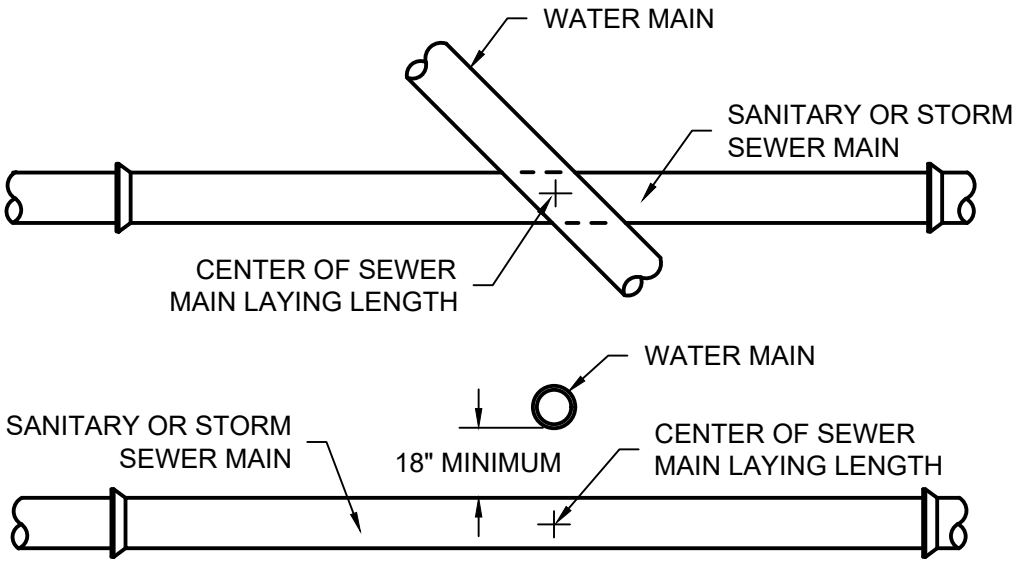


NOTES:

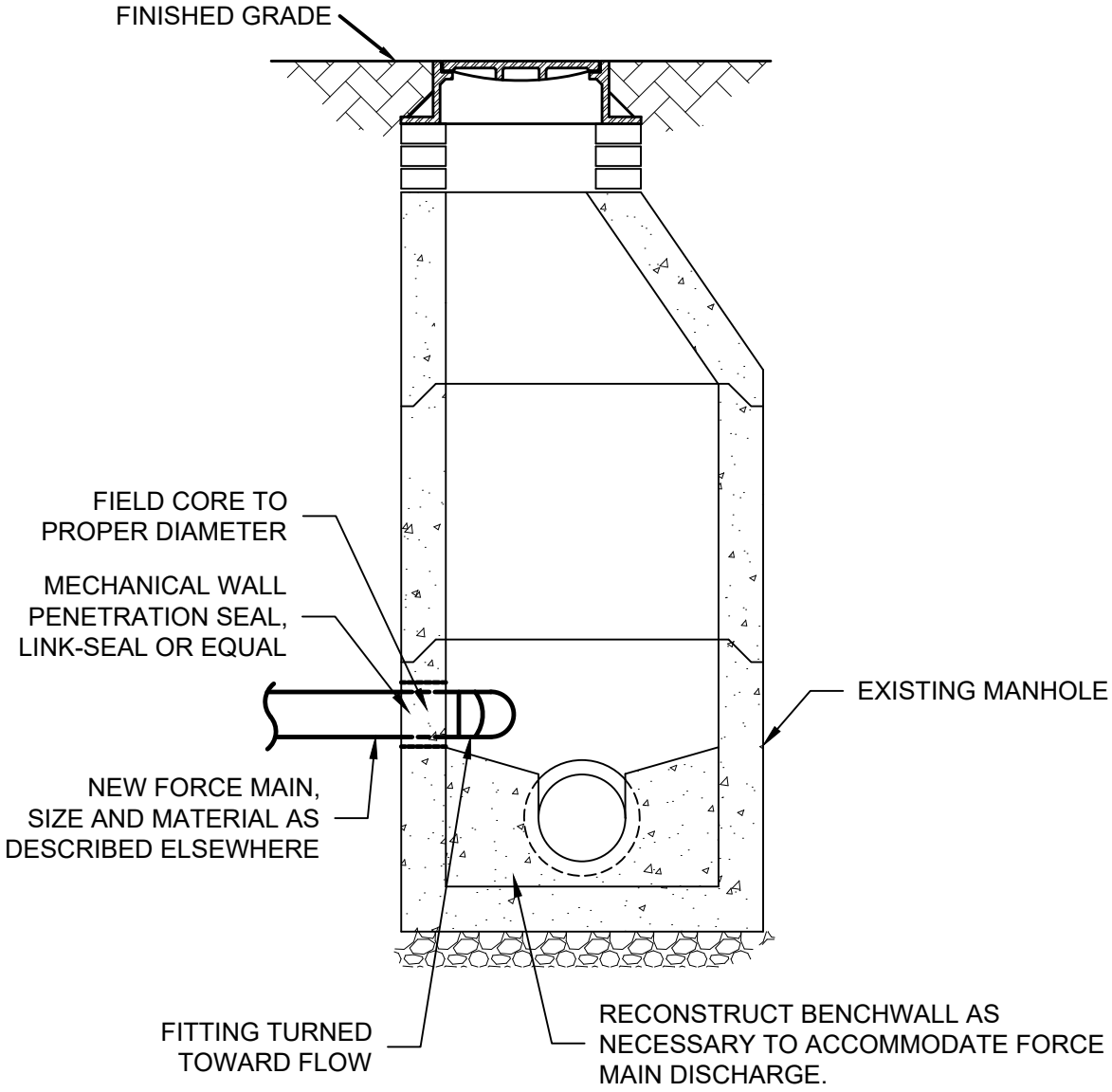
1. WATER MAIN AND SEWER MINIMUM SEPARATION: 18" VERTICAL SEPARATION 10'-0" HORIZONTAL SEPARATION.
2. WHERE WATER MAIN AND SEWER SEPARATION IS LESS THAN 18" VERTICAL OR 10' HORIZONTAL, THE SEWER MUST BE DUCTILE IRON OR SDR-21 PVC.

