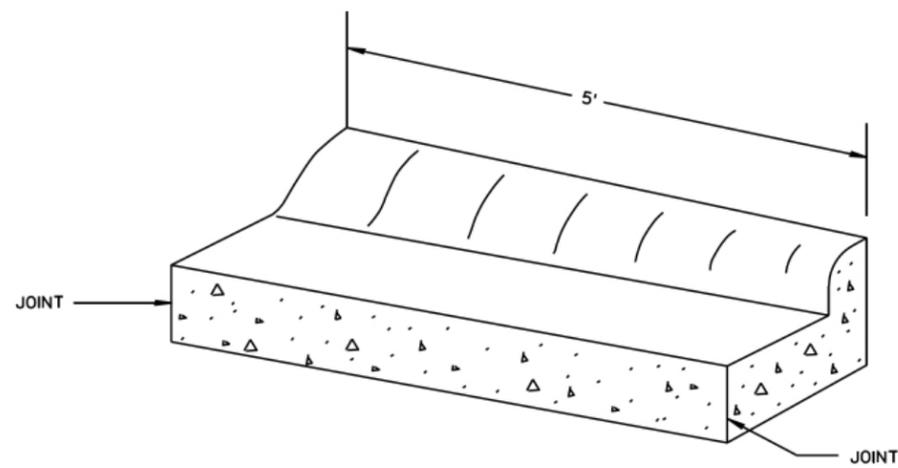
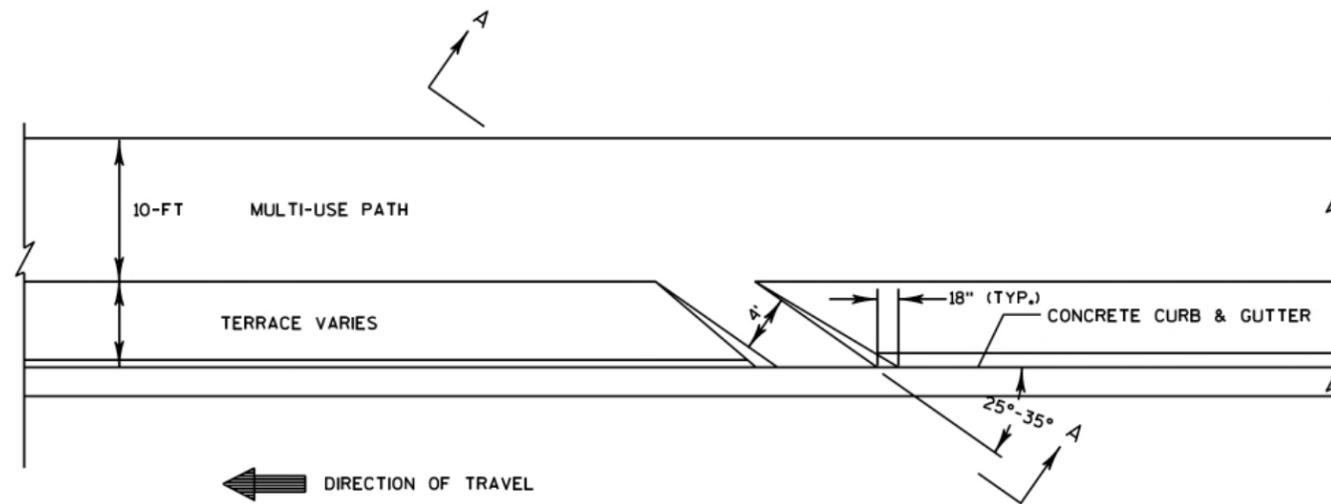
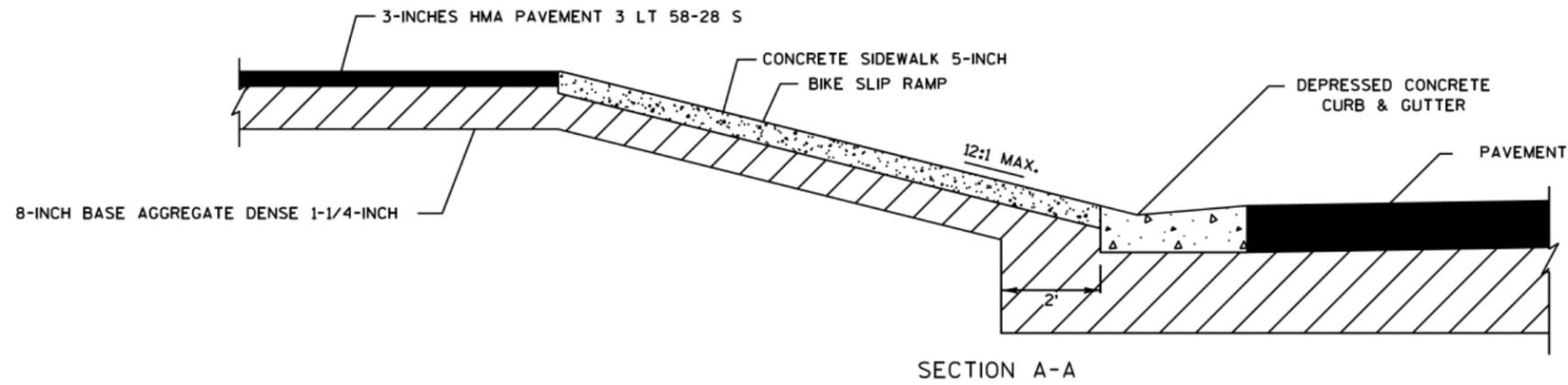


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CONCRETE CURB & GUTTER 30-INCH
 TO EXISTING CONCRETE CURB & GUTTER 24-INCH SPECIAL
 (TO BE MEASURED & PAID FOR AS CONCRETE CURB & GUTTER
 30-INCH)

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CITY OF FITCHBURG

CONSTRUCTION DETAILS

Project No: 19-3488
 Date: OCT 2019
 Designed By: BJS
 Drafted By: STD
 Checked By: LW

Revisions:

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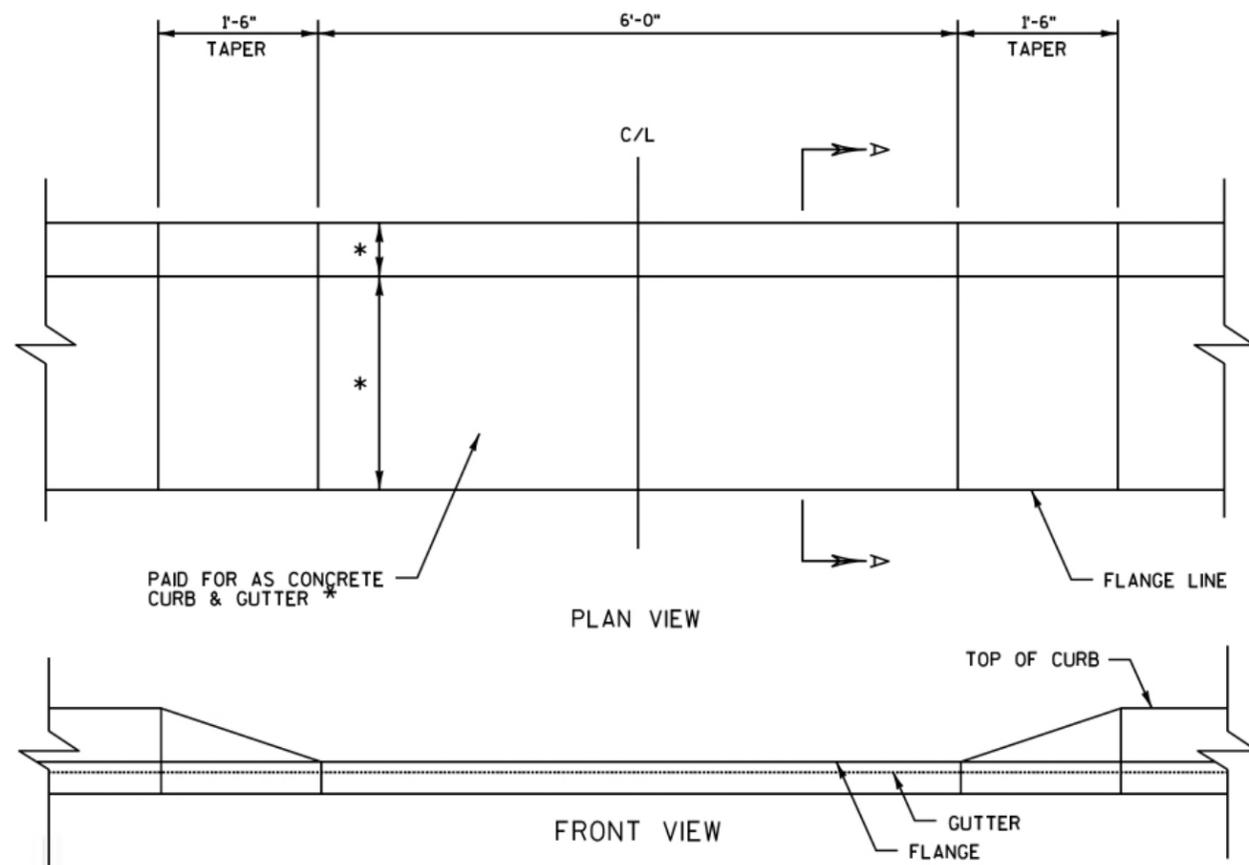


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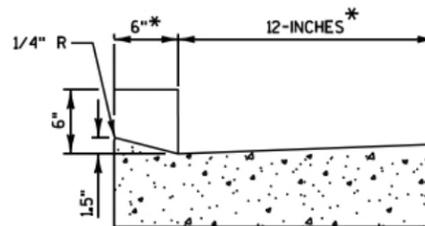
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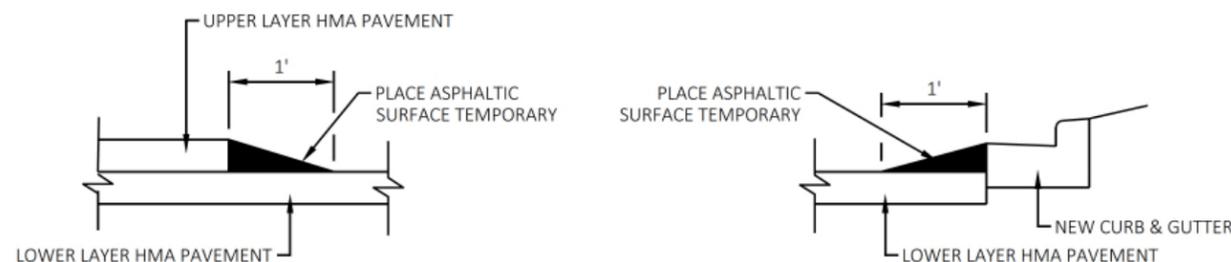
* TYPE AND DIMENSIONS TO MATCH ADJACENT CURB AND GUTTER.



MAINTENANCE OPENING DETAIL
LOCATIONS SHOWN ON PLAN DETAILS OR AS DIRECTED BY THE ENGINEER



END VIEW SECTION A-A



LONGITUDINAL EDGES

DRIVEWAYS

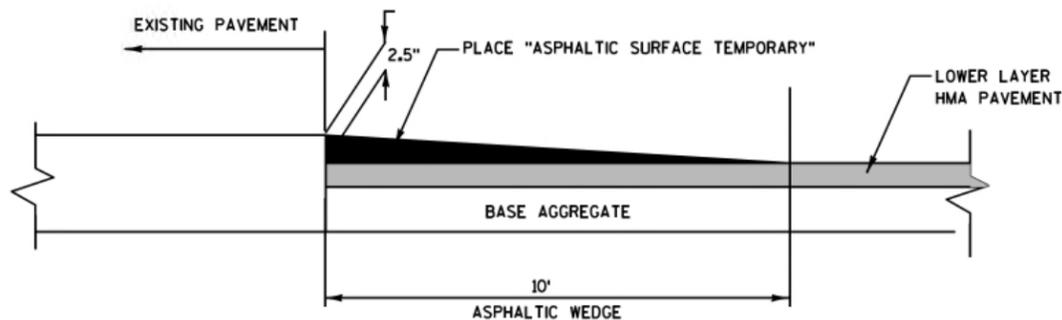
NOTE:

REMOVAL OF ASPHALTIC WEDGES WILL BE PAID FOR AS "REMOVING ASPHALTIC SURFACE BUTT JOINTS."

TEMPORARY WEDGES DETAIL (LONGITUDINAL EDGES / DRIVEWAYS)

NOTE:

PROVIDE ASPHALTIC WEDGES PRIOR TO OPENING LANE TO TRAFFIC. LOCATIONS AS DETERMINED BY THE ENGINEER.

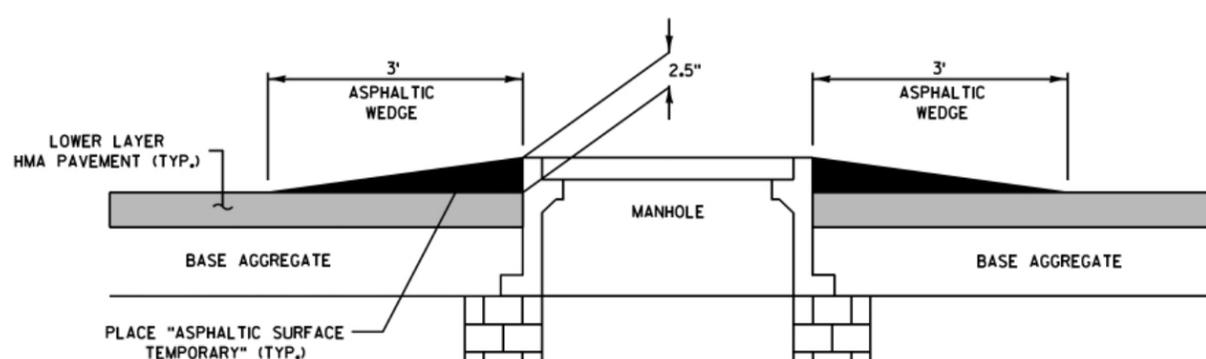


NOTE:

REMOVAL OF ASPHALTIC WEDGES WILL BE PAID FOR AS "REMOVING ASPHALTIC SURFACE BUTT JOINTS."

TEMPORARY WEDGES DETAIL (MATCH POINTS)

NOTE: PROVIDE ASPHALTIC WEDGE PRIOR TO OPENING LANE TO TRAFFIC.



NOTE:

REMOVAL OF ASPHALTIC WEDGES WILL BE PAID FOR AS "REMOVING ASPHALTIC SURFACE BUTT JOINTS."

TEMPORARY WEDGES DETAIL (MANHOLES, VALVES)

NOTES: PROVIDE ASPHALTIC WEDGES PRIOR TO OPENING LANE TO TRAFFIC. LOCATIONS AS DETERMINED BY THE ENGINEER

CITY OF FITCHBURG

CONSTRUCTION DETAILS

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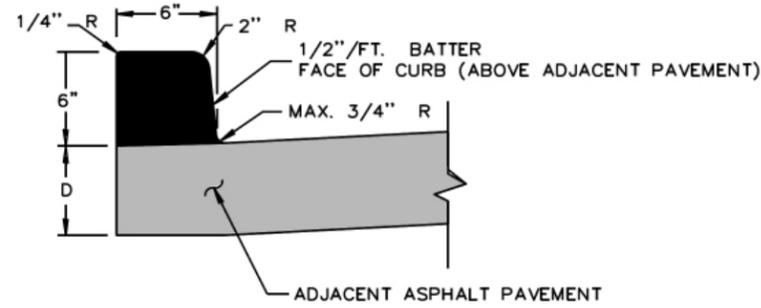
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D = DEPTH OF ADJACENT ASPHALT PAVEMENT

ASPHALTIC CURB DETAIL

INCIDENTAL TO TEMPORARY ASPHALT PAVEMENT.
LOCATIONS TO BE DETERMINED BY ENGINEER.



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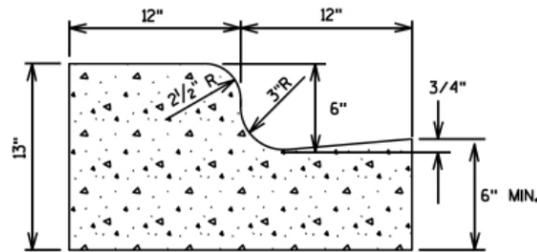
CONSTRUCTION DETAILS

GENERAL NOTES:

LATERAL CONTRACTION JOINTS SHALL BE PLACED AT INTERVALS OF NOT MORE THAN 15' NOR LESS THAN 6' IN LENGTH, THE JOINTS SHALL BE A MINIMUM OF 3" IN DEPTH

EXPANSION JOINTS SHALL BE PLACED TRANSVERSLY AT RADIUS POINTS ON CURVES OF RADIUS 200' OR LESS, AND AT ANGLE POINTS, OR AS DIRECTED BY THE ENGINEER. THE EXPANSION JOINT SHALL BE A ONE PIECE ASPHALTIC MATERIAL HAVING THE SAME DIMENSIONS AS CURB & GUTTER AT THAT STATION AND BE 1/2" THICK.

IN ALL CASES, CONCRETE CURB & GUTTER SHALL BE PLACED ON THOROUGHLY COMPACTED CRUSHED STONE



STANDARD CURB & GUTTER

CONCRETE CURB & GUTTER 24-INCH TYPE A/D SPECIAL DETAIL

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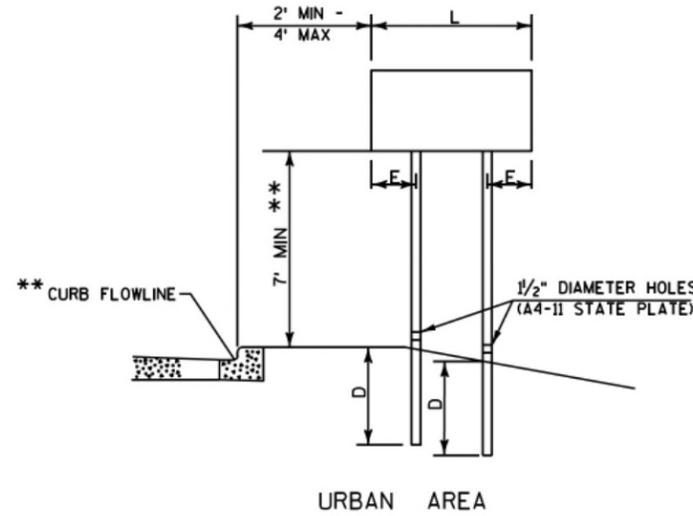
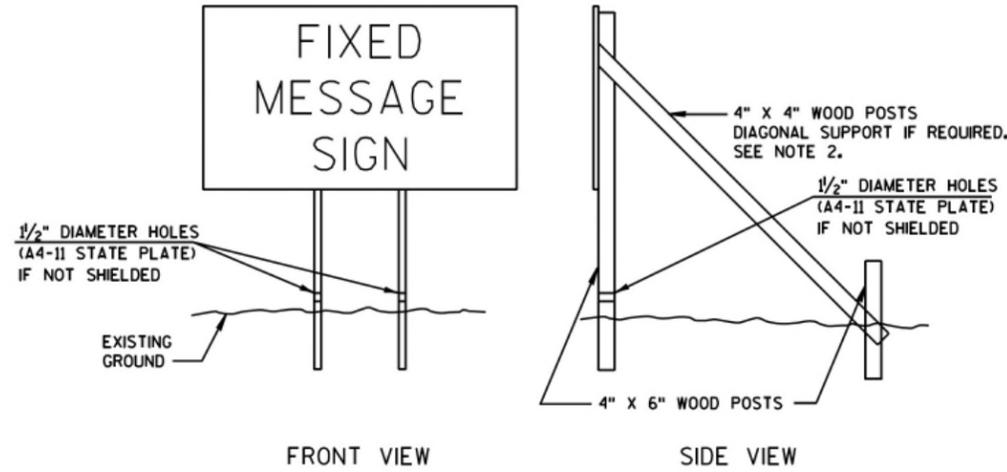
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NOTES

- SEE TRAFFIC CONTROL SHEETS FOR SIGN LOCATIONS.
- TWO DIAGONAL SUPPORTS TO BE INCLUDED FOR EACH SIGN OVER 12' LONG AND HIGHER THAN 8'. DIAGONAL SUPPORTS TO BE AFFIXED TO THE OUTSIDE SUPPORTS AND TO BE INCIDENTAL TO THE "TRAFFIC CONTROL FIXED MESSAGE SIGN" ITEM. IF DIAGONAL SUPPORTS ARE USED, SIGN TO BE SHIELDED BEHIND CONCRETE BARRIER OR PLACED OUTSIDE THE CLEAR ZONE.
- SEE TABLES BELOW FOR REQUIRED NUMBER OF POSTS.
- * 6' FROM EDGE OF A PAVED SHOULDER OR 12' FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) OR 2' FROM OUTSIDE EDGE OF GRAVEL, WHICHEVER IS GREATER UNLESS DIRECTED BY PROJECT ENGINEER. SEE NOTE 2 FOR OFFSET REQUIREMENTS WHERE DIAGONAL SUPPORTS ARE USED.
- ** THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK AND NO PARKING, VERTICAL CLEARANCE MAY BE REDUCED TO 5' MINIMUM. OFFSET OF SIGNS IS MEASURED FROM THE CURB FLOWLINE.
4. 4X6 WOOD POSTS SHALL HAVE TWO HOLES PER STATE PLATE A4-II

SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)	
L	E
GREATER THAN 48" LESS THAN 60"	12"
60" TO 120"	L/5

POST EMBEDMENT DEPTH	
AREA OF SIGN INSTALLATION (SQ. FT.)	D (MIN)
20 OR LESS	4'
GREATER THAN 20	5'

POST MOUNTING DETAIL FOR TRAFFIC CONTROL FIXED MESSAGE SIGNS

GENERAL NOTES:

ALL SIGNS TO HAVE STANDARD REFLECTIVE SHEETING - REFERENCE: "WISDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", LATEST EDITION.

AFTER SIGNS HAVE BEEN LOCATED IN THE FIELD, BUT BEFORE INSTALLATION, THE ENGINEER SHALL VERIFY EACH SIGN LOCATION.

ALL SIGNS TO BE MOUNTED ON WOOD POST SUPPORTS (4"x6"). THE NUMBER OF POSTS REQUIRED FOR EACH LAYOUT IS SHOWN.

THE SIGN ON THIS SHEET IS TO BE PAID UNDER THE ITEM "TRAFFIC CONTROL FIXED MESSAGES SIGNS".

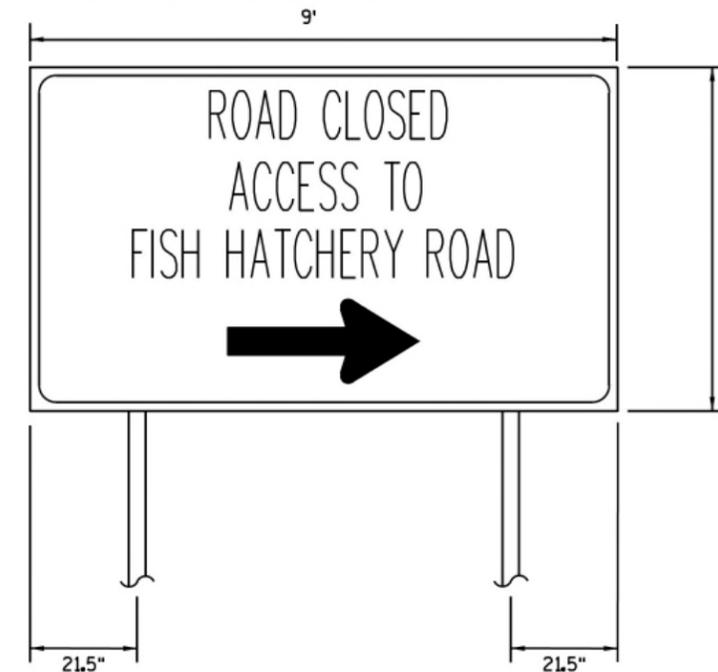
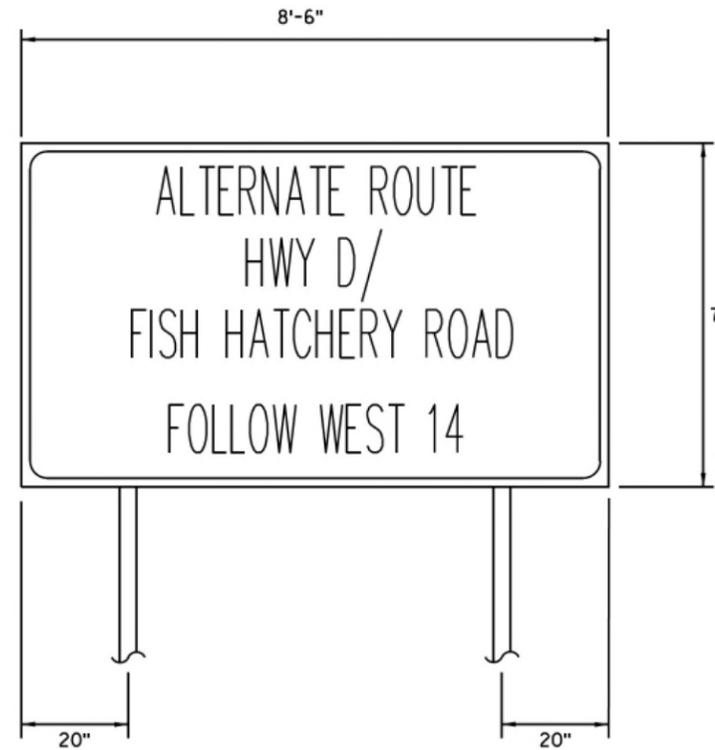
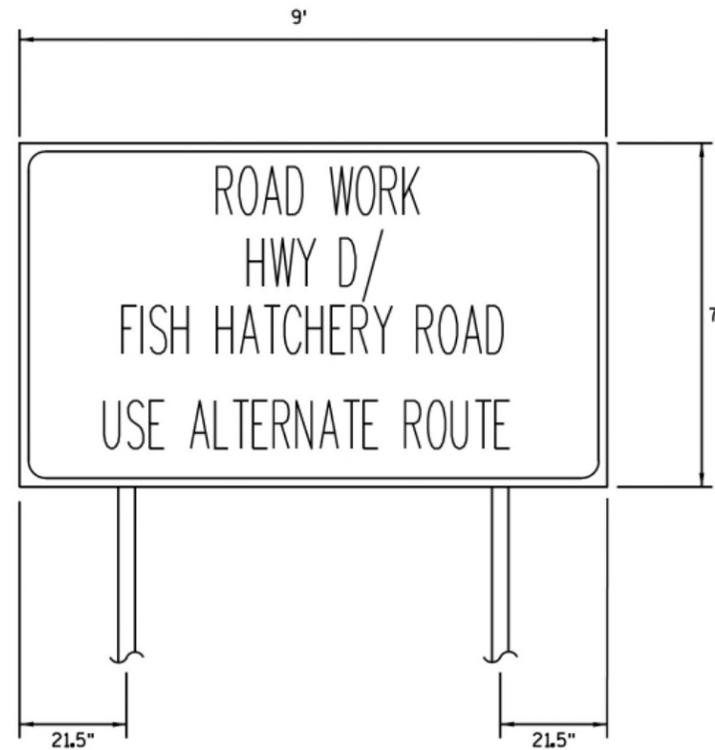
SIGNS SHALL BE BLACK NON-REFLECTIVE MESSAGE ON ORANGE REFLECTIVE BACKGROUND.

ALL SIGNS SHALL HAVE CAPITAL LETTERS AND NUMERALS:
6" CAPS SHALL BE SERIES "D"

SIGN BASE MATERIAL SHALL BE ACCORDING TO "WISDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", LATEST EDITION.

SIGNS TO BE PLACED 10 DAYS PRIOR TO CONSTRUCTION.

DIRECTIONAL ARROWS MAY BE REVERSED - SEE PLAN SHEETS



SIGN DETAIL FOR TRAFFIC CONTROL FIXED MESSAGE SIGNS

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CITY OF FITCHBURG

CONSTRUCTION DETAILS

Project No: 19-3488
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Drafted By: STD
Checked By: LW

Revisions:

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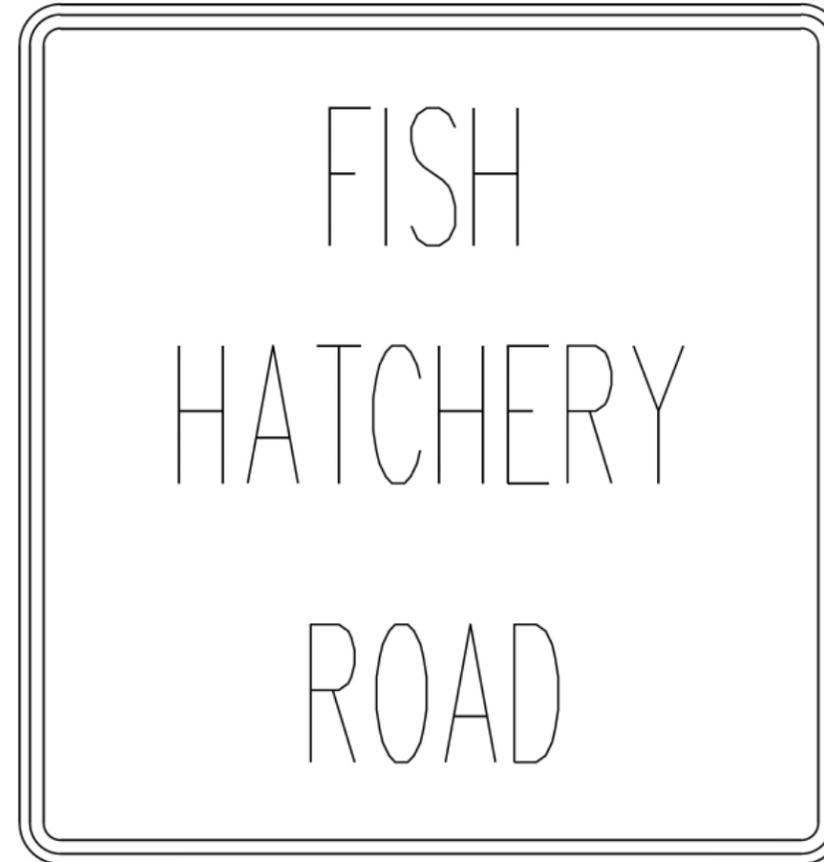
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Phone: (800)-810-4012

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NOTES

1. All Signs are Type II - Type F Reflective - reference WIS DOT Standard Specifications for ROAD and BRIDGE CONSTRUCTION latest edition.
2. COLOR:
Background - Orange
Message - Black
3. Message Series - M

SIGN DETAIL FOR TRAFFIC CONTROL DETOUR SIGNS

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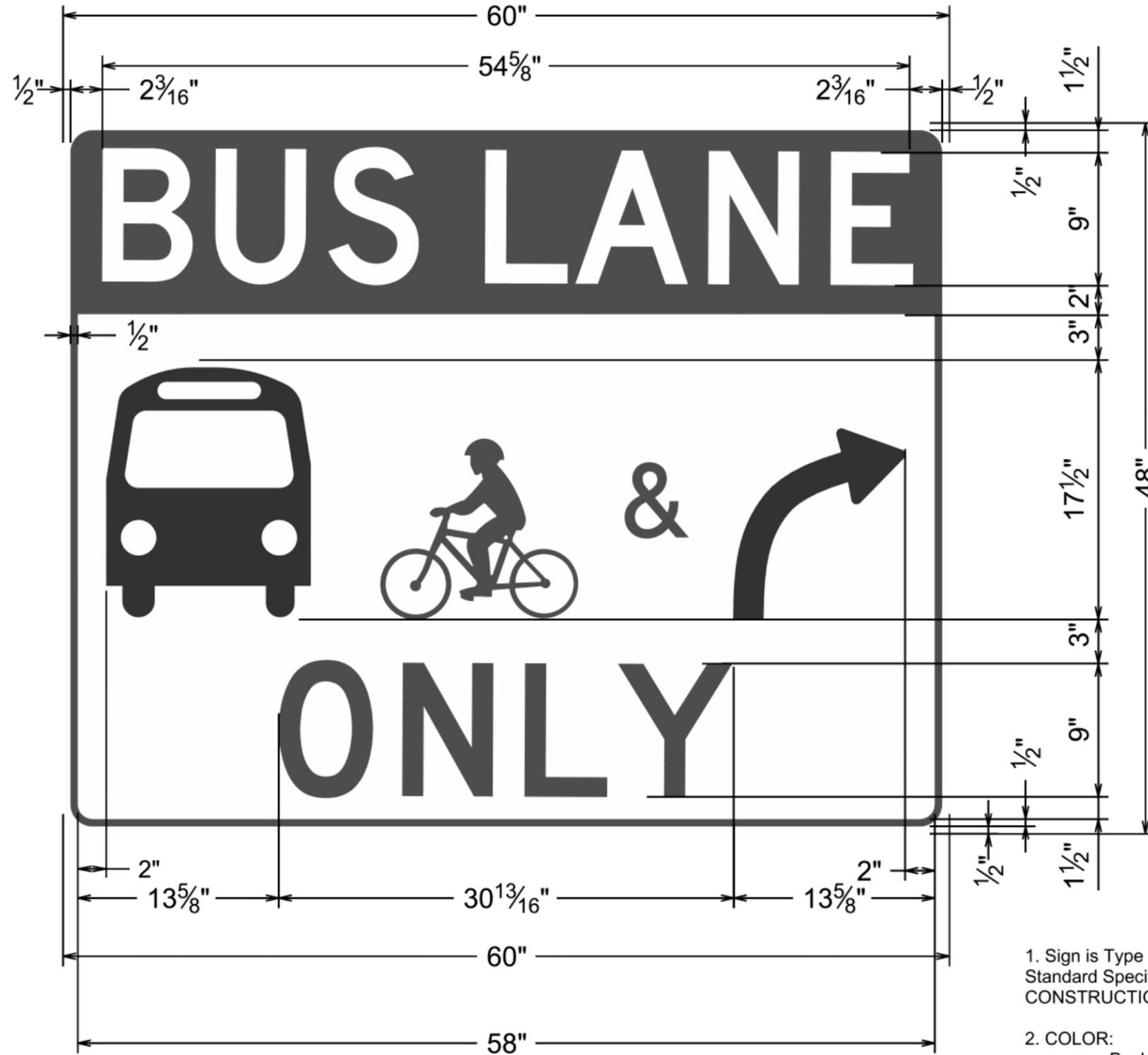
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NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specifications for ROAD and BRIDGE CONSTRUCTION latest edition.

