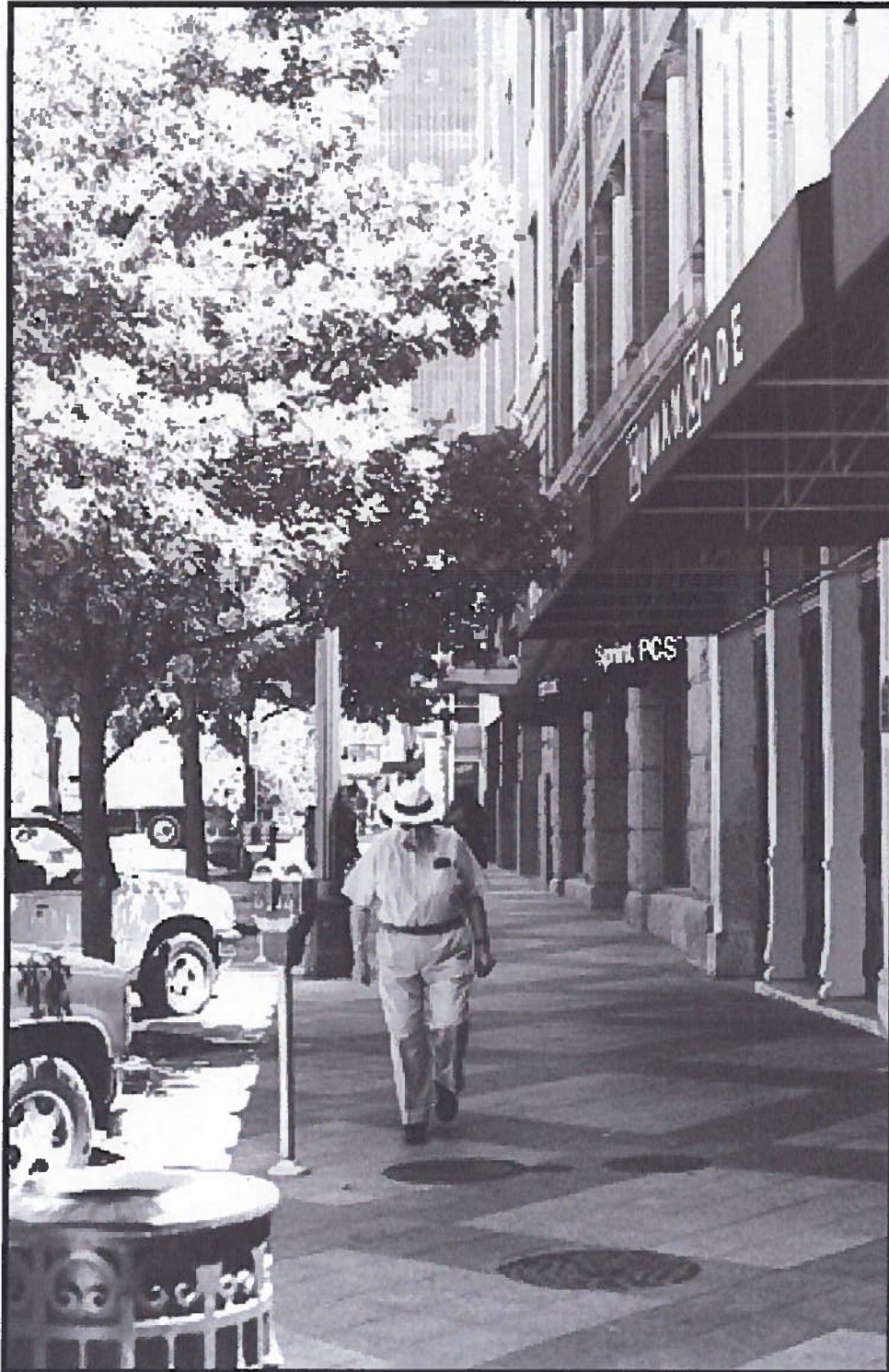


City of Austin
Great Streets Development Program
Planning & Development Review Department
Great Streets Process & Technical Information Packet



City of Austin

Great Streets Development Program

Great Streets Information Award Packet

Contact Information

City of Austin-Planning & Development Review Department (PDRD)
Urban Design Division

Humberto Rey, Urban Designer/Program Coordinator

Tel: 512-974-7288 Fax: 512-974-2269 E-mail: humberto.rey@austintexas.gov

Table of Contents

Introduction	What are Great Streets?
Page 4	Criteria for Qualifying for Great Streets Parking Meter Funding Award
Page 5	CBD Pedestrian Activity Map
Page 6	Great Streets Development Program (GSDP) Submittal, Review & Reimbursement Process/Minority & Women Owned Business Enterprise Overview (M/WBE)
Page 8	Great Streets Reimbursement Calculation Worksheet
Page 9	M/WBE Participation Report template
Page 11	Site & Landscaping Standards Overview
Page 18	Great Streets Sidewalk Plan Requirements
Page 19	Great Streets Typologies – Plans and Cross Sections
Page 20	Great Streets Furnishings Locations
Page 21	Furnishings & Landscaping Details

INTRODUCTION

What are Great Streets?

A community's downtown comprises the heart of that community, and its streets form the primary public arena for interchange and commerce. Downtown Austin belongs to all Austin residents, and it has always represented the community culturally, economically, and politically. Currently, downtown Austin lacks the numerous vibrant, pedestrian-dominant, multi-functional, commercial corridors that define other cities. For Austin to create great streets and public spaces, we must set forth a vision about our downtown and design a public right-of-way network to support that vision.

The Downtown Great Streets Master Plan articulates this vision for the growth of downtown Austin. The City of Austin selected Black & Vernooy + Kinney, a joint venture, to develop the Master Plan, synthesizing issues of street design and transportation into an integrated and harmonious system. With the tremendous growth and change Austin is experiencing, this Master Plan presents a timely opportunity to affect the livability, safety, and aesthetics of Austin's downtown streets.

Planning for the transportation as a component of the development of an active and vibrant downtown must begin with the premise that "Streets are for people."

...Streets in downtown should be designed to slow down and to integrate vehicle traffic better with pedestrian traffic. A network of streets should be changed to accommodate two-way traffic. Sixth Street should be immediately converted to two-way traffic...

(Austin, R/UDAT, 1991)

The goal of the Great Streets program is to provide a master plan as an instrument to pursue this vision of *streets for people*. This vision stems from the Downtown Austin Design Guidelines, adopted by City Council in 2000. The Design Guidelines established a set of values for downtown development, including authenticity, history, safety, diversity, density, and economic vitality. This document pursues the indoctrination of these values according to the following user hierarchy:

- Pedestrians
- Transit
- Bicycles
- Automobiles

In addition to the values presented by the Downtown Austin Design Guidelines, the Second Street Retail District Plan (prepared by the ROMA Design Group and Black & Vernooy Architects) includes the following six guiding design principles:

- **Streets as Places:** the Great Streets Program envisions downtown as a vital focus of city life, and as a primary destination. Our downtown streets encompass our most important and inclusive public space and common ground.
- **Interactive Streets:** urban streets are the stages on which the public life of the community is acted out.
- **Managed Congestion:** congestion is a fact of life in successful urban places. By definition, a place that supports a great concentration of economic and social activities within a pedestrian-scaled environment is going to be congested.
- **Balanced Usage:** downtown streets must balance the needs of pedestrians, transit, bicycles, and the automobile in creating an attractive and viable urban core.
- **Pride of Character:** visible care and upkeep are critical to the vitality of urban street life.
- **Public Art:** art in the public environment can help to establish a stronger sense of place and continuity between the past, present and future.

...consider what makes a city center magnetic, what can inject the gaiety, the wonder, the cheerful hurly-burly that makes people want to come into the city and linger there. magnetism is the crux of the problem. All downtown's values are its by-products.

To create in it an atmosphere of urbanity and exuberance is not a frivolous aim.

Jane Jacobs, Downtown is for People

The Great Streets Master Plan consists of a few simple but profound objectives:

- Change the space and scale of the street to create a sense of place for the individual.
- Create an environment that is safe, generous enough for multi-purpose use, and sheltered from the Texas sun.

- Find a thousand ways to calm traffic movement in downtown through symbols of pedestrian dominance, through traffic management in a two-way street system, and through rigorous enforcement of traffic lanes to promote and protect pedestrian safety.
- Create an equitable balance of space usage between sidewalks and streets. The ideal objective would be a 50/50 allocation between pedestrians and vehicles, though such an allocation would be difficult to achieve. Currently a typical downtown Austin street has an 80 foot right-of-way with 60 feet (75 percent) dedicated to automobiles, leaving the remaining 20 feet (25 percent) for pedestrians. The typical Great Street of Austin's future would have 44 feet dedicated to the auto (or 55 percent), giving 45 percent of the street over to pedestrian facilities and travel. For more detailed information regarding street right-of-way and allocation, refer to the Great Street typologies in Chapter Four.
- Occupy the wider sidewalk zone with an array of well-designed, functional objects such as street trees, broad eighteen-foot canopies, lights, benches, waste receptacles, and other amenities. Refer to Streetscape Elements and Standards in Chapter Five for more information regarding other enhancements of the pedestrian surroundings.
- Allow space for private sector initiatives to occupy and animate the street scene with sidewalk cafes, kiosks, and newsstands.
- Accommodate automobile traffic *to* downtown and discourage traffic *through* downtown.
- Recognize the primacy of the grid in the downtown and optimize its use.
- Recognize the inherent need for balance and finite limits of the street grid and the corridors that feed into it.

Great Streets Development Program

Criteria for Qualifying for Great Streets Parking Meter Funding Award

GATEKEEPER CRITERIA:

- ☐ Must be located in the CBD, bounded by Lamar, Cesar Chavez, 11th Street, IH 35.
- ☐ Must have Great Streets Sidewalk Plan¹ reviewed and approved by City's Urban Design Division (UDD) staff for compliance with the Great Streets Master Plan streetscape standards and layout.

ESTABLISHING AN AWARD CAP:

Three levels of Great Streets Program award are envisioned, according to the criteria below, with the highest level being capped at the value of \$18 per square foot of the sidewalk area proposed for Great Streets-type sidewalk improvements:

- ☐ HIGH: (CAP: \$18 PSF)
- ☐ MEDIUM: (CAP: \$14 PSF)
- ☐ LOW: (CAP: \$10 PSF)

AWARD CAP CRITERIA:

- _____ Is located in area of high pedestrian activity².
- _____ Is located along a CMTA bus route.
- _____ Extends/leverages underground utility improvements, planned or implemented.
- _____ Extends/leverages adjacent streetscape improvements, planned or implemented.
- _____ Is part of a planned corridor, district or master plan.
- _____ Improves Accessibility Compliance
- _____ Allows adequate on-street parking.
- _____ Provides sidewalk cafe.
- _____ Is within a historic district or is a landmarked property.
- _____ Is located along a COA bike route.
- _____ Incorporates placemaking/special features.³

REQUIRED PRIOR TO REQUEST FOR COUNCIL ACTION (RCA) LAUNCH DATE:

- ☐ Engineered CDs, License Agreements approved: ready to submit for Site Development Permit with final sign-off by UDD.
- ☐ 8 ½" X 11" site plan drawing with all Great Streets improvements shown as they are to be constructed.
- ☐ Line item budget for City-reimbursable expenses allowed under Texas Local Government Code for cost participation in "oversizing" facilities that benefit the public⁴.

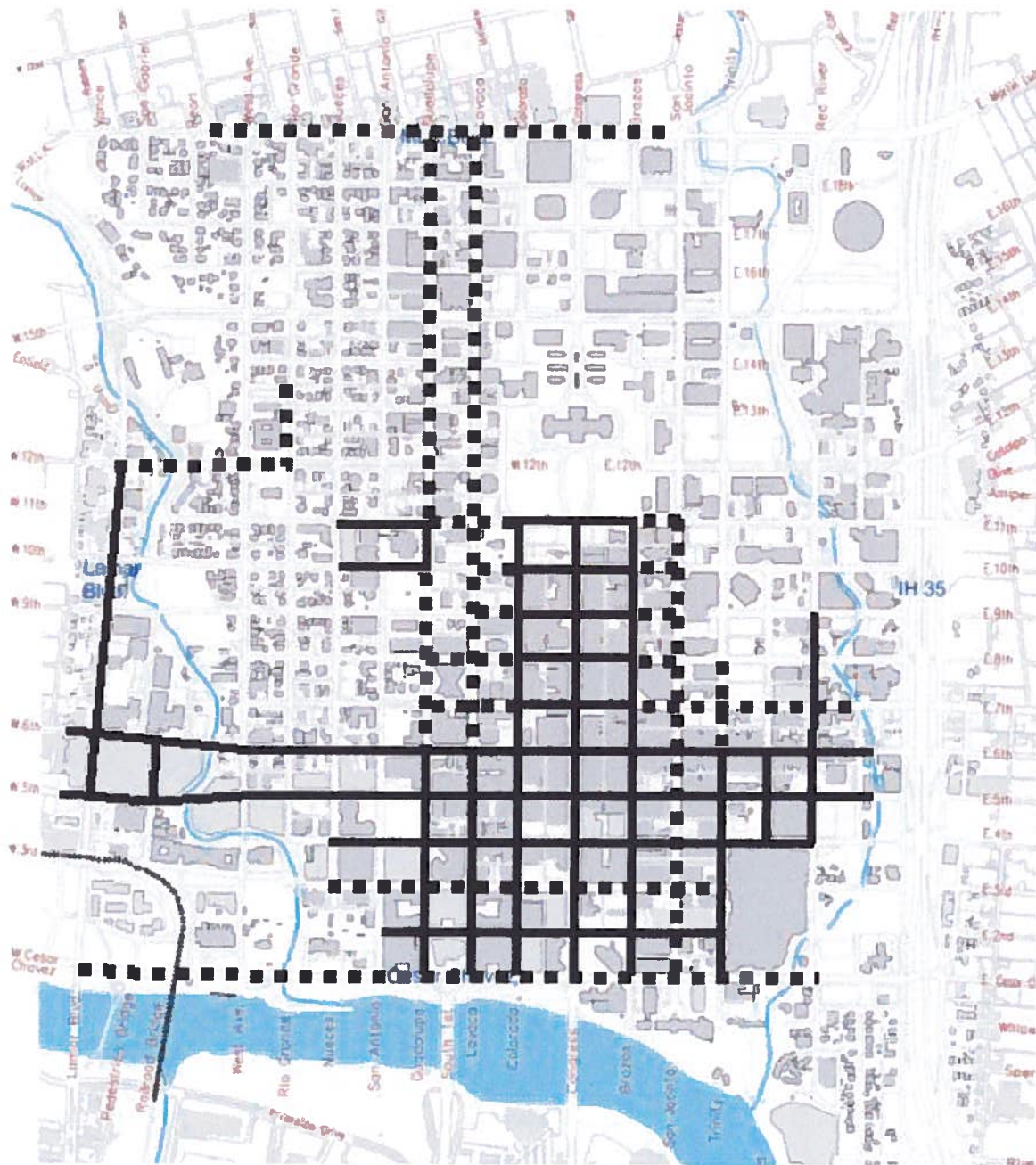
¹ See page 18, Great Streets Sidewalk Plan Requirements.

² See page 5, CBD Pedestrian Activity Map.

³ May include fountains, clocks, public art, artisan-produced elements, historic information, etc.

⁴ See page 8, Great Streets Reimbursement Calculation Worksheet.

Great Streets Development Program CBD Pedestrian Activity Map



Pedestrian Activity Level - Existing or Planned* (*subject to updates as projects emerge)

- HIGH pedestrian activity
- MEDIUM pedestrian activity
- unmarked-** LOW pedestrian activity

Planning & Development
Review Department

July 1, 2005

Great Streets Development Program Great Streets Submittal, Review & Reimbursement Process/ Minority & Women Owned Business Enterprise Overview

1. Applicant meets with PDRD Urban Design Division (UDD) and other city staff to review Great Streets standards and proposed streetscape improvements. (Contact **Humberto Rey, 512-974-7288**; humberto.rey@austintexas.gov)
2. Applicant submits streetscape plans to UDD staff and revises as necessary to receive UDD staff approval of finalized Great Streets Sidewalk Plan.
3. Once approved, a Great Streets reimbursement cap is established. (See Great Streets Development Program Criteria)
4. Applicant complies with M/WBE (Minority & Women-Owned Business Enterprise) Process - See Process Overview, below).
5. COA (City of Austin) drafts Community Facilities Contract (CFC).
6. Administrative approval if reimbursement < \$46,000; City Council approval required if >\$46,000.
7. Applicant and COA execute CFC.
8. Applicant constructs streetscape improvements.
9. Applicant submits required documentation for reimbursement (specified in CFC).
10. Inspection and acceptance of Great Streets improvements by COA.
11. Reimbursement funds released by COA.

M/WBE Process Overview

1. Applicant develops scope of work for streetscape project to identify major contractor opportunities.
2. Applicant meets with City of Austin DSMBR (Department of Small & Minority Business Recruitment **Raymond Young (512) 974-9183** to determine opportunities for M/WBE participation and identifies COA certified M/WBE contractors based on scope of work.
3. Applicant sends notice to all identified contractors at least 5 days prior to bid date and negotiates with qualified bidders.

4. Applicant provides documentation of M/WBE notification and good faith efforts to COA DSMBR.
5. Applicant submits letter to DSMBR and UDD verifying each M/WBE participant, percentage of monetary participation and scope of work commodity code. (See M/WBE participation template letter.)
6. Obtain letter from City of Austin DSMBR approving M/WBE participation.

Great Streets Development Program

Great Streets Reimbursement Calculation Worksheet

For Community Facilities Contract

Great Streets Element	Quantity Provided	City Standard	Cost (includes labor & materials)	Reimbursement Rate	Total
Standard CBD Sidewalk	(square foot area measured from property line to face-of-curb)	Width of concrete sidewalk varies, 6" concrete curb/18" gutter		30 %	
Paving for Sidewalk Beyond Minimum Required Width	(square foot area measured from property line to face-of-curb minus Standard CBD Sidewalk Requirement)			100 %	
Street Trees (including tree grates and irrigation)		None Required		30 %	
Planting Drainage		None Required		30 %	
Other Landscaping		None Required		30 %	
Benches		None Required		30 %	
Bike Racks		None Required		30 %	
Waste Bins		None Required		30 %	
Street Lighting / Traffic Signal Poles & Tree Lighting (including foundations, conduit, pull boxes)		3 Street Lighting poles per block; staggered / Traffic Signal Poles as warrants are met		100 %	
Relocation / Oversizing of Utilities (Water Lines, Drainage Inlets, Storm Lines, etc.)		Standards set by W/WW, PW, WPDR		100 %	
Other Elements					
Sub-total					\$ _____
Reimbursement CAP Established for this project:					\$ _____
TOTAL (not to exceed CAP)					\$ _____

Great Streets Development Program

Minority & Women-Owned Business Enterprise (M/WBE) Participation Report

Dear DSMBR Project Reviewer,

I have included in this report a list of the City of Austin Certified M/WBE participants being used in our (insert your project name) Project. Please review the following M/WBE participation provided in the chart below. We have also attached our notification letters, fax log and/or USPS envelope/letter to all DSMBR identified contenders.

Minority and Women-Owned Business Enterprise Participants:

Professional Service Provider	Status as MBE or WBE	COA Certification No.	% of total cost awarded to participant
Contractor	Status as MBE or WBE	COA Certification No.	% of total cost awarded to participant
Concrete:			
Erosion Control:			
Landscaping:			
Tree Protection:			
Supplier:			
Other:			
TOTAL Participation			% of total cost awarded

We are seeking your approval of our efforts made to include Minority and Women-Owned Business Enterprises in our streetscape improvement project for Great Streets. Please indicate your approval by signing in the space provided below.

Thank you for your time and consideration.

Sincerely,

(Applicant's information here)

(signature)
DSMBR Project Reviewer
Authorized Representative
City of Austin, Texas
Date:_____

CC: Raymond Young, DSMBR
Humberto Rey, PDRD, Urban Design Division

Great Streets Development Program ***Site & Landscaping Standards Overview***

The following standards highlight the major urban design and landscaping components of the *City of Austin Great Streets Development Program (GSDP)*. This summary should assist the development community in identifying and incorporating these elements into their overall design criteria. For further information please contact Humberto Rey, Urban Designer, Planning & Development Review Department (PDR) at (512) 974-7288.

Program Boundaries:

North: 11th Street
South: Cesar Chavez Blvd.
East: IH-35
West: Lamar Blvd.

General Standards:

Street Widths:

Curb to curb street width for travel lanes with or without parallel parking:

- Standard Street: 44'-0"
- Pedestrian Dominant Street: 32'-0"
- Commuter Boulevard: 54'-0"

Corner and curb radii: 22.5' radius at all corners and 10' radius at driveways and alleys.

Curb and gutter: Please use the City's standard curb and gutter detail (6" curb and 18" gutter).

Standard Sidewalk width: 18'-0"* of which

- a) *Pedestrian Zone:* 10 feet (from Property Line outward),
- b) *Curbside Zone:* 8 feet remaining to curb for trees, utility access, street furnishings;
- c) *Frontage Zone:* 2 feet **within** the 10 feet Pedestrian Zone, and adjacent to building façade. It allows pedestrians a comfortable "shy" distance from the building fronts, and also provides a place for private, temporary uses, i.e. sidewalk cafes (where allowed by code) while maintaining the clear, through passageway of the *Pedestrian Zone*.

* At certain locations, 18 feet width sidewalks may not be possible due to existing conditions. Urban Design Division will evaluate these situations on a case-by-case basis.

General Standards, cont.

- Street Trees Spacing: 22'-0" O.C.; 4'-0" from face of curb;
- Light Poles Spacing: 88'-0" O.C.; 4'-0" from face of curb;
- Pedestrian Crossing at every intersection with Type 1 ADA ramps;
- Transit stop options at most nearside intersections to be coordinated with Capital Metropolitan Transit Authority;

Street Typologies: The following is a listing of streets according to the design typology, which is to be used in implementing streetscape improvements along their frontages.

- | | |
|-----------------------------------|---|
| - Pedestrian Dominant Street: | Second Street |
| - Mixed Mode Streets: | Eight Street, Ninth Street, Tenth Street,
West Avenue, Rio Grande, San Antonio,
Colorado, Brazos, Neches, Sabine. |
| - Transit Street: | Fourth Street
Lavaca (from Drake Bridge to 11 th Street) |
| - Bicycle & Local Access Streets: | Third Street, Sixth Street, Eleventh Street
(west of Guadalupe and east of San Jacinto),
River/Holly, Henderson, Bowie,
West Avenue (south from Sixth Street),
Nueces Street (with parking),
Trinity Street (with parking) |
| - Commuter Street: | Cesar Chavez (east of Trinity Street),
Fifth Street, Seventh Street, Guadalupe
Street, San Jacinto Blvd., Red River Street
(11 th Street to Cesar Chavez) |
| - Commuter Boulevard: | Cesar Chavez (west of Trinity Street),
Eleven Street (between Guadalupe Street
and San Jacinto Blvd., with two bicycle
lanes). |

Please refer to attached *Great Streets Typology* plans and sections on Page 19; those on which your project has frontage are included in this packet.

Lights:

Light placement:

- 88'-0" pole to pole spacing;
- Streetlight poles adjacent to street intersections shall be 6'-0" inward from property corner (coincides with interior edge of corner ramp); then commence the 88'-0" pole to pole spacing;
- Provide at least 11'-0" distance between light poles and centerline of trees;
- Light poles will be placed on sidewalk 4'-0" from pole centerline to face of curb – centered within the 8'-0" *Curbside Zone* (matching placement of trees).
- At all tree locations, an electrical source/outlet shall be provided.

Streetscape Furnishings:

- Benches: 4 per block face – installed perpendicular to street
- Bike racks: 8 per block face – installed at centerline with trees and light poles.
- Waste Bins: 2 per block face
 - a) mid-block sites: located near building entrances.
 - b) corner sites: located adjacent to and aligned with corner ramps.

STREET TREES & LANDSCAPING STANDARDS:

Trees: Trees shall be a minimum of five-inch (5") caliper* (measured 12" above the root ball) at installation, with a typical canopy height of 14-16 feet.

** Three-inch (3") caliper for Big Tooth Maples*

- Spacing of trees shall be 22'-0" O.C. beginning 11'-0" from corner light pole, which in turn is located 6 feet from interior edge of corner ramp.
- Alternate Cluster Tree spacing: 19'-0" on streets with no duck-in parallel parking or alternating duck-in parallel parking, i.e. Bicycle & Local Access streets and Commuter Streets (located within the 88'-0" zone between light poles).
- Trees will be placed on sidewalk 4'-0" from tree centerline to face of curb – centered within the 8'-0" *Curbside Zone* (matching placement of light poles).
- Trees shall be lit with seasonal and/or accent lighting for aesthetics as well as pedestrian safety issues; an electrical source/outlet shall be provided.
- **Tree Wells:** On 18'-0" sidewalks minimum size shall be 6'-0" long x 6'-0" wide x 4'-0" deep.
- **Cast Iron Tree Grates:** Will have an expandable middle ring; 18'-0" sidewalks: 6'-0" x 6'-0" grate (Typ.)

