APPENDICES

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C	SWPPP Checklist (large sites)
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N	Standard Construction Notes
O	Letter of Permission
P	TXDOT Utility Permit Questionnaire
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APPENDIX A

STORM WATER MANAGEMENT SITE PLAN (SWMSP) CHECKLIST

STORM WATER MANAGEMENT SITE PLAN (SWMSP) CHECKLIST

A SWMSP is required for all development that disturbs a surface area of 12,000 square feet and creates or adds 5,000 square feet or more of impervious surface. Refer to Sections 4.3.A and 5.3.A of the Design Standards Manual for specific requirements.

Project name: _____

Project address: _____

Acreage to be disturbed: _____

Acreage or square-footage of proposed impervious surface: _____

Paved private access easement: ☐ Yes ☐ No
If yes, then one additional BMP above the minimum will be required.

Total Number of BMPs required: ☐ 1 ☐ 2 ☐ 3 ☐ 4

Are the following ***existing*** site features shown?

Existing two foot contours	☐ Yes ☐ No ☐ NA
Existing drainage patterns and features	☐ Yes ☐ No ☐ NA
Existing “C” value (runoff coefficient)	☐ Yes ☐ No ☐ NA
“Q” for 2-year, 15-minute duration, storm event before development	☐ Yes ☐ No ☐ NA
Approximate limit of tree canopy	☐ Yes ☐ No ☐ NA
Tree survey, if commercial site	☐ Yes ☐ No ☐ NA
Approximate limit of wetlands	☐ Yes ☐ No ☐ NA
Soil type and classification	☐ Yes ☐ No ☐ NA
100-year floodplain	☐ Yes ☐ No ☐ NA

Are the following permanent, *post-development* features shown?

Proposed two foot contours	☐ Yes ☐ No ☐ NA
Drainage system layout	☐ Yes ☐ No ☐ NA
Post-development “C” value (runoff coefficient)	☐ Yes ☐ No ☐ NA
“Q” for 2-year, 15 minute duration, storm event	☐ Yes ☐ No ☐ NA
Site layout	☐ Yes ☐ No ☐ NA
Areas to be protected from disturbance	☐ Yes ☐ No ☐ NA
Trees to be saved	☐ Yes ☐ No ☐ NA
100-year floodplain	☐ Yes ☐ No ☐ NA
Drainage easements	☐ Yes ☐ No ☐ NA
List of potential pollutants	☐ Yes ☐ No ☐ NA
BMP # 1 (describe) _____ _____ • Design criteria provided • Appropriate application • Shown as public or private • Coordinated with drainage plan • Coordinated with landscaping plan • Other comments	 ☐ Yes ☐ No ☐ NA ☐ Yes ☐ No ☐ NA ☐ Yes ☐ No ☐ NA ☐ Yes ☐ No ☐ NA ☐ Yes ☐ No ☐ NA _____ _____

BMP # 2 (describe) _____ _____ • Design criteria provided • Appropriate application • Shown as public or private • Coordinated with drainage plan • Coordinated with landscaping plan • Other comments	☐ Yes ☐ No ☐ NA ☐ Yes ☐ No ☐ NA ☐ Yes ☐ No ☐ NA ☐ Yes ☐ No ☐ NA ☐ Yes ☐ No ☐ NA _____ _____
BMP # 3 (describe) _____ _____ • Design criteria provided • Appropriate application • Shown as public or private • Coordinated with drainage plan • Coordinated with landscaping plan • Other comments	☐ Yes ☐ No ☐ NA ☐ Yes ☐ No ☐ NA ☐ Yes ☐ No ☐ NA ☐ Yes ☐ No ☐ NA ☐ Yes ☐ No ☐ NA _____ _____

BMP # 4 (describe) _____ _____ • Design criteria provided • Appropriate application • Shown as public or private • Coordinated with drainage plan • Coordinated with landscaping plan • Other comments	☐ Yes ☐ No ☐ NA ☐ Yes ☐ No ☐ NA ☐ Yes ☐ No ☐ NA ☐ Yes ☐ No ☐ NA ☐ Yes ☐ No ☐ NA _____ _____
BMP # 5 (describe) _____ _____ • Design criteria provided • Appropriate application • Shown as public or private • Coordinated with drainage plan • Coordinated with landscaping plan • Other comments	☐ Yes ☐ No ☐ NA ☐ Yes ☐ No ☐ NA ☐ Yes ☐ No ☐ NA ☐ Yes ☐ No ☐ NA ☐ Yes ☐ No ☐ NA _____ _____

APPENDIX B

STORM WATER POLLUTION PREVENTION PLAN (SWPPP) CHECKLIST SMALL SITES

SWPPP CHECKLIST FOR SMALL PROJECTS

RESIDENTIAL: 12,000 SF TO 1 ACRE DISTURBED
NON-RESIDENTIAL: 0 SF TO 1 ACRE DISTURBED
See Sections 4.3.B and 5.3.C of the Design Standards Manual for specific requirements.

Project Description: Are the following provided?

Construction plans or identifying notice containing the following:	☐ Yes ☐ No ☐ NA
Contact person, company name, address and phone number of each contractor or other person controlling the daily construction activity at the site.	☐ Yes ☐ No ☐ NA
Company name, contact, address and phone number of the site owner/developer.	☐ Yes ☐ No ☐ NA
Location of the site by street address and legal description.	☐ Yes ☐ No ☐ NA
Description of the construction activity.	☐ Yes ☐ No ☐ NA
SWPPP and plans signed and sealed by a professional engineer licensed in Texas.	☐ Yes ☐ No ☐ NA

Site Map: Does the site map include the following?

Limits of soil disturbance to avoid disturbing vegetation in areas outside the minimum needed for construction.	☐ Yes ☐ No ☐ NA
Location of the construction entrance, designed to limit tracking.	☐ Yes ☐ No ☐ NA
Location of structural storm water and sediment controls.	☐ Yes ☐ No ☐ NA

Best Management Practices: Are the following practices present?

Sediment barriers along the down-slope perimeter of disturbed areas and stockpiles where there is a potential for sediment discharge to adjacent property, streets and drainage facilities. Turn ends of sediment barriers up-slope to form sediment traps.	☐ Yes ☐ No ☐ NA
Permanently stabilize exposed soil, within and adjacent to the site, that is disturbed by vehicles, grading and other construction activities.	☐ Yes ☐ No ☐ NA
Prevention of the discharge of building materials, lime, cement, concrete, asphalt, and mortar to the MS4 or to the waters of the United States.	☐ Yes ☐ No ☐ NA
Liquid tight bermed area (liner required) or other spill protection measure per the Fire Code for any temporary fuel tanks placed on site during construction.	☐ Yes ☐ No ☐ NA
A pit for temporary on-site disposal of concrete waste from mixing drums and chutes.	☐ Yes ☐ No ☐ NA
Note to contain all runoff from materials used in the subgrade stabilization process.	☐ Yes ☐ No ☐ NA
Covered trash receptacle for on site litter and construction debris provided.	☐ Yes ☐ No ☐ NA
Notes requiring inspections by the permittee(s) once every 2 weeks and within 24 hours after a storm event of 0.5 inches or more.	☐ Yes ☐ No ☐ NA

APPENDIX C

STORM WATER POLLUTION PREVENTION PLAN (SWPPP) CHECKLIST LARGE SITES

SWPPP CHECKLIST FOR LARGE PROJECTS

ALL PROJECTS: 1 ACRE OR MORE DISTURBED
See Sections 4.3.B and 5.3.C of the Design Standards Manual for specific requirements.

Site/Project Description: Are the following provided?

Nature of construction activity.	☐ Yes ☐ No ☐ NA
Potential pollutants and sources.	☐ Yes ☐ No ☐ NA
Sequence of major soil disturbing events.	☐ Yes ☐ No ☐ NA
Total number of acres of the entire property.	☐ Yes ☐ No ☐ NA
Total number of acres where construction activities will occur, including off-site material storage, overburden and stockpiles of dirt and borrow areas.	☐ Yes ☐ No ☐ NA
A map showing the general location of the site.	☐ Yes ☐ No ☐ NA
Which permittee is responsible for each event.	☐ Yes ☐ No ☐ NA
Listing of controls associated with each event.	☐ Yes ☐ No ☐ NA
Existing data describing the soil and quality of any discharge from the site.	☐ Yes ☐ No ☐ NA
A copy of the signed Notice of Intent for owner if site is larger than 5 acres.	☐ Yes ☐ No ☐ NA
A copy of the signed Notice of intent for the contractor if the site is larger than 5 acres.	☐ Yes ☐ No ☐ NA
A copy of the TCEQ site notice.	☐ Yes ☐ No ☐ NA
Signature of the owner and operator.	☐ Yes ☐ No ☐ NA
A copy of the TPDES General Permit.	☐ Yes ☐ No ☐ NA
Signature and seal of a professional engineer licensed in Texas.	☐ Yes ☐ No ☐ NA
Comments:	

Site Map: Have plans been provided that include the following?

Topographic map of the site.	☐ Yes ☐ No ☐ NA
Existing drainage patterns.	☐ Yes ☐ No ☐ NA
Proposed drainage patterns and approximate slopes after grading activities.	☐ Yes ☐ No ☐ NA
Locations where stabilization practices are expected to be used.	☐ Yes ☐ No ☐ NA
Location of major storm water controls.	☐ Yes ☐ No ☐ NA
Limits of soil disturbance.	☐ Yes ☐ No ☐ NA
Location of off-site borrow materials.	☐ Yes ☐ No ☐ NA
Location of off-site equipment storage areas.	☐ Yes ☐ No ☐ NA
Location of on-site or near site wetland or surface waters.	☐ Yes ☐ No ☐ NA
Location of storm water discharges to on-site or near-site wetland or surface waters.	☐ Yes ☐ No ☐ NA
Location of on-site and off-site support activities (asphalt/concrete plant).	☐ Yes ☐ No ☐ NA
Location of industrial discharges to on-site or near-site wetland or surface waters.	☐ Yes ☐ No ☐ NA
Name of receiving water (s) (location or direction).	☐ Yes ☐ No ☐ NA
Comments:	

Best Management Practices: Are the following practices present?

Velocity dissipation devices at discharge locations and along the length or any outfall channel to provide a non-erosive flow velocity from the structure to the watercourse (i.e., no significant changes in the hydrological regime of the receiving water).	☐ Yes ☐ No ☐ NA
Measures to minimize off-site vehicle tracking.	☐ Yes ☐ No ☐ NA
Measures to minimize the generation of dust.	☐ Yes ☐ No ☐ NA
Fencing to protect any vegetation to be preserved.	☐ Yes ☐ No ☐ NA
Updateable list of materials to be stored on-sits.	☐ Yes ☐ No ☐ NA
Covered trash receptacle for on-site litter and construction debris.	☐ Yes ☐ No ☐ NA
A temporary detention structure if 10 or more acres drain to a common point or a discussion of why it is not feasible.	☐ Yes ☐ No ☐ NA
A pit for temporary on-site disposal of concrete waste from mixing drums and chutes.	☐ Yes ☐ No ☐ NA
A liquid tight bermed area (liner required) or other spill protection measure per the Fire Code for any temporary fuel tanks placed on site during construction.	☐ Yes ☐ No ☐ NA
A list of allowable non-storm water discharges and indicate appropriate control measures for non-storm water components of the discharge.	☐ Yes ☐ No ☐ NA
A note that ensures and demonstrates compliance with applicable federal, state and/or local waste disposal, sanitary sewer or septic system regulations.	☐ Yes ☐ No ☐ NA
A list of measures to be installed during construction that will remain after construction and be used to control pollutants in the storm water.	☐ Yes ☐ No ☐ NA
Are the measures provided adequate and in compliance with the Design Standards Manual?	☐ Yes ☐ No ☐ NA
Comments:	

Site Maintenance: Are the following activities included?

The maintenance of all erosion and sediment control measures and other protective measures to ensure effective operating conditions.	☐ Yes ☐ No ☐ NA
The inspection of adjacent areas daily, and the pick up of construction waste materials, debris, and fugitive sediment that have blown or wasted off-site.	☐ Yes ☐ No ☐ NA
Updates of the plan that may be necessary to protect surface water resources when the permittee is notified of such changes.	☐ Yes ☐ No ☐ NA
Sediment removal from controls (to include silt fences, ponds, etc.) when design capacity is reduced by 50%	☐ Yes ☐ No ☐ NA

Site Inspection:

Does the SWPPP provide for inspections by the permittee(s) once every 2 weeks and within 24 hours after a storm event of 0.5 inches or more? Alternatively, inspections may be performed once every 7 days without additional inspections after rain events.	☐ Yes ☐ No ☐ NA
Is an example inspection checklist provided?	☐ Yes ☐ No ☐ NA
Do the inspections include:	
A place for the inspector's name and qualifications?	☐ Yes ☐ No ☐ NA
A place for the date(s) of inspections(s) to be recorded?	☐ Yes ☐ No ☐ NA
Disturbed areas of the construction site that have not been stabilized?	☐ Yes ☐ No ☐ NA
Areas used for storage of materials that are exposed to precipitation?	☐ Yes ☐ No ☐ NA
Structural control measures?	☐ Yes ☐ No ☐ NA
Locations where vehicles enter or exit the site?	☐ Yes ☐ No ☐ NA
Identification of measures that need to be maintained, modified, or added to correct problems (and specify update of plan within 7 calendar days)?	☐ Yes ☐ No ☐ NA
A place to be signed in accordance with 30 TAC § 305.128?	☐ Yes ☐ No ☐ NA
Is the checklist provided adequate?	☐ Yes ☐ No ☐ NA
Comments:	

Site Stabilization:

Does the SWPPP include a description of interim and permanent stabilization practices for the site, including a schedule of when the practices will be implemented? (Examples include temporary/permanent seeding, mulching, geotextiles, sod, etc.)	☐ Yes ☐ No ☐ NA
Does the SWPPP address initiation of stabilization measures by the 14th day where construction activity temporarily or permanently ceases and will not resume on that portion of the site within 21 days?	☐ Yes ☐ No ☐ NA
Does the SWPPP include a note requiring the removal of all temporary controls and filing of a Notice of Termination when final stabilization is achieved?	☐ Yes ☐ No ☐ NA
Are stabilization specifications adequate and in compliance with the Design Standards Manual?	☐ Yes ☐ No ☐ NA
Does the SWPPP include a requirement to maintain records that include dates of major grading activities, dates when construction stops temporarily or permanently, and the date when stabilization is initiated.	☐ Yes ☐ No ☐ NA
Comments:	

APPENDIX D

MASTER THOROUGHFARE PLAN MAP

FIGURE 3.9

ROADWAY CLASSIFICATIONS

Burleson TEXAS

Kimley-Horn and Associates, Inc.

LEGEND

- Freeway
- Frontage Road
- Ramp
- Principal Arterial (P7U/P6D)
- Minor Arterial (P5U/P4D)
- Major Collector (C4U)
- Minor Collector (C3U)
- Local (L2U)
- Existing Rail
- Existing Streets
- City Limits
- Transit Oriented Development
- ETJ
- Streams
- Existing Grade Separation
- Proposed Grade Separation

0 3,000 6,000 Feet

N

CITY LIMITS ARE NOT ACCURATE
CONTACT CITY FOR CURRENT
CITY LIMITS

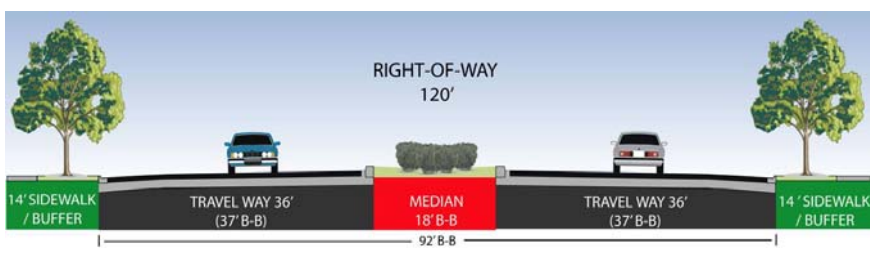
BURLESON MASTER THOROUGHFARE PLAN

MASTER THOROUGHFARE PLAN SUMMARY

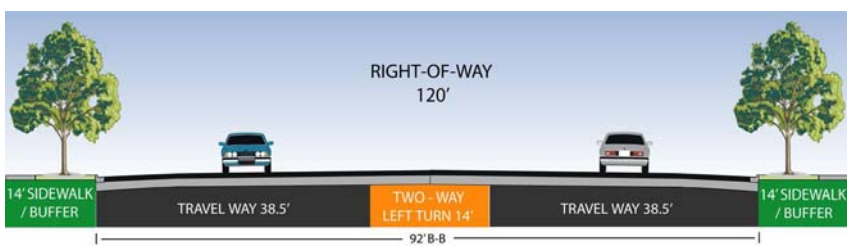
This is a summary of the design data for streets contained within the Master Thoroughfare Plan. For a complete copy of the City of Burleson Master Thoroughfare Plan, contact the Department of Planning and Engineering Services or Visit the City's website, www.burlesontx.com. For traffic study requirements, construction requirements and design requirements, see Section 5 of the Subdivision and Development Ordinance and Sections 3.7, 4.5 and 5.5 of the Design Standards Manual.

Street Type	Classification Code	Lane Configuration	Right-of-Way Width	Design Speed
Principal Arterial	P7U/P6D	7-Lane Undivided 6-Lane Divided	120’	50 mph
Minor Arterial	P5U/P4D	5-Lane Undivided 4-Lane Divided	90’	50 mph
Major Collector	C4U	4-Lane Undivided	70’	45 mph
Minor Collector	C3U	3-Lane Undivided	60’	35 mph
Local	L2U	2-Lane Undivided	50’ (Conventional) 80’ (Rural)	35 mph

PRINCIPAL ARTERIAL

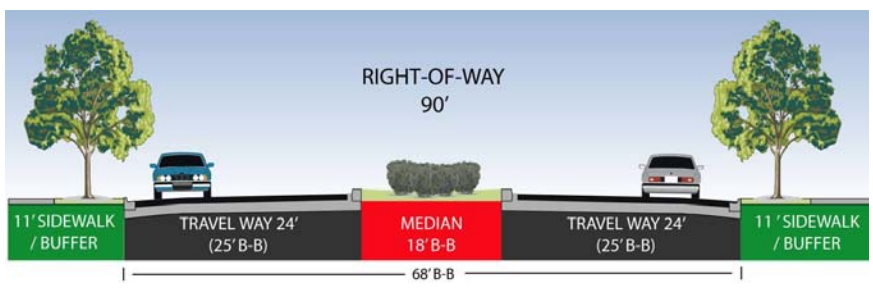


PRINCIPAL ARTERIAL (CONVENTIONAL)



PRINCIPAL ARTERIAL (TWLTL) – For state highways only.

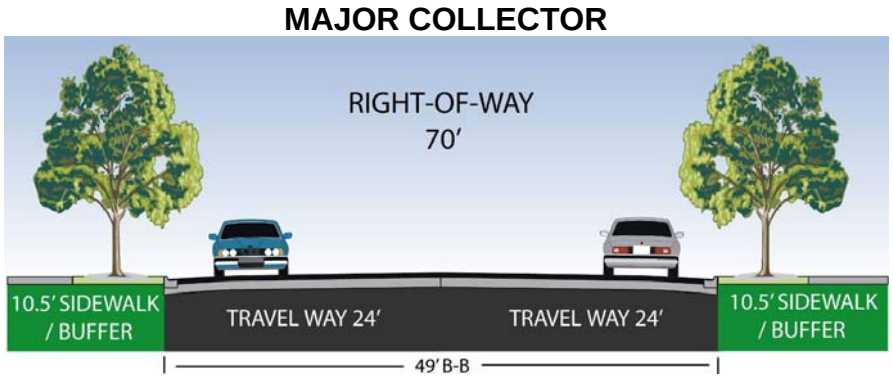
MINOR ARTERIAL



MINOR ARTERIAL (CONVENTIONAL)

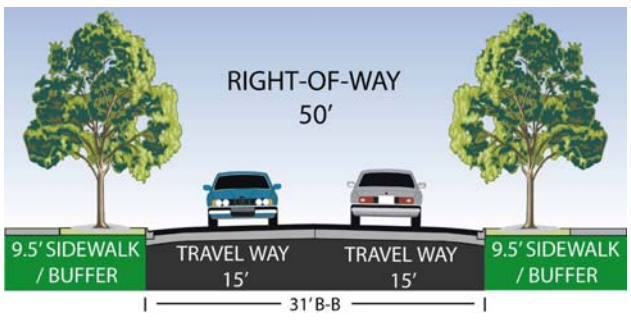
MINOR ARTERIAL (TWLTL)

MAJOR COLLECTOR



MINOR COLLECTOR

LOCAL STREET



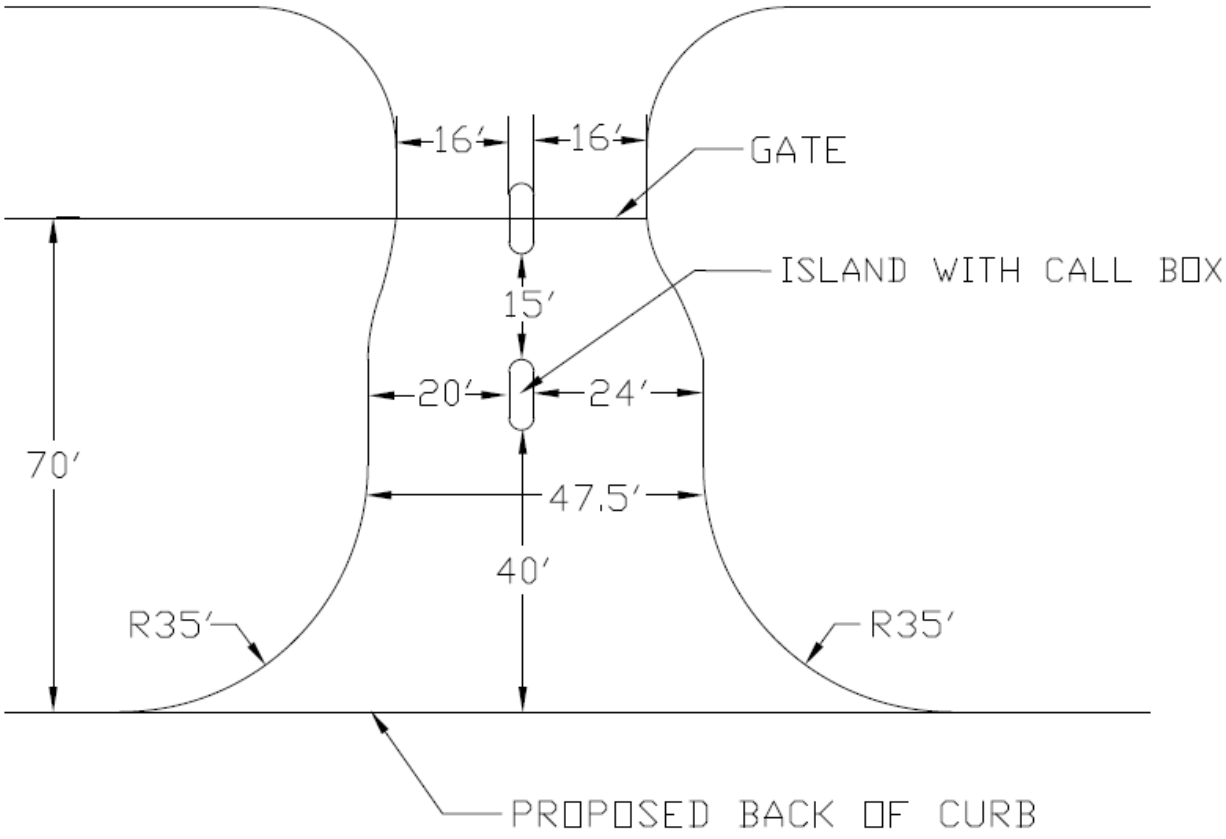
LOCAL STREET (CONVENTIONAL)

LOCAL STREET (RURAL)

APPENDIX E

GATED ENTRY LAYOUTS

E-1 Typical Residential Gated Entry Design
E-2 Gated Entry for High Volume/High Speed Entry Way
E-3 Circular Gated Entry
E-4 Typical Multi-family Gated Entry Design



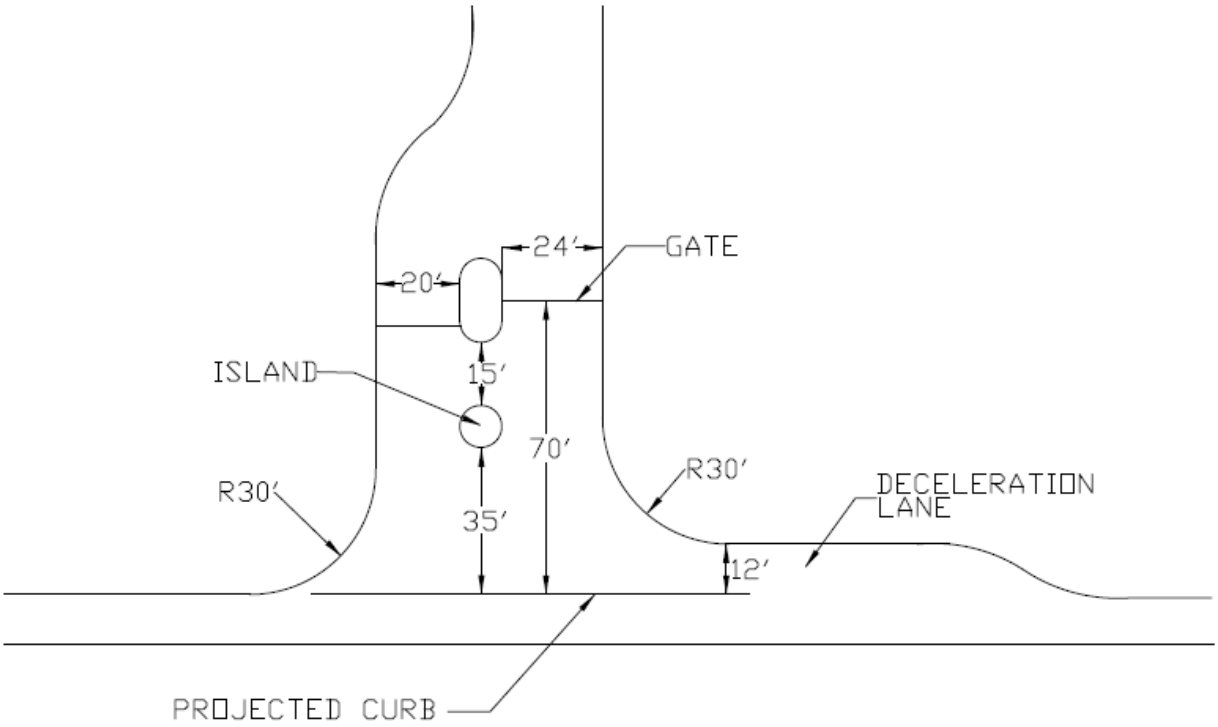
NOTES:

All dimensions are minimums.

Distance between back of curb and gate may vary depending on traffic generated by the site.

All dimensions are back of curb.

E-1	TYPICAL RESIDENTIAL GATED ENTRY DESIGN	
CITY OF BURLESON		
ORIGINAL	2/8/08	SWC
REVISION		
REVISION		
REVISION		



NOTES:

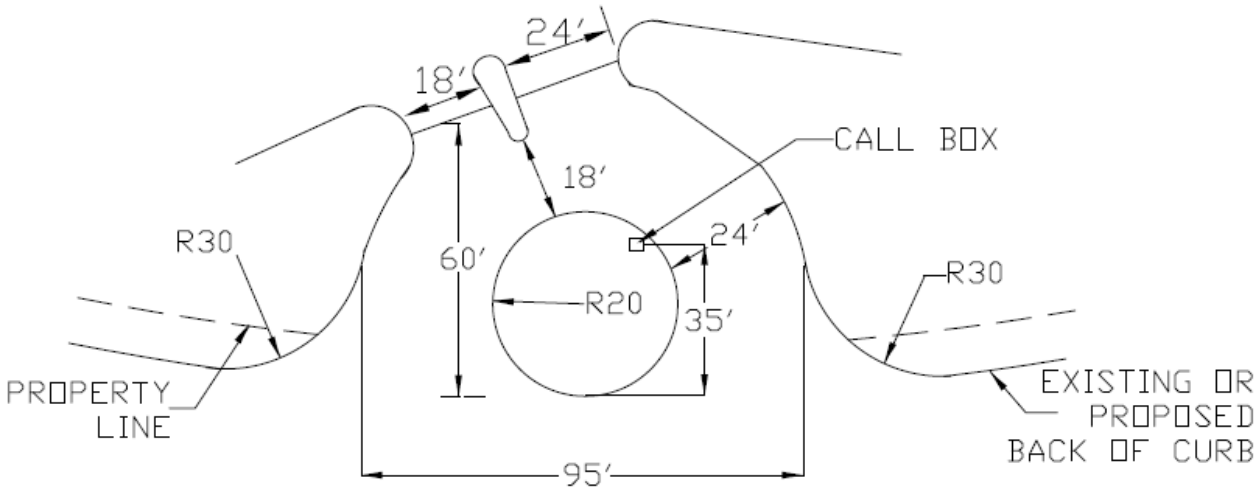
All dimensions are minimums.

Distance between back of curb and gate may vary depending on traffic generated by the site.

All dimensions are back of curb.

Deceleration Lane length varies based on traffic generation (Minimum storage length = 75 feet).

E-2	HIGH VOLUME/HIGH SPEED GATED ENTRY DESIGN	
CITY OF BURLESON		
ORIGINAL	3/24/08	SWC
REVISION		
REVISION		
REVISION		



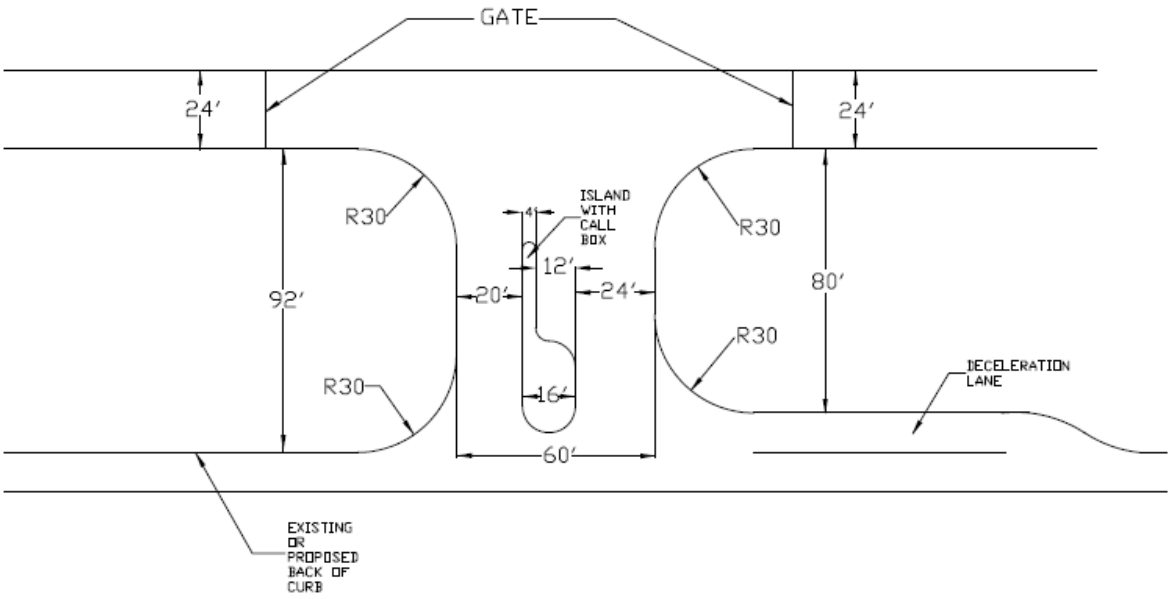
NOTES:

All dimensions are minimums.

Distance between back of curb and gate may vary depending on traffic generated by the site.

All dimensions are back of curb.

E-3	CIRCULAR GATED ENTRY DESIGN	
CITY OF BURLESON		
ORIGINAL	3/25/08	SWC
REVISION		
REVISION		
REVISION		



NOTES:

All dimensions are minimums.

Distance between back of curb and gate may vary depending on traffic generated by the site.

All dimensions are back of curb.

Deceleration lane length may vary depending on traffic generated by site.

E-4	MULTI-FAMILY GATED ENTRY DESIGN	
CITY OF BURLESON		
ORIGINAL	3/27/08	SWC
REVISION		
REVISION		
REVISION		

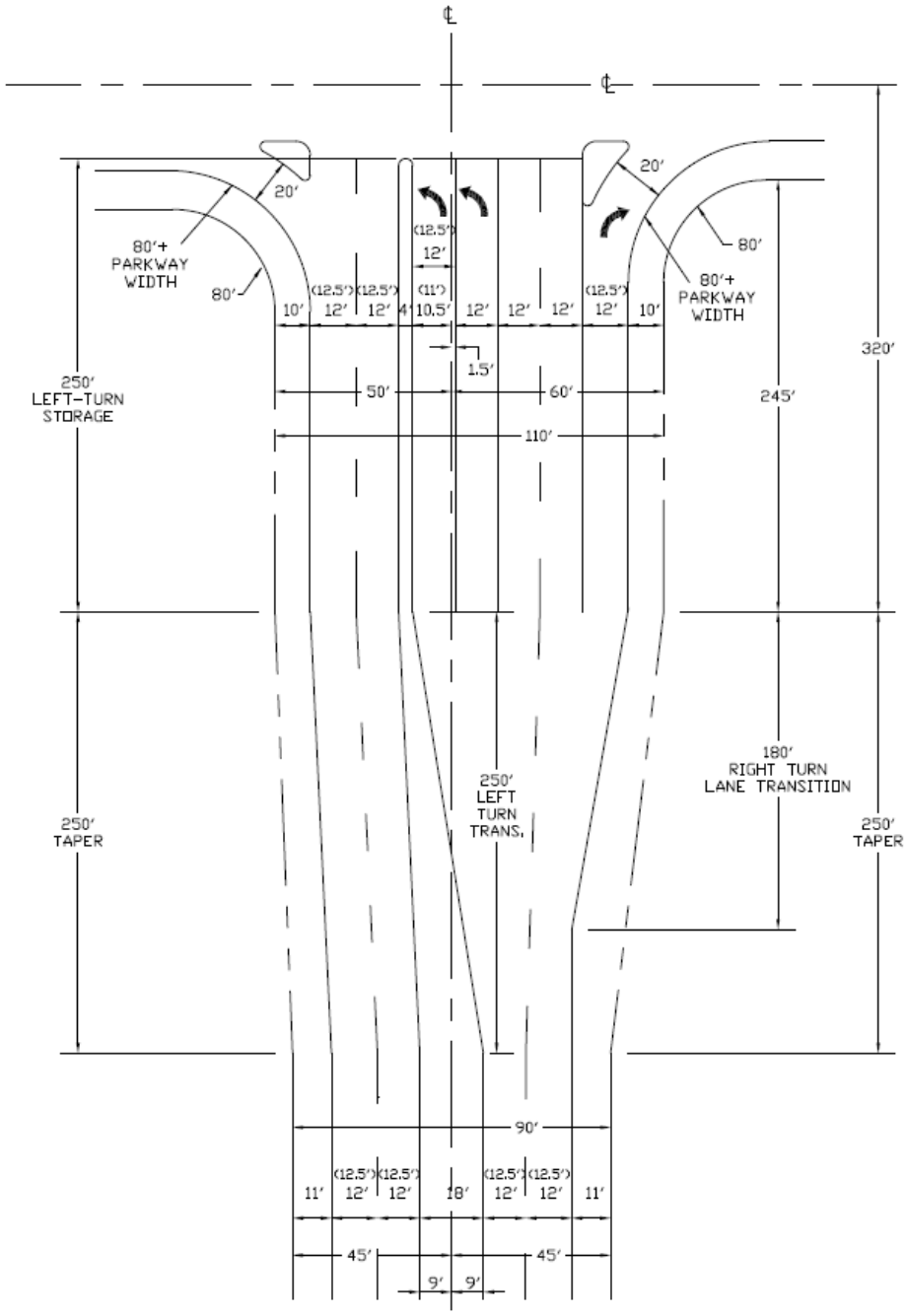
APPENDIX F

INTERSECTION GEOMETRIC LAYOUTS

F-1 4D Intersecting with 6D or 7U
F-2 4D Intersecting with 5U, 4D, or 4U
F-3 6D Intersecting with 7U, 6D, or 4D
F-4 6D Intersecting with 4U
F-5 7U Intersecting with 4U
F-6 Typical Island Detail

4 LANE DIVIDED APPROACH

INTERSECTING WITH 6D, 7U

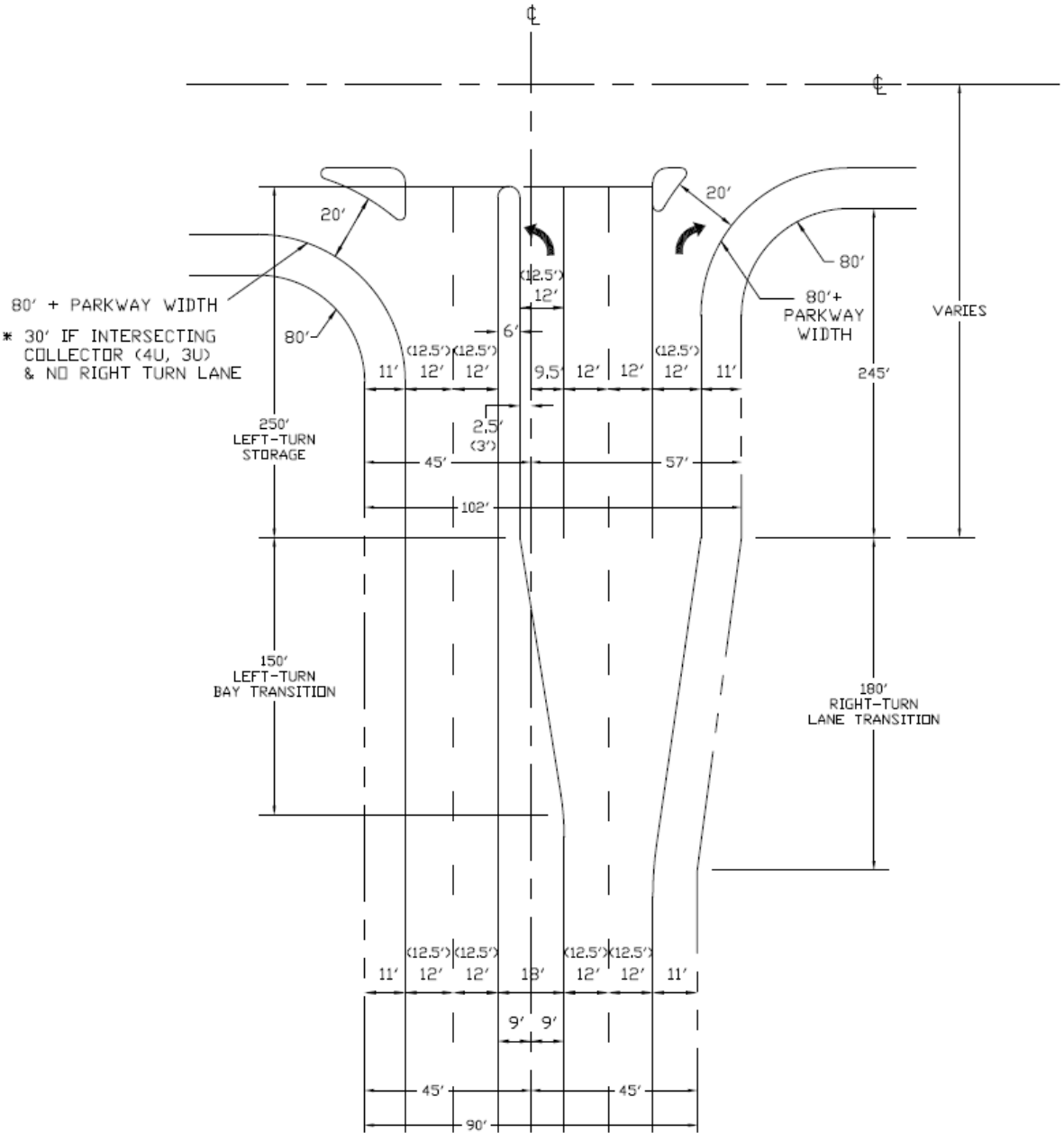


* Lane widths in parentheses () are back of curb dimensions
* All transitions shall be designed using reverse curves
* Parkway dimension may vary at intersection flare
* Islands should be placed 2′-3′ from outside edge of through lane traffic

N.T.S.

4 LANE DIVIDED APPROACH

INTERSECTING WITH 5U, 4D, 4U

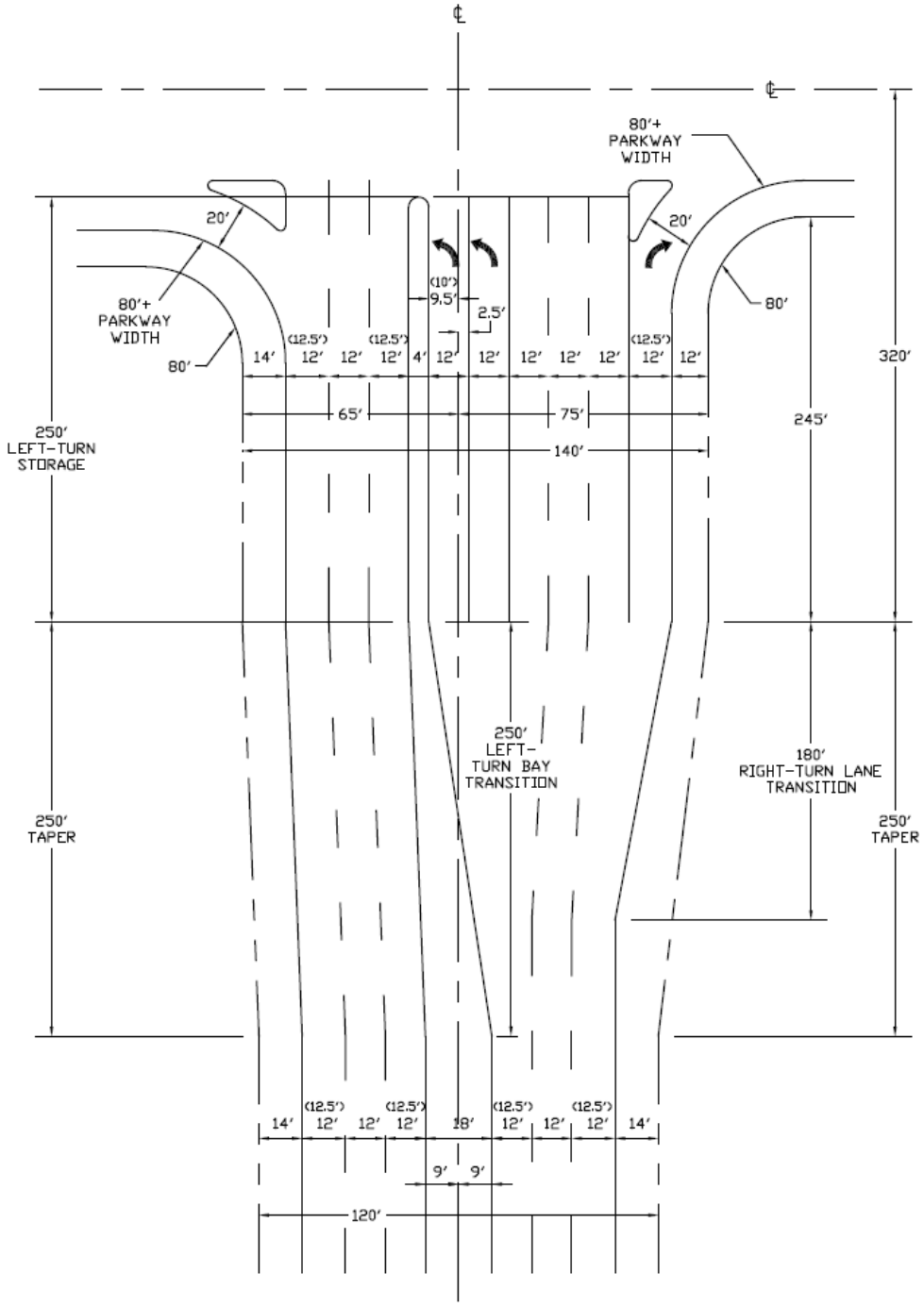


* Lane widths in parentheses () are back of curb dimensions
* All transitions shall be designed using reverse curves
* Parkway dimension may vary at intersection flare
* Islands should be placed 2′-3′ from outside edge of through lane traffic

N.T.S.

6 LANE DIVIDED APPROACH

INTERSECTING WITH 7U, 6D, 4D

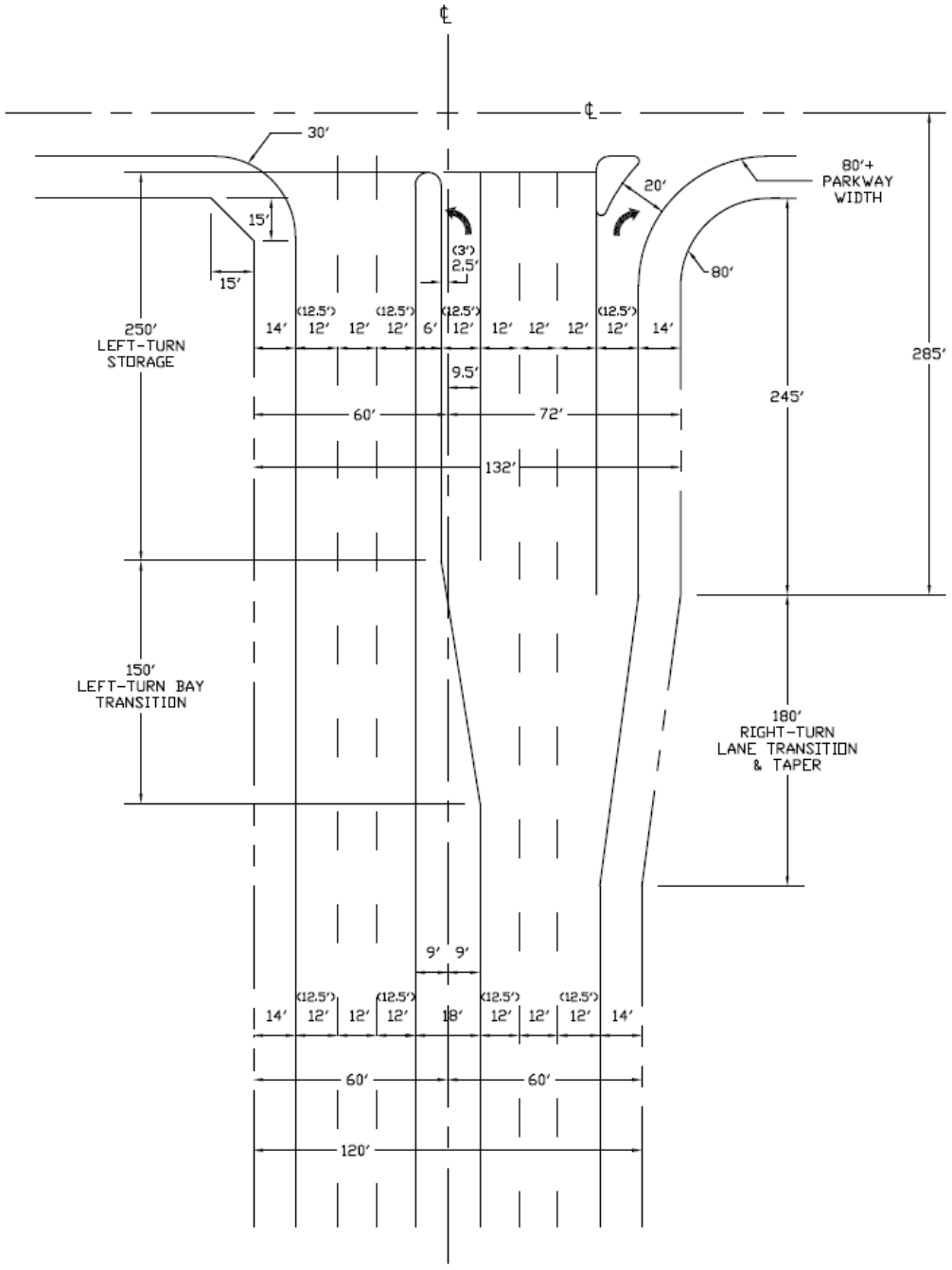


* Lane widths in parentheses () are back of curb dimensions
* All transitions shall be designed using reverse curves
* Parkway dimension may vary at intersection flare
* Islands should be placed 2'-3' from outside edge of through lane traffic

N.T.S.

6 LANE DIVIDED APPROACH

INTERSECTING WITH 4U

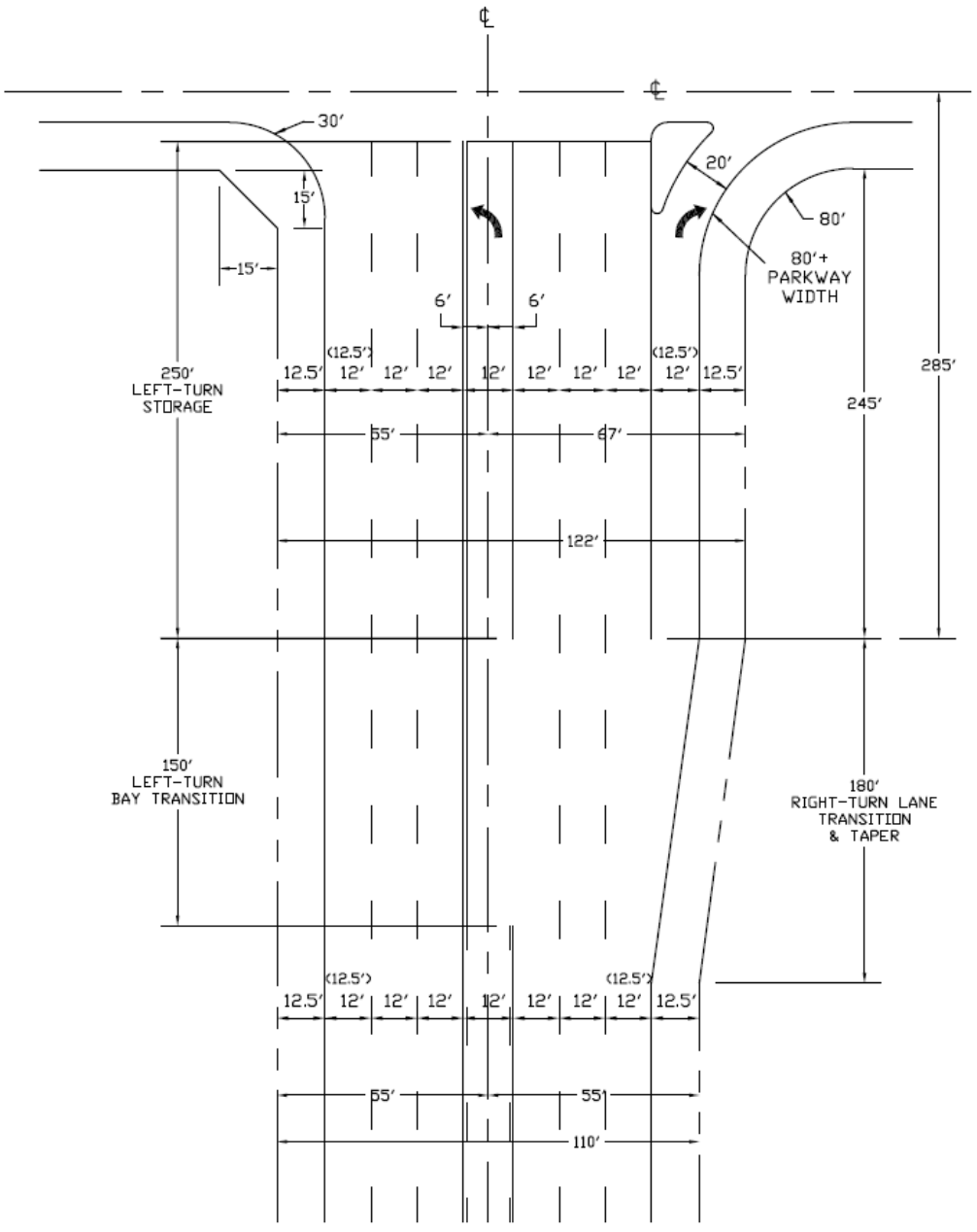


* Lane widths in parentheses () are back of curb dimensions
* All transitions shall be designed using reverse curves
* Parkway dimension may vary at intersection flare
* Islands should be placed 2′-3′ from outside edge of through lane traffic

N.T.S.

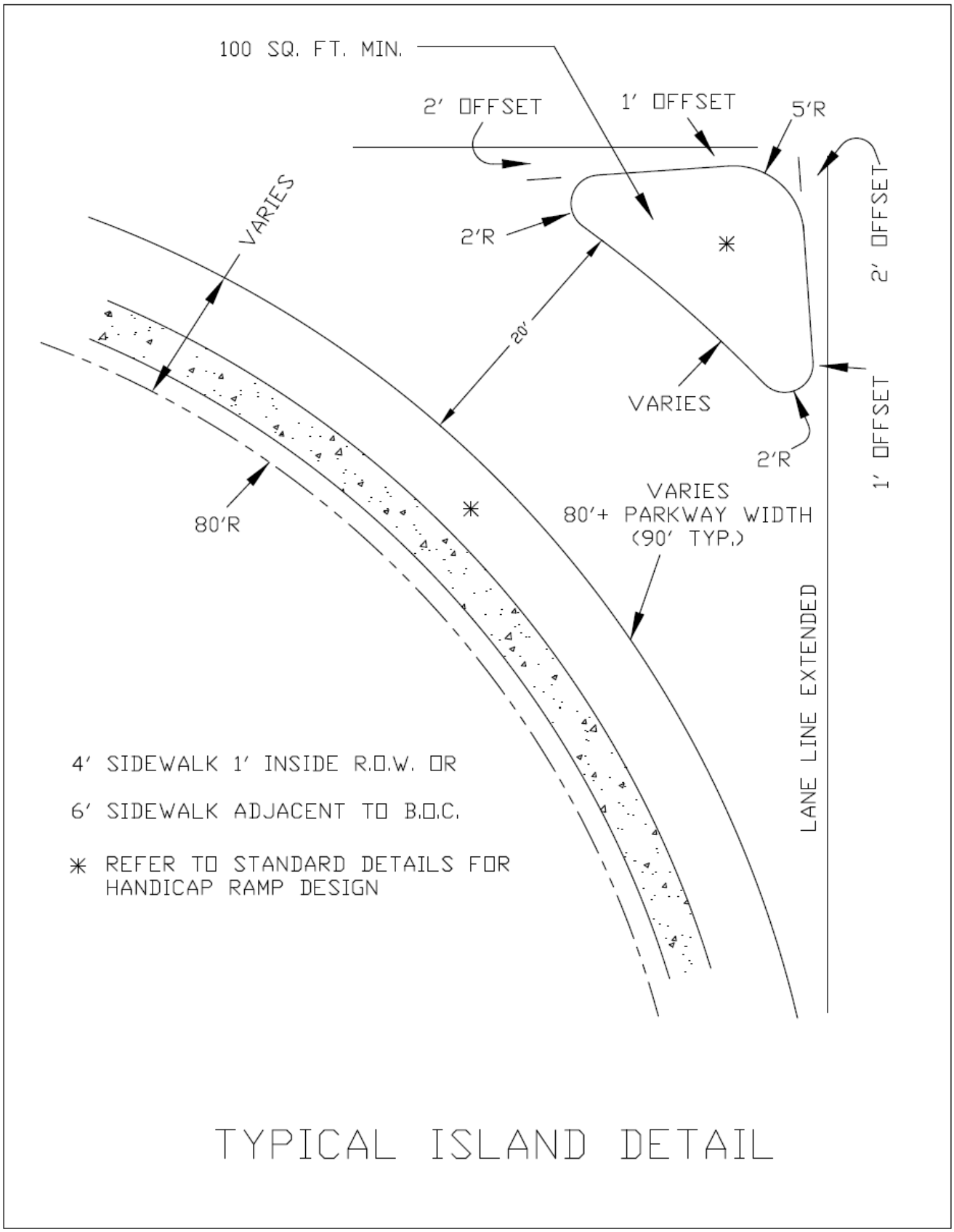
7 LANE UNDIVIDED APPROACH

INTERSECTING WITH 4U



* Lane widths in parentheses () are back of curb dimensions
* All transitions shall be designed using reverse curves
* Parkway dimension may vary at intersection flare
* Islands should be placed 2′-3′ from outside edge of through lane traffic

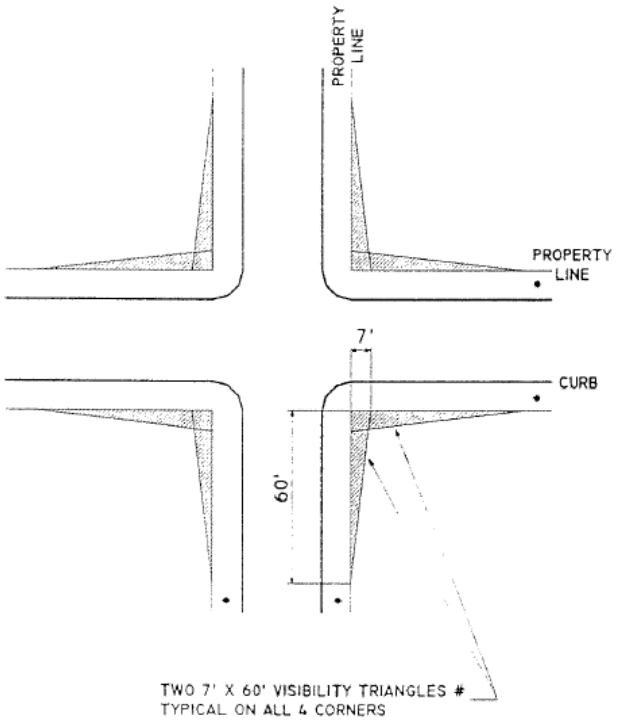
N.T.S.



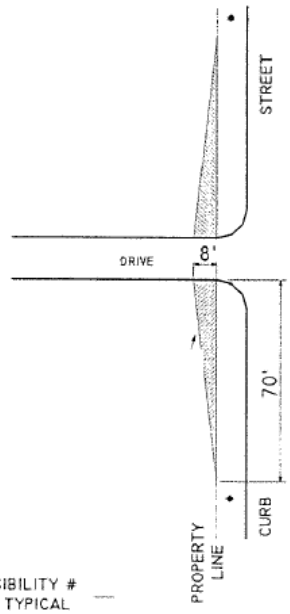
TYPICAL ISLAND DETAIL

APPENDIX G

SIGHT DISTANCE CRITERIA



DRIVEWAY AT ANY PUBLIC STREET

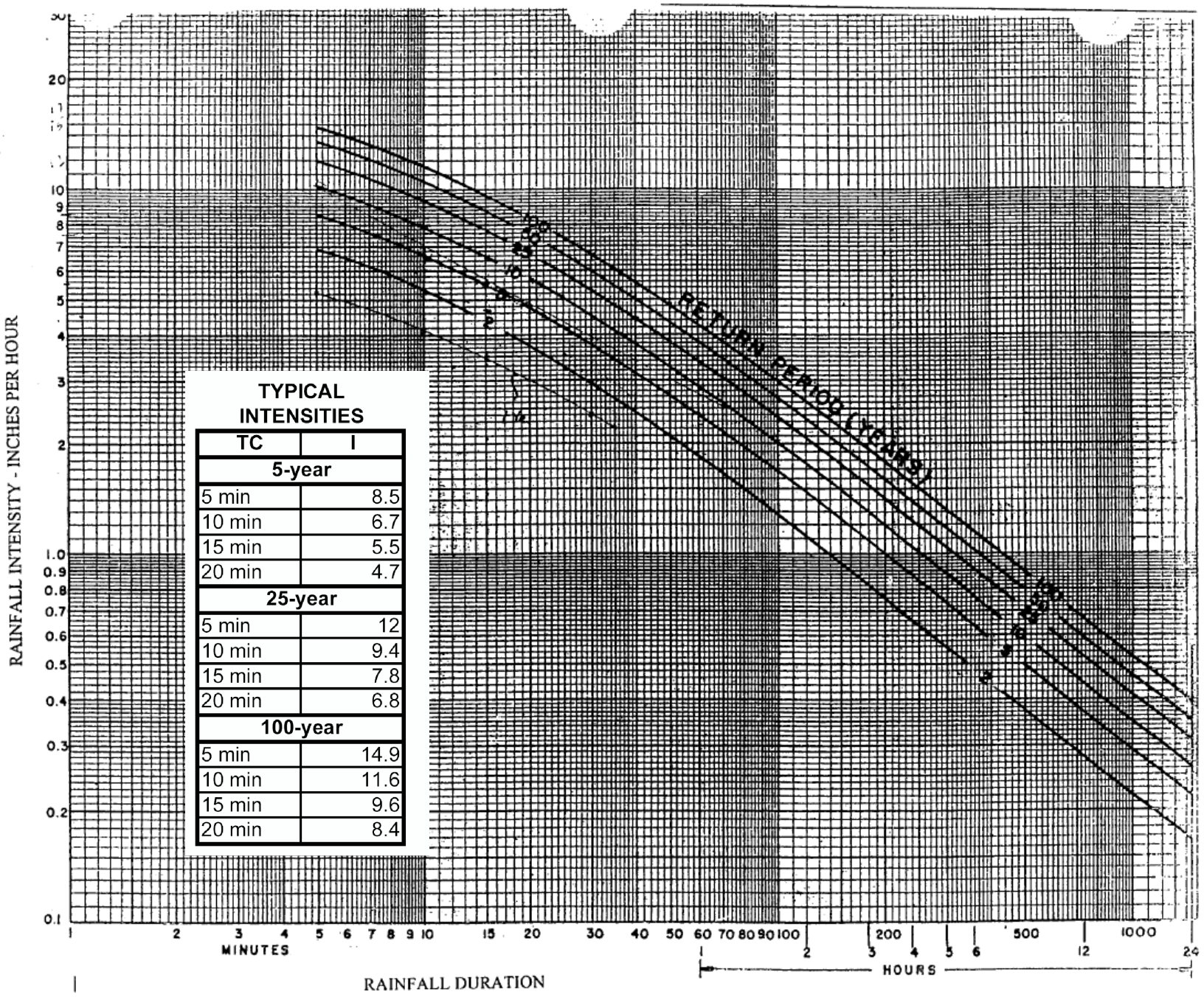


* – VARIABLE DISTANCE. THIS DISTANCE IS DEPENDENT UPON HORIZONTAL AND VERTICAL CURVATURE OF THE STREET AND SHALL BE CALCULATED IN ACCORDANCE WITH THE LATEST EDITION OF THE AASHTO HANDBOOK.