MINIMUM CROSSOVER AND SEPARATION REQUIREMENTS FOR SEWER AND WATER MAINS

SCALE: NONE

HAMILTON COUNTY, INDIANA
HAMILTON COUNTY REGIONAL UTILITY DISTRICT

DETAIL NO. SS-1
DATE: OCTOBER 2024

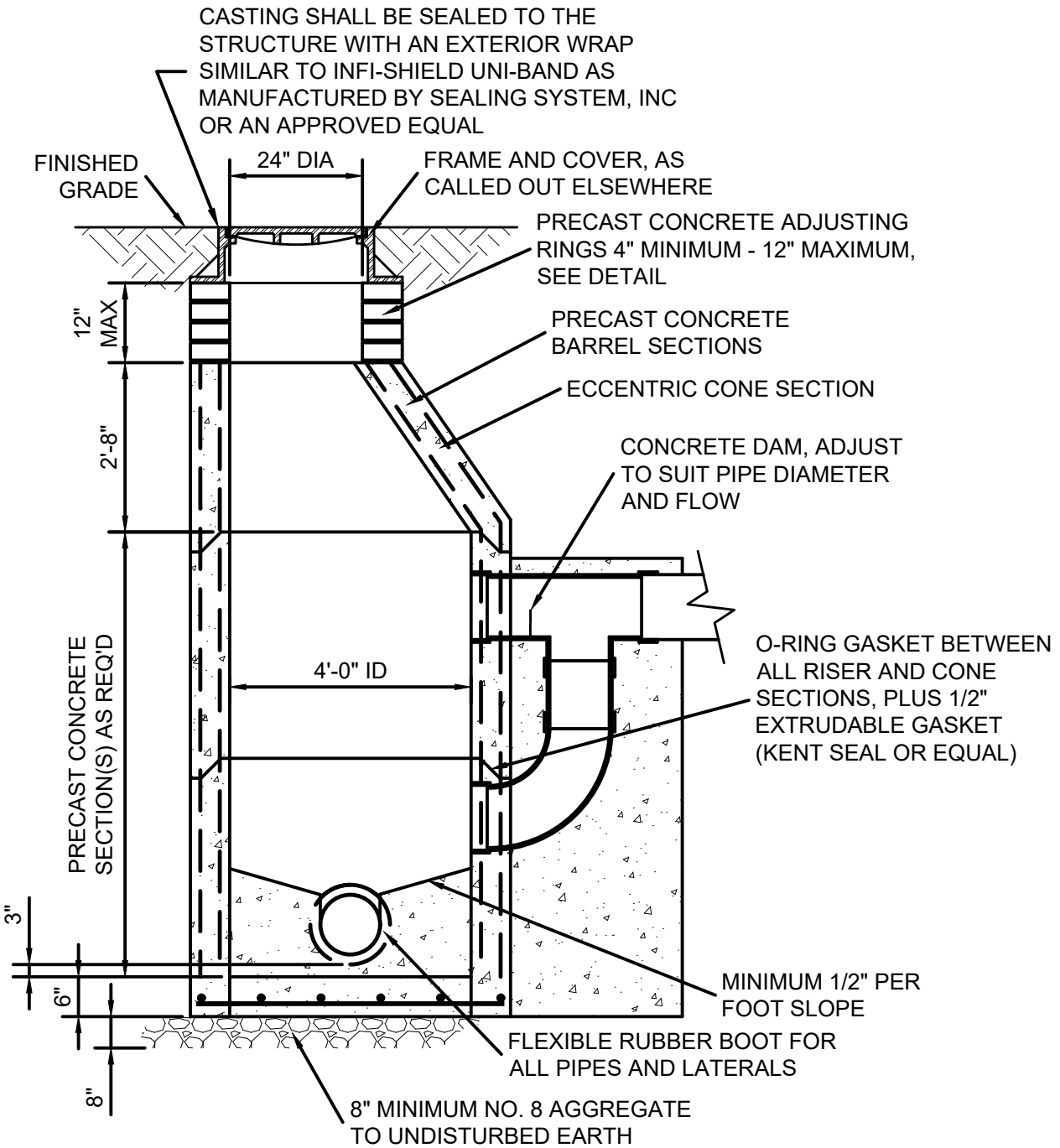


FORCE MAIN CONNECTION AT MANHOLE

SCALE: NONE

HAMILTON COUNTY, INDIANA
