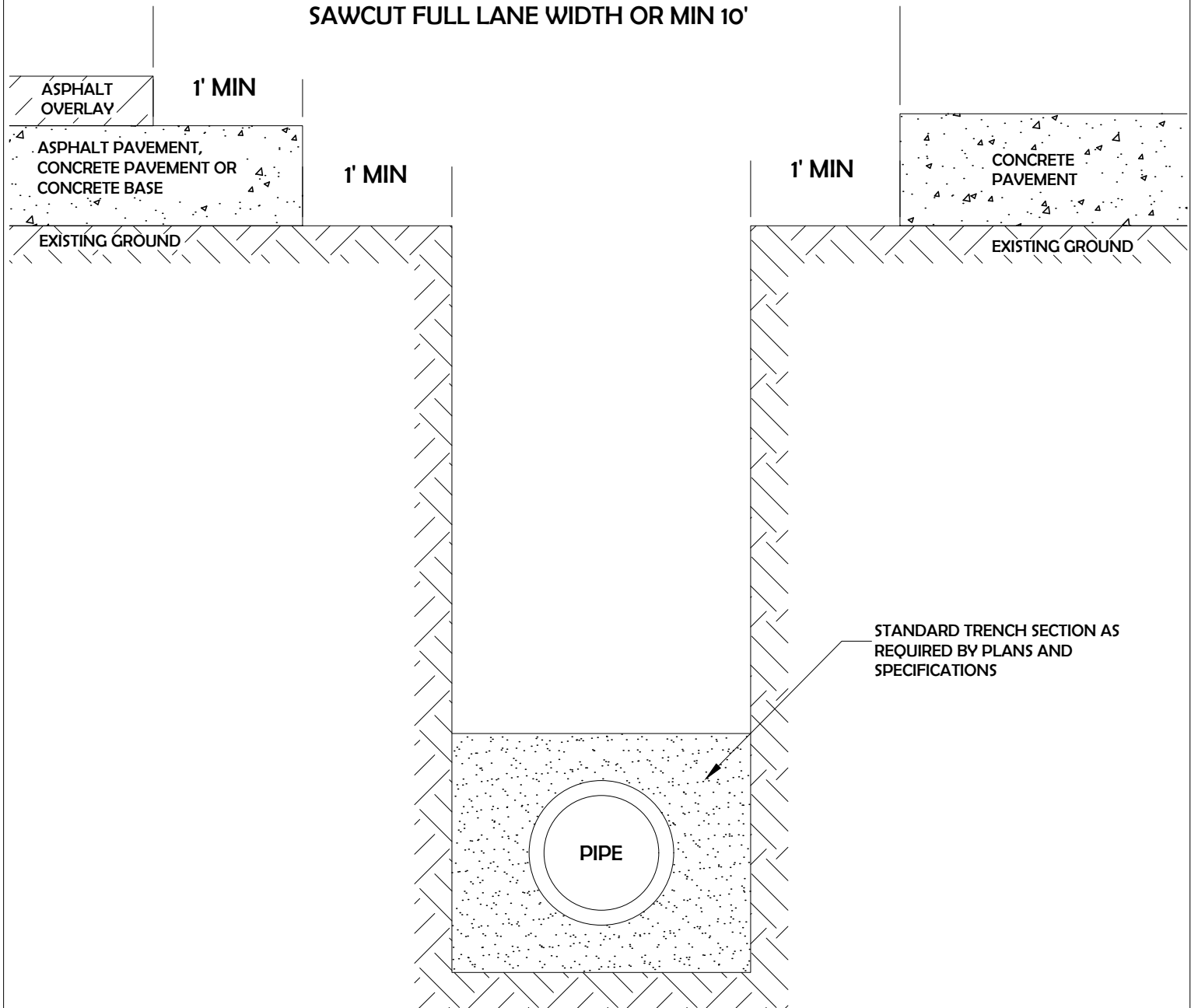


PAVEMENT SAWCUT - TRENCH SECTION (TYPICAL)



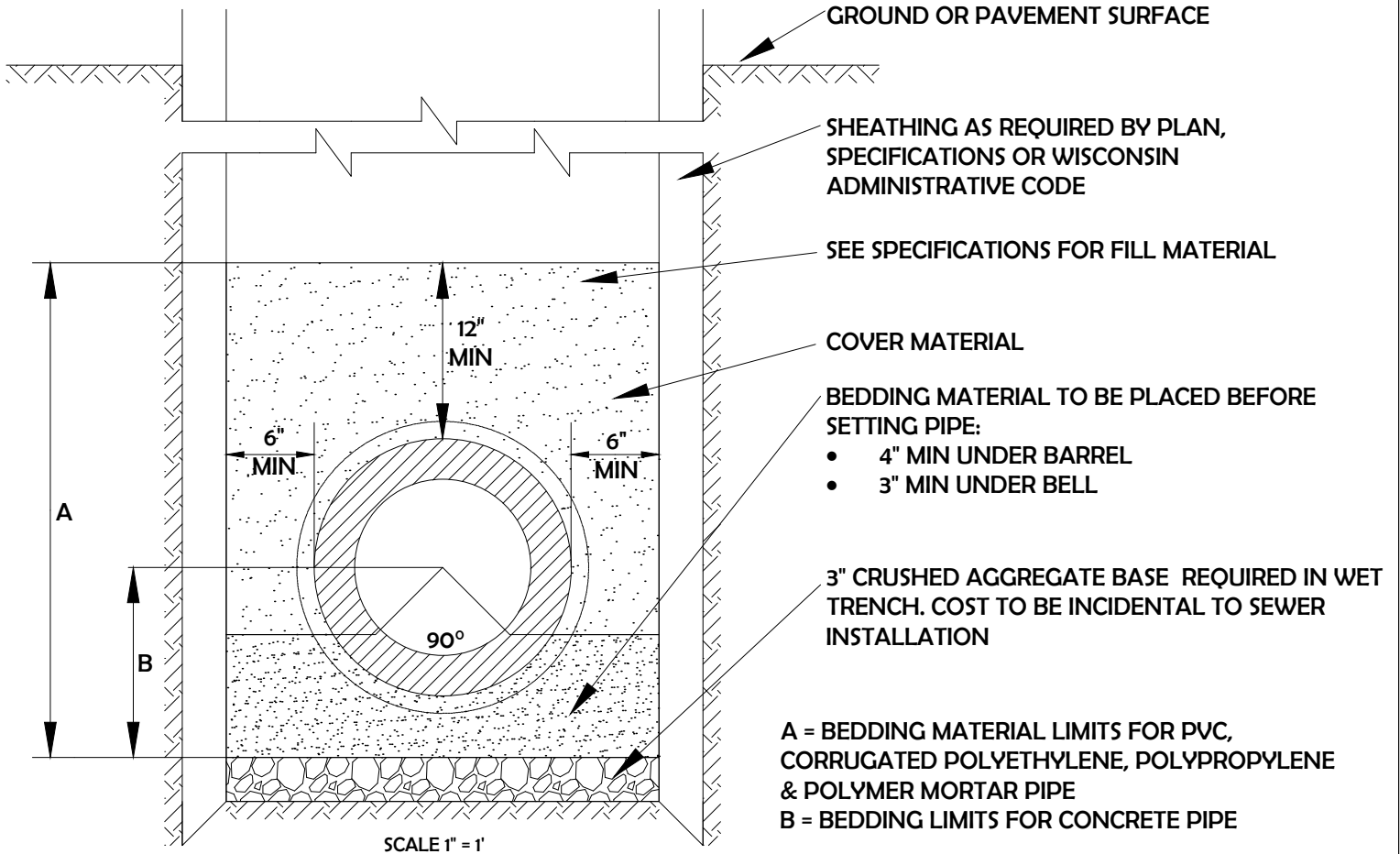
SCALE: 1" = 1'

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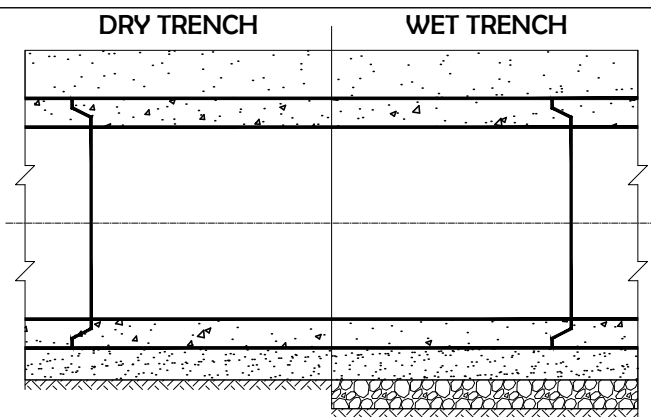
J:\CITYDWG\Civil 3D Drawings\DTL\City SDDs\1-A-1 Pavement Sawcut-Trench Section Detail.PDF

DEPARTMENT OF PUBLIC WORKS
ENGINEERING AND TRAFFIC DIVISION
CITY OF FOND DU LAC, WISCONSIN

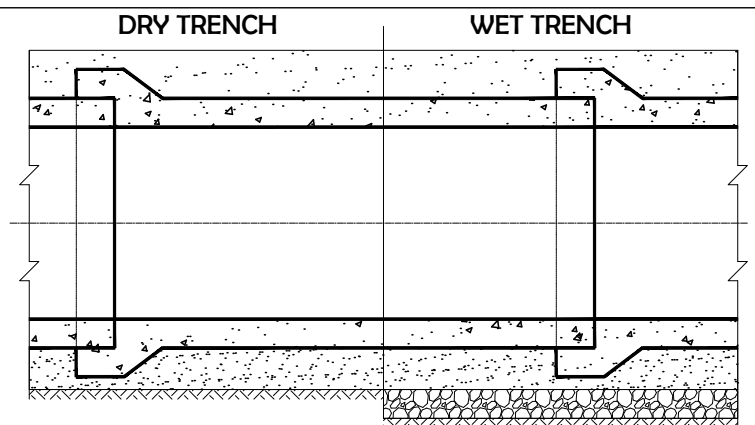
TRENCH SECTION (TYPICAL)



BELL AND SPIGOT JOINT SHOWN



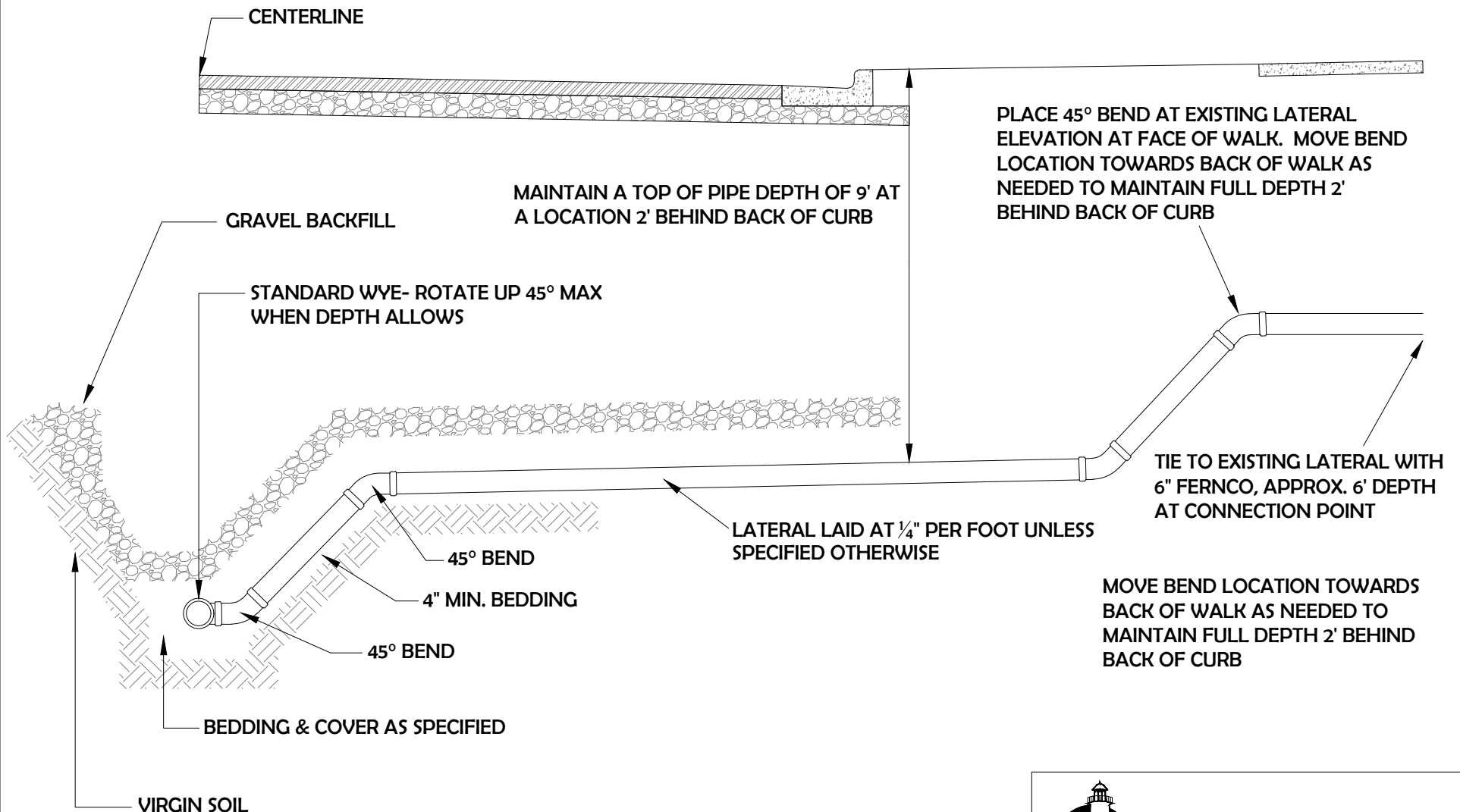
TONGUE AND GROOVE CROSS SECTION
(EXAGGERATED)



BELL AND SPIGOT CROSS SECTION
(EXAGGERATED)



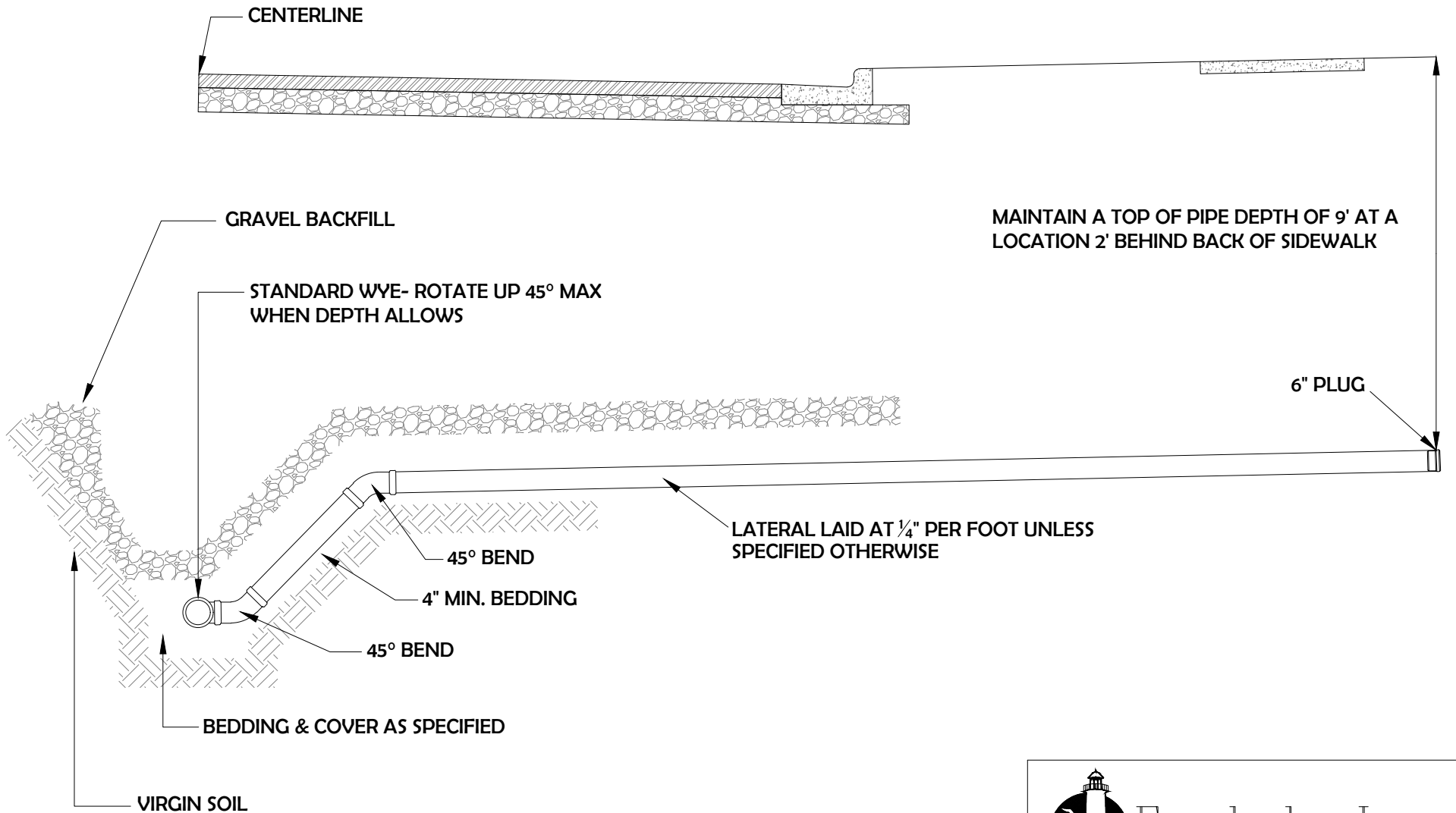
SANITARY RISER DETAIL (TYPICAL) EXISTING LATERAL



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CITY OF FOND DU LAC, WISCONSIN

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SANITARY RISER DETAIL (TYPICAL) NEW LATERAL

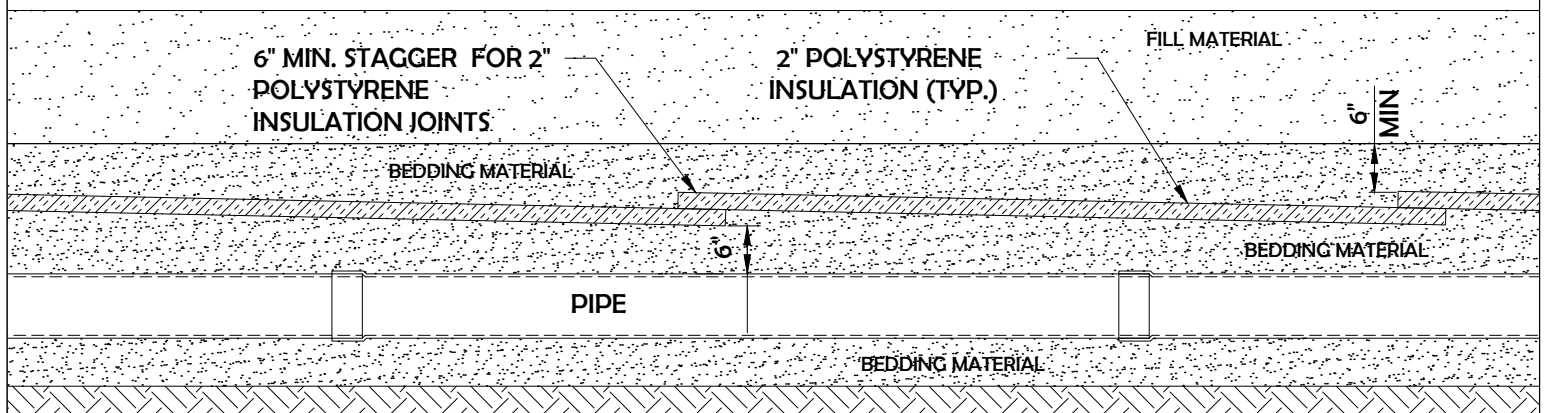
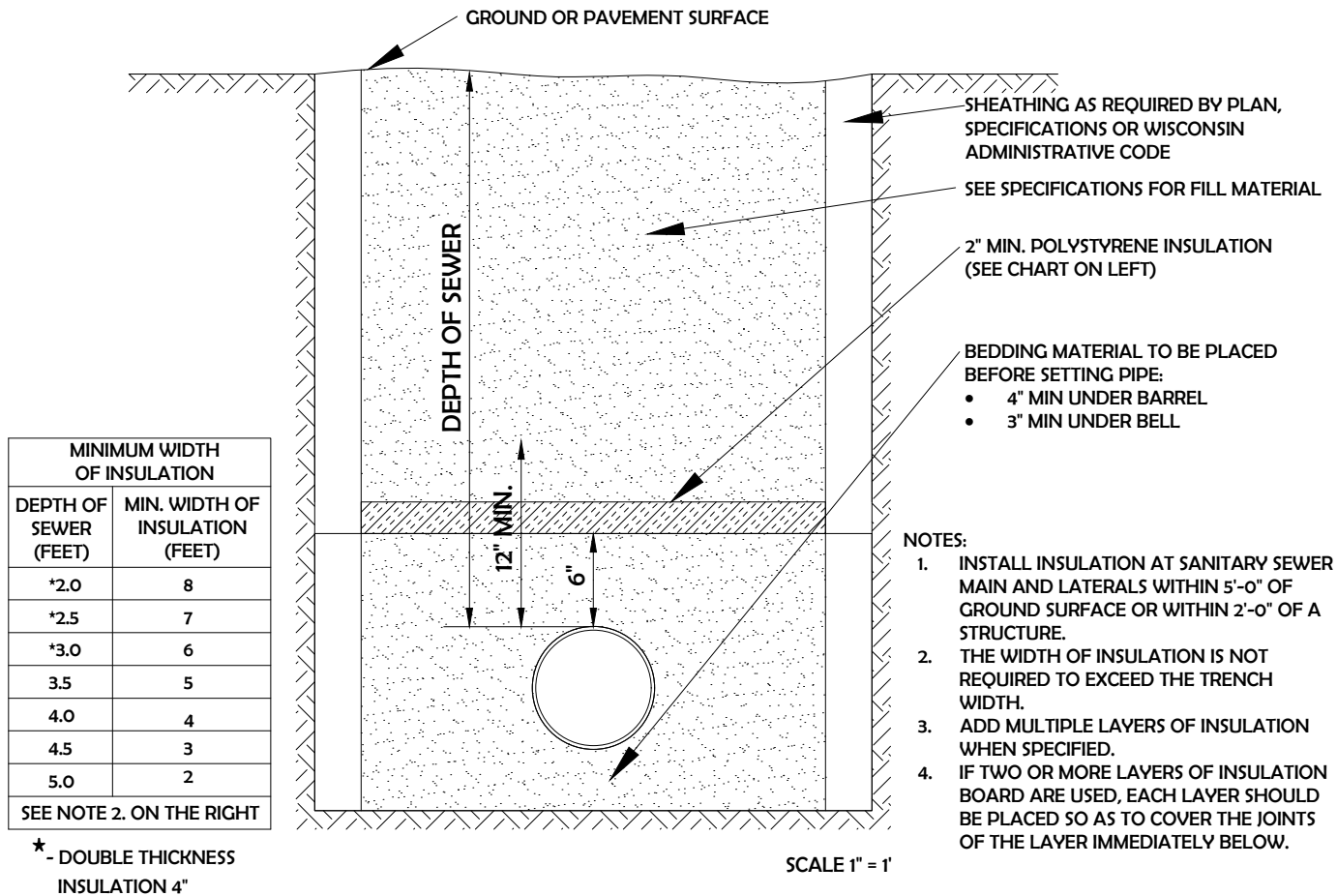


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SCALE: 1" = 4'
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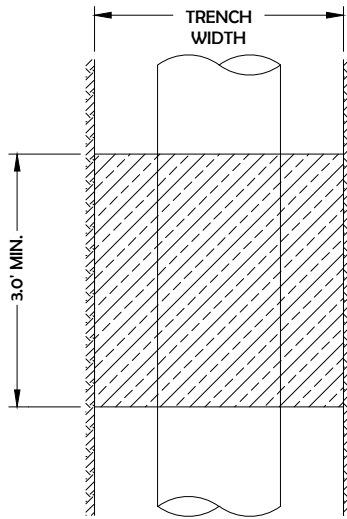
SANITARY SEWER INSULATION DETAIL



INSULATION INSTALLATION CROSS-SECTION



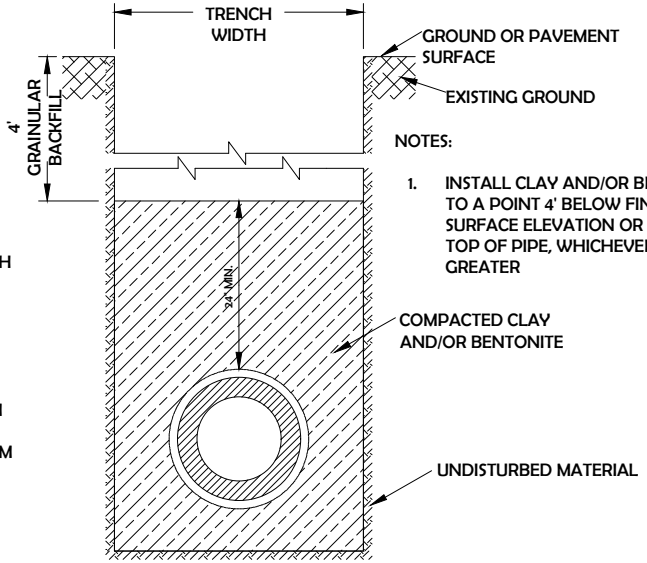
TRENCH DAM DETAIL



PLAN VIEW

NOTES:

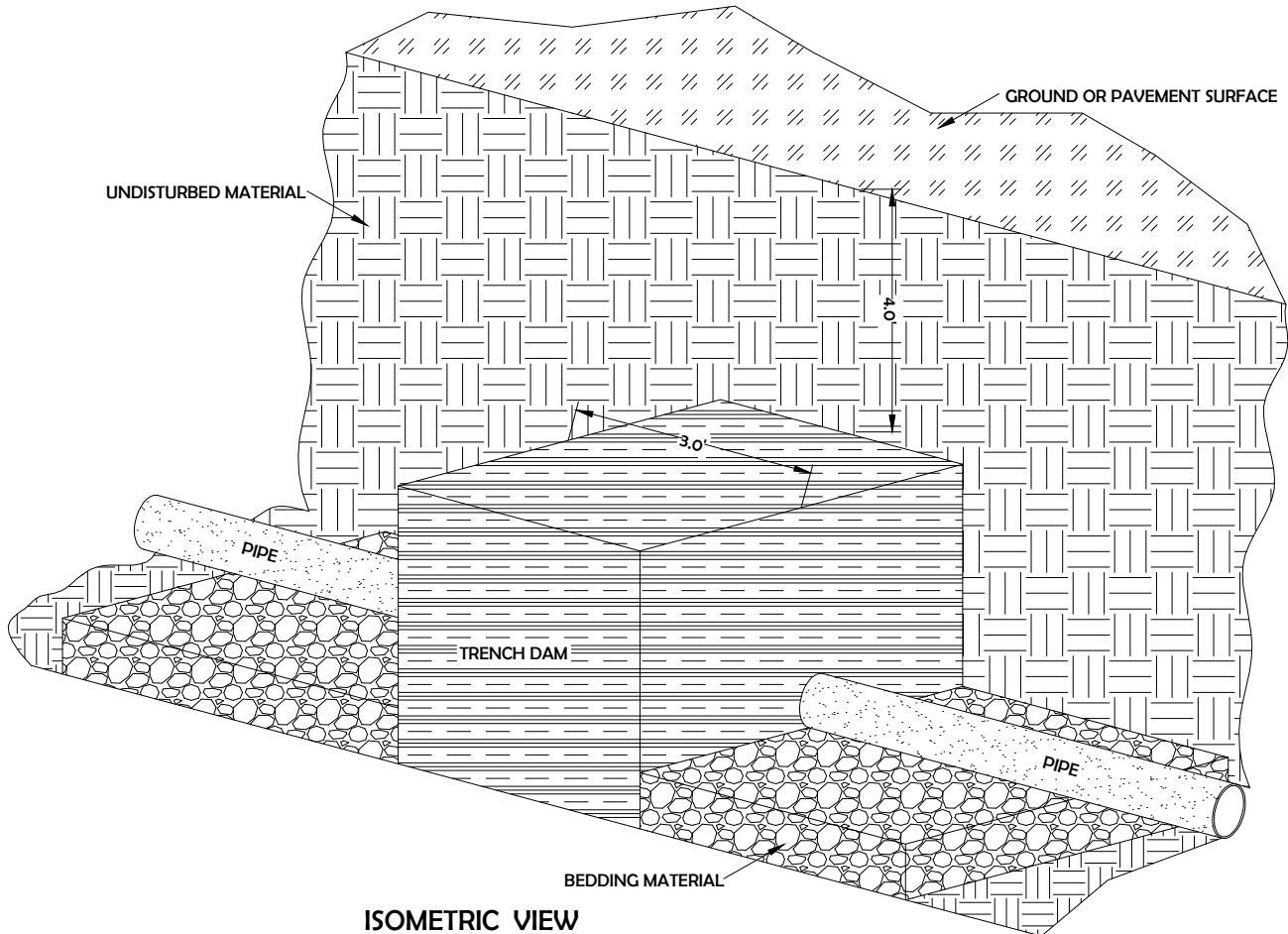
1. CONTRACTOR SHALL BACKFILL AND COMPACT TRENCH WITH CLAY AND/OR BENTONITE
2. NO STONE SHALL BE USED IN THE BOTTOM OF TRENCH ALONG THE LENGTH OF THE DAM
3. CLAY SHALL BE FREE OF STONE, GRAVEL, AND OTHER DEBRIS
4. NO JOINTS SHALL BE COVERED BY TRENCH DAM MATERIAL SHALL BE WELL COMPACTED. USE MAXIMUM 6" DIAMETER CLAY PIECES. AVOID PIPE DAMAGE DURING COMPACTION



SECTION VIEW

NOTES:

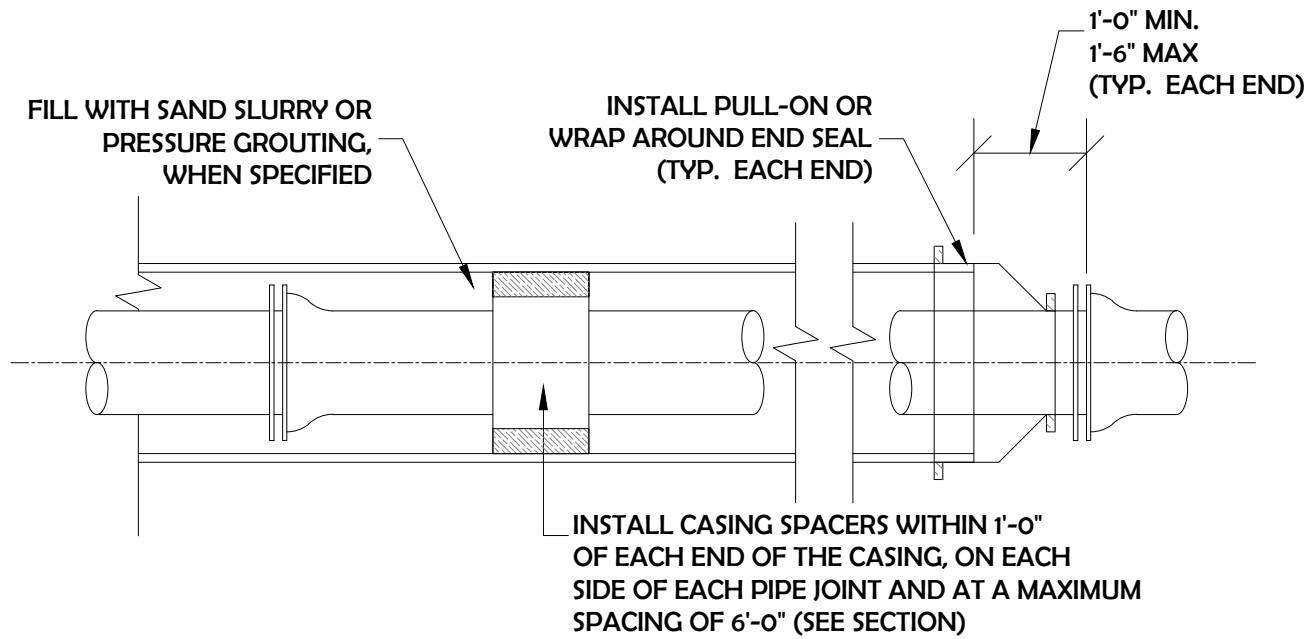
1. INSTALL CLAY AND/OR BENTONITE TO A POINT 4' BELOW FINISH SURFACE ELEVATION OR 2' ABOVE TOP OF PIPE, WHICHEVER IS GREATER



ISOMETRIC VIEW



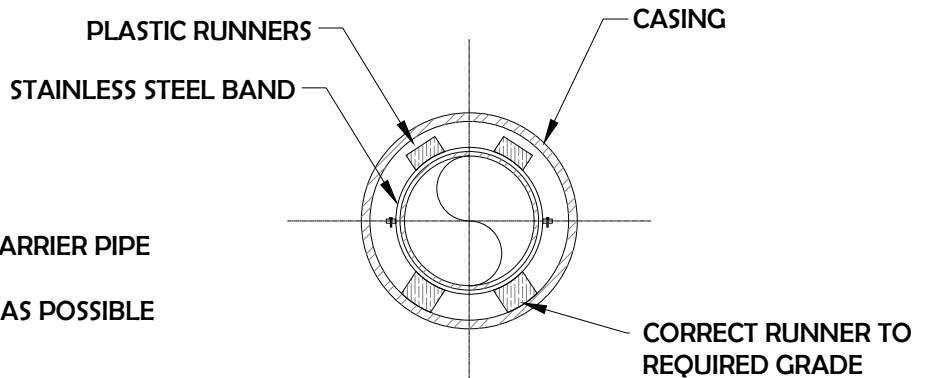
SANITARY AND STORM SEWER CASING INSTALLATION



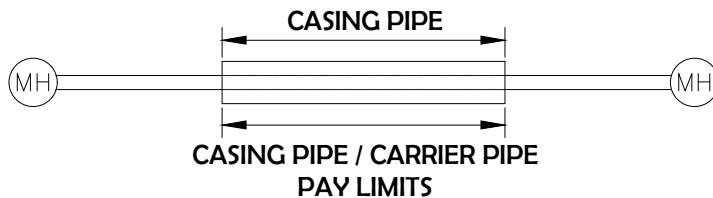
ELEVATION

NOTE:

1. SIZE CASING SPACERS TO MEET CARRIER PIPE LINE AND GRADE
2. CENTER CARRIER PIPE AS CLOSE AS POSSIBLE IN THE CASING PIPE



SECTION

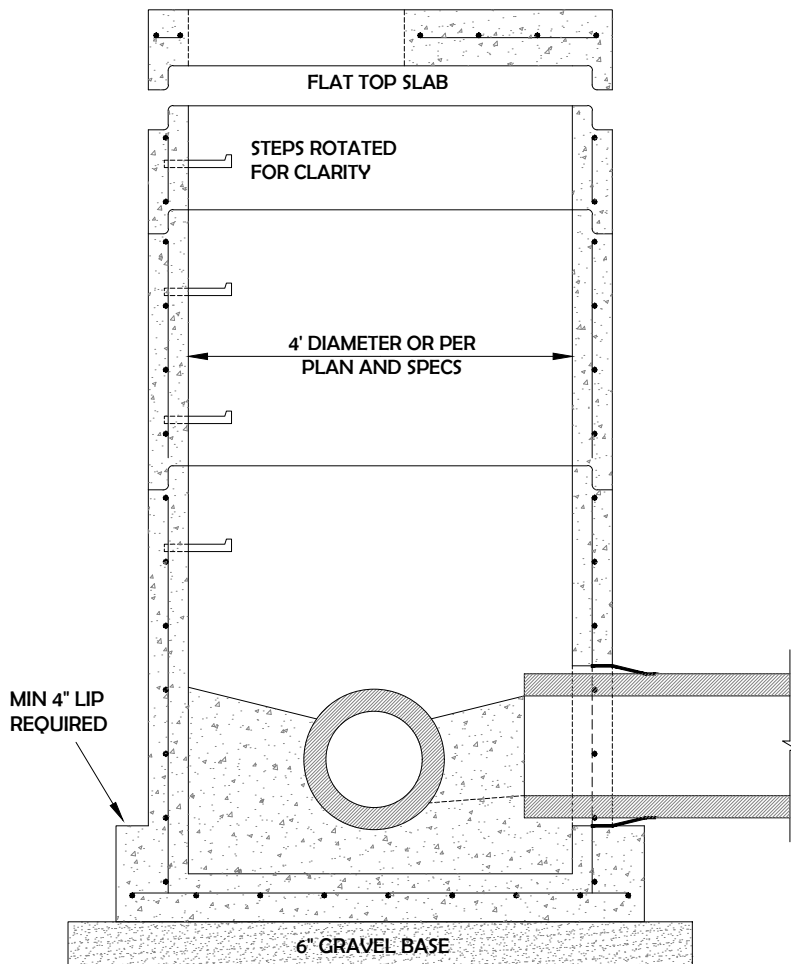
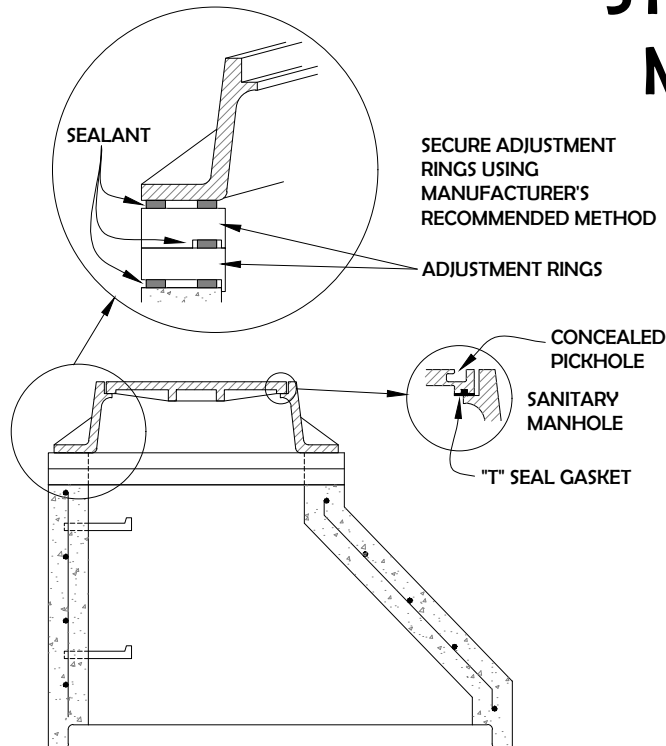


PLAN VIEW



DEPARTMENT OF PUBLIC WORKS
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CITY OF FOND DU LAC, WISCONSIN

STANDARD PRECAST MANHOLE DETAIL



- 6 INCHES OF CRUSHED STONE BASE REQUIRED
- CONCRETE AND STEEL REINFORCEMENT SHALL CONFORM TO ASTM DESIGNATION C478
- MANHOLE CONCRETE STRENGTH TO BE 4,000 PSI OR GREATER
- MIN. MANHOLE WALL, BASE & FLAT TOP SLAB THICKNESSES
 - 4 FT I.D.: 5 INCH WALL, 6 INCH BASE & FLAT TOP SLAB
 - 5 FT I.D.: 6 INCH WALL, 8 INCH BASE & FLAT TOP SLAB
 - 6 FT I.D.: 7 INCH WALL, 8 INCH BASE & FLAT TOP SLAB
 - 8 FT I.D.: 9 INCH WALL, 8 INCH BASE & FLAT TOP SLAB
- MANHOLE BASE TO BE CONSTRUCTED OF CLASS "C" CONCRETE, MINIMUM OF 12 INCHES PLACED UNDER FLOW LINE OF PIPE
- STORM SEWER BENCH SLOPE - 1 INCH PER FT
SANITARY SEWER BENCH SLOPE - 3 INCHES PER FT
- PIPE HOLES TO BE MANUFACTURED SO AS TO ALLOW FOR LATERAL AND VERTICAL MOVEMENT, AS WELL AS ANGULAR ADJUSTMENT THROUGH 15°
- PIPE TO MANHOLE CONNECTORS SHALL MEET ASTM C923 (KOR-N-SEAL, QUIK-LOK OR EQUAL)
- JOINTS SHALL BE WATERTIGHT AND SHALL BE MADE USING RUBBER TYPE GASKETS OR PRE-FORMED JOINT MATERIAL
- MANHOLE STEPS TO BE PLACED AT 16 INCH INTERVALS. THE FIRST STEP SHALL BE PLACED 16 INCHES ABOVE THE BENCH. THE TOP STEP MAY VARY FROM 16 INCHES - 24 INCHES FROM THE TOP OF CASTING. STEPS SHALL BE STEEL REINFORCED PLASTIC. MANHOLE STEPS SHALL BE ALIGNED OVER THE OUTGOING PIPE.
- BARREL SECTION - 12 INCH, 16 INCH, 24 INCH, 32 INCH, 48 INCH AND 64 INCH HIGH. AREA OF CIRCUMFERENTIAL STEEL = 0.12 SQ INCH PER LINEAL FOOT
- ECCENTRIC CONE MAY VARY IN HEIGHT FROM 28 INCHES TO 36 INCHES
- INSTALL FLAT TOP WHEN SHOWN ON PLANS, IN SPECIFICATIONS OR APPROVED BY ENGINEER
- ADJUSTMENT RINGS SHALL BE HDPE ADJUSTING RINGS BY LADTECH, INC., CRETEX PRO-RING, OR EJ INFRA-RISER. RINGS SHALL HAVE AN INSIDE DIAMETER OF APPROX. 23-3/4 INCHES. CONCRETE ADJUSTMENT RINGS SHALL NOT BE ALLOWED.
- FRAME SHALL BE NEENAH FOUNDRY R-1550 OR EQUAL.
- SANITARY MANHOLE LID TO HAVE CONCEALED PICK HOLES AND "T" SEAL GASKET.