– NOTHING OVER 2' IN HEIGHT, AS MEASURED FROM THE TOP OF THE CURB, IS ALLOWED WITHIN THESE VISIBILITY TRIANGLES.

APPENDIX H

TECHNICAL PAPER 40
(IDF CURVE)

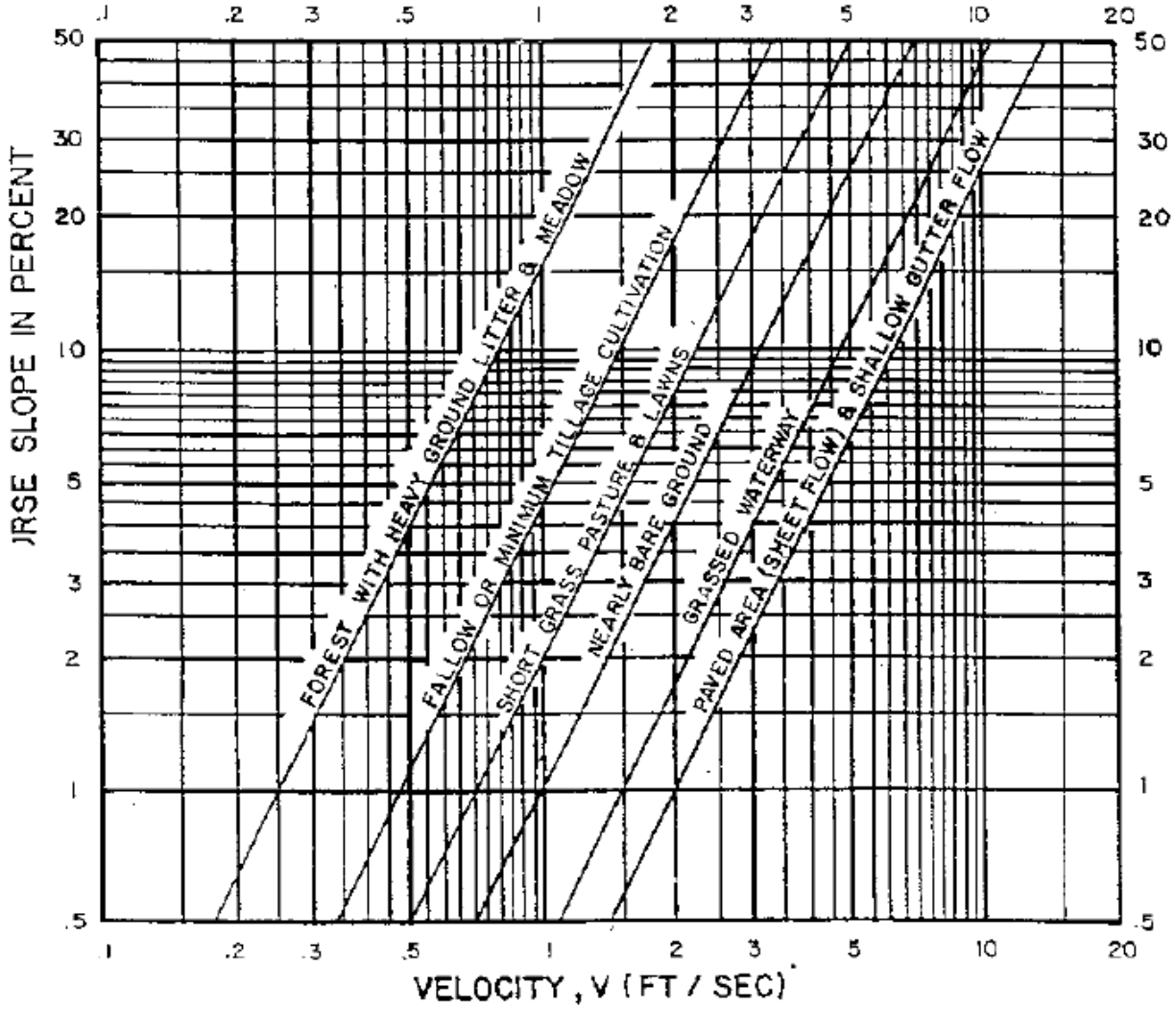


TYPICAL INTENSITIES

TC	I
5-year	
5 min	8.5
10 min	6.7
15 min	5.5
20 min	4.7
25-year	
5 min	12
10 min	9.4
15 min	7.8
20 min	6.8
100-year	
5 min	14.9
10 min	11.6
15 min	9.6
20 min	8.4

APPENDIX I

FLOW VELOCITY


JRSE SLOPE IN PERCENT
VELOCITY , V (FT / SEC)
FOREST WITH HEAVY GROUND LITTER & MEADOW
FALLOW OR MINIMUM TILLAGE CULTIVATION
SHORT GRASS PASTURE & LAWNS
NEARLY BARE GROUND
GRASSED WATERWAY
PAVED AREA (SHEET FLOW) & SHALLOW GUTTER FLOW

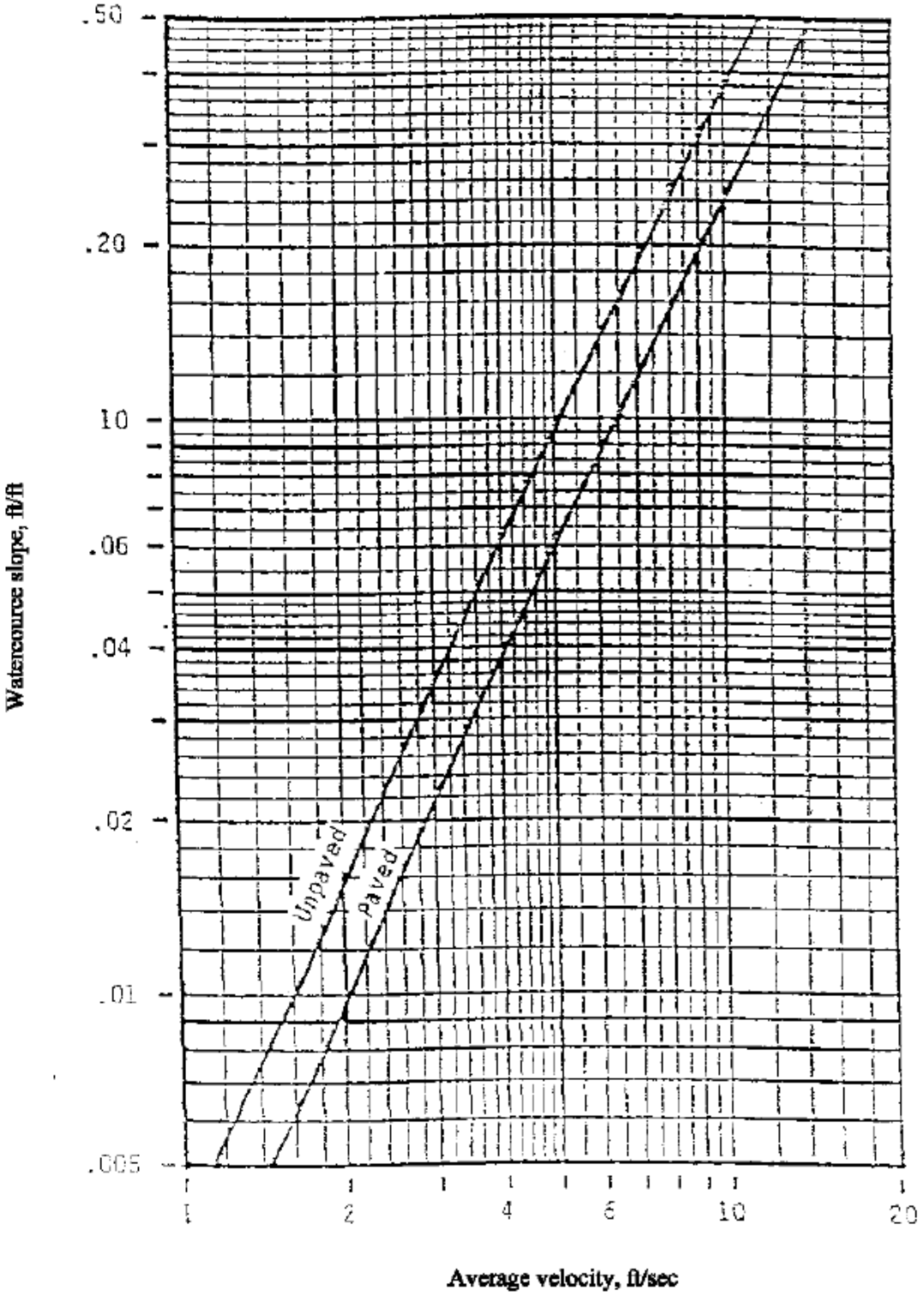
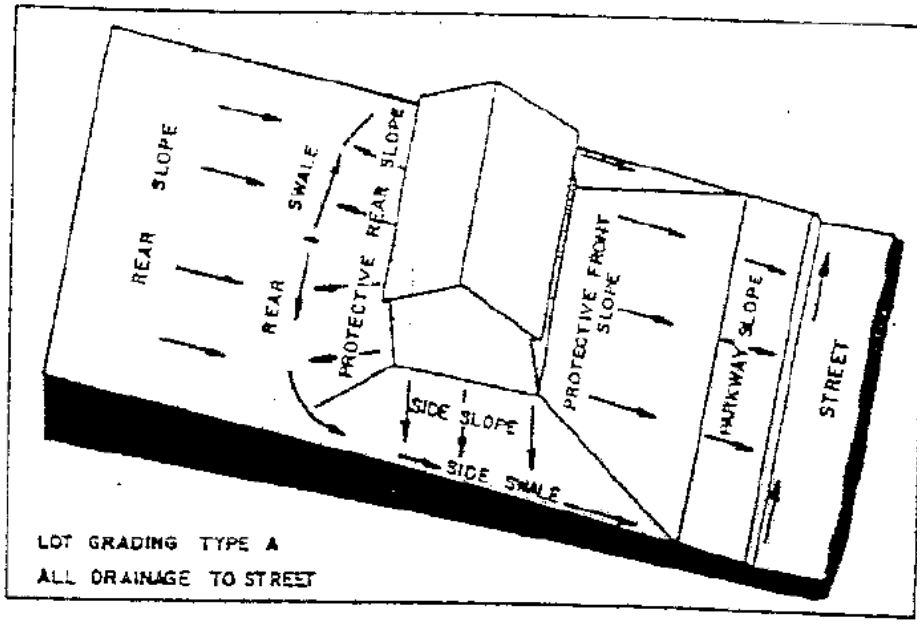


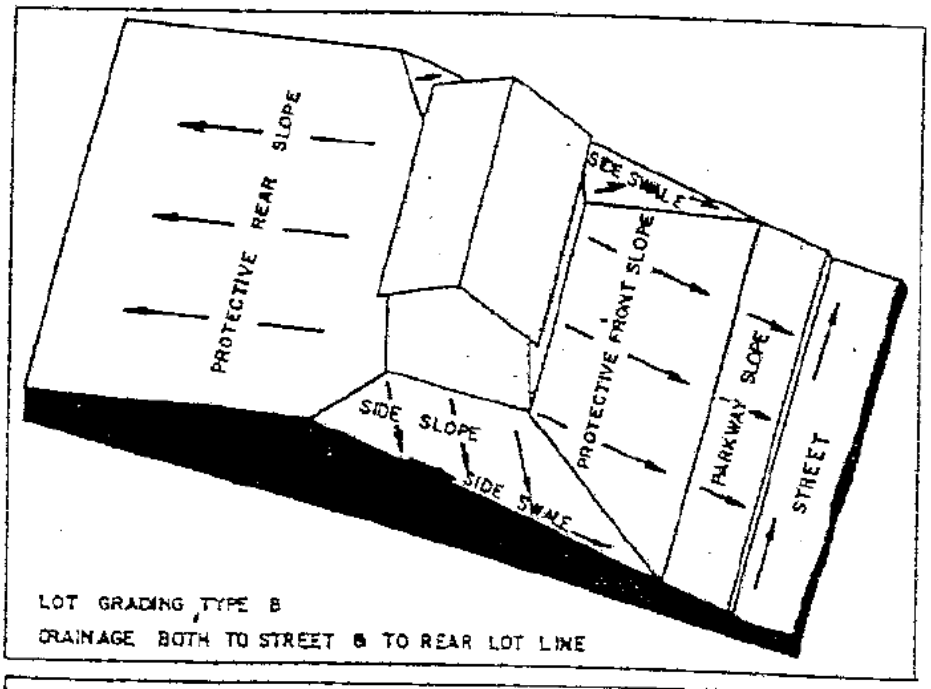
Figure 3-1.-Average velocities for estimating travel time for shallow concentrated flow.

APPENDIX J

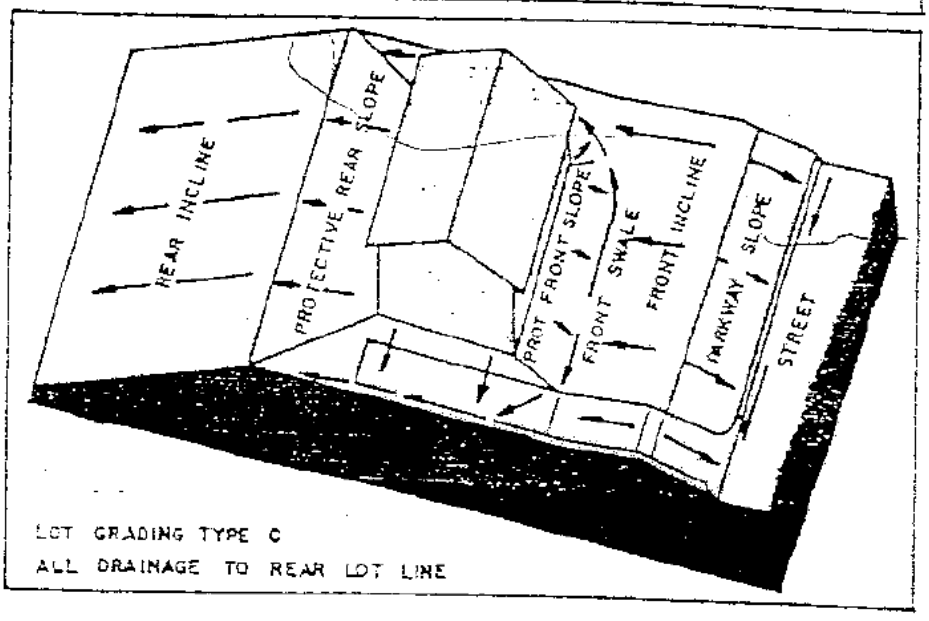
HUD FIGURES



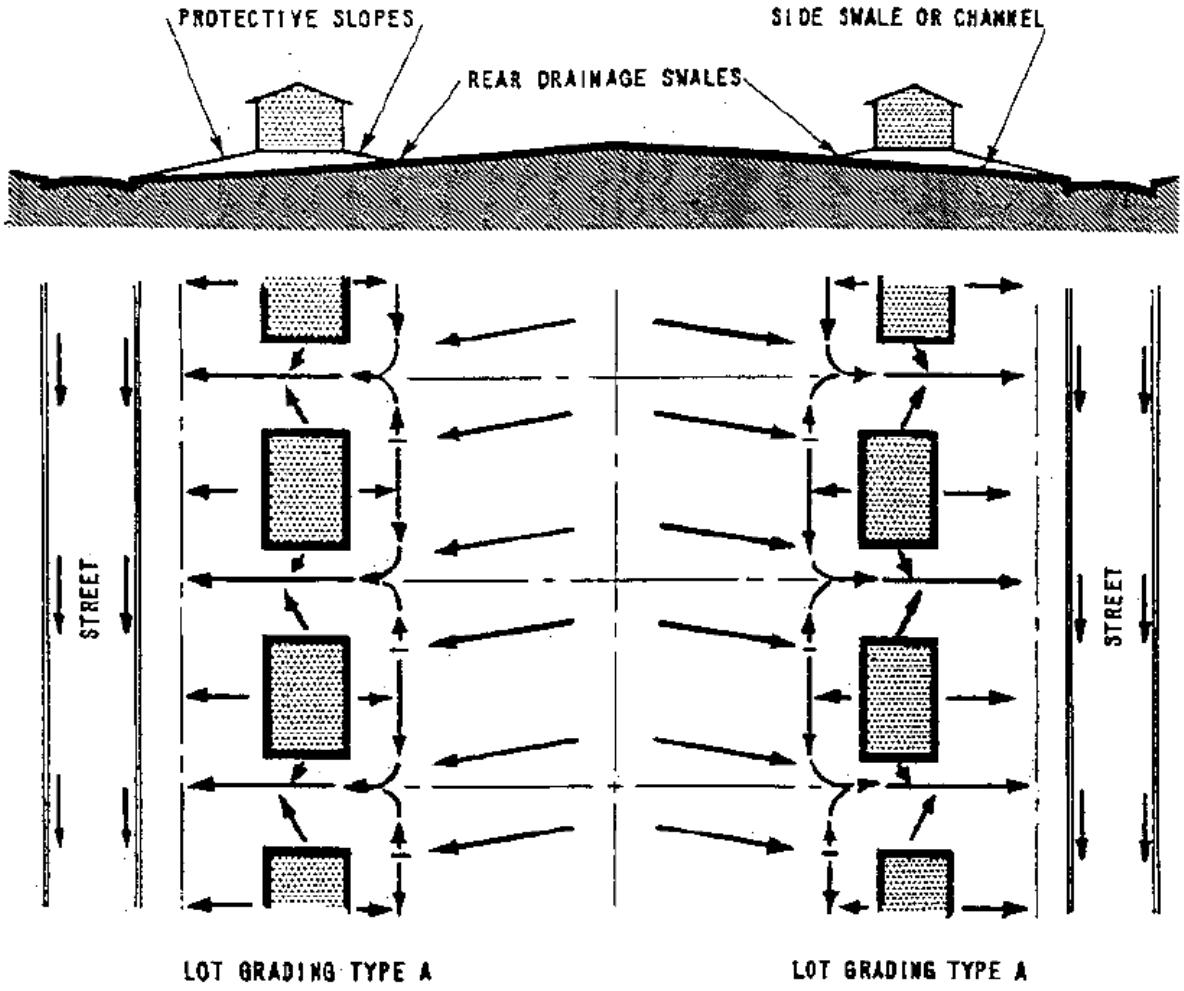
LOT GRADING TYPE A
ALL DRAINAGE TO STREET



LOT GRADING TYPE B
DRAINAGE BOTH TO STREET & TO REAR LOT LINE



LOT GRADING TYPE C
ALL DRAINAGE TO REAR LOT LINE



BLOCK GRADING TYPE 1: RIDGE ALONG REAR LOT LINES

BLOCK GRADING TYPES

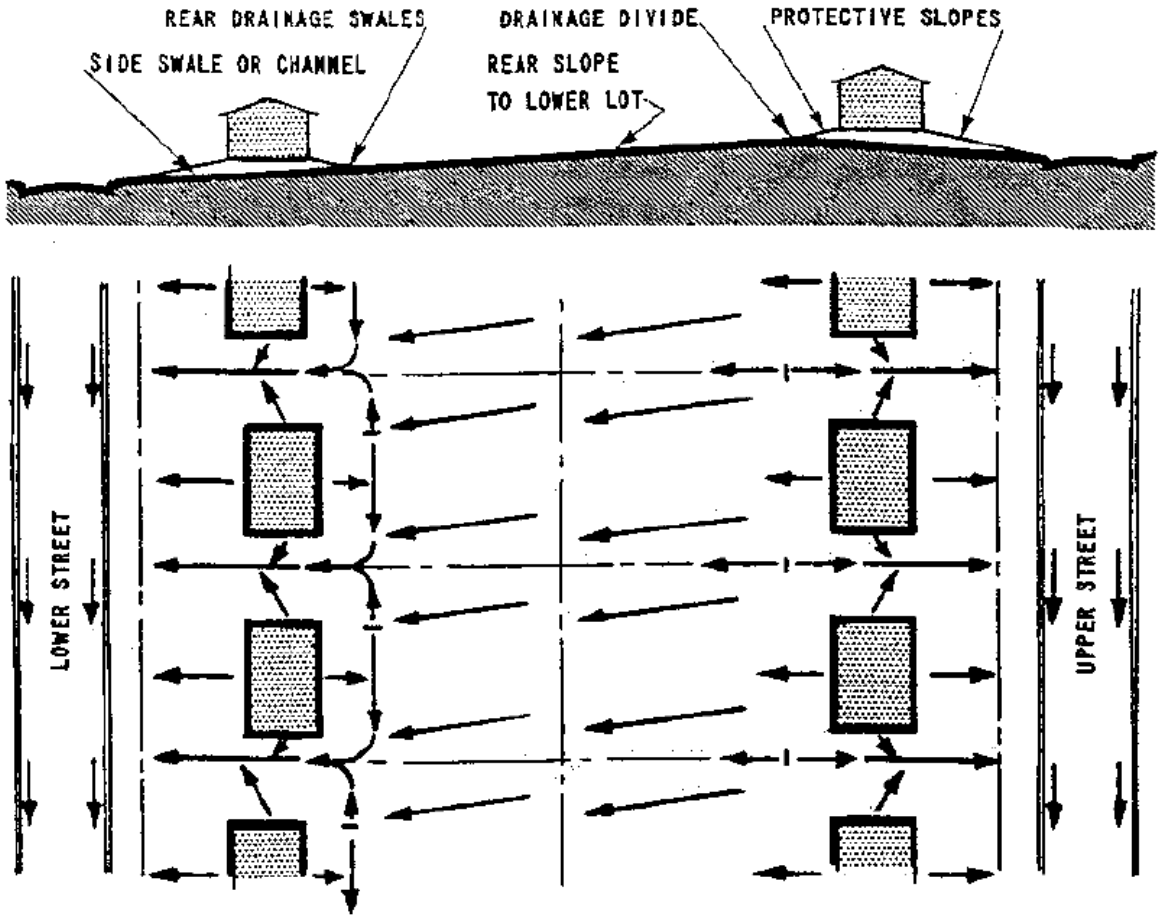
Block Grading Type 1 has a ridge along rear lot lines and each lot is graded to drain surface water directly to the street independent of other properties. It is the most simple and desirable type of block grading. Topography, however, will often require other block grading types.

Block Grading Type 2 for a gentle cross-slope involves drainage of some surface water from lots of the high side of the block across the lower tier of lots. Difficulties are not encountered, however, if slopes are gentle and if the water always drains over short routes to the streets and does not concentrate or accumulate in volume at any point inside the block.

Block Grading Type 3 for steep cross-slopes and Type 4 for a valley along rear lot lines require special provision for block drainage and erosion control.

Erosion is controlled by provision of intercepting drainage swales in easements at the top of the rear lot incline or at intermediate locations along it, and by treatment of the steep slope itself.

Drainage easements in Block Types 3 and 4 must have alignment, width and improvements appropriate for the expected use and maintenance. Assurance of permanent and adequate outfall is essential. The easements must be permanently



BLOCK GRADING TYPE 2: GENTLE CROSS-SLOPE

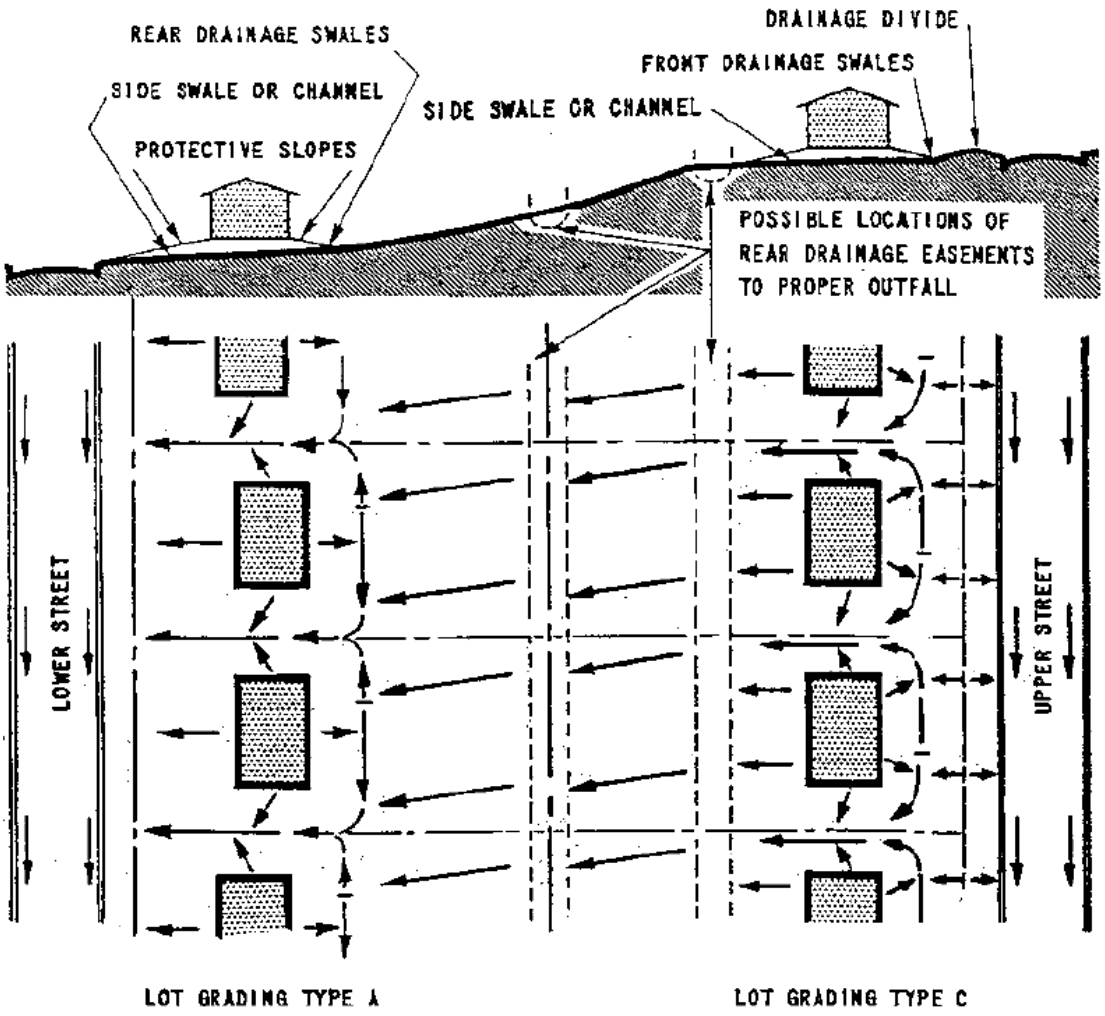
For Lot Grading Type B which drains both to the street and to the rear lot line, only side-yard swales are needed. They should extend back of the line of the rear building wall; then splash blocks from rear roof downspouts should be placed to direct roof water to the side swales for drainage directly to the abutting street. Thus the amount of water carried on the rear slope to easements or other properties is kept as small as possible. This reduces erosion and disposal problems.

In Lot Grading Type C draining entirely to the rear lot line, front swales are essential to carry surface water from the front yard to side-yard swales which carry it to the rear for disposal in easements or across other properties. Proper cross-section of the street gutter, curb and parkway strip are essential to stop street water from flowing onto the lot.

Easements and erosion involving Lot Types B and C are discussed above with Block Grading Types 3 and 4.

For lots with steep cross-slopes due to street gradients, similar lot grading types are used, the lot cross-slopes being taken up by walls or steep slopes along side lot lines or by changing grade levels along the front and rear house walls.

Where high slopes occur along side or rear lot

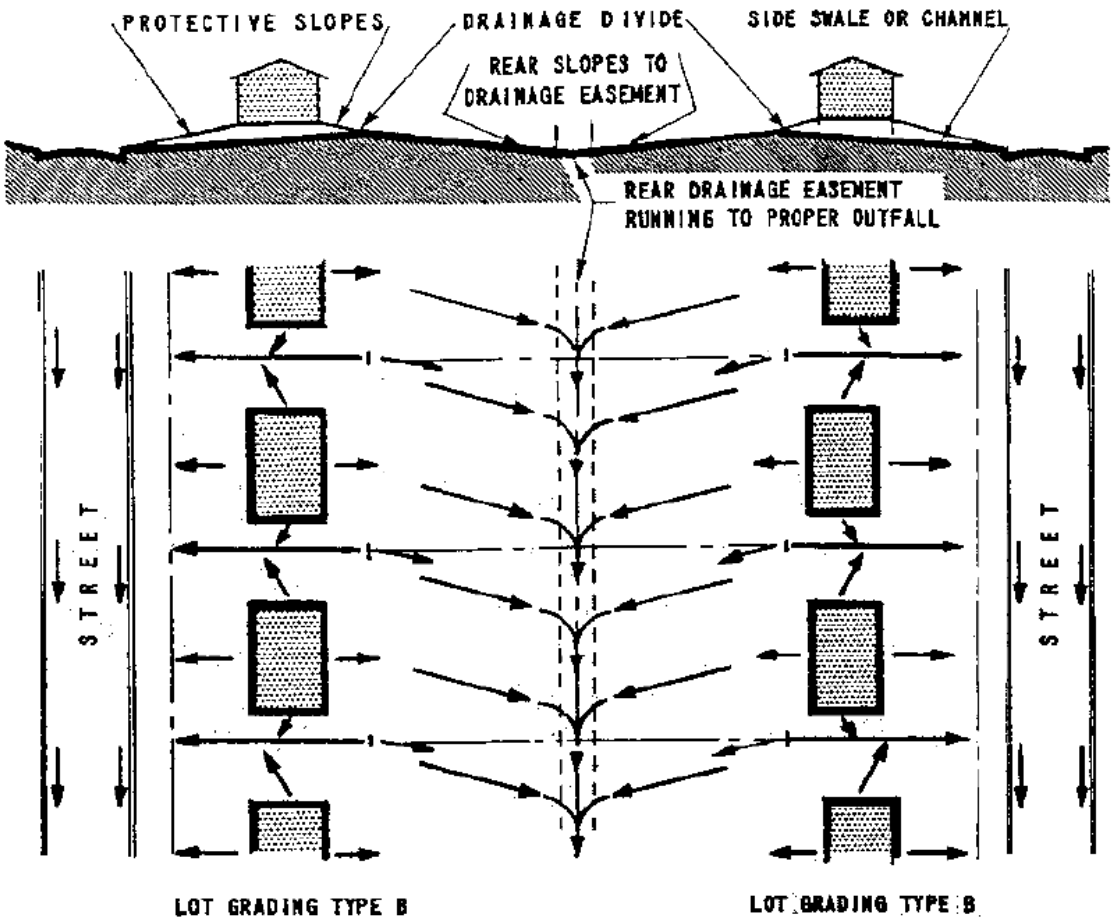


BLOCK GRADING TYPE 3: STEEP CROSS-SLOPE

point along the house wall where the outside finish grade controls the floor elevation. In the case of no street curbs, the starting point and elevation should be the normal curb location and the street center-line elevation.

The minimum street-to-floor rise for any lot is found by adding and subtracting the required rises and permitted falls along the lot grading control line for the property. The method is illustrated by the sample computation accompanying each of the three lot grading diagrams. For actual building operations, the relationship should be figured out specifically for each lot or group of typical lots because such factors as building setback, building depth, lot width and swale gradient may change the relationship considerably.

Minimum gradients for grass swales and other unpaved areas depend upon practical limits on precision in grading and maintaining land surfaces and upon the capacity of the ground to percolate water held back by surface texture and depressions. A gradient of 1/4 inch-per-foot (2%) is a practical minimum in areas subject to ground frost. Flatter gradients are usable, however, where the supplementary ground percolation at all seasons is adequate to prevent any prolonged saturation of soil or standing water. For example, 1/8 inch per foot (1%) is satisfactory on



BLOCK GRADING TYPE 4: VALLEY ALONG REAR LOT LINES

ADJUSTMENTS TO EACH PROPERTY

After the minimum lot grading control line and minimum street-to-floor rise have been determined, they should be adjusted upward as suitable for existing topography and other conditions of each property.

For a house with a basement, check is made of elevations of drains for basement floor and any basement plumbing fixtures. For a house with a crawl space, floor elevation is checked for height of access space and drainage of interior ground (MPS 803-3). For a concrete slab house, floor elevation is checked against excessive depth of fill under the slab (MPS 808-4).

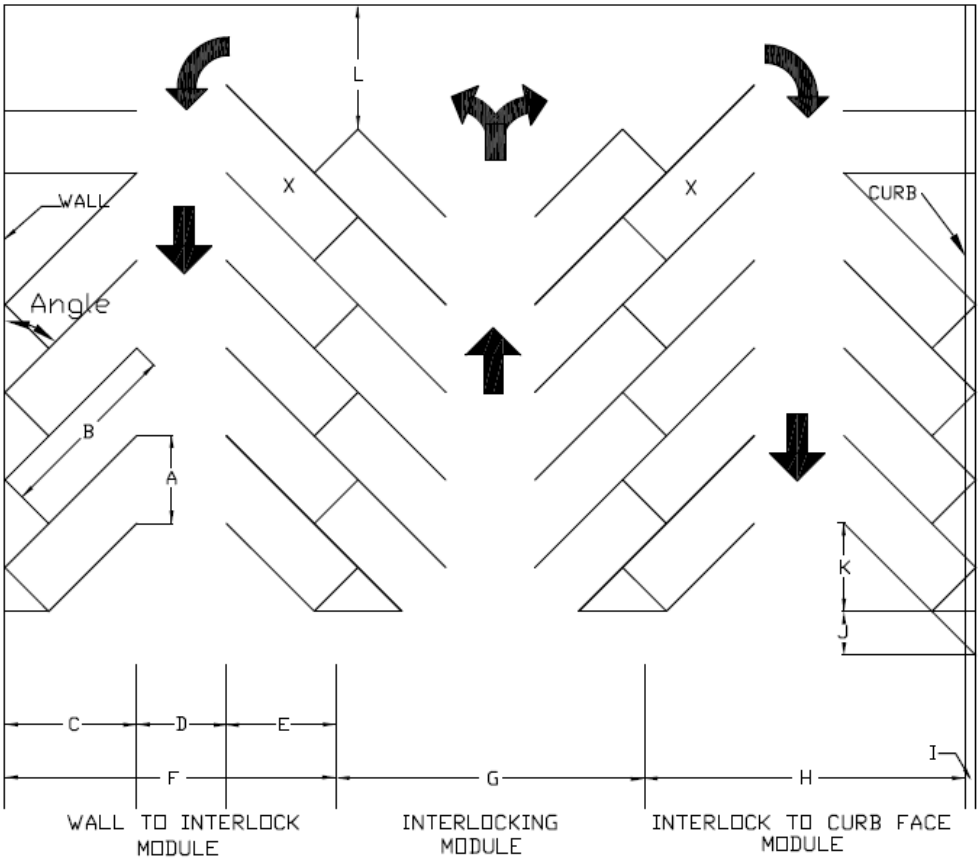
Then general lot grading is checked for feasibility and suitability. Proposed grades at any necessary additional key points are determined, and all grades are further adjusted as needed. These additional points and adjustments cover such items as grades of walk and driveway, variation of outside finish grade along building walls, width and gradients of usable yard areas, and transition to grades of adjoining properties.

After all key elevations have been properly determined by these adjustments in the planning stage, then execution of good grading on the ground is relatively easy. Care must be taken primarily to set grade stakes correctly at key points and to build and grade to them in accordance with the practices outlined in this data sheet and in the FHA Minimum Property Standards.

FHA-WASHINGTON, D. C.

APPENDIX K

PARKING LOT LAYOUT



DIMENSION	Key	0°	30°	45°	60°	75°	90°
		(FT)	(FT)	(FT)	(FT)	(FT)	(FT)
Stall width, parallel to aisle	A	9	18	12.7	10.4	9.3	9
Stall length of line	B	24	33.6	27	23.2	20.4	18
Stall depth to wall	C	9	16.8	19.1	20.1	19.7	18
Aisle width, one-way	D	12	13	13	18	22	24
Aisle width, two-way		24	19	20	22	23	24
Stall depth, interlock	E	9	12.9	15.9	17.9	18.5	18
Module, wall to interlock	F	30	42.7	48	56	60.2	60
Module, interlocking	G	30	38.8	44.7	53.7	59.1	60
Module, interlock to curb face	H	30	41.7	43.2	51.9	57.1	60
Module, curb face to curb face		30	40.7	41.7	50.1	55.1	58
Bumper, overhang (typical)	I	0	1.5	1.5	1.8	2	2
Offset	J		9	6.3	2.7	0.5	0
Setback	K	24	15.6	11	8.3	5	0
Cross aisle, one-way	L	18	18	18	18	18	18
Cross aisle, two-way		24	24	24	24	24	24

X = STALL NOT ACCESSIBLE IN CERTAIN LAYOUTS.

L	PARKING LOT LAYOUT	
CITY OF BURLESON		
ORIGINAL	2/11/08	SWC
REVISION		
REVISION		
REVISION		

APPENDIX L

EASEMENT/RIGHT-OF-WAY USE AGREEMENT

INSTRUCTIONS FOR COMPLETING
EASEMENT & RIGHT-OF-WAY USE AGREEMENT

The forms shall be signed (in black ink only) by a legal partner, corporate officer, or individual owner of the land. An authorized agent of the landowner must submit a Power of Attorney.

PLEASE READ THE FOLLOWING CAREFULLY:

APPLICATION: The application shall be completely filled out, signed and notarized in black ink. Item No. 3 on the application should be checked at the Engineering Services Maproom for existing utilities in the easement.

AGREEMENT: The agreement shall be individually completed, signed and notarized in black ink. Do not submit copies of signatures and notary acknowledgments. In the blanks of the heading paragraph, please describe specifically the intended use of the easement or right-of-way.

EXHIBIT NO. 1: This instrument shall be a very precise metes and bounds description of the part of an easement or right-of-way to be used. This information is best provided by a registered land surveyor. The City staff is not authorized to prepare this information.

EXHIBIT NO. 2: Please place all of the information required in the heading of this exhibit on the 8½" x 11" attached sheet of paper. You may submit additional 8½" x 11" sheets as necessary. (NOTE: Carefully line, dimension, and provide the appropriate courses about area of easement described in Exhibit No. 1 on this exhibit.) Please limit the area of usage of the easement/right-of-way to only that needed to accommodate your needs. You may reduce large plans or plat, providing the final document is legible. City staff will make the decision about legibility.

EXHIBIT NO. 3: Please provide a detail and/or cross-section of the private facilities to be placed in the right-of-way/easement.

EXHIBIT NO. 4: This will need to be signed by all utilities that serve the area regardless of whether they have utility equipment in the easement. This will need to be done before submitting to the City of Burleson.

NOTES:

1. You or your surveyor may contact Engineering Services, 817-426-9833 for more information about these forms.
2. After this agreement is filled out, you will need to return it to Public Works.
3. Please allow approximately 2 to 3 weeks for review of the agreement.
4. The applicant will be notified by letter at such time as a decision is made.
5. The filing fee shall be paid by the applicant prior to filing with the County.

APPLICATION

Application for the Use of a Portion of Right-of-Way/Easement in the _____ Addition to the City of Burleson, Texas.
Street Address:_____(if applicable)

DATE:_____

The undersigned hereby makes application for the joint use of that portion of the public utility easement/drainage easement/right-of-way situated in the above named addition, and particularly described in Exhibit No. 1 of the attached agreement. In support of this application, the undersigned represent and warrant the following:

1. The undersigned will hold the City of Burleson harmless, and indemnify it against all suits, costs, expenses, and damages that may arise or grow out of my use of the easement/right-of-way.

2. The reason for the use of the easement/right-of-way is as follows:
   _____
   _____

3. Such public utility easement/drainage easement/right-of-way has been and is being used as follows:
   _____
   _____

I respectfully request your favorable consideration of this application for joint use of the easement/right-of-way described and will authorize the execution of the attached agreement.

Printed Name: _____

Signed: _____

Name: _____

Mailing Address: _____
_____

Telephone Number: _____

Fax Number: _____

THE STATE OF TEXAS §
COUNTY OF _____ §

BEFORE ME, the undersigned authority, on this the _____ day of _____, 2004, personally appeared _____, known to me to be a credible person and one of the signers of the foregoing application, and who, after being by me duly sworn, did upon his/her oath, state that the information contained in such application is true and correct to the best of his/her knowledge and belief.

_____

NOTARY SEAL: Notary Public in and for the State of Texas

My Commission Expires:_____

EXHIBIT NUMBER 1

Being that portion of that certain easement/right-of-way situated in _____ _____ Addition/Survey to the City of Burleson, _____ County, Texas, and being more particularly described by metes and bounds as follows:

NOTE: DO NOT PLACE DRAWING OR GRAHICS ON THIS PAGE.

EXHIBIT NUMBER 2

The following is a detail drawing depicting the area or portion of the easement/right-of-way and property described in Exhibit Number 1, a plat of the utility easement/drainage easement/right-of-way to be subject of the joint use agreement in the above numbered application showing the surrounding area to the nearest streets in all directions, abutting lots, the block or blocks in which the portion of the utility easement/drainage easement/right-of-way sought to be the subject of joint use agreement is situated, and the addition or additions in which the portion of the easement/right-of-way sought to be joint use is situated.

This drawing shall include a north arrow, legal description of the subject property and adjoining properties. The type of easement shall be designated on this drawing.

EXHIBIT NUMBER 3

The following is a detail and/or cross section drawing of the improvement(s) in the easement/right-of-way to be subject of the joint use agreement in the above numbered application.

EXHIBIT NUMBER 4

The undersigned public utility companies, **using or entitled to use** under the terms and provisions of agreements with the City of Burleson, that portion of the public utility easement/drainage easement/utility easement/right-of-way sought to be used in Application for joint use of the utility easement/drainage easement/utility easement/right-of-way, do hereby consent to the joint use of the described portion of such utility easement/drainage easement/utility easement/right-of-way in Lot(s) _____, Block(s)_____ of the _____Addition to the City of Burleson, _____ County, Texas.

Street name:_____

TXU ELECTRIC

By:_____
(Please Print)

Title:_____
(Please Print)

Signature:_____

SBC

By:_____
(Please Print)

Title:_____
(Please Print)

Signature:_____

CHARTER CABLE

By:_____
(Please Print)

Title:_____
(Please Print)

Signature:_____

BETHESDA WATER SUPPLY CORP.

By:_____
(Please Print)

Title:_____
(Please Print)

Signature:_____

JOHNSON COUNTY SPECIAL UTILITY DISTRICT

By:_____
(Please Print)

Title:_____
(Please Print)

Signature:_____

PATHWAY COMMUNICATIONS

By:_____
(Please Print)

Title:_____
(Please Print)

Signature:_____

UNITED COOPERATIVE SERVICES

By:_____
(Please Print)

Title:_____
(Please Print)

Signature: _____

CITY OF BURLESON PUBLIC WORKS

By:_____
(Please Print)

Title:_____
(Please Print)

Signature: _____

ATMOS ENERGY CORP.

By:_____
(Please Print)

Title:_____
(Please Print)

Signature: _____

OTHER

By:_____
(Please Print)

Title:_____
(Please Print)

Signature: _____

UTILITY CONTACT INFORMATION

Oncor Electric Delivery (Electric)
3500 El Campo
Fort Worth, Texas 76107

Terry Sears 817-443-3432
PMDS Utility Designer Sr.
terry.sears@oncor.com

Atmos Energy (Gas)

100 W. Morningside Drive
Fort Worth, Texas 76110

Bob Davison 817-215-4704
bob.davison@atmosenergy.com

AT&T Telephone Company

1116 Houston St.
Room 1410
Fort Worth, Texas 76102

Tommy Ellison (817) 338-5357
Engineering Department
te5574@att.com

Charter Communications

15100 Trinity Blvd., Suite 500
Fort Worth, Texas 76155

Greg Piatt 817-298-3625

Johnson County Special Utility District

2849 Hwy 171 South
P.O. Box 509
Cleburne, TX 76033-0509

Ronnie Nichols 817-558-9522
nicholsr@jcsud.com

Pathway Communications

427 N Broadway St
Joshua, TX 76058-3413

Ricky Allen 817-484-2222
Fax 817-447-0169
ricky@usapathway.com
cc: Robert Strawn
robert@aciglobal.com

Bethesda Water Supply Corporation

P.O. Box 130
509 South Burleson Blvd.
Burleson, TX 76097

Carl Novack 817-295-2131
Fax 817-447-9370

United Cooperative Services

P.O. Box 16
Cleburne, TX 76033

Jason Dillard 817-556-4055
Jason@united-cs.com

City of Burleson

141 W. Renfro
Burleson,TX 76028

Mandy Clark 817-426-9616
Fax 817-426-9363
mclark@burlesontx.com

EASEMENT & RIGHT-OF-WAY USE AGREEMENT

THE STATE OF TEXAS §

COUNTY OF JOHNSON §

That the City of Burleson, hereinafter referred to as "City", and its franchised Utility Companies, herein referred to as "Utilities", do consent and agree to permit _____, herein after referred to as "Applicant", to use an easement/right-of-way dedicated to City. Such easement/right-of-way being described in Exhibit Number 1, to be used for the purposes of _____upon the following conditions:

I.

That Applicant, his successors or assigns shall maintain and keep in sightly condition all of the easement area and the improvements situated thereon; and, that City and Utilities shall not become responsible for such maintenance at any time in the future. Applicant shall repair any damage to City or Utility facilities caused by Applicant within a reasonable time.

II.

That Applicant shall and does hereby agree to indemnify and hold harmless City and Utilities from any and all damages, loss or liability of any kind whatsoever by reason of injury to property or third person occasioned by its use of the easement/right-of-way or act of omission, neglect or wrong doing of Applicant, his officers, agents, employees, invitees or other persons, with regard to the improvements and maintenance of such improvements; and the Applicant shall, at his own cost and expense, defend and protect City and Utilities against any and all such claims and demands.

III.

That Applicant shall arrange for all activities and improvements in the easements to be discontinued and/or removed within thirty (30) days of notification by City. The cost associated with the discontinuing of such activities, and the removal of such improvements, as well as property adjacent to the easement/right-of-way necessitated by such discontinuation of the easement/right-of-way use, shall be borne by the Applicant.

IV.

That Applicant, his successors or assigns shall not seek compensation from City or Utilities for loss of the value of the improvements made hereunder when such improvements are required to be removed by Applicant.

V.

This agreement shall be filed of record in the Deed Records of Johnson or Tarrant County, Texas, and shall bind all future owners of this lot and shall for all purposes be considered a covenant running with the land.

IN TESTIMONY WHEREOF, Applicant executes this Easement/Right-of-Way Use Agreement on this _____ day of _____, 20___.

CITY OF BURLESON:

By:_____

Printed Name:_____

Title:_____

APPLICANT:

By:_____

Printed Name:_____

Title:_____

NOTE: PLEASE COMPLETE APPROPRIATE ACKNOWLEDGEMENT ONLY.

THE STATE OF TEXAS §

CORPORATE ACKNOWLEDGMENT

COUNTY OF TARRANT §

BEFORE ME, the undersigned authority, a Notary Public in and for the State of Texas, on this day personally appeared _____, known to me to be the person and officer whose name is subscribed to the foregoing instrument and acknowledged to me that same was the act of said _____, a corporation, and that he executed same for the purposes and consideration therein expressed and in the capacity therein stated.

GIVEN UNDER MY HAND AND SEAL OF OFFICE this the _____ day of _____, 20____.

Notary Seal:

_____
Notary Public in and for the
State of Texas

My Commission Expires:_____

THE STATE OF TEXAS §

INDIVIDUAL ACKNOWLEDGMENT

COUNTY OF TARRANT §

BEFORE ME, the undersigned authority, a Notary Public in and for the State of Texas, on this day personally appeared _____, known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that he executed same for the purposes and consideration therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE this the _____ day of _____, 20____.

Notary Seal:

_____
Notary Public in and for the
State of Texas

My Commission Expires:_____

NOTE: PLEASE COMPLETE APPROPRIATE ACKNOWLEDGEMENT ONLY.

THE STATE OF TEXAS §

ACKNOWLEDGMENT

COUNTY OF JOHNSON §

BEFORE ME, the undersigned authority, a Notary Public in and for the State of Texas, on this day personally appeared _____, known to me to be the person and officer whose name is subscribed to the foregoing instrument and acknowledged to me that same was the act of said _____, and that he executed same for the purposes and consideration therein expressed and in the capacity therein stated.

GIVEN UNDER MY HAND AND SEAL OF OFFICE this the _____ day of _____, 20____.

Notary Seal: _____

Notary Public in and for the
State of Texas

My Commission Expires:_____

THE STATE OF TEXAS §

INDIVIDUAL ACKNOWLEDGMENT

COUNTY OF JOHNSON §

BEFORE ME, the undersigned authority, a Notary Public in and for the State of Texas, on this day personally appeared _____, known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that he executed same for the purposes and consideration therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE this the _____ day of _____, 20____.

Notary Seal: _____

Notary Public in and for the
State of Texas

My Commission Expires:_____

APPENDIX M

EASEMENT/RIGHT-OF-WAY ABANDONMENT APPLICATION

ABANDONMENT OF PUBLIC RIGHT-OF-WAY/EASEMENT APPLICATION

MINIMUM SUBMITTAL REQUIREMENTS

- ☐ Abandonment Fee ($550 for right-of-way, $250 for easement)
- ☐ A completed copy of the Abandonment of Public ROW/Easement Application
- ☐ All exhibits processed (except for Exhibit No. 4, which will be processed by staff).
- ☐ A copy of a recent (within 90 days) deed or title insurance policy showing the names of the owners, or, an older deed or titles with a Nothing Further Certificate.
- ☐ For unplatted property, a signed, sealed and dated metes and bounds description and a diagram of the property showing the location of the abandonment.
- ☐ For platted property, a copy of the plat showing the lot, block, subdivision, and recording information.
- ☐ Corporate or partnership owners must furnish a copy of a corporate resolution or other proof of authority to sign on behalf of the corporation, partnership, or joint venture.

APPLICATION

ADDRESS:_____

LEGAL DESCRIPTION:_____

APPLICANT (Primary Contact for the Project):

Name:_____ email: _____

Street Address:_____

City: _____ State: _____ Zip Code:_____

Phone Number: _____ Fax Number: _____

PROPERTY OWNER'S INFORMATION (If different from above):

Name:_____ email: _____

Street Address:_____

City: _____ State: _____ Zip Code:_____

Phone Number: _____ Fax Number: _____

The applicant has prepared this application and certifies that the facts stated hereing and exhibits attached hereto are true and correct.

_____ _____

Signature of Owner Date

APPLICATION FOR
THE ABANDONMENT OF A
PUBLIC RIGHT-OF-WAY/EASEMENT

Date: _____

Location of Right-of-way/Easement to be Abandoned:

_____

_____

_____

Property Owner's Name and Address: _____

_____

Property Owner's Phone Number: _____

Property Owner's email: _____

TO THE MAYOR AND CITY COUNCIL OF THE CITY OF BURLESON:

The undersigned hereby makes application for the abandonment of that portion of the above right-of-way particularly described in Exhibit No. 1, attached. In support of this application, the undersigned represents and warrants the following:

1. The undersigned will hold the City of Burleson harmless, and indemnify it against all suits, costs, expenses, and damages that may arise or grow out of such abandonment.

2. Attached, marked Exhibit No. 1, are two sealed metes and bounds descriptions (dividing the area in half) of the area sought to be abandoned, prepared by a Registered Public Surveyor.

3. Attached, marked Exhibit No. 2, are two copies of a plat or detailed sketch of that portion of the public right-of-way/easement sought to be abandoned and the surrounding area to the nearest streets in all directions, showing the abutting lots and block, and the subdivision in which the above described right-of-way/easement is situated, together with the record owners of such lots.

4. Attached, marked Exhibit No. 3, is the consent of all public utilities to the abandonment.

5. Attached, marked Exhibit No. 4, is the consent of the City of Burleson staff to the abandonment.

6. Attached, marked Exhibit No. 5, is the consent of all the abutting property owners, except the following: (if none, so state)

   _____

   _____

7. Such public right-of-way/easement should be abandoned because:
   _____
   _____

8. Such public right-of-way/easement has been and is being used as follows:
   _____
   _____
   _____

I swear that all of the information contained in this application is true and correct to the best of my knowledge and belief.

Owner's Signature:

Date:

STATE OF TEXAS

ACKNOWLEDGEMENT

COUNTY OF JOHNSON

Subscribed and sworn to me, a Notary Public, this _____ day of _____, 20__, by _____.

_____

Notary Public in and for the State of Texas

EXHIBIT NO. 1

Attached is a sealed copy of the metes and bounds description of the public right-of-way or easement situated in _____ Addition/Subdivision/Survey to the City of Burleson, Johnson County, Texas, sought to be abandoned.

EXHIBIT NO. 2

Attached is a copy of a plat or detailed sketch of the public right-of-way/easement sought to be abandoned in the above-mentioned application, showing the surrounding area to the nearest streets in all directions, abutting lots, the block or blocks in which the portion of the public right-of-way/easement sought to be vacated is situated, and the addition or subdivision in which the portion of the public right-of-way/easement sought to be abandoned is situated. Also, the names of record owners of the abutting lots are shown.

EXHIBIT NO. 3
EASEMENT ABANDONMENT
UTILITY COMPANY SIGN OFF SHEET

The undersigned public utility companies, using or entitled to use under the terms and provisions of agreements with the City of Burleson, that portion of the public utility easement sought to be abandoned, do hereby consent to the joint use of the described portion of such utility easement in Lot(s)_____, Block(s)_____of the _____ Addition to the City of Burleson, _____ County, Texas.

TXU ELECTRIC

By:_____
(Please Print)

Title:_____
(Please Print)

Signature:_____

SBC

By:_____
(Please Print)

Title:_____
(Please Print)

Signature:_____

CHARTER CABLE

By:_____
(Please Print)

Title:_____
(Please Print)

Signature:_____

BETHESDA WATER SUPPLY CORP.

By:_____
(Please Print)

Title:_____
(Please Print)

Signature:_____

JOHNSON COUNTY RURAL WATER SUPPLY CORP.

By:_____
(Please Print)

Title:_____
(Please Print)

Signature:_____

PATHWAY COMMUNICATIONS

By:_____
(Please Print)

Title:_____
(Please Print)

Signature:_____

UNITED COOPERATIVE SERVICES

By:_____
(Please Print)

Title:_____
(Please Print)

Signature: _____

ATMOS ENERGY

By:_____

Title:_____
(Please Print)

Signature: _____

NOTE: ONLY UTILITY COMPANIES THAT PROVIDE SERVICE IN THE AREA REQUESTED FOR USE MUST COMPLETE THIS EXHIBIT.

Abandonment Location: _____

EXHIBIT NO. 4

The undersigned, City staff of the City of Burleson, certify that they have carefully considered the Application for Abandonment of the public right-of-way/easement referred to above from the standpoint of the City of Burleson ordinances and with respect to present and future needs of the City of Burleson and see no objection to the requested abandonment from the City's standpoint.

_____
Assistant Director of Public Works/Utilities
City of Burleson

_____
Assistant Director of Public Works/Streets and Solid Waste
City of Burleson

_____
Assistant Director of Public Works/Engineering
City of Burleson

_____
Director of Community Development
City of Burleson

_____
Fire Marshal
City of Burleson

_____
Building Official
City of Burleson

EXHIBIT NO. 5

The undersigned owners of property abutting upon that portion of the public right-of-way/easement named and described in the Application for Abandonment of a Public Right-of-Way/Easement referred to above, do hereby consent to such abandonment.

Name: _____

Address: _____

Phone Number: _____

Signature: _____

STATE OF TEXAS

COUNTY OF _____

BEFORE ME, the undersigned, a Notary Public in and for said County and State, on this day personally appeared _____, known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that he executed the same for the purposes and considerations therein.

WITNESS MY HAND AND SEAL OF OFFICE THIS THE ____ DAY OF _____, 20__.

_____

Notary Public in and for the State of Texas

Name: _____

Address: _____

Phone Number: _____

Signature: _____

STATE OF TEXAS

COUNTY OF _____

BEFORE ME, the undersigned, a Notary Public in and for said County and State, on this day personally appeared _____, known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that he executed the same for the purposes and considerations therein.

WITNESS MY HAND AND SEAL OF OFFICE THIS THE ____ DAY OF _____, 20__.

_____

Notary Public in and for the State of Texas

Attach as many copies of this sheet as necessary.

UTILITY CONTACT INFORMATION

Oncor Electric Delivery (Electric)
3500 El Campo
Fort Worth, Texas 76107

Terry Sears 817-443-3432
PMDS Utility Designer Sr.
terry.sears@oncor.com

Atmos Energy (Gas)

100 W. Morningside Drive
Fort Worth, Texas 76110

Bob Davison 817-215-4704
bob.davison@atmosenergy.com

AT&T Telephone Company

1116 Houston St.
Room 1410
Fort Worth, Texas 76102

Tommy Ellison (817) 338-5357
Engineering Department
te5574@att.com

Charter Communications

15100 Trinity Blvd., Suite 500
Fort Worth, Texas 76155

Greg Piatt 817-298-3625

Johnson County Special Utility District

2849 Hwy 171 South
P.O. Box 509
Cleburne, TX 76033-0509

Ronnie Nichols 817-558-9522
nicholsr@jcsud.com

Pathway Communications

427 N Broadway St
Joshua, TX 76058-3413

Ricky Allen 817-484-2222
Fax 817-447-0169
ricky@usapathway.com
cc: Robert Strawn
robert@aciglobal.com

Bethesda Water Supply Corporation

P.O. Box 130
509 South Burleson Blvd.
Burleson, TX 76097

Carl Novack 817-295-2131
Fax 817-447-9370

United Cooperative Services

P.O. Box 16
Cleburne, TX 76033

Jason Dillard 817-556-4055
Jason@united-cs.com

City of Burleson

141 W. Renfro
Burleson,TX 76028

Mandy Clark 817-426-9616
Fax 817-426-9363
mclark@burlesontx.com

APPENDIX N

STANDARD CONSTRUCTION NOTES

The following notes are typical notes that should be placed on construction plan when applicable. This list is not all-inclusive. The plan reviewer may request that additional notes, specific to the site, be placed on the plans.

1. The contractor shall contact the City's Chief Inspector at 817-917-8966 at least 48 hours prior to beginning construction.

2. Construction shall be in accordance with current City of Burleson standard details and specifications and in accordance with the North Central Texas Council of Governments' *Public Works Construction Standards*.

3. No vertical facilities or meter boxes will be allowed to be located within the sidewalks.

4. All trees in the right-of-way must be removed prior to acceptance of the construction. If there are specific trees that are proposed to be saved, then the design needs to be modified to accommodate the trees, either by revising the layout or adding easements to contain the sidewalk.

5. Minimum depth of cover over all water mains shall be three and one-half feet.

6. The minimum horizontal separation between any water main and a storm drain facility shall be equal to two and one-half feet of half the depth of the water line, whichever is greater.

7. The minimum horizontal separation between any water main and a sanitary sewer main shall be nine feet measured from outside edge of pipe to outside edge of pipe.

8. When a water main crosses over a sanitary sewer main and the vertical separation is less than nine feet, then the sanitary sewer shall have one joint (20 feet) of PVC pipe conforming to ASTM D-3035, SDR-26 installed centered on the water line. In addition, the joint shall have a minimum of 12 inches of cement stabilized (two-sack minimum) backfill directly above the sanitary sewer pipe.

9. When a water main must cross under a sanitary sewer main, the minimum separation shall be 24 inches. In addition, the sanitary sewer shall have installed one joint (20 feet) of ductile iron pipe centered on the water main.

10. The minimum horizontal separation between any sanitary sewer main and a storm drain facility shall be equal to two and one-half feet or one-half times the depth of the sanitary sewer or storm drain, whichever is greater.

11. All waterline fittings shall incorporate Megalug mechanical joint restraints or approved equal.

12. Prior to grading, the contractor or developer must obtain a grading permit from the City. The grading permit will require 48 hours notice to the City and that all erosion control measures be installed prior to any grading.

APPENDIX O

LETTER OF PERMISSION

LETTER OF PERMISSION
FOR GRADING
OR
CONCENTRATION OF FLOW

(This form may be modified for specific site conditions or agreements with the offsite owner. This form is intended as a general template and must be customized for each project.)

I *(owner),* as owner of Lot ___, Block ____, of _____ Addition *((address)),* in the City of Burleson, Texas, do hereby grant permission to *(developer),* the developer of Lot(s) ___, Block ___ of _____ Addition for grading improvements to be performed on our property as shown on the attached exhibit *(or concentration of flow as shown on the attached plan sheet)*. I have reviewed the plans and fully understand the intent of this proposed work. In addition to the grading, I also give the developer or the City, the permanent ability to re-grade the area to maintain the drainage as shown in the plan. I understand that, once graded, the routine maintenance of the area is my responsibility.

It is fully understood by this document that both the property owner and the City of Burleson agree that all grading work necessary for conveying storm water as described will be at the developer's expense. It is also fully understood by both parties that this permission to grade does not constitute a permanent easement and will cease when, and if, this portion of the described property is developed in accordance with the City of Burleson Subdivision and Development Ordinance in the future.

The City of Burleson will have the right, but not the obligation, to enter the property as often as necessary to correct drainage problems with may occur.

_____
(owner)

STATE OF TEXAS

COUNTY OF JOHNSON

BEFORE ME, the undersigned authority in and for Johnson County, Texas on this day personally appeared *(owner)*, known to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that he executed the foregoing instrument for the purposes and consideration therein expressed, and in the capacity therein stated.

Given under my hand and seal of office, this _____ day of _____, 20__.

_____
Notary Public in and for the State of Texas

My Commission Expires:

_____
Type or Print Notary's Name

_____

APPENDIX P

TXDOT UTILITY PERMIT QUESTIONNAIRE

SUBMITTAL REQUIREMENTS FOR TXDOT UTILITY PERMITTING

1. State Roadway Impacted: _____

   Project Description: _____

   _____

   _____

2. Project location map as an adobe.pdf.

3. Applicable project plans as adobe.pdf. (NOTE: File size limit of 5 MB)

4. Project start date (approx.): _____

   Project end date (approx.): _____

5. Give the approximate distance of proposed work (measured along state road) from centerline of a street that intersects the state road)

   Distance: _____ LF from

   Intersecting street: _____

6. Complete the following checklist:

   Is the location of the proposed utility line clearly shown on the plans?

   Yes ☐ No ☐ N/A ☐

   Comment:_____

   _____

   Are other existing utility lines in the vicinity shown on the plans and have you included vertical elevations and horizontal alignments for these existing utilities based on the department's survey datum?