Intent of Street Trees:

The curbside street tree is envisioned as a large canopied, high branching tree that is tolerant of urban conditions, relatively disease and pest resistant, and has been grown successfully within the Austin area. Planting a tree is an investment in time, money, and the future. Trees can provide net benefits, both environmental and aesthetic, that are worth two to three times the cost of planting and caring for them over a 30-year period. The most important steps in producing a return on the investment in tree planting are to select the highest quality tree possible, plant it correctly, and train it to develop a sturdy, tapered trunk with well-spaced lateral branches that are proportional in size.

Criteria for Location of Trees in Streetscape:

- Street trees are intended to form a continuous canopy over the street and sidewalk affording shade to pedestrians and helping to counteract the urban heat island effect of pavements and masonry building walls. To accomplish this, trees should be tightly spaced at 22 feet on center - so that the canopies touch, but allow sufficient room for tree canopies to grow without conflict with building elements such as building canopies or signs or with other landscaping.

Trees form a psychological and physical boundary between the pedestrian and vehicular zones of the street. They should be placed in the 8-foot wide curbside zone with other streetscape furnishings, a minimum of four feet from the face of curb to centerline of tree. The 4-foot setback from face-of-curb means that if medians are to be built they must be a minimum of 8-feet wide from face-of-curb to face-of-curb for trees to be installed in them.

- Where sidewalks are not wide enough to accommodate a tree pit, consideration should be given to extending sidewalk at corners and at each mid-block roadway light pole location to create space for tree placement beyond the existing ten-foot sidewalk width.

Criteria for Tree Wells and Planting Areas:

- For tree health and longevity, it is imperative to provide the greatest volume of root zone possible. A minimum of 6'-0" long x 6'-0" wide x 3'-6" deep tree well is required in a 12 to 18-foot wide sidewalk. However, the greater the size of the root zone, the better the survival rate of the trees. 1000 cubic feet is the optimum soil volume to sustain long-term growth.

- Elongated tree wells, plant beds or a continuous planting trench running parallel to the street and connecting tree pits are encouraged to provide an even better growing environment for tree roots. Elongated tree wells should have at least that portion of the well which exceeds the standard 6-foot X 6-foot well dimension covered with a paver type of grate in lieu of a cast iron tree grate to maximize the walkable sidewalk surface. Where curbside parking is located, plant beds shall not exceed 14 feet in length, shall be centered on the tree and shall be located so as to not block access to the sidewalk from the parking space.
- The optimum tree well consists of a continuous 2' depth of structural soil extending underneath the sidewalk beyond the immediate planting well from the building face to the curb.
- Fully irrigate the tree wells with a minimum of two bubblers per well on an automatic irrigation system. Irrigation system must be designed in accordance with planting soil textural characteristics and infiltration rate of native, subgrade soils.
- Provide a well-drained planting mix in tree well, or use a structural soil.

Tree Selection Criteria

Tree Species: Property owners shall choose tree species from the Great Streets Tree Species Plan in consultation with the City's Great Streets Development Program staff. In general, East-West streets are to be planted in Cedar Elm or Drake Elm, in alternating pattern, i.e: Cedar Elm on Second Street, Drake Elm on Third Street and so forth. North-South streets are to be planted in Red Oak or Big Tooth Maple also in alternating pattern, i.e. Red Oak on LaVaca, Big Tooth Maple on Colorado, etc. Alternate shade tree species may be considered if approved by the Urban Design Division.

Trees that are to be planted where they will receive shadows from adjacent buildings shall be selected from those species that are able to acclimate to such conditions.

The selected tree species should be readily available from a tree nursery, have a reasonable growth rate of not less than ½ inch in caliper per year, and be of a disease-resistant, drought-tolerant variety whenever available.

Trees shall be locally grown to enhance their probability of success in Austin's limestone soils and climate of extremes in heat and drought. Locally grown shall be defined as grown from seed originating within an area that extends from San Antonio to Waco and from I-35 to Uvalde and having been grown in an alkaline soil/water environment for a minimum of 5 years.

Tree Size, Form and Condition

- For appropriate scale in the downtown environment, trees shall be a minimum of five-inch caliper (measured twelve inches above the root ball or soil surface in container) at time of planting. Administrative waiver to this requirement may be made by staff in the case of lack of availability for one of the approved species.
- Care should be taken to match the height, spread, and habit of the trees along a block front. All trees shall be true to type or name as ordered and have a form typical for the species or cultivar.

The height, crown spread, diameter, and root size of all trees shall be appropriate for the type of stock and in proportion to one another.

The trunk of the tree must have visible taper with a strong single, central leader, free of co-dominant stems and vigorous upright branches that compete with the central leader. Generally the leader should not be pruned or headed back. However, if the leader has been pruned, a vertical branch at least $\frac{1}{2}$ the diameter of the leader must be present immediately below the pruning point. No portion of the trunk from six inches above the root crown shall be larger than the lower portion. The bottom six inches of the trunk shall be of greater diameter than other portions of the trunk. The trunk shall be straight with no crooks or bends exceeding 20 degrees from the vertical with the total number of bends not to exceed two per tree.

- No branches shall be greater than $\frac{2}{3}$ the diameter of the trunk. The branches shall be well distributed in a symmetrical pattern around the trunk and free of crossing branches. The ideal branch spacing is 8" to 12" apart and forming a 45-degree angle with the trunk. Trees shall not have scaffold branches with included bark. Suckers and water sprouts shall not be present on trees.

- Temporary branches should be present along the trunk below the lowest permanent scaffold branch. Heading of temporary branches is acceptable to limit their growth. Minimum clearance for tree limbs and branches must be 7'-6" above the level of the sidewalk.

- Trees should be trimmed proportionately to an ultimate clearance height of 14'-0" above the sidewalk and street over time to provide adequate sight lines for storefronts and traffic signals.

- Container grown trees are preferred for their higher rate of successful establishment. This requirement may be administratively waived by staff to allow for the use of boxed, or balled and burlapped if container grown trees are proven to not be available.

- Root ball of all trees shall be moist throughout and the crown shall show no signs of moisture stress at time of delivery. The root ball or container shall be free of weeds.

- The root mass shall be free of roots visibly circling the trunk and free of "knees" (roots) protruding above the soil. The root mass periphery shall be free of excessive circling roots or bottom matted roots. The uppermost roots shall be within one inch above or

below the soil surface. If container grown, the soil surface shall be no lower than 3" from the top edge of the container.

- The tree shall be well-rooted in the soil mix and capable of standing upright, on its own, at the time of acceptance without the support of a nursery stake. When the container is removed, the rootball shall remain intact. The trunk and root ball shall move as one unit when lifted.

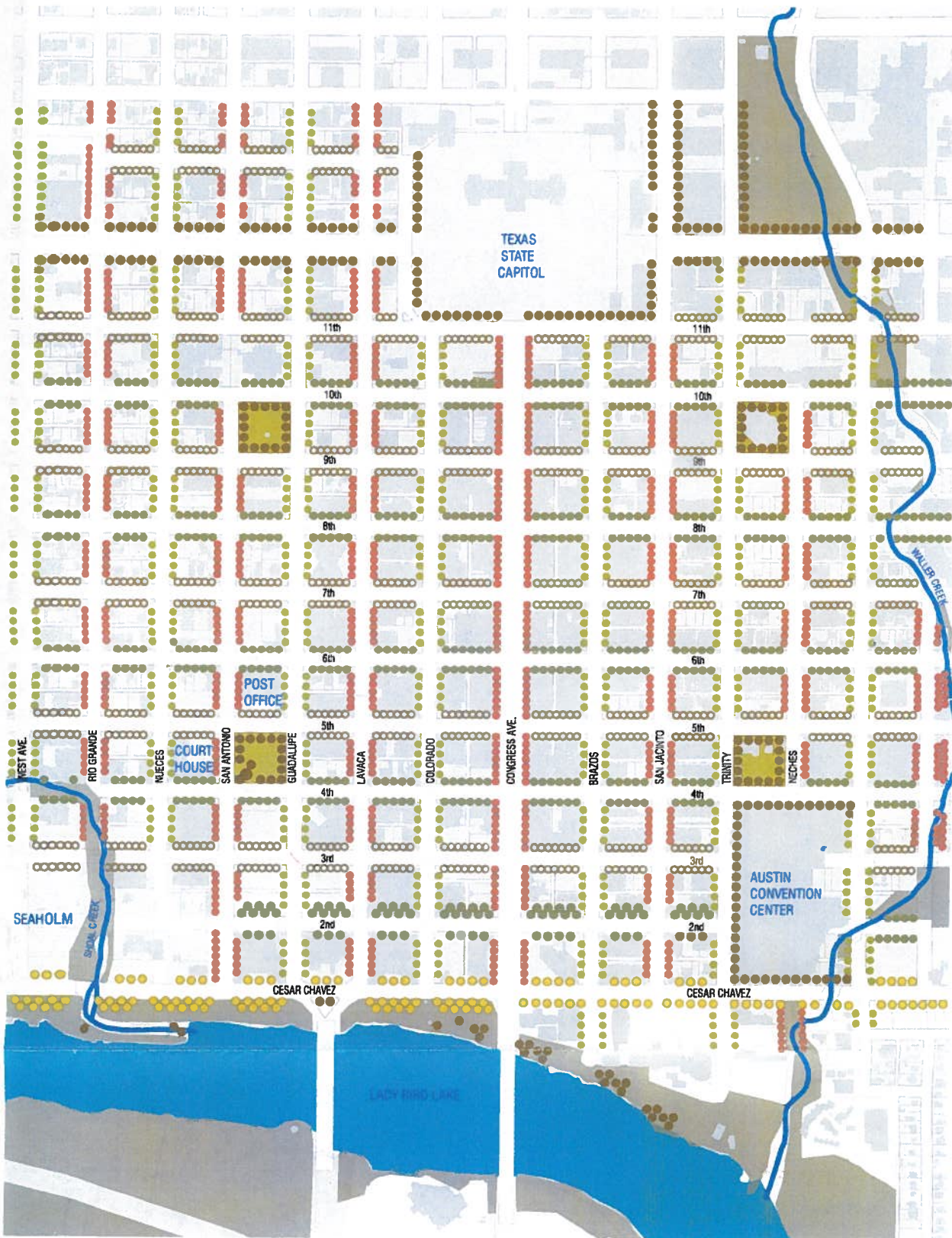
- All trees shall be healthy and vigorously growing at time of acceptance. They shall be free of wounds (except for properly made pruning cuts that have callused over at least half-way) sunburned areas and conks, bleeding galls, cankers, lesions and any other sign of disease or of boring insects and insect injuries.

Installation:

- Planting when the temperatures are high will decrease the chances for survival. Install trees only from September 15 to May 31.
- Set the root ball so its top is flush with grade in a continuous planting area or 6 to 9 inches below sidewalk grade with tree grates.
- Ensure that the best face of the tree is facing outward toward the street.
- When using tree grates, make sure that the trunk is set exactly in the center of the grate opening.
- Install tree upright and plumb in all directions

STREETSCAPE ELEMENTS AND STANDARDS

STREETSCAPE PLANTING AND ACCESSORIES - TREES



Downtown Great Streets Master Plan

- Live Oak
- Bald Cypress
- Cedar Elm
- Drake Elm
- Big Tooth Maple
- Red Oak

Great Streets Development Program

Great Streets Sidewalk Plan Requirements

Great Streets Sidewalk Plans⁵ must include and locate the following Great Streets Elements & Standards⁶ to be eligible for a Great Streets Parking Meter Revenue Funding Award⁷. Applicant to submit streetscape plans to the City's Urban Design Division (UDD) staff and revise as necessary to receive UDD staff approval of finalized Great Streets Sidewalk Plan for site plan submittal.

- ☐ Property lines and curb lines of adjacent properties (typical 80-foot Street and 20-foot Alley right-of-way)
- ☐ 6-inch curb / 18-inch gutter
- ☐ 22.5-foot corner curb radius / 10-foot alley curb radius / radius of curb cuts (varies)
- ☐ Accessible curb ramps with single flare at corners & alleys and tactile warning strips as appropriate
- ☐ On-street parking layout and parking meter locations
- ☐ Sidewalk paving material and pattern
- ☐ 5-inch caliper shade street trees and landscaping
- ☐ Street lighting and traffic signal poles and infrastructure
- ☐ Bike racks- 8 per block face
- ☐ Benches- 4 per block face
- ☐ Waste bins- 2 per block face at corners
- ☐ Bus stop locations coordinated with Capital Metro

⁵ Gatekeeper criteria for Great Streets Parking Meter Funding Award.

⁶ Great Streets Elements & Standards to be updated as proposed details are adopted by the City.

⁷ Requirements can be waived by the Urban Design Division and Designees if reasonably proved to be insurmountable for individual project.

STREET TYPOLOGY

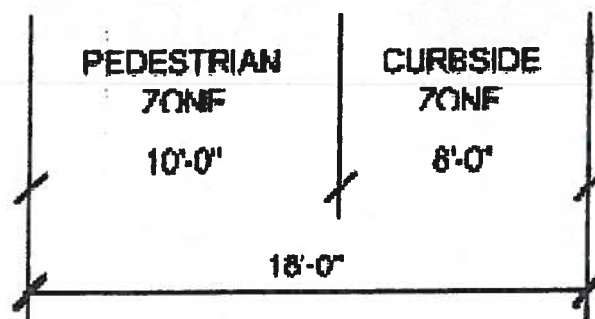
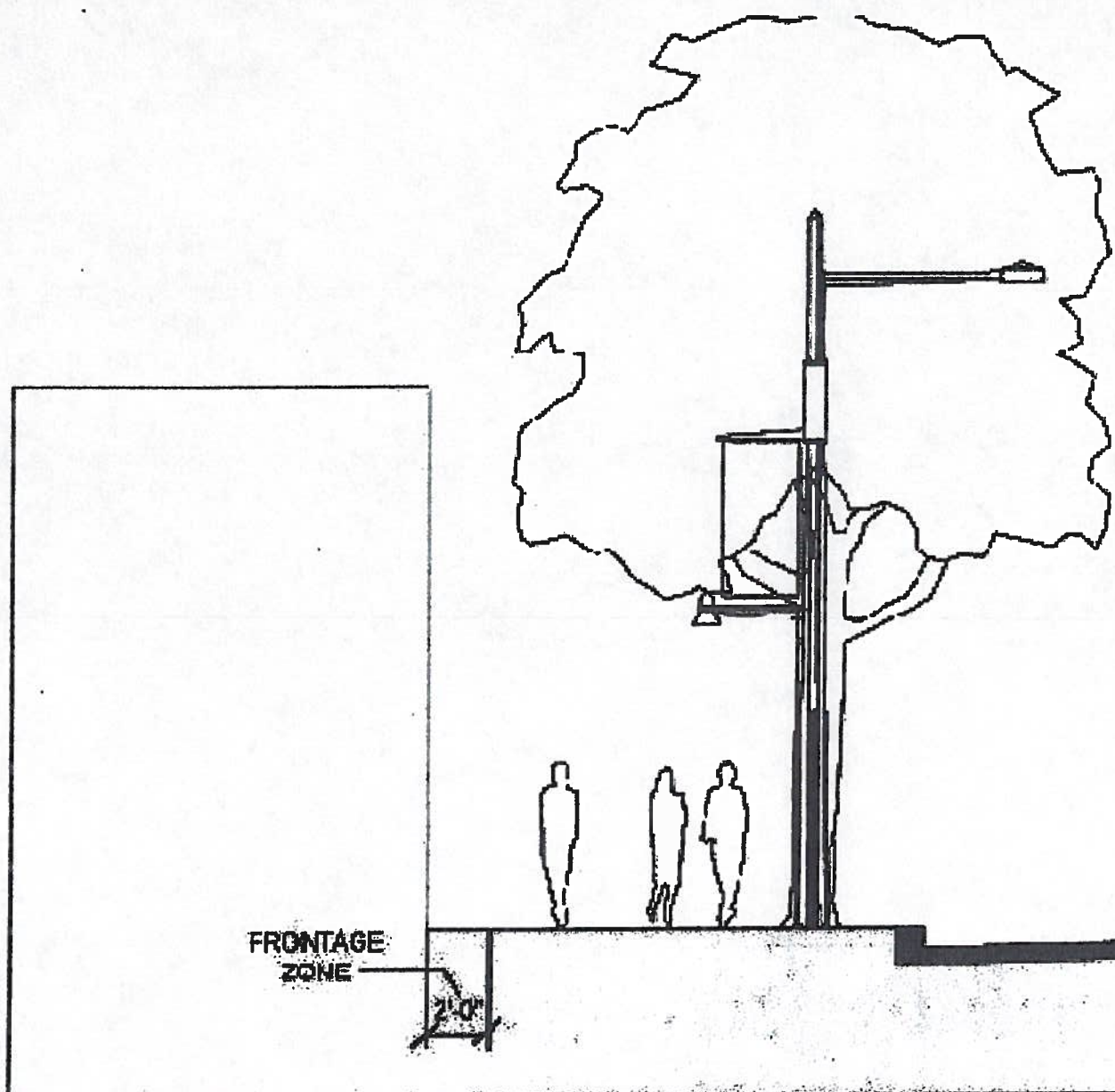
- **Pedestrian Dominant Street:** Second Street*
- **Mixed Mode Streets:** Eight Street, Ninth Street, Tenth Street, West Avenue, Rio Grande, San Antonio, Colorado, Brazos, Neches, Sabine.
- **Transit Street:** Fourth Street, Lavaca
- **Bicycle & Local Access Streets:** Third Street, Sixth Street, Eleventh Street (west of Guadalupe and east of San Jacinto), River/Holly, Henderson, Bowie, West Avenue (south from Sixth Street), Nueces Street (with parking), Trinity Street (with parking)
- **Commuter Street:** Cesar Chavez (east of Trinity Street), Fifth Street, Seventh Street, Guadalupe Street, San Jacinto Blvd.; Red River Street (11th Street to Cesar Chavez)
- **Commuter Boulevard:** Cesar Chavez (west of Trinity Street), Eleven Street (between Guadalupe Street and San Jacinto Blvd., with two bicycle lanes).

Please refer to the following Great Streets Typology plans and sections for design standards regarding the streets on which your project has frontage.

Variation to these typologies may be approved by the Urban Design staff, on a case by case basis, should existing conditions warrant such changes.

*** Second Street is a pedestrian dominant street; new driveways and auto oriented uses are not permitted.**

A typical sidewalk section showing the three sidewalk “zones” is also included for your reference.



Typical sidewalk section showing three "zones"

10

Second Street

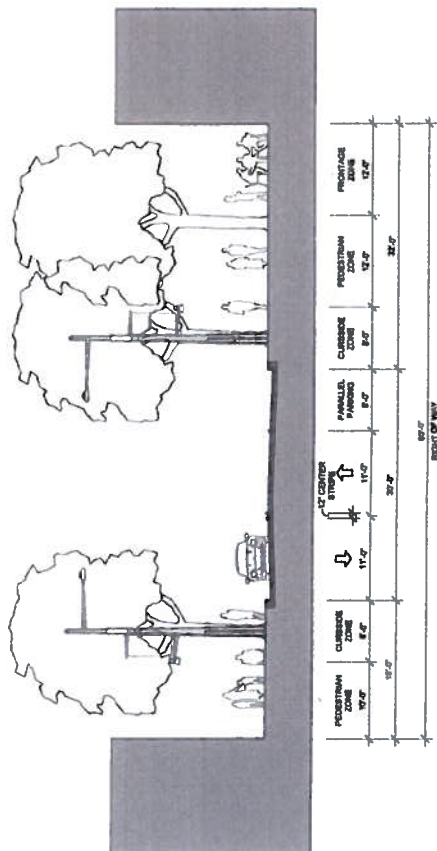
Proposed Pedestrian-Dominant Streets Include:

Second Street (Illustrated)

No other streets of this type are contemplated in the near future, although over time several of the Mixed Mode Streets may become candidates for this type as linear retail districts emerge.

No transit service on this street type is anticipated by Capital Metropolitan Transportation Authority.

For dimensional geometries of all other stratoscope apparatuses, refer to stratoscope elements and standards.

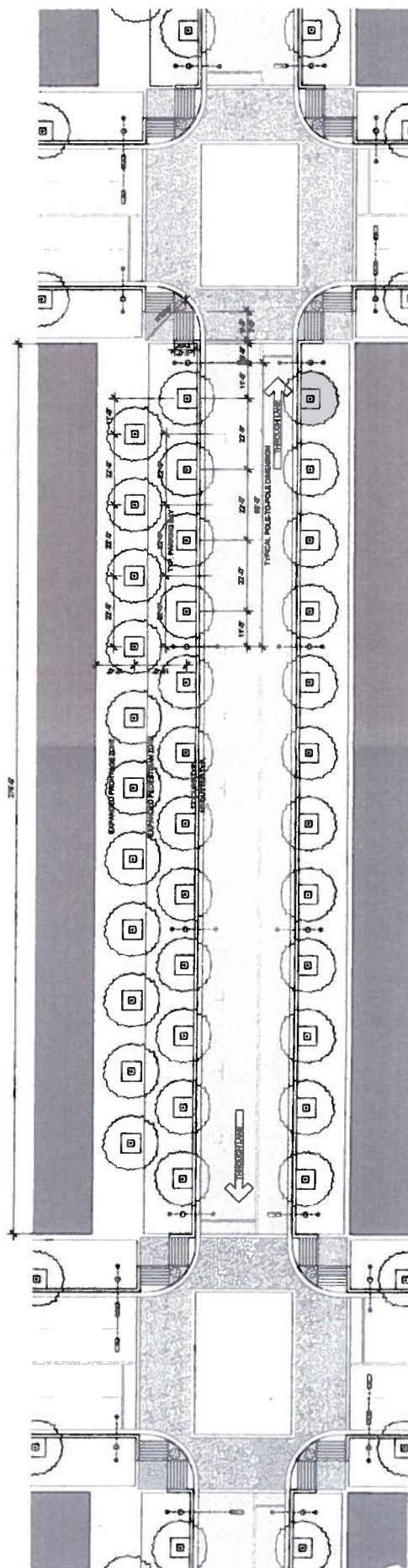
$$\left[\begin{array}{c} 0 \\ 0 \\ 0 \end{array} \right] \quad \left[\begin{array}{c} 0 \\ 0 \\ 0 \end{array} \right] \quad \left[\begin{array}{c} 0 \\ 0 \\ 0 \end{array} \right]$$


PEDESTRIAN DOMINANT STREET

Printed by: C
1007 120 H

SINGULAR BLACK &
ANDREW VERNOOY, AIA

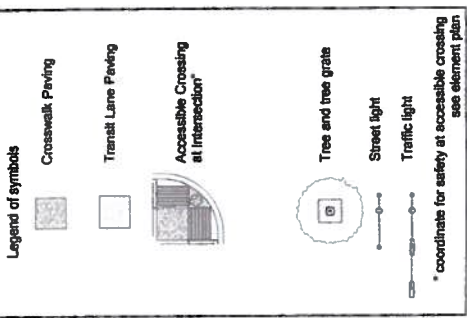
10001
 10002
 10003
 10004
 10005
 10006
 10007
 10008
 10009
 10010
 10011
 10012
 10013
 10014
 10015
 10016
 10017
 10018
 10019
 10020
 10021
 10022
 10023
 10024
 10025
 10026
 10027
 10028
 10029
 10030
 10031
 10032
 10033
 10034
 10035
 10036
 10037
 10038
 10039
 10040
 10041
 10042
 10043
 10044
 10045
 10046
 10047
 10048
 10049
 10050
 10051
 10052
 10053
 10054
 10055
 10056
 10057
 10058
 10059
 10060
 10061
 10062
 10063
 10064
 10065
 10066
 10067
 10068
 10069
 10070
 10071
 10072
 10073
 10074
 10075
 10076
 10077
 10078
 10079
 10080
 10081
 10082
 10083
 10084
 10085
 10086
 10087
 10088
 10089
 10090
 10091
 10092
 10093
 10094
 10095
 10096
 10097
 10098
 10099
 10100
 10101
 10102
 10103
 10104
 10105
 10106
 10107
 10108
 10109
 10110
 10111
 10112
 10113
 10114
 10115
 10116
 10117
 10118
 10119
 10120
 10121
 10122
 10123
 10124
 10125
 10126
 10127
 10128
 10129
 10130
 10131
 10132
 10133
 10134
 10135
 10136
 10137
 10138
 10139
 10140
 10141
 10142
 10143
 10144
 10145
 10146
 10147
 10148
 10149
 10150
 10151
 10152
 10153
 10154
 10155
 10156
 10157
 10158
 10159
 10160
 10161
 10162
 10163
 10164
 10165
 10166
 10167
 10168
 10169
 10170
 10171
 10172
 10173
 10174
 10175
 10176
 10177
 10178
 10179
 10180
 10181
 10182
 10183
 10184
 10185
 10186
 10187
 10188
 10189
 10190
 10191
 10192
 10193
 10194
 10195
 10196
 10197
 10198
 10199
 10200
 10201
 10202
 10203
 10204
 10205
 10206
 10207
 10208
 10209
 10210
 10211
 10212
 10213
 10214
 10215
 10216
 10217
 10218
 10219
 10220
 10221
 10222
 10223
 10224
 10225
 10226
 10227
 10228
 10229
 10230
 10231
 10232
 10233
 10234
 10235
 10236
 10237
 10238
 10239
 10240
 10241
 10242
 10243
 10244
 10245
 10246
 10247
 10248
 10249
 10250
 10251
 10252
 10253
 10254
 10255
 10256
 10257
 10258
 10259
 10260
 10261
 10262
 10263
 10264
 10265
 10266
 10267
 10268
 10269
 10270
 10271
 10272
 10273
 10274
 10275
 10276
 10277
 10278
 10279
 10280
 10281
 10282
 10283
 10284
 10285
 10286
 10287
 10288
 10289
 10290
 10291
 10292
 10293
 10294
 10295
 10296
 10297
 10298
 10299
 10300
 10301
 10302
 10303
 10304
 10305
 10306
 10307
 10308
 10309
 10310
 10311
 10312
 10313
 10314
 10315
 10316
 10317
 10318
 10319
 10320
 10321
 10322
 10323
 10324
 10325
 10326
 10327
 10328
 10329
 10330
 10331
 10332
 10333
 10334
 10335
 10336
 10337
 10338
 10339
 10340
 10341
 10342
 10343
 10344
 10345
 10346
 10347
 10348
 10349
 10350
 10351
 10352
 10353
 10354
 10355
 10356
 10357
 10358
 10359
 10360
 10361
 10362
 10363
 10364
 10365
 10366
 10367
 10368
 10369
 10370
 10371
 10372
 10373
 10374
 10375
 10376
 10377
 10378
 10379
 10380
 10381
 10382
 10383
 10384
 10385
 10386
 10387
 10388
 10389
 10390
 10391
 10392
 10393
 10394
 10395
 10396
 10397
 10398
 10399
 10400
 10401
 10402
 10403
 10404
 10405
 10406
 10407
 10408
 10409
 1



STREET PLAN
PEDESTRIAN DOMINANT STREET



Rapid Transit Street



Rapid Transit Streets are designed to accommodate dedicated, fixed-route transit service in and through downtown Austin.

