

GENERAL CONSTRUCTION NOTES

1. ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER WHO PREPARED THEM. IN REVIEWING THESE PLANS, THE CITY OF AUSTIN MUST RELY ON THE ADEQUACY OF THE WORK OF THE DESIGN ENGINEER.
2. CONTRACTOR SHALL CALL THE ONE CALL CENTER (1-800-344-8377) FOR UTILITY LOCATIONS PRIOR TO ANY WORK IN CITY EASEMENTS OR STREET R.O.W.
3. CONTRACTOR SHALL NOTIFY THE CONSTRUCTION INSPECTION DIVISION OF THE CITY'S ONE STOP SHOP (OSS) AT 974-6360 OR 974-7034 AT LEAST 24 HOURS PRIOR TO THE INSTALLATION OF ANY DRAINAGE FACILITY WITHIN A DRAINAGE EASEMENT OR STREET R.O.W. THE METHOD OF PLACEMENT AND COMPACTION OF BACKFILL IN THE CITY'S R.O.W. MUST BE APPROVED PRIOR TO THE START OF BACKFILL OPERATIONS.
4. FOR SLOPES OR TRENCHES GREATER THAN FIVE FEET IN DEPTH, A NOTE MUST BE ADDED STATING: "ALL CONSTRUCTION OPERATIONS SHALL BE ACCOMPLISHED IN ACCORDANCE WITH APPLICABLE REGULATIONS OF THE U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION." (OSHA STANDARDS MAY BE PURCHASED FROM THE GOVERNMENT PRINTING OFFICE; INFORMATION AND RELATED REFERENCE MATERIALS MAY BE PURCHASED FROM OSHA, 611 EAST 6TH STREET, AUSTIN TEXAS.)
5. ALL SITE WORK MUST ALSO COMPLY WITH ENVIRONMENTAL REQUIREMENTS.
6. UPON COMPLETION OF THE PROPOSED SITE IMPROVEMENTS AND PRIOR TO THE FOLLOWING, THE ENGINEER SHALL CERTIFY IN WRITING THAT THE PROPOSED DRAINAGE, FILTRATION AND DETENTION FACILITIES WERE CONSTRUCTED IN CONFORMANCE WITH THE APPROVED PLANS:
 - RELEASE OF THE CERTIFICATE OF OCCUPANCY BY THE PLANNING AND DEVELOPMENT REVIEW DEPARTMENT (INSIDE THE CITY LIMITS); OR
 - INSTALLATION OF AN ELECTRIC OR WATER METER (IN THE FIVE-MILE ETJ).

SPECIAL CONSTRUCTION NOTES

1. BLASTING WITHIN THE PROJECT AREA WILL NOT BE ALLOWED WITHOUT A SEPARATE BLASTING PERMIT.
2. THE CONTRACTOR SHALL FURNISH, INSTALL AND MAINTAIN BARRICADES, WARNING SIGNS, FLASHERS AND OTHER DEVICES OF THE TYPE AND SIZE AS INDICATED IN THE LATEST EDITION OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, OR AS DIRECTED BY THE ENGINEER.
3. THE CONTRACTOR SHALL MAINTAIN AT LEAST ONE DUST-FREE LANE FOR TRAFFIC WITH FLAGMEN DURING CONSTRUCTION ACTIVITIES AND TWO LANES AT ALL OTHER TIMES. ACCESS TO CONTIGUOUS PRIVATE PROPERTIES SHALL BE MAINTAINED AT ALL TIMES.
4. ALL STRUCTURAL CONCRETE SHALL BE CLASS "A" (5 SACK, 25-8-36100 PSI @ 28 DAYS) AND ALL REINFORCING STEEL SHALL BE GRADE SIXTY, UNLESS OTHERWISE NOTED.
5. THE CONTRACTOR SHALL NOT DISPOSE OF SURPLUS EXCAVATED MATERIAL FROM THE SITE WITHOUT NOTIFYING THE ENVIRONMENTAL INSPECTOR, AT 974-2278, 48 HOURS PRIOR TO THE REMOVAL. THIS NOTIFICATION SHALL INCLUDE THE DISPOSAL LOCATION AND A COPY OF THE PERMIT ISSUED TO RECEIVE THE MATERIAL, IF APPLICABLE.
6. UTILITIES SHOWN REFLECT THE BEST INFORMATION AVAILABLE AT THE TIME THE PROJECT WAS SURVEYED. UTILITY RELOCATION WORK HAS BEEN OR WILL BE ACCOMPLISHED TO CLEAR THE WORK SPACE. THESE RELOCATIONS ARE NOT REFLECTED ON THESE DRAWINGS. FOR EXACT LOCATIONS CALL 472-2822, 48 HOURS PRIOR TO BEGINNING EXCAVATION.
7. SIGNS IN THE WAY OF CONSTRUCTION SHALL BE REMOVED AND RELOCATED AS SOON AS POSSIBLE. ALL TRAFFIC CONTROL SIGNS, INCLUDING STOP AND STREET-NAME SIGNS, SHALL NOT BE REMOVED OR RELOCATED WITHOUT THE APPROVAL OF THE PROJECT INSPECTOR AND THE TRANSPORTATION ENGINEERING DIVISION OF THE DEPARTMENT OF TRANSPORTATION. THIS WORK SHALL BE SUBSIDIARY TO OTHER BID ITEMS.
8. ALL SITE WORK MUST COMPLY WITH THE ENVIRONMENTAL REQUIREMENTS.
9. THE CONTRACTOR SHALL ERECT AND MAINTAIN A FILTER FABRIC FENCE AT LOCATIONS SHOWN ON THE PLANS AND ANY OTHER LOCATIONS DESIGNATED BY THE ENGINEER. PAYMENT WILL BE MADE UNDER ITEM NO. 620 FILTER FABRIC FENCE.
10. ANY UTILITY METERS IN THE WAY OF THE CONSTRUCTION WILL BE RELOCATED OUTSIDE OF THE PROPOSED CONSTRUCTION AREA BY THE UTILITY OWNER UNLESS SUCH WORK AFFECTING THOSE METERS IS INCLUDED IN THE CONTRACT.
11. ANY AREAS TO RECEIVE TRANSITION PAVEMENT SHALL BE CONSTRUCTED WITH THE SAME TYPICAL SECTION AS THE ADJACENT NEW CONSTRUCTION.
12. ANY EXISTING SIDEWALKS, CURBS OR DRIVEWAYS DISTURBED BY THE CONSTRUCTION SHALL BE REMOVED AND RESTORED WITH SURFACE MATERIALS EQUAL TO OR BETTER THAN THE ORIGINAL.
13. THE REMOVAL OF EXISTING DRIVEWAY PIPE CULVERTS, RIPRAP AND HEADWALLS IN THE WAY OF CONSTRUCTION WILL NOT BE PAID FOR DIRECTLY, BUT SHALL BE SUBSIDIARY TO OTHER BID ITEMS.
14. IN AREAS WHERE EXISTING CURBS AND GUTTERS ARE TO REMAIN, THE OLD PAVING AND BASE MUST BE REMOVED AND THE NEW BASE AND PAVING PLACED AND COMPACTED SO AS NOT TO DISTURB EXISTING CURBS AND GUTTERS.
15. USE OF HYDRATED LIME SHALL BE RESTRICTED AND SHALL BE APPROVED BY OWNER. OWNER MAY DENY APPROVAL FOR USE OF HYDRATED LIME AT OWNER'S DISCRETION.
16. ALL STORM SEWER PIPE SHALL BE RCP, CLASS V, WITH BEDDING THAT CONFORMS TO COA STANDARD SPECIFICATION 510-PIPE, UNLESS OTHERWISE NOTED. ALL BEDDING MATERIAL SHALL BE APPROVED BY OWNER PRIOR TO PLACEMENT.
17. THE CONTRACTOR SHALL ERECT AND MAINTAIN FILTER FABRIC FENCE, MULCH SOCKS, AND SPILL CONTAINMENT BOOMS AT LOCATIONS SHOWN ON THE PLANS AND ANY OTHER LOCATIONS DESIGNATED BY THE ENGINEER OR OWNER. PAYMENT WILL BE MADE UNDER THE APPROPRIATE ITEMS LISTED ON THE BID FORM 300U.
18. COMPLIANCE WITH FEDERAL AND STATE ENDANGERED SPECIES PERMITS IS REQUIRED. OVERSIGHT BY CITY OF AUSTIN SALAMANDER BIOLOGIST IN ADDITION TO CITY OF AUSTIN ENVIRONMENTAL INSPECTOR IS REQUIRED THROUGHOUT THE ENTIRE CONSTRUCTION PHASE.

DEVELOPER INFORMATION

OWNER: LIZA COLUCCI, CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT
 ADDRESS: 505 BARTON SPRINGS ROAD, AUSTIN, TX 78701
 PHONE #: 512-974-2669
 OWNER'S REPRESENTATIVE RESPONSIBLE FOR PLAN ALTERATIONS: SCOTT M. MUCHARD, P.E., HDR ENGINEERING, INC.
 PHONE#: 512-912-5100
 PERSON OR FIRM RESPONSIBLE FOR EROSION/SEDIMENTATION CONTROL MAINTENANCE:
 PHONE#:
 PERSON OR FIRM RESPONSIBLE FOR TREE/NATURAL AREA PROTECTION MAINTENANCE:
 PHONE#:

AMERICANS WITH DISABILITIES ACT

THE CITY OF AUSTIN HAS REVIEWED THIS PLAN FOR COMPLIANCE WITH CITY DEVELOPMENT REGULATIONS ONLY. THE APPLICANT, PROPERTY OWNER, AND OCCUPANT OF THE PREMISES ARE RESPONSIBLE FOR DETERMINING WHETHER THE PLAN COMPLIES WITH ALL OTHER LAWS, REGULATIONS, AND RESTRICTIONS WHICH MAY BE APPLICABLE TO THE PROPERTY AND ITS USE.

D
C
B
A



ISSUE	DATE	DESCRIPTION
B	10/3/2014	90% DRAFT FOR REVIEW
A	1/24/2014	60% DRAFT FOR REVIEW

PROJECT MANAGER	S. MUCHARD
DESIGNED BY	S. MUCHARD
DRAWN BY	C. AMARAL
CHECKED BY	C. PARKER
DATE	OCTOBER 2014
PROJECT NUMBER	220162

THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF REVIEW UNDER THE AUTHORITY OF SCOTT M. MUCHARD TEXAS P.E. NO. 89409 DATE: OCTOBER 3, 2014 IT IS NOT TO BE USED FOR CONSTRUCTION OR ANY OTHER PURPOSE.
90% DRAFT



**ELIZA SPRING
OUTLET DAYLIGHTING**

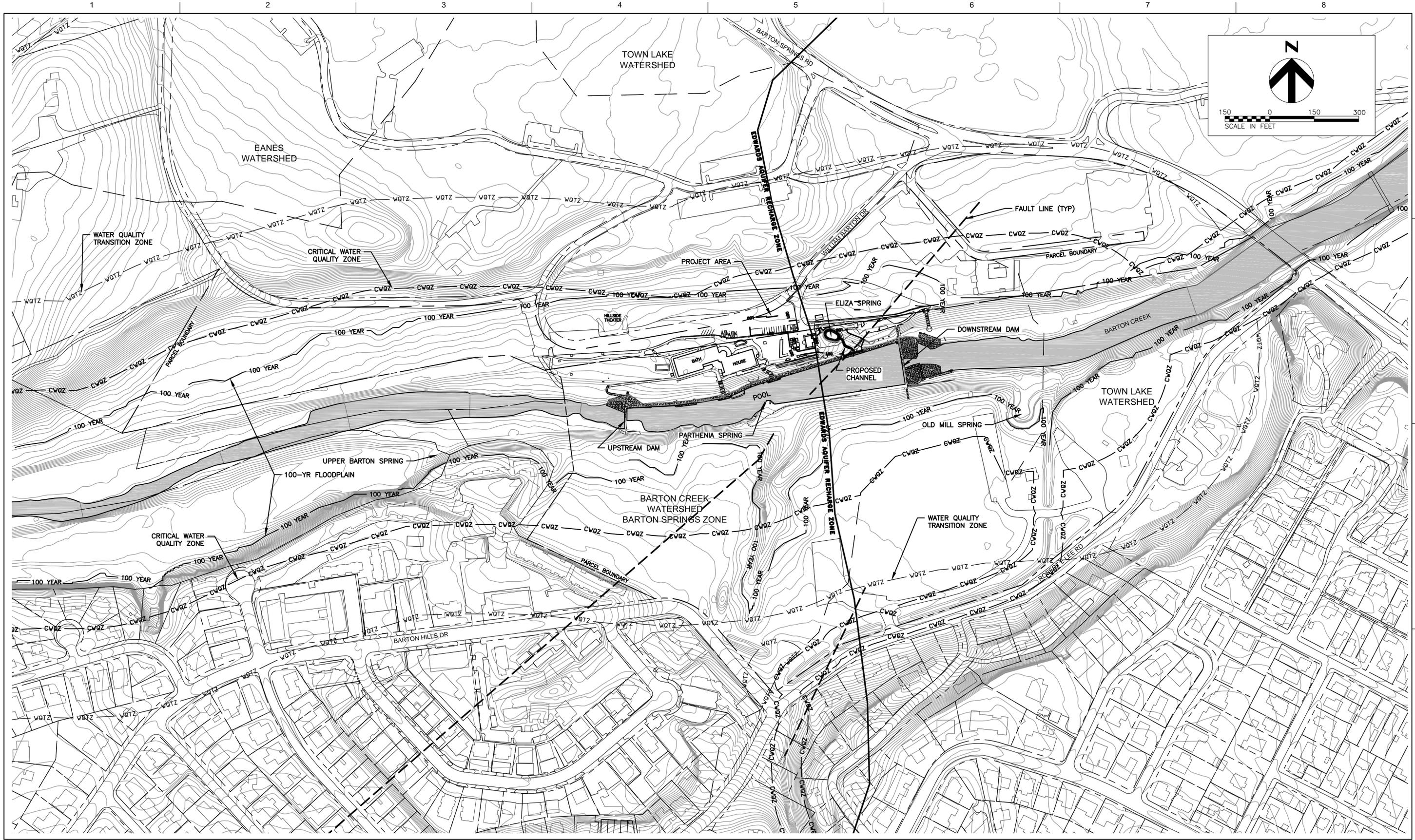
Austin, Texas

GENERAL NOTES



FILENAME | G1.2.DWG
 SCALE | NONE

SHEET
G1.2



ISSUE	DATE	DESCRIPTION
B	10/3/2014	90% DRAFT FOR REVIEW
A	1/24/2014	60% DRAFT FOR REVIEW

PROJECT MANAGER	S. MUCHARD
DESIGNED BY	S. MUCHARD
DRAWN BY	C. AMARAL
CHECKED BY	C. PARKER
DATE	OCTOBER 2014
PROJECT NUMBER	220162

THIS DOCUMENT IS
RELEASED FOR THE
PURPOSE OF REVIEW
UNDER THE AUTHORITY OF
SCOTT M. MUCHARD
TEXAS P.E. NO. 89409
DATE: OCTOBER 3, 2014
IT IS NOT TO BE USED
FOR CONSTRUCTION OR
ANY OTHER PURPOSE.
90% DRAFT



ELIZA SPRING OUTLET DAYLIGHTING

Austin, Texas

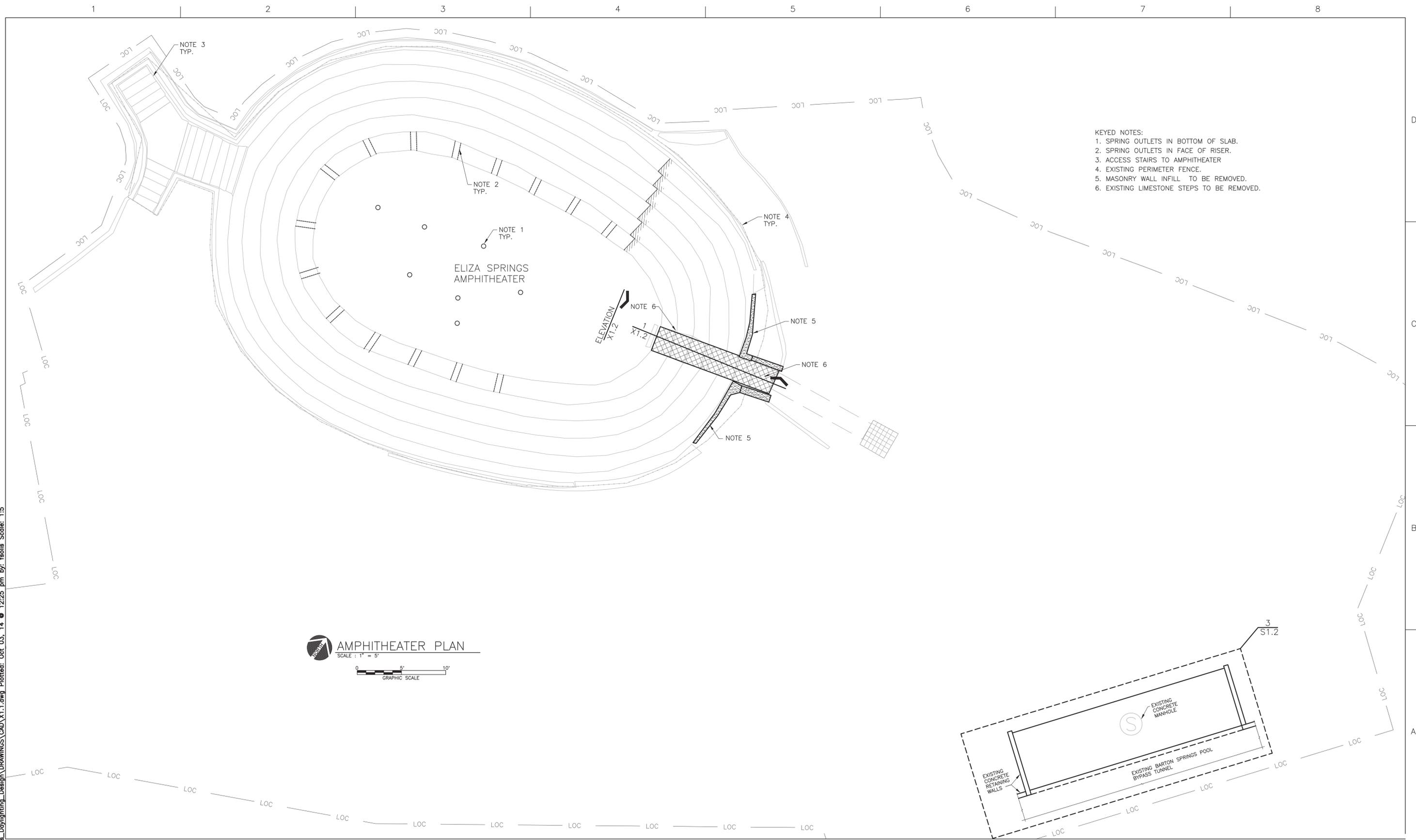
OVERALL SITE PLAN



FILENAME | G1.3.DWG
SCALE | 1" = 150'

SHEET
G1.3

CADFILE:\13025_Eliza_Springs_Daylighting_Design\DRAWINGS\CAD\X1.1.dwg Plotted: Oct 03, 14 @ 12:25 pm by: fscalis Scale: 1:5



- KEYED NOTES:
1. SPRING OUTLETS IN BOTTOM OF SLAB.
 2. SPRING OUTLETS IN FACE OF RISER.
 3. ACCESS STAIRS TO AMPHITHEATER
 4. EXISTING PERIMETER FENCE.
 5. MASONRY WALL INFILL TO BE REMOVED.
 6. EXISTING LIMESTONE STEPS TO BE REMOVED.

AMPHITHEATER PLAN
SCALE: 1" = 5'
GRAPHIC SCALE

Jose I. Guerra, Inc.
Consulting Engineers
2401 South IH-35 Suite 210
Austin, Texas 78741
(512) 445-2090
Structural • Civil • Mechanical • Electrical
TYPE FIRM P-3



ISSUE	DATE	DESCRIPTION
-	10/03/14	90% DRAFT FOR REVIEW

PROJECT MANAGER	JL
DESIGNED BY	JL
DRAWN BY	FS
CHECKED BY	JL
DATE	10-03-14
PROJECT NUMBER	Z20162

THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF REVIEW UNDER THE AUTHORITY OF JOSEPH J. LUKE #55974 OCTOBER 03, 2014

IT IS NOT TO BE USED FOR CONSTRUCTION OR ANY OTHER PURPOSE.



ELIZA SPRING OUTLET DAYLIGHTING
Austin, Texas

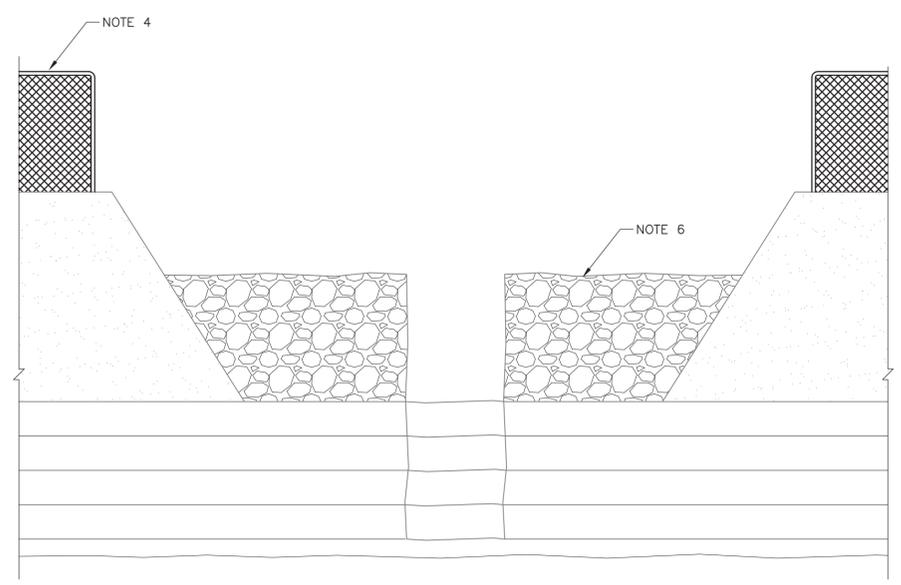
AMPHITHEATER MASONRY AND RAMP DEMOLITION PLAN

0 1" 2" FILENAME \$FILEABBREV\$ SCALE AS NOTED

SHEET
X1.1



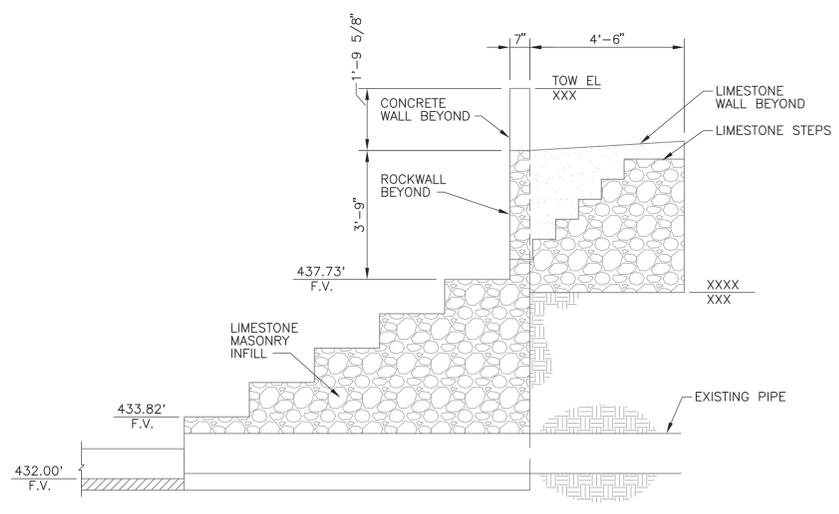
ELEVATION – MASONRY INFILL TO BE REMOVED
NO SCALE



ELEVATION – MASONRY INFILL TO BE REMOVED
NO SCALE

- KEYED NOTES:**
1. GRATING AND OUTLET PIPE TO BE REMOVED.
 2. EXISTING CONCRETE AMPHITHEATER SEATING STEPS TO REMAIN.
 3. EXISTING STEEL GATE TO BE REMOVED.
 4. EXISTING LIMESTONE MASONRY INFILL TO BE REMOVED.
 5. EXISTING LIMESTONE MASONRY STEPS TO BE REMOVED.

- SHEET NOTES:**
1. ALL DIMENSIONS SHOWN ARE ENGINEERS ESTIMATES CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS.



1 PROPOSED CONCRETE JUNCTION BOX SECTION
SCALE: 3/8" = 1'-0"

CADFILE:\13025_Eliza_Springs_Daylighting_Design\DRAWINGS\CAD\X1.2.dwg Plotted: Oct 03, 14 @ 12:35 pm by: fscalis Scale: 1:32

Jose I. Guerra, Inc.
Consulting Engineers
2401 South IH-35 Suite 210
Austin, Texas 78741
(512) 445-2090
Structural • Civil • Mechanical • Electrical
TPE FIRM P-3

HDR
Texas P.E. Firm
Registration No. F-754

ISSUE	DATE	DESCRIPTION
—	10/03/14	90% DRAFT FOR REVIEW

PROJECT MANAGER	JL
DESIGNED BY	JL
DRAWN BY	FS
CHECKED BY	JL
DATE	10-03-14
PROJECT NUMBER	Z20162

THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF REVIEW UNDER THE AUTHORITY OF JOSEPH J. LUKE #55974 OCTOBER 03, 2014

IT IS NOT TO BE USED FOR CONSTRUCTION OR ANY OTHER PURPOSE.



**ELIZA SPRING
OUTLET DAYLIGHTING**
Austin, Texas



**AMPHITHEATER
MASONRY DEMOLITION
ELEVATION**

FILENAME: \$FILEABBREV\$
SCALE: AS NOTED

SHEET
X1.2



E/S CONTROL LEGEND	
	TEMP SPOILS
	STABILIZED CONSTRUCTION ENTRANCE
	6-INCH MULCH BLANKET
	LIMITS OF CONSTRUCTION
	SILT FENCE
	TREE FENCE
	TEMPORARY SECURITY FENCE
	TRIANGULAR SEDIMENT FILTER DIKE

CONTRACTOR TO RESTORE PARKING LOT TO ORIGINAL CONDITION AFTER COMPLETION OF CONSTRUCTION INCLUDING REPAIRING PAVEMENT AND STRIPING AT NO ADDITIONAL COST TO OWNER. CONTRACTOR SHALL DOCUMENT CONDITION OF PARKING LOT BEFORE AND AFTER CONSTRUCTION.

