APPENDIX R

STANDARD DETAILS

Water Details
Sanitary Sewer Details
Paving Details
Drainage Details

WATER SYSTEM DETAILS

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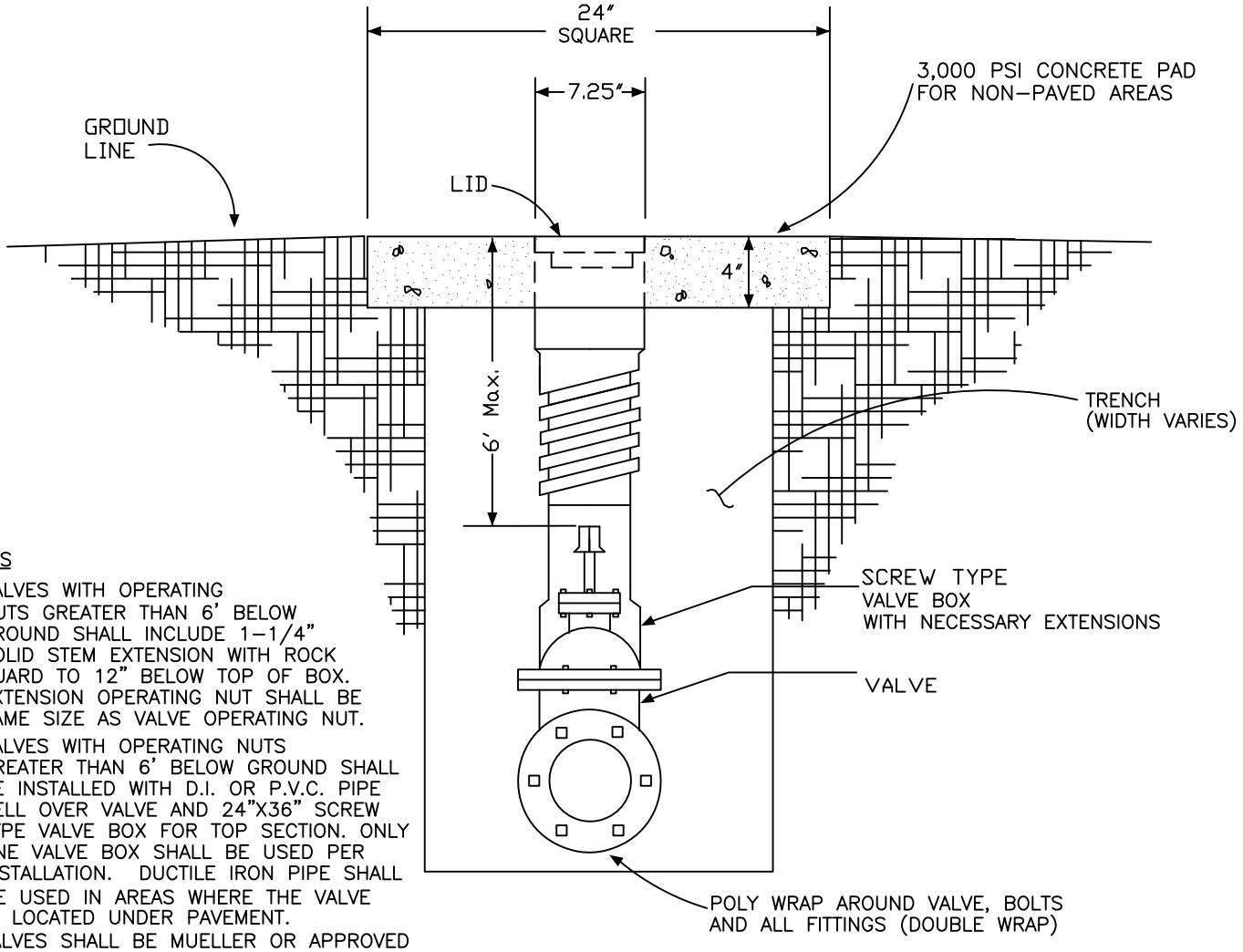
W-02	Fire Hydrant
W-03	Fire Hydrant Assembly
W-04	Horizontal Thrust Blocking
W-05	Water Main Embedment

Services:

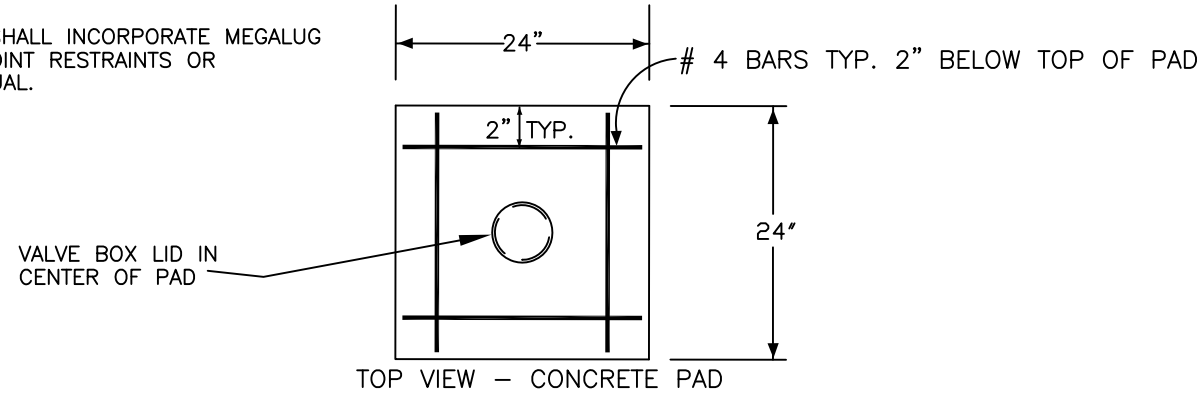
W-06	1” Service with two 3/4” Outlets (bullhead)
W-07	1” water service for 1” and 3/4” Outlets
W-08	2” Water Service for 2” and 1 1/2” Outlets or 2” flush point

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.

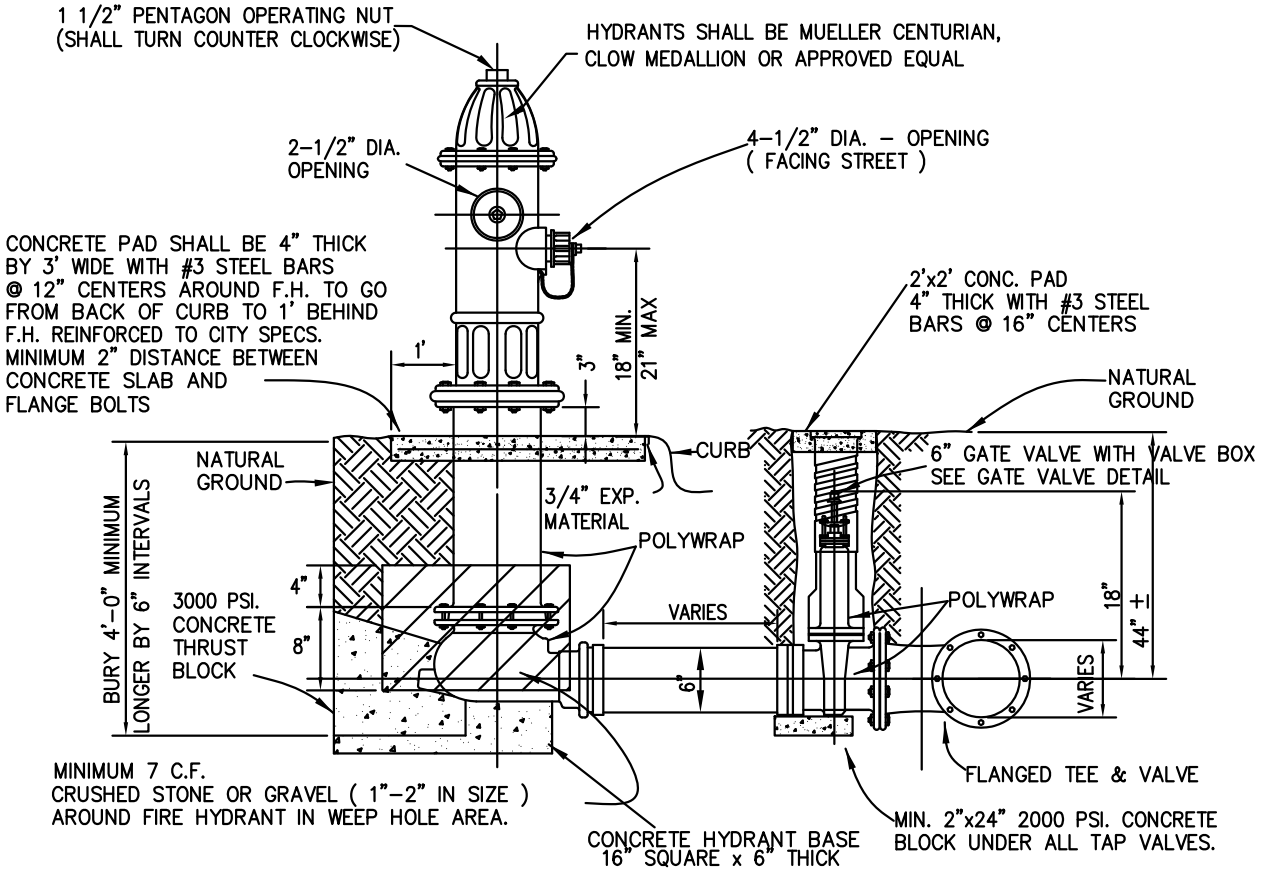


TOP VIEW – CONCRETE PAD

PADS ARE FOR NON-PAVED AREAS ONLY.

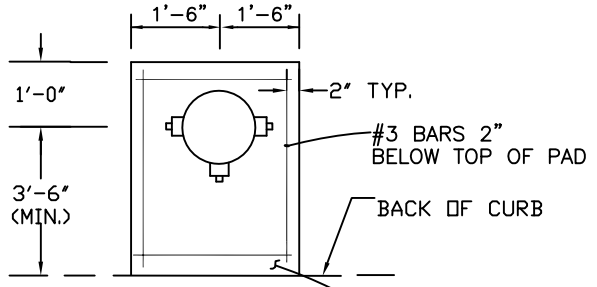
BROOM FINISH ALL PADS.

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

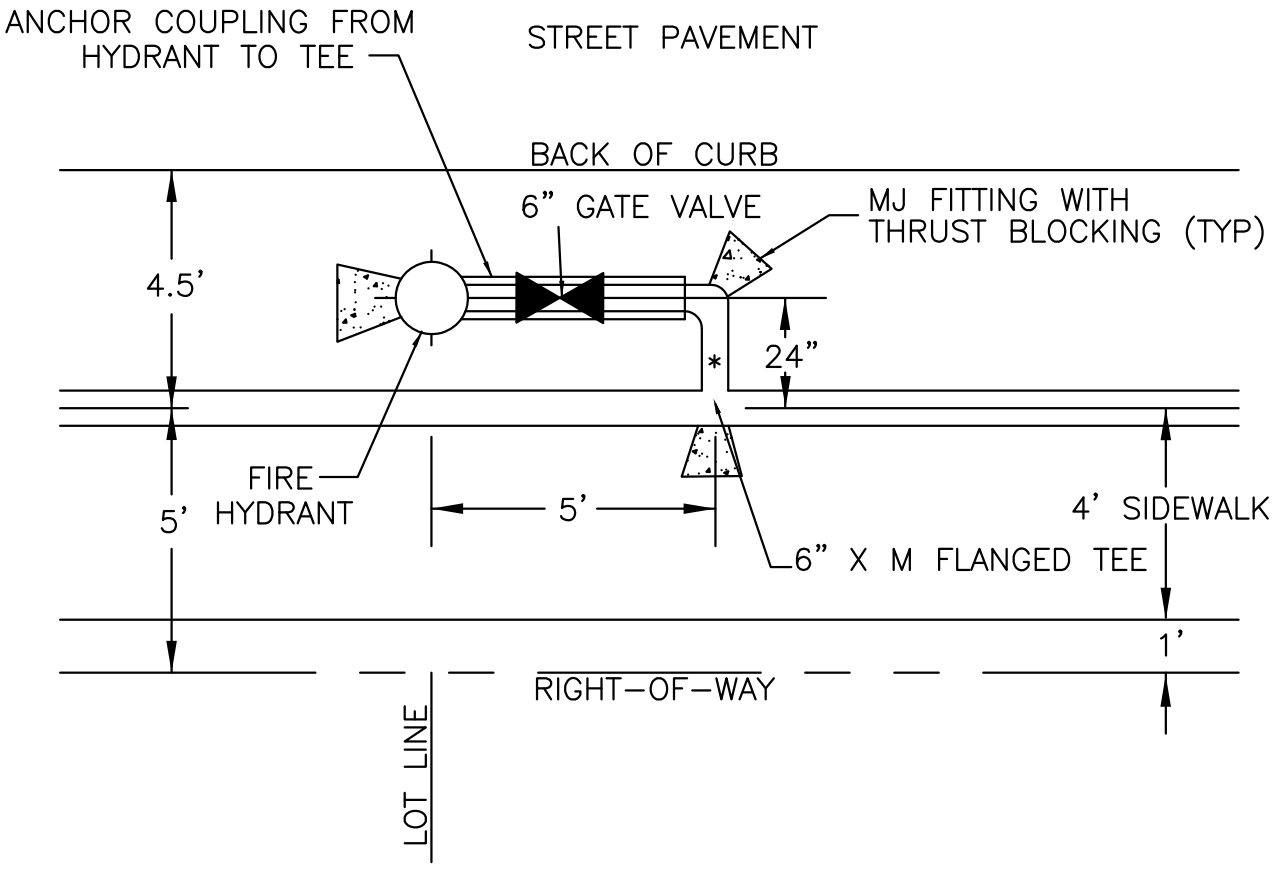


NOTES:

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.



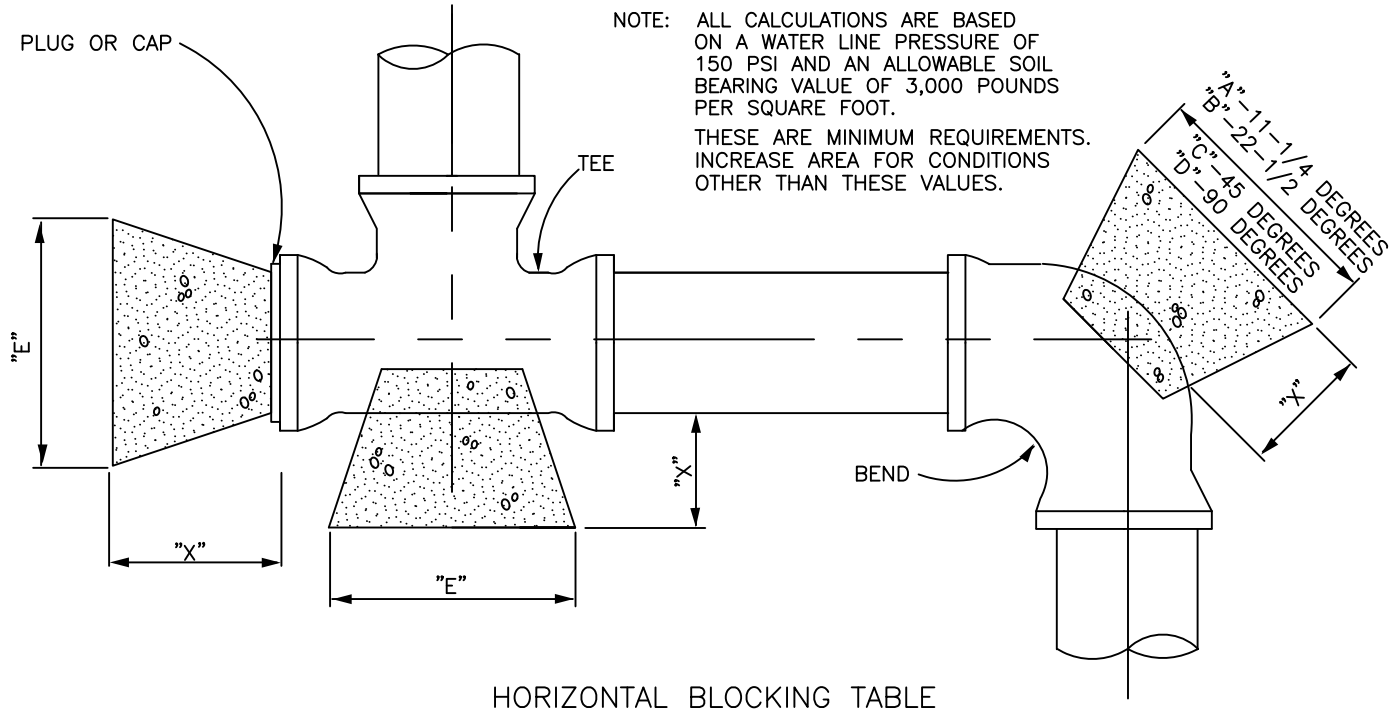
W-02	FIRE HYDRANT	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		



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.

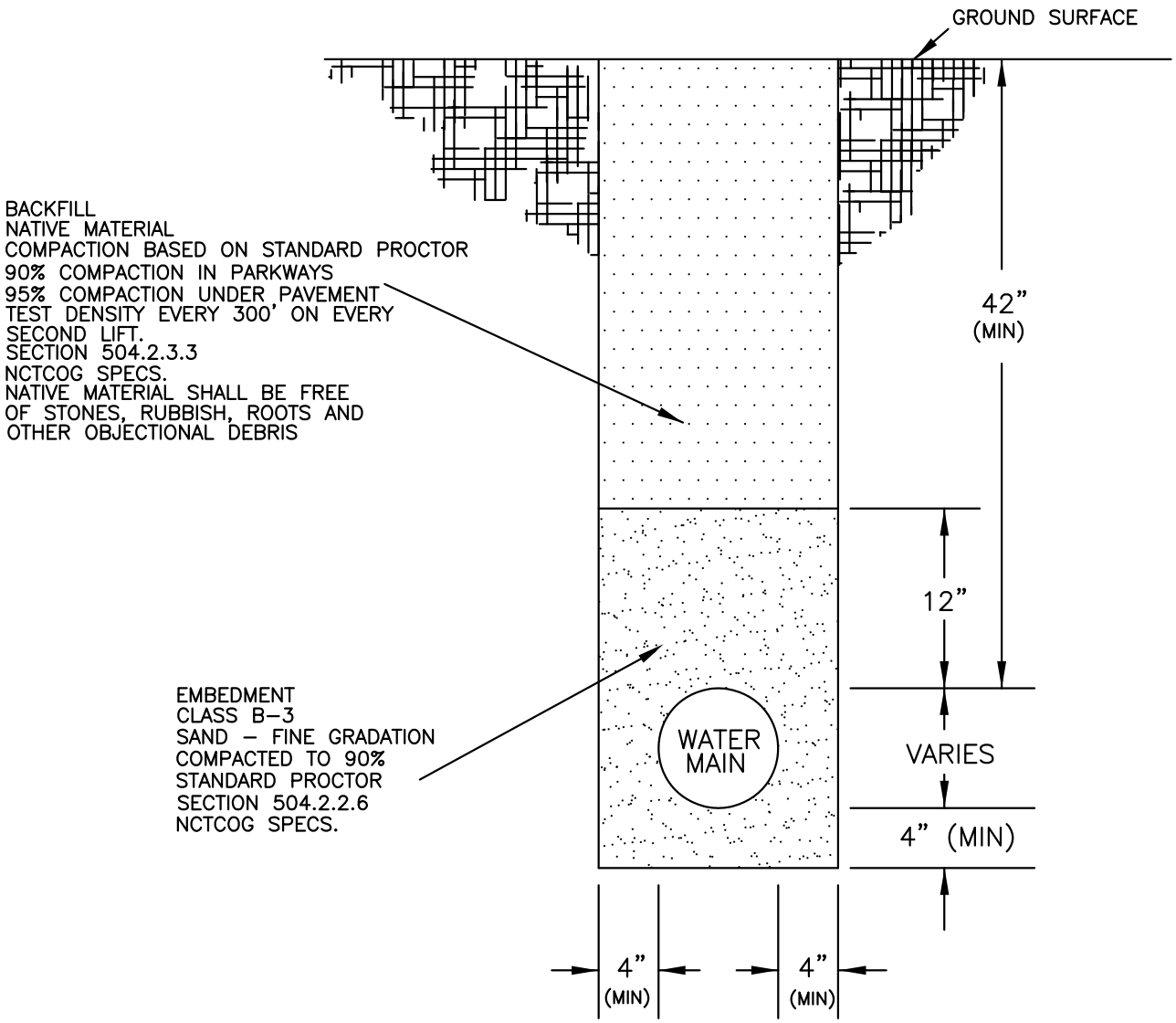
FOR 22-1/2°, 45°, 90°, AND TEES AND PLUGS, THE VERTICAL DIMENSION SHALL BE EQUAL TO THE HORIZONTAL DIMENSION SHOWN TO PRODUCE THE REQUIRED MINIMUM AREA.

ALL MINIMUM AREAS ARE IN SQUARE FEET.

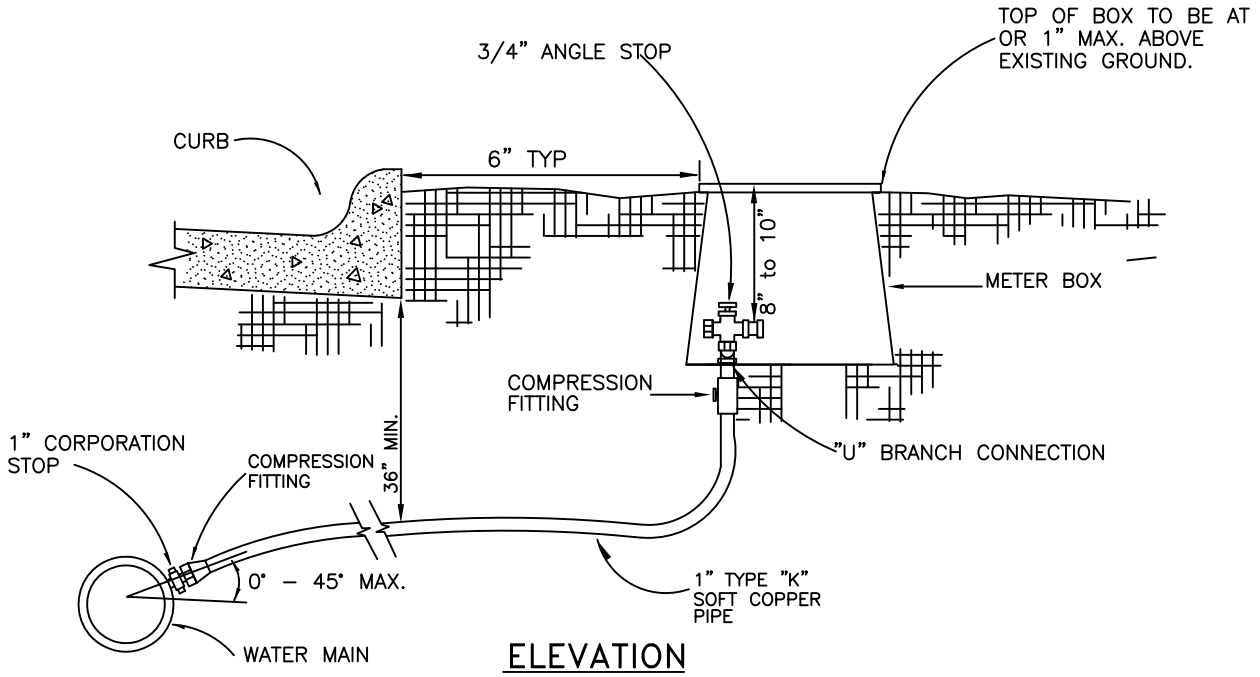
BLOCKING TO BE AGAINST UNDISTURBED TRENCH WALLS AND BOTTOM.

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

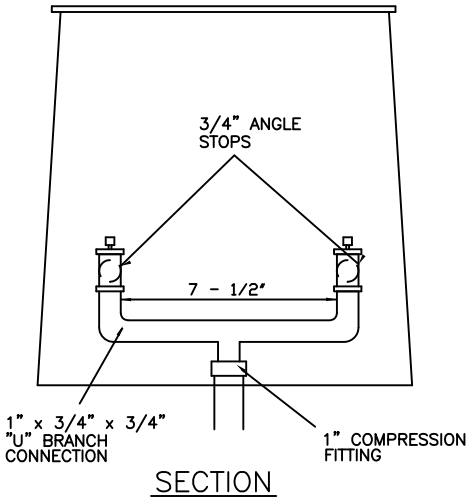
W-04	HORIZONTAL THRUST BLOCKING	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		



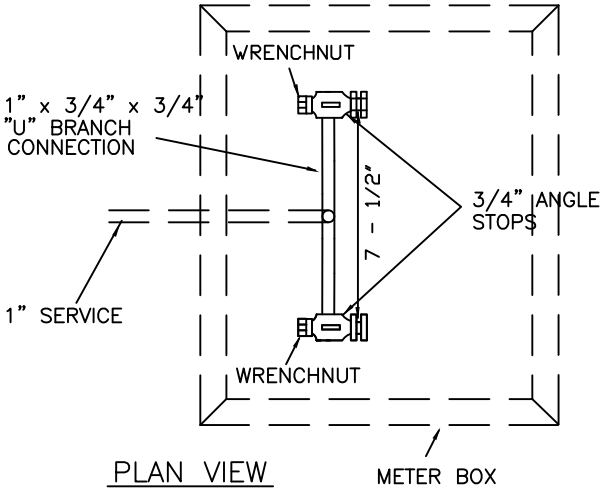
W-05	WATER MAIN EMBEDMENT	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		



ELEVATION



SECTION



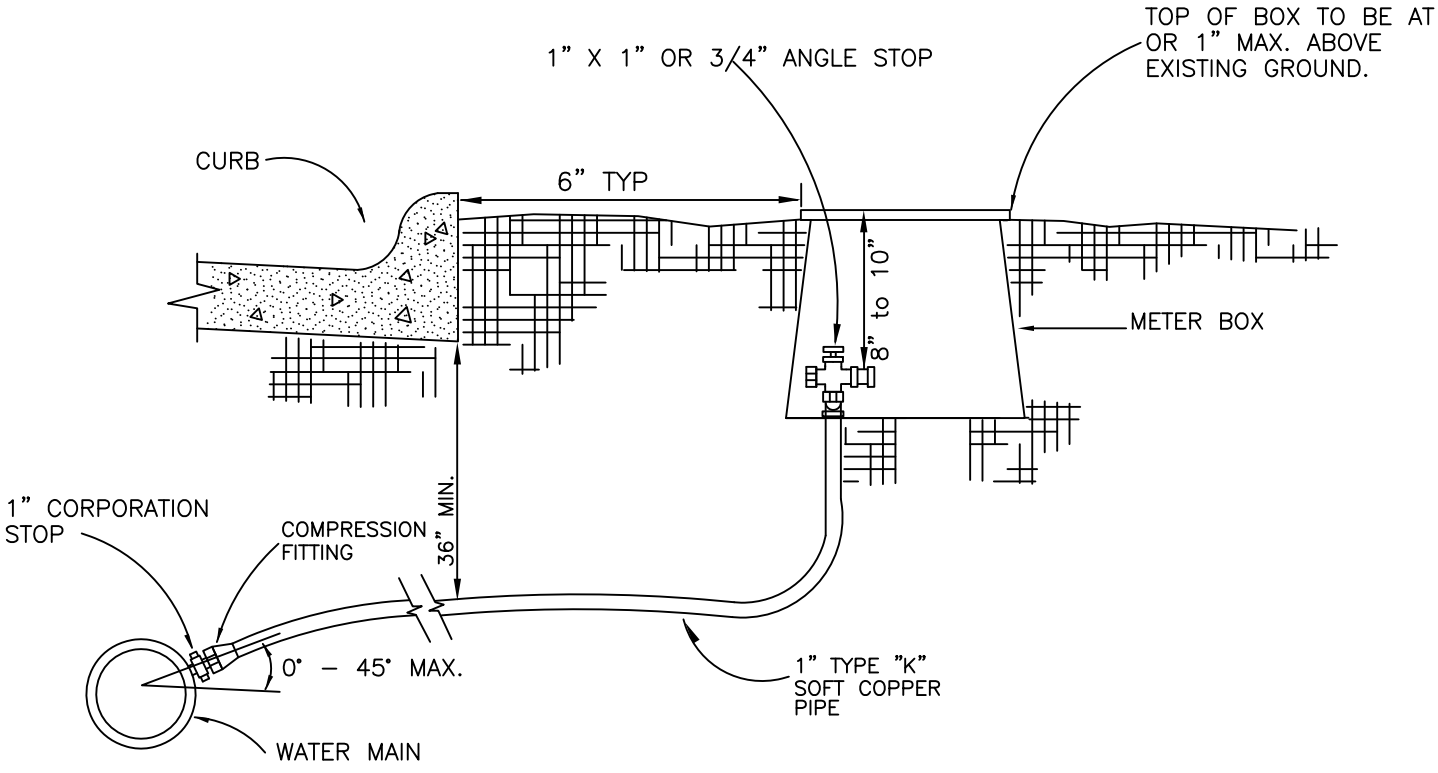
PLAN VIEW

*** 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.

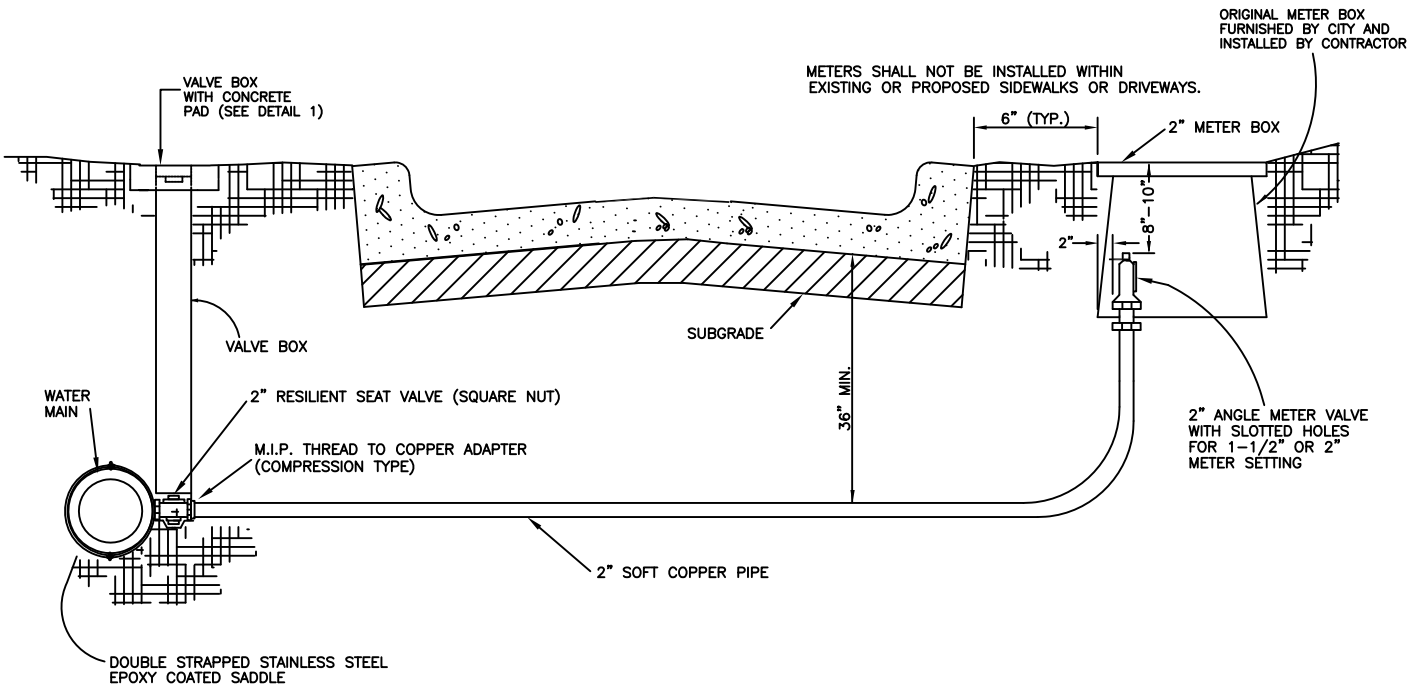
W–06	DOUBLE WATER SERVICE (BULLHEAD) (1" SERVICE WITH TWO 3/4" OUTLETS)	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		



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.

