

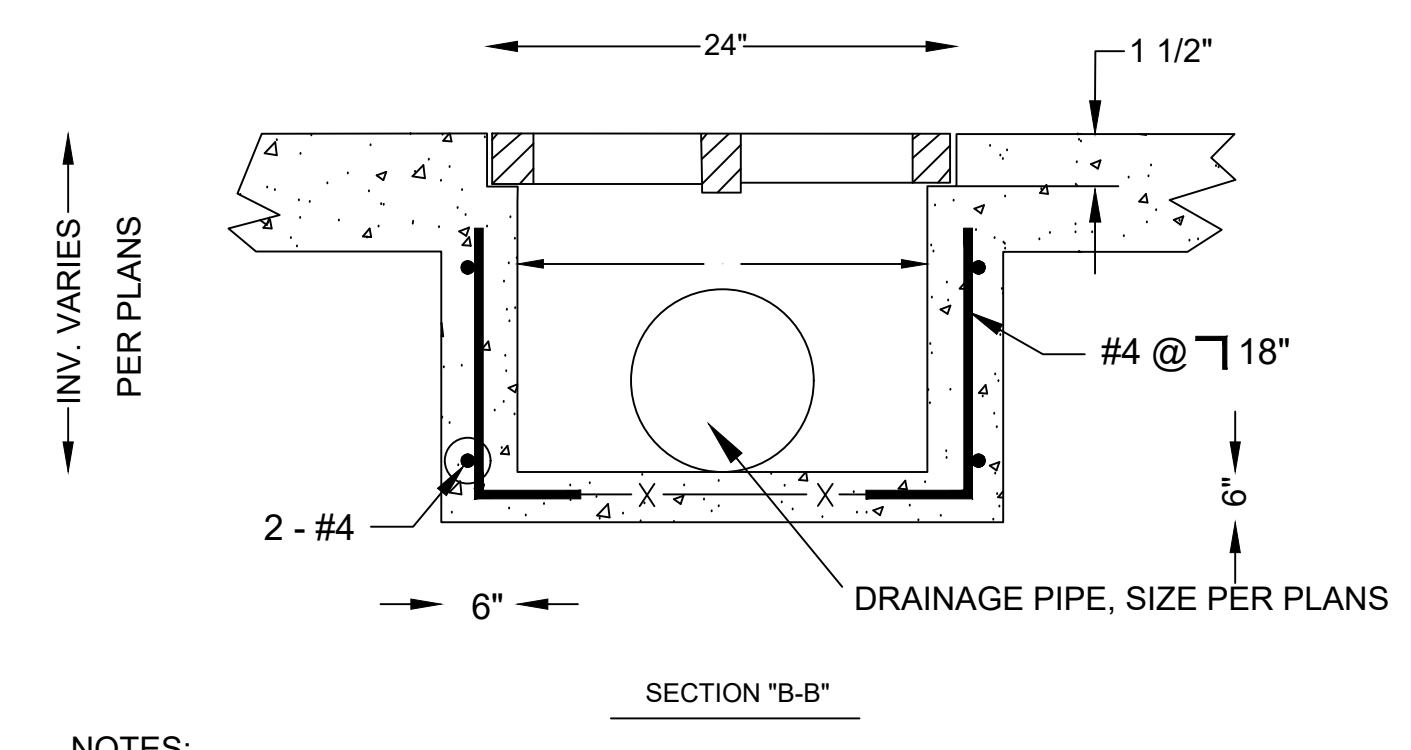
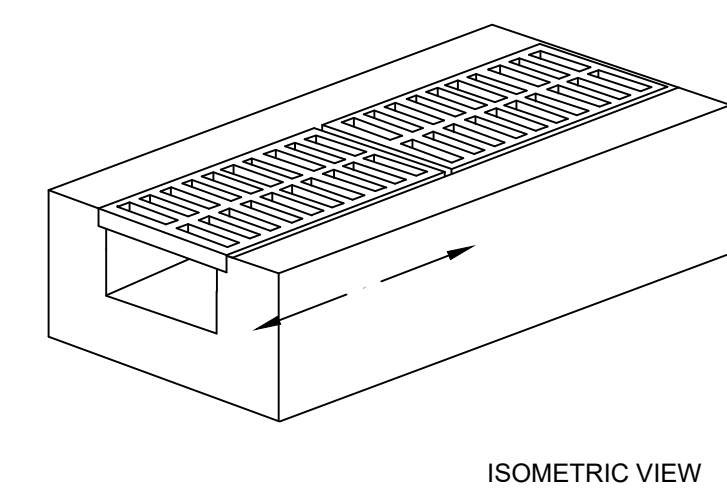
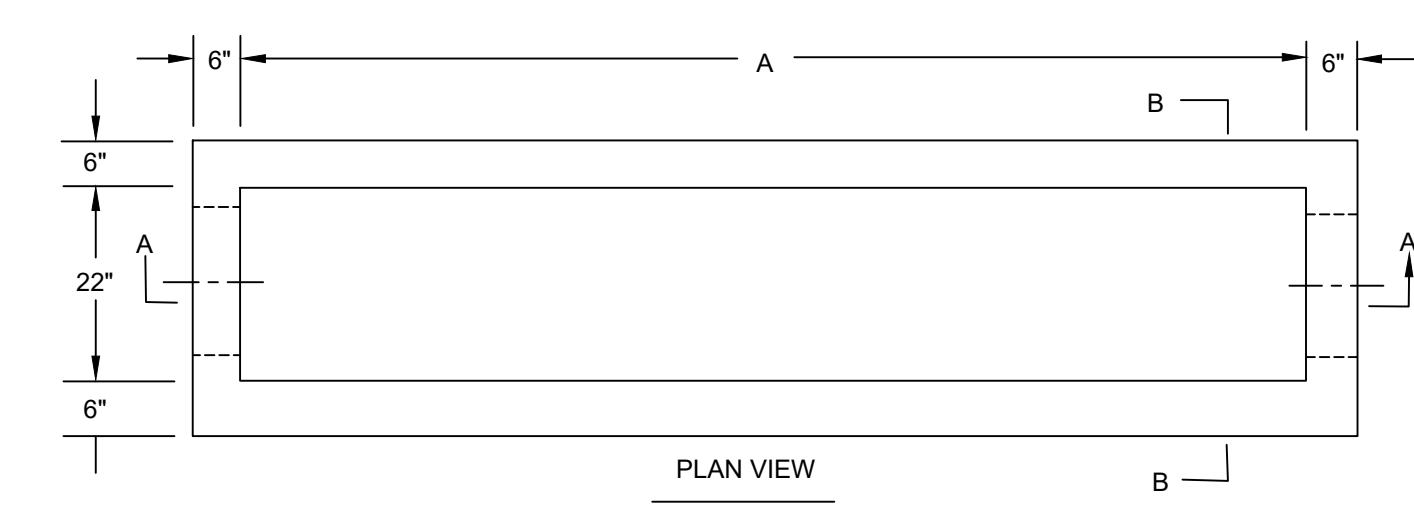
PIPE DIAM.	MIN. TRENCH WIDTH
4"	21"
(100mm)	(533mm)
6"	23"
(150mm)	(584mm)
8"	26"
(200mm)	(660mm)
10"	28"
(250mm)	(711mm)
12"	30"
(300mm)	(762mm)
15"	34"
(375mm)	(864mm)
18"	39"
(450mm)	(991mm)
24"	48"
(600mm)	(1219mm)
30"	56"
(750mm)	(1422mm)
36"	64"
(900mm)	(1626mm)
42"	72"
(1050mm)	(1829mm)
48"	80"
(1200mm)	(2032mm)
60"	96"
(1500mm)	(2438mm)

PIPE DIAM.	SURFACE LIVE LOADING CONDITION	
	H-25	HEAVY CONSTRUCTION (75T AXLE LOAD) *
12" - 48"	12"	48"
(300mm - 1200mm)	(305mm)	(1219mm)
60"	24"	60"
(1500mm)	(610mm)	(1524mm)

PIPE DIAM.	CLASS I			CLASS II			CLASS III		
	COMPACTED	DUMPED	95%	95%	90%	95%	95%	90%	95%
4"	37	18	18	25	18	18	18	18	18
(100mm)	(11.3m)	(5.5m)	(7.6m)	(5.5m)	(5.5m)	(5.5m)	(5.5m)	(5.5m)	(5.5m)
6"	44	20	29	20	21	21	21	21	21
(150mm)	(13.4m)	(6.1m)	(8.8m)	(6.1m)	(6.4m)	(6.4m)	(6.4m)	(6.4m)	(6.4m)
8"	32	15	22	15	16	16	16	16	16
(200mm)	(9.8m)	(4.6m)	(6.7m)	(4.6m)	(4.9m)	(4.9m)	(4.9m)	(4.9m)	(4.9m)
10"	38	18	26	18	18	18	18	18	18
(250mm)	(11.6m)	(5.5m)	(7.9m)	(5.5m)	(5.5m)	(5.5m)	(5.5m)	(5.5m)	(5.5m)
12"	35	17	24	17	17	17	17	17	17
(300mm)	(10.7m)	(5.2m)	(7.3m)	(5.2m)	(5.2m)	(5.2m)	(5.2m)	(5.2m)	(5.2m)
15"	38	17	25	17	18	18	18	18	18
(375mm)	(11.6m)	(5.2m)	(7.6m)	(5.2m)	(5.5m)	(5.5m)	(5.5m)	(5.5m)	(5.5m)
18"	36	17	24	17	17	17	17	17	17
(450mm)	(11.0m)	(5.2m)	(7.3m)	(5.2m)	(5.2m)	(5.2m)	(5.2m)	(5.2m)	(5.2m)
24"	28	13	20	13	14	14	14	14	14
(600mm)	(8.5m)	(4.0m)	(6.1m)	(4.0m)	(4.3m)	(4.3m)	(4.3m)	(4.3m)	(4.3m)
30"	28	13	20	13	14	14	14	14	14
(750mm)	(8.5m)	(4.0m)	(6.1m)	(4.0m)	(4.3m)	(4.3m)	(4.3m)	(4.3m)	(4.3m)
36"	26	12	18	13	13	13	13	13	13
(900mm)	(7.9m)	(3.7m)	(5.5m)	(4.0m)	(4.0m)	(4.0m)	(4.0m)	(4.0m)	(4.0m)
42"	23	11	16	11	11	11	11	11	11
(1050mm)	(7.0m)	(3.4m)	(4.9m)	(3.4m)	(3.4m)	(3.4m)	(3.4m)	(3.4m)	(3.4m)
48"	25	11	17	11	12	12	12	12	12
(1200mm)	(7.6m)	(3.4m)	(5.2m)	(3.4m)	(3.7m)	(3.7m)	(3.7m)	(3.7m)	(3.7m)
60"	25	11	17	11	12	12	12	12	12
(1500mm)	(7.6m)	(3.4m)	(5.2m)	(3.4m)	(3.7m)	(3.7m)	(3.7m)	(3.7m)	(3.7m)

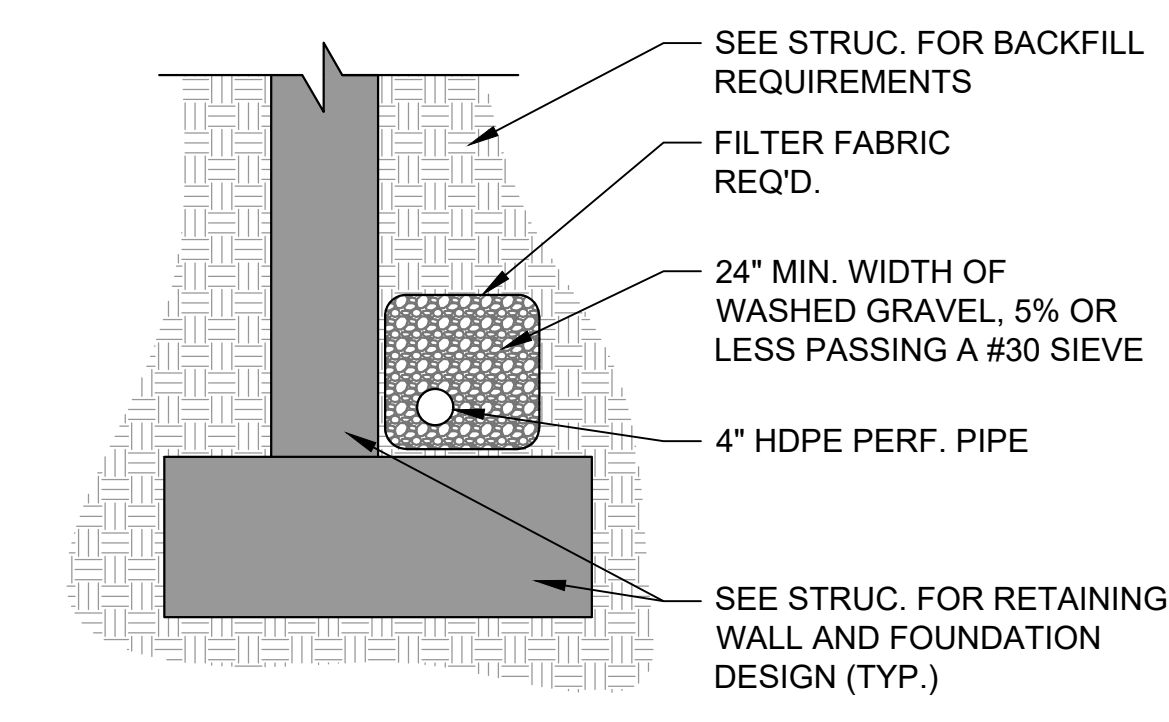
- NOTES:**
- ALL PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321. "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST ADDITION.
 - MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL, WHEN REQUIRED.
 - FOUNDATION:** WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER. AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.
 - BEDDING:** SUITABLE MATERIAL SHALL BE CLASS I, II OR III. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. UNLESS OTHERWISE NOTED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4" (100mm) FOR 4"-24" (100mm-600mm); 6" (150mm) FOR 30"-60" (750mm-1500mm).
 - INITIAL BACKFILL:** SUITABLE MATERIAL SHALL BE CLASS I, II OR III IN THE PIPE ZONE EXTENDING NOT LESS THAN 6" ABOVE CROWN OF PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.
 - MINIMUM COVER:** MINIMUM COVER, H, IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 12" FROM THE TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOTATION. FOR TRAFFIC APPLICATIONS, MINIMUM COVER, H, IS 12" UP TO 48" DIAMETER PIPE AND 24" OF COVER FOR 60" DIAMETER PIPE, MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT. FOR TRAFFIC APPLICATIONS WITH LESS THAN FOUR FEET OF COVER, EMBEDMENT OF THE PIPE SHALL BE USING ONLY A CLASS I OR CLASS II BACKFILL.

1 PLASTIC PIPE INSTALLATION
NTS

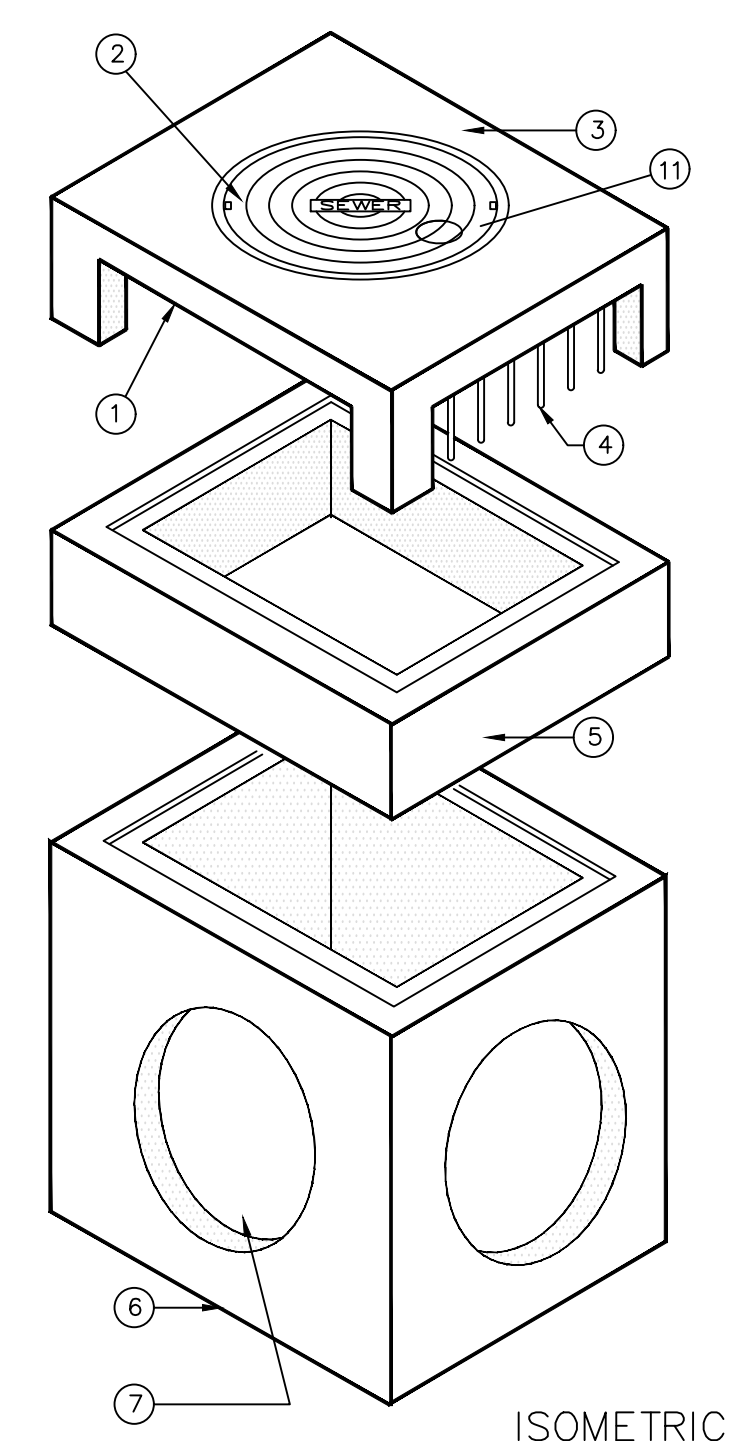


- NOTES:**
- ADA COMPLIANT GRATES TO BE USF 6002 GRATE OR APPROVED EQUAL
 - NON ADA GRATES TO BE USF 6429 GRATE OR APPROVED EQUAL

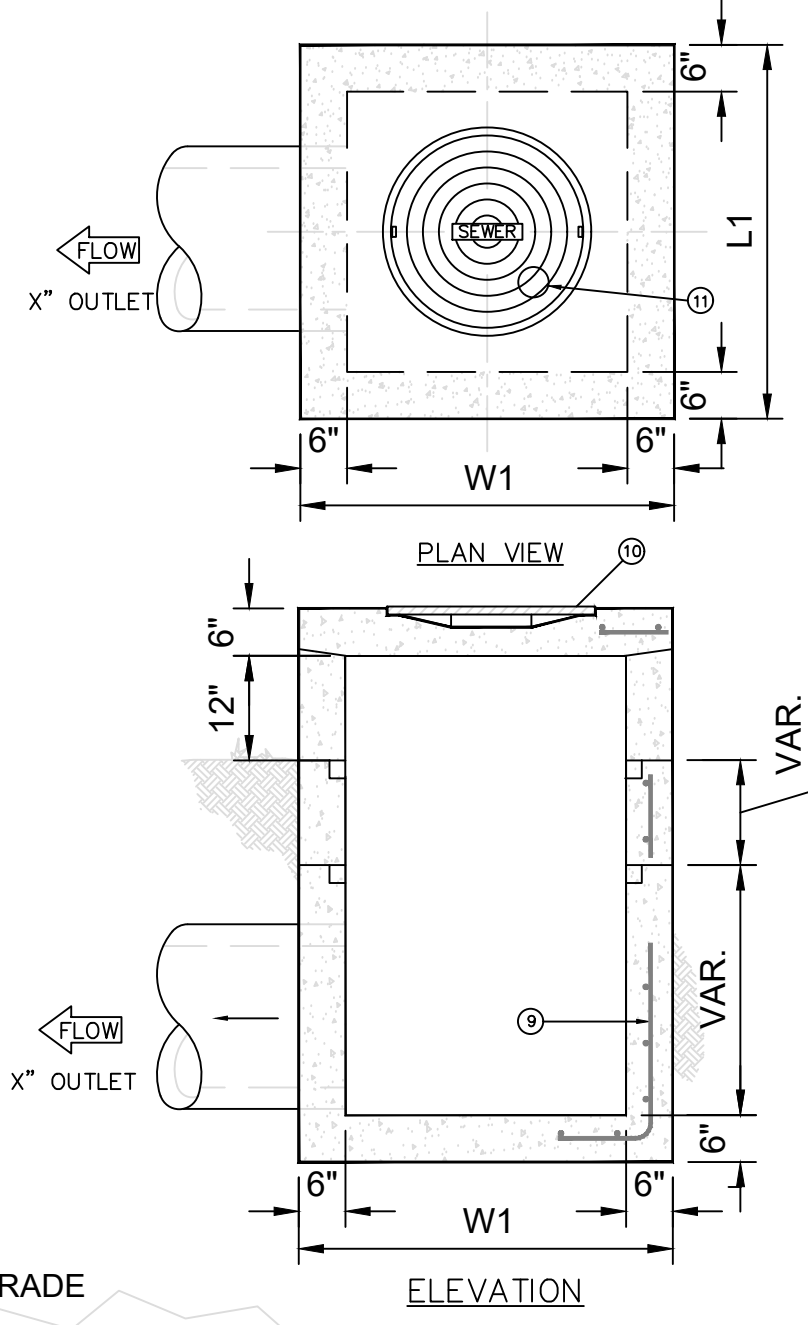
2 TRENCH GRATE DETAIL
NTS



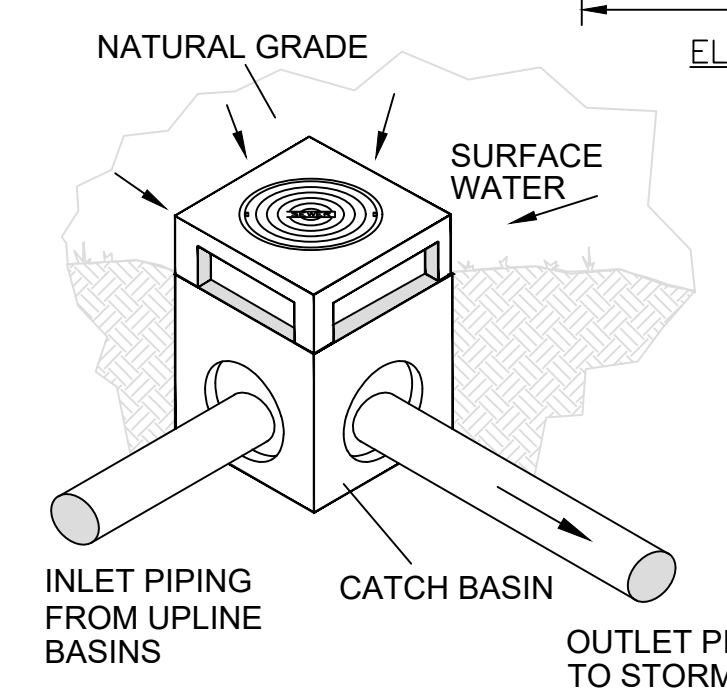
3 FOUNDATION DRAINAGE DETAIL (TYP.)
NTS



KEYED NOTES		
MARK	QTY	DESCRIPTION
1	1	OPENING ALL FOUR SIDES (VERTICAL REBAR GRATE IF REQUIRED)
2	1	20" CAST-IN RING AND COVER
3	1	TOP SECTION
4	1	SAFETY BARS (OPTIONAL)
5	1	MUD SECTION
6	1	BASE SECTION
7	1	THINWALL KNOCKOUT PIPE OPENING "K" DIAMETER
8	1	NOT USED
9	-	REBAR AS REQUIRED
10	1	DUCTILE IRON RING AND COVER
11	1	NAMEPLATE INDICATING: MFG: PARKUSA 888-611-PARK WWW.PARKUSA.COM MODEL: CBY-1 MANUFACTURED DATE



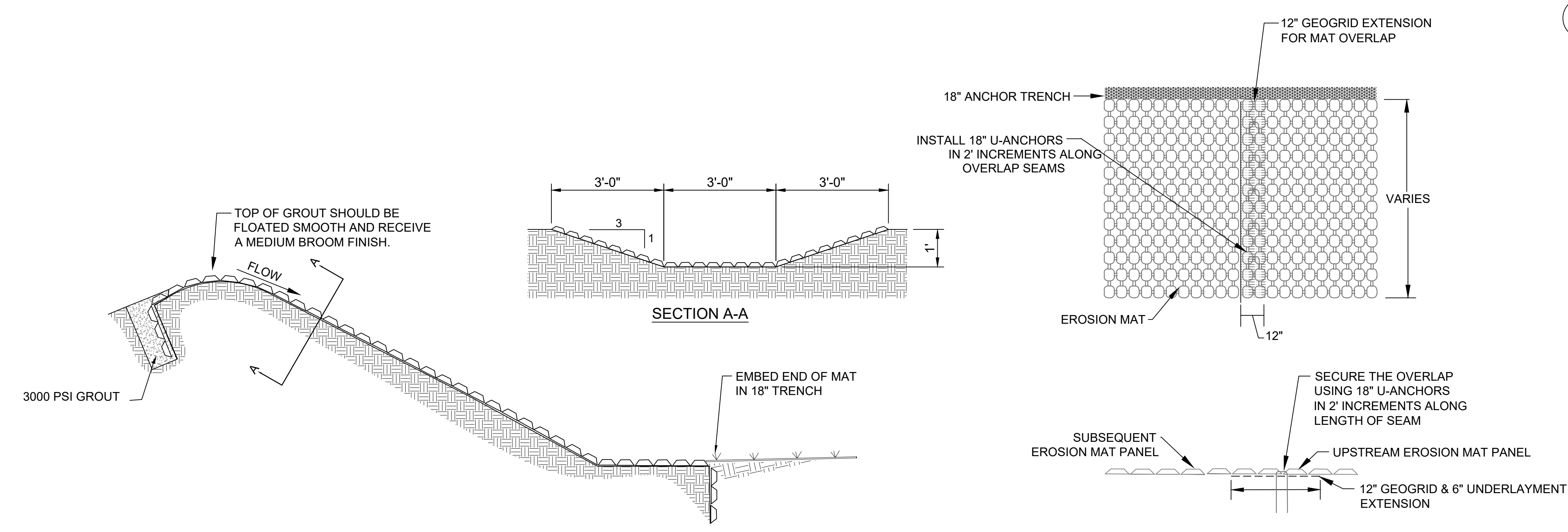
TYPE	L1	W1	K
CBY-36	4'-0"	4'-0"	32"
CBY-48	5'-0"	5'-0"	48"
CBY-60	6'-0"	6'-0"	60"
CBY-72	7'-0"	7'-0"	72"



SPECIFICATIONS

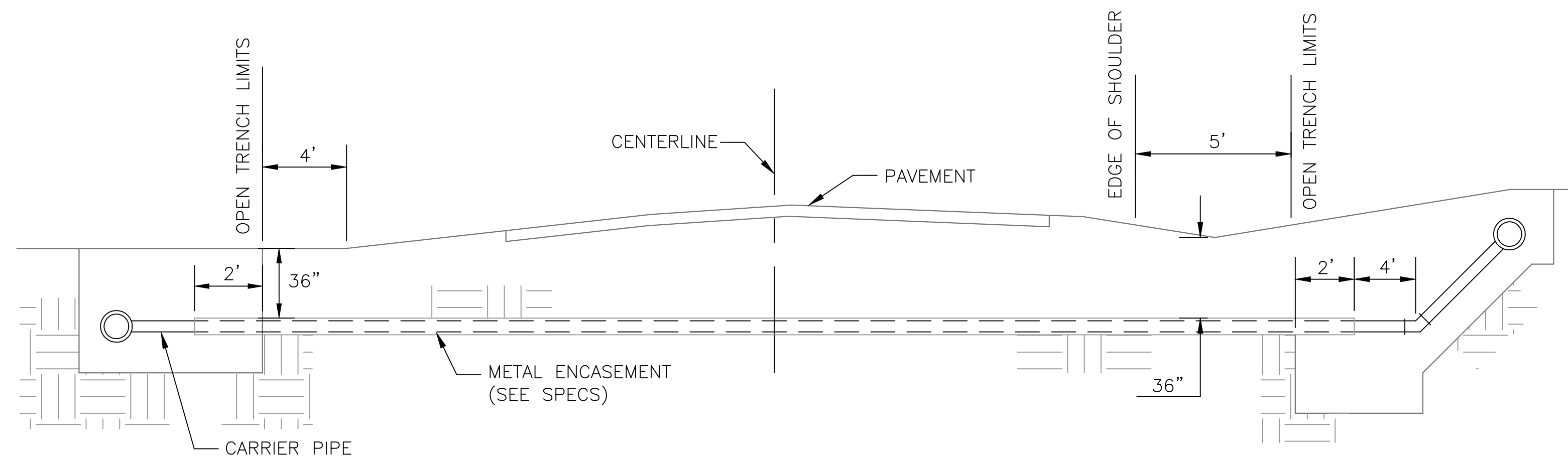
- CONCRETE:** CONCRETE TO MEET MDOT SPECIFICATIONS. UNIT IS OF MONOLITHIC CONSTRUCTION AT FLOOR AND FIRST STAGE OF WALL WITH SECTIONAL RISER TO REQUIRED DEPTH. RATED FOR H-20 LOADING.
- REINFORCEMENT:** GRADE 60 REINFORCED. NO. 4 STEEL REBAR TO CONFORM TO ASTM A615 ON REQUIRED CENTERS OR EQUAL.
- C.I. CASTINGS:** CAST IRON FRAMES AND GRATES ARE MANUFACTURED OF GREY CAST IRON CONFORMING TO ASTM A48-76 CLASS 30.