2. COLOR:
Background - White
Message - Black

3. Message Series - 8.5" Uppercase Highway Gothic D

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CONSTRUCTION DETAILS

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Drafted By: BDD
Checked By: LMW

Revisions: XX-XX-XXXX

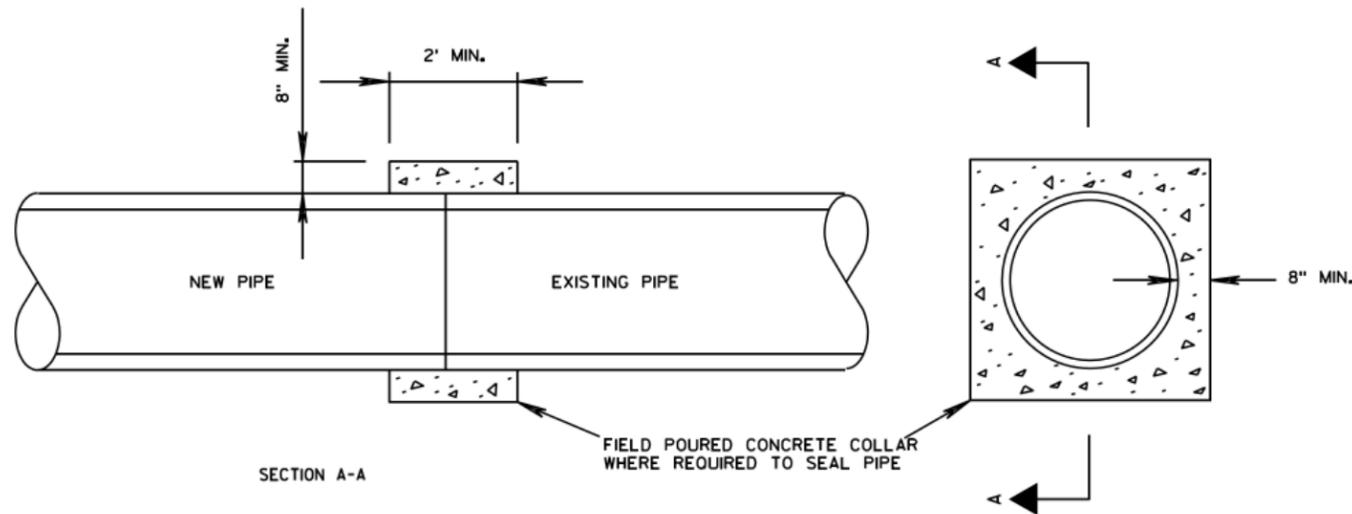
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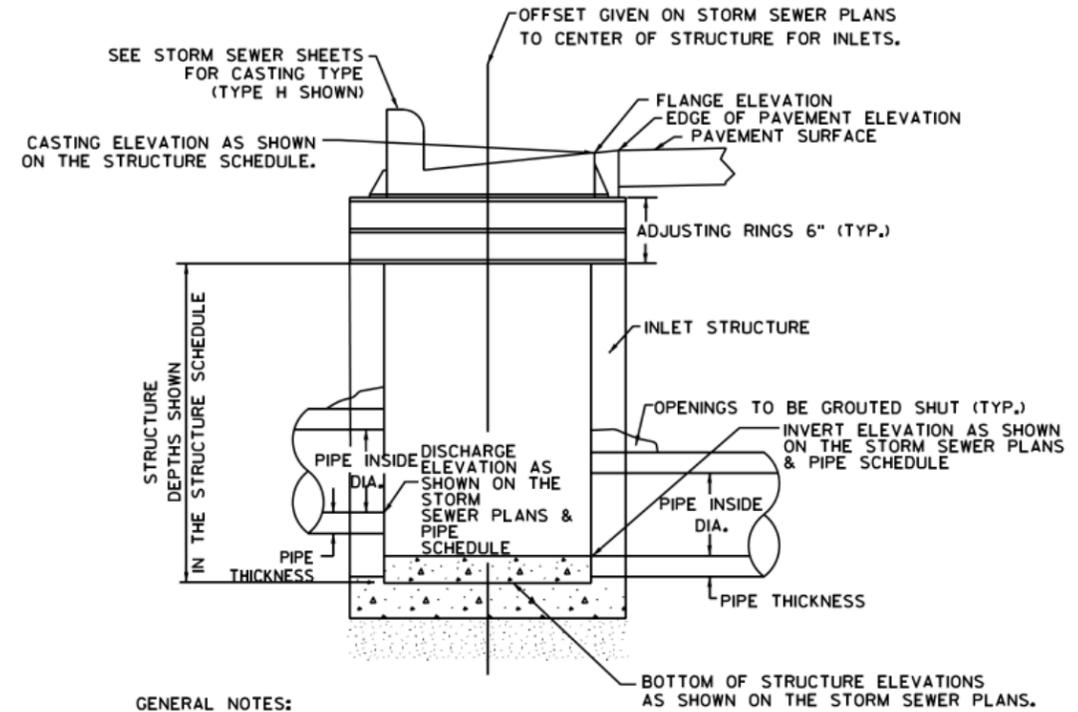
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NOTE:
IF REQUESTED BY THE CONSTRUCTION
ENGINEER, FIBER REINFORCED
CONCRETE SHALL BE PROVIDED

STORM SEWER PIPE CONCRETE COLLAR DETAIL

SEE STORM SEWER PLANS FOR LOCATIONS



GENERAL NOTES:

GRANULAR BACKFILL REQUIRED AROUND INLET (INCIDENTAL TO CONSTRUCTION OF INLET)
DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING
SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS,
APPLICABLE SPECIAL PROVISIONS, AND WISDOT S.D.D. FOR INLETS.

DETAIL OF INLET W/CASTING

CITY OF FITCHBURG

CONSTRUCTION DETAILS

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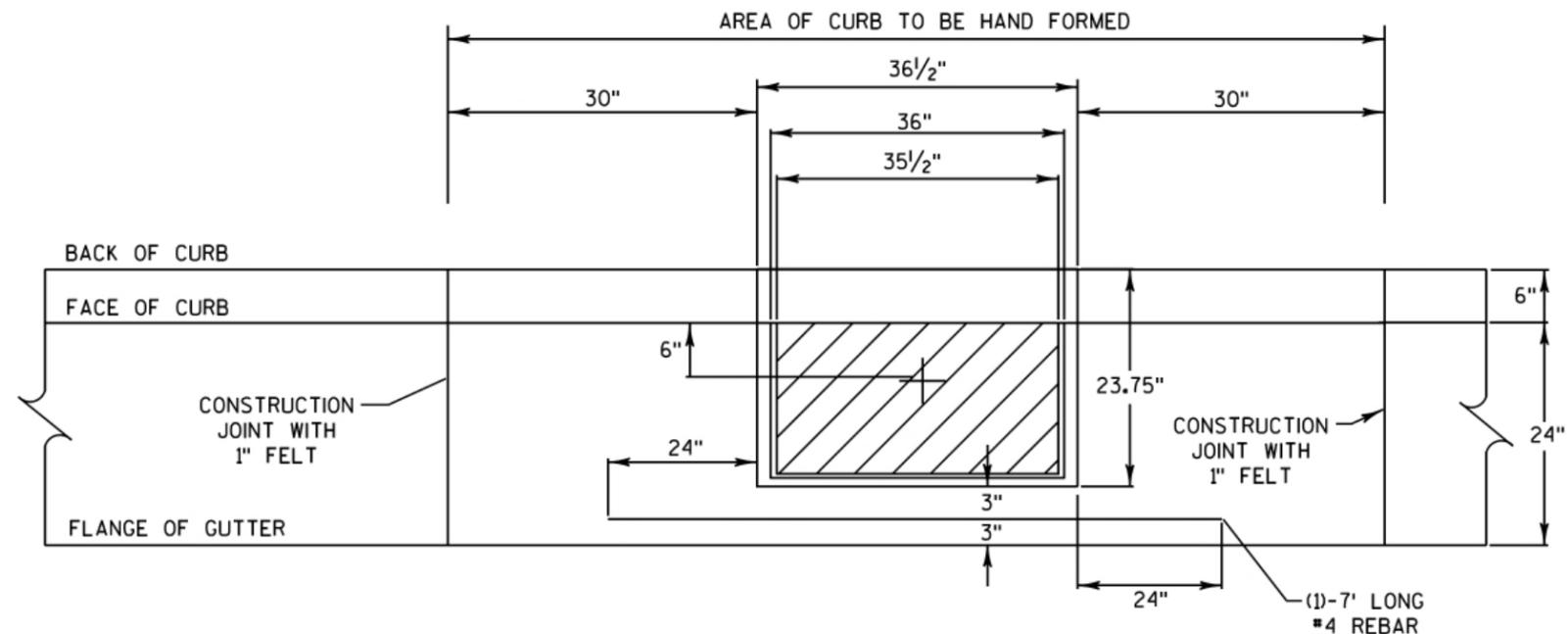
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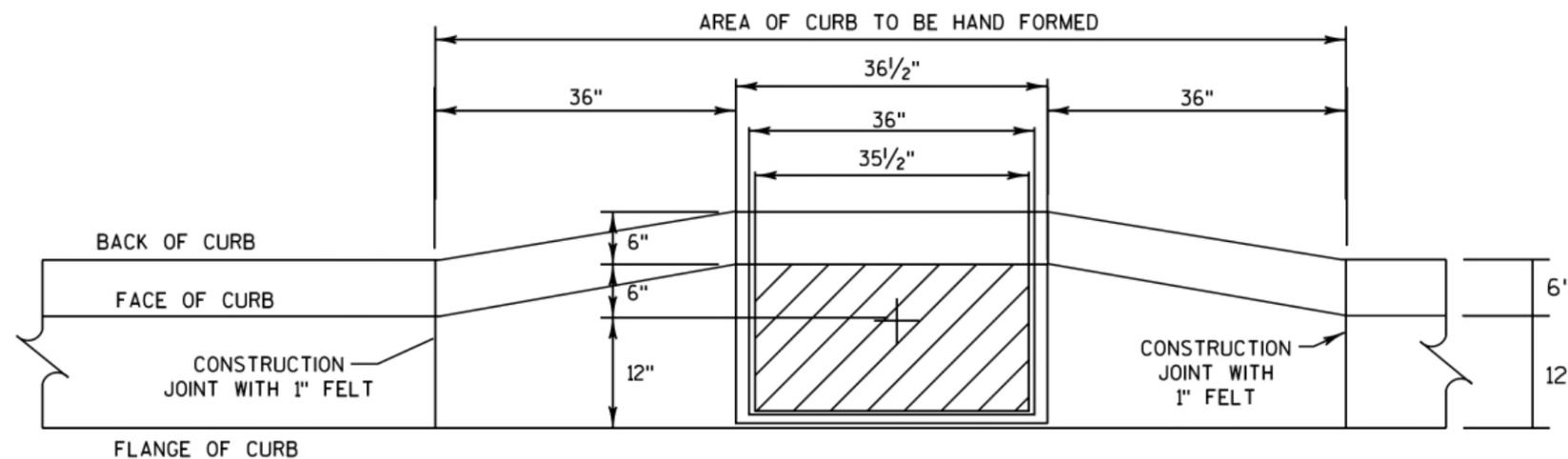
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TYPE H CASTING AND 30-INCH CONCRETE CURB AND GUTTER
PLAN VIEW

+ = CENTER OF STRUCTURE
(STATION AND OFFSET
AS INDICATED ON THE
STORM SCHEDULE)



TYPE H CASTING AND 18-INCH CONCRETE CURB AND GUTTER
PLAN VIEW

NOTE:
CASTING FLANGE (NOT SHOWN) PROTRUDES
APPROXIMATELY 3.63" INTO THE PAVEMENT.
SEE S.D.D. FOR INLET FRAME DETAILS.

INLET LOCATIONS IN VARIOUS TYPES OF CURB DETAIL

CITY OF FITCHBURG

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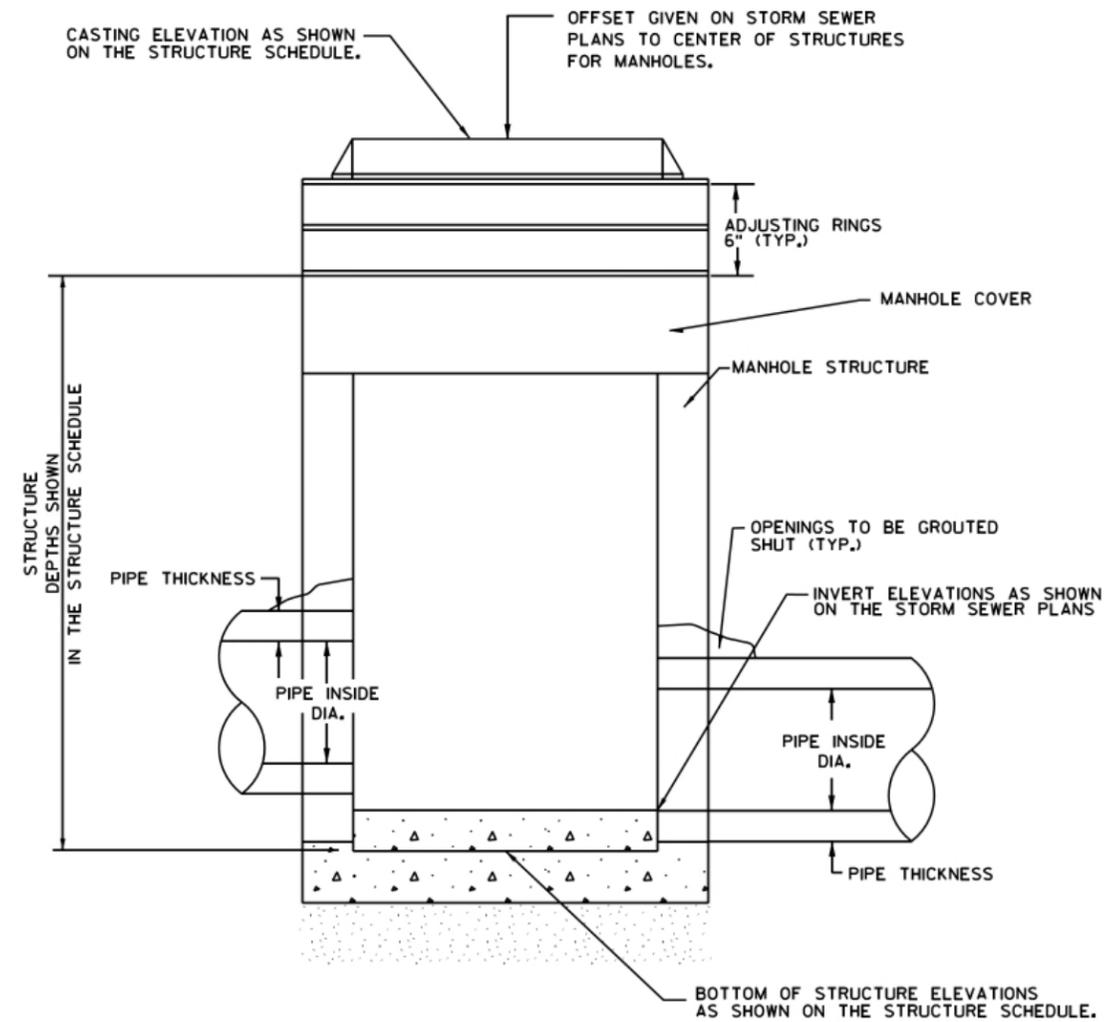
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GENERAL NOTES:

GRANULAR BACKFILL REQUIRED AROUND MANHOLE
(INCIDENTAL TO CONSTRUCTION OF MANHOLE)

DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT
SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT
REQUIREMENTS OF THE STANDARD SPECIFICATIONS, APPLICABLE
SPECIAL PROVISIONS, AND WISDOT S.D.D. FOR MANHOLES.



MANHOLE W/CASTING DETAIL

CITY OF FITCHBURG

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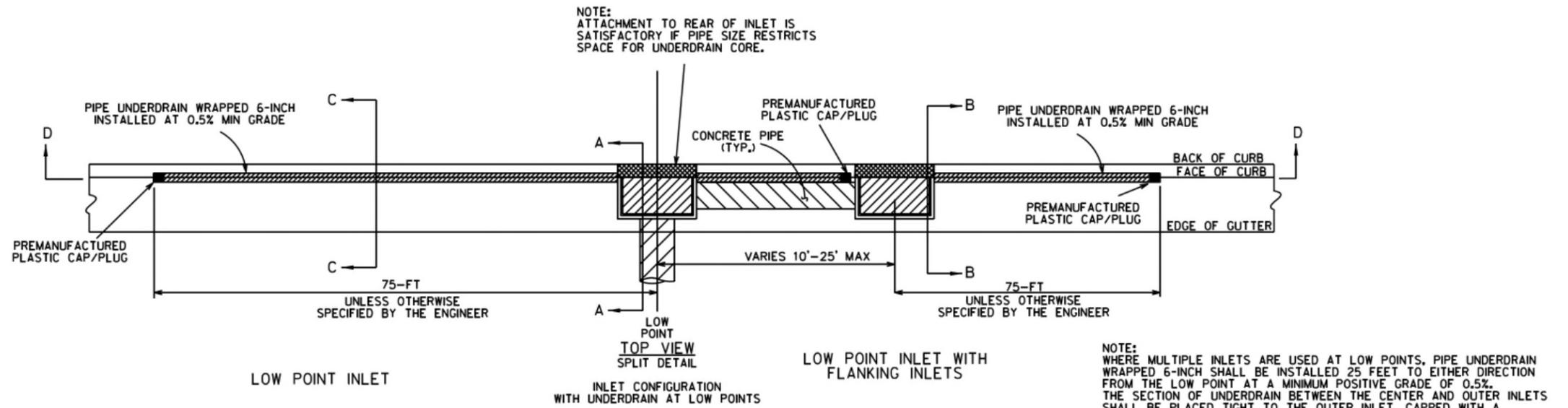
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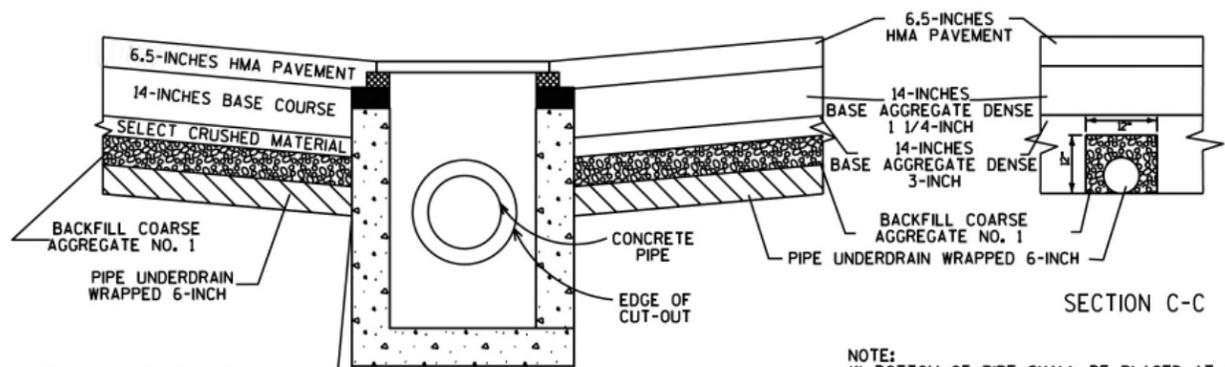


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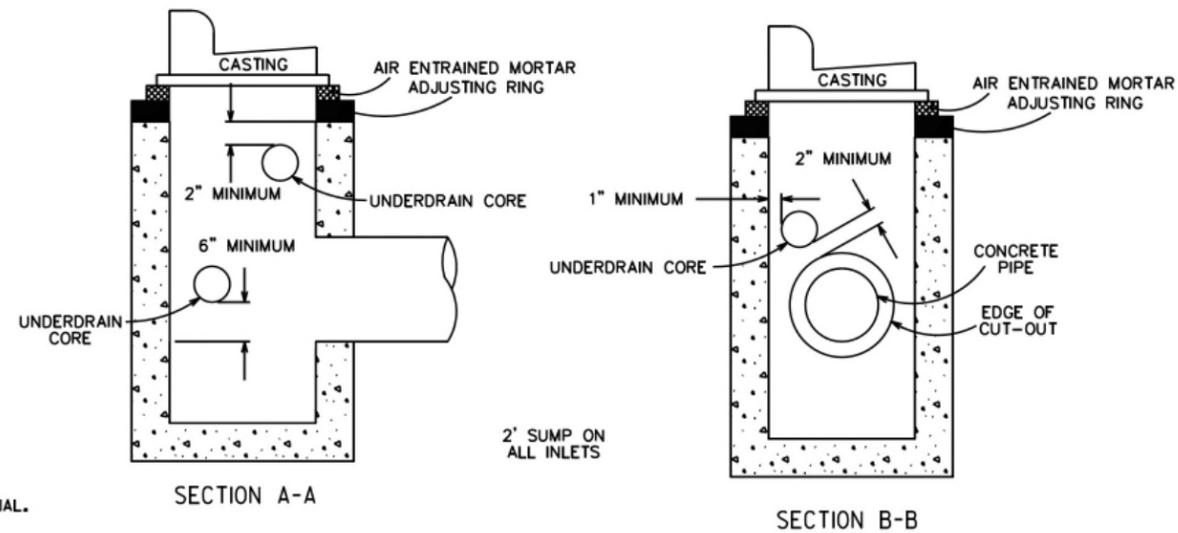


NOTE: WHERE MULTIPLE INLETS ARE USED AT LOW POINTS, PIPE UNDERDRAIN WRAPPED 6-INCH SHALL BE INSTALLED 25 FEET TO EITHER DIRECTION FROM THE LOW POINT AT A MINIMUM POSITIVE GRADE OF 0.5%. THE SECTION OF UNDERDRAIN BETWEEN THE CENTER AND OUTER INLETS SHALL BE PLACED TIGHT TO THE OUTER INLET, CAPPED WITH A PREMANUFACTURED PLASTIC CAP OR PLUG, AND LAID AS SPECIFIED ABOVE TO THE CENTER INLET.



ELEVATION OF PIPE UNDERDRAIN WRAPPED 6-INCH SHALL BE PLACED AT A MINIMUM OF 6" ABOVE THE INVERT OF STORM SEWER PIPE. UNDERDRAIN PIPE INVERT NOT NECESSARILY AT BOTTOM OF SELECT CRUSHED MATERIAL. ELEVATIONS TO BE DETERMINED BY TYPICAL INLET CONFIGURATION WITH UNDERDRAIN CORED INTO WALL WITH NO PIPE FOUND AT LOW POINTS WITHOUT FLANKING INLETS

NOTE:
 (1) BOTTOM OF PIPE SHALL BE PLACED AT THE BOTTOM OF BACKFILL COARSE AGGREGATE NO. 1 MATERIAL.
 (2) BOTTOM OF COARSE AGGREGATE NO. 1 MATERIAL IS NOT NECESSARILY THE BOTTOM OF THE SELECT CRUSHED MATERIAL.



NOTE:
 (1) BOTTOM OF CORE PLACED A MINIMUM OF 6" ABOVE THE INVERT OF THE CROSS PIPE.
 (2) TOP OF CORE HOLES WILL BE A MINIMUM OF 2" BELOW THE TOP OF THE INLET STRUCTURES (BOTTOM OF RINGS)
 (3) DRAIN TILES SHALL NOT BE ALLOWED IN THE RING OF THE STRUCTURE OF INLETS OR SEWER ACCESS STRUCTURES

NOTE:
 (1) CORE HOLES SHALL PROVIDE FOR A MINIMUM OF 2" OF CONCRETE BETWEEN THE CUTOUT FOR A CONCRETE PIPE AND THE EDGE OF THE CORE HOLE.
 (2) CORE HOLES MAY HAVE 0" CLEARANCE FROM THE INSIDE WALLS OF A STRUCTURE.

CROSS-SECTION VIEW
 TYPICAL INLET CONFIGURATION WITH UNDERDRAIN CORED INTO WALL WITH CROSSPIPE ONLY
 FOUND AT LOW POINTS WITHOUT FLANKING INLETS & INLETS PRIOR TO INTERSECTIONS

CROSS-SECTION VIEW
 TYPICAL INLET IN SUMP CONDITION WITH UNDERDRAIN CORED INTO WALL WITH PIPE FOUND AT FLANKING INLETS NEAR LOWPOINTS

UNDERDRAIN PIPE DETAIL

CITY OF FITCHBURG

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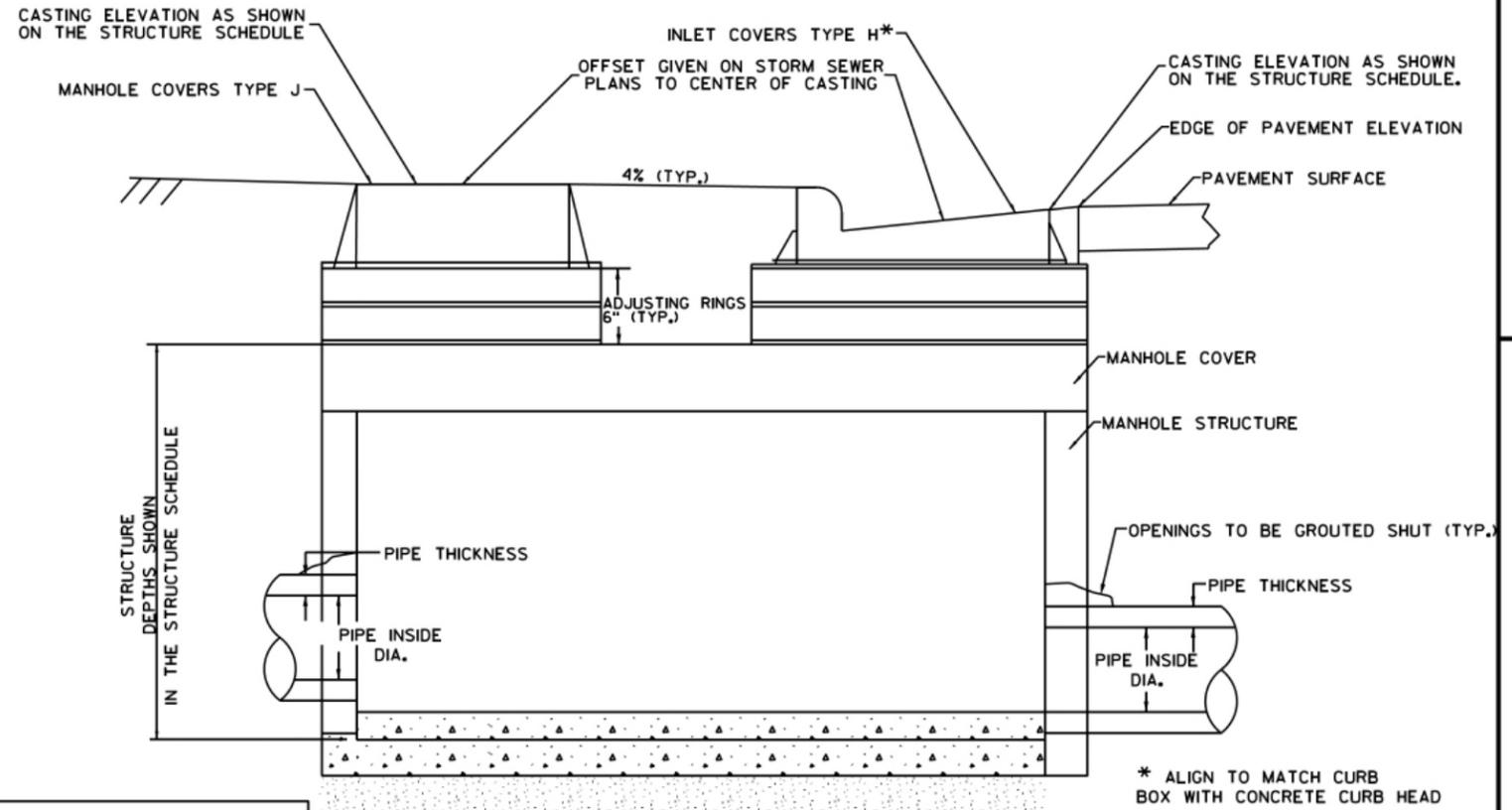
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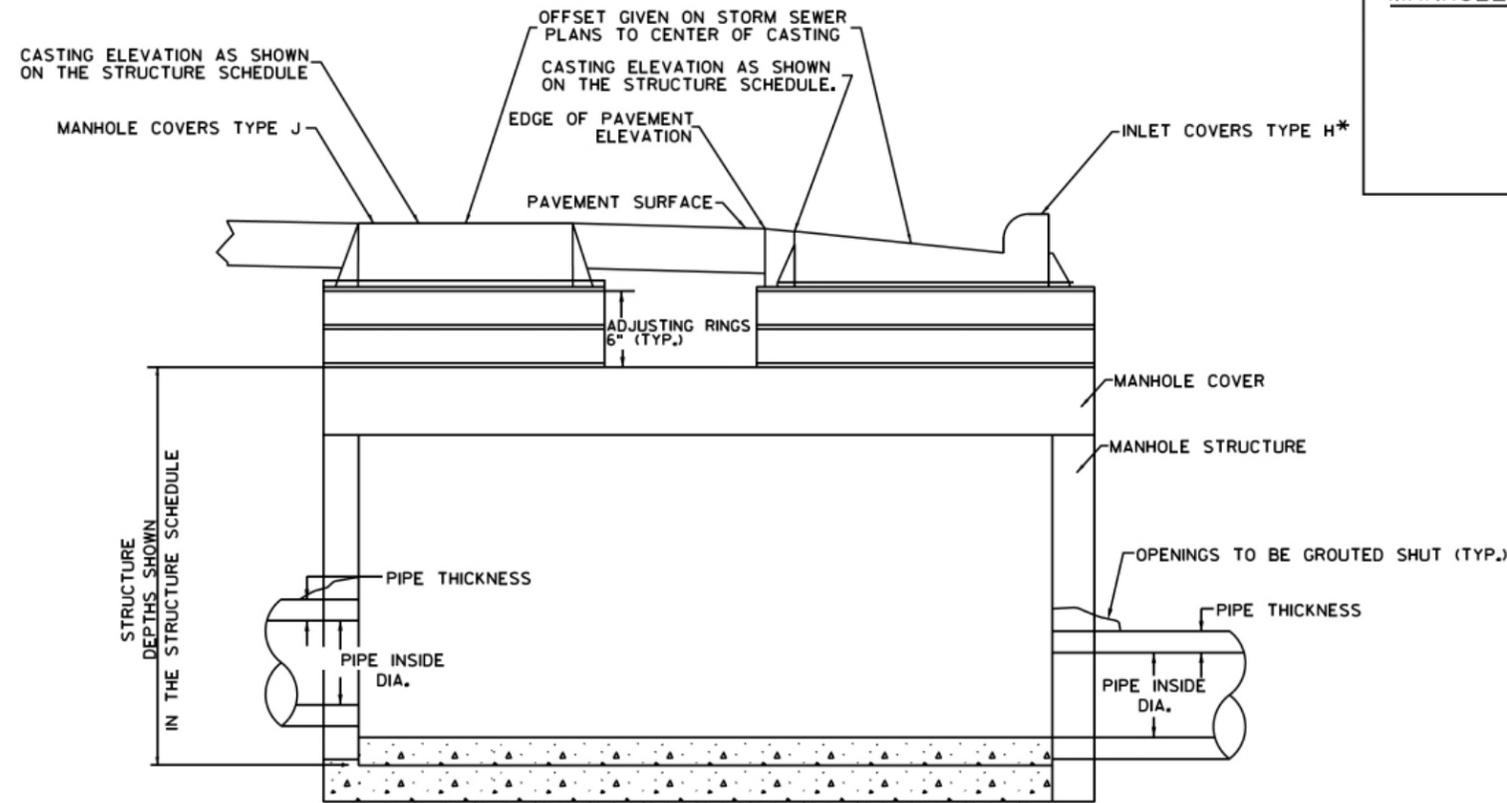
GENERAL NOTES:

GRANULAR BACKFILL REQUIRED AROUND MANHOLE (INCIDENTAL TO CONSTRUCTION OF MANHOLE)

DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, APPLICABLE SPECIAL PROVISIONS, AND WISDOT S.D.D. FOR MANHOLES.