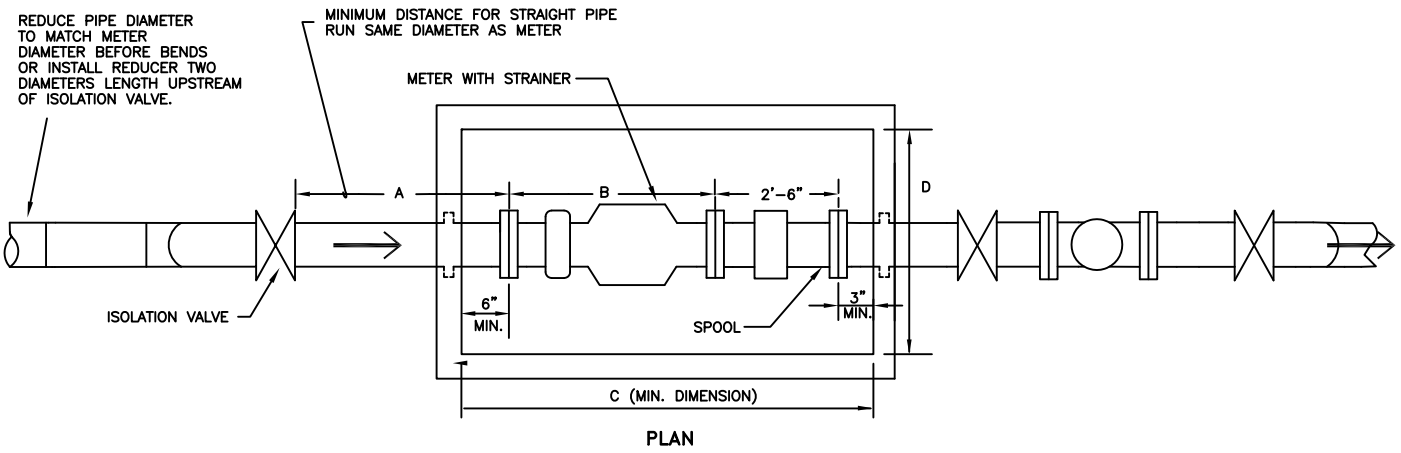
W–07	SINGLE WATER SERVICE (1" SERVICE FOR 1" & 3/4" OUTLETS)	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		



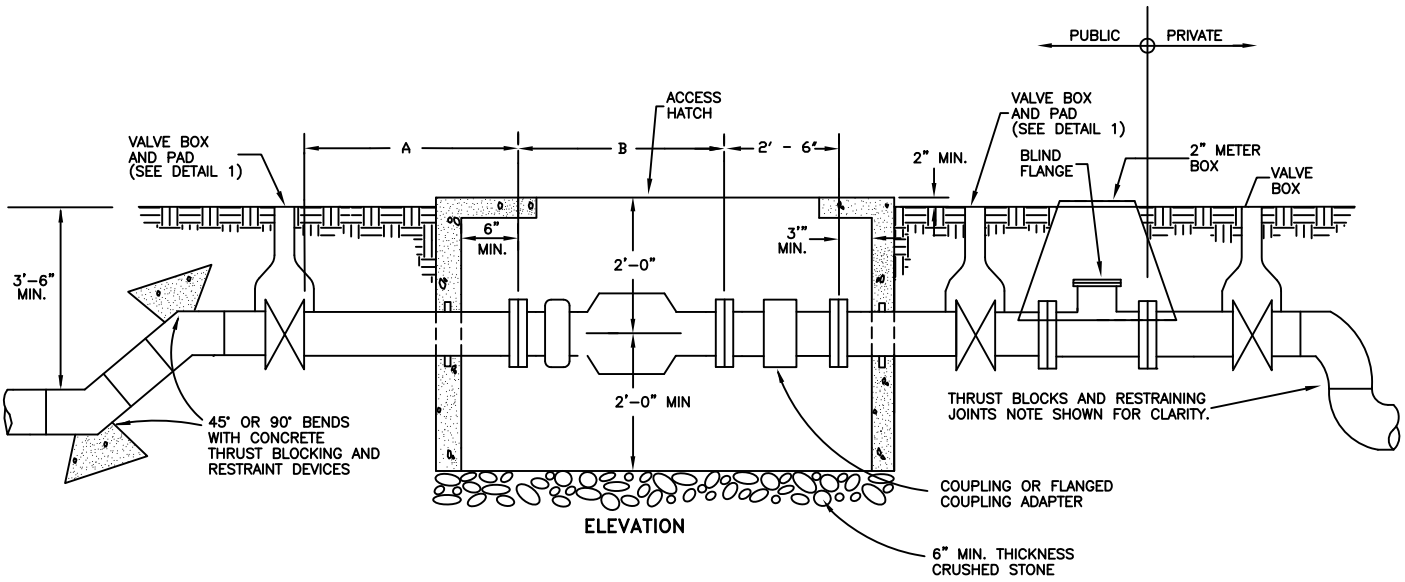
NOTES

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

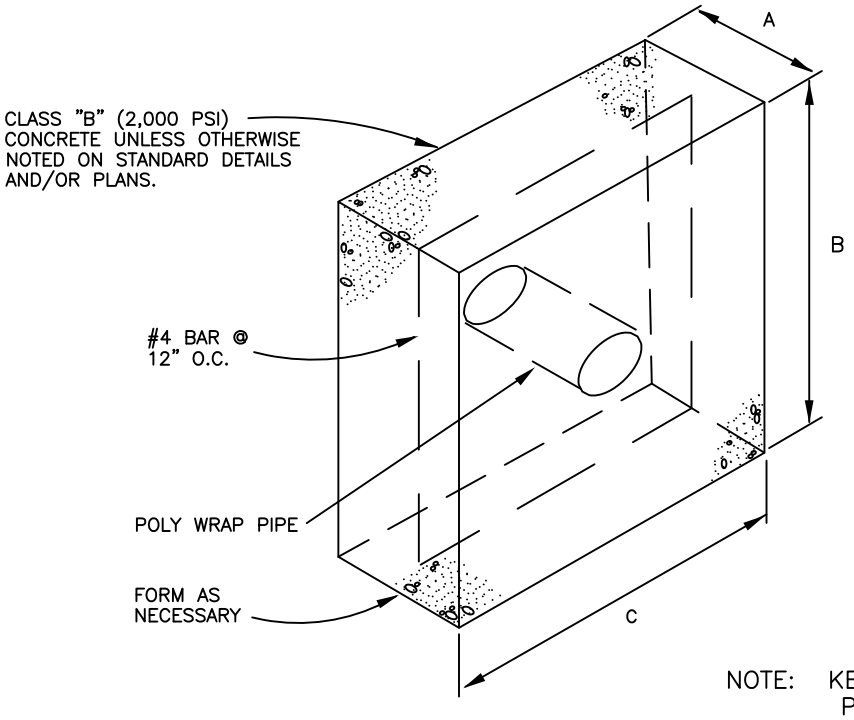
NOTES

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		

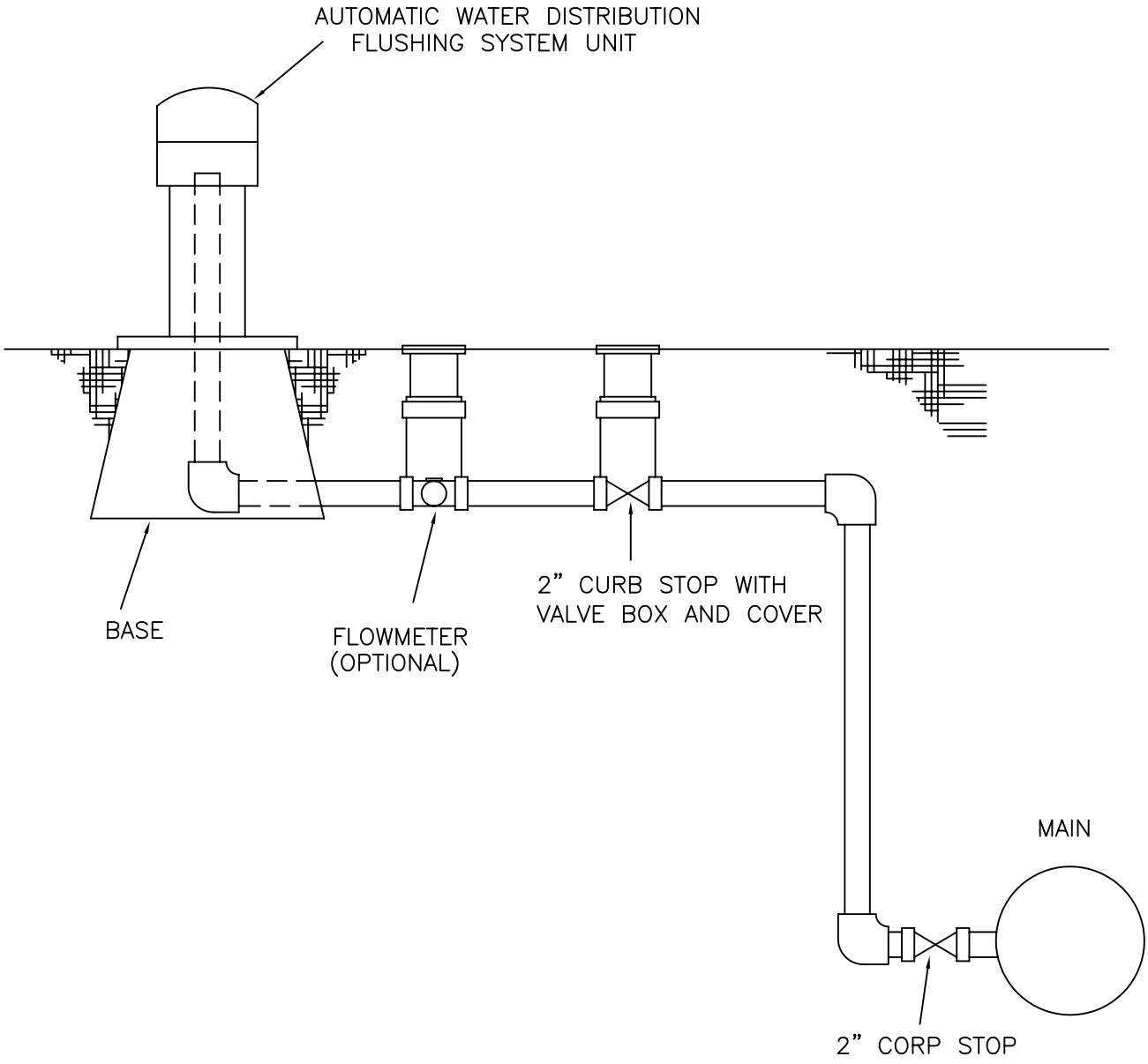


NOTE: KEEP CONCRETE CLEAR OF PIPE JOINTS & BOLTS.

PIPE NOMINAL DIA. (in.)	BENDS	90°	45°	22–1/2°	11–1/4°
6	*VOL. REQ'D. C.F. A FT. 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
8	*VOL. REQ'D. C.F. A FT. 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
10	*VOL. REQ'D. C.F. A FT. 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
12	*VOL. REQ'D. C.F. A FT. 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.

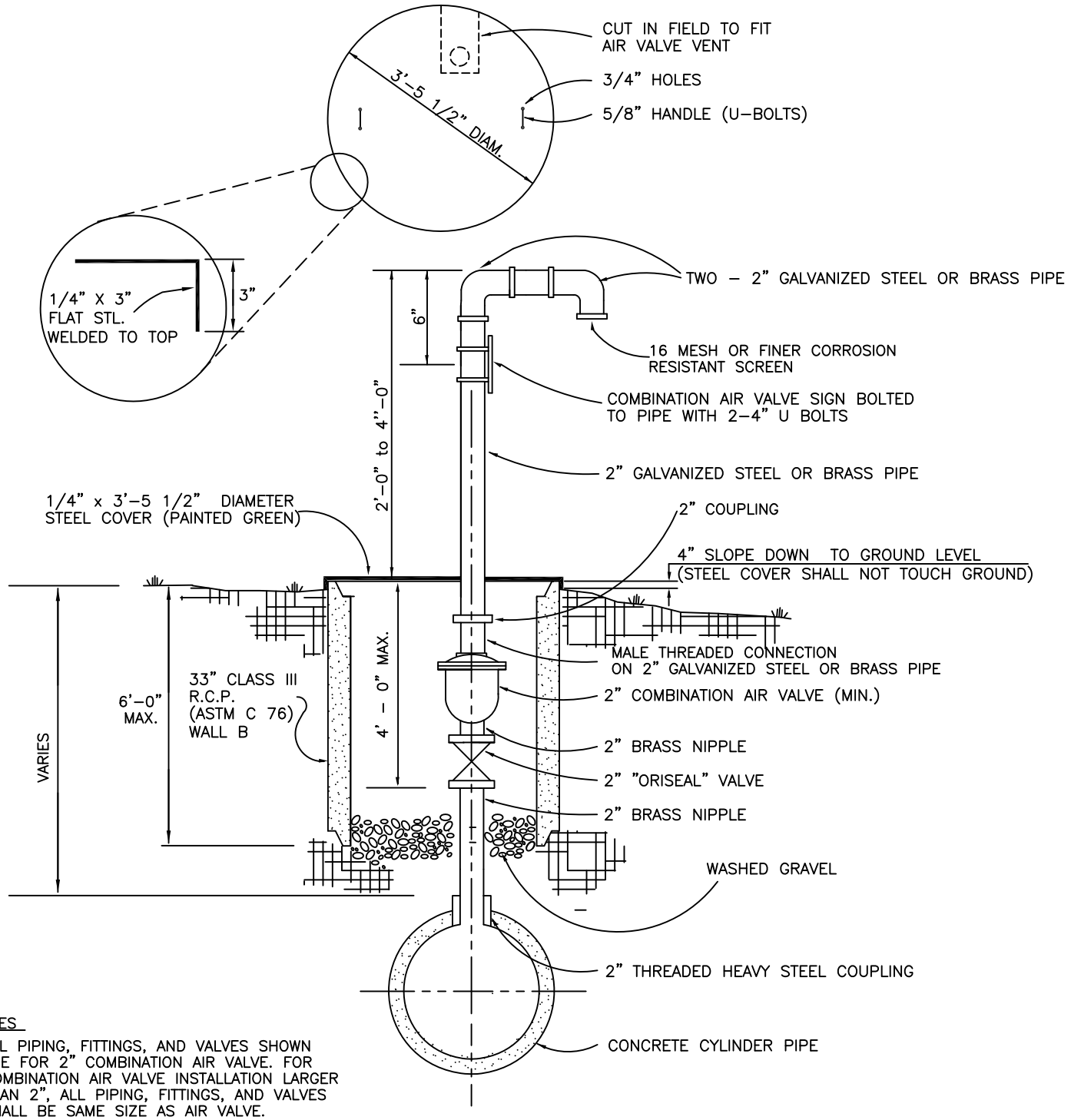
W–10	VERTICAL TIE–DOWN BLOCK	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		



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.

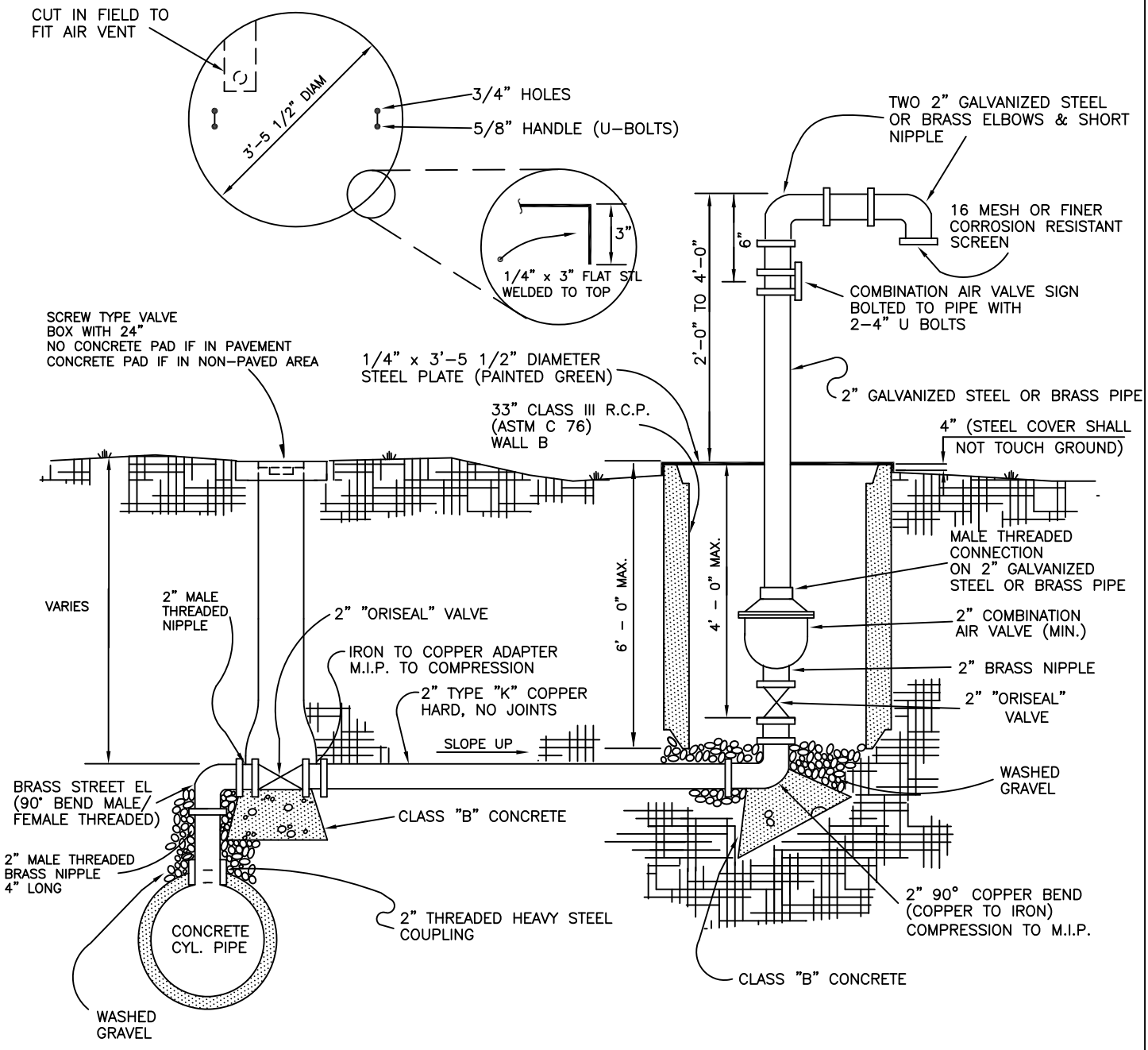
W-11	AUTOMATIC WATER DISTRIBUTION FLUSHING SYSTEM	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		



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).

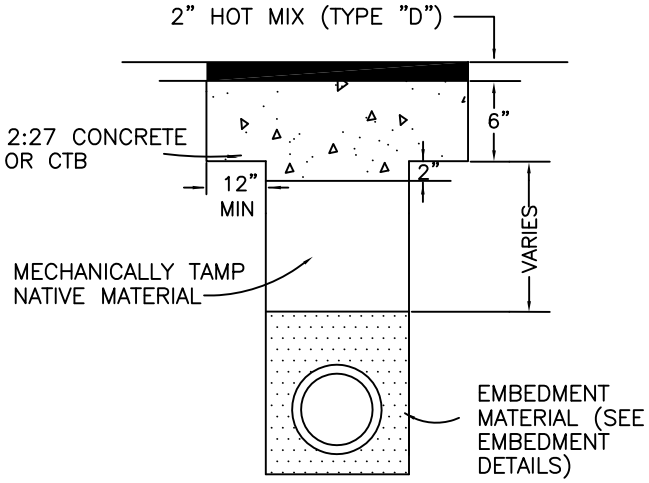
W-12	COMBINATION AIR VALVE INSTALLATION	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		



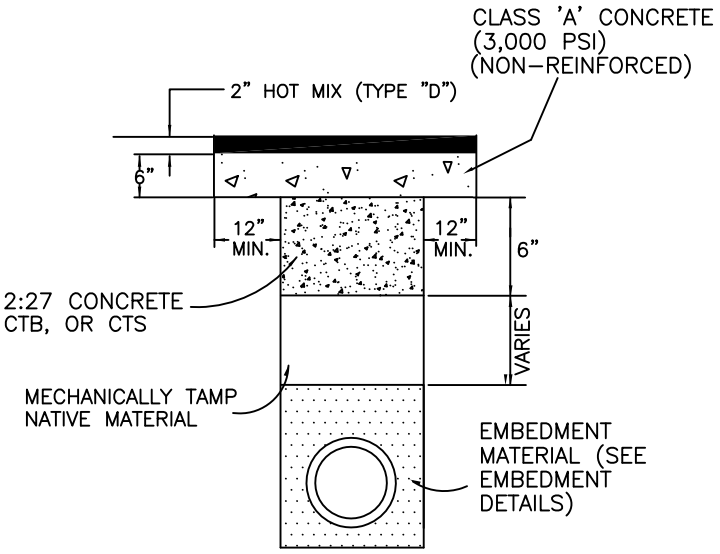
NOTES

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).

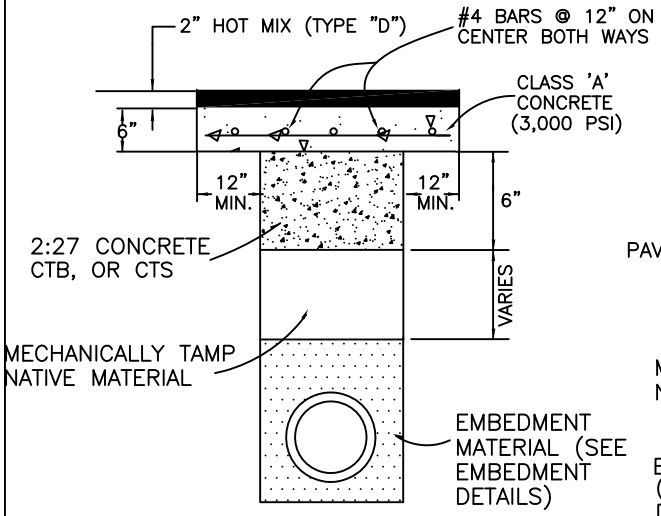
W-13	COMBINATION AIR VALVE INSTALLATION OFFSET FROM PIPE	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		



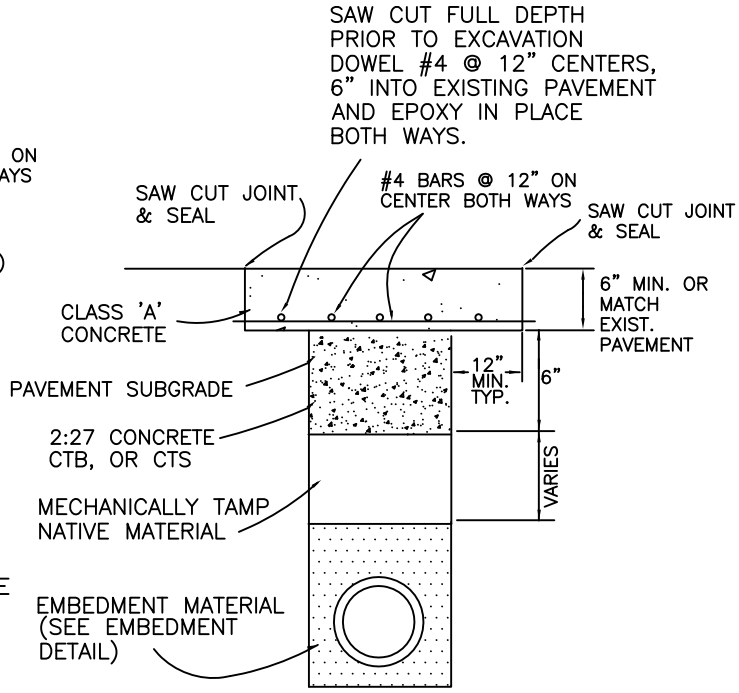
RESIDENTIAL/COUNTY ROAD



COLLECTOR STREET



MAJOR ARTERIALS & THOROUGHFARES



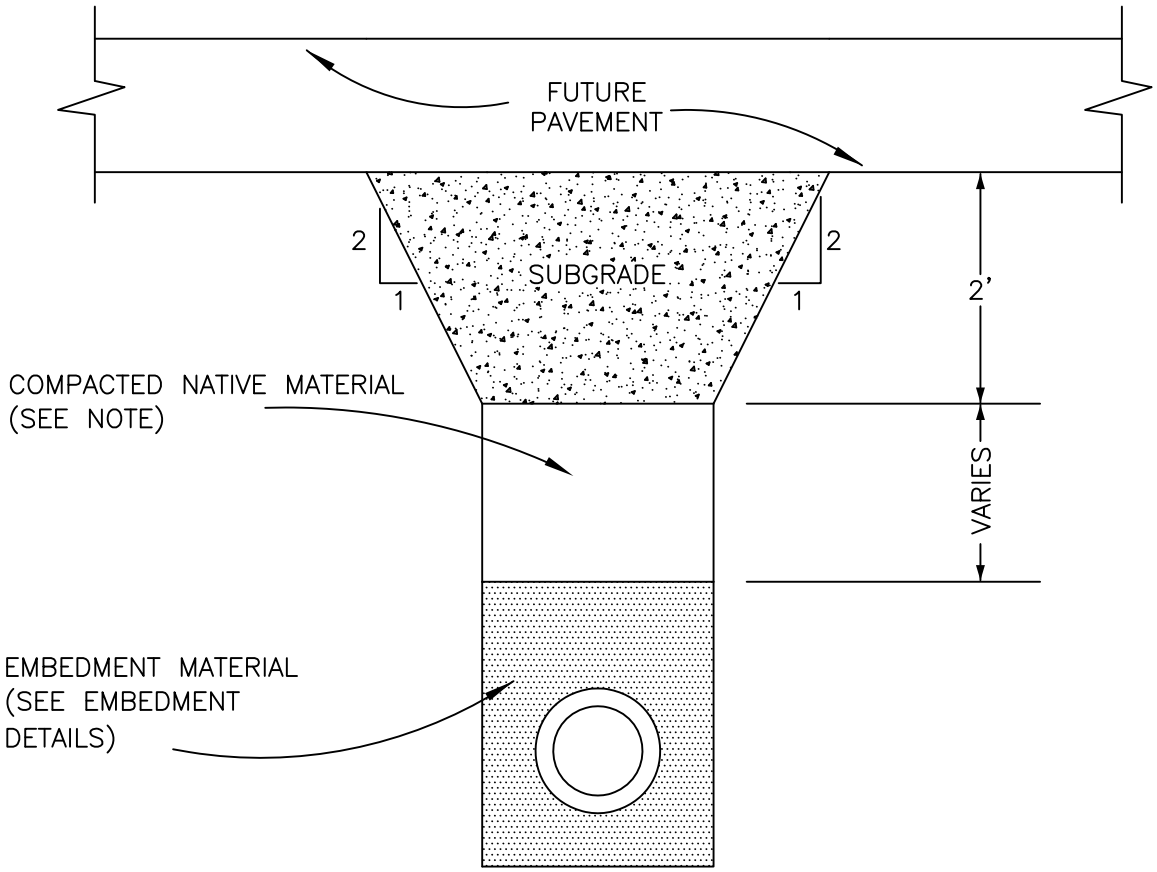
CONCRETE STREET

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		



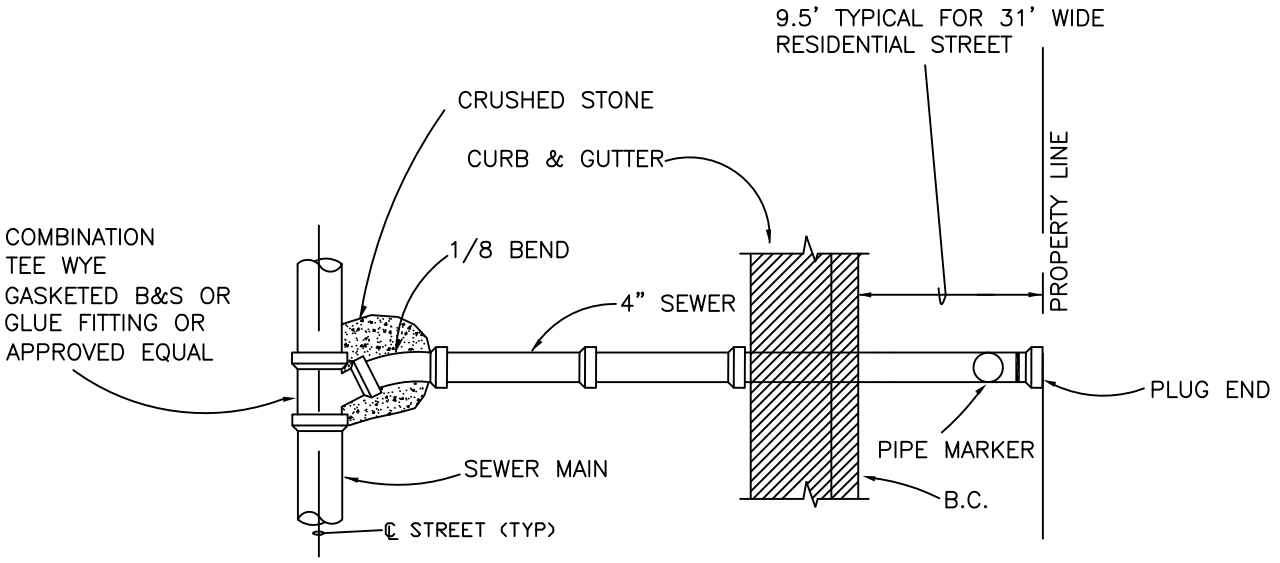
NOTE:

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		

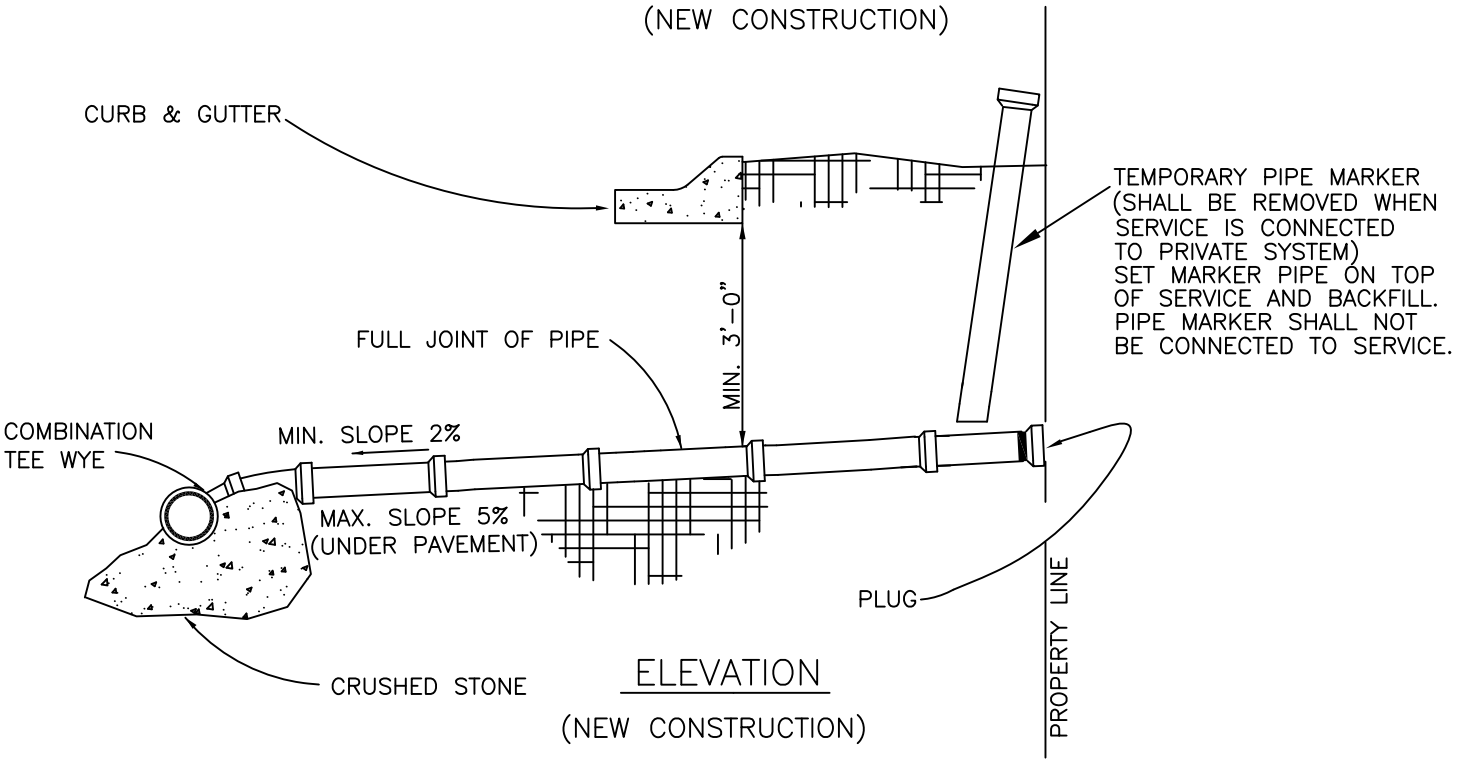
SANITARY SEWER SYSTEM DETAILS

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

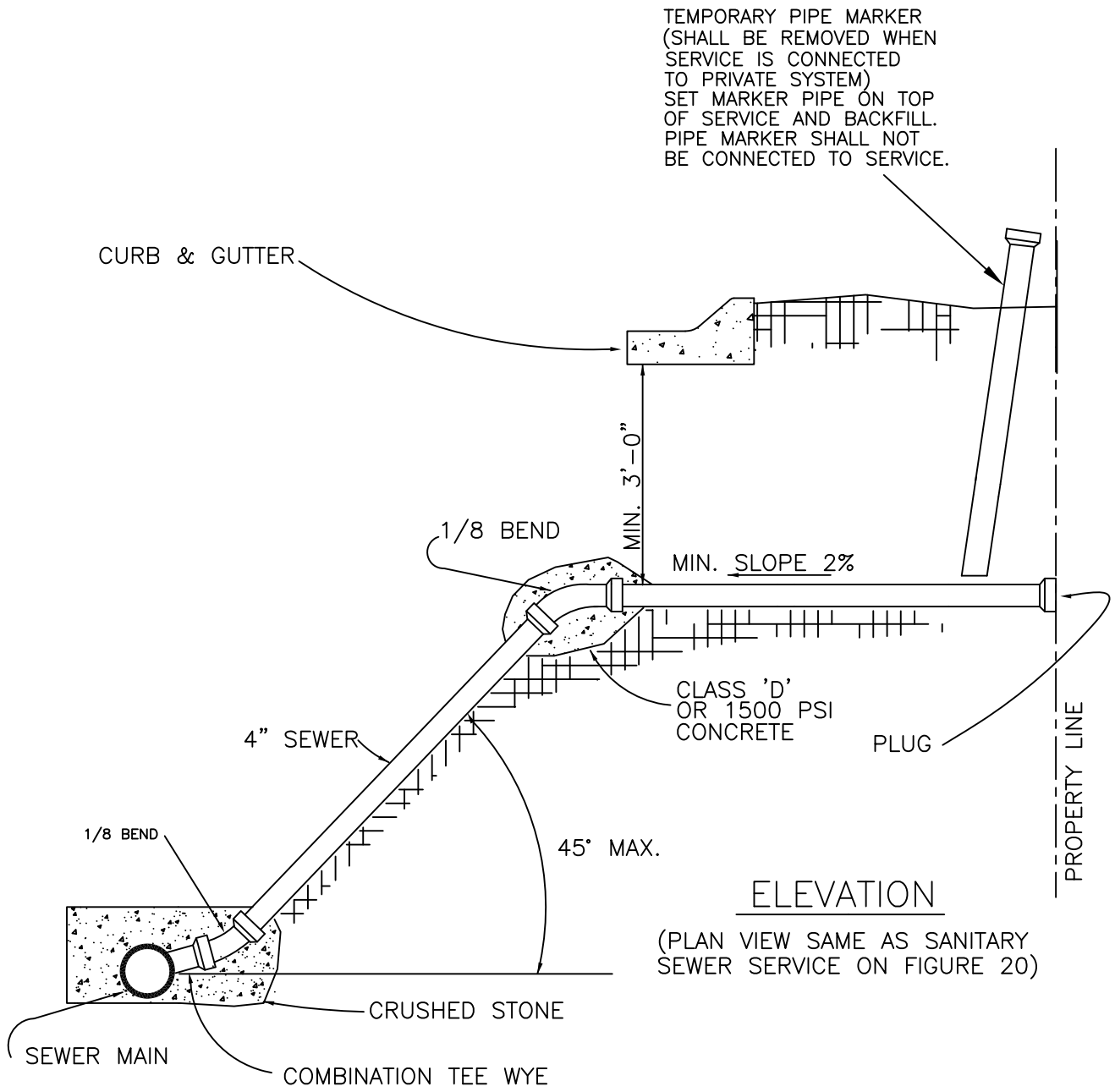
(NEW CONSTRUCTION)

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.

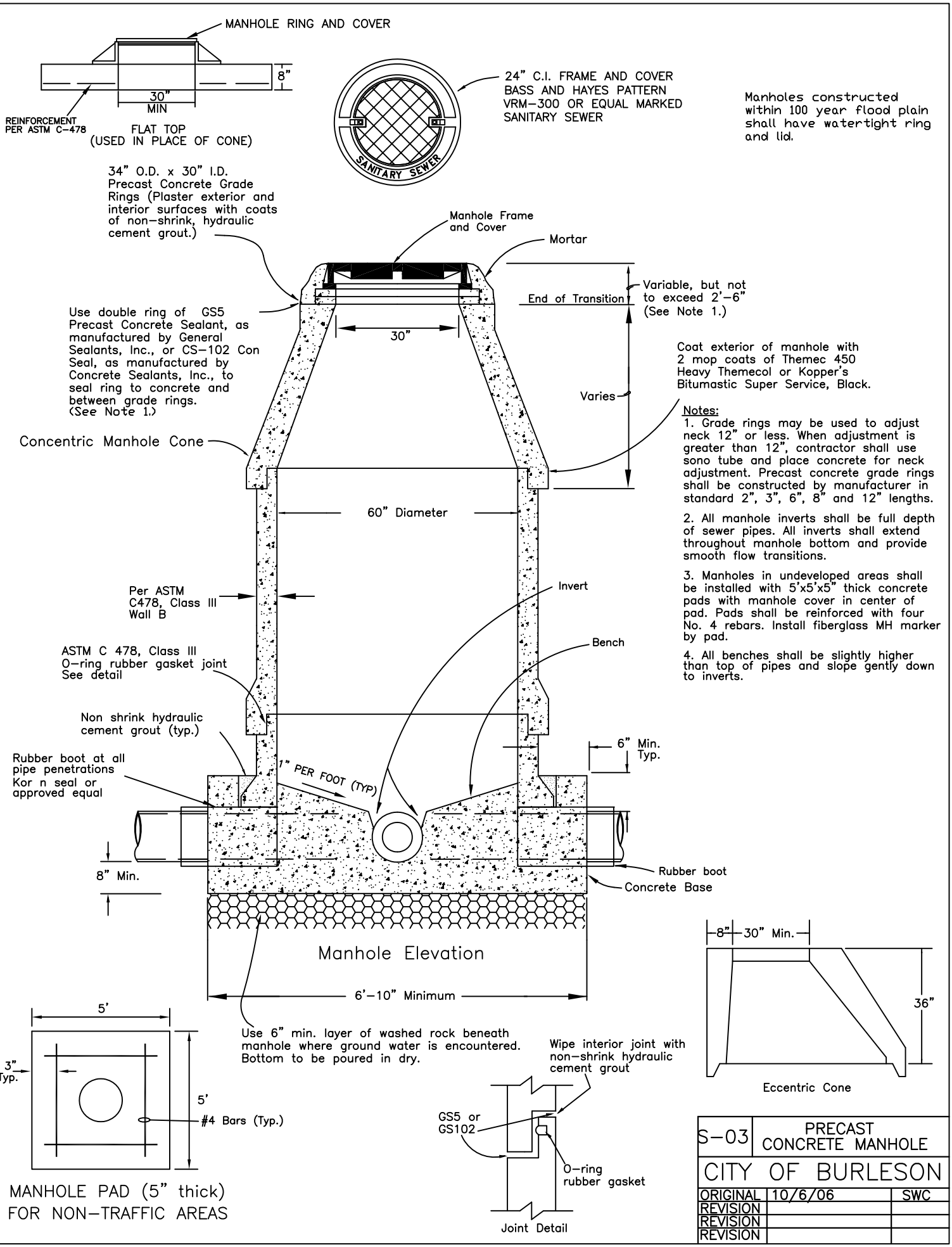
S-01	SANITARY SEWER SERVICE	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		



ELEVATION

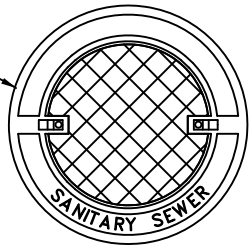
(PLAN VIEW SAME AS SANITARY SEWER SERVICE ON FIGURE 20)

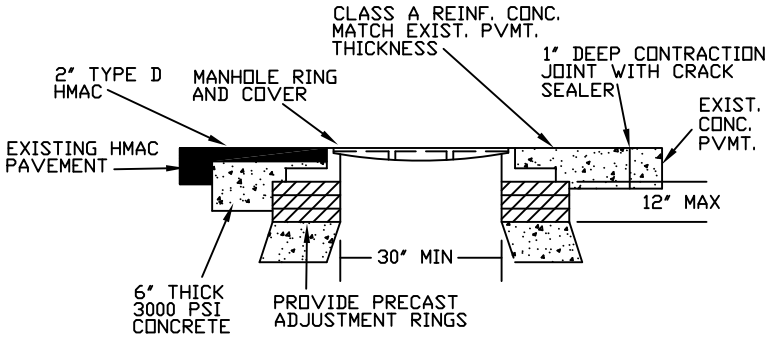
S-02	DEEP SEWER SERVICE	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		



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"





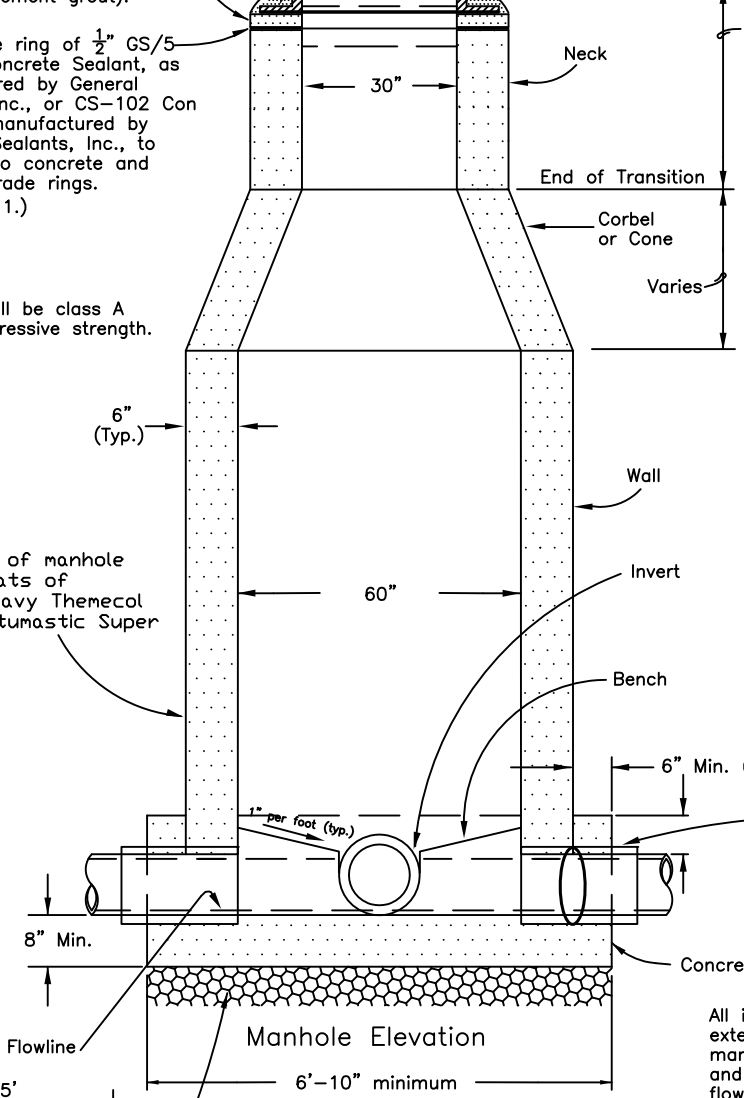
MANHOLE TOP FOR STREET INSTALLATION

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.)