HAMILTON COUNTY REGIONAL UTILITY DISTRICT

DETAIL NO. SS-2
DATE: OCTOBER 2024

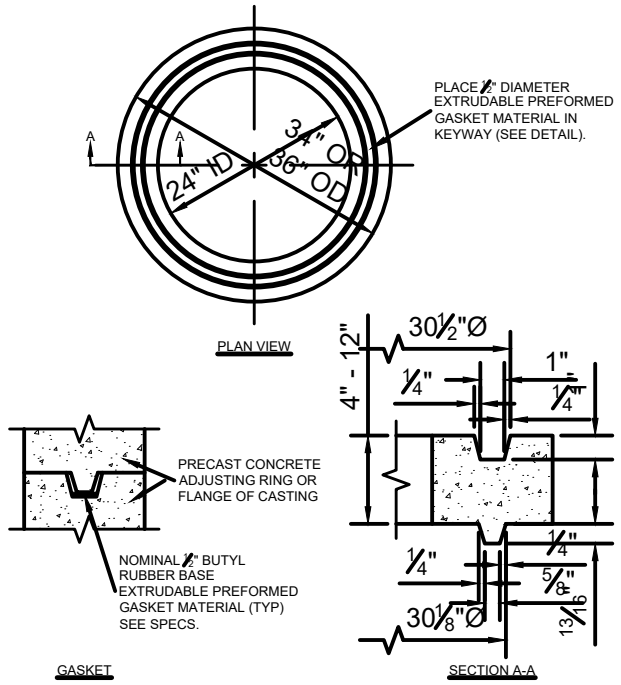


STANDARD SANITARY SEWER DROP MANHOLE

SCALE: NONE

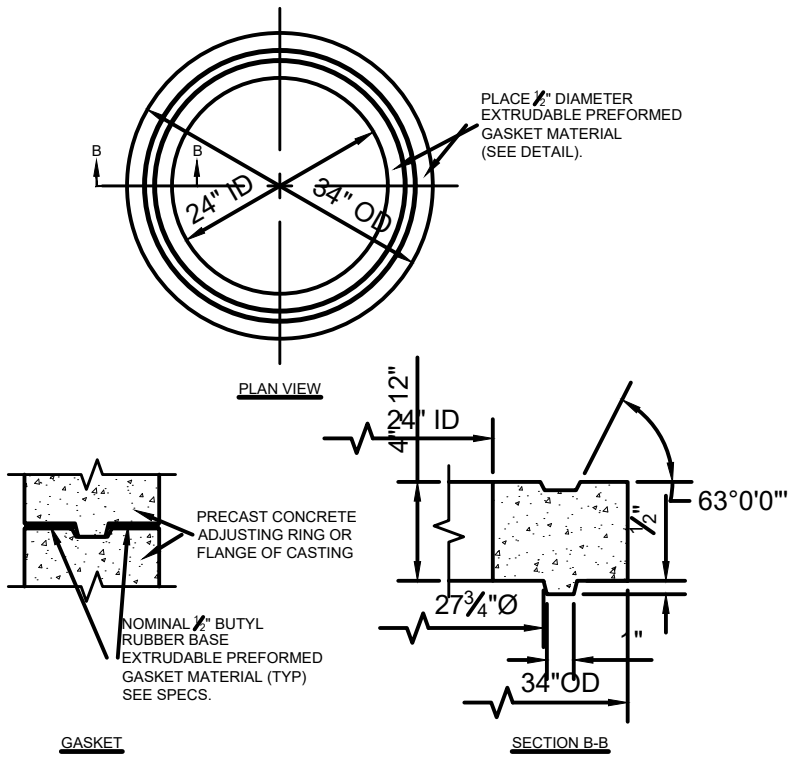
HAMILTON COUNTY, INDIANA
HAMILTON COUNTY REGIONAL UTILITY DISTRICT