   Yes ☐ No ☐ N/A ☐

   Comment:_____

   _____

Are the utility plans legible, drawn to scale, and accurately dimensioned?

Yes ☐ No☐ N/A☐

Comment:_____

_____

Is the location of the proposed utility line clearly shown on the plans?

Yes ☐ No☐ N/A☐

Comment:_____

_____

Are the right of way line and edge of highway pavement clearly shown on plans?

Yes ☐ No☐ N/A☐

Comment:_____

_____

For lines to be installed parallel to the highway, have you included the design, proposed location, vertical elevations, and horizontal alignments of the utility facility based on the department's survey datum, the relationship to existing highway facilities?

Yes ☐ No☐ N/A☐

Comment:_____

_____

For installations parallel to the highway, does the installation alignment change? Alignment changes need to be justified and reasonable.

Yes ☐ No☐ N/A☐

Comment:_____

_____

For lines crossing the highway, crossing intersecting streets/county roads, or passing through the protected root area of desirable trees, is it clearly shown that the line will be installed by boring? In addition, casing should be shown under highways and paved city street/county road intersections.

Yes ☐ No☐ N/A☐

Comment:_____

_____

For aerial installations, do the plans clearly show and differentiate between existing poles and new poles?

Yes ☐ No☐ N/A☐

Comment:_____

_____

For gas crossings, are all encased gas lines showing vent pipes at right of way line and all gas pipes clearly marked with owner's signs?

Yes ☐ No☐ N/A☐

Comment:_____

_____

APPENDIX Q

FLOODPLAIN DEVELOPMENT PERMIT

FLOODPLAIN DEVELOPMENT PERMIT

City of Burleson, Texas
Community No. 485459

Date _____ **Permit Number** _____

Owner	**Name:**
	Address:
	City : **State:** **Zip:**
	Home Telephone Number : ( ) -
	Alternate Telephone Number: ( ) -

Contractor	**Contact Name:**
	Company Name:
	Local Address:
	Local Telephone Number: ( ) -
	Pager/Cell Phone Number: ( ) -
	Permanent Address:
	City : **State:** **Zip:**
	Years in Business:

Site	**Street Address:** **City:** **County:**
	Subdivision: **Lot#:** **Block#:**
	Abstract: **Tract#**
	Existing Sewage Treatment: ☐ Municipal or On-Site Sewer Facilities? ☐Yes ☐No (If yes, specify type) ☐Aerobic Treatment ☐Drain Field ☐ET Bed ☐Other (Describe):

Type of Development	**Activity:** ☐ New ☐ Repair ☐ Remodel ☐Relocation ☐ Addition ☐ Demolition **Type of Structure:** ☐ Residential (1-4 Family) ☐ Residential (more than 4 family) ☐ Non-Residential (Flood-Proofing? ☐ Yes ☐ No) ☐ Mobile/Manufactured Home (In Manufactured Home Park? ☐☐ Yes ☐ No) ☐ Storage Shed ☐ Business ☐ Garage (Detached? ☐ Yes ☐ No) ☐ Commercial (Name & Type):
	Type of Foundation (Specify): ☐ Building on Slab ☐ Building on Piers, Piles or Columns ☐ Building with Basement
	Estimated Cost of Project: $

THIS PERMIT SHALL BECOME NULL AND VOID IF THE PROPOSED FLOOD PLAIN DEVELOPMENT IS NOT COMPLETED WITHIN 12 MONTHS FROM THE ISSUANCE DATE OF THIS PERMIT.

Other Development Activities	
	☐ Fill ☐ Mining ☐ Drilling ☐ Grading ☐ Excavation (other than for structure)
	☐ Drainage Improvements (including culvert work)
	☐ Road, Street or Bridge Construction
	☐ Subdivision (New or Expansion) Name:
	☐ Individual Water or Sewer System
	☐ Other (Please Specify):

Timeframe	
	Date to Begin Construction:
	Date for Foundation to be Completed:
	Estimated Date of Completion:

Attachments		
	☐ 8X10 copy of flood map	☐ Septic tank permit (if applicable)
	☐ Site plans with elevations (Show locations of proposed development with horizontal dimensions)	☐ Electrical Permit (if applicable)
	☐ Foundation plans with elevations	☐ Plumbing Permit (if applicable)
	☐ Map to Site	☐ Wetlands Permit (if applicable)
	☐ CLOMA/CLOMR (if applicable)	

I certify that the information shown on this application is accurate and true. I realize that I may need to provide more information and documentation on costs or other items if needed. I understand that I am **not** to begin development until the development permit has been issued or I will be in violation of the community's regulations and may be subject to fines as prescribed by ordinance.

Owners Signature:_____ Date:_____

FLOODPLAIN DEVELOPMENT PERMIT

Permit Number _____
Date _____

To Be Filled Out by the Floodplain Administrator

Floodplain Determination

The proposed development is located on FIRM Panel No. _____,Dated:_____

The proposed development is: Substantial improvement ☐ Yes ☐ No

The Proposed Development:

☐ Is NOT located in a Special Flood Hazard Area (Notify the applicant that the application review is complete and NO FLOODPLAIN DEVELOPMENT PERMIT IS REQUIRED).

☐ Is located in a Special Flood Hazard Area.
FIRM zone designation is _____.
100-Year flood elevation at the site is: _____Ft. NGVD (MSL)
☐ Unavailable
Elevation Required by the Community _____
Freeboard Required by Community _____

☐ The proposed development is located in a floodway.
FIRM Panel No. _____Dated: _____

☐ Permit applicant shall provide additional information.
(Provide applicant a copy of page 4 for submittals required)

An elevation certificate ☐ is required ☐ is not required.
If an elevation certificate is required, permit applicant shall provide a completed elevation certificate to the City for review, prior to final inspection of the structure.

THIS PERMIT SHALL BECOME NULL AND VOID IF THE PROPOSED FLOOD PLAIN DEVELOPMENT IS NOT COMPLETED WITHIN 12 MONTHS FROM THE ISSUANCE DATE OF THIS PERMIT.

FLOODPLAIN DEVELOPMENT PERMIT

Permit Number _____
Date _____

To Be Filled Out by the Floodplain Administrator

Additional Information Required

The applicant must provide the documents checked below before the application can be processed:

☐ A site plan showing the location of all existing structures, water bodies, adjacent roads, lot dimensions and proposed development.

☐ Development plans, drawn to scale, and specifications, including where applicable details for anchoring structures, proposed elevation of lowest floor (including basement), types of water resistant materials used below the first floor and details of enclosures below the first floor. Also. _____

☐ Subdivision or other development plans (If the subdivision or other development exceeds 50 lots or 5 acres, whichever is the lesser, the the applicant must provide 100-year flood elevations if they are not otherwise available).

☐ Plans showing the extent of watercourse relocation and/or landform alterations.

☐ Top of new fill elevation _____Ft. NGVD (MSL).

☐ Floodproofing protection level (non-residential only) _____Ft. NGVD (MSL). For floodproofed structures applicant must attach certification from registered engineer or architect.

☐ Certification from a registered engineer that the proposed activity in a regulatory floodway will not result in any increase in the height of the 100-year flood. A copy of all data and calculations supporting this finding must also be submitted.

☐ Other:

_____

_____

_____

THIS PERMIT SHALL BECOME NULL AND VOID IF THE PROPOSED FLOOD PLAIN DEVELOPMENT IS NOT COMPLETED WITHIN 12 MONTHS FROM THE ISSUANCE DATE OF THIS PERMIT.

FLOODPLAIN DEVELOPMENT PERMIT

Permit Number _____
Date _____

To Be Filled Out by the Floodplain Administrator

Permit Determination	I have determined that the proposed activity: A. ☐ Is B. ☐ Is not in conformance with provisions of the Flood Damage Prevention Ordinance of the City of Burleson. The permit is issued subject to the conditions attached to and made part of this permit. SIGNED_____ DATE _____ Floodplain Administrator City of Burleson, Texas

INSPECTIONS	Date _____ ☐ Preliminary ☐ Complaint ☐ During Construction ☐ Complaint Violation Noted (if any)
	Date _____ ☐ Preliminary ☐ Complaint ☐ During Construction ☐ Complaint Violation Noted (if any)
	Date _____ ☐ Preliminary ☐ Complaint ☐ During Construction ☐ Complaint Violation Noted (if any)

THIS PERMIT SHALL BECOME NULL AND VOID IF THE PROPOSED FLOOD PLAIN DEVELOPMENT IS NOT COMPLETED WITHIN 12 MONTHS FROM THE ISSUANCE DATE OF THIS PERMIT.

FLOODPLAIN DEVELOPMENT PERMIT

Permit Number _____ **Page 6**
Date _____

Record Keeping	
	Date _____ ☐ Final Inspection Checklist Attached Construction completed on date _____ Violations were found, re-inspect on date _____ ☐ Elevation certificate attached/received on (date) _____ ☐ Notice of violations were sent certified mail on (date) _____ ☐ Permit Application and work have been completed and are in compliance. ☐ Completed final inspection on (date) _____ ☐ File Closed on (date) _____

Additional Comments	
	_____ _____ _____ _____ _____ _____ _____ _____ _____ _____

THIS PERMIT SHALL BECOME NULL AND VOID IF THE PROPOSED FLOOD PLAIN DEVELOPMENT IS NOT COMPLETED WITHIN 12 MONTHS FROM THE ISSUANCE DATE OF THIS PERMIT.

FLOODPLAIN DEVELOPMENT PERMIT

THIS PERMIT SHALL BECOME NULL AND VOID IF THE PROPOSED FLOOD PLAIN DEVELOPMENT IS NOT COMPLETED WITHIN 12 MONTHS FROM THE ISSUANCE DATE OF THIS PERMIT.

APPENDIX R

STANDARD DETAILS

Water Details
Sanitary Sewer Details
Paving Details
Drainage Details

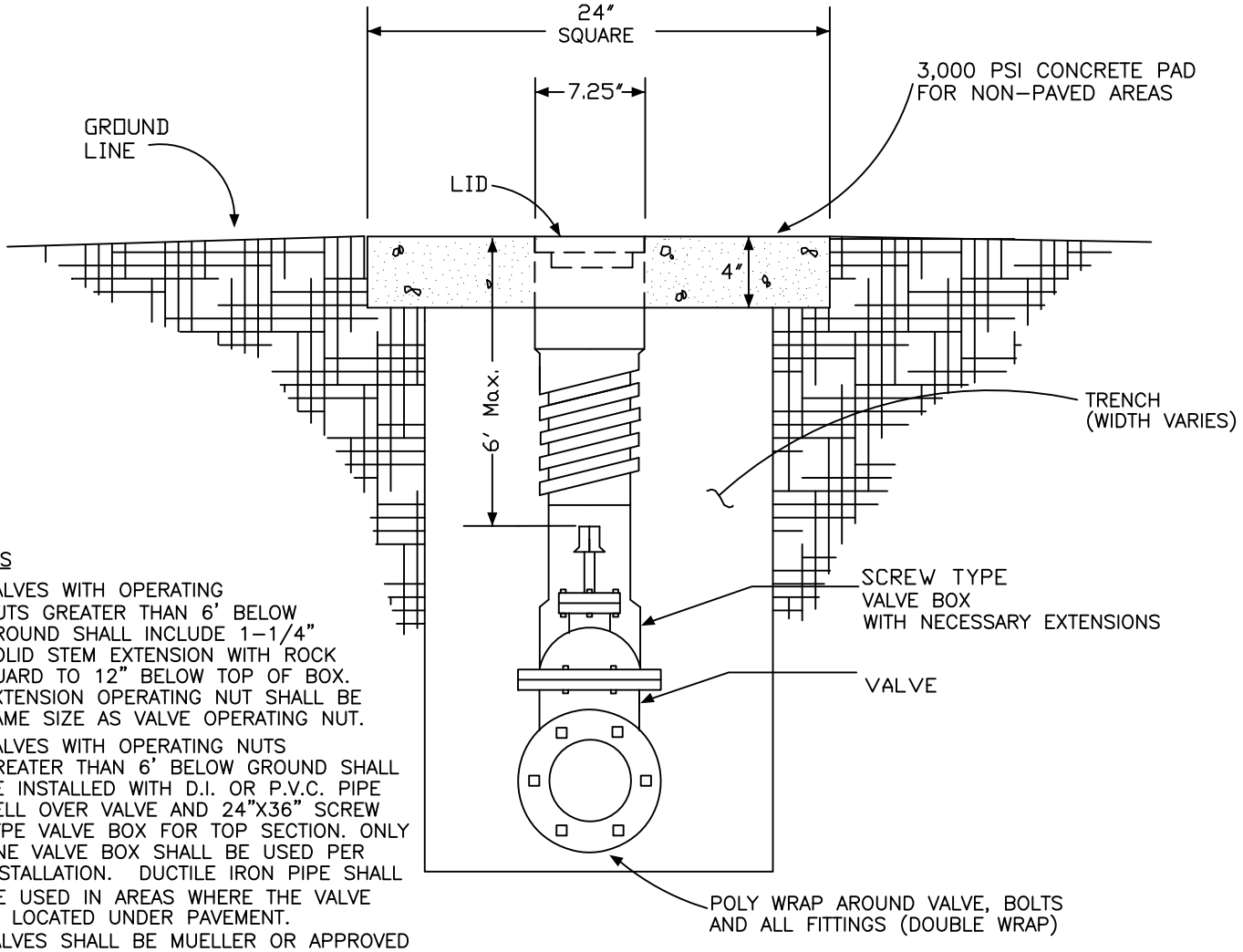
WATER SYSTEM DETAILS

W-01	Gate Valve
W-02	Fire Hydrant
W-03	Fire Hydrant Assembly
W-04	Horizontal Thrust Blocking
W-05	Water Main Embedment

Services:

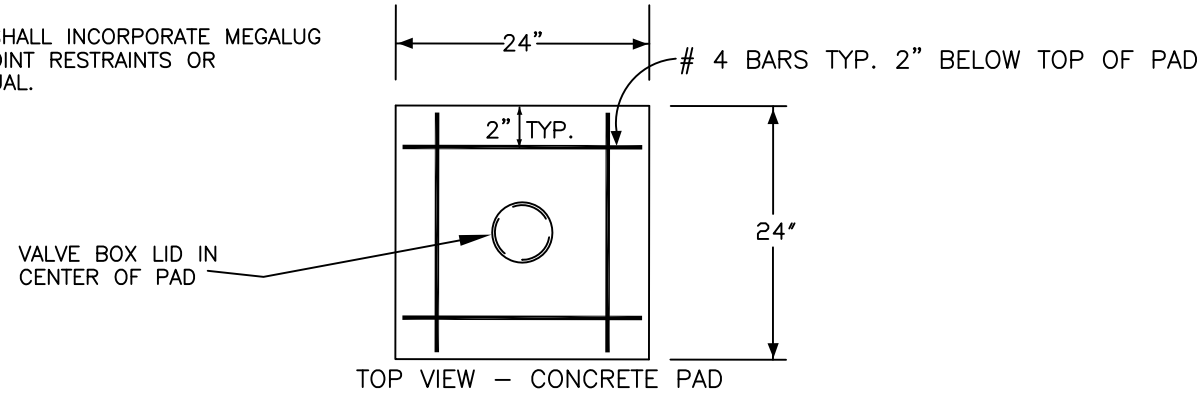
W-06	1” Service with two 3/4” Outlets (bullhead)
W-07	1” water service for 1” and 3/4” Outlets
W-08	2” Water Service for 2” and 1 1/2” Outlets or 2” flush point

W-9	Meter Vault and Appurtenances (3” and larger)
W-10	Vertical Tie-Down Block Detail
W-11	Automatic Water Distribution Flushing System
W-12	Combination Air Valve Installation
W-13	Combination Air Valve Installation Offset from Pipe
W-14	Existing Street Backfill and Repair
W-15	Street Backfill Prior to Street Construction



NOTES

1. VALVES WITH OPERATING NUTS GREATER THAN 6' BELOW GROUND SHALL INCLUDE 1-1/4" SOLID STEM EXTENSION WITH ROCK GUARD TO 12" BELOW TOP OF BOX. EXTENSION OPERATING NUT SHALL BE SAME SIZE AS VALVE OPERATING NUT.
2. VALVES WITH OPERATING NUTS GREATER THAN 6' BELOW GROUND SHALL BE INSTALLED WITH D.I. OR P.V.C. PIPE BELL OVER VALVE AND 24"X36" SCREW TYPE VALVE BOX FOR TOP SECTION. ONLY ONE VALVE BOX SHALL BE USED PER INSTALLATION. DUCTILE IRON PIPE SHALL BE USED IN AREAS WHERE THE VALVE IS LOCATED UNDER PAVEMENT.
3. VALVES SHALL BE MUELLER OR APPROVED EQUAL RESILIENT WEDGE GATE VALVE, EPOXY COATED.
4. UNLESS OTHERWISE NOTED ON PLANS, SET VALVE AND BOX AT CURB RETURN.
5. VALVE BOXES AND PADS SHALL BE INSTALLED AT FINISHED GRADE. SLOPE CONCRETE PAD SURFACE SLIGHTLY AWAY FROM LID.
6. ALL FITTINGS SHALL INCORPORATE MEGALUG MECHANICAL JOINT RESTRAINTS OR APPROVED EQUAL.

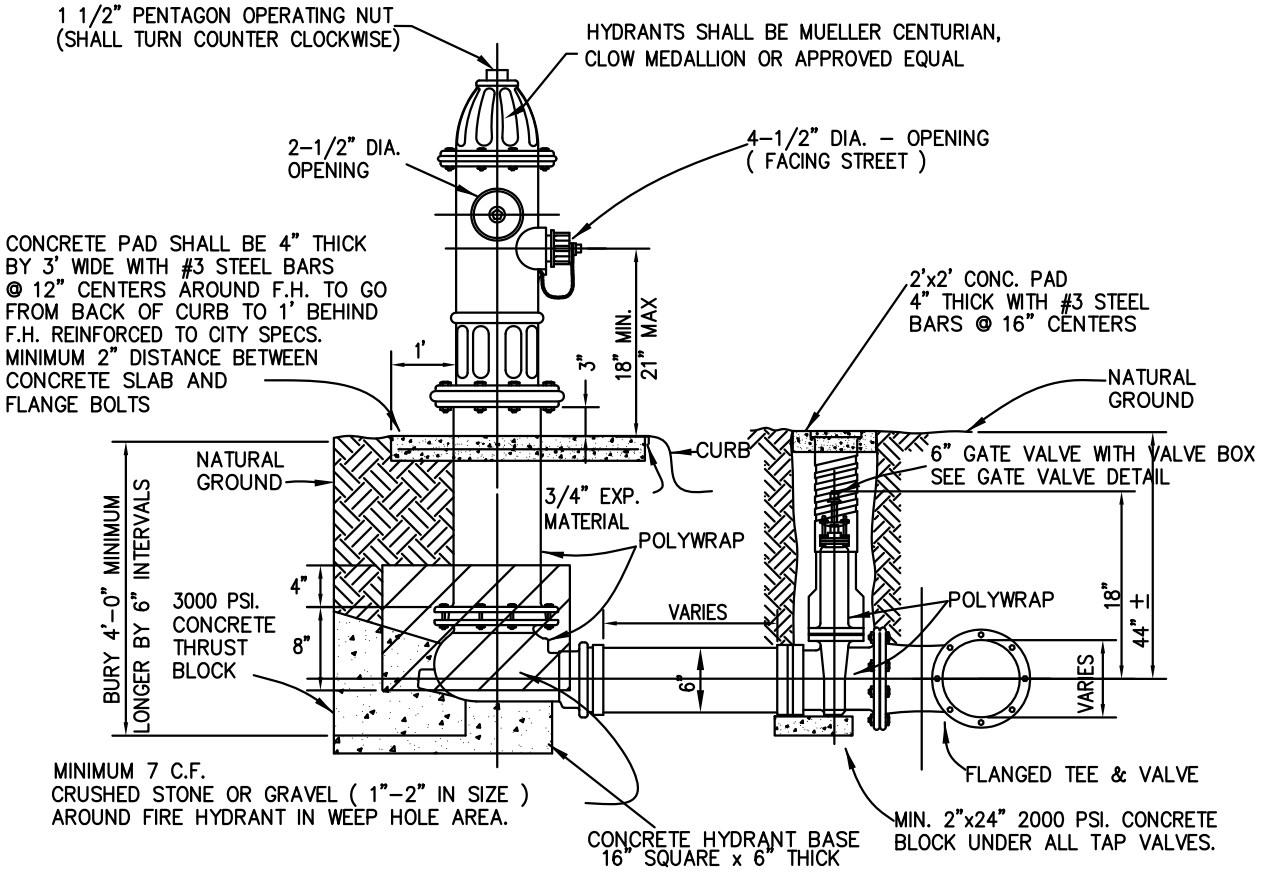


TOP VIEW – CONCRETE PAD

PADS ARE FOR NON-PAVED AREAS ONLY.

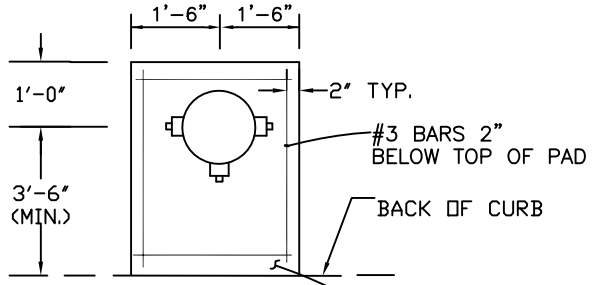
BROOM FINISH ALL PADS.

W-01	GATE VALVE	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		

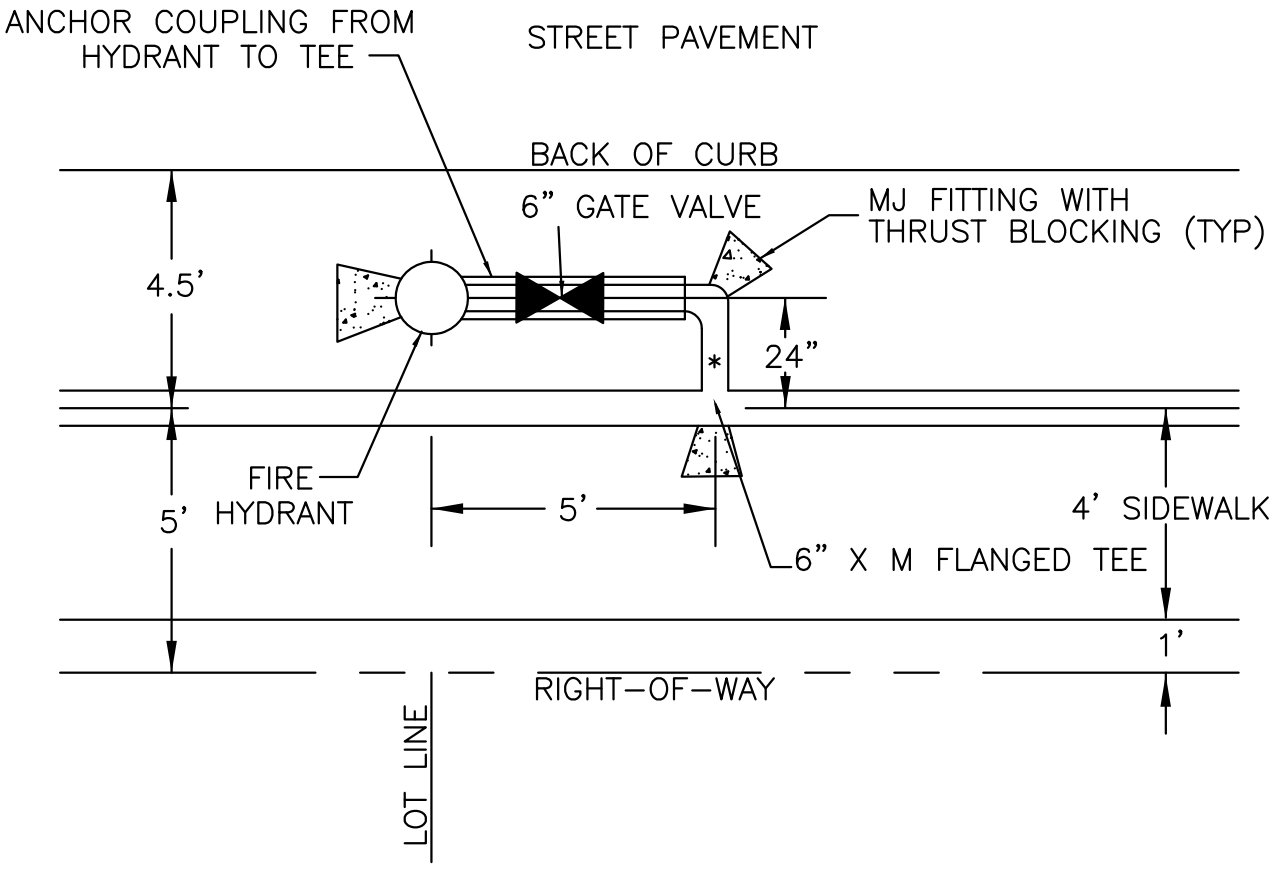


NOTES:

1. FIRE HYDRANTS SHALL NOT BE INSTALLED IN EXISTING OR PROPOSED SIDEWALKS
2. FIRE HYDRANTS SHALL BE INSTALLED PRIMED ONLY. THEY SHALL BE PAINTED AFTER INSTALLATION.
3. FIRE HYDRANTS SHALL BE COATED WITH 2 COATS BENJAMIN MOORE PAINT RUST INHIBITOR #16378 ALUMINUM OR EQUAL.
4. DOUBLE WRAP ALL D.I. FITTINGS WITH POLY WRAP INCLUDING BOLTS AND NUTS.
5. INSTALL RESTRAINED OFFSET BENDS OR "GRADELOCK" FITTINGS ON FIRE HYDRANT SUPPLY LINE SO FIRE HYDRANT BURY DEPTH IS NO GREATER THAN SIX FEET.
6. ALL FITTINGS SHALL INCORPORATE MEGALUG MECHANICAL JOINT RESTRAINTS OR APPROVED EQUAL.
7. SWIVEL SOLID ADAPTER ON CONCRETE CYLINDER PIPE FLANGED OUTLET.



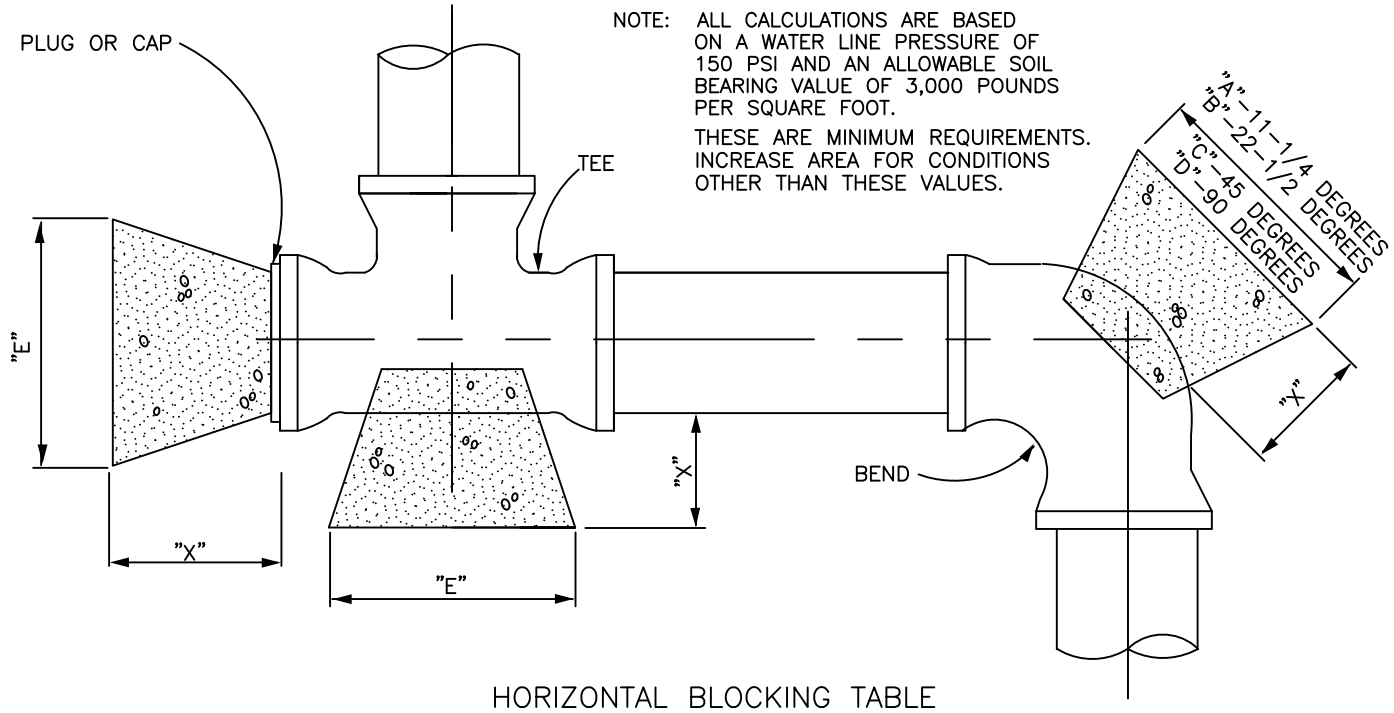
W-02	FIRE HYDRANT	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		



M = MAIN SIZE

* GATE VALVE MAY BE LOCATED EITHER AS SHOWN OR AT THE TEE.

W-03	FIRE HYDRANT ASSEMBLY	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		



NOTE: ALL CALCULATIONS ARE BASED ON A WATER LINE PRESSURE OF 150 PSI AND AN ALLOWABLE SOIL BEARING VALUE OF 3,000 POUNDS PER SQUARE FOOT.

THESE ARE MINIMUM REQUIREMENTS. INCREASE AREA FOR CONDITIONS OTHER THAN THESE VALUES.

HORIZONTAL BLOCKING TABLE

PIPE SIZE	"X" DIM. IN. FT.	11-1/4 DEGREES		22-1/2 DEGREES		45 DEGREES		90 DEGREES		TEE & PLUG	
		"A"	MIN. AREA	"B"	MIN. AREA	"C"	MIN. AREA	"D"	MIN. AREA	"E"	MIN. AREA
4"	1.5	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.06	1.00	1.00
6"	1.5	1.00	1.00	1.00	1.00	1.14	1.30	1.55	2.40	1.30	1.70
8"	1.5	1.00	1.00	1.08	1.18	1.52	2.31	2.07	4.27	1.74	3.02
10"	1.5	1.00	1.00	1.35	1.84	1.90	3.61	2.58	6.66	2.17	4.71
12"	1.5	1.00	1.33	1.63	2.65	1.86	5.19	3.10	9.60	2.61	6.79
14"	1.5	1.03	1.81	1.90	3.60	2.66	7.07	3.61	13.06	3.04	9.24
16"	2.0	1.18	2.36	2.17	4.71	3.04	9.23	4.13	17.06	3.47	12.06
18"	2.0	1.33	2.99	2.44	5.96	3.42	11.69	4.65	21.59	3.91	15.27
20"	2.0	1.48	3.70	2.71	7.35	3.80	14.43	5.16	26.66	4.34	18.85
21"	2.0	1.55	4.07	2.85	8.11	3.99	15.91	5.42	29.39	4.56	20.78
24"	2.0	1.77	5.32	3.25	10.59	4.56	20.77	6.20	38.39	5.21	27.14
27"	2.5	1.99	6.73	3.66	13.40	5.13	26.29	6.97	48.58	5.86	34.35
30"	2.5	2.22	8.31	4.07	16.55	5.70	32.46	7.74	59.98	6.51	42.41
33"	2.5	2.44	10.06	4.47	20.02	6.27	39.28	8.52	72.57	7.16	51.31
36"	2.5	2.66	11.97	4.88	23.83	6.84	46.74	9.29	86.37	7.81	61.07
39"	3.0	2.88	14.05	5.29	27.97	7.41	54.86	10.07	101.36	8.47	71.68
42"	3.0	3.10	16.30	5.69	32.43	7.98	63.62	10.85	117.56	9.12	83.13

NOTE: CLASS "B" CONCRETE 2,000 PSI SHALL BE USED FOR ALL BLOCKING UNLESS OTHERWISE NOTED ON STANDARD DETAILS AND / OR PLANS.

THE MINIMUM VERTICAL DIMENSION OF ALL BLOCKING SHALL BE 1.5 TIMES THE PIPE DIAMETER WITH AT LEAST 0.75 TIMES THE PIPE DIAMETER EXTENDING BOTH ABOVE AND BELOW THE PIPE CENTERLINE. THIS DIMENSION DETERMINES THE "A" DIMENSION FOR 11-1/4° BENDS.

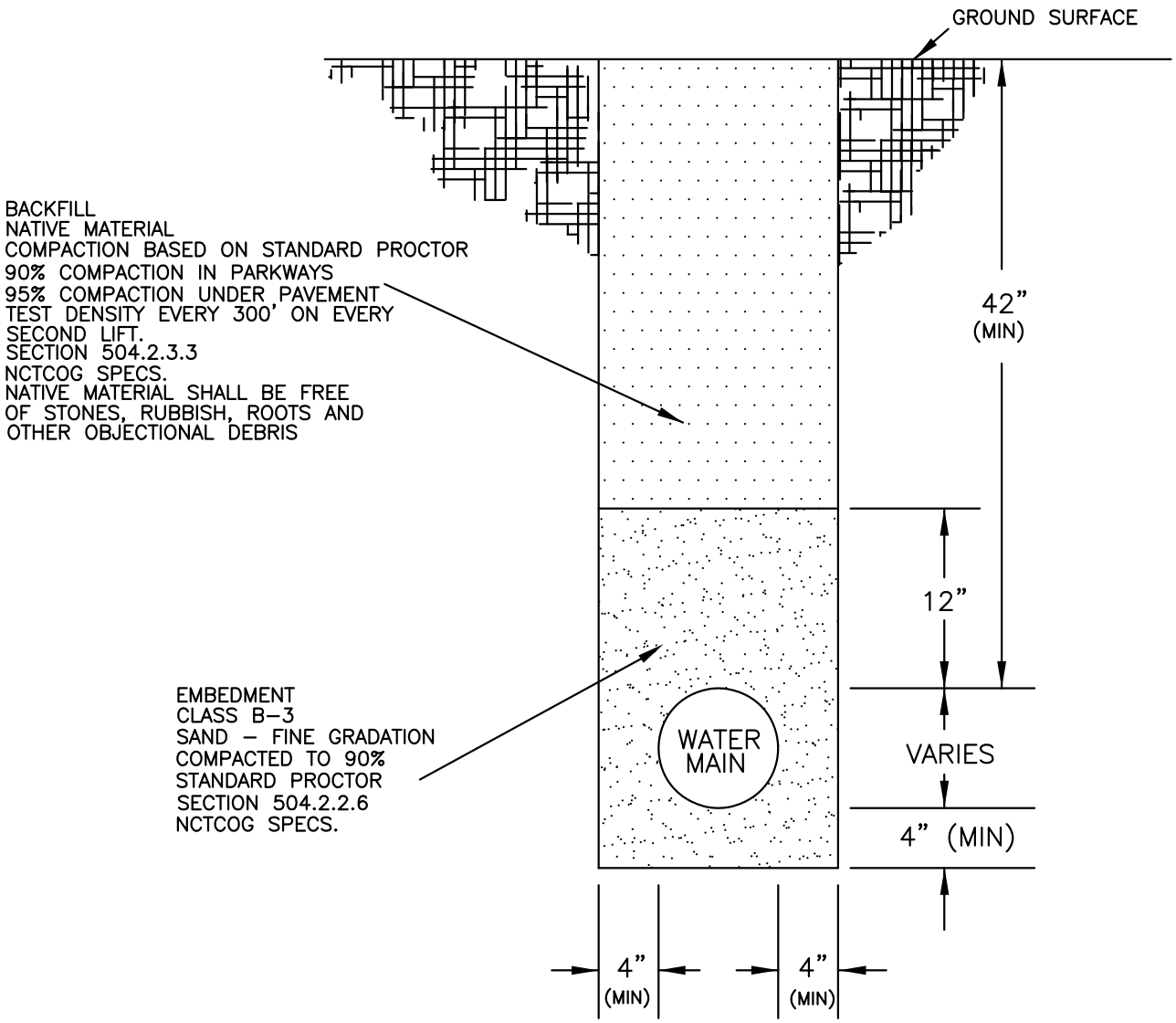
FOR 22-1/2°, 45°, 90°, AND TEES AND PLUGS, THE VERTICAL DIMENSION SHALL BE EQUAL TO THE HORIZONTAL DIMENSION SHOWN TO PRODUCE THE REQUIRED MINIMUM AREA.

ALL MINIMUM AREAS ARE IN SQUARE FEET.

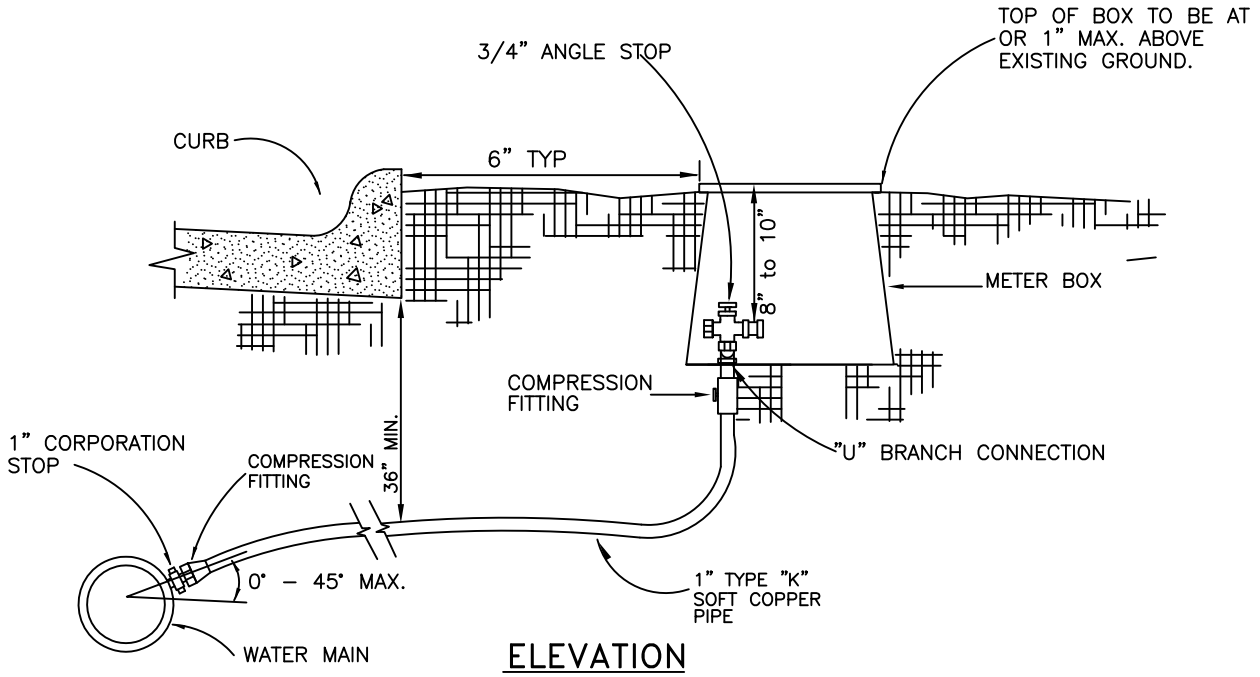
BLOCKING TO BE AGAINST UNDISTURBED TRENCH WALLS AND BOTTOM.

DOUBLE WRAP ALL D.I. FITTINGS INCLUDING BOLTS AND NUTS WITH POLY WRAP AND TAPE IN PLACE.

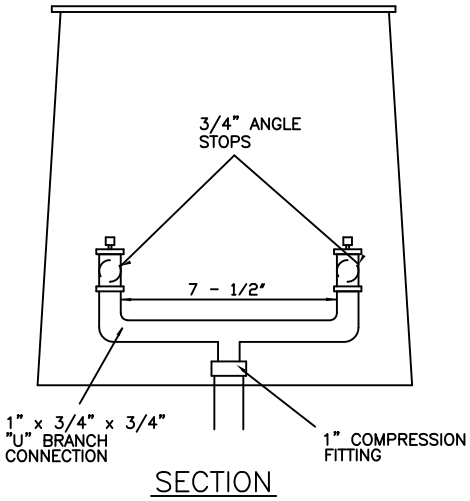
W-04	HORIZONTAL THRUST BLOCKING	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		



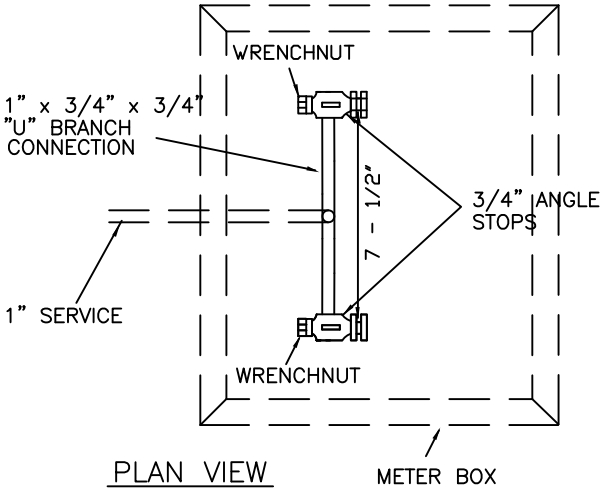
W-05	WATER MAIN EMBEDMENT	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		



ELEVATION



SECTION



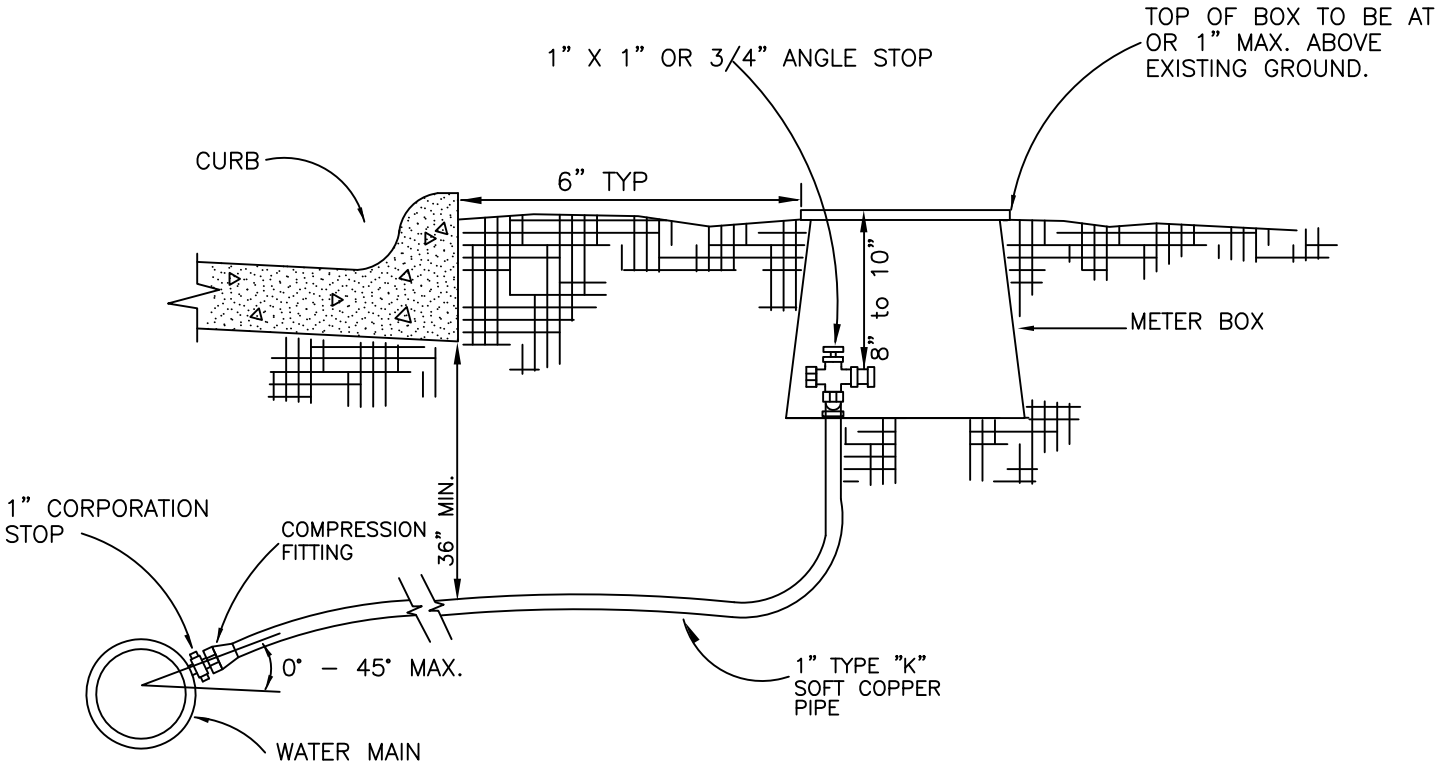
PLAN VIEW

*** THE CITY OF BURLESON PUBLIC WORKS DEPARTMENT SHALL MAKE ALL WATER LINE TAPS UNLESS OTHERWISE APPROVED.

NOTES

1. WHERE TAPPING EXISTING MAINS OR PVC WATER MAINS, DOUBLE STAINLESS STEEL STRAP, EPOXY–COATED SADDLES SHALL BE USED.
2. COPPER SERVICES SHALL BE CONTINUOUS WITH NO JOINTS FROM CORP. STOP TO QUARTER BEND.
3. ALL COPPER FITTINGS SHALL BE COMPRESSION FITTINGS.
4. METERS SHALL NOT BE INSTALLED IN EXISTING OR PROPOSED SIDEWALK OR DRIVEWAYS.
5. METER BOX SHALL BE:
   ALLIANCE 16AMR2.DU.SB (NON–TRAFFIC)
   ROTEC DFW38C–14–KSBSM (TRAFFIC)
6. ANGLE STOPS SHALL BE FULL ROTATION WITH LOCK RINGS AND METER SPUD.
7. CONTRACTOR SHALL PROVIDE AND INSTALL ANGLE BALL METER VALVES AT THE CONNECTION POINT OF THE "U" BRANCH PIECES AND WATER METERS. ANGLE BALL METER VALVES SHALL HAVE A VALVE SIZE OF 3/4", A SERVICE LINE CONNECTION OF 3/4", AND FIT A METER SIZE OF 5/8" X 3/4" AND 3/4" AND SHALL OTHERWISE MEET THE SPECIFICATIONS OF CATALOG NO. BA13–332W AS MANUFACTURED BY THE FORD METER BOX COMPANY OR EQUAL.
8. "U" BRANCH PIECES, AT A MINIMUM SHALL HAVE A PACK JOINT INLET FOR COPPER OR PLASTIC TUBING, BE DESCRIBED AS A 1" CTS P.J. X TWO (2) 3/4" MALE IRON PIPE OUTLETS, HAVE A 7 1/2" STANDARD SPACING, AND OTHERWISE MEET THE SAME SPECIFICATIONS OF CATALOG NUMBER U48–43 AS MANUFACTURED BY THE FORD METER BOX COMPANY OR EQUAL.

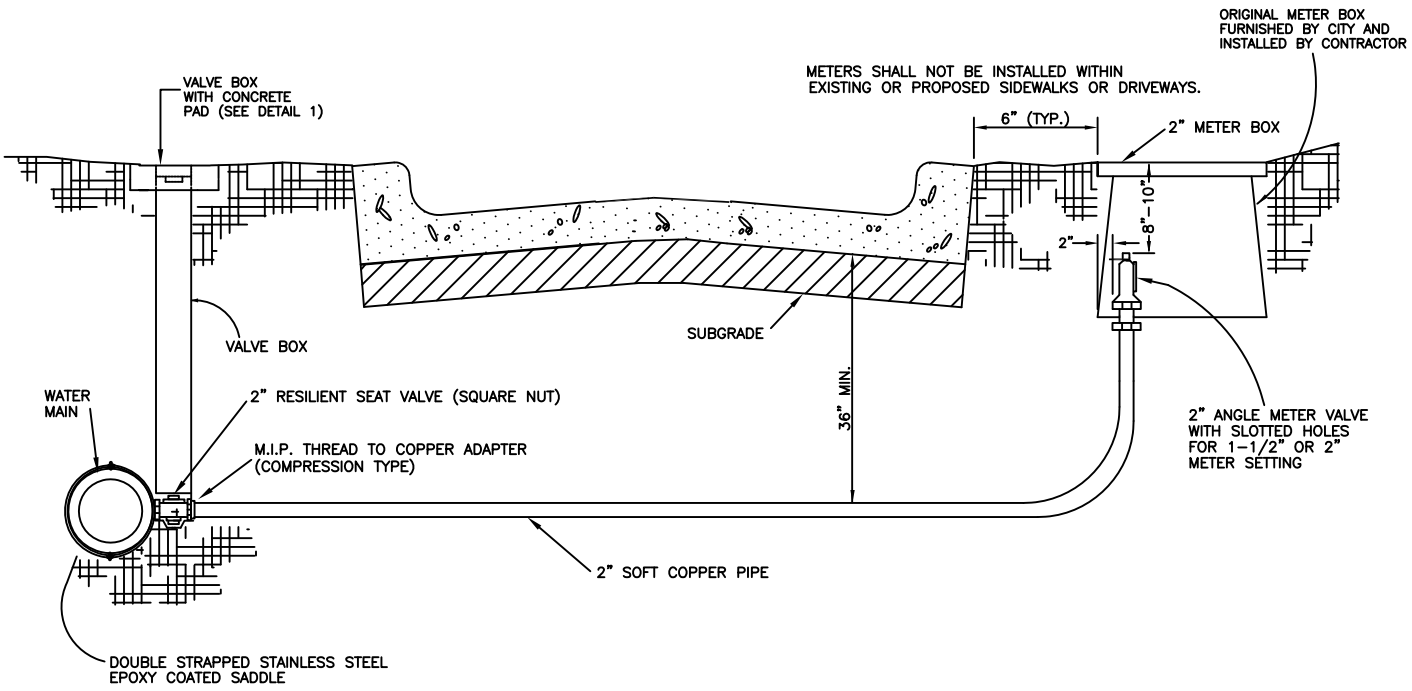
W–06	DOUBLE WATER SERVICE (BULLHEAD) (1" SERVICE WITH TWO 3/4" OUTLETS)	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		



NOTES

1. WHERE TAPPING EXISTING MAINS OR PVC WATER MAINS, DOUBLE STAINLESS STEEL STRAP, EPOXY–COATED SADDLES SHALL BE USED.
2. COPPER SERVICES SHALL BE CONTINUOUS WITH NO JOINTS FROM CORP. STOP TO QUARTER BEND.
3. ALL COPPER FITTINGS SHALL BE COMPRESSION FITTINGS.
4. METERS SHALL NOT BE INSTALLED IN EXISTING OR PROPOSED SIDEWALK OR DRIVEWAYS.
5. METER BOX SHALL BE:
   ALLIANCE 1200.SBTR (NON–TRAFFIC)
   ROTEC DFW36C–SBSM (TRAFFIC)
6. ANGLE BALL METER VALVES SHALL BE INSTALLED AND SHALL MEET THE SPECIFICATIONS OF CATALOG NO. BA13–332W AS MANUFACTURED BY THE FORD METER BOX COMPANY OR EQUAL.
7. ANGLE STOPS SHALL BE FULL ROTATION WITH LOCK RINGS AND METER SPUD.

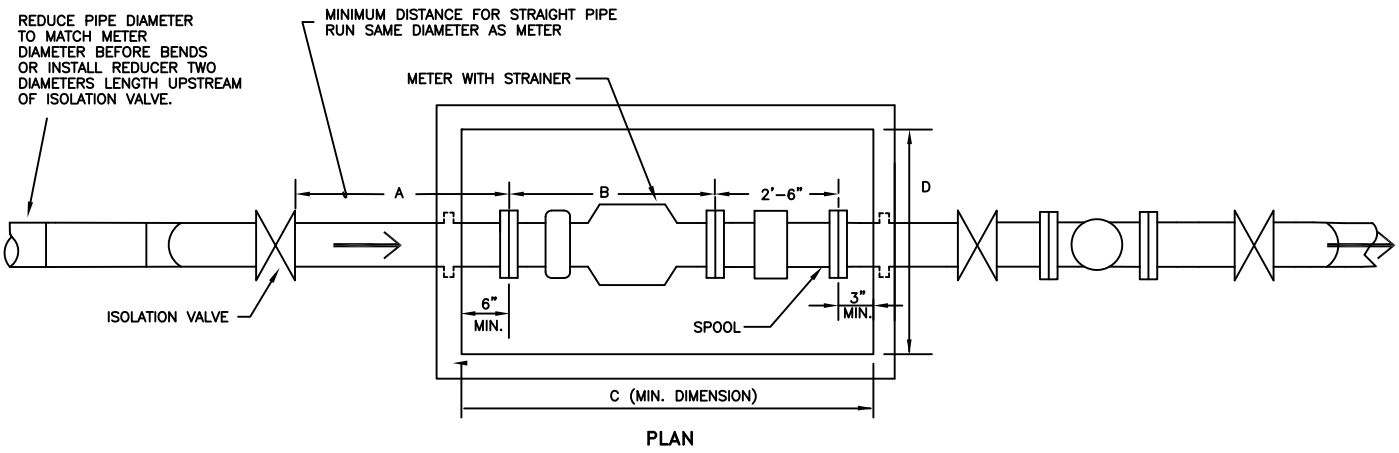
W–07	SINGLE WATER SERVICE (1" SERVICE FOR 1" & 3/4" OUTLETS)	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		



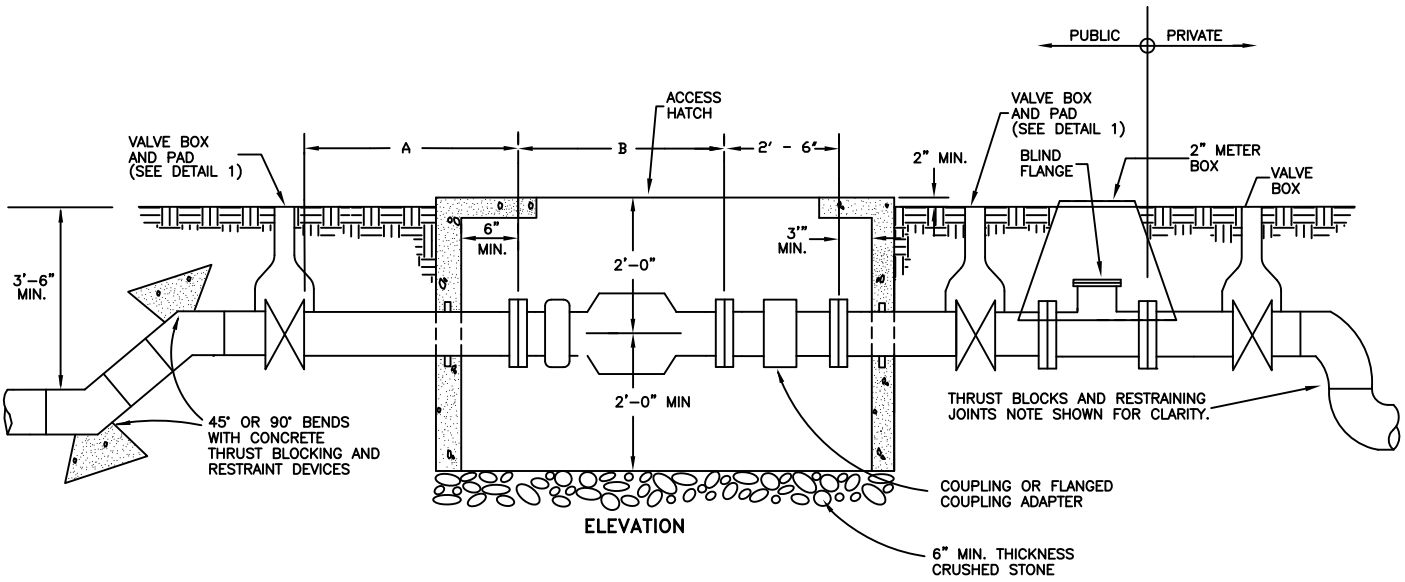
NOTES

1. DOUBLE STRAPPED BRONZE, STAINLESS STEEL, OR EPOXY COATED DUCTILE IRON SADDLES SHALL BE USED TO TAP ALL MAINS.
2. COPPER SERVICES SHALL BE CONTINUOUS WITH NO INTERMEDIATE FITTINGS ALLOWED.
3. ALL COPPER FITTINGS SHALL BE COMPRESSION FITTINGS.
4. INSTALL 2" PIPE AND TAP FOR BOTH 1 1/2" AND 2" METER INSTALLATIONS.
5. DOUBLE WRAP BRONZE STRAPS WITH POLY WRAP.

W–08	2" WATER SERVICE/FLUSH POINT (2" SERVICE FOR 1 1/2" & 2" OUTLETS)	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		



PLAN



ELEVATION

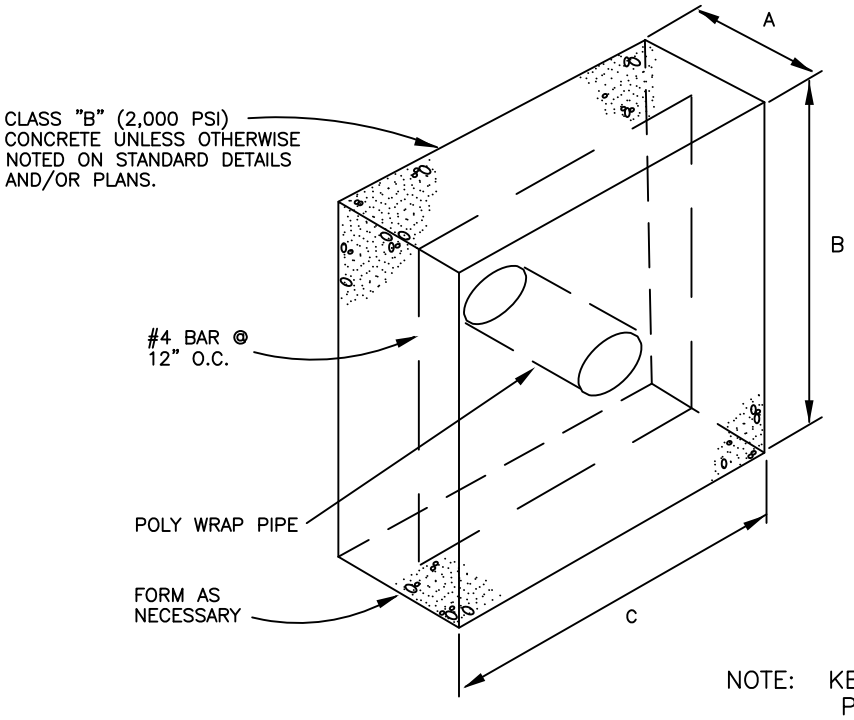
NOTES

1. ALL PIPING AND FITTINGS IN METER VAULT SHALL BE FLANGED DUCTILE IRON, CLASS 350.
2. CONTACT WATER UTILITY MANAGER AT 817-447-5410 FOR CURRENT INFORMATION ON METER AND VAULTS PRIOR TO DESIGN OF METER FACILITY. VAULTS MAY BE CONSTRUCTED OF CAST-IN-PLACE CONCRETE, PRECAST CONCRETE OR PLASTIC AS APPROVED BY CITY.
3. METER VAULT SHALL NOT BE INSTALLED IN EXISTING OR PROPOSED SIDEWALKS, DRIVEWAYS, PAVEMENTS OR ANY TRAFFIC AREAS.
4. ACCESS HATCH FOR METER VAULT SHALL BE 3'-6" X 3'-6" AS MANUFACTURED BY BILCO OR APPROVED EQUAL. HATCH SHALL BE LOCATED FOR EASE OF ENTRY AND ACCESS TO METER.
5. TOP OF VAULT SHALL BE 2" ABOVE GROUND WITH DRAINAGE SLOPING DOWN AWAY FROM VAULT.

MINIMUM VAULT AND PIPING DIMENSIONS

METER	A (5ø MIN.)	B	C	D
3"	15" (MIN.)	19"	4'-10"	4'-0"
4"	20' (MIN.)	23"	5'-2"	4'-0"
6"	30" (MIN.)	27"	5'-6"	4'-0"
8"	40" (MIN.)	30"	5'-9"	4'-6"
10"	50' (MIN.)	41"	6'-8"	4'-6"

W-09	TYPICAL METER VAULT AND APPURTENANCES (3" AND LARGER)	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		

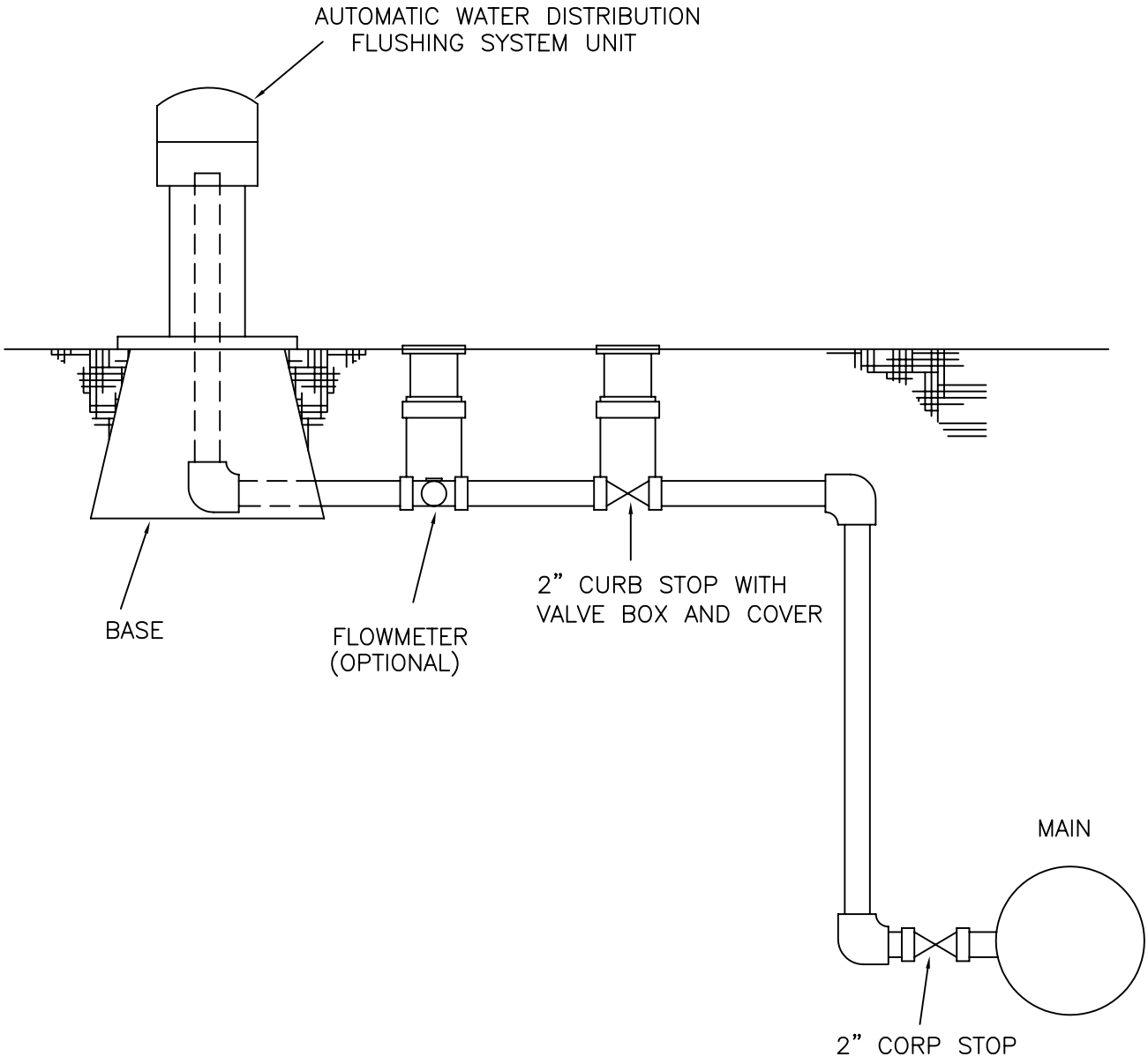


NOTE: KEEP CONCRETE CLEAR OF PIPE JOINTS & BOLTS.

