1P, CSS-1, CSS-1h, PCE, EAP & T, SS-1P, RS-1P, CRS-1P, CSS-1P, recycling agent, emulsified recycling agent, polymer modified AE crack sealant.	50-130 [10-54]	140 [60]	140 [60]
RS-2, RS-2h, MS-2, CRS-2, CRS-2h, CRS-2p, CMS-2, CMS-2S, HFRS-2, HFRS-2p, AES-300	110-160 [43-71]	170 [77]	170 [77]
Special Precoat Material	125-250 [52-121]	275 [135]	275 [135]
PG Binders, Modified PG Binders	275 - 350	350	350
Rubber Asphalt Crack Sealers (Class A, Class B)	350 - 375	400	-
Rubber-Asphalt Crack Sealer	350-375 [177-191]	400 [204]	-

* AC-5 + 2% SBR and AC-10 + 2% SBR, which is designated for surface treatment work, may be heated to a maximum temperature of 390°F [200°C] by the supplier loading through an in-line heater, or with the permission of the Engineer or designated representative, these materials may be heated to maximum of 390°F [200°C] by the Contractor just prior to application. When any of the SBR-modified asphalt cements are used in asphaltic concrete, the storage temperature at the mix plant should not exceed 350°F [177°C].

Attention is called to the fact that asphaltic materials (except emulsions) are very flammable and constitute fire hazards. Proper precautions should be used in all cases, especially with RC cutbacks.

Utmost care shall be taken to prevent open flames from coming in contact with the asphaltic material or the gases of it. The Contractor shall be responsible for any fires or accidents, which may result from heating the asphaltic materials.

301S.7 Measurement and Payment

All asphaltic materials included in this specification will not be paid for directly but shall be included in the unit price bid for the item of construction in which this item is used.

End

Specific CROSS REFERENCE MATERIALS
Specification Item 301S "Asphalts, Oils and Emulsions"

American Association of State Highway and Transportation Officials (AASHTO)

Designation	Description
AASHTO T-44	Solubility Of Bituminous Materials in Organic Solvents
AASHTO T-48	Flash and Fire Points By Cleveland Open Cup
AASHTO T-49	Penetration of Bituminous Materials
AASHTO T-50	Float Test for Bituminous Materials
AASHTO T-51	Ductility of Bituminous Materials
AASHTO T-53	Distillation of Road Tar
AASHTO T-55	Water in Petroleum Products and Bituminous Materials by Distillation
AASHTO T-59	Testing Emulsified Asphalt
AASHTO T-72	Saybolt Viscosity
AASHTO T-78	Distillation of Cut-Back Asphaltic (Bituminous) Products
AASHTO T-79	Flash Point With Tag Open-Cup Apparatus
AASHTO T-201	Kinematic Viscosity of Asphalts
AASHTO T-202	Viscosity of Asphalts by Vacuum Capillary Viscometer
AASHTO TP-1	Creep Stiffness
AASHTO TP-3	Direct Tension
AASHTO TP-5	Dynamic Shear
AASHTO TP-48	Rotational Viscometry

Texas Department of Transportation: Manual of Testing Procedures

Designation	Description
Tex-200-F	Sieve Analysis of Fine and Coarse Aggregates
Tex-238-F	Laser Diffraction Particle Size Distribution Analyzer
Tex-509-C	Spot Test of Asphaltic Materials
Tex-525-C	Tests for Asphalt and Concrete Joint Sealers
Tex-533-C	Determination of Polymer Additive Percentages in Polymer Modified Asphalt Cements
Tex-539-C	
Tex-540-C	
Tex-541-C	
Tex-542-C	
Tex-543-C	
Tex-544-C	

American Society for Testing and Materials (ASTM)

Designation	Description
D 217	Test Methods for Cone Penetration of Lubricating Grease
D 297	Test Methods for Rubber Products-Chemical Analysis
D 2186 Method A	Test Methods for Deposit-Forming Impurities in Steam
D 6084	Test Method for Elastic Recovery of Bituminous Materials by Ductilometer

RELATED CROSS REFERENCE MATERIALS
Specification Item 301S "Asphalts, Oils and Emulsions"

City of Austin Standard Specifications

Designation	Description
Item No. 206S	Asphalt Stabilized Base

Item No. 210S	Flexible Base
Item No. 302S	Aggregates for Surface Treatments
Item No. 306S	Prime Coat
Item No. 307S	Tack Coat
Item No. 310S	Emulsified Asphalt Treatment
Item No. 311S	Emulsified Asphalt Repaving

RELATED CROSS REFERENCE MATERIALS - Continued

Specification Item 301S "Asphalts, Oils and Emulsions"

City of Austin Standard Specifications

Designation	Description
Item No. 312S	Seal Coat
Item No. 313S	Rubber Asphalt Joint and Crack Sealant
Item No. 315S	Milling Asphaltic Concrete Paving
Item No. 320S	Two Course Surface Treatment
Item No. 340S	Hot Mix Asphaltic Concrete Pavement
Item No. 341S	Paving Fabric
Item No. 350S	Heating, Scarifying and Repaving
Item No. 351S	Recycling Agent

City of Austin Standard Details

Designation	Description
1000S-10	Local Street Sections
1000S-11(1)	Residential and Neighborhood collector Street Sections
1000S-11(2)	Industrial and Collector Street Sections
1000S-12(1)	Primary Collector Street Sections
1000S-12(2)	Primary Arterial Street Sections
1000S-13(1)	Minor Arterial Street Sections (4 Lanes)
1000S-13(2)	Minor Arterial Street Sections- (4 Lanes divided)
1000S-14	Major Arterial Street

Texas Department of Transportation: Standard Specifications for Construction And Maintenance of Highways, Streets, and Bridges

Designation	Description
Item 300	Asphalts, Oils and Emulsions
Item 301	Asphalt Antistripping Agents
Item 310	Prime Coat (Cutback Asphaltic Materials)
Item 314	Emulsified Asphalt Treatment
Item 316	Surface Treatments
Item 345	Asphalt Stabilized Base (Plant Mixed)
Item 354	Planing and/or Texturing Pavement
Item 520	Weighing and Measuring Equipment

Texas Department of Transportation: Manual of Testing Procedures

Designation	Description
Tex-126-E	Molding, Testing and Evaluation of Bituminous Black Base Materials
Tex-207-F	Determination of Density of Compacted Bituminous Mixtures
Tex-211-F	Recovery of Asphalt From Bituminous Mixtures By Abson
Tex-215-	Determination of Asphalt Content of Rock Asphalt Process by Hot Solvent Method
Tex-217-F	Determination of Deleterious Material and Decantation Test For Coarse Aggregates
Tex-224-F	Determination of Flakiness
Tex-400-A	Method of Sampling Stone, Gravel, Sand and Mineral Aggregates
Tex-410-A	Abrasion of Coarse Aggregate Using the Los Angeles Machine
Tex-411-A	Soundness of Aggregate by Use of Sodium Sulfate or Magnesium Sulfate
Tex-438-A	Accelerated Polish Test for Aggregate
Tex-460-A	Determination of Crushed Face Particle

Tex-501-C	Test for Water in Petroleum Products and Other Bituminous Materials
Tex-502-C	Test for Penetration of Bituminous Material
Tex-503-C	Test for Ductility of Bituminous Materials
Tex-504-C	Test for Flash and Fire Points of Petroleum Materials by Cleveland Open Cup

RELATED CROSS REFERENCE MATERIALS - Continued

Specification Item 301S "Asphalts, Oils and Emulsions"

Texas Department of Transportation: Manual of Testing Procedures

Designation	Description
Tex-505-C	Test for Softening Point of Bituminous Materials by Ring-and-Ball Method
Tex-506-C	Test for Loss on Heating of Oils and Asphaltic Compounds
Tex-507-C	Proportion of Bitumen Soluble in Trichloroethylene
Tex-510-C	Determining the Effect of Heat and Air on Asphaltic Materials when Exposed in Thin Films
Tex-512-C	Test for Flash Points of Volative Flammable Materials By Tag Open-Cup Apparatus
Tex-513-C	Test for Saybolt Viscosity
Tex-515-C	Distillation of Cut-Back Asphalt Products
Tex-519-C	Float Test for Bituminous Materials
Tex-520-C	Test for Residue of Specified Penetration
Tex-521-C	Testing Emulsified Asphalts
Tex-528-C	Test for Absolute Viscosity of Asphalt Cements
Tex-529-C	Test for Kinematic Viscosity of Asphalts

ATTACHMENT #5

Item No. 340S
Hot Mix Asphaltic Concrete Pavement

340S.1 Description

This item shall govern base, level up, and pavement surface courses composed of a compacted mixture of aggregate and asphaltic cement mixed hot in a mixing plant. The hot mix asphaltic (HMA) concrete pavement shall be constructed on a previously completed and approved subgrade, subbase material, base material, concrete slab or existing pavement.

This specification is applicable for projects or work involving either inch-pound or SI units. Within the text and accompanying tables, the inch-pound units are given preference followed by SI units shown within parentheses.

340S.2 Submittals

The submittal requirements of this specification item may include:

A. A mix design submittal including the plant corrected Job Mix Formula (JMF) for the hot mix asphaltic concrete,
B. Certification that the aggregate materials meet appropriate quality requirements.
C. Particle-size gradation and specific gravity tests on all aggregate materials.
D. Certification that the asphalt cement for paving materials meet appropriate quality requirements.

340S.3 Materials

The Contractor shall furnish materials to meet the requirements specified herein and shall be solely responsible for the quality and consistency of the product delivered to the Project.

A. Aggregate: The aggregate shall be composed of coarse aggregate, a fine aggregate and, if required or allowed, mineral filler and reclaimed asphalt pavement (RAP). RAP use will be allowed in all base course mixtures except as specifically excluded herein, in the Contract Documents or on the Drawings, provided no more than 20% RAP is used.

   RAP use will not be permitted in pavement surface courses.

   Aggregates shall meet the quality requirements of Table 1 and other requirements as specified herein. The aggregate contained in RAP will not be required to meet Table 1 requirements unless indicated otherwise on the Drawings.

   1. Coarse Aggregate: Coarse aggregate is defined as that part of the aggregate retained on the No. 10 (2.00 mm) sieve and shall consist of clean, tough, durable fragments of crushed stone or crushed gravel of uniform quality throughout.

      Gravel from each source shall be crushed to the extent that it has a minimum of 85% of the particles retained on the No. 4 (4.75 mm) sieve with two or more mechanically induced crushed faces as determined by TxDOT Test Method TEX-460-A (Part I). The material passing the No. 4 (4.75 mm) sieve and retained on the No. 10 (2.00 mm) sieve must be the produced from crushing aggregate that was originally retained on the No. 4 (4.75 mm) sieve.

   2. Reclaimed Asphalt Pavement (RAP): RAP is defined as a salvaged, milled, pulverized, broken or crushed asphaltic pavement. The RAP to be used in the mix shall be crushed or broken to the extent that 100 percent will pass the 2-inch (50 mm) sieve.

The RAP shall be stockpiled in such a manner that assures that it will not become contaminated by dirt or other objectionable materials. Unless indicated otherwise on the Drawings, stockpiled, crushed RAP must not exhibit a decantation more than 5 percent or a plasticity index more than 8, when tested in accordance with TxDOT Test Method Tex-406-A, Part I, or Test Method Tex-106-E, respectively.

3. Fine Aggregate: Fine aggregate is defined as that part of the aggregate passing the No. 10 (2.00 mm) sieve and shall be of uniform quality throughout. A maximum of 15 percent of the total aggregate may be field sand or other uncrushed fine aggregate.

   Screenings shall be supplied from sources whose coarse aggregate meets the abrasion and magnesium sulfate soundness loss requirements shown in Table 1.

   a) Unless indicated otherwise on the Drawings, stone screenings, which are the product of a rock crushing operation, are required and shall meet the following gradation requirements when tested in accordance with TxDOT Test Method Tex-200-F, Part I.

Material	Percent by Weight (Mass)
Passing 3/8 inch (9.50 mm) sieve	100
Passing No. 10 (2.00 mm) sieve	70-100
Passing No. 200 (75 µm) sieve	0-15

   b) Crushed gravel screenings may be used with, or in lieu of, stone screenings only when indicated on the Drawings. Crushed gravel screenings must be the product of crushing aggregate that was originally retained on the No. 4 (4.75 mm) sieve and must meet the gradation for stone screenings shown above.

4) Mineral Filler: Mineral filler shall consist of thoroughly dried stone dust, Portland cement, fly ash, lime or other mineral dust approved by the Engineer or designated representative. The mineral filler shall be free from foreign matter.

   Portland cement manufactured in a cement kiln fueled by hazardous waste shall be considered as an approved product if the production facility is authorized to operate under regulation of the Texas Natural Resource Conservation Commission (TNRCC) and the U. S. Environmental Protection Agency (EPA). Supplier shall provide current TNRCC and EPA authorizations to operate the facility.

   Fly ash obtained from a source using a process fueled by hazardous waste shall be considered as an approved product if the production facility is authorized to operate under regulation of the Texas Natural Resource Conservation Commission (TNRCC) and the U. S. Environmental Protection Agency (EPA). Supplier shall provide current TNRCC and EPA authorizations to operate the facility.

   The addition of baghouse fines or other collected fines will be permitted if the mixture quality is not adversely affected in the opinion of the Engineer or designated representative. In no case shall the amount of material passing the No. 200 (75 µm) sieve exceed the tolerances of the job-mix formula or the master gradation limits.

   When tested by TEX-200-F (Part I or Part III, as applicable), the mineral filler shall meet the following gradation requirements. Baghouse fines are not required to meet the gradation requirements.

Material	Percent by Weight (mass)
Passing No. 30 (600 µm) Sieve	95 - 100
Passing No. 80 (187.5 µm) Sieve, not less than	75
Passing No. 200 (75 µm) Sieve, not less than	55

TABLE 1: AGGREGATE QUALITY REQUIREMENTS *

Requirement	Test Method	Amount
COARSE AGGREGATE		
Deleterious Material, percent, maximum	Tex-217-F, I	1.5
Decantation, percent, maximum	Tex-217-F, II	1.5
Los Angeles Abrasion, percent, maximum	Tex-410-A	40
Magnesium Sulfate Soundness Loss 5 cycle, percent, maximum	Tex-410-A	30
FINE AGGREGATE		
Linear Shrinkage, maximum	Tex-107-E, II	3
COMBINED AGGREGATES		
Sand Equivalent Value, minimum	Tex-203-F	45

* - Aggregates, without added mineral filler or additives, combined as used in the job-mix formula (Plant Corrected).

B. Asphaltic Material

1. Paving Mixture. Asphalt cement for the paving mixture shall conform to the requirements of Standard Specification Item No. 301S, "Asphalts, Oils and Emulsions", for AC-20 or PG64-22, Styrene (SBS) Modified Asphalt Cement, AC-SBS Blend AC-45P or PG76-22S, unless otherwise indicated in the Project Documents.

2. Tack Coat: Tack Coat shall conform to Standard Specification Item No. 307S, "Tack Coat".

C. Additives: Additives to facilitate mixing and/or improve the quality of the asphaltic mixture or tack coat may be used with the authorization of the Engineer or designated representative. The Contractor may choose to use either lime or a liquid anti-stripping agent to reduce moisture susceptibility of the aggregate.

340S.4 Paving Mixtures

An asphalt mixture design is developed by a laboratory process, which includes the determination of the quality and quantity of the asphalt cement and the individual aggregates, and the testing of the combined mixture (Laboratory Design). The Laboratory Design is subsequently revised to produce an appropriate job mix formula.

The job mix formula (JMF) lists the quantity of each component to be used in the mix after the laboratory design has been adjusted by running it through a particular plant (i.e. the mix design is Plant Corrected). The JMF will be the standard to which the Acceptance Plan will be applied. The JMF of one drum or batching unit shall not be used for another unit.

The Contractor shall submit to the Engineer on forms provided by the Engineer or designated representative, an asphalt mixture design reviewed, signed and sealed by a Registered Professional Engineer licensed in the State of Texas or certified by a TxDOT Level II Certified

Asphalt Technician. An asphalt mixture design shall be submitted for a comprehensive review every two (2) years. Mix designs older than one year will not be accepted without a review of current test data of the proposed materials and current mix design to ensure that the materials meet specification requirements.

The JMF (Plant Corrected) shall be submitted to the Engineer or designated representative on a form provided by the Engineer through the Construction Inspector or Project Manager of the Project for review, for each individual Project, a minimum of three (3) working days before the mixture is to be placed. Under no circumstances will a mixture be placed before its use is reviewed and approved by the Engineer or designated representative.

Performance of the mix design shall remain the responsibility of the Contractor.

A. Mixture Design: The mix shall be designed in accordance with TxDOT Construction Bulletin C-14 and Test Method Tex-204-F to conform with the requirements herein. The master grading limits of the appropriate type and the JMF will be plotted on a graduated chart with sieve sizes raised to the 0.45 power and will be submitted to the Engineer or designated representative with the asphalt mixture design.

   The Bulk Specific Gravity of aggregates in RAP will be determined on extracted aggregates.

B. Types: The blend of coarse aggregate, fine aggregate, and mineral filler, if allowed, that is established by TxDOT Test Method Tex-200-F, Dry Sieve Analysis, shall conform to the master gradation shown in Table 2 for the type of specified mixture. The voids in the mineral aggregate (VMA) will be determined as a mixture design requirement only, in accordance with TxDOT Test Method Tex-207-F, and shall not be less than the value indicated in Table 2.

TABLE 2: Master Grading - Percent Passing by Weight (Mass) or Volume

Sieve Size US (SI)	Type A Coarse Base	Type B Fine Base	Type C Coarse Surface	Type D Fine Surface	Type F Fine Mixture
1-1/2" (37.5 mm)	100				
1-1/4" " (31 mm)	95-100				
1" (25 mm)		100			
7/8" (22 mm)	70-90	95-100	100		
5/8 (15.5 mm)"		75-95	95-100		
1/2" (12.5 mm)	50-70			100	
3/8" (9.5 mm)		60-80	70-85	85-100	100
1/4" (6.25 mm)					95-100
No. 4 (4.75 mm)	30-50	40-60	43-63	50-70	
No. 10 (2.00 mm)	20-34	27-40	30-40	32-42	32-42
No. 40 (425 µm)	5-20	10-25	10-25	11-26	9-24
No. 80 (187.5 µm)	2-12	3-13	3-13	4-14	3-13
No. 200 (75 µm)	1-6*	1-6*	1-6*	1-6*	1-6*
VMA % minimum	11	12	13	14	15
Rec. Min. Lift	3" (75 mm)	2" (50 mm)	1-3/4" (45 mm)	1" (25 mm)	3/4" (20 mm)

C. Tolerances: Fluctuations in the aggregate gradation and asphalt content of the Job Mix Formula (JMF) shall not vary by more than the following criteria but the aggregate gradation shall be limited to the range of the master gradation as established by TEX-210-F.

SIEVES	Percent By Weight (Mass)
2" " (50 mm) Sieve through No. 10 " (2.00 mm) Sieve	±5.0
No. 40 (425 µm) through No. 200 (75 µm) Sieve	± 3.0
Asphalt Content	±0.5

D. Stability and Density: The mixture shall be designed at or near optimum density, as indicated on the Drawings, to conform to the following percent of Maximum Theoretical Density as measured by TxDOT Test Method TEX-227-F and Stability conforming to TxDOT Test Method TEX-208-F. The laboratory mixture shall be molded in accordance with TxDOT Test Method TEX-206-F and the Bulk Specific Gravity determined in accordance with TxDOT Test Method TEX-207-F.

	Optimum Laboratory Density (%)	Laboratory Density (%) Min.	Max.	Stability
Local Streets Surface Courses	96	94.5	97.5	35 Min.
Collectors & Arterials Surface Courses	96	94.5	97.5	40-60
All Base Courses	96	94.5	97.5	35 Min.

E. Job Mix Formula Field Adjustments: The Contractor shall produce a mixture of uniform composition closely conforming to the reviewed JMF, that falls within the limits of the tolerances given above and the Acceptance Plan.

If it is determined by the City of Austin that adjustments to the JMF are necessary to achieve the specified requirements, the Engineer or designated representative may allow adjustments of the JMF within the following limits without a laboratory redesign of the mixture. The adjusted JMF shall not exceed the master grading criteria for the type of mixture specified. The proposed JMF adjustments shall not exceed 5 percent on any one sieve, ½-inch (12.5 mm) size and larger, or 3 percent on the sieve size below the 1/2-inch (12.5 mm) sieve of the JMF (Plant Corrected) reviewed for the Project.

When the proposed adjustments exceed either the 5 or 3 percent limits, and the Engineer or designated representative determines that the impact of these changes may adversely affect pavement performance, a new laboratory mixture design will be required.

The asphalt content may be adjusted with the concurrence of the Engineer or designated representative to maintain desirable laboratory density near the optimum value while achieving other mix requirements. However, increasing the asphalt content of the mixture in order to reduce pavement air voids will not be allowed. Also, if the percent air voids is determined to be less than 4 percent, adjustments shall be made to the plant production by the Contractor, within the tolerances as outlined above, so that an adequate air void level is attained.

340S.5 Equipment

The trucks that deliver the hot mix asphalt concrete material to the project shall be of sufficient number to insure a continuous paving operation. All equipment used for the production, placement and compaction of the mixture shall be maintained in good repair and operating

conditions to the satisfaction of the Engineer or designated representative. All equipment shall be made available for inspection. If the Engineer or designated representative expresses concern about the condition of any equipment, it shall not be used until it is repaired to the satisfaction of the Engineer or designated representative.

A. Mixing Plants: Plants may be of the weigh-batch type, the modified weigh-batch type or drum-mix type equipped with suitable material conveyers, power units, mixing equipment, aggregate proportioning devices, dryers, bins, dust collectors and sensing and recording devices as appropriate for the mixing plant type. The mixing plants shall meet the requirements specified in Section 340.4, 'Equipment' of TxDOT Specification Item No. 340, "Hot Mix Asphaltic Concrete Pavement".

B. Spreading and Finishing Paving Machine: The paving machine shall be self-propelled and equipped with a heated compacting screed capable of producing a finish surface meeting the requirements of the street cross-section indicated on the Drawings and all surface criteria. Extensions to the screed shall have the same heating and compacting capabilities as the primary unit, except for use on variable depth tapered areas and/or as approved by the Engineer or designated representative.

   The paving machine shall be equipped with an approved automatic dual longitudinal screed control system and an automatic transverse screed control system. The longitudinal controls shall be capable of operating from any longitudinal grade reference including a string line, ski, mobile string line or matching shoe. Unless indicated otherwise on the Drawings, the Contractor may use any one of these grade references. The selected grade reference equipment shall be maintained in good operating condition by personnel trained in the use of the specific type of equipment.

   The Contractor shall furnish all labor and equipment required for establishing and maintaining appropriate grade reference.

C. Rollers: The Contractor shall select rollers conforming to Item 230S, "Rolling (Flat Wheel)" and Item 232S, "Rolling (Pneumatic Tire)". Rollers that do not conform to these requirements shall be immediately removed from the Project.

D. Motor Grader: A self-propelled power motor grader may only be used, when its use is approved by the Engineer or designated representative. It shall have a blade of not less than 12 feet (3.66 meters) and a wheelbase of not less than 16 feet (4.88 meters). Smaller graders may be used for small irregular areas when approved by the Engineer or designated representative.

E. Material Transfer Equipment: Equipment for transferring the HMA mixture from the hauling units or the roadbed to the spreading and finishing machine will be allowed unless indicated otherwise on the Drawings.

   Windrow pick-up equipment, if permitted by the Engineer or designated representative, shall be constructed in such a manner that substantially all of the HMA mixture deposited on the roadbed is picked up and loaded into the spreading and finishing machine. The HMA mixture shall not be contaminated with foreign material. The loading equipment shall be designed so that it does not interfere with the spreading and finishing machine in obtaining the required line, grade and surface without resorting to hand finishing.

F. Straightedges and Templates: The Contractor shall provide a ten-foot (3.05 meter) straightedge acceptable to the Engineer or designated representative for surface testing. Satisfactory templates shall be provided as required by the Engineer or designated representative.

340S.6 Stockpiling Aggregates

Aggregates shall be stockpiled to facilitate blending. When the aggregate is not stockpiled on a hard, non-contaminant base, the bottom six-inch (150 mm) depth of the stockpiles shall not be used in asphaltic mixtures. Where space is limited at the plant site, the aggregate stockpiles shall be separated by walls or other appropriate barriers.

Aggregates shall be stockpiled and handled in a manner that will insure minimization of segregation and contamination. Aggregate and RAP stockpiles shall only contain material from a single source.

340S.7 Mixture Temperature

The Contractor shall select a target temperature for discharge of the HMA mixture from the mixer between 250°F (120°C) and 350°F (176°C) that is suitable to weather and Project conditions. The target temperature shall be reported to the Engineer or designated representative daily and recorded in the Daily Progress Report. The HMA mixture temperature shall not vary by more than 25°F (14°C) from the target temperature for discharge from the mixer. HMA mixtures that are discharged from the mixer at a temperature exceeding 360°F (182°C) or a temperature more than 50°F (28°C) below the target temperature shall not be accepted and shall not be placed on the Project.

340S.8 Mixture Storage

A surge-storage system may be used to minimize production interruptions during a normal day of operation. When approved by the Engineer or designated representative, overnight storage of HMA mixture in insulated storage bins may be used provided that material temperature and physical properties of the HMA mixture are not adversely affected. HMA mixtures that include hardened lumps shall not be used. Stored HMA mixtures shall not be exempt from any requirements provided in this specification.

When a surge-storage system is used, it shall be equipped with a device such as a gob hopper or other device approved by the Engineer or designated representative to prevent segregation in the surge-storage bin.

340S.9 Mixture Moisture Content

Hot mix asphalt (HMA) mixtures produced from any plant shall not have a moisture content in excess of 1 percent by weight (mass) when discharged from the mixer. The moisture content shall be determined in accordance with TxDOT Test Method Tex-212-F, Part II, except that the sample shall be left in the oven a total of not less than four (4) hours.

340S10 Construction Methods

A General: The Contractor shall be responsible for the production, transportation, placement and compaction of the specified HMA paving mixture to the requirements of this specification. The Contractor shall also be responsible for providing a safe environment for inspection personnel to inspect the equipment and to acquire samples.

All hot mix asphalt concrete pavement surface courses shall be placed with a spreading and finishing (lay-down) machine only. All hot mix asphalt concrete pavement base layers with the possible exception of the first lift of the base layer shall also be placed with a

spreading and finishing (lay-down) machine. Longitudinal pavement joints shall be located under the proposed lane lines. Density tests shall be taken prior to opening to traffic.

The first lift of a base layer may be placed with a motor grader if approved in advance by the Engineer or designated representative. The loose measure thickness of this first lift shall not exceed 6 inches (150 mm). If placed with a motor grader, the first lift shall achieve a minimum in-place relative density of 89% as determined by TxDOT test procedures TEX-207-F and TEX-227-F. All subsequent lifts should be placed with a spreading and finishing (lay-down) machine and shall be subject to the requirements of Section 340S.12, "Acceptance Plan". Density tests will be taken randomly to confirm compliance with the specification requirements.

For hot mix asphalt overlays, an automatic screed shall be used with outriggers.

Any material delivered to the Project that by visual inspection can reasonably be expected not to meet specification requirements (i.e. segregated or burned material, deficient or excess asphalt, low mixing temperature, visible contaminants, etc.), as determined by the Engineer or designated representative, shall not be used or left in place.

Equipment shall be inspected prior to use and, if found to be defective or in an operating condition that could potentially affect the quality of the finished pavement, as determined by the Engineer or designated representative, its use shall not be allowed. Leakage of fuels, oils, grease, hydraulic or brake fluids or other contaminants onto the prepared surface or newly-laid HMA layer will not be allowed and may require replacement of the affected pavement area.

The HMA paving mixture, when placed with a spreading and finishing machine, shall not be placed when the air temperature is below 50°F (10°C) and is falling, but it may be placed when the air temperature is above 40°F (4°C) and is rising.

The paving mixture, when used as a level-up course or when spread with a motor grader, shall not be placed when the air temperature is below 60°F (15°C) and is falling, but it may be placed when the air temperature is 50°F (10°C) and is rising. An HMA layer with a thickness of 1-1/2 inches (37.5 mm) and less shall not be placed when the temperature of the surface on which the layer is to be placed is below 50°F (10°C). The temperature shall be taken in a shaded area away from artificial heat.

Additional surface temperature requirements may be included in the Contract Documents or indicated on the Drawings.

Surfaces to be paved shall be finished, primed, cured, broomed and tacked, as appropriate, to the satisfaction of the Engineer or designated representative. If the surface on which the first course of the paving mixture is to be placed is a flexible base course, and a cut-back asphalt is to be used as a prime coat, the flexible base shall have been primed and cured a minimum of 24 hours before the paving mixture may be placed. The 24-hour restriction will not apply to a flexible base that has been primed with material other than a cutback. However, the surface on which the tack coat and/or paving mixture are to be placed shall be in a dry condition.

Pavement shall be opened to traffic as soon as possible after temporary pavement markings or permanent markings are in place as indicated on the Drawings) or as directed by the Engineer or designated representative. Construction traffic allowed on pavements open to the public will be subject to all laws governing traffic on streets and highways.

B. Tack Coat: The surface upon which the tack is to be placed shall be cleaned thoroughly to the satisfaction of the Engineer or designated representative. The surface shall be given a

uniform application of tack coat as governed by Standard Specification Item No. 307S, "Tack Coat". The tack coat shall be applied, as directed by the Engineer or designated representative, with an approved sprayer at a rate not to exceed 0.05 gallons per square yard. (0.225 liters per square meter) of surface area. Where the paving mixture will adhere to the surface on which it is to be placed without the use of a tack coat, the tack coat may be eliminated when approved by the Engineer or designated representative. All contact surfaces of curbs, castings and all structures and all joints shall be painted with a thin uniform application of tack coat.

During the application of tack coat, care shall be taken to prevent splattering of adjacent pavement, curb and gutter and structures. Before the Work can be accepted, all splatter shall be removed by the Contractor at the Contractor's expense.

C. Transporting Hot Mix Asphaltic (HMA) Concrete: The HMA mixture shall be hauled to the Work site in tight vehicles that were previously cleaned of all foreign material. Dispatching of the vehicles shall normally be arranged so that all material delivered is placed and all rolling completed during daylight hours. Nighttime paving may be allowed, when approved in advance by the Engineer or designated representative.

In cool weather or for long hauls, truck bodies containing the HMA mixture shall be covered.

If necessary, to prevent the HMA mixture from adhering to the truck body, the inside of the truck may be given a light coating of a release agent satisfactory to the Engineer or designated representative.

D. HMA Placement: The HMA mixture shall be dumped and spread on the approved prepared surface with the spreading and finishing machine. When properly compacted, the finished pavement shall be smooth, of uniform texture and density and shall meet the requirements of the typical cross sections and the surface tests. In addition the placement of the HMA mixture shall be done without tearing, shoving, gouging or segregating the mixture and without producing streaks in the HMA layer.

Discharge of the HMA mixture into the finishing machine shall be controlled so that the spreading and finishing machine is not bounced or jarred and the required lines and grades shall be obtained without resorting to hand finishing except as permitted below in this Section.

Unless indicated otherwise on the Drawings, dumping of the HMA material in a windrow and then placing the HMA mixture in the finishing machine with windrow pick-up equipment will be permitted provided the temperature of the HMA mixture does not drop more than 50°F (28°C) below the target temperature before being placed by the finishing machine.

Under no circumstances will the HMA material be permitted to be dumped on or near the job site and then reloaded for hauling to the site of placement. Exceptions may be allowed if approved by the Engineer or designated representative.

The windrow pick-up equipment shall be operated in such a manner that substantially all the mixture deposited on the roadbed or prepared surface is picked up and loaded into the finishing machine without contamination by foreign material. The windrow pick-up equipment will also be so operated that the finishing machine will obtain the required line, grade and surface without resorting to hand finishing. Any operation of the windrow pick-up equipment resulting in accumulation and subsequent shedding of accumulated material into the HMA mixture will not be permitted.

When approved by the Engineer or designated representative, level-up courses may be spread with a motor grader that meets the requirements of this specification item.

The spreading and finishing machine shall be operated at a uniform forward speed consistent with the plant production rate, hauling capability and roller train capacity to result in a continuous operation. Stopping of the spreading and finishing machine between trucks is to be held to a minimum. If, in the opinion of the Engineer or designated representative, delivery of material is adversely affecting the condition of the HMA layer (excessive stopping of the spreading and finishing machine, loss of mixture temperature, etc.), the Engineer or designated representative may require paving operations to cease until acceptable methods are provided to minimize starting and stopping of the spreading and finishing machine.

The hopper gates of the spreading and finishing machine shall be adjusted to provide an adequate and consistent flow of material. This shall result in enough material being delivered to the augers so that they are operating approximately 85 percent of the time or more. The augers shall provide means to supply adequate flow of material to the center of the paver. Augers shall supply an adequate flow of material for the full width of the mat being placed, as approved by the Engineer or designated representative. Augers should be kept approximately one-half to three-quarters full of HMA mixture at all times during the paving operation.

When the HMA mixture is placed in a narrow strip along the edge of an existing pavement, or is used to level up small areas of an existing pavement or is placed in small irregular areas where the use of a finishing machine is not practical, the finishing machine may be eliminated when permitted by the Engineer or designated representative.

The paving material adjacent to castings and flush curb and gutter and structures shall be finished uniformly high so that when compacted, it will be slightly above but not more than 1/8 inch (3 mm) above the edge of the casting or gutter lip.

Construction joints of successive courses of HMA material shall be offset at least 6 inches (150 mm). Longitudinal joints in the layer shall be placed to coincide with lane lines as directed the Engineer or designated representative. Transverse joints shall be offset a minimum of 5 feet (1.5 meters).

E. Compaction: The pavement layers/lifts shall be compacted thoroughly and uniformly to obtain the compaction and cross section meeting the requirements indicated on the Drawings and this specification item.

Regardless of the method used for compaction, all rolling to achieve specified density shall cease before the temperature of the HMA mixture drops below 175°F (80°C).

Rolling with a pneumatic tire roller shall be used to seal the surface. Rolling with a tandem or other steel-wheel roller shall be provided if required to iron out any roller marks. Surface sealing and removal of roller marks may be accomplished at HMA temperatures below 175°F (80°C).

Vibratory rollers shall not be allowed in the vibrating mode on layers with a plan thickness less than 1-1/2 inches (37.5 mm).

The motion of the rollers shall be slow enough to avoid other than usual initial displacement. If any displacement occurs, it shall be corrected to the satisfaction of the Engineer or designated representative.

The roller shall not be allowed to stand on pavement, which has not been compacted to minimum density requirements. In order to prevent adhesion of the surface mixture to the steel-wheel rollers, the wheels shall be thoroughly moistened with water; however an excess

of water will not be allowed. Necessary precautions shall be taken to prevent the dropping of diesel, gasoline, oil, grease or other foreign matter on the pavement, either when the rollers are in operation or when standing.

The edges of the pavement along curbs, headers and similar structures, and all places not accessible to the roller, or in such positions as will not allow thorough compaction with the rollers, shall be thoroughly compacted with lightly oiled tamps.

Rolling with a trench roller will be required on widened areas, in trenches and other limited areas where satisfactory density cannot be obtained with the approved rollers.

340S.11 Sampling and Testing

The HMA mixture shall be tested daily at the Project site for conformance to specification requirements. The Engineer or designated representative shall utilize a random selection method to determine sample locations based on the Contractor's anticipated production. Each day's anticipated production shall be divided into three (3) essentially equal single-pass, sub-area lots. Each day's sample locations shall be equally distributed over the three (3) sub-areas. If, due to the weather or plant malfunctions, the Contractor's daily-anticipated production is not attained, the random locations will not be recalculated. Also, no more than one location of the three (3) sub-areas shall be located in an irregular shaped area such as a cul-de-sac.

Unless directed otherwise by the Engineer or designated representative, a minimum of three bag samples and three correlating 6-inch (150-mm) cores will be obtained from each day's production.

Bag samples shall be taken during lay-down operations. The primary sampling point for the bag samples shall be from the windrow if a windrow elevator is used. If a windrow elevator is not used, the sample shall be taken from the middle of the paving machine hopper. This sampling location will require a stoppage in the paving operation in order for the Inspector to safely secure a sample from the hopper.

One core shall be taken for every 2,000 single-pass square yards (1 675 single-pass square meters) with a minimum of three (3) cores for all projects. One core shall be taken at the same station and pass sampled for each of the bag samples. Cores shall be taken by the City's laboratory within 48 hours of pavement laydown unless otherwise directed by the Engineer or designated representative.

For total areas of less than 500 square yards (420 square meters), a total of only two bag samples and two correlating cores will be obtained. If the Contractor desires additional testing, it shall be at its own entire expense.

The Engineer or designated representative may alter, increase or waive the testing schedule to ensure that the Work performed and the material used meet specification requirements. Acceptability of the completed pavement shall be based on the average of test results for the Project as defined in Section 340S.12, "Acceptance Plan" of this item.

Gradation, asphalt content and stability value of the HMA mixture shall be reported for each of the bag samples. The stability value reported for each of the bag samples shall be the average of three (3) tests per bag.

Pavement thickness and density shall be determined from 6-inch (150 mm) field cores. For each day's placement, density of cores for which no corresponding bag samples were taken shall be determined by using the average Maximum Theoretical Density of the day's three (3) bag samples or as may otherwise be determined by the Engineer or designated representative.

When, in the opinion of the Engineer or designated representative, test results appear unrepresentative, additional testing may be authorized. The retesting will be at the expense of the Contractor and the results of the retesting shall be averaged with the results of the original testing. If the results of retesting indicate that the original test results were erroneous, the original test results will be discarded. In the instance of erroneous original test results the subsequent first set of retests will be at the expense of the City of Austin.

Pavements with low-density results may be recored; but the pavement shall not receive any additional compactive effort.

Pavements that will not or cannot be cored within 48 hours shall be closed to both public and construction traffic.

340S.12 Acceptance Plan

For the purpose of the Acceptance Plan only, the "Paving Project" of each of the specified mixture types shall be defined by the Engineer or designated representative before the paving operation begins

Considerations for defining the Paving Project shall include paving operations staged due to traffic considerations, pavement structural section (i.e. with varying layer thicknesses), time required for paving, changes to the Job Mix Formula, phasing of large projects, or other factors affecting the consistency in the production, lay-down/compaction, use of completed portions, and/or aging of in-place material.

Acceptability of the completed pavement structure for a Paving Project shall be based on all daily averages of three test results and when approved by the Engineer or designated representative the overall average of all test results for each of the mixture/layer types specified on the Drawings.

Pay adjustments for two or more acceptance factors shall be accumulative. Pay adjustments of 100% unit price reduction shall require removal and replacement of the Work. Replacement materials shall be subject to all requirements of this specification. Alternatively, the Engineer or designated representative may allow the Work to remain in place without payment provided that the Work is warranted for an extended period under conditions as determined by the Engineer or designated representative. The decision of the Engineer or designated representative related to the removal and replacement of the Work shall be the final authority.

A. Non-Pay-Adjustment Acceptance Factors:

1 Surface Characteristics: Unless otherwise directed by the Engineer or designated representative, all pavements shall be tested for smoothness. Surfaces shall be tested with a 10-foot (3.05 meter) straightedge parallel to the roadway centerline and perpendicular to the centerline on flat, cross-slope sections. Maximum allowable deviation in 10 feet shall be 1/8 inch (1-mm per meter) parallel to the centerline and 1/4 inch (2-mm per meter) perpendicular to the centerline. Sections exceeding these maximums shall be corrected to the satisfaction of the Engineer or designated representative. The completed surface must meet the approval of the Engineer or designated representative for surface smoothness, finish and appearance.

If the surface ravels, ruts or deteriorates in any manner prior to the end of the warranty period, it will be the Contractor's responsibility to correct this condition at its own entire expense to the satisfaction of the Engineer or designated representative in conformance with the requirements of this specification.

For HMAC rehabilitation and overlay projects, if cracks develop in the pavement surface within the one-year warranty period, the Contractor shall seal the cracks in accordance with Standard Specification Item No. 313S, "Cleaning and/or Sealing Joints and Cracks (Asphaltic Concrete). Payment for this work will be measured and paid for as Mobilization (LS) and Crack Sealing (LF).

For new HMAC roadways constructed in accordance with the Drawings and specifications, if cracks less than 1/4 inch (6 mm) in width develop in the pavement surface within the one year warranty period the Contractor shall seal the cracks in accordance with Standard Specification Item No. 313S, "Cleaning and/or Sealing Joints and Cracks (Asphaltic Concrete). Payment for this Work will be measured and paid for as Mobilization (LS) and Crack Sealing (LF).

If cracks equal to or greater than 1/4 inch (6 mm) in width develop in the pavement surface within the one-year warranty period, the cracking shall be reviewed and evaluated by the Engineer or designated representative before corrective action is taken.

2. Stability: Stability test results shall be used as indicators of potential problems. Where stability test results fall below the range specified in this specification, additional tests shall be taken as directed by the Engineer or designated representative for further evaluation and monitoring of the paving mixture. This additional stability testing will be at the expense of the Contractor. When, in the opinion of the Engineer or designated representative, the stability is deemed unacceptable for the intended use of the pavement, the paving mixture shall be removed and replaced to the limits indicated by test results or may be left in place on conditions acceptable to the Engineer or designated representative. When the paving mixture is removed and replaced, it shall be at the sole expense of the Contractor.

3. Laboratory Density: Laboratory density results as determined by TxDOT Test Method Tex-207-F shall be used as indicators of potential problems. Where laboratory density test results are less than 94.5% or more than 97.5% of mix design maximum density, additional tests shall be taken as directed by the Engineer or designated representative for further evaluation and monitoring of the paving mixture. This additional laboratory density testing will be at the expense of the Contractor. When, in the opinion of the Engineer or designated representative, the laboratory density is deemed unacceptable for the intended use of the pavement, the paving mixture shall be removed and replaced to the limits indicated by test results.

   The removal and replacement of the paving mixture shall be at the sole expense of the Contractor.

4. Limited Areas: Irrespective of an acceptable overall Paving Project average for any or all of the Pay-Adjustment Acceptance Factors, limited substandard portions of the Work, as determined by the Engineer or designated representative, shall be remedied or removed and replaced to the satisfaction of the Engineer or designated representative at the sole expense of the Contractor.

B. Pay-Adjustment Acceptance Factors: Contract unit prices shall be adjusted for paving mixtures that fail to meet acceptance criteria for gradation, asphalt content, density and mat thickness in accordance with the following:

Gradation Acceptance Schedule (TEX-210-F)

Sieve	Deviation From Job Mix Formula		Percent Contract Unit Price Reduction
	Daily Average	Overall Average	
Total retained on No. 10 (2.00 mm)	± 6.5	± 5.0	0
	6.6±	5.1±	10
Passing No. 200 (75 µm)	± 3.9	± 3.0	0
	4.0±	3.1±	5

Asphalt Content Acceptance Schedule (TEX-210-F, PartII)

Deviation from the Job Mix Formula		Percent Contract Unit Price Reduction	
Daily Average	Overall Average	Local Streets*	All Others
± 0.5	± 0.4	0	0
±0.51 to ±0.60	±0. 41 to ±0.50	15	25
+0.61 to +0.70	+0.51 to +0.60	25**	100; Remove and Replace
-0.61 to -0.70	-0.51 to -0.60	100: Remove and Replace	100; Remove and Replace
Over ±0.70	Over ±0.60	100: Remove and Replace	100; Remove and Replace

*A local or residential street that serves as access to residence or other abutting property.

**If the street has an ADT of 500, or less, with 1%, or less, of truck traffic, plus a 2 year warranty; otherwise, Remove and Replace

Density Acceptance Schedule (TEX-207-F/TEX-227-F)

*Percent Density		Percent Contract Unit Price Reduction	
Daily Average	Overall Average	1-1/2" (38 mm) Thickness or Greater	Less than 1-1/2" (38 mm) Thickness
Above 96.5	Above 96	100; Remove and Replace	100; Remove and Replace
90.5 to 96.5	91 to 96	0	0
90.5 to 87.6	90.9 to 88.1	0.625 per 0.10% deficiency in density	0.50 per 0.10% deficiency in density
Less than 87.6	Less than 88.1	100: Remove and Replace	100; Remove and Replace

*Core bulk density divided by max. theoretical density

Thickness Acceptance Schedule

Variance Percent of Thickness		Percent Contract Unit Price Reduction
Daily Average	Overall Average	
0 – 15.0	0 - 10	0
15.1 – 20.0	10.1 - 16	20
20.1 – 30.0	16.1 - 25	50
Over 30.0	Over 25	100; Remove and Replace or mill/overlay 1" (25 mm) minimum

The Density Acceptance Schedule For Irregularly Shaped Areas; Hike And Bike Trails And Utility Trenches (see following table) will apply to utility trenches of widths less than 4 feet

(1.2 meter) and to irregular shaped areas and hike and bike trails in which an appropriate rolling pattern cannot be established making it difficult to achieve compaction.

Density Acceptance Schedule For Irregularly Shaped Areas; Hike And Bike Trails and Utility Trenches (TEX-207-F/TEX-227-F)

*Percent Density	Percent Contract Unit Price Reduction	
Daily Average	1-1/2" (38 mm) Thickness or Greater	Less than 1-1/2" (38 mm) Thickness
Above 96.5	100; Remove and Replace	100; Remove and Replace
96.5 to 89.0	0	0
89.0 to 86.1	0.625 per 0.10% deficiency in density	0.50 per 0.10% deficiency in density
Less than 86.1	100: Remove and Replace	100; Remove and Replace
*Core bulk density divided by maximum theoretical density		

The Density Acceptance Schedule will apply to utility trenches 4 feet (1.2 meter) or wider.

Core thicknesses greater than Drawing requirements shall be factored into the average thickness calculation as the Drawing required thickness. If total thickness of lift(s) proves to be less than required, the Contractor may remove and replace the overlay deficient areas as agreed to by the Engineer or designated representative. Overlays to correct thickness deficiencies shall be not less than one (1) inch (25-mm) thick. Overlays shall require milling of the asphalt in order to prevent a "featheredge" of the overlaying pavement.

The extent of the area to be overlaid or removed and replaced shall be determined by additional cores with thicknesses greater than or equal to the required thickness. All additional coring that is necessary to determine the area shall be paid for by the Contractor.

340S.13 Measurement

Work performed and material placed shall be measured under one of the following methods. When Drawing quantity measurement is specified, adjustment of quantity may be made as follows. If the quantity measured as outlined vary from those shown on the Drawings by more than 5%, either party to the Contract may request in writing and adjustment of the quantity by each separate bid item. The party to the Contract which requests the adjustment shall present to the other party one copy of measurements and calculations showing the revised quantity in question. This revised quantity, when approved by the Engineer or designated representative, shall constitute the final quantity for which payment will be made. However, no adjustment will be made for any quantity, which exceeds the Drawing required thickness.

A. Method A: Asphaltic concrete pavement shall be measured by the ton (2,000 pounds) of the type actually used in completed and accepted Work in accordance with the Drawings and specifications.

   The measurement shall be made on approved truck scales that meet the requirements of the National Institute of Standards and Technology Handbooks 44 and 112 except that the required accuracy shall be 0.4 percent of the load being weighed. The Contractor shall furnish a report of calibration from a scale mechanic licensed by the Texas Department of Agriculture certifying that the scales meet this requirement.

B. Method B: Asphaltic concrete pavement shall be measured by the square yard of specified total thickness of the type of paving mixture actually used in completed and accepted Work in

accordance with Drawings and specifications. Multiple lifts of the same type shall be considered as one for square yard measurement purposes.

C. Method C: Asphaltic concrete pavement shall be measured by the lineal foot of specified total thickness of the type of paving mixture actually used in completed and accepted Work in accordance with Drawings and specifications. Multiple lifts of the same type shall be considered as one for linear foot measurement purposes.

340S.14 Payment

Work performed and materials furnished as prescribed by this item and measured as provided under "Measurement" will be paid for at the unit bid prices or pay adjusted unit price for Hot Mix Asphaltic Concrete Pavement, of the types and thicknesses specified. The unit bid prices shall include full compensation for furnishing all labor, equipment, time, materials and incidentals necessary to complete the Work.

Removal of existing hot mix asphalt concrete transition areas prior to overlay, tack coat, saw cutting and temporary pavement markings will not be measured or paid for directly but shall be included in the unit price bid for Standard Specification Item No. 340S, "Hot Mix Asphaltic Concrete Pavement".

Payment for Work meeting these specifications will be made under one of the following:

Pay Item No. 340S-A:	Hot Mix Asphaltic Concrete Pavement, Type ____,	Per Ton.
Pay Item No. 340S-B:	Hot Mix Asphaltic Concrete Pavement, ___Inches, Type ____,	Per Square Yard.
Pay Item No. 340S-C:	Hot Mix Asphaltic Concrete Pavement, ___Inches, Type ____,	Per Lineal Foot.
Pay Item No. 340S-PQ:	Hot Mix Asphaltic Concrete Pavement, ___Inches, Type ____, Plan Quantity,	Per Ton
Pay Item No. 340S-L:	Hot Mix Asphaltic Concrete Pavement, ___In., Type ____, Level-up Course,	Lump Sum.
Pay Item No. 340S-M:	Crack Sealing Mobilization,	Lump Sum.
Pay Item No. 340S-S:	Crack Sealing,	Per Lineal Foot.

End

SPECIFIC CROSS REFERENCE MATERIALS
Special Specification Item 340S "Hot Mix Asphaltic Concrete Pavement"

City of Austin Standard Specifications

Designation	Description
Item No. 230S	Rolling (Flat Wheel)
Item No. 232S	Rolling (Pneumatic Tire)
Item No. 301S	Asphalts, Oils and Emulsions
Item No. 307S	Tack Coat
Item No. 313S	Cleaning and/or Sealing Joints and Cracks (Asphaltic Concrete)

Texas Department of Transportation: Manual of Testing Procedures

Designation	Description
Tex-106E	Method of Calculating the Plasticity Index of Soils
Tex-107E	Determination of Bar Linear Shrinkage of Soils
Tex-200-F	Sieve Analysis of Fine and Coarse Aggregates
Tex-203-F	Sand Equivalent Test
Tex-204-F	Design of Bituminous Mixtures
Tex-207-F	Determination of Density of Compacted Bituminous Mixtures
Tex-208-F	Test for Stabilometer Value of Bituminous Mixtures
Tex-210-F	Determination of Asphalt Content of Bituminous Mixtures by Extraction
Tex-212-F, Part II	Determination of Moisture Content of Bituminous Mixtures (by oven drying)
Tex-217-F	Determination of Deleterious Material and Decantation Test For Coarse Aggregates
Tex-227-F	Theoretical Maximum Specific Gravity of Bituminous Mixtures
Tex-410-A	Abrasion of Coarse Aggregate Using the Los Angeles Machine
Tex-460-A	Determination of Crushed Face Particle

Texas Department of Transportation: Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges

Designation	Description
Item 340	Hot Mix Asphalt Concrete Pavement

RELATED CROSS REFERENCE MATERIALS
Special Specification Item 340S "Hot Mix Asphaltic Concrete Pavement"

City of Austin Standard Specifications

Designation	Description
Item No. 206S	Asphalt Stabilized Base
Item No. 210S	Flexible Base
Item No. 306S	Prime Coat
Item No. 310S	Emulsified Asphalt Treatment
Item No. 311S	Emulsified Asphalt Repaving
Item No. 320S	Two Course Surface Treatment

Texas Department of Transportation: Manual of Testing Procedures

Designation	Description
Tex-215-F	Determination of Asphalt Content of Rock Asphalt By Hot Solvent Method
Tex-224-F	Determination of Flakiness
Tex-400-A	Method of Sampling Stone, Gravel, Sand and Mineral Aggregates

Tex-411-A	Soundness of Aggregate by Use of Sodium Sulfate or magnesium Sulfate
Tex-438-A	Accelerated Polish Test for Aggregate

ATTACHMENT #6

For this project, Item No. 340S, "Hot Mix Asphaltic Concrete Pavement" of the Standard Specifications, is hereby amended with respect to the clauses cited below, and no other clauses or requirements of this Item are waived or changed hereby.

Article 340S.3. Materials, Section A. Aggregate first three paragraphs are voided and REPLACED by the following:

A. Aggregate. Furnish aggregates from sources that conform to the requirements shown in Table 1 and as specified in this Section. Aggregate requirements in this Section, including those shown in Table 1, may be modified or eliminated when shown on the plans. Additional aggregate requirements may be specified when shown on the plans. Provide aggregate stockpiles that meet the definition in this Section for coarse, intermediate, or fine aggregate. Aggregate from reclaimed asphalt pavement (RAP) is not required to meet Table 1 requirements unless otherwise shown on the plans. Supply aggregates that meet the definitions in Tex-100-E for crushed gravel or crushed stone. The Engineer will designate the plant or the quarry as the sampling location. Samples must be from materials produced for the project. The Contactor must provide data for the supplier's testing values for Los Angeles abrasion, magnesium sulfate soundness, and Micro-Deval tests. Contractor shall perform all other aggregate quality tests listed in Table 1 and document all test results on the mixture design report. The Engineer may perform tests on independent or split samples to verify Contractor test results. Stockpile aggregates for each source and type separately. Determine aggregate gradations for mixture design and production testing based on the washed sieve analysis given in Tex-200-F, Part II.

Article 340S.3. Materials, Section A. Aggregate Table 1 is AMENDED by the inserting the following row between Decantation and Los Angeles Abrasion:

Micro-Deval abrasion, %	TEX-461-A	Note 1

Article 340S.3. Materials, Section A. Aggregate Table 1 is AMENDED by the adding the following note below the table:

1. Used to estimate the magnesium sulfate soundness loss in accordance with "Micro-Deval Abrasion" described in this section.

Article 340S.3. Materials, Section A. Aggregate, Section 2. RAP is voided and REPLACED by the following two sections:

2. Recycled Materials. Use of RAP is permitted unless otherwise shown on the plans. Use of RAS is not permitted. Do not exceed the maximum allowable percentages of RAP shown in Table 1A. The allowable percentages shown in Table 1A may be decreased or increased when shown on the plans. Determine asphalt binder content and gradation of the RAP stockpiles for mixture design purposes in accordance with Tex-236-F. The Engineer may verify the asphalt binder content of the stockpiles at any time during production. Perform other tests on RAP when shown on the plans. Asphalt binder from RAP is designated as recycled asphalt binder. Calculate and ensure that the ratio of the recycled asphalt binder to total binder does not exceed the percentages shown in Table 1B during mixture design and HMA production when RAP is used. Use a separate cold feed bin for each stockpile of RAP during HMA production.

Surface, intermediate, and base mixes referenced in Tables 1A and 1B are defined as follows:

- **Surface** - the final HMA lift placed at or near the top of the pavement structure;
- **Intermediate** - mixtures placed below an HMA surface mix and less than or equal to 4.0 in. from the riding surface; and
- **Base** - mixtures placed greater than 4.0 in. from the riding surface.

3. RAP. RAP is salvaged, milled, pulverized, broken, or crushed asphalt pavement. Crush or break RAP so that 100% of the particles pass the 2-in. sieve. Fractionated RAP is defined as having two (2) or more RAP stockpiles, divided into coarse and fine fractions.

Use of Contractor-owned RAP including hot-mix asphalt (HMA) plant waste is permitted, unless otherwise shown on the plans. Contractor may use Contractor-owned fractionated RAP. Perform any necessary tests to ensure Contractor-owned RAP is appropriate for use. When shown on the plans, the contractor will retain ownership of RAP generated on the project.

The coarse RAP stockpile will contain only material retained by processing over a 3/8 in. screen or 1/2 in. screen, unless otherwise approved. The fine RAP stockpile will contain only material passing the 3/8 in. screen or 1/2 in. screen, unless otherwise approved. The Engineer may allow the Contractor to use an alternate to the 3/8 in. screen or 1/2 in. screen to fractionate the RAP. The maximum percentages of fractionated RAP may be comprised of coarse or fine fractionated RAP or the combination of both coarse and fine fractionated RAP.

Do not use RAP contaminated with dirt or other objectionable materials. Do not use RAP if the decantation value exceeds 5% and the plasticity index is greater than 8. Test the stockpiled RAP for decantation in accordance with TEX-406-A, Part I. Determine the plasticity index in accordance with TEX-106-E if the decantation value exceeds 5%. The decantation and plasticity index requirements do not apply to RAP samples with asphalt removed by extraction or ignition.

Remove unused Contractor-owned RAP material from the project site upon completion of the project.

Table 1A
Maximum Allowable Amounts of RAP[1]

Maximum Allowable Fractionated RAP (%)			Maximum Allowable Unfractionated RAP[2] (%)		
Surface	Intermediate	Base	Surface	Intermediate	Base
20.0	30.0	40.0	10.0	10.0	10.0

1. Must also meet the recycled binder to total binder ratio shown in Table 1B.
2. Unfractionated RAP may not be combined with fractionated RAP.

Article 340S.3. Materials, Section A. Aggregate ADD the following after the new subsection 3. RAP:

4. RAS. Use of recycled asphalt shingle (RAS) material will not be permitted unless otherwise shown on the plans.

Article 340S.3. Materials, Section A. Aggregate RENUMBER section 3:

3. Fine Aggregate to **5. Fine Aggregate**

Article 340S.3. Materials, Section A. Aggregate RENUMBER section 4:

4. Mineral Filler to **6. Mineral Filler**

Article 340S.3. Materials, Section A. Aggregate ADD the following to the end of Section A as subsection **7. Micro-Deval Abrasion**:

7. Micro-Deval Abrasion. The Contactor shall provide results for a minimum of one Micro-Deval abrasion test in accordance with Tex-461-A for each coarse aggregate source used in the mixture design that has a Rated Source Soundness Magnesium (RSSM) loss value greater than 15 as listed in the TxDOT BRSQC. The Engineer may perform additional testing at any time during production. The Engineer may obtain the coarse aggregate samples from each coarse aggregate source or may require the Contractor to obtain the samples. The Engineer may waive all Micro-Deval testing based on a satisfactory test history of the same aggregate source.

The Engineer will estimate the magnesium sulfate soundness loss for each coarse aggregate source, when tested, using the following formula:

$Mg_{est} = (RSSM)(MD_{act}/RSMD)$

where:
$Mg_{est.}$ = magnesium sulfate soundness loss
MD_{act} = actual Micro-Deval percent loss
RSMD = Rated Source Micro-Deval

When the estimated magnesium sulfate soundness loss is greater than the maximum magnesium sulfate soundness loss specified, the coarse aggregate source will not be allowed for use unless otherwise approved. Additional testing may be required before granting approval.

Article 340S.3. Materials, Section B. Asphalt Binder is SUPPLEMENTED by the following:

B. Asphalt Material. Furnish the type and grade of performance-graded (PG) asphalt specified on the plans. The contractor may use a substitute PG binder listed in Table 1B in lieu of the PG binder originally specified when RAP is used, if the substitute PG binder and mixture made with the substitute PG binder meet the following:

- the substitute binder meets the specification requirements for the substitute binder grade in accordance with Item 301S.3.J, "Performance-Graded Binders;" and
- the mixture has less than 10.0 mm of rutting on the Hamburg Wheel test (Tex-242-F) after the number of passes required for the originally specified binder. Use of substitute PG binders may only be allowed at the discretion of the Engineer if the Hamburg Wheel test results are between 10.0 mm and 12.5 mm.

Table 1B
Allowable Substitute PG Binders and Maximum Recycled Binder Ratios

Originally Specified PG Binder	Allowable Substitute PG Binder	Maximum Ratio of Recycled Binder[1] to Total Binder (%)		
		Surface	Intermediate	Base
Hot Mix Asphalt (HMA)				
76-22[2]	70-22 or 64-22	20	20	20
	70-28 or 64-28	30	35	40
64-22[2]	58-28	30	35	40
Warm Mix Asphalt (WMA)[3]				
76-22[2]	70-22 or 64-22	30	35	40
64-22[2]	58-28	30	35	40

1. Recycled binder from RAP.
2. Use no more than 20% recycled binder when using this originally specified binder.
3. As described in section 340.S.3.C.2 Warm Mix Asphalt (WMA).

Article 340S.3. Materials, Section C. Additives is SUPPLEMENTED by the following:

Section C. Additives: Additives to facilitate mixing, compaction, and/or improve the quality of the asphaltic mixture or tack coat may be used with the authorization of the Engineer or designated representative.

1. **Lime and Liquid Anti-Stripping Agent.** The Contractor may choose to use either lime or a liquid anti-stripping agent to reduce moisture susceptibility of the aggregate. Do not add lime directly into the mixing drum of any plant where lime is removed through the exhaust stream unless the plant has a baghouse or dust collection system the reintroduces the lime in the drum.

2. **Warm Mix Asphalt (WMA).** Warm Mix Asphalt (WMA) is defined as HMA that is produced within a target temperature discharge range 215° F and 275° F using approved WMA additives or processes. A list of the approved WMA additives and processes is located on the TxDOT MPL at

   http://www.dot.state.tx.us/txdot_library/publications/producer_list.htm

   WMA is allowed for use on all projects and is required when shown on the plans. When WMA is required, the maximum placement temperature or target discharge temperature for WMA will be set at a value below 275° F.

   Approved WMA additives or processes may be used to facilitate mixing and compaction of HMA produced at target discharge temperatures greater than 275° F; however, such mixtures will not be defined as WMA.

Article 340S.4. Paving Mixtures, Section D. Stability and Density is REPLACED by the following:

Stability Requirements:

The mixture shall be designed at or near optimum density, as indicated on the Drawings, to conform to the following percent of Maximum Theoretical Density as measured by TxDOT Test Method TEX-227-F and Stability conforming to TxDOT Test Method TEX-208-F. The laboratory mixture shall be molded in accordance with TxDOT Test Method TEX-206-F and the Bulk Specific Gravity determined in accordance with TxDOT Test Method TEX-207-F.

Arterial and Collector street surface courses shall be designed with a Stability between 40 and 60. Local street surface courses and other intermediate and base courses shall be designed for a minimum Stability of 35.

Laboratory Mixture Design Properties

Mixture Property	Test Method	Requirement
Target Laboratory-Molded Density, %	Tex-207-F	96.5
Tensile Strength (dry), psi (molded to 93% ±1% density)	Tex-226-F	85–200[2]
Boil Test[3]	Tex-530-C	–

1. Increase to 97% or 97.5% at the Contractor's discretion or when shown on the plans or specifications.
2. Engineer may allow Indirect Tensile Strength to exceed 200 psi if the corresponding Hamburg Wheel rut depth is greater than 3.0 mm and less than 12.5 mm.
3. Used to establish baseline for comparison to production results. May be waived when approved.

Use an approved laboratory to perform the Hamburg Wheel test and provide results with the mixture design based on the following requirements:

Hamburg Wheel Test Requirements

High-Temperature Binder Grade	Test Method	Minimum # of Passes @ 0.5" (12.5 mm)[1] Rut Depth, Tested @122°F (50°C)
PG 64 or lower	Tex-242-F	10,000[2]
PG 76 or higher		20,000

1. When the rut depth at the required minimum number of passes is less than 3 mm, the Engineer may require the contractor to increase the target laboratory-molded density (TGC) by 0.5% to no more than 97.5%.
2. May be decreased to no less than 5,000 passes when shown on the plans.

Article 340S.4. Paving Mixtures, Section E. Job-Mix Formula Field Adjustments. The second paragraph is voided and REPLACED by the following:

If it is determined by the City of Austin that adjustments to the JMF are necessary to achieve the specified requirements, the Engineer or designated representative may allow adjustments of the JMF within the following limits without a laboratory redesign of the mixture. The following table shows the Operational Tolerances that will be allowed. When the proposed adjustments exceed these limits, and the Engineer or designated representative determines that the impact of these changes may adversely affect pavement performance, a new laboratory mixture design will be required.

Operational Tolerances

Description	Test Method	Allowable Difference from Current JMF Target	Allowable Difference between Contractor and Engineer[1]
Individual % retained for #10 sieve and larger	Tex-200-F or Tex-236-F	±5.0[2]	±5.0
Individual % retained for sieves smaller than #10 and larger than #200		±3.0[2]	±3.0
% passing the #200 sieve		±2.0[2]	±1.6
Asphalt content, %	Tex-236-F	±0.3[3]	±0.3
Laboratory-molded density, %	Tex-207-F	±1.0	±1.0
In-Place air voids, %		N/A	±1.0
Laboratory-molded bulk specific gravity		N/A	±0.020
VMA, % min	Tex-204-F	Note 4	N/A
Theoretical maximum specific (Rice) gravity	Tex-227-F	N/A	± 0.020

1. Contractor may request referee testing only when values exceed these tolerances.
2. When within these tolerances, mixture production gradations may fall outside the master grading limits; however, the % passing the #200 will be considered out of tolerance when outside the master grading limits.
3. Tolerance between JMF1 and JMF2 may exceed ±0.3%.
4. Test and verify that Master Gradation Limit requirements are met.

Article 340S.7.Mixture Temperature is SUPPLEMENTED by the following:

When WMA is specified on the plans, produce the mixture and monitor the temperature of the material in the truck before shipping to ensure that it does not exceed 275°F or is less than 215°F. When WMA is specified, payment will not be made for and Contractor shall not place any WMA produced at more than 275°F or less than 215°F, unless otherwise directed.

Article 340S.9. Mixture Moisture Content. The section is AMENDED by the following:

The mixture shall contain no more than 0.2% moisture by weight upon discharging into trucks.

Article 340S.10. Construction Methods. The first paragraph is SUPPLEMENTED by the following:

On or before the first day of paving, it is mandatory to schedule and participate in a pre-paving meeting with the Engineer unless otherwise shown on the plans.

Article 340S.10. Construction Methods, Section A. General. is SUPPLEMENTED by adding the following between the eighth and ninth paragraphs:

In lieu of complying with the requirements in Minimum Temperature, the Contractor may pave any time the roadway is dry and the roadway surface temperature is at least 32°F by using a thermal imaging system (paver mounted infrared bar) and demonstrating to the Engineer that no (moderate or severe) thermal segregation exists; however, Engineer may restrict the Contractor from paving surface mixtures if the ambient temperature is likely to drop below 32°F within 12 hours of paving.

When used, operate the thermal imaging system in accordance with Tex-244-F and provide the Engineer with the output results on a daily basis unless otherwise directed to demonstrate to the Engineer that no recurring (moderate or severe) thermal segregation exists. When not using a thermal imaging system, all normal temperature and weather restrictions in this section apply.

Article 340S.10. Construction Methods, Section D. HMA Placement ADD the following at the end of the section and before Section E Compaction:

Thermal Profile. Use a hand-held thermal camera or thermal imaging system to obtain a continuous thermal profile in accordance with Tex-244-F. The Engineer may allow the Contractor to reduce the testing frequency based on a satisfactory test history. Thermal profiles are not applicable in miscellaneous paving areas subject to hand work such as driveways, crossovers, turnouts, gores, tapers, and other similar areas.

Moderate Thermal Segregation. Any areas that have a maximum temperature differential greater than 25°F but not exceeding 50°F are deemed as having moderate thermal segregation.

Severe Thermal Segregation. Any areas that have a maximum temperature differential greater than 50°F are deemed as having severe thermal segregation.

Thermal Imaging System. Review the output when a thermal imaging system is used, and provide the automated report described in TEX-244-F to the Engineer daily unless otherwise directed. Modify the paving process as necessary to eliminate any recurring (moderate or severe) thermal segregation identified by the thermal imaging system. The Engineer may suspend paving operations if the Contractor cannot successfully modify the paving process to eliminate recurring severe thermal segregation. Density profiles are not required and not applicable when using a thermal imaging system. Provide the Engineer with temperature profile plots generated by the thermal imaging system software.

Thermal Camera. When a hand-held thermal camera is used, take immediate corrective action to eliminate the moderate thermal segregation. Evaluate areas with moderate thermal segregation by performing density profiles in accordance with Section 340.11 Sampling and Testing, Segregation (Density Profile). Provide the density profile results to the Engineer for review within one working day. Modify the paving process as necessary to eliminate any (moderate or severe) thermal segregation identified. The Engineer may suspend paving operations if the Contractor cannot successfully modify the paving process to eliminate thermal segregation. Suspend operations and take immediate corrective action to eliminate severe thermal segregation unless otherwise directed. Resume operations when the Engineer determines that subsequent production will meet the requirements of this Item. Evaluate areas with severe thermal segregation by performing a density profile in accordance with Section 340.11 Sampling and Testing, Segregation (Density Profile). Unless otherwise directed, remove and replace the material in any areas that have both severe thermal segregation and a failing result for Segregation (Density Profile).

Article 340S.11. Sampling and Testing is SUPPLEMENTED by the following:

Segregation (Density Profile). Test for segregation using density profiles in accordance with Tex-207-F, Part V. Provide the Engineer with the results of the density profiles as they are completed. Density profiles are not required and are not applicable when using a thermal imaging system. Areas defined in Section 340.11.A.4, "Limited Areas," are not subject to density profile testing. Density profiles are not applicable in miscellaneous paving areas subject to hand work such as driveways, crossovers, turnouts, gores, tapers, and other similar areas.

The density profile is considered failing if it exceeds the tolerances in Segregation (Density Profile) Acceptance Criteria. When a thermal imaging system is not used, the Engineer may measure the density profile at any time, at any location, and as often as deemed necessary to verify conformance. The Engineer's density profile results will be used when available. The Engineer may require the Contractor to remove and replace the area in question if the area fails the density profile and has surface irregularities. Contractor shall suspend production if two (2) consecutive density profiles fail unless otherwise approved. Production may not resume until Engineer approves corrective actions to production or placement methods.

Segregation (Density Profile) Acceptance Criteria

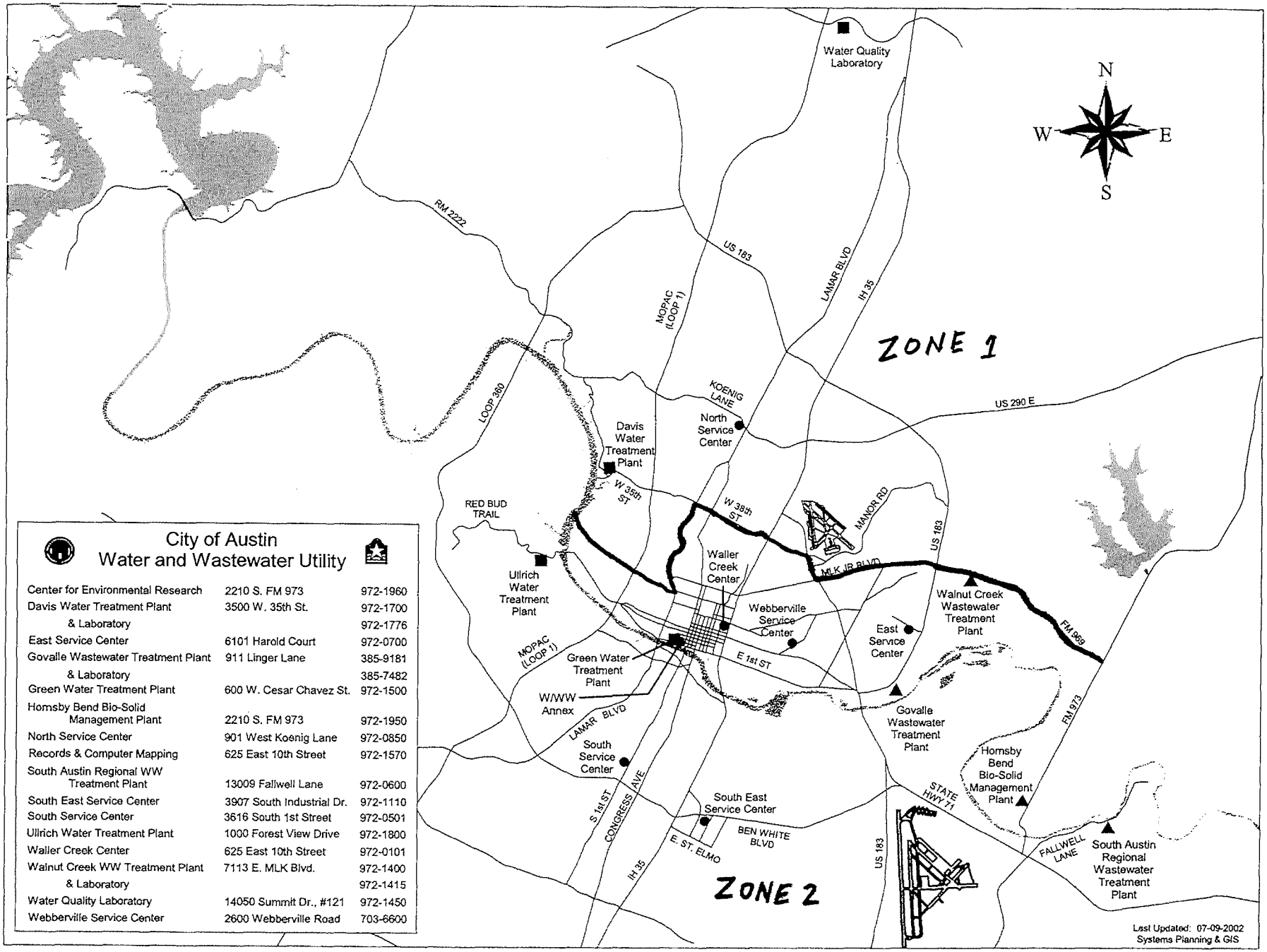
Mixture Type	Maximum Allowable Density Range (Highest to Lowest)	Maximum Allowable Density Range (Average to Lowest)
Type C, D, F	6.0 pcf	3.0 pcf
Type A, B	8.0 pcf	5.0 pcf

Article 340S.12. Acceptance Plan, Section A. Non-Pay-Adjustment Acceptance Factors, 1. Surface Characteristics INSERT the following after the first paragraph:

Irregularities. Identify and correct irregularities including segregation, rutting, raveling, flushing, fat spots, mat slippage, irregular color, irregular texture, roller marks, tears, gouges, streaks, uncoated aggregate particles, or broken aggregate particles. The Engineer may also identify irregularities, and in such cases, the Engineer will promptly notify the Contractor. If the Engineer determines that the irregularity will adversely affect pavement performance, the Engineer may require the Contractor to remove and replace (at the Contractor's expense) areas of the pavement that contain irregularities and areas where the mixture does not bond to the existing pavement.

END

ATTACHMENT #7



City of Austin
Water and Wastewater Utility

Center for Environmental Research	2210 S. FM 973	972-1960
Davis Water Treatment Plant	3500 W. 35th St.	972-1700
& Laboratory		972-1776
East Service Center	6101 Harold Court	972-0700
Govalle Wastewater Treatment Plant	911 Linger Lane	385-9181
& Laboratory		385-7482
Green Water Treatment Plant	600 W. Cesar Chavez St.	972-1500
Hornsby Bend Bio-Solid Management Plant	2210 S. FM 973	972-1950
North Service Center	901 West Koenig Lane	972-0850
Records & Computer Mapping	625 East 10th Street	972-1570
South Austin Regional WW Treatment Plant	13009 Fallwell Lane	972-0600
South East Service Center	3907 South Industrial Dr.	972-1110
South Service Center	3616 South 1st Street	972-0501
Ullrich Water Treatment Plant	1000 Forest View Drive	972-1800
Waller Creek Center	625 East 10th Street	972-0101
Walnut Creek WW Treatment Plant	7113 E. MLK Blvd.	972-1400
& Laboratory		972-1415
Water Quality Laboratory	14050 Summit Dr., #121	972-1450
Webberville Service Center	2600 Webberville Road	703-6600

TXDOT QCQA
Quality Control & Assurance

Use this template in conjunction with the QC/QA specifications for Hot Mix Asphalt or Warm Mix Asphalt mixtures according to the 2014 Specifications handbook.

If you have questions or comments concerning this template or the QC/QA procedures, please call Gisel Travis Patton at (512)506-5841 of the Flexible Pavements Branch of the Materials & Pavements Section within the Construction Division.

If you would like to obtain an updated version of this Site Manager template go to:
http://www.txdot.gov/inside-txdot/forms-publications/consultants-contractors/forms/site-manager.html

This program uses macros that must be enabled when the program starts.

The summary sheet provides notes when operational requirements are not met.

CONTROL PANEL

Click the button above for the Control Panel. The QCQA Control Panel is used for navigation and to refresh or import workbooks.

Click on the navigation buttons to move to the next or previous worksheet. The dropdown box may be used to jump to a specific worksheet within the workbook.

Two refresh buttons are available. These clear all the input fields in either the current worksheet or the entire workbook.

To import TxDOT or Contractor data, toggle the appropriate radio button and click the Select Book button. You will be prompted for the file to import.

GENERAL

The COURSE/LIFT field will provide appropriate options based on the mixture type selection.

MIX DESIGN

The following is a list of the input fields:

Trial?: Trial batches.
Level up?:
1.0 pay factor?:
Exempt production?:
Date lot opened (MM/DD/YYYY): Indicate the date the lot was opened using the date format as indicated i.e. month/day/year.
Mix uses WMA ?: Indicate if the mix uses warm mix asphalt (WMA) additives or processes.
Mix uses RAP/RAS?: Indicate if the mix uses recycled asphalt pavement (RAP) or recycled asphalt shingles (RAS).
Binder substitution?: Indicate if binder substitution was applied - typically when using RAP/RAS.
Course/Lift: Indicate if the mix is used for the surface, intermediate or base layer in the pavement structure.
Gyratory compactor: Select either Superpave (SGC) or Texas (TGC) gyratory compactor
Roadway Rice for base mixes?:
Method for gradation:
Dry or wet gradation:
Method used for asphalt content:
Equipment used for thermal profile:
Remarks:

SAMPLING

There are two worksheets on which to fill out sampling information and core locations.

On the first:
The sublot from which the blind sample is collected can be checked.
Enter the random numbers for each sublot for Production and Placement Sampling. Use TxRandNum.xls template to generate random numbers for the entire project. The template will automatically adjust the width offset for the coring location to 2-ft. if the randomly generated sample location is within 2 ft of a joint or pavement edge.
Enter the date in format month/day/year when samples where collected on the respective sublots.

On the second:
Placement Data for Lot: It is suggested to use the following procedure for describing where the mix was laid.
Direction of Lane: NB, SB, EB, and WB for north, east, south, and west bound.
Description of Lane: Referencing out from the center line of the median. Example: L1,L2,L3 etc. where L1 is the lane closest to the centerline. For shoulders, use IS for inside shoulder and OS for outside shoulder.

Description of the lift if mix is placed in multiple lifts. Example: C1, C2, C3 etc. for course 1, 2, 3, etc. (from the bottom course up).
Examples:
NBL2: North bound, driving lane (outside lane)
SBIS: South bound inside shoulder
WBL1C2: West bound passing lane (inside lane) second course
EBL1: East bound inside lane
Core Locations are calculated for each sublot after the laboratory density test results are entered OR after the Quantity Actually Placed is entered in the Pay sheet.

QCQA

Use these worksheets to enter all pertinent information referenced in the 2004 Specification Book; including Estimated Percent of Stripping, Thermal Segregation, Density Profile, Draindown, Binder Sample, and DSR Testing whenever specified.
• WARNING: Do not enter data or information for any sublot that has not been started. This affects the Bonus/Penalty calculations in the Pay Sheet.
• Thermal Profile, Mat Segregation, & Joint Density: Ensure that all thermal profile, segregation density profile, and longitudinal joint density information is entered. If this information is missing, no pay factors will be calculated. When using the Pave-IR system for specification compliance, thermal profiles or segregation density profiles are not required.
Select "Pass" if the Engineer didn't performed a thermal profile, density profile, or joint density evaluation for that sublot.
• Referee Results: Replace the original Engineer's test results with the referee results. For example, the referee in-place air voids for Sublot 2 should be entered in the TxDOT_2 sheet replacing the original Engineer's test results.
• Untrimmed Core Height: If the untrimmed core height is less than the minimum requirement and it is decided not to have the core included in air void determination, enter the untrimmed core height in the TxDOT sheet. This will allow the user to select an auto 1.000 placement pay factor in the Pay sheet.
• Notes: Warning notes are provided in each sublot sheet when test results or core heights are out of operational tolerance.
• Remark boxes are provided in each sublot sheet for any miscellaneous information or additional test results.

PAY

Enter the quantity actually placed in the lot and the bid price per ton. This worksheet calculates Payment for Item, Pay Adjustments, and Total Pay.
• Quantity Placed But No Air Void Testing Was Required, Tons: Enter tonnage for 'Miscellaneous Areas' only. See the specification for the definition of 'Miscellaneous Areas'.
• Auto 1.000 Pay Factor: Select 'Yes' from the dropdown list or type in the word 'Yes', if it is not available, to assign a 1.000 pay factor for that sublot.
• Pay Factor: No pay factors are calculated when not using the Pave-IR system and no thermal segregation, segregation density profile, or longitudinal joint density test results are entered in each individual TxDOT & CON sublot worksheet.
• Remove and Replace Condition: When the production and/or placement test results resulted in remove and replace condition, the program automatically assigns a no-pay for the other QA or QC results. The production and placement pay factors must be no-pay if the Engineer elects to leave in place without payment. Do not select auto 1.000 pay factors in this situation.

TEXAS DEPARTMENT OF TRANSPORTATION

2014 QC/QA Design Data

Refresh Workbook

TX2QCQA14 - File Version: 01/16/17 09:01:08

SAMPLE ID:		SAMPLED DATE:	6/8/2018
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:	Plant	CONTROLLING CSJ:	
COUNTY:		SPEC YEAR:	**2014**
SAMPLED BY:		SPEC ITEM:	
SAMPLE LOCATION:	Plant to truck	SPECIAL PROVISION:	
MATERIAL CODE:		MIX TYPE:	**340-DG-D**
MATERIAL NAME:	17DRAP20-64		
PRODUCER:	Texas Materials Bolm		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:	**Surface**	STATION:		DIST. FROM CL:	

Remarks:

Test Method:	Tested By:	Tested Date:
TX207		
TX226		
TX227		
TX228		
TX229		
TX236		
TX242		
TX248		
TX530		

Test Stamp Code:	Omit Test:	Completed Date:	Reviewed By:

Locked By:	TxDOT:	District:	Area:

Authorized By:	Authorized Date:	
		500

SAMPLE ID: _____ SAMPLED DATE: 06-08-2018_____
LOT NUMBER: _____ LETTING DATE: _____
SAMPLE STATUS: Plant_____ CONTROLLING CSJ: _____
COUNTY: _____ SPEC YEAR: 2014_____
SAMPLED BY: _____ SPEC ITEM: _____
SAMPLE LOCATION: Plant to truck_____ SPECIAL PROVISION: _____
MATERIAL CODE: _____ MIX TYPE: 340-DG-D_____
MATERIAL NAME: 17DRAP20-64_____
PRODUCER: Texas Materials Bolm_____
AREA ENGINEER: _____ PROJECT MANAGER: _____
COURSE\LIFT: Surface_____ STATION: _____ DIST. FROM CL: _____

MIXTURE DATA	
Specification year:	**2014**
Mix type:	**340-DG-D**
Trial batch?:	
Level up?:	
Exempt production?:	
First lot?:	
Date lot opened (MM/DD/YYYY):	
Mix uses WMA ?:	**Yes**
Mix uses RAP/RAS?:	**No**
Binder substitution?:	**No**
Course/Lift:	**Surface**
Gyratory compactor:	**TGC**
Roadway Rice for base mixes?:	
Method for gradation:	**Ignition oven**
Dry or wet gradation:	**Dry**
Method used for asphalt content:	**Ignition oven**
Equipment used for thermal profile:	**Thermal imaging system**
Remarks:	

WARM MIX ASPHALT (WMA)	
For compaction aid only:	**No**
Technology:	**Double Barrel Green (Astec)**
Rate:	**2**
Units:	**% by weight of asphalt**
Target discharge temperature, °F:	**275**
Mix treated as WMA?:	**Yes**

PRODUCTION	
Lot size, tons:	
Current JMF #:	**3**
Design JMF #:	**2**
Lift thickness, inches:	**1.5**
Mix design ID:	**17 DRAP 20-64**

ASPHALT CEMENT	
Binder originally specified:	**PG 64-22**
Substitute binder:	**NA**
JMF2 asphalt content (AC), %:	**4.7**
Current JMF AC, %:	**4.7**
Recycled binder from mix design, %:	**1.0**
Maximum recycled binder ratio:	**30**
Ignition oven correction factor, TxDOT:	**-0.6**
Ignition oven correction factor, Contractor:	**-0.6**

DENSITY & PROPERTIES OF BITUMINOUS MIXTURES	
Mix specific gravity (Ga):	**2.479**
Asphalt specific gravity (G1):	**1.029**
Rice gravity (Gr):	**2.582**
Target laboratory molded density, %:	**97.0**
Tex-206-F: Press correlations	
TxDOT Press correlation factor:	
TxDOT Press ID & serial number:	
Contractor Press correlation factor:	
Contractor Press ID & serial number:	

PERFORMANCE PROPERTIES OF BITUMINOUS MIXTURES	
Design VMA, %:	
Tex-530-C Boil test percent stripping, %:	
Trial batch	
Tex-242-F Hamburg number of cycles:	
Tex-242-F Hamburg rut depth, mm:	
Tex-226-F Indirect tensile strength, psi:	
Production	
Tex-242-F Hamburg number of cycles:	
Tex-242-F Hamburg rut depth, mm:	
Tex-226-F Indirect tensile strength, psi:	

SAMPLE ID: _____ SAMPLED DATE: 06-08-2018_____
LOT NUMBER: _____ LETTING DATE: _____
SAMPLE STATUS: Plant_____ CONTROLLING CSJ: _____
COUNTY: _____ SPEC YEAR: 2014_____
SAMPLED BY: _____ SPEC ITEM: _____
SAMPLE LOCATION: Plant to truck_____ SPECIAL PROVISION: _____
MATERIAL CODE: _____ MIX TYPE: 340-DG-D_____
MATERIAL NAME: 17DRAP20-64_____
PRODUCER: Texas Materials Bolm_____
AREA ENGINEER: _____ PROJECT MANAGER: _____
COURSE\LIFT: Surface_____ STATION: _____ DIST. FROM CL: _____

COMBINED AGGREGATE GRADATION				
Sieve size	Master gradation limits % passing	JMF 2 Cumulative % passing	Current JMF design % passing tolerances	Current JMF Cumulative % passing
3/4"	100.0 - 100.0	**100.0**	100.0 - 100.0	**100.0**
1/2"	98.0 - 100.0	**100.0**	98.0 - 100.0	**100.0**
3/8"	85.0 - 100.0	**95.6**	90.6 - 100.0	**95.6**
#4	50.0 - 70.0	**63.5**	58.5 - 68.5	**63.6**
#8	35.0 - 46.0	**43.5**	38.6 - 46.0	**40.4**
#30	15.0 - 29.0	**26.5**	20.4 - 26.4	**24.3**
#50	7.0 - 20.0	**17.3**	12.1 - 18.1	**16.4**
#200	2.0 - 7.0	**4.4**	2.0 - 5.5	**4.6**

IGNITION OVEN CORRECTION FACTORS	
TxDOT, %:	Contractor, %:
0.0	**0.0**
-0.1	**-0.1**
-0.5	**-0.5**
-3.5	**-3.5**
-4.0	**-4.0**
-5.6	**-5.6**
-5.6	**-5.6**
0.2	**0.2**

TOLERANCES	
Gradation	
JMF 2	Current JMF
✓	✓
✓	✓
✓	✓
✓	✓
✓	✓
✓	✓
✓	✓
✓	✓

SAMPLE ID: _____ SAMPLED DATE: 06-08-2018_____
LOT NUMBER: _____ LETTING DATE: _____
SAMPLE STATUS: Plant_____ CONTROLLING CSJ: _____
COUNTY: _____ SPEC YEAR: 2014_____
SAMPLED BY: _____ SPEC ITEM: _____
SAMPLE LOCATION: Plant to truck_____ SPECIAL PROVISION: _____
MATERIAL CODE: _____ MIX TYPE: 340-DG-D_____
MATERIAL NAME: 17DRAP20-64_____
PRODUCER: Texas Materials Bolm_____
AREA ENGINEER: _____ PROJECT MANAGER: _____
COURSE\LIFT: Surface_____ STATION: _____ DIST. FROM CL: _____

PRODUCTION SAMPLE LOCATIONS

Running production total (optional):	

TxDOT PRODUCTION SAMPLE LOCATIONS FOR LOT				
Sublot:	1	2	3	4
Blind sample:	○	○	○	○
Random number:				
Sublot sample date (MM/DD/YYYY):				
Sublot locations, Tons:				
Production locations, Tons:				

CONTRACTOR PRODUCTION SAMPLE LOCATIONS FOR LOT				
Sublot:	1	2	3	4
Random Number:				
Sublot sample date (MM/DD/YYYY):				
Sublot Locations, Tons:				
Production Locations, Tons:				

PLACEMENT SAMPLE LOCATIONS

PLACEMENT DATA FOR LOT

Enter Sta. In Feet (Ex. 12+34.34 is entered as 1234.34)

											CALCULATED CORE LOCATION								
											Sublot 1		Sublot 2		Sublot 3		Sublot 4		
											Rand. no. (L):		Rand. no. (L):		Rand. no. (L):		Rand. no. (L):		
											Rand. no. (W):		Rand. no. (W):		Rand. no. (W):		Rand. no. (W):		
Local ID	Sublot #	From station	To station	Width, ft	From Latitude	From Longitude	To Latitude	To Longitude	Area, sq. ft	Length, ft	Random core STA.	Random core offset	Random core STA.	Random core offset	Random core STA.	Random core offset	Random core STA.	Random core offset	Whole lot
										Total area, sq ft:									0.0

YIELD CALCULATIONS

	Misc. area, sq. yd	Reg. Area Sq. Yards	Total Area Sq. Yards	Total Tons	Rate Lbs./Sq.Yd.
This lot					
Total to date					

SAMPLE ID: _____ SAMPLED DATE: 06-08-2018_____
LOT NUMBER: _____ LETTING DATE: _____
SAMPLE STATUS: Plant_____ CONTROLLING CSJ: _____
COUNTY: _____ SPEC YEAR: 2014_____
SAMPLED BY: _____ SPEC ITEM: _____
SAMPLE LOCATION: Plant to truck_____ SPECIAL PROVISION: _____
MATERIAL CODE: _____ MIX TYPE: 340-DG-D_____
MATERIAL NAME: 17DRAP20-64_____
PRODUCER: Texas Materials Bolm_____
AREA ENGINEER: _____ PROJECT MANAGER: _____
COURSE\LIFT: Surface_____ STATION: _____ DIST. FROM CL: _____

DOT1 PRODUCTION DATA	
Sublot sample date:	
Sublot location, Tons:	
Production location, Tons:	

DETERMINATION OF ASPHALT CONTENT	
Method: Ignition oven	
Weight of sample and basket before ignition, g:	
Weight of sample and basket after ignition, g:	
Weight of basket, g:	**0.0**
Ignition oven AC, %:	
Corrected AC, %:	
Ratio of recycled to total binder:	
Binder sample received?:	
DSR aging ratio:	

LAB DETERMINATION OF RICE SPECIFIC GRAVITY Tex-227-F	
(A) Weight of dry sample in air, g:	
(D) Weight of calibrated pyc. with water, g:	
(E) Weight of sample, pyc. and water, g:	
A/(D+A-E) Rice specific gravity (Gr):	
(Asd) Weight of surface dry sample in air, g:	

PRODUCTION PERFORMANCE PROPERTIES OF BITUMINOUS MIXTURES	
Tex 212-F Moisture content, %:	
Tex-530-C Boil test estimated percent stripping, %:	
Tex-244-F Thermal profile segregation:	
Tex 207-F, Part V Mat segregation density profile:	
Tex 207-F, Part VII Longitudinal joint density:	

ESTIMATED FILM THICKNESS (based on gradation and asphalt content)	
Combined bulk specific gravity (Gsb):	
Effective specific gravity:	
Asphalt absorption, %:	
Effective asphalt content:	
Film thickness, micron:	

SAMPLE ID: _____ SAMPLED DATE: 06-08-2018_____
LOT NUMBER: _____ LETTING DATE: _____
SAMPLE STATUS: Plant_____ CONTROLLING CSJ: _____
COUNTY: _____ SPEC YEAR: 2014_____
SAMPLED BY: _____ SPEC ITEM: _____
SAMPLE LOCATION: Plant to truck_____ SPECIAL PROVISION: _____
MATERIAL CODE: _____ MIX TYPE: 340-DG-D_____
MATERIAL NAME: 17DRAP20-64_____
PRODUCER: Texas Materials Bolm_____
AREA ENGINEER: _____ PROJECT MANAGER: _____
COURSE\LIFT: Surface_____ STATION: _____ DIST. FROM CL: _____

DOT1 GRADATION OF EXTRACTED AGGREGATE: Tex-200-F

Method: Ignition oven

				Ignited sample original dry weight, g:			**TOLERANCES**
				Sieve analysis:	**Individual**		Gradation
Sieve Size	**Individual weight retained, g**	**Cumulative weight retained, g**	***Adjusted Individual percent retained, %**	***Adjusted Cumulative percent retained, %**	***Adjusted Cumulative percent passing, %**	**JMF individual retained limits**	JMF
3/4"							
1/2"							
3/8"							
#4							
#8							
#30							
#50							
#200							
- #200							
Total - #200						2.6 - 6.6	
Total weight, g							

SAMPLE ID: _____ SAMPLED DATE: 06-08-2018_____
LOT NUMBER: _____ LETTING DATE: _____
SAMPLE STATUS: Plant_____ CONTROLLING CSJ: _____
COUNTY: _____ SPEC YEAR: 2014_____
SAMPLED BY: _____ SPEC ITEM: _____
SAMPLE LOCATION: Plant to truck_____ SPECIAL PROVISION: _____
MATERIAL CODE: _____ MIX TYPE: 340-DG-D_____
MATERIAL NAME: 17DRAP20-64_____
PRODUCER: Texas Materials Bolm_____
AREA ENGINEER: _____ PROJECT MANAGER: _____
COURSE\LIFT: Surface_____ STATION: _____ DIST. FROM CL: _____

DOT1 DETERMINING PROPERTIES OF BITUMINOUS MIXTURES-Tex-207-F					
Specimen type:	Laboratory			Roadway	
Specimen number:	1(1)	1(2)	1(3)	1(A)	1(B)
Untrimmed specimen/Core height, in:					
Trimmed core height, in:					
Weight of specimen in air, g:					
Weight of specimen in water, g:					
SSD weight of specimen in air, g:					
Volume of specimen:					
Percent absorption, %:					
Bag required for Ga:					
Bag Used for Ga:					
Volumetric properties					
Bulk specific gravity, Ga:					
Percent density, %:					
Percent air voids, %:					
Percent VMA, %:					

MEAN VOLUMETRIC PROPERTIES		
Asphalt content, %:		
Rice specific gravity, Gr:		
Percent density, %:		
Actual specific gravity:		
Percent air voids, %:		
Percent VMA, %:		

SAMPLE ID: _____ SAMPLED DATE: 06-08-2018_____
LOT NUMBER: _____ LETTING DATE: _____
SAMPLE STATUS: Plant_____ CONTROLLING CSJ: _____
COUNTY: _____ SPEC YEAR: 2014_____
SAMPLED BY: _____ SPEC ITEM: _____
SAMPLE LOCATION: Plant to truck_____ SPECIAL PROVISION: _____
MATERIAL CODE: _____ MIX TYPE: 340-DG-D_____
MATERIAL NAME: 17DRAP20-64_____
PRODUCER: Texas Materials Bolm_____
AREA ENGINEER: _____ PROJECT MANAGER: _____
COURSE\LIFT: Surface_____ STATION: _____ DIST. FROM CL: _____

GRADATION OF EXTRACTED AGGREGATE-Tex-200-F														GRADATION REFEREE			
Sieve size	Design JMF	Current JMF	TxDOT test data				Contractor test data				Correlation factor		Referee test data			
			1	2	3	4	1	2	3	4	TxDOT	CON	1	2	3	4
			Cumulative percent passing				Cumulative percent passing						Cumulative percent passing			
3/4"	100.0	100.0									0.0	0.0				
1/2"	100.0	100.0									-0.1	-0.1				
3/8"	95.6	95.6									-0.5	-0.5				
#4	63.5	63.6									-3.5	-3.5				
#8	43.5	40.4									-4.0	-4.0				
#30	26.5	24.3									-5.6	-5.6				
#50	17.3	16.4									-5.6	-5.6				
#200	4.4	4.6									0.2	0.2				

CORE HEIGHTS										
Acceptable for testing:	NA	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	
Excessively trimmed:	NA	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	

DENSITY & PROPERTIES OF BITUMINOUS MIXTURES-Tex-207-F										DENSITY REFEREE			
Avg. Actual SG (Ga):	2.479												
Lab molded density, %:	97.0												
In place air voids, %:	NA												
Plant produced VMA, %:	14.5												

RICE SPECIFIC GRAVITY-Tex-227-F										RICE REFEREE			
Rice specific gravity:	2.582												

ASPHALT CONTENT by: Ignition oven										AC REFEREE			
Asphalt content, %:	4.7												
Recycled binder ratio:	30.0												
Binder sample received?:	NA												
DSR aging ratio?:	NA												

EFFECT OF WATER ON BITUMINOUS -Tex-530-C										
Estimated percent stripping:										

PROFILES: Tex-244-F & Tex-207-F, Part V & Tex-207-F, Part VII										
Thermal segregation:	NA									
Segregation profile:	NA									
Joint density:	NA									
Required documentation?:	NA	NA	NA	NA	NA	NA	NA	NA	NA	

MOISTURE CONTENT: Tex-212-F, Part II										
Moisture content, %:	NA									

Tested by: Reviewed by: Authorized by:

SAMPLE ID: _____ SAMPLED DATE: 06-08-2018_____
LOT NUMBER: _____ LETTING DATE: _____
SAMPLE STATUS: Plant_____ CONTROLLING CSJ: _____
COUNTY: _____ SPEC YEAR: 2014_____
SAMPLED BY: _____ SPEC ITEM: _____
SAMPLE LOCATION: Plant to truck_____ SPECIAL PROVISION: _____
MATERIAL CODE: _____ MIX TYPE: 340-DG-D_____
MATERIAL NAME: 17DRAP20-64_____
PRODUCER: Texas Materials Bolm_____
AREA ENGINEER: _____ PROJECT MANAGER: _____
COURSE\LIFT: Surface_____ STATION: _____ DIST. FROM CL: _____

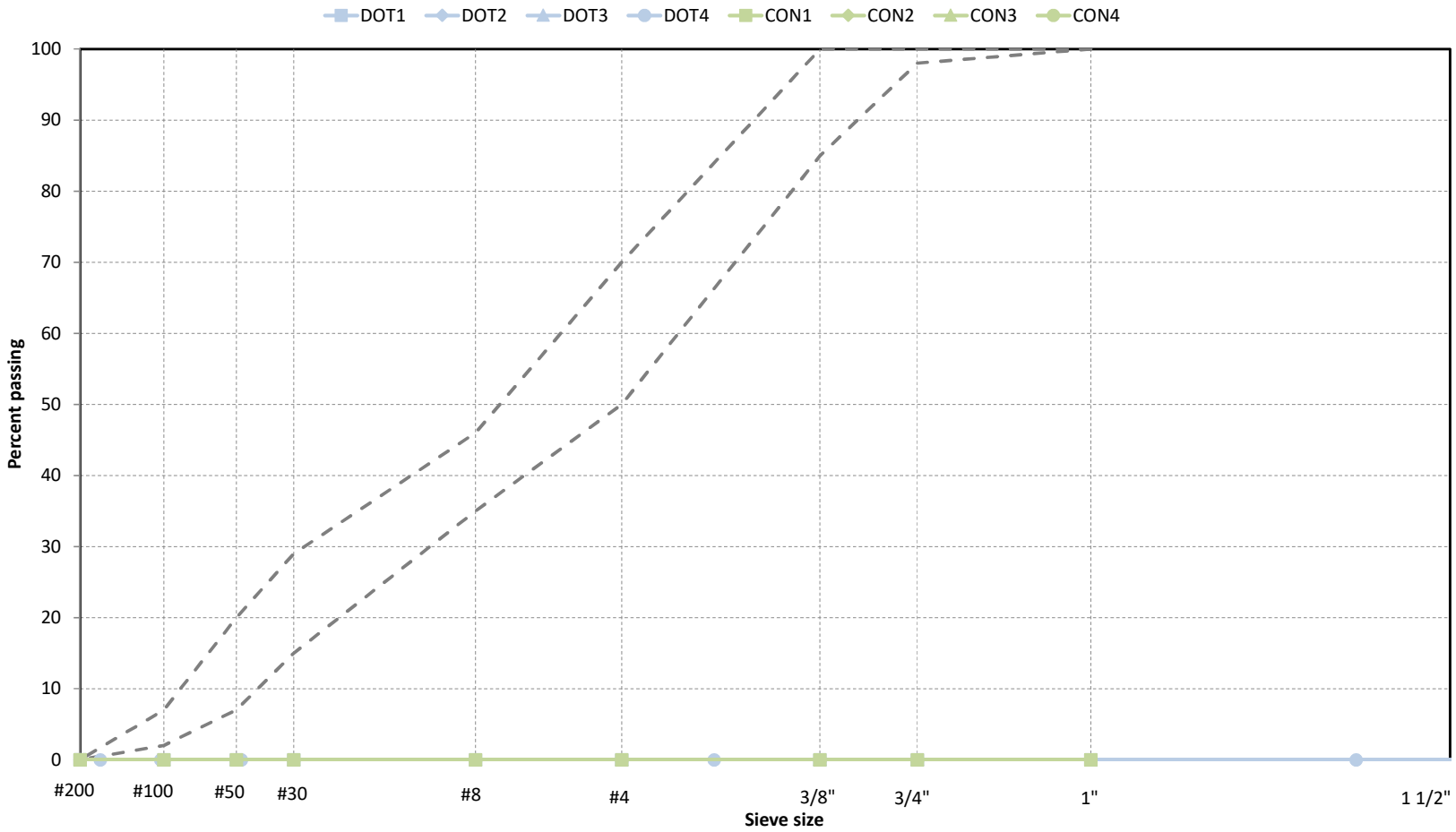
PAY ADJUSTMENT	
Total quantity actually placed, Tons:	

MIX PAYMENT	
Unit price, $/Ton:	
Quantity, Tons:	0.00
Pay amount, $:	0.00

LAB MOLDED DENSITY (PRODUCTION)					INPLACE AIR VOIDS (PLACEMENT)				
TxDOT sublot:	1	2	3	4	TxDOT sublot:	1	2	3	4
Design target density:	97.0				Average percent air voids:				
Average percent density:									
Absolute deviation:									
Production acceptable:					Placement acceptable:				

Signature of contractor representative

Signature of TxDOT representative


DOT1
DOT2
DOT3
DOT4
CON1
CON2
CON3
CON4
100
90
80
70
60
50
40
30
20
10
0
Percent passing
#200
#100
#50
#30
#8
#4
3/8"
3/4"
1"
1 1/2"
Sieve size

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN

Use this template to perform the mixture design of Hot Mix Asphalt or Warm Mix Asphalt mixtures according to the 2014 Specifications handbook.

If you have questions or comments concerning this template or the mixture design procedures, please call Gisel Carrasco at 512-506-5847 or Travis Patton at 512-506-5841 of the Flexible Pavements Branch of the Materials & Pavements Section within the Construction Division.

If you would like to obtain an updated version of this Site Manager template go to
http://www.txdot.gov/inside-txdot/forms-publications/consultants-contractors/forms/site-manager.html

To move from page to page, click on the different worksheet tabs at the bottom of the page.
This template provides notes throughout the worksheets when design requirements are not met.

COMBINED GRADATION SHEET: Start at this worksheet. Select the 2004 specification year and the mix type. This information will affect the calculation, labeling, and formatting of the worksheets in this mixture design template.

- **Spec Year:** Select the specification year from the dropdown list before selecting the mix type.
- **Mix Type: S**elect the mix type from the dropdown list that most closely matches your mix. This value will determine what sieve sizes and tolerances are displayed on the worksheets.
- **WMA:** Select "Yes" from the dropdown list when the mixture design includes WMA additives. Select "No" if WMA additives are not included in the mixture design, even though a WMA technology may be used during production. WMA information must be entered before entering bin percentages.
- **Course/Lift:** From this dropdown list, select the mixture description and its location from the final riding surface. The mixture description must be selected before entering the recycled materials information to establish the maximum allowable amount of recycled materials.
- **Aggregate Bin Fractions:** Select the aggregate type, source, and number from the dropdown lists. Refer to the BRSQC for additional aggregate and quarry information. To obtain the latest version of the BRSQC go to:
  http://www.txdot.gov/txdot_library/publications/producer_list.htm
  If the aggregate is not listed in the BRSQC but approved by the Engineer, select an aggregate source from the dropdown list and enter a description in the aggregate Sample ID cell.
- **Recycled Materials:** Select the recycled material type and source from the dropdown lists. When using Recycled Asphalt Shingles (RAS), select the type of RAS used from the dropdown list. The template calculates the recycled binder percent and the recycled to total binder ratio of the mixture.
  NOTE: Enter the asphalt content and the bin percentages of each recycled material by weight of the total mix. The template calculates the recycled aggregate bin percentages by weight of the total aggregate.
- **Binder Substitution:** When using binder substitution, select "Yes" from the dropdown list and enter the originally specified and the substitute binders.

SUMMARY SHEET: Use this worksheet to determine the optimum asphalt content and mixture properties according to the mixture design procedure.

- For informational purposes, enter the mixing and molding temperatures used for the mixture design.

MATL PROPERTIES SHEET: Use this worksheet to enter the material properties for each aggregate stockpile, fine aggregate, combined aggregate, and recycled materials.

- When the material quality requirements are changed according to general notes or when shown on the plans, enter the new requirements in the "Modified Spec. Limit" column.

AGGREGATE CLASSIFICATION SHEET: Use this worksheet to verify the amount of Class A material retained on the No. 4 or No. 8 sieve when blending Class A with Class B aggregate.

WEIGH UP SHEET: Use this worksheet to calculate the weight of the batches of mix used for molds, rice gravity, and any other required test.

- **WARNING**: When using recycled materials and changing the asphalt content in the Combined Gradation sheet, ensure that the Total Bin is 100%.

BLANK WEIGH UP SHEET: Use this worksheet to prepare blank samples to calculate the ignition oven correction factors in accordance with Tex-236-F.

BULK GRAVITY SHEET: Use this worksheet to calculate the aggregate combined bulk specific gravity and the coarse aggregate combined bulk specific gravity if applicable.

TEXAS DEPARTMENT OF TRANSPORTATION

2014 HMACP MIXTURE DESIGN : COMBINED GRADATION

Refresh Workbook

TX2MIXDE14 - File Version: 11/16/16 16:01:04

SAMPLE ID:	17CRAP64	SAMPLE DATE:	2-9-18
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:		SPEC YEAR:	2014
SAMPLED BY:	KYLE RANGNOW # 765	SPEC ITEM:	
SAMPLE LOCATION:		SPECIAL PROVISION:	
MATERIAL CODE:	HMAC	MIX TYPE:	341-DG-C
MATERIAL NAME:	17CRAP64		
PRODUCER:	Texas Materials		
AREA ENGINEER:		PROJECT MANAGER:	

WMA Additive in Design?	Yes				
Target Discharge Temp., ºF:	275				
WMA TECHNOLOGY:	Maxam (Maxam Equipm				
WMA RATE:	1.5	UNITS:	% by weight of asphalt		
CONTRACTOR DESIGN # :	17CRAP64				

COURSE\LIFT:	Surface	STATION:		DIST. FROM CL:	

Use this value in the QC/QA template>>

Maximum Allowable, %	
Frac RAP:	20.0
Unfrac RAP:	10.0
RAS:	5.0
RB Ratio:	30.0

Recycled Binder, %	
Bin No.8 :	0.9
Bin No.9 :	0.0
Bin No.10 :	0.0
Total	***0.900***

Ratio of Recycled to Total Binder, %
(based on binder percent (%) entered below in this worksheet)
18.8

	AGGREGATE BIN FRACTIONS							"RECYCLED MATERIALS"			
Aggregate	**Bin No.1**	**Bin No.2**	**Bin No.3**	**Bin No.4**	**Bin No.5**	**Bin No.6**	**Bin No.7**	**Bin No.8**	**Bin No.9**	**Bin No.10**	
Source:	Limestone_Dolomit	Limestone_Dolomit	Limestone_Dolomit	Limestone_Dolomit				Fractionated RAP			Material Type
Pit:	Marble Falls Quarry	Marble Falls Quarry	Marble Falls Quarry	Marble Falls Quarry	BEND			LIBERTY HILL			Material Source
Number:	1402702	1402702	1402702	1402702							RAS Type
Producer:	Oldcastle Materials Texas	Oldcastle Materials Texas	Oldcastle Materials Texas	Oldcastle Materials Texas	ALEXANDER			Texas Materials Bolm			RAP/RAS Producer
Sample ID:	C ROCK	D ROCK	F ROCK	MAN SAND	FIELD SAND			Fine 1/2"			Sample ID

															Recycled Asphalt Binder (%)							
															4.7						Combined Gradation	
Hydrated Lime?:															20.0	% of Tot. Mix		% of Tot. Mix		% of Tot. Mix	Total Bin	Lower & Upper Specification Limits
Individual Bin (%):	22.0	Percent	21.0	Percent	12.0	Percent	17.0	Percent	8.0	Percent		Percent		Percent	20.0	% of Aggreg		% of Aggreg		% of Aggreg	100.0%	
Sieve Size:	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum. % Passing	Lower	Upper	Within Spec's
1"	100.0	22.0	100.0	21.0	100.0	12.0	100.0	17.0	100.0	8.0					100.0	20.0					100.0	100.0	100.0	Yes
3/4"	100.0	22.0	100.0	21.0	100.0	12.0	100.0	17.0	100.0	8.0					100.0	20.0					100.0	95.0	100.0	Yes
3/8"	24.4	5.4	99.1	20.8	100.0	12.0	100.0	17.0	100.0	8.0					97.5	19.5					82.7	70.0	85.0	Yes
No. 4	1.9	0.4	20.5	4.3	69.1	8.3	99.5	16.9	100.0	8.0					82.0	16.4					54.3	43.0	63.0	Yes
No. 8	1.3	0.3	2.2	0.5	7.1	0.9	92.9	15.8	99.6	8.0					61.5	12.3					37.7	32.0	44.0	Yes
No. 30	1.2	0.3	0.7	0.1	2.1	0.3	37.1	6.3	99.2	7.9					38.1	7.6					22.5	14.0	28.0	Yes
No. 50	1.1	0.2	0.6	0.1	1.7	0.2	15.9	2.7	80.9	6.5					18.0	3.6					13.3	7.0	21.0	Yes
No. 200	0.5	0.1	0.5	0.1	1.1	0.1	2.8	0.5	9.6	0.8					6.6	1.3					2.9	2.0	7.0	Yes

(Bold Italic) Not within specifications ***(Bold Italic)*** Not within specificaitons- Restricted Zone *(Italic)* Not cumulative

Lift Thickness, in:	3.00	Binder Substitution?	No	Binder Originally Specified:	PG 64-22	Substitute Binder:
Asphalt Source:	VALERO 64-22			Binder Percent, (%):	4.8	Asphalt Spec. Grav.: 1.030
Antistripping Agent:				Percent, (%):		

Remarks:

Notes:

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : MATERIAL PROPERTIES

SAMPLE ID:	17CRAP64	SAMPLE DATE:	2-9-18
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:		SPEC YEAR:	2014
SAMPLED BY:	KYLE RANGNOW # 765	SPEC ITEM:	
SAMPLE LOCATION:		SPECIAL PROVISION:	
MATERIAL CODE:	HMAC	MIX TYPE:	341-DG-C
MATERIAL NAME:	17CRAP64		
PRODUCER:	Texas Materials		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:	Surface	STATION:		DIST. FROM CL:		CONTRACTOR DESIGN # :	17CRAP64

	Bin No.1	Bin No.2	Bin No.3	Bin No.4	Bin No.5	Bin No.6	Bin No.7
Individual Bin (%):	Bin No.1 = 22 %	Bin No.2 = 21 %	Bin No.3 = 12 %	Bin No.4 = 17 %	Bin No.5 = 8 %		
Aggregate Source:	Limestone_Dolomite	Limestone_Dolomite	Limestone_Dolomite	Limestone_Dolomite			
Aggregate Number:	1402702	1402702	1402702	1402702			
Sample ID:	C ROCK	D ROCK	F ROCK	MAN SAND	FIELD SAND		

Test Name	SiteManager Test Template	Test Method	Spec. Min or Max	Spec. Limit	Modified Spec. Limit	Result	Sample ID	Result	Sample ID	Result	Sample ID	Result	Sample ID	Result	Sample ID	Result	Sample ID	Result	Sample ID
Stockpile						Bin No.1		Bin No.2		Bin No.3		Bin No.4		Bin No.5		Bin No.6		Bin No.7	
Decantation	Tx217	Tex-217-F	Max.	**1.5**		0.20		0.30		0.60		0.90		1.00					
Deleterious Mat'l	Tx217	Tex-217-F	Max.	**1.5**		0.00		0.00		0.00		0.00		0.10					
Surface Aggregate Classification	Tx4AgClas	Tex-438-A, Tex-612-J	Min.			B		B		B		B		B					
Magnesium Sulfate Soundness	Tx411M	Tex-411-A	Max.	**30**		9.00		9.00		9.00		9.00							
LA Abrasion	Tx410	Tex-410-A	Max.	**40**		29.00		29.00		29.00		29.00							
Crushed Faces Count	Tx460	Tex-460-A	Min.	**85**		100.00		100.00		100.00		100.00							
Flat & Elongated	Tx280	Tex-280-F	Max.	**10**		0.00		0.00		0.00		0.00							
Micro-Deval Abrasion	Tx461	Tex-461-A	Use results to estimate the Mg Sulfate Soundness Loss																
Fine Aggregate						Bin No.1		Bin No.2		Bin No.3		Bin No.4		Bin No.5		Bin No.6		Bin No.7	
Bar Linear Shrinkage	Tx107	Tex-107-E	Max.	**3**								0.00		0.09					
Methylene Blue	-	AASHTO T330	Max.																
Combined Aggregate						Bin No.1		Bin No.2		Bin No.3		Bin No.4		Bin No.5		Bin No.6		Bin No.7	
Sand Equivalent	Tx203	Tex-203-F	Min.	**45**								75.00							
User Defined Testing						Bin No.1		Bin No.2		Bin No.3		Bin No.4		Bin No.5		Bin No.6		Bin No.7	
Use this area to enter any test methods, speciafications & test result that apply to this material(s) but are not not listed above.	**1**																		
	2																		
	3																		
	4																		
	5																		
Recycled Materials						**Bin No.8**		**Bin No.9**		**Bin No.10**									
Deleterious Mat'l	Tx217	Tex-217-F, Part III	Max.	**0.5**		0.1													
Decantation	Tx406	Tex-406-A, Part I	Max.	**5**		1.1													
Plasticity Index	Tx104-6	Tex-106-E	Max.	**8**															
User Defined Testing																			

Remarks:

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : Aggregate Classification

SAMPLE ID:	17CRAP64	SAMPLE DATE:	2-9-18
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:		SPEC YEAR:	2014
SAMPLED BY:	KYLE RANGNOW # 765	SPEC ITEM:	
SAMPLE LOCATION:		SPECIAL PROVISION:	
MATERIAL CODE:	HMAC	MIX TYPE:	341-DG-C
MATERIAL NAME:	17CRAP64		
PRODUCER:	Texas Materials		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:	Surface	STATION:		DIST. FROM CL:		CONTRACTOR DESIGN # :	17CRAP64

Aggregate Classification

	Bin No.1	Bin No.2	Bin No.3	Bin No.4	Bin No.5	Bin No.6	Bin No.7	Bin No.8	Bin No.9	Bin No.10
Individual Bin (%):	Bin No.1 = 22 %	Bin No.2 = 21 %	Bin No.3 = 12 %	Bin No.4 = 17 %	Bin No.5 = 8 %			Bin No.8 = 20 %		
Aggregate Source:	Limestone_Dolomite	Limestone_Dolomite	Limestone_Dolomite	Limestone_Dolomite				Fractionated RAP		
Aggregate Number:	1402702	1402702	1402702	1402702				Fine 1/2"		
Class (A) Rock (Y/N):	No	No	No	No	No					
Sieve Size: Passing	Sieve Size: Retained	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %
-	1"	0.0	0.0	0.0	0.0	0.0			0.0		
1"	3/4"	0.0	0.0	0.0	0.0	0.0			0.0		
3/4"	3/8"	16.6	0.2	0.0	0.0	0.0			0.5		
3/8"	No. 4	5.0	16.5	3.7	0.1	0.0			3.1		
No. 4	No. 8	0.1	3.8	7.4	1.1	0.0			4.1		
No. 8	No. 30	0.0	0.3	0.6	9.5	0.0			4.7		
No. 30	No. 50	0.0	0.0	0.0	3.6	1.5			4.0		
No. 50	No. 200	0.1	0.0	0.1	2.2	5.7			2.3		
No. 200	Pan	0.1	0.1	0.1	0.5	0.8			1.3		
Total:		22.0	21.0	12.0	17.0	8.0			20.0		
Percent of plus No. 4		21.6	16.7	3.7	0.1	0.0			3.6		
Percent of plus No. 8		21.7	20.5	11.1	1.2	0.0			7.7		

Percent of plus No. 4 from class (A) Rock:	0.0
Total Percent of plus No. 4	45.7
Percent of plus No. 4 from class (A) Rock:	***0.0***

Percent of plus No. 8 from class (A) Rock:	0.0
Total Percent of plus No. 8	62.3
Percent of plus No. 8 from class (A) Rock:	**0.0**

Remarks:

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : WEIGH UP SHEET

SAMPLE ID:	17CRAP64	SAMPLE DATE:	2-9-18
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:		SPEC YEAR:	2014
SAMPLED BY:	KYLE RANGNOW # 765	SPEC ITEM:	
SAMPLE LOCATION:		SPECIAL PROVISION:	
MATERIAL CODE:	HMAC	MIX TYPE:	341-DG-C
MATERIAL NAME:	17CRAP64		
PRODUCER:	Texas Materials		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:	Surface	STATION:		DIST. FROM CL:		CONTRACTOR DESIGN # :	17CRAP64

Aggregate Weight, g:	3,000.0
4.8% Asphalt by Total Weight, g:	151.3
Total Weight, g:	3151.3

4.8% Asphalt by Total Weight, g:	151.3
Less Asphalt by Weight of Recycled Material, g:	29.6
(VALERO 64-22) Asphalt to Add, g:	**121.7**

			Bin No.1	Bin No.2	Bin No.3	Bin No.4	Bin No.5	Bin No.6	Bin No.7	Bin No.8	Bin No.9	Bin No.10			
		Individual Bin (%):	Bin No.1 = 22 %	Bin No.2 = 21 %	Bin No.3 = 12 %	Bin No.4 = 17 %	Bin No.5 = 8 %			Bin No.8 = 20 %					
		Aggregate Source:	Limestone_Dolomite	Limestone_Dolomite	Limestone_Dolomite	Limestone_Dolomite				Fractionated RAP					
		Aggregate Number:	1402702	1402702	1402702	1402702				LIBERTY HILL					
		Sample ID:	C ROCK	D ROCK	F ROCK	MAN SAND	FIELD SAND			Fine 1/2"			Total Weights	Individual Retained, %	Cumulative Retained, %
	Sieve Size:		Aggregate Weight	Aggregate Weight	Aggregate Weight	Aggregate Weight	Aggregate Weight			Fractionated RAP Weight					
	Passing	Retained													
INDIVIDUAL	-	1"	0.0	0.0	0.0	0.0	0.0			0.0			0.0	0.0	0.0
	1"	3/4"	0.0	0.0	0.0	0.0	0.0			0.0			0.0	0.0	0.0
	3/4"	3/8"	499.0	5.7	0.0	0.0	0.0			15.7			520.4	17.2	17.2
	3/8"	No. 4	148.5	495.2	111.2	2.5	0.0			97.6			855.1	28.2	45.4
	No. 4	No. 8	4.0	115.3	223.2	33.7	1.0			129.1			506.1	16.7	62.1
	No. 8	No. 30	0.7	9.5	18.0	284.6	1.0			147.3			461.0	15.2	77.3
	No. 30	No. 50	0.7	0.6	1.4	108.1	43.9			126.5			281.3	9.3	86.6
	No. 50	No. 200	4.0	0.6	2.2	66.8	171.1			71.8			316.5	10.4	97.1
	No. 200	Pan	3.3	3.2	4.0	14.3	23.0			41.6			89.3	2.9	100.0
	Totals		660.0	630.0	360.0	510.0	240.0			629.6			**3,029.6**	Total includes asphalt from the recycled material aggregate	

Running Total:															
CUMULATIVE	-	1"	0.0	660.0	1,290.0	1,650.0	2,160.0			2,400.0			0.0		
	1"	3/4"	0.0	660.0	1,290.0	1,650.0	2,160.0			2,400.0			0.0		
	3/4"	3/8"	499.0	665.7	1,290.0	1,650.0	2,160.0			2,415.7			520.4		
	3/8"	No. 4	647.5	1,160.9	1,401.2	1,652.6	2,160.0			2,513.3			1,375.4		
	No. 4	No. 8	651.4	1,276.1	1,624.4	1,686.2	2,161.0			2,642.4			1,881.6		
	No. 8	No. 30	652.1	1,285.6	1,642.4	1,970.8	2,161.9			2,789.7			2,342.5		
	No. 30	No. 50	652.7	1,286.2	1,643.9	2,078.9	2,205.8			2,916.3			2,623.9		
	No. 50	No. 200	656.7	1,286.9	1,646.0	2,145.7	2,377.0			2,988.0			2,940.3		
	No. 200	Pan	660.0	1,290.0	1,650.0	2,160.0	2,400.0			3,029.6			3,029.6	Total includes asphalt from the recycled material aggregate	

Remarks:

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES

SAMPLE ID:	17CRAP64	SAMPLE DATE:	2-9-18
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:		SPEC YEAR:	2014
SAMPLED BY:	KYLE RANGNOW # 765	SPEC ITEM:	
SAMPLE LOCATION:		SPECIAL PROVISION:	
MATERIAL CODE:	HMAC	MIX TYPE:	341-DG-C
MATERIAL NAME:	17CRAP64		
PRODUCER:	Texas Materials		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:	Surface	STATION:		DIST. FROM CL:		CONTRACTOR DESIGN # :	17CRAP64

Blank Sample Weight, g:	1,500.0

			Bin No.1	Bin No.2	Bin No.3	Bin No.4	Bin No.5	Bin No.6	Bin No.7			
		Individual Bin (%):	Bin No.1 = 22 %	Bin No.2 = 21 %	Bin No.3 = 12 %	Bin No.4 = 17 %	Bin No.5 = 8 %					
		Aggregate Source:	Limestone_Dolomite	Limestone_Dolomite	Limestone_Dolomite	Limestone_Dolomite						
		Aggregate Number:	1402702	1402702	1402702	1402702						
		Sample ID:	C ROCK	D ROCK	F ROCK	MAN SAND	FIELD SAND			Total Weights	Individual Retained, %	Cumulative Retained, %
	Sieve Size: Passing	Retained	Aggregate Weight	Aggregate Weight	Aggregate Weight	Aggregate Weight	Aggregate Weight					
INDIVIDUAL	-	1"	0.0	0.0	0.0	0.0	0.0			0.0	0.0	0.0
	1"	3/4"	0.0	0.0	0.0	0.0	0.0			0.0	0.0	0.0
	3/4"	3/8"	311.9	3.5	0.0	0.0	0.0			315.4	21.0	21.0
	3/8"	No. 4	92.8	309.5	69.5	1.6	0.0			473.4	31.6	52.6
	No. 4	No. 8	2.5	72.1	139.5	21.0	0.6			235.7	15.7	68.3
	No. 8	No. 30	0.4	5.9	11.3	177.9	0.6			196.0	13.1	81.4
	No. 30	No. 50	0.4	0.4	0.9	67.6	27.5			96.7	6.4	87.8
	No. 50	No. 200	2.5	0.4	1.4	41.8	107.0			152.9	10.2	98.0
	No. 200	Pan	2.1	2.0	2.5	8.9	14.4			29.8	2.0	100.0
	Totals		412.5	393.8	225.0	318.8	150.0			**1,500.0**	Total does not include recycled material	

Running Total:	

CUMULATIVE	-	1"	0.0	412.5	806.3	1,031.3	1,350.0			0.0		
	1"	3/4"	0.0	412.5	806.3	1,031.3	1,350.0			0.0		
	3/4"	3/8"	311.9	416.0	806.3	1,031.3	1,350.0			315.4		
	3/8"	No. 4	404.7	725.5	875.8	1,032.8	1,350.0			788.8		
	No. 4	No. 8	407.1	797.6	1,015.3	1,053.9	1,350.6			1,024.5		
	No. 8	No. 30	407.6	803.5	1,026.5	1,231.7	1,351.2			1,220.5		
	No. 30	No. 50	408.0	803.9	1,027.4	1,299.3	1,378.7			1,317.2		
	No. 50	No. 200	410.4	804.3	1,028.8	1,341.1	1,485.6			1,470.2		
	No. 200	Pan	412.5	806.3	1,031.3	1,350.0	1,500.0			1,500.0		

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : BULK GRAVITY

SAMPLE ID:	17CRAP64	SAMPLE DATE:	2-9-18
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:		SPEC YEAR:	2014
SAMPLED BY:	KYLE RANGNOW # 765	SPEC ITEM:	
SAMPLE LOCATION:		SPECIAL PROVISION:	
MATERIAL CODE:	HMAC	MIX TYPE:	341-DG-C
MATERIAL NAME:	17CRAP64		
PRODUCER:	Texas Materials		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:	Surface	STATION:		DIST. FROM CL:		CONTRACTOR DESIGN # :	17CRAP64

	Bin No.1	Bin No.2	Bin No.3	Bin No.4	Bin No.5	Bin No.6	Bin No.7	Bin No.8	Bin No.9	Bin No.10
Individual Bin (%):	Bin No.1 = 22 %	Bin No.2 = 21 %	Bin No.3 = 12 %	Bin No.4 = 17 %	Bin No.5 = 8 %			Bin No.8 = 20 %		
Aggregate Source:	Limestone_Dolomite	Limestone_Dolomite	Limestone_Dolomite	Limestone_Dolomite				Fractionated RAP		
Aggregate Number:	1402702	1402702	1402702	1402702				LIBERTY HILL		
Sample ID:	C ROCK	D ROCK	F ROCK	MAN SAND	FIELD SAND			Fine 1/2"		

Sieve Size:		Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG
Passing	Retained																				
	1"																				
1"	3/4"																				
3/4"	3/8"	75.6	2.796	0.9	2.799											2.5					
3/8"	No. 4	22.5	2.799	78.6	2.799	30.9	2.799	0.5	2.805							15.5					
No. 4	No. 8	0.6	2.801	18.3	2.801	62.0	2.801	6.6	2.805	0.4	2.614					20.5					
No. 8	No. 30	0.1	2.801	1.5	2.801	5.0	2.801	55.8	2.805	0.4	2.614					23.4					
No. 30	No. 50	0.1	2.801	0.1	2.801	0.4	2.801	21.2	2.778	18.3	2.614					20.1					
No. 50	No. 200	0.6	2.801	0.1	2.801	0.6	2.801	13.1	2.778	71.3	2.614					11.4					
No. 200	Pan	0.5	2.801	0.5	2.801	1.1	2.801	2.8	2.778	9.6	2.614					6.6					
Totals		100.0	2.797	100.0	2.799	100.0	2.800	100.0	2.795	100.0	2.614					100.0					
			7.9		7.5		4.3		6.1		3.1										

Combined Bulk Specific Gravity:	**3.473**
Coarse Agg. Combined BSG:	

Specific Gravity of Asphalt:	**1.030**

Remarks:

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : SUMMARY SHEET

SAMPLE ID:	17CRAP64	SAMPLE DATE:	2-9-18
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:		SPEC YEAR:	2014
SAMPLED BY:	KYLE RANGNOW # 765	SPEC ITEM:	
SAMPLE LOCATION:		SPECIAL PROVISION:	
MATERIAL CODE:	HMAC	MIX TYPE:	341-DG-C
MATERIAL NAME:	17CRAP64		
PRODUCER:	Texas Materials		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:	Surface	STATION:		DIST. FROM CL:		CONTRACTOR DESIGN # :	17CRAP64

Target Density, %:	**97.0**
Number of Gyrations:	

CRM* Content, %:	

Note: This mix design requires an asphalt content of at least 3.0% to meet the Maximum Ratio of Recycled to Total Binder requirement.

TEST SPECIMENS								Mixture Evaluation @ Optimum Asphalt Content				
									Hamburg Wheel Tracking Test			
Asphalt Content (%)	Binder Ratio (%)	Specific Gravity Of Specimen (Ga)	Maximum Specific Gravity (Gr)	Effective Gravity (Ge)	Theo. Max. Specific Gravity (Gt)	Density from Gt (Percent)	VMA (Percent)	Indirect Tensile Strength (psi)	Number of cycles	Rut depth (mm)		*Overlay Tester Min. Number of Cycles*
3.5	25.7	2.453	2.599	2.751	2.623	93.5	14.8					
4.0	22.5	2.459	2.595	2.770	2.602	94.5	15.0					
4.5	20.0	2.481	2.579	2.776	2.581	96.1	14.7	115	15,000	6.53		
5.0	18.0	2.497	2.571	2.791	2.561	97.5	14.6					
5.5	16.4	2.513	2.562	2.805	2.541	98.9	14.5					

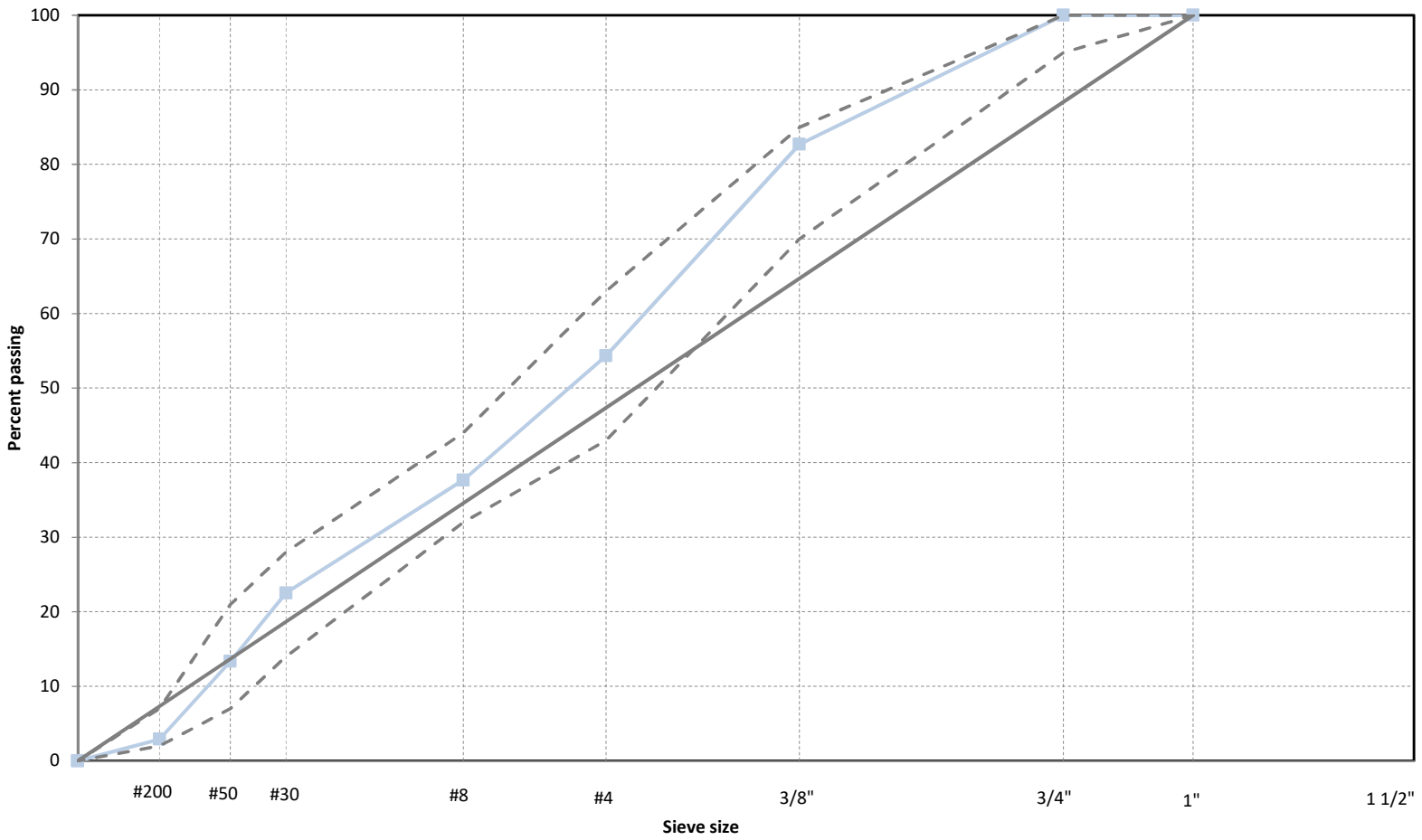
Effective Specific Gravity:	2.779
Optimum Asphalt Content :	**4.8**
Binder Ratio @ OAC:	18.8
VMA @ Optimum AC:	14.7

Interpolated Values	
Specific Gravity (Ga):	*2.491*
Max. Specific Gravity (Gr):	*2.574*
Theo. Max. Specific Gravity (Gt):	*2.568*

Estimated Percent of Stripping, %:	**0**

Mixing Temp,°F:	325
Molding Temp,°F:	275

Remarks:


100
90
80
70
60
50
40
30
20
10
0
Percent passing
#200
#50
#30
#8
#4
3/8"
3/4"
1"
1 1/2"
Sieve size

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN

Use this template to perform the mixture design of Hot Mix Asphalt or Warm Mix Asphalt mixtures according to the 2014 Specifications handbook.

If you have questions or comments concerning this template or the mixture design procedures, please call Travis Patton at 512-506-5841 of the Flexible Pavements Branch of the Materials & Pavements Section within the Construction Division.

If you would like to obtain an updated version of this Site Manager template go to
http://www.txdot.gov/inside-txdot/forms-publications/consultants-contractors/forms/site-manager.html

To move from page to page, click on the different worksheet tabs at the bottom of the page.
This template provides notes throughout the worksheets when design requirements are not met.

COMBINED GRADATION SHEET: Start at this worksheet. Select the 2004 specification year and the mix type. This information will affect the calculation, labeling, and formatting of the worksheets in this mixture design template.

- **Spec Year:** Select the specification year from the dropdown list before selecting the mix type.
- **Mix Type: S**elect the mix type from the dropdown list that most closely matches your mix. This value will determine what sieve sizes and tolerances are displayed on the worksheets.
- **WMA:** Select "Yes" from the dropdown list when the mixture design includes WMA additives. Select "No" if WMA additives are not included in the mixture design, even though a WMA technology may be used during production. WMA information must be entered before entering bin percentages.
- **Course/Lift:** From this dropdown list, select the mixture description and its location from the final riding surface. The mixture description must be selected before entering the recycled materials information to establish the maximum allowable amount of recycled materials.
- **Aggregate Bin Fractions:** Select the aggregate type, source, and number from the dropdown lists. Refer to the BRSQC for additional aggregate and quarry information. To obtain the latest version of the BRSQC go to:
  http://www.txdot.gov/txdot_library/publications/producer_list.htm
  If the aggregate is not listed in the BRSQC but approved by the Engineer, select an aggregate source from the dropdown list and enter a description in the aggregate Sample ID cell.
- **Recycled Materials:** Select the recycled material type and source from the dropdown lists. When using Recycled Asphalt Shingles (RAS), select the type of RAS used from the dropdown list. The template calculates the recycled binder percent and the recycled to total binder ratio of the mixture.
  NOTE: Enter the asphalt content and the bin percentages of each recycled material by weight of the total mix. The template calculates the recycled aggregate bin percentages by weight of the total aggregate.
- **Binder Substitution:** When using binder substitution, select "Yes" from the dropdown list and enter the originally specified and the substitute binders.

SUMMARY SHEET: Use this worksheet to determine the optimum asphalt content and mixture properties according to the mixture design procedure.

- For informational purposes, enter the mixing and molding temperatures used for the mixture design.

MATL PROPERTIES SHEET: Use this worksheet to enter the material properties for each aggregate stockpile, fine aggregate, combined aggregate, and recycled materials.

- When the material quality requirements are changed according to general notes or when shown on the plans, enter the new requirements in the "Modified Spec. Limit" column.

AGGREGATE CLASSIFICATION SHEET: Use this worksheet to verify the amount of Class A material retained on the No. 4 or No. 8 sieve when blending Class A with Class B aggregate.

WEIGH UP SHEET: Use this worksheet to calculate the weight of the batches of mix used for molds, rice gravity, and any other required test.

- **WARNING**: When using recycled materials and changing the asphalt content in the Combined Gradation sheet, ensure that the Total Bin is 100%.

BLANK WEIGH UP SHEET: Use this worksheet to prepare blank samples to calculate the ignition oven correction factors in accordance with Tex-236-F.

BULK GRAVITY SHEET: Use this worksheet to calculate the aggregate combined bulk specific gravity and the coarse aggregate combined bulk specific gravity if applicable.

TEXAS DEPARTMENT OF TRANSPORTATION

2014 HMACP MIXTURE DESIGN : COMBINED GRADATION

Refresh Workbook

TX2MIXDE14 - File Version: 01/19/17 15:32:54

SAMPLE ID:	17DRAP20	SAMPLE DATE:	2/18/17				
LOT NUMBER:		LETTING DATE:					
SAMPLE STATUS:		CONTROLLING CSJ:					
COUNTY:		SPEC YEAR:	2014				
SAMPLED BY:	DON MILLER # 319	SPEC ITEM:					
SAMPLE LOCATION:	DESIGN	SPECIAL PROVISION:					
MATERIAL CODE:		MIX TYPE:	341-DG-D	WMA Additive in Design?	Yes		
MATERIAL NAME:	TY D WITH RAP			Target Discharge Temp., ºF:	275		
PRODUCER:	APAC- WHEELER			WMA TECHNOLOGY:	Evotherm (MeadWestva		
AREA ENGINEER:		PROJECT MANAGER:		WMA RATE:	0.3	UNITS:	% by weight of asphalt
COURSE\LIFT:	Intermediate	STATION:		DIST. FROM CL:		CONTRACTOR DESIGN # :	17DRAP20

Maximum Allowable, %	
Frac RAP:	30.0
Unfrac RAP:	10.0
RAS:	5.0
RB Ratio:	35.0

Recycled Binder, %	
Bin No.8 :	1.0
Bin No.9 :	0.0
Bin No.10 :	0.0
Total	***1.0***

Use this value in the QC/QA template>>

Ratio of Recycled to Total Binder, %
(based on binder percent (%) entered below in this worksheet)
18.8

	AGGREGATE BIN FRACTIONS							"RECYCLED MATERIALS"			
Aggregate	Bin No.1	Bin No.2	Bin No.3	Bin No.4	Bin No.5	Bin No.6	Bin No.7	Bin No.8	Bin No.9	Bin No.10	
Source:	Limestone_Dolomite	Limestone_Dolomite	Limestone_Dolomite	Gravel				Fractionated RAP			Material Type
Pit:	Marble Falls Quarry	Marble Falls Quarry	Marble Falls Quarry	AUSTIN							Material Source
Number:	1402702	1402702	1402702								RAS Type
Producer:	Oldcastle Materials Texas	Oldcastle Materials Texas	Oldcastle Materials Texas	CAPITOL AGGREGATES							RAP/RAS Producer
Sample ID:	D ROCK	F ROCK	MAN SAND	FIELD SAND				Fine 1/2"			Sample ID

															Recycled Asphalt Binder (%)							
															4.8							Combined Gradation
Hydrated Lime?:															20.0	% of Tot. Mix		% of Tot. Mix		% of Tot. Mix	Total Bin	Lower & Upper Specification Limits
Individual Bin (%):	34.0	Percent	11.0	Percent	25.0	Percent	9.9	Percent		Percent		Percent		Percent	20.1	% of Aggreg		% of Aggreg		% of Aggreg	100.0%	
Sieve Size:	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum. % Passing	Lower	Upper	Within Spec's
3/4"	100.0	34.0	100.0	11.0	100.0	25.0	100.0	9.9							100.0	20.1					100.0	100.0	100.0	Yes
1/2"	100.0	34.0	100.0	11.0	100.0	25.0	100.0	9.9							100.0	20.1					100.0	98.0	100.0	Yes
3/8"	90.7	30.8	100.0	11.0	100.0	25.0	100.0	9.9							94.0	18.9					95.6	85.0	100.0	Yes
No. 4	22.1	7.5	69.1	7.6	99.5	24.9	99.5	9.9							68.1	13.7					63.5	50.0	70.0	Yes
No. 8	5.3	1.8	7.1	0.8	85.5	21.4	97.7	9.7							49.3	9.9					43.5	35.0	46.0	Yes
No. 30	3.4	1.2	2.1	0.2	43.4	10.9	80.6	8.0							31.5	6.3					26.5	15.0	29.0	Yes
No. 50	3.0	1.0	1.7	0.2	25.8	6.5	50.1	5.0							23.2	4.7					17.3	7.0	20.0	Yes
No. 200	2.2	0.7	1.1	0.1	2.8	0.7	14.2	1.4							7.1	1.4					4.4	2.0	7.0	Yes

(Bold Italic) Not within specifications ***(Bold Italic)*** Not within specificaitons- Restricted Zone *(Italic)* Not cumulative

Lift Thickness, in:		Binder Substitution?		Binder Originally Specified:	PG 64-22	Substitute Binder:
Asphalt Source:			Binder Percent, (%):	5.1	Asphalt Spec. Grav.:	1.030
Antistripping Agent:			Percent, (%):			

Remarks:

Notes:

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : MATERIAL PROPERTIES

SAMPLE ID:	17DRAP20	SAMPLE DATE:	2/18/17
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:		SPEC YEAR:	2014
SAMPLED BY:	DON MILLER # 319	SPEC ITEM:	
SAMPLE LOCATION:	DESIGN	SPECIAL PROVISION:	
MATERIAL CODE:		MIX TYPE:	341-DG-D
MATERIAL NAME:	TY D WITH RAP		
PRODUCER:	APAC- WHEELER		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:	Intermediate	STATION:		DIST. FROM CL:		CONTRACTOR DESIGN # :	17DRAP20

	Bin No.1	Bin No.2	Bin No.3	Bin No.4	Bin No.5	Bin No.6	Bin No.7
Individual Bin (%):	Bin No.1 = 34 %	Bin No.2 = 11 %	Bin No.3 = 25 %	Bin No.4 = 9.9 %			
Aggregate Source:	Limestone_Dolomite	Limestone_Dolomite	Limestone_Dolomite	Gravel			
Aggregate Number:	1402702	1402702	1402702				
Sample ID:	D ROCK	F ROCK	MAN SAND	FIELD SAND			

Test Name	SiteManager Test Template	Test Method	Spec. Min or Max	Spec. Limit	Modified Spec. Limit	Result	Sample ID	Result	Sample ID	Result	Sample ID	Result	Sample ID	Result	Sample ID	Result	Sample ID	Result	Sample ID
Stockpile						Bin No.1		Bin No.2		Bin No.3		Bin No.4		Bin No.5		Bin No.6		Bin No.7	
Decantation	Tx217	Tex-217-F	Max.	**1.5**	1.5	0.30		0.40											
Deleterious Mat'l	Tx217	Tex-217-F	Max.	**1.5**	1.5	0.00		0.00											
Surface Aggregate Classification	Tx4AgClas	Tex-438-A, Tex-612-J	Min.		B	B		B		B									
Magnesium Sulfate Soundness	Tx411M	Tex-411-A	Max.	**30**	30	11.00		11.00		11.00									
LA Abrasion	Tx410	Tex-410-A	Max.	**40**	40	29.00		29.00		29.00									
Crushed Faces Count	Tx460	Tex-460-A	Min.	**85**	N/A														
Flat & Elongated	Tx280	Tex-280-F	Max.	**10**	10														
Micro-Deval Abrasion	Tx461	Tex-461-A	Use results to estimate the Mg Sulfate Soundness Loss																
Fine Aggregate						Bin No.1		Bin No.2		Bin No.3		Bin No.4		Bin No.5		Bin No.6		Bin No.7	
Bar Linear Shrinkage	Tx107	Tex-107-E	Max.	**3**	3					1.00									
Methylene Blue	-	AASHTO T330	Max.																
Combined Aggregate						Bin No.1		Bin No.2		Bin No.3		Bin No.4		Bin No.5		Bin No.6		Bin No.7	
Sand Equivalent	Tx203	Tex-203-F	Min.	**45**	45					71.00		71.00							
User Defined Testing						Bin No.1		Bin No.2		Bin No.3		Bin No.4		Bin No.5		Bin No.6		Bin No.7	
Use this area to enter any test methods, speciafications & test result that apply to this material(s) but are not not listed above.	**1**																		
	2																		
	3																		
	4																		
	5																		
Recycled Materials						**Bin No.8**		**Bin No.9**		**Bin No.10**									
Deleterious Mat'l	Tx217	Tex-217-F, Part III	Max.	**0.5**		0.1		0.2											
Decantation	Tx406	Tex-406-A, Part I	Max.	**5**		1.3		0.2											
Plasticity Index	Tx104-6	Tex-106-E	Max.	**8**															
User Defined Testing																			

Remarks:

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : Aggregate Classification

SAMPLE ID:	17DRAP20	SAMPLE DATE:	2/18/17
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:		SPEC YEAR:	2014
SAMPLED BY:	DON MILLER # 319	SPEC ITEM:	
SAMPLE LOCATION:	DESIGN	SPECIAL PROVISION:	
MATERIAL CODE:		MIX TYPE:	341-DG-D
MATERIAL NAME:	TY D WITH RAP		
PRODUCER:	APAC- WHEELER		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:	Intermedi	STATION:		DIST. FROM CL:		CONTRACTOR DESIGN # :	17DRAP20

Aggregate Classification

	Bin No.1	Bin No.2	Bin No.3	Bin No.4	Bin No.5	Bin No.6	Bin No.7	Bin No.8	Bin No.9	Bin No.10
Individual Bin (%):	Bin No.1 = 34 %	Bin No.2 = 11 %	Bin No.3 = 25 %	Bin No.4 = 9.9 %				Bin No.8 = 20.1 %		
Aggregate Source:	Limestone_Dolomite	Limestone_Dolomite	Limestone_Dolomite	Gravel				Fractionated RAP		
Aggregate Number:	1402702	1402702	1402702					Fine 1/2"		
Class (A) Rock (Y/N):	No	No	No	No						
Sieve Size: Passing / Retained	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %
- / 3/4"	0.0	0.0	0.0	0.0				0.0		
3/4" / 1/2"	0.0	0.0	0.0	0.0				0.0		
1/2" / 3/8"	3.2	0.0	0.0	0.0				1.2		
3/8" / No. 4	23.3	3.4	0.1	0.0				5.2		
No. 4 / No. 8	5.7	6.8	3.5	0.2				3.8		
No. 8 / No. 30	0.6	0.6	10.5	1.7				3.6		
No. 30 / No. 50	0.1	0.0	4.4	3.0				1.7		
No. 50 / No. 200	0.3	0.1	5.8	3.6				3.2		
No. 200 / Pan	0.7	0.1	0.7	1.4				1.4		
Total:	34.0	11.0	25.0	9.9				20.1		
Percent of plus No. 4	26.5	3.4	0.1	0.0				6.4		
Percent of plus No. 8	32.2	10.2	3.6	0.2				10.2		

Percent of plus No. 4 from class (A) Rock:	0.0
Total Percent of plus No. 4	36.5
Percent of plus No. 4 from class (A) Rock:	***0.0***

Percent of plus No. 8 from class (A) Rock:	0.0
Total Percent of plus No. 8	56.5
Percent of plus No. 8 from class (A) Rock:	**0.0**

Remarks:

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : WEIGH UP SHEET

SAMPLE ID:	17DRAP20	SAMPLE DATE:	2/18/17
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:		SPEC YEAR:	2014
SAMPLED BY:	DON MILLER # 319	SPEC ITEM:	
SAMPLE LOCATION:	DESIGN	SPECIAL PROVISION:	
MATERIAL CODE:		MIX TYPE:	341-DG-D
MATERIAL NAME:	TY D WITH RAP		
PRODUCER:	APAC- WHEELER		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:	Intermedia	STATION:		DIST. FROM CL:		CONTRACTOR DESIGN # :	17DRAP20

Aggregate Weight, g:	2,500.0
5.1% Asphalt by Total Weight, g:	134.4
Total Weight, g:	2634.4

5.1% Asphalt by Total Weight, g:	134.4
Less Asphalt by Weight of Recycled Material, g:	25.3
() Asphalt to Add, g:	**109.0**

			Bin No.1	Bin No.2	Bin No.3	Bin No.4	Bin No.5	Bin No.6	Bin No.7	Bin No.8	Bin No.9	Bin No.10			
		Individual Bin (%):	Bin No.1 = 34 %	Bin No.2 = 11 %	Bin No.3 = 25 %	Bin No.4 = 9.9 %				Bin No.8 = 20 %					
		Aggregate Source:	Limestone_Dolomite	Limestone_Dolomite	Limestone_Dolomite	Gravel				Fractionated RAP					
		Aggregate Number:	1402702	1402702	1402702										
		Sample ID:	D ROCK	F ROCK	MAN SAND	FIELD SAND				Fine 1/2"					
	Sieve Size:		Aggregate Weight	Aggregate Weight	Aggregate Weight	Aggregate Weight				Fractionated RAP Weight			Total Weights	Individual Retained, %	Cumulative Retained, %
	Passing	Retained													
INDIVIDUAL	-	3/4"	0.0	0.0	0.0	0.0				0.0			0.0	0.0	0.0
	3/4"	1/2"	0.0	0.0	0.0	0.0				0.0			0.0	0.0	0.0
	1/2"	3/8"	79.0	0.0	0.0	0.0				31.7			110.7	4.4	4.4
	3/8"	No. 4	583.1	85.0	3.1	1.2				136.7			809.1	32.0	36.4
	No. 4	No. 8	142.8	170.5	87.5	4.5				99.2			504.5	20.0	56.4
	No. 8	No. 30	16.2	13.8	263.1	42.3				94.0			429.3	17.0	73.4
	No. 30	No. 50	3.4	1.1	110.0	75.5				43.8			233.8	9.3	82.7
	No. 50	No. 200	6.8	1.7	143.8	88.9				85.0			326.0	12.9	95.6
	No. 200	Pan	18.7	3.0	17.5	35.1				37.5			111.8	4.4	100.0
	Totals		850.0	275.0	625.0	247.5				527.8			**2,525.3**	Total includes asphalt from the recycled material aggregate	

Running Total:

CUMULATIVE	-	3/4"	0.0	850.0	1,125.0	1,750.0				1,997.5			0.0		
	3/4"	1/2"	0.0	850.0	1,125.0	1,750.0				1,997.5			0.0		
	1/2"	3/8"	79.0	850.0	1,125.0	1,750.0				2,029.2			110.7		
	3/8"	No. 4	662.2	935.0	1,128.1	1,751.2				2,165.9			919.9		
	No. 4	No. 8	805.0	1,105.5	1,215.6	1,755.7				2,265.1			1,424.4		
	No. 8	No. 30	821.1	1,119.2	1,478.8	1,798.0				2,359.1			1,853.7		
	No. 30	No. 50	824.5	1,120.3	1,588.8	1,873.5				2,402.9			2,087.5		
	No. 50	No. 200	831.3	1,122.0	1,732.5	1,962.4				2,487.9			2,413.5		
	No. 200	Pan	850.0	1,125.0	1,750.0	1,997.5				2,525.3			2,525.3	Total includes asphalt from the recycled material aggregate	

Remarks:

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES

SAMPLE ID:	17DRAP20	SAMPLE DATE:	2/18/17
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:		SPEC YEAR:	2014
SAMPLED BY:	DON MILLER # 319	SPEC ITEM:	
SAMPLE LOCATION:	DESIGN	SPECIAL PROVISION:	
MATERIAL CODE:		MIX TYPE:	341-DG-D
MATERIAL NAME:	TY D WITH RAP		
PRODUCER:	APAC- WHEELER		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:	Intermedia	STATION:		DIST. FROM CL:		CONTRACTOR DESIGN # :	17DRAP20

Blank Sample Weight, g:	1,500.0

			Bin No.1	Bin No.2	Bin No.3	Bin No.4	Bin No.5	Bin No.6	Bin No.7			
		Individual Bin (%):	Bin No.1 = 34 %	Bin No.2 = 11 %	Bin No.3 = 25 %	Bin No.4 = 9.9 %						
		Aggregate Source:	Limestone_Dolomite	Limestone_Dolomite	Limestone_Dolomite	Gravel						
		Aggregate Number:	1402702	1402702	1402702							
		Sample ID:	D ROCK	F ROCK	MAN SAND	FIELD SAND				Total Weights	Individual Retained, %	Cumulative Retained, %
	Sieve Size: Passing	Retained	Aggregate Weight	Aggregate Weight	Aggregate Weight	Aggregate Weight						
INDIVIDUAL	-	3/4"	0.0	0.0	0.0	0.0				0.0	0.0	0.0
	3/4"	1/2"	0.0	0.0	0.0	0.0				0.0	0.0	0.0
	1/2"	3/8"	59.4	0.0	0.0	0.0				59.4	4.0	4.0
	3/8"	No. 4	437.9	63.8	2.3	0.9				505.0	33.7	37.6
	No. 4	No. 8	107.2	128.0	65.7	3.3				304.3	20.3	57.9
	No. 8	No. 30	12.1	10.3	197.6	31.8				251.8	16.8	74.7
	No. 30	No. 50	2.6	0.8	82.6	56.7				142.7	9.5	84.2
	No. 50	No. 200	5.1	1.2	107.9	66.7				181.0	12.1	96.3
	No. 200	Pan	14.0	2.3	13.1	26.4				55.8	3.7	100.0
	Totals		638.3	206.5	469.3	185.9				**1,500.0**	Total does not include recycled material	

Running Total:												
CUMULATIVE	-	3/4"	0.0	638.3	844.8	1,314.1				0.0		
	3/4"	1/2"	0.0	638.3	844.8	1,314.1				0.0		
	1/2"	3/8"	59.4	638.3	844.8	1,314.1				59.4		
	3/8"	No. 4	497.2	702.1	847.2	1,315.1				564.3		
	No. 4	No. 8	604.5	830.1	912.9	1,318.4				868.6		
	No. 8	No. 30	616.6	840.5	1,110.5	1,350.2				1,120.5		
	No. 30	No. 50	619.1	841.3	1,193.1	1,406.9				1,263.1		
	No. 50	No. 200	624.3	842.5	1,301.0	1,473.6				1,444.2		
	No. 200	Pan	638.3	844.8	1,314.1	1,500.0				1,500.0		

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : BULK GRAVITY

SAMPLE ID:	17DRAP20	SAMPLE DATE:	2/18/17
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:		SPEC YEAR:	2014
SAMPLED BY:	DON MILLER # 319	SPEC ITEM:	
SAMPLE LOCATION:	DESIGN	SPECIAL PROVISION:	
MATERIAL CODE:		MIX TYPE:	341-DG-D
MATERIAL NAME:	TY D WITH RAP		
PRODUCER:	APAC- WHEELER		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:	Intermedi	STATION:		DIST. FROM CL:		CONTRACTOR DESIGN # :	17DRAP20

	Bin No.1	Bin No.2	Bin No.3	Bin No.4	Bin No.5	Bin No.6	Bin No.7	Bin No.8	Bin No.9	Bin No.10
Individual Bin (%):	Bin No.1 = 34 %	Bin No.2 = 11 %	Bin No.3 = 25 %	Bin No.4 = 9.9 %				Bin No.8 = 20 %		
Aggregate Source:	Limestone_Dolomite	Limestone_Dolomite	Limestone_Dolomite	Gravel				Fractionated RAP		
Aggregate Number:	1402702	1402702	1402702							
Sample ID:	D ROCK	F ROCK	MAN SAND	FIELD SAND				Fine 1/2"		

Sieve Size:		Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG
Passing	Retained																				
	3/4"																				
3/4"	1/2"																				
1/2"	3/8"	9.3														6.0					
3/8"	No. 4	68.6		30.9		0.5		0.5								25.9					
No. 4	No. 8	16.8		62.0		14.0		1.8								18.8					
No. 8	No. 30	1.9		5.0		42.1		17.1								17.8					
No. 30	No. 50	0.4		0.4		17.6		30.5								8.3					
No. 50	No. 200	0.8		0.6		23.0		35.9								16.1					
No. 200	Pan	2.2		1.1		2.8		14.2								7.1					
Totals		100.0		100.0		100.0		100.0								100.0					

Combined Bulk Specific Gravity:	
Coarse Agg. Combined BSG:	

Specific Gravity of Asphalt:	**1.030**

Remarks:

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : SUMMARY SHEET

SAMPLE ID:	17DRAP20	SAMPLE DATE:	2/18/17
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:		SPEC YEAR:	2014
SAMPLED BY:	DON MILLER # 319	SPEC ITEM:	
SAMPLE LOCATION:	DESIGN	SPECIAL PROVISION:	
MATERIAL CODE:		MIX TYPE:	341-DG-D
MATERIAL NAME:	TY D WITH RAP		
PRODUCER:	APAC- WHEELER		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:	Intermedi	STATION:		DIST. FROM CL:		CONTRACTOR DESIGN # :	17DRAP20

Target Density, %:	**97.0**
Number of Gyrations:	

CRM* Content, %:	

Note: This mix design requires an asphalt content of at least 2.8% to meet the Maximum Ratio of Recycled to Total Binder requirement.