Fourth Street

Fourth Street has been officially designated by City Ordinance as the primary transit corridor through downtown Austin. The street runs from east of I-35 to a proposed multi-modal transit center in the Seaholm District to the west. Along the way are the Austin Convention Center, the planned Convention Center Hilton Hotel, the Austin Museum of Art, the Austin City Hall, Republic Square, and numerous new mixed-use residential developments. The street is currently a two-lane street with a center turn lane and a north-south side loading dock, which causes the lane to become asymmetrical with a sixteen-foot sidewalk on the south and an expanded twenty-foot sidewalk on the north. Transit lanes would be identified by a change in paving color and texture. Transit passenger rail is implemented, Fourth Street would operate as a Smart-Mode Street type.

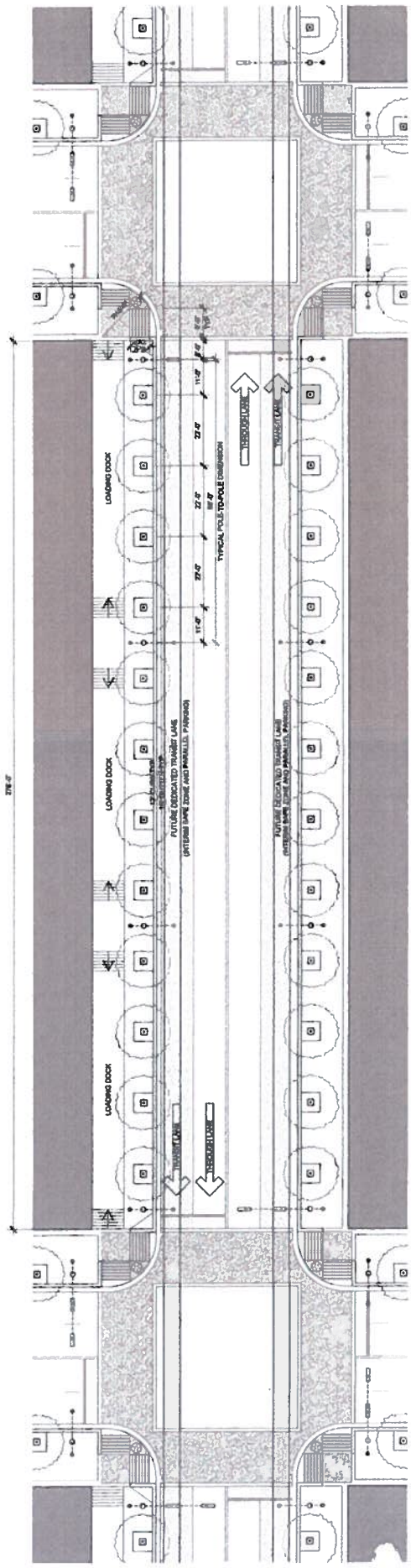
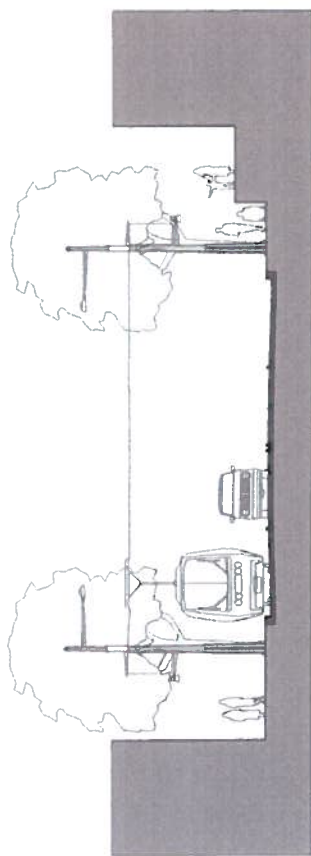
Proposed Rapid Transit Streets include:

Fourth Street (illustrated)

Lavaca Street (from Drake Bridge on the south to beyond Marlin Luther King Boulevard on the north) is the Great Streets recommended north-south Rapid Transit Street. At this writing several north-south alignments are currently being studied by the Rapid Transit Project.

Additional transit service and accommodation on this street type to be coordinated with Capital Metropolitan Transportation Authority.

For dimensional geometrics of all other streetscape appearances, refer to streetscape elements and standards.

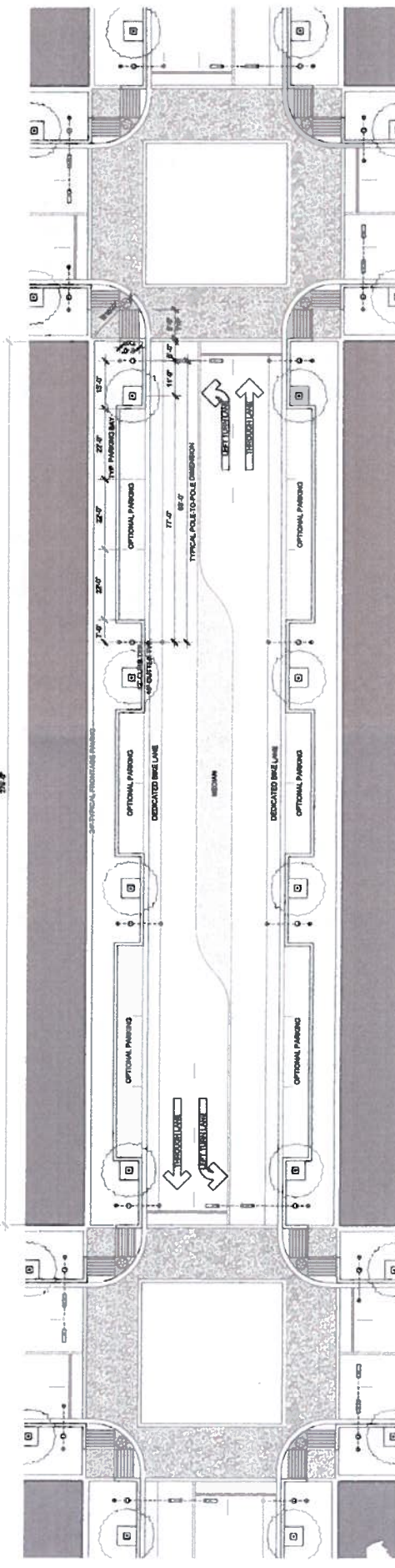


STREET PLAN
 RAPID TRANSIT STREET (FOURTH STREET)



TRANSVERSE STREET SECTION
BICYCLE AND LOCAL ACCESS STREET

25' 0"



STREET PLAN
BICYCLE AND LOCAL ACCESS STREET

Bicycle and Local Access Street

Bicycle and Local Access Streets emphasize bicycle mobility with dedicated bicycle lanes. These bicycle lanes form the backbone of the bicycle network, connecting with other bicycle facilities for comprehensive bicycle access. Additionally, these three lane streets are intended to provide automobile mobility within downtown, rather than automobile through-traffic. As bicycle travel is the primary mode of travel, the street layout and design create an environment that is safe and comfortable for all users. The street layout includes a dedicated left turn, occasional landscaped medians and/or mid-block turns into alleys and driveways. Alternatively, they can accommodate a blended street with three travel lanes (two lanes one way, one lane the other). Parking spaces are provided on both sides of the street, with a minimum of 10' from the curb to the first parking space. The street layout is designed to be flexible, allowing for future changes as needed.

Proposed Bicycle and Local Access Streets include:

- Third Street
- South Street (restricted, with optional parking)
- Eleventh Street (west of Oakdale Street and east of San Jacinto Boulevard)
- Eleventh Street (east of Oakdale Street and west of San Jacinto Boulevard)
- Eleventh Street (south of San Jacinto Boulevard)
- Eleventh Street (north of San Jacinto Boulevard)
- West Avenue (south from South Street)
- West Avenue (north from South Street)
- West Avenue (east from South Street)
- West Avenue (west from South Street)
- West Avenue (center turn lane and reduced parking creates an environment that is safe and comfortable for all users)

Transit service and accommodation on this street type to be coordinated with Capital Metropolitan Transportation Authority.

For dimensional specifications of all other streettype appearances, refer to streettype elements and standards.

Legend of symbols

- Crosswalk Paving
- Median Paving
- Accessible Crossing at Intersection*
- Tree and tree grate
- Street light
- Traffic light

* coordinate for safety at accessible crossing see element plan

GREAT STREETS TYPOLOGY

BICYCLE AND LOCAL ACCESS STREET

17 OCT 200
Drawn by: S. Hombach

SINCLAIR BLACK & ASSOCIATES
ARCHITECTS/ENGINEERS
208 W. 4TH ST. STE. 2A
AUSTIN, TEXAS 78701
TEL: 472-1000
FAX: 472-1005
WWW.SINCLAIRBLACK.COM

Commuter Street



Commaider Streets provides major vehicular access into and through downtown. Unlike the extended curb-to-curb of the Commaider Boulevard, the Commaider Street maintains the typical 44-foot curb-to-curb dimension. Generally, parking is not recommended on Commaider Streets, except in special conditions where it could occur in the form of "block" parking within the eight-foot curbside zone of the sidewalk, so that the 44-foot curb-to-curb dimension is preserved at intersections.

Fifth and Seventh Streets

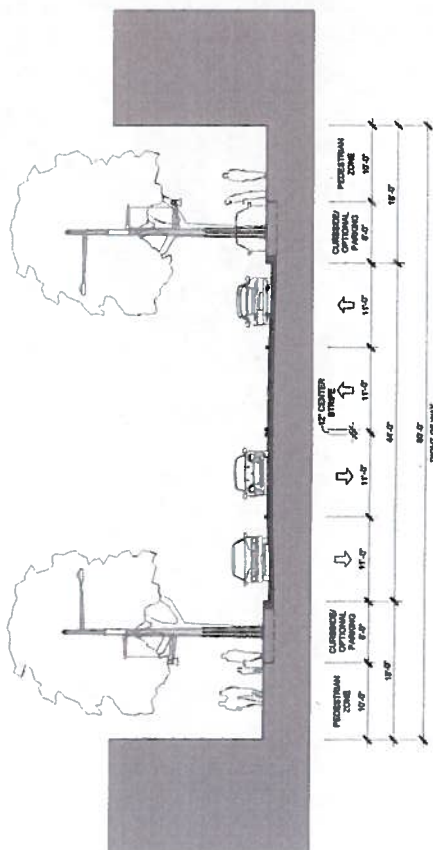
The long-term vision for downtown involves Fifth Street as its major two-way western artery and Seventh Street as the major two-way eastern artery. They have two lanes each way in the 44-foot curb-to-curb dimension. Right-of-way parking could occur in the form of "back-in" parking within the 44-foot curb-to-curb dimension. The 44-foot curb-to-curb dimension is preserved at intersections. Parking on one side only is also desirable, particularly where a full complement of trees on the northern edge of a block is desired. The street block (with no parking) is desired to shade the southern

Proposed Commuter Streets Include:

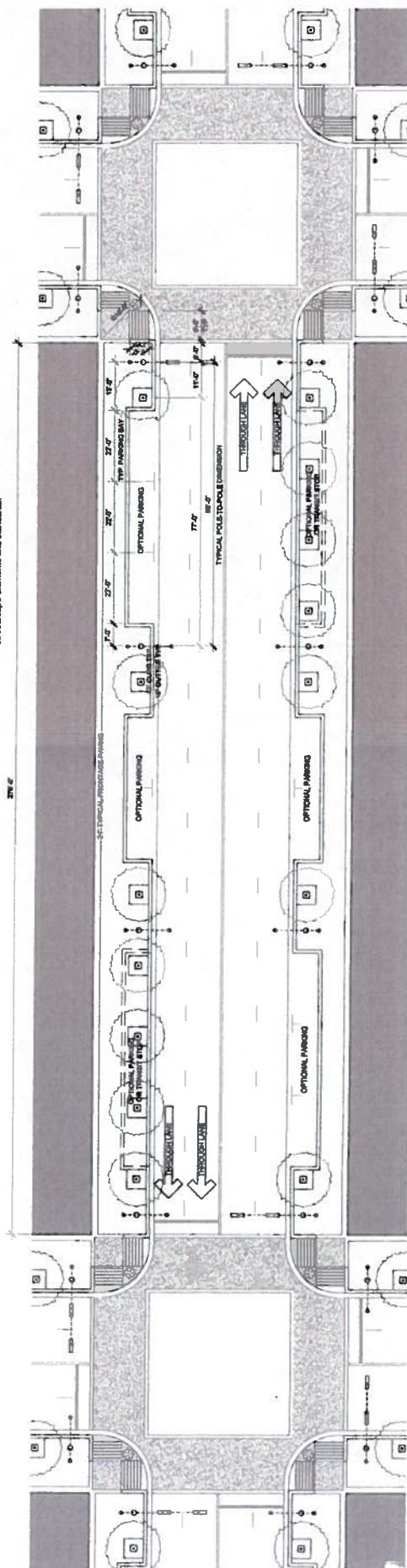
Cesar Chavez (east from Trinity Street, with bicycle lanes)
7th Street (illustrated, with optional parking)
Seventh Street
Twelfth Street (west from West Avenue)
Thirteenth Street (west from West Avenue)
Guadalupe Street
San Jacinto Boulevard
Red River Street (12th Street to Cesar Chavez)

Transit service and accommodation on this street type to be coordinated with Capital Metropolitan Transportation Authority.

For dimensional geometrics of other straightedge apparatuses, refer to straightedge elements and standards.



TRANSVERSE STREET SECTION
COMMUTER STREET



STREET PLAN
COMMUTER STREET

coordinate for safety at accessible crossing
see element plan

Legend of symbols



Crosswalk Paving

**Accessible Crossing
at Intersection***

Tree and tree grato

Street light

Traffic light

coordinate for safety at accessible crossing
see element plan

Commuter Boulevard



Commerce Boulevard provides primary vehicular gateways into the downtown. These gateways offer greatly less than each other, but are unified by the use of a painted median to provide dedicated left turn lanes and to provide a refuge at pedestrian crossings across the increased curb-to-curb distance. The median dimensions and lights-of-way differ for each street of this type.

West Chester Chemical Boulevard

[illegible]

Discontinued Component Separately Includes:

Cover Chorus (west from Twitty Street, West Coast Cancer Center Building)
Thruway Street (downhill) Outcrops Street and Main Junction Boulevard with two bicycles
Eastbound

Twitty Street (107' ROW, four lanes with parking)
Fleming Street (107' ROW, six lanes)
Middletown Lumber (1069' Six-lane) (107' ROW, four lanes)
East River (north of 12th Street, south of Cancer Center)
East River Street

Travel service and accommodation on this steel type to be coordinated with Capital Metropolitan Transportation Authority.

For dimensional geometries of all other structure experiments, refer to structure elements and standards.

* coordinate for safety at accessible crossing
see element plan

Legend of symbols



Accessible Crossing
at Intersections



Tree and tree grate

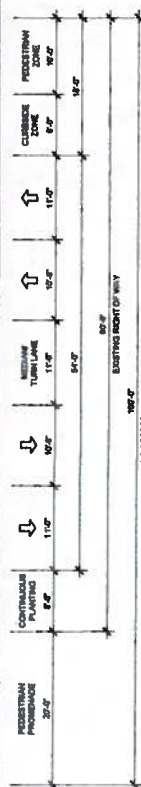


Street light

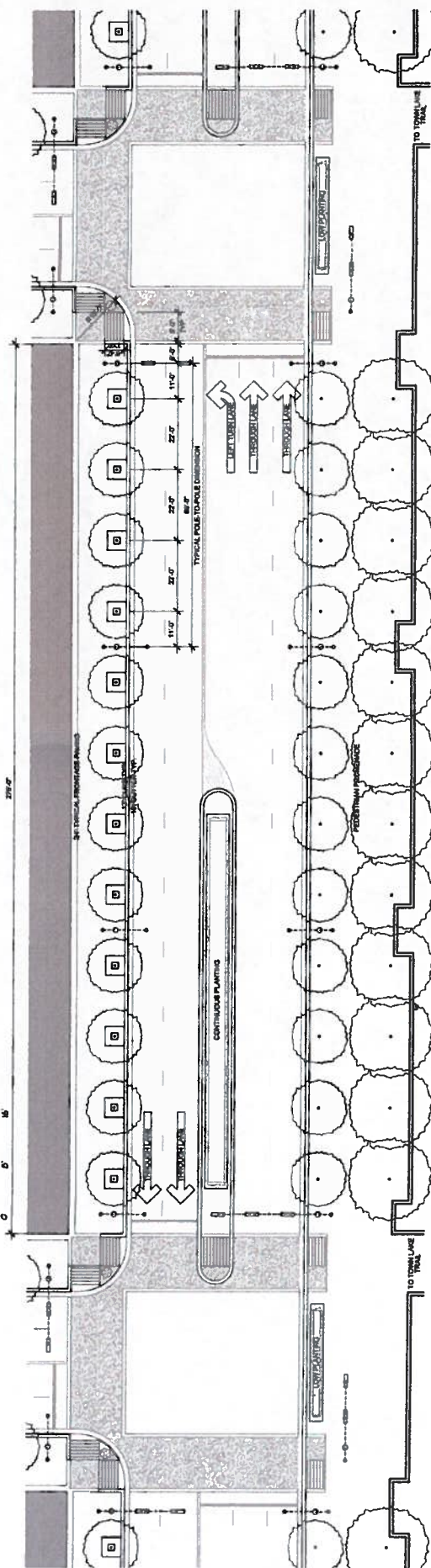


Traffic light

TRANSVERSE STREET SECTION
COMPUTER BOULEVARD (WEST CESAR CHAVEZ)



STREET PLAN
COMMUTER BOULEVARD (WEST CÉSAR CHAVEZ)



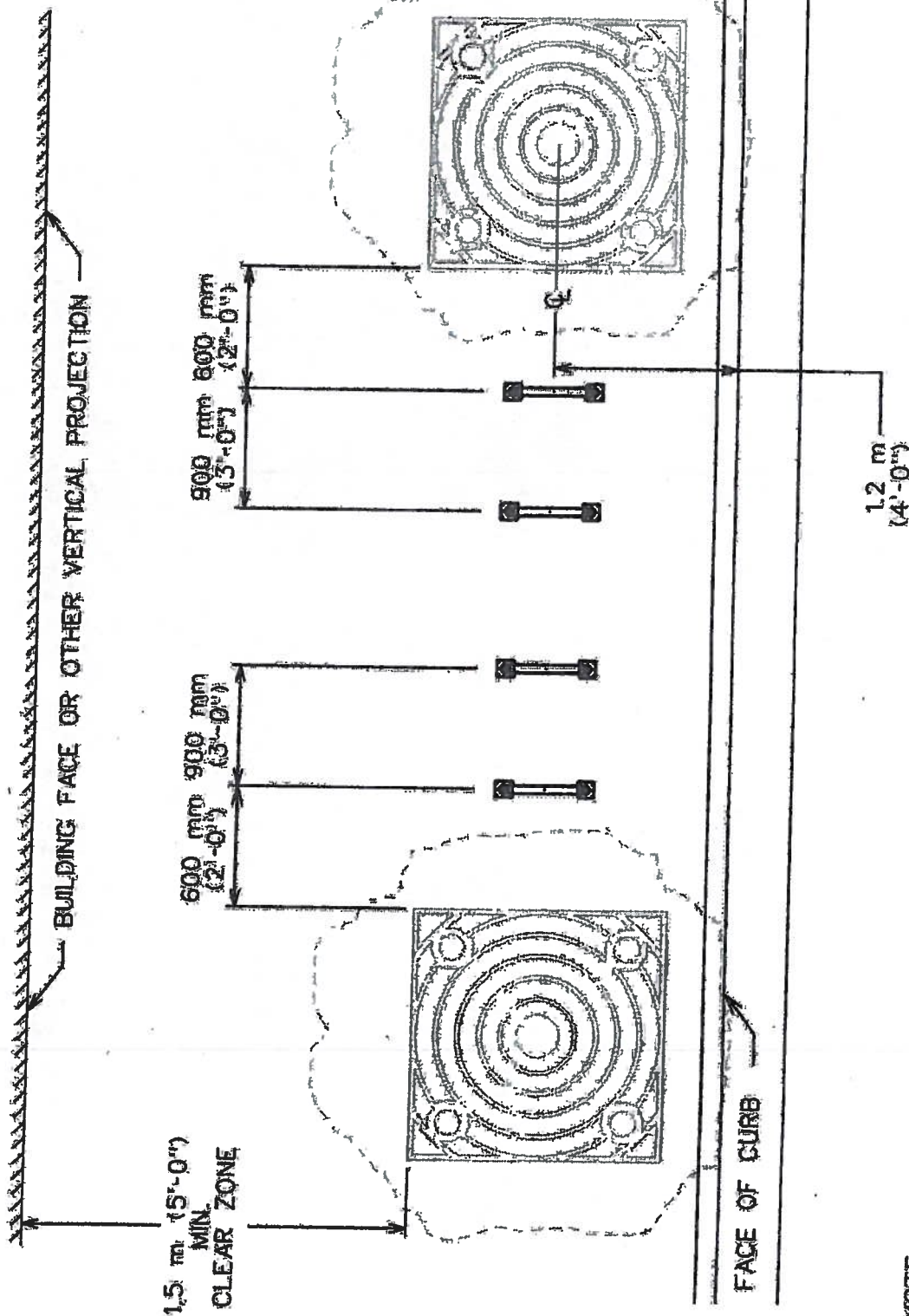
T TYPOLOGY & PLACEMENT OF GREAT STREETS FURNISHINGS

- **FURNISHINGS TYPOLOGY**
- **BIKE RACKS:** as per COA Detail 710S-6A
- **BENCHES:** as per COA Detail 432S-9C
- **WASTE BINS:** as per COA Detail 432S-8C

CITY OF AUSTIN
GREAT STREETS DEVELOPMENT PROGRAM FURNISHINGS

- **TRASH RECEPTACLE:**
*TR-12 Fairweather** Site Furnishings w/side openings – 35 gallon liner
“Silvadillo” color with top clear coat.
Contact: Patricia Calhoun (972) 492-2428
- **BENCHES:**
Landscape Forms – Plainwell- ”Austin Great Streets Bench” – 5-foot length* with center arm in silver and Ipe slats
Silver Finish RAL 49/90380 with top clear coat # 49/00530
Contact: JoAn Taylor (512) 619-2736/(512) 219-9938 or (866) 952-9063
- **BIKE RACKS:**
Type I Class III – Inverted “U” shaped bike rack – galvanized (1-2 spaces)
Refer to COA Standard Detail 710S-1, Page 1 of 3
Color: Silver
- **CAST IRON TREE GRATE:**
6 ft x 6 ft. with removable middle ring.
Refer to COA Standard Detail 437S-1
- **PAVER GRATE:**
Refer to COA Standard Detail 437S-1

* Other companies/manufacturers may also provide the same furnishings with the same required specifications.



NOTE:

1. FOR ALTERNATE TYPE III BICYCLE RACK SITING SEE STANDARD 710S-6B.

2. THE CLEARANCE FROM THE BICYCLE RACK TO ANY PUBLIC OR PRIVATE UTILITY APPURTENANCE MUST BE A MINIMUM OF 36" (900 mm). BICYCLE RACKS MAY NOT BE MOUNTED ON TOP OF VAULTS OR STORM DRAIN INLETS.