BENDS		90°	45°	22–1/2°	11–1/4°
PIPE NOMINAL DIA. (in.)	*VOL. REQ'D. C.F. A FT. 6 B FT. C FT.	28.27 1.75 4.0 4.0	22.61 1.5 3.88 3.88	11.33 1.0 3.36 3.36	5.65 0.75 2.75 2.75
	*VOL. REQ'D. C.F. A FT. 8 B FT. C FT.	50.27 2.0 5.0 5.0	40.21 1.75 4.8 4.8	20.11 1.5 3.66 3.66	10.05 1.0 3.2 3.2
	*VOL. REQ'D. C.F. A FT. 10 B FT. C FT.	78.54 2.25 5.9 5.9	62.83 2.0 5.6 5.6	31.41 1.75 4.25 4.25	15.71 1.5 3.25 3.25
	*VOL. REQ'D. C.F. A FT. 12 B FT. C FT.	153.94 4.0 6.2 6.2	123.15 3.5 6.0 6.0	61.57 2.0 5.54 5.54	30.79 1.75 4.2 4.2

*VOLUME CALCULATED ON THE BASIS OF CONCRETE REACTING THRUST ON THE RESPECTIVE BENDS UNDER AN INTERNAL PRESSURE OF 150 PSIG AT THE RATE OF 150 LB. WT. PER CU. FT. OF CONCRETE.

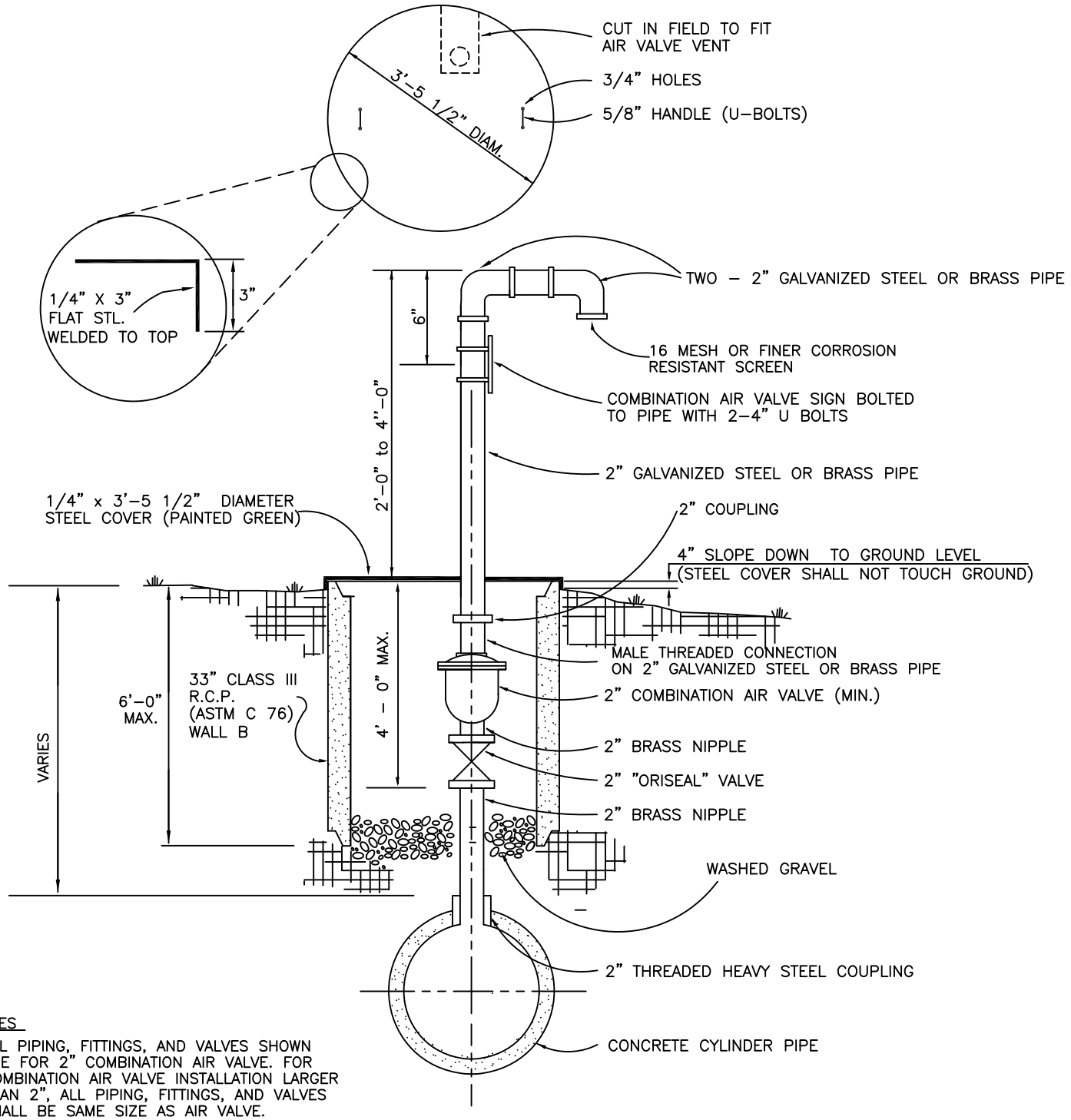
W–10	VERTICAL TIE–DOWN BLOCK	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		



NOTES:

1. UNIT SHALL BE HYDRO-GUARD STANDARD INTEGRATED UNIT (HG1-INT) OR APPROVED EQUAL.
2. INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.
3. UNIT SHALL BE INSTALLED AT ALL DEADEND WATER MAINS.

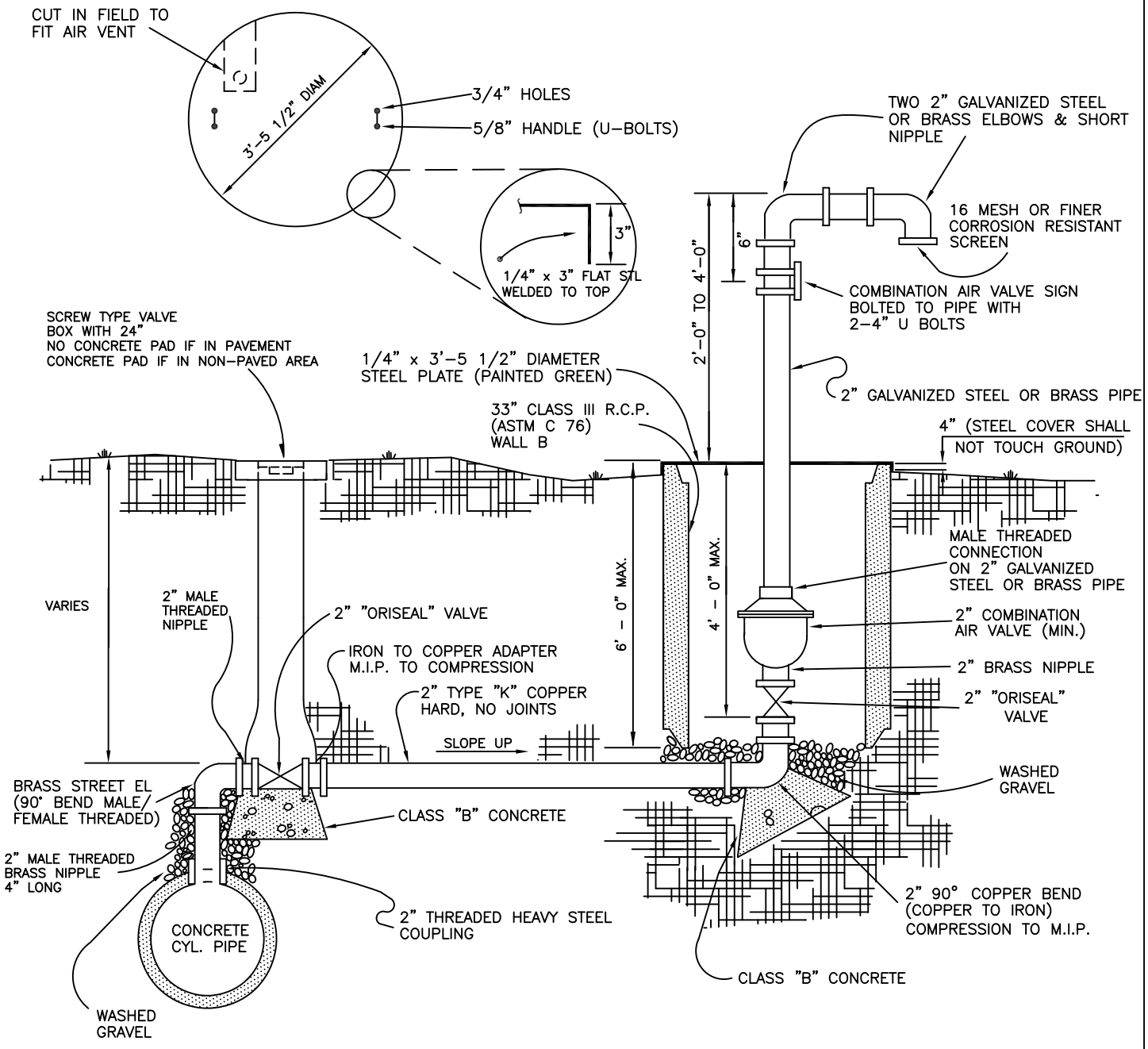
W-11	AUTOMATIC WATER DISTRIBUTION FLUSHING SYSTEM	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		



NOTES

1. ALL PIPING, FITTINGS, AND VALVES SHOWN ARE FOR 2" COMBINATION AIR VALVE. FOR COMBINATION AIR VALVE INSTALLATION LARGER THAN 2", ALL PIPING, FITTINGS, AND VALVES SHALL BE SAME SIZE AS AIR VALVE.
2. ALL ABOVE GROUND PIPING, FITTINGS, SIGNS, ETC., SHALL BE BRUSH PAINTED WITH TWO COATS OF ALUMINUM PAINT. (NO SPRAYING).

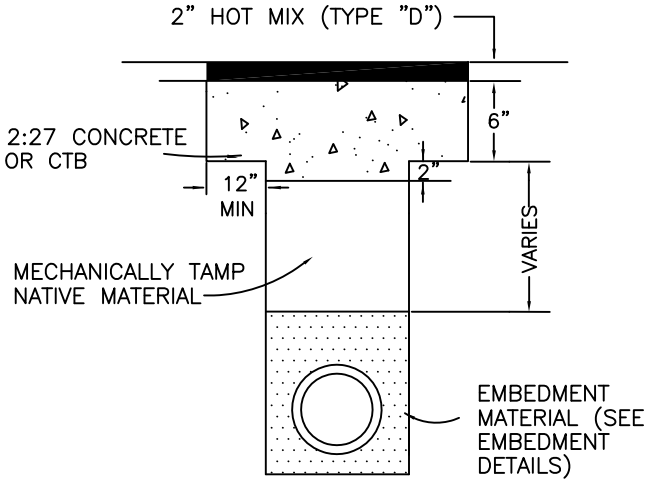
W-12	COMBINATION AIR VALVE INSTALLATION	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		



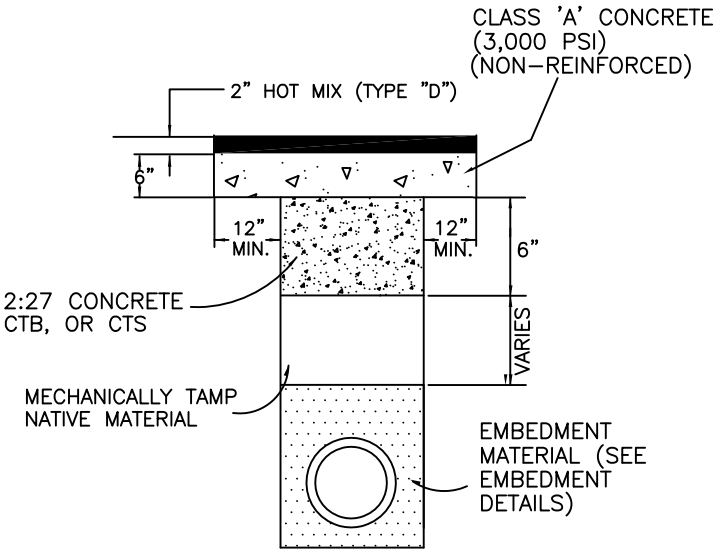
NOTES

1. ALL PIPING, FITTINGS , AND VALVES SHOWN ARE FOR 2" COMBINATION AIR VALVE. FOR COMBINATION AIR VALVE INSTALLATION LARGER THAN 2", ALL PIPING , FITTINGS, AND VALVES SHALL BE THE SAME SIZE AS AIR VALVE.
2. ALL ABOVE GROUND PIPING, FITTINGS, SIGNS, ETC., SHALL BE BRUSH PAINTED WITH TWO COATS OF ALUMINUM PAINT. (NO SPRAYING).

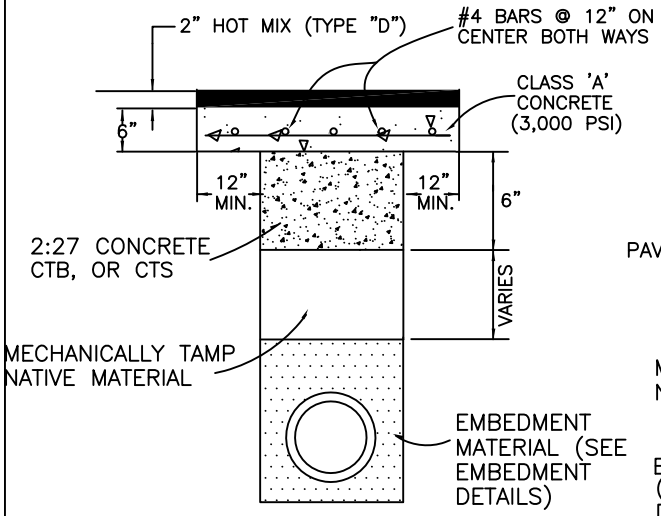
W-13	COMBINATION AIR VALVE INSTALLATION OFFSET FROM PIPE	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		



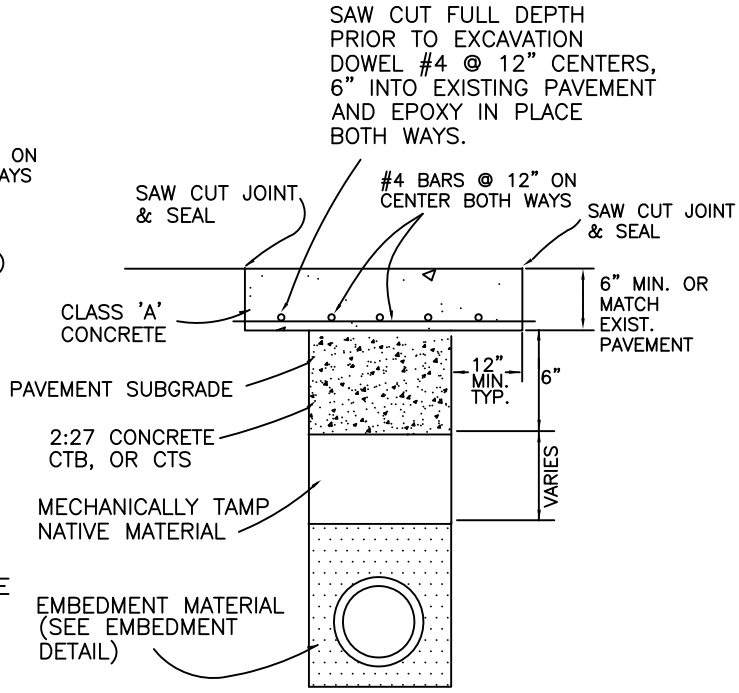
RESIDENTIAL/COUNTY ROAD



COLLECTOR STREET



MAJOR ARTERIALS & THOROUGHFARES



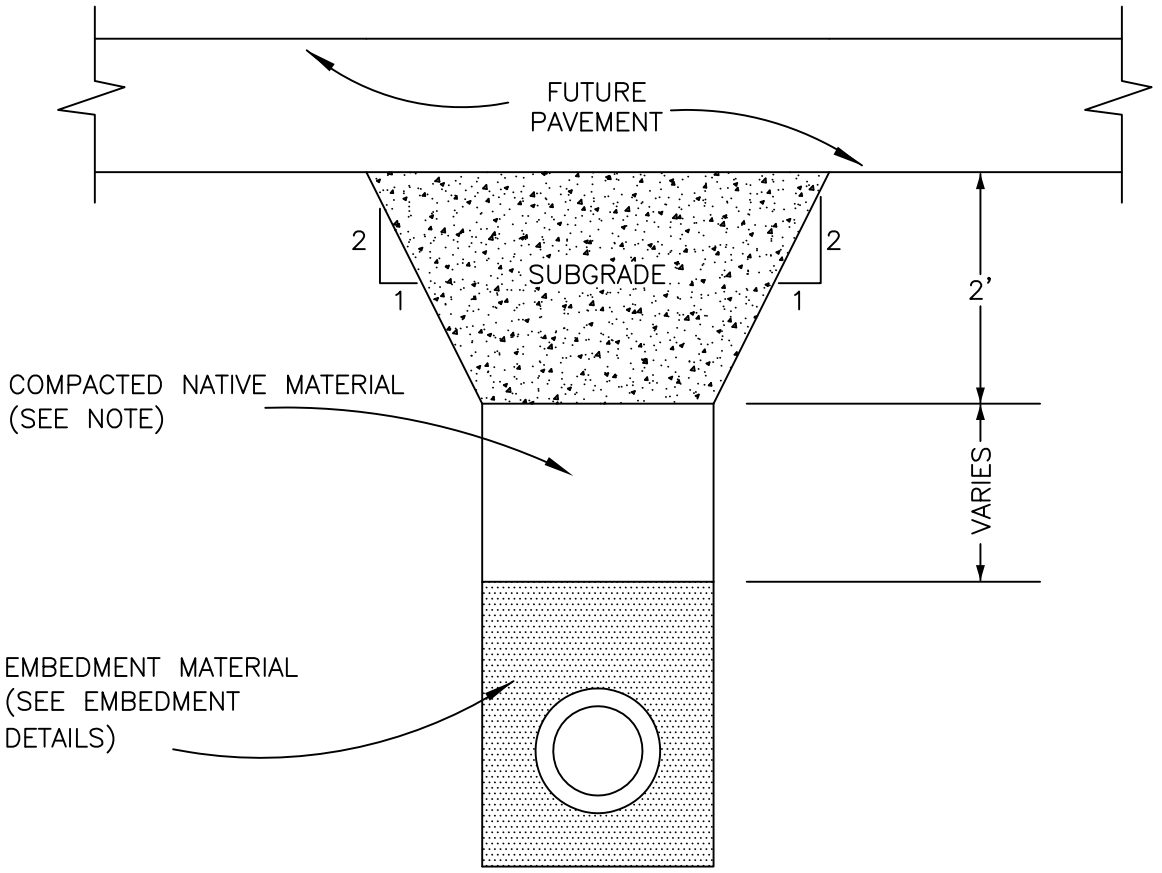
CONCRETE STREET

NOTES:

1. A SAW SHALL BE USED TO CUT ASPHALT OR CONCRETE FULL DEPTH PRIOR TO OPENING THE DITCH IN ORDER TO INSURE A NEAT STRAIGHT EDGE. SEE STANDARD SPECIFICATIONS FOR REQUIRED EMBEDMENT.

2. CTB = CEMENT TREATED BASE (CONTAINS AGGREGATE)
   CTS = CEMENT TREATED SAND
   BOTH MATERIALS SHALL BE MECHANICALLY TAMPED.

W-14	EXISTING STREET BACKFILL AND REPAIR	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		



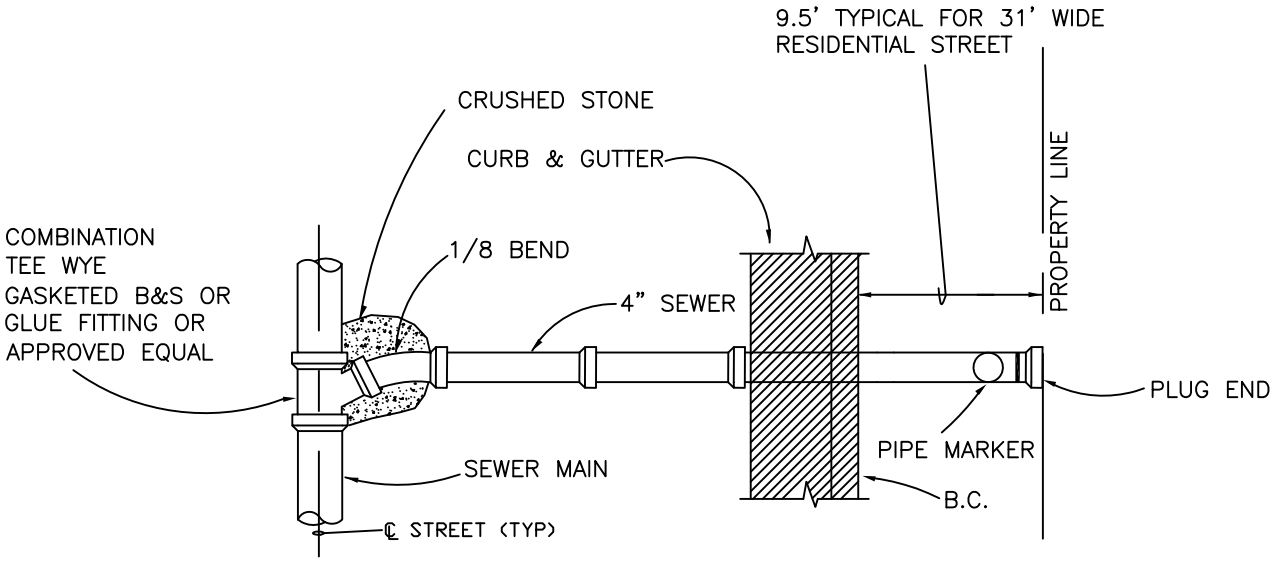
NOTE:

FOR LINES BEING LAID PRIOR TO NEW STREET CONSTRUCTION, WHICH WILL LIE BENEATH PAVEMENT OR CURB AND GUTTER, BACKFILL ABOVE PIPE EMBEDMENT SHALL CONSIST OF NATIVE MATERIAL, COMPACTED IN MAX. 6" TO 9" LIFTS (COMPACTED THICKNESS) TO 95% STANDARD PROCTOR DENSITY AT OPTIMUM MOISTURE CONTENT ±2%.

W–15	STREET BACKFILL PRIOR TO STREET CONSTRUCTION	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		

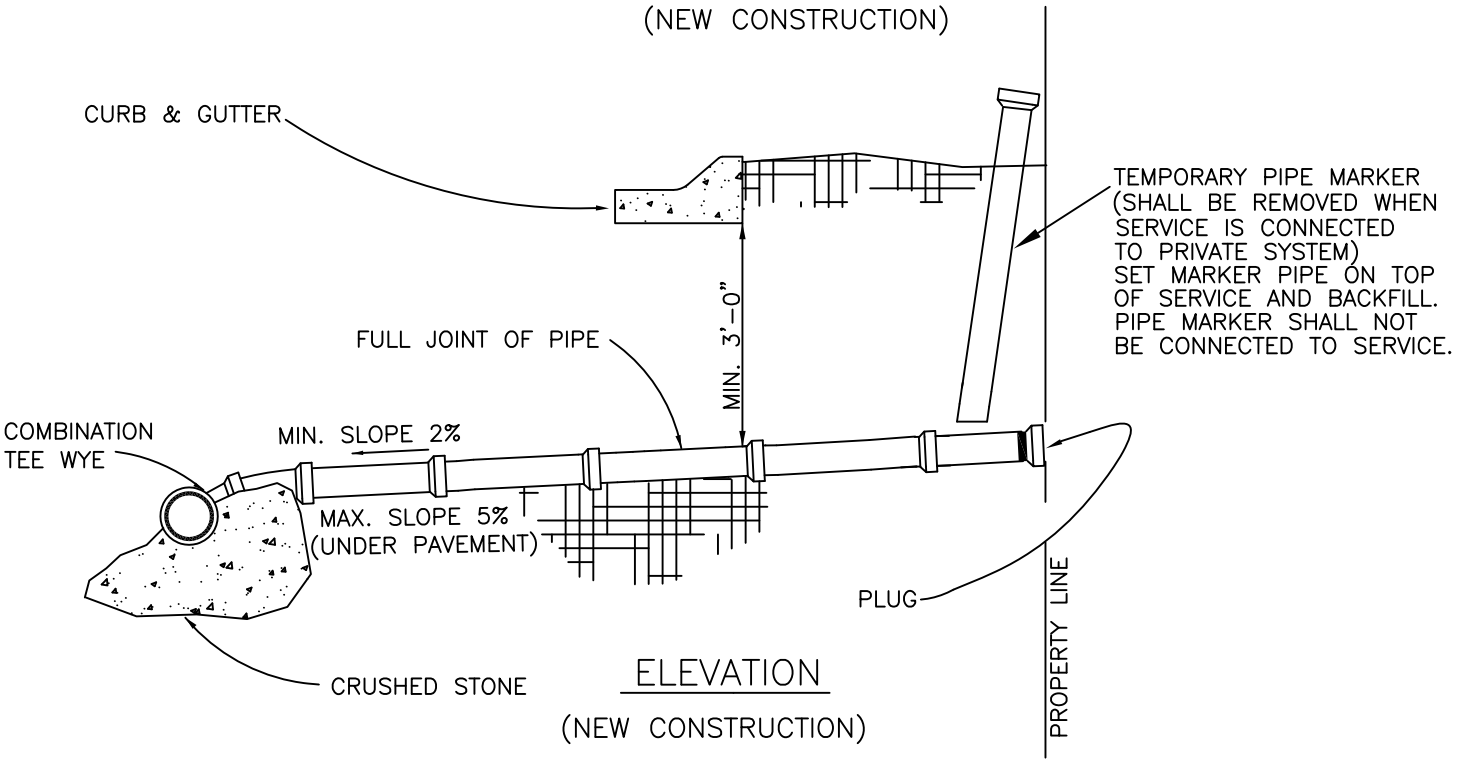
SANITARY SEWER SYSTEM DETAILS

S-01	Sanitary Sewer Service
S-02	Deep Sanitary Sewer Service
S-03	Precast Concrete Sanitary Sewer Manhole
S-04	Cast in Place Sanitary Sewer Manhole
S-05	Sanitary Sewer Embedment
S-06	Watertight Manhole Frame and Cover
S-07	Cleanout
S-08	Internal Drop Manhole (new construction)
S-09	Internal Drop Manhole (existing manhole)
S-10	Concrete Encasement
S-11	Existing Street Backfill and Repair
S-12	Street Backfill Prior to Street Construction
S-13	Precast 4’ Manhole/Sampling Port
S-14	Cast in Place 4’ Manhole/Sampling Port
S-15	Manhole Ring and Cover



PLAN

(NEW CONSTRUCTION)



ELEVATION

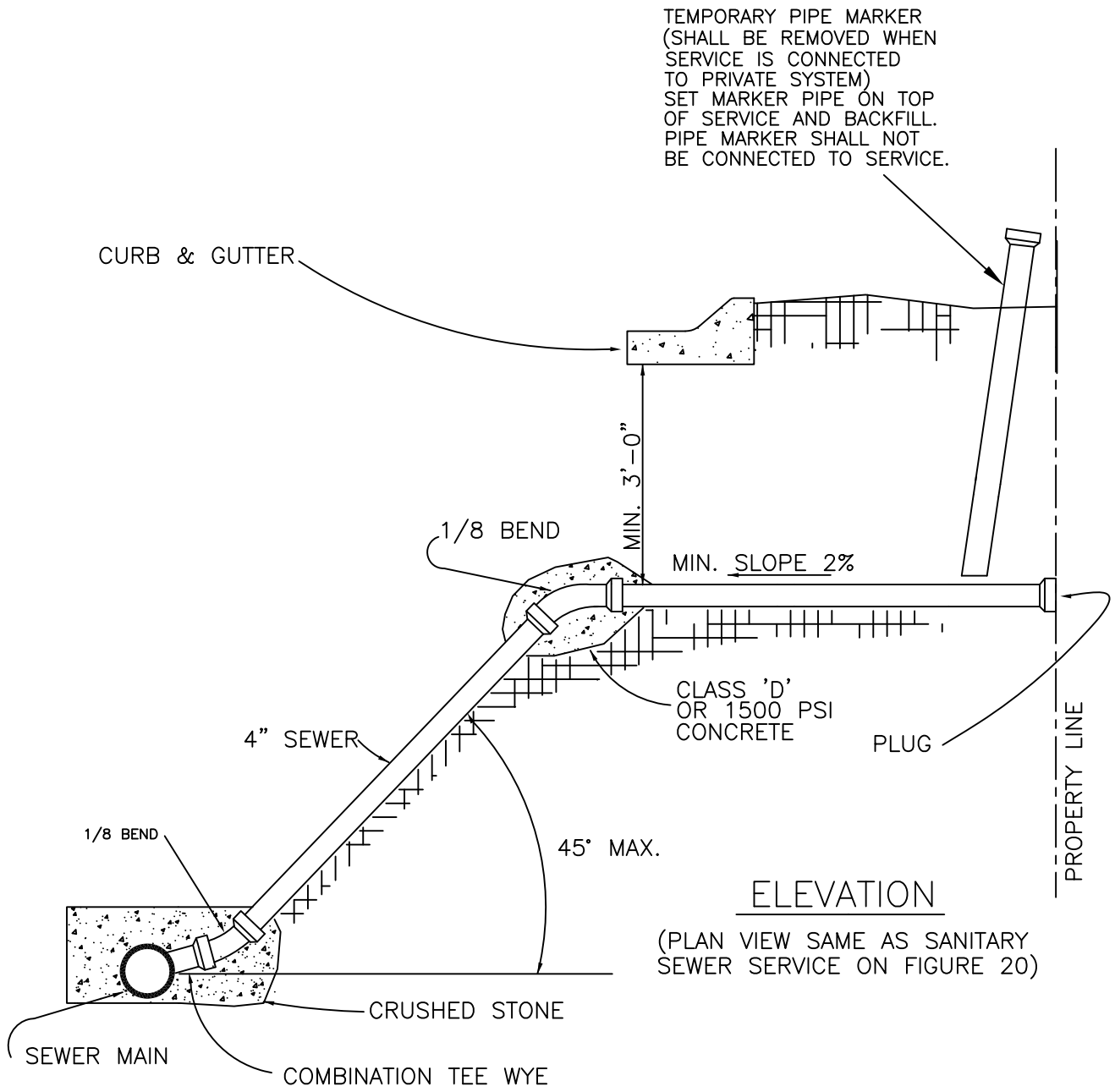
(NEW CONSTRUCTION)

ALL SPLICES OF SEWER SERVICES THAT ARE NOT BELL AND SPIGOT SHALL REQUIRE A NON-SHEAR CT ADAPTER WITH HOSE CLAMPS.

CONNECTION TO AN EXISTING MAIN:

CONNECTION TO AN EXISTING MAIN SHALL BE ACHIEVED WITH CONNECTION OF A BANDED FLEX SADDLE OR AN APPROPRIATELY SIZED RIGID WYE SADDLE. EACH FITTING SHOULD BE CMPLETELY ENCASED IN CONCRETE.

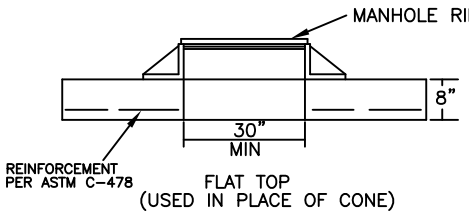
S-01	SANITARY SEWER SERVICE	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		

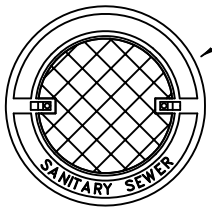


ELEVATION

(PLAN VIEW SAME AS SANITARY SEWER SERVICE ON FIGURE 20)

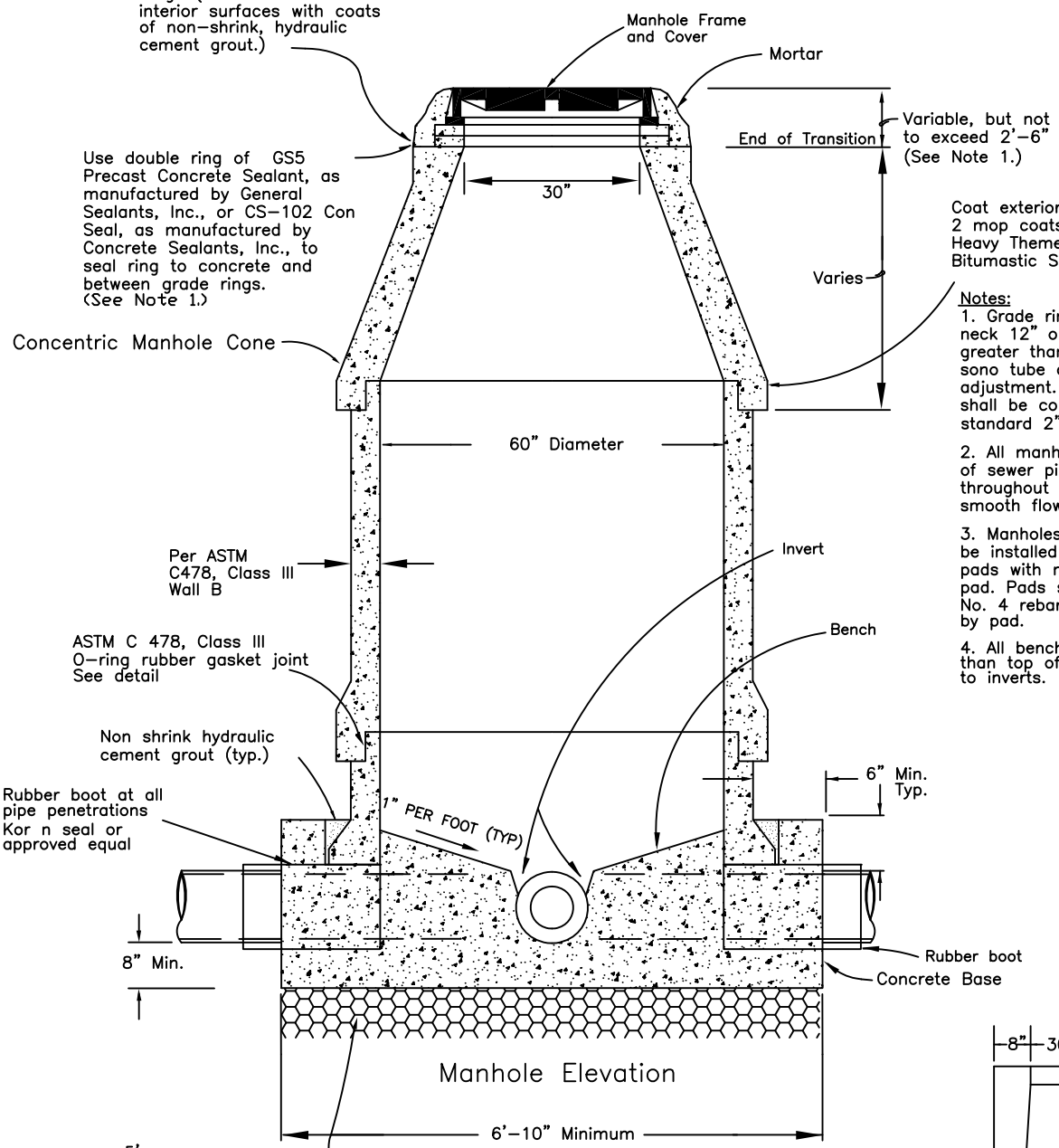
S-02	DEEP SEWER SERVICE	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		





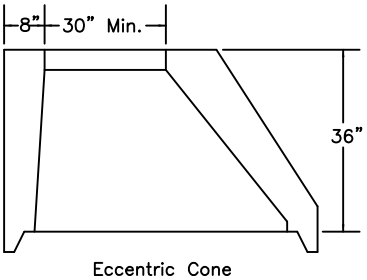
24" C.I. FRAME AND COVER
BASS AND HAYES PATTERN
VRM-300 OR EQUAL MARKED
SANITARY SEWER

Manholes constructed within 100 year flood plain shall have watertight ring and lid.

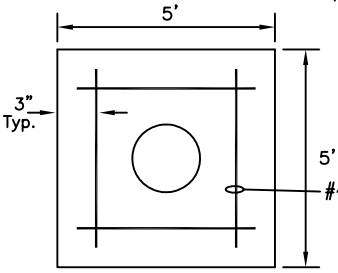


Notes:

1. Grade rings may be used to adjust neck 12" or less. When adjustment is greater than 12", contractor shall use sono tube and place concrete for neck adjustment. Precast concrete grade rings shall be constructed by manufacturer in standard 2", 3", 6", 8" and 12" lengths.
2. All manhole inverts shall be full depth of sewer pipes. All inverts shall extend throughout manhole bottom and provide smooth flow transitions.
3. Manholes in undeveloped areas shall be installed with 5'x5'x5" thick concrete pads with manhole cover in center of pad. Pads shall be reinforced with four No. 4 rebars. Install fiberglass MH marker by pad.
4. All benches shall be slightly higher than top of pipes and slope gently down to inverts.

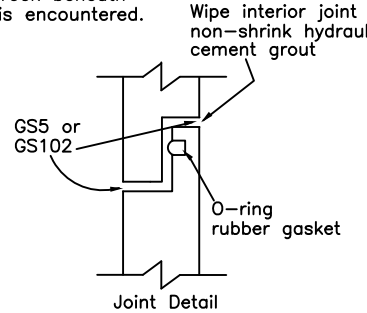


Eccentric Cone



MANHOLE PAD (5" thick)
FOR NON-TRAFFIC AREAS

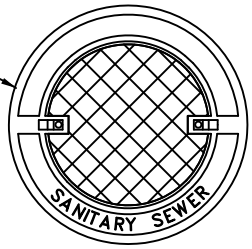
Use 6" min. layer of washed rock beneath manhole where ground water is encountered. Bottom to be poured in dry.

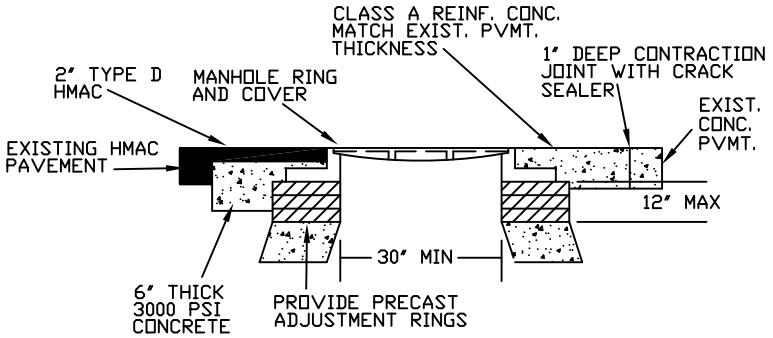


Joint Detail

S-03	PRECAST CONCRETE MANHOLE	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		

30" Cast Iron Manhole Frame (to be furnished and installed by contractor) Bass and Hayes VRM-30 with pick bars or equal marked "sanitary sewer"





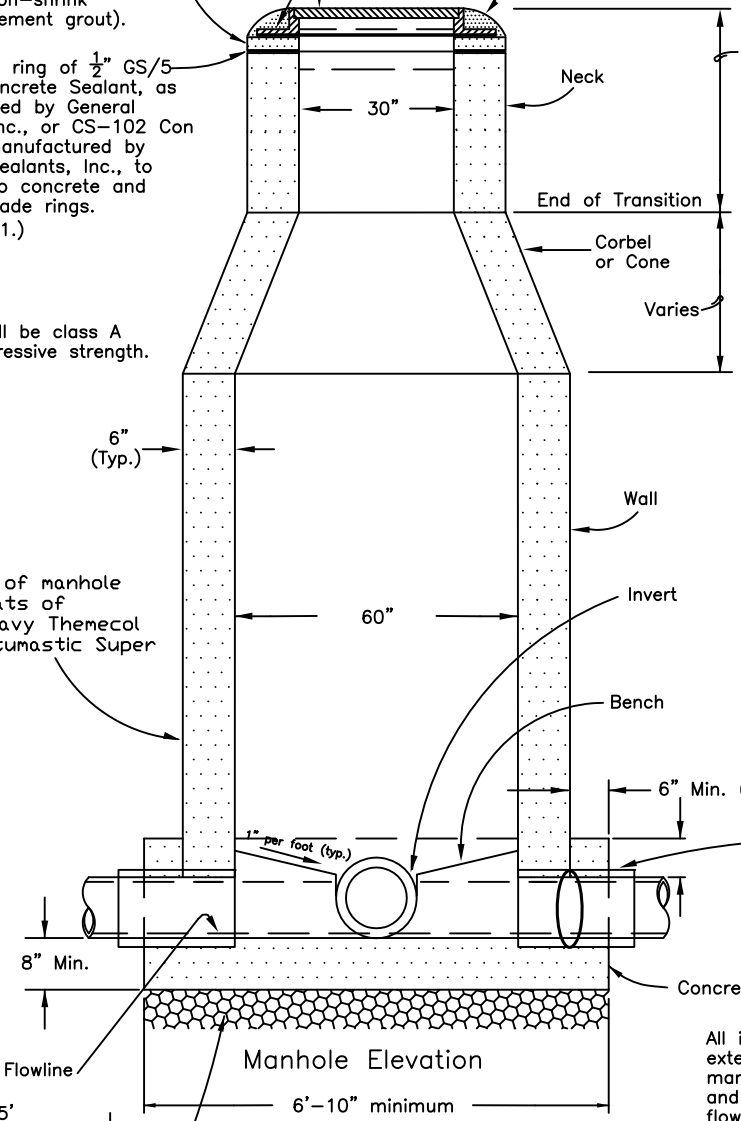
MANHOLE TOP FOR STREET INSTALLATION

34" O.D x 30" I.D. Precast Concrete Grade Rings (Plaster exterior and interior surfaces with smooth coats of non-shrink hydraulic cement grout).

Use double ring of 1/2" GS/5 Precast Concrete Sealant, as manufactured by General Sealants, Inc., or CS-102 Con Seal, as manufactured by Concrete Sealants, Inc., to seal ring to concrete and between grade rings. (See Note 1.)

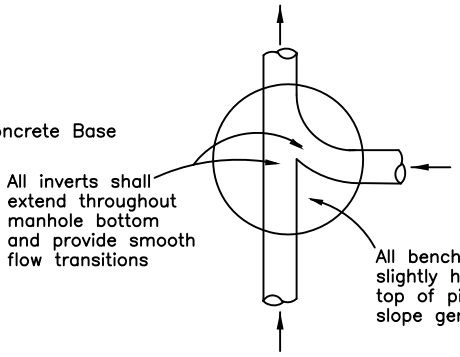
All concrete shall be class A 3,000 psi compressive strength.

Coat Exterior of manhole with 2 mop coats of Themec 450 Heavy Themecol or Koppers Bitumastic Super Service, Black.

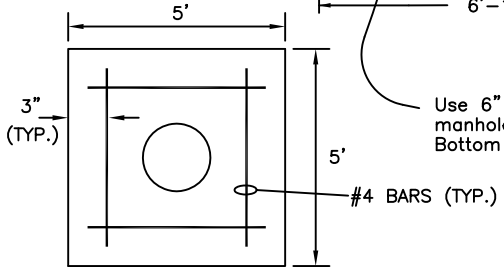


Notes:

1. Grade rings may be used to adjust neck 12" or less. When adjustment is greater than 12", contractor shall use sono tube and place concrete for neck adjustment. Precast concrete grade rings shall be constructed by manufacturer in standard 2", 3", 6", 8" and 12" heights.
2. Contractor shall not remove any forms until 24 hours after concrete is placed. No backfill shall begin until 96 hours after concrete is placed.
3. All manhole inverts shall be full depth of sewer pipes. All inverts shall be formed to center of manhole and shall provide smooth flow transitions.
4. Manholes in undeveloped areas shall be installed with 5'x5'x5" thick concrete pads with cover in center of pad. Pads shall be reinforced with four No. 4 rebars. Install fiberglass MH marker by pad.
5. Contractor shall rub all interior surfaces to a smooth finish.
6. Manhole to be addjusted to final grade prior to paving operation on new concrete streets.
7. Manholes constructed within 100-year flood plain shall have watertight ring and lid.

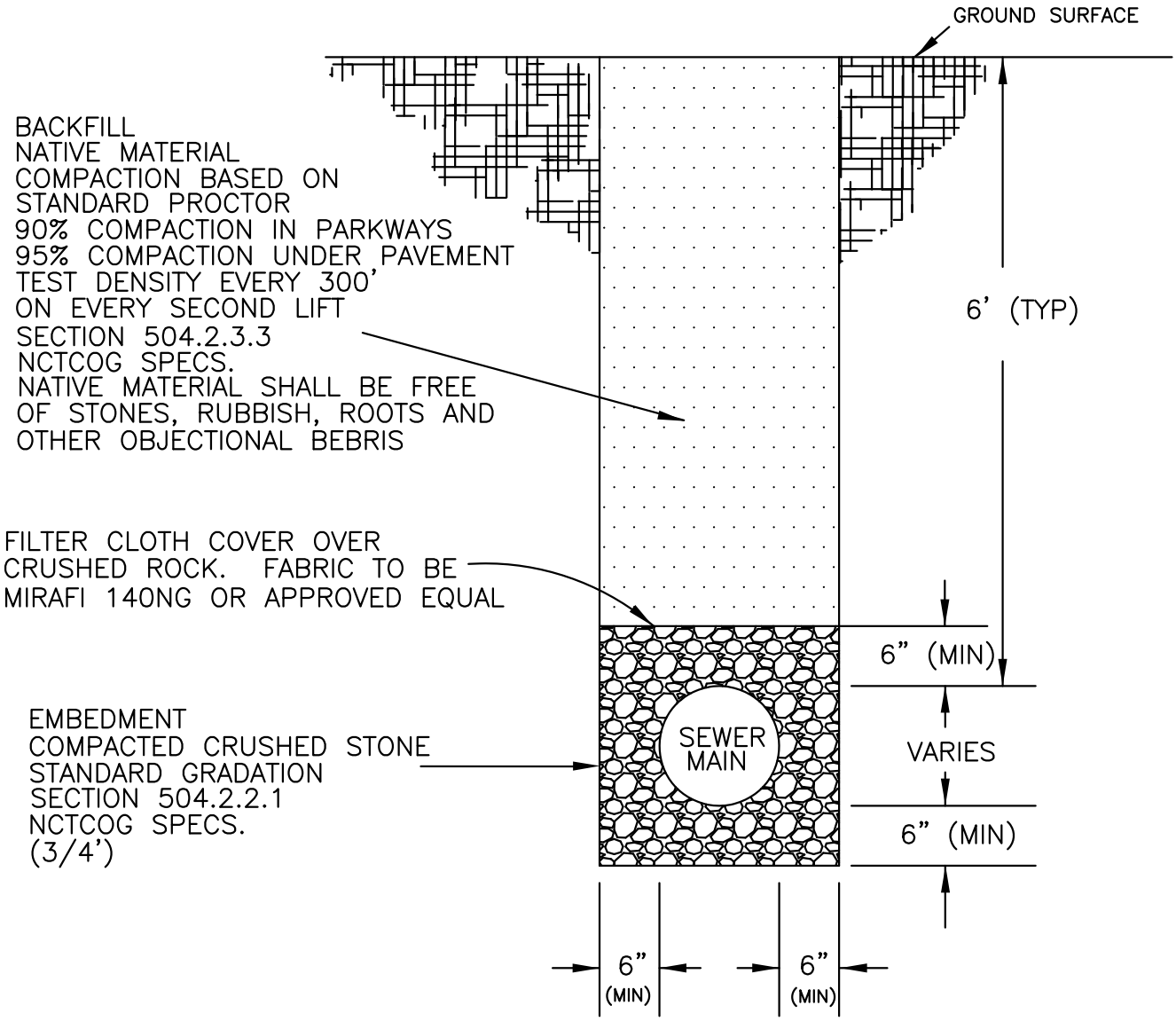


Use 6" min. layer of washed rock beneath manhole where ground water is encountered. Bottom to be poured in dry.

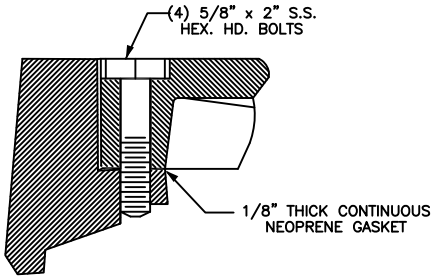


MANHOLE PAD FOR NON-TRAFFIC AREAS

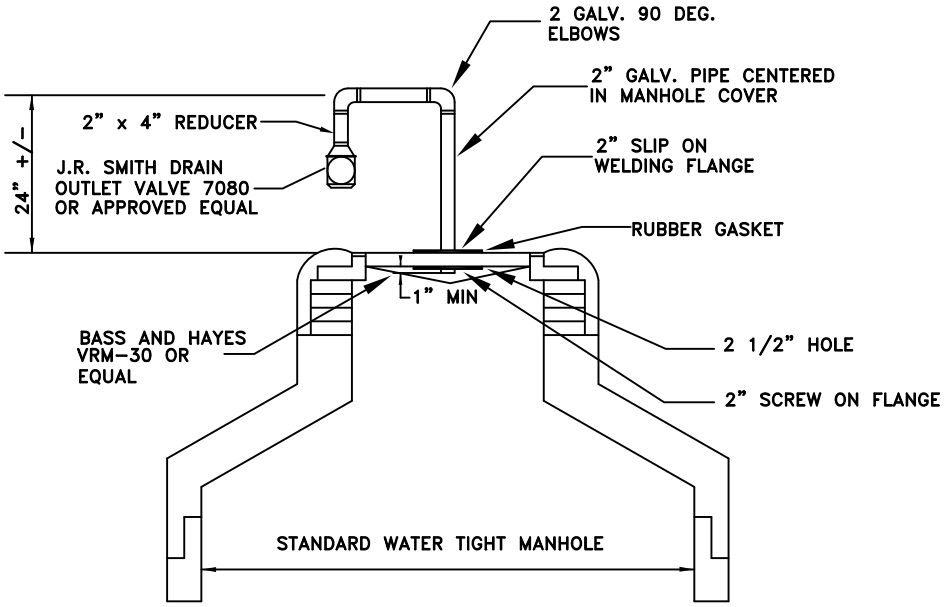
S-04	CAST IN PLACE CONCRETE MANHOLE	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		



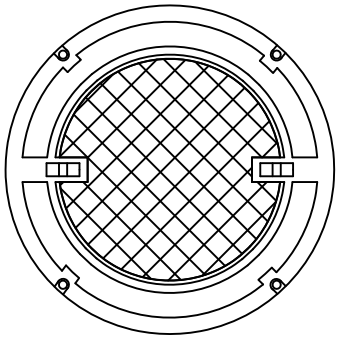
S-05	SANITARY SEWER EMBEDMENT	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		



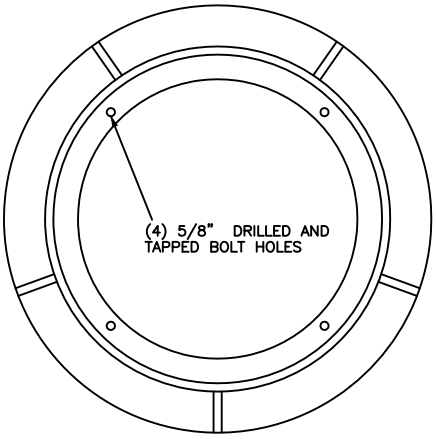
WATERTIGHT DETAIL



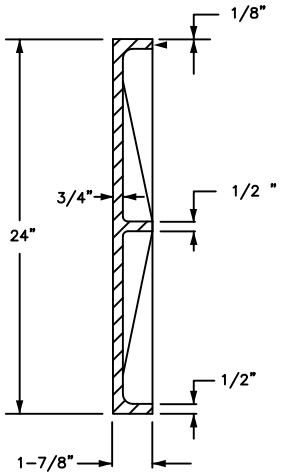
VENT FOR WATERPROOF MANHOLES



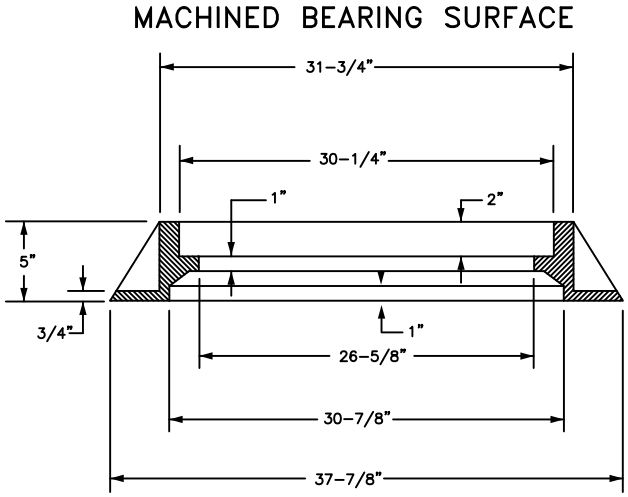
COVER FACE



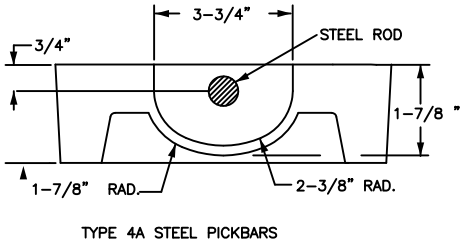
FRAME TOP VIEW



COVER SECTION



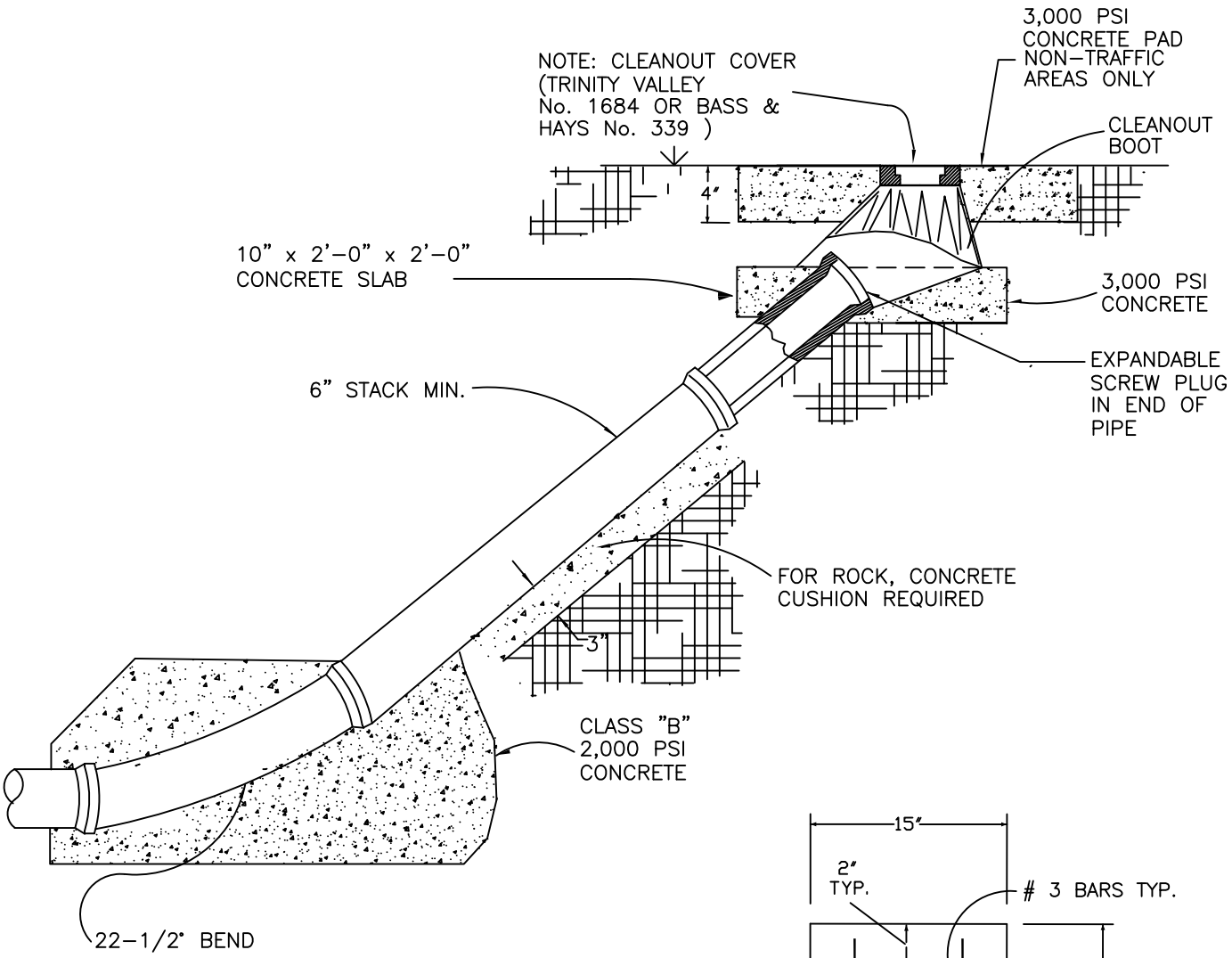
FRAME SECTION

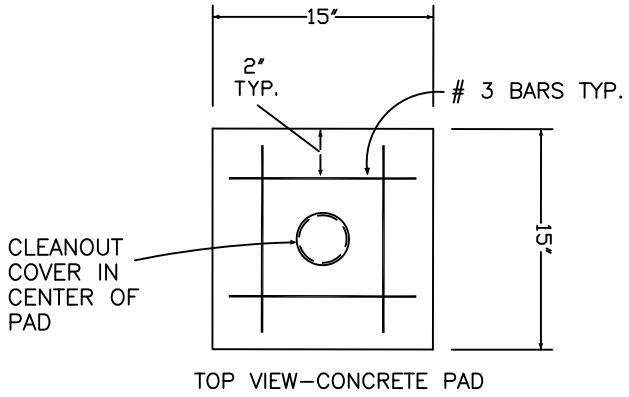


TYPE 4A STEEL PICKBARS

PICKBAR DETAIL

S-06	WATERTIGHT MANHOLE FRAME AND COVER	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		



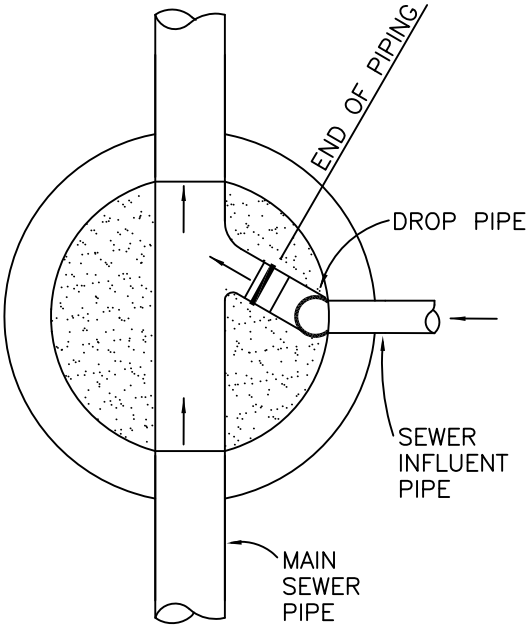


TOP VIEW–CONCRETE PAD

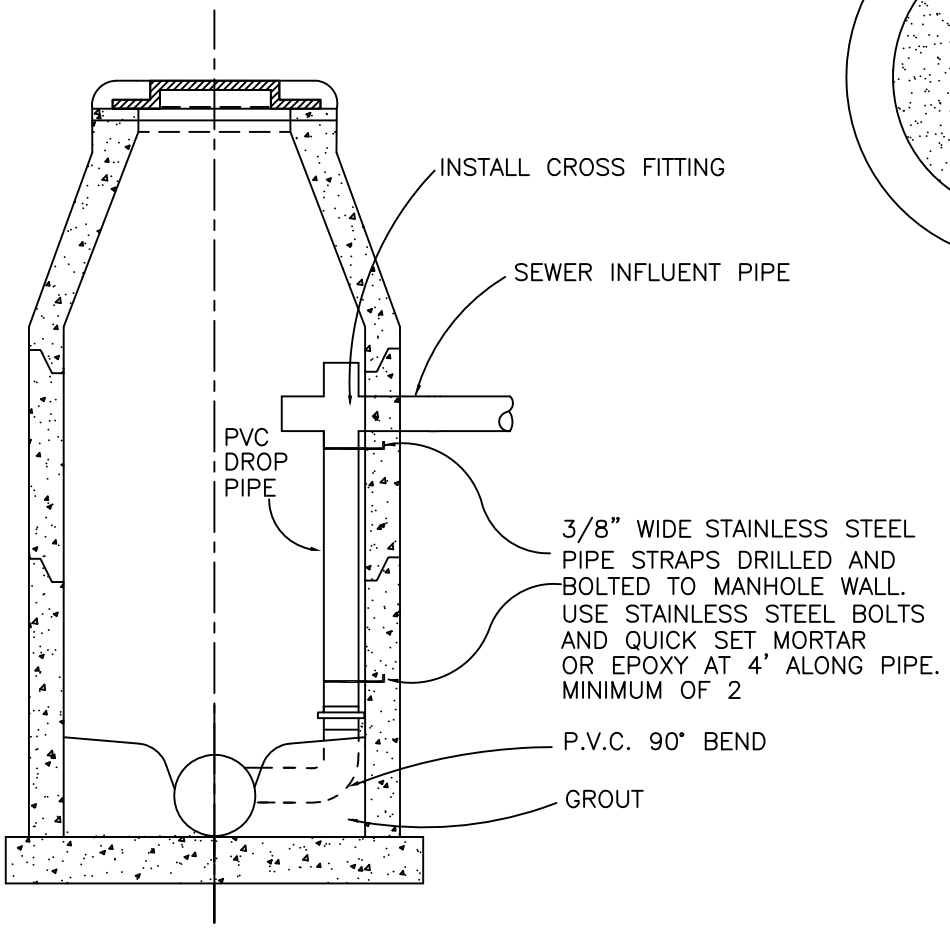
CLEANOUTS SHALL ONLY BE INSTALLED AT THE ENDS OF LINES THAT WILL BE EXTENDED WITH A FUTURE DEVELOPMENT PHASE.