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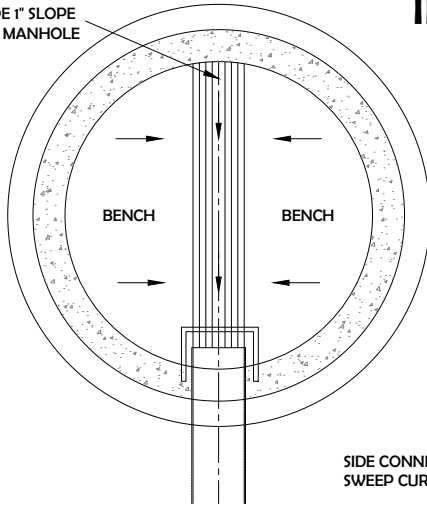
SCALE: 1" = 2'

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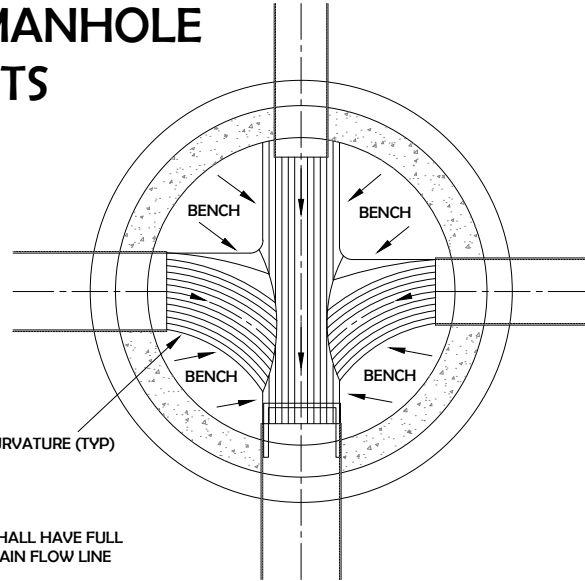
J:\CITYDWG\Civil 3D Drawings\DTL\City SDDs\1-B-(1-2) Precast Manhole & Manhole Inverts Detail.PDF

STANDARD MANHOLE INVERTS

PROVIDE 1" SLOPE
ACROSS MANHOLE

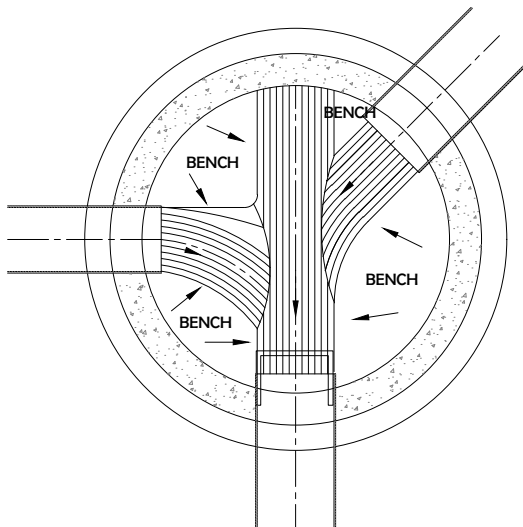
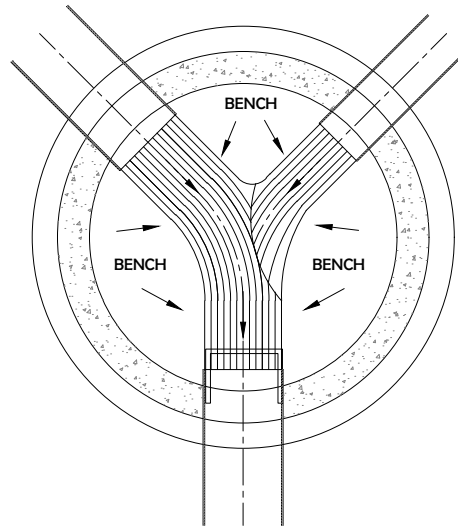
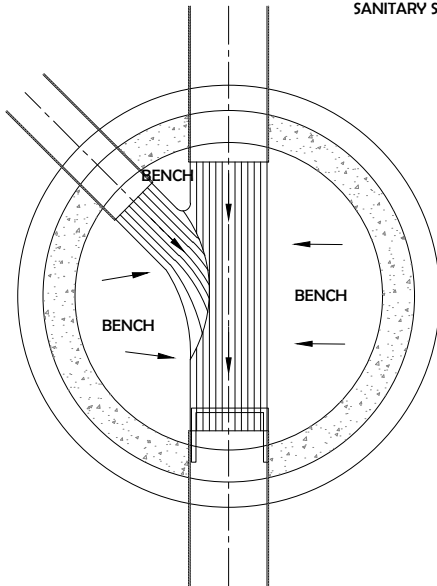


FULL SWEEP CURVATURE (TYP)



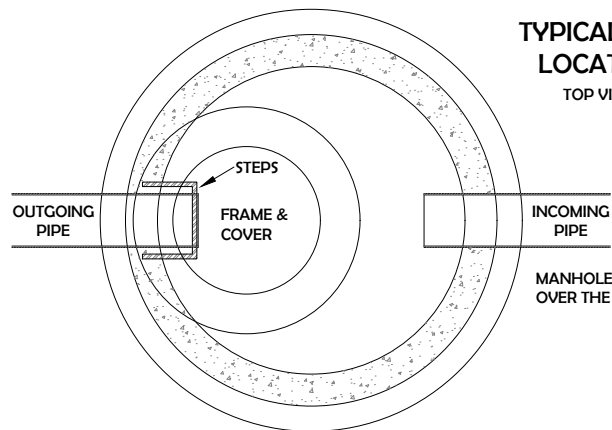
SIDE CONNECTING MAINS SHALL HAVE FULL
SWEEP CURVATURE INTO MAIN FLOW LINE

STORM SEWER BENCH SLOPE - 1 INCH PER FT
SANITARY SEWER BENCH SLOPE - 3 INCHES PER FT



TYPICAL STEP
LOCATION

TOP VIEW



MANHOLE STEPS SHALL BE ALIGNED
OVER THE OUTGOING PIPE

HEIGHT OF BENCH:

- PIPES 12 INCHES OR LESS = $0.8 \times \text{DIA. OF SEWER}$
- PIPES 15 TO 24 INCHES = 12 INCHES
- PIPES GREATER THAN 24 INCHES = SPRING LINE OF LARGEST PIPE
- ALL SANITARY PIPES 12 INCHES OR LESS HAVE A BENCH POURED TO SPRING LINE WHENEVER A LESSER HEIGHT BENCH IS ALLOWED FOR ADJOINING PIPES.

SCALE: 1" = 2'

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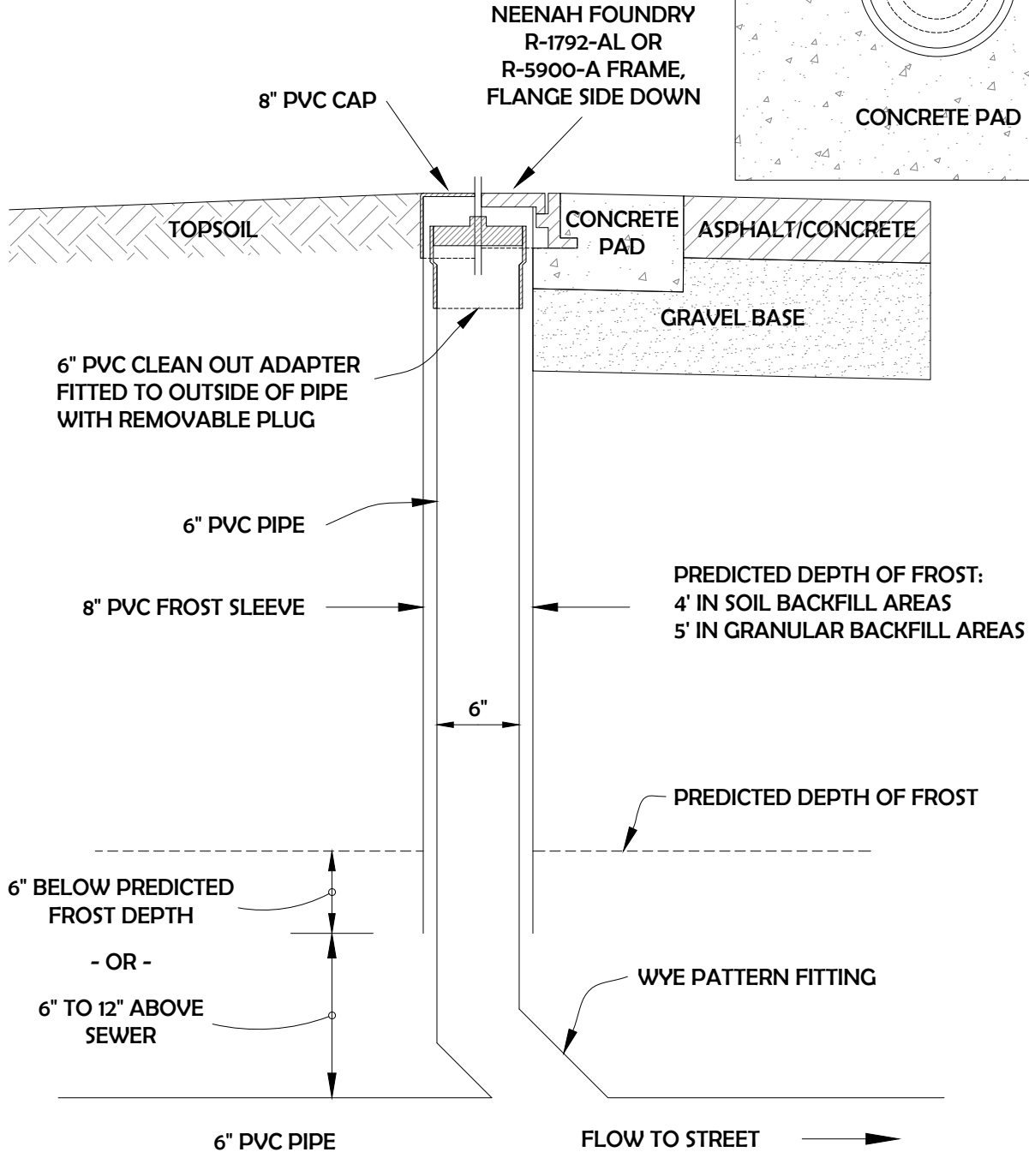
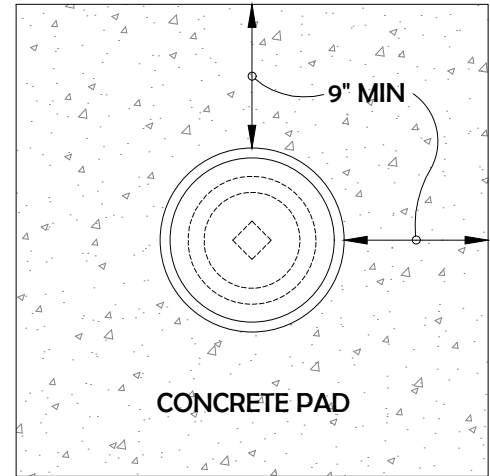
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DEPARTMENT OF PUBLIC WORKS
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CITY OF FOND DU LAC, WISCONSIN

CONCRETE PAD REQUIRED WHEN
CLEANOUT IS WITHIN A PAVED
VEHICULAR TRAFFIC AREA

CONCRETE PAD MIN. THICKNESS 7"
IN ROADWAY OR AS DIRECTED BY
CITY



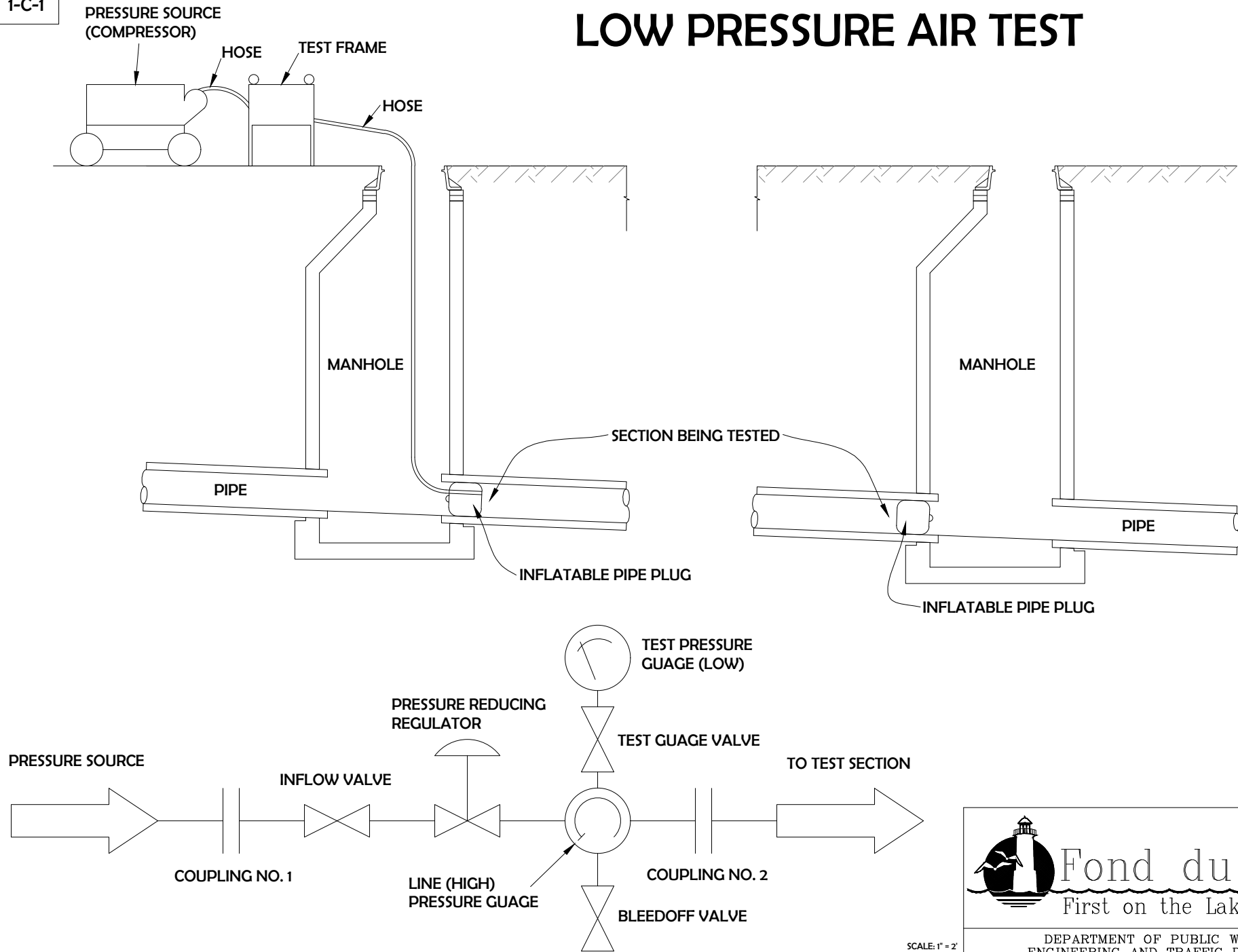
STANDARD PVC CLEANOUT DETAIL



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ENGINEERING AND TRAFFIC DIVISION
CITY OF FOND DU LAC, WISCONSIN

1-C-1

LOW PRESSURE AIR TEST

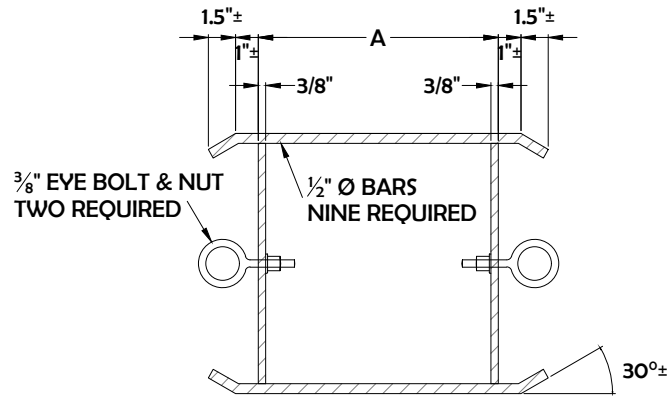


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ENGINEERING AND TRAFFIC DIVISION
CITY OF FOND DU LAC, WISCONSIN

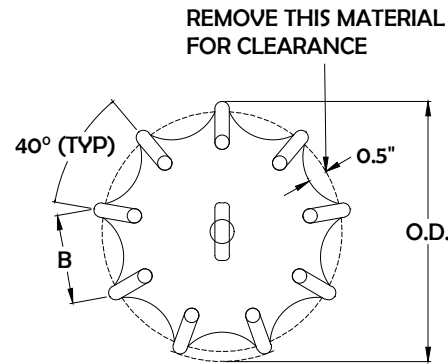
SCALE: 1" = 2'
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MANDREL FOR DEFLECTION TESTS



SIDE OR TOP VIEW



END VIEW

NOTE:

1. TOLERANCE ON MANDREL O.D. IS ± 0.010 "

REQUIRED DIMENSIONS:

1. MANDREL DIMENSIONS ON "O.D."
 2. 40° SPACING BETWEEN ANGLES
 3. DIMENSIONS A ARE MINIMUMS
- ALL OTHER DIMENSIONS ARE OPTIONAL

SUGGESTED MANDREL DESIGN

NOMINAL PIPE SIZE I.D.	A (MIN.)	MINIMUM MANDREL O.D. (INCHES)							
		DEFLECTION=				DEFLECTION=			
		D-3034 SDR-35				F-949			
		5%	B	7.5%	B	5%	B	7.5%	B
8"	8"	7.28	2.496	7.09	2.424	7.27	2.484	7.08	2.424
10"	10"	9.08	3.108	8.85	3.024	9.07	3.096	8.83	3.024
12"	10"	10.79	3.684	10.51	3.600				
15"	12"	13.20	4.512	12.85	4.392				
		F679 PS46 12454C PIPE				F679 PS46 12364C PIPE			
		5%	B	7.5%	B	5%	B	7.5%	B
		16.13	5.520	15.70	5.316	16.20	5.544	15.78	5.400
18"	15"	16.13	5.520	15.70	5.316	16.20	5.544	15.78	5.400
21"	18"	19.00	6.492	18.50	6.324	19.09	6.528	18.59	6.360
24"	21"	21.36	7.308	20.79	7.116	21.46	7.344	20.89	7.152
27"	24"	24.06	8.232	23.43	8.016	24.17	8.268	23.54	8.052



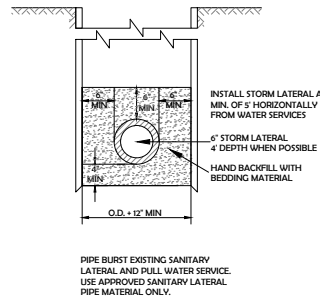
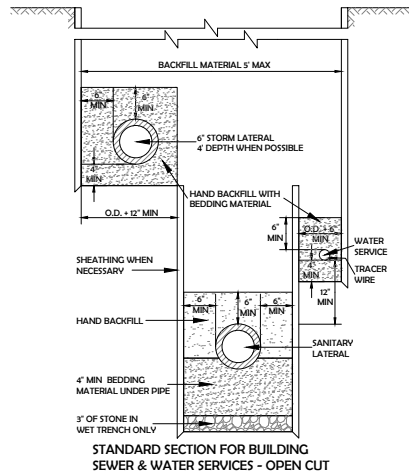
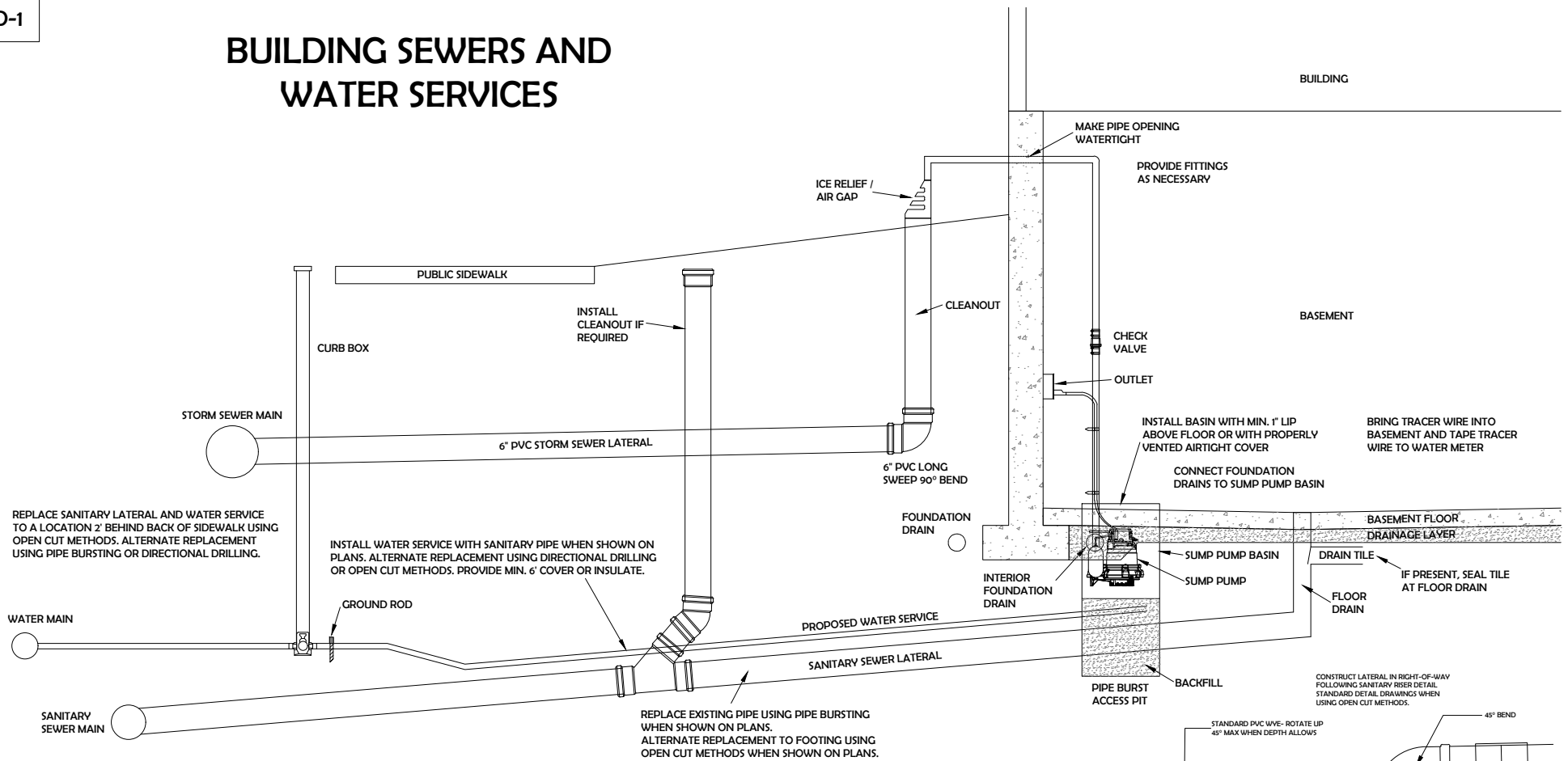
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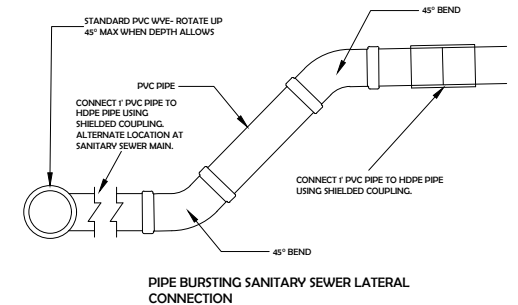
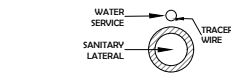
J:\CITYDWG\Civil 3D Drawings\DTL\City SDD\1-C-2 Deflection Test.PDF

DEPARTMENT OF PUBLIC WORKS
ENGINEERING AND TRAFFIC DIVISION
CITY OF FOND DU LAC, WISCONSIN

BUILDING SEWERS AND WATER SERVICES



ALTERNATE: INSTALL WATER SERVICE SEPARATELY USING DIRECTIONAL DRILLING A MIN. OFF 5' HORIZONTALLY FROM SANITARY AND STORM SEWERS.





Fond du Lac

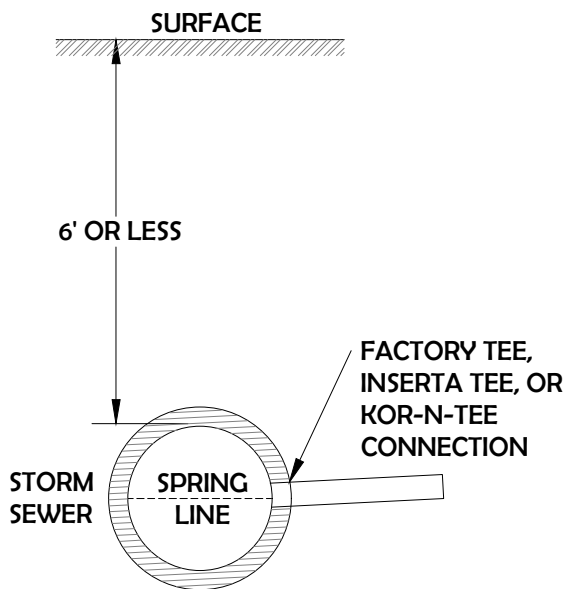
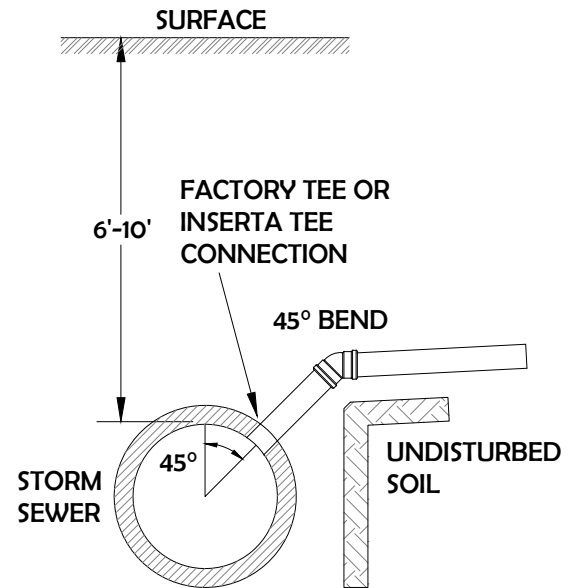
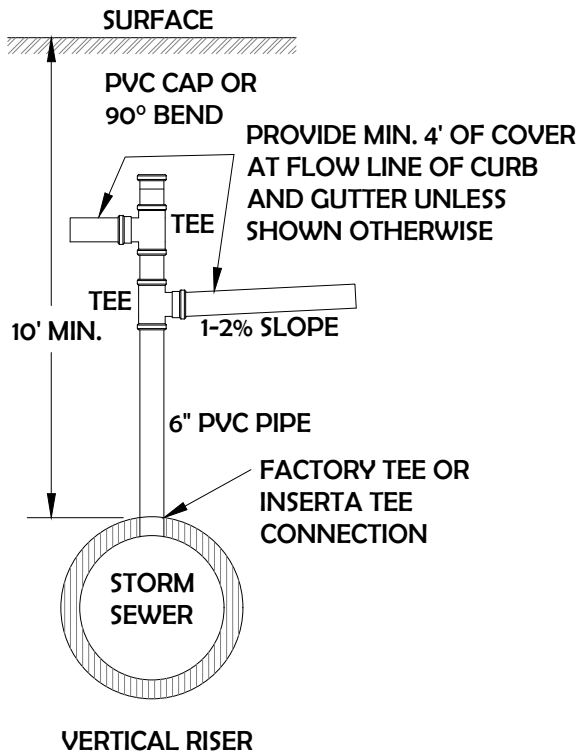
First on the Lake

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ENGINEERING AND TRAFFIC DIVISION
CITY OF FOND DU LAC, WISCONSIN

SCALE: N.T.S.
REVISED 03/05/2024 BY MIC

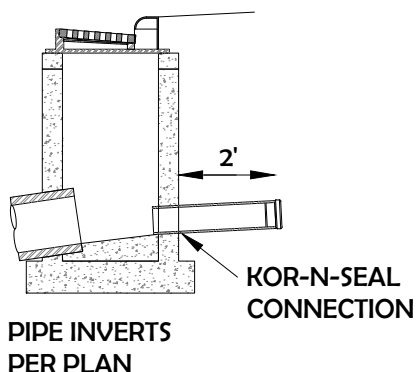
J:\CITYDWG\Civil 3D Drawings\DTL\City SDD\11-D-1 Building Sewers and Water Services Detail.DWG

STORM SEWER LATERALS



NOTES:

1. LATERALS SHALL BE 6" SDR-35 PVC UNLESS SHOWN OTHERWISE.
2. LATERALS SHALL BE LAID AT 1% TO 2% EXCEPT AS NEEDED TO AVOID OTHER UTILITIES.
3. PROVIDE MINIMUM 4' OF COVER AT FLOW LINE OF CURB AND GUTTER UNLESS SHOWN OTHERWISE.
4. LATERALS SHALL BE LAID TO A POINT 2' BEHIND THE CURB AND GUTTER UNLESS SHOWN OTHERWISE.
5. INSTALL PVC CAP OR PLUG AT END OF PIPE OR CONNECT TO EXISTING PIPE.
6. ALL LOCATIONS SHALL BE VERIFIED BY THE ENGINEER.



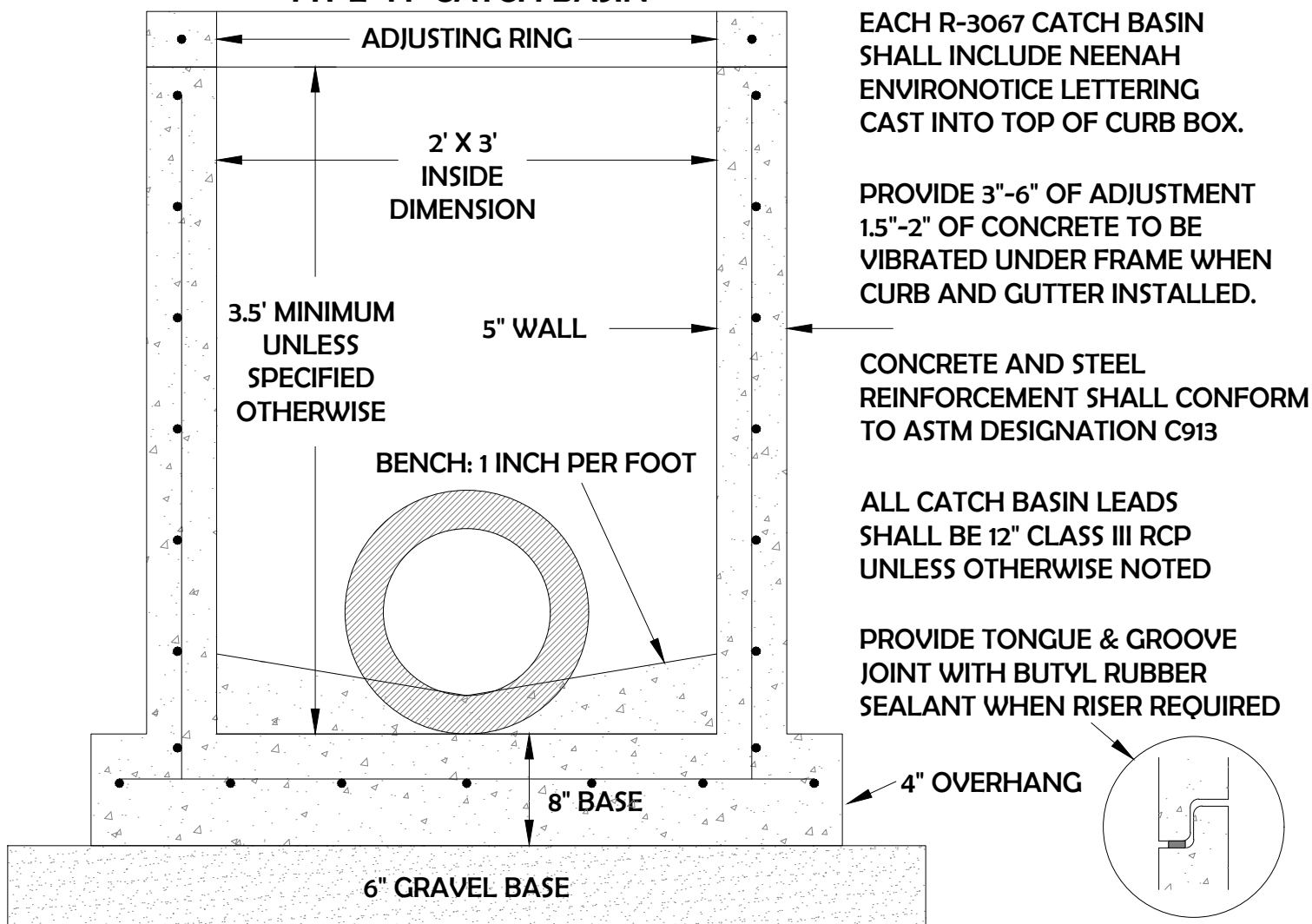
SCALE: 1" = 4'
REVISED 05/16/2024 BY MIC
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DEPARTMENT OF PUBLIC WORKS
ENGINEERING AND TRAFFIC DIVISION
CITY OF FOND DU LAC, WISCONSIN



**PRECAST
TYPE "H" CATCH BASIN**



STANDARD CATCH BASIN DETAIL

TYPE R GRATE REQUIRED,
UNLESS SPECIFIED OTHERWISE

NEENAH FOUNDRY FRAME TYPE
R-3067 (VERTICAL FACE CURB)
OR R-3067-C (DRIVEWAY OR
MOUNTABLE CURB), UNLESS
SPECIFIED OTHERWISE

EACH R-3067 CATCH BASIN
SHALL INCLUDE NEENAH
ENVIRONOTICE LETTERING
CAST INTO TOP OF CURB BOX.

PROVIDE 3"-6" OF ADJUSTMENT
1.5"-2" OF CONCRETE TO BE
VIBRATED UNDER FRAME WHEN
CURB AND GUTTER INSTALLED.