CITY OF AUSTIN
DEPARTMENT OF PUBLIC WORKS

RECORD COPY SIGNED
BY BILL GARDNER

03/12/07

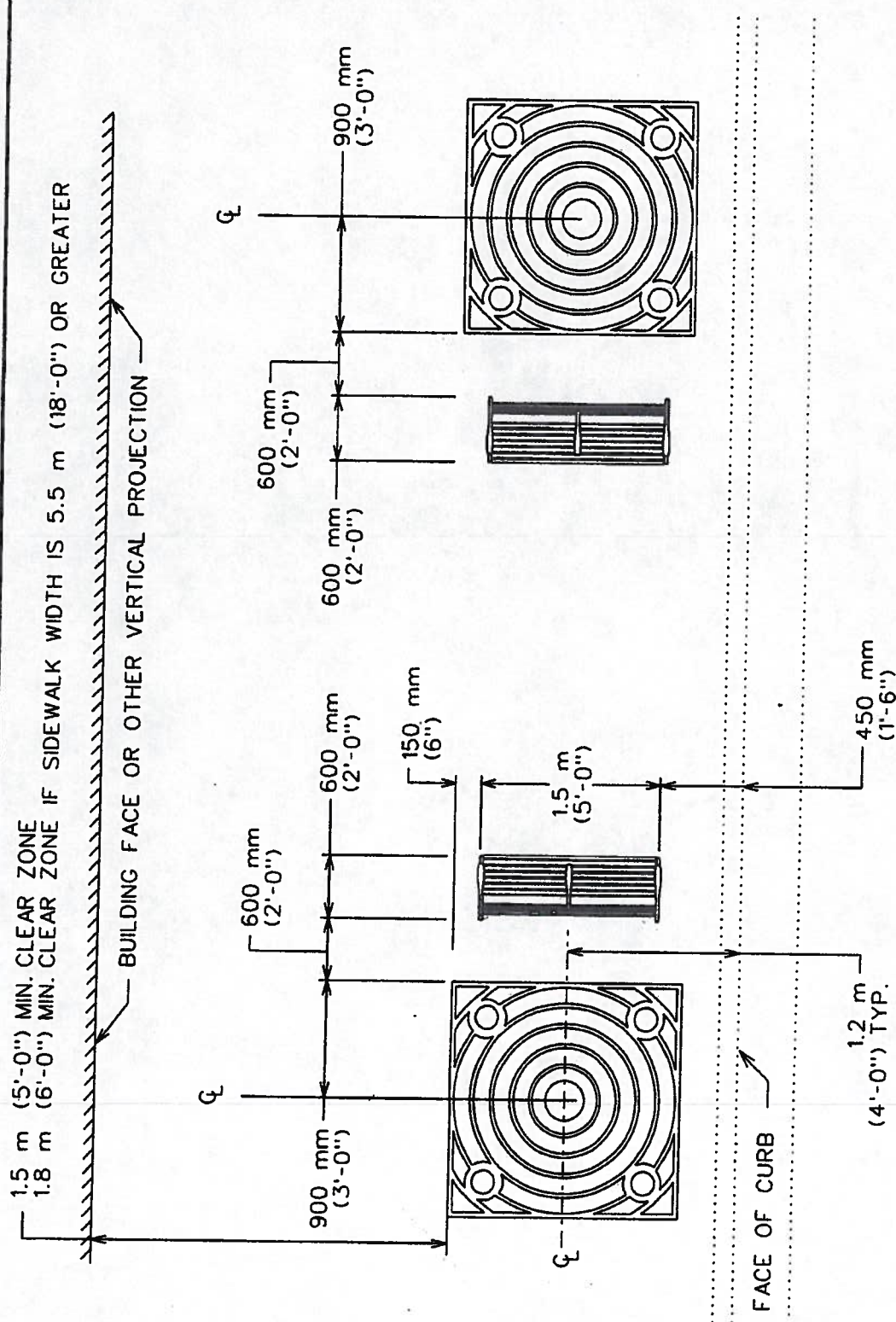
ADOPTED

FURNISHING LOCATION IN 12' (3.6m) WIDE OR
GREATER SIDEWALKS-TYPE III BICYCLE RACK SITING

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

STANDARD NO.

710S-6A

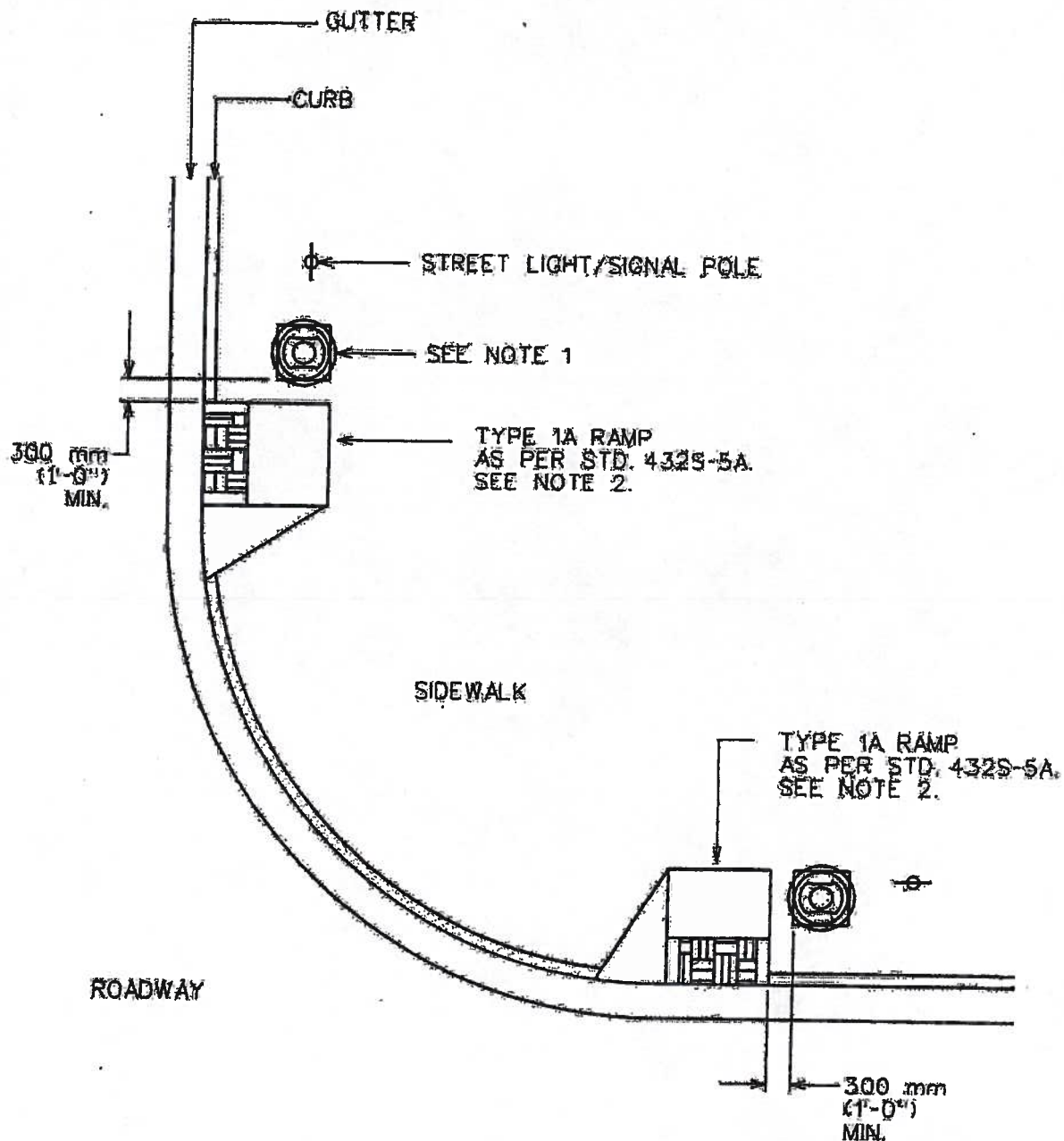


NOTE:

1. FOR ALTERNATE BENCH SITING SEE STANDARD 432S-9D.
2. THE CLEARANCE FROM THE BENCH TO ANY PUBLIC OR PRIVATE UTILITY APPURTENANCE MUST BE A MINIMUM OF 36" (900 mm). BENCHES MAY NOT BE MOUNTED ON TOP OF VAULTS OR STORM DRAIN INLETS.

<p>CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS</p>	<p>FURNISHING LOCATION IN 12' (3.6m) WIDE OR GREATER SIDEWALKS- BENCH SITING</p>	
<p>RECORD COPY SIGNED By BILL GARDNER</p>	<p>11/13/07 ADOPTED</p>	<p>STANDARD NO. 432S-9C</p>

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



NOTES:

1. INSTALL TRASH RECEPTACLE SO THE DOOR DOES NOT SWING INTO PEDESTRIAN PATH.
2. USE TYPE 1A SIDEWALK RAMP WHEN SIGNS, LIGHTS OR SIGNAL POLES EXIST OR WILL BE PLACED IN THIS AREA.
3. ALIGN OUTSIDE OF THE RECEPTACLE WITH THE TOP OF THE SIDEWALK RAMP.

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS		FURNISHING LOCATION IN 12' (3.6m) OR GREATER SIDEWALKS- TRASH RECEPTACLE SITING	
RECORD COPY SIGNED BY BILL GARDNER	03/12/07 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 432S-8C

FURNISHINGS & LANDSCAPING DETAILS

- **TR-12 FAIRWEATHER TRASH RECEPTACLE**
- **TRASH RECEPTACLE INSTALLATION DETAILS**
- **BENCH INSTALLATION DETAILS**
- **BICYCLE RACK – CLASS III TYPE 1 (1-2 SPACES ONLY)**
- **BICYCLE RACK INSTALLATION DETAILS**
- **PAVER GRATE FRAME DETAIL**
- **TREE WELL WITH SEAT**
- **ABOVE GRADE TREE PLANTERS**
- **CAST IRON TREE GRATE & FRAME DETAIL**

**TRASH RECEPTACLE
&
INSTALLATION DETAILS**

SPECIFICATIONS

MATERIAL

The TR-12 modified trash receptacle shall be fabricated with 1/4 x 1 1/2" mild steel vertical slats welded to 1/4 x 1 1/2" hoops. Flared straps shall be welded to 1/2" rod. All steel shall conform to ASTM A36 hot rolled steel and shall be wheelabrated prior to fabrication. Four mounting tabs with 5/8" holes for 1/2" anchors are welded to the base ring. The door is self latching and is secured with a keyed lock.

The 10" x 13" steel decal plate shall be supplied with stainless steel attachment hardware. The decal plate and the bolt heads shall be powder coated to match the receptacle and shall be factory installed with: landscape orientation, the center of the plate 180 degrees from the center of the door and the top of the plate level with the top of the door.

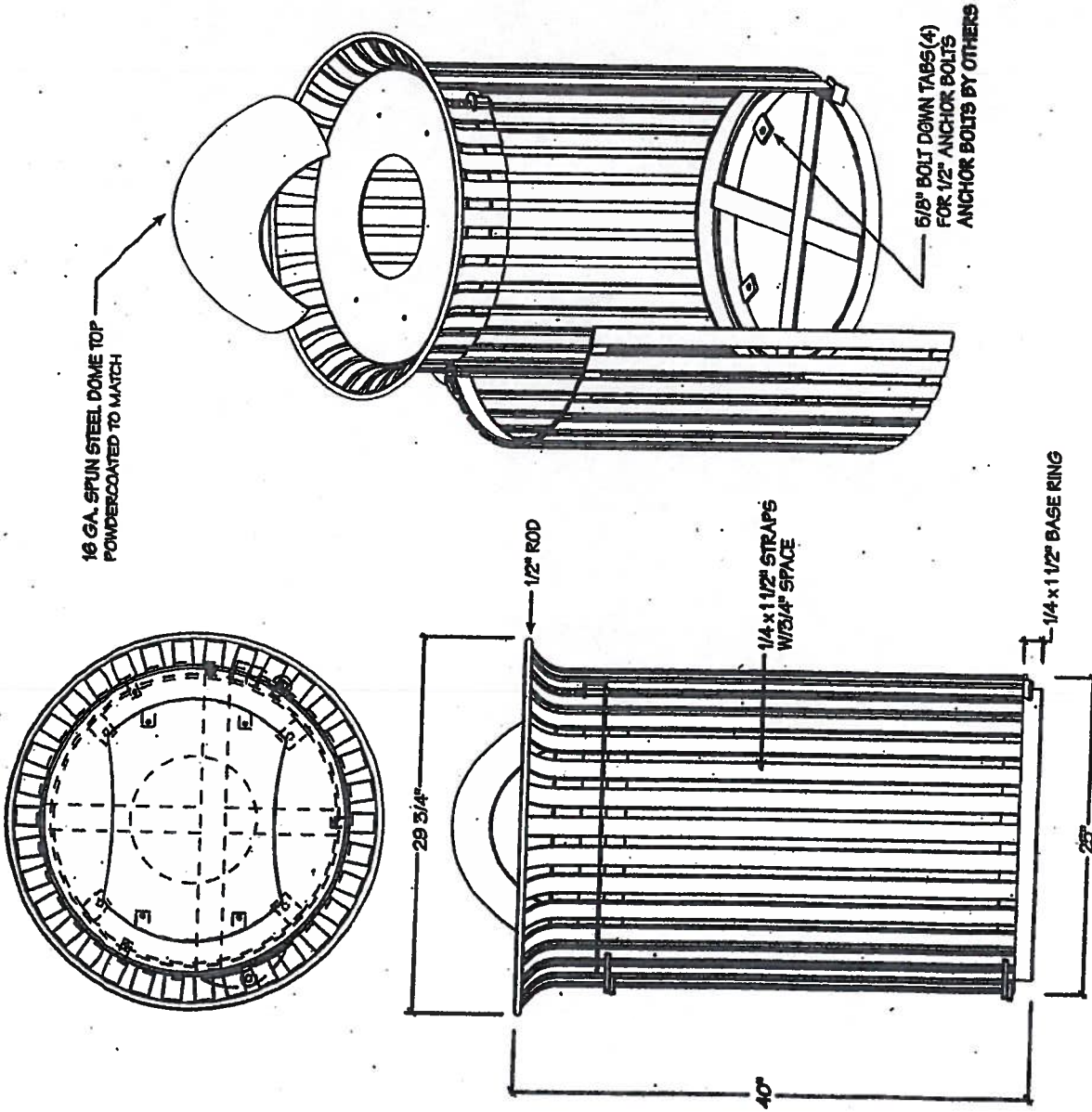
Liner shall be standard 35 gallon black plastic with hand holds. Liner is manufactured with 100% recycled plastic.

WELDS

All welds between flat straps shall be smooth, continuous fillet welds ground smooth where necessary, to remove any burrs or sharp edges. Where flared straps meet 1/2" rod, all welds are ground smooth for appearance.

PROTECTIVE COATINGS

Following fabrication the receptacles shall be cleaned and treated with an iron phosphate process prior to the coating application. This process shall include a non-chromated alkaline cleaner and an iron phosphate treatment followed with an acidic sealer for maximum adhesion. The protective coating shall consist of a corrosion resistant epoxy undercoat with a Silvadillo color coat and a clear top coat. Silvadillo and clearcoat are polyester TGIC powder applied by the dry electrostatic method. The resultant coating shall be a minimum of 4 mils thick on all surfaces. There is no lead in the finish.



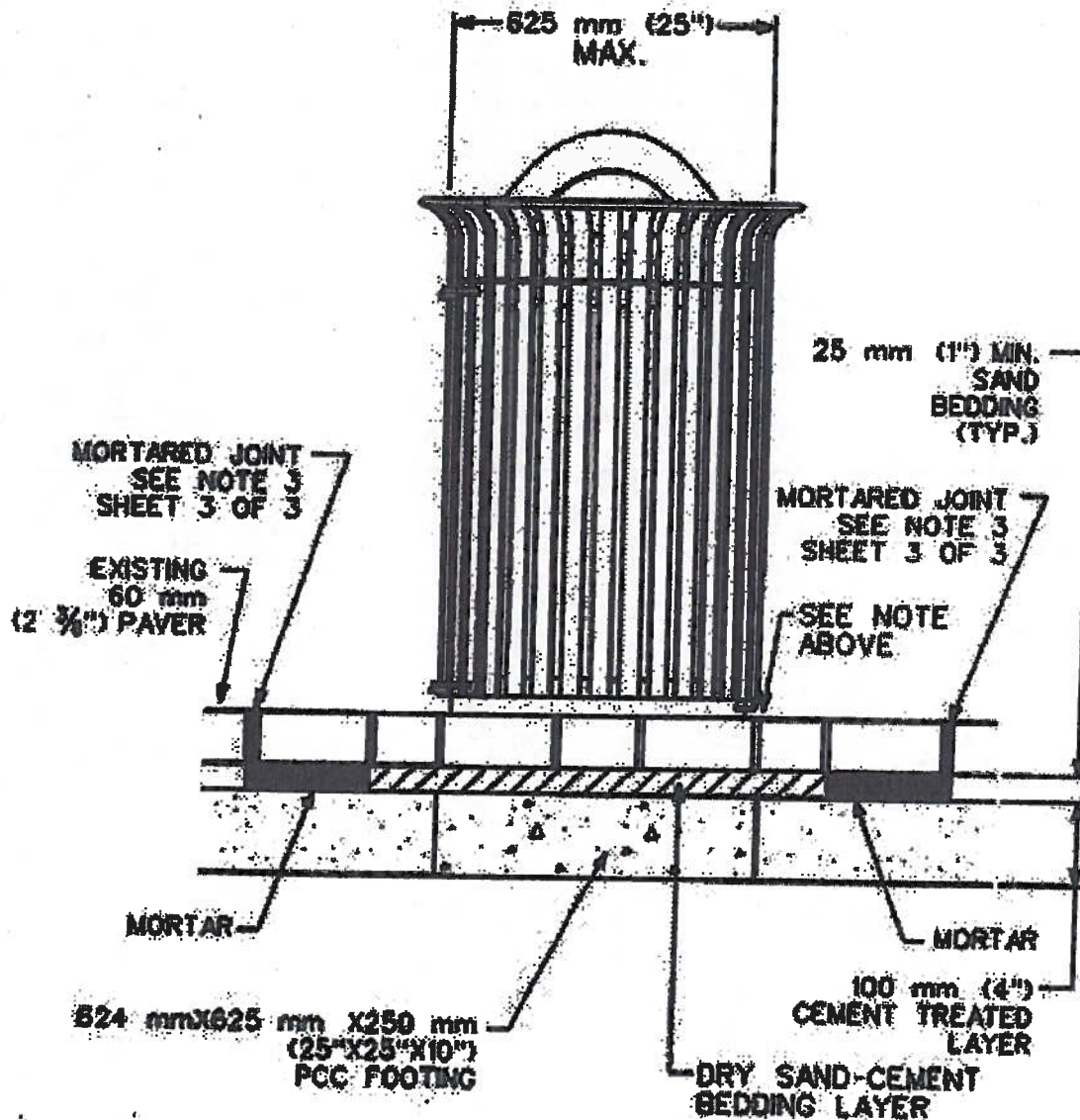
REV 2-17-03

TR-12 Trash Receptacle with Side Opening for Austin Great Streets

Fair Weather Site Furnishings
360-895-2626 or Toll Free 800-323-1798
Port Orchard, Washington

© 1999-2003 Fair Weather International Corporation
Fair Weather Site Furnishings Division

NOTE:
 NUMBER AND SIZE OF ANCHOR BOLTS AS SPECIFIED BY MANUFACTURER.
 MINIMUM LENGTH OF 150 mm (6").

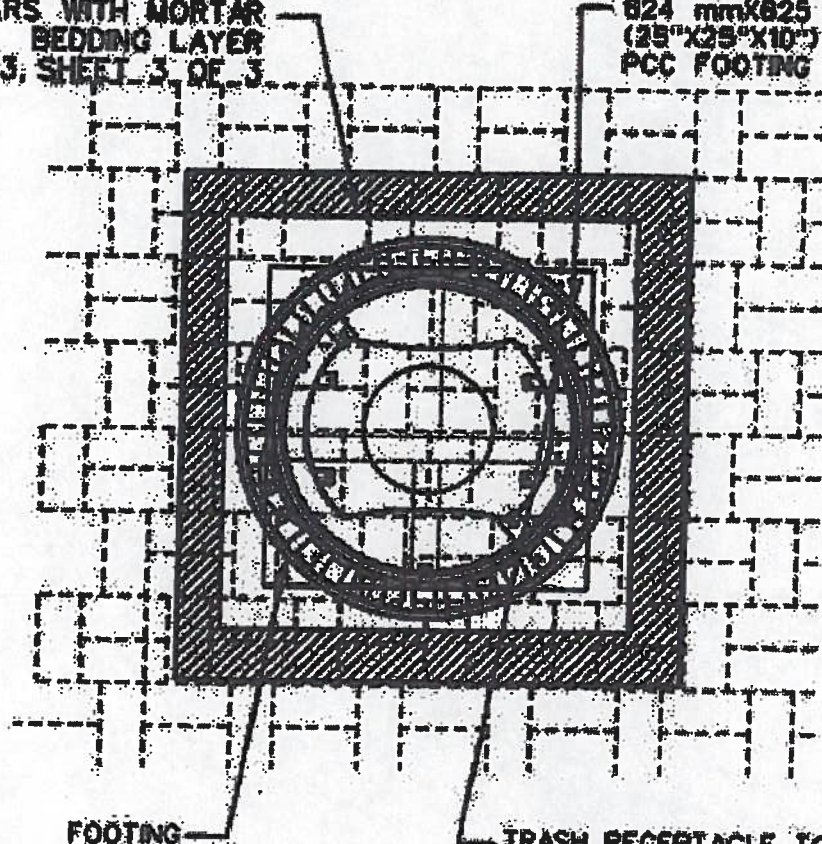


FRONT VIEW

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS		TRASH RECEPTACLE INSTALLATION IN CONCRETE PAVER SIDEWALK	
RECORD COPY SIGNED BY BILL GARDNER	11/21/05 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 432S-8A 1 OF 3

PAVERS WITH MORTAR
BEDDING LAYER
SEE NOTE 3, SHEET 3 OF 3

824 mmX825 mm X250 mm
(25"X25"X10")
PCC FOOTING



TRASH RECEPTACLE TO BE ANCHORED
ACCORDING TO MANUFACTURERS
SPECIFICATIONS TO SUPPORT FOOTING.
SEE NOTES 7-10 ON SHEET 3 OF 3.

TOP VIEW

DRY SAND-CEMENT BEDDING PLACEMENT:

1. MATERIAL COMPOSED OF ONE PART CEMENT AND 3 PARTS SAND.
2. THE DRY MIXTURE SHALL BE LIGHTLY WETTED PRIOR TO PLACEMENT OF PAVERS.
3. AFTER COMPACTION OF PAVERS, JOINTS SHALL BE FILLED WITH DRY SAND-CEMENT.
4. THE COMPLETED JOINTS SHALL BE FOGGED LIGHTLY WITH WATER.