NOTE: PROVIDE CLEANOUT PAD ON EVERY CLEANOUT NOT IN PAVEMENT

S–07	SANITARY SEWER CLEANOUT	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		



PLAN

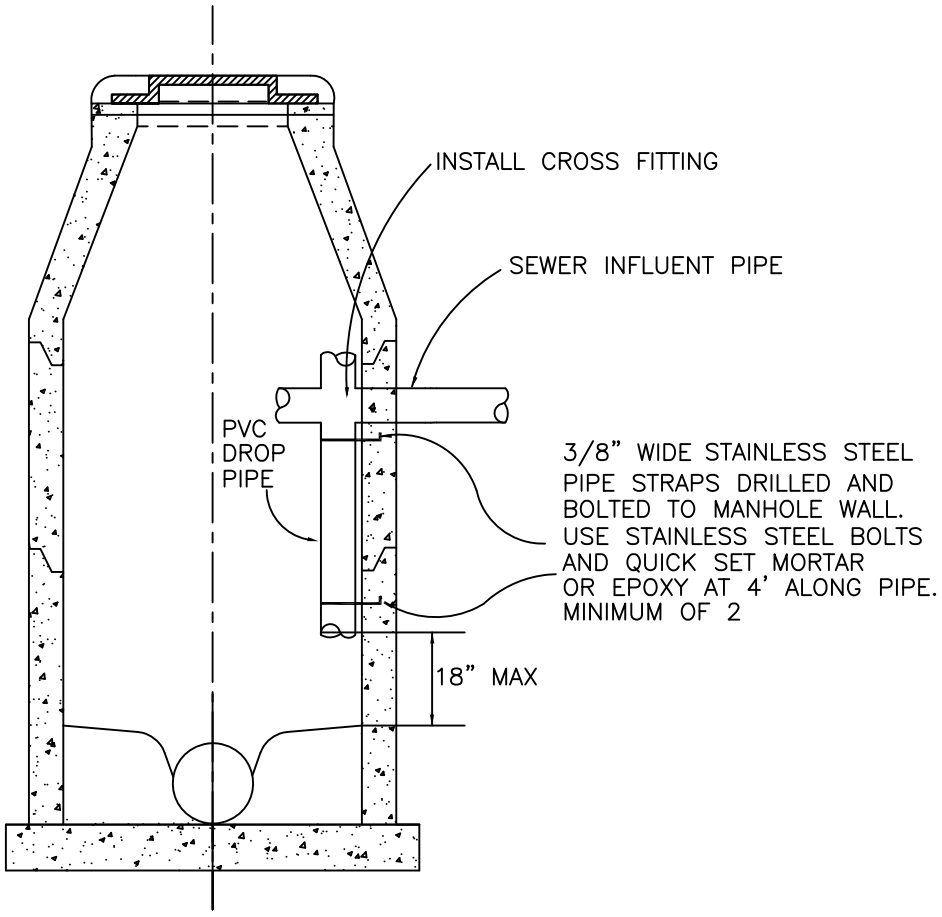


ELEVATION

NOTES

1. DROP PIPE SHALL BE ONE SIZE LARGER THAN SEWER INFLUENT PIPE.
2. ALL STANDARD MANHOLE DETAILS IN FIGURES S-03 AND/OR S-04 APPLY TO DROP MANHOLE CONSTRUCTION.
3. ALL DROP MANHOLES SHALL BE 72" DIAMETER.
4. NO DROP PIPING SHALL BE REQUIRED IF SEWER INFLUENT PIPE FLOWLINE IS 18" OR LESS ABOVE MAIN SEWER PIPE FLOWLINES OR IF MAIN SEWER PIPE BENCH IS HIGHER THAN SEWER INFLUENT FLOWLINE.

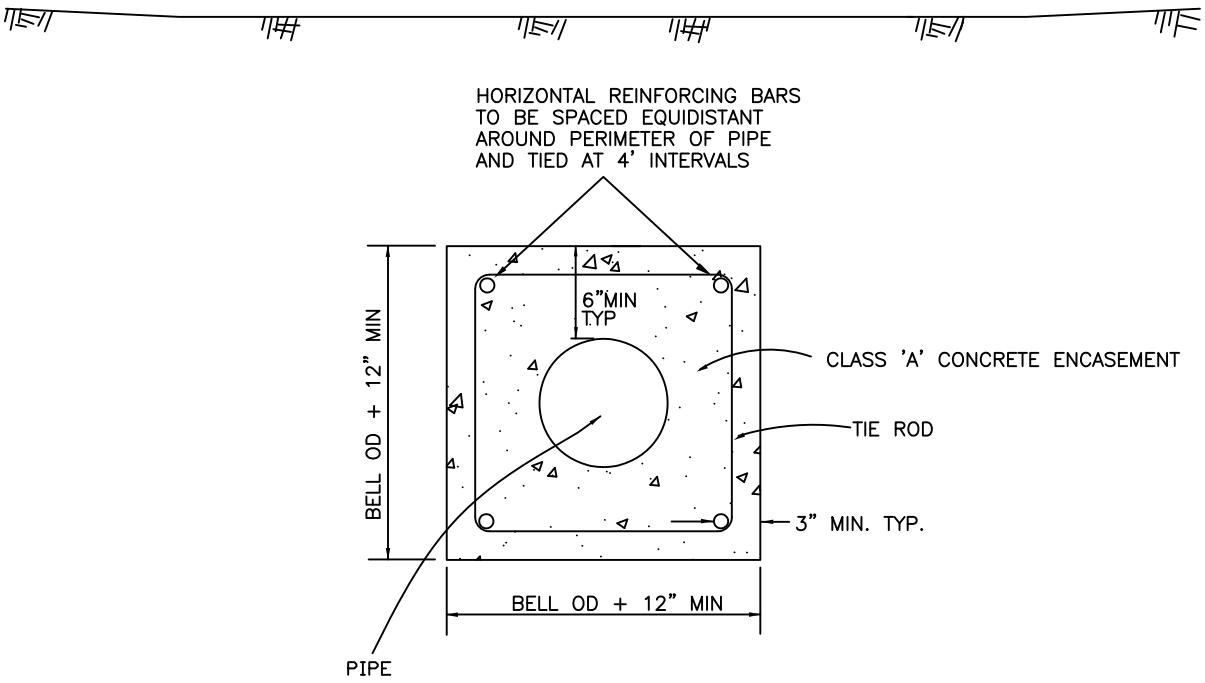
S-08	INTERNAL DROP MANHOLE NEW CONSTRUCTION	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		



NOTES

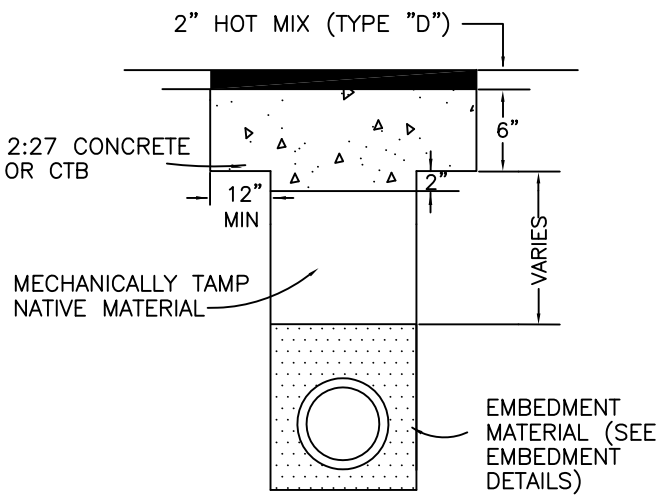
1. DROP PIPE SHALL BE ONE SIZE LARGER THAN SEWER INFLUENT PIPE.
2. NO DROP PIPING SHALL BE REQUIRED IF SEWER INFLUENT PIPE FLOWLINE IS 18" OR LESS ABOVE MAIN SEWER PIPE FLOWLINES OR IF MAIN SEWER PIPE BENCH IS HIGHER THAN SEWER INFLUENT FLOWLINE.

S-09	INTERNAL DROP MANHOLE EXISTING MANHOLE	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		

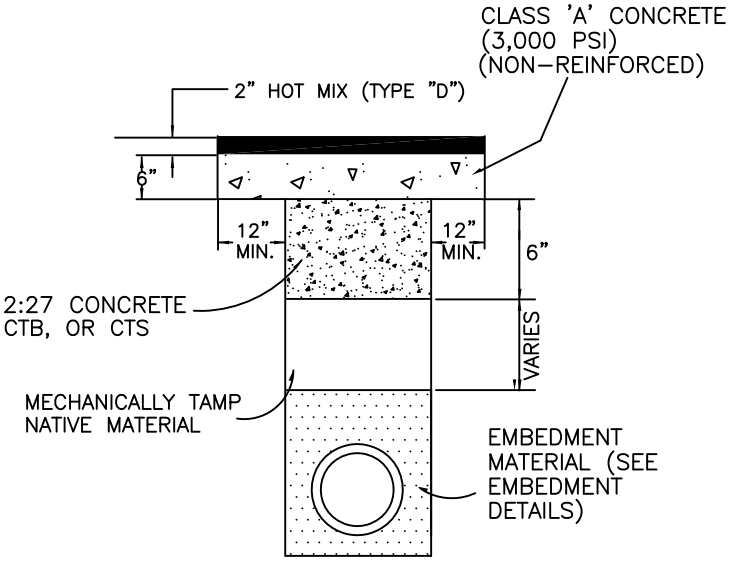


6" – 8" PIPE:	4 – #4	HORIZONTAL REINFORCING BARS	WITH TIE RODS
10"– 12" PIPE:	4 – #5	HORIZONTAL REINFORCING BARS	WITH TIE RODS
15"– 18" PIPE:	8 – #5	HORIZONTAL REINFORCING BARS	WITH TIE RODS
20"– 30" PIPE:	8 – #6	HORIZONTAL REINFORCING BARS	WITH TIE RODS

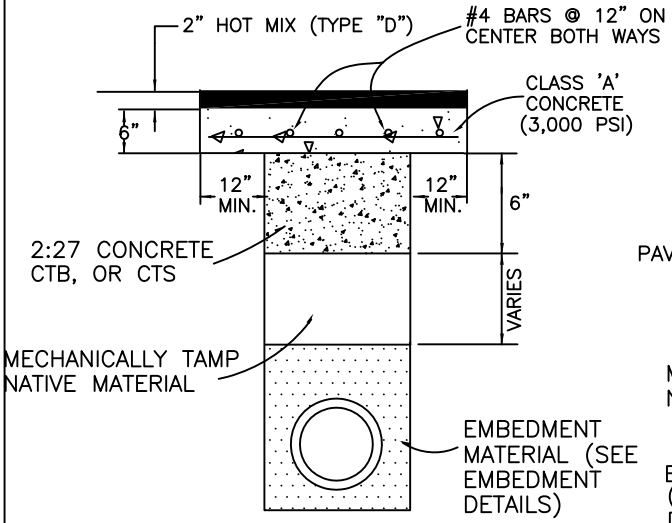
S–10	CONCRETE ENCASEMENT	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		



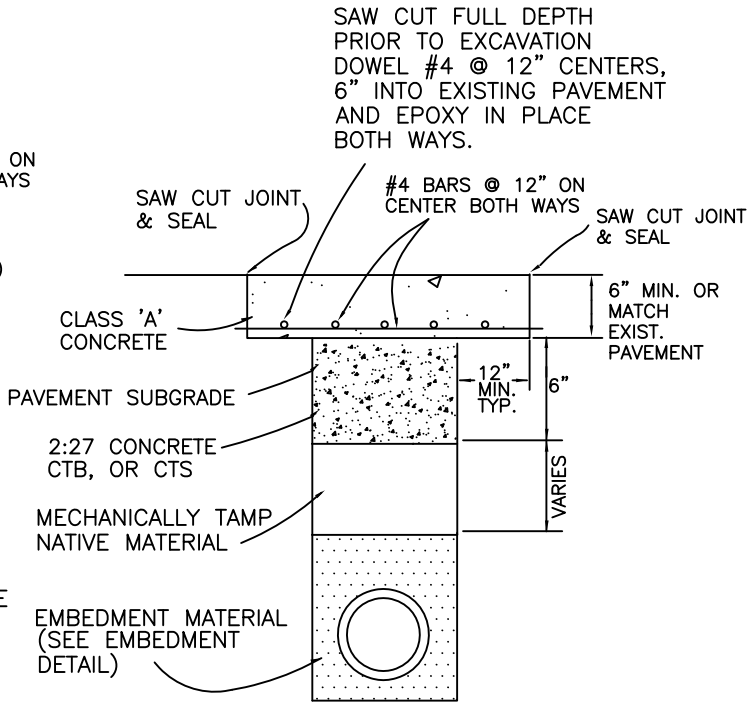
RESIDENTIAL/COUNTY ROAD



COLLECTOR STREET



MAJOR ARTERIALS & THOROUGHFARES



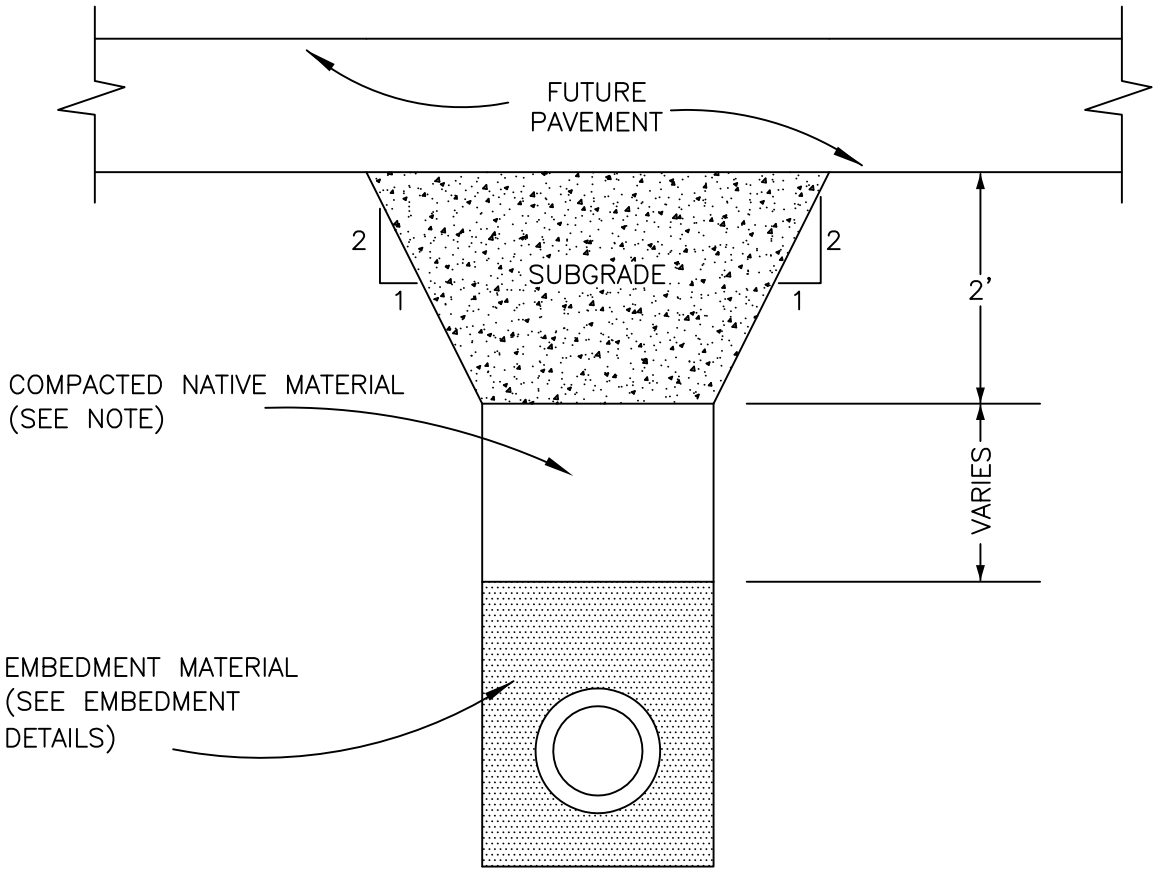
CONCRETE STREET

NOTES:

1. A SAW SHALL BE USED TO CUT ASPHALT OR CONCRETE FULL DEPTH PRIOR TO OPENING THE DITCH IN ORDER TO INSURE A NEAT STRAIGHT EDGE. SEE STANDARD SPECIFICATIONS FOR REQUIRED EMBEDMENT.

2. CTB = CEMENT TREATED BASE (CONTAINS AGGREGATE)
   CTS = CEMENT TREATED SAND
   BOTH MATERIALS SHALL BE MECHANICALLY TAMPED.

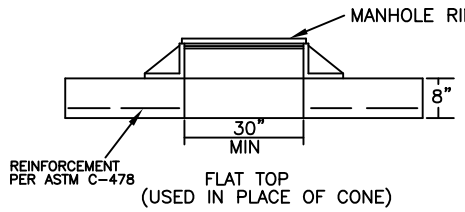
S-11	EXISTING STREET BACKFILL AND REPAIR	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		

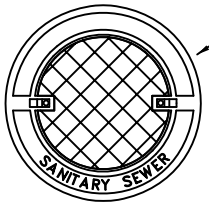


NOTE:

FOR LINES BEING LAID PRIOR TO NEW STREET CONSTRUCTION, WHICH WILL LIE BENEATH PAVEMENT OR CURB AND GUTTER, BACKFILL ABOVE PIPE EMBEDMENT SHALL CONSIST OF NATIVE MATERIAL, COMPACTED IN MAX. 6" TO 9" LIFTS (COMPACTED THICKNESS) TO 95% STANDARD PROCTOR DENSITY AT OPTIMUM MOISTURE CONTENT ±2%.

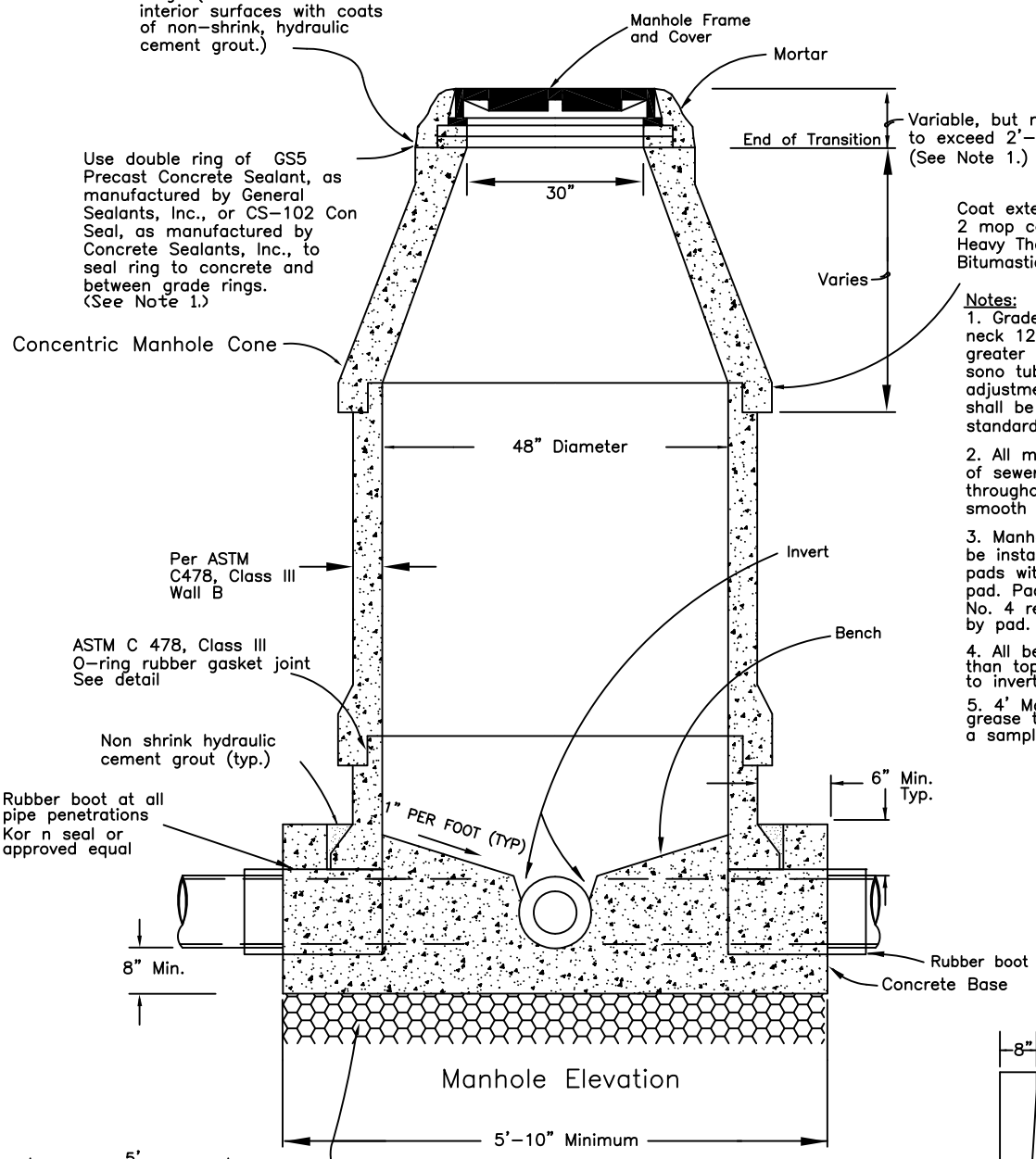
S-12	STREET BACKFILL PRIOR TO STREET CONSTRUCTION	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		





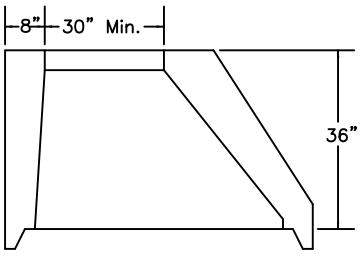
24" C.I. FRAME AND COVER
BASS AND HAYES PATTERN
VRM-30 OR EQUAL MARKED
SANITARY SEWER

Manholes constructed within 100 year flood plain shall have watertight ring and lid.

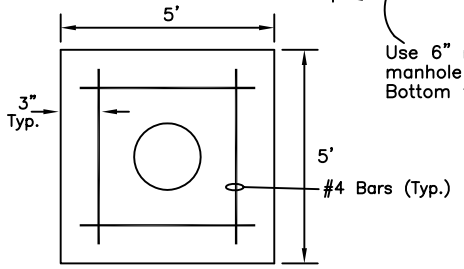


Notes:

1. Grade rings may be used to adjust neck 12" or less. When adjustment is greater than 12", contractor shall use sono tube and place concrete for neck adjustment. Precast concrete grade rings shall be constructed by manufacturer in standard 2", 3", 6", 8" and 12" lengths.
2. All manhole inverts shall be full depth of sewer pipes. All inverts shall extend throughout manhole bottom and provide smooth flow transitions.
3. Manholes in undeveloped areas shall be installed with 5'x5'x5" thick concrete pads with manhole cover in center of pad. Pads shall be reinforced with four No. 4 rebars. Install fiberglass MH marker by pad.
4. All benches shall be slightly higher than top of pipes and slope gently down to inverts.
5. 4' Manhole shall be installed between grease trap and public main to serve as a sampling port.

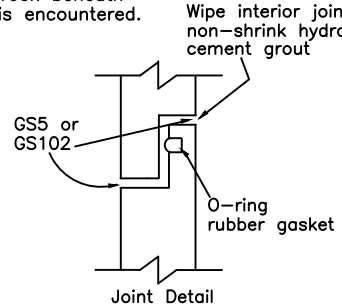


Eccentric Cone



MANHOLE PAD (5" thick)
FOR NON-TRAFFIC AREAS

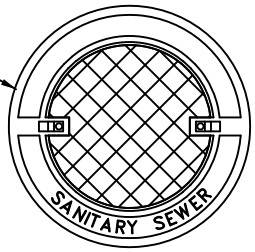
Use 6" min. layer of washed rock beneath manhole where ground water is encountered. Bottom to be poured in dry.

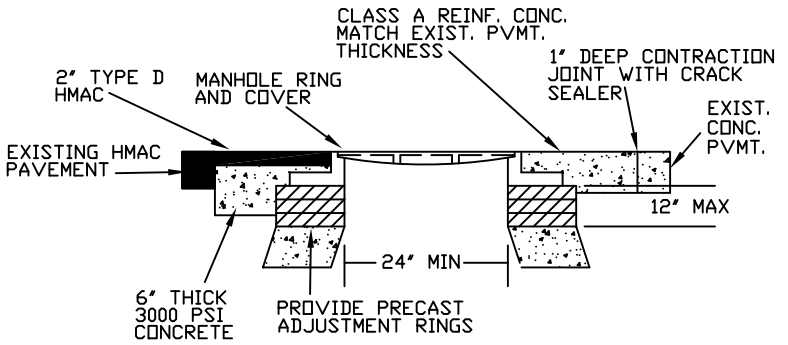


Joint Detail

S-13	PRECAST 4' MANHOLE/SAMPLING PORT	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		

30" Cast Iron Manhole Frame (to be furnished and installed by contractor) Bass and Hayes VRM-30 with pick bars or equal marked "sanitary sewer"





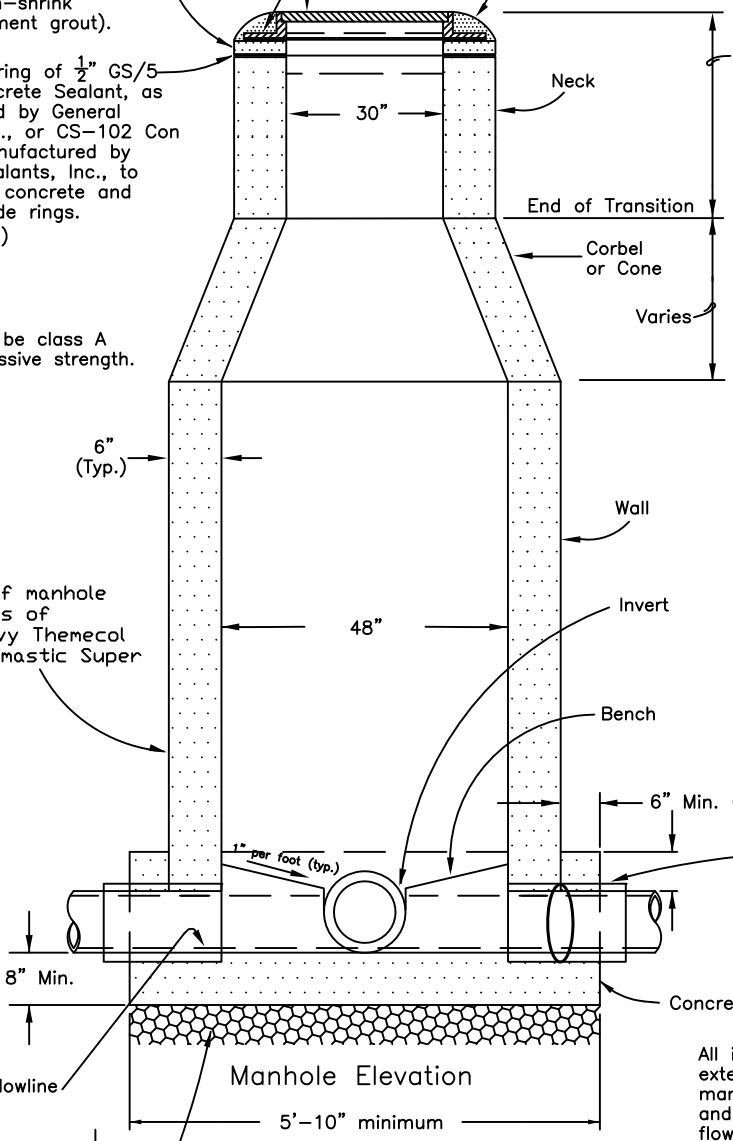
MANHOLE TOP FOR STREET INSTALLATION

34" O.D x 30" I.D. Precast Concrete Grade Rings (Plaster exterior and interior surfaces with smooth coats of non-shrink hydraulic cement grout).

Use double ring of $\frac{1}{2}$" GS/5 Precast Concrete Sealant, as manufactured by General Sealants, Inc., or CS-102 Con Seal, as manufactured by Concrete Sealants, Inc., to seal ring to concrete and between grade rings. (See Note 1.)

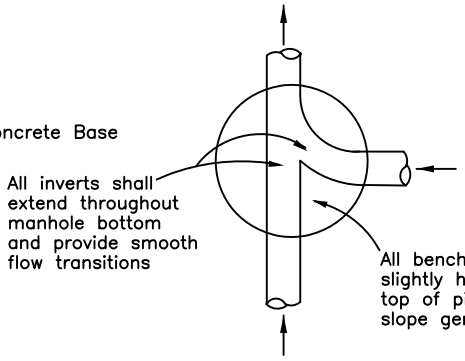
All concrete shall be class A 3,000 psi compressive strength.

Coat Exterior of manhole with 2 mop coats of Themec 450 Heavy Themecol or Koppers Bitumastic Super Service, Black.

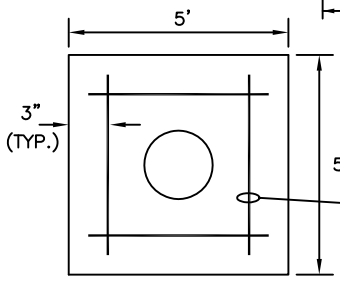


Notes:

1. Grade rings may be used to adjust neck 12" or less. When adjustment is greater than 12", contractor shall use sono tube and place concrete for neck adjustment. Precast concrete grade rings shall be constructed by manufacturer in standard 2", 3", 6", 8" and 12" heights.
2. Contractor shall not remove any forms until 24 hours after concrete is placed. No backfill shall begin until 96 hours after concrete is placed.
3. All manhole inverts shall be full depth of sewer pipes. All inverts shall be formed to center of manhole and shall provide smooth flow transitions.
4. Manholes in undeveloped areas shall be installed with 5'x5'x5" thick concrete pads with cover in center of pad. Pads shall be reinforced with four No. 4 rebars. Install fiberglass MH marker by pad.
5. Contractor shall rub all interior surfaces to a smooth finish.
6. Manhole to be addjusted to final grade prior to paving operation on new concrete streets.
7. Manholes constructed within 100-year flood plain shall have watertight ring and lid.
8. 4' Manhole shall be installed between grease trap and public main to serve as a sampling port.

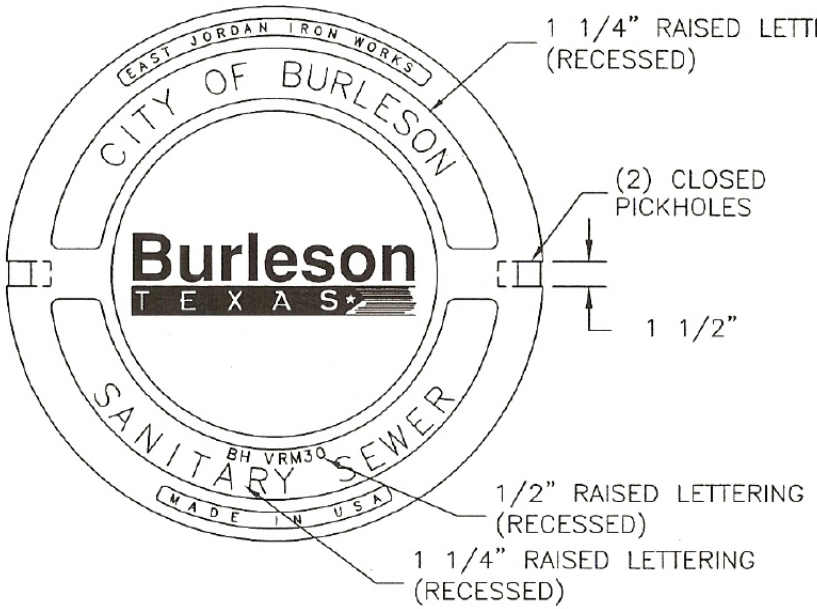


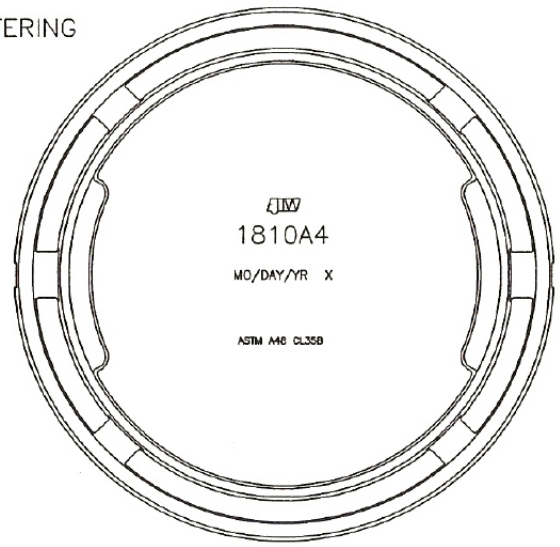
Use 6" min. layer of washed rock beneath manhole where ground water is encountered. Bottom to be poured in dry.



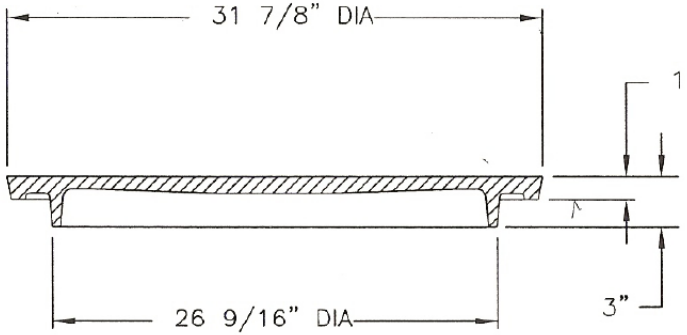
MANHOLE PAD FOR NON-TRAFFIC AREAS

S-14	4' CAST IN PLACE MANHOLE/SAMPLING PORT	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		

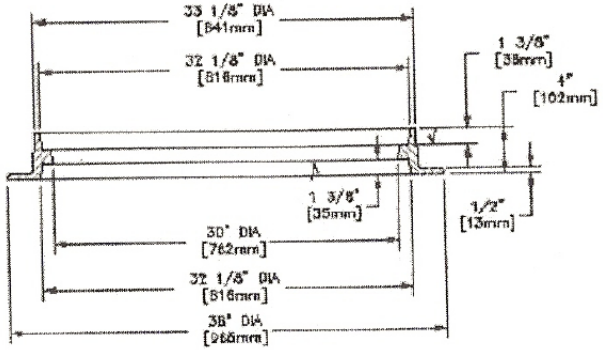




BOTTOM VIEW



COVER SECTION



SECTION

EJIW EAST JORDAN IRON WORKS EST.1883
800-626-4653
www.ejiw.com
MADE IN USA

PRODUCT NUMBER
NCR08-2060A

CATALOG NUMBER
VRM30 RING&COVER
BURLESON LOGO

COVER

LOAD RATING
HEAVY DUTY

COATING
UNDIPPED

MATERIAL SPECIFICATION

COVER – GRAY IRON
ASTM A48 CL35B

OPEN AREA
N/A

√DESIGNATES MACHINE SURFACE

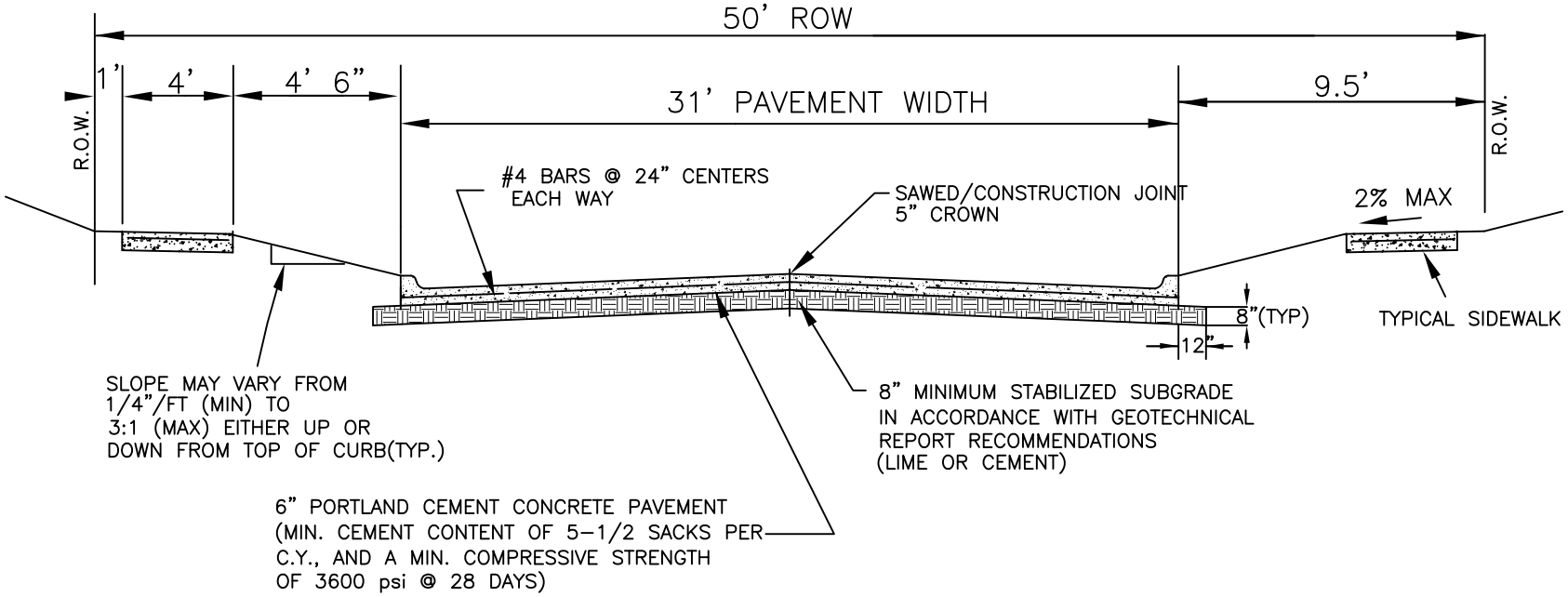
DRAWN	DATE
GAD	09/17/08
LAST REVISED	DATE

REFERENCE INFORMATION

S-15 MANHOLE RING AND COVER

PAVING DETAILS

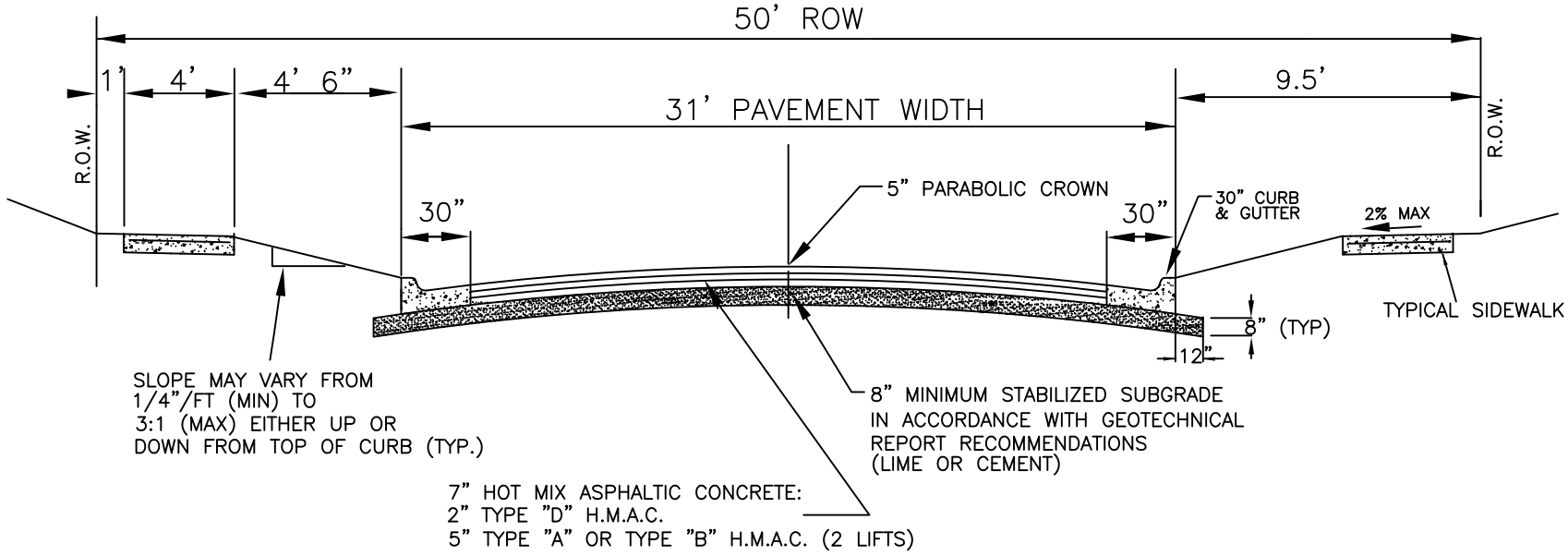
P-01	Residential Street (L2U) – Concrete
P-02	Residential Street (L2U) – HMAC
P-03	Rural Residential Street (L2U) – Concrete
P-04	Rural Residential Street (L2U) – HMAC
P-05	Minor Collector (C3U) – Concrete
P-06	Minor Collector (C3U) – HMAC
P-07	Major Collector (C4U)
P-08	Minor Arterial – Two-Way Left Turn Lane (P5U)
P-09	Minor Arterial – Conventional (P4D)
P-10	Principal Arterial – Conventional (P6D)
P-11	Alley/Fire Lane Paving
P-12a	Concrete Pavement Details: Epoxy Tie Bar Pavement Reinforcing Construction Joint Transverse Expansion Joint Sawed Contraction Joint
P-12b	Concrete Pavement Details: Joint Sealant Details Manhole Boxout Pavement Header
P-13	Joint and Steel Layout
P-14	Curb and Gutter
P-15	Rollover Curb
P-16	Drive Approach Detail – Constructed with Street
P-17	Drive Approach Detail – Connection to Existing Streets
P-18	Drive Approach Detail with 6’ sidewalk at Right-of-Way
P-19	4’ Sidewalk
P-20	6’ Sidewalk
P-21	Sidewalk with Wall
P-22A-D	Curb Ramp
P-23	Pipe Handrail
P-24	Dead End Barricade
P-25	Valley Gutter
P-26	Median/Island Paving
P-27a	Electrical Details – Streetlighting (1 of 3)
P27b	Electrical Details – Streetlighting (2 of 3)
P27c	Streetlighting – General Notes
Guardrail	Use the appropriate TXDOT detail (MBGF-03A, MBGF (TR)-05, MBGF (TL2)-05, MBGF (T101)-05)



NOTES:

1. TRANSVERSE SAWED CONTRACTION JOINTS AT 12' INTERVALS FOR CONCRETE PAVEMENT.
2. GEOTECHNICAL REPORT (LIME SERIES TEST) PREPARED BY LICENSED ENGINEER IS REQUIRED TO DETERMINE LIME OR CEMENT APPLICATION RATE.
3. MINIMUM LIME APPLICATION RATE SHALL BE 30 LBS./S.Y.
4. SUBGRADE COMPACTION SHALL BE 95% STANDARD PROCTOR DENSITY.

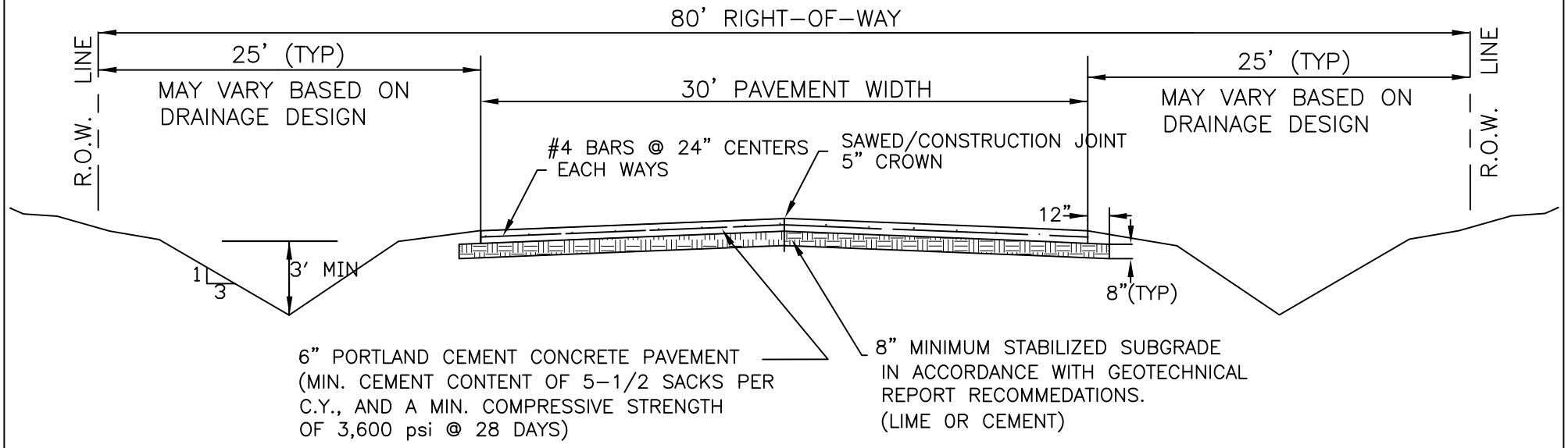
P-01	RESIDENTIAL STREET (L2U) CONCRETE	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		



NOTES:

1. GEOTECHNICAL REPORT (LIME SERIES TEST) PREPARED BY LICENSED ENGINEER IS REQUIRED TO DETERMINE LIME OR CEMENT APPLICATION RATE.
2. MINIMUM LIME APPLICATION RATE SHALL BE 30 LBS./S.Y.
3. SUBGRADE COMPACTION SHALL BE 95% STANDARD PROCTOR DENSITY.
4. BAR DITCH SIDE SLOPE VARIES DEPENDING UPON DESIGN. NO GREATER THAN 3:1 WITHOUT ARMORING.
5. FOR 30" GUTTER DETAIL, SEE CURB & GUTTER DETAILS.

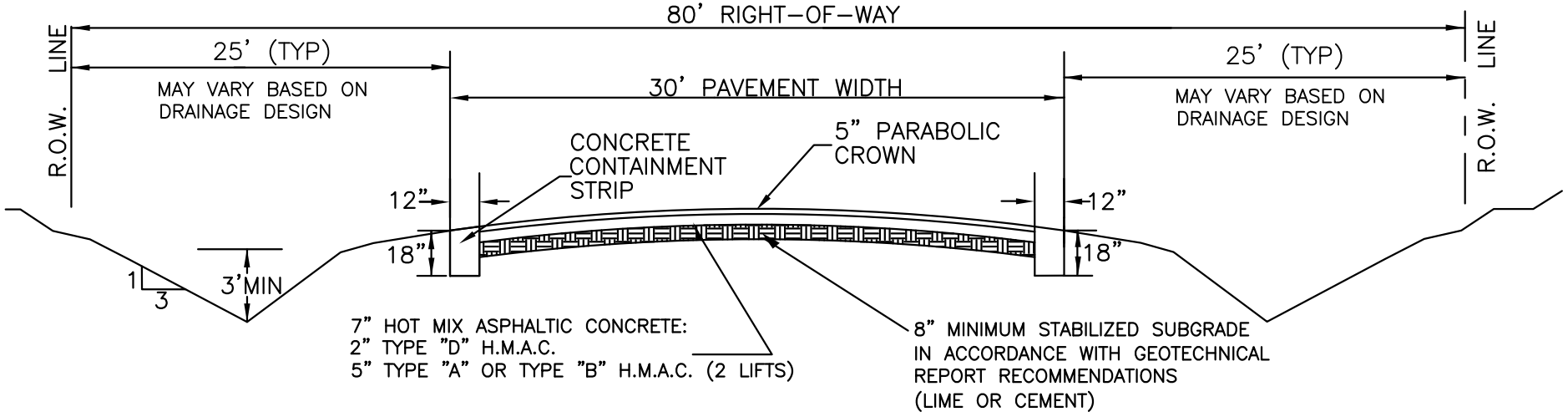
P-02	RESIDENTIAL STREET (L2U) HMAC	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		

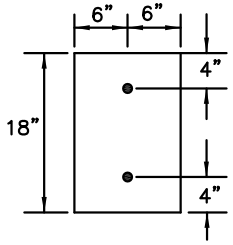


NOTES:

1. TRANSVERSE SAWED CONTRACTION JOINT AT AT 12' INTERVALS FOR CONCRETE PAVEMENT.
2. BAR DITCH SIDE SLOPE VARIES DEPENDING UPON DESIGN. NO GREATER THAN 3:1 WITHOUT AMORING.
3. GEOTECHNICAL REPORT (LIME SERIES TEST) PREPARED BY A LICENSED ENGINEER IS REQUIRED TO DETERMINE LIME OR CEMENT APPLICATION RATE.
4. MINIMUM LIME APPLICATION RATE SHALL BE 30 LBS./S.Y.
5. SUBDRADE COMPACTION SHALL BE 95% STANDARD PROCTOR DENSITY.

P-03	RURAL RESIDENTIAL STREET (L2U) CONCRETE	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		





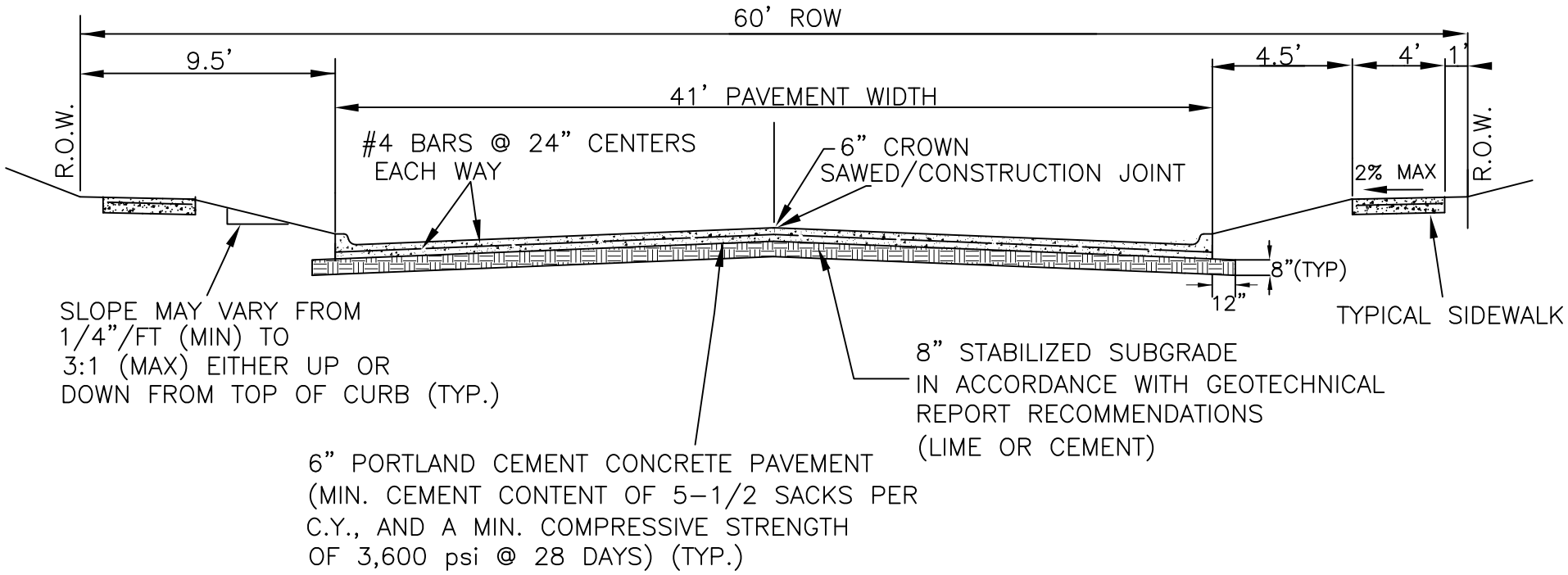
CONCRETE CONTAINMENT STRIP DETAIL

REINFORCING SHALL BE #4 BARS PLACED AS SHOWN.

NOTES:

1. BAR DITCH SIDE SLOPE VARIES DEPENDING UPON DESIGN. NO GREATER THAN 3:1 WITHOUT AMORING.
2. GEOTECHNICAL REPORT (LIME SERIES TEST) PREPARED BY A LICENSED ENGINEER IS REQUIRED TO DETERMINE LIME OR CEMENT APPLICATION RATE.
3. MINIMUM LIME APPLICATION RATE SHALL BE 30 LBS./S.Y.
4. SUBDRADE COMPACTION SHALL BE 95% STANDARD PROCTOR DENSITY.

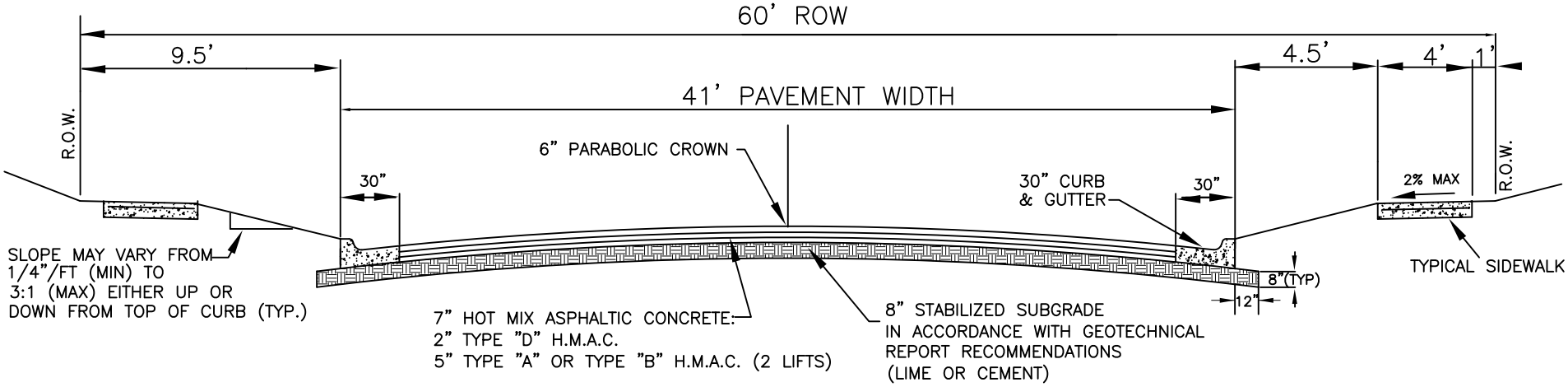
P-04	RURAL RESIDENTIAL STREET (L2U) HMAC	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		



NOTES:

1. TRANSVERSE SAWED CONTRACTION JOINTS AT 12' INTERVALS FOR CONCRETE PAVEMENT. LONGITUDINAL SAWED CONTRACTION JOINTS AT 11' INTERVALS.
2. GEOTECHNICAL REPORT (LIME SERIES TEST) PREPARED BY LICENSED ENGINEER IS REQUIRED TO DETERMINE LIME OR CEMENT APPLICATION RATE.
3. MINIMUM LIME APPLICATION RATE SHALL BE 30 LBS./S.Y.
4. SUBGRADE COMPACTION SHALL BE 95% STANDARD PROCTOR DENSITY.

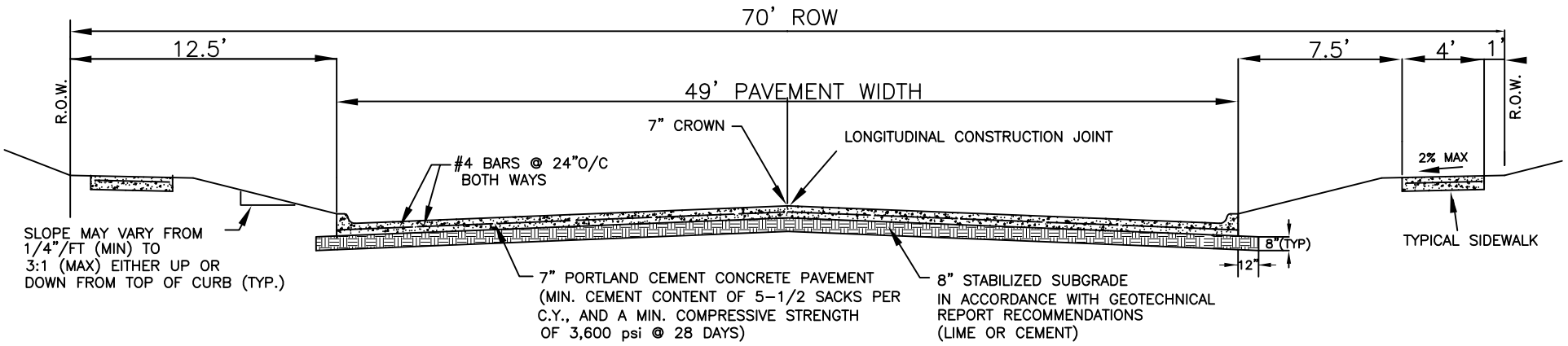
P–05	MINOR COLLECTOR (C3U) CONCRETE	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		



NOTES:

1. GEOTECHNICAL REPORT (LIME SERIES TEST) PREPARED BY LICENSED ENGINEER IS REQUIRED TO DETERMINE LIME OR CEMENT APPLICATION RATE.
2. MINIMUM LIME APPLICATION RATE SHALL BE 30 LBS./S.Y.
3. SUBGRADE COMPACTION SHALL BE 95% STANDARD PROCTOR DENSITY.

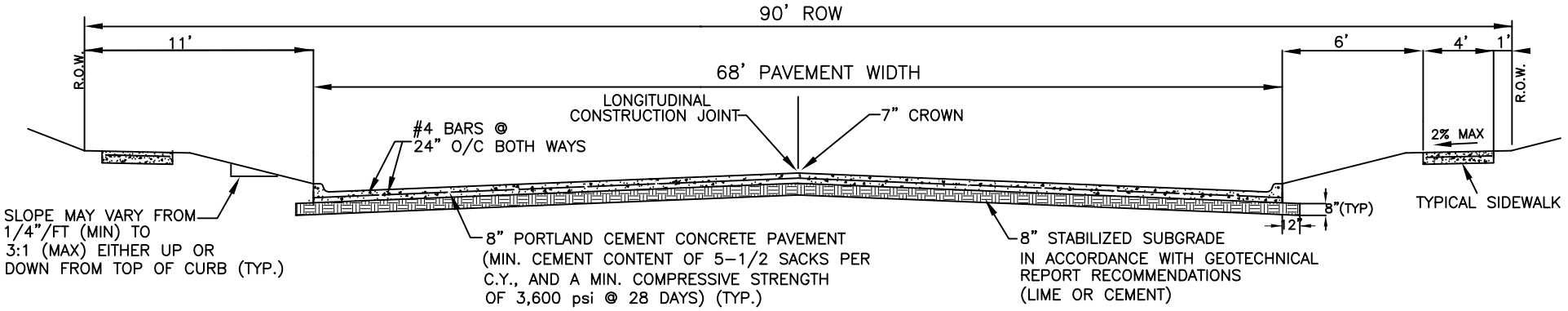
P–06	MINOR COLLECTOR (C3U) HMAC	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		



NOTES:

1. TRANSVERSE SAWED CONTRACTION JOINTS AT 15' INTERVALS & LONGITUDINAL SAWED CONTRACTION JOINTS AT 11' INTERVALS FOR CONCRETE PAVEMENT.
2. GEOTECHNICAL REPORT (LIME SERIES TEST) PREPARED BY LICENSED ENGINEER IS REQUIRED TO DETERMINE LIME OR CEMENT APPLICATION RATE.
3. MINIMUM LIME APPLICATION RATE SHALL BE 30 LBS./S.Y.
4. SUBGRADE COMPACTION SHALL BE 95% STANDARD PROCTOR DENSITY.

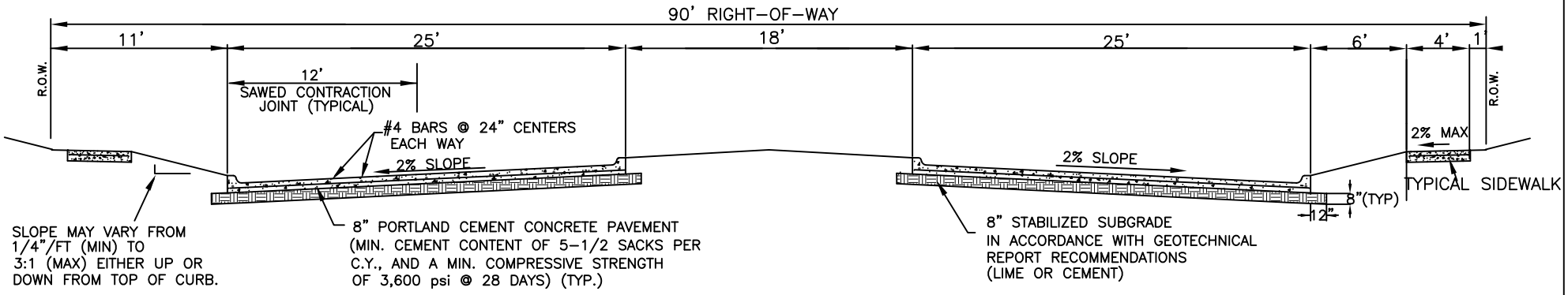
P-07	MAJOR COLLECTOR (C4U)	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		



NOTES:

1. TRANSVERSE SAWED CONTRACTION JOINTS AT 15' INTERVALS & LONGITUDINAL SAWED CONTRACTION JOINTS AT 11' INTERVALS FOR CONCRETE PAVEMENT.
2. GEOTECHNICAL REPORT (LIME SERIES TEST) PREPARED BY LICENSED ENGINEER IS REQUIRED TO DETERMINE LIME OR CEMENT APPLICATION RATE.
3. MINIMUM LIME APPLICATION RATE SHALL BE 30 LBS./S.Y.
4. SUBGRADE COMPACTION SHALL BE 95% STANDARD PROCTOR DENSITY.