WATER-FILLED TRAFFIC CONTROL BARRIER

TEMPORARY PEDESTRIAN PATHWAY

8 FT HIGH TEMPORARY CHAIN LINK FENCE, OPAQUE

TEMPORARY SPOILS

SILT FENCE

STORAGE AND STAGING AREA

8'x20' TEMP DOUBLE CHAIN LINK SWING GATE

8 FT x 20 FT TEMPORARY DOUBLE CHAIN LINK SWING GATE. ACCESS ONLY BE CONSTRUCTION PERSONNEL AND SMALL EQUIPMENT ONLY

OWNER TO PROVIDE AMPHITHEATER DEWATERING DURING CONSTRUCTION

8 FT HIGH TEMPORARY CHAIN LINK FENCE, OPAQUE

EXISTING TREES TO BE PROTECTED BY TREE FENCE. TREE AND FENCE LOCATION TO BE FIELD VERIFIED BY CONTRACTOR

REMOVE TREE

RESTORE SURFACE WITH 1 INCH THICK LAYER OF GRANITE. GRANITE GRAVEL SHALL COMPLY WITH ITEM 1301S

FILTER DIKE CURB INLET PROTECTION

CONSTRUCTION ENTRANCE

TREE PLANKING

TABLES TO BE RELOCATED AS DIRECTED BY OWNER

BARTON SPRINGS POOL BYPASS TUNNEL

TRIANGULAR SEDIMENT FILTER DIKE

PROVIDE WOOD MATTING TO PROTECT SIDEWALK SURFACE AND PREVENT DAMAGE. RESTORE SIDEWALK TO PRE-CONSTRUCTION CONDITIONS AT NO ADDITIONAL COST TO CITY.

BARTON SPRINGS RECHARGE ZONE ENDANGERED SPECIES HABITAT

NOTES:

1. NO HEAVY OR TRACKED EQUIPMENT OVER SIDEWALK OR BYPASS TUNNEL.
2. ALL DISTURBED AREAS TO BE REVEGETATED PER LANDSCAPE PLAN.
3. ENVIRONMENTAL INSPECTOR HAS AUTHORITY TO ADD AND/OR MODIFY CONTROLS TO MAINTAIN COMPLIANCE WITH CITY OF AUSTIN RULES AND REGULATIONS.



ISSUE	DATE	DESCRIPTION
B	10/3/2014	90% DRAFT FOR REVIEW
A	1/24/2014	60% DRAFT FOR REVIEW

PROJECT MANAGER	S. MUCHARD
DESIGNED BY	L. ROSS
DRAWN BY	C. AMARAL
CHECKED BY	C. PARKER
DATE	OCTOBER 2014
PROJECT NUMBER	220162

THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF REVIEW UNDER THE AUTHORITY OF D. LAUREN ROSS TEXAS P.E. NO. 56647 DATE: OCTOBER 3, 2014 IT IS NOT TO BE USED FOR CONSTRUCTION OR ANY OTHER PURPOSE.
90% DRAFT



ELIZA SPRING OUTLET DAYLIGHTING

Austin, Texas

EROSION/SEDIMENTATION CONTROL AND TREE PROTECTION PLAN



FILENAME C1.1.DWG
SCALE 1"=20'

SHEET
C1.1

SEQUENCE OF CONSTRUCTION

- INSTALL TEMPORARY EROSION AND SEDIMENTATION CONTROLS AS INDICATED ON THE APPROVED SITE PLAN. INSTALL TREE PROTECTION AND INITIATE TREE MITIGATION MEASURES.
- CONTACT THE WATERSHED PROTECTION DEPARTMENT, ENVIRONMENTAL INSPECTION, AT 512-974-2278, 72 HOURS PRIOR TO THE SCHEDULED DATE OF THE REQUIRED ON-SITE PRECONSTRUCTION ELIZA SPRING OUTLET DAYLIGHTING MEETING
- THE ENVIRONMENTAL PROJECT MANAGER, AND/OR SITE SUPERVISOR, AND/OR DESIGNATED RESPONSIBLE PARTY, AND THE GENERAL CONTRACTOR WILL REVISE TEMPORARY EROSION AND SEDIMENTATION CONTROLS, IF NEEDED, TO COMPLY WITH CITY INSPECTORS' DIRECTIVES, AND REVISED CONSTRUCTION SCHEDULE RELATIVE TO THE WATER QUALITY PLAN REQUIREMENTS AND THE EROSION PLAN.
- TEMPORARY EROSION AND SEDIMENTATION CONTROLS WILL BE INSPECTED AND MAINTAINED IN ACCORDANCE WITH THE SITE PLAN REQUIREMENTS.
- BEGIN SITE CLEARING/CONSTRUCTION (OR DEMOLITION) ACTIVITIES.
- IN THE BARTON SPRINGS ZONE, THE ENVIRONMENTAL PROJECT MANAGER OR SITE SUPERVISOR WILL SCHEDULE A MID-CONSTRUCTION CONFERENCE TO COORDINATE CHANGES IN THE CONSTRUCTION SCHEDULE AND EVALUATE EFFECTIVENESS OF THE EROSION CONTROL PLAN AFTER POSSIBLE CONSTRUCTION ALTERATIONS TO THE SITE. PARTICIPANTS SHALL INCLUDE THE CITY INSPECTOR, PROJECT ENGINEER, GENERAL CONTRACTOR AND ENVIRONMENTAL PROJECT MANAGER OR SITE SUPERVISOR. THE ANTICIPATED COMPLETION DATE AND FINAL CONSTRUCTION SEQUENCE AND INSPECTION SCHEDULE WILL BE COORDINATED WITH THE APPROPRIATE CITY INSPECTOR.
- COMPLETE CONSTRUCTION AND START REVEGETATION OF THE SITE AND INSTALLATION OF LANDSCAPING.
- UPON COMPLETION OF THE SITE CONSTRUCTION AND REVEGETATION OF A PROJECT SITE, THE DESIGN ENGINEER SHALL SUBMIT AN ENGINEER'S LETTER OF CONCURRENCE TO THE WATERSHED PROTECTION AND DEVELOPMENT REVIEW DEPARTMENT INDICATING THAT CONSTRUCTION, INCLUDING REVEGETATION, IS COMPLETE AND IN SUBSTANTIAL CONFORMITY WITH THE APPROVED PLANS. AFTER RECEIVING THIS LETTER, A FINAL INSPECTION WILL BE SCHEDULED BY THE APPROPRIATE CITY INSPECTOR.
- UPON COMPLETION OF LANDSCAPE INSTALLATION OF A PROJECT SITE, THE LANDSCAPE ARCHITECT SHALL SUBMIT A LETTER OF CONCURRENCE TO THE WATERSHED PROTECTION AND DEVELOPMENT REVIEW DEPARTMENT INDICATING THAT THE REQUIRED LANDSCAPING IS COMPLETE AND IN SUBSTANTIAL CONFORMITY WITH THE APPROVED PLANS. AFTER RECEIVING THIS LETTER, A FINAL INSPECTION WILL BE SCHEDULED BY THE APPROPRIATE CITY INSPECTOR.
- AFTER A FINAL INSPECTION HAS BEEN CONDUCTED BY THE CITY INSPECTOR AND WITH APPROVAL FROM THE CITY INSPECTOR, REMOVE THE TEMPORARY EROSION AND SEDIMENTATION CONTROLS AND COMPLETE ANY NECESSARY FINAL REVEGETATION RESULTING FROM REMOVAL OF THE CONTROLS. CONDUCT ANY MAINTENANCE AND REHABILITATION OF THE WATER QUALITY PONDS OR CONTROLS.

- CONTROLS MUST BE REMOVED WHEN THE DEPTH REACHES SIX (6) INCHES. SILT ACCUMULATION AT INLET DEVICES SHALL BE REMOVED WHEN THE DEPTH REACHES TWO (2) INCHES.
- PRIOR TO FINAL ACCEPTANCE BY THE CITY, HAUL ROADS CONSTRUCTED FOR TEMPORARY CONTRACTOR ACCESS MUST BE REMOVED AND THE AREA RESTORED TO THE ORIGINAL GRADE AND REVEGETATED. ALL LAND CLEARING DEBRIS SHALL BE DISPOSED OF IN APPROVED SPOIL DISPOSAL SITES.
 - ALL WORK MUST STOP IF A VOID IN THE ROCK SUBSTRATE IS DISCOVERED WHICH IS; ONE SQUARE FOOT IN TOTAL AREA; BLOWS AIR FROM WITHIN THE SUBSTRATE AND/OR CONSISTENTLY RECEIVES WATER DURING ANY RAIN EVENT. AT THIS TIME IT IS THE RESPONSIBILITY OF THE PROJECT MANAGER TO IMMEDIATELY CONTACT A CITY OF AUSTIN ENVIRONMENTAL INSPECTOR FOR FURTHER INVESTIGATION.
 - PERMANENT EROSION/SEDIMENTATION CONTROL: ALL DISTURBED AREAS SHALL BE RESTORED IN ACCORDANCE WITH CURRENT CITY OF AUSTIN ENVIRONMENTAL CRITERIA MANUAL AND STANDARD SPECIFICATIONS, UNLESS OTHERWISE INDICATED IN THE PLAN SET AND SPECIFICATIONS.
 - DEVELOPER INFORMATION: OWNER COMPANY: CITY OF AUSTIN CONTACT: ??? ADDRESS: ??? FAX: ??? PHONE: ??? OWNER'S REPRESENTATIVE RESPONSIBLE FOR PLAN ALTERATIONS: COMPANY: HDR ENGINEERING, INC. ADDRESS: 4401 WEST GATE BLVD, SUITE 400; AUSTIN, TX 78745 FAX: 512-912-5158 PHONE: 512-912-5100 PERSON OR FIRM RESPONSIBLE FOR EROSION/SEDIMENTATION CONTROL COMPANY: CONTRACTOR PERSON OR FIRM RESPONSIBLE FOR TREE/NATURAL AREA PROTECTION COMPANY: CONTRACTOR
 - THE CONTRACTOR SHALL NOT DISPOSE OF SURPLUS EXCAVATED MATERIAL FROM THE SITE WITHOUT NOTIFYING THE PLANNING AND DEVELOPMENT REVIEW DEPARTMENT AT 974-2278 AT LEAST 48 HOURS PRIOR WITH THE LOCATION AND A COPY OF THE PERMIT ISSUED TO RECEIVE THE MATERIAL.
 - INLET PROTECTION SHALL BE INSTALLED IMMEDIATELY PRIOR TO STREET WORK, AND WILL BE REMOVED AS SOON AS THE PLANNING AND DEVELOPMENT REVIEW DEPARTMENT ENVIRONMENTAL INSPECTOR AGREES THAT THERE IS NO POTENTIAL FOR SEDIMENTATION.

CITY OF AUSTIN -- ADDITIONAL EROSION CONTROL NOTES FOR BARTON SPRINGS CONTRIBUTING ZONE

- DESIGNATION OF AN ENVIRONMENTAL PROJECT MANAGER WHO IS ON SITE >90% OF THE TIME, WHO IS REQUIRED TO BE AT THE PRECONSTRUCTION AND MID-CONSTRUCTION MEETINGS, AND IS RESPONSIBLE FOR COMPLIANCE ON SITE OF THE TEMPORARY EROSION AND SEDIMENTATION CONTROLS. THE ENVIRONMENTAL PROJECT MANAGER IS RESPONSIBLE FOR ENSURING COMPLIANCE OF THE CONTROLS DURING THE CONSTRUCTION PERIOD. SHOULD THE PROJECT MANAGER NEED TO BE ABSENT FROM THE SITE FOR AN EXTENDED PERIOD (IN EXCESS OF ONE WEEK), THE ENVIRONMENTAL INSPECTOR WITH THE WATERSHED PROTECTION AND DEVELOPMENT REVIEW DEPARTMENT SHOULD BE INFORMED OF THE NAME OF A DESIGNATED REPLACEMENT.
- THE MAXIMUM LENGTH OF TIME BETWEEN CLEARING AND FINAL REVEGETATION OF A PROJECT SHALL NOT EXCEED 18 MONTHS, UNLESS EXTENDED BY THE DIRECTOR OF THE WATERSHED PROTECTION AND DEVELOPMENT REVIEW DEPARTMENT (THIS DOES NOT AFFECT THE EXPIRATION OF THE SITE PLAN OR BUILDING PERMIT. THIS REQUIREMENT APPLIES TO SITES THAT HAVE SUSPENDED WORK AND ARE EXPERIENCING EROSION CONTROL PROBLEMS DUE TO DISTURBED SOIL CONDITIONS.) DISTURBED AREAS MUST BE MAINTAINED TO PREVENT EROSION AND SEDIMENT LOADING OF ANY WATERWAYS OR DRAINAGE FACILITIES.
- IT IS A VIOLATION OF THE CODE AND THIS DEVELOPMENT PERMIT TO ALLOW SEDIMENT FROM A CONSTRUCTION SITE TO ENTER A CLASSIFIED WATERWAY DUE TO A FAILURE TO MAINTAIN THE REQUIRED EROSION AND SEDIMENTATION CONTROLS OR TO FOLLOW THE APPROVED CONSTRUCTION SEQUENCE.

SPECIAL NOTES TO COMPLY WITH BARTON SPRINGS SALAMANDER RECOVERY PLAN AND BARTON SPRINGS POOL HABITAT CONSERVATION PLAN (EFFECTIVE 9/13/2013)

- HEAVY METALS: SOURCE INCLUDES VEHICLE WEAR.
- FUELING AND EQUIPMENT MAINTENANCE WILL OCCUR AT LEAST 25 FEET AWAY FROM WATER TO AVOID THE CHANCE OF DETRIMENTAL IMPACTS ON THE SPRING HABITAT OR AQUATIC LIFE. ABSORBENT PADS WILL BE USED UNDERNEATH OR AROUND ALL EQUIPMENT, SUPPLIES, AND VEHICLES CONTAINING TOXIC COMPONENTS DURING ALL OPERATIONS, FUELING, AND MAINTENANCE ACTIVITIES. (BARTON SPRINGS POOL HABITAT CONSERVATION PLAN ITEM 6.1.6.2)
- UNDER CONDITIONS WHEN DECREASED DISSOLVED OXYGEN CONCENTRATIONS MAY BE HARMFUL TO SALAMANDERS, THE CITY MAY SUPPLEMENT DISSOLVED OXYGEN IN ELIZA SPRINGS USING AIR PUMPS, WATER RECIRCULATION, OR OTHER METHOD APPROVED BY THE US FISH AND WILDLIFE SERVICE. (BARTON SPRINGS POOL HABITAT CONSERVATION PLAN ITEM 6.2.4)

CITY OF AUSTIN -- STANDARD NOTES FOR TREE AND NATURAL AREA PROTECTION

- ALL TREES AND NATURAL AREAS SHOWN ON PLAN TO BE PRESERVED SHALL BE PROTECTED DURING CONSTRUCTION WITH TEMPORARY FENCING.
- PROTECTIVE FENCES SHALL BE ERECTED ACCORDING TO CITY OF AUSTIN STANDARDS FOR TREE PROTECTION.
- PROTECTIVE FENCES SHALL BE INSTALLED PRIOR TO THE START OF ANY SITE PREPARATION WORK (CLEARING, GRUBBING OR GRADING), AND SHALL BE MAINTAINED THROUGHOUT ALL PHASES OF THE CONSTRUCTION PROJECT.
- EROSION AND SEDIMENTATION CONTROL BARRIERS SHALL BE INSTALLED OR MAINTAINED IN A MANNER WHICH DOES NOT RESULT IN SOIL BUILD-UP WITHIN TREE DRIP LINES.
- PROTECTIVE FENCES SHALL SURROUND THE TREES OR GROUP OF TREES, AND WILL BE LOCATED AT THE OUTERMOST LIMIT OF BRANCHES (DRIP LINE) , FOR NATURAL AREAS; PROTECTIVE FENCES SHALL FOLLOW THE LIMIT OF CONSTRUCTION LINE, IN ORDER TO PREVENT THE FOLLOWING:
 - SOIL COMPACTION IN THE ROOT ZONE AREA RESULTING FROM VEHICULAR TRAFFIC OR STORAGE OF EQUIPMENT OR MATERIALS;
 - ROOT ZONE DISTURBANCES DUE TO GRADE CHANGES (GREATER THAN 6 INCHES CUT OR FILL), OR TRENCHING NOT REVIEWED AND AUTHORIZED BY THE CITY ARBORIST;
 - WOUNDS TO EXPOSED ROOTS, TRUNK OR LIMBS BY MECHANICAL EQUIPMENT;
 - OTHER ACTIVITIES DETRIMENTAL TO TREES SUCH AS CHEMICAL STORAGE, CEMENT TRUCK CLEANING, AND FIRES.
- EXCEPTIONS TO INSTALLING FENCES AT TREE DRIP LINES MAY BE PERMITTED IN THE FOLLOWING CASES:
 - WHERE THERE IS TO BE AN APPROVED GRADE CHANGE, IMPERMEABLE PAVING SURFACE, TREE WELL, OR OTHER SUCH SITE DEVELOPMENT, ERECT THE FENCE APPROXIMATELY 2 TO 4 FEET BEYOND THE AREA DISTURBED;
 - WHERE PERMEABLE PAVING IS TO BE INSTALLED WITHIN A TREE'S DRIP LINE, ERECT THE FENCE AT THE OUTER LIMITS OF THE PERMEABLE PAVING AREA (PRIOR TO SITE GRADING SO THAT THIS AREA IS GRADED SEPARATELY PRIOR TO PAVING INSTALLATION TO MINIMIZED ROOT DAMAGE);
 - WHERE TREES ARE CLOSE TO PROPOSED BUILDINGS, ERECT THE FENCE TO ALLOW 6 TO 10 FEET OF WORK SPACE BETWEEN THE FENCE AND THE BUILDING;
 - WHERE THERE ARE SEVERE SPACE CONSTRAINTS DUE TO TRACT SIZE, OR OTHER SPECIAL REQUIREMENTS, CONTACT THE CITY ARBORIST AT 512-974-1876 TO DISCUSS ALTERNATIVES.
 - SPECIAL NOTE: FOR THE PROTECTION OF NATURAL AREAS, NO EXCEPTIONS TO INSTALLING FENCES AT THE LIMIT OF CONSTRUCTION LINE WILL BE PERMITTED.
- WHERE ANY OF THE ABOVE EXCEPTIONS RESULT IN A FENCE BEING CLOSER THAN 4 FEET TO A TREE TRUNK, PROTECT THE TRUNK WITH STRAPPED-ON PLANKING TO A HEIGHT OF 8 FT (OR TO THE LIMITS OF LOWER BRANCHING) IN ADDITION TO THE REDUCED FENCING PROVIDED.
- TREES APPROVED FOR REMOVAL SHALL BE REMOVED IN A MANNER WHICH DOES NOT IMPACT TREES TO BE PRESERVED.
- ANY ROOTS EXPOSED BY CONSTRUCTION ACTIVITY SHALL BE PRUNED FLUSH WITH THE SOIL. BACKFILL ROOT AREAS WITH GOOD QUALITY TOP SOIL AS SOON AS POSSIBLE. IF EXPOSED ROOT AREAS ARE NOT BACKFILLED WITHIN 2 DAYS, COVER THEM WITH ORGANIC MATERIAL IN A MANNER WHICH REDUCES SOIL TEMPERATURE AND MINIMIZES WATER LOSS DUE TO EVAPORATION.
- ANY TRENCHING REQUIRED FOR THE INSTALLATION OF LANDSCAPE IRRIGATION SHALL BE PLACED AS FAR FROM EXISTING TREE TRUNKS AS POSSIBLE.
- NO LANDSCAPE TOPSOIL DRESSING GREATER THAN 4 INCHES SHALL BE PERMITTED WITHIN THE DRIP LINE OF TREES. NO SOIL IS PERMITTED ON THE ROOT FLARE OF ANY TREE.
- PRUNING TO PROVIDE CLEARANCE FOR STRUCTURES, VEHICULAR TRAFFIC AND EQUIPMENT SHALL TAKE PLACE BEFORE DAMAGE OCCURS (RIPPING OF BRANCHES, ETC.).
- ALL FINISHED PRUNING SHALL BE DONE ACCORDING TO RECOGNIZED, APPROVED STANDARDS OF THE INDUSTRY (REFERENCE THE NATIONAL ARBORIST ASSOCIATION PRUNING STANDARDS FOR SHADE TREES AVAILABLE ON REQUEST FROM THE CITY ARBORIST).
- ALL GRADING WITHIN PROTECTED ROOT ZONE AREAS SHALL BE DONE BY HAND OR WITH SMALL EQUIPMENT TO MINIMIZE ROOT DAMAGE. PRIOR TO GRADING, RELOCATE PROTECTION FENCES TO 2 FEET BEHIND THE GRADE CHANGE AREA.
- TREES IMPACTED BY CONSTRUCTION ACTIVITIES SHALL BE WATERED DEEPLY ONCE A WEEK DURING PERIODS OF HOT OR DRY WEATHER. TREE CROWNS WILL BE SPRAYED WITH WATER PERIODICALLY TO REDUCE DUST ACCUMULATION ON THE LEAVES.
- NO LANDSCAPE TOPSOIL DRESSING GREATER THAN 4 INCHES SHALL BE PERMITTED WITHIN THE DRIPLINE OF TREES. NO SOIL IS PERMITTED ON THE ROOT FLARE OF ANY TREE.
- PRUNING TO PROVIDE CLEARANCE FOR STRUCTURES, VEHICULAR TRAFFIC AND EQUIPMENT SHALL TAKE PLACE BEFORE CONSTRUCTION BEGINS.

- ALL PRUNING MUST BE DONE ACCORDING TO RECOGNIZED, APPROVED INDUSTRY STANDARDS. REFERENCE THE NATIONAL ARBORIST ASSOCIATION PRUNING STANDARDS FOR SHADE TREES.
- TREES APPROVED FOR REMOVAL SHALL BE REMOVED IN A MANNER WHICH DOES NOT IMPACT TREES TO BE PRESERVED.
- DEVIATIONS FROM THE ABOVE NOTES MAY BE CONSIDERED ORDINANCE VIOLATIONS IF THERE IS SUBSTANTIAL NON-COMPLIANCE OR IF A TREE SUSTAINS DAMAGE AS A RESULT.

SUPPLEMENTAL TREE PROTECTION NOTES

- ALL TREE PROTECTION MUST COMPLY WITH CITY OF AUSTIN REQUIREMENTS AS OUTLINED IN THE ENVIRONMENTAL CRITERIA MANUAL AND AS INDICATED BY STANDARD COA NOTES AND DETAILS INCLUDED WITHIN THIS DOCUMENT SET. CONTRACTOR SHALL INSTALL PROTECTION PRIOR TO PRE-CONSTRUCTION CONFERENCE, MAKE ADJUSTMENTS TO PROTECTION AS DIRECTED BY THE ENVIRONMENTAL INSPECTOR, AND MAINTAIN PROTECTION UNTIL PROJECT IS COMPLETE.
- TYPE AND LOCATION OF ALL TREE PROTECTION MUST BE APPROVED IN THE FIELD BY THE ENVIRONMENTAL INSPECTOR PRIOR TO CONSTRUCTION.
- WALK-THROUGH: CONTRACTOR SHALL CONDUCT WALK-THROUGH MEETING WITH THE ENVIRONMENTAL INSPECTOR PRIOR TO PERFORMING ANY PRUNING ACTIVITIES ON TREES IN PROJECT AREA. PURPOSE OF WALK-THROUGH WILL BE TWOFOLD. ONE PURPOSE WILL BE TO DETERMINE THE MINIMUM AMOUNT OF PRUNING NECESSARY TO ALLOW CONSTRUCTION WORK TO BE COMPLETED. SECOND PURPOSE WILL BE TO DETERMINE AREAS OF PROJECT IN WHICH EXHAUST DIVERTERS WILL BE REQUIRED ON CONSTRUCTION EQUIPMENT TO PREVENT SCORCHING OF EXISTING TREES.
- ALL PRUNING MUST BE PERFORMED IN ACCORDANCE WITH ANSI A300 (PART 1) - 2001 AMERICAN NATIONAL STANDARD FOR TREE CARE OPERATIONS (PRUNING) OR LATEST APPROVED VERSION. THIS DOCUMENT MAY BE OBTAINED ONLINE FOR A FEE AT WWW.ANSI.ORG.
- PRUNING SHALL BE DONE WITH CLEAN, SHARP TOOLS. TO PREVENT BARK TEARS, THE WEIGHT OF THE BRANCH SHALL BE REMOVED BEFORE MAKING FINAL PRUNING CUT.
- ALL PRUNING SHALL PRESERVE THE NATURAL CHARACTER OF THE TREE.
- ONLY COLLAR CUTS ARE ACCEPTABLE. NO FLUSH CUTS OR STUB CUTS WILL BE ALLOWED.
- ALL BRANCHES BROKEN OR DAMAGED DURING CONSTRUCTION SHALL BE REMOVED.
- PRUNING CUTS OR DAMAGED AREAS ON AN OAK TREE SHALL BE PAINTED WITHIN FIVE MINUTES WITH A STANDARD TREE WOUND DRESSING. TREE WOUND DRESSING SHALL BE EITHER TREEKOTE AEROSOL OR TANGLEFOOD PRUNING SEALER OR APPROVED EQUAL. THIS REQUIREMENT APPLIES TO WOUND CREATED BY CONSTRUCTION VEHICLES OR EQUIPMENT.
- ANY TREE ROOTS THAT ARE EXPOSED, CUT, OR TORN DURING CONSTRUCTION ACTIVITY SHALL BE PRUNED FLUSH WITH THE SURROUNDING SOIL. (REFER ALSO TO NUMBER 9 OF THE TREE AND NATURAL AREA PROTECTION NOTES INCLUDED IN THIS PLAN SET.)
- ALL TRENCHING WITHIN THE CRITICAL ROOT ZONE OF A TREE TO BE PRESERVED WILL BE SAW CUT.

REMEDIAL TREE CARE NOTES AERATION AND SUPPLEMENTAL NUTRIENT REQUIREMENTS FOR TREES WITHIN CONSTRUCTION AREAS

- AS A COMPONENT OF AN EFFECTIVE REMEDIAL TREE CARE PROGRAM PER ENVIRONMENTAL CRITERIA MANUAL SECTION 3.5.4, PRESERVED TREES WITHIN THE LIMITS OF CONSTRUCTION MAY REQUIRE SOIL AERATION AND SUPPLEMENTAL NUTRIENTS. SOIL AND/OR FOLIAR ANALYSIS SHOULD BE USED TO DETERMINE THE NEED FOR SUPPLEMENTAL NUTRIENTS. THE CITY ARBORIST MAY REQUIRE THESE ANALYSES AS PART OF A COMPREHENSIVE TREE CARE PLAN. SOIL PH SHALL BE CONSIDERED WHEN DETERMINING THE FERTILIZATION COMPOSITION AS SOIL PH INFLUENCES THE TREE'S ABILITY TO UPTAKE NUTRIENTS FROM THE SOIL. IF ANALYSES INDICATE THE NEED FOR SUPPLEMENTAL NUTRIENTS, THEN HUMATE/NUTRIENT SOLUTIONS WITH MYCORRHIZAE COMPONENTS ARE HIGHLY RECOMMENDED. IN ADDITION, SOIL ANALYSIS MAY BE NEEDED TO DETERMINE IF ORGANIC MATERIAL OR BENEFICIAL MICROORGANISMS ARE NEEDED TO IMPROVE SOIL HEALTH. MATERIALS AND METHODS ARE TO BE APPROVED BY THE CITY ARBORIST (512-974-1876) PRIOR TO APPLICATION. THE OWNER OR GENERAL CONTRACTOR SHALL SELECT A FERTILIZATION CONTRACTOR AND ENSURE COORDINATION WITH THE CITY ARBORIST.
- PRE-CONSTRUCTION TREATMENT SHOULD BE APPLIED IN THE APPROPRIATE SEASON, IDEALLY THE SEASON PRECEDING THE PROPOSED CONSTRUCTION. MINIMALLY, AREAS TO BE TREATED INCLUDE THE ENTIRE CRITICAL ROOT ZONE OF TREES AS DEPICTED ON THE CITY APPROVED PLANS. TREATMENT SHOULD INCLUDE, BUT NOT LIMITED TO, FERTILIZATION, SOIL TREATMENT, MULCHING, AND PROPER PRUNING.
- POST-CONSTRUCTION TREATMENT SHOULD OCCUR DURING FINAL REVEGETATION OR AS DETERMINED BY A QUALIFIED ARBORIST AFTER CONSTRUCTION. CONSTRUCTION ACTIVITIES OFTEN RESULT IN A REDUCTION IN SOIL MACRO AND MICRO PORES AND AN INCREASE IN SOIL BULK DENSITY. TO AMELIORATE THE DEGRADED SOIL CONDITIONS, AERATION VIA WATER AND/OR AIR INJECTED INTO THE SOIL IS NEEDED OR BY OTHER METHODS AS APPROVED BY THE CITY ARBORIST. THE PROPOSED NUTRIENT MIX SPECIFICATIONS AND SOIL AND/OR FOLIAR ANALYSIS RESULTS NEED TO BE PROVIDED TO AND APPROVED BY THE CITY ARBORIST PRIOR TO APPLICATION (FAX # 512-974-3010). CONSTRUCTION WHICH WILL BE COMPLETED IN LESS THAN 90 DAYS MAY USE MATERIALS AT 1/2 RECOMMENDED RATES. ALTERNATIVE ORGANIC FERTILIZER MATERIALS ARE ACCEPTABLE WHEN APPROVED BY

THE CITY ARBORIST. WITHIN 7 DAYS AFTER FERTILIZATION IS PERFORMED.
 4. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION OF THE WORK PERFORMED TO THE CITY ARBORIST, PLANNING AND DEVELOPMENT REVIEW DEPARTMENT. P.O. BOX 1088, AUSTIN, TX 78767. THIS NOTE SHOULD BE REFERENCED AS ITEM #1 IN THE SEQUENCE OF CONSTRUCTION.