MANHOLE IN TERRACE WITH TWO CASTING DETAIL
 STA. 566+34 SB (STR #24.0)
 STA. 566+47 SB (STR #25.0)



MANHOLE IN ROADWAY WITH TWO CASTING DETAIL
 STA. 522+15 NB (STR #21.0)

GENERAL NOTES:

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* ALIGN TO MATCH CURB BOX WITH CONCRETE CURB HEAD

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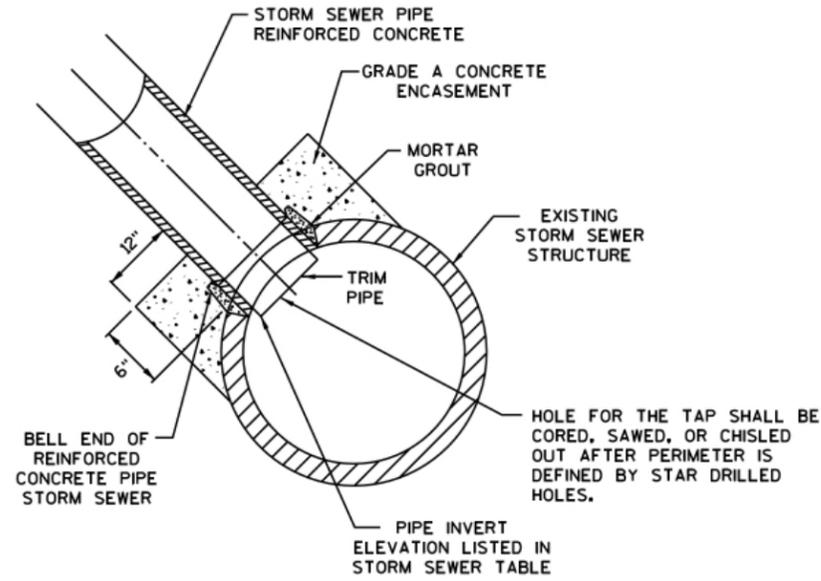
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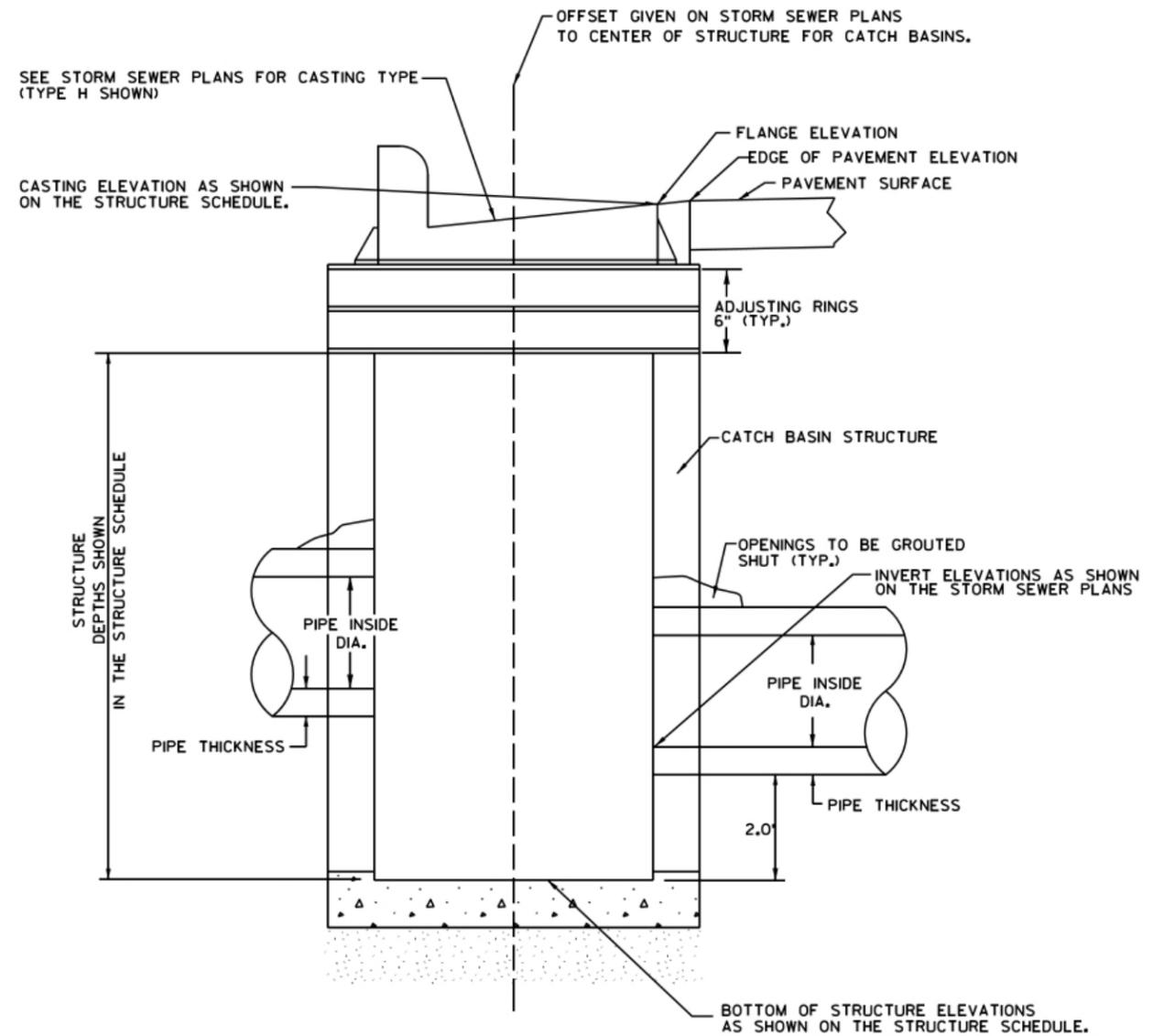
CONNECTION TO STORM SEWER DETAIL

NOTE: CONTRACT UNIT PRICE FOR PIPE SHALL INCLUDE COST OF CONNECTION TO EXISTING STORM SEWER OR M.H.

GENERAL NOTES:

GRANULAR BACKFILL REQUIRED AROUND CATCH BASIN (INCIDENTAL TO CONSTRUCTION OF CATCH BASIN)

DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, APPLICABLE SPECIAL PROVISIONS, AND WISDOT S.D.D. FOR CATCH BASINS.



CATCH BASIN W/CASTING DETAIL



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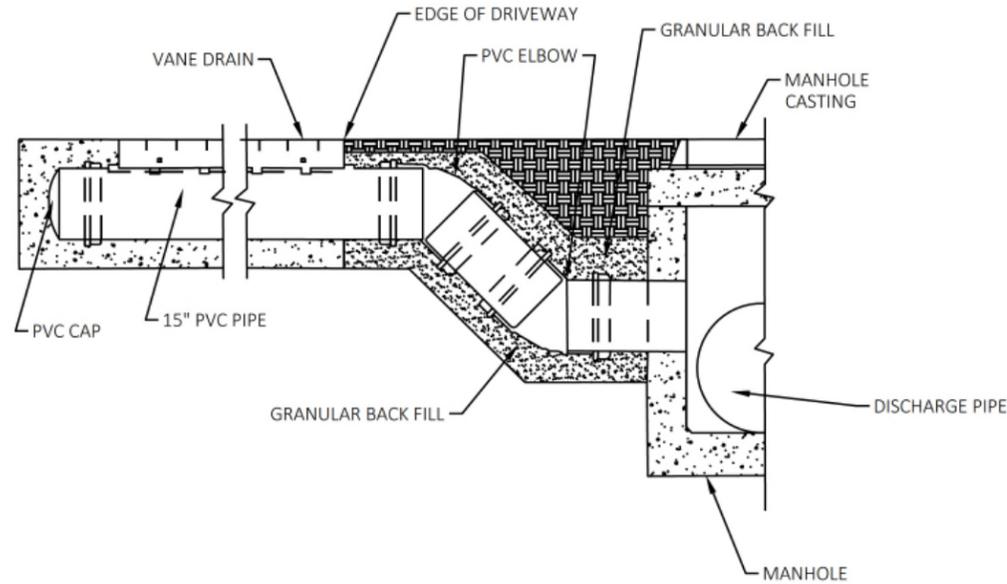
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GENERAL NOTES:

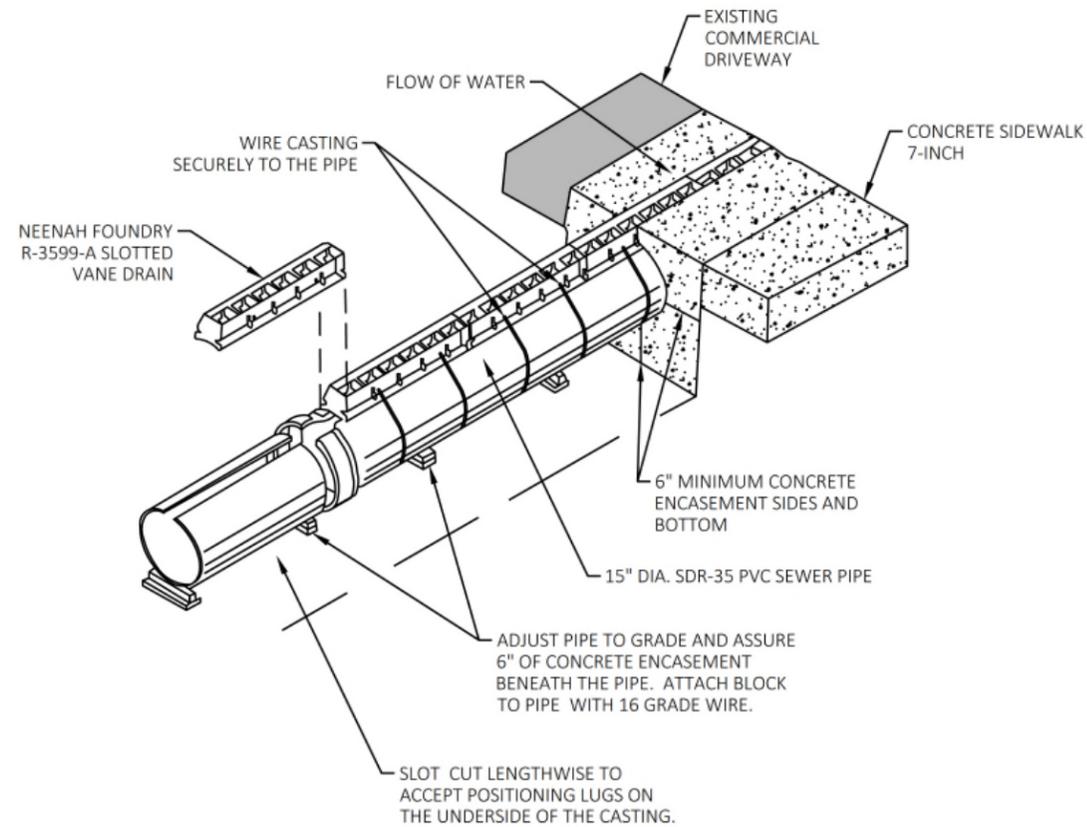
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE WISDOT STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

ENCASEMENT: THE ENCASING MATERIAL AROUND THE PIPE SHALL BE IN ACCORDANCE WITH WISDOT SPECIFICATIONS OF 501.4.3.3 FOR CONCRETE PAVEMENT.

THE PIPE USED SHALL BE 15" DIAMETER SDR-35 POLYVINYL CHLORIDE SEWER PIPE. THE PIPE SHALL CONFORM TO THE REQUIREMENTS SET FORTH IN WISDOT STANDARD SPECIFICATION 612.2.6.

SURFACE DRAIN: BEFORE PAVING OVER THE DRAIN, COVER THE TOP OF THE DRAIN TO KEEP MATERIAL OUT OF THE PIPE. THE FINISHED GRADE SHOULD BE FLUSH WITH THE TOP OF THE DRAIN.

THE ANGLE OF THE DRAIN TO THE FLOW OF WATER SHOULD BE AS CLOSE TO 90° AS POSSIBLE.



VANE DRAIN REQUIRED MATERIALS (FOR INFORMATION ONLY)		
STRUCTURE LOCATION	SLOTTED VANE DRAIN (LF)	15-INCH SDR-35 PVC SEWER PIPE (LF)
STA. 583+38 'SB'	39	46
STA. 585+54 'SB'	27	34
STA. 593+32 'SB'	60	67
STA. 595+54 'SB'	36	48
STA. 598+08 'SB'	33	42

SLOTTED VANE DRAIN

CITY OF FITCHBURG

CONSTRUCTION DETAILS

Project No: 19-3488
 Date: OCT 2019
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 Drafted By: STD
 Checked By: LW

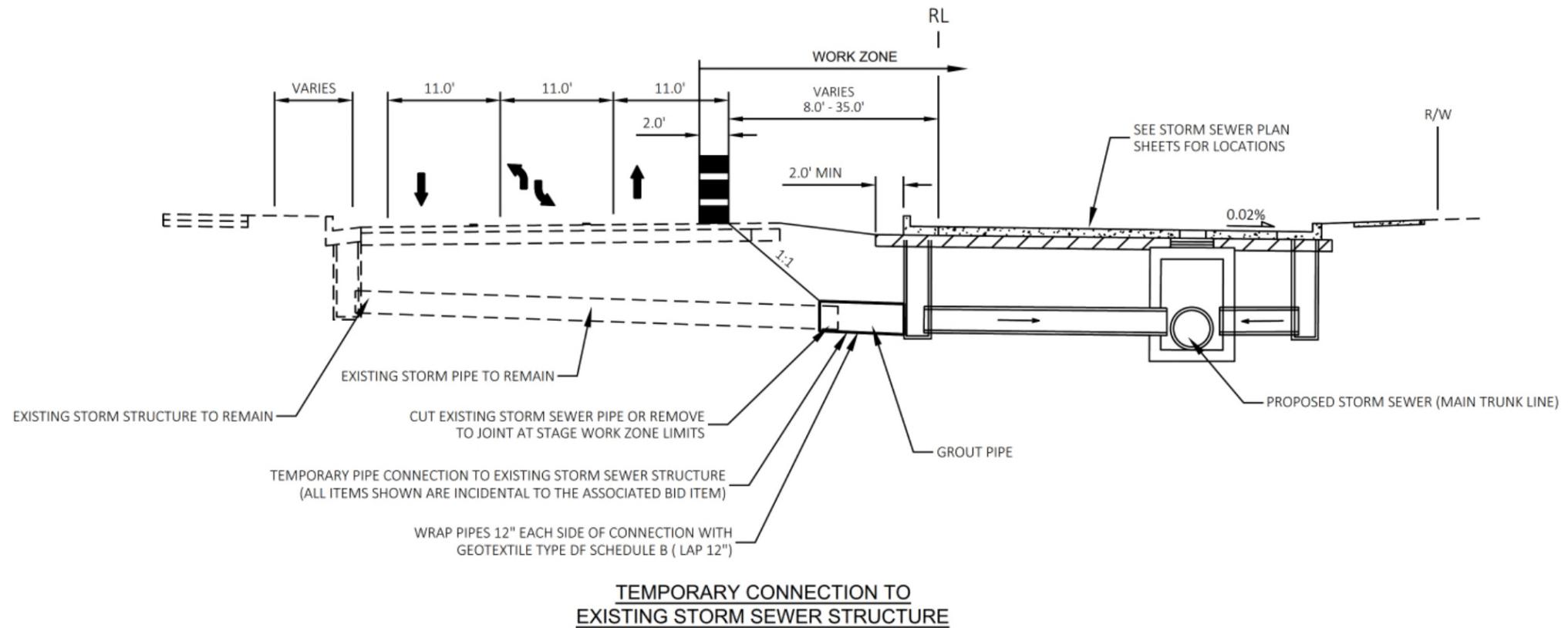
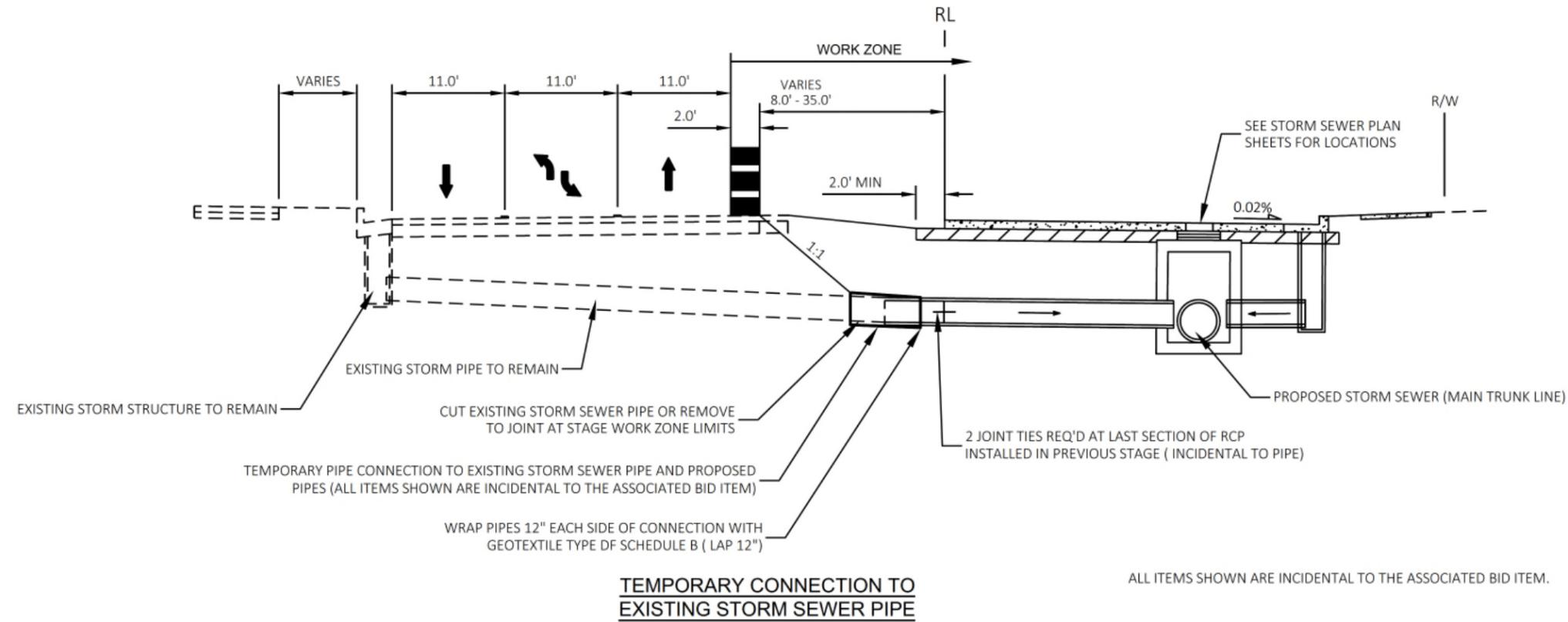
Revisions: 10-03-2019

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 Drafted By: JAL
 Checked By: LW

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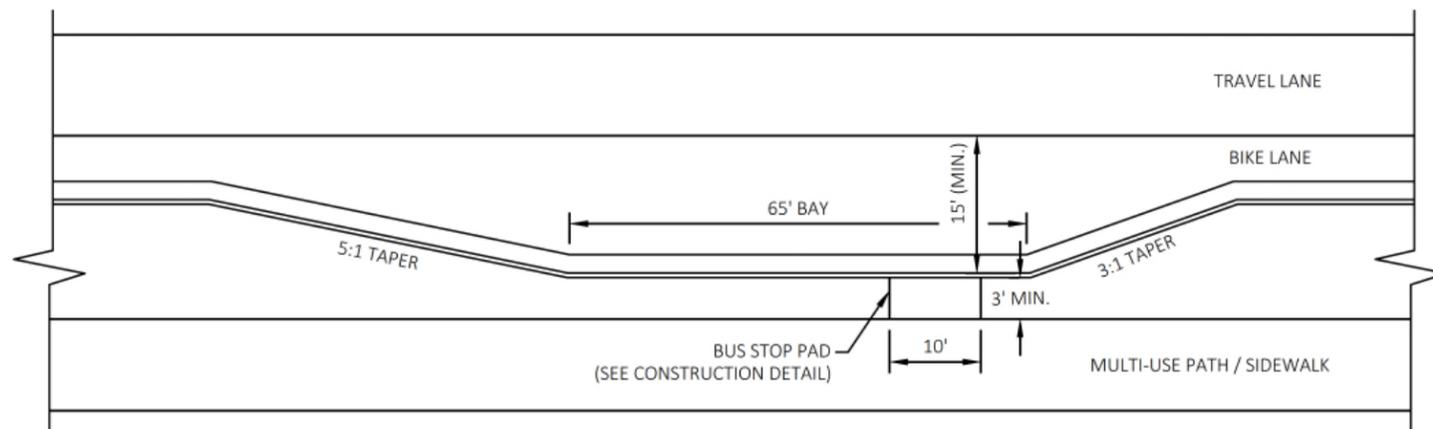
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Drafted By: STD
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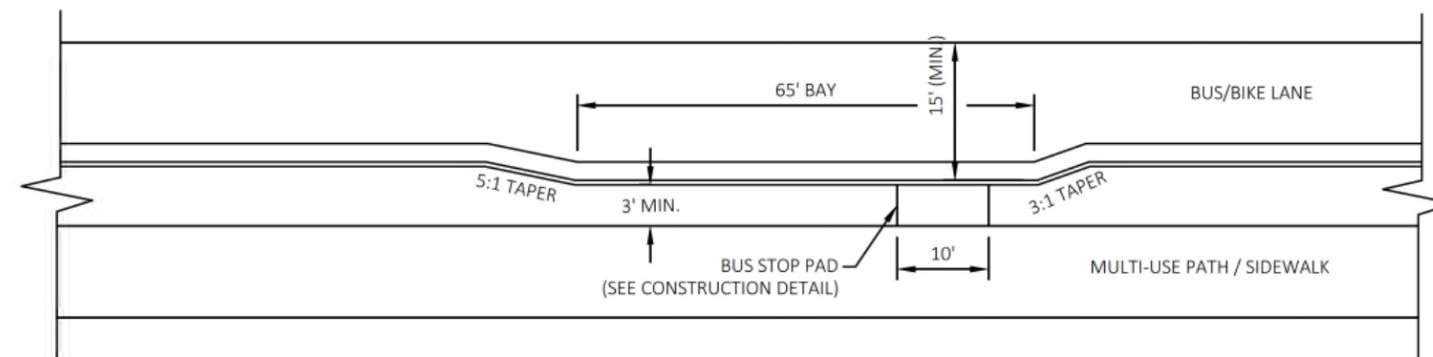
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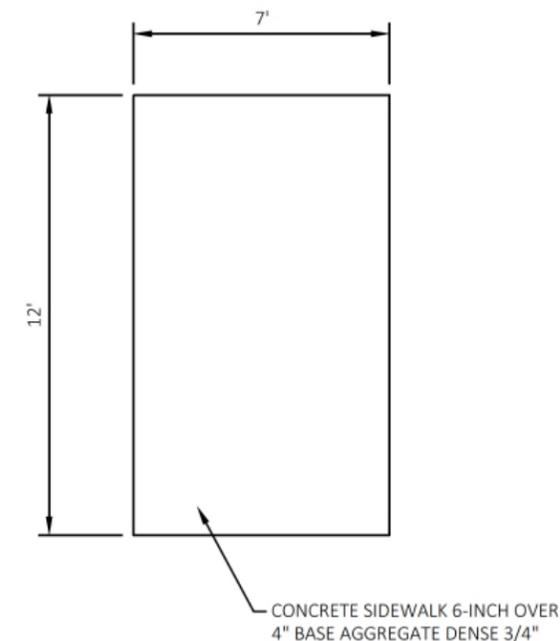


PLAN VIEW - BIKE LANE/SHOULDER



PLAN VIEW - BUS/BIKE LANE

BUS PULL-OUT DETAIL
 STA. 522+99'SB' - STA. 524+25'SB', LT
 STA. 12+90'MW' - STA. 14+29'MW', LT
 STA. 527+46'NB' - STA. 528+27'NB', RT



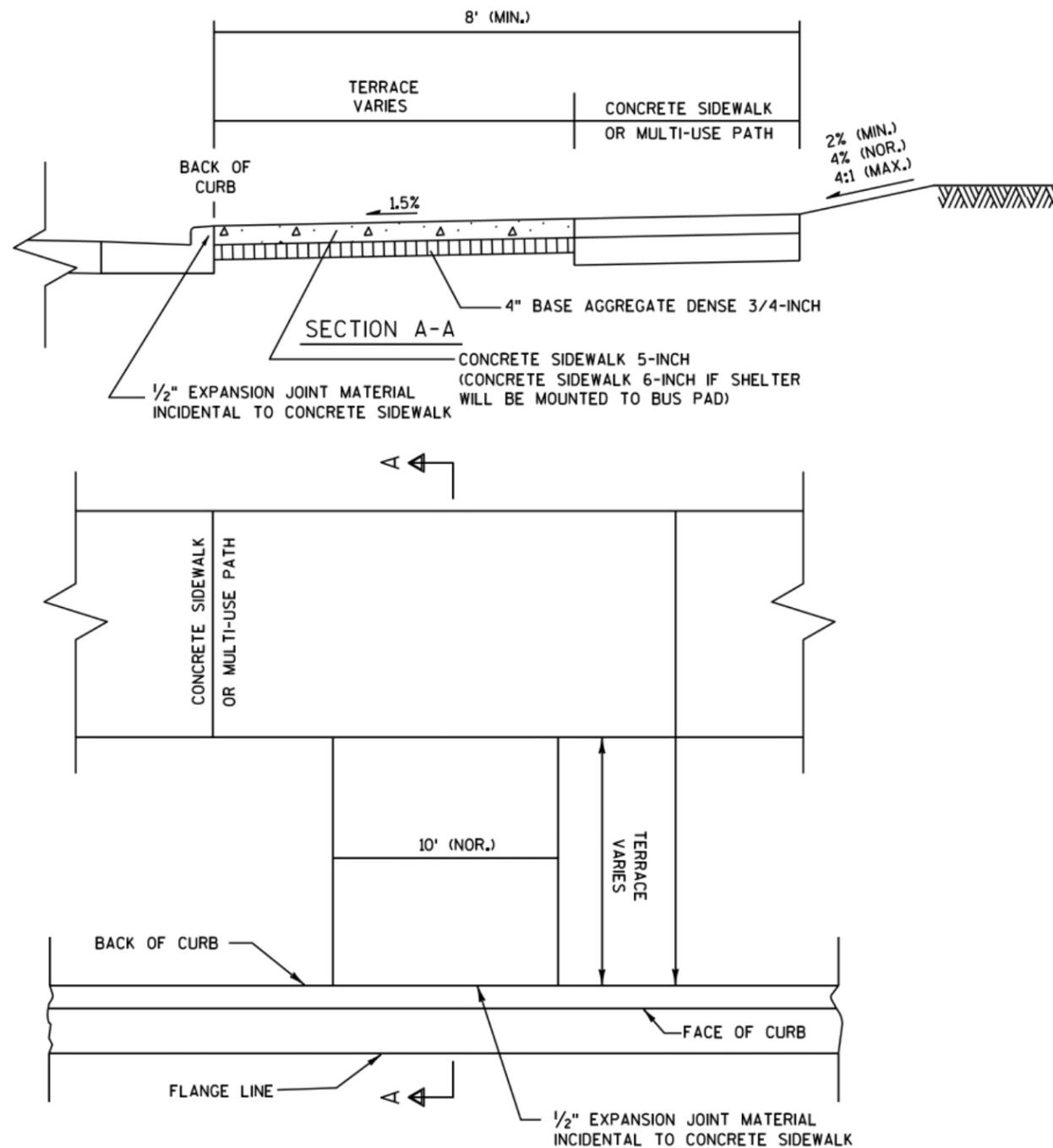
BUS SHELTER PAD DETAIL

STA. 581+08'NB', RT
 STA. 13+26'MW', LT
 STA. 557+31'NB', RT

NOTE: SHELTER TO BE PROVIDED BY THE CITY AND INSTALLED BY CONTRACTOR. SEE CONTRACT DOCUMENTS FOR ADDITIONAL DETAILS

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BUS STOP PAD DETAIL
(SEE PLAN DETAILS FOR LOCATIONS)



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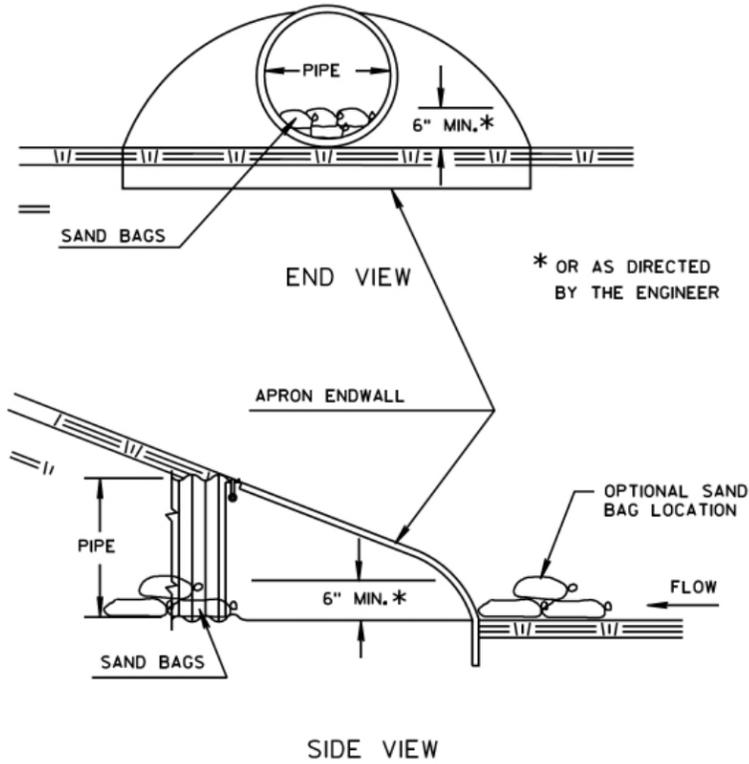
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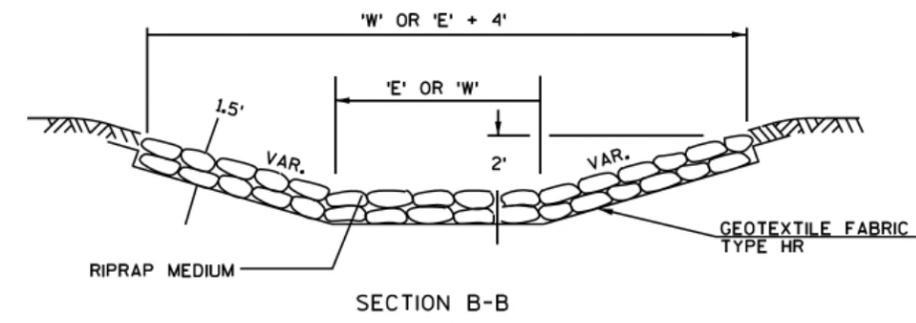
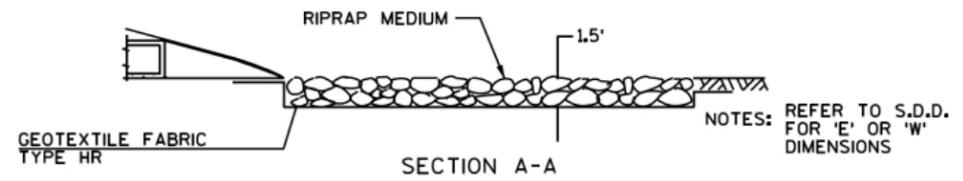
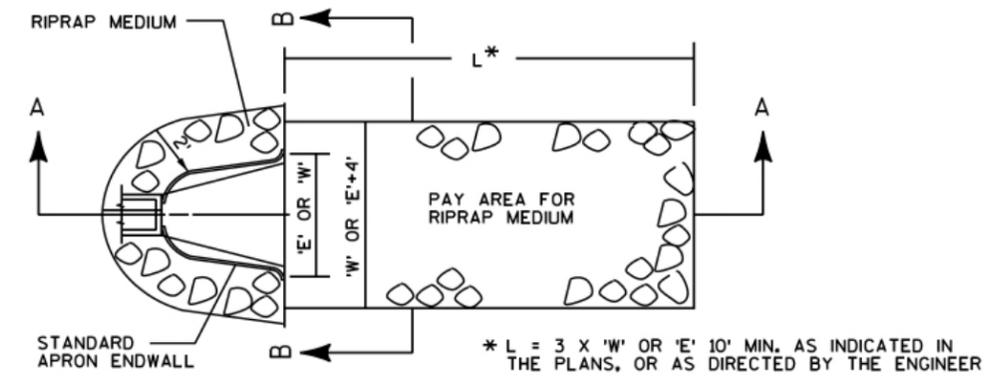
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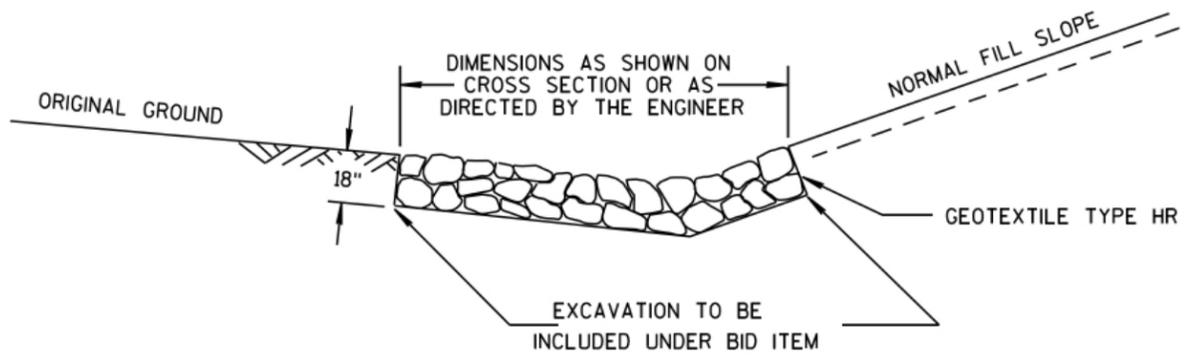
ESTIMATED BAG SIZE • 24" X 12" X 6"	
PIPE SIZE	ESTIMATED NO. OF BAGS
12"	1
15"	2
18"	2
24"	3
30"	5
36"	7
42"	7
48"	10
54"	10
60"	13
72"	16
30"X19"	5
38"X24"	7
53"X34"	10
60"X38"	13
76"X48"	18

NOTE:
TO BE PLACED AT INLET END
OF CULVERT PIPE.