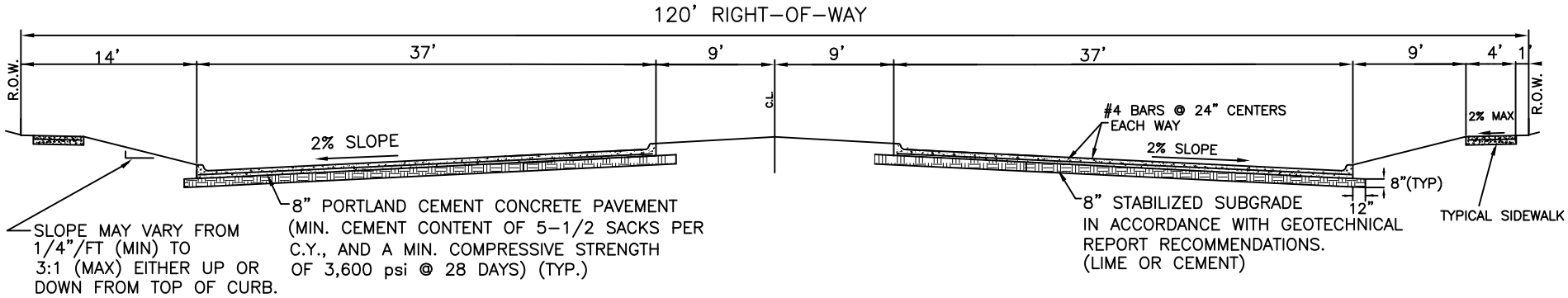
P-08	MINOR ARTERIAL – TWLTL (P5U)	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		



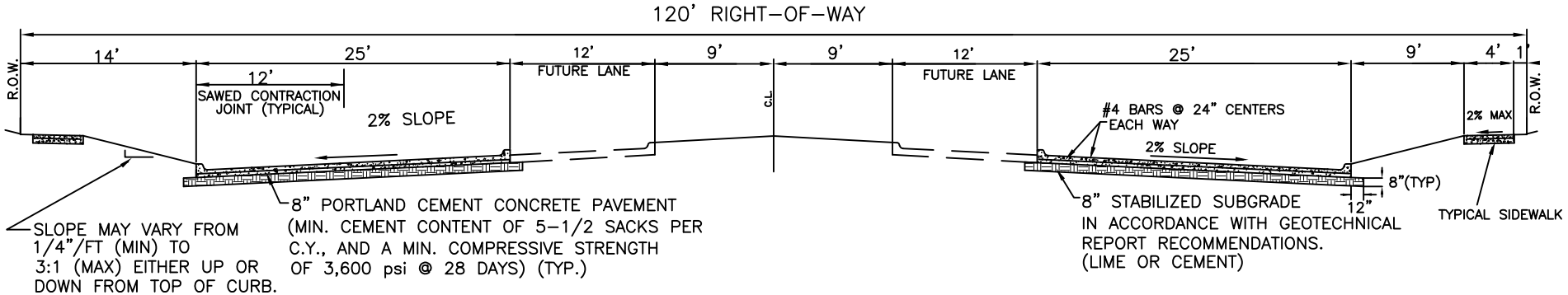
NOTES:

1. TRANSVERSE SAWED CONTRACTION JOINTS AT 15' INTERVALS AND LONGITUDINAL SAWED CONTRACTION JOINTS 12' FROM OUTSIDE BACK OF CURBS.
2. GEOTECHNICAL REPORT (LIME SERIES TEST) PREPARED BY LICENSED ENGINEER IS REQUIRED TO DETERMINE LIME OR CEMENT APPLICATION RATE.
3. MINIMUM LIME APPLICATION RATE SHALL BE 30 LBS./S.Y.
4. SUBGRADE COMPACTION SHALL BE 95% STANDARD PROCTOR DENSITY.

P-09	MINOR ARTERIAL CONVENTIONAL (P4D)	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		



FULL SECTION CONSTRUCTION

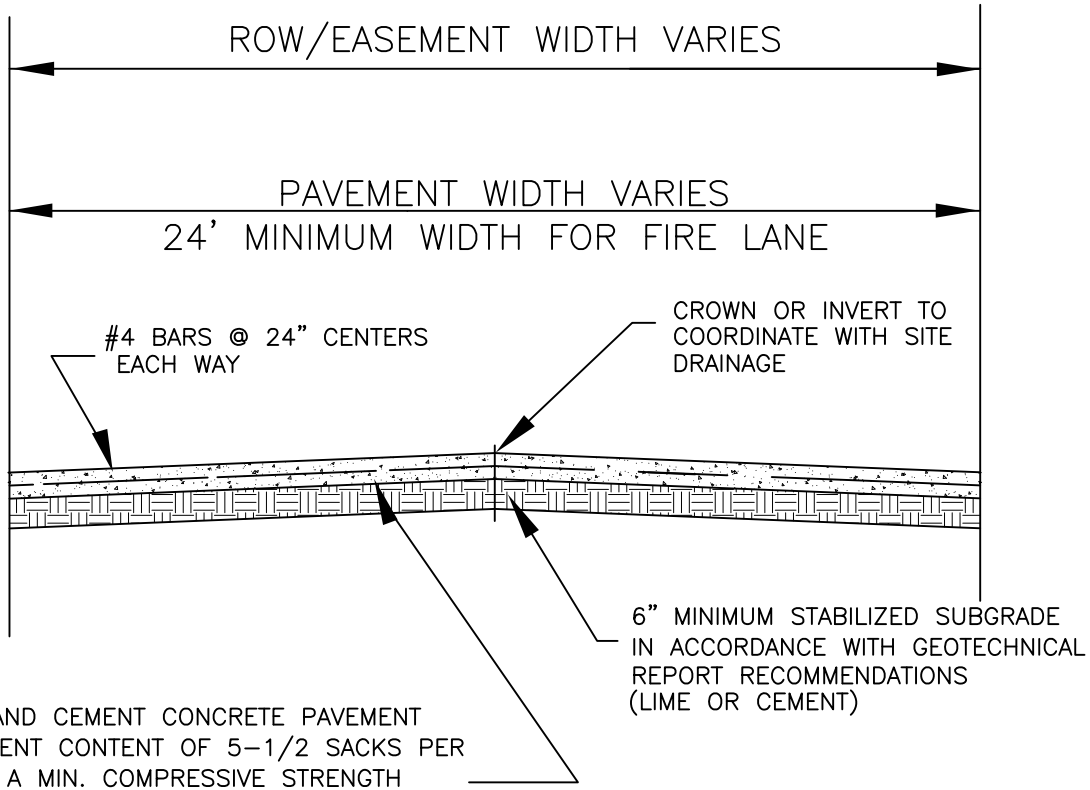


PROPOSED FUTURE WIDENING TO THE INSIDE

NOTES:

1. TRANSVERSE SAWED CONTRACTION JOINTS AT 15' INTERVALS & LONGITUDINAL SAWED CONTRACTION JOINTS AT 12' FROM OUTSIDE BACK OF CURBS.
2. GEOTECHNICAL REPORT (LIME SERIES TEST) PREPARED BY LICENSED ENGINEER IS REQUIRED TO DETERMINE LIME OR CEMENT APPLICATION RATE.
3. MINIMUM LIME APPLICATION RATE SHALL BE 30 LBS./S.Y.
4. SUBGRADE COMPACTION SHALL BE 95% STANDARD PROCTOR DENSITY.

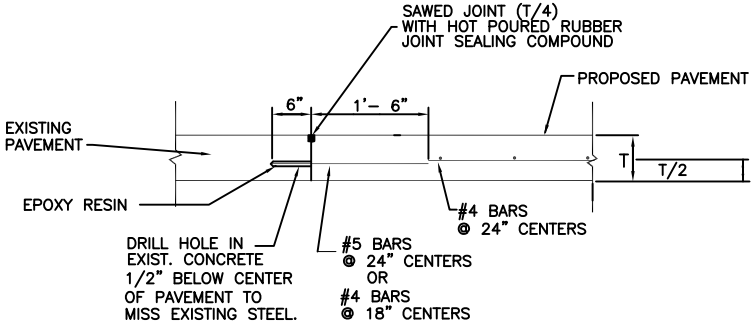
P-10	PRINCIPAL ARTERIAL CONVENTIONAL (P6D)	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		



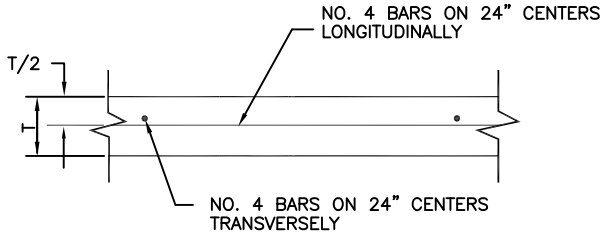
NOTES:

1. TRANSVERSE SAWED CONTRACTION JOINTS AT 12' INTERVALS.
2. GEOTECHNICAL REPORT (LIME SERIES TEST) PREPARED BY LICENSED ENGINEER IS REQUIRED TO DETERMINE LIME OR CEMENT APPLICATION RATE.
3. MINIMUM LIME APPLICATION RATE SHALL BE 30 LBS./S.Y.
4. SUBGRADE COMPACTION SHALL BE 95% STANDARD PROCTOR DENSITY.

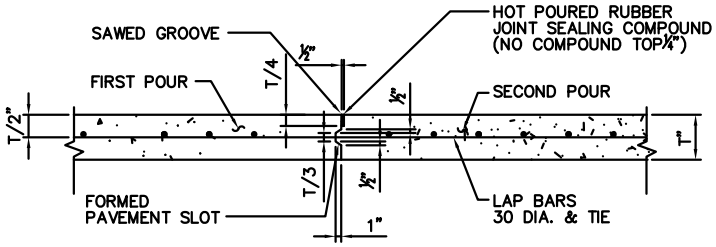
P–11	ALLEY/FIRE LANE PAVING	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		



EPOXY TIE BAR



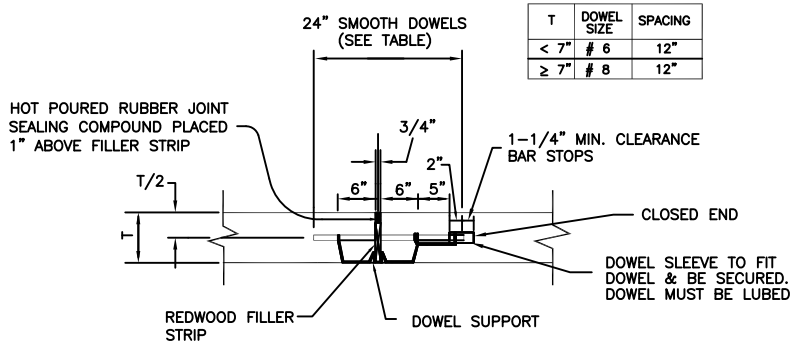
PAVEMENT REINFORCING



T = PAVEMENT THICKNESS

KEYWAY REQUIRED FOR T = 8" AND GREATER.

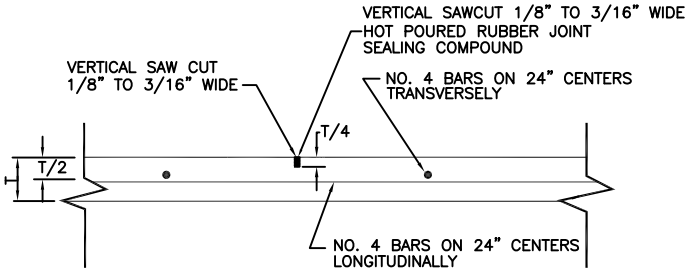
CONSTRUCTION JOINT



T	DOWEL SIZE	SPACING
< 7"	# 6	12"
≥ 7"	# 8	12"

NOTES:
1. PAVEMENT STEEL IS NOT SHOWN FOR CLARITY AND SHALL STOP 3 INCHES FROM JOINT.
2. EXPANSION JOINTS SHALL BE PLACED AT ALL POINTS OF CURVATURE, POINTS OF TANGENCY AND ALL INTERSECTION CURB RETURN POINTS. MAXIMUM SPACING SHALL BE 600 FEET.

TRANSVERSE EXPANSION JOINT



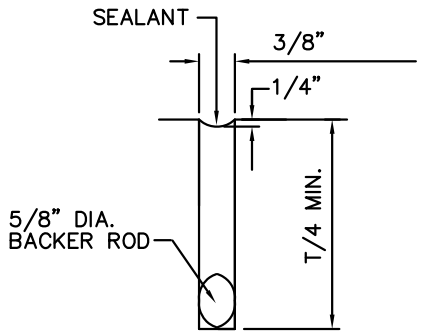
NOTE: TRANSVERSE JOINTS SHALL BE PLACED AT THE FOLLOWING INTERVALS:

6" THICKNESS = 12'

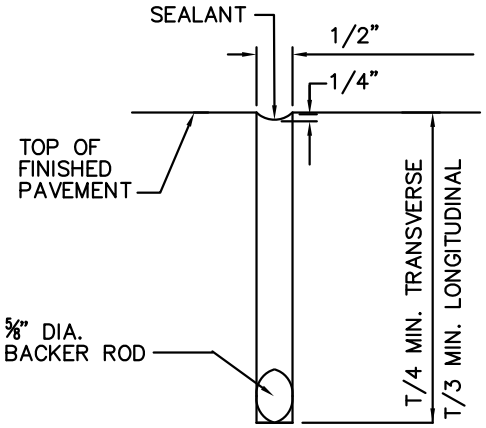
7" & 8" THICKNESS = 15'

SAWED CONTRACTION JOINT

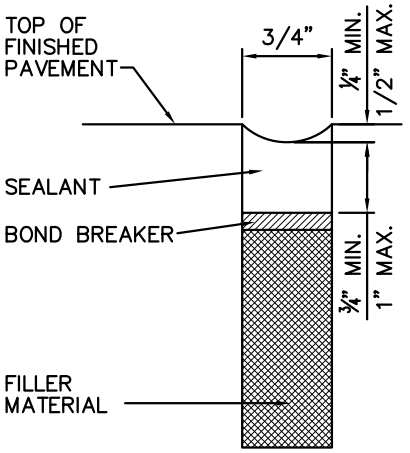
P-12a	CONCRETE PAVEMENT DETAILS (SHEET 1 OF 2)	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		



SAWED JOINT (DUMMY)

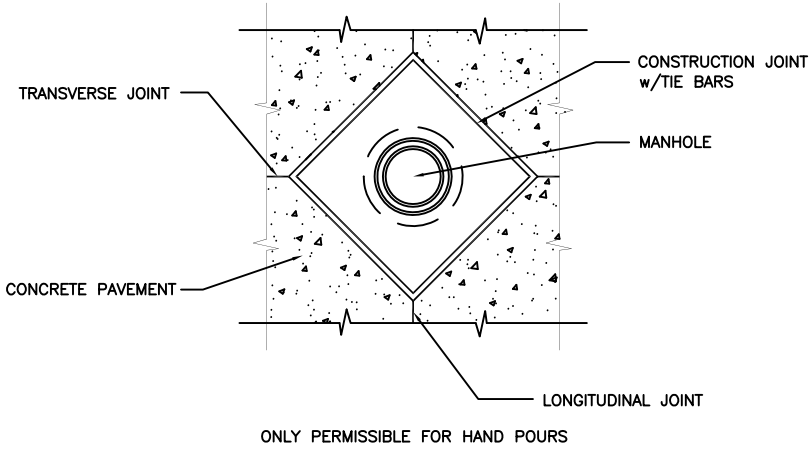


CONSTRUCTION JOINT



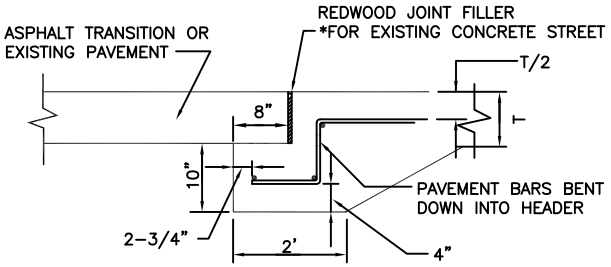
EXPANSION JOINT

JOINT SEALANT DETAILS



ONLY PERMISSIBLE FOR HAND POURS

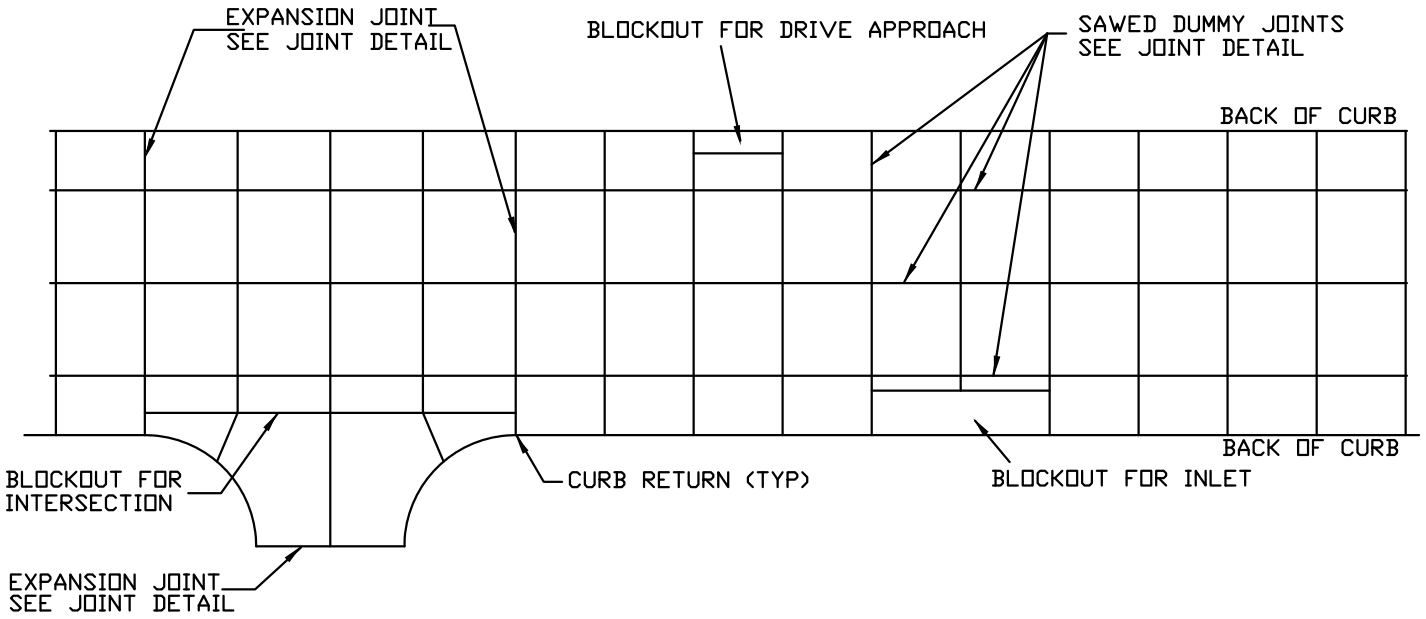
MANHOLE BOXOUT



NOTE: PAVEMENT & HEADER TO BE POURED MONOLITHICALLY

PAVEMENT HEADER

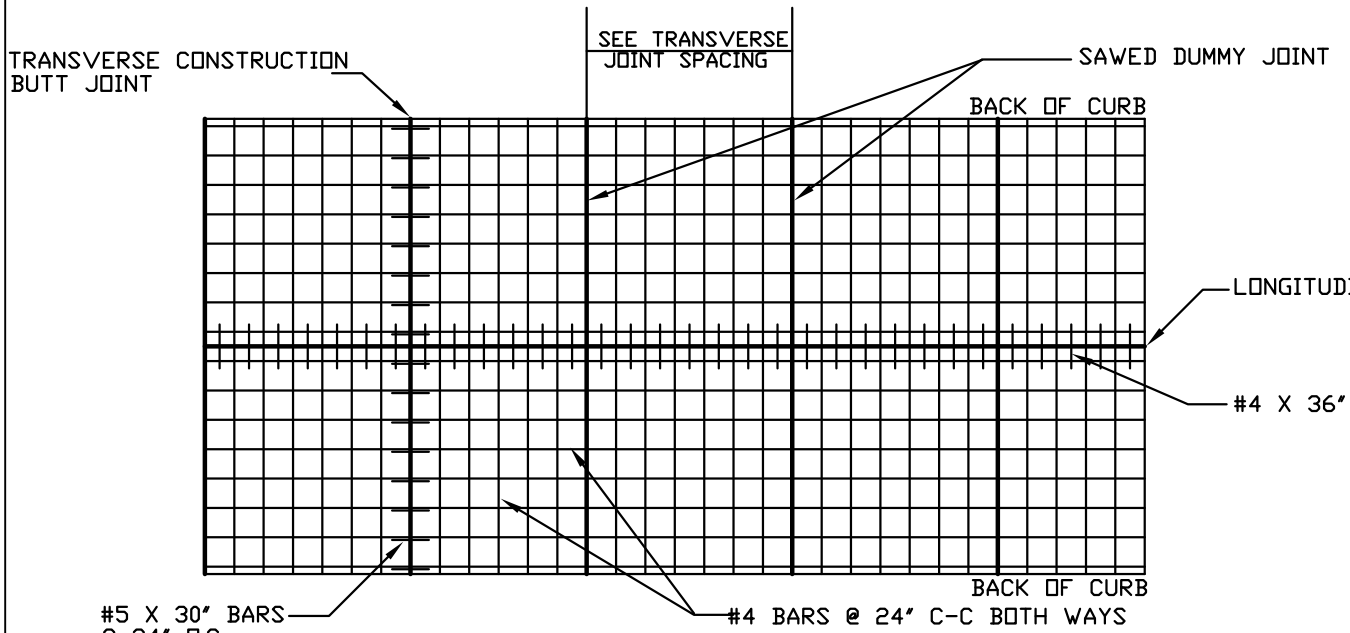
P-12b	CONCRETE PAVEMENT DETAILS (SHEET 2 OF 2)	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		



TRANSVERSE JOINT SPACING	
PAVEMENT THICKNESS	SPACING
6″	10′
7″	15′
8″	15′

LONGITUDINAL JOINT SPACING	
STREET WIDTH	SPACING
31′	ON CL
41′	ON CL AND 8′ FROM B/C
45′	ON CL AND 9′ OFF CL
67′	7′ AND 21′ OFF CL

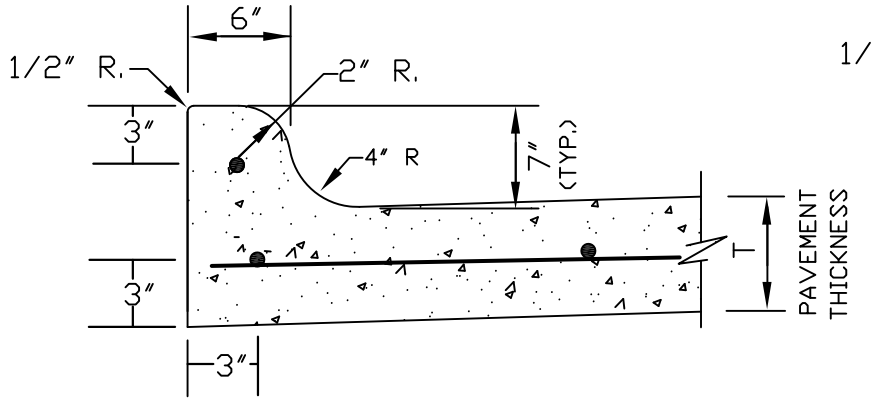
JOINT DEPTH	
PAVEMENT THICKNESS	JOINT DEPTH
6″	1 1/2″
7″	1 3/4″
8″	2″



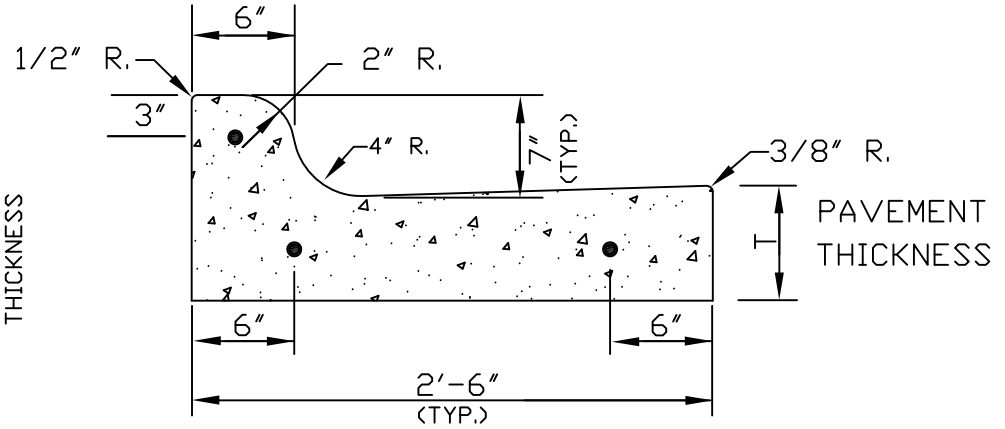
NOTES:

1. THE REINFORCING STEEL WILL EXTEND THROUGH LONGITUDINAL CONSTRUCTION BUTT, SAWED DUMMY AND TRANSVERSE CONSTRUCTION BUTT JOINTS.
2. EXPANSION JOINT SPACING IS 600′ AND AT RADIUS RETURNS
3. FINISH IS BAKER BROOM FINISH

P-13	JOINT AND STEEL LAYOUT	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		



INTEGRAL
CONCRETE CURB & GUTTER

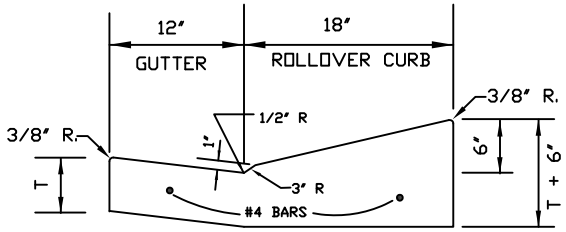


SEPARATE CURB & GUTTER

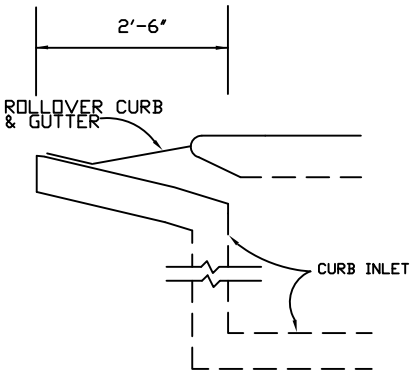
NOTES:

1. REINFORCEMENT SHALL BE NO. 4 BARS.
2. CONCRETE SHALL BE 5 1/2 SACK – 3600 PSI.

P–14	CURB AND GUTTER	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		

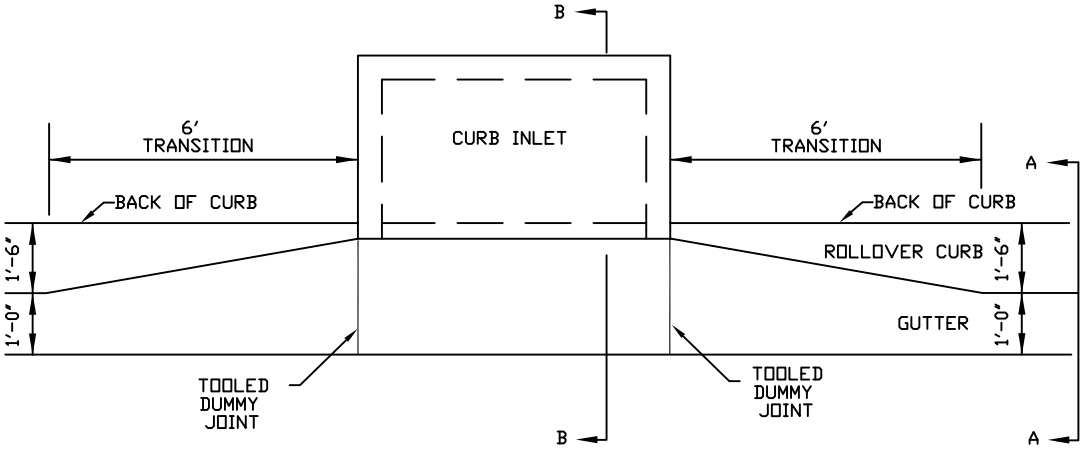


SECTION A–A



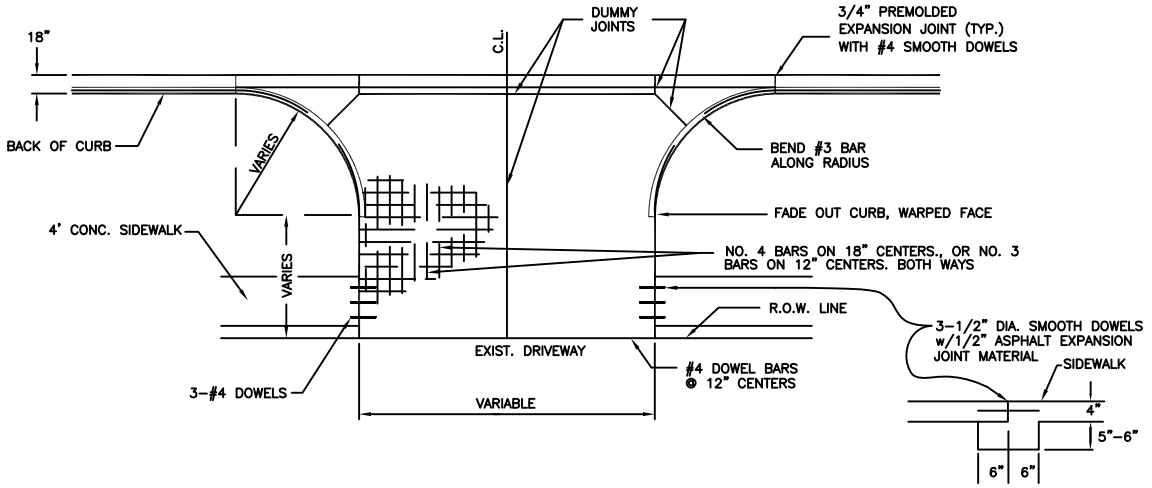
SECTION B–B

NOTE: SEE CURB INLET DETAILS

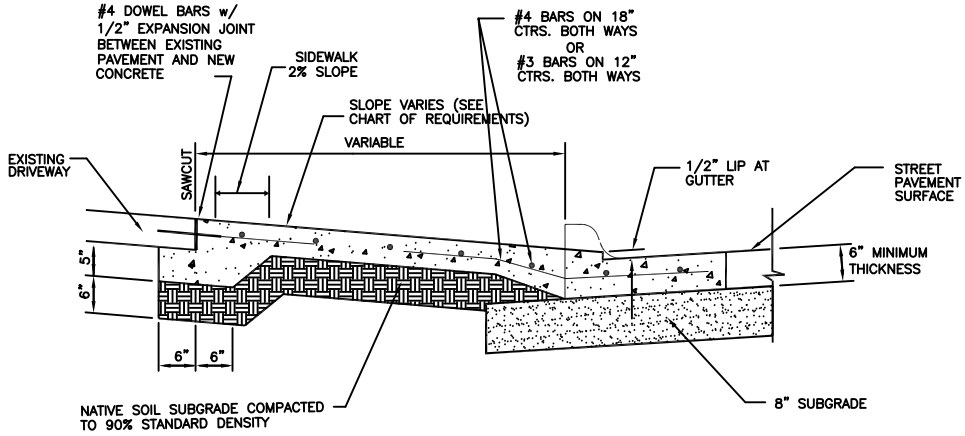


NOTE: IN THE TRANSITION AREA THE 18" ROLLOVER CURB WILL TRANSITION TO A 6" VERTICAL CURB AND THE GUTTER WILL TRANSITION TO A 4" DEPRESSION AT THE FACE OF THE INLET.

P–15	ROLLOVER CURB AND GUTTER	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		



TYPICAL SIDEWALK CONNECTION TO A DRIVE APPROACH



NOTES:

(1) FOR ANY APPROACH CONNECTING TO AN EXISTING STREET IT IS PREFERRED TO HORIZONTALLY SAW CUT THE CURB. THEN THE DRIVE MAY BE DOWELED INTO THE BACK OF THE GUTTER/SLAB. OTHERWISE, THE METHODS SHOWN IN THE ABOVE DETAILS SHALL BE USED.

(2) THE SLOPE OF THE DRIVE WHERE (SIDEWALKS CROSS SHALL BE A BE A MAXIMUM 2% . SIDEWALK SHALL BE CONNECTED TO DRIVE WITH #4 BARS ON 18" CENTERS.

(3) REMOVE ANY EXISTING SIDEWALK AT (NEAREST JOINT AND CONNECT REPLACED SECTION TO DRIVE WITH 3-#4 SMOOTH DOWELS WITH 1/2" PREMOLDED EXPANSION MATERIAL.

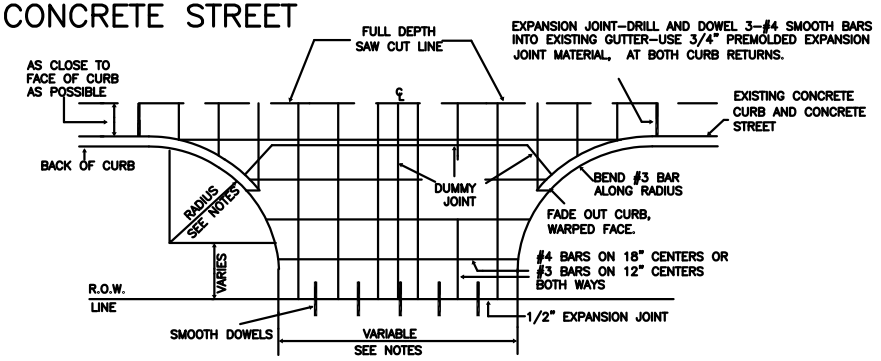
(4) ALL CONNECTIONS TO STATE RIGHT-OF-WAY SHALL USE TXDOT DETAILS.

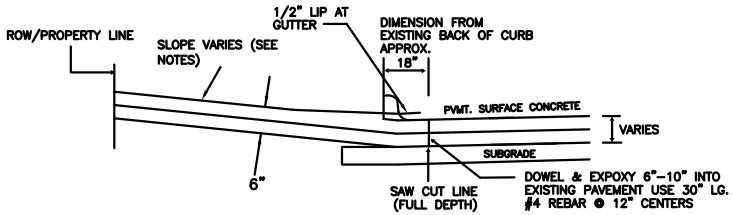
REQUIREMENTS	STREET CLASS	RESIDENTIAL DRIVEWAY	COMMERCIAL DRIVEWAY
DRIVEWAY THROAT WIDTH	LOCAL	10' – 28'	24' – 36'
	MINOR COLL.	10' – 28'	24' – 36'
	MAJOR COLL.	12' – 28'	24' – 36'
	ARTERIAL	12' – 28'	30' – 36'
DRIVEWAY CURB RADIUS	LOCAL	2.5' – 10'	10' – 20'
	MINOR COLL.	2.5' – 10'	15' – 20'
	MAJOR COLL.	10' – 20'	15' – 30'
	ARTERIAL	15' – 30'	20' – 30'
MAXIMUM APPROACH GRADE	LOCAL AND MINOR COLL.	9%	6%
	ALL OTHERS	6%	3%
MINIMUM APPROACH LENGTH	LOCAL AND MINOR COLL.	6'	9'
	ALL OTHERS	9'	20'

SEE DESIGN STANDARDS MANUAL FOR INDUSTRIAL DRIVEWAY REQUIREMENTS.

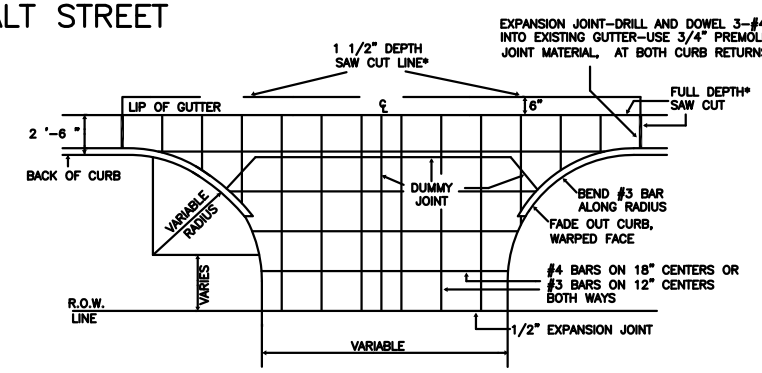
P-16	DRIVE APPROACH CONNECTION CONSTRUCTED WITH STREET	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		

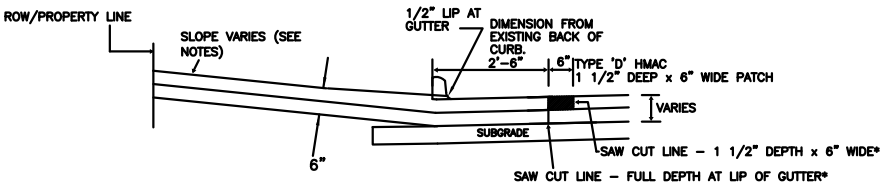
CONCRETE STREET



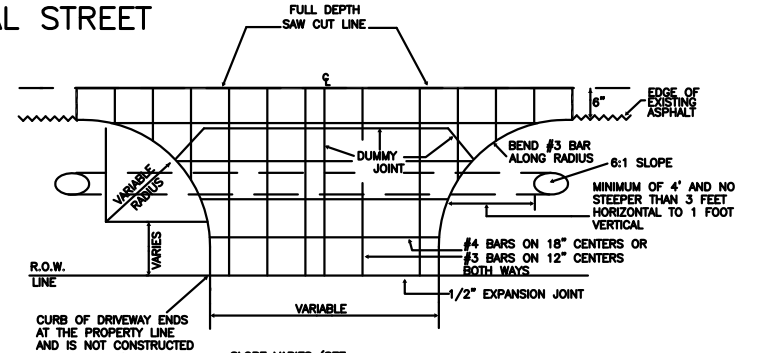


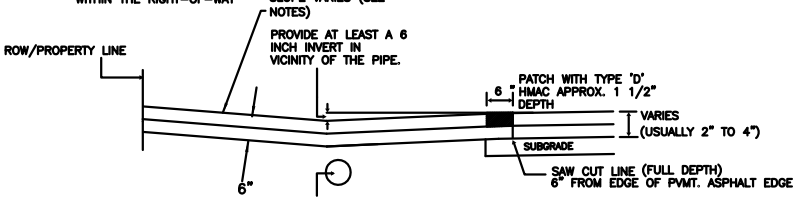
ASPHALT STREET





RURAL STREET





MINIMUM 18" DIAMETER PIPE WITH HEADWALLS OR SLOPED END SECTIONS. ACTUAL SIZE WILL NEED TO BE DETERMINED BY PROPERTY OWNERS ENGINEER.

NOTES:

IN SOME CASES A SWALE MAY BE PROVIDED IN LIEU OF THE THE PIPE. THE PROPERTY OWNER AND OWNER'S ENGINEER WILL NEED TO DETERMINE IF A SWALE CAN BE USED IN LIEU OF A PIPE.

NOTES:

(1) FOR ANY APPROACH CONNECTING TO AN EXISTING STREET IT IS PREFERRED TO HORIZONTALLY SAW CUT THE CURB. THEN THE DRIVE SHALL BE DOWELED INTO THE BACK OF THE GUTTER/SLAB. OTHERWISE, THE METHODS SHOWN IN THE ABOVE DETAILS SHALL BE USED.

(2) THE SLOPE OF THE DRIVE WHERE (SIDEWALKS CROSS SHALL BE A BE A MAXIMUM 2% . SIDEWALK SHALL BE CONNECTED TO DRIVE WITH #4 BARS ON 18" CENTERS.

(3) REMOVE ANY EXISTING SIDEWALK AT (NEAREST JOINT AND CONNECT REPLACED SECTION TO DRIVE WITH 3–#4 SMOOTH DOWELS WITH 1/2" PREMOLDED EXPANSION MATERIAL.

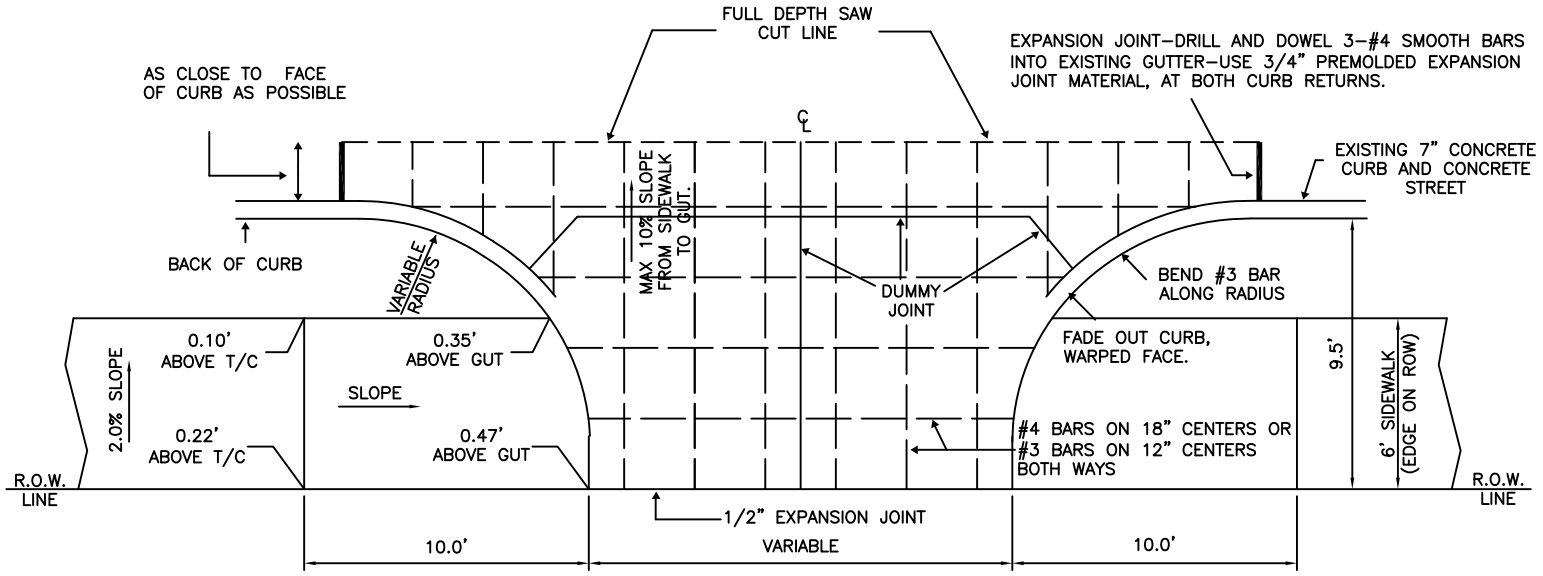
(4) ALL CONNECTIONS TO STATE RIGHT–OF–WAY SHALL USE TXDOT DETAILS.

(5) CONCRETE SHALL BE POURED WITHIN 72 HOURS OF CURB CUT.

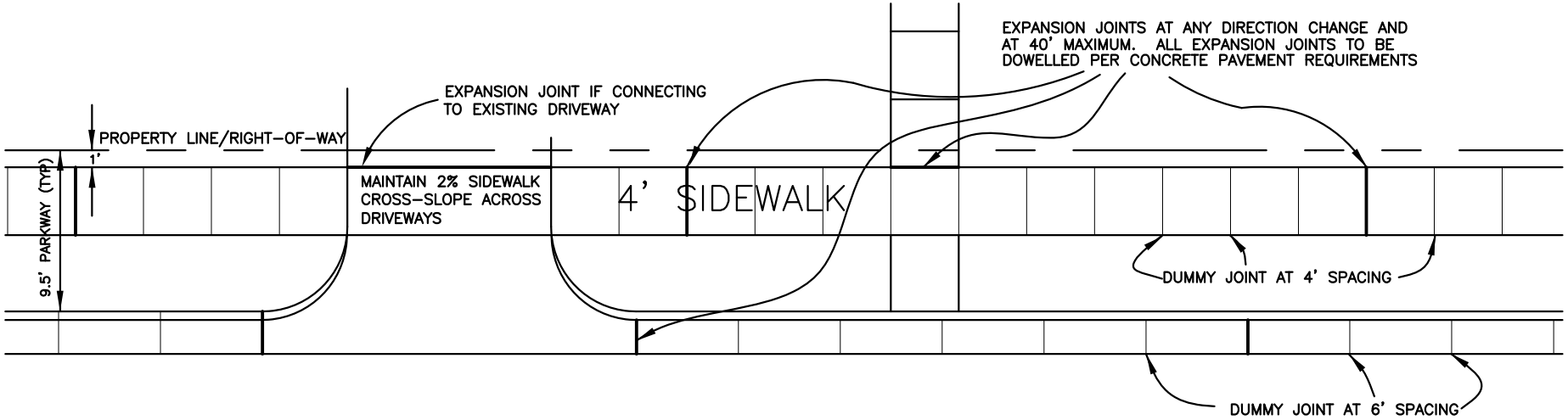
REQUIREMENTS	STREET CLASS	RESIDENTIAL DRIVEWAY	COMMERCIAL DRIVEWAY
DRIVEWAY THROAT WIDTH	LOCAL	10' – 28'	24' – 36'
	MINOR COLL.	10' – 28'	24' – 36'
	MAJOR COLL.	12' – 28'	24' – 36'
	ARTERIAL	12' – 28'	30' – 36'
DRIVEWAY CURB RADIUS	LOCAL	2.5' – 10'	10' – 20'
	MINOR COLL.	2.5' – 10'	15' – 20'
	MAJOR COLL.	10' – 20'	15' – 30'
	ARTERIAL	15' – 30'	20' – 30'
MAXIMUM APPROACH GRADE	LOCAL AND MINOR COLL.	9%	6%
	ALL OTHERS	6%	3%
MINIMUM APPROACH LENGTH	LOCAL AND MINOR COLL.	6'	9'
	ALL OTHERS	9'	20'

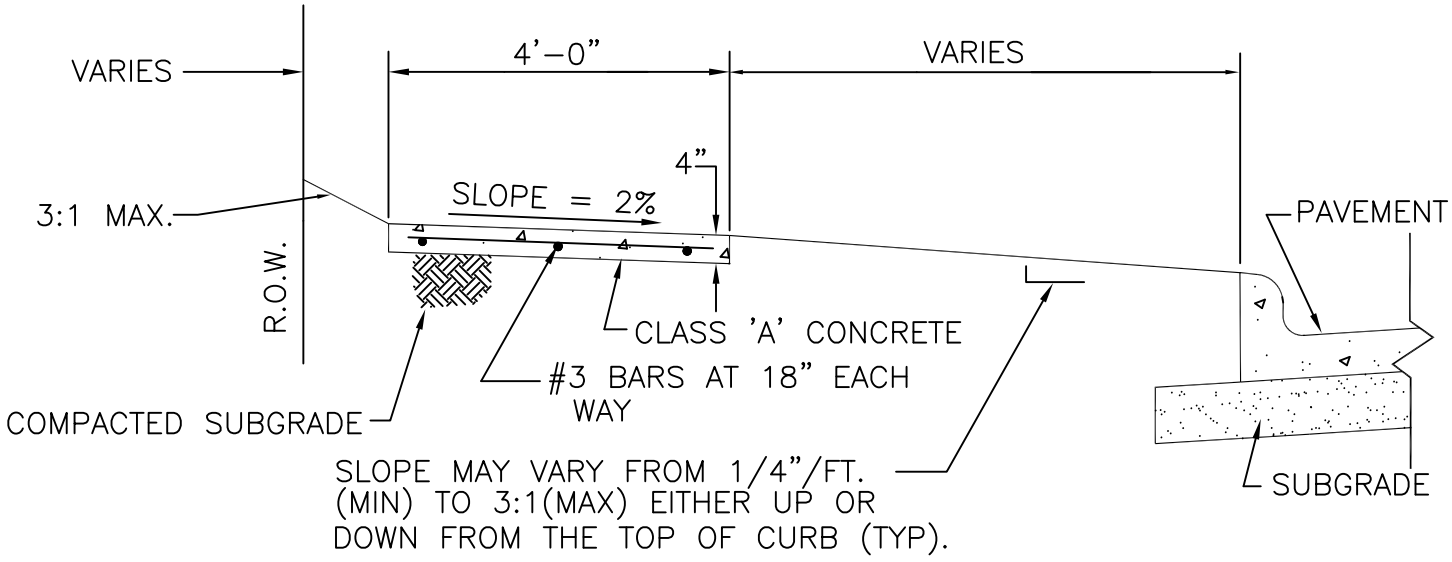
SEE DESIGN STANDARDS MANUAL FOR INDUSTRIAL DRIVEWAY REQUIREMENTS.

P–17	DRIVE APPROACH CONNECTION EXISTING STREET	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		



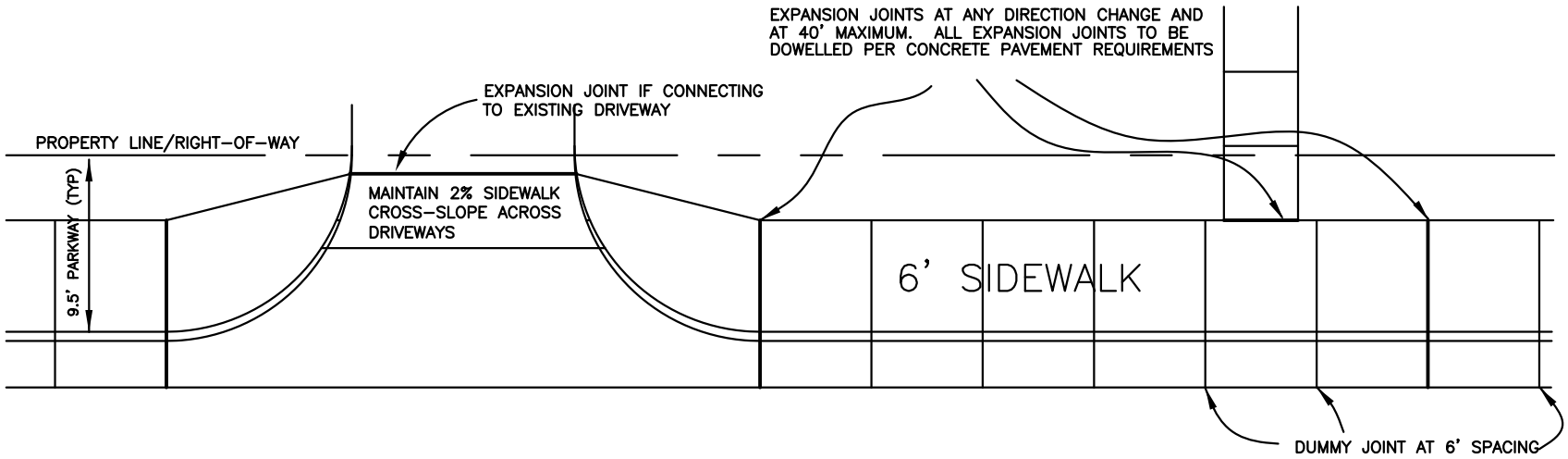
P–18	DRIVE APPROACH WITH 6' SIDEWALK AT RIGHT–OF–WAY	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		

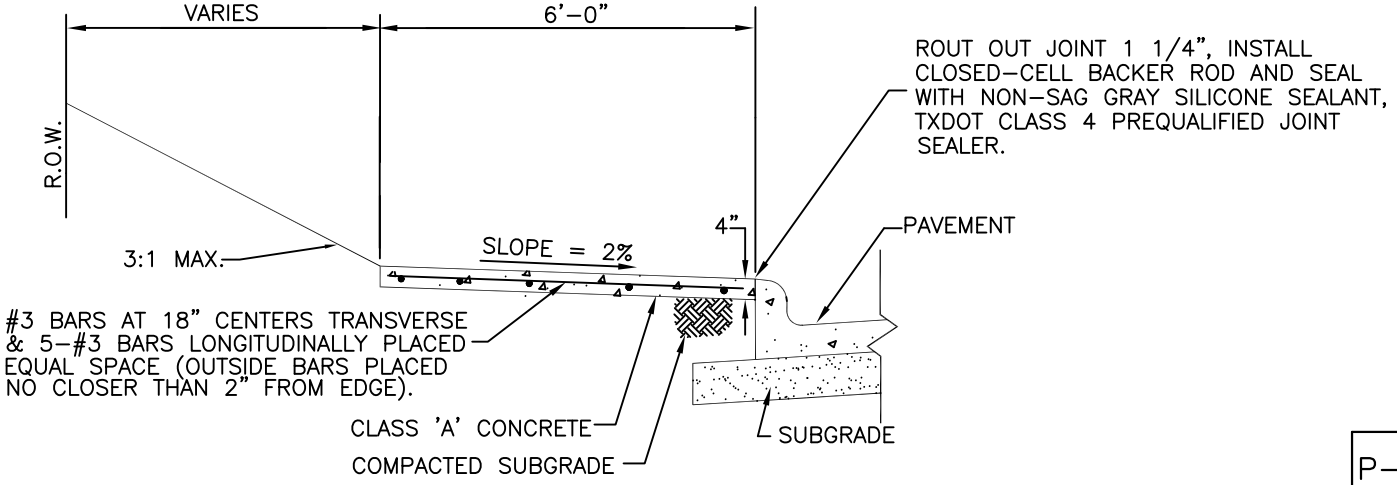




NOTE: EXPANSION JOINT EVERY 40', DUMMY JOINT EVERY 4'. SEE TRANSVERSE EXPANSION JOINT DETAIL (EXCEPT USE #4 SMOOTH DOWELS).

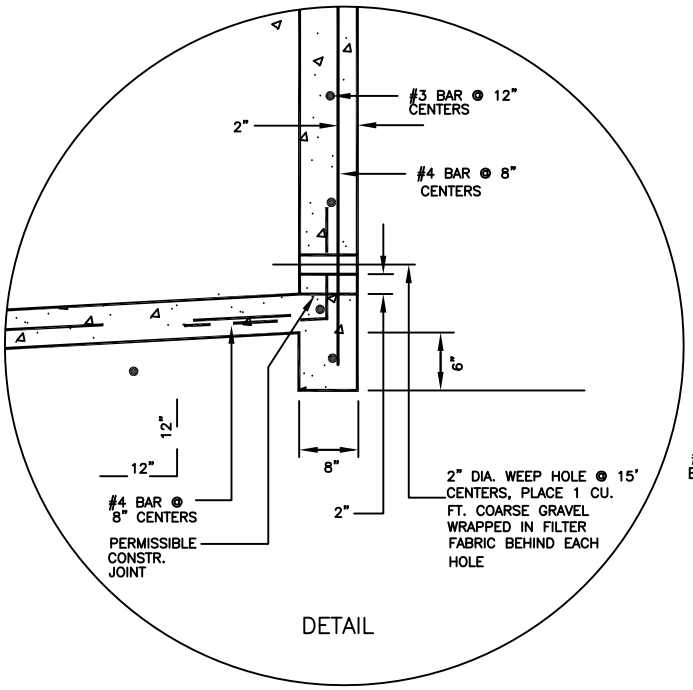
P-19	4' SIDEWALK	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		



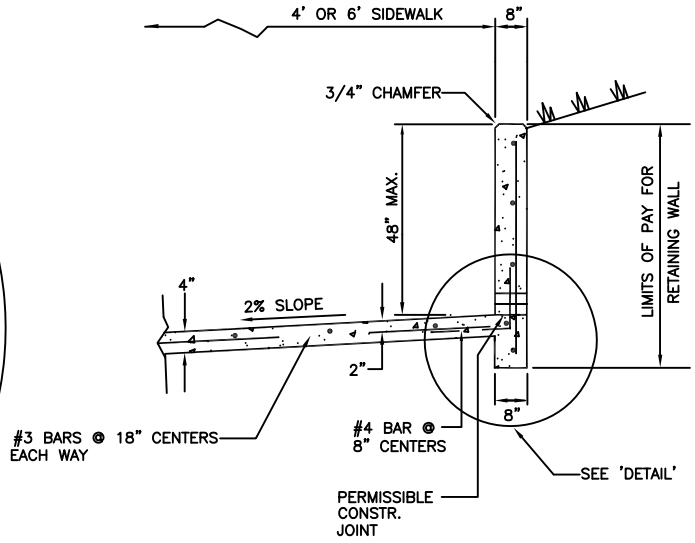


NOTE: EXPANSION JOINT EVERY 42', DUMMY JOINT EVERY 6'. SEE TRANSVERSE EXPANSION JOINT DETAIL (EXCEPT USE #4 SMOOTH DOWELS).

P-20	6' SIDEWALK	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		

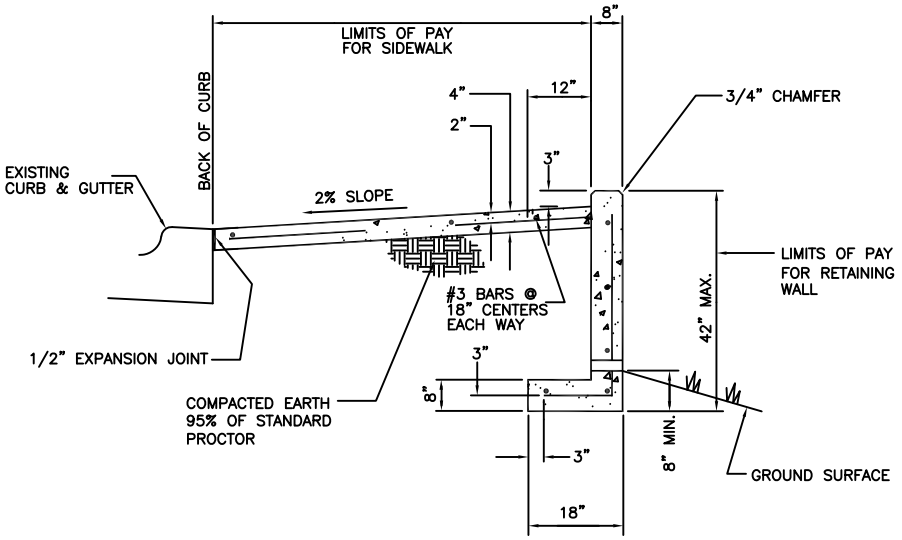


DETAIL



6' SIDEWALK WITH WALL

NOTES:
1. IN LOCATIONS WHERE WALL HEIGHT DOES NOT EXCEED 1', THE TOE WALL AND WEEP HOLES CAN BE OMITTED.
2. IN LOCATIONS WHERE WALL IS 36" TO 48" THE TOE WALL SHALL BE 1' DEPTH.
3. STEEL REINFORCING IN WALL SHALL BE #3 BARS @ 12" CENTERS HORIZONTALLY AND #4 BARS @ 8" CENTERS VERTICALLY.
4. REDWOOD JOINTS IN WALL SHALL MATCH REDWOOD JOINTS IN THE SIDEWALK. THE WALL SHALL BE DOUBLE CHAMFERED AT THE REDWOOD LOCATIONS.
5. ENDS OF WALL SHALL ALSO BE CHAMFERED.
6. CONCRETE TO HAVE COMPRESSIVE STRENGTH OF 3000 psi at 28 DAYS.
7. PRE-MOLDED MATERIAL WITH REMOVABLE CAP STRIP. SEAL WITH NON-SAG GRAY SILICONE SEALANT, TXDOT CLASS 4 PREQUALIFIED JOINT SEALER.



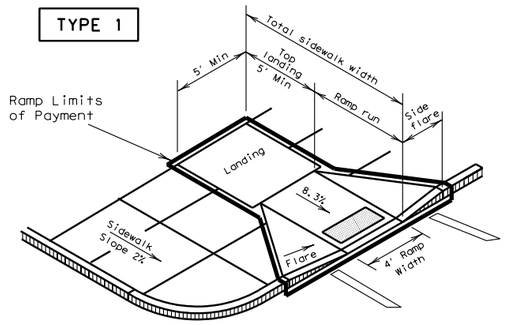
SIDEWALK WITH LOW WALL

NOTES:
1. STEEL REINFORCING IN WALL SHALL BE #3 BARS @ 12" CENTERS HORIZONTALLY AND #4 BARS @ 8" CENTERS VERTICALLY.
2. REDWOOD JOINTS IN WALL SHALL MATCH REDWOOD JOINTS IN THE SIDEWALK. THE WALL SHALL BE DOUBLE CHAMFERED AT THE REDWOOD LOCATIONS.
3. ENDS OF WALL SHALL ALSO BE CHAMFERED.
4. CONCRETE TO HAVE COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS.

P-21	SIDEWALK WITH WALL	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		

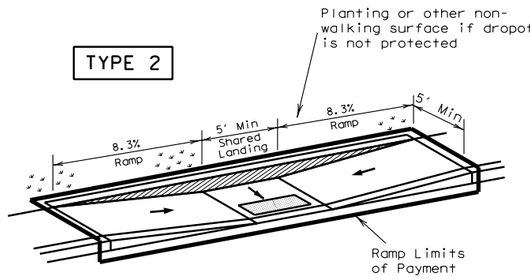
LEVELS DISPLAYED

TYPE 1



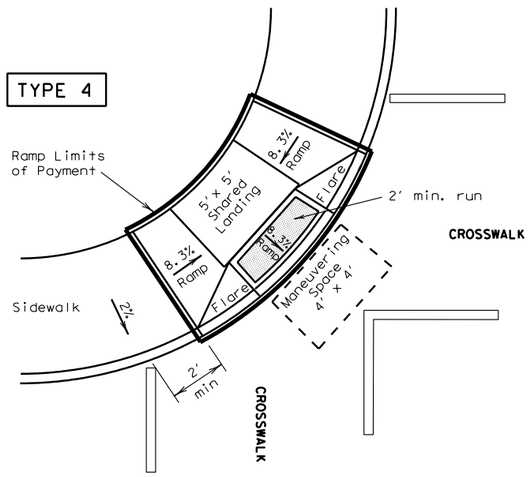
PERPENDICULAR CURB RAMP

TYPE 2



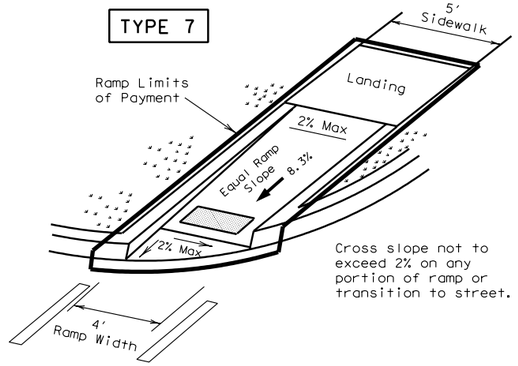
PARALLEL CURB RAMP
(Use only where water will not pond in the landing.)