5 TYPE "Y" INLET DETAIL
NTS



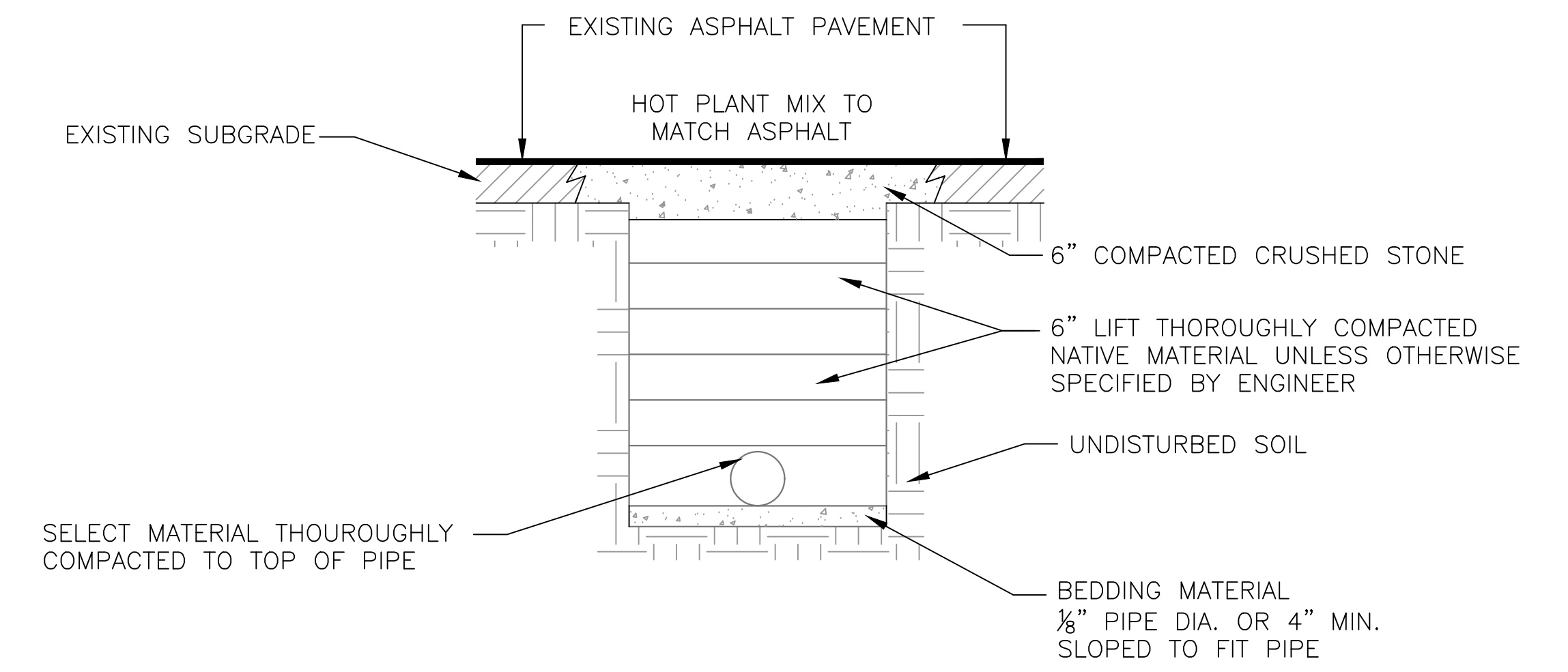
- CONSTRUCTION NOTES:**
- AN ENGINEER OR MANUFACTURER'S REPRESENTATIVE SHALL BE ONSITE FOR THE START OF THE INSTALLATION.
 - GRADE SITE SO THAT WATER WILL NOT FLOW ABOVE, BELOW, OR AROUND THE OUTSIDE OF THE AREA PROTECTED WITH TIED CONCRETE MAT. ALL SUBGRADE SURFACES PREPARED FOR PLACEMENT OF MATS SHALL BE SMOOTH AND FREE OF ALL ROCKS, STICKS, ROOTS, OTHER PROTRUSIONS, OR DEBRIS OF ANY KIND.
 - APPLY SEED DIRECTLY TO PREPARED SOIL PRIOR TO TIED CONCRETE MAT INSTALLATION.
 - AT THE ABUTMENT OF THE TIED CONCRETE MAT, EXCAVATE A 12" x 18" TRENCH. INSTALL 18" OF TIED CONCRETE MAT INTO THE TRENCH AND FILL WITH 3,000 PSI GROUT. THE GROUT SURFACE IS TO RECEIVE A MEDIUM BROOM FINISH AND CAN EXTEND 12" TO 18" OVER THE EROSION MAT BLOCKS.
 - AT EMERGENCY SPILLWAY, TYPICAL SECTION IS 15 FEET TOTAL WIDTH WITH 1 FOOT DEPTH, AND 6:1 SIDE SLOPES. INITIAL SECTION TRANSITIONS TO SECTION A-A.

4 TIED CONCRETE MAT DETAILS
NTS

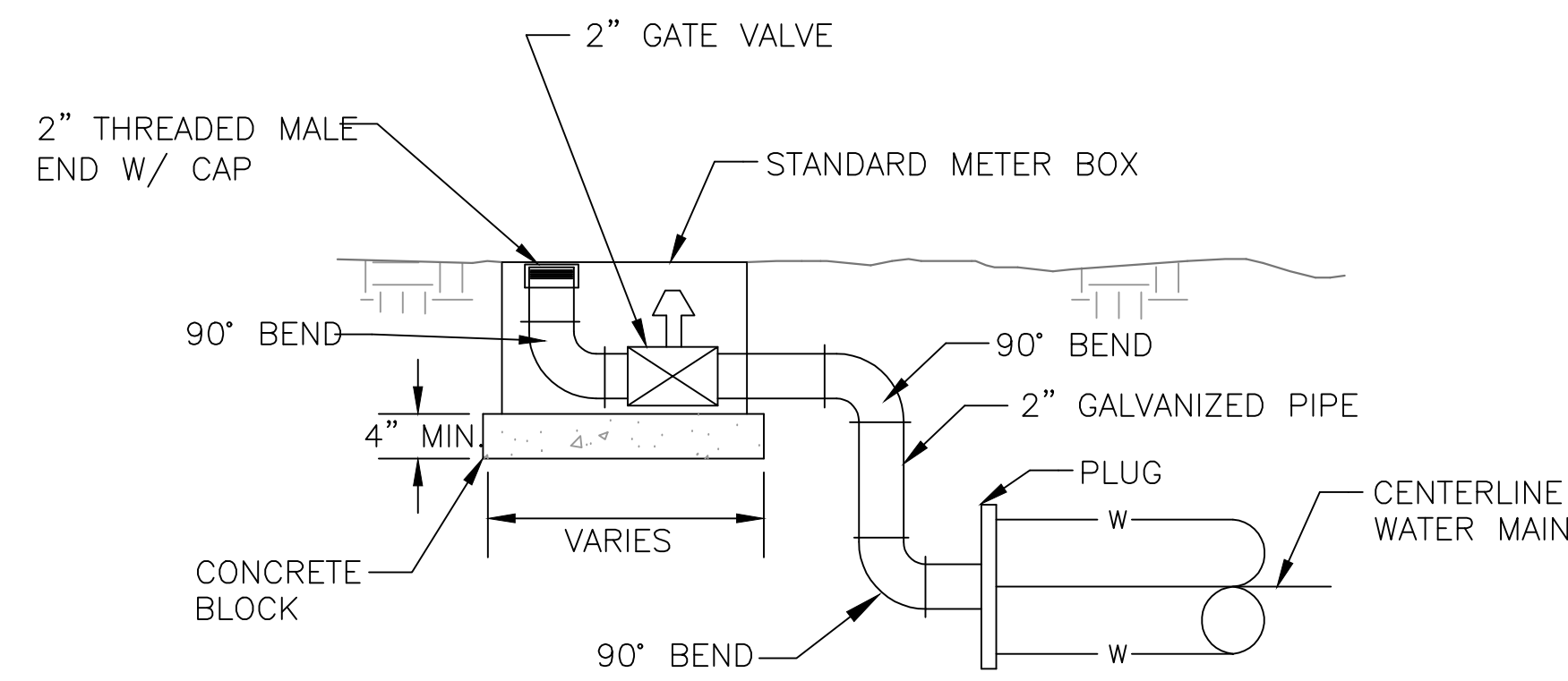


TYPICAL CASSED WATER MAIN CROSSING

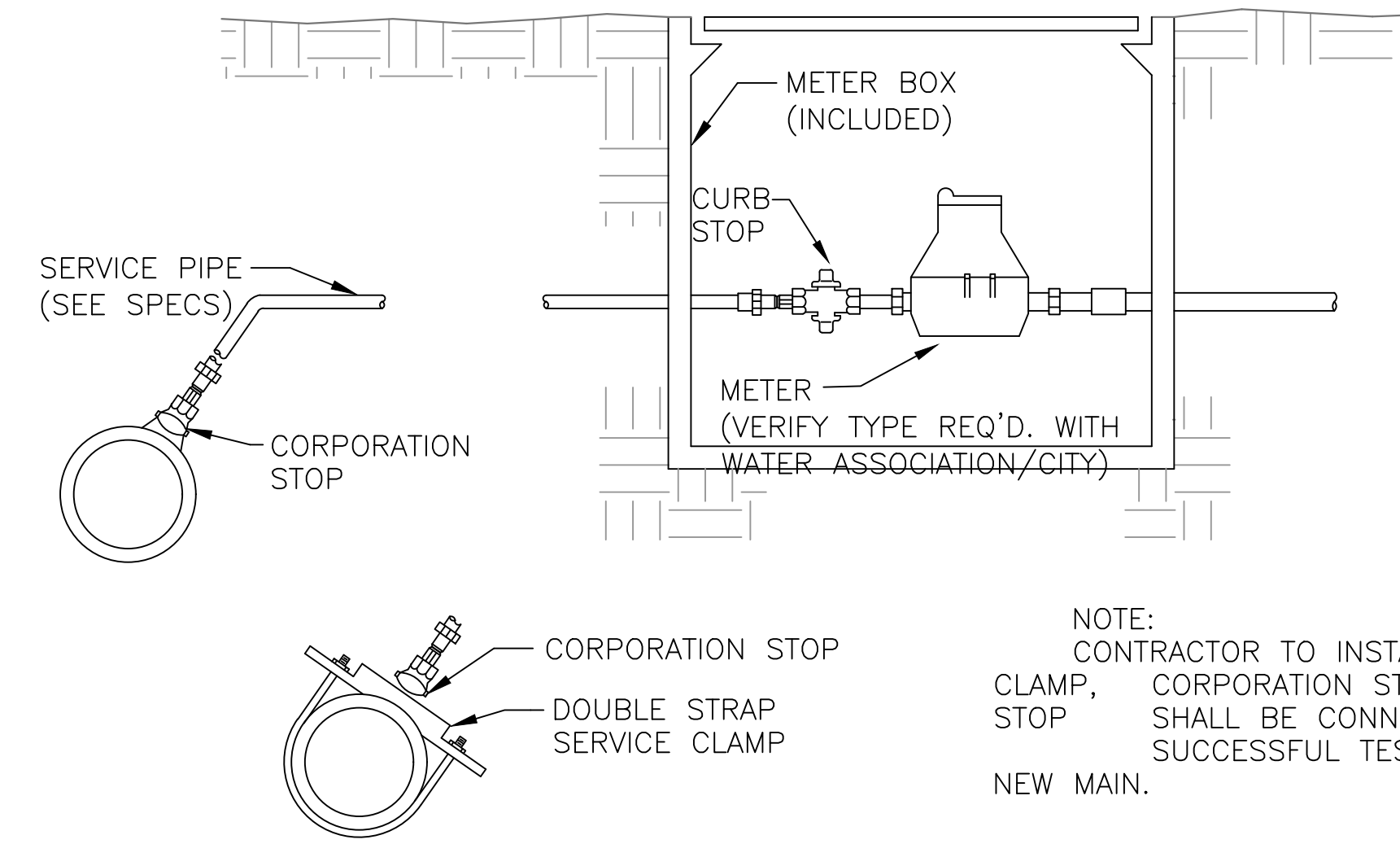
NOTE: IN AREAS WHERE CROSSING STATE/FEDERAL HIGHWAYS, SEE HIGHWAY PERMIT FOR SPECIFIC AND/OR ADDITIONAL INFORMATION.



STREET REPAIR OF OPEN CUT

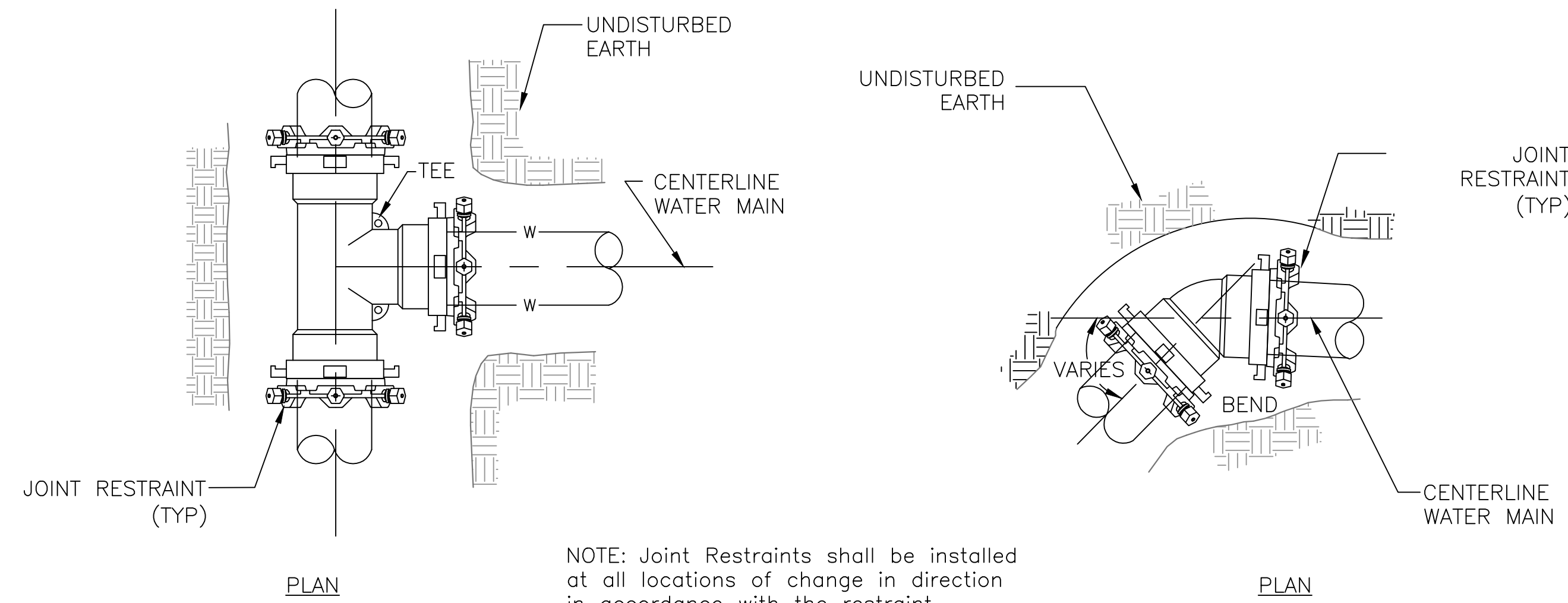


TYPICAL 2" BLOW-OFF DETAIL



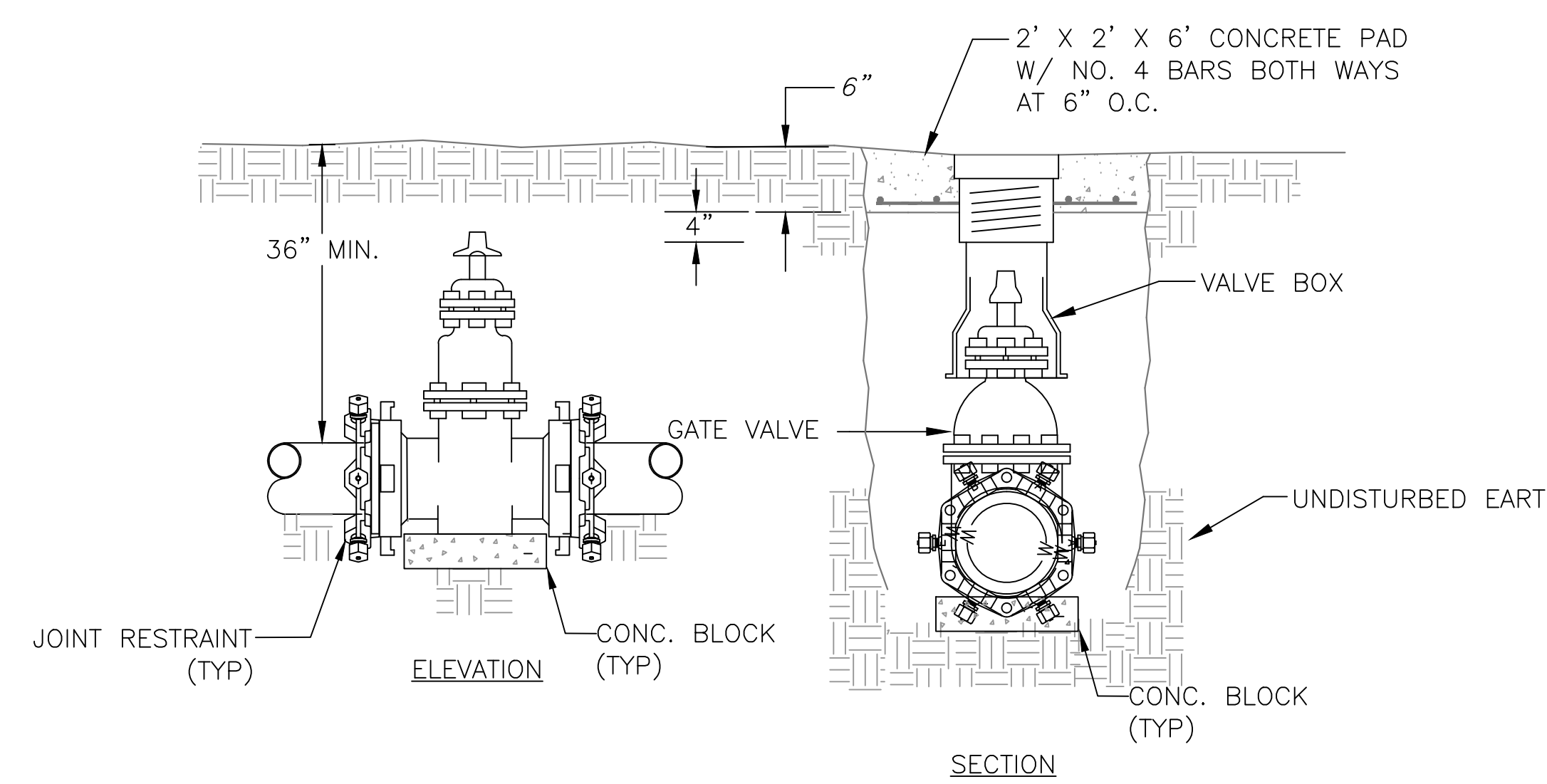
TYPICAL SERVICE ASSEMBLY

NOTE: CONTRACTOR TO INSTALL SERVICE TAP, SERVICE CORPORATION STOP, AND CURB STOP. CURB STOP SHALL BE CONNECTED TO EXISTING LINE UPON SUCCESSFUL TESTING AND DISINFECTION OF THE NEW MAIN.

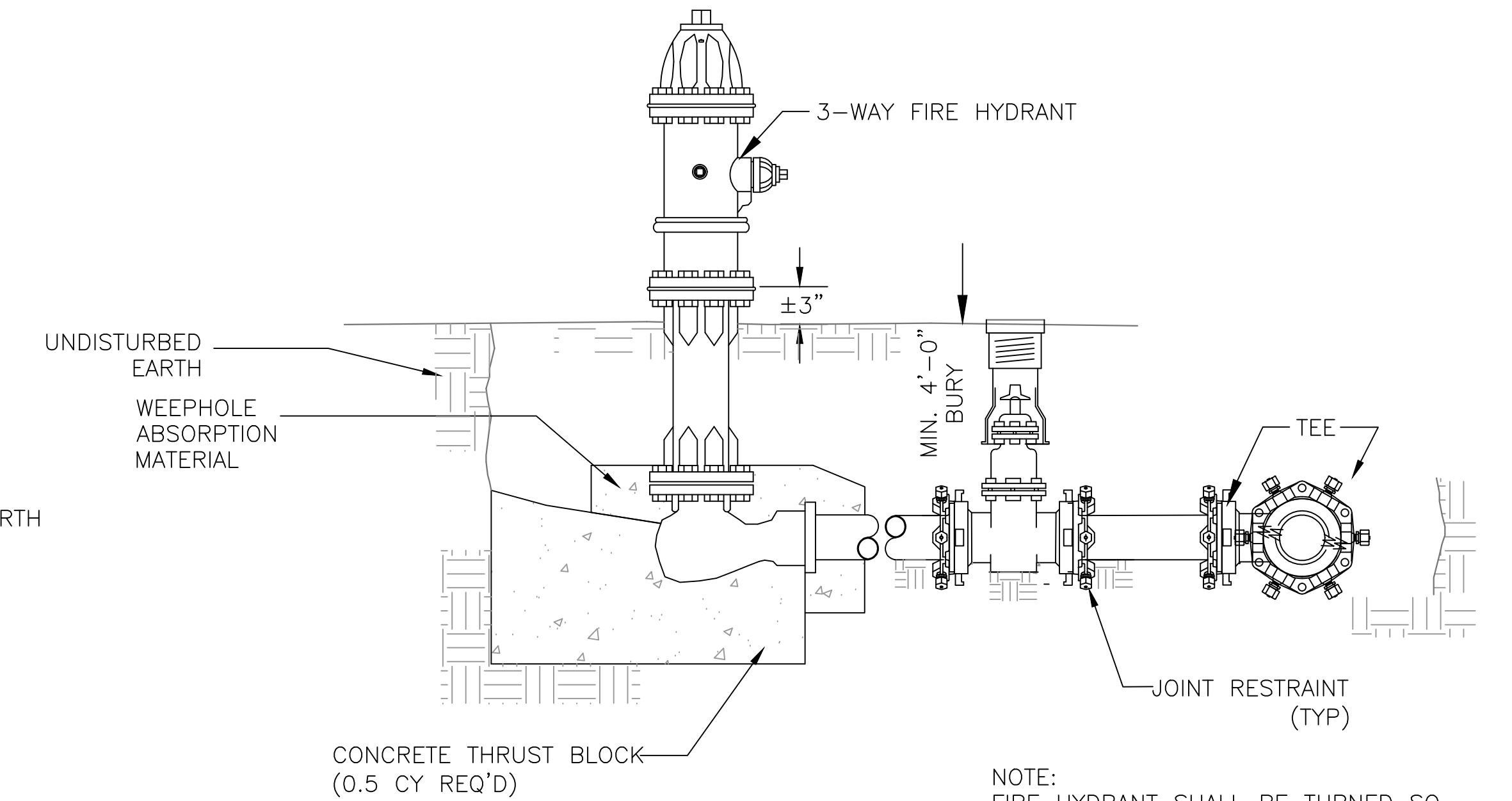


NOTE: Joint Restraints shall be installed at all locations of change in direction in accordance with the restraint manufacturer's recommendations for number of upstream and downstream pipe joints at bends to be restrained.

JOINT RESTRAINT DETAILS FOR TEES & BENDS

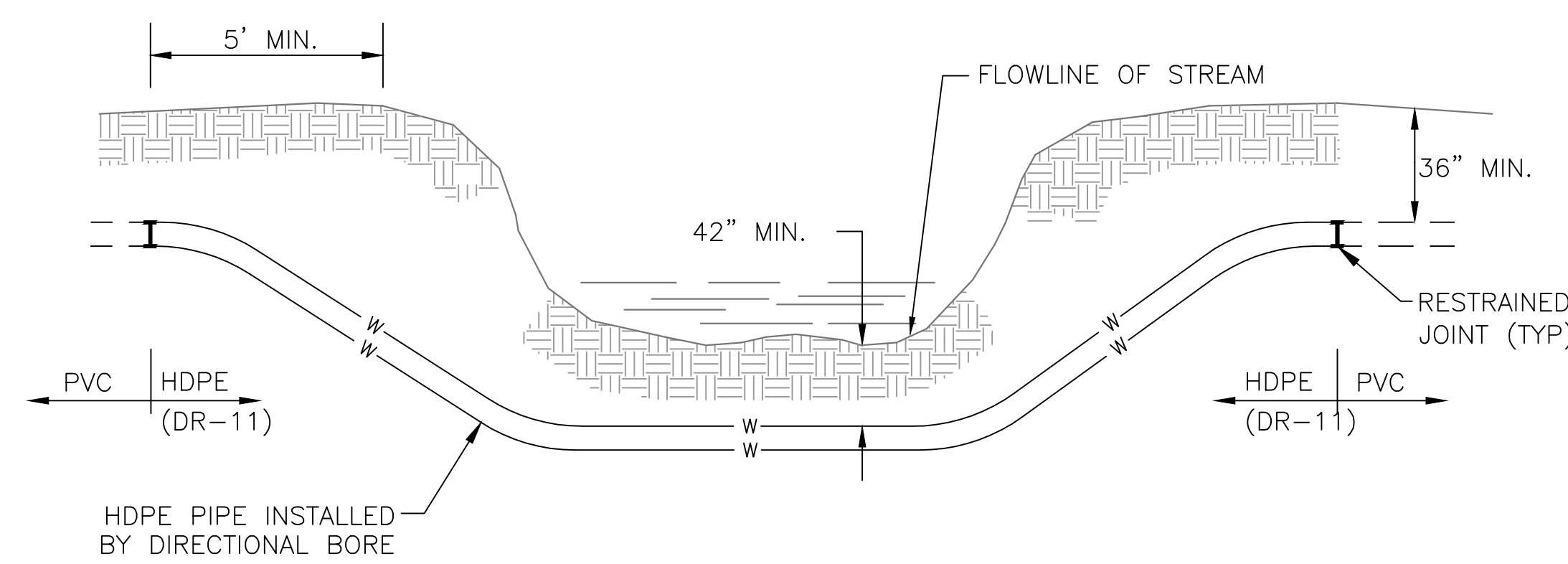


TYPICAL VALVE & BOX

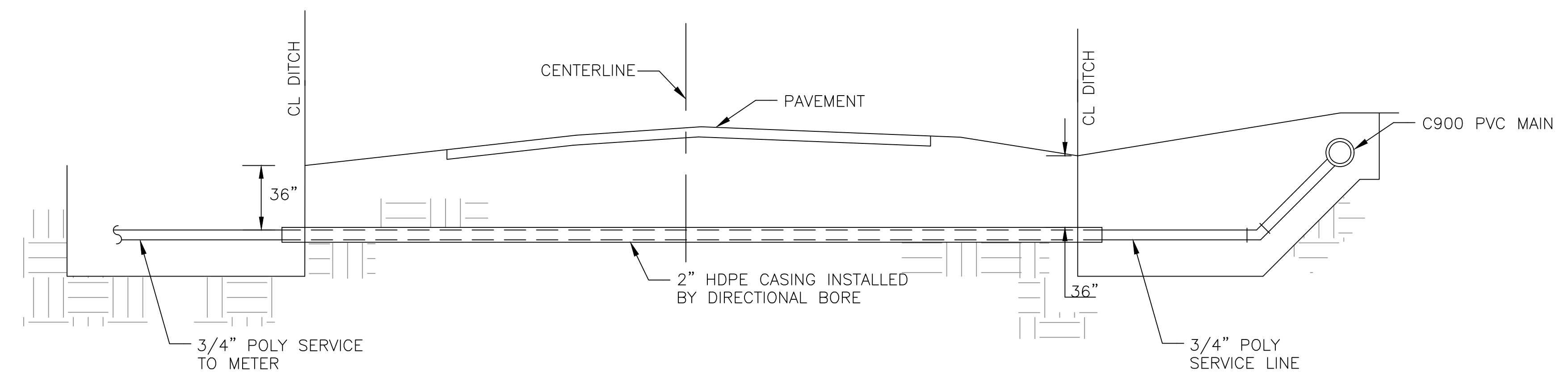


TYPICAL FIRE HYDRANT ASSEMBLY

NOTE: FIRE HYDRANT SHALL BE TURNED SO THAT THE NOZZLES FACE THE ADJACENT STREET. TYPE REQ'D. TO BE VERIFIED WITH WATER ASSOCIATION/CITY.