CITY OF AUSTIN -- STANDARD NOTES EROSION AND SEDIMENTATION CONTROL

- THE CONTRACTOR SHALL INSTALL EROSION/SEDIMENTATION CONTROLS AND TREE/NATURAL AREA PROTECTIVE FENCING PRIOR TO ANY SITE PREPARATION WORK (CLEARING, GRUBBING OR EXCAVATION).
- THE PLACEMENT OF EROSION/SEDIMENTATION CONTROLS SHALL BE IN ACCORDANCE WITH THE ENVIRONMENTAL CRITERIA MANUAL AND THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN.
- THE PLACEMENT OF TREE/NATURAL AREA PROTECTIVE FENCING SHALL BE IN ACCORDANCE WITH THE CITY OF AUSTIN STANDARD NOTES FOR TREE AND NATURAL AREA PROTECTION AND THE APPROVED GRADING/TREE AND NATURAL AREA PLAN.
- A PRE-CONSTRUCTION CONFERENCE SHALL BE HELD ON-SITE WITH THE CONTRACTOR, DESIGN ENGINEER/PERMIT APPLICANT AND ENVIRONMENTAL INSPECTOR AFTER INSTALLATION OF THE EROSION/SEDIMENTATION CONTROLS AND TREE/NATURAL AREA PROTECTION MEASURES AND PRIOR TO BEGINNING ANY SITE PREPARATION WORK. THE CONTRACTOR SHALL NOTIFY THE PLANNING AND DEVELOPMENT REVIEW DEPARTMENT AT, 512-974-2278, AT LEAST THREE DAYS PRIOR TO THE MEETING DATE. THE COA-APPROVED ESC PLAN SHOULD BE REVIEWED BY COA EV INSPECTOR AT THIS TIME.
- ANY SIGNIFICANT VARIATION IN MATERIALS OR LOCATIONS OF CONTROLS OR FENCES FROM THOSE SHOWN ON THE APPROVED PLANS MUST BE APPROVED BY THE REVIEWING ENGINEER, ENVIRONMENTAL SPECIALIST OR CITY ARBORIST AS APPROPRIATE.
- FIELD REVISIONS TO THE EROSION AND SEDIMENTATION CONTROL PLAN MAY BE REQUIRED BY THE ENVIRONMENTAL INSPECTOR DURING THE COURSE OF CONSTRUCTION TO CORRECT CONTROL INADEQUACIES. ANY REVISIONS TO THE PERMITTED PLAN MUST BE APPROVED BY THE SITE PLAN REVIEW OFFICE OF THE PLANNING AND DEVELOPMENT REVIEW DEPARTMENT.
- THE CONTRACTOR IS REQUIRED TO PROVIDE A CERTIFIED INSPECTOR WITH EITHER A CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL (CPESC), CERTIFIED EROSION, SEDIMENT AND STORMWATER-INSPECTOR (CESSWI) OR CERTIFIED INSPECTOR OF SEDIMENTATION AND EROSION CONTROLS (CISEC) CERTIFICATION TO INSPECT THE CONTROLS AND FENCES AT WEEKLY INTERVALS AND AFTER SIGNIFICANT RAINFALL EVENTS TO INSURE THAT THEY ARE FUNCTIONING PROPERLY. THE PERSON(S) RESPONSIBLE FOR MAINTENANCE OF CONTROLS AND FENCES SHALL IMMEDIATELY MAKE ANY NECESSARY REPAIRS TO DAMAGED AREAS. SILT ACCUMULATION AT

PROJECT MANAGER	S. MUCHARD
DESIGNED BY	L. ROSS
DRAWN BY	C. AMARAL
CHECKED BY	C. PARKER
DATE	OCTOBER 2014
PROJECT NUMBER	220162

THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF REVIEW UNDER THE AUTHORITY OF D. LAUREN ROSS TEXAS P.E. NO. 56647 DATE: OCTOBER 3, 2014 IT IS NOT TO BE USED FOR CONSTRUCTION OR ANY OTHER PURPOSE.
90% DRAFT



**ELIZA SPRING
 OUTLET DAYLIGHTING**

Austin, Texas

**EROSION/SEDIMENTATION
 CONTROL AND
 TREE PROTECTION PLAN NOTES**



FILENAME | C1.2.DWG
 SCALE | NONE

SHEET

C1.2

STANDARD SYMBOL FOR SILT FENCE (SF)

CITY OF AUSTIN
WATERSHED PROTECTION DEPARTMENT

SILT FENCE

RECORD COPY SIGNED BY MORGAN BYARS 08/01/2011 ADOPTED

THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.

STANDARD NO. 6425-1

1. STEEL OR WOOD POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF 300 mm (12 INCHES). IF WOOD POSTS CANNOT ACHIEVE 300 mm (12 INCHES) DEPTH, USE STEEL POSTS.

2. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPIKE OR MECHANICAL TRENCHER, SO THAT THE DOWN-SLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW.

3. THE TRENCH MUST BE A MINIMUM OF 150 mm (6 INCHES) DEEP AND 150 mm (6 INCHES) WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE Laid IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.

4. SILT FENCE FABRIC SHOULD BE SECURELY FASTENED TO EACH STEEL OR WOOD SUPPORT POST OR TO WOVEN WIRE WHICH IS IN TURN ATTACHED TO THE STEEL OR WOOD FENCE POST.

5. INSPECTION SHALL BE MADE WEEKLY OR AFTER EACH RAINFALL EVENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.

6. SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.

7. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 150 mm (6 INCHES). THE SILT SHALL BE DISPOSED OF ON AN APPROVED SITE AND IN SUCH A MANNER THAT WILL NOT CONTRIBUTE TO ADDITIONAL SILTATION.

NOTES:

1. MATERIAL - THE FFBRC MUST CORRESPOND TO THE FOLLOWING REQUIREMENTS:

PROPERTY	ASTM TEST METHOD	REQUIREMENTS
FABRIC WEIGHT	D 3776	≥3.0 OUNCES/SQUARE YPAD
ULTRAVIOLET (UV) RADIATION STABILITY	D 4355	70% STRENGTH RETAIN(M) MIN. AFTER 500 HOURS IN XENON ARC DEVICE
MUJEN BURST STRENGTH	D 3786	≥120 POUND PER SQURE INCH
WATER FLOW RATE	D 4491	≥275 GALLONS/MINUTE/SQUARE FEET

2. THIS MATERIAL SHOULD HAVE A MAXIMUM EXPECTED USEFUL LIFE OF APPROXIMATELY EIGHTEEN (18) MONTHS. THE INLET PROTECTION DEVICES SHOULD BE CONSTRUCTED IN A MANNER THAT WILL FACILITATE CLEAN OUT AND DISPOSAL OF TRAPPED SEDIMENT WHILE MINIMIZING INTERFERENCE WITH CONSTRUCTION ACTIVITIES. THEY SHOULD ALSO BE CONSTRUCTED SUCH THAT ANY PONDING OF STORM WATER WILL NOT CAUSE EXCESSIVE R.O.W. FLOODING (I.E. < 4 INCHES OF STANDING WATER) OR DPMAGETO THE STRUCTURE OR ADJACENT AREAS.

3. COVERAGE - THE FABRIC/WIRE SHOULD COMPLETELY COVER THE OPENING OF THE INLET AND DEVICES SHOULD BE INSTALLED WITHOUT PROTRUDING PARTS THAT COULD BE A TRAFFIC WORKER, OR PEDESTRIAN HAZARD. WHERE SECTIONS OF THE FABRIC OVERLAP, THEY SHALL OVERLAP AT LEAST THREE (3) INCHES.

4. THE INLET FILTER SHALL BE ATTACHED IN A WAY THAT THEY CAN EASILY BE REMOVED AND ARE NOT SECURED OR ATTACHED BY THE USE OF SAND BAGS. THE INLET FILTER MUST BE REMOVED UPON COMPLETION OF WORK. IF REMOVAL DAMAGES THE CONCRETE CURB, THE CURB MUST BE REPAIRED IMMEDIATELY.

5. DAILY INSPECTION SHALL BE MADE BY THE CONTRACTOR AND SILT ACCUMULATION MUST BE REMOVED WHEN THE DEPTH REACHES 50 MM (2 INCHES) INCHES OR ONE-THIRD THE HEIGHT OF THE INLET THROAT, AND DISPOSED OF IN A MANNER WHICH WILL NOT CAUSE ADDITIONAL SILTATION.

6. CONTRACTOR SHALL MONITOR THE PERFORMANCE OF INLET PROTECTION DURING EACH RAINFALL EVENT AND IMMEDIATELY REMOVE THE INLET PROTECTIONS IF THE STORMWATER BEGINS TO OVERTOP THE CURB.

7. INLET PROTECTIONS SHALL BE REMOVED AS SOON AS THE SOURCE OF SEDIMENT HAS ACHIEVED FINAL STABILIZATION CONDITIONS.

CITY OF AUSTIN
WATERSHED PROTECTION DEPARTMENT

FILTER DIKE CURB INLET PROTECTION

RECORD COPY SIGNED BY MARY VIGIL 10/30/09 ADOPTED

THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.

STANDARD NO. 6285-2

NOTES:

1. STONE SIZE: 75-125 mm (3-5") OPEN GRADED ROCK.

2. LENGTH: AS EFFECTIVE BUT NOT LESS THAN 15 m (50').

3. THICKNESS: NOT LESS THAN 200 mm (8").

4. WIDTH: NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS/EGRESS.

5. WASHING: WHEN NECESSARY, VEHICLE WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC ROADWAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE AND DRAINS INTO AN APPROVED TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATERCOURSE USING APPROVED METHODS.

6. MAINTENANCE: THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC ROADWAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND, AS WELL AS REPAIR AND CLEAN OUT OF ANY MEASURE DEVICES USED TO TRAP SEDIMENT. ALL SEDIMENTS THAT IS SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC ROADWAY MUST BE REMOVED IMMEDIATELY.

7. DRAINAGE: ENTRANCE MUST BE PROPERLY GRADED OR INCORPORATE A DRAINAGE SWALE TO PREVENT RUNOFF FROM LEAVING THE CONSTRUCTION SITE.

CITY OF AUSTIN
WATERSHED PROTECTION DEPARTMENT

STABILIZED CONSTRUCTION ENTRANCE

RECORD COPY SIGNED BY J. PATRICK MURPHY 5/23/00 ADOPTED

THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.

STANDARD NO. 6415-1

CITY OF AUSTIN
WATERSHED PROTECTION DEPARTMENT

TREE PROTECTION FENCE LOCATIONS

RECORD COPY SIGNED BY J. PATRICK MURPHY 11/15/99 ADOPTED

THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.

STANDARD NO. 6105-1

CITY OF AUSTIN
WATERSHED PROTECTION DEPARTMENT

TREE PROTECTION FENCE
TYPE A - CHAIN LINK

RECORD COPY SIGNED BY J. PATRICK MURPHY 11/15/99 ADOPTED

THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.

STANDARD NO. 6105-2

NOTE: FILTER FABRIC SHALL ENTIRELY COVER DIKE AND SKIRT.

INSTALLATION DETAIL OPTIONS:

- TOP-IN 150 mm (6") MINIMUM.
- WEIGHTED WITH 75 mm-125 mm (3"-5") OPEN GRADED ROCK OR TOED-IN 150 mm (6") WITH MECHANICALLY COMPACTED MATERIAL. OTHERWISE, THE ENTIRE STRUCTURE SHALL BE TRENCHED IN 100 mm (4").
- TRENCHED IN 100 mm (4").
- CONTINUOUS BACKING/PLANKS ON IMPERVIOUS SURFACES.

CITY OF AUSTIN
WATERSHED PROTECTION DEPARTMENT

TRIANGULAR SEDIMENT FILTER DIKE

RECORD COPY SIGNED BY J. PATRICK MURPHY 3/27/00 ADOPTED

THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.

STANDARD NO. 6285

GENERAL NOTES:

- DIKES SHALL BE PLACED IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT DIKE.
- THE FABRIC COVER AND SKIRT SHALL BE A CONTINUOUS WRAPPING OF GEOTEXTILE. THE SKIRT SHALL BE A CONTINUOUS EXTENSION OF THE FABRIC ON THE UPSTREAM FACE.
- THE SKIRT SHALL BE WEIGHTED WITH A CONTINUOUS LAYER OF 75-125 mm (3-5") OPEN GRADED ROCK OR TOED-IN 150 mm (6") WITH MECHANICALLY COMPACTED MATERIAL. OTHERWISE, THE ENTIRE STRUCTURE SHALL BE TRENCHED IN 100 mm (4").
- DIKES AND SKIRT SHALL BE SECURELY ANCHORED IN PLACE USING 150 mm (6") WIRE STAPLES ON 600 mm (2') CENTERS ON BOTH EDGES AND SKIRT, OR STAKE USING 10M (3/8") DIAMETER RE-BAR WITH TEE ENDS.
- FILTER MATERIAL SHALL BE LAPPED OVER ENDS 150 mm (6") TO COVER DIKE TO DIKE JOINTS. JOINTS SHALL BE FASTENED WITH GALVANIZED SHOAT RINGS.
- THE DIKE STRUCTURE SHALL BE MW40-150 mmX150 mm (6 GA. 6"X6") WIRE MESH, 450 mm (18") ON A SIDE.
- INSPECTION SHALL BE MADE WEEKLY OR AFTER EACH RAINFALL EVENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED BY THE CONTRACTOR.
- ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 150 mm (6") AND DISPOSED OF IN A MANNER WHICH WILL NOT CAUSE ADDITIONAL SILTATION.
- AFTER THE DEVELOPMENT SITE IS COMPLETELY STABILIZED, THE DIKES AND ANY REMAINING SILT SHALL BE REMOVED. SILT SHALL BE DISPOSED OF AS INDICATED IN GENERAL NOTE 8 ABOVE.

ISSUE	DATE	DESCRIPTION
B	10/3/2014	90% DRAFT FOR REVIEW
A	1/24/2014	60% DRAFT FOR REVIEW

PROJECT MANAGER	S. MUCHARD
DESIGNED BY	L. ROSS
DRAWN BY	C. AMARAL
CHECKED BY	C. PARKER
DATE	OCTOBER 2014
PROJECT NUMBER	220162

THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF REVIEW UNDER THE AUTHORITY OF D. LAUREN ROSS TEXAS P.E. NO. 56647 DATE: OCTOBER 3, 2014 IT IS NOT TO BE USED FOR CONSTRUCTION OR ANY OTHER PURPOSE.

90% DRAFT



**ELIZA SPRING
OUTLET DAYLIGHTING**

Austin, Texas

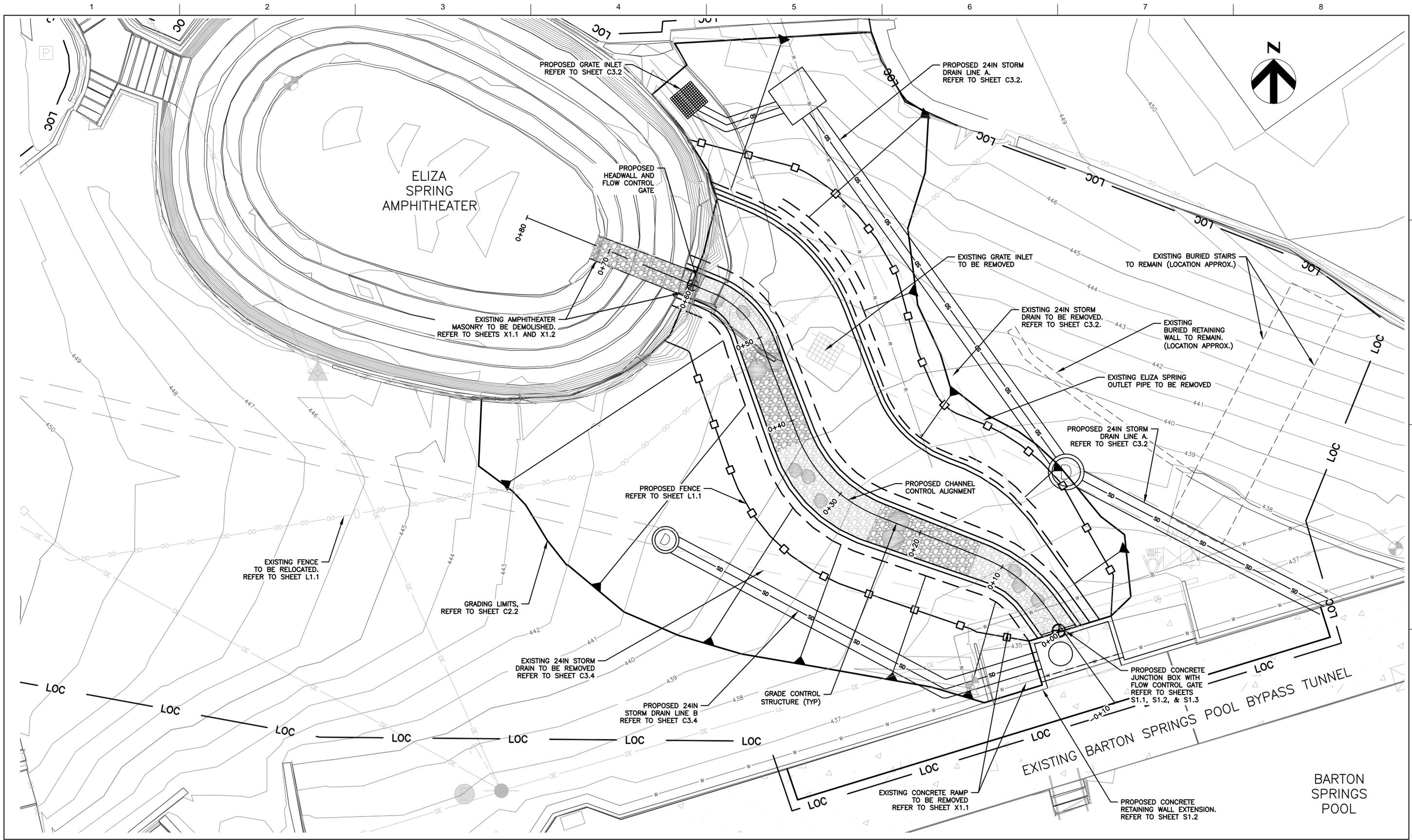
**EROSION/SEDIMENTATION CONTROL
STANDARD DETAILS**



FILENAME | C1.3.DWG
SCALE | NONE

SHEET
C1.3





ISSUE	DATE	DESCRIPTION
B	10/3/2014	90% DRAFT FOR REVIEW
A	1/24/2014	60% DRAFT FOR REVIEW

PROJECT MANAGER	S. MUCHARD
DESIGNED BY	S. MUCHARD
DRAWN BY	C. AMARAL
CHECKED BY	C. PARKER
DATE	OCTOBER 2014
PROJECT NUMBER	220162

THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF REVIEW UNDER THE AUTHORITY OF SCOTT M. MUCHARD TEXAS P.E. NO. 89409 DATE: OCTOBER 3, 2014 IT IS NOT TO BE USED FOR CONSTRUCTION OR ANY OTHER PURPOSE.
90% DRAFT



ELIZA SPRING OUTLET DAYLIGHTING

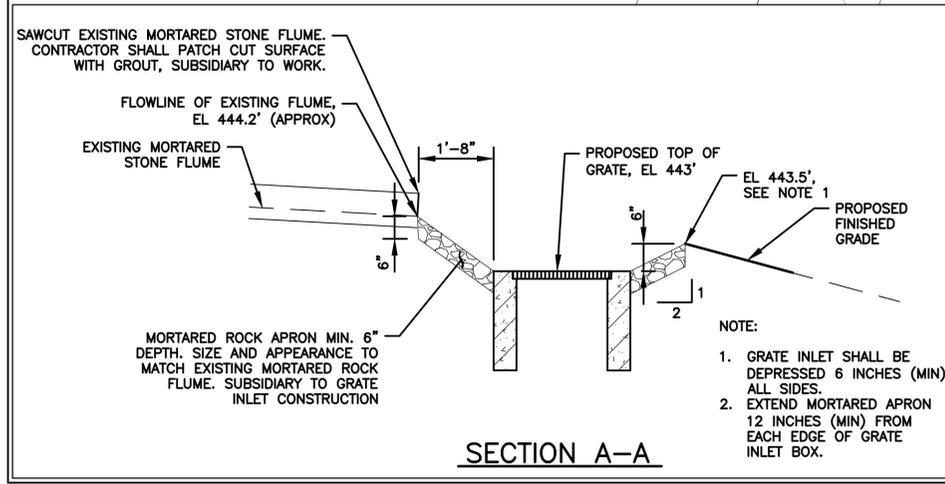
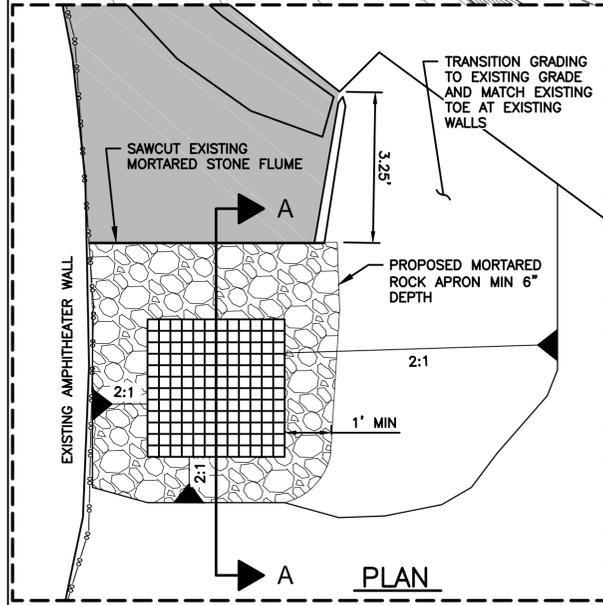
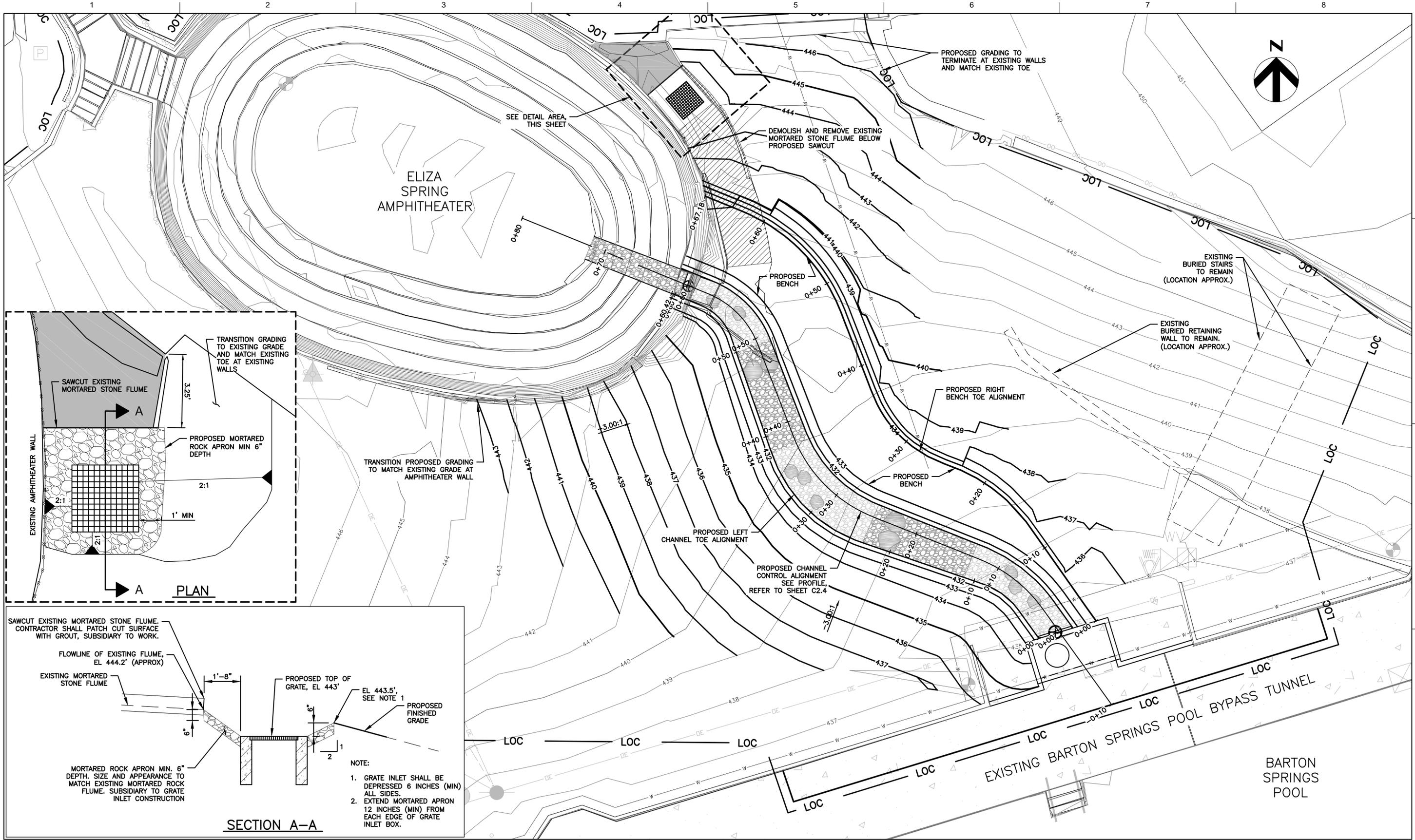
Austin, Texas

GENERAL PROJECT LAYOUT



FILENAME | C2.1.DWG
SCALE | 1"=5'

SHEET
C2.1



ISSUE	DATE	DESCRIPTION
B	10/3/2014	90% DRAFT FOR REVIEW
A	1/24/2014	60% DRAFT FOR REVIEW

PROJECT MANAGER	S. MUCHARD
DESIGNED BY	E. STEWART
DRAWN BY	C. AMARAL
CHECKED BY	C. PARKER
DATE	OCTOBER 2014
PROJECT NUMBER	220162

THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF REVIEW UNDER THE AUTHORITY OF ERIC J. STEWART TEXAS P.E. NO. 95907 DATE: OCTOBER 3, 2014 IT IS NOT TO BE USED FOR CONSTRUCTION OR ANY OTHER PURPOSE.