<p>CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS</p>	<p>TRASH RECEPTACLE INSTALLATION IN CONCRETE PAVER SIDEWALK</p>
<p>RECORD COPY SIGNED BY <u>BILL GARDNER</u></p>	<p>THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.</p>
<p>11/21/05 ADOPTED</p>	<p>STANDARD NO. 432S-8A 2 OF 3</p>

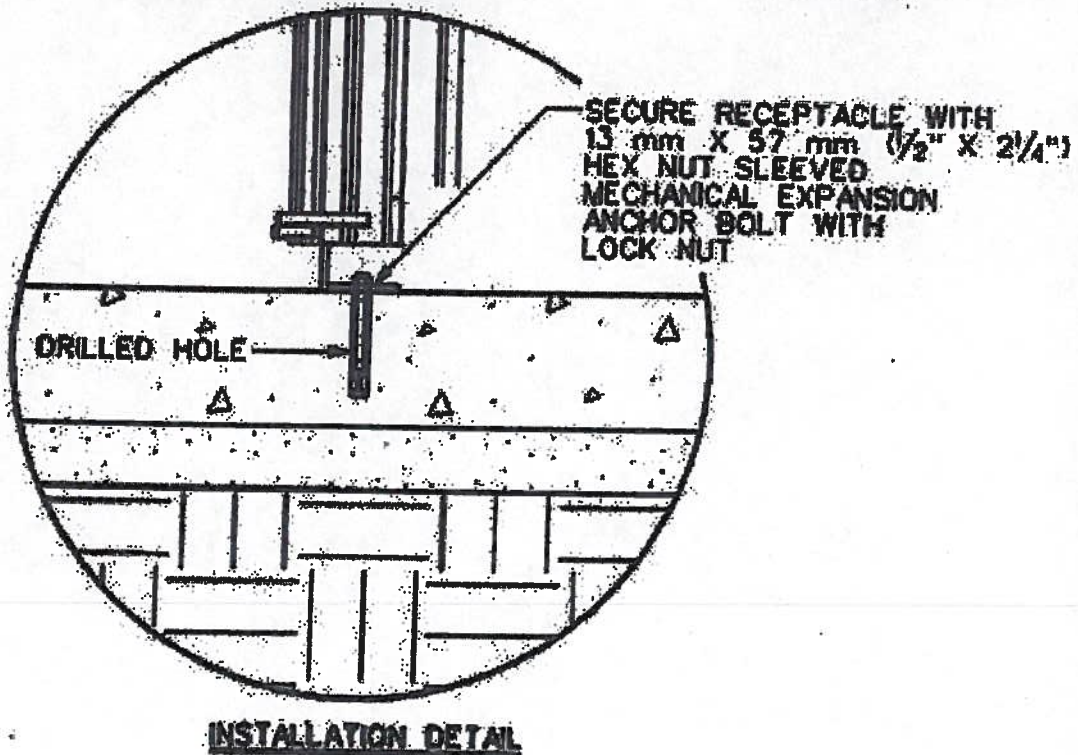
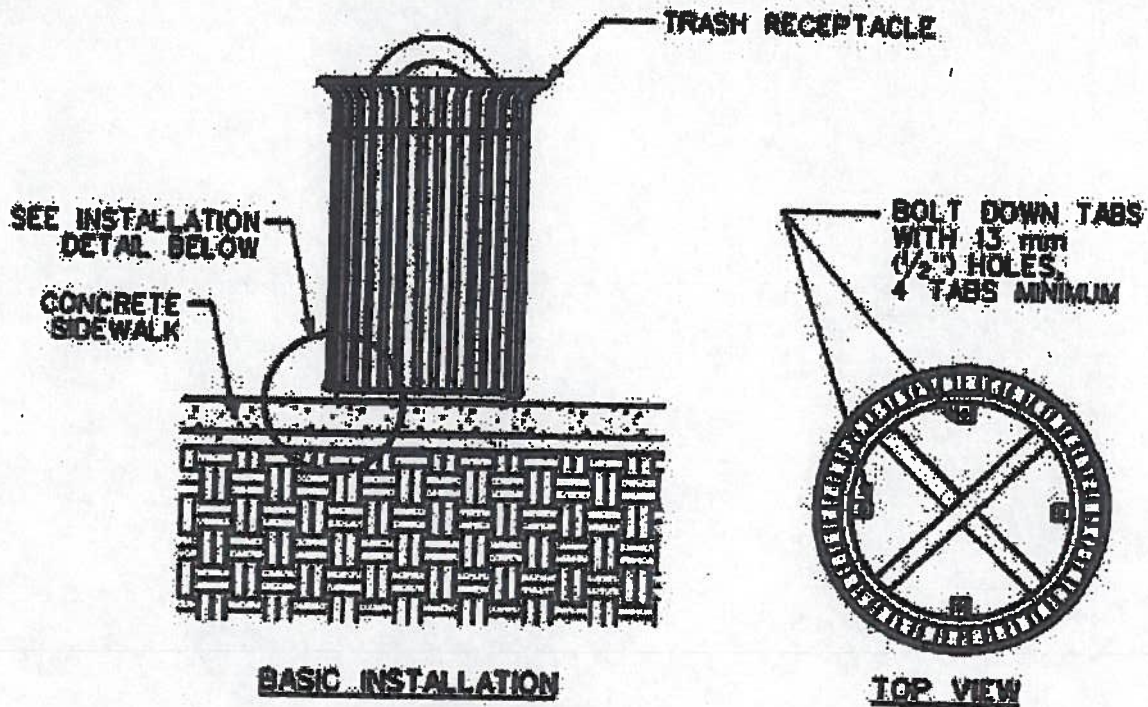
CONSTRUCTION SEQUENCE:

- *1. PLACE TRASH RECEPTACLE ON PAVERS AND MARK LOCATIONS OF BOLT HOLES AND REMOVE TRASH BIN.
- *2. IDENTIFY LOCATION OF FOOTING.
- *3. MARK AND REMOVE EXISTING PAVERS ONE UNIT AWAY FROM FOOTING LOCATIONS. PLACE MORTAR BEDDING LAYER, MORTAR THE JOINT AND REPLACE/COMPACT THE "MARKED" PAVERS IN APPROPRIATE LOCATIONS.
- *4. MARK AND REMOVE EXISTING PAVERS FROM LOCATION ABOVE FOOTING LOCATION.
5. EXCAVATE FOR FOOTING AND PLACE CLASS "A" PCC CONCRETE.
6. PLACE DRY SAND-CEMENT BEDDING LAYER. REPLACE THE "MARKED" PAVERS IN APPROPRIATE POSITIONS AND COMPACT THE PAVERS IN PLACE.
7. PLACE TRASH RECEPTACLE ON PAVERS AT APPROPRIATE LOCATIONS AND RE-MARK BOLT HOLES).
8. DRILL BOLT HOLES THROUGH THE PAVERS INTO THE PCC FOOTINGS.
9. INSTALL ANCHOR BOLTS AND EPOXY THEM IN PLACE.
10. INSTALL TRASH RECEPTACLE AND BOLT IN PLACE.
- * THESE STEPS ARE REQUIRED FOR EXISTING PAVES SIDEWALKS TO MAINTAIN STRUCTURE AND STABILITY OF ADJOINING PAVERS.

GENERAL NOTES:

1. FOR BUILDINGS WITH FRONTAGE ON MORE THAN ONE STREET, A TRASH RECEPTACLE SHALL BE PLACED ON EACH FRONTAGE. TRASH RECEPTACLES SHALL BE LOCATED WITHIN 3.66 m (12') OF EITHER THE MAIN BUILDING ENTRY OR THE ENTRY TO THE PRIMARY LOCAL USE, OR BOTH.
2. TRASH RECEPTACLES SHALL EITHER BE PLACED ALONG THE CURB, WITH THE CENTER LINE OF THE RECEPTACLE ON LINE WITH THE TREES AND LIGHT POLES, OR SHALL BE LOCATED AT THE BUILDING ENTRY IN ALIGNMENT WITH THE STRUCTURAL BAY SYSTEM OF THE BUILDING. IF LOCATED AT THE ENTRY, THERE SHALL BE NO MORE THAN 300 mm (1") CLEARANCE BETWEEN THE RECEPTACLE AND THE BUILDING WALL.
3. SAW CUT PAVES TO MATCH PAVES CONFIGURATION.

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS		TRASH RECEPTACLE INSTALLATION IN CONCRETE PAVES SIDEWALK	
RECORD COPY SIGNED BY BILL GARDNER	11/21/05	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THE STANDARD.	STANDARD NO. 432S-8A 3 OF 3
ADOPTED			



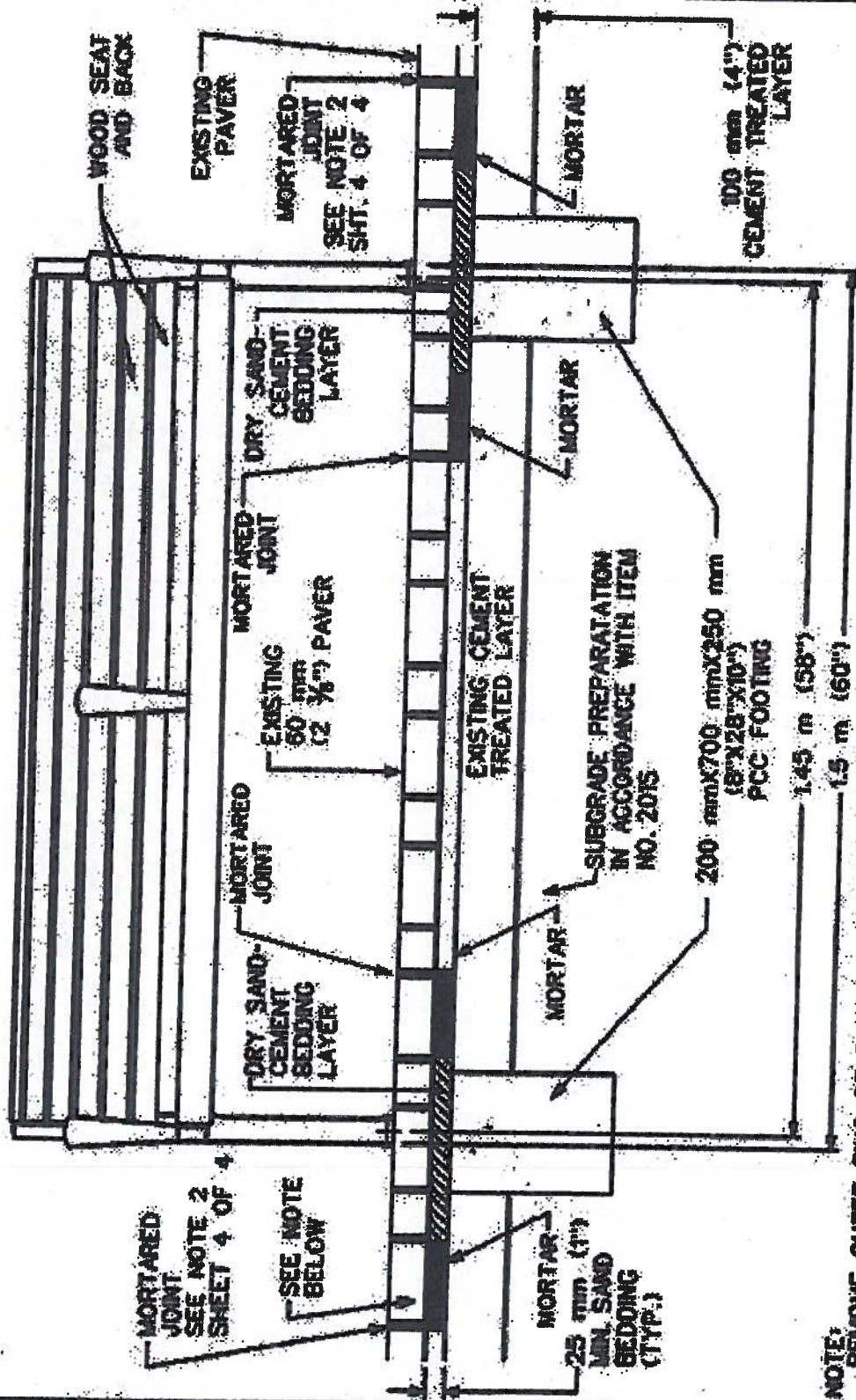
CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS		TRASH RECEPTACLE INSTALLATION IN CONCRETE SIDEWALK	
RECORD COPY SIGNED BY BILL GARNER	11/21/05 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 432S-8B 1 OF 2

GENERAL NOTES:

1. FOR BUILDINGS WITH FRONTAGE ON MORE THAN ONE STREET, A TRASH RECEPTACLE SHALL BE PLACED ON EACH FRONTAGE. TRASH RECEPTACLES SHALL BE LOCATED WITHIN 3.66 m (12') OF EITHER THE MAIN BUILDING ENTRY OR THE ENTRY TO THE PRIMARY LOCAL USE, OR BOTH.
2. TRASH RECEPTACLES SHALL EITHER BE PLACED ALONG THE CURB, WITH THE CENTER LINE OF THE RECEPTACLE ON LINE WITH THE TREES AND LIGHT POLES, OR SHALL BE LOCATED AT THE BUILDING ENTRY IN ALIGNMENT WITH THE STRUCTURAL BAY SYSTEM OF THE BUILDING. IF LOCATED AT THE ENTRY, THERE SHALL BE NO MORE THAN 300 mm (1') CLEARANCE BETWEEN THE RECEPTACLE AND THE BUILDING WALL.

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS		TRASH RECEPTACLE INSTALLATION IN CONCRETE SIDEWALK	
RECORD COPY SIGNED BY <u>BILL GARDNER</u>	11/21/05 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 432S-8B 2 OF 2

BENCH & INSTALLATION DETAILS

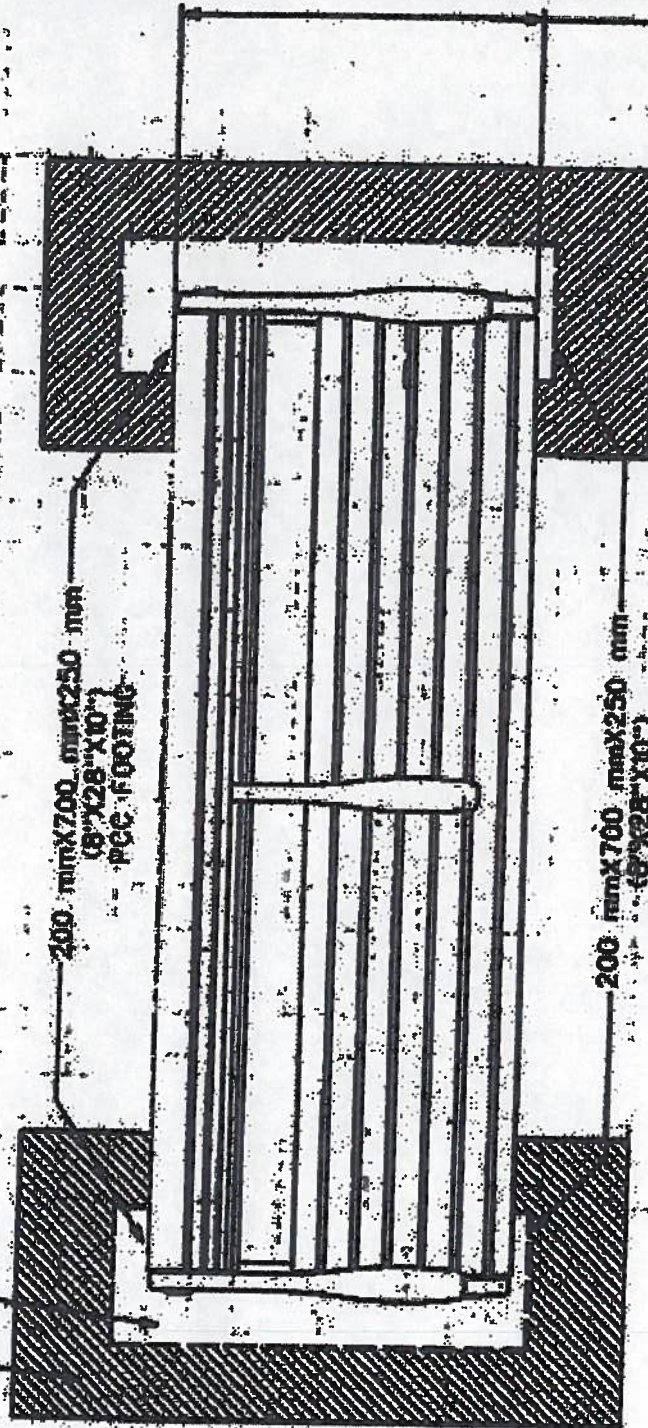


FRONT VIEW

<p>CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS</p>	<p>BENCH INSTALLATION IN CONCRETE PAVER SIDEWALK</p>		
<p>RECORD COPY SIGNED BY BILL GARDNER</p>	<p>11/21/05 ADOPTED</p>	<p>THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.</p>	<p>STANDARD NO. 432S-9A 1 OF 4</p>

INITIAL PAVER REMOVAL AND
MORTARING IN PLACE (TYP.)
SEE NOTE BELOW

PAVERS WITH DRY SAND-
CEMENT BEDDING LAYER (TYP.)



614 mm
(25 3/4")

TOP VIEW

NOTE:
REMOVE OUTER RING OF PAVERS AND GROUT IN PLACE
PRIOR TO REMOVAL OF INTERIOR PAVERS LOCATED IN THE
FOOTING PLACEMENT AREA.

CITY OF AUSTIN
DEPARTMENT OF PUBLIC WORKS

BENCH INSTALLATION
IN CONCRETE PAVER SIDEWALK

RECORD COPY SIGNED
BY BILL GARDNER

11/21/05
ADOPTED

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

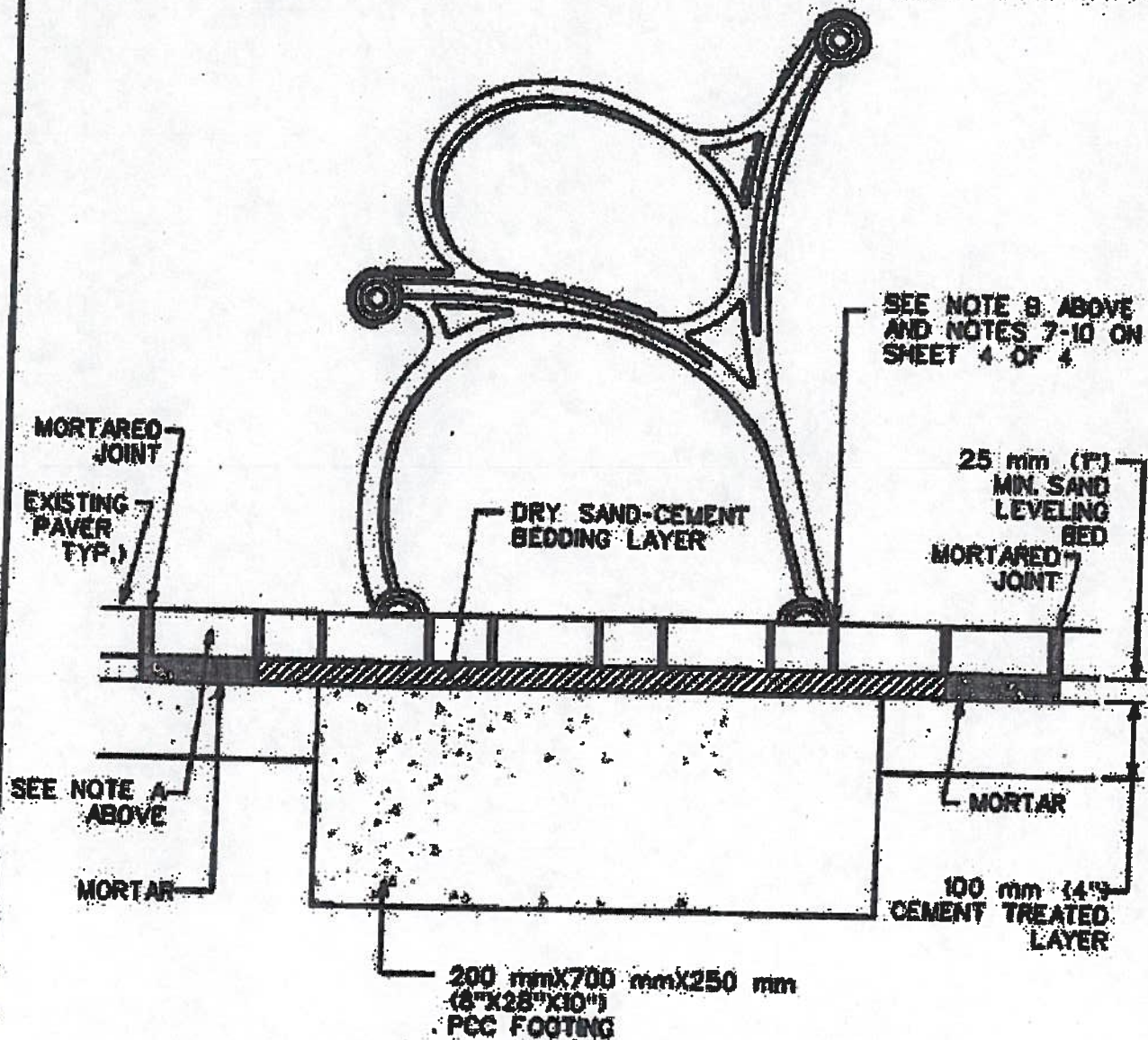
STANDARD NO.

432S-9A

2 OF 4

NOTES:

- A. REMOVE OUTER RING OF PAVERS AND GROUT IN PLACE PRIOR TO REMOVAL OF PAVERS LOCATED IN THE FOOTING PLACEMENT AREA.
 B. SECURE BENCH WITH 9 mm X 150 mm (3/8" X 6") ANCHOR BOLT EPOXIED IN PLACE.



SIDE VIEW

DRY SAND-CEMENT BEDDING PLACEMENT:

1. MATERIAL COMPOSED OF ONE PART CEMENT AND 3 PARTS SAND.
2. THE DRY MIXTURE SHALL BE LIGHTLY WETTED PRIOR TO PLACEMENT OF PAVERS.
3. AFTER COMPACTION OF PAVERS, JOINTS SHALL BE FILLED WITH DRY SAND-CEMENT.
4. THE COMPLETED JOINTS SHALL BE FOGGED LIGHTLY WITH WATER.

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS		BENCH INSTALLATION IN CONCRETE PAVEMENT SIDEWALK	
RECORD COPY SIGNED BY BILL GARNER	11/21/05	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO.
	ADOPTED		432S-9A 3 OF 4

CONSTRUCTION SEQUENCE:

- 1. PLACE BENCH ON PAVERS AND MARK LOCATIONS OF BOLT HOLES AND REMOVE BENCH.
- 2. IDENTIFY LOCATION OF FOOTINGS.
- 3. MARK AND REMOVE EXISTING PAVERS ONE UNIT AWAY FROM FOOTING LOCATIONS. PLACE MORTAR BEDDING LAYER, MORTAR THE JOINT AND REPLACE/COMPACT THE "MARKED" PAVERS IN APPROPRIATE LOCATIONS.
- 4. MARK AND REMOVE EXISTING PAVERS FROM LOCATION ABOVE FOOTING LOCATIONS.
- 5. EXCAVATE FOR FOOTINGS AND PLACE CLASS "A" PCC CONCRETE.
- 6. PLACE DRY SAND-CEMENT BEDDING LAYER, REPLACE THE "MARKED" PAVERS IN APPROPRIATE POSITIONS AND COMPACT THE PAVERS IN PLACE.
- 7. PLACE BENCH ON PAVERS AT APPROPRIATE LOCATIONS AND RE-MARK BOLT HOLES.
- 8. DRILL BOLT HOLES THROUGH THE PAVERS INTO THE PCC FOOTINGS.
- 9. INSTALL ANCHOR BOLTS AND EPOXY THEM IN PLACE.
- 10. INSTALL BENCH AND BOLT IN PLACE.
- THESE STEPS ARE REQUIRED FOR EXISTING PAVES SIDEWALKS TO MAINTAIN STRUCTURE AND STABILITY OF ADJOINING PAVERS.

GENERAL NOTE:

1. BENCHES SHALL BE LOCATED WITHIN 7.32 m (24') OF EITHER THE MAIN BUILDING ENTRY OR THE ENTRY TO THE PRIMARY LOCAL USE. BENCHES SHALL BE PLACED EITHER PERPENDICULAR TO THE CURB WITH THE CENTER OF THE BENCH ON LINE WITH TREES AND LIGHT POLES AND FACING TOWARD THE BUILDING ENTRY, OR PARALLEL TO THE BUILDING AND WITHIN 150 mm (6") OF THE BUILDING WALL, FACING OUT TO THE STREET.
2. SAW CUT PAVES TO MATCH PAVES CONFIGURATION.