TEST SPECIMENS								Mixture Evaluation @ Optimum Asphalt Content				
									Hamburg Wheel Tracking Test			
Asphalt Content (%)	Binder Ratio (%)	Specific Gravity Of Specimen (Ga)	Maximum Specific Gravity (Gr)	Effective Gravity (Ge)	Theo. Max. Specific Gravity (Gt)	Density from Gt (Percent)	VMA (Percent)	Indirect Tensile Strength (psi)	Number of cycles	Rut depth (mm)		*Overlay Tester Min. Number of Cycles*
3.5	27.4	2.428			2.623	92.6	15.7					
4.0	24.0	2.448	2.602	2.779	2.602	94.1	15.4					
4.5	21.3	2.465	2.582	2.779	2.582	95.5	15.3	155.2	10,000	4.39		
5.0	19.2	2.477	2.562	2.780	2.562	96.7	15.3					
5.5	17.5	2.484			2.542	97.7	15.5					

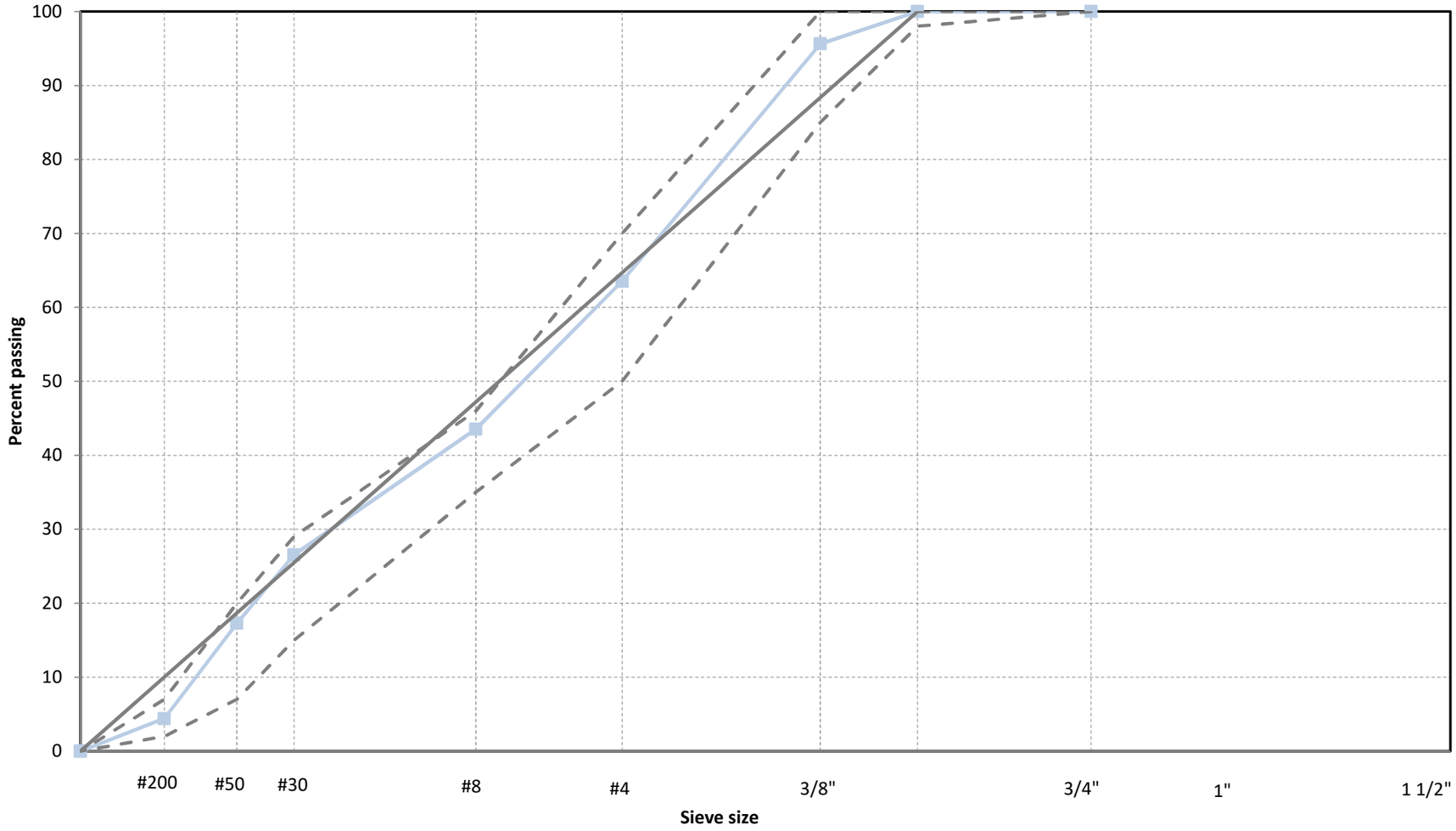
Effective Specific Gravity:	2.779
Optimum Asphalt Content :	**5.1**
Binder Ratio @ OAC:	18.8
VMA @ Optimum AC:	15.4

Interpolated Values	
Specific Gravity (Ga):	*2.479*
Max. Specific Gravity (Gr):	
Theo. Max. Specific Gravity (Gt):	*2.556*

Estimated Percent of Stripping, %:	**0**

Mixing Temp,°F:	300
Molding Temp,°F:	275

Remarks:


100
90
80
70
60
50
40
30
20
10
0
Percent passing
#200
#50
#30
#8
#4
3/8"
3/4"
1"
1 1/2"
Sieve size

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN

Use this template to perform the mixture design of Hot Mix Asphalt or Warm Mix Asphalt mixtures according to the 2014 Specifications handbook.

If you have questions or comments concerning this template or the mixture design procedures, please call Travis Patton at 512-506-5841 of the Flexible Pavements Branch of the Materials & Pavements Section within the Construction Division.

If you would like to obtain an updated version of this Site Manager template go to
http://www.txdot.gov/inside-txdot/forms-publications/consultants-contractors/forms/site-manager.html

To move from page to page, click on the different worksheet tabs at the bottom of the page.
This template provides notes throughout the worksheets when design requirements are not met.

COMBINED GRADATION SHEET: Start at this worksheet. Select the 2004 specification year and the mix type. This information will affect the calculation, labeling, and formatting of the worksheets in this mixture design template.

- **Spec Year:** Select the specification year from the dropdown list before selecting the mix type.
- **Mix Type: S**elect the mix type from the dropdown list that most closely matches your mix. This value will determine what sieve sizes and tolerances are displayed on the worksheets.
- **WMA:** Select "Yes" from the dropdown list when the mixture design includes WMA additives. Select "No" if WMA additives are not included in the mixture design, even though a WMA technology may be used during production. WMA information must be entered before entering bin percentages.
- **Course/Lift:** From this dropdown list, select the mixture description and its location from the final riding surface. The mixture description must be selected before entering the recycled materials information to establish the maximum allowable amount of recycled materials.
- **Aggregate Bin Fractions:** Select the aggregate type, source, and number from the dropdown lists. Refer to the BRSQC for additional aggregate and quarry information. To obtain the latest version of the BRSQC go to:
  http://www.txdot.gov/txdot_library/publications/producer_list.htm
  If the aggregate is not listed in the BRSQC but approved by the Engineer, select an aggregate source from the dropdown list and enter a description in the aggregate Sample ID cell.
- **Recycled Materials:** Select the recycled material type and source from the dropdown lists. When using Recycled Asphalt Shingles (RAS), select the type of RAS used from the dropdown list. The template calculates the recycled binder percent and the recycled to total binder ratio of the mixture.
  NOTE: Enter the asphalt content and the bin percentages of each recycled material by weight of the total mix. The template calculates the recycled aggregate bin percentages by weight of the total aggregate.
- **Binder Substitution:** When using binder substitution, select "Yes" from the dropdown list and enter the originally specified and the substitute binders.

SUMMARY SHEET: Use this worksheet to determine the optimum asphalt content and mixture properties according to the mixture design procedure.

- For informational purposes, enter the mixing and molding temperatures used for the mixture design.

MATL PROPERTIES SHEET: Use this worksheet to enter the material properties for each aggregate stockpile, fine aggregate, combined aggregate, and recycled materials.

- When the material quality requirements are changed according to general notes or when shown on the plans, enter the new requirements in the "Modified Spec. Limit" column.

AGGREGATE CLASSIFICATION SHEET: Use this worksheet to verify the amount of Class A material retained on the No. 4 or No. 8 sieve when blending Class A with Class B aggregate.

WEIGH UP SHEET: Use this worksheet to calculate the weight of the batches of mix used for molds, rice gravity, and any other required test.

- **WARNING**: When using recycled materials and changing the asphalt content in the Combined Gradation sheet, ensure that the Total Bin is 100%.

BLANK WEIGH UP SHEET: Use this worksheet to prepare blank samples to calculate the ignition oven correction factors in accordance with Tex-236-F.

BULK GRAVITY SHEET: Use this worksheet to calculate the aggregate combined bulk specific gravity and the coarse aggregate combined bulk specific gravity if applicable.

TEXAS DEPARTMENT OF TRANSPORTATION

2014 HMACP MIXTURE DESIGN : COMBINED GRADATION

Refresh Workbook

TX2MIXDE14 - File Version: 01/19/17 15:32:54

SAMPLE ID:	17TOM CL B76-22	SAMPLE DATE:	2/8/18		
LOT NUMBER:		LETTING DATE:			
SAMPLE STATUS:		CONTROLLING CSJ:			
COUNTY:		SPEC YEAR:	2014		
SAMPLED BY:	Kyle Rangnow #765	SPEC ITEM:			
SAMPLE LOCATION:	DESIGN	SPECIAL PROVISION:			
MATERIAL CODE:		MIX TYPE:	347-TOM-C	WMA Additive in Design?	No
MATERIAL NAME:	TOM CL B 70-22			Target Discharge Temp., ºF:	
PRODUCER:	Texas Materials			WMA TECHNOLOGY:	
AREA ENGINEER:		PROJECT MANAGER:		WMA RATE: / UNITS:	
COURSE\LIFT:	Surface	STATION:		DIST. FROM CL:	CONTRACTOR DESIGN # : 17TOMCLB76-22

Maximum Allowable, %	
Frac RAP:	0.0
Unfrac RAP:	0.0
RAS:	0.0
RB Ratio:	0.0

Recycled Binder, %	
Bin No.8 :	0.0
Bin No.9 :	0.0
Bin No.10 :	0.0
Total	***0.0***

Use this value in the QC/QA template>>

Ratio of Recycled to Total Binder, %
(based on binder percent (%) entered below in this worksheet)
0.0

	AGGREGATE BIN FRACTIONS							"RECYCLED MATERIALS"			
Aggregate	**Bin No.1**	**Bin No.2**	**Bin No.3**	**Bin No.4**	**Bin No.5**	**Bin No.6**	**Bin No.7**	**Bin No.8**	**Bin No.9**	**Bin No.10**	
Source:	Limestone_Dolomit	Limestone_Dolomit	Limestone_Dolomit								Material Type
Pit:	Marble Falls Quarry	Marble Falls Quarry	Feld								Material Source
Number:	1402702	1402702	1424602								RAS Type
Producer:	Oldcastle Materials Texas	Oldcastle Materials Texas	Texas Crushed Stone								RAP/RAS Producer
Sample ID:	D ROCK	F ROCK	DRY SCREENINGS								Sample ID

Recycled Asphalt Binder (%)

Combined Gradation

Hydrated Lime?:																% of Tot. Mix		% of Tot. Mix		% of Tot. Mix	Total Bin	Lower & Upper Specification Limits		
Individual Bin (%):	45.0	Percent	38.0	Percent	17.0	Percent		Percent		Percent		Percent		Percent		% of Aggreg		% of Aggreg		% of Aggreg	100.0%			
Sieve Size:	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum. % Passing	Lower	Upper	Within Spec's
1/2"	100.0	45.0	100.0	38.0	100.0	17.0															100.0	100.0	100.0	Yes
3/8"	90.7	40.8	100.0	38.0	100.0	17.0															95.8	95.0	100.0	Yes
No. 4	22.1	9.9	69.1	26.3	100.0	17.0															53.2	40.0	60.0	Yes
No. 8	5.3	2.4	7.1	2.7	94.1	16.0															21.1	17.0	27.0	Yes
No. 16	4.1	1.8	3.4	1.3	73.2	12.4															15.6	5.0	27.0	Yes
No. 30	3.4	1.5	2.1	0.8	59.4	10.1															12.4	5.0	27.0	Yes
No. 50	3.0	1.4	1.7	0.6	49.1	8.3															10.3	5.0	27.0	Yes
No. 200	2.2	1.0	1.1	0.4	29.0	4.9															6.3	5.0	9.0	Yes

(Bold Italic) Not within specifications ***(Bold Italic)*** Not within specificaitons- Restricted Zone *(Italic)* Not cumulative

Lift Thickness, in:		Binder Substitution?		Binder Originally Specified:	PG 76-22	Substitute Binder:
Asphalt Source:	VALERO 76-22			Binder Percent, (%):	6.5	Asphalt Spec. Grav.: 1.035
Antistripping Agent:				Percent, (%):		

Remarks:

Notes:

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : MATERIAL PROPERTIES

SAMPLE ID:	17TOM CL B76-22	SAMPLE DATE:	2/8/18
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:		SPEC YEAR:	2014
SAMPLED BY:	Kyle Rangnow #765	SPEC ITEM:	
SAMPLE LOCATION:	DESIGN	SPECIAL PROVISION:	
MATERIAL CODE:		MIX TYPE:	347-TOM-C
MATERIAL NAME:	TOM CL B 70-22		
PRODUCER:	Texas Materials		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:	Surface	STATION:		DIST. FROM CL:		CONTRACTOR DESIGN # :	17TOMCLB76-22

	Bin No.1	Bin No.2	Bin No.3	Bin No.4	Bin No.5	Bin No.6	Bin No.7
Individual Bin (%):	Bin No.1 = 45 %	Bin No.2 = 38 %	Bin No.3 = 17 %				
Aggregate Source:	Limestone_Dolomite	Limestone_Dolomite	Limestone_Dolomite				
Aggregate Number:	1402702	1402702	1424602				
Sample ID:	D ROCK	F ROCK	DRY SCREENINGS				

Test Name	SiteManager Test Template	Test Method	Spec. Min or Max	Spec. Limit	Modified Spec. Limit	Result	Sample ID	Result	Sample ID	Result	Sample ID	Result	Sample ID	Result	Sample ID	Result	Sample ID	Result	Sample ID
Stockpile						Bin No.1		Bin No.2		Bin No.3		Bin No.4		Bin No.5		Bin No.6		Bin No.7	
Decantation	Tx217	Tex-217-F	Max.	**1.5**		0.30		0.40											
Deleterious Mat'l	Tx217	Tex-217-F	Max.	**1.0**		0.00		0.00											
Surface Aggregate Classification	Tx4AgClas	Tex-438-A, Tex-612-J	Min.		B	B		B											
Magnesium Sulfate Soundness	Tx411M	Tex-411-A	Max.	**20**		11.00		11.00											
LA Abrasion	Tx410	Tex-410-A	Max.	**30**		29.00		29.00											
Crushed Faces Count	Tx460	Tex-460-A	Min.	**100**	N/A														
Flat & Elongated	Tx280	Tex-280-F	Max.	**10**	10	0.00		0.00											
Micro-Deval Abrasion	Tx461	Tex-461-A	Use results to estimate the Mg Sulfate Soundness Loss																
Fine Aggregate						Bin No.1		Bin No.2		Bin No.3		Bin No.4		Bin No.5		Bin No.6		Bin No.7	
Bar Linear Shrinkage	Tx107	Tex-107-E	Max.	**3**															
Methylene Blue	-	AASHTO T330	Max.																
Combined Aggregate						Bin No.1		Bin No.2		Bin No.3		Bin No.4		Bin No.5		Bin No.6		Bin No.7	
Sand Equivalent	Tx203	Tex-203-F	Min.	**45**															
User Defined Testing						Bin No.1		Bin No.2		Bin No.3		Bin No.4		Bin No.5		Bin No.6		Bin No.7	
Use this area to enter any test methods, speciafications & test result that apply to this material(s) but are not not listed above.	1																		
	2																		
	3																		
	4																		
	5																		
Recycled Materials						**Bin No.8**		**Bin No.9**		**Bin No.10**									
Deleterious Mat'l	Tx217	Tex-217-F, Part III	Max.	**0.5**															
Decantation	Tx406	Tex-406-A, Part I	Max.	**5**															
Plasticity Index	Tx104-6	Tex-106-E	Max.	**8**															
User Defined Testing																			

Remarks:

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : Aggregate Classification

SAMPLE ID:	17TOM CL B76-22	SAMPLE DATE:	2/8/18
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:		SPEC YEAR:	2014
SAMPLED BY:	Kyle Rangnow #765	SPEC ITEM:	
SAMPLE LOCATION:	DESIGN	SPECIAL PROVISION:	
MATERIAL CODE:		MIX TYPE:	347-TOM-C
MATERIAL NAME:	TOM CL B 70-22		
PRODUCER:	Texas Materials		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:	Surface	STATION:		DIST. FROM CL:		CONTRACTOR DESIGN # :	17TOMCLB76-22

Aggregate Classification

	Bin No.1	Bin No.2	Bin No.3	Bin No.4	Bin No.5	Bin No.6	Bin No.7	Bin No.8	Bin No.9	Bin No.10
Individual Bin (%):	Bin No.1 = 45 %	Bin No.2 = 38 %	Bin No.3 = 17 %							
Aggregate Source:	Limestone_Dolomite	Limestone_Dolomite	Limestone_Dolomite							
Aggregate Number:	1402702	1402702	1424602							
Class (A) Rock (Y/N):	No	No	No							
Sieve Size: Passing / Retained	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %
- / 1/2"	0.0	0.0	0.0							
1/2" / 3/8"	4.2	0.0	0.0							
3/8" / No. 4	30.9	11.7	0.0							
No. 4 / No. 8	7.6	23.6	1.0							
No. 8 / No. 16	0.5	1.4	3.6							
No. 16 / No. 30	0.3	0.5	2.3							
No. 30 / No. 50	0.2	0.2	1.8							
No. 50 / No. 200	0.4	0.2	3.4							
No. 200 / Pan	1.0	0.4	4.9							
Total:	45.0	38.0	17.0							
Percent of plus No. 4	35.1	11.7	0.0							
Percent of plus No. 8	42.6	35.3	1.0							

Percent of plus No. 4 from class (A) Rock:	0.0
Total Percent of plus No. 4	46.8
Percent of plus No. 4 from class (A) Rock:	**0.0**

Percent of plus No. 8 from class (A) Rock:	0.0
Total Percent of plus No. 8	78.9
Percent of plus No. 8 from class (A) Rock:	***0.0***

Remarks:

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : WEIGH UP SHEET

SAMPLE ID:	17TOM CL B76-22	SAMPLE DATE:	2/8/18
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:		SPEC YEAR:	2014
SAMPLED BY:	Kyle Rangnow #765	SPEC ITEM:	
SAMPLE LOCATION:	DESIGN	SPECIAL PROVISION:	
MATERIAL CODE:		MIX TYPE:	347-TOM-C
MATERIAL NAME:	TOM CL B 70-22		
PRODUCER:	Texas Materials		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:	Surface	STATION:		DIST. FROM CL:		CONTRACTOR DESIGN # :	17TOMCLB76-22

Aggregate Weight, g:	
6.5% Asphalt by Total Weight, g:	
Total Weight, g:	

6.5% Asphalt by Total Weight, g:	
(VALERO 76-22) Asphalt to Add, g:	

			Bin No.1	Bin No.2	Bin No.3	Bin No.4	Bin No.5	Bin No.6	Bin No.7	Bin No.8	Bin No.9	Bin No.10	Total Weights	Individual Retained, %	Cumulative Retained, %
Individual Bin (%):			Bin No.1 = 45 %	Bin No.2 = 38 %	Bin No.3 = 17 %										
Aggregate Source:			Limestone_Dolomite	Limestone_Dolomite	Limestone_Dolomite										
Aggregate Number:			1402702	1402702	1424602										
Sample ID:			D ROCK	F ROCK	DRY SCREENINGS										
	Sieve Size:		Aggregate Weight	Aggregate Weight	Aggregate Weight										
	Passing	Retained													
INDIVIDUAL	-	1/2"	0.0	0.0	0.0								0.0		
	1/2"	3/8"	0.0	0.0	0.0								0.0		
	3/8"	No. 4	0.0	0.0	0.0								0.0		
	No. 4	No. 8	0.0	0.0	0.0								0.0		
	No. 8	No. 16	0.0	0.0	0.0								0.0		
	No. 16	No. 30	0.0	0.0	0.0								0.0		
	No. 30	No. 50	0.0	0.0	0.0								0.0		
	No. 50	No. 200	0.0	0.0	0.0								0.0		
	No. 200	Pan	0.0	0.0	0.0								0.0		
	Totals		0.0	0.0	0.0								**0.0**	Total includes asphalt from the recycled material aggregate	
Running Total:															
CUMULATIVE	-	1/2"	0.0	0.0	0.0								0.0		
	1/2"	3/8"	0.0	0.0	0.0								0.0		
	3/8"	No. 4	0.0	0.0	0.0								0.0		
	No. 4	No. 8	0.0	0.0	0.0								0.0		
	No. 8	No. 16	0.0	0.0	0.0								0.0		
	No. 16	No. 30	0.0	0.0	0.0								0.0		
	No. 30	No. 50	0.0	0.0	0.0								0.0		
	No. 50	No. 200	0.0	0.0	0.0								0.0		
	No. 200	Pan	0.0	0.0	0.0								0.0	Total includes asphalt from the recycled material aggregate	

Remarks:

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES

SAMPLE ID:	17TOM CL B76-22	SAMPLE DATE:	2/8/18
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:		SPEC YEAR:	2014
SAMPLED BY:	Kyle Rangnow #765	SPEC ITEM:	
SAMPLE LOCATION:	DESIGN	SPECIAL PROVISION:	
MATERIAL CODE:		MIX TYPE:	347-TOM-C
MATERIAL NAME:	TOM CL B 70-22		
PRODUCER:	Texas Materials		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:	Surface	STATION:		DIST. FROM CL:		CONTRACTOR DESIGN # :	17TOMCLB76-22

Blank Sample Weight, g:	

			Bin No.1	Bin No.2	Bin No.3	Bin No.4	Bin No.5	Bin No.6	Bin No.7			
Individual Bin (%):			Bin No.1 = 45 %	Bin No.2 = 38 %	Bin No.3 = 17 %							
Aggregate Source:			Limestone_Dolomite	Limestone_Dolomite	Limestone_Dolomite							
Aggregate Number:			1402702	1402702	1424602							
Sample ID:			D ROCK	F ROCK	DRY SCREENINGS					Total Weights	Individual Retained, %	Cumulative Retained, %
	Sieve Size:		Aggregate Weight	Aggregate Weight	Aggregate Weight							
	Passing	Retained										
INDIVIDUAL	-	1/2"	0.0	0.0	0.0					0.0		
	1/2"	3/8"	0.0	0.0	0.0					0.0		
	3/8"	No. 4	0.0	0.0	0.0					0.0		
	No. 4	No. 8	0.0	0.0	0.0					0.0		
	No. 8	No. 16	0.0	0.0	0.0					0.0		
	No. 16	No. 30	0.0	0.0	0.0					0.0		
	No. 30	No. 50	0.0	0.0	0.0					0.0		
	No. 50	No. 200	0.0	0.0	0.0					0.0		
	No. 200	Pan	0.0	0.0	0.0					0.0		
	Totals		0.0	0.0	0.0					**0.0**	Total does not include recycled material	

Running Total:	

CUMULATIVE	-	1/2"	0.0	0.0	0.0					0.0		
	1/2"	3/8"	0.0	0.0	0.0					0.0		
	3/8"	No. 4	0.0	0.0	0.0					0.0		
	No. 4	No. 8	0.0	0.0	0.0					0.0		
	No. 8	No. 16	0.0	0.0	0.0					0.0		
	No. 16	No. 30	0.0	0.0	0.0					0.0		
	No. 30	No. 50	0.0	0.0	0.0					0.0		
	No. 50	No. 200	0.0	0.0	0.0					0.0		
	No. 200	Pan	0.0	0.0	0.0					0.0		

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : BULK GRAVITY

SAMPLE ID:	17TOM CL B76-22	SAMPLE DATE:	2/8/18
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:		SPEC YEAR:	2014
SAMPLED BY:	Kyle Rangnow #765	SPEC ITEM:	
SAMPLE LOCATION:	DESIGN	SPECIAL PROVISION:	
MATERIAL CODE:		MIX TYPE:	347-TOM-C
MATERIAL NAME:	TOM CL B 70-22		
PRODUCER:	Texas Materials		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:	Surface	STATION:		DIST. FROM CL:		CONTRACTOR DESIGN # :	17TOMCLB76-22

	Bin No.1	Bin No.2	Bin No.3	Bin No.4	Bin No.5	Bin No.6	Bin No.7	Bin No.8	Bin No.9	Bin No.10
Individual Bin (%):	Bin No.1 = 45 %	Bin No.2 = 38 %	Bin No.3 = 17 %							
Aggregate Source:	Limestone_Dolomite	Limestone_Dolomite	Limestone_Dolomite							
Aggregate Number:	1402702	1402702	1424602							
Sample ID:	D ROCK	F ROCK	DRY SCREENINGS							

Sieve Size:		Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG
Passing	Retained																				
	1/2"																				
1/2"	3/8"	9.3																			
3/8"	No. 4	68.6		30.9																	
No. 4	No. 8	16.8		62.0		5.9															
No. 8	No. 16	1.2		3.7		20.9															
No. 16	No. 30	0.7		1.3		13.8															
No. 30	No. 50	0.4		0.4		10.3															
No. 50	No. 200	0.8		0.6		20.1															
No. 200	Pan	2.2		1.1		29.0															
Totals		100.0		100.0		100.0															

Combined Bulk Specific Gravity:	
Coarse Agg. Combined BSG:	

Specific Gravity of Asphalt:	**1.035**

Remarks:

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : SUMMARY SHEET

SAMPLE ID:	17TOM CL B76-22	SAMPLE DATE:	2/8/18
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:		SPEC YEAR:	2014
SAMPLED BY:	Kyle Rangnow #765	SPEC ITEM:	
SAMPLE LOCATION:	DESIGN	SPECIAL PROVISION:	
MATERIAL CODE:		MIX TYPE:	347-TOM-C
MATERIAL NAME:	TOM CL B 70-22		
PRODUCER:	Texas Materials		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:	Surface	STATION:		DIST. FROM CL:		CONTRACTOR DESIGN # :	17TOMCLB76-22

Target Density, %:	**97.5**
Number of Gyrations:	

CRM* Content, %:	

TEST SPECIMENS								Mixture Evaluation @ Optimum Asphalt Content				
									Hamburg Wheel Tracking Test			
Asphalt Content (%)	Binder Ratio (%)	Specific Gravity Of Specimen (Ga)	Maximum Specific Gravity (Gr)	Effective Gravity (Ge)	Theo. Max. Specific Gravity (Gt)	Density from Gt (Percent)	VMA (Percent)	Indirect Tensile Strength (psi)	Number of cycles	Rut depth (mm)		Overlay Tester Min. Number of Cycles
6.3	0.0	2.446	2.528	2.800	2.535	96.5	18.4		20,000	10		
6.5	0.0	2.464	2.526	2.807	2.527	97.5	18.0					
6.7	0.0	2.474	2.527	2.819	2.519	98.2	17.8					

Effective Specific Gravity:	2.808
Optimum Asphalt Content :	**6.5**
Binder Ratio @ OAC:	0.0
VMA @ Optimum AC:	18.0

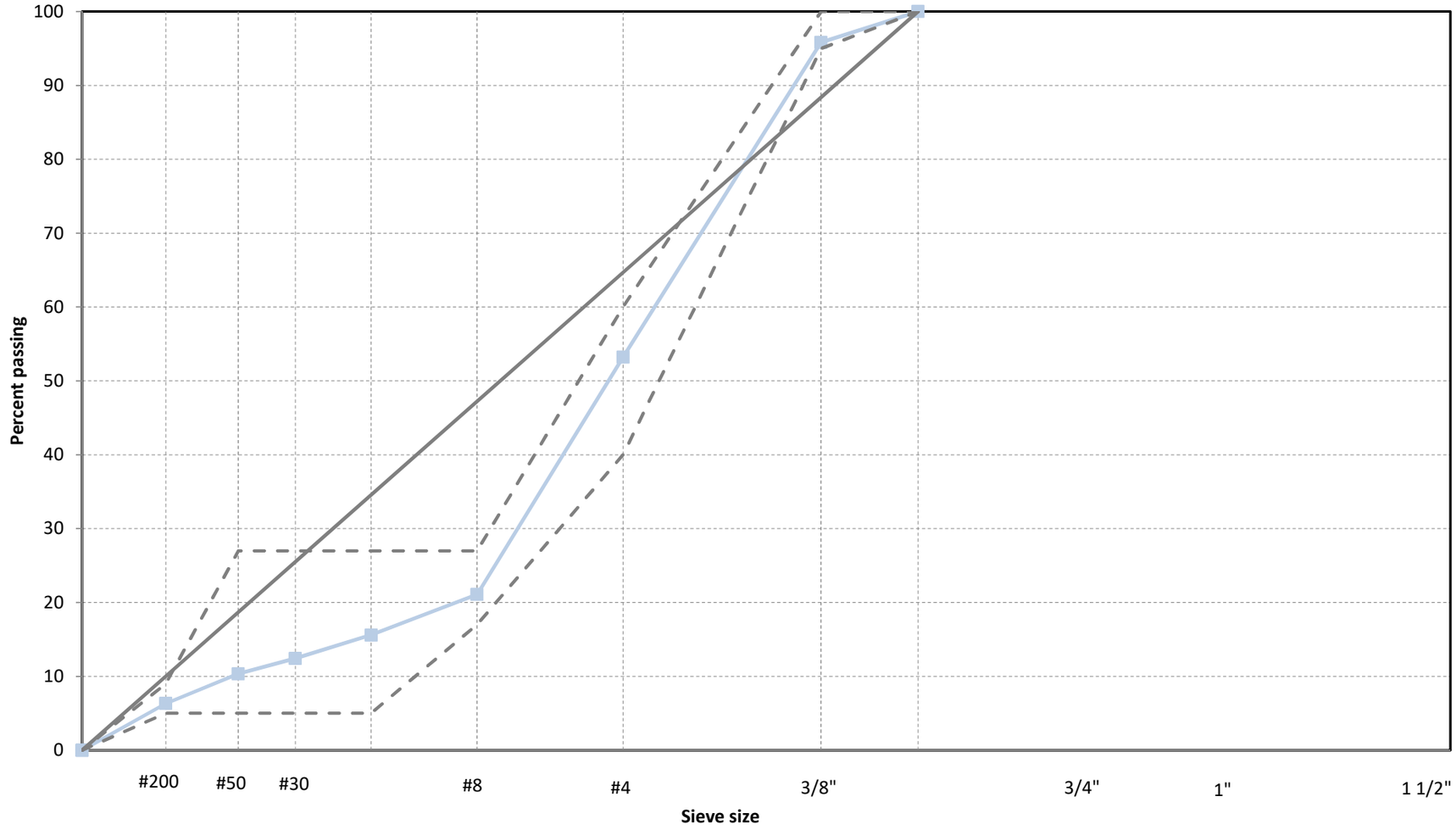
Interpolated Values	
Specific Gravity (Ga):	*2.464*
Max. Specific Gravity (Gr):	*2.526*
Theo. Max. Specific Gravity (Gt):	*2.527*

Estimated Percent of Stripping, %:	

Drain-Down, %:	

Mixing Temp,°F:	
Molding Temp,°F:	

Remarks:


100
90
80
70
60
50
40
30
20
10
0
Percent passing
#200
#50
#30
#8
#4
3/8"
3/4"
1"
1 1/2"
Sieve size

Texas Materials
an Oldcastle company

DESIGN NO: 1310D-64A
DESCRIPTION: TYPE "D" PG 64-22
DESIGN DATE: 15-Jul-13
SUBMITTAL DATE: 29-Sep-17
REVISION DATE: 01-Jun-14

DEPARTMENT OF PUBLIC WORKS - CONSTRUCTION INSPECTION DIVISION
505 BARTON SPRINGS ROAD
AUSTIN, TEXAS, 78704

ATTENTION: DIVISION ENGINEER

SHOWN BELOW IS THE PLANT CORRECTED JOB MIX FORMULA FOR THE HOT MIX ASPHALTIC CONCRETE TO BE USED ON THE FOLLOWING PROJECT:

NAME OF SUBDIVISION OR CIP PROJECT: _____
CIP PROJECT NUMBER: _____

THE JOB MIX FORMULA HAS DETERMINED ACCORDING TO CITY OF AUSTIN STANDARD SPECIFICATIONS ITEM 340.

HMAC PRODUCER: Texas Materials
PLANT LOCATION: 713 Linger Lane, Austin, Texas 78721

SUBMITTED BY: _____
DATE: _____
PRIME CONTRACTOR: _____

PREPARED BY: KYLE RANGNOW

CERTIFICATION: TXDOT LEVEL II #765

SIEVE SIZE	% PASSING
1/2"	100.0
3/8"	95.0
#4	66.6
#10	37.8
#40	21.2
#80	13.0
#200	4.7

ASPHALT CONTENT
VALERO PG 64-22
4.6%

HMAC SUBMITTALS

All responsibility for the adequacy of this mix design rests with the Contractor who submitted it. In reviewing the submittal the COA must rely upon the adequacy of the work of the Design Professional whose certification appears hereon.

☒ Reviewed ☐ With Annotations

Signed _____ Date 10/4/17

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : COMBINED GRADATION

Refresh Workbook

File Version: 06/07/10 10:24:04

SAMPLE ID:		SAMPLE DATE:	1/6/2018
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:		SPEC YEAR:	2004
SAMPLED BY:	Eulalio Orona #1042	SPEC ITEM:	
SAMPLE LOCATION:	Design	SPECIAL PROVISION:	
MATERIAL CODE:		MIX TYPE:	ITEM340_D_Fine_Surface
MATERIAL NAME:	TYPE D HMAC		
PRODUCER:	Texas Materials Bolm Road	WMA Included in Design?	No
AREA ENGINEER:		PROJECT MANAGER:	WMA TECHNOLOGY:

COURSE\LIFT:	Surface	STATION:		DIST. FROM CL:		CONTRACTOR DESIGN # : 1310D-64A

Recycled Binder, %	
Bin No.8 :	0.0
Bin No.9 :	0.0
Bin No.10 :	0.0
Total	0.0

Ratio of Recycled to Total Binder, %
(based on binder percent (%) entered below in this worksheet)
0.0

	AGGREGATE BIN FRACTIONS							"RECYCLED MATERIALS"			
	Bin No.1	Bin No.2	Bin No.3	Bin No.4	Bin No.5	Bin No.6	Bin No.7	Bin No.8	Bin No.9	Bin No.10	
Aggregate Source:	Limestone_Dolom	Limestone_Dolom	Limestone_Dolom	Gravel							Material Type
Aggregate Pit:	Marble Falls	Marble Falls	Marble Falls								Material Source
Aggregate Number:	1402702	1402702	1402702								RAS Type
Sample ID:	Type D	Type F	Man. Sand	C.A. Field Sand							Sample ID
								Recycled Asphalt Binder (%)			
Hydrated Lime?:											Combined Gradation
Individual Bin (%):	38.0	19.0	30.0	13.0							Total Bin 100.0%

																				Lower & Upper Specification Limits					
Sieve Size:	Percent	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	% of Tot. Mix / % of Aggreg	Cum.% Passing	*Wtd* Cum. %	% of Tot. Mix / % of Aggreg	Cum.% Passing	*Wtd* Cum. %	% of Tot. Mix / % of Aggreg	Cum. % Passing	Lower	Upper	Within Spec's	Individual % Retained	Cumulative % Retained	Sieve Size
3/4"		100.0	38.0	100.0	19.0	100.0	30.0	100.0	13.0														100.0	100.0	100.0	Yes	0.0	0.0	3/4"
1/2"		100.0	38.0	100.0	19.0	100.0	30.0	100.0	13.0														100.0	100.0	100.0	Yes	0.0	0.0	1/2"
3/8"		91.4	34.7	100.0	19.0	100.0	30.0	100.0	13.0														96.7	85.0	100.0	Yes	3.3	3.3	3/8"
No. 4		24.3	9.2	69.2	13.1	99.9	30.0	99.4	12.9														65.3	50.0	70.0	Yes	31.5	34.7	No. 4
No. 10		4.9	1.9	5.3	1.0	71.9	21.6	97.0	12.6														37.0	32.0	42.0	Yes	28.2	63.0	No. 10
No. 40		3.2	1.2	2.9	0.6	30.9	9.3	73.1	9.5														20.5	11.0	26.0	Yes	16.5	79.5	No. 40
No. 80		2.8	1.1	2.4	0.5	18.3	5.5	38.3	5.0														12.0	4.0	14.0	Yes	8.6	88.0	No. 80
No. 200		2.3	0.9	2.0	0.4	4.9	1.5	13.2	1.7														4.4	2.0	8.0	Yes	7.5	95.6	No. 200

(Bold Italic) Not within specifications ***(Bold Italic)*** Not within specificaitons- Restricted Zone *(Italic)* Not cumulative

Lift Thickness, in:		Binder Substitution?		Binder Originally Specified:		Substitute Binder:
Asphalt Source & Grade:	Valero 64-22	Binder Percent, (%):	4.7	Asphalt Spec. Grav.:	1.030	
Antistripping Agent:		Percent, (%):				

Remarks:

Notes:

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : MATERIAL PROPERTIES

File Version: 06/07/10 10:24:04

SAMPLE ID:		SAMPLE DATE:	1/6/2018
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:		SPEC YEAR:	2004
SAMPLED BY:	Eulalio Orona #1042	SPEC ITEM:	
SAMPLE LOCATION:	Design	SPECIAL PROVISION:	
MATERIAL CODE:		MIX TYPE:	ITEM340_D_Fine_Surface
MATERIAL NAME:	TYPE D HMAC		
PRODUCER:	Texas Materials Bolm Road		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:	Surface	STATION:		DIST. FROM CL:		CONTRACTOR DESIGN # :	1310D-64A

	Bin No.1	Bin No.2	Bin No.3	Bin No.4	Bin No.5	Bin No.6	Bin No.7
Individual Bin (%):	Bin No.1 = 38 %	Bin No.2 = 19 %	Bin No.3 = 30 %	Bin No.4 = 13 %			
Aggregate Source:	Limestone_Dolom	Limestone_Dolom	Limestone_Dolom	Gravel			
Aggregate Number:	1402702	1402702	1402702				
Sample ID:	Type D	Type F	Man. Sand	C.A. Field Sand			

Test Name	SiteManager Test Template	Test Method	Spec. Min or Max	Spec. Limit	Result	Sample ID	Result	Sample ID	Result	Sample ID	Result	Sample ID	Result	Sample ID	Result	Sample ID	Result	Sample ID
Stockpile					Bin No.1		Bin No.2		Bin No.3		Bin No.4		Bin No.5		Bin No.6		Bin No.7	
Decantation	Tx217	Tex-217-F	Max.	1.5	1.00		0.90											
Deleterious Mat'l	Tx217	Tex-217-F	Max.	1.5	0.00		0.00		0.00									
Surface Aggregate Classification	Tx4AgClas	Tex-438-A, Tex-612-J	Min.	B	B		B		B									
Magnesium Sulfate Soundness	Tx411M	Tex-411-A	Max.	30	7.00		7.00		7.00									
LA Abrasion	Tx410	Tex-410-A	Max.	40	30.00		30.00		30.00									
Crushed Faces Count	Tx460	Tex-460-A	Min.	n/a	n/a		n/a		n/a									
Flat & Elongated	Tx280	Tex-280-F	Max.	10	0.00		0.00		n/a									
Fine Aggregate					Bin No.1		Bin No.2		Bin No.3		Bin No.4		Bin No.5		Bin No.6		Bin No.7	
Bar Linear Shrinkage	Tx107	Tex-107-E	Max.	3					1.00									
Methylene Blue		AASHTO T330	Max.															
Combined Aggregate					Bin No.1		Bin No.2		Bin No.3		Bin No.4		Bin No.5		Bin No.6		Bin No.7	
Sand Equivalent	Tx203	Tex-203-F	Min.	45							61.00							
User Defined Testing					Bin No.1		Bin No.2		Bin No.3		Bin No.4		Bin No.5		Bin No.6		Bin No.7	
Use this area to enter any test methods, speciafications & test result that apply to this material(s) but are not not listed above. **1**																		
2																		
3																		
4																		
5																		
Recycled Materials					**Bin No.8**		**Bin No.9**		**Bin No.10**									
Deleterious Mat'l	Tx217	Tex-217-F, Part III	Max.															

Remarks:

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : Aggregate Classification

File Version: 06/07/10 10:24:04

SAMPLE ID:		SAMPLE DATE:	1/6/2018
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:		SPEC YEAR:	2004
SAMPLED BY:	Eulalio Orona #1042	SPEC ITEM:	
SAMPLE LOCATION:	Design	SPECIAL PROVISION:	
MATERIAL CODE:		MIX TYPE:	ITEM340_D_Fine_Surface
MATERIAL NAME:	TYPE D HMAC		
PRODUCER:	Texas Materials Bolm Road		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:	Surface	STATION:		DIST. FROM CL:		CONTRACTOR DESIGN # :	1310D-64A

Aggregate Classification

	Bin No.1	Bin No.2	Bin No.3	Bin No.4	Bin No.5	Bin No.6	Bin No.7	Bin No.8	Bin No.9	Bin No.10
Individual Bin (%):	Bin No.1 = 38 %	Bin No.2 = 19 %	Bin No.3 = 30 %	Bin No.4 = 13 %						
Aggregate Source:	Limestone_Dolom	Limestone_Dolom	Limestone_Dolom	Gravel						
Aggregate Number:	1402702	1402702	1402702							
Class (A) Rock (Y/N):	No	No	No	No						
Sieve Size: Passing	Sieve Size: Retained	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %
-	3/4"	0.0	0.0	0.0	0.0						
3/4"	1/2"	0.0	0.0	0.0	0.0						
1/2"	3/8"	3.3	0.0	0.0	0.0						
3/8"	No. 4	25.5	5.9	0.0	0.1						
No. 4	No. 10	7.4	12.1	8.4	0.3						
No. 10	No. 40	0.6	0.5	12.3	3.1						
No. 40	No. 80	0.2	0.1	3.8	4.5						
No. 80	No. 200	0.2	0.1	4.0	3.3						
No. 200	Pan	0.9	0.4	1.5	1.7						
Total:		38.0	19.0	30.0	13.0						
Percent of plus No. 4		28.8	5.9	0.0	0.1						

Percent of plus No. 4 from class (A) Rock:	0.0
Total Percent of plus No. 4	34.7
Percent of plus No. 4 from class (A) Rock:	***0.0***

Remarks:

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : WEIGH UP SHEET

File Version: 06/07/10 10:24:04

SAMPLE ID:		SAMPLE DATE:	1/6/2018
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:		SPEC YEAR:	2004
SAMPLED BY:	Eulalio Orona #1042	SPEC ITEM:	
SAMPLE LOCATION:	Design	SPECIAL PROVISION:	
MATERIAL CODE:		MIX TYPE:	ITEM340_D_Fine_Surface
MATERIAL NAME:	TYPE D HMAC		
PRODUCER:	Texas Materials Bolm Road		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:	Surface	STATION:		DIST. FROM CL:		CONTRACTOR DESIGN # :	1310D-64A

Aggregate Weight, g:	5,000.0
4.7% Asphalt by Total Weight, g:	246.6
Total Weight, g:	5246.6

4.7% Asphalt by Total Weight, g:	246.6
(Valero 64-22) Asphalt to Add, g:	**246.6**

			Bin No.1	Bin No.2	Bin No.3	Bin No.4	Bin No.5	Bin No.6	Bin No.7	Bin No.8	Bin No.9	Bin No.10	Total Weights	Individual Retained, %	Cumulative Retained, %
Individual Bin (%):			Bin No.1 = 38 %	Bin No.2 = 19 %	Bin No.3 = 30 %	Bin No.4 = 13 %									
Aggregate Source:			Limestone_Dolom	Limestone_Dolom	Limestone_Dolom	Gravel									
Aggregate Number:			1402702	1402702	1402702										
Sample ID:			Type D	Type F	Man. Sand	C.A. Field Sand									
	Sieve Size:		Aggregate Weight	Aggregate Weight	Aggregate Weight	Aggregate Weight									
	Passing	Retained													
INDIVIDUAL	-	3/4"	0.0	0.0	0.0	0.0							0.0	0.0	0.0
	3/4"	1/2"	0.0	0.0	0.0	0.0							0.0	0.0	0.0
	1/2"	3/8"	163.4	0.0	0.0	0.0							163.4	3.3	3.3
	3/8"	No. 4	1,274.9	292.6	1.5	3.9							1,572.9	31.5	34.7
	No. 4	No. 10	368.6	607.1	420.0	15.6							1,411.3	28.2	63.0
	No. 10	No. 40	32.3	22.8	615.0	155.4							825.5	16.5	79.5
	No. 40	No. 80	7.6	4.8	189.0	226.2							427.6	8.6	88.0
	No. 80	No. 200	9.5	3.8	201.0	163.2							377.5	7.5	95.6
	No. 200	Pan	43.7	19.0	73.5	85.8							222.0	4.4	100.0
	Totals		1,900.0	950.0	1,500.0	650.0							**5,000.0**	Total includes asphalt from the recycled material aggregate	
Running Total:															
CUMULATIVE	-	3/4"	0.0	1,900.0	2,850.0	4,350.0							0.0		
	3/4"	1/2"	0.0	1,900.0	2,850.0	4,350.0							0.0		
	1/2"	3/8"	163.4	1,900.0	2,850.0	4,350.0							163.4		
	3/8"	No. 4	1,438.3	2,192.6	2,851.5	4,353.9							1,736.3		
	No. 4	No. 10	1,806.9	2,799.7	3,271.5	4,369.5							3,147.6		
	No. 10	No. 40	1,839.2	2,822.5	3,886.5	4,524.9							3,973.0		
	No. 40	No. 80	1,846.8	2,827.2	4,075.5	4,751.1							4,400.6		
	No. 80	No. 200	1,856.3	2,831.0	4,276.5	4,914.2							4,778.0		
	No. 200	Pan	1,900.0	2,850.0	4,350.0	5,000.0							5,000.0	Total includes asphalt from the recycled material aggregate	

Remarks:

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES

SAMPLE ID:		SAMPLE DATE:	1/6/2018
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:		SPEC YEAR:	2004
SAMPLED BY:	Eulalio Orona #1042	SPEC ITEM:	
SAMPLE LOCATION:	Design	SPECIAL PROVISION:	
MATERIAL CODE:		MIX TYPE:	ITEM340_D_Fine_Surface
MATERIAL NAME:	TYPE D HMAC		
PRODUCER:	Texas Materials Bolm Road		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:	Surface	STATION:		DIST. FROM CL:		CONTRACTOR DESIGN # :	1310D-64A

Blank Sample Weight, g:	2,000.0

			Bin No.1	Bin No.2	Bin No.3	Bin No.4	Bin No.5	Bin No.6	Bin No.7			
Individual Bin (%):			Bin No.1 = 38 %	Bin No.2 = 19 %	Bin No.3 = 30 %	Bin No.4 = 13 %						
Aggregate Source:			Limestone_Dolom	Limestone_Dolom	Limestone_Dolom	Gravel						
Aggregate Number:			1402702	1402702	1402702							
Sample ID:			Type D	Type F	Man. Sand	C.A. Field Sand						
	Sieve Size:		Aggregate Weight	Aggregate Weight	Aggregate Weight	Aggregate Weight				Total Weights	Individual Retained, %	Cumulative Retained, %
	Passing	Retained										
INDIVIDUAL	-	3/4"	0.0	0.0	0.0	0.0				0.0	0.0	0.0
	3/4"	1/2"	0.0	0.0	0.0	0.0				0.0	0.0	0.0
	1/2"	3/8"	65.4	0.0	0.0	0.0				65.4	3.3	3.3
	3/8"	No. 4	510.0	117.0	0.6	1.6				629.2	31.5	34.7
	No. 4	No. 10	147.4	242.8	168.0	6.2				564.5	28.2	63.0
	No. 10	No. 40	12.9	9.1	246.0	62.1				330.2	16.5	79.5
	No. 40	No. 80	3.0	1.9	75.6	90.5				171.0	8.6	88.0
	No. 80	No. 200	3.8	1.5	80.4	65.3				151.0	7.5	95.6
	No. 200	Pan	17.5	7.6	29.4	34.3				88.8	4.4	100.0
	Totals		760.0	380.0	600.0	260.0				**2,000.0**	Total does not include recycled material	

Running Total:	

CUMULATIVE	-	3/4"	0.0	760.0	1,140.0	1,740.0				0.0		
	3/4"	1/2"	0.0	760.0	1,140.0	1,740.0				0.0		
	1/2"	3/8"	65.4	760.0	1,140.0	1,740.0				65.4		
	3/8"	No. 4	575.3	877.0	1,140.6	1,741.6				694.5		
	No. 4	No. 10	722.8	1,119.9	1,308.6	1,747.8				1,259.0		
	No. 10	No. 40	735.7	1,129.0	1,554.6	1,809.9				1,589.2		
	No. 40	No. 80	738.7	1,130.9	1,630.2	1,900.4				1,760.2		
	No. 80	No. 200	742.5	1,132.4	1,710.6	1,965.7				1,911.2		
	No. 200	Pan	760.0	1,140.0	1,740.0	2,000.0				2,000.0		

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : BULK GRAVITY

File Version: 06/07/10 10:24:04

SAMPLE ID:		SAMPLE DATE:	1/6/2018
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:		SPEC YEAR:	2004
SAMPLED BY:	Eulalio Orona #1042	SPEC ITEM:	
SAMPLE LOCATION:	Design	SPECIAL PROVISION:	
MATERIAL CODE:		MIX TYPE:	ITEM340_D_Fine_Surface
MATERIAL NAME:	TYPE D HMAC		
PRODUCER:	Texas Materials Bolm Road		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:	Surface	STATION:		DIST. FROM CL:		CONTRACTOR DESIGN # :	1310D-64A

	Bin No.1	Bin No.2	Bin No.3	Bin No.4	Bin No.5	Bin No.6	Bin No.7	Bin No.8	Bin No.9	Bin No.10
Individual Bin (%):	Bin No.1 = 38 %	Bin No.2 = 19 %	Bin No.3 = 30 %	Bin No.4 = 13 %						
Aggregate Source:	Limestone_Dolom	Limestone_Dolom	Limestone_Dolom	Gravel						
Aggregate Number:	1402702	1402702	1402702							
Sample ID:	Type D	Type F	Man. Sand	C.A. Field Sand						

Sieve Size:		Bin No.1		Bin No.2		Bin No.3		Bin No.4		Bin No.5		Bin No.6		Bin No.7		Bin No.8		Bin No.9		Bin No.10	
Passing	Retained	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG
	3/4"																				
3/4"	1/2"																				
1/2"	3/8"	8.6	2.788																		
3/8"	No. 4	67.1	2.794	30.8	2.794	0.1	2.815	0.6	2.642												
No. 4	No. 10	19.4	2.798	63.9	2.798	28.0	2.815	2.4	2.642												
No. 10	No. 40	1.7	2.798	2.4	2.798	41.0	2.815	23.9	2.642												
No. 40	No. 80	0.4	2.798	0.5	2.798	12.6	2.815	34.8	2.642												
No. 80	No. 200	0.5	2.798	0.4	2.798	13.4	2.815	25.1	2.678												
No. 200	Pan	2.3	2.798	2.0	2.798	4.9	2.815	13.2	2.678												
Totals		100.0	2.794	100.0	2.797	100.0	2.815	100.0	2.656												
			13.6		6.8		10.7		4.9												

Combined Bulk Specific Gravity:	**2.782**
Coarse Agg. Combined BSG:	

Specific Gravity of Asphalt:	**1.030**

Remarks:

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : SUMMARY SHEET

File Version: 06/07/10 10:24:04

SAMPLE ID:		SAMPLE DATE:	1/6/2018
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:		SPEC YEAR:	2004
SAMPLED BY:	Eulalio Orona #1042	SPEC ITEM:	
SAMPLE LOCATION:	Design	SPECIAL PROVISION:	
MATERIAL CODE:		MIX TYPE:	ITEM340_D_Fine_Surface
MATERIAL NAME:	TYPE D HMAC		
PRODUCER:	Texas Materials Bolm Road		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:	Surface	STATION:		DIST. FROM CL:		CONTRACTOR DESIGN # :	1310D-64A

Target Density, %:	**96.0**
Number of Gyrations:	

CRM* Content	

TEST SPECIMENS									**Mixture Evaluation @ Optimum Asphalt Content**			
										Hamburg Wheel Tracking Test		
Asphalt Content (%)	Binder Ratio (%)	Specific Gravity Of Specimen (Ga)	Maximum Specific Gravity (Gr)	Effective Gravity (Ge)	Theo. Max. Specific Gravity (Gt)	Density from Gt (Percent)	VMA (Percent)	Hveem Stability (%)	Indirect Tensile Strength (psi)	Number of cycles	Rut depth (mm)	*Overlay Tester Min. Number of Cycles*
3.5	0.0	2.445	2.620	2.775	2.631	92.9	15.4	68.0				
4.0	0.0	2.459	2.605	2.782	2.610	94.2	15.3	51.0				
4.5	0.0	2.474	2.590	2.789	2.589	95.5	15.3	42.0	129			
5.0	0.0	2.493	2.574	2.794	2.569	97.0	15.1	41.0				
5.5	0.0	2.512	2.558	2.800	2.549	98.6	14.9	34.0				

Effective Specific Gravity:	2.788

Estimated Percent of Stripping, %:	

Optimum Asphalt Content :	**4.7**	Binder Ratio @ OAC:	0.0
VMA @ Optimum AC:	**15.2**		

Interpolated Values	
Specific Gravity (Ga):	2.480
Max. Specific Gravity (Gr):	2.585
Theo. Max. Specific Gravity (Gt):	2.583

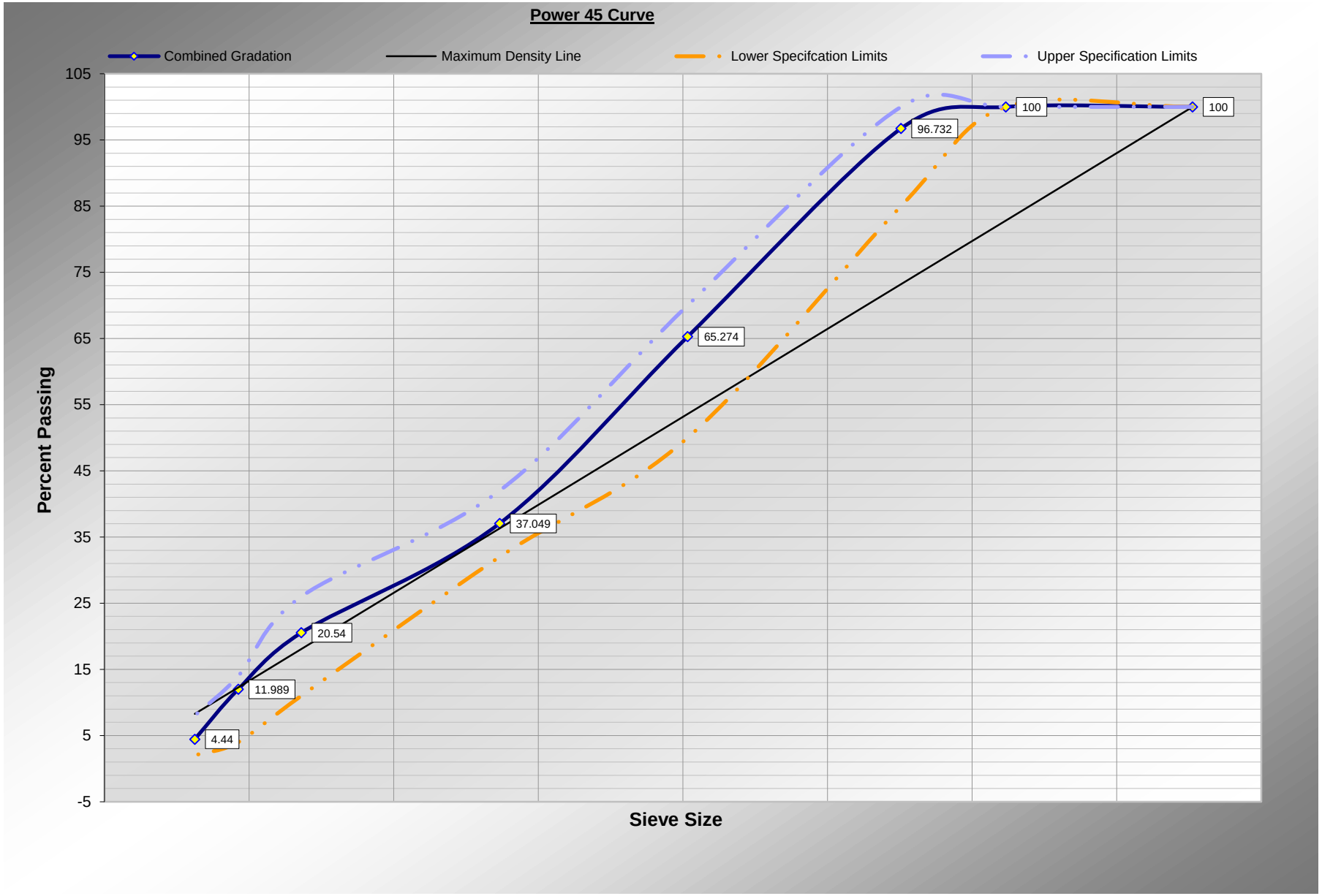
Remarks:

Date	Changes	By
7/20/2005	Add area in the Combined Gradation worksheet to enter in percent fiber for respective PFC and SMA mixtures in cells P42 to S42 Change field# for S42 (on the Combined Gradation worksheet) to Field383, and reference %Fiber value in the Summary sheet to cell S42 Add area in the Combined Gradation worksheet to enter in crumb rubber for respective PFC and SMA mixtures in cells T42 to W42 Change field# for W40 (on the Combined Gradation worksheet) to Field384, and reference % Crumb Rubber value in the Summary sheet to cell W40 Add conditional formatting for percent fiber and percent crumb rubber area so that only effected mixture types are represented on the combined gradation worksheet Add area to enter percent fiber and percent crumb rubber in the Summary worksheet (cell K18) Add field to calculate the weight of fiber or crumb rubber in the Weigh Up worksheet (cells S18 to V20) Add conditional formatting to the fiber and crumb rubber queries in the Weight Up worksheet so that only corresponding mixture types are represented Add sieves: 3/4", 1/2" & 3/8" to the SPA, SPB and SPC mixes, respectively, in the Std Spec GRADATIONS worksheet Set cell F38 in the summary sheet equal to IF(F31="Error","",VLOOKUP(0.075,DUST,16,FALSE)/F31). This will calculate the Dust to Asphalt ratio Add Gr to the densification section in the Summary worksheet Calculate densities in cells Z33 to Z35 on the Summary worksheet by using the Gr instead of the Gt Add "No" to the validation list for cell E42 on the Weigh Up worksheet Addition of "Version" to the Combined Gradation worksheet	Brett Haggerty
	Combined Gradation Worksheet Add UTBWC Types A, B and C options to Mix Type T40 - Add Membrane Target Application Rate, Gal/SY	
	Summary Worksheet Need Draindown and Cantabro Loss for UTBHMWC mix option Add AC%, Ga, Gr, Ge, Gt, Density from Gt, and Film Thickness columns to be used only for Film Thickness calculations in cells B29 to V35	
8/16/2005	Add only two inputs for AC% and Gr in cells B33 & F33, respectively. Add range of acceptable film thickness & AC% at those film thicknesses in cells B37 to AA37 (all calculated fields) Allow AC%, Ga, Gr, Ge, Gt, Density from Gt, and Film Thickness columns to be hidden when not analyzing UTBWC Increase width column for column B to 8.00	Brett Haggerty
	Film Thickness Worksheet Need to create this worksheet to calculate film thickness at each asphalt content. Need to reference data in Summary worksheet Hide this sheet when UTBWC is not selected	
	Std Spec GRADATIONS The Membrane Application Check is necessary for the conditional formatting on the Combined Gradation Worksheet cell T40. Because if a complex algorithm is entered for a second condition format the workbook becomes impossible to open and excel crashes.	
9/21/2005	Specification tolerance for 1" sieve for Type A mix was incorrect. Corrected as specified in Item 341.	Richard Izzo
9/27/2005	Added min & max tolerances for the No. 4 sieve of SP mix types	Richard Izzo
2/14/2006	Changed the location of Fields 521 to 557 & Fields 572 to 587 to M25, these field definitions were orignally found in different locations for different worksheets. Now all of the definitions are identical and reference a dummy cell to prevent the overwrite of other data within the template.	Brett Haggerty
2/15/2006	Added Mixtypes 340-A, 340-B, 340-C, 340-D, & 340-F to the mixtype list, as well as the cell definition to direct mix specifcations. This includes the addition of five new definitions, one for each of the new mixtypes. The addition of the mixtype names to the mixtype definition is also adjusted to include the mixtypes. No other changes were necessary for these mixtypes as they will reference the same limits as the 341 mixtypes.	Brett Haggerty
3/13/2006	Add definitions Field596 to Field636, these are the definitions for the "Other" mixtype that should be stored in Sitemanager databases when accessing previous data.	Brett Haggerty
3/14/2006	Revised minimum specification for percent passing for No. 4 sieve for SP-A, B, C, and D mix types.	Richard Izzo
5/17/2007	Add the new mixtype SS3111 for Crack Attenuating Mixtures	Brett Haggerty
	Matl Properties	

Date	Changes	By	
9/27/2005	B31, F31, H31 - Replaced Flakiness Index with Flat & Elongated. Flakiness Index not required in 2004 specifications.		
	Sumary	Richard Izzo	
	Changed conditional formatting of cells B44 to F47. Font color changed to black.		
9/27/2005	Added VFA calculation at optimum asphalt content in cells B43 & F43. Cells formatted to only show for Item 344.		
	Color of cell B44 changed to distinguish cells above and below when using Item 344 as all cells will have text and may look confusing.		
	Add the Dimensional Analysis for PFC mixtures (these calculations are new, and not adjustments to the old equations)		
	Add the Backcalculated Rice for PFC mixtures (these calculations are new to the sheet and not adjustments to the old equations)		
5/11/2006	Remove the Interpolated Values for UTBWC mixtypes and Mixture Densification	Brett Haggerty	
	Combined Gradation Worksheet		
5/30/2006	Add the Contractor's Design Number to cell V17, as well as the addition of the new field #	Brett Haggerty	
	Update the UPLC to 690		
5/17/2007	Add the Aggregate Pit to the bin information (these cells account for Fields 683-689)	Brett Haggerty	
	Summary Worksheet		
	Include comments for the backcalculated specific gravities when using PFC. This will provide users with a better idea of how to read the specifications		
	Include the new output results, which there are 117 values. This is the resval & resname values. The 117 values are expressed by the ULOV cell		
8/22/2006	Added Field#'s 638-681	Brett Haggerty	
	Change the VFA Conditional Formatting to display when SS3111 mixtype is selected		
	Add new comment to cell H65 to display correct VFA limits if they are not met		
	Change Dust/Asphalt Ratio conditional formatting to display when SS3111 mixtype is selected		
5/17/2007	Add a new entry for the minimum number of cycles using the Overlay Tester. Cell AF24 (Field690)	Brett Haggerty	
	Std Spec GRADATIONS		
	Remove the 3/8" sieve from the Item341-A, Item340-A & Type-A mixtypes		
	Add the number of sieves that contribute to coarse aggreagte to the following mixtypes: SP-A, SP-B, SP-C, SP-D, CMHB-C, CMHB-F, SMA-C, SMA-D, SMA-F, SMAR-C, SMAR-F		
	Combined Gradation Worksheet		
	Add the Dry Rodded Unit Weight cell, "S22". Also because this is an input field, change the ULOV to 682		
	Add a new version number "3" for the calculation of VCA, as opposed to when it was manually entered		
	Bulk Gravity		
	Include the Combined Bulk Specific Gravity for Coarse Aggregate calculation in cell "M40"		
	Summary Worksheet		
10/30/2006	Add the new calculated fields for VCA, "M67" & "M68". And adjust the conditional formatting to account for new version numbers.	Brett Haggerty	
	Weigh Up		
12/2/2006	Adjust Cell L39 to reference only column L in the Combined Gradation Worksheet	Brett Haggerty	
	Power 45 Curve		
5/17/2007	Adjust the macro to place brackets, "{", before and after the graphed data is updated	Brett Haggerty	Allows for compatibility with Excel 2007
	Matl Properties		
	Update cell K28 to remove the overlapping of conditional formatting ranges.		Allows for compatibility with Excel 2007 without significant loss of functionality
5/17/2007	Delete the cell definition "Draindown". This references a cell in a different workbook and causes fidelity errors with Excel 2007.	Brett Haggerty	
	Bulk Gravity		
	Adjusted cells: F39, G39, J39, K39, N39, O39, R39, S39, V39, W39, Z39, AA39, AD39, AE39. This accounts for moved cells		
	Summary Worksheet		
	Update cell F68 to access Target Density cell instead of using an assumed density value of 96%		
	Update cell M72 for the moving of cells & removal of resval definitions		
	Weigh Up		
	Adjust cell O20 to include +/- asphalt from RAP binder		
	Combined Gradation Worksheet		
3/13/2008	Add new version #4 to account for changes	Brett Haggerty	
	Matl Properties		
	Add Methylene Blue to the Fine Aggregate Analysis (Row 36)		

Date	Changes	By
	Add Cell Definitions for the Methylene Blue tests: Field691-Field705	
	Std Spec GRADATIONS	
	Add mixtypes ITEM3142_UTBWC_A, ITEM3142_UTBWC_B, ITEM3142_UTBWC_C	
	Summary Worksheet	
	Hide the "Target Density" cells when any of the Item3142 mixtypes are selected	
	Hide Mixture Evaluation cells (W22:AG30) with the selection of the Item3142 mixtypes	
	Add Final Specimen cells for Item3142 mixtypes in cells B64:M66	
	Add Cell Definitions for final specimen cells AC, Ga & Gr; declared Field706, Field707, & Field708, respectively	
	Declare new row definition (trip_4) for showing/hiding final specimen cells for the Item3142 mixtype	
	Add the Suggested Membrane Target Application Rate cells B68:G68	
	Combined Gradation Worksheet	
	Update the UPLC to 709	
	Update the Film Thickness worksheet show option (located in the Combined Gradation worksheet macros) to include Item3142 mixtypes	
	Film Thickness Worksheet	
	Add Ga and Density from Gt cells for the Item3142 mixtypes, cells: D33:E39 & L33:M39	
	Add conditional formatting for the minimum and maximum film thickness calculations. They now hide with the selection of Item3142 mixtypes. Cells B41:M44.	
	Add AC vs. Film Thickness & AC vs. Density Charts	
	Add cell definition Field709 to cell G63 (predicted AC%)	
4/3/2008	Add the prediction film thickness & prediction density cells, I62:L63	Brett Haggerty
	Summary Worksheet	
5/14/2008	Modified the Overlay Tester results to be hidden if the CAM mixtype is not selected.	Brett Haggerty
	Std Spec GRADATIONS	
	Add the mixtype for "CAM", it is exactly the same as SS3111CA_Mix	
	Add the mixtype for "TBPFC", it is exactly the same as PFC	
	Summary Worksheet	
	Modify the conditional formatting for the overlay tester results to display if the "CAM" mixtype is selected.	
6/5/2008	Modify the conditional formatting for all cells that use the PFC mixtype to include the same formats for TBPFC	Brett Haggerty
	Blank Weigh Up Worksheet	
2/27/2009	Need to create this new worksheet to prepare "blank" samples for the ignition oven correction factors.	Gisel Carrasco
	Combined Gradation Worksheet	
	Fixing equation in Cell O20 FROM: IF(OR(Authorized Date:>39493,AuthorizedDate=""), 4,IF(OR(AuthorizedDate>39022,AuthorizedDate=""), 3,IF(OR(AuthorizedDate>38579,AuthorizedDate=""),2,1))) TO: IF(OR(AuthorizedDate>40333,AuthorizedDate=""),5, IF(OR(AuthorizedDate>39493, AuthorizedDate=""),4, IF(OR(AuthorizedDate>39022,AuthorizedDate=""),3, IF(OR(AuthorizedDate>38579,AuthorizedDate=""),2,1)))) **Using Version #5 after 6/7/2010**	
	Add Item 341-024 to the Special Provision list (specprov). SP 341-024 can be used only when version>4	
	Add WMA technology information. It is required to enter the WMA information (V15), in order to enter aggregate bin percentages.	
	Change mix description cell (E18) to dropdown list	
	Change Aggregate Source, Pit, and Number (E22:Q24) to dropdown lists	
	Hide the Recycled Material row with versions > 4 and show Hydrated Lime row	
	Modify master gradation band limits for the #4 sieve for Type F mixture from 80-86 to 70-90. New limits are used with versions >4 or SP 341-024.	
	Add Bins 8, 9 & 10 for Recycled Materials only. Enter percentage by total mix to calculate percentage by total aggregate.	
	Calculate Recycled Binder for each bin and show Total Recycled Binder Percentage (AB18). Calculate Ratio of Recycled to Total Binder (AA24)	
	Add binder substitution information. Enter originally specified binder (Q43) and substitute binder (V43) when substitute binder is allowed	
	Matl Properties	
	Add Deleterious Material test for the Recycled Material (row 46)	
	Aggregate Classification	
	Add Recycled Materials Bins (8, 9 &10). Don't classify Recycled Materials as Class A Rock.	
	Weigh Up & Bulk Gravity	
	Add Recycled Materials Bins (8, 9 &10).	

Date	Changes	By
	Take CRM calculation out (Cell T19)	
	Summary Worksheet	
	Add Recycled Binder ratio for each asphalt content (C26:C30). Add ratio at OAC (I71).	
	Std Spec GRADATIONS	
	Add specprov table (J24), Recylced Material table (recycledlist), WMA table with approved technologies according to 2009 list (WMATech), aggregate table with approved aggragates and quarries according to Dec2009 list, & binder substitution table.	
4/12/2010	Move "Junk's Field #'s" to cell P24	Gisel Carrasco


Power 45 Curve
Combined Gradation
Maximum Density Line
Lower Specifcation Limits
Upper Specification Limits
105
95
85
75
65
55
45
35
25
15
5
-5
Percent Passing
Sieve Size
4.44
11.989
20.54
37.049
65.274
96.732
100
100

If you have any questions or comments concerning this program, or would like to obtain an updated version of this program (if it has been updated) contact the **Site Manager Tier I contact person for the District (District Lab)**. If you have any other concerns or questions contact Richard Izzo at 512-506-5832 or **Brett Haggerty at 512-506-5841** of the Construction Division or you may contact one of the

* **Getting Started**: Begin with the Combined Gradations or Summary sheet. Here you will select dependent variables such as specification year, mix type, asphalt content, combined aggregate, and others. These variable will affect the calculation of other sheets in the workbook.

    - **Spec Year**: Must be 2004

    - **Mix Type**: Select the correct mix type for this lot. Clicking in the green cell, adjacent to the mix type label, will reveal a small dropdown list. From this list select the mix type that most closely matches your mix. This value will determine what sieve sizes are displayed on the worksheets.
      Select Other if mix is not in the list and input parameters as required.
      A button labeled 'Enter Specifications' will appear above the Bin Fractions Table. Click on this button and a small table will appear on the screen labeled 'Other'. Enter the required sieve sizes, maximum and minimum master grading limits, and the required minimum VMA.

* To move from page to page click on the different sheet tabs at the bottom of the page.

1613										
Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
1		Remarks:								
2	Surface	COURSE\LIFT:								
3		Tested By	TX207							
4		Tested Date	TX207							
5		Tested By	TX226							
6		Tested Date	TX226							
7		Tested By	TX227							
8		Tested Date	TX227							
9		Tested By	TX235							
10		Tested Date	TX235							
11		Tested By	TX242							
12		Tested Date	TX242							
13		Tested By	TX530							
14		Tested Date	TX530							
15		Tested By								
16		Tested Date								
17		Tested By								
18		Tested Date								
19	1310D-64	CONTRACTOR DESIGN # :								
20	Limeston	HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Source:	Bin No.1						
21	Limeston	HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Source:	Bin No.2						
22	Limeston	HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Source:	Bin No.3						
23	Gravel	HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Source:	Bin No.4						
24		HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Source:	Bin No.5						
25		HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Source:	Bin No.6						
26		HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Source:	Bin No.7						
27	Marble F	HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Pit:	Bin No.1						
28	Marble F	HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Pit:	Bin No.2						
29	Marble F	HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Pit:	Bin No.3						
30		HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Pit:	Bin No.4						
31		HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Pit:	Bin No.5						
32		HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Pit:	Bin No.6						
33		HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Pit:	Bin No.7						
34	1402702	HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Number:	Bin No.1						
35	1402702	HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Number:	Bin No.2						
36	1402702	HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Number:	Bin No.3						
37		HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Number:	Bin No.4						
38		HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Number:	Bin No.5						
39		HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Number:	Bin No.6						
40		HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Number:	Bin No.7						
41	Type D	HMACP MIXTURE DESIGN : COMBINED GRADATION	Sample ID:	Bin No.1						
42	Type F	HMACP MIXTURE DESIGN : COMBINED GRADATION	Sample ID:	Bin No.2						
43	Man. San	HMACP MIXTURE DESIGN : COMBINED GRADATION	Sample ID:	Bin No.3						
44	C.A. Fiel	HMACP MIXTURE DESIGN : COMBINED GRADATION	Sample ID:	Bin No.4						
45		HMACP MIXTURE DESIGN : COMBINED GRADATION	Sample ID:	Bin No.5						
46		HMACP MIXTURE DESIGN : COMBINED GRADATION	Sample ID:	Bin No.6						
47		HMACP MIXTURE DESIGN : COMBINED GRADATION	Sample ID:	Bin No.7						
48		HMACP MIXTURE DESIGN : COMBINED GRADATION	Recycled Material?:	Bin No.1						
49		HMACP MIXTURE DESIGN : COMBINED GRADATION	Recycled Material?:	Bin No.2						
50		HMACP MIXTURE DESIGN : COMBINED GRADATION	Recycled Material?:	Bin No.3						
51		HMACP MIXTURE DESIGN : COMBINED GRADATION	Recycled Material?:	Bin No.4						
52		HMACP MIXTURE DESIGN : COMBINED GRADATION	Recycled Material?:	Bin No.5						
53		HMACP MIXTURE DESIGN : COMBINED GRADATION	Recycled Material?:	Bin No.6						
54		HMACP MIXTURE DESIGN : COMBINED GRADATION	Recycled Material?:	Bin No.7						
55		HMACP MIXTURE DESIGN : COMBINED GRADATION	Asphalt%:	Bin No.1						
56		HMACP MIXTURE DESIGN : COMBINED GRADATION	Asphalt%:	Bin No.2						
57		HMACP MIXTURE DESIGN : COMBINED GRADATION	Asphalt%:	Bin No.3						
58		HMACP MIXTURE DESIGN : COMBINED GRADATION	Asphalt%:	Bin No.4						

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
59		HMACP MIXTURE DESIGN : COMBINED GRADATION	Asphalt%:	Bin No.5						
60		HMACP MIXTURE DESIGN : COMBINED GRADATION	Asphalt%:	Bin No.6						
61		HMACP MIXTURE DESIGN : COMBINED GRADATION	Asphalt%:	Bin No.7						
62	38	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual Bin (%):	Bin No.1						
63	19	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual Bin (%):	Bin No.2						
64	30	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual Bin (%):	Bin No.3						
65	13	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual Bin (%):	Bin No.4						
66		HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual Bin (%):	Bin No.5						
67		HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual Bin (%):	Bin No.6						
68		HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual Bin (%):	Bin No.7						
69		HMACP MIXTURE DESIGN : COMBINED GRADATION	Dry Rodded Unit Weight of Coarse Agg. (pcf)							
70	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Cum.% Passing	Sieve Size:	3/4"				
71	38	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Wtd Cum. %	Sieve Size:	3/4"				
72	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Cum.% Passing	Sieve Size:	3/4"				
73	19	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Wtd Cum. %	Sieve Size:	3/4"				
74	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Cum.% Passing	Sieve Size:	3/4"				
75	30	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Wtd Cum. %	Sieve Size:	3/4"				
76	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Cum.% Passing	Sieve Size:	3/4"				
77	13	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Wtd Cum. %	Sieve Size:	3/4"				
78		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Cum.% Passing	Sieve Size:	3/4"				
79		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Wtd Cum. %	Sieve Size:	3/4"				
80		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Cum.% Passing	Sieve Size:	3/4"				
81		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Wtd Cum. %	Sieve Size:	3/4"				
82		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Cum.% Passing	Sieve Size:	3/4"				
83		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Wtd Cum. %	Sieve Size:	3/4"				
84	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Combined Gradation	Cum. % Passing	Sieve Size:	3/4"				
85	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Lower	Sieve Size:	3/4"				
86	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Upper	Sieve Size:	3/4"				
87	Yes	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Within Spec's	Sieve Size:	3/4"				
88		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Lower	Sieve Size:	3/4"				
89		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Upper	Sieve Size:	3/4"				
90		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Within Spec's	Sieve Size:	3/4"				
91	0	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual % Retained	Sieve Size:	3/4"					
92	0	HMACP MIXTURE DESIGN : COMBINED GRADATION	Cumulative % Retained	Sieve Size:	3/4"					
93	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Cum.% Passing	Sieve Size:	1/2"				
94	38	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Wtd Cum. %	Sieve Size:	1/2"				
95	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Cum.% Passing	Sieve Size:	1/2"				
96	19	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Wtd Cum. %	Sieve Size:	1/2"				
97	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Cum.% Passing	Sieve Size:	1/2"				
98	30	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Wtd Cum. %	Sieve Size:	1/2"				
99	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Cum.% Passing	Sieve Size:	1/2"				
100	13	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Wtd Cum. %	Sieve Size:	1/2"				
101		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Cum.% Passing	Sieve Size:	1/2"				
102		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Wtd Cum. %	Sieve Size:	1/2"				
103		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Cum.% Passing	Sieve Size:	1/2"				
104		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Wtd Cum. %	Sieve Size:	1/2"				
105		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Cum.% Passing	Sieve Size:	1/2"				
106		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Wtd Cum. %	Sieve Size:	1/2"				
107	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Combined Gradation	Cum. % Passing	Sieve Size:	1/2"				
108	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Lower	Sieve Size:	1/2"				
109	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Upper	Sieve Size:	1/2"				
110	Yes	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Within Spec's	Sieve Size:	1/2"				
111		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Lower	Sieve Size:	1/2"				
112		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Upper	Sieve Size:	1/2"				
113		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Within Spec's	Sieve Size:	1/2"				
114	0	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual % Retained	Sieve Size:	1/2"					
115	0	HMACP MIXTURE DESIGN : COMBINED GRADATION	Cumulative % Retained	Sieve Size:	1/2"					
116	91.4	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Cum.% Passing	Sieve Size:	3/8"				
117	34.732	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Wtd Cum. %	Sieve Size:	3/8"				

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
118	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Cum.% Passing	Sieve Size:	3/8"				
119	19	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Wtd Cum. %	Sieve Size:	3/8"				
120	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Cum.% Passing	Sieve Size:	3/8"				
121	30	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Wtd Cum. %	Sieve Size:	3/8"				
122	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Cum.% Passing	Sieve Size:	3/8"				
123	13	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Wtd Cum. %	Sieve Size:	3/8"				
124		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Cum.% Passing	Sieve Size:	3/8"				
125		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Wtd Cum. %	Sieve Size:	3/8"				
126		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Cum.% Passing	Sieve Size:	3/8"				
127		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Wtd Cum. %	Sieve Size:	3/8"				
128		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Cum.% Passing	Sieve Size:	3/8"				
129		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Wtd Cum. %	Sieve Size:	3/8"				
130	96.732	HMACP MIXTURE DESIGN : COMBINED GRADATION	Combined Gradation	Cum. % Passing	Sieve Size:	3/8"				
131	85	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Lower	Sieve Size:	3/8"				
132	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Upper	Sieve Size:	3/8"				
133	Yes	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Within Spec's	Sieve Size:	3/8"				
134		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Lower	Sieve Size:	3/8"				
135		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Upper	Sieve Size:	3/8"				
136		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Within Spec's	Sieve Size:	3/8"				
137	3.268	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual % Retained	Sieve Size:	3/8"					
138	3.268	HMACP MIXTURE DESIGN : COMBINED GRADATION	Cumulative % Retained	Sieve Size:	3/8"					
139	24.3	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Cum.% Passing	Sieve Size:	No. 4				
140	9.234	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Wtd Cum. %	Sieve Size:	No. 4				
141	69.2	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Cum.% Passing	Sieve Size:	No. 4				
142	13.148	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Wtd Cum. %	Sieve Size:	No. 4				
143	99.9	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Cum.% Passing	Sieve Size:	No. 4				
144	29.97	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Wtd Cum. %	Sieve Size:	No. 4				
145	99.4	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Cum.% Passing	Sieve Size:	No. 4				
146	12.922	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Wtd Cum. %	Sieve Size:	No. 4				
147		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Cum.% Passing	Sieve Size:	No. 4				
148		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Wtd Cum. %	Sieve Size:	No. 4				
149		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Cum.% Passing	Sieve Size:	No. 4				
150		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Wtd Cum. %	Sieve Size:	No. 4				
151		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Cum.% Passing	Sieve Size:	No. 4				
152		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Wtd Cum. %	Sieve Size:	No. 4				
153	65.274	HMACP MIXTURE DESIGN : COMBINED GRADATION	Combined Gradation	Cum. % Passing	Sieve Size:	No. 4				
154	50	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Lower	Sieve Size:	No. 4				
155	70	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Upper	Sieve Size:	No. 4				
156	Yes	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Within Spec's	Sieve Size:	No. 4				
157		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Lower	Sieve Size:	No. 4				
158		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Upper	Sieve Size:	No. 4				
159		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Within Spec's	Sieve Size:	No. 4				
160	31.458	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual % Retained	Sieve Size:	No. 4					
161	34.726	HMACP MIXTURE DESIGN : COMBINED GRADATION	Cumulative % Retained	Sieve Size:	No. 4					
162	4.9	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Cum.% Passing	Sieve Size:	No. 10				
163	1.862	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Wtd Cum. %	Sieve Size:	No. 10				
164	5.3	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Cum.% Passing	Sieve Size:	No. 10				
165	1.007	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Wtd Cum. %	Sieve Size:	No. 10				
166	71.9	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Cum.% Passing	Sieve Size:	No. 10				
167	21.57	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Wtd Cum. %	Sieve Size:	No. 10				
168	97	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Cum.% Passing	Sieve Size:	No. 10				
169	12.61	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Wtd Cum. %	Sieve Size:	No. 10				
170		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Cum.% Passing	Sieve Size:	No. 10				
171		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Wtd Cum. %	Sieve Size:	No. 10				
172		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Cum.% Passing	Sieve Size:	No. 10				
173		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Wtd Cum. %	Sieve Size:	No. 10				
174		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Cum.% Passing	Sieve Size:	No. 10				
175		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Wtd Cum. %	Sieve Size:	No. 10				
176	37.049	HMACP MIXTURE DESIGN : COMBINED GRADATION	Combined Gradation	Cum. % Passing	Sieve Size:	No. 10				

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
177	32	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Lower	Sieve Size:	No. 10				
178	42	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Upper	Sieve Size:	No. 10				
179	Yes	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Within Spec's	Sieve Size:	No. 10				
180		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Lower	Sieve Size:	No. 10				
181		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Upper	Sieve Size:	No. 10				
182		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Within Spec's	Sieve Size:	No. 10				
183	28.225	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual % Retained	Sieve Size:	No. 10					
184	62.951	HMACP MIXTURE DESIGN : COMBINED GRADATION	Cumulative % Retained	Sieve Size:	No. 10					
185	3.2	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Cum.% Passing	Sieve Size:	No. 40				
186	1.216	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Wtd Cum. %	Sieve Size:	No. 40				
187	2.9	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Cum.% Passing	Sieve Size:	No. 40				
188	0.551	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Wtd Cum. %	Sieve Size:	No. 40				
189	30.9	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Cum.% Passing	Sieve Size:	No. 40				
190	9.27	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Wtd Cum. %	Sieve Size:	No. 40				
191	73.1	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Cum.% Passing	Sieve Size:	No. 40				
192	9.503	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Wtd Cum. %	Sieve Size:	No. 40				
193		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Cum.% Passing	Sieve Size:	No. 40				
194		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Wtd Cum. %	Sieve Size:	No. 40				
195		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Cum.% Passing	Sieve Size:	No. 40				
196		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Wtd Cum. %	Sieve Size:	No. 40				
197		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Cum.% Passing	Sieve Size:	No. 40				
198		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Wtd Cum. %	Sieve Size:	No. 40				
199	20.54	HMACP MIXTURE DESIGN : COMBINED GRADATION	Combined Gradation	Cum. % Passing	Sieve Size:	No. 40				
200	11	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Lower	Sieve Size:	No. 40				
201	26	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Upper	Sieve Size:	No. 40				
202	Yes	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Within Spec's	Sieve Size:	No. 40				
203		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Lower	Sieve Size:	No. 40				
204		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Upper	Sieve Size:	No. 40				
205		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Within Spec's	Sieve Size:	No. 40				
206	16.509	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual % Retained	Sieve Size:	No. 40					
207	79.46	HMACP MIXTURE DESIGN : COMBINED GRADATION	Cumulative % Retained	Sieve Size:	No. 40					
208	2.8	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Cum.% Passing	Sieve Size:	No. 80				
209	1.064	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Wtd Cum. %	Sieve Size:	No. 80				
210	2.4	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Cum.% Passing	Sieve Size:	No. 80				
211	0.456	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Wtd Cum. %	Sieve Size:	No. 80				
212	18.3	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Cum.% Passing	Sieve Size:	No. 80				
213	5.49	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Wtd Cum. %	Sieve Size:	No. 80				
214	38.3	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Cum.% Passing	Sieve Size:	No. 80				
215	4.979	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Wtd Cum. %	Sieve Size:	No. 80				
216		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Cum.% Passing	Sieve Size:	No. 80				
217		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Wtd Cum. %	Sieve Size:	No. 80				
218		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Cum.% Passing	Sieve Size:	No. 80				
219		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Wtd Cum. %	Sieve Size:	No. 80				
220		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Cum.% Passing	Sieve Size:	No. 80				
221		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Wtd Cum. %	Sieve Size:	No. 80				
222	11.989	HMACP MIXTURE DESIGN : COMBINED GRADATION	Combined Gradation	Cum. % Passing	Sieve Size:	No. 80				
223	4	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Lower	Sieve Size:	No. 80				
224	14	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Upper	Sieve Size:	No. 80				
225	Yes	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Within Spec's	Sieve Size:	No. 80				
226		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Lower	Sieve Size:	No. 80				
227		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Upper	Sieve Size:	No. 80				
228		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Within Spec's	Sieve Size:	No. 80				
229	8.551	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual % Retained	Sieve Size:	No. 80					
230	88.011	HMACP MIXTURE DESIGN : COMBINED GRADATION	Cumulative % Retained	Sieve Size:	No. 80					
231	2.3	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Cum.% Passing	Sieve Size:	No. 200				
232	0.874	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Wtd Cum. %	Sieve Size:	No. 200				
233	2	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Cum.% Passing	Sieve Size:	No. 200				
234	0.38	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Wtd Cum. %	Sieve Size:	No. 200				
235	4.9	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Cum.% Passing	Sieve Size:	No. 200				

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
236	1.47	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Wtd Cum. %	Sieve Size:	No. 200				
237	13.2	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Cum.% Passing	Sieve Size:	No. 200				
238	1.716	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Wtd Cum. %	Sieve Size:	No. 200				
239		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Cum.% Passing	Sieve Size:	No. 200				
240		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Wtd Cum. %	Sieve Size:	No. 200				
241		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Cum.% Passing	Sieve Size:	No. 200				
242		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Wtd Cum. %	Sieve Size:	No. 200				
243		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Cum.% Passing	Sieve Size:	No. 200				
244		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Wtd Cum. %	Sieve Size:	No. 200				
245	4.44	HMACP MIXTURE DESIGN : COMBINED GRADATION	Combined Gradation	Cum. % Passing	Sieve Size:	No. 200				
246	2	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Lower	Sieve Size:	No. 200				
247	8	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Upper	Sieve Size:	No. 200				
248	Yes	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Within Spec's	Sieve Size:	No. 200				
249		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Lower	Sieve Size:	No. 200				
250		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Upper	Sieve Size:	No. 200				
251		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Within Spec's	Sieve Size:	No. 200				
252	7.549	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual % Retained	Sieve Size:	No. 200					
253	95.56	HMACP MIXTURE DESIGN : COMBINED GRADATION	Cumulative % Retained	Sieve Size:	No. 200					
254		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Cum.% Passing	Sieve Size:					
255		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Wtd Cum. %	Sieve Size:					
256		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Cum.% Passing	Sieve Size:					
257		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Wtd Cum. %	Sieve Size:					
258		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Cum.% Passing	Sieve Size:					
259		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Wtd Cum. %	Sieve Size:					
260		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Cum.% Passing	Sieve Size:					
261		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Wtd Cum. %	Sieve Size:					
262		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Cum.% Passing	Sieve Size:					
263		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Wtd Cum. %	Sieve Size:					
264		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Cum.% Passing	Sieve Size:					
265		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Wtd Cum. %	Sieve Size:					
266		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Cum.% Passing	Sieve Size:					
267		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Wtd Cum. %	Sieve Size:					
268		HMACP MIXTURE DESIGN : COMBINED GRADATION	Combined Gradation	Cum. % Passing	Sieve Size:					
269		HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Lower	Sieve Size:					
270		HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Upper	Sieve Size:					
271		HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Within Spec's	Sieve Size:					
272		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Lower	Sieve Size:					
273		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Upper	Sieve Size:					
274		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Within Spec's	Sieve Size:					
275		HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual % Retained	Sieve Size:						
276		HMACP MIXTURE DESIGN : COMBINED GRADATION	Cumulative % Retained	Sieve Size:						
277		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Cum.% Passing	Sieve Size:					
278		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Wtd Cum. %	Sieve Size:					
279		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Cum.% Passing	Sieve Size:					
280		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Wtd Cum. %	Sieve Size:					
281		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Cum.% Passing	Sieve Size:					
282		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Wtd Cum. %	Sieve Size:					
283		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Cum.% Passing	Sieve Size:					
284		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Wtd Cum. %	Sieve Size:					
285		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Cum.% Passing	Sieve Size:					
286		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Wtd Cum. %	Sieve Size:					
287		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Cum.% Passing	Sieve Size:					
288		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Wtd Cum. %	Sieve Size:					
289		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Cum.% Passing	Sieve Size:					
290		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Wtd Cum. %	Sieve Size:					
291		HMACP MIXTURE DESIGN : COMBINED GRADATION	Combined Gradation	Cum. % Passing	Sieve Size:					
292		HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Lower	Sieve Size:					
293		HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Upper	Sieve Size:					
294		HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Within Spec's	Sieve Size:					

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
295		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Lower	Sieve Size:					
296		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Upper	Sieve Size:					
297		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Within Spec's	Sieve Size:					
298		HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual % Retained	Sieve Size:						
299		HMACP MIXTURE DESIGN : COMBINED GRADATION	Cumulative % Retained	Sieve Size:						
300	Valero 64	HMACP MIXTURE DESIGN : COMBINED GRADATION	Asphalt Source & Grade:							
301	4.7	HMACP MIXTURE DESIGN : COMBINED GRADATION	Binder Percent, (%):							
302	1.03	HMACP MIXTURE DESIGN : COMBINED GRADATION	Asphalt Spec. Grav.:							
303		HMACP MIXTURE DESIGN : COMBINED GRADATION	Membrane Target Application Rate, gal/yd2							
304		HMACP MIXTURE DESIGN : COMBINED GRADATION	Antistripping Agent:							
305		HMACP MIXTURE DESIGN : COMBINED GRADATION	Percent, (%):							
306		HMACP MIXTURE DESIGN : COMBINED GRADATION								
307		HMACP MIXTURE DESIGN : COMBINED GRADATION								
308	1.5	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Max.	Spec. Limit				
309	1.5	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Max.	Spec. Limit				
310	B	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Min.	Spec. Limit				
311	30	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Max.	Spec. Limit				
312	40	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Max.	Spec. Limit				
313	n/a	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Min.	Spec. Limit				
314	10	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Max.	Spec. Limit				
315	3	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Max.	Spec. Limit				
316	45	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Min.	Spec. Limit				
317	1	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.1	Result				
318		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.1	Sample ID				
319	0.9	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.2	Result				
320		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.2	Sample ID				
321		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.3	Result				
322		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.3	Sample ID				
323		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.4	Result				
324		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.4	Sample ID				
325		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.5	Result				
326		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.5	Sample ID				
327		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.6	Result				
328		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.6	Sample ID				
329		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.7	Result				
330		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.7	Sample ID				
331	0	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.1	Result				
332		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.1	Sample ID				
333	0	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.2	Result				
334		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.2	Sample ID				
335	0	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.3	Result				
336		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.3	Sample ID				
337		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.4	Result				
338		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.4	Sample ID				
339		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.5	Result				
340		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.5	Sample ID				
341		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.6	Result				
342		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.6	Sample ID				
343		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.7	Result				
344		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.7	Sample ID				
345	B	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.1	Result				
346		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.1	Sample ID				
347	B	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.2	Result				
348		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.2	Sample ID				
349	B	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.3	Result				
350		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.3	Sample ID				
351		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.4	Result				
352		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.4	Sample ID				
353		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.5	Result				

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
354		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.5	Sample ID				
355		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.6	Result				
356		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.6	Sample ID				
357		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.7	Result				
358		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.7	Sample ID				
359	7	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.1	Result				
360		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.1	Sample ID				
361	7	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.2	Result				
362		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.2	Sample ID				
363	7	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.3	Result				
364		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.3	Sample ID				
365		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.4	Result				
366		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.4	Sample ID				
367		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.5	Result				
368		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.5	Sample ID				
369		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.6	Result				
370		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.6	Sample ID				
371		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.7	Result				
372		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.7	Sample ID				
373	30	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.1	Result				
374		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.1	Sample ID				
375	30	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.2	Result				
376		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.2	Sample ID				
377	30	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.3	Result				
378		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.3	Sample ID				
379		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.4	Result				
380		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.4	Sample ID				
381		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.5	Result				
382		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.5	Sample ID				
383		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.6	Result				
384		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.6	Sample ID				
385		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.7	Result				
386		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.7	Sample ID				
387	n/a	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.1	Result				
388		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.1	Sample ID				
389	n/a	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.2	Result				
390		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.2	Sample ID				
391	n/a	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.3	Result				
392		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.3	Sample ID				
393		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.4	Result				
394		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.4	Sample ID				
395		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.5	Result				
396		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.5	Sample ID				
397		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.6	Result				
398		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.6	Sample ID				
399		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.7	Result				
400		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.7	Sample ID				
401	0	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.1	Result				
402		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.1	Sample ID				
403	0	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.2	Result				
404		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.2	Sample ID				
405	n/a	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.3	Result				
406		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.3	Sample ID				
407		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.4	Result				
408		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.4	Sample ID				
409		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.5	Result				
410		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.5	Sample ID				
411		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.6	Result				
412		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.6	Sample ID				

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
413		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.7	Result				
414		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.7	Sample ID				
415		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.1	Result				
416		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.1	Sample ID				
417		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.2	Result				
418		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.2	Sample ID				
419	1	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.3	Result				
420		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.3	Sample ID				
421		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.4	Result				
422		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.4	Sample ID				
423		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.5	Result				
424		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.5	Sample ID				
425		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.6	Result				
426		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.6	Sample ID				
427		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.7	Result				
428		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.7	Sample ID				
429		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.1	Result				
430		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.1	Sample ID				
431		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.2	Result				
432		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.2	Sample ID				
433		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.3	Result				
434		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.3	Sample ID				
435	61	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.4	Result				
436		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.4	Sample ID				
437		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.5	Result				
438		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.5	Sample ID				
439		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.6	Result				
440		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.6	Sample ID				
441		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.7	Result				
442		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.7	Sample ID				
443		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Test Method					
444		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Spec. Min or Max					
445		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Spec. Limit					
446		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.1	Result				
447		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.1	Sample ID				
448		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.2	Result				
449		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.2	Sample ID				
450		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.3	Result				
451		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.3	Sample ID				
452		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.4	Result				
453		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.4	Sample ID				
454		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.5	Result				
455		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.5	Sample ID				
456		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.6	Result				
457		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.6	Sample ID				
458		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.7	Result				
459		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.7	Sample ID				
460		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Test Method					
461		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Spec. Min or Max					
462		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Spec. Limit					
463		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.1	Result				
464		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.1	Sample ID				
465		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.2	Result				
466		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.2	Sample ID				
467		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.3	Result				
468		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.3	Sample ID				
469		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.4	Result				
470		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.4	Sample ID				
471		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.5	Result				

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
472		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.5	Sample ID				
473		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.6	Result				
474		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.6	Sample ID				
475		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.7	Result				
476		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.7	Sample ID				
477		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Test Method					
478		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Spec. Min or Max					
479		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Spec. Limit					
480		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.1	Result				
481		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.1	Sample ID				
482		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.2	Result				
483		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.2	Sample ID				
484		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.3	Result				
485		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.3	Sample ID				
486		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.4	Result				
487		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.4	Sample ID				
488		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.5	Result				
489		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.5	Sample ID				
490		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.6	Result				
491		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.6	Sample ID				
492		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.7	Result				
493		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.7	Sample ID				
494		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Test Method					
495		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Spec. Min or Max					
496		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Spec. Limit					
497		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.1	Result				
498		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.1	Sample ID				
499		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.2	Result				
500		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.2	Sample ID				
501		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.3	Result				
502		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.3	Sample ID				
503		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.4	Result				
504		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.4	Sample ID				
505		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.5	Result				
506		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.5	Sample ID				
507		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.6	Result				
508		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.6	Sample ID				
509		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.7	Result				
510		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.7	Sample ID				
511		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Test Method					
512		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Spec. Min or Max					
513		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Spec. Limit					
514		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.1	Result				
515		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.1	Sample ID				
516		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.2	Result				
517		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.2	Sample ID				
518		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.3	Result				
519		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.3	Sample ID				
520		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.4	Result				
521		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.4	Sample ID				
522		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.5	Result				
523		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.5	Sample ID				
524		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.6	Result				
525		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.6	Sample ID				
526		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.7	Result				
527		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.7	Sample ID				
528		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Remarks:							
529	No	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Class (A) Rock (Y/N):						
530	0	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Individual Ret., %	Passing	-	Sieve Size:	Retained	3/4"	

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
531	0	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Individual Ret., %	Passing	3/4"	Sieve Size:	Retained	1/2"	
532	3.268	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Individual Ret., %	Passing	1/2"	Sieve Size:	Retained	3/8"	
533	25.498	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
534	7.372	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
535	0.646	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
536	0.152	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
537	0.19	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
538	0.874	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
539		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
540		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
541	38	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Individual Ret., %	Total:					
542	28.766	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Individual Ret., %	Percent of plus No. 4					
543	No	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Class (A) Rock (Y/N):						
544	0	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Individual Ret., %	Passing	-	Sieve Size:	Retained	3/4"	
545	0	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Individual Ret., %	Passing	3/4"	Sieve Size:	Retained	1/2"	
546	0	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Individual Ret., %	Passing	1/2"	Sieve Size:	Retained	3/8"	
547	5.852	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
548	12.141	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
549	0.456	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
550	0.095	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
551	0.076	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
552	0.38	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
553		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
554		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
555	19	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Individual Ret., %	Total:					
556	5.852	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Individual Ret., %	Percent of plus No. 4					
557	No	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Class (A) Rock (Y/N):						
558	0	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Individual Ret., %	Passing	-	Sieve Size:	Retained	3/4"	
559	0	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Individual Ret., %	Passing	3/4"	Sieve Size:	Retained	1/2"	
560	0	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Individual Ret., %	Passing	1/2"	Sieve Size:	Retained	3/8"	
561	0.03	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
562	8.4	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
563	12.3	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
564	3.78	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
565	4.02	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
566	1.47	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
567		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
568		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
569	30	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Individual Ret., %	Total:					
570	0.03	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Individual Ret., %	Percent of plus No. 4					
571	No	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Class (A) Rock (Y/N):						
572	0	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Individual Ret., %	Passing	-	Sieve Size:	Retained	3/4"	
573	0	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Individual Ret., %	Passing	3/4"	Sieve Size:	Retained	1/2"	
574	0	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Individual Ret., %	Passing	1/2"	Sieve Size:	Retained	3/8"	
575	0.078	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
576	0.312	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
577	3.107	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
578	4.524	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
579	3.263	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
580	1.716	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
581		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
582		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
583	13	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Individual Ret., %	Total:					
584	0.078	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Individual Ret., %	Percent of plus No. 4					
585		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Class (A) Rock (Y/N):						
586		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Individual Ret., %	Passing	-	Sieve Size:	Retained	3/4"	
587		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Individual Ret., %	Passing	3/4"	Sieve Size:	Retained	1/2"	
588		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Individual Ret., %	Passing	1/2"	Sieve Size:	Retained	3/8"	
589		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
590		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
591		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
592		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
593		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
594		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
595		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
596		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
597		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Individual Ret., %	Total:					
598		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Individual Ret., %	Percent of plus No. 4					
599		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Class (A) Rock (Y/N):						
600		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Individual Ret., %	Passing	-	Sieve Size:	Retained	3/4"	
601		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Individual Ret., %	Passing	3/4"	Sieve Size:	Retained	1/2"	
602		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Individual Ret., %	Passing	1/2"	Sieve Size:	Retained	3/8"	
603		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
604		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
605		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
606		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
607		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
608		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
609		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
610		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
611		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Individual Ret., %	Total:					
612		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Individual Ret., %	Percent of plus No. 4					
613		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Class (A) Rock (Y/N):						
614		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Individual Ret., %	Passing	-	Sieve Size:	Retained	3/4"	
615		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Individual Ret., %	Passing	3/4"	Sieve Size:	Retained	1/2"	
616		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Individual Ret., %	Passing	1/2"	Sieve Size:	Retained	3/8"	
617		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
618		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
619		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
620		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
621		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
622		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
623		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
624		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
625		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Individual Ret., %	Total:					
626		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Individual Ret., %	Percent of plus No. 4					
627		HMACP MIXTURE DESIGN : Aggregate Classification	Remarks:							
628	5000	HMACP MIXTURE DESIGN : WEIGH UP SHEET	Aggregate Weight, g:							
629	246.59	HMACP MIXTURE DESIGN : WEIGH UP SHEET	4.7% Asphalt by Total Weight, g:							
630	5246.59	HMACP MIXTURE DESIGN : WEIGH UP SHEET	Total Weight, g:							
631	246.59	HMACP MIXTURE DESIGN : WEIGH UP SHEET	4.7% Asphalt by Total Weight, g:							
632	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	Less Asphalt by Weight of Recycled Material, g:							
633	246.59	HMACP MIXTURE DESIGN : WEIGH UP SHEET	(Valero 64-22) Asphalt to Add, g:							
634	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET								
635	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	-	Sieve Size:	Retained	3/4"	Bin No.1	Aggregate Weight
636	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	-	Sieve Size:	Retained	3/4"	Bin No.2	Aggregate Weight
637	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	-	Sieve Size:	Retained	3/4"	Bin No.3	Aggregate Weight
638	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	-	Sieve Size:	Retained	3/4"	Bin No.4	Aggregate Weight
639		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	-	Sieve Size:	Retained	3/4"	Bin No.5	
640		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	-	Sieve Size:	Retained	3/4"	Bin No.6	
641		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	-	Sieve Size:	Retained	3/4"	Bin No.7	
642	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	-	Sieve Size:	Retained	3/4"	Total Weights	
643	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	-	Sieve Size:	Retained	3/4"	IndividualRetained, %	
644	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	-	Sieve Size:	Retained	3/4"	Cumulative Retained, %	
645	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/4"	Sieve Size:	Retained	1/2"	Bin No.1	Aggregate Weight
646	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/4"	Sieve Size:	Retained	1/2"	Bin No.2	Aggregate Weight
647	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/4"	Sieve Size:	Retained	1/2"	Bin No.3	Aggregate Weight
648	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/4"	Sieve Size:	Retained	1/2"	Bin No.4	Aggregate Weight

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
649		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/4"	Sieve Size:	Retained	1/2"	Bin No.5	
650		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/4"	Sieve Size:	Retained	1/2"	Bin No.6	
651		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/4"	Sieve Size:	Retained	1/2"	Bin No.7	
652	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/4"	Sieve Size:	Retained	1/2"	Total Weights	
653	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/4"	Sieve Size:	Retained	1/2"	IndividualRetained, %	
654	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/4"	Sieve Size:	Retained	1/2"	Cumulative Retained, %	
655	163.4	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	1/2"	Sieve Size:	Retained	3/8"	Bin No.1	Aggregate Weight
656	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	1/2"	Sieve Size:	Retained	3/8"	Bin No.2	Aggregate Weight
657	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	1/2"	Sieve Size:	Retained	3/8"	Bin No.3	Aggregate Weight
658	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	1/2"	Sieve Size:	Retained	3/8"	Bin No.4	Aggregate Weight
659		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	1/2"	Sieve Size:	Retained	3/8"	Bin No.5	
660		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	1/2"	Sieve Size:	Retained	3/8"	Bin No.6	
661		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	1/2"	Sieve Size:	Retained	3/8"	Bin No.7	
662	163.4	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	1/2"	Sieve Size:	Retained	3/8"	Total Weights	
663	3.268	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	1/2"	Sieve Size:	Retained	3/8"	IndividualRetained, %	
664	3.268	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	1/2"	Sieve Size:	Retained	3/8"	Cumulative Retained, %	
665	1274.9	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.1	Aggregate Weight
666	292.6	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.2	Aggregate Weight
667	1.5	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.3	Aggregate Weight
668	3.9	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.4	Aggregate Weight
669		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.5	
670		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.6	
671		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.7	
672	1572.9	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Total Weights	
673	31.458	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	IndividualRetained, %	
674	34.726	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Cumulative Retained, %	
675	368.6	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.1	Aggregate Weight
676	607.05	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.2	Aggregate Weight
677	420	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.3	Aggregate Weight
678	15.6	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.4	Aggregate Weight
679		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.5	
680		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.6	
681		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.7	
682	1411.25	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Total Weights	
683	28.225	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	IndividualRetained, %	
684	62.951	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Cumulative Retained, %	
685	32.3	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.1	Aggregate Weight
686	22.8	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.2	Aggregate Weight
687	615	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.3	Aggregate Weight
688	155.35	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.4	Aggregate Weight
689		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.5	
690		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.6	
691		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.7	
692	825.45	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Total Weights	
693	16.509	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	IndividualRetained, %	
694	79.46	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Cumulative Retained, %	
695	7.6	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.1	Aggregate Weight
696	4.75	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.2	Aggregate Weight
697	189	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.3	Aggregate Weight
698	226.2	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.4	Aggregate Weight
699		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.5	
700		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.6	
701		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.7	
702	427.55	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Total Weights	
703	8.551	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	IndividualRetained, %	
704	88.011	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Cumulative Retained, %	
705	9.5	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.1	Aggregate Weight
706	3.8	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.2	Aggregate Weight
707	201	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.3	Aggregate Weight

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
708	163.15	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.4	Aggregate Weight
709		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.5	
710		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.6	
711		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.7	
712	377.45	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Total Weights	
713	7.549	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	IndividualRetained, %	
714	95.56	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Cumulative Retained, %	
715	43.7	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.1	Aggregate Weight
716	19	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.2	Aggregate Weight
717	73.5	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.3	Aggregate Weight
718	85.8	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.4	Aggregate Weight
719		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.5	
720		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.6	
721		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.7	
722	222	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Total Weights	
723	4.44	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	IndividualRetained, %	
724	100	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Cumulative Retained, %	
725		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.1	Aggregate Weight
726		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.2	Aggregate Weight
727		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.3	Aggregate Weight
728		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.4	Aggregate Weight
729		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.5	
730		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.6	
731		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.7	
732		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Total Weights	
733		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	IndividualRetained, %	
734		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Cumulative Retained, %	
735		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.1	Aggregate Weight
736		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.2	Aggregate Weight
737		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.3	Aggregate Weight
738		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.4	Aggregate Weight
739		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.5	
740		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.6	
741		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.7	
742		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Total Weights	
743		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	IndividualRetained, %	
744		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Cumulative Retained, %	
745	1900	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Totals	Bin No.1	Aggregate Weight				
746	950	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Totals	Bin No.2	Aggregate Weight				
747	1500	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Totals	Bin No.3	Aggregate Weight				
748	650	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Totals	Bin No.4	Aggregate Weight				
749		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Totals	Bin No.5					
750		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Totals	Bin No.6					
751		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Totals	Bin No.7					
752	5000	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Totals	Total Weights					
753		HMACP MIXTURE DESIGN : WEIGH UP SHEET	Running Total:							
754	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	-	Sieve Size:	Retained	3/4"	Bin No.1	Aggregate Weight
755	1900	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	-	Sieve Size:	Retained	3/4"	Bin No.2	Aggregate Weight
756	2850	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	-	Sieve Size:	Retained	3/4"	Bin No.3	Aggregate Weight
757	4350	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	-	Sieve Size:	Retained	3/4"	Bin No.4	Aggregate Weight
758		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	-	Sieve Size:	Retained	3/4"	Bin No.5	
759		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	-	Sieve Size:	Retained	3/4"	Bin No.6	
760		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	-	Sieve Size:	Retained	3/4"	Bin No.7	
761	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	-	Sieve Size:	Retained	3/4"	Total Weights	
762	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/4"	Sieve Size:	Retained	1/2"	Bin No.1	Aggregate Weight
763	1900	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/4"	Sieve Size:	Retained	1/2"	Bin No.2	Aggregate Weight
764	2850	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/4"	Sieve Size:	Retained	1/2"	Bin No.3	Aggregate Weight
765	4350	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/4"	Sieve Size:	Retained	1/2"	Bin No.4	Aggregate Weight
766		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/4"	Sieve Size:	Retained	1/2"	Bin No.5	

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
767		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/4"	Sieve Size:	Retained	1/2"	Bin No.6	
768		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/4"	Sieve Size:	Retained	1/2"	Bin No.7	
769	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/4"	Sieve Size:	Retained	1/2"	Total Weights	
770	163.4	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	1/2"	Sieve Size:	Retained	3/8"	Bin No.1	Aggregate Weight
771	1900	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	1/2"	Sieve Size:	Retained	3/8"	Bin No.2	Aggregate Weight
772	2850	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	1/2"	Sieve Size:	Retained	3/8"	Bin No.3	Aggregate Weight
773	4350	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	1/2"	Sieve Size:	Retained	3/8"	Bin No.4	Aggregate Weight
774		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	1/2"	Sieve Size:	Retained	3/8"	Bin No.5	
775		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	1/2"	Sieve Size:	Retained	3/8"	Bin No.6	
776		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	1/2"	Sieve Size:	Retained	3/8"	Bin No.7	
777	163.4	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	1/2"	Sieve Size:	Retained	3/8"	Total Weights	
778	1438.3	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.1	Aggregate Weight
779	2192.6	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.2	Aggregate Weight
780	2851.5	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.3	Aggregate Weight
781	4353.9	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.4	Aggregate Weight
782		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.5	
783		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.6	
784		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.7	
785	1736.3	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Total Weights	
786	1806.9	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.1	Aggregate Weight
787	2799.65	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.2	Aggregate Weight
788	3271.5	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.3	Aggregate Weight
789	4369.5	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.4	Aggregate Weight
790		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.5	
791		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.6	
792		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.7	
793	3147.55	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Total Weights	
794	1839.2	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.1	Aggregate Weight
795	2822.45	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.2	Aggregate Weight
796	3886.5	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.3	Aggregate Weight
797	4524.85	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.4	Aggregate Weight
798		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.5	
799		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.6	
800		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.7	
801	3973	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Total Weights	
802	1846.8	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.1	Aggregate Weight
803	2827.2	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.2	Aggregate Weight
804	4075.5	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.3	Aggregate Weight
805	4751.05	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.4	Aggregate Weight
806		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.5	
807		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.6	
808		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.7	
809	4400.55	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Total Weights	
810	1856.3	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.1	Aggregate Weight
811	2831	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.2	Aggregate Weight
812	4276.5	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.3	Aggregate Weight
813	4914.2	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.4	Aggregate Weight
814		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.5	
815		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.6	
816		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.7	
817	4778	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Total Weights	
818	1900	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.1	Aggregate Weight
819	2850	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.2	Aggregate Weight
820	4350	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.3	Aggregate Weight
821	5000	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.4	Aggregate Weight
822		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.5	
823		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.6	
824		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.7	
825	5000	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Total Weights	

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
826		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.1	Aggregate Weight
827		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.2	Aggregate Weight
828		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.3	Aggregate Weight
829		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.4	Aggregate Weight
830		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.5	
831		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.6	
832		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.7	
833		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Total Weights	
834		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.1	Aggregate Weight
835		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.2	Aggregate Weight
836		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.3	Aggregate Weight
837		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.4	Aggregate Weight
838		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.5	
839		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.6	
840		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.7	
841		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Total Weights	
842		HMACP MIXTURE DESIGN : WEIGH UP SHEET	Remarks:							
843		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Individual Ret., %	Passing		Sieve Size:	Retained	3/4"	
844		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Bulk SG	Passing		Sieve Size:	Retained	3/4"	
845	0	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Individual Ret., %	Passing	3/4"	Sieve Size:	Retained	1/2"	
846		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Bulk SG	Passing	3/4"	Sieve Size:	Retained	1/2"	
847	8.6	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Individual Ret., %	Passing	1/2"	Sieve Size:	Retained	3/8"	
848	2.788	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Bulk SG	Passing	1/2"	Sieve Size:	Retained	3/8"	
849	67.1	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
850	2.794	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Bulk SG	Passing	3/8"	Sieve Size:	Retained	No. 4	
851	19.4	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
852	2.798	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Bulk SG	Passing	No. 4	Sieve Size:	Retained	No. 10	
853	1.7	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
854	2.798	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Bulk SG	Passing	No. 10	Sieve Size:	Retained	No. 40	
855	0.4	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
856	2.798	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Bulk SG	Passing	No. 40	Sieve Size:	Retained	No. 80	
857	0.5	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
858	2.798	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Bulk SG	Passing	No. 80	Sieve Size:	Retained	No. 200	
859	2.3	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
860	2.798	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Bulk SG	Passing	No. 200	Sieve Size:	Retained	Pan	
861		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
862		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Bulk SG	Passing		Sieve Size:	Retained	Pan	
863		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
864		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Bulk SG	Passing		Sieve Size:	Retained	Pan	
865	100	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Individual Ret., %	Totals					
866	2.79445	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Bulk SG	Totals					
867		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Individual Ret., %	Passing		Sieve Size:	Retained	3/4"	
868		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Bulk SG	Passing		Sieve Size:	Retained	3/4"	
869	0	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Individual Ret., %	Passing	3/4"	Sieve Size:	Retained	1/2"	
870		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Bulk SG	Passing	3/4"	Sieve Size:	Retained	1/2"	
871	0	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Individual Ret., %	Passing	1/2"	Sieve Size:	Retained	3/8"	
872		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Bulk SG	Passing	1/2"	Sieve Size:	Retained	3/8"	
873	30.8	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
874	2.794	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Bulk SG	Passing	3/8"	Sieve Size:	Retained	No. 4	
875	63.9	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
876	2.798	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Bulk SG	Passing	No. 4	Sieve Size:	Retained	No. 10	
877	2.4	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
878	2.798	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Bulk SG	Passing	No. 10	Sieve Size:	Retained	No. 40	
879	0.5	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
880	2.798	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Bulk SG	Passing	No. 40	Sieve Size:	Retained	No. 80	
881	0.4	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
882	2.798	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Bulk SG	Passing	No. 80	Sieve Size:	Retained	No. 200	
883	2	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
884	2.798	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Bulk SG	Passing	No. 200	Sieve Size:	Retained	Pan	

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
885		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
886		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Bulk SG	Passing		Sieve Size:	Retained	Pan	
887		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
888		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Bulk SG	Passing		Sieve Size:	Retained	Pan	
889	100	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Individual Ret., %	Totals					
890	2.79677	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Bulk SG	Totals					
891		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Individual Ret., %	Passing		Sieve Size:	Retained	3/4"	
892		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Bulk SG	Passing		Sieve Size:	Retained	3/4"	
893	0	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Individual Ret., %	Passing	3/4"	Sieve Size:	Retained	1/2"	
894		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Bulk SG	Passing	3/4"	Sieve Size:	Retained	1/2"	
895	0	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Individual Ret., %	Passing	1/2"	Sieve Size:	Retained	3/8"	
896		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Bulk SG	Passing	1/2"	Sieve Size:	Retained	3/8"	
897	0.1	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
898	2.815	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Bulk SG	Passing	3/8"	Sieve Size:	Retained	No. 4	
899	28	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
900	2.815	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Bulk SG	Passing	No. 4	Sieve Size:	Retained	No. 10	
901	41	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
902	2.815	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Bulk SG	Passing	No. 10	Sieve Size:	Retained	No. 40	
903	12.6	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
904	2.815	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Bulk SG	Passing	No. 40	Sieve Size:	Retained	No. 80	
905	13.4	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
906	2.815	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Bulk SG	Passing	No. 80	Sieve Size:	Retained	No. 200	
907	4.9	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
908	2.815	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Bulk SG	Passing	No. 200	Sieve Size:	Retained	Pan	
909		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
910		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Bulk SG	Passing		Sieve Size:	Retained	Pan	
911		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
912		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Bulk SG	Passing		Sieve Size:	Retained	Pan	
913	100	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Individual Ret., %	Totals					
914	2.815	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Bulk SG	Totals					
915		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Individual Ret., %	Passing		Sieve Size:	Retained	3/4"	
916		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Bulk SG	Passing		Sieve Size:	Retained	3/4"	
917	0	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Individual Ret., %	Passing	3/4"	Sieve Size:	Retained	1/2"	
918		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Bulk SG	Passing	3/4"	Sieve Size:	Retained	1/2"	
919	0	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Individual Ret., %	Passing	1/2"	Sieve Size:	Retained	3/8"	
920		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Bulk SG	Passing	1/2"	Sieve Size:	Retained	3/8"	
921	0.6	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
922	2.642	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Bulk SG	Passing	3/8"	Sieve Size:	Retained	No. 4	
923	2.4	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
924	2.642	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Bulk SG	Passing	No. 4	Sieve Size:	Retained	No. 10	
925	23.9	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
926	2.642	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Bulk SG	Passing	No. 10	Sieve Size:	Retained	No. 40	
927	34.8	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
928	2.642	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Bulk SG	Passing	No. 40	Sieve Size:	Retained	No. 80	
929	25.1	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
930	2.678	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Bulk SG	Passing	No. 80	Sieve Size:	Retained	No. 200	
931	13.2	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
932	2.678	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Bulk SG	Passing	No. 200	Sieve Size:	Retained	Pan	
933		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
934		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Bulk SG	Passing		Sieve Size:	Retained	Pan	
935		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
936		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Bulk SG	Passing		Sieve Size:	Retained	Pan	
937	100	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Individual Ret., %	Totals					
938	2.65567	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Bulk SG	Totals					
939		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Individual Ret., %	Passing		Sieve Size:	Retained	3/4"	
940		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Bulk SG	Passing		Sieve Size:	Retained	3/4"	
941		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Individual Ret., %	Passing	3/4"	Sieve Size:	Retained	1/2"	
942		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Bulk SG	Passing	3/4"	Sieve Size:	Retained	1/2"	
943		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Individual Ret., %	Passing	1/2"	Sieve Size:	Retained	3/8"	

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
944		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Bulk SG	Passing	1/2"	Sieve Size:	Retained	3/8"	
945		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
946		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Bulk SG	Passing	3/8"	Sieve Size:	Retained	No. 4	
947		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
948		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Bulk SG	Passing	No. 4	Sieve Size:	Retained	No. 10	
949		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
950		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Bulk SG	Passing	No. 10	Sieve Size:	Retained	No. 40	
951		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
952		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Bulk SG	Passing	No. 40	Sieve Size:	Retained	No. 80	
953		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
954		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Bulk SG	Passing	No. 80	Sieve Size:	Retained	No. 200	
955		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
956		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Bulk SG	Passing	No. 200	Sieve Size:	Retained	Pan	
957		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
958		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Bulk SG	Passing		Sieve Size:	Retained	Pan	
959		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
960		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Bulk SG	Passing		Sieve Size:	Retained	Pan	
961		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Individual Ret., %	Totals					
962		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Bulk SG	Totals					
963		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Individual Ret., %	Passing		Sieve Size:	Retained	3/4"	
964		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Bulk SG	Passing		Sieve Size:	Retained	3/4"	
965		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Individual Ret., %	Passing	3/4"	Sieve Size:	Retained	1/2"	
966		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Bulk SG	Passing	3/4"	Sieve Size:	Retained	1/2"	
967		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Individual Ret., %	Passing	1/2"	Sieve Size:	Retained	3/8"	
968		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Bulk SG	Passing	1/2"	Sieve Size:	Retained	3/8"	
969		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
970		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Bulk SG	Passing	3/8"	Sieve Size:	Retained	No. 4	
971		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
972		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Bulk SG	Passing	No. 4	Sieve Size:	Retained	No. 10	
973		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
974		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Bulk SG	Passing	No. 10	Sieve Size:	Retained	No. 40	
975		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
976		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Bulk SG	Passing	No. 40	Sieve Size:	Retained	No. 80	
977		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
978		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Bulk SG	Passing	No. 80	Sieve Size:	Retained	No. 200	
979		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
980		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Bulk SG	Passing	No. 200	Sieve Size:	Retained	Pan	
981		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
982		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Bulk SG	Passing		Sieve Size:	Retained	Pan	
983		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
984		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Bulk SG	Passing		Sieve Size:	Retained	Pan	
985		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Individual Ret., %	Totals					
986		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Bulk SG	Totals					
987		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Individual Ret., %	Passing		Sieve Size:	Retained	3/4"	
988		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Bulk SG	Passing		Sieve Size:	Retained	3/4"	
989		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Individual Ret., %	Passing	3/4"	Sieve Size:	Retained	1/2"	
990		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Bulk SG	Passing	3/4"	Sieve Size:	Retained	1/2"	
991		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Individual Ret., %	Passing	1/2"	Sieve Size:	Retained	3/8"	
992		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Bulk SG	Passing	1/2"	Sieve Size:	Retained	3/8"	
993		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
994		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Bulk SG	Passing	3/8"	Sieve Size:	Retained	No. 4	
995		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
996		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Bulk SG	Passing	No. 4	Sieve Size:	Retained	No. 10	
997		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
998		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Bulk SG	Passing	No. 10	Sieve Size:	Retained	No. 40	
999		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
1000		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Bulk SG	Passing	No. 40	Sieve Size:	Retained	No. 80	
1001		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
1002		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Bulk SG	Passing	No. 80	Sieve Size:	Retained	No. 200	

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
1003		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
1004		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Bulk SG	Passing	No. 200	Sieve Size:	Retained	Pan	
1005		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
1006		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Bulk SG	Passing		Sieve Size:	Retained	Pan	
1007		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
1008		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Bulk SG	Passing		Sieve Size:	Retained	Pan	
1009		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Individual Ret., %	Totals					
1010		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Bulk SG	Totals					
1011	1.03	HMACP MIXTURE DESIGN : BULK GRAVITY	Specific Gravity of Asphalt:							
1012	2.78208	HMACP MIXTURE DESIGN : BULK GRAVITY	Combined Bulk Specific Gravity:							
1013		HMACP MIXTURE DESIGN : BULK GRAVITY	Coarse Agg. Combined BSG:							
1014		HMACP MIXTURE DESIGN : BULK GRAVITY	Remarks:							
1015	96	HMACP MIXTURE DESIGN : SUMMARY SHEET	Target Density, %:							
1016		HMACP MIXTURE DESIGN : SUMMARY SHEET	Number of Gyrations:							
1017		HMACP MIXTURE DESIGN : SUMMARY SHEET	CRM* Content							
1018	3.5	HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Asphalt Content (%)						
1019	2.445	HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Specific Gravity Of Specimen (Ga)						
1020	2.62	HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Maximum Specific Gravity (Gr)						
1021	2.77539	HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Effective Gravity (Ge)						
1022	2.631	HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Theo. Max. Specific Gravity (Gt)						
1023	92.9306	HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Density from Gt (Percent)						
1024	15.3777	HMACP MIXTURE DESIGN : SUMMARY SHEET	1	VMA (Percent)						
1025	4	HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Asphalt Content (%)						
1026	2.459	HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Specific Gravity Of Specimen (Ga)						
1027	2.605	HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Maximum Specific Gravity (Gr)						
1028	2.78227	HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Effective Gravity (Ge)						
1029	2.60998	HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Theo. Max. Specific Gravity (Gt)						
1030	94.2154	HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Density from Gt (Percent)						
1031	15.3341	HMACP MIXTURE DESIGN : SUMMARY SHEET	2	VMA (Percent)						
1032	4.5	HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Asphalt Content (%)						
1033	2.474	HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Specific Gravity Of Specimen (Ga)						
1034	2.59	HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Maximum Specific Gravity (Gr)						
1035	2.78905	HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Effective Gravity (Ge)						
1036	2.58929	HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Theo. Max. Specific Gravity (Gt)						
1037	95.5475	HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Density from Gt (Percent)						
1038	15.2613	HMACP MIXTURE DESIGN : SUMMARY SHEET	3	VMA (Percent)						
1039	5	HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Asphalt Content (%)						
1040	2.493	HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Specific Gravity Of Specimen (Ga)						
1041	2.574	HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Maximum Specific Gravity (Gr)						
1042	2.79447	HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Effective Gravity (Ge)						
1043	2.56893	HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Theo. Max. Specific Gravity (Gt)						
1044	97.0444	HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Density from Gt (Percent)						
1045	15.0576	HMACP MIXTURE DESIGN : SUMMARY SHEET	4	VMA (Percent)						
1046	5.5	HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Asphalt Content (%)						
1047	2.512	HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Specific Gravity Of Specimen (Ga)						
1048	2.558	HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Maximum Specific Gravity (Gr)						
1049	2.79973	HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Effective Gravity (Ge)						
1050	2.54888	HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Theo. Max. Specific Gravity (Gt)						
1051	98.5529	HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Density from Gt (Percent)						
1052	14.8606	HMACP MIXTURE DESIGN : SUMMARY SHEET	5	VMA (Percent)						
1053	129	HMACP MIXTURE DESIGN : SUMMARY SHEET	Mixture Evaluation @ Optimum Asphalt Content	Indirect Tensile Strength (psi)						
1054		HMACP MIXTURE DESIGN : SUMMARY SHEET	Mixture Evaluation @ Optimum Asphalt Content	Hamburg Wheel Tracking Test	Number of cycles					
1055		HMACP MIXTURE DESIGN : SUMMARY SHEET	Mixture Evaluation @ Optimum Asphalt Content	Hamburg Wheel Tracking Test	Rut depth (mm)					
1056		HMACP MIXTURE DESIGN : SUMMARY SHEET	Mixture Evaluation @ Optimum Asphalt Content	Overlay Tester Min. Number of Cycles						
1057		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Asphalt Content (%)						
1058		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Maximum Specific Gravity (Gr)						
1059		HMACP MIXTURE DESIGN : SUMMARY SHEET	Effective Gravity (Ge)							
1060		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Theo. Max. Specific Gravity (Gt)						
1061		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	VMA (Percent)						

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
1062		HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Asphalt Content (%)						
1063		HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Maximum Specific Gravity (Gr)						
1064		HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Theo. Max. Specific Gravity (Gt)						
1065		HMACP MIXTURE DESIGN : SUMMARY SHEET	2	VMA (Percent)						
1066		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Asphalt Content (%)						
1067		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Maximum Specific Gravity (Gr)						
1068		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Theo. Max. Specific Gravity (Gt)						
1069		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	VMA (Percent)						
1070		HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Asphalt Content (%)						
1071		HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Maximum Specific Gravity (Gr)						
1072		HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Theo. Max. Specific Gravity (Gt)						
1073		HMACP MIXTURE DESIGN : SUMMARY SHEET	4	VMA (Percent)						
1074		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Asphalt Content (%)						
1075		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Maximum Specific Gravity (Gr)						
1076		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Theo. Max. Specific Gravity (Gt)						
1077		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	VMA (Percent)						
1078		HMACP MIXTURE DESIGN : SUMMARY SHEET	Min Film Thickness (microns)							
1079		HMACP MIXTURE DESIGN : SUMMARY SHEET	AC @ Min Film Thickness:							
1080		HMACP MIXTURE DESIGN : SUMMARY SHEET	Max Film Thickness (microns)							
1081		HMACP MIXTURE DESIGN : SUMMARY SHEET	AC @ Max Film Thickness:							
1082		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Asphalt Content (%)						
1083		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Lab Measured Gr						
1084		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Effective Specific Gravity (Ge)						
1085		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Backcalculated Gr						
1086		HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Lab Measured Gr						
1087		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Asphalt Content (%)						
1088		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Lab Measured Gr						
1089		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Effective Specific Gravity (Ge)						
1090		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Backcalculated Gr						
1091		HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Lab Measured Gr						
1092		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Asphalt Content (%)						
1093		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Lab Measured Gr						
1094		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Effective Specific Gravity (Ge)						
1095		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Backcalculated Gr						
1096		HMACP MIXTURE DESIGN : SUMMARY SHEET	6	Lab Measured Gr						
1097		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Asphalt Content (%)						
1098		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Height (in)						
1099		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Diameter (in)						
1100		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Dry Weight (grams)						
1101		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Backcalculated Gr						
1102		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Ga						
1103		HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Height (in)						
1104		HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Diameter (in)						
1105		HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Dry Weight (grams)						
1106		HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Ga						
1107		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Density from Backcalculated Gr (%)						
1108		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Asphalt Content (%)						
1109		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Height (in)						
1110		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Diameter (in)						
1111		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Dry Weight (grams)						
1112		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Backcalculated Gr						
1113		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Ga						
1114		HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Height (in)						
1115		HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Diameter (in)						
1116		HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Dry Weight (grams)						
1117		HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Ga						
1118		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Density from Backcalculated Gr (%)						
1119		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Asphalt Content (%)						
1120		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Height (in)						

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7
1121		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Diameter (in)				
1122		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Dry Weight (grams)				
1123		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Backcalculated Gr				
1124		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Ga				
1125		HMACP MIXTURE DESIGN : SUMMARY SHEET	6	Height (in)				
1126		HMACP MIXTURE DESIGN : SUMMARY SHEET	6	Diameter (in)				
1127		HMACP MIXTURE DESIGN : SUMMARY SHEET	6	Dry Weight (grams)				
1128		HMACP MIXTURE DESIGN : SUMMARY SHEET	6	Ga				
1129		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Density from Backcalculated Gr (%)				
1130		HMACP MIXTURE DESIGN : SUMMARY SHEET	7	Asphalt Content (%)				
1131		HMACP MIXTURE DESIGN : SUMMARY SHEET	7	Height (in)				
1132		HMACP MIXTURE DESIGN : SUMMARY SHEET	7	Diameter (in)				
1133		HMACP MIXTURE DESIGN : SUMMARY SHEET	7	Dry Weight (grams)				
1134		HMACP MIXTURE DESIGN : SUMMARY SHEET	7	Backcalculated Gr				
1135		HMACP MIXTURE DESIGN : SUMMARY SHEET	7	Ga				
1136		HMACP MIXTURE DESIGN : SUMMARY SHEET	8	Height (in)				
1137		HMACP MIXTURE DESIGN : SUMMARY SHEET	8	Diameter (in)				
1138		HMACP MIXTURE DESIGN : SUMMARY SHEET	8	Dry Weight (grams)				
1139		HMACP MIXTURE DESIGN : SUMMARY SHEET	8	Ga				
1140		HMACP MIXTURE DESIGN : SUMMARY SHEET	7	Density from Backcalculated Gr (%)				
1141		HMACP MIXTURE DESIGN : SUMMARY SHEET	9	Asphalt Content (%)				
1142		HMACP MIXTURE DESIGN : SUMMARY SHEET	9	Height (in)				
1143		HMACP MIXTURE DESIGN : SUMMARY SHEET	9	Diameter (in)				
1144		HMACP MIXTURE DESIGN : SUMMARY SHEET	9	Dry Weight (grams)				
1145		HMACP MIXTURE DESIGN : SUMMARY SHEET	9	Backcalculated Gr				
1146		HMACP MIXTURE DESIGN : SUMMARY SHEET	9	Ga				
1147		HMACP MIXTURE DESIGN : SUMMARY SHEET	10	Height (in)				
1148		HMACP MIXTURE DESIGN : SUMMARY SHEET	10	Diameter (in)				
1149		HMACP MIXTURE DESIGN : SUMMARY SHEET	10	Dry Weight (grams)				
1150		HMACP MIXTURE DESIGN : SUMMARY SHEET	10	Ga				
1151		HMACP MIXTURE DESIGN : SUMMARY SHEET	9	Density from Backcalculated Gr (%)				
1152	2.78818	HMACP MIXTURE DESIGN : SUMMARY SHEET	Effective Specific Gravity:					
1153	4.65115	HMACP MIXTURE DESIGN : SUMMARY SHEET	Optimum Asphalt Content :					
1154	15.1997	HMACP MIXTURE DESIGN : SUMMARY SHEET	VMA @ Optimum AC:					
1155		HMACP MIXTURE DESIGN : SUMMARY SHEET	Estimated Percent of Stripping, %:					
1156		HMACP MIXTURE DESIGN : SUMMARY SHEET	Drain-Down, %:					
1157		HMACP MIXTURE DESIGN : SUMMARY SHEET	Cantabro Loss, %:					
1158	2.47978	HMACP MIXTURE DESIGN : SUMMARY SHEET	Interpolated Values	Specific Gravity (Ga):				
1159	2.58516	HMACP MIXTURE DESIGN : SUMMARY SHEET	Interpolated Values	Max. Specific Gravity (Gr):				
1160	2.58313	HMACP MIXTURE DESIGN : SUMMARY SHEET	Interpolated Values	Theo. Max. Specific Gravity (Gt):				
1161		HMACP MIXTURE DESIGN : SUMMARY SHEET	VCA(CA)					
1162		HMACP MIXTURE DESIGN : SUMMARY SHEET	VCA(MIX)					
1163		HMACP MIXTURE DESIGN : SUMMARY SHEET	VCA(CA, calc.)					
1164		HMACP MIXTURE DESIGN : SUMMARY SHEET	VCA(MIX, calc.)					
1165		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	A	Gr			
1166		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	B	Gr			
1167		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	Density (%)	Gr			
1168		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	A	Ga			
1169		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	B	Ga			
1170		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	Density (%)	Ga			
1171		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	A	Height @ Nini			
1172		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	B	Height @ Nini			
1173		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	Density (%)	Height @ Nini			
1174		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	A	Height @ Ndes			
1175		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	B	Height @ Ndes			
1176		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	Density (%)	Height @ Ndes			
1177		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	A	Height @ Nmax			
1178		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	B	Height @ Nmax			
1179		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	Density (%)	Height @ Nmax			

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
1180	2004	HMACP MIXTURE DESIGN : COMBINED GRADATION	SPEC YEAR:							
1181		HMACP MIXTURE DESIGN : COMBINED GRADATION	SPECIAL PROVISION:							
1182	ITEM340	HMACP MIXTURE DESIGN : COMBINED GRADATION	MIX TYPE:							
1183		HMACP MIXTURE DESIGN : COMBINED GRADATION	Lift Thickness, in:							
1184		HMACP MIXTURE DESIGN : SUMMARY SHEET	FINAL SPECIMEN	Asphalt Content (%)						
1185		HMACP MIXTURE DESIGN : SUMMARY SHEET	FINAL SPECIMEN	Specific Gravity Of Specimen (Ga)						
1186		HMACP MIXTURE DESIGN : SUMMARY SHEET	FINAL SPECIMEN	Maximum Specific Gravity (Gr)						
1187		HMACP MIXTURE DESIGN : SUMMARY SHEET	FINAL SPECIMEN	Effective Gravity (Ge)						
1188		HMACP MIXTURE DESIGN : SUMMARY SHEET	FINAL SPECIMEN	Density from Gr (Percent)						
1189		HMACP MIXTURE DESIGN : SUMMARY SHEET	FINAL SPECIMEN	Film Thickness (microns)						
1190		HMACP MIXTURE DESIGN : SUMMARY SHEET	Suggested Membrane Target App. Rate, gal/yd2:							
1191		HMACP MIXTURE DESIGN : SUMMARY SHEET	PREDICTION ESTIMATES	AC %						
1192		HMACP MIXTURE DESIGN : SUMMARY SHEET	PREDICTION ESTIMATES	Film Thickness (microns)						
1193		HMACP MIXTURE DESIGN : SUMMARY SHEET	PREDICTION ESTIMATES	Density (%)						
1194	2000	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	Blank Sample Weight, g:							
1195	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	-	Sieve Size:	Retained	3/4"	Bin No.1	Aggregate Weight
1196	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	-	Sieve Size:	Retained	3/4"	Bin No.2	Aggregate Weight
1197	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	-	Sieve Size:	Retained	3/4"	Bin No.3	Aggregate Weight
1198	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	-	Sieve Size:	Retained	3/4"	Bin No.4	Aggregate Weight
1199		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	-	Sieve Size:	Retained	3/4"	Bin No.5	
1200		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	-	Sieve Size:	Retained	3/4"	Bin No.6	
1201		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	-	Sieve Size:	Retained	3/4"	Bin No.7	
1202	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	-	Sieve Size:	Retained	3/4"	Total Weights	
1203	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	-	Sieve Size:	Retained	3/4"	IndividualRetained, %	
1204	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	-	Sieve Size:	Retained	3/4"	Cumulative Retained, %	
1205	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	3/4"	Sieve Size:	Retained	1/2"	Bin No.1	Aggregate Weight
1206	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	3/4"	Sieve Size:	Retained	1/2"	Bin No.2	Aggregate Weight
1207	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	3/4"	Sieve Size:	Retained	1/2"	Bin No.3	Aggregate Weight
1208	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	3/4"	Sieve Size:	Retained	1/2"	Bin No.4	Aggregate Weight
1209		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	3/4"	Sieve Size:	Retained	1/2"	Bin No.5	
1210		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	3/4"	Sieve Size:	Retained	1/2"	Bin No.6	
1211		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	3/4"	Sieve Size:	Retained	1/2"	Bin No.7	
1212	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	3/4"	Sieve Size:	Retained	1/2"	Total Weights	
1213	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	3/4"	Sieve Size:	Retained	1/2"	IndividualRetained, %	
1214	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	3/4"	Sieve Size:	Retained	1/2"	Cumulative Retained, %	
1215	65.36	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	1/2"	Sieve Size:	Retained	3/8"	Bin No.1	Aggregate Weight
1216	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	1/2"	Sieve Size:	Retained	3/8"	Bin No.2	Aggregate Weight
1217	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	1/2"	Sieve Size:	Retained	3/8"	Bin No.3	Aggregate Weight
1218	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	1/2"	Sieve Size:	Retained	3/8"	Bin No.4	Aggregate Weight
1219		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	1/2"	Sieve Size:	Retained	3/8"	Bin No.5	
1220		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	1/2"	Sieve Size:	Retained	3/8"	Bin No.6	
1221		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	1/2"	Sieve Size:	Retained	3/8"	Bin No.7	
1222	65.36	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	1/2"	Sieve Size:	Retained	3/8"	Total Weights	
1223	3.268	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	1/2"	Sieve Size:	Retained	3/8"	IndividualRetained, %	
1224	3.268	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	1/2"	Sieve Size:	Retained	3/8"	Cumulative Retained, %	
1225	509.96	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.1	Aggregate Weight
1226	117.04	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.2	Aggregate Weight
1227	0.6	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.3	Aggregate Weight
1228	1.56	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.4	Aggregate Weight
1229		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.5	
1230		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.6	
1231		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.7	
1232	629.16	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Total Weights	
1233	31.458	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	IndividualRetained, %	
1234	34.726	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Cumulative Retained, %	
1235	147.44	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.1	Aggregate Weight
1236	242.82	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.2	Aggregate Weight
1237	168	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.3	Aggregate Weight
1238	6.24	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.4	Aggregate Weight

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
1239		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.5	
1240		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.6	
1241		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.7	
1242	564.5	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Total Weights	
1243	28.225	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	IndividualRetained, %	
1244	62.951	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Cumulative Retained, %	
1245	12.92	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.1	Aggregate Weight
1246	9.12	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.2	Aggregate Weight
1247	246	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.3	Aggregate Weight
1248	62.14	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.4	Aggregate Weight
1249		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.5	
1250		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.6	
1251		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.7	
1252	330.18	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Total Weights	
1253	16.509	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	IndividualRetained, %	
1254	79.46	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Cumulative Retained, %	
1255	3.04	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.1	Aggregate Weight
1256	1.9	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.2	Aggregate Weight
1257	75.6	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.3	Aggregate Weight
1258	90.48	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.4	Aggregate Weight
1259		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.5	
1260		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.6	
1261		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.7	
1262	171.02	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Total Weights	
1263	8.551	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	IndividualRetained, %	
1264	88.011	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Cumulative Retained, %	
1265	3.8	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.1	Aggregate Weight
1266	1.52	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.2	Aggregate Weight
1267	80.4	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.3	Aggregate Weight
1268	65.26	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.4	Aggregate Weight
1269		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.5	
1270		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.6	
1271		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.7	
1272	150.98	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Total Weights	
1273	7.549	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	IndividualRetained, %	
1274	95.56	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Cumulative Retained, %	
1275	17.48	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.1	Aggregate Weight
1276	7.6	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.2	Aggregate Weight
1277	29.4	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.3	Aggregate Weight
1278	34.32	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.4	Aggregate Weight
1279		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.5	
1280		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.6	
1281		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.7	
1282	88.8	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Total Weights	
1283	4.44	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	IndividualRetained, %	
1284	100	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Cumulative Retained, %	
1285		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.1	Aggregate Weight
1286		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.2	Aggregate Weight
1287		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.3	Aggregate Weight
1288		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.4	Aggregate Weight
1289		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.5	
1290		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.6	
1291		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.7	
1292		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Total Weights	
1293		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	IndividualRetained, %	
1294		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Cumulative Retained, %	
1295		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.1	Aggregate Weight
1296		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.2	Aggregate Weight
1297		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.3	Aggregate Weight

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
1298		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.4	Aggregate Weight
1299		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.5	
1300		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.6	
1301		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.7	
1302		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Total Weights	
1303		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	IndividualRetained, %	
1304		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Cumulative Retained, %	
1305	760	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Totals	Bin No.1	Aggregate Weight				
1306	380	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Totals	Bin No.2	Aggregate Weight				
1307	600	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Totals	Bin No.3	Aggregate Weight				
1308	260	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Totals	Bin No.4	Aggregate Weight				
1309		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Totals	Bin No.5					
1310		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Totals	Bin No.6					
1311		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Totals	Bin No.7					
1312	2000	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Totals	Total Weights					
1313		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	Running Total:							
1314	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	-	Sieve Size:	Retained	3/4"	Bin No.1	Aggregate Weight
1315	760	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	-	Sieve Size:	Retained	3/4"	Bin No.2	Aggregate Weight
1316	1140	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	-	Sieve Size:	Retained	3/4"	Bin No.3	Aggregate Weight
1317	1740	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	-	Sieve Size:	Retained	3/4"	Bin No.4	Aggregate Weight
1318		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	-	Sieve Size:	Retained	3/4"	Bin No.5	
1319		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	-	Sieve Size:	Retained	3/4"	Bin No.6	
1320		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	-	Sieve Size:	Retained	3/4"	Bin No.7	
1321	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	-	Sieve Size:	Retained	3/4"	Total Weights	
1322	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	3/4"	Sieve Size:	Retained	1/2"	Bin No.1	Aggregate Weight
1323	760	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	3/4"	Sieve Size:	Retained	1/2"	Bin No.2	Aggregate Weight
1324	1140	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	3/4"	Sieve Size:	Retained	1/2"	Bin No.3	Aggregate Weight
1325	1740	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	3/4"	Sieve Size:	Retained	1/2"	Bin No.4	Aggregate Weight
1326		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	3/4"	Sieve Size:	Retained	1/2"	Bin No.5	
1327		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	3/4"	Sieve Size:	Retained	1/2"	Bin No.6	
1328		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	3/4"	Sieve Size:	Retained	1/2"	Bin No.7	
1329	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	3/4"	Sieve Size:	Retained	1/2"	Total Weights	
1330	65.36	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	1/2"	Sieve Size:	Retained	3/8"	Bin No.1	Aggregate Weight
1331	760	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	1/2"	Sieve Size:	Retained	3/8"	Bin No.2	Aggregate Weight
1332	1140	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	1/2"	Sieve Size:	Retained	3/8"	Bin No.3	Aggregate Weight
1333	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	1/2"	Sieve Size:	Retained	3/8"	Bin No.4	Aggregate Weight
1334		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	1/2"	Sieve Size:	Retained	3/8"	Bin No.5	
1335		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	1/2"	Sieve Size:	Retained	3/8"	Bin No.6	
1336		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	1/2"	Sieve Size:	Retained	3/8"	Bin No.7	
1337	65.36	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	1/2"	Sieve Size:	Retained	3/8"	Total Weights	
1338	575.32	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.1	Aggregate Weight
1339	877.04	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.2	Aggregate Weight
1340	1140.6	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.3	Aggregate Weight
1341	1741.56	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.4	Aggregate Weight
1342		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.5	
1343		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.6	
1344		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.7	
1345	694.52	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Total Weights	
1346	722.76	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.1	Aggregate Weight
1347	1119.86	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.2	Aggregate Weight
1348	1308.6	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.3	Aggregate Weight
1349	1747.8	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.4	Aggregate Weight
1350		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.5	
1351		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.6	
1352		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.7	
1353	1259.02	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Total Weights	
1354	735.68	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.1	Aggregate Weight
1355	1128.98	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.2	Aggregate Weight
1356	1554.6	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.3	Aggregate Weight

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
1357	1809.94	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.4	Aggregate Weight
1358		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.5	
1359		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.6	
1360		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.7	
1361	1589.2	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Total Weights	
1362	738.72	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.1	Aggregate Weight
1363	1130.88	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.2	Aggregate Weight
1364	1630.2	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.3	Aggregate Weight
1365	1900.42	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.4	Aggregate Weight
1366		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.5	
1367		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.6	
1368		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.7	
1369	1760.22	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Total Weights	
1370	742.52	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.1	Aggregate Weight
1371	1132.4	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.2	Aggregate Weight
1372	1710.6	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.3	Aggregate Weight
1373	1965.68	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.4	Aggregate Weight
1374		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.5	
1375		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.6	
1376		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.7	
1377	1911.2	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Total Weights	
1378	760	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.1	Aggregate Weight
1379	1140	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.2	Aggregate Weight
1380	1740	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.3	Aggregate Weight
1381	2000	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.4	Aggregate Weight
1382		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.5	
1383		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.6	
1384		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.7	
1385	2000	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Total Weights	
1386		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.1	Aggregate Weight
1387		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.2	Aggregate Weight
1388		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.3	Aggregate Weight
1389		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.4	Aggregate Weight
1390		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.5	
1391		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.6	
1392		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.7	
1393		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Total Weights	
1394		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.1	Aggregate Weight
1395		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.2	Aggregate Weight
1396		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.3	Aggregate Weight
1397		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.4	Aggregate Weight
1398		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.5	
1399		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.6	
1400		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.7	
1401		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Total Weights	
1402	No	HMACP MIXTURE DESIGN : COMBINED GRADATION	WMA Included in Design?							
1403		HMACP MIXTURE DESIGN : COMBINED GRADATION	WMA TECHNOLOGY:							
1404		HMACP MIXTURE DESIGN : COMBINED GRADATION	Material Type	Bin No.8						
1405		HMACP MIXTURE DESIGN : COMBINED GRADATION	Material Type	Bin No.9						
1406		HMACP MIXTURE DESIGN : COMBINED GRADATION	Material Type	Bin No.10						
1407		HMACP MIXTURE DESIGN : COMBINED GRADATION	Material Source	Bin No.8						
1408		HMACP MIXTURE DESIGN : COMBINED GRADATION	Material Source	Bin No.9						
1409		HMACP MIXTURE DESIGN : COMBINED GRADATION	Material Source	Bin No.10						
1410		HMACP MIXTURE DESIGN : COMBINED GRADATION	RAS Type	Bin No.8						
1411		HMACP MIXTURE DESIGN : COMBINED GRADATION	RAS Type	Bin No.9						
1412		HMACP MIXTURE DESIGN : COMBINED GRADATION	RAS Type	Bin No.10						
1413		HMACP MIXTURE DESIGN : COMBINED GRADATION	Sample ID	Bin No.8						
1414		HMACP MIXTURE DESIGN : COMBINED GRADATION	Sample ID	Bin No.9						
1415		HMACP MIXTURE DESIGN : COMBINED GRADATION	Sample ID	Bin No.10						

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
1416		HMACP MIXTURE DESIGN : COMBINED GRADATION	Recycled Asphalt Binder (%)	Bin No.8						
1417		HMACP MIXTURE DESIGN : COMBINED GRADATION	Recycled Asphalt Binder (%)	Bin No.9						
1418		HMACP MIXTURE DESIGN : COMBINED GRADATION	Recycled Asphalt Binder (%)	Bin No.10						
1419	0	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual Bin (%):	Bin No.8						
1420	0	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual Bin (%):	Bin No.9						
1421	0	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual Bin (%):	Bin No.10						
1422		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Cum.% Passing	Sieve Size:	3/4"				
1423		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Wtd Cum. %	Sieve Size:	3/4"				
1424		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Cum.% Passing	Sieve Size:	3/4"				
1425		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Wtd Cum. %	Sieve Size:	3/4"				
1426		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Cum.% Passing	Sieve Size:	3/4"				
1427		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Wtd Cum. %	Sieve Size:	3/4"				
1428		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Cum.% Passing	Sieve Size:	1/2"				
1429		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Wtd Cum. %	Sieve Size:	1/2"				
1430		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Cum.% Passing	Sieve Size:	1/2"				
1431		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Wtd Cum. %	Sieve Size:	1/2"				
1432		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Cum.% Passing	Sieve Size:	1/2"				
1433		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Wtd Cum. %	Sieve Size:	1/2"				
1434		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Cum.% Passing	Sieve Size:	3/8"				
1435		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Wtd Cum. %	Sieve Size:	3/8"				
1436		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Cum.% Passing	Sieve Size:	3/8"				
1437		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Wtd Cum. %	Sieve Size:	3/8"				
1438		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Cum.% Passing	Sieve Size:	3/8"				
1439		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Wtd Cum. %	Sieve Size:	3/8"				
1440		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Cum.% Passing	Sieve Size:	No. 4				
1441		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Wtd Cum. %	Sieve Size:	No. 4				
1442		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Cum.% Passing	Sieve Size:	No. 4				
1443		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Wtd Cum. %	Sieve Size:	No. 4				
1444		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Cum.% Passing	Sieve Size:	No. 4				
1445		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Wtd Cum. %	Sieve Size:	No. 4				
1446		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Cum.% Passing	Sieve Size:	No. 10				
1447		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Wtd Cum. %	Sieve Size:	No. 10				
1448		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Cum.% Passing	Sieve Size:	No. 10				
1449		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Wtd Cum. %	Sieve Size:	No. 10				
1450		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Cum.% Passing	Sieve Size:	No. 10				
1451		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Wtd Cum. %	Sieve Size:	No. 10				
1452		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Cum.% Passing	Sieve Size:	No. 40				
1453		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Wtd Cum. %	Sieve Size:	No. 40				
1454		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Cum.% Passing	Sieve Size:	No. 40				
1455		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Wtd Cum. %	Sieve Size:	No. 40				
1456		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Cum.% Passing	Sieve Size:	No. 40				
1457		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Wtd Cum. %	Sieve Size:	No. 40				
1458		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Cum.% Passing	Sieve Size:	No. 80				
1459		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Wtd Cum. %	Sieve Size:	No. 80				
1460		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Cum.% Passing	Sieve Size:	No. 80				
1461		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Wtd Cum. %	Sieve Size:	No. 80				
1462		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Cum.% Passing	Sieve Size:	No. 80				
1463		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Wtd Cum. %	Sieve Size:	No. 80				
1464		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Cum.% Passing	Sieve Size:	No. 200				
1465		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Wtd Cum. %	Sieve Size:	No. 200				
1466		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Cum.% Passing	Sieve Size:	No. 200				
1467		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Wtd Cum. %	Sieve Size:	No. 200				
1468		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Cum.% Passing	Sieve Size:	No. 200				
1469		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Wtd Cum. %	Sieve Size:	No. 200				
1470		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Cum.% Passing	Sieve Size:					
1471		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Wtd Cum. %	Sieve Size:					
1472		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Cum.% Passing	Sieve Size:					
1473		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Wtd Cum. %	Sieve Size:					
1474		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Cum.% Passing	Sieve Size:					

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
1475		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Wtd Cum. %	Sieve Size:					
1476		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Cum.% Passing	Sieve Size:					
1477		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Wtd Cum. %	Sieve Size:					
1478		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Cum.% Passing	Sieve Size:					
1479		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Wtd Cum. %	Sieve Size:					
1480		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Cum.% Passing	Sieve Size:					
1481		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Wtd Cum. %	Sieve Size:					
1482		HMACP MIXTURE DESIGN : COMBINED GRADATION	Hydrated Lime?:	Bin No.1						
1483		HMACP MIXTURE DESIGN : COMBINED GRADATION	Hydrated Lime?:	Bin No.2						
1484		HMACP MIXTURE DESIGN : COMBINED GRADATION	Hydrated Lime?:	Bin No.3						
1485		HMACP MIXTURE DESIGN : COMBINED GRADATION	Hydrated Lime?:	Bin No.4						
1486		HMACP MIXTURE DESIGN : COMBINED GRADATION	Hydrated Lime?:	Bin No.5						
1487		HMACP MIXTURE DESIGN : COMBINED GRADATION	Hydrated Lime?:	Bin No.6						
1488		HMACP MIXTURE DESIGN : COMBINED GRADATION	Hydrated Lime?:	Bin No.7						
1489	0	HMACP MIXTURE DESIGN : COMBINED GRADATION	Ratio of Recycled to Total Binder, %							
1490		HMACP MIXTURE DESIGN : COMBINED GRADATION	Binder Substitution?							
1491		HMACP MIXTURE DESIGN : COMBINED GRADATION	Binder Originally Specified:							
1492		HMACP MIXTURE DESIGN : COMBINED GRADATION	Substitute Binder:							
1493		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Recycled Materials	Tex-217-F, Part III	Max.	Spec. Limit				
1494		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Recycled Materials	Tex-217-F, Part III	Bin No.8	Result				
1495		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Recycled Materials	Tex-217-F, Part III	Bin No.8	Sample ID				
1496		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Recycled Materials	Tex-217-F, Part III	Bin No.9	Result				
1497		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Recycled Materials	Tex-217-F, Part III	Bin No.9	Sample ID				
1498		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Recycled Materials	Tex-217-F, Part III	Bin No.10	Result				
1499		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Recycled Materials	Tex-217-F, Part III	Bin No.10	Sample ID				
1500		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.8	Individual Ret., %	Passing	-	Sieve Size:	Retained	3/4"	
1501		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.8	Individual Ret., %	Passing	3/4"	Sieve Size:	Retained	1/2"	
1502		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.8	Individual Ret., %	Passing	1/2"	Sieve Size:	Retained	3/8"	
1503		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.8	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
1504		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.8	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
1505		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.8	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
1506		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.8	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
1507		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.8	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
1508		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.8	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
1509		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.8	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
1510		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.8	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
1511		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.8	Individual Ret., %	Total:					
1512		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.8	Individual Ret., %	Percent of plus No. 4					
1513		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.9	Individual Ret., %	Passing	-	Sieve Size:	Retained	3/4"	
1514		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.9	Individual Ret., %	Passing	3/4"	Sieve Size:	Retained	1/2"	
1515		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.9	Individual Ret., %	Passing	1/2"	Sieve Size:	Retained	3/8"	
1516		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.9	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
1517		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.9	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
1518		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.9	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
1519		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.9	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
1520		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.9	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
1521		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.9	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
1522		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.9	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
1523		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.9	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
1524		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.9	Individual Ret., %	Total:					
1525		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.9	Individual Ret., %	Percent of plus No. 4					
1526		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.10	Individual Ret., %	Passing	-	Sieve Size:	Retained	3/4"	
1527		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.10	Individual Ret., %	Passing	3/4"	Sieve Size:	Retained	1/2"	
1528		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.10	Individual Ret., %	Passing	1/2"	Sieve Size:	Retained	3/8"	
1529		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.10	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
1530		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.10	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
1531		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.10	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
1532		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.10	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
1533		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.10	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
1534		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.10	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
1535		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.10	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
1536		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.10	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
1537		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.10	Individual Ret., %	Total:					
1538		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.10	Individual Ret., %	Percent of plus No. 4					
1539		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	-	Sieve Size:	Retained	3/4"	Bin No.8	
1540		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	-	Sieve Size:	Retained	3/4"	Bin No.9	
1541		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	-	Sieve Size:	Retained	3/4"	Bin No.10	
1542		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/4"	Sieve Size:	Retained	1/2"	Bin No.8	
1543		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/4"	Sieve Size:	Retained	1/2"	Bin No.9	
1544		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/4"	Sieve Size:	Retained	1/2"	Bin No.10	
1545		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	1/2"	Sieve Size:	Retained	3/8"	Bin No.8	
1546		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	1/2"	Sieve Size:	Retained	3/8"	Bin No.9	
1547		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	1/2"	Sieve Size:	Retained	3/8"	Bin No.10	
1548		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.8	
1549		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.9	
1550		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.10	
1551		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.8	
1552		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.9	
1553		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.10	
1554		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.8	
1555		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.9	
1556		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.10	
1557		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.8	
1558		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.9	
1559		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.10	
1560		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.8	
1561		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.9	
1562		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.10	
1563		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.8	
1564		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.9	
1565		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.10	
1566		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.8	
1567		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.9	
1568		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.10	
1569		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.8	
1570		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.9	
1571		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.10	
1572		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Totals	Bin No.8					
1573		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Totals	Bin No.9					
1574		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Totals	Bin No.10					
1575		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	-	Sieve Size:	Retained	3/4"	Bin No.8	
1576		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	-	Sieve Size:	Retained	3/4"	Bin No.9	
1577		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	-	Sieve Size:	Retained	3/4"	Bin No.10	
1578		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/4"	Sieve Size:	Retained	1/2"	Bin No.8	
1579		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/4"	Sieve Size:	Retained	1/2"	Bin No.9	
1580		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/4"	Sieve Size:	Retained	1/2"	Bin No.10	
1581		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	1/2"	Sieve Size:	Retained	3/8"	Bin No.8	
1582		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	1/2"	Sieve Size:	Retained	3/8"	Bin No.9	
1583		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	1/2"	Sieve Size:	Retained	3/8"	Bin No.10	
1584		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.8	
1585		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.9	
1586		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.10	
1587		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.8	
1588		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.9	
1589		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.10	
1590		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.8	
1591		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.9	
1592		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.10	

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
1593		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.8	
1594		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.9	
1595		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.10	
1596		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.8	
1597		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.9	
1598		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.10	
1599		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.8	
1600		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.9	
1601		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.10	
1602		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.8	
1603		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.9	
1604		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.10	
1605		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.8	
1606		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.9	
1607		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.10	
1608	0	HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Binder Ratio (%)						
1609	0	HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Binder Ratio (%)						
1610	0	HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Binder Ratio (%)						
1611	0	HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Binder Ratio (%)						
1612	0	HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Binder Ratio (%)						
1613	0	HMACP MIXTURE DESIGN : SUMMARY SHEET	Binder Ratio @ OAC:							

Grade				Washed Sieve Min	Washed Sieve Max	VMA: Min
A Coarse Base	1-1/2"		37.5	98	100	11
	1"		25	78	94	
	3/4"		19	64	85	
	1/2"		12.5	50	70	
	No. 4		4.75	30	50	
	No. 8		2.36	22	36	
	No. 30		0.6	8	23	
	No. 50		0.3	3	19	
	No. 200		0.075	2	7	
B Fine Base			25	100	100	12
	7/8"		22.4	95	100	
	5/8"		16	75	95	
	3/8"		9.5	60	80	
	No. 4		4.75	40	60	
	No. 10		2	27	40	
	No. 40		0.425	10	25	
	No. 80		0.18	3	13	
	No. 200		0.075	2	8	
C Coarse Surface	1"		25	100	100	13
	7/8"		22.4	100	100	
	3/8"		9.5	70	85	
	No. 4		4.75	43	63	
	No. 10		2	30	40	
	No. 40		0.425	10	25	
	No. 80		0.18	3	13	
	No. 200		0.075	2	8	
D Fine Surface	3/4"		19	100	100	14
	1/2"		12.5	100	100	
	3/8"		9.5	85	100	
	No. 4		4.75	50	70	
	No. 10		2	32	42	
	No. 40		0.425	11	26	
	No. 80		0.18	4	14	
	No. 200		0.075	2	8	
F Fine Mixture	3/4"		19	100	100	15
	3/8"		9.5	98	100	
	No. 4		4.75	70	90	
	No. 8		2.36	38	48	
	No. 30		0.6	12	27	
	No. 50		0.3	6	19	
	No. 200		0.075	2	7	
SP-A Base	2"		50	100	100	12.5
	1-1/2"		37.5	98	100	
	1"		25	90	100	
	3/4"		19	45	90	
	No. 4		4.75	19	90	
	No. 8		2.36	19	45	
	No. 16		1.18	1	45	
	No. 30		0.6	1	45	
	No. 50		0.3	1	45	
	No. 200		0.075	1	7	
SP-B Intermediate	1-1/2"		37.5	100	100	13.5
	1"		25	98	100	
	3/4"		19	90	100	
	1/2"		12.5	49	90	
	No. 4		4.75	23	90	
	No. 8		2.36	23	49	
	No. 16		1.18	2	49	
	No. 30		0.6	2	49	
	No. 50		0.3	2	49	
	No. 200		0.075	2	8	
SP-C Surface	1"		25	100	100	14.5
	3/4"		19	98	100	
	1/2"		12.5	90	100	
	3/8"		9.5	58	90	
	No. 4		4.75	28	90	
	No. 8		2.36	28	58	
	No. 16		1.18	2	58	
	No. 30		0.6	2	58	
	No. 50		0.3	2	58	
	No. 200		0.075	2	10	
SP-D Fine Mixture	3/4"		19	100	100	15.5
	1/2"		12.5	98	100	
	3/8"		9.5	90	100	
	No. 4		4.75	32	90	
	No. 8		2.36	32	67	
	No. 16		1.18	2	67	
	No. 30		0.6	2	67	
	No. 50		0.3	2	67	
	No. 200		0.075	2	10	
CMHB-C Coarse Surface	1"		25	100	100	13
	3/4"		19	98	100	
	1/2"		12.5	72	85	
	3/8"		9.5	50	70	
	No. 4		4.75	30	45	
	No. 8		2.36	17	27	
	No. 16		1.18	5	27	
	No. 30		0.6	5	27	

Grade				Min	Max	restricted		# of Sieves with Coarse Aggregate
	No. 200		0.075	2	7			

Goes with power 45 chart.