90% DRAFT



**ELIZA SPRING
OUTLET DAYLIGHTING**

Austin, Texas

**PROJECT GRADING
PLAN**



FILENAME | C2.2.DWG
SCALE | 1"=5'

SHEET
C2.2

Alignment: CHANNEL CONTROL ALIGNMENT
Description:

Tangent Data
Description PT Station Northing Easting
Start: 0+10.000 10069118.28 3105802.584
End: 0+03.283 10069129.05 3105794.818
Tangent Data
Parameter Value Parameter Value
Length: 13.283 Course: "N 35' 46' 32.6873" W"

Curve Point Data
Description Station Northing Easting
PC: 0+03.283 10069129.05 3105794.818
RP: 10069119.7 3105781.837
PT: 0+12.376 10069134.57 3105787.743
Circular Curve Data
Parameter Value Parameter Value
Delta: "32' 33' 47.731" Type: LEFT
Radius: 16
Length: 9.093 Tangent: 4.673
Mid-Ord: 0.642 External: 0.668
Chord: 8.971 Course: "N 52' 03' 26.5558" W"

Tangent Data
Description PT Station Northing Easting
Start: 0+12.376 10069134.57 3105787.743
End: 0+25.148 10069139.28 3105775.873
Tangent Data
Parameter Value Parameter Value
Length: 12.772 Course: "N 68' 20' 20.4243" W"

Curve Point Data
Description Station Northing Easting
PC: 0+25.148 10069139.28 3105775.873
RP: 10069154.16 3105781.779
PT: 0+38.314 10069148.37 3105766.861
Circular Curve Data
Parameter Value Parameter Value
Delta: "47' 08' 48.5387" Type: RIGHT
Radius: 16
Length: 13.166 Tangent: 6.981
Mid-Ord: 1.335 External: 1.457
Chord: 12.798 Course: "N 44' 45' 56.1550" W"

Tangent Data
Description PT Station Northing Easting
Start: 0+38.314 10069148.37 3105766.861
End: 0+49.332 10069158.64 3105762.878
Tangent Data
Parameter Value Parameter Value
Length: 11.018 Course: "N 21' 11' 31.8857" W"

Curve Point Data
Description Station Northing Easting
PC: 0+49.332 10069158.64 3105762.878
RP: 10069155.03 3105753.554
PT: 0+57.489 10069164.3 3105757.312
Circular Curve Data
Parameter Value Parameter Value
Delta: "46' 44' 06.9443" Type: LEFT
Radius: 10
Length: 8.157 Tangent: 4.321
Mid-Ord: 0.82 External: 0.893
Chord: 7.933 Course: "N 44' 33' 35.3578" W"

Tangent Data
Description PT Station Northing Easting
Start: 0+57.489 10069164.3 3105757.312
End: 0+79.998 10069172.75 3105736.453
Tangent Data
Parameter Value Parameter Value
Length: 22.509 Course: "N 67' 55' 38.8300" W"

Alignment: LEFT CHANNEL TOE
Description:

Tangent Data
Description PT Station Northing Easting
Start: 0+00.000 10069125.69 3105794.427
End: 0+03.929 10069128.87 3105792.13
Tangent Data
Parameter Value Parameter Value
Length: 3.929 Course: "N 35' 46' 32.6876" W"

Curve Point Data
Description Station Northing Easting
PC: 0+03.929 10069128.87 3105792.13
RP: 10069124.2 3105785.64
PT: 0+08.863 10069131.77 3105788.229
Circular Curve Data
Parameter Value Parameter Value
Delta: "35' 20' 21.4623" Type: LEFT
Radius: 8
Length: 4.934 Tangent: 2.548
Mid-Ord: 0.377 External: 0.396
Chord: 4.856 Course: "N 53' 26' 43.4188" W"

Tangent Data
Description PT Station Northing Easting
Start: 0+08.863 10069131.77 3105788.229
End: 0+23.485 10069136.5 3105774.394
Tangent Data
Parameter Value Parameter Value
Length: 14.622 Course: "N 71' 06' 54.1499" W"

Curve Point Data
Description Station Northing Easting
PC: 0+23.485 10069136.5 3105774.394
RP: 10069151.64 3105779.573
PT: 0+37.948 10069146.34 3105764.474
Circular Curve Data
Parameter Value Parameter Value
Delta: "51' 47' 24.6483" Type: RIGHT
Radius: 16
Length: 14.463 Tangent: 7.767
Mid-Ord: 1.606 External: 1.786
Chord: 13.975 Course: "N 45' 13' 11.8258" W"

Tangent Data
Description PT Station Northing Easting
Start: 0+37.948 10069146.34 3105764.474
End: 0+52.000 10069159.6 3105759.824
Tangent Data
Parameter Value Parameter Value
Length: 14.052 Course: "N 19' 19' 29.5016" W"

Curve Point Data
Description Station Northing Easting
PC: 0+52.000 10069159.6 3105759.824
RP: 10069157.44 3105754.23
PT: 0+56.853 10069162.98 3105756.523
Circular Curve Data
Parameter Value Parameter Value
Delta: "46' 20' 17.9496" Type: LEFT
Radius: 6
Length: 4.853 Tangent: 2.568
Mid-Ord: 0.484 External: 0.526
Chord: 4.721 Course: "N 44' 21' 40.8604" W"

Tangent Data
Description PT Station Northing Easting
Start: 0+56.853 10069162.98 3105756.523
End: 0+60.425 10069164.35 3105753.222
Tangent Data
Parameter Value Parameter Value
Length: 3.572 Course: "N 67' 31' 49.8353" W"

Alignment: RIGHT BENCH TOE
Description:

Tangent Data
Description PT Station Northing Easting
Start: 0+00.000 10069127.64 3105800.84
End: 0+12.964 10069138.24 3105793.374
Tangent Data
Parameter Value Parameter Value
Length: 12.964 Course: "N 35' 09' 39.5399" W"

Curve Point Data
Description Station Northing Easting
PC: 0+12.964 10069138.24 3105793.374
RP: 10069127.57 3105778.221
PT: 0+24.367 10069145.03 3105784.436
Circular Curve Data
Parameter Value Parameter Value
Delta: "35' 14' 47.9497" Type: LEFT
Radius: 18.536
Length: 11.403 Tangent: 5.888
Mid-Ord: 0.87 External: 0.913
Chord: 11.224 Course: "N 52' 47' 03.5147" W"

Tangent Data
Description PT Station Northing Easting
Start: 0+24.367 10069145.03 3105784.436
End: 0+24.995 10069145.24 3105783.845
Tangent Data
Parameter Value Parameter Value
Length: 0.628 Course: "N 70' 24' 27.4897" W"

Curve Point Data
Description Station Northing Easting
PC: 0+24.995 10069145.24 3105783.845
RP: 10069158.02 3105788.393
PT: 0+36.644 10069153.11 3105775.748
Circular Curve Data
Parameter Value Parameter Value
Delta: "49' 12' 55.6039" Type: RIGHT
Radius: 13.562
Length: 11.65 Tangent: 6.212
Mid-Ord: 1.232 External: 1.355
Chord: 11.295 Course: "N 45' 47' 59.6876" W"

Tangent Data
Description PT Station Northing Easting
Start: 0+36.644 10069153.11 3105775.748
End: 0+46.454 10069162.26 3105772.201
Tangent Data
Parameter Value Parameter Value
Length: 9.81 Course: "N 21' 11' 31.8856" W"

Curve Point Data
Description Station Northing Easting
PC: 0+46.454 10069162.26 3105772.201
RP: 10069155.03 3105753.554
PT: 0+62.768 10069173.56 3105761.07
Circular Curve Data
Parameter Value Parameter Value
Delta: "46' 44' 06.9443" Type: LEFT
Radius: 20
Length: 16.314 Tangent: 8.641
Mid-Ord: 1.64 External: 1.787
Chord: 15.865 Course: "N 44' 33' 35.3578" W"

Tangent Data
Description PT Station Northing Easting
Start: 0+62.768 10069173.56 3105761.07
End: 0+67.180 10069175.22 3105756.981
Tangent Data
Parameter Value Parameter Value
Length: 4.412 Course: "N 67' 55' 38.8300" W"



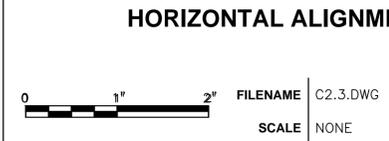
ISSUE	DATE	DESCRIPTION
B	10/3/2014	90% DRAFT FOR REVIEW
A	1/24/2014	60% DRAFT FOR REVIEW

PROJECT MANAGER	S. MUCHARD
DESIGNED BY	E. STEWART
DRAWN BY	C. AMARAL
CHECKED BY	C. PARKER
DATE	OCTOBER 2014
PROJECT NUMBER	220162

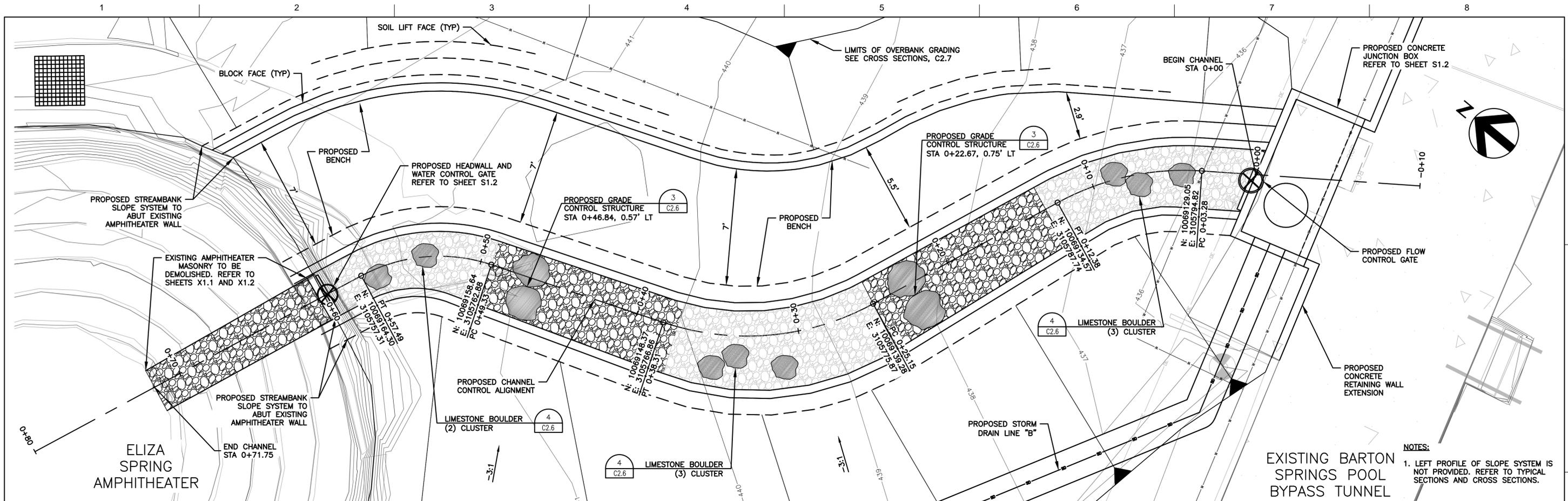
THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF REVIEW UNDER THE AUTHORITY OF ERIC J. STEWART TEXAS P.E. NO. 95907 DATE: OCTOBER 3, 2014 IT IS NOT TO BE USED FOR CONSTRUCTION OR ANY OTHER PURPOSE.
90% DRAFT



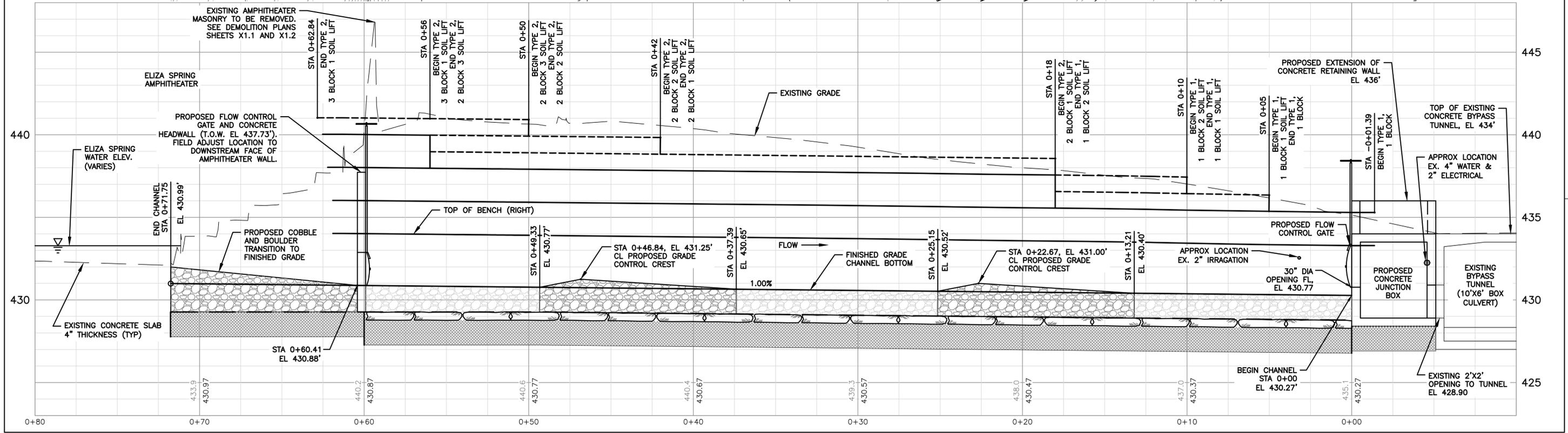
**ELIZA SPRING
OUTLET DAYLIGHTING**
Austin, Texas



HORIZONTAL ALIGNMENT DATA



NOTES:
 1. LEFT PROFILE OF SLOPE SYSTEM IS NOT PROVIDED. REFER TO TYPICAL SECTIONS AND CROSS SECTIONS.



ISSUE	DATE	DESCRIPTION
B	10/3/2014	90% DRAFT FOR REVIEW
A	7/24/2014	60% DRAFT FOR REVIEW

PROJECT MANAGER	S. MUCHARD
DESIGNED BY	E. STEWART
DRAWN BY	C. AMARAL
CHECKED BY	C. PARKER
DATE	OCTOBER 2014
PROJECT NUMBER	220162

THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF REVIEW UNDER THE AUTHORITY OF ERIC J. STEWART TEXAS P.E. NO. 95907 DATE: OCTOBER 3, 2014 IT IS NOT TO BE USED FOR CONSTRUCTION OR ANY OTHER PURPOSE.
90% DRAFT

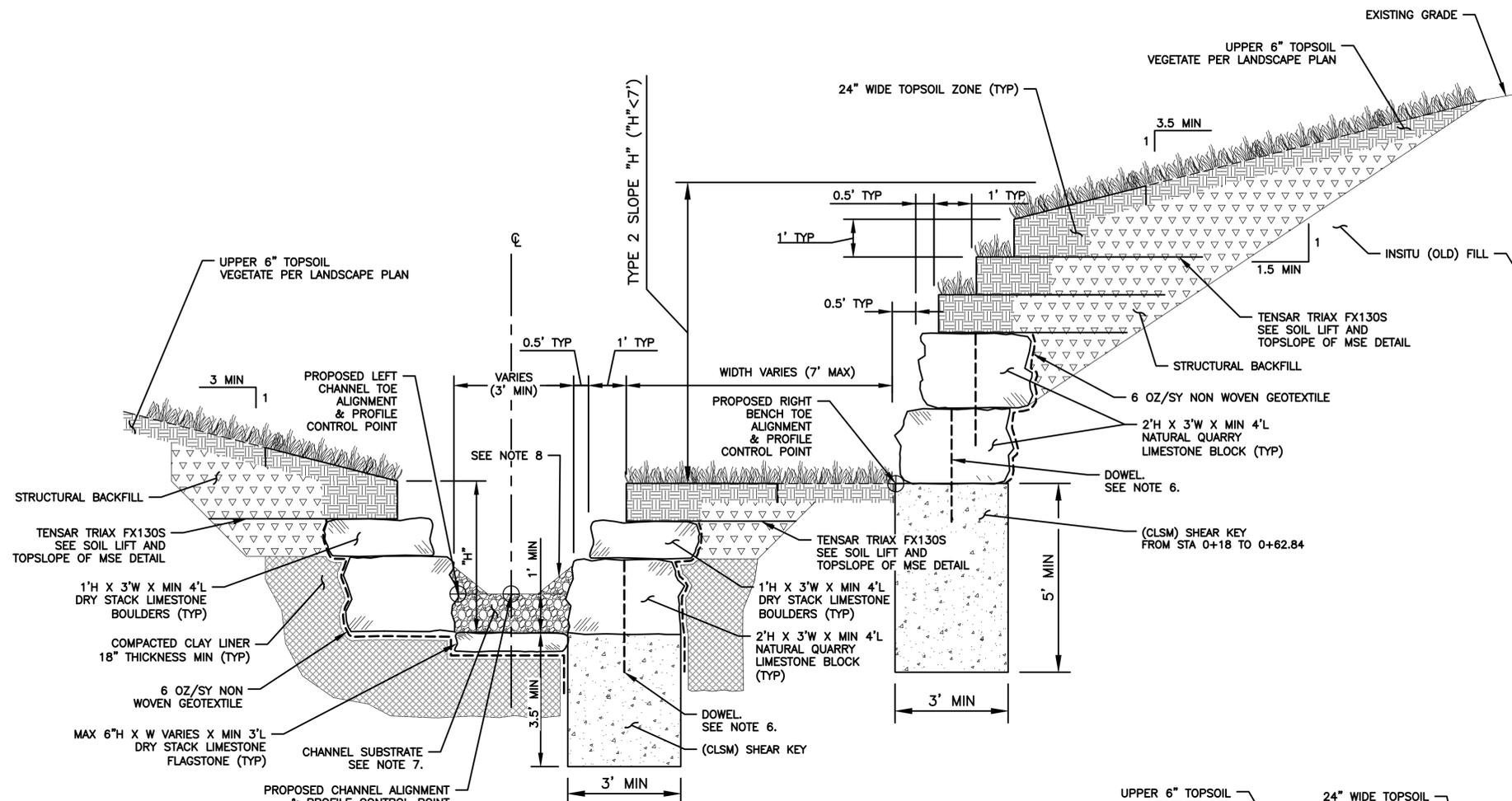


**ELIZA SPRING
 OUTLET DAYLIGHTING**
 Austin, Texas

**OUTLET CHANNEL
 PLAN & RIGHT PROFILE**

0 1" 2" FILENAME C2.4.DWG
 SCALE 1"=3'

SHEET
C2.4



TYPICAL SECTION W/ TYPE 2 SLOPE SYSTEM
 (1, 2, OR 3 BLOCKS WITH SOIL LIFTS,
 TYPE 2 SLOPE "H" < 7')

DESIGN CRITERIA SUMMARY								
Foundation Material	Sliding Factor of Safety		Overturning Factor of Safety		Bearing Capacity Factor of Safety		Slope Stability Factor of Safety	
	Computed	Criteria	Computed	Criteria	Computed	Criteria	Computed	Criteria
Soil Fill	3.14	1.5	2.06	2.0	3.18	3.0	1.86	1.3

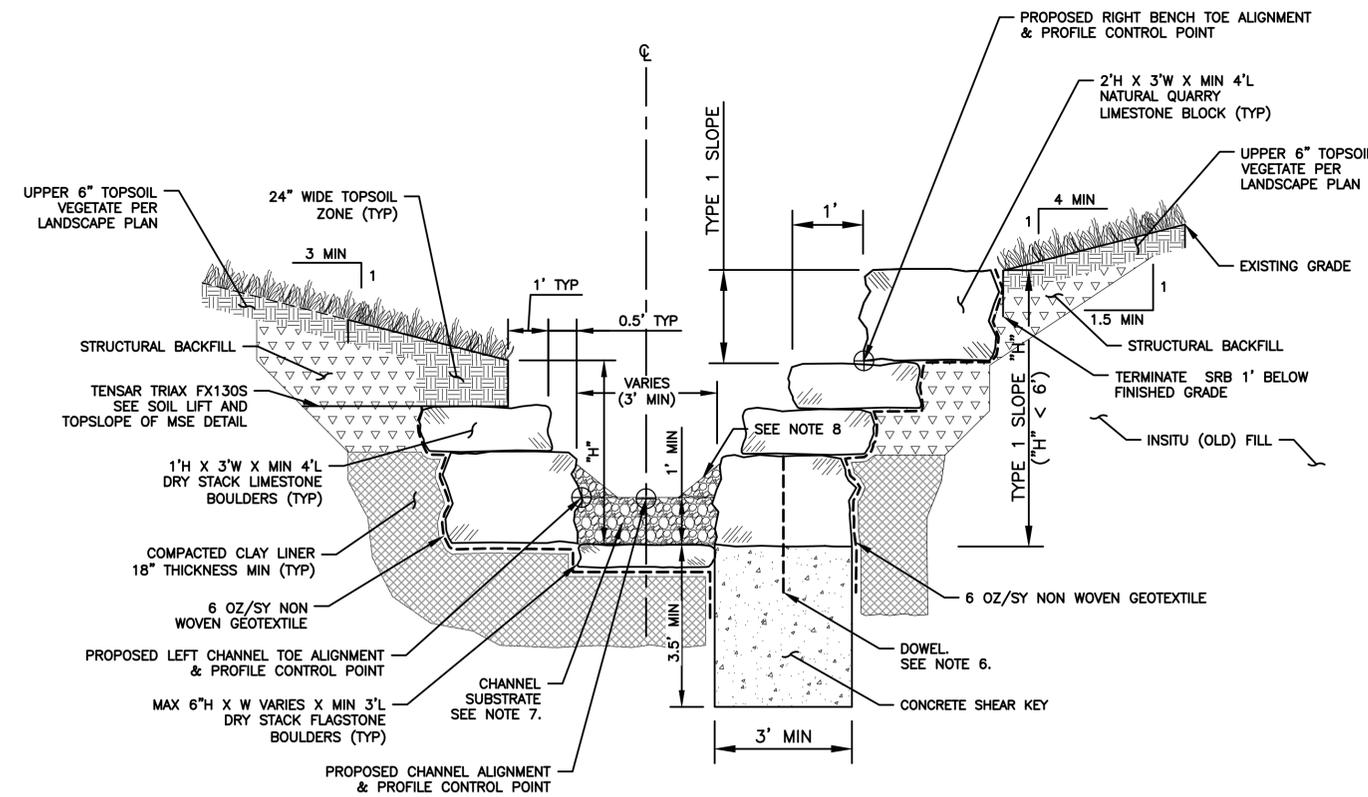
RETAINING WALL GEOTECHNICAL DESIGN PARAMETERS			
Material	Friction Angle (degrees)	Cohesion (psf)	Moist Unit Weight (pcf)
In Situ (Old) Fill	28	100	110
Structural (MSE) Backfill	32	250	122
Limestone Block	0	4000	140
LS Block Interface	24	NA	NA

DESIGN CRITERIA NOTE:
 1. WALLS WERE DESIGNED IN ACCORDANCE WITH THE CITY OF AUSTIN, TRANSPORTATION CRITERIA MANUAL, CHAPTER 11.

- SUBSURFACE CONDITIONS:**
- A SITE SPECIFIC GEOTECHNICAL INVESTIGATION WAS NOT CONDUCTED FOR THIS PROJECT. BASED ON LIMITED AVAILABLE INFORMATION, SUBSURFACE CONDITIONS WITHIN THE LIMITS OF THE PROJECT MAY CONSIST OF EXISTING UNDOCUMENTED FILL MATERIAL (OLD FILL). OLD FILL IS ASSUMED TO CONSIST OF LOOSE TO MEDIUM DENSE CLAYEY SAND TO MEDIUM STIFF SANDY LEAN CLAY. GROUNDWATER IS ASSUMED TO LIE AT ELEVATION 432 ± FEET.
 - SOIL DESIGN-RELATED PARAMETERS WERE ESTIMATED BASED ON THE ASSUMED SUBSURFACE CONDITIONS. PROJECT GEOTECHNICAL ENGINEER SHALL PERIODICALLY ASSESS EXPOSED/ENCOUNTERED MATERIAL DURING CONSTRUCTION EXCAVATION FOR CONSISTENCY WITH THE ESTIMATED DESIGN PARAMETERS. A SUBSURFACE CONDITION THAT IS MORE CRITICAL THAN THE ASSUMED SUBSURFACE CONDITION MAY BE CAUSE FOR WORK STOPPAGE AND REQUIRE DESIGN MODIFICATION.

- EXCAVATION:**
- CONTRACTOR IS RESPONSIBLE FOR TEMPORARY STABILITY RELATIVE TO EXCAVATION GEOMETRY AND EROSION CONTROL OF DISTURBED SOIL DUE TO CONSTRUCTION ACTIVITIES. CONTRACTOR SHALL SUBMIT TO THE OWNER A SEALED EXCAVATION SAFETY SYSTEM DESIGN WHICH SHALL INCLUDE ANY SPECIAL SHORING, SLOPE PROTECTION, OR PHASING AS REQUIRED TO KEEP EXCAVATED AREAS STABLE THROUGHOUT THE CONSTRUCTION PERIOD. CONTRACTOR SHALL MODIFY THE EXCAVATION SAFETY SYSTEM DESIGN BASED ON ACTUAL SUBSURFACE CONDITIONS ENCOUNTERED TO MAINTAIN SAFE AND STABLE EXCAVATIONS. SEE SPECIAL SPECIFICATION 130000.
 - MAJOR EXCAVATION SHALL PRECEDE MSE AND BANK STABILIZATION AND SHALL BE PERFORMED IN ACCORDANCE WITH COA STANDARD SPECIFICATION ITEMS NO. 120S AND NO. 132S.
 - CONTRACTOR SHALL NOTIFY OWNER OR ENGINEER PRIOR TO EXCAVATION. GEOTECHNICAL ENGINEER TO BE PRESENT PERIODICALLY DURING EXCAVATION TO CONFIRM THE ACTUAL SOIL CONDITIONS ARE CONSISTENT WITH THE ASSUMED CONDITIONS. IF EXCAVATION CONDITIONS ARE SUBSTANTIALLY DIFFERENT THEN ASSUMED, WHILE GEOTECHNICAL ENGINEER IS NOT ON-SITE, THEN ENGINEER SHALL BE NOTIFIED IMMEDIATELY.