CONCRETE AND STEEL
REINFORCEMENT SHALL CONFORM
TO ASTM DESIGNATION C913

ALL CATCH BASIN LEADS
SHALL BE 12" CLASS III RCP
UNLESS OTHERWISE NOTED

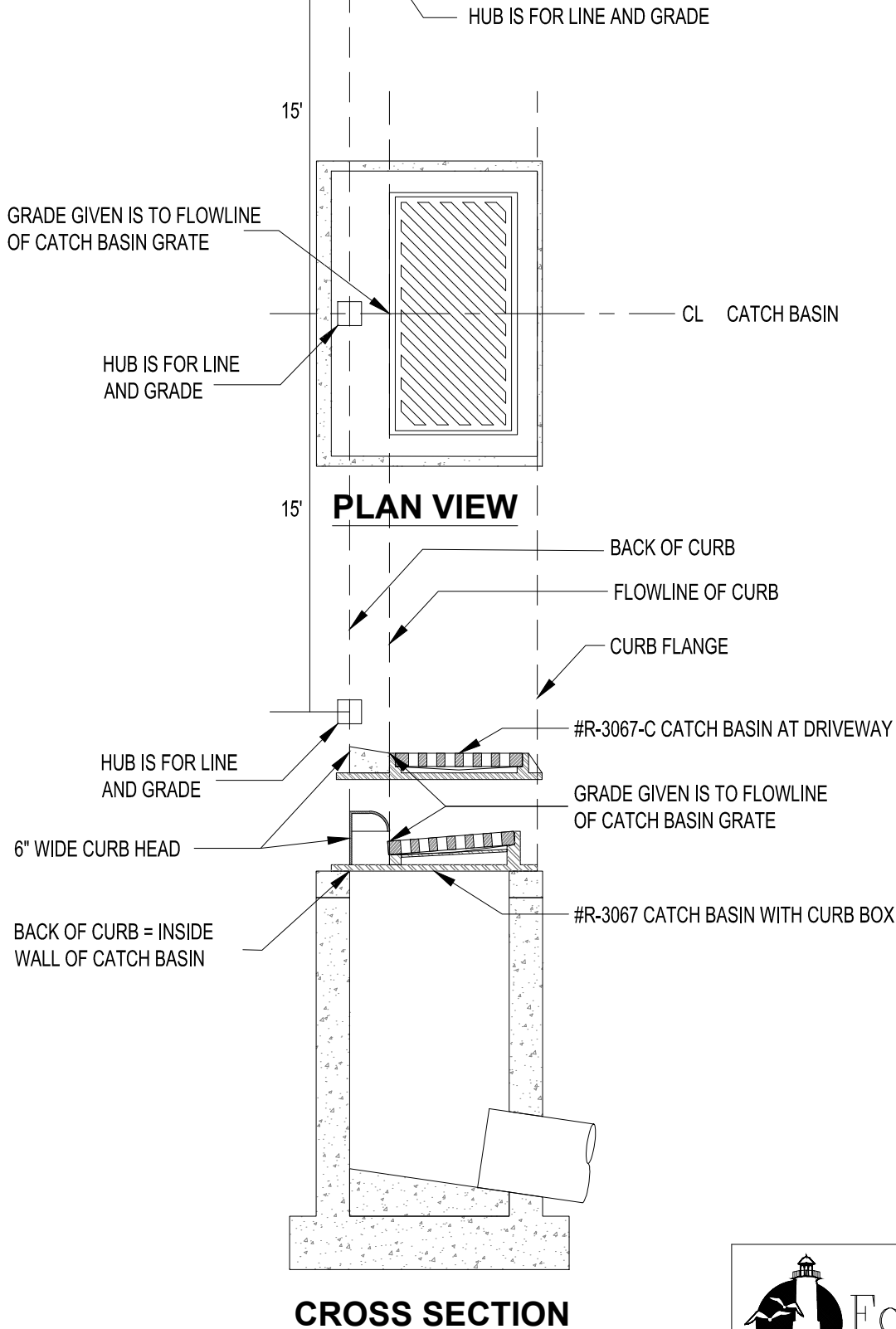
PROVIDE TONGUE & GROOVE
JOINT WITH BUTYL RUBBER
SEALANT WHEN RISER REQUIRED

ADJUSTMENT RINGS SHALL BE HDPE ADJUSTING RINGS BY
LADTECH, INC., CRETEX PRO-RING, OR EJ INFRA-RISER.
CONCRETE ADJUSTMENT RINGS SHALL NOT BE ALLOWED.



DEPARTMENT OF PUBLIC WORKS
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CATCH BASIN STAKING DIAGRAM STANDARD CURB CASTING # R-3067 OR #R-3067-C

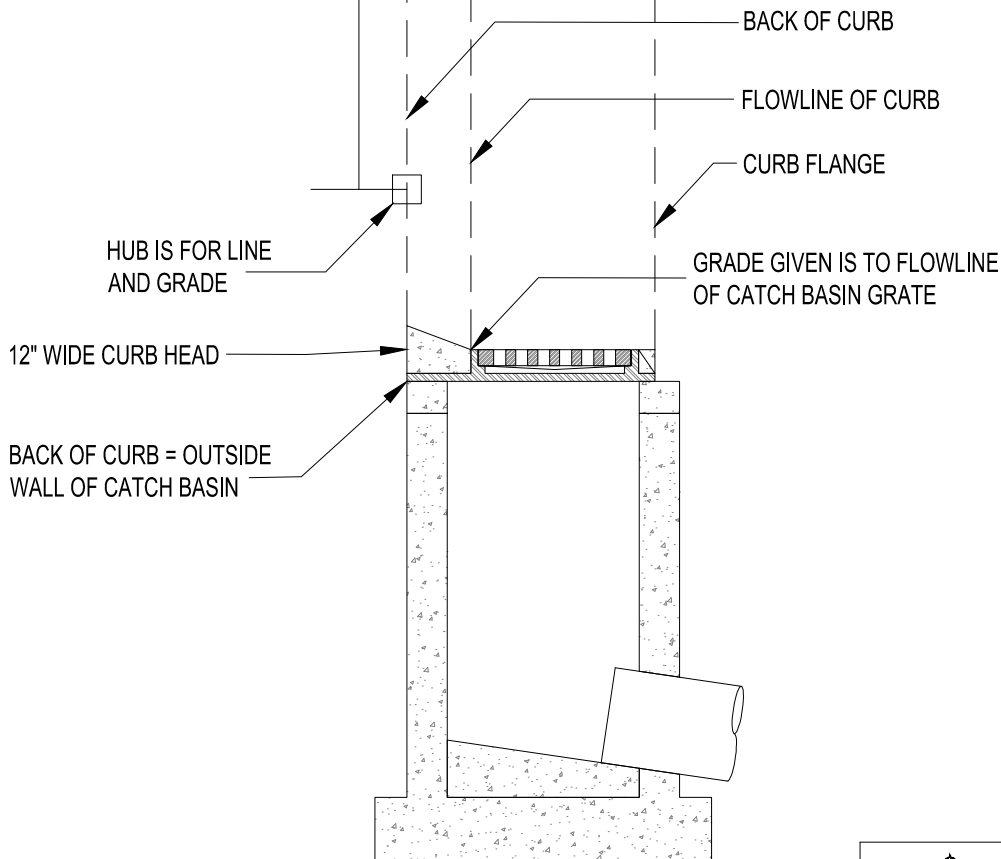
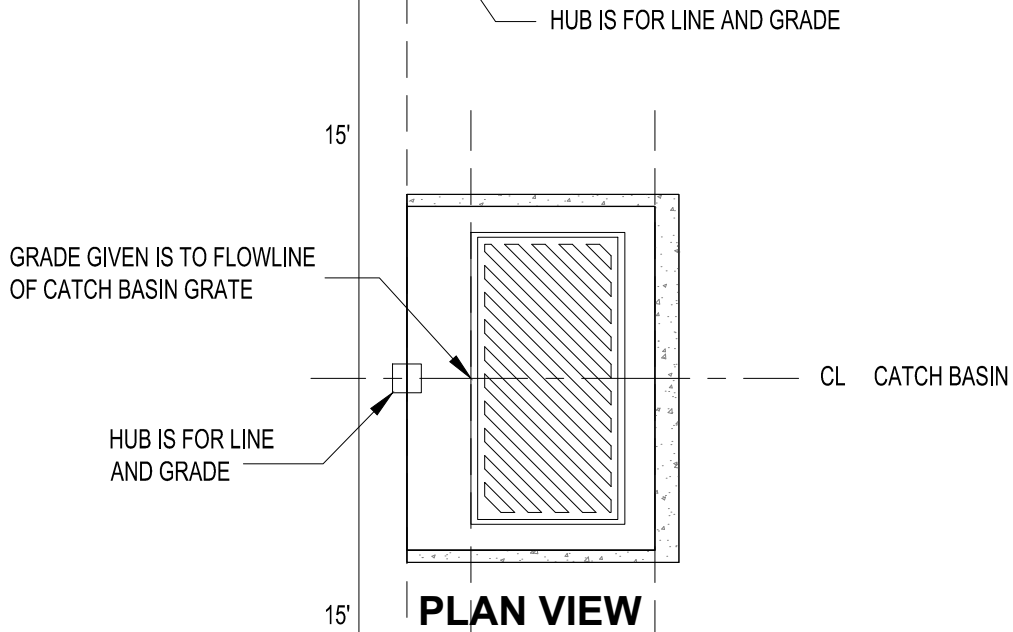


SCALE: 1" = 2'
REVISED 03/05/2024 BY MIC

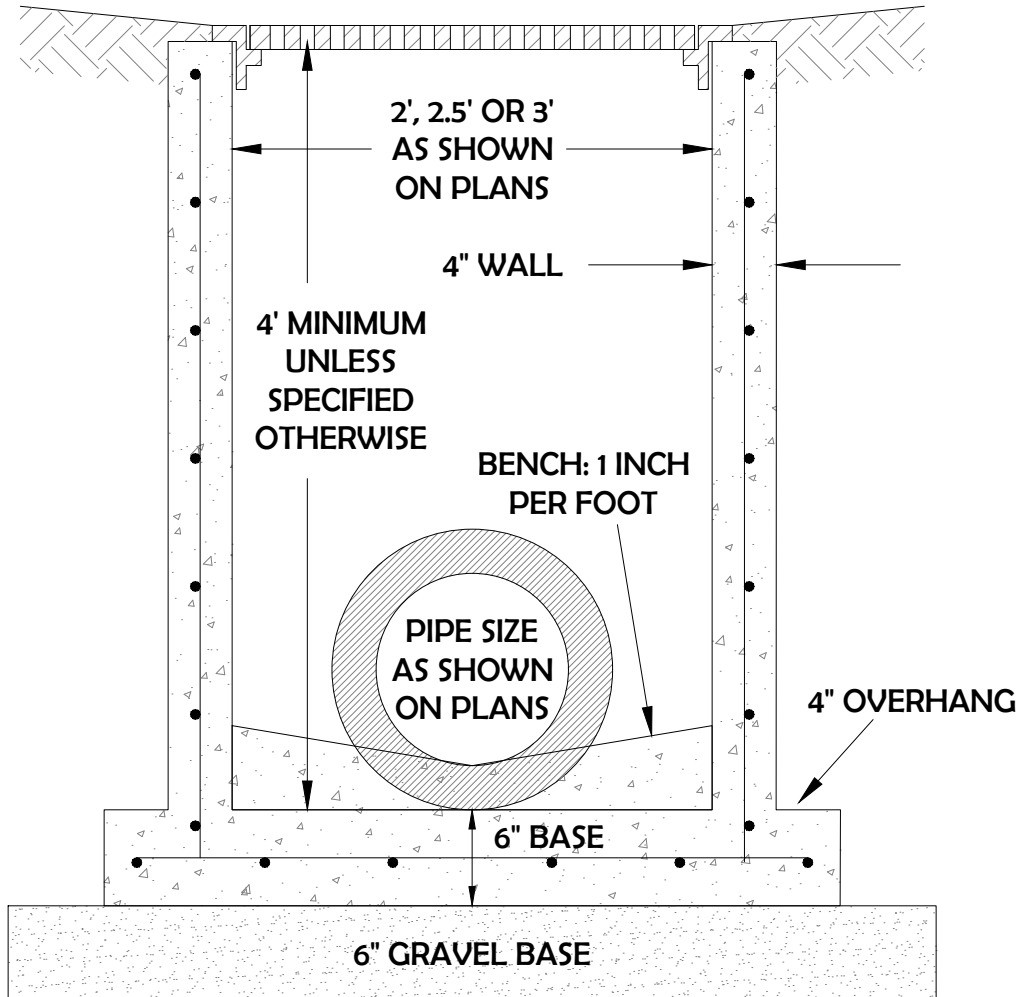
J:\CITYDWG\Civil 3D Drawings\ITL\City SDD\2-C-(2-3) Catch Basin Staking Standard & Mountable Curb Detail.PDF

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CITY OF FOND DU LAC, WISCONSIN

CATCH BASIN STAKING DIAGRAM **MOUNTABLE CURB** **CASTING # R-3067-C**



STANDARD FIELD INLET DETAIL

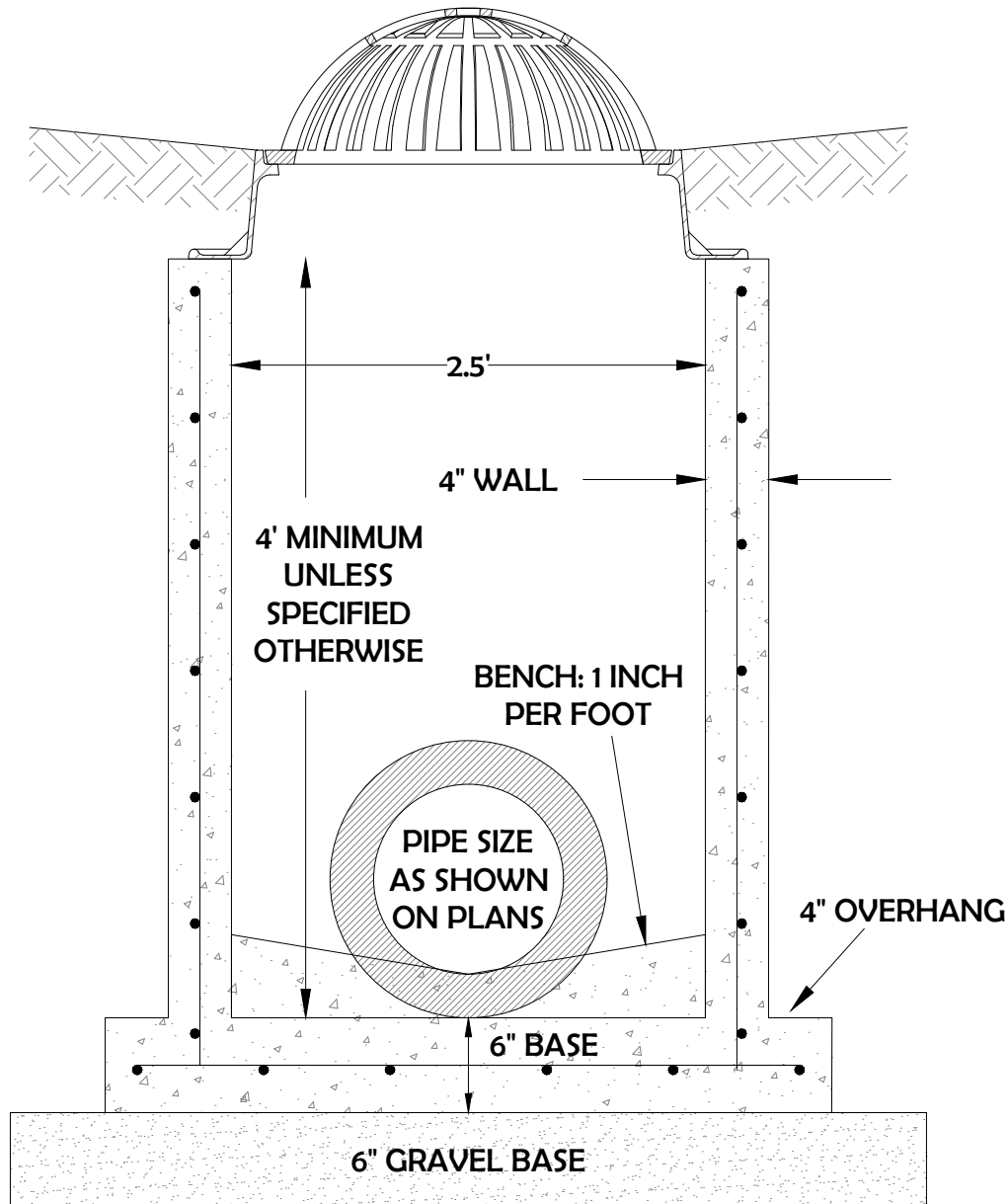


NEENAH FOUNDRY R-5901 FRAME SERIES
WITH TYPE G GRATE OR R-2560-E FRAME AS
SHOWN ON THE PLANS

CONCRETE AND STEEL REINFORCEMENT SHALL
CONFORM TO ASTM DESIGNATION C478

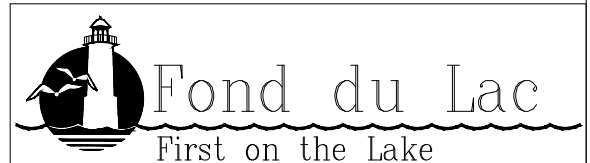


STANDARD FIELD INLET DETAIL WITH BEEHIVE GRATE

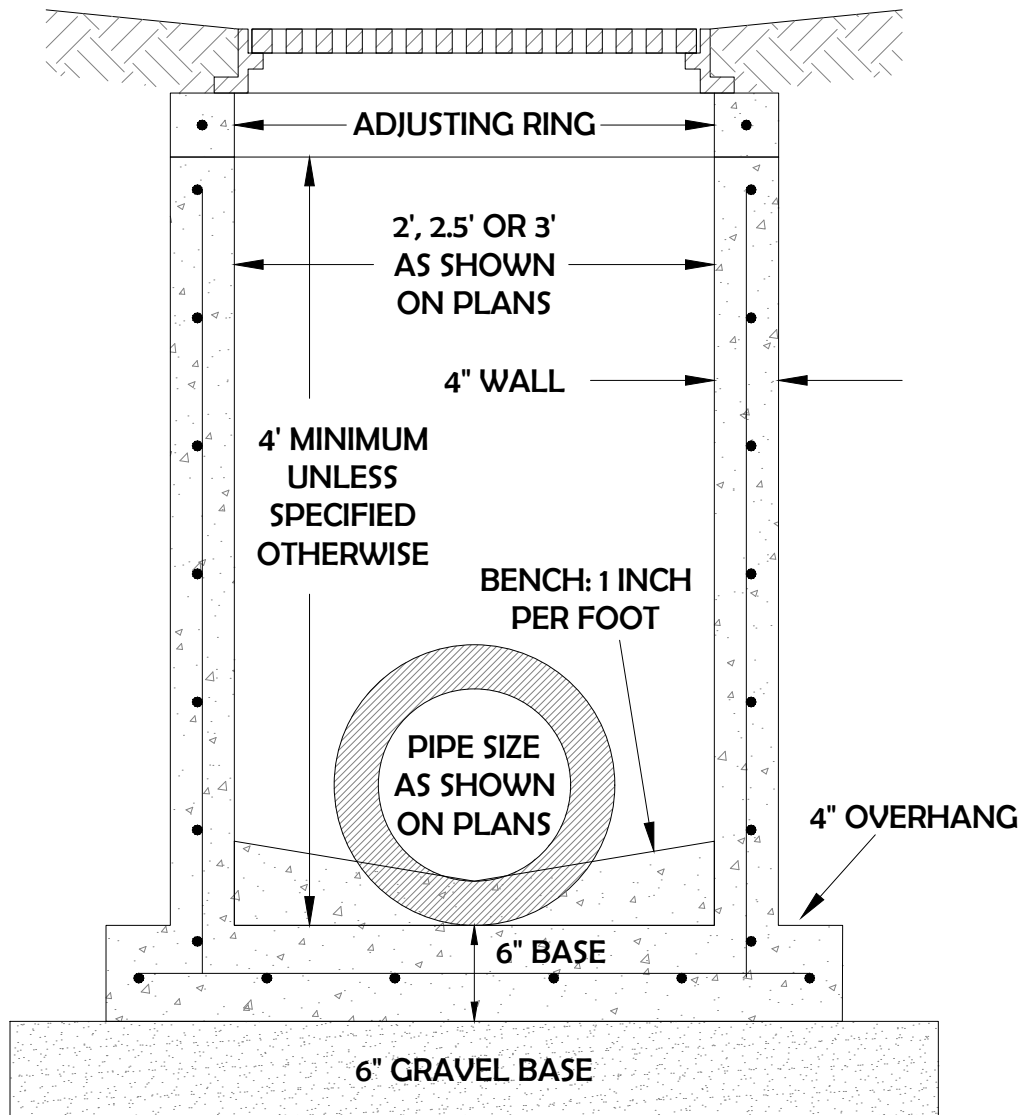


NEENAH FOUNDRY R-2560-E2 FRAME UNLESS
SHOWN OTHERWISE

CONCRETE AND STEEL REINFORCEMENT SHALL
CONFORM TO ASTM DESIGNATION C478



FIELD INLET FLANGE DOWN DETAIL



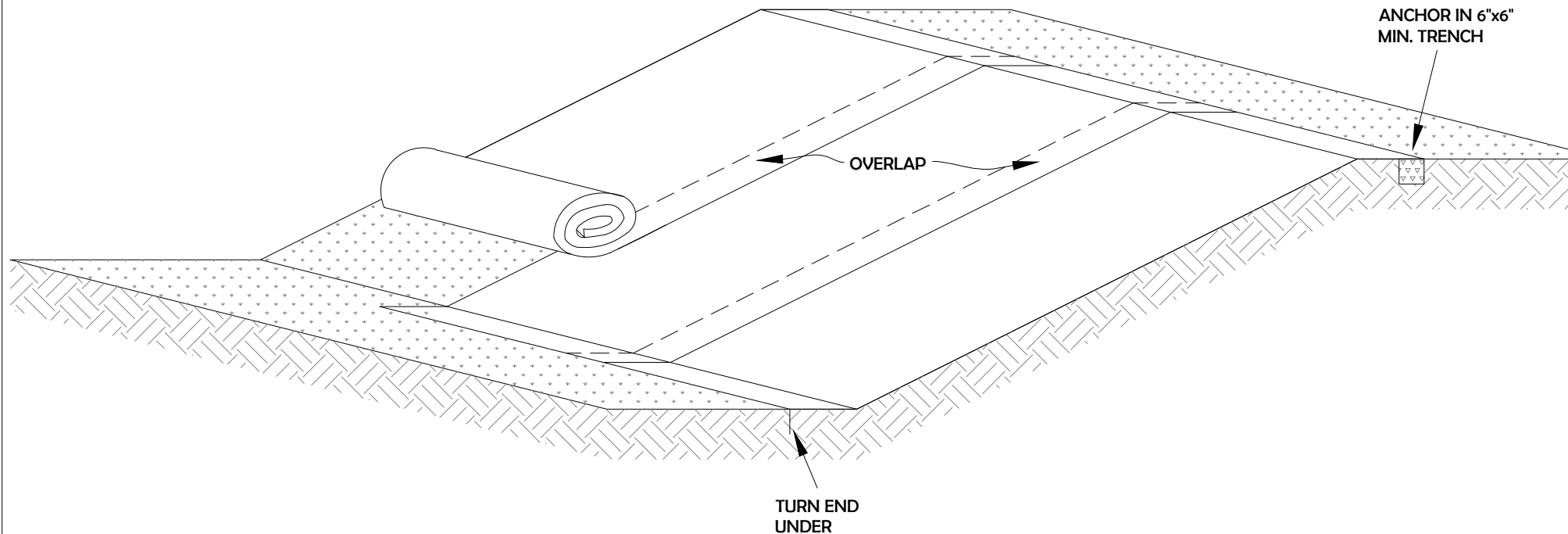
NEENAH FOUNDRY R-1792 FRAME SERIES WITH TYPE G GRATE OR R-2560-E FRAME AS SHOWN ON THE PLANS

CONCRETE AND STEEL REINFORCEMENT SHALL CONFORM TO ASTM DESIGNATION C478

ADJUSTMENT RINGS SHALL BE HDPE ADJUSTING RINGS BY LADTECH, INC., CRETEX PRO-RING, OR EJ INFRA-RISER. CONCRETE ADJUSTMENT RINGS SHALL NOT BE ALLOWED.



EROSION MAT DETAIL



NOTES:

1. GROUND SURFACE SHALL BE SMOOTH BEFORE PLACEMENT FOR PROPER SOIL CONTACT
2. ANCHOR PER MANUFACTURER'S REQUIREMENTS. PROVIDE MIN. ANCHOR FREQUENCY LISTED IN WISDOT PRODUCT ACCEPTABILITY LIST
3. PROVIDE URBAN ANCHORING DEVICES LISTED IN WISDOT PRODUCT ACCEPTABILITY LIST FOR CLASS I AND CLASS II MATS UNLESS DENOTED OTHERWISE
4. PROVIDE ANCHORS AT OVERLAPS AND SEAMS; PROJECTED WATER LINE; AND CHANNEL BOTTOM/SIDE SLOPE VERTICES
5. ENTRENCH MATS APPROXIMATELY 3 INCHES DEEP ALONG THE EDGE FACING TRAFFIC FOR ALL INSTALLATIONS WITHIN 5 FEET OF ACTIVE TRAFFIC LANES
6. OVERLAP MATS BY 3 INCHES OR LESS FOR ALL URBAN MATS
7. DO NOT USE SINGLE ROLL MATERIAL LESS THAN 6 FEET WIDE IN CHANNELS
8. FERTILIZE & SEED BEFORE INSTALLATION
9. COVER TURF REINFORCEMENT MATS IMMEDIATELY AFTER INSTALLATION WITH EROSION MAT OR SOIL STABILIZER, TYPE A
10. RESEED ANY VEGETATED AREAS DAMAGED OR DESTROYED DURING PLACEMENT OF MAT
11. APPLY WATER UNIFORMLY AFTER PLACING MAT TO SUFFICIENTLY MOISTEN SEEDBED TO A DEPTH OF 2 INCHES AND IN A WAY THAT PRECLUDES WASHING OR EROSION



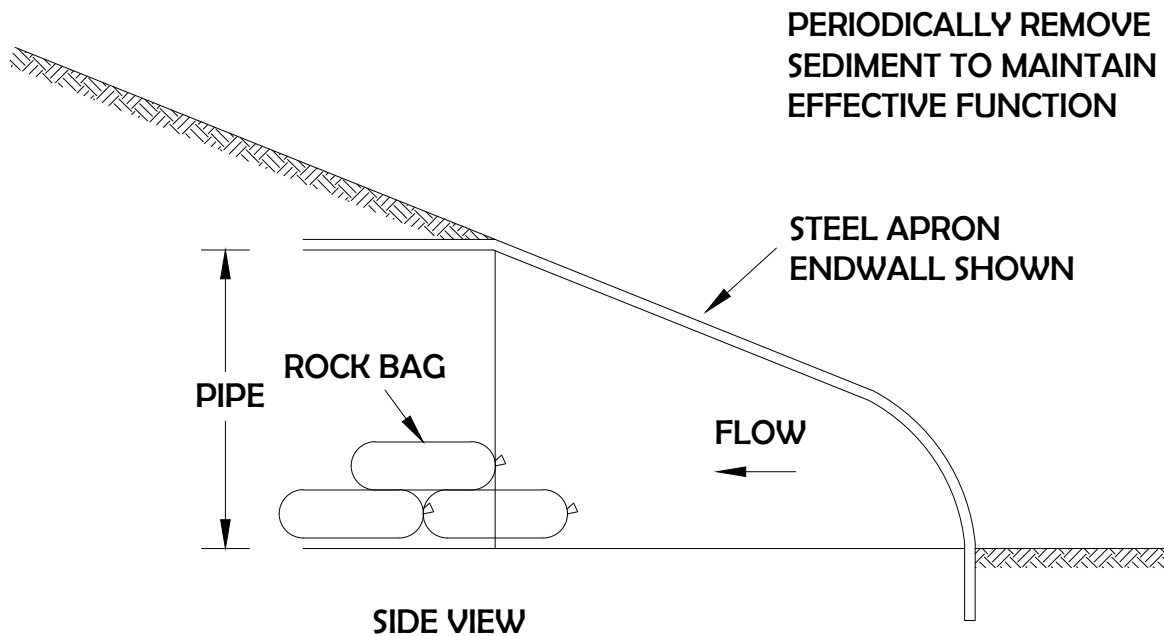
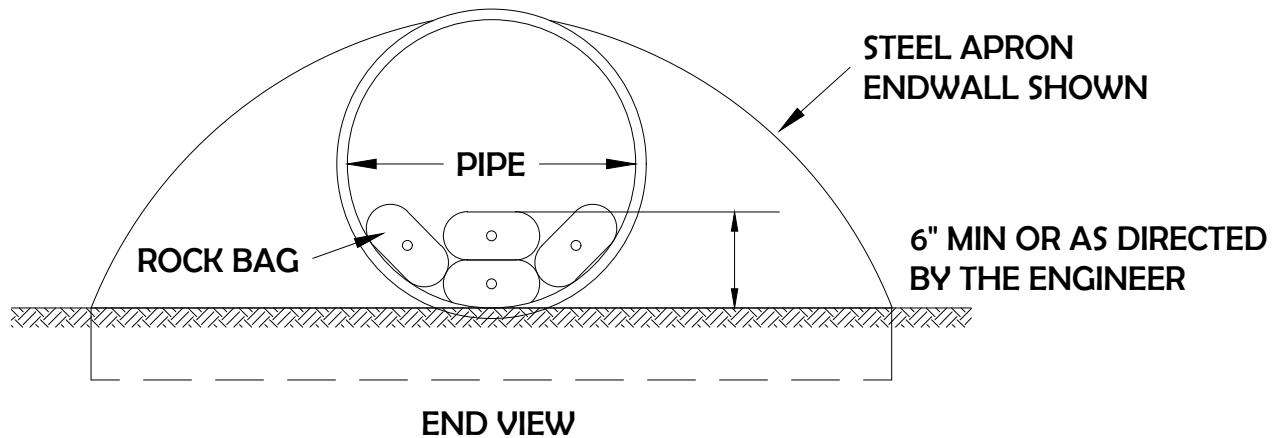
SCALE: 1" = 6'

REVISED 03/05/2024 BY MJC

J:\CITYDWG\Civil 3D Drawings\DTL\City SDD\3-A-1 Erosion Mat Detail.PDF

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ENGINEERING AND TRAFFIC DIVISION
CITY OF FOND DU LAC, WISCONSIN

CULVERT PIPE CHECK DETAIL



FILL BAGS WITH AGGREGATE CONFORMING TO THE FOLLOWING GRADATION (WISDOT NO. 1 COARSE AGGREGATE)

SIEVE	PERCENT PASSING BY WEIGHT
2-INCH	-
1 1/2-INCH	-
1-INCH	100
3/4-INCH	90-100
3/8-INCH	20-55
No. 4	0-10
No. 8	0-5

PROVIDE BAGS MADE OF HIGH-DENSITY POLYETHYLENE OR GEOTEXTILE FABRIC

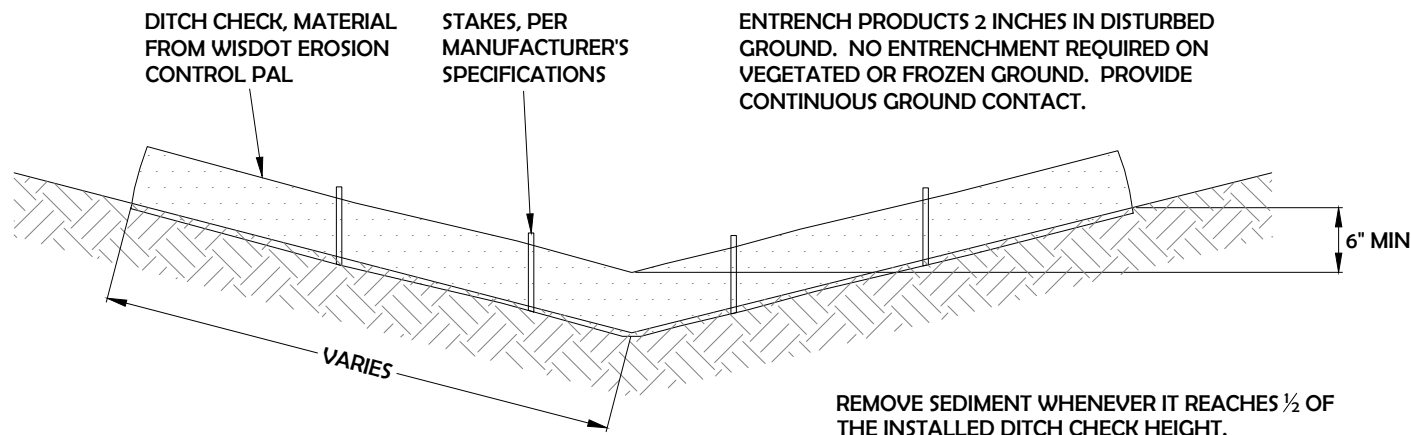
BAGS SHALL HAVE A MINIMUM IN-PLACE FILLED SIZE OF 18 INCHES LONG BY 12 INCHES WIDE BY 6 INCHES HIGH



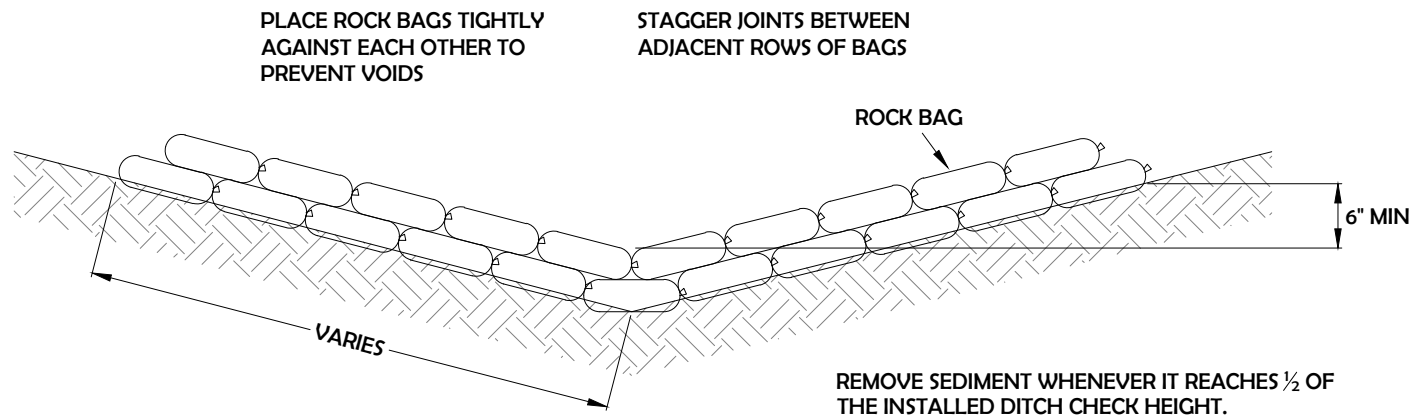
DEPARTMENT OF PUBLIC WORKS
ENGINEERING AND TRAFFIC DIVISION
CITY OF FOND DU LAC, WISCONSIN

DITCH CHECK DETAIL

LOG-TYPE DITCH CHECK



ROCK BAG DITCH CHECK



FILL BAGS WITH AGGREGATE CONFORMING TO THE FOLLOWING GRADATION (WISDOT NO. 1 COARSE AGGREGATE)

SIEVE	PERCENT PASSING BY WEIGHT
2-INCH	-
1½"-INCH	-
1-INCH	100
¾"-INCH	90-100
⅜"-INCH	20-55
No. 4	0-10
No. 8	0-5

PROVIDE BAGS MADE OF HIGH-DENSITY POLYETHYLENE OR GEOTEXTILE FABRIC

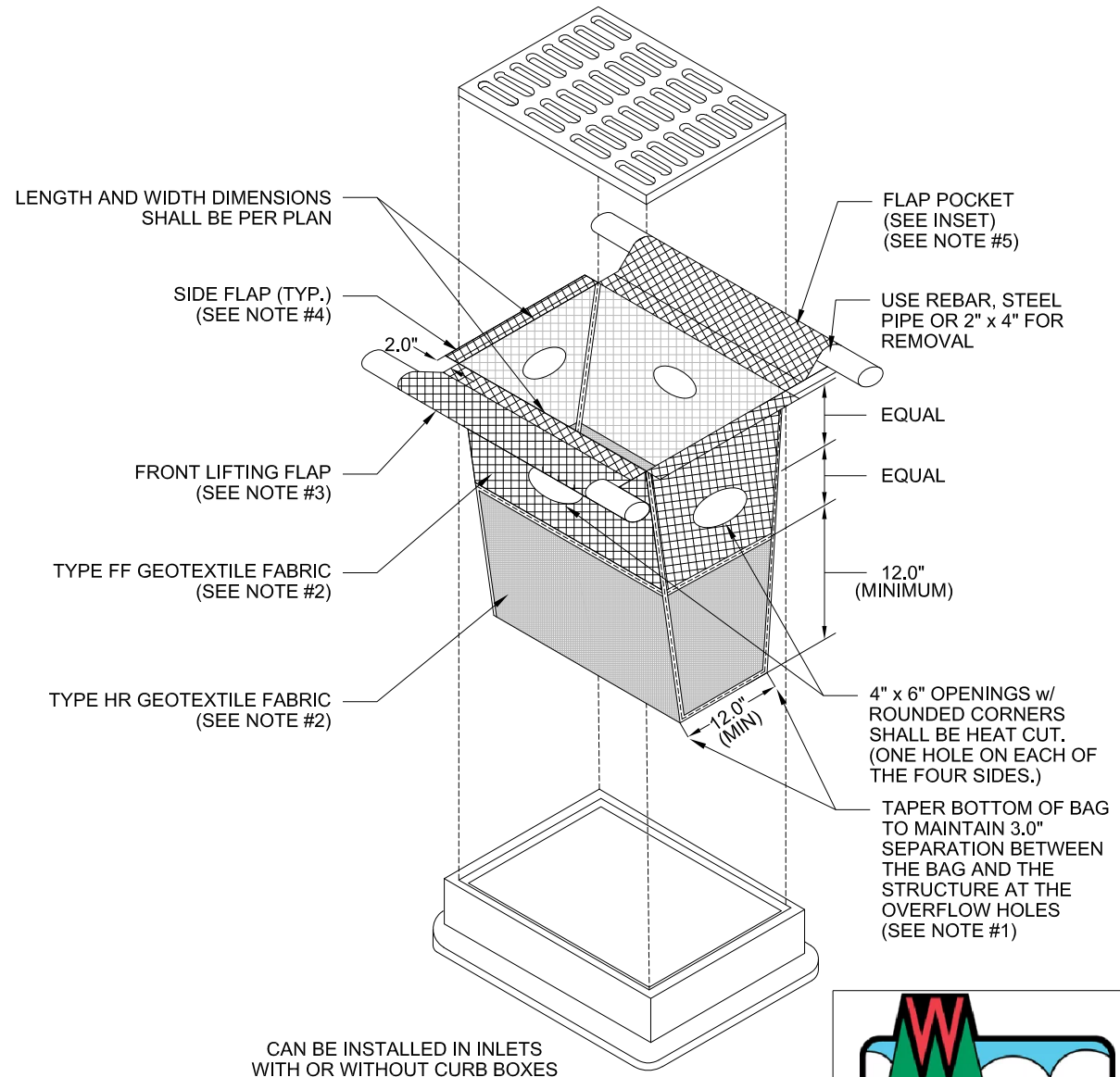
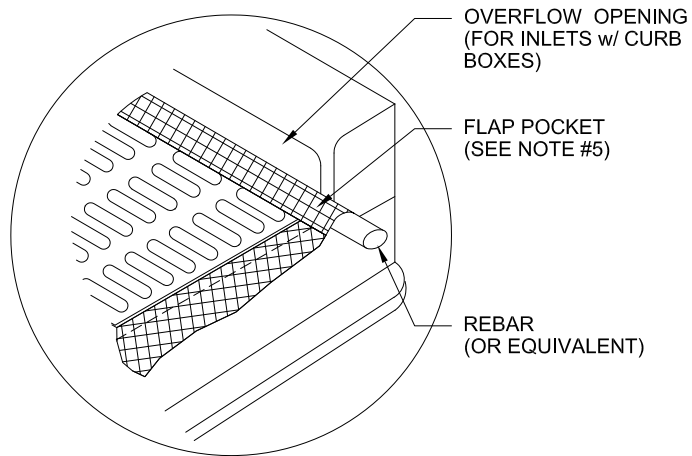
BAGS SHALL HAVE A MINIMUM IN-PLACE FILLED SIZE OF 18 INCHES LONG BY 12 INCHES WIDE BY 6 INCHES HIGH



DEPARTMENT OF PUBLIC WORKS
ENGINEERING AND TRAFFIC DIVISION
CITY OF FOND DU LAC, WISCONSIN

FIGURE 4. INLET PROTECTION TYPE D-HR

INSET



NOTES:

1. TAPER BOTTOM OF BAG TO MAINTAIN 3" OF CLEARANCE BETWEEN THE BAG AND THE STRUCTURE, MEASURED FROM THE BOTTOM OF THE OVERFLOW OPENINGS TO THE STRUCTURE WALL.
2. GEOTEXTILE FABRIC, TYPE FF FOR FLAPS AND TOP HALF OF FILTER BAG. GEOTEXTILE FABRIC, TYPE HR FOR BOTTOM HALF OF FILTER BAG WITH FRONT, BACK, AND BOTTOM BEING ONE PIECE. DUAL FABRIC BAGS SHALL BE STITCHED TOGETHER
3. FRONT LIFTING FLAP IS TO BE USED WHEN REMOVING AND MAINTAINING FILTER BAG.
4. SIDE FLAPS SHALL BE A MAXIMUM OF 2" LONG. FOLD THE FABRIC OVER AND REINFORCE WITH MULTIPLE STITCHES.
5. FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2" x 4". THE REBAR, STEEL PIPE, OR WOOD SHALL BE INSTALLED IN THE REAR FLAP AND SHALL NOT BLOCK THE TOP HALF OF THE CURB FACE OPENING.