Sieve Size				Combined Gradation	Lower Spec Limit	Upper Spec Limit
3/4"	19	3.762176102	100	100	100	100
1/2"	12.5	3.116086507	82.82670515	100	100	100
3/8"	9.5	2.754074109	73.2042848	96.732	85	100
No. 4	4.75	2.016100254	53.58867313	65.274	50	70
No. 10	2	1.366040257	36.30984355	37.049	32	42
No. 40	0.425	0.680416785	18.08572396	20.54	11	26
No. 80	0.18	0.462245431	12.28665056	11.989	4	14
No. 200	0.075	0.31172926	8.285876351	4.44	2	8

Recycled Material, %	Virgin Material, %
0.0	100.0

	Recycled Mat List	Total Percent
Fractionated RAP	Fractionated RAP	0
Unfractionated RAP	Unfractionated RAP	0
RAS	RAS	0

Special Provisions
341-024

JUNK FIELD #'S

BINDER SUBSTITUTION

PG 76-16	PG 70-16	PG 64-16	PG 82-22	PG 76-22	PG 70-22	PG 64-22	PG 58-22	PG 76-28	PG 70-28	PG 64-28	PG 58-28
				PG 70-22	PG 64-22	PG 58-22		PG 70-28	PG 64-28	PG 58-28	
				PG 64-22	PG 58-22			PG 64-28	PG 58-28		

Version: 5/20/2009

WMA Technology	WMA in Design?	Hydrated Lime	Mix Description
Advera	1	0	1
Aspha-Min			
Double Barrel Green			
Evotherm			
Redi-Set WMX			
Sasobit			
Terex			
Maxam			
Ultrafoam GX			

Version:12/01/2009

Sandstone		Limestone-Dolomite		Gravel		Igneous		Synthetic		Aggregate Code
Apple (Sawyer, OK)	0050437	1604	1501506	Canyon	0418814	Bird Hill	1523213	Streetman	1817502	1402702
Brownlee	1402704	Ardmore, OK	0050412	Beck	2110901	Davis, OK.	0050439			1402702
Sawyer, OK	0050447	Balcones Quarry	1504602	Boys Ranch	0418008	Jones Mill	0050122			1402702
		Beckmann	1501503	Broken Bow S & G	0050451	Knippa	1523206			
		Bridgeport	0224904	D and D	2215905	McKelligon-Granite	2407206			
		Brownwood	2302501	Del Rio	2223301	Mill Creek (Grnt), OK.	0050433			
		Burnet	1402701	Galo	2224019	Padre Canyon	2411613			
		Butterfield	2407220	Goode-Anderson	0801701	Porcupine Mountain	0040105			
		Chambers	0224921	Highcard Ranch	2506507	Snyder, OK.	0050435			
		Chapman	1523211	Hoban	0619502	Sweet Home, AR.	0050106			
		Coleman, OK	0050414	Johnson	0411807	Vado	0050310			
		Cooperton, OK	0050415	Las Viboras	2110905					
		Davenport	1523214	Little River	0050114					
		Eastland	2306805	LS Pit	0418002					
		Feld	1424602	Luckett	0916104					
		Gibbs	0901408	Mansfield	0418001					
		Helotes	1501514	Matador	2517309					
		Hondo	1516314	Murphy	1323505					
		Huebner Road	1501507	Pettibone	1716608					
		Hunter Rd.	1504605 1504606	Pit 365 Pit 424	0916117 1716611					
		Lake Bridgeport	0224902	Realitos	2106701					
		Lampasas	1402706	Reavis	2110906					
		Leach	0212001	Showers	2110904					
		Lone Star	1504607	Smith	0325205					
		Marble Falls	1402702	South Noodle	0812803					
		Matrimar	0040103	Stockett	0400604					
		McKelligon Dolo	2407201	Sweet 16	2206706					
		Mico # 68	1516315	Tasitas	2224014					
		Mill Creek, OK	0050445	Thrasher	2517302					
		Naruna	1402711	Woods	0505402					
		Nichols	1516312	Wynn	2215904					
		North Troy	0050448							
		Pate	0914710							
		Perch-Hill	0224901							
		Rankin	0623102							
		Richards Spur	0050405							
		Ruby	1410607							
		S.H. 211	1516310							
		Servtex	1504603							
		South Quarry	2407213							
		Spicewood	1402710							
		Springfield	0212002							
		Stringtown, OK	0050407							
		Tehuacana	0914708							
		Three Rivers	0050501							
		Turner	0722611							
		Weatherford	0218409							
		Weir	1424603							
		Yearwood	1424606							

Version: 2/10/2010

RAS Producer	RAS BIN
APAC- TX Cold Springs	
APAC-TX Gribble Plant	
APAC-TX Leston Plant	
APAC-TX Sunnyvale Plant	
Century Asphalt-Melendy Plant	
R. K. Hall Construction	
Ramming Paving- Buda	
Ramming Paving- Georgetown	
Recon Recycle	
Southwest Shingle Recyc	
Sustainable Pvmt Tech-Pasadena	
Sustainable Pvmt Tech-Schertz	
Waste Management WMAP	

	No. 50		0.3	5	27								
	No. 200		0.075	5	9								6
CMHB-F Fine Surface	3/4"		19	100	100	14							
	1/2"		12.5	98	100								
	3/8"		9.5	85	100								
	No. 4		4.75	40	60								
	No. 8		2.36	17	27								
	No. 16		1.18	5	27								
	No. 30		0.6	5	27								
	No. 50		0.3	5	27								
	No. 200		0.075	5	9								5
SMA-C Coarse	3/4"		19	100	100	17							
	1/2"		12.5	80	90								
	3/8"		9.5	25	60								
	No. 4		4.75	20	28								
	No. 8		2.36	14	20								
	No. 16		1.18	8	20								
	No. 30		0.6	8	20								
	No. 50		0.3	8	20								
	No. 200		0.075	8	12								5
SMA-D Medium	3/4"		19	100	100	17							
	1/2"		12.5	85	99								
	3/8"		9.5	50	75								
	No. 4		4.75	20	32								
	No. 8		2.36	16	28								
	No. 16		1.18	8	28								
	No. 30		0.6	8	28								
	No. 50		0.3	8	28								
	No. 200		0.075	8	12								5
SMA-F Fine	1/2"		12.5	100	100	17							
	3/8"		9.5	70	90								
	No. 4		4.75	30	50								
	No. 8		2.36	20	30								
	No. 16		1.18	8	30								
	No. 30		0.6	8	30								
	No. 50		0.3	8	30								
	No. 200		0.075	8	14								4
SMAR-C Coarse	3/4"		19	100	100	18.5							
	1/2"		12.5	72	85								
	3/8"		9.5	50	70								
	No. 4		4.75	30	45								
	No. 8		2.36	17	27								
	No. 16		1.18	12	22								
	No. 30		0.6	8	20								
	No. 50		0.3	6	15								
	No. 200		0.075	5	9								5
SMAR-F Fine	3/4"		19	100	100	18.5							
	3/8"		9.5	95	100								
	No. 4		4.75	40	50								
	No. 8		2.36	17	27								
	No. 16		1.18	12	22								
	No. 30		0.6	8	20								
	No. 50		0.3	6	15								
	No. 200		0.075	5	9								4
PFC PG 76 Mixtures	3/4"		19	100	100								
	1/2"		12.5	80	100								
	3/8"		9.5	35	60								
	No. 4		4.75	1	20								
	No. 8		2.36	1	10								
	No. 200		0.075	1	4								
PFC A-R Mixtures	3/4"		19	100	100								
	1/2"		12.5	95	100								
	3/8"		9.5	50	80								
	No. 4		4.75	0	8								
	No. 8		2.36	0	4								
	No. 200		0.075	0	4								
Other			#N/A										
			#N/A										
			#N/A										
			#N/A										
			#N/A										
			#N/A										
			#N/A										
			#N/A										
			#N/A										
			#N/A										

								AC CONTENT		Membrane Application Rates		
								MIN	MAX	MIN	MAX	SA Factors
UTBWC-A	3/8"		9.5	100	100							0.41
	No. 4		4.75	35	55							0.41
	No. 8		2.36	19	30							0.82
	No. 16		1.18	14	25			5.0	5.8	0.14	0.19	1.64
	No. 30		0.6	10	18							2.87
	No. 50		0.3	7	14							6.14
	No. 100		0.15	5	10							12.29
	No. 200		0.075	4	6							32.77
UTBWC-B	1/2"		12.5	100	100							0.41
	3/8"		9.5	75	100							-
	No. 4		4.75	22	36							0.41
	No. 8		2.36	19	30							0.82
	No. 16		1.18	14	24			4.8	5.6	0.17	0.24	1.64
	No. 30		0.6	10	18							2.87
	No. 50		0.3	7	14							6.14
	No. 100		0.15	5	10							12.29
	No. 200		0.075	4	6							32.77
UTBWC-C	3/4"		19	100	100							0.41
	1/2"		12.5	75	100							-
	3/8"		9.5	55	80							-
	No. 4		4.75	22	36							0.41
	No. 8		2.36	19	30							0.82
	No. 16		1.18	14	24			4.6	5.6	0.20	0.27	1.64
	No. 30		0.6	10	18							2.87
	No. 50		0.3	7	14							6.14
	No. 100		0.15	5	10							12.29
	No. 200		0.075	4	6							32.77

SS3111-CA Mix	3/8"		9.5	98	100	15.5			6.5	99999999					
	No. 4		4.75	70	90										
	No. 8		2.36	40	65										
	No. 16		1.18	20	45										
	No. 30		0.6	10	30										
	No. 50		0.3	10	20										
	No. 200		0.075	2	10									Min Lab Density	Max Lab Density
JTBHMWC-A	3/8"		9.5	100	100				5.0	5.8	0.14	0.20	0.41	85.0	92.0
	No. 4		4.75	35	55								0.41		
	No. 8		2.36	19	30								0.82		
	No. 16		1.18	14	25								1.64		
	No. 30		0.6	10	18								2.87		
	No. 50		0.3	7	14								6.14		
	No. 100		0.15	5	10								12.29		
	No. 200		0.075	4	6								32.77		
JTBHMWC-B	1/2"		12.5	100	100				4.8	5.6	0.16	0.24	0.41	85.0	92.0
	3/8"		9.5	75	100								-		
	No. 4		4.75	22	36								0.41		
	No. 8		2.36	19	30								0.82		
	No. 16		1.18	14	24								1.64		
	No. 30		0.6	10	18								2.87		
	No. 50		0.3	7	14								6.14		
	No. 100		0.15	5	10								12.29		
	No. 200		0.075	4	6								32.77		
JTBHMWC-C	3/4"		19	100	100				4.6	5.6	0.17	0.27	0.41	85.0	92.0
	1/2"		12.5	75	100								-		
	3/8"		9.5	55	80								-		
	No. 4		4.75	22	36								0.41		
	No. 8		2.36	19	30								0.82		
	No. 16		1.18	14	24								1.64		
	No. 30		0.6	10	18								2.87		
	No. 50		0.3	7	14								6.14		
	No. 100		0.15	5	10								12.29		
	No. 200		0.075	4	6								32.77		
TBPFC PG 76 Mixtures	3/4"		19	100	100				6.0	7.0	0.000	0.000		78.0	82.0
	1/2"		12.5	80	100										
	3/8"		9.5	35	60										
	No. 4		4.75	1	20										
	No. 8		2.36	1	10										
	No. 200		0.075	1	4										
TBPFC A-R Mixtures	3/4"		19	100	100				8.0	10.0	0.000	0.000		78.0	82.0
	1/2"		12.5	95	100										
	3/8"		9.5	50	80										
	No. 4		4.75	0	8										
	No. 8		2.36	0	4										
	No. 200		0.075	0	4										

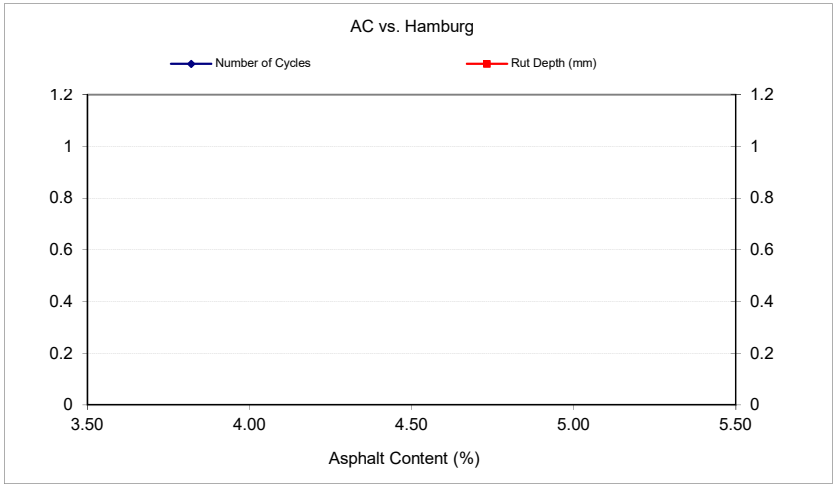
Gradation Table

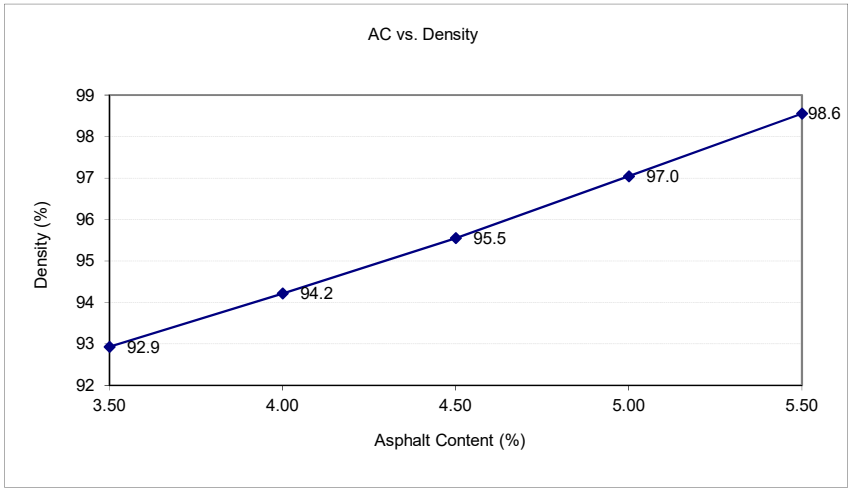
English	Metric	Selection	Size
2"	50 mm	2"	50
1-3/4"	45 mm	1-3/4"	45
1-1/2"	37.5 mm	1-1/2"	37.5
1-1/4"	31.5 mm	1-1/4"	31.5
1"	25 mm	1"	25
7/8"	22.4 mm	7/8"	22.4
3/4"	19 mm	3/4"	19
5/8"	16 mm	5/8"	16
1/2"	12.5 mm	1/2"	12.5
7/16"	11.2 mm	7/16"	11.2
3/8"	9.5 mm	3/8"	9.5
5/16"	8 mm	5/16"	8
1/4"	6.3 mm	1/4"	6.3
No. 4	4.75 mm	No. 4	4.75
No. 6	3.35 mm	No. 6	3.35
No. 8	2.36 mm	No. 8	2.36
No. 10	2 mm	No. 10	2
No. 14	1.4 mm	No. 14	1.4
No. 16	1.18 mm	No. 16	1.18
No. 20	.85 µm	No. 20	0.85
No. 30	.6 µm	No. 30	0.6
No. 40	.425 µm	No. 40	0.425
No. 50	.3 µm	No. 50	0.3
No. 80	.18 µm	No. 80	0.18
No. 100	.15 µm	No. 100	0.15
No. 200	.075 µm	No. 200	0.075

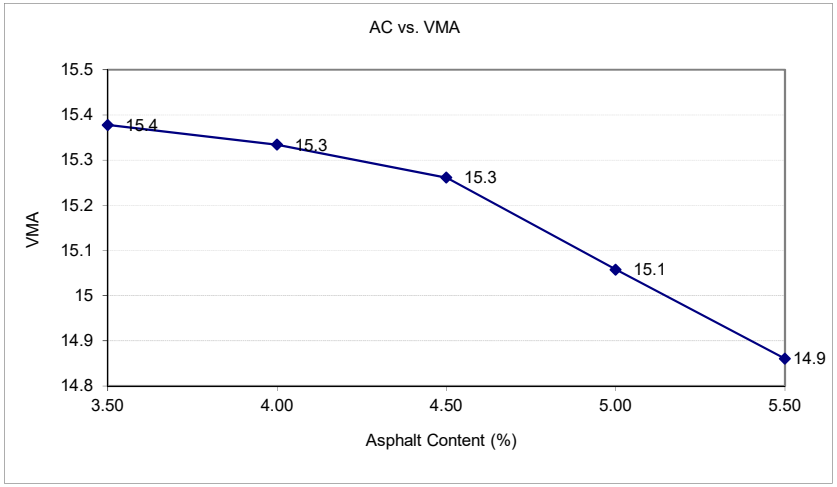
MIX TYPES
ITEM340_A_Coarse_Base
ITEM340_B_Fine_Base
ITEM340_C_Coarse_Surface
ITEM340_D_Fine_Surface
ITEM340_F_Fine_Mixture
ITEM341_A_Coarse_Base
ITEM341_B_Fine_Base
ITEM341_C_Coarse_Surface
ITEM341_D_Fine_Surface
ITEM341_F_Fine_Mixture
ITEM344_SP_A_Base
ITEM344_SP_B_Intermediate
ITEM344_SP_C_Surface
ITEM344_SP_D_Fine_Mixture
ITEM344_CMHB_C_Coarse_Surface
ITEM344_CMHB_F_Fine_Surface
ITEM346_SMA_C_Coarse
ITEM346_SMA_D_Medium
ITEM346_SMA_F_Fine
ITEM346_SMAR_C_Coarse
ITEM346_SMAR_F_Fine
ITEM342_PFC_PG_76_Mixtures
ITEM342_PFC_A_R_Mixtures
ITEM3001_UTBWC_A
ITEM3001_UTBWC_B
ITEM3001_UTBWC_C
SS3111_CA_Mix
ITEM3142_UTBWC_A
ITEM3142_UTBWC_B
ITEM3142_UTBWC_C
CAM
TBPFC_PG76
TBPFC_AR
Other

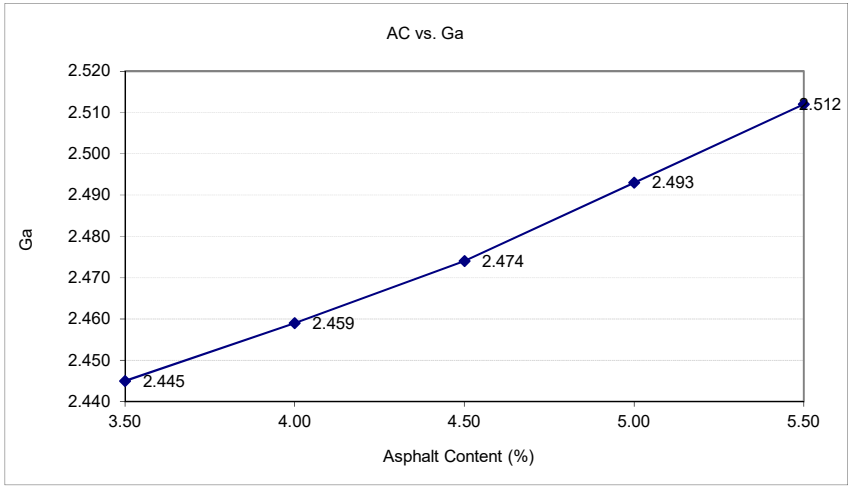
Membrane Application Check
0

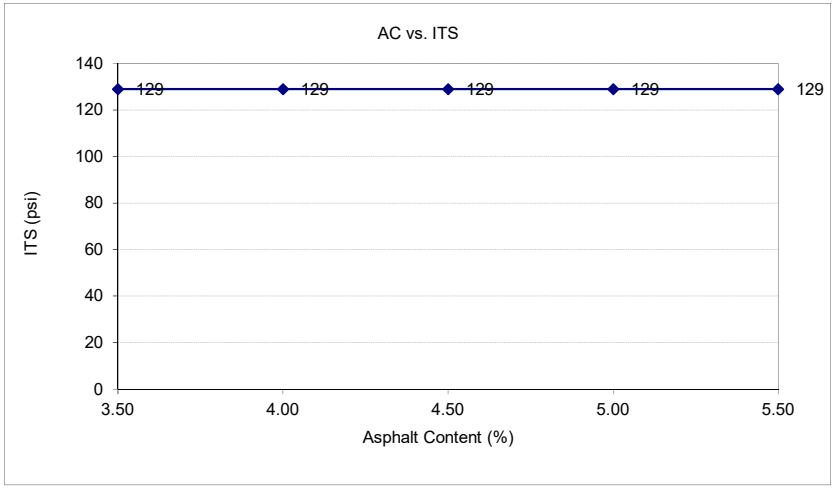
MINIMUM PFC AC CONTENT	
Bulk Specific Gravity	Minimum AC%
0.000	6.0
2.750	6.0
2.800	5.9
2.850	5.8
2.900	5.7
2.950	5.6
3.000	5.5
9999999999.000	5.5

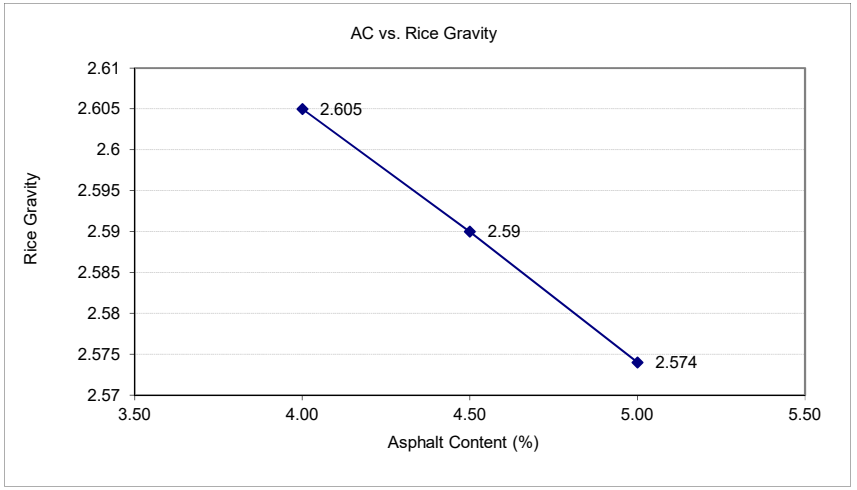

AC vs. Hamburg
Number of Cycles
Rut Depth (mm)
1.2
1
0.8
0.6
0.4
0.2
0
3.50
4.00
4.50
5.00
5.50
Asphalt Content (%)


AC vs. Density
Density (%)
99
98
97
96
95
94
93
92
98.6
97.0
95.5
94.2
92.9
3.50
4.00
4.50
5.00
5.50
Asphalt Content (%)


AC vs. VMA
VMA
15.5
15.4
15.3
15.2
15.1
15
14.9
14.8
15.4
15.3
15.3
15.1
14.9
3.50
4.00
4.50
5.00
5.50
Asphalt Content (%)


AC vs. Ga
Ga
2.520
2.510
2.500
2.490
2.480
2.470
2.460
2.450
2.440
2.512
2.493
2.474
2.459
2.445
3.50
4.00
4.50
5.00
5.50
Asphalt Content (%)


AC vs. ITS
ITS (psi)
140
120
100
80
60
40
20
0
129
129
129
129
129
3.50
4.00
4.50
5.00
5.50
Asphalt Content (%)


AC vs. Rice Gravity
Rice Gravity
2.61
2.605
2.6
2.595
2.59
2.585
2.58
2.575
2.57
2.605
2.59
2.574
3.50
4.00
4.50
5.00
5.50
Asphalt Content (%)

Texas Materials
an Oldcastle® company

DESIGN NO: 1310D-76A
DESCRIPTION: TYPE "D" PG 64-22
DESIGN DATE: 12-Feb-18
SUBMITTAL DATE:
REVISION DATE:

DEPARTMENT OF PUBLIC WORKS - CONSTRUCTION INSPECTION DIVISION
505 BARTON SPRINGS ROAD
AUSTIN, TEXAS, 78704

ATTENTION: DIVISION ENGINEER

SHOWN BELOW IS THE PLANT CORRECTED JOB MIX FORMULA FOR THE HOT MIX ASPHALTIC CONCRETE TO BE USED ON THE FOLLOWING PROJECT:

NAME OF SUBDIVISION OR CIP PROJECT:
CIP PROJECT NUMBER:

THE JOB MIX FORMULA HAS DETERMINED ACCORDING TO CITY OF AUSTIN STANDARD SPECIFICATIONS ITEM 340.

HMAC PRODUCER: Texas Materials
PLANT LOCATION: 713 Linger Lane, Austin, Texas 78721

SUBMITTED BY:
DATE:
PRIME CONTRACTOR:

PREPARED BY: KYLE RANGNOW

CERTIFICATION: TXDOT LEVEL II #765

SIEVE SIZE	% PASSING
1/2"	100.0
3/8"	95.0
#4	66.6
#10	37.8
#40	21.2
#80	13.0
#200	4.7

ASPHALT CONTENT
VALERO PG 76-22
4.6%

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : COMBINED GRADATION

Refresh Workbook

File Version: 06/07/10 10:24:04

SAMPLE ID:	1310D-76A	SAMPLE DATE:	2/12/18
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:		SPEC YEAR:	2004
SAMPLED BY:	Eulalio Orona #1042	SPEC ITEM:	
SAMPLE LOCATION:	Design	SPECIAL PROVISION:	
MATERIAL CODE:		MIX TYPE:	ITEM340_D_Fine_Surface
MATERIAL NAME:	TYPE D HMAC		
PRODUCER:	Texas Materials Bolm Road	WMA Included in Design?	No
AREA ENGINEER:		PROJECT MANAGER:	WMA TECHNOLOGY:

COURSE\LIFT:	Surface	STATION:		DIST. FROM CL:		CONTRACTOR DESIGN # : 1310D-76A

Recycled Binder, %	
Bin No.8 :	0.0
Bin No.9 :	0.0
Bin No.10 :	0.0
Total	0.0

Ratio of Recycled to Total Binder, %
(based on binder percent (%) entered below in this worksheet)
0.0

	AGGREGATE BIN FRACTIONS							"RECYCLED MATERIALS"			
	Bin No.1	Bin No.2	Bin No.3	Bin No.4	Bin No.5	Bin No.6	Bin No.7	Bin No.8	Bin No.9	Bin No.10	
Aggregate Source:	Limestone_Dolom	Limestone_Dolom	Limestone_Dolom	Gravel							Material Type
Aggregate Pit:	Marble Falls	Marble Falls	Marble Falls								Material Source
Aggregate Number:	1402702	1402702	1402702								RAS Type
Sample ID:	Type D	Type F	Man. Sand	C.A. Field Sand							Sample ID
								Recycled Asphalt Binder (%)			
Hydrated Lime?:											
Individual Bin (%):	38.0	19.0	30.0	13.0							

																				Combined Gradation					
	Percent		Percent		Percent		Percent		Percent		Percent		Percent		% of Tot. Mix		% of Tot. Mix		% of Tot. Mix	Total Bin	Lower & Upper Specification Limits			Individual % Retained	Cumulative % Retained	Sieve Size
Sieve Size:	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	% of Aggreg	Cum.% Passing	% of Aggreg	Cum.% Passing	% of Aggreg	Cum.% Passing	100.0% Cum. % Passing	Lower	Upper	Within Spec's			
3/4"	100.0	38.0	100.0	19.0	100.0	30.0	100.0	13.0													100.0	100.0	100.0	Yes	0.0	0.0	3/4"
1/2"	100.0	38.0	100.0	19.0	100.0	30.0	100.0	13.0													100.0	100.0	100.0	Yes	0.0	0.0	1/2"
3/8"	91.4	34.7	100.0	19.0	100.0	30.0	100.0	13.0													96.7	85.0	100.0	Yes	3.3	3.3	3/8"
No. 4	24.3	9.2	69.2	13.1	99.9	30.0	99.4	12.9													65.3	50.0	70.0	Yes	31.5	34.7	No. 4
No. 10	4.9	1.9	5.3	1.0	71.9	21.6	97.0	12.6													37.0	32.0	42.0	Yes	28.2	63.0	No. 10
No. 40	3.2	1.2	2.9	0.6	30.9	9.3	73.1	9.5													20.5	11.0	26.0	Yes	16.5	79.5	No. 40
No. 80	2.8	1.1	2.4	0.5	18.3	5.5	38.3	5.0													12.0	4.0	14.0	Yes	8.6	88.0	No. 80
No. 200	2.3	0.9	2.0	0.4	4.9	1.5	13.2	1.7													4.4	2.0	8.0	Yes	7.5	95.6	No. 200

(Bold Italic) Not within specifications ***(Bold Italic)*** Not within specificaitons- Restricted Zone *(Italic)* Not cumulative

Lift Thickness, in:		Binder Substitution?		Binder Originally Specified:		Substitute Binder:
Asphalt Source & Grade:	Valero 76-22	Binder Percent, (%):	4.6	Asphalt Spec. Grav.:	1.035	
Antistripping Agent:		Percent, (%):				

Remarks:

Notes:

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : MATERIAL PROPERTIES

File Version: 06/07/10 10:24:04

SAMPLE ID:	1310D-76A	SAMPLE DATE:	2/12/18
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:		SPEC YEAR:	2004
SAMPLED BY:	Eulalio Orona #1042	SPEC ITEM:	
SAMPLE LOCATION:	Design	SPECIAL PROVISION:	
MATERIAL CODE:		MIX TYPE:	ITEM340_D_Fine_Surface
MATERIAL NAME:	TYPE D HMAC		
PRODUCER:	Texas Materials Bolm Road		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:	Surface	STATION:		DIST. FROM CL:		CONTRACTOR DESIGN # :	1310D-76A

	Bin No.1	Bin No.2	Bin No.3	Bin No.4	Bin No.5	Bin No.6	Bin No.7
Individual Bin (%):	Bin No.1 = 38 %	Bin No.2 = 19 %	Bin No.3 = 30 %	Bin No.4 = 13 %			
Aggregate Source:	Limestone_Dolom	Limestone_Dolom	Limestone_Dolom	Gravel			
Aggregate Number:	1402702	1402702	1402702				
Sample ID:	Type D	Type F	Man. Sand	C.A. Field Sand			

Test Name	SiteManager Test Template	Test Method	Spec. Min or Max	Spec. Limit	Result	Sample ID	Result	Sample ID	Result	Sample ID	Result	Sample ID	Result	Sample ID	Result	Sample ID	Result	Sample ID
Stockpile					Bin No.1		Bin No.2		Bin No.3		Bin No.4		Bin No.5		Bin No.6		Bin No.7	
Decantation	Tx217	Tex-217-F	Max.	1.5	1.00		0.90											
Deleterious Mat'l	Tx217	Tex-217-F	Max.	1.5	0.00		0.00		0.00									
Surface Aggregate Classification	Tx4AgClas	Tex-438-A, Tex-612-J	Min.	B	B		B		B									
Magnesium Sulfate Soundness	Tx411M	Tex-411-A	Max.	30	7.00		7.00		7.00									
LA Abrasion	Tx410	Tex-410-A	Max.	40	30.00		30.00		30.00									
Crushed Faces Count	Tx460	Tex-460-A	Min.	n/a	n/a		n/a		n/a									
Flat & Elongated	Tx280	Tex-280-F	Max.	10	0.00		0.00		n/a									
Fine Aggregate					Bin No.1		Bin No.2		Bin No.3		Bin No.4		Bin No.5		Bin No.6		Bin No.7	
Bar Linear Shrinkage	Tx107	Tex-107-E	Max.	3					1.00									
Methylene Blue		AASHTO T330	Max.															
Combined Aggregate					Bin No.1		Bin No.2		Bin No.3		Bin No.4		Bin No.5		Bin No.6		Bin No.7	
Sand Equivalent	Tx203	Tex-203-F	Min.	45							61.00							
User Defined Testing					Bin No.1		Bin No.2		Bin No.3		Bin No.4		Bin No.5		Bin No.6		Bin No.7	
Use this area to enter any test methods, speciafications & test result that apply to this material(s) but are not not listed above. **1**																		
2																		
3																		
4																		
5																		
Recycled Materials					**Bin No.8**		**Bin No.9**		**Bin No.10**									
Deleterious Mat'l	Tx217	Tex-217-F, Part III	Max.															

Remarks:

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : Aggregate Classification

File Version: 06/07/10 10:24:04

SAMPLE ID:	1310D-76A	SAMPLE DATE:	2/12/18
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:		SPEC YEAR:	2004
SAMPLED BY:	Eulalio Orona #1042	SPEC ITEM:	
SAMPLE LOCATION:	Design	SPECIAL PROVISION:	
MATERIAL CODE:		MIX TYPE:	ITEM340_D_Fine_Surface
MATERIAL NAME:	TYPE D HMAC		
PRODUCER:	Texas Materials Bolm Road		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:	Surface	STATION:		DIST. FROM CL:		CONTRACTOR DESIGN # :	1310D-76A

Aggregate Classification

		Bin No.1	Bin No.2	Bin No.3	Bin No.4	Bin No.5	Bin No.6	Bin No.7	Bin No.8	Bin No.9	Bin No.10
Individual Bin (%):		Bin No.1 = 38 %	Bin No.2 = 19 %	Bin No.3 = 30 %	Bin No.4 = 13 %						
Aggregate Source:		Limestone_Dolom	Limestone_Dolom	Limestone_Dolom	Gravel						
Aggregate Number:		1402702	1402702	1402702							
Class (A) Rock (Y/N):		No	No	No	No						
Sieve Size:		Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %
Passing	Retained										
-	3/4"	0.0	0.0	0.0	0.0						
3/4"	1/2"	0.0	0.0	0.0	0.0						
1/2"	3/8"	3.3	0.0	0.0	0.0						
3/8"	No. 4	25.5	5.9	0.0	0.1						
No. 4	No. 10	7.4	12.1	8.4	0.3						
No. 10	No. 40	0.6	0.5	12.3	3.1						
No. 40	No. 80	0.2	0.1	3.8	4.5						
No. 80	No. 200	0.2	0.1	4.0	3.3						
No. 200	Pan	0.9	0.4	1.5	1.7						
Total:		38.0	19.0	30.0	13.0						
Percent of plus No. 4		28.8	5.9	0.0	0.1						

Percent of plus No. 4 from class (A) Rock:	0.0
Total Percent of plus No. 4	34.7
Percent of plus No. 4 from class (A) Rock:	***0.0***

Remarks:

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : WEIGH UP SHEET

File Version: 06/07/10 10:24:04

SAMPLE ID:	1310D-76A	SAMPLE DATE:	2/12/18
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:		SPEC YEAR:	2004
SAMPLED BY:	Eulalio Orona #1042	SPEC ITEM:	
SAMPLE LOCATION:	Design	SPECIAL PROVISION:	
MATERIAL CODE:		MIX TYPE:	ITEM340_D_Fine_Surface
MATERIAL NAME:	TYPE D HMAC		
PRODUCER:	Texas Materials Bolm Road		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:	Surface	STATION:		DIST. FROM CL:		CONTRACTOR DESIGN # :	1310D-76A

Aggregate Weight, g:	5,000.0
4.6% Asphalt by Total Weight, g:	241.1
Total Weight, g:	5241.1

4.6% Asphalt by Total Weight, g:	241.1
(Valero 76-22) Asphalt to Add, g:	**241.1**

			Bin No.1	Bin No.2	Bin No.3	Bin No.4	Bin No.5	Bin No.6	Bin No.7	Bin No.8	Bin No.9	Bin No.10			
		Individual Bin (%):	Bin No.1 = 38 %	Bin No.2 = 19 %	Bin No.3 = 30 %	Bin No.4 = 13 %									
		Aggregate Source:	Limestone_Dolom	Limestone_Dolom	Limestone_Dolom	Gravel									
		Aggregate Number:	1402702	1402702	1402702										
		Sample ID:	Type D	Type F	Man. Sand	C.A. Field Sand									
	Sieve Size:		Aggregate Weight	Aggregate Weight	Aggregate Weight	Aggregate Weight							Total Weights	Individual Retained, %	Cumulative Retained, %
	Passing	Retained													
INDIVIDUAL	-	3/4"	0.0	0.0	0.0	0.0							0.0	0.0	0.0
	3/4"	1/2"	0.0	0.0	0.0	0.0							0.0	0.0	0.0
	1/2"	3/8"	163.4	0.0	0.0	0.0							163.4	3.3	3.3
	3/8"	No. 4	1,274.9	292.6	1.5	3.9							1,572.9	31.5	34.7
	No. 4	No. 10	368.6	607.1	420.0	15.6							1,411.3	28.2	63.0
	No. 10	No. 40	32.3	22.8	615.0	155.4							825.5	16.5	79.5
	No. 40	No. 80	7.6	4.8	189.0	226.2							427.6	8.6	88.0
	No. 80	No. 200	9.5	3.8	201.0	163.2							377.5	7.5	95.6
	No. 200	Pan	43.7	19.0	73.5	85.8							222.0	4.4	100.0
	Totals		1,900.0	950.0	1,500.0	650.0							**5,000.0**	Total includes asphalt from the recycled material aggregate	

Running Total:

CUMULATIVE	-	3/4"	0.0	1,900.0	2,850.0	4,350.0							0.0		
	3/4"	1/2"	0.0	1,900.0	2,850.0	4,350.0							0.0		
	1/2"	3/8"	163.4	1,900.0	2,850.0	4,350.0							163.4		
	3/8"	No. 4	1,438.3	2,192.6	2,851.5	4,353.9							1,736.3		
	No. 4	No. 10	1,806.9	2,799.7	3,271.5	4,369.5							3,147.6		
	No. 10	No. 40	1,839.2	2,822.5	3,886.5	4,524.9							3,973.0		
	No. 40	No. 80	1,846.8	2,827.2	4,075.5	4,751.1							4,400.6		
	No. 80	No. 200	1,856.3	2,831.0	4,276.5	4,914.2							4,778.0		
	No. 200	Pan	1,900.0	2,850.0	4,350.0	5,000.0							5,000.0	Total includes asphalt from the recycled material aggregate	

Remarks:

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES

SAMPLE ID:	1310D-76A	SAMPLE DATE:	2/12/18
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:		SPEC YEAR:	2004
SAMPLED BY:	Eulalio Orona #1042	SPEC ITEM:	
SAMPLE LOCATION:	Design	SPECIAL PROVISION:	
MATERIAL CODE:		MIX TYPE:	ITEM340_D_Fine_Surface
MATERIAL NAME:	TYPE D HMAC		
PRODUCER:	Texas Materials Bolm Road		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:	Surface	STATION:		DIST. FROM CL:		CONTRACTOR DESIGN # :	1310D-76A

Blank Sample Weight, g:	2,000.0

			Bin No.1	Bin No.2	Bin No.3	Bin No.4	Bin No.5	Bin No.6	Bin No.7			
Individual Bin (%):			Bin No.1 = 38 %	Bin No.2 = 19 %	Bin No.3 = 30 %	Bin No.4 = 13 %						
Aggregate Source:			Limestone_Dolom	Limestone_Dolom	Limestone_Dolom	Gravel						
Aggregate Number:			1402702	1402702	1402702							
Sample ID:			Type D	Type F	Man. Sand	C.A. Field Sand						
	Sieve Size:		Aggregate Weight	Aggregate Weight	Aggregate Weight	Aggregate Weight				Total Weights	Individual Retained, %	Cumulative Retained, %
	Passing	Retained										
INDIVIDUAL	-	3/4"	0.0	0.0	0.0	0.0				0.0	0.0	0.0
	3/4"	1/2"	0.0	0.0	0.0	0.0				0.0	0.0	0.0
	1/2"	3/8"	65.4	0.0	0.0	0.0				65.4	3.3	3.3
	3/8"	No. 4	510.0	117.0	0.6	1.6				629.2	31.5	34.7
	No. 4	No. 10	147.4	242.8	168.0	6.2				564.5	28.2	63.0
	No. 10	No. 40	12.9	9.1	246.0	62.1				330.2	16.5	79.5
	No. 40	No. 80	3.0	1.9	75.6	90.5				171.0	8.6	88.0
	No. 80	No. 200	3.8	1.5	80.4	65.3				151.0	7.5	95.6
	No. 200	Pan	17.5	7.6	29.4	34.3				88.8	4.4	100.0
	Totals		760.0	380.0	600.0	260.0				**2,000.0**	Total does not include recycled material	

Running Total:	

CUMULATIVE	-	3/4"	0.0	760.0	1,140.0	1,740.0				0.0		
	3/4"	1/2"	0.0	760.0	1,140.0	1,740.0				0.0		
	1/2"	3/8"	65.4	760.0	1,140.0	1,740.0				65.4		
	3/8"	No. 4	575.3	877.0	1,140.6	1,741.6				694.5		
	No. 4	No. 10	722.8	1,119.9	1,308.6	1,747.8				1,259.0		
	No. 10	No. 40	735.7	1,129.0	1,554.6	1,809.9				1,589.2		
	No. 40	No. 80	738.7	1,130.9	1,630.2	1,900.4				1,760.2		
	No. 80	No. 200	742.5	1,132.4	1,710.6	1,965.7				1,911.2		
	No. 200	Pan	760.0	1,140.0	1,740.0	2,000.0				2,000.0		

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : BULK GRAVITY

File Version: 06/07/10 10:24:04

SAMPLE ID:	1310D-76A	SAMPLE DATE:	2/12/18
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:		SPEC YEAR:	2004
SAMPLED BY:	Eulalio Orona #1042	SPEC ITEM:	
SAMPLE LOCATION:	Design	SPECIAL PROVISION:	
MATERIAL CODE:		MIX TYPE:	ITEM340_D_Fine_Surface
MATERIAL NAME:	TYPE D HMAC		
PRODUCER:	Texas Materials Bolm Road		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:	Surface	STATION:		DIST. FROM CL:		CONTRACTOR DESIGN # :	1310D-76A

	Bin No.1	Bin No.2	Bin No.3	Bin No.4	Bin No.5	Bin No.6	Bin No.7	Bin No.8	Bin No.9	Bin No.10
Individual Bin (%):	Bin No.1 = 38 %	Bin No.2 = 19 %	Bin No.3 = 30 %	Bin No.4 = 13 %						
Aggregate Source:	Limestone_Dolom	Limestone_Dolom	Limestone_Dolom	Gravel						
Aggregate Number:	1402702	1402702	1402702							
Sample ID:	Type D	Type F	Man. Sand	C.A. Field Sand						

Sieve Size:		Bin No.1		Bin No.2		Bin No.3		Bin No.4		Bin No.5		Bin No.6		Bin No.7		Bin No.8		Bin No.9		Bin No.10	
Passing	Retained	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG
	3/4"																				
3/4"	1/2"																				
1/2"	3/8"	8.6	2.788																		
3/8"	No. 4	67.1	2.794	30.8	2.794	0.1	2.815	0.6	2.642												
No. 4	No. 10	19.4	2.798	63.9	2.798	28.0	2.815	2.4	2.642												
No. 10	No. 40	1.7	2.798	2.4	2.798	41.0	2.815	23.9	2.642												
No. 40	No. 80	0.4	2.798	0.5	2.798	12.6	2.815	34.8	2.642												
No. 80	No. 200	0.5	2.798	0.4	2.798	13.4	2.815	25.1	2.678												
No. 200	Pan	2.3	2.798	2.0	2.798	4.9	2.815	13.2	2.678												
Totals		100.0	2.794	100.0	2.797	100.0	2.815	100.0	2.656												
			13.6		6.8		10.7		4.9												

Combined Bulk Specific Gravity:	**2.782**
Coarse Agg. Combined BSG:	

Specific Gravity of Asphalt:	**1.035**

Remarks:

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : SUMMARY SHEET

File Version: 06/07/10 10:24:04

SAMPLE ID:	1310D-76A	SAMPLE DATE:	2/12/18
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:		SPEC YEAR:	2004
SAMPLED BY:	Eulalio Orona #1042	SPEC ITEM:	
SAMPLE LOCATION:	Design	SPECIAL PROVISION:	
MATERIAL CODE:		MIX TYPE:	ITEM340_D_Fine_Surface
MATERIAL NAME:	TYPE D HMAC		
PRODUCER:	Texas Materials Bolm Road		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:	Surface	STATION:		DIST. FROM CL:		CONTRACTOR DESIGN # :	1310D-76A

Target Density, %:	**96.0**
Number of Gyrations:	

CRM* Content	

TEST SPECIMENS									**Mixture Evaluation @ Optimum Asphalt Content**			
									Indirect Tensile Strength (psi)	Hamburg Wheel Tracking Test		*Overlay Tester Min. Number of Cycles*
Asphalt Content (%)	Binder Ratio (%)	Specific Gravity Of Specimen (Ga)	Maximum Specific Gravity (Gr)	Effective Gravity (Ge)	Theo. Max. Specific Gravity (Gt)	Density from Gt (Percent)	VMA (Percent)	Hveem Stability (%)		Number of cycles	Rut depth (mm)	
3.5	0.0	2.447	2.623	2.778	2.633	92.9	15.4	68.0				
4.0	0.0	2.460	2.607	2.783	2.612	94.2	15.3	51.0				
4.5	0.0	2.478	2.593	2.791	2.592	95.6	15.2	42.0	139			
5.0	0.0	2.495	2.577	2.796	2.572	97.0	15.0	41.0				
5.5	0.0	2.514	2.560	2.800	2.552	98.5	14.8	34.0				

Effective Specific Gravity:	2.790

Estimated Percent of Stripping, %:	

Optimum Asphalt Content :	**4.6**	Binder Ratio @ OAC:	0.0
VMA @ Optimum AC:	**15.1**		

Interpolated Values	
Specific Gravity (Ga):	2.483
Max. Specific Gravity (Gr):	2.589
Theo. Max. Specific Gravity (Gt):	2.586

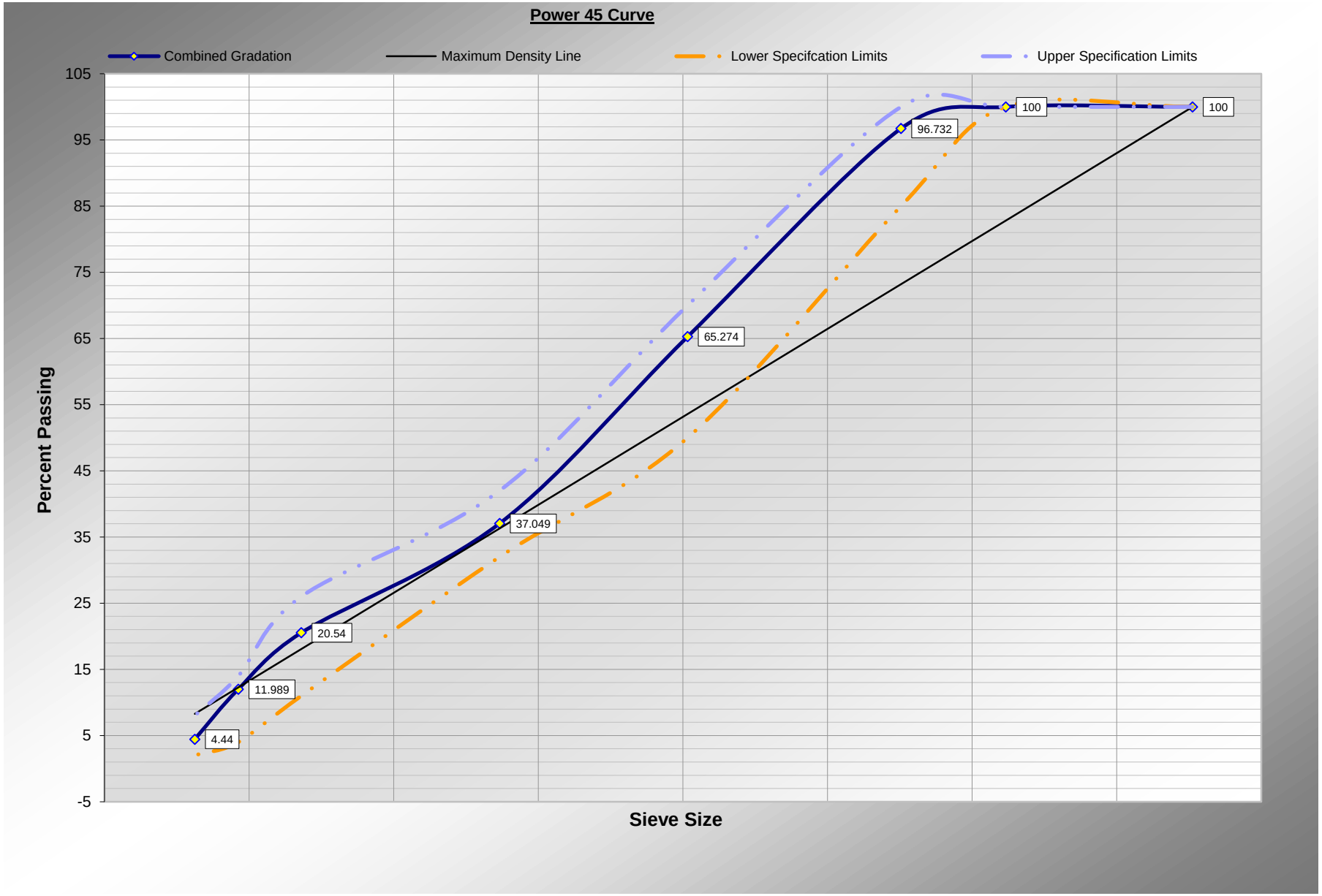
Remarks:

Date	Changes	By
7/20/2005	Add area in the Combined Gradation worksheet to enter in percent fiber for respective PFC and SMA mixtures in cells P42 to S42 Change field# for S42 (on the Combined Gradation worksheet) to Field383, and reference %Fiber value in the Summary sheet to cell S42 Add area in the Combined Gradation worksheet to enter in crumb rubber for respective PFC and SMA mixtures in cells T42 to W42 Change field# for W40 (on the Combined Gradation worksheet) to Field384, and reference % Crumb Rubber value in the Summary sheet to cell W40 Add conditional formatting for percent fiber and percent crumb rubber area so that only effected mixture types are represented on the combined gradation worksheet Add area to enter percent fiber and percent crumb rubber in the Summary worksheet (cell K18) Add field to calculate the weight of fiber or crumb rubber in the Weigh Up worksheet (cells S18 to V20) Add conditional formatting to the fiber and crumb rubber queries in the Weight Up worksheet so that only corresponding mixture types are represented Add sieves: 3/4", 1/2" & 3/8" to the SPA, SPB and SPC mixes, respectively, in the Std Spec GRADATIONS worksheet Set cell F38 in the summary sheet equal to IF(F31="Error","",VLOOKUP(0.075,DUST,16,FALSE)/F31). This will calculate the Dust to Asphalt ratio Add Gr to the densification section in the Summary worksheet Calculate densities in cells Z33 to Z35 on the Summary worksheet by using the Gr instead of the Gt Add "No" to the validation list for cell E42 on the Weigh Up worksheet Addition of "Version" to the Combined Gradation worksheet	Brett Haggerty
	Combined Gradation Worksheet Add UTBWC Types A, B and C options to Mix Type T40 - Add Membrane Target Application Rate, Gal/SY	
	Summary Worksheet Need Draindown and Cantabro Loss for UTBHMWC mix option Add AC%, Ga, Gr, Ge, Gt, Density from Gt, and Film Thickness columns to be used only for Film Thickness calculations in cells B29 to V35	
8/16/2005	Add only two inputs for AC% and Gr in cells B33 & F33, respectively. Add range of acceptable film thickness & AC% at those film thicknesses in cells B37 to AA37 (all calculated fields) Allow AC%, Ga, Gr, Ge, Gt, Density from Gt, and Film Thickness columns to be hidden when not analyzing UTBWC Increase width column for column B to 8.00	Brett Haggerty
	Film Thickness Worksheet Need to create this worksheet to calculate film thickness at each asphalt content. Need to reference data in Summary worksheet Hide this sheet when UTBWC is not selected	
	Std Spec GRADATIONS The Membrane Application Check is necessary for the conditional formatting on the Combined Gradation Worksheet cell T40. Because if a complex algorithm is entered for a second condition format the workbook becomes impossible to open and excel crashes.	
9/21/2005	Specification tolerance for 1" sieve for Type A mix was incorrect. Corrected as specified in Item 341.	Richard Izzo
9/27/2005	Added min & max tolerances for the No. 4 sieve of SP mix types	Richard Izzo
2/14/2006	Changed the location of Fields 521 to 557 & Fields 572 to 587 to M25, these field definitions were orignally found in different locations for different worksheets. Now all of the definitions are identical and reference a dummy cell to prevent the overwrite of other data within the template.	Brett Haggerty
2/15/2006	Added Mixtypes 340-A, 340-B, 340-C, 340-D, & 340-F to the mixtype list, as well as the cell definition to direct mix specifcations. This includes the addition of five new definitions, one for each of the new mixtypes. The addition of the mixtype names to the mixtype definition is also adjusted to include the mixtypes. No other changes were necessary for these mixtypes as they will reference the same limits as the 341 mixtypes.	Brett Haggerty
3/13/2006	Add definitions Field596 to Field636, these are the definitions for the "Other" mixtype that should be stored in Sitemanager databases when accessing previous data.	Brett Haggerty
3/14/2006	Revised minimum specification for percent passing for No. 4 sieve for SP-A, B, C, and D mix types.	Richard Izzo
5/17/2007	Add the new mixtype SS3111 for Crack Attenuating Mixtures	Brett Haggerty
	Matl Properties	

Date	Changes	By	
9/27/2005	B31, F31, H31 - Replaced Flakiness Index with Flat & Elongated. Flakiness Index not required in 2004 specifications.		
	Sumary	Richard Izzo	
	Changed conditional formatting of cells B44 to F47. Font color changed to black.		
9/27/2005	Added VFA calculation at optimum asphalt content in cells B43 & F43. Cells formatted to only show for Item 344.		
	Color of cell B44 changed to distinguish cells above and below when using Item 344 as all cells will have text and may look confusing.		
	Add the Dimensional Analysis for PFC mixtures (these calculations are new, and not adjustments to the old equations)		
	Add the Backcalculated Rice for PFC mixtures (these calculations are new to the sheet and not adjustments to the old equations)		
5/11/2006	Remove the Interpolated Values for UTBWC mixtypes and Mixture Densification	Brett Haggerty	
	Combined Gradation Worksheet		
5/30/2006	Add the Contractor's Design Number to cell V17, as well as the addition of the new field #	Brett Haggerty	
	Update the UPLC to 690		
5/17/2007	Add the Aggregate Pit to the bin information (these cells account for Fields 683-689)	Brett Haggerty	
	Summary Worksheet		
	Include comments for the backcalculated specific gravities when using PFC. This will provide users with a better idea of how to read the specifications		
	Include the new output results, which there are 117 values. This is the resval & resname values. The 117 values are expressed by the ULOV cell		
8/22/2006	Added Field#'s 638-681	Brett Haggerty	
	Change the VFA Conditional Formatting to display when SS3111 mixtype is selected		
	Add new comment to cell H65 to display correct VFA limits if they are not met		
	Change Dust/Asphalt Ratio conditional formatting to display when SS3111 mixtype is selected		
5/17/2007	Add a new entry for the minimum number of cycles using the Overlay Tester. Cell AF24 (Field690)	Brett Haggerty	
	Std Spec GRADATIONS		
	Remove the 3/8" sieve from the Item341-A, Item340-A & Type-A mixtypes		
	Add the number of sieves that contribute to coarse aggreagte to the following mixtypes: SP-A, SP-B, SP-C, SP-D, CMHB-C, CMHB-F, SMA-C, SMA-D, SMA-F, SMAR-C, SMAR-F		
	Combined Gradation Worksheet		
	Add the Dry Rodded Unit Weight cell, "S22". Also because this is an input field, change the ULOV to 682		
	Add a new version number "3" for the calculation of VCA, as opposed to when it was manually entered		
	Bulk Gravity		
	Include the Combined Bulk Specific Gravity for Coarse Aggregate calculation in cell "M40"		
	Summary Worksheet		
10/30/2006	Add the new calculated fields for VCA, "M67" & "M68". And adjust the conditional formatting to account for new version numbers.	Brett Haggerty	
	Weigh Up		
12/2/2006	Adjust Cell L39 to reference only column L in the Combined Gradation Worksheet	Brett Haggerty	
	Power 45 Curve		
5/17/2007	Adjust the macro to place brackets, "{", before and after the graphed data is updated	Brett Haggerty	Allows for compatibility with Excel 2007
	Matl Properties		
	Update cell K28 to remove the overlapping of conditional formatting ranges.		Allows for compatibility with Excel 2007 without significant loss of functionality
5/17/2007	Delete the cell definition "Draindown". This references a cell in a different workbook and causes fidelity errors with Excel 2007.	Brett Haggerty	
	Bulk Gravity		
	Adjusted cells: F39, G39, J39, K39, N39, O39, R39, S39, V39, W39, Z39, AA39, AD39, AE39. This accounts for moved cells		
	Summary Worksheet		
	Update cell F68 to access Target Density cell instead of using an assumed density value of 96%		
	Update cell M72 for the moving of cells & removal of resval definitions		
	Weigh Up		
	Adjust cell O20 to include +/- asphalt from RAP binder		
	Combined Gradation Worksheet		
3/13/2008	Add new version #4 to account for changes	Brett Haggerty	
	Matl Properties		
	Add Methylene Blue to the Fine Aggregate Analysis (Row 36)		

Date	Changes	By
	Add Cell Definitions for the Methylene Blue tests: Field691-Field705	
	Std Spec GRADATIONS	
	Add mixtypes ITEM3142_UTBWC_A, ITEM3142_UTBWC_B, ITEM3142_UTBWC_C	
	Summary Worksheet	
	Hide the "Target Density" cells when any of the Item3142 mixtypes are selected	
	Hide Mixture Evaluation cells (W22:AG30) with the selection of the Item3142 mixtypes	
	Add Final Specimen cells for Item3142 mixtypes in cells B64:M66	
	Add Cell Definitions for final specimen cells AC, Ga & Gr; declared Field706, Field707, & Field708, respectively	
	Declare new row definition (trip_4) for showing/hiding final specimen cells for the Item3142 mixtype	
	Add the Suggested Membrane Target Application Rate cells B68:G68	
	Combined Gradation Worksheet	
	Update the UPLC to 709	
	Update the Film Thickness worksheet show option (located in the Combined Gradation worksheet macros) to include Item3142 mixtypes	
	Film Thickness Worksheet	
	Add Ga and Density from Gt cells for the Item3142 mixtypes, cells: D33:E39 & L33:M39	
	Add conditional formatting for the minimum and maximum film thickness calculations. They now hide with the selection of Item3142 mixtypes. Cells B41:M44.	
	Add AC vs. Film Thickness & AC vs. Density Charts	
	Add cell definition Field709 to cell G63 (predicted AC%)	
4/3/2008	Add the prediction film thickness & prediction density cells, I62:L63	Brett Haggerty
	Summary Worksheet	
5/14/2008	Modified the Overlay Tester results to be hidden if the CAM mixtype is not selected.	Brett Haggerty
	Std Spec GRADATIONS	
	Add the mixtype for "CAM", it is exactly the same as SS3111CA_Mix	
	Add the mixtype for "TBPFC", it is exactly the same as PFC	
	Summary Worksheet	
	Modify the conditional formatting for the overlay tester results to display if the "CAM" mixtype is selected.	
6/5/2008	Modify the conditional formatting for all cells that use the PFC mixtype to include the same formats for TBPFC	Brett Haggerty
	Blank Weigh Up Worksheet	
2/27/2009	Need to create this new worksheet to prepare "blank" samples for the ignition oven correction factors.	Gisel Carrasco
	Combined Gradation Worksheet	
	Fixing equation in Cell O20 FROM: IF(OR(Authorized Date:>39493,AuthorizedDate=""), 4,IF(OR(AuthorizedDate>39022,AuthorizedDate=""), 3,IF(OR(AuthorizedDate>38579,AuthorizedDate=""),2,1))) TO: IF(OR(AuthorizedDate>40333,AuthorizedDate=""),5, IF(OR(AuthorizedDate>39493, AuthorizedDate=""),4, IF(OR(AuthorizedDate>39022,AuthorizedDate=""),3, IF(OR(AuthorizedDate>38579,AuthorizedDate=""),2,1)))) **Using Version #5 after 6/7/2010**	
	Add Item 341-024 to the Special Provision list (specprov). SP 341-024 can be used only when version>4	
	Add WMA technology information. It is required to enter the WMA information (V15), in order to enter aggregate bin percentages.	
	Change mix description cell (E18) to dropdown list	
	Change Aggregate Source, Pit, and Number (E22:Q24) to dropdown lists	
	Hide the Recycled Material row with versions > 4 and show Hydrated Lime row	
	Modify master gradation band limits for the #4 sieve for Type F mixture from 80-86 to 70-90. New limits are used with versions >4 or SP 341-024.	
	Add Bins 8, 9 & 10 for Recycled Materials only. Enter percentage by total mix to calculate percentage by total aggregate.	
	Calculate Recycled Binder for each bin and show Total Recycled Binder Percentage (AB18). Calculate Ratio of Recycled to Total Binder (AA24)	
	Add binder substitution information. Enter originally specified binder (Q43) and substitute binder (V43) when substitute binder is allowed	
	Matl Properties	
	Add Deleterious Material test for the Recycled Material (row 46)	
	Aggregate Classification	
	Add Recycled Materials Bins (8, 9 &10). Don't classify Recycled Materials as Class A Rock.	
	Weigh Up & Bulk Gravity	
	Add Recycled Materials Bins (8, 9 &10).	

Date	Changes	By
	Take CRM calculation out (Cell T19)	
	Summary Worksheet	
	Add Recycled Binder ratio for each asphalt content (C26:C30). Add ratio at OAC (I71).	
	Std Spec GRADATIONS	
	Add specprov table (J24), Recylced Material table (recycledlist), WMA table with approved technologies according to 2009 list (WMATech), aggregate table with approved aggragates and quarries according to Dec2009 list, & binder substitution table.	
4/12/2010	Move "Junk's Field #'s" to cell P24	Gisel Carrasco


Power 45 Curve
Combined Gradation
Maximum Density Line
Lower Specifcation Limits
Upper Specification Limits
105
95
85
75
65
55
45
35
25
15
5
-5
Percent Passing
Sieve Size
4.44
11.989
20.54
37.049
65.274
96.732
100
100

If you have any questions or comments concerning this program, or would like to obtain an updated version of this program (if it has been updated) contact the **Site Manager Tier I contact person for the District (District Lab)**. If you have any other concerns or questions contact Richard Izzo at 512-506-5832 or **Brett Haggerty at 512-506-5841** of the Construction Division or you may contact one of the

* **Getting Started**: Begin with the Combined Gradations or Summary sheet. Here you will select dependent variables such as specification year, mix type, asphalt content, combined aggregate, and others. These variable will affect the calculation of other sheets in the workbook.

    - **Spec Year**: Must be 2004

    - **Mix Type**: Select the correct mix type for this lot. Clicking in the green cell, adjacent to the mix type label, will reveal a small dropdown list. From this list select the mix type that most closely matches your mix. This value will determine what sieve sizes are displayed on the worksheets.
      Select Other if mix is not in the list and input parameters as required.
      A button labeled 'Enter Specifications' will appear above the Bin Fractions Table. Click on this button and a small table will appear on the screen labeled 'Other'. Enter the required sieve sizes, maximum and minimum master grading limits, and the required minimum VMA.

* To move from page to page click on the different sheet tabs at the bottom of the page.

1613										
Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
1		Remarks:								
2	Surface	COURSE\LIFT:								
3		Tested By	TX207							
4		Tested Date	TX207							
5		Tested By	TX226							
6		Tested Date	TX226							
7		Tested By	TX227							
8		Tested Date	TX227							
9		Tested By	TX235							
10		Tested Date	TX235							
11		Tested By	TX242							
12		Tested Date	TX242							
13		Tested By	TX530							
14		Tested Date	TX530							
15		Tested By								
16		Tested Date								
17		Tested By								
18		Tested Date								
19	1310D-7(	CONTRACTOR DESIGN # :								
20	Limeston	HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Source:	Bin No.1						
21	Limeston	HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Source:	Bin No.2						
22	Limeston	HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Source:	Bin No.3						
23	Gravel	HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Source:	Bin No.4						
24		HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Source:	Bin No.5						
25		HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Source:	Bin No.6						
26		HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Source:	Bin No.7						
27	Marble F	HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Pit:	Bin No.1						
28	Marble F	HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Pit:	Bin No.2						
29	Marble F	HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Pit:	Bin No.3						
30		HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Pit:	Bin No.4						
31		HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Pit:	Bin No.5						
32		HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Pit:	Bin No.6						
33		HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Pit:	Bin No.7						
34	1402702	HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Number:	Bin No.1						
35	1402702	HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Number:	Bin No.2						
36	1402702	HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Number:	Bin No.3						
37		HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Number:	Bin No.4						
38		HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Number:	Bin No.5						
39		HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Number:	Bin No.6						
40		HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Number:	Bin No.7						
41	Type D	HMACP MIXTURE DESIGN : COMBINED GRADATION	Sample ID:	Bin No.1						
42	Type F	HMACP MIXTURE DESIGN : COMBINED GRADATION	Sample ID:	Bin No.2						
43	Man. Sar	HMACP MIXTURE DESIGN : COMBINED GRADATION	Sample ID:	Bin No.3						
44	C.A. Fiel(	HMACP MIXTURE DESIGN : COMBINED GRADATION	Sample ID:	Bin No.4						
45		HMACP MIXTURE DESIGN : COMBINED GRADATION	Sample ID:	Bin No.5						
46		HMACP MIXTURE DESIGN : COMBINED GRADATION	Sample ID:	Bin No.6						
47		HMACP MIXTURE DESIGN : COMBINED GRADATION	Sample ID:	Bin No.7						
48		HMACP MIXTURE DESIGN : COMBINED GRADATION	Recycled Material?:	Bin No.1						
49		HMACP MIXTURE DESIGN : COMBINED GRADATION	Recycled Material?:	Bin No.2						
50		HMACP MIXTURE DESIGN : COMBINED GRADATION	Recycled Material?:	Bin No.3						
51		HMACP MIXTURE DESIGN : COMBINED GRADATION	Recycled Material?:	Bin No.4						
52		HMACP MIXTURE DESIGN : COMBINED GRADATION	Recycled Material?:	Bin No.5						
53		HMACP MIXTURE DESIGN : COMBINED GRADATION	Recycled Material?:	Bin No.6						
54		HMACP MIXTURE DESIGN : COMBINED GRADATION	Recycled Material?:	Bin No.7						
55		HMACP MIXTURE DESIGN : COMBINED GRADATION	Asphalt%:	Bin No.1						
56		HMACP MIXTURE DESIGN : COMBINED GRADATION	Asphalt%:	Bin No.2						
57		HMACP MIXTURE DESIGN : COMBINED GRADATION	Asphalt%:	Bin No.3						
58		HMACP MIXTURE DESIGN : COMBINED GRADATION	Asphalt%:	Bin No.4						
59		HMACP MIXTURE DESIGN : COMBINED GRADATION	Asphalt%:	Bin No.5						
60		HMACP MIXTURE DESIGN : COMBINED GRADATION	Asphalt%:	Bin No.6						

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
61		HMACP MIXTURE DESIGN : COMBINED GRADATION	Asphalt%:	Bin No.7						
62	38	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual Bin (%):	Bin No.1						
63	19	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual Bin (%):	Bin No.2						
64	30	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual Bin (%):	Bin No.3						
65	13	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual Bin (%):	Bin No.4						
66		HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual Bin (%):	Bin No.5						
67		HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual Bin (%):	Bin No.6						
68		HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual Bin (%):	Bin No.7						
69		HMACP MIXTURE DESIGN : COMBINED GRADATION	Dry Rodded Unit Weight of Coarse Agg. (pcf)							
70	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Cum.% Passing	Sieve Size:	3/4"				
71	38	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Wtd Cum. %	Sieve Size:	3/4"				
72	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Cum.% Passing	Sieve Size:	3/4"				
73	19	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Wtd Cum. %	Sieve Size:	3/4"				
74	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Cum.% Passing	Sieve Size:	3/4"				
75	30	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Wtd Cum. %	Sieve Size:	3/4"				
76	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Cum.% Passing	Sieve Size:	3/4"				
77	13	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Wtd Cum. %	Sieve Size:	3/4"				
78		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Cum.% Passing	Sieve Size:	3/4"				
79		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Wtd Cum. %	Sieve Size:	3/4"				
80		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Cum.% Passing	Sieve Size:	3/4"				
81		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Wtd Cum. %	Sieve Size:	3/4"				
82		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Cum.% Passing	Sieve Size:	3/4"				
83		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Wtd Cum. %	Sieve Size:	3/4"				
84	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Combined Gradation	Cum. % Passing	Sieve Size:	3/4"				
85	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Lower	Sieve Size:	3/4"				
86	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Upper	Sieve Size:	3/4"				
87	Yes	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Within Spec's	Sieve Size:	3/4"				
88		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Lower	Sieve Size:	3/4"				
89		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Upper	Sieve Size:	3/4"				
90		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Within Spec's	Sieve Size:	3/4"				
91	0	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual % Retained	Sieve Size:	3/4"					
92	0	HMACP MIXTURE DESIGN : COMBINED GRADATION	Cumulative % Retained	Sieve Size:	3/4"					
93	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Cum.% Passing	Sieve Size:	1/2"				
94	38	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Wtd Cum. %	Sieve Size:	1/2"				
95	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Cum.% Passing	Sieve Size:	1/2"				
96	19	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Wtd Cum. %	Sieve Size:	1/2"				
97	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Cum.% Passing	Sieve Size:	1/2"				
98	30	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Wtd Cum. %	Sieve Size:	1/2"				
99	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Cum.% Passing	Sieve Size:	1/2"				
100	13	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Wtd Cum. %	Sieve Size:	1/2"				
101		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Cum.% Passing	Sieve Size:	1/2"				
102		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Wtd Cum. %	Sieve Size:	1/2"				
103		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Cum.% Passing	Sieve Size:	1/2"				
104		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Wtd Cum. %	Sieve Size:	1/2"				
105		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Cum.% Passing	Sieve Size:	1/2"				
106		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Wtd Cum. %	Sieve Size:	1/2"				
107	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Combined Gradation	Cum. % Passing	Sieve Size:	1/2"				
108	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Lower	Sieve Size:	1/2"				
109	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Upper	Sieve Size:	1/2"				
110	Yes	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Within Spec's	Sieve Size:	1/2"				
111		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Lower	Sieve Size:	1/2"				
112		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Upper	Sieve Size:	1/2"				
113		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Within Spec's	Sieve Size:	1/2"				
114	0	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual % Retained	Sieve Size:	1/2"					
115	0	HMACP MIXTURE DESIGN : COMBINED GRADATION	Cumulative % Retained	Sieve Size:	1/2"					
116	91.4	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Cum.% Passing	Sieve Size:	3/8"				
117	34.732	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Wtd Cum. %	Sieve Size:	3/8"				
118	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Cum.% Passing	Sieve Size:	3/8"				
119	19	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Wtd Cum. %	Sieve Size:	3/8"				
120	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Cum.% Passing	Sieve Size:	3/8"				
121	30	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Wtd Cum. %	Sieve Size:	3/8"				

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
122	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Cum.% Passing	Sieve Size:	3/8"				
123	13	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Wtd Cum. %	Sieve Size:	3/8"				
124		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Cum.% Passing	Sieve Size:	3/8"				
125		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Wtd Cum. %	Sieve Size:	3/8"				
126		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Cum.% Passing	Sieve Size:	3/8"				
127		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Wtd Cum. %	Sieve Size:	3/8"				
128		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Cum.% Passing	Sieve Size:	3/8"				
129		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Wtd Cum. %	Sieve Size:	3/8"				
130	96.732	HMACP MIXTURE DESIGN : COMBINED GRADATION	Combined Gradation	Cum. % Passing	Sieve Size:	3/8"				
131	85	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Lower	Sieve Size:	3/8"				
132	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Upper	Sieve Size:	3/8"				
133	Yes	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Within Spec's	Sieve Size:	3/8"				
134		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Lower	Sieve Size:	3/8"				
135		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Upper	Sieve Size:	3/8"				
136		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Within Spec's	Sieve Size:	3/8"				
137	3.268	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual % Retained	Sieve Size:	3/8"					
138	3.268	HMACP MIXTURE DESIGN : COMBINED GRADATION	Cumulative % Retained	Sieve Size:	3/8"					
139	24.3	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Cum.% Passing	Sieve Size:	No. 4				
140	9.234	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Wtd Cum. %	Sieve Size:	No. 4				
141	69.2	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Cum.% Passing	Sieve Size:	No. 4				
142	13.148	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Wtd Cum. %	Sieve Size:	No. 4				
143	99.9	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Cum.% Passing	Sieve Size:	No. 4				
144	29.97	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Wtd Cum. %	Sieve Size:	No. 4				
145	99.4	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Cum.% Passing	Sieve Size:	No. 4				
146	12.922	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Wtd Cum. %	Sieve Size:	No. 4				
147		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Cum.% Passing	Sieve Size:	No. 4				
148		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Wtd Cum. %	Sieve Size:	No. 4				
149		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Cum.% Passing	Sieve Size:	No. 4				
150		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Wtd Cum. %	Sieve Size:	No. 4				
151		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Cum.% Passing	Sieve Size:	No. 4				
152		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Wtd Cum. %	Sieve Size:	No. 4				
153	65.274	HMACP MIXTURE DESIGN : COMBINED GRADATION	Combined Gradation	Cum. % Passing	Sieve Size:	No. 4				
154	50	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Lower	Sieve Size:	No. 4				
155	70	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Upper	Sieve Size:	No. 4				
156	Yes	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Within Spec's	Sieve Size:	No. 4				
157		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Lower	Sieve Size:	No. 4				
158		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Upper	Sieve Size:	No. 4				
159		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Within Spec's	Sieve Size:	No. 4				
160	31.458	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual % Retained	Sieve Size:	No. 4					
161	34.726	HMACP MIXTURE DESIGN : COMBINED GRADATION	Cumulative % Retained	Sieve Size:	No. 4					
162	4.9	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Cum.% Passing	Sieve Size:	No. 10				
163	1.862	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Wtd Cum. %	Sieve Size:	No. 10				
164	5.3	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Cum.% Passing	Sieve Size:	No. 10				
165	1.007	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Wtd Cum. %	Sieve Size:	No. 10				
166	71.9	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Cum.% Passing	Sieve Size:	No. 10				
167	21.57	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Wtd Cum. %	Sieve Size:	No. 10				
168	97	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Cum.% Passing	Sieve Size:	No. 10				
169	12.61	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Wtd Cum. %	Sieve Size:	No. 10				
170		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Cum.% Passing	Sieve Size:	No. 10				
171		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Wtd Cum. %	Sieve Size:	No. 10				
172		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Cum.% Passing	Sieve Size:	No. 10				
173		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Wtd Cum. %	Sieve Size:	No. 10				
174		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Cum.% Passing	Sieve Size:	No. 10				
175		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Wtd Cum. %	Sieve Size:	No. 10				
176	37.049	HMACP MIXTURE DESIGN : COMBINED GRADATION	Combined Gradation	Cum. % Passing	Sieve Size:	No. 10				
177	32	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Lower	Sieve Size:	No. 10				
178	42	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Upper	Sieve Size:	No. 10				
179	Yes	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Within Spec's	Sieve Size:	No. 10				
180		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Lower	Sieve Size:	No. 10				
181		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Upper	Sieve Size:	No. 10				
182		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Within Spec's	Sieve Size:	No. 10				

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
183	28.225	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual % Retained	Sieve Size:	No. 10					
184	62.951	HMACP MIXTURE DESIGN : COMBINED GRADATION	Cumulative % Retained	Sieve Size:	No. 10					
185	3.2	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Cum.% Passing	Sieve Size:	No. 40				
186	1.216	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Wtd Cum. %	Sieve Size:	No. 40				
187	2.9	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Cum.% Passing	Sieve Size:	No. 40				
188	0.551	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Wtd Cum. %	Sieve Size:	No. 40				
189	30.9	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Cum.% Passing	Sieve Size:	No. 40				
190	9.27	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Wtd Cum. %	Sieve Size:	No. 40				
191	73.1	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Cum.% Passing	Sieve Size:	No. 40				
192	9.503	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Wtd Cum. %	Sieve Size:	No. 40				
193		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Cum.% Passing	Sieve Size:	No. 40				
194		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Wtd Cum. %	Sieve Size:	No. 40				
195		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Cum.% Passing	Sieve Size:	No. 40				
196		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Wtd Cum. %	Sieve Size:	No. 40				
197		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Cum.% Passing	Sieve Size:	No. 40				
198		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Wtd Cum. %	Sieve Size:	No. 40				
199	20.54	HMACP MIXTURE DESIGN : COMBINED GRADATION	Combined Gradation	Cum. % Passing	Sieve Size:	No. 40				
200	11	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Lower	Sieve Size:	No. 40				
201	26	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Upper	Sieve Size:	No. 40				
202	Yes	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Within Spec's	Sieve Size:	No. 40				
203		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Lower	Sieve Size:	No. 40				
204		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Upper	Sieve Size:	No. 40				
205		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Within Spec's	Sieve Size:	No. 40				
206	16.509	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual % Retained	Sieve Size:	No. 40					
207	79.46	HMACP MIXTURE DESIGN : COMBINED GRADATION	Cumulative % Retained	Sieve Size:	No. 40					
208	2.8	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Cum.% Passing	Sieve Size:	No. 80				
209	1.064	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Wtd Cum. %	Sieve Size:	No. 80				
210	2.4	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Cum.% Passing	Sieve Size:	No. 80				
211	0.456	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Wtd Cum. %	Sieve Size:	No. 80				
212	18.3	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Cum.% Passing	Sieve Size:	No. 80				
213	5.49	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Wtd Cum. %	Sieve Size:	No. 80				
214	38.3	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Cum.% Passing	Sieve Size:	No. 80				
215	4.979	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Wtd Cum. %	Sieve Size:	No. 80				
216		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Cum.% Passing	Sieve Size:	No. 80				
217		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Wtd Cum. %	Sieve Size:	No. 80				
218		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Cum.% Passing	Sieve Size:	No. 80				
219		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Wtd Cum. %	Sieve Size:	No. 80				
220		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Cum.% Passing	Sieve Size:	No. 80				
221		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Wtd Cum. %	Sieve Size:	No. 80				
222	11.989	HMACP MIXTURE DESIGN : COMBINED GRADATION	Combined Gradation	Cum. % Passing	Sieve Size:	No. 80				
223	4	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Lower	Sieve Size:	No. 80				
224	14	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Upper	Sieve Size:	No. 80				
225	Yes	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Within Spec's	Sieve Size:	No. 80				
226		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Lower	Sieve Size:	No. 80				
227		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Upper	Sieve Size:	No. 80				
228		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Within Spec's	Sieve Size:	No. 80				
229	8.551	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual % Retained	Sieve Size:	No. 80					
230	88.011	HMACP MIXTURE DESIGN : COMBINED GRADATION	Cumulative % Retained	Sieve Size:	No. 80					
231	2.3	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Cum.% Passing	Sieve Size:	No. 200				
232	0.874	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Wtd Cum. %	Sieve Size:	No. 200				
233	2	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Cum.% Passing	Sieve Size:	No. 200				
234	0.38	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Wtd Cum. %	Sieve Size:	No. 200				
235	4.9	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Cum.% Passing	Sieve Size:	No. 200				
236	1.47	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Wtd Cum. %	Sieve Size:	No. 200				
237	13.2	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Cum.% Passing	Sieve Size:	No. 200				
238	1.716	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Wtd Cum. %	Sieve Size:	No. 200				
239		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Cum.% Passing	Sieve Size:	No. 200				
240		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Wtd Cum. %	Sieve Size:	No. 200				
241		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Cum.% Passing	Sieve Size:	No. 200				
242		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Wtd Cum. %	Sieve Size:	No. 200				
243		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Cum.% Passing	Sieve Size:	No. 200				

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
244		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Wtd Cum. %	Sieve Size:	No. 200				
245	4.44	HMACP MIXTURE DESIGN : COMBINED GRADATION	Combined Gradation	Cum. % Passing	Sieve Size:	No. 200				
246	2	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Lower	Sieve Size:	No. 200				
247	8	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Upper	Sieve Size:	No. 200				
248	Yes	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Within Spec's	Sieve Size:	No. 200				
249		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Lower	Sieve Size:	No. 200				
250		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Upper	Sieve Size:	No. 200				
251		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Within Spec's	Sieve Size:	No. 200				
252	7.549	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual % Retained	Sieve Size:	No. 200					
253	95.56	HMACP MIXTURE DESIGN : COMBINED GRADATION	Cumulative % Retained	Sieve Size:	No. 200					
254		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Cum.% Passing	Sieve Size:					
255		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Wtd Cum. %	Sieve Size:					
256		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Cum.% Passing	Sieve Size:					
257		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Wtd Cum. %	Sieve Size:					
258		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Cum.% Passing	Sieve Size:					
259		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Wtd Cum. %	Sieve Size:					
260		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Cum.% Passing	Sieve Size:					
261		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Wtd Cum. %	Sieve Size:					
262		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Cum.% Passing	Sieve Size:					
263		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Wtd Cum. %	Sieve Size:					
264		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Cum.% Passing	Sieve Size:					
265		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Wtd Cum. %	Sieve Size:					
266		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Cum.% Passing	Sieve Size:					
267		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Wtd Cum. %	Sieve Size:					
268		HMACP MIXTURE DESIGN : COMBINED GRADATION	Combined Gradation	Cum. % Passing	Sieve Size:					
269		HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Lower	Sieve Size:					
270		HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Upper	Sieve Size:					
271		HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Within Spec's	Sieve Size:					
272		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Lower	Sieve Size:					
273		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Upper	Sieve Size:					
274		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Within Spec's	Sieve Size:					
275		HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual % Retained	Sieve Size:						
276		HMACP MIXTURE DESIGN : COMBINED GRADATION	Cumulative % Retained	Sieve Size:						
277		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Cum.% Passing	Sieve Size:					
278		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Wtd Cum. %	Sieve Size:					
279		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Cum.% Passing	Sieve Size:					
280		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Wtd Cum. %	Sieve Size:					
281		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Cum.% Passing	Sieve Size:					
282		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Wtd Cum. %	Sieve Size:					
283		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Cum.% Passing	Sieve Size:					
284		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Wtd Cum. %	Sieve Size:					
285		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Cum.% Passing	Sieve Size:					
286		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Wtd Cum. %	Sieve Size:					
287		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Cum.% Passing	Sieve Size:					
288		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Wtd Cum. %	Sieve Size:					
289		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Cum.% Passing	Sieve Size:					
290		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Wtd Cum. %	Sieve Size:					
291		HMACP MIXTURE DESIGN : COMBINED GRADATION	Combined Gradation	Cum. % Passing	Sieve Size:					
292		HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Lower	Sieve Size:					
293		HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Upper	Sieve Size:					
294		HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Within Spec's	Sieve Size:					
295		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Lower	Sieve Size:					
296		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Upper	Sieve Size:					
297		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Within Spec's	Sieve Size:					
298		HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual % Retained	Sieve Size:						
299		HMACP MIXTURE DESIGN : COMBINED GRADATION	Cumulative % Retained	Sieve Size:						
300	Valero 76	HMACP MIXTURE DESIGN : COMBINED GRADATION	Asphalt Source & Grade:							
301	4.6	HMACP MIXTURE DESIGN : COMBINED GRADATION	Binder Percent, (%):							
302	1.035	HMACP MIXTURE DESIGN : COMBINED GRADATION	Asphalt Spec. Grav.:							
303		HMACP MIXTURE DESIGN : COMBINED GRADATION	Membrane Target Application Rate, gal/yd2							
304		HMACP MIXTURE DESIGN : COMBINED GRADATION	Antistripping Agent:							

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
305		HMACP MIXTURE DESIGN : COMBINED GRADATION	Percent, (%):							
306		HMACP MIXTURE DESIGN : COMBINED GRADATION								
307		HMACP MIXTURE DESIGN : COMBINED GRADATION								
308	1.5	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Max.	Spec. Limit				
309	1.5	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Max.	Spec. Limit				
310	B	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Min.	Spec. Limit				
311	30	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Max.	Spec. Limit				
312	40	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Max.	Spec. Limit				
313	n/a	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Min.	Spec. Limit				
314	10	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Max.	Spec. Limit				
315	3	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Max.	Spec. Limit				
316	45	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Min.	Spec. Limit				
317	1	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.1	Result				
318		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.1	Sample ID				
319	0.9	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.2	Result				
320		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.2	Sample ID				
321		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.3	Result				
322		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.3	Sample ID				
323		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.4	Result				
324		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.4	Sample ID				
325		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.5	Result				
326		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.5	Sample ID				
327		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.6	Result				
328		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.6	Sample ID				
329		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.7	Result				
330		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.7	Sample ID				
331	0	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.1	Result				
332		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.1	Sample ID				
333	0	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.2	Result				
334		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.2	Sample ID				
335	0	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.3	Result				
336		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.3	Sample ID				
337		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.4	Result				
338		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.4	Sample ID				
339		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.5	Result				
340		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.5	Sample ID				
341		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.6	Result				
342		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.6	Sample ID				
343		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.7	Result				
344		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.7	Sample ID				
345	B	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.1	Result				
346		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.1	Sample ID				
347	B	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.2	Result				
348		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.2	Sample ID				
349	B	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.3	Result				
350		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.3	Sample ID				
351		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.4	Result				
352		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.4	Sample ID				
353		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.5	Result				
354		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.5	Sample ID				
355		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.6	Result				
356		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.6	Sample ID				
357		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.7	Result				
358		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.7	Sample ID				
359	7	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.1	Result				
360		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.1	Sample ID				
361	7	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.2	Result				
362		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.2	Sample ID				
363	7	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.3	Result				
364		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.3	Sample ID				
365		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.4	Result				

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
366		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.4	Sample ID				
367		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.5	Result				
368		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.5	Sample ID				
369		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.6	Result				
370		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.6	Sample ID				
371		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.7	Result				
372		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.7	Sample ID				
373	30	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.1	Result				
374		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.1	Sample ID				
375	30	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.2	Result				
376		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.2	Sample ID				
377	30	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.3	Result				
378		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.3	Sample ID				
379		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.4	Result				
380		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.4	Sample ID				
381		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.5	Result				
382		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.5	Sample ID				
383		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.6	Result				
384		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.6	Sample ID				
385		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.7	Result				
386		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.7	Sample ID				
387	n/a	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.1	Result				
388		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.1	Sample ID				
389	n/a	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.2	Result				
390		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.2	Sample ID				
391	n/a	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.3	Result				
392		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.3	Sample ID				
393		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.4	Result				
394		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.4	Sample ID				
395		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.5	Result				
396		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.5	Sample ID				
397		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.6	Result				
398		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.6	Sample ID				
399		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.7	Result				
400		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.7	Sample ID				
401	0	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.1	Result				
402		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.1	Sample ID				
403	0	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.2	Result				
404		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.2	Sample ID				
405	n/a	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.3	Result				
406		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.3	Sample ID				
407		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.4	Result				
408		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.4	Sample ID				
409		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.5	Result				
410		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.5	Sample ID				
411		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.6	Result				
412		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.6	Sample ID				
413		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.7	Result				
414		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.7	Sample ID				
415		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.1	Result				
416		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.1	Sample ID				
417		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.2	Result				
418		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.2	Sample ID				
419	1	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.3	Result				
420		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.3	Sample ID				
421		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.4	Result				
422		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.4	Sample ID				
423		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.5	Result				
424		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.5	Sample ID				
425		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.6	Result				
426		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.6	Sample ID				

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
427		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.7	Result				
428		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.7	Sample ID				
429		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.1	Result				
430		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.1	Sample ID				
431		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.2	Result				
432		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.2	Sample ID				
433		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.3	Result				
434		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.3	Sample ID				
435	61	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.4	Result				
436		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.4	Sample ID				
437		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.5	Result				
438		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.5	Sample ID				
439		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.6	Result				
440		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.6	Sample ID				
441		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.7	Result				
442		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.7	Sample ID				
443		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Test Method					
444		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Spec. Min or Max					
445		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Spec. Limit					
446		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.1	Result				
447		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.1	Sample ID				
448		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.2	Result				
449		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.2	Sample ID				
450		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.3	Result				
451		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.3	Sample ID				
452		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.4	Result				
453		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.4	Sample ID				
454		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.5	Result				
455		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.5	Sample ID				
456		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.6	Result				
457		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.6	Sample ID				
458		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.7	Result				
459		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.7	Sample ID				
460		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Test Method					
461		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Spec. Min or Max					
462		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Spec. Limit					
463		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.1	Result				
464		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.1	Sample ID				
465		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.2	Result				
466		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.2	Sample ID				
467		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.3	Result				
468		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.3	Sample ID				
469		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.4	Result				
470		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.4	Sample ID				
471		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.5	Result				
472		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.5	Sample ID				
473		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.6	Result				
474		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.6	Sample ID				
475		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.7	Result				
476		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.7	Sample ID				
477		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Test Method					
478		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Spec. Min or Max					
479		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Spec. Limit					
480		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.1	Result				
481		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.1	Sample ID				
482		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.2	Result				
483		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.2	Sample ID				
484		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.3	Result				
485		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.3	Sample ID				
486		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.4	Result				
487		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.4	Sample ID				

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
488		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.5	Result				
489		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.5	Sample ID				
490		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.6	Result				
491		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.6	Sample ID				
492		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.7	Result				
493		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.7	Sample ID				
494		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Test Method					
495		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Spec. Min or Max					
496		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Spec. Limit					
497		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.1	Result				
498		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.1	Sample ID				
499		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.2	Result				
500		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.2	Sample ID				
501		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.3	Result				
502		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.3	Sample ID				
503		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.4	Result				
504		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.4	Sample ID				
505		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.5	Result				
506		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.5	Sample ID				
507		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.6	Result				
508		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.6	Sample ID				
509		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.7	Result				
510		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.7	Sample ID				
511		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Test Method					
512		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Spec. Min or Max					
513		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Spec. Limit					
514		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.1	Result				
515		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.1	Sample ID				
516		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.2	Result				
517		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.2	Sample ID				
518		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.3	Result				
519		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.3	Sample ID				
520		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.4	Result				
521		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.4	Sample ID				
522		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.5	Result				
523		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.5	Sample ID				
524		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.6	Result				
525		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.6	Sample ID				
526		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.7	Result				
527		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.7	Sample ID				
528		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Remarks:							
529	No	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Class (A) Rock (Y/N):						
530	0	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Individual Ret., %	Passing	-	Sieve Size:	Retained	3/4"	
531	0	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Individual Ret., %	Passing	3/4"	Sieve Size:	Retained	1/2"	
532	3.268	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Individual Ret., %	Passing	1/2"	Sieve Size:	Retained	3/8"	
533	25.498	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
534	7.372	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
535	0.646	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
536	0.152	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
537	0.19	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
538	0.874	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
539		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
540		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
541	38	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Individual Ret., %	Total:					
542	28.766	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Individual Ret., %	Percent of plus No. 4					
543	No	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Class (A) Rock (Y/N):						
544	0	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Individual Ret., %	Passing	-	Sieve Size:	Retained	3/4"	
545	0	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Individual Ret., %	Passing	3/4"	Sieve Size:	Retained	1/2"	
546	0	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Individual Ret., %	Passing	1/2"	Sieve Size:	Retained	3/8"	
547	5.852	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
548	12.141	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
549	0.456	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
550	0.095	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
551	0.076	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
552	0.38	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
553		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
554		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
555	19	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Individual Ret., %	Total:					
556	5.852	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Individual Ret., %	Percent of plus No. 4					
557	No	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Class (A) Rock (Y/N):						
558	0	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Individual Ret., %	Passing	-	Sieve Size:	Retained	3/4"	
559	0	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Individual Ret., %	Passing	3/4"	Sieve Size:	Retained	1/2"	
560	0	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Individual Ret., %	Passing	1/2"	Sieve Size:	Retained	3/8"	
561	0.03	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
562	8.4	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
563	12.3	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
564	3.78	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
565	4.02	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
566	1.47	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
567		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
568		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
569	30	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Individual Ret., %	Total:					
570	0.03	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Individual Ret., %	Percent of plus No. 4					
571	No	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Class (A) Rock (Y/N):						
572	0	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Individual Ret., %	Passing	-	Sieve Size:	Retained	3/4"	
573	0	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Individual Ret., %	Passing	3/4"	Sieve Size:	Retained	1/2"	
574	0	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Individual Ret., %	Passing	1/2"	Sieve Size:	Retained	3/8"	
575	0.078	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
576	0.312	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
577	3.107	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
578	4.524	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
579	3.263	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
580	1.716	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
581		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
582		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
583	13	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Individual Ret., %	Total:					
584	0.078	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Individual Ret., %	Percent of plus No. 4					
585		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Class (A) Rock (Y/N):						
586		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Individual Ret., %	Passing	-	Sieve Size:	Retained	3/4"	
587		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Individual Ret., %	Passing	3/4"	Sieve Size:	Retained	1/2"	
588		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Individual Ret., %	Passing	1/2"	Sieve Size:	Retained	3/8"	
589		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
590		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
591		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
592		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
593		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
594		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
595		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
596		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
597		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Individual Ret., %	Total:					
598		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Individual Ret., %	Percent of plus No. 4					
599		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Class (A) Rock (Y/N):						
600		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Individual Ret., %	Passing	-	Sieve Size:	Retained	3/4"	
601		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Individual Ret., %	Passing	3/4"	Sieve Size:	Retained	1/2"	
602		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Individual Ret., %	Passing	1/2"	Sieve Size:	Retained	3/8"	
603		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
604		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
605		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
606		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
607		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
608		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
609		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
610		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
611		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Individual Ret., %	Total:					
612		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Individual Ret., %	Percent of plus No. 4					
613		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Class (A) Rock (Y/N):						
614		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Individual Ret., %	Passing	-	Sieve Size:	Retained	3/4"	
615		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Individual Ret., %	Passing	3/4"	Sieve Size:	Retained	1/2"	
616		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Individual Ret., %	Passing	1/2"	Sieve Size:	Retained	3/8"	
617		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
618		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
619		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
620		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
621		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
622		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
623		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
624		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
625		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Individual Ret., %	Total:					
626		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Individual Ret., %	Percent of plus No. 4					
627		HMACP MIXTURE DESIGN : Aggregate Classification	Remarks:							
628	5000	HMACP MIXTURE DESIGN : WEIGH UP SHEET	Aggregate Weight, g:							
629	241.09	HMACP MIXTURE DESIGN : WEIGH UP SHEET	4.6% Asphalt by Total Weight, g:							
630	5241.09	HMACP MIXTURE DESIGN : WEIGH UP SHEET	Total Weight, g:							
631	241.09	HMACP MIXTURE DESIGN : WEIGH UP SHEET	4.6% Asphalt by Total Weight, g:							
632	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	Less Asphalt by Weight of Recycled Material, g:							
633	241.09	HMACP MIXTURE DESIGN : WEIGH UP SHEET	(Valero 76-22) Asphalt to Add, g:							
634	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET								
635	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	-	Sieve Size:	Retained	3/4"	Bin No.1	Aggregate Weight
636	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	-	Sieve Size:	Retained	3/4"	Bin No.2	Aggregate Weight
637	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	-	Sieve Size:	Retained	3/4"	Bin No.3	Aggregate Weight
638	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	-	Sieve Size:	Retained	3/4"	Bin No.4	Aggregate Weight
639		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	-	Sieve Size:	Retained	3/4"	Bin No.5	
640		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	-	Sieve Size:	Retained	3/4"	Bin No.6	
641		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	-	Sieve Size:	Retained	3/4"	Bin No.7	
642	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	-	Sieve Size:	Retained	3/4"	Total Weights	
643	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	-	Sieve Size:	Retained	3/4"	IndividualRetained, %	
644	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	-	Sieve Size:	Retained	3/4"	Cumulative Retained, %	
645	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/4"	Sieve Size:	Retained	1/2"	Bin No.1	Aggregate Weight
646	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/4"	Sieve Size:	Retained	1/2"	Bin No.2	Aggregate Weight
647	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/4"	Sieve Size:	Retained	1/2"	Bin No.3	Aggregate Weight
648	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/4"	Sieve Size:	Retained	1/2"	Bin No.4	Aggregate Weight
649		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/4"	Sieve Size:	Retained	1/2"	Bin No.5	
650		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/4"	Sieve Size:	Retained	1/2"	Bin No.6	
651		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/4"	Sieve Size:	Retained	1/2"	Bin No.7	
652	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/4"	Sieve Size:	Retained	1/2"	Total Weights	
653	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/4"	Sieve Size:	Retained	1/2"	IndividualRetained, %	
654	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/4"	Sieve Size:	Retained	1/2"	Cumulative Retained, %	
655	163.4	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	1/2"	Sieve Size:	Retained	3/8"	Bin No.1	Aggregate Weight
656	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	1/2"	Sieve Size:	Retained	3/8"	Bin No.2	Aggregate Weight
657	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	1/2"	Sieve Size:	Retained	3/8"	Bin No.3	Aggregate Weight
658	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	1/2"	Sieve Size:	Retained	3/8"	Bin No.4	Aggregate Weight
659		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	1/2"	Sieve Size:	Retained	3/8"	Bin No.5	
660		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	1/2"	Sieve Size:	Retained	3/8"	Bin No.6	
661		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	1/2"	Sieve Size:	Retained	3/8"	Bin No.7	
662	163.4	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	1/2"	Sieve Size:	Retained	3/8"	Total Weights	
663	3.268	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	1/2"	Sieve Size:	Retained	3/8"	IndividualRetained, %	
664	3.268	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	1/2"	Sieve Size:	Retained	3/8"	Cumulative Retained, %	
665	1274.9	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.1	Aggregate Weight
666	292.6	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.2	Aggregate Weight
667	1.5	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.3	Aggregate Weight
668	3.9	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.4	Aggregate Weight
669		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.5	
670		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.6	

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
671		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.7	
672	1572.9	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Total Weights	
673	31.458	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	IndividualRetained, %	
674	34.726	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Cumulative Retained, %	
675	368.6	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.1	Aggregate Weight
676	607.05	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.2	Aggregate Weight
677	420	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.3	Aggregate Weight
678	15.6	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.4	Aggregate Weight
679		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.5	
680		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.6	
681		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.7	
682	1411.25	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Total Weights	
683	28.225	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	IndividualRetained, %	
684	62.951	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Cumulative Retained, %	
685	32.3	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.1	Aggregate Weight
686	22.8	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.2	Aggregate Weight
687	615	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.3	Aggregate Weight
688	155.35	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.4	Aggregate Weight
689		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.5	
690		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.6	
691		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.7	
692	825.45	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Total Weights	
693	16.509	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	IndividualRetained, %	
694	79.46	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Cumulative Retained, %	
695	7.6	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.1	Aggregate Weight
696	4.75	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.2	Aggregate Weight
697	189	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.3	Aggregate Weight
698	226.2	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.4	Aggregate Weight
699		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.5	
700		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.6	
701		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.7	
702	427.55	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Total Weights	
703	8.551	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	IndividualRetained, %	
704	88.011	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Cumulative Retained, %	
705	9.5	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.1	Aggregate Weight
706	3.8	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.2	Aggregate Weight
707	201	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.3	Aggregate Weight
708	163.15	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.4	Aggregate Weight
709		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.5	
710		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.6	
711		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.7	
712	377.45	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Total Weights	
713	7.549	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	IndividualRetained, %	
714	95.56	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Cumulative Retained, %	
715	43.7	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.1	Aggregate Weight
716	19	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.2	Aggregate Weight
717	73.5	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.3	Aggregate Weight
718	85.8	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.4	Aggregate Weight
719		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.5	
720		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.6	
721		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.7	
722	222	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Total Weights	
723	4.44	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	IndividualRetained, %	
724	100	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Cumulative Retained, %	
725		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.1	Aggregate Weight
726		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.2	Aggregate Weight
727		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.3	Aggregate Weight
728		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.4	Aggregate Weight
729		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.5	
730		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.6	
731		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.7	

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
732		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Total Weights	
733		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	IndividualRetained, %	
734		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Cumulative Retained, %	
735		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.1	Aggregate Weight
736		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.2	Aggregate Weight
737		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.3	Aggregate Weight
738		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.4	Aggregate Weight
739		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.5	
740		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.6	
741		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.7	
742		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Total Weights	
743		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	IndividualRetained, %	
744		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Cumulative Retained, %	
745	1900	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Totals	Bin No.1	Aggregate Weight				
746	950	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Totals	Bin No.2	Aggregate Weight				
747	1500	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Totals	Bin No.3	Aggregate Weight				
748	650	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Totals	Bin No.4	Aggregate Weight				
749		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Totals	Bin No.5					
750		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Totals	Bin No.6					
751		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Totals	Bin No.7					
752	5000	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Totals	Total Weights					
753		HMACP MIXTURE DESIGN : WEIGH UP SHEET	Running Total:							
754	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	-	Sieve Size:	Retained	3/4"	Bin No.1	Aggregate Weight
755	1900	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	-	Sieve Size:	Retained	3/4"	Bin No.2	Aggregate Weight
756	2850	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	-	Sieve Size:	Retained	3/4"	Bin No.3	Aggregate Weight
757	4350	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	-	Sieve Size:	Retained	3/4"	Bin No.4	Aggregate Weight
758		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	-	Sieve Size:	Retained	3/4"	Bin No.5	
759		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	-	Sieve Size:	Retained	3/4"	Bin No.6	
760		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	-	Sieve Size:	Retained	3/4"	Bin No.7	
761	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	-	Sieve Size:	Retained	3/4"	Total Weights	
762	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/4"	Sieve Size:	Retained	1/2"	Bin No.1	Aggregate Weight
763	1900	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/4"	Sieve Size:	Retained	1/2"	Bin No.2	Aggregate Weight
764	2850	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/4"	Sieve Size:	Retained	1/2"	Bin No.3	Aggregate Weight
765	4350	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/4"	Sieve Size:	Retained	1/2"	Bin No.4	Aggregate Weight
766		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/4"	Sieve Size:	Retained	1/2"	Bin No.5	
767		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/4"	Sieve Size:	Retained	1/2"	Bin No.6	
768		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/4"	Sieve Size:	Retained	1/2"	Bin No.7	
769	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/4"	Sieve Size:	Retained	1/2"	Total Weights	
770	163.4	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	1/2"	Sieve Size:	Retained	3/8"	Bin No.1	Aggregate Weight
771	1900	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	1/2"	Sieve Size:	Retained	3/8"	Bin No.2	Aggregate Weight
772	2850	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	1/2"	Sieve Size:	Retained	3/8"	Bin No.3	Aggregate Weight
773	4350	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	1/2"	Sieve Size:	Retained	3/8"	Bin No.4	Aggregate Weight
774		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	1/2"	Sieve Size:	Retained	3/8"	Bin No.5	
775		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	1/2"	Sieve Size:	Retained	3/8"	Bin No.6	
776		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	1/2"	Sieve Size:	Retained	3/8"	Bin No.7	
777	163.4	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	1/2"	Sieve Size:	Retained	3/8"	Total Weights	
778	1438.3	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.1	Aggregate Weight
779	2192.6	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.2	Aggregate Weight
780	2851.5	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.3	Aggregate Weight
781	4353.9	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.4	Aggregate Weight
782		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.5	
783		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.6	
784		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.7	
785	1736.3	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Total Weights	
786	1806.9	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.1	Aggregate Weight
787	2799.65	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.2	Aggregate Weight
788	3271.5	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.3	Aggregate Weight
789	4369.5	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.4	Aggregate Weight
790		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.5	
791		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.6	
792		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.7	

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
793	3147.55	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Total Weights	
794	1839.2	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.1	Aggregate Weight
795	2822.45	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.2	Aggregate Weight
796	3886.5	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.3	Aggregate Weight
797	4524.85	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.4	Aggregate Weight
798		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.5	
799		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.6	
800		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.7	
801	3973	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Total Weights	
802	1846.8	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.1	Aggregate Weight
803	2827.2	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.2	Aggregate Weight
804	4075.5	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.3	Aggregate Weight
805	4751.05	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.4	Aggregate Weight
806		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.5	
807		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.6	
808		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.7	
809	4400.55	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Total Weights	
810	1856.3	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.1	Aggregate Weight
811	2831	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.2	Aggregate Weight
812	4276.5	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.3	Aggregate Weight
813	4914.2	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.4	Aggregate Weight
814		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.5	
815		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.6	
816		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.7	
817	4778	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Total Weights	
818	1900	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.1	Aggregate Weight
819	2850	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.2	Aggregate Weight
820	4350	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.3	Aggregate Weight
821	5000	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.4	Aggregate Weight
822		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.5	
823		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.6	
824		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.7	
825	5000	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Total Weights	
826		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.1	Aggregate Weight
827		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.2	Aggregate Weight
828		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.3	Aggregate Weight
829		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.4	Aggregate Weight
830		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.5	
831		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.6	
832		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.7	
833		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Total Weights	
834		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.1	Aggregate Weight
835		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.2	Aggregate Weight
836		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.3	Aggregate Weight
837		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.4	Aggregate Weight
838		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.5	
839		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.6	
840		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.7	
841		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Total Weights	
842		HMACP MIXTURE DESIGN : WEIGH UP SHEET	Remarks:							
843		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Individual Ret., %	Passing		Sieve Size:	Retained	3/4"	
844		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Bulk SG	Passing		Sieve Size:	Retained	3/4"	
845	0	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Individual Ret., %	Passing	3/4"	Sieve Size:	Retained	1/2"	
846		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Bulk SG	Passing	3/4"	Sieve Size:	Retained	1/2"	
847	8.6	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Individual Ret., %	Passing	1/2"	Sieve Size:	Retained	3/8"	
848	2.788	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Bulk SG	Passing	1/2"	Sieve Size:	Retained	3/8"	
849	67.1	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
850	2.794	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Bulk SG	Passing	3/8"	Sieve Size:	Retained	No. 4	
851	19.4	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
852	2.798	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Bulk SG	Passing	No. 4	Sieve Size:	Retained	No. 10	
853	1.7	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
854	2.798	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Bulk SG	Passing	No. 10	Sieve Size:	Retained	No. 40	
855	0.4	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
856	2.798	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Bulk SG	Passing	No. 40	Sieve Size:	Retained	No. 80	
857	0.5	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
858	2.798	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Bulk SG	Passing	No. 80	Sieve Size:	Retained	No. 200	
859	2.3	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
860	2.798	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Bulk SG	Passing	No. 200	Sieve Size:	Retained	Pan	
861		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
862		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Bulk SG	Passing		Sieve Size:	Retained	Pan	
863		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
864		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Bulk SG	Passing		Sieve Size:	Retained	Pan	
865	100	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Individual Ret., %	Totals					
866	2.79445	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Bulk SG	Totals					
867		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Individual Ret., %	Passing		Sieve Size:	Retained	3/4"	
868		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Bulk SG	Passing		Sieve Size:	Retained	3/4"	
869	0	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Individual Ret., %	Passing	3/4"	Sieve Size:	Retained	1/2"	
870		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Bulk SG	Passing	3/4"	Sieve Size:	Retained	1/2"	
871	0	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Individual Ret., %	Passing	1/2"	Sieve Size:	Retained	3/8"	
872		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Bulk SG	Passing	1/2"	Sieve Size:	Retained	3/8"	
873	30.8	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
874	2.794	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Bulk SG	Passing	3/8"	Sieve Size:	Retained	No. 4	
875	63.9	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
876	2.798	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Bulk SG	Passing	No. 4	Sieve Size:	Retained	No. 10	
877	2.4	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
878	2.798	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Bulk SG	Passing	No. 10	Sieve Size:	Retained	No. 40	
879	0.5	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
880	2.798	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Bulk SG	Passing	No. 40	Sieve Size:	Retained	No. 80	
881	0.4	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
882	2.798	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Bulk SG	Passing	No. 80	Sieve Size:	Retained	No. 200	
883	2	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
884	2.798	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Bulk SG	Passing	No. 200	Sieve Size:	Retained	Pan	
885		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
886		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Bulk SG	Passing		Sieve Size:	Retained	Pan	
887		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
888		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Bulk SG	Passing		Sieve Size:	Retained	Pan	
889	100	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Individual Ret., %	Totals					
890	2.79677	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Bulk SG	Totals					
891		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Individual Ret., %	Passing		Sieve Size:	Retained	3/4"	
892		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Bulk SG	Passing		Sieve Size:	Retained	3/4"	
893	0	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Individual Ret., %	Passing	3/4"	Sieve Size:	Retained	1/2"	
894		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Bulk SG	Passing	3/4"	Sieve Size:	Retained	1/2"	
895	0	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Individual Ret., %	Passing	1/2"	Sieve Size:	Retained	3/8"	
896		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Bulk SG	Passing	1/2"	Sieve Size:	Retained	3/8"	
897	0.1	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
898	2.815	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Bulk SG	Passing	3/8"	Sieve Size:	Retained	No. 4	
899	28	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
900	2.815	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Bulk SG	Passing	No. 4	Sieve Size:	Retained	No. 10	
901	41	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
902	2.815	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Bulk SG	Passing	No. 10	Sieve Size:	Retained	No. 40	
903	12.6	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
904	2.815	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Bulk SG	Passing	No. 40	Sieve Size:	Retained	No. 80	
905	13.4	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
906	2.815	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Bulk SG	Passing	No. 80	Sieve Size:	Retained	No. 200	
907	4.9	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
908	2.815	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Bulk SG	Passing	No. 200	Sieve Size:	Retained	Pan	
909		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
910		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Bulk SG	Passing		Sieve Size:	Retained	Pan	
911		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
912		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Bulk SG	Passing		Sieve Size:	Retained	Pan	
913	100	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Individual Ret., %	Totals					
914	2.815	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Bulk SG	Totals					

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
915		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Individual Ret., %	Passing		Sieve Size:	Retained	3/4"	
916		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Bulk SG	Passing		Sieve Size:	Retained	3/4"	
917	0	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Individual Ret., %	Passing	3/4"	Sieve Size:	Retained	1/2"	
918		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Bulk SG	Passing	3/4"	Sieve Size:	Retained	1/2"	
919	0	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Individual Ret., %	Passing	1/2"	Sieve Size:	Retained	3/8"	
920		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Bulk SG	Passing	1/2"	Sieve Size:	Retained	3/8"	
921	0.6	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
922	2.642	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Bulk SG	Passing	3/8"	Sieve Size:	Retained	No. 4	
923	2.4	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
924	2.642	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Bulk SG	Passing	No. 4	Sieve Size:	Retained	No. 10	
925	23.9	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
926	2.642	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Bulk SG	Passing	No. 10	Sieve Size:	Retained	No. 40	
927	34.8	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
928	2.642	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Bulk SG	Passing	No. 40	Sieve Size:	Retained	No. 80	
929	25.1	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
930	2.678	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Bulk SG	Passing	No. 80	Sieve Size:	Retained	No. 200	
931	13.2	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
932	2.678	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Bulk SG	Passing	No. 200	Sieve Size:	Retained	Pan	
933		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
934		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Bulk SG	Passing		Sieve Size:	Retained	Pan	
935		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
936		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Bulk SG	Passing		Sieve Size:	Retained	Pan	
937	100	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Individual Ret., %	Totals					
938	2.65567	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Bulk SG	Totals					
939		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Individual Ret., %	Passing		Sieve Size:	Retained	3/4"	
940		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Bulk SG	Passing		Sieve Size:	Retained	3/4"	
941		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Individual Ret., %	Passing	3/4"	Sieve Size:	Retained	1/2"	
942		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Bulk SG	Passing	3/4"	Sieve Size:	Retained	1/2"	
943		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Individual Ret., %	Passing	1/2"	Sieve Size:	Retained	3/8"	
944		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Bulk SG	Passing	1/2"	Sieve Size:	Retained	3/8"	
945		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
946		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Bulk SG	Passing	3/8"	Sieve Size:	Retained	No. 4	
947		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
948		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Bulk SG	Passing	No. 4	Sieve Size:	Retained	No. 10	
949		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
950		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Bulk SG	Passing	No. 10	Sieve Size:	Retained	No. 40	
951		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
952		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Bulk SG	Passing	No. 40	Sieve Size:	Retained	No. 80	
953		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
954		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Bulk SG	Passing	No. 80	Sieve Size:	Retained	No. 200	
955		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
956		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Bulk SG	Passing	No. 200	Sieve Size:	Retained	Pan	
957		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
958		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Bulk SG	Passing		Sieve Size:	Retained	Pan	
959		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
960		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Bulk SG	Passing		Sieve Size:	Retained	Pan	
961		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Individual Ret., %	Totals					
962		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Bulk SG	Totals					
963		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Individual Ret., %	Passing		Sieve Size:	Retained	3/4"	
964		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Bulk SG	Passing		Sieve Size:	Retained	3/4"	
965		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Individual Ret., %	Passing	3/4"	Sieve Size:	Retained	1/2"	
966		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Bulk SG	Passing	3/4"	Sieve Size:	Retained	1/2"	
967		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Individual Ret., %	Passing	1/2"	Sieve Size:	Retained	3/8"	
968		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Bulk SG	Passing	1/2"	Sieve Size:	Retained	3/8"	
969		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
970		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Bulk SG	Passing	3/8"	Sieve Size:	Retained	No. 4	
971		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
972		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Bulk SG	Passing	No. 4	Sieve Size:	Retained	No. 10	
973		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
974		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Bulk SG	Passing	No. 10	Sieve Size:	Retained	No. 40	
975		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
976		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Bulk SG	Passing	No. 40	Sieve Size:	Retained	No. 80	
977		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
978		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Bulk SG	Passing	No. 80	Sieve Size:	Retained	No. 200	
979		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
980		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Bulk SG	Passing	No. 200	Sieve Size:	Retained	Pan	
981		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
982		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Bulk SG	Passing		Sieve Size:	Retained	Pan	
983		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
984		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Bulk SG	Passing		Sieve Size:	Retained	Pan	
985		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Individual Ret., %	Totals					
986		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Bulk SG	Totals					
987		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Individual Ret., %	Passing		Sieve Size:	Retained	3/4"	
988		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Bulk SG	Passing		Sieve Size:	Retained	3/4"	
989		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Individual Ret., %	Passing	3/4"	Sieve Size:	Retained	1/2"	
990		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Bulk SG	Passing	3/4"	Sieve Size:	Retained	1/2"	
991		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Individual Ret., %	Passing	1/2"	Sieve Size:	Retained	3/8"	
992		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Bulk SG	Passing	1/2"	Sieve Size:	Retained	3/8"	
993		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
994		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Bulk SG	Passing	3/8"	Sieve Size:	Retained	No. 4	
995		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
996		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Bulk SG	Passing	No. 4	Sieve Size:	Retained	No. 10	
997		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
998		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Bulk SG	Passing	No. 10	Sieve Size:	Retained	No. 40	
999		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
1000		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Bulk SG	Passing	No. 40	Sieve Size:	Retained	No. 80	
1001		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
1002		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Bulk SG	Passing	No. 80	Sieve Size:	Retained	No. 200	
1003		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
1004		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Bulk SG	Passing	No. 200	Sieve Size:	Retained	Pan	
1005		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
1006		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Bulk SG	Passing		Sieve Size:	Retained	Pan	
1007		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
1008		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Bulk SG	Passing		Sieve Size:	Retained	Pan	
1009		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Individual Ret., %	Totals					
1010		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Bulk SG	Totals					
1011	1.035	HMACP MIXTURE DESIGN : BULK GRAVITY	Specific Gravity of Asphalt:							
1012	2.78208	HMACP MIXTURE DESIGN : BULK GRAVITY	Combined Bulk Specific Gravity:							
1013		HMACP MIXTURE DESIGN : BULK GRAVITY	Coarse Agg. Combined BSG:							
1014		HMACP MIXTURE DESIGN : BULK GRAVITY	Remarks:							
1015	96	HMACP MIXTURE DESIGN : SUMMARY SHEET	Target Density, %:							
1016		HMACP MIXTURE DESIGN : SUMMARY SHEET	Number of Gyrations:							
1017		HMACP MIXTURE DESIGN : SUMMARY SHEET	CRM* Content							
1018	3.5	HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Asphalt Content (%)						
1019	2.447	HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Specific Gravity Of Specimen (Ga)						
1020	2.623	HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Maximum Specific Gravity (Gr)						
1021	2.77757	HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Effective Gravity (Ge)						
1022	2.63336	HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Theo. Max. Specific Gravity (Gt)						
1023	92.9231	HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Density from Gt (Percent)						
1024	15.3518	HMACP MIXTURE DESIGN : SUMMARY SHEET	1	VMA (Percent)						
1025	4	HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Asphalt Content (%)						
1026	2.46	HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Specific Gravity Of Specimen (Ga)						
1027	2.607	HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Maximum Specific Gravity (Gr)						
1028	2.78313	HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Effective Gravity (Ge)						
1029	2.61246	HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Theo. Max. Specific Gravity (Gt)						
1030	94.1642	HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Density from Gt (Percent)						
1031	15.343	HMACP MIXTURE DESIGN : SUMMARY SHEET	2	VMA (Percent)						
1032	4.5	HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Asphalt Content (%)						
1033	2.478	HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Specific Gravity Of Specimen (Ga)						
1034	2.593	HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Maximum Specific Gravity (Gr)						
1035	2.79097	HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Effective Gravity (Ge)						
1036	2.59188	HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Theo. Max. Specific Gravity (Gt)						

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
1037	95.6062	HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Density from Gt (Percent)						
1038	15.1677	HMACP MIXTURE DESIGN : SUMMARY SHEET	3	VMA (Percent)						
1039	5	HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Asphalt Content (%)						
1040	2.495	HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Specific Gravity Of Specimen (Ga)						
1041	2.577	HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Maximum Specific Gravity (Gr)						
1042	2.79626	HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Effective Gravity (Ge)						
1043	2.57163	HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Theo. Max. Specific Gravity (Gt)						
1044	97.0202	HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Density from Gt (Percent)						
1045	15.0329	HMACP MIXTURE DESIGN : SUMMARY SHEET	4	VMA (Percent)						
1046	5.5	HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Asphalt Content (%)						
1047	2.514	HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Specific Gravity Of Specimen (Ga)						
1048	2.56	HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Maximum Specific Gravity (Gr)						
1049	2.80013	HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Effective Gravity (Ge)						
1050	2.55169	HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Theo. Max. Specific Gravity (Gt)						
1051	98.5229	HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Density from Gt (Percent)						
1052	14.8365	HMACP MIXTURE DESIGN : SUMMARY SHEET	5	VMA (Percent)						
1053	139	HMACP MIXTURE DESIGN : SUMMARY SHEET	Mixture Evaluation @ Optimum Asphalt Content	Indirect Tensile Strength (psi)						
1054		HMACP MIXTURE DESIGN : SUMMARY SHEET	Mixture Evaluation @ Optimum Asphalt Content	Hamburg Wheel Tracking Test	Number of cycles					
1055		HMACP MIXTURE DESIGN : SUMMARY SHEET	Mixture Evaluation @ Optimum Asphalt Content	Hamburg Wheel Tracking Test	Rut depth (mm)					
1056		HMACP MIXTURE DESIGN : SUMMARY SHEET	Mixture Evaluation @ Optimum Asphalt Content	Overlay Tester Min. Number of Cycles						
1057		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Asphalt Content (%)						
1058		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Maximum Specific Gravity (Gr)						
1059		HMACP MIXTURE DESIGN : SUMMARY SHEET	Effective Gravity (Ge)							
1060		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Theo. Max. Specific Gravity (Gt)						
1061		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	VMA (Percent)						
1062		HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Asphalt Content (%)						
1063		HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Maximum Specific Gravity (Gr)						
1064		HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Theo. Max. Specific Gravity (Gt)						
1065		HMACP MIXTURE DESIGN : SUMMARY SHEET	2	VMA (Percent)						
1066		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Asphalt Content (%)						
1067		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Maximum Specific Gravity (Gr)						
1068		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Theo. Max. Specific Gravity (Gt)						
1069		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	VMA (Percent)						
1070		HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Asphalt Content (%)						
1071		HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Maximum Specific Gravity (Gr)						
1072		HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Theo. Max. Specific Gravity (Gt)						
1073		HMACP MIXTURE DESIGN : SUMMARY SHEET	4	VMA (Percent)						
1074		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Asphalt Content (%)						
1075		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Maximum Specific Gravity (Gr)						
1076		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Theo. Max. Specific Gravity (Gt)						
1077		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	VMA (Percent)						
1078		HMACP MIXTURE DESIGN : SUMMARY SHEET	Min Film Thickness (microns)							
1079		HMACP MIXTURE DESIGN : SUMMARY SHEET	AC @ Min Film Thickness:							
1080		HMACP MIXTURE DESIGN : SUMMARY SHEET	Max Film Thickness (microns)							
1081		HMACP MIXTURE DESIGN : SUMMARY SHEET	AC @ Max Film Thickness:							
1082		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Asphalt Content (%)						
1083		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Lab Measured Gr						
1084		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Effective Specific Gravity (Ge)						
1085		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Backcalculated Gr						
1086		HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Lab Measured Gr						
1087		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Asphalt Content (%)						
1088		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Lab Measured Gr						
1089		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Effective Specific Gravity (Ge)						
1090		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Backcalculated Gr						
1091		HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Lab Measured Gr						
1092		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Asphalt Content (%)						
1093		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Lab Measured Gr						
1094		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Effective Specific Gravity (Ge)						
1095		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Backcalculated Gr						
1096		HMACP MIXTURE DESIGN : SUMMARY SHEET	6	Lab Measured Gr						
1097		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Asphalt Content (%)						

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
1098		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Height (in)						
1099		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Diameter (in)						
1100		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Dry Weight (grams)						
1101		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Backcalculated Gr						
1102		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Ga						
1103		HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Height (in)						
1104		HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Diameter (in)						
1105		HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Dry Weight (grams)						
1106		HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Ga						
1107		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Density from Backcalculated Gr (%)						
1108		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Asphalt Content (%)						
1109		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Height (in)						
1110		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Diameter (in)						
1111		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Dry Weight (grams)						
1112		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Backcalculated Gr						
1113		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Ga						
1114		HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Height (in)						
1115		HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Diameter (in)						
1116		HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Dry Weight (grams)						
1117		HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Ga						
1118		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Density from Backcalculated Gr (%)						
1119		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Asphalt Content (%)						
1120		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Height (in)						
1121		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Diameter (in)						
1122		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Dry Weight (grams)						
1123		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Backcalculated Gr						
1124		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Ga						
1125		HMACP MIXTURE DESIGN : SUMMARY SHEET	6	Height (in)						
1126		HMACP MIXTURE DESIGN : SUMMARY SHEET	6	Diameter (in)						
1127		HMACP MIXTURE DESIGN : SUMMARY SHEET	6	Dry Weight (grams)						
1128		HMACP MIXTURE DESIGN : SUMMARY SHEET	6	Ga						
1129		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Density from Backcalculated Gr (%)						
1130		HMACP MIXTURE DESIGN : SUMMARY SHEET	7	Asphalt Content (%)						
1131		HMACP MIXTURE DESIGN : SUMMARY SHEET	7	Height (in)						
1132		HMACP MIXTURE DESIGN : SUMMARY SHEET	7	Diameter (in)						
1133		HMACP MIXTURE DESIGN : SUMMARY SHEET	7	Dry Weight (grams)						
1134		HMACP MIXTURE DESIGN : SUMMARY SHEET	7	Backcalculated Gr						
1135		HMACP MIXTURE DESIGN : SUMMARY SHEET	7	Ga						
1136		HMACP MIXTURE DESIGN : SUMMARY SHEET	8	Height (in)						
1137		HMACP MIXTURE DESIGN : SUMMARY SHEET	8	Diameter (in)						
1138		HMACP MIXTURE DESIGN : SUMMARY SHEET	8	Dry Weight (grams)						
1139		HMACP MIXTURE DESIGN : SUMMARY SHEET	8	Ga						
1140		HMACP MIXTURE DESIGN : SUMMARY SHEET	7	Density from Backcalculated Gr (%)						
1141		HMACP MIXTURE DESIGN : SUMMARY SHEET	9	Asphalt Content (%)						
1142		HMACP MIXTURE DESIGN : SUMMARY SHEET	9	Height (in)						
1143		HMACP MIXTURE DESIGN : SUMMARY SHEET	9	Diameter (in)						
1144		HMACP MIXTURE DESIGN : SUMMARY SHEET	9	Dry Weight (grams)						
1145		HMACP MIXTURE DESIGN : SUMMARY SHEET	9	Backcalculated Gr						
1146		HMACP MIXTURE DESIGN : SUMMARY SHEET	9	Ga						
1147		HMACP MIXTURE DESIGN : SUMMARY SHEET	10	Height (in)						
1148		HMACP MIXTURE DESIGN : SUMMARY SHEET	10	Diameter (in)						
1149		HMACP MIXTURE DESIGN : SUMMARY SHEET	10	Dry Weight (grams)						
1150		HMACP MIXTURE DESIGN : SUMMARY SHEET	10	Ga						
1151		HMACP MIXTURE DESIGN : SUMMARY SHEET	9	Density from Backcalculated Gr (%)						
1152	2.78961	HMACP MIXTURE DESIGN : SUMMARY SHEET	Effective Specific Gravity:							
1153	4.63926	HMACP MIXTURE DESIGN : SUMMARY SHEET	Optimum Asphalt Content :							
1154	15.1302	HMACP MIXTURE DESIGN : SUMMARY SHEET	VMA @ Optimum AC:							
1155		HMACP MIXTURE DESIGN : SUMMARY SHEET	Estimated Percent of Stripping, %:							
1156		HMACP MIXTURE DESIGN : SUMMARY SHEET	Drain-Down, %:							
1157		HMACP MIXTURE DESIGN : SUMMARY SHEET	Cantabro Loss, %:							
1158	2.48276	HMACP MIXTURE DESIGN : SUMMARY SHEET	Interpolated Values	Specific Gravity (Ga):						

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
1159	2.58854	HMACP MIXTURE DESIGN : SUMMARY SHEET	Interpolated Values	Max. Specific Gravity (Gr):						
1160	2.58624	HMACP MIXTURE DESIGN : SUMMARY SHEET	Interpolated Values	Theo. Max. Specific Gravity (Gt):						
1161		HMACP MIXTURE DESIGN : SUMMARY SHEET	VCA(CA)							
1162		HMACP MIXTURE DESIGN : SUMMARY SHEET	VCA(MIX)							
1163		HMACP MIXTURE DESIGN : SUMMARY SHEET	VCA(CA, calc.)							
1164		HMACP MIXTURE DESIGN : SUMMARY SHEET	VCA(MIX, calc.)							
1165		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	A	Gr					
1166		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	B	Gr					
1167		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	Density (%)	Gr					
1168		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	A	Ga					
1169		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	B	Ga					
1170		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	Density (%)	Ga					
1171		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	A	Height @ Nini					
1172		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	B	Height @ Nini					
1173		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	Density (%)	Height @ Nini					
1174		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	A	Height @ Ndes					
1175		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	B	Height @ Ndes					
1176		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	Density (%)	Height @ Ndes					
1177		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	A	Height @ Nmax					
1178		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	B	Height @ Nmax					
1179		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	Density (%)	Height @ Nmax					
1180	2004	HMACP MIXTURE DESIGN : COMBINED GRADATION	SPEC YEAR:							
1181		HMACP MIXTURE DESIGN : COMBINED GRADATION	SPECIAL PROVISION:							
1182	ITEM340	HMACP MIXTURE DESIGN : COMBINED GRADATION	MIX TYPE:							
1183		HMACP MIXTURE DESIGN : COMBINED GRADATION	Lift Thickness, in:							
1184		HMACP MIXTURE DESIGN : SUMMARY SHEET	FINAL SPECIMEN	Asphalt Content (%)						
1185		HMACP MIXTURE DESIGN : SUMMARY SHEET	FINAL SPECIMEN	Specific Gravity Of Specimen (Ga)						
1186		HMACP MIXTURE DESIGN : SUMMARY SHEET	FINAL SPECIMEN	Maximum Specific Gravity (Gr)						
1187		HMACP MIXTURE DESIGN : SUMMARY SHEET	FINAL SPECIMEN	Effective Gravity (Ge)						
1188		HMACP MIXTURE DESIGN : SUMMARY SHEET	FINAL SPECIMEN	Density from Gr (Percent)						
1189		HMACP MIXTURE DESIGN : SUMMARY SHEET	FINAL SPECIMEN	Film Thickness (microns)						
1190		HMACP MIXTURE DESIGN : SUMMARY SHEET	Suggested Membrane Target App. Rate, gal/yd2:							
1191		HMACP MIXTURE DESIGN : SUMMARY SHEET	PREDICTION ESTIMATES	AC %						
1192		HMACP MIXTURE DESIGN : SUMMARY SHEET	PREDICTION ESTIMATES	Film Thickness (microns)						
1193		HMACP MIXTURE DESIGN : SUMMARY SHEET	PREDICTION ESTIMATES	Density (%)						
1194	2000	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	Blank Sample Weight, g:							
1195	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	-	Sieve Size:	Retained	3/4"	Bin No.1	Aggregate Weight
1196	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	-	Sieve Size:	Retained	3/4"	Bin No.2	Aggregate Weight
1197	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	-	Sieve Size:	Retained	3/4"	Bin No.3	Aggregate Weight
1198	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	-	Sieve Size:	Retained	3/4"	Bin No.4	Aggregate Weight
1199		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	-	Sieve Size:	Retained	3/4"	Bin No.5	
1200		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	-	Sieve Size:	Retained	3/4"	Bin No.6	
1201		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	-	Sieve Size:	Retained	3/4"	Bin No.7	
1202	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	-	Sieve Size:	Retained	3/4"	Total Weights	
1203	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	-	Sieve Size:	Retained	3/4"	IndividualRetained, %	
1204	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	-	Sieve Size:	Retained	3/4"	Cumulative Retained, %	
1205	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	3/4"	Sieve Size:	Retained	1/2"	Bin No.1	Aggregate Weight
1206	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	3/4"	Sieve Size:	Retained	1/2"	Bin No.2	Aggregate Weight
1207	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	3/4"	Sieve Size:	Retained	1/2"	Bin No.3	Aggregate Weight
1208	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	3/4"	Sieve Size:	Retained	1/2"	Bin No.4	Aggregate Weight
1209		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	3/4"	Sieve Size:	Retained	1/2"	Bin No.5	
1210		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	3/4"	Sieve Size:	Retained	1/2"	Bin No.6	
1211		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	3/4"	Sieve Size:	Retained	1/2"	Bin No.7	
1212	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	3/4"	Sieve Size:	Retained	1/2"	Total Weights	
1213	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	3/4"	Sieve Size:	Retained	1/2"	IndividualRetained, %	
1214	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	3/4"	Sieve Size:	Retained	1/2"	Cumulative Retained, %	
1215	65.36	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	1/2"	Sieve Size:	Retained	3/8"	Bin No.1	Aggregate Weight
1216	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	1/2"	Sieve Size:	Retained	3/8"	Bin No.2	Aggregate Weight
1217	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	1/2"	Sieve Size:	Retained	3/8"	Bin No.3	Aggregate Weight
1218	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	1/2"	Sieve Size:	Retained	3/8"	Bin No.4	Aggregate Weight
1219		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	1/2"	Sieve Size:	Retained	3/8"	Bin No.5	

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
1220		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	1/2"	Sieve Size:	Retained	3/8"	Bin No.6	
1221		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	1/2"	Sieve Size:	Retained	3/8"	Bin No.7	
1222	65.36	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	1/2"	Sieve Size:	Retained	3/8"	Total Weights	
1223	3.268	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	1/2"	Sieve Size:	Retained	3/8"	IndividualRetained, %	
1224	3.268	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	1/2"	Sieve Size:	Retained	3/8"	Cumulative Retained, %	
1225	509.96	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.1	Aggregate Weight
1226	117.04	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.2	Aggregate Weight
1227	0.6	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.3	Aggregate Weight
1228	1.56	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.4	Aggregate Weight
1229		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.5	
1230		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.6	
1231		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.7	
1232	629.16	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Total Weights	
1233	31.458	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	IndividualRetained, %	
1234	34.726	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Cumulative Retained, %	
1235	147.44	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.1	Aggregate Weight
1236	242.82	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.2	Aggregate Weight
1237	168	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.3	Aggregate Weight
1238	6.24	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.4	Aggregate Weight
1239		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.5	
1240		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.6	
1241		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.7	
1242	564.5	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Total Weights	
1243	28.225	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	IndividualRetained, %	
1244	62.951	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Cumulative Retained, %	
1245	12.92	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.1	Aggregate Weight
1246	9.12	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.2	Aggregate Weight
1247	246	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.3	Aggregate Weight
1248	62.14	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.4	Aggregate Weight
1249		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.5	
1250		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.6	
1251		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.7	
1252	330.18	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Total Weights	
1253	16.509	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	IndividualRetained, %	
1254	79.46	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Cumulative Retained, %	
1255	3.04	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.1	Aggregate Weight
1256	1.9	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.2	Aggregate Weight
1257	75.6	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.3	Aggregate Weight
1258	90.48	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.4	Aggregate Weight
1259		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.5	
1260		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.6	
1261		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.7	
1262	171.02	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Total Weights	
1263	8.551	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	IndividualRetained, %	
1264	88.011	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Cumulative Retained, %	
1265	3.8	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.1	Aggregate Weight
1266	1.52	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.2	Aggregate Weight
1267	80.4	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.3	Aggregate Weight
1268	65.26	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.4	Aggregate Weight
1269		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.5	
1270		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.6	
1271		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.7	
1272	150.98	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Total Weights	
1273	7.549	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	IndividualRetained, %	
1274	95.56	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Cumulative Retained, %	
1275	17.48	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.1	Aggregate Weight
1276	7.6	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.2	Aggregate Weight
1277	29.4	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.3	Aggregate Weight
1278	34.32	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.4	Aggregate Weight
1279		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.5	
1280		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.6	

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
1281		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.7	
1282	88.8	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Total Weights	
1283	4.44	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	IndividualRetained, %	
1284	100	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Cumulative Retained, %	
1285		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.1	Aggregate Weight
1286		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.2	Aggregate Weight
1287		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.3	Aggregate Weight
1288		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.4	Aggregate Weight
1289		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.5	
1290		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.6	
1291		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.7	
1292		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Total Weights	
1293		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	IndividualRetained, %	
1294		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Cumulative Retained, %	
1295		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.1	Aggregate Weight
1296		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.2	Aggregate Weight
1297		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.3	Aggregate Weight
1298		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.4	Aggregate Weight
1299		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.5	
1300		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.6	
1301		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.7	
1302		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Total Weights	
1303		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	IndividualRetained, %	
1304		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Cumulative Retained, %	
1305	760	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Totals	Bin No.1	Aggregate Weight				
1306	380	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Totals	Bin No.2	Aggregate Weight				
1307	600	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Totals	Bin No.3	Aggregate Weight				
1308	260	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Totals	Bin No.4	Aggregate Weight				
1309		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Totals	Bin No.5					
1310		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Totals	Bin No.6					
1311		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Totals	Bin No.7					
1312	2000	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Totals	Total Weights					
1313		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	Running Total:							
1314	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	-	Sieve Size:	Retained	3/4"	Bin No.1	Aggregate Weight
1315	760	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	-	Sieve Size:	Retained	3/4"	Bin No.2	Aggregate Weight
1316	1140	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	-	Sieve Size:	Retained	3/4"	Bin No.3	Aggregate Weight
1317	1740	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	-	Sieve Size:	Retained	3/4"	Bin No.4	Aggregate Weight
1318		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	-	Sieve Size:	Retained	3/4"	Bin No.5	
1319		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	-	Sieve Size:	Retained	3/4"	Bin No.6	
1320		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	-	Sieve Size:	Retained	3/4"	Bin No.7	
1321	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	-	Sieve Size:	Retained	3/4"	Total Weights	
1322	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	3/4"	Sieve Size:	Retained	1/2"	Bin No.1	Aggregate Weight
1323	760	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	3/4"	Sieve Size:	Retained	1/2"	Bin No.2	Aggregate Weight
1324	1140	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	3/4"	Sieve Size:	Retained	1/2"	Bin No.3	Aggregate Weight
1325	1740	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	3/4"	Sieve Size:	Retained	1/2"	Bin No.4	Aggregate Weight
1326		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	3/4"	Sieve Size:	Retained	1/2"	Bin No.5	
1327		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	3/4"	Sieve Size:	Retained	1/2"	Bin No.6	
1328		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	3/4"	Sieve Size:	Retained	1/2"	Bin No.7	
1329	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	3/4"	Sieve Size:	Retained	1/2"	Total Weights	
1330	65.36	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	1/2"	Sieve Size:	Retained	3/8"	Bin No.1	Aggregate Weight
1331	760	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	1/2"	Sieve Size:	Retained	3/8"	Bin No.2	Aggregate Weight
1332	1140	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	1/2"	Sieve Size:	Retained	3/8"	Bin No.3	Aggregate Weight
1333	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	1/2"	Sieve Size:	Retained	3/8"	Bin No.4	Aggregate Weight
1334		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	1/2"	Sieve Size:	Retained	3/8"	Bin No.5	
1335		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	1/2"	Sieve Size:	Retained	3/8"	Bin No.6	
1336		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	1/2"	Sieve Size:	Retained	3/8"	Bin No.7	
1337	65.36	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	1/2"	Sieve Size:	Retained	3/8"	Total Weights	
1338	575.32	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.1	Aggregate Weight
1339	877.04	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.2	Aggregate Weight
1340	1140.6	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.3	Aggregate Weight
1341	1741.56	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.4	Aggregate Weight

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
1342		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.5	
1343		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.6	
1344		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.7	
1345	694.52	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Total Weights	
1346	722.76	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.1	Aggregate Weight
1347	1119.86	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.2	Aggregate Weight
1348	1308.6	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.3	Aggregate Weight
1349	1747.8	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.4	Aggregate Weight
1350		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.5	
1351		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.6	
1352		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.7	
1353	1259.02	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Total Weights	
1354	735.68	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.1	Aggregate Weight
1355	1128.98	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.2	Aggregate Weight
1356	1554.6	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.3	Aggregate Weight
1357	1809.94	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.4	Aggregate Weight
1358		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.5	
1359		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.6	
1360		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.7	
1361	1589.2	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Total Weights	
1362	738.72	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.1	Aggregate Weight
1363	1130.88	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.2	Aggregate Weight
1364	1630.2	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.3	Aggregate Weight
1365	1900.42	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.4	Aggregate Weight
1366		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.5	
1367		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.6	
1368		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.7	
1369	1760.22	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Total Weights	
1370	742.52	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.1	Aggregate Weight
1371	1132.4	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.2	Aggregate Weight
1372	1710.6	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.3	Aggregate Weight
1373	1965.68	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.4	Aggregate Weight
1374		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.5	
1375		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.6	
1376		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.7	
1377	1911.2	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Total Weights	
1378	760	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.1	Aggregate Weight
1379	1140	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.2	Aggregate Weight
1380	1740	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.3	Aggregate Weight
1381	2000	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.4	Aggregate Weight
1382		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.5	
1383		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.6	
1384		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.7	
1385	2000	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Total Weights	
1386		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.1	Aggregate Weight
1387		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.2	Aggregate Weight
1388		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.3	Aggregate Weight
1389		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.4	Aggregate Weight
1390		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.5	
1391		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.6	
1392		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.7	
1393		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Total Weights	
1394		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.1	Aggregate Weight
1395		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.2	Aggregate Weight
1396		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.3	Aggregate Weight
1397		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.4	Aggregate Weight
1398		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.5	
1399		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.6	
1400		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.7	
1401		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Total Weights	
1402	No	HMACP MIXTURE DESIGN : COMBINED GRADATION	WMA Included in Design?							

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
1403		HMACP MIXTURE DESIGN : COMBINED GRADATION	WMA TECHNOLOGY:							
1404		HMACP MIXTURE DESIGN : COMBINED GRADATION	Material Type	Bin No.8						
1405		HMACP MIXTURE DESIGN : COMBINED GRADATION	Material Type	Bin No.9						
1406		HMACP MIXTURE DESIGN : COMBINED GRADATION	Material Type	Bin No.10						
1407		HMACP MIXTURE DESIGN : COMBINED GRADATION	Material Source	Bin No.8						
1408		HMACP MIXTURE DESIGN : COMBINED GRADATION	Material Source	Bin No.9						
1409		HMACP MIXTURE DESIGN : COMBINED GRADATION	Material Source	Bin No.10						
1410		HMACP MIXTURE DESIGN : COMBINED GRADATION	RAS Type	Bin No.8						
1411		HMACP MIXTURE DESIGN : COMBINED GRADATION	RAS Type	Bin No.9						
1412		HMACP MIXTURE DESIGN : COMBINED GRADATION	RAS Type	Bin No.10						
1413		HMACP MIXTURE DESIGN : COMBINED GRADATION	Sample ID	Bin No.8						
1414		HMACP MIXTURE DESIGN : COMBINED GRADATION	Sample ID	Bin No.9						
1415		HMACP MIXTURE DESIGN : COMBINED GRADATION	Sample ID	Bin No.10						
1416		HMACP MIXTURE DESIGN : COMBINED GRADATION	Recycled Asphalt Binder (%)	Bin No.8						
1417		HMACP MIXTURE DESIGN : COMBINED GRADATION	Recycled Asphalt Binder (%)	Bin No.9						
1418		HMACP MIXTURE DESIGN : COMBINED GRADATION	Recycled Asphalt Binder (%)	Bin No.10						
1419	0	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual Bin (%):	Bin No.8						
1420	0	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual Bin (%):	Bin No.9						
1421	0	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual Bin (%):	Bin No.10						
1422		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Cum.% Passing	Sieve Size:	3/4"				
1423		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Wtd Cum. %	Sieve Size:	3/4"				
1424		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Cum.% Passing	Sieve Size:	3/4"				
1425		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Wtd Cum. %	Sieve Size:	3/4"				
1426		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Cum.% Passing	Sieve Size:	3/4"				
1427		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Wtd Cum. %	Sieve Size:	3/4"				
1428		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Cum.% Passing	Sieve Size:	1/2"				
1429		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Wtd Cum. %	Sieve Size:	1/2"				
1430		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Cum.% Passing	Sieve Size:	1/2"				
1431		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Wtd Cum. %	Sieve Size:	1/2"				
1432		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Cum.% Passing	Sieve Size:	1/2"				
1433		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Wtd Cum. %	Sieve Size:	1/2"				
1434		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Cum.% Passing	Sieve Size:	3/8"				
1435		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Wtd Cum. %	Sieve Size:	3/8"				
1436		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Cum.% Passing	Sieve Size:	3/8"				
1437		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Wtd Cum. %	Sieve Size:	3/8"				
1438		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Cum.% Passing	Sieve Size:	3/8"				
1439		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Wtd Cum. %	Sieve Size:	3/8"				
1440		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Cum.% Passing	Sieve Size:	No. 4				
1441		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Wtd Cum. %	Sieve Size:	No. 4				
1442		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Cum.% Passing	Sieve Size:	No. 4				
1443		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Wtd Cum. %	Sieve Size:	No. 4				
1444		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Cum.% Passing	Sieve Size:	No. 4				
1445		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Wtd Cum. %	Sieve Size:	No. 4				
1446		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Cum.% Passing	Sieve Size:	No. 10				
1447		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Wtd Cum. %	Sieve Size:	No. 10				
1448		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Cum.% Passing	Sieve Size:	No. 10				
1449		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Wtd Cum. %	Sieve Size:	No. 10				
1450		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Cum.% Passing	Sieve Size:	No. 10				
1451		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Wtd Cum. %	Sieve Size:	No. 10				
1452		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Cum.% Passing	Sieve Size:	No. 40				
1453		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Wtd Cum. %	Sieve Size:	No. 40				
1454		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Cum.% Passing	Sieve Size:	No. 40				
1455		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Wtd Cum. %	Sieve Size:	No. 40				
1456		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Cum.% Passing	Sieve Size:	No. 40				
1457		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Wtd Cum. %	Sieve Size:	No. 40				
1458		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Cum.% Passing	Sieve Size:	No. 80				
1459		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Wtd Cum. %	Sieve Size:	No. 80				
1460		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Cum.% Passing	Sieve Size:	No. 80				
1461		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Wtd Cum. %	Sieve Size:	No. 80				
1462		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Cum.% Passing	Sieve Size:	No. 80				
1463		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Wtd Cum. %	Sieve Size:	No. 80				

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
1464		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Cum.% Passing	Sieve Size:	No. 200				
1465		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Wtd Cum. %	Sieve Size:	No. 200				
1466		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Cum.% Passing	Sieve Size:	No. 200				
1467		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Wtd Cum. %	Sieve Size:	No. 200				
1468		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Cum.% Passing	Sieve Size:	No. 200				
1469		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Wtd Cum. %	Sieve Size:	No. 200				
1470		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Cum.% Passing	Sieve Size:					
1471		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Wtd Cum. %	Sieve Size:					
1472		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Cum.% Passing	Sieve Size:					
1473		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Wtd Cum. %	Sieve Size:					
1474		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Cum.% Passing	Sieve Size:					
1475		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Wtd Cum. %	Sieve Size:					
1476		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Cum.% Passing	Sieve Size:					
1477		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Wtd Cum. %	Sieve Size:					
1478		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Cum.% Passing	Sieve Size:					
1479		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Wtd Cum. %	Sieve Size:					
1480		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Cum.% Passing	Sieve Size:					
1481		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Wtd Cum. %	Sieve Size:					
1482		HMACP MIXTURE DESIGN : COMBINED GRADATION	Hydrated Lime?:	Bin No.1						
1483		HMACP MIXTURE DESIGN : COMBINED GRADATION	Hydrated Lime?:	Bin No.2						
1484		HMACP MIXTURE DESIGN : COMBINED GRADATION	Hydrated Lime?:	Bin No.3						
1485		HMACP MIXTURE DESIGN : COMBINED GRADATION	Hydrated Lime?:	Bin No.4						
1486		HMACP MIXTURE DESIGN : COMBINED GRADATION	Hydrated Lime?:	Bin No.5						
1487		HMACP MIXTURE DESIGN : COMBINED GRADATION	Hydrated Lime?:	Bin No.6						
1488		HMACP MIXTURE DESIGN : COMBINED GRADATION	Hydrated Lime?:	Bin No.7						
1489	0	HMACP MIXTURE DESIGN : COMBINED GRADATION	Ratio of Recycled to Total Binder, %							
1490		HMACP MIXTURE DESIGN : COMBINED GRADATION	Binder Substitution?							
1491		HMACP MIXTURE DESIGN : COMBINED GRADATION	Binder Originally Specified:							
1492		HMACP MIXTURE DESIGN : COMBINED GRADATION	Substitute Binder:							
1493		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Recycled Materials	Tex-217-F, Part III	Max.	Spec. Limit				
1494		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Recycled Materials	Tex-217-F, Part III	Bin No.8	Result				
1495		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Recycled Materials	Tex-217-F, Part III	Bin No.8	Sample ID				
1496		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Recycled Materials	Tex-217-F, Part III	Bin No.9	Result				
1497		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Recycled Materials	Tex-217-F, Part III	Bin No.9	Sample ID				
1498		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Recycled Materials	Tex-217-F, Part III	Bin No.10	Result				
1499		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Recycled Materials	Tex-217-F, Part III	Bin No.10	Sample ID				
1500		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.8	Individual Ret., %	Passing	-	Sieve Size:	Retained	3/4"	
1501		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.8	Individual Ret., %	Passing	3/4"	Sieve Size:	Retained	1/2"	
1502		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.8	Individual Ret., %	Passing	1/2"	Sieve Size:	Retained	3/8"	
1503		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.8	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
1504		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.8	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
1505		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.8	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
1506		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.8	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
1507		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.8	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
1508		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.8	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
1509		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.8	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
1510		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.8	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
1511		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.8	Individual Ret., %	Total:					
1512		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.8	Individual Ret., %	Percent of plus No. 4					
1513		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.9	Individual Ret., %	Passing	-	Sieve Size:	Retained	3/4"	
1514		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.9	Individual Ret., %	Passing	3/4"	Sieve Size:	Retained	1/2"	
1515		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.9	Individual Ret., %	Passing	1/2"	Sieve Size:	Retained	3/8"	
1516		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.9	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
1517		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.9	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
1518		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.9	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
1519		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.9	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
1520		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.9	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
1521		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.9	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
1522		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.9	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
1523		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.9	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
1524		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.9	Individual Ret., %	Total:					

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
1525		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.9	Individual Ret., %	Percent of plus No. 4					
1526		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.10	Individual Ret., %	Passing	-	Sieve Size:	Retained	3/4"	
1527		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.10	Individual Ret., %	Passing	3/4"	Sieve Size:	Retained	1/2"	
1528		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.10	Individual Ret., %	Passing	1/2"	Sieve Size:	Retained	3/8"	
1529		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.10	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
1530		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.10	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
1531		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.10	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
1532		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.10	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
1533		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.10	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
1534		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.10	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
1535		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.10	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
1536		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.10	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
1537		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.10	Individual Ret., %	Total:					
1538		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.10	Individual Ret., %	Percent of plus No. 4					
1539		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	-	Sieve Size:	Retained	3/4"	Bin No.8	
1540		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	-	Sieve Size:	Retained	3/4"	Bin No.9	
1541		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	-	Sieve Size:	Retained	3/4"	Bin No.10	
1542		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/4"	Sieve Size:	Retained	1/2"	Bin No.8	
1543		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/4"	Sieve Size:	Retained	1/2"	Bin No.9	
1544		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/4"	Sieve Size:	Retained	1/2"	Bin No.10	
1545		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	1/2"	Sieve Size:	Retained	3/8"	Bin No.8	
1546		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	1/2"	Sieve Size:	Retained	3/8"	Bin No.9	
1547		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	1/2"	Sieve Size:	Retained	3/8"	Bin No.10	
1548		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.8	
1549		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.9	
1550		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.10	
1551		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.8	
1552		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.9	
1553		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.10	
1554		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.8	
1555		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.9	
1556		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.10	
1557		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.8	
1558		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.9	
1559		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.10	
1560		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.8	
1561		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.9	
1562		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.10	
1563		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.8	
1564		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.9	
1565		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.10	
1566		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.8	
1567		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.9	
1568		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.10	
1569		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.8	
1570		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.9	
1571		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.10	
1572		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Totals	Bin No.8					
1573		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Totals	Bin No.9					
1574		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Totals	Bin No.10					
1575		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	-	Sieve Size:	Retained	3/4"	Bin No.8	
1576		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	-	Sieve Size:	Retained	3/4"	Bin No.9	
1577		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	-	Sieve Size:	Retained	3/4"	Bin No.10	
1578		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/4"	Sieve Size:	Retained	1/2"	Bin No.8	
1579		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/4"	Sieve Size:	Retained	1/2"	Bin No.9	
1580		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/4"	Sieve Size:	Retained	1/2"	Bin No.10	
1581		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	1/2"	Sieve Size:	Retained	3/8"	Bin No.8	
1582		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	1/2"	Sieve Size:	Retained	3/8"	Bin No.9	
1583		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	1/2"	Sieve Size:	Retained	3/8"	Bin No.10	
1584		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.8	
1585		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.9	

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
1586		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.10	
1587		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.8	
1588		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.9	
1589		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.10	
1590		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.8	
1591		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.9	
1592		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.10	
1593		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.8	
1594		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.9	
1595		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.10	
1596		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.8	
1597		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.9	
1598		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.10	
1599		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.8	
1600		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.9	
1601		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.10	
1602		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.8	
1603		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.9	
1604		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.10	
1605		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.8	
1606		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.9	
1607		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.10	
1608	0	HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Binder Ratio (%)						
1609	0	HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Binder Ratio (%)						
1610	0	HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Binder Ratio (%)						
1611	0	HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Binder Ratio (%)						
1612	0	HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Binder Ratio (%)						
1613	0	HMACP MIXTURE DESIGN : SUMMARY SHEET	Binder Ratio @ OAC:							

Grade				Washed Sieve Min	Washed Sieve Max	VMA: Min
A Coarse Base	1-1/2"		37.5	98	100	11
	1"		25	78	94	
	3/4"		19	64	85	
	1/2"		12.5	50	70	
	No. 4		4.75	30	50	
	No. 8		2.36	22	36	
	No. 30		0.6	8	23	
	No. 50		0.3	3	19	
	No. 200		0.075	2	7	
B Fine Base	1"		25	100	100	12
	7/8"		22.4	95	100	
	5/8"		16	75	95	
	3/8"		9.5	60	80	
	No. 4		4.75	40	60	
	No. 10		2	27	40	
	No. 40		0.425	10	25	
	No. 80		0.18	3	13	
	No. 200		0.075	2	8	
C Coarse Surface	1"		25	100	100	13
	7/8"		22.4	100	100	
	3/8"		9.5	70	85	
	No. 4		4.75	43	63	
	No. 10		2	30	40	
	No. 40		0.425	10	25	
	No. 80		0.18	3	13	
	No. 200		0.075	2	8	
D Fine Surface	3/4"		19	100	100	14
	1/2"		12.5	100	100	
	3/8"		9.5	85	100	
	No. 4		4.75	50	70	
	No. 10		2	32	42	
	No. 40		0.425	11	26	
	No. 80		0.18	4	14	
	No. 200		0.075	2	8	
F Fine Mixture	3/4"		19	100	100	15
	3/8"		9.5	98	100	
	No. 4		4.75	70	90	
	No. 8		2.36	38	48	
	No. 30		0.6	12	27	
	No. 50		0.3	6	19	
	No. 200		0.075	2	7	

Grade				restricted	restricted	# of Sieves with Coarse Aggregate
SP-A Base	2"		50	100	100	12.5			
	1-1/2"		37.5	98	100				
	1"		25	90	100				
	3/4"		19	45	90				
	No. 4		4.75	19	90		39.5	39.5	
	No. 8		2.36	19	45		26.8	30.8	
	No. 16		1.18	1	45		18.1	24.1	
	No. 30		0.6	1	45		13.6	17.5	
	No. 50		0.3	1	45		11.4	11.4	
	No. 200		0.075	1	7				6
SP-B Intermediate	1-1/2"		37.5	100	100	13.5			
	1"		25	98	100				
	3/4"		19	90	100				
	1/2"		12.5	49	90				
	No. 4		4.75	23	90				
	No. 8		2.36	23	49		34.6	34.6	
	No. 16		1.18	2	49		22.3	28.3	
	No. 30		0.6	2	49		16.7	20.7	
	No. 50		0.3	2	49		13.7	13.7	
	No. 200		0.075	2	8				6
SP-C Surface	1"		25	100	100	14.5			
	3/4"		19	98	100				
	1/2"		12.5	90	100				
	3/8"		9.5	58	90				
	No. 4		4.75	28	90				
	No. 8		2.36	28	58		39.1	39.1	
	No. 16		1.18	2	58		25.6	31.6	
	No. 30		0.6	2	58		19.1	23.1	
	No. 50		0.3	2	58		15.5	15.5	
	No. 200		0.075	2	10				6
SP-D Fine Mixture	3/4"		19	100	100	15.5			
	1/2"		12.5	98	100				
	3/8"		9.5	90	100				
	No. 4		4.75	32	90				
	No. 8		2.36	32	67		47.2	47.2	
	No. 16		1.18	2	67		31.6	37.6	
	No. 30		0.6	2	67		23.5	27.5	
	No. 50		0.3	2	67		18.7	18.7	
	No. 200		0.075	2	10				5
CMHB-C Coarse Surface	1"		25	100	100	13			
	3/4"		19	98	100				
	1/2"		12.5	72	85				
	3/8"		9.5	50	70				
	No. 4		4.75	30	45				
	No. 8		2.36	17	27				
	No. 16		1.18	5	27				
	No. 30		0.6	5	27				

Goes with power 45 chart.