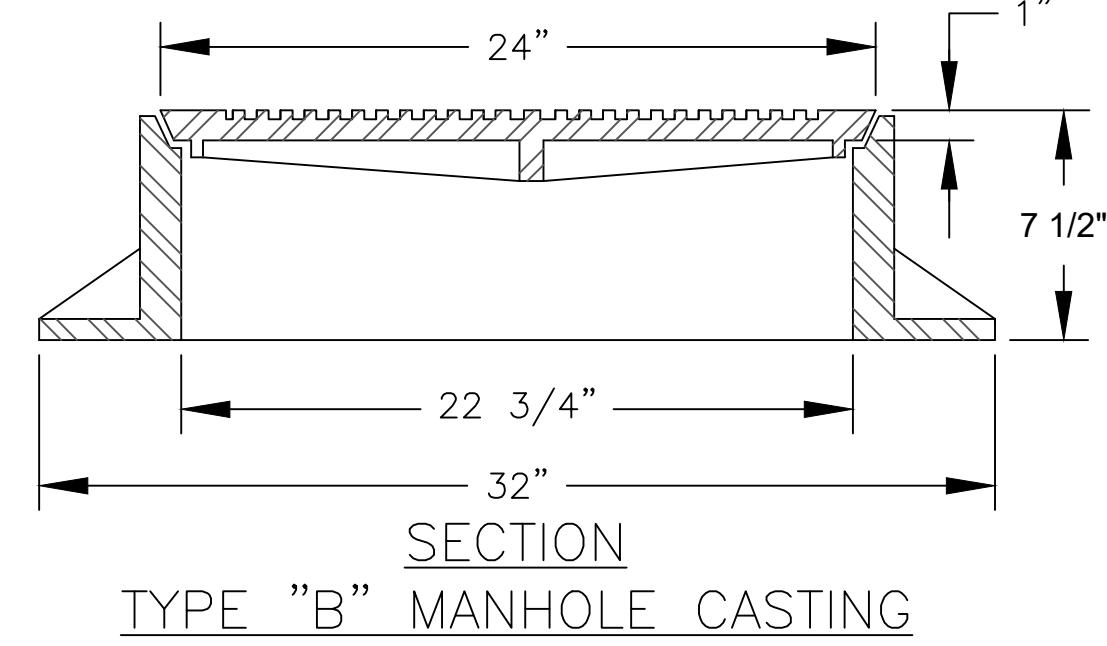
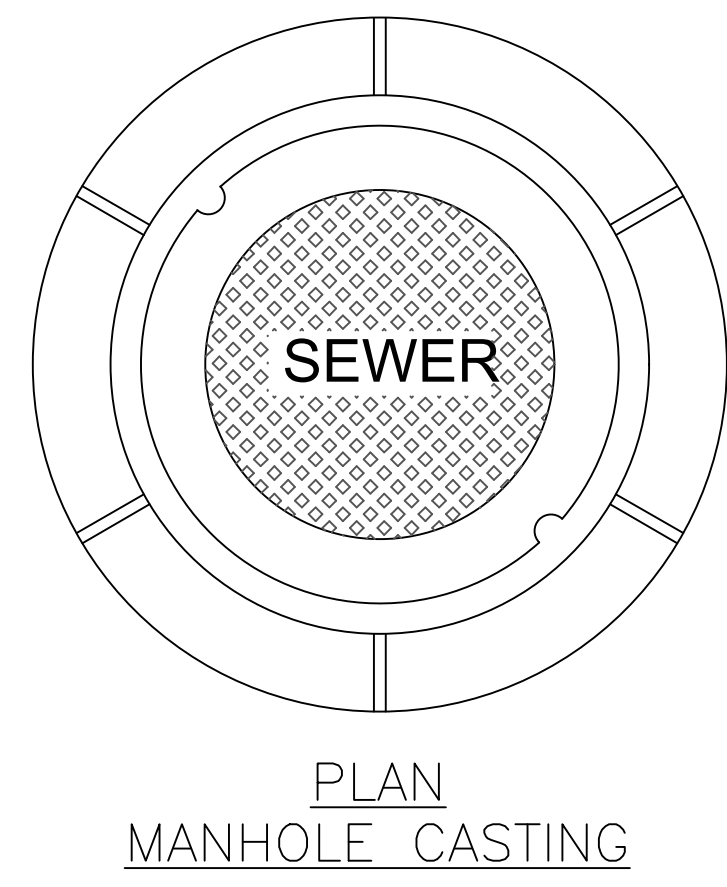


TYPICAL BORED STREAM CROSSING

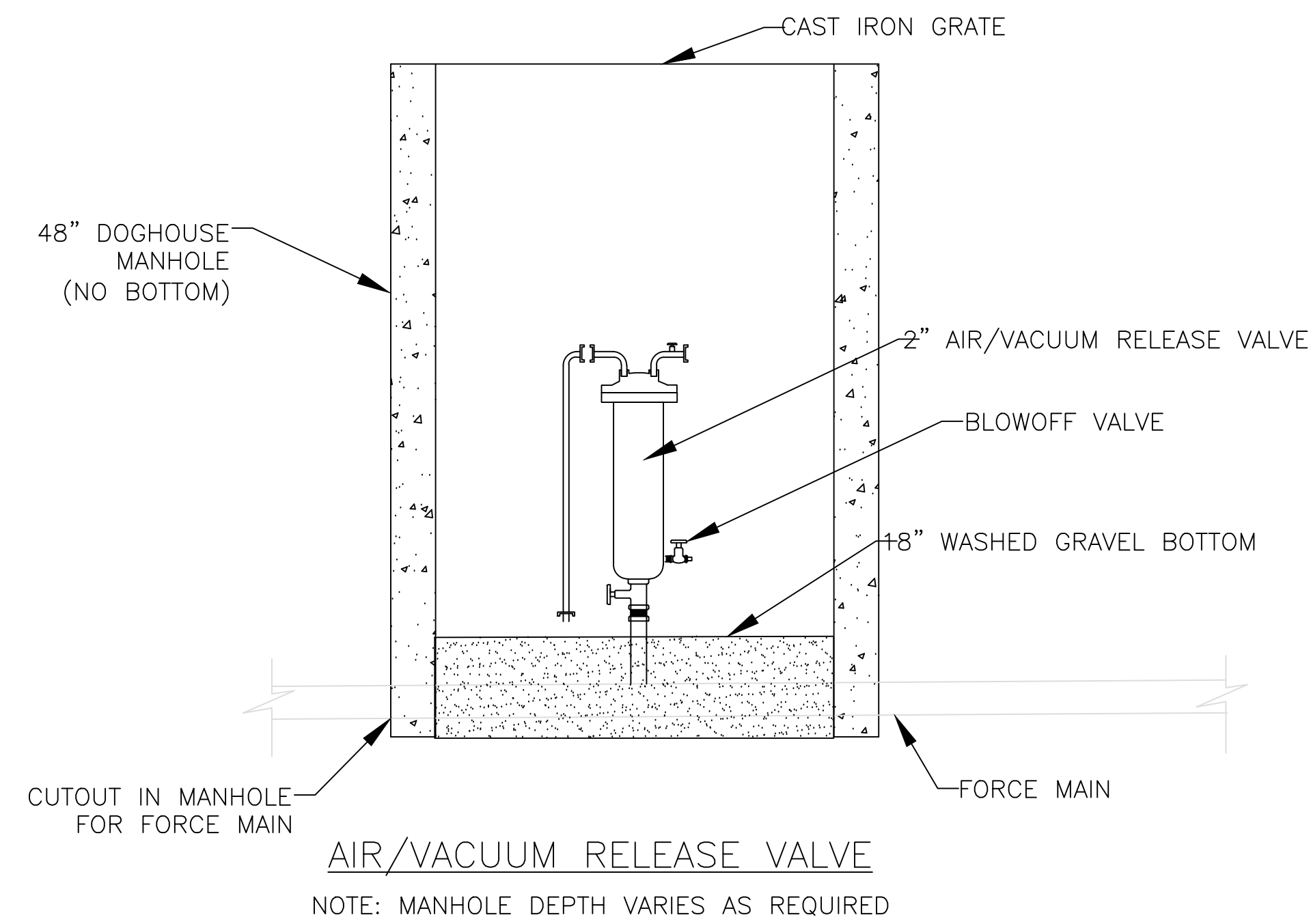


TYPICAL SERVICE BORE

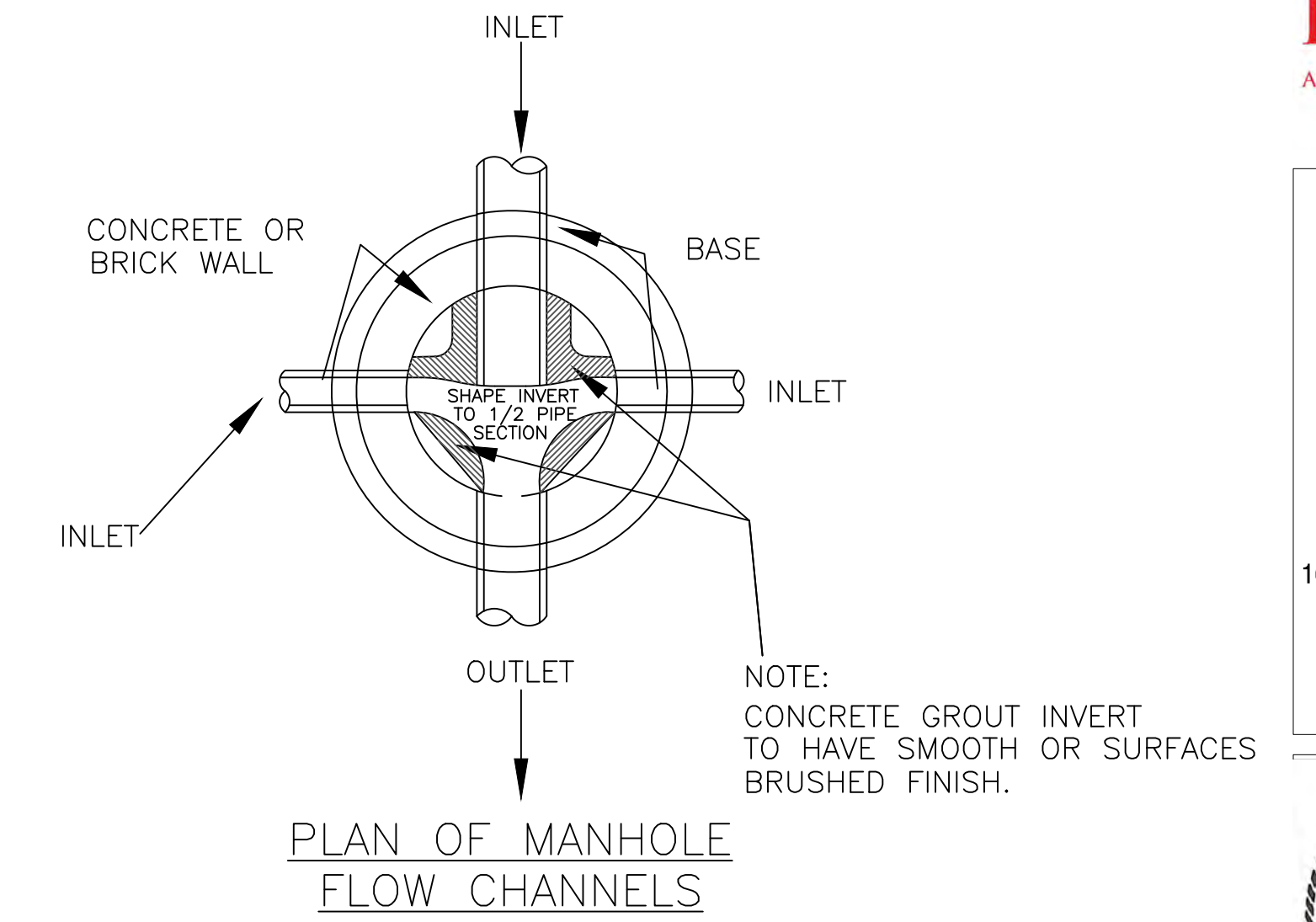
NOTE: IN AREAS WHERE CROSSING STATE/FEDERAL HIGHWAYS, SEE HIGHWAY PERMIT FOR SPECIFIC AND/OR ADDITIONAL INFORMATION.



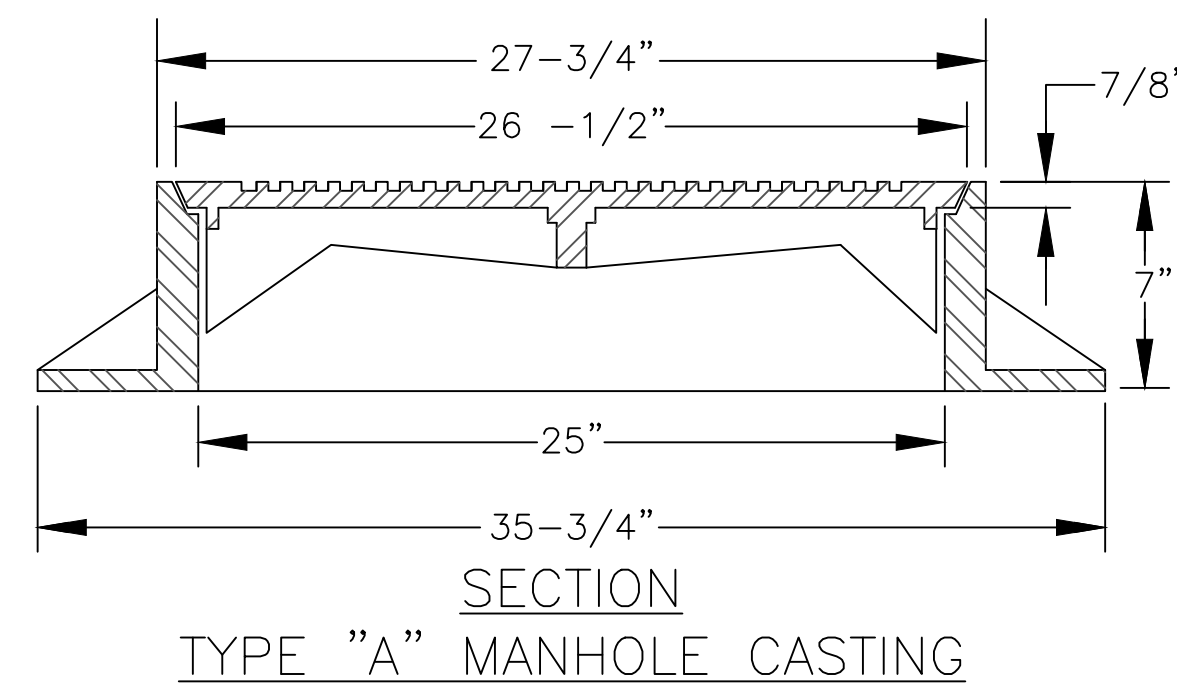
NOTE: 1) USE TYPE "B" MANHOLE CASTING FOR ANY MANHOLE NOT IN STREET R.O.W.
2) USE HARPER NO. 1 (M.S.P.E. STANDARD) LIGHT WEIGHT (330 LBS), VULCAN. NO. VM-17 (300 LBS) OR OPELIKA FOUNDRY NO. C-2-1 (325 LBS).



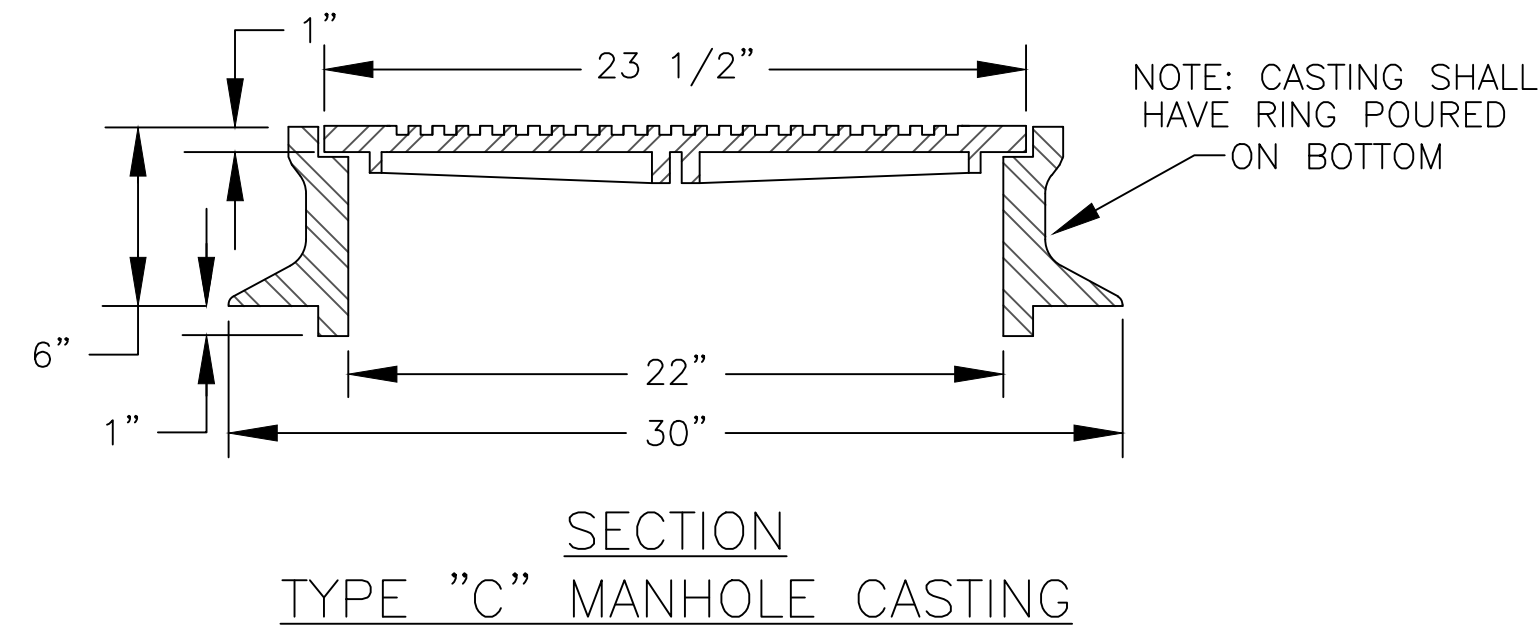
AIR/VACUUM RELEASE VALVE
NOTE: MANHOLE DEPTH VARIES AS REQUIRED



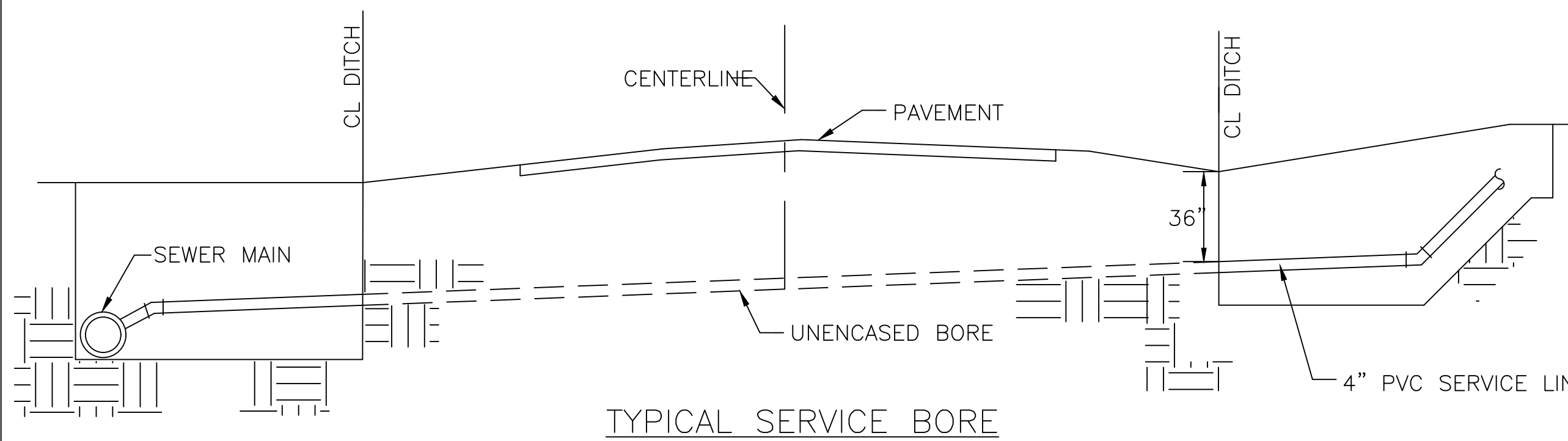
PLAN OF MANHOLE FLOW CHANNELS



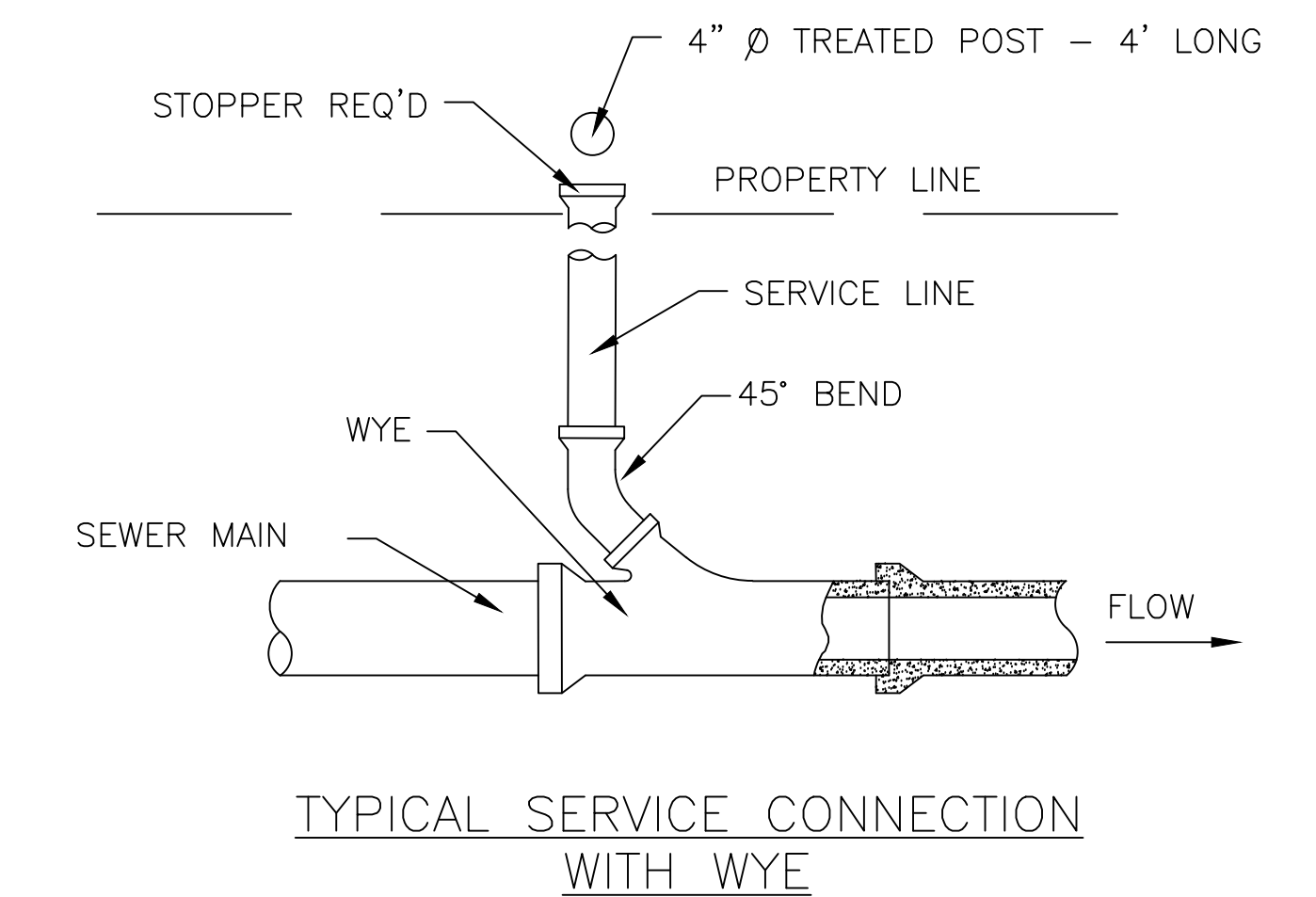
NOTE:
1) USE TYPE "A" MANHOLE CASTING IN STREET R.O.W.
2) USE HARPER NO. 2 OR VULCAN NO. VM-15



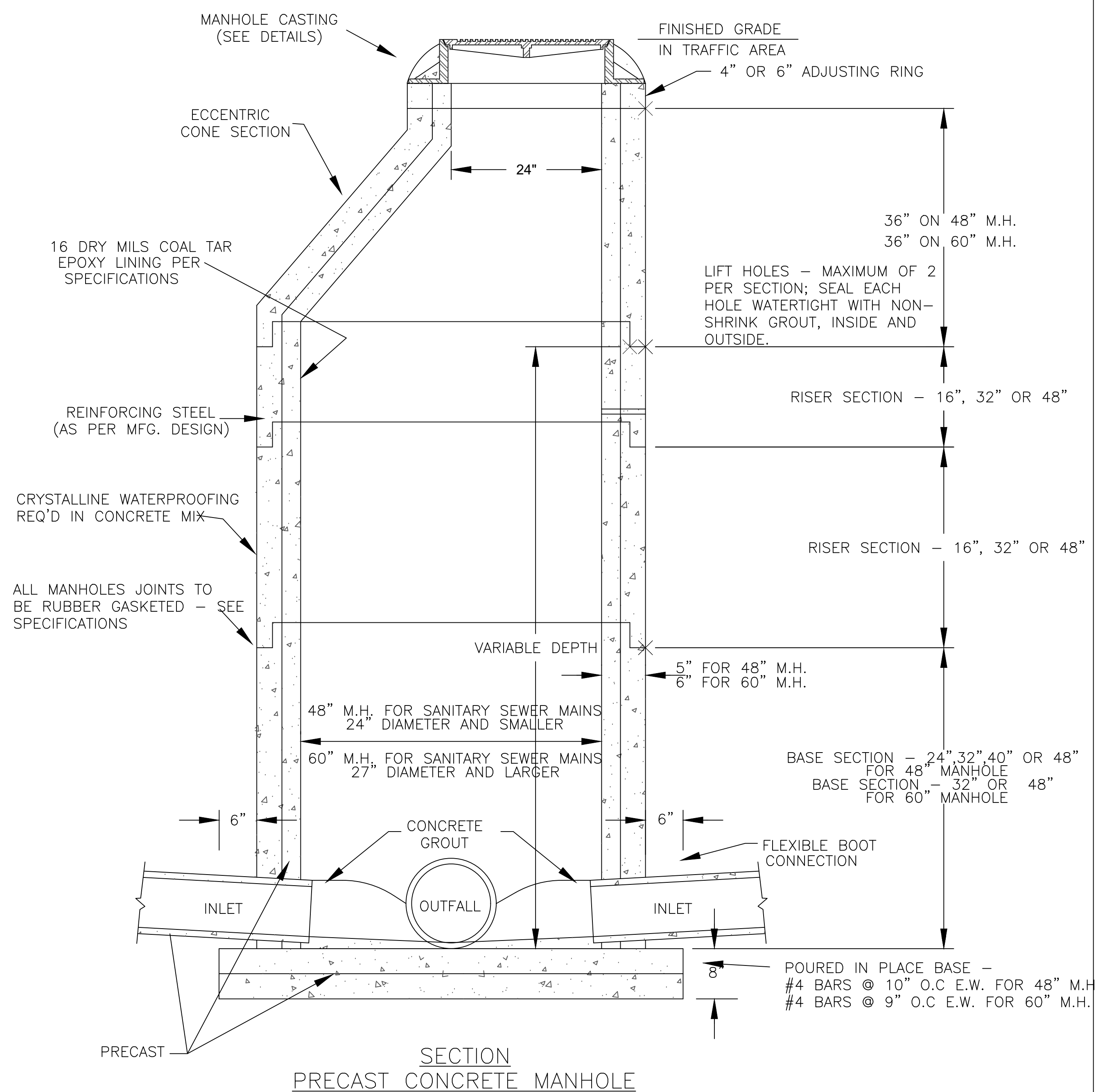
NOTE:
1) USE TYPE "C" MANHOLE CASTING FOR PRECAST MANHOLE NOT IN STREET R.O.W.
2) USE HARPER NO. 8 (330 LBS), NEENAH NO. R-1779 (300 LBS) OR VULCAN NO. VM-7 (330 LBS)



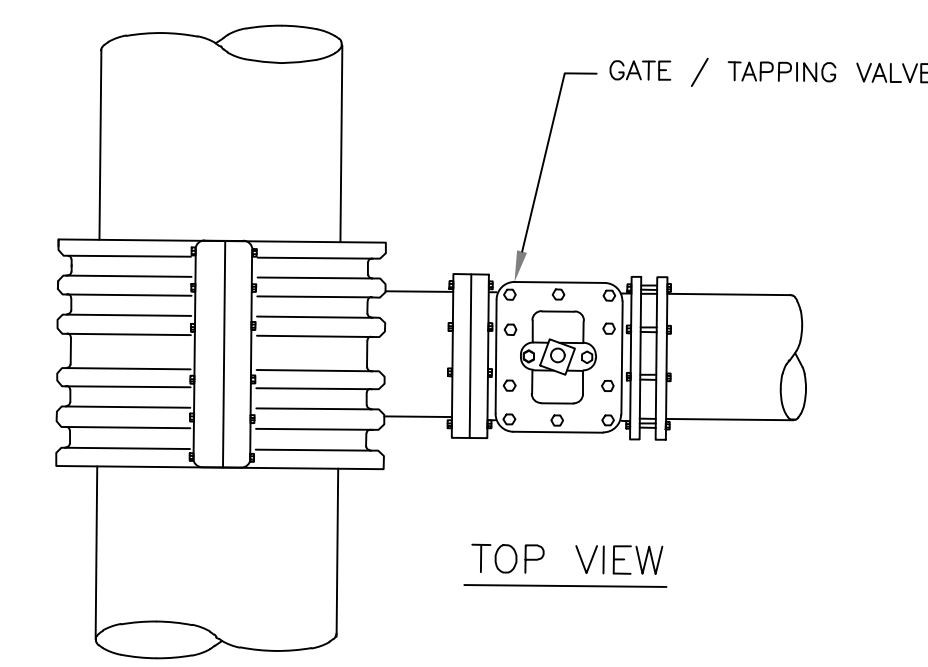
NOTE: IN AREAS WHERE CROSSING STATE/FEDERAL HIGHWAYS, SEE HIGHWAY PERMIT FOR SPECIFIC AND/OR ADDITIONAL INFORMATION.