- CONSTRUCTION NOTES:**
- EACH BLOCK-TO-SHEAR KEY AND BLOCK TO BLOCK INTERFACE SHALL BE DOWELED. FOR EACH BLOCK-TO-SHEAR KEY INTERFACE, DRILL 1.5 INCH DIAMETER HOLES CENTERED INTO THE BLOCK AND SHEAR KEY. FOR EACH BLOCK-TO-BLOCK INTERFACE, DRILL 1.5 INCH DIAMETER HOLES CENTERED BETWEEN THE FRONT AND BACK FACES OF THE UPPER BLOCK AND A MINIMUM OF 6 INCHES FROM THE PREVIOUSLY INSTALLED DOWELS IN THE LOWER BLOCK COURSE. NO ROCK HAMMERING WILL BE ALLOWED. INSTALL #8 REBAR DOWELS WITH MINIMUM 12 INCHES OF EMBEDMENT INTO UPPER AND LOWER BLOCK/CONCRETE LAYER. DOWELS SHALL BE ANCHORED WITH EPOXY ADHESIVE (HILTI HIT-RE-500, OR EQUAL) IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION GUIDELINES.
 - CHANNEL SUBSTRATE MATERIAL WILL BE PROVIDED AND STOCKPILED BY THE CITY FOR USE ON THE PROJECT. MATERIAL WILL CONSIST OF COARSE GRAVELS AND COBBLES.
 - CONTRACTOR SHALL PILE UP SUBSTRATE AT THE EDGE OF THE PROPOSED CHANNEL AS DIRECTED BY THE CITY'S BIOLOGIST TO PROVIDE VARIABLE DEPTHS ALONG BOTTOM WIDTH OF THE CHANNEL FOR FULL LENGTH OF CHANNEL. NO SEPARATE PAY.



TYPICAL SECTION W/ TYPE 1 SLOPE SYSTEM
 (1 BLOCK, TYPE 1 SLOPE < 6')



ISSUE	DATE	DESCRIPTION
B	10/3/2014	90% DRAFT FOR REVIEW
A	7/24/2014	60% DRAFT FOR REVIEW

PROJECT MANAGER	S. MUCHARD
DESIGNED BY	R. BOEHM
DRAWN BY	C. AMARAL
CHECKED BY	C. PARKER
DATE	OCTOBER 2014
PROJECT NUMBER	220162

THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF REVIEW UNDER THE AUTHORITY OF ROLLAND G. BOEHM TEXAS P.E. NO. 101598 DATE: OCTOBER 3, 2014 IT IS NOT TO BE USED FOR CONSTRUCTION OR ANY OTHER PURPOSE.
90% DRAFT



**ELIZA SPRING
 OUTLET DAYLIGHTING**

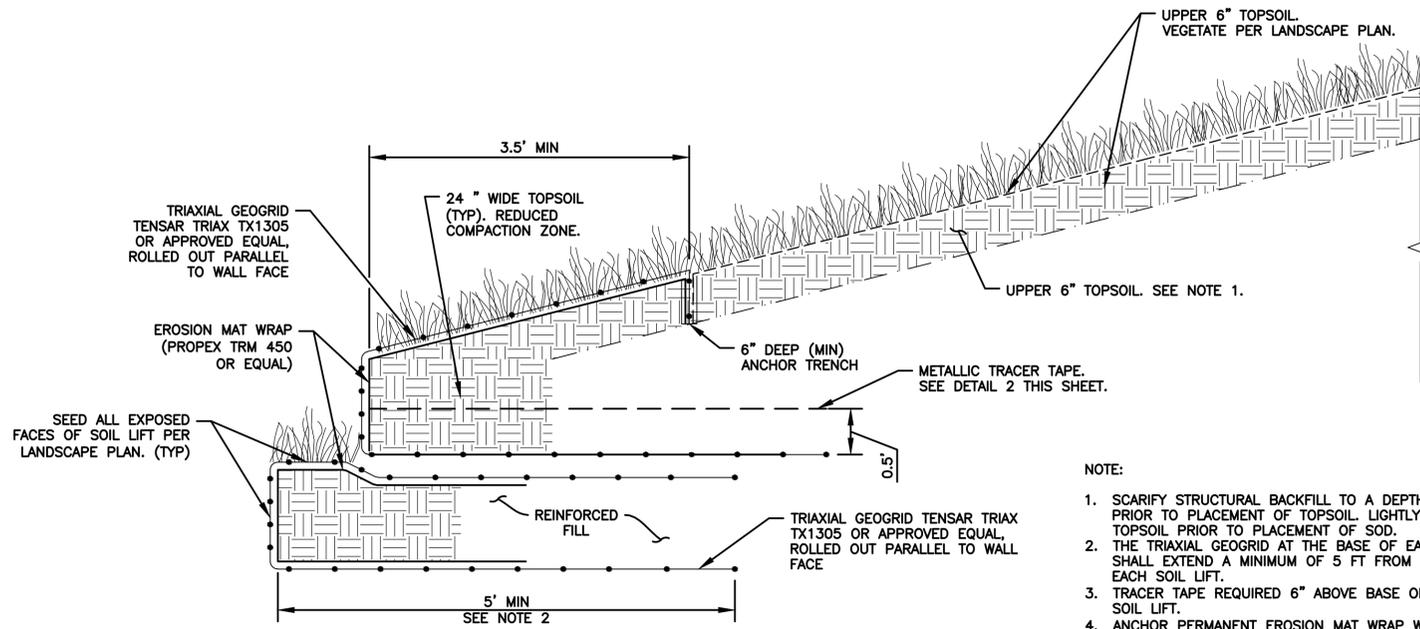
Austin, Texas

**TYPICAL CHANNEL SECTIONS
 W/ SLOPE SYSTEM
 DETAILS**



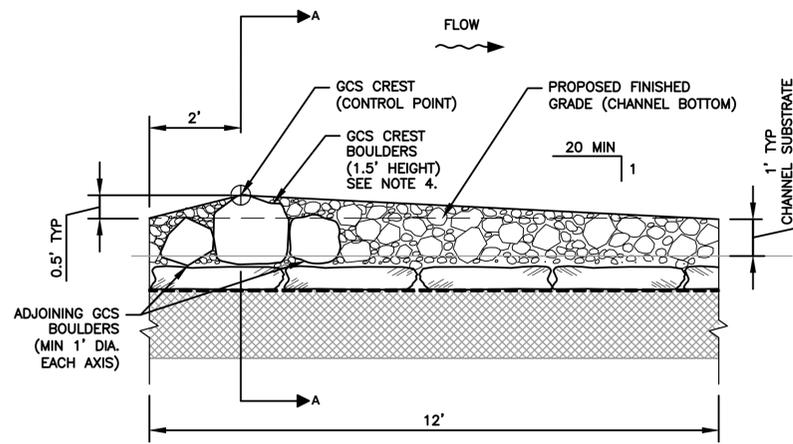
FILENAME | C2.5.DWG
 SCALE | 1"=2'

SHEET
C2.5



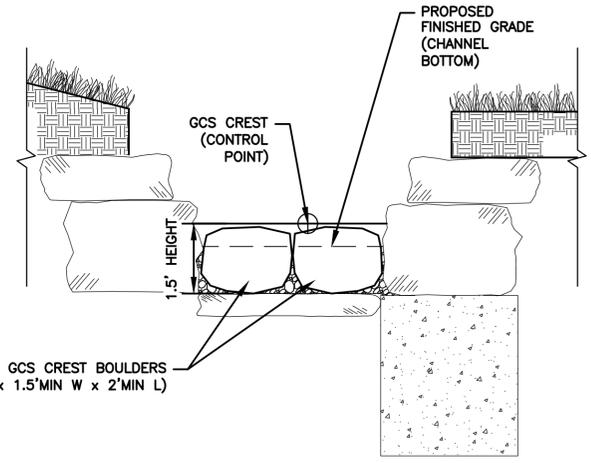
1
SOIL LIFT AND TOP SLOPE OF MSE STRUCTURE DETAIL
SCALE: 1"=1'

- NOTE:
1. SCARIFY STRUCTURAL BACKFILL TO A DEPTH OF 3 INCHES PRIOR TO PLACEMENT OF TOPSOIL. LIGHTLY COMPACT TOPSOIL PRIOR TO PLACEMENT OF SOD.
 2. THE TRIAXIAL GEOGRID AT THE BASE OF EACH SOIL LIFT SHALL EXTEND A MINIMUM OF 5 FT FROM THE FACE OF EACH SOIL LIFT.
 3. TRACER TAPE REQUIRED 6" ABOVE BASE OF UPPERMOST SOIL LIFT.
 4. ANCHOR PERMANENT EROSION MAT WRAP WITH 12", 8 GAUGE WIRE STAPLES, 2.5 STAPLES PER SY.

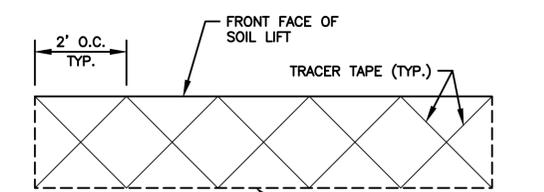


GRADE CONTROL PROFILE
N.T.S.

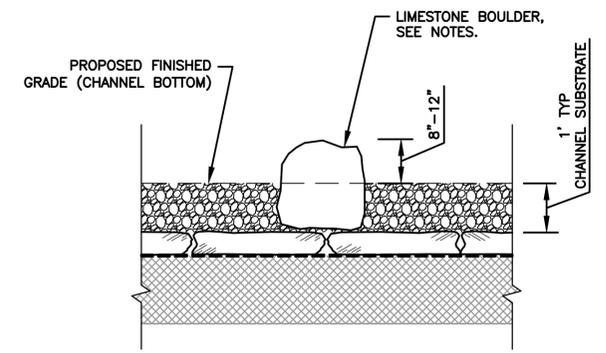
- GRADE CONTROL NOTES:
1. PLAN: BUILD GRADE CONTROL STRUCTURE (GCS) TO EXTEND ACROSS BASE OF CHANNEL WITH LARGEST DIAMETER BOULDERS AT THE CREST LINE AND REDUCE SIZES PROGRESSIVELY UPSTREAM AND DOWNSTREAM. MANUAL PLACEMENT AND SELECTION OF BOULDERS IS REQUIRED.
 2. PROFILE: CONSTRUCT DOWNSTREAM FACE OF RIFFLE AT APPROXIMATELY 20H:1V AND UPSTREAM FACE AT APPROXIMATELY 4H:1V SLOPE.
 3. GCS BOULDERS SHALL BE HAND SELECTED TO COMPLY WITH GEOMETRIC REQUIREMENTS. BOULDERS IN CHANNEL ARE TO BE PRE-APPROVED BY OWNER AND ENGINEER PRIOR CONSTRUCTION. BOULDER PLACEMENT SHALL BE APPROVED BY OWNER AND ENGINEER.
 4. EACH GCS CREST SHALL CONSIST OF TWO HAND SELECTED BOULDERS EXTENDING THE FULL WIDTH OF CHANNEL. THE HEIGHT OF EACH GCS CREST BOULDER SHALL EXTEND 6 INCHES ABOVE PROPOSED FINISHED GRADE OF CHANNEL.
 5. GCS CREST BOULDERS SHALL EXTEND AND REST SOUNDLY ON FLAGSTONE LAYER AT BASE OF CHANNEL SUBSTRATE.
 6. ADDITIONAL BOULDERS (MIN 1' DIA. EACH AXIS) SHALL ABUT THE DOWNSTREAM AND UPSTREAM FACES OF THE GCS BOULDERS.



SECTION A-A
N.T.S.



2
METALLIC TRACER TAPE PARTIAL PLAN
SCALE: 1"=2'



2
LIMESTONE BOULDER CLUSTER
SCALE: 1"=2'

- NOTES:
1. LIMESTONE BOULDER CLUSTERS SHALL EXTEND AND REST SOUNDLY ON FLAGSTONE LAYER AT BASE OF CHANNEL SUBSTRATE.
 2. EACH CLUSTER BOULDER SHALL BE HAND SELECTED BY CONTRACTOR AND PRE-APPROVED BY OWNER.
 3. CLUSTER BOULDER DIMENSIONS SHALL VARY. LENGTH AND WIDTH SHALL BE 18 INCHES MIN, BUT HEIGHT SHALL BE 20 TO 24 INCHES TO EXTEND 8 TO 12 INCHES ABOVE PROPOSED FINISHED GRADE OF CHANNEL.

3
GRADE CONTROL STRUCTURE (GCS) DETAIL
N.T.S.



ISSUE	DATE	DESCRIPTION
B	10/3/2014	90% DRAFT FOR REVIEW
A	7/24/2014	60% DRAFT FOR REVIEW

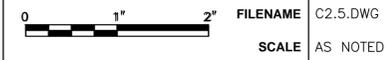
PROJECT MANAGER	S. MUCHARD
DESIGNED BY	E. STEWART
DRAWN BY	C. AMARAL
CHECKED BY	C. PARKER
DATE	OCTOBER 2014
PROJECT NUMBER	220162

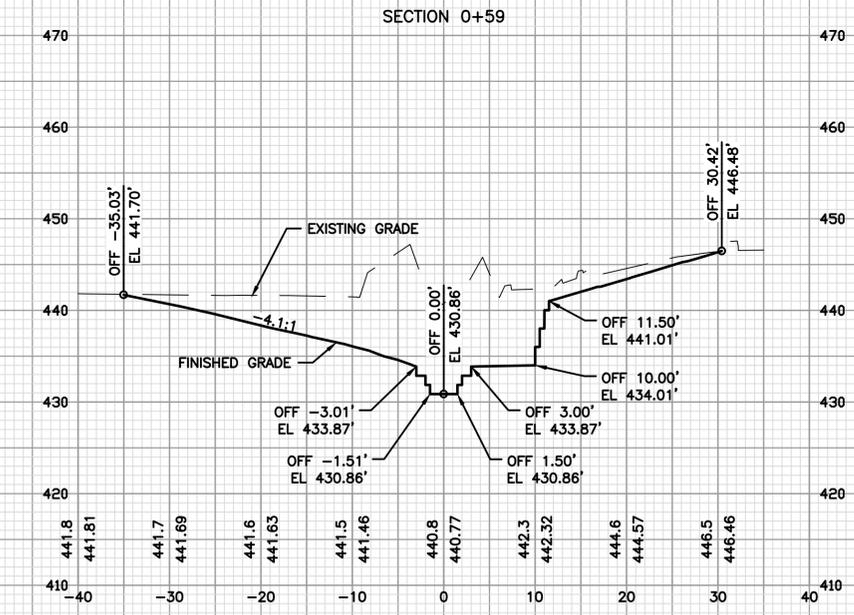
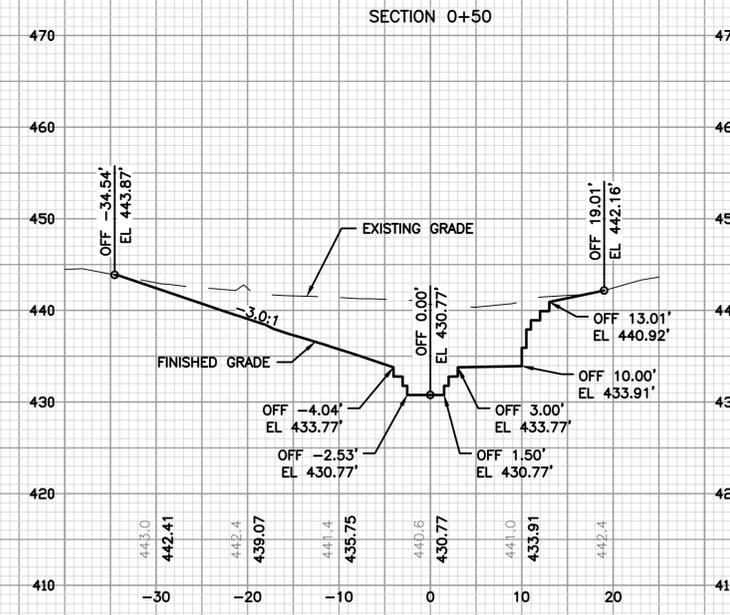
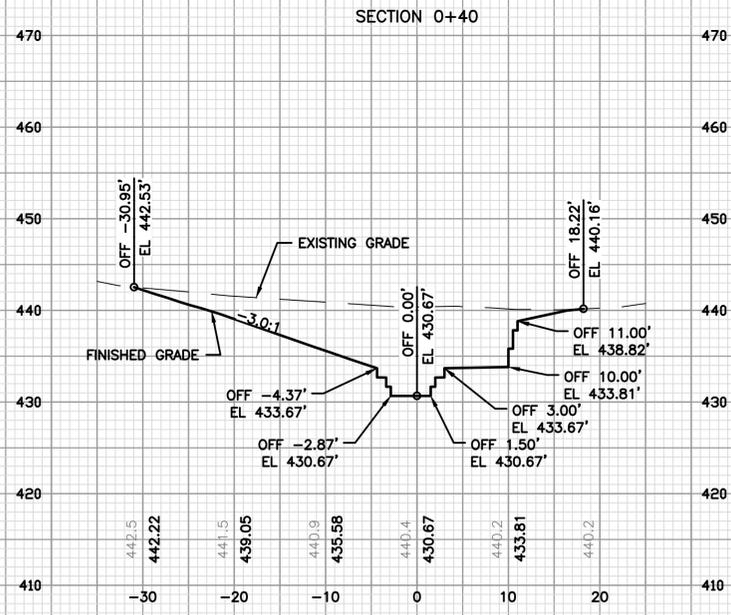
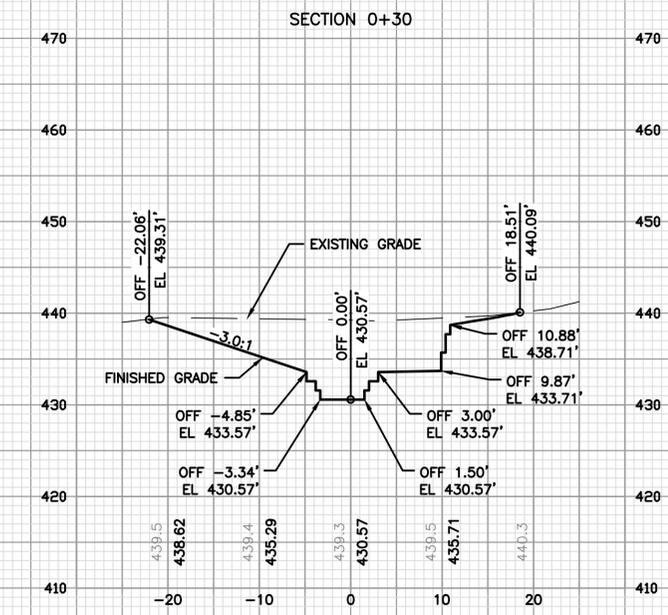
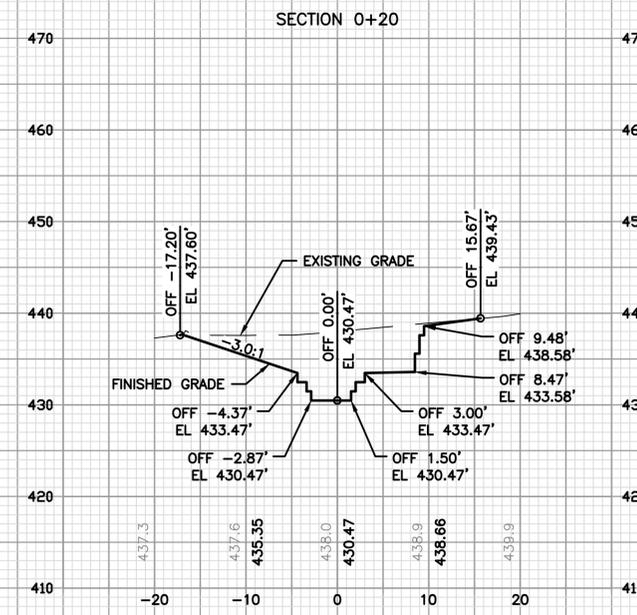
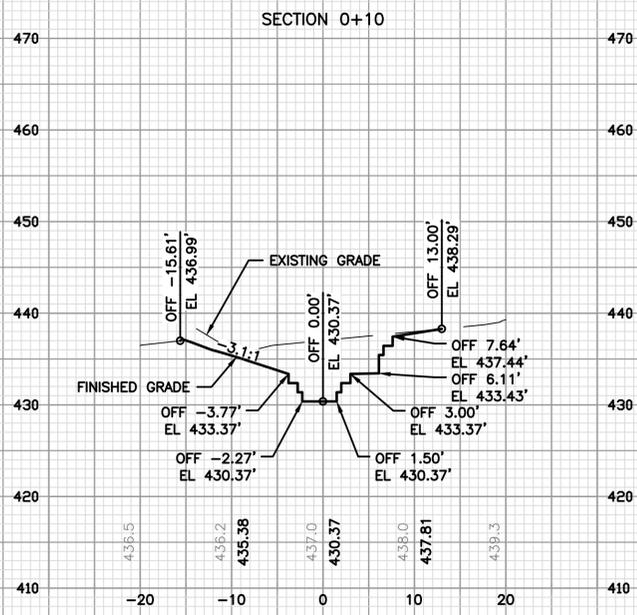
THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF REVIEW UNDER THE AUTHORITY OF ERIC J. STEWART TEXAS P.E. NO. 95907 DATE: OCTOBER 3, 2014 IT IS NOT TO BE USED FOR CONSTRUCTION OR ANY OTHER PURPOSE.
90% DRAFT



**ELIZA SPRING
OUTLET DAYLIGHTING**
Austin, Texas

MISC. CHANNEL DETAILS





ISSUE	DATE	DESCRIPTION
B	10/3/2014	90% DRAFT FOR REVIEW
A	7/24/2014	60% DRAFT FOR REVIEW

PROJECT MANAGER	S. MUCHARD
DESIGNED BY	E. STEWART
DRAWN BY	C. AMARAL
CHECKED BY	C. PARKER
DATE	OCTOBER 2014
PROJECT NUMBER	220162

THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF REVIEW UNDER THE AUTHORITY OF ERIC J. STEWART TEXAS P.E. NO. 95907 DATE: OCTOBER 3, 2014 IT IS NOT TO BE USED FOR CONSTRUCTION OR ANY OTHER PURPOSE.
90% DRAFT

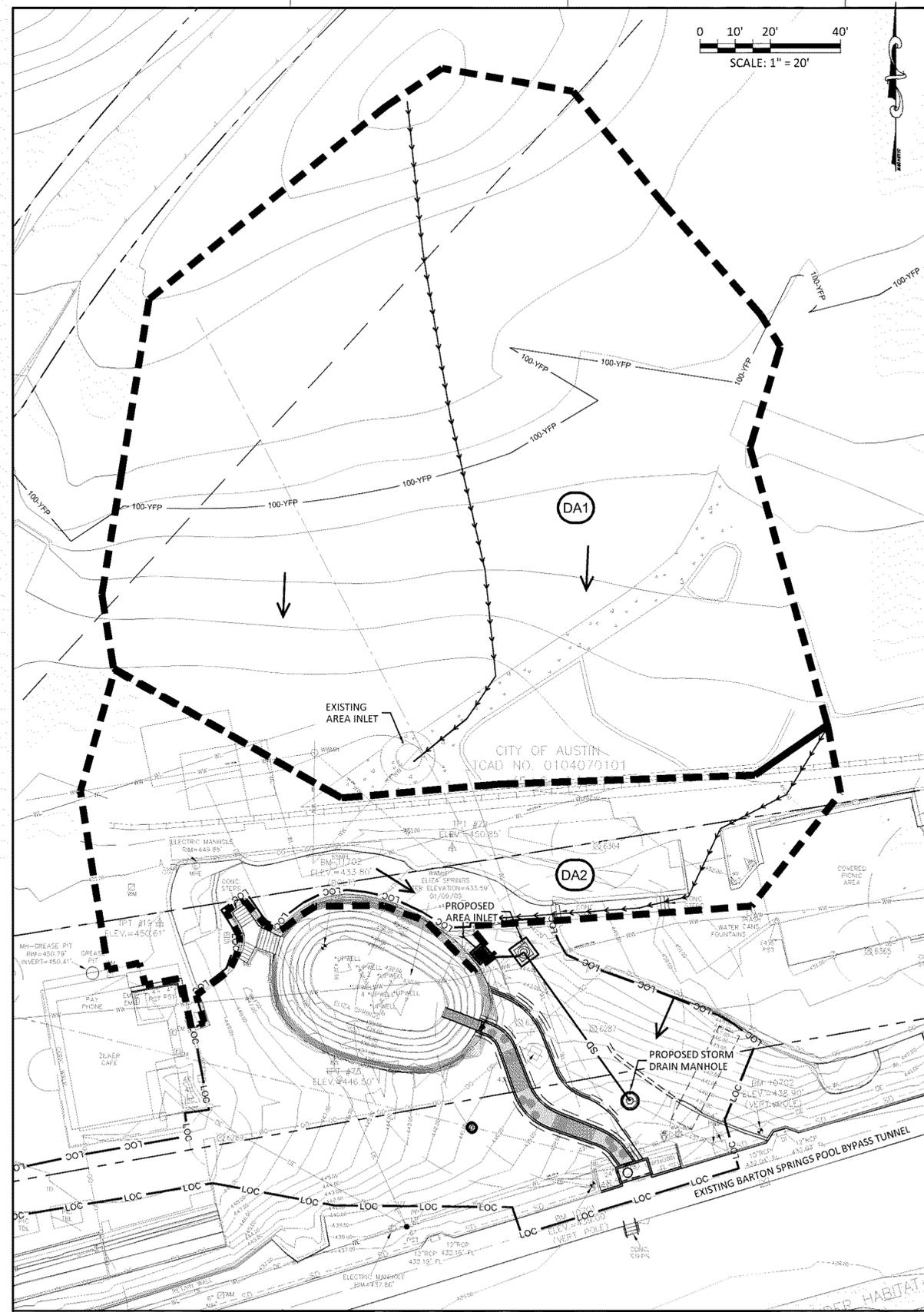


**ELIZA SPRING
OUTLET DAYLIGHTING**
Austin, Texas

CROSS SECTIONS



FILENAME | C2.7.DWG
SCALE | 1" = 10'



IMPERVIOUS COVER CALCULATIONS

Drainage Area	Area (Sq. Ft.)	Area (Acres)	Impervious Cover		Impervious Cover Composite C Value						Impervious Area (sf)	Percent Impervious	Pervious Classification	Pervious C Value					
			Concrete (%)	Asphalt (%)	2-yr	5-yr	10-yr	25-yr	50-yr	100-yr				2-yr	5-yr	10-yr	25-yr	50-yr	100-yr
DA1	31524.5	0.723703	100.00	0.00	0.75	0.80	0.83	0.88	0.92	0.97	2410.16	8%	FS	0.37	0.40	0.42	0.46	0.49	0.53
DA2	9608.6	0.220583	100.00	0.00	0.75	0.80	0.83	0.88	0.92	0.97	5582.61	58%	FS	0.37	0.40	0.42	0.46	0.49	0.53

Composite C Value						
2-yr	5-yr	10-yr	25-yr	50-yr	100-yr	
0.40	0.43	0.45	0.49	0.52	0.56	
0.59	0.63	0.66	0.71	0.74	0.79	

TIME OF CONCENTRATION CALCULATIONS

Drainage Area	Sheet Flow						Shallow Concentrated Flow 1				Shallow Concentrated Flow 2				Time of Conce		
	Length	N	P2	ΔElev.	Slope	Sub Tc	Length	Paved?	ΔElev.	Slope	Sub Tc	Length	Paved?	ΔElev.		Slope	Sub Tc
DA1	100	0.15	3.44	11	0.11	4.78	65.44	No	8	0.122	0.19	34.03	Yes	2	0.059	0.12	5.09
DA2	42.2	0.015	3.44	3	0.0711	0.45	35.87	Yes	3	0.084	0.10	59.4	No	5	0.084	0.21	0.77

HYDROLOGY CALCULATIONS

Drainage Area	Area (Acres)	T _c (min)	I ₂	I ₅	I ₁₀	I ₂₅	I ₅₀	I ₁₀₀	C ₂	C ₅	C ₁₀	C ₂₅	C ₅₀	C ₁₀₀	Q ₂	Q ₅	Q ₁₀	Q ₂₅	Q ₅₀	Q ₁₀₀
DA1	0.724	5.09	5.73	7.36	8.53	10.07	11.18	12.50	0.40	0.43	0.45	0.49	0.52	0.56	1.7	2.3	2.8	3.6	4.2	5.1
DA2	0.221	5.00	5.76	7.39	8.57	10.11	11.23	12.54	0.59	0.63	0.66	0.70	0.74	0.79	0.8	1.0	1.2	1.6	1.8	2.2

LEGEND

- EXISTING R.O.W./PROPERTY LINE
- EXISTING EASEMENT LINE
- EXISTING PAVEMENT
- PROPOSED CURB & GUTTER
- EXISTING CREEK/SWALE
- DRAINAGE BOUNDARY LINE
- DA DRAINAGE BOUNDARY LABEL
- NO INLET NUMBER
- DRAINAGE FLOW DIRECTION
- TIME OF CONCENTRATION LINE
- 493 EX. CONTOURS 493 PROP. CONTOURS
- EX. STORM DRAIN INLET WITH LATERAL PROP. STORM DRAIN INLET WITH LATERAL
- 100-YFP 100-YR FLOODPLAIN
- CWOZ CRITICAL WATER QUALITY ZONE
- WOTZ WATER QUALITY TRANSITION ZONE

CHAN & PARTNERS ENGINEERING, LLC
 4319 JAMES CASEY STREET, #300
 AUSTIN, TEXAS 78745
 512-480-8155 (PH) • 512-480-8811 (FAX)
 E-mail: info@chanpartners.com
 WWW.CHANPARTNERS.COM
 TEXAS REGISTRATION NO. F-13013



ISSUE	DATE	DESCRIPTION

PROJECT MANAGER	S. MUCHARD
DESIGNED BY	
DRAWN BY	
CHECKED BY	
DATE	
PROJECT NUMBER	220162

CHAN & PARTNERS
CONSULTING CIVIL ENGINEERS

THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF INTERIM REVIEW UNDER THE AUTHORITY OF JOHN R. KING, P.E. #58429 ON 10/3/2014. IT IS NOT TO BE USED FOR PERMITTING, BIDDING, OR CONSTRUCTION PURPOSES.