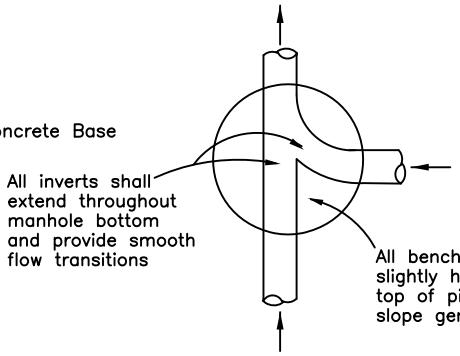
All concrete shall be class A 3,000 psi compressive strength.

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

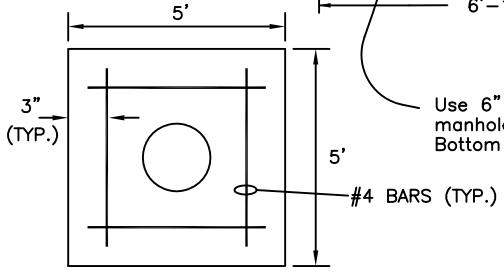


Notes:

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.

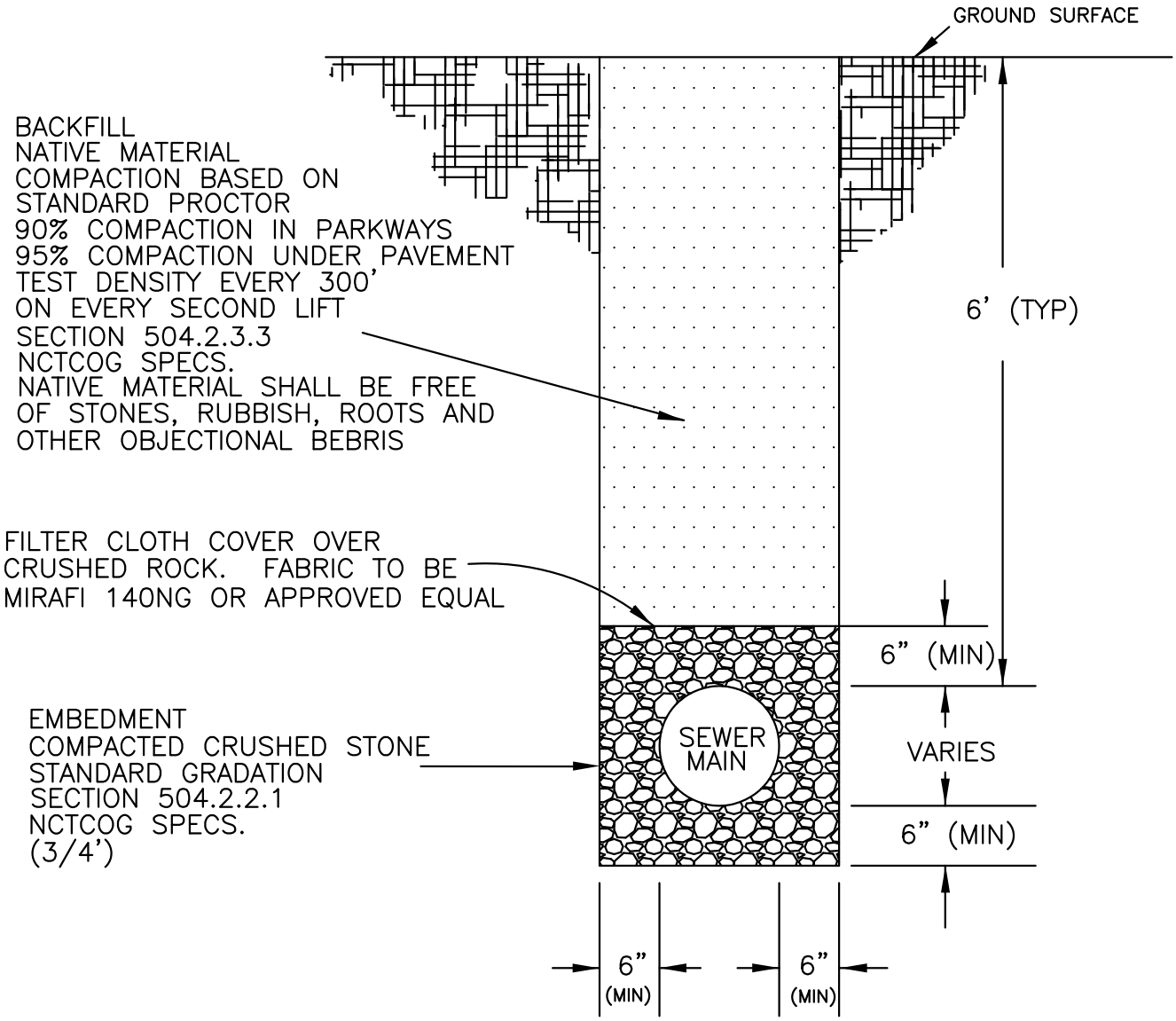


Use 6" min. layer of washed rock beneath manhole where ground water is encountered. Bottom to be poured in dry.

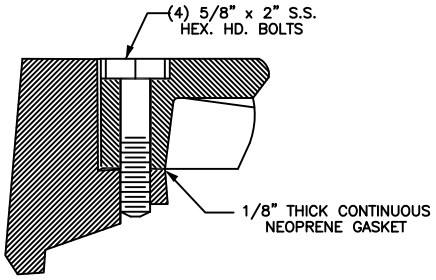


MANHOLE PAD FOR NON-TRAFFIC AREAS

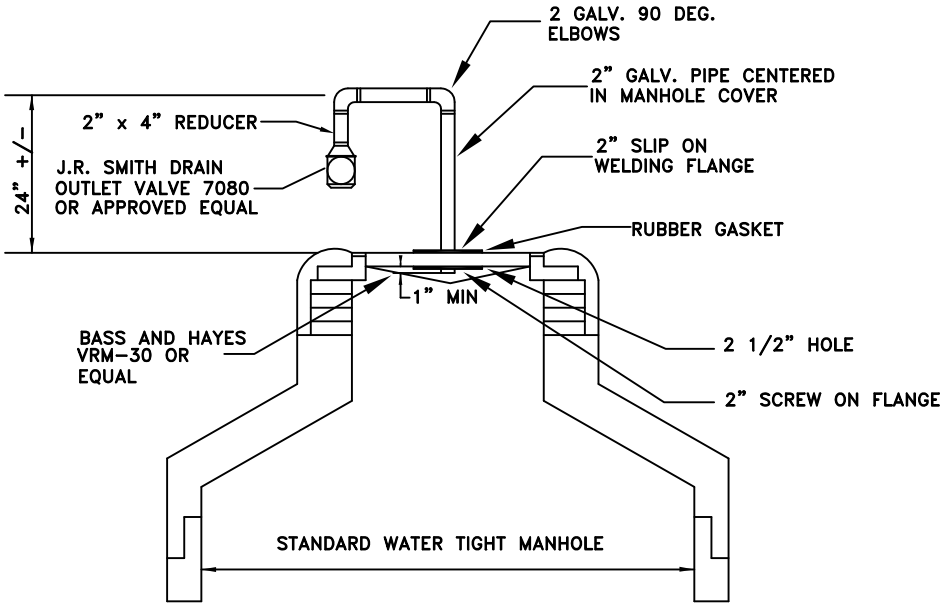
S-04	CAST IN PLACE CONCRETE MANHOLE	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		



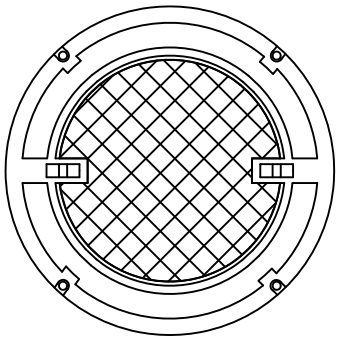
S-05	SANITARY SEWER EMBEDMENT	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		



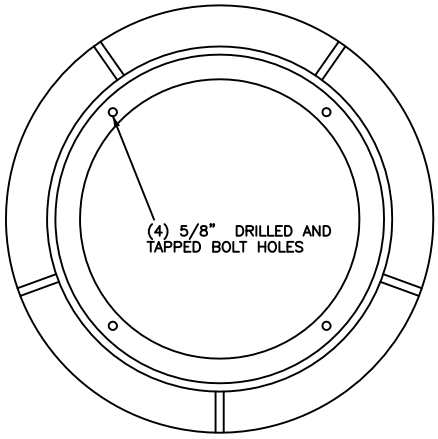
WATERTIGHT DETAIL



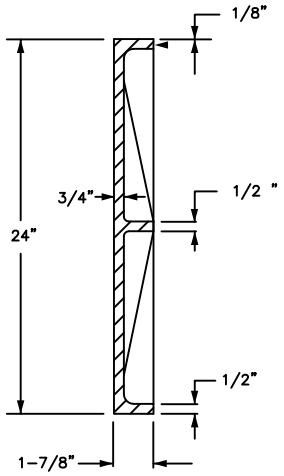
VENT FOR WATERPROOF MANHOLES



COVER FACE

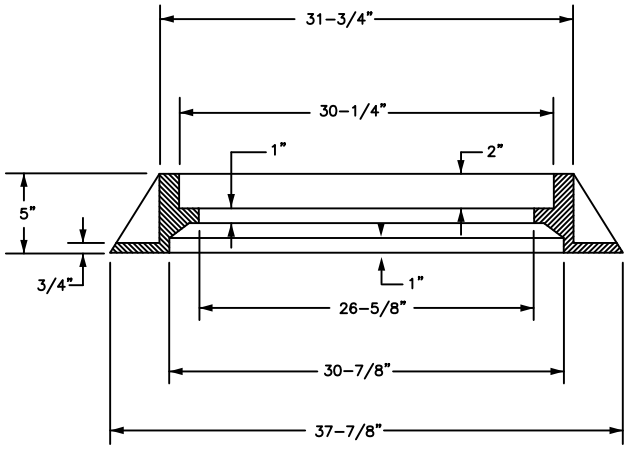


FRAME TOP VIEW

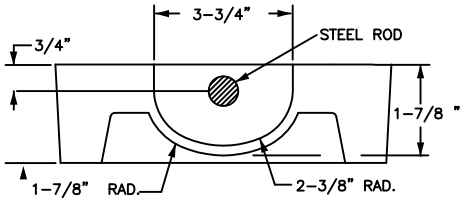


COVER SECTION

MACHINED BEARING SURFACE



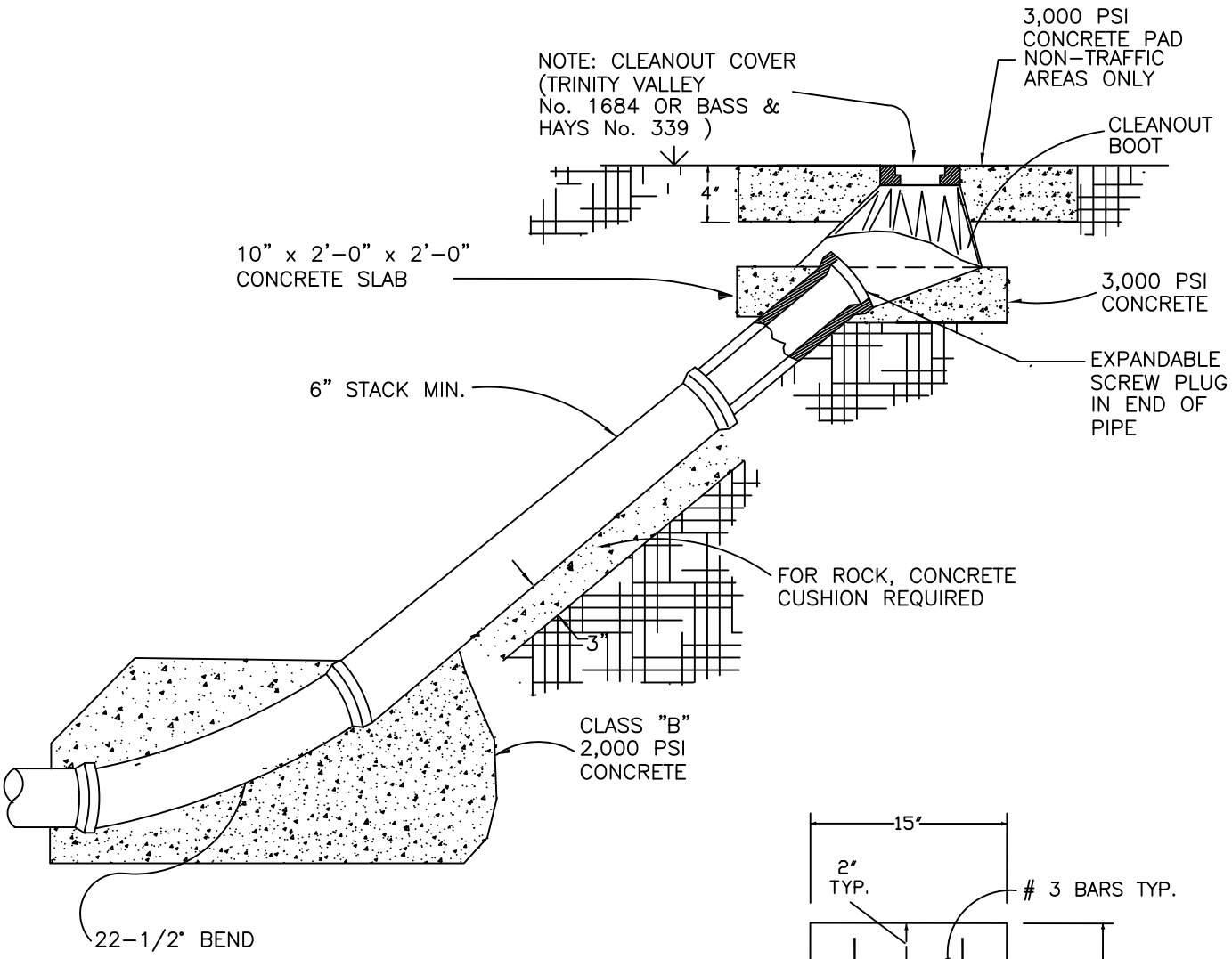
FRAME SECTION

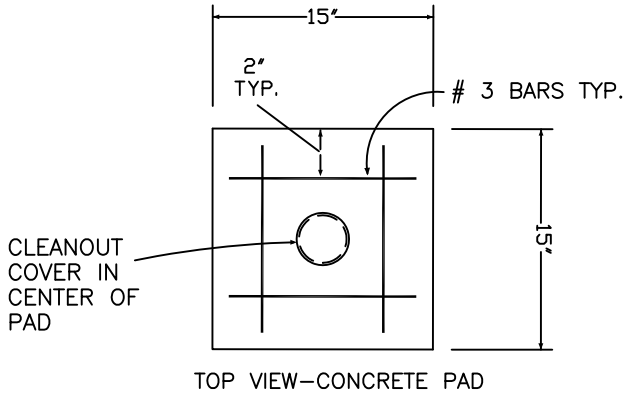


TYPE 4A STEEL PICKBARS

PICKBAR DETAIL

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



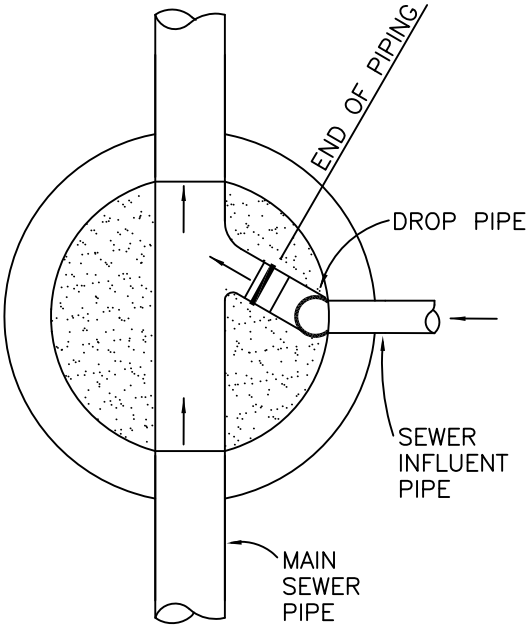


TOP VIEW–CONCRETE PAD

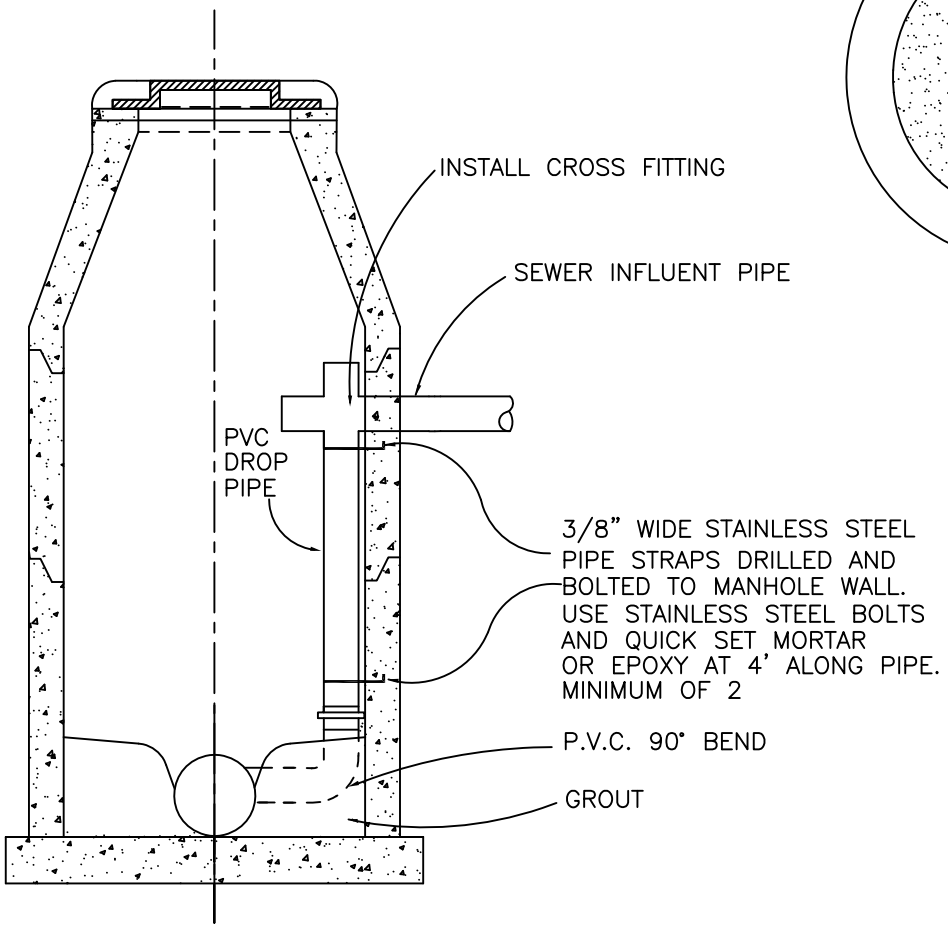
NOTE: PROVIDE CLEANOUT PAD ON EVERY CLEANOUT NOT IN PAVEMENT

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

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



PLAN

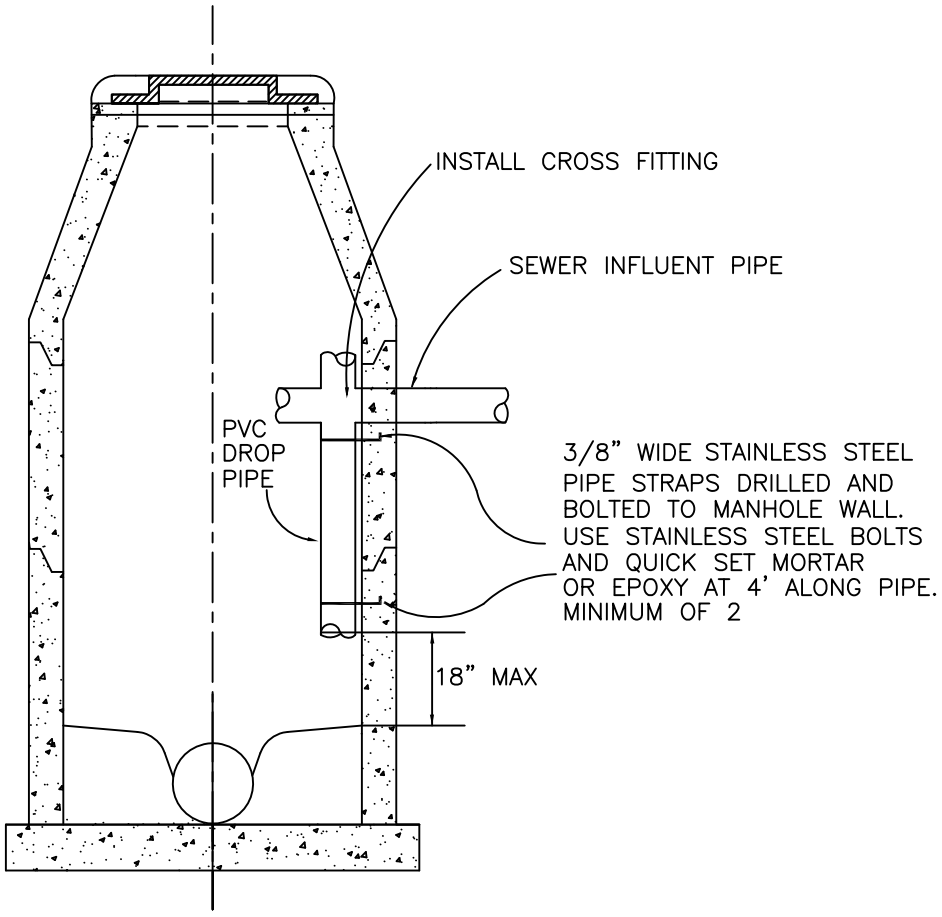


ELEVATION

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.

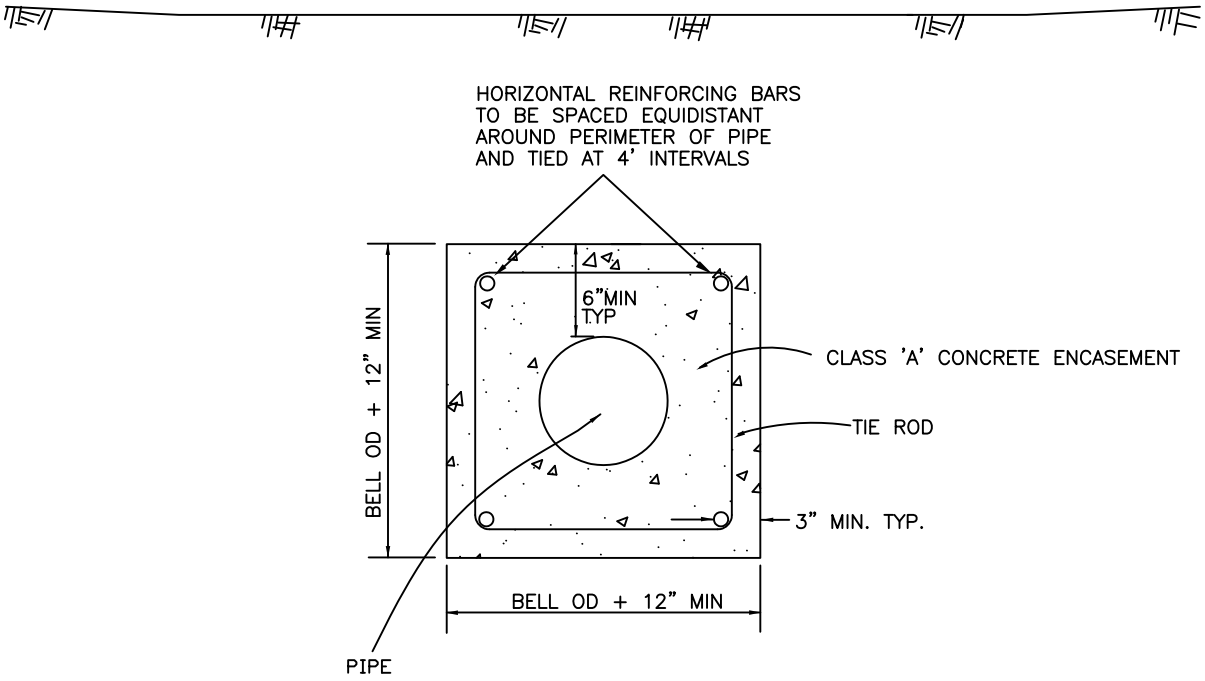
S-08	INTERNAL DROP MANHOLE NEW CONSTRUCTION	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		



NOTES

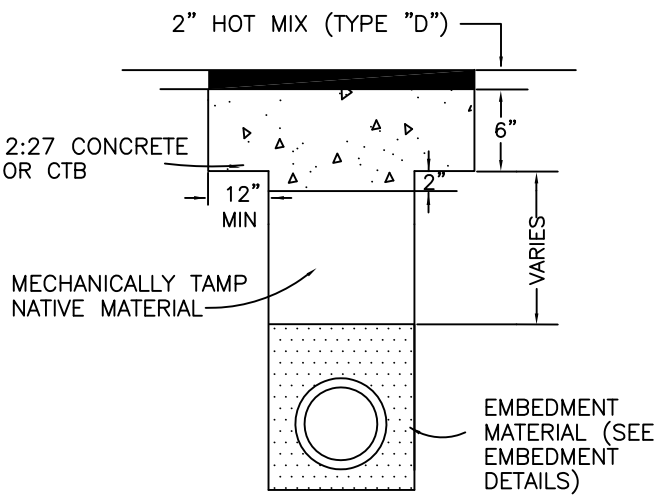
1. DROP PIPE SHALL BE ONE SIZE LARGER THAN SEWER INFLUENT PIPE.
2. NO DROP PIPING SHALL BE REQUIRED IF SEWER INFLUENT PIPE FLOWLINE IS 18" OR LESS ABOVE MAIN SEWER PIPE FLOWLINES OR IF MAIN SEWER PIPE BENCH IS HIGHER THAN SEWER INFLUENT FLOWLINE.

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

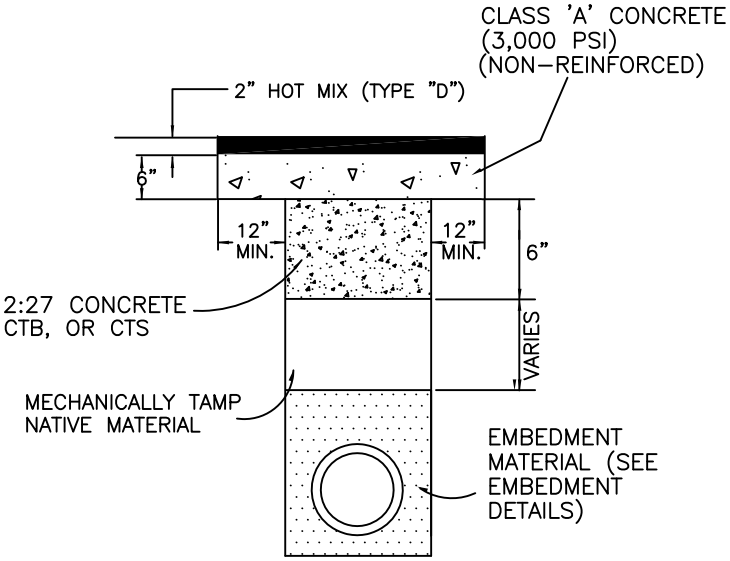


6" – 8" PIPE:	4 – #4	HORIZONTAL REINFORCING BARS	WITH TIE RODS
10"– 12" PIPE:	4 – #5	HORIZONTAL REINFORCING BARS	WITH TIE RODS
15"– 18" PIPE:	8 – #5	HORIZONTAL REINFORCING BARS	WITH TIE RODS
20"– 30" PIPE:	8 – #6	HORIZONTAL REINFORCING BARS	WITH TIE RODS

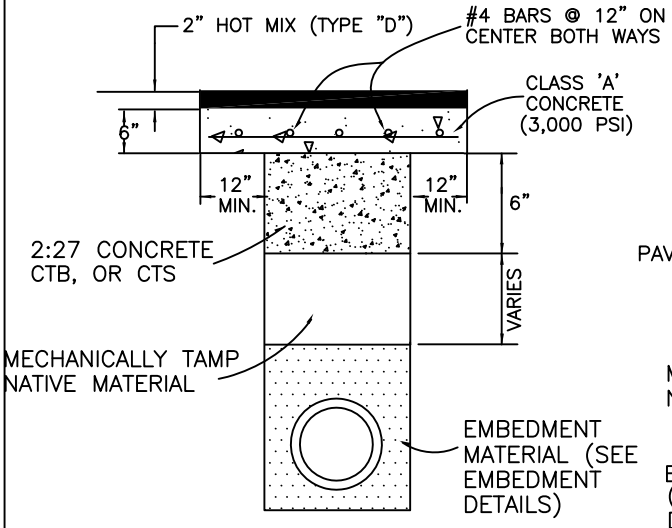
S–10	CONCRETE ENCASEMENT	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		



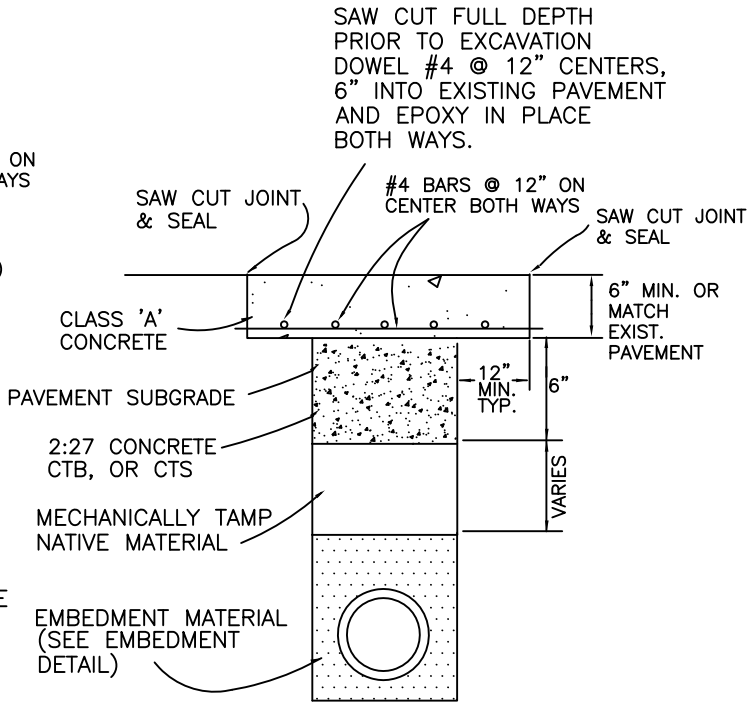
RESIDENTIAL/COUNTY ROAD



COLLECTOR STREET



MAJOR ARTERIALS & THOROUGHFARES



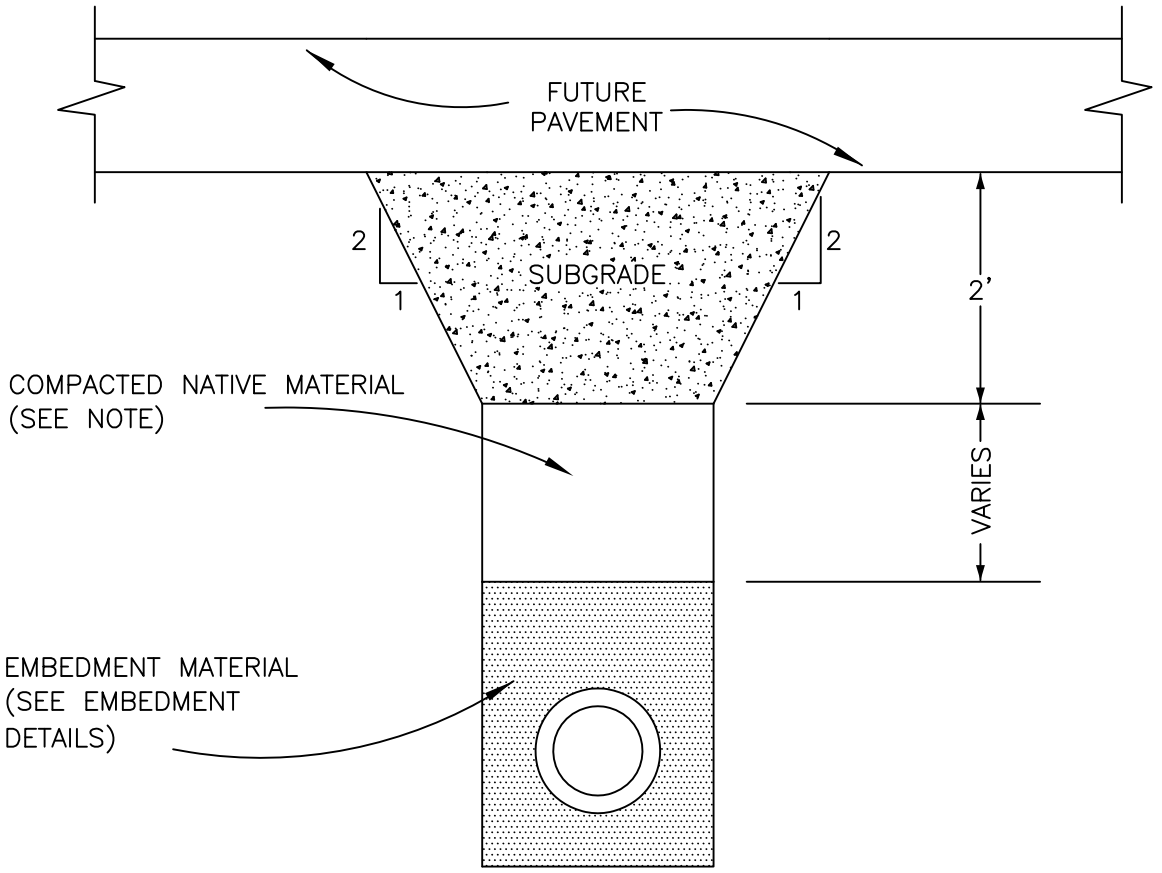
CONCRETE STREET

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.

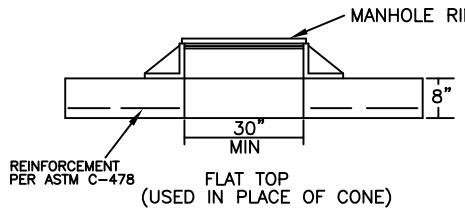
S-11	EXISTING STREET BACKFILL AND REPAIR	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		

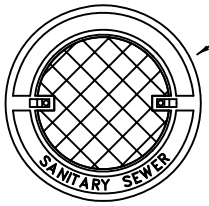


NOTE:

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%.