Sieve Size				Combined Gradation	Lower Spec Limit	Upper Spec Limit
3/4"	19	3.762176102	100	100	100	100
1/2"	12.5	3.116086507	82.82670515	100	100	100
3/8"	9.5	2.754074109	73.2042848	96.732	85	100
No. 4	4.75	2.016100254	53.58867313	65.274	50	70
No. 10	2	1.366040257	36.30984355	37.049	32	42
No. 40	0.425	0.680416785	18.08572396	20.54	11	26
No. 80	0.18	0.462245431	12.28665056	11.989	4	14
No. 200	0.075	0.31172926	8.285876351	4.44	2	8

Recycled Material, %	Virgin Material, %
0.0	100.0

	Recycled Mat List	Total Percent
Fractionated RAP	Fractionated RAP	0
Unfractionated RAP	Unfractionated RAP	0
RAS	RAS	0

Special Provisions
341-024

JUNK FIELD #'S

BINDER SUBSTITUTION											
PG 76-16	PG 70-16	PG 64-16	PG 82-22	PG 76-22	PG 70-22	PG 64-22	PG 58-22	PG 76-28	PG 70-28	PG 64-28	PG 58-28
				PG 70-22	PG 64-22	PG 58-22		PG 70-28	PG 64-28	PG 58-28	
				PG 64-22	PG 58-22			PG 64-28	PG 58-28		

Version: 5/20/2009

WMA Technology	WMA in Design?	Hydrated Lime	Mix Description
Advera	1	0	1
Aspha-Min			
Double Barrel Green			
Evotherm			
Redi-Set WMX			
Sasobit			
Terex			
Maxam			
Ultrafoam GX			

Version:12/01/2009

Sandstone		Limestone-Dolomite		Gravel		Igneous		Synthetic		Aggregate Code
Apple (Sawyer, OK)	0050437	1604	1501506	Canyon	0418814	Bird Hill	1523213	Streetman	1817502	1402702
Brownlee	1402704	Ardmore, OK	0050412	Beck	2110901	Davis, OK.	0050439			1402702
Sawyer, OK	0050447	Balcones Quarry	1504602	Boys Ranch	0418008	Jones Mill	0050122			1402702
		Beckmann	1501503	Broken Bow S & G	0050451	Knippa	1523206			
		Bridgeport	0224904	D and D	2215905	McKelligon-Granite	2407206			
		Brownwood	2302501	Del Rio	2223301	Mill Creek (Grnt), OK.	0050433			
		Burnet	1402701	Galo	2224019	Padre Canyon	2411613			
		Butterfield	2407220	Goode-Anderson	0801701	Porcupine Mountain	0040105			
		Chambers	0224921	Highcard Ranch	2506507	Snyder, OK.	0050435			
		Chapman	1523211	Hoban	0619502	Sweet Home, AR.	0050106			
		Coleman, OK	0050414	Johnson	0411807	Vado	0050310			
		Cooperton, OK	0050415	Las Viboras	2110905					
		Davenport	1523214	Little River	0050114					
		Eastland	2306805	LS Pit	0418002					
		Feld	1424602	Luckett	0916104					
		Gibbs	0901408	Mansfield	0418001					
		Helotes	1501514	Matador	2517309					
		Hondo	1516314	Murphy	1323505					
		Huebner Road	1501507	Pettibone	1716608					
		Hunter	1504605	Pit 365	0916117					
		Rd.	1504606	Pit 424	1716611					
		Lake Bridgeport	0224902	Realitos	2106701					
		Lampasas	1402706	Reavis	2110906					
		Leach	0212001	Showers	2110904					
		Lone Star	1504607	Smith	0325205					
		Marble Falls	1402702	South Noodle	0812803					
		Matrimar	0040103	Stockett	0400604					
		McKelligon Dolo	2407201	Sweet 16	2206706					
		Mico # 68	1516315	Tasitas	2224014					
		Mill Creek, OK	0050445	Thrasher	2517302					
		Naruna	1402711	Woods	0505402					
		Nichols	1516312	Wynn	2215904					
		North Troy	0050448							
		Pate	0914710							
		Perch-Hill	0224901							
		Rankin	0623102							
		Richards Spur	0050405							
		Ruby	1410607							
		S.H. 211	1516310							
		Servtex	1504603							
		South Quarry	2407213							
		Spicewood	1402710							
		Springfield	0212002							
		Stringtown, OK	0050407							
		Tehuacana	0914708							
		Three Rivers	0050501							
		Turner	0722611							
		Weatherford	0218409							
		Weir	1424603							
		Yearwood	1424606							

Version: 2/10/2010

RAS Producer	RAS BIN
APAC- TX Cold Springs	
APAC-TX Gribble Plant	
APAC-TX Leston Plant	
APAC-TX Sunnyvale Plant	
Century Asphalt-Melendy Plant	
R. K. Hall Construction	
Ramming Paving- Buda	
Ramming Paving- Georgetown	
Recon Recycle	
Southwest Shingle Recyc	
Sustainable Pvmt Tech-Pasadena	
Sustainable Pvmt Tech-Schertz	
Waste Management WMAP	

	No. 50		0.3	5	27					
	No. 200		0.075	5	9					6
CMHB-F Fine Surface	3/4"		19	100	100					
	1/2"		12.5	98	100					
	3/8"		9.5	85	100					
	No. 4		4.75	40	60					
	No. 8		2.36	17	27	14				
	No. 16		1.18	5	27					
	No. 30		0.6	5	27					
	No. 50		0.3	5	27					
	No. 200		0.075	5	9					5
SMA-C Coarse	3/4"		19	100	100					
	1/2"		12.5	80	90					
	3/8"		9.5	25	60					
	No. 4		4.75	20	28					
	No. 8		2.36	14	20	17				
	No. 16		1.18	8	20					
	No. 30		0.6	8	20					
	No. 50		0.3	8	20					
	No. 200		0.075	8	12					5
SMA-D Medium	3/4"		19	100	100					
	1/2"		12.5	85	99					
	3/8"		9.5	50	75					
	No. 4		4.75	20	32					
	No. 8		2.36	16	28	17				
	No. 16		1.18	8	28					
	No. 30		0.6	8	28					
	No. 50		0.3	8	28					
	No. 200		0.075	8	12					5
SMA-F Fine	1/2"		12.5	100	100					
	3/8"		9.5	70	90					
	No. 4		4.75	30	50					
	No. 8		2.36	20	30	17				
	No. 16		1.18	8	30					
	No. 30		0.6	8	30					
	No. 50		0.3	8	30					
	No. 200		0.075	8	14					4
SMAR-C Coarse	3/4"		19	100	100					
	1/2"		12.5	72	85					
	3/8"		9.5	50	70					
	No. 4		4.75	30	45					
	No. 8		2.36	17	27	18.5				
	No. 16		1.18	12	22					
	No. 30		0.6	8	20					
	No. 50		0.3	6	15					
	No. 200		0.075	5	9					5
SMAR-F Fine	3/4"		19	100	100					
	3/8"		9.5	95	100					
	No. 4		4.75	40	50					
	No. 8		2.36	17	27	18.5				
	No. 16		1.18	12	22					
	No. 30		0.6	8	20					
	No. 50		0.3	6	15					
	No. 200		0.075	5	9					4
PFC PG 76 Mixtures	3/4"		19	100	100					
	1/2"		12.5	80	100					
	3/8"		9.5	35	60					
	No. 4		4.75	1	20					
	No. 8		2.36	1	10					
	No. 200		0.075	1	4					
PFC A-R Mixtures	3/4"		19	100	100					
	1/2"		12.5	95	100					
	3/8"		9.5	50	80					
	No. 4		4.75	0	8					
	No. 8		2.36	0	4					
	No. 200		0.075	0	4					
Other			#N/A							
			#N/A							
			#N/A							
			#N/A							
			#N/A							
			#N/A							
			#N/A							
			#N/A							
			#N/A							
			#N/A							

							AC CONTENT		Membrane Application Rates		
							MIN	MAX	MIN	MAX	SA Factors
UTBWC-A	3/8"		9.5	100	100						0.41
	No. 4		4.75	35	55						0.41
	No. 8		2.36	19	30						0.82
	No. 16		1.18	14	25		5.0	5.8	0.14	0.19	1.64
	No. 30		0.6	10	18						2.87
	No. 50		0.3	7	14						6.14
	No. 100		0.15	5	10						12.29
	No. 200		0.075	4	6						32.77
UTBWC-B	1/2"		12.5	100	100						0.41
	3/8"		9.5	75	100						-
	No. 4		4.75	22	36						0.41
	No. 8		2.36	19	30						0.82
	No. 16		1.18	14	24		4.8	5.6	0.17	0.24	1.64
	No. 30		0.6	10	18						2.87
	No. 50		0.3	7	14						6.14
	No. 100		0.15	5	10						12.29
	No. 200		0.075	4	6						32.77
UTBWC-C	3/4"		19	100	100						0.41
	1/2"		12.5	75	100						-
	3/8"		9.5	55	80						-
	No. 4		4.75	22	36						0.41
	No. 8		2.36	19	30						0.82
	No. 16		1.18	14	24		4.6	5.6	0.20	0.27	1.64
	No. 30		0.6	10	18						2.87
	No. 50		0.3	7	14						6.14
	No. 100		0.15	5	10						12.29
	No. 200		0.075	4	6						32.77

SS3111-CA Mix	3/8"		9.5	98	100	15.5			6.5	99999999					
	No. 4		4.75	70	90										
	No. 8		2.36	40	65										
	No. 16		1.18	20	45										
	No. 30		0.6	10	30										
	No. 50		0.3	10	20										
	No. 200		0.075	2	10									Min Lab Density	Max Lab Density
JTBHMWC-A	3/8"		9.5	100	100				5.0	5.8	0.14	0.20	0.41	85.0	92.0
	No. 4		4.75	35	55								0.41		
	No. 8		2.36	19	30								0.82		
	No. 16		1.18	14	25								1.64		
	No. 30		0.6	10	18								2.87		
	No. 50		0.3	7	14								6.14		
	No. 100		0.15	5	10								12.29		
	No. 200		0.075	4	6								32.77		
JTBHMWC-B	1/2"		12.5	100	100				4.8	5.6	0.16	0.24	0.41	85.0	92.0
	3/8"		9.5	75	100								-		
	No. 4		4.75	22	36								0.41		
	No. 8		2.36	19	30								0.82		
	No. 16		1.18	14	24								1.64		
	No. 30		0.6	10	18								2.87		
	No. 50		0.3	7	14								6.14		
	No. 100		0.15	5	10								12.29		
	No. 200		0.075	4	6								32.77		
JTBHMWC-C	3/4"		19	100	100				4.6	5.6	0.17	0.27	0.41	85.0	92.0
	1/2"		12.5	75	100								-		
	3/8"		9.5	55	80								-		
	No. 4		4.75	22	36								0.41		
	No. 8		2.36	19	30								0.82		
	No. 16		1.18	14	24								1.64		
	No. 30		0.6	10	18								2.87		
	No. 50		0.3	7	14								6.14		
	No. 100		0.15	5	10								12.29		
	No. 200		0.075	4	6								32.77		
TBPFC PG 76 Mixtures	3/4"		19	100	100				6.0	7.0	0.000	0.000		78.0	82.0
	1/2"		12.5	80	100										
	3/8"		9.5	35	60										
	No. 4		4.75	1	20										
	No. 8		2.36	1	10										
	No. 200		0.075	1	4										
TBPFC A-R Mixtures	3/4"		19	100	100				8.0	10.0	0.000	0.000		78.0	82.0
	1/2"		12.5	95	100										
	3/8"		9.5	50	80										
	No. 4		4.75	0	8										
	No. 8		2.36	0	4										
	No. 200		0.075	0	4										

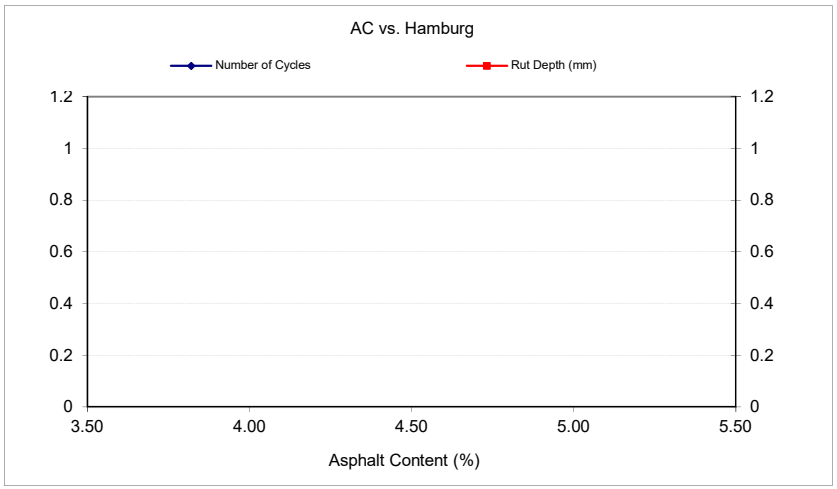
Gradation Table

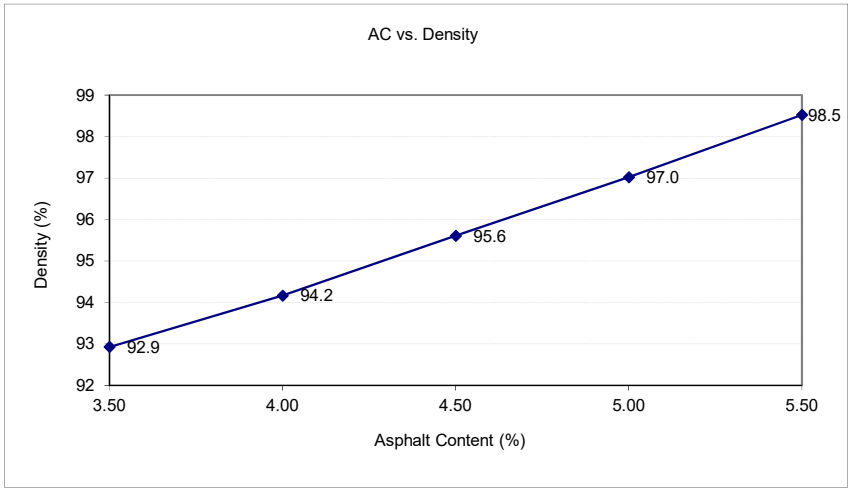
English	Metric	Selection	Size
2"	50 mm	2"	50
1-3/4"	45 mm	1-3/4"	45
1-1/2"	37.5 mm	1-1/2"	37.5
1-1/4"	31.5 mm	1-1/4"	31.5
1"	25 mm	1"	25
7/8"	22.4 mm	7/8"	22.4
3/4"	19 mm	3/4"	19
5/8"	16 mm	5/8"	16
1/2"	12.5 mm	1/2"	12.5
7/16"	11.2 mm	7/16"	11.2
3/8"	9.5 mm	3/8"	9.5
5/16"	8 mm	5/16"	8
1/4"	6.3 mm	1/4"	6.3
No. 4	4.75 mm	No. 4	4.75
No. 6	3.35 mm	No. 6	3.35
No. 8	2.36 mm	No. 8	2.36
No. 10	2 mm	No. 10	2
No. 14	1.4 mm	No. 14	1.4
No. 16	1.18 mm	No. 16	1.18
No. 20	.85 µm	No. 20	0.85
No. 30	.6 µm	No. 30	0.6
No. 40	.425 µm	No. 40	0.425
No. 50	.3 µm	No. 50	0.3
No. 80	.18 µm	No. 80	0.18
No. 100	.15 µm	No. 100	0.15
No. 200	.075 µm	No. 200	0.075

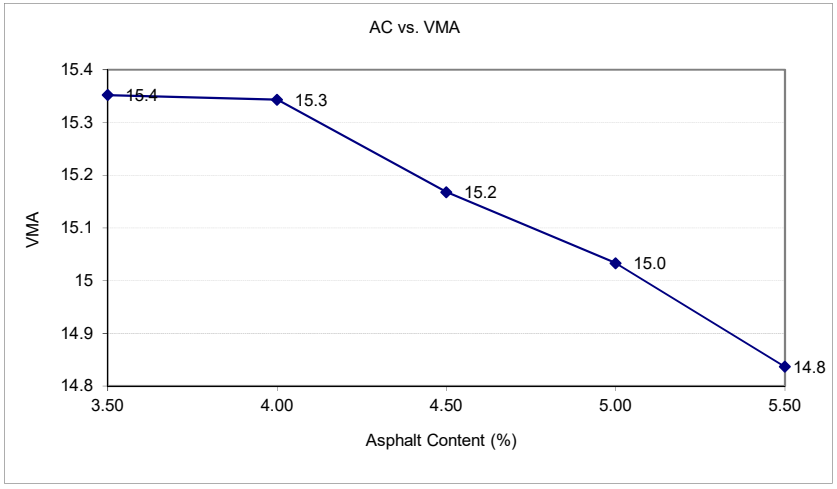
MIX TYPES
ITEM340_A_Coarse_Base
ITEM340_B_Fine_Base
ITEM340_C_Coarse_Surface
ITEM340_D_Fine_Surface
ITEM340_F_Fine_Mixture
ITEM341_A_Coarse_Base
ITEM341_B_Fine_Base
ITEM341_C_Coarse_Surface
ITEM341_D_Fine_Surface
ITEM341_F_Fine_Mixture
ITEM344_SP_A_Base
ITEM344_SP_B_Intermediate
ITEM344_SP_C_Surface
ITEM344_SP_D_Fine_Mixture
ITEM344_CMHB_C_Coarse_Surface
ITEM344_CMHB_F_Fine_Surface
ITEM346_SMA_C_Coarse
ITEM346_SMA_D_Medium
ITEM346_SMA_F_Fine
ITEM346_SMAR_C_Coarse
ITEM346_SMAR_F_Fine
ITEM342_PFC_PG_76_Mixtures
ITEM342_PFC_A_R_Mixtures
ITEM3001_UTBWC_A
ITEM3001_UTBWC_B
ITEM3001_UTBWC_C
SS3111_CA_Mix
ITEM3142_UTBWC_A
ITEM3142_UTBWC_B
ITEM3142_UTBWC_C
CAM
TBPFC_PG76
TBPFC_AR
Other

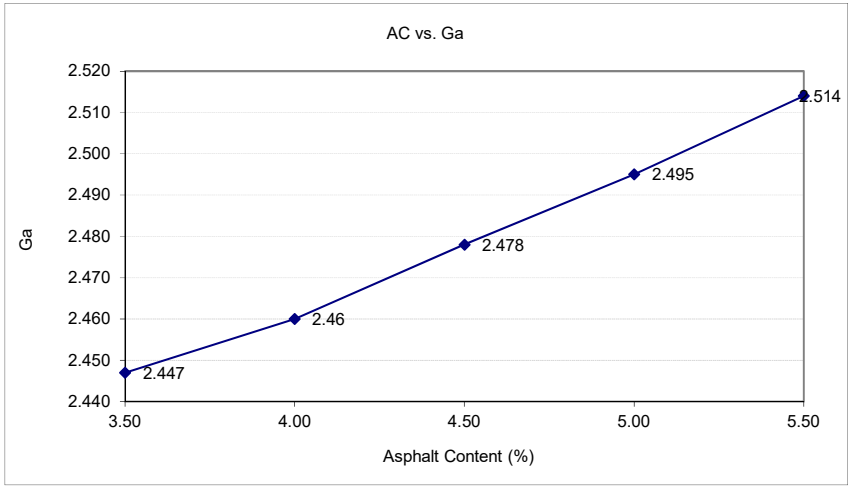
Membrane Application Check
0

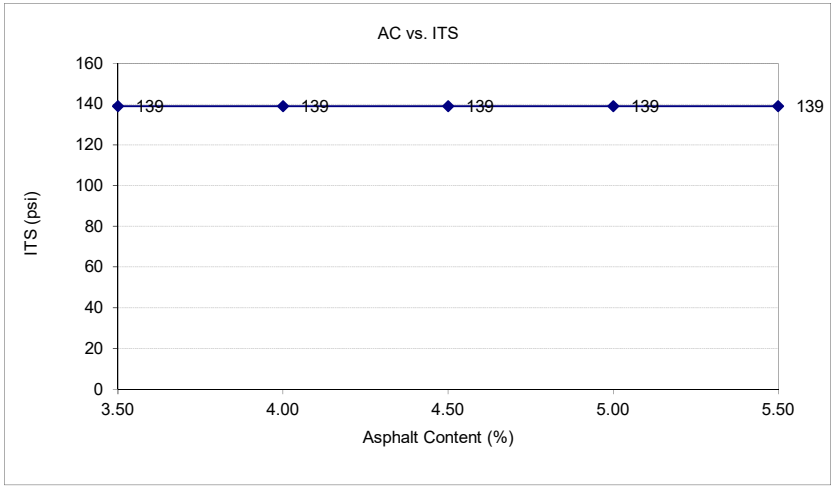
MINIMUM PFC AC CONTENT	
Bulk Specific Gravity	Minimum AC%
0.000	6.0
2.750	6.0
2.800	5.9
2.850	5.8
2.900	5.7
2.950	5.6
3.000	5.5
9999999999.000	5.5

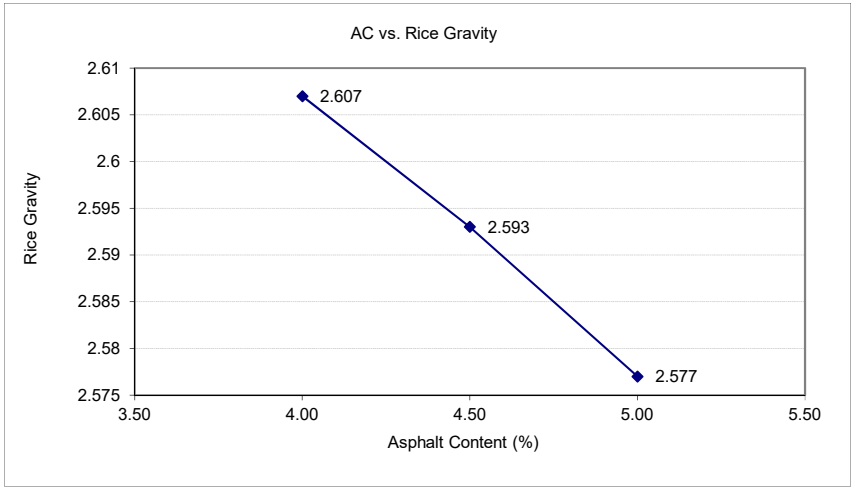

AC vs. Hamburg
Number of Cycles
Rut Depth (mm)
1.2
1
0.8
0.6
0.4
0.2
0
3.50
4.00
4.50
5.00
5.50
Asphalt Content (%)


AC vs. Density
Density (%)
99
98
97
96
95
94
93
92
98.5
97.0
95.6
94.2
92.9
3.50
4.00
4.50
5.00
5.50
Asphalt Content (%)


AC vs. VMA
VMA
15.4
15.3
15.2
15.1
15
14.9
14.8
15.4
15.3
15.2
15.0
14.8
3.50
4.00
4.50
5.00
5.50
Asphalt Content (%)


AC vs. Ga
Ga
2.520
2.510
2.500
2.490
2.480
2.470
2.460
2.450
2.440
2.514
2.495
2.478
2.46
2.447
3.50
4.00
4.50
5.00
5.50
Asphalt Content (%)


AC vs. ITS
ITS (psi)
160
140
120
100
80
60
40
20
0
139
139
139
139
139
3.50
4.00
4.50
5.00
5.50
Asphalt Content (%)


AC vs. Rice Gravity
Rice Gravity
2.61
2.605
2.6
2.595
2.59
2.585
2.58
2.575
2.607
2.593
2.577
3.50
4.00
4.50
5.00
5.50
Asphalt Content (%)

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : COMBINED GRADATION

Refresh Workbook

File Version: 06/07/10 10:24:04

SAMPLE ID:		SAMPLE DATE:	7-26-13
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:		SPEC YEAR:	2004
SAMPLED BY:	WILLIAM CHAMPION #770	SPEC ITEM:	
SAMPLE LOCATION:	Design	SPECIAL PROVISION:	
MATERIAL CODE:	HMAC	MIX TYPE:	ITEM340_C_Coarse_Surface
MATERIAL NAME:	TYPE C HMAC		
PRODUCER:	Texas Materials All Plants	WMA Included in Design?	No
AREA ENGINEER:		PROJECT MANAGER:	WMA TECHNOLOGY:

COURSE\LIFT:	Surface	STATION:		DIST. FROM CL:		CONTRACTOR DESIGN # : 1320C-64

Recycled Binder, %	
Bin No.8 :	0.0
Bin No.9 :	0.0
Bin No.10 :	0.0
Total	0.0

Ratio of Recycled to Total Binder, %
(based on binder percent (%) entered below in this worksheet)
0.0

	AGGREGATE BIN FRACTIONS							"RECYCLED MATERIALS"			
	Bin No.1	Bin No.2	Bin No.3	Bin No.4	Bin No.5	Bin No.6	Bin No.7	Bin No.8	Bin No.9	Bin No.10	
Aggregate Source:	Limestone_Dolom	Limestone_Dolom	Limestone_Dolom	Limestone_Dolom	Gravel						Material Type
Aggregate Pit:	Marble Falls	Marble Falls	Marble Falls	Marble Falls							Material Source
Aggregate Number:	1402702	1402702	1402702	1402702							RAS Type
Sample ID:	C Rock	D Rock	F Rock	Man. Sand	Field Sand						Sample ID
								Recycled Asphalt Binder (%)			
Hydrated Lime?:											
Individual Bin (%):	20.0		26.0		14.0		27.0	13.0			

																				Combined Gradation					
															% of Tot. Mix		% of Tot. Mix		% of Tot. Mix	Total Bin	Lower & Upper Specification Limits			Individual % Retained	Cumulative % Retained	Sieve Size
															% of Aggreg		% of Aggreg		% of Aggreg	100.0%						
Sieve Size:	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum. % Passing	Lower	Upper	Within Spec's			
7/8"	100.0	20.0	100.0	26.0	100.0	14.0	100.0	27.0	100.0	13.0											100.0	100.0	100.0	Yes	0.0	0.0	7/8"
5/8"	89.7	17.9	100.0	26.0	100.0	14.0	100.0	27.0	100.0	13.0											97.9	95.0	100.0	Yes	2.1	2.1	5/8"
3/8"	25.5	5.1	91.4	23.8	100.0	14.0	100.0	27.0	100.0	13.0											82.9	70.0	85.0	Yes	15.1	17.1	3/8"
No. 4	5.6	1.1	24.3	6.3	64.7	9.1	99.9	27.0	99.4	12.9											56.4	43.0	63.0	Yes	26.5	43.6	No. 4
No. 10	3.9	0.8	4.9	1.3	5.5	0.8	71.9	19.4	97.0	12.6											34.8	30.0	40.0	Yes	21.5	65.2	No. 10
No. 40	3.3	0.7	3.2	0.8	2.9	0.4	30.9	8.3	73.1	9.5											19.7	10.0	25.0	Yes	15.1	80.3	No. 40
No. 80	3.0	0.6	2.8	0.7	2.4	0.3	18.3	4.9	38.3	5.0											11.6	3.0	13.0	Yes	8.2	88.4	No. 80
No. 200	2.4	0.5	2.3	0.6	2.0	0.3	4.9	1.3	13.2	1.7											4.4	2.0	8.0	Yes	7.2	95.6	No. 200

(Bold Italic) Not within specifications ***(Bold Italic)*** Not within specificaitons- Restricted Zone *(Italic)* Not cumulative

Lift Thickness, in:		Binder Substitution?		Binder Originally Specified:		Substitute Binder:
Asphalt Source & Grade:	Valero 64-22	Binder Percent, (%):	4.4	Asphalt Spec. Grav.:	1.030	
Antistripping Agent:		Percent, (%):				

Remarks:

Notes:

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : MATERIAL PROPERTIES

File Version: 06/07/10 10:24:04

SAMPLE ID:		SAMPLE DATE:	7-26-13
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:		SPEC YEAR:	2004
SAMPLED BY:	WILLIAM CHAMPION #770	SPEC ITEM:	
SAMPLE LOCATION:	Design	SPECIAL PROVISION:	
MATERIAL CODE:	HMAC	MIX TYPE:	ITEM340_C_Coarse_Surfac
MATERIAL NAME:	TYPE C HMAC		
PRODUCER:	Texas Materials All Plants		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:	Surface	STATION:		DIST. FROM CL:		CONTRACTOR DESIGN # :	1320C-64

	Bin No.1	Bin No.2	Bin No.3	Bin No.4	Bin No.5	Bin No.6	Bin No.7
Individual Bin (%):	Bin No.1 = 20 %	Bin No.2 = 26 %	Bin No.3 = 14 %	Bin No.4 = 27 %	Bin No.5 = 13 %		
Aggregate Source:	Limestone_Dolom	Limestone_Dolom	Limestone_Dolom	Limestone_Dolom	Gravel		
Aggregate Number:	1402702	1402702	1402702	1402702			
Sample ID:	C Rock	D Rock	F Rock	Man. Sand	Field Sand		

Test Name	SiteManager Test Template	Test Method	Spec. Min or Max	Spec. Limit	Result	Sample ID	Result	Sample ID	Result	Sample ID	Result	Sample ID	Result	Sample ID	Result	Sample ID	Result	Sample ID
Stockpile					Bin No.1		Bin No.2		Bin No.3		Bin No.4		Bin No.5		Bin No.6		Bin No.7	
Decantation	Tx217	Tex-217-F	Max.	1.5	0.40		1.00		0.90									
Deleterious Mat'l	Tx217	Tex-217-F	Max.	1.5	0.00		0.00		0.00									
Surface Aggregate Classification	Tx4AgClas	Tex-438-A, Tex-612-J	Min.	B	B		B		B		B							
Magnesium Sulfate Soundness	Tx411M	Tex-411-A	Max.	30	7.00		7.00		7.00		7.00							
LA Abrasion	Tx410	Tex-410-A	Max.	40	30.00		30.00		30.00		30.00							
Crushed Faces Count	Tx460	Tex-460-A	Min.	n/a	n/a		n/a		n/a									
Flat & Elongated	Tx280	Tex-280-F	Max.	10	0.00		0.00		0.00									
Fine Aggregate					Bin No.1		Bin No.2		Bin No.3		Bin No.4		Bin No.5		Bin No.6		Bin No.7	
Bar Linear Shrinkage	Tx107	Tex-107-E	Max.	3							1.00							
Methylene Blue		AASHTO T330	Max.															
Combined Aggregate					Bin No.1		Bin No.2		Bin No.3		Bin No.4		Bin No.5		Bin No.6		Bin No.7	
Sand Equivalent	Tx203	Tex-203-F	Min.	45									68.00					
User Defined Testing					Bin No.1		Bin No.2		Bin No.3		Bin No.4		Bin No.5		Bin No.6		Bin No.7	
Use this area to enter any test methods, speciafications & test result that apply to this material(s) but are not not listed above. **1**																		
2																		
3																		
4																		
5																		
Recycled Materials					**Bin No.8**		**Bin No.9**		**Bin No.10**									
Deleterious Mat'l	Tx217	Tex-217-F, Part III	Max.															

Remarks:

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : Aggregate Classification

File Version: 06/07/10 10:24:04

SAMPLE ID:		SAMPLE DATE:	7-26-13
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:		SPEC YEAR:	2004
SAMPLED BY:	WILLIAM CHAMPION #770	SPEC ITEM:	
SAMPLE LOCATION:	Design	SPECIAL PROVISION:	
MATERIAL CODE:	HMAC	MIX TYPE:	ITEM340_C_Coarse_Surface
MATERIAL NAME:	TYPE C HMAC		
PRODUCER:	Texas Materials All Plants		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:	Surface	STATION:		DIST. FROM CL:		CONTRACTOR DESIGN # :	1320C-64

Aggregate Classification

	Bin No.1	Bin No.2	Bin No.3	Bin No.4	Bin No.5	Bin No.6	Bin No.7	Bin No.8	Bin No.9	Bin No.10
Individual Bin (%):	Bin No.1 = 20 %	Bin No.2 = 26 %	Bin No.3 = 14 %	Bin No.4 = 27 %	Bin No.5 = 13 %					
Aggregate Source:	Limestone_Dolom	Limestone_Dolom	Limestone_Dolom	Limestone_Dolom	Gravel					
Aggregate Number:	1402702	1402702	1402702	1402702						
Class (A) Rock (Y/N):	No	No	No	No	No					
Sieve Size: Passing	Sieve Size: Retained	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %
-	7/8"	0.0	0.0	0.0	0.0	0.0					
7/8"	5/8"	2.1	0.0	0.0	0.0	0.0					
5/8"	3/8"	12.8	2.2	0.0	0.0	0.0					
3/8"	No. 4	4.0	17.4	4.9	0.0	0.1					
No. 4	No. 10	0.3	5.0	8.3	7.6	0.3					
No. 10	No. 40	0.1	0.4	0.4	11.1	3.1					
No. 40	No. 80	0.1	0.1	0.1	3.4	4.5					
No. 80	No. 200	0.1	0.1	0.1	3.6	3.3					
No. 200	Pan	0.5	0.6	0.3	1.3	1.7					
Total:		20.0	26.0	14.0	27.0	13.0					
Percent of plus No. 4		18.9	19.7	4.9	0.0	0.1					

Percent of plus No. 4 from class (A) Rock:	0.0
Total Percent of plus No. 4	43.6
Percent of plus No. 4 from class (A) Rock:	***0.0***

Remarks:

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : BULK GRAVITY

File Version: 06/07/10 10:24:04

SAMPLE ID:		SAMPLE DATE:	7-26-13
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:		SPEC YEAR:	2004
SAMPLED BY:	WILLIAM CHAMPION #770	SPEC ITEM:	
SAMPLE LOCATION:	Design	SPECIAL PROVISION:	
MATERIAL CODE:	HMAC	MIX TYPE:	ITEM340_C_Coarse_Surface
MATERIAL NAME:	TYPE C HMAC		
PRODUCER:	Texas Materials All Plants		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:	Surface	STATION:		DIST. FROM CL:		CONTRACTOR DESIGN # :	1320C-64

	Bin No.1	Bin No.2	Bin No.3	Bin No.4	Bin No.5	Bin No.6	Bin No.7	Bin No.8	Bin No.9	Bin No.10
Individual Bin (%):	Bin No.1 = 20 %	Bin No.2 = 26 %	Bin No.3 = 14 %	Bin No.4 = 27 %	Bin No.5 = 13 %					
Aggregate Source:	Limestone_Dolom	Limestone_Dolom	Limestone_Dolom	Limestone_Dolom	Gravel					
Aggregate Number:	1402702	1402702	1402702	1402702						
Sample ID:	C Rock	D Rock	F Rock	Man. Sand	Field Sand					

Sieve Size:		Bin No.1		Bin No.2		Bin No.3		Bin No.4		Bin No.5		Bin No.6		Bin No.7		Bin No.8		Bin No.9		Bin No.10	
Passing	Retained	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG
	7/8"																				
7/8"	5/8"	10.3	2.788																		
5/8"	3/8"	64.2	2.788	8.6	2.788																
3/8"	No. 4	19.9	2.794	67.1	2.794	35.3	2.794	0.1	2.815	0.6	2.642										
No. 4	No. 10	1.7	2.794	19.4	2.798	59.2	2.798	28.0	2.815	2.4	2.642										
No. 10	No. 40	0.6	2.794	1.7	2.798	2.6	2.798	41.0	2.815	23.9	2.642										
No. 40	No. 80	0.3	2.794	0.4	2.798	0.5	2.798	12.6	2.815	34.8	2.642										
No. 80	No. 200	0.6	2.794	0.5	2.798	0.4	2.798	13.4	2.815	25.1	2.678										
No. 200	Pan	2.4	2.794	2.3	2.798	2.0	2.798	4.9	2.815	13.2	2.678										
Totals		100.0	2.790	100.0	2.794	100.0	2.797	100.0	2.815	100.0	2.656										
			7.2		9.3		5.0		9.6		4.9										

Combined Bulk Specific Gravity:	**2.780**
Coarse Agg. Combined BSG:	

Specific Gravity of Asphalt:	**1.030**

Remarks:

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : SUMMARY SHEET

File Version: 06/07/10 10:24:04

SAMPLE ID:		SAMPLE DATE:	7-26-13
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:		SPEC YEAR:	2004
SAMPLED BY:	WILLIAM CHAMPION #770	SPEC ITEM:	
SAMPLE LOCATION:	Design	SPECIAL PROVISION:	
MATERIAL CODE:	HMAC	MIX TYPE:	ITEM340_C_Coarse_Surface
MATERIAL NAME:	TYPE C HMAC		
PRODUCER:	Texas Materials All Plants		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:	Surface	STATION:		DIST. FROM CL:		CONTRACTOR DESIGN # :	1320C-64

Target Density, %:	**96.0**
Number of Gyrations:	

CRM* Content	

TEST SPECIMENS									**Mixture Evaluation @ Optimum Asphalt Content**			
										Hamburg Wheel Tracking Test		
Asphalt Content (%)	Binder Ratio (%)	Specific Gravity Of Specimen (Ga)	Maximum Specific Gravity (Gr)	Effective Gravity (Ge)	Theo. Max. Specific Gravity (Gt)	Density from Gt (Percent)	VMA (Percent)	Hveem Stability (%)	Indirect Tensile Strength (psi)	Number of cycles	Rut depth (mm)	*Overlay Tester Min. Number of Cycles*
3.5	0.0	2.461	2.622	2.778	2.630	93.6	14.8	53.0				
4.0	0.0	2.479	2.610	2.788	2.609	95.0	14.6	46.0				
4.5	0.0	2.493	2.588	2.787	2.588	96.3	14.6	44.0	137	10,000	7.5	
5.0	0.0	2.510	2.569	2.788	2.568	97.7	14.4	43.0				
5.5	0.0	2.519	2.553	2.793	2.548	98.9	14.6	37.0				

Effective Specific Gravity:	2.787

Estimated Percent of Stripping, %:	

Optimum Asphalt Content :	**4.4**	Binder Ratio @ OAC:	0.0
VMA @ Optimum AC:	**14.6**		

Interpolated Values	
Specific Gravity (Ga):	2.490
Max. Specific Gravity (Gr):	2.593
Theo. Max. Specific Gravity (Gt):	2.593

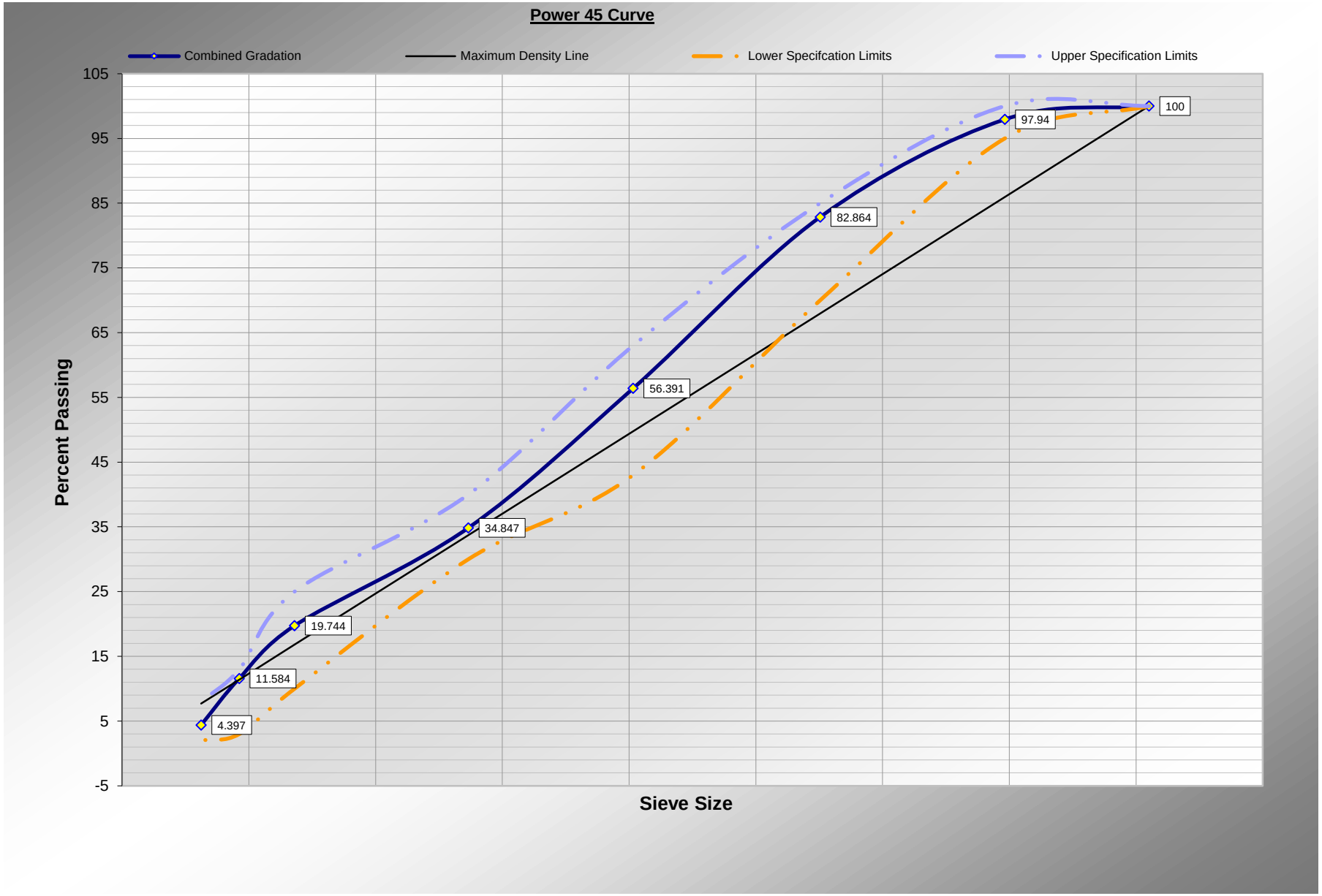
Remarks:

Date	Changes	By
7/20/2005	Add area in the Combined Gradation worksheet to enter in percent fiber for respective PFC and SMA mixtures in cells P42 to S42 Change field# for S42 (on the Combined Gradation worksheet) to Field383, and reference %Fiber value in the Summary sheet to cell S42 Add area in the Combined Gradation worksheet to enter in crumb rubber for respective PFC and SMA mixtures in cells T42 to W42 Change field# for W40 (on the Combined Gradation worksheet) to Field384, and reference % Crumb Rubber value in the Summary sheet to cell W40 Add conditional formatting for percent fiber and percent crumb rubber area so that only effected mixture types are represented on the combined gradation worksheet Add area to enter percent fiber and percent crumb rubber in the Summary worksheet (cell K18) Add field to calculate the weight of fiber or crumb rubber in the Weigh Up worksheet (cells S18 to V20) Add conditional formatting to the fiber and crumb rubber queries in the Weight Up worksheet so that only corresponding mixture types are represented Add sieves: 3/4", 1/2" & 3/8" to the SPA, SPB and SPC mixes, respectively, in the Std Spec GRADATIONS worksheet Set cell F38 in the summary sheet equal to IF(F31="Error","",VLOOKUP(0.075,DUST,16,FALSE)/F31). This will calculate the Dust to Asphalt ratio Add Gr to the densification section in the Summary worksheet Calculate densities in cells Z33 to Z35 on the Summary worksheet by using the Gr instead of the Gt Add "No" to the validation list for cell E42 on the Weigh Up worksheet Addition of "Version" to the Combined Gradation worksheet	Brett Haggerty
	Combined Gradation Worksheet Add UTBWC Types A, B and C options to Mix Type T40 - Add Membrane Target Application Rate, Gal/SY	
	Summary Worksheet Need Draindown and Cantabro Loss for UTBHMWC mix option Add AC%, Ga, Gr, Ge, Gt, Density from Gt, and Film Thickness columns to be used only for Film Thickness calculations in cells B29 to V35	
8/16/2005	Add only two inputs for AC% and Gr in cells B33 & F33, respectively. Add range of acceptable film thickness & AC% at those film thicknesses in cells B37 to AA37 (all calculated fields) Allow AC%, Ga, Gr, Ge, Gt, Density from Gt, and Film Thickness columns to be hidden when not analyzing UTBWC Increase width column for column B to 8.00	Brett Haggerty
	Film Thickness Worksheet Need to create this worksheet to calculate film thickness at each asphalt content. Need to reference data in Summary worksheet Hide this sheet when UTBWC is not selected	
	Std Spec GRADATIONS The Membrane Application Check is necessary for the conditional formatting on the Combined Gradation Worksheet cell T40. Because if a complex algorithm is entered for a second condition format the workbook becomes impossible to open and excel crashes.	
9/21/2005	Specification tolerance for 1" sieve for Type A mix was incorrect. Corrected as specified in Item 341.	Richard Izzo
9/27/2005	Added min & max tolerances for the No. 4 sieve of SP mix types	Richard Izzo
2/14/2006	Changed the location of Fields 521 to 557 & Fields 572 to 587 to M25, these field definitions were orignally found in different locations for different worksheets. Now all of the definitions are identical and reference a dummy cell to prevent the overwrite of other data within the template.	Brett Haggerty
2/15/2006	Added Mixtypes 340-A, 340-B, 340-C, 340-D, & 340-F to the mixtype list, as well as the cell definition to direct mix specifcations. This includes the addition of five new definitions, one for each of the new mixtypes. The addition of the mixtype names to the mixtype definition is also adjusted to include the mixtypes. No other changes were necessary for these mixtypes as they will reference the same limits as the 341 mixtypes.	Brett Haggerty
3/13/2006	Add definitions Field596 to Field636, these are the definitions for the "Other" mixtype that should be stored in Sitemanager databases when accessing previous data.	Brett Haggerty
3/14/2006	Revised minimum specification for percent passing for No. 4 sieve for SP-A, B, C, and D mix types.	Richard Izzo
5/17/2007	Add the new mixtype SS3111 for Crack Attenuating Mixtures	Brett Haggerty
	Matl Properties	

Date	Changes	By	
9/27/2005	B31, F31, H31 - Replaced Flakiness Index with Flat & Elongated. Flakiness Index not required in 2004 specifications.		
	Sumary	Richard Izzo	
	Changed conditional formatting of cells B44 to F47. Font color changed to black.		
9/27/2005	Added VFA calculation at optimum asphalt content in cells B43 & F43. Cells formatted to only show for Item 344.		
	Color of cell B44 changed to distinguish cells above and below when using Item 344 as all cells will have text and may look confusing.		
	Add the Dimensional Analysis for PFC mixtures (these calculations are new, and not adjustments to the old equations)		
	Add the Backcalculated Rice for PFC mixtures (these calculations are new to the sheet and not adjustments to the old equations)		
5/11/2006	Remove the Interpolated Values for UTBWC mixtypes and Mixture Densification	Brett Haggerty	
	Combined Gradation Worksheet		
5/30/2006	Add the Contractor's Design Number to cell V17, as well as the addition of the new field #	Brett Haggerty	
	Update the UPLC to 690		
5/17/2007	Add the Aggregate Pit to the bin information (these cells account for Fields 683-689)	Brett Haggerty	
	Summary Worksheet		
	Include comments for the backcalculated specific gravities when using PFC. This will provide users with a better idea of how to read the specifications		
	Include the new output results, which there are 117 values. This is the resval & resname values. The 117 values are expressed by the ULOV cell		
8/22/2006	Added Field#'s 638-681	Brett Haggerty	
	Change the VFA Conditional Formatting to display when SS3111 mixtype is selected		
	Add new comment to cell H65 to display correct VFA limits if they are not met		
	Change Dust/Asphalt Ratio conditional formatting to display when SS3111 mixtype is selected		
5/17/2007	Add a new entry for the minimum number of cycles using the Overlay Tester. Cell AF24 (Field690)	Brett Haggerty	
	Std Spec GRADATIONS		
	Remove the 3/8" sieve from the Item341-A, Item340-A & Type-A mixtypes		
	Add the number of sieves that contribute to coarse aggreagte to the following mixtypes: SP-A, SP-B, SP-C, SP-D, CMHB-C, CMHB-F, SMA-C, SMA-D, SMA-F, SMAR-C, SMAR-F		
	Combined Gradation Worksheet		
	Add the Dry Rodded Unit Weight cell, "S22". Also because this is an input field, change the ULOV to 682		
	Add a new version number "3" for the calculation of VCA, as opposed to when it was manually entered		
	Bulk Gravity		
	Include the Combined Bulk Specific Gravity for Coarse Aggregate calculation in cell "M40"		
	Summary Worksheet		
10/30/2006	Add the new calculated fields for VCA, "M67" & "M68". And adjust the conditional formatting to account for new version numbers.	Brett Haggerty	
	Weigh Up		
12/2/2006	Adjust Cell L39 to reference only column L in the Combined Gradation Worksheet	Brett Haggerty	
	Power 45 Curve		
5/17/2007	Adjust the macro to place brackets, "{", before and after the graphed data is updated	Brett Haggerty	Allows for compatibility with Excel 2007
	Matl Properties		
	Update cell K28 to remove the overlapping of conditional formatting ranges.		Allows for compatibility with Excel 2007 without significant loss of functionality
5/17/2007	Delete the cell definition "Draindown". This references a cell in a different workbook and causes fidelity errors with Excel 2007.	Brett Haggerty	
	Bulk Gravity		
	Adjusted cells: F39, G39, J39, K39, N39, O39, R39, S39, V39, W39, Z39, AA39, AD39, AE39. This accounts for moved cells		
	Summary Worksheet		
	Update cell F68 to access Target Density cell instead of using an assumed density value of 96%		
	Update cell M72 for the moving of cells & removal of resval definitions		
	Weigh Up		
	Adjust cell O20 to include +/- asphalt from RAP binder		
	Combined Gradation Worksheet		
3/13/2008	Add new version #4 to account for changes	Brett Haggerty	
	Matl Properties		
	Add Methylene Blue to the Fine Aggregate Analysis (Row 36)		

Date	Changes	By
	Add Cell Definitions for the Methylene Blue tests: Field691-Field705	
	Std Spec GRADATIONS	
	Add mixtypes ITEM3142_UTBWC_A, ITEM3142_UTBWC_B, ITEM3142_UTBWC_C	
	Summary Worksheet	
	Hide the "Target Density" cells when any of the Item3142 mixtypes are selected	
	Hide Mixture Evaluation cells (W22:AG30) with the selection of the Item3142 mixtypes	
	Add Final Specimen cells for Item3142 mixtypes in cells B64:M66	
	Add Cell Definitions for final specimen cells AC, Ga & Gr; declared Field706, Field707, & Field708, respectively	
	Declare new row definition (trip_4) for showing/hiding final specimen cells for the Item3142 mixtype	
	Add the Suggested Membrane Target Application Rate cells B68:G68	
	Combined Gradation Worksheet	
	Update the UPLC to 709	
	Update the Film Thickness worksheet show option (located in the Combined Gradation worksheet macros) to include Item3142 mixtypes	
	Film Thickness Worksheet	
	Add Ga and Density from Gt cells for the Item3142 mixtypes, cells: D33:E39 & L33:M39	
	Add conditional formatting for the minimum and maximum film thickness calculations. They now hide with the selection of Item3142 mixtypes. Cells B41:M44.	
	Add AC vs. Film Thickness & AC vs. Density Charts	
	Add cell definition Field709 to cell G63 (predicted AC%)	
4/3/2008	Add the prediction film thickness & prediction density cells, I62:L63	Brett Haggerty
	Summary Worksheet	
5/14/2008	Modified the Overlay Tester results to be hidden if the CAM mixtype is not selected.	Brett Haggerty
	Std Spec GRADATIONS	
	Add the mixtype for "CAM", it is exactly the same as SS3111CA_Mix	
	Add the mixtype for "TBPFC", it is exactly the same as PFC	
	Summary Worksheet	
	Modify the conditional formatting for the overlay tester results to display if the "CAM" mixtype is selected.	
6/5/2008	Modify the conditional formatting for all cells that use the PFC mixtype to include the same formats for TBPFC	Brett Haggerty
	Blank Weigh Up Worksheet	
2/27/2009	Need to create this new worksheet to prepare "blank" samples for the ignition oven correction factors.	Gisel Carrasco
	Combined Gradation Worksheet	
	Fixing equation in Cell O20 FROM: IF(OR(Authorized Date:>39493,AuthorizedDate=""), 4,IF(OR(AuthorizedDate>39022,AuthorizedDate=""), 3,IF(OR(AuthorizedDate>38579,AuthorizedDate=""),2,1))) TO: IF(OR(AuthorizedDate>40333,AuthorizedDate=""),5, IF(OR(AuthorizedDate>39493, AuthorizedDate=""),4, IF(OR(AuthorizedDate>39022,AuthorizedDate=""),3, IF(OR(AuthorizedDate>38579,AuthorizedDate=""),2,1)))) **Using Version #5 after 6/7/2010**	
	Add Item 341-024 to the Special Provision list (specprov). SP 341-024 can be used only when version>4	
	Add WMA technology information. It is required to enter the WMA information (V15), in order to enter aggregate bin percentages.	
	Change mix description cell (E18) to dropdown list	
	Change Aggregate Source, Pit, and Number (E22:Q24) to dropdown lists	
	Hide the Recycled Material row with versions > 4 and show Hydrated Lime row	
	Modify master gradation band limits for the #4 sieve for Type F mixture from 80-86 to 70-90. New limits are used with versions >4 or SP 341-024.	
	Add Bins 8, 9 & 10 for Recycled Materials only. Enter percentage by total mix to calculate percentage by total aggregate.	
	Calculate Recycled Binder for each bin and show Total Recycled Binder Percentage (AB18). Calculate Ratio of Recycled to Total Binder (AA24)	
	Add binder substitution information. Enter originally specified binder (Q43) and substitute binder (V43) when substitute binder is allowed	
	Matl Properties	
	Add Deleterious Material test for the Recycled Material (row 46)	
	Aggregate Classification	
	Add Recycled Materials Bins (8, 9 &10). Don't classify Recycled Materials as Class A Rock.	
	Weigh Up & Bulk Gravity	
	Add Recycled Materials Bins (8, 9 &10).	

Date	Changes	By
	Take CRM calculation out (Cell T19)	
	Summary Worksheet	
	Add Recycled Binder ratio for each asphalt content (C26:C30). Add ratio at OAC (I71).	
	Std Spec GRADATIONS	
	Add specprov table (J24), Recylced Material table (recycledlist), WMA table with approved technologies according to 2009 list (WMATech), aggregate table with approved aggragates and quarries according to Dec2009 list, & binder substitution table.	
4/12/2010	Move "Junk's Field #'s" to cell P24	Gisel Carrasco


Power 45 Curve
Combined Gradation
Maximum Density Line
Lower Specifcation Limits
Upper Specification Limits
105
95
85
75
65
55
45
35
25
15
5
-5
Percent Passing
Sieve Size
4.397
11.584
19.744
34.847
56.391
82.864
97.94
100

If you have any questions or comments concerning this program, or would like to obtain an updated version of this program (if it has been updated) contact the **Site Manager Tier I contact person for the District (District Lab)**. If you have any other concerns or questions contact Richard Izzo at 512-506-5832 or **Brett Haggerty at 512-506-5841** of the Construction Division or you may contact one of the

* **Getting Started**: Begin with the Combined Gradations or Summary sheet. Here you will select dependent variables such as specification year, mix type, asphalt content, combined aggregate, and others. These variable will affect the calculation of other sheets in the workbook.

    - **Spec Year**: Must be 2004

    - **Mix Type**: Select the correct mix type for this lot. Clicking in the green cell, adjacent to the mix type label, will reveal a small dropdown list. From this list select the mix type that most closely matches your mix. This value will determine what sieve sizes are displayed on the worksheets.
      Select Other if mix is not in the list and input parameters as required.
      A button labeled 'Enter Specifications' will appear above the Bin Fractions Table. Click on this button and a small table will appear on the screen labeled 'Other'. Enter the required sieve sizes, maximum and minimum master grading limits, and the required minimum VMA.

* To move from page to page click on the different sheet tabs at the bottom of the page.

1613										
Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
1		Remarks:								
2	Surface	COURSE\LIFT:								
3		Tested By	TX207							
4		Tested Date	TX207							
5		Tested By	TX226							
6		Tested Date	TX226							
7		Tested By	TX227							
8		Tested Date	TX227							
9		Tested By	TX235							
10		Tested Date	TX235							
11		Tested By	TX242							
12		Tested Date	TX242							
13		Tested By	TX530							
14		Tested Date	TX530							
15		Tested By								
16		Tested Date								
17		Tested By								
18		Tested Date								
19	1320C-64	CONTRACTOR DESIGN # :								
20	Limeston	HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Source:	Bin No.1						
21	Limeston	HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Source:	Bin No.2						
22	Limeston	HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Source:	Bin No.3						
23	Limeston	HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Source:	Bin No.4						
24	Gravel	HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Source:	Bin No.5						
25		HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Source:	Bin No.6						
26		HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Source:	Bin No.7						
27	Marble F	HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Pit:	Bin No.1						
28	Marble F	HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Pit:	Bin No.2						
29	Marble F	HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Pit:	Bin No.3						
30	Marble F	HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Pit:	Bin No.4						
31		HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Pit:	Bin No.5						
32		HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Pit:	Bin No.6						
33		HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Pit:	Bin No.7						
34	1402702	HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Number:	Bin No.1						
35	1402702	HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Number:	Bin No.2						
36	1402702	HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Number:	Bin No.3						
37	1402702	HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Number:	Bin No.4						
38		HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Number:	Bin No.5						
39		HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Number:	Bin No.6						
40		HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Number:	Bin No.7						
41	C Rock	HMACP MIXTURE DESIGN : COMBINED GRADATION	Sample ID:	Bin No.1						
42	D Rock	HMACP MIXTURE DESIGN : COMBINED GRADATION	Sample ID:	Bin No.2						
43	F Rock	HMACP MIXTURE DESIGN : COMBINED GRADATION	Sample ID:	Bin No.3						
44	Man. San	HMACP MIXTURE DESIGN : COMBINED GRADATION	Sample ID:	Bin No.4						
45	Field San	HMACP MIXTURE DESIGN : COMBINED GRADATION	Sample ID:	Bin No.5						
46		HMACP MIXTURE DESIGN : COMBINED GRADATION	Sample ID:	Bin No.6						
47		HMACP MIXTURE DESIGN : COMBINED GRADATION	Sample ID:	Bin No.7						
48		HMACP MIXTURE DESIGN : COMBINED GRADATION	Recycled Material?:	Bin No.1						
49		HMACP MIXTURE DESIGN : COMBINED GRADATION	Recycled Material?:	Bin No.2						
50		HMACP MIXTURE DESIGN : COMBINED GRADATION	Recycled Material?:	Bin No.3						
51		HMACP MIXTURE DESIGN : COMBINED GRADATION	Recycled Material?:	Bin No.4						
52		HMACP MIXTURE DESIGN : COMBINED GRADATION	Recycled Material?:	Bin No.5						
53		HMACP MIXTURE DESIGN : COMBINED GRADATION	Recycled Material?:	Bin No.6						
54		HMACP MIXTURE DESIGN : COMBINED GRADATION	Recycled Material?:	Bin No.7						
55		HMACP MIXTURE DESIGN : COMBINED GRADATION	Asphalt%:	Bin No.1						
56		HMACP MIXTURE DESIGN : COMBINED GRADATION	Asphalt%:	Bin No.2						
57		HMACP MIXTURE DESIGN : COMBINED GRADATION	Asphalt%:	Bin No.3						
58		HMACP MIXTURE DESIGN : COMBINED GRADATION	Asphalt%:	Bin No.4						

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
59		HMACP MIXTURE DESIGN : COMBINED GRADATION	Asphalt%:	Bin No.5						
60		HMACP MIXTURE DESIGN : COMBINED GRADATION	Asphalt%:	Bin No.6						
61		HMACP MIXTURE DESIGN : COMBINED GRADATION	Asphalt%:	Bin No.7						
62	20	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual Bin (%):	Bin No.1						
63	26	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual Bin (%):	Bin No.2						
64	14	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual Bin (%):	Bin No.3						
65	27	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual Bin (%):	Bin No.4						
66	13	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual Bin (%):	Bin No.5						
67		HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual Bin (%):	Bin No.6						
68		HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual Bin (%):	Bin No.7						
69		HMACP MIXTURE DESIGN : COMBINED GRADATION	Dry Rodded Unit Weight of Coarse Agg. (pcf)							
70	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Cum.% Passing	Sieve Size:	7/8"				
71	20	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Wtd Cum. %	Sieve Size:	7/8"				
72	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Cum.% Passing	Sieve Size:	7/8"				
73	26	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Wtd Cum. %	Sieve Size:	7/8"				
74	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Cum.% Passing	Sieve Size:	7/8"				
75	14	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Wtd Cum. %	Sieve Size:	7/8"				
76	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Cum.% Passing	Sieve Size:	7/8"				
77	27	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Wtd Cum. %	Sieve Size:	7/8"				
78	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Cum.% Passing	Sieve Size:	7/8"				
79	13	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Wtd Cum. %	Sieve Size:	7/8"				
80		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Cum.% Passing	Sieve Size:	7/8"				
81		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Wtd Cum. %	Sieve Size:	7/8"				
82		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Cum.% Passing	Sieve Size:	7/8"				
83		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Wtd Cum. %	Sieve Size:	7/8"				
84	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Combined Gradation	Cum. % Passing	Sieve Size:	7/8"				
85	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Lower	Sieve Size:	7/8"				
86	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Upper	Sieve Size:	7/8"				
87	Yes	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Within Spec's	Sieve Size:	7/8"				
88		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Lower	Sieve Size:	7/8"				
89		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Upper	Sieve Size:	7/8"				
90		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Within Spec's	Sieve Size:	7/8"				
91	0	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual % Retained	Sieve Size:	7/8"					
92	0	HMACP MIXTURE DESIGN : COMBINED GRADATION	Cumulative % Retained	Sieve Size:	7/8"					
93	89.7	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Cum.% Passing	Sieve Size:	5/8"				
94	17.94	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Wtd Cum. %	Sieve Size:	5/8"				
95	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Cum.% Passing	Sieve Size:	5/8"				
96	26	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Wtd Cum. %	Sieve Size:	5/8"				
97	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Cum.% Passing	Sieve Size:	5/8"				
98	14	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Wtd Cum. %	Sieve Size:	5/8"				
99	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Cum.% Passing	Sieve Size:	5/8"				
100	27	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Wtd Cum. %	Sieve Size:	5/8"				
101	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Cum.% Passing	Sieve Size:	5/8"				
102	13	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Wtd Cum. %	Sieve Size:	5/8"				
103		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Cum.% Passing	Sieve Size:	5/8"				
104		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Wtd Cum. %	Sieve Size:	5/8"				
105		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Cum.% Passing	Sieve Size:	5/8"				
106		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Wtd Cum. %	Sieve Size:	5/8"				
107	97.94	HMACP MIXTURE DESIGN : COMBINED GRADATION	Combined Gradation	Cum. % Passing	Sieve Size:	5/8"				
108	95	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Lower	Sieve Size:	5/8"				
109	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Upper	Sieve Size:	5/8"				
110	Yes	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Within Spec's	Sieve Size:	5/8"				
111		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Lower	Sieve Size:	5/8"				
112		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Upper	Sieve Size:	5/8"				
113		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Within Spec's	Sieve Size:	5/8"				
114	2.06	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual % Retained	Sieve Size:	5/8"					
115	2.06	HMACP MIXTURE DESIGN : COMBINED GRADATION	Cumulative % Retained	Sieve Size:	5/8"					
116	25.5	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Cum.% Passing	Sieve Size:	3/8"				
117	5.1	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Wtd Cum. %	Sieve Size:	3/8"				

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
118	91.4	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Cum.% Passing	Sieve Size:	3/8"				
119	23.764	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Wtd Cum. %	Sieve Size:	3/8"				
120	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Cum.% Passing	Sieve Size:	3/8"				
121	14	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Wtd Cum. %	Sieve Size:	3/8"				
122	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Cum.% Passing	Sieve Size:	3/8"				
123	27	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Wtd Cum. %	Sieve Size:	3/8"				
124	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Cum.% Passing	Sieve Size:	3/8"				
125	13	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Wtd Cum. %	Sieve Size:	3/8"				
126		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Cum.% Passing	Sieve Size:	3/8"				
127		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Wtd Cum. %	Sieve Size:	3/8"				
128		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Cum.% Passing	Sieve Size:	3/8"				
129		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Wtd Cum. %	Sieve Size:	3/8"				
130	82.864	HMACP MIXTURE DESIGN : COMBINED GRADATION	Combined Gradation	Cum. % Passing	Sieve Size:	3/8"				
131	70	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Lower	Sieve Size:	3/8"				
132	85	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Upper	Sieve Size:	3/8"				
133	Yes	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Within Spec's	Sieve Size:	3/8"				
134		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Lower	Sieve Size:	3/8"				
135		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Upper	Sieve Size:	3/8"				
136		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Within Spec's	Sieve Size:	3/8"				
137	15.076	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual % Retained	Sieve Size:	3/8"					
138	17.136	HMACP MIXTURE DESIGN : COMBINED GRADATION	Cumulative % Retained	Sieve Size:	3/8"					
139	5.6	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Cum.% Passing	Sieve Size:	No. 4				
140	1.12	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Wtd Cum. %	Sieve Size:	No. 4				
141	24.3	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Cum.% Passing	Sieve Size:	No. 4				
142	6.318	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Wtd Cum. %	Sieve Size:	No. 4				
143	64.7	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Cum.% Passing	Sieve Size:	No. 4				
144	9.058	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Wtd Cum. %	Sieve Size:	No. 4				
145	99.9	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Cum.% Passing	Sieve Size:	No. 4				
146	26.973	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Wtd Cum. %	Sieve Size:	No. 4				
147	99.4	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Cum.% Passing	Sieve Size:	No. 4				
148	12.922	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Wtd Cum. %	Sieve Size:	No. 4				
149		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Cum.% Passing	Sieve Size:	No. 4				
150		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Wtd Cum. %	Sieve Size:	No. 4				
151		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Cum.% Passing	Sieve Size:	No. 4				
152		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Wtd Cum. %	Sieve Size:	No. 4				
153	56.391	HMACP MIXTURE DESIGN : COMBINED GRADATION	Combined Gradation	Cum. % Passing	Sieve Size:	No. 4				
154	43	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Lower	Sieve Size:	No. 4				
155	63	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Upper	Sieve Size:	No. 4				
156	Yes	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Within Spec's	Sieve Size:	No. 4				
157		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Lower	Sieve Size:	No. 4				
158		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Upper	Sieve Size:	No. 4				
159		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Within Spec's	Sieve Size:	No. 4				
160	26.473	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual % Retained	Sieve Size:	No. 4					
161	43.609	HMACP MIXTURE DESIGN : COMBINED GRADATION	Cumulative % Retained	Sieve Size:	No. 4					
162	3.9	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Cum.% Passing	Sieve Size:	No. 10				
163	0.78	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Wtd Cum. %	Sieve Size:	No. 10				
164	4.9	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Cum.% Passing	Sieve Size:	No. 10				
165	1.274	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Wtd Cum. %	Sieve Size:	No. 10				
166	5.5	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Cum.% Passing	Sieve Size:	No. 10				
167	0.77	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Wtd Cum. %	Sieve Size:	No. 10				
168	71.9	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Cum.% Passing	Sieve Size:	No. 10				
169	19.413	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Wtd Cum. %	Sieve Size:	No. 10				
170	97	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Cum.% Passing	Sieve Size:	No. 10				
171	12.61	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Wtd Cum. %	Sieve Size:	No. 10				
172		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Cum.% Passing	Sieve Size:	No. 10				
173		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Wtd Cum. %	Sieve Size:	No. 10				
174		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Cum.% Passing	Sieve Size:	No. 10				
175		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Wtd Cum. %	Sieve Size:	No. 10				
176	34.847	HMACP MIXTURE DESIGN : COMBINED GRADATION	Combined Gradation	Cum. % Passing	Sieve Size:	No. 10				

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
177	30	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Lower	Sieve Size:	No. 10				
178	40	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Upper	Sieve Size:	No. 10				
179	Yes	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Within Spec's	Sieve Size:	No. 10				
180		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Lower	Sieve Size:	No. 10				
181		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Upper	Sieve Size:	No. 10				
182		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Within Spec's	Sieve Size:	No. 10				
183	21.544	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual % Retained	Sieve Size:	No. 10					
184	65.153	HMACP MIXTURE DESIGN : COMBINED GRADATION	Cumulative % Retained	Sieve Size:	No. 10					
185	3.3	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Cum.% Passing	Sieve Size:	No. 40				
186	0.66	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Wtd Cum. %	Sieve Size:	No. 40				
187	3.2	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Cum.% Passing	Sieve Size:	No. 40				
188	0.832	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Wtd Cum. %	Sieve Size:	No. 40				
189	2.9	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Cum.% Passing	Sieve Size:	No. 40				
190	0.406	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Wtd Cum. %	Sieve Size:	No. 40				
191	30.9	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Cum.% Passing	Sieve Size:	No. 40				
192	8.343	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Wtd Cum. %	Sieve Size:	No. 40				
193	73.1	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Cum.% Passing	Sieve Size:	No. 40				
194	9.503	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Wtd Cum. %	Sieve Size:	No. 40				
195		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Cum.% Passing	Sieve Size:	No. 40				
196		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Wtd Cum. %	Sieve Size:	No. 40				
197		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Cum.% Passing	Sieve Size:	No. 40				
198		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Wtd Cum. %	Sieve Size:	No. 40				
199	19.744	HMACP MIXTURE DESIGN : COMBINED GRADATION	Combined Gradation	Cum. % Passing	Sieve Size:	No. 40				
200	10	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Lower	Sieve Size:	No. 40				
201	25	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Upper	Sieve Size:	No. 40				
202	Yes	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Within Spec's	Sieve Size:	No. 40				
203		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Lower	Sieve Size:	No. 40				
204		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Upper	Sieve Size:	No. 40				
205		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Within Spec's	Sieve Size:	No. 40				
206	15.103	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual % Retained	Sieve Size:	No. 40					
207	80.256	HMACP MIXTURE DESIGN : COMBINED GRADATION	Cumulative % Retained	Sieve Size:	No. 40					
208	3	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Cum.% Passing	Sieve Size:	No. 80				
209	0.6	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Wtd Cum. %	Sieve Size:	No. 80				
210	2.8	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Cum.% Passing	Sieve Size:	No. 80				
211	0.728	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Wtd Cum. %	Sieve Size:	No. 80				
212	2.4	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Cum.% Passing	Sieve Size:	No. 80				
213	0.336	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Wtd Cum. %	Sieve Size:	No. 80				
214	18.3	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Cum.% Passing	Sieve Size:	No. 80				
215	4.941	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Wtd Cum. %	Sieve Size:	No. 80				
216	38.3	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Cum.% Passing	Sieve Size:	No. 80				
217	4.979	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Wtd Cum. %	Sieve Size:	No. 80				
218		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Cum.% Passing	Sieve Size:	No. 80				
219		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Wtd Cum. %	Sieve Size:	No. 80				
220		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Cum.% Passing	Sieve Size:	No. 80				
221		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Wtd Cum. %	Sieve Size:	No. 80				
222	11.584	HMACP MIXTURE DESIGN : COMBINED GRADATION	Combined Gradation	Cum. % Passing	Sieve Size:	No. 80				
223	3	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Lower	Sieve Size:	No. 80				
224	13	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Upper	Sieve Size:	No. 80				
225	Yes	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Within Spec's	Sieve Size:	No. 80				
226		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Lower	Sieve Size:	No. 80				
227		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Upper	Sieve Size:	No. 80				
228		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Within Spec's	Sieve Size:	No. 80				
229	8.16	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual % Retained	Sieve Size:	No. 80					
230	88.416	HMACP MIXTURE DESIGN : COMBINED GRADATION	Cumulative % Retained	Sieve Size:	No. 80					
231	2.4	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Cum.% Passing	Sieve Size:	No. 200				
232	0.48	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Wtd Cum. %	Sieve Size:	No. 200				
233	2.3	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Cum.% Passing	Sieve Size:	No. 200				
234	0.598	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Wtd Cum. %	Sieve Size:	No. 200				
235	2	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Cum.% Passing	Sieve Size:	No. 200				

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
236	0.28	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Wtd Cum. %	Sieve Size:	No. 200				
237	4.9	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Cum.% Passing	Sieve Size:	No. 200				
238	1.323	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Wtd Cum. %	Sieve Size:	No. 200				
239	13.2	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Cum.% Passing	Sieve Size:	No. 200				
240	1.716	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Wtd Cum. %	Sieve Size:	No. 200				
241		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Cum.% Passing	Sieve Size:	No. 200				
242		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Wtd Cum. %	Sieve Size:	No. 200				
243		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Cum.% Passing	Sieve Size:	No. 200				
244		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Wtd Cum. %	Sieve Size:	No. 200				
245	4.397	HMACP MIXTURE DESIGN : COMBINED GRADATION	Combined Gradation	Cum. % Passing	Sieve Size:	No. 200				
246	2	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Lower	Sieve Size:	No. 200				
247	8	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Upper	Sieve Size:	No. 200				
248	Yes	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Within Spec's	Sieve Size:	No. 200				
249		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Lower	Sieve Size:	No. 200				
250		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Upper	Sieve Size:	No. 200				
251		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Within Spec's	Sieve Size:	No. 200				
252	7.187	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual % Retained	Sieve Size:	No. 200					
253	95.603	HMACP MIXTURE DESIGN : COMBINED GRADATION	Cumulative % Retained	Sieve Size:	No. 200					
254		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Cum.% Passing	Sieve Size:					
255		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Wtd Cum. %	Sieve Size:					
256		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Cum.% Passing	Sieve Size:					
257		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Wtd Cum. %	Sieve Size:					
258		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Cum.% Passing	Sieve Size:					
259		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Wtd Cum. %	Sieve Size:					
260		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Cum.% Passing	Sieve Size:					
261		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Wtd Cum. %	Sieve Size:					
262		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Cum.% Passing	Sieve Size:					
263		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Wtd Cum. %	Sieve Size:					
264		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Cum.% Passing	Sieve Size:					
265		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Wtd Cum. %	Sieve Size:					
266		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Cum.% Passing	Sieve Size:					
267		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Wtd Cum. %	Sieve Size:					
268		HMACP MIXTURE DESIGN : COMBINED GRADATION	Combined Gradation	Cum. % Passing	Sieve Size:					
269		HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Lower	Sieve Size:					
270		HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Upper	Sieve Size:					
271		HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Within Spec's	Sieve Size:					
272		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Lower	Sieve Size:					
273		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Upper	Sieve Size:					
274		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Within Spec's	Sieve Size:					
275		HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual % Retained	Sieve Size:						
276		HMACP MIXTURE DESIGN : COMBINED GRADATION	Cumulative % Retained	Sieve Size:						
277		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Cum.% Passing	Sieve Size:					
278		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Wtd Cum. %	Sieve Size:					
279		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Cum.% Passing	Sieve Size:					
280		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Wtd Cum. %	Sieve Size:					
281		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Cum.% Passing	Sieve Size:					
282		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Wtd Cum. %	Sieve Size:					
283		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Cum.% Passing	Sieve Size:					
284		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Wtd Cum. %	Sieve Size:					
285		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Cum.% Passing	Sieve Size:					
286		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Wtd Cum. %	Sieve Size:					
287		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Cum.% Passing	Sieve Size:					
288		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Wtd Cum. %	Sieve Size:					
289		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Cum.% Passing	Sieve Size:					
290		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Wtd Cum. %	Sieve Size:					
291		HMACP MIXTURE DESIGN : COMBINED GRADATION	Combined Gradation	Cum. % Passing	Sieve Size:					
292		HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Lower	Sieve Size:					
293		HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Upper	Sieve Size:					
294		HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Within Spec's	Sieve Size:					

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
295		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Lower	Sieve Size:					
296		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Upper	Sieve Size:					
297		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Within Spec's	Sieve Size:					
298		HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual % Retained	Sieve Size:						
299		HMACP MIXTURE DESIGN : COMBINED GRADATION	Cumulative % Retained	Sieve Size:						
300	Valero 64	HMACP MIXTURE DESIGN : COMBINED GRADATION	Asphalt Source & Grade:							
301	4.4	HMACP MIXTURE DESIGN : COMBINED GRADATION	Binder Percent, (%):							
302	1.03	HMACP MIXTURE DESIGN : COMBINED GRADATION	Asphalt Spec. Grav.:							
303		HMACP MIXTURE DESIGN : COMBINED GRADATION	Membrane Target Application Rate, gal/yd2							
304		HMACP MIXTURE DESIGN : COMBINED GRADATION	Antistripping Agent:							
305		HMACP MIXTURE DESIGN : COMBINED GRADATION	Percent, (%):							
306		HMACP MIXTURE DESIGN : COMBINED GRADATION								
307		HMACP MIXTURE DESIGN : COMBINED GRADATION								
308	1.5	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Max.	Spec. Limit				
309	1.5	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Max.	Spec. Limit				
310	B	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Min.	Spec. Limit				
311	30	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Max.	Spec. Limit				
312	40	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Max.	Spec. Limit				
313	n/a	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Min.	Spec. Limit				
314	10	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Max.	Spec. Limit				
315	3	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Max.	Spec. Limit				
316	45	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Min.	Spec. Limit				
317	0.4	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.1	Result				
318		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.1	Sample ID				
319	1	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.2	Result				
320		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.2	Sample ID				
321	0.9	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.3	Result				
322		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.3	Sample ID				
323		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.4	Result				
324		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.4	Sample ID				
325		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.5	Result				
326		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.5	Sample ID				
327		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.6	Result				
328		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.6	Sample ID				
329		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.7	Result				
330		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.7	Sample ID				
331	0	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.1	Result				
332		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.1	Sample ID				
333	0	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.2	Result				
334		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.2	Sample ID				
335	0	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.3	Result				
336		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.3	Sample ID				
337		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.4	Result				
338		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.4	Sample ID				
339		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.5	Result				
340		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.5	Sample ID				
341		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.6	Result				
342		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.6	Sample ID				
343		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.7	Result				
344		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.7	Sample ID				
345	B	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.1	Result				
346		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.1	Sample ID				
347	B	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.2	Result				
348		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.2	Sample ID				
349	B	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.3	Result				
350		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.3	Sample ID				
351	B	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.4	Result				
352		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.4	Sample ID				
353		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.5	Result				

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
354		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.5	Sample ID				
355		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.6	Result				
356		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.6	Sample ID				
357		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.7	Result				
358		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.7	Sample ID				
359	7	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.1	Result				
360		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.1	Sample ID				
361	7	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.2	Result				
362		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.2	Sample ID				
363	7	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.3	Result				
364		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.3	Sample ID				
365	7	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.4	Result				
366		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.4	Sample ID				
367		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.5	Result				
368		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.5	Sample ID				
369		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.6	Result				
370		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.6	Sample ID				
371		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.7	Result				
372		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.7	Sample ID				
373	30	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.1	Result				
374		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.1	Sample ID				
375	30	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.2	Result				
376		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.2	Sample ID				
377	30	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.3	Result				
378		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.3	Sample ID				
379	30	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.4	Result				
380		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.4	Sample ID				
381		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.5	Result				
382		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.5	Sample ID				
383		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.6	Result				
384		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.6	Sample ID				
385		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.7	Result				
386		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.7	Sample ID				
387	n/a	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.1	Result				
388		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.1	Sample ID				
389	n/a	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.2	Result				
390		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.2	Sample ID				
391	n/a	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.3	Result				
392		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.3	Sample ID				
393		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.4	Result				
394		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.4	Sample ID				
395		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.5	Result				
396		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.5	Sample ID				
397		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.6	Result				
398		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.6	Sample ID				
399		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.7	Result				
400		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.7	Sample ID				
401	0	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.1	Result				
402		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.1	Sample ID				
403	0	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.2	Result				
404		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.2	Sample ID				
405	0	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.3	Result				
406		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.3	Sample ID				
407		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.4	Result				
408		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.4	Sample ID				
409		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.5	Result				
410		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.5	Sample ID				
411		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.6	Result				
412		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.6	Sample ID				

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
413		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.7	Result				
414		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.7	Sample ID				
415		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.1	Result				
416		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.1	Sample ID				
417		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.2	Result				
418		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.2	Sample ID				
419		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.3	Result				
420		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.3	Sample ID				
421	1	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.4	Result				
422		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.4	Sample ID				
423		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.5	Result				
424		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.5	Sample ID				
425		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.6	Result				
426		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.6	Sample ID				
427		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.7	Result				
428		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.7	Sample ID				
429		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.1	Result				
430		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.1	Sample ID				
431		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.2	Result				
432		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.2	Sample ID				
433		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.3	Result				
434		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.3	Sample ID				
435		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.4	Result				
436		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.4	Sample ID				
437	68	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.5	Result				
438		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.5	Sample ID				
439		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.6	Result				
440		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.6	Sample ID				
441		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.7	Result				
442		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.7	Sample ID				
443		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Test Method					
444		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Spec. Min or Max					
445		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Spec. Limit					
446		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.1	Result				
447		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.1	Sample ID				
448		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.2	Result				
449		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.2	Sample ID				
450		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.3	Result				
451		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.3	Sample ID				
452		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.4	Result				
453		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.4	Sample ID				
454		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.5	Result				
455		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.5	Sample ID				
456		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.6	Result				
457		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.6	Sample ID				
458		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.7	Result				
459		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.7	Sample ID				
460		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Test Method					
461		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Spec. Min or Max					
462		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Spec. Limit					
463		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.1	Result				
464		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.1	Sample ID				
465		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.2	Result				
466		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.2	Sample ID				
467		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.3	Result				
468		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.3	Sample ID				
469		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.4	Result				
470		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.4	Sample ID				
471		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.5	Result				

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
472		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.5	Sample ID				
473		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.6	Result				
474		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.6	Sample ID				
475		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.7	Result				
476		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.7	Sample ID				
477		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Test Method					
478		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Spec. Min or Max					
479		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Spec. Limit					
480		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.1	Result				
481		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.1	Sample ID				
482		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.2	Result				
483		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.2	Sample ID				
484		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.3	Result				
485		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.3	Sample ID				
486		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.4	Result				
487		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.4	Sample ID				
488		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.5	Result				
489		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.5	Sample ID				
490		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.6	Result				
491		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.6	Sample ID				
492		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.7	Result				
493		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.7	Sample ID				
494		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Test Method					
495		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Spec. Min or Max					
496		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Spec. Limit					
497		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.1	Result				
498		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.1	Sample ID				
499		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.2	Result				
500		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.2	Sample ID				
501		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.3	Result				
502		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.3	Sample ID				
503		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.4	Result				
504		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.4	Sample ID				
505		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.5	Result				
506		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.5	Sample ID				
507		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.6	Result				
508		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.6	Sample ID				
509		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.7	Result				
510		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.7	Sample ID				
511		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Test Method					
512		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Spec. Min or Max					
513		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Spec. Limit					
514		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.1	Result				
515		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.1	Sample ID				
516		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.2	Result				
517		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.2	Sample ID				
518		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.3	Result				
519		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.3	Sample ID				
520		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.4	Result				
521		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.4	Sample ID				
522		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.5	Result				
523		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.5	Sample ID				
524		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.6	Result				
525		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.6	Sample ID				
526		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.7	Result				
527		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.7	Sample ID				
528		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Remarks:							
529	No	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Class (A) Rock (Y/N):						
530	0	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Individual Ret., %	Passing	-	Sieve Size:	Retained	7/8"	

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
531	2.06	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Individual Ret., %	Passing	7/8"	Sieve Size:	Retained	5/8"	
532	12.84	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Individual Ret., %	Passing	5/8"	Sieve Size:	Retained	3/8"	
533	3.98	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
534	0.34	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
535	0.12	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
536	0.06	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
537	0.12	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
538	0.48	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
539		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
540		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
541	20	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Individual Ret., %	Total:					
542	18.88	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Individual Ret., %	Percent of plus No. 4					
543	No	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Class (A) Rock (Y/N):						
544	0	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Individual Ret., %	Passing	-	Sieve Size:	Retained	7/8"	
545	0	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Individual Ret., %	Passing	7/8"	Sieve Size:	Retained	5/8"	
546	2.236	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Individual Ret., %	Passing	5/8"	Sieve Size:	Retained	3/8"	
547	17.446	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
548	5.044	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
549	0.442	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
550	0.104	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
551	0.13	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
552	0.598	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
553		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
554		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
555	26	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Individual Ret., %	Total:					
556	19.682	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Individual Ret., %	Percent of plus No. 4					
557	No	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Class (A) Rock (Y/N):						
558	-2E-15	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Individual Ret., %	Passing	-	Sieve Size:	Retained	7/8"	
559	0	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Individual Ret., %	Passing	7/8"	Sieve Size:	Retained	5/8"	
560	0	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Individual Ret., %	Passing	5/8"	Sieve Size:	Retained	3/8"	
561	4.942	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
562	8.288	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
563	0.364	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
564	0.07	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
565	0.056	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
566	0.28	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
567		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
568		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
569	14	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Individual Ret., %	Total:					
570	4.942	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Individual Ret., %	Percent of plus No. 4					
571	No	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Class (A) Rock (Y/N):						
572	0	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Individual Ret., %	Passing	-	Sieve Size:	Retained	7/8"	
573	0	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Individual Ret., %	Passing	7/8"	Sieve Size:	Retained	5/8"	
574	0	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Individual Ret., %	Passing	5/8"	Sieve Size:	Retained	3/8"	
575	0.027	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
576	7.56	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
577	11.07	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
578	3.402	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
579	3.618	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
580	1.323	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
581		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
582		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
583	27	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Individual Ret., %	Total:					
584	0.027	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Individual Ret., %	Percent of plus No. 4					
585	No	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Class (A) Rock (Y/N):						
586	0	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Individual Ret., %	Passing	-	Sieve Size:	Retained	7/8"	
587	0	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Individual Ret., %	Passing	7/8"	Sieve Size:	Retained	5/8"	
588	0	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Individual Ret., %	Passing	5/8"	Sieve Size:	Retained	3/8"	
589	0.078	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
590	0.312	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
591	3.107	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
592	4.524	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
593	3.263	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
594	1.716	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
595		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
596		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
597	13	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Individual Ret., %	Total:					
598	0.078	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Individual Ret., %	Percent of plus No. 4					
599		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Class (A) Rock (Y/N):						
600		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Individual Ret., %	Passing	-	Sieve Size:	Retained	7/8"	
601		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Individual Ret., %	Passing	7/8"	Sieve Size:	Retained	5/8"	
602		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Individual Ret., %	Passing	5/8"	Sieve Size:	Retained	3/8"	
603		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
604		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
605		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
606		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
607		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
608		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
609		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
610		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
611		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Individual Ret., %	Total:					
612		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Individual Ret., %	Percent of plus No. 4					
613		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Class (A) Rock (Y/N):						
614		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Individual Ret., %	Passing	-	Sieve Size:	Retained	7/8"	
615		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Individual Ret., %	Passing	7/8"	Sieve Size:	Retained	5/8"	
616		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Individual Ret., %	Passing	5/8"	Sieve Size:	Retained	3/8"	
617		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
618		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
619		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
620		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
621		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
622		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
623		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
624		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
625		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Individual Ret., %	Total:					
626		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Individual Ret., %	Percent of plus No. 4					
627		HMACP MIXTURE DESIGN : Aggregate Classification	Remarks:							
628	5000	HMACP MIXTURE DESIGN : WEIGH UP SHEET	Aggregate Weight, g:							
629	230.126	HMACP MIXTURE DESIGN : WEIGH UP SHEET	4.4% Asphalt by Total Weight, g:							
630	5230.13	HMACP MIXTURE DESIGN : WEIGH UP SHEET	Total Weight, g:							
631	230.126	HMACP MIXTURE DESIGN : WEIGH UP SHEET	4.4% Asphalt by Total Weight, g:							
632	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	Less Asphalt by Weight of Recycled Material, g:							
633	230.126	HMACP MIXTURE DESIGN : WEIGH UP SHEET	(Valero 64-22) Asphalt to Add, g:							
634	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET								
635	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	-	Sieve Size:	Retained	7/8"	Bin No.1	Aggregate Weight
636	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	-	Sieve Size:	Retained	7/8"	Bin No.2	Aggregate Weight
637	-9E-14	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	-	Sieve Size:	Retained	7/8"	Bin No.3	Aggregate Weight
638	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	-	Sieve Size:	Retained	7/8"	Bin No.4	Aggregate Weight
639	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	-	Sieve Size:	Retained	7/8"	Bin No.5	Aggregate Weight
640		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	-	Sieve Size:	Retained	7/8"	Bin No.6	
641		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	-	Sieve Size:	Retained	7/8"	Bin No.7	
642	-9E-14	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	-	Sieve Size:	Retained	7/8"	Total Weights	
643	-2E-15	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	-	Sieve Size:	Retained	7/8"	IndividualRetained, %	
644	-2E-15	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	-	Sieve Size:	Retained	7/8"	Cumulative Retained, %	
645	103	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.1	Aggregate Weight
646	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.2	Aggregate Weight
647	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.3	Aggregate Weight
648	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.4	Aggregate Weight

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
649	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.5	Aggregate Weight
650		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.6	
651		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.7	
652	103	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Total Weights	
653	2.06	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	IndividualRetained, %	
654	2.06	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Cumulative Retained, %	
655	642	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.1	Aggregate Weight
656	111.8	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.2	Aggregate Weight
657	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.3	Aggregate Weight
658	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.4	Aggregate Weight
659	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.5	Aggregate Weight
660		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.6	
661		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.7	
662	753.8	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Total Weights	
663	15.076	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	IndividualRetained, %	
664	17.136	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Cumulative Retained, %	
665	199	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.1	Aggregate Weight
666	872.3	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.2	Aggregate Weight
667	247.1	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.3	Aggregate Weight
668	1.35	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.4	Aggregate Weight
669	3.9	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.5	Aggregate Weight
670		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.6	
671		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.7	
672	1323.65	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Total Weights	
673	26.473	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	IndividualRetained, %	
674	43.609	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Cumulative Retained, %	
675	17	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.1	Aggregate Weight
676	252.2	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.2	Aggregate Weight
677	414.4	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.3	Aggregate Weight
678	378	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.4	Aggregate Weight
679	15.6	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.5	Aggregate Weight
680		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.6	
681		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.7	
682	1077.2	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Total Weights	
683	21.544	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	IndividualRetained, %	
684	65.153	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Cumulative Retained, %	
685	6	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.1	Aggregate Weight
686	22.1	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.2	Aggregate Weight
687	18.2	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.3	Aggregate Weight
688	553.5	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.4	Aggregate Weight
689	155.35	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.5	Aggregate Weight
690		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.6	
691		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.7	
692	755.15	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Total Weights	
693	15.103	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	IndividualRetained, %	
694	80.256	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Cumulative Retained, %	
695	3	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.1	Aggregate Weight
696	5.2	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.2	Aggregate Weight
697	3.5	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.3	Aggregate Weight
698	170.1	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.4	Aggregate Weight
699	226.2	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.5	Aggregate Weight
700		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.6	
701		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.7	
702	408	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Total Weights	
703	8.16	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	IndividualRetained, %	
704	88.416	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Cumulative Retained, %	
705	6	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.1	Aggregate Weight
706	6.5	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.2	Aggregate Weight
707	2.8	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.3	Aggregate Weight

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
708	180.9	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.4	Aggregate Weight
709	163.15	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.5	Aggregate Weight
710		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.6	
711		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.7	
712	359.35	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Total Weights	
713	7.187	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	IndividualRetained, %	
714	95.603	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Cumulative Retained, %	
715	24	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.1	Aggregate Weight
716	29.9	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.2	Aggregate Weight
717	14	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.3	Aggregate Weight
718	66.15	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.4	Aggregate Weight
719	85.8	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.5	Aggregate Weight
720		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.6	
721		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.7	
722	219.85	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Total Weights	
723	4.397	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	IndividualRetained, %	
724	100	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Cumulative Retained, %	
725		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.1	Aggregate Weight
726		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.2	Aggregate Weight
727		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.3	Aggregate Weight
728		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.4	Aggregate Weight
729		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.5	Aggregate Weight
730		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.6	
731		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.7	
732		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Total Weights	
733		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	IndividualRetained, %	
734		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Cumulative Retained, %	
735		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.1	Aggregate Weight
736		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.2	Aggregate Weight
737		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.3	Aggregate Weight
738		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.4	Aggregate Weight
739		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.5	Aggregate Weight
740		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.6	
741		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.7	
742		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Total Weights	
743		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	IndividualRetained, %	
744		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Cumulative Retained, %	
745	1000	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Totals	Bin No.1	Aggregate Weight				
746	1300	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Totals	Bin No.2	Aggregate Weight				
747	700	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Totals	Bin No.3	Aggregate Weight				
748	1350	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Totals	Bin No.4	Aggregate Weight				
749	650	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Totals	Bin No.5	Aggregate Weight				
750		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Totals	Bin No.6					
751		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Totals	Bin No.7					
752	5000	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Totals	Total Weights					
753		HMACP MIXTURE DESIGN : WEIGH UP SHEET	Running Total:							
754	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	-	Sieve Size:	Retained	7/8"	Bin No.1	Aggregate Weight
755	1000	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	-	Sieve Size:	Retained	7/8"	Bin No.2	Aggregate Weight
756	2300	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	-	Sieve Size:	Retained	7/8"	Bin No.3	Aggregate Weight
757	3000	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	-	Sieve Size:	Retained	7/8"	Bin No.4	Aggregate Weight
758	4350	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	-	Sieve Size:	Retained	7/8"	Bin No.5	Aggregate Weight
759		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	-	Sieve Size:	Retained	7/8"	Bin No.6	
760		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	-	Sieve Size:	Retained	7/8"	Bin No.7	
761	-9E-14	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	-	Sieve Size:	Retained	7/8"	Total Weights	
762	103	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.1	Aggregate Weight
763	1000	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.2	Aggregate Weight
764	2300	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.3	Aggregate Weight
765	3000	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.4	Aggregate Weight
766	4350	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.5	Aggregate Weight

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
767		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.6	
768		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.7	
769	103	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	7/8"	Sieve Size:	Retained	5/8"	Total Weights	
770	745	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.1	Aggregate Weight
771	1111.8	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.2	Aggregate Weight
772	2300	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.3	Aggregate Weight
773	3000	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.4	Aggregate Weight
774	4350	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.5	Aggregate Weight
775		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.6	
776		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.7	
777	856.8	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	5/8"	Sieve Size:	Retained	3/8"	Total Weights	
778	944	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.1	Aggregate Weight
779	1984.1	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.2	Aggregate Weight
780	2547.1	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.3	Aggregate Weight
781	3001.35	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.4	Aggregate Weight
782	4353.9	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.5	Aggregate Weight
783		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.6	
784		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.7	
785	2180.45	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Total Weights	
786	961	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.1	Aggregate Weight
787	2236.3	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.2	Aggregate Weight
788	2961.5	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.3	Aggregate Weight
789	3379.35	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.4	Aggregate Weight
790	4369.5	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.5	Aggregate Weight
791		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.6	
792		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.7	
793	3257.65	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Total Weights	
794	967	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.1	Aggregate Weight
795	2258.4	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.2	Aggregate Weight
796	2979.7	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.3	Aggregate Weight
797	3932.85	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.4	Aggregate Weight
798	4524.85	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.5	Aggregate Weight
799		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.6	
800		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.7	
801	4012.8	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Total Weights	
802	970	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.1	Aggregate Weight
803	2263.6	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.2	Aggregate Weight
804	2983.2	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.3	Aggregate Weight
805	4102.95	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.4	Aggregate Weight
806	4751.05	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.5	Aggregate Weight
807		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.6	
808		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.7	
809	4420.8	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Total Weights	
810	976	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.1	Aggregate Weight
811	2270.1	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.2	Aggregate Weight
812	2986	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.3	Aggregate Weight
813	4283.85	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.4	Aggregate Weight
814	4914.2	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.5	Aggregate Weight
815		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.6	
816		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.7	
817	4780.15	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Total Weights	
818	1000	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.1	Aggregate Weight
819	2300	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.2	Aggregate Weight
820	3000	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.3	Aggregate Weight
821	4350	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.4	Aggregate Weight
822	5000	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.5	Aggregate Weight
823		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.6	
824		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.7	
825	5000	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Total Weights	

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
826		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.1	Aggregate Weight
827		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.2	Aggregate Weight
828		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.3	Aggregate Weight
829		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.4	Aggregate Weight
830		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.5	Aggregate Weight
831		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.6	
832		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.7	
833		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Total Weights	
834		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.1	Aggregate Weight
835		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.2	Aggregate Weight
836		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.3	Aggregate Weight
837		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.4	Aggregate Weight
838		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.5	Aggregate Weight
839		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.6	
840		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.7	
841		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Total Weights	
842		HMACP MIXTURE DESIGN : WEIGH UP SHEET	Remarks:							
843		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Individual Ret., %	Passing		Sieve Size:	Retained	7/8"	
844		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Bulk SG	Passing		Sieve Size:	Retained	7/8"	
845	10.3	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Individual Ret., %	Passing	7/8"	Sieve Size:	Retained	5/8"	
846	2.788	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Bulk SG	Passing	7/8"	Sieve Size:	Retained	5/8"	
847	64.2	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Individual Ret., %	Passing	5/8"	Sieve Size:	Retained	3/8"	
848	2.788	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Bulk SG	Passing	5/8"	Sieve Size:	Retained	3/8"	
849	19.9	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
850	2.794	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Bulk SG	Passing	3/8"	Sieve Size:	Retained	No. 4	
851	1.7	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
852	2.794	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Bulk SG	Passing	No. 4	Sieve Size:	Retained	No. 10	
853	0.6	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
854	2.794	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Bulk SG	Passing	No. 10	Sieve Size:	Retained	No. 40	
855	0.3	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
856	2.794	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Bulk SG	Passing	No. 40	Sieve Size:	Retained	No. 80	
857	0.6	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
858	2.794	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Bulk SG	Passing	No. 80	Sieve Size:	Retained	No. 200	
859	2.4	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
860	2.794	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Bulk SG	Passing	No. 200	Sieve Size:	Retained	Pan	
861		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
862		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Bulk SG	Passing		Sieve Size:	Retained	Pan	
863		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
864		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Bulk SG	Passing		Sieve Size:	Retained	Pan	
865	100	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Individual Ret., %	Totals					
866	2.78953	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Bulk SG	Totals					
867		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Individual Ret., %	Passing		Sieve Size:	Retained	7/8"	
868		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Bulk SG	Passing		Sieve Size:	Retained	7/8"	
869	0	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Individual Ret., %	Passing	7/8"	Sieve Size:	Retained	5/8"	
870		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Bulk SG	Passing	7/8"	Sieve Size:	Retained	5/8"	
871	8.6	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Individual Ret., %	Passing	5/8"	Sieve Size:	Retained	3/8"	
872	2.788	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Bulk SG	Passing	5/8"	Sieve Size:	Retained	3/8"	
873	67.1	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
874	2.794	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Bulk SG	Passing	3/8"	Sieve Size:	Retained	No. 4	
875	19.4	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
876	2.798	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Bulk SG	Passing	No. 4	Sieve Size:	Retained	No. 10	
877	1.7	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
878	2.798	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Bulk SG	Passing	No. 10	Sieve Size:	Retained	No. 40	
879	0.4	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
880	2.798	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Bulk SG	Passing	No. 40	Sieve Size:	Retained	No. 80	
881	0.5	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
882	2.798	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Bulk SG	Passing	No. 80	Sieve Size:	Retained	No. 200	
883	2.3	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
884	2.798	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Bulk SG	Passing	No. 200	Sieve Size:	Retained	Pan	

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
885		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
886		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Bulk SG	Passing		Sieve Size:	Retained	Pan	
887		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
888		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Bulk SG	Passing		Sieve Size:	Retained	Pan	
889	100	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Individual Ret., %	Totals					
890	2.79445	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Bulk SG	Totals					
891		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Individual Ret., %	Passing		Sieve Size:	Retained	7/8"	
892		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Bulk SG	Passing		Sieve Size:	Retained	7/8"	
893	0	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Individual Ret., %	Passing	7/8"	Sieve Size:	Retained	5/8"	
894		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Bulk SG	Passing	7/8"	Sieve Size:	Retained	5/8"	
895	0	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Individual Ret., %	Passing	5/8"	Sieve Size:	Retained	3/8"	
896		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Bulk SG	Passing	5/8"	Sieve Size:	Retained	3/8"	
897	35.3	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
898	2.794	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Bulk SG	Passing	3/8"	Sieve Size:	Retained	No. 4	
899	59.2	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
900	2.798	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Bulk SG	Passing	No. 4	Sieve Size:	Retained	No. 10	
901	2.6	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
902	2.798	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Bulk SG	Passing	No. 10	Sieve Size:	Retained	No. 40	
903	0.5	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
904	2.798	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Bulk SG	Passing	No. 40	Sieve Size:	Retained	No. 80	
905	0.4	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
906	2.798	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Bulk SG	Passing	No. 80	Sieve Size:	Retained	No. 200	
907	2	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
908	2.798	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Bulk SG	Passing	No. 200	Sieve Size:	Retained	Pan	
909		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
910		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Bulk SG	Passing		Sieve Size:	Retained	Pan	
911		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
912		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Bulk SG	Passing		Sieve Size:	Retained	Pan	
913	100	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Individual Ret., %	Totals					
914	2.79659	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Bulk SG	Totals					
915		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Individual Ret., %	Passing		Sieve Size:	Retained	7/8"	
916		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Bulk SG	Passing		Sieve Size:	Retained	7/8"	
917	0	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Individual Ret., %	Passing	7/8"	Sieve Size:	Retained	5/8"	
918		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Bulk SG	Passing	7/8"	Sieve Size:	Retained	5/8"	
919	0	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Individual Ret., %	Passing	5/8"	Sieve Size:	Retained	3/8"	
920		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Bulk SG	Passing	5/8"	Sieve Size:	Retained	3/8"	
921	0.1	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
922	2.815	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Bulk SG	Passing	3/8"	Sieve Size:	Retained	No. 4	
923	28	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
924	2.815	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Bulk SG	Passing	No. 4	Sieve Size:	Retained	No. 10	
925	41	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
926	2.815	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Bulk SG	Passing	No. 10	Sieve Size:	Retained	No. 40	
927	12.6	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
928	2.815	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Bulk SG	Passing	No. 40	Sieve Size:	Retained	No. 80	
929	13.4	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
930	2.815	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Bulk SG	Passing	No. 80	Sieve Size:	Retained	No. 200	
931	4.9	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
932	2.815	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Bulk SG	Passing	No. 200	Sieve Size:	Retained	Pan	
933		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
934		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Bulk SG	Passing		Sieve Size:	Retained	Pan	
935		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
936		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Bulk SG	Passing		Sieve Size:	Retained	Pan	
937	100	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Individual Ret., %	Totals					
938	2.815	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Bulk SG	Totals					
939		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Individual Ret., %	Passing		Sieve Size:	Retained	7/8"	
940		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Bulk SG	Passing		Sieve Size:	Retained	7/8"	
941	0	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Individual Ret., %	Passing	7/8"	Sieve Size:	Retained	5/8"	
942		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Bulk SG	Passing	7/8"	Sieve Size:	Retained	5/8"	
943	0	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Individual Ret., %	Passing	5/8"	Sieve Size:	Retained	3/8"	

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
944		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Bulk SG	Passing	5/8"	Sieve Size:	Retained	3/8"	
945	0.6	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
946	2.642	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Bulk SG	Passing	3/8"	Sieve Size:	Retained	No. 4	
947	2.4	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
948	2.642	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Bulk SG	Passing	No. 4	Sieve Size:	Retained	No. 10	
949	23.9	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
950	2.642	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Bulk SG	Passing	No. 10	Sieve Size:	Retained	No. 40	
951	34.8	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
952	2.642	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Bulk SG	Passing	No. 40	Sieve Size:	Retained	No. 80	
953	25.1	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
954	2.678	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Bulk SG	Passing	No. 80	Sieve Size:	Retained	No. 200	
955	13.2	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
956	2.678	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Bulk SG	Passing	No. 200	Sieve Size:	Retained	Pan	
957		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
958		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Bulk SG	Passing		Sieve Size:	Retained	Pan	
959		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
960		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Bulk SG	Passing		Sieve Size:	Retained	Pan	
961	100	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Individual Ret., %	Totals					
962	2.65567	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Bulk SG	Totals					
963		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Individual Ret., %	Passing		Sieve Size:	Retained	7/8"	
964		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Bulk SG	Passing		Sieve Size:	Retained	7/8"	
965		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Individual Ret., %	Passing	7/8"	Sieve Size:	Retained	5/8"	
966		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Bulk SG	Passing	7/8"	Sieve Size:	Retained	5/8"	
967		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Individual Ret., %	Passing	5/8"	Sieve Size:	Retained	3/8"	
968		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Bulk SG	Passing	5/8"	Sieve Size:	Retained	3/8"	
969		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
970		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Bulk SG	Passing	3/8"	Sieve Size:	Retained	No. 4	
971		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
972		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Bulk SG	Passing	No. 4	Sieve Size:	Retained	No. 10	
973		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
974		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Bulk SG	Passing	No. 10	Sieve Size:	Retained	No. 40	
975		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
976		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Bulk SG	Passing	No. 40	Sieve Size:	Retained	No. 80	
977		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
978		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Bulk SG	Passing	No. 80	Sieve Size:	Retained	No. 200	
979		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
980		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Bulk SG	Passing	No. 200	Sieve Size:	Retained	Pan	
981		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
982		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Bulk SG	Passing		Sieve Size:	Retained	Pan	
983		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
984		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Bulk SG	Passing		Sieve Size:	Retained	Pan	
985		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Individual Ret., %	Totals					
986		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Bulk SG	Totals					
987		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Individual Ret., %	Passing		Sieve Size:	Retained	7/8"	
988		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Bulk SG	Passing		Sieve Size:	Retained	7/8"	
989		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Individual Ret., %	Passing	7/8"	Sieve Size:	Retained	5/8"	
990		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Bulk SG	Passing	7/8"	Sieve Size:	Retained	5/8"	
991		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Individual Ret., %	Passing	5/8"	Sieve Size:	Retained	3/8"	
992		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Bulk SG	Passing	5/8"	Sieve Size:	Retained	3/8"	
993		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
994		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Bulk SG	Passing	3/8"	Sieve Size:	Retained	No. 4	
995		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
996		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Bulk SG	Passing	No. 4	Sieve Size:	Retained	No. 10	
997		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
998		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Bulk SG	Passing	No. 10	Sieve Size:	Retained	No. 40	
999		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
1000		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Bulk SG	Passing	No. 40	Sieve Size:	Retained	No. 80	
1001		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
1002		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Bulk SG	Passing	No. 80	Sieve Size:	Retained	No. 200	

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
1003		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
1004		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Bulk SG	Passing	No. 200	Sieve Size:	Retained	Pan	
1005		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
1006		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Bulk SG	Passing		Sieve Size:	Retained	Pan	
1007		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
1008		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Bulk SG	Passing		Sieve Size:	Retained	Pan	
1009		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Individual Ret., %	Totals					
1010		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Bulk SG	Totals					
1011	1.03	HMACP MIXTURE DESIGN : BULK GRAVITY	Specific Gravity of Asphalt:							
1012	2.78036	HMACP MIXTURE DESIGN : BULK GRAVITY	Combined Bulk Specific Gravity:							
1013		HMACP MIXTURE DESIGN : BULK GRAVITY	Coarse Agg. Combined BSG:							
1014		HMACP MIXTURE DESIGN : BULK GRAVITY	Remarks:							
1015	96	HMACP MIXTURE DESIGN : SUMMARY SHEET	Target Density, %:							
1016		HMACP MIXTURE DESIGN : SUMMARY SHEET	Number of Gyrations:							
1017		HMACP MIXTURE DESIGN : SUMMARY SHEET	CRM* Content							
1018	3.5	HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Asphalt Content (%)						
1019	2.461	HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Specific Gravity Of Specimen (Ga)						
1020	2.622	HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Maximum Specific Gravity (Gr)						
1021	2.77772	HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Effective Gravity (Ge)						
1022	2.62984	HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Theo. Max. Specific Gravity (Gt)						
1023	93.5797	HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Density from Gt (Percent)						
1024	14.7829	HMACP MIXTURE DESIGN : SUMMARY SHEET	1	VMA (Percent)						
1025	4	HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Asphalt Content (%)						
1026	2.479	HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Specific Gravity Of Specimen (Ga)						
1027	2.61	HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Maximum Specific Gravity (Gr)						
1028	2.78821	HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Effective Gravity (Ge)						
1029	2.60885	HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Theo. Max. Specific Gravity (Gt)						
1030	95.0228	HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Density from Gt (Percent)						
1031	14.6044	HMACP MIXTURE DESIGN : SUMMARY SHEET	2	VMA (Percent)						
1032	4.5	HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Asphalt Content (%)						
1033	2.493	HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Specific Gravity Of Specimen (Ga)						
1034	2.588	HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Maximum Specific Gravity (Gr)						
1035	2.78662	HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Effective Gravity (Ge)						
1036	2.58819	HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Theo. Max. Specific Gravity (Gt)						
1037	96.3223	HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Density from Gt (Percent)						
1038	14.5694	HMACP MIXTURE DESIGN : SUMMARY SHEET	3	VMA (Percent)						
1039	5	HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Asphalt Content (%)						
1040	2.51	HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Specific Gravity Of Specimen (Ga)						
1041	2.569	HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Maximum Specific Gravity (Gr)						
1042	2.78827	HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Effective Gravity (Ge)						
1043	2.56785	HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Theo. Max. Specific Gravity (Gt)						
1044	97.7473	HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Density from Gt (Percent)						
1045	14.4372	HMACP MIXTURE DESIGN : SUMMARY SHEET	4	VMA (Percent)						
1046	5.5	HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Asphalt Content (%)						
1047	2.519	HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Specific Gravity Of Specimen (Ga)						
1048	2.553	HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Maximum Specific Gravity (Gr)						
1049	2.7934	HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Effective Gravity (Ge)						
1050	2.54783	HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Theo. Max. Specific Gravity (Gt)						
1051	98.8686	HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Density from Gt (Percent)						
1052	14.5824	HMACP MIXTURE DESIGN : SUMMARY SHEET	5	VMA (Percent)						
1053	137	HMACP MIXTURE DESIGN : SUMMARY SHEET	Mixture Evaluation @ Optimum Asphalt Content	Indirect Tensile Strength (psi)						
1054	10000	HMACP MIXTURE DESIGN : SUMMARY SHEET	Mixture Evaluation @ Optimum Asphalt Content	Hamburg Wheel Tracking Test	Number of cycles					
1055	7.5	HMACP MIXTURE DESIGN : SUMMARY SHEET	Mixture Evaluation @ Optimum Asphalt Content	Hamburg Wheel Tracking Test	Rut depth (mm)					
1056		HMACP MIXTURE DESIGN : SUMMARY SHEET	Mixture Evaluation @ Optimum Asphalt Content	Overlay Tester Min. Number of Cycles						
1057		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Asphalt Content (%)						
1058		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Maximum Specific Gravity (Gr)						
1059		HMACP MIXTURE DESIGN : SUMMARY SHEET	Effective Gravity (Ge)							
1060		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Theo. Max. Specific Gravity (Gt)						
1061		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	VMA (Percent)						

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
1062		HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Asphalt Content (%)						
1063		HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Maximum Specific Gravity (Gr)						
1064		HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Theo. Max. Specific Gravity (Gt)						
1065		HMACP MIXTURE DESIGN : SUMMARY SHEET	2	VMA (Percent)						
1066		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Asphalt Content (%)						
1067		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Maximum Specific Gravity (Gr)						
1068		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Theo. Max. Specific Gravity (Gt)						
1069		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	VMA (Percent)						
1070		HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Asphalt Content (%)						
1071		HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Maximum Specific Gravity (Gr)						
1072		HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Theo. Max. Specific Gravity (Gt)						
1073		HMACP MIXTURE DESIGN : SUMMARY SHEET	4	VMA (Percent)						
1074		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Asphalt Content (%)						
1075		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Maximum Specific Gravity (Gr)						
1076		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Theo. Max. Specific Gravity (Gt)						
1077		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	VMA (Percent)						
1078		HMACP MIXTURE DESIGN : SUMMARY SHEET	Min Film Thickness (microns)							
1079		HMACP MIXTURE DESIGN : SUMMARY SHEET	AC @ Min Film Thickness:							
1080		HMACP MIXTURE DESIGN : SUMMARY SHEET	Max Film Thickness (microns)							
1081		HMACP MIXTURE DESIGN : SUMMARY SHEET	AC @ Max Film Thickness:							
1082		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Asphalt Content (%)						
1083		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Lab Measured Gr						
1084		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Effective Specific Gravity (Ge)						
1085		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Backcalculated Gr						
1086		HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Lab Measured Gr						
1087		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Asphalt Content (%)						
1088		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Lab Measured Gr						
1089		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Effective Specific Gravity (Ge)						
1090		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Backcalculated Gr						
1091		HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Lab Measured Gr						
1092		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Asphalt Content (%)						
1093		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Lab Measured Gr						
1094		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Effective Specific Gravity (Ge)						
1095		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Backcalculated Gr						
1096		HMACP MIXTURE DESIGN : SUMMARY SHEET	6	Lab Measured Gr						
1097		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Asphalt Content (%)						
1098		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Height (in)						
1099		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Diameter (in)						
1100		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Dry Weight (grams)						
1101		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Backcalculated Gr						
1102		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Ga						
1103		HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Height (in)						
1104		HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Diameter (in)						
1105		HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Dry Weight (grams)						
1106		HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Ga						
1107		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Density from Backcalculated Gr (%)						
1108		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Asphalt Content (%)						
1109		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Height (in)						
1110		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Diameter (in)						
1111		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Dry Weight (grams)						
1112		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Backcalculated Gr						
1113		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Ga						
1114		HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Height (in)						
1115		HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Diameter (in)						
1116		HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Dry Weight (grams)						
1117		HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Ga						
1118		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Density from Backcalculated Gr (%)						
1119		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Asphalt Content (%)						
1120		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Height (in)						

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7
1121		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Diameter (in)				
1122		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Dry Weight (grams)				
1123		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Backcalculated Gr				
1124		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Ga				
1125		HMACP MIXTURE DESIGN : SUMMARY SHEET	6	Height (in)				
1126		HMACP MIXTURE DESIGN : SUMMARY SHEET	6	Diameter (in)				
1127		HMACP MIXTURE DESIGN : SUMMARY SHEET	6	Dry Weight (grams)				
1128		HMACP MIXTURE DESIGN : SUMMARY SHEET	6	Ga				
1129		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Density from Backcalculated Gr (%)				
1130		HMACP MIXTURE DESIGN : SUMMARY SHEET	7	Asphalt Content (%)				
1131		HMACP MIXTURE DESIGN : SUMMARY SHEET	7	Height (in)				
1132		HMACP MIXTURE DESIGN : SUMMARY SHEET	7	Diameter (in)				
1133		HMACP MIXTURE DESIGN : SUMMARY SHEET	7	Dry Weight (grams)				
1134		HMACP MIXTURE DESIGN : SUMMARY SHEET	7	Backcalculated Gr				
1135		HMACP MIXTURE DESIGN : SUMMARY SHEET	7	Ga				
1136		HMACP MIXTURE DESIGN : SUMMARY SHEET	8	Height (in)				
1137		HMACP MIXTURE DESIGN : SUMMARY SHEET	8	Diameter (in)				
1138		HMACP MIXTURE DESIGN : SUMMARY SHEET	8	Dry Weight (grams)				
1139		HMACP MIXTURE DESIGN : SUMMARY SHEET	8	Ga				
1140		HMACP MIXTURE DESIGN : SUMMARY SHEET	7	Density from Backcalculated Gr (%)				
1141		HMACP MIXTURE DESIGN : SUMMARY SHEET	9	Asphalt Content (%)				
1142		HMACP MIXTURE DESIGN : SUMMARY SHEET	9	Height (in)				
1143		HMACP MIXTURE DESIGN : SUMMARY SHEET	9	Diameter (in)				
1144		HMACP MIXTURE DESIGN : SUMMARY SHEET	9	Dry Weight (grams)				
1145		HMACP MIXTURE DESIGN : SUMMARY SHEET	9	Backcalculated Gr				
1146		HMACP MIXTURE DESIGN : SUMMARY SHEET	9	Ga				
1147		HMACP MIXTURE DESIGN : SUMMARY SHEET	10	Height (in)				
1148		HMACP MIXTURE DESIGN : SUMMARY SHEET	10	Diameter (in)				
1149		HMACP MIXTURE DESIGN : SUMMARY SHEET	10	Dry Weight (grams)				
1150		HMACP MIXTURE DESIGN : SUMMARY SHEET	10	Ga				
1151		HMACP MIXTURE DESIGN : SUMMARY SHEET	9	Density from Backcalculated Gr (%)				
1152	2.78684	HMACP MIXTURE DESIGN : SUMMARY SHEET	Effective Specific Gravity:					
1153	4.37599	HMACP MIXTURE DESIGN : SUMMARY SHEET	Optimum Asphalt Content :					
1154	14.5781	HMACP MIXTURE DESIGN : SUMMARY SHEET	VMA @ Optimum AC:					
1155		HMACP MIXTURE DESIGN : SUMMARY SHEET	Estimated Percent of Stripping, %:					
1156		HMACP MIXTURE DESIGN : SUMMARY SHEET	Drain-Down, %:					
1157		HMACP MIXTURE DESIGN : SUMMARY SHEET	Cantabro Loss, %:					
1158	2.48955	HMACP MIXTURE DESIGN : SUMMARY SHEET	Interpolated Values	Specific Gravity (Ga):				
1159	2.59346	HMACP MIXTURE DESIGN : SUMMARY SHEET	Interpolated Values	Max. Specific Gravity (Gr):				
1160	2.59331	HMACP MIXTURE DESIGN : SUMMARY SHEET	Interpolated Values	Theo. Max. Specific Gravity (Gt):				
1161		HMACP MIXTURE DESIGN : SUMMARY SHEET	VCA(CA)					
1162		HMACP MIXTURE DESIGN : SUMMARY SHEET	VCA(MIX)					
1163		HMACP MIXTURE DESIGN : SUMMARY SHEET	VCA(CA, calc.)					
1164		HMACP MIXTURE DESIGN : SUMMARY SHEET	VCA(MIX, calc.)					
1165		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	A	Gr			
1166		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	B	Gr			
1167		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	Density (%)	Gr			
1168		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	A	Ga			
1169		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	B	Ga			
1170		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	Density (%)	Ga			
1171		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	A	Height @ Nini			
1172		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	B	Height @ Nini			
1173		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	Density (%)	Height @ Nini			
1174		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	A	Height @ Ndes			
1175		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	B	Height @ Ndes			
1176		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	Density (%)	Height @ Ndes			
1177		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	A	Height @ Nmax			
1178		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	B	Height @ Nmax			
1179		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	Density (%)	Height @ Nmax			

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
1180	2004	HMACP MIXTURE DESIGN : COMBINED GRADATION	SPEC YEAR:							
1181		HMACP MIXTURE DESIGN : COMBINED GRADATION	SPECIAL PROVISION:							
1182	ITEM340	HMACP MIXTURE DESIGN : COMBINED GRADATION	MIX TYPE:							
1183		HMACP MIXTURE DESIGN : COMBINED GRADATION	Lift Thickness, in:							
1184		HMACP MIXTURE DESIGN : SUMMARY SHEET	FINAL SPECIMEN	Asphalt Content (%)						
1185		HMACP MIXTURE DESIGN : SUMMARY SHEET	FINAL SPECIMEN	Specific Gravity Of Specimen (Ga)						
1186		HMACP MIXTURE DESIGN : SUMMARY SHEET	FINAL SPECIMEN	Maximum Specific Gravity (Gr)						
1187		HMACP MIXTURE DESIGN : SUMMARY SHEET	FINAL SPECIMEN	Effective Gravity (Ge)						
1188		HMACP MIXTURE DESIGN : SUMMARY SHEET	FINAL SPECIMEN	Density from Gr (Percent)						
1189		HMACP MIXTURE DESIGN : SUMMARY SHEET	FINAL SPECIMEN	Film Thickness (microns)						
1190		HMACP MIXTURE DESIGN : SUMMARY SHEET	Suggested Membrane Target App. Rate, gal/yd2:							
1191		HMACP MIXTURE DESIGN : SUMMARY SHEET	PREDICTION ESTIMATES	AC %						
1192		HMACP MIXTURE DESIGN : SUMMARY SHEET	PREDICTION ESTIMATES	Film Thickness (microns)						
1193		HMACP MIXTURE DESIGN : SUMMARY SHEET	PREDICTION ESTIMATES	Density (%)						
1194		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	Blank Sample Weight, g:							
1195	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	-	Sieve Size:	Retained	7/8"	Bin No.1	Aggregate Weight
1196	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	-	Sieve Size:	Retained	7/8"	Bin No.2	Aggregate Weight
1197	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	-	Sieve Size:	Retained	7/8"	Bin No.3	Aggregate Weight
1198	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	-	Sieve Size:	Retained	7/8"	Bin No.4	Aggregate Weight
1199	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	-	Sieve Size:	Retained	7/8"	Bin No.5	Aggregate Weight
1200		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	-	Sieve Size:	Retained	7/8"	Bin No.6	
1201		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	-	Sieve Size:	Retained	7/8"	Bin No.7	
1202	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	-	Sieve Size:	Retained	7/8"	Total Weights	
1203		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	-	Sieve Size:	Retained	7/8"	IndividualRetained, %	
1204		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	-	Sieve Size:	Retained	7/8"	Cumulative Retained, %	
1205	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.1	Aggregate Weight
1206	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.2	Aggregate Weight
1207	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.3	Aggregate Weight
1208	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.4	Aggregate Weight
1209	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.5	Aggregate Weight
1210		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.6	
1211		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.7	
1212	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Total Weights	
1213		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	IndividualRetained, %	
1214		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Cumulative Retained, %	
1215	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.1	Aggregate Weight
1216	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.2	Aggregate Weight
1217	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.3	Aggregate Weight
1218	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.4	Aggregate Weight
1219	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.5	Aggregate Weight
1220		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.6	
1221		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.7	
1222	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Total Weights	
1223		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	IndividualRetained, %	
1224		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Cumulative Retained, %	
1225	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.1	Aggregate Weight
1226	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.2	Aggregate Weight
1227	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.3	Aggregate Weight
1228	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.4	Aggregate Weight
1229	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.5	Aggregate Weight
1230		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.6	
1231		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.7	
1232	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Total Weights	
1233		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	IndividualRetained, %	
1234		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Cumulative Retained, %	
1235	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.1	Aggregate Weight
1236	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.2	Aggregate Weight
1237	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.3	Aggregate Weight
1238	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.4	Aggregate Weight

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
1239	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.5	Aggregate Weight
1240		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.6	
1241		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.7	
1242	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Total Weights	
1243		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	IndividualRetained, %	
1244		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Cumulative Retained, %	
1245	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.1	Aggregate Weight
1246	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.2	Aggregate Weight
1247	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.3	Aggregate Weight
1248	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.4	Aggregate Weight
1249	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.5	Aggregate Weight
1250		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.6	
1251		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.7	
1252	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Total Weights	
1253		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	IndividualRetained, %	
1254		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Cumulative Retained, %	
1255	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.1	Aggregate Weight
1256	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.2	Aggregate Weight
1257	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.3	Aggregate Weight
1258	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.4	Aggregate Weight
1259	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.5	Aggregate Weight
1260		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.6	
1261		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.7	
1262	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Total Weights	
1263		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	IndividualRetained, %	
1264		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Cumulative Retained, %	
1265	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.1	Aggregate Weight
1266	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.2	Aggregate Weight
1267	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.3	Aggregate Weight
1268	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.4	Aggregate Weight
1269	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.5	Aggregate Weight
1270		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.6	
1271		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.7	
1272	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Total Weights	
1273		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	IndividualRetained, %	
1274		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Cumulative Retained, %	
1275	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.1	Aggregate Weight
1276	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.2	Aggregate Weight
1277	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.3	Aggregate Weight
1278	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.4	Aggregate Weight
1279	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.5	Aggregate Weight
1280		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.6	
1281		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.7	
1282	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Total Weights	
1283		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	IndividualRetained, %	
1284		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Cumulative Retained, %	
1285		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.1	Aggregate Weight
1286		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.2	Aggregate Weight
1287		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.3	Aggregate Weight
1288		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.4	Aggregate Weight
1289		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.5	Aggregate Weight
1290		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.6	
1291		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.7	
1292		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Total Weights	
1293		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	IndividualRetained, %	
1294		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Cumulative Retained, %	
1295		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.1	Aggregate Weight
1296		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.2	Aggregate Weight
1297		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.3	Aggregate Weight

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
1298		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.4	Aggregate Weight
1299		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.5	Aggregate Weight
1300		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.6	
1301		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.7	
1302		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Total Weights	
1303		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	IndividualRetained, %	
1304		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Cumulative Retained, %	
1305	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Totals	Bin No.1	Aggregate Weight				
1306	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Totals	Bin No.2	Aggregate Weight				
1307	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Totals	Bin No.3	Aggregate Weight				
1308	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Totals	Bin No.4	Aggregate Weight				
1309	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Totals	Bin No.5	Aggregate Weight				
1310		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Totals	Bin No.6					
1311		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Totals	Bin No.7					
1312	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Totals	Total Weights					
1313		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	Running Total:							
1314	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	-	Sieve Size:	Retained	7/8"	Bin No.1	Aggregate Weight
1315	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	-	Sieve Size:	Retained	7/8"	Bin No.2	Aggregate Weight
1316	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	-	Sieve Size:	Retained	7/8"	Bin No.3	Aggregate Weight
1317	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	-	Sieve Size:	Retained	7/8"	Bin No.4	Aggregate Weight
1318	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	-	Sieve Size:	Retained	7/8"	Bin No.5	Aggregate Weight
1319		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	-	Sieve Size:	Retained	7/8"	Bin No.6	
1320		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	-	Sieve Size:	Retained	7/8"	Bin No.7	
1321	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	-	Sieve Size:	Retained	7/8"	Total Weights	
1322	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.1	Aggregate Weight
1323	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.2	Aggregate Weight
1324	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.3	Aggregate Weight
1325	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.4	Aggregate Weight
1326	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.5	Aggregate Weight
1327		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.6	
1328		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.7	
1329	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	7/8"	Sieve Size:	Retained	5/8"	Total Weights	
1330	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.1	Aggregate Weight
1331	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.2	Aggregate Weight
1332	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.3	Aggregate Weight
1333	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.4	Aggregate Weight
1334	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.5	Aggregate Weight
1335		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.6	
1336		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.7	
1337	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	5/8"	Sieve Size:	Retained	3/8"	Total Weights	
1338	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.1	Aggregate Weight
1339	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.2	Aggregate Weight
1340	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.3	Aggregate Weight
1341	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.4	Aggregate Weight
1342	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.5	Aggregate Weight
1343		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.6	
1344		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.7	
1345	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Total Weights	
1346	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.1	Aggregate Weight
1347	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.2	Aggregate Weight
1348	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.3	Aggregate Weight
1349	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.4	Aggregate Weight
1350	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.5	Aggregate Weight
1351		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.6	
1352		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.7	
1353	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Total Weights	
1354	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.1	Aggregate Weight
1355	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.2	Aggregate Weight
1356	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.3	Aggregate Weight

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
1357	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.4	Aggregate Weight
1358	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.5	Aggregate Weight
1359		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.6	
1360		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.7	
1361	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Total Weights	
1362	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.1	Aggregate Weight
1363	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.2	Aggregate Weight
1364	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.3	Aggregate Weight
1365	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.4	Aggregate Weight
1366	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.5	Aggregate Weight
1367		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.6	
1368		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.7	
1369	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Total Weights	
1370	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.1	Aggregate Weight
1371	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.2	Aggregate Weight
1372	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.3	Aggregate Weight
1373	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.4	Aggregate Weight
1374	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.5	Aggregate Weight
1375		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.6	
1376		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.7	
1377	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Total Weights	
1378	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.1	Aggregate Weight
1379	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.2	Aggregate Weight
1380	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.3	Aggregate Weight
1381	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.4	Aggregate Weight
1382	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.5	Aggregate Weight
1383		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.6	
1384		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.7	
1385	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Total Weights	
1386		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.1	Aggregate Weight
1387		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.2	Aggregate Weight
1388		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.3	Aggregate Weight
1389		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.4	Aggregate Weight
1390		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.5	Aggregate Weight
1391		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.6	
1392		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.7	
1393		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Total Weights	
1394		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.1	Aggregate Weight
1395		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.2	Aggregate Weight
1396		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.3	Aggregate Weight
1397		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.4	Aggregate Weight
1398		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.5	Aggregate Weight
1399		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.6	
1400		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.7	
1401		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Total Weights	
1402	No	HMACP MIXTURE DESIGN : COMBINED GRADATION	WMA Included in Design?							
1403		HMACP MIXTURE DESIGN : COMBINED GRADATION	WMA TECHNOLOGY:							
1404		HMACP MIXTURE DESIGN : COMBINED GRADATION	Material Type	Bin No.8						
1405		HMACP MIXTURE DESIGN : COMBINED GRADATION	Material Type	Bin No.9						
1406		HMACP MIXTURE DESIGN : COMBINED GRADATION	Material Type	Bin No.10						
1407		HMACP MIXTURE DESIGN : COMBINED GRADATION	Material Source	Bin No.8						
1408		HMACP MIXTURE DESIGN : COMBINED GRADATION	Material Source	Bin No.9						
1409		HMACP MIXTURE DESIGN : COMBINED GRADATION	Material Source	Bin No.10						
1410		HMACP MIXTURE DESIGN : COMBINED GRADATION	RAS Type	Bin No.8						
1411		HMACP MIXTURE DESIGN : COMBINED GRADATION	RAS Type	Bin No.9						
1412		HMACP MIXTURE DESIGN : COMBINED GRADATION	RAS Type	Bin No.10						
1413		HMACP MIXTURE DESIGN : COMBINED GRADATION	Sample ID	Bin No.8						
1414		HMACP MIXTURE DESIGN : COMBINED GRADATION	Sample ID	Bin No.9						
1415		HMACP MIXTURE DESIGN : COMBINED GRADATION	Sample ID	Bin No.10						

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
1416		HMACP MIXTURE DESIGN : COMBINED GRADATION	Recycled Asphalt Binder (%)	Bin No.8						
1417		HMACP MIXTURE DESIGN : COMBINED GRADATION	Recycled Asphalt Binder (%)	Bin No.9						
1418		HMACP MIXTURE DESIGN : COMBINED GRADATION	Recycled Asphalt Binder (%)	Bin No.10						
1419	0	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual Bin (%):	Bin No.8						
1420	0	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual Bin (%):	Bin No.9						
1421	0	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual Bin (%):	Bin No.10						
1422		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Cum.% Passing	Sieve Size:	7/8"				
1423		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Wtd Cum. %	Sieve Size:	7/8"				
1424		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Cum.% Passing	Sieve Size:	7/8"				
1425		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Wtd Cum. %	Sieve Size:	7/8"				
1426		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Cum.% Passing	Sieve Size:	7/8"				
1427		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Wtd Cum. %	Sieve Size:	7/8"				
1428		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Cum.% Passing	Sieve Size:	5/8"				
1429		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Wtd Cum. %	Sieve Size:	5/8"				
1430		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Cum.% Passing	Sieve Size:	5/8"				
1431		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Wtd Cum. %	Sieve Size:	5/8"				
1432		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Cum.% Passing	Sieve Size:	5/8"				
1433		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Wtd Cum. %	Sieve Size:	5/8"				
1434		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Cum.% Passing	Sieve Size:	3/8"				
1435		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Wtd Cum. %	Sieve Size:	3/8"				
1436		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Cum.% Passing	Sieve Size:	3/8"				
1437		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Wtd Cum. %	Sieve Size:	3/8"				
1438		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Cum.% Passing	Sieve Size:	3/8"				
1439		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Wtd Cum. %	Sieve Size:	3/8"				
1440		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Cum.% Passing	Sieve Size:	No. 4				
1441		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Wtd Cum. %	Sieve Size:	No. 4				
1442		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Cum.% Passing	Sieve Size:	No. 4				
1443		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Wtd Cum. %	Sieve Size:	No. 4				
1444		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Cum.% Passing	Sieve Size:	No. 4				
1445		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Wtd Cum. %	Sieve Size:	No. 4				
1446		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Cum.% Passing	Sieve Size:	No. 10				
1447		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Wtd Cum. %	Sieve Size:	No. 10				
1448		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Cum.% Passing	Sieve Size:	No. 10				
1449		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Wtd Cum. %	Sieve Size:	No. 10				
1450		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Cum.% Passing	Sieve Size:	No. 10				
1451		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Wtd Cum. %	Sieve Size:	No. 10				
1452		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Cum.% Passing	Sieve Size:	No. 40				
1453		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Wtd Cum. %	Sieve Size:	No. 40				
1454		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Cum.% Passing	Sieve Size:	No. 40				
1455		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Wtd Cum. %	Sieve Size:	No. 40				
1456		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Cum.% Passing	Sieve Size:	No. 40				
1457		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Wtd Cum. %	Sieve Size:	No. 40				
1458		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Cum.% Passing	Sieve Size:	No. 80				
1459		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Wtd Cum. %	Sieve Size:	No. 80				
1460		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Cum.% Passing	Sieve Size:	No. 80				
1461		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Wtd Cum. %	Sieve Size:	No. 80				
1462		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Cum.% Passing	Sieve Size:	No. 80				
1463		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Wtd Cum. %	Sieve Size:	No. 80				
1464		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Cum.% Passing	Sieve Size:	No. 200				
1465		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Wtd Cum. %	Sieve Size:	No. 200				
1466		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Cum.% Passing	Sieve Size:	No. 200				
1467		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Wtd Cum. %	Sieve Size:	No. 200				
1468		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Cum.% Passing	Sieve Size:	No. 200				
1469		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Wtd Cum. %	Sieve Size:	No. 200				
1470		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Cum.% Passing	Sieve Size:					
1471		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Wtd Cum. %	Sieve Size:					
1472		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Cum.% Passing	Sieve Size:					
1473		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Wtd Cum. %	Sieve Size:					
1474		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Cum.% Passing	Sieve Size:					

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
1475		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Wtd Cum. %	Sieve Size:					
1476		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Cum.% Passing	Sieve Size:					
1477		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Wtd Cum. %	Sieve Size:					
1478		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Cum.% Passing	Sieve Size:					
1479		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Wtd Cum. %	Sieve Size:					
1480		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Cum.% Passing	Sieve Size:					
1481		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Wtd Cum. %	Sieve Size:					
1482		HMACP MIXTURE DESIGN : COMBINED GRADATION	Hydrated Lime?:	Bin No.1						
1483		HMACP MIXTURE DESIGN : COMBINED GRADATION	Hydrated Lime?:	Bin No.2						
1484		HMACP MIXTURE DESIGN : COMBINED GRADATION	Hydrated Lime?:	Bin No.3						
1485		HMACP MIXTURE DESIGN : COMBINED GRADATION	Hydrated Lime?:	Bin No.4						
1486		HMACP MIXTURE DESIGN : COMBINED GRADATION	Hydrated Lime?:	Bin No.5						
1487		HMACP MIXTURE DESIGN : COMBINED GRADATION	Hydrated Lime?:	Bin No.6						
1488		HMACP MIXTURE DESIGN : COMBINED GRADATION	Hydrated Lime?:	Bin No.7						
1489	0	HMACP MIXTURE DESIGN : COMBINED GRADATION	Ratio of Recycled to Total Binder, %							
1490		HMACP MIXTURE DESIGN : COMBINED GRADATION	Binder Substitution?							
1491		HMACP MIXTURE DESIGN : COMBINED GRADATION	Binder Originally Specified:							
1492		HMACP MIXTURE DESIGN : COMBINED GRADATION	Substitute Binder:							
1493		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Recycled Materials	Tex-217-F, Part III	Max.	Spec. Limit				
1494		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Recycled Materials	Tex-217-F, Part III	Bin No.8	Result				
1495		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Recycled Materials	Tex-217-F, Part III	Bin No.8	Sample ID				
1496		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Recycled Materials	Tex-217-F, Part III	Bin No.9	Result				
1497		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Recycled Materials	Tex-217-F, Part III	Bin No.9	Sample ID				
1498		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Recycled Materials	Tex-217-F, Part III	Bin No.10	Result				
1499		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Recycled Materials	Tex-217-F, Part III	Bin No.10	Sample ID				
1500		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.8	Individual Ret., %	Passing	-	Sieve Size:	Retained	7/8"	
1501		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.8	Individual Ret., %	Passing	7/8"	Sieve Size:	Retained	5/8"	
1502		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.8	Individual Ret., %	Passing	5/8"	Sieve Size:	Retained	3/8"	
1503		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.8	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
1504		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.8	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
1505		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.8	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
1506		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.8	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
1507		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.8	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
1508		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.8	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
1509		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.8	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
1510		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.8	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
1511		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.8	Individual Ret., %	Total:					
1512		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.8	Individual Ret., %	Percent of plus No. 4					
1513		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.9	Individual Ret., %	Passing	-	Sieve Size:	Retained	7/8"	
1514		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.9	Individual Ret., %	Passing	7/8"	Sieve Size:	Retained	5/8"	
1515		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.9	Individual Ret., %	Passing	5/8"	Sieve Size:	Retained	3/8"	
1516		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.9	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
1517		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.9	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
1518		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.9	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
1519		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.9	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
1520		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.9	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
1521		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.9	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
1522		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.9	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
1523		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.9	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
1524		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.9	Individual Ret., %	Total:					
1525		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.9	Individual Ret., %	Percent of plus No. 4					
1526		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.10	Individual Ret., %	Passing	-	Sieve Size:	Retained	7/8"	
1527		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.10	Individual Ret., %	Passing	7/8"	Sieve Size:	Retained	5/8"	
1528		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.10	Individual Ret., %	Passing	5/8"	Sieve Size:	Retained	3/8"	
1529		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.10	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
1530		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.10	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
1531		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.10	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
1532		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.10	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
1533		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.10	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
1534		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.10	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
1535		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.10	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
1536		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.10	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
1537		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.10	Individual Ret., %	Total:					
1538		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.10	Individual Ret., %	Percent of plus No. 4					
1539		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	-	Sieve Size:	Retained	7/8"	Bin No.8	
1540		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	-	Sieve Size:	Retained	7/8"	Bin No.9	
1541		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	-	Sieve Size:	Retained	7/8"	Bin No.10	
1542		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.8	
1543		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.9	
1544		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.10	
1545		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.8	
1546		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.9	
1547		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.10	
1548		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.8	
1549		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.9	
1550		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.10	
1551		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.8	
1552		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.9	
1553		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.10	
1554		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.8	
1555		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.9	
1556		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.10	
1557		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.8	
1558		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.9	
1559		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.10	
1560		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.8	
1561		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.9	
1562		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.10	
1563		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.8	
1564		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.9	
1565		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.10	
1566		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.8	
1567		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.9	
1568		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.10	
1569		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.8	
1570		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.9	
1571		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.10	
1572		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Totals	Bin No.8					
1573		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Totals	Bin No.9					
1574		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Totals	Bin No.10					
1575		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	-	Sieve Size:	Retained	7/8"	Bin No.8	
1576		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	-	Sieve Size:	Retained	7/8"	Bin No.9	
1577		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	-	Sieve Size:	Retained	7/8"	Bin No.10	
1578		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.8	
1579		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.9	
1580		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.10	
1581		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.8	
1582		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.9	
1583		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.10	
1584		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.8	
1585		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.9	
1586		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.10	
1587		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.8	
1588		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.9	
1589		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.10	
1590		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.8	
1591		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.9	
1592		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.10	

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
1593		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.8	
1594		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.9	
1595		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.10	
1596		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.8	
1597		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.9	
1598		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.10	
1599		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.8	
1600		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.9	
1601		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.10	
1602		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.8	
1603		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.9	
1604		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.10	
1605		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.8	
1606		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.9	
1607		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.10	
1608	0	HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Binder Ratio (%)						
1609	0	HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Binder Ratio (%)						
1610	0	HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Binder Ratio (%)						
1611	0	HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Binder Ratio (%)						
1612	0	HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Binder Ratio (%)						
1613	0	HMACP MIXTURE DESIGN : SUMMARY SHEET	Binder Ratio @ OAC:							

Grade				Washed Sieve Min	Washed Sieve Max	VMA: Min
A Coarse Base	1-1/2"		37.5	98	100	11
	1"		25	78	94	
	3/4"		19	64	85	
	1/2"		12.5	50	70	
	No. 4		4.75	30	50	
	No. 8		2.36	22	36	
	No. 30		0.6	8	23	
	No. 50		0.3	3	19	
	No. 200		0.075	2	7	
B Fine Base	1"		25	100	100	12
	7/8"		22.4	95	100	
	5/8"		16	75	95	
	3/8"		9.5	60	80	
	No. 4		4.75	40	60	
	No. 10		2	27	40	
	No. 40		0.425	10	25	
	No. 80		0.18	3	13	
	No. 200		0.075	2	8	
C Coarse Surface	7/8"		22.4	100	100	13
	5/8"		16	95	100	
	3/8"		9.5	70	85	
	No. 4		4.75	43	63	
	No. 10		2	30	40	
	No. 40		0.425	10	25	
	No. 80		0.18	3	13	
	No. 200		0.075	2	8	
D Fine Surface	3/4"		19	100	100	14
	1/2"		12.5	100	100	
	3/8"		9.5	85	100	
	No. 4		4.75	50	70	
	No. 10		2	32	42	
	No. 40		0.425	11	26	
	No. 80		0.18	4	14	
	No. 200		0.075	2	8	
F Fine Mixture	3/4"		19	100	100	15
	3/8"		9.5	98	100	
	No. 4		4.75	70	90	
	No. 8		2.36	38	48	
	No. 30		0.6	12	27	
	No. 50		0.3	6	19	
	No. 200		0.075	2	7	

Grade				restricted	restricted	# of Sieves with Coarse Aggregate
SP-A Base	2"		50	100	100	12.5			
	1-1/2"		37.5	98	100				
	1"		25	90	100				
	3/4"		19	45	90				
	No. 4		4.75	19	90		39.5	39.5	
	No. 8		2.36	19	45		26.8	30.8	
	No. 16		1.18	1	45		18.1	24.1	
	No. 30		0.6	1	45		13.6	17.5	
	No. 50		0.3	1	45		11.4	11.4	
	No. 200		0.075	1	7				6
SP-B Intermediate	1-1/2"		37.5	100	100	13.5			
	1"		25	98	100				
	3/4"		19	90	100				
	1/2"		12.5	49	90				
	No. 4		4.75	23	90				
	No. 8		2.36	23	49		34.6	34.6	
	No. 16		1.18	2	49		22.3	28.3	
	No. 30		0.6	2	49		16.7	20.7	
	No. 50		0.3	2	49		13.7	13.7	
	No. 200		0.075	2	8				6
SP-C Surface	1"		25	100	100	14.5			
	3/4"		19	98	100				
	1/2"		12.5	90	100				
	3/8"		9.5	58	90				
	No. 4		4.75	28	90				
	No. 8		2.36	28	58		39.1	39.1	
	No. 16		1.18	2	58		25.6	31.6	
	No. 30		0.6	2	58		19.1	23.1	
	No. 50		0.3	2	58		15.5	15.5	
	No. 200		0.075	2	10				6
SP-D Fine Mixture	3/4"		19	100	100	15.5			
	1/2"		12.5	98	100				
	3/8"		9.5	90	100				
	No. 4		4.75	32	90				
	No. 8		2.36	32	67		47.2	47.2	
	No. 16		1.18	2	67		31.6	37.6	
	No. 30		0.6	2	67		23.5	27.5	
	No. 50		0.3	2	67		18.7	18.7	
	No. 200		0.075	2	10				5
CMHB-C Coarse Surface	1"		25	100	100	13			
	3/4"		19	98	100				
	1/2"		12.5	72	85				
	3/8"		9.5	50	70				
	No. 4		4.75	30	45				
	No. 8		2.36	17	27				
	No. 16		1.18	5	27				
	No. 30		0.6	5	27				

Goes with power 45 chart.

Sieve Size				Combined Gradation	Lower Spec Limit	Upper Spec Limit
7/8"	22.4	4.051460492	100	100	100	100
5/8"	16	3.482202253	85.94930791	97.94	95	100
3/8"	9.5	2.754074109	67.97731618	82.864	70	85
No. 4	4.75	2.016100254	49.76230813	56.391	43	63
No. 10	2	1.366040257	33.7172301	34.847	30	40
No. 40	0.425	0.680416785	16.79435814	19.744	10	25
No. 80	0.18	0.462245431	11.40935305	11.584	3	13
No. 200	0.075	0.31172926	7.694244102	4.397	2	8

Recycled Material, %	Virgin Material, %
0.0	100.0

	Recycled Mat List	Total Percent
Fractionated RAP	Fractionated RAP	0
Unfractionated RAP	Unfractionated RAP	0
RAS	RAS	0

Special Provisions
341-024

JUNK FIELD #'S

BINDER SUBSTITUTION										
PG 76-16	PG 70-16	PG 64-16	PG 82-22	PG 76-22	PG 70-22	PG 64-22	PG 58-22	PG 76-28	PG 70-28	PG 64-28	PG 58-28
				PG 70-22	PG 64-22	PG 58-22		PG 70-28	PG 64-28	PG 58-28	
				PG 64-22	PG 58-22			PG 64-28	PG 58-28		

Version: 5/20/2009

WMA Technology	WMA in Design?	Hydrated Lime	Mix Description
Advera	1	0	1
Aspha-Min			
Double Barrel Green			
Evotherm			
Redi-Set WMX			
Sasobit			
Terex			
Maxam			
Ultrafoam GX			

Version:12/01/2009

Sandstone		Limestone-Dolomite		Gravel		Igneous		Synthetic		Aggregate Code
Apple (Sawyer, OK)	0050437	1604	1501506	Canyon	0418814	Bird Hill	1523213	Streetman	1817502	1402702
Brownlee	1402704	Ardmore, OK	0050412	Beck	2110901	Davis, OK.	0050439			1402702
Sawyer, OK	0050447	Balcones Quarry	1504602	Boys Ranch	0418008	Jones Mill	0050122			1402702
		Beckmann	1501503	Broken Bow S & G	0050451	Knippa	1523206			1402702
		Bridgeport	0224904	D and D	2215905	McKelligon-Granite	2407206			
		Brownwood	2302501	Del Rio	2223301	Mill Creek (Grnt), OK.	0050433			
		Burnet	1402701	Galo	2224019	Padre Canyon	2411613			
		Butterfield	2407220	Goode-Anderson	0801701	Porcupine Mountain	0040105			
		Chambers	0224921	Highcard Ranch	2506507	Snyder, OK.	0050435			
		Chapman	1523211	Hoban	0619502	Sweet Home, AR.	0050106			
		Coleman, OK	0050414	Johnson	0411807	Vado	0050310			
		Cooperton, OK	0050415	Las Viboras	2110905					
		Davenport	1523214	Little River	0050114					
		Eastland	2306805	LS Pit	0418002					
		Feld	1424602	Luckett	0916104					
		Gibbs	0901408	Mansfield	0418001					
		Helotes	1501514	Matador	2517309					
		Hondo	1516314	Murphy	1323505					
		Huebner Road	1501507	Pettibone	1716608					
		Hunter	1504605	Pit 365	0916117					
		Rd.	1504606	Pit 424	1716611					
		Lake Bridgeport	0224902	Realitos	2106701					
		Lampasas	1402706	Reavis	2110906					
		Leach	0212001	Showers	2110904					
		Lone Star	1504607	Smith	0325205					
		Marble Falls	1402702	South Noodle	0812803					
		Matrimar	0040103	Stockett	0400604					
		McKelligon Dolo	2407201	Sweet 16	2206706					
		Mico # 68	1516315	Tasitas	2224014					
		Mill Creek, OK	0050445	Thrasher	2517302					
		Naruna	1402711	Woods	0505402					
		Nichols	1516312	Wynn	2215904					
		North Troy	0050448							
		Pate	0914710							
		Perch-Hill	0224901							
		Rankin	0623102							
		Richards Spur	0050405							
		Ruby	1410607							
		S.H. 211	1516310							
		Servtex	1504603							
		South Quarry	2407213							
		Spicewood	1402710							
		Springfield	0212002							
		Stringtown, OK	0050407							
		Tehuacana	0914708							
		Three Rivers	0050501							
		Turner	0722611							
		Weatherford	0218409							
		Weir	1424603							
		Yearwood	1424606							

Version: 2/10/2010

RAS Producer	RAS BIN
APAC- TX Cold Springs	
APAC-TX Gribble Plant	
APAC-TX Leston Plant	
APAC-TX Sunnyvale Plant	
Century Asphalt-Melendy Plant	
R. K. Hall Construction	
Ramming Paving- Buda	
Ramming Paving- Georgetown	
Recon Recycle	
Southwest Shingle Recyc	
Sustainable Pvmt Tech-Pasadena	
Sustainable Pvmt Tech-Schertz	
Waste Management WMAP	

	No. 50		0.3	5	27							
	No. 200		0.075	5	9							6
CMHB-F Fine Surface	3/4"		19	100	100							
	1/2"		12.5	98	100							
	3/8"		9.5	85	100							
	No. 4		4.75	40	60							
	No. 8		2.36	17	27	14						
	No. 16		1.18	5	27							
	No. 30		0.6	5	27							
	No. 50		0.3	5	27							
	No. 200		0.075	5	9							5
SMA-C Coarse	3/4"		19	100	100							
	1/2"		12.5	80	90							
	3/8"		9.5	25	60							
	No. 4		4.75	20	28							
	No. 8		2.36	14	20	17						
	No. 16		1.18	8	20							
	No. 30		0.6	8	20							
	No. 50		0.3	8	20							
	No. 200		0.075	8	12							5
SMA-D Medium	3/4"		19	100	100							
	1/2"		12.5	85	99							
	3/8"		9.5	50	75							
	No. 4		4.75	20	32							
	No. 8		2.36	16	28	17						
	No. 16		1.18	8	28							
	No. 30		0.6	8	28							
	No. 50		0.3	8	28							
	No. 200		0.075	8	12							5
SMA-F Fine	1/2"		12.5	100	100							
	3/8"		9.5	70	90							
	No. 4		4.75	30	50							
	No. 8		2.36	20	30	17						
	No. 16		1.18	8	30							
	No. 30		0.6	8	30							
	No. 50		0.3	8	30							
	No. 200		0.075	8	14							4
SMAR-C Coarse	3/4"		19	100	100							
	1/2"		12.5	72	85							
	3/8"		9.5	50	70							
	No. 4		4.75	30	45							
	No. 8		2.36	17	27	18.5						
	No. 16		1.18	12	22							
	No. 30		0.6	8	20							
	No. 50		0.3	6	15							
	No. 200		0.075	5	9							5
SMAR-F Fine	3/4"		19	100	100							
	3/8"		9.5	95	100							
	No. 4		4.75	40	50							
	No. 8		2.36	17	27	18.5						
	No. 16		1.18	12	22							
	No. 30		0.6	8	20							
	No. 50		0.3	6	15							
	No. 200		0.075	5	9							4
PFC PG 76 Mixtures	3/4"		19	100	100							
	1/2"		12.5	80	100							
	3/8"		9.5	35	60							
	No. 4		4.75	1	20							
	No. 8		2.36	1	10							
	No. 200		0.075	1	4							4
PFC A-R Mixtures	3/4"		19	100	100							
	1/2"		12.5	95	100							
	3/8"		9.5	50	80							
	No. 4		4.75	0	8							
	No. 8		2.36	0	4							
	No. 200		0.075	0	4							
Other			#N/A									
			#N/A									
			#N/A									
			#N/A									
			#N/A									
			#N/A									
			#N/A									
			#N/A									
			#N/A									
			#N/A									

								AC CONTENT		Membrane Application Rates		
								MIN	MAX	MIN	MAX	SA Factors
UTBWC-A	3/8"		9.5	100	100							0.41
	No. 4		4.75	35	55							0.41
	No. 8		2.36	19	30							0.82
	No. 16		1.18	14	25			5.0	5.8	0.14	0.19	1.64
	No. 30		0.6	10	18							2.87
	No. 50		0.3	7	14							6.14
	No. 100		0.15	5	10							12.29
	No. 200		0.075	4	6							32.77
UTBWC-B	1/2"		12.5	100	100							0.41
	3/8"		9.5	75	100							-
	No. 4		4.75	22	36							0.41
	No. 8		2.36	19	30							0.82
	No. 16		1.18	14	24			4.8	5.6	0.17	0.24	1.64
	No. 30		0.6	10	18							2.87
	No. 50		0.3	7	14							6.14
	No. 100		0.15	5	10							12.29
	No. 200		0.075	4	6							32.77
UTBWC-C	3/4"		19	100	100							0.41
	1/2"		12.5	75	100							-
	3/8"		9.5	55	80							-
	No. 4		4.75	22	36							0.41
	No. 8		2.36	19	30							0.82
	No. 16		1.18	14	24			4.6	5.6	0.20	0.27	1.64
	No. 30		0.6	10	18							2.87
	No. 50		0.3	7	14							6.14
	No. 100		0.15	5	10							12.29
	No. 200		0.075	4	6							32.77

SS3111-CA Mix	3/8"		9.5	98	100	15.5			6.5	99999999						
	No. 4		4.75	70	90											
	No. 8		2.36	40	65											
	No. 16		1.18	20	45											
	No. 30		0.6	10	30											
	No. 50		0.3	10	20											
	No. 200		0.075	2	10										Min Lab Density	Max Lab Density
UTBHMWC-A	3/8"		9.5	100	100				5.0	5.8	0.14	0.20	0.41			
	No. 4		4.75	35	55								0.41			
	No. 8		2.36	19	30								0.82			
	No. 16		1.18	14	25								1.64			
	No. 30		0.6	10	18								2.87			
	No. 50		0.3	7	14								6.14			
	No. 100		0.15	5	10								12.29			
	No. 200		0.075	4	6								32.77			
UTBHMWC-B	1/2"		12.5	100	100				4.8	5.6	0.16	0.24	0.41			
	3/8"		9.5	75	100								-			
	No. 4		4.75	22	36								0.41			
	No. 8		2.36	19	30								0.82			
	No. 16		1.18	14	24								1.64			
	No. 30		0.6	10	18								2.87			
	No. 50		0.3	7	14								6.14			
	No. 100		0.15	5	10								12.29			
	No. 200		0.075	4	6								32.77			
UTBHMWC-C	3/4"		19	100	100				4.6	5.6	0.17	0.27	0.41			
	1/2"		12.5	75	100								-			
	3/8"		9.5	55	80								-			
	No. 4		4.75	22	36								0.41			
	No. 8		2.36	19	30								0.82			
	No. 16		1.18	14	24								1.64			
	No. 30		0.6	10	18								2.87			
	No. 50		0.3	7	14								6.14			
	No. 100		0.15	5	10								12.29			
	No. 200		0.075	4	6								32.77			
TBPFC PG 76 Mixtures	3/4"		19	100	100				6.0	7.0	0.000	0.000			78.0	82.0
	1/2"		12.5	80	100											
	3/8"		9.5	35	60											
	No. 4		4.75	1	20											
	No. 8		2.36	1	10											
	No. 200		0.075	1	4											
TBPFC A-R Mixtures	3/4"		19	100	100				8.0	10.0	0.000	0.000			78.0	82.0
	1/2"		12.5	95	100											
	3/8"		9.5	50	80											
	No. 4		4.75	0	8											
	No. 8		2.36	0	4											
	No. 200		0.075	0	4											

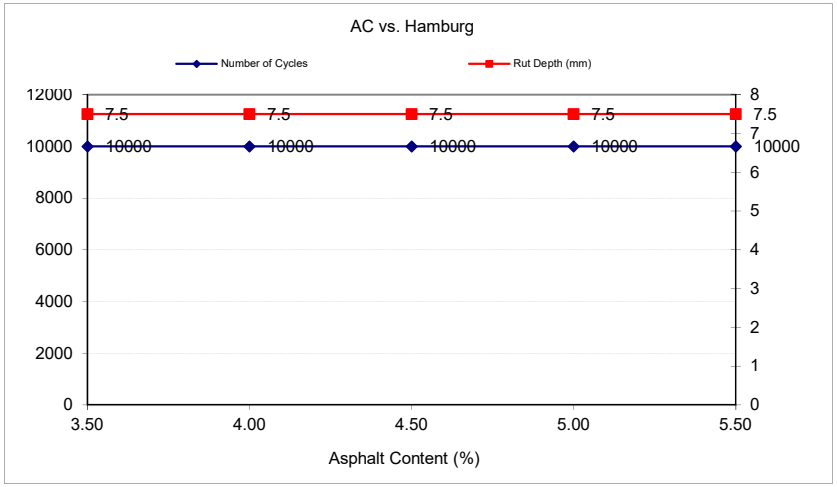
Gradation Table

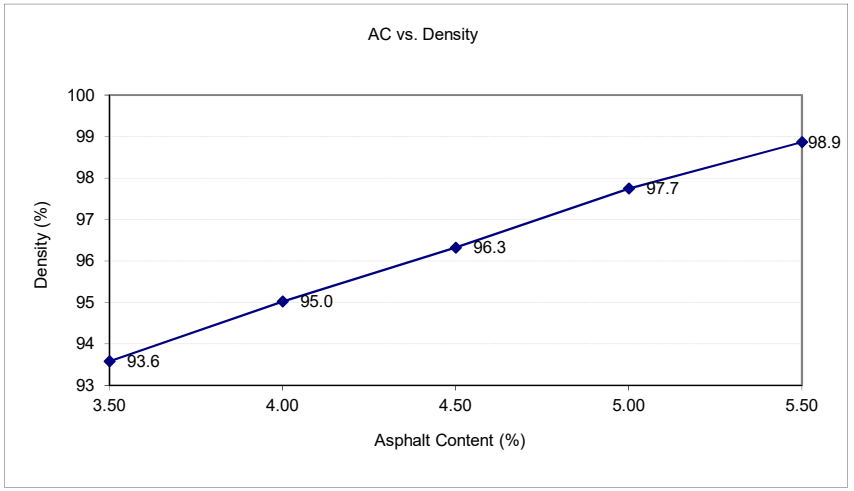
English	Metric	Selection	Size
2"	50 mm	2"	50
1-3/4"	45 mm	1-3/4"	45
1-1/2"	37.5 mm	1-1/2"	37.5
1-1/4"	31.5 mm	1-1/4"	31.5
1"	25 mm	1"	25
7/8"	22.4 mm	7/8"	22.4
3/4"	19 mm	3/4"	19
5/8"	16 mm	5/8"	16
1/2"	12.5 mm	1/2"	12.5
7/16"	11.2 mm	7/16"	11.2
3/8"	9.5 mm	3/8"	9.5
5/16"	8 mm	5/16"	8
1/4"	6.3 mm	1/4"	6.3
No. 4	4.75 mm	No. 4	4.75
No. 6	3.35 mm	No. 6	3.35
No. 8	2.36 mm	No. 8	2.36
No. 10	2 mm	No. 10	2
No. 14	1.4 mm	No. 14	1.4
No. 16	1.18 mm	No. 16	1.18
No. 20	.85 µm	No. 20	0.85
No. 30	.6 µm	No. 30	0.6
No. 40	.425 µm	No. 40	0.425
No. 50	.3 µm	No. 50	0.3
No. 80	.18 µm	No. 80	0.18
No. 100	.15 µm	No. 100	0.15
No. 200	.075 µm	No. 200	0.075

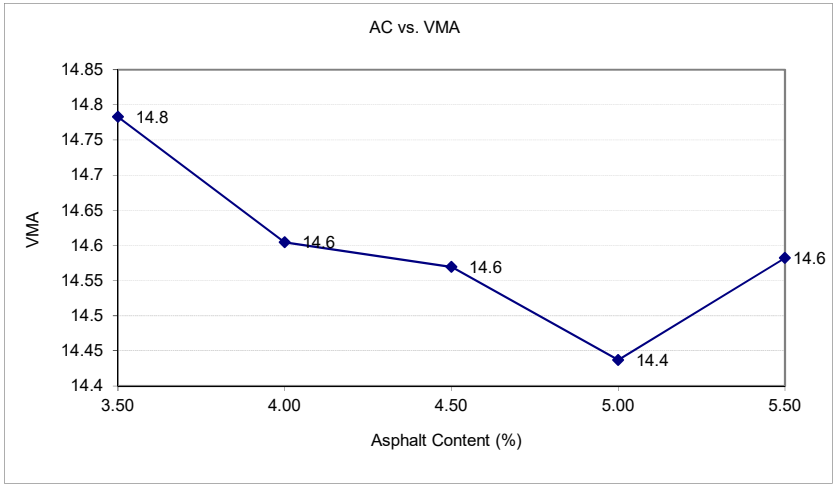
MIX TYPES
ITEM340_A_Coarse_Base
ITEM340_B_Fine_Base
ITEM340_C_Coarse_Surface
ITEM340_D_Fine_Surface
ITEM340_F_Fine_Mixture
ITEM341_A_Coarse_Base
ITEM341_B_Fine_Base
ITEM341_C_Coarse_Surface
ITEM341_D_Fine_Surface
ITEM341_F_Fine_Mixture
ITEM344_SP_A_Base
ITEM344_SP_B_Intermediate
ITEM344_SP_C_Surface
ITEM344_SP_D_Fine_Mixture
ITEM344_CMHB_C_Coarse_Surface
ITEM344_CMHB_F_Fine_Surface
ITEM346_SMA_C_Coarse
ITEM346_SMA_D_Medium
ITEM346_SMA_F_Fine
ITEM346_SMAR_C_Coarse
ITEM346_SMAR_F_Fine
ITEM342_PFC_PG_76_Mixtures
ITEM342_PFC_A_R_Mixtures
ITEM3001_UTBWC_A
ITEM3001_UTBWC_B
ITEM3001_UTBWC_C
SS3111_CA_Mix
ITEM3142_UTBWC_A
ITEM3142_UTBWC_B
ITEM3142_UTBWC_C
CAM
TBPFC_PG76
TBPFC_AR
Other

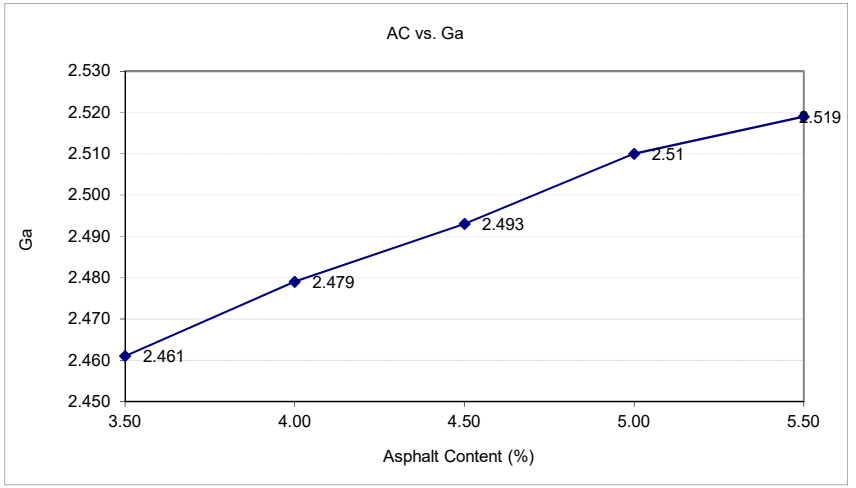
Membrane Application Check
0

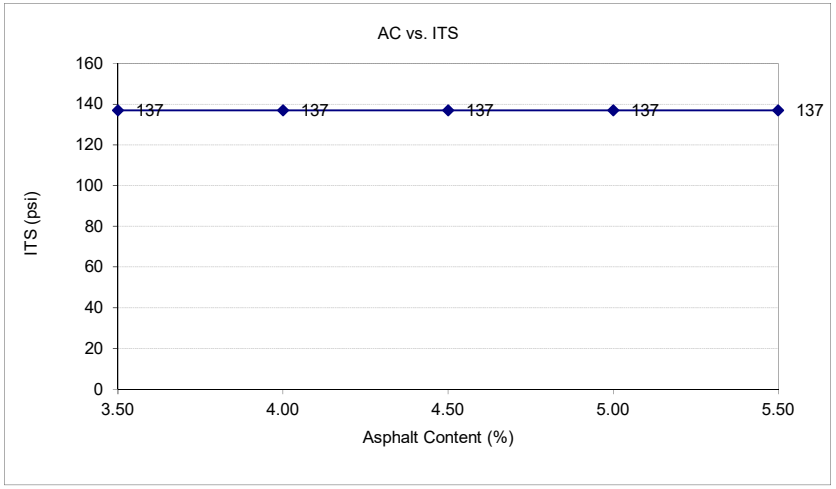
MINIMUM PFC AC CONTENT	
Bulk Specific Gravity	Minimum AC%
0.000	6.0
2.750	6.0
2.800	5.9
2.850	5.8
2.900	5.7
2.950	5.6
3.000	5.5
9999999999.000	5.5

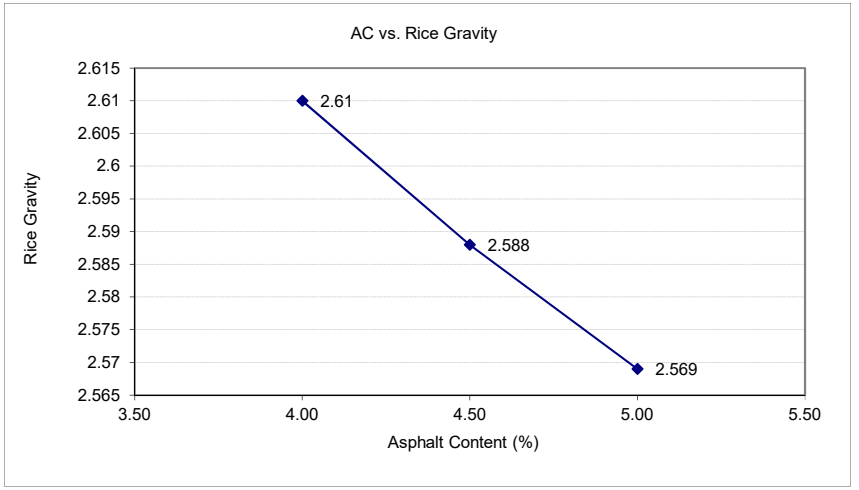

AC vs. Hamburg
Number of Cycles
Rut Depth (mm)
12000
10000
8000
6000
4000
2000
0
8
7
6
5
4
3
2
1
0
7.5
7.5
7.5
7.5
7.5
10000
10000
10000
10000
10000
3.50
4.00
4.50
5.00
5.50
Asphalt Content (%)


AC vs. Density
Density (%)
100
99
98
97
96
95
94
93
93.6
95.0
96.3
97.7
98.9
3.50
4.00
4.50
5.00
5.50
Asphalt Content (%)


AC vs. VMA
VMA
14.85
14.8
14.75
14.7
14.65
14.6
14.55
14.5
14.45
14.4
14.8
14.6
14.6
14.4
14.6
3.50
4.00
4.50
5.00
5.50
Asphalt Content (%)


AC vs. Ga
Ga
2.530
2.520
2.510
2.500
2.490
2.480
2.470
2.460
2.450
2.461
2.479
2.493
2.51
2.519
3.50
4.00
4.50
5.00
5.50
Asphalt Content (%)


AC vs. ITS
ITS (psi)
160
140
120
100
80
60
40
20
0
137
137
137
137
137
3.50
4.00
4.50
5.00
5.50
Asphalt Content (%)


AC vs. Rice Gravity
Rice Gravity
2.615
2.61
2.605
2.6
2.595
2.59
2.585
2.58
2.575
2.57
2.565
2.61
2.588
2.569
3.50
4.00
4.50
5.00
5.50
Asphalt Content (%)

Texas Materials
an Oldcastle company

DESIGN NO: 1320C-64A
DESCRIPTION: TYPE "C" PG 64-22
DESIGN DATE: 26-Jul-13
SUBMITTAL DATE: 29-Sep-17
REVISION DATE: 01-Jun-14

DEPARTMENT OF PUBLIC WORKS - CONSTRUCTION INSPECTION DIVISION
505 BARTON SPRINGS ROAD
AUSTIN, TEXAS, 78704

ATTENTION: DIVISION ENGINEER

SHOWN BELOW IS THE PLANT CORRECTED JOB MIX FORMULA FOR THE HOT MIX ASPHALTIC CONCRETE TO BE USED ON THE FOLLOWING PROJECT:

NAME OF SUBDIVISION OR CIP PROJECT: _____
CIP PROJECT NUMBER: _____

THE JOB MIX FORMULA HAS DETERMINED ACCORDING TO CITY OF AUSTIN STANDARD SPECIFICATIONS ITEM 340

HMAC PRODUCER: Texas Materials
PLANT LOCATION: 713 Linger Lane, Austin, TX 78721

SUBMITTED BY: _____
DATE: _____
PRIME CONTRACTOR: _____

PREPARED BY: KYLE RANGNOW

CERTIFICATION: TXDOT LEVEL II #765

SIEVE SIZE	% PASSING
7/8"	100.0
5/8"	97.8
3/8"	82.9
#4	57.6
#10	35.9
#40	19.9
#80	11.7
#200	4.4

ASPHALT CONTENT
VALERO PG 64-22
4.4%

HMAC SUBMITTALS

All responsibility for the adequacy of this mix design rests with the Contractor who submitted it. In reviewing the submittal, the CDM shall rely upon the adequacy of the work of the Design Professional whose certification appears hereon.