DETAIL NO. SS-3
DATE: OCTOBER 2024



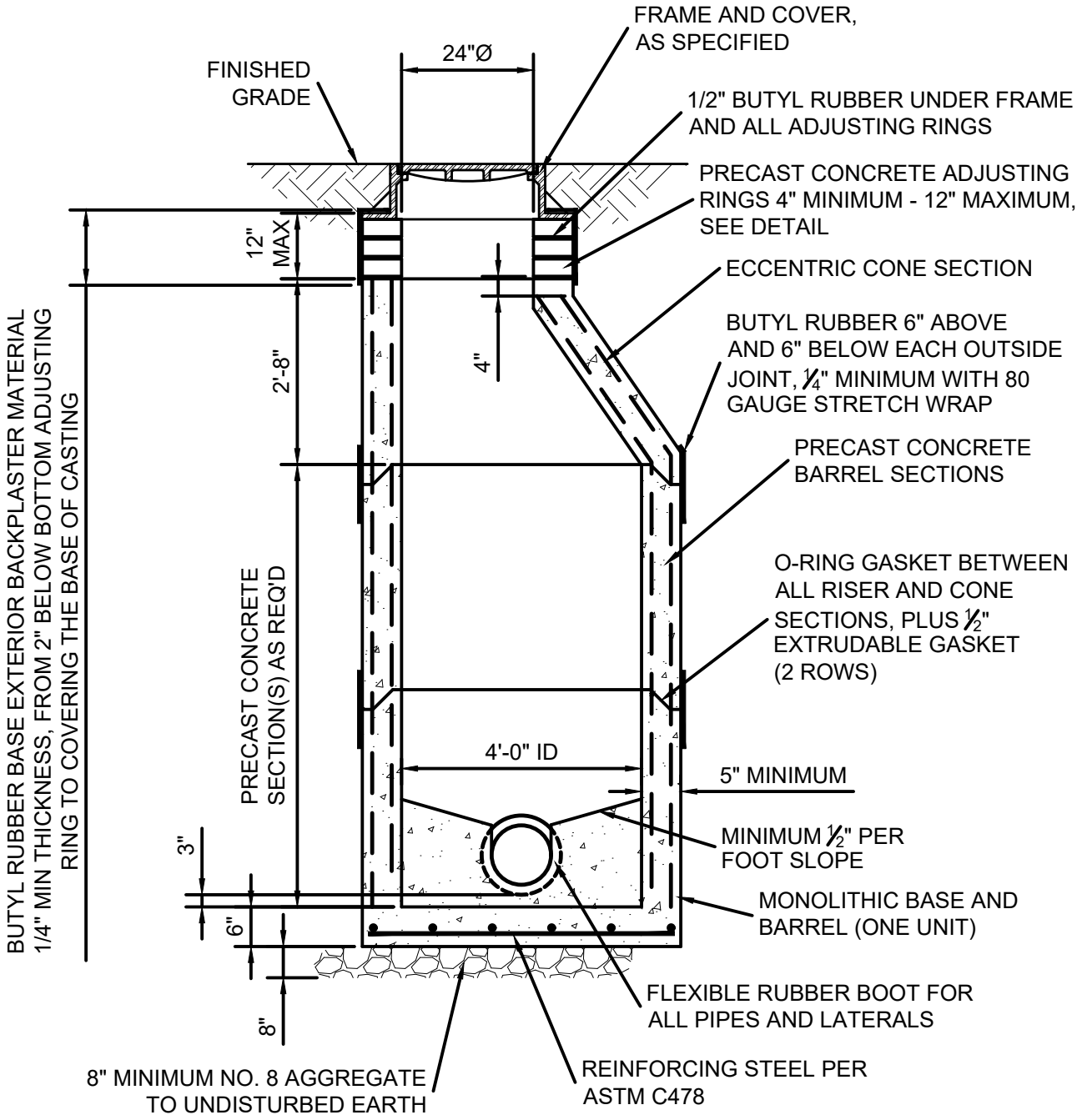
ADJUSTING RING (OPTION 1)

SCALE: NONE



ADJUSTING RING (OPTION 2)