CULVERT PIPE CHECK TEMPORARY
SEE EROSION CONTROL PLANS FOR LOCATIONS



RIPRAP TREATMENT AT PIPE ENDWALL DETAIL
SEE EROSION CONTROL PLAN FOR LOCATIONS



RIPRAP MEDIUM IN DITCHES DETAIL
SEE EROSION CONTROL PLANS FOR LOCATIONS

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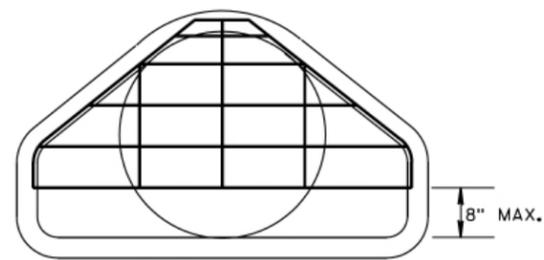
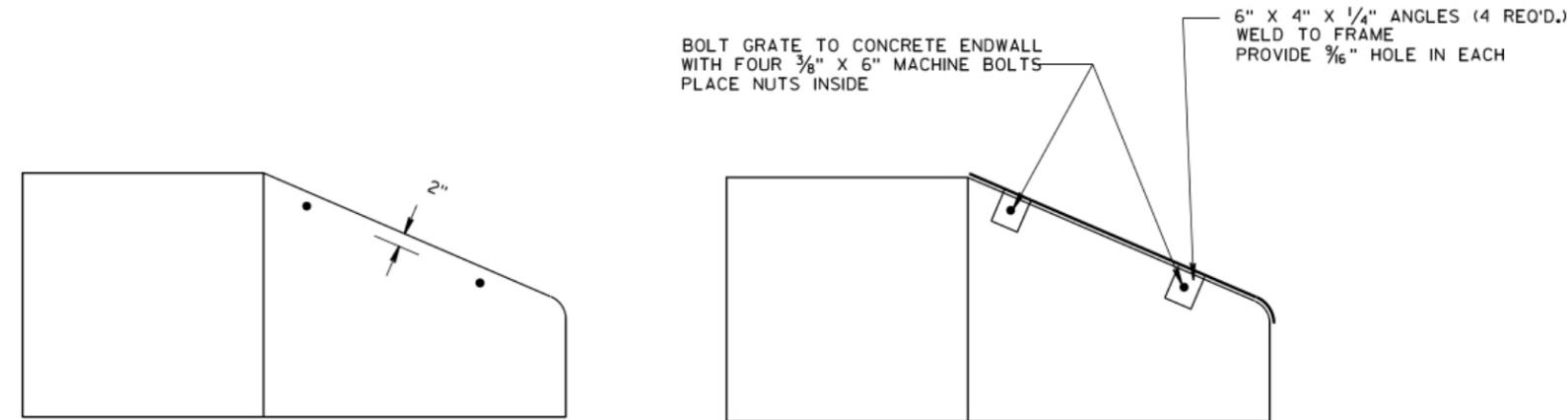
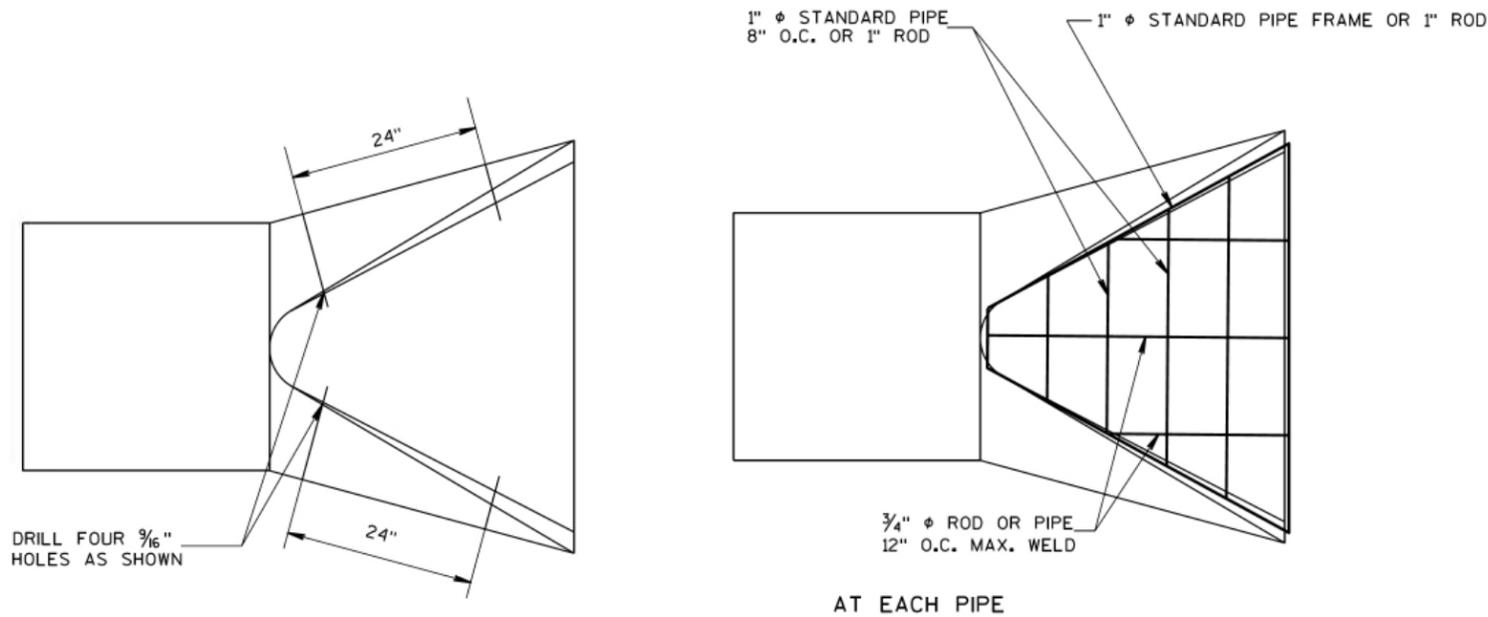
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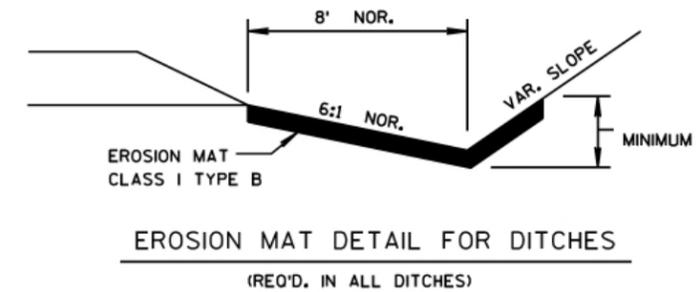
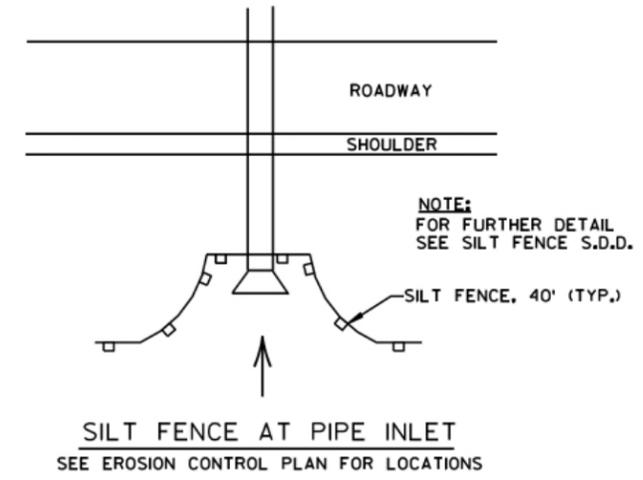
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PIPE GRATE DETAIL



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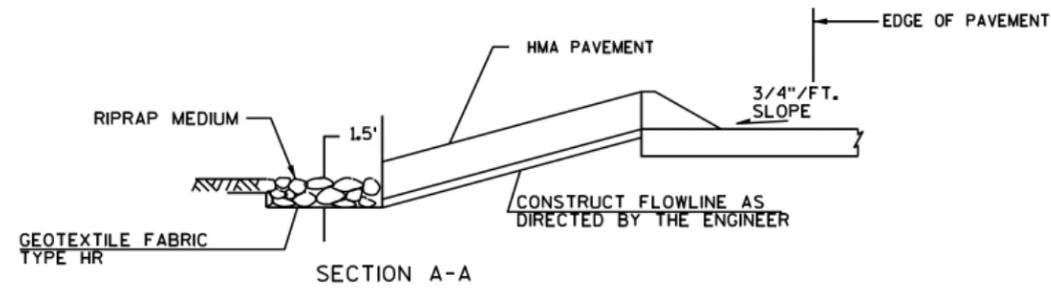
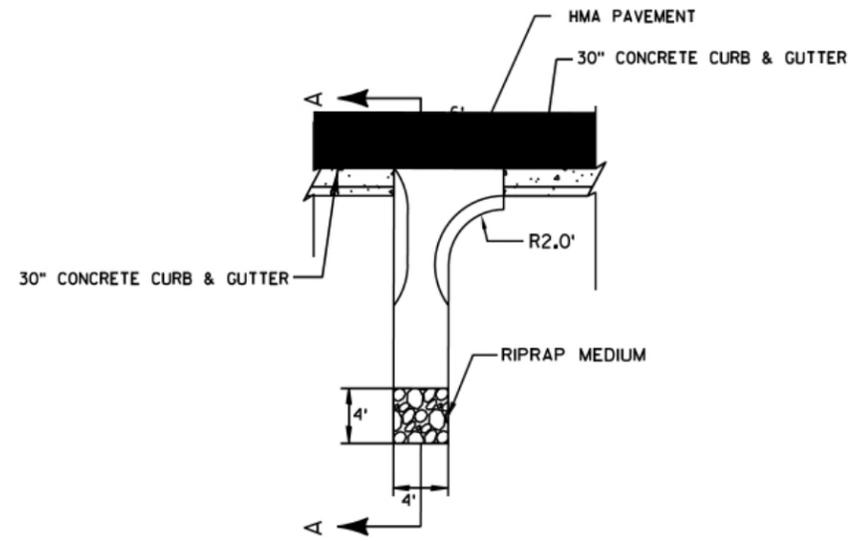
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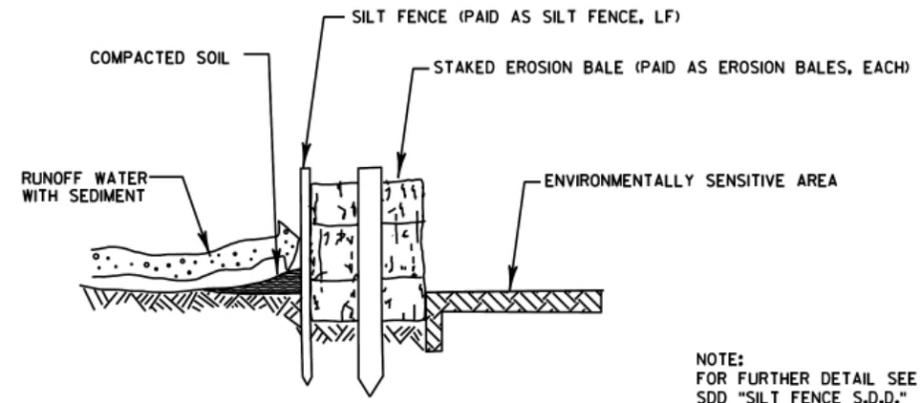
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ASPHALTIC FLUME WITH RIPRAP MEDIUM
SEE EROSION CONTROL PLAN FOR LOCATION



NOTE:
FOR FURTHER DETAIL SEE
SDD "SILT FENCE S.D.D."

SILT FENCE & EROSION BALE BARRIER DETAIL
SEE EROSION CONTROL PLAN FOR LOCATIONS



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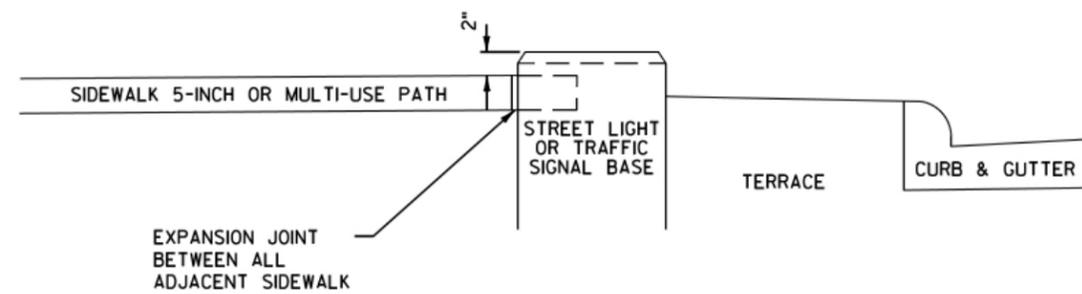
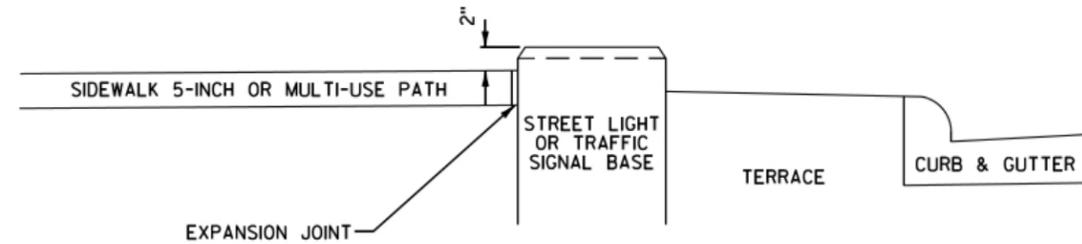
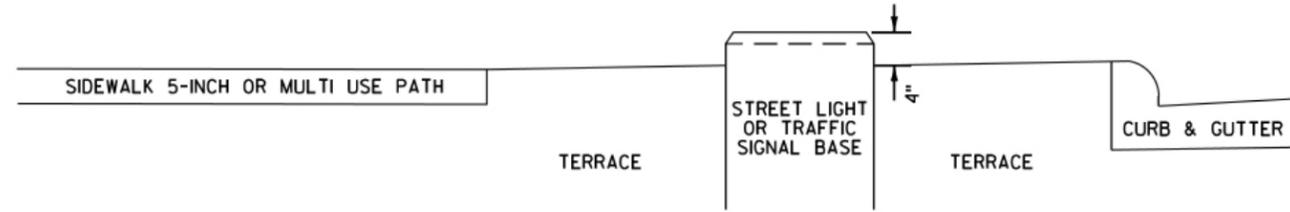
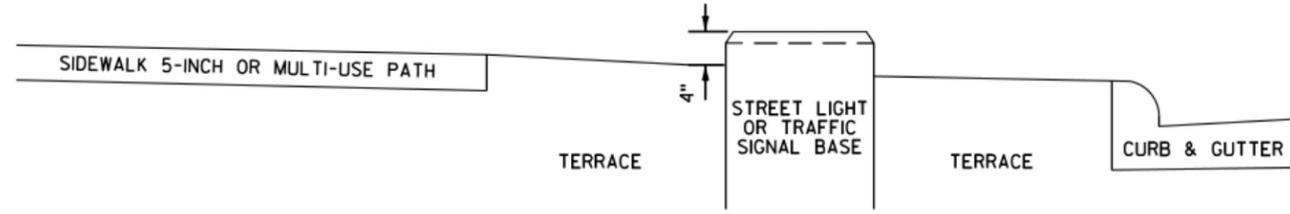
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CONSTRUCTION DETAILS



TYPICAL ELEVATIONS FOR BASES

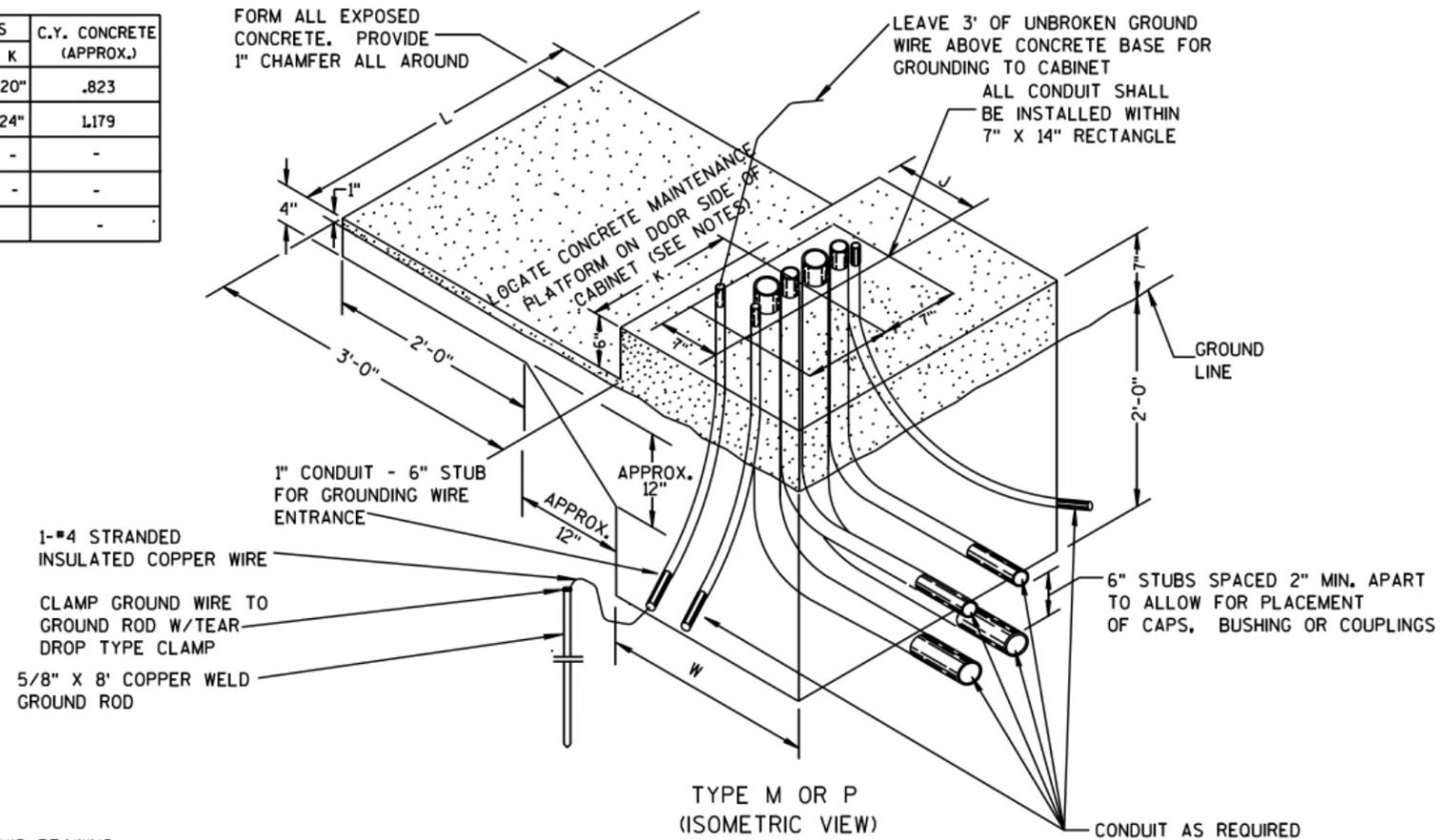
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CONCRETE BASE TYPE	DIMENSIONS				C.Y. CONCRETE (APPROX.)
	L	W	J	K	
TYPE M	40"	30"	12"	20"	.823
TYPE P	48"	30"	16"	24"	1.179
TYPE M MODIFIED	-	-	-	-	-
TYPE P MODIFIED	-	-	-	-	-
TYPE OTHER	-	-	-	-	-



TYPE M AND P CONTROLLER BASE DETAIL

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

DEPTH OF CONDUIT EXITING THE BASE SHALL MATCH THE DEPTH SPECIFIED FOR CONDUIT INSTALLATION.

ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.

CONTROL CABINET BASE TOP SURFACES SHALL BE TROWEL FINISHED AND LEVEL.

MAINTENANCE PLATFORM SHALL NOT BE INSTALLED WHEN THE SURROUNDING AREA IS PAVED.

MINIMUM BENDING RADIUS OF CONDUIT = 6 X THE DIAMETER.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED OR PLUGGED IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

CONCRETE FORM DEPTH BELOW FINISHED GRADE SHALL BE 6" MINIMUM. CONCRETE FORMS SHALL BE REMOVED AFTER CONCRETE HAS SET.

CONDUITS SHALL EXIT THE BASE IN THE DIRECTION OF THE STRUCTURE IT IS TERMINATING INTO.

MAINTENANCE PLATFORM SIZE MAY VARY ON ACCOUNT OF CONDITIONS. VERIFY THE MAINTENANCE PLATFORM SIZE WITH ENGINEER PRIOR TO POURING BASE.

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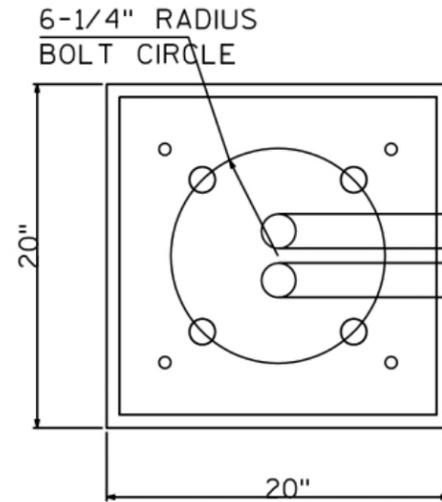
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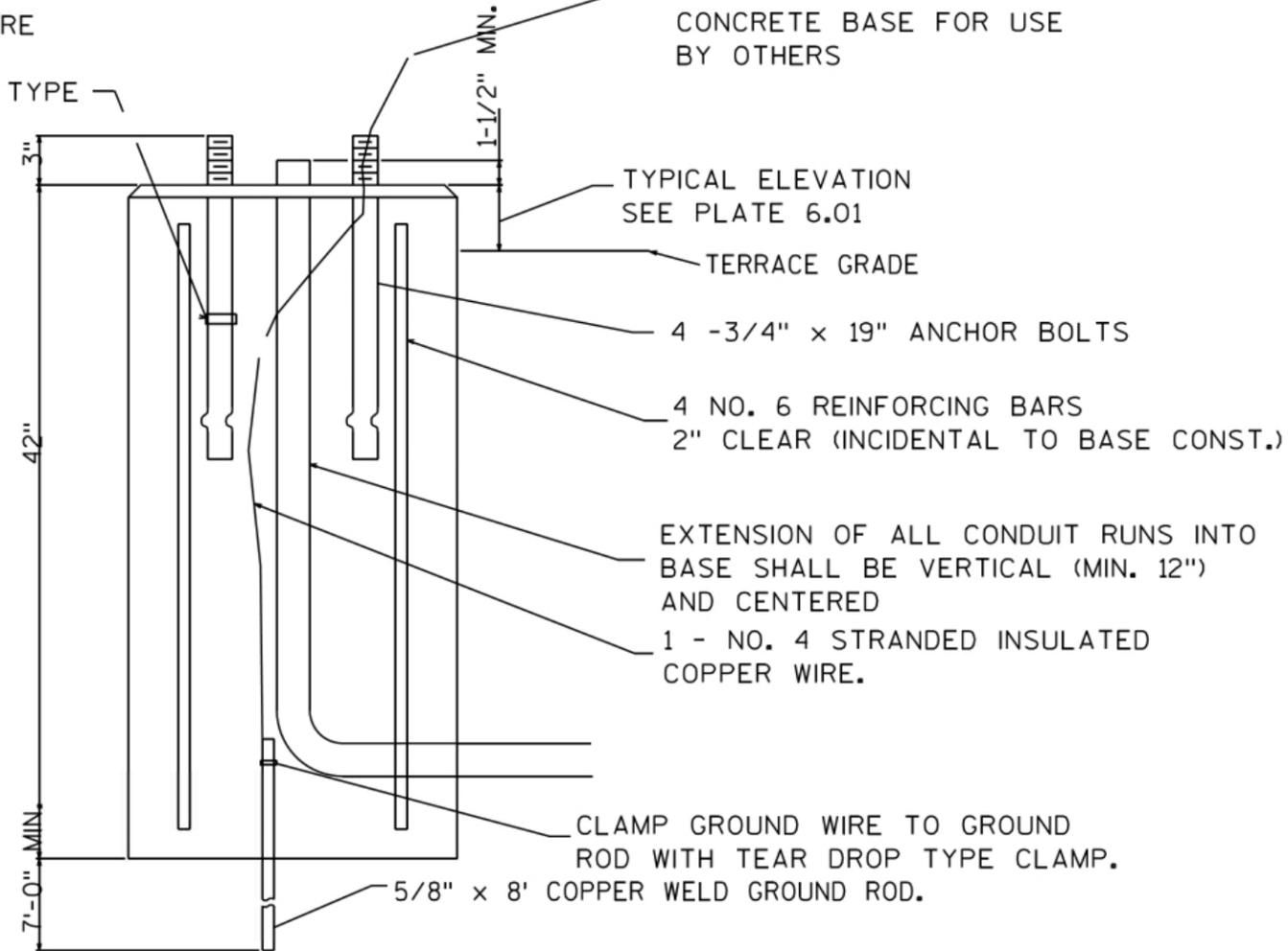
CONDUIT AS REQUIRED

NOTE: FORMS SHALL BE OF SUFFICIENT DEPTH TO PROVIDE A MINIMUM OF 12" OF FORMED BASE BELOW GRADE ON THE LOW SIDE.

ALL CONDUIT AND ELBOWS SHOWN IN CONCRETE BASE TO BE INCLUDED IN UNIT PRICE FOR TYPE "G" TRAFFIC SIGNAL BASE.

CLAMP GROUND WIRE TO ANCHOR BOLT WITH WATER PIPE TYPE GROUND CLAMP.

3' OF UNBROKEN GROUND WIRE TO BE LEFT ABOVE CONCRETE BASE FOR USE BY OTHERS



TYPE G BASE DETAIL

CITY OF FITCHBURG

CONSTRUCTION DETAILS

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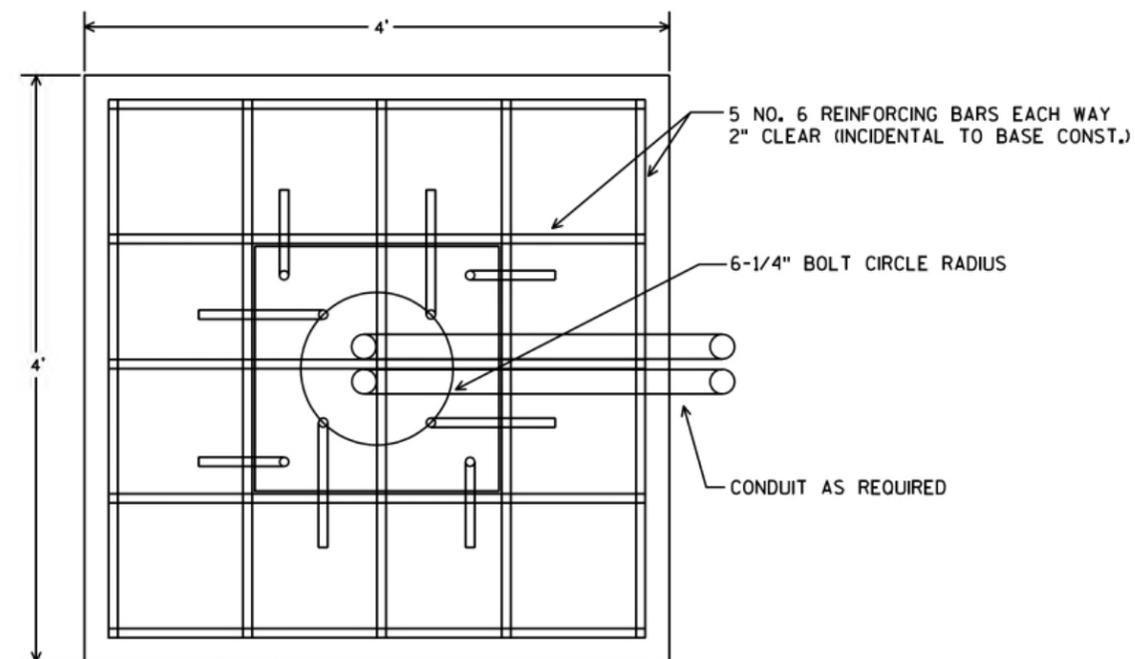
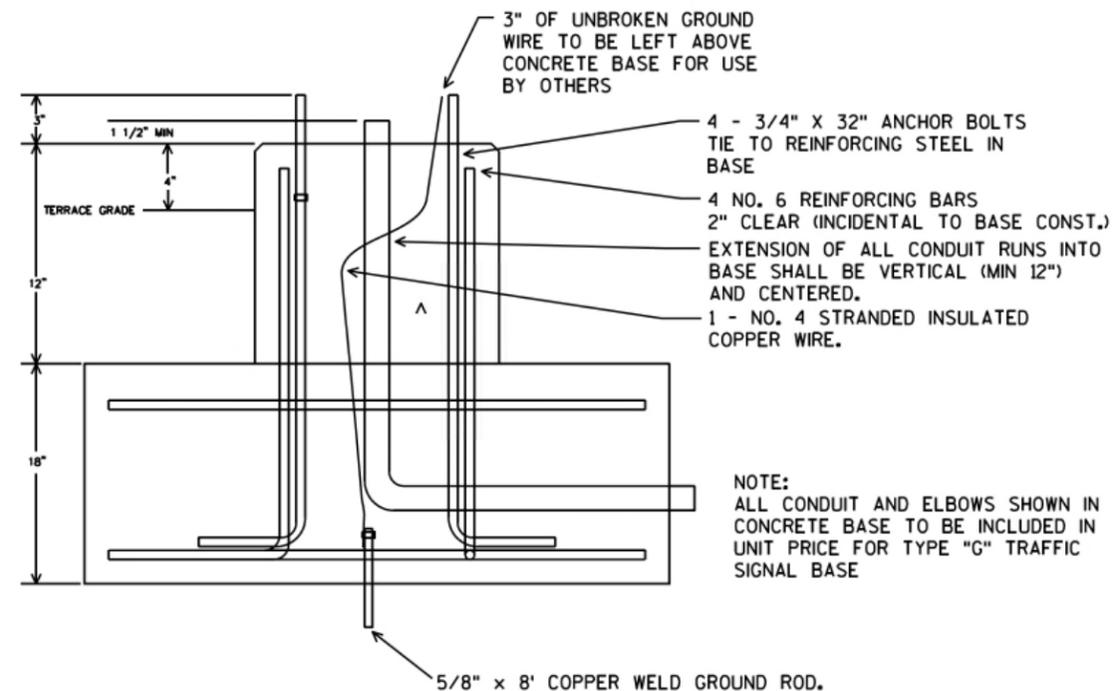
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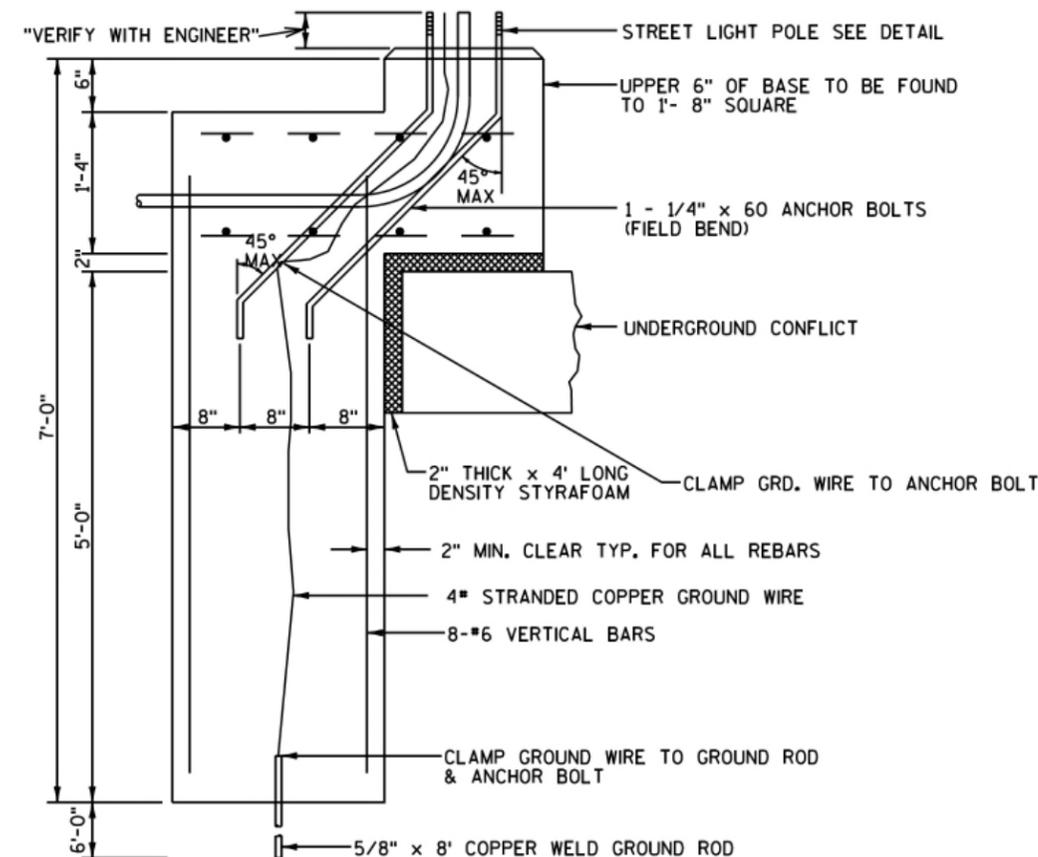
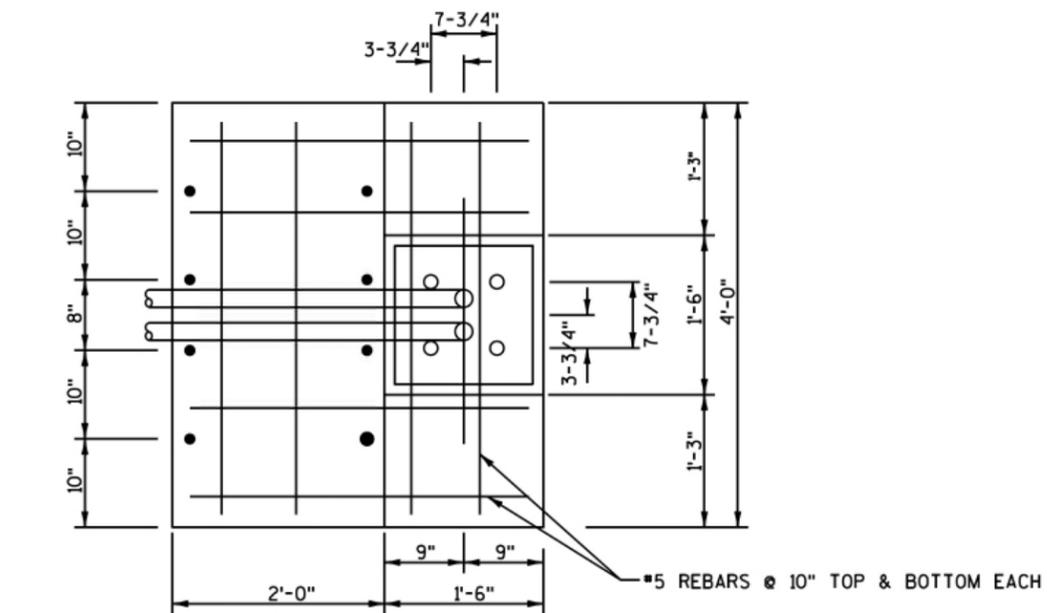
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CONCRETE BASES TYPE G SPREAD FOOTING