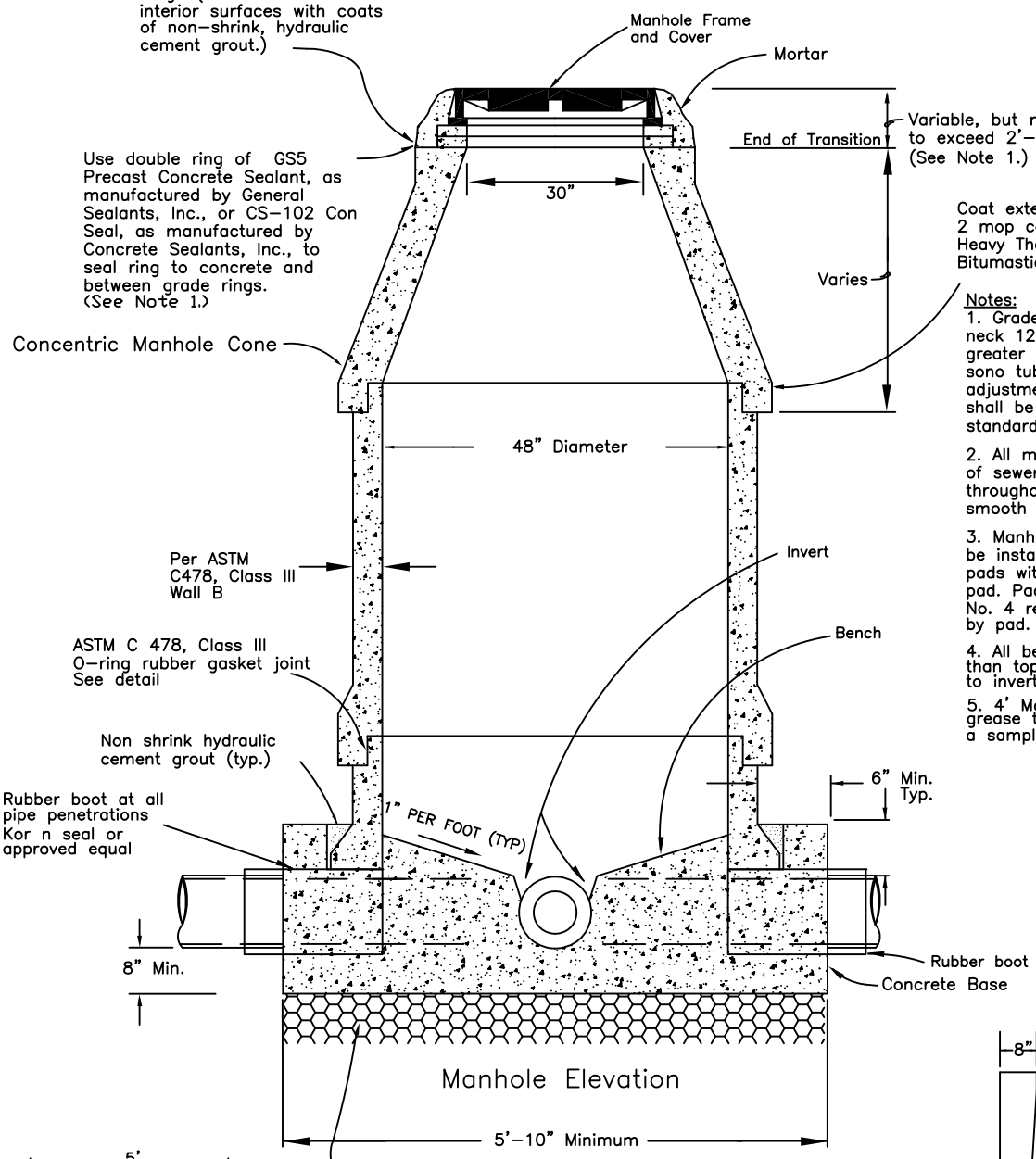
S-12	STREET BACKFILL PRIOR TO STREET CONSTRUCTION	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		





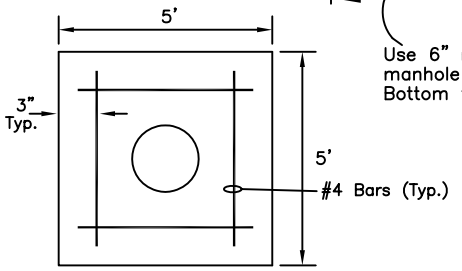
24" C.I. FRAME AND COVER
BASS AND HAYES PATTERN
VRM-30 OR EQUAL MARKED
SANITARY SEWER

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



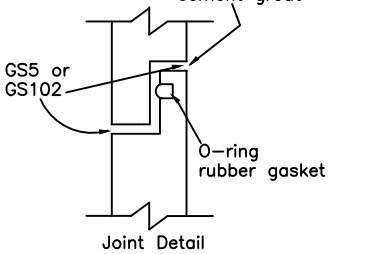
Notes:

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.

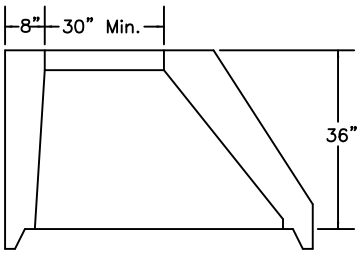


MANHOLE PAD (5" thick)
FOR NON-TRAFFIC AREAS

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



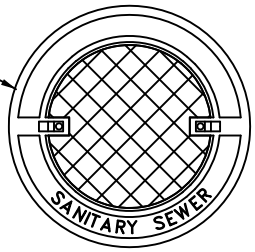
Joint Detail

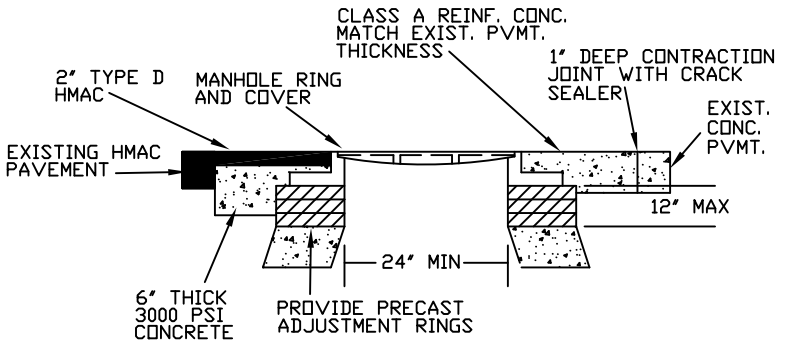


Eccentric Cone

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"





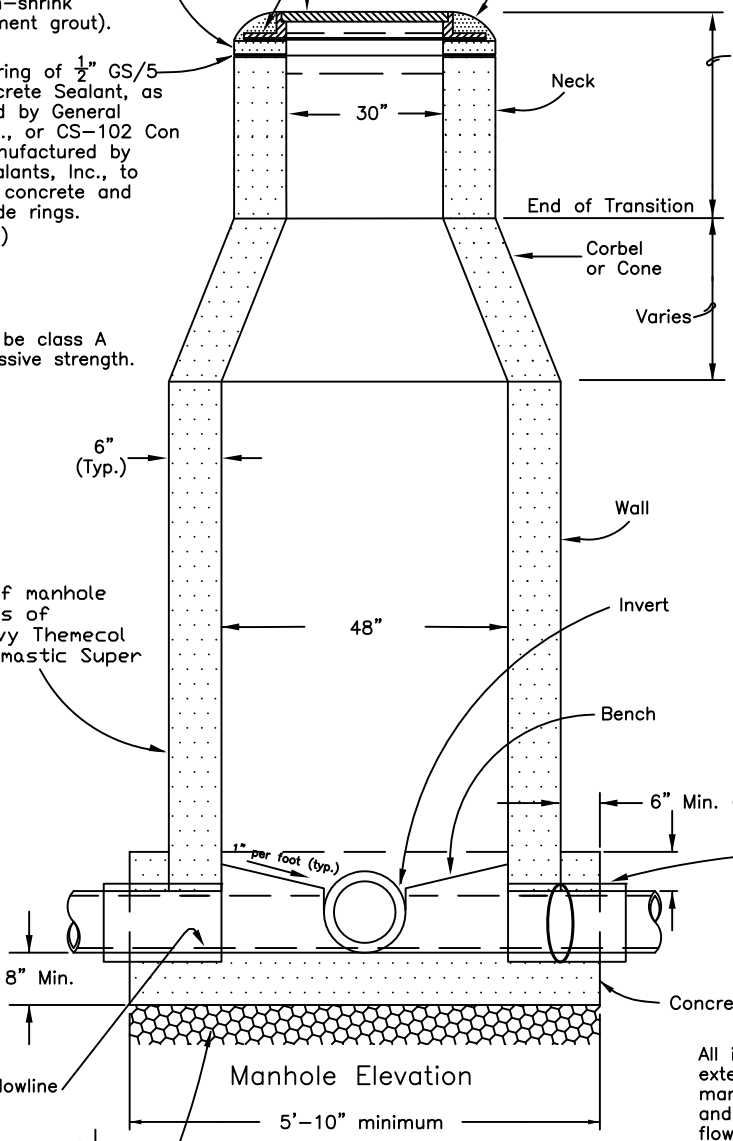
MANHOLE TOP FOR STREET INSTALLATION

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.)

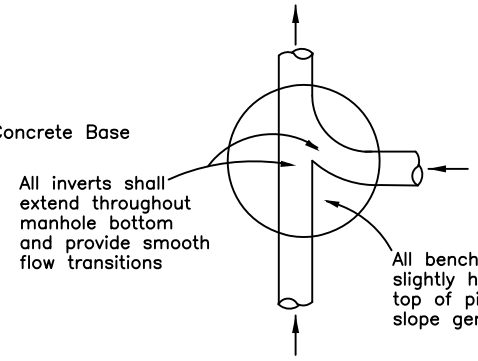
All concrete shall be class A 3,000 psi compressive strength.

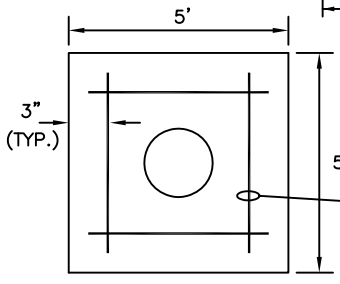
Coat Exterior of manhole with 2 mop coats of Themec 450 Heavy Themecol or Koppers Bitumastic Super Service, Black.



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.

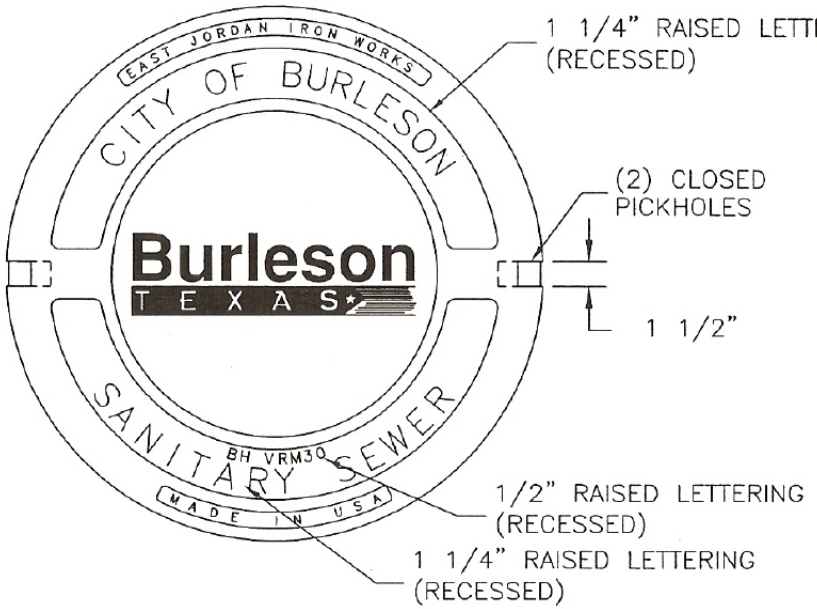


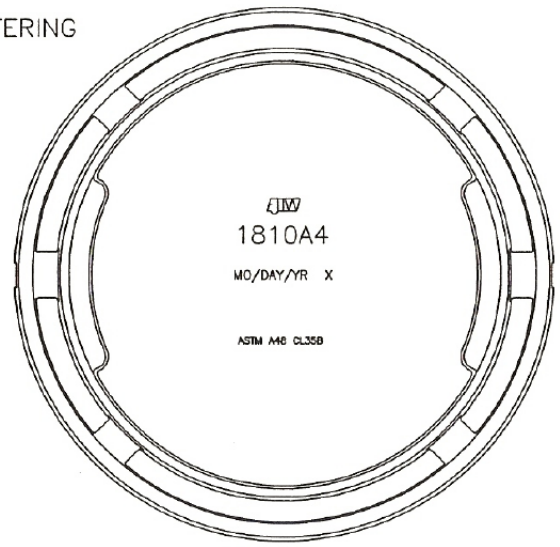


Use 6" min. layer of washed rock beneath manhole where ground water is encountered. Bottom to be poured in dry.

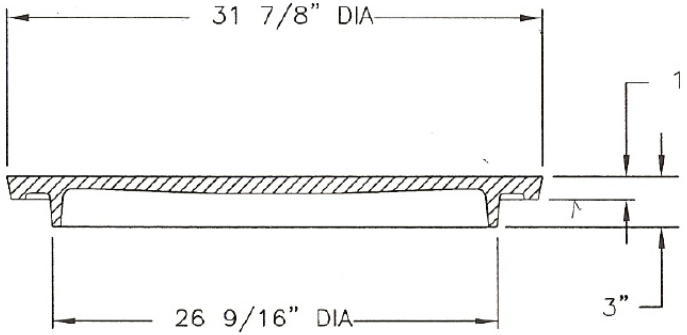
MANHOLE PAD FOR NON-TRAFFIC AREAS

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

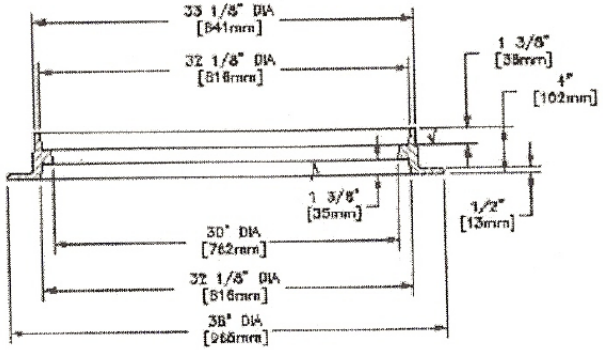




BOTTOM VIEW



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

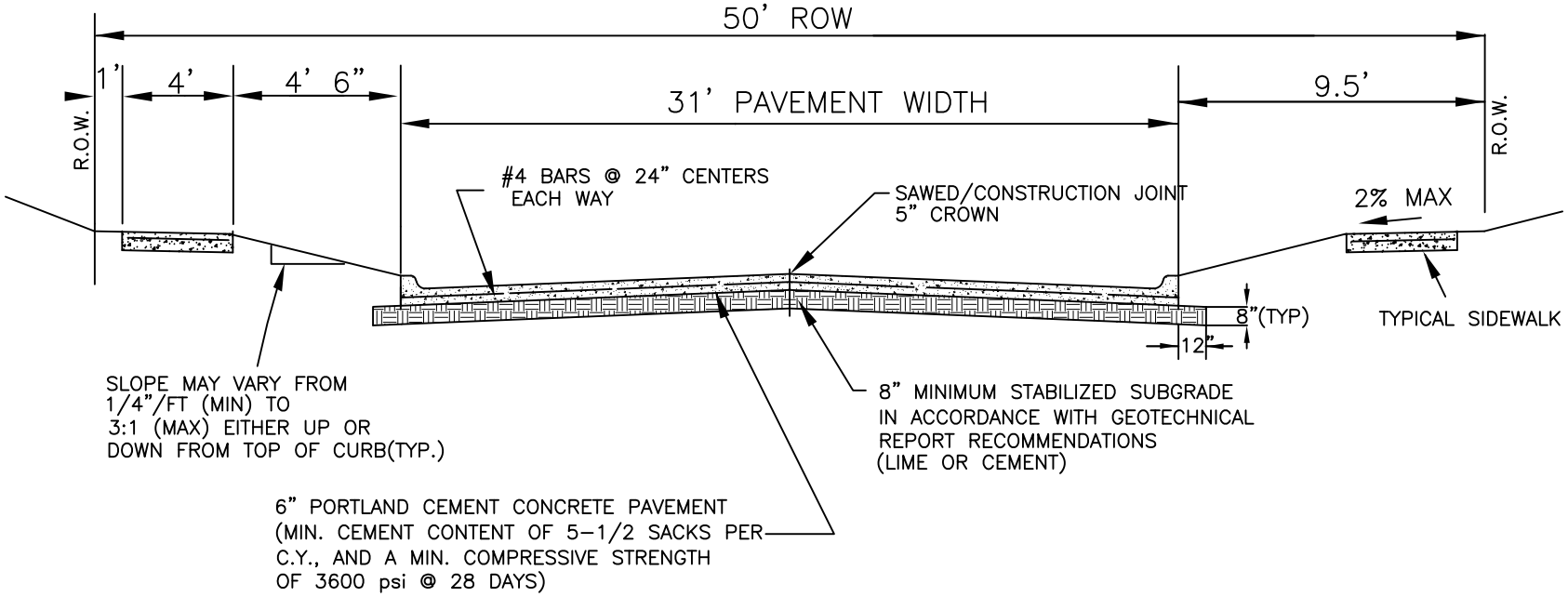
DRAWN	DATE
GAD	09/17/08
LAST REVISED	DATE

REFERENCE INFORMATION

S-15 MANHOLE RING AND COVER

PAVING DETAILS

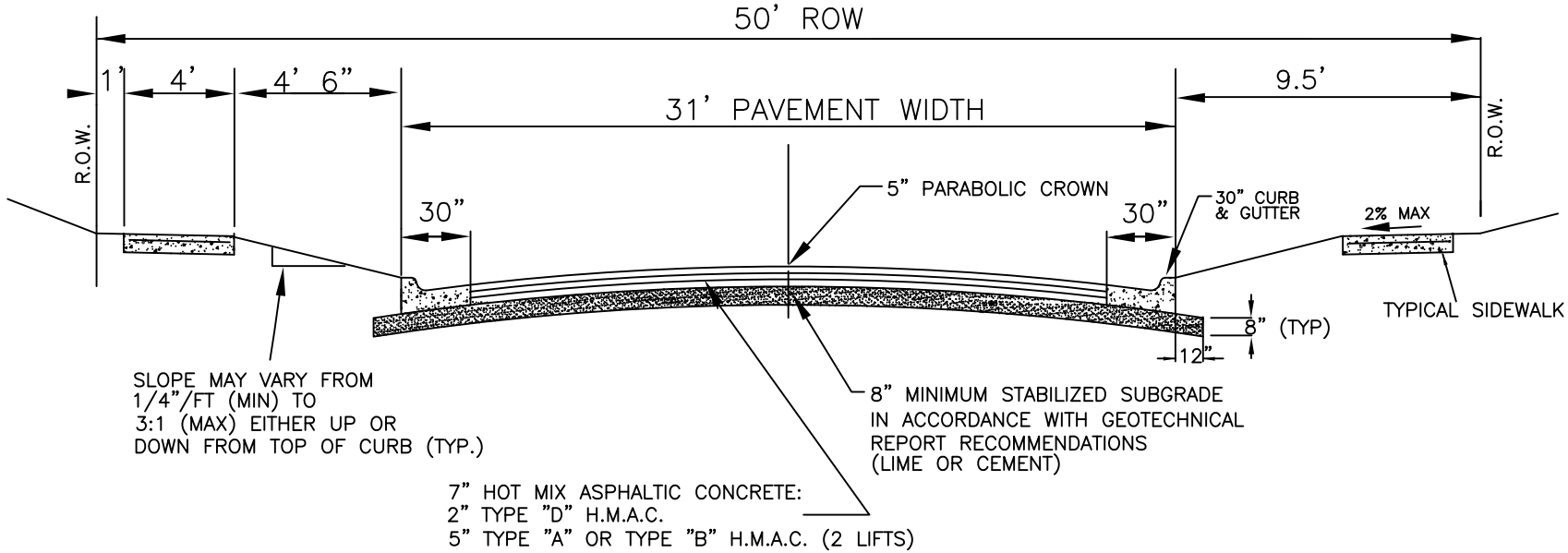
P-01	Residential Street (L2U) – Concrete
P-02	Residential Street (L2U) – HMAC
P-03	Rural Residential Street (L2U) – Concrete
P-04	Rural Residential Street (L2U) – HMAC
P-05	Minor Collector (C3U) – Concrete
P-06	Minor Collector (C3U) – HMAC
P-07	Major Collector (C4U)
P-08	Minor Arterial – Two-Way Left 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.

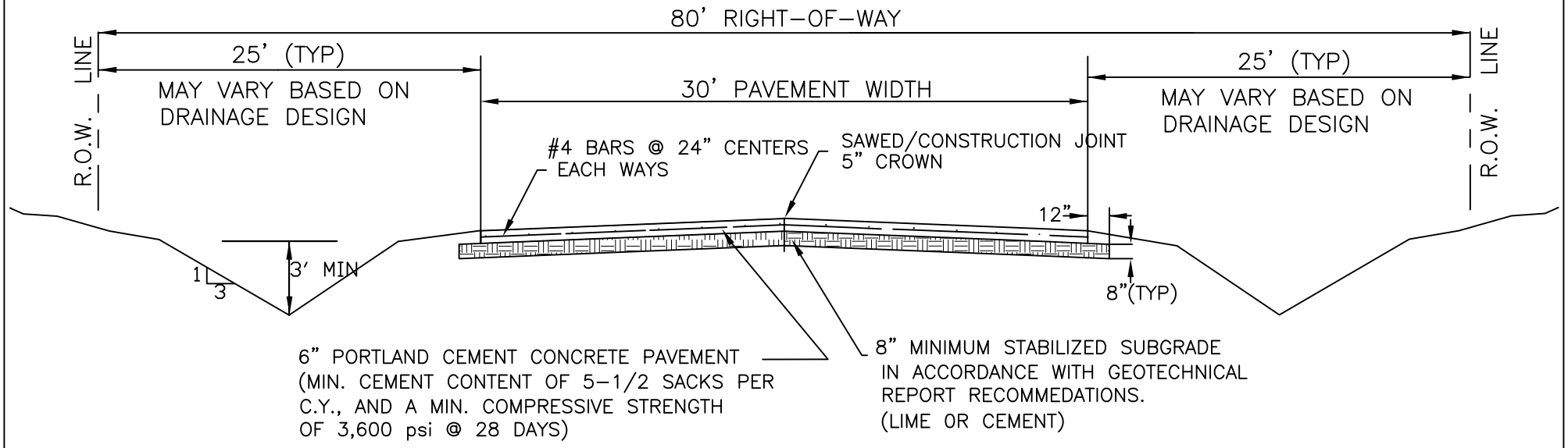
P-01	RESIDENTIAL STREET (L2U) CONCRETE	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		



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.

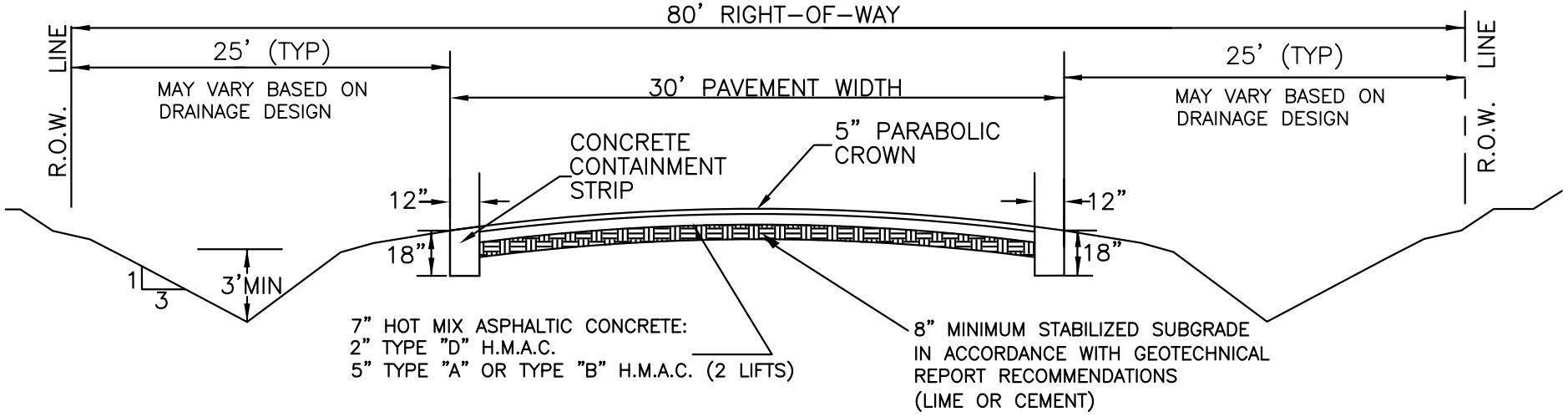
P-02	RESIDENTIAL STREET (L2U) HMAC	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		

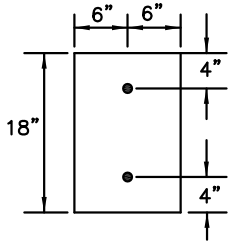


NOTES:

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		





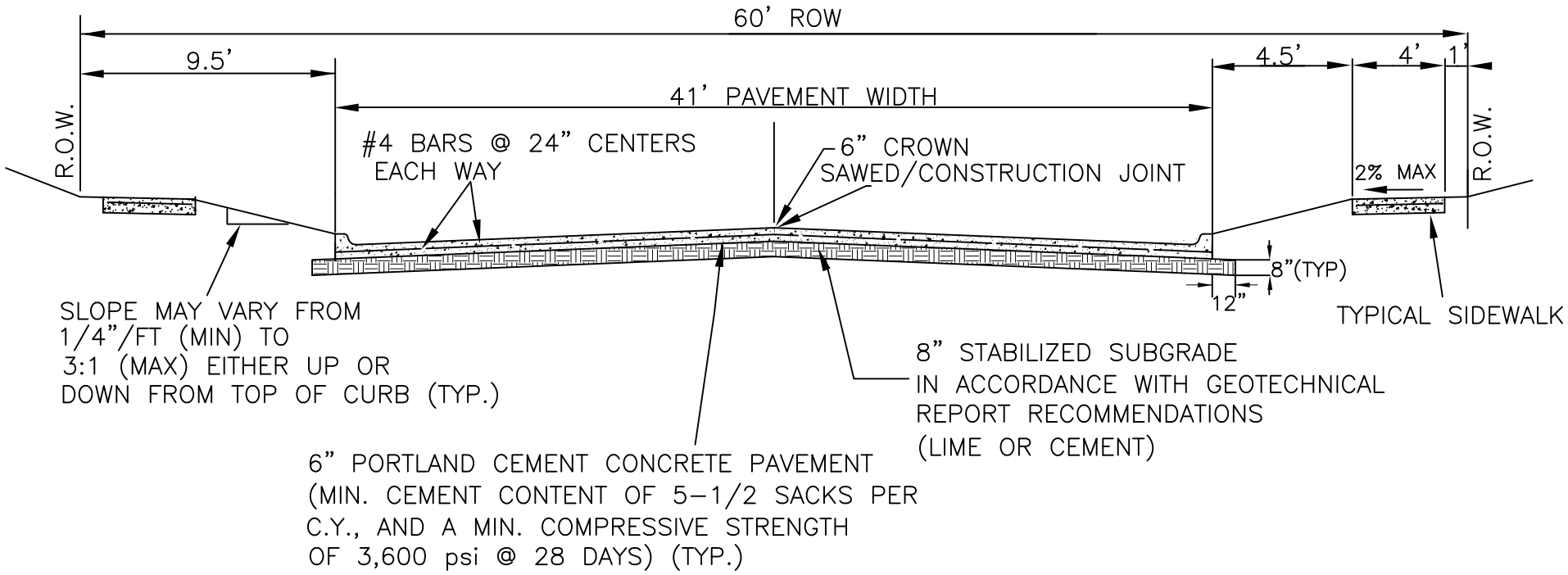
CONCRETE CONTAINMENT STRIP DETAIL

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.

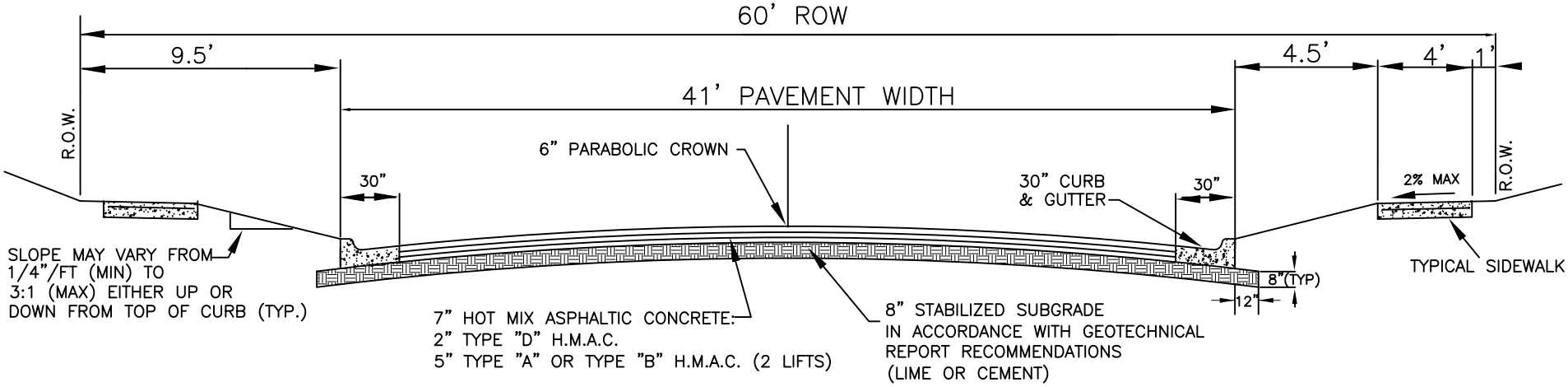
P-04	RURAL RESIDENTIAL STREET (L2U) HMAC	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		



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.

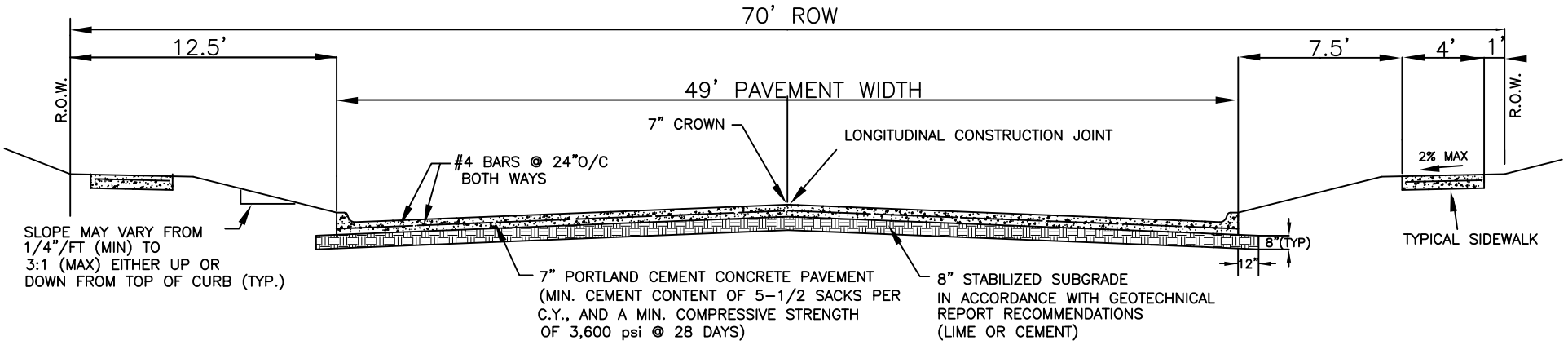
P–05	MINOR COLLECTOR (C3U) CONCRETE	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		



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.

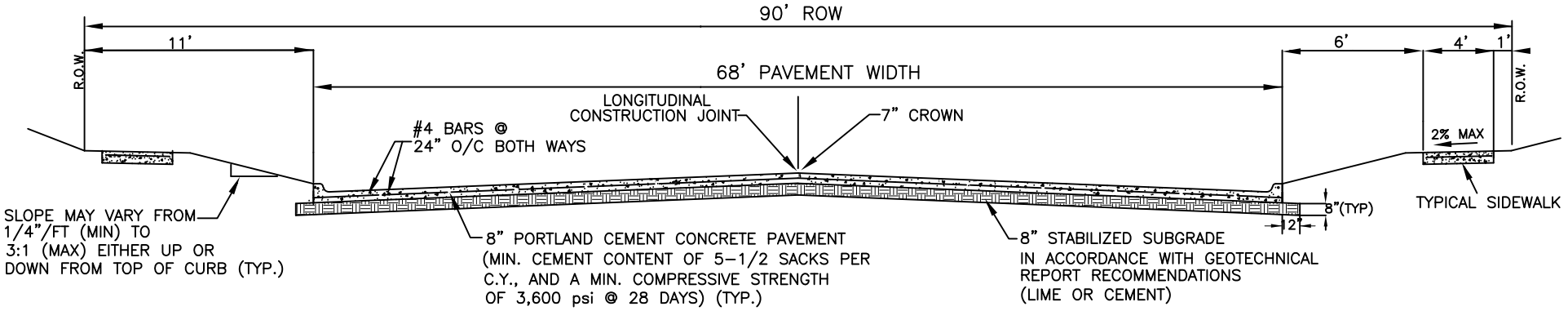
P–06	MINOR COLLECTOR (C3U) HMAC	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		



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.

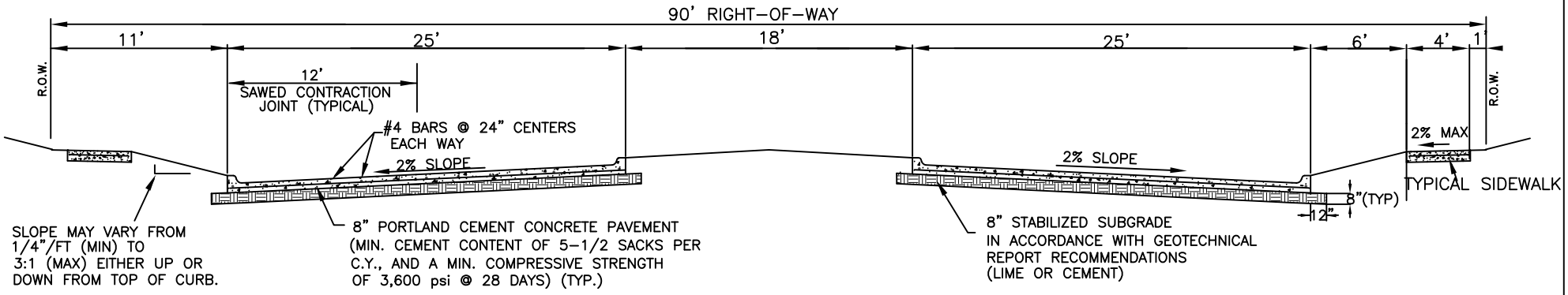
P-07	MAJOR COLLECTOR (C4U)	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		



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.