SCALE: NONE

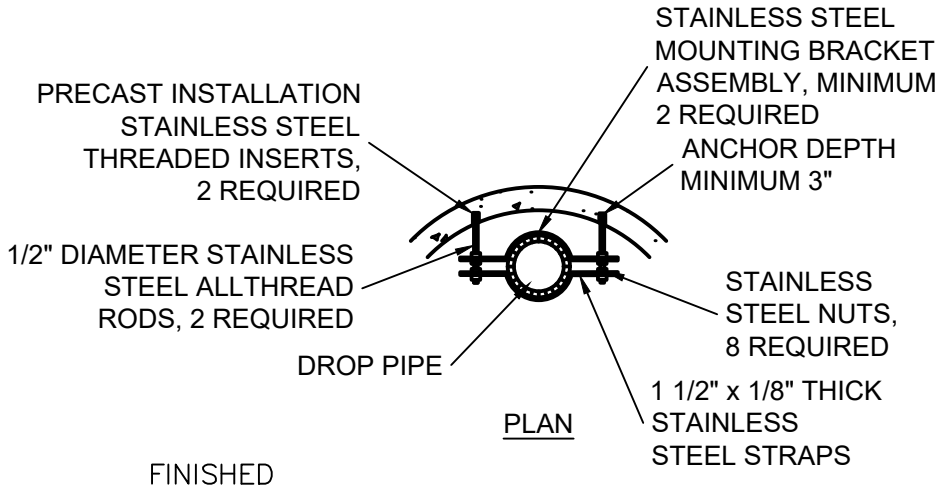


STANDARD SANITARY SEWER MANHOLE

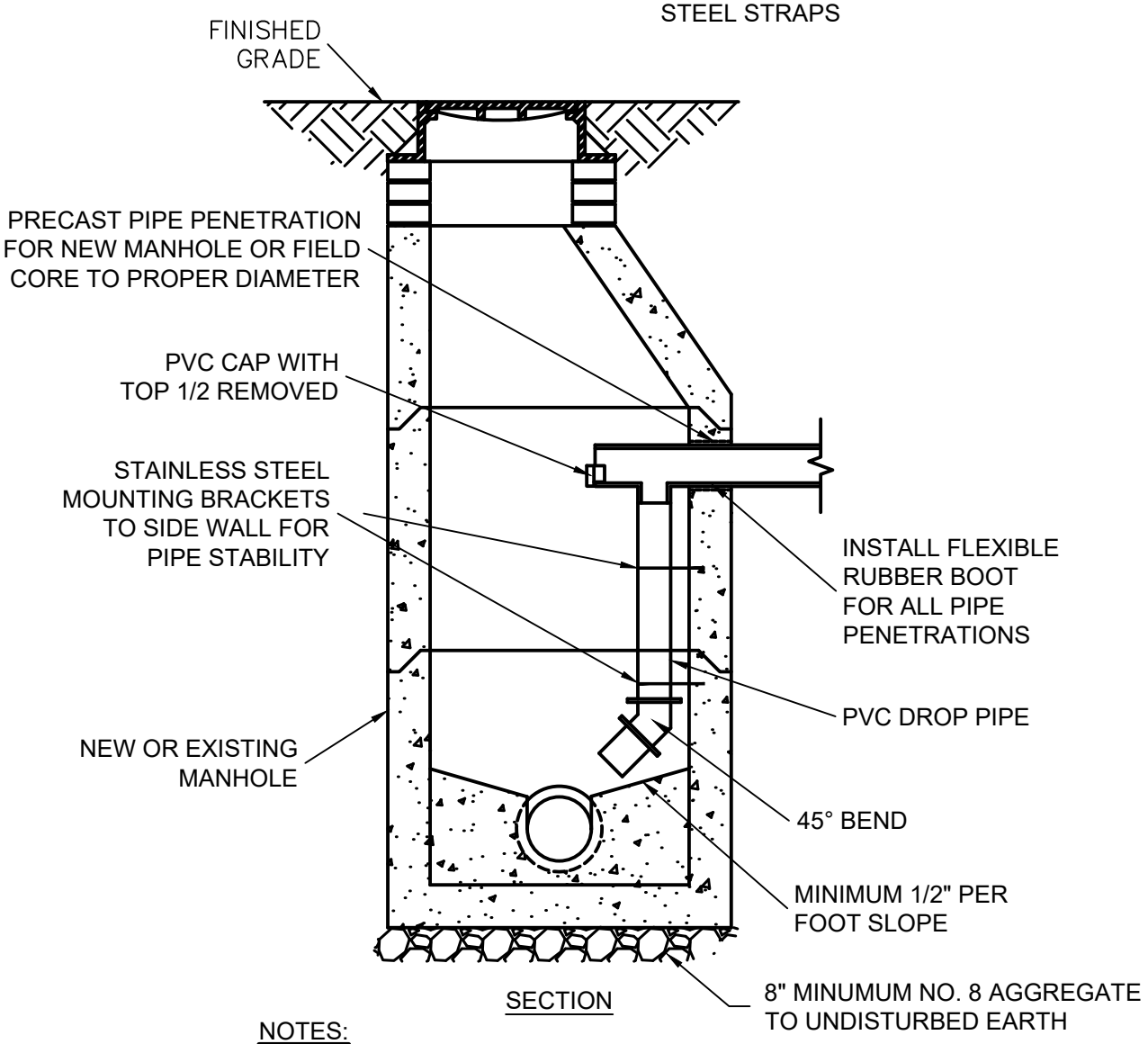
SCALE: NONE

HAMILTON COUNTY, INDIANA
HAMILTON COUNTY REGIONAL UTILITY DISTRICT

DETAIL NO. SS-5
DATE: OCTOBER 2024