FOR SIGNAL POLE USE
USE AS DIRECTED BY THE ENGINEER



OFFSET BASE DETAIL

FOR STREET LIGHT OR SIGNAL POLE USE
USE AS DIRECTED BY THE ENGINEER



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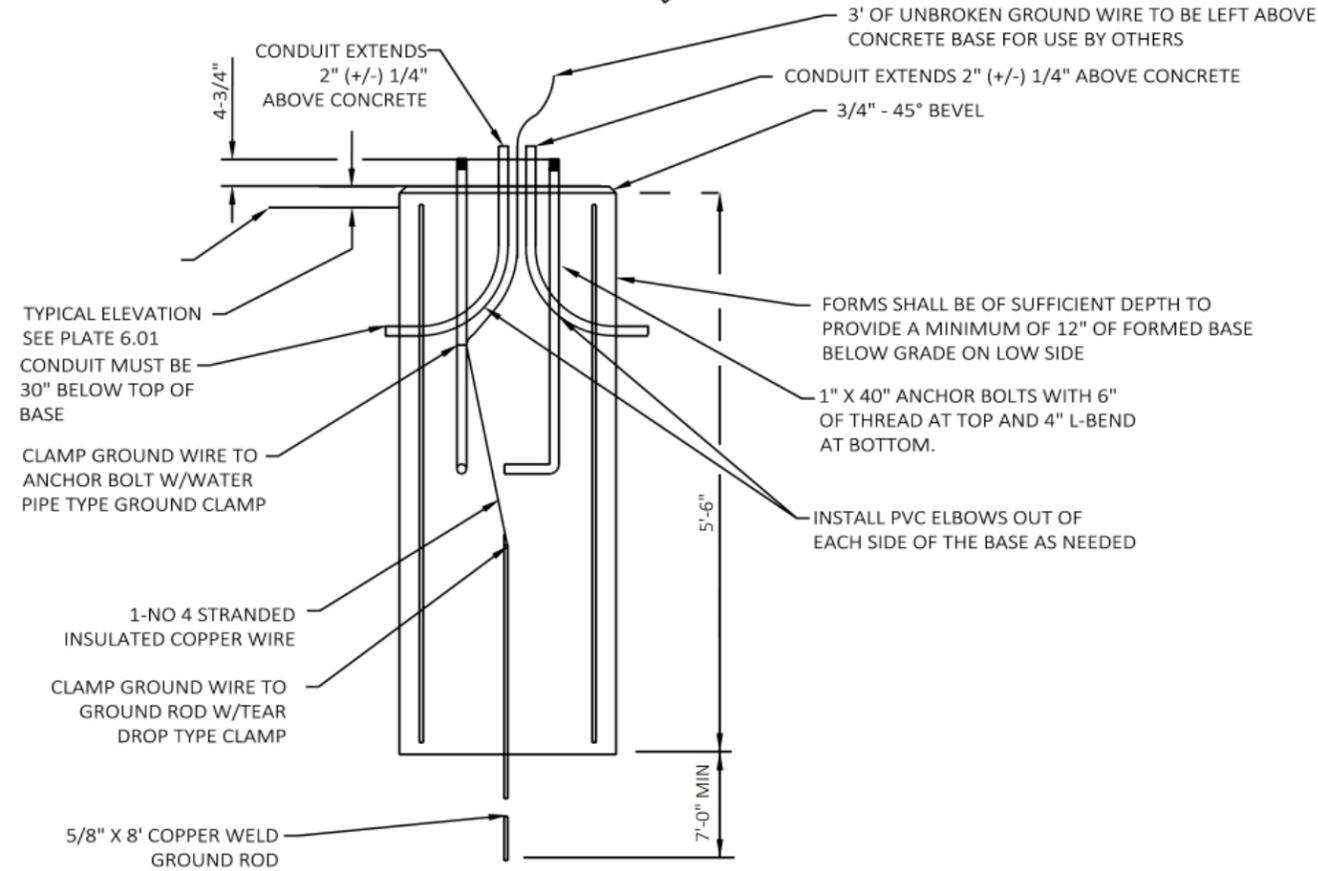
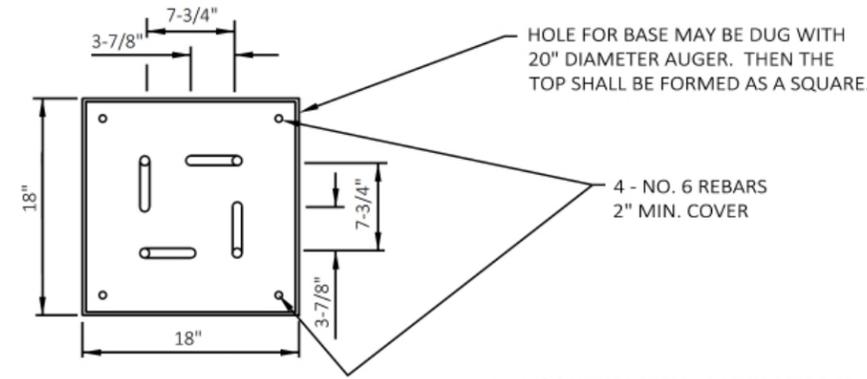
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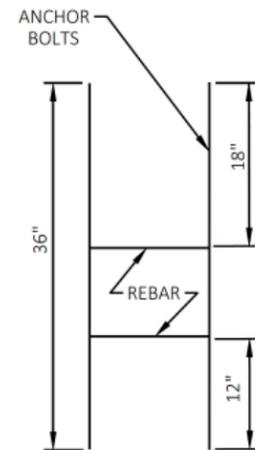
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ANCHOR BOLT CAGE DETAIL



HORIZONTAL REBAR SHALL BE TACK WELDED OR WIRED TO ANCHOR BOLTS TO FORM ANCHOR BOLT CAGE BEFORE POURING CONCRETE.

LB-3 DETAIL

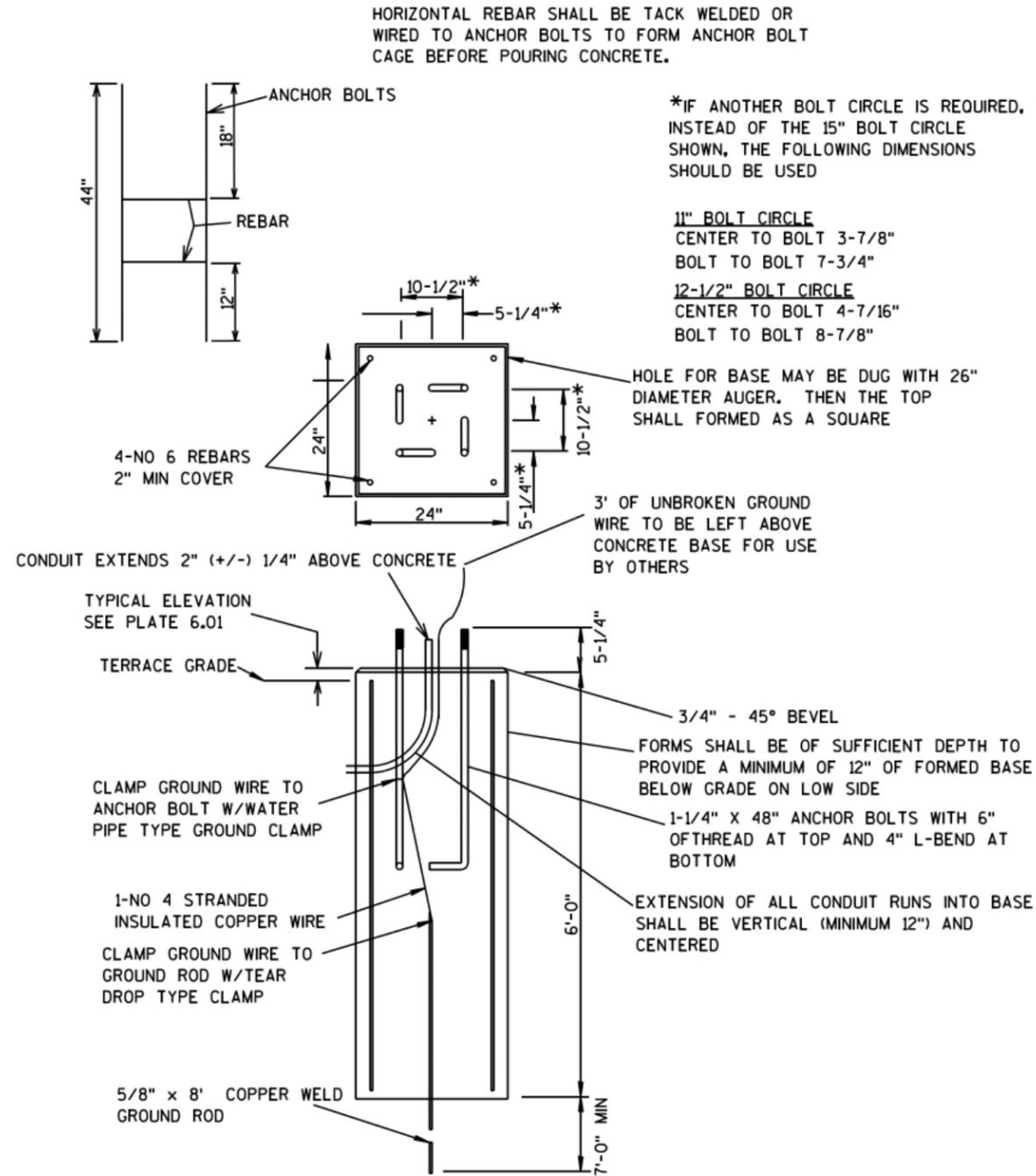


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CONSTRUCTION DETAILS



LB-8 DETAIL

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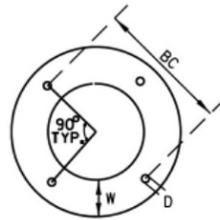
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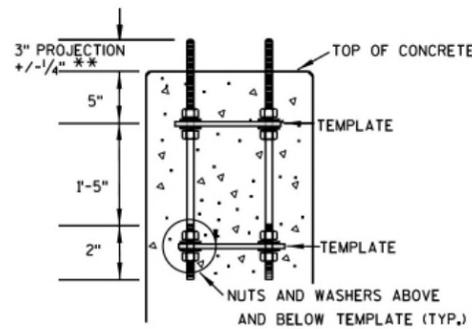
**SPREAD FOOTING DIMENSIONS
STEEL AND CONCRETE QUANTITIES ARE APPROXIMATE**

TYPE OF BASE	IF D =	THEN L =	401 HOOPS LBS.	402 VERTICAL BARS LBS.	602 VERTICAL BARS LBS.	403 HORIZ BARS LBS.	TOTAL LBS. STEEL	CONCR YDS.
TYPE 2 OR 5	2'	6' 6"	8	-	14	72	94	3.1
TYPE 2 OR 5	3'	6' 6"	12	-	26	72	110	3.2
TYPE 2 OR 5	4'	6' 0"	12	-	35	55	102	2.8



	TYPE 2 OR 5
THICKNESS OF PLATE	1/2"
BOLT CIRCLE "BC"	11.50"
WIDTH "W"	3" +/-
HOLE DIAMETER "D"	1.125"
ANCHOR ROD	1" X 2'-3"

ANCHOR ROD TEMPLATE



ANCHOR ROD ASSEMBLY

ANCHOR ROD SHALL BE ASTM A449/AASHTO M314-90 GR55
THREADED 12-INCH AT TOP; 4-INCH AT BOTTOM,
HOT-DIP GALVANIZED TO ASTM A153, GR C

REQUIRED:

- 2 TEMPLATES
- 4 ANCHOR RODS
- 16 FLAT WASHERS HOT-DIP GALVANIZED
- 16 HEAVY DUTY HEX NUTS* HOT-DIP GALVANIZED

*CHASE THREADS FOR HOT-DIP GALVANIZED ANCHOR RODS
** FAILURE TO MEET TOLERANCE CONDEMNS THE BASE

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

TOP SURFACES OF CONCRETE BASES SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

CONDUIT SIZES AND LOCATIONS SHALL BE AS SHOWN ON THE PLANS.

THE FINAL OR TERMINATING CONCRETE BASE IN A CONDUIT RUN SHALL HAVE A 6" EXIT STUB INSTALLED FOR FUTURE CABLING USE. THE EXIT STUB SHALL BE SIZED AS USED THROUGHOUT THE CONDUIT RUN AS SHOWN AT THE ENTRANCE OF THE BASE.

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6 X THE DIAMETER.

CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 1 INCH. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

GENERAL NOTES (CONTINUED)

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF CONCRETE BASES BEFORE INSTALLATION OF CABLE OR WIRE.

ENDS OF CONDUIT INSTALLED BELOW GRADE FOR FUTURE USE SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC.

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE DIRT OR FILL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING AROUND THE BASE. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETE BASE IN LAYERS OF 1 FOOT OR LESS.

A 4 AWG, STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD) FOR TYPE 2 AND TYPE 5 BASES.

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER THE BASE OF THE TYPE 2 AND TYPE 5 BASES THROUGH A 1 INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 4 FOOT COIL OF WIRE ABOVE THE CONCRETE BASE. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL PER SECTION 5.17.6.3, AASHTO 2001 4TH EDITION STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINARIES AND TRAFFIC SIGNALS.

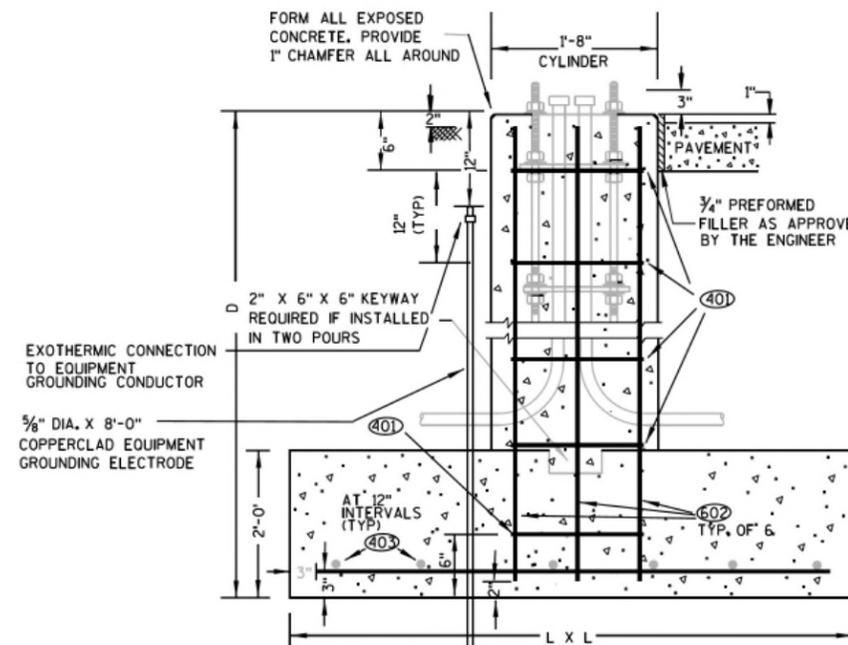
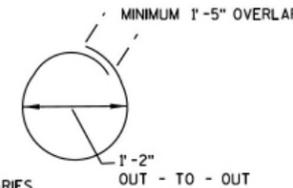
WELDING OF THE ANCHOR RODS TO THE CAGE OR TEMPLATE IS UNACCEPTABLE. TIE WIRES SHALL BE USED.

BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS (LATEST EDITION).

CONDUIT SHOWN FOR ILLUSTRATION ONLY AND VARIES BY "D"

ANCHOR ROD PATTERN SHALL BE PARALLEL TO THE ROADWAY

- 401 HOOP QUANTITY VARIES
- 602 VERTICAL "D" - 4" QUANTITY 6, LENGTH VARIES
- 403 HORIZONTAL "L" - 6" QUANTITY AND LENGTH VARY



**SPREAD FOOTING
TYPE 2 OR 5**

TO REPLACE LB-3 INSTALLATIONS
AS DIRECTED BY THE ENGINEER

PLOT DATE: 10/21/2019 3:10 PM

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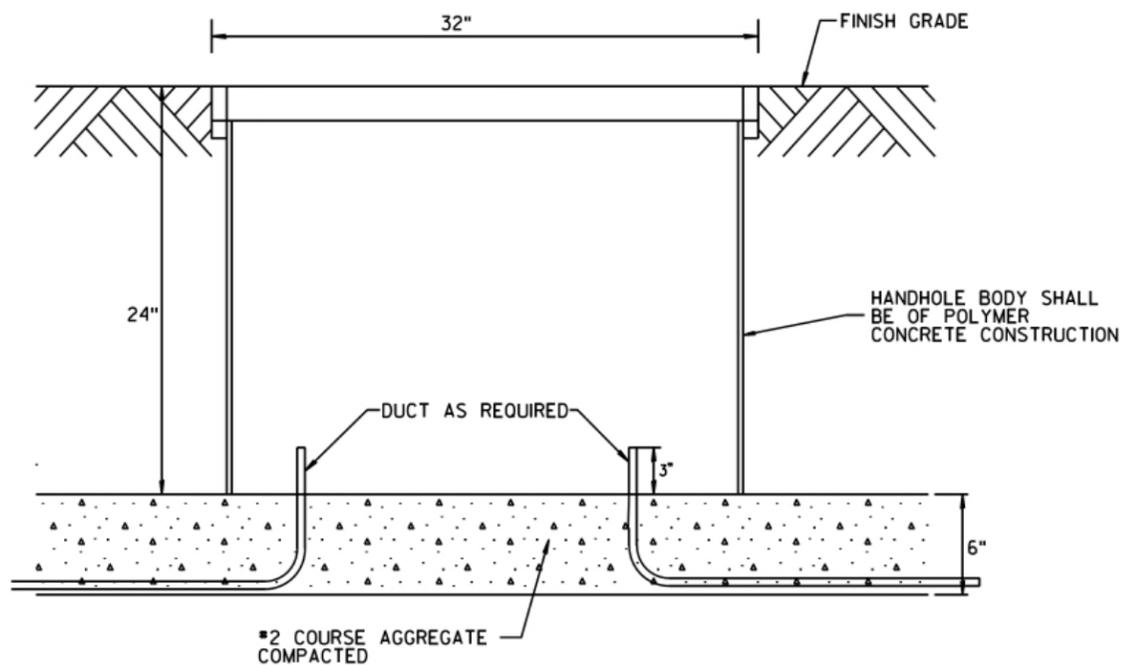
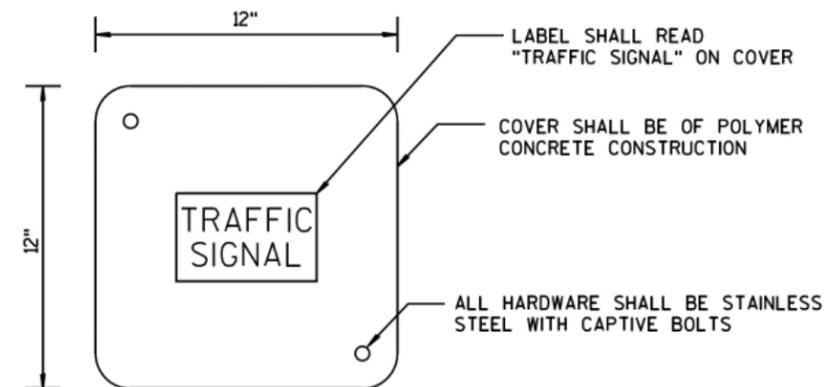
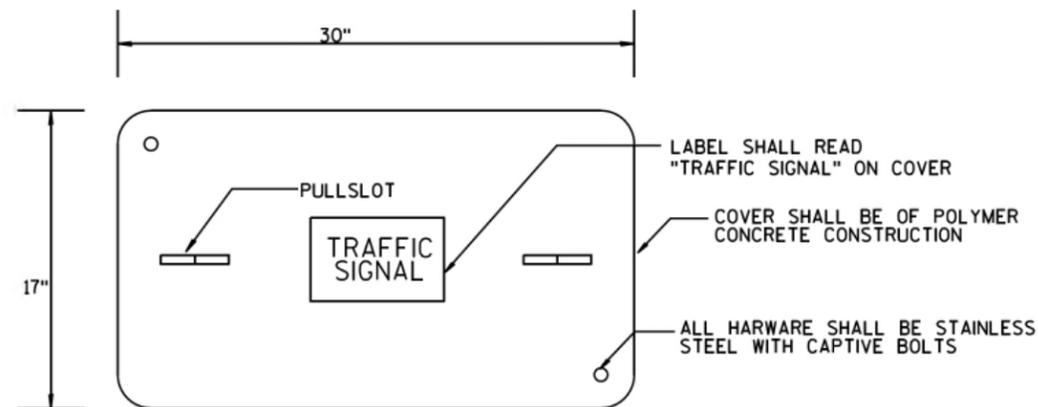
CONSTRUCTION DETAILS

Project No: 19-3488
Date: OCT 2019
Designed By: BJS
Drafted By: STD
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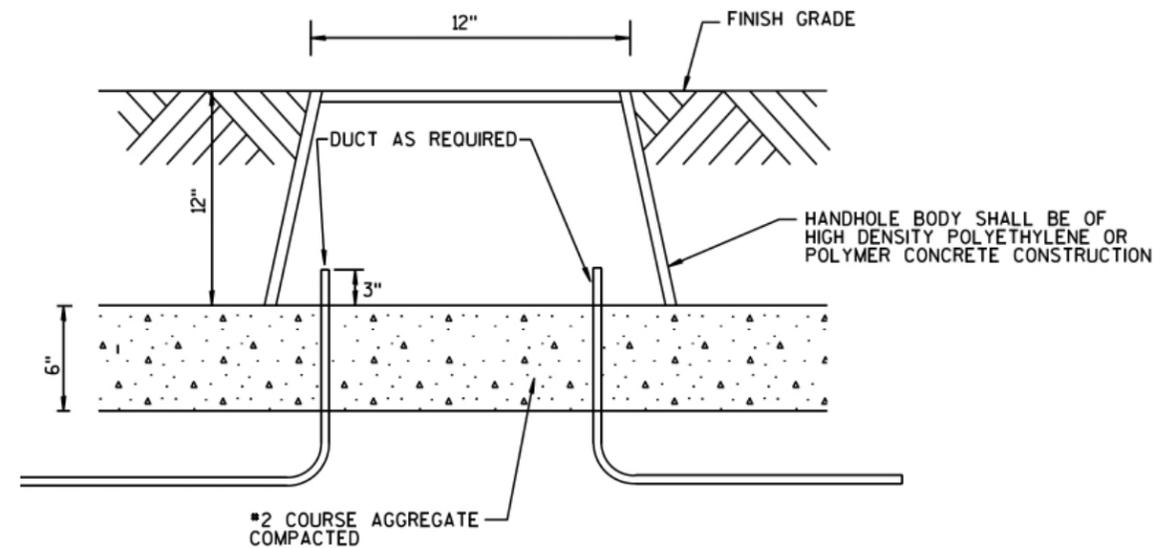
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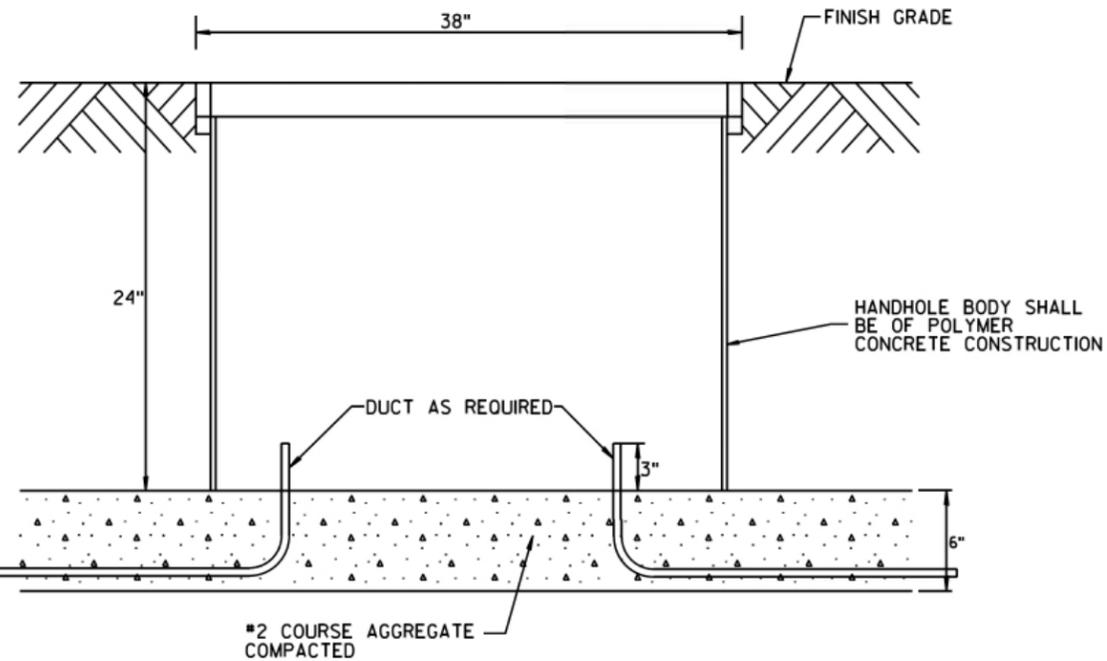
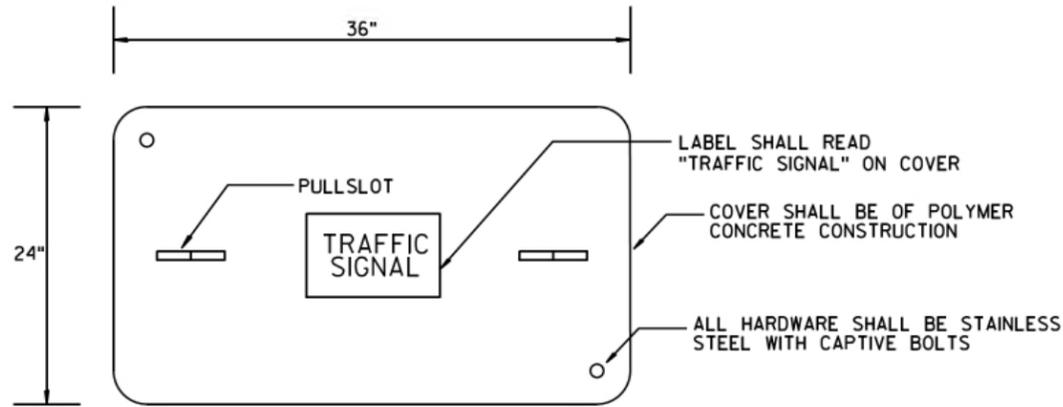
TYPE I HANDHOLE DETAIL



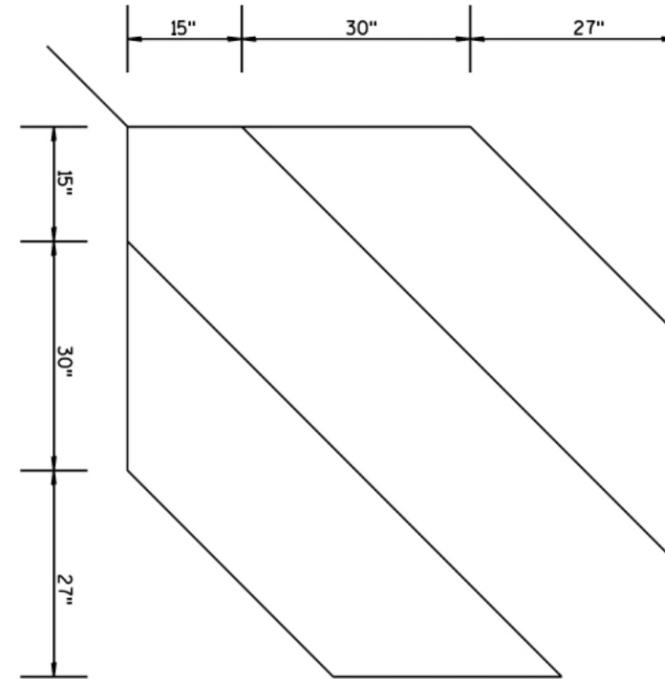
TYPE III HANDHOLE DETAIL

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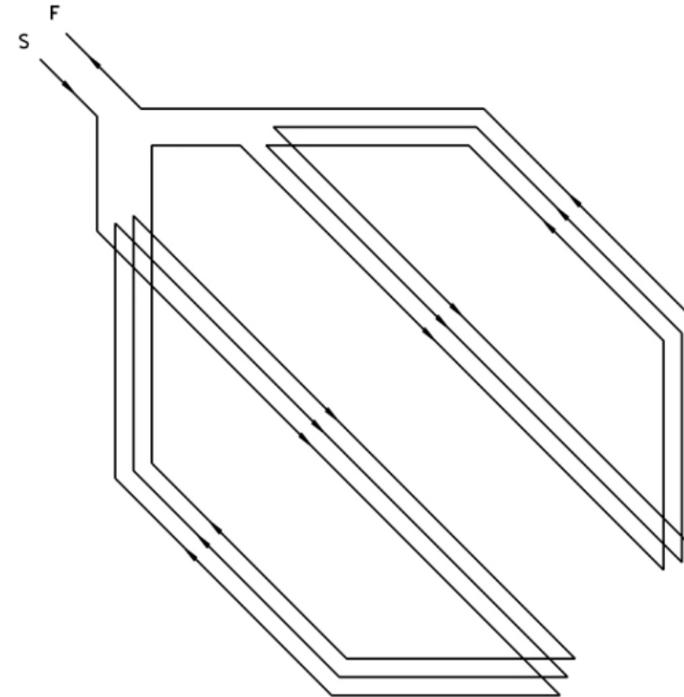
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TYPE V HANDHOLE DETAIL



SAW CUT DETAIL



WINDING DETAIL

GENERAL NOTES

ROUND CORNERS OF ACUTE ANGLE SAW CUTS TO PREVENT DAMAGE TO CONDUCTORS.