☒ Reviewed ☐ With Annotations

Signed: _____ Date: 10/16/17

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : COMBINED GRADATION

Refresh Workbook

File Version: 06/07/10 10:24:04

SAMPLE ID:		SAMPLE DATE:	7-26-13
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:		SPEC YEAR:	2004
SAMPLED BY:	WILLIAM CHAMPION#770	SPEC ITEM:	
SAMPLE LOCATION:	Design	SPECIAL PROVISION:	
MATERIAL CODE:	HMAC	MIX TYPE:	ITEM340_C_Coarse_Surface
MATERIAL NAME:	TYPE C HMAC		
PRODUCER:	Texas Materials All Plants	WMA Included in Design?	No
AREA ENGINEER:		PROJECT MANAGER:	WMA TECHNOLOGY:

COURSE\LIFT:	Surface	STATION:		DIST. FROM CL:		CONTRACTOR DESIGN # : 1321C-76

Recycled Binder, %	
Bin No.8 :	0.0
Bin No.9 :	0.0
Bin No.10 :	0.0
Total	0.0

Ratio of Recycled to Total Binder, %
(based on binder percent (%) entered below in this worksheet)
0.0

	AGGREGATE BIN FRACTIONS							"RECYCLED MATERIALS"			
	Bin No.1	Bin No.2	Bin No.3	Bin No.4	Bin No.5	Bin No.6	Bin No.7	Bin No.8	Bin No.9	Bin No.10	
Aggregate Source:	Limestone_Dolom	Limestone_Dolom	Limestone_Dolom	Limestone_Dolom	Gravel						Material Type
Aggregate Pit:	Marble Falls	Marble Falls	Marble Falls	Marble Falls							Material Source
Aggregate Number:	1402702	1402702	1402702	1402702							RAS Type
Sample ID:	C Rock	D Rock	F Rock	Man. Sand	Field Sand						Sample ID
								Recycled Asphalt Binder (%)			
Hydrated Lime?:											
Individual Bin (%):	20.0	26.0	14.0	27.0	13.0						

																				Combined Gradation					
															% of Tot. Mix		% of Tot. Mix		% of Tot. Mix	Total Bin	Lower & Upper Specification Limits				
															% of Aggreg		% of Aggreg		% of Aggreg	100.0%				Individual % Retained	Cumulative % Retained	Sieve Size
Sieve Size:	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum. % Passing	Lower	Upper	Within Spec's			
7/8"	100.0	20.0	100.0	26.0	100.0	14.0	100.0	27.0	100.0	13.0											100.0	100.0	100.0	Yes	0.0	0.0	7/8"
5/8"	89.7	17.9	100.0	26.0	100.0	14.0	100.0	27.0	100.0	13.0											97.9	95.0	100.0	Yes	2.1	2.1	5/8"
3/8"	25.5	5.1	91.4	23.8	100.0	14.0	100.0	27.0	100.0	13.0											82.9	70.0	85.0	Yes	15.1	17.1	3/8"
No. 4	5.6	1.1	24.3	6.3	64.7	9.1	99.9	27.0	99.4	12.9											56.4	43.0	63.0	Yes	26.5	43.6	No. 4
No. 10	3.9	0.8	4.9	1.3	5.5	0.8	71.9	19.4	97.0	12.6											34.8	30.0	40.0	Yes	21.5	65.2	No. 10
No. 40	3.3	0.7	3.2	0.8	2.9	0.4	30.9	8.3	73.1	9.5											19.7	10.0	25.0	Yes	15.1	80.3	No. 40
No. 80	3.0	0.6	2.8	0.7	2.4	0.3	18.3	4.9	38.3	5.0											11.6	3.0	13.0	Yes	8.2	88.4	No. 80
No. 200	2.4	0.5	2.3	0.6	2.0	0.3	4.9	1.3	13.2	1.7											4.4	2.0	8.0	Yes	7.2	95.6	No. 200

(Bold Italic) Not within specifications ***(Bold Italic)*** Not within specificaitons- Restricted Zone *(Italic)* Not cumulative

Lift Thickness, in:		Binder Substitution?		Binder Originally Specified:		Substitute Binder:
Asphalt Source & Grade:	Valero 76-22	Binder Percent, (%):	4.3	Asphalt Spec. Grav.:	1.036	
Antistripping Agent:		Percent, (%):				

Remarks:

Notes:

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : MATERIAL PROPERTIES

File Version: 06/07/10 10:24:04

SAMPLE ID:		SAMPLE DATE:	7-26-13
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:		SPEC YEAR:	2004
SAMPLED BY:	WILLIAM CHAMPION#770	SPEC ITEM:	
SAMPLE LOCATION:	Design	SPECIAL PROVISION:	
MATERIAL CODE:	HMAC	MIX TYPE:	ITEM340_C_Coarse_Surfac
MATERIAL NAME:	TYPE C HMAC		
PRODUCER:	Texas Materials All Plants		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:	Surface	STATION:		DIST. FROM CL:		CONTRACTOR DESIGN # :	1321C-76

	Bin No.1	Bin No.2	Bin No.3	Bin No.4	Bin No.5	Bin No.6	Bin No.7
Individual Bin (%):	Bin No.1 = 20 %	Bin No.2 = 26 %	Bin No.3 = 14 %	Bin No.4 = 27 %	Bin No.5 = 13 %		
Aggregate Source:	Limestone_Dolom	Limestone_Dolom	Limestone_Dolom	Limestone_Dolom	Gravel		
Aggregate Number:	1402702	1402702	1402702	1402702			
Sample ID:	C Rock	D Rock	F Rock	Man. Sand	Field Sand		

Test Name	SiteManager Test Template	Test Method	Spec. Min or Max	Spec. Limit	Result	Sample ID	Result	Sample ID	Result	Sample ID	Result	Sample ID	Result	Sample ID	Result	Sample ID	Result	Sample ID
Stockpile					Bin No.1		Bin No.2		Bin No.3		Bin No.4		Bin No.5		Bin No.6		Bin No.7	
Decantation	Tx217	Tex-217-F	Max.	1.5	0.40		1.00		0.90									
Deleterious Mat'l	Tx217	Tex-217-F	Max.	1.5	0.00		0.00		0.00									
Surface Aggregate Classification	Tx4AgClas	Tex-438-A, Tex-612-J	Min.	B	B		B		B		B							
Magnesium Sulfate Soundness	Tx411M	Tex-411-A	Max.	30	7.00		7.00		7.00		7.00							
LA Abrasion	Tx410	Tex-410-A	Max.	40	30.00		30.00		30.00		30.00							
Crushed Faces Count	Tx460	Tex-460-A	Min.	n/a	n/a		n/a		n/a									
Flat & Elongated	Tx280	Tex-280-F	Max.	10	0.00		0.00		0.00									
Fine Aggregate					Bin No.1		Bin No.2		Bin No.3		Bin No.4		Bin No.5		Bin No.6		Bin No.7	
Bar Linear Shrinkage	Tx107	Tex-107-E	Max.	3							1.00							
Methylene Blue		AASHTO T330	Max.															
Combined Aggregate					Bin No.1		Bin No.2		Bin No.3		Bin No.4		Bin No.5		Bin No.6		Bin No.7	
Sand Equivalent	Tx203	Tex-203-F	Min.	45									68.00					
User Defined Testing					Bin No.1		Bin No.2		Bin No.3		Bin No.4		Bin No.5		Bin No.6		Bin No.7	
Use this area to enter any test methods, speciafications & test result that apply to this material(s) but are not not listed above. **1**																		
2																		
3																		
4																		
5																		
Recycled Materials					**Bin No.8**		**Bin No.9**		**Bin No.10**									
Deleterious Mat'l	Tx217	Tex-217-F, Part III	Max.															

Remarks:

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : Aggregate Classification

File Version: 06/07/10 10:24:04

SAMPLE ID:		SAMPLE DATE:	7-26-13
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:		SPEC YEAR:	2004
SAMPLED BY:	WILLIAM CHAMPION#770	SPEC ITEM:	
SAMPLE LOCATION:	Design	SPECIAL PROVISION:	
MATERIAL CODE:	HMAC	MIX TYPE:	ITEM340_C_Coarse_Surface
MATERIAL NAME:	TYPE C HMAC		
PRODUCER:	Texas Materials All Plants		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:	Surface	STATION:		DIST. FROM CL:		CONTRACTOR DESIGN # :	1321C-76

Aggregate Classification

	Bin No.1	Bin No.2	Bin No.3	Bin No.4	Bin No.5	Bin No.6	Bin No.7	Bin No.8	Bin No.9	Bin No.10
Individual Bin (%):	Bin No.1 = 20 %	Bin No.2 = 26 %	Bin No.3 = 14 %	Bin No.4 = 27 %	Bin No.5 = 13 %					
Aggregate Source:	Limestone_Dolom	Limestone_Dolom	Limestone_Dolom	Limestone_Dolom	Gravel					
Aggregate Number:	1402702	1402702	1402702	1402702						
Class (A) Rock (Y/N):	No	No	No	No	No					
Sieve Size:	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %
Passing / Retained										
- / 7/8"	0.0	0.0	0.0	0.0	0.0					
7/8" / 5/8"	2.1	0.0	0.0	0.0	0.0					
5/8" / 3/8"	12.8	2.2	0.0	0.0	0.0					
3/8" / No. 4	4.0	17.4	4.9	0.0	0.1					
No. 4 / No. 10	0.3	5.0	8.3	7.6	0.3					
No. 10 / No. 40	0.1	0.4	0.4	11.1	3.1					
No. 40 / No. 80	0.1	0.1	0.1	3.4	4.5					
No. 80 / No. 200	0.1	0.1	0.1	3.6	3.3					
No. 200 / Pan	0.5	0.6	0.3	1.3	1.7					
Total:	20.0	26.0	14.0	27.0	13.0					
Percent of plus No. 4	18.9	19.7	4.9	0.0	0.1					

Percent of plus No. 4 from class (A) Rock:	0.0
Total Percent of plus No. 4	43.6
Percent of plus No. 4 from class (A) Rock:	***0.0***

Remarks:

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : WEIGH UP SHEET

File Version: 06/07/10 10:24:04

SAMPLE ID:		SAMPLE DATE:	7-26-13
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:		SPEC YEAR:	2004
SAMPLED BY:	WILLIAM CHAMPION#770	SPEC ITEM:	
SAMPLE LOCATION:	Design	SPECIAL PROVISION:	
MATERIAL CODE:	HMAC	MIX TYPE:	ITEM340_C_Coarse_Surfac
MATERIAL NAME:	TYPE C HMAC		
PRODUCER:	Texas Materials All Plants		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:	Surface	STATION:		DIST. FROM CL:		CONTRACTOR DESIGN # :	1321C-76

Aggregate Weight, g:	5,000.0
4.3% Asphalt by Total Weight, g:	224.7
Total Weight, g:	5224.7

4.3% Asphalt by Total Weight, g:	224.7
(Valero 76-22) Asphalt to Add, g:	**224.7**

			Bin No.1	Bin No.2	Bin No.3	Bin No.4	Bin No.5	Bin No.6	Bin No.7	Bin No.8	Bin No.9	Bin No.10			
		Individual Bin (%):	Bin No.1 = 20 %	Bin No.2 = 26 %	Bin No.3 = 14 %	Bin No.4 = 27 %	Bin No.5 = 13 %								
		Aggregate Source:	Limestone_Dolom	Limestone_Dolom	Limestone_Dolom	Limestone_Dolom	Gravel								
		Aggregate Number:	1402702	1402702	1402702	1402702									
		Sample ID:	C Rock	D Rock	F Rock	Man. Sand	Field Sand								
	Sieve Size: Passing	Sieve Size: Retained	Aggregate Weight	Aggregate Weight	Aggregate Weight	Aggregate Weight	Aggregate Weight						Total Weights	Individual Retained, %	Cumulative Retained, %
INDIVIDUAL	-	7/8"	0.0	0.0	0.0	0.0	0.0						0.0	0.0	0.0
	7/8"	5/8"	103.0	0.0	0.0	0.0	0.0						103.0	2.1	2.1
	5/8"	3/8"	642.0	111.8	0.0	0.0	0.0						753.8	15.1	17.1
	3/8"	No. 4	199.0	872.3	247.1	1.3	3.9						1,323.7	26.5	43.6
	No. 4	No. 10	17.0	252.2	414.4	378.0	15.6						1,077.2	21.5	65.2
	No. 10	No. 40	6.0	22.1	18.2	553.5	155.4						755.2	15.1	80.3
	No. 40	No. 80	3.0	5.2	3.5	170.1	226.2						408.0	8.2	88.4
	No. 80	No. 200	6.0	6.5	2.8	180.9	163.2						359.4	7.2	95.6
	No. 200	Pan	24.0	29.9	14.0	66.2	85.8						219.9	4.4	100.0
	Totals		1,000.0	1,300.0	700.0	1,350.0	650.0						**5,000.0**	Total includes asphalt from the recycled material aggregate	

Running Total:

CUMULATIVE	-	7/8"	0.0	1,000.0	2,300.0	3,000.0	4,350.0						0.0		
	7/8"	5/8"	103.0	1,000.0	2,300.0	3,000.0	4,350.0						103.0		
	5/8"	3/8"	745.0	1,111.8	2,300.0	3,000.0	4,350.0						856.8		
	3/8"	No. 4	944.0	1,984.1	2,547.1	3,001.4	4,353.9						2,180.5		
	No. 4	No. 10	961.0	2,236.3	2,961.5	3,379.4	4,369.5						3,257.7		
	No. 10	No. 40	967.0	2,258.4	2,979.7	3,932.9	4,524.9						4,012.8		
	No. 40	No. 80	970.0	2,263.6	2,983.2	4,103.0	4,751.1						4,420.8		
	No. 80	No. 200	976.0	2,270.1	2,986.0	4,283.9	4,914.2						4,780.2		
	No. 200	Pan	1,000.0	2,300.0	3,000.0	4,350.0	5,000.0						5,000.0	Total includes asphalt from the recycled material aggregate	

Remarks:

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES

SAMPLE ID:		SAMPLE DATE:	7-26-13
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:		SPEC YEAR:	2004
SAMPLED BY:	WILLIAM CHAMPION#770	SPEC ITEM:	
SAMPLE LOCATION:	Design	SPECIAL PROVISION:	
MATERIAL CODE:	HMAC	MIX TYPE:	ITEM340_C_Coarse_Surface
MATERIAL NAME:	TYPE C HMAC		
PRODUCER:	Texas Materials All Plants		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:	Surface	STATION:		DIST. FROM CL:		CONTRACTOR DESIGN # :	1321C-76

Blank Sample Weight, g:	

			Bin No.1	Bin No.2	Bin No.3	Bin No.4	Bin No.5	Bin No.6	Bin No.7			
Individual Bin (%):			Bin No.1 = 20 %	Bin No.2 = 26 %	Bin No.3 = 14 %	Bin No.4 = 27 %	Bin No.5 = 13 %					
Aggregate Source:			Limestone_Dolom	Limestone_Dolom	Limestone_Dolom	Limestone_Dolom	Gravel					
Aggregate Number:			1402702	1402702	1402702	1402702						
Sample ID:			C Rock	D Rock	F Rock	Man. Sand	Field Sand					
	Sieve Size:		Aggregate Weight	Aggregate Weight	Aggregate Weight	Aggregate Weight	Aggregate Weight			Total Weights	Individual Retained, %	Cumulative Retained, %
	Passing	Retained										
INDIVIDUAL	-	7/8"	0.0	0.0	0.0	0.0	0.0			0.0		
	7/8"	5/8"	0.0	0.0	0.0	0.0	0.0			0.0		
	5/8"	3/8"	0.0	0.0	0.0	0.0	0.0			0.0		
	3/8"	No. 4	0.0	0.0	0.0	0.0	0.0			0.0		
	No. 4	No. 10	0.0	0.0	0.0	0.0	0.0			0.0		
	No. 10	No. 40	0.0	0.0	0.0	0.0	0.0			0.0		
	No. 40	No. 80	0.0	0.0	0.0	0.0	0.0			0.0		
	No. 80	No. 200	0.0	0.0	0.0	0.0	0.0			0.0		
	No. 200	Pan	0.0	0.0	0.0	0.0	0.0			0.0		
	Totals		0.0	0.0	0.0	0.0	0.0			**0.0**	Total does not include recycled material	

Running Total:	

CUMULATIVE	-	7/8"	0.0	0.0	0.0	0.0	0.0			0.0		
	7/8"	5/8"	0.0	0.0	0.0	0.0	0.0			0.0		
	5/8"	3/8"	0.0	0.0	0.0	0.0	0.0			0.0		
	3/8"	No. 4	0.0	0.0	0.0	0.0	0.0			0.0		
	No. 4	No. 10	0.0	0.0	0.0	0.0	0.0			0.0		
	No. 10	No. 40	0.0	0.0	0.0	0.0	0.0			0.0		
	No. 40	No. 80	0.0	0.0	0.0	0.0	0.0			0.0		
	No. 80	No. 200	0.0	0.0	0.0	0.0	0.0			0.0		
	No. 200	Pan	0.0	0.0	0.0	0.0	0.0			0.0		

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : BULK GRAVITY

File Version: 06/07/10 10:24:04

SAMPLE ID:		SAMPLE DATE:	7-26-13
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:		SPEC YEAR:	2004
SAMPLED BY:	WILLIAM CHAMPION#770	SPEC ITEM:	
SAMPLE LOCATION:	Design	SPECIAL PROVISION:	
MATERIAL CODE:	HMAC	MIX TYPE:	ITEM340_C_Coarse_Surface
MATERIAL NAME:	TYPE C HMAC		
PRODUCER:	Texas Materials All Plants		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:	Surface	STATION:		DIST. FROM CL:		CONTRACTOR DESIGN # :	1321C-76

	Bin No.1	Bin No.2	Bin No.3	Bin No.4	Bin No.5	Bin No.6	Bin No.7	Bin No.8	Bin No.9	Bin No.10
Individual Bin (%):	Bin No.1 = 20 %	Bin No.2 = 26 %	Bin No.3 = 14 %	Bin No.4 = 27 %	Bin No.5 = 13 %					
Aggregate Source:	Limestone_Dolom	Limestone_Dolom	Limestone_Dolom	Limestone_Dolom	Gravel					
Aggregate Number:	1402702	1402702	1402702	1402702						
Sample ID:	C Rock	D Rock	F Rock	Man. Sand	Field Sand					

Sieve Size:		Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG
Passing	Retained																				
	7/8"																				
7/8"	5/8"	10.3	2.788																		
5/8"	3/8"	64.2	2.788	8.6	2.788																
3/8"	No. 4	19.9	2.794	67.1	2.794	35.3	2.794	0.1	2.815	0.6	2.642										
No. 4	No. 10	1.7	2.794	19.4	2.798	59.2	2.798	28.0	2.815	2.4	2.642										
No. 10	No. 40	0.6	2.794	1.7	2.798	2.6	2.798	41.0	2.815	23.9	2.642										
No. 40	No. 80	0.3	2.794	0.4	2.798	0.5	2.798	12.6	2.815	34.8	2.642										
No. 80	No. 200	0.6	2.794	0.5	2.798	0.4	2.798	13.4	2.815	25.1	2.678										
No. 200	Pan	2.4	2.794	2.3	2.798	2.0	2.798	4.9	2.815	13.2	2.678										
Totals		100.0	2.790	100.0	2.794	100.0	2.797	100.0	2.815	100.0	2.656										
			7.2		9.3		5.0		9.6		4.9										

Combined Bulk Specific Gravity:	**2.780**
Coarse Agg. Combined BSG:	

Specific Gravity of Asphalt:	**1.036**

Remarks:

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : SUMMARY SHEET

File Version: 06/07/10 10:24:04

SAMPLE ID:		SAMPLE DATE:	7-26-13
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:		SPEC YEAR:	2004
SAMPLED BY:	WILLIAM CHAMPION#770	SPEC ITEM:	
SAMPLE LOCATION:	Design	SPECIAL PROVISION:	
MATERIAL CODE:	HMAC	MIX TYPE:	ITEM340_C_Coarse_Surface
MATERIAL NAME:	TYPE C HMAC		
PRODUCER:	Texas Materials All Plants		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:	Surface	STATION:		DIST. FROM CL:		CONTRACTOR DESIGN # :	1321C-76

Target Density, %:	**96.0**
Number of Gyrations:	

CRM* Content	

TEST SPECIMENS									Mixture Evaluation @ Optimum Asphalt Content			
										Hamburg Wheel Tracking Test		
Asphalt Content (%)	Binder Ratio (%)	Specific Gravity Of Specimen (Ga)	Maximum Specific Gravity (Gr)	Effective Gravity (Ge)	Theo. Max. Specific Gravity (Gt)	Density from Gt (Percent)	VMA (Percent)	Hveem Stability (%)	Indirect Tensile Strength (psi)	Number of cycles	Rut depth (mm)	*Overlay Tester Min. Number of Cycles*
3.5	0.0	2.465	2.616	2.769	2.624	93.9	14.4	58.0				
4.0	0.0	2.480	2.599	2.773	2.603	95.3	14.3	55.0				
4.5	0.0	2.494	2.582	2.777	2.583	96.6	14.3	53.0	145			
5.0	0.0	2.509	2.567	2.783	2.563	97.9	14.2	48.0				
5.5	0.0	2.520	2.551	2.788	2.543	99.1	14.3	36.0				

Effective Specific Gravity:	2.778

Estimated Percent of Stripping, %:	

Optimum Asphalt Content :	**4.3**	Binder Ratio @ OAC:	0.0
VMA @ Optimum AC:	**14.3**		

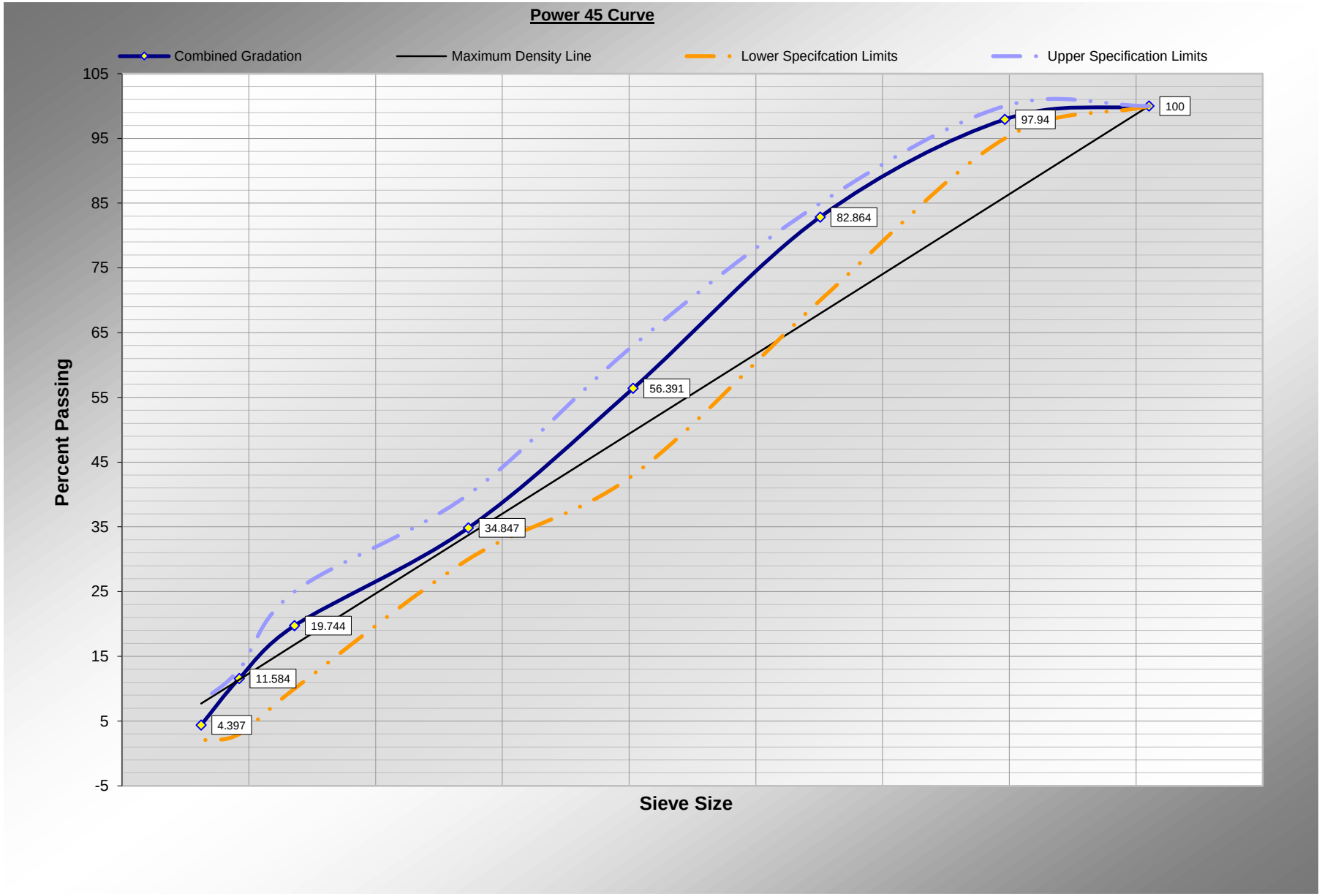
Interpolated Values	
Specific Gravity (Ga):	2.488
Max. Specific Gravity (Gr):	2.589
Theo. Max. Specific Gravity (Gt):	2.592

Remarks:

Date	Changes	By
7/20/2005	Add area in the Combined Gradation worksheet to enter in percent fiber for respective PFC and SMA mixtures in cells P42 to S42 Change field# for S42 (on the Combined Gradation worksheet) to Field383, and reference %Fiber value in the Summary sheet to cell S42 Add area in the Combined Gradation worksheet to enter in crumb rubber for respective PFC and SMA mixtures in cells T42 to W42 Change field# for W40 (on the Combined Gradation worksheet) to Field384, and reference % Crumb Rubber value in the Summary sheet to cell W40 Add conditional formatting for percent fiber and percent crumb rubber area so that only effected mixture types are represented on the combined gradation worksheet Add area to enter percent fiber and percent crumb rubber in the Summary worksheet (cell K18) Add field to calculate the weight of fiber or crumb rubber in the Weigh Up worksheet (cells S18 to V20) Add conditional formatting to the fiber and crumb rubber queries in the Weight Up worksheet so that only corresponding mixture types are represented Add sieves: 3/4", 1/2" & 3/8" to the SPA, SPB and SPC mixes, respectively, in the Std Spec GRADATIONS worksheet Set cell F38 in the summary sheet equal to IF(F31="Error","",VLOOKUP(0.075,DUST,16,FALSE)/F31). This will calculate the Dust to Asphalt ratio Add Gr to the densification section in the Summary worksheet Calculate densities in cells Z33 to Z35 on the Summary worksheet by using the Gr instead of the Gt Add "No" to the validation list for cell E42 on the Weigh Up worksheet Addition of "Version" to the Combined Gradation worksheet	Brett Haggerty
	Combined Gradation Worksheet	
	Add UTBWC Types A, B and C options to Mix Type T40 - Add Membrane Target Application Rate, Gal/SY	
	Summary Worksheet	
8/16/2005	Need Draindown and Cantabro Loss for UTBHMWC mix option Add AC%, Ga, Gr, Ge, Gt, Density from Gt, and Film Thickness columns to be used only for Film Thickness calculations in cells B29 to V35 Add only two inputs for AC% and Gr in cells B33 & F33, respectively. Add range of acceptable film thickness & AC% at those film thicknesses in cells B37 to AA37 (all calculated fields) Allow AC%, Ga, Gr, Ge, Gt, Density from Gt, and Film Thickness columns to be hidden when not analyzing UTBWC Increase width column for column B to 8.00	Brett Haggerty
	Film Thickness Worksheet	
	Need to create this worksheet to calculate film thickness at each asphalt content. Need to reference data in Summary worksheet Hide this sheet when UTBWC is not selected	
	Std Spec GRADATIONS	
9/21/2005	The Membrane Application Check is necessary for the conditional formatting on the Combined Gradation Worksheet cell T40. Because if a complex algorithm is entered for a second condition format the workbook becomes impossible to open and excel crashes. Specification tolerance for 1" sieve for Type A mix was incorrect. Corrected as specified in Item 341.	Richard Izzo
9/27/2005	Added min & max tolerances for the No. 4 sieve of SP mix types	Richard Izzo
2/14/2006	Changed the location of Fields 521 to 557 & Fields 572 to 587 to M25, these field definitions were orignally found in different locations for different worksheets. Now all of the definitions are identical and reference a dummy cell to prevent the overwrite of other data within the template.	Brett Haggerty
2/15/2006	Added Mixtypes 340-A, 340-B, 340-C, 340-D, & 340-F to the mixtype list, as well as the cell definition to direct mix specifcations. This includes the addition of five new definitions, one for each of the new mixtypes. The addition of the mixtype names to the mixtype definition is also adjusted to include the mixtypes. No other changes were necessary for these mixtypes as they will reference the same limits as the 341 mixtypes.	Brett Haggerty
3/13/2006	Add definitions Field596 to Field636, these are the definitions for the "Other" mixtype that should be stored in Sitemanager databases when accessing previous data.	Brett Haggerty
3/14/2006	Revised minimum specification for percent passing for No. 4 sieve for SP-A, B, C, and D mix types.	Richard Izzo
5/17/2007	Add the new mixtype SS3111 for Crack Attenuating Mixtures	Brett Haggerty
	Matl Properties	
9/27/2005	B31, F31, H31 - Replaced Flakiness Index with Flat & Elongated. Flakiness Index not required in 2004 specifications.	
	Sumary	
9/27/2005	Changed conditional formatting of cells B44 to F47. Font color changed to black. Added VFA calculation at optimum asphalt content in cells B43 & F43. Cells formatted to only show for Item 344. Color of cell B44 changed to distinguish cells above and below when using Item 344 as all cells will have text and may look confusing.	Richard Izzo
5/11/2006	Add the Dimensional Analysis for PFC mixtures (these calculations are new, and not adjustments to the old equations) Add the Backcalculated Rice for PFC mixtures (these calculations are new to the sheet and not adjustments to the old equations) Remove the Interpolated Values for UTBWC mixtypes and Mixture Densification	Brett Haggerty
	Combined Gradation Worksheet	
5/30/2006	Add the Contractor's Design Number to cell V17, as well as the addition of the new field #	Brett Haggerty
5/17/2007	Update the UPLC to 690 Add the Aggregate Pit to the bin information (these cells account for Fields 683-689)	Brett Haggerty

Date	Changes	By	
	Summary Worksheet		
	Include comments for the backcalculated specific gravities when using PFC. This will provide users with a better idea of how to read the specifications		
	Include the new output results, which there are 117 values. This is the resval & resname values. The 117 values are expressed by the ULOV cell		
8/22/2006	Added Field#'s 638-681	Brett Haggerty	
	Change the VFA Conditional Formatting to display when SS3111 mixtype is selected		
	Add new comment to cell H65 to display correct VFA limits if they are not met		
	Change Dust/Asphalt Ratio conditional formatting to display when SS3111 mixtype is selected		
5/17/2007	Add a new entry for the minimum number of cycles using the Overlay Tester. Cell AF24 (Field690)	Brett Haggerty	
	Std Spec GRADATIONS		
	Remove the 3/8" sieve from the Item341-A, Item340-A & Type-A mixtypes		
	Add the number of sieves that contribute to coarse aggreagte to the following mixtypes: SP-A, SP-B, SP-C, SP-D, CMHB-C, CMHB-F, SMA-C, SMA D, SMA-F, SMAR-C, SMAR-F		
	Combined Gradation Worksheet		
	Add the Dry Rodded Unit Weight cell, "S22". Also because this is an input field, change the ULOV to 682		
	Add a new version number "3" for the calculation of VCA, as opposed to when it was manually entered		
	Bulk Gravity		
	Include the Combined Bulk Specific Gravity for Coarse Aggregate calculation in cell "M40"		
	Summary Worksheet		
10/30/2006	Add the new calculated fields for VCA, "M67" & "M68". And adjust the conditional formatting to account for new version numbers.	Brett Haggerty	
	Weigh Up		
12/2/2006	Adjust Cell L39 to reference only column L in the Combined Gradation Worksheet	Brett Haggerty	
	Power 45 Curve		
5/17/2007	Adjust the macro to place brackets, "{", before and after the graphed data is updated	Brett Haggerty	Allows for compatibility with Excel 2007
	Matl Properties		
	Update cell K28 to remove the overlapping of conditional formatting ranges.		Allows for compatibility with Excel 2007 without significant loss of functionality
5/17/2007	Delete the cell definition "Draindown". This references a cell in a different workbook and causes fidelity errors with Excel 2007.	Brett Haggerty	
	Bulk Gravity		
	Adjusted cells: F39, G39, J39, K39, N39, O39, R39, S39, V39, W39, Z39, AA39, AD39, AE39. This accounts for moved cells		
	Summary Worksheet		
	Update cell F68 to access Target Density cell instead of using an assumed density value of 96%		
	Update cell M72 for the moving of cells & removal of resval definitions		
	Weigh Up		
	Adjust cell O20 to include +/- asphalt from RAP binder		
	Combined Gradation Worksheet		
3/13/2008	Add new version #4 to account for changes	Brett Haggerty	
	Matl Properties		
	Add Methylene Blue to the Fine Aggregate Analysis (Row 36)		
	Add Cell Definitions for the Methylene Blue tests: Field691-Field705		
	Std Spec GRADATIONS		
	Add mixtypes ITEM3142_UTBWC_A, ITEM3142_UTBWC_B, ITEM3142_UTBWC_C		
	Summary Worksheet		
	Hide the "Target Density" cells when any of the Item3142 mixtypes are selected		
	Hide Mixture Evaluation cells (W22:AG30) with the selection of the Item3142 mixtypes		
	Add Final Specimen cells for Item3142 mixtypes in cells B64:M66		
	Add Cell Definitions for final specimen cells AC, Ga & Gr; declared Field706, Field707, & Field708, respectively		
	Declare new row definition (trip_4) for showing/hiding final specimen cells for the Item3142 mixtype		
	Add the Suggested Membrane Target Application Rate cells B68:G68		
	Combined Gradation Worksheet		
	Update the UPLC to 709		
	Update the Film Thickness worksheet show option (located in the Combined Gradation worksheet macros) to include Item3142 mixtypes		
	Film Thickness Worksheet		
	Add Ga and Density from Gt cells for the Item3142 mixtypes, cells: D33:E39 & L33:M39		
	Add conditional formatting for the minimum and maximum film thickness calculations. They now hide with the selection of Item3142 mixtypes. Cells B41:M44.		
	Add AC vs. Film Thickness & AC vs. Density Charts		
	Add cell definition Field709 to cell G63 (predicted AC%)		
4/3/2008	Add the prediction film thickness & prediction density cells, I62:L63	Brett Haggerty	
	Summary Worksheet		
5/14/2008	Modified the Overlay Tester results to be hidden if the CAM mixtype is not selected.	Brett Haggerty	
	Std Spec GRADATIONS		
	Add the mixtype for "CAM", it is exactly the same as SS3111CA_Mix		
	Add the mixtype for "TBPFC", it is exactly the same as PFC		
	Summary Worksheet		

Date	Changes	By
	Modify the conditional formatting for the overlay tester results to display if the "CAM" mixtype is selected.	
6/5/2008	Modify the conditional formatting for all cells that use the PFC mixtype to include the same formats for TBPFC	Brett Haggerty
	Blank Weigh Up Worksheet	
2/27/2009	Need to create this new worksheet to prepare "blank" samples for the ignition oven correction factors.	Gisel Carrasco
	Combined Gradation Worksheet	
	Fixing equation in Cell O20 FROM: IF(OR(Authorized Date:>39493,AuthorizedDate=""), 4,IF(OR(AuthorizedDate>39022,AuthorizedDate=""), 3,IF(OR(AuthorizedDate>38579,AuthorizedDate=""),2,1))) TO: IF(OR(AuthorizedDate>40333,AuthorizedDate=""),5, IF(OR(AuthorizedDate>39493, AuthorizedDate=""),4, IF(OR(AuthorizedDate>39022,AuthorizedDate=""),3, IF(OR(AuthorizedDate>38579,AuthorizedDate=""),2,1)))) **Using Version #5 after 6/7/2010**	
	Add Item 341-024 to the Special Provision list (specprov). SP 341-024 can be used only when version>4	
	Add WMA technology information. It is required to enter the WMA information (V15), in order to enter aggregate bin percentages.	
	Change mix description cell (E18) to dropdown list	
	Change Aggregate Source, Pit, and Number (E22:Q24) to dropdown lists	
	Hide the Recycled Material row with versions > 4 and show Hydrated Lime row	
	Modify master gradation band limits for the #4 sieve for Type F mixture from 80-86 to 70-90. New limits are used with versions >4 or SP 341-024.	
	Add Bins 8, 9 & 10 for Recycled Materials only. Enter percentage by total mix to calculate percentage by total aggregate.	
	Calculate Recycled Binder for each bin and show Total Recycled Binder Percentage (AB18). Calculate Ratio of Recycled to Total Binder (AA24)	
	Add binder substitution information. Enter originally specified binder (Q43) and substitute binder (V43) when substitute binder is allowed.	
	Matl Properties	
	Add Deleterious Material test for the Recycled Material (row 46)	
	Aggregate Classification	
	Add Recycled Materials Bins (8, 9 &10). Don't classify Recycled Materials as Class A Rock.	
	Weigh Up & Bulk Gravity	
	Add Recycled Materials Bins (8, 9 &10).	
	Take CRM calculation out (Cell T19)	
	Summary Worksheet	
	Add Recycled Binder ratio for each asphalt content (C26:C30). Add ratio at OAC (I71).	
	Std Spec GRADATIONS	
	Add specprov table (J24), Recylced Material table (recycledlist), WMA table with approved technologies according to 2009 list (WMATech), aggregate table with approved aggragates and quarries according to Dec2009 list, & binder substitution table.	
4/12/2010	Move "Junk's Field #'s" to cell P24	Gisel Carrasco


Power 45 Curve
Combined Gradation
Maximum Density Line
Lower Specifcation Limits
Upper Specification Limits
105
95
85
75
65
55
45
35
25
15
5
-5
Percent Passing
Sieve Size
4.397
11.584
19.744
34.847
56.391
82.864
97.94
100

If you have any questions or comments concerning this program, or would like to obtain an updated version of this program (if it has been updated) contact the **Site Manager Tier I contact person for the District (District Lab)**. If you have any other concerns or questions contact Richard Izzo at 512-506-5832 or **Brett Haggerty at 512-506-5841** of the Construction Division or you may contact one of the

* **Getting Started**: Begin with the Combined Gradations or Summary sheet. Here you will select dependent variables such as specification year, mix type, asphalt content, combined aggregate, and others. These variable will affect the calculation of other sheets in the workbook.

    - **Spec Year**: Must be 2004

    - **Mix Type**: Select the correct mix type for this lot. Clicking in the green cell, adjacent to the mix type label, will reveal a small dropdown list. From this list select the mix type that most closely matches your mix. This value will determine what sieve sizes are displayed on the worksheets.
      Select Other if mix is not in the list and input parameters as required.
      A button labeled 'Enter Specifications' will appear above the Bin Fractions Table. Click on this button and a small table will appear on the screen labeled 'Other'. Enter the required sieve sizes, maximum and minimum master grading limits, and the required minimum VMA.

* To move from page to page click on the different sheet tabs at the bottom of the page.

1613										
Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
1		Remarks:								
2	Surface	COURSE\LIFT:								
3		Tested By	TX207							
4		Tested Date	TX207							
5		Tested By	TX226							
6		Tested Date	TX226							
7		Tested By	TX227							
8		Tested Date	TX227							
9		Tested By	TX235							
10		Tested Date	TX235							
11		Tested By	TX242							
12		Tested Date	TX242							
13		Tested By	TX530							
14		Tested Date	TX530							
15		Tested By								
16		Tested Date								
17		Tested By								
18		Tested Date								
19	1321C-7(	CONTRACTOR DESIGN # :								
20	Limeston	HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Source:	Bin No.1						
21	Limeston	HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Source:	Bin No.2						
22	Limeston	HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Source:	Bin No.3						
23	Limeston	HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Source:	Bin No.4						
24	Gravel	HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Source:	Bin No.5						
25		HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Source:	Bin No.6						
26		HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Source:	Bin No.7						
27	Marble F	HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Pit:	Bin No.1						
28	Marble F	HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Pit:	Bin No.2						
29	Marble F	HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Pit:	Bin No.3						
30	Marble F	HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Pit:	Bin No.4						
31		HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Pit:	Bin No.5						
32		HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Pit:	Bin No.6						
33		HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Pit:	Bin No.7						
34	1402702	HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Number:	Bin No.1						
35	1402702	HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Number:	Bin No.2						
36	1402702	HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Number:	Bin No.3						
37	1402702	HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Number:	Bin No.4						
38		HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Number:	Bin No.5						
39		HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Number:	Bin No.6						
40		HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Number:	Bin No.7						
41	C Rock	HMACP MIXTURE DESIGN : COMBINED GRADATION	Sample ID:	Bin No.1						
42	D Rock	HMACP MIXTURE DESIGN : COMBINED GRADATION	Sample ID:	Bin No.2						
43	F Rock	HMACP MIXTURE DESIGN : COMBINED GRADATION	Sample ID:	Bin No.3						
44	Man. San	HMACP MIXTURE DESIGN : COMBINED GRADATION	Sample ID:	Bin No.4						
45	Field San	HMACP MIXTURE DESIGN : COMBINED GRADATION	Sample ID:	Bin No.5						
46		HMACP MIXTURE DESIGN : COMBINED GRADATION	Sample ID:	Bin No.6						
47		HMACP MIXTURE DESIGN : COMBINED GRADATION	Sample ID:	Bin No.7						
48		HMACP MIXTURE DESIGN : COMBINED GRADATION	Recycled Material?:	Bin No.1						
49		HMACP MIXTURE DESIGN : COMBINED GRADATION	Recycled Material?:	Bin No.2						
50		HMACP MIXTURE DESIGN : COMBINED GRADATION	Recycled Material?:	Bin No.3						
51		HMACP MIXTURE DESIGN : COMBINED GRADATION	Recycled Material?:	Bin No.4						
52		HMACP MIXTURE DESIGN : COMBINED GRADATION	Recycled Material?:	Bin No.5						
53		HMACP MIXTURE DESIGN : COMBINED GRADATION	Recycled Material?:	Bin No.6						
54		HMACP MIXTURE DESIGN : COMBINED GRADATION	Recycled Material?:	Bin No.7						
55		HMACP MIXTURE DESIGN : COMBINED GRADATION	Asphalt%:	Bin No.1						
56		HMACP MIXTURE DESIGN : COMBINED GRADATION	Asphalt%:	Bin No.2						
57		HMACP MIXTURE DESIGN : COMBINED GRADATION	Asphalt%:	Bin No.3						
58		HMACP MIXTURE DESIGN : COMBINED GRADATION	Asphalt%:	Bin No.4						

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
59		HMACP MIXTURE DESIGN : COMBINED GRADATION	Asphalt%:	Bin No.5						
60		HMACP MIXTURE DESIGN : COMBINED GRADATION	Asphalt%:	Bin No.6						
61		HMACP MIXTURE DESIGN : COMBINED GRADATION	Asphalt%:	Bin No.7						
62	20	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual Bin (%):	Bin No.1						
63	26	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual Bin (%):	Bin No.2						
64	14	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual Bin (%):	Bin No.3						
65	27	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual Bin (%):	Bin No.4						
66	13	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual Bin (%):	Bin No.5						
67		HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual Bin (%):	Bin No.6						
68		HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual Bin (%):	Bin No.7						
69		HMACP MIXTURE DESIGN : COMBINED GRADATION	Dry Rodded Unit Weight of Coarse Agg. (pcf)							
70	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Cum.% Passing	Sieve Size:	7/8"				
71	20	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Wtd Cum. %	Sieve Size:	7/8"				
72	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Cum.% Passing	Sieve Size:	7/8"				
73	26	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Wtd Cum. %	Sieve Size:	7/8"				
74	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Cum.% Passing	Sieve Size:	7/8"				
75	14	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Wtd Cum. %	Sieve Size:	7/8"				
76	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Cum.% Passing	Sieve Size:	7/8"				
77	27	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Wtd Cum. %	Sieve Size:	7/8"				
78	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Cum.% Passing	Sieve Size:	7/8"				
79	13	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Wtd Cum. %	Sieve Size:	7/8"				
80		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Cum.% Passing	Sieve Size:	7/8"				
81		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Wtd Cum. %	Sieve Size:	7/8"				
82		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Cum.% Passing	Sieve Size:	7/8"				
83		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Wtd Cum. %	Sieve Size:	7/8"				
84	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Combined Gradation	Cum. % Passing	Sieve Size:	7/8"				
85	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Lower	Sieve Size:	7/8"				
86	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Upper	Sieve Size:	7/8"				
87	Yes	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Within Spec's	Sieve Size:	7/8"				
88		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Lower	Sieve Size:	7/8"				
89		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Upper	Sieve Size:	7/8"				
90		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Within Spec's	Sieve Size:	7/8"				
91	0	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual % Retained	Sieve Size:	7/8"					
92	0	HMACP MIXTURE DESIGN : COMBINED GRADATION	Cumulative % Retained	Sieve Size:	7/8"					
93	89.7	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Cum.% Passing	Sieve Size:	5/8"				
94	17.94	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Wtd Cum. %	Sieve Size:	5/8"				
95	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Cum.% Passing	Sieve Size:	5/8"				
96	26	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Wtd Cum. %	Sieve Size:	5/8"				
97	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Cum.% Passing	Sieve Size:	5/8"				
98	14	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Wtd Cum. %	Sieve Size:	5/8"				
99	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Cum.% Passing	Sieve Size:	5/8"				
100	27	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Wtd Cum. %	Sieve Size:	5/8"				
101	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Cum.% Passing	Sieve Size:	5/8"				
102	13	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Wtd Cum. %	Sieve Size:	5/8"				
103		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Cum.% Passing	Sieve Size:	5/8"				
104		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Wtd Cum. %	Sieve Size:	5/8"				
105		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Cum.% Passing	Sieve Size:	5/8"				
106		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Wtd Cum. %	Sieve Size:	5/8"				
107	97.94	HMACP MIXTURE DESIGN : COMBINED GRADATION	Combined Gradation	Cum. % Passing	Sieve Size:	5/8"				
108	95	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Lower	Sieve Size:	5/8"				
109	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Upper	Sieve Size:	5/8"				
110	Yes	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Within Spec's	Sieve Size:	5/8"				
111		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Lower	Sieve Size:	5/8"				
112		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Upper	Sieve Size:	5/8"				
113		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Within Spec's	Sieve Size:	5/8"				
114	2.06	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual % Retained	Sieve Size:	5/8"					
115	2.06	HMACP MIXTURE DESIGN : COMBINED GRADATION	Cumulative % Retained	Sieve Size:	5/8"					
116	25.5	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Cum.% Passing	Sieve Size:	3/8"				
117	5.1	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Wtd Cum. %	Sieve Size:	3/8"				

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
118	91.4	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Cum.% Passing	Sieve Size:	3/8"				
119	23.764	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Wtd Cum. %	Sieve Size:	3/8"				
120	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Cum.% Passing	Sieve Size:	3/8"				
121	14	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Wtd Cum. %	Sieve Size:	3/8"				
122	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Cum.% Passing	Sieve Size:	3/8"				
123	27	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Wtd Cum. %	Sieve Size:	3/8"				
124	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Cum.% Passing	Sieve Size:	3/8"				
125	13	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Wtd Cum. %	Sieve Size:	3/8"				
126		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Cum.% Passing	Sieve Size:	3/8"				
127		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Wtd Cum. %	Sieve Size:	3/8"				
128		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Cum.% Passing	Sieve Size:	3/8"				
129		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Wtd Cum. %	Sieve Size:	3/8"				
130	82.864	HMACP MIXTURE DESIGN : COMBINED GRADATION	Combined Gradation	Cum. % Passing	Sieve Size:	3/8"				
131	70	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Lower	Sieve Size:	3/8"				
132	85	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Upper	Sieve Size:	3/8"				
133	Yes	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Within Spec's	Sieve Size:	3/8"				
134		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Lower	Sieve Size:	3/8"				
135		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Upper	Sieve Size:	3/8"				
136		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Within Spec's	Sieve Size:	3/8"				
137	15.076	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual % Retained	Sieve Size:	3/8"					
138	17.136	HMACP MIXTURE DESIGN : COMBINED GRADATION	Cumulative % Retained	Sieve Size:	3/8"					
139	5.6	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Cum.% Passing	Sieve Size:	No. 4				
140	1.12	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Wtd Cum. %	Sieve Size:	No. 4				
141	24.3	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Cum.% Passing	Sieve Size:	No. 4				
142	6.318	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Wtd Cum. %	Sieve Size:	No. 4				
143	64.7	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Cum.% Passing	Sieve Size:	No. 4				
144	9.058	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Wtd Cum. %	Sieve Size:	No. 4				
145	99.9	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Cum.% Passing	Sieve Size:	No. 4				
146	26.973	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Wtd Cum. %	Sieve Size:	No. 4				
147	99.4	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Cum.% Passing	Sieve Size:	No. 4				
148	12.922	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Wtd Cum. %	Sieve Size:	No. 4				
149		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Cum.% Passing	Sieve Size:	No. 4				
150		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Wtd Cum. %	Sieve Size:	No. 4				
151		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Cum.% Passing	Sieve Size:	No. 4				
152		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Wtd Cum. %	Sieve Size:	No. 4				
153	56.391	HMACP MIXTURE DESIGN : COMBINED GRADATION	Combined Gradation	Cum. % Passing	Sieve Size:	No. 4				
154	43	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Lower	Sieve Size:	No. 4				
155	63	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Upper	Sieve Size:	No. 4				
156	Yes	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Within Spec's	Sieve Size:	No. 4				
157		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Lower	Sieve Size:	No. 4				
158		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Upper	Sieve Size:	No. 4				
159		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Within Spec's	Sieve Size:	No. 4				
160	26.473	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual % Retained	Sieve Size:	No. 4					
161	43.609	HMACP MIXTURE DESIGN : COMBINED GRADATION	Cumulative % Retained	Sieve Size:	No. 4					
162	3.9	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Cum.% Passing	Sieve Size:	No. 10				
163	0.78	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Wtd Cum. %	Sieve Size:	No. 10				
164	4.9	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Cum.% Passing	Sieve Size:	No. 10				
165	1.274	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Wtd Cum. %	Sieve Size:	No. 10				
166	5.5	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Cum.% Passing	Sieve Size:	No. 10				
167	0.77	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Wtd Cum. %	Sieve Size:	No. 10				
168	71.9	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Cum.% Passing	Sieve Size:	No. 10				
169	19.413	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Wtd Cum. %	Sieve Size:	No. 10				
170	97	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Cum.% Passing	Sieve Size:	No. 10				
171	12.61	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Wtd Cum. %	Sieve Size:	No. 10				
172		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Cum.% Passing	Sieve Size:	No. 10				
173		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Wtd Cum. %	Sieve Size:	No. 10				
174		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Cum.% Passing	Sieve Size:	No. 10				
175		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Wtd Cum. %	Sieve Size:	No. 10				
176	34.847	HMACP MIXTURE DESIGN : COMBINED GRADATION	Combined Gradation	Cum. % Passing	Sieve Size:	No. 10				

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
177	30	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Lower	Sieve Size:	No. 10				
178	40	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Upper	Sieve Size:	No. 10				
179	Yes	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Within Spec's	Sieve Size:	No. 10				
180		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Lower	Sieve Size:	No. 10				
181		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Upper	Sieve Size:	No. 10				
182		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Within Spec's	Sieve Size:	No. 10				
183	21.544	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual % Retained	Sieve Size:	No. 10					
184	65.153	HMACP MIXTURE DESIGN : COMBINED GRADATION	Cumulative % Retained	Sieve Size:	No. 10					
185	3.3	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Cum.% Passing	Sieve Size:	No. 40				
186	0.66	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Wtd Cum. %	Sieve Size:	No. 40				
187	3.2	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Cum.% Passing	Sieve Size:	No. 40				
188	0.832	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Wtd Cum. %	Sieve Size:	No. 40				
189	2.9	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Cum.% Passing	Sieve Size:	No. 40				
190	0.406	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Wtd Cum. %	Sieve Size:	No. 40				
191	30.9	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Cum.% Passing	Sieve Size:	No. 40				
192	8.343	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Wtd Cum. %	Sieve Size:	No. 40				
193	73.1	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Cum.% Passing	Sieve Size:	No. 40				
194	9.503	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Wtd Cum. %	Sieve Size:	No. 40				
195		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Cum.% Passing	Sieve Size:	No. 40				
196		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Wtd Cum. %	Sieve Size:	No. 40				
197		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Cum.% Passing	Sieve Size:	No. 40				
198		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Wtd Cum. %	Sieve Size:	No. 40				
199	19.744	HMACP MIXTURE DESIGN : COMBINED GRADATION	Combined Gradation	Cum. % Passing	Sieve Size:	No. 40				
200	10	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Lower	Sieve Size:	No. 40				
201	25	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Upper	Sieve Size:	No. 40				
202	Yes	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Within Spec's	Sieve Size:	No. 40				
203		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Lower	Sieve Size:	No. 40				
204		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Upper	Sieve Size:	No. 40				
205		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Within Spec's	Sieve Size:	No. 40				
206	15.103	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual % Retained	Sieve Size:	No. 40					
207	80.256	HMACP MIXTURE DESIGN : COMBINED GRADATION	Cumulative % Retained	Sieve Size:	No. 40					
208	3	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Cum.% Passing	Sieve Size:	No. 80				
209	0.6	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Wtd Cum. %	Sieve Size:	No. 80				
210	2.8	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Cum.% Passing	Sieve Size:	No. 80				
211	0.728	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Wtd Cum. %	Sieve Size:	No. 80				
212	2.4	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Cum.% Passing	Sieve Size:	No. 80				
213	0.336	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Wtd Cum. %	Sieve Size:	No. 80				
214	18.3	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Cum.% Passing	Sieve Size:	No. 80				
215	4.941	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Wtd Cum. %	Sieve Size:	No. 80				
216	38.3	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Cum.% Passing	Sieve Size:	No. 80				
217	4.979	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Wtd Cum. %	Sieve Size:	No. 80				
218		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Cum.% Passing	Sieve Size:	No. 80				
219		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Wtd Cum. %	Sieve Size:	No. 80				
220		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Cum.% Passing	Sieve Size:	No. 80				
221		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Wtd Cum. %	Sieve Size:	No. 80				
222	11.584	HMACP MIXTURE DESIGN : COMBINED GRADATION	Combined Gradation	Cum. % Passing	Sieve Size:	No. 80				
223	3	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Lower	Sieve Size:	No. 80				
224	13	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Upper	Sieve Size:	No. 80				
225	Yes	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Within Spec's	Sieve Size:	No. 80				
226		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Lower	Sieve Size:	No. 80				
227		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Upper	Sieve Size:	No. 80				
228		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Within Spec's	Sieve Size:	No. 80				
229	8.16	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual % Retained	Sieve Size:	No. 80					
230	88.416	HMACP MIXTURE DESIGN : COMBINED GRADATION	Cumulative % Retained	Sieve Size:	No. 80					
231	2.4	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Cum.% Passing	Sieve Size:	No. 200				
232	0.48	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Wtd Cum. %	Sieve Size:	No. 200				
233	2.3	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Cum.% Passing	Sieve Size:	No. 200				
234	0.598	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Wtd Cum. %	Sieve Size:	No. 200				
235	2	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Cum.% Passing	Sieve Size:	No. 200				

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
236	0.28	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Wtd Cum. %	Sieve Size:	No. 200				
237	4.9	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Cum.% Passing	Sieve Size:	No. 200				
238	1.323	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Wtd Cum. %	Sieve Size:	No. 200				
239	13.2	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Cum.% Passing	Sieve Size:	No. 200				
240	1.716	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Wtd Cum. %	Sieve Size:	No. 200				
241		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Cum.% Passing	Sieve Size:	No. 200				
242		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Wtd Cum. %	Sieve Size:	No. 200				
243		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Cum.% Passing	Sieve Size:	No. 200				
244		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Wtd Cum. %	Sieve Size:	No. 200				
245	4.397	HMACP MIXTURE DESIGN : COMBINED GRADATION	Combined Gradation	Cum. % Passing	Sieve Size:	No. 200				
246	2	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Lower	Sieve Size:	No. 200				
247	8	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Upper	Sieve Size:	No. 200				
248	Yes	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Within Spec's	Sieve Size:	No. 200				
249		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Lower	Sieve Size:	No. 200				
250		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Upper	Sieve Size:	No. 200				
251		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Within Spec's	Sieve Size:	No. 200				
252	7.187	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual % Retained	Sieve Size:	No. 200					
253	95.603	HMACP MIXTURE DESIGN : COMBINED GRADATION	Cumulative % Retained	Sieve Size:	No. 200					
254		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Cum.% Passing	Sieve Size:					
255		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Wtd Cum. %	Sieve Size:					
256		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Cum.% Passing	Sieve Size:					
257		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Wtd Cum. %	Sieve Size:					
258		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Cum.% Passing	Sieve Size:					
259		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Wtd Cum. %	Sieve Size:					
260		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Cum.% Passing	Sieve Size:					
261		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Wtd Cum. %	Sieve Size:					
262		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Cum.% Passing	Sieve Size:					
263		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Wtd Cum. %	Sieve Size:					
264		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Cum.% Passing	Sieve Size:					
265		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Wtd Cum. %	Sieve Size:					
266		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Cum.% Passing	Sieve Size:					
267		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Wtd Cum. %	Sieve Size:					
268		HMACP MIXTURE DESIGN : COMBINED GRADATION	Combined Gradation	Cum. % Passing	Sieve Size:					
269		HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Lower	Sieve Size:					
270		HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Upper	Sieve Size:					
271		HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Within Spec's	Sieve Size:					
272		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Lower	Sieve Size:					
273		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Upper	Sieve Size:					
274		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Within Spec's	Sieve Size:					
275		HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual % Retained	Sieve Size:						
276		HMACP MIXTURE DESIGN : COMBINED GRADATION	Cumulative % Retained	Sieve Size:						
277		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Cum.% Passing	Sieve Size:					
278		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Wtd Cum. %	Sieve Size:					
279		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Cum.% Passing	Sieve Size:					
280		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Wtd Cum. %	Sieve Size:					
281		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Cum.% Passing	Sieve Size:					
282		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Wtd Cum. %	Sieve Size:					
283		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Cum.% Passing	Sieve Size:					
284		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Wtd Cum. %	Sieve Size:					
285		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Cum.% Passing	Sieve Size:					
286		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Wtd Cum. %	Sieve Size:					
287		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Cum.% Passing	Sieve Size:					
288		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Wtd Cum. %	Sieve Size:					
289		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Cum.% Passing	Sieve Size:					
290		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Wtd Cum. %	Sieve Size:					
291		HMACP MIXTURE DESIGN : COMBINED GRADATION	Combined Gradation	Cum. % Passing	Sieve Size:					
292		HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Lower	Sieve Size:					
293		HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Upper	Sieve Size:					
294		HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Within Spec's	Sieve Size:					

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
295		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Lower	Sieve Size:					
296		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Upper	Sieve Size:					
297		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Within Spec's	Sieve Size:					
298		HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual % Retained	Sieve Size:						
299		HMACP MIXTURE DESIGN : COMBINED GRADATION	Cumulative % Retained	Sieve Size:						
300	Valero 76	HMACP MIXTURE DESIGN : COMBINED GRADATION	Asphalt Source & Grade:							
301	4.3	HMACP MIXTURE DESIGN : COMBINED GRADATION	Binder Percent, (%):							
302	1.036	HMACP MIXTURE DESIGN : COMBINED GRADATION	Asphalt Spec. Grav.:							
303		HMACP MIXTURE DESIGN : COMBINED GRADATION	Membrane Target Application Rate, gal/yd2							
304		HMACP MIXTURE DESIGN : COMBINED GRADATION	Antistripping Agent:							
305		HMACP MIXTURE DESIGN : COMBINED GRADATION	Percent, (%):							
306		HMACP MIXTURE DESIGN : COMBINED GRADATION								
307		HMACP MIXTURE DESIGN : COMBINED GRADATION								
308	1.5	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Max.	Spec. Limit				
309	1.5	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Max.	Spec. Limit				
310	B	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Min.	Spec. Limit				
311	30	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Max.	Spec. Limit				
312	40	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Max.	Spec. Limit				
313	n/a	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Min.	Spec. Limit				
314	10	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Max.	Spec. Limit				
315	3	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Max.	Spec. Limit				
316	45	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Min.	Spec. Limit				
317	0.4	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.1	Result				
318		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.1	Sample ID				
319	1	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.2	Result				
320		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.2	Sample ID				
321	0.9	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.3	Result				
322		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.3	Sample ID				
323		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.4	Result				
324		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.4	Sample ID				
325		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.5	Result				
326		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.5	Sample ID				
327		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.6	Result				
328		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.6	Sample ID				
329		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.7	Result				
330		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.7	Sample ID				
331	0	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.1	Result				
332		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.1	Sample ID				
333	0	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.2	Result				
334		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.2	Sample ID				
335	0	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.3	Result				
336		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.3	Sample ID				
337		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.4	Result				
338		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.4	Sample ID				
339		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.5	Result				
340		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.5	Sample ID				
341		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.6	Result				
342		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.6	Sample ID				
343		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.7	Result				
344		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.7	Sample ID				
345	B	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.1	Result				
346		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.1	Sample ID				
347	B	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.2	Result				
348		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.2	Sample ID				
349	B	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.3	Result				
350		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.3	Sample ID				
351	B	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.4	Result				
352		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.4	Sample ID				
353		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.5	Result				

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
354		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.5	Sample ID				
355		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.6	Result				
356		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.6	Sample ID				
357		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.7	Result				
358		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.7	Sample ID				
359	7	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.1	Result				
360		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.1	Sample ID				
361	7	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.2	Result				
362		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.2	Sample ID				
363	7	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.3	Result				
364		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.3	Sample ID				
365	7	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.4	Result				
366		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.4	Sample ID				
367		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.5	Result				
368		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.5	Sample ID				
369		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.6	Result				
370		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.6	Sample ID				
371		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.7	Result				
372		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.7	Sample ID				
373	30	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.1	Result				
374		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.1	Sample ID				
375	30	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.2	Result				
376		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.2	Sample ID				
377	30	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.3	Result				
378		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.3	Sample ID				
379	30	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.4	Result				
380		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.4	Sample ID				
381		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.5	Result				
382		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.5	Sample ID				
383		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.6	Result				
384		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.6	Sample ID				
385		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.7	Result				
386		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.7	Sample ID				
387	n/a	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.1	Result				
388		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.1	Sample ID				
389	n/a	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.2	Result				
390		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.2	Sample ID				
391	n/a	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.3	Result				
392		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.3	Sample ID				
393		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.4	Result				
394		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.4	Sample ID				
395		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.5	Result				
396		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.5	Sample ID				
397		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.6	Result				
398		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.6	Sample ID				
399		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.7	Result				
400		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.7	Sample ID				
401	0	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.1	Result				
402		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.1	Sample ID				
403	0	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.2	Result				
404		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.2	Sample ID				
405	0	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.3	Result				
406		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.3	Sample ID				
407		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.4	Result				
408		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.4	Sample ID				
409		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.5	Result				
410		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.5	Sample ID				
411		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.6	Result				
412		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.6	Sample ID				

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
413		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.7	Result				
414		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.7	Sample ID				
415		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.1	Result				
416		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.1	Sample ID				
417		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.2	Result				
418		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.2	Sample ID				
419		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.3	Result				
420		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.3	Sample ID				
421	1	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.4	Result				
422		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.4	Sample ID				
423		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.5	Result				
424		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.5	Sample ID				
425		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.6	Result				
426		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.6	Sample ID				
427		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.7	Result				
428		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.7	Sample ID				
429		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.1	Result				
430		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.1	Sample ID				
431		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.2	Result				
432		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.2	Sample ID				
433		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.3	Result				
434		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.3	Sample ID				
435		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.4	Result				
436		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.4	Sample ID				
437	68	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.5	Result				
438		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.5	Sample ID				
439		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.6	Result				
440		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.6	Sample ID				
441		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.7	Result				
442		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.7	Sample ID				
443		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Test Method					
444		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Spec. Min or Max					
445		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Spec. Limit					
446		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.1	Result				
447		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.1	Sample ID				
448		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.2	Result				
449		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.2	Sample ID				
450		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.3	Result				
451		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.3	Sample ID				
452		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.4	Result				
453		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.4	Sample ID				
454		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.5	Result				
455		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.5	Sample ID				
456		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.6	Result				
457		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.6	Sample ID				
458		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.7	Result				
459		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.7	Sample ID				
460		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Test Method					
461		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Spec. Min or Max					
462		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Spec. Limit					
463		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.1	Result				
464		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.1	Sample ID				
465		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.2	Result				
466		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.2	Sample ID				
467		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.3	Result				
468		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.3	Sample ID				
469		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.4	Result				
470		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.4	Sample ID				
471		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.5	Result				

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
472		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.5	Sample ID				
473		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.6	Result				
474		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.6	Sample ID				
475		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.7	Result				
476		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.7	Sample ID				
477		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Test Method					
478		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Spec. Min or Max					
479		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Spec. Limit					
480		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.1	Result				
481		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.1	Sample ID				
482		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.2	Result				
483		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.2	Sample ID				
484		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.3	Result				
485		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.3	Sample ID				
486		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.4	Result				
487		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.4	Sample ID				
488		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.5	Result				
489		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.5	Sample ID				
490		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.6	Result				
491		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.6	Sample ID				
492		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.7	Result				
493		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.7	Sample ID				
494		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Test Method					
495		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Spec. Min or Max					
496		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Spec. Limit					
497		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.1	Result				
498		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.1	Sample ID				
499		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.2	Result				
500		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.2	Sample ID				
501		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.3	Result				
502		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.3	Sample ID				
503		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.4	Result				
504		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.4	Sample ID				
505		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.5	Result				
506		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.5	Sample ID				
507		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.6	Result				
508		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.6	Sample ID				
509		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.7	Result				
510		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.7	Sample ID				
511		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Test Method					
512		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Spec. Min or Max					
513		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Spec. Limit					
514		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.1	Result				
515		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.1	Sample ID				
516		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.2	Result				
517		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.2	Sample ID				
518		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.3	Result				
519		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.3	Sample ID				
520		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.4	Result				
521		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.4	Sample ID				
522		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.5	Result				
523		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.5	Sample ID				
524		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.6	Result				
525		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.6	Sample ID				
526		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.7	Result				
527		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.7	Sample ID				
528		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Remarks:							
529	No	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Class (A) Rock (Y/N):						
530	0	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Individual Ret., %	Passing	-	Sieve Size:	Retained	7/8"	

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
531	2.06	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Individual Ret., %	Passing	7/8"	Sieve Size:	Retained	5/8"	
532	12.84	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Individual Ret., %	Passing	5/8"	Sieve Size:	Retained	3/8"	
533	3.98	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
534	0.34	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
535	0.12	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
536	0.06	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
537	0.12	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
538	0.48	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
539		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
540		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
541	20	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Individual Ret., %	Total:					
542	18.88	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Individual Ret., %	Percent of plus No. 4					
543	No	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Class (A) Rock (Y/N):						
544	0	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Individual Ret., %	Passing	-	Sieve Size:	Retained	7/8"	
545	0	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Individual Ret., %	Passing	7/8"	Sieve Size:	Retained	5/8"	
546	2.236	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Individual Ret., %	Passing	5/8"	Sieve Size:	Retained	3/8"	
547	17.446	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
548	5.044	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
549	0.442	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
550	0.104	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
551	0.13	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
552	0.598	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
553		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
554		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
555	26	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Individual Ret., %	Total:					
556	19.682	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Individual Ret., %	Percent of plus No. 4					
557	No	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Class (A) Rock (Y/N):						
558	-2E-15	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Individual Ret., %	Passing	-	Sieve Size:	Retained	7/8"	
559	0	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Individual Ret., %	Passing	7/8"	Sieve Size:	Retained	5/8"	
560	0	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Individual Ret., %	Passing	5/8"	Sieve Size:	Retained	3/8"	
561	4.942	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
562	8.288	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
563	0.364	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
564	0.07	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
565	0.056	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
566	0.28	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
567		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
568		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
569	14	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Individual Ret., %	Total:					
570	4.942	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Individual Ret., %	Percent of plus No. 4					
571	No	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Class (A) Rock (Y/N):						
572	0	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Individual Ret., %	Passing	-	Sieve Size:	Retained	7/8"	
573	0	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Individual Ret., %	Passing	7/8"	Sieve Size:	Retained	5/8"	
574	0	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Individual Ret., %	Passing	5/8"	Sieve Size:	Retained	3/8"	
575	0.027	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
576	7.56	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
577	11.07	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
578	3.402	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
579	3.618	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
580	1.323	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
581		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
582		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
583	27	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Individual Ret., %	Total:					
584	0.027	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Individual Ret., %	Percent of plus No. 4					
585	No	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Class (A) Rock (Y/N):						
586	0	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Individual Ret., %	Passing	-	Sieve Size:	Retained	7/8"	
587	0	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Individual Ret., %	Passing	7/8"	Sieve Size:	Retained	5/8"	
588	0	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Individual Ret., %	Passing	5/8"	Sieve Size:	Retained	3/8"	
589	0.078	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
590	0.312	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
591	3.107	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
592	4.524	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
593	3.263	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
594	1.716	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
595		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
596		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
597	13	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Individual Ret., %	Total:					
598	0.078	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Individual Ret., %	Percent of plus No. 4					
599		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Class (A) Rock (Y/N):						
600		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Individual Ret., %	Passing	-	Sieve Size:	Retained	7/8"	
601		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Individual Ret., %	Passing	7/8"	Sieve Size:	Retained	5/8"	
602		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Individual Ret., %	Passing	5/8"	Sieve Size:	Retained	3/8"	
603		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
604		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
605		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
606		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
607		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
608		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
609		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
610		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
611		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Individual Ret., %	Total:					
612		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Individual Ret., %	Percent of plus No. 4					
613		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Class (A) Rock (Y/N):						
614		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Individual Ret., %	Passing	-	Sieve Size:	Retained	7/8"	
615		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Individual Ret., %	Passing	7/8"	Sieve Size:	Retained	5/8"	
616		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Individual Ret., %	Passing	5/8"	Sieve Size:	Retained	3/8"	
617		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
618		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
619		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
620		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
621		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
622		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
623		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
624		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
625		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Individual Ret., %	Total:					
626		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Individual Ret., %	Percent of plus No. 4					
627		HMACP MIXTURE DESIGN : Aggregate Classification	Remarks:							
628	5000	HMACP MIXTURE DESIGN : WEIGH UP SHEET	Aggregate Weight, g:							
629	224.66	HMACP MIXTURE DESIGN : WEIGH UP SHEET	4.3% Asphalt by Total Weight, g:							
630	5224.66	HMACP MIXTURE DESIGN : WEIGH UP SHEET	Total Weight, g:							
631	224.66	HMACP MIXTURE DESIGN : WEIGH UP SHEET	4.3% Asphalt by Total Weight, g:							
632	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	Less Asphalt by Weight of Recycled Material, g:							
633	224.66	HMACP MIXTURE DESIGN : WEIGH UP SHEET	(Valero 76-22) Asphalt to Add, g:							
634	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET								
635	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	-	Sieve Size:	Retained	7/8"	Bin No.1	Aggregate Weight
636	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	-	Sieve Size:	Retained	7/8"	Bin No.2	Aggregate Weight
637	-9E-14	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	-	Sieve Size:	Retained	7/8"	Bin No.3	Aggregate Weight
638	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	-	Sieve Size:	Retained	7/8"	Bin No.4	Aggregate Weight
639	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	-	Sieve Size:	Retained	7/8"	Bin No.5	Aggregate Weight
640		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	-	Sieve Size:	Retained	7/8"	Bin No.6	
641		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	-	Sieve Size:	Retained	7/8"	Bin No.7	
642	-9E-14	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	-	Sieve Size:	Retained	7/8"	Total Weights	
643	-2E-15	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	-	Sieve Size:	Retained	7/8"	IndividualRetained, %	
644	-2E-15	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	-	Sieve Size:	Retained	7/8"	Cumulative Retained, %	
645	103	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.1	Aggregate Weight
646	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.2	Aggregate Weight
647	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.3	Aggregate Weight
648	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.4	Aggregate Weight

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
649	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.5	Aggregate Weight
650		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.6	
651		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.7	
652	103	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Total Weights	
653	2.06	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	IndividualRetained, %	
654	2.06	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Cumulative Retained, %	
655	642	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.1	Aggregate Weight
656	111.8	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.2	Aggregate Weight
657	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.3	Aggregate Weight
658	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.4	Aggregate Weight
659	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.5	Aggregate Weight
660		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.6	
661		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.7	
662	753.8	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Total Weights	
663	15.076	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	IndividualRetained, %	
664	17.136	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Cumulative Retained, %	
665	199	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.1	Aggregate Weight
666	872.3	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.2	Aggregate Weight
667	247.1	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.3	Aggregate Weight
668	1.35	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.4	Aggregate Weight
669	3.9	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.5	Aggregate Weight
670		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.6	
671		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.7	
672	1323.65	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Total Weights	
673	26.473	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	IndividualRetained, %	
674	43.609	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Cumulative Retained, %	
675	17	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.1	Aggregate Weight
676	252.2	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.2	Aggregate Weight
677	414.4	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.3	Aggregate Weight
678	378	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.4	Aggregate Weight
679	15.6	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.5	Aggregate Weight
680		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.6	
681		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.7	
682	1077.2	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Total Weights	
683	21.544	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	IndividualRetained, %	
684	65.153	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Cumulative Retained, %	
685	6	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.1	Aggregate Weight
686	22.1	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.2	Aggregate Weight
687	18.2	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.3	Aggregate Weight
688	553.5	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.4	Aggregate Weight
689	155.35	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.5	Aggregate Weight
690		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.6	
691		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.7	
692	755.15	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Total Weights	
693	15.103	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	IndividualRetained, %	
694	80.256	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Cumulative Retained, %	
695	3	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.1	Aggregate Weight
696	5.2	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.2	Aggregate Weight
697	3.5	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.3	Aggregate Weight
698	170.1	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.4	Aggregate Weight
699	226.2	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.5	Aggregate Weight
700		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.6	
701		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.7	
702	408	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Total Weights	
703	8.16	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	IndividualRetained, %	
704	88.416	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Cumulative Retained, %	
705	6	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.1	Aggregate Weight
706	6.5	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.2	Aggregate Weight
707	2.8	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.3	Aggregate Weight

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
708	180.9	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.4	Aggregate Weight
709	163.15	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.5	Aggregate Weight
710		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.6	
711		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.7	
712	359.35	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Total Weights	
713	7.187	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	IndividualRetained, %	
714	95.603	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Cumulative Retained, %	
715	24	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.1	Aggregate Weight
716	29.9	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.2	Aggregate Weight
717	14	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.3	Aggregate Weight
718	66.15	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.4	Aggregate Weight
719	85.8	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.5	Aggregate Weight
720		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.6	
721		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.7	
722	219.85	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Total Weights	
723	4.397	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	IndividualRetained, %	
724	100	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Cumulative Retained, %	
725		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.1	Aggregate Weight
726		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.2	Aggregate Weight
727		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.3	Aggregate Weight
728		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.4	Aggregate Weight
729		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.5	Aggregate Weight
730		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.6	
731		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.7	
732		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Total Weights	
733		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	IndividualRetained, %	
734		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Cumulative Retained, %	
735		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.1	Aggregate Weight
736		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.2	Aggregate Weight
737		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.3	Aggregate Weight
738		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.4	Aggregate Weight
739		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.5	Aggregate Weight
740		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.6	
741		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.7	
742		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Total Weights	
743		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	IndividualRetained, %	
744		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Cumulative Retained, %	
745	1000	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Totals	Bin No.1	Aggregate Weight				
746	1300	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Totals	Bin No.2	Aggregate Weight				
747	700	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Totals	Bin No.3	Aggregate Weight				
748	1350	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Totals	Bin No.4	Aggregate Weight				
749	650	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Totals	Bin No.5	Aggregate Weight				
750		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Totals	Bin No.6					
751		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Totals	Bin No.7					
752	5000	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Totals	Total Weights					
753		HMACP MIXTURE DESIGN : WEIGH UP SHEET	Running Total:							
754	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	-	Sieve Size:	Retained	7/8"	Bin No.1	Aggregate Weight
755	1000	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	-	Sieve Size:	Retained	7/8"	Bin No.2	Aggregate Weight
756	2300	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	-	Sieve Size:	Retained	7/8"	Bin No.3	Aggregate Weight
757	3000	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	-	Sieve Size:	Retained	7/8"	Bin No.4	Aggregate Weight
758	4350	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	-	Sieve Size:	Retained	7/8"	Bin No.5	Aggregate Weight
759		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	-	Sieve Size:	Retained	7/8"	Bin No.6	
760		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	-	Sieve Size:	Retained	7/8"	Bin No.7	
761	-9E-14	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	-	Sieve Size:	Retained	7/8"	Total Weights	
762	103	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.1	Aggregate Weight
763	1000	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.2	Aggregate Weight
764	2300	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.3	Aggregate Weight
765	3000	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.4	Aggregate Weight
766	4350	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.5	Aggregate Weight

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
767		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.6	
768		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.7	
769	103	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	7/8"	Sieve Size:	Retained	5/8"	Total Weights	
770	745	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.1	Aggregate Weight
771	1111.8	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.2	Aggregate Weight
772	2300	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.3	Aggregate Weight
773	3000	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.4	Aggregate Weight
774	4350	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.5	Aggregate Weight
775		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.6	
776		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.7	
777	856.8	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	5/8"	Sieve Size:	Retained	3/8"	Total Weights	
778	944	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.1	Aggregate Weight
779	1984.1	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.2	Aggregate Weight
780	2547.1	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.3	Aggregate Weight
781	3001.35	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.4	Aggregate Weight
782	4353.9	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.5	Aggregate Weight
783		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.6	
784		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.7	
785	2180.45	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Total Weights	
786	961	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.1	Aggregate Weight
787	2236.3	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.2	Aggregate Weight
788	2961.5	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.3	Aggregate Weight
789	3379.35	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.4	Aggregate Weight
790	4369.5	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.5	Aggregate Weight
791		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.6	
792		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.7	
793	3257.65	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Total Weights	
794	967	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.1	Aggregate Weight
795	2258.4	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.2	Aggregate Weight
796	2979.7	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.3	Aggregate Weight
797	3932.85	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.4	Aggregate Weight
798	4524.85	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.5	Aggregate Weight
799		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.6	
800		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.7	
801	4012.8	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Total Weights	
802	970	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.1	Aggregate Weight
803	2263.6	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.2	Aggregate Weight
804	2983.2	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.3	Aggregate Weight
805	4102.95	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.4	Aggregate Weight
806	4751.05	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.5	Aggregate Weight
807		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.6	
808		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.7	
809	4420.8	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Total Weights	
810	976	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.1	Aggregate Weight
811	2270.1	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.2	Aggregate Weight
812	2986	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.3	Aggregate Weight
813	4283.85	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.4	Aggregate Weight
814	4914.2	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.5	Aggregate Weight
815		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.6	
816		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.7	
817	4780.15	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Total Weights	
818	1000	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.1	Aggregate Weight
819	2300	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.2	Aggregate Weight
820	3000	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.3	Aggregate Weight
821	4350	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.4	Aggregate Weight
822	5000	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.5	Aggregate Weight
823		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.6	
824		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.7	
825	5000	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Total Weights	

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
826		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.1	Aggregate Weight
827		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.2	Aggregate Weight
828		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.3	Aggregate Weight
829		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.4	Aggregate Weight
830		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.5	Aggregate Weight
831		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.6	
832		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.7	
833		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Total Weights	
834		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.1	Aggregate Weight
835		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.2	Aggregate Weight
836		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.3	Aggregate Weight
837		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.4	Aggregate Weight
838		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.5	Aggregate Weight
839		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.6	
840		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.7	
841		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Total Weights	
842		HMACP MIXTURE DESIGN : WEIGH UP SHEET	Remarks:							
843		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Individual Ret., %	Passing		Sieve Size:	Retained	7/8"	
844		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Bulk SG	Passing		Sieve Size:	Retained	7/8"	
845	10.3	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Individual Ret., %	Passing	7/8"	Sieve Size:	Retained	5/8"	
846	2.788	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Bulk SG	Passing	7/8"	Sieve Size:	Retained	5/8"	
847	64.2	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Individual Ret., %	Passing	5/8"	Sieve Size:	Retained	3/8"	
848	2.788	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Bulk SG	Passing	5/8"	Sieve Size:	Retained	3/8"	
849	19.9	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
850	2.794	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Bulk SG	Passing	3/8"	Sieve Size:	Retained	No. 4	
851	1.7	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
852	2.794	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Bulk SG	Passing	No. 4	Sieve Size:	Retained	No. 10	
853	0.6	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
854	2.794	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Bulk SG	Passing	No. 10	Sieve Size:	Retained	No. 40	
855	0.3	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
856	2.794	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Bulk SG	Passing	No. 40	Sieve Size:	Retained	No. 80	
857	0.6	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
858	2.794	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Bulk SG	Passing	No. 80	Sieve Size:	Retained	No. 200	
859	2.4	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
860	2.794	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Bulk SG	Passing	No. 200	Sieve Size:	Retained	Pan	
861		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
862		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Bulk SG	Passing		Sieve Size:	Retained	Pan	
863		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
864		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Bulk SG	Passing		Sieve Size:	Retained	Pan	
865	100	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Individual Ret., %	Totals					
866	2.78953	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Bulk SG	Totals					
867		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Individual Ret., %	Passing		Sieve Size:	Retained	7/8"	
868		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Bulk SG	Passing		Sieve Size:	Retained	7/8"	
869	0	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Individual Ret., %	Passing	7/8"	Sieve Size:	Retained	5/8"	
870		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Bulk SG	Passing	7/8"	Sieve Size:	Retained	5/8"	
871	8.6	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Individual Ret., %	Passing	5/8"	Sieve Size:	Retained	3/8"	
872	2.788	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Bulk SG	Passing	5/8"	Sieve Size:	Retained	3/8"	
873	67.1	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
874	2.794	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Bulk SG	Passing	3/8"	Sieve Size:	Retained	No. 4	
875	19.4	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
876	2.798	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Bulk SG	Passing	No. 4	Sieve Size:	Retained	No. 10	
877	1.7	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
878	2.798	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Bulk SG	Passing	No. 10	Sieve Size:	Retained	No. 40	
879	0.4	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
880	2.798	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Bulk SG	Passing	No. 40	Sieve Size:	Retained	No. 80	
881	0.5	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
882	2.798	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Bulk SG	Passing	No. 80	Sieve Size:	Retained	No. 200	
883	2.3	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
884	2.798	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Bulk SG	Passing	No. 200	Sieve Size:	Retained	Pan	

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
885		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
886		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Bulk SG	Passing		Sieve Size:	Retained	Pan	
887		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
888		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Bulk SG	Passing		Sieve Size:	Retained	Pan	
889	100	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Individual Ret., %	Totals					
890	2.79445	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Bulk SG	Totals					
891		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Individual Ret., %	Passing		Sieve Size:	Retained	7/8"	
892		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Bulk SG	Passing		Sieve Size:	Retained	7/8"	
893	0	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Individual Ret., %	Passing	7/8"	Sieve Size:	Retained	5/8"	
894		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Bulk SG	Passing	7/8"	Sieve Size:	Retained	5/8"	
895	0	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Individual Ret., %	Passing	5/8"	Sieve Size:	Retained	3/8"	
896		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Bulk SG	Passing	5/8"	Sieve Size:	Retained	3/8"	
897	35.3	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
898	2.794	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Bulk SG	Passing	3/8"	Sieve Size:	Retained	No. 4	
899	59.2	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
900	2.798	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Bulk SG	Passing	No. 4	Sieve Size:	Retained	No. 10	
901	2.6	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
902	2.798	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Bulk SG	Passing	No. 10	Sieve Size:	Retained	No. 40	
903	0.5	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
904	2.798	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Bulk SG	Passing	No. 40	Sieve Size:	Retained	No. 80	
905	0.4	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
906	2.798	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Bulk SG	Passing	No. 80	Sieve Size:	Retained	No. 200	
907	2	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
908	2.798	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Bulk SG	Passing	No. 200	Sieve Size:	Retained	Pan	
909		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
910		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Bulk SG	Passing		Sieve Size:	Retained	Pan	
911		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
912		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Bulk SG	Passing		Sieve Size:	Retained	Pan	
913	100	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Individual Ret., %	Totals					
914	2.79659	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Bulk SG	Totals					
915		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Individual Ret., %	Passing		Sieve Size:	Retained	7/8"	
916		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Bulk SG	Passing		Sieve Size:	Retained	7/8"	
917	0	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Individual Ret., %	Passing	7/8"	Sieve Size:	Retained	5/8"	
918		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Bulk SG	Passing	7/8"	Sieve Size:	Retained	5/8"	
919	0	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Individual Ret., %	Passing	5/8"	Sieve Size:	Retained	3/8"	
920		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Bulk SG	Passing	5/8"	Sieve Size:	Retained	3/8"	
921	0.1	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
922	2.815	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Bulk SG	Passing	3/8"	Sieve Size:	Retained	No. 4	
923	28	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
924	2.815	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Bulk SG	Passing	No. 4	Sieve Size:	Retained	No. 10	
925	41	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
926	2.815	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Bulk SG	Passing	No. 10	Sieve Size:	Retained	No. 40	
927	12.6	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
928	2.815	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Bulk SG	Passing	No. 40	Sieve Size:	Retained	No. 80	
929	13.4	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
930	2.815	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Bulk SG	Passing	No. 80	Sieve Size:	Retained	No. 200	
931	4.9	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
932	2.815	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Bulk SG	Passing	No. 200	Sieve Size:	Retained	Pan	
933		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
934		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Bulk SG	Passing		Sieve Size:	Retained	Pan	
935		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
936		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Bulk SG	Passing		Sieve Size:	Retained	Pan	
937	100	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Individual Ret., %	Totals					
938	2.815	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Bulk SG	Totals					
939		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Individual Ret., %	Passing		Sieve Size:	Retained	7/8"	
940		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Bulk SG	Passing		Sieve Size:	Retained	7/8"	
941	0	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Individual Ret., %	Passing	7/8"	Sieve Size:	Retained	5/8"	
942		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Bulk SG	Passing	7/8"	Sieve Size:	Retained	5/8"	
943	0	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Individual Ret., %	Passing	5/8"	Sieve Size:	Retained	3/8"	

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
944		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Bulk SG	Passing	5/8"	Sieve Size:	Retained	3/8"	
945	0.6	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
946	2.642	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Bulk SG	Passing	3/8"	Sieve Size:	Retained	No. 4	
947	2.4	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
948	2.642	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Bulk SG	Passing	No. 4	Sieve Size:	Retained	No. 10	
949	23.9	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
950	2.642	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Bulk SG	Passing	No. 10	Sieve Size:	Retained	No. 40	
951	34.8	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
952	2.642	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Bulk SG	Passing	No. 40	Sieve Size:	Retained	No. 80	
953	25.1	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
954	2.678	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Bulk SG	Passing	No. 80	Sieve Size:	Retained	No. 200	
955	13.2	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
956	2.678	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Bulk SG	Passing	No. 200	Sieve Size:	Retained	Pan	
957		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
958		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Bulk SG	Passing		Sieve Size:	Retained	Pan	
959		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
960		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Bulk SG	Passing		Sieve Size:	Retained	Pan	
961	100	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Individual Ret., %	Totals					
962	2.65567	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Bulk SG	Totals					
963		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Individual Ret., %	Passing		Sieve Size:	Retained	7/8"	
964		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Bulk SG	Passing		Sieve Size:	Retained	7/8"	
965		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Individual Ret., %	Passing	7/8"	Sieve Size:	Retained	5/8"	
966		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Bulk SG	Passing	7/8"	Sieve Size:	Retained	5/8"	
967		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Individual Ret., %	Passing	5/8"	Sieve Size:	Retained	3/8"	
968		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Bulk SG	Passing	5/8"	Sieve Size:	Retained	3/8"	
969		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
970		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Bulk SG	Passing	3/8"	Sieve Size:	Retained	No. 4	
971		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
972		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Bulk SG	Passing	No. 4	Sieve Size:	Retained	No. 10	
973		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
974		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Bulk SG	Passing	No. 10	Sieve Size:	Retained	No. 40	
975		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
976		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Bulk SG	Passing	No. 40	Sieve Size:	Retained	No. 80	
977		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
978		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Bulk SG	Passing	No. 80	Sieve Size:	Retained	No. 200	
979		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
980		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Bulk SG	Passing	No. 200	Sieve Size:	Retained	Pan	
981		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
982		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Bulk SG	Passing		Sieve Size:	Retained	Pan	
983		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
984		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Bulk SG	Passing		Sieve Size:	Retained	Pan	
985		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Individual Ret., %	Totals					
986		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Bulk SG	Totals					
987		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Individual Ret., %	Passing		Sieve Size:	Retained	7/8"	
988		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Bulk SG	Passing		Sieve Size:	Retained	7/8"	
989		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Individual Ret., %	Passing	7/8"	Sieve Size:	Retained	5/8"	
990		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Bulk SG	Passing	7/8"	Sieve Size:	Retained	5/8"	
991		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Individual Ret., %	Passing	5/8"	Sieve Size:	Retained	3/8"	
992		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Bulk SG	Passing	5/8"	Sieve Size:	Retained	3/8"	
993		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
994		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Bulk SG	Passing	3/8"	Sieve Size:	Retained	No. 4	
995		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
996		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Bulk SG	Passing	No. 4	Sieve Size:	Retained	No. 10	
997		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
998		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Bulk SG	Passing	No. 10	Sieve Size:	Retained	No. 40	
999		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
1000		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Bulk SG	Passing	No. 40	Sieve Size:	Retained	No. 80	
1001		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
1002		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Bulk SG	Passing	No. 80	Sieve Size:	Retained	No. 200	

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
1003		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
1004		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Bulk SG	Passing	No. 200	Sieve Size:	Retained	Pan	
1005		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
1006		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Bulk SG	Passing		Sieve Size:	Retained	Pan	
1007		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
1008		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Bulk SG	Passing		Sieve Size:	Retained	Pan	
1009		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Individual Ret., %	Totals					
1010		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Bulk SG	Totals					
1011	1.036	HMACP MIXTURE DESIGN : BULK GRAVITY	Specific Gravity of Asphalt:							
1012	2.78036	HMACP MIXTURE DESIGN : BULK GRAVITY	Combined Bulk Specific Gravity:							
1013		HMACP MIXTURE DESIGN : BULK GRAVITY	Coarse Agg. Combined BSG:							
1014		HMACP MIXTURE DESIGN : BULK GRAVITY	Remarks:							
1015	96	HMACP MIXTURE DESIGN : SUMMARY SHEET	Target Density, %:							
1016		HMACP MIXTURE DESIGN : SUMMARY SHEET	Number of Gyrations:							
1017		HMACP MIXTURE DESIGN : SUMMARY SHEET	CRM* Content							
1018	3.5	HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Asphalt Content (%)						
1019	2.465	HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Specific Gravity Of Specimen (Ga)						
1020	2.616	HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Maximum Specific Gravity (Gr)						
1021	2.76918	HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Effective Gravity (Ge)						
1022	2.62388	HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Theo. Max. Specific Gravity (Gt)						
1023	93.945	HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Density from Gt (Percent)						
1024	14.3827	HMACP MIXTURE DESIGN : SUMMARY SHEET	1	VMA (Percent)						
1025	4	HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Asphalt Content (%)						
1026	2.48	HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Specific Gravity Of Specimen (Ga)						
1027	2.599	HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Maximum Specific Gravity (Gr)						
1028	2.77334	HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Effective Gravity (Ge)						
1029	2.6032	HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Theo. Max. Specific Gravity (Gt)						
1030	95.2673	HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Density from Gt (Percent)						
1031	14.308	HMACP MIXTURE DESIGN : SUMMARY SHEET	2	VMA (Percent)						
1032	4.5	HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Asphalt Content (%)						
1033	2.494	HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Specific Gravity Of Specimen (Ga)						
1034	2.582	HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Maximum Specific Gravity (Gr)						
1035	2.77729	HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Effective Gravity (Ge)						
1036	2.58285	HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Theo. Max. Specific Gravity (Gt)						
1037	96.5599	HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Density from Gt (Percent)						
1038	14.2731	HMACP MIXTURE DESIGN : SUMMARY SHEET	3	VMA (Percent)						
1039	5	HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Asphalt Content (%)						
1040	2.509	HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Specific Gravity Of Specimen (Ga)						
1041	2.567	HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Maximum Specific Gravity (Gr)						
1042	2.7835	HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Effective Gravity (Ge)						
1043	2.56282	HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Theo. Max. Specific Gravity (Gt)						
1044	97.9	HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Density from Gt (Percent)						
1045	14.209	HMACP MIXTURE DESIGN : SUMMARY SHEET	4	VMA (Percent)						
1046	5.5	HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Asphalt Content (%)						
1047	2.52	HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Specific Gravity Of Specimen (Ga)						
1048	2.551	HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Maximum Specific Gravity (Gr)						
1049	2.78832	HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Effective Gravity (Ge)						
1050	2.54309	HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Theo. Max. Specific Gravity (Gt)						
1051	99.092	HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Density from Gt (Percent)						
1052	14.2864	HMACP MIXTURE DESIGN : SUMMARY SHEET	5	VMA (Percent)						
1053	145	HMACP MIXTURE DESIGN : SUMMARY SHEET	Mixture Evaluation @ Optimum Asphalt Content	Indirect Tensile Strength (psi)						
1054		HMACP MIXTURE DESIGN : SUMMARY SHEET	Mixture Evaluation @ Optimum Asphalt Content	Hamburg Wheel Tracking Test	Number of cycles					
1055		HMACP MIXTURE DESIGN : SUMMARY SHEET	Mixture Evaluation @ Optimum Asphalt Content	Hamburg Wheel Tracking Test	Rut depth (mm)					
1056		HMACP MIXTURE DESIGN : SUMMARY SHEET	Mixture Evaluation @ Optimum Asphalt Content	Overlay Tester Min. Number of Cycles						
1057		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Asphalt Content (%)						
1058		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Maximum Specific Gravity (Gr)						
1059		HMACP MIXTURE DESIGN : SUMMARY SHEET	Effective Gravity (Ge)							
1060		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Theo. Max. Specific Gravity (Gt)						
1061		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	VMA (Percent)						

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
1062		HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Asphalt Content (%)						
1063		HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Maximum Specific Gravity (Gr)						
1064		HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Theo. Max. Specific Gravity (Gt)						
1065		HMACP MIXTURE DESIGN : SUMMARY SHEET	2	VMA (Percent)						
1066		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Asphalt Content (%)						
1067		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Maximum Specific Gravity (Gr)						
1068		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Theo. Max. Specific Gravity (Gt)						
1069		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	VMA (Percent)						
1070		HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Asphalt Content (%)						
1071		HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Maximum Specific Gravity (Gr)						
1072		HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Theo. Max. Specific Gravity (Gt)						
1073		HMACP MIXTURE DESIGN : SUMMARY SHEET	4	VMA (Percent)						
1074		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Asphalt Content (%)						
1075		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Maximum Specific Gravity (Gr)						
1076		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Theo. Max. Specific Gravity (Gt)						
1077		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	VMA (Percent)						
1078		HMACP MIXTURE DESIGN : SUMMARY SHEET	Min Film Thickness (microns)							
1079		HMACP MIXTURE DESIGN : SUMMARY SHEET	AC @ Min Film Thickness:							
1080		HMACP MIXTURE DESIGN : SUMMARY SHEET	Max Film Thickness (microns)							
1081		HMACP MIXTURE DESIGN : SUMMARY SHEET	AC @ Max Film Thickness:							
1082		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Asphalt Content (%)						
1083		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Lab Measured Gr						
1084		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Effective Specific Gravity (Ge)						
1085		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Backcalculated Gr						
1086		HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Lab Measured Gr						
1087		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Asphalt Content (%)						
1088		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Lab Measured Gr						
1089		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Effective Specific Gravity (Ge)						
1090		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Backcalculated Gr						
1091		HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Lab Measured Gr						
1092		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Asphalt Content (%)						
1093		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Lab Measured Gr						
1094		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Effective Specific Gravity (Ge)						
1095		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Backcalculated Gr						
1096		HMACP MIXTURE DESIGN : SUMMARY SHEET	6	Lab Measured Gr						
1097		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Asphalt Content (%)						
1098		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Height (in)						
1099		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Diameter (in)						
1100		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Dry Weight (grams)						
1101		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Backcalculated Gr						
1102		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Ga						
1103		HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Height (in)						
1104		HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Diameter (in)						
1105		HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Dry Weight (grams)						
1106		HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Ga						
1107		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Density from Backcalculated Gr (%)						
1108		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Asphalt Content (%)						
1109		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Height (in)						
1110		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Diameter (in)						
1111		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Dry Weight (grams)						
1112		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Backcalculated Gr						
1113		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Ga						
1114		HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Height (in)						
1115		HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Diameter (in)						
1116		HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Dry Weight (grams)						
1117		HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Ga						
1118		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Density from Backcalculated Gr (%)						
1119		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Asphalt Content (%)						
1120		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Height (in)						

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7
1121		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Diameter (in)				
1122		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Dry Weight (grams)				
1123		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Backcalculated Gr				
1124		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Ga				
1125		HMACP MIXTURE DESIGN : SUMMARY SHEET	6	Height (in)				
1126		HMACP MIXTURE DESIGN : SUMMARY SHEET	6	Diameter (in)				
1127		HMACP MIXTURE DESIGN : SUMMARY SHEET	6	Dry Weight (grams)				
1128		HMACP MIXTURE DESIGN : SUMMARY SHEET	6	Ga				
1129		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Density from Backcalculated Gr (%)				
1130		HMACP MIXTURE DESIGN : SUMMARY SHEET	7	Asphalt Content (%)				
1131		HMACP MIXTURE DESIGN : SUMMARY SHEET	7	Height (in)				
1132		HMACP MIXTURE DESIGN : SUMMARY SHEET	7	Diameter (in)				
1133		HMACP MIXTURE DESIGN : SUMMARY SHEET	7	Dry Weight (grams)				
1134		HMACP MIXTURE DESIGN : SUMMARY SHEET	7	Backcalculated Gr				
1135		HMACP MIXTURE DESIGN : SUMMARY SHEET	7	Ga				
1136		HMACP MIXTURE DESIGN : SUMMARY SHEET	8	Height (in)				
1137		HMACP MIXTURE DESIGN : SUMMARY SHEET	8	Diameter (in)				
1138		HMACP MIXTURE DESIGN : SUMMARY SHEET	8	Dry Weight (grams)				
1139		HMACP MIXTURE DESIGN : SUMMARY SHEET	8	Ga				
1140		HMACP MIXTURE DESIGN : SUMMARY SHEET	7	Density from Backcalculated Gr (%)				
1141		HMACP MIXTURE DESIGN : SUMMARY SHEET	9	Asphalt Content (%)				
1142		HMACP MIXTURE DESIGN : SUMMARY SHEET	9	Height (in)				
1143		HMACP MIXTURE DESIGN : SUMMARY SHEET	9	Diameter (in)				
1144		HMACP MIXTURE DESIGN : SUMMARY SHEET	9	Dry Weight (grams)				
1145		HMACP MIXTURE DESIGN : SUMMARY SHEET	9	Backcalculated Gr				
1146		HMACP MIXTURE DESIGN : SUMMARY SHEET	9	Ga				
1147		HMACP MIXTURE DESIGN : SUMMARY SHEET	10	Height (in)				
1148		HMACP MIXTURE DESIGN : SUMMARY SHEET	10	Diameter (in)				
1149		HMACP MIXTURE DESIGN : SUMMARY SHEET	10	Dry Weight (grams)				
1150		HMACP MIXTURE DESIGN : SUMMARY SHEET	10	Ga				
1151		HMACP MIXTURE DESIGN : SUMMARY SHEET	9	Density from Backcalculated Gr (%)				
1152	2.77832	HMACP MIXTURE DESIGN : SUMMARY SHEET	Effective Specific Gravity:					
1153	4.28343	HMACP MIXTURE DESIGN : SUMMARY SHEET	Optimum Asphalt Content :					
1154	14.2882	HMACP MIXTURE DESIGN : SUMMARY SHEET	VMA @ Optimum AC:					
1155		HMACP MIXTURE DESIGN : SUMMARY SHEET	Estimated Percent of Stripping, %:					
1156		HMACP MIXTURE DESIGN : SUMMARY SHEET	Drain-Down, %:					
1157		HMACP MIXTURE DESIGN : SUMMARY SHEET	Cantabro Loss, %:					
1158	2.48796	HMACP MIXTURE DESIGN : SUMMARY SHEET	Interpolated Values	Specific Gravity (Ga):				
1159	2.58936	HMACP MIXTURE DESIGN : SUMMARY SHEET	Interpolated Values	Max. Specific Gravity (Gr):				
1160	2.59167	HMACP MIXTURE DESIGN : SUMMARY SHEET	Interpolated Values	Theo. Max. Specific Gravity (Gt):				
1161		HMACP MIXTURE DESIGN : SUMMARY SHEET	VCA(CA)					
1162		HMACP MIXTURE DESIGN : SUMMARY SHEET	VCA(MIX)					
1163		HMACP MIXTURE DESIGN : SUMMARY SHEET	VCA(CA, calc.)					
1164		HMACP MIXTURE DESIGN : SUMMARY SHEET	VCA(MIX, calc.)					
1165		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	A	Gr			
1166		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	B	Gr			
1167		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	Density (%)	Gr			
1168		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	A	Ga			
1169		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	B	Ga			
1170		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	Density (%)	Ga			
1171		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	A	Height @ Nini			
1172		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	B	Height @ Nini			
1173		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	Density (%)	Height @ Nini			
1174		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	A	Height @ Ndes			
1175		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	B	Height @ Ndes			
1176		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	Density (%)	Height @ Ndes			
1177		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	A	Height @ Nmax			
1178		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	B	Height @ Nmax			
1179		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	Density (%)	Height @ Nmax			

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
1180	2004	HMACP MIXTURE DESIGN : COMBINED GRADATION	SPEC YEAR:							
1181		HMACP MIXTURE DESIGN : COMBINED GRADATION	SPECIAL PROVISION:							
1182	ITEM340	HMACP MIXTURE DESIGN : COMBINED GRADATION	MIX TYPE:							
1183		HMACP MIXTURE DESIGN : COMBINED GRADATION	Lift Thickness, in:							
1184		HMACP MIXTURE DESIGN : SUMMARY SHEET	FINAL SPECIMEN	Asphalt Content (%)						
1185		HMACP MIXTURE DESIGN : SUMMARY SHEET	FINAL SPECIMEN	Specific Gravity Of Specimen (Ga)						
1186		HMACP MIXTURE DESIGN : SUMMARY SHEET	FINAL SPECIMEN	Maximum Specific Gravity (Gr)						
1187		HMACP MIXTURE DESIGN : SUMMARY SHEET	FINAL SPECIMEN	Effective Gravity (Ge)						
1188		HMACP MIXTURE DESIGN : SUMMARY SHEET	FINAL SPECIMEN	Density from Gr (Percent)						
1189		HMACP MIXTURE DESIGN : SUMMARY SHEET	FINAL SPECIMEN	Film Thickness (microns)						
1190		HMACP MIXTURE DESIGN : SUMMARY SHEET	Suggested Membrane Target App. Rate, gal/yd2:							
1191		HMACP MIXTURE DESIGN : SUMMARY SHEET	PREDICTION ESTIMATES	AC %						
1192		HMACP MIXTURE DESIGN : SUMMARY SHEET	PREDICTION ESTIMATES	Film Thickness (microns)						
1193		HMACP MIXTURE DESIGN : SUMMARY SHEET	PREDICTION ESTIMATES	Density (%)						
1194		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	Blank Sample Weight, g:							
1195	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	-	Sieve Size:	Retained	7/8"	Bin No.1	Aggregate Weight
1196	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	-	Sieve Size:	Retained	7/8"	Bin No.2	Aggregate Weight
1197	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	-	Sieve Size:	Retained	7/8"	Bin No.3	Aggregate Weight
1198	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	-	Sieve Size:	Retained	7/8"	Bin No.4	Aggregate Weight
1199	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	-	Sieve Size:	Retained	7/8"	Bin No.5	Aggregate Weight
1200		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	-	Sieve Size:	Retained	7/8"	Bin No.6	
1201		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	-	Sieve Size:	Retained	7/8"	Bin No.7	
1202	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	-	Sieve Size:	Retained	7/8"	Total Weights	
1203		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	-	Sieve Size:	Retained	7/8"	IndividualRetained, %	
1204		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	-	Sieve Size:	Retained	7/8"	Cumulative Retained, %	
1205	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.1	Aggregate Weight
1206	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.2	Aggregate Weight
1207	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.3	Aggregate Weight
1208	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.4	Aggregate Weight
1209	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.5	Aggregate Weight
1210		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.6	
1211		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.7	
1212	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Total Weights	
1213		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	IndividualRetained, %	
1214		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Cumulative Retained, %	
1215	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.1	Aggregate Weight
1216	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.2	Aggregate Weight
1217	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.3	Aggregate Weight
1218	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.4	Aggregate Weight
1219	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.5	Aggregate Weight
1220		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.6	
1221		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.7	
1222	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Total Weights	
1223		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	IndividualRetained, %	
1224		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Cumulative Retained, %	
1225	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.1	Aggregate Weight
1226	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.2	Aggregate Weight
1227	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.3	Aggregate Weight
1228	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.4	Aggregate Weight
1229	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.5	Aggregate Weight
1230		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.6	
1231		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.7	
1232	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Total Weights	
1233		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	IndividualRetained, %	
1234		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Cumulative Retained, %	
1235	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.1	Aggregate Weight
1236	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.2	Aggregate Weight
1237	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.3	Aggregate Weight
1238	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.4	Aggregate Weight

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
1239	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.5	Aggregate Weight
1240		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.6	
1241		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.7	
1242	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Total Weights	
1243		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	IndividualRetained, %	
1244		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Cumulative Retained, %	
1245	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.1	Aggregate Weight
1246	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.2	Aggregate Weight
1247	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.3	Aggregate Weight
1248	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.4	Aggregate Weight
1249	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.5	Aggregate Weight
1250		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.6	
1251		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.7	
1252	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Total Weights	
1253		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	IndividualRetained, %	
1254		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Cumulative Retained, %	
1255	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.1	Aggregate Weight
1256	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.2	Aggregate Weight
1257	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.3	Aggregate Weight
1258	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.4	Aggregate Weight
1259	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.5	Aggregate Weight
1260		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.6	
1261		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.7	
1262	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Total Weights	
1263		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	IndividualRetained, %	
1264		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Cumulative Retained, %	
1265	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.1	Aggregate Weight
1266	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.2	Aggregate Weight
1267	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.3	Aggregate Weight
1268	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.4	Aggregate Weight
1269	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.5	Aggregate Weight
1270		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.6	
1271		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.7	
1272	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Total Weights	
1273		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	IndividualRetained, %	
1274		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Cumulative Retained, %	
1275	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.1	Aggregate Weight
1276	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.2	Aggregate Weight
1277	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.3	Aggregate Weight
1278	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.4	Aggregate Weight
1279	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.5	Aggregate Weight
1280		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.6	
1281		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.7	
1282	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Total Weights	
1283		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	IndividualRetained, %	
1284		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Cumulative Retained, %	
1285		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.1	Aggregate Weight
1286		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.2	Aggregate Weight
1287		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.3	Aggregate Weight
1288		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.4	Aggregate Weight
1289		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.5	Aggregate Weight
1290		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.6	
1291		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.7	
1292		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Total Weights	
1293		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	IndividualRetained, %	
1294		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Cumulative Retained, %	
1295		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.1	Aggregate Weight
1296		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.2	Aggregate Weight
1297		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.3	Aggregate Weight

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
1298		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.4	Aggregate Weight
1299		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.5	Aggregate Weight
1300		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.6	
1301		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.7	
1302		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Total Weights	
1303		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	IndividualRetained, %	
1304		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Cumulative Retained, %	
1305	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Totals	Bin No.1	Aggregate Weight				
1306	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Totals	Bin No.2	Aggregate Weight				
1307	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Totals	Bin No.3	Aggregate Weight				
1308	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Totals	Bin No.4	Aggregate Weight				
1309	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Totals	Bin No.5	Aggregate Weight				
1310		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Totals	Bin No.6					
1311		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Totals	Bin No.7					
1312	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Totals	Total Weights					
1313		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	Running Total:							
1314	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	-	Sieve Size:	Retained	7/8"	Bin No.1	Aggregate Weight
1315	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	-	Sieve Size:	Retained	7/8"	Bin No.2	Aggregate Weight
1316	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	-	Sieve Size:	Retained	7/8"	Bin No.3	Aggregate Weight
1317	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	-	Sieve Size:	Retained	7/8"	Bin No.4	Aggregate Weight
1318	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	-	Sieve Size:	Retained	7/8"	Bin No.5	Aggregate Weight
1319		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	-	Sieve Size:	Retained	7/8"	Bin No.6	
1320		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	-	Sieve Size:	Retained	7/8"	Bin No.7	
1321	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	-	Sieve Size:	Retained	7/8"	Total Weights	
1322	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.1	Aggregate Weight
1323	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.2	Aggregate Weight
1324	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.3	Aggregate Weight
1325	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.4	Aggregate Weight
1326	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.5	Aggregate Weight
1327		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.6	
1328		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.7	
1329	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	7/8"	Sieve Size:	Retained	5/8"	Total Weights	
1330	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.1	Aggregate Weight
1331	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.2	Aggregate Weight
1332	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.3	Aggregate Weight
1333	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.4	Aggregate Weight
1334	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.5	Aggregate Weight
1335		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.6	
1336		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.7	
1337	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	5/8"	Sieve Size:	Retained	3/8"	Total Weights	
1338	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.1	Aggregate Weight
1339	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.2	Aggregate Weight
1340	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.3	Aggregate Weight
1341	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.4	Aggregate Weight
1342	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.5	Aggregate Weight
1343		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.6	
1344		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.7	
1345	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Total Weights	
1346	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.1	Aggregate Weight
1347	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.2	Aggregate Weight
1348	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.3	Aggregate Weight
1349	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.4	Aggregate Weight
1350	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.5	Aggregate Weight
1351		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.6	
1352		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.7	
1353	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Total Weights	
1354	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.1	Aggregate Weight
1355	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.2	Aggregate Weight
1356	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.3	Aggregate Weight

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
1357	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.4	Aggregate Weight
1358	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.5	Aggregate Weight
1359		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.6	
1360		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.7	
1361	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Total Weights	
1362	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.1	Aggregate Weight
1363	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.2	Aggregate Weight
1364	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.3	Aggregate Weight
1365	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.4	Aggregate Weight
1366	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.5	Aggregate Weight
1367		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.6	
1368		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.7	
1369	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Total Weights	
1370	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.1	Aggregate Weight
1371	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.2	Aggregate Weight
1372	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.3	Aggregate Weight
1373	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.4	Aggregate Weight
1374	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.5	Aggregate Weight
1375		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.6	
1376		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.7	
1377	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Total Weights	
1378	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.1	Aggregate Weight
1379	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.2	Aggregate Weight
1380	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.3	Aggregate Weight
1381	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.4	Aggregate Weight
1382	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.5	Aggregate Weight
1383		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.6	
1384		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.7	
1385	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Total Weights	
1386		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.1	Aggregate Weight
1387		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.2	Aggregate Weight
1388		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.3	Aggregate Weight
1389		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.4	Aggregate Weight
1390		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.5	Aggregate Weight
1391		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.6	
1392		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.7	
1393		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Total Weights	
1394		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.1	Aggregate Weight
1395		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.2	Aggregate Weight
1396		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.3	Aggregate Weight
1397		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.4	Aggregate Weight
1398		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.5	Aggregate Weight
1399		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.6	
1400		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.7	
1401		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Total Weights	
1402	No	HMACP MIXTURE DESIGN : COMBINED GRADATION	WMA Included in Design?							
1403		HMACP MIXTURE DESIGN : COMBINED GRADATION	WMA TECHNOLOGY:							
1404		HMACP MIXTURE DESIGN : COMBINED GRADATION	Material Type	Bin No.8						
1405		HMACP MIXTURE DESIGN : COMBINED GRADATION	Material Type	Bin No.9						
1406		HMACP MIXTURE DESIGN : COMBINED GRADATION	Material Type	Bin No.10						
1407		HMACP MIXTURE DESIGN : COMBINED GRADATION	Material Source	Bin No.8						
1408		HMACP MIXTURE DESIGN : COMBINED GRADATION	Material Source	Bin No.9						
1409		HMACP MIXTURE DESIGN : COMBINED GRADATION	Material Source	Bin No.10						
1410		HMACP MIXTURE DESIGN : COMBINED GRADATION	RAS Type	Bin No.8						
1411		HMACP MIXTURE DESIGN : COMBINED GRADATION	RAS Type	Bin No.9						
1412		HMACP MIXTURE DESIGN : COMBINED GRADATION	RAS Type	Bin No.10						
1413		HMACP MIXTURE DESIGN : COMBINED GRADATION	Sample ID	Bin No.8						
1414		HMACP MIXTURE DESIGN : COMBINED GRADATION	Sample ID	Bin No.9						
1415		HMACP MIXTURE DESIGN : COMBINED GRADATION	Sample ID	Bin No.10						

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
1416		HMACP MIXTURE DESIGN : COMBINED GRADATION	Recycled Asphalt Binder (%)	Bin No.8						
1417		HMACP MIXTURE DESIGN : COMBINED GRADATION	Recycled Asphalt Binder (%)	Bin No.9						
1418		HMACP MIXTURE DESIGN : COMBINED GRADATION	Recycled Asphalt Binder (%)	Bin No.10						
1419	0	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual Bin (%):	Bin No.8						
1420	0	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual Bin (%):	Bin No.9						
1421	0	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual Bin (%):	Bin No.10						
1422		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Cum.% Passing	Sieve Size:	7/8"				
1423		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Wtd Cum. %	Sieve Size:	7/8"				
1424		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Cum.% Passing	Sieve Size:	7/8"				
1425		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Wtd Cum. %	Sieve Size:	7/8"				
1426		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Cum.% Passing	Sieve Size:	7/8"				
1427		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Wtd Cum. %	Sieve Size:	7/8"				
1428		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Cum.% Passing	Sieve Size:	5/8"				
1429		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Wtd Cum. %	Sieve Size:	5/8"				
1430		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Cum.% Passing	Sieve Size:	5/8"				
1431		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Wtd Cum. %	Sieve Size:	5/8"				
1432		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Cum.% Passing	Sieve Size:	5/8"				
1433		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Wtd Cum. %	Sieve Size:	5/8"				
1434		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Cum.% Passing	Sieve Size:	3/8"				
1435		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Wtd Cum. %	Sieve Size:	3/8"				
1436		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Cum.% Passing	Sieve Size:	3/8"				
1437		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Wtd Cum. %	Sieve Size:	3/8"				
1438		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Cum.% Passing	Sieve Size:	3/8"				
1439		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Wtd Cum. %	Sieve Size:	3/8"				
1440		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Cum.% Passing	Sieve Size:	No. 4				
1441		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Wtd Cum. %	Sieve Size:	No. 4				
1442		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Cum.% Passing	Sieve Size:	No. 4				
1443		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Wtd Cum. %	Sieve Size:	No. 4				
1444		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Cum.% Passing	Sieve Size:	No. 4				
1445		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Wtd Cum. %	Sieve Size:	No. 4				
1446		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Cum.% Passing	Sieve Size:	No. 10				
1447		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Wtd Cum. %	Sieve Size:	No. 10				
1448		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Cum.% Passing	Sieve Size:	No. 10				
1449		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Wtd Cum. %	Sieve Size:	No. 10				
1450		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Cum.% Passing	Sieve Size:	No. 10				
1451		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Wtd Cum. %	Sieve Size:	No. 10				
1452		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Cum.% Passing	Sieve Size:	No. 40				
1453		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Wtd Cum. %	Sieve Size:	No. 40				
1454		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Cum.% Passing	Sieve Size:	No. 40				
1455		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Wtd Cum. %	Sieve Size:	No. 40				
1456		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Cum.% Passing	Sieve Size:	No. 40				
1457		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Wtd Cum. %	Sieve Size:	No. 40				
1458		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Cum.% Passing	Sieve Size:	No. 80				
1459		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Wtd Cum. %	Sieve Size:	No. 80				
1460		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Cum.% Passing	Sieve Size:	No. 80				
1461		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Wtd Cum. %	Sieve Size:	No. 80				
1462		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Cum.% Passing	Sieve Size:	No. 80				
1463		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Wtd Cum. %	Sieve Size:	No. 80				
1464		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Cum.% Passing	Sieve Size:	No. 200				
1465		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Wtd Cum. %	Sieve Size:	No. 200				
1466		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Cum.% Passing	Sieve Size:	No. 200				
1467		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Wtd Cum. %	Sieve Size:	No. 200				
1468		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Cum.% Passing	Sieve Size:	No. 200				
1469		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Wtd Cum. %	Sieve Size:	No. 200				
1470		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Cum.% Passing	Sieve Size:					
1471		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Wtd Cum. %	Sieve Size:					
1472		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Cum.% Passing	Sieve Size:					
1473		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Wtd Cum. %	Sieve Size:					
1474		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Cum.% Passing	Sieve Size:					

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
1475		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Wtd Cum. %	Sieve Size:					
1476		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Cum.% Passing	Sieve Size:					
1477		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Wtd Cum. %	Sieve Size:					
1478		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Cum.% Passing	Sieve Size:					
1479		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Wtd Cum. %	Sieve Size:					
1480		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Cum.% Passing	Sieve Size:					
1481		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Wtd Cum. %	Sieve Size:					
1482		HMACP MIXTURE DESIGN : COMBINED GRADATION	Hydrated Lime?:	Bin No.1						
1483		HMACP MIXTURE DESIGN : COMBINED GRADATION	Hydrated Lime?:	Bin No.2						
1484		HMACP MIXTURE DESIGN : COMBINED GRADATION	Hydrated Lime?:	Bin No.3						
1485		HMACP MIXTURE DESIGN : COMBINED GRADATION	Hydrated Lime?:	Bin No.4						
1486		HMACP MIXTURE DESIGN : COMBINED GRADATION	Hydrated Lime?:	Bin No.5						
1487		HMACP MIXTURE DESIGN : COMBINED GRADATION	Hydrated Lime?:	Bin No.6						
1488		HMACP MIXTURE DESIGN : COMBINED GRADATION	Hydrated Lime?:	Bin No.7						
1489	0	HMACP MIXTURE DESIGN : COMBINED GRADATION	Ratio of Recycled to Total Binder, %							
1490		HMACP MIXTURE DESIGN : COMBINED GRADATION	Binder Substitution?							
1491		HMACP MIXTURE DESIGN : COMBINED GRADATION	Binder Originally Specified:							
1492		HMACP MIXTURE DESIGN : COMBINED GRADATION	Substitute Binder:							
1493		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Recycled Materials	Tex-217-F, Part III	Max.	Spec. Limit				
1494		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Recycled Materials	Tex-217-F, Part III	Bin No.8	Result				
1495		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Recycled Materials	Tex-217-F, Part III	Bin No.8	Sample ID				
1496		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Recycled Materials	Tex-217-F, Part III	Bin No.9	Result				
1497		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Recycled Materials	Tex-217-F, Part III	Bin No.9	Sample ID				
1498		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Recycled Materials	Tex-217-F, Part III	Bin No.10	Result				
1499		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Recycled Materials	Tex-217-F, Part III	Bin No.10	Sample ID				
1500		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.8	Individual Ret., %	Passing	-	Sieve Size:	Retained	7/8"	
1501		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.8	Individual Ret., %	Passing	7/8"	Sieve Size:	Retained	5/8"	
1502		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.8	Individual Ret., %	Passing	5/8"	Sieve Size:	Retained	3/8"	
1503		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.8	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
1504		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.8	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
1505		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.8	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
1506		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.8	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
1507		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.8	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
1508		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.8	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
1509		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.8	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
1510		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.8	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
1511		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.8	Individual Ret., %	Total:					
1512		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.8	Individual Ret., %	Percent of plus No. 4					
1513		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.9	Individual Ret., %	Passing	-	Sieve Size:	Retained	7/8"	
1514		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.9	Individual Ret., %	Passing	7/8"	Sieve Size:	Retained	5/8"	
1515		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.9	Individual Ret., %	Passing	5/8"	Sieve Size:	Retained	3/8"	
1516		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.9	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
1517		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.9	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
1518		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.9	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
1519		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.9	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
1520		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.9	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
1521		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.9	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
1522		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.9	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
1523		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.9	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
1524		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.9	Individual Ret., %	Total:					
1525		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.9	Individual Ret., %	Percent of plus No. 4					
1526		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.10	Individual Ret., %	Passing	-	Sieve Size:	Retained	7/8"	
1527		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.10	Individual Ret., %	Passing	7/8"	Sieve Size:	Retained	5/8"	
1528		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.10	Individual Ret., %	Passing	5/8"	Sieve Size:	Retained	3/8"	
1529		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.10	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
1530		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.10	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
1531		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.10	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
1532		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.10	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
1533		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.10	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
1534		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.10	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
1535		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.10	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
1536		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.10	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
1537		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.10	Individual Ret., %	Total:					
1538		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.10	Individual Ret., %	Percent of plus No. 4					
1539		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	-	Sieve Size:	Retained	7/8"	Bin No.8	
1540		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	-	Sieve Size:	Retained	7/8"	Bin No.9	
1541		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	-	Sieve Size:	Retained	7/8"	Bin No.10	
1542		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.8	
1543		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.9	
1544		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.10	
1545		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.8	
1546		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.9	
1547		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.10	
1548		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.8	
1549		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.9	
1550		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.10	
1551		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.8	
1552		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.9	
1553		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.10	
1554		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.8	
1555		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.9	
1556		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.10	
1557		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.8	
1558		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.9	
1559		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.10	
1560		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.8	
1561		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.9	
1562		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.10	
1563		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.8	
1564		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.9	
1565		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.10	
1566		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.8	
1567		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.9	
1568		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.10	
1569		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.8	
1570		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.9	
1571		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.10	
1572		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Totals	Bin No.8					
1573		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Totals	Bin No.9					
1574		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Totals	Bin No.10					
1575		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	-	Sieve Size:	Retained	7/8"	Bin No.8	
1576		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	-	Sieve Size:	Retained	7/8"	Bin No.9	
1577		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	-	Sieve Size:	Retained	7/8"	Bin No.10	
1578		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.8	
1579		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.9	
1580		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.10	
1581		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.8	
1582		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.9	
1583		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.10	
1584		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.8	
1585		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.9	
1586		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.10	
1587		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.8	
1588		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.9	
1589		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.10	
1590		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.8	
1591		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.9	
1592		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.10	

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
1593		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.8	
1594		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.9	
1595		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.10	
1596		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.8	
1597		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.9	
1598		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.10	
1599		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.8	
1600		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.9	
1601		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.10	
1602		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.8	
1603		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.9	
1604		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.10	
1605		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.8	
1606		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.9	
1607		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.10	
1608	0	HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Binder Ratio (%)						
1609	0	HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Binder Ratio (%)						
1610	0	HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Binder Ratio (%)						
1611	0	HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Binder Ratio (%)						
1612	0	HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Binder Ratio (%)						
1613	0	HMACP MIXTURE DESIGN : SUMMARY SHEET	Binder Ratio @ OAC:							

Grade				Washed Sieve Min	Washed Sieve Max	VMA: Min
A Coarse Base	1-1/2"		37.5	98	100	11
	1"		25	78	94	
	3/4"		19	64	85	
	1/2"		12.5	50	70	
	No. 4		4.75	30	50	
	No. 8		2.36	22	36	
	No. 30		0.6	8	23	
	No. 50		0.3	3	19	
	No. 200		0.075	2	7	
B Fine Base	1"		25	100	100	12
	7/8"		22.4	95	100	
	5/8"		16	75	95	
	3/8"		9.5	60	80	
	No. 4		4.75	40	60	
	No. 10		2	27	40	
	No. 40		0.425	10	25	
	No. 80		0.18	3	13	
	No. 200		0.075	2	8	
C Coarse Surface	7/8"		22.4	100	100	13
	5/8"		16	95	100	
	3/8"		9.5	70	85	
	No. 4		4.75	43	63	
	No. 10		2	30	40	
	No. 40		0.425	10	25	
	No. 80		0.18	3	13	
	No. 200		0.075	2	8	
D Fine Surface	3/4"		19	100	100	14
	1/2"		12.5	100	100	
	3/8"		9.5	85	100	
	No. 4		4.75	50	70	
	No. 10		2	32	42	
	No. 40		0.425	11	26	
	No. 80		0.18	4	14	
	No. 200		0.075	2	8	
F Fine Mixture	3/4"		19	100	100	15
	3/8"		9.5	98	100	
	No. 4		4.75	70	90	
	No. 8		2.36	38	48	
	No. 30		0.6	12	27	
	No. 50		0.3	6	19	
	No. 200		0.075	2	7	

Grade				restricted	restricted	# of Sieves with Coarse Aggregate
SP-A Base	2"		50	100	100	12.5			
	1-1/2"		37.5	98	100				
	1"		25	90	100				
	3/4"		19	45	90				
	No. 4		4.75	19	90		39.5	39.5	
	No. 8		2.36	19	45		26.8	30.8	
	No. 16		1.18	1	45		18.1	24.1	
	No. 30		0.6	1	45		13.6	17.5	
	No. 50		0.3	1	45		11.4	11.4	
	No. 200		0.075	1	7				6
SP-B Intermediate	1-1/2"		37.5	100	100	13.5			
	1"		25	98	100				
	3/4"		19	90	100				
	1/2"		12.5	49	90				
	No. 4		4.75	23	90				
	No. 8		2.36	23	49		34.6	34.6	
	No. 16		1.18	2	49		22.3	28.3	
	No. 30		0.6	2	49		16.7	20.7	
	No. 50		0.3	2	49		13.7	13.7	
	No. 200		0.075	2	8				6
SP-C Surface	1"		25	100	100	14.5			
	3/4"		19	98	100				
	1/2"		12.5	90	100				
	3/8"		9.5	58	90				
	No. 4		4.75	28	90				
	No. 8		2.36	28	58		39.1	39.1	
	No. 16		1.18	2	58		25.6	31.6	
	No. 30		0.6	2	58		19.1	23.1	
	No. 50		0.3	2	58		15.5	15.5	
	No. 200		0.075	2	10				6
SP-D Fine Mixture	3/4"		19	100	100	15.5			
	1/2"		12.5	98	100				
	3/8"		9.5	90	100				
	No. 4		4.75	32	90				
	No. 8		2.36	32	67		47.2	47.2	
	No. 16		1.18	2	67		31.6	37.6	
	No. 30		0.6	2	67		23.5	27.5	
	No. 50		0.3	2	67		18.7	18.7	
	No. 200		0.075	2	10				5
CMHB-C Coarse Surface	1"		25	100	100	13			
	3/4"		19	98	100				
	1/2"		12.5	72	85				
	3/8"		9.5	50	70				
	No. 4		4.75	30	45				
	No. 8		2.36	17	27				
	No. 16		1.18	5	27				
	No. 30		0.6	5	27				

Goes with power 45 chart.

Sieve Size				Combined Gradation	Lower Spec Limit	Upper Spec Limit
7/8"	22.4	4.051460492	100	100	100	100
5/8"	16	3.482202253	85.94930791	97.94	95	100
3/8"	9.5	2.754074109	67.97731618	82.864	70	85
No. 4	4.75	2.016100254	49.76230813	56.391	43	63
No. 10	2	1.366040257	33.7172301	34.847	30	40
No. 40	0.425	0.680416785	16.79435814	19.744	10	25
No. 80	0.18	0.462245431	11.40935305	11.584	3	13
No. 200	0.075	0.31172926	7.694244102	4.397	2	8

Recycled Material, %	Virgin Material, %
0.0	100.0

	Recycled Mat List	Total Percent
Fractionated RAP	Fractionated RAP	0
Unfractionated RAP	Unfractionated RAP	0
RAS	RAS	0

Special Provisions
341-024

JUNK FIELD #'S

BINDER SUBSTITUTION										
PG 76-16	PG 70-16	PG 64-16	PG 82-22	PG 76-22	PG 70-22	PG 64-22	PG 58-22	PG 76-28	PG 70-28	PG 64-28	PG 58-28
				PG 70-22	PG 64-22	PG 58-22		PG 70-28	PG 64-28	PG 58-28	
				PG 64-22	PG 58-22			PG 64-28	PG 58-28		

Version: 5/20/2009

WMA Technology	WMA in Design?	Hydrated Lime	Mix Description
Advera	1	0	1
Aspha-Min			
Double Barrel Green			
Evotherm			
Redi-Set WMX			
Sasobit			
Terex			
Maxam			
Ultrafoam GX			

Version:12/01/2009

Sandstone		Limestone-Dolomite		Gravel		Igneous		Synthetic		Aggregate Code
Apple (Sawyer, OK)	0050437	1604	1501506	Canyon	0418814	Bird Hill	1523213	Streetman	1817502	1402702
Brownlee	1402704	Ardmore, OK	0050412	Beck	2110901	Davis, OK.	0050439			1402702
Sawyer, OK	0050447	Balcones Quarry	1504602	Boys Ranch	0418008	Jones Mill	0050122			1402702
		Beckmann	1501503	Broken Bow S & G	0050451	Knippa	1523206			1402702
		Bridgeport	0224904	D and D	2215905	McKelligon-Granite	2407206			
		Brownwood	2302501	Del Rio	2223301	Mill Creek (Grnt), OK.	0050433			
		Burnet	1402701	Galo	2224019	Padre Canyon	2411613			
		Butterfield	2407220	Goode-Anderson	0801701	Porcupine Mountain	0040105			
		Chambers	0224921	Highcard Ranch	2506507	Snyder, OK.	0050435			
		Chapman	1523211	Hoban	0619502	Sweet Home, AR.	0050106			
		Coleman, OK	0050414	Johnson	0411807	Vado	0050310			
		Cooperton, OK	0050415	Las Viboras	2110905					
		Davenport	1523214	Little River	0050114					
		Eastland	2306805	LS Pit	0418002					
		Feld	1424602	Luckett	0916104					
		Gibbs	0901408	Mansfield	0418001					
		Helotes	1501514	Matador	2517309					
		Hondo	1516314	Murphy	1323505					
		Huebner Road	1501507	Pettibone	1716608					
		Hunter	1504605	Pit 365	0916117					
		Rd.	1504606	Pit 424	1716611					
		Lake Bridgeport	0224902	Realitos	2106701					
		Lampasas	1402706	Reavis	2110906					
		Leach	0212001	Showers	2110904					
		Lone Star	1504607	Smith	0325205					
		Marble Falls	1402702	South Noodle	0812803					
		Matrimar	0040103	Stockett	0400604					
		McKelligon Dolo	2407201	Sweet 16	2206706					
		Mico # 68	1516315	Tasitas	2224014					
		Mill Creek, OK	0050445	Thrasher	2517302					
		Naruna	1402711	Woods	0505402					
		Nichols	1516312	Wynn	2215904					
		North Troy	0050448							
		Pate	0914710							
		Perch-Hill	0224901							
		Rankin	0623102							
		Richards Spur	0050405							
		Ruby	1410607							
		S.H. 211	1516310							
		Servtex	1504603							
		South Quarry	2407213							
		Spicewood	1402710							
		Springfield	0212002							
		Stringtown, OK	0050407							
		Tehuacana	0914708							
		Three Rivers	0050501							
		Turner	0722611							
		Weatherford	0218409							
		Weir	1424603							
		Yearwood	1424606							

Version: 2/10/2010

RAS Producer	RAS BIN
APAC- TX Cold Springs	
APAC-TX Gribble Plant	
APAC-TX Leston Plant	
APAC-TX Sunnyvale Plant	
Century Asphalt-Melendy Plant	
R. K. Hall Construction	
Ramming Paving- Buda	
Ramming Paving- Georgetown	
Recon Recycle	
Southwest Shingle Recyc	
Sustainable Pvmt Tech-Pasadena	
Sustainable Pvmt Tech-Schertz	
Waste Management WMAP	

	No. 50		0.3	5	27							
	No. 200		0.075	5	9							6
CMHB-F Fine Surface	3/4"		19	100	100							
	1/2"		12.5	98	100							
	3/8"		9.5	85	100							
	No. 4		4.75	40	60							
	No. 8		2.36	17	27	14						
	No. 16		1.18	5	27							
	No. 30		0.6	5	27							
	No. 50		0.3	5	27							
	No. 200		0.075	5	9							5
SMA-C Coarse	3/4"		19	100	100							
	1/2"		12.5	80	90							
	3/8"		9.5	25	60							
	No. 4		4.75	20	28							
	No. 8		2.36	14	20	17						
	No. 16		1.18	8	20							
	No. 30		0.6	8	20							
	No. 50		0.3	8	20							
	No. 200		0.075	8	12							5
SMA-D Medium	3/4"		19	100	100							
	1/2"		12.5	85	99							
	3/8"		9.5	50	75							
	No. 4		4.75	20	32							
	No. 8		2.36	16	28	17						
	No. 16		1.18	8	28							
	No. 30		0.6	8	28							
	No. 50		0.3	8	28							
	No. 200		0.075	8	12							5
SMA-F Fine	1/2"		12.5	100	100							
	3/8"		9.5	70	90							
	No. 4		4.75	30	50							
	No. 8		2.36	20	30	17						
	No. 16		1.18	8	30							
	No. 30		0.6	8	30							
	No. 50		0.3	8	30							
	No. 200		0.075	8	14							4
SMAR-C Coarse	3/4"		19	100	100							
	1/2"		12.5	72	85							
	3/8"		9.5	50	70							
	No. 4		4.75	30	45							
	No. 8		2.36	17	27	18.5						
	No. 16		1.18	12	22							
	No. 30		0.6	8	20							
	No. 50		0.3	6	15							
	No. 200		0.075	5	9							5
SMAR-F Fine	3/4"		19	100	100							
	3/8"		9.5	95	100							
	No. 4		4.75	40	50							
	No. 8		2.36	17	27	18.5						
	No. 16		1.18	12	22							
	No. 30		0.6	8	20							
	No. 50		0.3	6	15							
	No. 200		0.075	5	9							4
PFC PG 76 Mixtures	3/4"		19	100	100							
	1/2"		12.5	80	100							
	3/8"		9.5	35	60							
	No. 4		4.75	1	20							
	No. 8		2.36	1	10							
	No. 200		0.075	1	4							4
PFC A-R Mixtures	3/4"		19	100	100							
	1/2"		12.5	95	100							
	3/8"		9.5	50	80							
	No. 4		4.75	0	8							
	No. 8		2.36	0	4							
	No. 200		0.075	0	4							
Other			#N/A									
			#N/A									
			#N/A									
			#N/A									
			#N/A									
			#N/A									
			#N/A									
			#N/A									
			#N/A									
			#N/A									

								AC CONTENT		Membrane Application Rates		
								MIN	MAX	MIN	MAX	SA Factors
UTBWC-A	3/8"		9.5	100	100							0.41
	No. 4		4.75	35	55							0.41
	No. 8		2.36	19	30							0.82
	No. 16		1.18	14	25			5.0	5.8	0.14	0.19	1.64
	No. 30		0.6	10	18							2.87
	No. 50		0.3	7	14							6.14
	No. 100		0.15	5	10							12.29
	No. 200		0.075	4	6							32.77
UTBWC-B	1/2"		12.5	100	100							0.41
	3/8"		9.5	75	100							-
	No. 4		4.75	22	36							0.41
	No. 8		2.36	19	30							0.82
	No. 16		1.18	14	24			4.8	5.6	0.17	0.24	1.64
	No. 30		0.6	10	18							2.87
	No. 50		0.3	7	14							6.14
	No. 100		0.15	5	10							12.29
	No. 200		0.075	4	6							32.77
UTBWC-C	3/4"		19	100	100							0.41
	1/2"		12.5	75	100							-
	3/8"		9.5	55	80							-
	No. 4		4.75	22	36							0.41
	No. 8		2.36	19	30							0.82
	No. 16		1.18	14	24			4.6	5.6	0.20	0.27	1.64
	No. 30		0.6	10	18							2.87
	No. 50		0.3	7	14							6.14
	No. 100		0.15	5	10							12.29
	No. 200		0.075	4	6							32.77

SS3111-CA Mix	3/8"		9.5	98	100	15.5			6.5	99999999						
	No. 4		4.75	70	90											
	No. 8		2.36	40	65											
	No. 16		1.18	20	45											
	No. 30		0.6	10	30											
	No. 50		0.3	10	20											
	No. 200		0.075	2	10										Min Lab Density	Max Lab Density
UTBHMWC-A	3/8"		9.5	100	100				5.0	5.8	0.14	0.20	0.41			
	No. 4		4.75	35	55								0.41			
	No. 8		2.36	19	30								0.82			
	No. 16		1.18	14	25								1.64			
	No. 30		0.6	10	18								2.87			
	No. 50		0.3	7	14								6.14			
	No. 100		0.15	5	10								12.29			
	No. 200		0.075	4	6								32.77			
UTBHMWC-B	1/2"		12.5	100	100				4.8	5.6	0.16	0.24	0.41		85.0	92.0
	3/8"		9.5	75	100								-			
	No. 4		4.75	22	36								0.41			
	No. 8		2.36	19	30								0.82			
	No. 16		1.18	14	24								1.64			
	No. 30		0.6	10	18								2.87			
	No. 50		0.3	7	14								6.14			
	No. 100		0.15	5	10								12.29			
	No. 200		0.075	4	6								32.77			
UTBHMWC-C	3/4"		19	100	100				4.6	5.6	0.17	0.27	0.41		85.0	92.0
	1/2"		12.5	75	100								-			
	3/8"		9.5	55	80								-			
	No. 4		4.75	22	36								0.41			
	No. 8		2.36	19	30								0.82			
	No. 16		1.18	14	24								1.64			
	No. 30		0.6	10	18								2.87			
	No. 50		0.3	7	14								6.14			
	No. 100		0.15	5	10								12.29			
	No. 200		0.075	4	6								32.77			
TBPFC PG 76 Mixtures	3/4"		19	100	100				6.0	7.0	0.000	0.000			78.0	82.0
	1/2"		12.5	80	100											
	3/8"		9.5	35	60											
	No. 4		4.75	1	20											
	No. 8		2.36	1	10											
	No. 200		0.075	1	4											
TBPFC A-R Mixtures	3/4"		19	100	100				8.0	10.0	0.000	0.000			78.0	82.0
	1/2"		12.5	95	100											
	3/8"		9.5	50	80											
	No. 4		4.75	0	8											
	No. 8		2.36	0	4											
	No. 200		0.075	0	4											

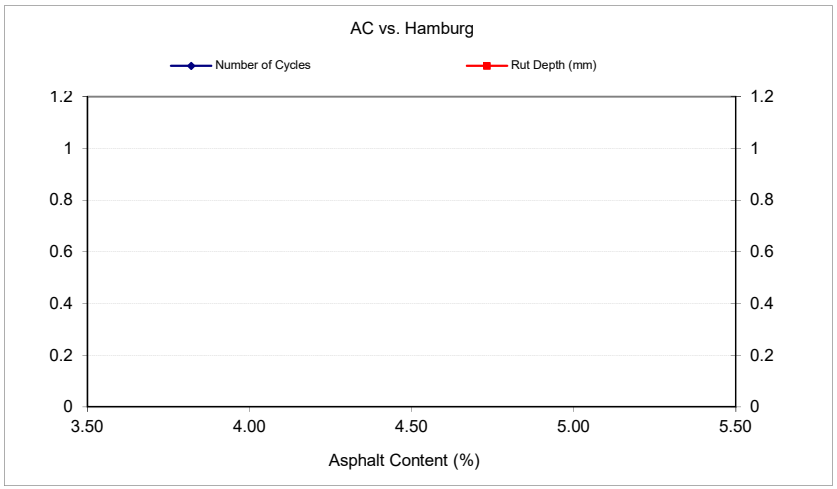
Gradation Table

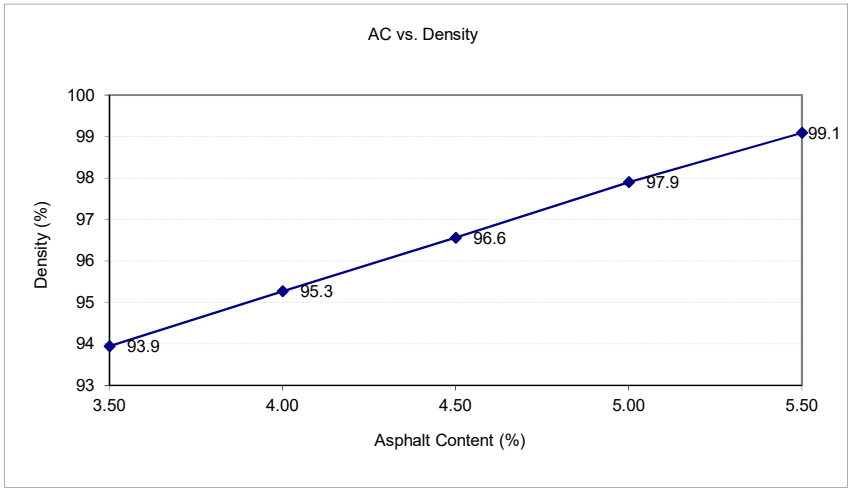
English	Metric	Selection	Size
2"	50 mm	2"	50
1-3/4"	45 mm	1-3/4"	45
1-1/2"	37.5 mm	1-1/2"	37.5
1-1/4"	31.5 mm	1-1/4"	31.5
1"	25 mm	1"	25
7/8"	22.4 mm	7/8"	22.4
3/4"	19 mm	3/4"	19
5/8"	16 mm	5/8"	16
1/2"	12.5 mm	1/2"	12.5
7/16"	11.2 mm	7/16"	11.2
3/8"	9.5 mm	3/8"	9.5
5/16"	8 mm	5/16"	8
1/4"	6.3 mm	1/4"	6.3
No. 4	4.75 mm	No. 4	4.75
No. 6	3.35 mm	No. 6	3.35
No. 8	2.36 mm	No. 8	2.36
No. 10	2 mm	No. 10	2
No. 14	1.4 mm	No. 14	1.4
No. 16	1.18 mm	No. 16	1.18
No. 20	.85 µm	No. 20	0.85
No. 30	.6 µm	No. 30	0.6
No. 40	.425 µm	No. 40	0.425
No. 50	.3 µm	No. 50	0.3
No. 80	.18 µm	No. 80	0.18
No. 100	.15 µm	No. 100	0.15
No. 200	.075 µm	No. 200	0.075

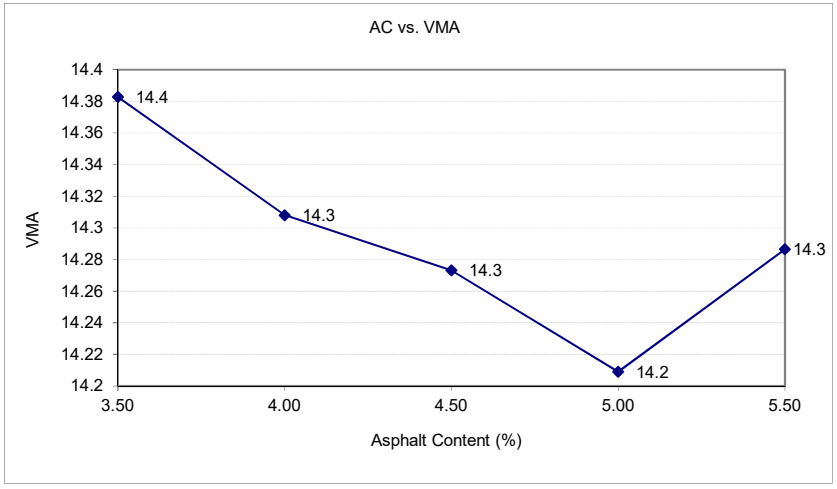
MIX TYPES
ITEM340_A_Coarse_Base
ITEM340_B_Fine_Base
ITEM340_C_Coarse_Surface
ITEM340_D_Fine_Surface
ITEM340_F_Fine_Mixture
ITEM341_A_Coarse_Base
ITEM341_B_Fine_Base
ITEM341_C_Coarse_Surface
ITEM341_D_Fine_Surface
ITEM341_F_Fine_Mixture
ITEM344_SP_A_Base
ITEM344_SP_B_Intermediate
ITEM344_SP_C_Surface
ITEM344_SP_D_Fine_Mixture
ITEM344_CMHB_C_Coarse_Surface
ITEM344_CMHB_F_Fine_Surface
ITEM346_SMA_C_Coarse
ITEM346_SMA_D_Medium
ITEM346_SMA_F_Fine
ITEM346_SMAR_C_Coarse
ITEM346_SMAR_F_Fine
ITEM342_PFC_PG_76_Mixtures
ITEM342_PFC_A_R_Mixtures
ITEM3001_UTBWC_A
ITEM3001_UTBWC_B
ITEM3001_UTBWC_C
SS3111_CA_Mix
ITEM3142_UTBWC_A
ITEM3142_UTBWC_B
ITEM3142_UTBWC_C
CAM
TBPFC_PG76
TBPFC_AR
Other

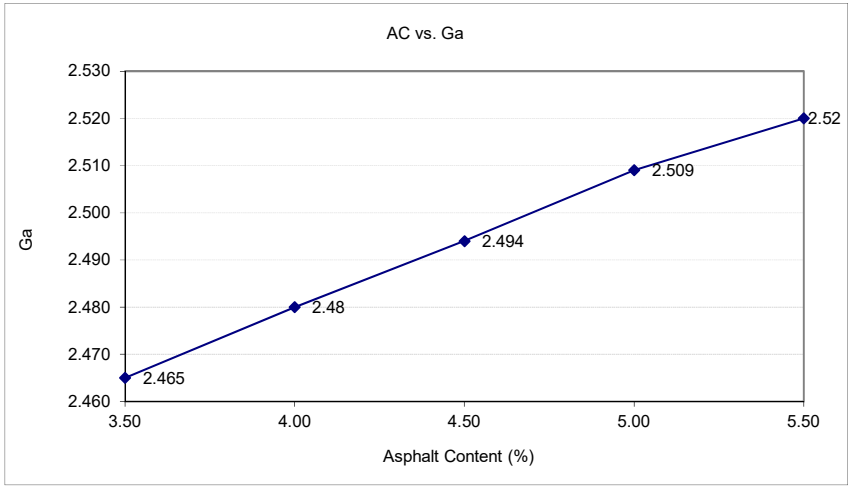
Membrane Application Check
0

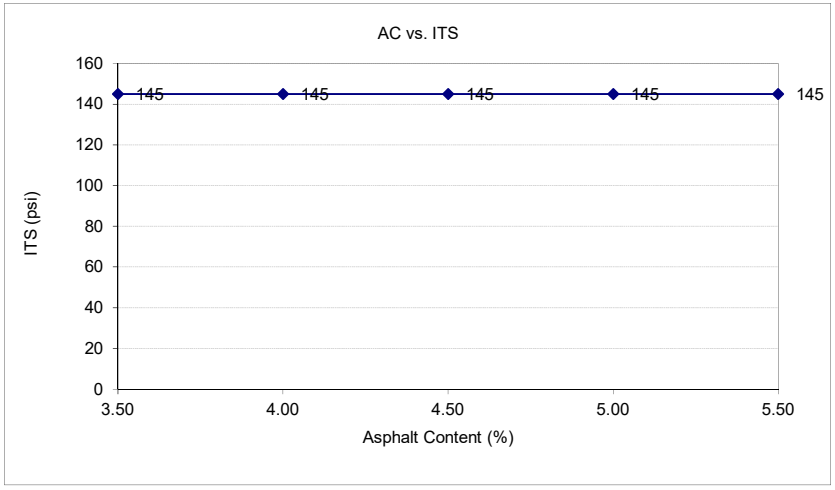
MINIMUM PFC AC CONTENT	
Bulk Specific Gravity	Minimum AC%
0.000	6.0
2.750	6.0
2.800	5.9
2.850	5.8
2.900	5.7
2.950	5.6
3.000	5.5
9999999999.000	5.5

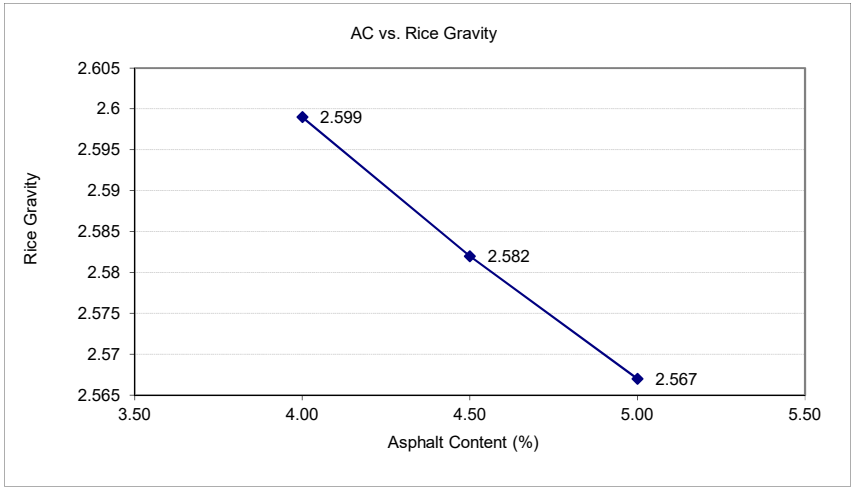

AC vs. Hamburg
Number of Cycles
Rut Depth (mm)
1.2
1
0.8
0.6
0.4
0.2
0
3.50
4.00
4.50
5.00
5.50
Asphalt Content (%)


AC vs. Density
Density (%)
100
99
98
97
96
95
94
93
99.1
97.9
96.6
95.3
93.9
3.50
4.00
4.50
5.00
5.50
Asphalt Content (%)


AC vs. VMA
VMA
14.4
14.38
14.36
14.34
14.32
14.3
14.28
14.26
14.24
14.22
14.2
14.4
14.3
14.3
14.2
14.3
3.50
4.00
4.50
5.00
5.50
Asphalt Content (%)


AC vs. Ga
Ga
2.530
2.520
2.510
2.500
2.490
2.480
2.470
2.460
2.52
2.509
2.494
2.48
2.465
3.50
4.00
4.50
5.00
5.50
Asphalt Content (%)


AC vs. ITS
ITS (psi)
160
140
120
100
80
60
40
20
0
145
145
145
145
145
3.50
4.00
4.50
5.00
5.50
Asphalt Content (%)


AC vs. Rice Gravity
Rice Gravity
2.605
2.6
2.595
2.59
2.585
2.58
2.575
2.57
2.565
2.599
2.582
2.567
3.50
4.00
4.50
5.00
5.50
Asphalt Content (%)

Texas Materials
an Oldcastle® company

DESIGN NO: 1321C-76A
DESCRIPTION: TYPE "C" PG 76-22
DESIGN DATE: 26-Jul-13
SUBMITTAL DATE: 29-Sep-17
REVISION DATE: 01-Jun-14

DEPARTMENT OF PUBLIC WORKS - CONSTRUCTION INSPECTION DIVISION
505 BARTON SPRINGS ROAD
AUSTIN, TEXAS, 78704

ATTENTION: DIVISION ENGINEER

SHOWN BELOW IS THE PLANT CORRECTED JOB MIX FORMULA FOR THE HOT MIX ASPHALTIC CONCRETE TO BE USED ON THE FOLLOWING PROJECT:

NAME OF SUBDIVISION OR CIP PROJECT: _____
CIP PROJECT NUMBER: _____

THE JOB MIX FORMULA HAS DETERMINED ACCORDING TO CITY OF AUSTIN STANDARD SPECIFICATIONS ITEM 340.