MAINTENANCE NOTES:

1. WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED IN THE FABRIC DOES NOT FALL INTO THE STRUCTURE. MATERIAL THAT HAS FALLEN INTO THE STRUCTURE SHALL BE IMMEDIATELY REMOVED.



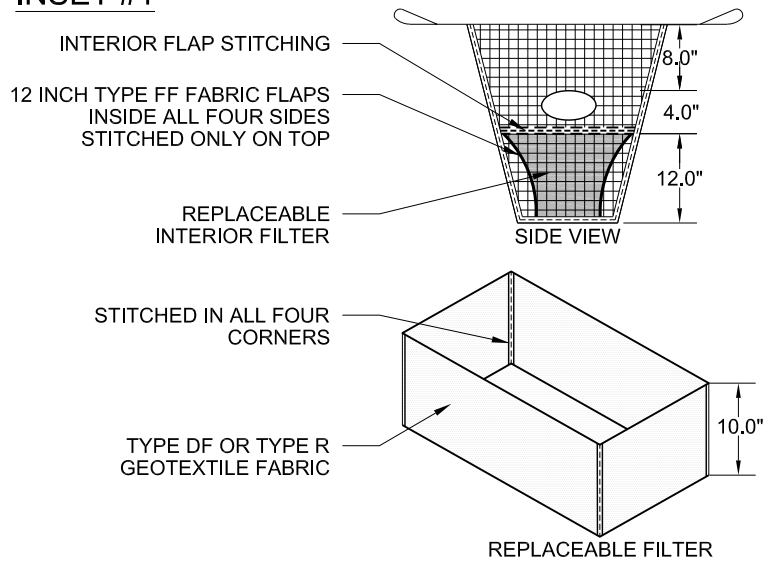
1060
TECHNICAL STANDARD No.

12/2021
REVISION DATE

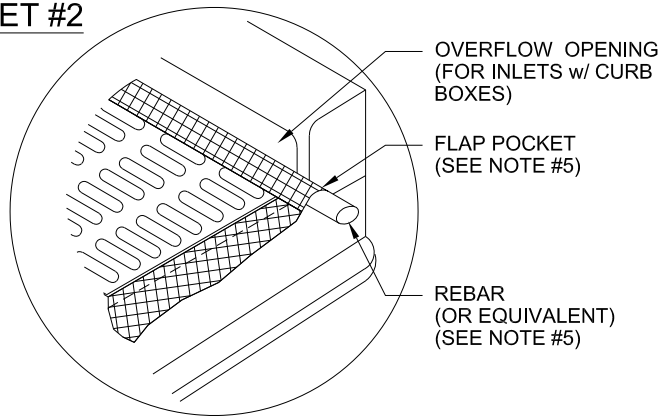
NOT TO SCALE

FIGURE 3. INLET PROTECTION TYPE D-M

INSET #1



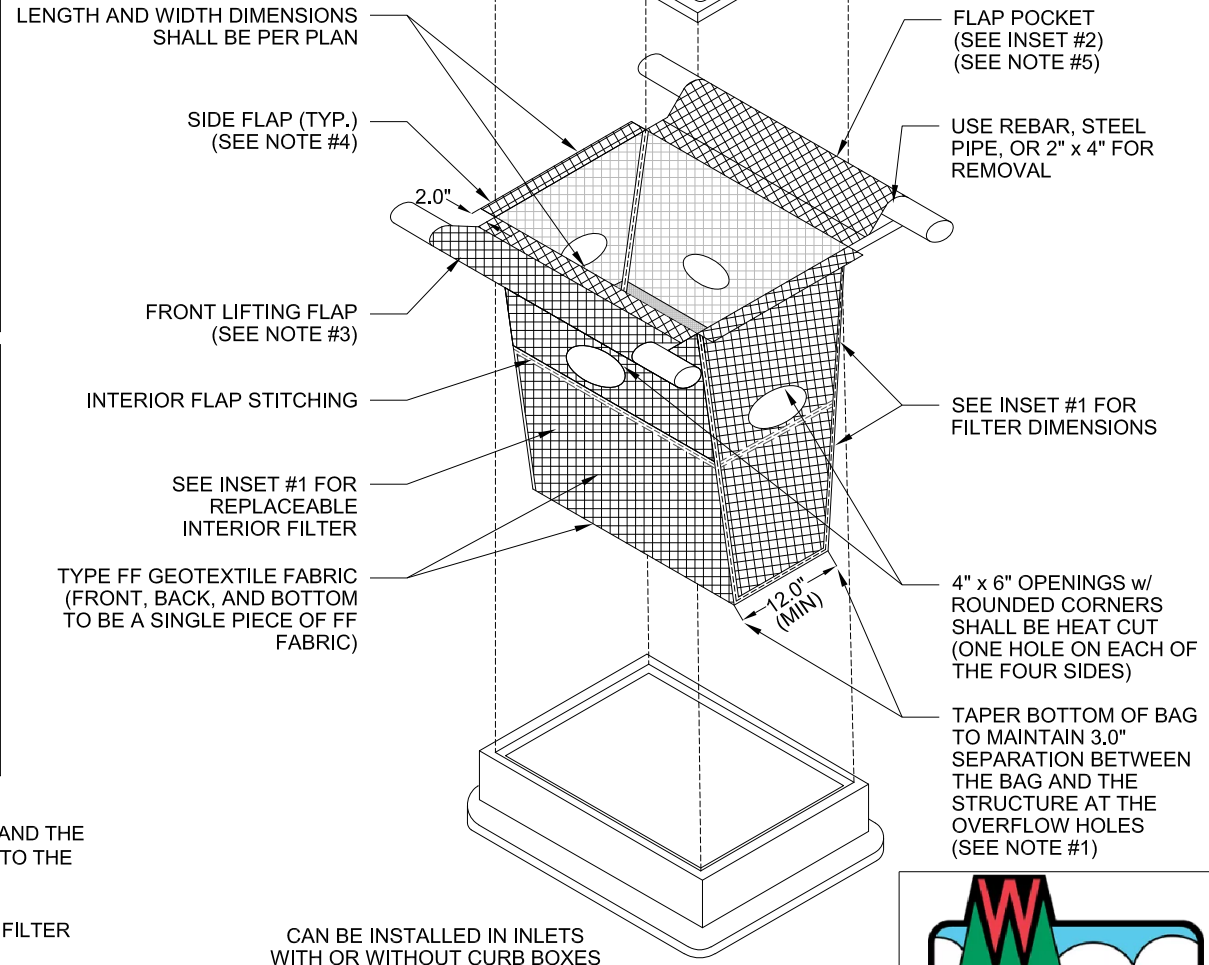
INSET #2



NOTES:

1. TAPER BOTTOM OF BAG TO MAINTAIN 3" OF CLEARANCE BETWEEN THE BAG AND THE STRUCTURE, MEASURED FROM THE BOTTOM OF THE OVERFLOW OPENINGS TO THE STRUCTURE WALL.
2. GEOTEXTILE FABRIC TYPE FF FOR FLAPS, TOP AND BOTTOM OF OUTSIDE OF FILTER BAG. FRONT, BACK, AND BOTTOM OF FILTER BAG BEING ONE PIECE.
3. FRONT LIFTING FLAP IS TO BE USED WHEN REMOVING AND MAINTAINING FILTER BAG.
4. SIDE FLAPS SHALL BE A MAXIMUM OF 2" LONG. FOLD THE FABRIC OVER AND REINFORCE WITH MULTIPLE STITCHES.
5. FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2" x 4". THE REBAR, STEEL PIPE, OR WOOD SHALL BE INSTALLED IN THE REAR FLAP AND SHALL NOT BLOCK THE TOP HALF OF THE CURB FACE OPENING.

LENGTH AND WIDTH DIMENSIONS SHALL BE PER PLAN



CAN BE INSTALLED IN INLETS WITH OR WITHOUT CURB BOXES

MAINTENANCE NOTES:

1. WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED IN THE FABRIC DOES NOT FALL INTO THE STRUCTURE. MATERIAL THAT HAS FALLEN INTO THE STRUCTURE SHALL BE IMMEDIATELY REMOVED.



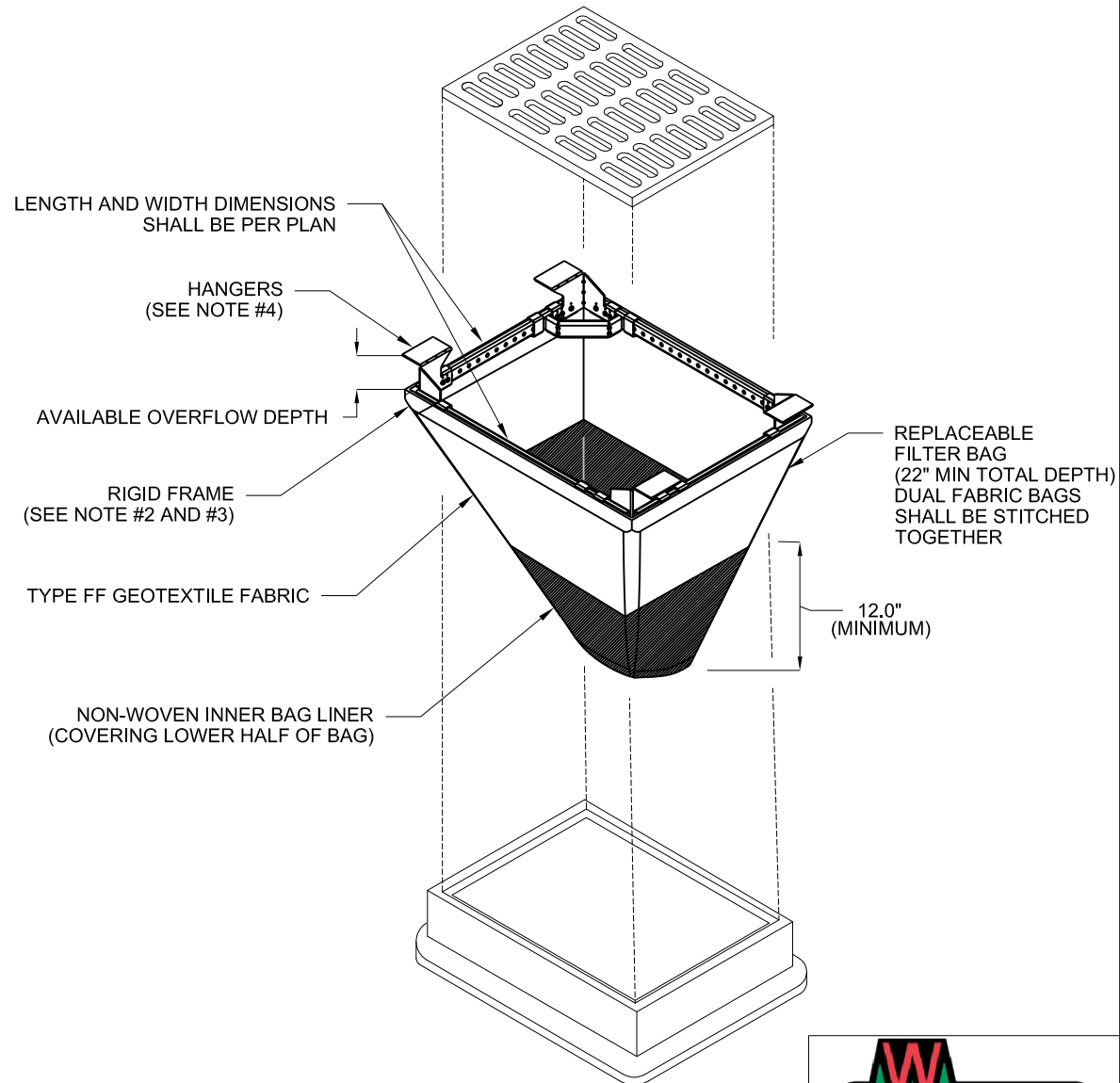
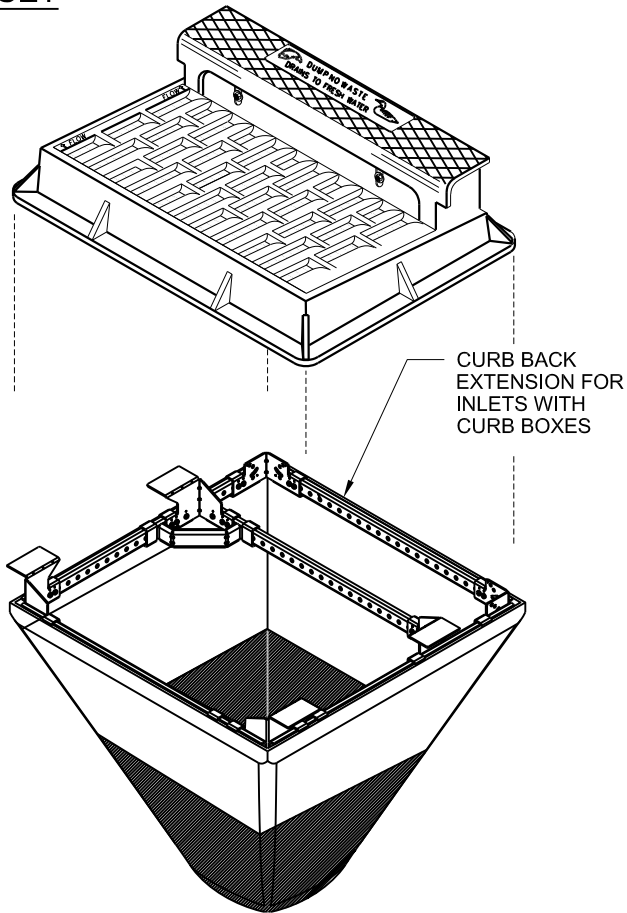
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TECHNICAL STANDARD No.

12/2021
REVISION DATE

NOT TO SCALE

FIGURE 5. INLET PROTECTION TYPE D-RF

INSET



NOTES:

1. TAPER BOTTOM OF BAG TO MAINTAIN 3" OF CLEARANCE BETWEEN THE BAG AND THE STRUCTURE, MEASURED FROM THE BOTTOM OF THE OVERFLOW OPENINGS TO THE STRUCTURE WALL.
2. THE RIGID FRAME SHALL BE CONSTRUCTED OF GALVANIZED STEEL AND HAVE ADEQUATE STRENGTH TO SUPPORT THE WEIGHT OF THE SEDIMENT BAG WHEN COMPLETELY FULL.
3. THE RIGID FRAME SHALL NOT INTERFERE WITH OR ELEVATE THE GRATE MORE THAN 1/8".
4. DROP THE INLET FILTER THROUGH THE CLEAR OPENING SUCH THAT THE HANGERS REST FIRMLY ON THE LIP OF THE STRUCTURE.

CAN BE INSTALLED IN INLETS
WITH OR WITHOUT CURB BOXES

MAINTENANCE NOTES:

1. WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED IN THE FABRIC DOES NOT FALL INTO THE STRUCTURE. MATERIAL THAT HAS FALLEN INTO THE STRUCTURE SHALL BE IMMEDIATELY REMOVED.

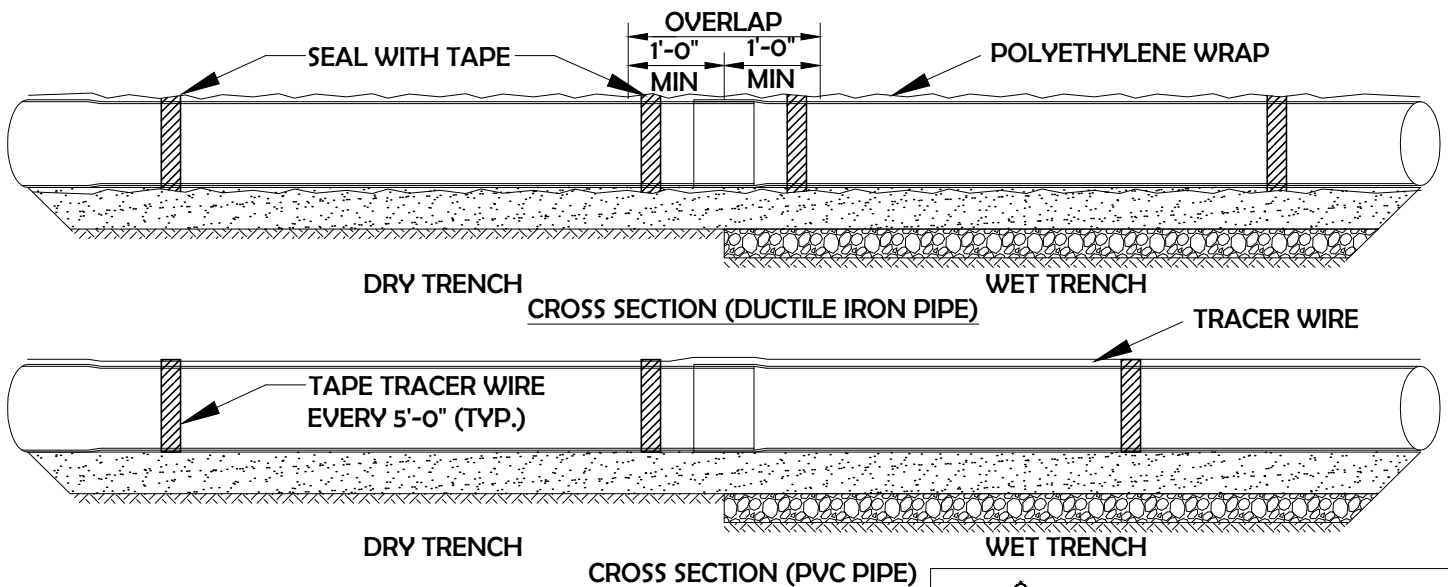
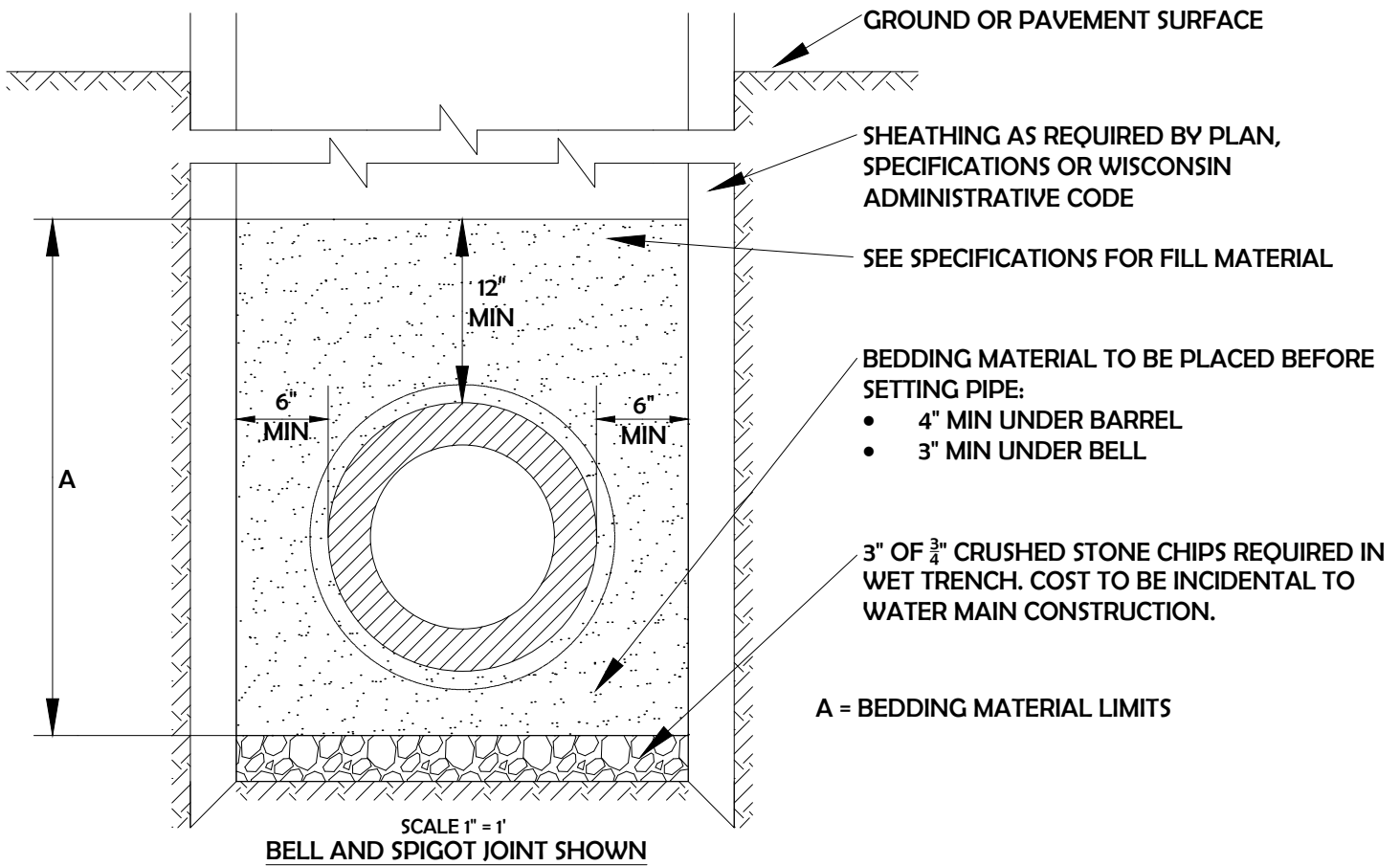


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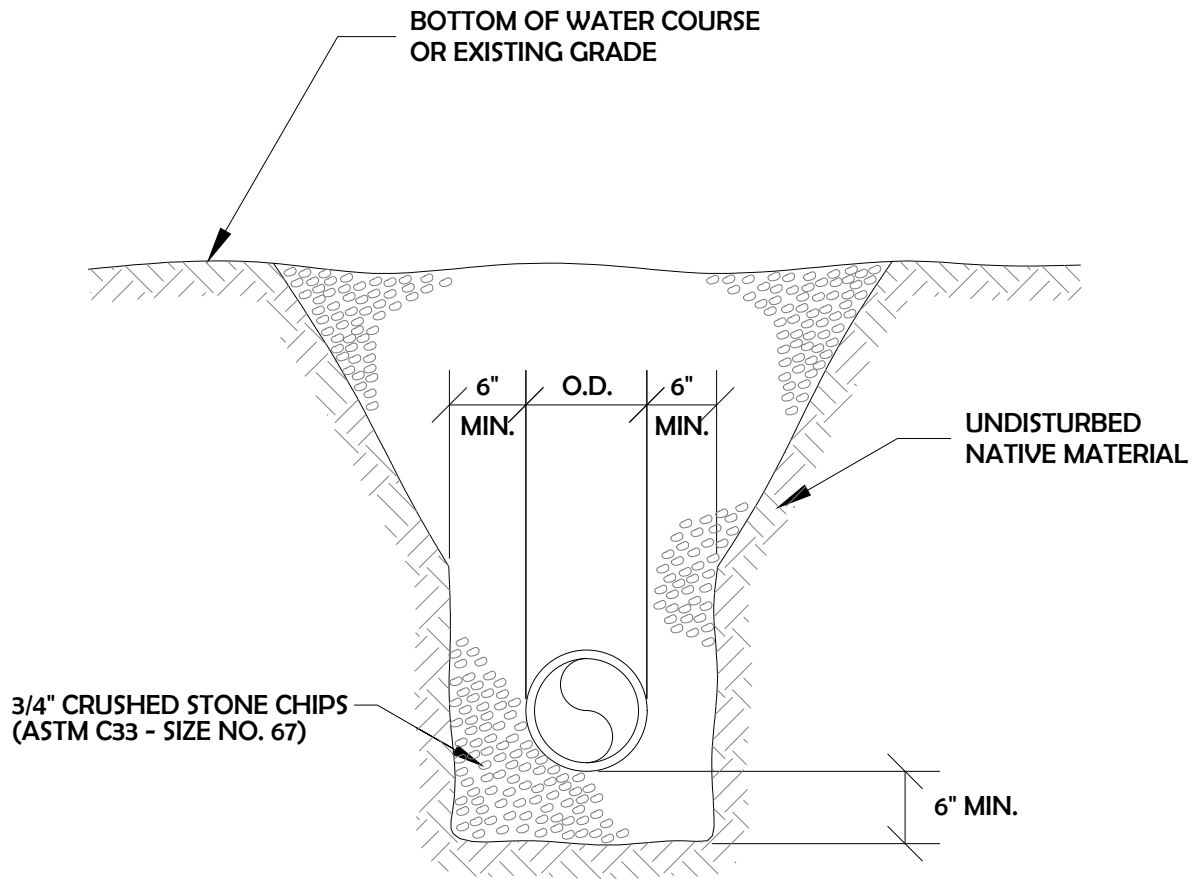
12/2021
REVISION DATE

NOT TO SCALE

WATER MAIN TRENCH SECTION (TYPICAL)

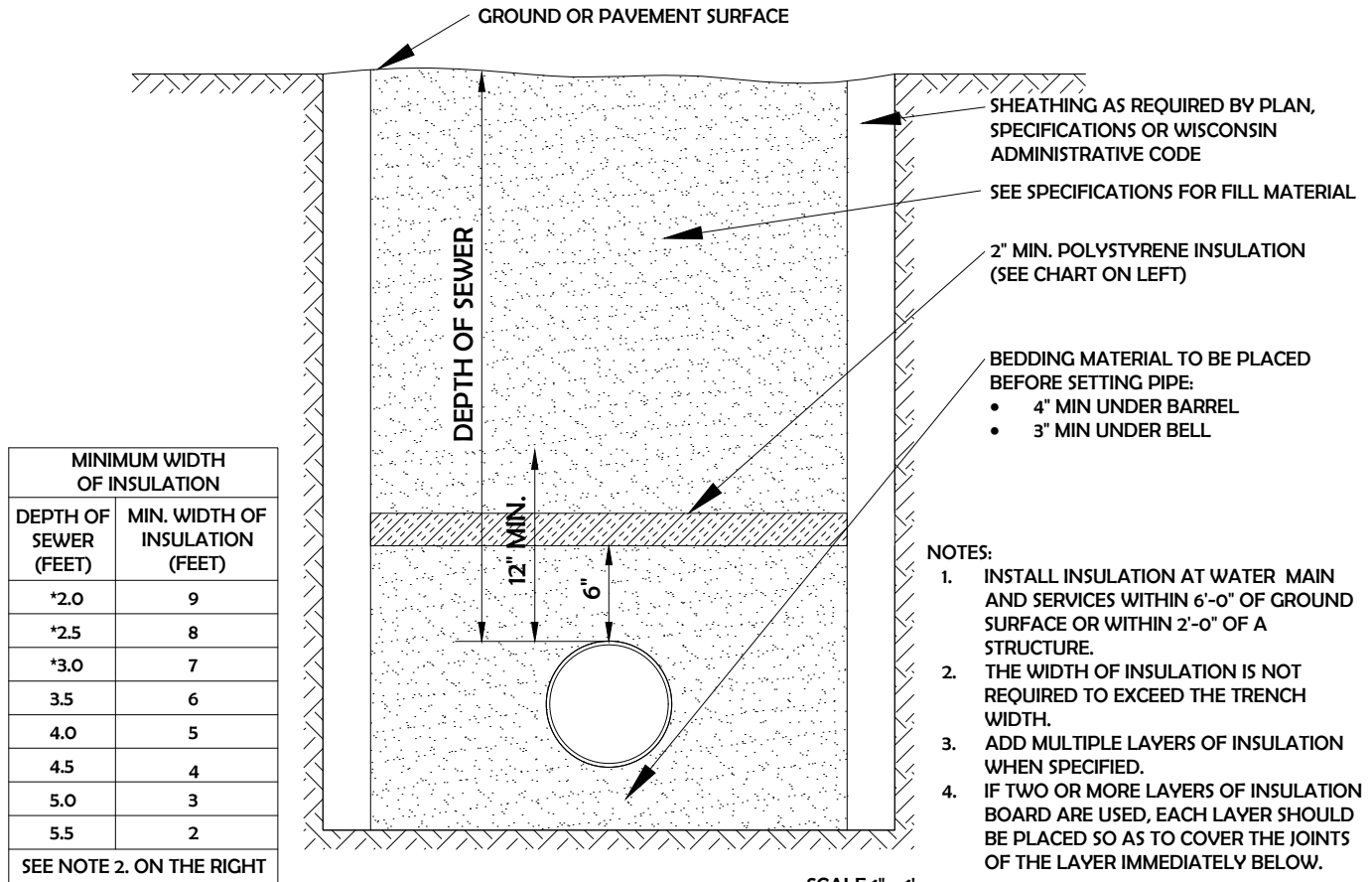


CLASS "S" BEDDING (SUBMERGED PIPE)

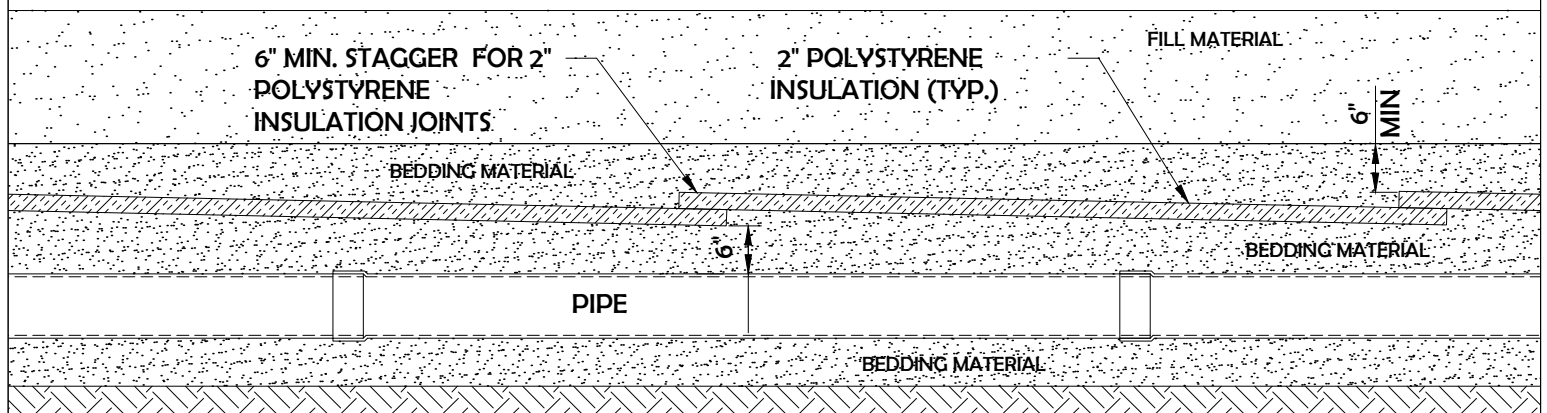


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CITY OF FOND DU LAC, WISCONSIN

WATER MAIN INSULATION DETAIL



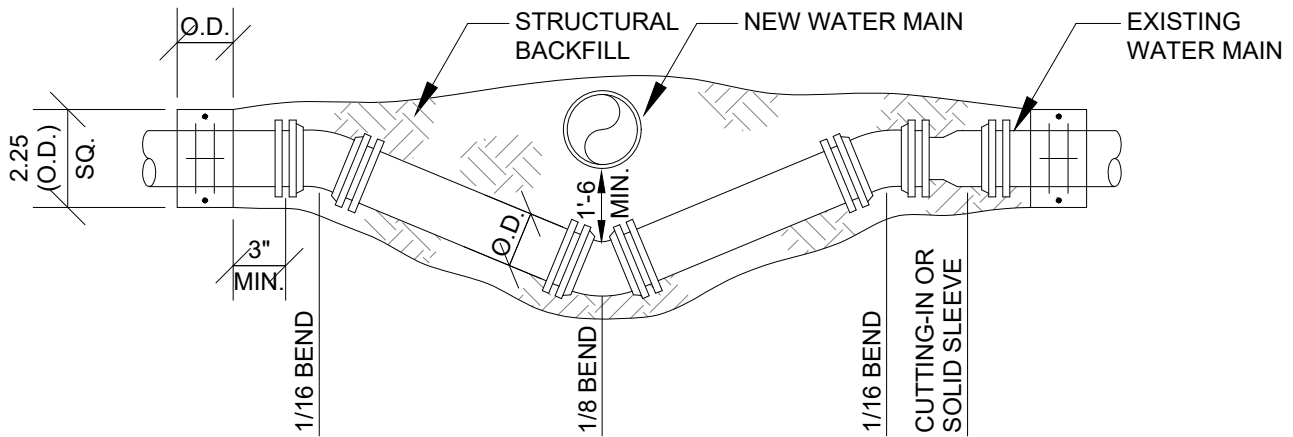
* - DOUBLE THICKNESS
INSULATION 4"