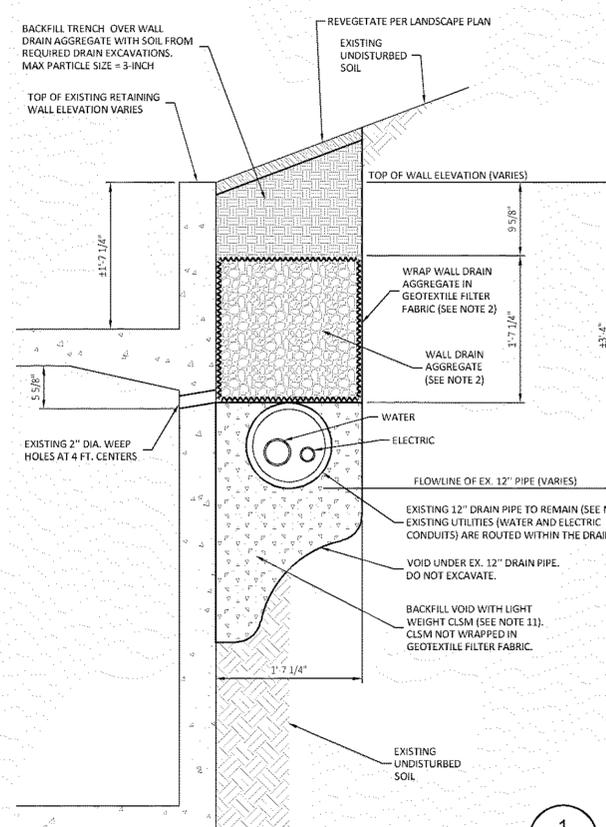
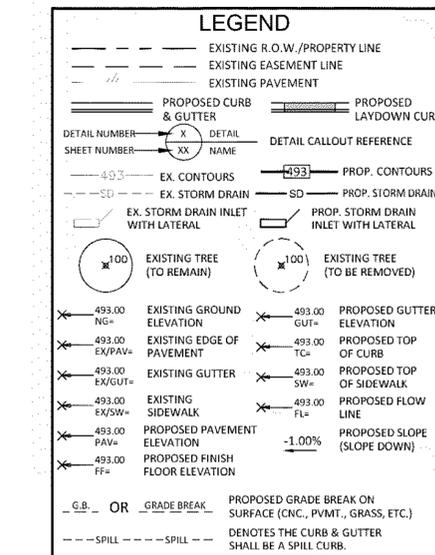
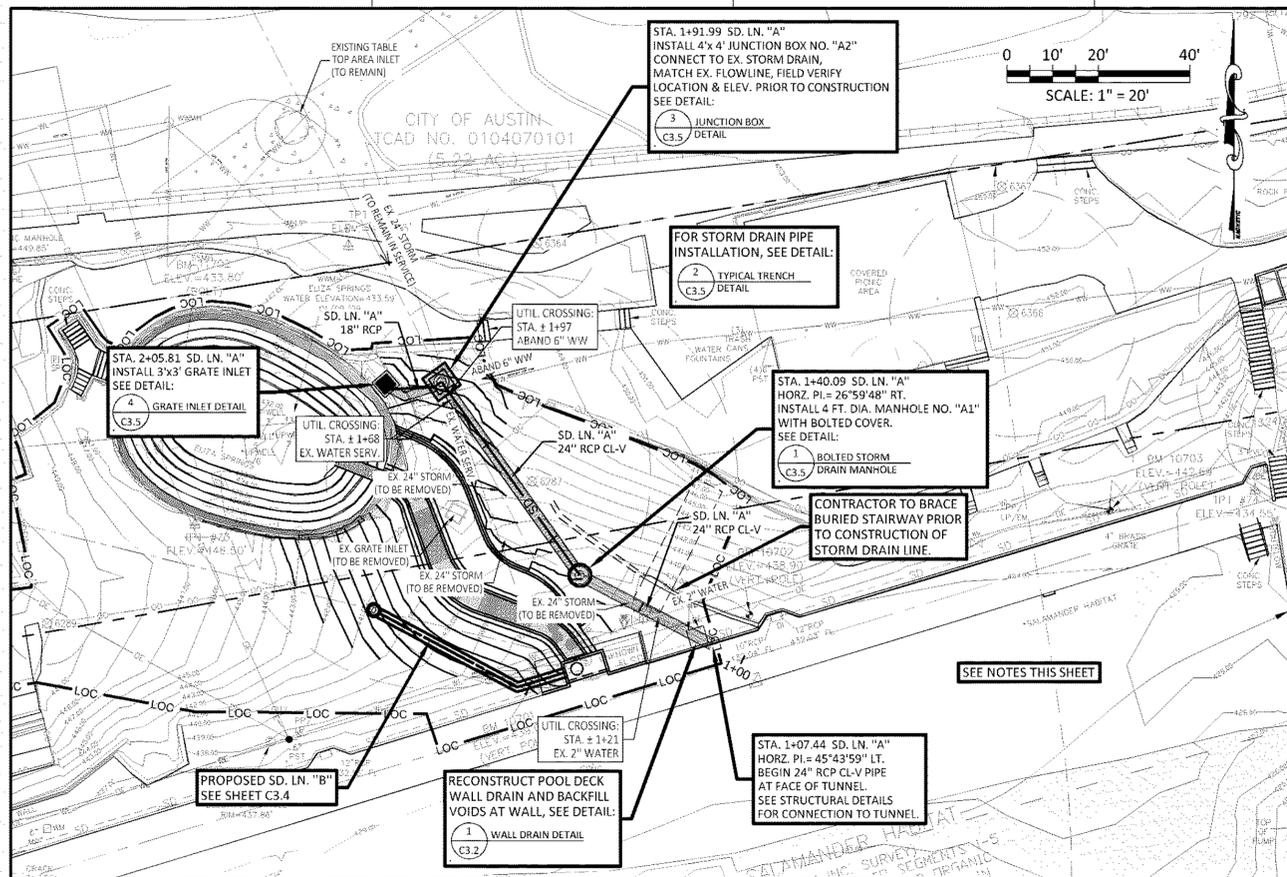
ELIZA SPRING OUTLET DAYLIGHTING
 Austin, Texas

STORM DRAIN LINE "A" DRAINAGE AREA MAP

0 1" 2"

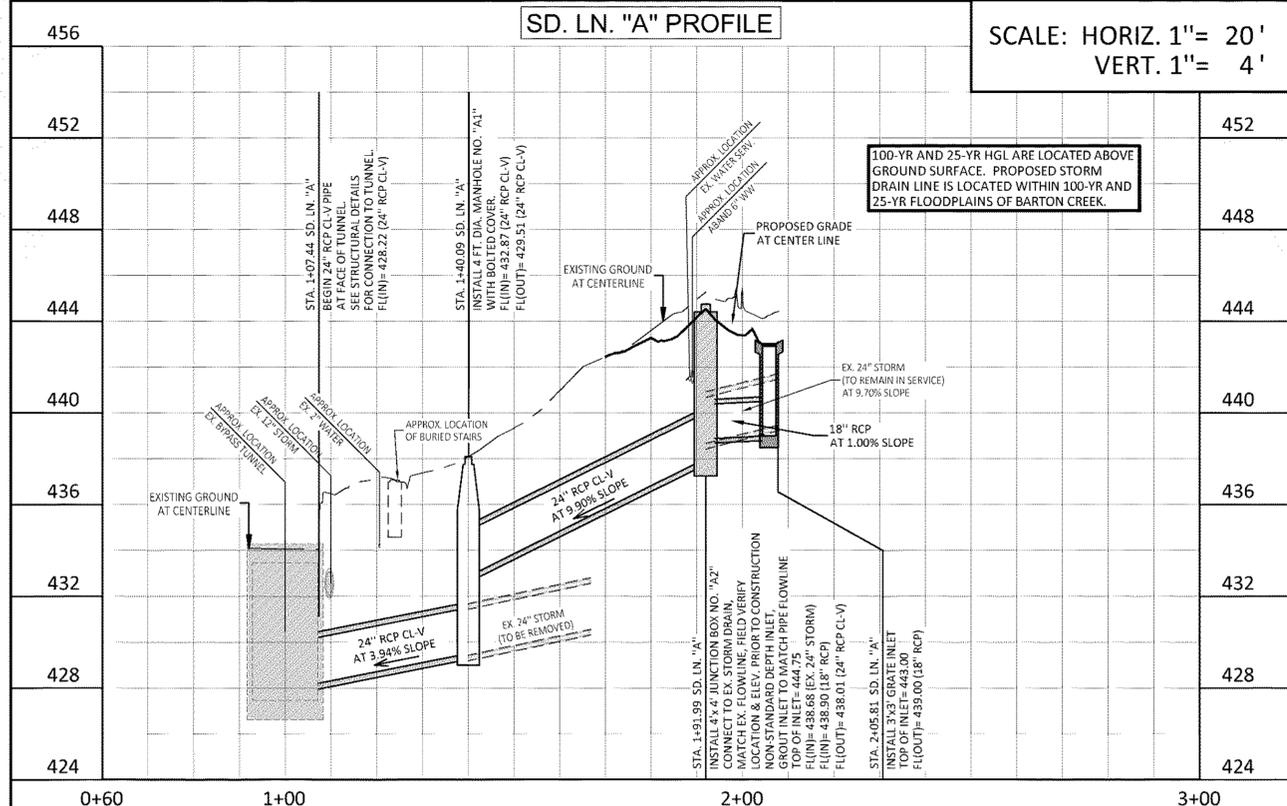
FILENAME: C-1049--DRAINAGE_MAP2.DWG SHEET: C3.1
 SCALE:

IF THIS SHEET IS NOT 34" X 22", IT IS A REDUCED PRINT.



- NOTES:**
- WALL DRAIN AGGREGATE SHALL BE 5/8" TO 1" SIZE AND SHALL COMPLY WITH STANDARD SPECIFICATION ITEM 551.
 - INSTALL GEOTEXTILE FILTER FABRIC AT THE INTERFACE BETWEEN WALL DRAIN AGGREGATE AND IN-SITU SOILS AND OVERLAP 12". GEOTEXTILE FILTER FABRIC SHALL BE WEBTEC, TERRA NO. 4 (A05 US STANDARD SIEVE 70) GEOTEXTILE FABRIC OR ENGINEER APPROVED EQUAL.
 - CONTRACTOR SHALL PROTECT EXISTING WATER DISTRIBUTION SYSTEM IN PLACE. CONTRACTOR SHALL REPAIR AND RESTORE DAMAGED MAIN IRRIGATION AND WATER SYSTEM TO PRE-CONSTRUCTION CONDITION AT NO ADDITIONAL COST TO THE CITY.
 - IF CONTRACTOR IS DIRECTED TO REMOVE EXISTING 12" DRAIN PIPE, GROUT PLUG ENDS OF PIPE REMAINING IN PLACE.
 - CONTRACTOR SHALL PROVIDE TEMPORARY EXCAVATION SAFETY SYSTEM IN ACCORDANCE WITH STANDARD SPECIFICATION ITEM 509S.
 - A MAXIMUM LENGTH OF 20 FEET OF EXCAVATION FOR THE WALL DRAIN IMPROVEMENTS MAY REMAIN OPEN AT ANY TIME EXCEPT EXCAVATION SHALL BE COMPLETELY BACKFILLED AT THE END OF EACH DAY.
 - LIGHT WEIGHT CLSM SHALL BE PLACED IN MAX. 12-INCH THICK LIFTS. CLSM SHALL COMPLY WITH STANDARD SPECIFICATION ITEM 402S, EXCEPT UNIT WEIGHT OF CLSM SHALL BE BETWEEN 70 TO 90 PCF.
 - SPOIL MATERIAL EXCAVATED FOR WALL DRAIN IMPROVEMENTS, IF NOT USED TO BACKFILL EXCAVATION, SHALL BE TAKEN DIRECTLY TO TEMPORARY SPOILS AREA. NO SPOIL, EVEN IF USED FOR BACKFILL, SHALL REMAIN OVERNIGHT ALONG THE WALL DRAIN IMPROVEMENTS.
 - PROVIDE PROTECTIVE HARDWOOD TIMBER MATTING ON TUNNEL DECK TO PREVENT DAMAGE TO DECK.
 - IMMEDIATELY INSTALL TEMPORARY SOIL RETENTION BLANKET, CLASS 1, TYPE D, ON ALL DISTURBED VEGETATED SURFACES WITH SLOPES GREATER THAN 5H:1V UNTIL PERMANENT REVEGETATION IS INSTALLED.

CONTRACTOR NOTES:
 EXISTING UNDERGROUND & OVERHEAD UTILITIES IN VICINITY. CONTRACTOR TO CONTACT UTILITY COMPANIES & CITY OF AUSTIN PRIOR TO CONSTRUCTION. CONTRACTOR SHOULD CONTACT PARD FOR IRRIGATION AND SPRING WATER DELIVERY SYSTEM. CONTRACTOR TO FIELD VERIFY EXISTING UTILITY LOCATIONS & DEPTH PRIOR TO BEGINNING CONSTRUCTION.
 CONTRACTOR SHALL CONSIDER PROPOSED UTILITY IMPROVEMENTS AND PROVIDE ADEQUATE HORIZONTAL AND VERTICAL CLEARANCE DURING INSTALLATION OF ALL UTILITY INFRASTRUCTURE.



- NOTES**
- CONSTRUCT GRATE INLET IN ACCORDANCE WITH CITY OF AUSTIN STANDARD SPECIFICATION ITEM NO. 508S AND ITS CROSS REFERENCED MATERIALS AND SPECIFICATIONS.
 - CONSTRUCT STORM DRAIN PIPE IN ACCORDANCE WITH CITY OF AUSTIN STANDARD SPECIFICATION ITEM NO. 510 AND ITS CROSS REFERENCED MATERIALS AND SPECIFICATIONS.
 - DESIGN, FURNISH, INSTALL, MAINTAIN, AND REMOVE TEMPORARY EXCAVATION SAFETY SYSTEMS IN ACCORDANCE WITH CITY OF AUSTIN STANDARD SPECIFICATION ITEM NO. 509S AND ITS CROSS REFERENCED MATERIALS.
 - CONSTRUCT STORM DRAIN MANHOLE IN ACCORDANCE WITH CITY OF AUSTIN STANDARD SPECIFICATION ITEM NO. 506 AND ITS CROSS REFERENCED MATERIALS AND SPECIFICATIONS.
 - POTHOLE AND CONFIRM EXISTING UTILITY CROSSINGS.
 - POTHOLE AND CONFIRM EXISTING STORM DRAIN PIPE ALIGNMENT AND GRADE AT CONNECTION LOCATIONS. CONTRACTOR TO MINIMIZE IMPACT TO 12-INCH STORM DRAIN PIPE AND CORRESPONDING WATER AND ELECTRIC LINES WITHIN THE PIPE.
 - CONSTRUCT ALL STORM DRAIN LINES FROM DOWNSTREAM TO UPSTREAM. IN THE EVENT EXISTING STORM DRAIN LINES ARE DEMOLISHED, PROVIDE PROVISIONS TO DRAIN STORM WATER RUNOFF DURING CONSTRUCTION OF THE NEW LINES IN CASE OF A STORM EVENT. THESE PROVISIONS SHALL INCLUDE TEMPORARY STORM DRAIN LINES (PVC SCHEDULE 40 PIPE IS ACCEPTABLE), BY-PASS PUMPING, AND/OR BY OTHER MEANS.
 - BACKFILL ALL VOIDS AND TRENCHES CREATED BY THE DEMOLITION, EXCAVATION, AND REMOVAL OF EXISTING STORM DRAIN STRUCTURES, PIPES, AND CONDUITS IN ACCORDANCE WITH CITY OF AUSTIN STANDARD SPECIFICATION NO. 401S AND ITS CROSS REFERENCED MATERIALS AND SPECIFICATIONS.
 - REFER TO EROSION/SEDIMENTATION CONTROL PLAN FOR EROSION AND SEDIMENTATION CONTROLS AND TREE PROTECTION MEASURES ASSOCIATED WITH STORM DRAIN IMPROVEMENTS.
 - ALL STORM DRAIN PIPES ARE CLASS V UNLESS OTHERWISE NOTED.
 - ALL MANHOLES SHALL BE RATED FOR AN EQUIVALENT AASHTO HS-20 DIRECT LOADING.
 - EXCAVATION SAFETY SYSTEMS SHALL BE DESIGNED TO INCLUDE LOADING FROM POTENTIAL UNSTABLE FILL MATERIAL (INCLUDING TRENCH SPOILS AND BACKFILL AND BEDDING OF ADJACENT UTILITY TRENCHES), GROUND WATER, AND LOADING FROM THRUST AND LEAKAGE FROM WATER UTILITY LINES.
 - ALL STORM DRAIN MANHOLES SHALL HAVE BOLTED COVERS.
 - PROVIDE NOTIFICATIONS, SUSPEND CONSTRUCTION, AND FURNISH AND INSTALL MITIGATION MEASURES FOR VOIDS AND WATER FLOW FEATURES DISCOVERED IN BED ROCK DURING EXCAVATION ACTIVITIES IN ACCORDANCE WITH CITY OF AUSTIN STANDARD ITEM NO. 658S.
 - IMMEDIATELY INSTALL TEMPORARY SOIL RETENTION BLANKET, CLASS 1 TYPE D, ON ALL BACKFILL SURFACES WITH SLOPES GREATER THAN 5H:1V UNTIL PERMANENT REVEGETATION IS INSTALLED. SEE REVEGETATION PLAN FOR TEMPORARY AND PERMANENT REVEGETATION.

CHAN & PARTNERS ENGINEERING, LLC
 4319 JAMES CASEY STREET, #300
 AUSTIN, TEXAS 78745
 512-480-8155 (PH) • 512-480-8811 (FAX)
 E-mail: info@chanpartners.com
 WWW.CHANPARTNERS.COM
 TEXAS REGISTRATION NO. F-13013



ISSUE	DATE	DESCRIPTION

PROJECT MANAGER	S. MUCHARD
DESIGNED BY	
DRAWN BY	
CHECKED BY	
DATE	
PROJECT NUMBER	220162

CHAN & PARTNERS
 CONSULTING CIVIL ENGINEERS
 THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF INTERIM REVIEW UNDER THE AUTHORITY OF JOHN R. KING, P.E. #58429 ON 10/3/2014. IT IS NOT TO BE USED FOR PERMITTING, BIDDING, OR CONSTRUCTION PURPOSES.

CITY OF AUSTIN
ELIZA SPRING OUTLET DAYLIGHTING
 Austin, Texas

STORM DRAIN LINE "A" PLAN & PROFILE

0 1" 2"

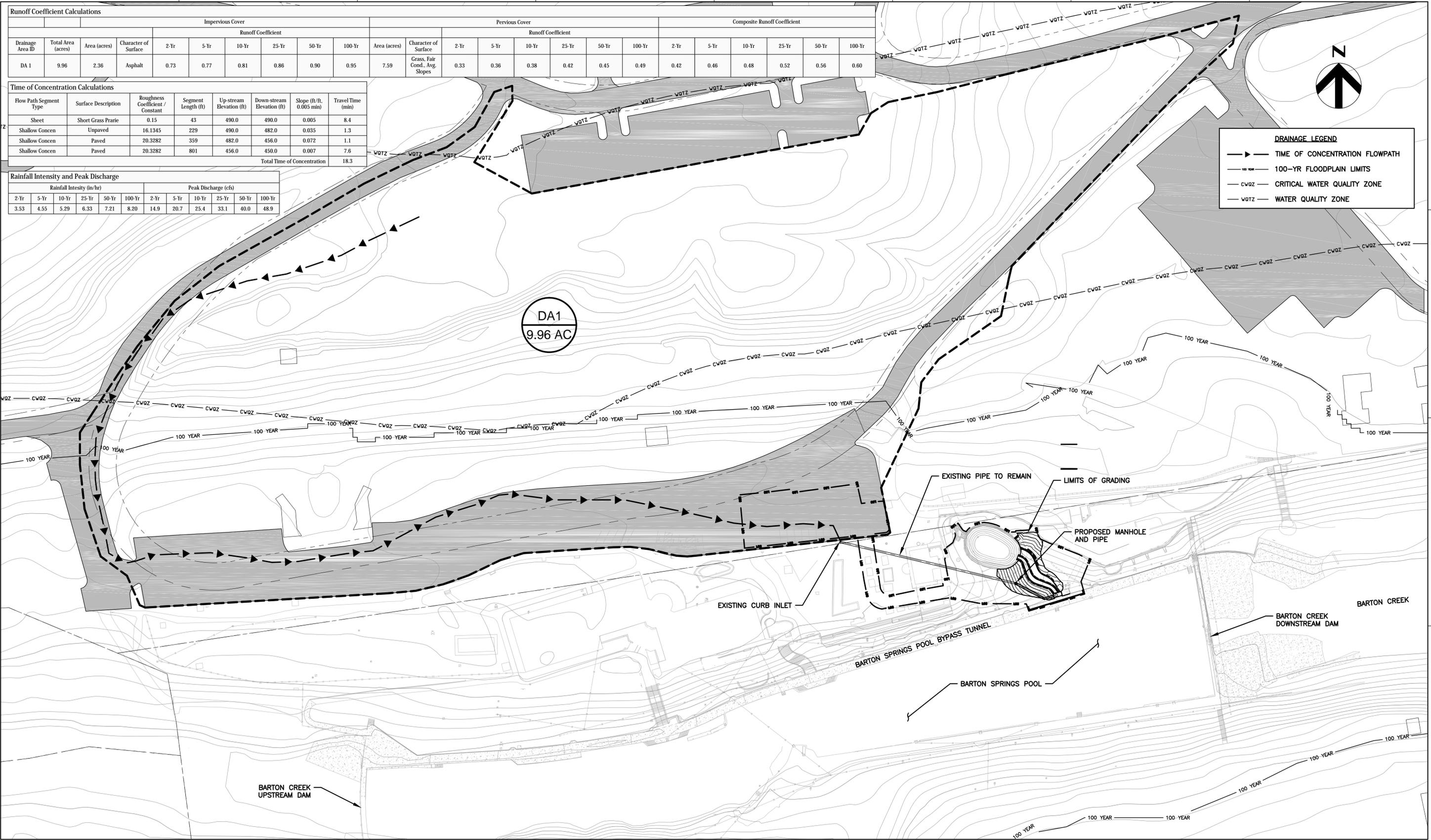
FILENAME C-1049--STORM PNP.DWG SHEET C3.2

SCALE

Runoff Coefficient Calculations																							
Impervious Cover				Pervious Cover						Composite Runoff Coefficient													
Drainage Area ID	Total Area (acres)	Area (acres)	Character of Surface	Runoff Coefficient						Area (acres)	Character of Surface	Runoff Coefficient											
				2-Yr	5-Yr	10-Yr	25-Yr	50-Yr	100-Yr			2-Yr	5-Yr	10-Yr	25-Yr	50-Yr	100-Yr						
DA 1	9.96	2.36	Asphalt	0.73	0.77	0.81	0.86	0.90	0.95	7.59	Grass, Fair Cond., Avg. Slopes	0.33	0.36	0.38	0.42	0.45	0.49	0.42	0.46	0.48	0.52	0.56	0.60

Time of Concentration Calculations							
Flow Path Segment Type	Surface Description	Roughness Coefficient / Constant	Segment Length (ft)	Up-stream Elevation (ft)	Down-stream Elevation (ft)	Slope (ft/ft, 0.005 min)	Travel Time (min)
Sheet	Short Grass Prairie	0.15	43	490.0	490.0	0.005	8.4
Shallow Concen	Unpaved	16.1345	229	490.0	482.0	0.035	1.3
Shallow Concen	Paved	20.3282	359	482.0	456.0	0.072	1.1
Shallow Concen	Paved	20.3282	801	456.0	450.0	0.007	7.6
Total Time of Concentration							18.3

Rainfall Intensity and Peak Discharge											
Rainfall Intensity (in/hr)						Peak Discharge (cfs)					
2-Yr	5-Yr	10-Yr	25-Yr	50-Yr	100-Yr	2-Yr	5-Yr	10-Yr	25-Yr	50-Yr	100-Yr
3.53	4.55	5.29	6.33	7.21	8.20	14.9	20.7	25.4	33.1	40.0	48.9



ISSUE	DATE	DESCRIPTION
B	10/3/2014	90% DRAFT FOR REVIEW
A	7/24/2014	60% DRAFT FOR REVIEW

PROJECT MANAGER	S. MUCHARD
DESIGNED BY	S. MUCHARD
DRAWN BY	C. AMARAL
CHECKED BY	C. PARKER
DATE	OCTOBER 2014
PROJECT NUMBER	220162

THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF REVIEW UNDER THE AUTHORITY OF SCOTT M. MUCHARD TEXAS P.E. NO. 89409 DATE: OCTOBER 3, 2014 IT IS NOT TO BE USED FOR CONSTRUCTION OR ANY OTHER PURPOSE.
90% DRAFT