HMAC PRODUCER: Texas Materials
PLANT LOCATION: 713 Linger Lane, Austin, TX 78721

SUBMITTED BY: _____
DATE: _____
PRIME CONTRACTOR: _____

PREPARED BY: KYLE RANGNOW

CERTIFICATION: TXDOT LEVEL II #765

SIEVE SIZE	% PASSING
7/8"	100.0
5/8"	97.8
3/8"	82.5
#4	57.8
#10	35.9
#40	19.9
#80	11.7
#200	4.2

ASPHALT CONTENT
VALERO PG 76-22
4.3%

HMAC SUBMITTALS
All responsibility for the adequacy of this mix design rests with the Contractor who submitted it. In reviewing the submittal, the COA must rely upon the adequacy of the work of the Design Professional whose certification appears herein.

☒ Reviewed ☐ See Annotations
Signed: [signature] Date: 10/14/17

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : COMBINED GRADATION

Refresh Workbook

File Version: 06/07/10 10:24:04

SAMPLE ID:		SAMPLE DATE:	7/19/2013
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:	Travis	SPEC YEAR:	2004
SAMPLED BY:	William Champion #770	SPEC ITEM:	340
SAMPLE LOCATION:	Design	SPECIAL PROVISION:	
MATERIAL CODE:		MIX TYPE:	ITEM340_B_Fine_Base
MATERIAL NAME:	HMAC Type B		
PRODUCER:	Texas Materials Bolm Road		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:	Non-Surface (<8 in.)	STATION:		DIST. FROM CL:		CONTRACTOR DESIGN # :	1330B -64A

WMA Included in Design?	No
WMA TECHNOLOGY:	

Recycled Binder, %	
Bin No.8 :	1.0
Bin No.9 :	0.0
Bin No.10 :	0.0
Total	1.0

Ratio of Recycled to Total Binder, %
(based on binder percent (%) entered below in this worksheet)
23.4

	AGGREGATE BIN FRACTIONS							"RECYCLED MATERIALS"			
	Bin No.1	Bin No.2	Bin No.3	Bin No.4	Bin No.5	Bin No.6	Bin No.7	Bin No.8	Bin No.9	Bin No.10	
Aggregate Source:	Limestone_Dolom	Limestone_Dolom	Limestone_Dolom	Limestone_Dolom	Gravel			Fractionated RAP			Material Type
Aggregate Pit:	Marble Falls	Marble Falls	Marble Falls	Marble Falls							Material Source
Aggregate Number:	1402702	1402702	1402702	1402702					Tear-off		RAS Type
Sample ID:	B Rock	D Rock	F Rock	Man. Sand	C.A. Field Sand						Sample ID
Recycled Asphalt Binder (%)								4.8			
Hydrated Lime?:								20.0	% of Tot. Mix		% of Tot. Mix		% of Tot. Mix	Total Bin
Individual Bin (%):	26.0	15.0	12.0	16.0	11.1			19.9	% of Aggreg		% of Aggreg		% of Aggreg	100.0%

Combined Gradation

Sieve Size:	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum. % Passing	Lower	Upper	Within Spec's	Individual % Retained	Cumulative % Retained	Sieve Size
1"	100.0	26.0	100.0	15.0	100.0	12.0	100.0	16.0	100.0	11.1					100.0	19.9					100.0	100.0	100.0	Yes	0.0	0.0	1"
7/8"	93.1	24.2	100.0	15.0	100.0	12.0	100.0	16.0	100.0	11.1					100.0	19.9					98.2	95.0	100.0	Yes	1.8	1.8	7/8"
5/8"	66.4	17.3	100.0	15.0	100.0	12.0	100.0	16.0	100.0	11.1					100.0	19.9					91.3	75.0	95.0	Yes	6.9	8.7	5/8"
3/8"	10.3	2.7	91.4	13.7	100.0	12.0	100.0	16.0	100.0	11.1					94.0	18.7					74.2	60.0	80.0	Yes	17.1	25.8	3/8"
No. 4	2.5	0.7	24.3	3.6	69.2	8.3	99.9	16.0	99.4	11.0					68.1	13.6					53.2	40.0	60.0	Yes	21.0	46.8	No. 4
No. 10	1.8	0.5	4.9	0.7	5.3	0.6	71.9	11.5	97.0	10.8					47.2	9.4					33.5	27.0	40.0	Yes	19.7	66.5	No. 10
No. 40	1.2	0.3	3.2	0.5	2.9	0.3	30.9	4.9	73.1	8.1					30.5	6.1					20.3	10.0	25.0	Yes	13.2	79.7	No. 40
No. 80	1.0	0.3	2.8	0.4	2.4	0.3	18.3	2.9	38.3	4.3					19.3	3.8					12.0	3.0	13.0	Yes	8.3	88.0	No. 80
No. 200	0.8	0.2	2.3	0.3	2.0	0.2	4.9	0.8	13.2	1.5					7.1	1.4					4.5	2.0	8.0	Yes	7.5	95.5	No. 200

(Bold Italic) Not within specifications ***(Bold Italic)*** Not within specificaitons- Restricted Zone *(Italic)* Not cumulative

Lift Thickness, in:		Binder Substitution?		Binder Originally Specified:		Substitute Binder:
Asphalt Source & Grade:	Valero 64-22	Binder Percent, (%):	4.1	Asphalt Spec. Grav.:	1.030	
Antistripping Agent:		Percent, (%):				

Remarks:

Notes:

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : MATERIAL PROPERTIES

File Version: 06/07/10 10:24:04

SAMPLE ID:		SAMPLE DATE:	7/19/2013
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:	Travis	SPEC YEAR:	2004
SAMPLED BY:	William Champion #770	SPEC ITEM:	340
SAMPLE LOCATION:	Design	SPECIAL PROVISION:	
MATERIAL CODE:		MIX TYPE:	ITEM340_B_Fine_Base
MATERIAL NAME:	HMAC Type B		
PRODUCER:	Texas Materials Bolm Road		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:	Non-Surface	STATION:		DIST. FROM CL:		CONTRACTOR DESIGN # :	1330B -64A

	Bin No.1	Bin No.2	Bin No.3	Bin No.4	Bin No.5	Bin No.6	Bin No.7
Individual Bin (%):	Bin No.1 = 26 %	Bin No.2 = 15 %	Bin No.3 = 12 %	Bin No.4 = 16 %	Bin No.5 = 11.1 %		
Aggregate Source:	Limestone_Dolom	Limestone_Dolom	Limestone_Dolom	Limestone_Dolom	Gravel		
Aggregate Number:	1402702	1402702	1402702	1402702			
Sample ID:	B Rock	D Rock	F Rock	Man. Sand	C.A. Field Sand		

Test Name	SiteManager Test Template	Test Method	Spec. Min or Max	Spec. Limit	Result	Sample ID	Result	Sample ID	Result	Sample ID	Result	Sample ID	Result	Sample ID	Result	Sample ID	Result	Sample ID
Stockpile					Bin No.1		Bin No.2		Bin No.3		Bin No.4		Bin No.5		Bin No.6		Bin No.7	
Decantation	Tx217	Tex-217-F	Max.	1.5	0.70		1.00		0.90									
Deleterious Mat'l	Tx217	Tex-217-F	Max.	1.5	0.00		0.00		0.00									
Surface Aggregate Classification	Tx4AgClas	Tex-438-A, Tex-612-J	Min.	B	B		B		B		B							
Magnesium Sulfate Soundness	Tx411M	Tex-411-A	Max.	30	7.00		7.00		7.00		7.00							
LA Abrasion	Tx410	Tex-410-A	Max.	40	30.00		30.00		30.00		30.00							
Crushed Faces Count	Tx460	Tex-460-A	Min.	n/a	n/a		n/a		n/a									
Flat & Elongated	Tx280	Tex-280-F	Max.	10	0.00		0.00		0.00									
Fine Aggregate					Bin No.1		Bin No.2		Bin No.3		Bin No.4		Bin No.5		Bin No.6		Bin No.7	
Bar Linear Shrinkage	Tx107	Tex-107-E	Max.	3							1.00							
Methylene Blue		AASHTO T330	Max.															
Combined Aggregate					Bin No.1		Bin No.2		Bin No.3		Bin No.4		Bin No.5		Bin No.6		Bin No.7	
Sand Equivalent	Tx203	Tex-203-F	Min.	45									65.00					
User Defined Testing					Bin No.1		Bin No.2		Bin No.3		Bin No.4		Bin No.5		Bin No.6		Bin No.7	
Use this area to enter any test methods, speciafications & test result that apply to this material(s) but are not not listed above. **1**																		
2																		
3																		
4																		
5																		
Recycled Materials					**Bin No.8**		**Bin No.9**		**Bin No.10**									
Deleterious Mat'l	Tx217	Tex-217-F, Part III	Max.	n/a														

Remarks:

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : Aggregate Classification

File Version: 06/07/10 10:24:04

SAMPLE ID:		SAMPLE DATE:	7/19/2013
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:	Travis	SPEC YEAR:	2004
SAMPLED BY:	William Champion #770	SPEC ITEM:	340
SAMPLE LOCATION:	Design	SPECIAL PROVISION:	
MATERIAL CODE:		MIX TYPE:	ITEM340_B_Fine_Base
MATERIAL NAME:	HMAC Type B		
PRODUCER:	Texas Materials Bolm Road		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:	Non-Surf	STATION:		DIST. FROM CL:		CONTRACTOR DESIGN # :	1330B -64A

Aggregate Classification

	Bin No.1	Bin No.2	Bin No.3	Bin No.4	Bin No.5	Bin No.6	Bin No.7	Bin No.8	Bin No.9	Bin No.10
Individual Bin (%):	Bin No.1 = 26 %	Bin No.2 = 15 %	Bin No.3 = 12 %	Bin No.4 = 16 %	Bin No.5 = 11.1 %			Bin No.8 = 19.9 %		
Aggregate Source:	Limestone_Dolom	Limestone_Dolom	Limestone_Dolom	Limestone_Dolom	Gravel			Fractionated RAP		
Aggregate Number:	1402702	1402702	1402702	1402702						
Class (A) Rock (Y/N):	No	No	No	No	No					
Sieve Size: Passing	Sieve Size: Retained	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %
-	1"	0.0	0.0	0.0	0.0	0.0			0.0		
1"	7/8"	1.8	0.0	0.0	0.0	0.0			0.0		
7/8"	5/8"	6.9	0.0	0.0	0.0	0.0			0.0		
5/8"	3/8"	14.6	1.3	0.0	0.0	0.0			1.2		
3/8"	No. 4	2.0	10.1	3.7	0.0	0.1			5.2		
No. 4	No. 10	0.2	2.9	7.7	4.5	0.3			4.2		
No. 10	No. 40	0.2	0.3	0.3	6.6	2.7			3.3		
No. 40	No. 80	0.1	0.1	0.1	2.0	3.9			2.2		
No. 80	No. 200	0.1	0.1	0.0	2.1	2.8			2.4		
No. 200	Pan	0.2	0.3	0.2	0.8	1.5			1.4		
Total:		26.0	15.0	12.0	16.0	11.1			19.9		
Percent of plus No. 4		25.4	11.4	3.7	0.0	0.1			6.3		

Percent of plus No. 4 from class (A) Rock:	0.0
Total Percent of plus No. 4	46.8
Percent of plus No. 4 from class (A) Rock:	***0.0***

Remarks:

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : WEIGH UP SHEET

File Version: 06/07/10 10:24:04

SAMPLE ID:		SAMPLE DATE:	7/19/2013
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:	Travis	SPEC YEAR:	2004
SAMPLED BY:	William Champion #770	SPEC ITEM:	340
SAMPLE LOCATION:	Design	SPECIAL PROVISION:	
MATERIAL CODE:		MIX TYPE:	ITEM340_B_Fine_Base
MATERIAL NAME:	HMAC Type B		
PRODUCER:	Texas Materials Bolm Road		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:	Non-Surfa	STATION:		DIST. FROM CL:		CONTRACTOR DESIGN # :	1330B -64A

Aggregate Weight, g:	1,000.0
4.1% Asphalt by Total Weight, g:	42.8
Total Weight, g:	1042.8

4.1% Asphalt by Total Weight, g:	42.8
Less Asphalt by Weight of Recycled Material, g:	10.0
(Valero 64-22) Asphalt to Add, g:	**32.7**

			Bin No.1	Bin No.2	Bin No.3	Bin No.4	Bin No.5	Bin No.6	Bin No.7	Bin No.8	Bin No.9	Bin No.10			
		Individual Bin (%):	Bin No.1 = 26 %	Bin No.2 = 15 %	Bin No.3 = 12 %	Bin No.4 = 16 %	Bin No.5 = 11.1 %			Bin No.8 = 20 %					
		Aggregate Source:	Limestone_Dolom	Limestone_Dolom	Limestone_Dolom	Limestone_Dolom	Gravel			Fractionated RAP					
		Aggregate Number:	1402702	1402702	1402702	1402702									
		Sample ID:	B Rock	D Rock	F Rock	Man. Sand	C.A. Field Sand								
	Sieve Size:		Aggregate Weight	Aggregate Weight	Aggregate Weight	Aggregate Weight	Aggregate Weight			Fractionated RAP Weight			Total Weights	Individual Retained, %	Cumulative Retained, %
	Passing	Retained													
INDIVIDUAL	-	1"	0.0	0.0	0.0	0.0	0.0			0.0			0.0	0.0	0.0
	1"	7/8"	17.9	0.0	0.0	0.0	0.0			0.0			17.9	1.8	1.8
	7/8"	5/8"	69.4	0.0	0.0	0.0	0.0			0.0			69.4	6.9	8.6
	5/8"	3/8"	145.9	12.9	0.0	0.0	0.0			12.5			171.3	17.0	25.6
	3/8"	No. 4	20.3	100.7	37.0	0.2	0.7			54.1			212.9	21.1	46.7
	No. 4	No. 10	1.8	29.1	76.7	44.8	2.7			43.7			198.8	19.7	66.4
	No. 10	No. 40	1.6	2.6	2.9	65.6	26.5			34.9			134.0	13.3	79.6
	No. 40	No. 80	0.5	0.6	0.6	20.2	38.6			23.4			83.9	8.3	87.9
	No. 80	No. 200	0.5	0.8	0.5	21.4	27.9			25.5			76.6	7.6	95.5
	No. 200	Pan	2.1	3.5	2.4	7.8	14.7			14.8			45.3	4.5	100.0
	Totals		260.0	150.0	120.0	160.0	111.0			209.0			**1,010.0**	Total includes asphalt from the recycled material aggregate	
Running Total:															
CUMULATIVE	-	1"	0.0	260.0	410.0	530.0	690.0			801.0			0.0		
	1"	7/8"	17.9	260.0	410.0	530.0	690.0			801.0			17.9		
	7/8"	5/8"	87.4	260.0	410.0	530.0	690.0			801.0			87.4		
	5/8"	3/8"	233.2	272.9	410.0	530.0	690.0			813.5			258.7		
	3/8"	No. 4	253.5	373.6	447.0	530.2	690.7			867.7			471.5		
	No. 4	No. 10	255.3	402.7	523.6	575.0	693.3			911.4			670.3		
	No. 10	No. 40	256.9	405.2	526.5	640.6	719.9			946.3			804.3		
	No. 40	No. 80	257.4	405.8	527.1	660.7	758.5			969.7			888.2		
	No. 80	No. 200	257.9	406.6	527.6	682.2	786.3			995.2			964.8	Total includes asphalt from the recycled material aggregate	
	No. 200	Pan	260.0	410.0	530.0	690.0	801.0			1,010.0			1,010.0		

Remarks:

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES

SAMPLE ID:		SAMPLE DATE:	7/19/2013
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:	Travis	SPEC YEAR:	2004
SAMPLED BY:	William Champion #770	SPEC ITEM:	340
SAMPLE LOCATION:	Design	SPECIAL PROVISION:	
MATERIAL CODE:		MIX TYPE:	ITEM340_B_Fine_Base
MATERIAL NAME:	HMAC Type B		
PRODUCER:	Texas Materials Bolm Road		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:	Non-Surfa	STATION:		DIST. FROM CL:		CONTRACTOR DESIGN # :	1330B -64A

Blank Sample Weight, g:	

			Bin No.1	Bin No.2	Bin No.3	Bin No.4	Bin No.5	Bin No.6	Bin No.7			
Individual Bin (%):			Bin No.1 = 26 %	Bin No.2 = 15 %	Bin No.3 = 12 %	Bin No.4 = 16 %	Bin No.5 = 11.1 %					
Aggregate Source:			Limestone_Dolom	Limestone_Dolom	Limestone_Dolom	Limestone_Dolom	Gravel					
Aggregate Number:			1402702	1402702	1402702	1402702						
Sample ID:			B Rock	D Rock	F Rock	Man. Sand	C.A. Field Sand					
	Sieve Size:		Aggregate Weight	Aggregate Weight	Aggregate Weight	Aggregate Weight	Aggregate Weight			Total Weights	Individual Retained, %	Cumulative Retained, %
	Passing	Retained										
INDIVIDUAL	-	1"	0.0	0.0	0.0	0.0	0.0			0.0		
	1"	7/8"	0.0	0.0	0.0	0.0	0.0			0.0		
	7/8"	5/8"	0.0	0.0	0.0	0.0	0.0			0.0		
	5/8"	3/8"	0.0	0.0	0.0	0.0	0.0			0.0		
	3/8"	No. 4	0.0	0.0	0.0	0.0	0.0			0.0		
	No. 4	No. 10	0.0	0.0	0.0	0.0	0.0			0.0		
	No. 10	No. 40	0.0	0.0	0.0	0.0	0.0			0.0		
	No. 40	No. 80	0.0	0.0	0.0	0.0	0.0			0.0		
	No. 80	No. 200	0.0	0.0	0.0	0.0	0.0			0.0		
	No. 200	Pan	0.0	0.0	0.0	0.0	0.0			0.0		
	Totals		0.0	0.0	0.0	0.0	0.0			**0.0**	Total does not include recycled material	

Running Total:	

CUMULATIVE	-	1"	0.0	0.0	0.0	0.0	0.0			0.0		
	1"	7/8"	0.0	0.0	0.0	0.0	0.0			0.0		
	7/8"	5/8"	0.0	0.0	0.0	0.0	0.0			0.0		
	5/8"	3/8"	0.0	0.0	0.0	0.0	0.0			0.0		
	3/8"	No. 4	0.0	0.0	0.0	0.0	0.0			0.0		
	No. 4	No. 10	0.0	0.0	0.0	0.0	0.0			0.0		
	No. 10	No. 40	0.0	0.0	0.0	0.0	0.0			0.0		
	No. 40	No. 80	0.0	0.0	0.0	0.0	0.0			0.0		
	No. 80	No. 200	0.0	0.0	0.0	0.0	0.0			0.0		
	No. 200	Pan	0.0	0.0	0.0	0.0	0.0			0.0		

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : BULK GRAVITY

File Version: 06/07/10 10:24:04

SAMPLE ID:		SAMPLE DATE:	7/19/2013
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:	Travis	SPEC YEAR:	2004
SAMPLED BY:	William Champion #770	SPEC ITEM:	340
SAMPLE LOCATION:	Design	SPECIAL PROVISION:	
MATERIAL CODE:		MIX TYPE:	ITEM340_B_Fine_Base
MATERIAL NAME:	HMAC Type B		
PRODUCER:	Texas Materials Bolm Road		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:	Non-Surfa	STATION:		DIST. FROM CL:		CONTRACTOR DESIGN # :	1330B -64A

	Bin No.1	Bin No.2	Bin No.3	Bin No.4	Bin No.5	Bin No.6	Bin No.7	Bin No.8	Bin No.9	Bin No.10
Individual Bin (%):	Bin No.1 = 26 %	Bin No.2 = 15 %	Bin No.3 = 12 %	Bin No.4 = 16 %	Bin No.5 = 11.1 %			Bin No.8 = 20 %		
Aggregate Source:	Limestone_Dolom	Limestone_Dolom	Limestone_Dolom	Limestone_Dolom	Gravel			Fractionated RAP		
Aggregate Number:	1402702	1402702	1402702	1402702						
Sample ID:	B Rock	D Rock	F Rock	Man. Sand	C.A. Field Sand					

Sieve Size:		Individual		Individual		Individual		Individual		Individual		Individual		Individual		Individual		Individual		Individual		Individual	
Passing	Retained	Ret., %	Bulk SG	Ret., %	Bulk SG	Ret., %	Bulk SG	Ret., %	Bulk SG	Ret., %	Bulk SG	Ret., %	Bulk SG	Ret., %	Bulk SG	Ret., %	Bulk SG	Ret., %	Bulk SG	Ret., %	Bulk SG	Ret., %	Bulk SG
	1"																						
1"	7/8"	6.9	2.788																				
7/8"	5/8"	26.7	2.788														2.558						
5/8"	3/8"	56.1	2.788	8.6	2.788											6.0	2.558						
3/8"	No. 4	7.8	2.794	67.1	2.794	30.8	2.794	0.1	2.815	0.6	2.642					25.9	2.558						
No. 4	No. 10	0.7	2.794	19.4	2.798	63.9	2.798	28.0	2.815	2.4	2.642.					20.9	2.558						
No. 10	No. 40	0.6	2.794	1.7	2.798	2.4	2.798	41.0	2.815	23.9	2.642					16.7	2.558						
No. 40	No. 80	0.2	2.794	0.4	2.798	0.5	2.798	12.6	2.815	34.8	2.642					11.2	2.591						
No. 80	No. 200	0.2	2.794	0.5	2.798	0.4	2.798	13.4	2.815	25.1	2.678					12.2	2.591						
No. 200	Pan	0.8	2.794	2.3	2.798	2.0	2.798	4.9	2.815	13.2	2.678					7.1	2.591						
Totals		100.0	2.789	100.0	2.794	100.0	2.797	100.0	2.815	100.0	2.721					100.0	2.568						
			9.3		5.4		4.3		5.7		4.1						7.7						

Combined Bulk Specific Gravity:	**2.740**
Coarse Agg. Combined BSG:	

Specific Gravity of Asphalt:	**1.030**

Remarks:

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : SUMMARY SHEET

File Version: 06/07/10 10:24:04

SAMPLE ID:		SAMPLE DATE:	7/19/2013
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:	Travis	SPEC YEAR:	2004
SAMPLED BY:	William Champion #770	SPEC ITEM:	340
SAMPLE LOCATION:	Design	SPECIAL PROVISION:	
MATERIAL CODE:		MIX TYPE:	ITEM340_B_Fine_Base
MATERIAL NAME:	HMAC Type B		
PRODUCER:	Texas Materials Bolm Road		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:	Non-Surf	STATION:		DIST. FROM CL:		CONTRACTOR DESIGN # :	1330B -64A

Target Density, %:	**96.0**
Number of Gyrations:	

CRM* Content	

TEST SPECIMENS									**Mixture Evaluation @ Optimum Asphalt Content**			
										Hamburg Wheel Tracking Test		
Asphalt Content (%)	Binder Ratio (%)	Specific Gravity Of Specimen (Ga)	Maximum Specific Gravity (Gr)	Effective Gravity (Ge)	Theo. Max. Specific Gravity (Gt)	Density from Gt (Percent)	VMA (Percent)	Hveem Stability (%)	Indirect Tensile Strength (psi)	Number of cycles	Rut depth (mm)	*Overlay Tester Min. Number of Cycles*
3.0	32.0	2.444	2.614	2.745	2.620	93.3	13.9	75.0				
3.5	27.4	2.461	2.598	2.750	2.600	94.7	13.7	52.0				
4.0	24.0	2.472	2.581	2.754	2.579	95.8	13.8	44.0	164.2			
4.5	21.3	2.486	2.560	2.753	2.559	97.1	13.7	39.0				
5.0	19.2	2.494	2.545	2.759	2.540	98.2	13.9	28.0				

Effective Specific Gravity:	2.752

Estimated Percent of Stripping, %:	

Optimum Asphalt Content :	**4.1**	Binder Ratio @ OAC:	23.4
VMA @ Optimum AC:	**13.8**		

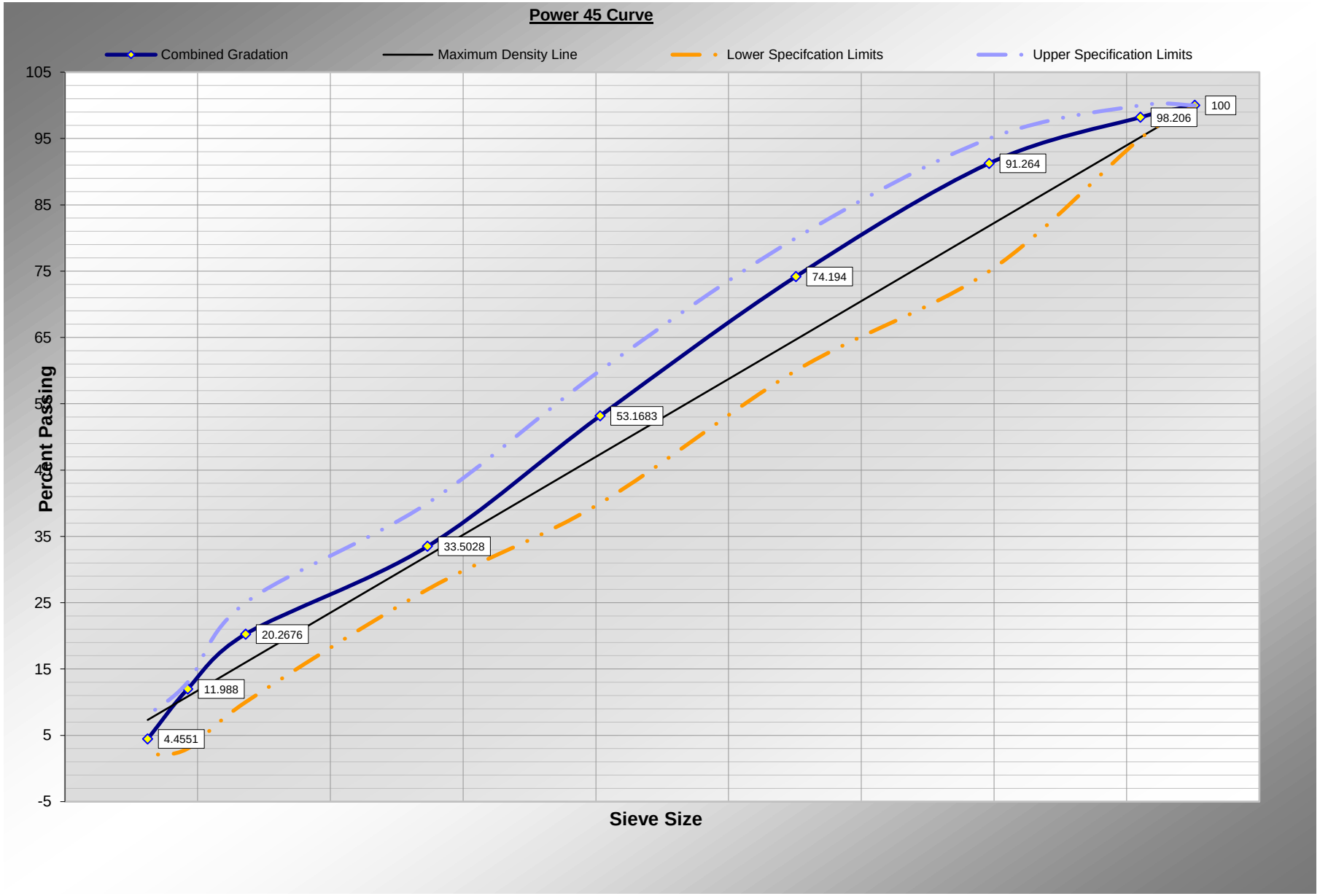
Interpolated Values	
Specific Gravity (Ga):	2.474
Max. Specific Gravity (Gr):	2.578
Theo. Max. Specific Gravity (Gt):	2.577

Remarks:

Date	Changes	By
7/20/2005	Add area in the Combined Gradation worksheet to enter in percent fiber for respective PFC and SMA mixtures in cells P42 to S42 Change field# for S42 (on the Combined Gradation worksheet) to Field383, and reference %Fiber value in the Summary sheet to cell S42 Add area in the Combined Gradation worksheet to enter in crumb rubber for respective PFC and SMA mixtures in cells T42 to W42 Change field# for W40 (on the Combined Gradation worksheet) to Field384, and reference % Crumb Rubber value in the Summary sheet to cell W40 Add conditional formatting for percent fiber and percent crumb rubber area so that only effected mixture types are represented on the combined gradation worksheet Add area to enter percent fiber and percent crumb rubber in the Summary worksheet (cell K18) Add field to calculate the weight of fiber or crumb rubber in the Weigh Up worksheet (cells S18 to V20) Add conditional formatting to the fiber and crumb rubber queries in the Weight Up worksheet so that only corresponding mixture types are represented Add sieves: 3/4", 1/2" & 3/8" to the SPA, SPB and SPC mixes, respectively, in the Std Spec GRADATIONS worksheet Set cell F38 in the summary sheet equal to IF(F31="Error","",VLOOKUP(0.075,DUST,16,FALSE)/F31). This will calculate the Dust to Asphalt ratio Add Gr to the densification section in the Summary worksheet Calculate densities in cells Z33 to Z35 on the Summary worksheet by using the Gr instead of the Gt Add "No" to the validation list for cell E42 on the Weigh Up worksheet Addition of "Version" to the Combined Gradation worksheet	Brett Haggerty
	Combined Gradation Worksheet	
	Add UTBWC Types A, B and C options to Mix Type T40 - Add Membrane Target Application Rate, Gal/SY	
	Summary Worksheet	
8/16/2005	Need Draindown and Cantabro Loss for UTBHMWC mix option Add AC%, Ga, Gr, Ge, Gt, Density from Gt, and Film Thickness columns to be used only for Film Thickness calculations in cells B29 to V35 Add only two inputs for AC% and Gr in cells B33 & F33, respectively. Add range of acceptable film thickness & AC% at those film thicknesses in cells B37 to AA37 (all calculated fields) Allow AC%, Ga, Gr, Ge, Gt, Density from Gt, and Film Thickness columns to be hidden when not analyzing UTBWC Increase width column for column B to 8.00	Brett Haggerty
	Film Thickness Worksheet	
	Need to create this worksheet to calculate film thickness at each asphalt content. Need to reference data in Summary worksheet Hide this sheet when UTBWC is not selected	
	Std Spec GRADATIONS	
9/21/2005	The Membrane Application Check is necessary for the conditional formatting on the Combined Gradation Worksheet cell T40. Because if a complex algorithm is entered for a second condition format the workbook becomes impossible to open and excel crashes. Specification tolerance for 1" sieve for Type A mix was incorrect. Corrected as specified in Item 341.	Richard Izzo
9/27/2005	Added min & max tolerances for the No. 4 sieve of SP mix types	Richard Izzo
2/14/2006	Changed the location of Fields 521 to 557 & Fields 572 to 587 to M25, these field definitions were orignally found in different locations for different worksheets. Now all of the definitions are identical and reference a dummy cell to prevent the overwrite of other data within the template.	Brett Haggerty
2/15/2006	Added Mixtypes 340-A, 340-B, 340-C, 340-D, & 340-F to the mixtype list, as well as the cell definition to direct mix specifcations. This includes the addition of five new definitions, one for each of the new mixtypes. The addition of the mixtype names to the mixtype definition is also adjusted to include the mixtypes. No other changes were necessary for these mixtypes as they will reference the same limits as the 341 mixtypes.	Brett Haggerty
3/13/2006	Add definitions Field596 to Field636, these are the definitions for the "Other" mixtype that should be stored in Sitemanager databases when accessing previous data.	Brett Haggerty
3/14/2006	Revised minimum specification for percent passing for No. 4 sieve for SP-A, B, C, and D mix types.	Richard Izzo
5/17/2007	Add the new mixtype SS3111 for Crack Attenuating Mixtures	Brett Haggerty
	Matl Properties	
9/27/2005	B31, F31, H31 - Replaced Flakiness Index with Flat & Elongated. Flakiness Index not required in 2004 specifications.	
	Sumary	
9/27/2005	Changed conditional formatting of cells B44 to F47. Font color changed to black. Added VFA calculation at optimum asphalt content in cells B43 & F43. Cells formatted to only show for Item 344. Color of cell B44 changed to distinguish cells above and below when using Item 344 as all cells will have text and may look confusing.	Richard Izzo
5/11/2006	Add the Dimensional Analysis for PFC mixtures (these calculations are new, and not adjustments to the old equations) Add the Backcalculated Rice for PFC mixtures (these calculations are new to the sheet and not adjustments to the old equations) Remove the Interpolated Values for UTBWC mixtypes and Mixture Densification	Brett Haggerty
	Combined Gradation Worksheet	
5/30/2006	Add the Contractor's Design Number to cell V17, as well as the addition of the new field #	Brett Haggerty
5/17/2007	Update the UPLC to 690 Add the Aggregate Pit to the bin information (these cells account for Fields 683-689)	Brett Haggerty

Date	Changes	By	
	Summary Worksheet		
	Include comments for the backcalculated specific gravities when using PFC. This will provide users with a better idea of how to read the specifications		
	Include the new output results, which there are 117 values. This is the resval & resname values. The 117 values are expressed by the ULOV cell		
8/22/2006	Added Field#'s 638-681	Brett Haggerty	
	Change the VFA Conditional Formatting to display when SS3111 mixtype is selected		
	Add new comment to cell H65 to display correct VFA limits if they are not met		
	Change Dust/Asphalt Ratio conditional formatting to display when SS3111 mixtype is selected		
5/17/2007	Add a new entry for the minimum number of cycles using the Overlay Tester. Cell AF24 (Field690)	Brett Haggerty	
	Std Spec GRADATIONS		
	Remove the 3/8" sieve from the Item341-A, Item340-A & Type-A mixtypes		
	Add the number of sieves that contribute to coarse aggreagte to the following mixtypes: SP-A, SP-B, SP-C, SP-D, CMHB-C, CMHB-F, SMA-C, SMA D, SMA-F, SMAR-C, SMAR-F		
	Combined Gradation Worksheet		
	Add the Dry Rodded Unit Weight cell, "S22". Also because this is an input field, change the ULOV to 682		
	Add a new version number "3" for the calculation of VCA, as opposed to when it was manually entered		
	Bulk Gravity		
	Include the Combined Bulk Specific Gravity for Coarse Aggregate calculation in cell "M40"		
	Summary Worksheet		
10/30/2006	Add the new calculated fields for VCA, "M67" & "M68". And adjust the conditional formatting to account for new version numbers.	Brett Haggerty	
	Weigh Up		
12/2/2006	Adjust Cell L39 to reference only column L in the Combined Gradation Worksheet	Brett Haggerty	
	Power 45 Curve		
5/17/2007	Adjust the macro to place brackets, "{", before and after the graphed data is updated	Brett Haggerty	Allows for compatibility with Excel 2007
	Matl Properties		
	Update cell K28 to remove the overlapping of conditional formatting ranges.		Allows for compatibility with Excel 2007 without significant loss of functionality
5/17/2007	Delete the cell definition "Draindown". This references a cell in a different workbook and causes fidelity errors with Excel 2007.	Brett Haggerty	
	Bulk Gravity		
	Adjusted cells: F39, G39, J39, K39, N39, O39, R39, S39, V39, W39, Z39, AA39, AD39, AE39. This accounts for moved cells		
	Summary Worksheet		
	Update cell F68 to access Target Density cell instead of using an assumed density value of 96%		
	Update cell M72 for the moving of cells & removal of resval definitions		
	Weigh Up		
	Adjust cell O20 to include +/- asphalt from RAP binder		
	Combined Gradation Worksheet		
3/13/2008	Add new version #4 to account for changes	Brett Haggerty	
	Matl Properties		
	Add Methylene Blue to the Fine Aggregate Analysis (Row 36)		
	Add Cell Definitions for the Methylene Blue tests: Field691-Field705		
	Std Spec GRADATIONS		
	Add mixtypes ITEM3142_UTBWC_A, ITEM3142_UTBWC_B, ITEM3142_UTBWC_C		
	Summary Worksheet		
	Hide the "Target Density" cells when any of the Item3142 mixtypes are selected		
	Hide Mixture Evaluation cells (W22:AG30) with the selection of the Item3142 mixtypes		
	Add Final Specimen cells for Item3142 mixtypes in cells B64:M66		
	Add Cell Definitions for final specimen cells AC, Ga & Gr; declared Field706, Field707, & Field708, respectively		
	Declare new row definition (trip_4) for showing/hiding final specimen cells for the Item3142 mixtype		
	Add the Suggested Membrane Target Application Rate cells B68:G68		
	Combined Gradation Worksheet		
	Update the UPLC to 709		
	Update the Film Thickness worksheet show option (located in the Combined Gradation worksheet macros) to include Item3142 mixtypes		
	Film Thickness Worksheet		
	Add Ga and Density from Gt cells for the Item3142 mixtypes, cells: D33:E39 & L33:M39		
	Add conditional formatting for the minimum and maximum film thickness calculations. They now hide with the selection of Item3142 mixtypes. Cells B41:M44.		
	Add AC vs. Film Thickness & AC vs. Density Charts		
	Add cell definition Field709 to cell G63 (predicted AC%)		
4/3/2008	Add the prediction film thickness & prediction density cells, I62:L63	Brett Haggerty	
	Summary Worksheet		
5/14/2008	Modified the Overlay Tester results to be hidden if the CAM mixtype is not selected.	Brett Haggerty	
	Std Spec GRADATIONS		
	Add the mixtype for "CAM", it is exactly the same as SS3111CA_Mix		
	Add the mixtype for "TBPFC", it is exactly the same as PFC		
	Summary Worksheet		

Date	Changes	By
	Modify the conditional formatting for the overlay tester results to display if the "CAM" mixtype is selected.	
6/5/2008	Modify the conditional formatting for all cells that use the PFC mixtype to include the same formats for TBPFC	Brett Haggerty
	Blank Weigh Up Worksheet	
2/27/2009	Need to create this new worksheet to prepare "blank" samples for the ignition oven correction factors.	Gisel Carrasco
	Combined Gradation Worksheet	
	Fixing equation in Cell O20 FROM: IF(OR(Authorized Date:>39493,AuthorizedDate=""), 4,IF(OR(AuthorizedDate>39022,AuthorizedDate=""), 3,IF(OR(AuthorizedDate>38579,AuthorizedDate=""),2,1))) TO: IF(OR(AuthorizedDate>40333,AuthorizedDate=""),5, IF(OR(AuthorizedDate>39493, AuthorizedDate=""),4, IF(OR(AuthorizedDate>39022,AuthorizedDate=""),3, IF(OR(AuthorizedDate>38579,AuthorizedDate=""),2,1)))) **Using Version #5 after 6/7/2010**	
	Add Item 341-024 to the Special Provision list (specprov). SP 341-024 can be used only when version>4	
	Add WMA technology information. It is required to enter the WMA information (V15), in order to enter aggregate bin percentages.	
	Change mix description cell (E18) to dropdown list	
	Change Aggregate Source, Pit, and Number (E22:Q24) to dropdown lists	
	Hide the Recycled Material row with versions > 4 and show Hydrated Lime row	
	Modify master gradation band limits for the #4 sieve for Type F mixture from 80-86 to 70-90. New limits are used with versions >4 or SP 341-024.	
	Add Bins 8, 9 & 10 for Recycled Materials only. Enter percentage by total mix to calculate percentage by total aggregate.	
	Calculate Recycled Binder for each bin and show Total Recycled Binder Percentage (AB18). Calculate Ratio of Recycled to Total Binder (AA24)	
	Add binder substitution information. Enter originally specified binder (Q43) and substitute binder (V43) when substitute binder is allowed.	
	Matl Properties	
	Add Deleterious Material test for the Recycled Material (row 46)	
	Aggregate Classification	
	Add Recycled Materials Bins (8, 9 &10). Don't classify Recycled Materials as Class A Rock.	
	Weigh Up & Bulk Gravity	
	Add Recycled Materials Bins (8, 9 &10).	
	Take CRM calculation out (Cell T19)	
	Summary Worksheet	
	Add Recycled Binder ratio for each asphalt content (C26:C30). Add ratio at OAC (I71).	
	Std Spec GRADATIONS	
	Add specprov table (J24), Recylced Material table (recycledlist), WMA table with approved technologies according to 2009 list (WMATech), aggregate table with approved aggragates and quarries according to Dec2009 list, & binder substitution table.	
4/12/2010	Move "Junk's Field #'s" to cell P24	Gisel Carrasco


Power 45 Curve
Combined Gradation
Maximum Density Line
Lower Specifcation Limits
Upper Specification Limits
105
95
85
75
65
55
45
35
25
15
5
-5
Percent Passing
Sieve Size
4.4551
11.988
20.2676
33.5028
53.1683
74.194
91.264
98.206
100

If you have any questions or comments concerning this program, or would like to obtain an updated version of this program (if it has been updated) contact the **Site Manager Tier I contact person for the District (District Lab)**. If you have any other concerns or questions contact Richard Izzo at 512-506-5832 or **Brett Haggerty at 512-506-5841** of the Construction Division or you may contact one of the

* **Getting Started**: Begin with the Combined Gradations or Summary sheet. Here you will select dependent variables such as specification year, mix type, asphalt content, combined aggregate, and others. These variable will affect the calculation of other sheets in the workbook.

    - **Spec Year**: Must be 2004

    - **Mix Type**: Select the correct mix type for this lot. Clicking in the green cell, adjacent to the mix type label, will reveal a small dropdown list. From this list select the mix type that most closely matches your mix. This value will determine what sieve sizes are displayed on the worksheets.
      Select Other if mix is not in the list and input parameters as required.
      A button labeled 'Enter Specifications' will appear above the Bin Fractions Table. Click on this button and a small table will appear on the screen labeled 'Other'. Enter the required sieve sizes, maximum and minimum master grading limits, and the required minimum VMA.

* To move from page to page click on the different sheet tabs at the bottom of the page.

1613										
Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
1		Remarks:								
2	Non-Surf	COURSE\LIFT:								
3		Tested By	TX207							
4		Tested Date	TX207							
5		Tested By	TX226							
6		Tested Date	TX226							
7		Tested By	TX227							
8		Tested Date	TX227							
9		Tested By	TX235							
10		Tested Date	TX235							
11		Tested By	TX242							
12		Tested Date	TX242							
13		Tested By	TX530							
14		Tested Date	TX530							
15		Tested By								
16		Tested Date								
17		Tested By								
18		Tested Date								
19	1330B -6	CONTRACTOR DESIGN # :								
20	Limeston	HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Source:	Bin No.1						
21	Limeston	HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Source:	Bin No.2						
22	Limeston	HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Source:	Bin No.3						
23	Limeston	HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Source:	Bin No.4						
24	Gravel	HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Source:	Bin No.5						
25		HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Source:	Bin No.6						
26		HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Source:	Bin No.7						
27	Marble F	HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Pit:	Bin No.1						
28	Marble F	HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Pit:	Bin No.2						
29	Marble F	HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Pit:	Bin No.3						
30	Marble F	HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Pit:	Bin No.4						
31		HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Pit:	Bin No.5						
32		HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Pit:	Bin No.6						
33		HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Pit:	Bin No.7						
34	1402702	HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Number:	Bin No.1						
35	1402702	HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Number:	Bin No.2						
36	1402702	HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Number:	Bin No.3						
37	1402702	HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Number:	Bin No.4						
38		HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Number:	Bin No.5						
39		HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Number:	Bin No.6						
40		HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Number:	Bin No.7						
41	B Rock	HMACP MIXTURE DESIGN : COMBINED GRADATION	Sample ID:	Bin No.1						
42	D Rock	HMACP MIXTURE DESIGN : COMBINED GRADATION	Sample ID:	Bin No.2						
43	F Rock	HMACP MIXTURE DESIGN : COMBINED GRADATION	Sample ID:	Bin No.3						
44	Man. San	HMACP MIXTURE DESIGN : COMBINED GRADATION	Sample ID:	Bin No.4						
45	C.A. Fiel	HMACP MIXTURE DESIGN : COMBINED GRADATION	Sample ID:	Bin No.5						
46		HMACP MIXTURE DESIGN : COMBINED GRADATION	Sample ID:	Bin No.6						
47		HMACP MIXTURE DESIGN : COMBINED GRADATION	Sample ID:	Bin No.7						
48		HMACP MIXTURE DESIGN : COMBINED GRADATION	Recycled Material?:	Bin No.1						
49		HMACP MIXTURE DESIGN : COMBINED GRADATION	Recycled Material?:	Bin No.2						
50		HMACP MIXTURE DESIGN : COMBINED GRADATION	Recycled Material?:	Bin No.3						
51		HMACP MIXTURE DESIGN : COMBINED GRADATION	Recycled Material?:	Bin No.4						
52		HMACP MIXTURE DESIGN : COMBINED GRADATION	Recycled Material?:	Bin No.5						
53		HMACP MIXTURE DESIGN : COMBINED GRADATION	Recycled Material?:	Bin No.6						
54		HMACP MIXTURE DESIGN : COMBINED GRADATION	Recycled Material?:	Bin No.7						
55		HMACP MIXTURE DESIGN : COMBINED GRADATION	Asphalt%:	Bin No.1						
56		HMACP MIXTURE DESIGN : COMBINED GRADATION	Asphalt%:	Bin No.2						
57		HMACP MIXTURE DESIGN : COMBINED GRADATION	Asphalt%:	Bin No.3						
58		HMACP MIXTURE DESIGN : COMBINED GRADATION	Asphalt%:	Bin No.4						
59		HMACP MIXTURE DESIGN : COMBINED GRADATION	Asphalt%:	Bin No.5						
60		HMACP MIXTURE DESIGN : COMBINED GRADATION	Asphalt%:	Bin No.6						
61		HMACP MIXTURE DESIGN : COMBINED GRADATION	Asphalt%:	Bin No.7						

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
62	26	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual Bin (%):	Bin No.1						
63	15	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual Bin (%):	Bin No.2						
64	12	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual Bin (%):	Bin No.3						
65	16	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual Bin (%):	Bin No.4						
66	11.1	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual Bin (%):	Bin No.5						
67		HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual Bin (%):	Bin No.6						
68		HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual Bin (%):	Bin No.7						
69		HMACP MIXTURE DESIGN : COMBINED GRADATION	Dry Rodded Unit Weight of Coarse Agg. (pcf)							
70	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Cum.% Passing	Sieve Size:	1"				
71	26	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Wtd Cum. %	Sieve Size:	1"				
72	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Cum.% Passing	Sieve Size:	1"				
73	15	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Wtd Cum. %	Sieve Size:	1"				
74	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Cum.% Passing	Sieve Size:	1"				
75	12	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Wtd Cum. %	Sieve Size:	1"				
76	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Cum.% Passing	Sieve Size:	1"				
77	16	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Wtd Cum. %	Sieve Size:	1"				
78	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Cum.% Passing	Sieve Size:	1"				
79	11.1	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Wtd Cum. %	Sieve Size:	1"				
80		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Cum.% Passing	Sieve Size:	1"				
81		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Wtd Cum. %	Sieve Size:	1"				
82		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Cum.% Passing	Sieve Size:	1"				
83		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Wtd Cum. %	Sieve Size:	1"				
84	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Combined Gradation	Cum. % Passing	Sieve Size:	1"				
85	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Lower	Sieve Size:	1"				
86	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Upper	Sieve Size:	1"				
87	Yes	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Within Spec's	Sieve Size:	1"				
88		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Lower	Sieve Size:	1"				
89		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Upper	Sieve Size:	1"				
90		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Within Spec's	Sieve Size:	1"				
91	0	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual % Retained	Sieve Size:	1"					
92	0	HMACP MIXTURE DESIGN : COMBINED GRADATION	Cumulative % Retained	Sieve Size:	1"					
93	93.1	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Cum.% Passing	Sieve Size:	7/8"				
94	24.206	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Wtd Cum. %	Sieve Size:	7/8"				
95	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Cum.% Passing	Sieve Size:	7/8"				
96	15	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Wtd Cum. %	Sieve Size:	7/8"				
97	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Cum.% Passing	Sieve Size:	7/8"				
98	12	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Wtd Cum. %	Sieve Size:	7/8"				
99	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Cum.% Passing	Sieve Size:	7/8"				
100	16	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Wtd Cum. %	Sieve Size:	7/8"				
101	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Cum.% Passing	Sieve Size:	7/8"				
102	11.1	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Wtd Cum. %	Sieve Size:	7/8"				
103		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Cum.% Passing	Sieve Size:	7/8"				
104		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Wtd Cum. %	Sieve Size:	7/8"				
105		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Cum.% Passing	Sieve Size:	7/8"				
106		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Wtd Cum. %	Sieve Size:	7/8"				
107	98.206	HMACP MIXTURE DESIGN : COMBINED GRADATION	Combined Gradation	Cum. % Passing	Sieve Size:	7/8"				
108	95	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Lower	Sieve Size:	7/8"				
109	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Upper	Sieve Size:	7/8"				
110	Yes	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Within Spec's	Sieve Size:	7/8"				
111		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Lower	Sieve Size:	7/8"				
112		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Upper	Sieve Size:	7/8"				
113		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Within Spec's	Sieve Size:	7/8"				
114	1.794	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual % Retained	Sieve Size:	7/8"					
115	1.794	HMACP MIXTURE DESIGN : COMBINED GRADATION	Cumulative % Retained	Sieve Size:	7/8"					
116	66.4	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Cum.% Passing	Sieve Size:	5/8"				
117	17.264	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Wtd Cum. %	Sieve Size:	5/8"				
118	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Cum.% Passing	Sieve Size:	5/8"				
119	15	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Wtd Cum. %	Sieve Size:	5/8"				
120	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Cum.% Passing	Sieve Size:	5/8"				
121	12	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Wtd Cum. %	Sieve Size:	5/8"				
122	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Cum.% Passing	Sieve Size:	5/8"				
123	16	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Wtd Cum. %	Sieve Size:	5/8"				

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
124	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Cum.% Passing	Sieve Size:	5/8"				
125	11.1	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Wtd Cum. %	Sieve Size:	5/8"				
126		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Cum.% Passing	Sieve Size:	5/8"				
127		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Wtd Cum. %	Sieve Size:	5/8"				
128		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Cum.% Passing	Sieve Size:	5/8"				
129		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Wtd Cum. %	Sieve Size:	5/8"				
130	91.264	HMACP MIXTURE DESIGN : COMBINED GRADATION	Combined Gradation	Cum. % Passing	Sieve Size:	5/8"				
131	75	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Lower	Sieve Size:	5/8"				
132	95	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Upper	Sieve Size:	5/8"				
133	Yes	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Within Spec's	Sieve Size:	5/8"				
134		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Lower	Sieve Size:	5/8"				
135		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Upper	Sieve Size:	5/8"				
136		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Within Spec's	Sieve Size:	5/8"				
137	6.942	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual % Retained	Sieve Size:	5/8"					
138	8.736	HMACP MIXTURE DESIGN : COMBINED GRADATION	Cumulative % Retained	Sieve Size:	5/8"					
139	10.3	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Cum.% Passing	Sieve Size:	3/8"				
140	2.678	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Wtd Cum. %	Sieve Size:	3/8"				
141	91.4	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Cum.% Passing	Sieve Size:	3/8"				
142	13.71	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Wtd Cum. %	Sieve Size:	3/8"				
143	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Cum.% Passing	Sieve Size:	3/8"				
144	12	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Wtd Cum. %	Sieve Size:	3/8"				
145	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Cum.% Passing	Sieve Size:	3/8"				
146	16	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Wtd Cum. %	Sieve Size:	3/8"				
147	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Cum.% Passing	Sieve Size:	3/8"				
148	11.1	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Wtd Cum. %	Sieve Size:	3/8"				
149		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Cum.% Passing	Sieve Size:	3/8"				
150		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Wtd Cum. %	Sieve Size:	3/8"				
151		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Cum.% Passing	Sieve Size:	3/8"				
152		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Wtd Cum. %	Sieve Size:	3/8"				
153	74.194	HMACP MIXTURE DESIGN : COMBINED GRADATION	Combined Gradation	Cum. % Passing	Sieve Size:	3/8"				
154	60	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Lower	Sieve Size:	3/8"				
155	80	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Upper	Sieve Size:	3/8"				
156	Yes	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Within Spec's	Sieve Size:	3/8"				
157		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Lower	Sieve Size:	3/8"				
158		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Upper	Sieve Size:	3/8"				
159		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Within Spec's	Sieve Size:	3/8"				
160	17.07	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual % Retained	Sieve Size:	3/8"					
161	25.806	HMACP MIXTURE DESIGN : COMBINED GRADATION	Cumulative % Retained	Sieve Size:	3/8"					
162	2.5	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Cum.% Passing	Sieve Size:	No. 4				
163	0.65	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Wtd Cum. %	Sieve Size:	No. 4				
164	24.3	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Cum.% Passing	Sieve Size:	No. 4				
165	3.645	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Wtd Cum. %	Sieve Size:	No. 4				
166	69.2	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Cum.% Passing	Sieve Size:	No. 4				
167	8.304	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Wtd Cum. %	Sieve Size:	No. 4				
168	99.9	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Cum.% Passing	Sieve Size:	No. 4				
169	15.984	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Wtd Cum. %	Sieve Size:	No. 4				
170	99.4	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Cum.% Passing	Sieve Size:	No. 4				
171	11.0334	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Wtd Cum. %	Sieve Size:	No. 4				
172		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Cum.% Passing	Sieve Size:	No. 4				
173		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Wtd Cum. %	Sieve Size:	No. 4				
174		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Cum.% Passing	Sieve Size:	No. 4				
175		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Wtd Cum. %	Sieve Size:	No. 4				
176	53.1683	HMACP MIXTURE DESIGN : COMBINED GRADATION	Combined Gradation	Cum. % Passing	Sieve Size:	No. 4				
177	40	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Lower	Sieve Size:	No. 4				
178	60	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Upper	Sieve Size:	No. 4				
179	Yes	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Within Spec's	Sieve Size:	No. 4				
180		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Lower	Sieve Size:	No. 4				
181		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Upper	Sieve Size:	No. 4				
182		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Within Spec's	Sieve Size:	No. 4				
183	21.0257	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual % Retained	Sieve Size:	No. 4					
184	46.8317	HMACP MIXTURE DESIGN : COMBINED GRADATION	Cumulative % Retained	Sieve Size:	No. 4					
185	1.8	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Cum.% Passing	Sieve Size:	No. 10				

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
186	0.468	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Wtd Cum. %	Sieve Size:	No. 10				
187	4.9	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Cum.% Passing	Sieve Size:	No. 10				
188	0.735	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Wtd Cum. %	Sieve Size:	No. 10				
189	5.3	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Cum.% Passing	Sieve Size:	No. 10				
190	0.636	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Wtd Cum. %	Sieve Size:	No. 10				
191	71.9	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Cum.% Passing	Sieve Size:	No. 10				
192	11.504	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Wtd Cum. %	Sieve Size:	No. 10				
193	97	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Cum.% Passing	Sieve Size:	No. 10				
194	10.767	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Wtd Cum. %	Sieve Size:	No. 10				
195		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Cum.% Passing	Sieve Size:	No. 10				
196		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Wtd Cum. %	Sieve Size:	No. 10				
197		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Cum.% Passing	Sieve Size:	No. 10				
198		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Wtd Cum. %	Sieve Size:	No. 10				
199	33.5028	HMACP MIXTURE DESIGN : COMBINED GRADATION	Combined Gradation	Cum. % Passing	Sieve Size:	No. 10				
200	27	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Lower	Sieve Size:	No. 10				
201	40	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Upper	Sieve Size:	No. 10				
202	Yes	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Within Spec's	Sieve Size:	No. 10				
203		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Lower	Sieve Size:	No. 10				
204		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Upper	Sieve Size:	No. 10				
205		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Within Spec's	Sieve Size:	No. 10				
206	19.6655	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual % Retained	Sieve Size:	No. 10					
207	66.4972	HMACP MIXTURE DESIGN : COMBINED GRADATION	Cumulative % Retained	Sieve Size:	No. 10					
208	1.2	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Cum.% Passing	Sieve Size:	No. 40				
209	0.312	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Wtd Cum. %	Sieve Size:	No. 40				
210	3.2	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Cum.% Passing	Sieve Size:	No. 40				
211	0.48	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Wtd Cum. %	Sieve Size:	No. 40				
212	2.9	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Cum.% Passing	Sieve Size:	No. 40				
213	0.348	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Wtd Cum. %	Sieve Size:	No. 40				
214	30.9	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Cum.% Passing	Sieve Size:	No. 40				
215	4.944	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Wtd Cum. %	Sieve Size:	No. 40				
216	73.1	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Cum.% Passing	Sieve Size:	No. 40				
217	8.1141	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Wtd Cum. %	Sieve Size:	No. 40				
218		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Cum.% Passing	Sieve Size:	No. 40				
219		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Wtd Cum. %	Sieve Size:	No. 40				
220		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Cum.% Passing	Sieve Size:	No. 40				
221		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Wtd Cum. %	Sieve Size:	No. 40				
222	20.2676	HMACP MIXTURE DESIGN : COMBINED GRADATION	Combined Gradation	Cum. % Passing	Sieve Size:	No. 40				
223	10	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Lower	Sieve Size:	No. 40				
224	25	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Upper	Sieve Size:	No. 40				
225	Yes	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Within Spec's	Sieve Size:	No. 40				
226		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Lower	Sieve Size:	No. 40				
227		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Upper	Sieve Size:	No. 40				
228		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Within Spec's	Sieve Size:	No. 40				
229	13.2352	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual % Retained	Sieve Size:	No. 40					
230	79.7324	HMACP MIXTURE DESIGN : COMBINED GRADATION	Cumulative % Retained	Sieve Size:	No. 40					
231	1	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Cum.% Passing	Sieve Size:	No. 80				
232	0.26	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Wtd Cum. %	Sieve Size:	No. 80				
233	2.8	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Cum.% Passing	Sieve Size:	No. 80				
234	0.42	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Wtd Cum. %	Sieve Size:	No. 80				
235	2.4	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Cum.% Passing	Sieve Size:	No. 80				
236	0.288	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Wtd Cum. %	Sieve Size:	No. 80				
237	18.3	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Cum.% Passing	Sieve Size:	No. 80				
238	2.928	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Wtd Cum. %	Sieve Size:	No. 80				
239	38.3	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Cum.% Passing	Sieve Size:	No. 80				
240	4.2513	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Wtd Cum. %	Sieve Size:	No. 80				
241		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Cum.% Passing	Sieve Size:	No. 80				
242		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Wtd Cum. %	Sieve Size:	No. 80				
243		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Cum.% Passing	Sieve Size:	No. 80				
244		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Wtd Cum. %	Sieve Size:	No. 80				
245	11.988	HMACP MIXTURE DESIGN : COMBINED GRADATION	Combined Gradation	Cum. % Passing	Sieve Size:	No. 80				
246	3	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Lower	Sieve Size:	No. 80				
247	13	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Upper	Sieve Size:	No. 80				

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
248	Yes	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Within Spec's	Sieve Size:	No. 80				
249		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Lower	Sieve Size:	No. 80				
250		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Upper	Sieve Size:	No. 80				
251		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Within Spec's	Sieve Size:	No. 80				
252	8.2796	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual % Retained	Sieve Size:	No. 80					
253	88.012	HMACP MIXTURE DESIGN : COMBINED GRADATION	Cumulative % Retained	Sieve Size:	No. 80					
254	0.8	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Cum.% Passing	Sieve Size:	No. 200				
255	0.208	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Wtd Cum. %	Sieve Size:	No. 200				
256	2.3	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Cum.% Passing	Sieve Size:	No. 200				
257	0.345	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Wtd Cum. %	Sieve Size:	No. 200				
258	2	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Cum.% Passing	Sieve Size:	No. 200				
259	0.24	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Wtd Cum. %	Sieve Size:	No. 200				
260	4.9	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Cum.% Passing	Sieve Size:	No. 200				
261	0.784	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Wtd Cum. %	Sieve Size:	No. 200				
262	13.2	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Cum.% Passing	Sieve Size:	No. 200				
263	1.4652	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Wtd Cum. %	Sieve Size:	No. 200				
264		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Cum.% Passing	Sieve Size:	No. 200				
265		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Wtd Cum. %	Sieve Size:	No. 200				
266		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Cum.% Passing	Sieve Size:	No. 200				
267		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Wtd Cum. %	Sieve Size:	No. 200				
268	4.4551	HMACP MIXTURE DESIGN : COMBINED GRADATION	Combined Gradation	Cum. % Passing	Sieve Size:	No. 200				
269	2	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Lower	Sieve Size:	No. 200				
270	8	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Upper	Sieve Size:	No. 200				
271	Yes	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Within Spec's	Sieve Size:	No. 200				
272		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Lower	Sieve Size:	No. 200				
273		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Upper	Sieve Size:	No. 200				
274		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Within Spec's	Sieve Size:	No. 200				
275	7.5329	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual % Retained	Sieve Size:	No. 200					
276	95.5449	HMACP MIXTURE DESIGN : COMBINED GRADATION	Cumulative % Retained	Sieve Size:	No. 200					
277		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Cum.% Passing	Sieve Size:					
278		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Wtd Cum. %	Sieve Size:					
279		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Cum.% Passing	Sieve Size:					
280		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Wtd Cum. %	Sieve Size:					
281		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Cum.% Passing	Sieve Size:					
282		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Wtd Cum. %	Sieve Size:					
283		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Cum.% Passing	Sieve Size:					
284		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Wtd Cum. %	Sieve Size:					
285		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Cum.% Passing	Sieve Size:					
286		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Wtd Cum. %	Sieve Size:					
287		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Cum.% Passing	Sieve Size:					
288		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Wtd Cum. %	Sieve Size:					
289		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Cum.% Passing	Sieve Size:					
290		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Wtd Cum. %	Sieve Size:					
291		HMACP MIXTURE DESIGN : COMBINED GRADATION	Combined Gradation	Cum. % Passing	Sieve Size:					
292		HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Lower	Sieve Size:					
293		HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Upper	Sieve Size:					
294		HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Within Spec's	Sieve Size:					
295		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Lower	Sieve Size:					
296		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Upper	Sieve Size:					
297		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Within Spec's	Sieve Size:					
298		HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual % Retained	Sieve Size:						
299		HMACP MIXTURE DESIGN : COMBINED GRADATION	Cumulative % Retained	Sieve Size:						
300	Valero 64	HMACP MIXTURE DESIGN : COMBINED GRADATION	Asphalt Source & Grade:							
301	4.1	HMACP MIXTURE DESIGN : COMBINED GRADATION	Binder Percent, (%):							
302	1.03	HMACP MIXTURE DESIGN : COMBINED GRADATION	Asphalt Spec. Grav.:							
303		HMACP MIXTURE DESIGN : COMBINED GRADATION	Membrane Target Application Rate, gal/yd2							
304		HMACP MIXTURE DESIGN : COMBINED GRADATION	Antistripping Agent:							
305		HMACP MIXTURE DESIGN : COMBINED GRADATION	Percent, (%):							
306		HMACP MIXTURE DESIGN : COMBINED GRADATION								
307		HMACP MIXTURE DESIGN : COMBINED GRADATION								
308	1.5	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Max.	Spec. Limit				
309	1.5	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Max.	Spec. Limit				

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
310	B	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Min.	Spec. Limit				
311	30	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Max.	Spec. Limit				
312	40	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Max.	Spec. Limit				
313	n/a	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Min.	Spec. Limit				
314	10	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Max.	Spec. Limit				
315	3	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Max.	Spec. Limit				
316	45	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Min.	Spec. Limit				
317	0.7	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.1	Result				
318		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.1	Sample ID				
319	1	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.2	Result				
320		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.2	Sample ID				
321	0.9	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.3	Result				
322		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.3	Sample ID				
323		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.4	Result				
324		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.4	Sample ID				
325		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.5	Result				
326		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.5	Sample ID				
327		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.6	Result				
328		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.6	Sample ID				
329		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.7	Result				
330		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.7	Sample ID				
331	0	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.1	Result				
332		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.1	Sample ID				
333	0	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.2	Result				
334		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.2	Sample ID				
335	0	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.3	Result				
336		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.3	Sample ID				
337		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.4	Result				
338		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.4	Sample ID				
339		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.5	Result				
340		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.5	Sample ID				
341		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.6	Result				
342		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.6	Sample ID				
343		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.7	Result				
344		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.7	Sample ID				
345	B	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.1	Result				
346		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.1	Sample ID				
347	B	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.2	Result				
348		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.2	Sample ID				
349	B	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.3	Result				
350		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.3	Sample ID				
351	B	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.4	Result				
352		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.4	Sample ID				
353		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.5	Result				
354		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.5	Sample ID				
355		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.6	Result				
356		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.6	Sample ID				
357		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.7	Result				
358		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.7	Sample ID				
359	7	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.1	Result				
360		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.1	Sample ID				
361	7	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.2	Result				
362		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.2	Sample ID				
363	7	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.3	Result				
364		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.3	Sample ID				
365	7	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.4	Result				
366		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.4	Sample ID				
367		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.5	Result				
368		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.5	Sample ID				
369		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.6	Result				
370		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.6	Sample ID				
371		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.7	Result				

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
372		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.7	Sample ID				
373	30	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.1	Result				
374		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.1	Sample ID				
375	30	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.2	Result				
376		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.2	Sample ID				
377	30	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.3	Result				
378		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.3	Sample ID				
379	30	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.4	Result				
380		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.4	Sample ID				
381		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.5	Result				
382		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.5	Sample ID				
383		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.6	Result				
384		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.6	Sample ID				
385		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.7	Result				
386		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.7	Sample ID				
387	n/a	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.1	Result				
388		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.1	Sample ID				
389	n/a	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.2	Result				
390		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.2	Sample ID				
391	n/a	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.3	Result				
392		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.3	Sample ID				
393		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.4	Result				
394		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.4	Sample ID				
395		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.5	Result				
396		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.5	Sample ID				
397		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.6	Result				
398		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.6	Sample ID				
399		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.7	Result				
400		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.7	Sample ID				
401	0	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.1	Result				
402		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.1	Sample ID				
403	0	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.2	Result				
404		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.2	Sample ID				
405	0	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.3	Result				
406		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.3	Sample ID				
407		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.4	Result				
408		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.4	Sample ID				
409		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.5	Result				
410		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.5	Sample ID				
411		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.6	Result				
412		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.6	Sample ID				
413		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.7	Result				
414		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.7	Sample ID				
415		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.1	Result				
416		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.1	Sample ID				
417		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.2	Result				
418		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.2	Sample ID				
419		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.3	Result				
420		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.3	Sample ID				
421	1	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.4	Result				
422		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.4	Sample ID				
423		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.5	Result				
424		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.5	Sample ID				
425		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.6	Result				
426		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.6	Sample ID				
427		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.7	Result				
428		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.7	Sample ID				
429		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.1	Result				
430		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.1	Sample ID				
431		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.2	Result				
432		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.2	Sample ID				
433		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.3	Result				

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
434		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.3	Sample ID				
435		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.4	Result				
436		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.4	Sample ID				
437	65	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.5	Result				
438		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.5	Sample ID				
439		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.6	Result				
440		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.6	Sample ID				
441		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.7	Result				
442		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.7	Sample ID				
443		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Test Method					
444		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Spec. Min or Max					
445		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Spec. Limit					
446		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.1	Result				
447		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.1	Sample ID				
448		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.2	Result				
449		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.2	Sample ID				
450		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.3	Result				
451		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.3	Sample ID				
452		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.4	Result				
453		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.4	Sample ID				
454		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.5	Result				
455		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.5	Sample ID				
456		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.6	Result				
457		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.6	Sample ID				
458		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.7	Result				
459		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.7	Sample ID				
460		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Test Method					
461		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Spec. Min or Max					
462		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Spec. Limit					
463		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.1	Result				
464		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.1	Sample ID				
465		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.2	Result				
466		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.2	Sample ID				
467		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.3	Result				
468		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.3	Sample ID				
469		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.4	Result				
470		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.4	Sample ID				
471		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.5	Result				
472		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.5	Sample ID				
473		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.6	Result				
474		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.6	Sample ID				
475		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.7	Result				
476		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.7	Sample ID				
477		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Test Method					
478		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Spec. Min or Max					
479		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Spec. Limit					
480		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.1	Result				
481		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.1	Sample ID				
482		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.2	Result				
483		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.2	Sample ID				
484		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.3	Result				
485		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.3	Sample ID				
486		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.4	Result				
487		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.4	Sample ID				
488		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.5	Result				
489		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.5	Sample ID				
490		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.6	Result				
491		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.6	Sample ID				
492		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.7	Result				
493		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.7	Sample ID				
494		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Test Method					
495		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Spec. Min or Max					

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
496		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Spec. Limit					
497		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.1	Result				
498		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.1	Sample ID				
499		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.2	Result				
500		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.2	Sample ID				
501		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.3	Result				
502		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.3	Sample ID				
503		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.4	Result				
504		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.4	Sample ID				
505		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.5	Result				
506		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.5	Sample ID				
507		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.6	Result				
508		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.6	Sample ID				
509		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.7	Result				
510		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.7	Sample ID				
511		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Test Method					
512		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Spec. Min or Max					
513		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Spec. Limit					
514		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.1	Result				
515		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.1	Sample ID				
516		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.2	Result				
517		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.2	Sample ID				
518		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.3	Result				
519		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.3	Sample ID				
520		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.4	Result				
521		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.4	Sample ID				
522		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.5	Result				
523		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.5	Sample ID				
524		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.6	Result				
525		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.6	Sample ID				
526		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.7	Result				
527		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.7	Sample ID				
528		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Remarks:							
529	No	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Class (A) Rock (Y/N):						
530	0	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Individual Ret., %	Passing	-	Sieve Size:	Retained	1"	
531	1.794	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Individual Ret., %	Passing	1"	Sieve Size:	Retained	7/8"	
532	6.942	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Individual Ret., %	Passing	7/8"	Sieve Size:	Retained	5/8"	
533	14.586	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Individual Ret., %	Passing	5/8"	Sieve Size:	Retained	3/8"	
534	2.028	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
535	0.182	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
536	0.156	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
537	0.052	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
538	0.052	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
539	0.208	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
540		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
541	26	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Individual Ret., %	Total:					
542	25.35	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Individual Ret., %	Percent of plus No. 4					
543	No	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Class (A) Rock (Y/N):						
544	0	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Individual Ret., %	Passing	-	Sieve Size:	Retained	1"	
545	0	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Individual Ret., %	Passing	1"	Sieve Size:	Retained	7/8"	
546	0	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Individual Ret., %	Passing	7/8"	Sieve Size:	Retained	5/8"	
547	1.29	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Individual Ret., %	Passing	5/8"	Sieve Size:	Retained	3/8"	
548	10.065	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
549	2.91	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
550	0.255	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
551	0.06	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
552	0.075	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
553	0.345	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
554		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
555	15	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Individual Ret., %	Total:					
556	11.355	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Individual Ret., %	Percent of plus No. 4					
557	No	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Class (A) Rock (Y/N):						

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
558	0	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Individual Ret., %	Passing	-	Sieve Size:	Retained	1"	
559	0	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Individual Ret., %	Passing	1"	Sieve Size:	Retained	7/8"	
560	0	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Individual Ret., %	Passing	7/8"	Sieve Size:	Retained	5/8"	
561	0	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Individual Ret., %	Passing	5/8"	Sieve Size:	Retained	3/8"	
562	3.696	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
563	7.668	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
564	0.288	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
565	0.06	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
566	0.048	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
567	0.24	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
568		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
569	12	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Individual Ret., %	Total:					
570	3.696	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Individual Ret., %	Percent of plus No. 4					
571	No	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Class (A) Rock (Y/N):						
572	0	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Individual Ret., %	Passing	-	Sieve Size:	Retained	1"	
573	0	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Individual Ret., %	Passing	1"	Sieve Size:	Retained	7/8"	
574	0	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Individual Ret., %	Passing	7/8"	Sieve Size:	Retained	5/8"	
575	0	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Individual Ret., %	Passing	5/8"	Sieve Size:	Retained	3/8"	
576	0.016	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
577	4.48	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
578	6.56	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
579	2.016	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
580	2.144	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
581	0.784	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
582		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
583	16	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Individual Ret., %	Total:					
584	0.016	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Individual Ret., %	Percent of plus No. 4					
585	No	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Class (A) Rock (Y/N):						
586	0	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Individual Ret., %	Passing	-	Sieve Size:	Retained	1"	
587	0	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Individual Ret., %	Passing	1"	Sieve Size:	Retained	7/8"	
588	0	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Individual Ret., %	Passing	7/8"	Sieve Size:	Retained	5/8"	
589	0	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Individual Ret., %	Passing	5/8"	Sieve Size:	Retained	3/8"	
590	0.0666	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
591	0.2664	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
592	2.6529	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
593	3.8628	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
594	2.7861	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
595	1.4652	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
596		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
597	11.1	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Individual Ret., %	Total:					
598	0.0666	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Individual Ret., %	Percent of plus No. 4					
599		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Class (A) Rock (Y/N):						
600		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Individual Ret., %	Passing	-	Sieve Size:	Retained	1"	
601		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Individual Ret., %	Passing	1"	Sieve Size:	Retained	7/8"	
602		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Individual Ret., %	Passing	7/8"	Sieve Size:	Retained	5/8"	
603		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Individual Ret., %	Passing	5/8"	Sieve Size:	Retained	3/8"	
604		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
605		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
606		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
607		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
608		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
609		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
610		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
611		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Individual Ret., %	Total:					
612		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Individual Ret., %	Percent of plus No. 4					
613		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Class (A) Rock (Y/N):						
614		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Individual Ret., %	Passing	-	Sieve Size:	Retained	1"	
615		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Individual Ret., %	Passing	1"	Sieve Size:	Retained	7/8"	
616		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Individual Ret., %	Passing	7/8"	Sieve Size:	Retained	5/8"	
617		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Individual Ret., %	Passing	5/8"	Sieve Size:	Retained	3/8"	
618		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
619		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
620		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
621		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
622		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
623		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
624		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
625		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Individual Ret., %	Total:					
626		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Individual Ret., %	Percent of plus No. 4					
627		HMACP MIXTURE DESIGN : Aggregate Classification	Remarks:							
628	1000	HMACP MIXTURE DESIGN : WEIGH UP SHEET	Aggregate Weight, g:							
629	42.7529	HMACP MIXTURE DESIGN : WEIGH UP SHEET	4.1% Asphalt by Total Weight, g:							
630	1042.75	HMACP MIXTURE DESIGN : WEIGH UP SHEET	Total Weight, g:							
631	42.7529	HMACP MIXTURE DESIGN : WEIGH UP SHEET	4.1% Asphalt by Total Weight, g:							
632	10.0336	HMACP MIXTURE DESIGN : WEIGH UP SHEET	Less Asphalt by Weight of Recycled Material, g:							
633	32.7193	HMACP MIXTURE DESIGN : WEIGH UP SHEET	(Valero 64-22) Asphalt to Add, g:							
634	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET								
635	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	-	Sieve Size:	Retained	1"	Bin No.1	Aggregate Weight
636	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	-	Sieve Size:	Retained	1"	Bin No.2	Aggregate Weight
637	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	-	Sieve Size:	Retained	1"	Bin No.3	Aggregate Weight
638	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	-	Sieve Size:	Retained	1"	Bin No.4	Aggregate Weight
639	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	-	Sieve Size:	Retained	1"	Bin No.5	Aggregate Weight
640		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	-	Sieve Size:	Retained	1"	Bin No.6	
641		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	-	Sieve Size:	Retained	1"	Bin No.7	
642	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	-	Sieve Size:	Retained	1"	Total Weights	
643	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	-	Sieve Size:	Retained	1"	IndividualRetained, %	
644	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	-	Sieve Size:	Retained	1"	Cumulative Retained, %	
645	17.94	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	1"	Sieve Size:	Retained	7/8"	Bin No.1	Aggregate Weight
646	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	1"	Sieve Size:	Retained	7/8"	Bin No.2	Aggregate Weight
647	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	1"	Sieve Size:	Retained	7/8"	Bin No.3	Aggregate Weight
648	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	1"	Sieve Size:	Retained	7/8"	Bin No.4	Aggregate Weight
649	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	1"	Sieve Size:	Retained	7/8"	Bin No.5	Aggregate Weight
650		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	1"	Sieve Size:	Retained	7/8"	Bin No.6	
651		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	1"	Sieve Size:	Retained	7/8"	Bin No.7	
652	17.94	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	1"	Sieve Size:	Retained	7/8"	Total Weights	
653	1.77618	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	1"	Sieve Size:	Retained	7/8"	IndividualRetained, %	
654	1.77618	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	1"	Sieve Size:	Retained	7/8"	Cumulative Retained, %	
655	69.42	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.1	Aggregate Weight
656	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.2	Aggregate Weight
657	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.3	Aggregate Weight
658	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.4	Aggregate Weight
659	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.5	Aggregate Weight
660		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.6	
661		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.7	
662	69.42	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Total Weights	
663	6.87304	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	IndividualRetained, %	
664	8.64922	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Cumulative Retained, %	
665	145.86	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.1	Aggregate Weight
666	12.9	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.2	Aggregate Weight
667	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.3	Aggregate Weight
668	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.4	Aggregate Weight
669	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.5	Aggregate Weight
670		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.6	
671		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.7	
672	171.302	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Total Weights	
673	16.96	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	IndividualRetained, %	
674	25.6092	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Cumulative Retained, %	
675	20.28	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.1	Aggregate Weight
676	100.65	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.2	Aggregate Weight
677	36.96	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.3	Aggregate Weight
678	0.16	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.4	Aggregate Weight
679	0.666	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.5	Aggregate Weight
680		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.6	
681		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.7	

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
682	212.856	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Total Weights	
683	21.0741	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	IndividualRetained, %	
684	46.6834	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Cumulative Retained, %	
685	1.82	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.1	Aggregate Weight
686	29.1	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.2	Aggregate Weight
687	76.68	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.3	Aggregate Weight
688	44.8	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.4	Aggregate Weight
689	2.664	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.5	Aggregate Weight
690		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.6	
691		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.7	
692	198.752	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Total Weights	
693	19.6778	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	IndividualRetained, %	
694	66.3611	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Cumulative Retained, %	
695	1.56	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.1	Aggregate Weight
696	2.55	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.2	Aggregate Weight
697	2.88	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.3	Aggregate Weight
698	65.6	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.4	Aggregate Weight
699	26.529	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.5	Aggregate Weight
700		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.6	
701		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.7	
702	134.028	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Total Weights	
703	13.2696	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	IndividualRetained, %	
704	79.6308	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Cumulative Retained, %	
705	0.52	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.1	Aggregate Weight
706	0.6	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.2	Aggregate Weight
707	0.6	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.3	Aggregate Weight
708	20.16	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.4	Aggregate Weight
709	38.628	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.5	Aggregate Weight
710		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.6	
711		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.7	
712	83.9198	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Total Weights	
713	8.30861	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	IndividualRetained, %	
714	87.9394	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Cumulative Retained, %	
715	0.52	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.1	Aggregate Weight
716	0.75	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.2	Aggregate Weight
717	0.48	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.3	Aggregate Weight
718	21.44	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.4	Aggregate Weight
719	27.861	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.5	Aggregate Weight
720		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.6	
721		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.7	
722	76.5531	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Total Weights	
723	7.57926	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	IndividualRetained, %	
724	95.5186	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Cumulative Retained, %	
725	2.08	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.1	Aggregate Weight
726	3.45	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.2	Aggregate Weight
727	2.4	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.3	Aggregate Weight
728	7.84	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.4	Aggregate Weight
729	14.652	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.5	Aggregate Weight
730		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.6	
731		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.7	
732	45.2634	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Total Weights	
733	4.48137	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	IndividualRetained, %	
734	100	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Cumulative Retained, %	
735		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.1	Aggregate Weight
736		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.2	Aggregate Weight
737		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.3	Aggregate Weight
738		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.4	Aggregate Weight
739		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.5	Aggregate Weight
740		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.6	
741		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.7	
742		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Total Weights	
743		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	IndividualRetained, %	

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
744		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Cumulative Retained, %	
745	260	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Totals	Bin No.1	Aggregate Weight				
746	150	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Totals	Bin No.2	Aggregate Weight				
747	120	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Totals	Bin No.3	Aggregate Weight				
748	160	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Totals	Bin No.4	Aggregate Weight				
749	111	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Totals	Bin No.5	Aggregate Weight				
750		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Totals	Bin No.6					
751		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Totals	Bin No.7					
752	1010.03	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Totals	Total Weights					
753		HMACP MIXTURE DESIGN : WEIGH UP SHEET	Running Total:							
754	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	-	Sieve Size:	Retained	1"	Bin No.1	Aggregate Weight
755	260	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	-	Sieve Size:	Retained	1"	Bin No.2	Aggregate Weight
756	410	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	-	Sieve Size:	Retained	1"	Bin No.3	Aggregate Weight
757	530	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	-	Sieve Size:	Retained	1"	Bin No.4	Aggregate Weight
758	690	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	-	Sieve Size:	Retained	1"	Bin No.5	Aggregate Weight
759		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	-	Sieve Size:	Retained	1"	Bin No.6	
760		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	-	Sieve Size:	Retained	1"	Bin No.7	
761	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	-	Sieve Size:	Retained	1"	Total Weights	
762	17.94	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	1"	Sieve Size:	Retained	7/8"	Bin No.1	Aggregate Weight
763	260	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	1"	Sieve Size:	Retained	7/8"	Bin No.2	Aggregate Weight
764	410	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	1"	Sieve Size:	Retained	7/8"	Bin No.3	Aggregate Weight
765	530	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	1"	Sieve Size:	Retained	7/8"	Bin No.4	Aggregate Weight
766	690	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	1"	Sieve Size:	Retained	7/8"	Bin No.5	Aggregate Weight
767		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	1"	Sieve Size:	Retained	7/8"	Bin No.6	
768		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	1"	Sieve Size:	Retained	7/8"	Bin No.7	
769	17.94	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	1"	Sieve Size:	Retained	7/8"	Total Weights	
770	87.36	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.1	Aggregate Weight
771	260	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.2	Aggregate Weight
772	410	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.3	Aggregate Weight
773	530	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.4	Aggregate Weight
774	690	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.5	Aggregate Weight
775		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.6	
776		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.7	
777	87.36	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	7/8"	Sieve Size:	Retained	5/8"	Total Weights	
778	233.22	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.1	Aggregate Weight
779	272.9	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.2	Aggregate Weight
780	410	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.3	Aggregate Weight
781	530	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.4	Aggregate Weight
782	690	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.5	Aggregate Weight
783		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.6	
784		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.7	
785	258.662	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	5/8"	Sieve Size:	Retained	3/8"	Total Weights	
786	253.5	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.1	Aggregate Weight
787	373.55	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.2	Aggregate Weight
788	446.96	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.3	Aggregate Weight
789	530.16	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.4	Aggregate Weight
790	690.666	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.5	Aggregate Weight
791		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.6	
792		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.7	
793	471.518	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Total Weights	
794	255.32	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.1	Aggregate Weight
795	402.65	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.2	Aggregate Weight
796	523.64	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.3	Aggregate Weight
797	574.96	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.4	Aggregate Weight
798	693.33	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.5	Aggregate Weight
799		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.6	
800		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.7	
801	670.27	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Total Weights	
802	256.88	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.1	Aggregate Weight
803	405.2	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.2	Aggregate Weight
804	526.52	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.3	Aggregate Weight
805	640.56	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.4	Aggregate Weight

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
806	719.859	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.5	Aggregate Weight
807		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.6	
808		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.7	
809	804.297	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Total Weights	
810	257.4	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.1	Aggregate Weight
811	405.8	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.2	Aggregate Weight
812	527.12	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.3	Aggregate Weight
813	660.72	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.4	Aggregate Weight
814	758.487	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.5	Aggregate Weight
815		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.6	
816		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.7	
817	888.217	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Total Weights	
818	257.92	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.1	Aggregate Weight
819	406.55	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.2	Aggregate Weight
820	527.6	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.3	Aggregate Weight
821	682.16	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.4	Aggregate Weight
822	786.348	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.5	Aggregate Weight
823		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.6	
824		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.7	
825	964.77	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Total Weights	
826	260	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.1	Aggregate Weight
827	410	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.2	Aggregate Weight
828	530	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.3	Aggregate Weight
829	690	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.4	Aggregate Weight
830	801	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.5	Aggregate Weight
831		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.6	
832		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.7	
833	1010.03	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Total Weights	
834		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.1	Aggregate Weight
835		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.2	Aggregate Weight
836		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.3	Aggregate Weight
837		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.4	Aggregate Weight
838		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.5	Aggregate Weight
839		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.6	
840		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.7	
841		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Total Weights	
842		HMACP MIXTURE DESIGN : WEIGH UP SHEET	Remarks:							
843		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Individual Ret., %	Passing		Sieve Size:	Retained	1"	
844		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Bulk SG	Passing		Sieve Size:	Retained	1"	
845	6.9	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Individual Ret., %	Passing	1"	Sieve Size:	Retained	7/8"	
846	2.788	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Bulk SG	Passing	1"	Sieve Size:	Retained	7/8"	
847	26.7	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Individual Ret., %	Passing	7/8"	Sieve Size:	Retained	5/8"	
848	2.788	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Bulk SG	Passing	7/8"	Sieve Size:	Retained	5/8"	
849	56.1	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Individual Ret., %	Passing	5/8"	Sieve Size:	Retained	3/8"	
850	2.788	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Bulk SG	Passing	5/8"	Sieve Size:	Retained	3/8"	
851	7.8	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
852	2.794	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Bulk SG	Passing	3/8"	Sieve Size:	Retained	No. 4	
853	0.7	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
854	2.794	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Bulk SG	Passing	No. 4	Sieve Size:	Retained	No. 10	
855	0.6	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
856	2.794	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Bulk SG	Passing	No. 10	Sieve Size:	Retained	No. 40	
857	0.2	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
858	2.794	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Bulk SG	Passing	No. 40	Sieve Size:	Retained	No. 80	
859	0.2	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
860	2.794	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Bulk SG	Passing	No. 80	Sieve Size:	Retained	No. 200	
861	0.8	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
862	2.794	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Bulk SG	Passing	No. 200	Sieve Size:	Retained	Pan	
863		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
864		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Bulk SG	Passing		Sieve Size:	Retained	Pan	
865	100	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Individual Ret., %	Totals					
866	2.78862	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Bulk SG	Totals					
867		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Individual Ret., %	Passing		Sieve Size:	Retained	1"	

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
868		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Bulk SG	Passing		Sieve Size:	Retained	1"	
869	0	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Individual Ret., %	Passing	1"	Sieve Size:	Retained	7/8"	
870		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Bulk SG	Passing	1"	Sieve Size:	Retained	7/8"	
871	0	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Individual Ret., %	Passing	7/8"	Sieve Size:	Retained	5/8"	
872		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Bulk SG	Passing	7/8"	Sieve Size:	Retained	5/8"	
873	8.6	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Individual Ret., %	Passing	5/8"	Sieve Size:	Retained	3/8"	
874	2.788	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Bulk SG	Passing	5/8"	Sieve Size:	Retained	3/8"	
875	67.1	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
876	2.794	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Bulk SG	Passing	3/8"	Sieve Size:	Retained	No. 4	
877	19.4	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
878	2.798	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Bulk SG	Passing	No. 4	Sieve Size:	Retained	No. 10	
879	1.7	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
880	2.798	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Bulk SG	Passing	No. 10	Sieve Size:	Retained	No. 40	
881	0.4	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
882	2.798	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Bulk SG	Passing	No. 40	Sieve Size:	Retained	No. 80	
883	0.5	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
884	2.798	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Bulk SG	Passing	No. 80	Sieve Size:	Retained	No. 200	
885	2.3	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
886	2.798	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Bulk SG	Passing	No. 200	Sieve Size:	Retained	Pan	
887		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
888		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Bulk SG	Passing		Sieve Size:	Retained	Pan	
889	100	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Individual Ret., %	Totals					
890	2.79445	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Bulk SG	Totals					
891		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Individual Ret., %	Passing		Sieve Size:	Retained	1"	
892		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Bulk SG	Passing		Sieve Size:	Retained	1"	
893	0	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Individual Ret., %	Passing	1"	Sieve Size:	Retained	7/8"	
894		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Bulk SG	Passing	1"	Sieve Size:	Retained	7/8"	
895	0	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Individual Ret., %	Passing	7/8"	Sieve Size:	Retained	5/8"	
896		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Bulk SG	Passing	7/8"	Sieve Size:	Retained	5/8"	
897	0	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Individual Ret., %	Passing	5/8"	Sieve Size:	Retained	3/8"	
898		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Bulk SG	Passing	5/8"	Sieve Size:	Retained	3/8"	
899	30.8	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
900	2.794	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Bulk SG	Passing	3/8"	Sieve Size:	Retained	No. 4	
901	63.9	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
902	2.798	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Bulk SG	Passing	No. 4	Sieve Size:	Retained	No. 10	
903	2.4	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
904	2.798	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Bulk SG	Passing	No. 10	Sieve Size:	Retained	No. 40	
905	0.5	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
906	2.798	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Bulk SG	Passing	No. 40	Sieve Size:	Retained	No. 80	
907	0.4	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
908	2.798	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Bulk SG	Passing	No. 80	Sieve Size:	Retained	No. 200	
909	2	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
910	2.798	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Bulk SG	Passing	No. 200	Sieve Size:	Retained	Pan	
911		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
912		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Bulk SG	Passing		Sieve Size:	Retained	Pan	
913	100	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Individual Ret., %	Totals					
914	2.79677	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Bulk SG	Totals					
915		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Individual Ret., %	Passing		Sieve Size:	Retained	1"	
916		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Bulk SG	Passing		Sieve Size:	Retained	1"	
917	0	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Individual Ret., %	Passing	1"	Sieve Size:	Retained	7/8"	
918		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Bulk SG	Passing	1"	Sieve Size:	Retained	7/8"	
919	0	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Individual Ret., %	Passing	7/8"	Sieve Size:	Retained	5/8"	
920		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Bulk SG	Passing	7/8"	Sieve Size:	Retained	5/8"	
921	0	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Individual Ret., %	Passing	5/8"	Sieve Size:	Retained	3/8"	
922		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Bulk SG	Passing	5/8"	Sieve Size:	Retained	3/8"	
923	0.1	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
924	2.815	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Bulk SG	Passing	3/8"	Sieve Size:	Retained	No. 4	
925	28	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
926	2.815	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Bulk SG	Passing	No. 4	Sieve Size:	Retained	No. 10	
927	41	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
928	2.815	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Bulk SG	Passing	No. 10	Sieve Size:	Retained	No. 40	
929	12.6	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
930	2.815	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Bulk SG	Passing	No. 40	Sieve Size:	Retained	No. 80	
931	13.4	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
932	2.815	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Bulk SG	Passing	No. 80	Sieve Size:	Retained	No. 200	
933	4.9	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
934	2.815	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Bulk SG	Passing	No. 200	Sieve Size:	Retained	Pan	
935		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
936		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Bulk SG	Passing		Sieve Size:	Retained	Pan	
937	100	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Individual Ret., %	Totals					
938	2.815	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Bulk SG	Totals					
939		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Individual Ret., %	Passing		Sieve Size:	Retained	1"	
940		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Bulk SG	Passing		Sieve Size:	Retained	1"	
941	0	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Individual Ret., %	Passing	1"	Sieve Size:	Retained	7/8"	
942		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Bulk SG	Passing	1"	Sieve Size:	Retained	7/8"	
943	0	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Individual Ret., %	Passing	7/8"	Sieve Size:	Retained	5/8"	
944		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Bulk SG	Passing	7/8"	Sieve Size:	Retained	5/8"	
945	0	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Individual Ret., %	Passing	5/8"	Sieve Size:	Retained	3/8"	
946		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Bulk SG	Passing	5/8"	Sieve Size:	Retained	3/8"	
947	0.6	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
948	2.642	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Bulk SG	Passing	3/8"	Sieve Size:	Retained	No. 4	
949	2.4	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
950	2.642.	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Bulk SG	Passing	No. 4	Sieve Size:	Retained	No. 10	
951	23.9	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
952	2.642	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Bulk SG	Passing	No. 10	Sieve Size:	Retained	No. 40	
953	34.8	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
954	2.642	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Bulk SG	Passing	No. 40	Sieve Size:	Retained	No. 80	
955	25.1	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
956	2.678	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Bulk SG	Passing	No. 80	Sieve Size:	Retained	No. 200	
957	13.2	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
958	2.678	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Bulk SG	Passing	No. 200	Sieve Size:	Retained	Pan	
959		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
960		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Bulk SG	Passing		Sieve Size:	Retained	Pan	
961	100	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Individual Ret., %	Totals					
962	2.72132	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Bulk SG	Totals					
963		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Individual Ret., %	Passing		Sieve Size:	Retained	1"	
964		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Bulk SG	Passing		Sieve Size:	Retained	1"	
965		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Individual Ret., %	Passing	1"	Sieve Size:	Retained	7/8"	
966		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Bulk SG	Passing	1"	Sieve Size:	Retained	7/8"	
967		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Individual Ret., %	Passing	7/8"	Sieve Size:	Retained	5/8"	
968		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Bulk SG	Passing	7/8"	Sieve Size:	Retained	5/8"	
969		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Individual Ret., %	Passing	5/8"	Sieve Size:	Retained	3/8"	
970		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Bulk SG	Passing	5/8"	Sieve Size:	Retained	3/8"	
971		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
972		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Bulk SG	Passing	3/8"	Sieve Size:	Retained	No. 4	
973		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
974		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Bulk SG	Passing	No. 4	Sieve Size:	Retained	No. 10	
975		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
976		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Bulk SG	Passing	No. 10	Sieve Size:	Retained	No. 40	
977		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
978		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Bulk SG	Passing	No. 40	Sieve Size:	Retained	No. 80	
979		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
980		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Bulk SG	Passing	No. 80	Sieve Size:	Retained	No. 200	
981		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
982		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Bulk SG	Passing	No. 200	Sieve Size:	Retained	Pan	
983		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
984		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Bulk SG	Passing		Sieve Size:	Retained	Pan	
985		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Individual Ret., %	Totals					
986		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Bulk SG	Totals					
987		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Individual Ret., %	Passing		Sieve Size:	Retained	1"	
988		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Bulk SG	Passing		Sieve Size:	Retained	1"	
989		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Individual Ret., %	Passing	1"	Sieve Size:	Retained	7/8"	
990		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Bulk SG	Passing	1"	Sieve Size:	Retained	7/8"	
991		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Individual Ret., %	Passing	7/8"	Sieve Size:	Retained	5/8"	

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
992		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Bulk SG	Passing	7/8"	Sieve Size:	Retained	5/8"	
993		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Individual Ret., %	Passing	5/8"	Sieve Size:	Retained	3/8"	
994		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Bulk SG	Passing	5/8"	Sieve Size:	Retained	3/8"	
995		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
996		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Bulk SG	Passing	3/8"	Sieve Size:	Retained	No. 4	
997		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
998		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Bulk SG	Passing	No. 4	Sieve Size:	Retained	No. 10	
999		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
1000		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Bulk SG	Passing	No. 10	Sieve Size:	Retained	No. 40	
1001		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
1002		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Bulk SG	Passing	No. 40	Sieve Size:	Retained	No. 80	
1003		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
1004		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Bulk SG	Passing	No. 80	Sieve Size:	Retained	No. 200	
1005		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
1006		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Bulk SG	Passing	No. 200	Sieve Size:	Retained	Pan	
1007		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
1008		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Bulk SG	Passing		Sieve Size:	Retained	Pan	
1009		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Individual Ret., %	Totals					
1010		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Bulk SG	Totals					
1011	1.03	HMACP MIXTURE DESIGN : BULK GRAVITY	Specific Gravity of Asphalt:							
1012	2.74017	HMACP MIXTURE DESIGN : BULK GRAVITY	Combined Bulk Specific Gravity:							
1013		HMACP MIXTURE DESIGN : BULK GRAVITY	Coarse Agg. Combined BSG:							
1014		HMACP MIXTURE DESIGN : BULK GRAVITY	Remarks:							
1015	96	HMACP MIXTURE DESIGN : SUMMARY SHEET	Target Density, %:							
1016		HMACP MIXTURE DESIGN : SUMMARY SHEET	Number of Gyrations:							
1017		HMACP MIXTURE DESIGN : SUMMARY SHEET	CRM* Content							
1018	3	HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Asphalt Content (%)						
1019	2.444	HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Specific Gravity Of Specimen (Ga)						
1020	2.614	HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Maximum Specific Gravity (Gr)						
1021	2.74454	HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Effective Gravity (Ge)						
1022	2.62045	HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Theo. Max. Specific Gravity (Gt)						
1023	93.2663	HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Density from Gt (Percent)						
1024	13.8522	HMACP MIXTURE DESIGN : SUMMARY SHEET	1	VMA (Percent)						
1025	3.5	HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Asphalt Content (%)						
1026	2.461	HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Specific Gravity Of Specimen (Ga)						
1027	2.598	HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Maximum Specific Gravity (Gr)						
1028	2.74983	HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Effective Gravity (Ge)						
1029	2.59976	HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Theo. Max. Specific Gravity (Gt)						
1030	94.6625	HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Density from Gt (Percent)						
1031	13.7001	HMACP MIXTURE DESIGN : SUMMARY SHEET	2	VMA (Percent)						
1032	4	HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Asphalt Content (%)						
1033	2.472	HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Specific Gravity Of Specimen (Ga)						
1034	2.581	HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Maximum Specific Gravity (Gr)						
1035	2.75378	HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Effective Gravity (Ge)						
1036	2.57939	HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Theo. Max. Specific Gravity (Gt)						
1037	95.8365	HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Density from Gt (Percent)						
1038	13.7635	HMACP MIXTURE DESIGN : SUMMARY SHEET	3	VMA (Percent)						
1039	4.5	HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Asphalt Content (%)						
1040	2.486	HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Specific Gravity Of Specimen (Ga)						
1041	2.56	HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Maximum Specific Gravity (Gr)						
1042	2.75267	HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Effective Gravity (Ge)						
1043	2.55934	HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Theo. Max. Specific Gravity (Gt)						
1044	97.1344	HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Density from Gt (Percent)						
1045	13.7268	HMACP MIXTURE DESIGN : SUMMARY SHEET	4	VMA (Percent)						
1046	5	HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Asphalt Content (%)						
1047	2.494	HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Specific Gravity Of Specimen (Ga)						
1048	2.545	HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Maximum Specific Gravity (Gr)						
1049	2.75855	HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Effective Gravity (Ge)						
1050	2.5396	HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Theo. Max. Specific Gravity (Gt)						
1051	98.2045	HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Density from Gt (Percent)						
1052	13.9023	HMACP MIXTURE DESIGN : SUMMARY SHEET	5	VMA (Percent)						
1053	164.2	HMACP MIXTURE DESIGN : SUMMARY SHEET	Mixture Evaluation @ Optimum Asphalt Content	Indirect Tensile Strength (psi)						

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
1054		HMACP MIXTURE DESIGN : SUMMARY SHEET	Mixture Evaluation @ Optimum Asphalt Content	Hamburg Wheel Tracking Test	Number of cycles					
1055		HMACP MIXTURE DESIGN : SUMMARY SHEET	Mixture Evaluation @ Optimum Asphalt Content	Hamburg Wheel Tracking Test	Rut depth (mm)					
1056		HMACP MIXTURE DESIGN : SUMMARY SHEET	Mixture Evaluation @ Optimum Asphalt Content	Overlay Tester Min. Number of Cycles						
1057		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Asphalt Content (%)						
1058		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Maximum Specific Gravity (Gr)						
1059		HMACP MIXTURE DESIGN : SUMMARY SHEET	Effective Gravity (Ge)							
1060		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Theo. Max. Specific Gravity (Gt)						
1061		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	VMA (Percent)						
1062		HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Asphalt Content (%)						
1063		HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Maximum Specific Gravity (Gr)						
1064		HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Theo. Max. Specific Gravity (Gt)						
1065		HMACP MIXTURE DESIGN : SUMMARY SHEET	2	VMA (Percent)						
1066		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Asphalt Content (%)						
1067		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Maximum Specific Gravity (Gr)						
1068		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Theo. Max. Specific Gravity (Gt)						
1069		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	VMA (Percent)						
1070		HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Asphalt Content (%)						
1071		HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Maximum Specific Gravity (Gr)						
1072		HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Theo. Max. Specific Gravity (Gt)						
1073		HMACP MIXTURE DESIGN : SUMMARY SHEET	4	VMA (Percent)						
1074		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Asphalt Content (%)						
1075		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Maximum Specific Gravity (Gr)						
1076		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Theo. Max. Specific Gravity (Gt)						
1077		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	VMA (Percent)						
1078		HMACP MIXTURE DESIGN : SUMMARY SHEET	Min Film Thickness (microns)							
1079		HMACP MIXTURE DESIGN : SUMMARY SHEET	AC @ Min Film Thickness:							
1080		HMACP MIXTURE DESIGN : SUMMARY SHEET	Max Film Thickness (microns)							
1081		HMACP MIXTURE DESIGN : SUMMARY SHEET	AC @ Max Film Thickness:							
1082		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Asphalt Content (%)						
1083		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Lab Measured Gr						
1084		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Effective Specific Gravity (Ge)						
1085		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Backcalculated Gr						
1086		HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Lab Measured Gr						
1087		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Asphalt Content (%)						
1088		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Lab Measured Gr						
1089		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Effective Specific Gravity (Ge)						
1090		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Backcalculated Gr						
1091		HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Lab Measured Gr						
1092		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Asphalt Content (%)						
1093		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Lab Measured Gr						
1094		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Effective Specific Gravity (Ge)						
1095		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Backcalculated Gr						
1096		HMACP MIXTURE DESIGN : SUMMARY SHEET	6	Lab Measured Gr						
1097		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Asphalt Content (%)						
1098		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Height (in)						
1099		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Diameter (in)						
1100		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Dry Weight (grams)						
1101		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Backcalculated Gr						
1102		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Ga						
1103		HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Height (in)						
1104		HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Diameter (in)						
1105		HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Dry Weight (grams)						
1106		HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Ga						
1107		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Density from Backcalculated Gr (%)						
1108		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Asphalt Content (%)						
1109		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Height (in)						
1110		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Diameter (in)						
1111		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Dry Weight (grams)						
1112		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Backcalculated Gr						
1113		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Ga						
1114		HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Height (in)						
1115		HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Diameter (in)						

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
1116		HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Dry Weight (grams)						
1117		HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Ga						
1118		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Density from Backcalculated Gr (%)						
1119		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Asphalt Content (%)						
1120		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Height (in)						
1121		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Diameter (in)						
1122		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Dry Weight (grams)						
1123		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Backcalculated Gr						
1124		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Ga						
1125		HMACP MIXTURE DESIGN : SUMMARY SHEET	6	Height (in)						
1126		HMACP MIXTURE DESIGN : SUMMARY SHEET	6	Diameter (in)						
1127		HMACP MIXTURE DESIGN : SUMMARY SHEET	6	Dry Weight (grams)						
1128		HMACP MIXTURE DESIGN : SUMMARY SHEET	6	Ga						
1129		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Density from Backcalculated Gr (%)						
1130		HMACP MIXTURE DESIGN : SUMMARY SHEET	7	Asphalt Content (%)						
1131		HMACP MIXTURE DESIGN : SUMMARY SHEET	7	Height (in)						
1132		HMACP MIXTURE DESIGN : SUMMARY SHEET	7	Diameter (in)						
1133		HMACP MIXTURE DESIGN : SUMMARY SHEET	7	Dry Weight (grams)						
1134		HMACP MIXTURE DESIGN : SUMMARY SHEET	7	Backcalculated Gr						
1135		HMACP MIXTURE DESIGN : SUMMARY SHEET	7	Ga						
1136		HMACP MIXTURE DESIGN : SUMMARY SHEET	8	Height (in)						
1137		HMACP MIXTURE DESIGN : SUMMARY SHEET	8	Diameter (in)						
1138		HMACP MIXTURE DESIGN : SUMMARY SHEET	8	Dry Weight (grams)						
1139		HMACP MIXTURE DESIGN : SUMMARY SHEET	8	Ga						
1140		HMACP MIXTURE DESIGN : SUMMARY SHEET	7	Density from Backcalculated Gr (%)						
1141		HMACP MIXTURE DESIGN : SUMMARY SHEET	9	Asphalt Content (%)						
1142		HMACP MIXTURE DESIGN : SUMMARY SHEET	9	Height (in)						
1143		HMACP MIXTURE DESIGN : SUMMARY SHEET	9	Diameter (in)						
1144		HMACP MIXTURE DESIGN : SUMMARY SHEET	9	Dry Weight (grams)						
1145		HMACP MIXTURE DESIGN : SUMMARY SHEET	9	Backcalculated Gr						
1146		HMACP MIXTURE DESIGN : SUMMARY SHEET	9	Ga						
1147		HMACP MIXTURE DESIGN : SUMMARY SHEET	10	Height (in)						
1148		HMACP MIXTURE DESIGN : SUMMARY SHEET	10	Diameter (in)						
1149		HMACP MIXTURE DESIGN : SUMMARY SHEET	10	Dry Weight (grams)						
1150		HMACP MIXTURE DESIGN : SUMMARY SHEET	10	Ga						
1151		HMACP MIXTURE DESIGN : SUMMARY SHEET	9	Density from Backcalculated Gr (%)						
1152	2.75187	HMACP MIXTURE DESIGN : SUMMARY SHEET	Effective Specific Gravity:							
1153	4.06299	HMACP MIXTURE DESIGN : SUMMARY SHEET	Optimum Asphalt Content :							
1154	13.7589	HMACP MIXTURE DESIGN : SUMMARY SHEET	VMA @ Optimum AC:							
1155		HMACP MIXTURE DESIGN : SUMMARY SHEET	Estimated Percent of Stripping, %:							
1156		HMACP MIXTURE DESIGN : SUMMARY SHEET	Drain-Down, %:							
1157		HMACP MIXTURE DESIGN : SUMMARY SHEET	Cantabro Loss, %:							
1158	2.47378	HMACP MIXTURE DESIGN : SUMMARY SHEET	Interpolated Values	Specific Gravity (Ga):						
1159	2.57835	HMACP MIXTURE DESIGN : SUMMARY SHEET	Interpolated Values	Max. Specific Gravity (Gr):						
1160	2.57687	HMACP MIXTURE DESIGN : SUMMARY SHEET	Interpolated Values	Theo. Max. Specific Gravity (Gt):						
1161		HMACP MIXTURE DESIGN : SUMMARY SHEET	VCA(CA)							
1162		HMACP MIXTURE DESIGN : SUMMARY SHEET	VCA(MIX)							
1163		HMACP MIXTURE DESIGN : SUMMARY SHEET	VCA(CA, calc.)							
1164		HMACP MIXTURE DESIGN : SUMMARY SHEET	VCA(MIX, calc.)							
1165		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	A	Gr					
1166		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	B	Gr					
1167		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	Density (%)	Gr					
1168		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	A	Ga					
1169		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	B	Ga					
1170		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	Density (%)	Ga					
1171		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	A	Height @ Nini					
1172		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	B	Height @ Nini					
1173		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	Density (%)	Height @ Nini					
1174		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	A	Height @ Ndes					
1175		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	B	Height @ Ndes					
1176		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	Density (%)	Height @ Ndes					
1177		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	A	Height @ Nmax					

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
1178		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	B	Height @ Nmax					
1179		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	Density (%)	Height @ Nmax					
1180	2004	HMACP MIXTURE DESIGN : COMBINED GRADATION	SPEC YEAR:							
1181		HMACP MIXTURE DESIGN : COMBINED GRADATION	SPECIAL PROVISION:							
1182	ITEM340	HMACP MIXTURE DESIGN : COMBINED GRADATION	MIX TYPE:							
1183		HMACP MIXTURE DESIGN : COMBINED GRADATION	Lift Thickness, in:							
1184		HMACP MIXTURE DESIGN : SUMMARY SHEET	FINAL SPECIMEN	Asphalt Content (%)						
1185		HMACP MIXTURE DESIGN : SUMMARY SHEET	FINAL SPECIMEN	Specific Gravity Of Specimen (Ga)						
1186		HMACP MIXTURE DESIGN : SUMMARY SHEET	FINAL SPECIMEN	Maximum Specific Gravity (Gr)						
1187		HMACP MIXTURE DESIGN : SUMMARY SHEET	FINAL SPECIMEN	Effective Gravity (Ge)						
1188		HMACP MIXTURE DESIGN : SUMMARY SHEET	FINAL SPECIMEN	Density from Gr (Percent)						
1189		HMACP MIXTURE DESIGN : SUMMARY SHEET	FINAL SPECIMEN	Film Thickness (microns)						
1190		HMACP MIXTURE DESIGN : SUMMARY SHEET	Suggested Membrane Target App. Rate, gal/yd2:							
1191		HMACP MIXTURE DESIGN : SUMMARY SHEET	PREDICTION ESTIMATES	AC %						
1192		HMACP MIXTURE DESIGN : SUMMARY SHEET	PREDICTION ESTIMATES	Film Thickness (microns)						
1193		HMACP MIXTURE DESIGN : SUMMARY SHEET	PREDICTION ESTIMATES	Density (%)						
1194		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	Blank Sample Weight, g:							
1195	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	-	Sieve Size:	Retained	1"	Bin No.1	Aggregate Weight
1196	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	-	Sieve Size:	Retained	1"	Bin No.2	Aggregate Weight
1197	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	-	Sieve Size:	Retained	1"	Bin No.3	Aggregate Weight
1198	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	-	Sieve Size:	Retained	1"	Bin No.4	Aggregate Weight
1199	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	-	Sieve Size:	Retained	1"	Bin No.5	Aggregate Weight
1200		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	-	Sieve Size:	Retained	1"	Bin No.6	
1201		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	-	Sieve Size:	Retained	1"	Bin No.7	
1202	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	-	Sieve Size:	Retained	1"	Total Weights	
1203		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	-	Sieve Size:	Retained	1"	IndividualRetained, %	
1204		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	-	Sieve Size:	Retained	1"	Cumulative Retained, %	
1205	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	1"	Sieve Size:	Retained	7/8"	Bin No.1	Aggregate Weight
1206	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	1"	Sieve Size:	Retained	7/8"	Bin No.2	Aggregate Weight
1207	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	1"	Sieve Size:	Retained	7/8"	Bin No.3	Aggregate Weight
1208	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	1"	Sieve Size:	Retained	7/8"	Bin No.4	Aggregate Weight
1209	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	1"	Sieve Size:	Retained	7/8"	Bin No.5	Aggregate Weight
1210		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	1"	Sieve Size:	Retained	7/8"	Bin No.6	
1211		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	1"	Sieve Size:	Retained	7/8"	Bin No.7	
1212	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	1"	Sieve Size:	Retained	7/8"	Total Weights	
1213		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	1"	Sieve Size:	Retained	7/8"	IndividualRetained, %	
1214		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	1"	Sieve Size:	Retained	7/8"	Cumulative Retained, %	
1215	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.1	Aggregate Weight
1216	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.2	Aggregate Weight
1217	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.3	Aggregate Weight
1218	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.4	Aggregate Weight
1219	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.5	Aggregate Weight
1220		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.6	
1221		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.7	
1222	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Total Weights	
1223		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	IndividualRetained, %	
1224		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Cumulative Retained, %	
1225	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.1	Aggregate Weight
1226	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.2	Aggregate Weight
1227	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.3	Aggregate Weight
1228	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.4	Aggregate Weight
1229	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.5	Aggregate Weight
1230		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.6	
1231		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.7	
1232	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Total Weights	
1233		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	IndividualRetained, %	
1234		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Cumulative Retained, %	
1235	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.1	Aggregate Weight
1236	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.2	Aggregate Weight
1237	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.3	Aggregate Weight
1238	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.4	Aggregate Weight
1239	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.5	Aggregate Weight

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
1240		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.6	
1241		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.7	
1242	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Total Weights	
1243		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	IndividualRetained, %	
1244		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Cumulative Retained, %	
1245	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.1	Aggregate Weight
1246	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.2	Aggregate Weight
1247	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.3	Aggregate Weight
1248	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.4	Aggregate Weight
1249	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.5	Aggregate Weight
1250		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.6	
1251		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.7	
1252	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Total Weights	
1253		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	IndividualRetained, %	
1254		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Cumulative Retained, %	
1255	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.1	Aggregate Weight
1256	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.2	Aggregate Weight
1257	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.3	Aggregate Weight
1258	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.4	Aggregate Weight
1259	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.5	Aggregate Weight
1260		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.6	
1261		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.7	
1262	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Total Weights	
1263		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	IndividualRetained, %	
1264		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Cumulative Retained, %	
1265	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.1	Aggregate Weight
1266	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.2	Aggregate Weight
1267	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.3	Aggregate Weight
1268	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.4	Aggregate Weight
1269	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.5	Aggregate Weight
1270		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.6	
1271		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.7	
1272	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Total Weights	
1273		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	IndividualRetained, %	
1274		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Cumulative Retained, %	
1275	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.1	Aggregate Weight
1276	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.2	Aggregate Weight
1277	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.3	Aggregate Weight
1278	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.4	Aggregate Weight
1279	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.5	Aggregate Weight
1280		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.6	
1281		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.7	
1282	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Total Weights	
1283		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	IndividualRetained, %	
1284		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Cumulative Retained, %	
1285	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.1	Aggregate Weight
1286	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.2	Aggregate Weight
1287	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.3	Aggregate Weight
1288	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.4	Aggregate Weight
1289	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.5	Aggregate Weight
1290		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.6	
1291		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.7	
1292	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Total Weights	
1293		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	IndividualRetained, %	
1294		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Cumulative Retained, %	
1295		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.1	Aggregate Weight
1296		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.2	Aggregate Weight
1297		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.3	Aggregate Weight
1298		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.4	Aggregate Weight
1299		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.5	Aggregate Weight
1300		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.6	
1301		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.7	

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
1302		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Total Weights	
1303		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	IndividualRetained, %	
1304		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Cumulative Retained, %	
1305	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Totals	Bin No.1	Aggregate Weight				
1306	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Totals	Bin No.2	Aggregate Weight				
1307	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Totals	Bin No.3	Aggregate Weight				
1308	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Totals	Bin No.4	Aggregate Weight				
1309	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Totals	Bin No.5	Aggregate Weight				
1310		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Totals	Bin No.6					
1311		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Totals	Bin No.7					
1312	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Totals	Total Weights					
1313		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	Running Total:							
1314	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	-	Sieve Size:	Retained	1"	Bin No.1	Aggregate Weight
1315	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	-	Sieve Size:	Retained	1"	Bin No.2	Aggregate Weight
1316	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	-	Sieve Size:	Retained	1"	Bin No.3	Aggregate Weight
1317	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	-	Sieve Size:	Retained	1"	Bin No.4	Aggregate Weight
1318	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	-	Sieve Size:	Retained	1"	Bin No.5	Aggregate Weight
1319		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	-	Sieve Size:	Retained	1"	Bin No.6	
1320		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	-	Sieve Size:	Retained	1"	Bin No.7	
1321	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	-	Sieve Size:	Retained	1"	Total Weights	
1322	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	1"	Sieve Size:	Retained	7/8"	Bin No.1	Aggregate Weight
1323	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	1"	Sieve Size:	Retained	7/8"	Bin No.2	Aggregate Weight
1324	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	1"	Sieve Size:	Retained	7/8"	Bin No.3	Aggregate Weight
1325	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	1"	Sieve Size:	Retained	7/8"	Bin No.4	Aggregate Weight
1326	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	1"	Sieve Size:	Retained	7/8"	Bin No.5	Aggregate Weight
1327		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	1"	Sieve Size:	Retained	7/8"	Bin No.6	
1328		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	1"	Sieve Size:	Retained	7/8"	Bin No.7	
1329	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	1"	Sieve Size:	Retained	7/8"	Total Weights	
1330	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.1	Aggregate Weight
1331	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.2	Aggregate Weight
1332	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.3	Aggregate Weight
1333	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.4	Aggregate Weight
1334	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.5	Aggregate Weight
1335		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.6	
1336		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.7	
1337	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	7/8"	Sieve Size:	Retained	5/8"	Total Weights	
1338	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.1	Aggregate Weight
1339	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.2	Aggregate Weight
1340	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.3	Aggregate Weight
1341	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.4	Aggregate Weight
1342	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.5	Aggregate Weight
1343		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.6	
1344		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.7	
1345	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	5/8"	Sieve Size:	Retained	3/8"	Total Weights	
1346	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.1	Aggregate Weight
1347	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.2	Aggregate Weight
1348	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.3	Aggregate Weight
1349	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.4	Aggregate Weight
1350	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.5	Aggregate Weight
1351		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.6	
1352		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.7	
1353	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Total Weights	
1354	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.1	Aggregate Weight
1355	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.2	Aggregate Weight
1356	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.3	Aggregate Weight
1357	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.4	Aggregate Weight
1358	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.5	Aggregate Weight
1359		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.6	
1360		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.7	
1361	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Total Weights	
1362	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.1	Aggregate Weight
1363	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.2	Aggregate Weight

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
1364	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.3	Aggregate Weight
1365	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.4	Aggregate Weight
1366	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.5	Aggregate Weight
1367		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.6	
1368		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.7	
1369	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Total Weights	
1370	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.1	Aggregate Weight
1371	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.2	Aggregate Weight
1372	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.3	Aggregate Weight
1373	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.4	Aggregate Weight
1374	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.5	Aggregate Weight
1375		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.6	
1376		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.7	
1377	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Total Weights	
1378	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.1	Aggregate Weight
1379	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.2	Aggregate Weight
1380	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.3	Aggregate Weight
1381	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.4	Aggregate Weight
1382	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.5	Aggregate Weight
1383		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.6	
1384		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.7	
1385	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Total Weights	
1386	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.1	Aggregate Weight
1387	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.2	Aggregate Weight
1388	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.3	Aggregate Weight
1389	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.4	Aggregate Weight
1390	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.5	Aggregate Weight
1391		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.6	
1392		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.7	
1393	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Total Weights	
1394		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.1	Aggregate Weight
1395		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.2	Aggregate Weight
1396		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.3	Aggregate Weight
1397		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.4	Aggregate Weight
1398		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.5	Aggregate Weight
1399		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.6	
1400		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.7	
1401		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Total Weights	
1402	No	HMACP MIXTURE DESIGN : COMBINED GRADATION	WMA Included in Design?							
1403		HMACP MIXTURE DESIGN : COMBINED GRADATION	WMA TECHNOLOGY:							
1404	Fractiona	HMACP MIXTURE DESIGN : COMBINED GRADATION	Material Type	Bin No.8						
1405		HMACP MIXTURE DESIGN : COMBINED GRADATION	Material Type	Bin No.9						
1406		HMACP MIXTURE DESIGN : COMBINED GRADATION	Material Type	Bin No.10						
1407		HMACP MIXTURE DESIGN : COMBINED GRADATION	Material Source	Bin No.8						
1408		HMACP MIXTURE DESIGN : COMBINED GRADATION	Material Source	Bin No.9						
1409		HMACP MIXTURE DESIGN : COMBINED GRADATION	Material Source	Bin No.10						
1410		HMACP MIXTURE DESIGN : COMBINED GRADATION	RAS Type	Bin No.8						
1411	Tear-off	HMACP MIXTURE DESIGN : COMBINED GRADATION	RAS Type	Bin No.9						
1412		HMACP MIXTURE DESIGN : COMBINED GRADATION	RAS Type	Bin No.10						
1413		HMACP MIXTURE DESIGN : COMBINED GRADATION	Sample ID	Bin No.8						
1414		HMACP MIXTURE DESIGN : COMBINED GRADATION	Sample ID	Bin No.9						
1415		HMACP MIXTURE DESIGN : COMBINED GRADATION	Sample ID	Bin No.10						
1416	4.8	HMACP MIXTURE DESIGN : COMBINED GRADATION	Recycled Asphalt Binder (%)	Bin No.8						
1417		HMACP MIXTURE DESIGN : COMBINED GRADATION	Recycled Asphalt Binder (%)	Bin No.9						
1418		HMACP MIXTURE DESIGN : COMBINED GRADATION	Recycled Asphalt Binder (%)	Bin No.10						
1419	19.9	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual Bin (%):	Bin No.8						
1420	0	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual Bin (%):	Bin No.9						
1421	0	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual Bin (%):	Bin No.10						
1422	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Cum.% Passing	Sieve Size:	1"				
1423	19.9	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Wtd Cum. %	Sieve Size:	1"				
1424		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Cum.% Passing	Sieve Size:	1"				
1425		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Wtd Cum. %	Sieve Size:	1"				

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
1426		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Cum.% Passing	Sieve Size:	1"				
1427		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Wtd Cum. %	Sieve Size:	1"				
1428	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Cum.% Passing	Sieve Size:	7/8"				
1429	19.9	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Wtd Cum. %	Sieve Size:	7/8"				
1430		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Cum.% Passing	Sieve Size:	7/8"				
1431		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Wtd Cum. %	Sieve Size:	7/8"				
1432		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Cum.% Passing	Sieve Size:	7/8"				
1433		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Wtd Cum. %	Sieve Size:	7/8"				
1434	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Cum.% Passing	Sieve Size:	5/8"				
1435	19.9	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Wtd Cum. %	Sieve Size:	5/8"				
1436		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Cum.% Passing	Sieve Size:	5/8"				
1437		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Wtd Cum. %	Sieve Size:	5/8"				
1438		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Cum.% Passing	Sieve Size:	5/8"				
1439		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Wtd Cum. %	Sieve Size:	5/8"				
1440	94	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Cum.% Passing	Sieve Size:	3/8"				
1441	18.706	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Wtd Cum. %	Sieve Size:	3/8"				
1442		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Cum.% Passing	Sieve Size:	3/8"				
1443		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Wtd Cum. %	Sieve Size:	3/8"				
1444		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Cum.% Passing	Sieve Size:	3/8"				
1445		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Wtd Cum. %	Sieve Size:	3/8"				
1446	68.1	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Cum.% Passing	Sieve Size:	No. 4				
1447	13.5519	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Wtd Cum. %	Sieve Size:	No. 4				
1448		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Cum.% Passing	Sieve Size:	No. 4				
1449		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Wtd Cum. %	Sieve Size:	No. 4				
1450		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Cum.% Passing	Sieve Size:	No. 4				
1451		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Wtd Cum. %	Sieve Size:	No. 4				
1452	47.2	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Cum.% Passing	Sieve Size:	No. 10				
1453	9.3928	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Wtd Cum. %	Sieve Size:	No. 10				
1454		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Cum.% Passing	Sieve Size:	No. 10				
1455		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Wtd Cum. %	Sieve Size:	No. 10				
1456		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Cum.% Passing	Sieve Size:	No. 10				
1457		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Wtd Cum. %	Sieve Size:	No. 10				
1458	30.5	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Cum.% Passing	Sieve Size:	No. 40				
1459	6.0695	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Wtd Cum. %	Sieve Size:	No. 40				
1460		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Cum.% Passing	Sieve Size:	No. 40				
1461		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Wtd Cum. %	Sieve Size:	No. 40				
1462		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Cum.% Passing	Sieve Size:	No. 40				
1463		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Wtd Cum. %	Sieve Size:	No. 40				
1464	19.3	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Cum.% Passing	Sieve Size:	No. 80				
1465	3.8407	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Wtd Cum. %	Sieve Size:	No. 80				
1466		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Cum.% Passing	Sieve Size:	No. 80				
1467		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Wtd Cum. %	Sieve Size:	No. 80				
1468		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Cum.% Passing	Sieve Size:	No. 80				
1469		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Wtd Cum. %	Sieve Size:	No. 80				
1470	7.1	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Cum.% Passing	Sieve Size:	No. 200				
1471	1.4129	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Wtd Cum. %	Sieve Size:	No. 200				
1472		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Cum.% Passing	Sieve Size:	No. 200				
1473		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Wtd Cum. %	Sieve Size:	No. 200				
1474		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Cum.% Passing	Sieve Size:	No. 200				
1475		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Wtd Cum. %	Sieve Size:	No. 200				
1476		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Cum.% Passing	Sieve Size:					
1477		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Wtd Cum. %	Sieve Size:					
1478		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Cum.% Passing	Sieve Size:					
1479		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Wtd Cum. %	Sieve Size:					
1480		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Cum.% Passing	Sieve Size:					
1481		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Wtd Cum. %	Sieve Size:					
1482		HMACP MIXTURE DESIGN : COMBINED GRADATION	Hydrated Lime?:	Bin No.1						
1483		HMACP MIXTURE DESIGN : COMBINED GRADATION	Hydrated Lime?:	Bin No.2						
1484		HMACP MIXTURE DESIGN : COMBINED GRADATION	Hydrated Lime?:	Bin No.3						
1485		HMACP MIXTURE DESIGN : COMBINED GRADATION	Hydrated Lime?:	Bin No.4						
1486		HMACP MIXTURE DESIGN : COMBINED GRADATION	Hydrated Lime?:	Bin No.5						
1487		HMACP MIXTURE DESIGN : COMBINED GRADATION	Hydrated Lime?:	Bin No.6						

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
1488		HMACP MIXTURE DESIGN : COMBINED GRADATION	Hydrated Lime?:	Bin No.7						
1489	23.4146	HMACP MIXTURE DESIGN : COMBINED GRADATION	Ratio of Recycled to Total Binder, %							
1490		HMACP MIXTURE DESIGN : COMBINED GRADATION	Binder Substitution?							
1491		HMACP MIXTURE DESIGN : COMBINED GRADATION	Binder Originally Specified:							
1492		HMACP MIXTURE DESIGN : COMBINED GRADATION	Substitute Binder:							
1493	n/a	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Recycled Materials	Tex-217-F, Part III	Max.	Spec. Limit				
1494		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Recycled Materials	Tex-217-F, Part III	Bin No.8	Result				
1495		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Recycled Materials	Tex-217-F, Part III	Bin No.8	Sample ID				
1496		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Recycled Materials	Tex-217-F, Part III	Bin No.9	Result				
1497		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Recycled Materials	Tex-217-F, Part III	Bin No.9	Sample ID				
1498		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Recycled Materials	Tex-217-F, Part III	Bin No.10	Result				
1499		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Recycled Materials	Tex-217-F, Part III	Bin No.10	Sample ID				
1500	0	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.8	Individual Ret., %	Passing	-	Sieve Size:	Retained	1"	
1501	0	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.8	Individual Ret., %	Passing	1"	Sieve Size:	Retained	7/8"	
1502	0	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.8	Individual Ret., %	Passing	7/8"	Sieve Size:	Retained	5/8"	
1503	1.194	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.8	Individual Ret., %	Passing	5/8"	Sieve Size:	Retained	3/8"	
1504	5.1541	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.8	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
1505	4.1591	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.8	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
1506	3.3233	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.8	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
1507	2.2288	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.8	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
1508	2.4278	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.8	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
1509	1.4129	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.8	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
1510		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.8	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
1511	19.9	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.8	Individual Ret., %	Total:					
1512	6.3481	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.8	Individual Ret., %	Percent of plus No. 4					
1513		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.9	Individual Ret., %	Passing	-	Sieve Size:	Retained	1"	
1514		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.9	Individual Ret., %	Passing	1"	Sieve Size:	Retained	7/8"	
1515		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.9	Individual Ret., %	Passing	7/8"	Sieve Size:	Retained	5/8"	
1516		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.9	Individual Ret., %	Passing	5/8"	Sieve Size:	Retained	3/8"	
1517		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.9	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
1518		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.9	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
1519		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.9	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
1520		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.9	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
1521		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.9	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
1522		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.9	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
1523		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.9	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
1524		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.9	Individual Ret., %	Total:					
1525		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.9	Individual Ret., %	Percent of plus No. 4					
1526		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.10	Individual Ret., %	Passing	-	Sieve Size:	Retained	1"	
1527		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.10	Individual Ret., %	Passing	1"	Sieve Size:	Retained	7/8"	
1528		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.10	Individual Ret., %	Passing	7/8"	Sieve Size:	Retained	5/8"	
1529		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.10	Individual Ret., %	Passing	5/8"	Sieve Size:	Retained	3/8"	
1530		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.10	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
1531		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.10	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
1532		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.10	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
1533		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.10	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
1534		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.10	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
1535		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.10	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
1536		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.10	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
1537		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.10	Individual Ret., %	Total:					
1538		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.10	Individual Ret., %	Percent of plus No. 4					
1539	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	-	Sieve Size:	Retained	1"	Bin No.8	Fractionated RAP Weight
1540		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	-	Sieve Size:	Retained	1"	Bin No.9	
1541		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	-	Sieve Size:	Retained	1"	Bin No.10	
1542	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	1"	Sieve Size:	Retained	7/8"	Bin No.8	Fractionated RAP Weight
1543		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	1"	Sieve Size:	Retained	7/8"	Bin No.9	
1544		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	1"	Sieve Size:	Retained	7/8"	Bin No.10	
1545	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.8	Fractionated RAP Weight
1546		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.9	
1547		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.10	
1548	12.542	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.8	Fractionated RAP Weight
1549		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.9	

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
1550		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.10	
1551	54.1397	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.8	Fractionated RAP Weight
1552		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.9	
1553		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.10	
1554	43.688	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.8	Fractionated RAP Weight
1555		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.9	
1556		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.10	
1557	34.9086	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.8	Fractionated RAP Weight
1558		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.9	
1559		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.10	
1560	23.4118	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.8	Fractionated RAP Weight
1561		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.9	
1562		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.10	
1563	25.5021	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.8	Fractionated RAP Weight
1564		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.9	
1565		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.10	
1566	14.8414	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.8	Fractionated RAP Weight
1567		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.9	
1568		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.10	
1569		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.8	Fractionated RAP Weight
1570		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.9	
1571		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.10	
1572	209.034	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Totals	Bin No.8	Fractionated	RAP Weight			
1573		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Totals	Bin No.9					
1574		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Totals	Bin No.10					
1575	801	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	-	Sieve Size:	Retained	1"	Bin No.8	Fractionated RAP Weight
1576		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	-	Sieve Size:	Retained	1"	Bin No.9	
1577		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	-	Sieve Size:	Retained	1"	Bin No.10	
1578	801	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	1"	Sieve Size:	Retained	7/8"	Bin No.8	Fractionated RAP Weight
1579		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	1"	Sieve Size:	Retained	7/8"	Bin No.9	
1580		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	1"	Sieve Size:	Retained	7/8"	Bin No.10	
1581	801	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.8	Fractionated RAP Weight
1582		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.9	
1583		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.10	
1584	813.542	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.8	Fractionated RAP Weight
1585		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.9	
1586		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.10	
1587	867.682	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.8	Fractionated RAP Weight
1588		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.9	
1589		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.10	
1590	911.37	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.8	Fractionated RAP Weight
1591		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.9	
1592		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.10	
1593	946.278	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.8	Fractionated RAP Weight
1594		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.9	
1595		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.10	
1596	969.69	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.8	Fractionated RAP Weight
1597		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.9	
1598		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.10	
1599	995.192	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.8	Fractionated RAP Weight
1600		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.9	
1601		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.10	
1602	1010.03	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.8	Fractionated RAP Weight
1603		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.9	
1604		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.10	
1605		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.8	Fractionated RAP Weight
1606		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.9	
1607		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.10	
1608	32	HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Binder Ratio (%)						
1609	27.4286	HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Binder Ratio (%)						
1610	24	HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Binder Ratio (%)						
1611	21.3333	HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Binder Ratio (%)						

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
1612	19.2	HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Binder Ratio (%)						
1613	23.4146	HMACP MIXTURE DESIGN : SUMMARY SHEET	Binder Ratio @ OAC:							

Grade				Washed Sieve Min	Washed Sieve Max	VMA: Min
A Coarse Base	1-1/2"		37.5	98	100	11
	1"		25	78	94	
	3/4"		19	64	85	
	1/2"		12.5	50	70	
	No. 4		4.75	30	50	
	No. 8		2.36	22	36	
	No. 30		0.6	8	23	
	No. 50		0.3	3	19	
	No. 200		0.075	2	7	
B Fine Base	1"		25	100	100	12
	7/8"		22.4	95	100	
	5/8"		16	75	95	
	3/8"		9.5	60	80	
	No. 4		4.75	40	60	
	No. 10		2	27	40	
	No. 40		0.425	10	25	
	No. 80		0.18	3	13	
	No. 200		0.075	2	8	
C Coarse Surface	1"		25	100	100	13
	7/8"		22.4	100	100	
	3/8"		9.5	70	85	
	No. 4		4.75	43	63	
	No. 10		2	30	40	
	No. 40		0.425	10	25	
	No. 80		0.18	3	13	
	No. 200		0.075	2	8	
D Fine Surface	3/4"		19	100	100	14
	1/2"		12.5	100	100	
	3/8"		9.5	85	100	
	No. 4		4.75	50	70	
	No. 10		2	32	42	
	No. 40		0.425	11	26	
	No. 80		0.18	4	14	
	No. 200		0.075	2	8	
F Fine Mixture	3/4"		19	100	100	15
	3/8"		9.5	98	100	
	No. 4		4.75	70	90	
	No. 8		2.36	38	48	
	No. 30		0.6	12	27	
	No. 50		0.3	6	19	
	No. 200		0.075	2	7	
SP-A Base	2"		50	100	100	12.5
	1-1/2"		37.5	98	100	
	1"		25	90	100	
	3/4"		19	45	90	
	No. 4		4.75	19	90	
	No. 8		2.36	19	45	
	No. 16		1.18	1	45	
	No. 30		0.6	1	45	
	No. 50		0.3	1	45	
	No. 200		0.075	1	7	
SP-B Intermediate	1-1/2"		37.5	100	100	13.5
	1"		25	98	100	
	3/4"		19	90	100	
	1/2"		12.5	49	90	
	No. 4		4.75	23	90	
	No. 8		2.36	23	49	
	No. 16		1.18	2	49	
	No. 30		0.6	2	49	
	No. 50		0.3	2	49	
	No. 200		0.075	2	8	
SP-C Surface	1"		25	100	100	14.5
	3/4"		19	98	100	
	1/2"		12.5	90	100	
	3/8"		9.5	58	90	
	No. 4		4.75	28	90	
	No. 8		2.36	28	58	
	No. 16		1.18	2	58	
	No. 30		0.6	2	58	
	No. 50		0.3	2	58	
	No. 200		0.075	2	10	
SP-D Fine Mixture	3/4"		19	100	100	15.5
	1/2"		12.5	98	100	
	3/8"		9.5	90	100	
	No. 4		4.75	32	90	
	No. 8		2.36	32	67	
	No. 16		1.18	2	67	
	No. 30		0.6	2	67	
	No. 50		0.3	2	67	
	No. 200		0.075	2	10	
CMHB-C	1"		25	100	100	
	3/4"		19	98	100	
	1/2"		12.5	72	85	
	3/8"		9.5	50	70	

Goes with power 45 chart.