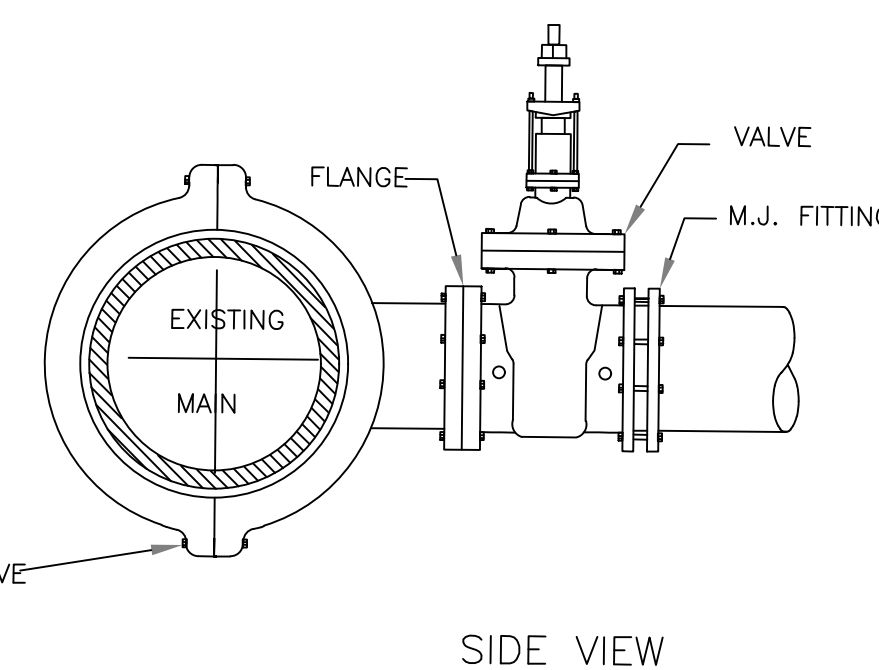
TYPICAL SERVICE CONNECTION WITH WYE



SECTION PRECAST CONCRETE MANHOLE

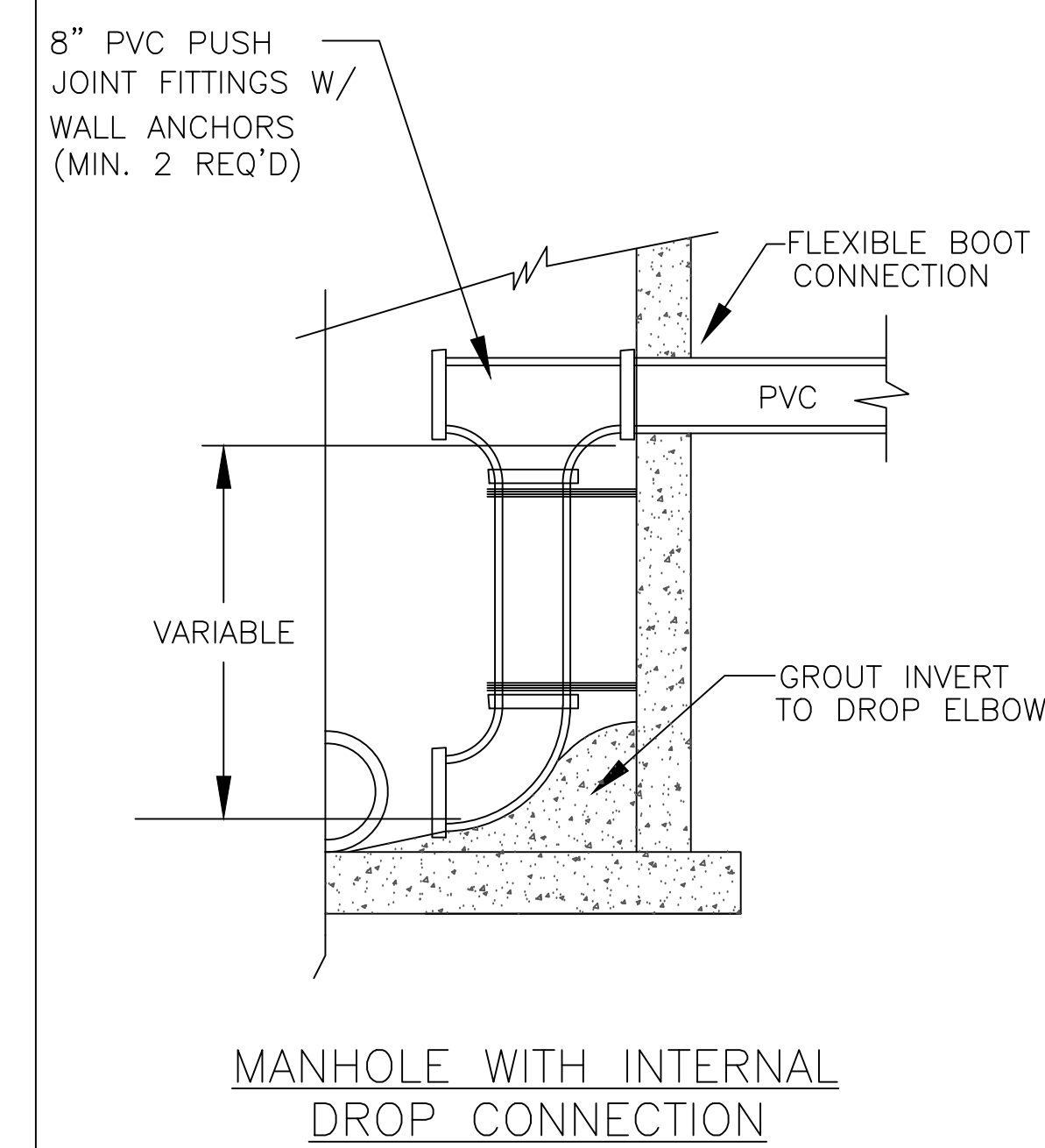


TOP VIEW

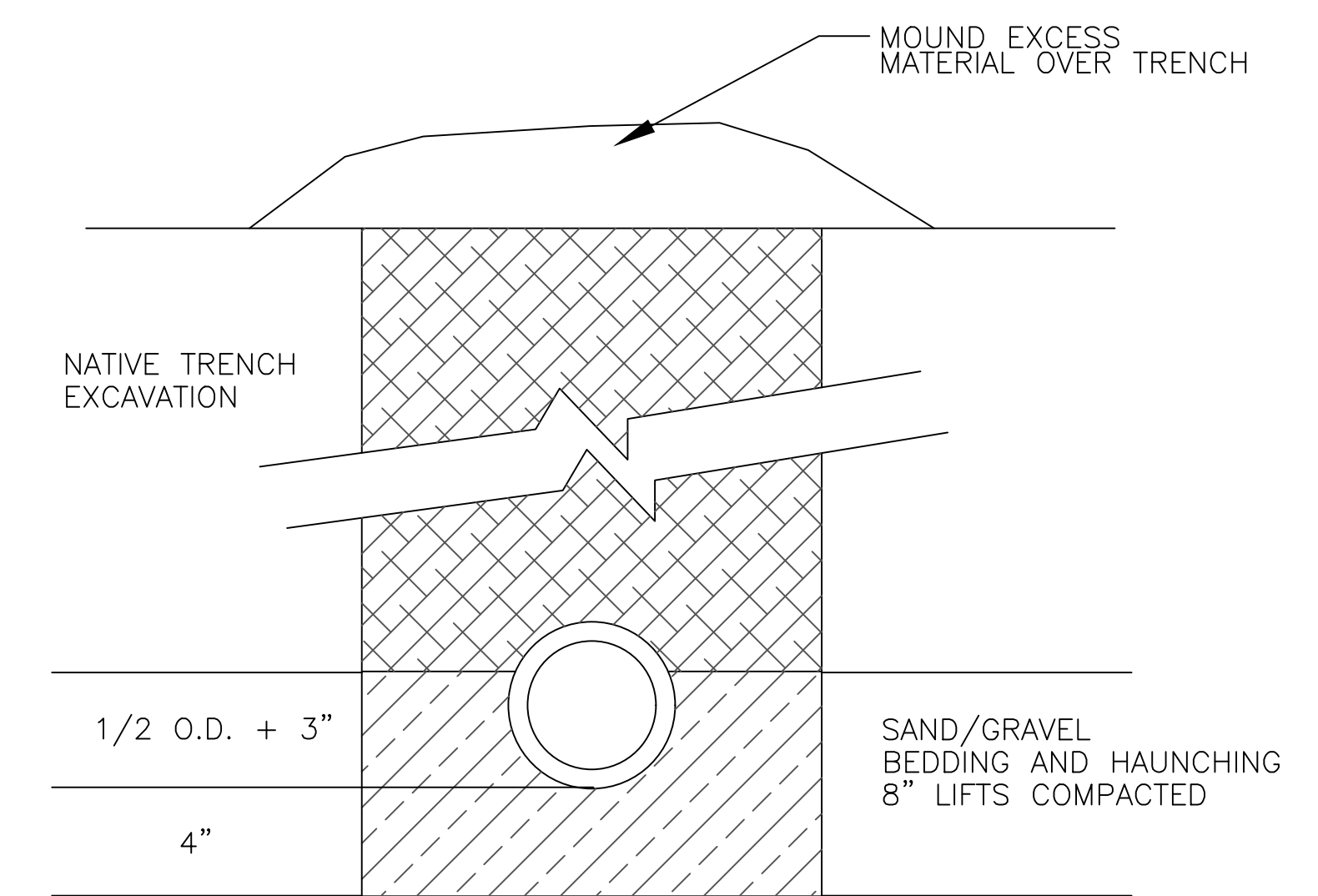


SIDE VIEW

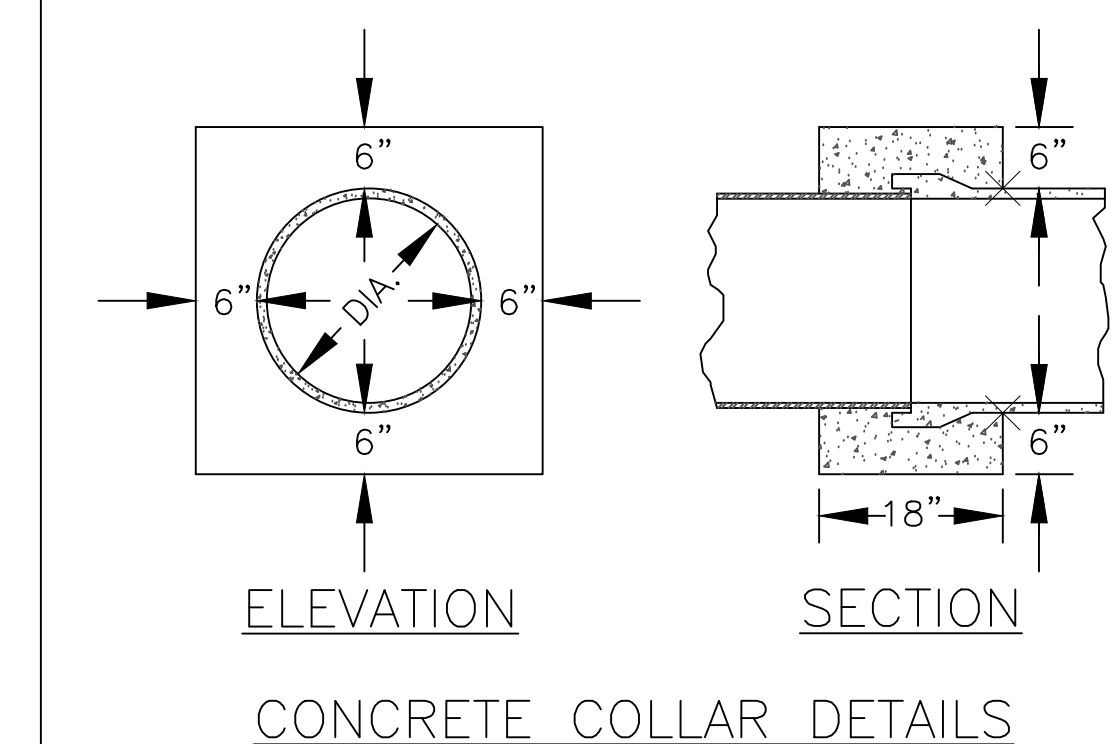
HOT TAP VALVE ASSEMBLY



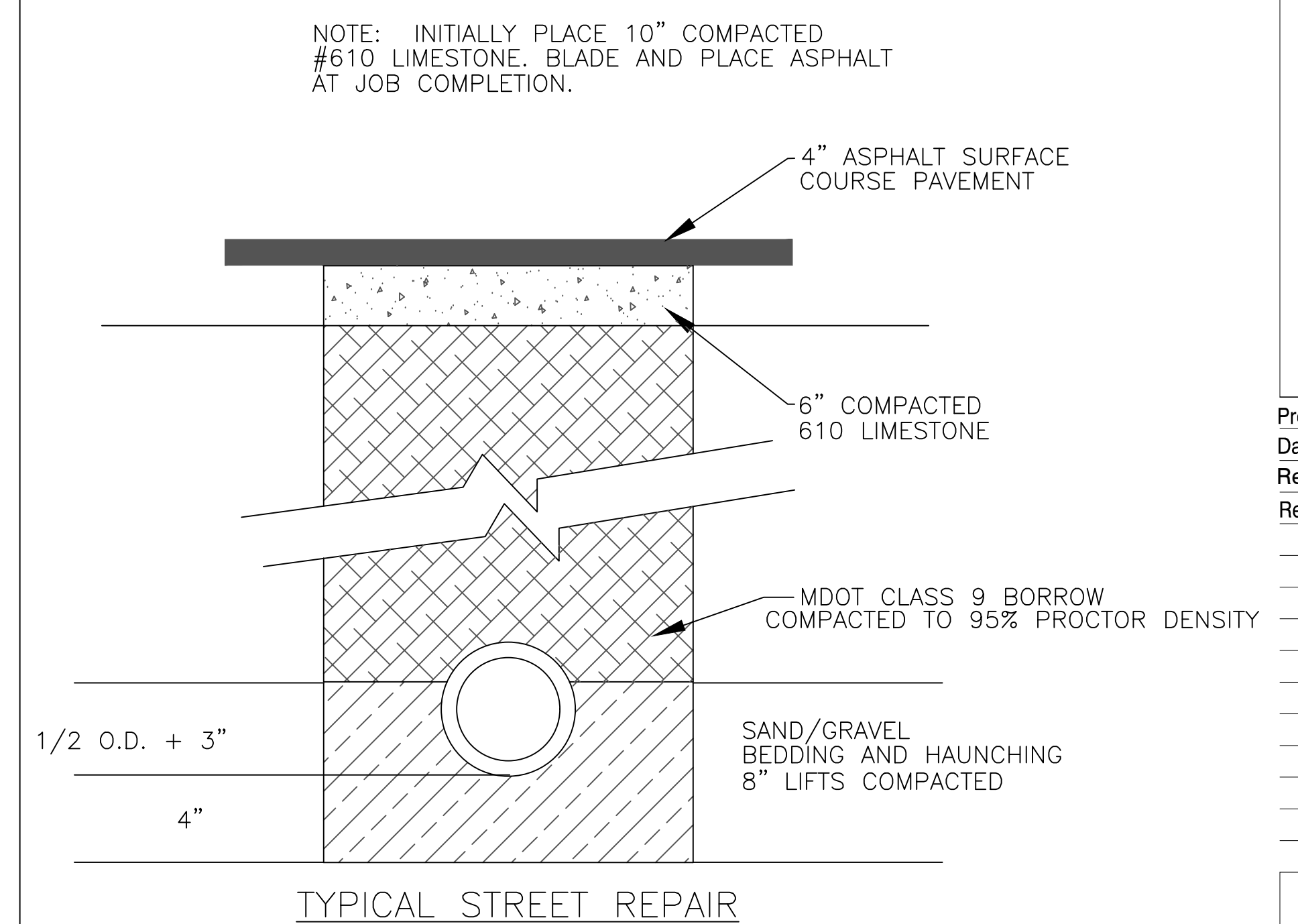
MANHOLE WITH INTERNAL DROP CONNECTION



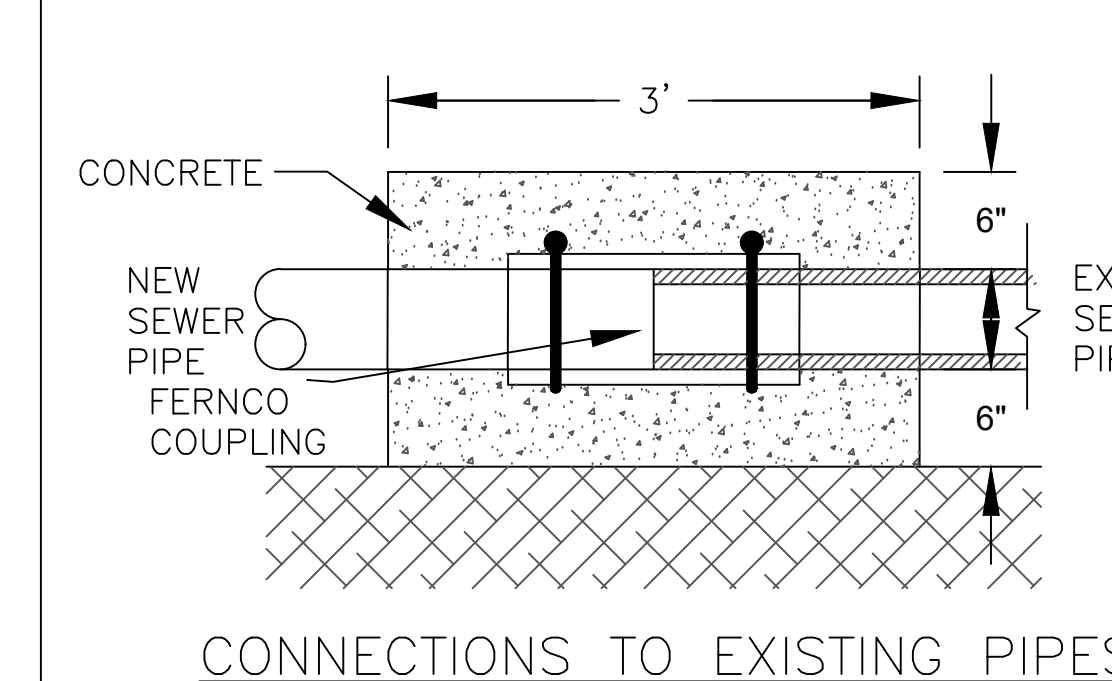
PVC GRAVITY PIPE BEDDING & HAUNCHING BACKFILL DETAIL



ELEVATION SECTION
CONCRETE COLLAR DETAILS



TYPICAL STREET REPAIR



CONNECTIONS TO EXISTING PIPES

Meridian High School Baseball/Softball

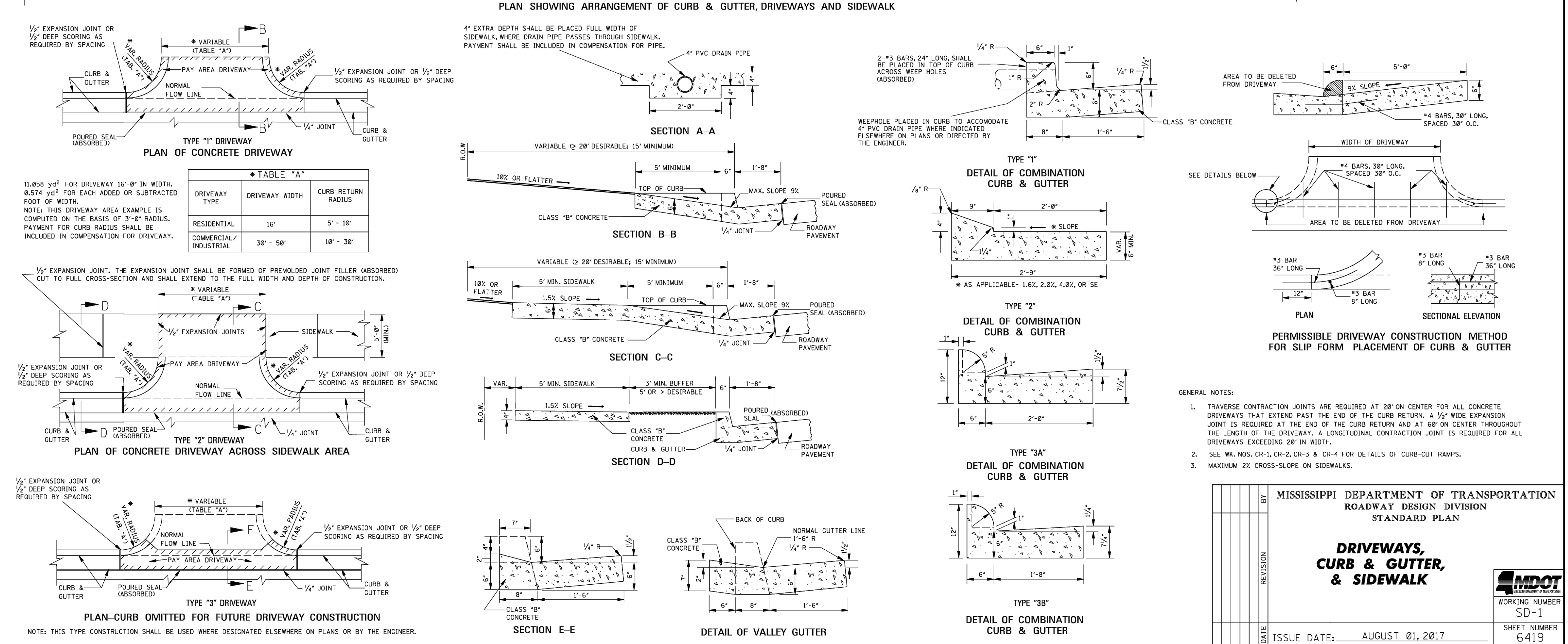
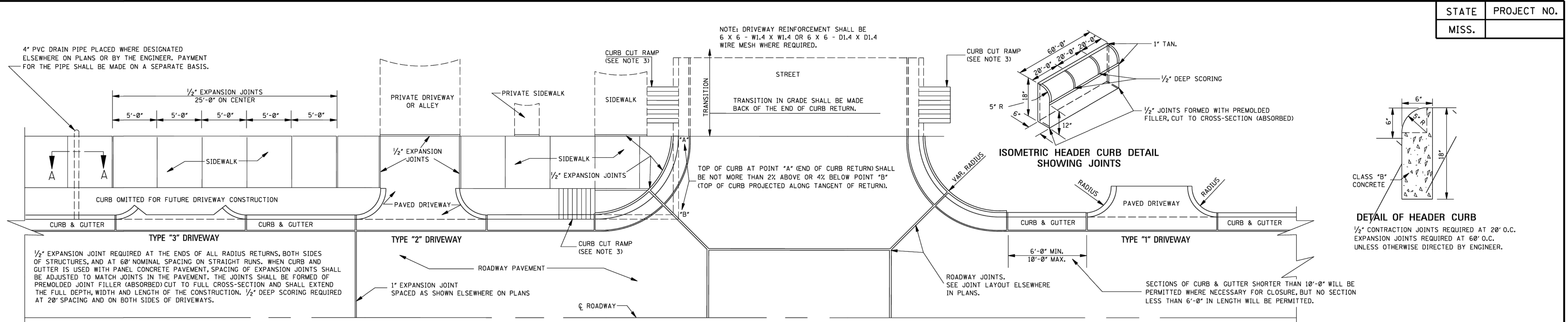
2320 32nd St., Meridian, MS 39305

100% Construction Documents

Project No 22034-03
Date March 6, 2023
Revisions Rev Date
Rev. 4 April 19, 2023



STATE	PROJECT NO.
MISS.	



*** TABLE "A"**

DRIVEWAY TYPE	DRIVEWAY WIDTH	CURB RETURN RADIUS
RESIDENTIAL	16'	5' - 10'
COMMERCIAL/ INDUSTRIAL	30' - 50'	10' - 30'

- GENERAL NOTES:**
1. TRANSVERSE CONTRACTION JOINTS ARE REQUIRED AT 20' ON CENTER FOR ALL CONCRETE DRIVEWAYS THAT EXTEND PAST THE END OF THE CURB RETURN. A 1/4" WIDE EXPANSION JOINT IS REQUIRED AT THE END OF THE CURB RETURN AND AT 60' ON CENTER THROUGHOUT THE LENGTH OF THE DRIVEWAY. A LONGITUDINAL CONTRACTION JOINT IS REQUIRED FOR ALL DRIVEWAYS EXCEEDING 20' IN WIDTH.
 2. SEE WK. NOS. CR-1, CR-2, CR-3 & CR-4 FOR DETAILS OF CURB-CUT RAMPS.
 3. MAXIMUM 2% CROSS-SLOPE ON SIDEWALKS.