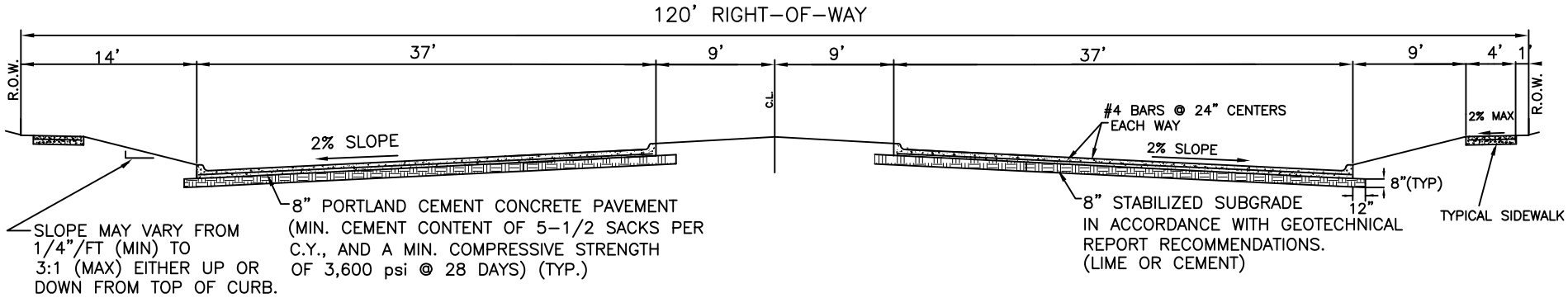
P-08	MINOR ARTERIAL – TWLTL (P5U)	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		



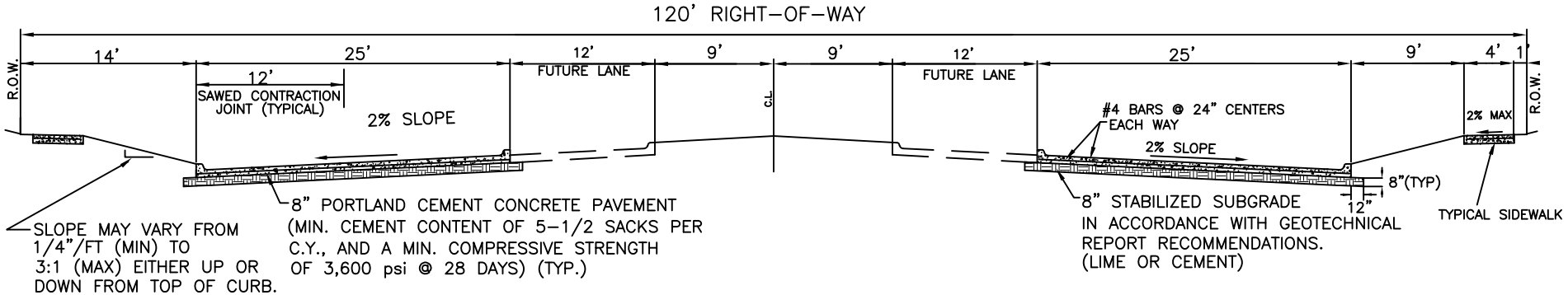
NOTES:

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

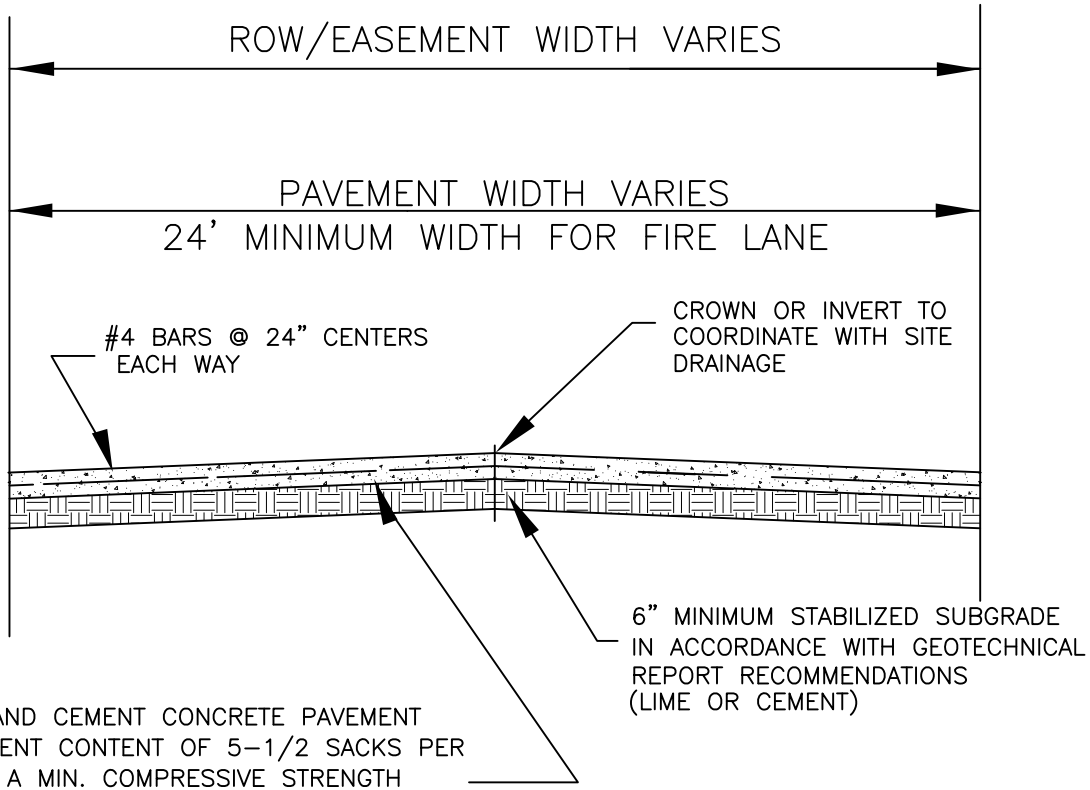


PROPOSED FUTURE WIDENING TO THE INSIDE

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.

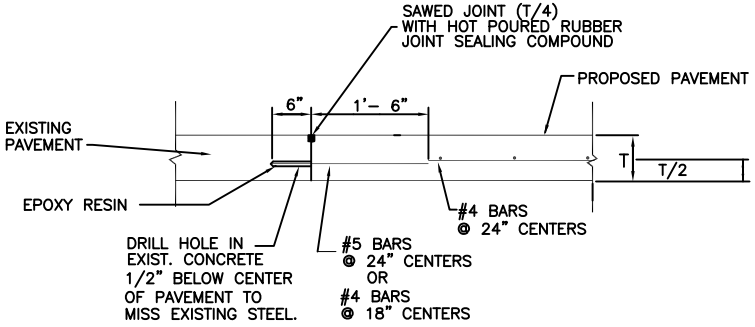
P-10	PRINCIPAL ARTERIAL CONVENTIONAL (P6D)	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		



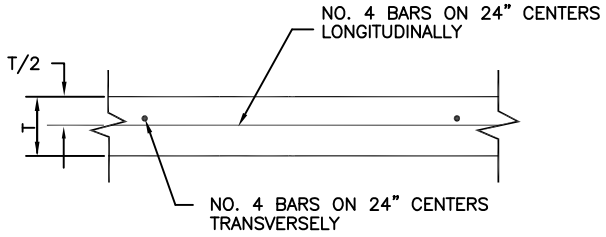
NOTES:

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.

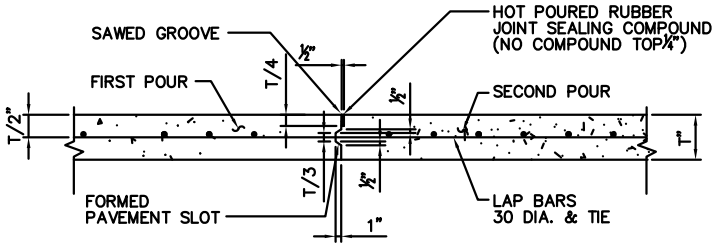
P–11	ALLEY/FIRE LANE PAVING	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		



EPOXY TIE BAR



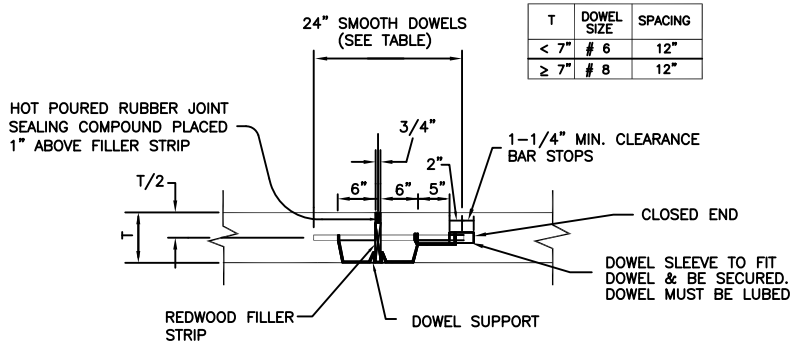
PAVEMENT REINFORCING



T = PAVEMENT THICKNESS

KEYWAY REQUIRED FOR T = 8" AND GREATER.

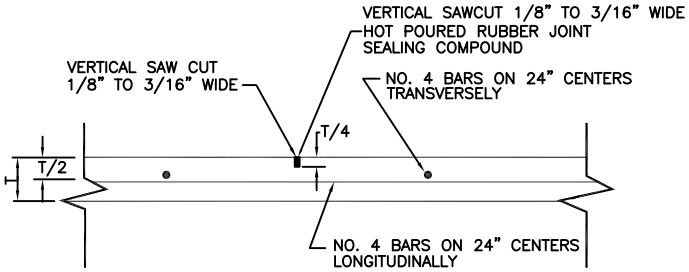
CONSTRUCTION JOINT



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



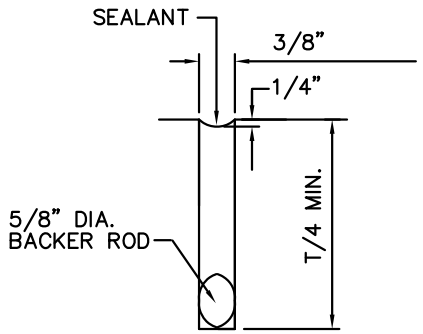
NOTE: TRANSVERSE JOINTS SHALL BE PLACED AT THE FOLLOWING INTERVALS:

6" THICKNESS = 12'

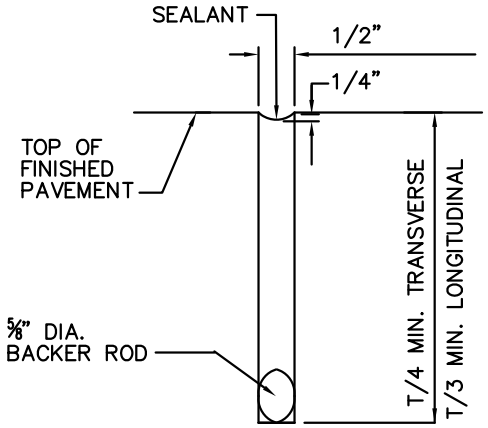
7" & 8" THICKNESS = 15'

SAWED CONTRACTION JOINT

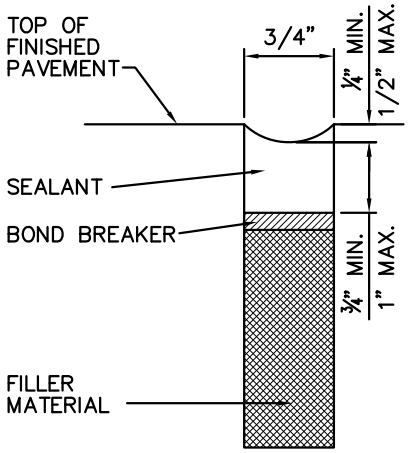
P-12a	CONCRETE PAVEMENT DETAILS (SHEET 1 OF 2)	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		



SAWED JOINT (DUMMY)

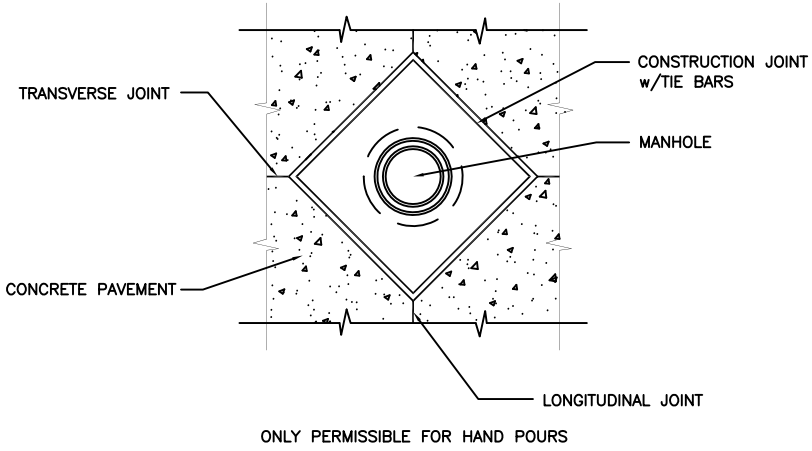


CONSTRUCTION JOINT



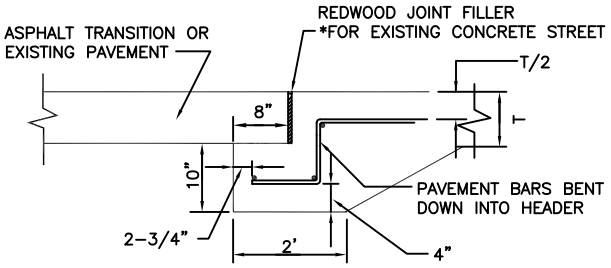
EXPANSION JOINT

JOINT SEALANT DETAILS



ONLY PERMISSIBLE FOR HAND POURS

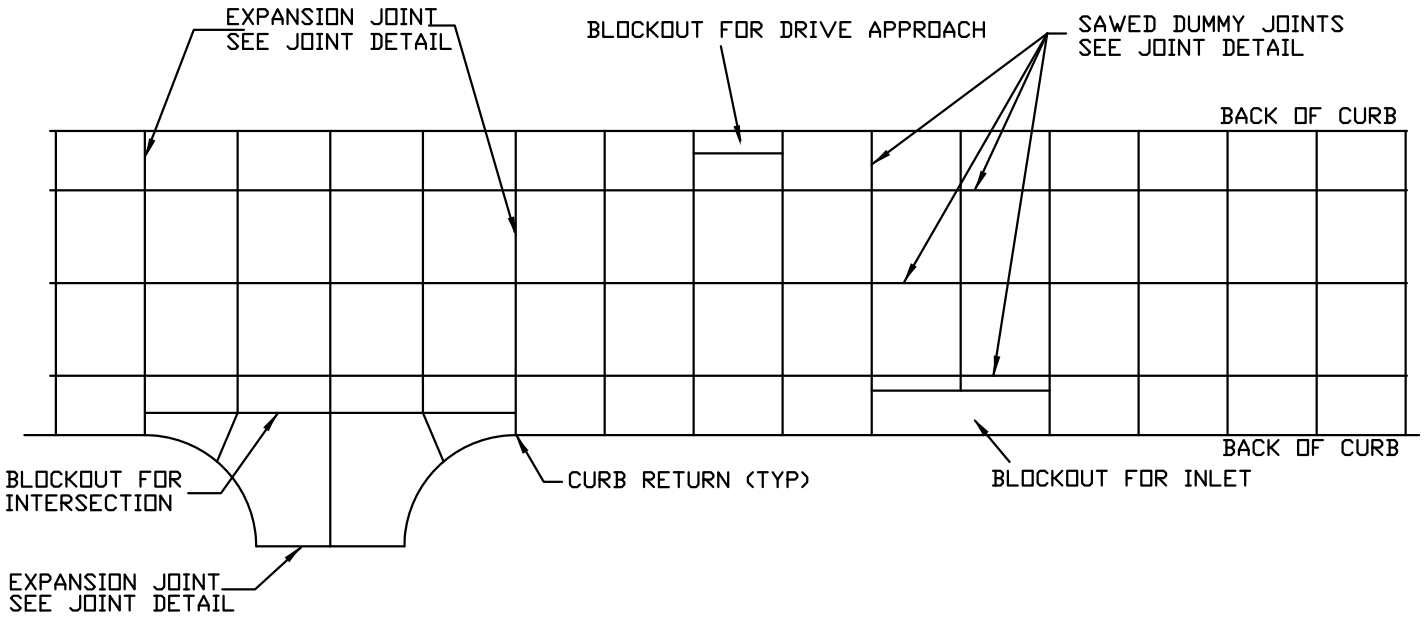
MANHOLE BOXOUT



NOTE: PAVEMENT & HEADER TO BE POURED MONOLITHICALLY

PAVEMENT HEADER

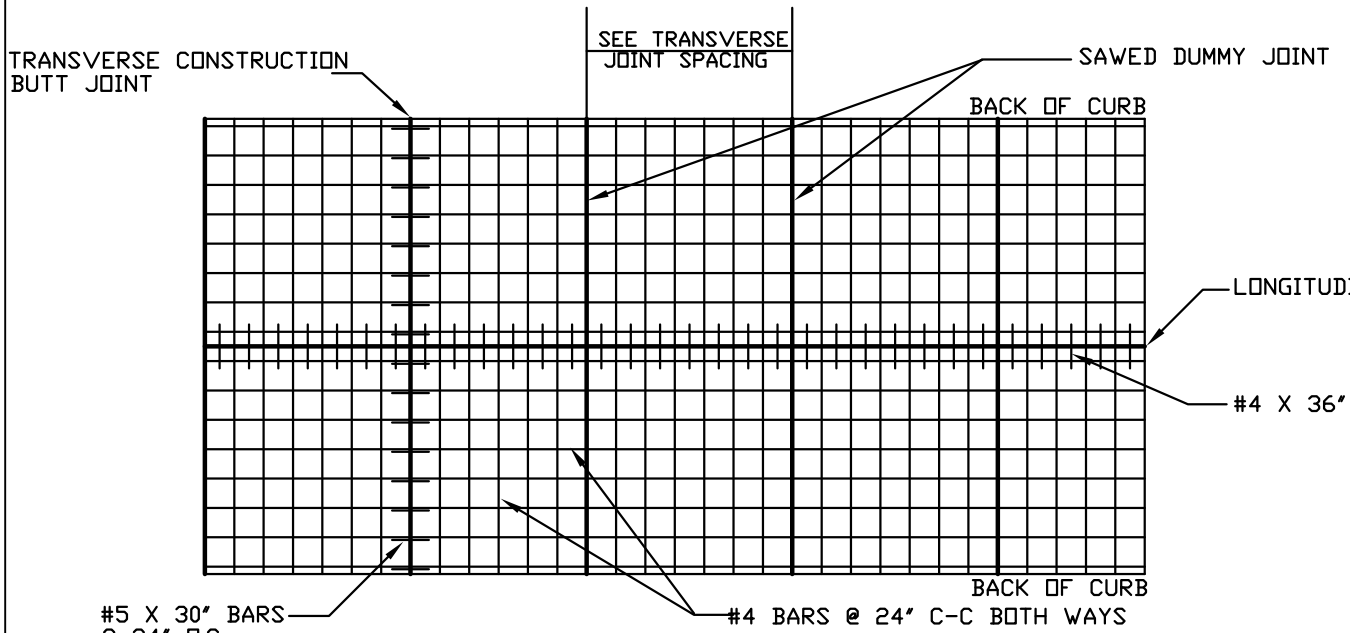
P-12b	CONCRETE PAVEMENT DETAILS (SHEET 2 OF 2)	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		



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

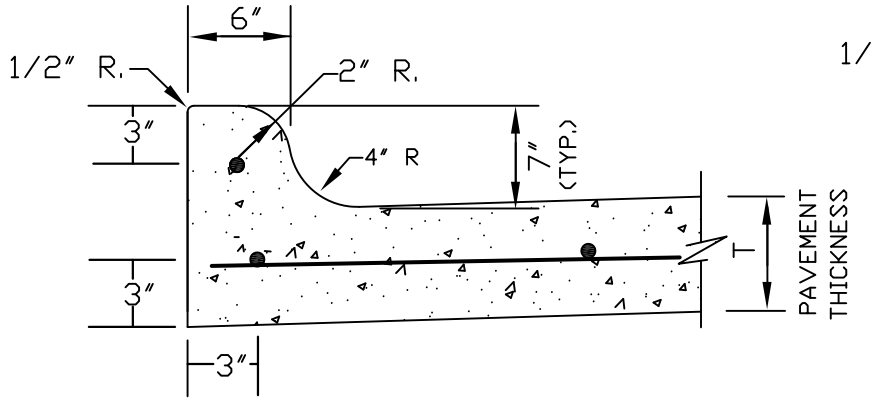
JOINT DEPTH	
PAVEMENT THICKNESS	JOINT DEPTH
6″	1 1/2″
7″	1 3/4″
8″	2″



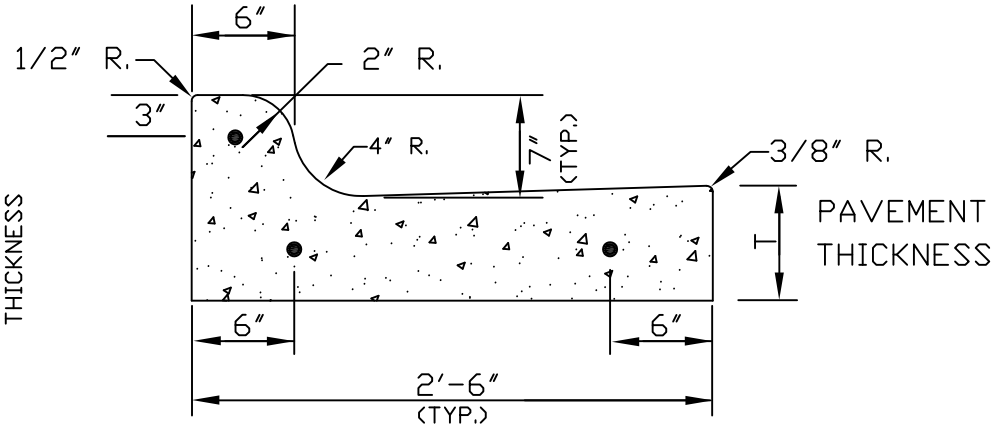
NOTES:

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

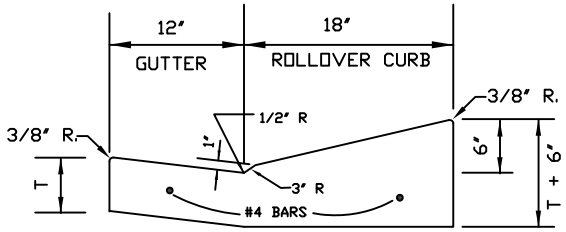


SEPARATE CURB & GUTTER

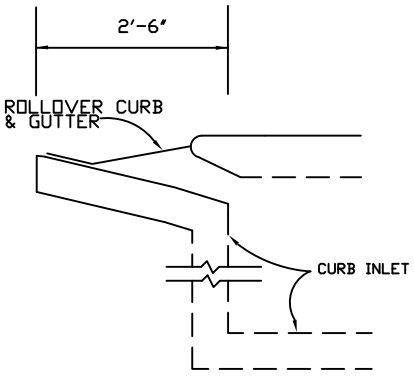
NOTES:

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		

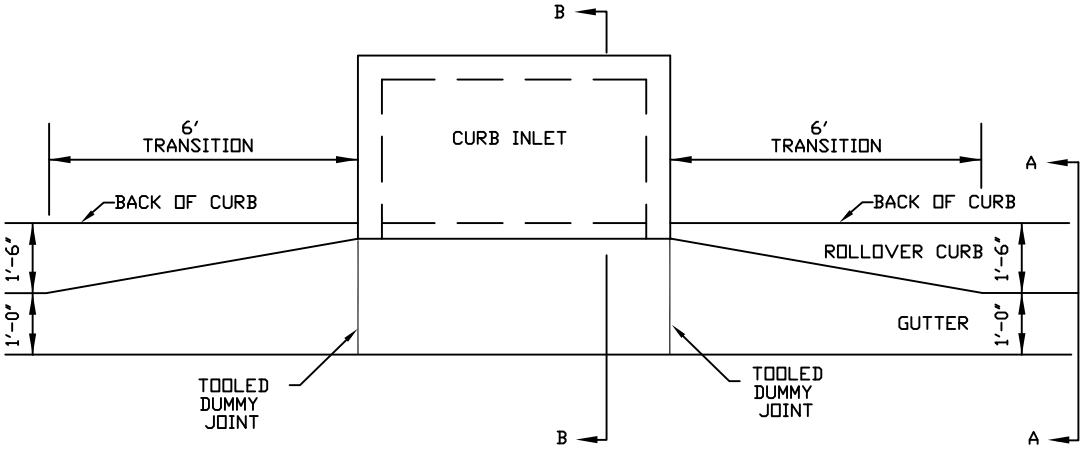


SECTION A–A



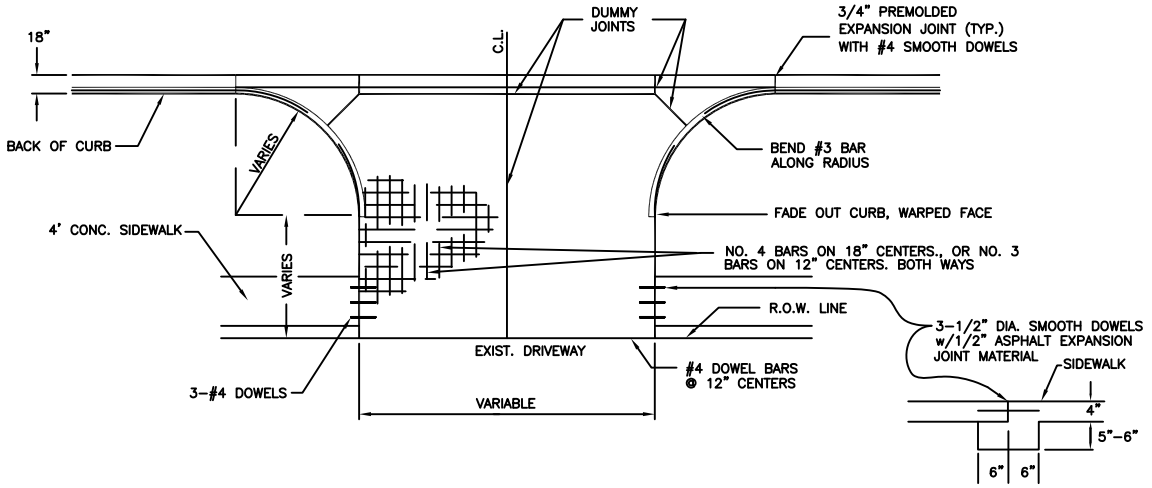
SECTION B–B

NOTE: SEE CURB INLET DETAILS

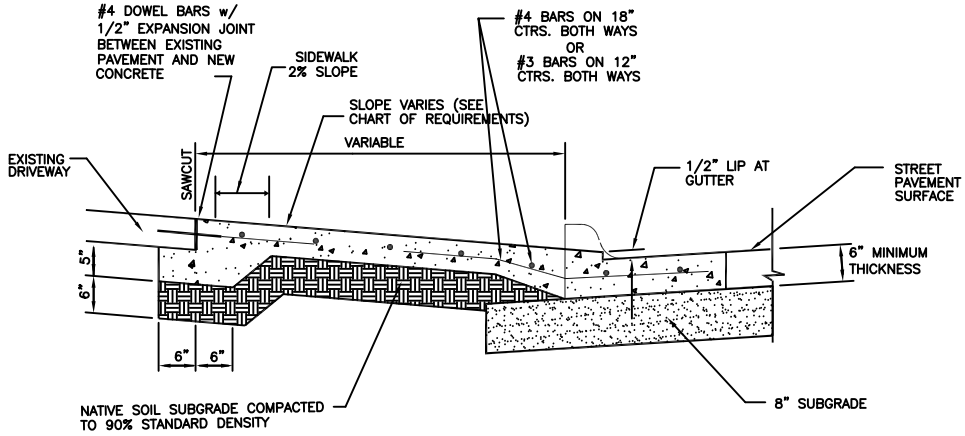


NOTE: IN THE TRANSITION AREA THE 18" ROLLOVER CURB WILL TRANSITION TO A 6" VERTICAL CURB AND THE GUTTER WILL TRANSITION TO A 4" DEPRESSION AT THE FACE OF THE INLET.

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.

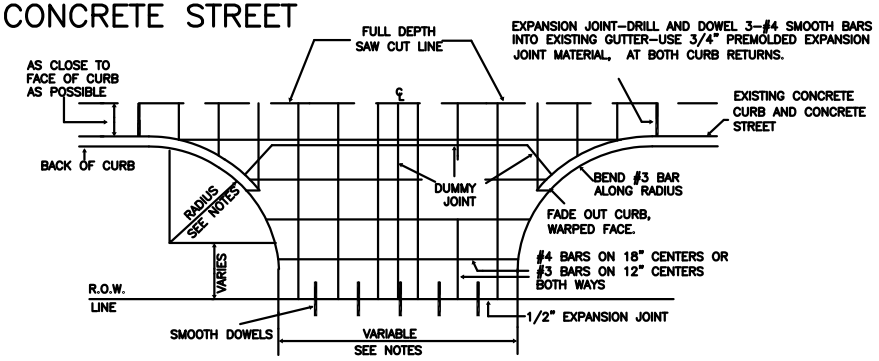
(4) ALL CONNECTIONS TO STATE RIGHT-OF-WAY SHALL USE TXDOT DETAILS.

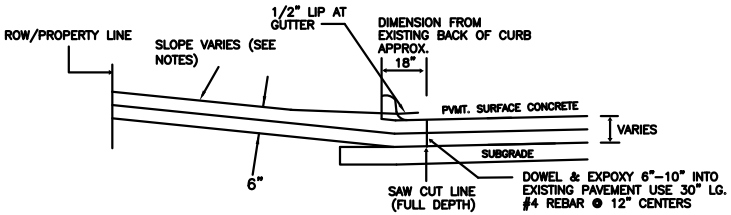
REQUIREMENTS	STREET CLASS	RESIDENTIAL DRIVEWAY	COMMERCIAL DRIVEWAY
DRIVEWAY THROAT WIDTH	LOCAL	10' – 28'	24' – 36'
	MINOR COLL.	10' – 28'	24' – 36'
	MAJOR COLL.	12' – 28'	24' – 36'
	ARTERIAL	12' – 28'	30' – 36'
DRIVEWAY CURB RADIUS	LOCAL	2.5' – 10'	10' – 20'
	MINOR COLL.	2.5' – 10'	15' – 20'
	MAJOR COLL.	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.

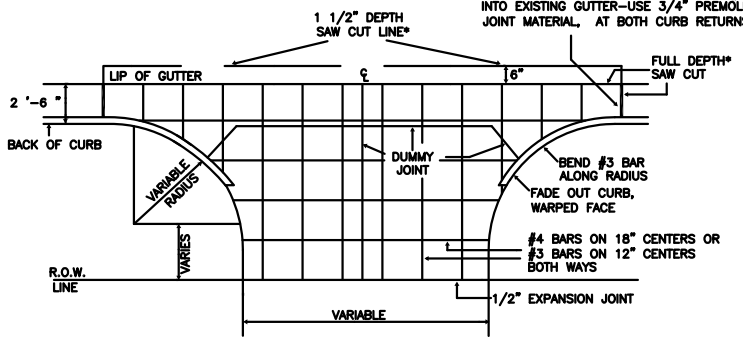
P-16	DRIVE APPROACH CONNECTION CONSTRUCTED WITH STREET	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		

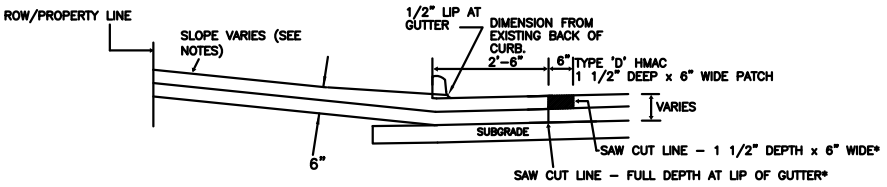
CONCRETE STREET



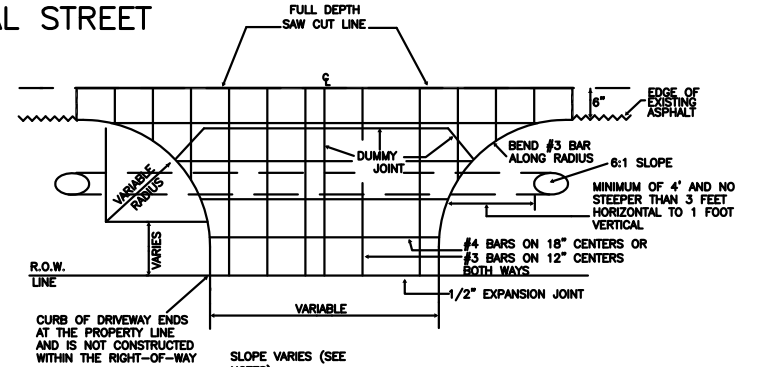


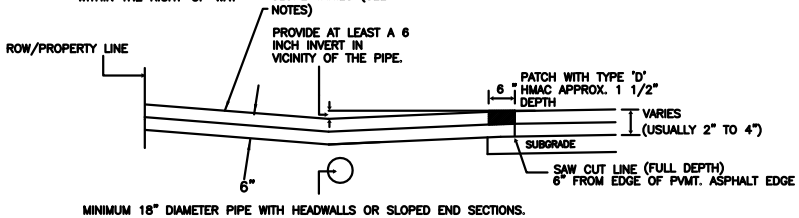
ASPHALT STREET





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.

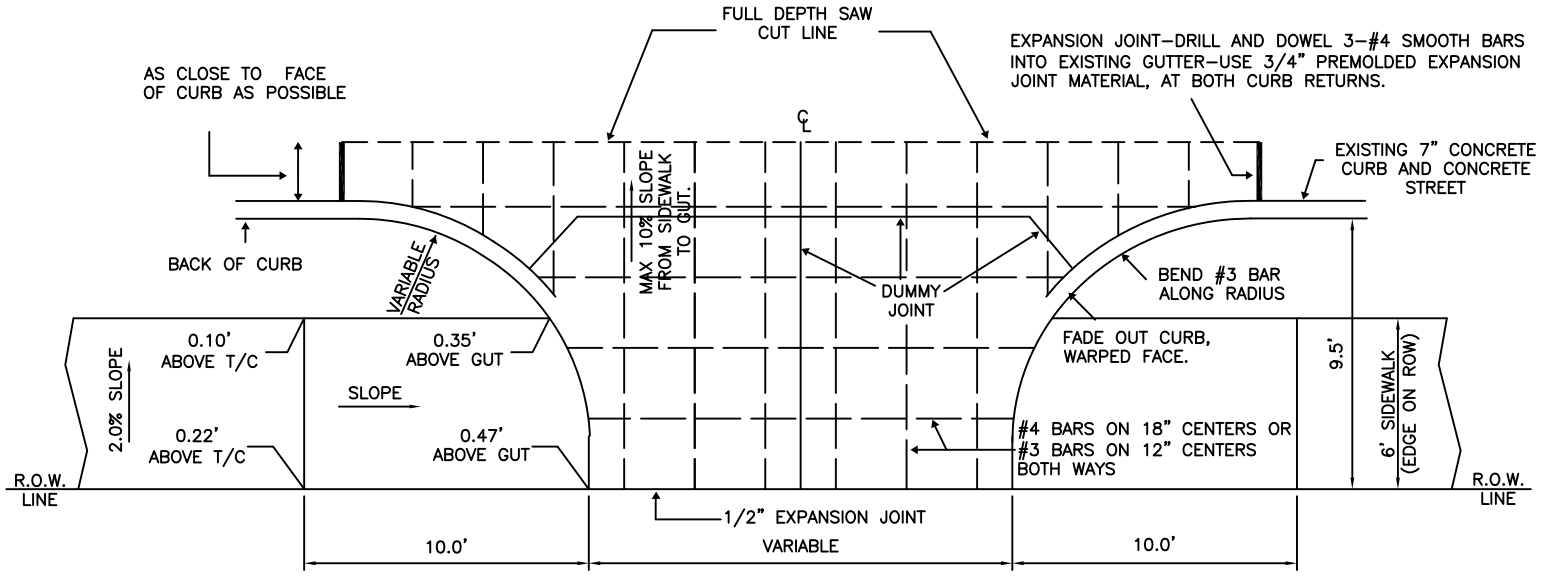
(4) ALL CONNECTIONS TO STATE RIGHT–OF–WAY SHALL USE TXDOT DETAILS.