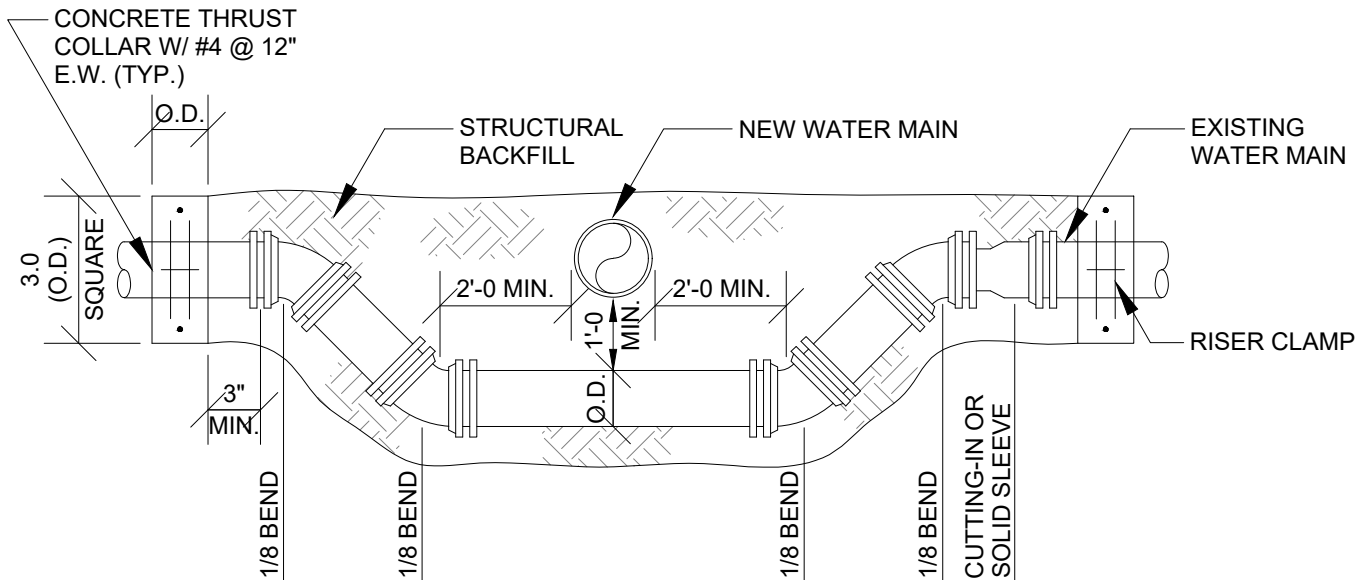
INSULATION INSTALLATION CROSS-SECTION



WATER MAIN LOWERING 4" TO 14" INCLUSIVE



ALTERNATE METHOD NO. 1



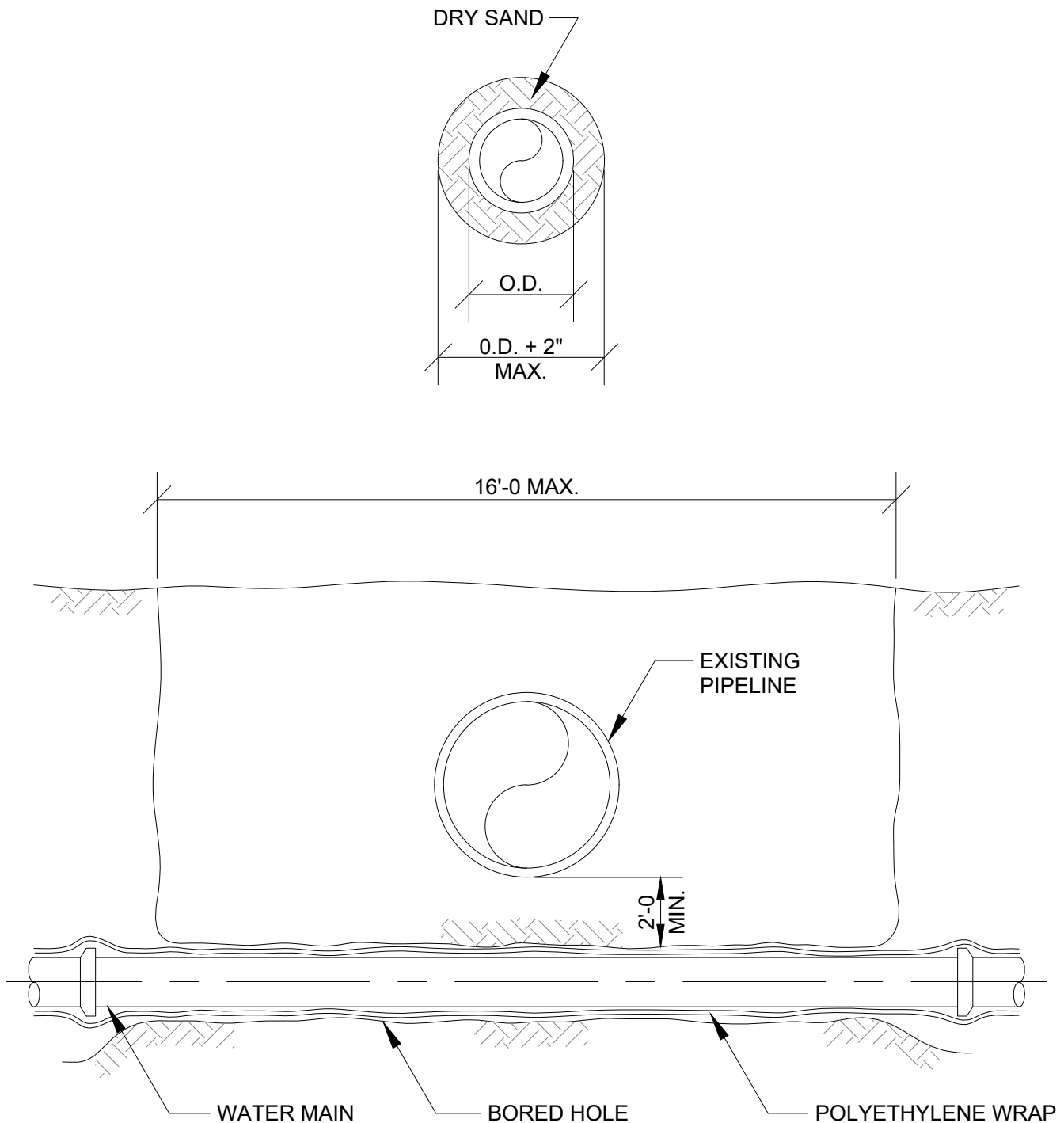
ALTERNATE METHOD NO. 2

NOTES: JOINT RESTRAINT
SYSTEM SHALL BE PROVIDED
FOR ALL PIPE JOINTS BETWEEN
THRUST COLLARS



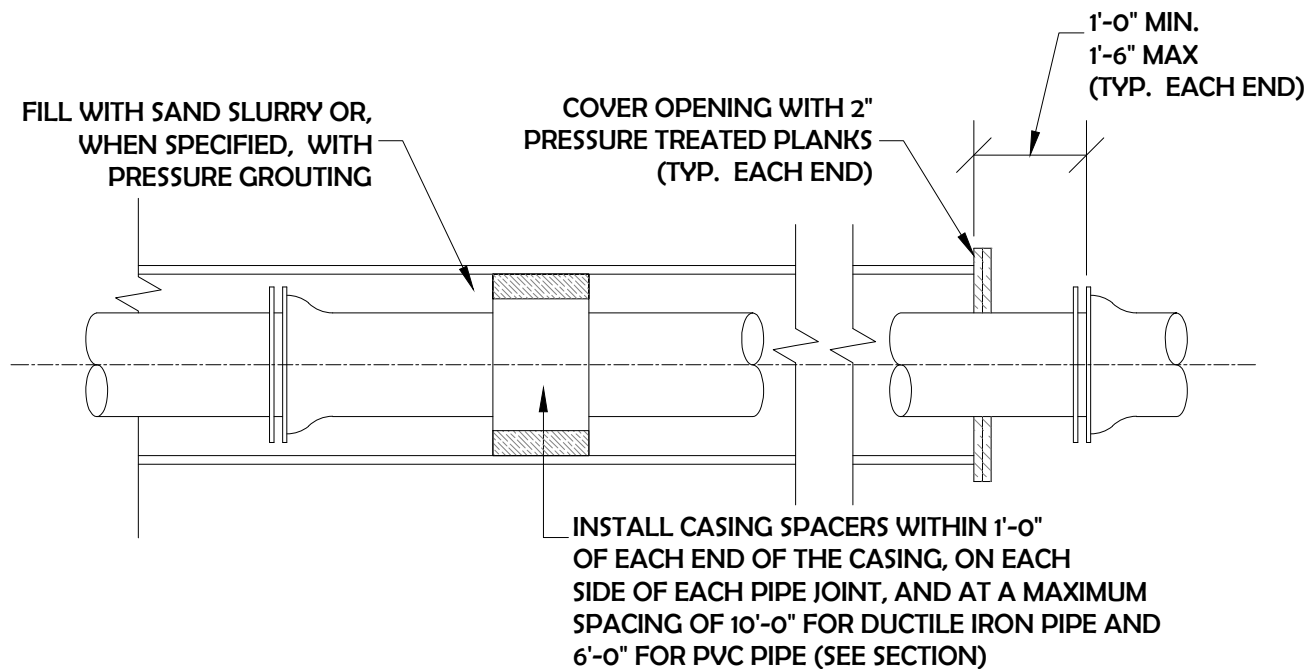
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BORING WITHOUT CASING PIPE

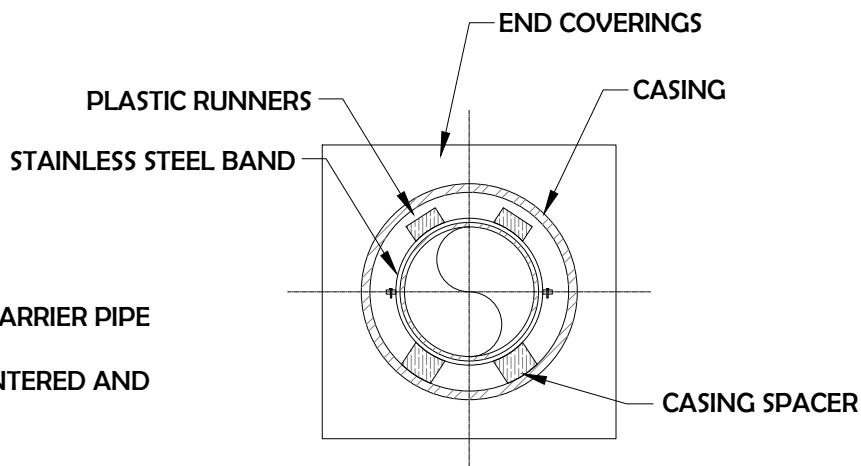


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WATER MAIN CASING INSTALLATION



ELEVATION



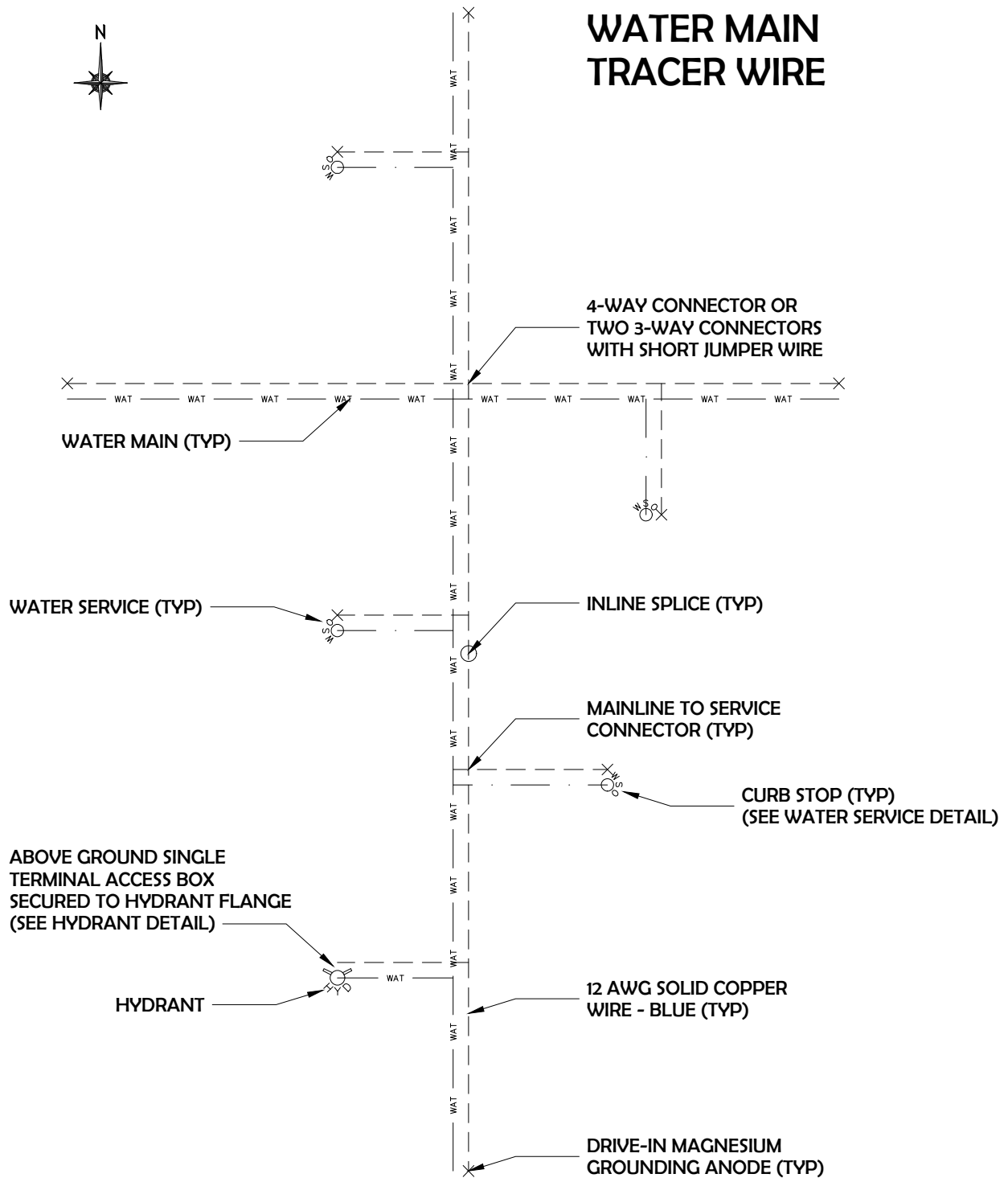
SECTION

NOTE:

1. SIZE CASING SPACERS TO MEET CARRIER PIPE LINE AND GRADE
2. POSITION CARRIER PIPE IN A CENTERED AND RESTRAINED POSITION



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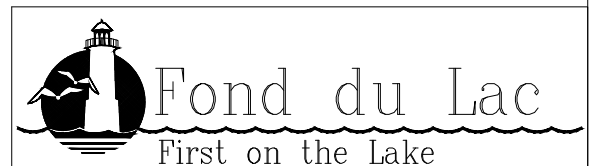
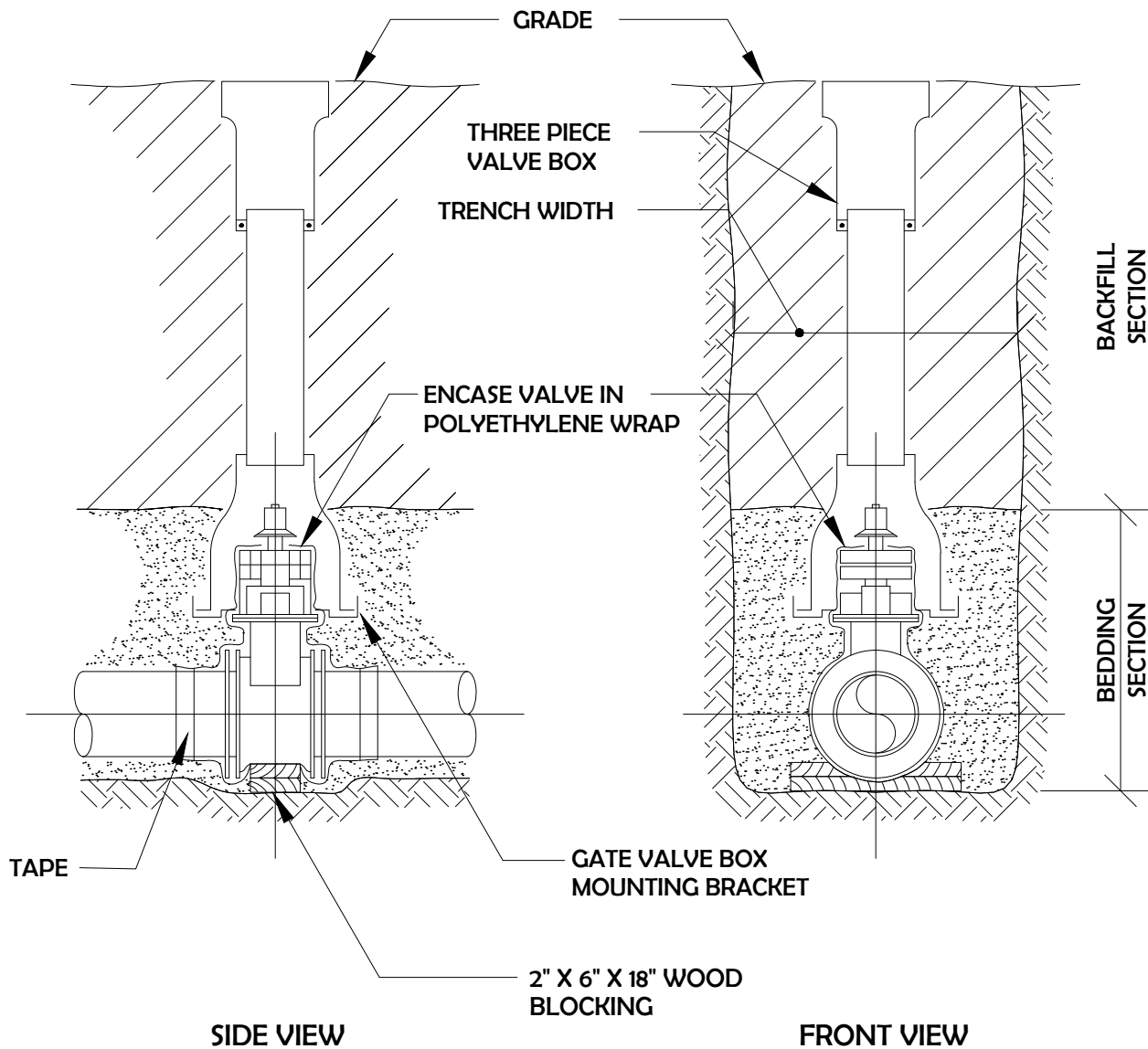
**NOTES:**

1. WIRE SHOWN AWAY FROM PIPE FOR CLARITY. WIRE SHALL BE INSTALLED ON THE BOTTOM SIDE OF THE PIPE BELOW THE SPRING LINE. THE WIRE SHALL BE FASTENED TO THE PIPE WITH TAPE OR PLASTIC TIES AT 5' INTERVALS.
2. INSTALL TRACER WIRE ON THE NORTH OR EAST SIDE OF WATER MAIN PIPE.
3. DO NOT CUT THE MAINLINE TRACER WIRE WHEN INSTALLING MAINLINE TO SERVICE CONNECTORS.
4. MINIMIZE IN-LINE SPLICES ON WATER MAIN TRACER WIRE. DO NOT USE ANY SPLICES ON WATER SERVICE TRACER WIRE.



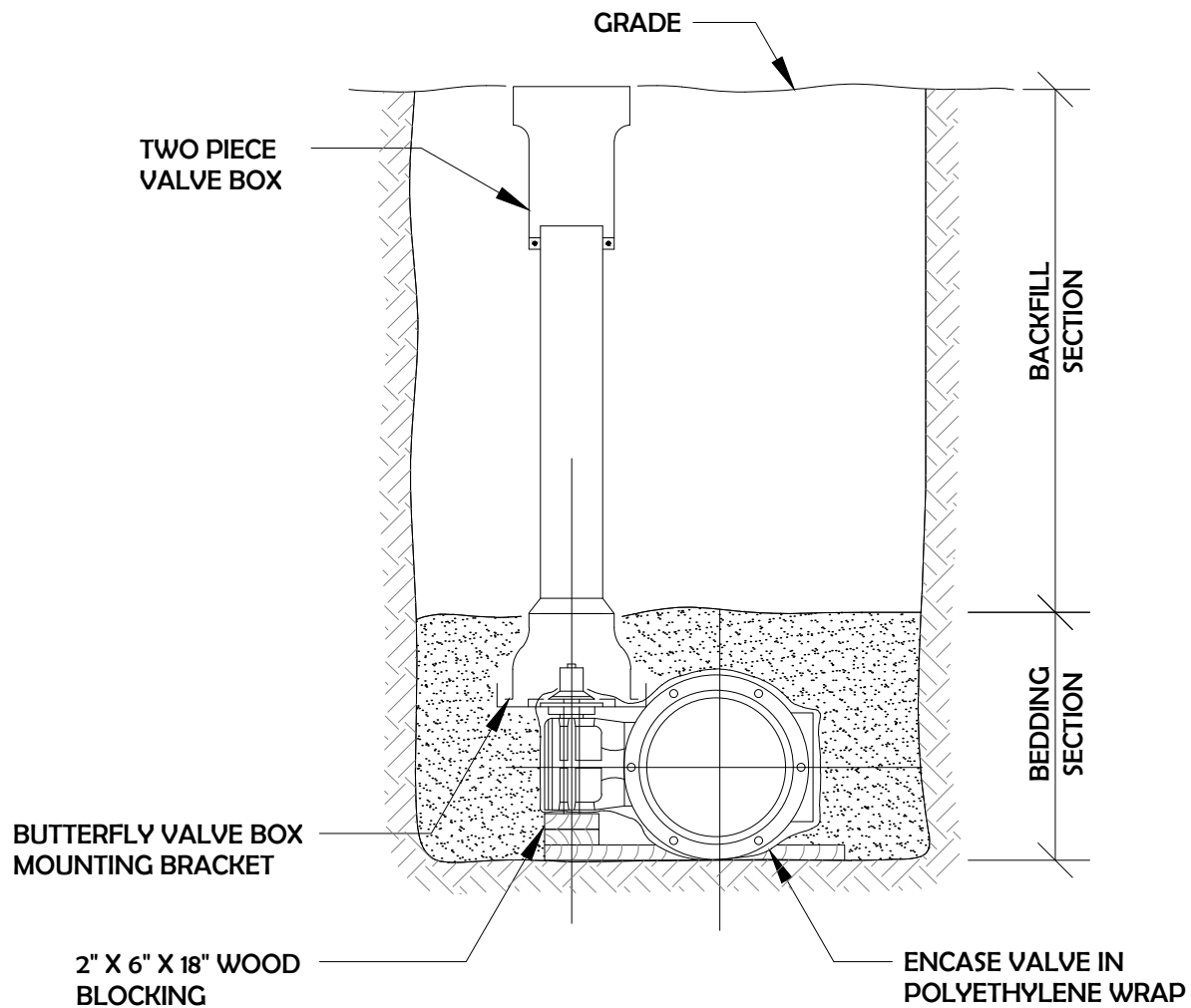
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RESILIENT SEATED GATE VALVE & BOX SETTING



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BUTTERFLY VALVE & BOX SETTING

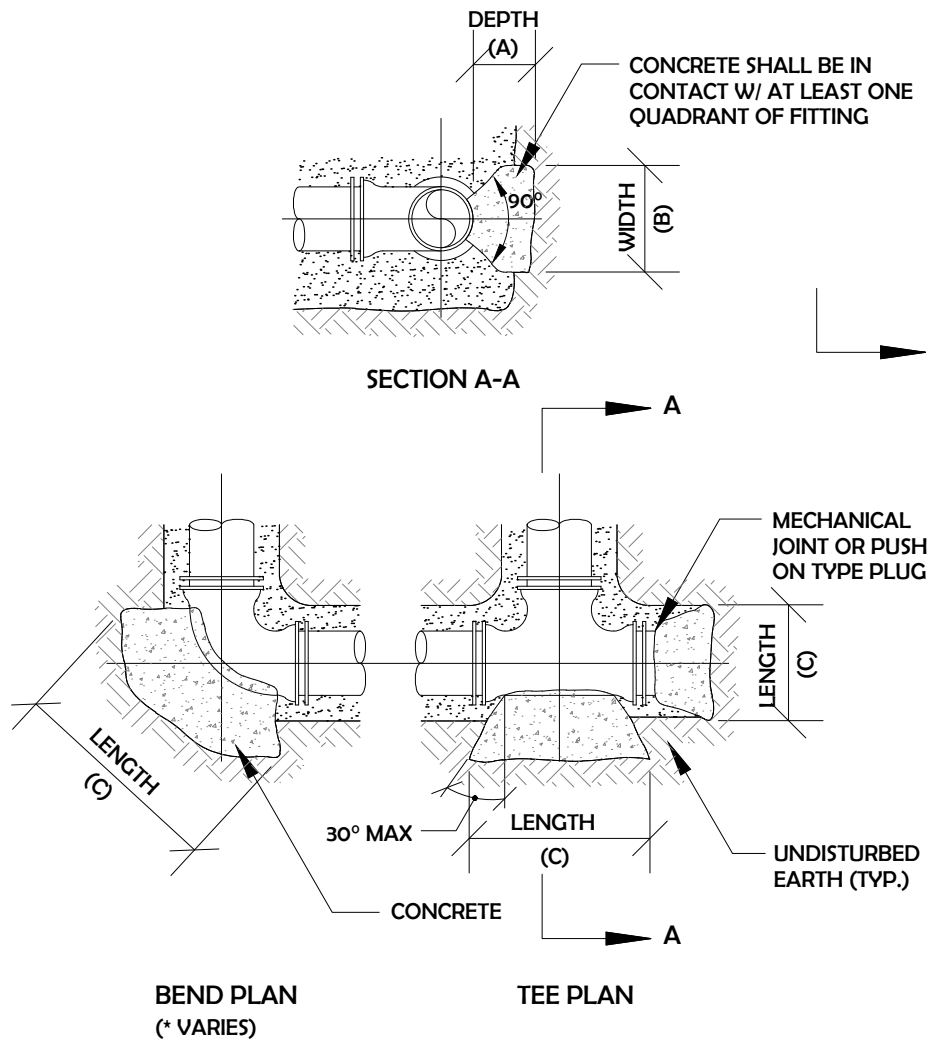


DEPARTMENT OF PUBLIC WORKS
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THRUST BLOCKING

THRUST BLOCKING NOTES:

1. CONCRETE SHALL HAVE A MIN. COMPRESSIVE STRENGTH OF 2000 PSI & SHALL BE CAST AGAINST UNDISTURBED EARTH.
2. FITTINGS SHALL BE ENCASED IN PLASTIC TO PREVENT CONCRETE BONDING TO FITTINGS.
3. FORM CONCRETE AS REQUIRED TO PREVENT CONTACT OR INTERFERENCE W/PIPE JOINTS.
4. THE LENGTH OF THE THRUST BLOCK SHALL BE APPROXIMATELY TWICE THE WIDTH.
BEARING AREA = LENGTH (A) X WIDTH (B).



THRUST BLOCK DIMENSIONS

THRUST BLOCK DIMENSIONS ⁽¹⁾											
PIPE SIZE	A	11 ¼° BEND		22 ½° BEND		45° BEND		90° BEND		TEE/DEAD END	
		B	C	B	C	B	C	B	C	B	C
6"	1'-0	1'-8	1'-0	1'-8	1'-0	1'-8	1'-0	1'-8	1'-4	1'-8	1'-0
8"	1'-2	2'-0	1'-0	2'-0	1'-0	2'-0	1'-0	2'-0	1'-10	2'-0	1'-4
10"	1'-4	2'-3	1'-0	2'-3	1'-0	2'-3	1'-4	2'-3	2'-4	2'-3	1'-8
12"	1'-6	2'-6	1'-0	2'-6	1'-0	2'-6	1'-8	2'-6	3'-0	2'-6	2'-2
16"	2'-0	3'-0	1'-0	3'-0	1'-2	3'-0	2'-4	3'-0	4'-4	3'-0	3'-0
20"	2'-6	3'-9	1'-0	3'-9	1'-6"	3'-9	2'-10"	3'-9	5'-4"	3'-9	3'-9"
24"	3'-0	4'-3	1'-0	4'-3	1'-10"	4'-3	3'-8"	4'-3	6'-8"	4'-3	4'-8"

(1) DIMENSIONS IN TABLE ARE BASED ON A WATER PRESSURE OF 150 PSI AND AN ALLOWABLE SOIL BEARING PRESSURE OF 4000 PSF.

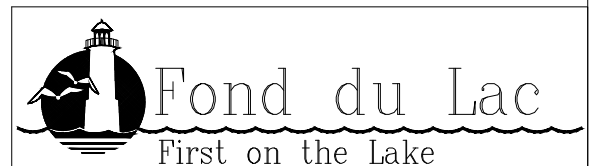


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U.S. JOINT RESTRAINT LENGTHS

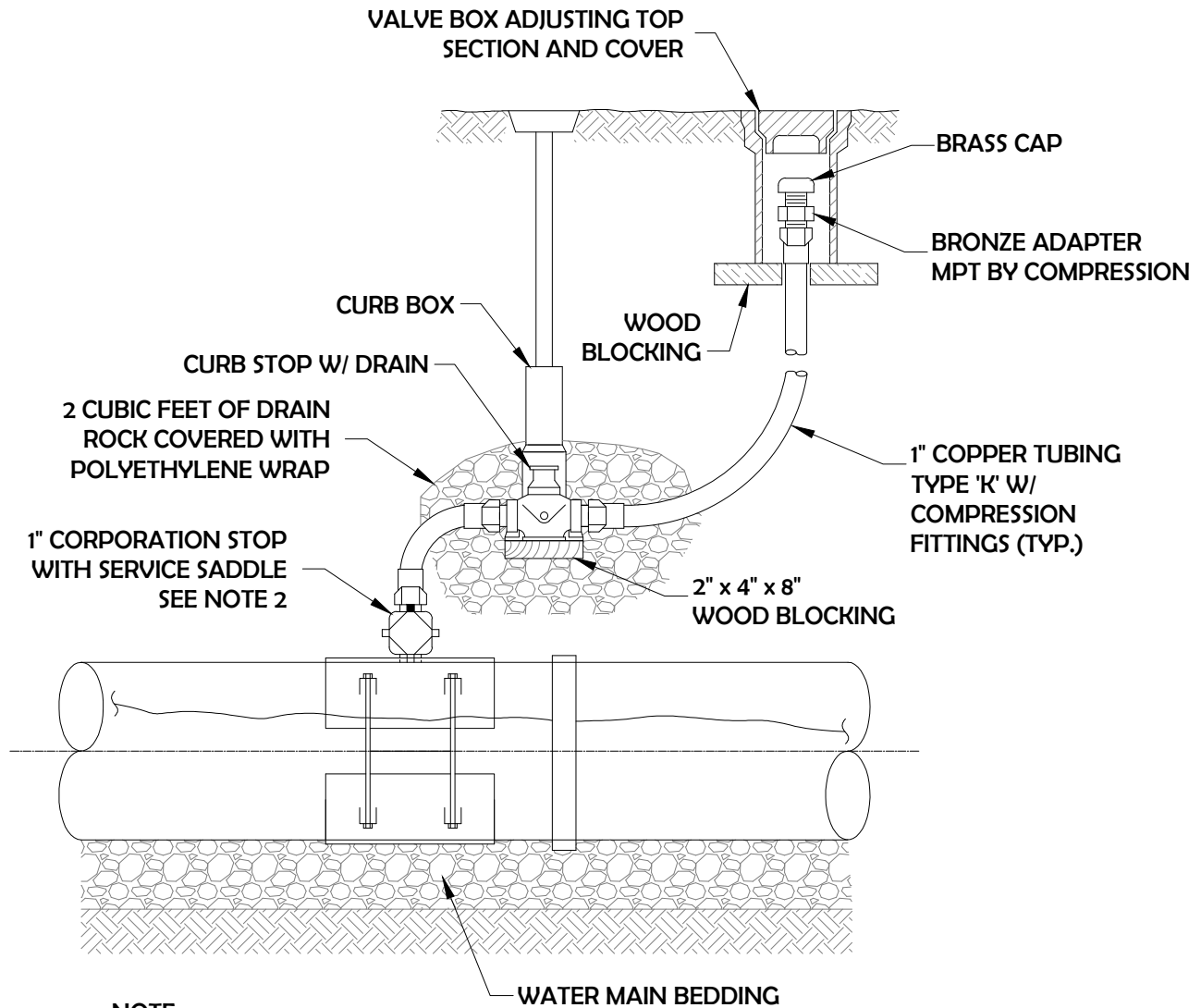
U.S. JOINT RESTRAINT LENGTHS ⁽¹⁾ (FEET)					
PIPE SIZE	HORIZONTAL & VERTICAL-UP BENDS				
	11 ¼° BEND	22 ½° BEND	45° BEND	90° BEND	DEAD END
6"	2	4	7	16	31
8"	3	5	9	21	41
10"	3	5	11	25	49
12"	3	6	13	30	58
16"	4	8	17	39	75
18"	4	9	19	44	84
20"	5	10	20	48	92
24"	6	12	24	57	109
PIPE SIZE	VERTICAL-DOWN BENDS				
	11 ¼° BEND	22 ½° BEND	45° BEND	90° BEND	
6"	4	7	13	31	
8"	5	9	17	41	
10"	5	10	21	49	
12"	6	12	25	59	
16"	8	16	32	77	
18"	9	18	37	95	
20"	10	19	40	95	
24"	12	23	47	113	

- (1) RESTRAINT LENGTHS BASED ON DIPRA PUBLICATION "THRUST RESTRAINT DESIGN FOR DUCTILE IRON PIPE" SECOND EDITION 1986. WITH THE FOLLOWING ASSUMPTIONS:
 LAY CONDITION - TYPE 4
 SOILS - CLAY 1 (TABLE 3, PG. 11)
 DEPTH - 6'-0
 PIPE ENCASED IN POLYETHYLENE WRAP
 SAFETY FACTOR - 1.5
 PIPELINE PRESSURE - 100 PSI



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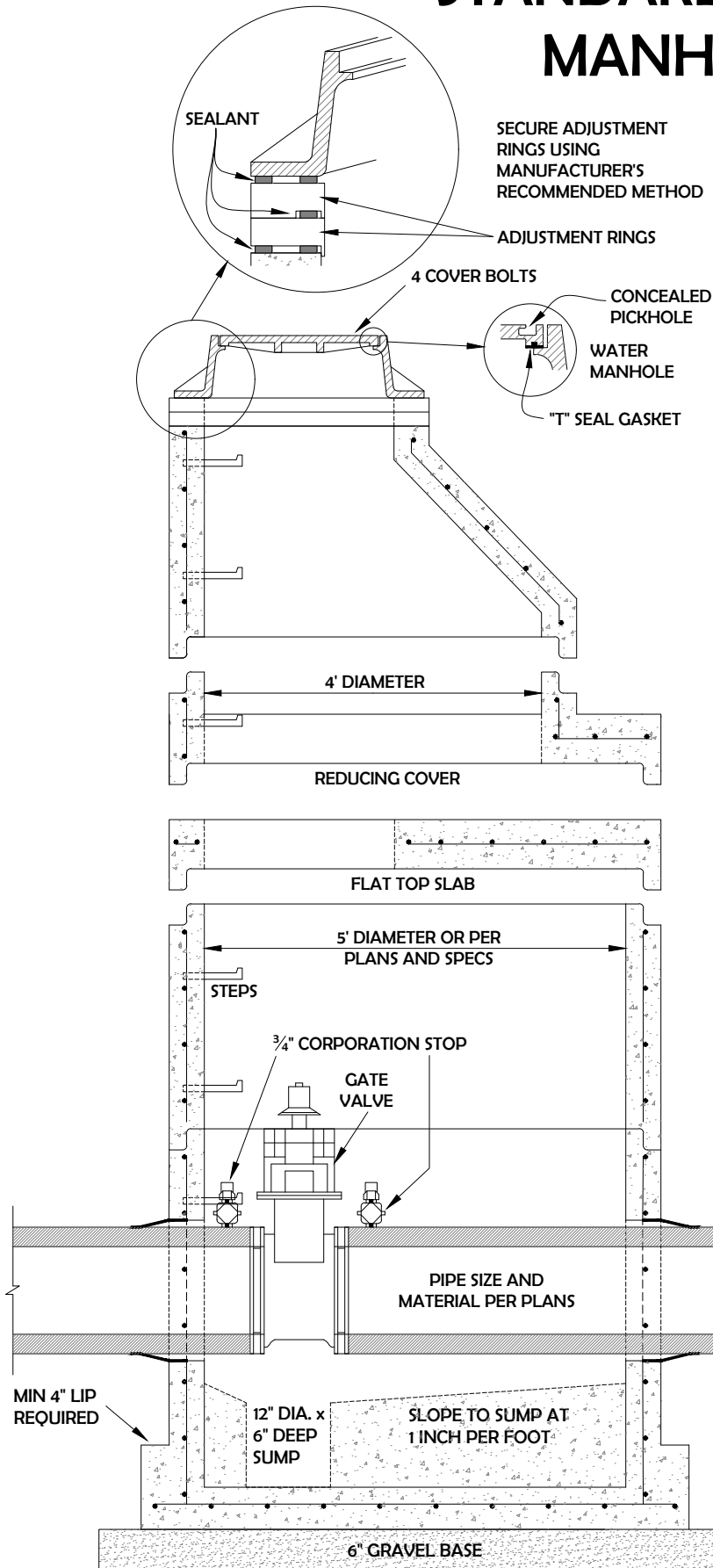
AIR RELEASE ASSEMBLY



NOTE:

1. AN AIR RELEASE ASSEMBLY SHALL BE PROVIDED AT ALL HIGH POINTS AS NOTED ON PLANS.
2. NO SERVICE SADDLE SHALL BE PROVIDED WHEN FOUR FULL THREADS CAN BE OBTAINED IN A DUCTILE IRON PIPE.
3. SADDLE, CORPORATION AND COPPER PIPE TO CURB STOP SHALL BE POLYETHYLENE WRAPPED.