**MISSISSIPPI DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION
STANDARD PLAN**

**DRIVEWAYS,
CURB & GUTTER,
& SIDEWALK**

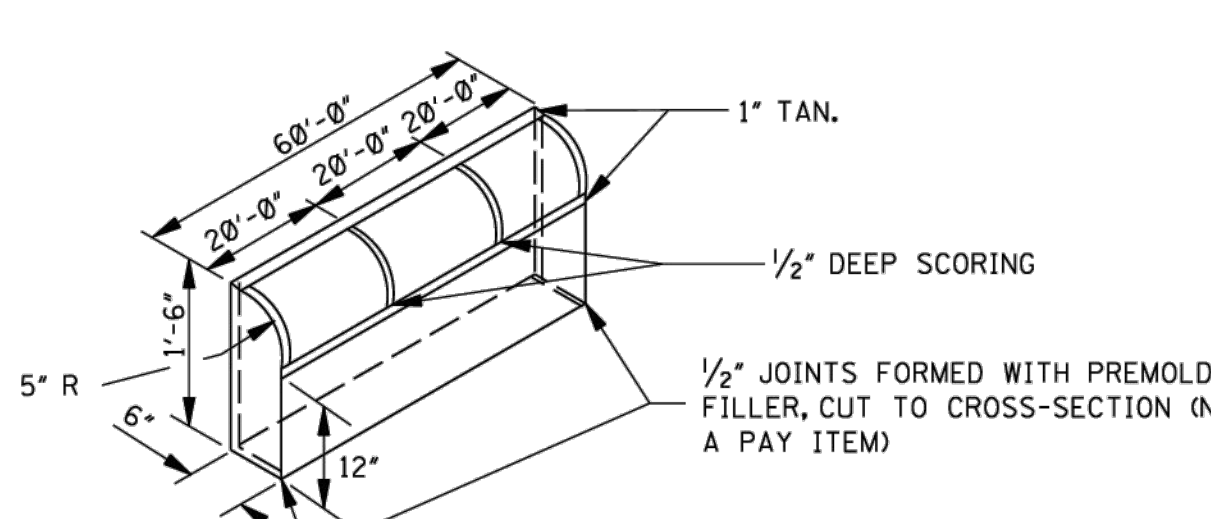
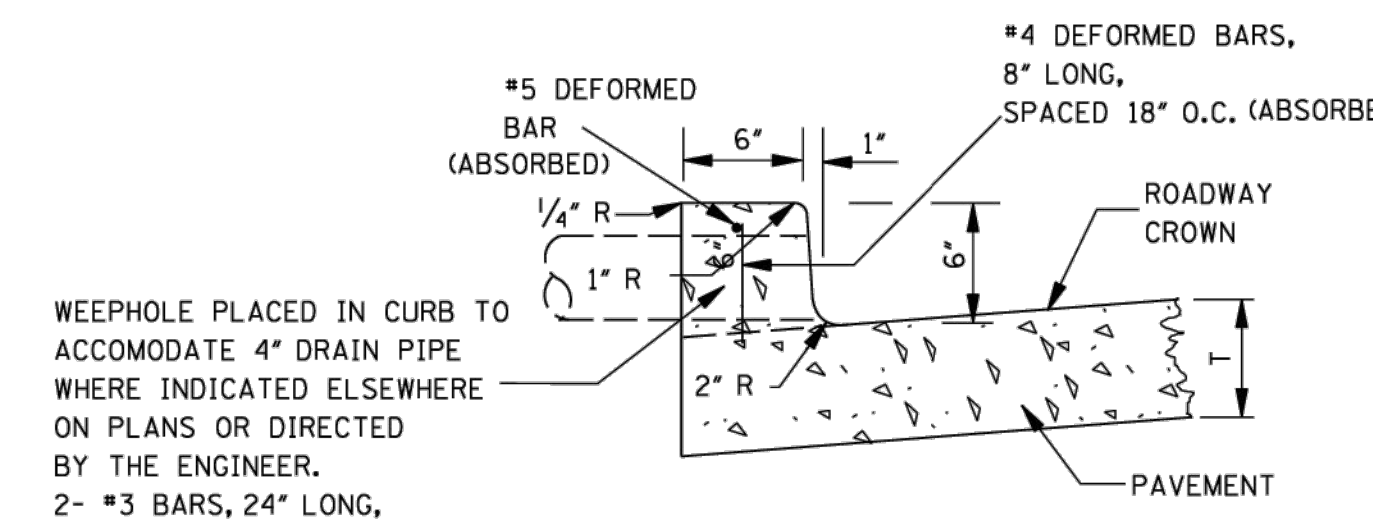
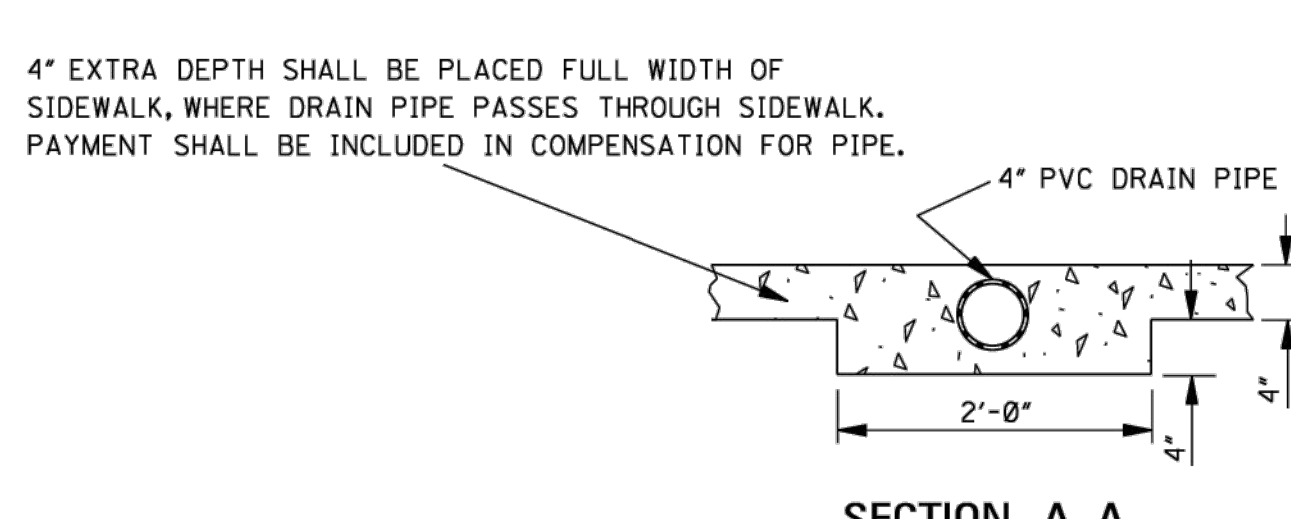
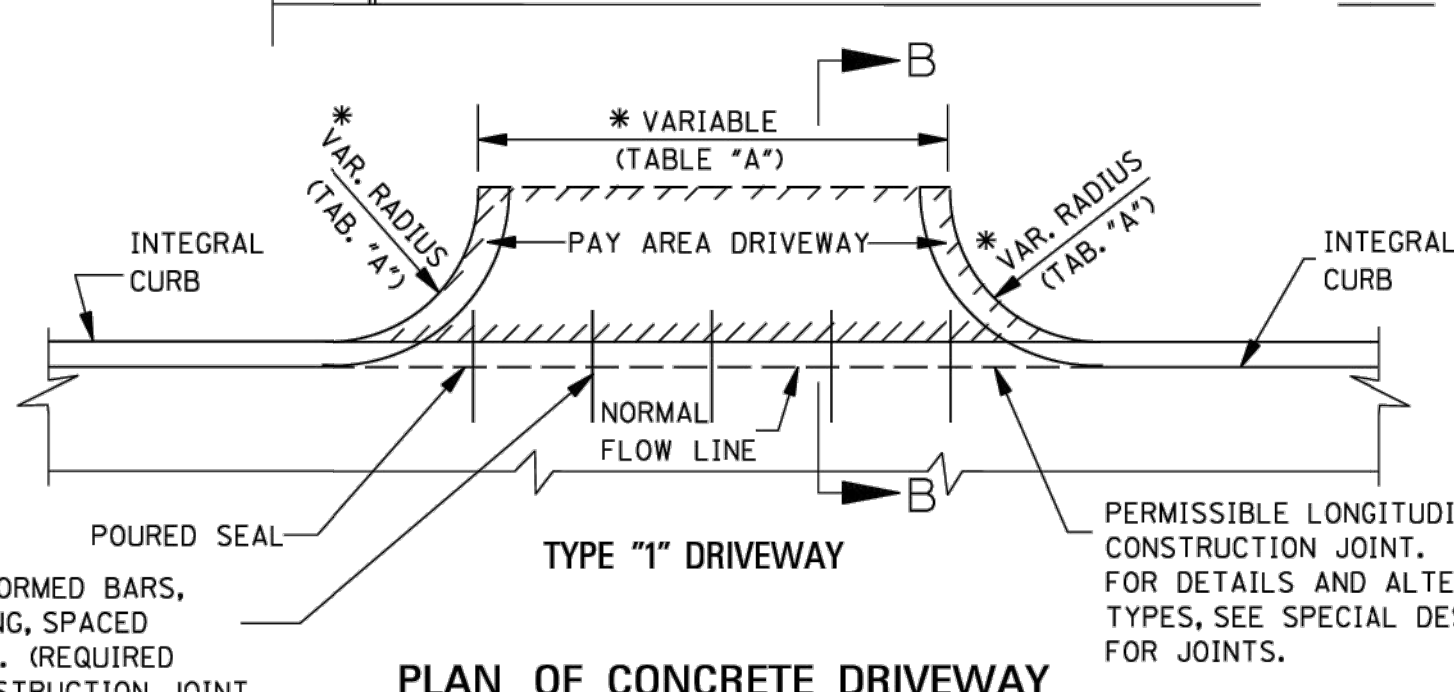
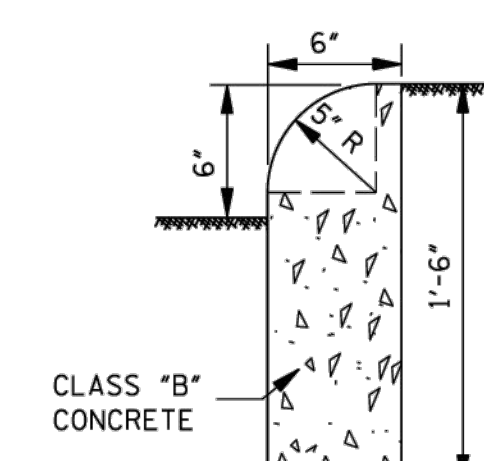
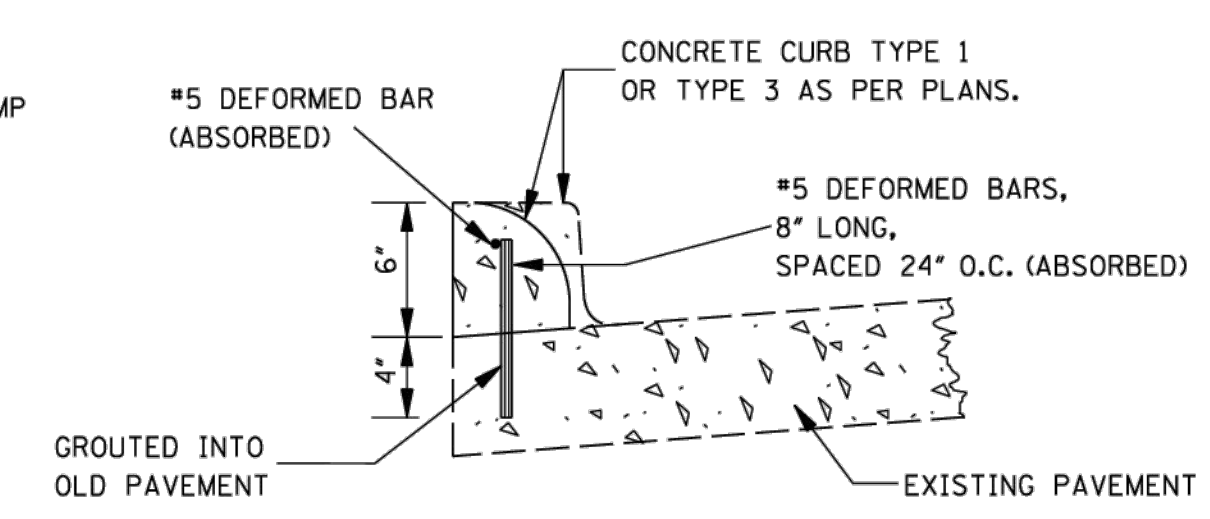
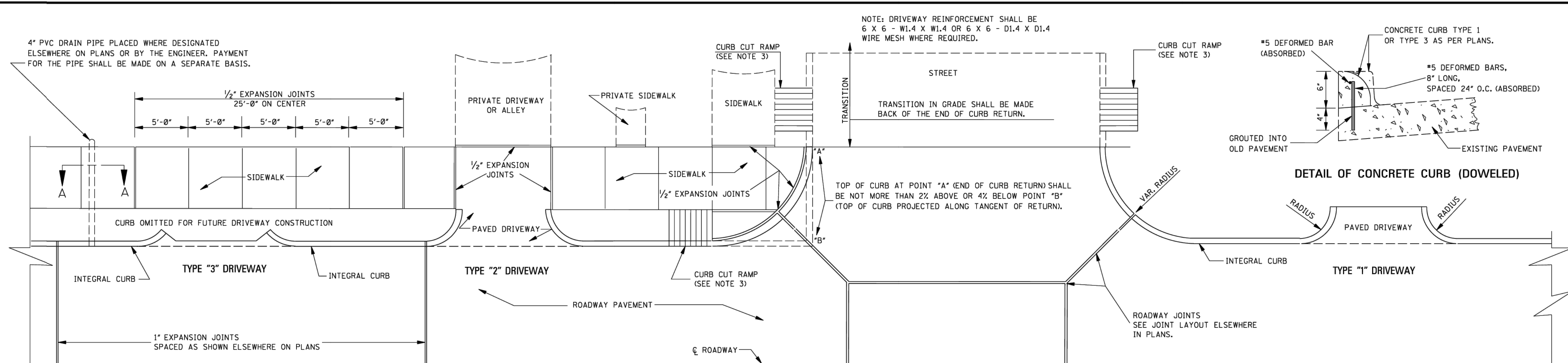
DATE	REVISION	BY

ISSUE DATE: AUGUST 01, 2017

WORKING NUMBER SD-1
SHEET NUMBER 6419

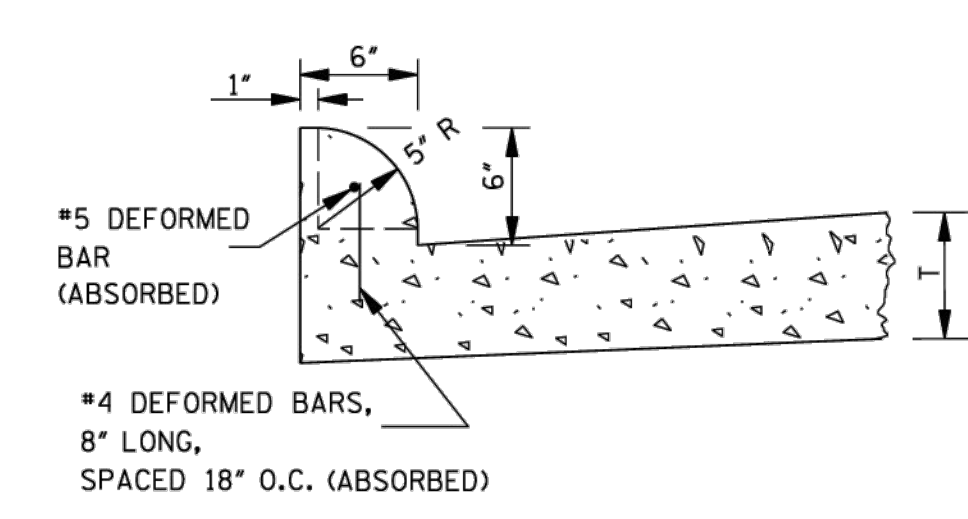
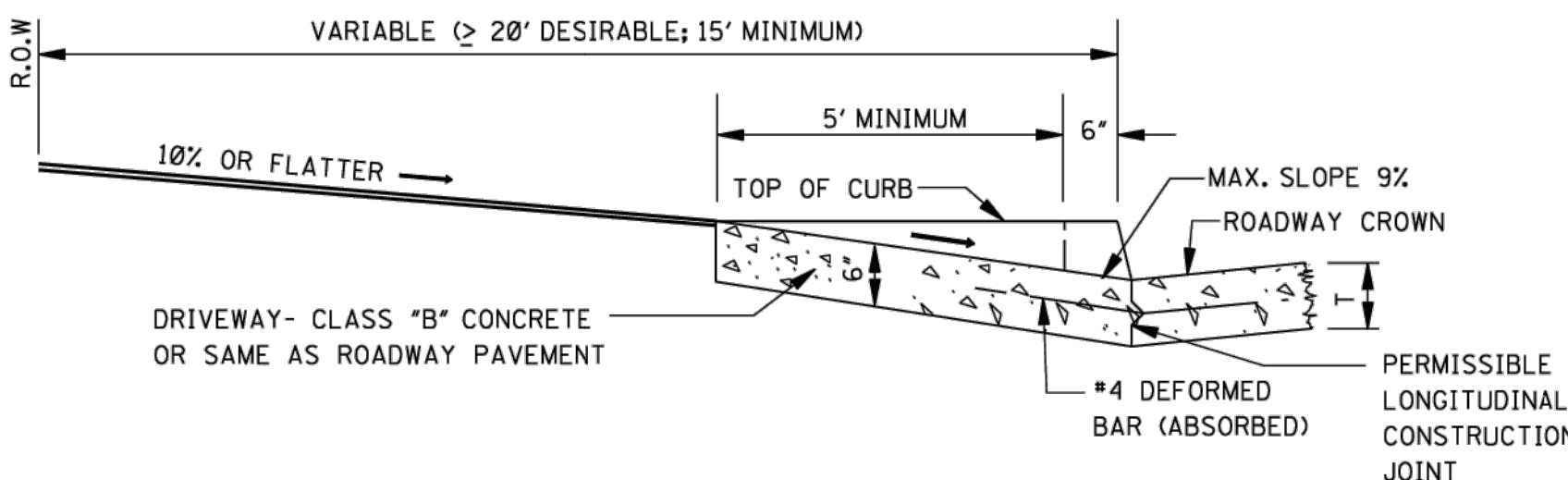
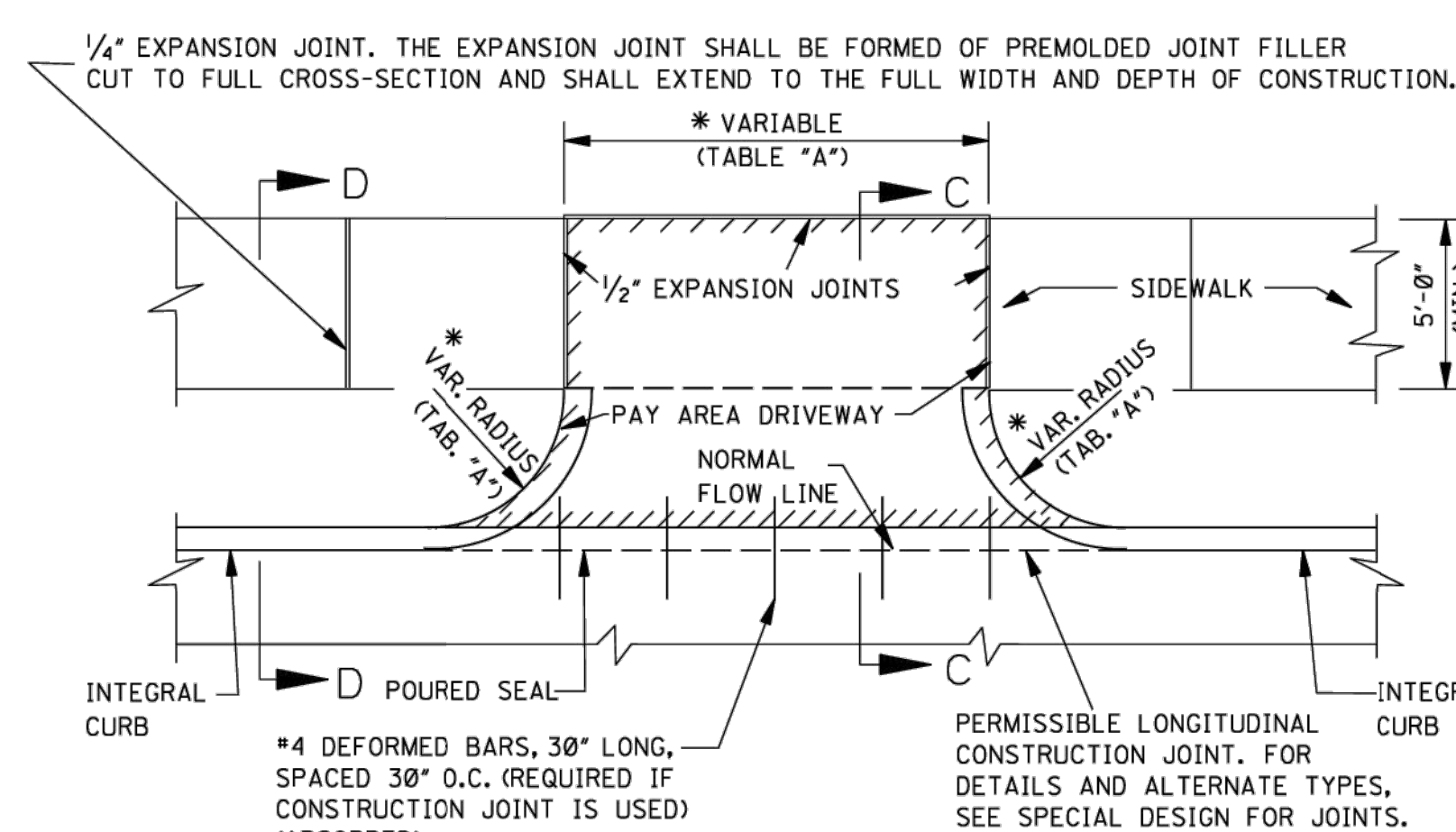


STATE	PROJECT NO.
MISS.	

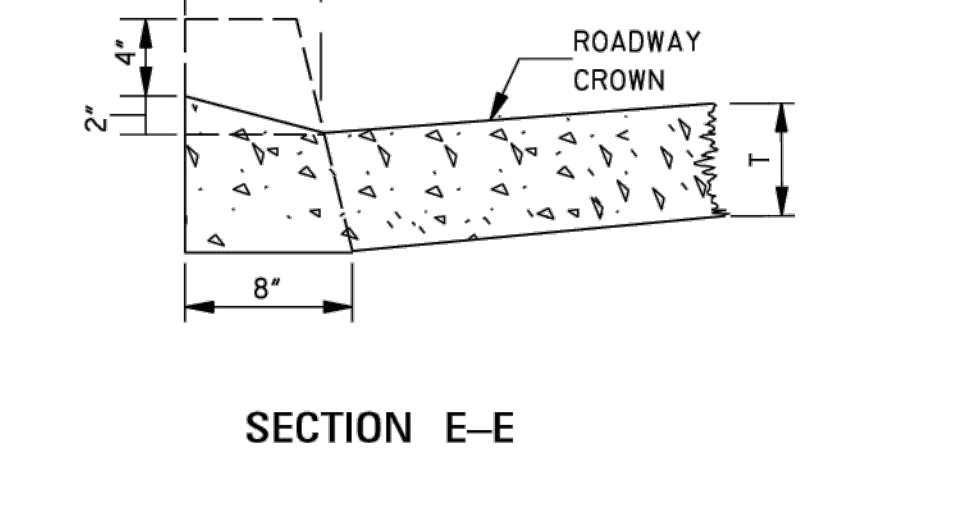
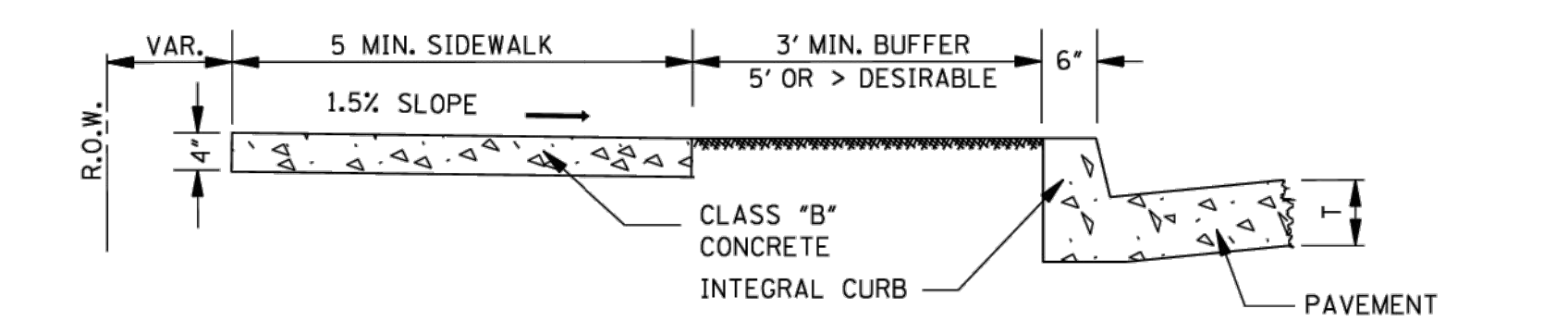
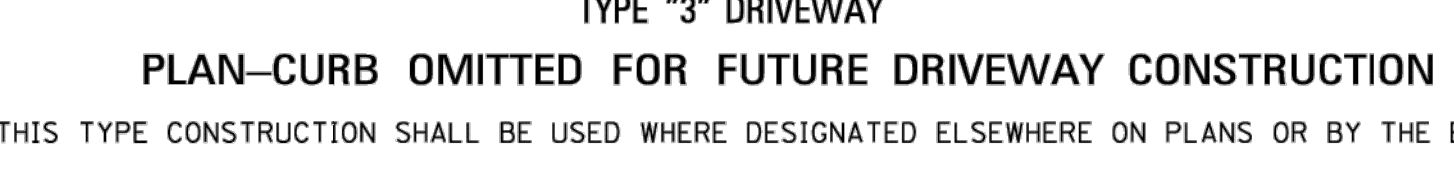
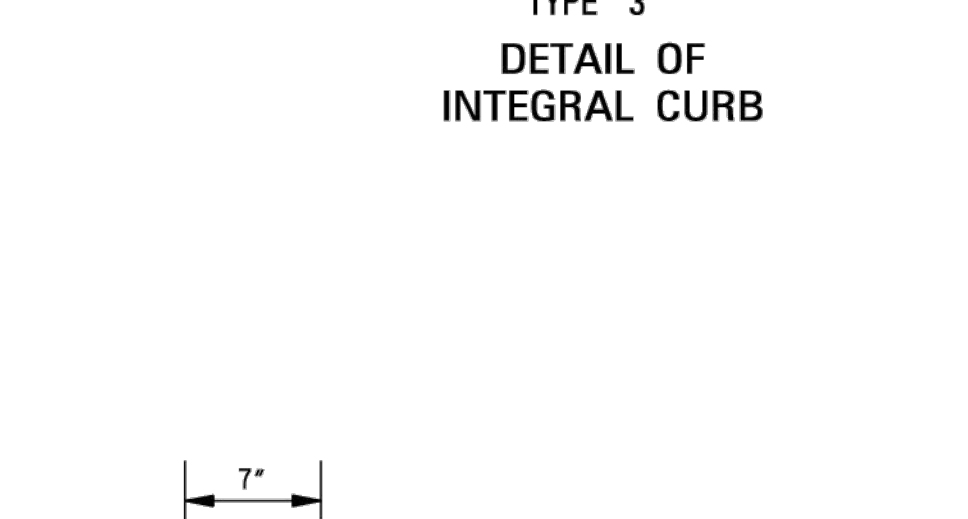
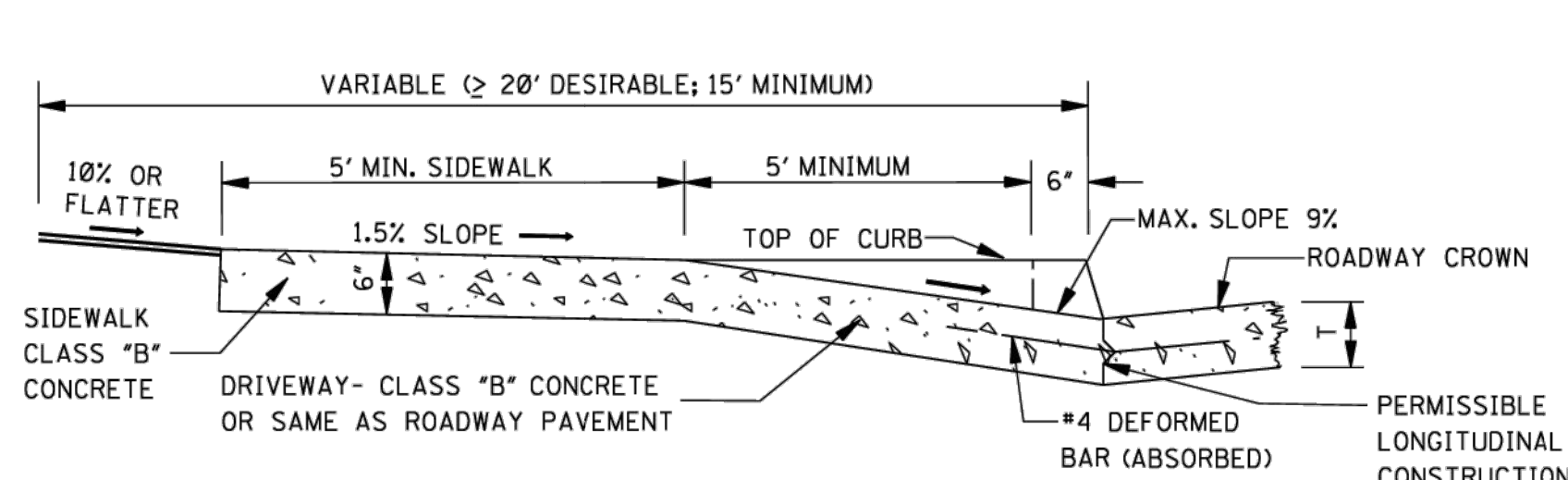
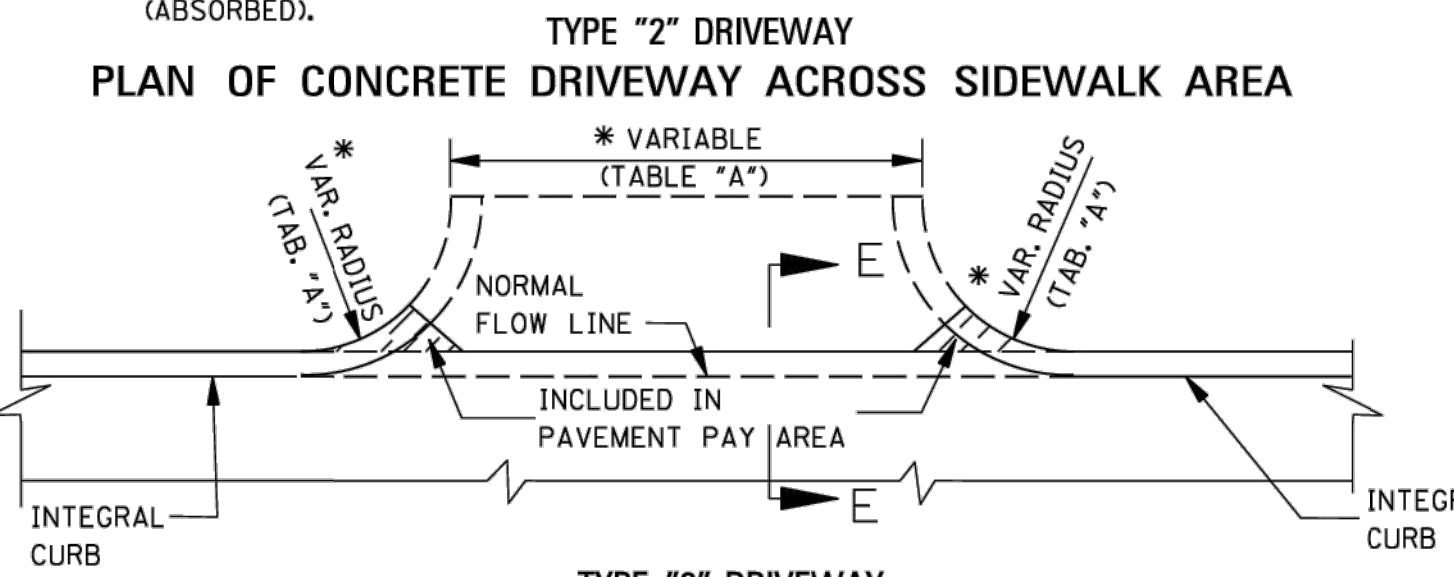


***TABLE "A"**

DRIVEWAY TYPE	DRIVEWAY WIDTH (ft)	CURB RETURN RADIUS (ft)
RESIDENTIAL	16'	5' - 10'
COMMERCIAL/ INDUSTRIAL	30' - 50'	10' - 30'



- GENERAL NOTES:**
1. TRAVERSE CONTRACTION JOINTS ARE REQUIRED AT 20' ON CENTER FOR ALL CONCRETE DRIVEWAYS THAT EXTEND PAST THE END OF THE CURB RETURN. A 1/2" WIDE EXPANSION JOINT IS REQUIRED AT THE END OF THE CURB RETURN AND AT 60' ON CENTER THROUGHOUT THE LENGTH OF THE DRIVEWAY. A LONGITUDINAL CONTRACTION JOINT IS REQUIRED FOR ALL DRIVEWAYS EXCEEDING 20' IN WIDTH.
 2. SEE WK. NOS. CR-1, CR-2, CR-3 & CR-4 FOR DETAILS OF CURB-CUT RAMPS.
 3. MAXIMUM 2% CROSS-SLOPE ON SIDEWALKS.



DATE		BY	REVISION
DATE		BY	REVISION
DATE		BY	REVISION
DATE		BY	REVISION

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION
STANDARD PLAN

**DRIVEWAYS,
INTEGRAL CURB
& SIDEWALK**

WORKING NUMBER
SD-2

SHEET NUMBER
6420

ISSUE DATE: AUGUST 01, 2017

NOTE: THIS TYPE CONSTRUCTION SHALL BE USED WHERE DESIGNATED ELSEWHERE ON PLANS OR BY THE ENGINEER.

WG K

204 West Leake Street
Clinton, Mississippi 39056
p. 601.925.4444

132 West Cherokee Street
Brookhaven, Mississippi 39601
p. 601.833.9598



STATE	PROJECT NO.
MISS.	

GENERAL NOTES:

1. THE DETAILS PROVIDED ARE NOT DRAWN TO SCALE. THE QUANTITY OF DOMES DEPICTED ON THE DETECTABLE WARNING UNIT (THE DOMES AND THE ENTIRE 2' LEVEL SURFACE) IS FOR ILLUSTRATION ONLY.
2. ALL DETECTABLE WARNINGS SHOWN ON THIS SHEET SHALL BE PAID FOR - PER SQUARE FEET, UNLESS OTHERWISE NOTED IN THE PLANS.

DETECTABLE WARNING UNIT DIMENSIONS:

3. DETECTABLE WARNING SURFACES SHALL EXTEND 2' MINIMUM IN THE DIRECTION OF PEDESTRIAN TRAVEL. AT CURB RAMP AND BLENDED TRANSITIONS, DETECTABLE WARNING SURFACES SHALL EXTEND THE FULL WIDTH OF THE RAMP RUN (EXCLUDING ANY FLARED SIDES), BLENDED TRANSITION, OR TURNING SPACE. AT PEDESTRIAN AT-GRADE RAIL CROSSINGS NOT LOCATED WITHIN A STREET OR HIGHWAY, DETECTABLE WARNINGS SHALL EXTEND THE FULL WIDTH OF THE CROSSING. AT BOARDING PLATFORMS FOR BUSES AND RAIL VEHICLES, DETECTABLE WARNING SURFACES SHALL EXTEND THE FULL LENGTH OF THE PUBLIC USE AREAS OF THE PLATFORM. AT BOARDING AND ALIGHTING AREAS AT SIDEWALK OR STREET LEVEL TRANSIT STOPS FOR RAIL VEHICLES, DETECTABLE WARNING SURFACES SHALL EXTEND THE FULL LENGTH OF THE TRANSIT STOP.