TYPE 4



DIAGONAL COMBINATION CURB RAMP
Perpendicular to the Tangent of the Curb Radius and Contained in Crosswalk

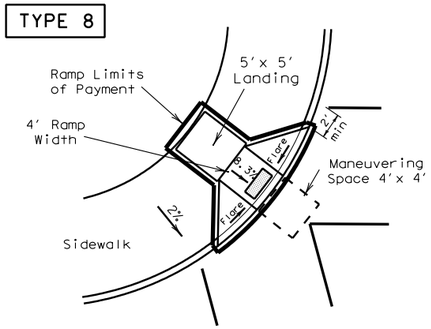
TYPE 7



Cross slope not to exceed 2% on any portion of ramp or transition to street.

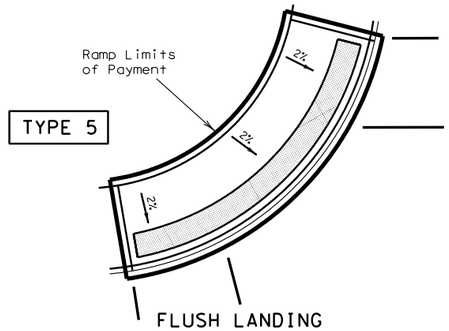
DIRECTIONAL RAMP WITHIN RADIUS
(Sidewalk set back from curb)

TYPE 8



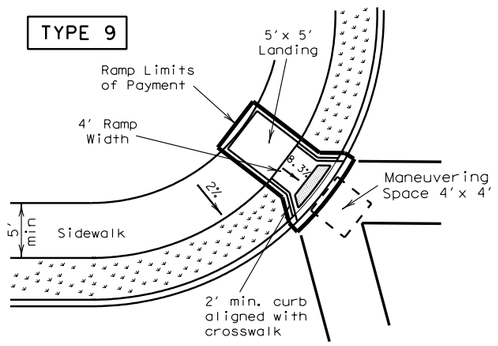
DIAGONAL CURB RAMP (FLARED SIDES)

TYPE 5



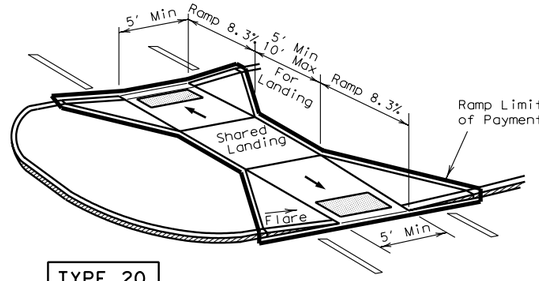
FLUSH LANDING

TYPE 9

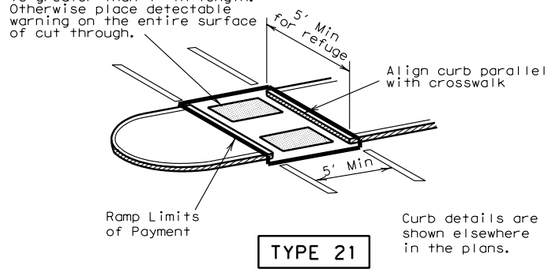


DIAGONAL CURB RAMP (RETURNED CURB)

TYPE 20



TYPE 21

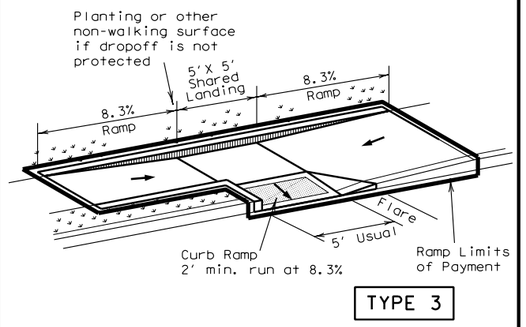


Curb details are shown elsewhere in the plans.

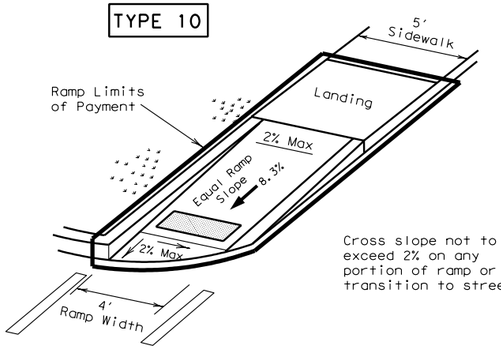
CURB RAMPS AT MEDIAN ISLANDS

Planting or other non-walking surface if dropoff is not protected

TYPE 3



TYPE 10

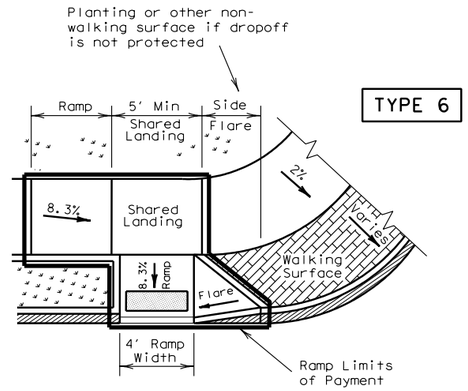


Cross slope not to exceed 2% on any portion of ramp or transition to street.

DIRECTIONAL RAMP WITHIN RADIUS
(Sidewalk adjacent to curb)

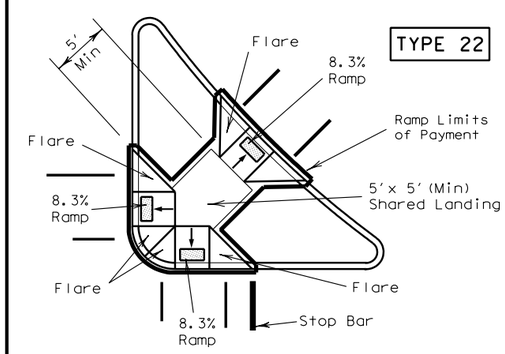
Planting or other non-walking surface if dropoff is not protected

TYPE 6



COMBINATION CURB RAMPS

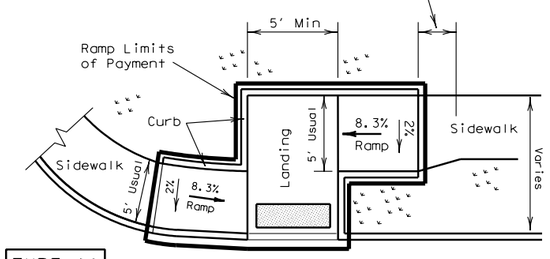
TYPE 22



COMBINATION ISLAND RAMPS

Min. 2' taper to existing or proposed sidewalk

TYPE 11



OFFSET PARALLEL CURB RAMP

NOTES:
See General Notes on sheet 2 of 4 for more information.

" " Denotes planting or non-walking surface.

Texas Department of Transportation
Design Division (Roadway)

PEDESTRIAN FACILITIES
CURB RAMPS

PED-05

SHEET 1 OF 4

FILE: ped05.dgn	DN: EH	CK:	DW: BGD	CK:	
©TxDOT March 2002	DIST	FEDERAL AID PROJECT			SHEET
REVISIONS					
	COUNTY		CONTROL	SECT	JOB	HIGHWAY

DETECTABLE WARNINGS

General Notes for Detectable Warnings

1. Curb ramps must contain a detectable warning surface that consists of raised truncated domes complying with Section 4.29 of the Texas Accessibility Standards (TAS). The surface must contrast visually with adjoining surfaces, including side flares. Furnish dark brown or dark red detectable warning surface adjacent to uncolored concrete, unless specified elsewhere in the plans.

2. Detectable warning surfaces must be slip resistant and not allow water to accumulate.

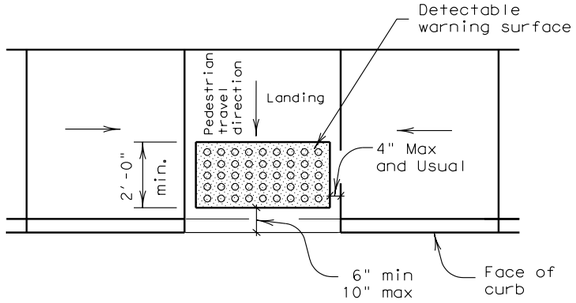
3. Align truncated domes in the direction of pedestrian travel when entering the street.

4. Shaded areas on Sheet 1 of 4 indicate the approximate location for the detectable warning surface for each curb ramp type.

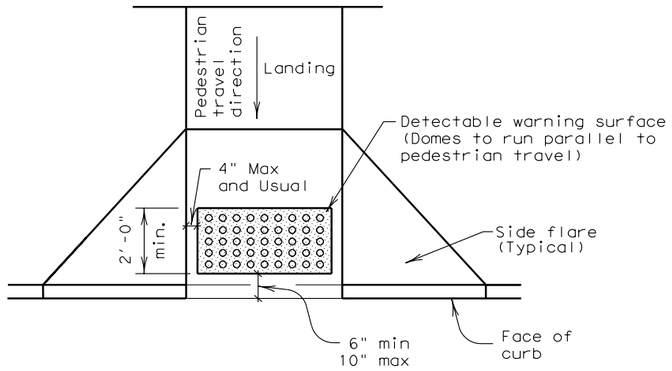
5. Detectable warning surfaces shall be a minimum of 24" in depth in the direction of pedestrian travel, and extend the full width of the curb ramp or landing where the pedestrian access route enters the street.

6. Detectable warning surfaces shall be located so that the edge nearest the curb line is a minimum of 6" and a maximum of 10" from the extension of the face of curb. Detectable warning surfaces may be curved along the corner radius.

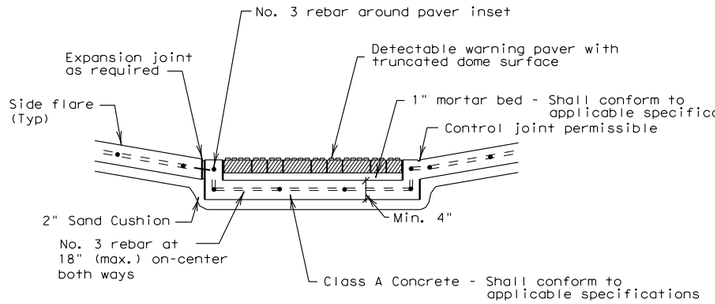
7. TxDOT maintains a list of Qualified Detectable Warning Materials. Details are provided herein for the placement of landscape pavers. For other materials, refer to the manufacturer's product manual for proper installation.



Typical placement of detectable warning surface on landing at street edge.



Typical placement of detectable warning surface on sloping ramp run.

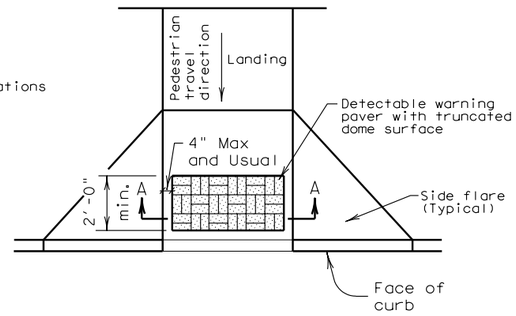


Section A-A

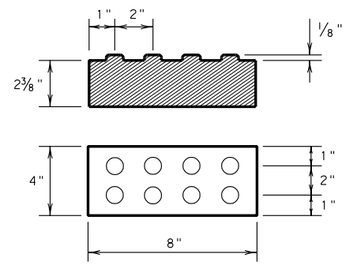
General Notes (Pavers)

Furnish detectable warning paver units meeting all requirements of ASTM C-936, C-33. Lay in a two by two unit basket weave pattern or as directed.

Lay full-size units first followed by closure units consisting of at least 25 percent of a full unit. Cut detectable warning paver units using a power saw.



Truncated Dome Pattern Curb Ramp



Detectable Warning Paver

DETECTABLE WARNING PAVER (OPTION)

Pedestrian Facilities General Notes

1. All slopes are maximum allowable. The least possible slope that will still drain properly should be used. Adjust curb ramp length or grade of approach sidewalks as directed.

2. The minimum sidewalk width is 5'. Where the sidewalk is adjacent to the back of curb, a 6' sidewalk width is encouraged. Where a 5' sidewalk can not be provided due to site constraints, a minimum 3' sidewalk with 5'x 5' passing areas at intervals not to exceed 200' is required.

3. Landings shall be 5'x 5' minimum with a maximum 2% slope in any direction.

4. Maneuvering space at the bottom of curb ramps shall be a minimum of 4'x 4' wholly contained within the crosswalk and wholly outside the parallel vehicular travel path.

5. Maximum allowable cross slope on sidewalk and curb ramp surfaces is 2%.

6. Curb ramps with returned curbs may be used only where pedestrians would not normally walk across the ramp, either because the adjacent surface is planting or other non-walking surface or because the side approach is substantially obstructed. Otherwise, provide flared sides.

7. Additional information on curb ramp location, design, light reflective value and texture may be found in the current edition of the Texas Accessibility Standards (TAS) and 16 TAC §68.102.

8. To serve as a pedestrian refuge area, the median should be a minimum of 5' wide. Medians should be designed to provide accessible passage over or through them.

9. Small channelization islands, which do not provide a minimum 5'x 5' landing at the top of curb ramps, shall be cut through level with the surface of the street.

10. Crosswalk dimensions, crosswalk markings and stop bar locations shall be as shown elsewhere in the plans. At intersections where crosswalk markings are not required, curb ramps shall be aligned with theoretical crosswalks, or as directed by the Engineer.

11. Existing features that comply with TAS may remain in place unless otherwise shown on the plans.

12. Handrails are not required on curb ramps. Provide curb ramps wherever on accessible route crosses (penetrates) a curb.

13. Curb ramps and landings shall be constructed and paid for in accordance with Item 531 "Sidewalks".

14. Separate curb ramp and landings from adjacent sidewalk and any other elements with premold or board joint of ¾" unless otherwise directed by the Engineer.

15. Provide a smooth transition where the curb ramps connect to the street.

16. Curbs shown on sheet 1 within the limits of payment are considered part of the curb ramp for payment, whether it is concrete curb, gutter, or combined curb and gutter.

17. Flare slope shall not exceed 10% measured along curb line.

LEVELS DISPLAYED

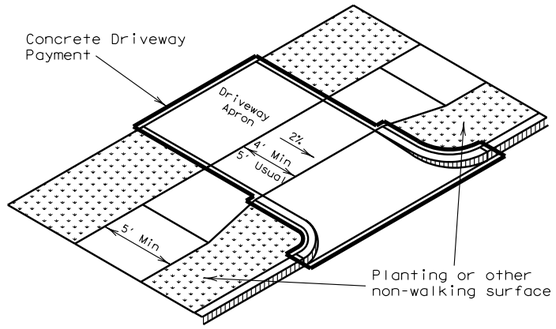
Texas Department of Transportation
Design Division (Roadway)

PEDESTRIAN FACILITIES

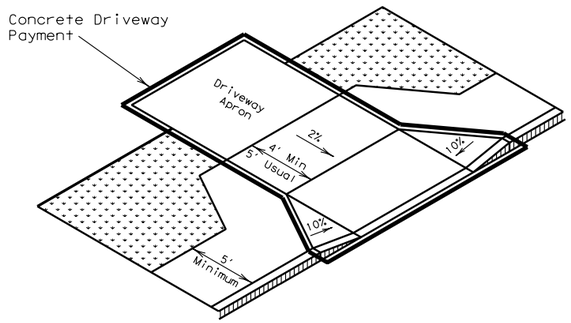
GENERAL NOTES AND DETECTABLE WARNINGS

PED-05

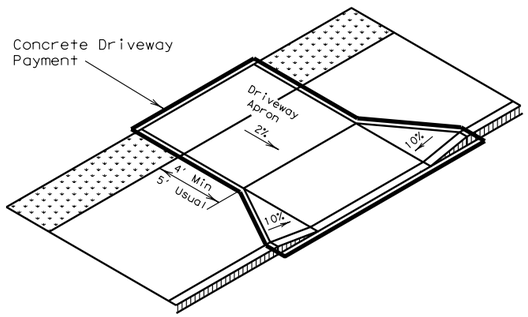
FILE: ped05.dgn	DN: EH	CK:	DW: BGD	CK:
©TxDOT March 2002	DIST	FEDERAL AID PROJECT		SHEET
REVISIONS				
	COUNTY	CONTROL	SECT	JOB	HIGHWAY



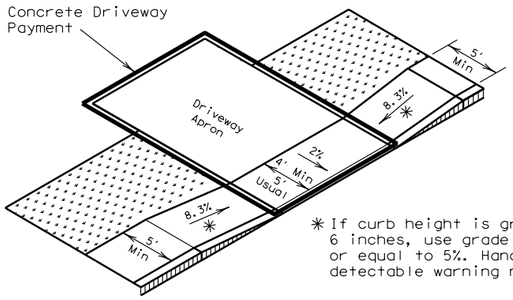
Setback sidewalk



Apron offset sidewalk



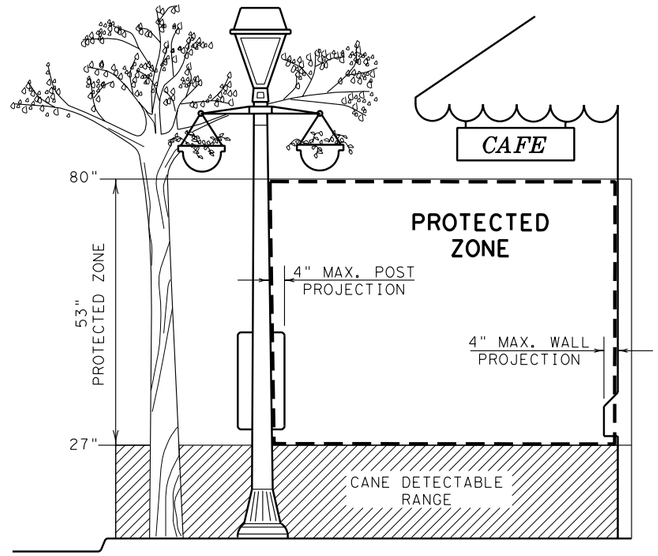
Wide sidewalk



* If curb height is greater than 6 inches, use grade less than or equal to 5%. Handrail and detectable warning not required.

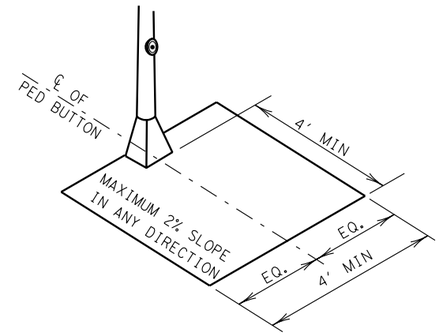
Ramp sidewalk

SIDEWALK TREATMENT AT DRIVEWAYS

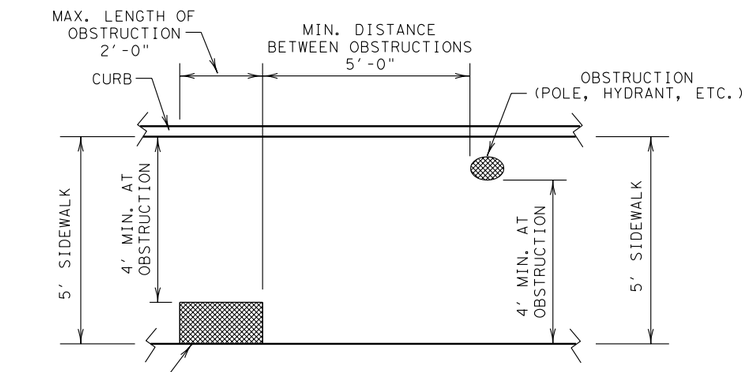


PROTECTED ZONE

In pedestrian circulation area, maximum 4" projection for post or wall mounted objects between 27"and 80" above the surface.



CLEAR GROUND SPACE CENTERED AT PEDESTRIAN PUSH BUTTON

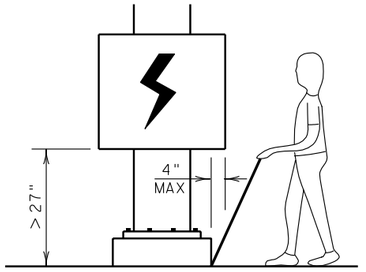


PLAN VIEW
PLACEMENT OF STREET FIXTURES

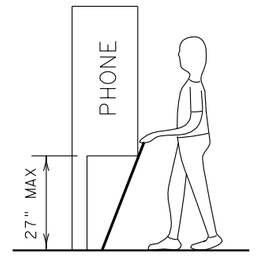
(ITEMS NOT INTENDED FOR PUBLIC USE. MINIMUM 4' × 4' CLEAR GROUND SPACE REQUIRED AT PUBLIC USE FIXTURES.)

General Notes

1. All slopes are maximum allowable. The least possible slope that will still drain properly should be used.
2. Place traffic signal or illumination poles, ground boxes, controller boxes, signs, drainage facilities and other items so as not to obstruct the accessible route or clear ground space.
3. Usual sidewalk cross slope equals 1.5%. The maximum allowable sidewalk cross slope equals 2%.
4. Street grades and cross slopes shall be as shown elsewhere in the plans.
5. Existing features that comply with TAS may remain in place unless otherwise shown on the plans.
6. Changes in level greater than ¼ inch are not permitted.
7. The least possible grade should be used to maximize accessibility. The running slope of sidewalks and crosswalks, within the public right of way, may follow the grade of the parallel roadway. Where a continuous grade greater than 5% must be provided, handrails may be desirable on one or both sides of the sidewalk to improve accessibility. Handrails may also be needed to protect pedestrians from potentially hazardous conditions. If provided, handrails must comply with TAS 4.8.5.
8. Handrail extensions shall not protrude into the usable landing area or into intersecting pedestrian routes.
9. Driveways and turnouts shall be constructed and paid for in accordance with Item, "Driveways and Turnouts". Sidewalks shall be constructed and paid for in accordance with Item, "Sidewalks".
10. Sidewalk details are shown elsewhere in the plans.



When an obstruction of a height greater than 27" from the surface would create a protrusion of more than 4" into the pedestrian circulation area, construct additional curb or foundation at the bottom to provide a maximum 4" overhang.



Protruding objects of a height ≤ 27" are detectable by cane and do not require additional treatment.

DETECTION BARRIER FOR VERTICAL CLEARANCE < 80"

LEVELS DISPLAYED
1

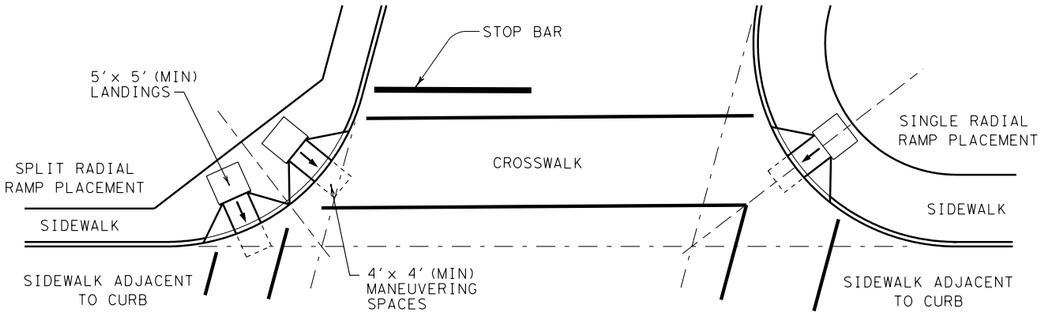
Texas Department of Transportation
Design Division (Roadway)

PEDESTRIAN FACILITIES
SIDEWALKS

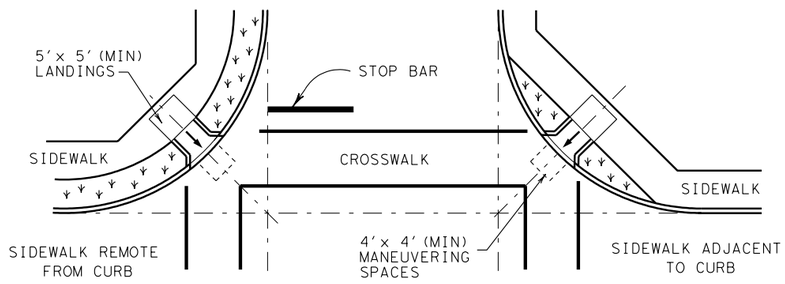
PED-05

SHEET 3 OF 4

FILE: ped05.dgn	DN: EH	CK:	DW: BGD	CK:
© TxDOT March 2002	DIST	FEDERAL AID PROJECT		SHEET
REVISIONS				
	COUNTY	CONTROL	SECT	JOB	HIGHWAY



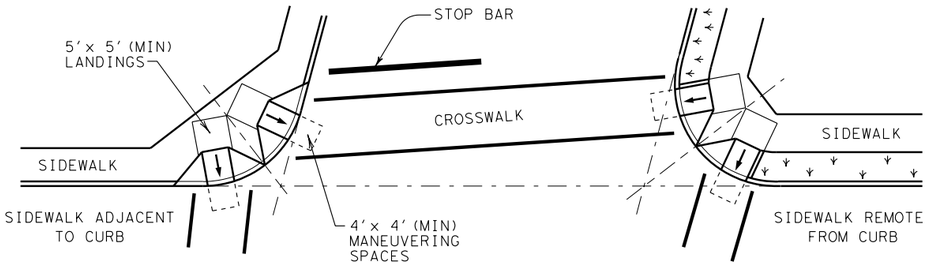
SKEWED INTERSECTION WITH "LARGE" RADIUS



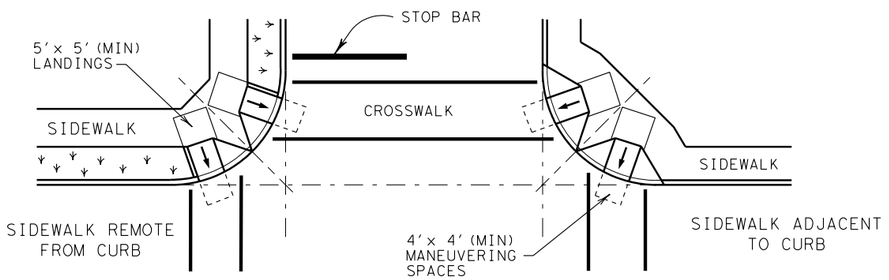
NORMAL INTERSECTION WITH "LARGE" RADIUS

General Notes

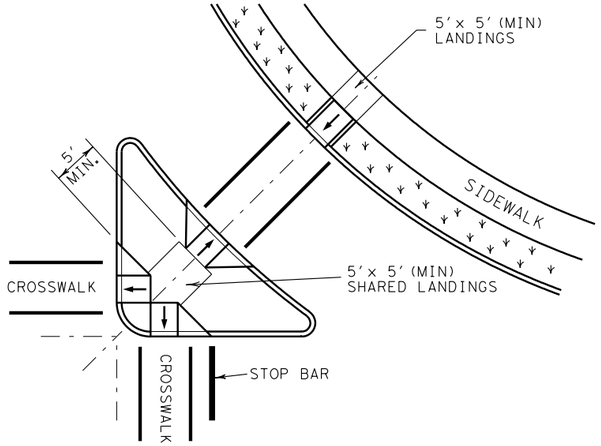
1. Street grades and cross slopes shall be as shown elsewhere in the plans.
2. Ramps are shown here without detectable warnings for simplicity. Detectable warnings are required at the locations shown on the PED Standard (Sheets 1 and 2 of 4) and in accordance with the details shown below.
3. Small channelization islands, which can not provide a minimum 5' x 5' landing at the top of ramps, shall be cut through level with the surface of the street.



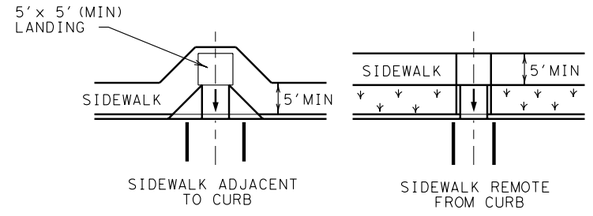
SKEWED INTERSECTION WITH "SMALL" RADIUS



NORMAL INTERSECTION WITH "SMALL" RADIUS



AT INTERSECTION
W/FREE RIGHT TURN & ISLAND



MID-BLOCK PLACEMENT
PERPENDICULAR RAMPS

TYPICAL CROSSING LAYOUTS

SEE SHEET 1 OF 4 FOR DETAILS AND DIMENSIONS

LEVELS DISPLAYED
1

Texas Department of Transportation
Design Division (Roadway)

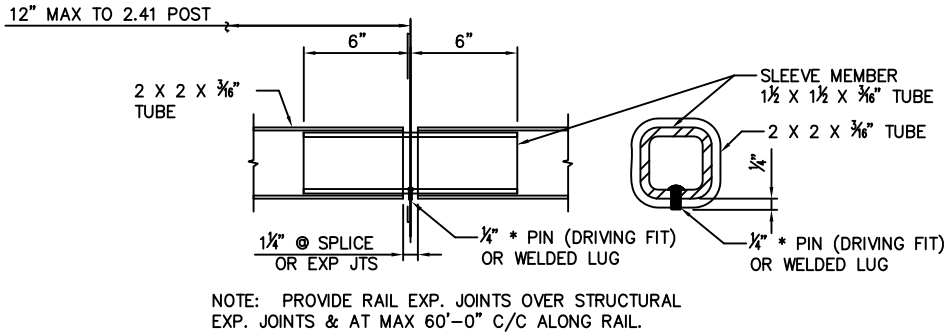
PEDESTRIAN FACILITIES

INTERSECTION LAYOUTS

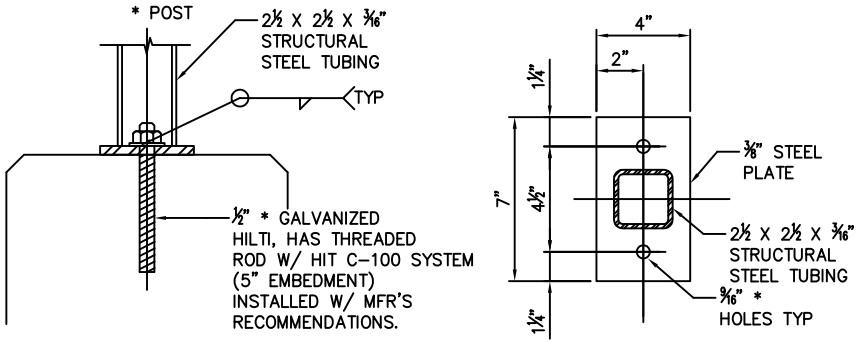
PED-05

SHEET 4 OF 4

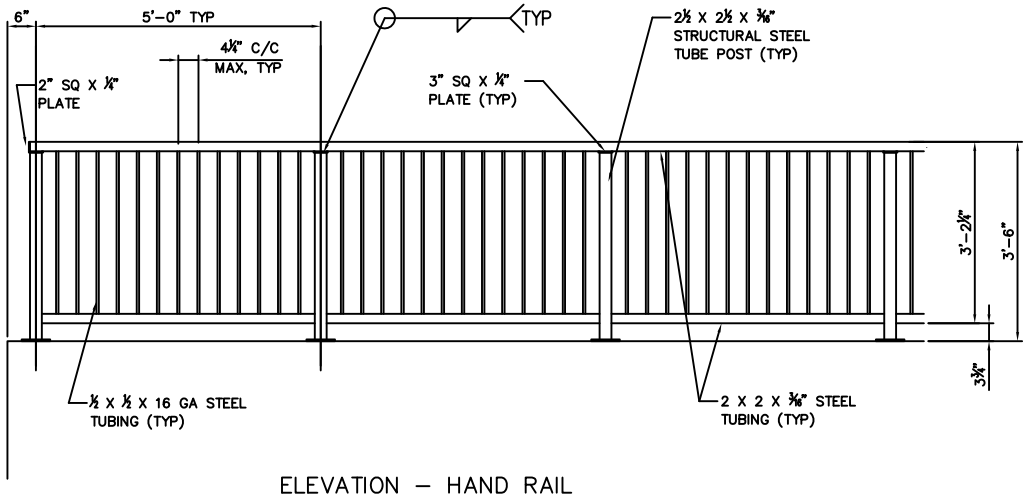
FILE: ped05.dgn	DN: EH	CK:	DW: BGD	CK:
©TxDOT March 2002	DIST	FEDERAL AID PROJECT		SHEET
REVISIONS				
	COUNTY	CONTROL	SECT	JOB	HIGHWAY



HANDRAIL SPLICE DETAIL



HANDRAIL BASE PLATE DETAILS

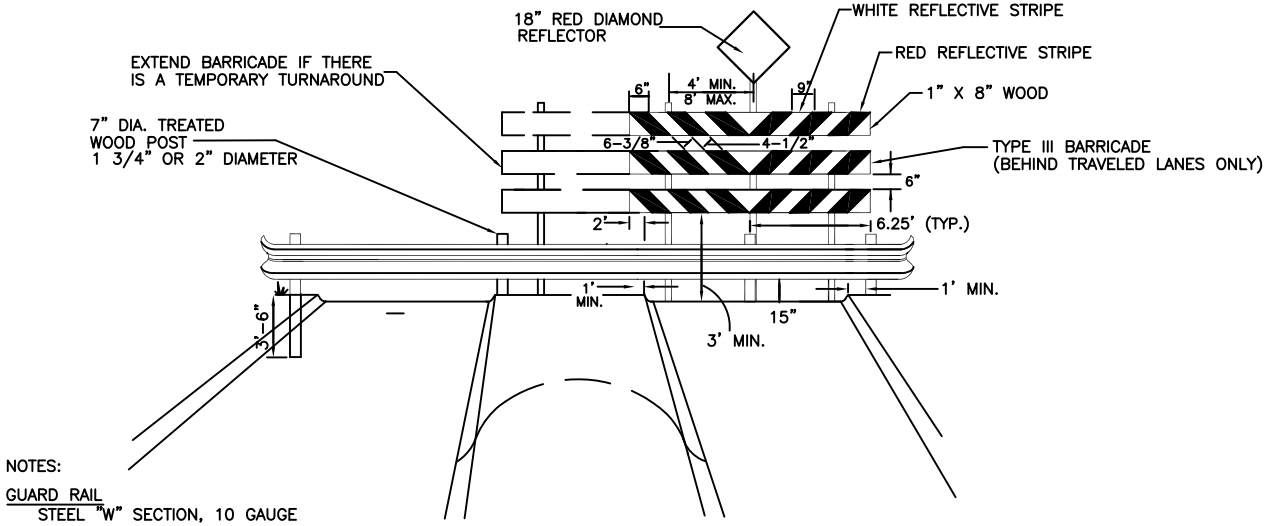


ELEVATION – HAND RAIL

NOTES:

1. ALL STEEL COMPONENTS SHALL BE COATED IN TAN OR BLACK COLOR.
2. EXPOSED EDGES OF HANDRAIL AND HANDRAIL POSTS SHALL BE ROUNDED OR CHAMFERED TO APPROXIMATELY 1/16" BY GRINDING.
3. HANDRAIL POSTS SHALL BE PERPENDICULAR TO TOP OF CONCRETE. GROUT MAY BE USED UNDER BASE PLATES IF NECESSARY.

P-23	PIPE HANDRAIL	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		

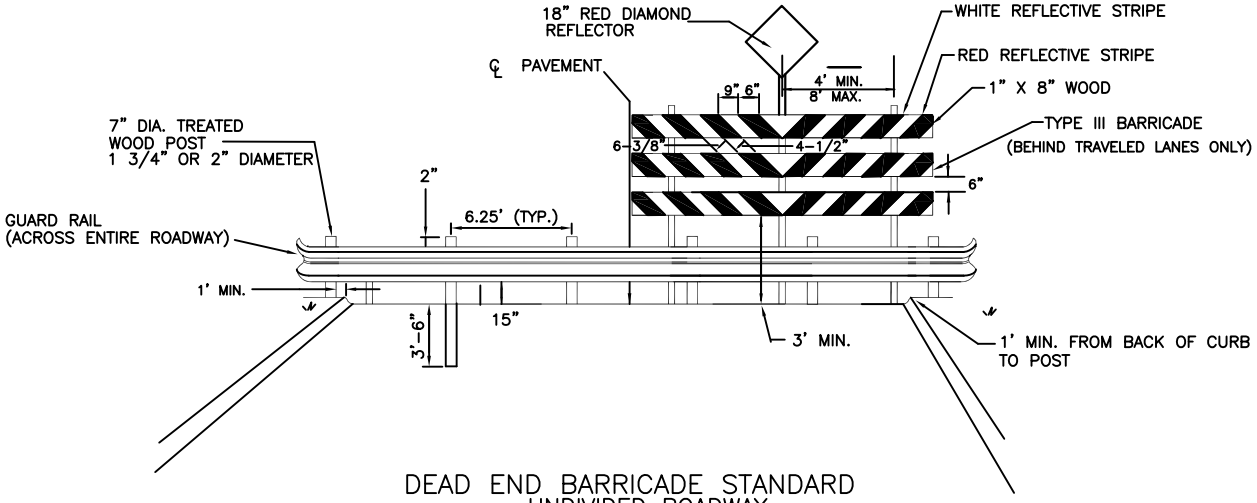


NOTES:

GUARD RAIL
STEEL "W" SECTION, 10 GAUGE

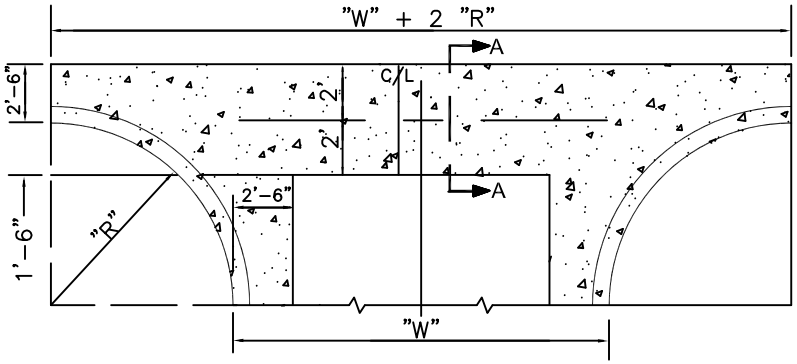
CONNECTIONS
5/8" DIA. BOLTS, APPROX. 9" LONG

DEAD END BARRICADE STANDARD
DIVIDED ROADWAY



DEAD END BARRICADE STANDARD
UNDIVIDED ROADWAY

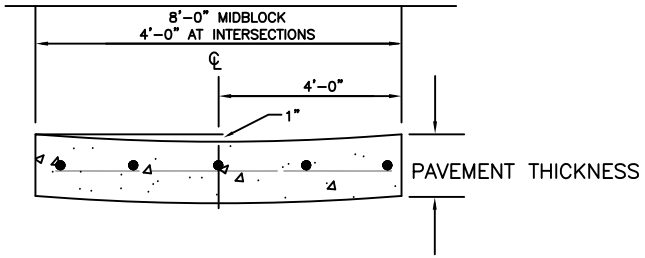
P-24	DEADEND BARRICADE	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		



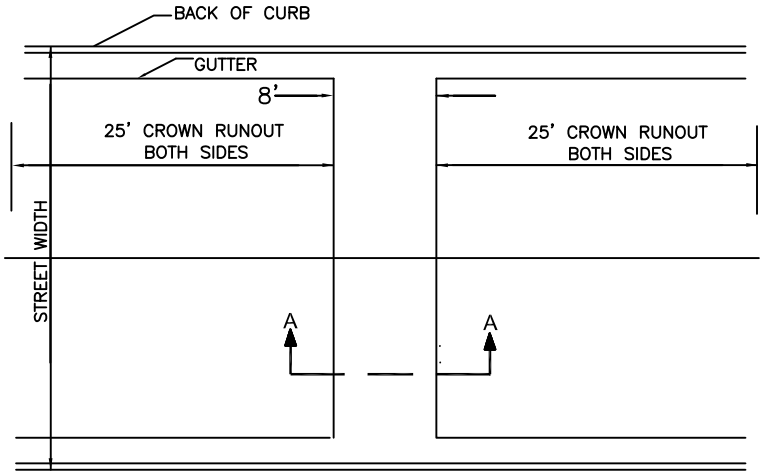
NOTE:

ALL CONCRETE FOR VALLEY GUTTER SHALL BE CLASS "A". REINFORCING STEEL SHALL BE NO. 4 BARS ON 12" CENTERS BOTH WAYS.

VALLEY GUTTER PLAN

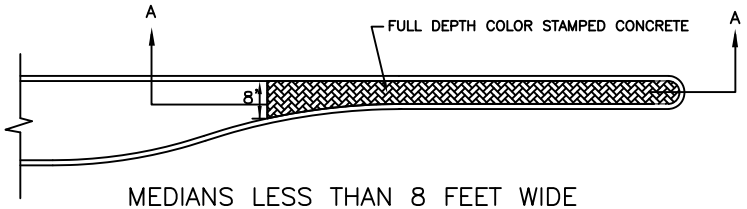


SECTION A–A

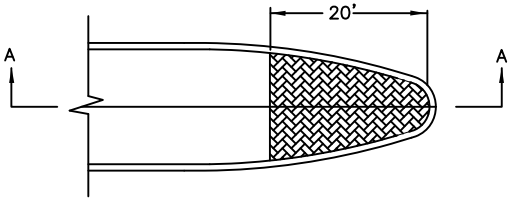


VALLEY GUTTER CROSSING
AN ASPHALT STREET

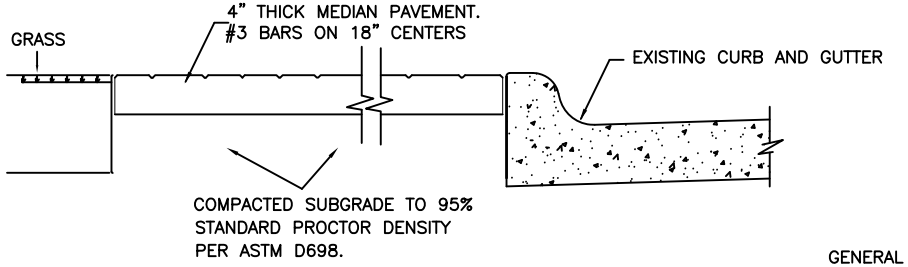
P–25	VALLEY GUTTER	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		



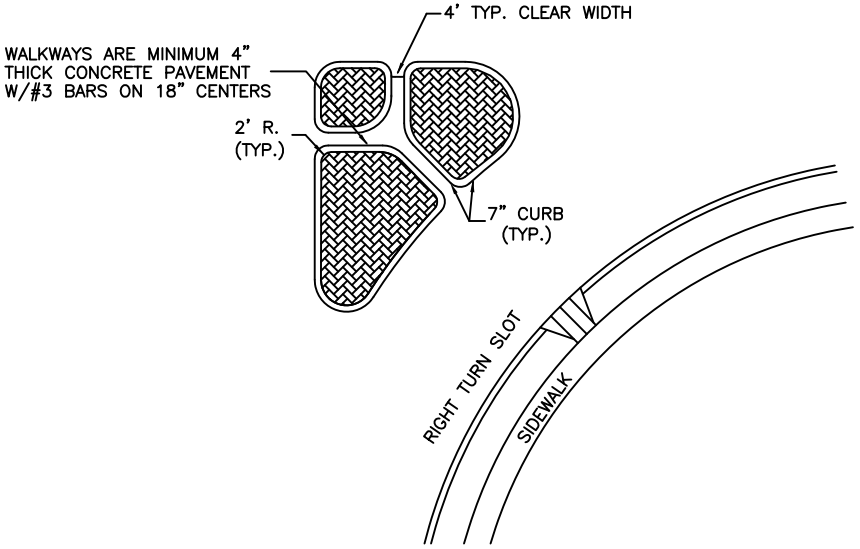
MEDIANS LESS THAN 8 FEET WIDE



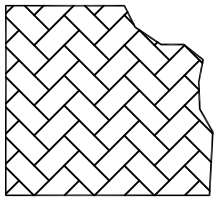
MEDIAN GREATER THAN 8 FEET WIDE



SECTION A–A



TYPICAL ISLAND AT INTERSECTION



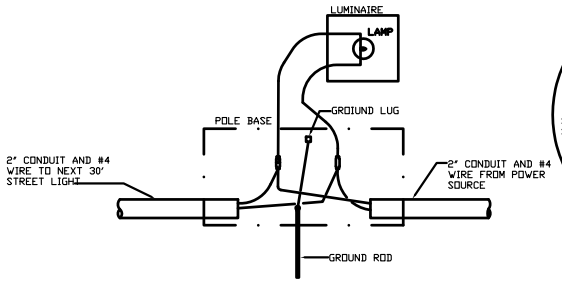
CONCRETE PAVER PATTERN

HERRINGBONE BRICK (NEW BRICK FINISH)
OR APPROVED EQUAL

GENERAL NOTES:

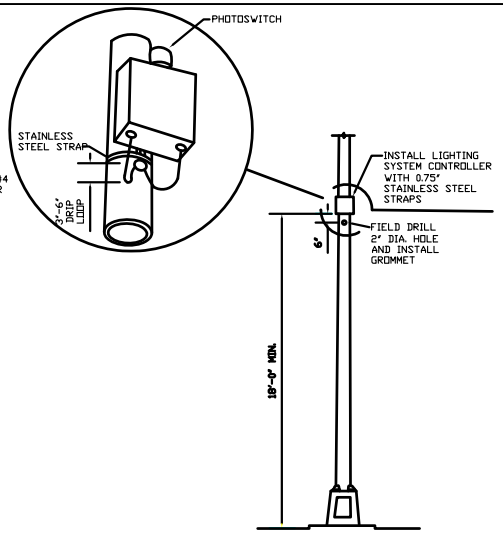
1. CONCRETE SHALL CONFORM TO THE CITY OF BURLESON STANDARD SPECIFICATIONS.
2. MEDIAN PAVING SHALL BE FULL DEPTH COLOR STAMPED CONCRETE. COLOR SHALL BE RED CLAY (4D) OR APPROVED EQUAL.
3. MEDIAN PAVING SHALL BE 4" THICK CONCRETE, REINFORCED WITH #3 BARS ON 18" CENTERS ON A COMPACTED SUBGRADE.
4. 1/2" PREMOLDED ASPHALTIC FIBER EXPANSION JOINT MATERIAL ANY PLACE WHERE CONCRETE ABUTS CONCRETE.

P–26	MEDIAN/ISLAND PAVING	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		



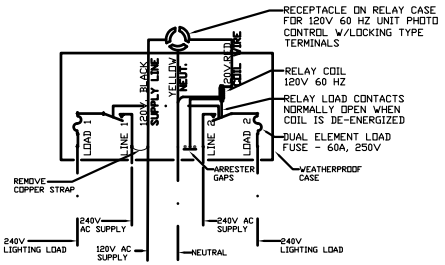
1 Street Light Schematic Wiring Diagram

N.T.S.



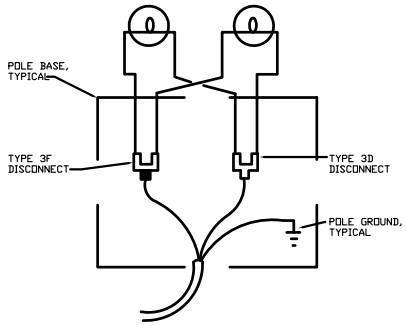
3 Pole Mounted Lighting Controller

N.T.S.



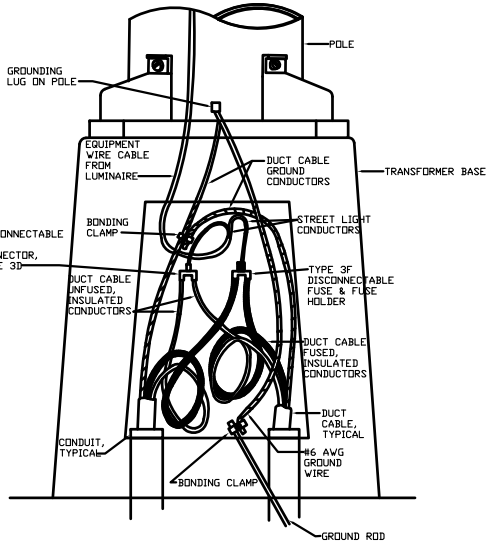
ELECTRICAL SERVICE NOTES:

1. THE CONTROLLER AND ITS PHOTO SWITCH SHALL BE LOCATED SO THAT THE PHOTO SENSOR FACES IN A NORTHERLY DIRECTION SO THAT THE SUNLIGHT HITTING IT IS NOT OBSCURED BY THE PAD MOUNTED EQUIPMENT.
2. THE LIGHTING SYSTEM CONTROLLER SHALL CONSIST OF A PHOTOCELL AND A LIGHTING CONTACTOR TO CONTROL THE 40' STREET LIGHTS. LIGHTING CONTACTOR SHALL BE TRINETICS TYPE MR-UG, SPEC 6338 RATED FOR 240V, SINGLE PHASE, 60 AMPERES PRIMARY WITH 240V, 60 HETRZ CONTROL VOLTAGE AND A PHOTOCELL RECEPTACLE. PROVIDE LIGHTNING ARRESTORS, DUAL ELEMENT FUSES AND A NEMA 3R ENCLOSURE. PROVIDE PHOTOCELL COMPATIBLE WITH SOCKET. WIRE PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
3. THE CONTRACTOR SHALL COORDINATE WITH THE CITY OF BURLESON AND TXU/ONCOR TO WIRE THE LIGHTING CONTROLLER TO MATCH THE 240V, 1Ø (H, N, G) WITH 120V CONTROL, WHICH IS THE CITY STANDARD STREET LIGHTING VOLTAGE.



5 Two Luminaires at End of Cable

N.T.S.



2 Typical Connections in Pole Base

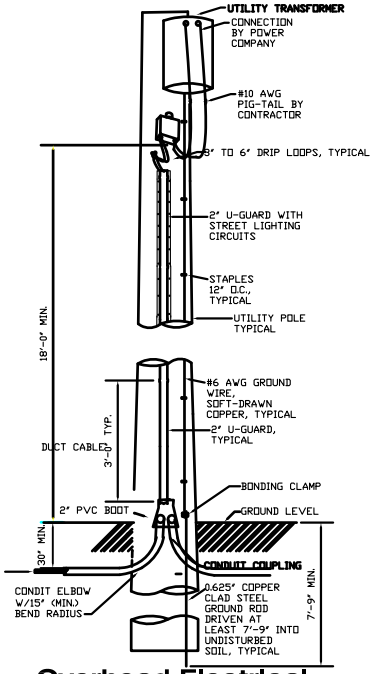
N.T.S.

NOTE:

LEAVE AT LEAST 18" OF SLACK IN EACH CONDUCTOR IN POLE BASE, EXCEPT THAT GROUND WIRE FROM POLE TO GROUND ROD SHALL NOT BE COILED OR KINKED. IT SHALL BE AS DIRECT AS THE DRESSING OF OTHER CONDUCTORS WILL PERMIT.

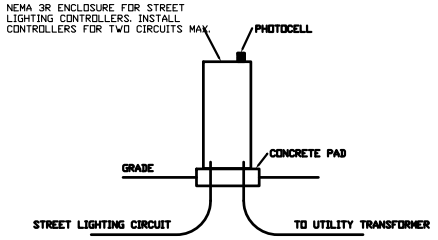
STREET LIGHT CIRCUIT CHHEDULE

CIRCUIT NUMBER	OH/UG	CONDUIT SIZE/TYPE	SIZE (A.W.G.)	CONDUCTOR TYPE	CONDUCTOR INSULATION	NUMBER OF CONDUCTORS	GROUNDING CONDUCTOR MIN.SIZE CU.(A.W.G.)	FUSE SIZE
L-1	UG	2"	2	Cu	XHHW	2	6	30A
L-2	UG	2"	2	Cu	XHHW	2	6	30A
				Cu	XHHW			30A
				Cu	XHHW			30A
				Cu	XHHW			30A
				Cu	XHHW			30A
				Cu	XHHW			30A
				Cu	XHHW			30A



4 Overhead Electrical Service - Existing Utility Pole

N.T.S.



LEGEND:

UNDERGROUND WIRE IN 2" PVC

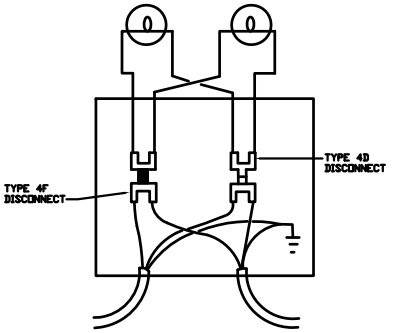
L - 0 CURCUIT NUMBER

STREET LIGHTS

7-145 TWO # 2 WIRES WITH ONE # 6 BARE GROUND

GENERAL NOTES FOR 40' POLES

PROVIDE BUSSMANN HEB SERIES BREAK-A-WAY, IN-LINE FUSE HOLDERS, CATALOG NO. HEB-A-W-RYC WITH BUSSMANN TYPE KTK5 FUSES, TO PROTECT #12 AWG CONDUCTORS FROM POLE BASE TO LUMINAIRE.



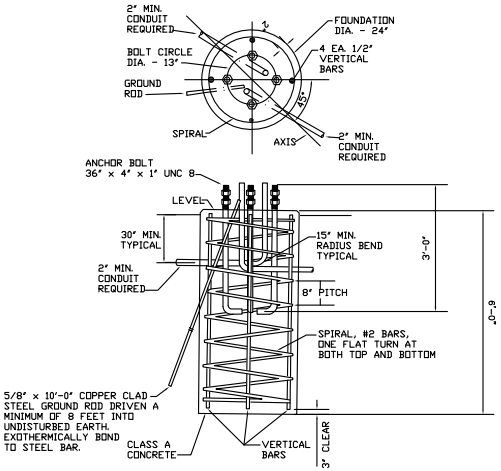
6 Two Luminaires at Location Along Cable

N.T.S.

GENERAL NOTES FOR 40' POLES

1. PROVIDE BUSSMANN HEB SERIES BREAK-A-WAY, IN-LINE FUSE HOLDERS, CATALOG NO. HEB-A-W-RYC WITH BUSSMANN TYPE KTK5 FUSES, TO PROTECT #12 AWG CONDUCTORS FROM POLE BASE TO LUMINAIRE.

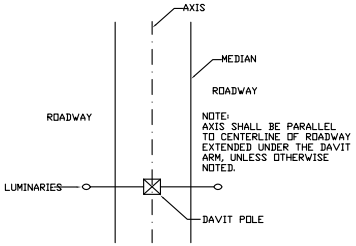
P-27a	ELECTRICAL DETAILS STREETLIGHTING	
CITY OF BURLESON		
ORIGINAL	6/6/08	SWC
REVISION		
REVISION		
REVISION		



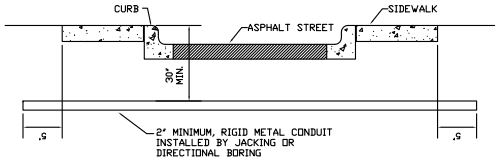
1 Davit Pole Base Detail
N.T.S.

DAVIT POLE BASE NOTES:

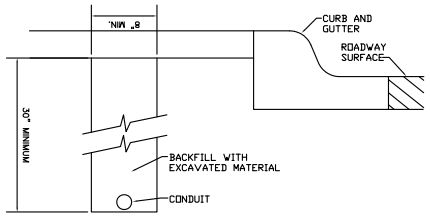
1. ELEVATION OF THE FOUNDATION TOP SHALL BE THE SAME AS THE ELEVATION OF THE TOP OF THE SIDEWALK OR THE SAME AS THE ELEVATION OF THE CROWN OF THE ROADWAY UNDER THE DAVIT ARM, WHICHEVER IS HIGHER. THE CONTRACTOR SHALL FIELD VERIFY THE ELEVATIONS.
2. EACH FOUNDATION SHALL HAVE AT LEAST TWO 2"C. STUBBED UP INTO THE BASE AND ORIENTED AS REQUIRED TO SERVE THE ENTERING CABLES.
3. COORDINATE POLE BASE REQUIREMENTS AND BOLT HOLE PATTERN WITH THE CITY OF BURLESON AND THE POLE MANUFACTURER.
4. UNLESS OTHERWISE NOTED, THE DESIGN OF THE POLES, DAVIT ARMS AND LUMINARIES SHALL CONFORM TO THE REQUIREMENTS OF THE CURRENT AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINARIES AND TRAFFIC SIGNALS AND ALL ADDENDA THERETO. THE DESIGN SHALL WITHSTAND ICE AND 80 MPH WINDS WITH 104 MPH GUSTS.



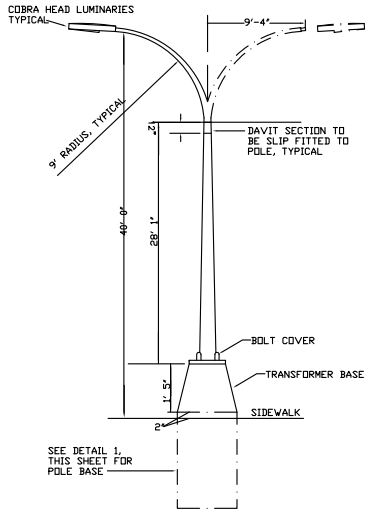
2 Foundation Orientation
N.T.S.



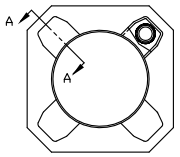
3 Street Crossing Detail
N.T.S.

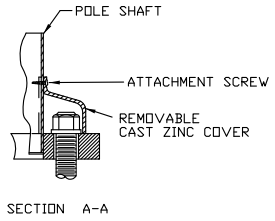


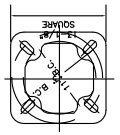
4 Condult Under Medlan
N.T.S.

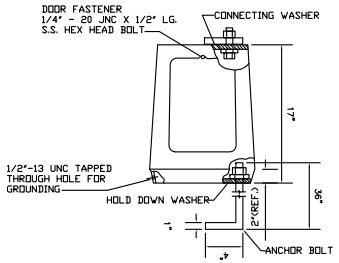


5 Davit Pole Detail
N.T.S.

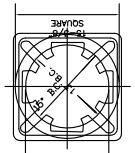


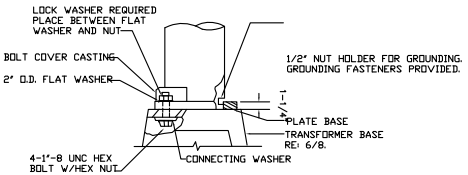


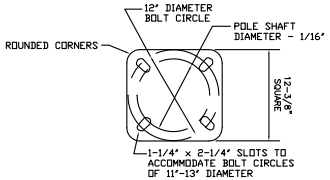




6 Bolt Cover Detail
N.T.S.







7 Base Plate Detail
N.T.S.

TRANSFORMER BASE NOTES

DOOR OPENING APPROXIMATELY 8-3/4"x 9-1/4"x 13".

TOP BOLT HOLES WILL ACCOMMODATE MAXIMUM 1" DIA. BOLTS.

4" GALVANIZED 2-3/4"O.D. x 1/2" THK. HOLD DOWN WASHERS PROVIDED FOR INSTALLATION UNDER ANCHOR BOLT HEX NUTS AS SHOWN.

4" GALVANIZED 2-1/2"O.D. c 3/8" THK. CONNECTING WASHERS PROVIDED FOR INSTALLATION UNDER THE TRANSFORMER BASE TOP PLATE AS SHOWN.

MATERIAL SHALL CONFORM TO COMMERCIAL DESIGNATION, A356-T6 ALLOY.

BASE CONFORMS TO BREAKAWAY CRITERIA OF AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS, FOR HIGHWAY SIGNS, LUMINARIES AND TRAFFIC SIGNALS (1975).

8 Transformer Base Detail
N.T.S.

P-27b	ELECTRICAL DETAILS STREETLIGHTING	
CITY OF BURLESON		
ORIGINAL	6/6/08	SWC
REVISION		
REVISION		
REVISION		

1. ALL STREET LIGHT CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE STANDARD SPECIFICATIONS FOR STREET LIGHTING CITY OF BURLESON, TEXAS, DEPARTMENT OF PUBLIC WORKS.

2. PROPOSED LIGHTING POLE LOCATIONS AND CONDUIT ALIGNMENT SHALL BE STAKED BY THE CONTRACTOR. CONTRACTOR SHALL KEEP A RECORD SET OF PLANS AND MARK ANY DIFFERENCES BETWEEN THE LOCATIONS SHOWN IN THE PLANS AND THE BUILT LOCATIONS. THIS RECORD SET SHALL BE PROVIDED TO THE CITY AT THE TIME OF ACCEPTANCE OF THE WORK.

3. T.X.U. ELECTRIC WILL INSTALL TRANSFORMERS. ALL WORK AT SERVICE INCLUDING SERVICE CONNECTION SHALL BE BY CONTRACTOR.

4. UNDERGROUND LIGHTING CIRCUIT CONDUCTORS SHALL BE TWO XHHN 600 VOLT INSULATED COPPER CONDUCTORS OF THE SIZES INDICATED WITH A BARE COPPER GROUNDING CONDUCTOR OF THE SIZE INDICATED.

5. CONTRACTOR SHALL HAVE ALL EXISTING UTILITIES THAT ARE POSSIBLY IN CONFLICT WITH CONSTRUCTION STAKED HORIZONTALLY AND / OR VERIFIED VERTICALLY PRIOR TO CONSTRUCTION.

6. SCHEDULE 40 PVC CONDUIT SHALL BE USED AND SHALL BE BURIED A MINIMUM OF 30".

7. POLES SHALL BE INSTALLED A MINIMUM OF FOUR FEET FROM FIRE HYDRANTS, TREES, DRAIN LINES, INLETS, DIRVEWAYS, ETC.

8. INSTALL IN LINE FUSES AT ALL SERVICE CONNECTIONS.

9. POLES SHALL BE STEEL, 40'-0" DAVIT DOUBLE ARM, BRONZE IN COLOR WITH 24" X 72" PIER

10. LUMINAIRES SHALL BE AMERICAN ELECTRIC SERIES 114, OR EQUAL, OUTDOOR LIGHTING, HORIZONTAL LUMINAIRES FOR 150 WATT HIGHT PRESSURE SODIUM LAMP 120/240 VOLT MULTI-BALLAST. LUMINAIRES SHALL BE A COBRA-HEAD TYPE WITH A FLAT CLEAR LENS AND LIGHTING ASSESSOR. LUMINAIRES SHALL CONFORM TO ALL PROVISIONS OF THE CURRENT CITY OF BURLESON SPECIFICATIONS FOR STREET LIGHTING.