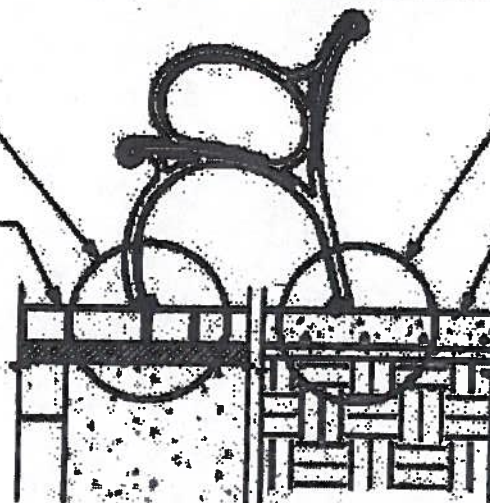
CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS		BENCH INSTALLATION IN CONCRETE PAVES SIDEWALK	
RECORD COPY SIGNED BY BILL GARDNER	11/21/05	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 432S-9A 4 OF 4
ADOPTED			

SEE INSTALLATION
DETAIL BELOW

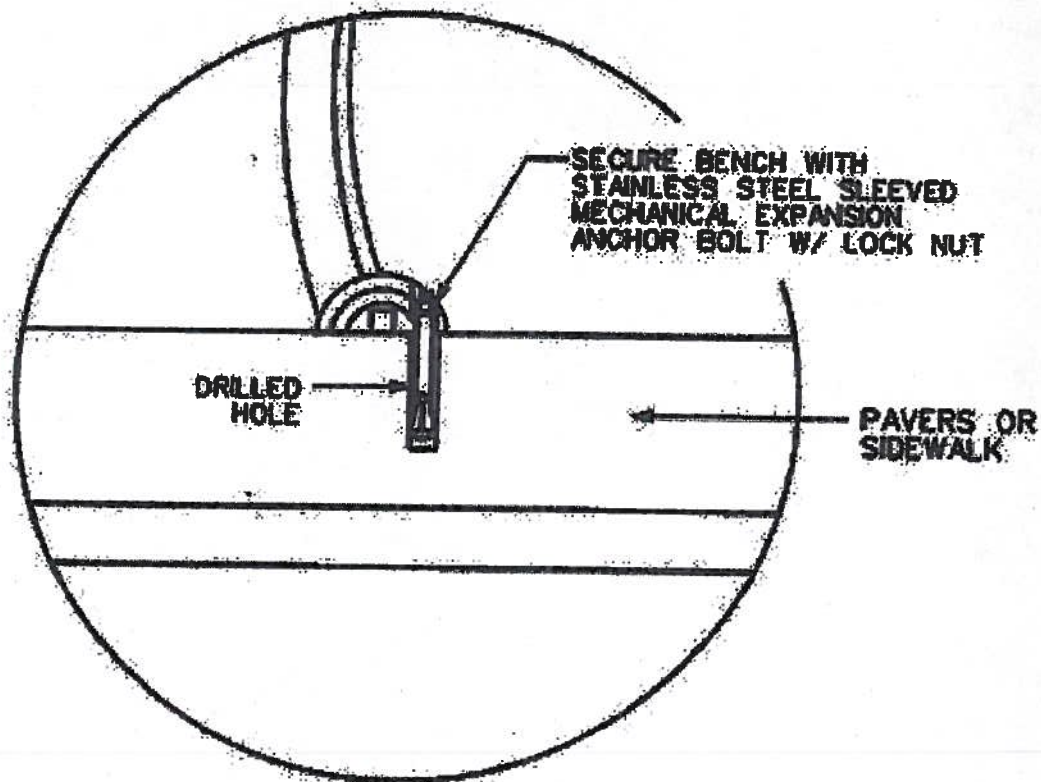
PAVERS

SEE INSTALLATION
DETAIL BELOW

CONCRETE SIDEWALK



BASIC INSTALLATION



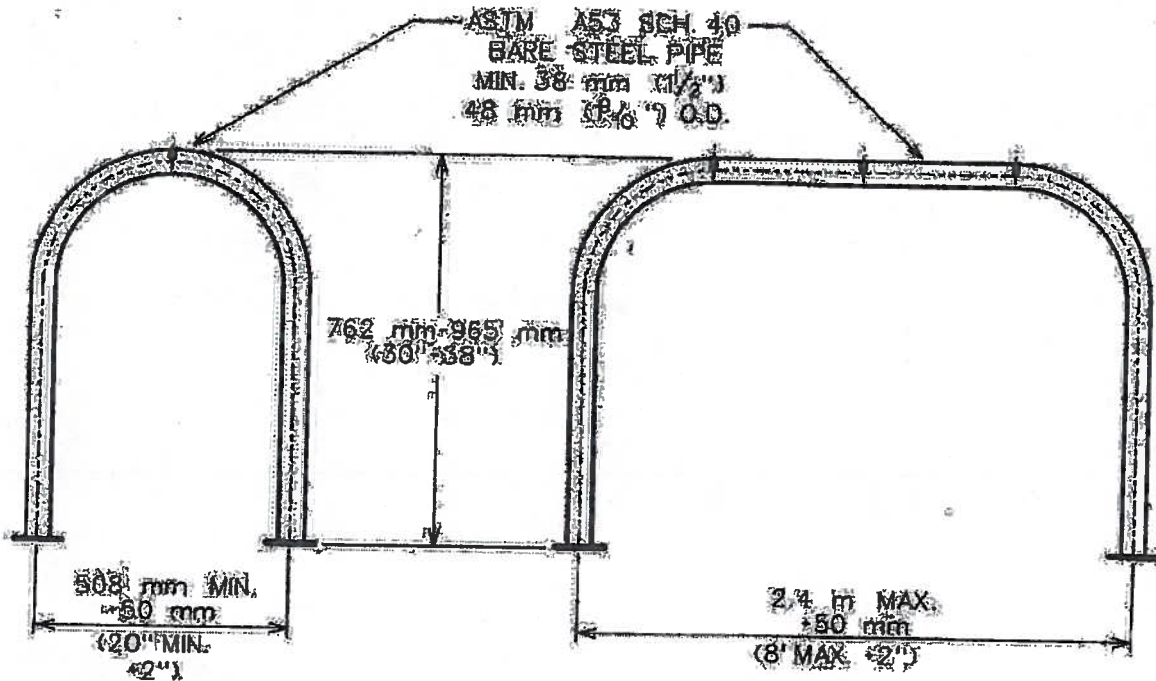
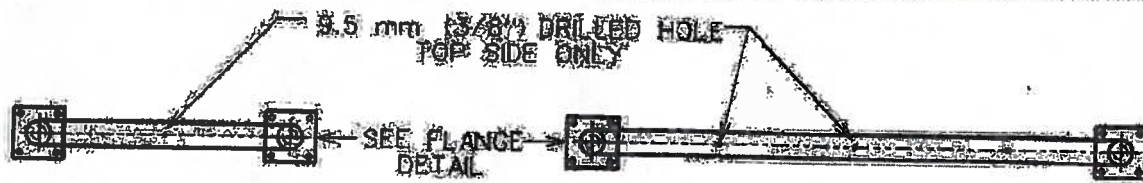
INSTALLATION DETAIL

GENERAL NOTE:

BENCHES SHALL BE LOCATED WITHIN 7.32 m (24') OF EITHER THE MAIN BUILDING ENTRY OR THE ENTRY TO THE PRIMARY LOCAL USE. BENCHES SHALL BE PLACED EITHER PERPENDICULAR TO THE CURB WITH THE CENTER OF THE BENCH ON LINE WITH TREES AND LIGHT POLES AND FACING TOWARD THE BUILDING ENTRY, OR PARALLEL TO THE BUILDING AND WITHIN 150 mm (6") OF THE BUILDING WALL, FACING OUT TO THE STREET.

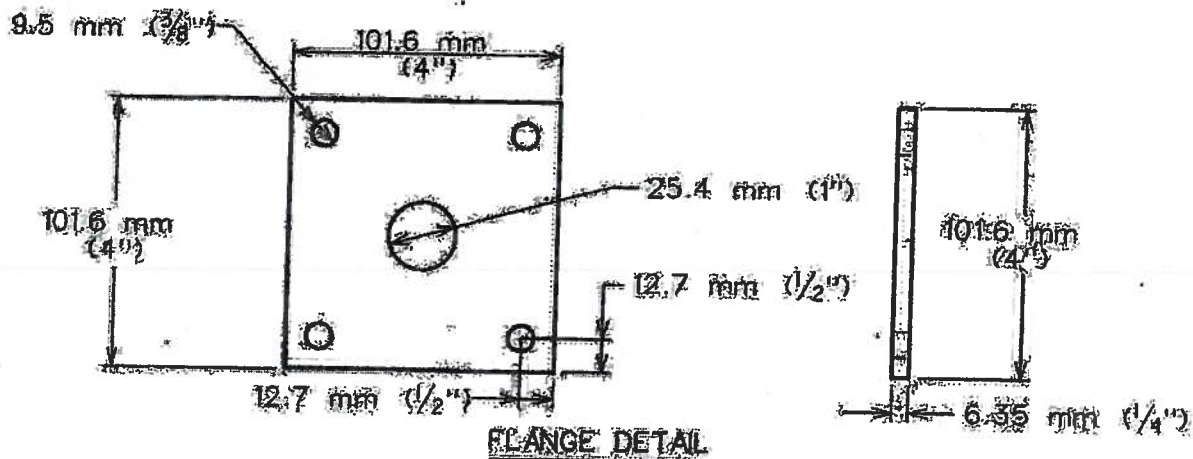
<p>CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS</p>	<p>BENCH/CHAIR INSTALLATION IN SIDEWALKS</p>	
<p>RECORD COPY SIGNED BY BILL GARDNER</p>	<p>11/21/05 ADOPTED</p>	<p>THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.</p> <p>STANDARD NO. 432S-9B</p>

**BICYCLE RACK
&
INSTALLATION DETAILS**



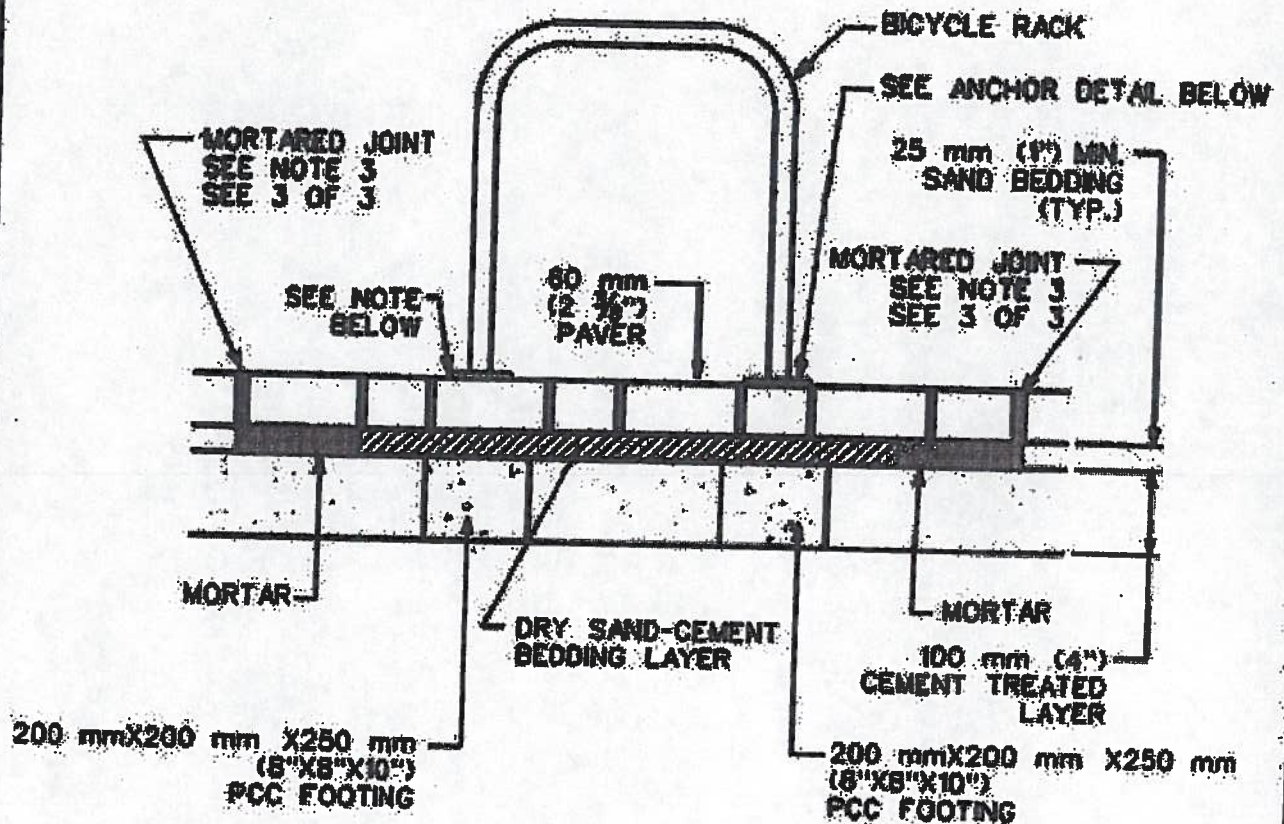
RACK TYPE 1
1-2 SPACES

RACK TYPE 3
1-4 SPACES



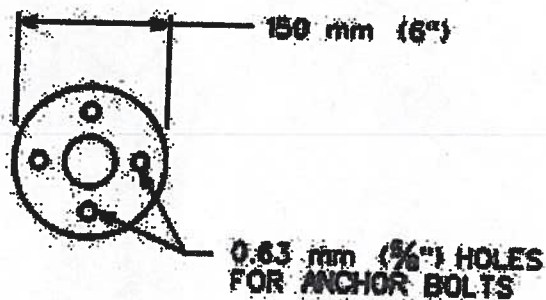
FLANGE DETAIL

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS		GLASS II STYLE BICYCLE PARKING	
RECORD COPY SIGNED BY LINO RIVERA	2/17/00 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 710S-1 1 OF 3



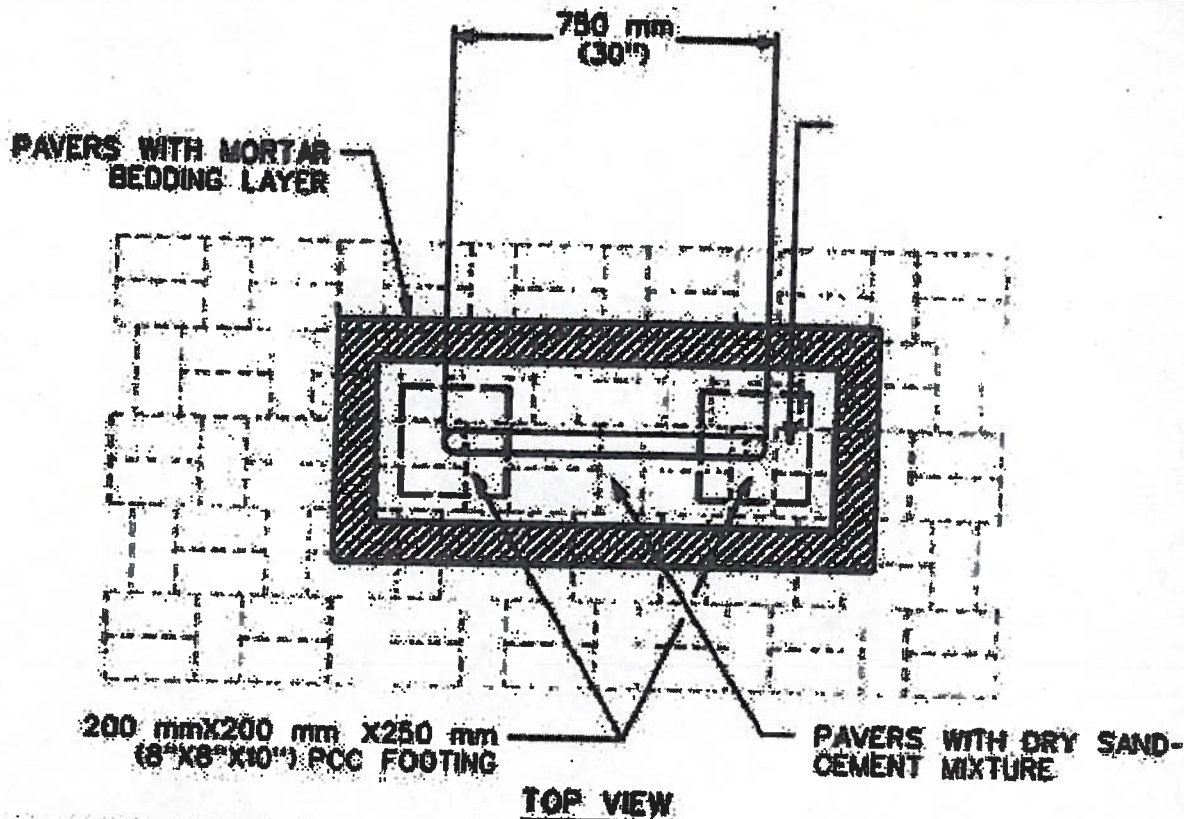
NOTE:
 13 mm X 150 mm (1/2" X 6")
 ANCHOR BOLTS EPOXIED IN PLACE.
 SEE NOTES 7-10 ON SHEET 2 OF 2.

SIDE VIEW



ANCHOR DETAIL

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS		BICYCLE RACK INSTALLATION IN CONCRETE PAVER SIDEWALK-ALTERNATE 1	
RECORD COPY SIGNED BY BILL BARNER	11/21/05 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 710S-3 1 OF 3



CONSTRUCTION SEQUENCE:

- *1. PLACE BICYCLE RACK ON PAVERS AND MARK LOCATIONS OF BOLT HOLES AND REMOVE BICYCLE RACK.
 - *2. IDENTIFY LOCATION OF FOOTING.
 - *3. MARK AND REMOVE EXISTING PAVERS ONE UNIT AWAY FROM FOOTING LOCATIONS. PLACE MORTAR BEDDING LAYER, MORTAR THE JOINT AND REPLACE/COMPACT THE "MARKED" PAVERS IN APPROPRIATE LOCATIONS.
 - *4. MARK AND REMOVE EXISTING PAVERS FROM LOCATION ABOVE FOOTING LOCATIONS.
 5. EXCAVATE FOR FOOTINGS AND PLACE CLASS "A" PCC CONCRETE.
 6. PLACE DRY SAND-CEMENT BEDDING LAYER, REPLACE THE "MARKED" PAVERS IN APPROPRIATE POSITIONS AND COMPACT THE PAVERS IN PLACE.
 7. PLACE BICYCLE RACK ON PAVERS AT APPROPRIATE LOCATIONS AND RE-MARK BOLT HOLES.
 8. DRILL BOLT HOLES THROUGH THE PAVERS INTO THE PCC FOOTINGS.
 9. INSTALL ANCHOR BOLTS AND EPOXY THEM IN PLACE.
 10. INSTALL BICYCLE RACK AND BOLT IN PLACE.
- * THESE STEPS ARE REQUIRED FOR EXISTING PAVES SIDEWALKS TO MAINTAIN STRUCTURE AND STABILITY OF ADJOINING PAVERS.

DRY SAND-CEMENT BEDDING PLACEMENT:

1. MATERIAL COMPOSED OF ONE PART CEMENT AND 3 PARTS SAND.
2. THE DRY MIXTURE SHALL BE LIGHTLY WETTED PRIOR TO PLACEMENT OF PAVERS.
3. AFTER COMPACTION OF PAVERS, JOINTS SHALL BE FILLED WITH DRY SAND-CEMENT.
4. THE COMPLETED JOINTS SHALL BE FOGGED LIGHTLY WITH WATER.

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS		BICYCLE RACK INSTALLATION IN CONCRETE PAVES SIDEWALK-ALTERNATE 1	
RECORD COPY SIGNED BY BILL GARDNER	11/21/05 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 7105-3 2 OF 3

GENERAL NOTES:

1. RACKS SHALL COMPLY WITH CITY STANDARD DETAIL 710S-1, TYPE III RACK FOR 1 TO 2 BIKES.
2. BIKE RACKS SHALL BE LOCATED WITHIN 7.32 m (24') OF EITHER THE MAIN BUILDING ENTRY OR THE ENTRY TO THE PRIMARY LOCAL USE. BIKE RACKS ARE TO BE PLACED PERPENDICULAR TO THE CURB WITH THE CENTERLINE OF THE RACK ON LINE WITH TREES AND LIGHT POLES.
3. SAW CUT PAVES TO MATCH PAVES CONFIGURATION.

CITY OF AUSTIN
DEPARTMENT OF PUBLIC WORKS

RECORD COPY SIGNED
BY BILL GARDNER

11/21/05

ADOPTED

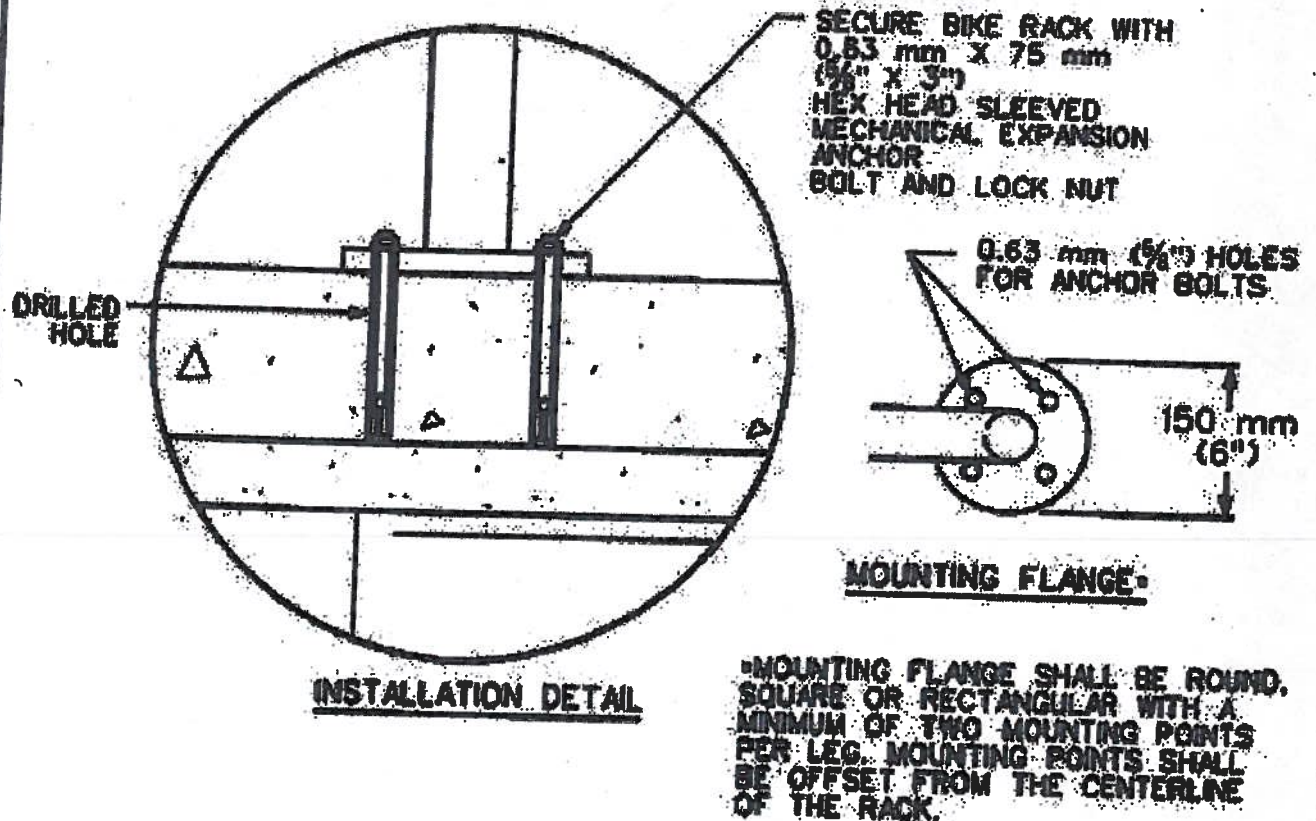
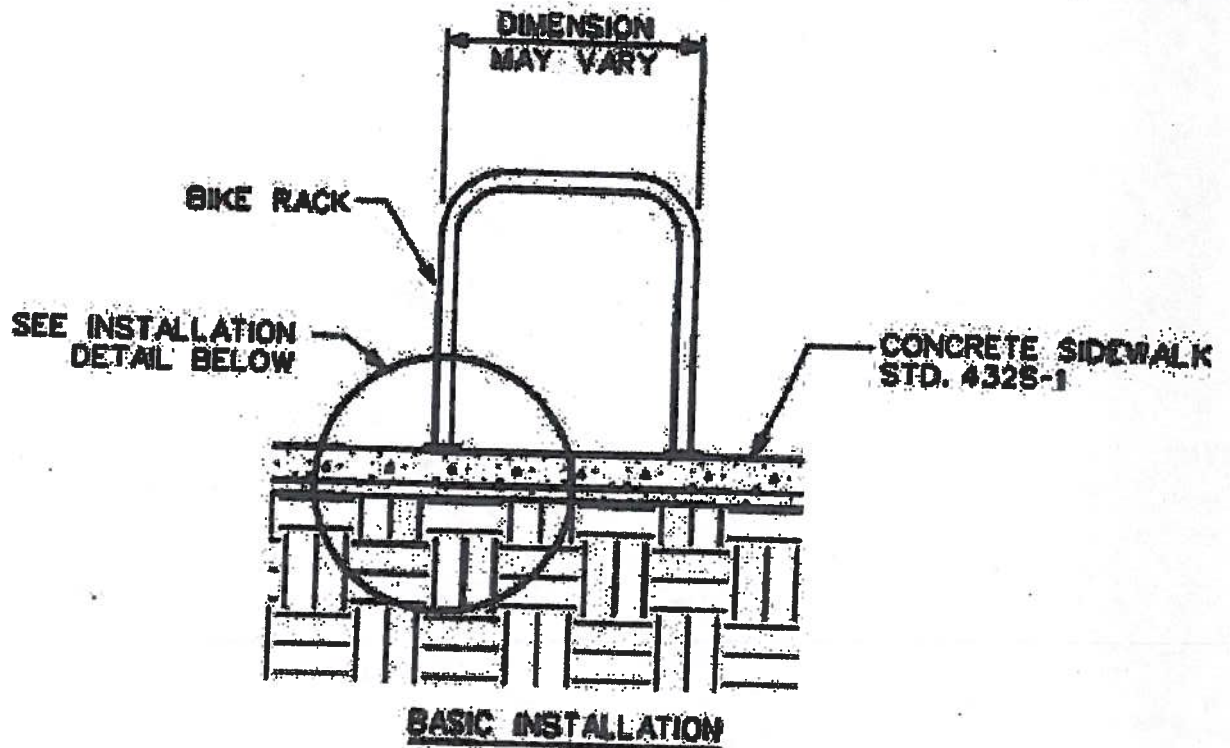
**BICYCLE RACK INSTALLATION IN
CONCRETE PAVES SIDEWALK-ALTERNATE 1**

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

STANDARD NO.

710S-3

3 OF 3



CITY OF AUSTIN
DEPARTMENT OF PUBLIC WORKS

RECORD COPY SIGNED
BY BILL GARDNER

11/21/05

ADOPTED

**BICYCLE RACK INSTALLATION
IN CONCRETE SIDEWALK-ALTERNATE 1**

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

STANDARD NO.