HOME ALIGNMENT:

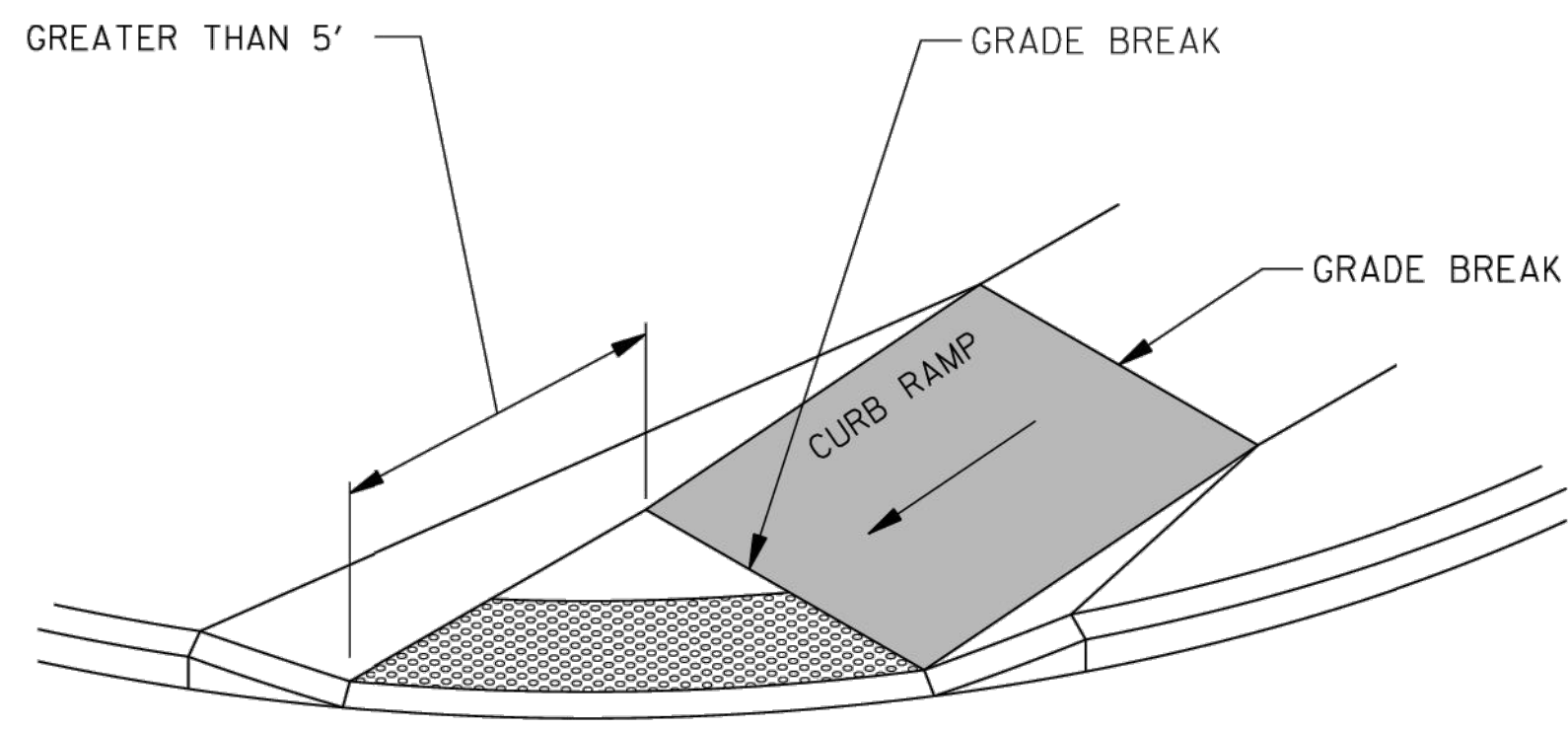
4. THE ROWS OF DOMES SHALL BE ALIGNED TO BE PERPENDICULAR OR RADIAL TO THE GRADE BREAK AT THE RAMP LANDING OR BETWEEN THE CURB RAMP AND THE STREET.
5. WHERE DOMES ARE ARRAYED RADially THEY MAY DIFFER IN DOME DIAMETER AND CENTER-TO-CENTER SPACING WITHIN THE RANGES SPECIFIED ON THIS SHEET.

COLOR REQUIREMENTS:

6. DETECTABLE WARNING SURFACES SHALL CONTRAST VISUALLY WITH ADJACENT GUTTER, STREET OR HIGHWAY, OR PEDESTRIAN ACCESS ROUTE SURFACE, EITHER LIGHT-ON-DARK OR DARK-ON-LIGHT.

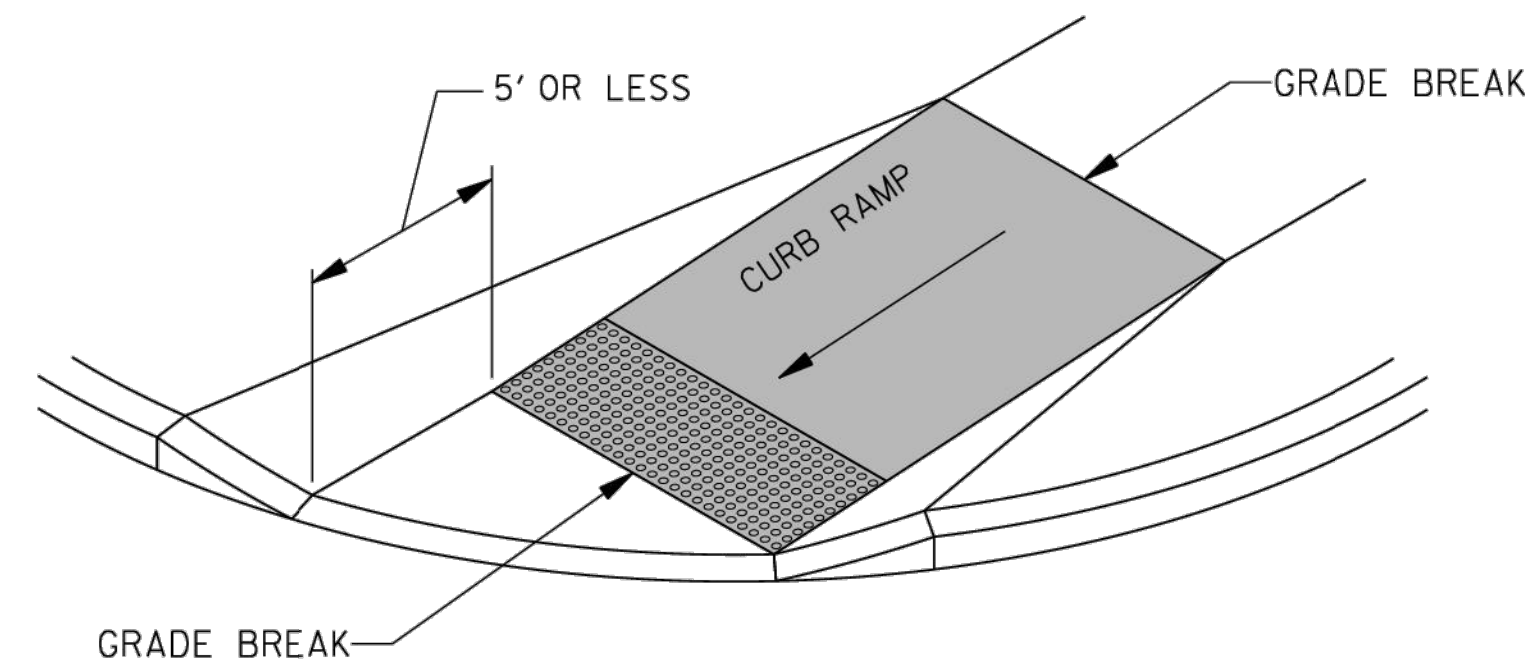
DETECTABLE WARNINGS LOCATIONS:

7. ON PERPENDICULAR CURB RAMP, WHERE THE ENDS OF THE BOTTOM GRADE BREAK ARE IN FRONT OF THE BACK OF CURB, DETECTABLE WARNING SURFACES SHALL BE PLACED AT THE BACK OF CURB. WHERE THE ENDS OF THE BOTTOM GRADE BREAK ARE BEHIND THE BACK OF CURB AND THE DISTANCE FROM EITHER END OF THE BOTTOM GRADE BREAK TO THE BACK OF CURB IS 5' OR LESS, DETECTABLE WARNING SURFACES SHALL BE PLACED ON THE RAMP RUN WITHIN ONE DOME SPACING OF THE BOTTOM GRADE BREAK. WHERE THE ENDS OF THE BOTTOM GRADE BREAK ARE BEHIND THE BACK OF CURB AND THE DISTANCE FROM EITHER END OF THE BOTTOM GRADE BREAK TO THE BACK OF CURB IS MORE THAN 5', DETECTABLE WARNING SURFACES SHALL BE PLACED ON THE LOWER LANDING AT THE BACK OF CURB.
8. ON PARALLEL CURB RAMP, DETECTABLE WARNING SURFACES SHALL BE PLACED ON THE TURNING SPACE AT THE FLUSH TRANSITION BETWEEN THE STREET AND SIDEWALK.
9. ON BLENDED TRANSITIONS, DETECTABLE WARNING SURFACES SHALL BE PLACED AT THE BACK OF CURB. WHERE RAISED PEDESTRIAN STREET CROSSINGS, DEPRESSED CORNERS, OR OTHER LEVEL PEDESTRIAN STREET CROSSINGS ARE PROVIDED, DETECTABLE WARNING SURFACES SHALL BE PLACED AT THE FLUSH TRANSITION BETWEEN THE STREET AND THE SIDEWALK.
10. AT CUT-THROUGH PEDESTRIAN REFUGE ISLANDS, DETECTABLE WARNING SURFACES SHALL BE PLACED AT THE EDGES OF THE PEDESTRIAN ISLAND AND SHALL BE SEPARATED BY A 2' MINIMUM LENGTH OF SURFACE WITHOUT DETECTABLE WARNINGS.
11. AT PEDESTRIAN AT-GRADE RAIL CROSSINGS NOT LOCATED WITHIN A STREET OR HIGHWAY, DETECTABLE WARNING SURFACES SHALL BE PLACED ON EACH SIDE OF THE RAIL CROSSING. THE EDGE OF THE DETECTABLE WARNING SURFACE NEAREST THE RAIL CROSSING SHALL BE 6' MINIMUM AND 15' MAXIMUM FROM THE CENTERLINE OF THE NEAREST RAIL. WHERE PEDESTRIAN GATES ARE PROVIDED, DETECTABLE WARNING SURFACES SHALL BE PLACED ON THE SIDE OF THE GATES OPPOSITE THE RAIL.
12. AT BOARDING PLATFORMS FOR BUSES AND RAIL VEHICLES, DETECTABLE WARNING SURFACES SHALL BE PLACED AT THE BOARDING EDGE OF THE PLATFORM.
13. AT BOARDING AND ALIGHTING AREAS AT SIDEWALK OR STREET LEVEL TRANSIT STOPS FOR RAIL VEHICLES, DETECTABLE WARNING SURFACES SHALL BE PLACED AT THE SIDE OF THE BOARDING AND ALIGHTING AREA FACING THE RAIL VEHICLES.



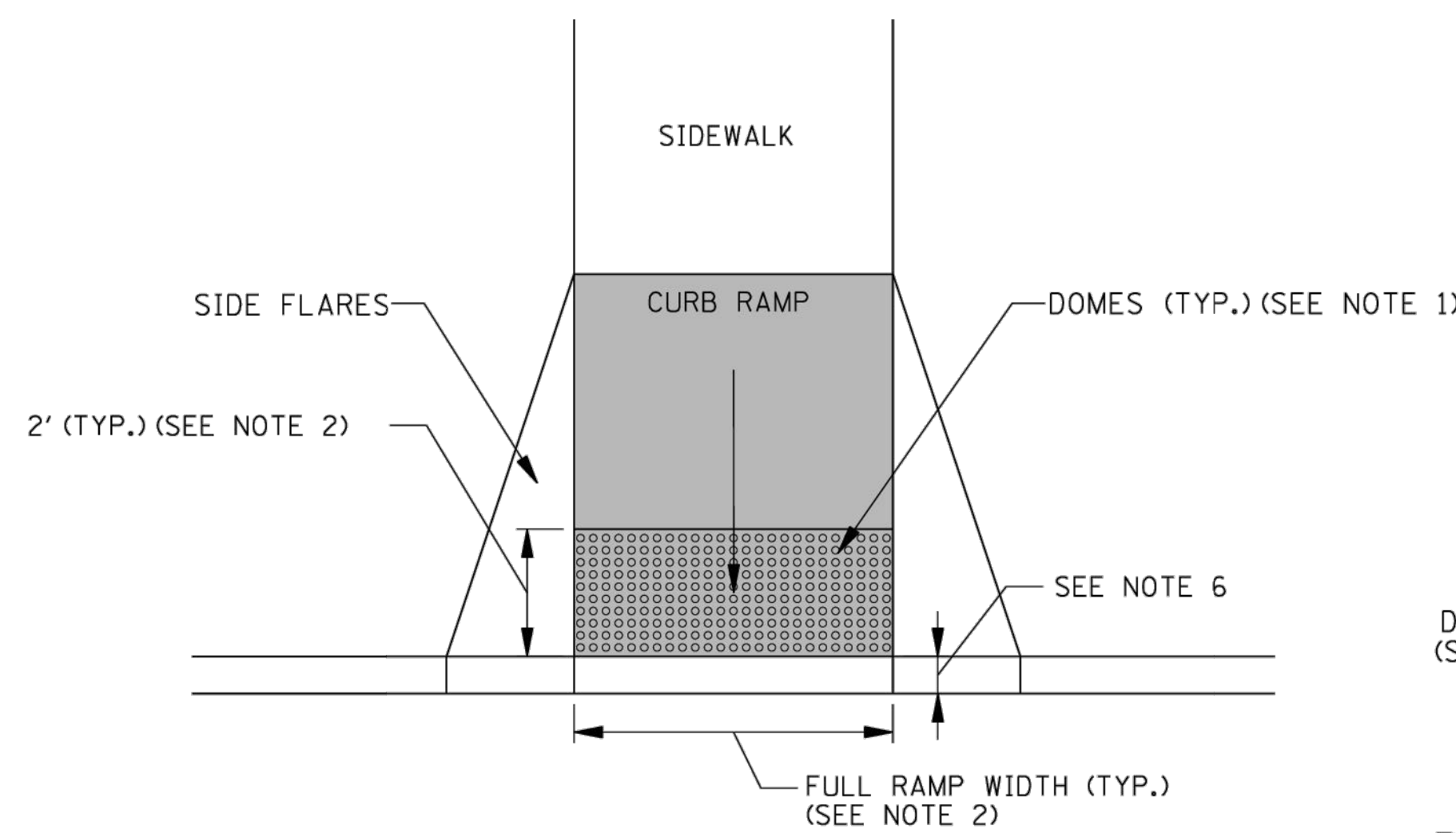
DETECTABLE WARNING PLACEMENT DETAIL 1

NOTE: IF THE DISTANCE FROM THE GRADE BREAK IS GREATER THAN OR EQUAL TO 5', DETECTABLE WARNINGS SHALL BE PLACED ALONG THE RADIUS OF THE CURVE AS SHOWN IN THE ABOVE DETAIL.

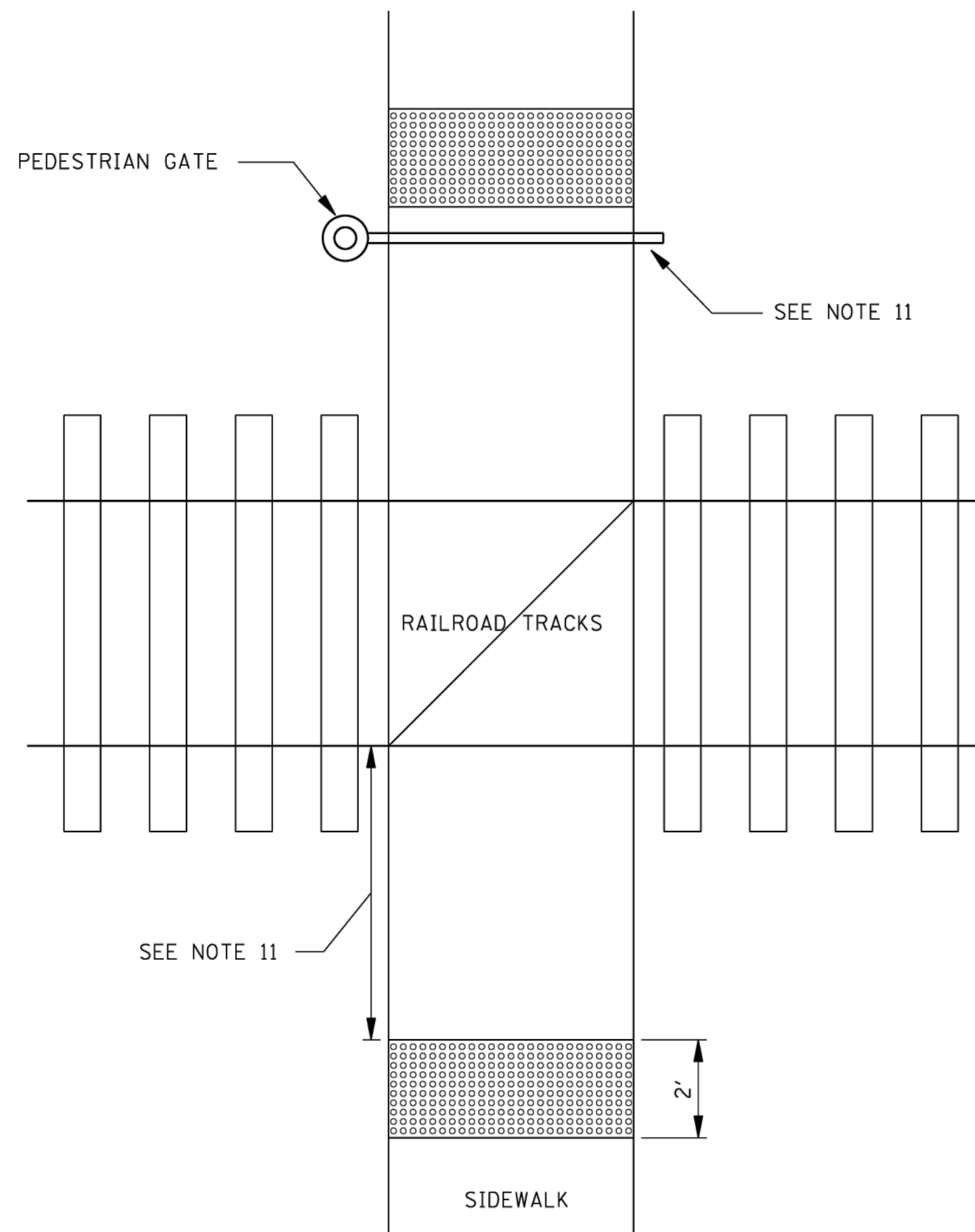


DETECTABLE WARNING PLACEMENT DETAIL 2

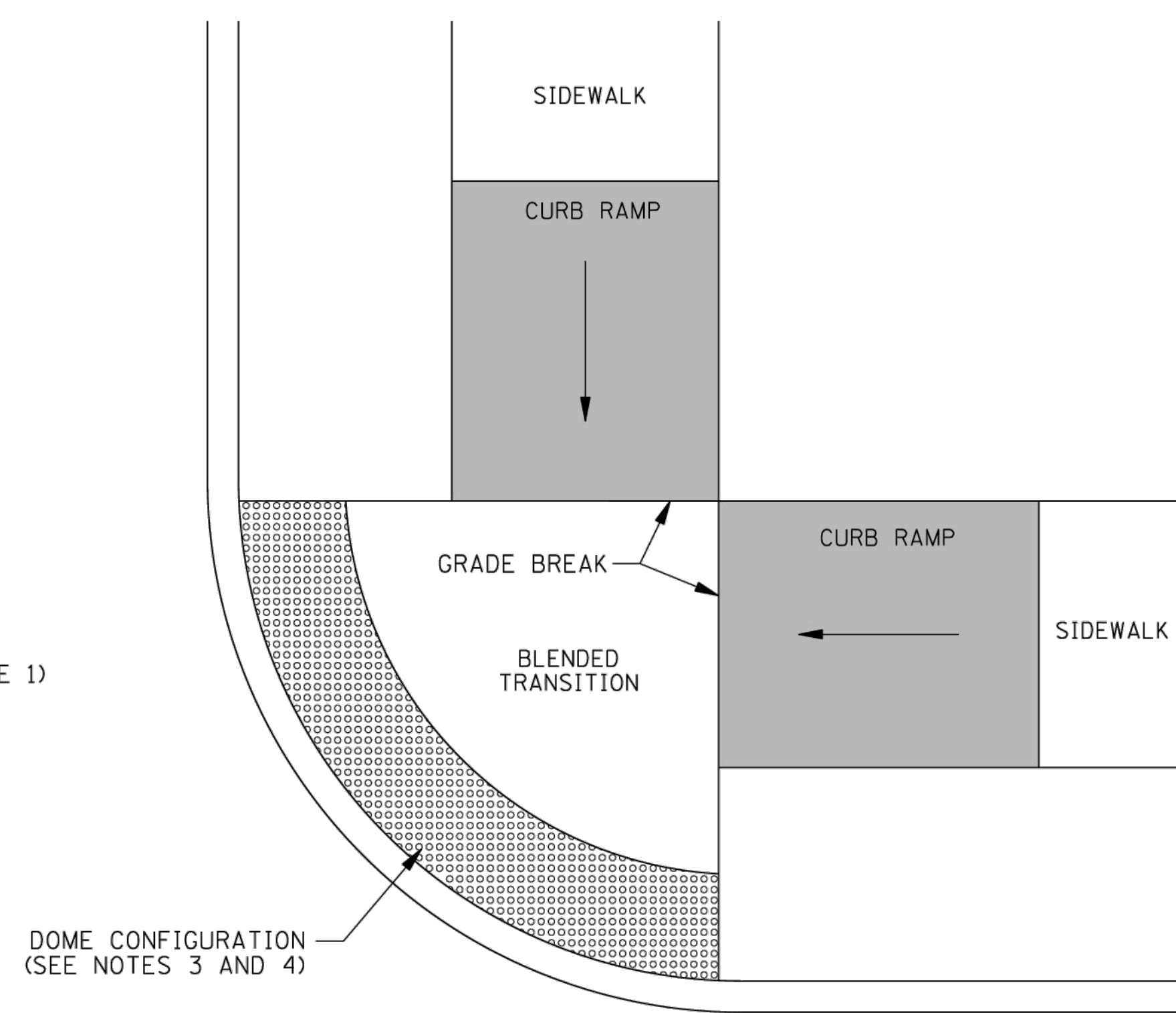
NOTE: IF THE DISTANCE FROM THE GRADE BREAK IS LESS THAN OR EQUAL TO 5', DETECTABLE WARNINGS SHALL BE PLACED ON THE CURB RAMP ALONG THE BOTTOM GRADE BREAK WITH ONE CORNER 5' TO 9' FROM THE FRONT OF THE CURB OR EDGE OF THE ROADWAY.



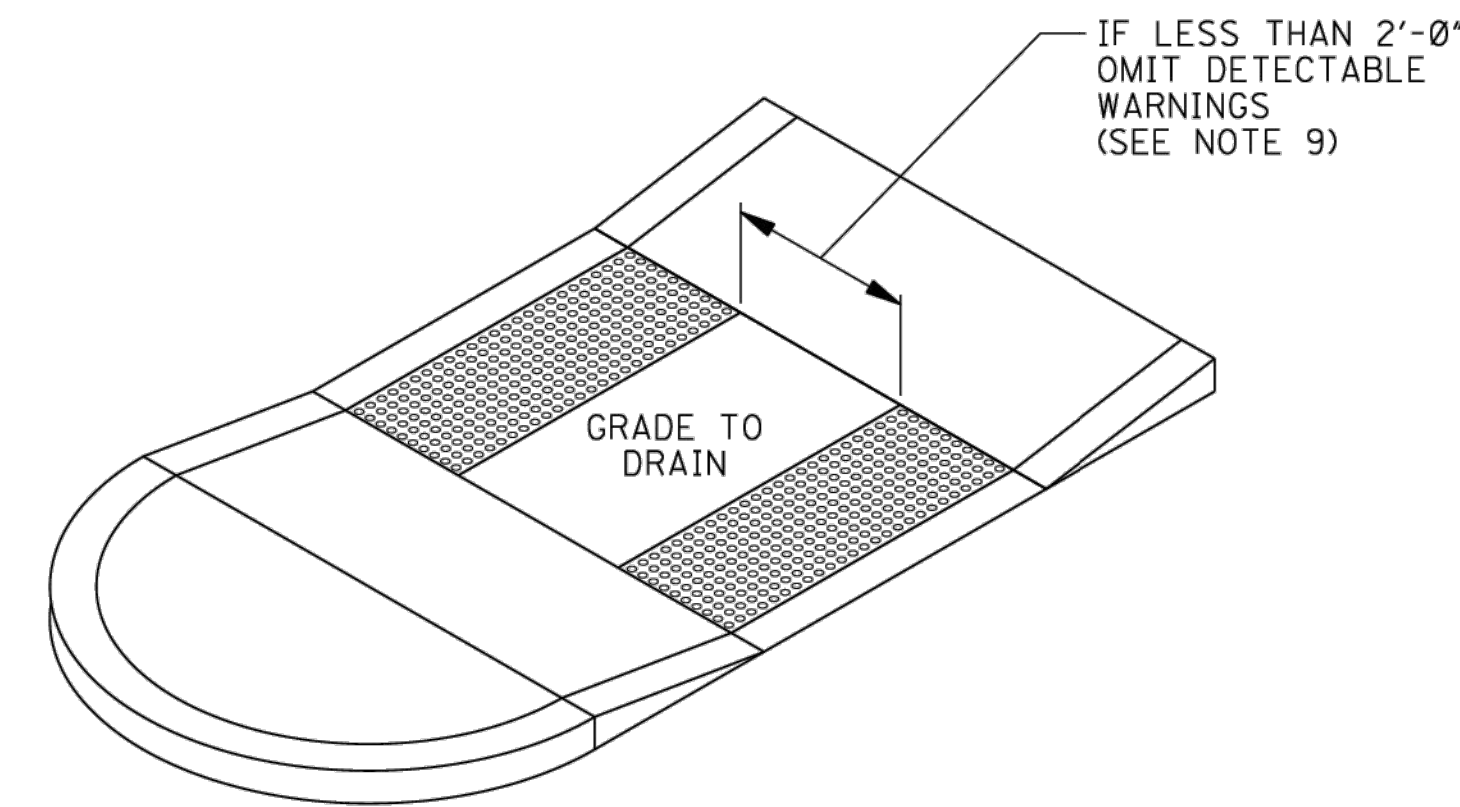
DETECTABLE WARNING AT CURB RAMP



DETECTABLE WARNINGS AT RAILROAD CROSSING

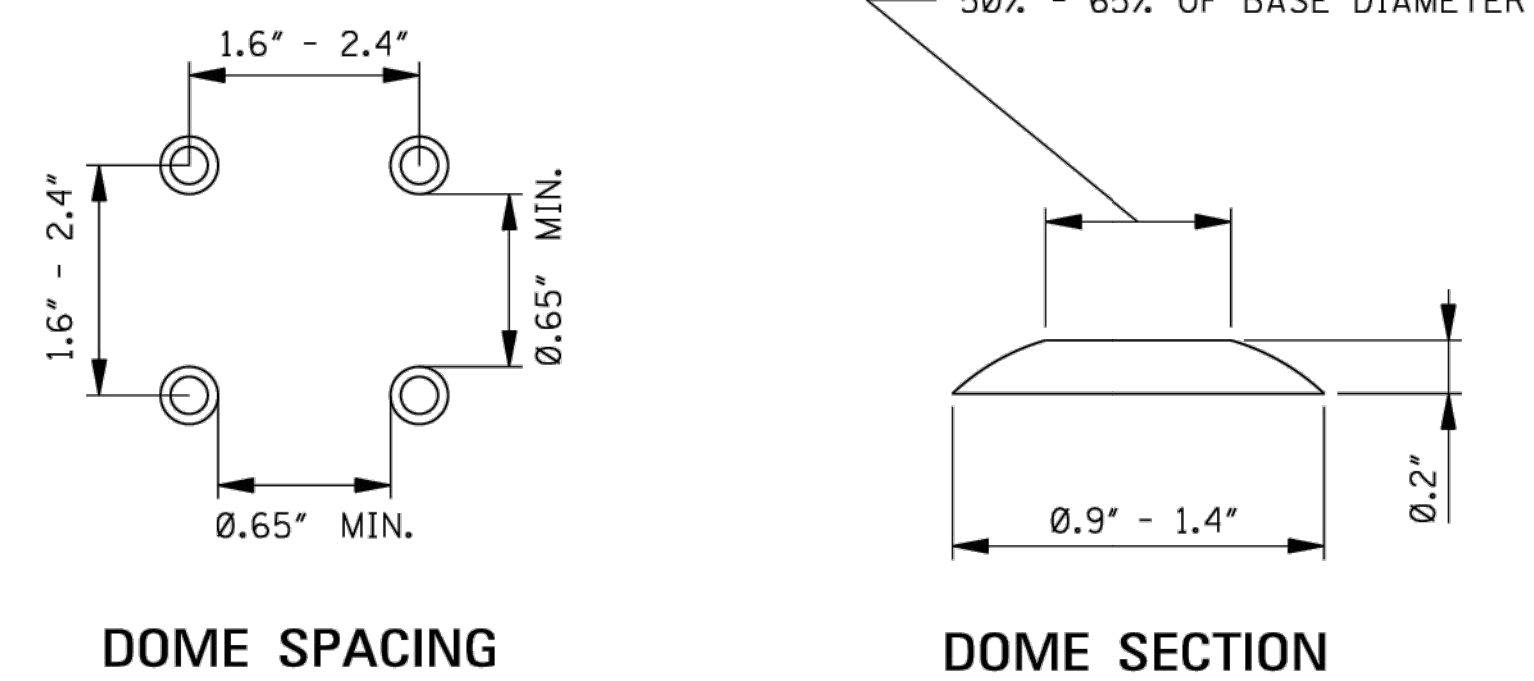


DETECTABLE WARNING AT BLENDED TRANSITION (CONFIGURATION: TYPES K AND J)



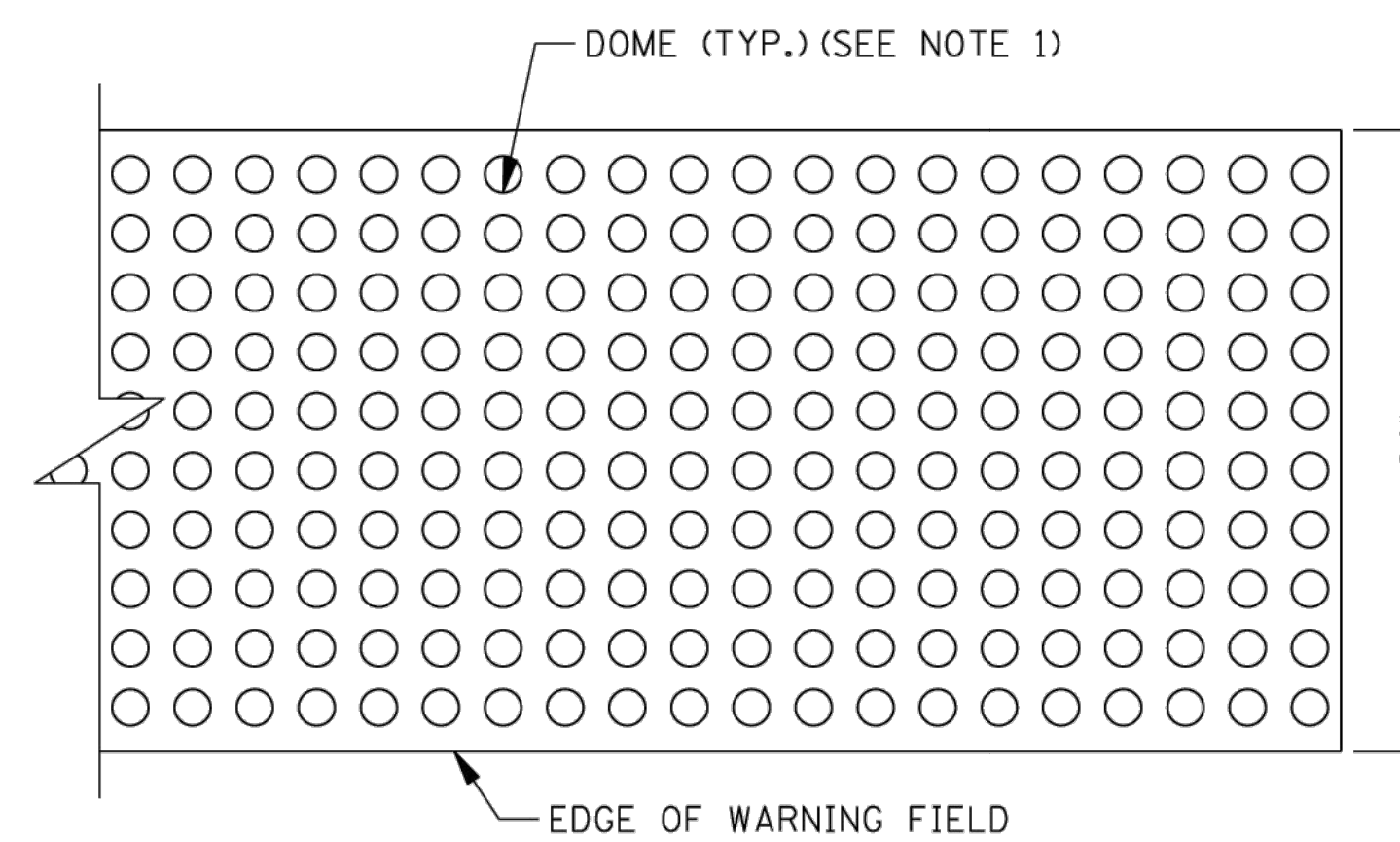
DETECTABLE WARNINGS AT MEDIAN ISLANDS

NON-ELEVATED CROSSING



DOME SPACING

DOME SECTION



DETECTABLE WARNING LAYOUT

MISSISSIPPI DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION STANDARD PLAN	
CURB RAMP DETECTABLE WARNING DETAILS	
WORKING NUMBER CR-4	SHEET NUMBER 6424
DATE	ISSUE DATE: AUGUST 01, 2017



STATE	PROJECT NO.
MISS.	