PLAN



SECTION

NOTES:

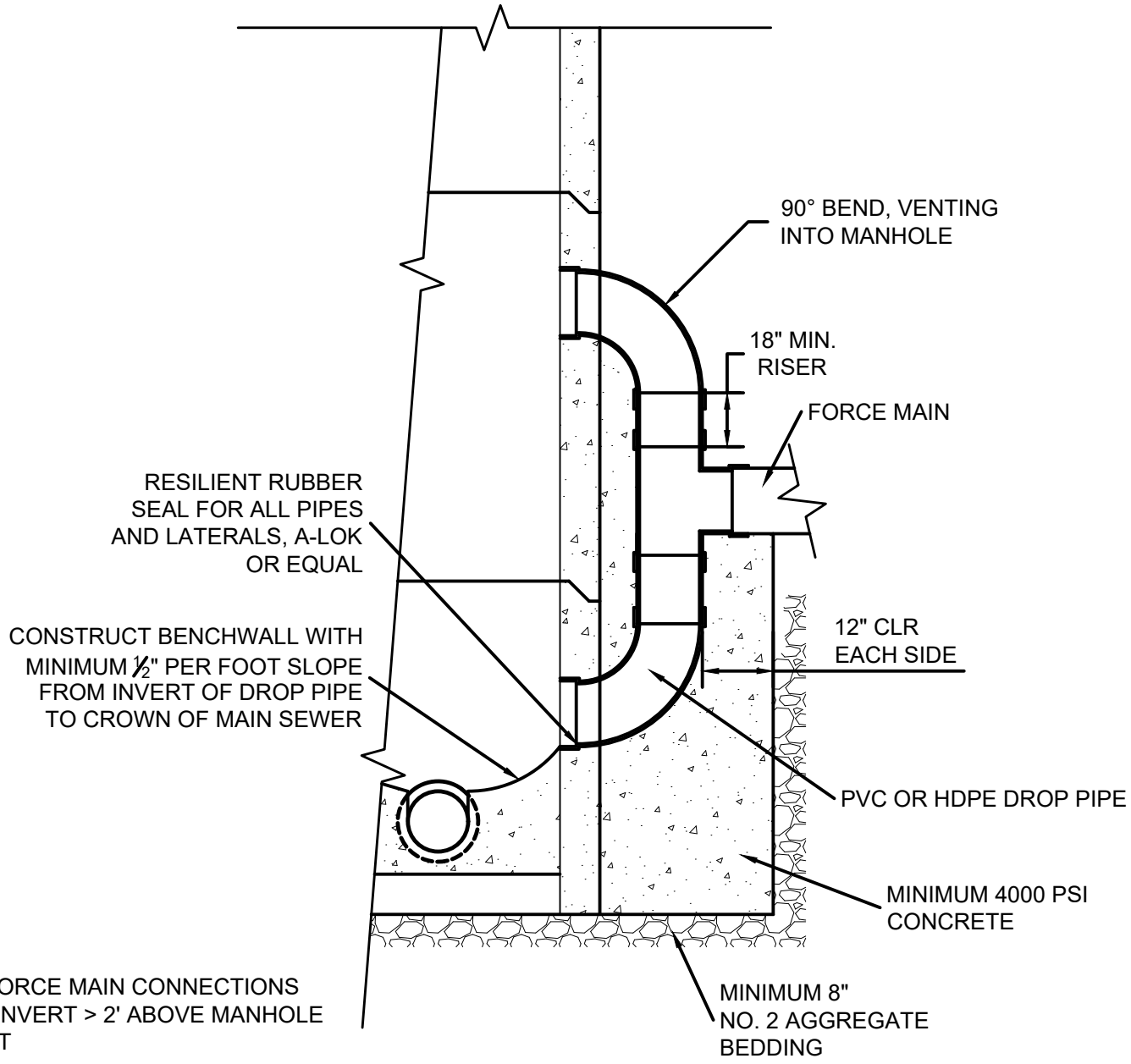
1. NEW MANHOLE CONSTRUCTION AND ACCESSORIES SAME AS SHOWN FOR STANDARD SANITARY SEWER MANHOLE.
2. INSIDE DROP ONLY ALLOWED WITH SPECIAL PERMISSION FROM DISTRICT