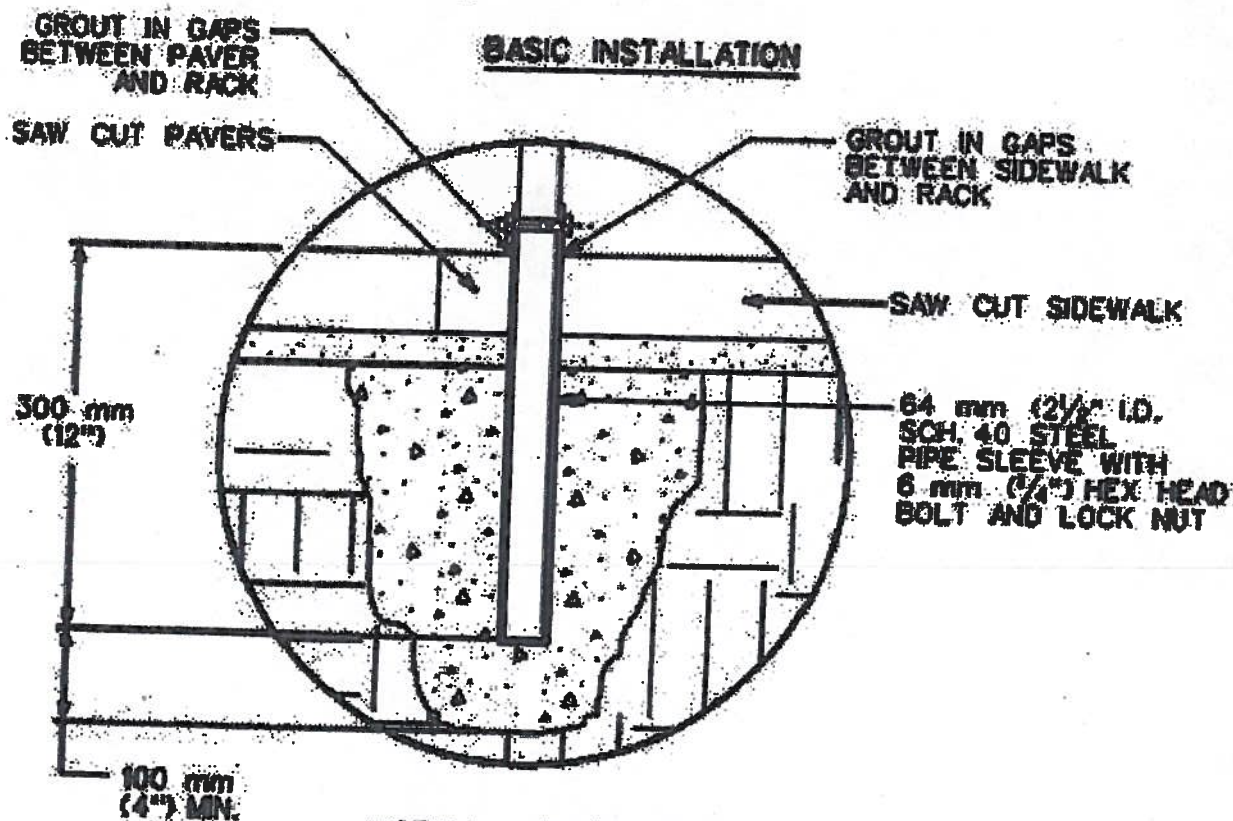
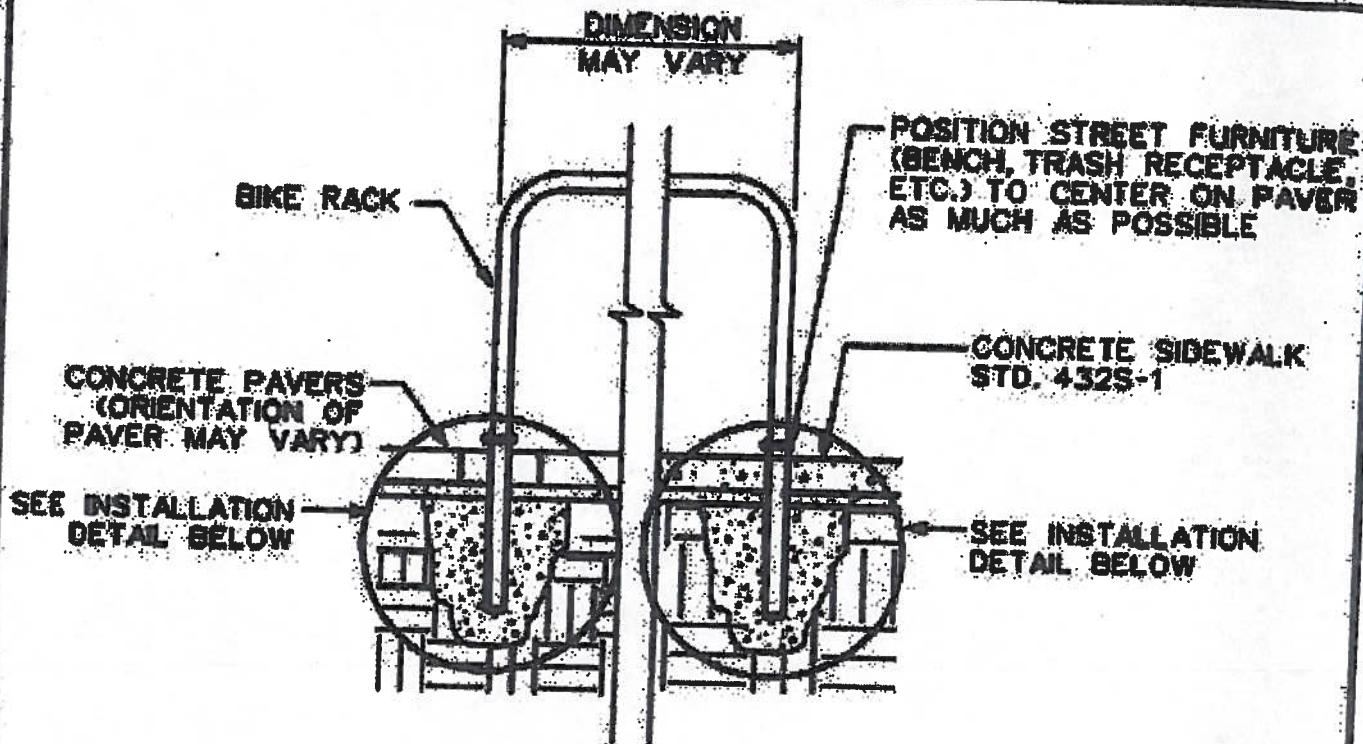
710S-4

1 OF 2

GENERAL NOTES:

1. RACKS SHALL COMPLY WITH CITY STANDARD DETAIL 710S-1, TYPE III RACK FOR 1 TO 2 BIKES.
2. BIKE RACKS SHALL BE LOCATED WITHIN 7.32 m (24') OF EITHER THE MAIN BUILDING ENTRY OR THE ENTRY TO THE PRIMARY LOCAL USE. BIKE RACKS ARE TO BE PLACED PERPENDICULAR TO THE CURB WITH THE CENTERLINE OF THE RACK ON LINE WITH TREES AND LIGHT POLES.

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS		BICYCLE RACK INSTALLATION IN CONCRETE SIDEWALK-ALTERNATE 1	
RECORD COPY SIGNED BY BILL GARNER	11/21/05 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 710S-4 2 OF 2



INSTALLATION DETAIL

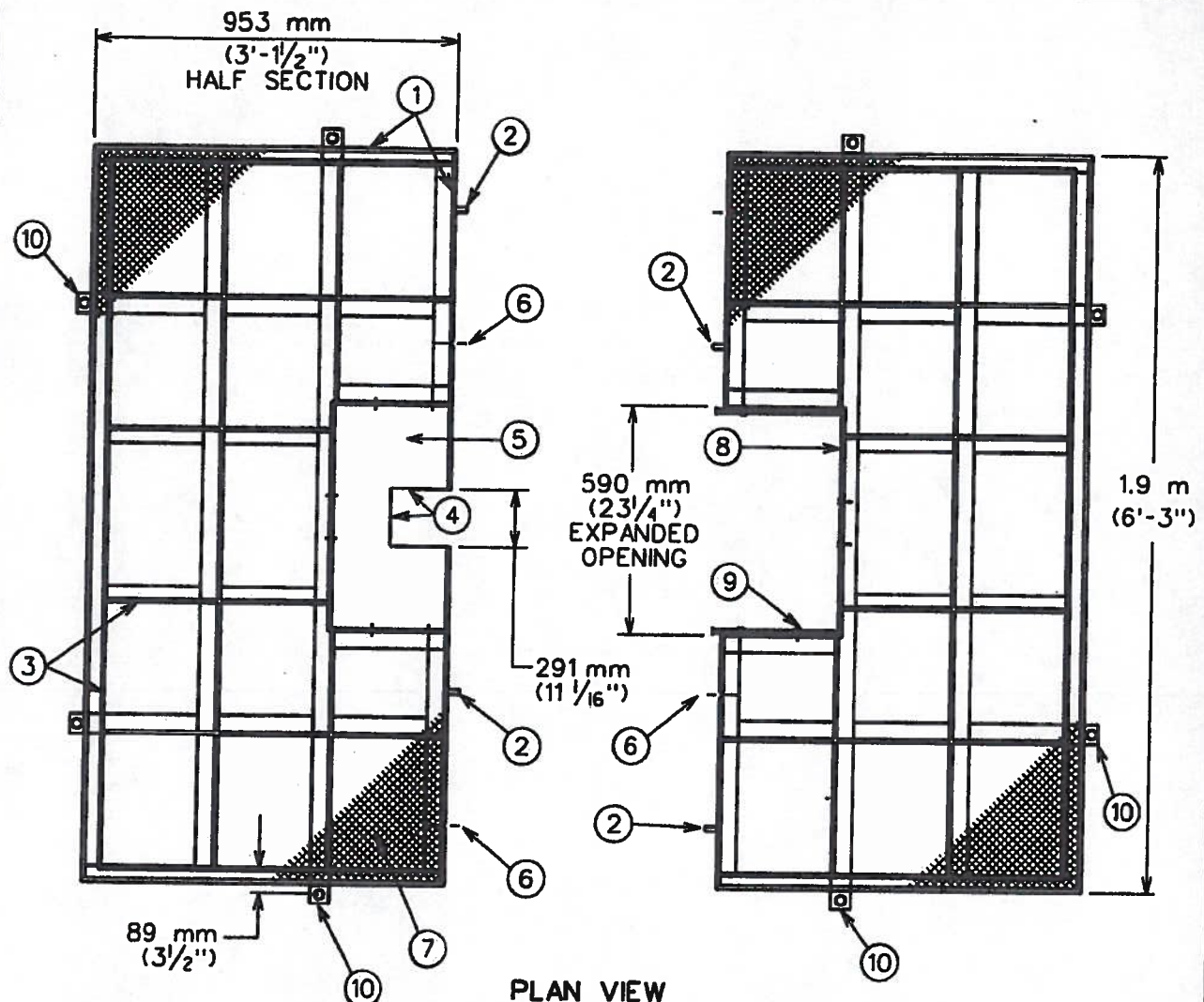
CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	BICYCLE RACK INSTALLATION IN SIDEWALKS-ALTERNATE 2		
RECORD COPY SIGNED BY <u>BILL GARDNER</u>	11/21/05 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 710S-5 1 OF 2

GENERAL NOTES:

1. RACKS SHALL COMPLY WITH CITY STANDARD DETAIL 710S-1, TYPE II RACK FOR 1 TO 2 BIKES.
2. BIKE RACKS SHALL BE LOCATED WITHIN 7.32 m (24') OF EITHER THE MAIN BUILDING ENTRY OR THE ENTRY TO THE PRIMARY LOCAL USE. BIKE RACKS ARE TO BE PLACED PERPENDICULAR TO THE CURB WITH THE CENTERLINE OF THE RACK ON LINE WITH TREES AND LIGHT POLES.

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS		BICYCLE RACK INSTALLATION IN SIDEWALKS-ALTERNATE 2	
RECORD COPY SIGNED BY GILL GARDNER	11/21/05 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 710S-5 2 OF 2

PAVER GRATE FRAME DETAIL



- ① 13 mm (1/2") SQ. STEEL BAR WELDED NEXT TO ALL EXPOSED EXPANDED METAL EDGES
- ② 13 mm (1/2") DIA. STEEL PIN (1 PER SECTION)
- ③ 64 mm X 50 mm X 5 mm (2 1/2" X 2" X 3/16") STEEL ANGLE
- ④ 6 mm X 38 mm (1/4" X 1 1/2") STEEL BAR (STOPS)
- ⑤ REMOVABLE 6 mm (1/4") THICK PLATE TO MAKE 590 mm (23 1/4") OPENING
- ⑥ 14 mm (9/16") DIA. HOLE TO RECEIVE 13 mm (1/2") DIA. TAPERED STEEL PIN
- ⑦ EXPANDED METAL
- ⑧ 10 mm X 114 mm (3/8" X 4 1/2") STEEL BAR EXPANDED
- ⑨ 10 mm X 38 mm (3/8" X 1 1/2") STAINLESS STEEL CAP SCREW WITH WASHER AND NUT
- ⑩ 64 mm X 50 mm X 5 mm (2 1/2" X 2" X 3/16") STEEL ANGLE TAB, 4 PER GRATE HALF TO ALLOW GRATE TO BE BOLTED TO CONCRETE SURROUND

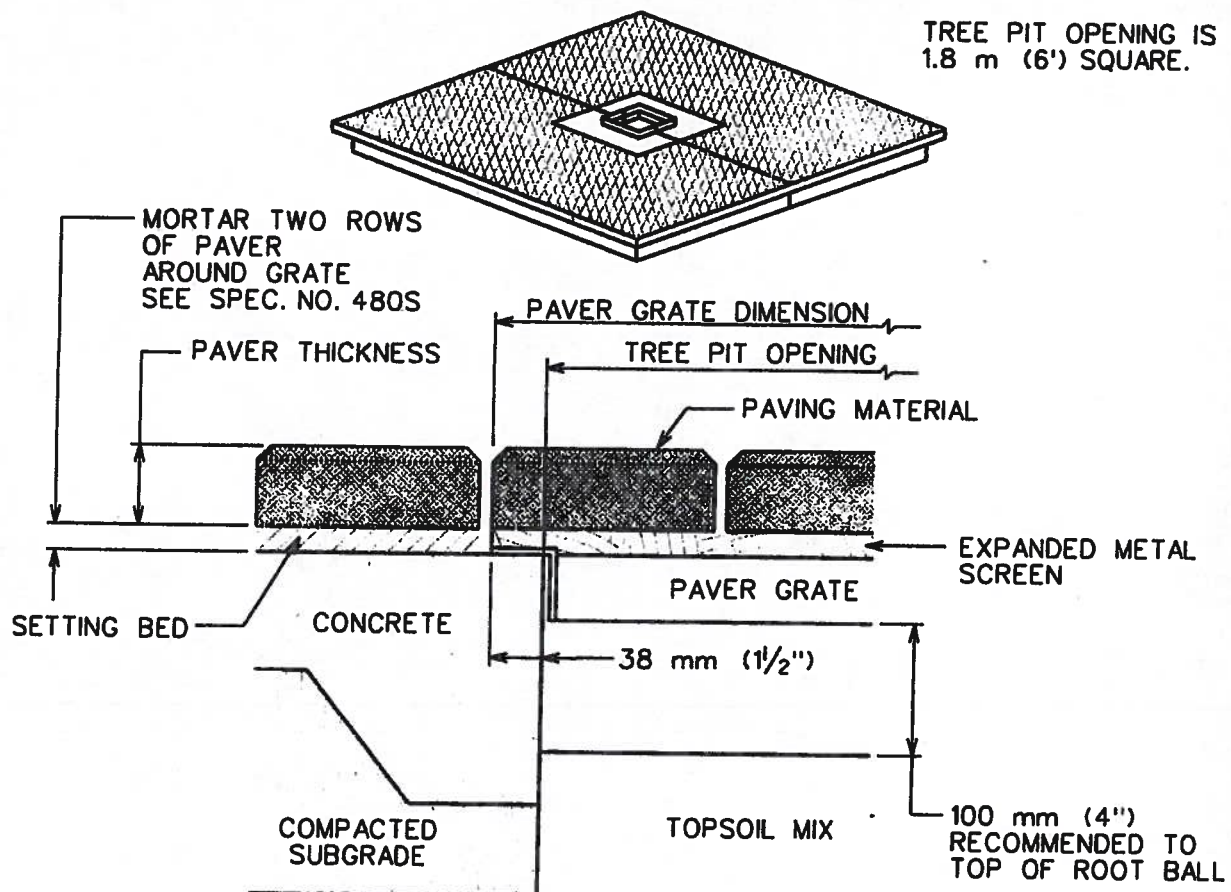
CITY OF AUSTIN
DEPARTMENT OF PUBLIC WORKS

1.8 m (6') PAVER GRATE FRAME

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

STANDARD NO.
437S-1
1 OF 2

ADOPTED



INSTALLATION

NOTES:

1. PAVER GRATE FRAME SHALL BE FABRICATED IN TWO IDENTICAL HALVES. EACH HALF SHALL WEIGH NO MORE THAN 91 kg (200 lbs).
2. CONTINUOUS WELD ALL INTERSECTIONS.
3. EXPANDED METAL SHALL BE WELDED ON TOP OF FRAME WORK. SPOT WELD AT 150 mm (6") O.C. ON ALL ANGLES.
4. REMOVE ALL SHARP EDGES AND BURRS.
5. THE INSTALLER SHALL FORM AND POUR A CONCRETE SURROUND IN A SQUARE, FLAT PLANE TO PREVENT ROCKING OF THE GRATE. TO ENSURE THE GRATE AND CHOSEN PAVING CONFIGURATION MATERIALS FIT PROPERLY IT IS RECOMMENDED THAT EITHER A FRAME OR TEMPLATE BE USED. IF THE TREE IS TO BE GUYED IT IS ALSO RECOMMENDED THAT THE EYE BOLTS BE INSTALLED IN THE POURED CONCRETE BELOW THE BOTTOM SUPPORT OF THE GRATE.
6. INSTALL CHOSEN PAVING MATERIALS ON THE GRATE. ENSURE MATERIALS FIT SNUG TO PREVENT ANY MOVEMENT. IF PLACING THE GRATE TO ADJOINING SETTING BED FOR A CONTINUOUS RUN OF PAVERS, ENSURE SETTING BED IS FLUSH WITH TOP EDGE OF THE GRATE.
7. CUT OR TRIM PAVERS AROUND CENTER OPENING, SIDES AND TREE GUY WIRES. IF SAND OR OTHER MATERIAL IS TO BE USED IN FILLING THE PAVER JOINTS A POROUS MAT FABRIC MUST FIRST BE PLACED OVER THE ENTIRE GRATE SURFACE BEFORE INSTALLING THE PAVERS. TRIM OFF ANY EXCESS FABRIC AFTER COMPLETING PAVER INSTALLATION. ANY PENETRATIONS OF THE PAVER INSTALLATION SHALL BE IN CONFORMANCE WITH APPROPRIATE STANDARD DETAIL SERIES 480.

CITY OF AUSTIN
DEPARTMENT OF PUBLIC WORKS

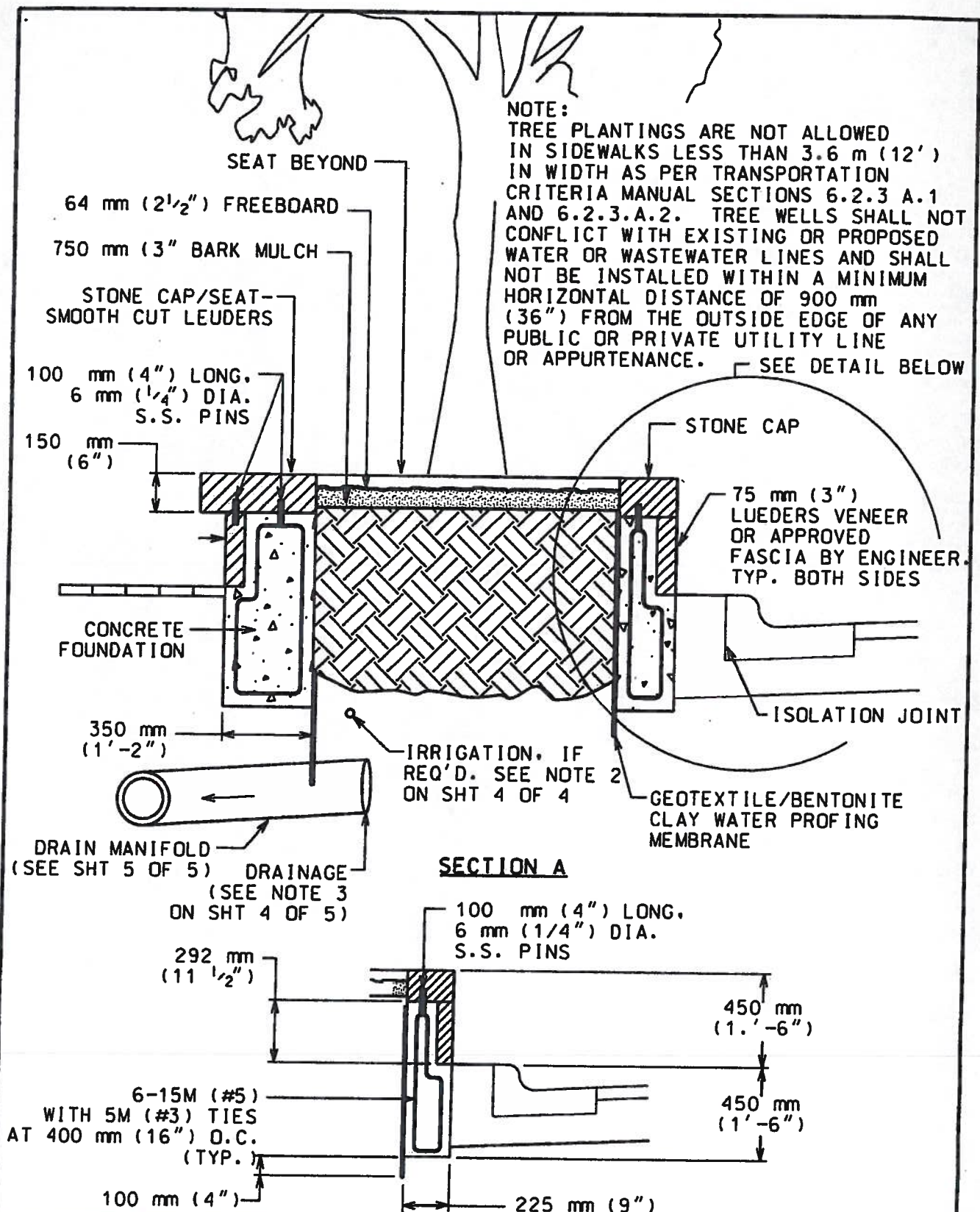
1.8 m (6') PAVER GRATE FRAME

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

STANDARD NO.
437S-1
2 OF 2

ADOPTED

TREE WELL WITH SEAT



CITY OF AUSTIN
 DEPARTMENT OF PUBLIC WORKS

TREE WELL WITH SEAT

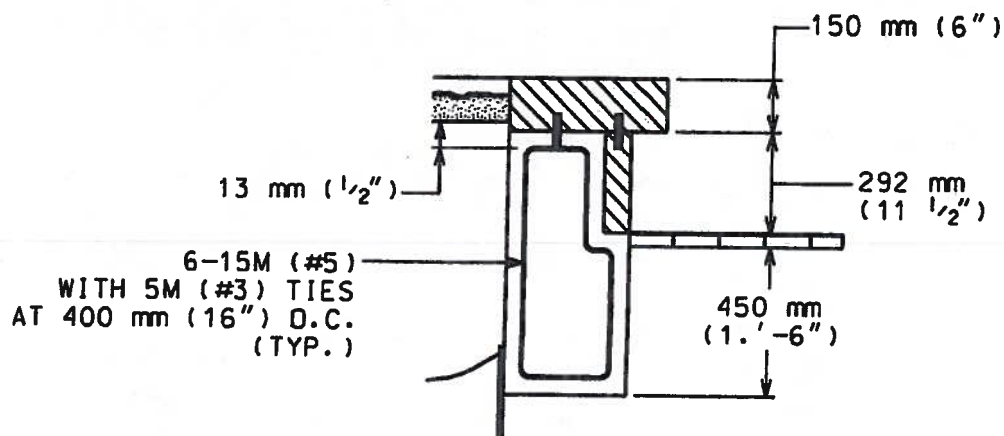
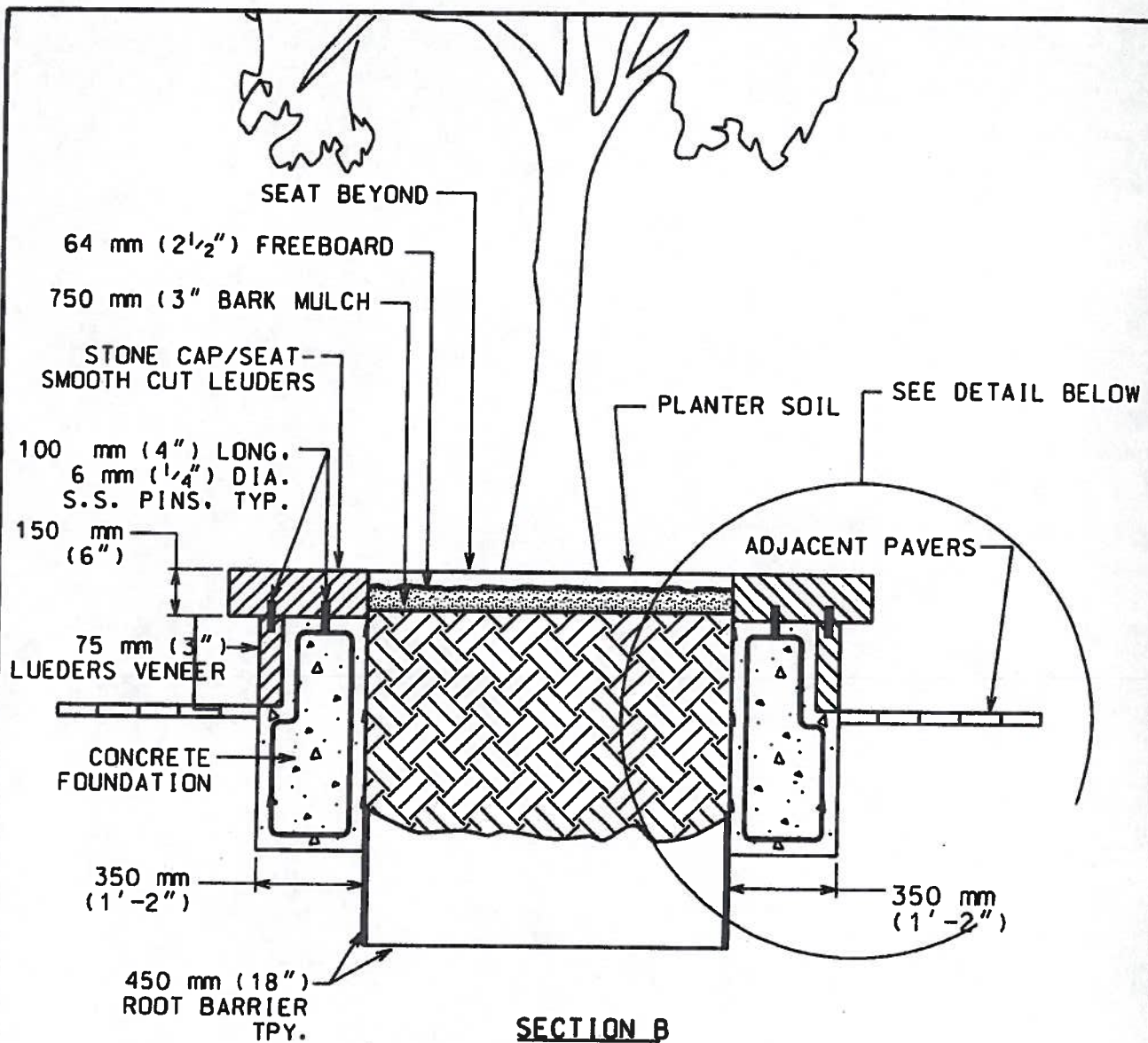
THE ARCHITECT/ENGINEER ASSUMES
 RESPONSIBILITY FOR APPROPRIATE
 USE OF THIS STANDARD.