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

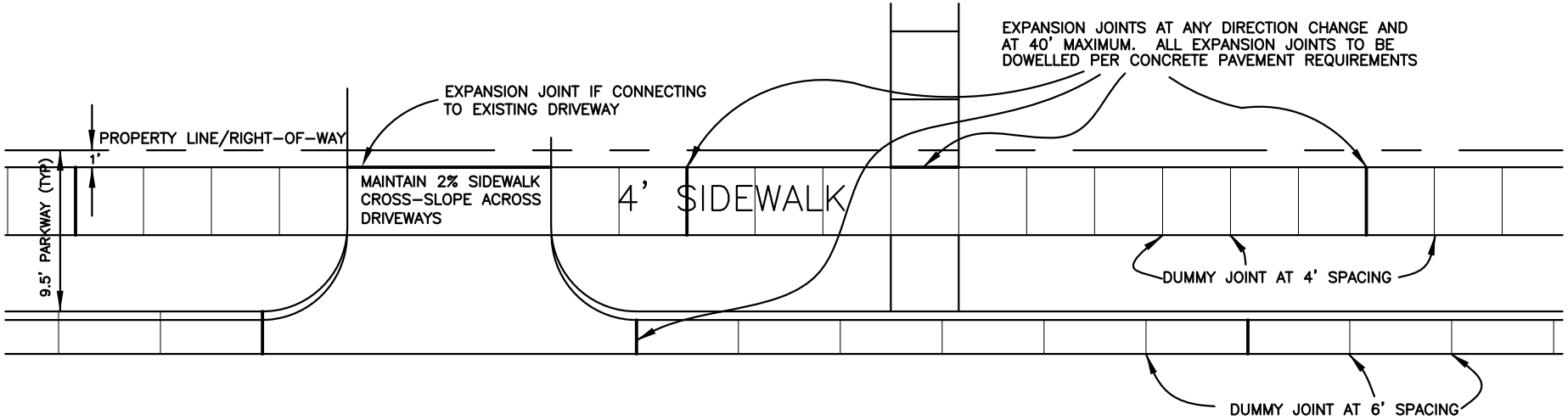
REQUIREMENTS	STREET CLASS	RESIDENTIAL DRIVEWAY	COMMERCIAL DRIVEWAY
DRIVEWAY THROAT WIDTH	LOCAL	10' – 28'	24' – 36'
	MINOR COLL.	10' – 28'	24' – 36'
	MAJOR COLL.	12' – 28'	24' – 36'
	ARTERIAL	12' – 28'	30' – 36'
DRIVEWAY CURB RADIUS	LOCAL	2.5' – 10'	10' – 20'
	MINOR COLL.	2.5' – 10'	15' – 20'
	MAJOR COLL.	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'

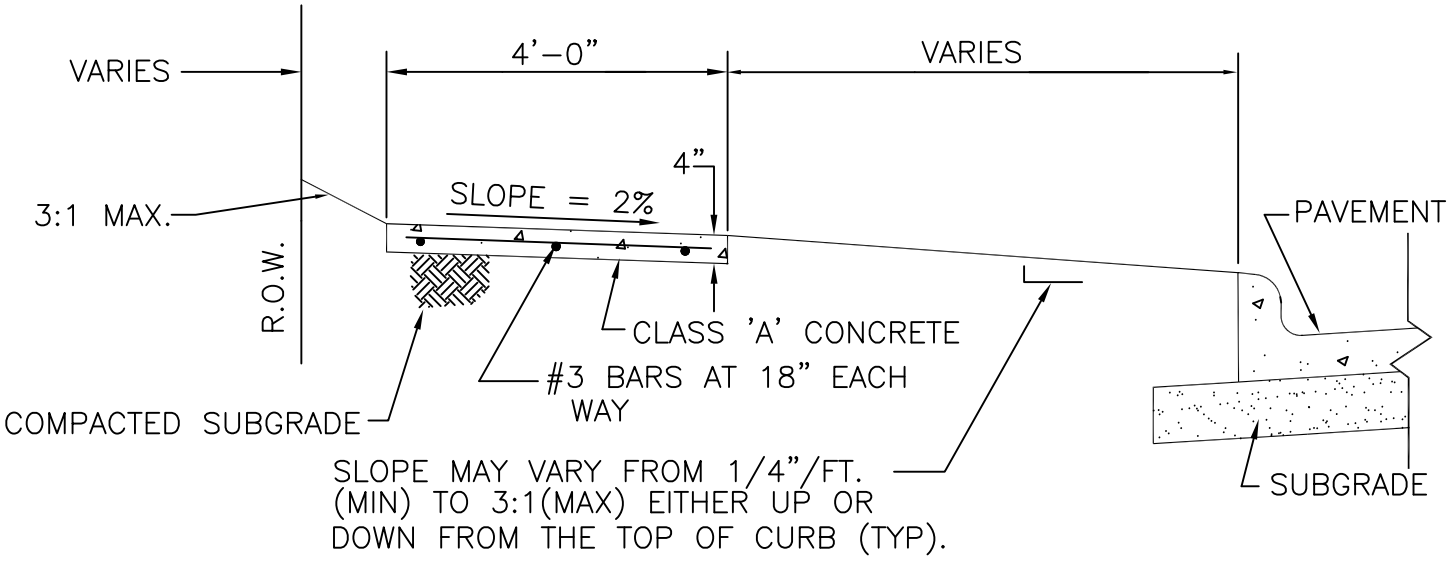
SEE DESIGN STANDARDS MANUAL FOR INDUSTRIAL DRIVEWAY REQUIREMENTS.

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



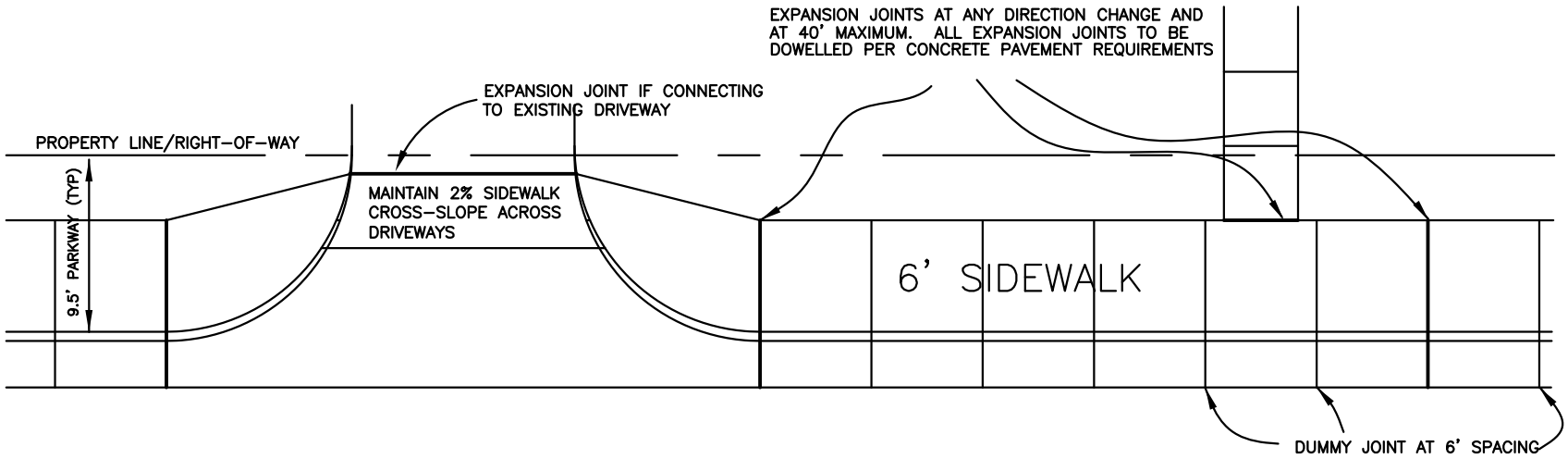
P–18	DRIVE APPROACH WITH 6' SIDEWALK AT RIGHT–OF–WAY	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		

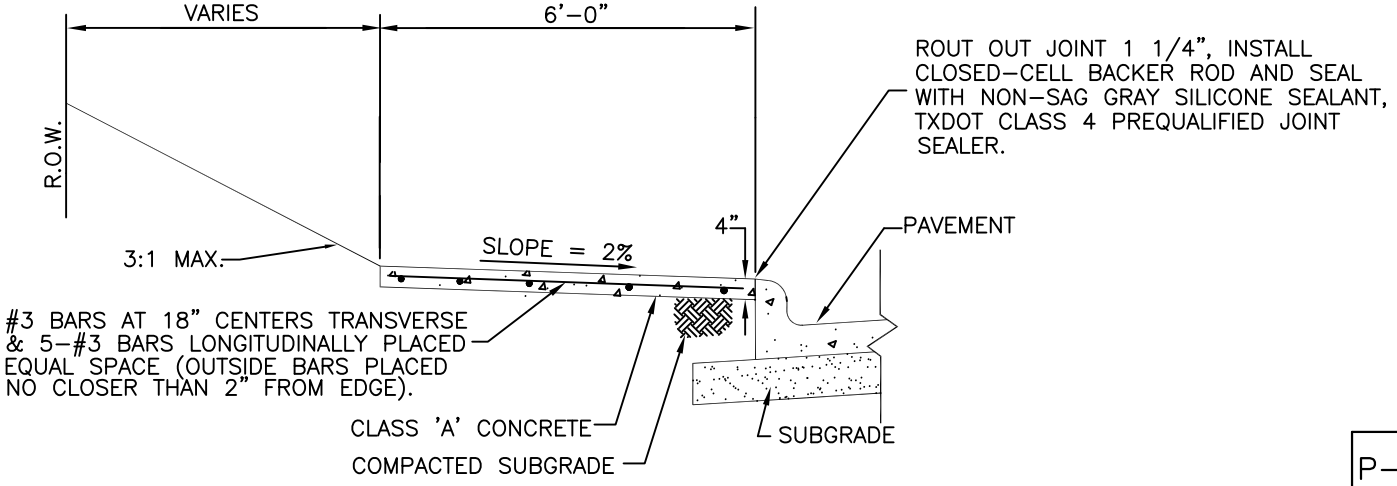




NOTE: EXPANSION JOINT EVERY 40', DUMMY JOINT EVERY 4'. SEE TRANSVERSE EXPANSION JOINT DETAIL (EXCEPT USE #4 SMOOTH DOWELS).

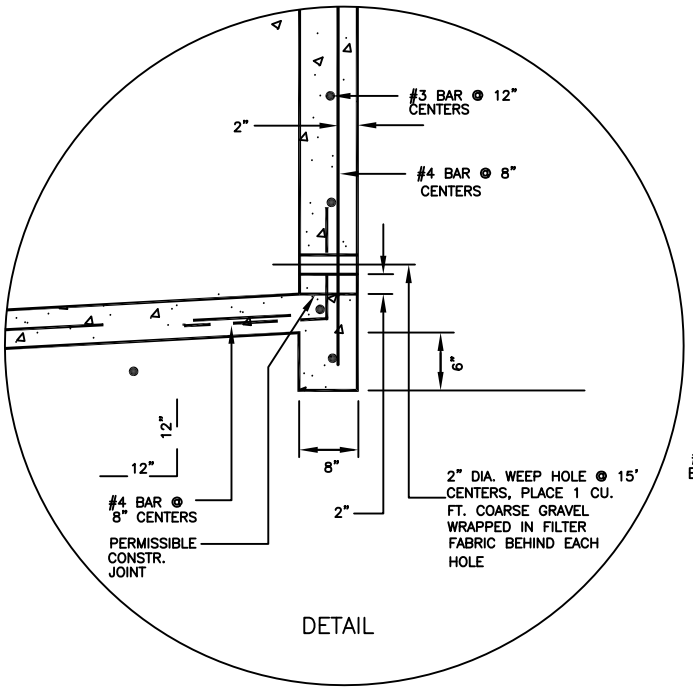
P-19	4' SIDEWALK	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		



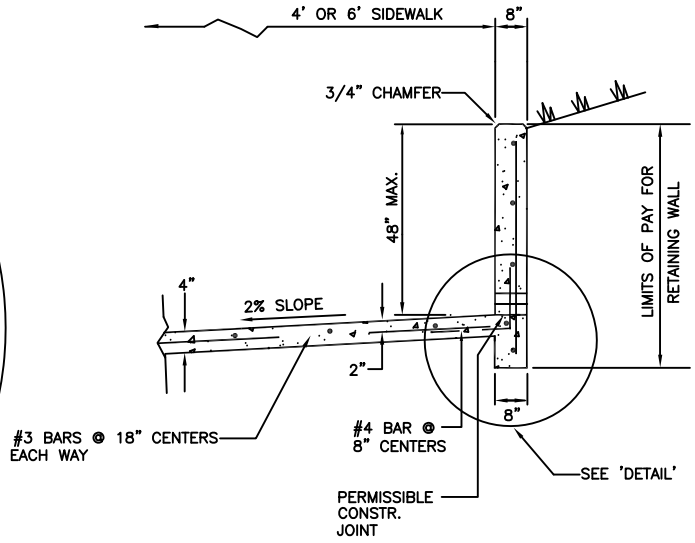


NOTE: EXPANSION JOINT EVERY 42', DUMMY JOINT EVERY 6'. SEE TRANSVERSE EXPANSION JOINT DETAIL (EXCEPT USE #4 SMOOTH DOWELS).

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

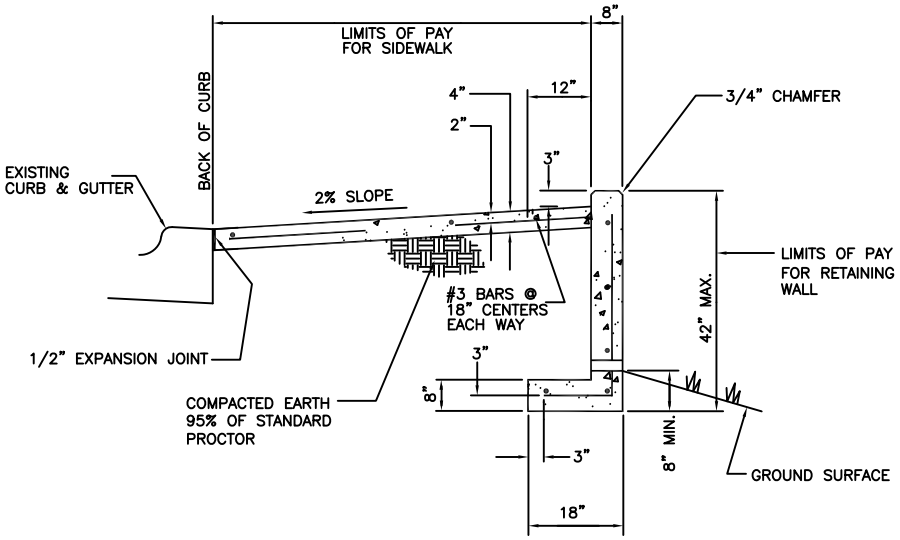


DETAIL



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.



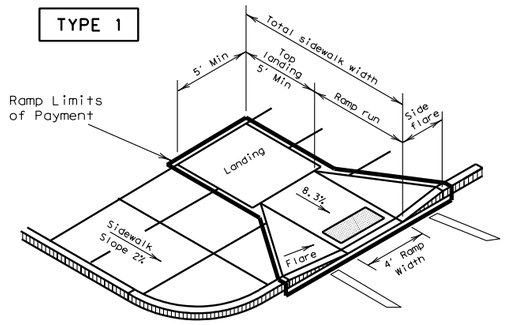
SIDEWALK WITH LOW WALL

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		

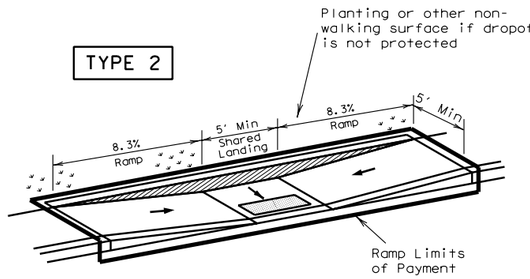
LEVELS DISPLAYED

TYPE 1



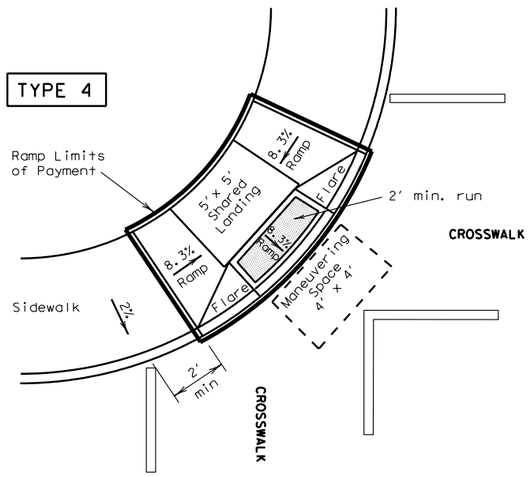
PERPENDICULAR CURB RAMP

TYPE 2



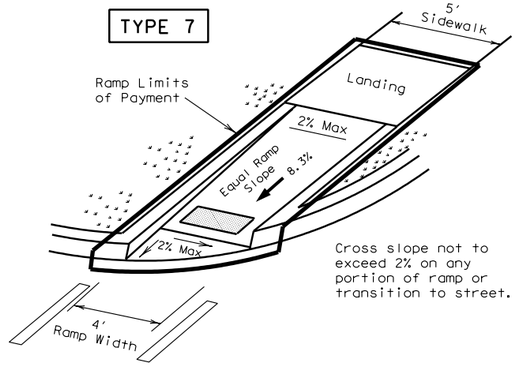
PARALLEL CURB RAMP
(Use only where water will not pond in the landing.)

TYPE 4



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

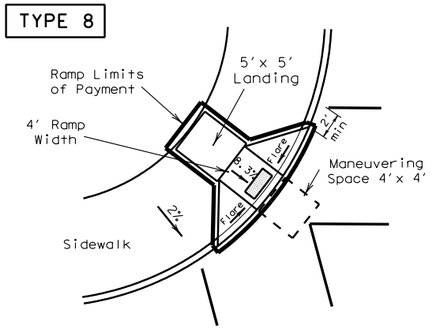
TYPE 7



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

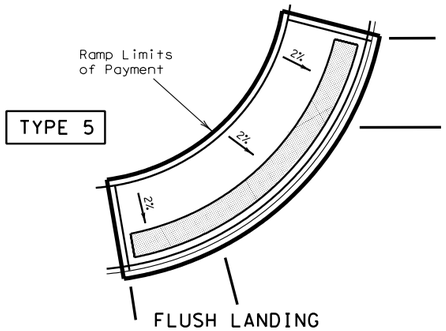
DIRECTIONAL RAMP WITHIN RADIUS
(Sidewalk set back from curb)

TYPE 8



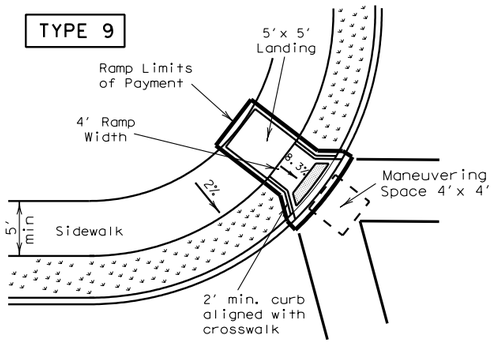
DIAGONAL CURB RAMP (FLARED SIDES)

TYPE 5



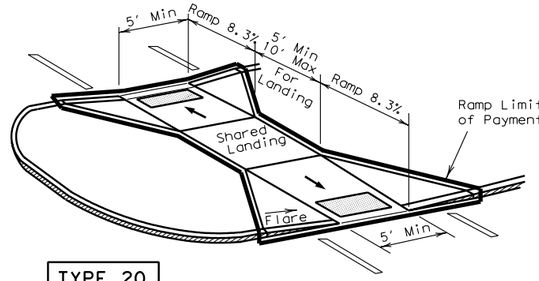
FLUSH LANDING

TYPE 9

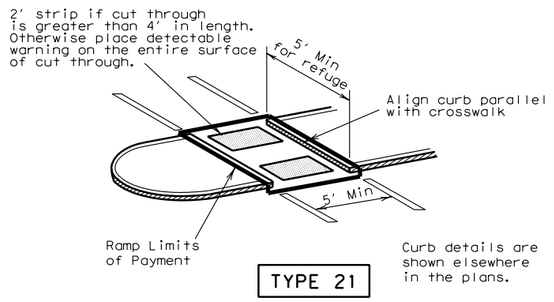


DIAGONAL CURB RAMP (RETURNED CURB)

TYPE 20



TYPE 21

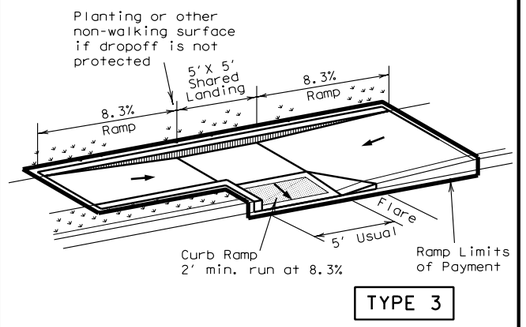


Curb details are shown elsewhere in the plans.

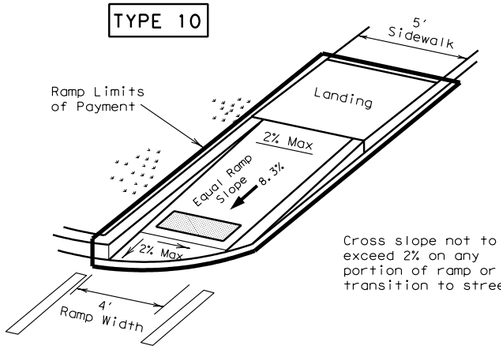
CURB RAMPS AT MEDIAN ISLANDS

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

TYPE 3



TYPE 10

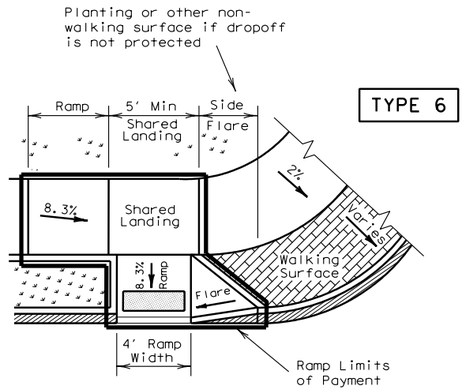


Cross slope not to exceed 2% on any portion of ramp or transition to street.

DIRECTIONAL RAMP WITHIN RADIUS
(Sidewalk adjacent to curb)

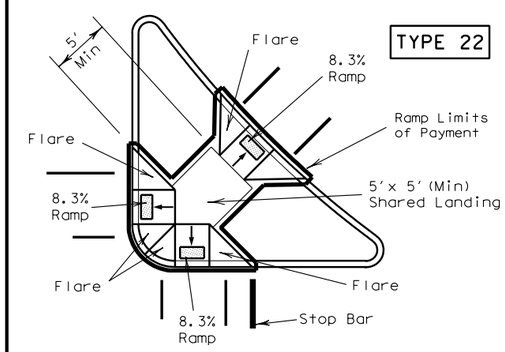
Planting or other non-walking surface if dropoff is not protected

TYPE 6

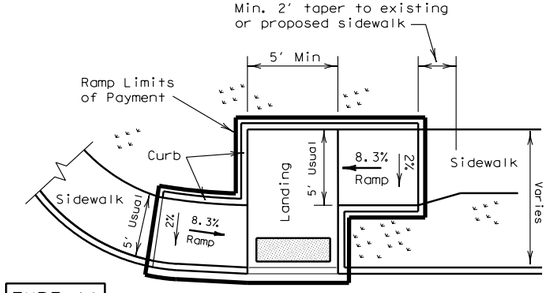


COMBINATION CURB RAMPS

TYPE 22



COMBINATION ISLAND RAMPS



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

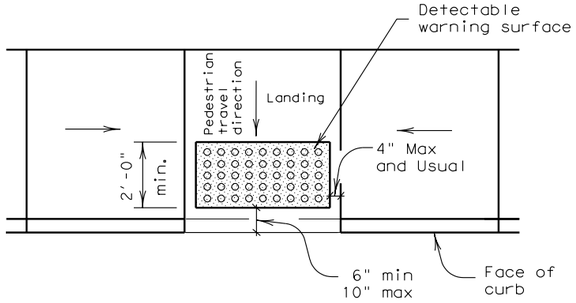
PED-05 SHEET 1 OF 4

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

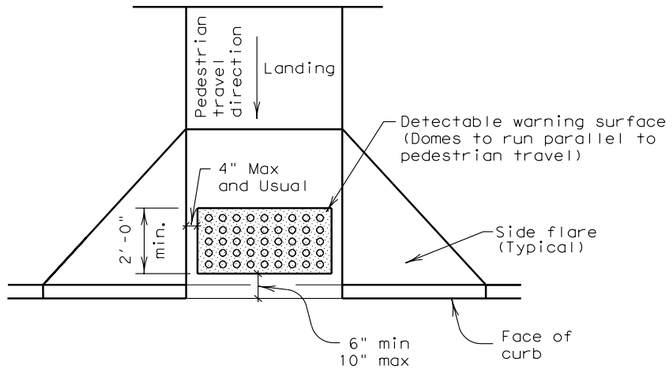
DETECTABLE WARNINGS

General Notes for Detectable Warnings

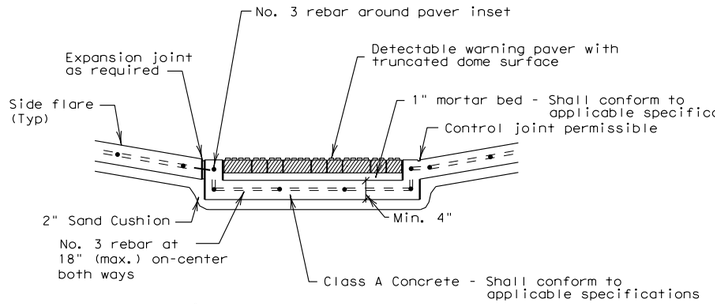
1. Curb ramps must contain a detectable warning surface that consists of raised truncated domes complying with Section 4.29 of the Texas Accessibility Standards (TAS). The surface must contrast visually with adjoining surfaces, including side flares. Furnish dark brown or dark red detectable warning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

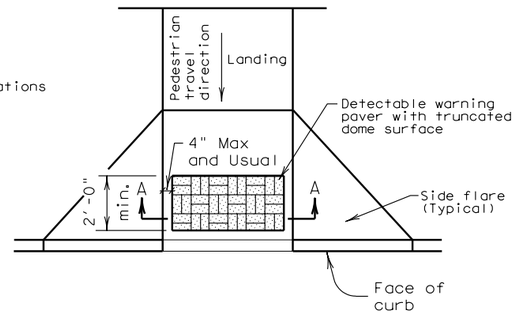


Section A-A

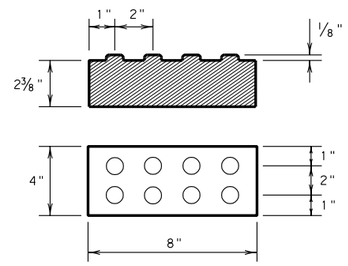
General Notes (Pavers)

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:
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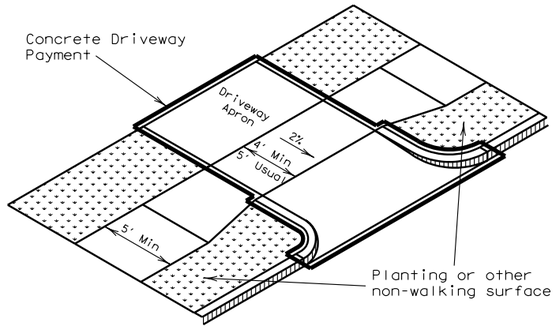
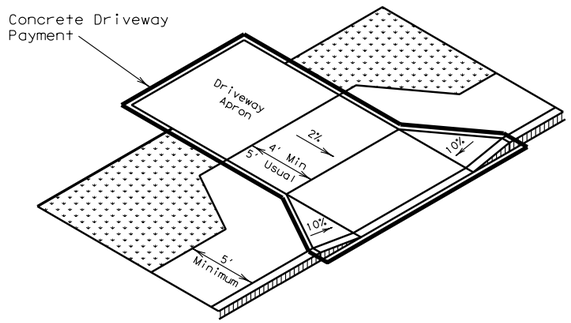
REVISIONS				
	COUNTY	CONTROL	SECT	JOB	HIGHWAY

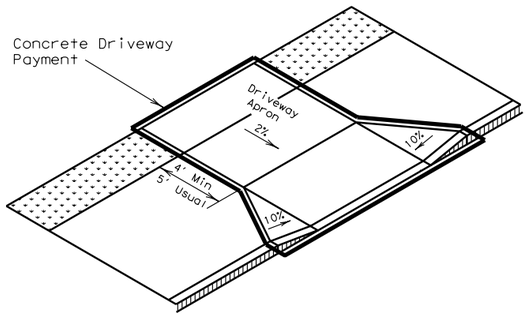
LEVELS DISPLAYED
1



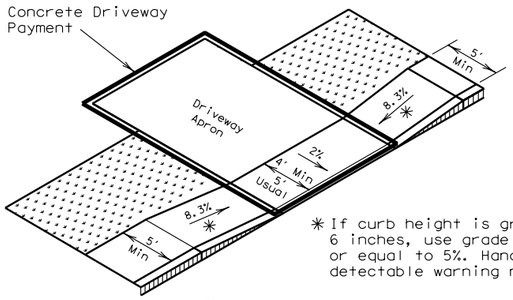
Setback sidewalk



Apron offset sidewalk



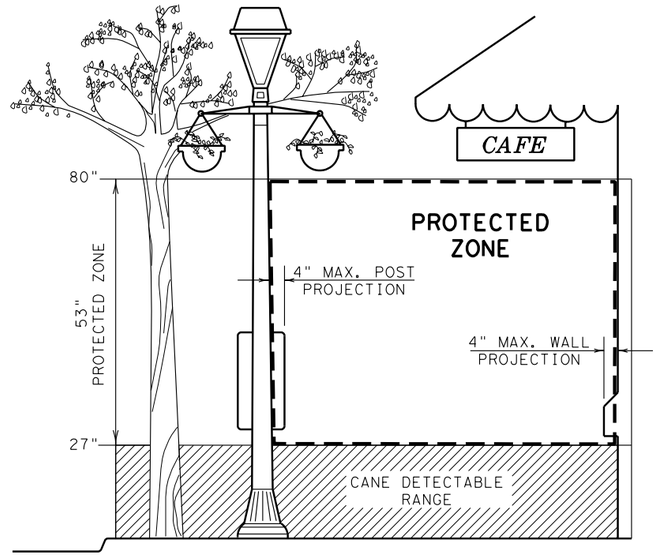
Wide sidewalk



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

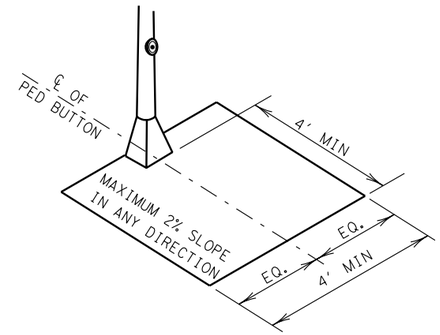
Ramp sidewalk

SIDEWALK TREATMENT AT DRIVEWAYS

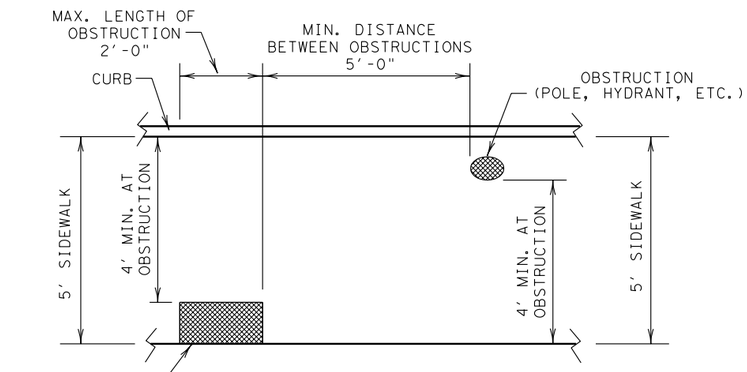


PROTECTED ZONE

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

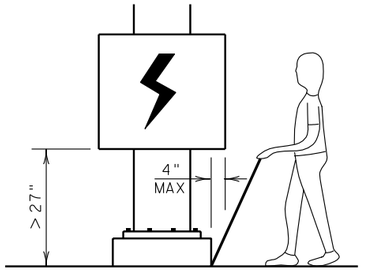


PLAN VIEW
PLACEMENT OF STREET FIXTURES

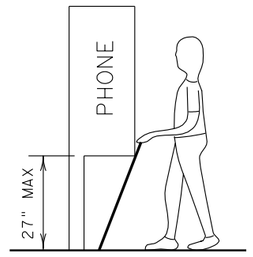
(ITEMS NOT INTENDED FOR PUBLIC USE. MINIMUM 4' x 4' CLEAR GROUND SPACE REQUIRED AT PUBLIC USE FIXTURES.)

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"

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:	
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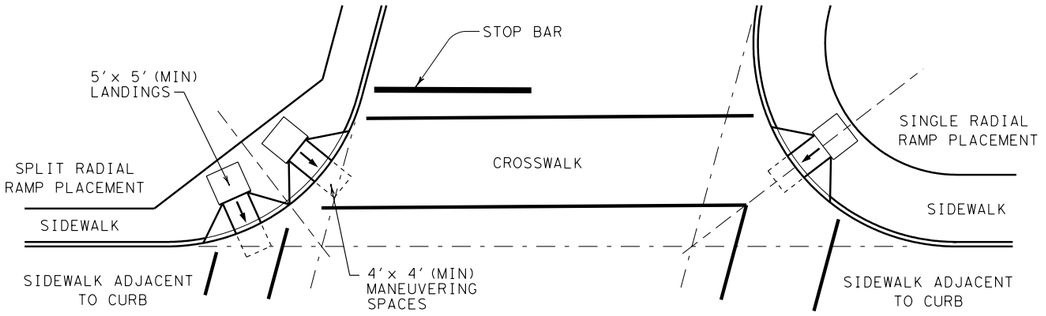
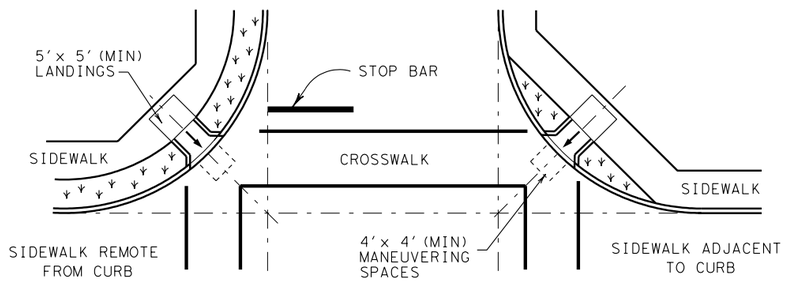
REVISIONS					
	COUNTY		CONTROL	SECT	JOB	HIGHWAY



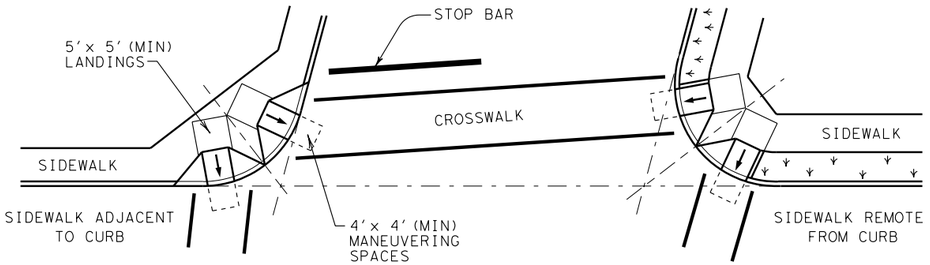
SKEWED INTERSECTION WITH "LARGE" RADIUS



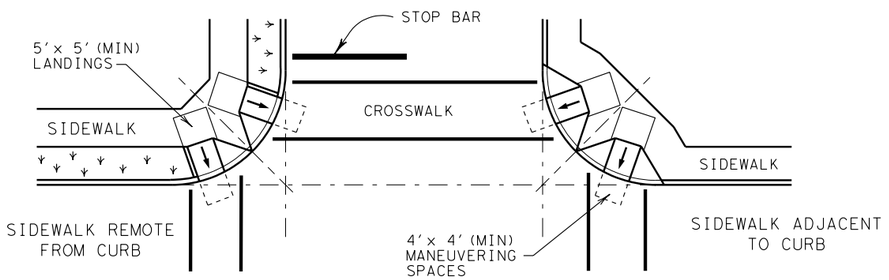
NORMAL INTERSECTION WITH "LARGE" RADIUS

General Notes

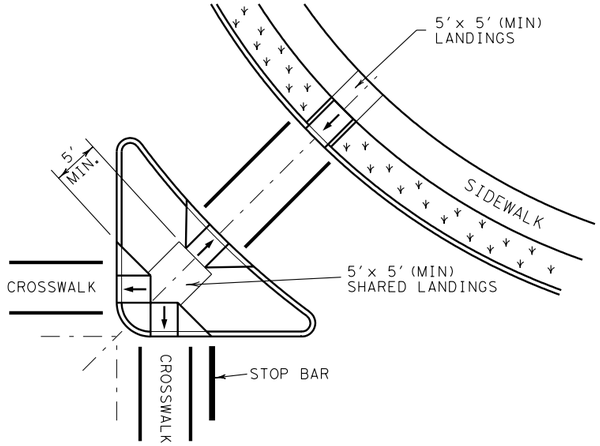
1. Street grades and cross slopes shall be as shown elsewhere in the plans.
2. Ramps are shown here without detectable warnings for simplicity. Detectable warnings are required at the locations shown on the PED Standard (Sheets 1 and 2 of 4) and in accordance with the details shown below.
3. Small channelization 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.