INSIDE DROP MANHOLE

SCALE: NONE

HAMILTON COUNTY, INDIANA
HAMILTON COUNTY REGIONAL UTILITY DISTRICT

DETAIL NO. SS-6
DATE: OCTOBER 2024



NOTES:

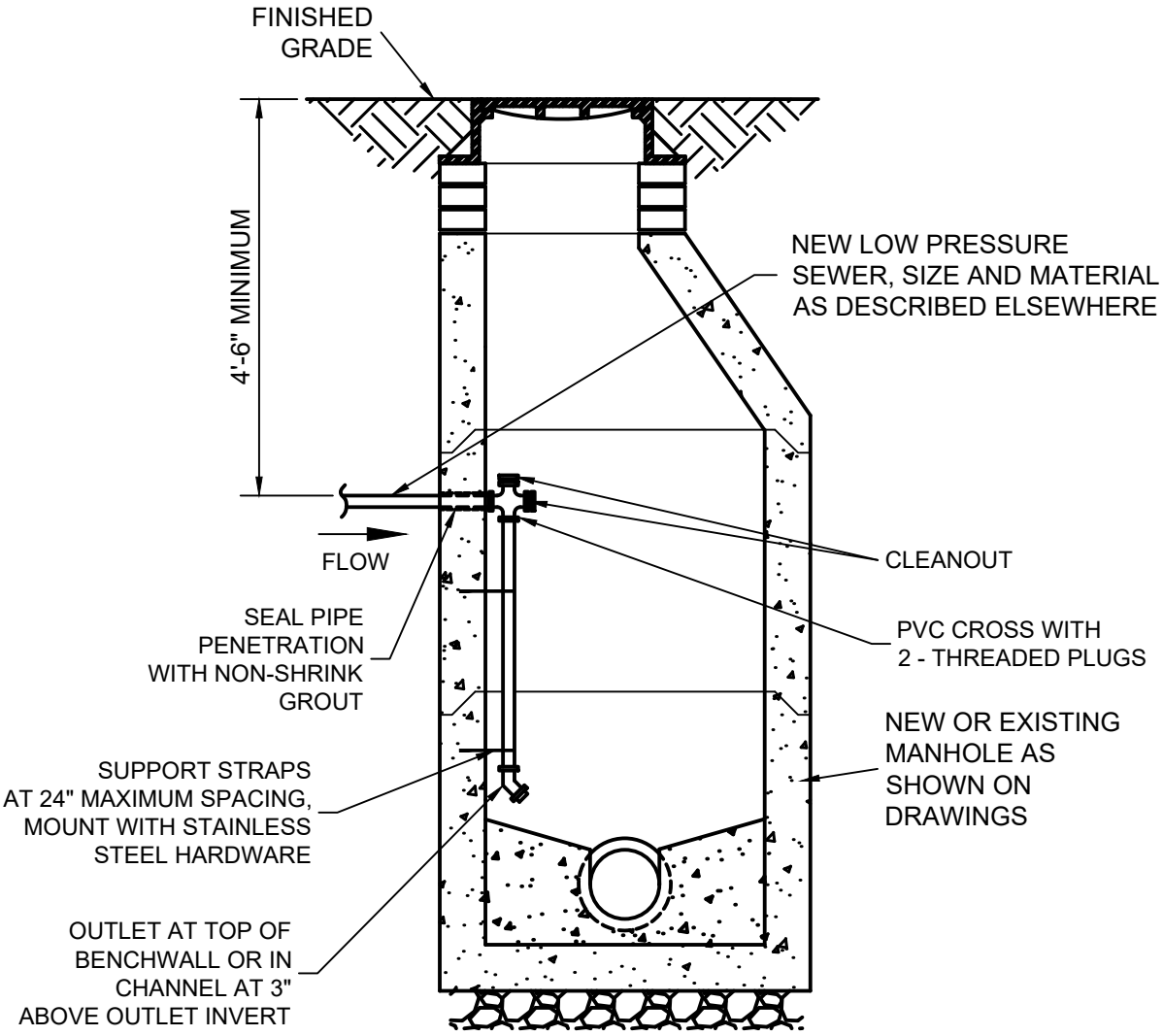
1. MANHOLE CONSTRUCTION AND ACCESSORIES SAME AS SHOWN FOR STANDARD SANITARY SEWER MANHOLE.