**ELIZA SPRING
OUTLET DAYLIGHTING**

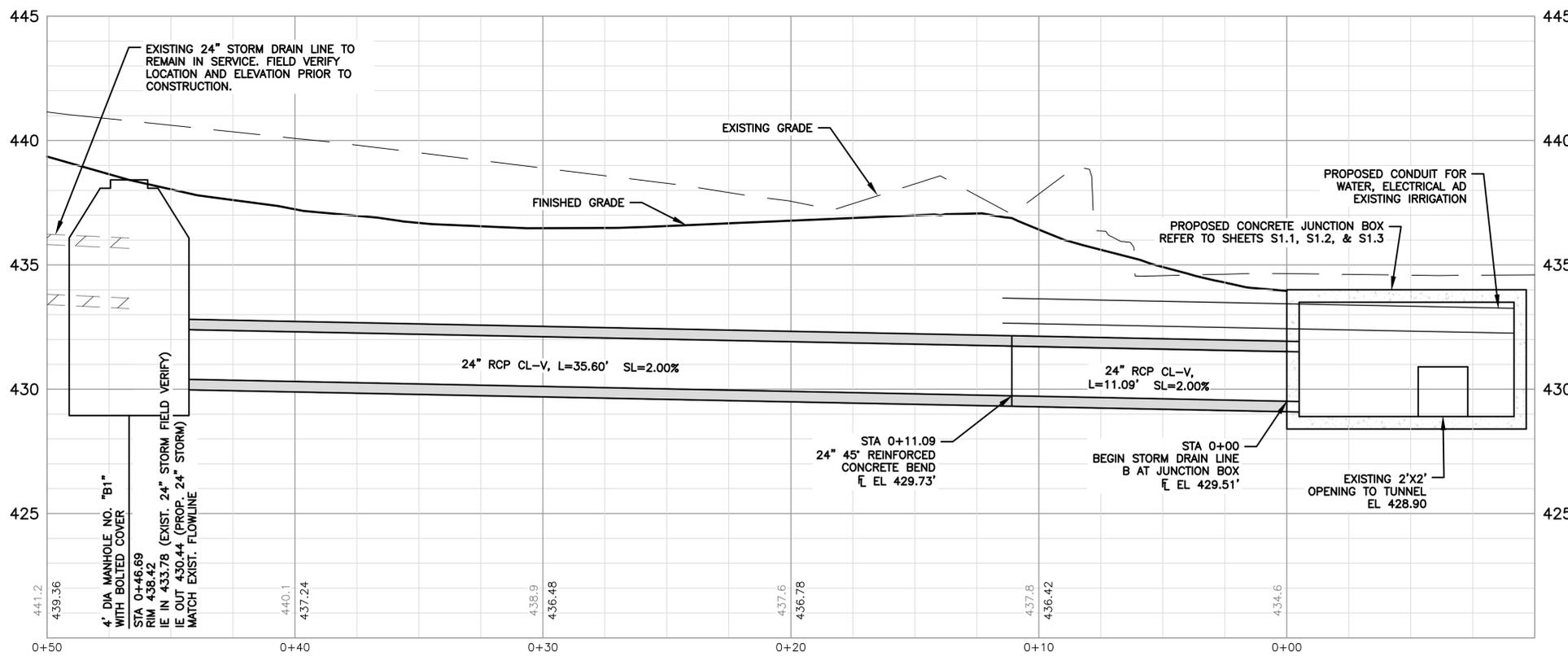
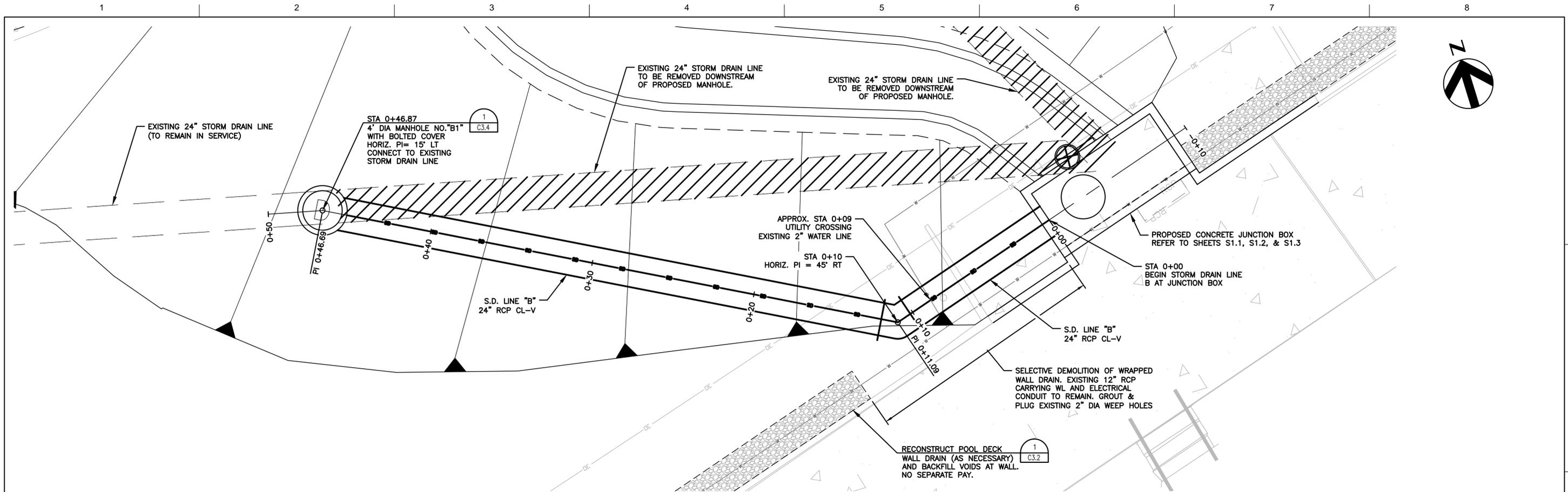
Austin, Texas

**STORM DRAIN LINE B
DRAINAGE AREA MAP**



FILENAME | C3.3.DWG
SCALE | 1" = 50'

SHEET
C3.3



- NOTES:**
- EXISTING UNDERGROUND AND OVERHEAD UTILITIES IN VICINITY. CONTRACTOR TO CONTACT UTILITY COMPANIES PRIOR TO CONSTRUCTION. CONTRACTOR TO FIELD VERIFY EXISTING UTILITY LOCATIONS AND DEPTH PRIOR TO BEGINNING CONSTRUCTION.
 - CONTRACTOR SHALL CONSIDER PROPOSED UTILITY IMPROVEMENTS AND PROVIDE ADEQUATE HORIZONTAL AND VERTICAL CLEARANCE DURING INSTALLATION OF ALL UTILITY INFRASTRUCTURE.
 - 100-YR AND 25-YR HGL ARE LOCATED ABOVE GROUND SURFACE. PROPOSED STORM DRAIN LINE IS LOCATED WITHIN 100-YR AND 25-YR FLOODPLAIN OF BARTON CREEK.



ISSUE	DATE	DESCRIPTION
B	10/3/2014	90% DRAFT FOR REVIEW
A	7/24/2014	60% DRAFT FOR REVIEW

PROJECT MANAGER	S. MUCHARD
DESIGNED BY	S. MUCHARD
DRAWN BY	C. AMARAL
CHECKED BY	C. PARKER
DATE	OCTOBER 2014
PROJECT NUMBER	220162

THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF REVIEW UNDER THE AUTHORITY OF SCOTT M. MUCHARD TEXAS P.E. NO. 89409 DATE: OCTOBER 3, 2014 IT IS NOT TO BE USED FOR CONSTRUCTION OR ANY OTHER PURPOSE.
90% DRAFT



**ELIZA SPRING
OUTLET DAYLIGHTING**
Austin, Texas

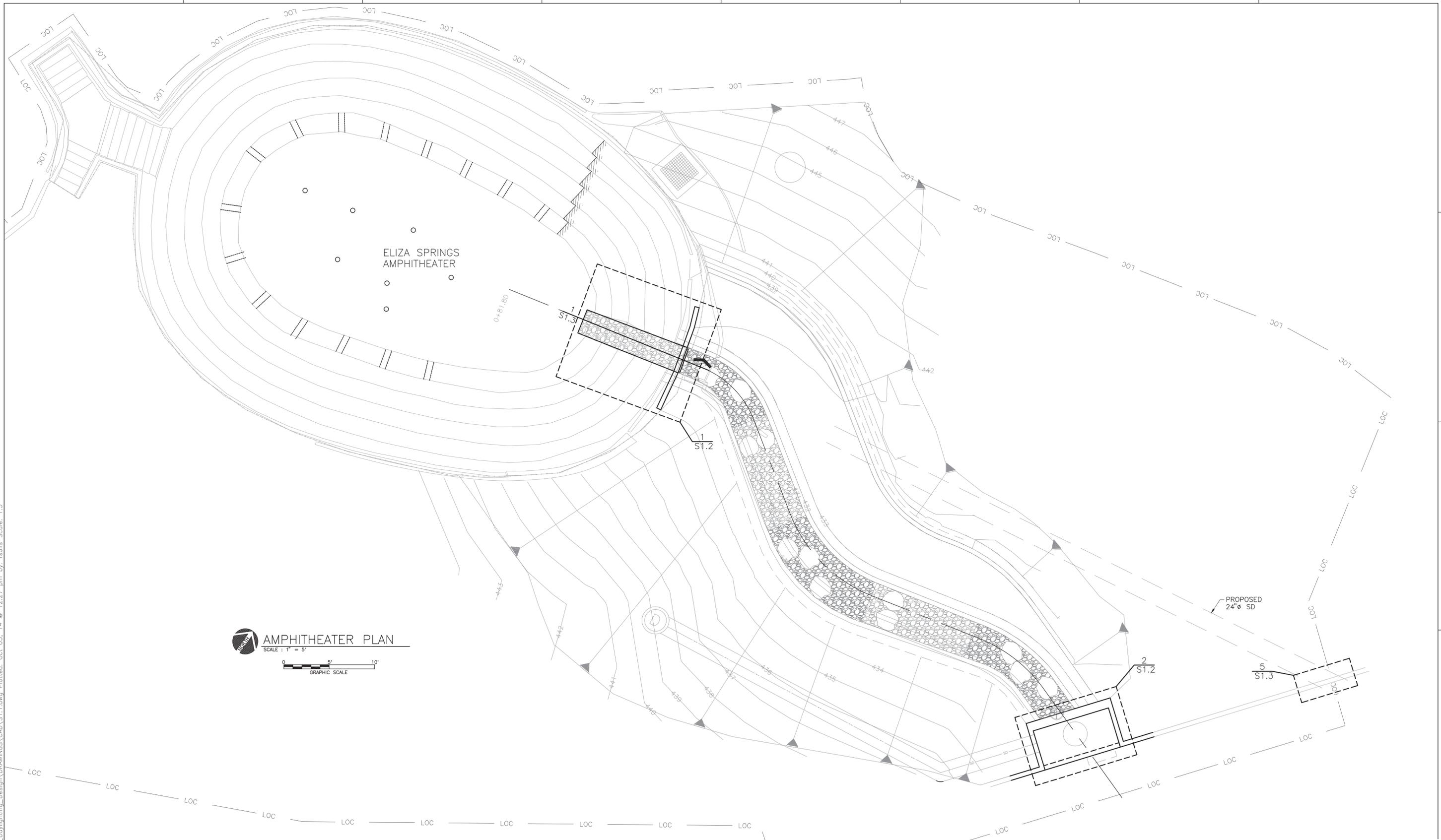


**STORM DRAIN LINE B
PLAN & PROFILE**

FILENAME | C3.4.DWG
SCALE | 1"=3'

SHEET
C3.4

CADFILE:\13025_Eliza_Springs_Daylighting_Design\DRAWINGS\CAD\S1.1.dwg Plotted: Oct 03, 14 @ 12:27 pm by: fscalis Scale: 1:5



AMPHITHEATER PLAN
 SCALE: 1" = 5'
 0 5' 10'
 GRAPHIC SCALE

Jose I. Guerra, Inc.
 Consulting Engineers
 2401 South IH-35 Suite 210
 Austin, Texas 78741
 (512) 445-2090
 Structural • Civil • Mechanical • Electrical
 TPE FIRM P-3



ISSUE	DATE	DESCRIPTION
-	10/03/14	90% DRAFT FOR REVIEW

PROJECT MANAGER	JL
DESIGNED BY	JL
DRAWN BY	FS
CHECKED BY	JL
DATE	10-03-14
PROJECT NUMBER	Z20162

THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF REVIEW UNDER THE AUTHORITY OF JOSEPH J. LUKE #55974 OCTOBER 03, 2014

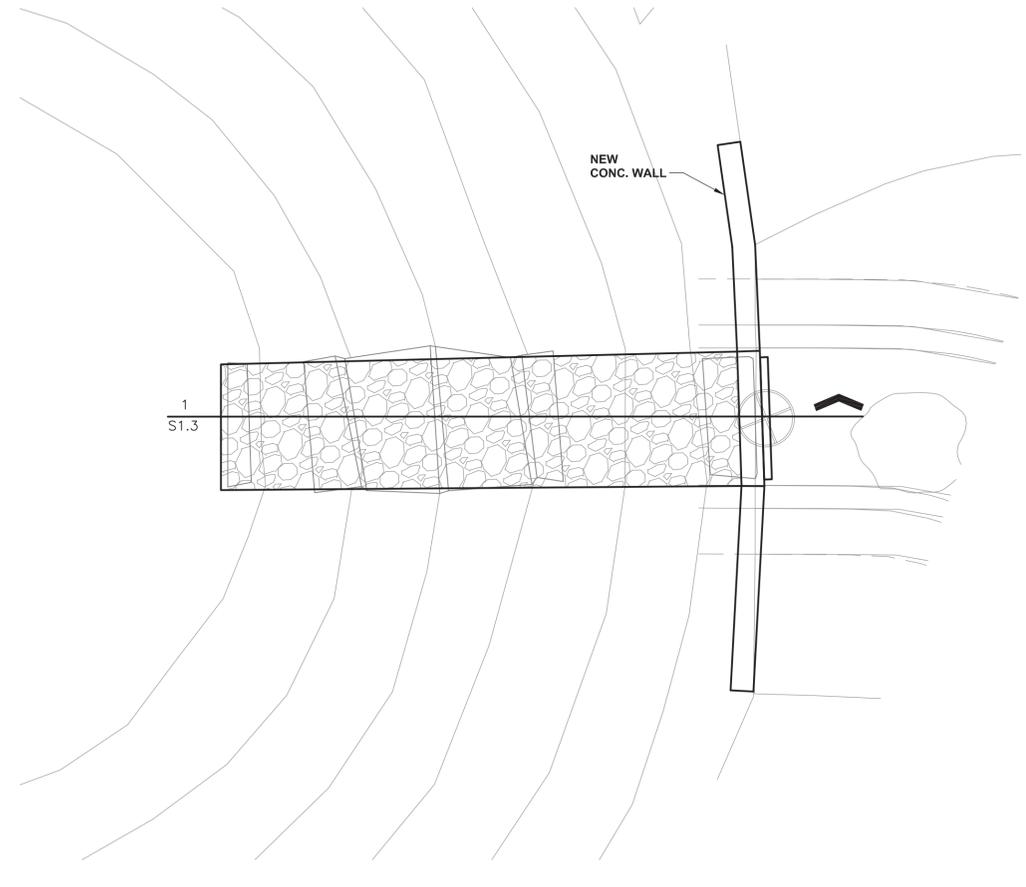
IT IS NOT TO BE USED FOR CONSTRUCTION OR ANY OTHER PURPOSE.



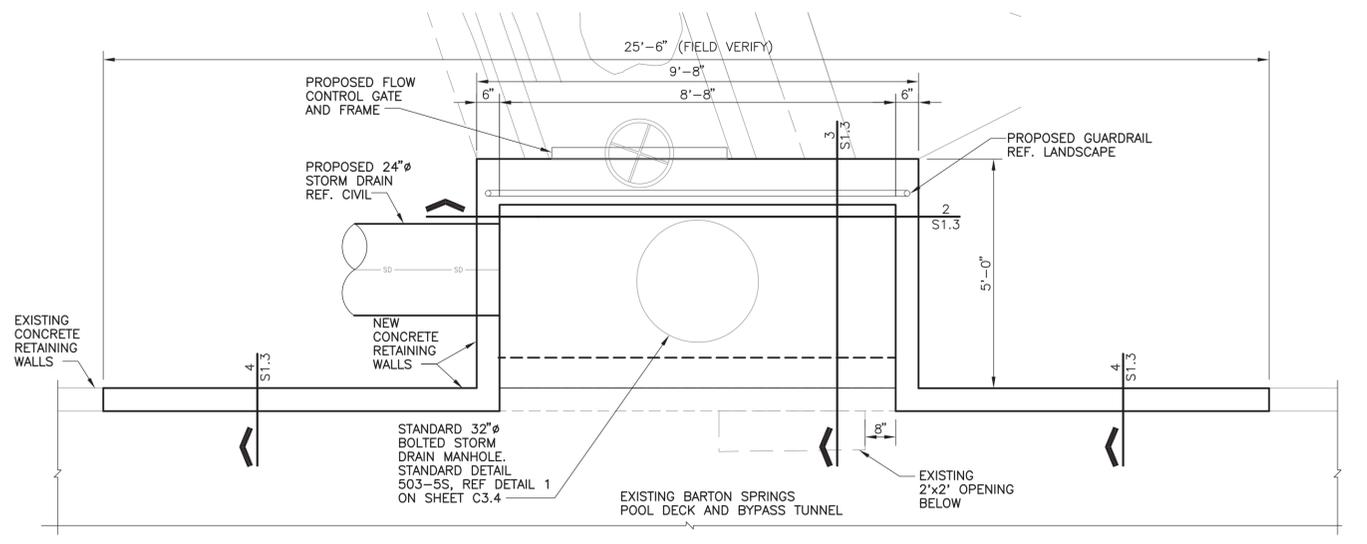
ELIZA SPRING OUTLET DAYLIGHTING
 Austin, Texas

AMPHITHEATER & JUNCTION BOX STRUCTURAL PLAN

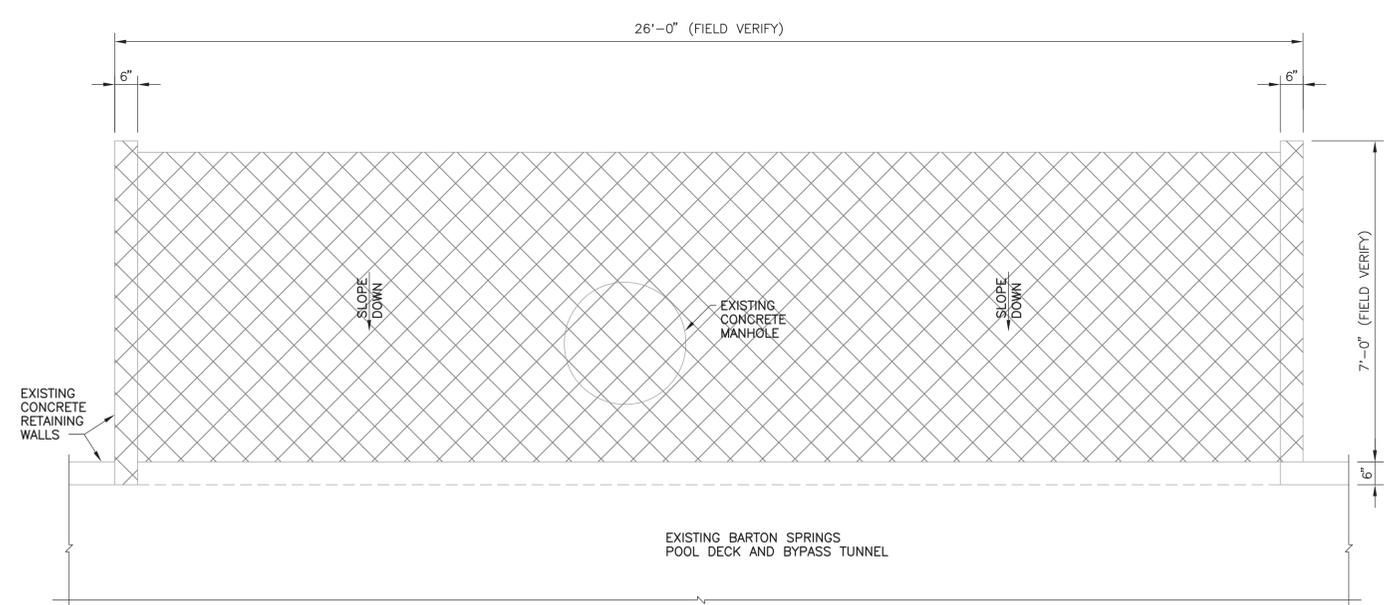
0 1" 2" FILENAME \$FILEABBREV\$ SHEET
 SCALE AS NOTED S1.1



1 PROPOSED AMPHITHEATER KEYWAY FLOW CONTROL PLAN
SCALE: 1/2" = 1'-0"



2 PROPOSED CONCRETE JUNCTION BOX PLAN
SCALE: 1/2" = 1'-0"



3 EXISTING CONCRETE MANHOLE AND RAMP DEMOLITION PLAN
SCALE: 1/2" = 1'-0"

CADFILE:\13025_Eliza_Springs_Daylighting_Design\DRAWINGS\CAD\S1.2.dwg Plotted: Oct 03, 14 @ 12:28 pm by: fscalis Scale: 1:24

Jose I. Guerra, Inc.
Consulting Engineers
2401 South IH-35 Suite 210
Austin, Texas 78741
(512) 445-2090
Structural • Civil • Mechanical • Electrical
TRPE FIRM P-3



ISSUE	DATE	DESCRIPTION
-	10/03/14	90% DRAFT FOR REVIEW

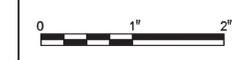
PROJECT MANAGER	JL
DESIGNED BY	JL
DRAWN BY	FS
CHECKED BY	JL
DATE	10-03-14
PROJECT NUMBER	Z20162

THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF REVIEW UNDER THE AUTHORITY OF JOSEPH J. LUKE #55974 OCTOBER 03, 2014

IT IS NOT TO BE USED FOR CONSTRUCTION OR ANY OTHER PURPOSE.



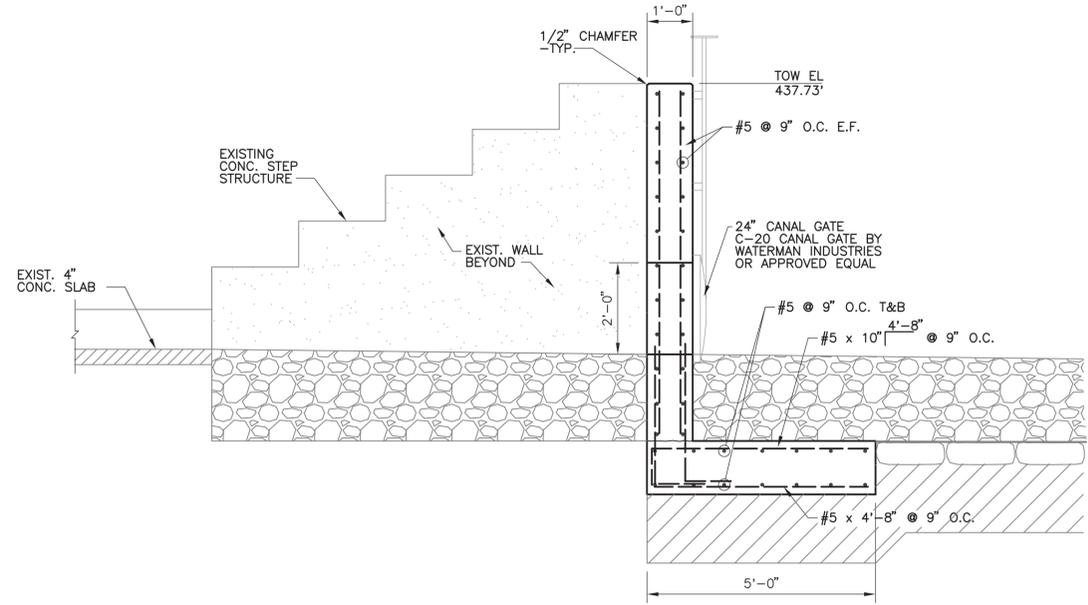
ELIZA SPRING OUTLET DAYLIGHTING
Austin, Texas



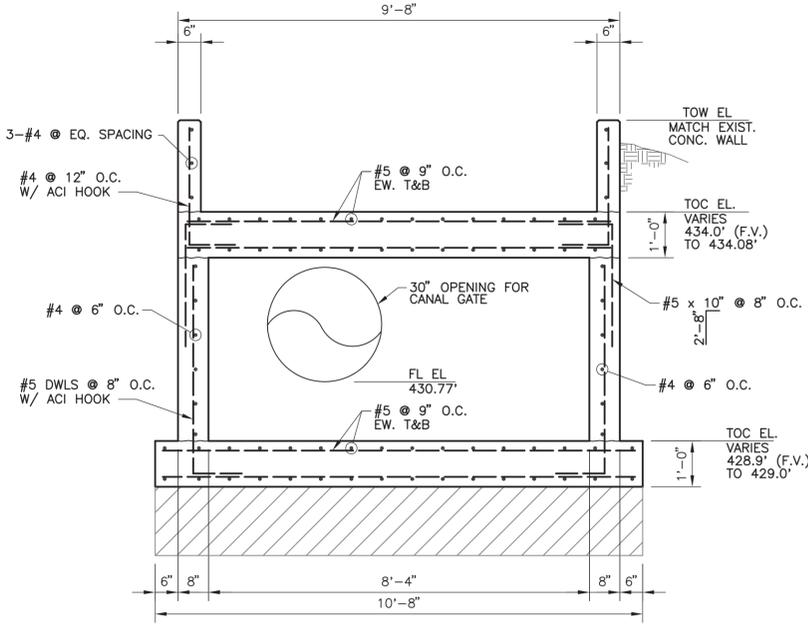
STRUTURAL ENLARGED PLANS

FILENAME | \$FILEABBREV\$
SCALE | AS NOTED

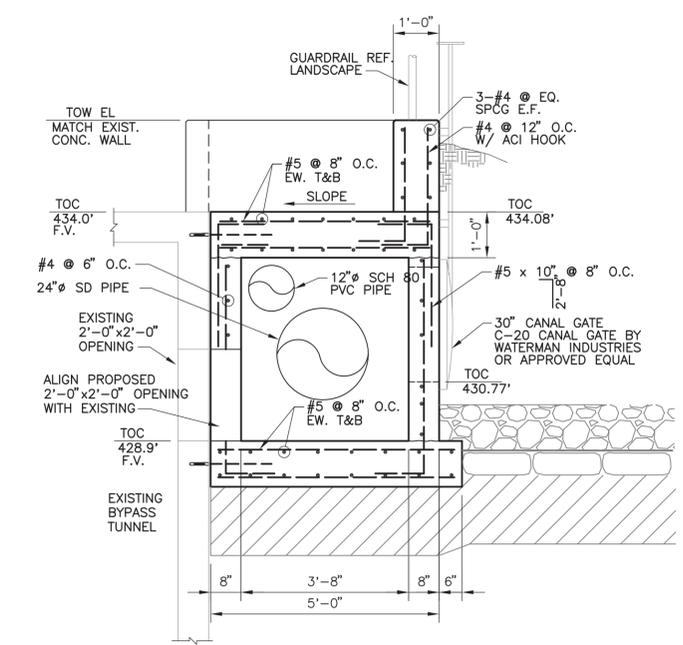
SHEET
S1.2



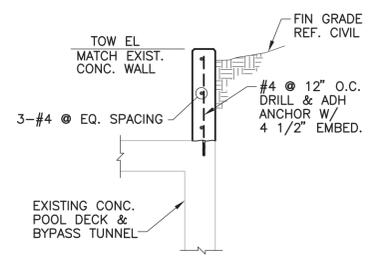
1 PROPOSED AMPHITHEATER KEYWAY FLOW CONTROL SECTION
SCALE: 1/2" = 1'-0"



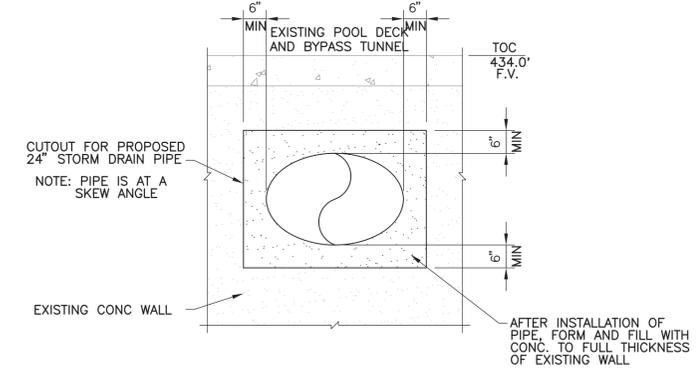
2 PROPOSED CONCRETE JUNCTION BOX SECTION
SCALE: 1/2" = 1'-0"



3 PROPOSED CONCRETE JUNCTION BOX SECTION
SCALE: 1/2" = 1'-0"



4 PROPOSED CONCRETE RETAINING WALL DETAIL
SCALE: 1/2" = 1'-0"



5 PROPOSED 24" SD PENETRATION THROUGH EXISTING BYPASS TUNNEL WALL DETAIL
SCALE: 1/2" = 1'-0"

CADFILE: X:\13025_Eliza_Springs_Daylighting_Design\DRAWINGS\CAD\S1.3.dwg Plotted: Oct 03, 14 @ 12:29 pm by: fscalis Scale: 1:24

Jose I. Guerra, Inc.
Consulting Engineers
2401 South IH-35 Suite 210
Austin, Texas 78741
(512) 445-2090
Structural • Civil • Mechanical • Electrical
TRPE FIRM P-3



ISSUE	DATE	DESCRIPTION
-	10/03/14	90% DRAFT FOR REVIEW

PROJECT MANAGER	JL
DESIGNED BY	JL
DRAWN BY	FS
CHECKED BY	JL
DATE	10-03-14
PROJECT NUMBER	220162

THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF REVIEW UNDER THE AUTHORITY OF JOSEPH J. LUKE #55974 OCTOBER 03, 2014

IT IS NOT TO BE USED FOR CONSTRUCTION OR ANY OTHER PURPOSE.