STANDARD WATER VALVE MANHOLE DETAIL

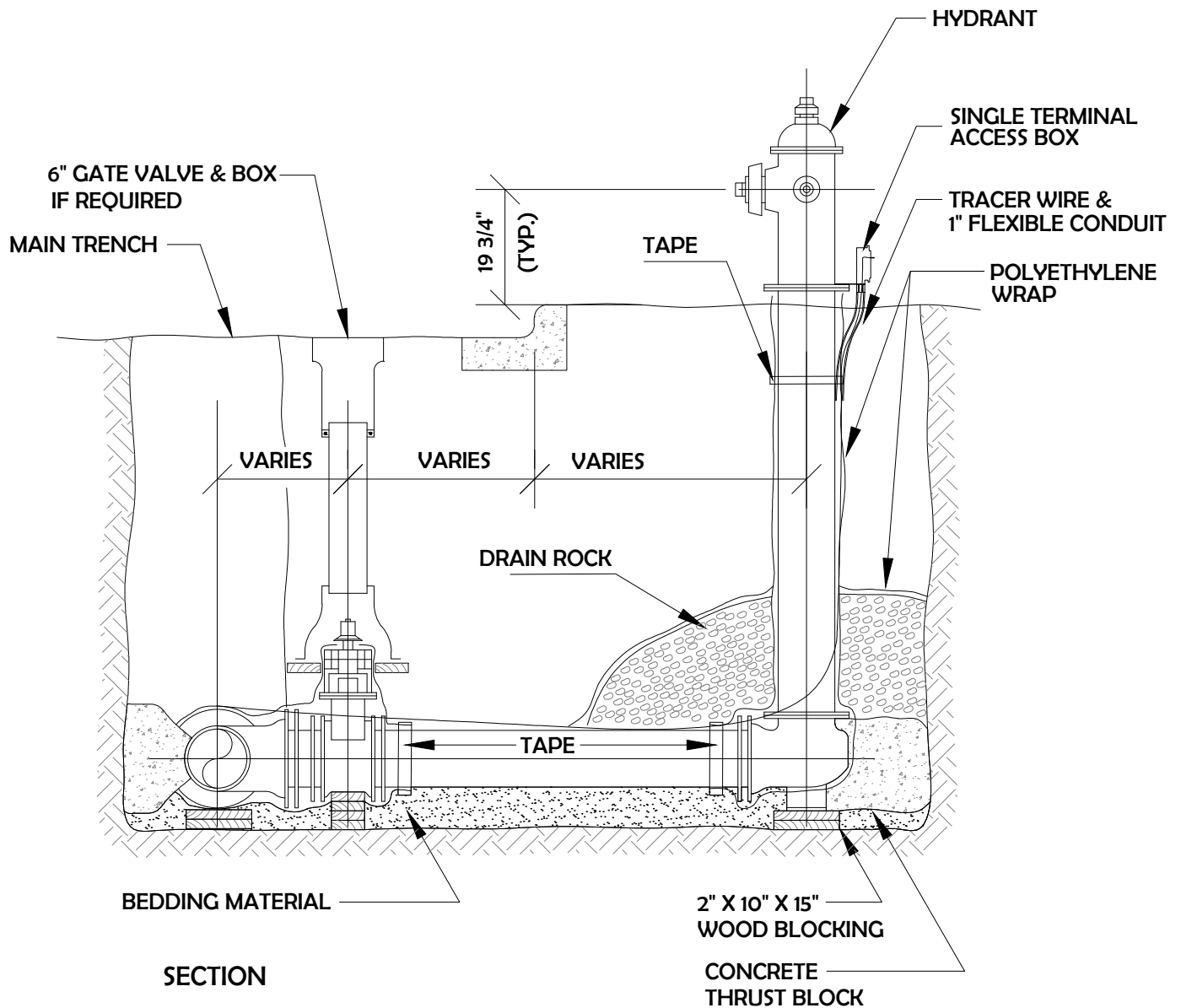


- 6 INCHES OF CRUSHED STONE BASE REQUIRED
- CONCRETE AND STEEL REINFORCEMENT SHALL CONFORM TO ASTM DESIGNATION C478
- MANHOLE CONCRETE STRENGTH TO BE 4,000 PSI OR GREATER
- MIN. MANHOLE WALL, BASE & FLAT TOP SLAB THICKNESSES
4 FT I.D.: 5 INCH WALL, 6 INCH BASE & FLAT TOP SLAB
5 FT I.D.: 6 INCH WALL, 8 INCH BASE & FLAT TOP SLAB
- MANHOLE BASE TO BE CONSTRUCTED OF CLASS "C" CONCRETE, MINIMUM OF 12 INCHES PLACED UNDER FLOW LINE OF PIPE
- PIPE HOLES TO BE MANUFACTURED SO AS TO ALLOW FOR LATERAL AND VERTICAL MOVEMENT, AS WELL AS ANGULAR ADJUSTMENT THROUGH 15°
- PIPE TO MANHOLE CONNECTORS SHALL MEET ASTM C923 (KOR-N-SEAL, QUIK-LOK OR EQUAL)
- JOINTS SHALL BE WATERTIGHT AND SHALL BE MADE USING RUBBER TYPE GASKETS OR PRE-FORMED JOINT MATERIAL
- MANHOLE STEPS TO BE PLACED AT 16 INCH INTERVALS. THE FIRST STEP SHALL BE PLACED 16 INCHES ABOVE THE FLOOR. THE TOP STEP MAY VARY FROM 16 INCHES - 24 INCHES FROM THE TOP OF CASTING. STEPS SHALL BE STEEL REINFORCED PLASTIC. MANHOLE STEPS SHALL BE ALIGNED OVER THE MANHOLE FRAME.
- BARREL SECTION - 12 INCH, 16 INCH, 24 INCH, 32 INCH, 48 INCH AND 64 INCH HIGH. AREA OF CIRCUMFERENTIAL STEEL = 0.12 SQ INCH PER LINEAL FOOT
- ECCENTRIC CONE MAY VARY IN HEIGHT FROM 28 INCHES TO 36 INCHES
- INSTALL FLAT TOP WHEN SHOWN ON PLANS, IN SPECIFICATIONS OR APPROVED BY ENGINEER
- ADJUSTMENT RINGS SHALL BE HDPE ADJUSTING RINGS BY LADTECH, INC., CRETEX PRO-RING, OR EJ INFRA-RISER. RINGS SHALL HAVE AN INSIDE DIAMETER OF APPROX. 23-3/4 INCHES. CONCRETE ADJUSTMENT RINGS SHALL NOT BE ALLOWED.
- FRAME SHALL BE NEENAH FOUNDRY R-1916-C OR EQUAL
- MANHOLE LID TO HAVE CONCEALED PICK HOLES, "T" SEAL GASKET AND COVER BOLTS.



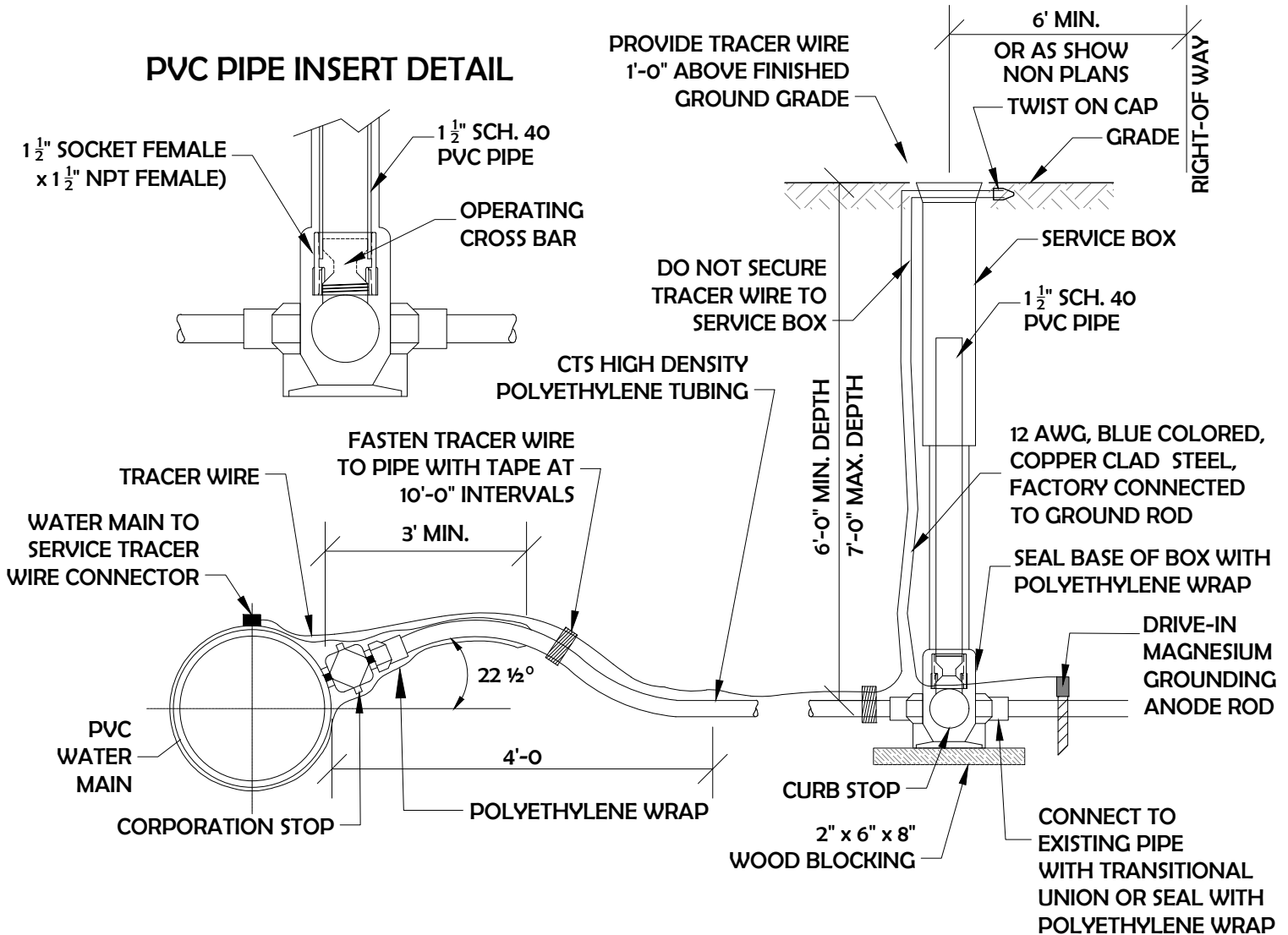
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WATER UTILITY
CITY OF FOND DU LAC, WISCONSIN

STANDARD HYDRANT

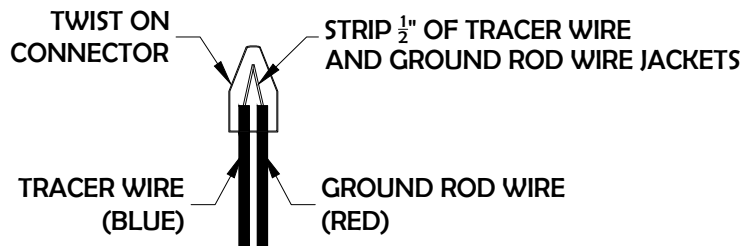


POLYETHYLENE WATER SERVICE

PVC PIPE INSERT DETAIL

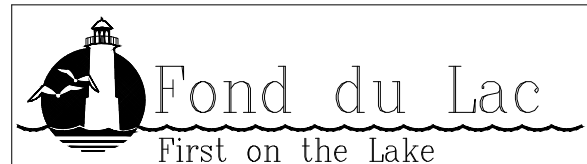


TRACER WIRE AND GROUND ROD CONNECTION DETAIL



ALL SERVICES REQUIRE THE USE OF A SERVICE SADDLE.

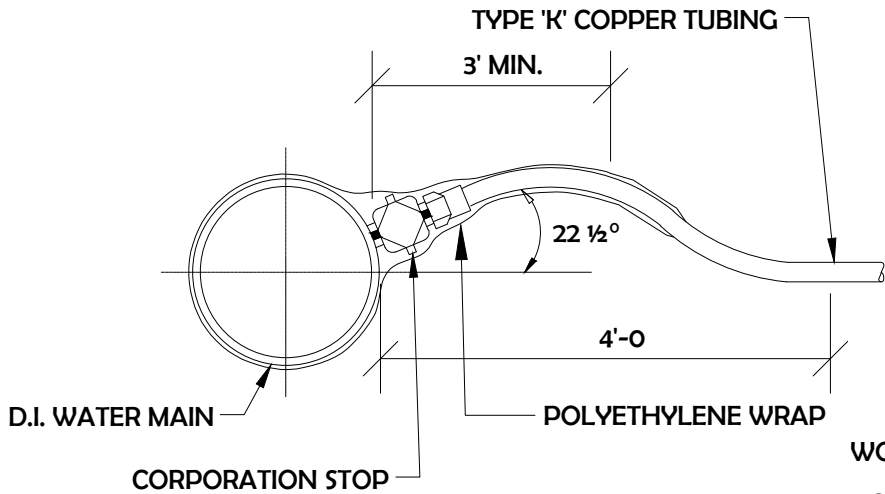
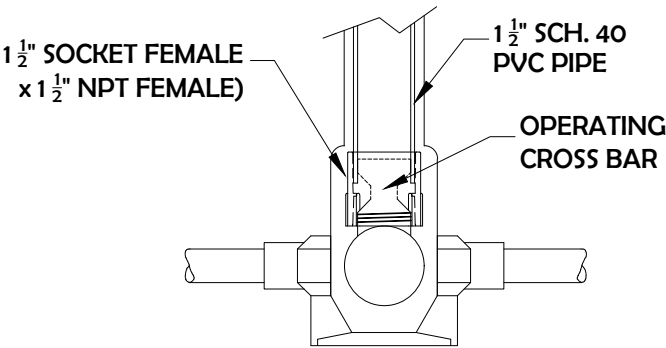
SERVICE PIPE	CORP. STOP	CURB STOP	SERVICE BOX
1"	3/4" x 1"	1"	2 1/2"
1 1/4"	1" x 1 1/4"	1 1/4" x 1" x 1 1/4"	2 1/2"
1 1/2"	1 1/2"	1 1/2"	2 1/2"
2"	2"	2"	2 1/2"



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COPPER WATER SERVICE

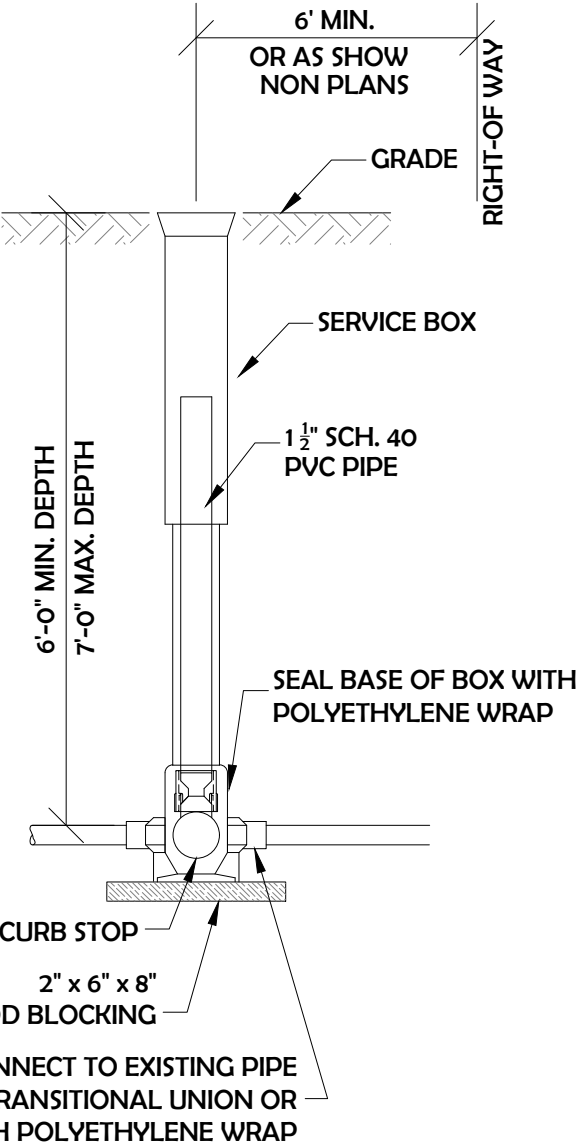
PVC PIPE INSERT DETAIL



USE SERVICE SADDLE OR DIRECTLY TAP
MAIN. DO NOT EXCEED THE MAXIMUM
DIRECT TAP SIZE BELOW.

MANIMUM DIRECT TAP SIZE

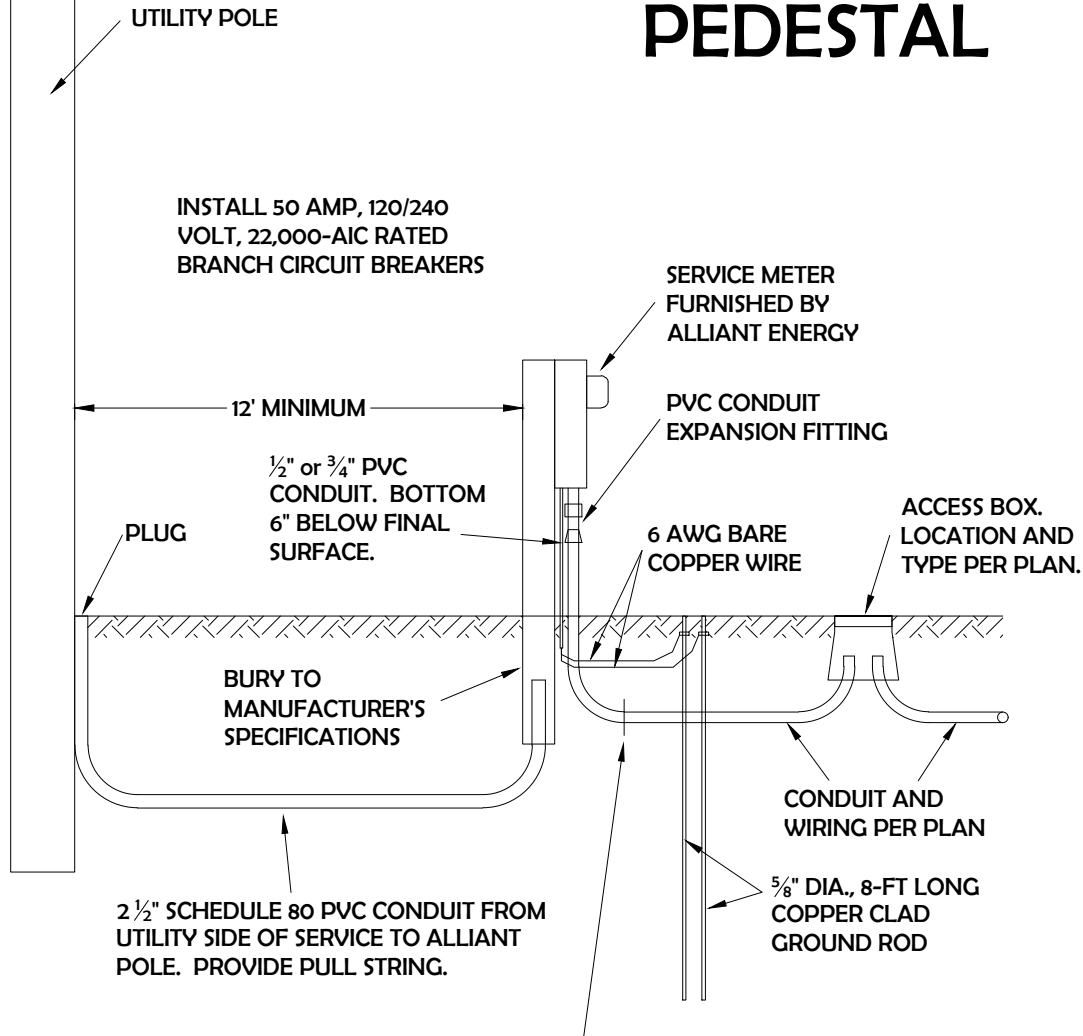
PIPE DIA.	MAX. DIRECT TAP SIZE
4"	3/4"
6"	1"
8"	1"
10"	1"
12"	1 1/4"
14"	1 1/2"
16 AND LARGER	2"



SERVICE PIPE	CORP. STOP	CURB STOP	SERVICE BOX
3/4"	3/4"	3/4"	2 1/2"
1"	1"	1"	2 1/2"
1 1/4"	1 1/4"	1 1/4"	1 1/4"
1 1/2"	1 1/2"	1 1/2"	2 1/2"
2"	2"	2"	2 1/2"

DEPARTMENT OF PUBLIC WORKS
WATER UTILITY
CITY OF FOND DU LAC, WISCONSIN

ELECTRICAL UNDERGROUND METER PEDESTAL



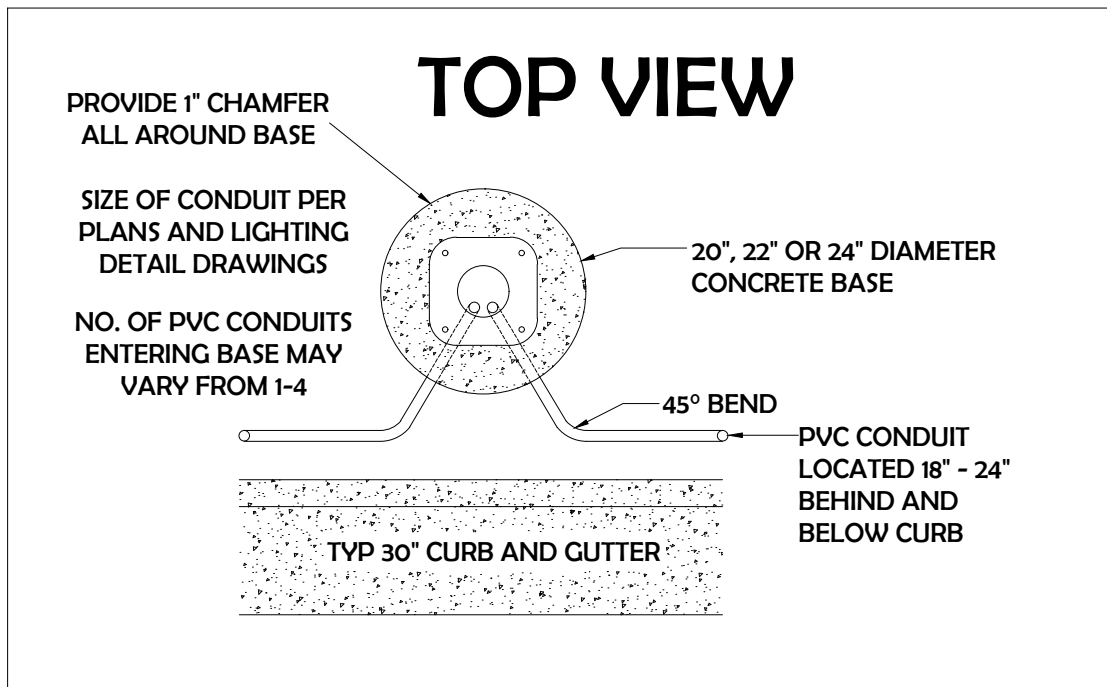
CONDUIT, WIRING, AND ACCESS BOXES PAID SEPARATELY FROM THIS POINT. OTHER ITEMS SHOWN PAID AS "ELECTRICAL SERVICE METER PEDESTAL".

UNDERGROUND METER PEDESTAL INSTALLATION SHALL CONFORM WITH THE LATEST ACCEPTED NATIONAL ELECTRIC CODE AND THE ALLIANT ENERGY SERVICE MANUAL.



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CITY OF FOND DU LAC, WISCONSIN

CONCRETE BASES FOR TRAFFIC SIGNALS & STREET LIGHTS



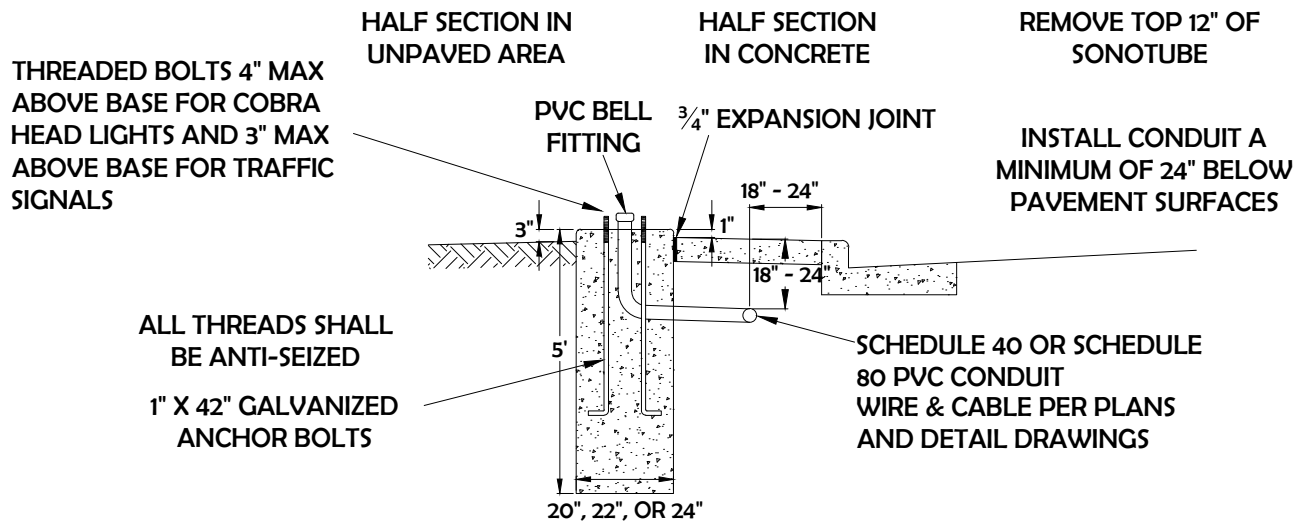
TB1 TRANSFORMER BASE
22" OR 24" CONCRETE BASE
15" DIAMETER BOLT PATTERN



TB2 TRANSFORMER BASE
20" CONCRETE BASE
11.5" DIAMETER BOLT PATTERN

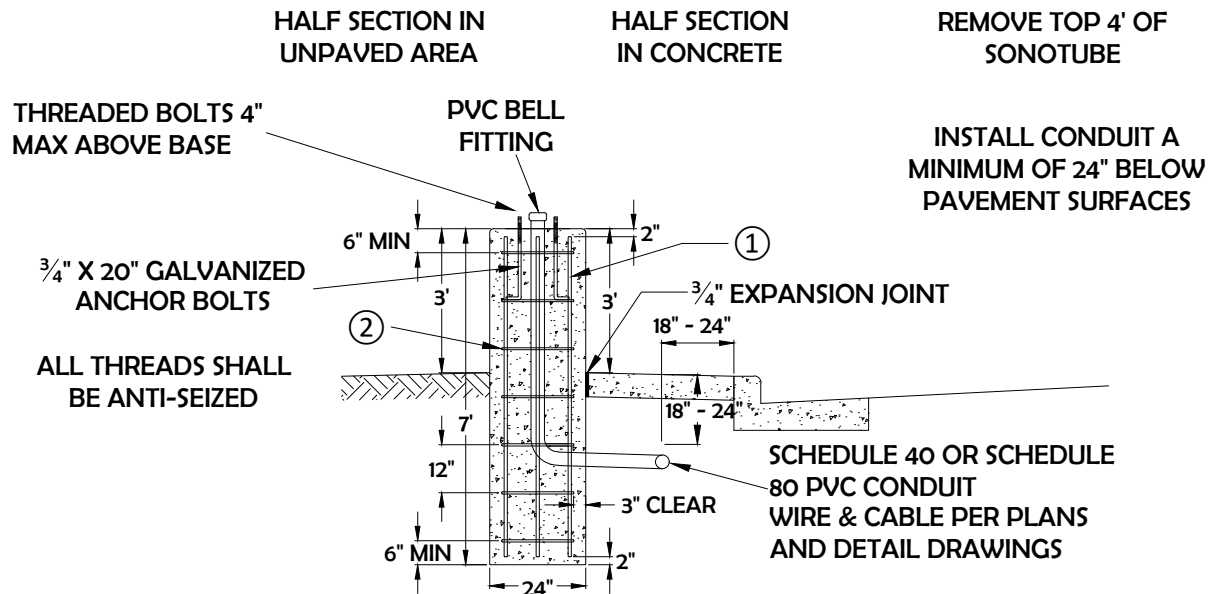
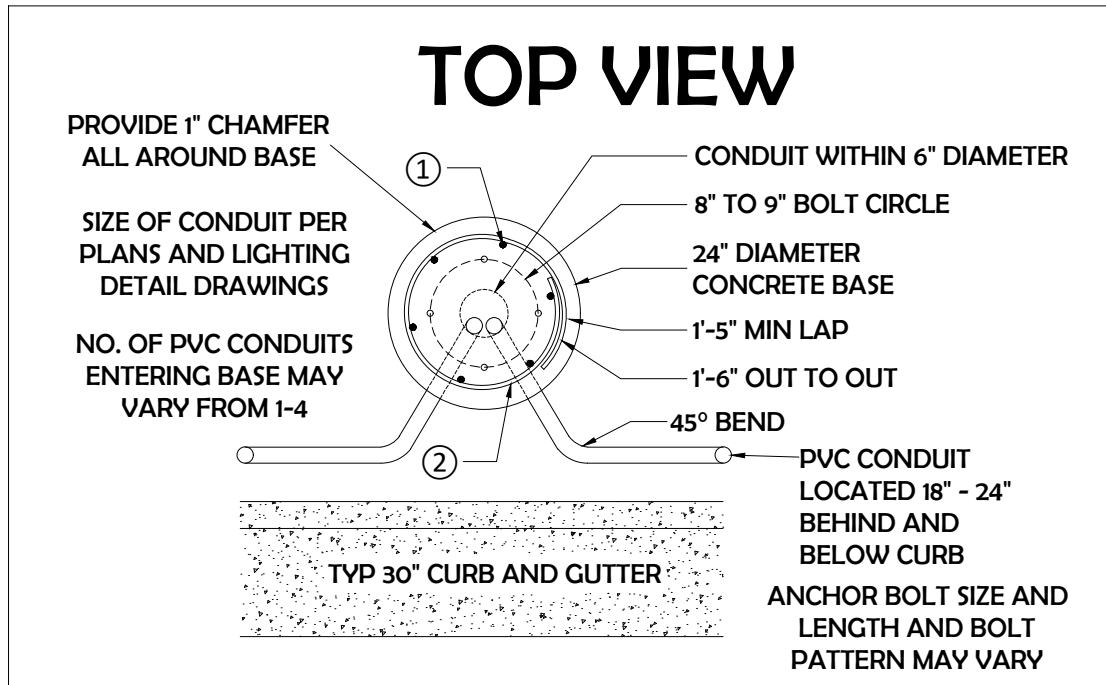


PEDESTAL BASE
20" CONCRETE BASE
12.5" DIAMETER BOLT PATTERN



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CONCRETE BASES FOR PARKING LOT LIGHTS



- ① (6) No. 6 x 6'-8" BAR STEEL REINFORCEMENT
- ② (7) No. 4 x 6'-2" BAR STEEL REINFORCEMENT @ 1'-0" C-C



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CITY OF FOND DU LAC, WISCONSIN

ORNAMENTAL STREET LIGHT



UTILITY TAFT POSTOP LED LUMINAIRE
WITH LED PERFORMANCE PACKAGE P20,
3000K CCT, MVOLT, GLASS REFRACTOR
TYPE 3, BALL FINIAL, 7-PIN NEMA
INTERNAL RECPTACLE, DTL
PHOTOCONTROL & BLACK FINISH
(HOLOPHANE PTUE3 P20 30K MVOLT GL3
BK BL PR7 PCLL PH5590)

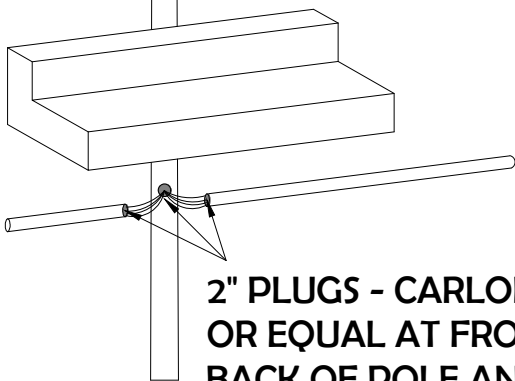
19' POLE (VALMONT TB19X503HST3)

USE 3 - ELEC. WIRE 12 AWG (HOT,
NEUTRAL, GROUND) FROM
HANDHOLE TO LUMINAIRE. USE 20'
OF EACH WIRE (60' TOTAL).

INSTALL IN-LINE FUSE
ASSEMBLY WITH 5 AMP
FUSE

USE APPROVED INSULATED
TERMINAL BLOCK CONNECTORS
FOR SPLICES

HANDHOLE SHALL BE 8"-12"
ABOVE GRADE & ORIENTED
TOWARD SIDEWALK



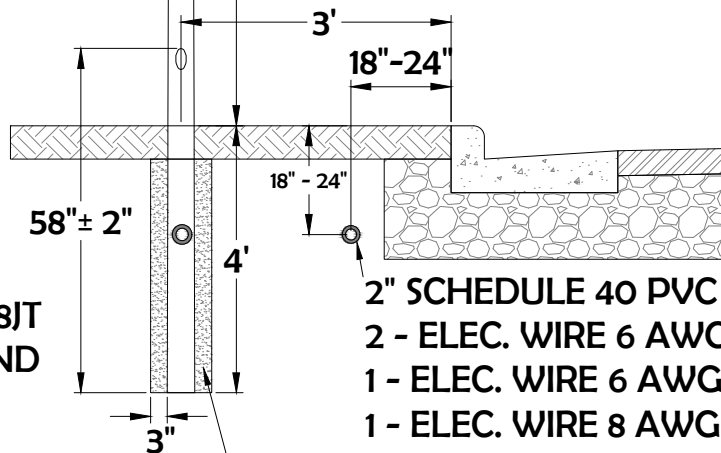
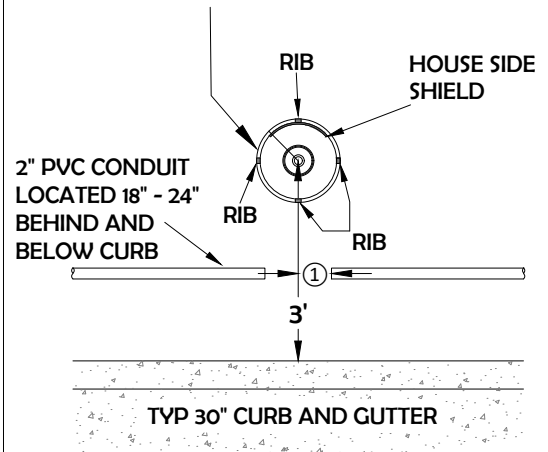
2" PLUGS - CARLON P258JT
OR EQUAL AT FRONT AND
BACK OF POLE AND AT
CONDUIT ENDS



15'

TOP VIEW

- ① ENDS OF CONDUIT NO
MORE THAN 1' FROM
CENTER OF LIGHT POLE
LIGHT POLE AND BASE



SAND BACKFILL

2" SCHEDULE 40 PVC CONDUIT
2 - ELEC. WIRE 6 AWG HOTS
1 - ELEC. WIRE 6 AWG NEUTRAL
1 - ELEC. WIRE 8 AWG GROUND

ORIENT "STREET SIDE" RIB
TO ROADWAY



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NOT TO SCALE
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COBRA HEAD STREET LIGHT

156 W LED (TYP.)

6' CLAMP ON ARM (TYP.)

30' ROUND TAPERED
ALUM. POLE (TYP.)LUMINAIRE TYPE, MOUNTING HEIGHT
AND ARM LENGTH MAY VARYUSE 3 - ELEC. WIRE 12 AWG (HOT, NEUTRAL, GROUND) TO
EACH LUMINAIRE. USE 40' OF EACH WIRE (120' TOTAL). (TYP.)

TOP VIEW

PROVIDE 1"
CHAMFER ALL
AROUND BASEORIENT ACCESS OPENING
TOWARD SIDEWALK20" DIAMETER
CONCRETE BASE

11.5" DIAMETER BOLT PATTERN

45° BEND

NO. OF 2" PVC CONDUITS
ENTERING BASE MAY
VARY FROM 1-42" PVC CONDUIT
LOCATED 18" - 24"
BEHIND AND
BELOW CURB

TYP 30" CURB AND GUTTER

INSTALL IN-LINE
FUSE ASSEMBLY
WITH 5 AMP FUSEUSE APPROVED
INSULATED
TERMINAL BLOCK
CONNECTORS
FOR SPLICESTHREADED BOLTS
4" MAX ABOVE
CONCRETEALTERNATE BASE:
USE A 22" OR 24" DIAMETER CONCRETE BASE,
TB1 TRANSFORMER BASE, AND 15" DIAMETER
BOLT PATTERN WHEN SPECIFIED ON PLANS

TB2 TRANSFORMER BASE

PVC BELL FITTING

ALL THREADS SHALL
BE ANTI-SEIZED

GRASS 3"

REMOVE TOP 12"
OF SONOTUBE

5'

20"

CONCRETE

2" SCHEDULE 40 PVC CONDUIT
2 - ELEC. WIRE 6 AWG HOTS
1 - ELEC. WIRE 6 AWG NEUTRAL
1 - ELEC. WIRE 8 AWG GROUND
OR AS SHOWN ON PLANS

1" X 42" GALVANIZED ANCHOR BOLTS

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J:\CITYDWG\Civil 3D Drawings\IDTL\City SDDs\5-C-(2-3)\Cobra Head
Street Light & Cobra Head Street Light - roadside Ditch Detail.pdfDEPARTMENT OF PUBLIC WORKS
ENGINEERING AND TRAFFIC DIVISION
CITY OF FOND DU LAC, WISCONSIN

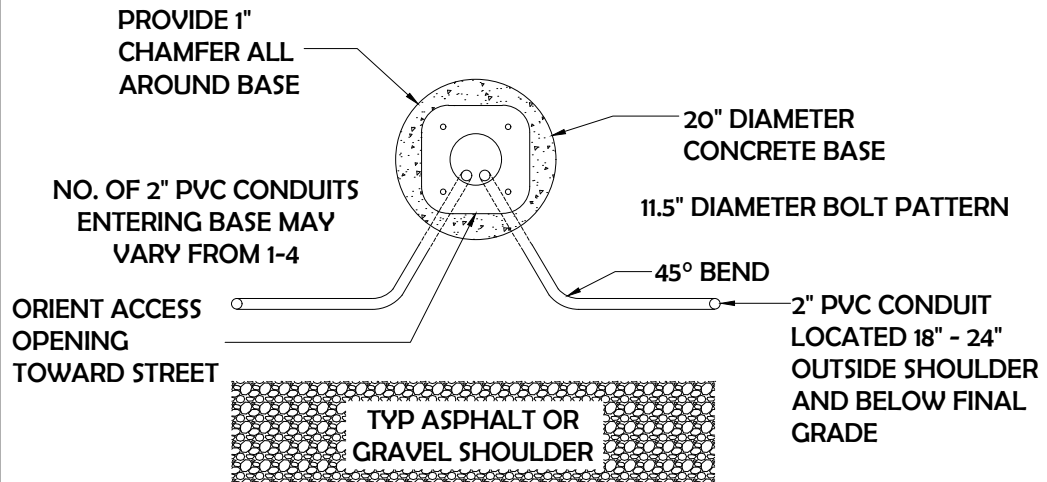
COBRA HEAD STREET LIGHT - ROADSIDE DITCH

156 W LED (TYP.)
6' CLAMP ON ARM (TYP.)
30' ROUND TAPERED
ALUM. POLE (TYP.)

LUMINAIRE TYPE, MOUNTING HEIGHT
AND ARM LENGTH MAY VARY

USE 3 - ELEC. WIRE 12 AWG (HOT, NEUTRAL, GROUND) TO
EACH LUMINAIRE. USE 40' OF EACH WIRE (120' TOTAL). (TYP.)