STANDARD INSTALLATION DETAIL

TABLE 1: BEDDING AND BACKFILL REQUIREMENTS

BEDDING AND BACKFILL REQUIREMENTS FOR NON-RIGID PIPE IN CROSS DRAIN AND STORM DRAIN APPLICATIONS
 A. BEDDING SHALL BE CLASS B IN ACCORDANCE WITH THE MISSISSIPPI STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION.
 B. BACKFILL MATERIAL SHALL BE ONE OF THE FOLLOWING:
 1. FLOWABLE FILL IN ACCORDANCE WITH THE MISSISSIPPI STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION LATEST EDITION.
 2. CRUSHED STONE AGGREGATE BACKFILL IN ACCORDANCE WITH THE MISSISSIPPI STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION.
 IF FLOWABLE FILL IS UTILIZED, CARE SHALL BE TAKEN TO PREVENT "FLOATING" OF THE PIPE. THE COST OF FURNISHING AND PLACING THE REQUIRED BEDDING AND BACKFILL MATERIAL INDICATED IN A AND B SHALL BE INCLUDED IN THE UNIT COST OF THE NON-RIGID PIPE ALTERNATE, I.E., THERE IS NO SEPARATE PAY ITEM FOR NON-RIGID PIPE BEDDING AND BACKFILL MATERIAL.

BEDDING AND BACKFILL REQUIREMENTS FOR NON-RIGID PIPE IN SIDE DRAIN APPLICATIONS
 A. BEDDING SHALL BE CLASS C IN ACCORDANCE WITH THE MISSISSIPPI SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION.
 B. BACKFILL MATERIAL SHALL BE IN ACCORDANCE WITH THE MISSISSIPPI SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION. PIPES THAT SERVE AS A SIDE DRAIN ON DEPARTMENT RIGHT OF WAY, BUT CARRY DRAINAGE UNDER A COUNTY OR LOCAL ROAD SHALL ADHERE TO THE BEDDING AND BACKFILL REQUIREMENTS FOR A CROSS DRAIN CONTAINED ABOVE.
 THE COST OF FURNISHING AND PLACING THE REQUIRED BEDDING AND BACKFILL MATERIAL INDICATED IN A AND B SHALL BE INCLUDED IN THE UNIT COST OF THE NON-RIGID ALTERNATE PIPE, I.E., THERE IS NO SEPARATE PAY ITEM FOR NON-RIGID BEDDING AND BACKFILL MATERIAL.

TABLE 2: HIGH DENSITY CORRUGATED POLYETHYLENE PIPE HEIGHT OF COVER

NOMINAL DIAMETER IN.	MINIMUM COVER IN.	MAXIMUM COVER - FT.	
		CROSS DRAIN	SIDE DRAIN
12	12	38	11
15	12	36	12
18	12	35	11
24	12	30	10
30	12	25	9
36	21	29	10
42	21	27	9
48	21	25	8

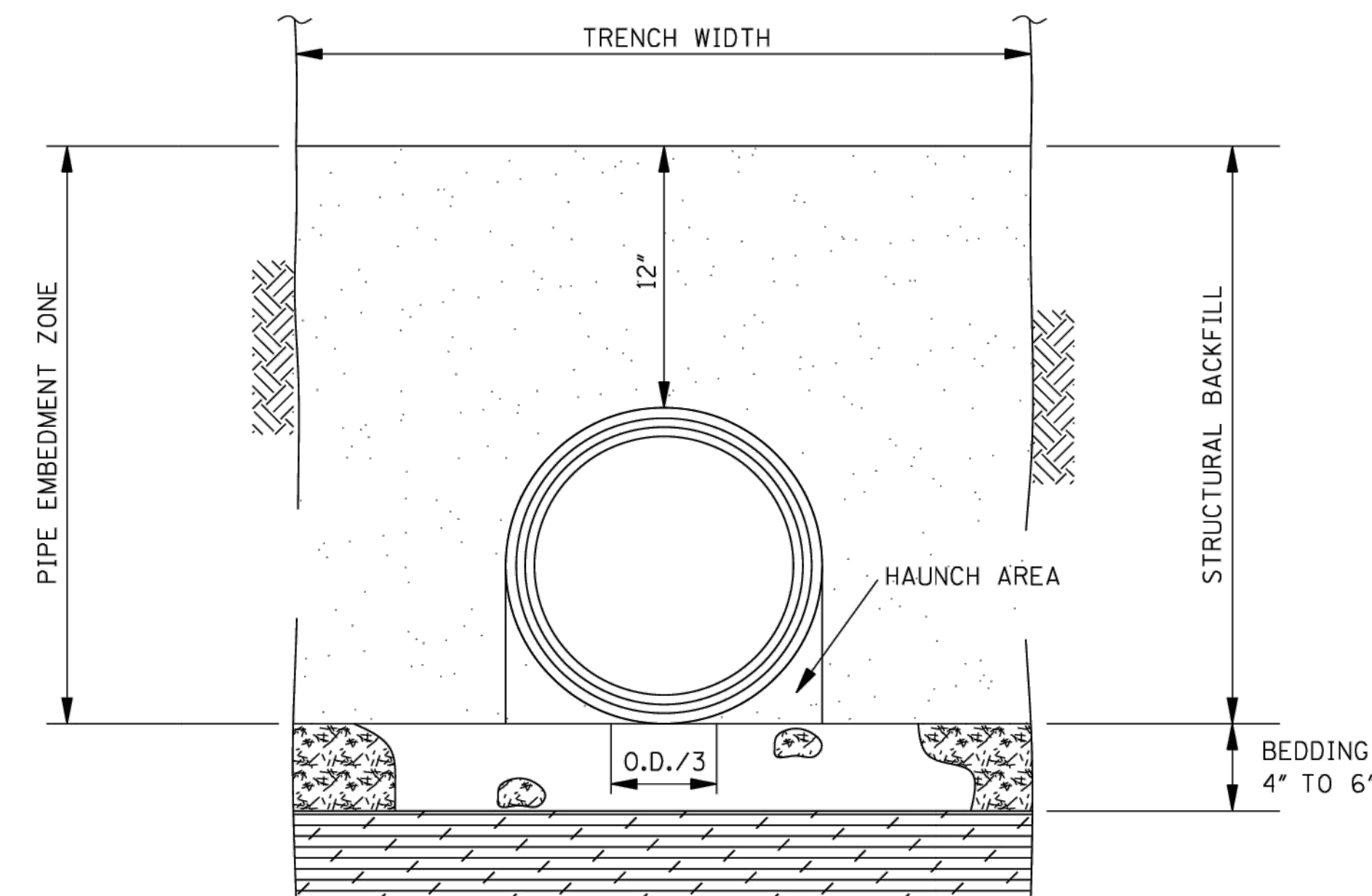
TABLE 3: RECOMMENDED TRENCH WIDTH

DIAMETER IN.	O.D. IN.	TRENCH WIDTH IN.
12	14.45	34
15	17.57	38
18	21.20	44
24	27.80	54
30	35.10	65
36	41.70	75
42	47.70	84
48	53.60	92

THE TRENCH WIDTH MUST BE WIDE ENOUGH TO ACCOMMODATE COMPACTION EQUIPMENT

TABLE 4: MULTIPLE INSTALLATION OF POLYETHYLENE PIPES

DIAMETER OF PIPE IN.	CLEAR DISTANCE BETWEEN PIPES FT., IN.
18	1'-2"
24	1'-5"
30	1'-8"
36	1'-11"
42	2'-2"
48	2'-5"



TRENCH CROSS SECTION SHOWING TERMINOLOGY

GENERAL NOTES:

- MATERIALS**
THERMOPLASTIC PIPE
 POLYETHYLENE PIPE SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M 294, LATEST EDITION.
 DESIGNATION OF TYPE: TYPE S: THIS PIPE WILL HAVE A FULL CIRCULAR CROSS SECTION WITH AN OUTER CORRUGATED PIPE WALL AND A SMOOTH INNER LINER.
BEDDING MATERIAL AND STRUCTURAL BACKFILL
 BEDDING MATERIAL AND STRUCTURAL BACKFILL SHALL MEET THE REQUIREMENTS OF TABLE 1.
- JOINTS**
 JOINTS FOR THERMOPLASTIC PIPE SHALL MEET THE PERFORMANCE REQUIREMENTS OF SOILTIGHTNESS UNLESS WATERTIGHTNESS IS SPECIFIED.
 SUITABLE JOINTS CAN BE OBTAINED WITH THE FOLLOWING TYPES OF CONNECTIONS:
 A) CORRUGATED BANDS (WITH OR WITHOUT GASKETS)
 B) BELL AND SPIGOT PIPE ENDS (WITH OR WITHOUT GASKETS)
 C) DOUBLE BELL COUPLINGS (WITH OR WITHOUT GASKETS)
- INSTALLATION**
 MINIMUM TRENCH WIDTHS SHALL MEET THE REQUIREMENTS OF TABLE 3.
 THE MIDDLE THIRD OF THE BEDDING MATERIAL UNDER THE PIPE SHOULD BE LOOSELY PLACED, WHILE THE REMAINDER SHALL BE COMPACTED TO A MINIMUM 90% OF MAXIMUM DENSITY PER AASHTO T 99.
 A MINIMUM OF 4 INCHES OF BEDDING SHALL BE PROVIDED PRIOR TO PLACEMENT OF THE PIPE.
 STRUCTURAL BACKFILL SHALL BE PLACED AND COMPACTED IN LAYERS NOT EXCEEDING AN 8" LOOSE LIFT THICKNESS AND BROUGHT UP EVENLY ON BOTH SIDES OF THE PIPE WITH AN ELEVATION NOT LESS THAN 12 INCHES ABOVE THE TOP OF THE PIPE. A MINIMUM COMPACTION LEVEL OF 90% STANDARD DENSITY PER AASHTO T 99 SHALL BE ACHIEVED.
 MINIMUM COVER REQUIREMENTS SHALL MEET THE REQUIREMENTS OF TABLE 2.
 FOR MULTIPLE INSTALLATIONS OF POLYETHYLENE PIPES, A CLEAR DISTANCE BETWEEN THE PIPES SHALL MEET THE REQUIREMENTS OF TABLE 4.
- CALCULATIONS FOR FILL DEPTHS ARE BASED ON PROPERTIES DEFINED IN AASHTO M294 AND CALCULATIONS IN AASHTO SEC. 19.**

MISSISSIPPI DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION STANDARD PLAN	
FLEXIBLE PIPE CULVERT INSTALLATION	
WORKING NUMBER PI-2	SHEET NUMBER 6502
ISSUE DATE: AUGUST 01, 2017	



STATE	PROJECT NO.
MISS.	

REINFORCING BAR LIST			
BAR	SIZE	NUMBER REQUIRED	LENGTH
A	#4	2 PER PIPE OPENING	$\sqrt{196 + \left(\frac{W}{2} + 2\right)^2}$
B	#4	2	$W_{1-3} - 6"$
C	#4	2	$W_{2-4} - 6"$
D	#4	4	$H - 6"$
E	#4	$2 \left[\left(\frac{W_{1-3}}{9} \right) ** + 1 \right]$	$W_{2-4} - 4"$
F	#4	$2 \left[\left(\frac{W_{2-4}}{9} \right) ** + 1 \right]$	$W_{1-3} - 4"$

NOTE: VARIABLES AND DESIGNATIONS ARE AS FOLLOWS:
D (OR SPAN) = PIPE DIAMETER (OR SPAN)
W₁₋₃ = WIDTH OF SIDE 1 & SIDE 3
W₂₋₄ = WIDTH OF SIDE 2 & SIDE 4
W* = W₁₋₃ OR W₂₋₄ (SIDE OF ENTERING PIPE)
** = ROUND TO NEAREST WHOLE NUMBER

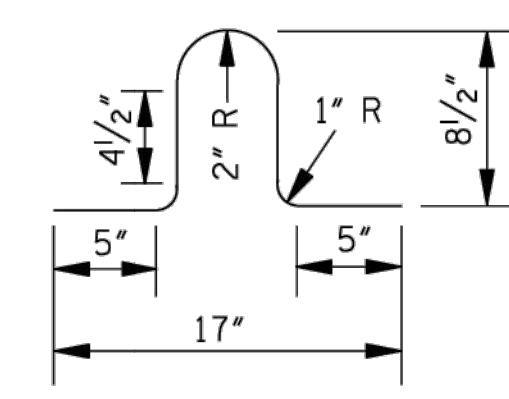
CL. *B* CONC. (yd³) = [(Q1 + Q2) / 46,656] - Σ PIPE OPENING DEDUCTIONS
WHERE: Q1 = [5*W₁₋₃W₂₋₄] + [1*(W₁₋₃ - 12.5)*W₂₋₄ - 12.5*3] + [(T₁ + 6)*W₁₋₃W₂₋₄]
Q2 = 12*H - (T₁ + 6*) [(W₁₋₃ - 12*) + W₂₋₄]

COMMON PIPE SIZE					
CIRCULAR PIPE			ARCH PIPE		
PIPE SIZE	T	PIPE OPENING DEDUCTION (yd ³)	PIPE SIZE	T	PIPE OPENING DEDUCTION (yd ³)
18"	2 1/2"	0.053	22" x 13"	2 1/2"	0.053
24"	3"	0.091	29" x 18"	3"	0.087
30"	3 1/2"	0.138	36" x 23"	3 1/2"	0.129
36"	4"	0.196	44" x 27"	4"	0.185
42"	4 1/2"	0.263	51" x 31"	4 1/2"	0.245
48"	5"	0.340	58" x 36"	5"	0.318
54"	5 1/2"	0.427	65" x 40"	5 1/2"	0.394
60"	6"	0.524	73" x 45"	6"	0.489
66"	6 1/2"	0.630			
72"	7"	0.747			

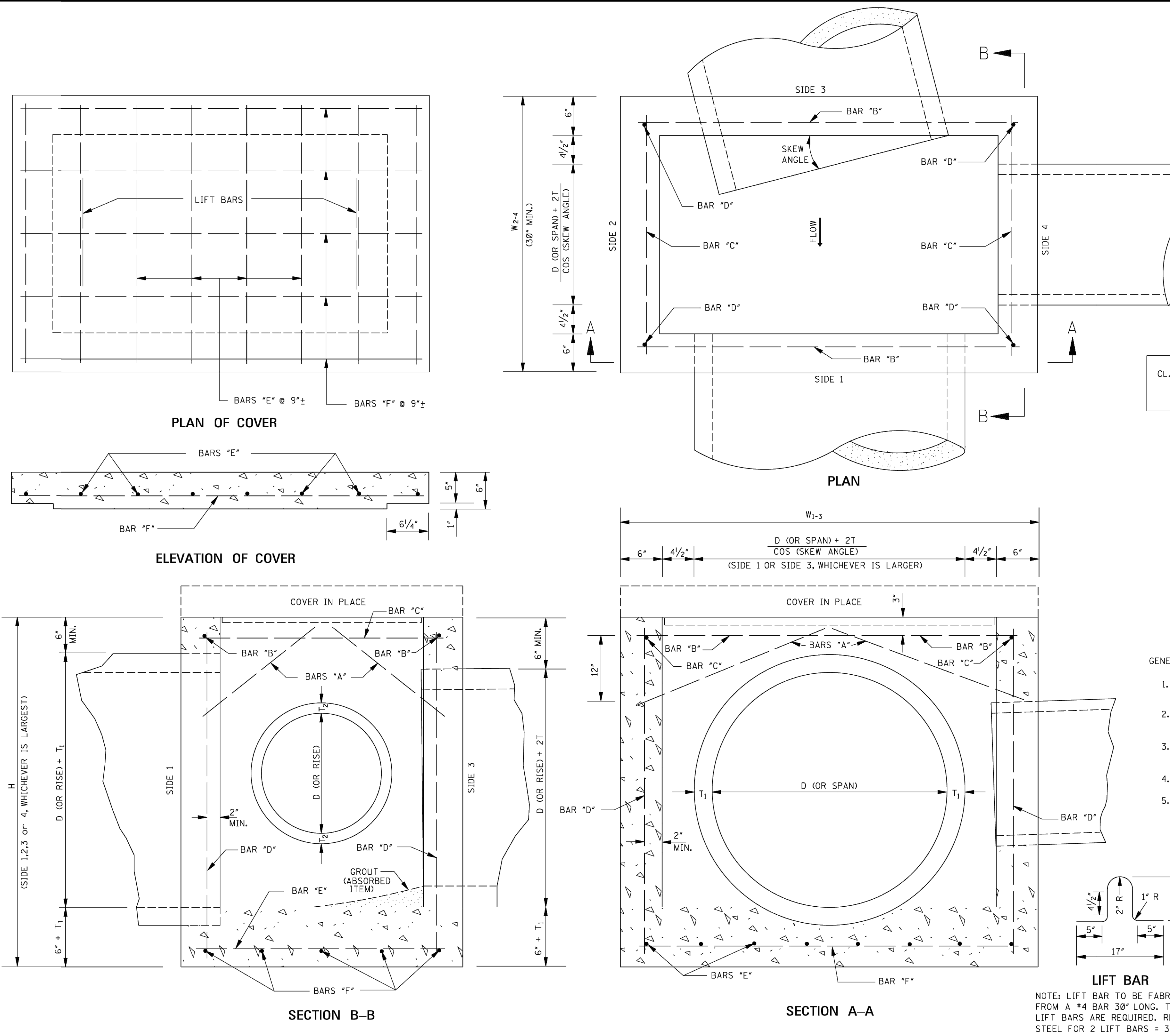
GENERAL NOTES:

- REINFORCING STEEL QUANTITIES TO BE COMPUTED FROM BAR LIST AND SHOWN ELSEWHERE ON THE PLANS.
- QUANTITIES FOR JUNCTION BOXES SHOWN ON THE PLANS WILL BE THE BASIS FOR PAYMENT UNLESS AUTHORIZED MODIFICATIONS ARE MADE.
- CONCRETE SHALL BE CLASS "B" AND REINFORCING STEEL SHALL BE DEFORMED BARS.
- SIDE 1 OF THE JUNCTION BOX WILL ALWAYS BE THE OUTFLOW SIDE.
- IF PIPES ARE SKEWED MORE THAN 15° OR IF SKEWED PIPES PRODUCE CONFLICTS WITH ANOTHER OPENING, THE PIPE SHALL BE BROKEN BACK TO THE WALL OF THE JUNCTION BOX.

BY		MISSISSIPPI DEPARTMENT OF TRANSPORTATION	
REVISION		ROADWAY DESIGN DIVISION	
DATE		STANDARD PLAN	
JUNCTION BOX FOR PIPE CULVERTS			
WORKING NUMBER		JB-1	
SHEET NUMBER		6504	
ISSUE DATE: AUGUST 01, 2017			



LIFT BAR
NOTE: LIFT BAR TO BE FABRICATED FROM A #4 BAR 30" LONG. TWO LIFT BARS ARE REQUIRED. REINFORCING STEEL FOR 2 LIFT BARS = 3.3 lbs.