ELIZA SPRING OUTLET DAYLIGHTING

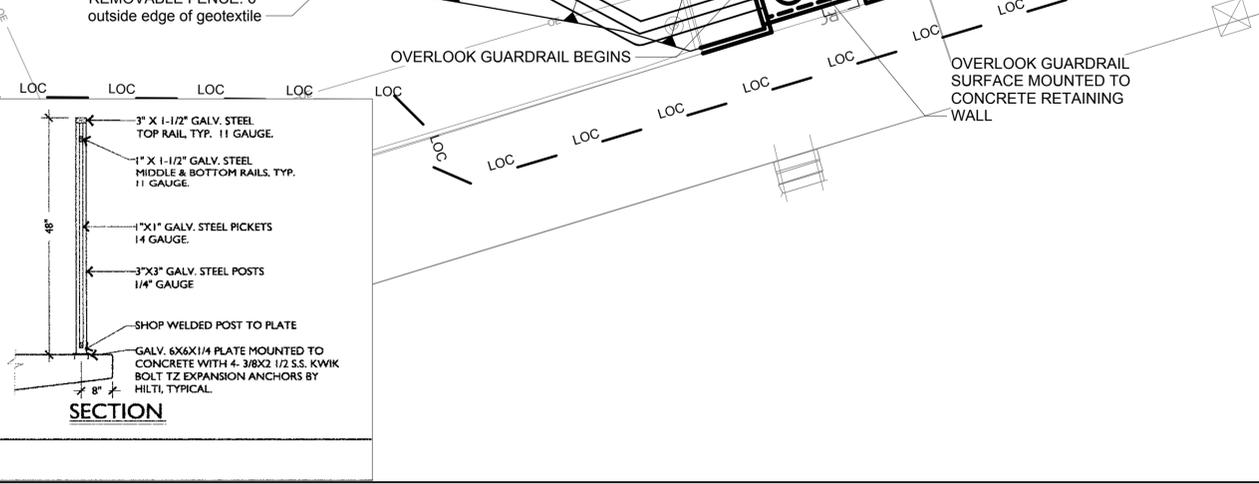
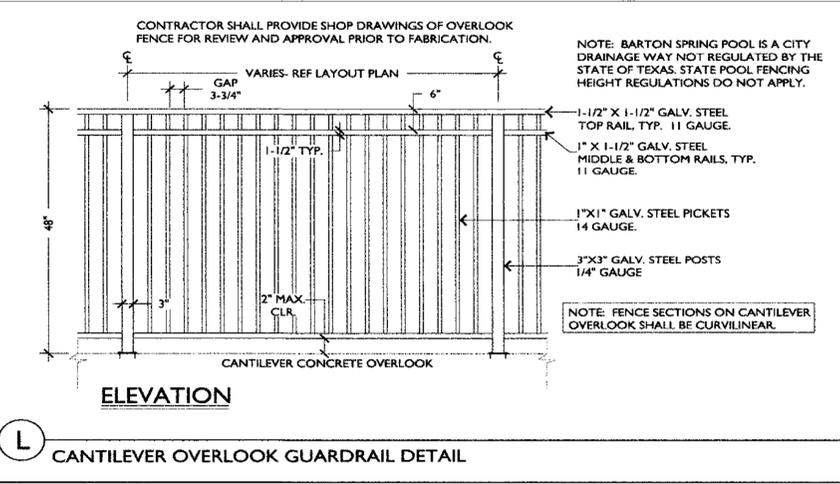
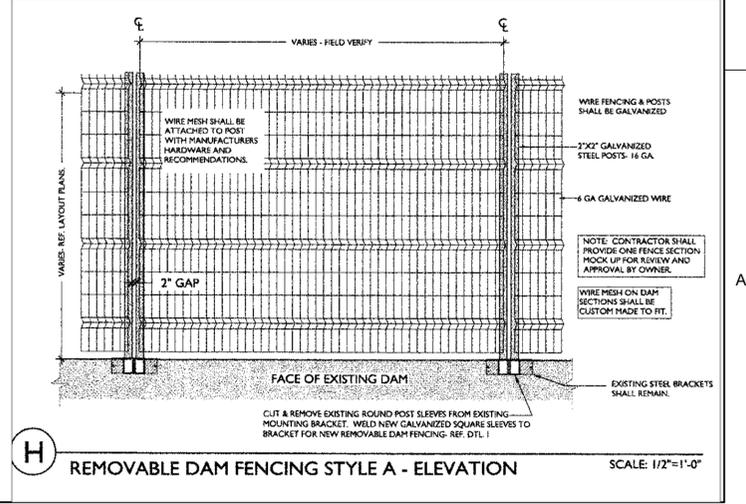
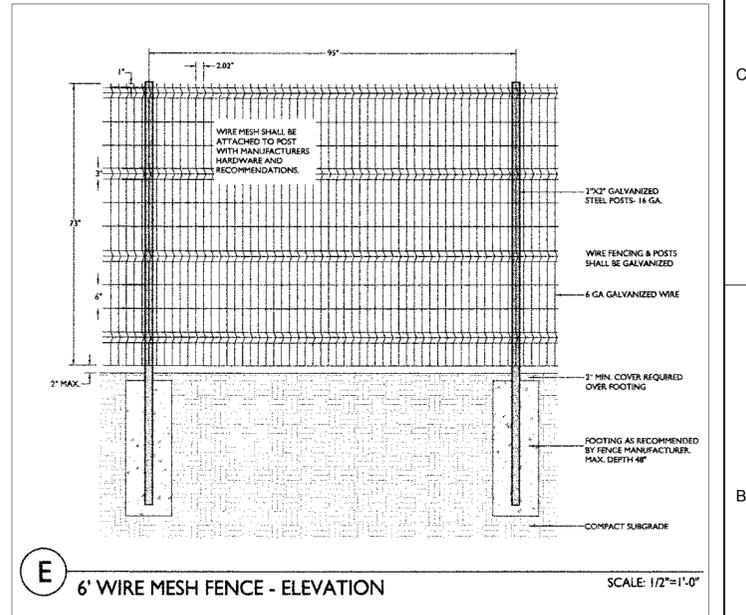
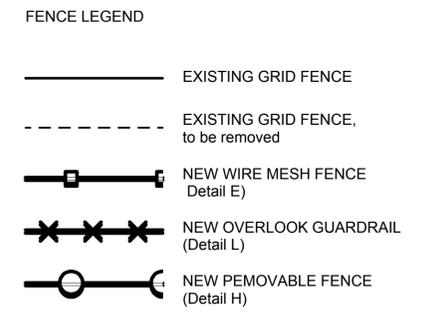
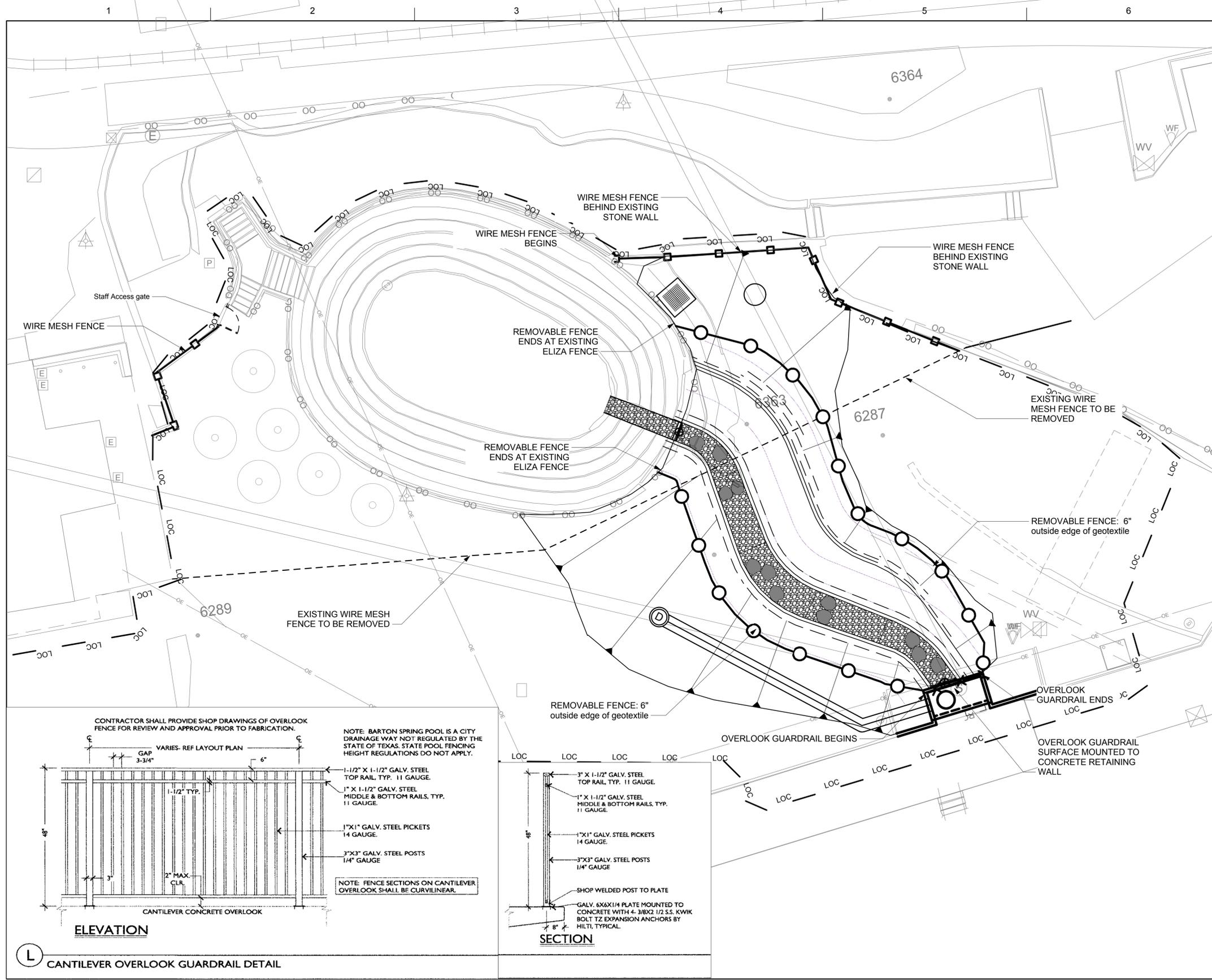
Austin, Texas



AMPHITHEATER SECTIONS

FILENAME: \$FILEABBREV\$
SCALE: AS NOTED

SHEET S1.3



Carolyn Kelley, ASLA
Landscape Architect

512.445.0431
512.857.1342 fax
carolyn@ccla.net

CK LA

HR

Texas P.E. Firm
Registration No. F-754

ISSUE	DATE	DESCRIPTION
B	10/3/2014	90% DRAFT FOR REVIEW
A	1/24/2014	60% DRAFT FOR REVIEW

PROJECT MANAGER	S MUCHARD
DESIGNED BY	CK
DRAWN BY	CK
CHECKED BY	CK
DATE	10/03/2014
PROJECT NUMBER	220162

NOT FOR CONSTRUCTION,
PERMITTING OR REGULATORY
APPROVAL



**ELIZA SPRING
OUTLET
DAYLIGHTING**

Austin, Texas

FENCING PLAN



FILENAME ELIZA02
SCALE AS SHOWN



1 PLANTING PLAN
Scale: 1/8" = 1'-0"

Plant List				
Tag	Common Name	Botanical Name	Qty	Scheduled Size
Trees				
SYC	American Sycamore	Platanus occidentalis	3	3" caliper
BTM	Big Tooth Maple	Acer grandidentatum	2	3" caliper
CBTh	Carolina Buckthorn	Rhamnus caroliniana	3	5 gal
Ch Oak	Chinquapin Oak	Quercus muhlenbergia	2	3" caliper
PHaw	Possumhaw	Ilex decidua	3	5 gal
RB Vib	Rusty Blackhaw Viburnum	Viburnum rufidulum	1	15 gal
Shrubs, Grasses, Vines & Groundcover				
LMuh	Big Muhly	Muhlenbergia lindheimeri	4	1 gal
BBush	Buttonbush	Cephalanthus occidentalis	1	5 gal
GRMist	Gregg's Mistflower	Conoclinium greggii	3	1 gal
HTail	horsetail	Equisetum hyemale var. affine	9	5 gal
ISO	Inland Sea Oats	Chasmanthium latifolium	16	1 gal
Mist	Mistflower	Ageratina havanensis	9	1 gal
TCap	Turk's Cap	Malvastrum drummondii	4	1 gal
CHoney	Coral Honeysuckle	Lonicera sempervirens	4	1 gal
Total	Total		64	

Carolyn Kelley, ASLA
Landscape Architect



ISSUE	DATE	DESCRIPTION
B	10/3/2014	90% DRAFT FOR REVIEW
A	1/24/2014	60% DRAFT FOR REVIEW

PROJECT MANAGER	S MUCHARD
DESIGNED BY	CK
DRAWN BY	CK
CHECKED BY	CK
DATE	10/03/2014
PROJECT NUMBER	220162

NOT FOR CONSTRUCTION,
PERMITTING OR REGULATORY
APPROVAL



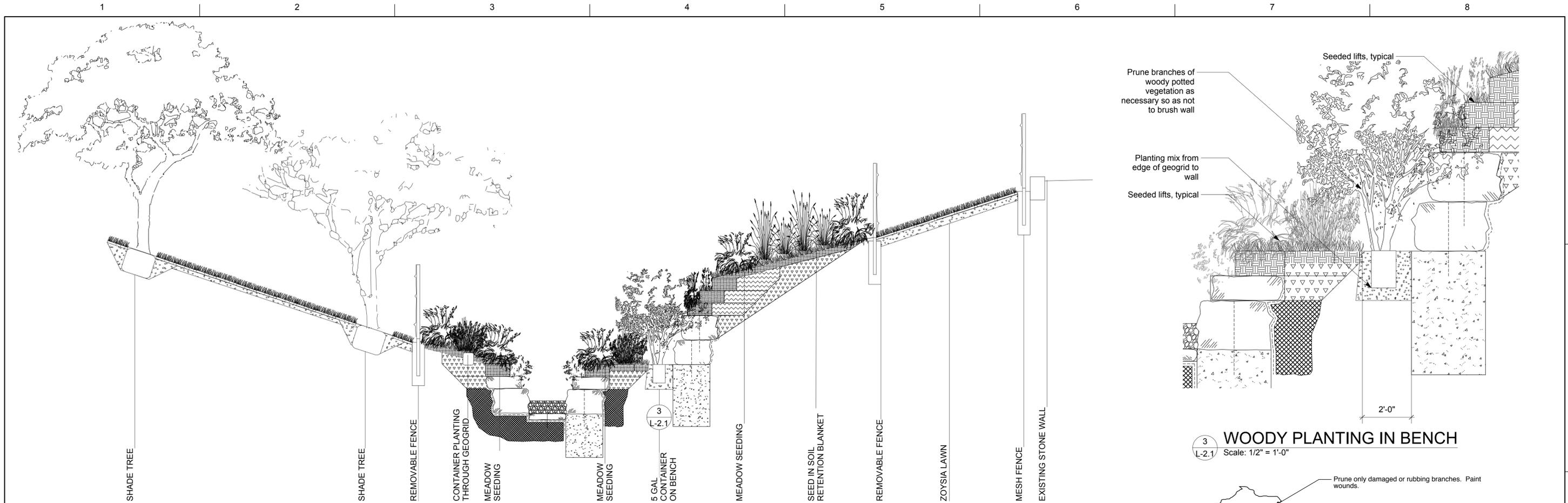
**ELIZA SPRING
OUTLET
DAYLIGHTING**

Austin, Texas

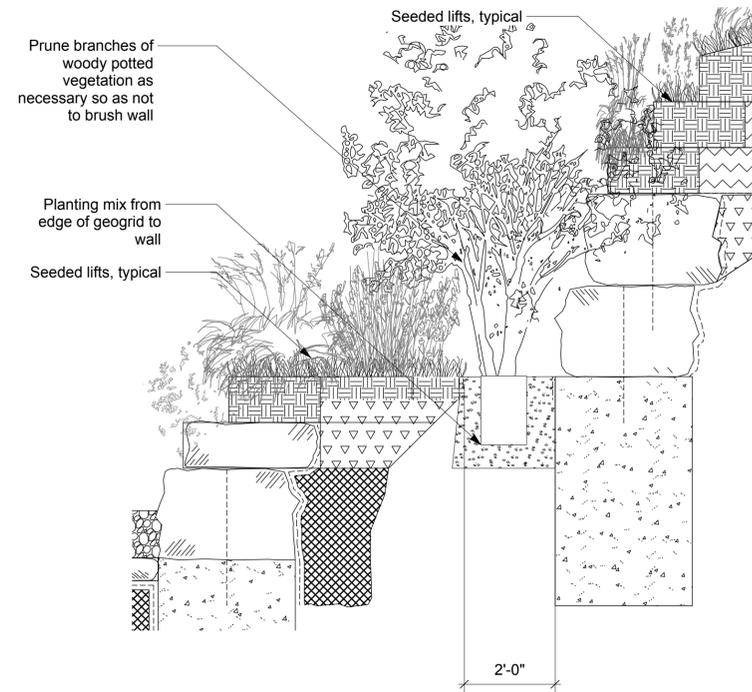
PLANTING PLAN



FILENAME | ELIZA02
SCALE | AS SHOWN

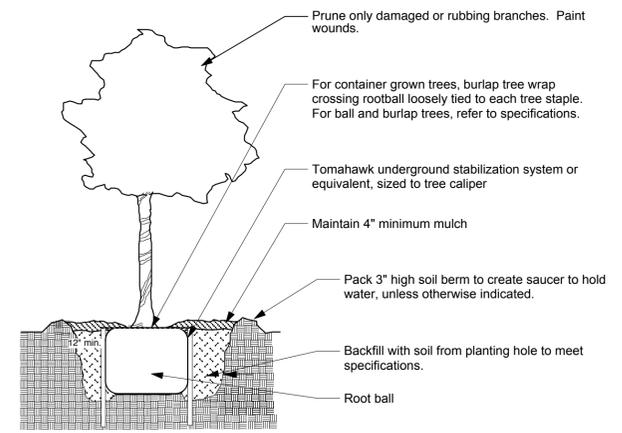


SECTION 1
Scale: 1/4" = 1'-0"

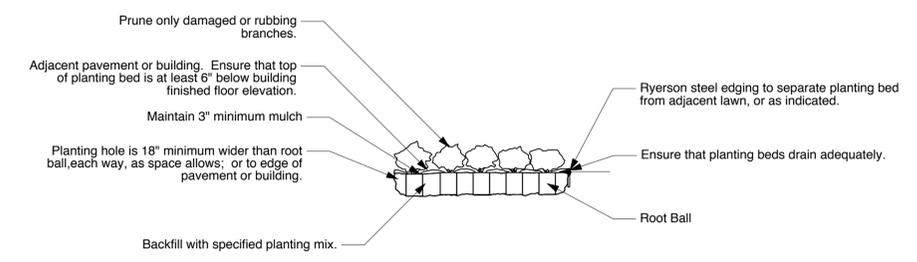


3 WOODY PLANTING IN BENCH
Scale: 1/2" = 1'-0"

SECTION 2
Scale: 1/4" = 1'-0"



TREE PLANTING DETAIL



SHRUB AND GROUNDCOVER PLANTING DETAIL

Carolyn Kelley, ASLA
Landscape Architect
512.445.0431
512.857.1342 fax
carolyn@ckla.net



ISSUE	DATE	DESCRIPTION
B	10/3/2014	90% DRAFT FOR REVIEW
A	1/24/2014	60% DRAFT FOR REVIEW

PROJECT MANAGER	S MUCHARD
DESIGNED BY	CK
DRAWN BY	CK
CHECKED BY	CK
DATE	10/03/2014
PROJECT NUMBER	220162

NOT FOR CONSTRUCTION,
PERMITTING OR REGULATORY
APPROVAL



**ELIZA SPRING
OUTLET
DAYLIGHTING**

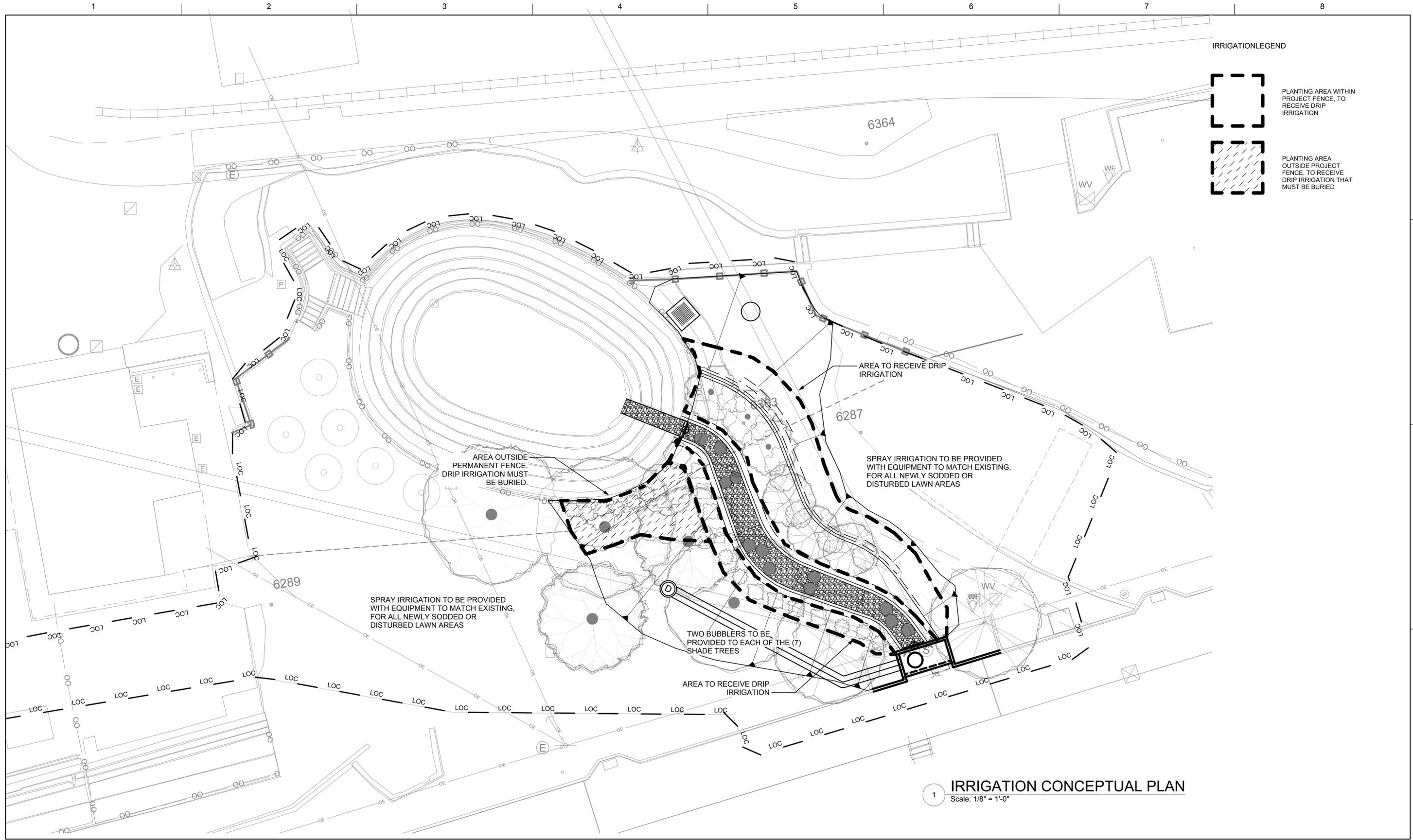
Austin, Texas

LANDSCAPE SECTIONS & DETAILS



FILENAME | ELIZA02
SCALE | AS SHOWN

SHEET
L2.1



Carolyn Kelley, ASLA
Landscape Architect

512.445.0431
512.857.1342 fax
carolyn@ckla.net



ISSUE	DATE	DESCRIPTION
B	10/3/2014	90% DRAFT FOR REVIEW
A	1/24/2014	60% DRAFT FOR REVIEW

PROJECT MANAGER	S MICHARD
DESIGNED BY	CK
DRAWN BY	CK
CHECKED BY	CK
DATE	10/03/2014
PROJECT NUMBER	220162

NOT FOR CONSTRUCTION.
PERMITTING OR REGULATORY
APPROVAL



**ELIZA SPRING
OUTLET
DAYLIGHTING**

Austin, Texas

IRRIGATION PLAN



FILENAME | ELIZA02
SCALE | AS SHOWN

SHEET
IR1.1