TOP VIEW



INSTALL IN-LINE
FUSE ASSEMBLY
WITH 5 AMP FUSE

USE APPROVED
INSULATED
TERMINAL BLOCK
CONNECTORS
FOR SPLICES

THREADED BOLTS
4" MAX ABOVE
CONCRETE

PVC BELL
FITTING

8" MAX

6'

20"

ALL THREADS SHALL
BE ANTI-SEIZED

TB2 TRANSFORMER BASE

18" - 24" SHOULDER

2"

REMOVE ALL FORMS
AFTER CONCRETE HAS SET

2" SCHEDULE 40 PVC CONDUIT
2 - ELEC. WIRE 6 AWG HOTS
1 - ELEC. WIRE 6 AWG NEUTRAL
1 - ELEC. WIRE 8 AWG GROUND
OR AS SHOWN ON PLANS

1" X 60" GALVANIZED ANCHOR BOLTS

ALTERNATE BASE:

USE A 22" OR 24" DIAMETER CONCRETE BASE, TB1 TRANSFORMER BASE,
AND 15" DIAMETER BOLT PATTERN WHEN SPECIFIED ON PLANS

INSTALL CONCRETE BASE AT LOCATION SHOWN
ON PLANS. INSTALL CONCRETE BASE A MINIMUM
OF 3' FROM EDGE OF SHOULDER TO EDGE OF
BASE IF NO LOCATION SHOWN ON PLANS.
CONFIRM LOCATION WITH CITY OF FOND DU LAC.

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J:\CITYDWG\Civil 3D Drawings\DTL\City SDDs\5-C-(2-3)\Cobra Head
Street Light & Cobra Head Street Light - roadside Ditch Detail.pdf



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CITY OF FOND DU LAC, WISCONSIN

RESIDENTIAL DECORATIVE STREET LIGHT

INSTALL IN-LINE
FUSE ASSEMBLY
WITH 5 AMP FUSE.

USE APPROVED INSULATED
TERMINAL BLOCK
CONNECTORS FOR SPLICES

14' NORTH YORKSHIRE
ALUM. POLE, BRONZE

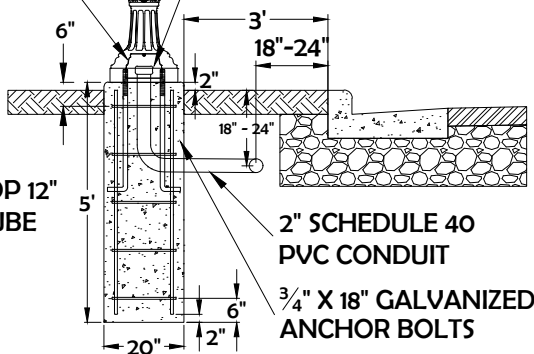
USE 3 - ELEC.
WIRE 12 AWG
(HOT, NEUTRAL,
GROUND) TO
LUMINAIRE. USE
20' OF EACH
WIRE (60' TOTAL).

THREADED BOLTS
2" MAX ABOVE
CONCRETE

PVC BELL FITTING

ALL THREADS SHALL
BE ANTI-SEIZED

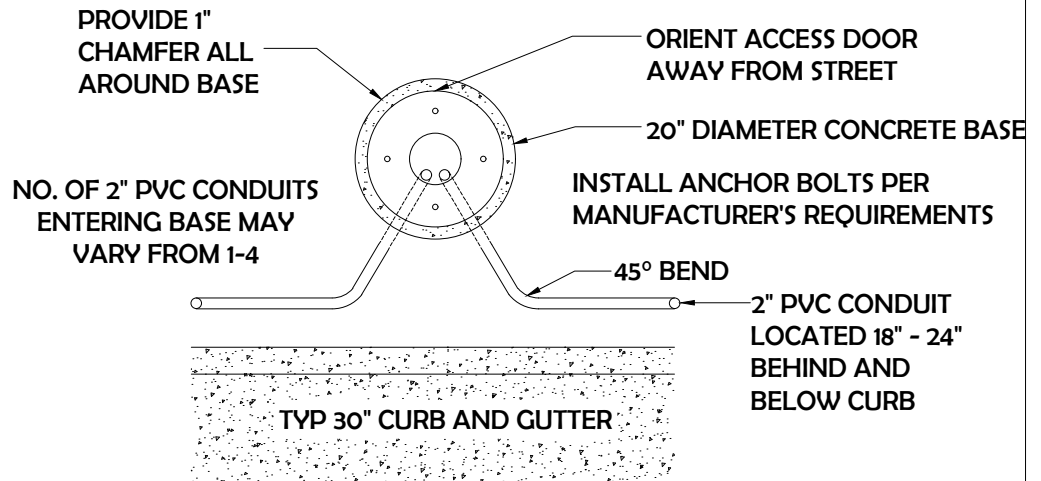
REMOVE TOP 12"
OF SONOTUBE



(6) NO. 6 x 4'-8" VERT. BARS

(5) NO. 4 RINGS AT 12" C-C
WITH 17" OVERLAP (14" DIA.)

TOP VIEW



HOLOPHANE UTILITY GRANVILLE LUMINAIRE
100 W HPS, MOGUL BASE, MULTI TAP
ASYMMETRIC TYPE IV
BRONZE FINISH

2 - ELEC. WIRE 6 AWG
1 - ELEC. WIRE 6 AWG NEUTRAL
1 - ELEC. WIRE 8 AWG GROUND

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Downtown Decorative Street Light.pdf



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DOWNTOWN DECORATIVE STREET LIGHT

INSTALL IN-LINE FUSE ASSEMBLY WITH 5 AMP FUSE FOR LUMINAIRES AND 15 AMP FUSE FOR OUTLETS

USE APPROVED INSULATED TERMINAL BLOCK CONNECTORS FOR SPLICES

14' NORTH YORKSHIRE ALUM. POLE, BLACK

TOP VIEW

INSTALL ANCHOR BOLTS PER MANUFACTURER'S REQUIREMENTS

ORIENT ACCESS DOOR AWAY FROM STREET

LOCATION OF CONDUIT ENTERING BASE MAY VARY

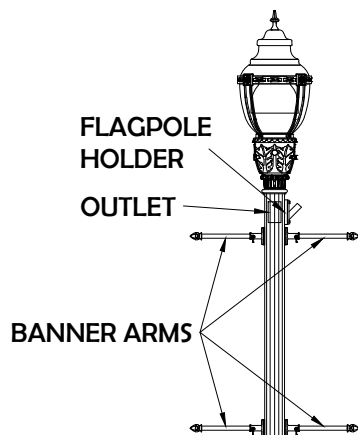
PROVIDE 1" CHAMFER ALL AROUND BASE

45° BEND

2" PVC CONDUIT LOCATED 18" - 24" BEHIND AND BELOW CURB

20" DIAMETER CONCRETE BASE

TYP 30" CURB AND GUTTER



USE 3 - ELEC. WIRE 12 AWG (HOT, NEUTRAL, GROUND) TO EACH LUMINAIRE AND OUTLET. USE 20' OF EACH WIRE TO LUMINAIRE AND UPPER OUTLET. USE 6' OF EACH WIRE TO LOWER OUTLET. (138' TOTAL).

OUTLET
THREADED BOLTS 2" MAX ABOVE CONCRETE

ALL THREADS SHALL BE ANTI-SEIZED

PVC BELL FITTING

3/4" X 18" GALVANIZED ANCHOR BOLTS

2 - 2" SCHEDULE 40 PVC CONDUITS

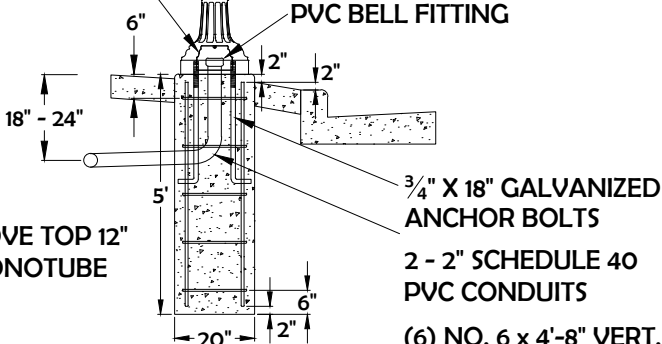
(6) NO. 6 x 4'-8" VERT. BAR STEEL

(5) NO. 4 BAR STEEL AT 12" C-C WITH 17" OVERLAP (14" DIA.)

WASHINGTON POSTLITE ENHANCED LED 2 LUMINAIRE
LED PERFORMANCE PACKAGE 40
3000 K CCT
ASYMMETRIC TYPE III
GOLD BAND & RIBS, SPIKE FINIAL
BLACK FINISH
(HOLOPHANE WSE2 P40 30K BK GL 6 PSC P7)

2 - ELEC. WIRE 6 AWG (IN EACH CONDUIT)
1 - ELEC. WIRE 6 AWG NEUTRAL (IN EACH CONDUIT)
1 - ELEC. WIRE 8 AWG GROUND (IN EACH CONDUIT)
OR AS SHOWN ON PLANS

REMOVE TOP 12" OF SONOTUBE



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TEAR DROP STREET LIGHT

ESPLANADE UTILITY TEAR DROP LED 2 LUMINAIRE,
LED PERFORMANCE PACKAGE P30S,
3000 K CCT, TEARDROP & GLASS DOOR TYPE 4,
PENDANT MOUNT & BLACK FINISH
(HOLOHANE ESL2 P30S 30K AH BK TG 4 P)

USE 3 - ELEC. WIRE 12 AWG (HOT, NEUTRAL, GROUND) TO
EACH LUMINAIRE. USE 35' OF EACH WIRE (105' TOTAL).

30' ROUND
TAPERED ALUM.
POLE, BLACK
ANODIZED

TOP VIEW

11.5" DIAMETER BOLT PATTERN

USE A 22" OR 24" DIAMETER CONCRETE BASE,
TB1 TRANSFORMER BASE, AND 15" DIAMETER
BOLT PATTERN WHEN SPECIFIED ON PLANS

ORIENT ACCESS
OPENING AWAY
FROM STREET

LOCATION OF
CONDUIT ENTERING
BASE MAY VARY

45° BEND

2" PVC CONDUIT
LOCATED 18" - 24"
BEHIND AND
BELOW CURB

PROVIDE 1"
CHAMFER ALL
AROUND BASE

22" OR 24" DIAMETER
CONCRETE BASE

TYP 30" CURB AND GUTTER

INSTALL IN-LINE
FUSE ASSEMBLY
WITH 5 AMP FUSE

USE APPROVED
INSULATED
TERMINAL BLOCK
CONNECTORS
FOR SPLICES

THREADED BOLTS
4" MAX ABOVE
CONCRETE

2 - ELEC. WIRE 6 AWG (IN EACH CONDUIT)
1 - ELEC. WIRE 6 AWG NEUTRAL (IN EACH CONDUIT)
1 - ELEC. WIRE 8 AWG GROUND (IN EACH CONDUIT)

TB2 TRANSFORMER BASE

ALL THREADS SHALL
BE ANTI-SEIZED

PVC BELL FITTING

2 - 2" SCHEDULE 40 PVC CONDUITS

1" X 42" GALVANIZED ANCHOR BOLTS

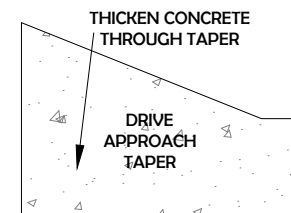
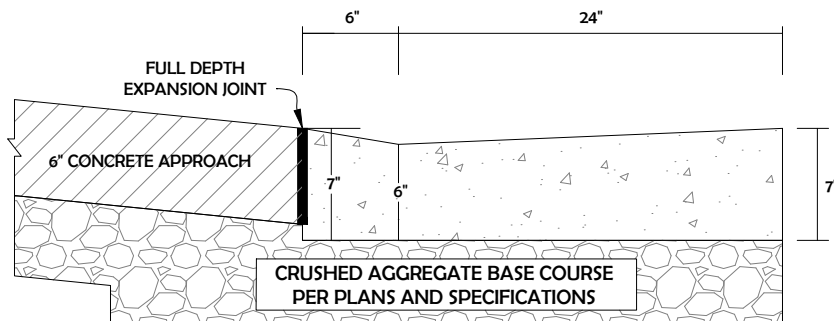
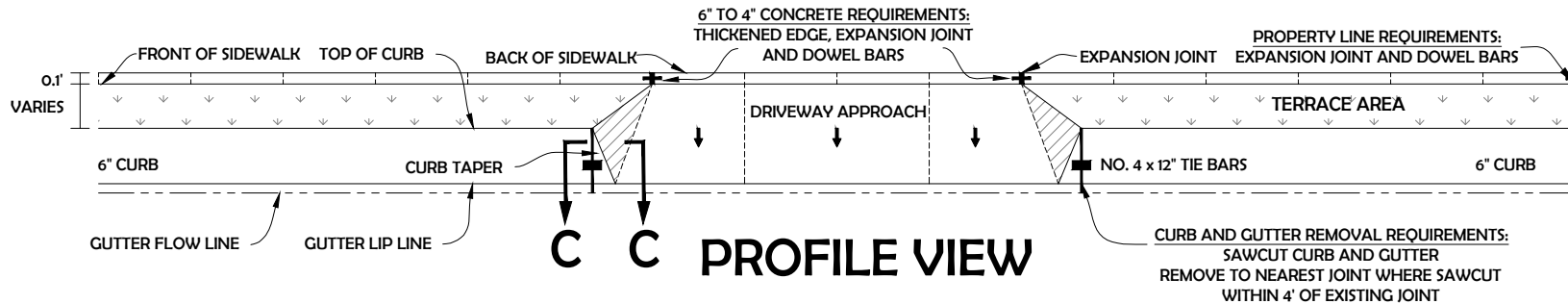
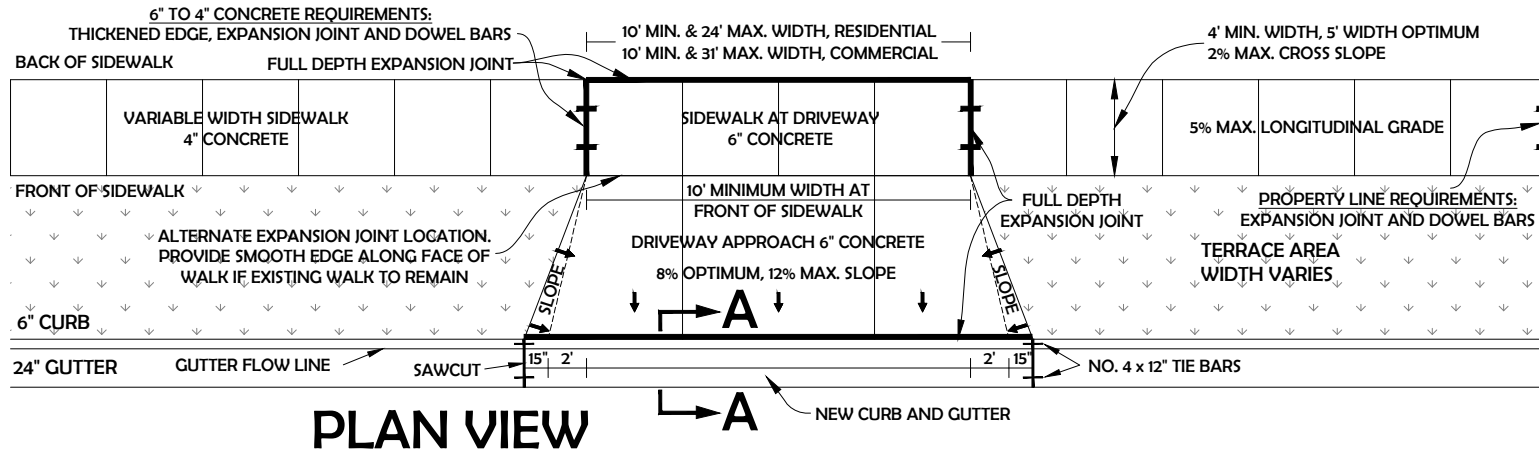
REMOVE TOP 12"
OF SONOTUBE

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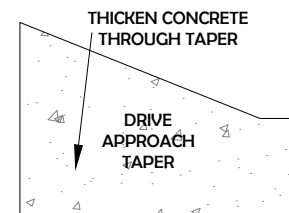
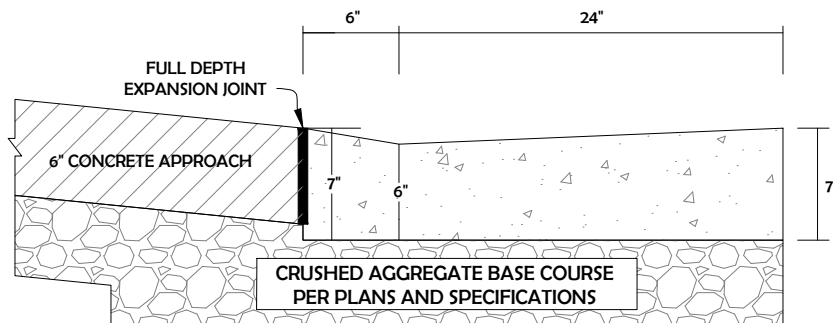
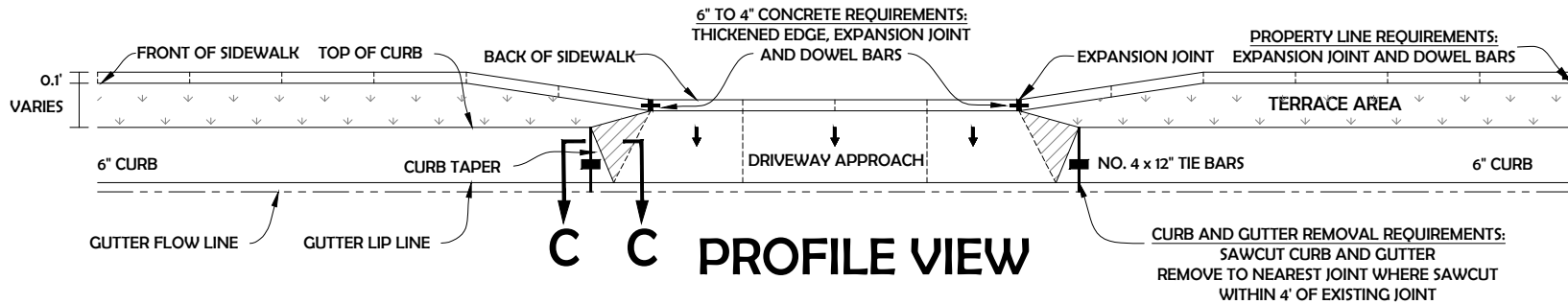
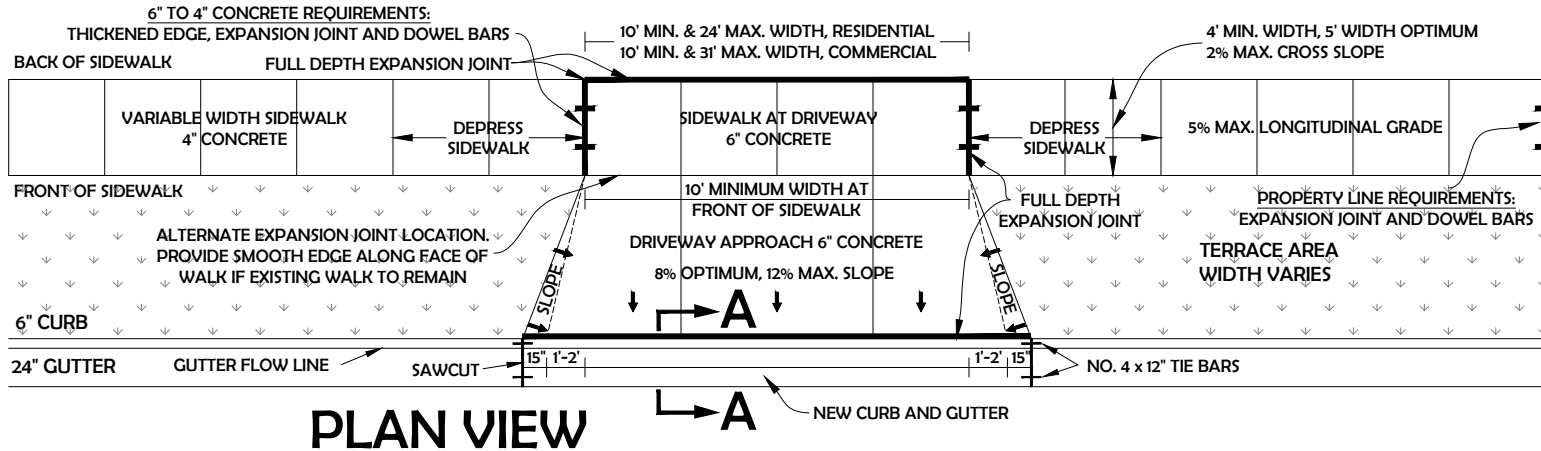
TYPICAL DRIVE APPROACH: GRASS TERRACE

NOTES:

- TIE BARS ARE REQUIRED IN THE CURB AND GUTTER AT LOCATIONS WHERE NEW CURB AND GUTTER WILL CONNECT TO EXISTING.
- EXISTING CURB AND GUTTER TO BE SAWCUT AND REMOVED FOR THE ENTIRE LENGTH OF THE PROPOSED DRIVEWAY AND REPLACED AS SHOWN IN SECTION A-A.
- A PROFILE SAWCUT OF THE EXISTING CURB HEAD MAY BE PERFORMED WHEN APPROVED BY CITY. SAWCUT AS SHOWN IN SECTION A-A USING APPROVED EQUIPMENT.
- WHEN SPOT REPLACING SIDEWALK, INSTALL NO. 4 TIE BARS, 12" IN LENGTH, INTO BOTH SIDES OF EXISTING WALK 18" FROM THE FRONT AND BACK OF WALK.
- NO. 4 DOWEL BARS, 12" IN LENGTH, TO BE INSTALLED AT EXPANSION JOINTS. BARS ONLY REQUIRED WHERE NEW CONCRETE ABUTS EXISTING CONCRETE.
- DOWEL BARS SHALL BE ANCHORED INTO DRILLED HOLES WITH AN APPROVED EPOXY GROUT.
- THE FREE END OF DOWEL BARS SHALL RECEIVE A THIN UNIFORM COATING OF BOND BREAKER.
- ALL TIE BARS AND DOWEL BARS SHALL BE EPOXY COATED.



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TYPICAL DRIVE APPROACH: GRASS TERRACE WITH DEPRESSED DRIVE APPROACH



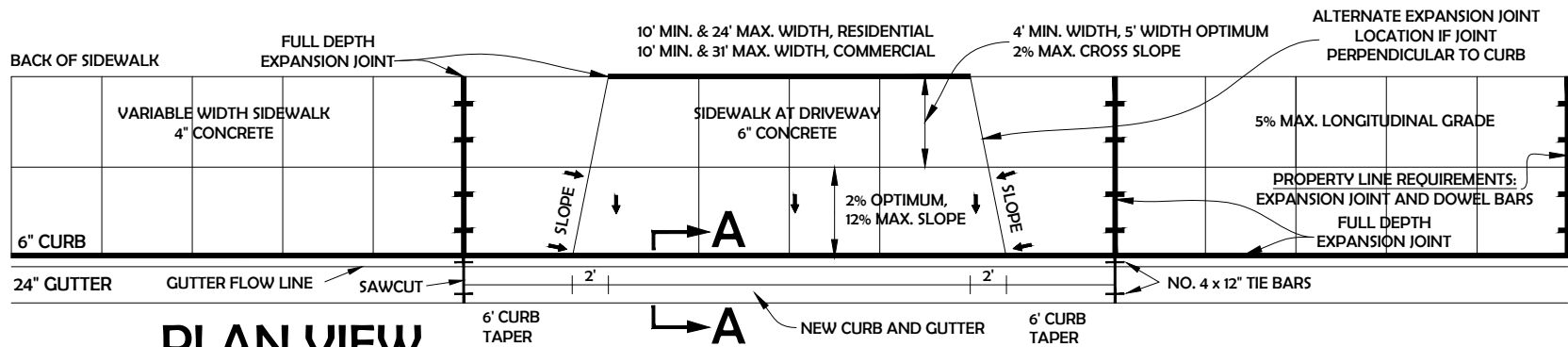
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NOTES:

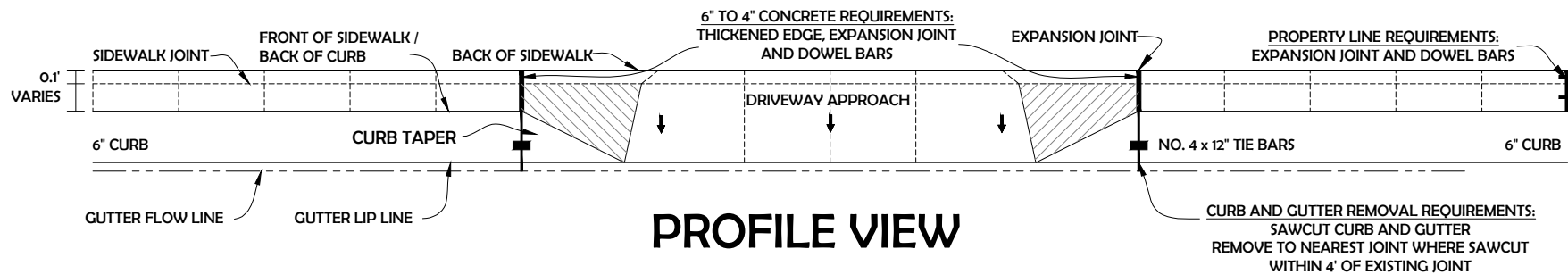
- TIE BARS ARE REQUIRED IN THE CURB AND GUTTER AT LOCATIONS WHERE NEW CURB AND GUTTER WILL CONNECT TO EXISTING.
- EXISTING CURB AND GUTTER TO BE SAWCUT AND REMOVED FOR THE ENTIRE LENGTH OF THE PROPOSED DRIVEWAY AND REPLACED AS SHOWN IN SECTION A-A.
- A PROFILE SAWCUT OF THE EXISTING CURB HEAD MAY BE PERFORMED WHEN APPROVED BY CITY. SAWCUT AS SHOWN IN SECTION A-A USING APPROVED EQUIPMENT.
- WHEN SPOT REPLACING SIDEWALK, INSTALL NO. 4 TIE BARS, 12" IN LENGTH, INTO BOTH SIDES OF EXISTING WALK 18" FROM THE FRONT AND BACK OF WALK.
- NO. 4 DOWEL BARS, 12" IN LENGTH, TO BE INSTALLED AT EXPANSION JOINTS. BARS ONLY REQUIRED WHERE NEW CONCRETE ABUTS EXISTING CONCRETE.
- DOWEL BARS SHALL BE ANCHORED INTO DRILLED HOLES WITH AN APPROVED EPOXY GROUT.
- THE FREE END OF DOWEL BARS SHALL RECEIVE A THIN UNIFORM COATING OF BOND BREAKER.
- DRIVEWAY FLARE WIDTH VARIES PER PLAN.
- DEPRESS SIDEWALK THROUGH DRIVE APPROACH. 5% MAX. LONGITUDINAL SLOPE.
- ALL TIE BARS AND DOWEL BARS SHALL BE EPOXY COATED.

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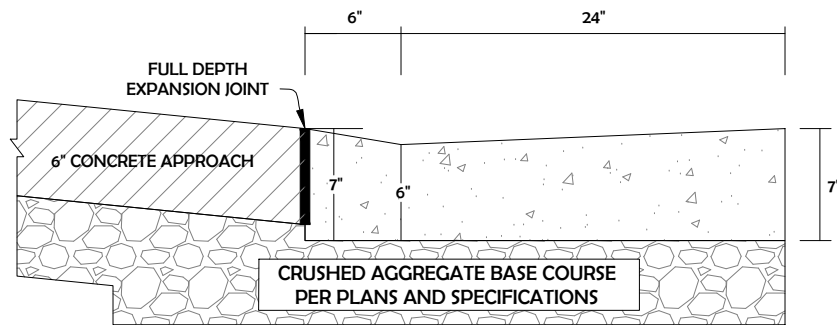
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PLAN VIEW



PROFILE VIEW



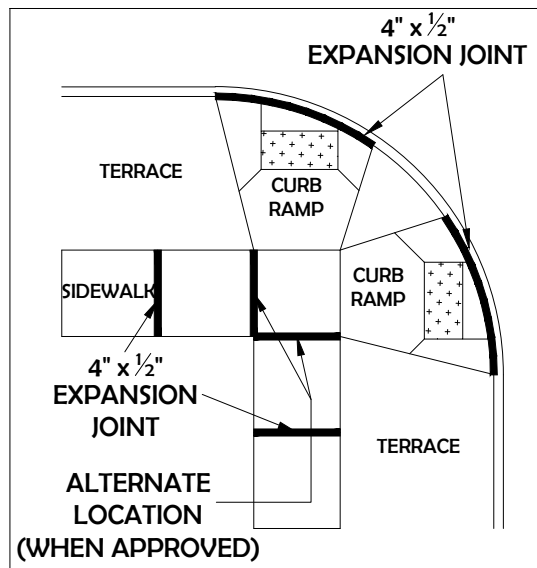
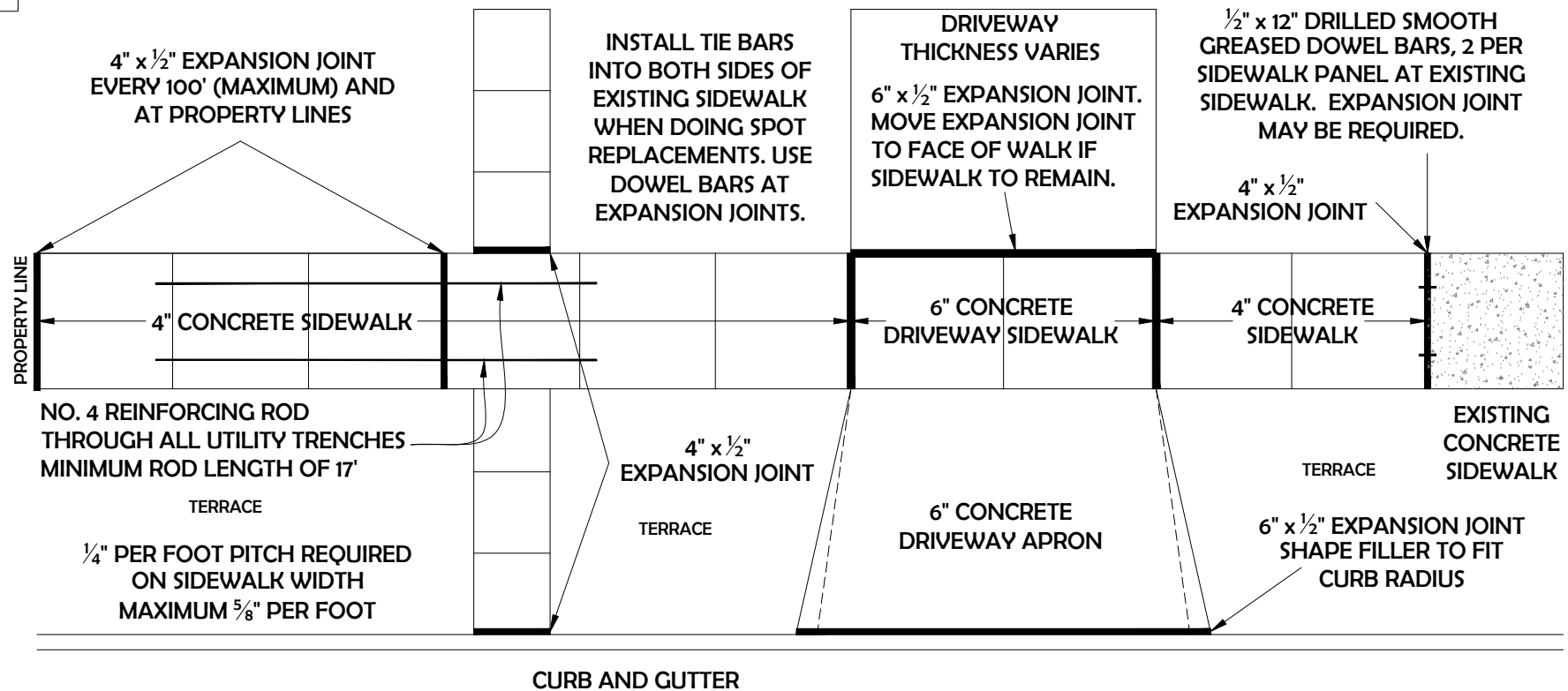
SECTION A - A

TYPICAL DRIVE APPROACH: CURBSIDE SIDEWALK

- NOTES:**
- TIE BARS ARE REQUIRED IN THE CURB AND GUTTER AT LOCATIONS WHERE NEW CURB AND GUTTER WILL CONNECT TO EXISTING.
 - EXISTING CURB AND GUTTER TO BE SAWCUT AND REMOVED FOR THE ENTIRE LENGTH OF THE PROPOSED DRIVEWAY AND REPLACED AS SHOWN IN SECTION A-A.
 - A PROFILE SAWCUT OF THE EXISTING CURB HEAD MAY BE PERFORMED WHEN APPROVED BY CITY. SAWCUT AS SHOWN IN SECTION A-A USING APPROVED EQUIPMENT.
 - WHEN SPOT REPLACING SIDEWALK, INSTALL NO. 4 TIE BARS, 12" IN LENGTH, INTO BOTH SIDES OF EXISTING WALK 18" FROM THE FRONT AND BACK OF WALK.
 - NO. 4 DOWEL BARS, 12" IN LENGTH, TO BE INSTALLED AT EXPANSION JOINTS. BARS ONLY REQUIRED WHERE NEW CONCRETE ABUTS EXISTING CONCRETE.
 - DOWEL BARS SHALL BE ANCHORED INTO DRILLED HOLES WITH AN APPROVED EPOXY GROUT.
 - THE FREE END OF DOWEL BARS SHALL RECEIVE A THIN UNIFORM COATING OF BOND BREAKER.
 - ALL TIE BARS AND DOWEL BARS SHALL BE EPOXY COATED.