STANDARD NO.

432S-7E

1 OF 5

ADOPTED



CITY OF AUSTIN
DEPARTMENT OF PUBLIC WORKS

TREE WELL WITH SEAT

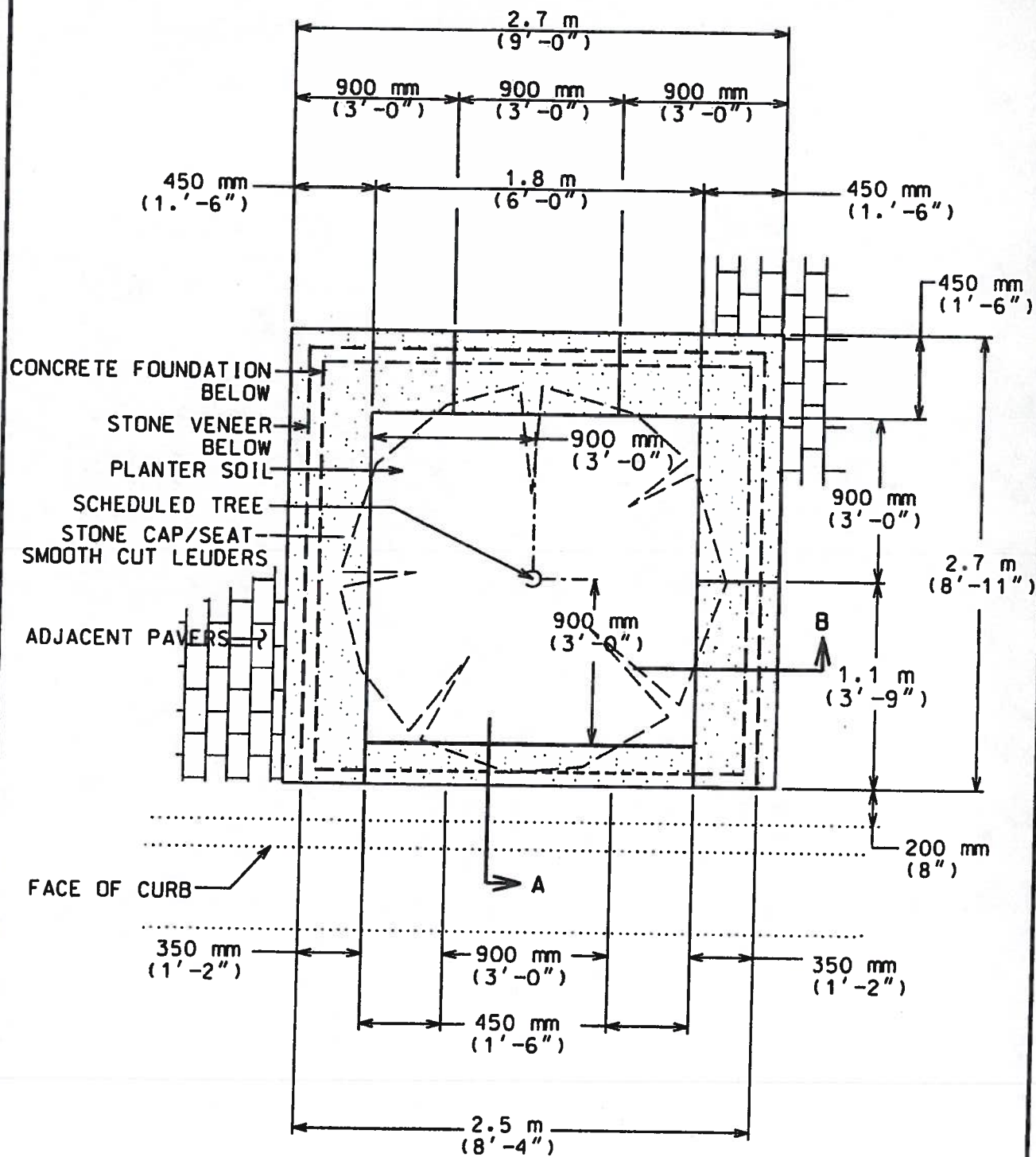
THE ARCHITECT/ENGINEER ASSUMES
RESPONSIBILITY FOR APPROPRIATE
USE OF THIS STANDARD.

STANDARD NO.

432S-7E

2 OF 5

ADOPTED



CITY OF AUSTIN
DEPARTMENT OF PUBLIC WORKS

TREE WELL WITH SEAT

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

STANDARD NO.

432S-7E

3 OF 5

ADOPTED

NOTES:

1. THE MINIMUM OFFSET DISTANCE SHALL BE INCREASED UNIFORMLY WHEN THE DEPTH OF EXCAVATION EXCEEDS 1.14 m (45") AS FOLLOWS:

EXCAVATION DEPTH	MINIMUM OFFSET DISTANCE
1.1 m (45") OR LESS	1.2 m (4')
1.3 m (51")	1.4 m (4'-6")
1.5 m (57")	1.5 m (5')
1.6 m (63")	1.7 m (5'-6")
1.7 m (69") OR GREATER	1.8 m (6')

2. IRRIGATION SHALL COMPLY WITH REQUIREMENTS IN THE LAND DEVELOPMENT CODE SECTION 25-2-1008 AND ENVIRONMENTAL CRITERIA MANUAL SECTIONS 2.4.6 AND 2.7.2.G.
3. DRAINAGE SHALL BE DESIGNED/CONSTRUCTED TO PROVIDE INDEPENDENT DRAINAGE OF THE SPECIFIC TREE WELL BY GRAVITY FLOW. THE DRAIN SYSTEM SHALL CONFORM TO DRAINAGE CRITERIA MANUAL SECTION 5.2.0. "DESIGN GUIDE-LINES". THE DRAIN SHALL BE CONNECTED TO THE STORMWATER DRAINAGE SYSTEM IN ACCORDANCE WITH THE DRAWINGS.
4. LIGHTING AND ASSOCIATED ELECTRICAL INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE DRAWINGS.
5. TREE WELL EXCAVATIONS SHALL BE INSTALLED NO CLOSER THAN 3 m (10') TO CONTIGUOUS PROPERTY CORNERS.
6. SHOULD MAINTENANCE OF WATER, WASTEWATER SERVICES OR FIRE LINES BE NECESSARY, LICENSE HOLDERS ARE RESPONSIBLE FOR MAINTENANCE OR REPLACEMENT OF GEOTEXTILE OR BENTONITE CLAY MEMBRANE.
7. TREE SPACING MUST BE SHOWN ON THE DRAWINGS.
8. ALTERNATE PLACEMENT OF GEOTEXTILE/BENTONITE FOR TREE SPACING LESS THAN 4.5 m (15').
9. THE CLEARANCE FROM TREE WELL WITH SEAT TO ANY EXISTING OR PROPOSED PUBLIC OR PRIVATE UTILITY LINE OR APPURTENANCE MUST MAINTAIN A MINIMUM HORIZONTAL CLEARANCE OF 900 mm (36"). TREE WELL WITH SEAT SHALL NOT BE MOUNTED ON TOP OF VAULTS OR STORM DRAIN INLETS.

CITY OF AUSTIN
DEPARTMENT OF PUBLIC WORKS

TREE WELL WITH SEAT

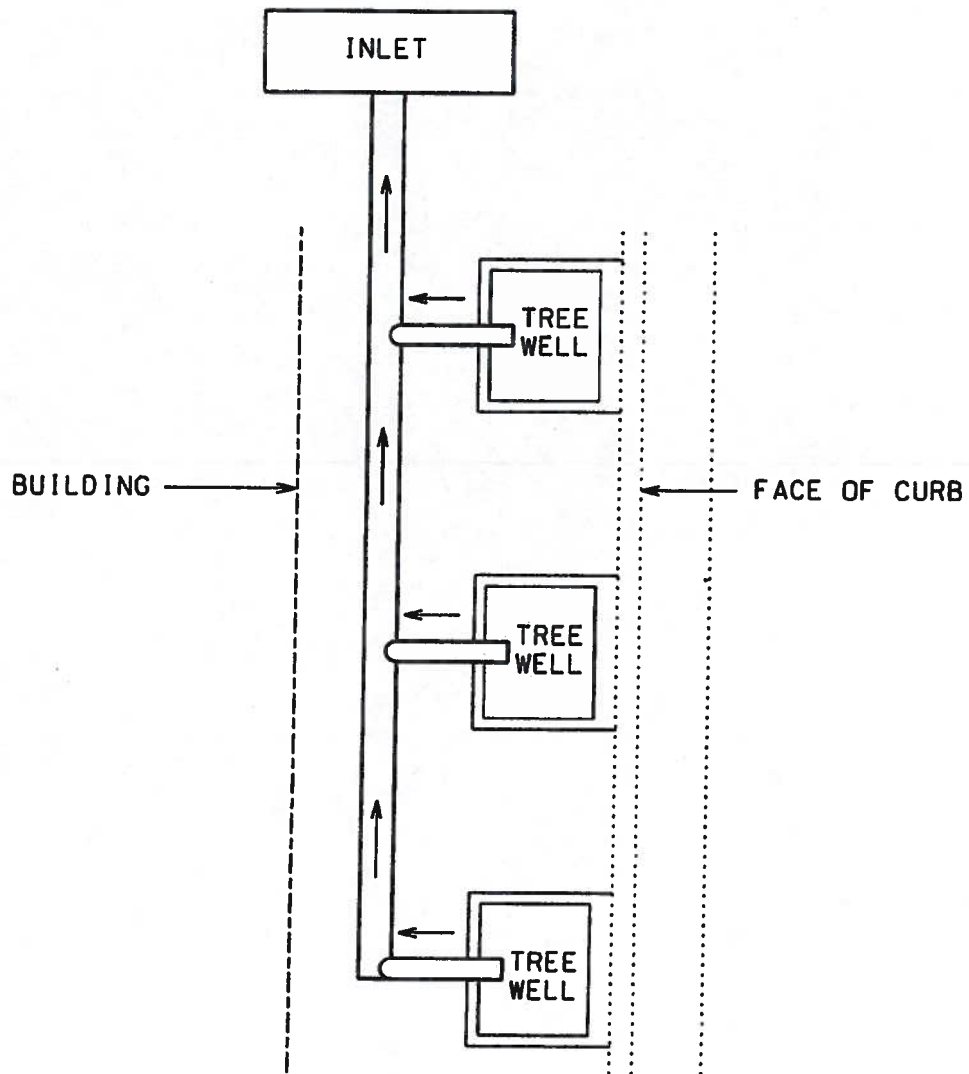
THE ARCHITECT/ENGINEER ASSUMES
RESPONSIBILITY FOR APPROPRIATE
USE OF THIS STANDARD.

STANDARD NO.

432S-7E

4 OF 5

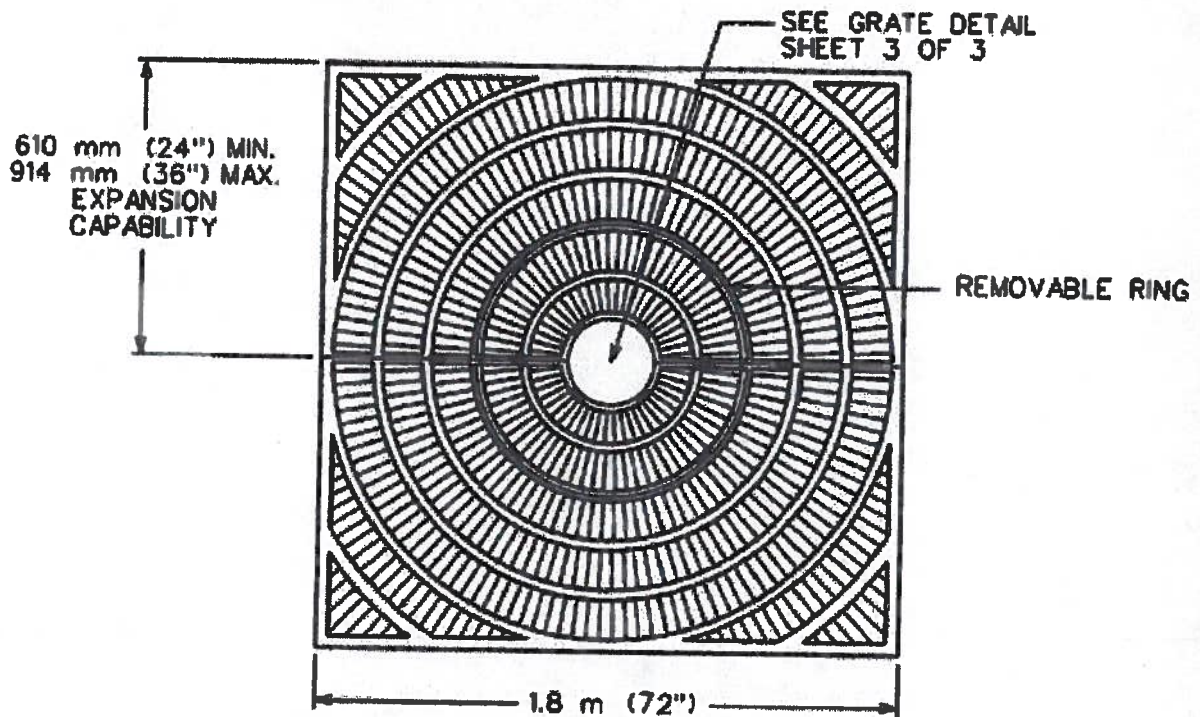
ADOPTED



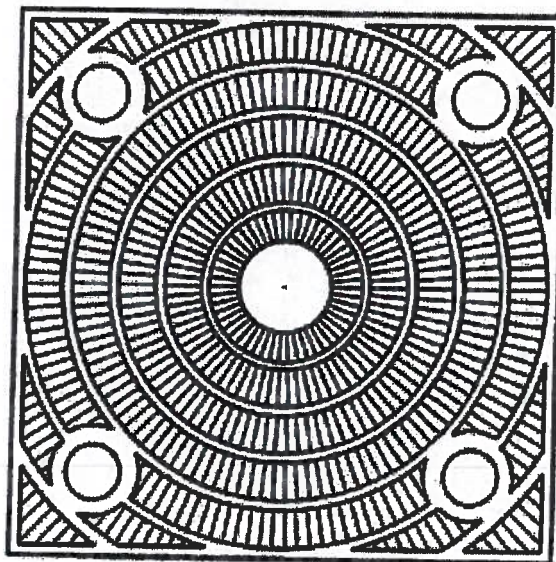
MANIFOLD DRAINAGE LAYOUT

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	TREE WELL WITH SEAT	
_____ ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 432S-7E 5 OF 5

CAST IRON TREE GRATE & FRAME DETAILS

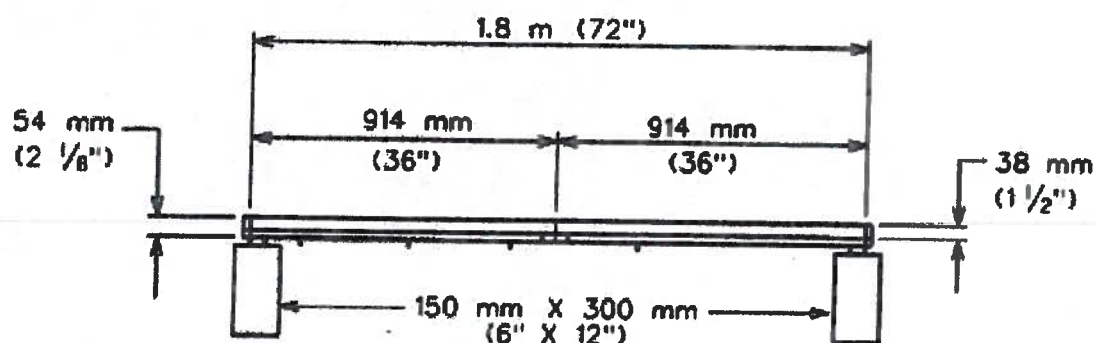
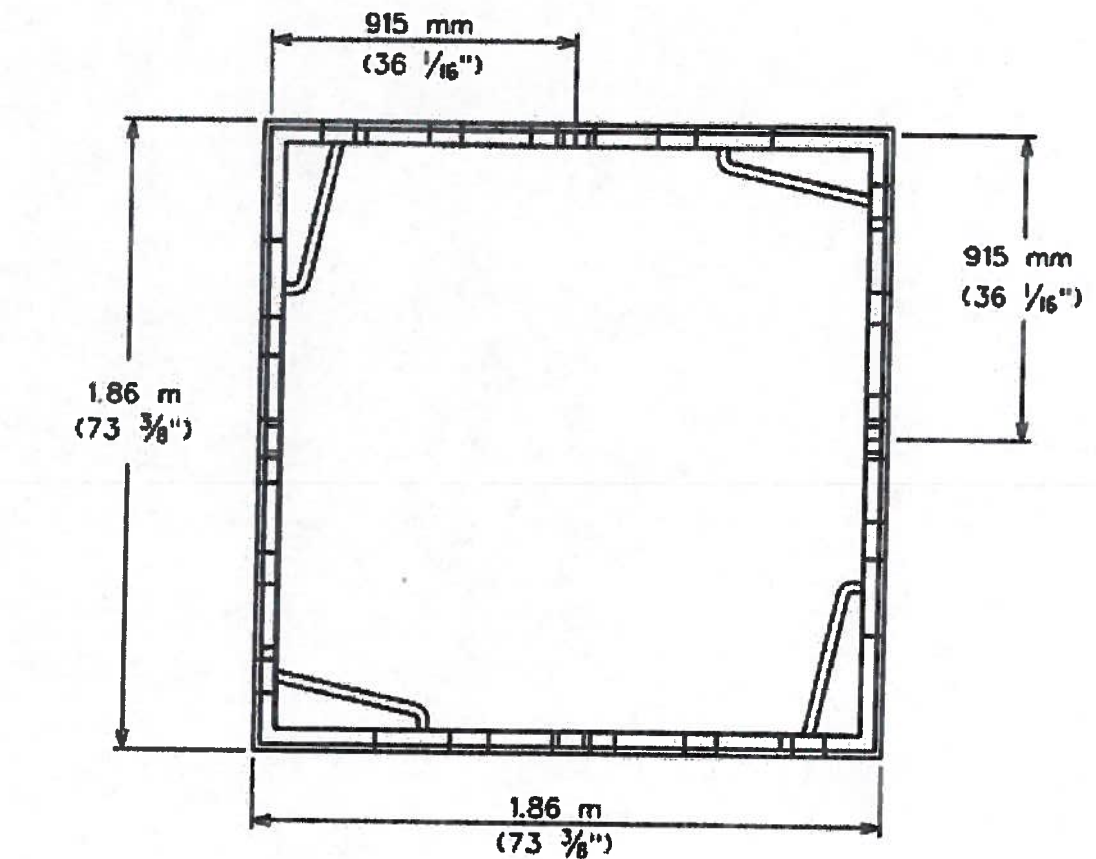


TREE GRATE



TREE GRATE WITH LIGHTING OPENINGS

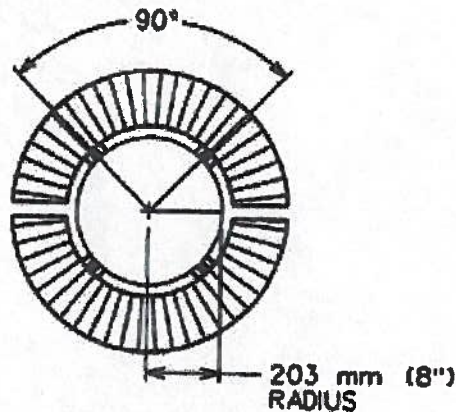
CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	1.8 m (6') CAST IRON TREE GRATE AND FRAME		
RECORD COPY SIGNED BY <u>BILL GARDNER</u>	<u>11/21/05</u> ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 437S-2 1 OF 3



CONCRETE BEAM
REFER TO STANDARD 432S-7A, B & C

GRATE FRAME (TYPICAL)

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	1.8 m (6') CAST IRON TREE GRATE AND FRAME		
RECORD COPY SIGNED BY BILL GARDNER	11/21/05 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 437S-2 2 OF 3



GRATE DETAIL

NOTES:

1. TREE GRATE AND FRAME SHALL BE OF CAST IRON WITH GRAY IRON CASTINGS CONFORMING TO ASTM A-48 CLASS 35 OR BETTER. IF CAST IRONS USED, THEN MATERIAL FINISH MUST BE RESISTANT TO CORROSION.
2. GRATES SHALL BE COMPRISE OF 2 PANELS NO LESS THAN 38 mm (1½") THICK TO RESIST HIGH-STRESS IMPACTS FROM MECHANIZED SIDEWALK CLEANING MACHINES.
3. GRATE OPENINGS SHALL BE 9.5 mm (¾") OR LESS TO MEET ADA STANDARDS AND PREVENT THE GATHERING OF LEAVES OR LITTER.
4. GRATES SHALL HAVE REMOVABLE INSERT GRATE FOR INCREMENTAL TRUNK GROWTH AND EXPANSION. STREET GRATES WITH EASILY REMOVABLE RING SHOULD USE AN ABRASIVE CUTTING WHEEL OR LASER WATER JET AND NOTCH AT THE RADIAL SPOKES.
5. GRATES ACCOMMODATING SUBGRADE LIGHTING UNITS SHOULD HAVE REMOVABLE LIGHT-OPENING SECTIONS SECURED WITH COUNTER-SUNK SCREWS IN ORDER TO TAMPER-PROOF THE LIGHTING UNITS, IF REQUIRED.
6. GRATES SHOULD BE ABLE TO ACCOMMODATE CUSTOM CORNER LOGOS.

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	1.8 m (6') CAST IRON TREE GRATE AND FRAME		
RECORD COPY SIGNED BY BILL GARDNER	11/21/05 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 437S-2 3 OF 3