INSTALL 3 TURNS OF LOOP DETECTOR WIRE RATED FOR DIRECT IN-PAVEMNT INSTALLATION.

LOOP DETECTOR SLOTS SHALL BE 1/4" WIDE. CUT SLOTS TO A DEPTH SO THAT THE MOST SHALLOW LOOP DETECTOR WIRE TURN IS LOCATED 1" BELOW THE FINISHED PAVEMENT GRADE. OVERLAP CUTS SO THAT SLOT IS FULL DEPTH AT TURNS. THE SLOTS SHALL BE CLEANED FREE OF DIRT, DUST, MOISTURE, AND DEBRIS PRIOR TO INSTALLATION OF THE WIRE.

AFTER PLACING THE WIRE IN THE SLOT, FILL THE SLOT WITH AN ASPHALTIC MATERIAL IN ACCORDANCE WITH THE "SPECIFICATIONS FOR JOINT SEALANTS, HOT Poured, FOR CONCRETE AND ASPHALT PAVEMENTS, ASTM DESIGNATION 06690".

THE TWO SINGLE CONDUCTOR LOOP WIRES SHALL BE TWISTED TOGETHER AT A RATE OF THREE TWISTS PER FOOT FROM THE PAVEMENT EDGE TO THE SPLICE CONNECTION WITH THE LOOP LEAD-IN CABLE.

LEAD-IN CABLES AND LOOP LEAD-IN WIRES SHALL BOTH BE CUT TO 6 FEET IN LENGTHS AT THE SPLICING PULL BOX.

BICYCLE DETECTION LOOP DETAIL



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CONSTRUCTION DETAILS

Project No: 19-3488
Date: OCT 2019
Designed By: BJS
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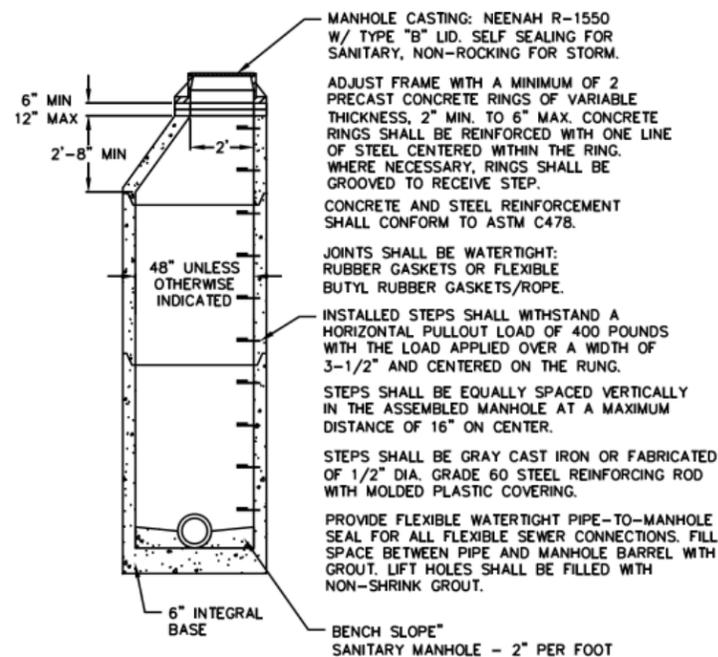
CONSTRUCTION DETAILS

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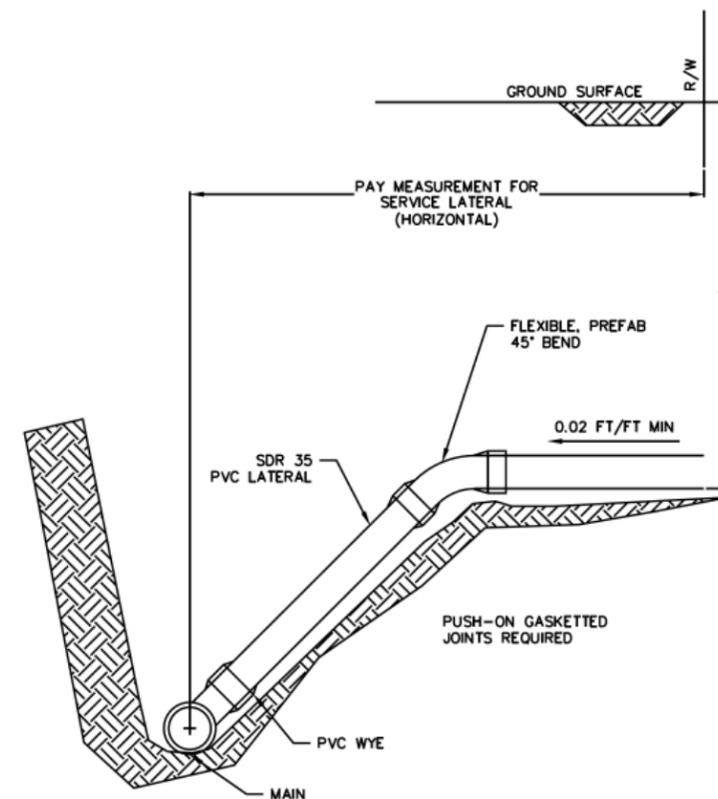
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1 PRECAST CONCRETE SANITARY MANHOLE
 1 NOT TO SCALE



NOTE:
 UNLESS OTHERWISE STATED BY THE ENGINEER OR REQUIRED BY THE LOCAL GOVERNING BODY, ALL LATERALS SHALL BE INSTALLED TO A POINT 10 FEET BEYOND THE BACK OF ANY PROPOSED SIDEWALK OR 5 FEET BEYOND THE LIMITS OF ANY UTILITY EASEMENTS IMMEDIATELY ADJACENT TO THE RIGHT-OF-WAY, WHICHEVER IS GREATER. CONTRACTOR SHALL BE RESPONSIBLE TO CONFIRM THE LENGTH OF LATERAL REQUIRED FOR INSTALLATION AND THE REQUIRED TERMINATION POINT.

1 SANITARY SEWER LATERAL
 1 NOT TO SCALE



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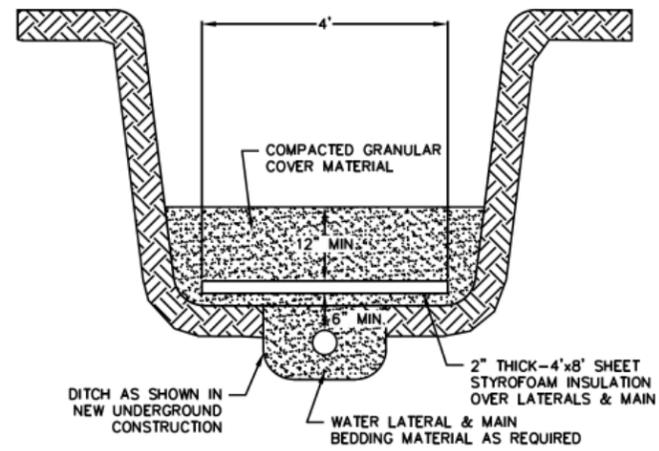
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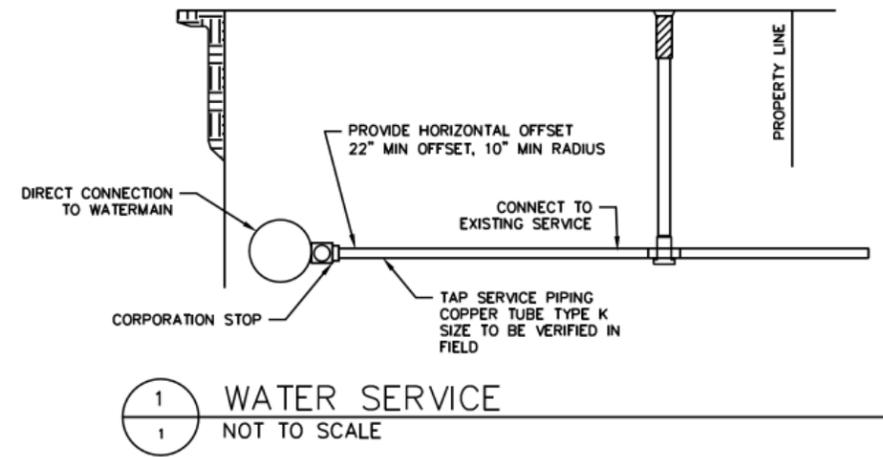
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CONSTRUCTION DETAILS



1 INSULATION DETAIL
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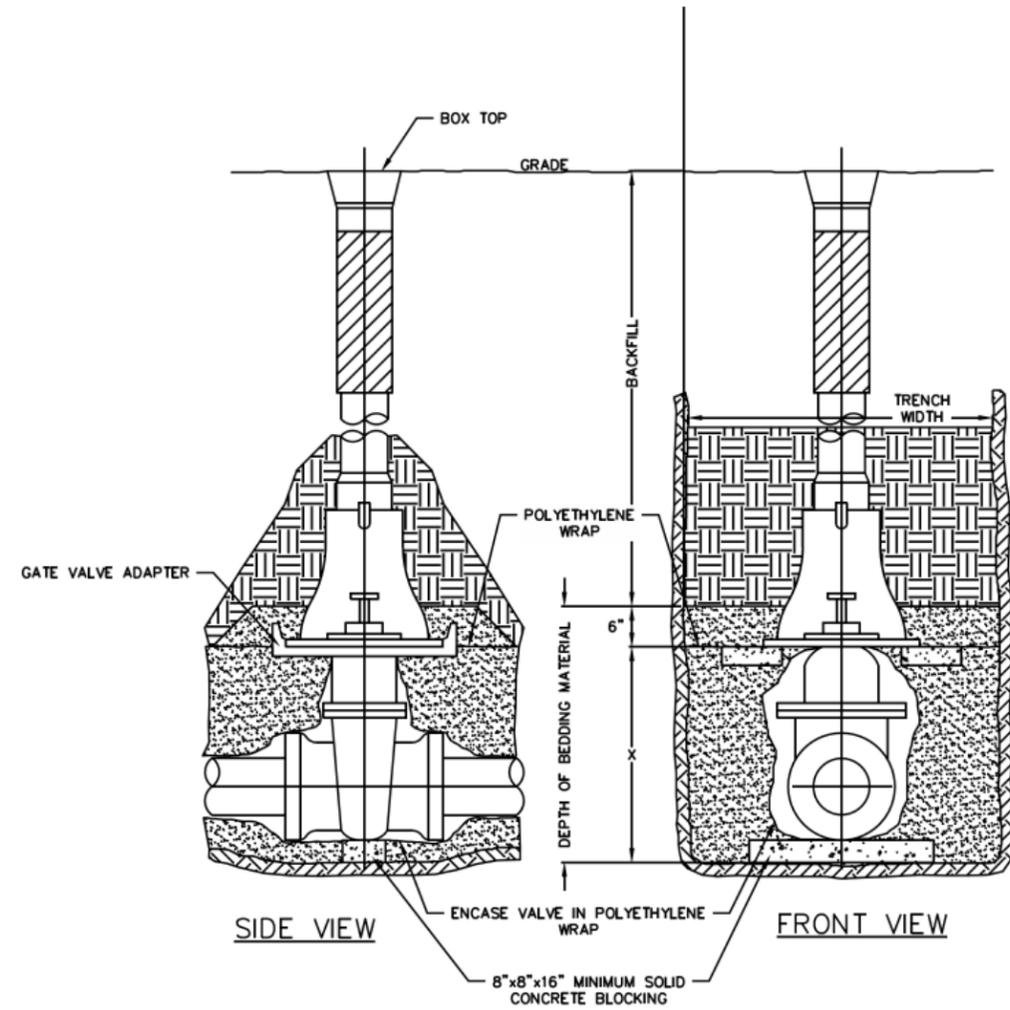
1 WATER SERVICE
1 NOT TO SCALE

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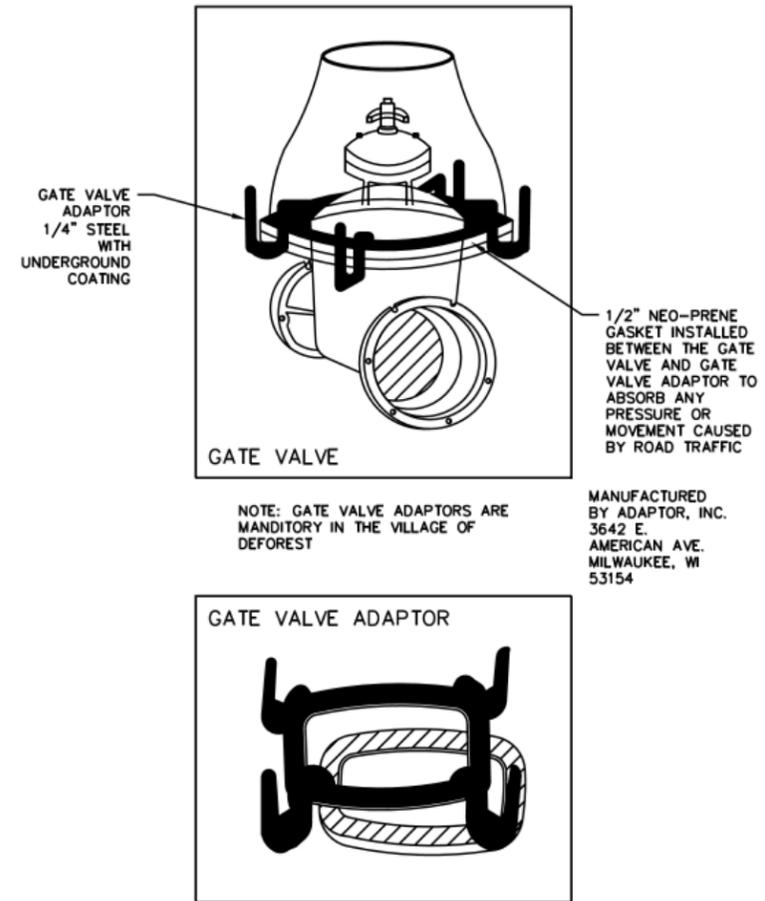
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1 STANDARD GATE VALVE BOX SETTING
1 NOT TO SCALE



1 GATE VALVE AND GATE VALVE ADAPTOR
1 NOT TO SCALE



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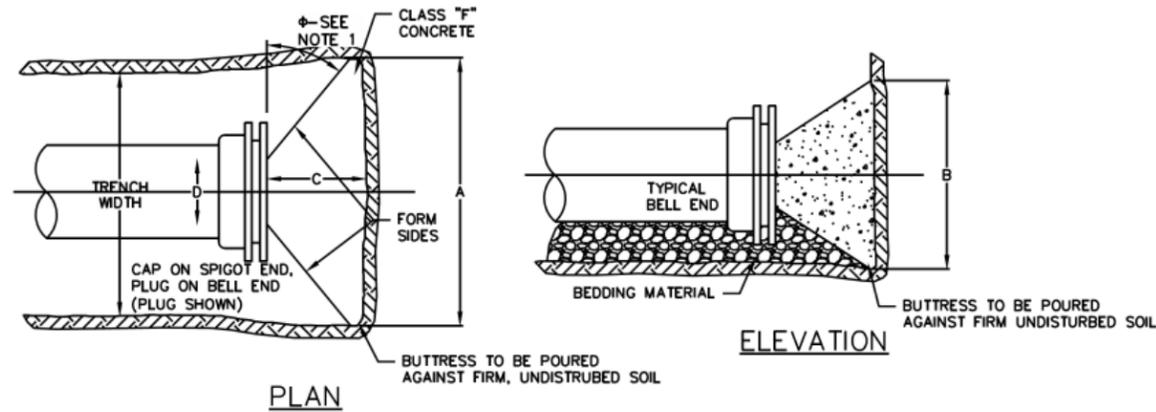
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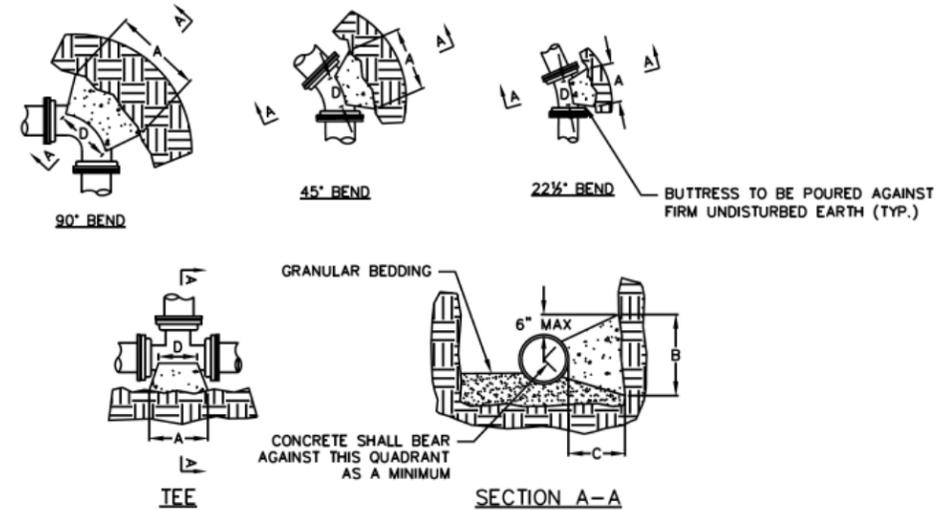
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BUTTRISS DIMENSIONS				
DIA.	A	B	C	D
4"	1'-5"	1'-0"	SEE NOTE NO. 1	SEE NOTE NO. 2
6"	1'-7"	1'-9"		
8"	2'-4"	2'-0"		
12"	2'-8"	2'-6"		
16"	3'-4"	3'-6"		
20"	3'-10"	4'-9"		
24"	4'-8"	5'-6"		

- NOTES:
- DIMENSION C SHOULD BE LARGE ENOUGH TO MAKE ANGLE ϕ EQUAL TO OR LARGER THAN 45°.
 - DIMENSION D EQUALS APPROXIMATELY I.D. OF PIPE LESS 2". AN EFFORT TO BE MADE TO PREVENT THE CONCRETE FROM COVERING THE M.J. BOLTS.
 - WHERE BUTTRISSES ARE NOT POSSIBLE BECAUSE OF POOR SOIL CONDITIONS OR LACK OF ROOM, STRAPPING SHALL BE PERMITTED.
 - BUTTRISS DIMENSIONS ARE BASED ON A SOIL RESISTANCE OF TWO TONS PER SQ. FT. AND A WATER PRESSURE OF 150 PSI.

1 BUTTRISS FOR DEAD ENDS
 1 NOT TO SCALE



- DIMENSION "D" SHALL BE AS LARGE AS POSSIBLE, BUT THE CONCRETE SHALL NOT INTERFERE WITH THE MECHANICAL JOINTS.
- DIMENSION "C" SHALL BE AT LEAST 6 INCHES, AND LARGE ENOUGH TO MAKE THE "O" ANGLE EQUAL TO OR GREATER THAN 45 DEGREES WITH THE DIMENSION "A" AS SHOWN ON THE TABLE, OR GREATER, AND WITH DIMENSION "D" AS LARGE AS POSSIBLE.

PIPE SIZE	BUTTRISS DIMENSIONS									
	TEES		11.25° BEND		22.5° BEND		45° BEND		90° BEND	
	A	B	A	B	A	B	A	B	A	B
4	0'-10"	1'-6"	0'-5"	0'-8"	0'-6"	1'-1"	0'-10"	1'-3"	1'-6"	1'-4"
6	1'-6"	1'-8"	0'-6"	1'-2"	0'-9"	1'-6"	1'-4"	1'-8"	2'-2"	1'-10"
8	1'-9"	2'-4"	0'-9"	1'-3"	1'-0"	2'-0"	1'-11"	2'-0"	3'-0"	2'-4"
10	1'-9"	2'-4"	0'-9"	1'-3"	1'-0"	2'-0"	1'-11"	2'-0"	3'-0"	2'-4"
12	2'-3"	1'-7"	1'-0"	1'-4"	2'-4"	1'-1"	2'-6"	2'-6"	3'-7"	2'-8"
16	3'-8"	2'-10"	1'-2"	2'-0"	2'-10"	1'-6"	3'-0"	3'-0"	5'-6"	3'-0"
20	5'-0"	3'-10"	1'-5"	2'-6"	1'-11"	3'-9"	3'-9"	3'-9"	6'-9"	3'-9"
24	5'-4"	4'-8"	1'-8"	3'-0"	2'-4"	4'-3"	4'-7"	4'-3"	8'-4"	4'-4"

DIMENSIONS IN THE TABLE ARE BASED ON A WATER PRESSURE OF 150 PSI AND SOIL RESISTANCE OF 2000 LBS/SQ FT

* = FOR TEE THIS WILL BE THE BRANCH PIPE

CONCRETE SHALL BE CLASS "F"

1 BUTTRISS FOR BENDS
 1 NOT TO SCALE

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CONSTRUCTION DETAILS

Project No: 19-3488
 Date: OCT 2019
 Designed By: BJS
 Drafted By: STD
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Revisions:

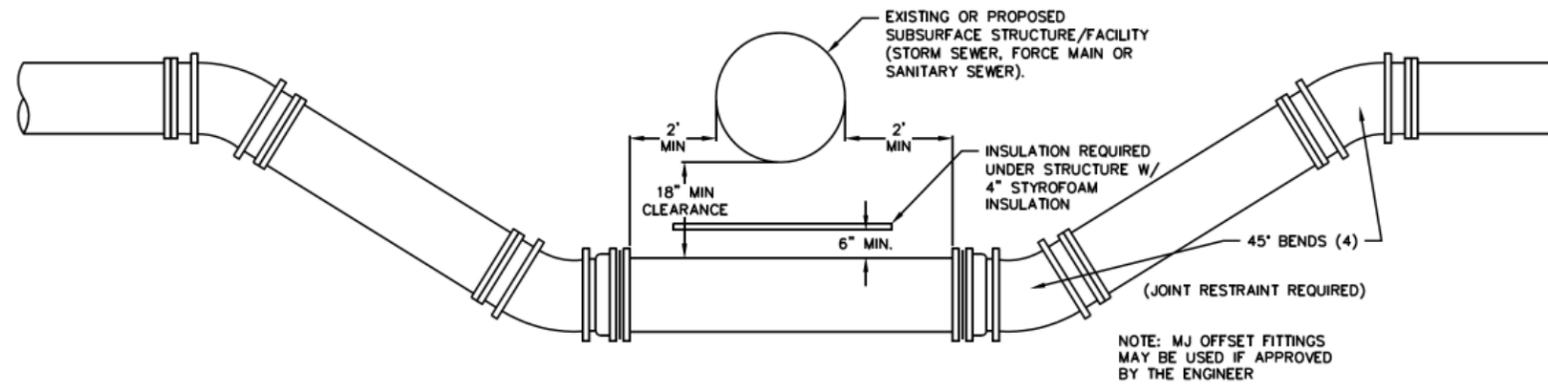
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1 LOWERING WATERMAIN UNDER STORM STRUCTURE
1 NOT TO SCALE

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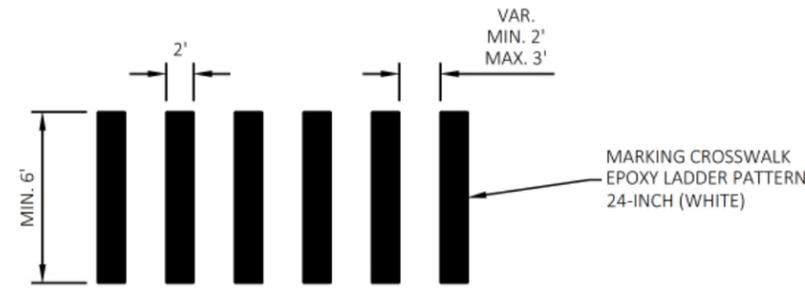
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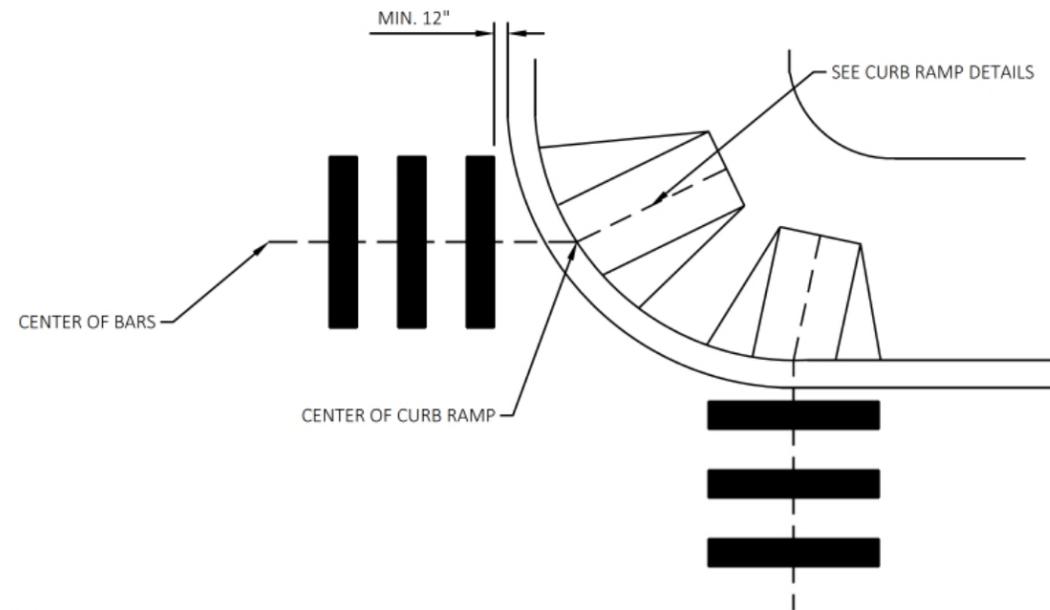
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SIDEWALK CONTINENTAL
CROSSWALK AT UNCONTROLLED
INTERSECTION TYPICAL



CONTINENTAL CROSSWALK
AT CURB RAMP TYPICAL

- LEGEND:**
- - - - - CENTER OF CURB RAMP
 - ===== CURB & GUTTER
 - ████████ CROSSWALK BAR (24" WIDE)

GENERAL NOTES:

CONTINENTAL CROSSWALK MARKINGS SHALL BE ALIGNED PARALLEL TO THE DIRECTION OF VEHICULAR TRAVEL.

PLACEMENT OF CONTINENTAL CROSSWALKS SHALL COMPLY WITH THE ACCESSIBILITY REGULATIONS PER THE MOST RECENT VERSION OF AMERICANS WITH DISABILITIES ACT (ADA) STANDARDS.

MARKINGS TO BE CENTERED ON CENTERLINE AND LANE LINES, SPACE UNIFORMLY TO AVOID WHEEL PATH.

CONTINENTAL CROSSWALK BARS SHALL BE UNIFORM WITHIN THE SAME CROSSING. NO PARTIAL BARS SHALL BE INSTALLED.

CROSSWALK MARKINGS SHALL BE WISCONSIN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (WMUTCD) RETROREFLECTIVITY COMPLIANT AND SKID RESISTANT.

CONTINENTAL CROSSWALK MARKING DETAIL

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**CONTINENTAL CROSSWALK
MARKING DETAIL**

Project No:	19-3488
Date:	OCT 2019
Designed By:	BJS
Drafted By:	BJS
Checked By:	LW

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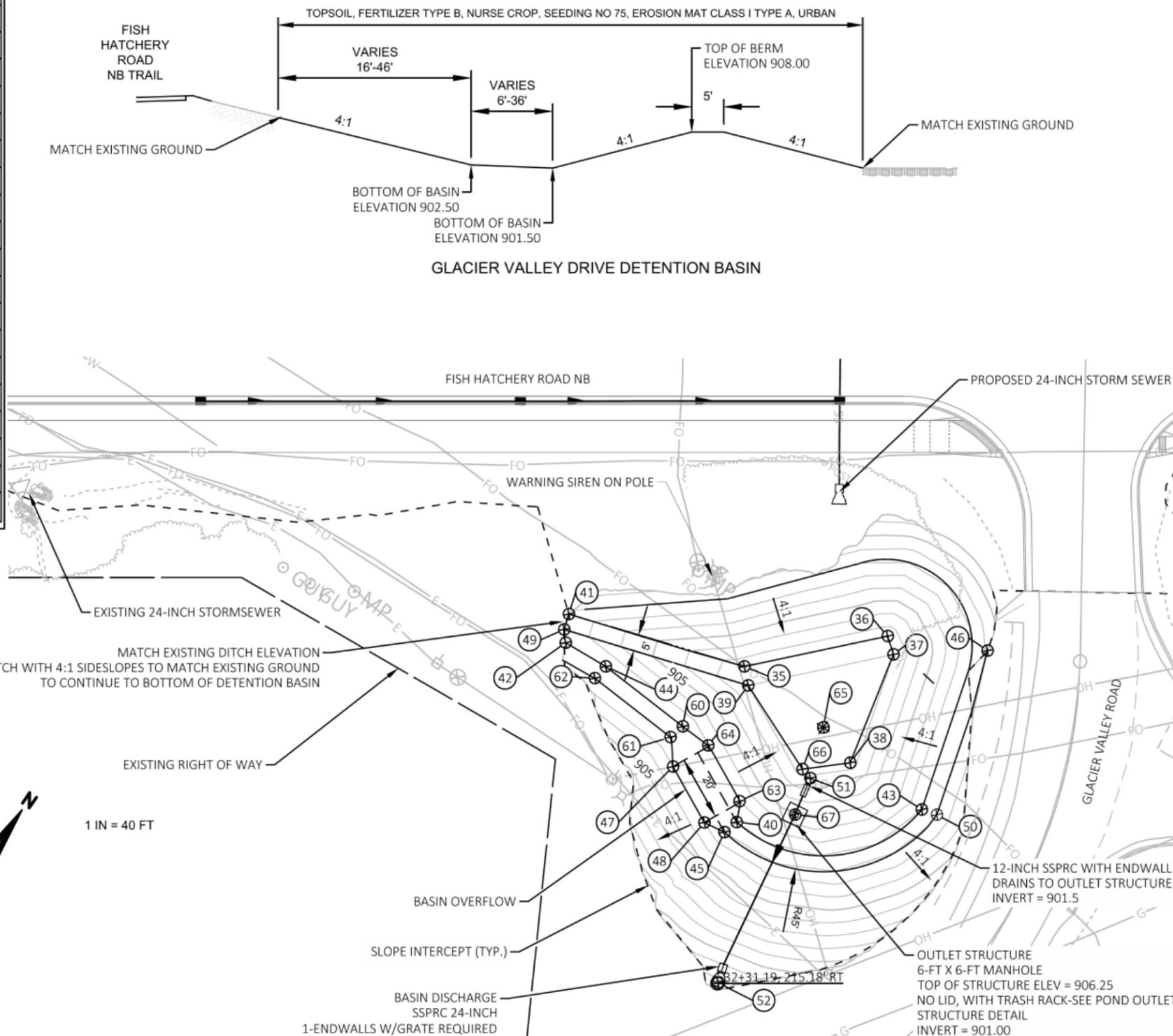
PLOT BY : KLENGINEERING

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POINT LAYOUT TABLE

#	STATION	OFFSET	ELEV	DESCRIPTION	NORTHING	EASTING
35	532+39.66NB	116.3RT	902.50	END DITCH/BTM BASIN	461393.696	810824.094
36	532+84.55NB	106.8RT	902.25	BTM BASIN	461426.940	810855.697
37	532+86.34NB	112.6RT	902.00	BTM BASIN	461423.262	810860.411
38	532+72.79NB	146.4RT	901.50	BTM BASIN	461387.738	810868.431
39	532+40.92NB	122.2RT	902.00	END DITCH\BTM BASIN	461389.523	810828.493
40	532+37.31NB	164.8RT	908.00	BERM	461352.380	810849.704
41	531+84.74NB	99.9RT	907.78	BEGIN DITCH	461375.997	810769.593
42	531+83.74NB	108.9RT	908.00	INSIDE BERM	461368.082	810773.836
43	532+95.21NB	160.9RT	908.00	INSIDE BERM	461388.440	810895.172
44	531+96.32NB	116.3RT	908.00	INSIDE BERM	461369.114	810788.402
45	532+33.42NB	168.0RT	908.00	BERM	461347.588	810848.284
46	533+15.78NB	111.4RT	909.22	OUTSIDE BERM	461440.944	810883.971
47	532+17.36NB	147.6RT	907.00	BOTTOM OF OVERFLOW	461355.301	810823.464
48	532+27.17NB	165.0RT	907.00	BOTTOM OF OVERFLOW	461346.516	810841.432
49	531+83.28NB	104.7RT	907.78	5' DITCH	461371.231	810771.107
50	532+99.95NB	162.5RT	908.00	OUTSIDE BERM	461389.811	810899.980
51	532+33.26NB	209.1RT	901.50	GV1 INVERT OF 12-INCH ENDWALL	461376.721	810860.913
52	532+31.43NB	209.1RT	896.75	GV3 OUTLET OF 24-INCH ENDWALL	461307.773	810873.298
60	532+20.44NB	135.0RT	908.00	BERM	461367.368	810818.889
61	532+16.58NB	138.4RT	908.00	BERM	461362.434	810817.597
62	531+92.91NB	120.0RT	908.00	INSIDE BERM	461364.148	810787.678
63	532+38.14NB	158.3RT	907.00	BOTTOM OF OVERFLOW	461358.207	810846.698
64	532+28.34NB	140.9RT	907.00	BOTTOM OF OVERFLOW	461367.005	810828.737
65	532+64.39NB	135.3RT	0.00	CENTER OF BERM CURVES	461392.044	810855.262
66	532+57.87NB	148.4RT	901.50	BTM BASIN	461377.624	810857.284
67	532+55.49NB	162.6RT	906.25	GV2 CENTER OF 6' MANHOLE, TOP	461364.651	810863.371