Meridian High School Baseball/Softball

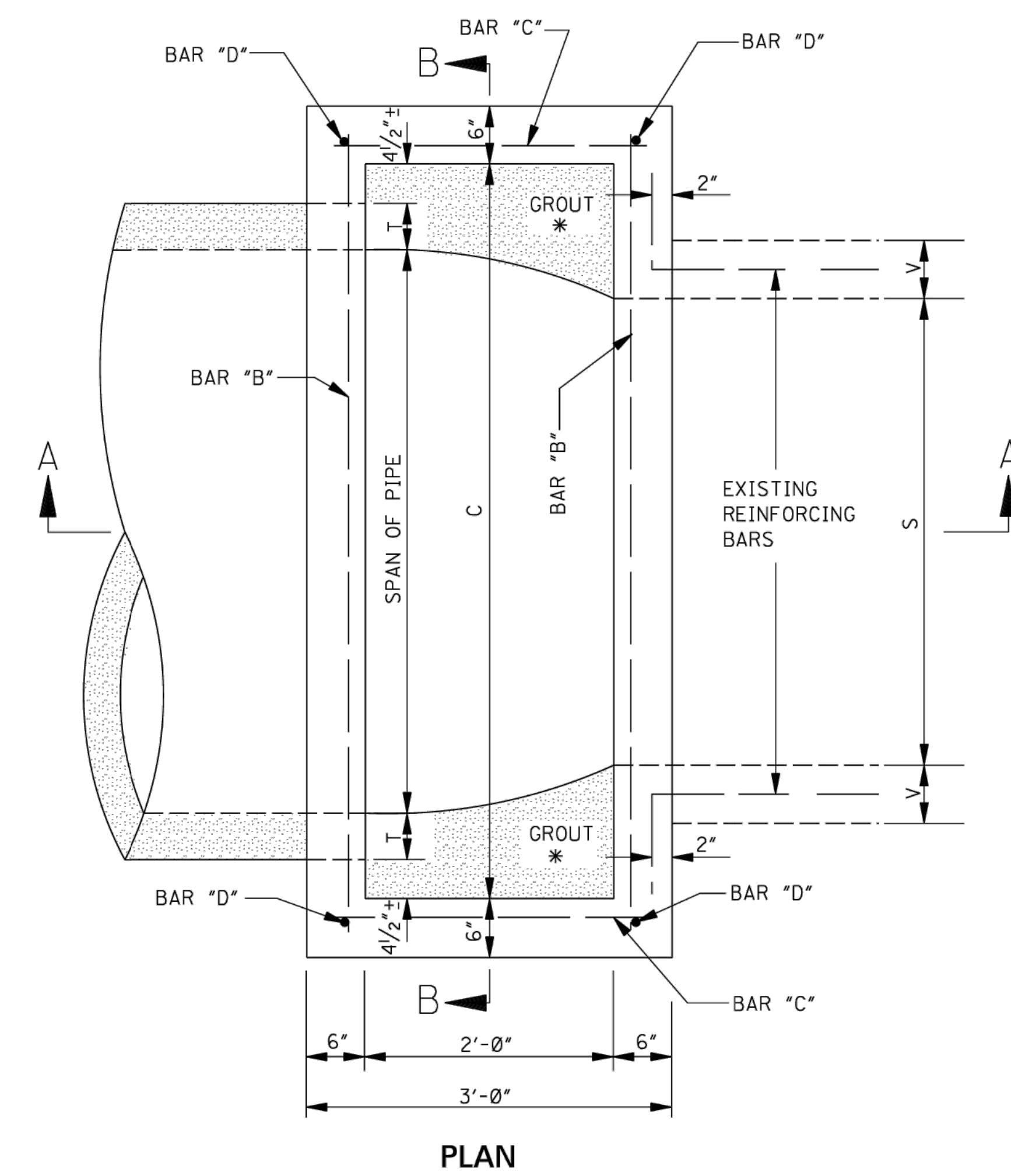
2820 32nd St., Meridian, MS 39305

100%
Construction Documents

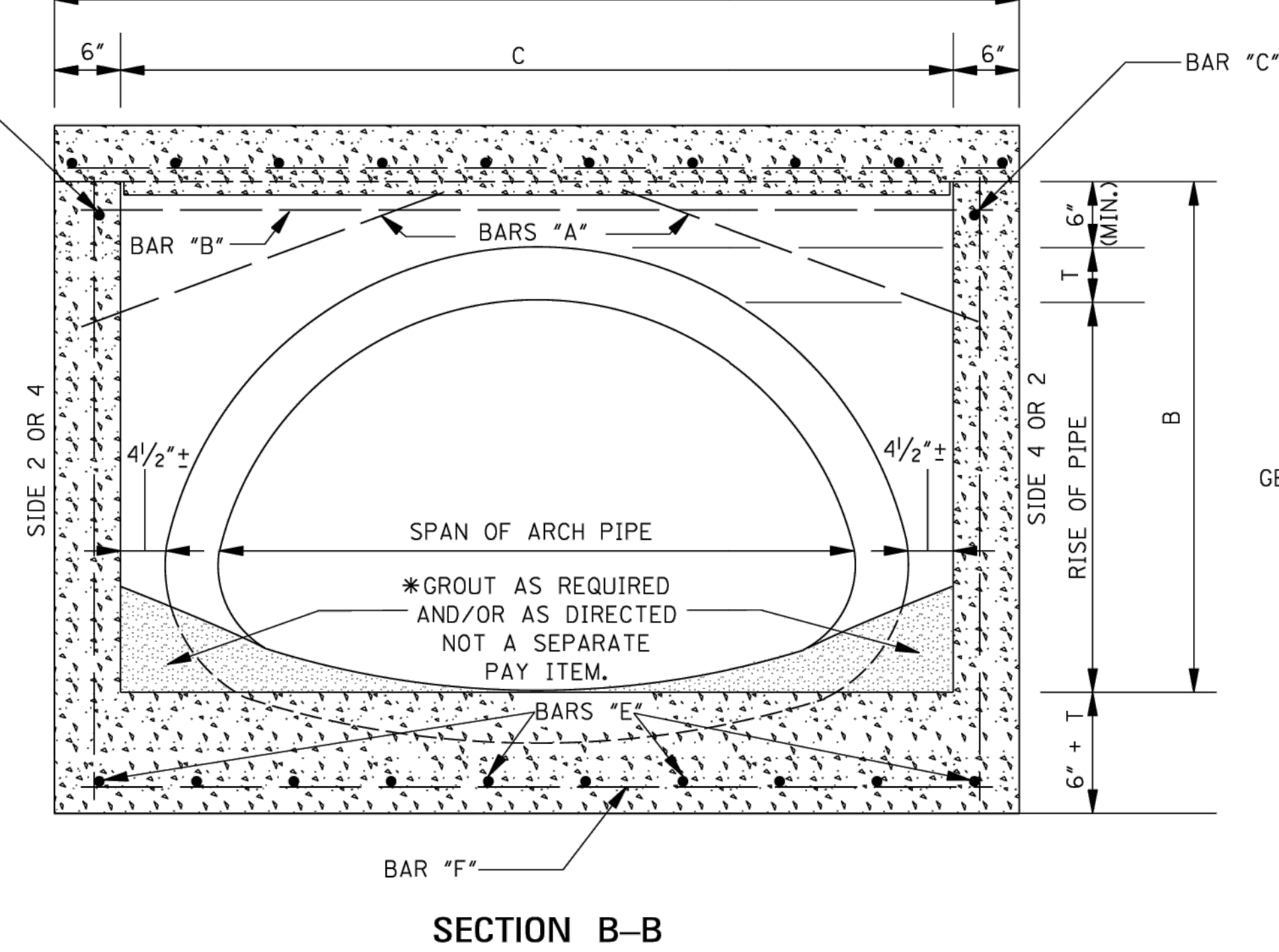
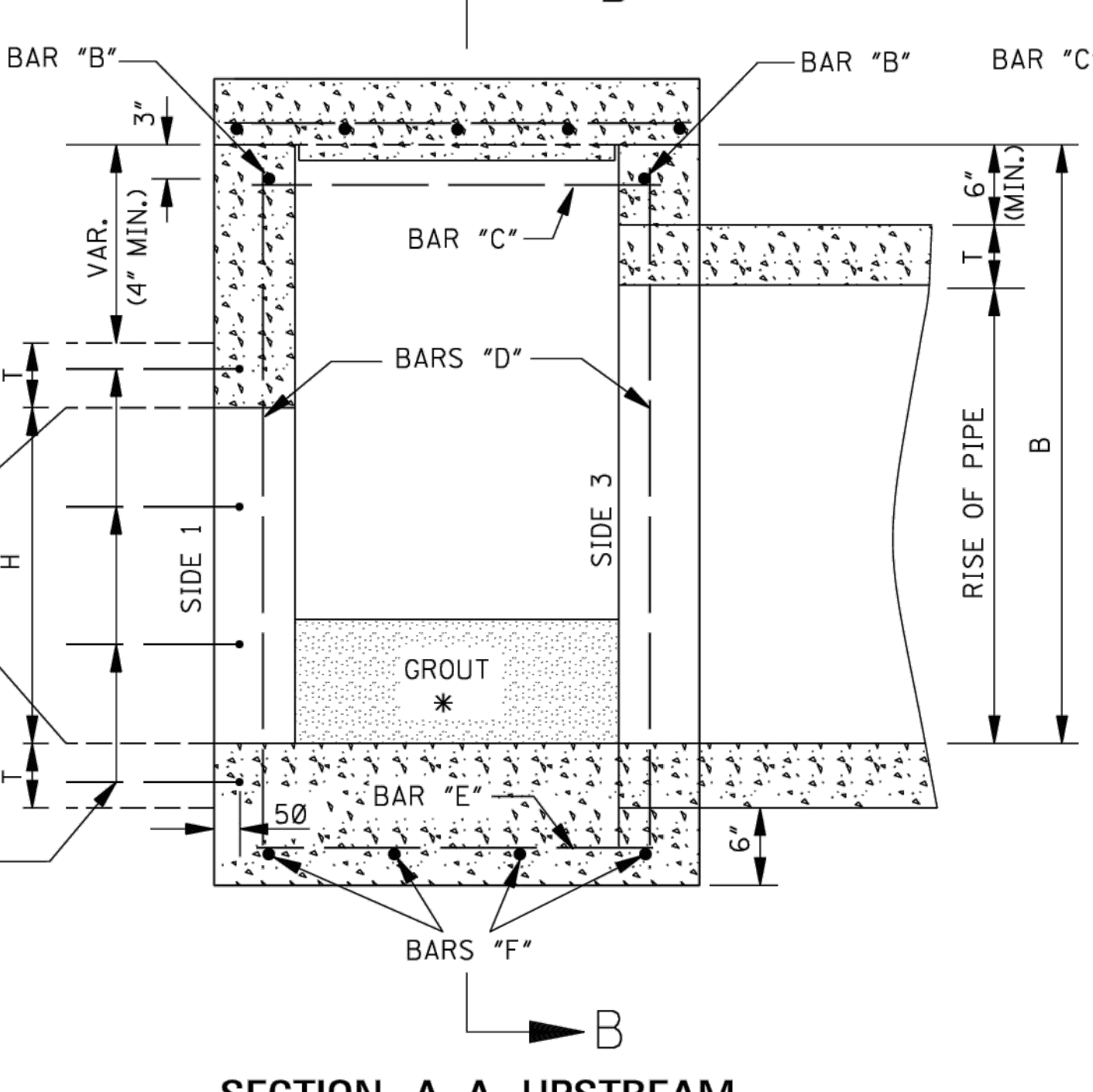
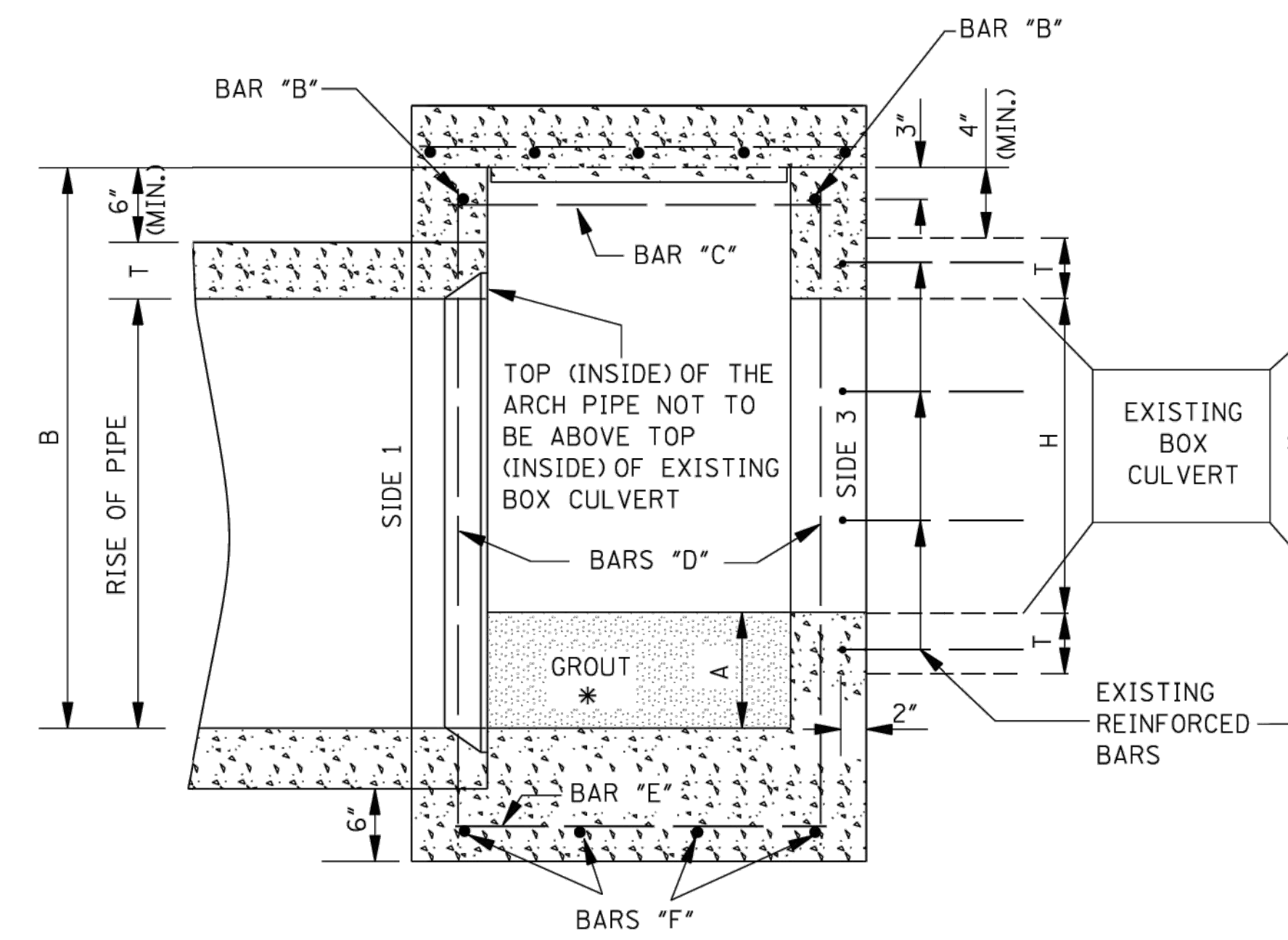
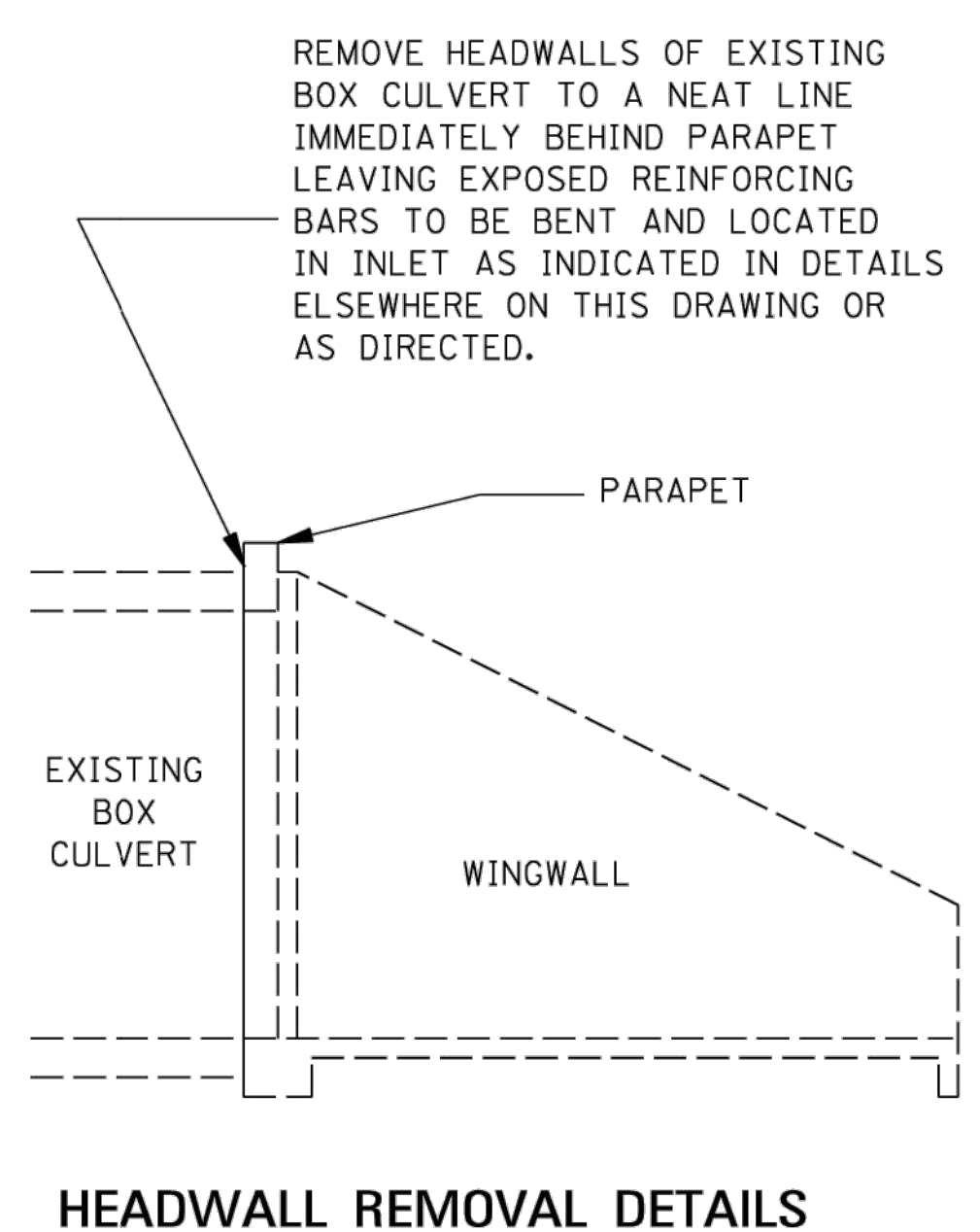
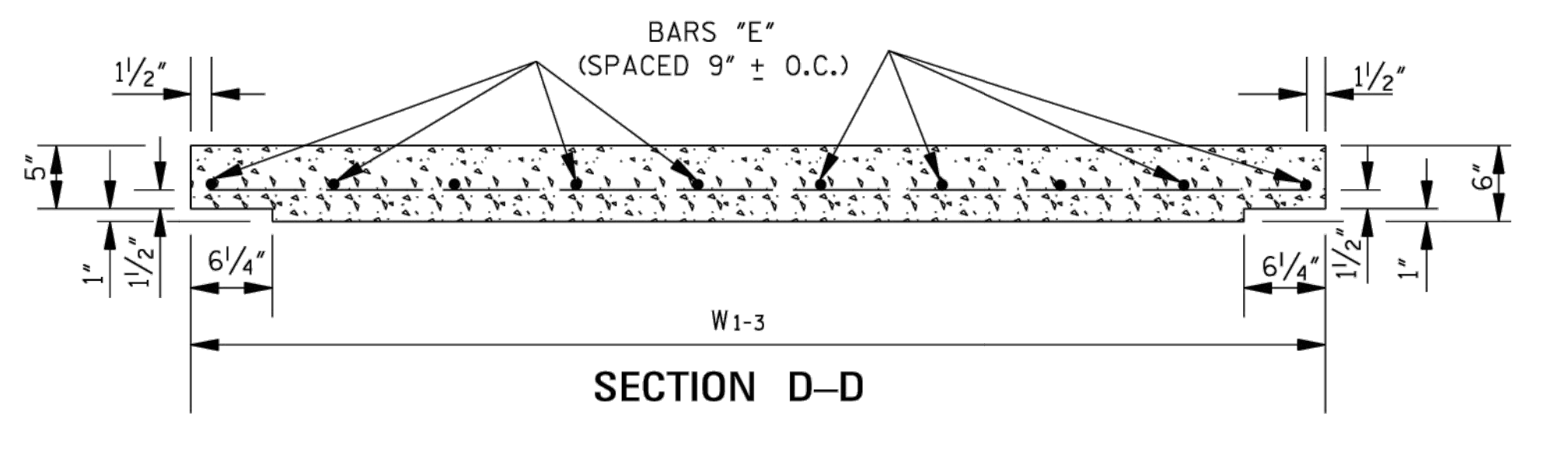
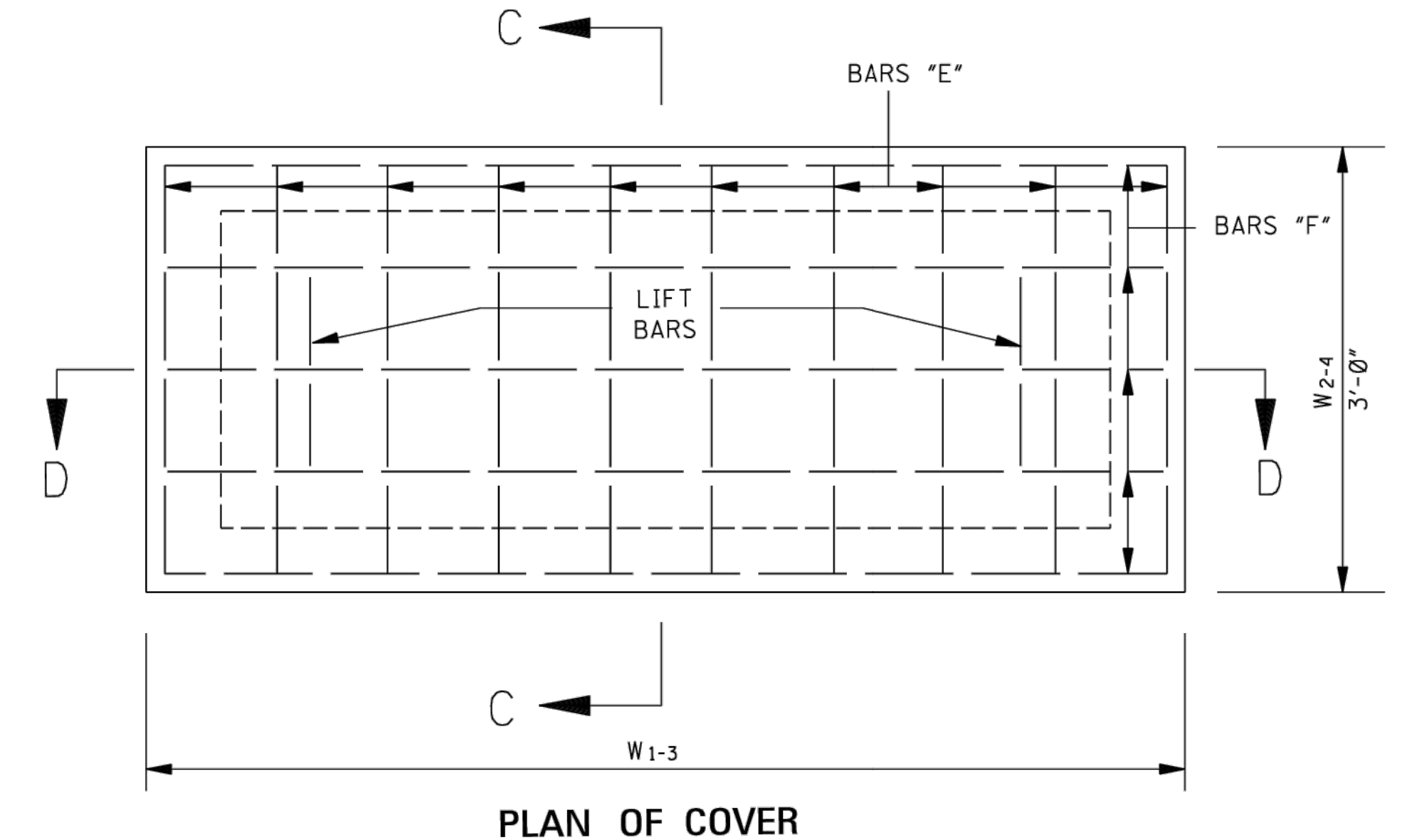
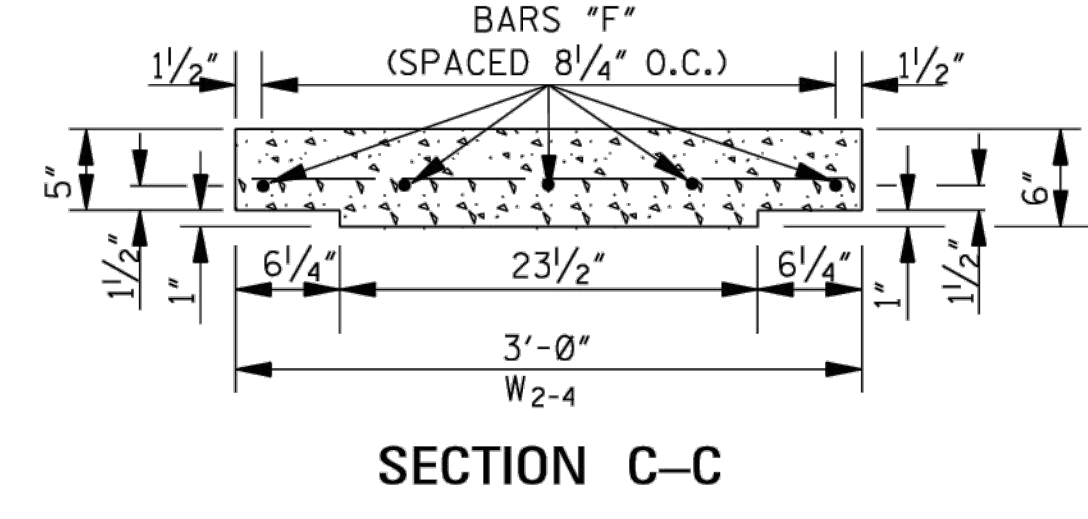
Project No. 22034-03
Date March 6, 2023
Revisions Rev Date
Rev. 4 April 19, 2023



STATE	PROJECT NO.
MISS.	



LIFT BAR
NOTE: LIFT BAR TO BE FABRICATED FROM A #4 BAR 30" LONG. TWO LIFT BARS ARE REQUIRED. REINFORCING STEEL FOR 2 LIFT BARS = 3.3 lbs.



- GENERAL NOTES:
1. THE QUANTITIES SHOWN WILL BE USED AS THE BASIS FOR PAYMENT UNLESS THIS DRAWING IS MODIFIED.
 2. CONCRETE SHALL BE CLASS "B" AND REINFORCING STEEL SHALL BE SIZE #4 DEFORMED BARS.
 3. SIDE 1 OF THE JUNCTION BOX WILL ALWAYS BE THE OUTFLOW SIDE.
 4. ESTIMATE AN ADDITIONAL 3.3 lbs. FOR 2 LIFT BARS.
 5. CONCRETE QUANTITIES SHOWN HAVE BEEN ADJUSTED FOR BOX & PIPE OPENING DEDUCTIONS.

DIMENSIONS OF EXISTING BOX CULVERT				DIMENSIONS OF JUNCTION BOX REQUIRED			DIMENSIONS OF PRECAST COVER		DIMENSIONS OF ARCH PIPE REQUIRED				CLASS "B" STRUCTURAL CONCRETE (yd ³)	REINFORCING STEEL (lbs)	BAR LIST					
S	H	T	V	A	B	C	W1-3	W2-4	S	R	L	T			"A"	"B"	"C"	"D"	"E"	"F"
2'	2'	6"	6"	0"	32 1/2"	52"	5'-4"	3'	36"	23"	6"	3 1/2"	1.532	78	2 @ 3'-1"	2 @ 4'-10"	2 @ 2'-6"	4 @ 3'-3"	16 @ 2'-6"	9 @ 4'-10"
3'	2'	6 1/2"	6"	3"	37"	61"	6'-1"	3'	44"	27"	8"	4"	1.764	89	2 @ 3'-5"	2 @ 5'-7"	2 @ 2'-6"	4 @ 3'-8"	18 @ 2'-6"	9 @ 5'-7"
4'	2'	7"	6"	7"	41 1/2"	69"	6'-9"	3'	51"	31"	8"	4 1/2"	1.996	99	2 @ 3'-9"	2 @ 6'-3"	2 @ 2'-6"	4 @ 4'-1"	20 @ 2'-6"	9 @ 6'-3"
5'	2'	7 1/2"	6"	12"	47"	77"	7'-5"	3'	58"	36"	8"	5"	2.258	105	2 @ 4'-1"	2 @ 6'-11"	2 @ 2'-6"	4 @ 4'-7"	20 @ 2'-6"	9 @ 6'-11"
3'	3'	6 1/2"	6"	0"	45 1/2"	69"	6'-9"	3'	51"	31"	8"	4 1/2"	1.995	99	2 @ 3'-9"	2 @ 6'-3"	2 @ 2'-6"	4 @ 4'-5"	20 @ 2'-6"	9 @ 6'-3"
4'	3'	7"	6"	0"	47"	77"	7'-5"	3'	58"	36"	8"	5"	2.238	105	2 @ 4'-1"	2 @ 6'-11"	2 @ 2'-6"	4 @ 4'-7"	20 @ 2'-6"	9 @ 6'-11"
5'	3'	7 1/2"	6 1/2"	4"	51 1/2"	85"	8'-1"	3'	65"	40"	8"	5 1/2"	2.469	115	2 @ 4'-4"	2 @ 7'-7"	2 @ 2'-6"	4 @ 5'-0"	22 @ 2'-6"	9 @ 7'-7"
6'	3'	8"	6 1/2"	9"	57"	94"	8'-10"	3'	73"	45"	8"	6"	2.767	126	2 @ 4'-9"	2 @ 8'-4"	2 @ 2'-6"	4 @ 5'-6"	24 @ 2'-6"	9 @ 8'-4"

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION
STANDARD PLAN

JUNCTION BOX FOR BOX CULVERT TO CONCRETE ARCH PIPE

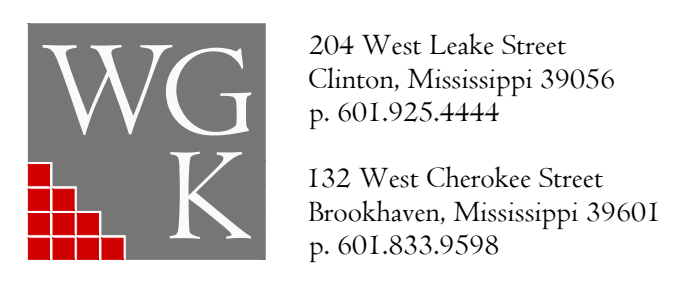
WORKING NUMBER: JB-1A
SHEET NUMBER: 6505

ISSUE DATE: AUGUST 01, 2017

Meridian High School Baseball/Softball
2820 32nd St., Meridian, MS 39305

100%
Construction Documents

Project No: 22034-03
Date: March 6, 2023
Revisions: Rev Date
Rev. 4: April 19, 2023



C-811
Junction Box for Box Culvert To Concrete Arch Pipe



STATE	PROJECT NO.
MISS.	

REINFORCING BAR LIST			
BAR	SIZE	NUMBER REQUIRED	LENGTH
A	#4	2 PER PIPE OPENING	$\sqrt{196 + \frac{W^*}{2} + 2^*}$
B	#6 FOR 6" WALL #6 FOR 8" WALL	2 + (2 PER OPENING SIDE 3) + (1 PER SIDE 1) + (12" O.C. FOR SOLID WALL)	$W_{1-3} - 4^*$
C	#7 FOR 6" WALL #7 FOR 8" WALL	2 + (2 PER OPENING) + (12" O.C. FOR SOLID WALL)	$W_{2-4} - 4^*$
D	#6	4 + (2 PER OPENING) + (12" O.C. FOR SOLID WALL)	H
E	#6	$2 \left[\left(\frac{W_{1-3}}{6^*} \right)^* + 1 \right]$	$W_{2-4} - 4^*$
F	#6	$2 \left[\left(\frac{W_{2-4}}{6^*} \right)^* + 1 \right]$	$W_{1-3} - 4^*$

NOTE: VARIABLES AND DESIGNATIONS ARE AS FOLLOWS:
D (OR SPAN) = PIPE DIAMETER (OR SPAN)
W₁₋₃ = WIDTH OF SIDE 1 & SIDE 3
W₂₋₄ = WIDTH OF SIDE 2 & SIDE 4
W* = W₁₋₃ OR W₂₋₄ (SIDE OF ENTERING PIPE)
** = ROUND TO NEAREST WHOLE NUMBER

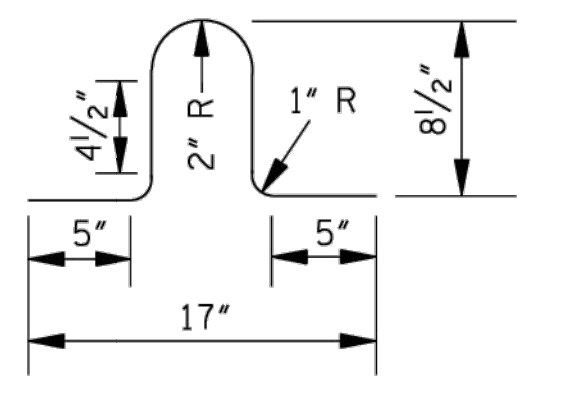
CL. *B* CONC. (yd³) = [(Q1 + Q2) / 46,656] - Σ PIPE OPENING DEDUCTIONS
WHERE: 6" WALL
Q1 = [8*W₁₋₃W₂₋₄] + [1*(W₁₋₃ - 12.5)*(W₂₋₄ - 12.5)] + [(T₁ + 6*)W₁₋₃W₂₋₄]
Q2 = 12*[H - (T₁ + 6*)] [(W₁₋₃ - 12') + W₂₋₄]
OR: 8" WALL
Q1 = [8*W₁₋₃W₂₋₄] + [1*(W₁₋₃ - 16.5)*(W₂₋₄ - 16.5)] + [(T₁ + 6*)W₁₋₃W₂₋₄]
Q2 = 16*[H - (T₁ + 6*)] [(W₁₋₃ - 16') + W₂₋₄]

COMMON PIPE SIZE							
CIRCULAR PIPE			ARCH PIPE				
PIPE SIZE	T	PIPE OPENING DEDUCTION (yd ³)		PIPE SIZE	T	PIPE OPENING DEDUCTION (yd ³)	
		6" WALL	8" WALL			6" WALL	8" WALL
18"	2 1/2"	0.053	0.071	22" X 13"	2 1/2"	0.053	0.071
24"	3"	0.091	0.121	29" X 18"	3"	0.087	0.116
30"	3 1/2"	0.138	0.184	36" X 23"	3 1/2"	0.129	0.172
36"	4"	0.196	0.261	44" X 27"	4"	0.185	0.247
42"	4 1/2"	0.263	0.350	51" X 31"	4 1/2"	-	0.327
48"	5"	-	0.453	58" X 36"	5"	-	0.424
54"	5 1/2"	-	0.569	65" X 40"	5 1/2"	-	0.525
60"	6"	-	0.699	73" X 45"	6"	-	0.652
66"	6 1/2"	-	0.840				
72"	7"	-	0.996				

† NOTE: IF ANY PIPE REQUIRING A 8" WALL IS USED, ALL WALLS SHALL BE 8" REGARDLESS OF PIPE SIZE.

GENERAL NOTES:

- REINFORCING STEEL QUANTITIES TO BE COMPUTED FROM BAR LIST AND SHOWN ELSEWHERE ON THE PLANS.
- QUANTITIES FOR JUNCTION BOXES SHOWN ON THE PLANS WILL BE THE BASIS FOR PAYMENT UNLESS AUTHORIZED MODIFICATIONS ARE MADE.
- CONCRETE SHALL BE CLASS "B" AND REINFORCING STEEL SHALL BE DEFORMED BARS, ASTM A 615, GRADE 60 OR AASHTO M 31, GRADE 60.
- SIDE 1 OF THE JUNCTION BOX WILL ALWAYS BE THE OUTFLOW SIDE.
- IF PIPES ARE SKEWED MORE THAN 15° OR IF SKEWED PIPES PRODUCE CONFLICTS WITH ANOTHER OPENING, THE PIPE SHALL BE BROKEN BACK TO THE WALL OF THE JUNCTION BOX.



LIFT BAR
NOTE: LIFT BAR TO BE FABRICATED FROM A #4 BAR 30" LONG. TWO LIFT BARS ARE REQUIRED. REINFORCING STEEL FOR 2 LIFT BARS = 3.3 lbs.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION
STANDARD PLAN

JUNCTION BOX TYPE 2 FOR TRAFFIC LOAD
(MAXIMUM "W" = 9'-3")

WORKING NUMBER JB-2
SHEET NUMBER 6506

ISSUE DATE: AUGUST 01, 2017