Sieve Size				Combined Gradation	Lower Spec Limit	Upper Spec Limit
1"	25	4.256699613	100	100	100	100
7/8"	22.4	4.051460492	95.17844483	98.206	95	100
5/8"	16	3.482202253	81.80521461	91.264	75	95
3/8"	9.5	2.754074109	64.69975237	74.194	60	80
No. 4	4.75	2.016100254	47.36299099	53.1683	40	60
No. 10	2	1.366040257	32.09153525	33.5028	27	40
No. 40	0.425	0.680416785	15.9846089	20.2676	10	25
No. 80	0.18	0.462245431	10.8592448	11.988	3	13
No. 200	0.075	0.31172926	7.323261877	4.4551	2	8

Recycled Material, %	Virgin Material, %
19.9	80.1

	Recycled Mat List	Total Percent
Fractionated RAP	Fractionated RAP	20
Unfractionated RAP		0
RAS	RAS	0

Special Provisions
341-024

JUNK FIELD #'S

BINDER SUBSTITUTION

PG 76-16	PG 70-16	PG 64-16	PG 82-22	PG 76-22	PG 70-22	PG 64-22	PG 58-22	PG 76-28	PG 70-28	PG 64-28	PG 58-28
				PG 70-22	PG 64-22	PG 58-22		PG 70-28	PG 64-28	PG 58-28	
				PG 64-22	PG 58-22			PG 64-28	PG 58-28		

restricted		# of Sieves with Coarse Aggregate
39.5	39.5	
26.8	30.8	
18.1	24.1	
13.6	17.5	
11.4	11.4	
		6
34.6	34.6	
22.3	28.3	
16.7	20.7	
13.7	13.7	
		6
39.1	39.1	
25.6	31.6	
19.1	23.1	
15.5	15.5	
		6
47.2	47.2	
31.6	37.6	
23.5	27.5	
18.7	18.7	
		5

Version: 5/20/2009

WMA Technology	WMA in Design?	Hydrated Lime	Mix Description
Advera	1	0	1
Aspha-Min			
Double Barrel Green			
Evotherm			
Redi-Set WMX			
Sasobit			
Terex			
Maxam			
Ultrafoam GX			

Version:12/01/2009

Sandstone		Limestone-Dolomite		Gravel		Igneous		Synthetic		Aggregate Code
Apple (Sawyer, OK)	0050437	1604	1501506	Canyon	0418814	Bird Hill	1523213	Streetman	1817502	1402702
Brownlee	1402704	Ardmore, OK	0050412	Beck	2110901	Davis, OK.	0050439			1402702
Sawyer, OK	0050447	Balcones Quarry	1504602	Boys Ranch	0418008	Jones Mill	0050122			1402702
		Beckmann	1501503	Broken Bow S & G	0050451	Knippa	1523206			1402702
		Bridgeport	0224904	D and D	2215905	McKelligon-Granite	2407206			
		Brownwood	2302501	Del Rio	2223301	Mill Creek (Grnt), OK.	0050433			
		Burnet	1402701	Galo	2224019	Padre Canyon	2411613			
		Butterfield	2407220	Goode-Anderson	0801701	Porcupine Mountain	0040105			
		Chambers	0224921	Highcard Ranch	2506507	Snyder, OK.	0050435			
		Chapman	1523211	Hoban	0619502	Sweet Home, AR.	0050106			
		Coleman, OK	0050414	Johnson	0411807	Vado	0050310			
		Cooperton, OK	0050415	Las Viboras	2110905					
		Davenport	1523214	Little River	0050114					
		Eastland	2306805	LS Pit	0418002					
		Feld	1424602	Luckett	0916104					
		Gibbs	0901408	Mansfield	0418001					
		Helotes	1501514	Matador	2517309					
		Hondo	1516314	Murphy	1323505					
		Huebner Road	1501507	Pettibone	1716608					
		Hunter	1504605	Pit 365	0916117					
		Rd.	1504606	Pit 424	1716611					
		Lake Bridgeport	0224902	Realitos	2106701					
		Lampasas	1402706	Reavis	2110906					
		Leach	0212001	Showers	2110904					
		Lone Star	1504607	Smith	0325205					
		Marble Falls	1402702	South Noodle	0812803					
		Matrimar	0040103	Stockett	0400604					
		McKelligon Dolo	2407201	Sweet 16	2206706					
		Mico # 68	1516315	Tasitas	2224014					
		Mill Creek, OK	0050445	Thrasher	2517302					
		Naruna	1402711	Woods	0505402					
		Nichols	1516312	Wynn	2215904					
		North Troy	0050448							
		Pate	0914710							
		Perch-Hill	0224901							
		Rankin	0623102							
		Richards Spur	0050405							
		Ruby	1410607							
		S.H. 211	1516310							
		Servtex	1504603							
		South Quarry	2407213							
		Spicewood	1402710							
		Springfield	0212002							
		Stringtown, OK	0050407							
		Tehuacana	0914708							
		Three Rivers	0050501							
		Turner	0722611							
		Weatherford	0218409							
		Weir	1424603							
		Yearwood	1424606							

Version: 2/10/2010

RAS Producer	RAS BIN
APAC- TX Cold Springs	
APAC-TX Gribble Plant	
APAC-TX Leston Plant	
APAC-TX Sunnyvale Plant	
Century Asphalt-Melendy Plant	
R. K. Hall Construction	
Ramming Paving- Buda	
Ramming Paving- Georgetown	
Recon Recycle	
Southwest Shingle Recyc	
Sustainable Pvmt Tech-Pasadena	
Sustainable Pvmt Tech-Schertz	
Waste Management WMAP	

CMHB-C Coarse Surface	No. 4		4.75	30	45	13						
	No. 8		2.36	17	27							
	No. 16		1.18	5	27							
	No. 30		0.6	5	27							
	No. 50		0.3	5	27							
	No. 200		0.075	5	9							6
CMHB-F Fine Surface	3/4"		19	100	100	14						
	1/2"		12.5	98	100							
	3/8"		9.5	85	100							
	No. 4		4.75	40	60							
	No. 8		2.36	17	27							
	No. 16		1.18	5	27							
	No. 30		0.6	5	27							
	No. 50		0.3	5	27							
	No. 200		0.075	5	9							5
SMA-C Coarse	3/4"		19	100	100	17						
	1/2"		12.5	80	90							
	3/8"		9.5	25	60							
	No. 4		4.75	20	28							
	No. 8		2.36	14	20							
	No. 16		1.18	8	20							
	No. 30		0.6	8	20							
	No. 50		0.3	8	20							
	No. 200		0.075	8	12							5
SMA-D Medium	3/4"		19	100	100	17						
	1/2"		12.5	85	99							
	3/8"		9.5	50	75							
	No. 4		4.75	20	32							
	No. 8		2.36	16	28							
	No. 16		1.18	8	28							
	No. 30		0.6	8	28							
	No. 50		0.3	8	28							
	No. 200		0.075	8	12							5
SMA-F Fine	1/2"		12.5	100	100	17						
	3/8"		9.5	70	90							
	No. 4		4.75	30	50							
	No. 8		2.36	20	30							
	No. 16		1.18	8	30							
	No. 30		0.6	8	30							
	No. 50		0.3	8	30							
	No. 200		0.075	8	14							4
SMAR-C Coarse	3/4"		19	100	100	18.5						
	1/2"		12.5	72	85							
	3/8"		9.5	50	70							
	No. 4		4.75	30	45							
	No. 8		2.36	17	27							
	No. 16		1.18	12	22							
	No. 30		0.6	8	20							
	No. 50		0.3	6	15							
	No. 200		0.075	5	9							5
SMAR-F Fine	3/4"		19	100	100	18.5						
	3/8"		9.5	95	100							
	No. 4		4.75	40	50							
	No. 8		2.36	17	27							
	No. 16		1.18	12	22							
	No. 30		0.6	8	20							
	No. 50		0.3	6	15							
	No. 200		0.075	5	9							4
PFC PG 76 Mixtures	3/4"		19	100	100							
	1/2"		12.5	80	100							
	3/8"		9.5	35	60							
	No. 4		4.75	1	20							
	No. 8		2.36	1	10							
	No. 200		0.075	1	4							
PFC A-R Mixtures	3/4"		19	100	100							
	1/2"		12.5	95	100							
	3/8"		9.5	50	80							
	No. 4		4.75	0	8							
	No. 8		2.36	0	4							
	No. 200		0.075	0	4							
Other			#N/A									
			#N/A									
			#N/A									
			#N/A									
			#N/A									
			#N/A									
			#N/A									
			#N/A									
			#N/A									
			#N/A									

						AC CONTENT		Membrane Application Rates		
						MIN	MAX	MIN	MAX	SA Factors
UTBWC-A	3/8"		9.5	100	100	5.0	5.8	0.14	0.19	0.41
	No. 4		4.75	35	55					0.41
	No. 8		2.36	19	30					0.82
	No. 16		1.18	14	25					1.64
	No. 30		0.6	10	18					2.87
	No. 50		0.3	7	14					6.14
	No. 100		0.15	5	10					12.29
	No. 200		0.075	4	6					32.77
UTBWC-B	1/2"		12.5	100	100	4.8	5.6	0.17	0.24	0.41
	3/8"		9.5	75	100					-
	No. 4		4.75	22	36					0.41
	No. 8		2.36	19	30					0.82
	No. 16		1.18	14	24					1.64
	No. 30		0.6	10	18					2.87
	No. 50		0.3	7	14					6.14
	No. 100		0.15	5	10					12.29
	No. 200		0.075	4	6					32.77
	3/4"		19	100	100					0.41
	1/2"		12.5	75	100					-

UTBWC-C	3/8"		9.5	55	80				4.6	5.6	0.20	0.27	-		
	No. 4		4.75	22	36								0.41		
	No. 8		2.36	19	30								0.82		
	No. 16		1.18	14	24								1.64		
	No. 30		0.6	10	18								2.87		
	No. 50		0.3	7	14								6.14		
	No. 100		0.15	5	10								12.29		
	No. 200		0.075	4	6								32.77		
SS3111-CA Mix	3/8"		9.5	98	100										
	No. 4		4.75	70	90										
	No. 8		2.36	40	65										
	No. 16		1.18	20	45	15.5			6.5	99999999					
	No. 30		0.6	10	30										
	No. 50		0.3	10	20										
	No. 200		0.075	2	10									Min Lab Density	Max Lab Density
JTBHMWC-A	3/8"		9.5	100	100								0.41		
	No. 4		4.75	35	55								0.41		
	No. 8		2.36	19	30								0.82		
	No. 16		1.18	14	25				5.0	5.8	0.14	0.20	1.64	85.0	92.0
	No. 30		0.6	10	18								2.87		
	No. 50		0.3	7	14								6.14		
	No. 100		0.15	5	10								12.29		
	No. 200		0.075	4	6								32.77		
JTBHMWC-B	1/2"		12.5	100	100								0.41		
	3/8"		9.5	75	100								-		
	No. 4		4.75	22	36								0.41		
	No. 8		2.36	19	30								0.82		
	No. 16		1.18	14	24				4.8	5.6	0.16	0.24	1.64	85.0	92.0
	No. 30		0.6	10	18								2.87		
	No. 50		0.3	7	14								6.14		
	No. 100		0.15	5	10								12.29		
	No. 200		0.075	4	6								32.77		
JTBHMWC-C	3/4"		19	100	100								0.41		
	1/2"		12.5	75	100								-		
	3/8"		9.5	55	80								-		
	No. 4		4.75	22	36								0.41		
	No. 8		2.36	19	30				4.6	5.6	0.17	0.27	0.82	85.0	92.0
	No. 16		1.18	14	24								1.64		
	No. 30		0.6	10	18								2.87		
	No. 50		0.3	7	14								6.14		
	No. 100		0.15	5	10								12.29		
	No. 200		0.075	4	6								32.77		
TBPFC PG 76 Mixtures	3/4"		19	100	100										
	1/2"		12.5	80	100										
	3/8"		9.5	35	60				6.0	7.0	0.000	0.000		78.0	82.0
	No. 4		4.75	1	20										
	No. 8		2.36	1	10										
	No. 200		0.075	1	4										
TBPFC A-R Mixtures	3/4"		19	100	100										
	1/2"		12.5	95	100										
	3/8"		9.5	50	80				8.0	10.0	0.000	0.000		78.0	82.0
	No. 4		4.75	0	8										
	No. 8		2.36	0	4										
	No. 200		0.075	0	4										

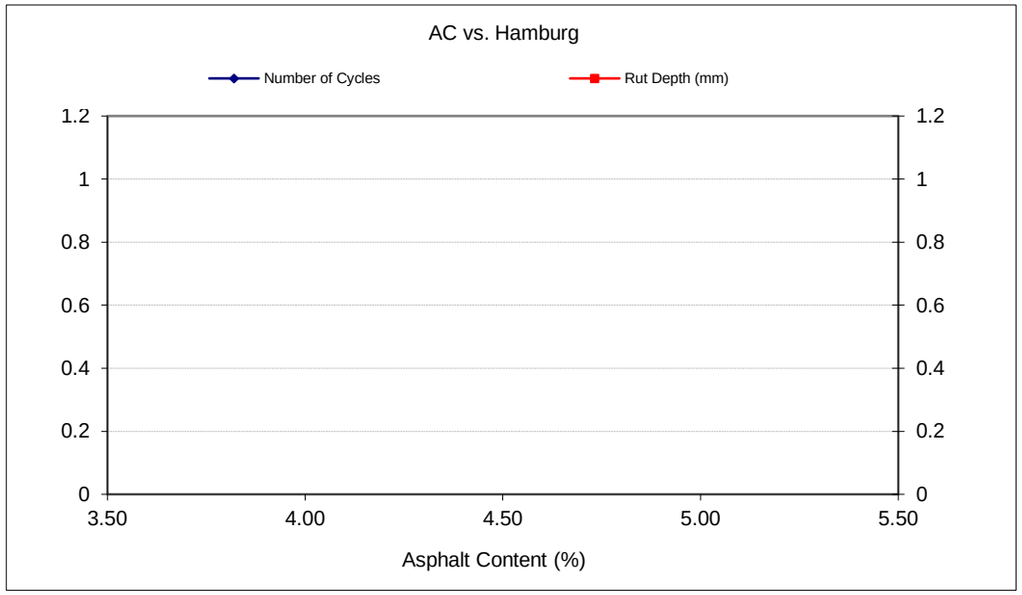
Gradation Table

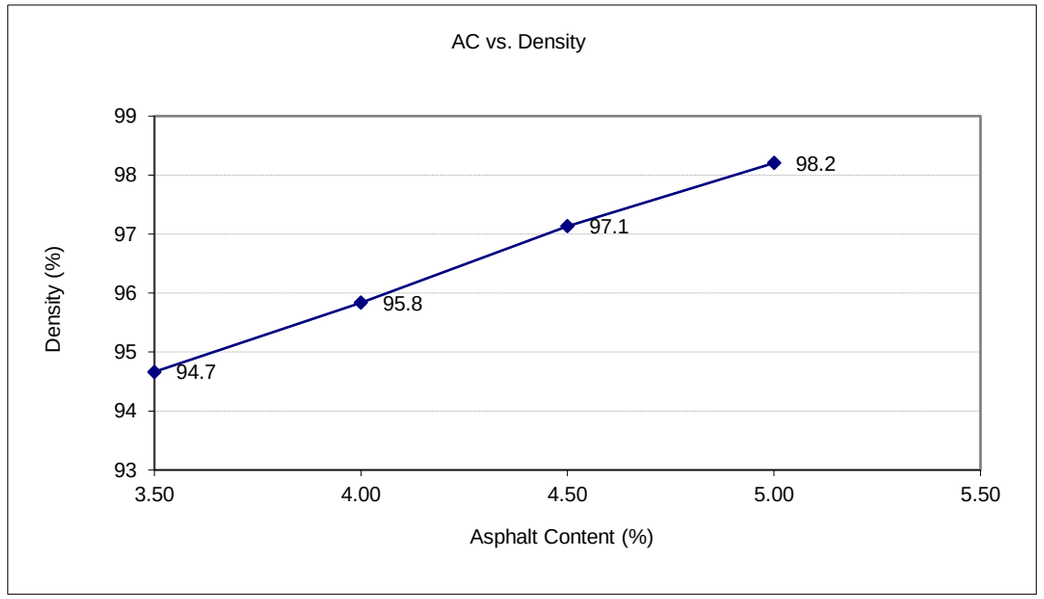
English	Metric	Selection	Size
2"	50 mm	2"	50
1-3/4"	45 mm	1-3/4"	45
1-1/2"	37.5 mm	1-1/2"	37.5
1-1/4"	31.5 mm	1-1/4"	31.5
1"	25 mm	1"	25
7/8"	22.4 mm	7/8"	22.4
3/4"	19 mm	3/4"	19
5/8"	16 mm	5/8"	16
1/2"	12.5 mm	1/2"	12.5
7/16"	11.2 mm	7/16"	11.2
3/8"	9.5 mm	3/8"	9.5
5/16"	8 mm	5/16"	8
1/4"	6.3 mm	1/4"	6.3
No. 4	4.75 mm	No. 4	4.75
No. 6	3.35 mm	No. 6	3.35
No. 8	2.36 mm	No. 8	2.36
No. 10	2 mm	No. 10	2
No. 14	1.4 mm	No. 14	1.4
No. 16	1.18 mm	No. 16	1.18
No. 20	.85 µm	No. 20	0.85
No. 30	.6 µm	No. 30	0.6
No. 40	.425 µm	No. 40	0.425
No. 50	.3 µm	No. 50	0.3
No. 80	.18 µm	No. 80	0.18
No. 100	.15 µm	No. 100	0.15
No. 200	.075 µm	No. 200	0.075

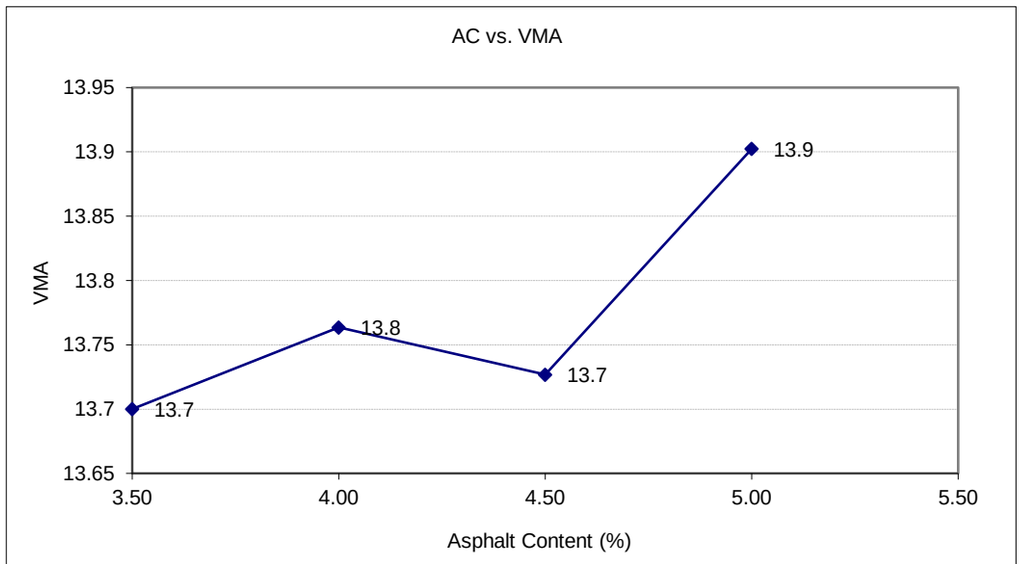
MIX TYPES
ITEM340_A_Coarse_B
ITEM340_B_Fine_Bas
ITEM340_C_Coarse_S
ITEM340_D_Fine_Sur
ITEM340_F_Fine_Mix
ITEM341_A_Coarse_B
ITEM341_B_Fine_Bas
ITEM341_C_Coarse_S
ITEM341_D_Fine_Sur
ITEM341_F_Fine_Mix
ITEM344_SP_A_Base
ITEM344_SP_B_Inter
ITEM344_SP_C_Surfa
ITEM344_SP_D_Fine
ITEM344_CMHB_C_C
ITEM344_CMHB_F_F
ITEM346_SMA_C_Co
ITEM346_SMA_D_Me
ITEM346_SMA_F_Fin
ITEM346_SMAR_C_C
ITEM346_SMAR_F_F
ITEM342_PFC_PG_76
ITEM342_PFC_A_R_M
ITEM3001_UTBWC_A
ITEM3001_UTBWC_B
ITEM3001_UTBWC_C
SS3111_CA_Mix
ITEM3142_UTBWC_A
ITEM3142_UTBWC_B
ITEM3142_UTBWC_C
CAM
TBPFC_PG76
TBPFC_AR
Other

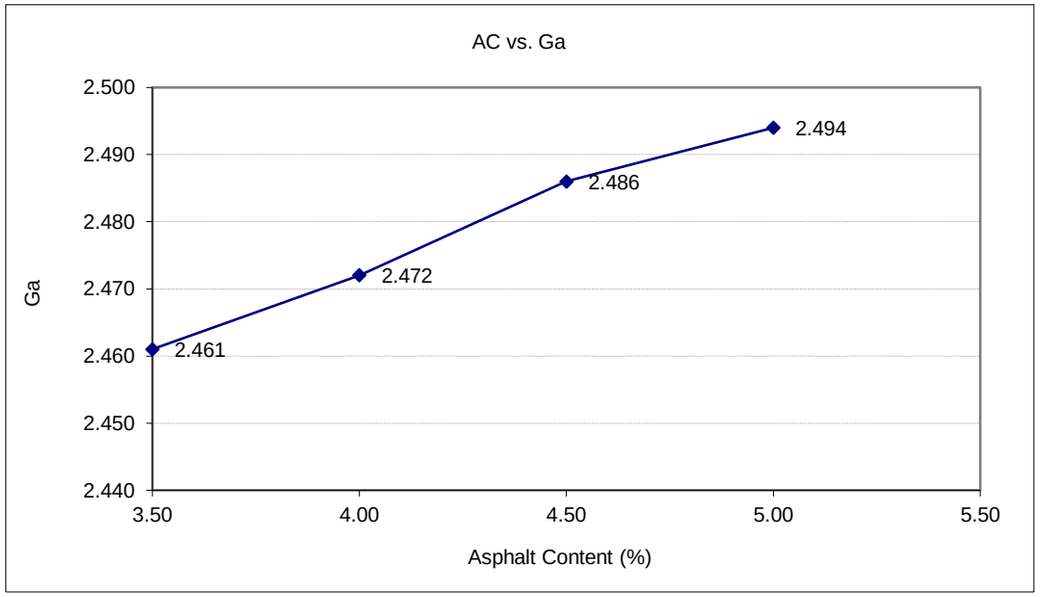
Membrane Application Check
0

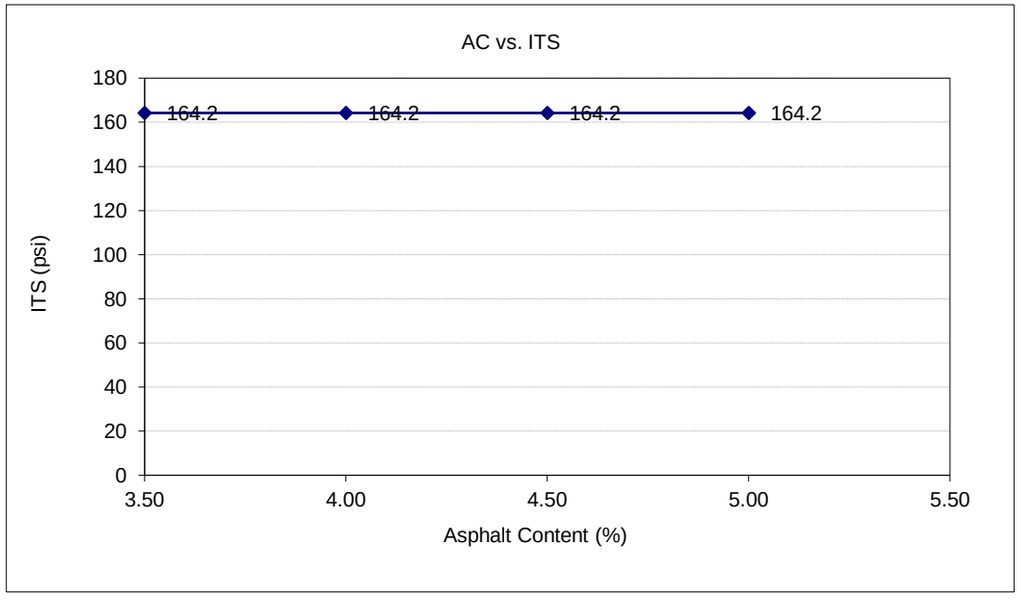
MINIMUM PFC AC CONTENT	
Bulk Specific Gravity	Minimum AC%
0.000	6.0
2.750	6.0
2.800	5.9
2.850	5.8
2.900	5.7
2.950	5.6
3.000	5.5
9999999999.000	5.5

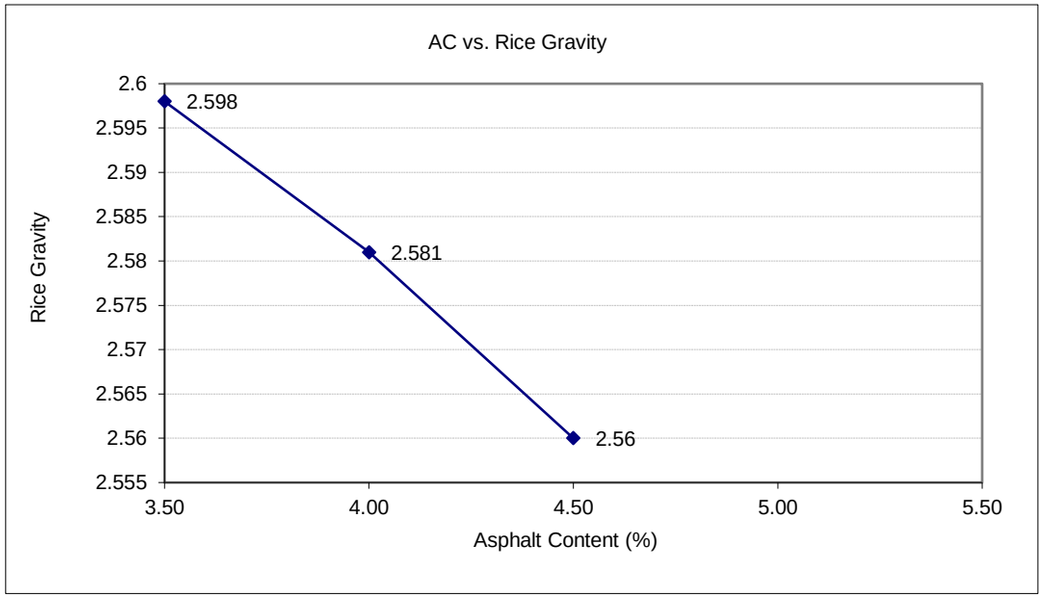

AC vs. Hamburg
Number of Cycles
Rut Depth (mm)
1.2
1
0.8
0.6
0.4
0.2
0
3.50
4.00
4.50
5.00
5.50
Asphalt Content (%)


AC vs. Density
Density (%)
99
98
97
96
95
94
93
98.2
97.1
95.8
94.7
3.50
4.00
4.50
5.00
5.50
Asphalt Content (%)


AC vs. VMA
VMA
13.95
13.9
13.85
13.8
13.75
13.7
13.65
13.9
13.8
13.7
13.7
3.50
4.00
4.50
5.00
5.50
Asphalt Content (%)


AC vs. Ga
Ga
2.500
2.490
2.480
2.470
2.460
2.450
2.440
2.494
2.486
2.472
2.461
3.50
4.00
4.50
5.00
5.50
Asphalt Content (%)


AC vs. ITS
ITS (psi)
180
160
140
120
100
80
60
40
20
0
164.2
164.2
164.2
164.2
3.50
4.00
4.50
5.00
5.50
Asphalt Content (%)


AC vs. Rice Gravity
Rice Gravity
2.6
2.595
2.59
2.585
2.58
2.575
2.57
2.565
2.56
2.555
2.598
2.581
2.56
3.50
4.00
4.50
5.00
5.50
Asphalt Content (%)

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : COMBINED GRADATION

Refresh Workbook

File Version: 06/07/10 10:24:04

SAMPLE ID:		SAMPLE DATE:	3/12/18
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:	Travis	SPEC YEAR:	2004
SAMPLED BY:	William Champion #770	SPEC ITEM:	340
SAMPLE LOCATION:	Design	SPECIAL PROVISION:	
MATERIAL CODE:		MIX TYPE:	ITEM340_B_Fine_Base
MATERIAL NAME:	HMAC Type B		
PRODUCER:	Texas Materials Bolm Road		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:	Non-Surface (<8 in.)	STATION:		DIST. FROM CL:		CONTRACTOR DESIGN # :	1330B -76A

WMA Included in Design?	No
WMA TECHNOLOGY:	

Recycled Binder, %	
Bin No.8 :	1.0
Bin No.9 :	0.0
Bin No.10 :	0.0
Total	1.0

Ratio of Recycled to Total Binder, %
(based on binder percent (%) entered below in this worksheet)
23.4

	AGGREGATE BIN FRACTIONS							"RECYCLED MATERIALS"			
	Bin No.1	Bin No.2	Bin No.3	Bin No.4	Bin No.5	Bin No.6	Bin No.7	Bin No.8	Bin No.9	Bin No.10	
Aggregate Source:	Limestone_Dolom	Limestone_Dolom	Limestone_Dolom	Limestone_Dolom	Gravel			Fractionated RAP			Material Type
Aggregate Pit:	Marble Falls	Marble Falls	Marble Falls	Marble Falls							Material Source
Aggregate Number:	1402702	1402702	1402702	1402702					Tear-off		RAS Type
Sample ID:	B Rock	D Rock	F Rock	Man. Sand	C.A. Field Sand						Sample ID
Recycled Asphalt Binder (%)								4.8			
Hydrated Lime?:								20.0	% of Tot. Mix		% of Tot. Mix		% of Tot. Mix	Total Bin
Individual Bin (%):	26.0	15.0	12.0	16.0	11.1			19.9	% of Aggreg		% of Aggreg		% of Aggreg	100.0%

Sieve Size:	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum. % Passing	Lower	Upper	Within Spec's	Individual % Retained	Cumulative % Retained	Sieve Size
1"	100.0	26.0	100.0	15.0	100.0	12.0	100.0	16.0	100.0	11.1					100.0	19.9					100.0	100.0	100.0	Yes	0.0	0.0	1"
7/8"	93.1	24.2	100.0	15.0	100.0	12.0	100.0	16.0	100.0	11.1					100.0	19.9					98.2	95.0	100.0	Yes	1.8	1.8	7/8"
5/8"	66.4	17.3	100.0	15.0	100.0	12.0	100.0	16.0	100.0	11.1					100.0	19.9					91.3	75.0	95.0	Yes	6.9	8.7	5/8"
3/8"	10.3	2.7	91.4	13.7	100.0	12.0	100.0	16.0	100.0	11.1					94.0	18.7					74.2	60.0	80.0	Yes	17.1	25.8	3/8"
No. 4	2.5	0.7	24.3	3.6	69.2	8.3	99.9	16.0	99.4	11.0					68.1	13.6					53.2	40.0	60.0	Yes	21.0	46.8	No. 4
No. 10	1.8	0.5	4.9	0.7	5.3	0.6	71.9	11.5	97.0	10.8					47.2	9.4					33.5	27.0	40.0	Yes	19.7	66.5	No. 10
No. 40	1.2	0.3	3.2	0.5	2.9	0.3	30.9	4.9	73.1	8.1					30.5	6.1					20.3	10.0	25.0	Yes	13.2	79.7	No. 40
No. 80	1.0	0.3	2.8	0.4	2.4	0.3	18.3	2.9	38.3	4.3					19.3	3.8					12.0	3.0	13.0	Yes	8.3	88.0	No. 80
No. 200	0.8	0.2	2.3	0.3	2.0	0.2	4.9	0.8	13.2	1.5					7.1	1.4					4.5	2.0	8.0	Yes	7.5	95.5	No. 200

Combined Gradation

(Bold Italic) Not within specifications ***(Bold Italic)*** Not within specificaitons- Restricted Zone *(Italic)* Not cumulative

Lift Thickness, in:		Binder Substitution?		Binder Originally Specified:		Substitute Binder:
Asphalt Source & Grade:	Valero 76-22	Binder Percent, (%):	4.1	Asphalt Spec. Grav.:	1.030	
Antistripping Agent:		Percent, (%):				

Remarks:

Notes:

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : MATERIAL PROPERTIES

File Version: 06/07/10 10:24:04

SAMPLE ID:		SAMPLE DATE:	3/12/18
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:	Travis	SPEC YEAR:	2004
SAMPLED BY:	William Champion #770	SPEC ITEM:	340
SAMPLE LOCATION:	Design	SPECIAL PROVISION:	
MATERIAL CODE:		MIX TYPE:	ITEM340_B_Fine_Base
MATERIAL NAME:	HMAC Type B		
PRODUCER:	Texas Materials Bolm Road		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:	Non-Surface	STATION:		DIST. FROM CL:		CONTRACTOR DESIGN # :	1330B -76A

	Bin No.1	Bin No.2	Bin No.3	Bin No.4	Bin No.5	Bin No.6	Bin No.7
Individual Bin (%):	Bin No.1 = 26 %	Bin No.2 = 15 %	Bin No.3 = 12 %	Bin No.4 = 16 %	Bin No.5 = 11.1 %		
Aggregate Source:	Limestone_Dolom	Limestone_Dolom	Limestone_Dolom	Limestone_Dolom	Gravel		
Aggregate Number:	1402702	1402702	1402702	1402702			
Sample ID:	B Rock	D Rock	F Rock	Man. Sand	C.A. Field Sand		

Test Name	SiteManager Test Template	Test Method	Spec. Min or Max	Spec. Limit	Result	Sample ID	Result	Sample ID	Result	Sample ID	Result	Sample ID	Result	Sample ID	Result	Sample ID	Result	Sample ID
Stockpile					Bin No.1		Bin No.2		Bin No.3		Bin No.4		Bin No.5		Bin No.6		Bin No.7	
Decantation	Tx217	Tex-217-F	Max.	1.5	0.70		1.00		0.90									
Deleterious Mat'l	Tx217	Tex-217-F	Max.	1.5	0.00		0.00		0.00									
Surface Aggregate Classification	Tx4AgClas	Tex-438-A, Tex-612-J	Min.	B	B		B		B		B							
Magnesium Sulfate Soundness	Tx411M	Tex-411-A	Max.	30	7.00		7.00		7.00		7.00							
LA Abrasion	Tx410	Tex-410-A	Max.	40	30.00		30.00		30.00		30.00							
Crushed Faces Count	Tx460	Tex-460-A	Min.	n/a	n/a		n/a		n/a									
Flat & Elongated	Tx280	Tex-280-F	Max.	10	0.00		0.00		0.00									
Fine Aggregate					Bin No.1		Bin No.2		Bin No.3		Bin No.4		Bin No.5		Bin No.6		Bin No.7	
Bar Linear Shrinkage	Tx107	Tex-107-E	Max.	3							1.00							
Methylene Blue		AASHTO T330	Max.															
Combined Aggregate					Bin No.1		Bin No.2		Bin No.3		Bin No.4		Bin No.5		Bin No.6		Bin No.7	
Sand Equivalent	Tx203	Tex-203-F	Min.	45									65.00					
User Defined Testing					Bin No.1		Bin No.2		Bin No.3		Bin No.4		Bin No.5		Bin No.6		Bin No.7	
Use this area to enter any test methods, speciafications & test result that apply to this material(s) but are not not listed above. **1**																		
2																		
3																		
4																		
5																		
Recycled Materials					**Bin No.8**		**Bin No.9**		**Bin No.10**									
Deleterious Mat'l	Tx217	Tex-217-F, Part III	Max.	n/a														

Remarks:

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : Aggregate Classification

File Version: 06/07/10 10:24:04

SAMPLE ID:		SAMPLE DATE:	3/12/18
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:	Travis	SPEC YEAR:	2004
SAMPLED BY:	William Champion #770	SPEC ITEM:	340
SAMPLE LOCATION:	Design	SPECIAL PROVISION:	
MATERIAL CODE:		MIX TYPE:	ITEM340_B_Fine_Base
MATERIAL NAME:	HMAC Type B		
PRODUCER:	Texas Materials Bolm Road		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:	Non-Surf	STATION:		DIST. FROM CL:		CONTRACTOR DESIGN # :	1330B -76A

Aggregate Classification

	Bin No.1	Bin No.2	Bin No.3	Bin No.4	Bin No.5	Bin No.6	Bin No.7	Bin No.8	Bin No.9	Bin No.10
Individual Bin (%):	Bin No.1 = 26 %	Bin No.2 = 15 %	Bin No.3 = 12 %	Bin No.4 = 16 %	Bin No.5 = 11.1 %			Bin No.8 = 19.9 %		
Aggregate Source:	Limestone_Dolom	Limestone_Dolom	Limestone_Dolom	Limestone_Dolom	Gravel			Fractionated RAP		
Aggregate Number:	1402702	1402702	1402702	1402702						
Class (A) Rock (Y/N):	No	No	No	No	No					
Sieve Size: Passing	Sieve Size: Retained	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %
-	1"	0.0	0.0	0.0	0.0	0.0			0.0		
1"	7/8"	1.8	0.0	0.0	0.0	0.0			0.0		
7/8"	5/8"	6.9	0.0	0.0	0.0	0.0			0.0		
5/8"	3/8"	14.6	1.3	0.0	0.0	0.0			1.2		
3/8"	No. 4	2.0	10.1	3.7	0.0	0.1			5.2		
No. 4	No. 10	0.2	2.9	7.7	4.5	0.3			4.2		
No. 10	No. 40	0.2	0.3	0.3	6.6	2.7			3.3		
No. 40	No. 80	0.1	0.1	0.1	2.0	3.9			2.2		
No. 80	No. 200	0.1	0.1	0.0	2.1	2.8			2.4		
No. 200	Pan	0.2	0.3	0.2	0.8	1.5			1.4		
Total:		26.0	15.0	12.0	16.0	11.1			19.9		
Percent of plus No. 4		25.4	11.4	3.7	0.0	0.1			6.3		

Percent of plus No. 4 from class (A) Rock:	0.0
Total Percent of plus No. 4	46.8
Percent of plus No. 4 from class (A) Rock:	***0.0***

Remarks:

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : WEIGH UP SHEET

File Version: 06/07/10 10:24:04

SAMPLE ID:		SAMPLE DATE:	3/12/18
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:	Travis	SPEC YEAR:	2004
SAMPLED BY:	William Champion #770	SPEC ITEM:	340
SAMPLE LOCATION:	Design	SPECIAL PROVISION:	
MATERIAL CODE:		MIX TYPE:	ITEM340_B_Fine_Base
MATERIAL NAME:	HMAC Type B		
PRODUCER:	Texas Materials Bolm Road		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:	Non-Surfa	STATION:		DIST. FROM CL:		CONTRACTOR DESIGN # :	1330B -76A

Aggregate Weight, g:	1,000.0
4.1% Asphalt by Total Weight, g:	42.8
Total Weight, g:	1042.8

4.1% Asphalt by Total Weight, g:	42.8
Less Asphalt by Weight of Recycled Material, g:	10.0
(Valero 76-22) Asphalt to Add, g:	**32.7**

			Bin No.1	Bin No.2	Bin No.3	Bin No.4	Bin No.5	Bin No.6	Bin No.7	Bin No.8	Bin No.9	Bin No.10			
		Individual Bin (%):	Bin No.1 = 26 %	Bin No.2 = 15 %	Bin No.3 = 12 %	Bin No.4 = 16 %	Bin No.5 = 11.1 %			Bin No.8 = 20 %					
		Aggregate Source:	Limestone_Dolom	Limestone_Dolom	Limestone_Dolom	Limestone_Dolom	Gravel			Fractionated RAP					
		Aggregate Number:	1402702	1402702	1402702	1402702									
		Sample ID:	B Rock	D Rock	F Rock	Man. Sand	C.A. Field Sand								
	Sieve Size:		Aggregate Weight	Aggregate Weight	Aggregate Weight	Aggregate Weight	Aggregate Weight			Fractionated RAP Weight			Total Weights	Individual Retained, %	Cumulative Retained, %
	Passing	Retained													
INDIVIDUAL	-	1"	0.0	0.0	0.0	0.0	0.0			0.0			0.0	0.0	0.0
	1"	7/8"	17.9	0.0	0.0	0.0	0.0			0.0			17.9	1.8	1.8
	7/8"	5/8"	69.4	0.0	0.0	0.0	0.0			0.0			69.4	6.9	8.6
	5/8"	3/8"	145.9	12.9	0.0	0.0	0.0			12.5			171.3	17.0	25.6
	3/8"	No. 4	20.3	100.7	37.0	0.2	0.7			54.1			212.9	21.1	46.7
	No. 4	No. 10	1.8	29.1	76.7	44.8	2.7			43.7			198.8	19.7	66.4
	No. 10	No. 40	1.6	2.6	2.9	65.6	26.5			34.9			134.0	13.3	79.6
	No. 40	No. 80	0.5	0.6	0.6	20.2	38.6			23.4			83.9	8.3	87.9
	No. 80	No. 200	0.5	0.8	0.5	21.4	27.9			25.5			76.6	7.6	95.5
	No. 200	Pan	2.1	3.5	2.4	7.8	14.7			14.8			45.3	4.5	100.0
	Totals		260.0	150.0	120.0	160.0	111.0			209.0			**1,010.0**	Total includes asphalt from the recycled material aggregate	

Running Total:															
CUMULATIVE	-	1"	0.0	260.0	410.0	530.0	690.0			801.0			0.0		
	1"	7/8"	17.9	260.0	410.0	530.0	690.0			801.0			17.9		
	7/8"	5/8"	87.4	260.0	410.0	530.0	690.0			801.0			87.4		
	5/8"	3/8"	233.2	272.9	410.0	530.0	690.0			813.5			258.7		
	3/8"	No. 4	253.5	373.6	447.0	530.2	690.7			867.7			471.5		
	No. 4	No. 10	255.3	402.7	523.6	575.0	693.3			911.4			670.3		
	No. 10	No. 40	256.9	405.2	526.5	640.6	719.9			946.3			804.3		
	No. 40	No. 80	257.4	405.8	527.1	660.7	758.5			969.7			888.2		
	No. 80	No. 200	257.9	406.6	527.6	682.2	786.3			995.2			964.8	Total includes asphalt from the recycled material aggregate	
	No. 200	Pan	260.0	410.0	530.0	690.0	801.0			1,010.0			1,010.0		

Remarks:

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES

SAMPLE ID:		SAMPLE DATE:	3/12/18
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:	Travis	SPEC YEAR:	2004
SAMPLED BY:	William Champion #770	SPEC ITEM:	340
SAMPLE LOCATION:	Design	SPECIAL PROVISION:	
MATERIAL CODE:		MIX TYPE:	ITEM340_B_Fine_Base
MATERIAL NAME:	HMAC Type B		
PRODUCER:	Texas Materials Bolm Road		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:	Non-Surfa	STATION:		DIST. FROM CL:		CONTRACTOR DESIGN # :	1330B -76A

Blank Sample Weight, g:	

			Bin No.1	Bin No.2	Bin No.3	Bin No.4	Bin No.5	Bin No.6	Bin No.7			
Individual Bin (%):			Bin No.1 = 26 %	Bin No.2 = 15 %	Bin No.3 = 12 %	Bin No.4 = 16 %	Bin No.5 = 11.1 %					
Aggregate Source:			Limestone_Dolom	Limestone_Dolom	Limestone_Dolom	Limestone_Dolom	Gravel					
Aggregate Number:			1402702	1402702	1402702	1402702						
Sample ID:			B Rock	D Rock	F Rock	Man. Sand	C.A. Field Sand					
	Sieve Size:		Aggregate Weight	Aggregate Weight	Aggregate Weight	Aggregate Weight	Aggregate Weight			Total Weights	Individual Retained, %	Cumulative Retained, %
	Passing	Retained										
INDIVIDUAL	-	1"	0.0	0.0	0.0	0.0	0.0			0.0		
	1"	7/8"	0.0	0.0	0.0	0.0	0.0			0.0		
	7/8"	5/8"	0.0	0.0	0.0	0.0	0.0			0.0		
	5/8"	3/8"	0.0	0.0	0.0	0.0	0.0			0.0		
	3/8"	No. 4	0.0	0.0	0.0	0.0	0.0			0.0		
	No. 4	No. 10	0.0	0.0	0.0	0.0	0.0			0.0		
	No. 10	No. 40	0.0	0.0	0.0	0.0	0.0			0.0		
	No. 40	No. 80	0.0	0.0	0.0	0.0	0.0			0.0		
	No. 80	No. 200	0.0	0.0	0.0	0.0	0.0			0.0		
	No. 200	Pan	0.0	0.0	0.0	0.0	0.0			0.0		
	Totals		0.0	0.0	0.0	0.0	0.0			**0.0**	Total does not include recycled material	

Running Total:	

CUMULATIVE	-	1"	0.0	0.0	0.0	0.0	0.0			0.0		
	1"	7/8"	0.0	0.0	0.0	0.0	0.0			0.0		
	7/8"	5/8"	0.0	0.0	0.0	0.0	0.0			0.0		
	5/8"	3/8"	0.0	0.0	0.0	0.0	0.0			0.0		
	3/8"	No. 4	0.0	0.0	0.0	0.0	0.0			0.0		
	No. 4	No. 10	0.0	0.0	0.0	0.0	0.0			0.0		
	No. 10	No. 40	0.0	0.0	0.0	0.0	0.0			0.0		
	No. 40	No. 80	0.0	0.0	0.0	0.0	0.0			0.0		
	No. 80	No. 200	0.0	0.0	0.0	0.0	0.0			0.0		
	No. 200	Pan	0.0	0.0	0.0	0.0	0.0			0.0		

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : BULK GRAVITY

File Version: 06/07/10 10:24:04

SAMPLE ID:		SAMPLE DATE:	3/12/18
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:	Travis	SPEC YEAR:	2004
SAMPLED BY:	William Champion #770	SPEC ITEM:	340
SAMPLE LOCATION:	Design	SPECIAL PROVISION:	
MATERIAL CODE:		MIX TYPE:	ITEM340_B_Fine_Base
MATERIAL NAME:	HMAC Type B		
PRODUCER:	Texas Materials Bolm Road		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:	Non-Surfa	STATION:		DIST. FROM CL:		CONTRACTOR DESIGN # :	1330B -76A

	Bin No.1	Bin No.2	Bin No.3	Bin No.4	Bin No.5	Bin No.6	Bin No.7	Bin No.8	Bin No.9	Bin No.10
Individual Bin (%):	Bin No.1 = 26 %	Bin No.2 = 15 %	Bin No.3 = 12 %	Bin No.4 = 16 %	Bin No.5 = 11.1 %			Bin No.8 = 20 %		
Aggregate Source:	Limestone_Dolom	Limestone_Dolom	Limestone_Dolom	Limestone_Dolom	Gravel			Fractionated RAP		
Aggregate Number:	1402702	1402702	1402702	1402702						
Sample ID:	B Rock	D Rock	F Rock	Man. Sand	C.A. Field Sand					

Sieve Size:		Individual		Individual		Individual		Individual		Individual		Individual		Individual		Individual		Individual		Individual		Individual	
Passing	Retained	Ret., %	Bulk SG	Ret., %	Bulk SG	Ret., %	Bulk SG	Ret., %	Bulk SG	Ret., %	Bulk SG	Ret., %	Bulk SG	Ret., %	Bulk SG	Ret., %	Bulk SG	Ret., %	Bulk SG	Ret., %	Bulk SG	Ret., %	Bulk SG
	1"																						
1"	7/8"	6.9	2.788																				
7/8"	5/8"	26.7	2.788														2.558						
5/8"	3/8"	56.1	2.788	8.6	2.788											6.0	2.558						
3/8"	No. 4	7.8	2.794	67.1	2.794	30.8	2.794	0.1	2.815	0.6	2.642					25.9	2.558						
No. 4	No. 10	0.7	2.794	19.4	2.798	63.9	2.798	28.0	2.815	2.4	2.642.					20.9	2.558						
No. 10	No. 40	0.6	2.794	1.7	2.798	2.4	2.798	41.0	2.815	23.9	2.642					16.7	2.558						
No. 40	No. 80	0.2	2.794	0.4	2.798	0.5	2.798	12.6	2.815	34.8	2.642					11.2	2.591						
No. 80	No. 200	0.2	2.794	0.5	2.798	0.4	2.798	13.4	2.815	25.1	2.678					12.2	2.591						
No. 200	Pan	0.8	2.794	2.3	2.798	2.0	2.798	4.9	2.815	13.2	2.678					7.1	2.591						
Totals		100.0	2.789	100.0	2.794	100.0	2.797	100.0	2.815	100.0	2.721					100.0	2.568						
			9.3		5.4		4.3		5.7		4.1						7.7						

Combined Bulk Specific Gravity:	**2.740**
Coarse Agg. Combined BSG:	

Specific Gravity of Asphalt:	**1.030**

Remarks:

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : SUMMARY SHEET

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SAMPLE ID:		SAMPLE DATE:	3/12/18
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:	Travis	SPEC YEAR:	2004
SAMPLED BY:	William Champion #770	SPEC ITEM:	340
SAMPLE LOCATION:	Design	SPECIAL PROVISION:	
MATERIAL CODE:		MIX TYPE:	ITEM340_B_Fine_Base
MATERIAL NAME:	HMAC Type B		
PRODUCER:	Texas Materials Bolm Road		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:	Non-Surf	STATION:		DIST. FROM CL:		CONTRACTOR DESIGN # :	1330B -76A

Target Density, %:	**96.0**
Number of Gyrations:	

CRM* Content	

TEST SPECIMENS									Mixture Evaluation @ Optimum Asphalt Content			
									Indirect Tensile Strength (psi)	Hamburg Wheel Tracking Test		Overlay Tester Min. Number of Cycles
Asphalt Content (%)	Binder Ratio (%)	Specific Gravity Of Specimen (Ga)	Maximum Specific Gravity (Gr)	Effective Gravity (Ge)	Theo. Max. Specific Gravity (Gt)	Density from Gt (Percent)	VMA (Percent)	Hveem Stability (%)		Number of cycles	Rut depth (mm)	
3.0	32.0	2.451	2.615	2.746	2.623	93.5	13.7	75.0				
3.5	27.4	2.463	2.600	2.752	2.602	94.7	13.7	52.0				
4.0	24.0	2.473	2.584	2.757	2.581	95.8	13.8	44.0	177			
4.5	21.3	2.486	2.562	2.755	2.561	97.1	13.8	39.0				
5.0	19.2	2.493	2.547	2.761	2.542	98.1	14.0	28.0				

Effective Specific Gravity:	2.754

Estimated Percent of Stripping, %:	

Optimum Asphalt Content :	**4.1**	Binder Ratio @ OAC:	23.4
VMA @ Optimum AC:	**13.8**		

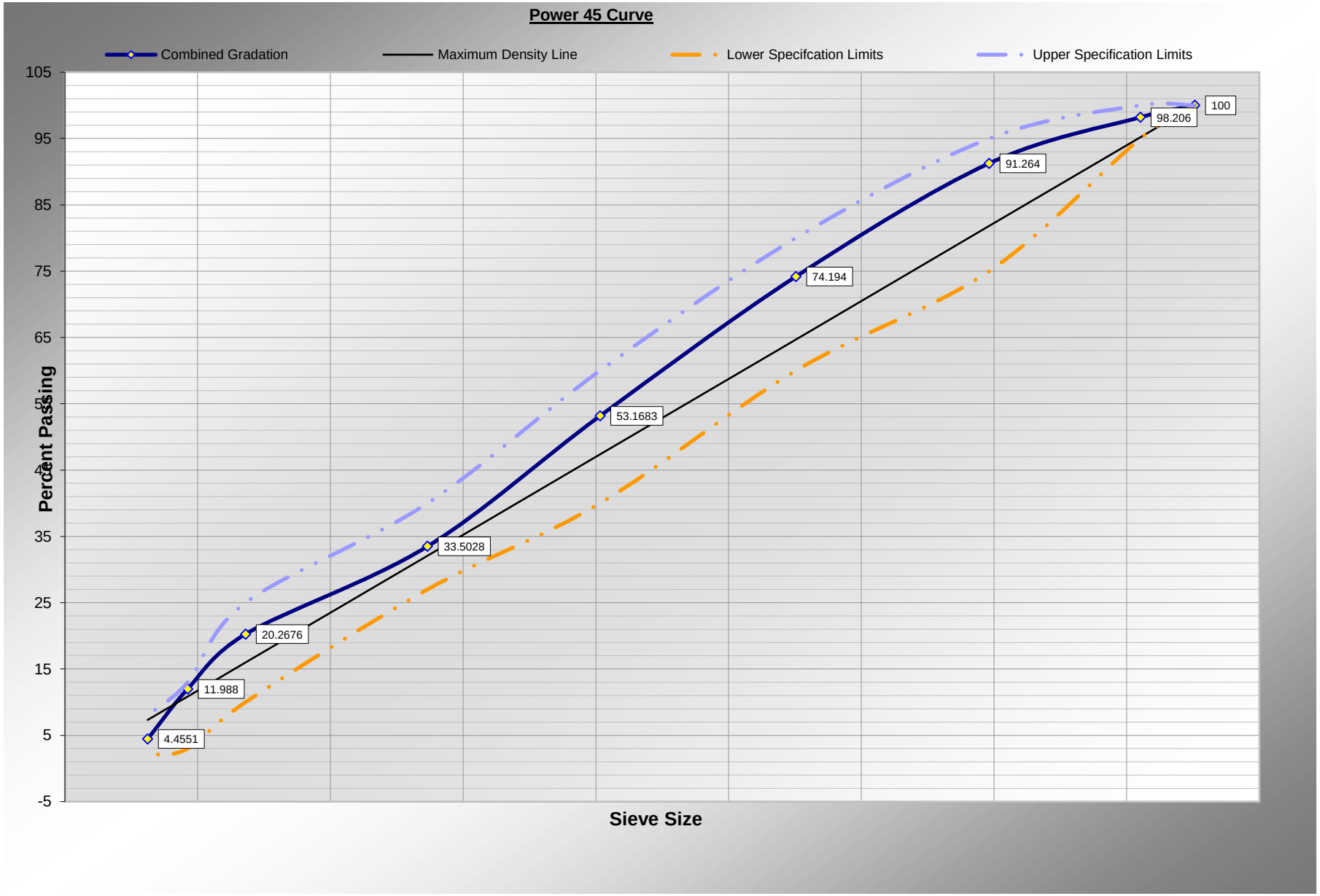
Interpolated Values	
Specific Gravity (Ga):	2.475
Max. Specific Gravity (Gr):	2.581
Theo. Max. Specific Gravity (Gt):	2.578

Remarks:

Date	Changes	By
7/20/2005	Add area in the Combined Gradation worksheet to enter in percent fiber for respective PFC and SMA mixtures in cells P42 to S42 Change field# for S42 (on the Combined Gradation worksheet) to Field383, and reference %Fiber value in the Summary sheet to cell S42 Add area in the Combined Gradation worksheet to enter in crumb rubber for respective PFC and SMA mixtures in cells T42 to W42 Change field# for W40 (on the Combined Gradation worksheet) to Field384, and reference % Crumb Rubber value in the Summary sheet to cell W40 Add conditional formatting for percent fiber and percent crumb rubber area so that only effected mixture types are represented on the combined gradation worksheet Add area to enter percent fiber and percent crumb rubber in the Summary worksheet (cell K18) Add field to calculate the weight of fiber or crumb rubber in the Weigh Up worksheet (cells S18 to V20) Add conditional formatting to the fiber and crumb rubber queries in the Weight Up worksheet so that only corresponding mixture types are represented Add sieves: 3/4", 1/2" & 3/8" to the SPA, SPB and SPC mixes, respectively, in the Std Spec GRADATIONS worksheet Set cell F38 in the summary sheet equal to IF(F31="Error","",VLOOKUP(0.075,DUST,16,FALSE)/F31). This will calculate the Dust to Asphalt ratio Add Gr to the densification section in the Summary worksheet Calculate densities in cells Z33 to Z35 on the Summary worksheet by using the Gr instead of the Gt Add "No" to the validation list for cell E42 on the Weigh Up worksheet Addition of "Version" to the Combined Gradation worksheet	Brett Haggerty
	Combined Gradation Worksheet	
	Add UTBWC Types A, B and C options to Mix Type T40 - Add Membrane Target Application Rate, Gal/SY	
	Summary Worksheet	
8/16/2005	Need Draindown and Cantabro Loss for UTBHMWC mix option Add AC%, Ga, Gr, Ge, Gt, Density from Gt, and Film Thickness columns to be used only for Film Thickness calculations in cells B29 to V35 Add only two inputs for AC% and Gr in cells B33 & F33, respectively. Add range of acceptable film thickness & AC% at those film thicknesses in cells B37 to AA37 (all calculated fields) Allow AC%, Ga, Gr, Ge, Gt, Density from Gt, and Film Thickness columns to be hidden when not analyzing UTBWC Increase width column for column B to 8.00	Brett Haggerty
	Film Thickness Worksheet	
	Need to create this worksheet to calculate film thickness at each asphalt content. Need to reference data in Summary worksheet Hide this sheet when UTBWC is not selected	
	Std Spec GRADATIONS	
9/21/2005	The Membrane Application Check is necessary for the conditional formatting on the Combined Gradation Worksheet cell T40. Because if a complex algorithm is entered for a second condition format the workbook becomes impossible to open and excel crashes. Specification tolerance for 1" sieve for Type A mix was incorrect. Corrected as specified in Item 341.	Richard Izzo
9/27/2005	Added min & max tolerances for the No. 4 sieve of SP mix types	Richard Izzo
2/14/2006	Changed the location of Fields 521 to 557 & Fields 572 to 587 to M25, these field definitions were orignally found in different locations for different worksheets. Now all of the definitions are identical and reference a dummy cell to prevent the overwrite of other data within the template.	Brett Haggerty
2/15/2006	Added Mixtypes 340-A, 340-B, 340-C, 340-D, & 340-F to the mixtype list, as well as the cell definition to direct mix specifcations. This includes the addition of five new definitions, one for each of the new mixtypes. The addition of the mixtype names to the mixtype definition is also adjusted to include the mixtypes. No other changes were necessary for these mixtypes as they will reference the same limits as the 341 mixtypes.	Brett Haggerty
3/13/2006	Add definitions Field596 to Field636, these are the definitions for the "Other" mixtype that should be stored in Sitemanager databases when accessing previous data.	Brett Haggerty
3/14/2006	Revised minimum specification for percent passing for No. 4 sieve for SP-A, B, C, and D mix types.	Richard Izzo
5/17/2007	Add the new mixtype SS3111 for Crack Attenuating Mixtures	Brett Haggerty
	Matl Properties	
9/27/2005	B31, F31, H31 - Replaced Flakiness Index with Flat & Elongated. Flakiness Index not required in 2004 specifications.	
	Sumary	
9/27/2005	Changed conditional formatting of cells B44 to F47. Font color changed to black. Added VFA calculation at optimum asphalt content in cells B43 & F43. Cells formatted to only show for Item 344. Color of cell B44 changed to distinguish cells above and below when using Item 344 as all cells will have text and may look confusing.	Richard Izzo
5/11/2006	Add the Dimensional Analysis for PFC mixtures (these calculations are new, and not adjustments to the old equations) Add the Backcalculated Rice for PFC mixtures (these calculations are new to the sheet and not adjustments to the old equations) Remove the Interpolated Values for UTBWC mixtypes and Mixture Densification	Brett Haggerty
	Combined Gradation Worksheet	
5/30/2006	Add the Contractor's Design Number to cell V17, as well as the addition of the new field #	Brett Haggerty
5/17/2007	Update the UPLC to 690 Add the Aggregate Pit to the bin information (these cells account for Fields 683-689)	Brett Haggerty

Date	Changes	By	
	Summary Worksheet		
	Include comments for the backcalculated specific gravities when using PFC. This will provide users with a better idea of how to read the specifications		
	Include the new output results, which there are 117 values. This is the resval & resname values. The 117 values are expressed by the ULOV cell		
8/22/2006	Added Field#'s 638-681	Brett Haggerty	
	Change the VFA Conditional Formatting to display when SS3111 mixtype is selected		
	Add new comment to cell H65 to display correct VFA limits if they are not met		
	Change Dust/Asphalt Ratio conditional formatting to display when SS3111 mixtype is selected		
5/17/2007	Add a new entry for the minimum number of cycles using the Overlay Tester. Cell AF24 (Field690)	Brett Haggerty	
	Std Spec GRADATIONS		
	Remove the 3/8" sieve from the Item341-A, Item340-A & Type-A mixtypes		
	Add the number of sieves that contribute to coarse aggreagte to the following mixtypes: SP-A, SP-B, SP-C, SP-D, CMHB-C, CMHB-F, SMA-C, SMA D, SMA-F, SMAR-C, SMAR-F		
	Combined Gradation Worksheet		
	Add the Dry Rodded Unit Weight cell, "S22". Also because this is an input field, change the ULOV to 682		
	Add a new version number "3" for the calculation of VCA, as opposed to when it was manually entered		
	Bulk Gravity		
	Include the Combined Bulk Specific Gravity for Coarse Aggregate calculation in cell "M40"		
	Summary Worksheet		
10/30/2006	Add the new calculated fields for VCA, "M67" & "M68". And adjust the conditional formatting to account for new version numbers.	Brett Haggerty	
	Weigh Up		
12/2/2006	Adjust Cell L39 to reference only column L in the Combined Gradation Worksheet	Brett Haggerty	
	Power 45 Curve		
5/17/2007	Adjust the macro to place brackets, "{", before and after the graphed data is updated	Brett Haggerty	Allows for compatibility with Excel 2007
	Matl Properties		
	Update cell K28 to remove the overlapping of conditional formatting ranges.		Allows for compatibility with Excel 2007 without significant loss of functionality
5/17/2007	Delete the cell definition "Draindown". This references a cell in a different workbook and causes fidelity errors with Excel 2007.	Brett Haggerty	
	Bulk Gravity		
	Adjusted cells: F39, G39, J39, K39, N39, O39, R39, S39, V39, W39, Z39, AA39, AD39, AE39. This accounts for moved cells		
	Summary Worksheet		
	Update cell F68 to access Target Density cell instead of using an assumed density value of 96%		
	Update cell M72 for the moving of cells & removal of resval definitions		
	Weigh Up		
	Adjust cell O20 to include +/- asphalt from RAP binder		
	Combined Gradation Worksheet		
3/13/2008	Add new version #4 to account for changes	Brett Haggerty	
	Matl Properties		
	Add Methylene Blue to the Fine Aggregate Analysis (Row 36)		
	Add Cell Definitions for the Methylene Blue tests: Field691-Field705		
	Std Spec GRADATIONS		
	Add mixtypes ITEM3142_UTBWC_A, ITEM3142_UTBWC_B, ITEM3142_UTBWC_C		
	Summary Worksheet		
	Hide the "Target Density" cells when any of the Item3142 mixtypes are selected		
	Hide Mixture Evaluation cells (W22:AG30) with the selection of the Item3142 mixtypes		
	Add Final Specimen cells for Item3142 mixtypes in cells B64:M66		
	Add Cell Definitions for final specimen cells AC, Ga & Gr; declared Field706, Field707, & Field708, respectively		
	Declare new row definition (trip_4) for showing/hiding final specimen cells for the Item3142 mixtype		
	Add the Suggested Membrane Target Application Rate cells B68:G68		
	Combined Gradation Worksheet		
	Update the UPLC to 709		
	Update the Film Thickness worksheet show option (located in the Combined Gradation worksheet macros) to include Item3142 mixtypes		
	Film Thickness Worksheet		
	Add Ga and Density from Gt cells for the Item3142 mixtypes, cells: D33:E39 & L33:M39		
	Add conditional formatting for the minimum and maximum film thickness calculations. They now hide with the selection of Item3142 mixtypes. Cells B41:M44.		
	Add AC vs. Film Thickness & AC vs. Density Charts		
	Add cell definition Field709 to cell G63 (predicted AC%)		
4/3/2008	Add the prediction film thickness & prediction density cells, I62:L63	Brett Haggerty	
	Summary Worksheet		
5/14/2008	Modified the Overlay Tester results to be hidden if the CAM mixtype is not selected.	Brett Haggerty	
	Std Spec GRADATIONS		
	Add the mixtype for "CAM", it is exactly the same as SS3111CA_Mix		
	Add the mixtype for "TBPFC", it is exactly the same as PFC		
	Summary Worksheet		

Date	Changes	By
	Modify the conditional formatting for the overlay tester results to display if the "CAM" mixtype is selected.	
6/5/2008	Modify the conditional formatting for all cells that use the PFC mixtype to include the same formats for TBPFC	Brett Haggerty
	Blank Weigh Up Worksheet	
2/27/2009	Need to create this new worksheet to prepare "blank" samples for the ignition oven correction factors.	Gisel Carrasco
	Combined Gradation Worksheet	
	Fixing equation in Cell O20 FROM: IF(OR(Authorized Date:>39493,AuthorizedDate=""), 4,IF(OR(AuthorizedDate>39022,AuthorizedDate=""), 3,IF(OR(AuthorizedDate>38579,AuthorizedDate=""),2,1))) TO: IF(OR(AuthorizedDate>40333,AuthorizedDate=""),5, IF(OR(AuthorizedDate>39493, AuthorizedDate=""),4, IF(OR(AuthorizedDate>39022,AuthorizedDate=""),3, IF(OR(AuthorizedDate>38579,AuthorizedDate=""),2,1)))) **Using Version #5 after 6/7/2010**	
	Add Item 341-024 to the Special Provision list (specprov). SP 341-024 can be used only when version>4	
	Add WMA technology information. It is required to enter the WMA information (V15), in order to enter aggregate bin percentages.	
	Change mix description cell (E18) to dropdown list	
	Change Aggregate Source, Pit, and Number (E22:Q24) to dropdown lists	
	Hide the Recycled Material row with versions > 4 and show Hydrated Lime row	
	Modify master gradation band limits for the #4 sieve for Type F mixture from 80-86 to 70-90. New limits are used with versions >4 or SP 341-024.	
	Add Bins 8, 9 & 10 for Recycled Materials only. Enter percentage by total mix to calculate percentage by total aggregate.	
	Calculate Recycled Binder for each bin and show Total Recycled Binder Percentage (AB18). Calculate Ratio of Recycled to Total Binder (AA24)	
	Add binder substitution information. Enter originally specified binder (Q43) and substitute binder (V43) when substitute binder is allowed.	
	Matl Properties	
	Add Deleterious Material test for the Recycled Material (row 46)	
	Aggregate Classification	
	Add Recycled Materials Bins (8, 9 &10). Don't classify Recycled Materials as Class A Rock.	
	Weigh Up & Bulk Gravity	
	Add Recycled Materials Bins (8, 9 &10).	
	Take CRM calculation out (Cell T19)	
	Summary Worksheet	
	Add Recycled Binder ratio for each asphalt content (C26:C30). Add ratio at OAC (I71).	
	Std Spec GRADATIONS	
	Add specprov table (J24), Recylced Material table (recycledlist), WMA table with approved technologies according to 2009 list (WMATech), aggregate table with approved aggragates and quarries according to Dec2009 list, & binder substitution table.	
4/12/2010	Move "Junk's Field #'s" to cell P24	Gisel Carrasco


Power 45 Curve
Combined Gradation
Maximum Density Line
Lower Specifcation Limits
Upper Specification Limits
105
95
85
75
65
55
45
35
25
15
5
-5
Percent Passing
Sieve Size
4.4551
11.988
20.2676
33.5028
53.1683
74.194
91.264
98.206
100

If you have any questions or comments concerning this program, or would like to obtain an updated version of this program (if it has been updated) contact the **Site Manager Tier I contact person for the District (District Lab)**. If you have any other concerns or questions contact Richard Izzo at 512-506-5832 or **Brett Haggerty at 512-506-5841** of the Construction Division or you may contact one of the

* **Getting Started**: Begin with the Combined Gradations or Summary sheet. Here you will select dependent variables such as specification year, mix type, asphalt content, combined aggregate, and others. These variable will affect the calculation of other sheets in the workbook.

    - **Spec Year**: Must be 2004

    - **Mix Type**: Select the correct mix type for this lot. Clicking in the green cell, adjacent to the mix type label, will reveal a small dropdown list. From this list select the mix type that most closely matches your mix. This value will determine what sieve sizes are displayed on the worksheets.
      Select Other if mix is not in the list and input parameters as required.
      A button labeled 'Enter Specifications' will appear above the Bin Fractions Table. Click on this button and a small table will appear on the screen labeled 'Other'. Enter the required sieve sizes, maximum and minimum master grading limits, and the required minimum VMA.

* To move from page to page click on the different sheet tabs at the bottom of the page.

1613										
Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
1		Remarks:								
2	Non-Surf	COURSE\LIFT:								
3		Tested By	TX207							
4		Tested Date	TX207							
5		Tested By	TX226							
6		Tested Date	TX226							
7		Tested By	TX227							
8		Tested Date	TX227							
9		Tested By	TX235							
10		Tested Date	TX235							
11		Tested By	TX242							
12		Tested Date	TX242							
13		Tested By	TX530							
14		Tested Date	TX530							
15		Tested By								
16		Tested Date								
17		Tested By								
18		Tested Date								
19	1330B -7	CONTRACTOR DESIGN # :								
20	Limeston	HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Source:	Bin No.1						
21	Limeston	HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Source:	Bin No.2						
22	Limeston	HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Source:	Bin No.3						
23	Limeston	HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Source:	Bin No.4						
24	Gravel	HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Source:	Bin No.5						
25		HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Source:	Bin No.6						
26		HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Source:	Bin No.7						
27	Marble F	HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Pit:	Bin No.1						
28	Marble F	HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Pit:	Bin No.2						
29	Marble F	HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Pit:	Bin No.3						
30	Marble F	HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Pit:	Bin No.4						
31		HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Pit:	Bin No.5						
32		HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Pit:	Bin No.6						
33		HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Pit:	Bin No.7						
34	1402702	HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Number:	Bin No.1						
35	1402702	HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Number:	Bin No.2						
36	1402702	HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Number:	Bin No.3						
37	1402702	HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Number:	Bin No.4						
38		HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Number:	Bin No.5						
39		HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Number:	Bin No.6						
40		HMACP MIXTURE DESIGN : COMBINED GRADATION	Aggregate Number:	Bin No.7						
41	B Rock	HMACP MIXTURE DESIGN : COMBINED GRADATION	Sample ID:	Bin No.1						
42	D Rock	HMACP MIXTURE DESIGN : COMBINED GRADATION	Sample ID:	Bin No.2						
43	F Rock	HMACP MIXTURE DESIGN : COMBINED GRADATION	Sample ID:	Bin No.3						
44	Man. San	HMACP MIXTURE DESIGN : COMBINED GRADATION	Sample ID:	Bin No.4						
45	C.A. Fiel	HMACP MIXTURE DESIGN : COMBINED GRADATION	Sample ID:	Bin No.5						
46		HMACP MIXTURE DESIGN : COMBINED GRADATION	Sample ID:	Bin No.6						
47		HMACP MIXTURE DESIGN : COMBINED GRADATION	Sample ID:	Bin No.7						
48		HMACP MIXTURE DESIGN : COMBINED GRADATION	Recycled Material?:	Bin No.1						
49		HMACP MIXTURE DESIGN : COMBINED GRADATION	Recycled Material?:	Bin No.2						
50		HMACP MIXTURE DESIGN : COMBINED GRADATION	Recycled Material?:	Bin No.3						
51		HMACP MIXTURE DESIGN : COMBINED GRADATION	Recycled Material?:	Bin No.4						
52		HMACP MIXTURE DESIGN : COMBINED GRADATION	Recycled Material?:	Bin No.5						
53		HMACP MIXTURE DESIGN : COMBINED GRADATION	Recycled Material?:	Bin No.6						
54		HMACP MIXTURE DESIGN : COMBINED GRADATION	Recycled Material?:	Bin No.7						
55		HMACP MIXTURE DESIGN : COMBINED GRADATION	Asphalt%:	Bin No.1						
56		HMACP MIXTURE DESIGN : COMBINED GRADATION	Asphalt%:	Bin No.2						
57		HMACP MIXTURE DESIGN : COMBINED GRADATION	Asphalt%:	Bin No.3						
58		HMACP MIXTURE DESIGN : COMBINED GRADATION	Asphalt%:	Bin No.4						
59		HMACP MIXTURE DESIGN : COMBINED GRADATION	Asphalt%:	Bin No.5						
60		HMACP MIXTURE DESIGN : COMBINED GRADATION	Asphalt%:	Bin No.6						
61		HMACP MIXTURE DESIGN : COMBINED GRADATION	Asphalt%:	Bin No.7						

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
62	26	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual Bin (%):	Bin No.1						
63	15	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual Bin (%):	Bin No.2						
64	12	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual Bin (%):	Bin No.3						
65	16	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual Bin (%):	Bin No.4						
66	11.1	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual Bin (%):	Bin No.5						
67		HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual Bin (%):	Bin No.6						
68		HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual Bin (%):	Bin No.7						
69		HMACP MIXTURE DESIGN : COMBINED GRADATION	Dry Rodded Unit Weight of Coarse Agg. (pcf)							
70	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Cum.% Passing	Sieve Size:	1"				
71	26	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Wtd Cum. %	Sieve Size:	1"				
72	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Cum.% Passing	Sieve Size:	1"				
73	15	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Wtd Cum. %	Sieve Size:	1"				
74	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Cum.% Passing	Sieve Size:	1"				
75	12	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Wtd Cum. %	Sieve Size:	1"				
76	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Cum.% Passing	Sieve Size:	1"				
77	16	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Wtd Cum. %	Sieve Size:	1"				
78	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Cum.% Passing	Sieve Size:	1"				
79	11.1	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Wtd Cum. %	Sieve Size:	1"				
80		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Cum.% Passing	Sieve Size:	1"				
81		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Wtd Cum. %	Sieve Size:	1"				
82		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Cum.% Passing	Sieve Size:	1"				
83		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Wtd Cum. %	Sieve Size:	1"				
84	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Combined Gradation	Cum. % Passing	Sieve Size:	1"				
85	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Lower	Sieve Size:	1"				
86	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Upper	Sieve Size:	1"				
87	Yes	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Within Spec's	Sieve Size:	1"				
88		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Lower	Sieve Size:	1"				
89		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Upper	Sieve Size:	1"				
90		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Within Spec's	Sieve Size:	1"				
91	0	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual % Retained	Sieve Size:	1"					
92	0	HMACP MIXTURE DESIGN : COMBINED GRADATION	Cumulative % Retained	Sieve Size:	1"					
93	93.1	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Cum.% Passing	Sieve Size:	7/8"				
94	24.206	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Wtd Cum. %	Sieve Size:	7/8"				
95	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Cum.% Passing	Sieve Size:	7/8"				
96	15	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Wtd Cum. %	Sieve Size:	7/8"				
97	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Cum.% Passing	Sieve Size:	7/8"				
98	12	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Wtd Cum. %	Sieve Size:	7/8"				
99	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Cum.% Passing	Sieve Size:	7/8"				
100	16	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Wtd Cum. %	Sieve Size:	7/8"				
101	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Cum.% Passing	Sieve Size:	7/8"				
102	11.1	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Wtd Cum. %	Sieve Size:	7/8"				
103		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Cum.% Passing	Sieve Size:	7/8"				
104		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Wtd Cum. %	Sieve Size:	7/8"				
105		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Cum.% Passing	Sieve Size:	7/8"				
106		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Wtd Cum. %	Sieve Size:	7/8"				
107	98.206	HMACP MIXTURE DESIGN : COMBINED GRADATION	Combined Gradation	Cum. % Passing	Sieve Size:	7/8"				
108	95	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Lower	Sieve Size:	7/8"				
109	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Upper	Sieve Size:	7/8"				
110	Yes	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Within Spec's	Sieve Size:	7/8"				
111		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Lower	Sieve Size:	7/8"				
112		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Upper	Sieve Size:	7/8"				
113		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Within Spec's	Sieve Size:	7/8"				
114	1.794	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual % Retained	Sieve Size:	7/8"					
115	1.794	HMACP MIXTURE DESIGN : COMBINED GRADATION	Cumulative % Retained	Sieve Size:	7/8"					
116	66.4	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Cum.% Passing	Sieve Size:	5/8"				
117	17.264	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Wtd Cum. %	Sieve Size:	5/8"				
118	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Cum.% Passing	Sieve Size:	5/8"				
119	15	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Wtd Cum. %	Sieve Size:	5/8"				
120	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Cum.% Passing	Sieve Size:	5/8"				
121	12	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Wtd Cum. %	Sieve Size:	5/8"				
122	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Cum.% Passing	Sieve Size:	5/8"				
123	16	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Wtd Cum. %	Sieve Size:	5/8"				

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
124	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Cum.% Passing	Sieve Size:	5/8"				
125	11.1	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Wtd Cum. %	Sieve Size:	5/8"				
126		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Cum.% Passing	Sieve Size:	5/8"				
127		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Wtd Cum. %	Sieve Size:	5/8"				
128		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Cum.% Passing	Sieve Size:	5/8"				
129		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Wtd Cum. %	Sieve Size:	5/8"				
130	91.264	HMACP MIXTURE DESIGN : COMBINED GRADATION	Combined Gradation	Cum. % Passing	Sieve Size:	5/8"				
131	75	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Lower	Sieve Size:	5/8"				
132	95	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Upper	Sieve Size:	5/8"				
133	Yes	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Within Spec's	Sieve Size:	5/8"				
134		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Lower	Sieve Size:	5/8"				
135		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Upper	Sieve Size:	5/8"				
136		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Within Spec's	Sieve Size:	5/8"				
137	6.942	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual % Retained	Sieve Size:	5/8"					
138	8.736	HMACP MIXTURE DESIGN : COMBINED GRADATION	Cumulative % Retained	Sieve Size:	5/8"					
139	10.3	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Cum.% Passing	Sieve Size:	3/8"				
140	2.678	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Wtd Cum. %	Sieve Size:	3/8"				
141	91.4	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Cum.% Passing	Sieve Size:	3/8"				
142	13.71	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Wtd Cum. %	Sieve Size:	3/8"				
143	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Cum.% Passing	Sieve Size:	3/8"				
144	12	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Wtd Cum. %	Sieve Size:	3/8"				
145	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Cum.% Passing	Sieve Size:	3/8"				
146	16	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Wtd Cum. %	Sieve Size:	3/8"				
147	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Cum.% Passing	Sieve Size:	3/8"				
148	11.1	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Wtd Cum. %	Sieve Size:	3/8"				
149		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Cum.% Passing	Sieve Size:	3/8"				
150		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Wtd Cum. %	Sieve Size:	3/8"				
151		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Cum.% Passing	Sieve Size:	3/8"				
152		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Wtd Cum. %	Sieve Size:	3/8"				
153	74.194	HMACP MIXTURE DESIGN : COMBINED GRADATION	Combined Gradation	Cum. % Passing	Sieve Size:	3/8"				
154	60	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Lower	Sieve Size:	3/8"				
155	80	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Upper	Sieve Size:	3/8"				
156	Yes	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Within Spec's	Sieve Size:	3/8"				
157		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Lower	Sieve Size:	3/8"				
158		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Upper	Sieve Size:	3/8"				
159		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Within Spec's	Sieve Size:	3/8"				
160	17.07	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual % Retained	Sieve Size:	3/8"					
161	25.806	HMACP MIXTURE DESIGN : COMBINED GRADATION	Cumulative % Retained	Sieve Size:	3/8"					
162	2.5	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Cum.% Passing	Sieve Size:	No. 4				
163	0.65	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Wtd Cum. %	Sieve Size:	No. 4				
164	24.3	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Cum.% Passing	Sieve Size:	No. 4				
165	3.645	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Wtd Cum. %	Sieve Size:	No. 4				
166	69.2	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Cum.% Passing	Sieve Size:	No. 4				
167	8.304	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Wtd Cum. %	Sieve Size:	No. 4				
168	99.9	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Cum.% Passing	Sieve Size:	No. 4				
169	15.984	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Wtd Cum. %	Sieve Size:	No. 4				
170	99.4	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Cum.% Passing	Sieve Size:	No. 4				
171	11.0334	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Wtd Cum. %	Sieve Size:	No. 4				
172		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Cum.% Passing	Sieve Size:	No. 4				
173		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Wtd Cum. %	Sieve Size:	No. 4				
174		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Cum.% Passing	Sieve Size:	No. 4				
175		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Wtd Cum. %	Sieve Size:	No. 4				
176	53.1683	HMACP MIXTURE DESIGN : COMBINED GRADATION	Combined Gradation	Cum. % Passing	Sieve Size:	No. 4				
177	40	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Lower	Sieve Size:	No. 4				
178	60	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Upper	Sieve Size:	No. 4				
179	Yes	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Within Spec's	Sieve Size:	No. 4				
180		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Lower	Sieve Size:	No. 4				
181		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Upper	Sieve Size:	No. 4				
182		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Within Spec's	Sieve Size:	No. 4				
183	21.0257	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual % Retained	Sieve Size:	No. 4					
184	46.8317	HMACP MIXTURE DESIGN : COMBINED GRADATION	Cumulative % Retained	Sieve Size:	No. 4					
185	1.8	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Cum.% Passing	Sieve Size:	No. 10				

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
186	0.468	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Wtd Cum. %	Sieve Size:	No. 10				
187	4.9	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Cum.% Passing	Sieve Size:	No. 10				
188	0.735	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Wtd Cum. %	Sieve Size:	No. 10				
189	5.3	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Cum.% Passing	Sieve Size:	No. 10				
190	0.636	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Wtd Cum. %	Sieve Size:	No. 10				
191	71.9	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Cum.% Passing	Sieve Size:	No. 10				
192	11.504	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Wtd Cum. %	Sieve Size:	No. 10				
193	97	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Cum.% Passing	Sieve Size:	No. 10				
194	10.767	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Wtd Cum. %	Sieve Size:	No. 10				
195		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Cum.% Passing	Sieve Size:	No. 10				
196		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Wtd Cum. %	Sieve Size:	No. 10				
197		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Cum.% Passing	Sieve Size:	No. 10				
198		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Wtd Cum. %	Sieve Size:	No. 10				
199	33.5028	HMACP MIXTURE DESIGN : COMBINED GRADATION	Combined Gradation	Cum. % Passing	Sieve Size:	No. 10				
200	27	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Lower	Sieve Size:	No. 10				
201	40	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Upper	Sieve Size:	No. 10				
202	Yes	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Within Spec's	Sieve Size:	No. 10				
203		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Lower	Sieve Size:	No. 10				
204		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Upper	Sieve Size:	No. 10				
205		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Within Spec's	Sieve Size:	No. 10				
206	19.6655	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual % Retained	Sieve Size:	No. 10					
207	66.4972	HMACP MIXTURE DESIGN : COMBINED GRADATION	Cumulative % Retained	Sieve Size:	No. 10					
208	1.2	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Cum.% Passing	Sieve Size:	No. 40				
209	0.312	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Wtd Cum. %	Sieve Size:	No. 40				
210	3.2	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Cum.% Passing	Sieve Size:	No. 40				
211	0.48	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Wtd Cum. %	Sieve Size:	No. 40				
212	2.9	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Cum.% Passing	Sieve Size:	No. 40				
213	0.348	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Wtd Cum. %	Sieve Size:	No. 40				
214	30.9	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Cum.% Passing	Sieve Size:	No. 40				
215	4.944	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Wtd Cum. %	Sieve Size:	No. 40				
216	73.1	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Cum.% Passing	Sieve Size:	No. 40				
217	8.1141	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Wtd Cum. %	Sieve Size:	No. 40				
218		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Cum.% Passing	Sieve Size:	No. 40				
219		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Wtd Cum. %	Sieve Size:	No. 40				
220		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Cum.% Passing	Sieve Size:	No. 40				
221		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Wtd Cum. %	Sieve Size:	No. 40				
222	20.2676	HMACP MIXTURE DESIGN : COMBINED GRADATION	Combined Gradation	Cum. % Passing	Sieve Size:	No. 40				
223	10	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Lower	Sieve Size:	No. 40				
224	25	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Upper	Sieve Size:	No. 40				
225	Yes	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Within Spec's	Sieve Size:	No. 40				
226		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Lower	Sieve Size:	No. 40				
227		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Upper	Sieve Size:	No. 40				
228		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Within Spec's	Sieve Size:	No. 40				
229	13.2352	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual % Retained	Sieve Size:	No. 40					
230	79.7324	HMACP MIXTURE DESIGN : COMBINED GRADATION	Cumulative % Retained	Sieve Size:	No. 40					
231	1	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Cum.% Passing	Sieve Size:	No. 80				
232	0.26	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Wtd Cum. %	Sieve Size:	No. 80				
233	2.8	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Cum.% Passing	Sieve Size:	No. 80				
234	0.42	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Wtd Cum. %	Sieve Size:	No. 80				
235	2.4	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Cum.% Passing	Sieve Size:	No. 80				
236	0.288	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Wtd Cum. %	Sieve Size:	No. 80				
237	18.3	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Cum.% Passing	Sieve Size:	No. 80				
238	2.928	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Wtd Cum. %	Sieve Size:	No. 80				
239	38.3	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Cum.% Passing	Sieve Size:	No. 80				
240	4.2513	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Wtd Cum. %	Sieve Size:	No. 80				
241		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Cum.% Passing	Sieve Size:	No. 80				
242		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Wtd Cum. %	Sieve Size:	No. 80				
243		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Cum.% Passing	Sieve Size:	No. 80				
244		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Wtd Cum. %	Sieve Size:	No. 80				
245	11.988	HMACP MIXTURE DESIGN : COMBINED GRADATION	Combined Gradation	Cum. % Passing	Sieve Size:	No. 80				
246	3	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Lower	Sieve Size:	No. 80				
247	13	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Upper	Sieve Size:	No. 80				

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
248	Yes	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Within Spec's	Sieve Size:	No. 80				
249		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Lower	Sieve Size:	No. 80				
250		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Upper	Sieve Size:	No. 80				
251		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Within Spec's	Sieve Size:	No. 80				
252	8.2796	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual % Retained	Sieve Size:	No. 80					
253	88.012	HMACP MIXTURE DESIGN : COMBINED GRADATION	Cumulative % Retained	Sieve Size:	No. 80					
254	0.8	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Cum.% Passing	Sieve Size:	No. 200				
255	0.208	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Wtd Cum. %	Sieve Size:	No. 200				
256	2.3	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Cum.% Passing	Sieve Size:	No. 200				
257	0.345	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Wtd Cum. %	Sieve Size:	No. 200				
258	2	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Cum.% Passing	Sieve Size:	No. 200				
259	0.24	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Wtd Cum. %	Sieve Size:	No. 200				
260	4.9	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Cum.% Passing	Sieve Size:	No. 200				
261	0.784	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Wtd Cum. %	Sieve Size:	No. 200				
262	13.2	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Cum.% Passing	Sieve Size:	No. 200				
263	1.4652	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Wtd Cum. %	Sieve Size:	No. 200				
264		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Cum.% Passing	Sieve Size:	No. 200				
265		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Wtd Cum. %	Sieve Size:	No. 200				
266		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Cum.% Passing	Sieve Size:	No. 200				
267		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Wtd Cum. %	Sieve Size:	No. 200				
268	4.4551	HMACP MIXTURE DESIGN : COMBINED GRADATION	Combined Gradation	Cum. % Passing	Sieve Size:	No. 200				
269	2	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Lower	Sieve Size:	No. 200				
270	8	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Upper	Sieve Size:	No. 200				
271	Yes	HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Within Spec's	Sieve Size:	No. 200				
272		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Lower	Sieve Size:	No. 200				
273		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Upper	Sieve Size:	No. 200				
274		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Within Spec's	Sieve Size:	No. 200				
275	7.5329	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual % Retained	Sieve Size:	No. 200					
276	95.5449	HMACP MIXTURE DESIGN : COMBINED GRADATION	Cumulative % Retained	Sieve Size:	No. 200					
277		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Cum.% Passing	Sieve Size:					
278		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.1	Wtd Cum. %	Sieve Size:					
279		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Cum.% Passing	Sieve Size:					
280		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.2	Wtd Cum. %	Sieve Size:					
281		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Cum.% Passing	Sieve Size:					
282		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.3	Wtd Cum. %	Sieve Size:					
283		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Cum.% Passing	Sieve Size:					
284		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.4	Wtd Cum. %	Sieve Size:					
285		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Cum.% Passing	Sieve Size:					
286		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.5	Wtd Cum. %	Sieve Size:					
287		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Cum.% Passing	Sieve Size:					
288		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.6	Wtd Cum. %	Sieve Size:					
289		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Cum.% Passing	Sieve Size:					
290		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.7	Wtd Cum. %	Sieve Size:					
291		HMACP MIXTURE DESIGN : COMBINED GRADATION	Combined Gradation	Cum. % Passing	Sieve Size:					
292		HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Lower	Sieve Size:					
293		HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Upper	Sieve Size:					
294		HMACP MIXTURE DESIGN : COMBINED GRADATION	Lower & Upper Specification Limits	Within Spec's	Sieve Size:					
295		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Lower	Sieve Size:					
296		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Upper	Sieve Size:					
297		HMACP MIXTURE DESIGN : COMBINED GRADATION	Restricted Zone	Within Spec's	Sieve Size:					
298		HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual % Retained	Sieve Size:						
299		HMACP MIXTURE DESIGN : COMBINED GRADATION	Cumulative % Retained	Sieve Size:						
300	Valero 76	HMACP MIXTURE DESIGN : COMBINED GRADATION	Asphalt Source & Grade:							
301	4.1	HMACP MIXTURE DESIGN : COMBINED GRADATION	Binder Percent, (%):							
302	1.03	HMACP MIXTURE DESIGN : COMBINED GRADATION	Asphalt Spec. Grav.:							
303		HMACP MIXTURE DESIGN : COMBINED GRADATION	Membrane Target Application Rate, gal/yd2							
304		HMACP MIXTURE DESIGN : COMBINED GRADATION	Antistripping Agent:							
305		HMACP MIXTURE DESIGN : COMBINED GRADATION	Percent, (%):							
306		HMACP MIXTURE DESIGN : COMBINED GRADATION								
307		HMACP MIXTURE DESIGN : COMBINED GRADATION								
308	1.5	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Max.	Spec. Limit				
309	1.5	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Max.	Spec. Limit				

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
310	B	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Min.	Spec. Limit				
311	30	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Max.	Spec. Limit				
312	40	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Max.	Spec. Limit				
313	n/a	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Min.	Spec. Limit				
314	10	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Max.	Spec. Limit				
315	3	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Max.	Spec. Limit				
316	45	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Min.	Spec. Limit				
317	0.7	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.1	Result				
318		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.1	Sample ID				
319	1	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.2	Result				
320		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.2	Sample ID				
321	0.9	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.3	Result				
322		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.3	Sample ID				
323		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.4	Result				
324		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.4	Sample ID				
325		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.5	Result				
326		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.5	Sample ID				
327		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.6	Result				
328		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.6	Sample ID				
329		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.7	Result				
330		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.7	Sample ID				
331	0	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.1	Result				
332		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.1	Sample ID				
333	0	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.2	Result				
334		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.2	Sample ID				
335	0	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.3	Result				
336		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.3	Sample ID				
337		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.4	Result				
338		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.4	Sample ID				
339		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.5	Result				
340		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.5	Sample ID				
341		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.6	Result				
342		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.6	Sample ID				
343		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.7	Result				
344		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-217-F	Bin No.7	Sample ID				
345	B	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.1	Result				
346		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.1	Sample ID				
347	B	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.2	Result				
348		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.2	Sample ID				
349	B	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.3	Result				
350		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.3	Sample ID				
351	B	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.4	Result				
352		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.4	Sample ID				
353		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.5	Result				
354		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.5	Sample ID				
355		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.6	Result				
356		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.6	Sample ID				
357		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.7	Result				
358		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-438-A, Tex-612-J	Bin No.7	Sample ID				
359	7	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.1	Result				
360		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.1	Sample ID				
361	7	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.2	Result				
362		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.2	Sample ID				
363	7	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.3	Result				
364		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.3	Sample ID				
365	7	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.4	Result				
366		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.4	Sample ID				
367		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.5	Result				
368		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.5	Sample ID				
369		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.6	Result				
370		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.6	Sample ID				
371		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.7	Result				

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
372		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-411-A	Bin No.7	Sample ID				
373	30	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.1	Result				
374		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.1	Sample ID				
375	30	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.2	Result				
376		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.2	Sample ID				
377	30	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.3	Result				
378		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.3	Sample ID				
379	30	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.4	Result				
380		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.4	Sample ID				
381		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.5	Result				
382		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.5	Sample ID				
383		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.6	Result				
384		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.6	Sample ID				
385		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.7	Result				
386		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-410-A	Bin No.7	Sample ID				
387	n/a	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.1	Result				
388		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.1	Sample ID				
389	n/a	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.2	Result				
390		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.2	Sample ID				
391	n/a	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.3	Result				
392		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.3	Sample ID				
393		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.4	Result				
394		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.4	Sample ID				
395		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.5	Result				
396		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.5	Sample ID				
397		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.6	Result				
398		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.6	Sample ID				
399		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.7	Result				
400		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-460-A	Bin No.7	Sample ID				
401	0	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.1	Result				
402		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.1	Sample ID				
403	0	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.2	Result				
404		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.2	Sample ID				
405	0	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.3	Result				
406		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.3	Sample ID				
407		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.4	Result				
408		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.4	Sample ID				
409		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.5	Result				
410		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.5	Sample ID				
411		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.6	Result				
412		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.6	Sample ID				
413		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.7	Result				
414		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Stockpile	Tex-280-F	Bin No.7	Sample ID				
415		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.1	Result				
416		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.1	Sample ID				
417		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.2	Result				
418		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.2	Sample ID				
419		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.3	Result				
420		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.3	Sample ID				
421	1	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.4	Result				
422		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.4	Sample ID				
423		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.5	Result				
424		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.5	Sample ID				
425		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.6	Result				
426		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.6	Sample ID				
427		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.7	Result				
428		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Fine Aggregate	Tex-107-E	Bin No.7	Sample ID				
429		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.1	Result				
430		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.1	Sample ID				
431		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.2	Result				
432		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.2	Sample ID				
433		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.3	Result				

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
434		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.3	Sample ID				
435		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.4	Result				
436		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.4	Sample ID				
437	65	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.5	Result				
438		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.5	Sample ID				
439		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.6	Result				
440		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.6	Sample ID				
441		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.7	Result				
442		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Combined Aggregate	Tex-203-F	Bin No.7	Sample ID				
443		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Test Method					
444		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Spec. Min or Max					
445		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Spec. Limit					
446		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.1	Result				
447		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.1	Sample ID				
448		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.2	Result				
449		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.2	Sample ID				
450		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.3	Result				
451		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.3	Sample ID				
452		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.4	Result				
453		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.4	Sample ID				
454		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.5	Result				
455		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.5	Sample ID				
456		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.6	Result				
457		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.6	Sample ID				
458		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.7	Result				
459		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	1	Bin No.7	Sample ID				
460		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Test Method					
461		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Spec. Min or Max					
462		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Spec. Limit					
463		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.1	Result				
464		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.1	Sample ID				
465		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.2	Result				
466		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.2	Sample ID				
467		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.3	Result				
468		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.3	Sample ID				
469		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.4	Result				
470		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.4	Sample ID				
471		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.5	Result				
472		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.5	Sample ID				
473		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.6	Result				
474		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.6	Sample ID				
475		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.7	Result				
476		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	2	Bin No.7	Sample ID				
477		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Test Method					
478		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Spec. Min or Max					
479		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Spec. Limit					
480		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.1	Result				
481		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.1	Sample ID				
482		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.2	Result				
483		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.2	Sample ID				
484		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.3	Result				
485		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.3	Sample ID				
486		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.4	Result				
487		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.4	Sample ID				
488		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.5	Result				
489		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.5	Sample ID				
490		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.6	Result				
491		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.6	Sample ID				
492		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.7	Result				
493		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	3	Bin No.7	Sample ID				
494		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Test Method					
495		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Spec. Min or Max					

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
496		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Spec. Limit					
497		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.1	Result				
498		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.1	Sample ID				
499		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.2	Result				
500		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.2	Sample ID				
501		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.3	Result				
502		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.3	Sample ID				
503		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.4	Result				
504		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.4	Sample ID				
505		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.5	Result				
506		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.5	Sample ID				
507		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.6	Result				
508		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.6	Sample ID				
509		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.7	Result				
510		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	4	Bin No.7	Sample ID				
511		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Test Method					
512		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Spec. Min or Max					
513		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Spec. Limit					
514		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.1	Result				
515		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.1	Sample ID				
516		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.2	Result				
517		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.2	Sample ID				
518		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.3	Result				
519		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.3	Sample ID				
520		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.4	Result				
521		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.4	Sample ID				
522		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.5	Result				
523		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.5	Sample ID				
524		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.6	Result				
525		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.6	Sample ID				
526		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.7	Result				
527		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	User Defined Testing	5	Bin No.7	Sample ID				
528		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Remarks:							
529	No	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Class (A) Rock (Y/N):						
530	0	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Individual Ret., %	Passing	-	Sieve Size:	Retained	1"	
531	1.794	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Individual Ret., %	Passing	1"	Sieve Size:	Retained	7/8"	
532	6.942	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Individual Ret., %	Passing	7/8"	Sieve Size:	Retained	5/8"	
533	14.586	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Individual Ret., %	Passing	5/8"	Sieve Size:	Retained	3/8"	
534	2.028	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
535	0.182	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
536	0.156	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
537	0.052	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
538	0.052	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
539	0.208	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
540		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
541	26	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Individual Ret., %	Total:					
542	25.35	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.1	Individual Ret., %	Percent of plus No. 4					
543	No	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Class (A) Rock (Y/N):						
544	0	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Individual Ret., %	Passing	-	Sieve Size:	Retained	1"	
545	0	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Individual Ret., %	Passing	1"	Sieve Size:	Retained	7/8"	
546	0	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Individual Ret., %	Passing	7/8"	Sieve Size:	Retained	5/8"	
547	1.29	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Individual Ret., %	Passing	5/8"	Sieve Size:	Retained	3/8"	
548	10.065	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
549	2.91	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
550	0.255	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
551	0.06	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
552	0.075	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
553	0.345	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
554		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
555	15	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Individual Ret., %	Total:					
556	11.355	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.2	Individual Ret., %	Percent of plus No. 4					
557	No	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Class (A) Rock (Y/N):						

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
558	0	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Individual Ret., %	Passing	-	Sieve Size:	Retained	1"	
559	0	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Individual Ret., %	Passing	1"	Sieve Size:	Retained	7/8"	
560	0	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Individual Ret., %	Passing	7/8"	Sieve Size:	Retained	5/8"	
561	0	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Individual Ret., %	Passing	5/8"	Sieve Size:	Retained	3/8"	
562	3.696	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
563	7.668	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
564	0.288	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
565	0.06	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
566	0.048	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
567	0.24	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
568		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
569	12	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Individual Ret., %	Total:					
570	3.696	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.3	Individual Ret., %	Percent of plus No. 4					
571	No	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Class (A) Rock (Y/N):						
572	0	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Individual Ret., %	Passing	-	Sieve Size:	Retained	1"	
573	0	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Individual Ret., %	Passing	1"	Sieve Size:	Retained	7/8"	
574	0	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Individual Ret., %	Passing	7/8"	Sieve Size:	Retained	5/8"	
575	0	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Individual Ret., %	Passing	5/8"	Sieve Size:	Retained	3/8"	
576	0.016	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
577	4.48	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
578	6.56	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
579	2.016	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
580	2.144	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
581	0.784	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
582		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
583	16	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Individual Ret., %	Total:					
584	0.016	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.4	Individual Ret., %	Percent of plus No. 4					
585	No	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Class (A) Rock (Y/N):						
586	0	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Individual Ret., %	Passing	-	Sieve Size:	Retained	1"	
587	0	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Individual Ret., %	Passing	1"	Sieve Size:	Retained	7/8"	
588	0	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Individual Ret., %	Passing	7/8"	Sieve Size:	Retained	5/8"	
589	0	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Individual Ret., %	Passing	5/8"	Sieve Size:	Retained	3/8"	
590	0.0666	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
591	0.2664	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
592	2.6529	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
593	3.8628	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
594	2.7861	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
595	1.4652	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
596		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
597	11.1	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Individual Ret., %	Total:					
598	0.0666	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.5	Individual Ret., %	Percent of plus No. 4					
599		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Class (A) Rock (Y/N):						
600		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Individual Ret., %	Passing	-	Sieve Size:	Retained	1"	
601		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Individual Ret., %	Passing	1"	Sieve Size:	Retained	7/8"	
602		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Individual Ret., %	Passing	7/8"	Sieve Size:	Retained	5/8"	
603		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Individual Ret., %	Passing	5/8"	Sieve Size:	Retained	3/8"	
604		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
605		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
606		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
607		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
608		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
609		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
610		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
611		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Individual Ret., %	Total:					
612		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.6	Individual Ret., %	Percent of plus No. 4					
613		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Class (A) Rock (Y/N):						
614		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Individual Ret., %	Passing	-	Sieve Size:	Retained	1"	
615		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Individual Ret., %	Passing	1"	Sieve Size:	Retained	7/8"	
616		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Individual Ret., %	Passing	7/8"	Sieve Size:	Retained	5/8"	
617		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Individual Ret., %	Passing	5/8"	Sieve Size:	Retained	3/8"	
618		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
619		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
620		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
621		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
622		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
623		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
624		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
625		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Individual Ret., %	Total:					
626		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.7	Individual Ret., %	Percent of plus No. 4					
627		HMACP MIXTURE DESIGN : Aggregate Classification	Remarks:							
628	1000	HMACP MIXTURE DESIGN : WEIGH UP SHEET	Aggregate Weight, g:							
629	42.7529	HMACP MIXTURE DESIGN : WEIGH UP SHEET	4.1% Asphalt by Total Weight, g:							
630	1042.75	HMACP MIXTURE DESIGN : WEIGH UP SHEET	Total Weight, g:							
631	42.7529	HMACP MIXTURE DESIGN : WEIGH UP SHEET	4.1% Asphalt by Total Weight, g:							
632	10.0336	HMACP MIXTURE DESIGN : WEIGH UP SHEET	Less Asphalt by Weight of Recycled Material, g:							
633	32.7193	HMACP MIXTURE DESIGN : WEIGH UP SHEET	(Valero 76-22) Asphalt to Add, g:							
634	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET								
635	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	-	Sieve Size:	Retained	1"	Bin No.1	Aggregate Weight
636	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	-	Sieve Size:	Retained	1"	Bin No.2	Aggregate Weight
637	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	-	Sieve Size:	Retained	1"	Bin No.3	Aggregate Weight
638	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	-	Sieve Size:	Retained	1"	Bin No.4	Aggregate Weight
639	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	-	Sieve Size:	Retained	1"	Bin No.5	Aggregate Weight
640		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	-	Sieve Size:	Retained	1"	Bin No.6	
641		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	-	Sieve Size:	Retained	1"	Bin No.7	
642	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	-	Sieve Size:	Retained	1"	Total Weights	
643	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	-	Sieve Size:	Retained	1"	IndividualRetained, %	
644	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	-	Sieve Size:	Retained	1"	Cumulative Retained, %	
645	17.94	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	1"	Sieve Size:	Retained	7/8"	Bin No.1	Aggregate Weight
646	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	1"	Sieve Size:	Retained	7/8"	Bin No.2	Aggregate Weight
647	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	1"	Sieve Size:	Retained	7/8"	Bin No.3	Aggregate Weight
648	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	1"	Sieve Size:	Retained	7/8"	Bin No.4	Aggregate Weight
649	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	1"	Sieve Size:	Retained	7/8"	Bin No.5	Aggregate Weight
650		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	1"	Sieve Size:	Retained	7/8"	Bin No.6	
651		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	1"	Sieve Size:	Retained	7/8"	Bin No.7	
652	17.94	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	1"	Sieve Size:	Retained	7/8"	Total Weights	
653	1.77618	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	1"	Sieve Size:	Retained	7/8"	IndividualRetained, %	
654	1.77618	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	1"	Sieve Size:	Retained	7/8"	Cumulative Retained, %	
655	69.42	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.1	Aggregate Weight
656	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.2	Aggregate Weight
657	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.3	Aggregate Weight
658	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.4	Aggregate Weight
659	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.5	Aggregate Weight
660		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.6	
661		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.7	
662	69.42	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Total Weights	
663	6.87304	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	IndividualRetained, %	
664	8.64922	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Cumulative Retained, %	
665	145.86	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.1	Aggregate Weight
666	12.9	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.2	Aggregate Weight
667	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.3	Aggregate Weight
668	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.4	Aggregate Weight
669	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.5	Aggregate Weight
670		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.6	
671		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.7	
672	171.302	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Total Weights	
673	16.96	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	IndividualRetained, %	
674	25.6092	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Cumulative Retained, %	
675	20.28	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.1	Aggregate Weight
676	100.65	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.2	Aggregate Weight
677	36.96	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.3	Aggregate Weight
678	0.16	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.4	Aggregate Weight
679	0.666	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.5	Aggregate Weight
680		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.6	
681		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.7	

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
682	212.856	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Total Weights	
683	21.0741	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	IndividualRetained, %	
684	46.6834	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Cumulative Retained, %	
685	1.82	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.1	Aggregate Weight
686	29.1	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.2	Aggregate Weight
687	76.68	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.3	Aggregate Weight
688	44.8	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.4	Aggregate Weight
689	2.664	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.5	Aggregate Weight
690		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.6	
691		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.7	
692	198.752	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Total Weights	
693	19.6778	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	IndividualRetained, %	
694	66.3611	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Cumulative Retained, %	
695	1.56	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.1	Aggregate Weight
696	2.55	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.2	Aggregate Weight
697	2.88	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.3	Aggregate Weight
698	65.6	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.4	Aggregate Weight
699	26.529	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.5	Aggregate Weight
700		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.6	
701		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.7	
702	134.028	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Total Weights	
703	13.2696	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	IndividualRetained, %	
704	79.6308	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Cumulative Retained, %	
705	0.52	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.1	Aggregate Weight
706	0.6	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.2	Aggregate Weight
707	0.6	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.3	Aggregate Weight
708	20.16	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.4	Aggregate Weight
709	38.628	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.5	Aggregate Weight
710		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.6	
711		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.7	
712	83.9198	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Total Weights	
713	8.30861	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	IndividualRetained, %	
714	87.9394	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Cumulative Retained, %	
715	0.52	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.1	Aggregate Weight
716	0.75	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.2	Aggregate Weight
717	0.48	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.3	Aggregate Weight
718	21.44	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.4	Aggregate Weight
719	27.861	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.5	Aggregate Weight
720		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.6	
721		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.7	
722	76.5531	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Total Weights	
723	7.57926	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	IndividualRetained, %	
724	95.5186	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Cumulative Retained, %	
725	2.08	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.1	Aggregate Weight
726	3.45	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.2	Aggregate Weight
727	2.4	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.3	Aggregate Weight
728	7.84	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.4	Aggregate Weight
729	14.652	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.5	Aggregate Weight
730		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.6	
731		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.7	
732	45.2634	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Total Weights	
733	4.48137	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	IndividualRetained, %	
734	100	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Cumulative Retained, %	
735		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.1	Aggregate Weight
736		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.2	Aggregate Weight
737		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.3	Aggregate Weight
738		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.4	Aggregate Weight
739		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.5	Aggregate Weight
740		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.6	
741		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.7	
742		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Total Weights	
743		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	IndividualRetained, %	

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
744		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Cumulative Retained, %	
745	260	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Totals	Bin No.1	Aggregate Weight				
746	150	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Totals	Bin No.2	Aggregate Weight				
747	120	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Totals	Bin No.3	Aggregate Weight				
748	160	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Totals	Bin No.4	Aggregate Weight				
749	111	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Totals	Bin No.5	Aggregate Weight				
750		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Totals	Bin No.6					
751		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Totals	Bin No.7					
752	1010.03	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Totals	Total Weights					
753		HMACP MIXTURE DESIGN : WEIGH UP SHEET	Running Total:							
754	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	-	Sieve Size:	Retained	1"	Bin No.1	Aggregate Weight
755	260	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	-	Sieve Size:	Retained	1"	Bin No.2	Aggregate Weight
756	410	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	-	Sieve Size:	Retained	1"	Bin No.3	Aggregate Weight
757	530	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	-	Sieve Size:	Retained	1"	Bin No.4	Aggregate Weight
758	690	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	-	Sieve Size:	Retained	1"	Bin No.5	Aggregate Weight
759		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	-	Sieve Size:	Retained	1"	Bin No.6	
760		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	-	Sieve Size:	Retained	1"	Bin No.7	
761	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	-	Sieve Size:	Retained	1"	Total Weights	
762	17.94	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	1"	Sieve Size:	Retained	7/8"	Bin No.1	Aggregate Weight
763	260	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	1"	Sieve Size:	Retained	7/8"	Bin No.2	Aggregate Weight
764	410	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	1"	Sieve Size:	Retained	7/8"	Bin No.3	Aggregate Weight
765	530	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	1"	Sieve Size:	Retained	7/8"	Bin No.4	Aggregate Weight
766	690	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	1"	Sieve Size:	Retained	7/8"	Bin No.5	Aggregate Weight
767		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	1"	Sieve Size:	Retained	7/8"	Bin No.6	
768		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	1"	Sieve Size:	Retained	7/8"	Bin No.7	
769	17.94	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	1"	Sieve Size:	Retained	7/8"	Total Weights	
770	87.36	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.1	Aggregate Weight
771	260	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.2	Aggregate Weight
772	410	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.3	Aggregate Weight
773	530	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.4	Aggregate Weight
774	690	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.5	Aggregate Weight
775		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.6	
776		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.7	
777	87.36	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	7/8"	Sieve Size:	Retained	5/8"	Total Weights	
778	233.22	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.1	Aggregate Weight
779	272.9	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.2	Aggregate Weight
780	410	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.3	Aggregate Weight
781	530	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.4	Aggregate Weight
782	690	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.5	Aggregate Weight
783		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.6	
784		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.7	
785	258.662	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	5/8"	Sieve Size:	Retained	3/8"	Total Weights	
786	253.5	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.1	Aggregate Weight
787	373.55	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.2	Aggregate Weight
788	446.96	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.3	Aggregate Weight
789	530.16	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.4	Aggregate Weight
790	690.666	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.5	Aggregate Weight
791		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.6	
792		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.7	
793	471.518	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Total Weights	
794	255.32	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.1	Aggregate Weight
795	402.65	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.2	Aggregate Weight
796	523.64	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.3	Aggregate Weight
797	574.96	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.4	Aggregate Weight
798	693.33	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.5	Aggregate Weight
799		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.6	
800		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.7	
801	670.27	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Total Weights	
802	256.88	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.1	Aggregate Weight
803	405.2	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.2	Aggregate Weight
804	526.52	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.3	Aggregate Weight
805	640.56	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.4	Aggregate Weight

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
806	719.859	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.5	Aggregate Weight
807		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.6	
808		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.7	
809	804.297	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Total Weights	
810	257.4	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.1	Aggregate Weight
811	405.8	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.2	Aggregate Weight
812	527.12	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.3	Aggregate Weight
813	660.72	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.4	Aggregate Weight
814	758.487	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.5	Aggregate Weight
815		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.6	
816		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.7	
817	888.217	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Total Weights	
818	257.92	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.1	Aggregate Weight
819	406.55	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.2	Aggregate Weight
820	527.6	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.3	Aggregate Weight
821	682.16	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.4	Aggregate Weight
822	786.348	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.5	Aggregate Weight
823		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.6	
824		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.7	
825	964.77	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Total Weights	
826	260	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.1	Aggregate Weight
827	410	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.2	Aggregate Weight
828	530	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.3	Aggregate Weight
829	690	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.4	Aggregate Weight
830	801	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.5	Aggregate Weight
831		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.6	
832		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.7	
833	1010.03	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Total Weights	
834		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.1	Aggregate Weight
835		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.2	Aggregate Weight
836		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.3	Aggregate Weight
837		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.4	Aggregate Weight
838		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.5	Aggregate Weight
839		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.6	
840		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.7	
841		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Total Weights	
842		HMACP MIXTURE DESIGN : WEIGH UP SHEET	Remarks:							
843		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Individual Ret., %	Passing		Sieve Size:	Retained	1"	
844		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Bulk SG	Passing		Sieve Size:	Retained	1"	
845	6.9	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Individual Ret., %	Passing	1"	Sieve Size:	Retained	7/8"	
846	2.788	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Bulk SG	Passing	1"	Sieve Size:	Retained	7/8"	
847	26.7	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Individual Ret., %	Passing	7/8"	Sieve Size:	Retained	5/8"	
848	2.788	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Bulk SG	Passing	7/8"	Sieve Size:	Retained	5/8"	
849	56.1	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Individual Ret., %	Passing	5/8"	Sieve Size:	Retained	3/8"	
850	2.788	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Bulk SG	Passing	5/8"	Sieve Size:	Retained	3/8"	
851	7.8	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
852	2.794	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Bulk SG	Passing	3/8"	Sieve Size:	Retained	No. 4	
853	0.7	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
854	2.794	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Bulk SG	Passing	No. 4	Sieve Size:	Retained	No. 10	
855	0.6	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
856	2.794	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Bulk SG	Passing	No. 10	Sieve Size:	Retained	No. 40	
857	0.2	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
858	2.794	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Bulk SG	Passing	No. 40	Sieve Size:	Retained	No. 80	
859	0.2	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
860	2.794	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Bulk SG	Passing	No. 80	Sieve Size:	Retained	No. 200	
861	0.8	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
862	2.794	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Bulk SG	Passing	No. 200	Sieve Size:	Retained	Pan	
863		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
864		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Bulk SG	Passing		Sieve Size:	Retained	Pan	
865	100	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Individual Ret., %	Totals					
866	2.78862	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.1	Bulk SG	Totals					
867		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Individual Ret., %	Passing		Sieve Size:	Retained	1"	

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
868		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Bulk SG	Passing		Sieve Size:	Retained	1"	
869	0	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Individual Ret., %	Passing	1"	Sieve Size:	Retained	7/8"	
870		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Bulk SG	Passing	1"	Sieve Size:	Retained	7/8"	
871	0	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Individual Ret., %	Passing	7/8"	Sieve Size:	Retained	5/8"	
872		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Bulk SG	Passing	7/8"	Sieve Size:	Retained	5/8"	
873	8.6	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Individual Ret., %	Passing	5/8"	Sieve Size:	Retained	3/8"	
874	2.788	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Bulk SG	Passing	5/8"	Sieve Size:	Retained	3/8"	
875	67.1	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
876	2.794	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Bulk SG	Passing	3/8"	Sieve Size:	Retained	No. 4	
877	19.4	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
878	2.798	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Bulk SG	Passing	No. 4	Sieve Size:	Retained	No. 10	
879	1.7	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
880	2.798	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Bulk SG	Passing	No. 10	Sieve Size:	Retained	No. 40	
881	0.4	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
882	2.798	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Bulk SG	Passing	No. 40	Sieve Size:	Retained	No. 80	
883	0.5	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
884	2.798	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Bulk SG	Passing	No. 80	Sieve Size:	Retained	No. 200	
885	2.3	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
886	2.798	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Bulk SG	Passing	No. 200	Sieve Size:	Retained	Pan	
887		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
888		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Bulk SG	Passing		Sieve Size:	Retained	Pan	
889	100	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Individual Ret., %	Totals					
890	2.79445	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.2	Bulk SG	Totals					
891		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Individual Ret., %	Passing		Sieve Size:	Retained	1"	
892		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Bulk SG	Passing		Sieve Size:	Retained	1"	
893	0	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Individual Ret., %	Passing	1"	Sieve Size:	Retained	7/8"	
894		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Bulk SG	Passing	1"	Sieve Size:	Retained	7/8"	
895	0	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Individual Ret., %	Passing	7/8"	Sieve Size:	Retained	5/8"	
896		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Bulk SG	Passing	7/8"	Sieve Size:	Retained	5/8"	
897	0	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Individual Ret., %	Passing	5/8"	Sieve Size:	Retained	3/8"	
898		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Bulk SG	Passing	5/8"	Sieve Size:	Retained	3/8"	
899	30.8	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
900	2.794	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Bulk SG	Passing	3/8"	Sieve Size:	Retained	No. 4	
901	63.9	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
902	2.798	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Bulk SG	Passing	No. 4	Sieve Size:	Retained	No. 10	
903	2.4	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
904	2.798	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Bulk SG	Passing	No. 10	Sieve Size:	Retained	No. 40	
905	0.5	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
906	2.798	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Bulk SG	Passing	No. 40	Sieve Size:	Retained	No. 80	
907	0.4	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
908	2.798	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Bulk SG	Passing	No. 80	Sieve Size:	Retained	No. 200	
909	2	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
910	2.798	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Bulk SG	Passing	No. 200	Sieve Size:	Retained	Pan	
911		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
912		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Bulk SG	Passing		Sieve Size:	Retained	Pan	
913	100	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Individual Ret., %	Totals					
914	2.79677	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.3	Bulk SG	Totals					
915		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Individual Ret., %	Passing		Sieve Size:	Retained	1"	
916		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Bulk SG	Passing		Sieve Size:	Retained	1"	
917	0	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Individual Ret., %	Passing	1"	Sieve Size:	Retained	7/8"	
918		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Bulk SG	Passing	1"	Sieve Size:	Retained	7/8"	
919	0	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Individual Ret., %	Passing	7/8"	Sieve Size:	Retained	5/8"	
920		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Bulk SG	Passing	7/8"	Sieve Size:	Retained	5/8"	
921	0	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Individual Ret., %	Passing	5/8"	Sieve Size:	Retained	3/8"	
922		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Bulk SG	Passing	5/8"	Sieve Size:	Retained	3/8"	
923	0.1	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
924	2.815	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Bulk SG	Passing	3/8"	Sieve Size:	Retained	No. 4	
925	28	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
926	2.815	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Bulk SG	Passing	No. 4	Sieve Size:	Retained	No. 10	
927	41	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
928	2.815	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Bulk SG	Passing	No. 10	Sieve Size:	Retained	No. 40	
929	12.6	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
930	2.815	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Bulk SG	Passing	No. 40	Sieve Size:	Retained	No. 80	
931	13.4	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
932	2.815	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Bulk SG	Passing	No. 80	Sieve Size:	Retained	No. 200	
933	4.9	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
934	2.815	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Bulk SG	Passing	No. 200	Sieve Size:	Retained	Pan	
935		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
936		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Bulk SG	Passing		Sieve Size:	Retained	Pan	
937	100	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Individual Ret., %	Totals					
938	2.815	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.4	Bulk SG	Totals					
939		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Individual Ret., %	Passing		Sieve Size:	Retained	1"	
940		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Bulk SG	Passing		Sieve Size:	Retained	1"	
941	0	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Individual Ret., %	Passing	1"	Sieve Size:	Retained	7/8"	
942		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Bulk SG	Passing	1"	Sieve Size:	Retained	7/8"	
943	0	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Individual Ret., %	Passing	7/8"	Sieve Size:	Retained	5/8"	
944		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Bulk SG	Passing	7/8"	Sieve Size:	Retained	5/8"	
945	0	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Individual Ret., %	Passing	5/8"	Sieve Size:	Retained	3/8"	
946		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Bulk SG	Passing	5/8"	Sieve Size:	Retained	3/8"	
947	0.6	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
948	2.642	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Bulk SG	Passing	3/8"	Sieve Size:	Retained	No. 4	
949	2.4	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
950	2.642.	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Bulk SG	Passing	No. 4	Sieve Size:	Retained	No. 10	
951	23.9	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
952	2.642	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Bulk SG	Passing	No. 10	Sieve Size:	Retained	No. 40	
953	34.8	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
954	2.642	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Bulk SG	Passing	No. 40	Sieve Size:	Retained	No. 80	
955	25.1	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
956	2.678	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Bulk SG	Passing	No. 80	Sieve Size:	Retained	No. 200	
957	13.2	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
958	2.678	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Bulk SG	Passing	No. 200	Sieve Size:	Retained	Pan	
959		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
960		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Bulk SG	Passing		Sieve Size:	Retained	Pan	
961	100	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Individual Ret., %	Totals					
962	2.72132	HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.5	Bulk SG	Totals					
963		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Individual Ret., %	Passing		Sieve Size:	Retained	1"	
964		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Bulk SG	Passing		Sieve Size:	Retained	1"	
965		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Individual Ret., %	Passing	1"	Sieve Size:	Retained	7/8"	
966		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Bulk SG	Passing	1"	Sieve Size:	Retained	7/8"	
967		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Individual Ret., %	Passing	7/8"	Sieve Size:	Retained	5/8"	
968		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Bulk SG	Passing	7/8"	Sieve Size:	Retained	5/8"	
969		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Individual Ret., %	Passing	5/8"	Sieve Size:	Retained	3/8"	
970		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Bulk SG	Passing	5/8"	Sieve Size:	Retained	3/8"	
971		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
972		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Bulk SG	Passing	3/8"	Sieve Size:	Retained	No. 4	
973		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
974		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Bulk SG	Passing	No. 4	Sieve Size:	Retained	No. 10	
975		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
976		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Bulk SG	Passing	No. 10	Sieve Size:	Retained	No. 40	
977		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
978		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Bulk SG	Passing	No. 40	Sieve Size:	Retained	No. 80	
979		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
980		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Bulk SG	Passing	No. 80	Sieve Size:	Retained	No. 200	
981		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
982		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Bulk SG	Passing	No. 200	Sieve Size:	Retained	Pan	
983		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
984		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Bulk SG	Passing		Sieve Size:	Retained	Pan	
985		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Individual Ret., %	Totals					
986		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.6	Bulk SG	Totals					
987		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Individual Ret., %	Passing		Sieve Size:	Retained	1"	
988		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Bulk SG	Passing		Sieve Size:	Retained	1"	
989		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Individual Ret., %	Passing	1"	Sieve Size:	Retained	7/8"	
990		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Bulk SG	Passing	1"	Sieve Size:	Retained	7/8"	
991		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Individual Ret., %	Passing	7/8"	Sieve Size:	Retained	5/8"	

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
992		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Bulk SG	Passing	7/8"	Sieve Size:	Retained	5/8"	
993		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Individual Ret., %	Passing	5/8"	Sieve Size:	Retained	3/8"	
994		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Bulk SG	Passing	5/8"	Sieve Size:	Retained	3/8"	
995		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
996		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Bulk SG	Passing	3/8"	Sieve Size:	Retained	No. 4	
997		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
998		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Bulk SG	Passing	No. 4	Sieve Size:	Retained	No. 10	
999		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
1000		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Bulk SG	Passing	No. 10	Sieve Size:	Retained	No. 40	
1001		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
1002		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Bulk SG	Passing	No. 40	Sieve Size:	Retained	No. 80	
1003		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
1004		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Bulk SG	Passing	No. 80	Sieve Size:	Retained	No. 200	
1005		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
1006		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Bulk SG	Passing	No. 200	Sieve Size:	Retained	Pan	
1007		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
1008		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Bulk SG	Passing		Sieve Size:	Retained	Pan	
1009		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Individual Ret., %	Totals					
1010		HMACP MIXTURE DESIGN : BULK GRAVITY	Bin No.7	Bulk SG	Totals					
1011	1.03	HMACP MIXTURE DESIGN : BULK GRAVITY	Specific Gravity of Asphalt:							
1012	2.74017	HMACP MIXTURE DESIGN : BULK GRAVITY	Combined Bulk Specific Gravity:							
1013		HMACP MIXTURE DESIGN : BULK GRAVITY	Coarse Agg. Combined BSG:							
1014		HMACP MIXTURE DESIGN : BULK GRAVITY	Remarks:							
1015	96	HMACP MIXTURE DESIGN : SUMMARY SHEET	Target Density, %:							
1016		HMACP MIXTURE DESIGN : SUMMARY SHEET	Number of Gyrations:							
1017		HMACP MIXTURE DESIGN : SUMMARY SHEET	CRM* Content							
1018	3	HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Asphalt Content (%)						
1019	2.451	HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Specific Gravity Of Specimen (Ga)						
1020	2.615	HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Maximum Specific Gravity (Gr)						
1021	2.74567	HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Effective Gravity (Ge)						
1022	2.62255	HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Theo. Max. Specific Gravity (Gt)						
1023	93.4587	HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Density from Gt (Percent)						
1024	13.6801	HMACP MIXTURE DESIGN : SUMMARY SHEET	1	VMA (Percent)						
1025	3.5	HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Asphalt Content (%)						
1026	2.463	HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Specific Gravity Of Specimen (Ga)						
1027	2.6	HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Maximum Specific Gravity (Gr)						
1028	2.75215	HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Effective Gravity (Ge)						
1029	2.60181	HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Theo. Max. Specific Gravity (Gt)						
1030	94.6648	HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Density from Gt (Percent)						
1031	13.7047	HMACP MIXTURE DESIGN : SUMMARY SHEET	2	VMA (Percent)						
1032	4	HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Asphalt Content (%)						
1033	2.473	HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Specific Gravity Of Specimen (Ga)						
1034	2.584	HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Maximum Specific Gravity (Gr)						
1035	2.75734	HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Effective Gravity (Ge)						
1036	2.5814	HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Theo. Max. Specific Gravity (Gt)						
1037	95.8007	HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Density from Gt (Percent)						
1038	13.8032	HMACP MIXTURE DESIGN : SUMMARY SHEET	3	VMA (Percent)						
1039	4.5	HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Asphalt Content (%)						
1040	2.486	HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Specific Gravity Of Specimen (Ga)						
1041	2.562	HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Maximum Specific Gravity (Gr)						
1042	2.75509	HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Effective Gravity (Ge)						
1043	2.56131	HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Theo. Max. Specific Gravity (Gt)						
1044	97.0598	HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Density from Gt (Percent)						
1045	13.8014	HMACP MIXTURE DESIGN : SUMMARY SHEET	4	VMA (Percent)						
1046	5	HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Asphalt Content (%)						
1047	2.493	HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Specific Gravity Of Specimen (Ga)						
1048	2.547	HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Maximum Specific Gravity (Gr)						
1049	2.76103	HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Effective Gravity (Ge)						
1050	2.54153	HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Theo. Max. Specific Gravity (Gt)						
1051	98.0907	HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Density from Gt (Percent)						
1052	14.0113	HMACP MIXTURE DESIGN : SUMMARY SHEET	5	VMA (Percent)						
1053	177	HMACP MIXTURE DESIGN : SUMMARY SHEET	Mixture Evaluation @ Optimum Asphalt Content	Indirect Tensile Strength (psi)						

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
1054		HMACP MIXTURE DESIGN : SUMMARY SHEET	Mixture Evaluation @ Optimum Asphalt Content	Hamburg Wheel Tracking Test	Number of cycles					
1055		HMACP MIXTURE DESIGN : SUMMARY SHEET	Mixture Evaluation @ Optimum Asphalt Content	Hamburg Wheel Tracking Test	Rut depth (mm)					
1056		HMACP MIXTURE DESIGN : SUMMARY SHEET	Mixture Evaluation @ Optimum Asphalt Content	Overlay Tester Min. Number of Cycles						
1057		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Asphalt Content (%)						
1058		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Maximum Specific Gravity (Gr)						
1059		HMACP MIXTURE DESIGN : SUMMARY SHEET	Effective Gravity (Ge)							
1060		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Theo. Max. Specific Gravity (Gt)						
1061		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	VMA (Percent)						
1062		HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Asphalt Content (%)						
1063		HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Maximum Specific Gravity (Gr)						
1064		HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Theo. Max. Specific Gravity (Gt)						
1065		HMACP MIXTURE DESIGN : SUMMARY SHEET	2	VMA (Percent)						
1066		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Asphalt Content (%)						
1067		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Maximum Specific Gravity (Gr)						
1068		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Theo. Max. Specific Gravity (Gt)						
1069		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	VMA (Percent)						
1070		HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Asphalt Content (%)						
1071		HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Maximum Specific Gravity (Gr)						
1072		HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Theo. Max. Specific Gravity (Gt)						
1073		HMACP MIXTURE DESIGN : SUMMARY SHEET	4	VMA (Percent)						
1074		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Asphalt Content (%)						
1075		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Maximum Specific Gravity (Gr)						
1076		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Theo. Max. Specific Gravity (Gt)						
1077		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	VMA (Percent)						
1078		HMACP MIXTURE DESIGN : SUMMARY SHEET	Min Film Thickness (microns)							
1079		HMACP MIXTURE DESIGN : SUMMARY SHEET	AC @ Min Film Thickness:							
1080		HMACP MIXTURE DESIGN : SUMMARY SHEET	Max Film Thickness (microns)							
1081		HMACP MIXTURE DESIGN : SUMMARY SHEET	AC @ Max Film Thickness:							
1082		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Asphalt Content (%)						
1083		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Lab Measured Gr						
1084		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Effective Specific Gravity (Ge)						
1085		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Backcalculated Gr						
1086		HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Lab Measured Gr						
1087		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Asphalt Content (%)						
1088		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Lab Measured Gr						
1089		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Effective Specific Gravity (Ge)						
1090		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Backcalculated Gr						
1091		HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Lab Measured Gr						
1092		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Asphalt Content (%)						
1093		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Lab Measured Gr						
1094		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Effective Specific Gravity (Ge)						
1095		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Backcalculated Gr						
1096		HMACP MIXTURE DESIGN : SUMMARY SHEET	6	Lab Measured Gr						
1097		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Asphalt Content (%)						
1098		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Height (in)						
1099		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Diameter (in)						
1100		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Dry Weight (grams)						
1101		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Backcalculated Gr						
1102		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Ga						
1103		HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Height (in)						
1104		HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Diameter (in)						
1105		HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Dry Weight (grams)						
1106		HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Ga						
1107		HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Density from Backcalculated Gr (%)						
1108		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Asphalt Content (%)						
1109		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Height (in)						
1110		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Diameter (in)						
1111		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Dry Weight (grams)						
1112		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Backcalculated Gr						
1113		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Ga						
1114		HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Height (in)						
1115		HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Diameter (in)						

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
1116		HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Dry Weight (grams)						
1117		HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Ga						
1118		HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Density from Backcalculated Gr (%)						
1119		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Asphalt Content (%)						
1120		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Height (in)						
1121		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Diameter (in)						
1122		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Dry Weight (grams)						
1123		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Backcalculated Gr						
1124		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Ga						
1125		HMACP MIXTURE DESIGN : SUMMARY SHEET	6	Height (in)						
1126		HMACP MIXTURE DESIGN : SUMMARY SHEET	6	Diameter (in)						
1127		HMACP MIXTURE DESIGN : SUMMARY SHEET	6	Dry Weight (grams)						
1128		HMACP MIXTURE DESIGN : SUMMARY SHEET	6	Ga						
1129		HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Density from Backcalculated Gr (%)						
1130		HMACP MIXTURE DESIGN : SUMMARY SHEET	7	Asphalt Content (%)						
1131		HMACP MIXTURE DESIGN : SUMMARY SHEET	7	Height (in)						
1132		HMACP MIXTURE DESIGN : SUMMARY SHEET	7	Diameter (in)						
1133		HMACP MIXTURE DESIGN : SUMMARY SHEET	7	Dry Weight (grams)						
1134		HMACP MIXTURE DESIGN : SUMMARY SHEET	7	Backcalculated Gr						
1135		HMACP MIXTURE DESIGN : SUMMARY SHEET	7	Ga						
1136		HMACP MIXTURE DESIGN : SUMMARY SHEET	8	Height (in)						
1137		HMACP MIXTURE DESIGN : SUMMARY SHEET	8	Diameter (in)						
1138		HMACP MIXTURE DESIGN : SUMMARY SHEET	8	Dry Weight (grams)						
1139		HMACP MIXTURE DESIGN : SUMMARY SHEET	8	Ga						
1140		HMACP MIXTURE DESIGN : SUMMARY SHEET	7	Density from Backcalculated Gr (%)						
1141		HMACP MIXTURE DESIGN : SUMMARY SHEET	9	Asphalt Content (%)						
1142		HMACP MIXTURE DESIGN : SUMMARY SHEET	9	Height (in)						
1143		HMACP MIXTURE DESIGN : SUMMARY SHEET	9	Diameter (in)						
1144		HMACP MIXTURE DESIGN : SUMMARY SHEET	9	Dry Weight (grams)						
1145		HMACP MIXTURE DESIGN : SUMMARY SHEET	9	Backcalculated Gr						
1146		HMACP MIXTURE DESIGN : SUMMARY SHEET	9	Ga						
1147		HMACP MIXTURE DESIGN : SUMMARY SHEET	10	Height (in)						
1148		HMACP MIXTURE DESIGN : SUMMARY SHEET	10	Diameter (in)						
1149		HMACP MIXTURE DESIGN : SUMMARY SHEET	10	Dry Weight (grams)						
1150		HMACP MIXTURE DESIGN : SUMMARY SHEET	10	Ga						
1151		HMACP MIXTURE DESIGN : SUMMARY SHEET	9	Density from Backcalculated Gr (%)						
1152	2.75426	HMACP MIXTURE DESIGN : SUMMARY SHEET	Effective Specific Gravity:							
1153	4.07916	HMACP MIXTURE DESIGN : SUMMARY SHEET	Optimum Asphalt Content :							
1154	13.8029	HMACP MIXTURE DESIGN : SUMMARY SHEET	VMA @ Optimum AC:							
1155		HMACP MIXTURE DESIGN : SUMMARY SHEET	Estimated Percent of Stripping, %:							
1156		HMACP MIXTURE DESIGN : SUMMARY SHEET	Drain-Down, %:							
1157		HMACP MIXTURE DESIGN : SUMMARY SHEET	Cantabro Loss, %:							
1158	2.47507	HMACP MIXTURE DESIGN : SUMMARY SHEET	Interpolated Values	Specific Gravity (Ga):						
1159	2.58052	HMACP MIXTURE DESIGN : SUMMARY SHEET	Interpolated Values	Max. Specific Gravity (Gr):						
1160	2.57822	HMACP MIXTURE DESIGN : SUMMARY SHEET	Interpolated Values	Theo. Max. Specific Gravity (Gt):						
1161		HMACP MIXTURE DESIGN : SUMMARY SHEET	VCA(CA)							
1162		HMACP MIXTURE DESIGN : SUMMARY SHEET	VCA(MIX)							
1163		HMACP MIXTURE DESIGN : SUMMARY SHEET	VCA(CA, calc.)							
1164		HMACP MIXTURE DESIGN : SUMMARY SHEET	VCA(MIX, calc.)							
1165		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	A	Gr					
1166		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	B	Gr					
1167		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	Density (%)	Gr					
1168		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	A	Ga					
1169		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	B	Ga					
1170		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	Density (%)	Ga					
1171		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	A	Height @ Nini					
1172		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	B	Height @ Nini					
1173		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	Density (%)	Height @ Nini					
1174		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	A	Height @ Ndes					
1175		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	B	Height @ Ndes					
1176		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	Density (%)	Height @ Ndes					
1177		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	A	Height @ Nmax					

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
1178		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	B	Height @ Nmax					
1179		HMACP MIXTURE DESIGN : SUMMARY SHEET	MIXTURE DENSIFICATION	Density (%)	Height @ Nmax					
1180	2004	HMACP MIXTURE DESIGN : COMBINED GRADATION	SPEC YEAR:							
1181		HMACP MIXTURE DESIGN : COMBINED GRADATION	SPECIAL PROVISION:							
1182	ITEM340	HMACP MIXTURE DESIGN : COMBINED GRADATION	MIX TYPE:							
1183		HMACP MIXTURE DESIGN : COMBINED GRADATION	Lift Thickness, in:							
1184		HMACP MIXTURE DESIGN : SUMMARY SHEET	FINAL SPECIMEN	Asphalt Content (%)						
1185		HMACP MIXTURE DESIGN : SUMMARY SHEET	FINAL SPECIMEN	Specific Gravity Of Specimen (Ga)						
1186		HMACP MIXTURE DESIGN : SUMMARY SHEET	FINAL SPECIMEN	Maximum Specific Gravity (Gr)						
1187		HMACP MIXTURE DESIGN : SUMMARY SHEET	FINAL SPECIMEN	Effective Gravity (Ge)						
1188		HMACP MIXTURE DESIGN : SUMMARY SHEET	FINAL SPECIMEN	Density from Gr (Percent)						
1189		HMACP MIXTURE DESIGN : SUMMARY SHEET	FINAL SPECIMEN	Film Thickness (microns)						
1190		HMACP MIXTURE DESIGN : SUMMARY SHEET	Suggested Membrane Target App. Rate, gal/yd2:							
1191		HMACP MIXTURE DESIGN : SUMMARY SHEET	PREDICTION ESTIMATES	AC %						
1192		HMACP MIXTURE DESIGN : SUMMARY SHEET	PREDICTION ESTIMATES	Film Thickness (microns)						
1193		HMACP MIXTURE DESIGN : SUMMARY SHEET	PREDICTION ESTIMATES	Density (%)						
1194		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	Blank Sample Weight, g:							
1195	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	-	Sieve Size:	Retained	1"	Bin No.1	Aggregate Weight
1196	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	-	Sieve Size:	Retained	1"	Bin No.2	Aggregate Weight
1197	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	-	Sieve Size:	Retained	1"	Bin No.3	Aggregate Weight
1198	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	-	Sieve Size:	Retained	1"	Bin No.4	Aggregate Weight
1199	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	-	Sieve Size:	Retained	1"	Bin No.5	Aggregate Weight
1200		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	-	Sieve Size:	Retained	1"	Bin No.6	
1201		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	-	Sieve Size:	Retained	1"	Bin No.7	
1202	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	-	Sieve Size:	Retained	1"	Total Weights	
1203		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	-	Sieve Size:	Retained	1"	IndividualRetained, %	
1204		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	-	Sieve Size:	Retained	1"	Cumulative Retained, %	
1205	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	1"	Sieve Size:	Retained	7/8"	Bin No.1	Aggregate Weight
1206	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	1"	Sieve Size:	Retained	7/8"	Bin No.2	Aggregate Weight
1207	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	1"	Sieve Size:	Retained	7/8"	Bin No.3	Aggregate Weight
1208	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	1"	Sieve Size:	Retained	7/8"	Bin No.4	Aggregate Weight
1209	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	1"	Sieve Size:	Retained	7/8"	Bin No.5	Aggregate Weight
1210		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	1"	Sieve Size:	Retained	7/8"	Bin No.6	
1211		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	1"	Sieve Size:	Retained	7/8"	Bin No.7	
1212	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	1"	Sieve Size:	Retained	7/8"	Total Weights	
1213		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	1"	Sieve Size:	Retained	7/8"	IndividualRetained, %	
1214		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	1"	Sieve Size:	Retained	7/8"	Cumulative Retained, %	
1215	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.1	Aggregate Weight
1216	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.2	Aggregate Weight
1217	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.3	Aggregate Weight
1218	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.4	Aggregate Weight
1219	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.5	Aggregate Weight
1220		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.6	
1221		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.7	
1222	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Total Weights	
1223		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	IndividualRetained, %	
1224		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Cumulative Retained, %	
1225	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.1	Aggregate Weight
1226	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.2	Aggregate Weight
1227	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.3	Aggregate Weight
1228	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.4	Aggregate Weight
1229	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.5	Aggregate Weight
1230		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.6	
1231		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.7	
1232	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Total Weights	
1233		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	IndividualRetained, %	
1234		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Cumulative Retained, %	
1235	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.1	Aggregate Weight
1236	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.2	Aggregate Weight
1237	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.3	Aggregate Weight
1238	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.4	Aggregate Weight
1239	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.5	Aggregate Weight

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
1240		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.6	
1241		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.7	
1242	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Total Weights	
1243		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	IndividualRetained, %	
1244		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Cumulative Retained, %	
1245	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.1	Aggregate Weight
1246	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.2	Aggregate Weight
1247	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.3	Aggregate Weight
1248	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.4	Aggregate Weight
1249	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.5	Aggregate Weight
1250		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.6	
1251		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.7	
1252	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Total Weights	
1253		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	IndividualRetained, %	
1254		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Cumulative Retained, %	
1255	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.1	Aggregate Weight
1256	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.2	Aggregate Weight
1257	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.3	Aggregate Weight
1258	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.4	Aggregate Weight
1259	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.5	Aggregate Weight
1260		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.6	
1261		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.7	
1262	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Total Weights	
1263		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	IndividualRetained, %	
1264		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Cumulative Retained, %	
1265	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.1	Aggregate Weight
1266	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.2	Aggregate Weight
1267	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.3	Aggregate Weight
1268	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.4	Aggregate Weight
1269	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.5	Aggregate Weight
1270		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.6	
1271		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.7	
1272	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Total Weights	
1273		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	IndividualRetained, %	
1274		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Cumulative Retained, %	
1275	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.1	Aggregate Weight
1276	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.2	Aggregate Weight
1277	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.3	Aggregate Weight
1278	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.4	Aggregate Weight
1279	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.5	Aggregate Weight
1280		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.6	
1281		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.7	
1282	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Total Weights	
1283		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	IndividualRetained, %	
1284		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Cumulative Retained, %	
1285	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.1	Aggregate Weight
1286	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.2	Aggregate Weight
1287	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.3	Aggregate Weight
1288	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.4	Aggregate Weight
1289	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.5	Aggregate Weight
1290		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.6	
1291		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.7	
1292	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Total Weights	
1293		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	IndividualRetained, %	
1294		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Cumulative Retained, %	
1295		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.1	Aggregate Weight
1296		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.2	Aggregate Weight
1297		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.3	Aggregate Weight
1298		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.4	Aggregate Weight
1299		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.5	Aggregate Weight
1300		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.6	
1301		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.7	

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
1302		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Total Weights	
1303		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	IndividualRetained, %	
1304		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Cumulative Retained, %	
1305	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Totals	Bin No.1	Aggregate Weight				
1306	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Totals	Bin No.2	Aggregate Weight				
1307	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Totals	Bin No.3	Aggregate Weight				
1308	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Totals	Bin No.4	Aggregate Weight				
1309	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Totals	Bin No.5	Aggregate Weight				
1310		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Totals	Bin No.6					
1311		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Totals	Bin No.7					
1312	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	INDIVIDUAL	Totals	Total Weights					
1313		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	Running Total:							
1314	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	-	Sieve Size:	Retained	1"	Bin No.1	Aggregate Weight
1315	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	-	Sieve Size:	Retained	1"	Bin No.2	Aggregate Weight
1316	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	-	Sieve Size:	Retained	1"	Bin No.3	Aggregate Weight
1317	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	-	Sieve Size:	Retained	1"	Bin No.4	Aggregate Weight
1318	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	-	Sieve Size:	Retained	1"	Bin No.5	Aggregate Weight
1319		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	-	Sieve Size:	Retained	1"	Bin No.6	
1320		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	-	Sieve Size:	Retained	1"	Bin No.7	
1321	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	-	Sieve Size:	Retained	1"	Total Weights	
1322	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	1"	Sieve Size:	Retained	7/8"	Bin No.1	Aggregate Weight
1323	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	1"	Sieve Size:	Retained	7/8"	Bin No.2	Aggregate Weight
1324	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	1"	Sieve Size:	Retained	7/8"	Bin No.3	Aggregate Weight
1325	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	1"	Sieve Size:	Retained	7/8"	Bin No.4	Aggregate Weight
1326	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	1"	Sieve Size:	Retained	7/8"	Bin No.5	Aggregate Weight
1327		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	1"	Sieve Size:	Retained	7/8"	Bin No.6	
1328		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	1"	Sieve Size:	Retained	7/8"	Bin No.7	
1329	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	1"	Sieve Size:	Retained	7/8"	Total Weights	
1330	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.1	Aggregate Weight
1331	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.2	Aggregate Weight
1332	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.3	Aggregate Weight
1333	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.4	Aggregate Weight
1334	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.5	Aggregate Weight
1335		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.6	
1336		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.7	
1337	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	7/8"	Sieve Size:	Retained	5/8"	Total Weights	
1338	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.1	Aggregate Weight
1339	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.2	Aggregate Weight
1340	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.3	Aggregate Weight
1341	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.4	Aggregate Weight
1342	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.5	Aggregate Weight
1343		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.6	
1344		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.7	
1345	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	5/8"	Sieve Size:	Retained	3/8"	Total Weights	
1346	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.1	Aggregate Weight
1347	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.2	Aggregate Weight
1348	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.3	Aggregate Weight
1349	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.4	Aggregate Weight
1350	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.5	Aggregate Weight
1351		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.6	
1352		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.7	
1353	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Total Weights	
1354	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.1	Aggregate Weight
1355	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.2	Aggregate Weight
1356	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.3	Aggregate Weight
1357	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.4	Aggregate Weight
1358	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.5	Aggregate Weight
1359		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.6	
1360		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.7	
1361	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Total Weights	
1362	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.1	Aggregate Weight
1363	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.2	Aggregate Weight

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
1364	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.3	Aggregate Weight
1365	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.4	Aggregate Weight
1366	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.5	Aggregate Weight
1367		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.6	
1368		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.7	
1369	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Total Weights	
1370	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.1	Aggregate Weight
1371	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.2	Aggregate Weight
1372	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.3	Aggregate Weight
1373	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.4	Aggregate Weight
1374	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.5	Aggregate Weight
1375		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.6	
1376		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.7	
1377	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Total Weights	
1378	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.1	Aggregate Weight
1379	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.2	Aggregate Weight
1380	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.3	Aggregate Weight
1381	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.4	Aggregate Weight
1382	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.5	Aggregate Weight
1383		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.6	
1384		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.7	
1385	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Total Weights	
1386	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.1	Aggregate Weight
1387	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.2	Aggregate Weight
1388	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.3	Aggregate Weight
1389	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.4	Aggregate Weight
1390	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.5	Aggregate Weight
1391		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.6	
1392		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.7	
1393	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Total Weights	
1394		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.1	Aggregate Weight
1395		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.2	Aggregate Weight
1396		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.3	Aggregate Weight
1397		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.4	Aggregate Weight
1398		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.5	Aggregate Weight
1399		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.6	
1400		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.7	
1401		HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Total Weights	
1402	No	HMACP MIXTURE DESIGN : COMBINED GRADATION	WMA Included in Design?							
1403		HMACP MIXTURE DESIGN : COMBINED GRADATION	WMA TECHNOLOGY:							
1404	Fractiona	HMACP MIXTURE DESIGN : COMBINED GRADATION	Material Type	Bin No.8						
1405		HMACP MIXTURE DESIGN : COMBINED GRADATION	Material Type	Bin No.9						
1406		HMACP MIXTURE DESIGN : COMBINED GRADATION	Material Type	Bin No.10						
1407		HMACP MIXTURE DESIGN : COMBINED GRADATION	Material Source	Bin No.8						
1408		HMACP MIXTURE DESIGN : COMBINED GRADATION	Material Source	Bin No.9						
1409		HMACP MIXTURE DESIGN : COMBINED GRADATION	Material Source	Bin No.10						
1410		HMACP MIXTURE DESIGN : COMBINED GRADATION	RAS Type	Bin No.8						
1411	Tear-off	HMACP MIXTURE DESIGN : COMBINED GRADATION	RAS Type	Bin No.9						
1412		HMACP MIXTURE DESIGN : COMBINED GRADATION	RAS Type	Bin No.10						
1413		HMACP MIXTURE DESIGN : COMBINED GRADATION	Sample ID	Bin No.8						
1414		HMACP MIXTURE DESIGN : COMBINED GRADATION	Sample ID	Bin No.9						
1415		HMACP MIXTURE DESIGN : COMBINED GRADATION	Sample ID	Bin No.10						
1416	4.8	HMACP MIXTURE DESIGN : COMBINED GRADATION	Recycled Asphalt Binder (%)	Bin No.8						
1417		HMACP MIXTURE DESIGN : COMBINED GRADATION	Recycled Asphalt Binder (%)	Bin No.9						
1418		HMACP MIXTURE DESIGN : COMBINED GRADATION	Recycled Asphalt Binder (%)	Bin No.10						
1419	19.9	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual Bin (%):	Bin No.8						
1420	0	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual Bin (%):	Bin No.9						
1421	0	HMACP MIXTURE DESIGN : COMBINED GRADATION	Individual Bin (%):	Bin No.10						
1422	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Cum.% Passing	Sieve Size:	1"				
1423	19.9	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Wtd Cum. %	Sieve Size:	1"				
1424		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Cum.% Passing	Sieve Size:	1"				
1425		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Wtd Cum. %	Sieve Size:	1"				

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
1426		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Cum.% Passing	Sieve Size:	1"				
1427		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Wtd Cum. %	Sieve Size:	1"				
1428	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Cum.% Passing	Sieve Size:	7/8"				
1429	19.9	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Wtd Cum. %	Sieve Size:	7/8"				
1430		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Cum.% Passing	Sieve Size:	7/8"				
1431		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Wtd Cum. %	Sieve Size:	7/8"				
1432		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Cum.% Passing	Sieve Size:	7/8"				
1433		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Wtd Cum. %	Sieve Size:	7/8"				
1434	100	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Cum.% Passing	Sieve Size:	5/8"				
1435	19.9	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Wtd Cum. %	Sieve Size:	5/8"				
1436		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Cum.% Passing	Sieve Size:	5/8"				
1437		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Wtd Cum. %	Sieve Size:	5/8"				
1438		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Cum.% Passing	Sieve Size:	5/8"				
1439		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Wtd Cum. %	Sieve Size:	5/8"				
1440	94	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Cum.% Passing	Sieve Size:	3/8"				
1441	18.706	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Wtd Cum. %	Sieve Size:	3/8"				
1442		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Cum.% Passing	Sieve Size:	3/8"				
1443		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Wtd Cum. %	Sieve Size:	3/8"				
1444		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Cum.% Passing	Sieve Size:	3/8"				
1445		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Wtd Cum. %	Sieve Size:	3/8"				
1446	68.1	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Cum.% Passing	Sieve Size:	No. 4				
1447	13.5519	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Wtd Cum. %	Sieve Size:	No. 4				
1448		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Cum.% Passing	Sieve Size:	No. 4				
1449		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Wtd Cum. %	Sieve Size:	No. 4				
1450		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Cum.% Passing	Sieve Size:	No. 4				
1451		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Wtd Cum. %	Sieve Size:	No. 4				
1452	47.2	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Cum.% Passing	Sieve Size:	No. 10				
1453	9.3928	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Wtd Cum. %	Sieve Size:	No. 10				
1454		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Cum.% Passing	Sieve Size:	No. 10				
1455		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Wtd Cum. %	Sieve Size:	No. 10				
1456		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Cum.% Passing	Sieve Size:	No. 10				
1457		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Wtd Cum. %	Sieve Size:	No. 10				
1458	30.5	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Cum.% Passing	Sieve Size:	No. 40				
1459	6.0695	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Wtd Cum. %	Sieve Size:	No. 40				
1460		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Cum.% Passing	Sieve Size:	No. 40				
1461		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Wtd Cum. %	Sieve Size:	No. 40				
1462		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Cum.% Passing	Sieve Size:	No. 40				
1463		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Wtd Cum. %	Sieve Size:	No. 40				
1464	19.3	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Cum.% Passing	Sieve Size:	No. 80				
1465	3.8407	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Wtd Cum. %	Sieve Size:	No. 80				
1466		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Cum.% Passing	Sieve Size:	No. 80				
1467		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Wtd Cum. %	Sieve Size:	No. 80				
1468		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Cum.% Passing	Sieve Size:	No. 80				
1469		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Wtd Cum. %	Sieve Size:	No. 80				
1470	7.1	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Cum.% Passing	Sieve Size:	No. 200				
1471	1.4129	HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Wtd Cum. %	Sieve Size:	No. 200				
1472		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Cum.% Passing	Sieve Size:	No. 200				
1473		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Wtd Cum. %	Sieve Size:	No. 200				
1474		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Cum.% Passing	Sieve Size:	No. 200				
1475		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Wtd Cum. %	Sieve Size:	No. 200				
1476		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Cum.% Passing	Sieve Size:					
1477		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.8	Wtd Cum. %	Sieve Size:					
1478		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Cum.% Passing	Sieve Size:					
1479		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.9	Wtd Cum. %	Sieve Size:					
1480		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Cum.% Passing	Sieve Size:					
1481		HMACP MIXTURE DESIGN : COMBINED GRADATION	Bin No.10	Wtd Cum. %	Sieve Size:					
1482		HMACP MIXTURE DESIGN : COMBINED GRADATION	Hydrated Lime?:	Bin No.1						
1483		HMACP MIXTURE DESIGN : COMBINED GRADATION	Hydrated Lime?:	Bin No.2						
1484		HMACP MIXTURE DESIGN : COMBINED GRADATION	Hydrated Lime?:	Bin No.3						
1485		HMACP MIXTURE DESIGN : COMBINED GRADATION	Hydrated Lime?:	Bin No.4						
1486		HMACP MIXTURE DESIGN : COMBINED GRADATION	Hydrated Lime?:	Bin No.5						
1487		HMACP MIXTURE DESIGN : COMBINED GRADATION	Hydrated Lime?:	Bin No.6						

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
1488		HMACP MIXTURE DESIGN : COMBINED GRADATION	Hydrated Lime?:	Bin No.7						
1489	23.4146	HMACP MIXTURE DESIGN : COMBINED GRADATION	Ratio of Recycled to Total Binder, %							
1490		HMACP MIXTURE DESIGN : COMBINED GRADATION	Binder Substitution?							
1491		HMACP MIXTURE DESIGN : COMBINED GRADATION	Binder Originally Specified:							
1492		HMACP MIXTURE DESIGN : COMBINED GRADATION	Substitute Binder:							
1493	n/a	HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Recycled Materials	Tex-217-F, Part III	Max.	Spec. Limit				
1494		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Recycled Materials	Tex-217-F, Part III	Bin No.8	Result				
1495		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Recycled Materials	Tex-217-F, Part III	Bin No.8	Sample ID				
1496		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Recycled Materials	Tex-217-F, Part III	Bin No.9	Result				
1497		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Recycled Materials	Tex-217-F, Part III	Bin No.9	Sample ID				
1498		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Recycled Materials	Tex-217-F, Part III	Bin No.10	Result				
1499		HMACP MIXTURE DESIGN : MATERIAL PROPERTIES	Recycled Materials	Tex-217-F, Part III	Bin No.10	Sample ID				
1500	0	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.8	Individual Ret., %	Passing	-	Sieve Size:	Retained	1"	
1501	0	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.8	Individual Ret., %	Passing	1"	Sieve Size:	Retained	7/8"	
1502	0	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.8	Individual Ret., %	Passing	7/8"	Sieve Size:	Retained	5/8"	
1503	1.194	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.8	Individual Ret., %	Passing	5/8"	Sieve Size:	Retained	3/8"	
1504	5.1541	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.8	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
1505	4.1591	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.8	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
1506	3.3233	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.8	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
1507	2.2288	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.8	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
1508	2.4278	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.8	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
1509	1.4129	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.8	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
1510		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.8	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
1511	19.9	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.8	Individual Ret., %	Total:					
1512	6.3481	HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.8	Individual Ret., %	Percent of plus No. 4					
1513		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.9	Individual Ret., %	Passing	-	Sieve Size:	Retained	1"	
1514		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.9	Individual Ret., %	Passing	1"	Sieve Size:	Retained	7/8"	
1515		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.9	Individual Ret., %	Passing	7/8"	Sieve Size:	Retained	5/8"	
1516		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.9	Individual Ret., %	Passing	5/8"	Sieve Size:	Retained	3/8"	
1517		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.9	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
1518		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.9	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
1519		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.9	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
1520		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.9	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
1521		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.9	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
1522		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.9	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
1523		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.9	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
1524		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.9	Individual Ret., %	Total:					
1525		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.9	Individual Ret., %	Percent of plus No. 4					
1526		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.10	Individual Ret., %	Passing	-	Sieve Size:	Retained	1"	
1527		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.10	Individual Ret., %	Passing	1"	Sieve Size:	Retained	7/8"	
1528		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.10	Individual Ret., %	Passing	7/8"	Sieve Size:	Retained	5/8"	
1529		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.10	Individual Ret., %	Passing	5/8"	Sieve Size:	Retained	3/8"	
1530		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.10	Individual Ret., %	Passing	3/8"	Sieve Size:	Retained	No. 4	
1531		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.10	Individual Ret., %	Passing	No. 4	Sieve Size:	Retained	No. 10	
1532		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.10	Individual Ret., %	Passing	No. 10	Sieve Size:	Retained	No. 40	
1533		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.10	Individual Ret., %	Passing	No. 40	Sieve Size:	Retained	No. 80	
1534		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.10	Individual Ret., %	Passing	No. 80	Sieve Size:	Retained	No. 200	
1535		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.10	Individual Ret., %	Passing	No. 200	Sieve Size:	Retained	Pan	
1536		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.10	Individual Ret., %	Passing		Sieve Size:	Retained	Pan	
1537		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.10	Individual Ret., %	Total:					
1538		HMACP MIXTURE DESIGN : Aggregate Classification	Bin No.10	Individual Ret., %	Percent of plus No. 4					
1539	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	-	Sieve Size:	Retained	1"	Bin No.8	Fractionated RAP Weight
1540		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	-	Sieve Size:	Retained	1"	Bin No.9	
1541		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	-	Sieve Size:	Retained	1"	Bin No.10	
1542	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	1"	Sieve Size:	Retained	7/8"	Bin No.8	Fractionated RAP Weight
1543		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	1"	Sieve Size:	Retained	7/8"	Bin No.9	
1544		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	1"	Sieve Size:	Retained	7/8"	Bin No.10	
1545	0	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.8	Fractionated RAP Weight
1546		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.9	
1547		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.10	
1548	12.542	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.8	Fractionated RAP Weight
1549		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.9	

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
1550		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.10	
1551	54.1397	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.8	Fractionated RAP Weight
1552		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.9	
1553		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.10	
1554	43.688	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.8	Fractionated RAP Weight
1555		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.9	
1556		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.10	
1557	34.9086	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.8	Fractionated RAP Weight
1558		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.9	
1559		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.10	
1560	23.4118	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.8	Fractionated RAP Weight
1561		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.9	
1562		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.10	
1563	25.5021	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.8	Fractionated RAP Weight
1564		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.9	
1565		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.10	
1566	14.8414	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.8	Fractionated RAP Weight
1567		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.9	
1568		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.10	
1569		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.8	Fractionated RAP Weight
1570		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.9	
1571		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Passing		Sieve Size:	Retained	Pan	Bin No.10	
1572	209.034	HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Totals	Bin No.8	Fractionated	RAP Weight			
1573		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Totals	Bin No.9					
1574		HMACP MIXTURE DESIGN : WEIGH UP SHEET	INDIVIDUAL	Totals	Bin No.10					
1575	801	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	-	Sieve Size:	Retained	1"	Bin No.8	Fractionated RAP Weight
1576		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	-	Sieve Size:	Retained	1"	Bin No.9	
1577		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	-	Sieve Size:	Retained	1"	Bin No.10	
1578	801	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	1"	Sieve Size:	Retained	7/8"	Bin No.8	Fractionated RAP Weight
1579		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	1"	Sieve Size:	Retained	7/8"	Bin No.9	
1580		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	1"	Sieve Size:	Retained	7/8"	Bin No.10	
1581	801	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.8	Fractionated RAP Weight
1582		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.9	
1583		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	7/8"	Sieve Size:	Retained	5/8"	Bin No.10	
1584	813.542	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.8	Fractionated RAP Weight
1585		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.9	
1586		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	5/8"	Sieve Size:	Retained	3/8"	Bin No.10	
1587	867.682	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.8	Fractionated RAP Weight
1588		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.9	
1589		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	3/8"	Sieve Size:	Retained	No. 4	Bin No.10	
1590	911.37	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.8	Fractionated RAP Weight
1591		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.9	
1592		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 4	Sieve Size:	Retained	No. 10	Bin No.10	
1593	946.278	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.8	Fractionated RAP Weight
1594		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.9	
1595		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 10	Sieve Size:	Retained	No. 40	Bin No.10	
1596	969.69	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.8	Fractionated RAP Weight
1597		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.9	
1598		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 40	Sieve Size:	Retained	No. 80	Bin No.10	
1599	995.192	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.8	Fractionated RAP Weight
1600		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.9	
1601		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 80	Sieve Size:	Retained	No. 200	Bin No.10	
1602	1010.03	HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.8	Fractionated RAP Weight
1603		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.9	
1604		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing	No. 200	Sieve Size:	Retained	Pan	Bin No.10	
1605		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.8	Fractionated RAP Weight
1606		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.9	
1607		HMACP MIXTURE DESIGN : WEIGH UP SHEET	CUMULATIVE	Passing		Sieve Size:	Retained	Pan	Bin No.10	
1608	32	HMACP MIXTURE DESIGN : SUMMARY SHEET	1	Binder Ratio (%)						
1609	27.4286	HMACP MIXTURE DESIGN : SUMMARY SHEET	2	Binder Ratio (%)						
1610	24	HMACP MIXTURE DESIGN : SUMMARY SHEET	3	Binder Ratio (%)						
1611	21.3333	HMACP MIXTURE DESIGN : SUMMARY SHEET	4	Binder Ratio (%)						

Fld_nbr	Value	Desc_1	Desc_2	Desc_3	Desc_4	Desc_5	Desc_6	Desc_7		
1612	19.2	HMACP MIXTURE DESIGN : SUMMARY SHEET	5	Binder Ratio (%)						
1613	23.4146	HMACP MIXTURE DESIGN : SUMMARY SHEET	Binder Ratio @ OAC:							

Grade				Washed Sieve Min	Washed Sieve Max	VMA: Min
A Coarse Base	1-1/2"		37.5	98	100	11
	1"		25	78	94	
	3/4"		19	64	85	
	1/2"		12.5	50	70	
	No. 4		4.75	30	50	
	No. 8		2.36	22	36	
	No. 30		0.6	8	23	
	No. 50		0.3	3	19	
	No. 200		0.075	2	7	
B Fine Base	1"		25	100	100	12
	7/8"		22.4	95	100	
	5/8"		16	75	95	
	3/8"		9.5	60	80	
	No. 4		4.75	40	60	
	No. 10		2	27	40	
	No. 40		0.425	10	25	
	No. 80		0.18	3	13	
	No. 200		0.075	2	8	
C Coarse Surface	1"		25	100	100	13
	7/8"		22.4	100	100	
	3/8"		9.5	70	85	
	No. 4		4.75	43	63	
	No. 10		2	30	40	
	No. 40		0.425	10	25	
	No. 80		0.18	3	13	
	No. 200		0.075	2	8	
D Fine Surface	3/4"		19	100	100	14
	1/2"		12.5	100	100	
	3/8"		9.5	85	100	
	No. 4		4.75	50	70	
	No. 10		2	32	42	
	No. 40		0.425	11	26	
	No. 80		0.18	4	14	
	No. 200		0.075	2	8	
F Fine Mixture	3/4"		19	100	100	15
	3/8"		9.5	98	100	
	No. 4		4.75	70	90	
	No. 8		2.36	38	48	
	No. 30		0.6	12	27	
	No. 50		0.3	6	19	
	No. 200		0.075	2	7	
SP-A Base	2"		50	100	100	12.5
	1-1/2"		37.5	98	100	
	1"		25	90	100	
	3/4"		19	45	90	
	No. 4		4.75	19	90	
	No. 8		2.36	19	45	
	No. 16		1.18	1	45	
	No. 30		0.6	1	45	
	No. 50		0.3	1	45	
	No. 200		0.075	1	7	
SP-B Intermediate	1-1/2"		37.5	100	100	13.5
	1"		25	98	100	
	3/4"		19	90	100	
	1/2"		12.5	49	90	
	No. 4		4.75	23	90	
	No. 8		2.36	23	49	
	No. 16		1.18	2	49	
	No. 30		0.6	2	49	
	No. 50		0.3	2	49	
	No. 200		0.075	2	8	
SP-C Surface	1"		25	100	100	14.5
	3/4"		19	98	100	
	1/2"		12.5	90	100	
	3/8"		9.5	58	90	
	No. 4		4.75	28	90	
	No. 8		2.36	28	58	
	No. 16		1.18	2	58	
	No. 30		0.6	2	58	
	No. 50		0.3	2	58	
	No. 200		0.075	2	10	
SP-D Fine Mixture	3/4"		19	100	100	15.5
	1/2"		12.5	98	100	
	3/8"		9.5	90	100	
	No. 4		4.75	32	90	
	No. 8		2.36	32	67	
	No. 16		1.18	2	67	
	No. 30		0.6	2	67	
	No. 50		0.3	2	67	
	No. 200		0.075	2	10	
CMHB-C Coarse Surface	1"		25	100	100	13
	3/4"		19	98	100	
	1/2"		12.5	72	85	
	3/8"		9.5	50	70	
	No. 4		4.75	30	45	
	No. 8		2.36	17	27	
	No. 16		1.18	5	27	
	No. 30		0.6	5	27	

Sieve Size				Combined Gradation	Lower Spec Limit	Upper Spec Limit
1"	25	4.256699613	100	100	100	100
7/8"	22.4	4.051460492	95.17844483	98.206	95	100
5/8"	16	3.482202253	81.80521461	91.264	75	95
3/8"	9.5	2.754074109	64.69975237	74.194	60	80
No. 4	4.75	2.016100254	47.36299099	53.1683	40	60
No. 10	2	1.366040257	32.09153525	33.5028	27	40
No. 40	0.425	0.680416785	15.9846089	20.2676	10	25
No. 80	0.18	0.462245431	10.8592448	11.988	3	13
No. 200	0.075	0.31172926	7.323261877	4.4551	2	8

Goes with power 45 chart.