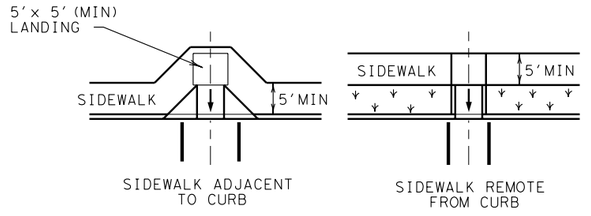
SKEWED INTERSECTION WITH "SMALL" RADIUS



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)

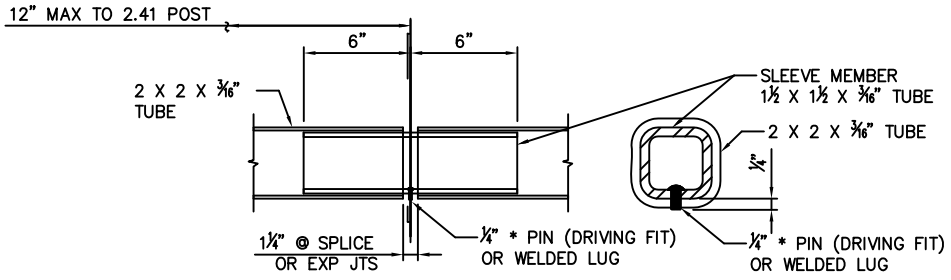
PEDESTRIAN FACILITIES

INTERSECTION LAYOUTS

PED-05

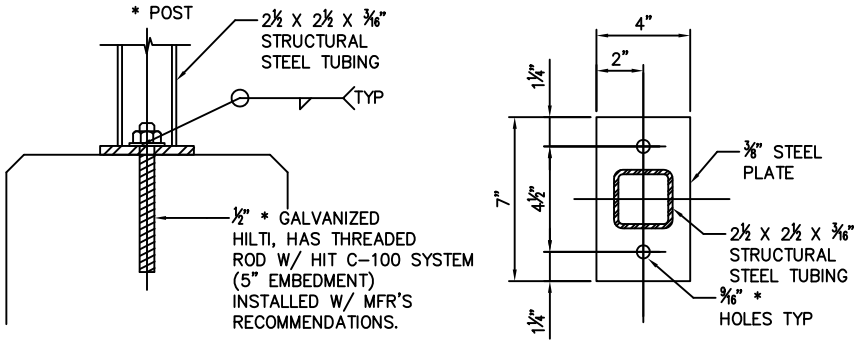
SHEET 4 OF 4

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

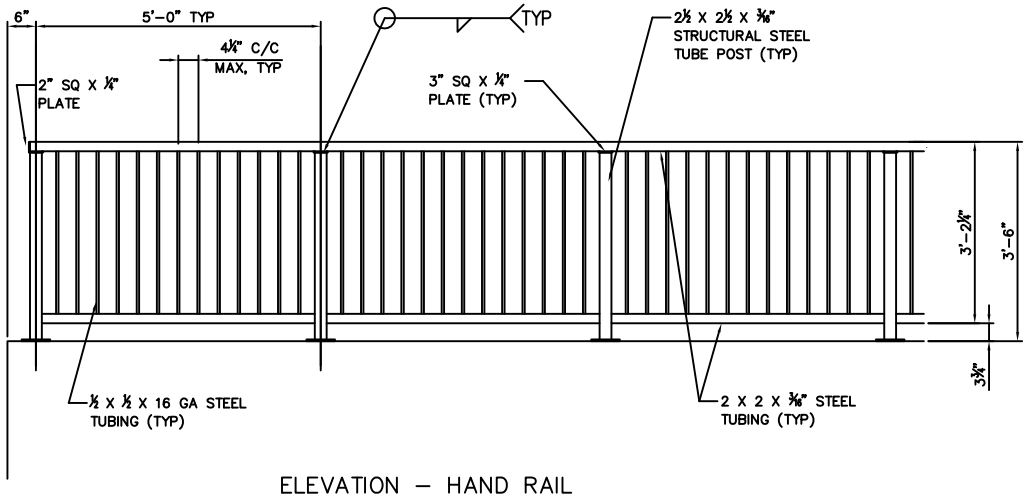


NOTE: PROVIDE RAIL EXP. JOINTS OVER STRUCTURAL EXP. JOINTS & AT MAX 60'-0" C/C ALONG RAIL.

HANDRAIL SPLICE DETAIL



HANDRAIL BASE PLATE DETAILS

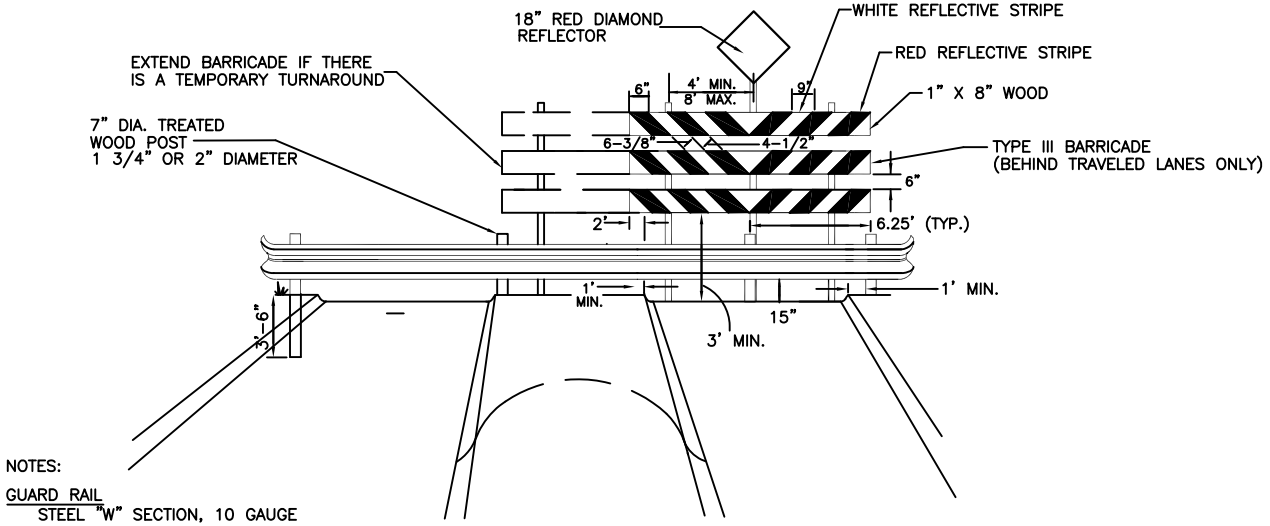


ELEVATION – HAND RAIL

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		

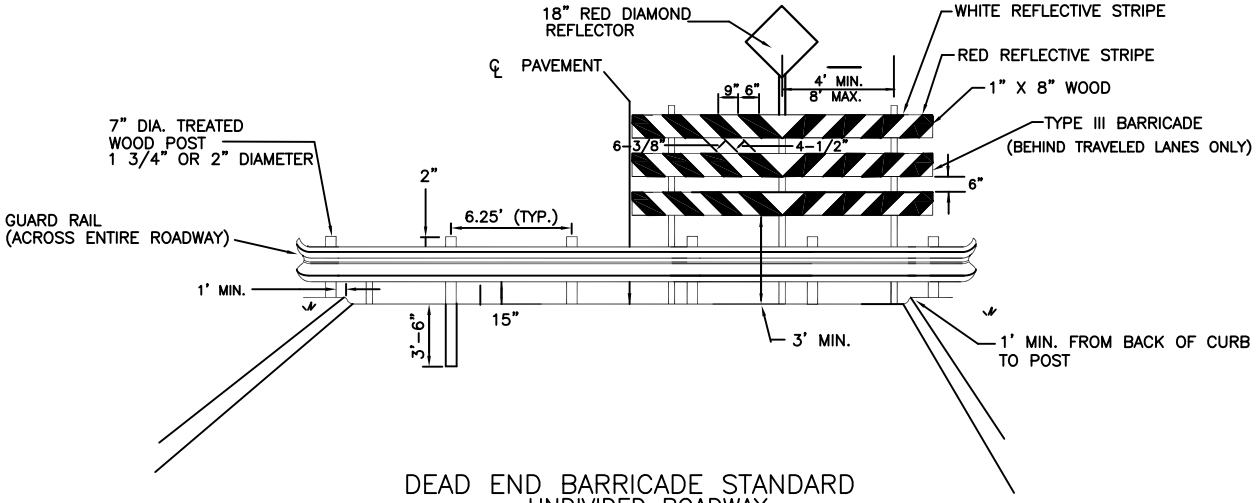


NOTES:

GUARD RAIL
STEEL "W" SECTION, 10 GAUGE

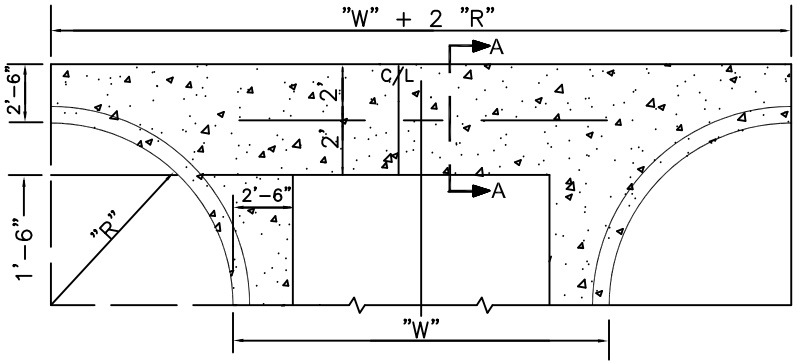
CONNECTIONS
5/8" DIA. BOLTS, APPROX. 9" LONG

DEAD END BARRICADE STANDARD
DIVIDED ROADWAY



DEAD END BARRICADE STANDARD
UNDIVIDED ROADWAY

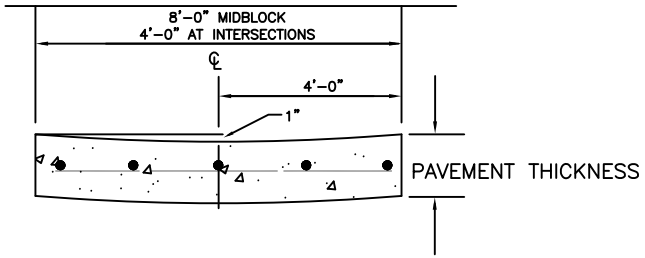
P-24	DEADEND BARRICADE	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		



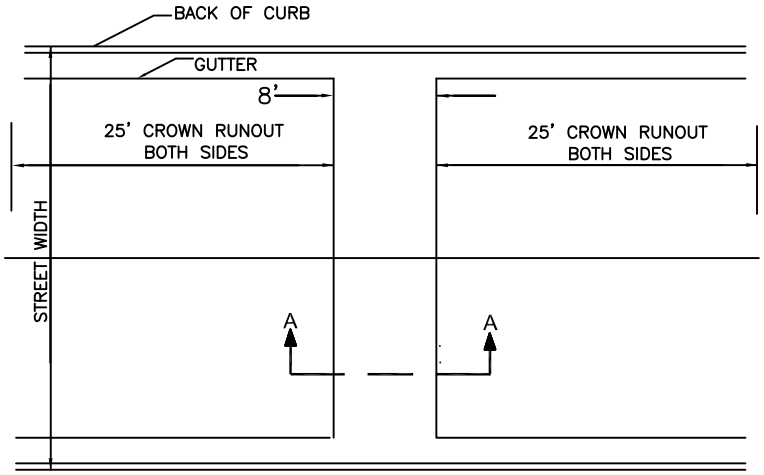
NOTE:

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

VALLEY GUTTER PLAN

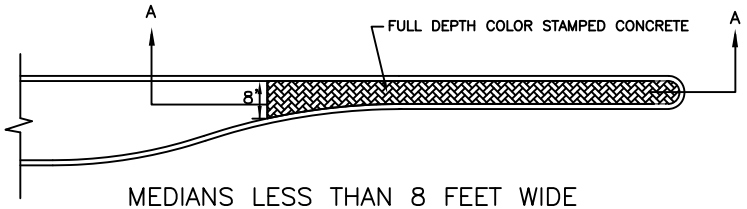


SECTION A–A

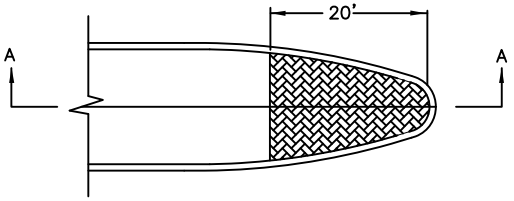


VALLEY GUTTER CROSSING
AN ASPHALT STREET

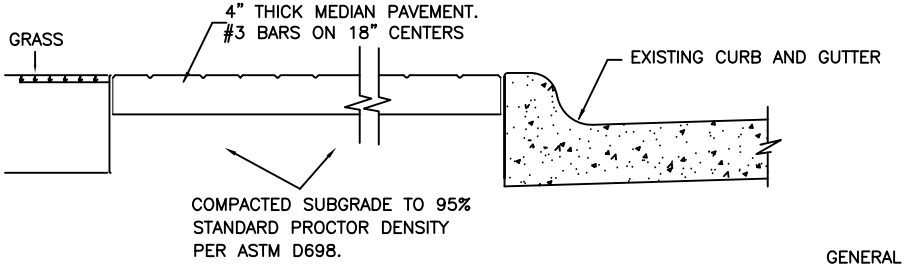
P–25	VALLEY GUTTER	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		



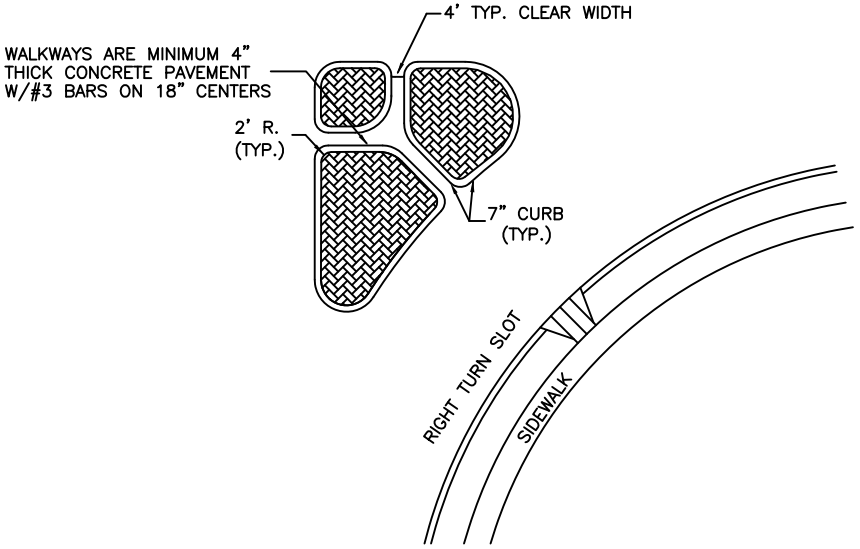
MEDIANS LESS THAN 8 FEET WIDE



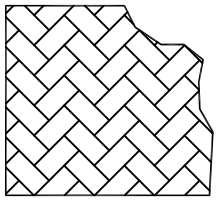
MEDIAN GREATER THAN 8 FEET WIDE



SECTION A–A



TYPICAL ISLAND AT INTERSECTION



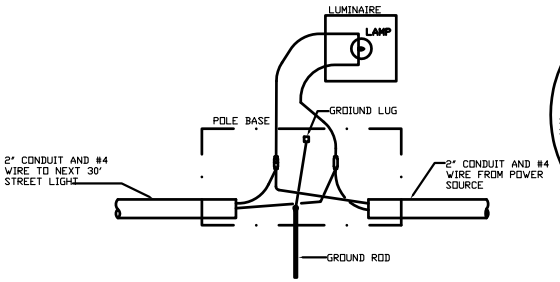
CONCRETE PAVER PATTERN

HERRINGBONE BRICK (NEW BRICK FINISH)
OR APPROVED EQUAL

GENERAL NOTES:

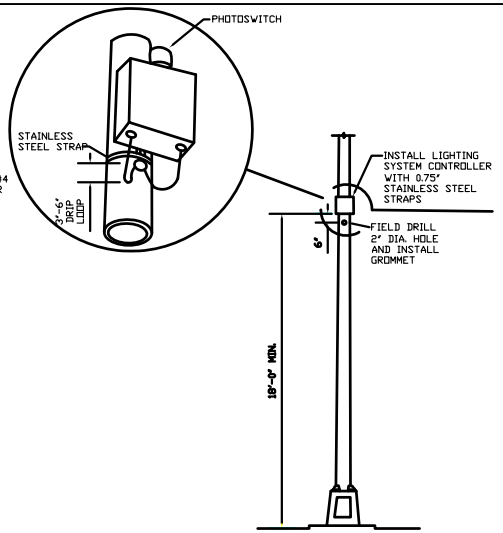
1. CONCRETE SHALL CONFORM TO THE CITY OF BURLESON STANDARD SPECIFICATIONS.
2. MEDIAN PAVING SHALL BE FULL DEPTH COLOR STAMPED CONCRETE. COLOR SHALL BE RED CLAY (4D) OR APPROVED EQUAL.
3. MEDIAN PAVING SHALL BE 4" THICK CONCRETE, REINFORCED WITH #3 BARS ON 18" CENTERS ON A COMPACTED SUBGRADE.
4. 1/2"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



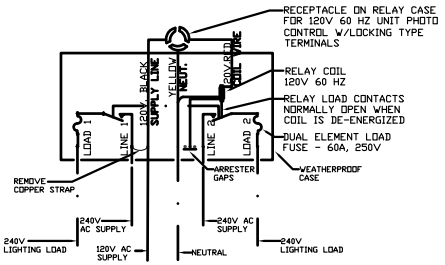
1 Street Light Schematic Wiring Diagram

N.T.S.



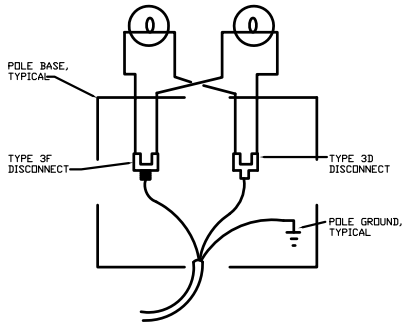
3 Pole Mounted Lighting Controller

N.T.S.



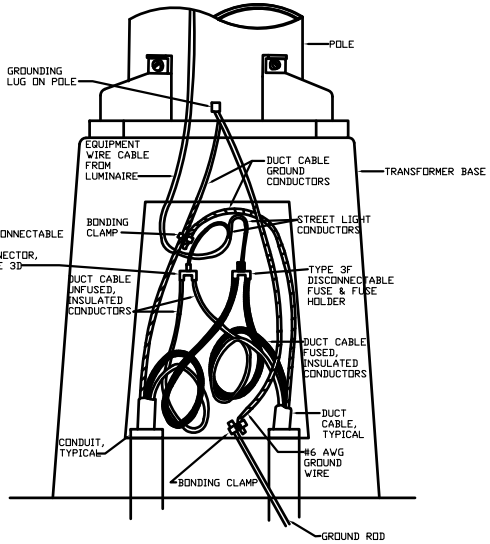
ELECTRICAL SERVICE NOTES:

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

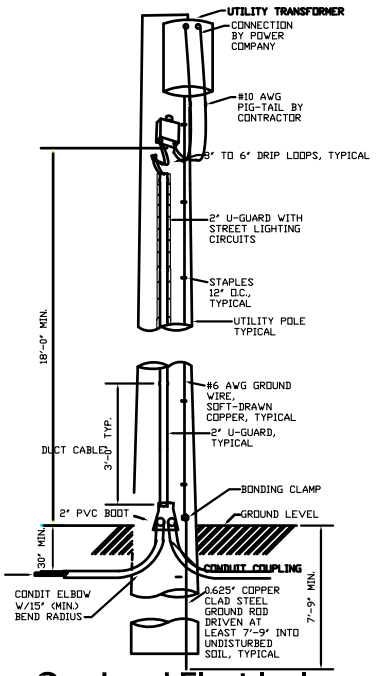
N.T.S.

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.

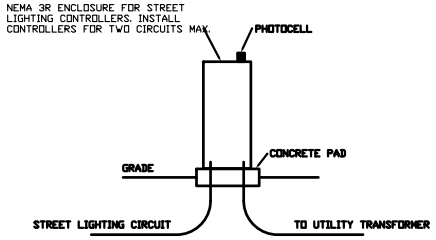
STREET LIGHT CIRCUIT CHHEDULE

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

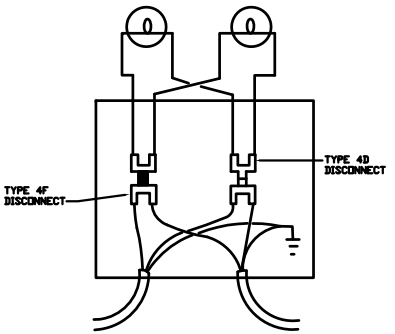
L - 0 CURCUIT NUMBER

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.



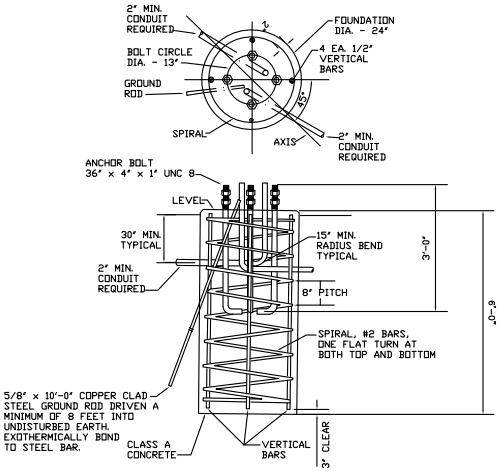
6 Two Luminaires at Location Along Cable

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.

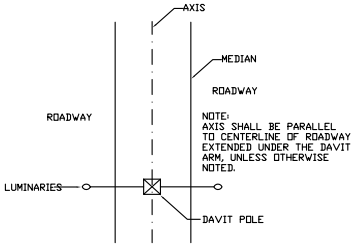
P-27a	ELECTRICAL DETAILS STREETLIGHTING	
CITY OF BURLESON		
ORIGINAL	6/6/08	SWC
REVISION		
REVISION		
REVISION		



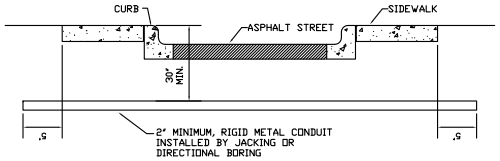
1 Davit Pole Base Detail
N.T.S.

DAVIT POLE BASE NOTES:

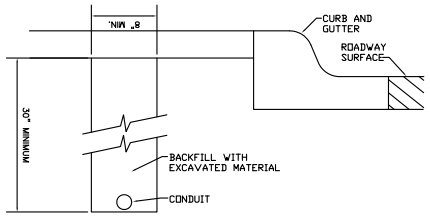
1. ELEVATION OF THE FOUNDATION TOP SHALL BE THE SAME AS THE ELEVATION OF THE TOP OF THE SIDEWALK OR THE SAME AS THE ELEVATION OF THE CROWN OF THE ROADWAY UNDER THE DAVIT ARM, WHICHEVER IS HIGHER. THE CONTRACTOR SHALL FIELD VERIFY THE ELEVATIONS.
2. EACH FOUNDATION SHALL HAVE AT LEAST TWO 2"C. STUBBED 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.



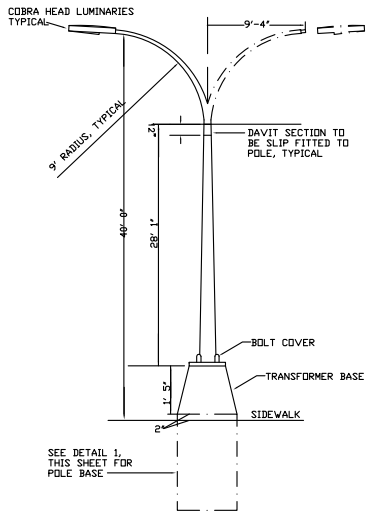
2 Foundation Orientation
N.T.S.



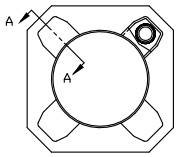
3 Street Crossing Detail
N.T.S.

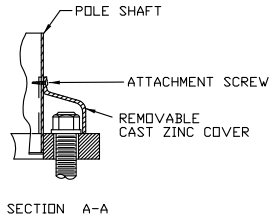


4 Condult Under Medlan
N.T.S.

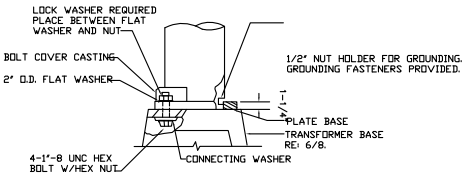


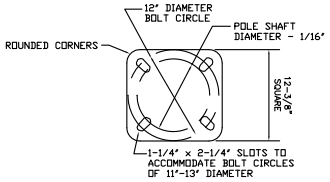
5 Davit Pole Detail
N.T.S.



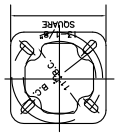


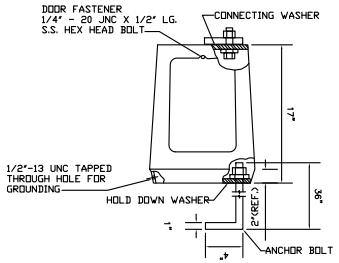
6 Bolt Cover Detail
N.T.S.

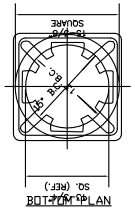




7 Base Plate Detail
N.T.S.







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.

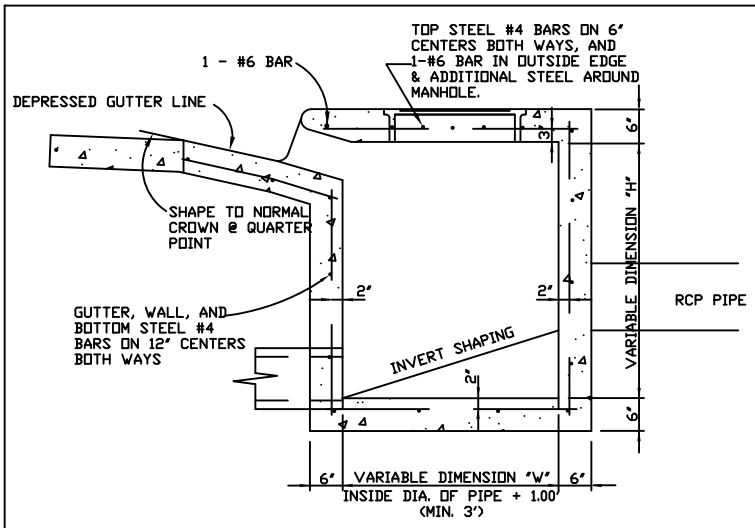
12. ALL EXPOSED METAL PARTS ON LIGHTING LUMINARIES AND LIGHTING STANDARDS SHALL BE BONDED TO THE LIGHTING CIRCUIT GROUNDING CONDUCTOR.

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		

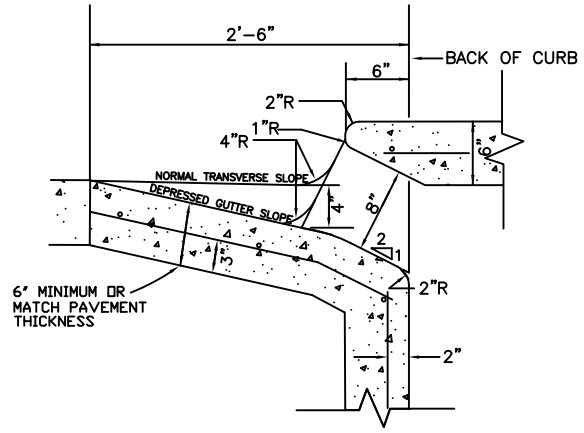
STORM DRAIN SYSTEM DETAILS

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

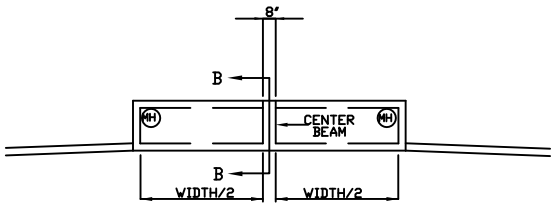


A–A

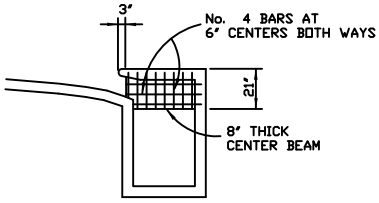
CURB INLET
CROSS SECTION



THROAT DETAIL FOR STANDARD INLETS
ON CONCRETE STREETS



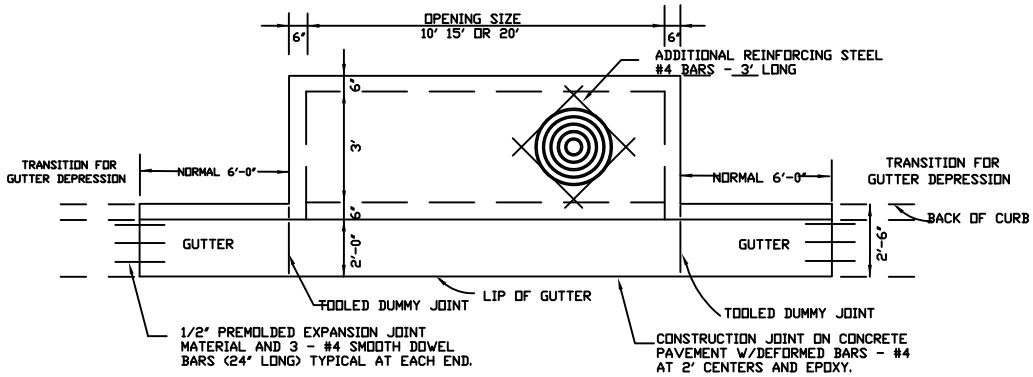
CENTER BEAM FOR
INLETS LARGER THAN 10'

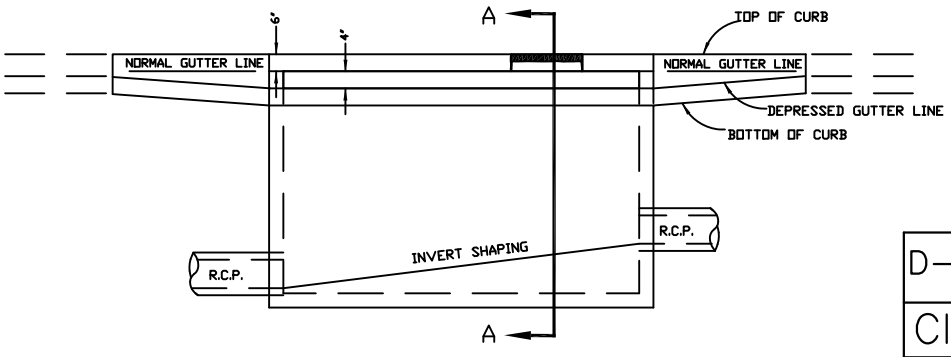


SECTION B–B

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.

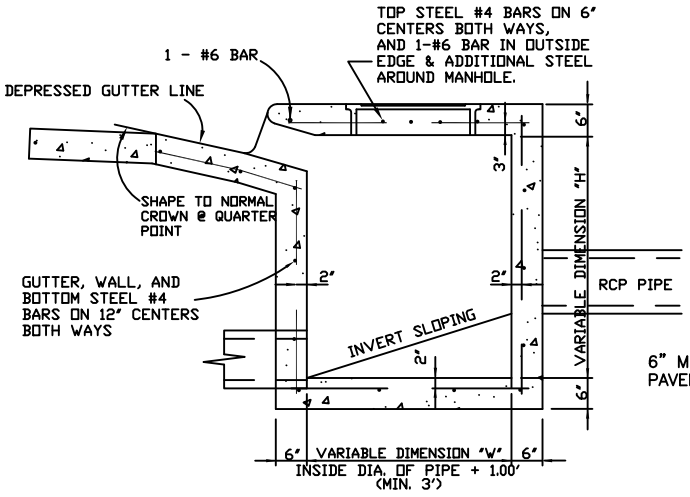




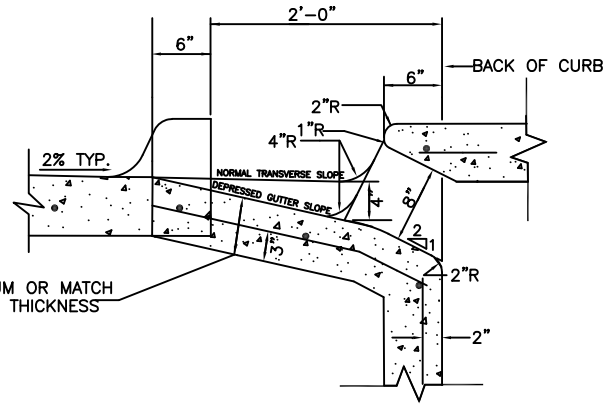
CURB INLET

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

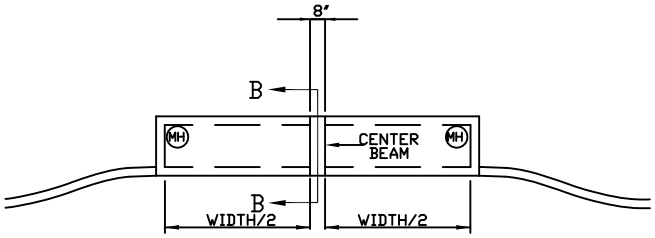
D–01	STANDARD CURB INLET	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		



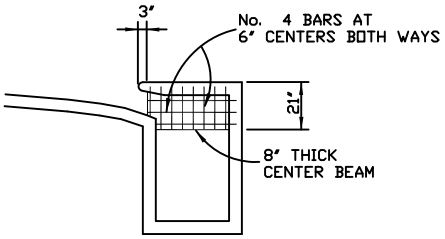
SECTION A–A
CURB INLET
CROSS SECTION



THROAT DETAIL FOR RECESSED INLETS
ON CONCRETE STREETS



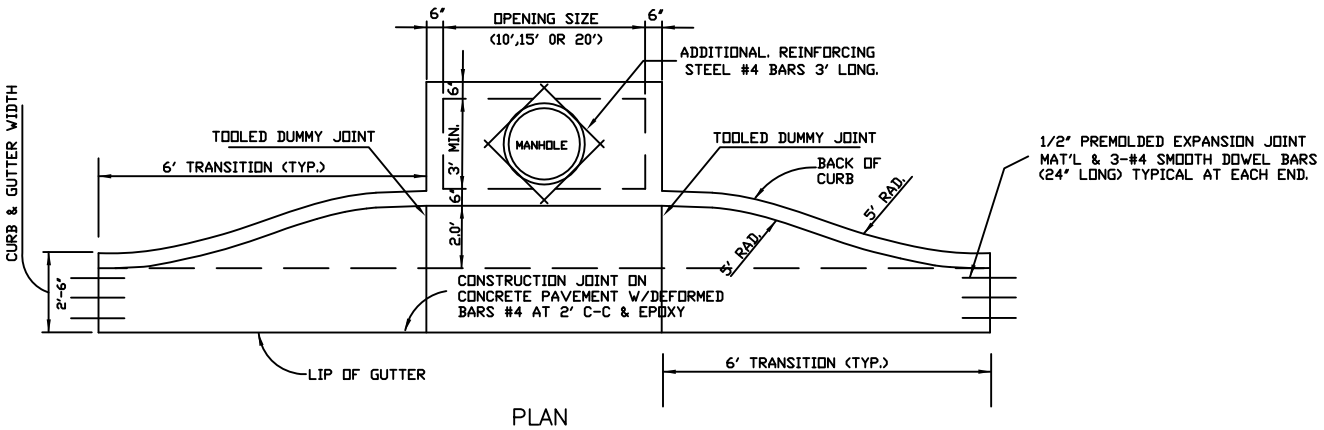
CENTER BEAM FOR
FOR INLETS LARGER THAN 10'



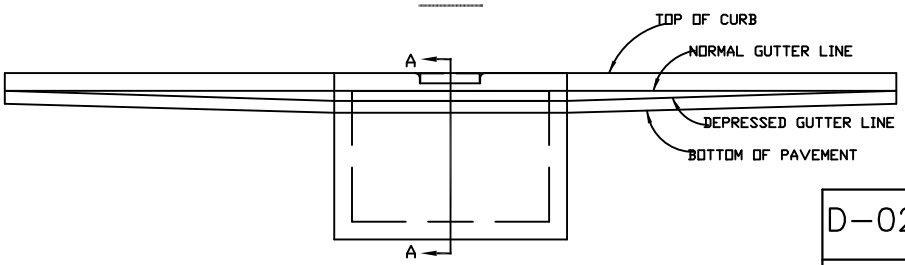
SECTION B–B

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

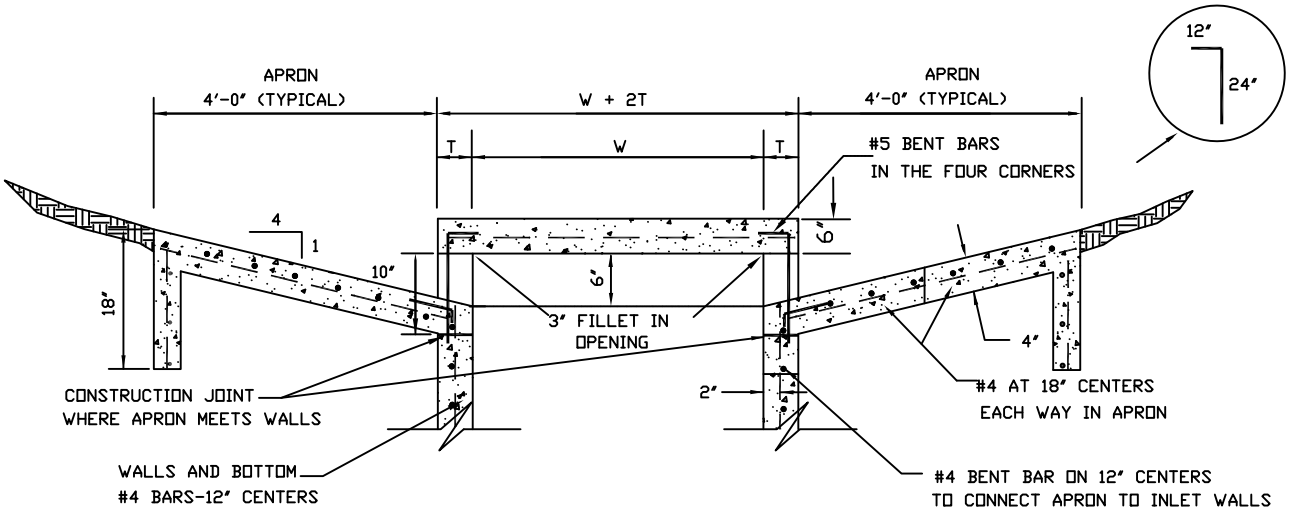


ELEVATION

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

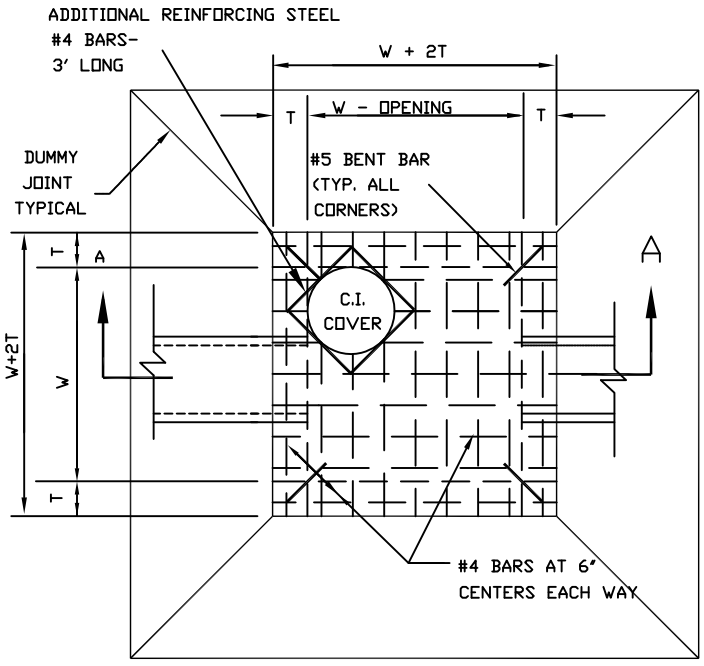
CURB INLET RECESSED
10', 15' OR 20' OPENING

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"

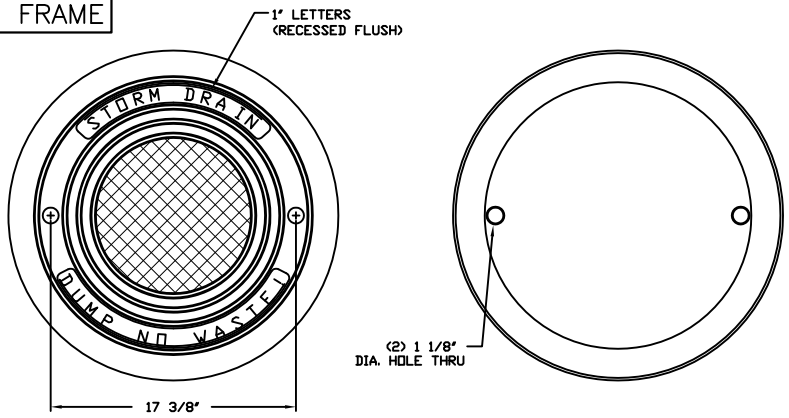


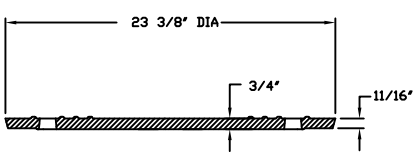
PLAN OF TOP SLAB

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

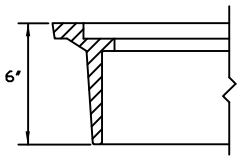
D-03	DROP INLET	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		

MANHOLE COVER & FRAME





COVER SECTION

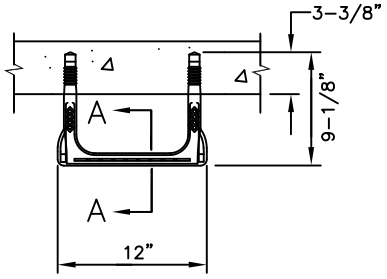


SECTION THROUGH RING

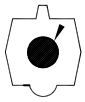
COVER WILL BE BASS AND HAYES NO. 103 (OR APPROVED EQUAL)

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.