NOTES: SLOPES SHOWN ARE PERPENDICULAR FROM BOTTOM OF BASIN, BOTTOM OF DITCH OR TOP OF BERM



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CONSTRUCTION DETAIL

Project No: 19-3488
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 Designed By: JPB
 Drafted By: STD
 Checked By: LMW

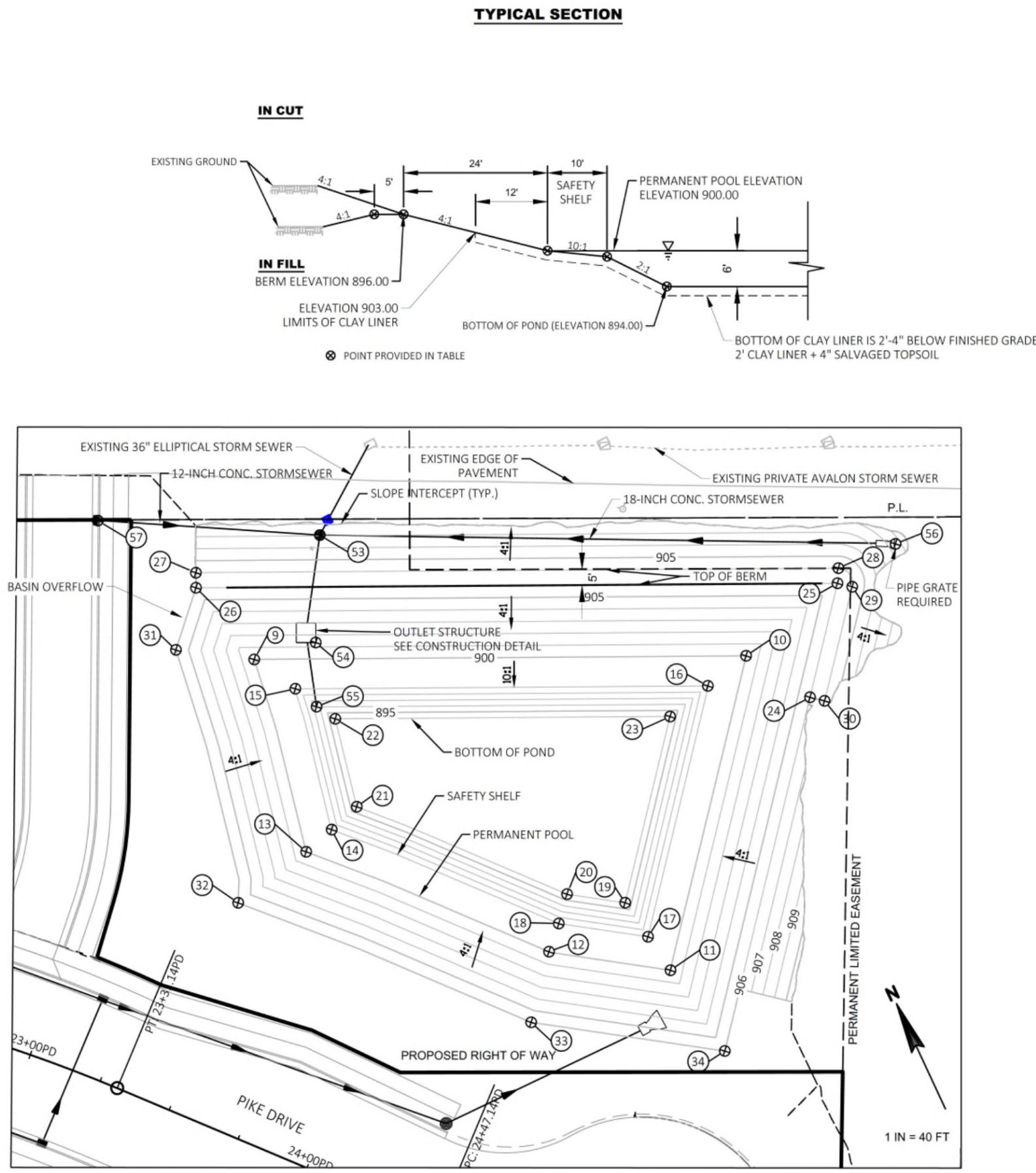
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POINT LAYOUT TABLE						
#	STATION	OFFSET	ELEV	DESCRIPTION	NORTHING	EASTING
9	23+21.12PD	149.8LT	900.00	WATER SURFACE ELEV	465967.436	814371.111
10	24+86.15PD	213.6LT	900.00	WATER SURFACE ELEV	465893.782	814518.360
11	24+97.42PD	105.9LT	900.00	WATER SURFACE ELEV	465811.807	814448.191
12	24+46.81PD	97.9LT	900.00	WATER SURFACE ELEV	465835.781	814414.763
13	23+58.96PD	97.2LT	900.00	WATER SURFACE ELEV	465902.389	814357.479
14	23+63.97PD	107.3LT	899.00	SAFETY SHELF	465905.100	814368.444
15	23+34.58PD	145.9LT	899.00	SAFETY SHELF	465952.481	814378.933
16	24+71.13PD	199.9LT	899.00	SAFETY SHELF	465890.659	814502.396
17	24+83.86PD	114.3LT	899.00	SAFETY SHELF	465825.171	814446.551
18	24+46.21PD	107.8LT	899.00	SAFETY SHELF	465842.658	814421.969
19	24+69.50PD	122.4LT	894.00	BOTTOM	465838.741	814444.904
20	24+44.95PD	117.9LT	894.00	BOTTOM	465850.140	814428.850
21	23+68.76PD	117.6LT	894.00	BOTTOM	465908.083	814379.383
22	23+50.78PD	141.9LT	894.00	BOTTOM OF POND	465937.493	814386.296
23	24+57.80PD	185.9LT	894.00	BOTTOM OF POND	465887.295	814486.504
24	25+28.15PD	206.1LT	906.00	INSIDE BERM	465871.744	814531.147
25	25+28.31PD	245.3LT	906.00	INSIDE BERM	465901.468	814556.614
26	23+00.87PD	165.4LT	906.00	INSIDE BERM	465997.611	814364.608
27	22+99.59PD	170.1LT	906.00	OUTSIDE BERM	466002.111	814366.832
28	25+26.55PD	250.2LT	906.00	OUTSIDE BERM	465905.827	814559.178
29	25+38.23PD	245.2LT	906.00	OUTSIDE BERM	465898.198	814560.470
30	25+36.69PD	206.0LT	906.01	OUTSIDE BERM	465868.461	814534.945
31	23+01.27PD	143.6LT	906.00	TOP OF DETENTION	465982.179	814349.212
32	23+44.57PD	72.7LT	906.00	TOP OF DETENTION	465897.534	814329.466
33	24+50.99PD	73.8LT	906.00	TOP OF DETENTION	465817.497	814398.747
34	25+27.85PD	84.7LT	906.00	TOP OF DETENTION	465779.541	814452.150
53	23+24.80PD	196.5LT	902.94	AV MANHOLE 6x6-FT - TYPE J	465994.454	814409.522
54	23+34.91PD	162.8LT	905.00	SE CORNER OF OUTLET STRUCTURE	465963.136	814392.029
55	23+43.45PD	143.2LT	0.00	END OF 10-INCH UNDERDRAIN	465943.938	814382.557
56	25+61.61PD	262.0LT	900.00	AV2 APRON ENDWALLS FOR CPRC 18-INCH	465904.361	814579.896
57	22+72.48PD	176.8LT	902.60	AV1 4-FT DIA. TYPE H INLET	466032.481	814345.516



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CITY OF FITCHBURG
 CONSTRUCTION DETAIL

Project No: 19-3488
 Date: 05-31-2019
 Designed By: JPB
 Drafted By: JPB
 Checked By: LMW

Revisions: XX-XX-XXXX

SHEET NO.
36 OF 48

PLOT DATE : 10/24/2019 1:33 PM

FILE NAME : G:\FITCHBURG\18013-000\CIVIL\3DSHEETS\PLAN\CONSTRUCTION DETAILS\FHR_CD_BMP-OUTLET.DWG - OUT



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CITY OF FITCHBURG

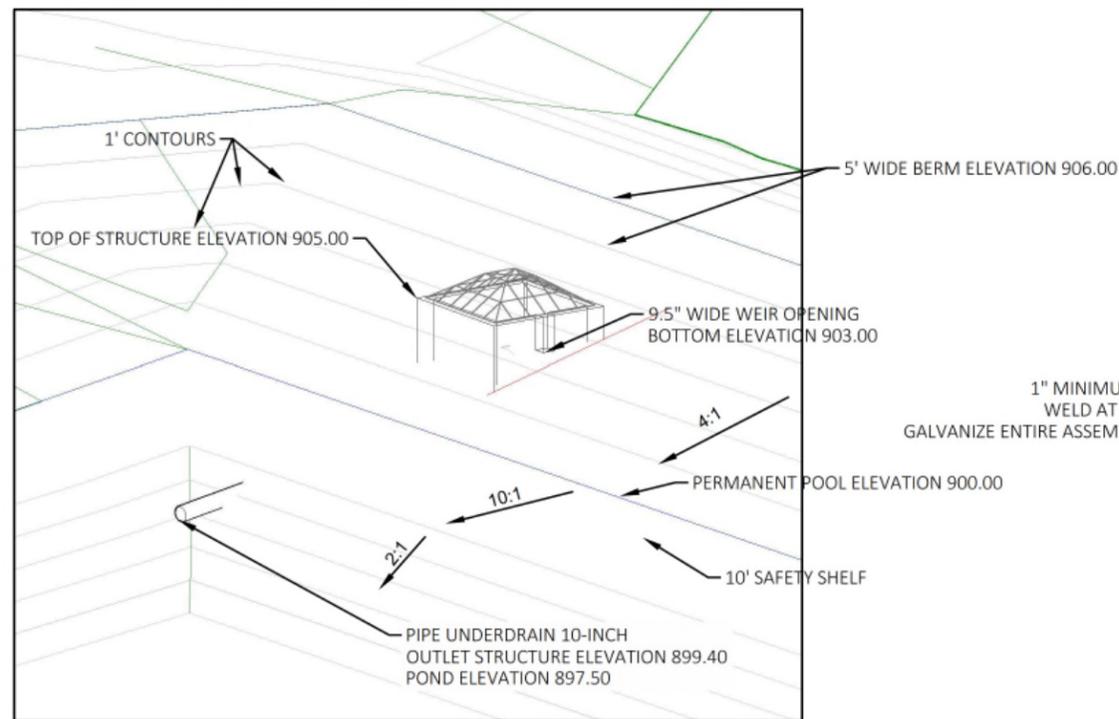
CONSTRUCTION DETAIL
POND OUTLET STRUCTURE

Project No: 19-3488
Date: 05-31-2019
Designed By: JPB
Drafted By: JPB
Checked By: LMW

Revisions: XX-XX-XXXX

SHEET NO.

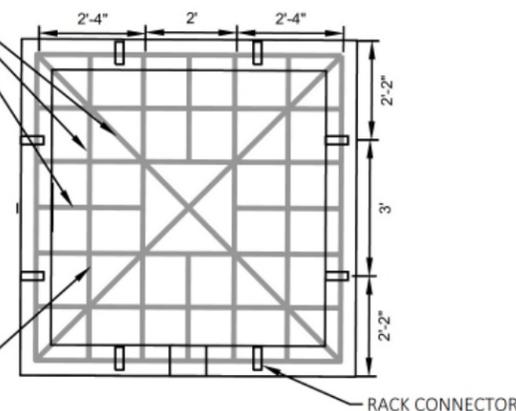
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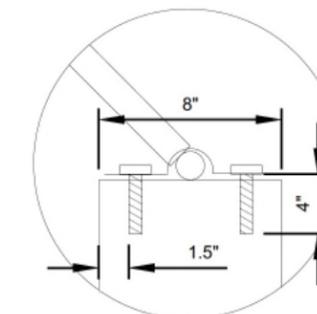
PERSPECTIVE VIEW
STRUCTURE DETAIL FOR PIKE DRIVE ONLY

NOTE: SEE STANDARD DETAIL DRAWING FOR MANHOLE 6X6 FOR INFORMATION NOT SHOWN IN THIS CONSTRUCTION DETAIL.

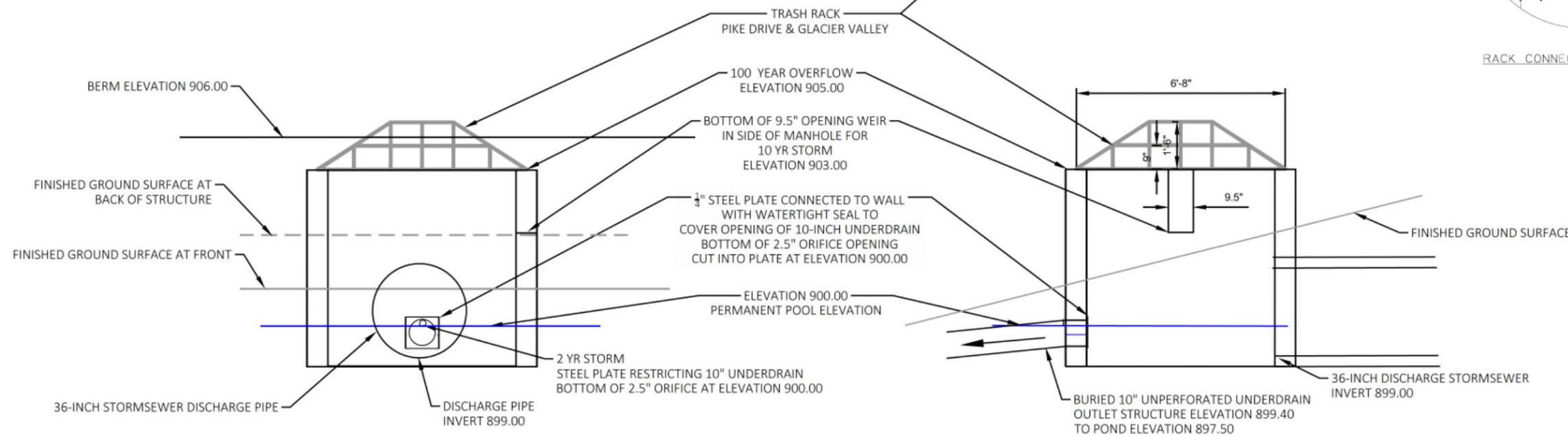
1" MINIMUM STRUCTURAL STEEL,
WELD AT EACH CONTACT POINT
GALVANIZE ENTIRE ASSEMBLY AS PER ASTM A123



TOP VIEW



RACK CONNECTOR DETAIL



FRONT VIEW

SIDE VIEW

STRUCTURE DETAIL FOR PIKE DRIVE ONLY

FILE NAME: G:\FITCHBURG\18013-000\CIVIL\3D\SHEETS\PLAN\CONSTRUCTION DETAILS\02002_CD.DWG PLOT BY: KLENGINEERING PLOT DATE: 10/25/2019 2:41 PM



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CITY OF FITCHBURG
CONSTRUCTION DETAIL
PEDESTRIAN OVERPASS & TEE BOX
REGRADE PLAN

Project No: 19-3488
Date: OCT 2019
Designed By: LMW
Drafted By: BJS
Checked By: LMW

Revisions: XX-XX-XXXX

SHEET NO.

38 OF 48

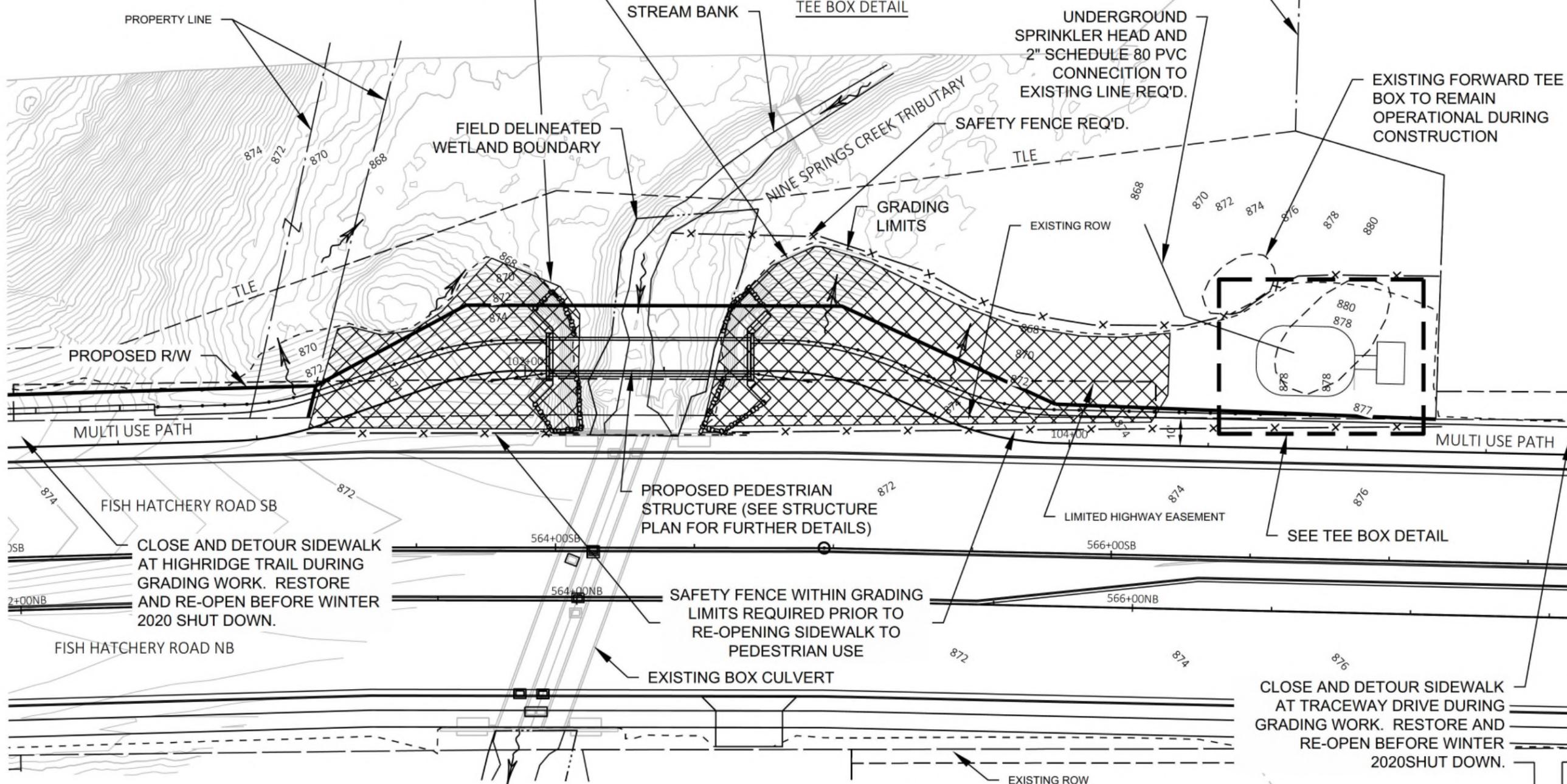
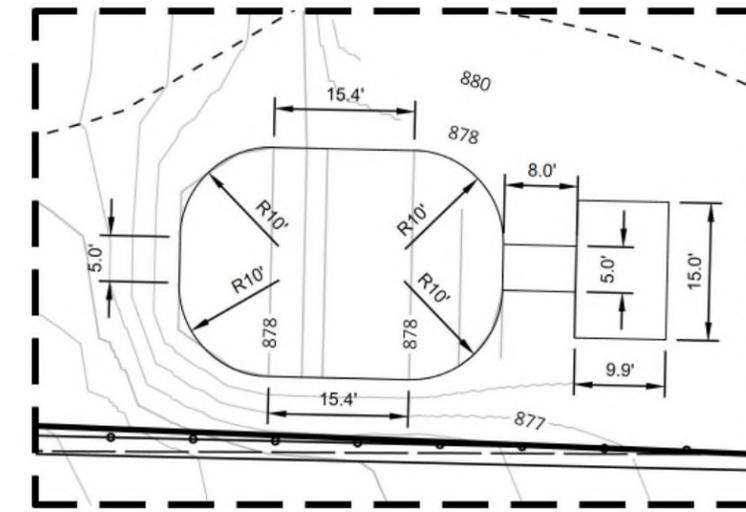


SCALE, FEET
0 20 40

NOTE:

STONE TRACK PAD REQUIRED WHERE VEHICLES INGRESS/EGRESS WORK AREAS.

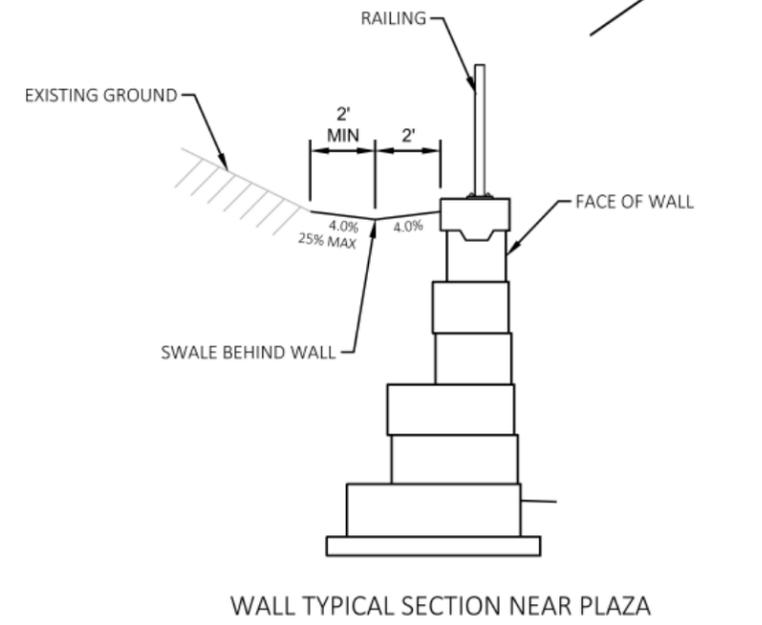
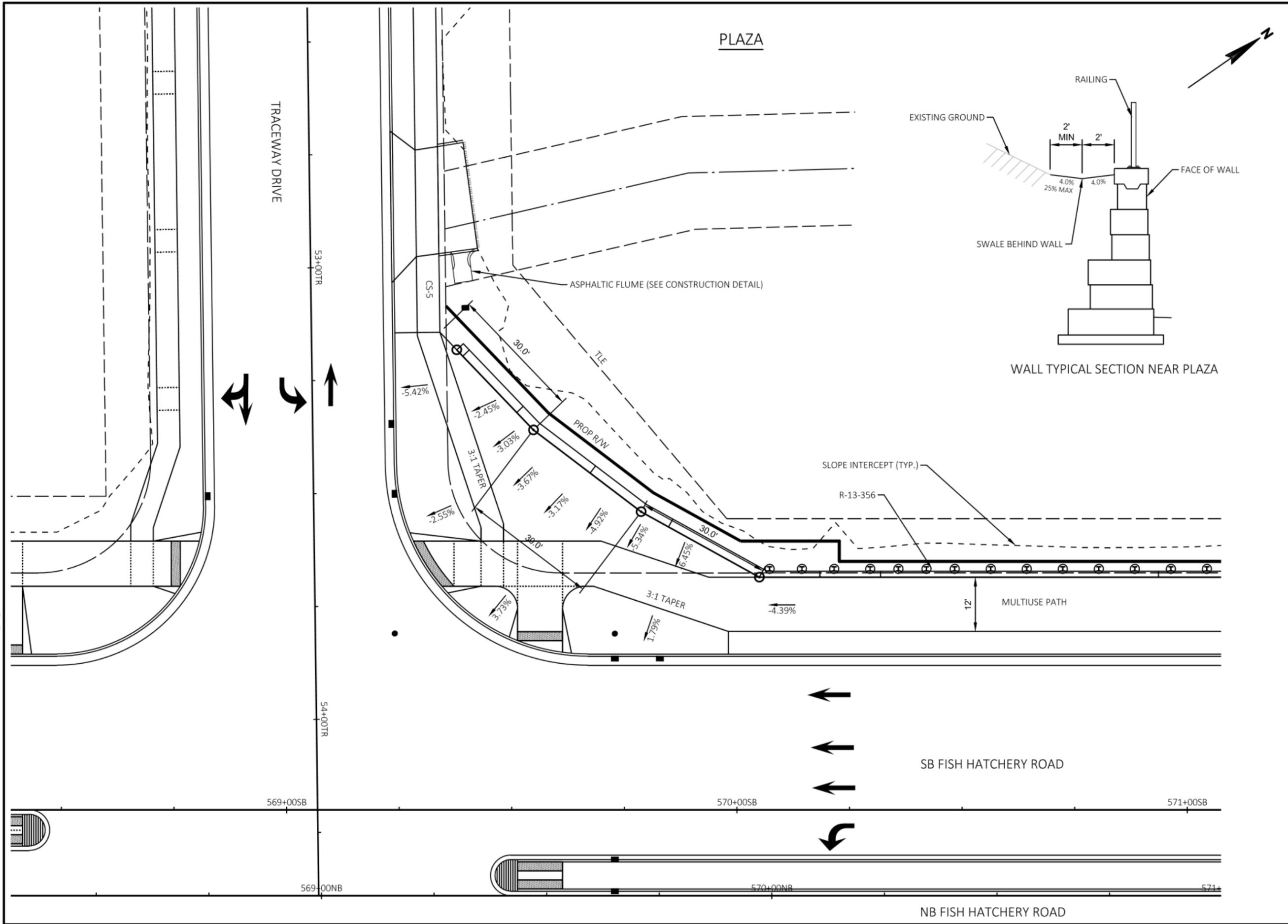
AREAS FOR EARLY CLEARING AND GRUBBING, EMBANKMENT/OVERBURDEN PLACEMENT, EROSION CONTROL MEASURES AND TURF RESTORATION IN 2020. SEE SPECIAL PROVISIONS FOR ADDITIONAL DETAILS



CLOSE AND DETOUR SIDEWALK AT TRACEWAY DRIVE DURING GRADING WORK. RESTORE AND RE-OPEN BEFORE WINTER 2020 SHUT DOWN.

FILE NAME : G:\FITCHBURG\18013-000\CIVIL\3D\SHEETS\PLAN\CONSTRUCTION DETAILS\FHR_CD_TEEBOX.DWG

PLOT BY : KLENGINEERING PLOT DATE : 10/25/2019 2:46 PM



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CITY OF FITCHBURG
CONSTRUCTION DETAILS

Project No:	19-3488
Date:	OCT 2019
Designed By:	LMW
Drafted By:	STD
Checked By:	LMW
Revisions:	XX-XX-XXXX

SHEET NO.
39 OF 48



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Phone: (800)-810-4012

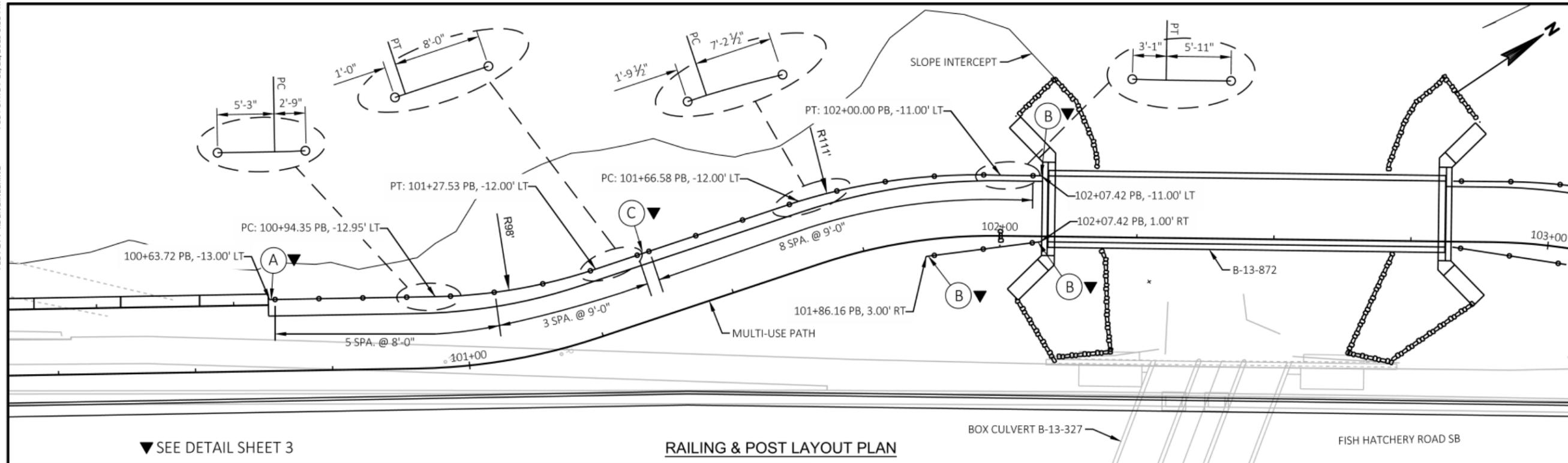
http://klengineering.com

email@klengineering.com

PLOT DATE : 10/21/2019 3:35 PM

PLOT BY : KL ENGINEERING

FILE NAME : G:\FITCHBRG\18013-000\CIVIL\3D\SHEETS\PLAN\CONSTRUCTION DETAILS\FHR_CD_PED_RAILING.DWG



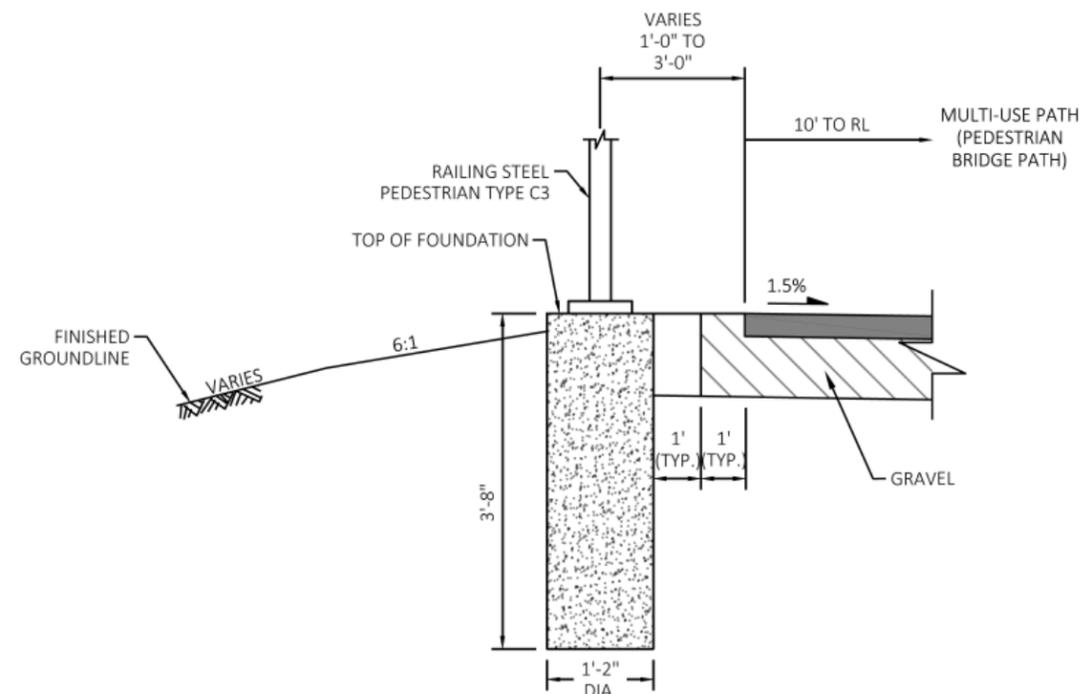
▼ SEE DETAIL SHEET 3

RAILING & POST LAYOUT PLAN

SHAFT FOUNDATION		
STATION*	OFFSET*	ELEVATION**
100+64.72PB	13.00' LT	873.59
100+72.72PB	13.00' LT	873.35
100+80.72PB	13.00' LT	873.24
100+88.72PB	13.00' LT	873.12
100+97.51PB	12.86' LT	873.07
101+06.55PB	12.59' LT	873.08
101+16.70PB	12.28' LT	873.19
101+26.53PB	12.01' LT	873.36
101+35.52PB	12.00' LT	873.55
101+37.77PB	12.00' LT	873.61
101+46.77PB	12.00' LT	873.88
101+55.77PB	12.00' LT	874.21
101+64.77PB	12.00' LT	874.60
101+73.00PB	11.81' LT	874.95
101+81.06PB	11.57' LT	875.26
101+89.13PB	11.33' LT	875.49
101+97.22PB	11.08' LT	875.62
102+05.92PB	11.00' LT	875.66

SHAFT FOUNDATION		
STATION*	OFFSET*	ELEVATION**
101+87.71PB	2.99' RT	875.13
101+96.94PB	2.42' RT	875.37
102+05.93PB	1.21' RT	875.48

* SHAFT FOUNDATION STATION AND OFFSET MEASURED TO CENTER OF RAILING POST
 ** SHAFT FOUNDATION ELEVATION MEASURED AT TOP OF FOUNDATION



SHAFT FOUNDATION DETAIL

NOTES

ALL CONCRETE TO HAVE f'c = 3500 PSI

COST FOR CONCRETE SHALL BE INCIDENTAL TO THE BID ITEM "RAILING STEEL PEDESTRIAN TYPE C3 MULTI-USE PATH"

CITY OF FITCHBURG

CONSTRUCTION DETAIL -
PEDESTRIAN RAILING

Project No: 19-3488
 Date: OCT 2019
 Designed By: AKR
 Drafted By: AKR
 Checked By: LMW

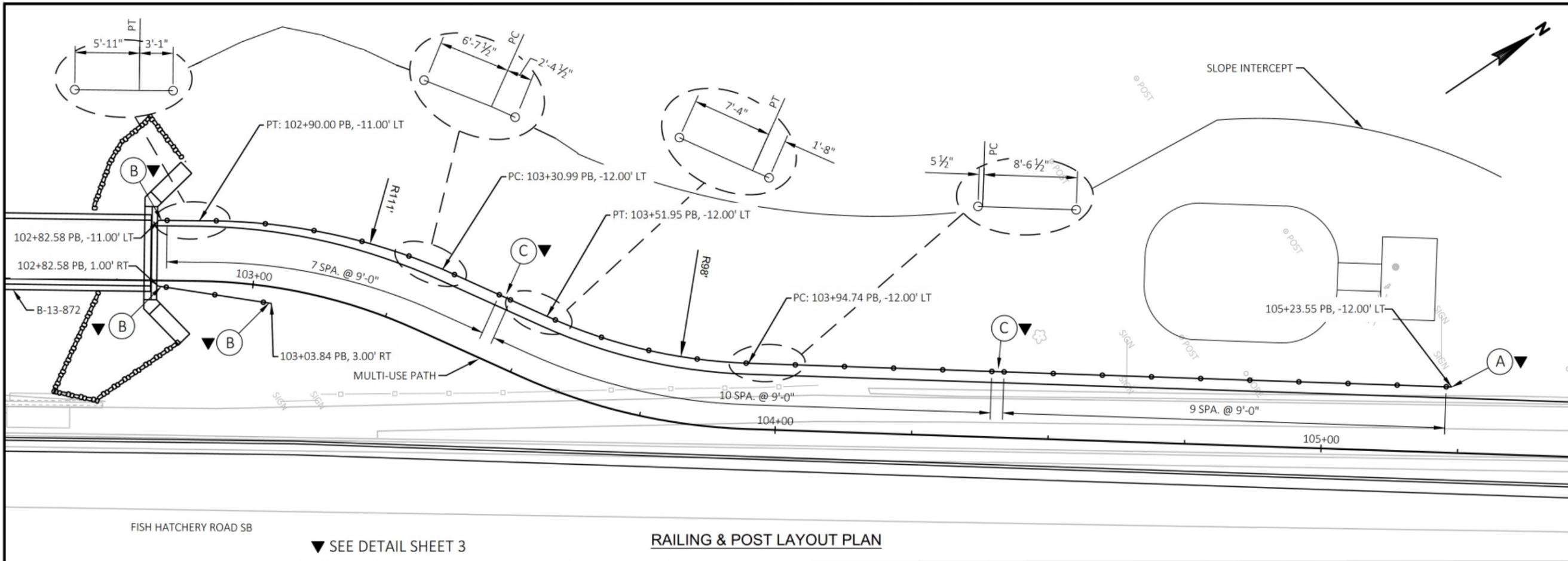
Revisions: XX-XX-XXXX

SHEET NO.