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CITY OF FOND DU LAC, WISCONSIN



TYPICAL SIDEWALK (MINIMUM WIDTH 4.5')

INSTALL "HUDSON" BOX (PROVIDED BY CITY) AT WATER & GAS SERVICE BOXES LOCATED IN CONCRETE AREAS

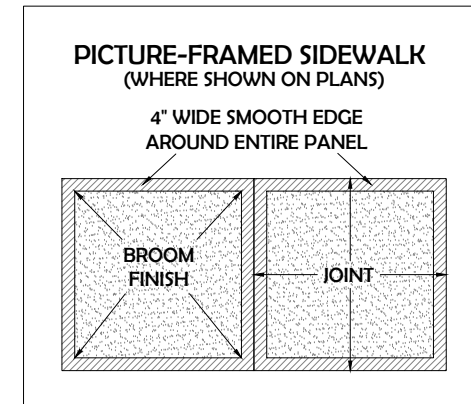
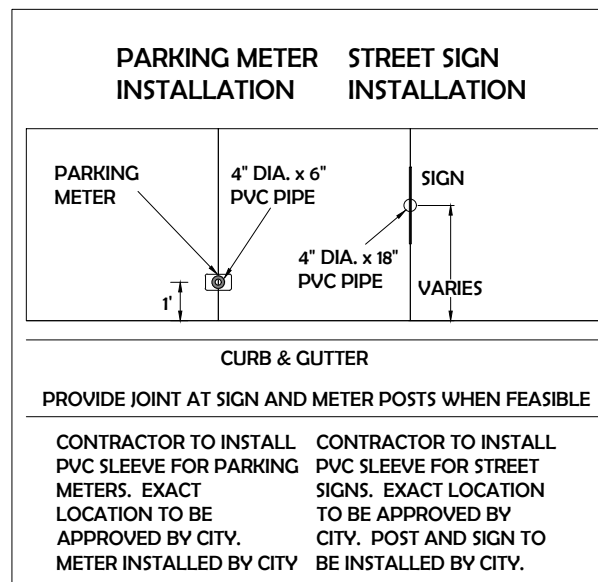
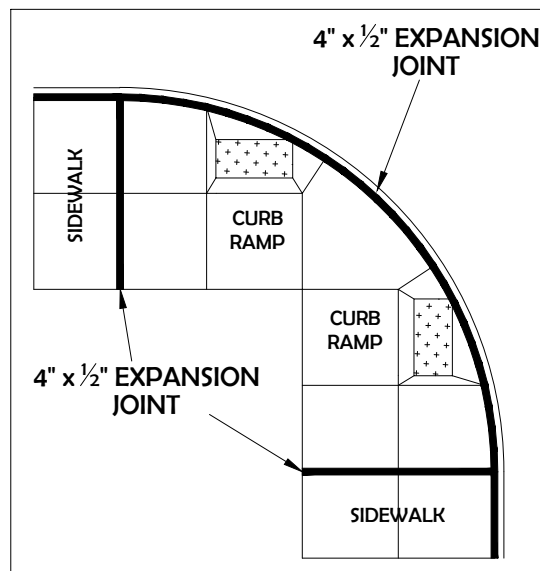
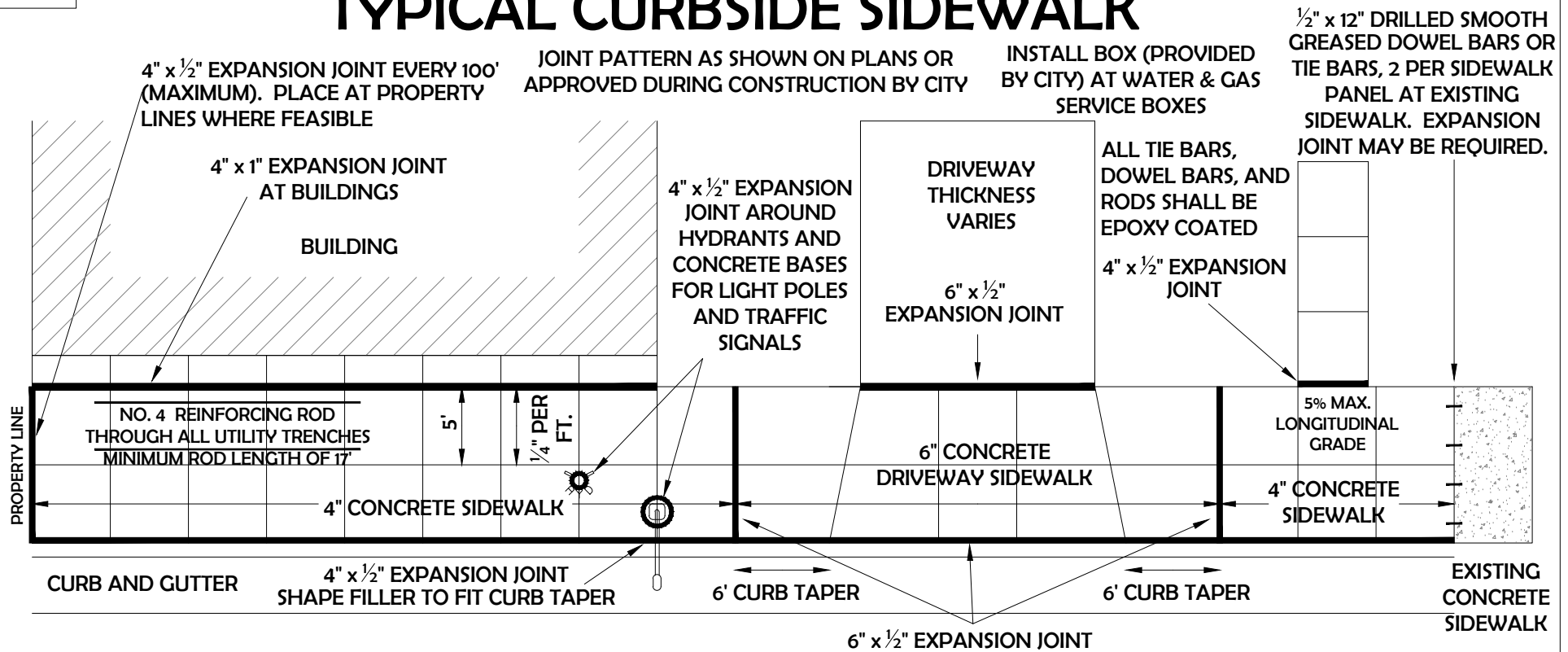
INSTALL DETECTABLE WARNING FIELDS AT CURB RAMP

EXPANSION JOINT & FILLER SHALL MATCH SIDEWALK THICKNESS

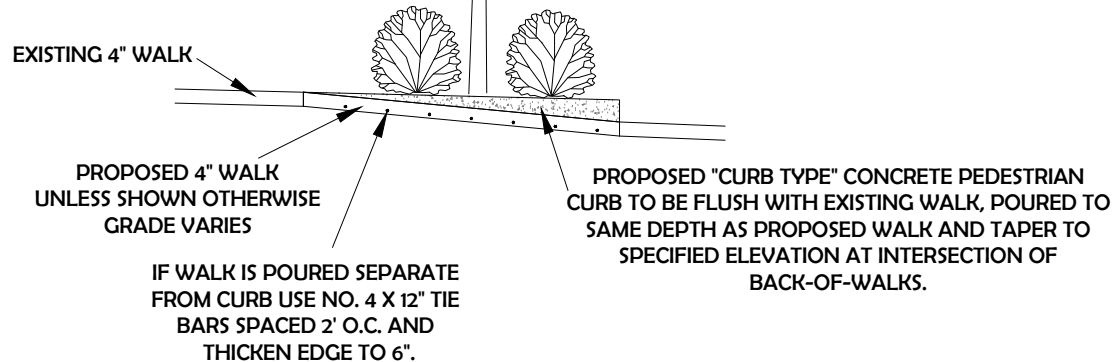
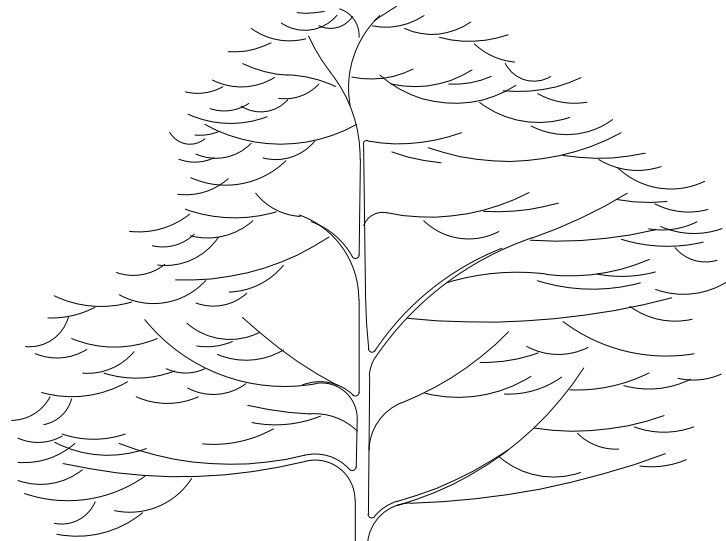
ALL TIE BARS, DOWEL BARS, AND RODS SHALL BE EPOXY COATED



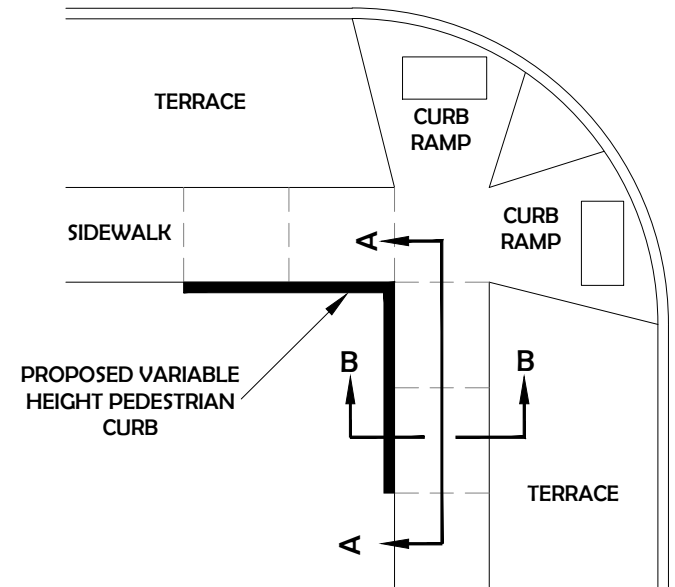
TYPICAL CURBSIDE SIDEWALK



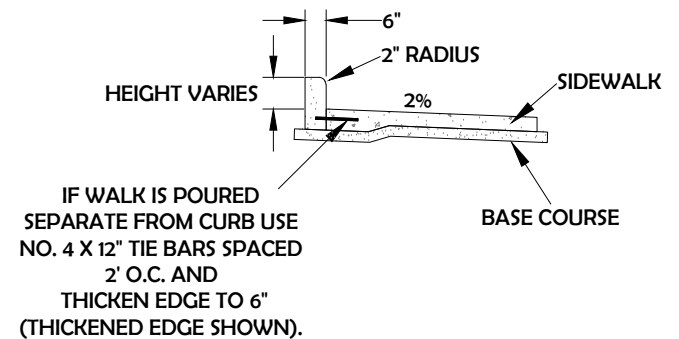
DEPARTMENT OF PUBLIC WORKS
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CITY OF FOND DU LAC, WISCONSIN



SECTION A-A



PLAN VIEW



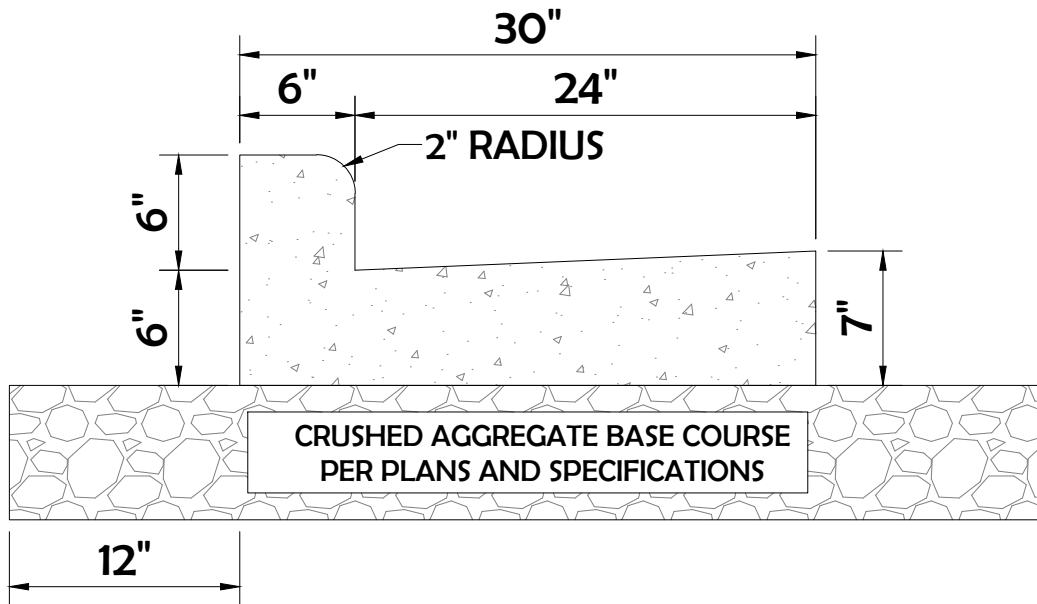
SECTION B-B

VARIABLE HEIGHT CONCRETE PEDESTRIAN CURB DETAIL

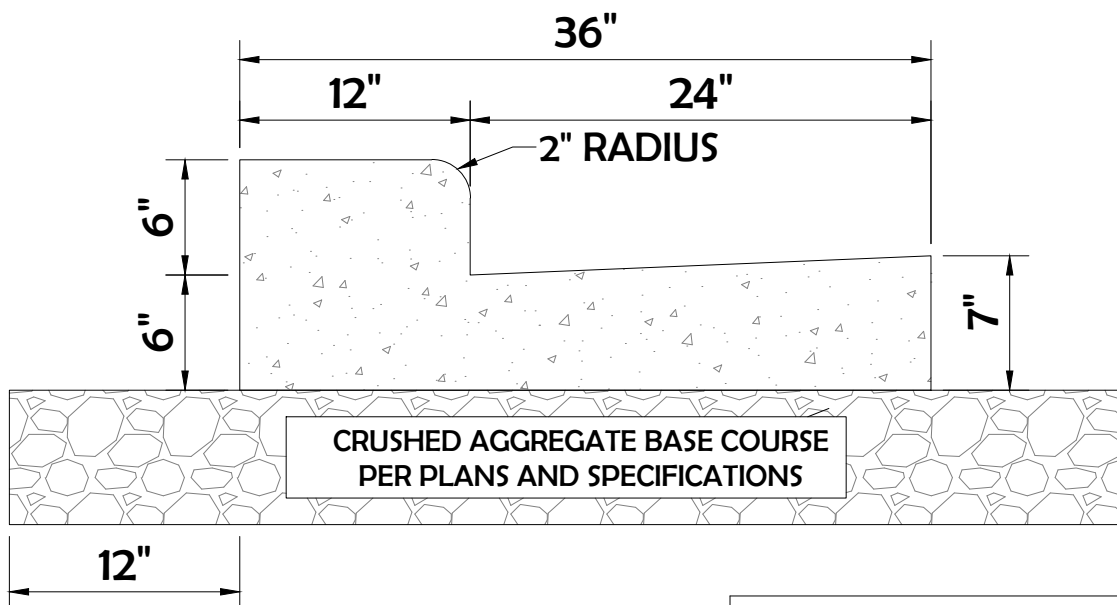


DEPARTMENT OF PUBLIC WORKS
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CITY OF FOND DU LAC, WISCONSIN

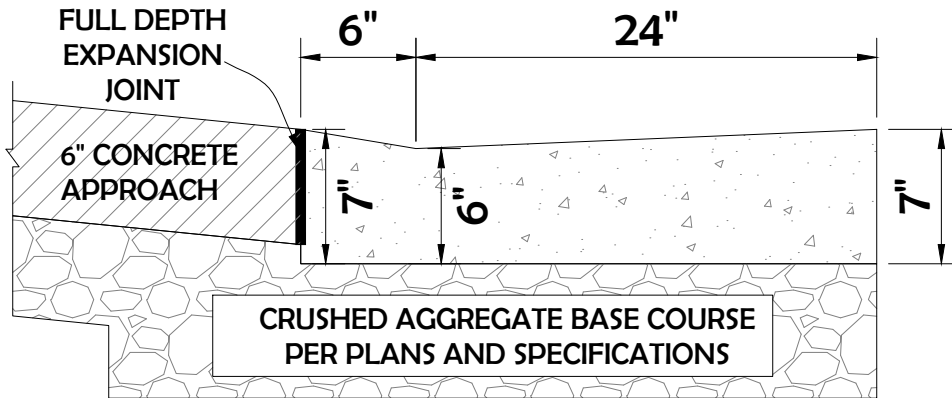
30" CONCRETE CURB AND GUTTER - STANDARD



36" CONCRETE CURB AND GUTTER - STANDARD

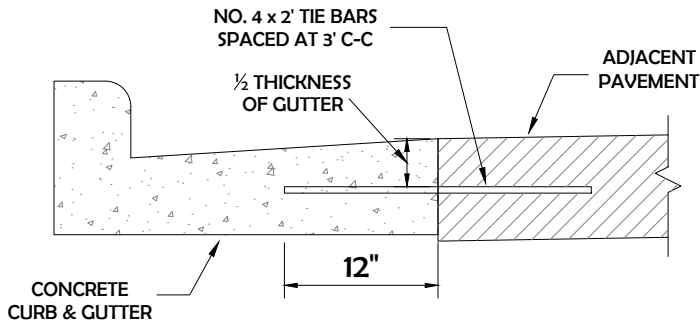


DRIVE APPROACH CURB AND GUTTER

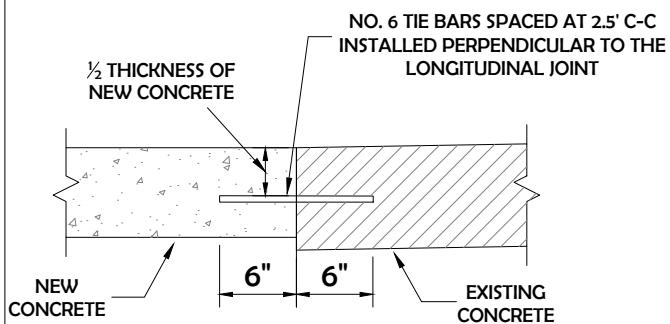


TYPICAL TIE BAR LOCATION

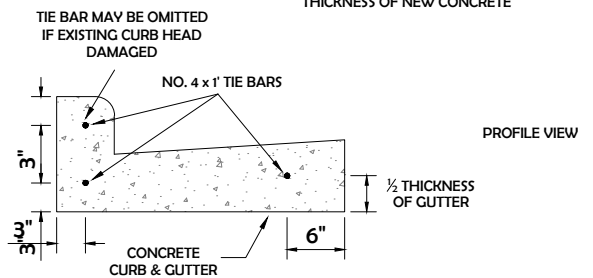
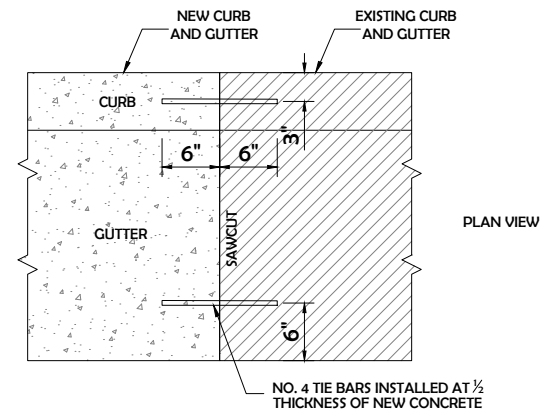
TIE BARS



TIE BARS DRILLED INTO EXISTING PAVEMENT

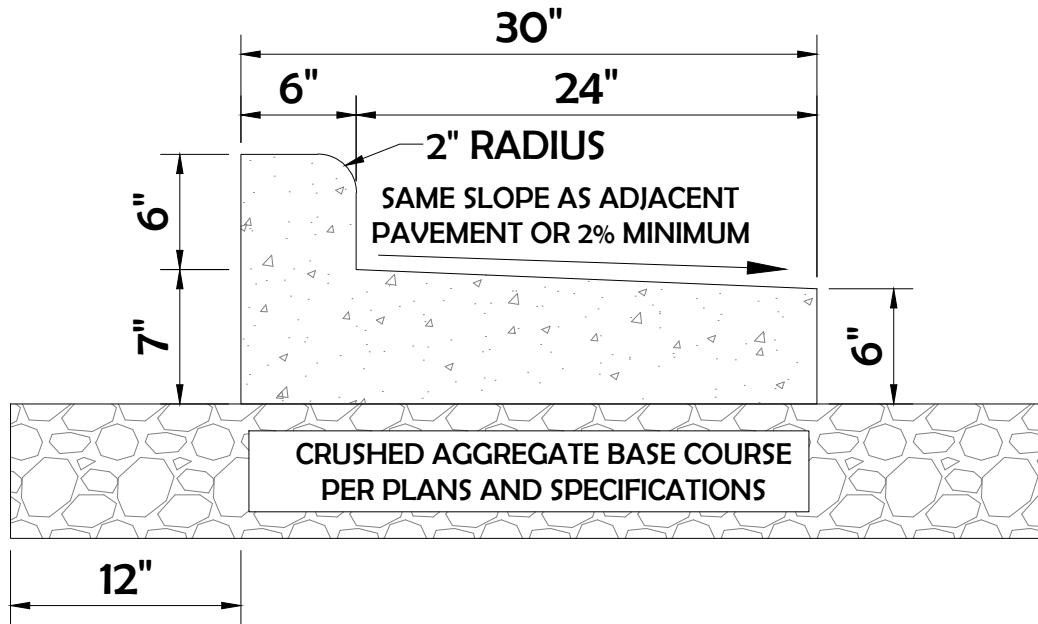


TIE BARS DRILLED INTO EXISTING CURB AND GUTTER

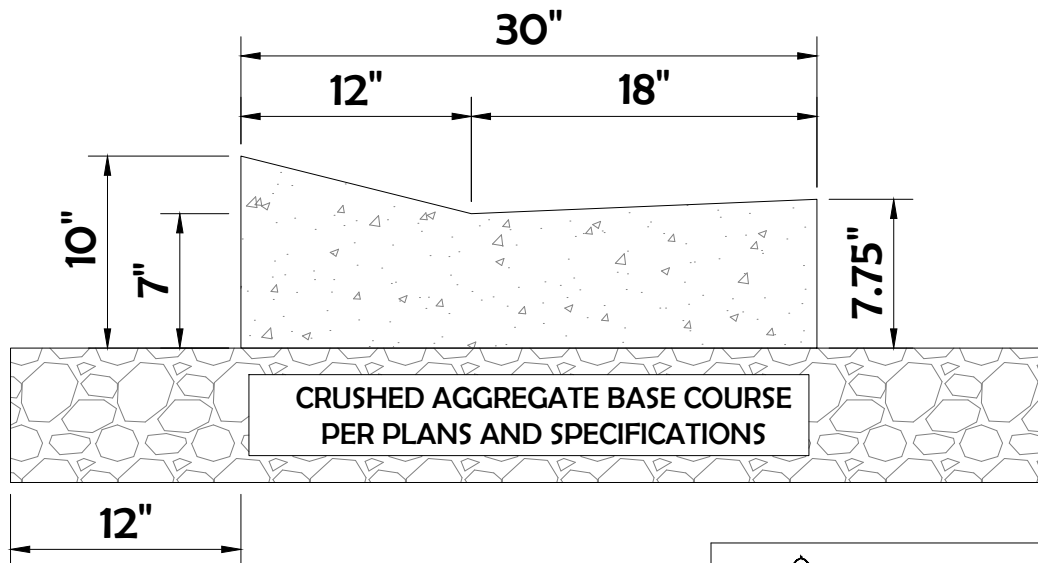


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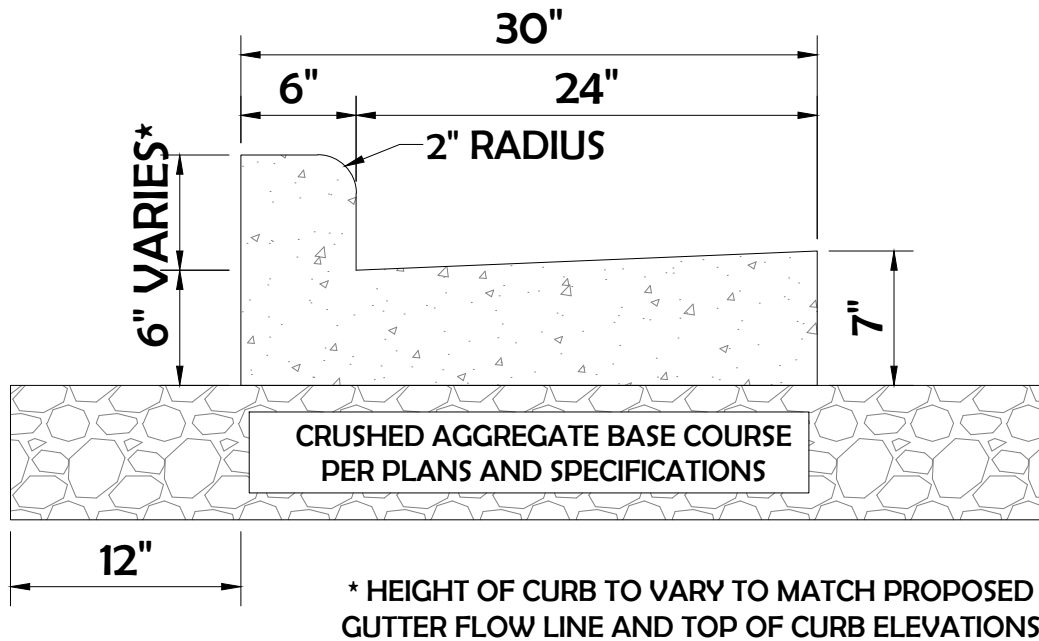
30" CONCRETE CURB AND GUTTER - REVERSE SLOPE



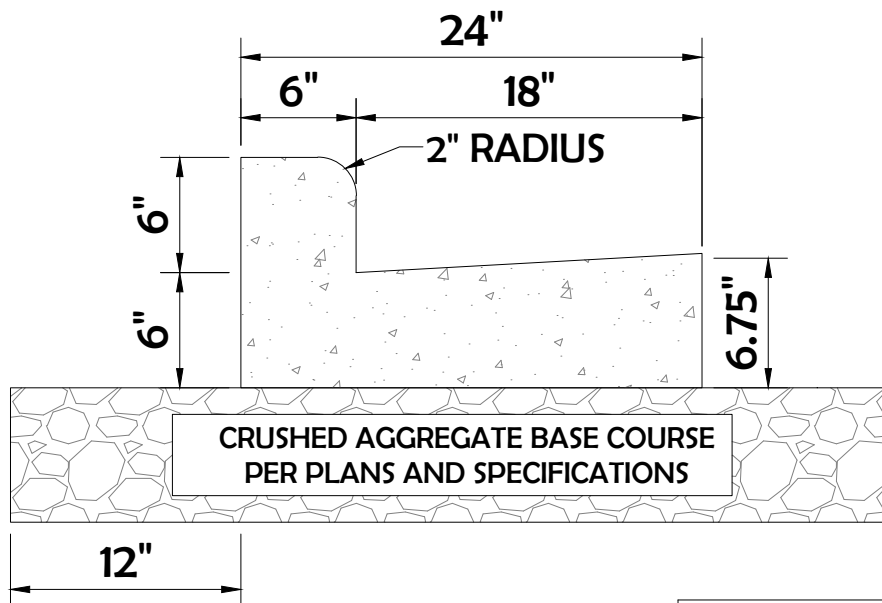
30" CONCRETE CURB AND GUTTER - MOUNTABLE



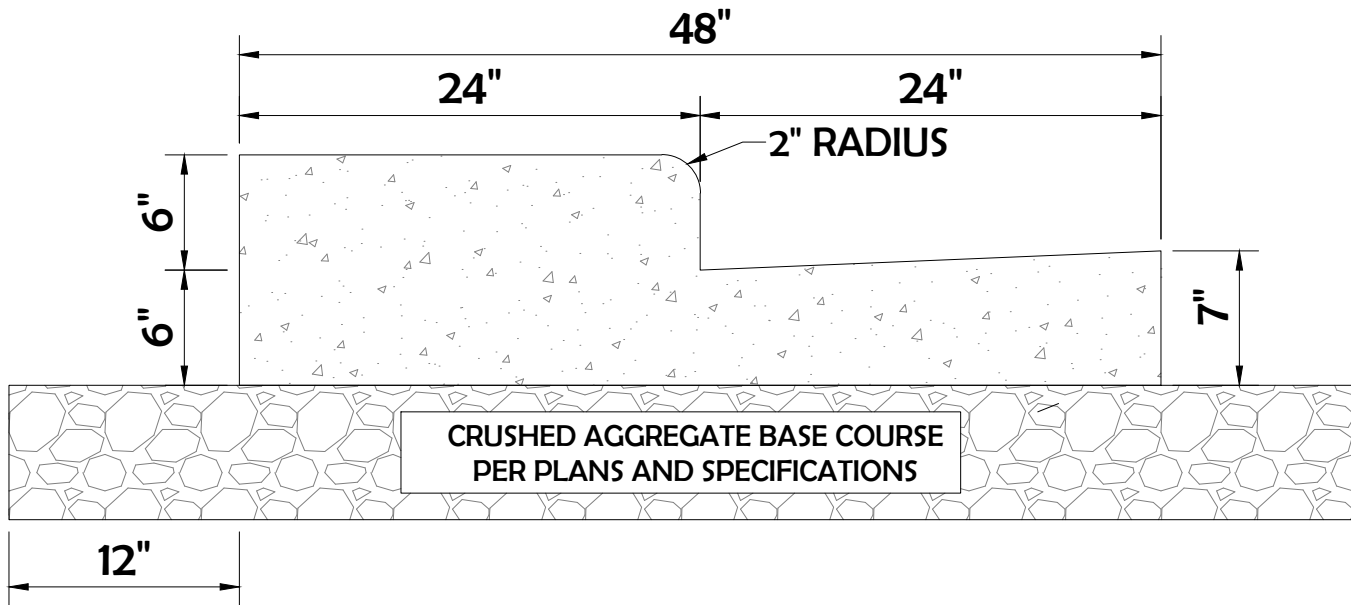
30" CONCRETE CURB AND GUTTER - STANDARD WITH VARIABLE CURB HEIGHT



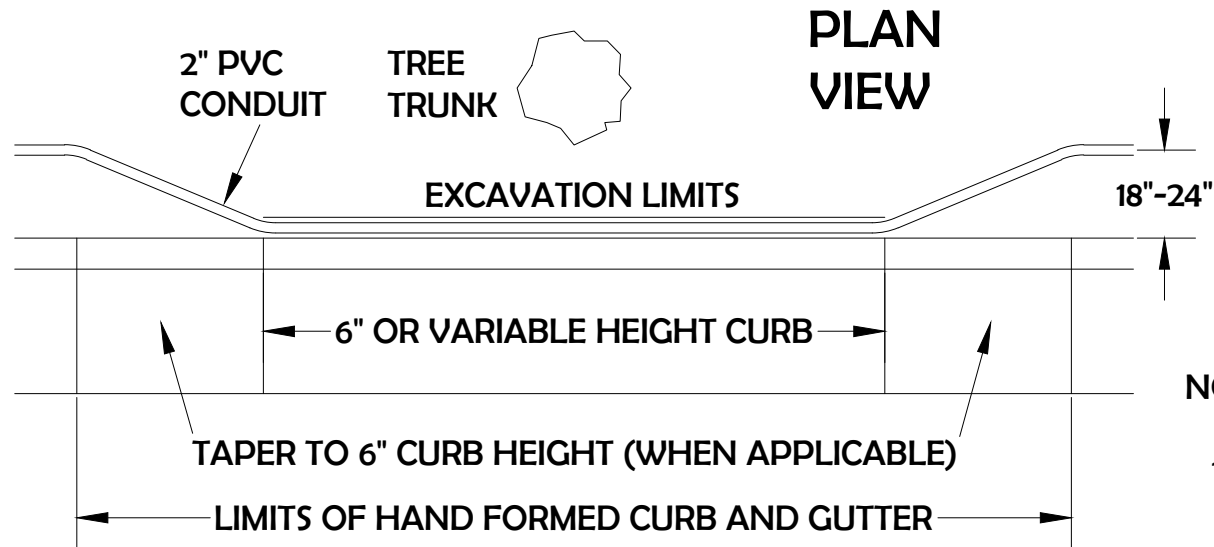
24" CONCRETE CURB AND GUTTER - STANDARD



48" CONCRETE CURB AND GUTTER - STANDARD



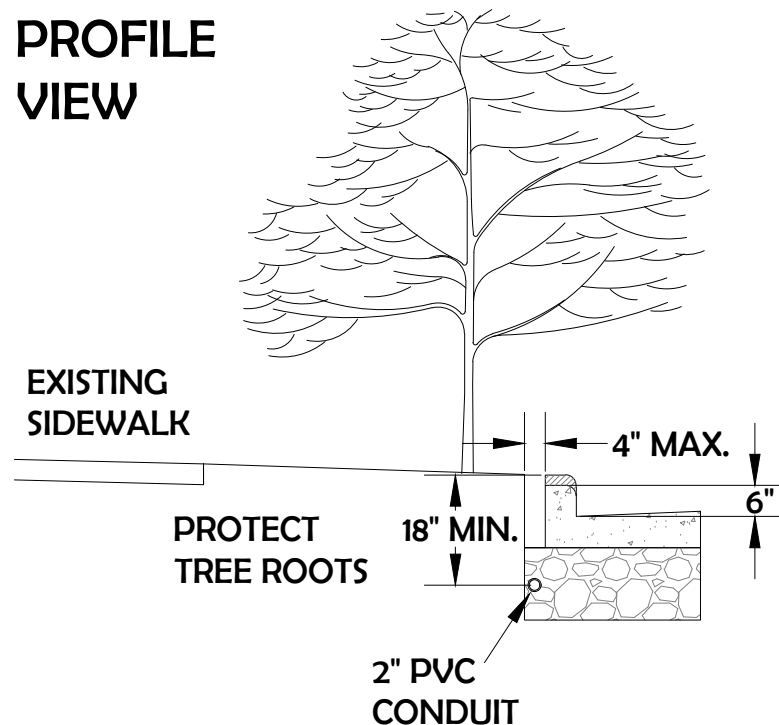
HAND FORMED CURB AND GUTTER



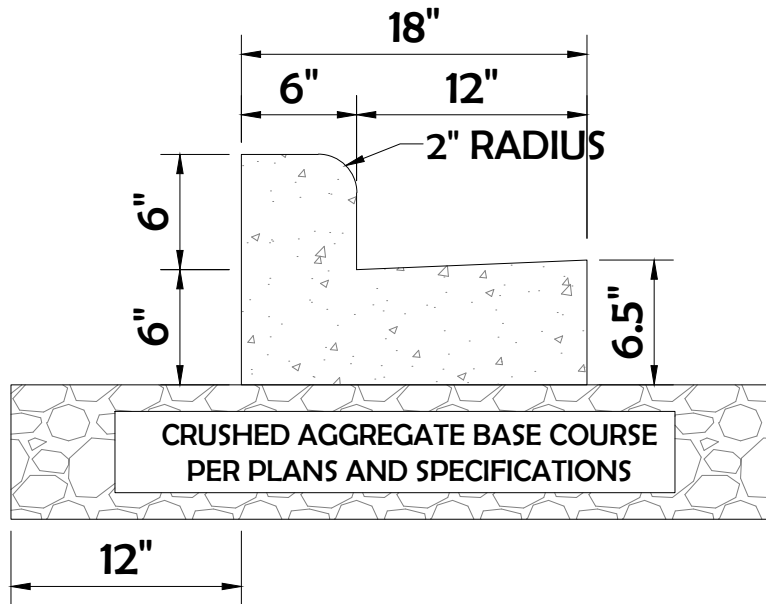
NOTES:

1. EXCAVATION LIMITS OF 4" BEHIND CURB AND GUTTER UNLESS DIRECTED OTHERWISE BY ENGINEER.
2. HAND FORMED CURB MAY INCLUDE VARIABLE HEIGHT CURB.
3. TAPER CURB HEAD AT 12:1 WHEN TRANSITIONING BETWEEN 6" CURB AND VARIABLE HEIGHT CURB.
4. VARIABLE HEIGHT CURB SHALL HAVE A MAXIMUM HEIGHT OF 9" UNLESS DIRECTED OTHERWISE.
5. INSIDE EDGE OF CONDUIT SHALL BE PLACED BEHIND BACK OF CURB AND GUTTER.

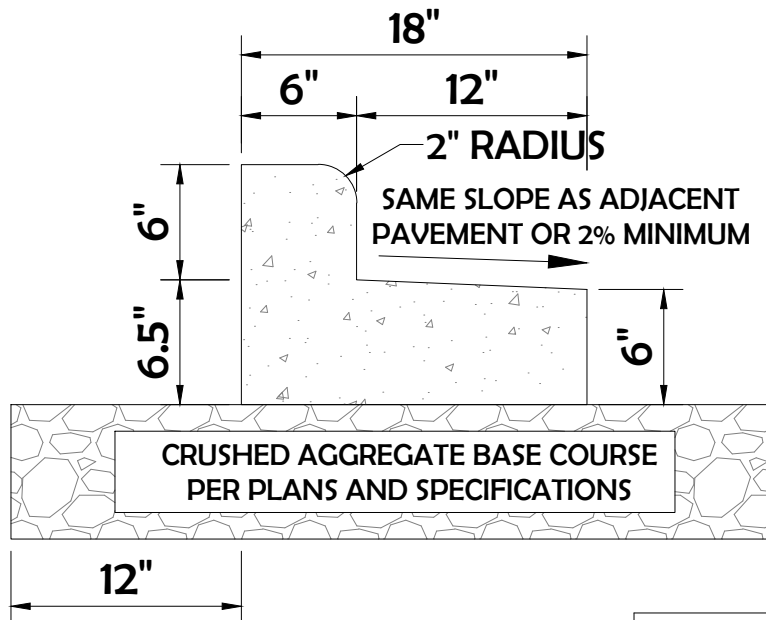
PROFILE VIEW



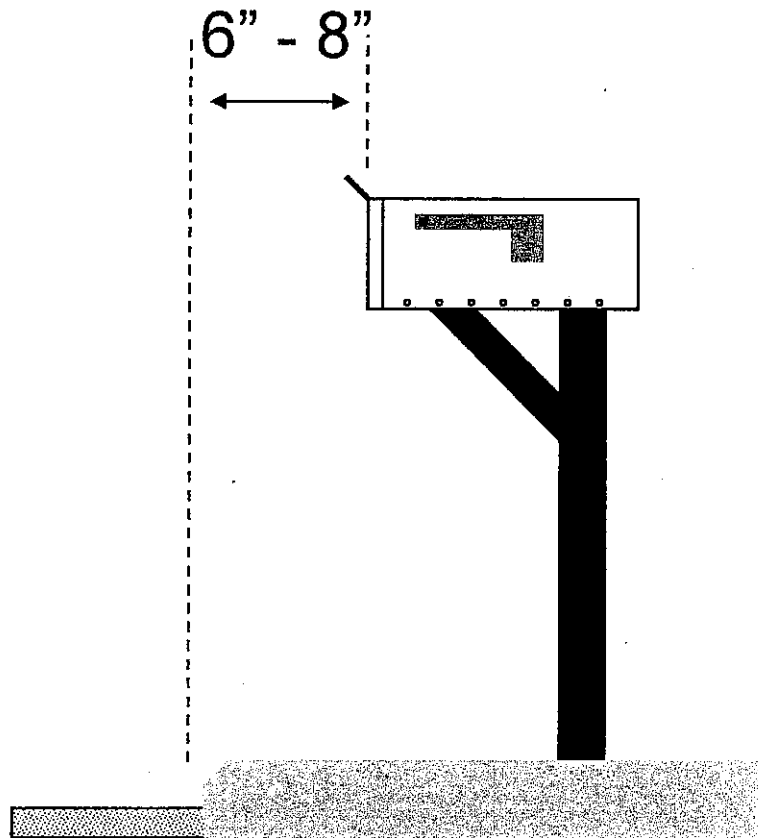
18" CONCRETE CURB AND GUTTER - STANDARD



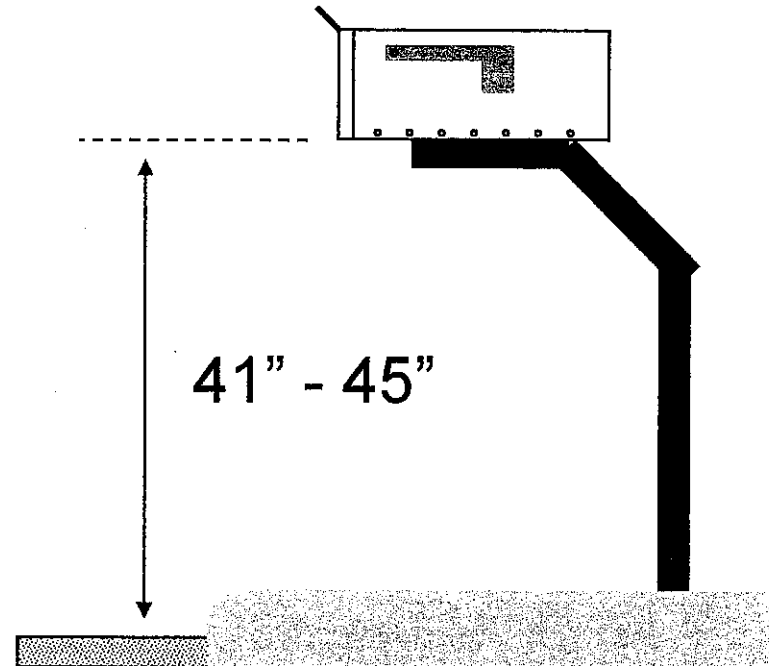
18" CONCRETE CURB AND GUTTER - REVERSE SLOPE



Mailbox Location (POM 632)



Mailboxes are set back 6 to 8 inches from the front face of the curb or road edge to the mailbox door.



Generally, mailboxes are installed at a height of 41 to 45 inches from the road surface to the bottom of the mailbox.

Note Check with your local municipality/county for mailbox requirements which may differ from above. Customers should contact the postmaster or carrier before erecting or replacing their mailbox.**