11. INSTALL PHOTO ELECTRIC CONTROLLED LIGHTING CONTROLLER ON POLES WHERE INDICATED. CONTROLLER SHALL BE RCOC REMOTE CONTROL OUTDOOR LIGHTING MODEL MR-UG DOUBLE POLE RELAY TYPE RATED 120/240 VOLTS. THE CABINET OF THE CONTROLLER SHALL BE MADE OF FINISHED CAST ALUMINUM. CONTROLLER SHALL BE FURNISHED COMPLETE WITH PHOTO ELECTRIC CONTROL AND DUAL ELEMENT LOAD OF THE SIZE INDICATED. CONTROLLER AMPERE RATING FUSE SIZE SHALL BE AS NOTED ON THE PLAN SHEETS AT THE POINT OF INSTALLATION. WHERE CONTROLLER IS LOCATED AT MIDPOINT OF THE CIRCUIT, CONNECT BOTH ENDS OF THE CIRCUIT CONNECTORS TO THE COMMON LOAD TERMINALS OF THE LIGHTING CONTROLLER.

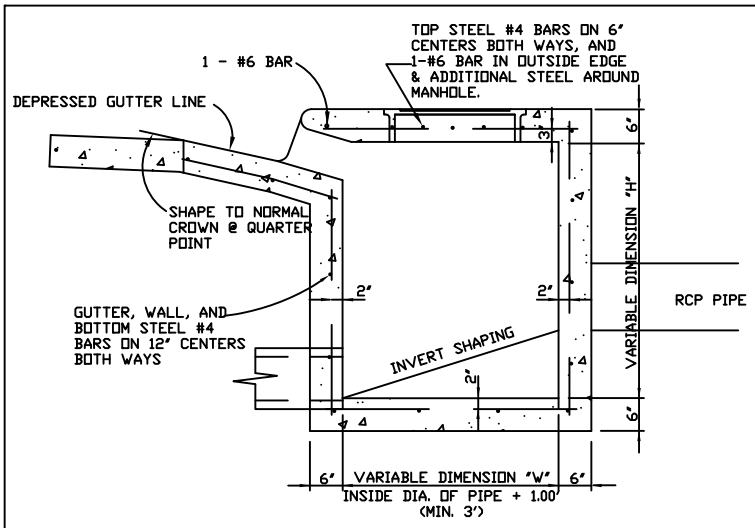
12. ALL EXPOSED METAL PARTS ON LIGHTING LUMINARIES AND LIGHTING STANDARDS SHALL BE BONDED TO THE LIGHTING CIRCUIT GROUNDING CONDUCTOR.

13. THERE IS TO BE A MINIMUM CLEARANCE OF 10' BETWEEN THE STREET LIGHT POLES AND ANY OVERHEAD POWER LINES. THE CONTRACTOR SHALL VERIFY THAT NO CONFLICT EXISTS WITH ANY OVERHEAD POWER LINES THAT RUN PARALLEL WITH OR CROSS OVER ROADWAYS BEFORE DRILLING THE PIERS FOR THE POLES. ADJUST THE LOCATION OF THE STREET LIGHT POLES ACCORDINGLY TO INSURE THE 10' MINIMUM CLEARANCE. CONTACT CITY REPRESENTATIVE CONCERNING ALL CONFLICTS.

P-27c	STREETLIGHTING GENERAL NOTES	
CITY OF BURLESON		
ORIGINAL	6/6/08	SWC
REVISION		
REVISION		
REVISION		

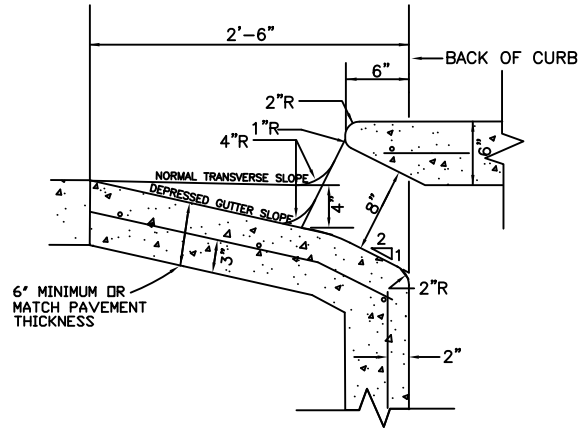
STORM DRAIN SYSTEM DETAILS

D-01	Standard Curb Inlet
D-02	Recessed Curb Inlet
D-03	Drop Inlet
D-04	Manhole Cover and Steps and General Inlet Notes
D-05A	Storm Drain Manhole (Sheet 1 of 2)
D-05B	Storm Drain Manhole (Sheet 2 of 2)
D-06	Storm Drain Embedment Detail
D-07	Storm Drain Connection to Existing Pipe
D-08	Pipe Collar
D-09	Flume
D-10	Channel
D-11	Existing Street Backfill and Repair
D-12	Street Backfill Prior to Street Construction

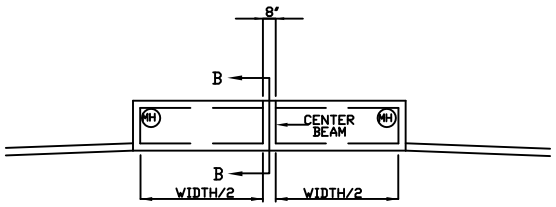


A–A

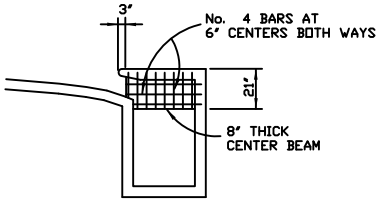
CURB INLET
CROSS SECTION



THROAT DETAIL FOR STANDARD INLETS
ON CONCRETE STREETS



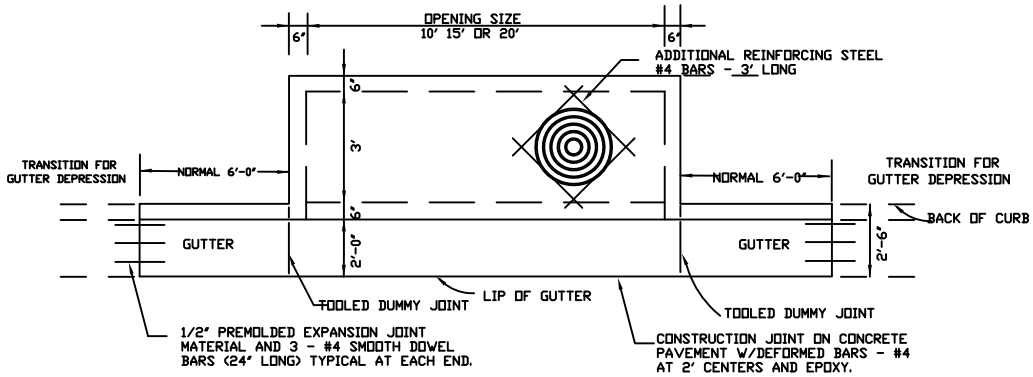
CENTER BEAM FOR
INLETS LARGER THAN 10'

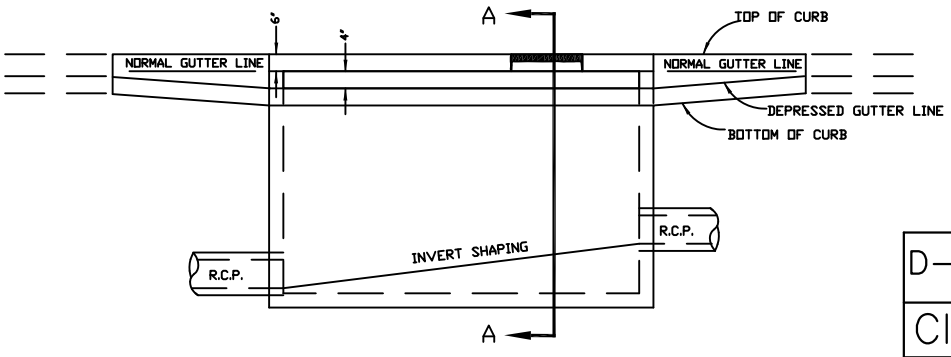


SECTION B–B

NOTES:

1. ALL INLETS LARGER THAN 10' WILL REQUIRE A CENTER SUPPORT BEAM.
2. ALL OPEN BACK INLETS WILL REQUIRE A CENTER BEAM, REGARDLESS OF INLET TYPE OR SIZE.

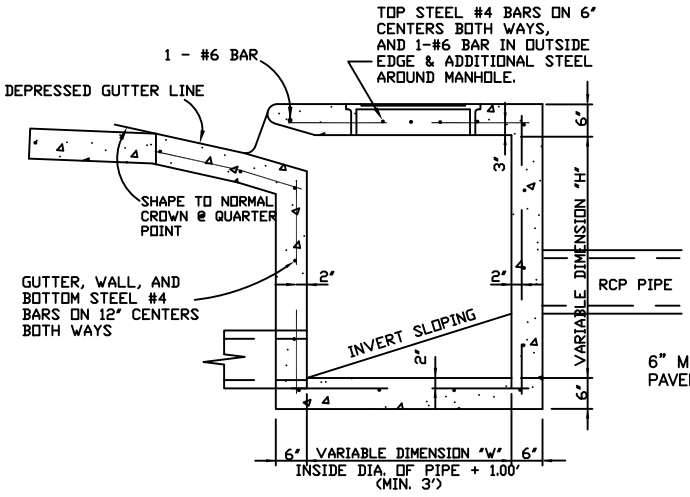




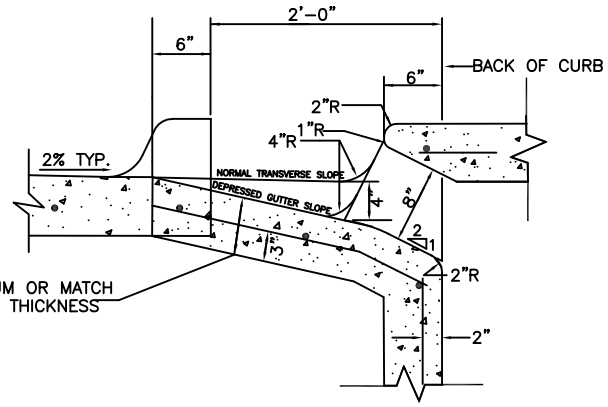
CURB INLET

SEE DETAIL D–04
FOR MANHOLE AND
STEP DETAILS AND
GENERAL INLET
NOTES.

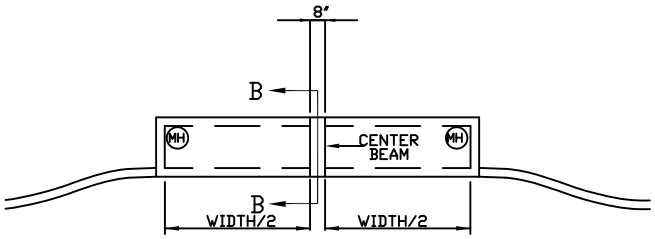
D–01	STANDARD CURB INLET	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		



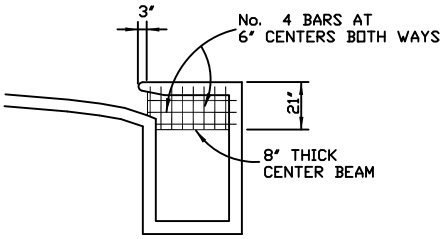
SECTION A–A
CURB INLET
CROSS SECTION



THROAT DETAIL FOR RECESSED INLETS
ON CONCRETE STREETS



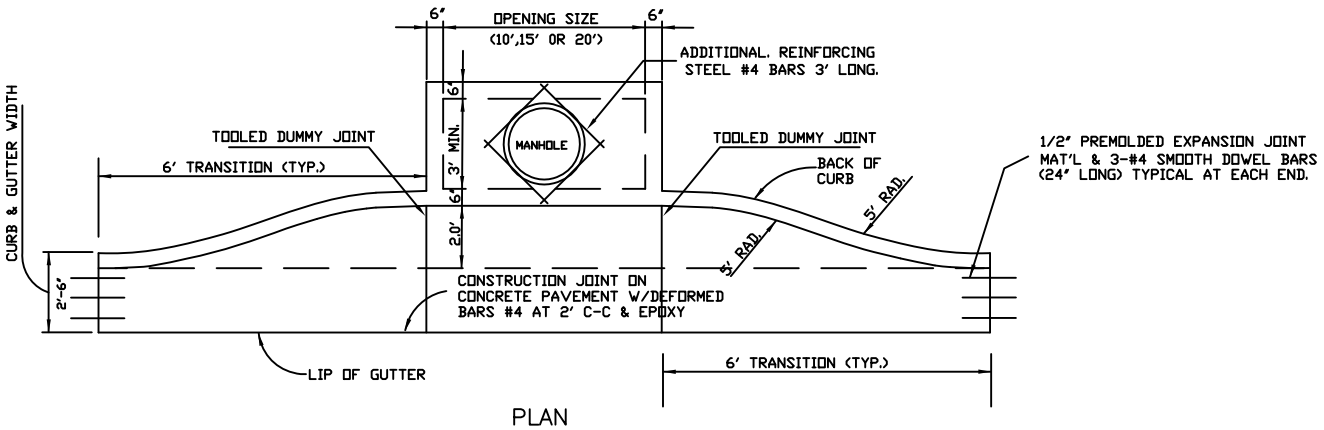
CENTER BEAM FOR
FOR INLETS LARGER THAN 10'



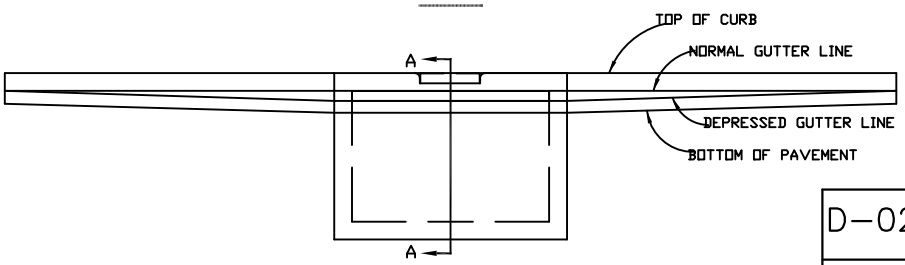
SECTION B–B

NOTES:

1. ALL INLETS LARGER THAN 10' WILL REQUIRE A CENTER SUPPORT BEAM.
2. ALL OPEN BACK INLETS WILL REQUIRE A CENTER BEAM, REGARDLESS OF INLET TYPE OR SIZE.



PLAN

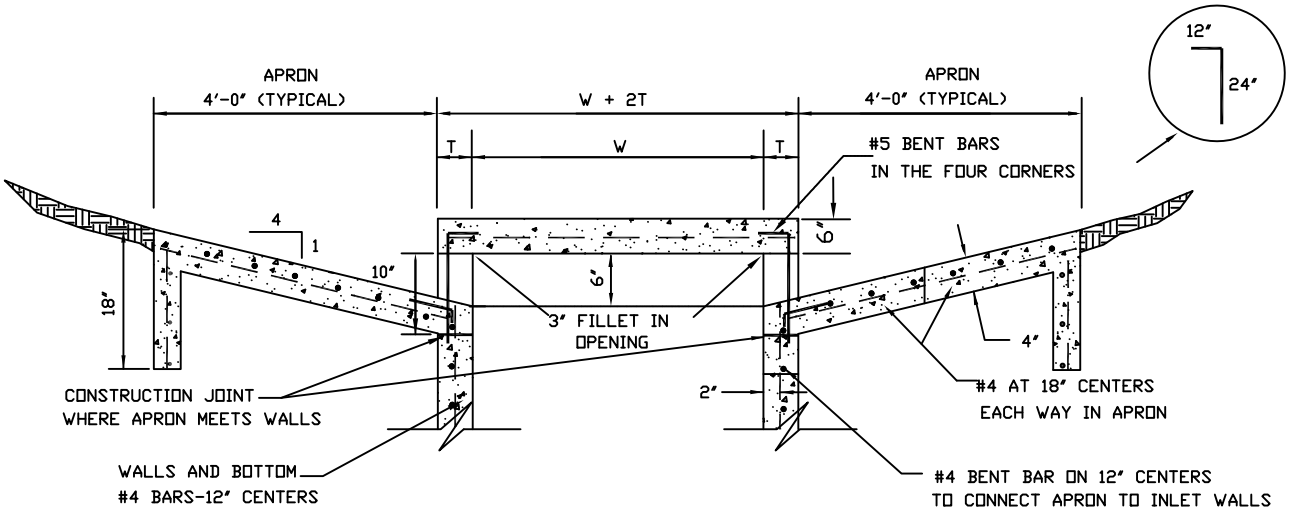


ELEVATION

SEE DETAIL D–04
FOR MANHOLE AND
STEP DETAILS AND
GENERAL INLET
NOTES.

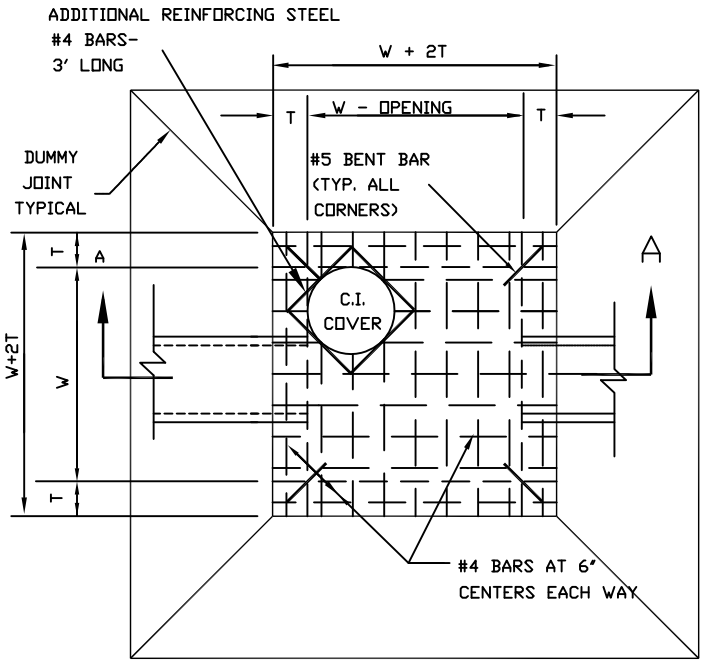
CURB INLET RECESSED
10', 15' OR 20' OPENING

D–02	RECESSED CURB INLET	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		



SECTION "A"

INLET SIZE	T	W
4' SQUARE	7"	4'-0"
5' SQUARE	8"	5'-0"
6' SQUARE	9"	6'-0"

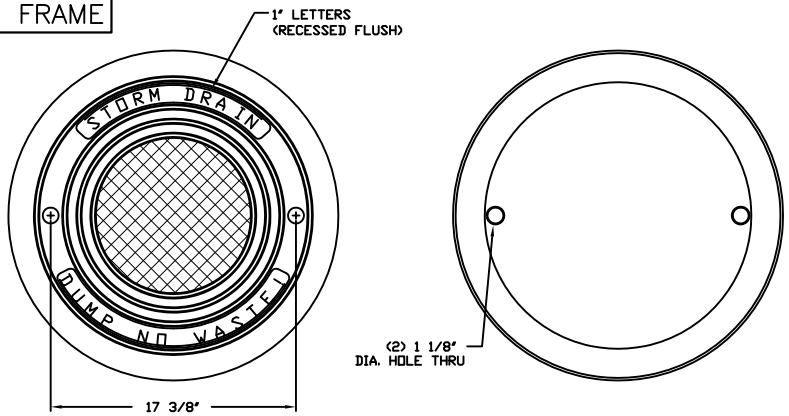


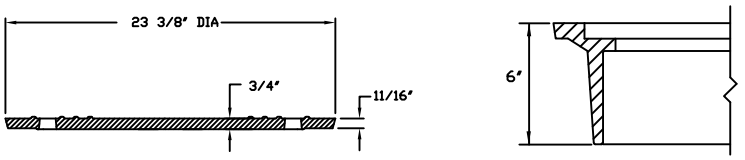
PLAN OF TOP SLAB

SEE DETAIL D-04 FOR MANHOLE COVER AND STEP DETAILS AND GENERAL NOTES.

D-03	DROP INLET	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		

MANHOLE COVER & FRAME





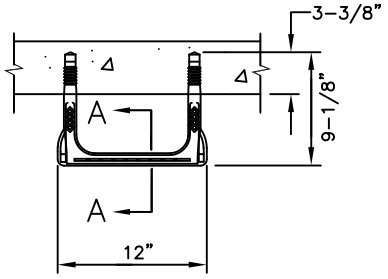
COVER SECTION

SECTION THROUGH RING

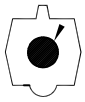
COVER WILL BE BASS AND HAYES NO. 103 (OR APPROVED EQUAL)

COVER WILL BE NON-LOCKING TYPE. SPOT WELD INLET COVER TO RING IN AT LEAST 4 LOCATIONS TO PREVENT THEFT.

NON-CORROSIVE STEPS



1/2" GRADE 60 STEEL REINFORCEMENT



SECTION A-A

NOTES:

1. STEPS SHALL CONFORM TO ASTM C478-88a.
2. M.A. IND. INC. NUMBER "PS1-PF" STEPS OR AMERICAN STEP CO., INC. NUMBER ML-10 OR APPROVED EQUAL TO BE INSTALLED PER MANUFACTURERS DIRECTION.
3. STEPS ARE REQUIRED FOR ALL INLETS 4' AND DEEPER.
4. STEPS SHALL BE PLACED 12" ON CENTERS VERTICALLY AND STAGGERED 12" ON CENTERS HORIZONTALLY.
5. THE TOP STEP SHALL BE NO GREATER THAN 1' BELOW THE INSIDE OF THE TOP OF THE INLET, AND THE BOTTOM STEP SHALL BE NO HIGHER THAN 2' FROM THE FLOOR.
6. STEPS SHALL BE PLACED ON A WALL WHICH WILL NOT CONFLICT WITH THE PIPE(S) AND SHALL BE EASILY ACCESSIBLE FROM THE MANHOLE OPENING.

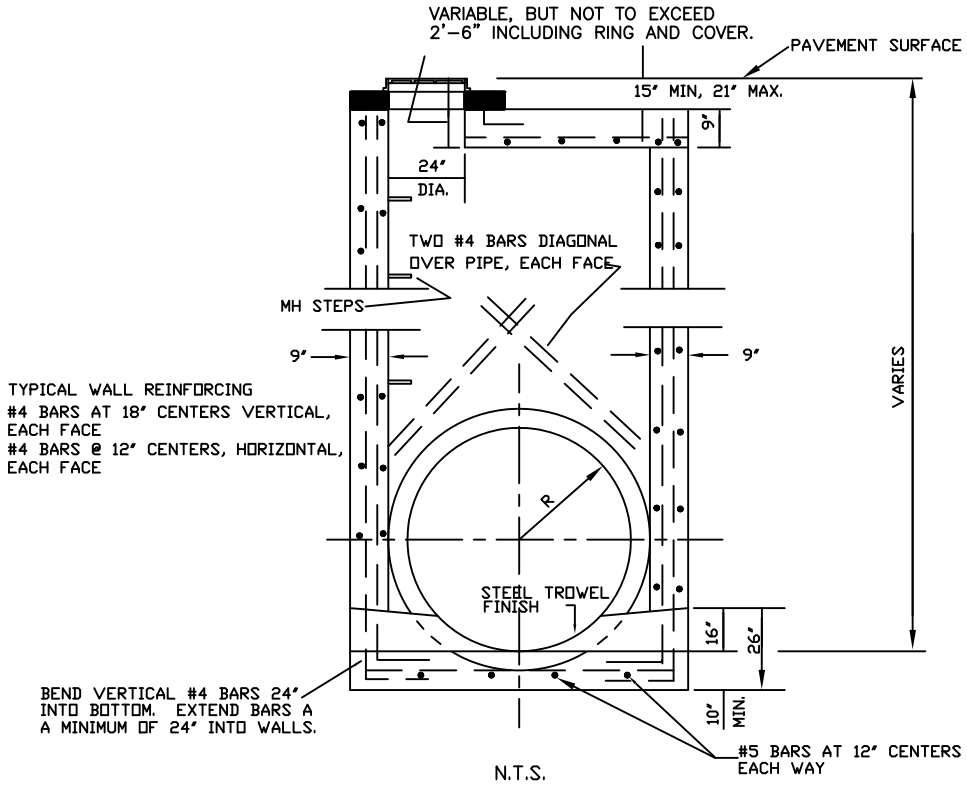
GENERAL INLET NOTES

1. REINFORCING STEEL SHALL BE #4 BARS ON 12" CENTERS BOTH WAYS FOR GUTTER, BOTTOM SLAB, ENDS, FRONT AND BACK WALLS, AND #4 BARS ON 6" CENTERS BOTH WAYS FOR TOP SLAB. AN ADDITIONAL #6 BAR SHALL BE PLACED IN THE FRONT EDGE OF THE TOP SLAB IN THE CURB INLETS AND ADDITIONAL REINFORCING STEEL SHALL BE PLACED AROUND MANHOLES AS SHOWN.
2. ALL REINFORCING STEEL SHALL BE GRADE 60.
3. ALL CONCRETE SHALL BE CLASS "A". 4. ALL EXPOSED CORNERS SHALL BE CHAMFERED
4. ALL EXPOSED CORNERS SHALL BE CHAMFERED 3/4".
5. ALL REINFORCING STEEL SHALL HAVE A MINIMUM COVER OF 2".
6. ALL BACKFILLING SHALL BE PERFORMED BY MECHANICAL TAMPING TO 95% STANDARD PROCTOR DENSITY.
7. IF MODIFYING AN INLET, i.e. CREATING AN OPEN BACK INLET, THE TOP SHALL BE REMOVED AND RECONSTRUCTED.
8. LOCATION OF MANHOLE OPENING ON CURB INLETS TO BE AT OUTFALL END.
9. ALL 15' AND 20' INLETS WILL REQUIRE TWO MANHOLES ONLY IF THE INSIDE HEIGHT (UNDER THE CENTER BEAM) IS LESS THAN FOUR FEET.
10. LIGHT BROOM FINISH ON ALL SURFACES.
11. ALL DROP INLETS SHALL HAVE ONE OPENING ON EACH SIDE UNLESS OTHERWISE SHOWN ON PLANS.

D-04	MANHOLE COVER AND STEPS AND GENERAL INLET NOTES (APPLICABLE TO ALL INLET DETAILS)

CITY OF BURLESON

ORIGINAL	10/2/08	SWC
REVISION		
REVISION		
REVISION		

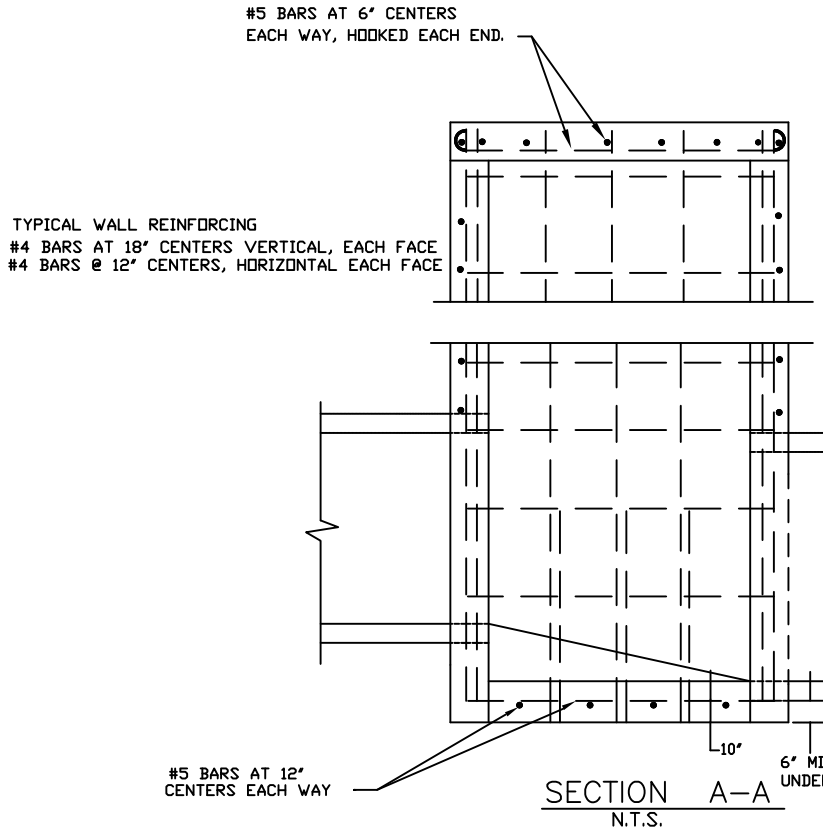


N.T.S.

SECTION B-B

JUNCTION BOX MAY BE RECTANGULAR
BUT NOT LESS THAN 4 FEET IN SHORT DIRECTION.

STORMWATER JUNCTION BOX 4', 5' OR 6' WIDTHS



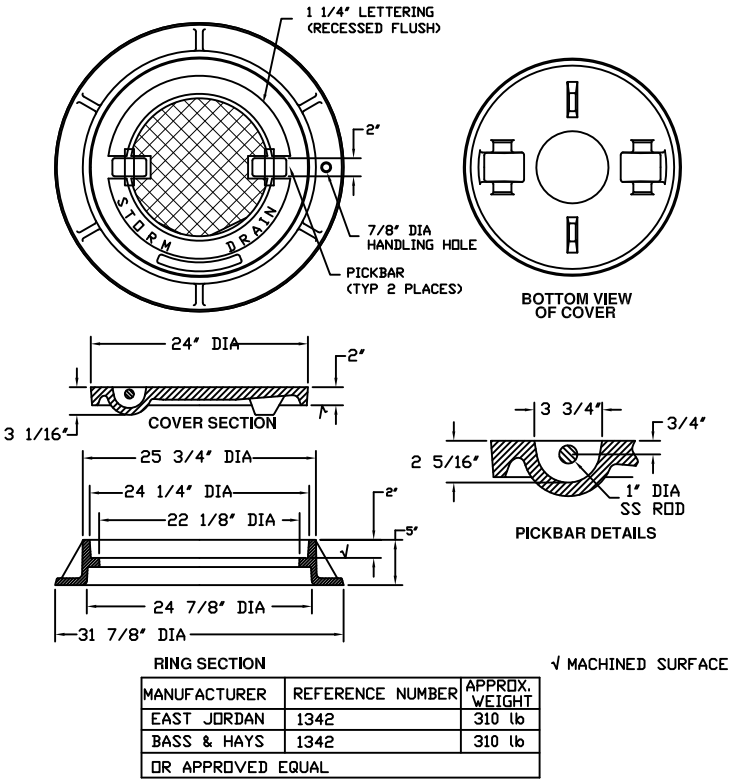
SECTION A-A

N.T.S.

NOTES :

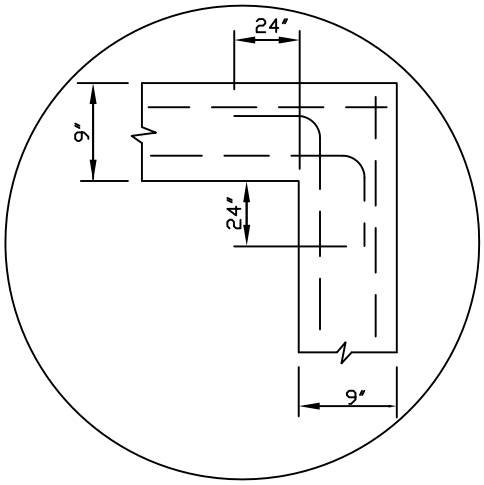
1. SLOPE INVERT OF JUNCTION BOX TO MATCH PIPE FLOWLINES.
2. LAYERS OF REINFORCING STEEL NEAREST THE INTERIOR AND EXTERIOR SURFACE SHALL HAVE A COVER OF 2" TO THE BARS, UNLESS OTHERWISE NOTED.
3. CONCRETE SHALL BE CLASS "A".
4. REINFORCING STEEL TO BE GRADE 60.

D-05A	STORM DRAIN MANHOLE (SHEET 1 OF 2)	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		

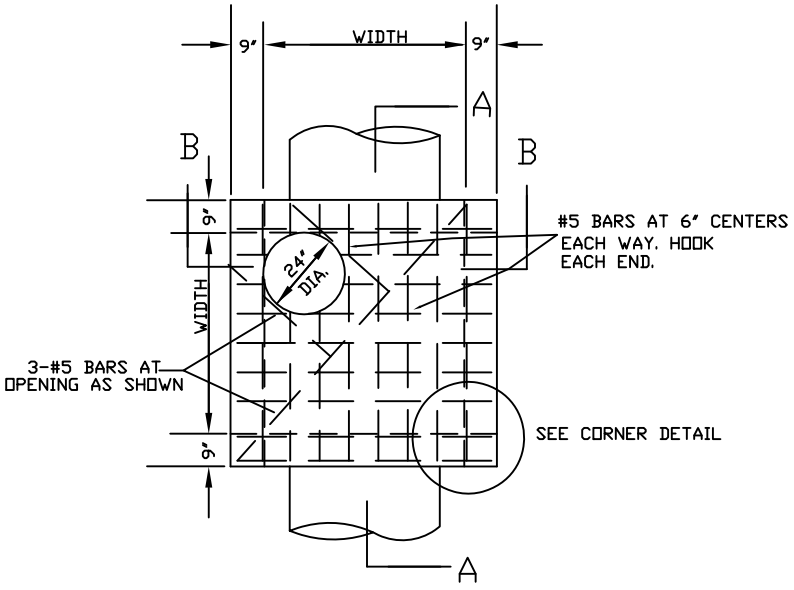


MANUFACTURER	REFERENCE NUMBER	APPROX. WEIGHT
EAST JORDAN	1342	310 lb
BASS & HAYS	1342	310 lb
OR APPROVED EQUAL		

LOGO MANHOLE COVER & FRAME

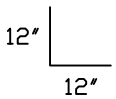


CORNER DETAIL
PLAN VIEW

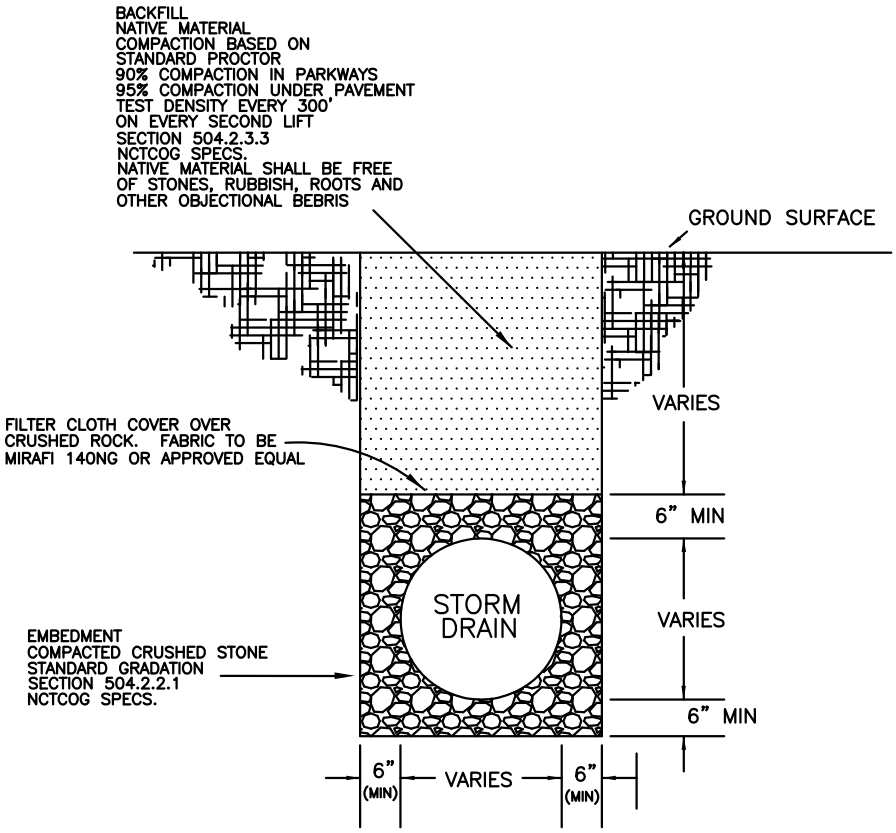


PLAN

SONOTUBE SHALL BE USED FOR FORMING NECK ADJUSTMENT, POUR CONCRETE AROUND TUBE 9' WIDE. CONNECT TO TOP SLAB WITH 12" x 12" #4 BARS AT 12" CENTERS AROUND OPENING. ONE #4 BAR AROUND OPENING.

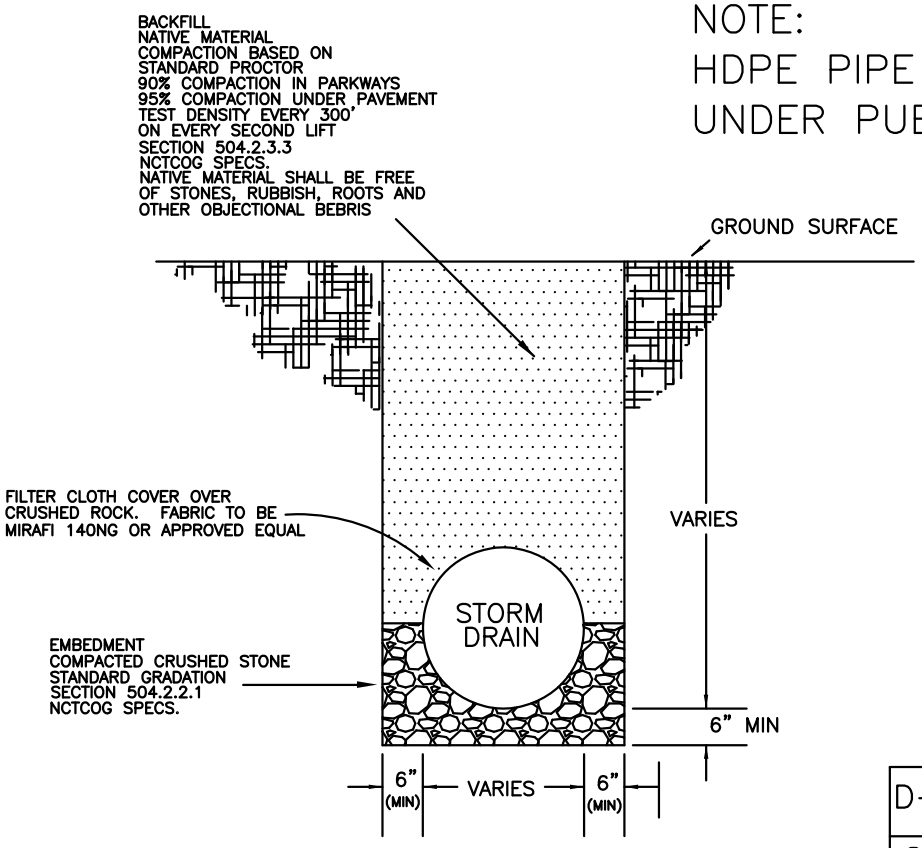


D-05B	STORM DRAIN MANHOLE (SHEET 2 OF 2)	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		



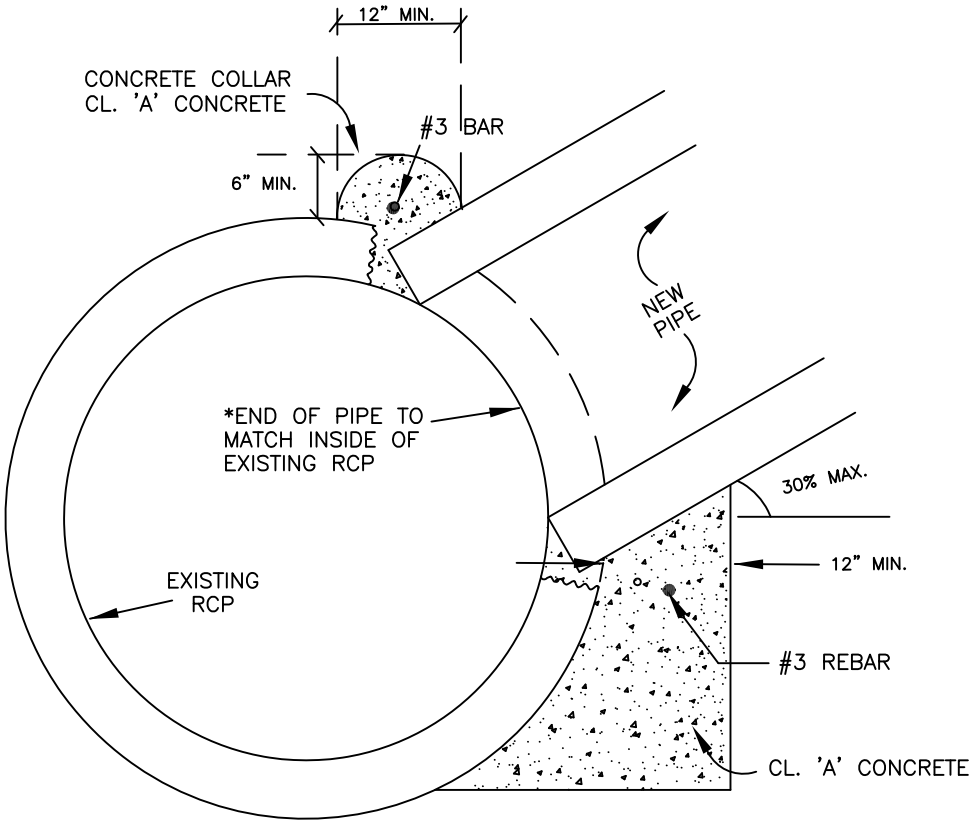
STORM DRAIN EMBEDMENT DETAIL
RCP UNDER PAVEMENT AND HDPE PIPE

NOTE:
HDPE PIPE IS NOT ALLOWED
UNDER PUBLIC PAVEMENT.

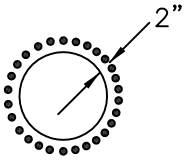


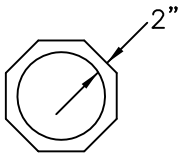
STORM DRAIN EMBEDMENT DETAIL
RCP IN PARKWAY OR UNPAVED EASEMENT

D–06	STORM DRAIN EMBEDMENT	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		



* REMOVAL OF PLUG FROM EXISTING RCP TO BE ACCOMPLISHED BY USING A MASONRY DRILL AT A SPACING EQUAL TO THE DRILL BIT DIAMETER IN A CIRCULAR PATTERN OR A MASONRY SAW IN AN OCTAGONAL PATTERN PER DETAIL.





STORM DRAIN CONNECTION
TO EXISTING RCP

NTS

THIS DETAIL APPLICABLE ONLY FOR APPLICATIONS WHERE NEW PIPE IS LESS THAN OR EQUAL TO ONE HALF THE DIAMETER OF THE EXISTING PIPE. FOR APPLICATIONS WHERE THE NEW PIPE IS GREATER THAN HALF THE SIZE OF THE EXISTING PIPE, A PREFABRICATED WYE SHALL BE USED.

D-07	STORM DRAIN CONNECTION TO EXISTING PIPE	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
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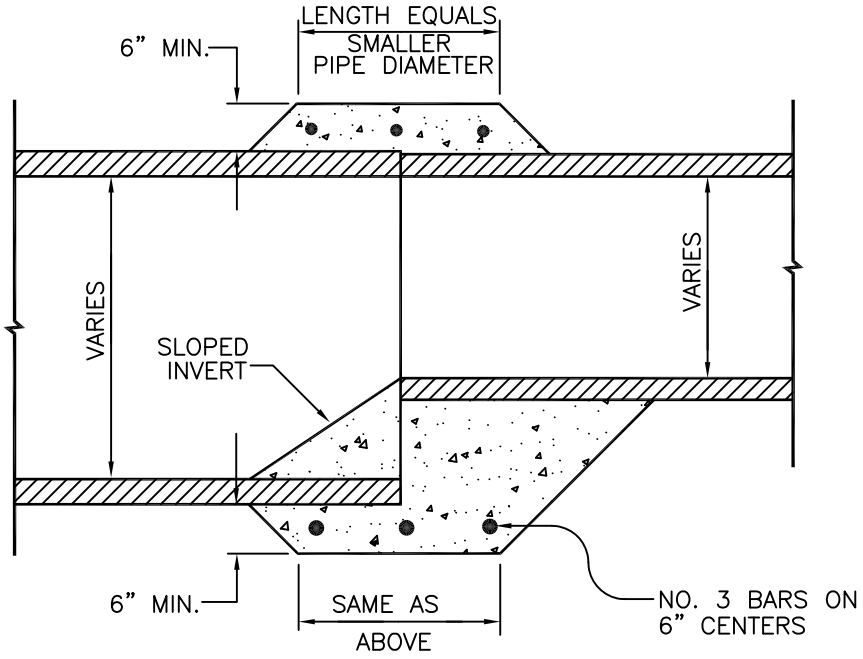
REVISION		



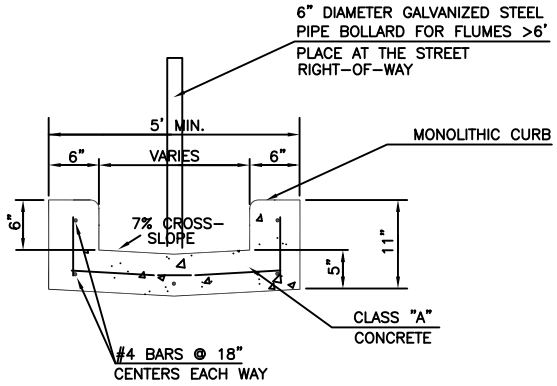
PIPE COLLAR DETAIL

NOTES

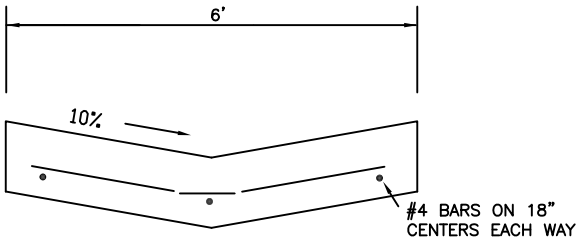
1. THIS PROCEDURE/DETAIL WILL ONLY BE USED WHEN A PREFAB REDUCTION IS NOT POSSIBLE.
2. CONCRETE FOR COLLAR WILL NOT BE PAID FOR DIRECTLY, BUT WILL BE CONSIDERED SUBSIDIARY TO THE VARIOUS OTHER BIDS.
3. CONCRETE SHALL BE 5 SACK 3000 PSI.

D-08	PIPE COLLAR	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		

FLUME SECTIONS



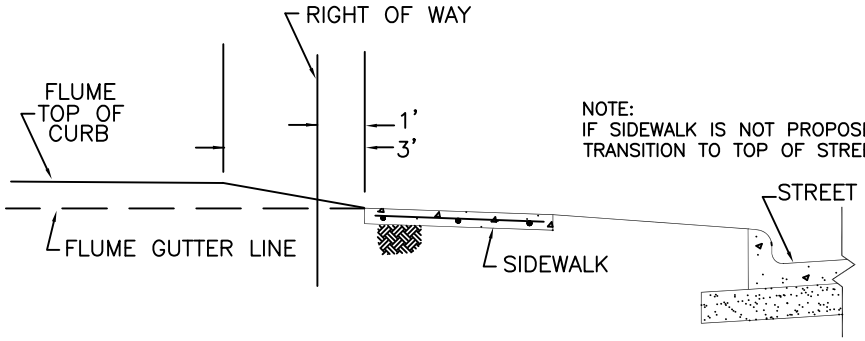
NOTE:
1. FLUME NEEDS TO BE FLARED AT ENTRANCE ONLY FOR HYDRAULIC PURPOSES.
2. BOLLARDS SHALL BE FILLED WITH CONCRETE AND SET IN 18" DIAMETER CONCRETE FOOTING A MINIMUM OF 3' BELOW THE FLUME FLOW LINE. BOLLARD SHALL BE 4' HIGH ABOVE THE FLUME FLOW LINE.



CURBS MAY BE OMITTED AND USE THE VALLEY SECTION WHEN OVERFLOW IS 10 CFS OR LESS OR WHEN FLOW CAN BE CONTAINED WITHIN THE CONCRETE SECTION.

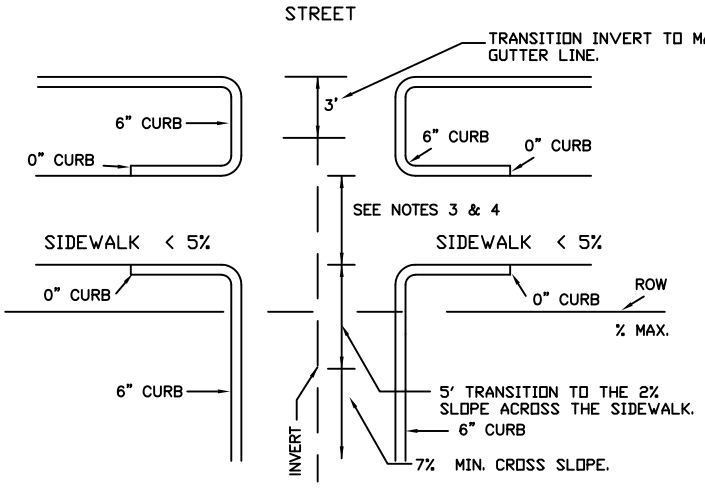
ALTERNATE

SIDEWALK CROSSING OPTIONS
APPROPRIATE OPTION TO BE DETERMINED BY DESIGN ENGINEER AND THE CITY



NOTE:
IF SIDEWALK IS NOT PROPOSED, EXTEND FLUME AND TRANSITION TO TOP OF STREET CURB.

OVERFLOW FLUME PROFILE
(TRANSITION TO SIDEWALK)
GENERALLY USED FOR OVERFLOW FLUMES.



NOTE:
1. FLOW IS TOWARD STREET, OTHERWISE THE FLUME WILL HAVE TO BE FLARED AT THE STREET.
2. FOR FLUMES 5 FEET OR LESS IN WIDTH A METAL PLATE MAY BE CONSIDERED FOR UNIQUE SITUATIONS IF AUTHORIZED BY THE PUBLIC WORKS DEPARTMENT.
3. LONGITUDINAL FLUME SLOPE ACROSS SIDEWALK MUST BE NO GREATER THAN 2%.
4. THE TRANSVERSE SLOPE OF THE FLUME AT THE SIDEWALK MUST BE LESS THAN 5

FLUME WITH SIDEWALK CROSSING

GENERALLY USED WHEN FLUME IS PRIMARY DRAINAGE FEATURE.

D-09	FLUME	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
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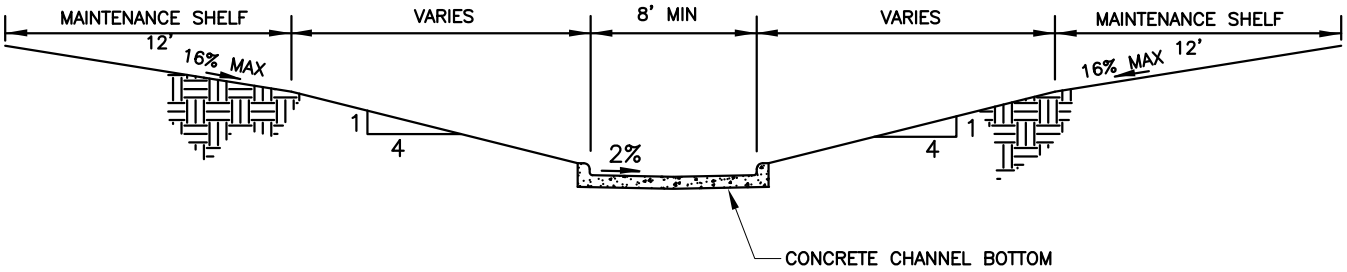
REVISION		
REVISION		



NOTES:

1. CONCRETE CHANNEL BOTTOM SHALL HAVE 6" CURBS.
2. CONCRETE SHALL BE 6" THICK WITH 3000 PSI COMPRESSIVE STRENGTH.
3. CONCRETE SHALL BE REINFORCED WITH #3 BARS ON 18" CENTERS.
4. 2" MINIMUM DIAMETER WEEPHOLES WITH MIRAFI 140NS FILTER MEDIA OR APPROVED EQUAL SHALL BE PLACED AT INTERVALS NO GREATER THAN 25'.
5. CONCRETE SHALL HAVE TRANSVERSE JOINTS AT WEEPHOLE LOCATIONS. REDWOOD EXPANSION JOINTS ARE REQUIRED A MAXIMUM OF EVERY 200 FEET. CONSTRUCTION JOINTS PLACED WHEN PAVING OPERATION HAS CEASED FOR MORE THAN 30 MINUTES.
6. SIDESLOPES AND MAINTENANCE SHELVES SHALL HAVE ADEQUATE STAND OF VEGETATION PRIOR TO ACCEPTANCE.

D-10	CHANNEL	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
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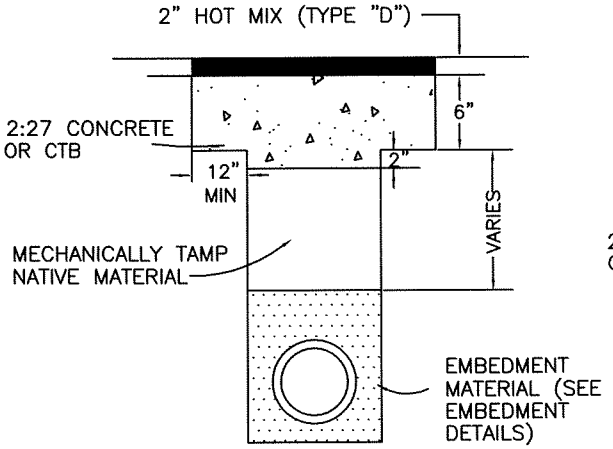
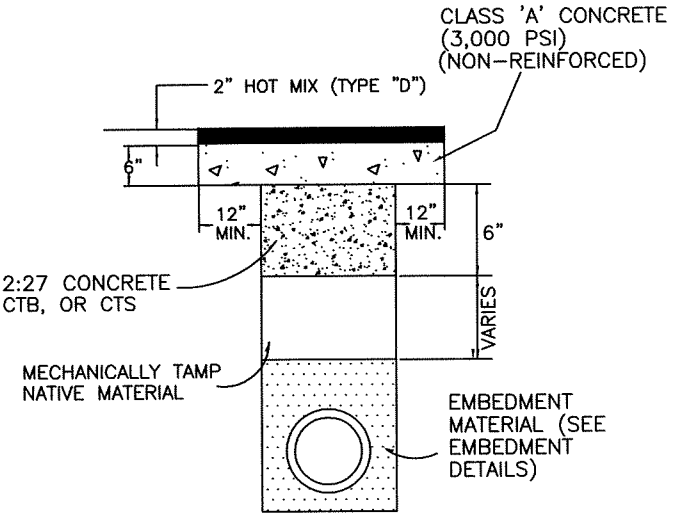
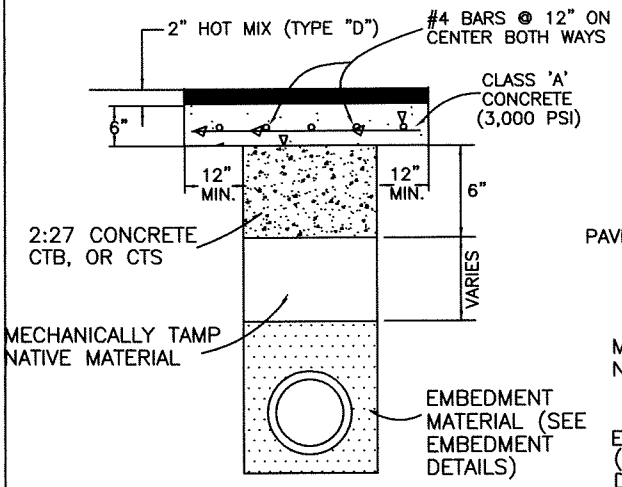
REVISION		
REVISION		



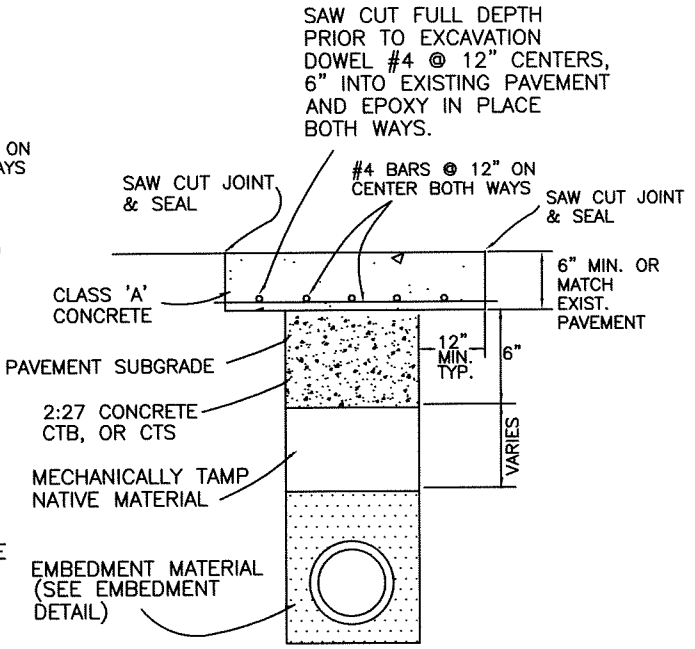
RESIDENTIAL/COUNTY ROAD



COLLECTOR STREET



MAJOR ARTERIALS & THOROUGHFARES



CONCRETE STREET

NOTES:

1. A SAW SHALL BE USED TO CUT ASPHALT OR CONCRETE FULL DEPTH PRIOR TO OPENING THE DITCH IN ORDER TO INSURE A NEAT STRAIGHT EDGE. SEE STANDARD SPECIFICATIONS FOR REQUIRED EMBEDMENT.

2. CTB = CEMENT TREATED BASE (CONTAINS AGGREGATE)
   CTS = CEMENT TREATED SAND
   BOTH MATERIALS SHALL BE MECHANICALLY TAMPED.

D-11	EXISTING STREET BACKFILL AND REPAIR	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
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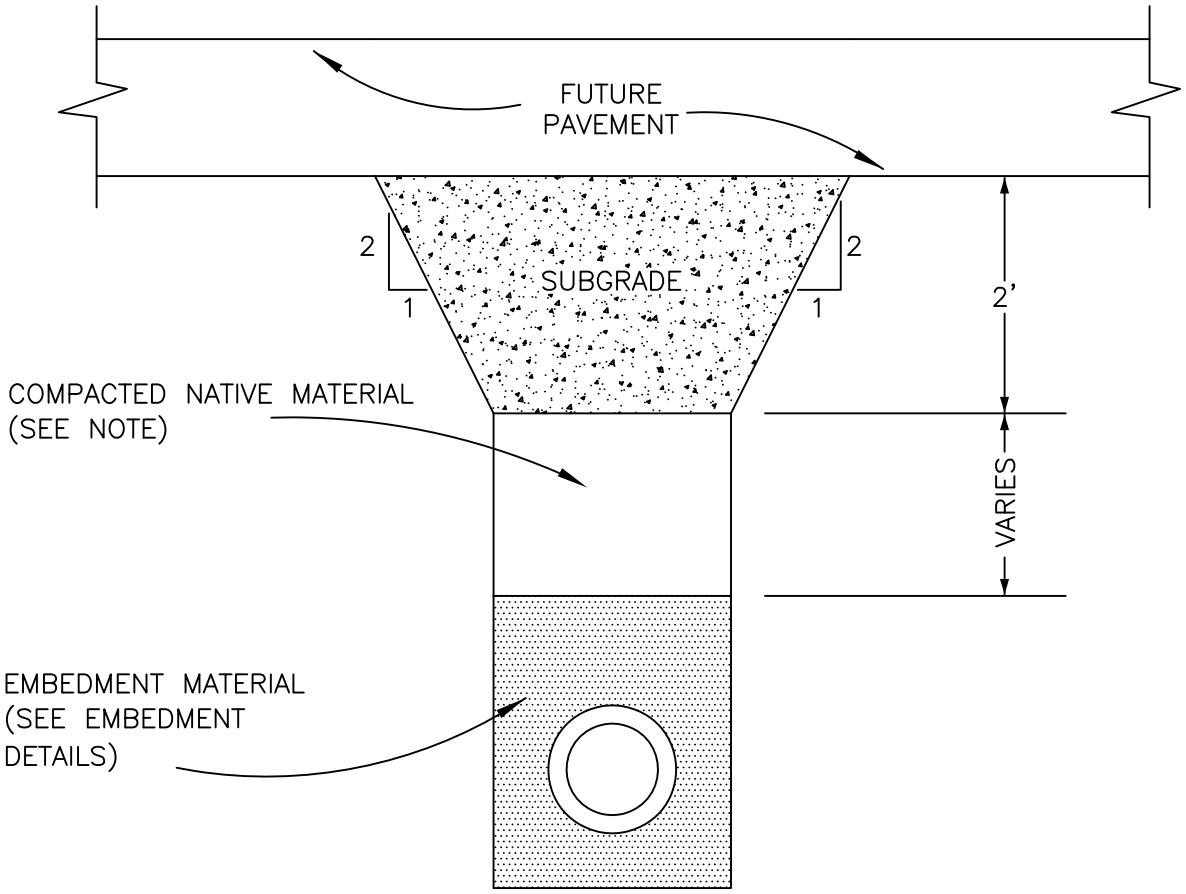
REVISION		
REVISION		



NOTE:

FOR LINES BEING LAID PRIOR TO NEW STREET CONSTRUCTION, WHICH WILL LIE BENEATH PAVEMENT OR CURB AND GUTTER, BACKFILL ABOVE PIPE EMBEDMENT SHALL CONSIST OF NATIVE MATERIAL, COMPACTED IN MAX. 6" TO 9" LIFTS (COMPACTED THICKNESS) TO 95% STANDARD PROCTOR DENSITY AT OPTIMUM MOISTURE CONTENT ±2%.

D–12	STREET BACKFILL PRIOR TO STREET CONSTRUCTION	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		