40 OF 48

PLOT DATE : 10/21/2019 3:35 PM

PLOT BY : KL ENGINEERING



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CITY OF FITCHBURG

CONSTRUCTION DETAIL -
 PEDESTRIAN RAILING

▼ SEE DETAIL SHEET 3

RAILING & POST LAYOUT PLAN

SHAFT FOUNDATION		
STATION*	OFFSET*	ELEVATION**
102+84.08PB	11.00' LT	875.66
102+92.78PB	11.07' LT	875.63
103+00.87PB	11.27' LT	875.54
103+08.95PB	11.47' LT	875.39
103+17.02PB	11.67' LT	875.17
103+25.07PB	11.86' LT	874.94
103+33.37PB	12.00' LT	874.69
103+42.37PB	12.00' LT	874.43
103+44.62PB	12.00' LT	874.36
103+53.82PB	12.00' LT	874.12
103+63.93PB	12.00' LT	873.92
103+74.03PB	12.00' LT	873.79
103+84.14PB	12.00' LT	873.73
103+94.24PB	12.00' LT	873.75
104+03.30PB	12.00' LT	873.82

SHAFT FOUNDATION		
STATION*	OFFSET*	ELEVATION**
104+12.30PB	12.00' LT	873.96
104+21.30PB	12.00' LT	874.15
104+30.30PB	12.00' LT	874.38
104+39.30PB	12.00' LT	874.62
104+41.55PB	12.00' LT	874.67
104+50.55PB	12.00' LT	874.92
104+59.55PB	12.00' LT	875.17
104+68.55PB	12.00' LT	875.43
104+77.55PB	12.00' LT	875.70
104+86.55PB	12.00' LT	875.99
104+95.55PB	12.00' LT	876.28
105+04.55PB	12.00' LT	876.59
105+13.55PB	12.00' LT	876.90
105+22.55PB	12.00' LT	877.23

SHAFT FOUNDATION		
STATION*	OFFSET*	ELEVATION**
102+84.07PB	1.21' RT	875.48
102+93.06PB	2.42' RT	875.39
103+02.29PB	2.99' RT	875.20

* SHAFT FOUNDATION STATION AND OFFSET MEASURED TO CENTER OF RAILING POST
 ** SHAFT FOUNDATION ELEVATION MEASURED AT TOP OF FOUNDATION

Project No: 19-3488
 Date: OCT 2019
 Designed By: AKR
 Drafted By: AKR
 Checked By: LMW

Revisions: XX-XX-XXXX

SHEET NO.

41 OF 48

FILE NAME : G:\FITCHBURG\18013-000\CIVIL\3D\SHEETS\PLAN\CONSTRUCTION DETAILS\FHR_CD_PED_RAILING.DWG



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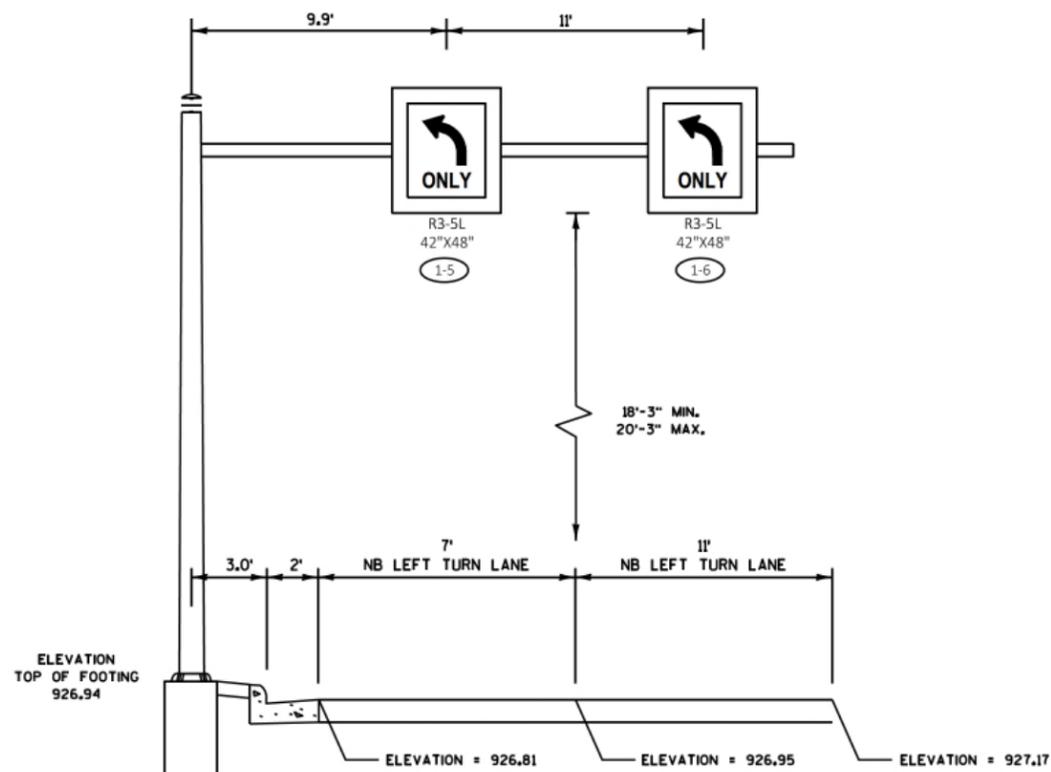
Phone: (608) 663-1218

Phone: (800)-810-4012

http://klengineering.com

email@klengineering.com

LEGEND
XXXX DENOTES SIGN NUMBER



OVERHEAD SIGN SUPPORT DETAIL

S-13-580
STA 523+13'NB'
(SIGN FACING SOUTHWEST)

NOTE:

FOOTING SHALL BE PER WISDOT STANDARD DETAIL DRAWING, "30" DIAMETER CANTILEVER OVERHEAD SIGN SUPPORT BASE".

NOTE:

CONTRACTOR SHALL:

- SUBMIT SHOP DRAWINGS OF OVERHEAD SIGN SUPPORT, FOOTING IS INCIDENTAL TO OVERHEAD SIGN SUPPORT.
- PROVIDE DESIGN CALCULATIONS.
- SHOW SIGNS ON SHOP DRAWINGS
- I.D. PLAQUE INCIDENTAL TO OVERHEAD SIGN SUPPORT
- 6 ANCHOR RODS PER STANDARD DETAIL DRAWING ARE REQUIRED.

SIGN SUPPORT BEAMS ARE REQUIRED PER SPECIFICATIONS AND INCIDENTAL TO THE SIGN.

GENERAL NOTES:

DRAWINGS NOT TO SCALE

DESIGN ACCORDING TO AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SIGN SUPPORTS FOR HIGHWAY SIGNS, LUMINARIES AND TRAFFIC SIGNALS".

THE SIGN STRUCTURES SHALL BE DESIGNED TO SUPPORT THE SIGN SHOWN.

WIND VELOCITY PER WISDOT STD SPECIFICATIONS.

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 3" CLEAR UNLESS DETAILED OTHERWISE.

METAL SUPPORT ELEMENTS SHALL BE BLACK IN COLOR.

ALLOWABLE DESIGN STRESSES

CONCRETE MASONRY	FC = 3,500 PSI
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60	FY = 60,000 PSI

FOUNDATION DATA

ALLOWABLE SOIL BEARING PRESSURE	3,000 PSF
---------------------------------	-----------

CITY OF FITCHBURG

CONSTRUCTION DETAILS

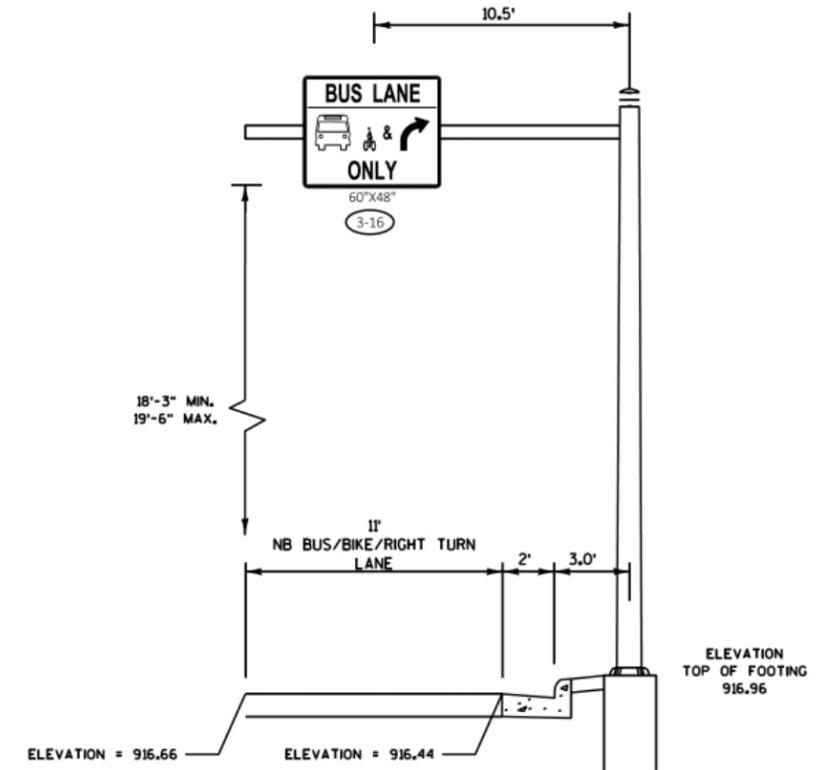
Project No:	19-3488
Date:	OCT 2019
Designed By:	LMW
Drafted By:	BDD
Checked By:	LMW

Revisions: XX-XX-XXXX

SHEET NO.

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LEGEND
 (XXX) DENOTES SIGN NUMBER



OVERHEAD SIGN SUPPORT DETAIL

S-13-581
 STA 530+40'NB'
 (SIGN FACING SOUTHWEST)

NOTE:

FOOTING SHALL BE PER WISDOT STANDARD DETAIL DRAWING, "24" DIAMETER CANTILEVER OVERHEAD SIGN SUPPORT BASE".

GENERAL NOTES:

DRAWINGS NOT TO SCALE

DESIGN ACCORDING TO AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SIGN SUPPORTS FOR HIGHWAY SIGNS, LUMINARIES AND TRAFFIC SIGNALS".

THE SIGN STRUCTURES SHALL BE DESIGNED TO SUPPORT THE SIGN SHOWN.

WIND VELOCITY PER WISDOT STD SPECIFICATIONS.

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 3" CLEAR UNLESS DETAILED OTHERWISE.

METAL SUPPORT ELEMENTS SHALL BE BLACK IN COLOR.

NOTE:

CONTRACTOR SHALL:

- SUBMIT SHOP DRAWINGS OF OVERHEAD SIGN SUPPORT, FOOTING IS INCIDENTAL TO OVERHEAD SIGN SUPPORT.
- PROVIDE DESIGN CALCULATIONS.
- SHOW SIGNS ON SHOP DRAWINGS
- I.D. PLAQUE INCIDENTAL TO OVERHEAD SIGN SUPPORT
- 6 ANCHOR RODS PER STANDARD DETAIL DRAWING ARE REQUIRED.

SIGN SUPPORT BEAMS ARE REQUIRED PER SPECIFICATIONS AND INCIDENTAL TO THE SIGN.

ALLOWABLE DESIGN STRESSES	
CONCRETE MASONRY	FC = 3,500 PSI
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60	FY = 60,000 PSI
FOUNDATION DATA	
ALLOWABLE SOIL BEARING PRESSURE	3,000 PSF



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CITY OF FITCHBURG

CONSTRUCTION DETAILS

Project No: 19-3488
 Date: OCT 2019
 Designed By: LMW
 Drafted By: BDD
 Checked By: LMW

Revisions: XX-XX-XXXX

SHEET NO.

44 OF 48

PLOT DATE : 10/21/2019 3:39 PM

PLOT BY : KL ENGINEERING

FILE NAME : G:\FITCHBURG\18013-000\CIVIL\3D\SHEETS\PLAN\CONSTRUCTION DETAILS\PHR_CD_OVERHEAD SIGN SUPPORTS.DWG



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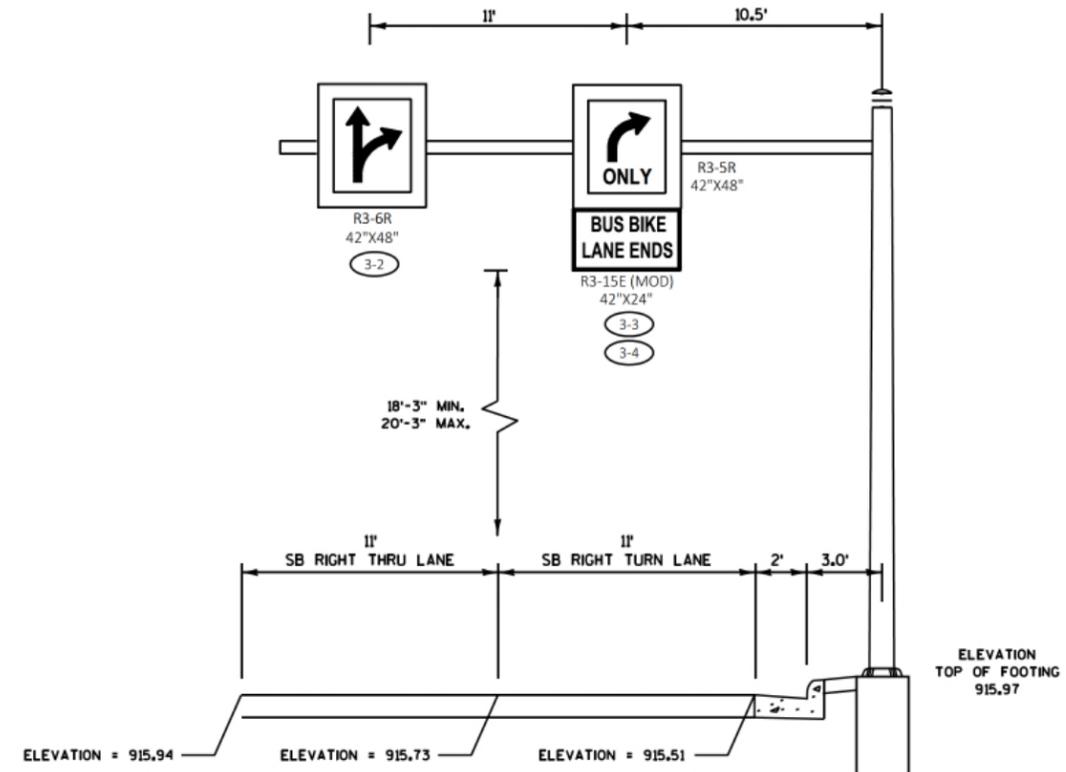
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Phone: (800)-810-4012

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email@klengineering.com

LEGEND
XXXX DENOTES SIGN NUMBER



OVERHEAD SIGN SUPPORT DETAIL

S-13-582
STA 532+25'SB'
(SIGN FACING NORTHEAST)

NOTE:

FOOTING SHALL BE PER WISDOT STANDARD DETAIL DRAWING. "30" DIAMETER CANTILEVER OVERHEAD SIGN SUPPORT BASE".

NOTE:

CONTRACTOR SHALL:

- SUBMIT SHOP DRAWINGS OF OVERHEAD SIGN SUPPORT, FOOTING IS INCIDENTAL TO OVERHEAD SIGN SUPPORT.
- PROVIDE DESIGN CALCULATIONS.
- SHOW SIGNS ON SHOP DRAWINGS
- I.D. PLAQUE INCIDENTAL TO OVERHEAD SIGN SUPPORT
- 6 ANCHOR RODS PER STANDARD DETAIL DRAWING ARE REQUIRED.

SIGN SUPPORT BEAMS ARE REQUIRED PER SPECIFICATIONS AND INCIDENTAL TO THE SIGN.

GENERAL NOTES:

DRAWINGS NOT TO SCALE

DESIGN ACCORDING TO AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SIGN SUPPORTS FOR HIGHWAY SIGNS, LUMINARIES AND TRAFFIC SIGNALS".

THE SIGN STRUCTURES SHALL BE DESIGNED TO SUPPORT THE SIGN SHOWN.

WIND VELOCITY PER WISDOT STD SPECIFICATIONS.

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 3" CLEAR UNLESS DETAILED OTHERWISE.

METAL SUPPORT ELEMENTS SHALL BE BLACK IN COLOR.

ALLOWABLE DESIGN STRESSES

CONCRETE MASONRY FC = 3,500 PSI
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60 FY = 60,000 PSI

FOUNDATION DATA

ALLOWABLE SOIL BEARING PRESSURE 3,000 PSF

CITY OF FITCHBURG

CONSTRUCTION DETAILS

Project No: 19-3488
Date: OCT 2019
Designed By: LMW
Drafted By: BDD
Checked By: LMW

Revisions: XX-XX-XXXX

SHEET NO.

45 OF 48

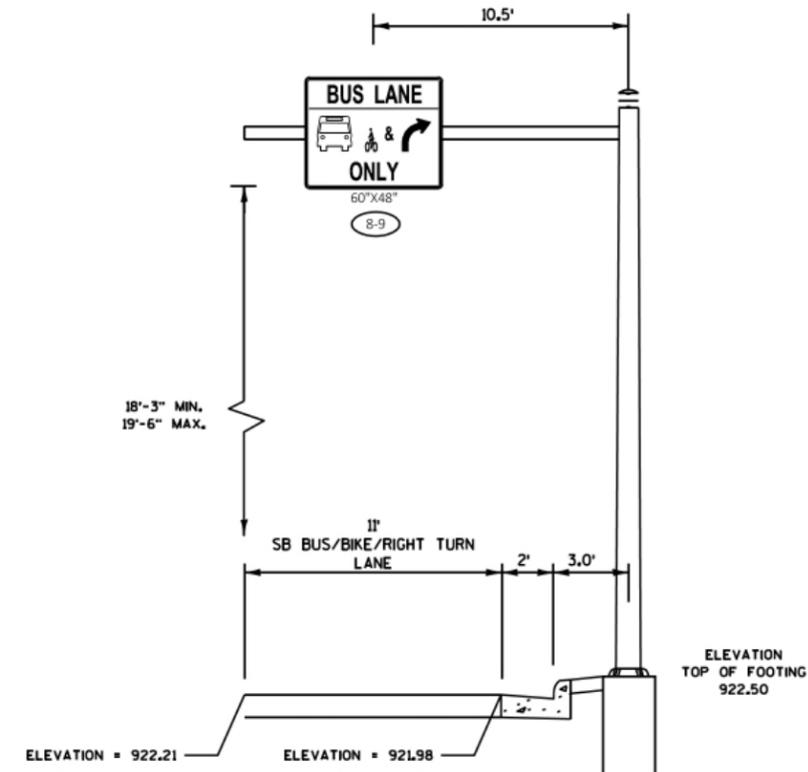


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LEGEND

(XXXX) DENOTES SIGN NUMBER



OVERHEAD SIGN SUPPORT DETAIL

S-13-583
 STA 577+50'SB'
 (SIGN FACING NORTHEAST)

NOTE:

FOOTING SHALL BE PER WISDOT STANDARD DETAIL DRAWING, "24" DIAMETER CANTILEVER OVERHEAD SIGN SUPPORT BASE".

GENERAL NOTES:

DRAWINGS NOT TO SCALE

DESIGN ACCORDING TO AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SIGN SUPPORTS FOR HIGHWAY SIGNS, LUMINARIES AND TRAFFIC SIGNALS".

THE SIGN STRUCTURES SHALL BE DESIGNED TO SUPPORT THE SIGN SHOWN.

WIND VELOCITY PER WISDOT STD SPECIFICATIONS.

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 3" CLEAR UNLESS DETAILED OTHERWISE.

METAL SUPPORT ELEMENTS SHALL BE BLACK IN COLOR.

NOTE:

CONTRACTOR SHALL:

- SUBMIT SHOP DRAWINGS OF OVERHEAD SIGN SUPPORT, FOOTING IS INCIDENTAL TO OVERHEAD SIGN SUPPORT.
- PROVIDE DESIGN CALCULATIONS.
- SHOW SIGNS ON SHOP DRAWINGS
- I.D. PLAQUE INCIDENTAL TO OVERHEAD SIGN SUPPORT
- 6 ANCHOR RODS PER STANDARD DETAIL DRAWING ARE REQUIRED.

SIGN SUPPORT BEAMS ARE REQUIRED PER SPECIFICATIONS AND INCIDENTAL TO THE SIGN.

ALLOWABLE DESIGN STRESSES

CONCRETE MASONRY FC = 3,500 PSI
 HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60 FY = 60,000 PSI

FOUNDATION DATA

ALLOWABLE SOIL BEARING PRESSURE 3,000 PSF

CITY OF FITCHBURG

CONSTRUCTION DETAILS

Project No: 19-3488
 Date: OCT 2019
 Designed By: LMW
 Drafted By: BDD
 Checked By: LMW

Revisions: XX-XX-XXXX

SHEET NO.

46 OF 48



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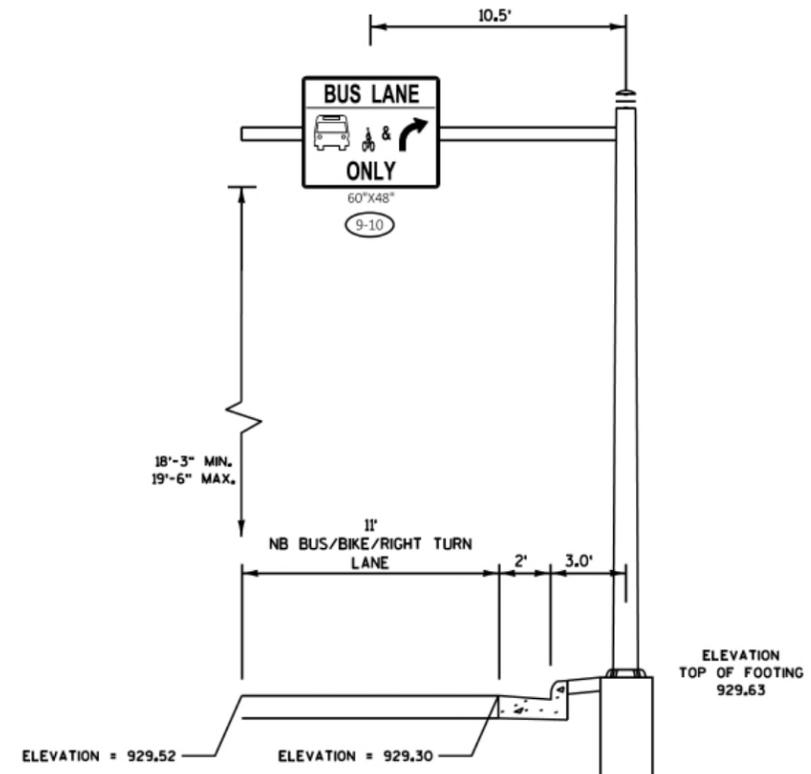
Phone: (800)-810-4012

http://klengineering.com

email@klengineering.com

LEGEND

(XXX) DENOTES SIGN NUMBER



OVERHEAD SIGN SUPPORT DETAIL

S-13-584
STA 582+00'NB'
(SIGN FACING SOUTHWEST)

NOTE:

FOOTING SHALL BE PER WISDOT STANDARD DETAIL DRAWING, "24" DIAMETER CANTILEVER OVERHEAD SIGN SUPPORT BASE".

GENERAL NOTES:

DRAWINGS NOT TO SCALE

DESIGN ACCORDING TO AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SIGN SUPPORTS FOR HIGHWAY SIGNS, LUMINARIES AND TRAFFIC SIGNALS".

THE SIGN STRUCTURES SHALL BE DESIGNED TO SUPPORT THE SIGN SHOWN.

WIND VELOCITY PER WISDOT STD SPECIFICATIONS.

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 3" CLEAR UNLESS DETAILED OTHERWISE.

METAL SUPPORT ELEMENTS SHALL BE BLACK IN COLOR.

NOTE:

CONTRACTOR SHALL:

- SUBMIT SHOP DRAWINGS OF OVERHEAD SIGN SUPPORT, FOOTING IS INCIDENTAL TO OVERHEAD SIGN SUPPORT.
- PROVIDE DESIGN CALCULATIONS.
- SHOW SIGNS ON SHOP DRAWINGS
- I.D. PLAQUE INCIDENTAL TO OVERHEAD SIGN SUPPORT
- 6 ANCHOR RODS PER STANDARD DETAIL DRAWING ARE REQUIRED.

SIGN SUPPORT BEAMS ARE REQUIRED PER SPECIFICATIONS AND INCIDENTAL TO THE SIGN.

ALLOWABLE DESIGN STRESSES

CONCRETE MASONRY FC = 3,500 PSI
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60 FY = 60,000 PSI

FOUNDATION DATA

ALLOWABLE SOIL BEARING PRESSURE 3,000 PSF

CITY OF FITCHBURG

CONSTRUCTION DETAILS

Project No: 19-3488
Date: OCT 2019
Designed By: LMW
Drafted By: BDD
Checked By: LMW

Revisions: XX-XX-XXXX

SHEET NO.

47 OF 48



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[A] Better Experience

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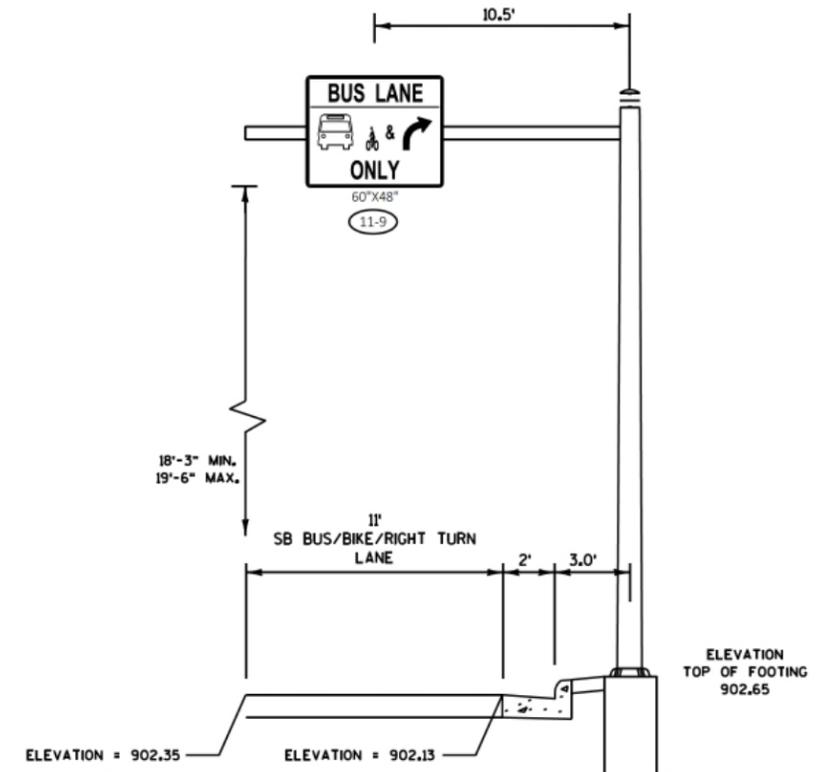
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LEGEND
 (XXXX) DENOTES SIGN NUMBER



OVERHEAD SIGN SUPPORT DETAIL

S-13-585
 STA 596+90'SB'
 (SIGN FACING NORTHEAST)

NOTE:

FOOTING SHALL BE PER WISDOT STANDARD DETAIL DRAWING, "24" DIAMETER CANTILEVER OVERHEAD SIGN SUPPORT BASE".

GENERAL NOTES:

DRAWINGS NOT TO SCALE

DESIGN ACCORDING TO AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SIGN SUPPORTS FOR HIGHWAY SIGNS, LUMINARIES AND TRAFFIC SIGNALS".

THE SIGN STRUCTURES SHALL BE DESIGNED TO SUPPORT THE SIGN SHOWN.

WIND VELOCITY PER WISDOT STD SPECIFICATIONS.

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 3" CLEAR UNLESS DETAILED OTHERWISE.

METAL SUPPORT ELEMENTS SHALL BE BLACK IN COLOR.

NOTE:

CONTRACTOR SHALL:

- SUBMIT SHOP DRAWINGS OF OVERHEAD SIGN SUPPORT, FOOTING IS INCIDENTAL TO OVERHEAD SIGN SUPPORT.
- PROVIDE DESIGN CALCULATIONS.
- SHOW SIGNS ON SHOP DRAWINGS
- I.D. PLAQUE INCIDENTAL TO OVERHEAD SIGN SUPPORT
- 6 ANCHOR RODS PER STANDARD DETAIL DRAWING ARE REQUIRED.

SIGN SUPPORT BEAMS ARE REQUIRED PER SPECIFICATIONS AND INCIDENTAL TO THE SIGN.

ALLOWABLE DESIGN STRESSES

CONCRETE MASONRY FC = 3,500 PSI
 HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60 FY = 60,000 PSI

FOUNDATION DATA

ALLOWABLE SOIL BEARING PRESSURE 3,000 PSF

CITY OF FITCHBURG

CONSTRUCTION DETAILS

Project No: 19-3488
 Date: OCT 2019
 Designed By: LMW
 Drafted By: BDD
 Checked By: LMW

Revisions: XX-XX-XXXX

SHEET NO.

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