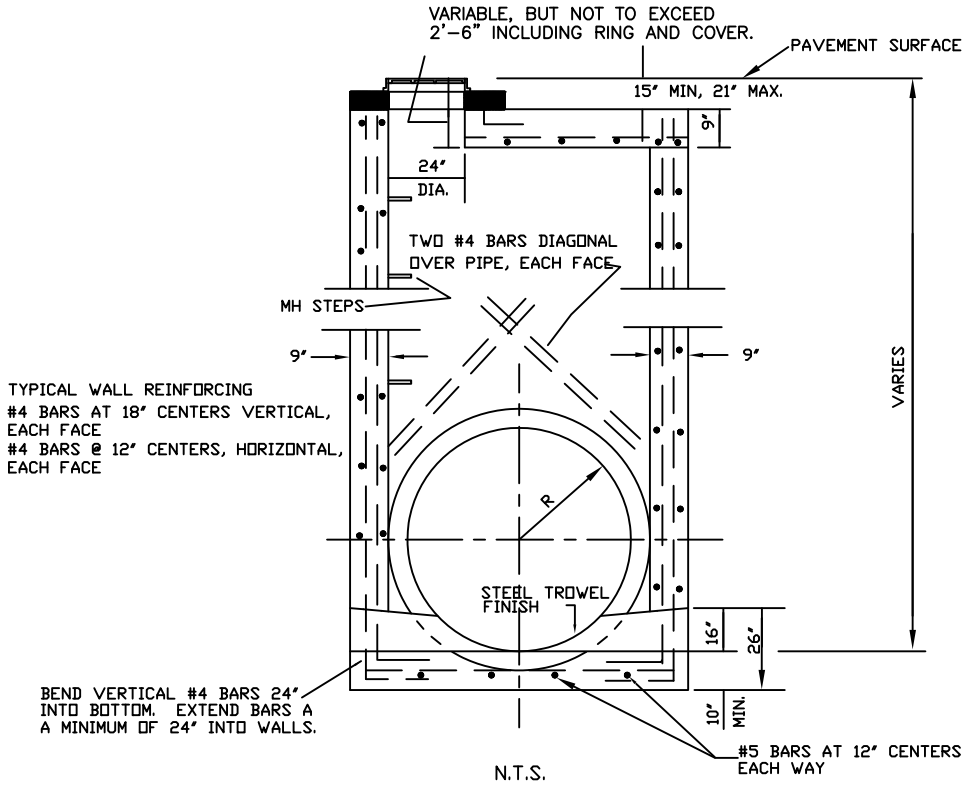
GENERAL INLET NOTES

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		

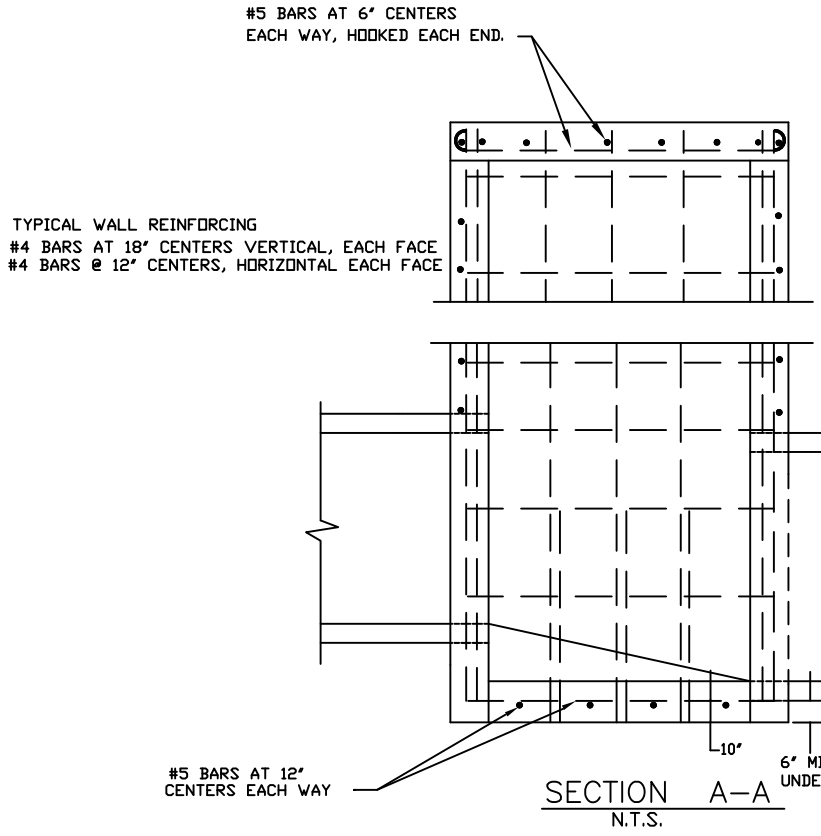


N.T.S.

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



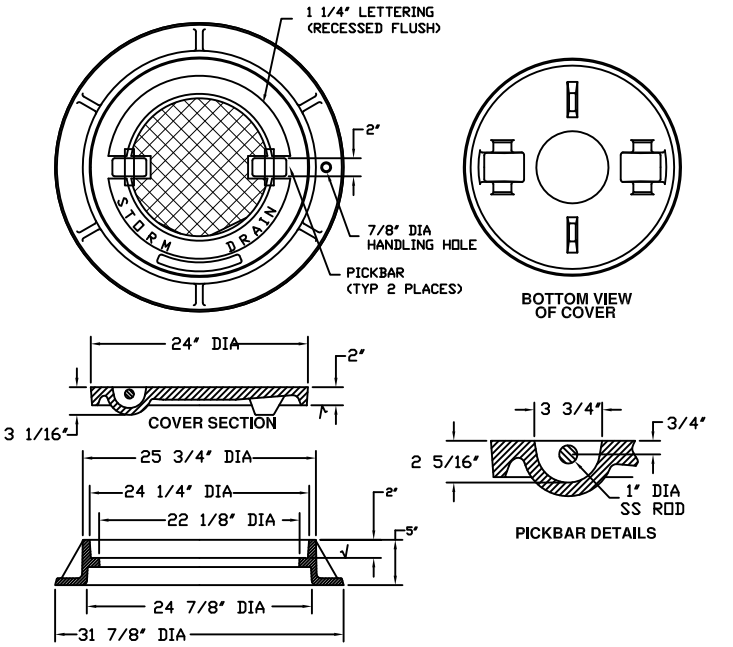
SECTION A-A

N.T.S.

NOTES :

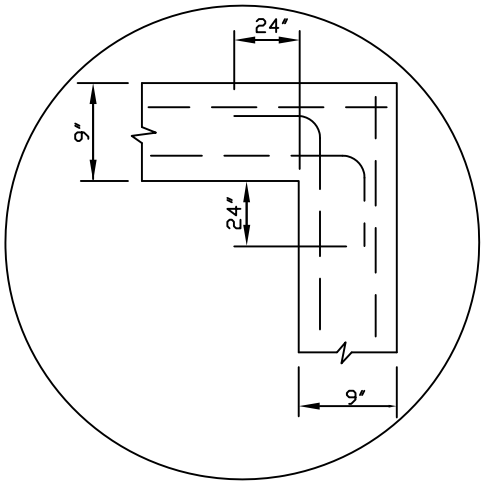
1. SLOPE INVERT OF JUNCTION BOX TO MATCH PIPE FLOWLINES.
2. LAYERS OF REINFORCING STEEL NEAREST THE INTERIOR AND EXTERIOR SURFACE SHALL HAVE A COVER OF 2" TO THE BARS, UNLESS OTHERWISE NOTED.
3. CONCRETE SHALL BE CLASS "A".
4. REINFORCING STEEL TO BE GRADE 60.

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

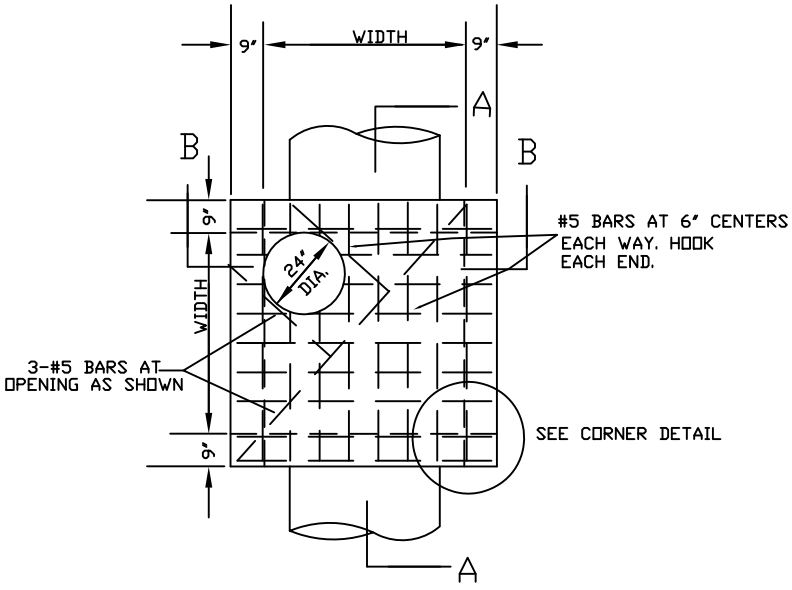


MANUFACTURER	REFERENCE NUMBER	APPROX. WEIGHT
EAST JORDAN	1342	310 lb
BASS & HAYS	1342	310 lb
OR APPROVED EQUAL		

LOGO MANHOLE COVER & FRAME

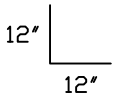


CORNER DETAIL
PLAN VIEW

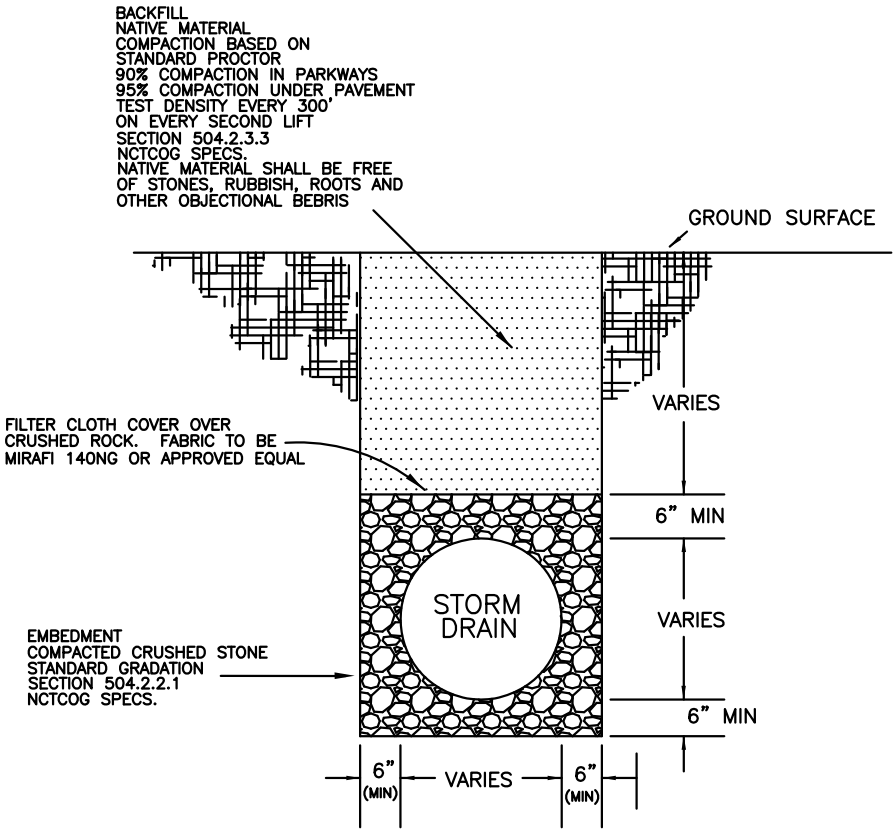


PLAN

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.

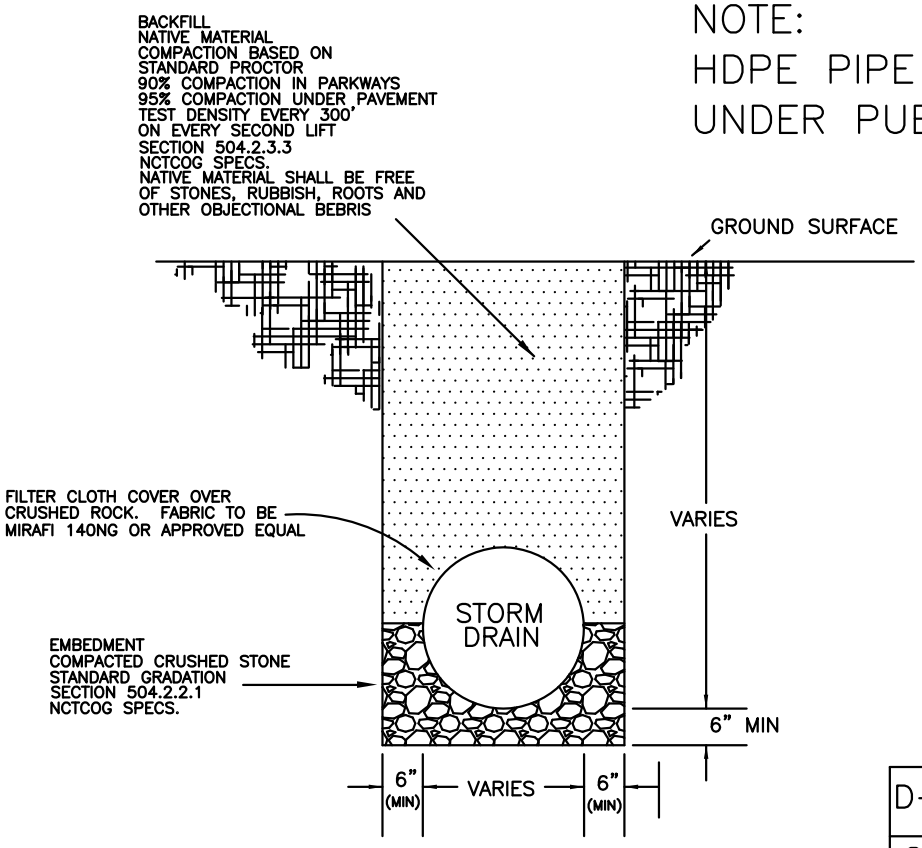


D-05B	STORM DRAIN MANHOLE (SHEET 2 OF 2)	
CITY OF BURLESON		
ORIGINAL	10/6/06	SWC
REVISION		
REVISION		
REVISION		



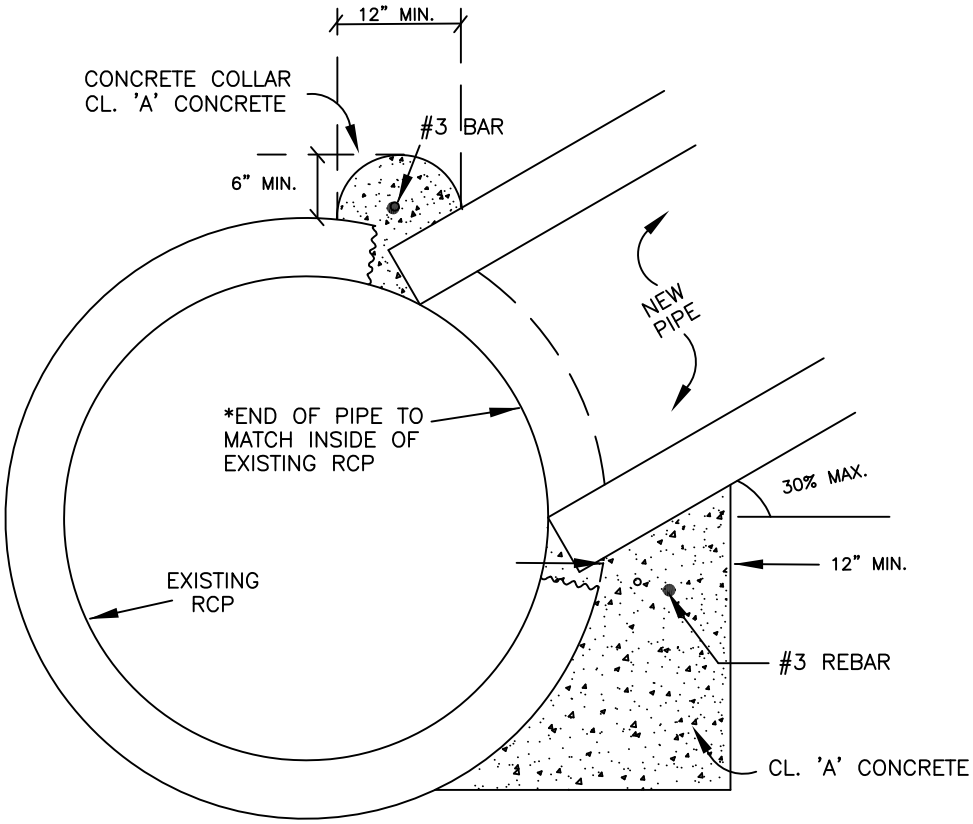
STORM DRAIN EMBEDMENT DETAIL
RCP UNDER PAVEMENT AND HDPE PIPE

NOTE:
HDPE PIPE IS NOT ALLOWED
UNDER PUBLIC PAVEMENT.

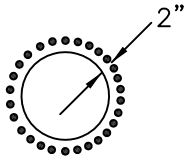


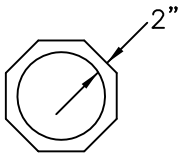
STORM DRAIN EMBEDMENT DETAIL
RCP IN PARKWAY OR UNPAVED EASEMENT

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
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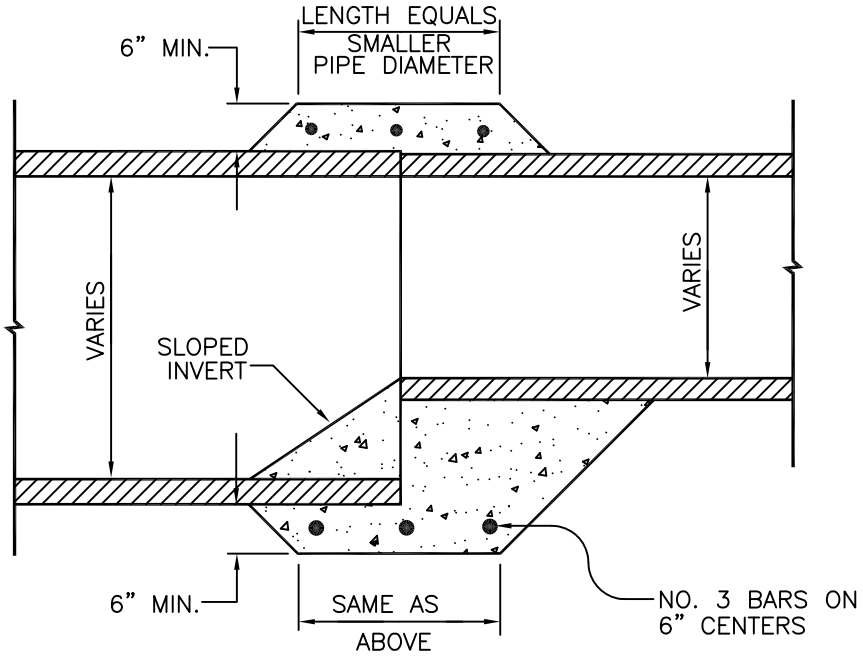
REVISION		



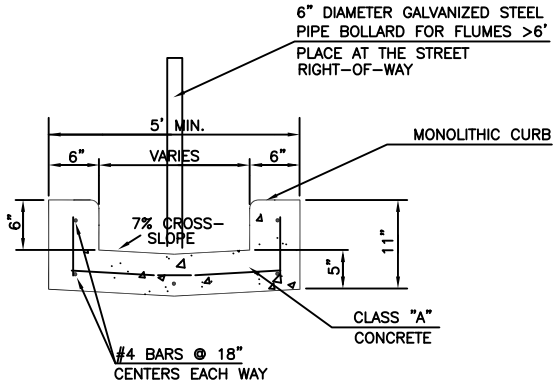
PIPE COLLAR DETAIL

NOTES

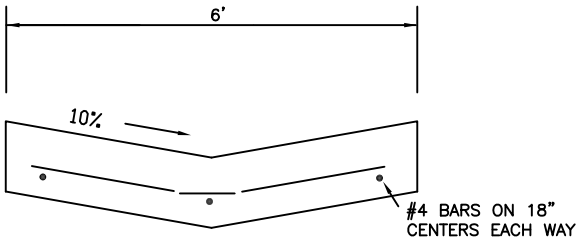
1. THIS PROCEDURE/DETAIL WILL ONLY BE USED WHEN A PREFAB REDUCTION IS NOT POSSIBLE.
2. CONCRETE FOR COLLAR WILL NOT BE PAID FOR DIRECTLY, BUT WILL BE CONSIDERED SUBSIDIARY TO THE VARIOUS OTHER BIDS.
3. CONCRETE SHALL BE 5 SACK 3000 PSI.

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

FLUME SECTIONS



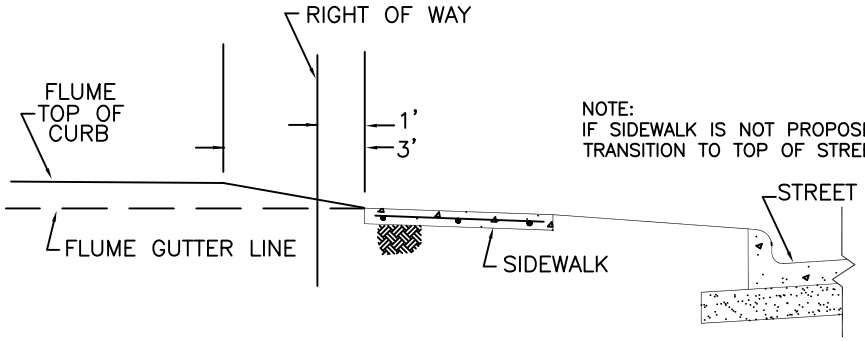
NOTE:
1. FLUME NEEDS TO BE FLARED AT ENTRANCE ONLY FOR HYDRAULIC PURPOSES.
2. BOLLARDS SHALL BE FILLED WITH CONCRETE AND SET IN 18" DIAMETER CONCRETE FOOTING A MINIMUM OF 3' BELOW THE FLUME FLOW LINE. BOLLARD SHALL BE 4' HIGH ABOVE THE FLUME FLOW LINE.



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.

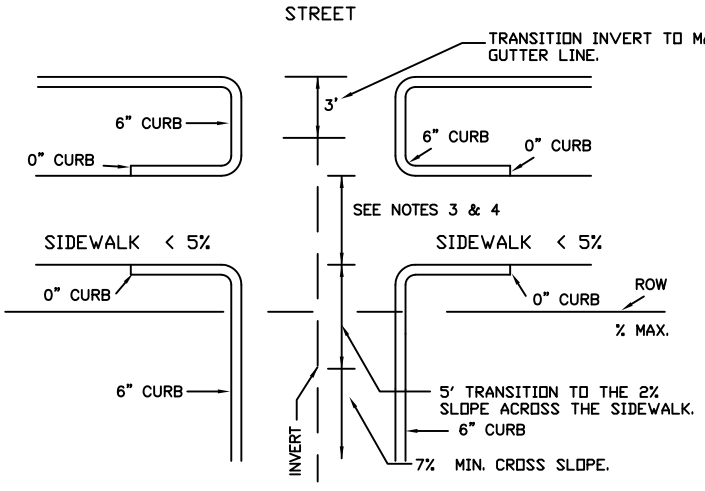
ALTERNATE

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.

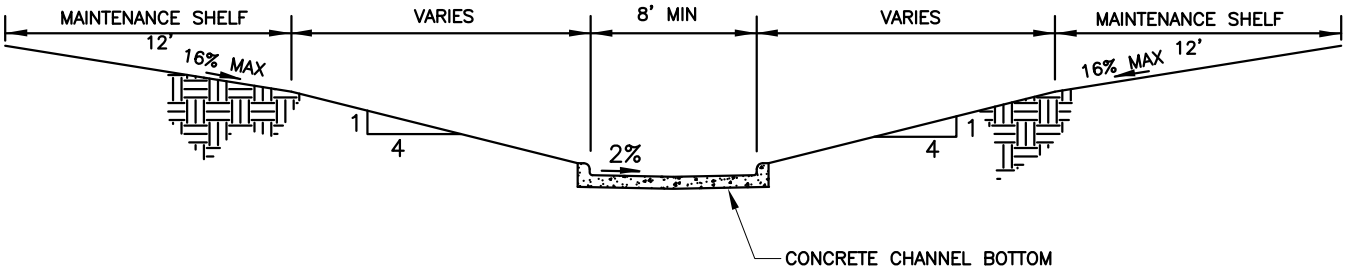


NOTE:
1. FLOW IS TOWARD STREET, OTHERWISE THE FLUME WILL HAVE TO BE FLARED AT THE STREET.
2. FOR FLUMES 5 FEET OR LESS IN WIDTH A METAL PLATE MAY BE CONSIDERED FOR UNIQUE SITUATIONS IF AUTHORIZED BY THE PUBLIC WORKS DEPARTMENT.
3. LONGITUDINAL FLUME SLOPE ACROSS SIDEWALK MUST BE NO GREATER THAN 2%.
4.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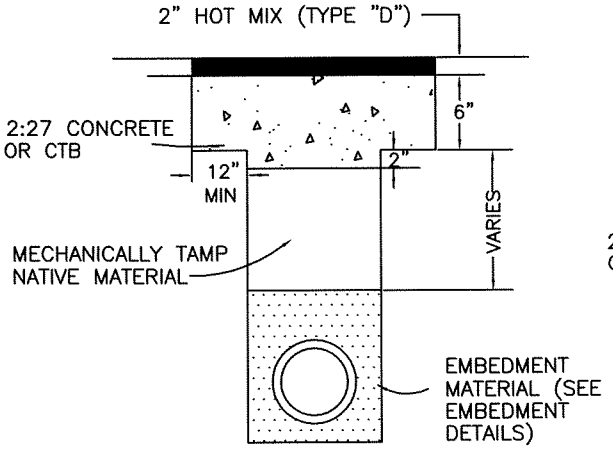
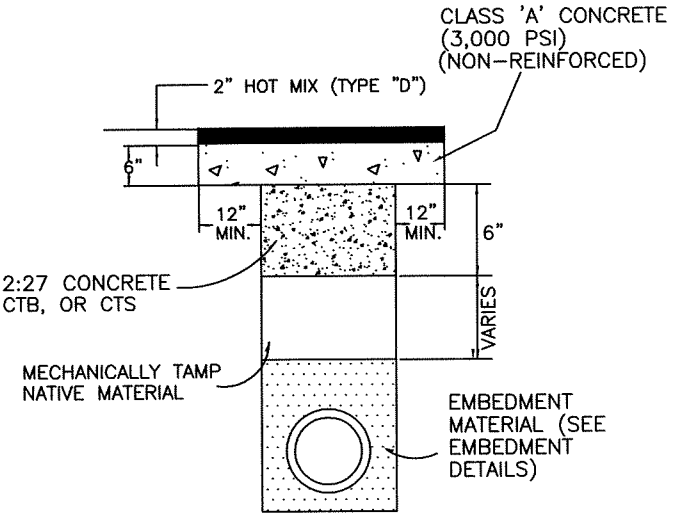
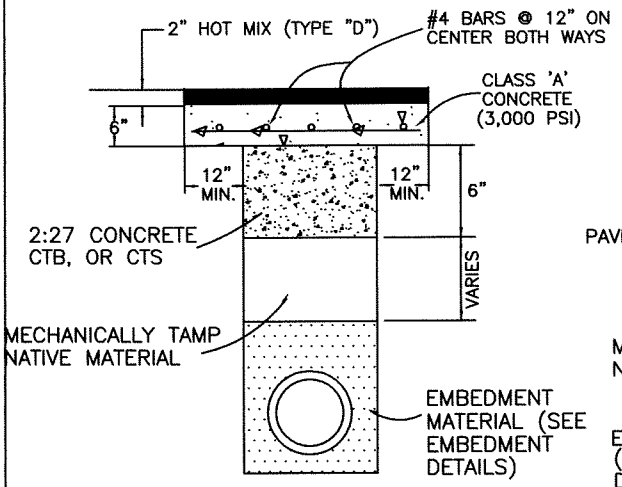
REVISION		
REVISION		



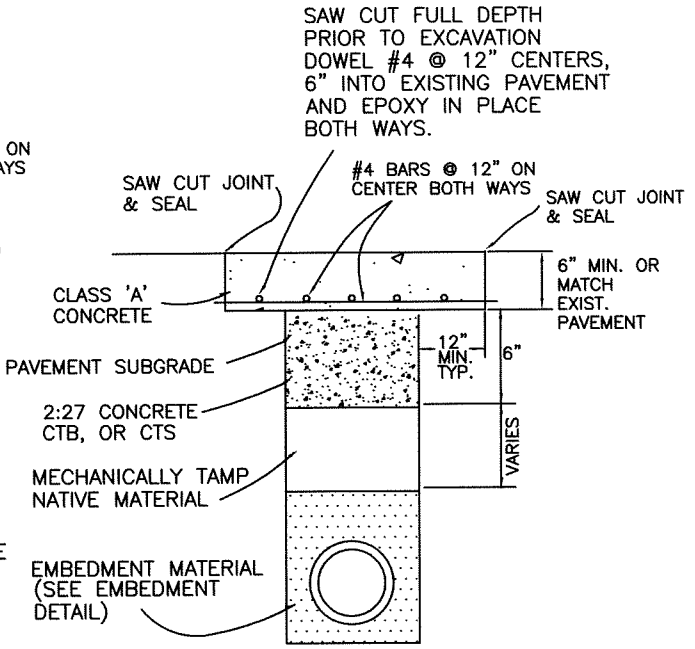
RESIDENTIAL/COUNTY ROAD



COLLECTOR STREET



MAJOR ARTERIALS & THOROUGHFARES



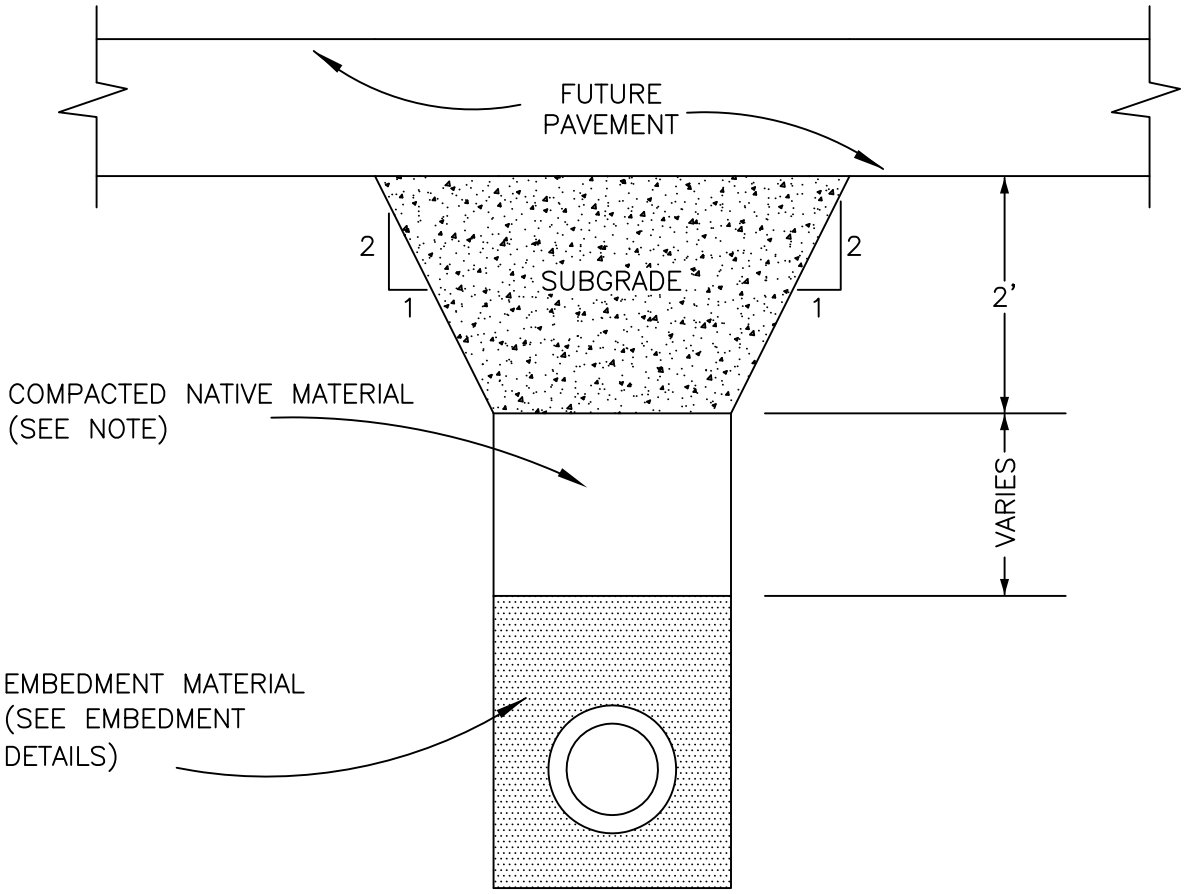
CONCRETE STREET

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
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%.

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