Recycled Material, %	Virgin Material, %
19.9	80.1

	Recycled Mat List	Total Percent
Fractionated RAP	Fractionated RAP	20
Unfractionated RAP		0
RAS	RAS	0

Special Provisions
341-024

JUNK FIELD #'S

BINDER SUBSTITUTION										
PG 76-16	PG 70-16	PG 64-16	PG 82-22	PG 76-22	PG 70-22	PG 64-22	PG 58-22	PG 76-28	PG 70-28	PG 64-28	PG 58-28
				PG 70-22	PG 64-22	PG 58-22		PG 70-28	PG 64-28	PG 58-28	
				PG 64-22	PG 58-22			PG 64-28	PG 58-28		

# of Sieves with Coarse Aggregate	restricted	
	39.5	39.5
	26.8	30.8
	18.1	24.1
	13.6	17.5
	11.4	11.4
6		
	34.6	34.6
	22.3	28.3
	16.7	20.7
	13.7	13.7
6		
	39.1	39.1
	25.6	31.6
	19.1	23.1
	15.5	15.5
6		
	47.2	47.2
	31.6	37.6
	23.5	27.5
	18.7	18.7
5		

Version: 5/20/2009

WMA Technology	WMA in Design?	Hydrated Lime	Mix Description
Advera	1	0	1
Aspha-Min			
Double Barrel Green			
Evotherm			
Redi-Set WMX			
Sasobit			
Terex			
Maxam			
Ultrafoam GX			

Version:12/01/2009

Sandstone	
Apple (Sawyer, OK)	0050437
Brownlee	1402704
Sawyer, OK	0050447

Limestone-Dolomite	
1604	1501506
Ardmore, OK	0050412
Balcones Quarry	1504602
Beckmann	1501503
Bridgeport	0224904
Brownwood	2302501
Burnet	1402701
Butterfield	2407220
Chambers	0224921
Chapman	1523211
Coleman, OK	0050414
Cooperton, OK	0050415
Davenport	1523214
Eastland	2306805
Feld	1424602
Gibbs	0901408
Helotes	1501514
Hondo	1516314
Huebner Road	1501507
Hunter	1504605
Rd.	1504606
Lake Bridgeport	0224902
Lampasas	1402706
Leach	0212001
Lone Star	1504607
Marble Falls	1402702
Matrimar	0040103
McKelligon Dolo	2407201
Mico # 68	1516315
Mill Creek, OK	0050445
Naruna	1402711
Nichols	1516312
North Troy	0050448
Pate	0914710
Perch-Hill	0224901
Rankin	0623102
Richards Spur	0050405
Ruby	1410607
S.H. 211	1516310
Servtex	1504603
South Quarry	2407213
Spicewood	1402710
Springfield	0212002
Stringtown, OK	0050407
Tehuacana	0914708
Three Rivers	0050501
Turner	0722611
Weatherford	0218409
Wer	1424603
Yearwood	1424606

Gravel	
Canyon	0418814
Beck	2110901
Boys Ranch	0418008
Broken Bow S & G	0050451
D and D	2215905
Del Rio	2223301
Galo	2224019
Goode-Anderson	0801701
Highcard Ranch	2506507
Hoban	0619502
Johnson	0411807
Las Viboras	2110905
Little River	0050114
LS Pit	0418002
Luckett	0916104
Mansfield	0418001
Matador	2517309
Murphy	1323505
Pettibone	1716608
Pit 365	0916117
Pit 424	1716611
Realitos	2106701
Reavis	2110906
Showers	2110904
Smith	0325205
South Noodle	0812803
Stockett	0400604
Sweet 16	2206706
Tasitas	2224014
Thrasher	2517302
Woods	0505402
Wynn	2215904

Igneous	
Bird Hill	1523213
Davis, OK.	0050439
Jones Mill	0050122
Knippa	1523206
McKelligon-Granite	2407206
Mill Creek (Grnt), OK.	0050433
Padre Canyon	2411613
Porcupine Mountain	0040105
Snyder, OK.	0050435
Sweet Home, AR.	0050106
Vado	0050310

Synthetic	
Streetman	1817502

Aggregate Code
1402702
1402702
1402702

Version: 2/10/2010

RAS Producer	RAS BIN
APAC- TX Cold Springs	
APAC-TX Gribble Plant	
APAC-TX Leston Plant	
APAC-TX Sunnyvale Plant	
Century Asphalt-Melendy Plant	
R. K. Hall Construction	
Ramming Paving- Buda	
Ramming Paving- Georgetown	
Recon Recycle	
Southwest Shingle Recyc	
Sustainable Pvmt Tech-Pasadena	
Sustainable Pvmt Tech-Schertz	
Waste Management WMAP	

	No. 50		0.3	5	27							
	No. 200		0.075	5	9							6
CMHB-F Fine Surface	3/4"		19	100	100							
	1/2"		12.5	98	100							
	3/8"		9.5	85	100							
	No. 4		4.75	40	60							
	No. 8		2.36	17	27	14						
	No. 16		1.18	5	27							
	No. 30		0.6	5	27							
	No. 50		0.3	5	27							
	No. 200		0.075	5	9							5
SMA-C Coarse	3/4"		19	100	100							
	1/2"		12.5	80	90							
	3/8"		9.5	25	60							
	No. 4		4.75	20	28							
	No. 8		2.36	14	20	17						
	No. 16		1.18	8	20							
	No. 30		0.6	8	20							
	No. 50		0.3	8	20							
	No. 200		0.075	8	12							5
SMA-D Medium	3/4"		19	100	100							
	1/2"		12.5	85	99							
	3/8"		9.5	50	75							
	No. 4		4.75	20	32							
	No. 8		2.36	16	28	17						
	No. 16		1.18	8	28							
	No. 30		0.6	8	28							
	No. 50		0.3	8	28							
	No. 200		0.075	8	12							5
SMA-F Fine	1/2"		12.5	100	100							
	3/8"		9.5	70	90							
	No. 4		4.75	30	50							
	No. 8		2.36	20	30	17						
	No. 16		1.18	8	30							
	No. 30		0.6	8	30							
	No. 50		0.3	8	30							
	No. 200		0.075	8	14							4
SMAR-C Coarse	3/4"		19	100	100							
	1/2"		12.5	72	85							
	3/8"		9.5	50	70							
	No. 4		4.75	30	45							
	No. 8		2.36	17	27	18.5						
	No. 16		1.18	12	22							
	No. 30		0.6	8	20							
	No. 50		0.3	6	15							
	No. 200		0.075	5	9							5
SMAR-F Fine	3/4"		19	100	100							
	3/8"		9.5	95	100							
	No. 4		4.75	40	50							
	No. 8		2.36	17	27	18.5						
	No. 16		1.18	12	22							
	No. 30		0.6	8	20							
	No. 50		0.3	6	15							
	No. 200		0.075	5	9							4
PFC PG 76 Mixtures	3/4"		19	100	100							
	1/2"		12.5	80	100							
	3/8"		9.5	35	60							
	No. 4		4.75	1	20							
	No. 8		2.36	1	10							
	No. 200		0.075	1	4							4
PFC A-R Mixtures	3/4"		19	100	100							
	1/2"		12.5	95	100							
	3/8"		9.5	50	80							
	No. 4		4.75	0	8							
	No. 8		2.36	0	4							
	No. 200		0.075	0	4							
Other			#N/A									
			#N/A									
			#N/A									
			#N/A									
			#N/A									
			#N/A									
			#N/A									
			#N/A									
			#N/A									
			#N/A									

								AC CONTENT		Membrane Application Rates		
								MIN	MAX	MIN	MAX	SA Factors
UTBWC-A	3/8"		9.5	100	100			5.0	5.8	0.14	0.19	0.41
	No. 4		4.75	35	55							0.41
	No. 8		2.36	19	30							0.82
	No. 16		1.18	14	25							1.64
	No. 30		0.6	10	18							2.87
	No. 50		0.3	7	14							6.14
	No. 100		0.15	5	10							12.29
	No. 200		0.075	4	6							32.77
UTBWC-B	1/2"		12.5	100	100			4.8	5.6	0.17	0.24	0.41
	3/8"		9.5	75	100							-
	No. 4		4.75	22	36							0.41
	No. 8		2.36	19	30							0.82
	No. 16		1.18	14	24							1.64
	No. 30		0.6	10	18							2.87
	No. 50		0.3	7	14							6.14
	No. 100		0.15	5	10							12.29
	No. 200		0.075	4	6							32.77
UTBWC-C	3/4"		19	100	100			4.6	5.6	0.20	0.27	0.41
	1/2"		12.5	75	100							-
	3/8"		9.5	55	80							-
	No. 4		4.75	22	36							0.41
	No. 8		2.36	19	30							0.82
	No. 16		1.18	14	24							1.64
	No. 30		0.6	10	18							2.87
	No. 50		0.3	7	14							6.14
	No. 100		0.15	5	10							12.29
	No. 200		0.075	4	6							32.77

SS3111-CA Mix	3/8"		9.5	98	100	15.5			6.5	99999999					
	No. 4		4.75	70	90										
	No. 8		2.36	40	65										
	No. 16		1.18	20	45										
	No. 30		0.6	10	30										
	No. 50		0.3	10	20										
	No. 200		0.075	2	10									Min Lab Density	Max Lab Density
UTBHMWC-A	3/8"		9.5	100	100				5.0	5.8	0.14	0.20	0.41	85.0	92.0
	No. 4		4.75	35	55								0.41		
	No. 8		2.36	19	30								0.82		
	No. 16		1.18	14	25								1.64		
	No. 30		0.6	10	18								2.87		
	No. 50		0.3	7	14								6.14		
	No. 100		0.15	5	10								12.29		
	No. 200		0.075	4	6								32.77		
UTBHMWC-B	1/2"		12.5	100	100				4.8	5.6	0.16	0.24	0.41	85.0	92.0
	3/8"		9.5	75	100								-		
	No. 4		4.75	22	36								0.41		
	No. 8		2.36	19	30								0.82		
	No. 16		1.18	14	24								1.64		
	No. 30		0.6	10	18								2.87		
	No. 50		0.3	7	14								6.14		
	No. 100		0.15	5	10								12.29		
	No. 200		0.075	4	6								32.77		
UTBHMWC-C	3/4"		19	100	100				4.6	5.6	0.17	0.27	0.41	85.0	92.0
	1/2"		12.5	75	100								-		
	3/8"		9.5	55	80								-		
	No. 4		4.75	22	36								0.41		
	No. 8		2.36	19	30								0.82		
	No. 16		1.18	14	24								1.64		
	No. 30		0.6	10	18								2.87		
	No. 50		0.3	7	14								6.14		
	No. 100		0.15	5	10								12.29		
	No. 200		0.075	4	6								32.77		
TBPFC PG 76 Mixtures	3/4"		19	100	100				6.0	7.0	0.000	0.000		78.0	82.0
	1/2"		12.5	80	100										
	3/8"		9.5	35	60										
	No. 4		4.75	1	20										
	No. 8		2.36	1	10										
	No. 200		0.075	1	4										
TBPFC A-R Mixtures	3/4"		19	100	100				8.0	10.0	0.000	0.000		78.0	82.0
	1/2"		12.5	95	100										
	3/8"		9.5	50	80										
	No. 4		4.75	0	8										
	No. 8		2.36	0	4										
	No. 200		0.075	0	4										

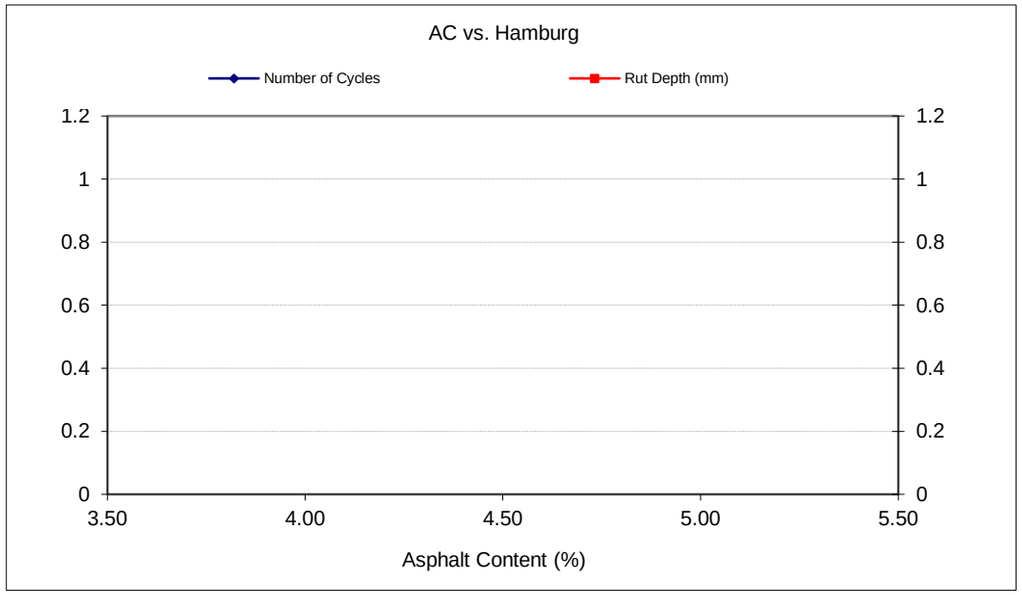
Gradation Table

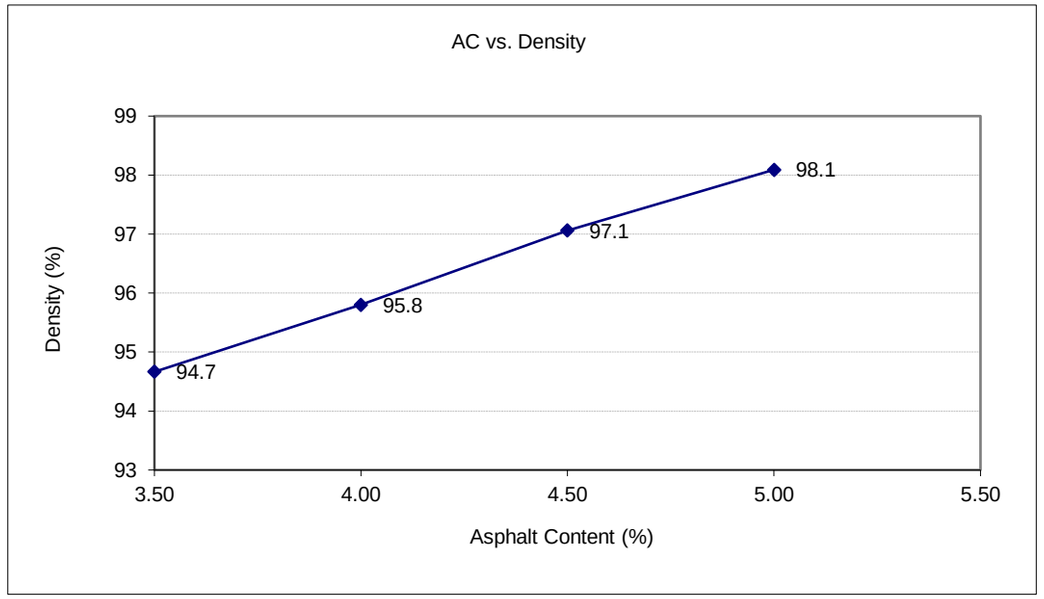
English	Metric	Selection	Size
2"	50 mm	2"	50
1-3/4"	45 mm	1-3/4"	45
1-1/2"	37.5 mm	1-1/2"	37.5
1-1/4"	31.5 mm	1-1/4"	31.5
1"	25 mm	1"	25
7/8"	22.4 mm	7/8"	22.4
3/4"	19 mm	3/4"	19
5/8"	16 mm	5/8"	16
1/2"	12.5 mm	1/2"	12.5
7/16"	11.2 mm	7/16"	11.2
3/8"	9.5 mm	3/8"	9.5
5/16"	8 mm	5/16"	8
1/4"	6.3 mm	1/4"	6.3
No. 4	4.75 mm	No. 4	4.75
No. 6	3.35 mm	No. 6	3.35
No. 8	2.36 mm	No. 8	2.36
No. 10	2 mm	No. 10	2
No. 14	1.4 mm	No. 14	1.4
No. 16	1.18 mm	No. 16	1.18
No. 20	.85 µm	No. 20	0.85
No. 30	.6 µm	No. 30	0.6
No. 40	.425 µm	No. 40	0.425
No. 50	.3 µm	No. 50	0.3
No. 80	.18 µm	No. 80	0.18
No. 100	.15 µm	No. 100	0.15
No. 200	.075 µm	No. 200	0.075

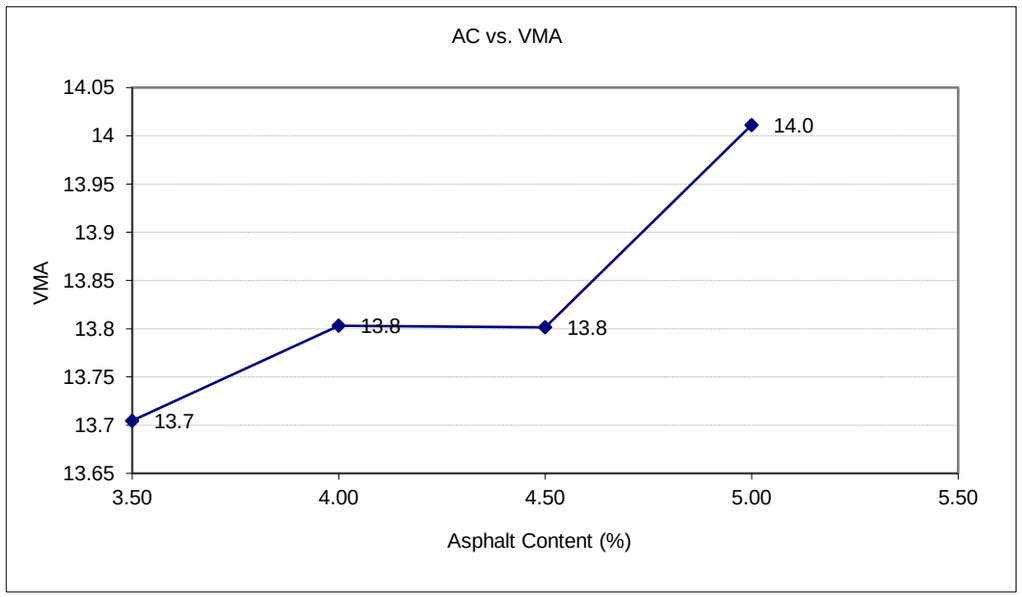
MIX TYPES
ITEM340_A_Coarse_Base
ITEM340_B_Fine_Base
ITEM340_C_Coarse_Surface
ITEM340_D_Fine_Surface
ITEM340_F_Fine_Mixture
ITEM341_A_Coarse_Base
ITEM341_B_Fine_Base
ITEM341_C_Coarse_Surface
ITEM341_D_Fine_Surface
ITEM341_F_Fine_Mixture
ITEM344_SP_A_Base
ITEM344_SP_B_Intermediate
ITEM344_SP_C_Surface
ITEM344_SP_D_Fine_Mixture
ITEM344_CMHB_C_Coarse_Surface
ITEM344_CMHB_F_Fine_Surface
ITEM346_SMA_C_Coarse
ITEM346_SMA_D_Medium
ITEM346_SMA_F_Fine
ITEM346_SMAR_C_Coarse
ITEM346_SMAR_F_Fine
ITEM342_PFC_PG_76_Mixtures
ITEM342_PFC_A_R_Mixtures
ITEM3001_UTBWC_A
ITEM3001_UTBWC_B
ITEM3001_UTBWC_C
SS3111_CA_Mix
ITEM3142_UTBWC_A
ITEM3142_UTBWC_B
ITEM3142_UTBWC_C
CAM
TBPFC_PG76
TBPFC_AR
Other

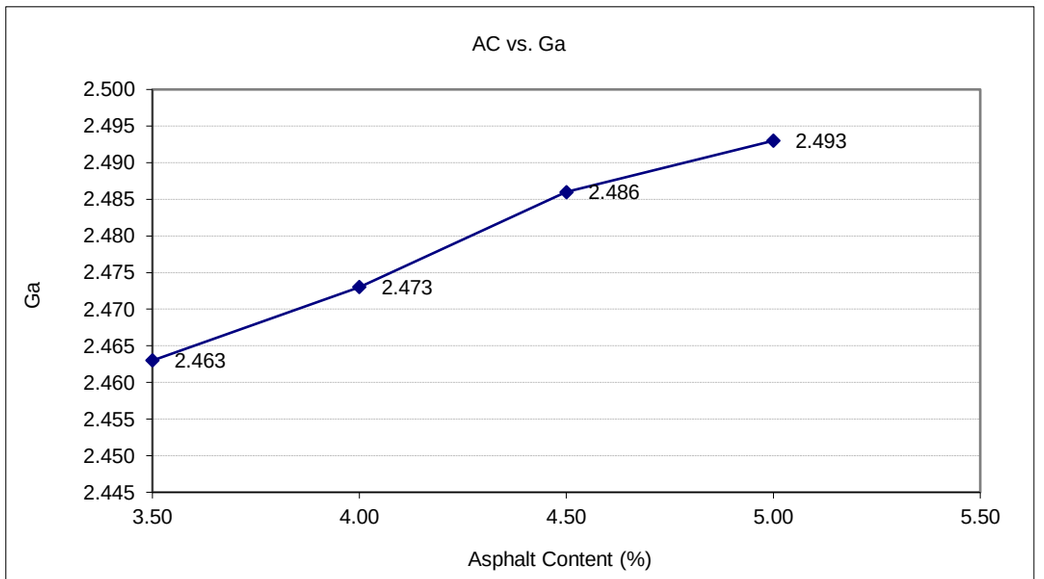
Membrane Application Check
0

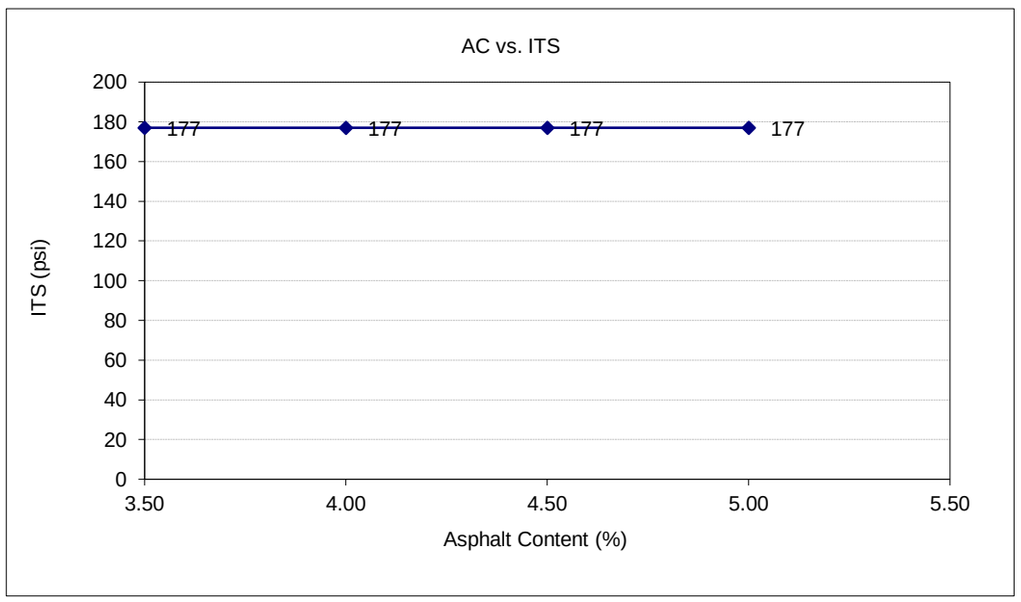
MINIMUM PFC AC CONTENT	
Bulk Specific Gravity	Minimum AC%
0.000	6.0
2.750	6.0
2.800	5.9
2.850	5.8
2.900	5.7
2.950	5.6
3.000	5.5
9999999999.000	5.5

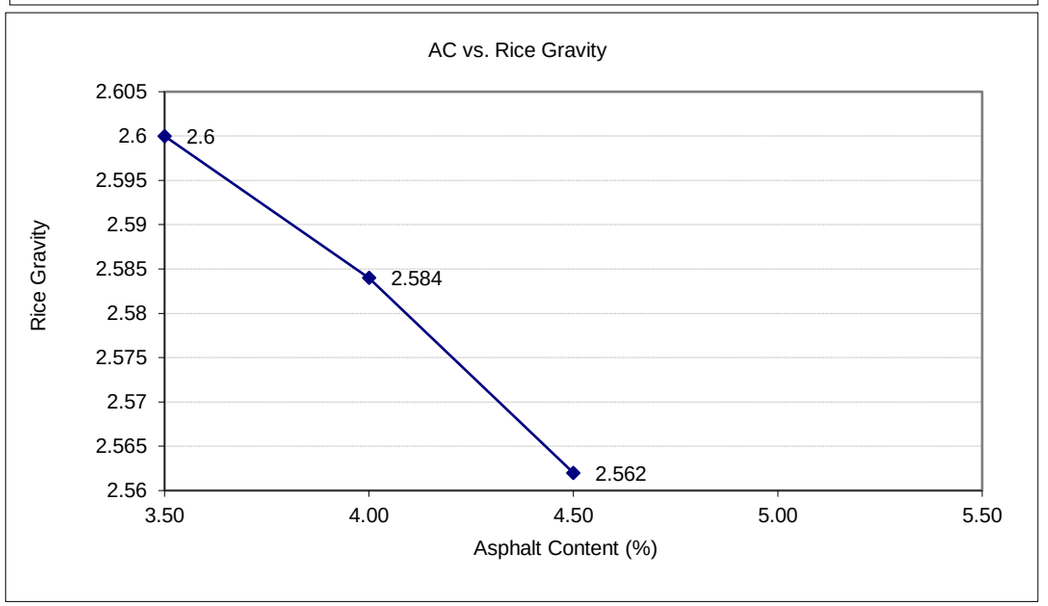

AC vs. Hamburg
Number of Cycles
Rut Depth (mm)
1.2
1
0.8
0.6
0.4
0.2
0
3.50
4.00
4.50
5.00
5.50
Asphalt Content (%)


AC vs. Density
Density (%)
99
98
97
96
95
94
93
98.1
97.1
95.8
94.7
3.50
4.00
4.50
5.00
5.50
Asphalt Content (%)


AC vs. VMA
VMA
14.05
14
13.95
13.9
13.85
13.8
13.75
13.7
13.65
14.0
13.8
13.8
13.7
3.50
4.00
4.50
5.00
5.50
Asphalt Content (%)


AC vs. Ga
Ga
2.500
2.495
2.490
2.485
2.480
2.475
2.470
2.465
2.460
2.455
2.450
2.445
2.493
2.486
2.473
2.463
3.50
4.00
4.50
5.00
5.50
Asphalt Content (%)


AC vs. ITS
ITS (psi)
200
180
160
140
120
100
80
60
40
20
0
177
177
177
177
3.50
4.00
4.50
5.00
5.50
Asphalt Content (%)


AC vs. Rice Gravity
Rice Gravity
2.605
2.6
2.595
2.59
2.585
2.58
2.575
2.57
2.565
2.56
2.6
2.584
2.562
3.50
4.00
4.50
5.00
5.50
Asphalt Content (%)

Texas Materials
an Oldcastle company

DESIGN NO: 1330B-64A
DESCRIPTION: TYPE "B" w/RAP PG 64-22
DESIGN DATE: 19-Jul-13
SUBMITTAL DATE: 29-Sep-17
REVISION DATE: 01-Jun-14

DEPARTMENT OF PUBLIC WORKS - CONSTRUCTION INSPECTION DIVISION
505 BARTON SPRINGS ROAD
AUSTIN, TEXAS, 78704

ATTENTION: DIVISION ENGINEER

SHOWN BELOW IS THE PLANT CORRECTED JOB MIX FORMULA FOR THE HOT MIX ASPHALTIC CONCRETE TO BE USED ON THE FOLLOWING PROJECT:

NAME OF SUBDIVISION OR CIP PROJECT: _____
CIP PROJECT NUMBER: _____

THE JOB MIX FORMULA HAS DETERMINED ACCORDING TO CITY OF AUSTIN STANDARD SPECIFICATIONS ITEM 340.

HMAC PRODUCER: Texas Materials
PLANT LOCATION: 713 Linger Lane, Austin, TX 78721

SUBMITTED BY: _____
DATE: _____
PRIME CONTRACTOR: _____

PREPARED BY: KYLE RANGNOW

CERTIFICATION: TXDOT LEVEL II #765

SIEVE SIZE	% PASSING
1"	100.0
7/8"	98.0
5/8"	90.9
3/8"	76.3
#4	54.5
#10	34.8
#40	20.6
#80	12.9
#200	5.2

ASPHALT CONTENT
VALERO PG 64-22
4.0%

HMAC SUBMITTALS
All responsibility for the adequacy of this mix design rests with the Contractor who submitted it. In reviewing the submittal, the COA must rely upon the adequacy of the work of the Design Professional whose certification appears herein.

☑ Reviewed ☐ See Annotations
Signature: [signature] Date: 10/14/17

IRONHORSE ASPHALT, LTD. dba HEART OF TEXAS HOTMIX
P.O. BOX 1118
BELTON, TX 76513
PH. 254-939-1040 FX. 254-939-2304

DESIGN NO: 1330B-76A
DESIGN DATE: 12-Mar-18
SUBMITTAL DATE: _____
REVISION DATE: _____

DEPARTMENT OF PUBLIC WORKS - CONSTRUCTION INSPECTION DIVISION
505 BARTON SPRINGS ROAD
AUSTIN, TEXAS, 78704

ATTENTION: DIVISION ENGINEER

SHOWN BELOW IS THE PLANT CORRECTED JOB MIX FORMULA FOR THE HOT MIX ASPHALTIC CONCRETE TO BE USED ON THE FOLLOWING PROJECT:

NAME OF SUBDIVISION OR CIP PROJECT: _____
CIP PROJECT NUMBER: _____

THE JOB MIX FORMULA HAS DETERMINED ACCORDING TO CITY OF AUSTIN STANDARD SPECIFICATIONS ITEM 340.

HMAC PRODUCER: Texas Materials Bolm
PLANT LOCATION: 713 Linger Lane, Austin, Texas 78721

SUBMITTED BY: _____
DATE: _____
PRIME CONTRACTOR: _____

PREPARED BY: KYLE RANGNOW

CERTIFICATION: TXDOT LEVEL II #765

SIEVE SIZE	% PASSING
1"	100.0
7/8"	98.0
5/8"	90.9
3/8"	76.3
#4	54.5
#10	34.8
#40	20.6
#80	12.9
#200	5.2

ASPHALT CONTENT
VALERO PG 76-22
4.1%

Bituminous Rated Source Quality Catalog

Material Producer List

Construction Division – Materials & Pavements (CST-M&P)

March 16, 2018

Texas Department of Transportation

Bituminous Rated Source Quality Catalog

Overview

The Construction Division oversees TxDOT's Aggregate Quality Monitoring Program (AQMP) in accordance with Tex-499-A. The AQMP was created by TxDOT to improve efficiency of TxDOT operations. The program provides rated values for aggregate products from sources demonstrating continued quality and uniformity. Districts are allowed to use aggregates from rated sources qualified through the AQMP without project specific testing.

Sources are subject to sampling and testing at least twice a year to publish the Bituminous Rated Source Quality Catalog (BRSQC) bi-annually. Aggregate sources are added to the catalog based on their testing history of material only supplied to TxDOT projects. Participation is at TxDOT's discretion and not at the option of the aggregate supplier.

This catalog produces rated values for the following aggregate tests:

- Tex-410-A, *Abrasion of Coarse Aggregate Using the Los Angeles Abrasion Machine*
- Tex-411-A, *Soundness of Aggregate by Use of Magnesium Sulfate*
- Tex-461-A, *Degradation of Coarse Aggregate by Micro-Deval Abrasion*
- Tex-612-J, *Acid Insoluble Residue for Fine Aggregate*

The AQMP does not exempt sources from project level quality assurance testing. Districts are required to perform project testing in accordance with TxDOT's Guide Schedule to determine specification compliance for those aggregate requirements not rated by this catalog.

TxDOT reserves the right to conduct random sampling & testing of these materials to ensure quality. TxDOT representatives may sample material stockpiled at any location.

Contact the Geotechnical, Soils, and Aggregates Branch at (512) 506-5907 for more information or if you have any questions.

Effective Date: *March 16, 2018*

Legend

- SAC = Surface Aggregate Classification for Wet Surface Crash Reduction Program
- RSLA = Rated Source Los Angeles Abrasion
- RSSM = Rated Source Soundness Magnesium
- RSMD = Rated Source Micro-Deval
- HMAC = Hot Mix Asphaltic Concrete
- ST = Surface Treatment
- MS = Microsurfacing
- RSAI = Rated Source Acid Insoluble
- CA = Coarse Aggregate
- Dry Unit Weight is measured in lb./ft.^{3}
- * = Requires project testing for surface treatment aggregates.

Producer Code Number

The producer code number for each aggregate source provides information to the quarry or pit location.

- The first two digits identify the district in which the source is located. Sources located outside Texas have '00' as the first two digits of the code.
- The middle three digits identify the county in which the source is located. The counties are numbered beginning with Anderson County as '001' and ending with Zavala County as '254.' A list of counties, in alphabetical order, can be found on the official Texas Travel Map.
- Out of state sources are denoted with the following middle three digits:
  - 401 – Mexico
  - 402 – Canada
  - 501 – Arkansas
  - 502 – Louisiana
  - 503 – New Mexico
  - 504 – Oklahoma
- The last two digits represent the sequential order the sources have been assigned within the corresponding county.

Product Codes

- 082 - Microsurfacing
- 093 - HMAC
- 094 - Surface Treatment
- 095/096 - Lightweight

Material Code

The following material codes indicate the material type of the source:

Coarse Aggregate

011 - Crushed Siliceous Gravel
014 - Crushed Siliceous and Limestone Gravel
018 - Crushed Limestone
019 - Crushed Dolomite
021 - Crushed Limestone Gravel
024 - Crushed Limestone and Siliceous Gravel
025 - Partly Crushed Limestone and Siliceous Gravel
029 - Crushed Sandstone
032 - Crushed Rhyolite
033 - Crushed Rhyolite Gravel
040 – Quartzite
041 - Tuff
048 - Lightweight Aggregate
050 - Crushed Trap Rock
051 - Crushed Granite

Materials

- *Sandstone*

SANDSTONE											
Producer Information					*Ratings*						
Producer	Quarry	Producer Code	Product Code	Material Code	SAC	RSLA	RSSM			RSMD	CA-RSAI
							HMAC	ST	MS		
Capitol Aggregates	Delta Materials	1402704	082, 093, 094	029	A	27	20	17	13	17	61
Martin Marietta	Apple (Sawyer, OK)	0050437	082, 093, 094	029	A	33	18	15	15	12	99
Smith Buster Crushed Stone , LLC	Byrd Pit	0050447	093, 094	029	A	34	24	19		11	100

- *Limestones-Dolomites*

LIMESTONES-DOLOMITES

Producer Information					*Ratings*						
Producer	Quarry	Producer Code	Product Code	Material Code	SAC	RSLA	RSSM			RSMD	CA-RSAI
							HMAC	ST	MS		
Anderson Columbia Co, Inc.	Tejas Quarry	1504609	093, 094	018	B	27	16	12		19	1
Cedar Creek Stone	Pate	0914710	093, 094	018	B	37*	30	24		29	14
Cemex	Balcones Quarry	1504602	093,094	018	B	30	17	14		20	10
Centex Materials	Ruby	1410507	093, 094	018	B	29	16	14		22	2
Chanas Aggregates Blanco, LLC	Johnson City Quarry	1401601	093, 094	019	B	25	5	4		8	1
Colorado Materials	Hunter	1504605	093, 094	018	B	30	25	21		24	5
CSA Materials	Turner	0722611	093, 094	018	B	34	21	17		23	1
Dean Word Co.	Lone Star	1504607	093, 094	018	B	30	16	15		22	3
Dolese Brothers	Ardmore, OK	0050412	093, 094	018	B	27	19	20		15	10
Dolese Brothers	Coleman, OK	0050414	093, 094	019	B	30	10	9		12	6
Dolese Brothers	Cooperton, OK	0050415	093, 094	019	B	27	5	4		11	0
Dolese Borthers	Richards Spur	0050405	093, 094	018	B	27	12	11		15	10
Fisher Sand & Gravel	Kizer Pit	0515304	093, 094	018	B	30	29	25		24	11
GCC Sun City Materials LLC	McKelligon-Dolomite	2407101	093, 094	019	B	22	6	5		9	7
Hanson Aggregates	Burnet	1402701	093, 094	019	B	26	4	4		8	6
Hanson Aggregates	Lake Bridgeport	0224902	093, 094	018	B	31	27	24		21	1
Hanson Aggregates	Perch-Hill	0224901	093, 094	018	B	27	11	9		15	0
Hanson Aggregates	Servtex	1504603	093, 094	018	B	30	17	14		18	2
Industrial Asphalt & Aggregate	Florence Quarry	1424608	093, 094	018	B	28	17	11		22	5
Industrial Asphalt & Aggregate	Hays Quarry	1410508	093, 094	018	B	31	19	14		22	1
J.H. Strain and Sons, Inc.	Nelson Pit	2306707	093, 094	018	B	28	8	6		15	3
J. Lee Milligan, Inc.	Aztec Canyon	0418814	093, 094	018	B	31	23	19		20	4
Jobe Materials, L.P.	Ned Finney Quarry	2407120	093, 094	018	B	27	3	3		11	0
Jones Brothers	Rankin	0623102	093, 094	018	B	29	29	25		23	2
Killeen Crushed Stone	Gibbs	0901408	093, 094	018	B	33	22	16		19	1
Lattimore Materials	Stringtown, OK	0050407	093, 094	019	A	21	12	10		11	71

LIMESTONES-DOLOMITES											
Producer Information					*Ratings*						
Producer	Quarry	Producer Code	Product Code	Material Code	SAC	RSLA	RSSM			RSMD	CA-RSAI
							HMAC	ST	MS		
Martin Marietta	Beckmann	1501503	093, 094	018	B	32	18	17		21	2
Martin Marietta	Bridgeport	0224904	093, 094	018	B	27	19	18		18	6
Martin Marietta	Chambers	0224921	093, 094	018	B	35	29	*		23	0
Martin Marietta	Hunter Stone	1504608	093, 094	018	B	33	21	17		23	2
Martin Marietta	Medina Rock & Rail	1516319	093, 094	018	B	30	19	13		21	11
Martin Marietta	Mill Creek, OK	0050445	093, 094	019	B	30	9	7		12	2
Martin Marietta	Rio Medina Quarry	1516312	093, 094	018	B	29	14	11		18	1
Martin Marietta	S.H. 211	1516310	093, 094	018	B	33	22	17		26	1
Matrimar SA de CV	Matrimar	0040108	093, 094	019	B	26	6	5		14	5
Oldcastle Materials Texas	Marble Falls Quarry	1402702	093,094	019	B	28	9	7		10	0
South Texas Aggregates	Chapman	1523211	093, 094	018	B	40*	30	23		31	2
Texas Crushed Stone	Feld	1424602	093, 094	018	B	34	29	24		27	3
Victory Rock Texas, LLC	VR Palo Pinto	0218207	093, 094	018	B	30	19	18		18	4
Vulcan Materials	1604	1501506	093, 094	018	B	35	24	21		28	5
Vulcan Materials	Brownwood	2302501	093, 094	018	B	27	11	10		16	1
Vulcan Materials	Eastland	2306705	093, 094	018	B	27	13	9		15	1
Vulcan Materials	Helotes	1501514	093, 094	018	B	27	12	9		19	2
Vulcan Materials	Huebner Road	1501507	093, 094	018	B	35	23	22		27	6
Vulcan Materials	Mico	1516315	093, 094	018	B	38*	23	21		31	3
Vulcan Materials	North Troy	0050448	093, 094	019	B	23	15	14		9	11
Vulcan Materials	Spicewood	1402710	093, 094	019	B	24	8	7		8	3
Vulcan Materials	Weatherford	0218409	093, 094	018	B	28	20	16		19	4
Zack Burkett Co	Leach	0211901	093, 094	018	B	29	16	14		19	4
Zack Burkett Co	Mayo Pit	0325206	093, 094	018	B	26	15	16		16	3
Zack Burkett Co	Springfield Quarry	0211902	093, 094	018	B	27	14	11		16	5

- *Gravels*

GRAVELS

Producer Information					*Ratings*						
Producer	Quarry	Producer Code	Product Code	Material Code	SAC	RSLA	RSSM			RSMD	CA-RSAI
							HMAC	ST	MS		
Anderson Columbia Co, Inc.	AC Rio Grande Pit	2225301	093, 094	011	A	19	4	2		4	93
Anderson Columbia Co, Inc.	La Barronea Pit	2206607	093, 094	014	A	22	4	3		5	82
Big Creek Construction	Mitchell Pit	0907301	093, 094	024	B	23	6	5		9	39
Big Creek Construction	Young	0907302	093, 094	024	B	24	6	7		10	26
Big Creek Sand & Gravel, Inc.	Bear Creek Pit	0411712	093, 094	014	A	33	14	11		13	89
Big Creek Sand & Gravel, Inc.	Big Creek	0411707	093, 094	011	A	34	10	9		14	92
Capitol Aggregates	Hoban	0619502	082, 093, 094	033	A	23	16	14	10	8	98
Century Asphalt, Ltd.	Legna Pit	1508203	093, 094	011	A	25	2	2		5	96
Colorado Materials	Jaehne Pit	1523216	093, 094	024	B	24	4	2		9	21
Duininck Brothers	Matador	2517309	083, 094	014	A	25	10	6		7	71
Fordyce Co.	Murphy	1323505	093, 094	014	A	20	3	2		3	92
Fordyce Co.	Showers	2110804	093, 094	014	A	21	11	7		6	77
Frontera Materials	Reavis	2110806	093, 094	014	A	19	5	3		3	88
Hanson Aggregates	Little River	0050114	093, 094	011	A	23	6	5		4	98
J. Lee Milligan, Inc.	Archer Pit	2517311	093, 094	014	A	33	12	10		12	85
J. Lee Milligan, Inc.	Boys Ranch	0418008	093, 094	011	A	35	9	8		10	92
J. Lee Milligan, Inc.	Frasier Pit	2506509	093, 094	014	A	35	10	8		10	94
J. Lee Milligan, Inc.	Roach Pit #2	2506505	093, 094	011	A	34	11	8		10	91
J. Lee Milligan, Inc.	Sawyer	0406510	093, 094	014	A	32	18	18		14	70
Jobe Materials, L.P.	Avispa Canyon	2407129	093, 094	021	B	26	2	2		12	3
Jobe Materials, L.P.	Van Horn Quarry	2405507	093, 094	033	A	25	22	19		16	97
LS Sand & Gravel	Mansfield	0418001	093, 094	014	A	26	11	9		11	75
Martin Marietta	Broken Bow S & G	0050451	093, 094	011	A	28	13	10		10	98
Martin Marietta	Webberville	1422712	093, 094	014	A	25	5	3		7	59
R.E. Janes Gravel Co.	South Noodle	0812703	Partly Crushed	025	B	27	18	14		18	11
South Texas Aggregates	D and D	2215905	093, 094	024	A	21	8	5		7	81

GRAVELS											
Producer Information					*Ratings*						
Producer	Quarry	Producer Code	Product Code	Material Code	SAC	RSLA	RSSM			RSMD	CA-RSAI
							HMAC	ST	MS		
Terra Firma Materials, LLC	La Havana Pit	2110807	093, 094	014	A	22	17	11		7	80
Texas Sand & Gravel	Kritser-Fain	0418812	093, 094	014	A	32	10	9		10	77
Upper Valley Materials	Las Viboras	2110805	093, 094	014	A	21	11	9		6	79
Valley Caliche	Beck	2110801	093, 094	014	A	23	13	10		6	80
Wright Materials	Realitos	2206601	093, 094	011	A	21	3	2		3	97
XIT Sand & Gravel, LLC	XIT S & G Pit	0418010	093, 094	014	A	38*	11	10		14	94
Zack Burkett	Smith	0325205	093, 094	014	A	23	5	4		7	63

- *Igneous Rocks*

IGNEOUS											
Producer Information					*Ratings*						
Producer	Quarry	Producer Code	Product Code	Material Code	SAC	RSLA	RSSM			RSMD	CA-RSAI
							HMAC	ST	MS		
Colorado Materials	Davenport-Cline Basalt Quarry	1523215	093, 094	050	A	13	4	3		8	93
Dolese Brothers	Roosevelt Quarry	0050454	093, 094	051	A	34	6	6		11	97
GCC Sun City Materials LLC	McKelligon-Granite	2407106	093, 094	051	A	40*	16	13		12	95
GCC Sun City Materials LLC	Vado	0050310	093, 094	032	A	23	16	15		15	98
Granite Mountain Quarries	Plant 1	0050106	093, 094	051	A	29	3	1		4	94
Hanson Aggregates	Davis Pit, OK	0050439	093, 094	032	A	23	14	13		12	90
Jobe Materials, L.P.	Padre Canyon	2411513	093, 094	051	A	28	14	11		10	94
Jobe Materials, L.P.	Vado Quarry	0050314	093, 094	032	A	28	12	10		15	94
Martin Marietta	Bird Hill	1523213	093, 094	050	A	14	12	8		14	94
Martin Marietta	Jones Mill	0050122	093, 094	040	A	17	5	4		7	98
Martin Marietta	Mill Creek (Grnt), OK	0050433	093, 094	051	A	35	8	7	4	12	96
Martin Marietta	Snyder, OK	0050435	093, 094	051	A	29	3	2		6	99
Volcanic Stone	Cinder Mountain	0050313	093, 094	041	A	35	18	15		22	97
Vulcan Materials	Knippa	1523206	093, 094	050	A	13	6	5		12	92

- *Lightweight*

LIGHTWEIGHT													
Producer Information				*Ratings*									
Producer	Quarry	Producer Code	Material Code	SAC	RSLA	RSSM		RSMD	CA RSAI	Pressure Slake	FreezeThaw	Absorption	Dry Unit Weight (lb./ft.³)
						HMAC	ST						
Trinity Expanded Shale and Clay	Streetman	1817502	048	A	29	12	8	29	98	HMAC: 2 ST Gr 4: 4 ST Gr 3: 4	HMAC: 6 ST Gr 4: 6 ST Gr 3: 6	10.3	50.8

TXDOT QCQA
Quality Control & Assurance

Use this template in conjunction with the QC/QA specifications for Hot Mix Asphalt or Warm Mix Asphalt mixtures according to the 2014 Specifications handbook.

If you have questions or comments concerning this template or the QC/QA procedures, please call Gisel Travis Patton at (512)506-5841 of the Flexible Pavements Branch of the Materials & Pavements Section within the Construction Division.

If you would like to obtain an updated version of this Site Manager template go to:
http://www.txdot.gov/inside-txdot/forms-publications/consultants-contractors/forms/site-manager.html

This program uses macros that must be enabled when the program starts.

The summary sheet provides notes when operational requirements are not met.

CONTROL PANEL

Click the button above for the Control Panel. The QCQA Control Panel is used for navigation and to refresh or import workbooks.

Click on the navigation buttons to move to the next or previous worksheet. The dropdown box may be used to jump to a specific worksheet within the workbook.

Two refresh buttons are available. These clear all the input fields in either the current worksheet or the entire workbook.

To import TxDOT or Contractor data, toggle the appropriate radio button and click the Select Book button. You will be prompted for the file to import.

GENERAL

The COURSE/LIFT field will provide appropriate options based on the mixture type selection.

MIX DESIGN

The following is a list of the input fields:

Trial?: Trial batches.
Level up?:
1.0 pay factor?:
Exempt production?:
Date lot opened (MM/DD/YYYY): Indicate the date the lot was opened using the date format as indicated i.e. month/day/year.
Mix uses WMA ?: Indicate if the mix uses warm mix asphalt (WMA) additives or processes.
Mix uses RAP/RAS?: Indicate if the mix uses recycled asphalt pavement (RAP) or recycled asphalt shingles (RAS).
Binder substitution?: Indicate if binder substitution was applied - typically when using RAP/RAS.
Course/Lift: Indicate if the mix is used for the surface, intermediate or base layer in the pavement structure.
Gyratory compactor: Select either Superpave (SGC) or Texas (TGC) gyratory compactor
Roadway Rice for base mixes?:
Method for gradation:
Dry or wet gradation:
Method used for asphalt content:
Equipment used for thermal profile:
Remarks:

SAMPLING

There are two worksheets on which to fill out sampling information and core locations.

On the first:
The sublot from which the blind sample is collected can be checked.
Enter the random numbers for each sublot for Production and Placement Sampling. Use TxRandNum.xls template to generate random numbers for the entire project. The template will automatically adjust the width offset for the coring location to 2-ft. if the randomly generated sample location is within 2 ft of a joint or pavement edge.
Enter the date in format month/day/year when samples where collected on the respective sublots.

On the second:
Placement Data for Lot: It is suggested to use the following procedure for describing where the mix was laid.
Direction of Lane: NB, SB, EB, and WB for north, east, south, and west bound.
Description of Lane: Referencing out from the center line of the median. Example: L1,L2,L3 etc. where L1 is the lane closest to the centerline. For shoulders, use IS for inside shoulder and OS for outside shoulder.

Description of the lift if mix is placed in multiple lifts. Example: C1, C2, C3 etc. for course 1, 2, 3, etc. (from the bottom course up).
Examples:
NBL2: North bound, driving lane (outside lane)
SBIS: South bound inside shoulder
WBL1C2: West bound passing lane (inside lane) second course
EBL1: East bound inside lane
Core Locations are calculated for each sublot after the laboratory density test results are entered OR after the Quantity Actually Placed is entered in the Pay sheet.

QCQA

Use these worksheets to enter all pertinent information referenced in the 2004 Specification Book; including Estimated Percent of Stripping, Thermal Segregation, Density Profile, Draindown, Binder Sample, and DSR Testing whenever specified.
• WARNING: Do not enter data or information for any sublot that has not been started. This affects the Bonus/Penalty calculations in the Pay Sheet.
• Thermal Profile, Mat Segregation, & Joint Density: Ensure that all thermal profile, segregation density profile, and longitudinal joint density information is entered. If this information is missing, no pay factors will be calculated. When using the Pave-IR system for specification compliance, thermal profiles or segregation density profiles are not required.
Select "Pass" if the Engineer didn't performed a thermal profile, density profile, or joint density evaluation for that sublot.
• Referee Results: Replace the original Engineer's test results with the referee results. For example, the referee in-place air voids for Sublot 2 should be entered in the TxDOT_2 sheet replacing the original Engineer's test results.
• Untrimmed Core Height: If the untrimmed core height is less than the minimum requirement and it is decided not to have the core included in air void determination, enter the untrimmed core height in the TxDOT sheet. This will allow the user to select an auto 1.000 placement pay factor in the Pay sheet.
• Notes: Warning notes are provided in each sublot sheet when test results or core heights are out of operational tolerance.
• Remark boxes are provided in each sublot sheet for any miscellaneous information or additional test results.

PAY

Enter the quantity actually placed in the lot and the bid price per ton. This worksheet calculates Payment for Item, Pay Adjustments, and Total Pay.
• Quantity Placed But No Air Void Testing Was Required, Tons: Enter tonnage for 'Miscellaneous Areas' only. See the specification for the definition of 'Miscellaneous Areas'.
• Auto 1.000 Pay Factor: Select 'Yes' from the dropdown list or type in the word 'Yes', if it is not available, to assign a 1.000 pay factor for that sublot.
• Pay Factor: No pay factors are calculated when not using the Pave-IR system and no thermal segregation, segregation density profile, or longitudinal joint density test results are entered in each individual TxDOT & CON sublot worksheet.
• Remove and Replace Condition: When the production and/or placement test results resulted in remove and replace condition, the program automatically assigns a no-pay for the other QA or QC results. The production and placement pay factors must be no-pay if the Engineer elects to leave in place without payment. Do not select auto 1.000 pay factors in this situation.

TEXAS DEPARTMENT OF TRANSPORTATION

2014 QC/QA Design Data

Refresh Workbook

TX2QCQA14 - File Version: 01/16/17 09:01:08

SAMPLE ID:		SAMPLED DATE:	5/31/2018
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:		SPEC YEAR:	**2014**
SAMPLED BY:		SPEC ITEM:	
SAMPLE LOCATION:		SPECIAL PROVISION:	
MATERIAL CODE:	HMAC	MIX TYPE:	**347-TOM-C**
MATERIAL NAME:	17TOM CL B 76-22		
PRODUCER:	Texas Materials Manor TX		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:	**Surface**	STATION:		DIST. FROM CL:	

Remarks:

Test Method:	Tested By:	Tested Date:
TX207		
TX226		
TX227		
TX228		
TX229		
TX236		
TX242		
TX248		
TX530		

Test Stamp Code:	Omit Test:	Completed Date:	Reviewed By:

Locked By:	TxDOT:	District:	Area:

Authorized By:	Authorized Date:	
		500

SAMPLE ID: _____ SAMPLED DATE: 05-31-2018_____
LOT NUMBER: _____ LETTING DATE: _____
SAMPLE STATUS: _____ CONTROLLING CSJ: _____
COUNTY: _____ SPEC YEAR: 2014_____
SAMPLED BY: _____ SPEC ITEM: _____
SAMPLE LOCATION: _____ SPECIAL PROVISION: _____
MATERIAL CODE: HMAC_____ MIX TYPE: 347-TOM-C_____
MATERIAL NAME: 17TOM CL B 76-22_____
PRODUCER: Texas Materials Manor TX_____
AREA ENGINEER: _____ PROJECT MANAGER: _____
COURSE\LIFT: Surface_____ STATION: _____ DIST. FROM CL: _____

MIXTURE DATA	
Specification year:	**2014**
Mix type:	**347-TOM-C**
Trial batch?:	
Level up?:	
Exempt production?:	
First lot?:	**Yes**
Date lot opened (MM/DD/YYYY):	**07/30/17**
Mix uses WMA ?:	
Mix uses RAP/RAS?:	**No**
Binder substitution?:	**No**
Course/Lift:	**Surface**
Gyratory compactor:	**TGC**
Roadway Rice for base mixes?:	
Method for gradation:	**Ignition oven**
Dry or wet gradation:	**Dry**
Method used for asphalt content:	**Ignition oven**
Equipment used for thermal profile:	**Thermal camera**
Remarks:	

WARM MIX ASPHALT (WMA)	
For compaction aid only:	**NA**
Technology:	
Rate:	
Units:	
Target discharge temperature, °F:	
Mix treated as WMA?:	**No**

PRODUCTION	
Lot size, tons:	**1,500.0**
Sublot size, tons:	**375.0**
Current JMF #:	**3**
Design JMF #:	**2**
Lift thickness, inches:	**1.0**
Mix design ID:	**17TOM CL B 70-22**

ASPHALT CEMENT	
Binder originally specified:	**PG 70-22**
Substitute binder:	**NA**
JMF2 asphalt content (AC), %:	**6.3**
Current JMF AC, %:	**6.3**
Recycled binder from mix design, %:	**0.0**
Maximum recycled binder ratio:	**0**
Ignition oven correction factor, TxDOT:	**-0.6**
Ignition oven correction factor, Contractor:	**-0.6**

DENSITY & PROPERTIES OF BITUMINOUS MIXTURES	
Mix specific gravity (Ga):	**2.464**
Asphalt specific gravity (G1):	**1.030**
Rice gravity (Gr):	**2.526**
Target laboratory molded density, %:	**97.5**
Tex-206-F: Press correlations	
TxDOT Press correlation factor:	
TxDOT Press ID & serial number:	
Contractor Press correlation factor:	
Contractor Press ID & serial number:	

PERFORMANCE PROPERTIES OF BITUMINOUS MIXTURES	
Tex-248-F Overlay test number of cycles:	
Tex-235-F Binder draindown, %:	
Design VMA, %:	**18.0**
Tex-530-C Boil test percent stripping, %:	
Trial batch	
Tex-242-F Hamburg number of cycles:	
Tex-242-F Hamburg rut depth, mm:	
Tex-226-F Indirect tensile strength, psi:	
Production	
Tex-242-F Hamburg number of cycles:	
Tex-242-F Hamburg rut depth, mm:	
Tex-226-F Indirect tensile strength, psi:	

SAMPLE ID: _____ SAMPLED DATE: 05-31-2018_____
LOT NUMBER: _____ LETTING DATE: _____
SAMPLE STATUS: _____ CONTROLLING CSJ: _____
COUNTY: _____ SPEC YEAR: 2014_____
SAMPLED BY: _____ SPEC ITEM: _____
SAMPLE LOCATION: _____ SPECIAL PROVISION: _____
MATERIAL CODE: HMAC_____ MIX TYPE: 347-TOM-C_____
MATERIAL NAME: 17TOM CL B 76-22_____
PRODUCER: Texas Materials Manor TX_____
AREA ENGINEER: _____ PROJECT MANAGER: _____
COURSE\LIFT: Surface_____ STATION: _____ DIST. FROM CL: _____

COMBINED AGGREGATE GRADATION				
Sieve size	Master gradation limits % passing	JMF 2 Cumulative % passing	Current JMF design % passing tolerances	Current JMF Cumulative % passing
1/2"	100.0 - 100.0	**100.0**	100.0 - 100.0	**100.0**
3/8"	95.0 - 100.0	**95.8**	95.0 - 98.8	**95.0**
#4	40.0 - 60.0	**53.2**	49.4 - 55.4	**50.5**
#8	17.0 - 27.0	**21.1**	17.0 - 21.4	**21.4**
#16	5.0 - 27.0	**15.6**	12.9 - 18.9	**15.6**
#30	5.0 - 27.0	**12.4**	9.4 - 15.4	**12.4**
#50	5.0 - 27.0	**10.3**	7.3 - 13.3	**10.3**
#200	5.0 - 9.0	**6.3**	5.0 - 8.3	**7.0**

IGNITION OVEN CORRECTION FACTORS	
TxDOT, %:	Contractor, %:
0.1	**0.1**
0.6	**0.6**
-0.9	**-0.9**
-3.6	**-3.6**
-3.5	**-3.5**
-3.5	**-3.5**
-2.7	**-2.7**
1.2	**1.2**

TOLERANCES	
Gradation	
JMF 2	Current JMF
✓	✓
✓	✓
✓	✓
✓	✓
✓	✓
✓	✓
✓	✓
✓	✓

SAMPLE ID: _____ SAMPLED DATE: 05-31-2018_____
LOT NUMBER: _____ LETTING DATE: _____
SAMPLE STATUS: _____ CONTROLLING CSJ: _____
COUNTY: _____ SPEC YEAR: 2014_____
SAMPLED BY: _____ SPEC ITEM: _____
SAMPLE LOCATION: _____ SPECIAL PROVISION: _____
MATERIAL CODE: HMAC_____ MIX TYPE: 347-TOM-C_____
MATERIAL NAME: 17TOM CL B 76-22_____
PRODUCER: Texas Materials Manor TX_____
AREA ENGINEER: _____ PROJECT MANAGER: _____
COURSE\LIFT: Surface_____ STATION: _____ DIST. FROM CL: _____

PRODUCTION SAMPLE LOCATIONS

Running production total (optional):	

TxDOT PRODUCTION SAMPLE LOCATIONS FOR LOT				
Sublot:	1	2	3	4
Blind sample:	◯	◯	◯	◯
Random number:				
Sublot sample date (MM/DD/YYYY):				
Sublot locations, Tons:				
Production locations, Tons:				

CONTRACTOR PRODUCTION SAMPLE LOCATIONS FOR LOT				
Sublot:	1	2	3	4
Random Number:				
Sublot sample date (MM/DD/YYYY):				
Sublot Locations, Tons:				
Production Locations, Tons:				

PLACEMENT SAMPLE LOCATIONS

PLACEMENT DATA FOR LOT

Enter Sta. In Feet (Ex. 12+34.34 is entered as 1234.34)

Local ID	Sublot #	From station	To station	Width, ft	From Latitude	From Longitude	To Latitude	To Longitude	Area, sq. ft	Length, ft
									Total area, sq ft:	

CALCULATED CORE LOCATION

Sublot 1		Sublot 2		Sublot 3		Sublot 4	
Rand. no. (L):		Rand. no. (L):		Rand. no. (L):		Rand. no. (L):	
Rand. no. (W):		Rand. no. (W):		Rand. no. (W):		Rand. no. (W):	
Random core STA.	Random core offset	Random core STA.	Random core offset	Random core STA.	Random core offset	Random core STA.	Random core offset

Whole lot
0.0

YIELD CALCULATIONS

	Misc. area, sq. yd	Reg. Area Sq. Yards	Total Area Sq. Yards	Total Tons	Rate Lbs./Sq.Yd.
This lot					
Total to date					

SAMPLE ID: _____ SAMPLED DATE: 05-31-2018_____
LOT NUMBER: _____ LETTING DATE: _____
SAMPLE STATUS: _____ CONTROLLING CSJ: _____
COUNTY: _____ SPEC YEAR: 2014_____
SAMPLED BY: _____ SPEC ITEM: _____
SAMPLE LOCATION: _____ SPECIAL PROVISION: _____
MATERIAL CODE: HMAC_____ MIX TYPE: 347-TOM-C_____
MATERIAL NAME: 17TOM CL B 76-22_____
PRODUCER: Texas Materials Manor TX_____
AREA ENGINEER: _____ PROJECT MANAGER: _____
COURSE\LIFT: Surface_____ STATION: _____ DIST. FROM CL: _____

DOT1 PRODUCTION DATA	
Sublot sample date:	
Sublot location, Tons:	
Production location, Tons:	

DETERMINATION OF ASPHALT CONTENT	
Method: Ignition oven	
Weight of sample and basket before ignition, g:	
Weight of sample and basket after ignition, g:	
Weight of basket, g:	**0.0**
Ignition oven AC, %:	
Corrected AC, %:	
Ratio of recycled to total binder:	
Binder sample received?:	
DSR aging ratio:	

LAB DETERMINATION OF RICE SPECIFIC GRAVITY Tex-227-F	
(A) Weight of dry sample in air, g:	
(D) Weight of calibrated pyc. with water, g:	
(E) Weight of sample, pyc. and water, g:	
A/(D+A-E) Rice specific gravity (Gr):	
(Asd) Weight of surface dry sample in air, g:	

PRODUCTION PERFORMANCE PROPERTIES OF BITUMINOUS MIXTURES	
Tex-235-F Binder draindown, %:	
Tex 246-F Permeability or Water flow, sec:	
Tex 212-F Moisture content, %:	
Tex-530-C Boil test estimated percent stripping, %:	
Tex-244-F Thermal profile segregation:	

ESTIMATED FILM THICKNESS (based on gradation and asphalt content)	
Combined bulk specific gravity (Gsb):	
Effective specific gravity:	
Asphalt absorption, %:	
Effective asphalt content:	
Film thickness, micron:	

SAMPLE ID: _____ SAMPLED DATE: 05-31-2018_____
LOT NUMBER: _____ LETTING DATE: _____
SAMPLE STATUS: _____ CONTROLLING CSJ: _____
COUNTY: _____ SPEC YEAR: 2014_____
SAMPLED BY: _____ SPEC ITEM: _____
SAMPLE LOCATION: _____ SPECIAL PROVISION: _____
MATERIAL CODE: HMAC_____ MIX TYPE: 347-TOM-C_____
MATERIAL NAME: 17TOM CL B 76-22_____
PRODUCER: Texas Materials Manor TX_____
AREA ENGINEER: _____ PROJECT MANAGER: _____
COURSE\LIFT: Surface_____ STATION: _____ DIST. FROM CL: _____

DOT1 GRADATION OF EXTRACTED AGGREGATE: Tex-200-F

Method: Ignition oven

					Ignited sample original dry weight, g:		**TOLERANCES**
					Sieve analysis:	**Individual**	Gradation
Sieve Size	**Individual weight retained, g**	**Cumulative weight retained, g**	***Adjusted Individual percent retained, %**	***Adjusted Cumulative percent retained, %**	***Adjusted Cumulative percent passing, %**	**JMF individual retained limits**	JMF
1/2"							
3/8"							
#4							
#8							
#16							
#30							
#50							
#200							
- #200							
Total - #200						5.0 - 9.0	
Total weight, g							

SAMPLE ID: _____ SAMPLED DATE: 05-31-2018_____

LOT NUMBER: _____ LETTING DATE: _____

SAMPLE STATUS: _____ CONTROLLING CSJ: _____

COUNTY: _____ SPEC YEAR: 2014_____

SAMPLED BY: _____ SPEC ITEM: _____

SAMPLE LOCATION: _____ SPECIAL PROVISION: _____

MATERIAL CODE: HMAC_____ MIX TYPE: 347-TOM-C_____

MATERIAL NAME: 17TOM CL B 76-22_____

PRODUCER: Texas Materials Manor TX_____

AREA ENGINEER: _____ PROJECT MANAGER: _____

COURSE\LIFT: Surface_____ STATION: _____ DIST. FROM CL: _____

DOT1 DETERMINING PROPERTIES OF BITUMINOUS MIXTURES-Tex-207-F			
Specimen type:	**Laboratory**		
Specimen number:	1(1)	1(2)	1(3)
Untrimmed specimen/Core height, in:			
Weight of specimen in air, g:			
Weight of specimen in water, g:			
SSD weight of specimen in air, g:			
Volume of specimen:			
Percent absorption, %:			
Bag required for Ga:			
Bag Used for Ga:			
Volumetric properties			
Bulk specific gravity, Ga:			
Percent density, %:			
Percent air voids, %:			
Percent VMA, %:			

MEAN VOLUMETRIC PROPERTIES	
Asphalt content, %:	
Rice specific gravity, Gr:	
Percent density, %:	
Actual specific gravity:	
Percent air voids, %:	
Percent VMA, %:	

SAMPLE ID: _____ SAMPLED DATE: 05-31-2018_____
LOT NUMBER: _____ LETTING DATE: _____
SAMPLE STATUS: _____ CONTROLLING CSJ: _____
COUNTY: _____ SPEC YEAR: 2014_____
SAMPLED BY: _____ SPEC ITEM: _____
SAMPLE LOCATION: _____ SPECIAL PROVISION: _____
MATERIAL CODE: HMAC_____ MIX TYPE: 347-TOM-C_____
MATERIAL NAME: 17TOM CL B 76-22_____
PRODUCER: Texas Materials Manor TX_____
AREA ENGINEER: _____ PROJECT MANAGER: _____
COURSE\LIFT: Surface_____ STATION: _____ DIST. FROM CL: _____

DOT2 PRODUCTION DATA	
Sublot sample date:	
Sublot location, Tons:	
Production location, Tons:	

DETERMINATION OF ASPHALT CONTENT	
Method: Ignition oven	
Weight of sample and basket before ignition, g:	
Weight of sample and basket after ignition, g:	
Weight of basket, g:	
Ignition oven AC, %:	
Corrected AC, %:	
Ratio of recycled to total binder:	
Binder sample received?:	
DSR aging ratio:	

LAB DETERMINATION OF RICE SPECIFIC GRAVITY Tex-227-F	
(A) Weight of dry sample in air, g:	
(D) Weight of calibrated pyc. with water, g:	
(E) Weight of sample, pyc. and water, g:	
A/(D+A-E) Rice specific gravity (Gr):	
(Asd) Weight of surface dry sample in air, g:	

PRODUCTION PERFORMANCE PROPERTIES OF BITUMINOUS MIXTURES	
Tex-235-F Binder draindown, %:	
Tex 246-F Permeability or Water flow, sec:	
Tex 212-F Moisture content, %:	
Tex-530-C Boil test estimated percent stripping, %:	
Tex-244-F Thermal profile segregation:	

ESTIMATED FILM THICKNESS (based on gradation and asphalt content)	
Combined bulk specific gravity (Gsb):	
Effective specific gravity:	
Asphalt absorption, %:	
Effective asphalt content:	
Film thickness, micron:	

SAMPLE ID: _____ SAMPLED DATE: 05-31-2018_____
LOT NUMBER: _____ LETTING DATE: _____
SAMPLE STATUS: _____ CONTROLLING CSJ: _____
COUNTY: _____ SPEC YEAR: 2014_____
SAMPLED BY: _____ SPEC ITEM: _____
SAMPLE LOCATION: _____ SPECIAL PROVISION: _____
MATERIAL CODE: HMAC_____ MIX TYPE: 347-TOM-C_____
MATERIAL NAME: 17TOM CL B 76-22_____
PRODUCER: Texas Materials Manor TX_____
AREA ENGINEER: _____ PROJECT MANAGER: _____
COURSE\LIFT: Surface_____ STATION: _____ DIST. FROM CL: _____

DOT2 GRADATION OF EXTRACTED AGGREGATE: Tex-200-F

Method: Ignition oven

					Ignited sample original dry weight, g:		
					Sieve analysis:		
Sieve Size	**Individual weight retained, g**	**Cumulative weight retained, g**	***Adjusted Individual percent retained, %**	***Adjusted Cumulative percent retained, %**	***Adjusted Cumulative percent passing, %**	**JMF individual retained limits**	
1/2"							
3/8"							
#4							
#8							
#16							
#30							
#50							
#200							
- #200							
Total - #200						5.0 - 9.0	
Total weight, g							

TOLERANCES
Gradation
JMF

SAMPLE ID: _____ SAMPLED DATE: 05-31-2018_____

LOT NUMBER: _____ LETTING DATE: _____

SAMPLE STATUS: _____ CONTROLLING CSJ: _____

COUNTY: _____ SPEC YEAR: 2014_____

SAMPLED BY: _____ SPEC ITEM: _____

SAMPLE LOCATION: _____ SPECIAL PROVISION: _____

MATERIAL CODE: HMAC_____ MIX TYPE: 347-TOM-C_____

MATERIAL NAME: 17TOM CL B 76-22_____

PRODUCER: Texas Materials Manor TX_____

AREA ENGINEER: _____ PROJECT MANAGER: _____

COURSE\LIFT: Surface_____ STATION: _____ DIST. FROM CL: _____

DOT2 DETERMINING PROPERTIES OF BITUMINOUS MIXTURES-Tex-207-F			
Specimen type:	**Laboratory**		
Specimen number:	1(1)	1(2)	1(3)
Untrimmed specimen/Core height, in:			
Weight of specimen in air, g:			
Weight of specimen in water, g:			
SSD weight of specimen in air, g:			
Volume of specimen:			
Percent absorption, %:			
Bag required for Ga:			
Bag Used for Ga:			
Volumetric properties			
Bulk specific gravity, Ga:			
Percent density, %:			
Percent air voids, %:			
Percent VMA, %:			

MEAN VOLUMETRIC PROPERTIES	
Asphalt content, %:	
Rice specific gravity, Gr:	
Percent density, %:	
Actual specific gravity:	
Percent air voids, %:	
Percent VMA, %:	

SAMPLE ID: _____ SAMPLED DATE: 05-31-2018_____
LOT NUMBER: _____ LETTING DATE: _____
SAMPLE STATUS: _____ CONTROLLING CSJ: _____
COUNTY: _____ SPEC YEAR: 2014_____
SAMPLED BY: _____ SPEC ITEM: _____
SAMPLE LOCATION: _____ SPECIAL PROVISION: _____
MATERIAL CODE: HMAC_____ MIX TYPE: 347-TOM-C_____
MATERIAL NAME: 17TOM CL B 76-22_____
PRODUCER: Texas Materials Manor TX_____
AREA ENGINEER: _____ PROJECT MANAGER: _____
COURSE\LIFT: Surface_____ STATION: _____ DIST. FROM CL: _____

DOT3 PRODUCTION DATA	
Sublot sample date:	
Sublot location, Tons:	
Production location, Tons:	

DETERMINATION OF ASPHALT CONTENT	
Method: Ignition oven	
Weight of sample and basket before ignition, g:	
Weight of sample and basket after ignition, g:	
Weight of basket, g:	
Ignition oven AC, %:	
Corrected AC, %:	
Ratio of recycled to total binder:	
Binder sample received?:	
DSR aging ratio:	

LAB DETERMINATION OF RICE SPECIFIC GRAVITY Tex-227-F	
(A) Weight of dry sample in air, g:	
(D) Weight of calibrated pyc. with water, g:	
(E) Weight of sample, pyc. and water, g:	
A/(D+A-E) Rice specific gravity (Gr):	
(Asd) Weight of surface dry sample in air, g:	

PRODUCTION PERFORMANCE PROPERTIES OF BITUMINOUS MIXTURES	
Tex-235-F Binder draindown, %:	
Tex 246-F Permeability or Water flow, sec:	
Tex 212-F Moisture content, %:	
Tex-530-C Boil test estimated percent stripping, %:	
Tex-244-F Thermal profile segregation:	

ESTIMATED FILM THICKNESS (based on gradation and asphalt content)	
Combined bulk specific gravity (Gsb):	
Effective specific gravity:	
Asphalt absorption, %:	
Effective asphalt content:	
Film thickness, micron:	

SAMPLE ID: _____ SAMPLED DATE: 05-31-2018_____
LOT NUMBER: _____ LETTING DATE: _____
SAMPLE STATUS: _____ CONTROLLING CSJ: _____
COUNTY: _____ SPEC YEAR: 2014_____
SAMPLED BY: _____ SPEC ITEM: _____
SAMPLE LOCATION: _____ SPECIAL PROVISION: _____
MATERIAL CODE: HMAC_____ MIX TYPE: 347-TOM-C_____
MATERIAL NAME: 17TOM CL B 76-22_____
PRODUCER: Texas Materials Manor TX_____
AREA ENGINEER: _____ PROJECT MANAGER: _____
COURSE\LIFT: Surface_____ STATION: _____ DIST. FROM CL: _____

DOT3 GRADATION OF EXTRACTED AGGREGATE: Tex-200-F

Method: Ignition oven

				Ignited sample original dry weight, g:			**TOLERANCES**
				Sieve analysis:			Gradation
Sieve Size	**Individual weight retained, g**	**Cumulative weight retained, g**	***Adjusted Individual percent retained, %**	***Adjusted Cumulative percent retained, %**	***Adjusted Cumulative percent passing, %**	**JMF individual retained limits**	JMF
1/2"							
3/8"							
#4							
#8							
#16							
#30							
#50							
#200							
- #200							
Total - #200						5.0 - 9.0	
Total weight, g							

SAMPLE ID: _____ SAMPLED DATE: 05-31-2018_____

LOT NUMBER: _____ LETTING DATE: _____

SAMPLE STATUS: _____ CONTROLLING CSJ: _____

COUNTY: _____ SPEC YEAR: 2014_____

SAMPLED BY: _____ SPEC ITEM: _____

SAMPLE LOCATION: _____ SPECIAL PROVISION: _____

MATERIAL CODE: HMAC_____ MIX TYPE: 347-TOM-C_____

MATERIAL NAME: 17TOM CL B 76-22_____

PRODUCER: Texas Materials Manor TX_____

AREA ENGINEER: _____ PROJECT MANAGER: _____

COURSE\LIFT: Surface_____ STATION: _____ DIST. FROM CL: _____

DOT3 DETERMINING PROPERTIES OF BITUMINOUS MIXTURES-Tex-207-F			
Specimen type:	Laboratory		
Specimen number:	1(1)	1(2)	1(3)
Untrimmed specimen/Core height, in:			
Weight of specimen in air, g:			
Weight of specimen in water, g:			
SSD weight of specimen in air, g:			
Volume of specimen:			
Percent absorption, %:			
Bag required for Ga:			
Bag Used for Ga:			
Volumetric properties			
Bulk specific gravity, Ga:			
Percent density, %:			
Percent air voids, %:			
Percent VMA, %:			

MEAN VOLUMETRIC PROPERTIES	
Asphalt content, %:	
Rice specific gravity, Gr:	
Percent density, %:	
Actual specific gravity:	
Percent air voids, %:	
Percent VMA, %:	

SAMPLE ID: _____ SAMPLED DATE: 05-31-2018_____
LOT NUMBER: _____ LETTING DATE: _____
SAMPLE STATUS: _____ CONTROLLING CSJ: _____
COUNTY: _____ SPEC YEAR: 2014_____
SAMPLED BY: _____ SPEC ITEM: _____
SAMPLE LOCATION: _____ SPECIAL PROVISION: _____
MATERIAL CODE: HMAC_____ MIX TYPE: 347-TOM-C_____
MATERIAL NAME: 17TOM CL B 76-22_____
PRODUCER: Texas Materials Manor TX_____
AREA ENGINEER: _____ PROJECT MANAGER: _____
COURSE\LIFT: Surface_____ STATION: _____ DIST. FROM CL: _____

DOT4 PRODUCTION DATA	
Sublot sample date:	
Sublot location, Tons:	
Production location, Tons:	

DETERMINATION OF ASPHALT CONTENT	
Method: Ignition oven	
Weight of sample and basket before ignition, g:	
Weight of sample and basket after ignition, g:	
Weight of basket, g:	
Ignition oven AC, %:	
Corrected AC, %:	
Ratio of recycled to total binder:	
Binder sample received?:	
DSR aging ratio:	

LAB DETERMINATION OF RICE SPECIFIC GRAVITY Tex-227-F	
(A) Weight of dry sample in air, g:	
(D) Weight of calibrated pyc. with water, g:	
(E) Weight of sample, pyc. and water, g:	
A/(D+A-E) Rice specific gravity (Gr):	
(Asd) Weight of surface dry sample in air, g:	

PRODUCTION PERFORMANCE PROPERTIES OF BITUMINOUS MIXTURES	
Tex-235-F Binder draindown, %:	
Tex 246-F Permeability or Water flow, sec:	
Tex 212-F Moisture content, %:	
Tex-530-C Boil test estimated percent stripping, %:	
Tex-244-F Thermal profile segregation:	

ESTIMATED FILM THICKNESS (based on gradation and asphalt content)	
Combined bulk specific gravity (Gsb):	
Effective specific gravity:	
Asphalt absorption, %:	
Effective asphalt content:	
Film thickness, micron:	

SAMPLE ID: _____ SAMPLED DATE: 05-31-2018_____
LOT NUMBER: _____ LETTING DATE: _____
SAMPLE STATUS: _____ CONTROLLING CSJ: _____
COUNTY: _____ SPEC YEAR: 2014_____
SAMPLED BY: _____ SPEC ITEM: _____
SAMPLE LOCATION: _____ SPECIAL PROVISION: _____
MATERIAL CODE: HMAC_____ MIX TYPE: 347-TOM-C_____
MATERIAL NAME: 17TOM CL B 76-22_____
PRODUCER: Texas Materials Manor TX_____
AREA ENGINEER: _____ PROJECT MANAGER: _____
COURSE\LIFT: Surface_____ STATION: _____ DIST. FROM CL: _____

DOT4 GRADATION OF EXTRACTED AGGREGATE: Tex-200-F

Method: Ignition oven

					Ignited sample original dry weight, g:		**TOLERANCES**
					Sieve analysis:		Gradation
Sieve Size	**Individual weight retained, g**	**Cumulative weight retained, g**	***Adjusted Individual percent retained, %**	***Adjusted Cumulative percent retained, %**	***Adjusted Cumulative percent passing, %**	**JMF individual retained limits**	JMF
1/2"							
3/8"							
#4							
#8							
#16							
#30							
#50							
#200							
- #200							
Total - #200						5.0 - 9.0	
Total weight, g							

SAMPLE ID: _____ SAMPLED DATE: 05-31-2018_____

LOT NUMBER: _____ LETTING DATE: _____

SAMPLE STATUS: _____ CONTROLLING CSJ: _____

COUNTY: _____ SPEC YEAR: 2014_____

SAMPLED BY: _____ SPEC ITEM: _____

SAMPLE LOCATION: _____ SPECIAL PROVISION: _____

MATERIAL CODE: HMAC_____ MIX TYPE: 347-TOM-C_____

MATERIAL NAME: 17TOM CL B 76-22_____

PRODUCER: Texas Materials Manor TX_____

AREA ENGINEER: _____ PROJECT MANAGER: _____

COURSE\LIFT: Surface_____ STATION: _____ DIST. FROM CL: _____

DOT4 DETERMINING PROPERTIES OF BITUMINOUS MIXTURES-Tex-207-F			
Specimen type:	**Laboratory**		
Specimen number:	1(1)	1(2)	1(3)
Untrimmed specimen/Core height, in:			
Weight of specimen in air, g:			
Weight of specimen in water, g:			
SSD weight of specimen in air, g:			
Volume of specimen:			
Percent absorption, %:			
Bag required for Ga:			
Bag Used for Ga:			
Volumetric properties			
Bulk specific gravity, Ga:			
Percent density, %:			
Percent air voids, %:			
Percent VMA, %:			

MEAN VOLUMETRIC PROPERTIES	
Asphalt content, %:	
Rice specific gravity, Gr:	
Percent density, %:	
Actual specific gravity:	
Percent air voids, %:	
Percent VMA, %:	

SAMPLE ID: _____ SAMPLED DATE: 05-31-2018_____
LOT NUMBER: _____ LETTING DATE: _____
SAMPLE STATUS: _____ CONTROLLING CSJ: _____
COUNTY: _____ SPEC YEAR: 2014_____
SAMPLED BY: _____ SPEC ITEM: _____
SAMPLE LOCATION: _____ SPECIAL PROVISION: _____
MATERIAL CODE: HMAC_____ MIX TYPE: 347-TOM-C_____
MATERIAL NAME: 17TOM CL B 76-22_____
PRODUCER: Texas Materials Manor TX_____
AREA ENGINEER: _____ PROJECT MANAGER: _____
COURSE\LIFT: Surface_____ STATION: _____ DIST. FROM CL: _____

CON1 PRODUCTION DATA	
Sublot sample date:	
Sublot location, Tons:	
Production location, Tons:	

DETERMINATION OF ASPHALT CONTENT	
Method: Ignition oven	
Weight of sample and basket before ignition, g:	
Weight of sample and basket after ignition, g:	
Weight of basket, g:	
Ignition oven AC, %:	
Corrected AC, %:	
Ratio of recycled to total binder:	
Binder sample received?:	
DSR aging ratio:	

LAB DETERMINATION OF RICE SPECIFIC GRAVITY Tex-227-F	
(A) Weight of dry sample in air, g:	
(D) Weight of calibrated pyc. with water, g:	
(E) Weight of sample, pyc. and water, g:	
A/(D+A-E) Rice specific gravity (Gr):	
(Asd) Weight of surface dry sample in air, g:	

PRODUCTION PERFORMANCE PROPERTIES OF BITUMINOUS MIXTURES	
Tex-235-F Binder draindown, %:	
Tex 246-F Permeability or Water flow, sec:	
Tex 212-F Moisture content, %:	
Tex-530-C Boil test estimated percent stripping, %:	
Tex-244-F Thermal profile segregation:	

ESTIMATED FILM THICKNESS (based on gradation and asphalt content)	
Combined bulk specific gravity (Gsb):	
Effective specific gravity:	
Asphalt absorption, %:	
Effective asphalt content:	
Film thickness, micron:	

SAMPLE ID: _____ SAMPLED DATE: 05-31-2018_____
LOT NUMBER: _____ LETTING DATE: _____
SAMPLE STATUS: _____ CONTROLLING CSJ: _____
COUNTY: _____ SPEC YEAR: 2014_____
SAMPLED BY: _____ SPEC ITEM: _____
SAMPLE LOCATION: _____ SPECIAL PROVISION: _____
MATERIAL CODE: HMAC_____ MIX TYPE: 347-TOM-C_____
MATERIAL NAME: 17TOM CL B 76-22_____
PRODUCER: Texas Materials Manor TX_____
AREA ENGINEER: _____ PROJECT MANAGER: _____
COURSE\LIFT: Surface_____ STATION: _____ DIST. FROM CL: _____

CON1 GRADATION OF EXTRACTED AGGREGATE: Tex-200-F

Method: Ignition oven

					Ignited sample original dry weight, g:		**TOLERANCES**
					Sieve analysis:		Gradation
Sieve Size	**Individual weight retained, g**	**Cumulative weight retained, g**	***Adjusted Individual percent retained, %**	***Adjusted Cumulative percent retained, %**	***Adjusted Cumulative percent passing, %**	**JMF individual retained limits**	JMF
1/2"							
3/8"							
#4							
#8							
#16							
#30							
#50							
#200							
- #200							
Total - #200						5.0 - 9.0	
Total weight, g							

SAMPLE ID: _____ SAMPLED DATE: 05-31-2018_____

LOT NUMBER: _____ LETTING DATE: _____

SAMPLE STATUS: _____ CONTROLLING CSJ: _____

COUNTY: _____ SPEC YEAR: 2014_____

SAMPLED BY: _____ SPEC ITEM: _____

SAMPLE LOCATION: _____ SPECIAL PROVISION: _____

MATERIAL CODE: HMAC_____ MIX TYPE: 347-TOM-C_____

MATERIAL NAME: 17TOM CL B 76-22_____

PRODUCER: Texas Materials Manor TX_____

AREA ENGINEER: _____ PROJECT MANAGER: _____

COURSE\LIFT: Surface_____ STATION: _____ DIST. FROM CL: _____

CON1 DETERMINING PROPERTIES OF BITUMINOUS MIXTURES-Tex-207-F			
Specimen type:	Laboratory		
Specimen number:	1(1)	1(2)	1(3)
Untrimmed specimen/Core height, in:			
Weight of specimen in air, g:			
Weight of specimen in water, g:			
SSD weight of specimen in air, g:			
Volume of specimen:			
Percent absorption, %:			
Bag required for Ga:			
Bag Used for Ga:			
Volumetric properties			
Bulk specific gravity, Ga:			
Percent density, %:			
Percent air voids, %:			
Percent VMA, %:			

MEAN VOLUMETRIC PROPERTIES	
Asphalt content, %:	
Rice specific gravity, Gr:	
Percent density, %:	
Actual specific gravity:	
Percent air voids, %:	
Percent VMA, %:	

SAMPLE ID: _____ SAMPLED DATE: 05-31-2018_____
LOT NUMBER: _____ LETTING DATE: _____
SAMPLE STATUS: _____ CONTROLLING CSJ: _____
COUNTY: _____ SPEC YEAR: 2014_____
SAMPLED BY: _____ SPEC ITEM: _____
SAMPLE LOCATION: _____ SPECIAL PROVISION: _____
MATERIAL CODE: HMAC_____ MIX TYPE: 347-TOM-C_____
MATERIAL NAME: 17TOM CL B 76-22_____
PRODUCER: Texas Materials Manor TX_____
AREA ENGINEER: _____ PROJECT MANAGER: _____
COURSE\LIFT: Surface_____ STATION: _____ DIST. FROM CL: _____

CON2 PRODUCTION DATA	
Sublot sample date:	
Sublot location, Tons:	
Production location, Tons:	

DETERMINATION OF ASPHALT CONTENT	
Method: Ignition oven	
Weight of sample and basket before ignition, g:	
Weight of sample and basket after ignition, g:	
Weight of basket, g:	
Ignition oven AC, %:	
Corrected AC, %:	
Ratio of recycled to total binder:	
Binder sample received?:	
DSR aging ratio:	

LAB DETERMINATION OF RICE SPECIFIC GRAVITY Tex-227-F	
(A) Weight of dry sample in air, g:	
(D) Weight of calibrated pyc. with water, g:	
(E) Weight of sample, pyc. and water, g:	
A/(D+A-E) Rice specific gravity (Gr):	
(Asd) Weight of surface dry sample in air, g:	

PRODUCTION PERFORMANCE PROPERTIES OF BITUMINOUS MIXTURES	
Tex-235-F Binder draindown, %:	
Tex 246-F Permeability or Water flow, sec:	
Tex 212-F Moisture content, %:	
Tex-530-C Boil test estimated percent stripping, %:	
Tex-244-F Thermal profile segregation:	

ESTIMATED FILM THICKNESS (based on gradation and asphalt content)	
Combined bulk specific gravity (Gsb):	
Effective specific gravity:	
Asphalt absorption, %:	
Effective asphalt content:	
Film thickness, micron:	

SAMPLE ID: _____ SAMPLED DATE: 05-31-2018_____
LOT NUMBER: _____ LETTING DATE: _____
SAMPLE STATUS: _____ CONTROLLING CSJ: _____
COUNTY: _____ SPEC YEAR: 2014_____
SAMPLED BY: _____ SPEC ITEM: _____
SAMPLE LOCATION: _____ SPECIAL PROVISION: _____
MATERIAL CODE: HMAC_____ MIX TYPE: 347-TOM-C_____
MATERIAL NAME: 17TOM CL B 76-22_____
PRODUCER: Texas Materials Manor TX_____
AREA ENGINEER: _____ PROJECT MANAGER: _____
COURSE\LIFT: Surface_____ STATION: _____ DIST. FROM CL: _____

CON2 GRADATION OF EXTRACTED AGGREGATE: Tex-200-F

Method: Ignition oven

					Ignited sample original dry weight, g:		
					Sieve analysis:		
Sieve Size	**Individual weight retained, g**	**Cumulative weight retained, g**	***Adjusted Individual percent retained, %**	***Adjusted Cumulative percent retained, %**	***Adjusted Cumulative percent passing, %**	**JMF individual retained limits**	
1/2"							
3/8"							
#4							
#8							
#16							
#30							
#50							
#200							
- #200							
Total - #200						5.0 - 9.0	
Total weight, g							

TOLERANCES
Gradation
JMF

SAMPLE ID: _____ SAMPLED DATE: 05-31-2018_____

LOT NUMBER: _____ LETTING DATE: _____

SAMPLE STATUS: _____ CONTROLLING CSJ: _____

COUNTY: _____ SPEC YEAR: 2014_____

SAMPLED BY: _____ SPEC ITEM: _____

SAMPLE LOCATION: _____ SPECIAL PROVISION: _____

MATERIAL CODE: HMAC_____ MIX TYPE: 347-TOM-C_____

MATERIAL NAME: 17TOM CL B 76-22_____

PRODUCER: Texas Materials Manor TX_____

AREA ENGINEER: _____ PROJECT MANAGER: _____

COURSE\LIFT: Surface_____ STATION: _____ DIST. FROM CL: _____

CON2 DETERMINING PROPERTIES OF BITUMINOUS MIXTURES-Tex-207-F			
Specimen type:	Laboratory		
Specimen number:	1(1)	1(2)	1(3)
Untrimmed specimen/Core height, in:			
Weight of specimen in air, g:			
Weight of specimen in water, g:			
SSD weight of specimen in air, g:			
Volume of specimen:			
Percent absorption, %:			
Bag required for Ga:			
Bag Used for Ga:			
Volumetric properties			
Bulk specific gravity, Ga:			
Percent density, %:			
Percent air voids, %:			
Percent VMA, %:			

MEAN VOLUMETRIC PROPERTIES	
Asphalt content, %:	
Rice specific gravity, Gr:	
Percent density, %:	
Actual specific gravity:	
Percent air voids, %:	
Percent VMA, %:	

SAMPLE ID: _____ SAMPLED DATE: 05-31-2018_____
LOT NUMBER: _____ LETTING DATE: _____
SAMPLE STATUS: _____ CONTROLLING CSJ: _____
COUNTY: _____ SPEC YEAR: 2014_____
SAMPLED BY: _____ SPEC ITEM: _____
SAMPLE LOCATION: _____ SPECIAL PROVISION: _____
MATERIAL CODE: HMAC_____ MIX TYPE: 347-TOM-C_____
MATERIAL NAME: 17TOM CL B 76-22_____
PRODUCER: Texas Materials Manor TX_____
AREA ENGINEER: _____ PROJECT MANAGER: _____
COURSE\LIFT: Surface_____ STATION: _____ DIST. FROM CL: _____

CON3 PRODUCTION DATA	
Sublot sample date:	
Sublot location, Tons:	
Production location, Tons:	

DETERMINATION OF ASPHALT CONTENT	
Method: Ignition oven	
Weight of sample and basket before ignition, g:	
Weight of sample and basket after ignition, g:	
Weight of basket, g:	
Ignition oven AC, %:	
Corrected AC, %:	
Ratio of recycled to total binder:	
Binder sample received?:	
DSR aging ratio:	

LAB DETERMINATION OF RICE SPECIFIC GRAVITY Tex-227-F	
(A) Weight of dry sample in air, g:	
(D) Weight of calibrated pyc. with water, g:	
(E) Weight of sample, pyc. and water, g:	
A/(D+A-E) Rice specific gravity (Gr):	
(Asd) Weight of surface dry sample in air, g:	

PRODUCTION PERFORMANCE PROPERTIES OF BITUMINOUS MIXTURES	
Tex-235-F Binder draindown, %:	
Tex 246-F Permeability or Water flow, sec:	
Tex 212-F Moisture content, %:	
Tex-530-C Boil test estimated percent stripping, %:	
Tex-244-F Thermal profile segregation:	

ESTIMATED FILM THICKNESS (based on gradation and asphalt content)	
Combined bulk specific gravity (Gsb):	
Effective specific gravity:	
Asphalt absorption, %:	
Effective asphalt content:	
Film thickness, micron:	

SAMPLE ID: _____ SAMPLED DATE: 05-31-2018_____
LOT NUMBER: _____ LETTING DATE: _____
SAMPLE STATUS: _____ CONTROLLING CSJ: _____
COUNTY: _____ SPEC YEAR: 2014_____
SAMPLED BY: _____ SPEC ITEM: _____
SAMPLE LOCATION: _____ SPECIAL PROVISION: _____
MATERIAL CODE: HMAC_____ MIX TYPE: 347-TOM-C_____
MATERIAL NAME: 17TOM CL B 76-22_____
PRODUCER: Texas Materials Manor TX_____
AREA ENGINEER: _____ PROJECT MANAGER: _____
COURSE\LIFT: Surface_____ STATION: _____ DIST. FROM CL: _____

CON3 GRADATION OF EXTRACTED AGGREGATE: Tex-200-F

Method: Ignition oven

					Ignited sample original dry weight, g:		
					Sieve analysis:		
Sieve Size	**Individual weight retained, g**	**Cumulative weight retained, g**	***Adjusted Individual percent retained, %**	***Adjusted Cumulative percent retained, %**	***Adjusted Cumulative percent passing, %**	**JMF individual retained limits**	
1/2"							
3/8"							
#4							
#8							
#16							
#30							
#50							
#200							
- #200							
Total - #200						5.0 - 9.0	
Total weight, g							

TOLERANCES
Gradation
JMF

SAMPLE ID: _____ SAMPLED DATE: 05-31-2018_____

LOT NUMBER: _____ LETTING DATE: _____

SAMPLE STATUS: _____ CONTROLLING CSJ: _____

COUNTY: _____ SPEC YEAR: 2014_____

SAMPLED BY: _____ SPEC ITEM: _____

SAMPLE LOCATION: _____ SPECIAL PROVISION: _____

MATERIAL CODE: HMAC_____ MIX TYPE: 347-TOM-C_____

MATERIAL NAME: 17TOM CL B 76-22_____

PRODUCER: Texas Materials Manor TX_____

AREA ENGINEER: _____ PROJECT MANAGER: _____

COURSE\LIFT: Surface_____ STATION: _____ DIST. FROM CL: _____

CON3 DETERMINING PROPERTIES OF BITUMINOUS MIXTURES-Tex-207-F			
Specimen type:	Laboratory		
Specimen number:	1(1)	1(2)	1(3)
Untrimmed specimen/Core height, in:			
Weight of specimen in air, g:			
Weight of specimen in water, g:			
SSD weight of specimen in air, g:			
Volume of specimen:			
Percent absorption, %:			
Bag required for Ga:			
Bag Used for Ga:			
Volumetric properties			
Bulk specific gravity, Ga:			
Percent density, %:			
Percent air voids, %:			
Percent VMA, %:			

MEAN VOLUMETRIC PROPERTIES	
Asphalt content, %:	
Rice specific gravity, Gr:	
Percent density, %:	
Actual specific gravity:	
Percent air voids, %:	
Percent VMA, %:	

SAMPLE ID: _____ SAMPLED DATE: 05-31-2018_____
LOT NUMBER: _____ LETTING DATE: _____
SAMPLE STATUS: _____ CONTROLLING CSJ: _____
COUNTY: _____ SPEC YEAR: 2014_____
SAMPLED BY: _____ SPEC ITEM: _____
SAMPLE LOCATION: _____ SPECIAL PROVISION: _____
MATERIAL CODE: HMAC_____ MIX TYPE: 347-TOM-C_____
MATERIAL NAME: 17TOM CL B 76-22_____
PRODUCER: Texas Materials Manor TX_____
AREA ENGINEER: _____ PROJECT MANAGER: _____
COURSE\LIFT: Surface_____ STATION: _____ DIST. FROM CL: _____

CON4 PRODUCTION DATA	
Sublot sample date:	
Sublot location, Tons:	
Production location, Tons:	

DETERMINATION OF ASPHALT CONTENT	
Method: Ignition oven	
Weight of sample and basket before ignition, g:	
Weight of sample and basket after ignition, g:	
Weight of basket, g:	
Ignition oven AC, %:	
Corrected AC, %:	
Ratio of recycled to total binder:	
Binder sample received?:	
DSR aging ratio:	

LAB DETERMINATION OF RICE SPECIFIC GRAVITY Tex-227-F	
(A) Weight of dry sample in air, g:	
(D) Weight of calibrated pyc. with water, g:	
(E) Weight of sample, pyc. and water, g:	
A/(D+A-E) Rice specific gravity (Gr):	
(Asd) Weight of surface dry sample in air, g:	

PRODUCTION PERFORMANCE PROPERTIES OF BITUMINOUS MIXTURES	
Tex-235-F Binder draindown, %:	
Tex 246-F Permeability or Water flow, sec:	
Tex 212-F Moisture content, %:	
Tex-530-C Boil test estimated percent stripping, %:	
Tex-244-F Thermal profile segregation:	

ESTIMATED FILM THICKNESS (based on gradation and asphalt content)	
Combined bulk specific gravity (Gsb):	
Effective specific gravity:	
Asphalt absorption, %:	
Effective asphalt content:	
Film thickness, micron:	

SAMPLE ID: _____ SAMPLED DATE: 05-31-2018_____
LOT NUMBER: _____ LETTING DATE: _____
SAMPLE STATUS: _____ CONTROLLING CSJ: _____
COUNTY: _____ SPEC YEAR: 2014_____
SAMPLED BY: _____ SPEC ITEM: _____
SAMPLE LOCATION: _____ SPECIAL PROVISION: _____
MATERIAL CODE: HMAC_____ MIX TYPE: 347-TOM-C_____
MATERIAL NAME: 17TOM CL B 76-22_____
PRODUCER: Texas Materials Manor TX_____
AREA ENGINEER: _____ PROJECT MANAGER: _____
COURSE\LIFT: Surface_____ STATION: _____ DIST. FROM CL: _____

CON4 GRADATION OF EXTRACTED AGGREGATE: Tex-200-F

Method: Ignition oven

					Ignited sample original dry weight, g:		
					Sieve analysis:		
Sieve Size	**Individual weight retained, g**	**Cumulative weight retained, g**	***Adjusted Individual percent retained, %**	***Adjusted Cumulative percent retained, %**	***Adjusted Cumulative percent passing, %**	**JMF individual retained limits**	
1/2"							
3/8"							
#4							
#8							
#16							
#30							
#50							
#200							
- #200							
Total - #200						5.0 - 9.0	
Total weight, g							

TOLERANCES
Gradation
JMF

SAMPLE ID: _____ SAMPLED DATE: 05-31-2018_____

LOT NUMBER: _____ LETTING DATE: _____

SAMPLE STATUS: _____ CONTROLLING CSJ: _____

COUNTY: _____ SPEC YEAR: 2014_____

SAMPLED BY: _____ SPEC ITEM: _____

SAMPLE LOCATION: _____ SPECIAL PROVISION: _____

MATERIAL CODE: HMAC_____ MIX TYPE: 347-TOM-C_____

MATERIAL NAME: 17TOM CL B 76-22_____

PRODUCER: Texas Materials Manor TX_____

AREA ENGINEER: _____ PROJECT MANAGER: _____

COURSE\LIFT: Surface_____ STATION: _____ DIST. FROM CL: _____

CON4 DETERMINING PROPERTIES OF BITUMINOUS MIXTURES-Tex-207-F			
Specimen type:	**Laboratory**		
Specimen number:	1(1)	1(2)	1(3)
Untrimmed specimen/Core height, in:			
Weight of specimen in air, g:			
Weight of specimen in water, g:			
SSD weight of specimen in air, g:			
Volume of specimen:			
Percent absorption, %:			
Bag required for Ga:			
Bag Used for Ga:			
Volumetric properties			
Bulk specific gravity, Ga:			
Percent density, %:			
Percent air voids, %:			
Percent VMA, %:			

MEAN VOLUMETRIC PROPERTIES	
Asphalt content, %:	
Rice specific gravity, Gr:	
Percent density, %:	
Actual specific gravity:	
Percent air voids, %:	
Percent VMA, %:	

SAMPLE ID: _____ SAMPLED DATE: 05-31-2018_____
LOT NUMBER: _____ LETTING DATE: _____
SAMPLE STATUS: _____ CONTROLLING CSJ: _____
COUNTY: _____ SPEC YEAR: 2014_____
SAMPLED BY: _____ SPEC ITEM: _____
SAMPLE LOCATION: _____ SPECIAL PROVISION: _____
MATERIAL CODE: HMAC_____ MIX TYPE: 347-TOM-C_____
MATERIAL NAME: 17TOM CL B 76-22_____
PRODUCER: Texas Materials Manor TX_____
AREA ENGINEER: _____ PROJECT MANAGER: _____
COURSE\LIFT: Surface_____ STATION: _____ DIST. FROM CL: _____

GRADATION OF EXTRACTED AGGREGATE-Tex-200-F

Sieve size	Design JMF	Current JMF	TxDOT test data 1	2	3	4	Contractor test data 1	2	3	4	Correlation factor TxDOT	CON
			Cumulative percent passing				Cumulative percent passing					
1/2"	**100.0**	**100.0**									**0.1**	**0.1**
3/8"	**95.8**	**95.0**									**0.6**	**0.6**
#4	**53.2**	**50.5**									**-0.9**	**-0.9**
#8	**21.1**	**21.4**									**-3.6**	**-3.6**
#16	**15.6**	**15.6**									**-3.5**	**-3.5**
#30	**12.4**	**12.4**									**-3.5**	**-3.5**
#50	**10.3**	**10.3**									**-2.7**	**-2.7**
#200	**6.3**	**7.0**									**1.2**	**1.2**

GRADATION REFEREE

Referee test data 1	2	3	4
Cumulative percent passing			

CORE HEIGHTS

Acceptable for testing:	**NA**	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Excessively trimmed:	**NA**	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**

DENSITY & PROPERTIES OF BITUMINOUS MIXTURES-Tex-207-F

Avg. Actual SG (Ga):	**2.464**									
Lab molded density, %:	**97.5**									
In place air voids, %:	**NA**									
Plant produced VMA, %:	**0.0**									

DENSITY REFEREE

RICE SPECIFIC GRAVITY-Tex-227-F

Rice specific gravity:	**2.526**									

RICE REFEREE

ASPHALT CONTENT by: Ignition oven

Asphalt content, %:	**6.3**									
Recycled binder ratio:	**0.0**									
Binder sample received?:	**NA**									
DSR aging ratio?:	**NA**									

AC REFEREE

EFFECT OF WATER ON BITUMINOUS -Tex-530-C

Estimated percent stripping:										

PROFILES: Tex-244-F & Tex-207-F, Part V & Tex-207-F, Part VII

Thermal segregation:	**NA**									
Segregation profile:	**NA**									
Joint density:	**NA**									
Required documentation?:	**NA**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**

DRAIN-DOWN: Tex-235-F

Drain-down, %:	**NA**									

MOISTURE CONTENT: Tex-212-F, Part II

Moisture content, %:	**NA**									

Tested by: **Reviewed by:** **Authorized by:**

SAMPLE ID: _____ SAMPLED DATE: 05-31-2018_____
LOT NUMBER: _____ LETTING DATE: _____
SAMPLE STATUS: _____ CONTROLLING CSJ: _____
COUNTY: _____ SPEC YEAR: 2014_____
SAMPLED BY: _____ SPEC ITEM: _____
SAMPLE LOCATION: _____ SPECIAL PROVISION: _____
MATERIAL CODE: HMAC_____ MIX TYPE: 347-TOM-C_____
MATERIAL NAME: 17TOM CL B 76-22_____
PRODUCER: Texas Materials Manor TX_____
AREA ENGINEER: _____ PROJECT MANAGER: _____
COURSE\LIFT: Surface_____ STATION: _____ DIST. FROM CL: _____

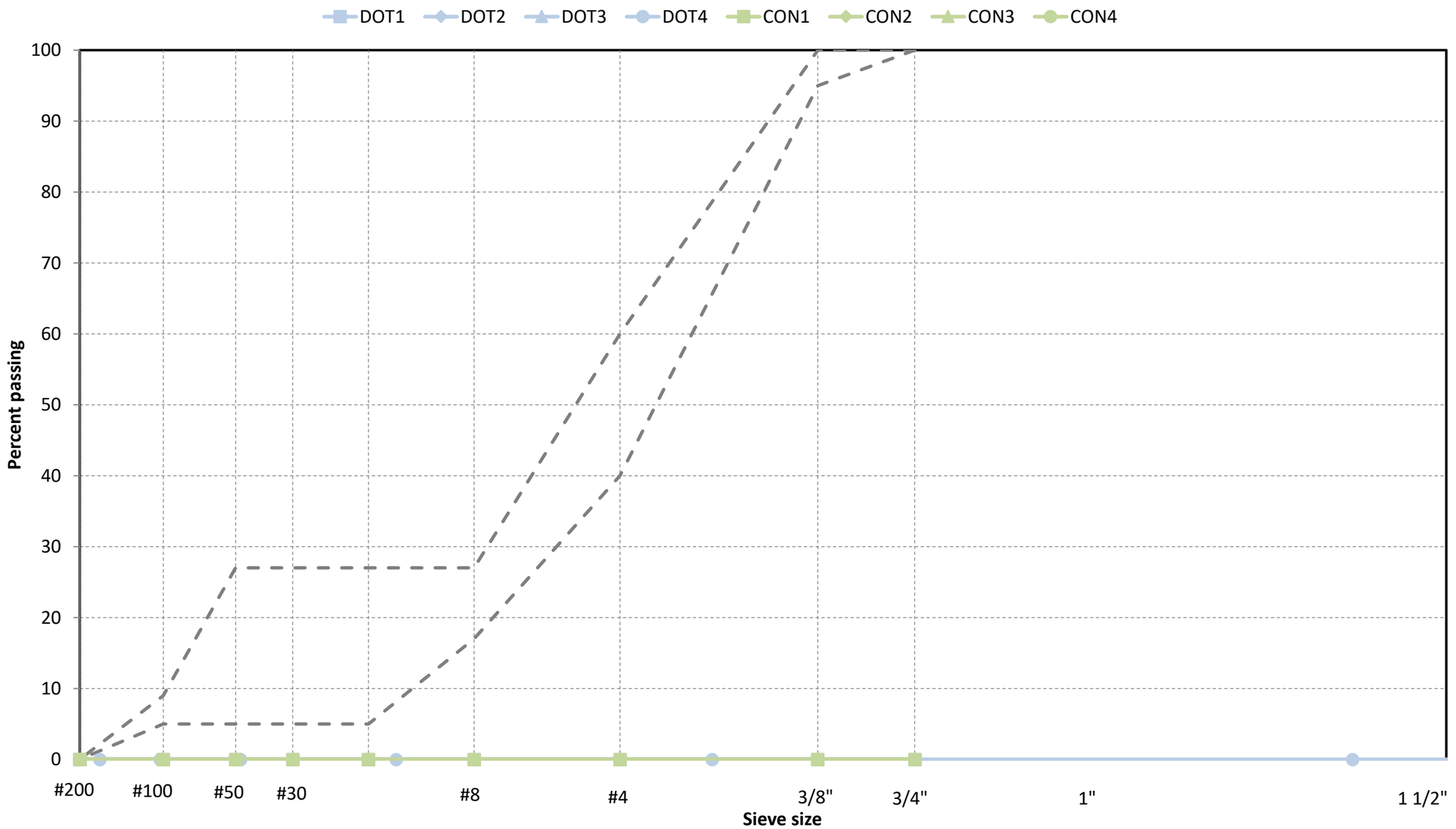
QCQA PAY ADJUSTMENT	
Total quantity actually placed, Tons:	

AGGREGATE PAYMENT	
Unit price, $/Ton:	
Quantity, Tons:	0.00
Pay amount, $:	0.00

ASPHALT PAYMENT	
Unit price, $/Ton:	
Average measured asphalt percentage, %:	6.3
Quantity, Tons:	0.00
Pay amount, $:	0.00

Signature of contractor representative

Signature of TxDOT representative


DOT1
DOT2
DOT3
DOT4
CON1
CON2
CON3
CON4
100
90
80
70
60
50
40
30
20
10
0
Percent passing
#200
#100
#50
#30
#8
#4
3/8"
3/4"
1"
1 1/2"
Sieve size

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN

Use this template to perform the mixture design of Hot Mix Asphalt or Warm Mix Asphalt mixtures according to the 2014 Specifications handbook.

If you have questions or comments concerning this template or the mixture design procedures, please call Travis Patton at 512-506-5841 of the Flexible Pavements Branch of the Materials & Pavements Section within the Construction Division.

If you would like to obtain an updated version of this Site Manager template go to
http://www.txdot.gov/inside-txdot/forms-publications/consultants-contractors/forms/site-manager.html

To move from page to page, click on the different worksheet tabs at the bottom of the page.
This template provides notes throughout the worksheets when design requirements are not met.

COMBINED GRADATION SHEET: Start at this worksheet. Select the 2004 specification year and the mix type. This information will affect the calculation, labeling, and formatting of the worksheets in this mixture design template.

- **Spec Year:** Select the specification year from the dropdown list before selecting the mix type.
- **Mix Type: S**elect the mix type from the dropdown list that most closely matches your mix. This value will determine what sieve sizes and tolerances are displayed on the worksheets.
- **WMA:** Select "Yes" from the dropdown list when the mixture design includes WMA additives. Select "No" if WMA additives are not included in the mixture design, even though a WMA technology may be used during production. WMA information must be entered before entering bin percentages.
- **Course/Lift:** From this dropdown list, select the mixture description and its location from the final riding surface. The mixture description must be selected before entering the recycled materials information to establish the maximum allowable amount of recycled materials.
- **Aggregate Bin Fractions:** Select the aggregate type, source, and number from the dropdown lists. Refer to the BRSQC for additional aggregate and quarry information. To obtain the latest version of the BRSQC go to:
  http://www.txdot.gov/txdot_library/publications/producer_list.htm
  If the aggregate is not listed in the BRSQC but approved by the Engineer, select an aggregate source from the dropdown list and enter a description in the aggregate Sample ID cell.
- **Recycled Materials:** Select the recycled material type and source from the dropdown lists. When using Recycled Asphalt Shingles (RAS), select the type of RAS used from the dropdown list. The template calculates the recycled binder percent and the recycled to total binder ratio of the mixture.
  NOTE: Enter the asphalt content and the bin percentages of each recycled material by weight of the total mix. The template calculates the recycled aggregate bin percentages by weight of the total aggregate.
- **Binder Substitution:** When using binder substitution, select "Yes" from the dropdown list and enter the originally specified and the substitute binders.

SUMMARY SHEET: Use this worksheet to determine the optimum asphalt content and mixture properties according to the mixture design procedure.

- For informational purposes, enter the mixing and molding temperatures used for the mixture design.

MATL PROPERTIES SHEET: Use this worksheet to enter the material properties for each aggregate stockpile, fine aggregate, combined aggregate, and recycled materials.

- When the material quality requirements are changed according to general notes or when shown on the plans, enter the new requirements in the "Modified Spec. Limit" column.

AGGREGATE CLASSIFICATION SHEET: Use this worksheet to verify the amount of Class A material retained on the No. 4 or No. 8 sieve when blending Class A with Class B aggregate.

WEIGH UP SHEET: Use this worksheet to calculate the weight of the batches of mix used for molds, rice gravity, and any other required test.

- **WARNING**: When using recycled materials and changing the asphalt content in the Combined Gradation sheet, ensure that the Total Bin is 100%.

BLANK WEIGH UP SHEET: Use this worksheet to prepare blank samples to calculate the ignition oven correction factors in accordance with Tex-236-F.

BULK GRAVITY SHEET: Use this worksheet to calculate the aggregate combined bulk specific gravity and the coarse aggregate combined bulk specific gravity if applicable.

TEXAS DEPARTMENT OF TRANSPORTATION

2014 HMACP MIXTURE DESIGN : COMBINED GRADATION

Refresh Workbook

TX2MIXDE14 - File Version: 01/19/17 15:32:54

SAMPLE ID:	TY D - Cold Mix-.6	SAMPLE DATE:	3-4-2017
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:	Various	SPEC YEAR:	2014
SAMPLED BY:	Kyle Rangnow # 765	SPEC ITEM:	
SAMPLE LOCATION:		SPECIAL PROVISION:	
MATERIAL CODE:		MIX TYPE:	334-HMCL-D
MATERIAL NAME:	Type D HMCL		
PRODUCER:	APAC- Wheeler		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:		STATION:		DIST. FROM CL:	

WMA Additive in Design?	No
Target Discharge Temp., ºF:	
WMA TECHNOLOGY:	
WMA RATE:	UNITS:
CONTRACTOR DESIGN # :	TY D -COLD MIX-.6

Maximum Allowable, %	
Frac RAP:	
Unfrac RAP:	
RAS:	0.0
RB Ratio:	

Recycled Binder, %	
Bin No.8 :	0.0
Bin No.9 :	0.0
Bin No.10 :	0.0
Total	*0.0*

Use this value in the QC/QA template>>

Ratio of Recycled to Total Binder, %
(based on binder percent (%) entered below in this worksheet)
0.0

	AGGREGATE BIN FRACTIONS							"RECYCLED MATERIALS"			
Aggregate	Bin No.1	Bin No.2	Bin No.3	Bin No.4	Bin No.5	Bin No.6	Bin No.7	Bin No.8	Bin No.9	Bin No.10	
Source:	Limestone_Dolomit	Limestone_Dolomit	Limestone_Dolomit								Material Type
Pit:	Marble Falls Quarry	Marble Falls Quarry	Marble Falls Quarry	Bend	Austin White Lime						Material Source
Number:	1402702	1402702	1402702	Alexander	Lime						RAS Type
Producer:	Oldcastle Materials Texas	Oldcastle Materials Texas	Oldcastle Materials Texas								RAP/RAS Producer
Sample ID:	D ROCK	F ROCK	MAN. SAND	FIELD SAND	Austin White Lime						Sample ID

Recycled Asphalt Binder (%)

																					Combined Gradation		
Hydrated Lime?:																% of Tot. Mix		% of Tot. Mix		% of Tot. Mix	Total Bin	Lower & Upper Specification Limits	
Individual Bin (%):	36.0	Percent	23.0	Percent	30.0	Percent	10.0	Percent	1.0	Percent		Percent		Percent		% of Aggreg		% of Aggreg		% of Aggreg	100.0%		
Sieve Size:	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum.% Passing	*Wtd* Cum. %	Cum. % Passing	Lower	Upper	Within Spec's
3/4"	100.0	36.0	100.0	23.0	100.0	30.0	100.0	10.0	100.0	1.0											100.0	100.0	100.0	Yes
1/2"	100.0	36.0	100.0	23.0	100.0	30.0	100.0	10.0	100.0	1.0											100.0	98.0	100.0	Yes
3/8"	99.1	35.7	100.0	23.0	100.0	30.0	100.0	10.0	100.0	1.0											99.7	85.0	100.0	Yes
No. 4	20.5	7.4	69.1	15.9	99.5	29.9	100.0	10.0	100.0	1.0											64.1	50.0	70.0	Yes
No. 8	2.2	0.8	7.1	1.6	85.5	25.7	99.8	10.0	100.0	1.0											39.1	35.0	46.0	Yes
No. 30	0.7	0.3	2.1	0.5	43.4	13.0	99.4	9.9	100.0	1.0											24.7	15.0	29.0	Yes
No. 50	0.6	0.2	1.7	0.4	25.8	7.7	88.8	8.9	100.0	1.0											18.2	7.0	20.0	Yes
No. 200	0.5	0.2	1.1	0.3	2.8	0.8	7.5	0.8	100.0	1.0											3.0	2.0	7.0	Yes

(Bold Italic) Not within specifications ***(Bold Italic)*** Not within specificaitons- Restricted Zone *(Italic)* Not cumulative

Lift Thickness, in:		Binder Substitution?	No	Binder Originally Specified:		Substitute Binder:
Asphalt Source:	Martin .6		Binder Percent, (%):	4.0	Asphalt Spec. Grav.:	0.992
Antistripping Agent:			Percent, (%):			

Remarks:

Notes:

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : MATERIAL PROPERTIES

SAMPLE ID:	TY D - Cold Mix-.6	SAMPLE DATE:	3-4-2017
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:	Various	SPEC YEAR:	2014
SAMPLED BY:	Kyle Rangnow # 765	SPEC ITEM:	
SAMPLE LOCATION:		SPECIAL PROVISION:	
MATERIAL CODE:		MIX TYPE:	334-HMCL-D
MATERIAL NAME:	Type D HMCL		
PRODUCER:	APAC- Wheeler		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:		STATION:		DIST. FROM CL:		CONTRACTOR DESIGN # :	TY D -COLD MIX-.6

	Bin No.1	Bin No.2	Bin No.3	Bin No.4	Bin No.5	Bin No.6	Bin No.7
Individual Bin (%):	Bin No.1 = 36 %	Bin No.2 = 23 %	Bin No.3 = 30 %	Bin No.4 = 10 %	Bin No.5 = 1 %		
Aggregate Source:	Limestone_Dolomite	Limestone_Dolomite	Limestone_Dolomite				
Aggregate Number:	1402702	1402702	1402702	Alexander	Lime		
Sample ID:	D ROCK	F ROCK	MAN. SAND	FIELD SAND	Austin White Lime		

Test Name	SiteManager Test Template	Test Method	Spec. Min or Max	Spec. Limit	Modified Spec. Limit	Bin No.1 Result	Bin No.1 Sample ID	Bin No.2 Result	Bin No.2 Sample ID	Bin No.3 Result	Bin No.3 Sample ID	Bin No.4 Result	Bin No.4 Sample ID	Bin No.5 Result	Bin No.5 Sample ID	Bin No.6 Result	Bin No.6 Sample ID	Bin No.7 Result	Bin No.7 Sample ID
Stockpile						Bin No.1		Bin No.2		Bin No.3		Bin No.4		Bin No.5		Bin No.6		Bin No.7	
Decantation	Tx217	Tex-217-F	Max.	**1.5**		0.30		0.60											
Deleterious Mat'l	Tx217	Tex-217-F	Max.	**1.5**		0.00		0.00											
Surface Aggregate Classification	Tx4AgClas	Tex-438-A, Tex-612-J	Min.			B		B											
Magnesium Sulfate Soundness	Tx411M	Tex-411-A	Max.	**30**		9.00		9.00											
LA Abrasion	Tx410	Tex-410-A	Max.	**40**		29.00		29.00											
Crushed Faces Count	Tx460	Tex-460-A	Min.	**85**		N/A		N/A											
Flat & Elongated	Tx280	Tex-280-F	Max.	**10**		0.00		0.00											
Micro-Deval Abrasion	Tx461	Tex-461-A	Use results to estimate the Mg Sulfate Soundness Loss																
Fine Aggregate						Bin No.1		Bin No.2		Bin No.3		Bin No.4		Bin No.5		Bin No.6		Bin No.7	
Bar Linear Shrinkage	Tx107	Tex-107-E	Max.	**3**								0.04							
Methylene Blue	-	AASHTO T330	Max.																
Combined Aggregate						Bin No.1		Bin No.2		Bin No.3		Bin No.4		Bin No.5		Bin No.6		Bin No.7	
Sand Equivalent	Tx203	Tex-203-F	Min.	**45**						77.00									
User Defined Testing						Bin No.1		Bin No.2		Bin No.3		Bin No.4		Bin No.5		Bin No.6		Bin No.7	
Use this area to enter any test methods, speciafications & test result that apply to this material(s) but are not not listed above. 1																			
2																			
3																			
4																			
5																			
Recycled Materials						**Bin No.8**		**Bin No.9**		**Bin No.10**									
Deleterious Mat'l	Tx217	Tex-217-F, Part III	Max.	**0.5**															
Decantation	Tx406	Tex-406-A, Part I	Max.	**5**															
Plasticity Index	Tx104-6	Tex-106-E	Max.	**8**															
User Defined Testing																			

Remarks:

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : Aggregate Classification

SAMPLE ID:	TY D - Cold Mix-.6	SAMPLE DATE:	3-4-2017
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:	Various	SPEC YEAR:	2014
SAMPLED BY:	Kyle Rangnow # 765	SPEC ITEM:	
SAMPLE LOCATION:		SPECIAL PROVISION:	
MATERIAL CODE:		MIX TYPE:	334-HMCL-D
MATERIAL NAME:	Type D HMCL		
PRODUCER:	APAC- Wheeler		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:		STATION:		DIST. FROM CL:		CONTRACTOR DESIGN # :	TY D -COLD MIX-.6

Aggregate Classification

		Bin No.1	Bin No.2	Bin No.3	Bin No.4	Bin No.5	Bin No.6	Bin No.7	Bin No.8	Bin No.9	Bin No.10
Individual Bin (%):		Bin No.1 = 36 %	Bin No.2 = 23 %	Bin No.3 = 30 %	Bin No.4 = 10 %	Bin No.5 = 1 %					
Aggregate Source:		Limestone_Dolomite	Limestone_Dolomite	Limestone_Dolomite							
Aggregate Number:		1402702	1402702	1402702	Alexander	Lime					
Class (A) Rock (Y/N):		No	No	No							
Sieve Size:		Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %	Individual Ret., %
Passing	Retained										
-	3/4"	0.0	0.0	0.0	0.0	0.0					
3/4"	1/2"	0.0	0.0	0.0	0.0	0.0					
1/2"	3/8"	0.3	0.0	0.0	0.0	0.0					
3/8"	No. 4	28.3	7.1	0.2	0.0	0.0					
No. 4	No. 8	6.6	14.3	4.2	0.0	0.0					
No. 8	No. 30	0.5	1.2	12.6	0.0	0.0					
No. 30	No. 50	0.0	0.1	5.3	1.1	0.0					
No. 50	No. 200	0.0	0.1	6.9	8.1	0.0					
No. 200	Pan	0.2	0.3	0.8	0.8	1.0					
Total:		36.0	23.0	30.0	10.0	1.0					
Percent of plus No. 4		28.6	7.1	0.2	0.0	0.0					
Percent of plus No. 8		35.2	21.4	4.4	0.0	0.0					

Percent of plus No. 4 from class (A) Rock:	0.0
Total Percent of plus No. 4	35.9
Percent of plus No. 4 from class (A) Rock:	***0.0***

Percent of plus No. 8 from class (A) Rock:	0.0
Total Percent of plus No. 8	60.9
Percent of plus No. 8 from class (A) Rock:	**0.0**

Remarks:

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : WEIGH UP SHEET

SAMPLE ID:	TY D - Cold Mix-.6	SAMPLE DATE:	3-4-2017
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:	Various	SPEC YEAR:	2014
SAMPLED BY:	Kyle Rangnow # 765	SPEC ITEM:	
SAMPLE LOCATION:		SPECIAL PROVISION:	
MATERIAL CODE:		MIX TYPE:	334-HMCL-D
MATERIAL NAME:	Type D HMCL		
PRODUCER:	APAC- Wheeler		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:		STATION:		DIST. FROM CL:		CONTRACTOR DESIGN # :	TY D -COLD MIX-.6

Aggregate Weight, g:		4% Asphalt by Total Weight, g:	
4% Asphalt by Total Weight, g:			
Total Weight, g:		(Martin .6) Asphalt to Add, g:	

			Bin No.1	Bin No.2	Bin No.3	Bin No.4	Bin No.5	Bin No.6	Bin No.7	Bin No.8	Bin No.9	Bin No.10			
Individual Bin (%):			Bin No.1 = 36 %	Bin No.2 = 23 %	Bin No.3 = 30 %	Bin No.4 = 10 %	Bin No.5 = 1 %								
Aggregate Source:			Limestone_Dolomite	Limestone_Dolomite	Limestone_Dolomite										
Aggregate Number:			1402702	1402702	1402702	Alexander	Lime								
Sample ID:			D ROCK	F ROCK	MAN. SAND	FIELD SAND	Austin White Lime								
	Sieve Size:		Aggregate Weight	Aggregate Weight	Aggregate Weight	Aggregate Weight	Aggregate Weight						Total Weights	Individual Retained, %	Cumulative Retained, %
	Passing	Retained													
INDIVIDUAL	-	3/4"	0.0	0.0	0.0	0.0	0.0						0.0		
	3/4"	1/2"	0.0	0.0	0.0	0.0	0.0						0.0		
	1/2"	3/8"	0.0	0.0	0.0	0.0	0.0						0.0		
	3/8"	No. 4	0.0	0.0	0.0	0.0	0.0						0.0		
	No. 4	No. 8	0.0	0.0	0.0	0.0	0.0						0.0		
	No. 8	No. 30	0.0	0.0	0.0	0.0	0.0						0.0		
	No. 30	No. 50	0.0	0.0	0.0	0.0	0.0						0.0		
	No. 50	No. 200	0.0	0.0	0.0	0.0	0.0						0.0		
	No. 200	Pan	0.0	0.0	0.0	0.0	0.0						0.0		
	Totals		0.0	0.0	0.0	0.0	0.0						**0.0**		

Running Total:															
CUMULATIVE	-	3/4"	0.0	0.0	0.0	0.0	0.0						0.0		
	3/4"	1/2"	0.0	0.0	0.0	0.0	0.0						0.0		
	1/2"	3/8"	0.0	0.0	0.0	0.0	0.0						0.0		
	3/8"	No. 4	0.0	0.0	0.0	0.0	0.0						0.0		
	No. 4	No. 8	0.0	0.0	0.0	0.0	0.0						0.0		
	No. 8	No. 30	0.0	0.0	0.0	0.0	0.0						0.0		
	No. 30	No. 50	0.0	0.0	0.0	0.0	0.0						0.0		
	No. 50	No. 200	0.0	0.0	0.0	0.0	0.0						0.0		
	No. 200	Pan	0.0	0.0	0.0	0.0	0.0						0.0	Total includes asphalt from the recycled material aggregate	

Remarks:

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : WEIGH UP SHEET FOR BLANK SAMPLES

SAMPLE ID:	TY D - Cold Mix-.6	SAMPLE DATE:	3-4-2017
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:	Various	SPEC YEAR:	2014
SAMPLED BY:	Kyle Rangnow # 765	SPEC ITEM:	
SAMPLE LOCATION:		SPECIAL PROVISION:	
MATERIAL CODE:		MIX TYPE:	334-HMCL-D
MATERIAL NAME:	Type D HMCL		
PRODUCER:	APAC- Wheeler		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:		STATION:		DIST. FROM CL:		CONTRACTOR DESIGN # :	TY D -COLD MIX-.6

Blank Sample Weight, g:	

			Bin No.1	Bin No.2	Bin No.3	Bin No.4	Bin No.5	Bin No.6	Bin No.7			
Individual Bin (%):			Bin No.1 = 36 %	Bin No.2 = 23 %	Bin No.3 = 30 %	Bin No.4 = 10 %	Bin No.5 = 1 %					
Aggregate Source:			Limestone_Dolomite	Limestone_Dolomite	Limestone_Dolomite							
Aggregate Number:			1402702	1402702	1402702	Alexander	Lime					
Sample ID:			D ROCK	F ROCK	MAN. SAND	FIELD SAND	Austin White Lime			Total Weights	Individual Retained, %	Cumulative Retained, %
	Sieve Size:		Aggregate Weight	Aggregate Weight	Aggregate Weight	Aggregate Weight	Aggregate Weight					
	Passing	Retained										
INDIVIDUAL	-	3/4"	0.0	0.0	0.0	0.0	0.0			0.0		
	3/4"	1/2"	0.0	0.0	0.0	0.0	0.0			0.0		
	1/2"	3/8"	0.0	0.0	0.0	0.0	0.0			0.0		
	3/8"	No. 4	0.0	0.0	0.0	0.0	0.0			0.0		
	No. 4	No. 8	0.0	0.0	0.0	0.0	0.0			0.0		
	No. 8	No. 30	0.0	0.0	0.0	0.0	0.0			0.0		
	No. 30	No. 50	0.0	0.0	0.0	0.0	0.0			0.0		
	No. 50	No. 200	0.0	0.0	0.0	0.0	0.0			0.0		
	No. 200	Pan	0.0	0.0	0.0	0.0	0.0			0.0		
	Totals		0.0	0.0	0.0	0.0	0.0			**0.0**	Total does not include recycled material	

Running Total:										
CUMULATIVE	-	3/4"	0.0	0.0	0.0	0.0	0.0			0.0
	3/4"	1/2"	0.0	0.0	0.0	0.0	0.0			0.0
	1/2"	3/8"	0.0	0.0	0.0	0.0	0.0			0.0
	3/8"	No. 4	0.0	0.0	0.0	0.0	0.0			0.0
	No. 4	No. 8	0.0	0.0	0.0	0.0	0.0			0.0
	No. 8	No. 30	0.0	0.0	0.0	0.0	0.0			0.0
	No. 30	No. 50	0.0	0.0	0.0	0.0	0.0			0.0
	No. 50	No. 200	0.0	0.0	0.0	0.0	0.0			0.0
	No. 200	Pan	0.0	0.0	0.0	0.0	0.0			0.0

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : BULK GRAVITY

SAMPLE ID:	TY D - Cold Mix-.6	SAMPLE DATE:	3-4-2017
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:	Various	SPEC YEAR:	2014
SAMPLED BY:	Kyle Rangnow # 765	SPEC ITEM:	
SAMPLE LOCATION:		SPECIAL PROVISION:	
MATERIAL CODE:		MIX TYPE:	334-HMCL-D
MATERIAL NAME:	Type D HMCL		
PRODUCER:	APAC- Wheeler		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:	STATION:		DIST. FROM CL:		CONTRACTOR DESIGN # : TY D -COLD MIX-.6

	Bin No.1	Bin No.2	Bin No.3	Bin No.4	Bin No.5	Bin No.6	Bin No.7	Bin No.8	Bin No.9	Bin No.10
Individual Bin (%):	Bin No.1 = 36 %	Bin No.2 = 23 %	Bin No.3 = 30 %	Bin No.4 = 10 %	Bin No.5 = 1 %					
Aggregate Source:	Limestone_Dolomite	Limestone_Dolomite	Limestone_Dolomite							
Aggregate Number:	1402702	1402702	1402702	Alexander	Lime					
Sample ID:	D ROCK	F ROCK	MAN. SAND	FIELD SAND	Austin White Lime					

Sieve Size:		Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG	Individual Ret., %	Bulk SG
Passing	Retained																				
	3/4"																				
3/4"	1/2"																				
1/2"	3/8"	0.9	2.764																		
3/8"	No. 4	78.6	2.764	30.9	2.764	0.5	2.749														
No. 4	No. 8	18.3	2.749	62.0	2.749	14.0	2.749	0.2	2.645												
No. 8	No. 30	1.5	2.749	5.0	2.749	42.1	2.749	0.4	2.645												
No. 30	No. 50	0.1	2.749	0.4	2.749	17.6	2.749	10.6	2.645												
No. 50	No. 200	0.1	2.749	0.6	2.749	23.0	2.722	81.3	2.619												
No. 200	Pan	0.5	2.749	1.1	2.749	2.8	2.722	7.5	2.619	100.0											
Totals		100.0	2.761	100.0	2.754	100.0	2.742	100.0	2.622	100.0											

Combined Bulk Specific Gravity:	**2.766**	Specific Gravity of Asphalt:	**0.992**
Coarse Agg. Combined BSG:			

Remarks:

TEXAS DEPARTMENT OF TRANSPORTATION

HMACP MIXTURE DESIGN : SUMMARY SHEET

SAMPLE ID:	TY D - Cold Mix-.6	SAMPLE DATE:	3-4-2017
LOT NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:	Various	SPEC YEAR:	2014
SAMPLED BY:	Kyle Rangnow # 765	SPEC ITEM:	
SAMPLE LOCATION:		SPECIAL PROVISION:	
MATERIAL CODE:		MIX TYPE:	334-HMCL-D
MATERIAL NAME:	Type D HMCL		
PRODUCER:	APAC- Wheeler		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:		STATION:		DIST. FROM CL:		CONTRACTOR DESIGN # :	TY D -COLD MIX-.6

Target Density, %:	**92.5**
Number of Gyrations:	

CRM* Content, %:

Note: This mix design requires an asphalt content of at least to meet the Maximum Ratio of Recycled to Total Binder requirement.

TEST SPECIMENS								Mixture Evaluation @ Optimum Asphalt Content				
									Hamburg Wheel Tracking Test			
Asphalt Content (%)	Binder Ratio (%)	Specific Gravity Of Specimen (Ga)	Maximum Specific Gravity (Gr)	Effective Gravity (Ge)	Theo. Max. Specific Gravity (Gt)	Density from Gt (Percent)	VMA (Percent)	Indirect Tensile Strength (psi)	Number of cycles	Rut depth (mm)		*Overlay Tester Min. Number of Cycles*
3.5	0.0	2.419	2.637	2.806	2.642	91.5	17.0					
4.0	0.0	2.422	2.617	2.809	2.620	92.5	17.3					
4.5	0.0	2.438	2.598	2.813	2.598	93.9	17.2					
5.0	0.0	2.450	2.578	2.815	2.576	95.1	17.2					
5.5	0.0	2.463	2.559	2.818	2.554	96.4	17.2					

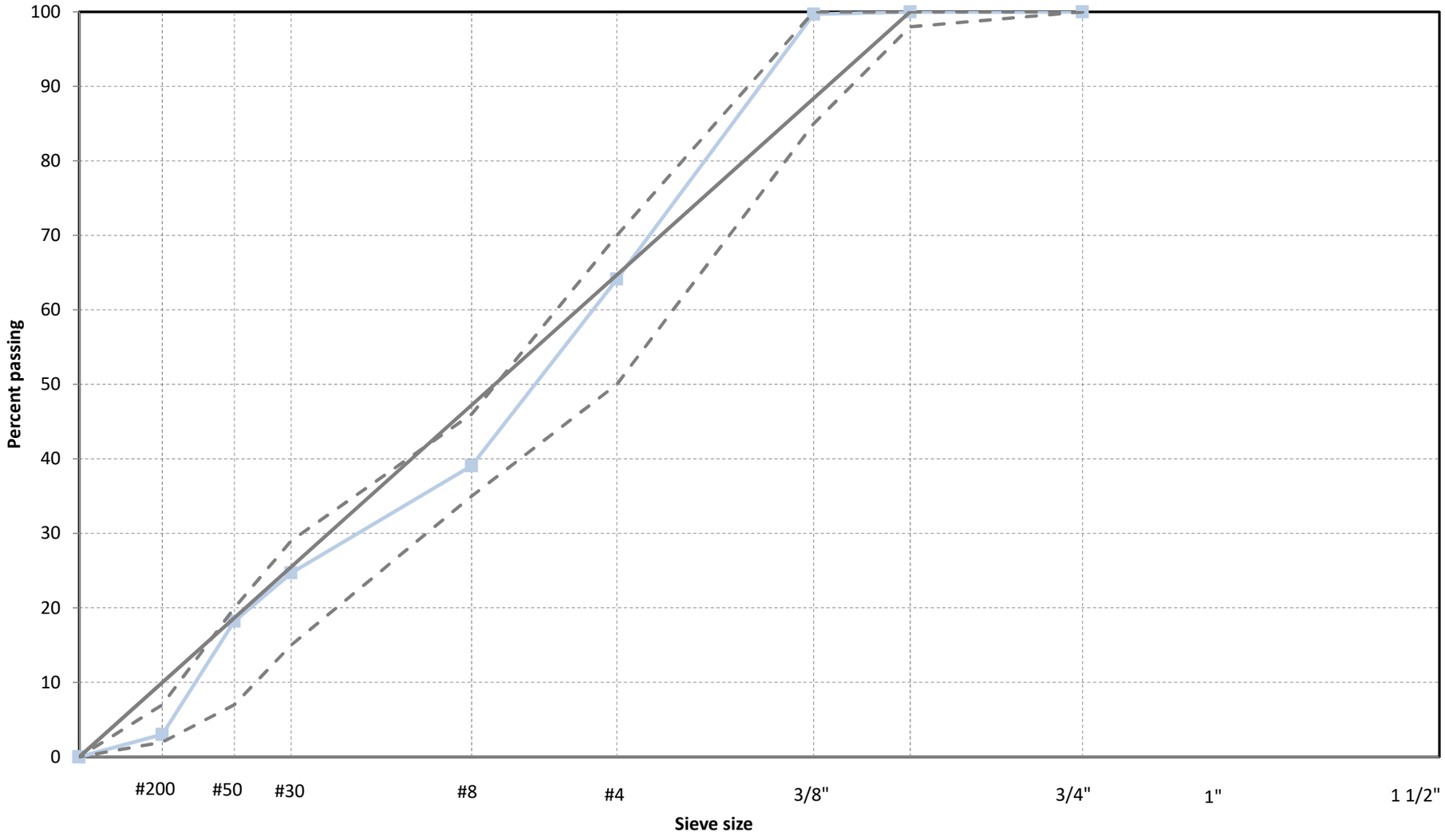
Effective Specific Gravity:	2.812
Optimum Asphalt Content :	**4.0**
Binder Ratio @ OAC:	0.0
VMA @ Optimum AC:	17.3

Interpolated Values	
Specific Gravity (Ga):	*2.423*
Max. Specific Gravity (Gr):	*2.616*
Theo. Max. Specific Gravity (Gt):	*2.619*

Estimated Percent of Stripping, %:	

Mixing Temp,°F:	
Molding Temp,°F:	

Remarks:


100
90
80
70
60
50
40
30
20
10
0
Percent passing
#200
#50
#30
#8
#4
3/8"
3/4"
1"
1 1/2"
Sieve size

TEXAS DEPARTMENT OF TRANSPORTATION

HMAC Mix Properties

This program can be use for Hot Mix Trial Batches, Small Quantities, and Miscellaneous Areas.

If you have questions or comments concerning this program, please call Gisel Carrasco at 512-506-5847 or Travis Patton at 512-506-5841 of the Flexible Pavements Section, or Joe Liu at 512-416-2543 of the Construction and Materials Information Systems Development Section.

If you would like to obtain an updated version of this Site Manager form go to
http://www.txdot.gov/txdot_library/consultants_contractors/forms/site_manager.htm

To move from page to page, click on the different worksheet tabs at the bottom of the page.

* **DESIGN DATA SHEET:** Select the 2004 specification year, mix type, method of determining asphalt content, method for obtaining combined aggregate, and others. This information will affect the calculation, labeling, and formatting of other worksheets in this template.

- **Spec Year:** Select the specification year from the dropdown list before selecting the mix type.
- **Mix Type:** Select the mix type from the dropdown list that most closely matches the mix for this lot. This value will determine what sieve sizes and tolerances are displayed on the worksheets.
- **Determination of Asphalt Content:** elect the method of determining asphalt content that will govern all sublots. Choose Ignition Oven Method or Nuclear Method from the dropdown list. This selection will modify labels and formats on other worksheets. Option for Flow Meter Method is available for Asphalt Rubber mixtures.
- **Method Used to Obtain Aggregate:** Select the method used to obtain the combined aggregate for the gradation. Select Ignition Oven Method or Belt Feed from the dropdown list. This selection will modify labels and formats on other worksheets allowing users to enter the test data in the designated area.
- **Determining Density & Properties of Bituminous Mixtures:** Enter the press correction factor, if available. Enter the mix properties and mix design target density.
- **Mechanical Testing:** When available, enter the results of the IDT and Hamburg Wheel tests performed during design.

* **TEST DATA SHEET:** Project information, spec year, spec item, special provision, and mix type will be transferred to this sheet. Here you will enter production test data. The sheet calculates Rice Specific Gravity, Moisture Content, Aggregate Gradation, Density of Laboratory & Roadway Samples and additional test results. This worksheet will flag results that are out of specification or do not meet operational tolerances depending on specification.

- **Gradation:** For PFC mixtures, the worksheet will flag the cumulative percent passing if the gradation for production samples exceeds the master gradation limits.
- **Determining Density:** When the percent absorption is greater than 2%, and the vacuum method is used to calculate the Ga, the worksheet will select the lowest Ga from both calculations as required in the test procedure.

  For roadway cores, this worksheet averages the air voids from the roadway cores to calculate the in-place air voids. It subtracts the average air voids from 100 to calculate in-place density as required by specification.

TEXAS DEPARTMENT OF TRANSPORTATION

HMAC MIX PROPERTIES

Refresh Workbook

File Version: 10/23/13 08:09:07

SAMPLE ID:		SAMPLED DATE:	3/12/18
TEST NUMBER:	1	LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:		SPEC YEAR:	2004
SAMPLED BY:		SPEC ITEM:	3267
SAMPLE LOCATION:	Plant	SPECIAL PROVISION:	
MATERIAL CODE:		MIX TYPE:	SS3267_Type_C
MATERIAL NAME:	HMAC Type C		
PRODUCER:	Texas Materials Bolm		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:	Surface	STATION:		DIST. FROM CL:		Design # :	17C rap 20

PRODUCTION DATA

Quantity actually placed, Tons:

DETERMINATION OF ASPHALT CONTENT

Determination of asphalt content *by*: Ignition Oven Method — **PG Binder:** 64-22

Original Mix Design Asphalt Content, %: 4.9 — Current JMF Asphalt Content, %: 4.8 — Ignition Correction Factor: -0.8 %

Recycled Binder, %:

Maximum Recycled Binder Ratio, %:

COMBINED AGGREGATE GRADATION:Tex-229-F

Method used to obtain aggregate: Ignition Oven Method

Sieve Size:	Size (mm)	Master Specification % Passing Tolerances	Master Specification % Passing Restricted	Design JMF Cumulative Percent Passing	In Tolerance	Restricted Zone	Current JMF Design % Passing Tolerances	Current JMF Cumulative Percent Passing	In Tolerance	Restricted Zone	Sieve Size:	TxDOT Ignition Oven Correction Factor,%:
1"	25.000	100-100		100.0	☑		100-100	100.0	☑		1"	0.0
3/4"	19.000	95-100		99.9	☑		95-100	100.0	☑		3/4"	- 0.4
3/8"	9.500	70-85		82.0	☑		77.1-85	82.7	☑		3/8"	2.0
No. 4	4.750	43-63		54.8	☑		50.5-60.5	51.5	☑		No. 4	- 1.0
No. 8	2.360	32-44		37.7	☑		32-39.4	35.5	☑		No. 8	- 2.7
No. 30	0.600	14-28		23.2	☑		18-24	21.5	☑		No. 30	- 5.2
No. 50	0.300	7-21		15.7	☑		11-17	13.3	☑		No. 50	- 5.6
No. 200	0.075	2-7		4.5	☑		2-5.1	3.5	☑		No. 200	- 0.5

DETERMINING DENSITY & PROPERTIES OF BITUMINOUS MIXTURES

Press correlation factor used? No

Press correlation factor:

TxDOT press ID & serial no.:

Contractor press ID no.:

Ge (Effective) specific gravity:	2.485
G1 (specific gravity of asphalt):	1.030
Theoretical max.specific gravity:	2.562
Mix design target density:	97.0

% Mineral Filler (by wt. of dry aggregate):

Wet Track Abrasion Wear Value (g/sq. ft.):

HAMBURG: Tex-242-F

No. of Passes	RUT Depth	IDT: Tex-226
		Psi

Remarks:

US 290 Maintnence

Test Method	Tested By:	Tested Date:
TX207		
TX208		
TX210		
TX212		
TX213		
TX217		
TX227		
TX228		
TX229		
TX231		
TX235		
TX236		
TX530		
TX531		

Test Stamp Code:	Omit Test:	Completed Date:	Reviewed By:

Locked By:	TxDOT:	District:	Area:

Authorized By:	Authorized Date:

TEXAS DEPARTMENT OF TRANSPORTATION

TEST DATA

SAMPLE ID:		DATE LOT OPENED:	3/12/18
LOT NUMBER:	1	LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:		SPEC YEAR:	2004
SAMPLED BY:		SPEC ITEM:	3267
SAMPLE LOCATION:	Plant	SPECIAL PROVISION:	
MATERIAL CODE:		MIX TYPE:	SS3267_Type_C
MATERIAL NAME:	HMAC Type C		
PRODUCER:	Texas Materials Bolm		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:	Surface	STATION:		DIST. FROM CL:	

DETERMINATION OF ASPHALT CONTENT Ignition Oven Method: Tex-236-F	
Asphalt Content from Ignition Method/Corrected, (%):	
Ratio of Recycled to Total Binder, %	

DETERMINATION OF RICE SPECIFIC GRAVITY-Tex-227-F	Laboratory
(A) Weight of Dry Sample in Air:	1097.8
(D) Weight of Calibrated Pyc. w/H2O:	432.7
(E) Weight of Sample, Pyc. and H2O:	1105.1
A/(D+A-E) Rice Specific Gravity (Gr):	2.581
(Asd) Weight of Surface Dry Sample in Air:	

EFFECT OF WATER ON BITUMINOUS -Tex-530-C	
Estimated Percent of Stripping:	

Determination of Moisture Tex-212-F :	

GRADATION OF EXTRACTED AGGREGATE-Tex-229-F

GRADATION SAMPLE FROM IGNITION OVEN

gnited Sample Original Dry Weight: | Dry Weight After Washing:

Sieve Size:	Individual Weight Retained (g)	Cumulative Weight Retained (g)	*Adjusted Individual Percent Retained	*Adjusted Cumulative Percent Retained	*Adjusted Cumulative Percent Passing	JMF Individual Retained Limits, %	In Tolerance	Restricted Zone
1"						0.0-0.0		
3/4"						0.0-5.0		
3/8"						12.3-22.3		
No. 4						26.2-36.2		
No. 8						11.0-21.0		
No. 30						11.0-17.0		
No. 50						5.2-11.2		
No. 200						6.8-12.8		
-No. 200		*Adjusted for ignition oven correlation.						
	0.0	Gain (g)						
Total -No. 200	0.0					1.5-5.5		
Total Weight:	0.0							
		Sieving Gain (g), from ?						

Determination of Hydrocarbon-Volatile Content: Tex-213-F	
Still Number:	
Still Weight (g):	
Weight of Still and Sample (g):	
Sample Weight (g):	
Top Meniscus Reading (mL):	
Bottom Meniscus Reading (mL):	
Volume of Volatiles (mL):	
Specific Gravity of Volatiles:	
Percent Hydrocarbon Volatiles (%):	

Extraction Method: Tex-210-F by:

DETERMINING DENSITY & PROPERTIES OF BITUMINOUS MIXTURES-Tex-207-F

Specimen Type:	Laboratory			Roadway		
Specimen Number:	1(1)	1(2)	1(3)	1(A)	1(B)	
Specimen Radius (mm):						
Untrimmed Specimen/Core Height (in):						
Weight of Specimen in Air (g):						
Wt of Spec. in Water (g):						
SSD Wt of Specimen in Air (g):						
Volume of Specimen:						
Percent Absorption:						
Bag Required for Ga ?:						
Bag Used for Ga?						
Rice Specific Gravity (Gr):	2.581	2.581	2.581	*2.581*	*2.581*	
Bulk Specific Gravity, Ga:						
Percent Density:						
Percent Air Voids:						
VMA:						

Average % Density:					
Average Actual SG:					
Average % Air Voids:					
Average VMA:					

IDT - Tex-226

	1	2	3	4				
Specimen No.								
% Density:								
Height:								
Load, (lbs.):								
Strength, (psi.):								
Average Strength, (psi):								

Hamburg: Tex-242-F	
No. of Passes	**RUT Depth**

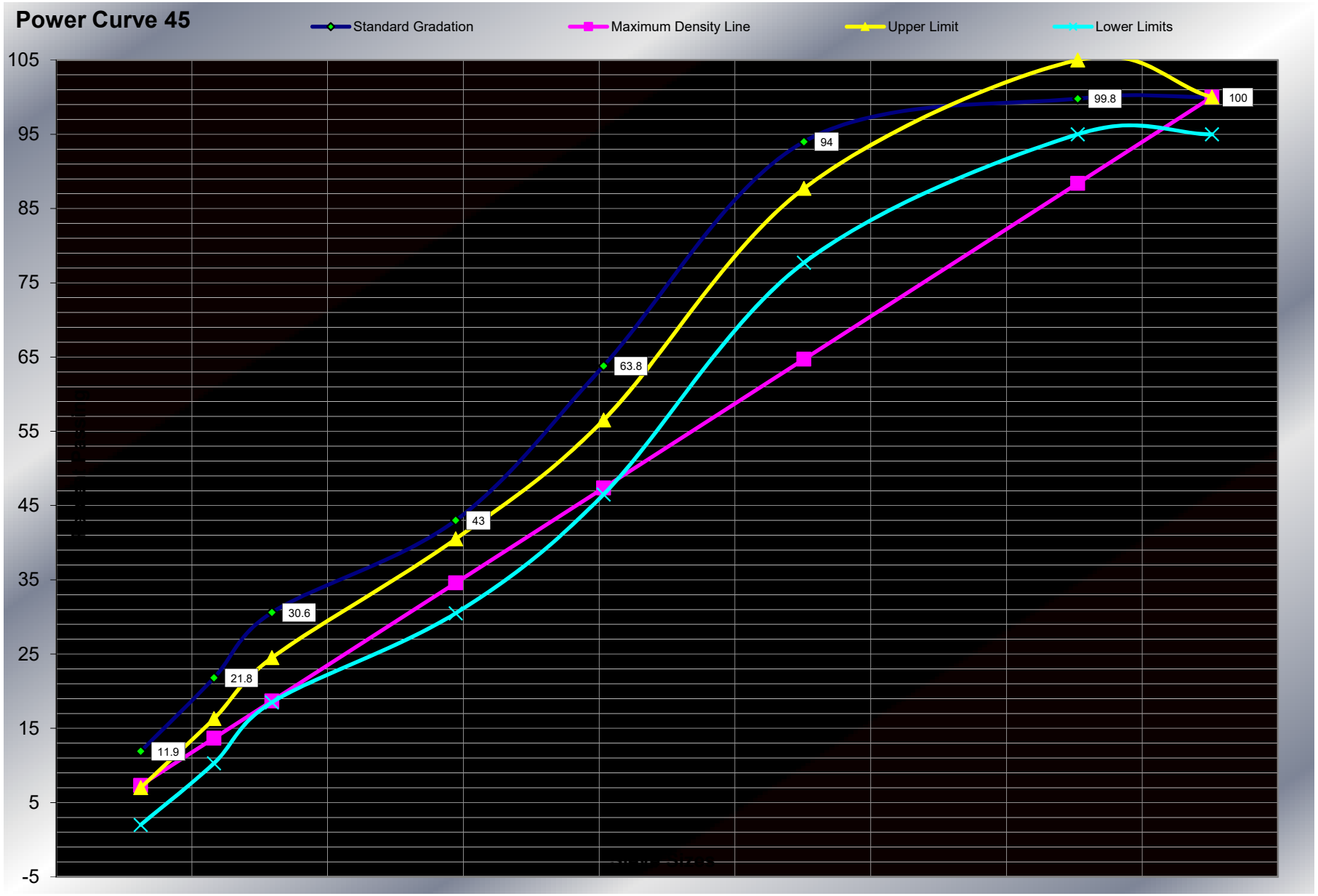
Fluxing Material: From Quantity Used

DRAINDOWN OF BITUMIOUS MATERIALS - Tex-235-F	Sample 1	Sample 2
Initial Sample Weight (g):		
Initial Weight Plate (g):		
Final Weight Plate (g):		
Draindown, (%):		
Average Draindown, (%):		

DELETERIOUS MATERIAL - Tex-217-F (Part I)			
Sieve Size	**Original Weight Retained, (g)**	**Weight of Deleterious material, (g)**	**Deleterious Material,%**
DECANTATION - Tex-217-F - (Part II)			
Sieve Size	**Original Weight Retained, (g)**	**Dry Weight after Washing, (g)**	**% Loss by Decantation**

Magnesium Sulfate Soundness (%)	

Sand Equivalent Value (%)	


Power Curve 45
Standard Gradation
Maximum Density Line
Upper Limit
Lower Limits
105
95
85
75
65
55
45
35
25
15
5
-5
11.9
21.8
30.6
43
63.8
94
99.8
100

TEXAS DEPARTMENT OF TRANSPORTATION

HMAC MIX PROPERTIES

Refresh Workbook

File Version: 07/16/10 15:12:58

SAMPLE ID:	Type D Cold Mix .6	SAMPLED DATE:	05-18-18
TEST NUMBER:		LETTING DATE:	
SAMPLE STATUS:		CONTROLLING CSJ:	
COUNTY:		SPEC YEAR:	2004
SAMPLED BY:		SPEC ITEM:	334
SAMPLE LOCATION:	Stockpile	SPECIAL PROVISION:	
MATERIAL CODE:		MIX TYPE:	Type__D
MATERIAL NAME:	TYPE D HMAC w .6		
PRODUCER:	Texas Materials Bolm Road		
AREA ENGINEER:		PROJECT MANAGER:	

COURSE\LIFT:		STATION:		DIST. FROM CL:		Design # :	Type D Cold Mix .6

PRODUCTION DATA

Quantity actually placed, Tons:

DETERMINATION OF ASPHALT CONTENT

Determination of asphalt content *by:* **Ignition Oven Method** **PG Binder:**

Original Mix Design Asphalt Content, %: 4.4 | Current JMF Asphalt Content, %: 4.4 | Ignition Correction Factor: -0.9 %

COMBINED AGGREGATE GRADATION:Tex-229-F

Method used to obtain aggregate*:* **Ignition Oven Method**

Sieve Size:	Size (mm)	Master Specification % Passing Tolerances	*Master Specification % Passing Restricted*	**Design JMF Cumulative Percent Passing**	In Tolerance	*Restricted Zone*	Current JMF Design % Passing Tolerances	**Current JMF Cumulative Percent Passing**	In Tolerance	*Restricted Zone*	Sieve Size:	TxDOT Ignition Oven Correction Factor,%:
1/2"	12.500	98-100		100.0	☑		98-100	100.0	☑		1/2"	0.0
3/8"	9.500	85-100		99.7	☑		94.7-100	98.7	☑		3/8"	- 0.1
No. 4	4.750	50-70		64.9	☑		58.9-68.9	68.9	☑		No. 4	- 0.2
No. 8	2.360	35-46		44.5	☑		43.5-46	43.5	☑		No. 8	- 0.3
No. 30	0.600	15-29		23.6	☑		19.6-25.6	24.6	☑		No. 30	- 5.3
No. 50	0.300	7-20		13.6	☑		11.6-17.6	15.6	☑		No. 50	- 8.1
No. 200	0.075	2-7		3.5	☑		2.5-7	3.5	☑		No. 200	- 0.9

DETERMINING DENSITY & PROPERTIES OF BITUMINOUS MIXTURES

Press correlation factor used?	No	**Ge (Effective) specific gravity:**		% Mineral Filler (by wt. of dry aggregate)	
Press correlation factor:		**G1 (specific gravity of asphalt):**	0.992	Wet Track Abrasion Wear Value (g/sq. ft.)	
TxDOT press ID & serial no.:		Theoretical max.specific gravity:			
Contractor press ID no.:		Mix design target density:	92.5		

DETERMINING HVEEM STABILITY OF BITUMINOUS MIXTURES: Tex-208-F

Design's HVEEM Stability, %:

Remarks:

Test Method	Tested By:	Tested Date:
TX207		
TX208		
TX210		
TX212		
TX213		
TX217		
TX227		
TX228		
TX229		
TX231		
TX235		
TX236		
TX530		
TX531		

Test Stamp Code:	Omit Test:	Completed Date:	Reviewed By:

Locked By:	TxDOT:	District:	Area:

Authorized By:	Authorized Date:

BID TABULATION
CITY OF AUSTIN
HOT MIX ASPHALTIC CONCRETE

Solicitation No. IFB 2200 MDP0261
RX NO. 18010900189
Opening Date: 7/17/2018
Buyer: Michelle Pearson

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Prices offered on the bid sheet shall be all inclusive of fees not expressly allowed in Section 0500. The Offeror shall not charge separately for administrative, overhead, per diem, and shipping or transportation costs (travel time, fuel surcharges, mileage, stop-fee, etc.) to deliver services or items to the Austin, Texas area. The Offeror shall provide all tools, labor, travel, and equipment necessary to perform the services required under this contract.
The City reserves the right to make an award based on overall low cost or mulitiple awards based on individual or categories/groups of specific line items, cost, or any criteria or combination deemed most advantageous to the City.

Receipt No.	1	2	3
Vendor Name	**Asphalt, Inc.**	**Oldcastle Materials - Texas**	**Industrial Asphalt, LLC**
Local Presence (Y/N)			
MBE/WBE			

CATEGORY 1 - SPECIFIED ITEMS FOR PICK-UP ***PRIMARY CONTRACT***

ITEM NO.	ITEM DESCRIPTION	ESTIMATED ANNUAL QTY	UNIT	UNIT PRICE	EXT PRICE	UNIT PRICE	EXT PRICE	UNIT PRICE	EXT PRICE
1.1	HOT MIX COLD LAID ASPHALTIC CONCRETE IN ACCORDANCE WITH SECTION 0500 SPECIFICATIONS	5,000	TONS	*	*	$60.00	$300,000.00	$49.00	$245,000.00
1.2	Hot Mix Cold Laid Summer-Grade Type D, as per the attached Specification in Section 0500	375	TONS	*	*	$60.00	$22,500.00	$49.00	$18,375.00
1.3	Hot Mix Cold Laid Winter-Grade Type D, as per the attached Specification in Section 0500	125	TONS	*	*	$60.00	$7,500.00	$49.00	$6,125.00
1.4	SP 340 HMAC Type B	5,000	TONS	*	*	$51.00	$255,000.00	$40.00	$200,000.00
1.5	HMAC Type B SBS Polymer Modified - 5% Polymer (Item 340)	5,000	TONS	*	*	$54.15	$270,750.00	$50.00	$250,000.00
1.6	HMAC Type C (unmodified Item 340)	8,000	TONS	*	*	$58.90	$471,200.00	$51.50	$412,000.00
1.7	SP 340 HMAC Type C	10,000	TONS	*	*	$53.75	$537,500.00	$45.00	$450,000.00
1.8	WMA (Warm Mix) Type C (Item 340 with WMA additive)	6,500	TONS	*	*	$53.75	$349,375.00	$46.00	$299,000.00
1.9	HMAC Type C SBS Polymer Modified (unmodified Item 340)	12,500	TONS	*	*	$70.15	$876,875.00	$57.00	$712,500.00
1.10	HMAC Type D (unmodified Item 340)	15,000	TONS	*	*	$58.90	$883,500.00	$53.50	$802,500.00
1.11	SP 340 HMAC Type D	45,000	TONS	*	*	$53.75	$2,418,750.00	$47.00	$2,115,000.00
1.12	WMA (Warm Mix) Type D (Item 340 with WMA additive)	16,500	TONS	*	*	$59.72	$985,380.00	$48.00	$792,000.00
1.13	HMAC Type D SBS Polymer Modified (unmodified Item 340)	12,500	TONS	*	*	$70.15	$876,875.00	$58.00	$725,000.00
1.14	HMAC Type D-Thin Special Specification	5,000	TONS	*	*	$81.25	$406,250.00	$53.50	$267,500.00
1.15	HMAC Type D-AR Thin Special Specification - Rubber Modified	5,000	TONS	*	*	$85.00	$425,000.00	$56.00	$280,000.00
	TOTAL EXTENDED PRICE - CATEGORY 1 =			*		**$9,086,455.00**		**$7,575,000.00**	

CATEGORY 2 - SPECIFIED ITEMS FOR DELIVERY ***PRIMARY CONTRACT***

ITEM NO.	ITEM DESCRIPTION	ESTIMATED ANNUAL QTY	UNIT	UNIT PRICE	EXT PRICE	UNIT PRICE	EXT PRICE	UNIT PRICE	EXT PRICE
2.1	HOT MIX COLD LAID ASPHALTIC CONCRETE FOR DELIVERY	3,600	TONS	*	*	$250.00	$900,000.00	$61.00	$219,600.00
	TOTAL EXTENDED PRICE - CATEGORY 2 =			*		**$900,000.00**		**$219,600.00**	
	TOTAL EXTENDED PRICE FOR CATEGORIES 1 THRU 2 =			*		**$9,986,455.00**		**$7,794,600.00**	

BID TABULATION
CITY OF AUSTIN
HOT MIX ASPHALTIC CONCRETE

Solicitation No. IFB 2200 MDP0261
RX NO. 18010900189
Opening Date: 7/17/2018
Buyer: Michelle Pearson

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Receipt No.	1	2	3
Vendor Name	**Asphalt, Inc.**	**Oldcastle Materials - Texas**	**Industrial Asphalt, LLC**
Local Presence (Y/N)			
MBE/WBE			

CATEGORY 3 - SPECIFIED ITEMS FOR PICK-UP *** ALTERNATE CONTRACT ***

ITEM NO.	ITEM DESCRIPTION	ESTIMATED ANNUAL QTY	UNIT	UNIT PRICE	EXT PRICE	UNIT PRICE	EXT PRICE	UNIT PRICE	EXT PRICE
3.1	HOT MIX COLD LAID ASPHALTIC CONCRETE IN ACCORDANCE WITH SECTION 0500 SPECIFICATIONS	5,000	TONS	*	*	$60.00	$300,000.00	$50.00 **	$250,000.00
3.2	Hot Mix Cold Laid Summer-Grade Type D, as per the attached Specification in Section 0500	375	TONS	*	*	$60.00	$22,500.00	$50.00 **	$18,750.00
3.3	Hot Mix Cold Laid Winter-Grade Type D, as per the attached Specification in Section 0500	125	TONS	*	*	$60.00	$7,500.00	$50.00 **	$6,250.00
3.4	SP 340 HMAC Type B	5,000	TONS	*	*	$51.00	$255,000.00	$41.00 **	$205,000.00
3.5	HMAC Type B SBS Polymer Modified - 5% Polymer (Item 340)	5,000	TONS	*	*	$54.15	$270,750.00	$51.00 **	$255,000.00
3.6	HMAC Type C (unmodified Item 340)	8,000	TONS	*	*	$58.90	$471,200.00	$53.00 **	$424,000.00
3.7	SP 340 HMAC Type C	10,000	TONS	*	*	$53.75	$537,500.00	$46.00 **	$460,000.00
3.8	WMA (Warm Mix) Type C (Item 340 with WMA additive)	6,500	TONS	*	*	$53.75	$349,375.00	$47.00 **	$305,500.00
3.9	HMAC Type C SBS Polymer Modified (unmodified Item 340)	12,500	TONS	*	*	$70.15	$876,875.00	$58.00 **	$725,000.00
3.10	HMAC Type D (unmodified Item 340)	15,000	TONS	*	*	$58.90	$883,500.00	$55.00 **	$825,000.00
3.11	SP 340 HMAC Type D	45,000	TONS	*	*	$53.75	$2,418,750.00	$48.00 **	$2,160,000.00
3.12	WMA (Warm Mix) Type D (Item 340 with WMA additive)	16,500	TONS	*	*	$59.72	$985,380.00	$49.00 **	$808,500.00
3.13	HMAC Type D SBS Polymer Modified (unmodified Item 340)	12,500	TONS	*	*	$70.15	$876,875.00	$60.00 **	$750,000.00
3.14	HMAC Type D-Thin Special Specification	5,000	TONS	*	*	$81.25	$406,250.00	$55.00 **	$275,000.00
3.15	HMAC Type D-AR Thin Special Specification - Rubber Modified	5,000	TONS	*	*	$85.00	$425,000.00	$58.00 **	$290,000.00
	TOTAL EXTENDED PRICE - CATEGORY 3 =				*		**$9,086,455.00**		**$7,758,000.00**

CATEGORY 4 - SPECIFIED ITEMS FOR DELIVERY ***ALTERNATE CONTRACT***

ITEM NO.	ITEM DESCRIPTION	ESTIMATED ANNUAL QTY	UNIT	UNIT PRICE	EXT PRICE	UNIT PRICE	EXT PRICE	UNIT PRICE	EXT PRICE
4.1	HOT MIX COLD LAID ASPHALTIC CONCRETE FOR DELIVERY	3,600	TONS	*	*	$250.00	$900,000.00	$62.00 **	$223,200.00
	TOTAL EXTENDED PRICE - CATEGORY 4 =				*		**$900,000.00**		**$223,200.00**
	TOTAL EXTENDED PRICE FOR CATEGORIES 3 THRU 4 =				*		**$9,986,455.00**		**$7,981,200.00**

BID TABULATION
CITY OF AUSTIN
HOT MIX ASPHALTIC CONCRETE

Solicitation No. IFB 2200 MDP0261
RX NO. 18010900189
Opening Date: 7/17/2018
Buyer: Michelle Pearson

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Prices offered on the bid sheet shall be all inclusive of fees not expressly allowed in Section 0500. The Offeror shall not charge separately for administrative, overhead, per diem, and shipping or transportation costs (travel time, fuel surcharges, mileage, stop-fee, etc.) to deliver services or items to the Austin, Texas area. The Offeror shall provide all tools, labor, travel, and equipment necessary to perform the services required under this contract.
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Receipt No.	1	2	3
Vendor Name	**Asphalt, Inc.**	**Oldcastle Materials - Texas**	**Industrial Asphalt, LLC**
Local Presence (Y/N)			
MBE/WBE			

CATEGORY 5 - ADDITIONAL PRODUCTS

The City reserves the right to purchase and add additional items not specified above to the contract. The percentage discount shall be the minimum discount offered for the category line throughout the term of the contract including any subsequent extension options, and are not subject to change. The invoice prices for these materials shall be based off the discount as indicated below. The percentage discount given should take into all costs (administrative, overhead, shipping charges, etc.). These costs shall be factored into the discount and shall not be paid separately.
Information in this Category will not be evaluated, and the City does not guarantee the purchase of any additional services.

ITEM NO.	**ITEM DESCRIPTION**	**MINIMUM PERCENT DISCOUNT**	**MINIMUM PERCENT DISCOUNT**	**MINIMUM PERCENT DISCOUNT**
5.1	Not Specified Mix(es) TXDOT	*	N/A	2.50%
ITEM NO.	**ITEM DESCRIPTION**	**PRICE**	**PRICE**	**PRICE**
5.2	Hourly Rate after 4:30 PM Monday - Saturday	*	N/A	$200.00
5.3	Start-Up Cost After 4:30 PM Monday - Saturday	*	$2,500.00	$1,000.00
5.4	Hourly Rate 7:30 AM - 4:30 PM Sundays	*	N/A	$200.00
5.5	Start-Up Cost 7:30 AM - 4:30 PM Sundays	*	$2,500.00	$1,000.00
5.6	Hot Mix Cold Laid Summer-Grade Type D (as per the attached Specification in Section 0500) per ton, delivered	*	$250.00	$62.00
5.7	Hot Mix Cold Laid Winter-Grade Type D (as per the attached Specification in Section 0500) per ton, delivered	*	$250.00	$62.00

Note: *Deemed non-responsive - Did not meet specification requirements of the solicitation related to the Minority Owned and Women Owned Business Enterprise Procurement Program.
**Primary contractor is not eligible for award of Alternate contract.

Award Method: By groups

Prepared By: Sheritta Nesbitt
Approved By: Michelle Pearson

Yellow notates primary award.
Blue notates secondary award.

City of Austin
SMBR
Small & Minority Business Resources
Opening the door to opportunities

GOAL DETERMINATION REQUEST FORM

Buyer Name/Phone	Michelle Pearson x42023	**PM Name/Phone**	Darrell Richmond, x20313 (Austin Water); Brenda Jimenez (Public Works), x47955
Sponsor/User Dept.	Austin Water / Public Works	**Sponsor Name/Phone**	n/a
Solicitation No	IFB 2200 MDP0261	**Project Name**	Hot Mix Asphalt
Contract Amount	$55,000,000.00	**Ad Date (if applicable)**	TBD

Procurement Type

☐ AD – CSP	☐ AD – CM@R	☐ AD – Design Build
☐ AD – Design Build Op Maint	☐ AD – JOC	☐ IFB – Construction
☐ IFB – IDIQ	☐ PS – Project Specific	☐ PS – Rotation List
☐ Nonprofessional Services	☒ Commodities/Goods	☐ Cooperative Agreement
☐ Critical Business Need	☐ Interlocal Agreement	☐ Ratification
☐ Sole Source*		

Provide Project Description**

Hotmix Cold Laid asphaltic concrete for Austin Water and Hotmix Hot Laid asphaltic concrete for Public Works.

Project History: Was a solicitation previously issued; if so were goals established? Were subcontractors/subconsultants utilized? Include prior Solicitation No.

IFB 2200 STA1115 no goals, IFB 6200 BKH0148P no goals.

List the scopes of work (commodity codes) for this project. *(Attach commodity breakdown by percentage; eCAPRIS printout acceptable)*

7452114 (Hotmix Hot Laid) and 7451413 (Hotmix Cold Laid) = 98%; 96239 (Hauling) = 2%

Michelle D Pearson	04/23/2018
Buyer Confirmation	**Date**

** Sole Source must include Certificate of Exemption*
***Project Description not required for Sole Source*

FOR SMBR USE ONLY

Date Received	4/24/2018	**Date Assigned to BDC**	4/24/2018

In accordance with Chapter2-9(A-D)-19 of the Austin City Code, SMBR makes the following determination:

☒ Goals	5.86% MBE/WBE Combined	% WBE
☐ Subgoals	% African American	% Hispanic
	% Asian/Native American	% WBE

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GOAL DETERMINATION REQUEST FORM

☐ Exempt from MBE/WBE Procurement Program	☐ No Goals

City of Austin
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Opening the door to opportunities

GOAL DETERMINATION REQUEST FORM

This determination is based upon the following:	
☐ Insufficient availability of M/WBEs ☐ Insufficient subcontracting opportunities ☒ Sufficient availability of M/WBEs ☐ Sole Source	☐ No availability of M/WBEs ☐ No subcontracting opportunities ☒ Sufficient subcontracting opportunities ☒ Other
If Other was selected, provide reasoning: large contract amount	
MBE/WBE/DBE Availability	
47 Certified firms in SCBP	
Subcontracting Opportunities Identified	
96239-Hauling	

Cynthia Van Maanen	4/30/18
SMBR Staff	**Signature/ Date**
SMBR Director or Designee	**Date** 4/30/18
Returned to/ Date:	