FORCE MAIN OUTSIDE DROP MANHOLE

SCALE: NONE

HAMILTON COUNTY, INDIANA
HAMILTON COUNTY REGIONAL UTILITY DISTRICT

DETAIL NO. SS-7
DATE: OCTOBER 2024



NOTES:

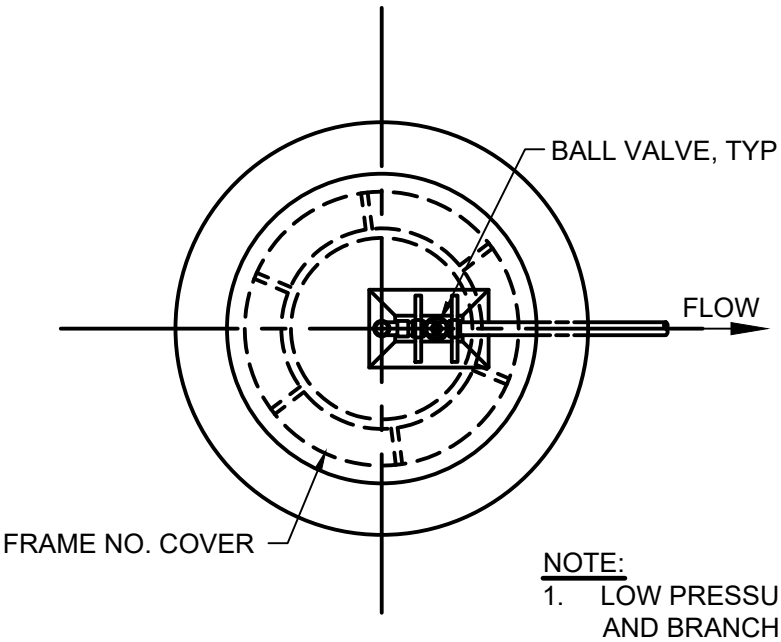
1. NEW MANHOLE CONSTRUCTION AND ACCESSORIES SAME AS SHOWN FOR STANDARD SANITARY SEWER MANHOLE.

LOW PRESSURE SEWER CONNECTION AT NEW MANHOLE

SCALE: NONE

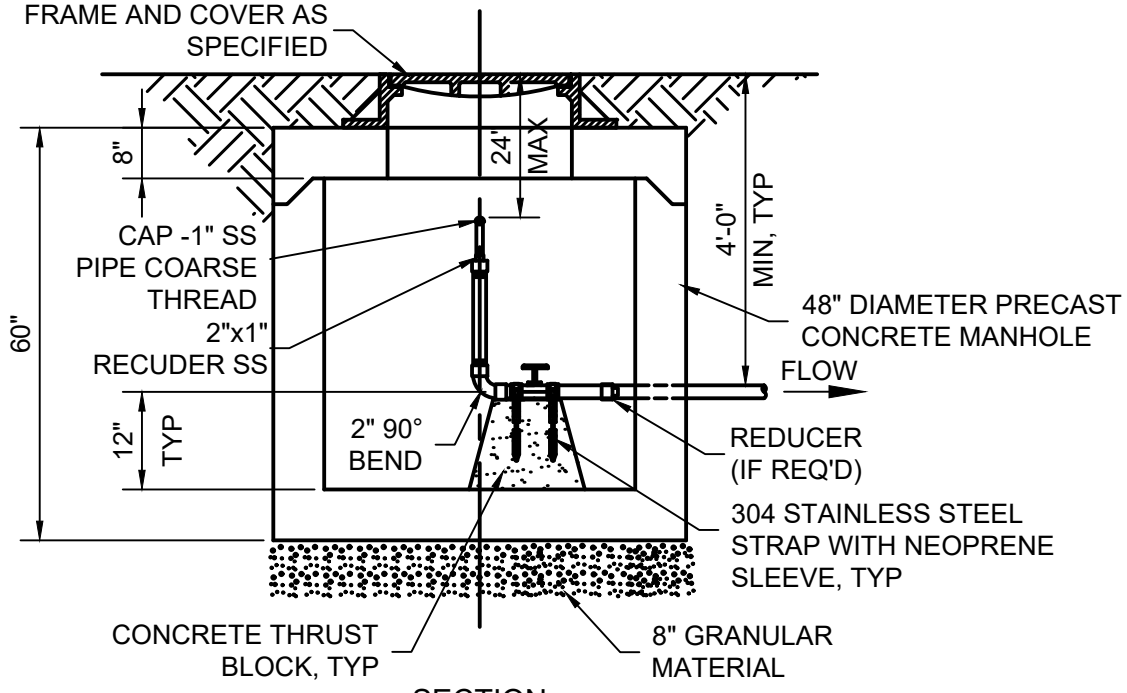
HAMILTON COUNTY, INDIANA
HAMILTON COUNTY REGIONAL UTILITY DISTRICT

DETAIL NO. SS-8
DATE: OCTOBER 2024



LOWER PLAN

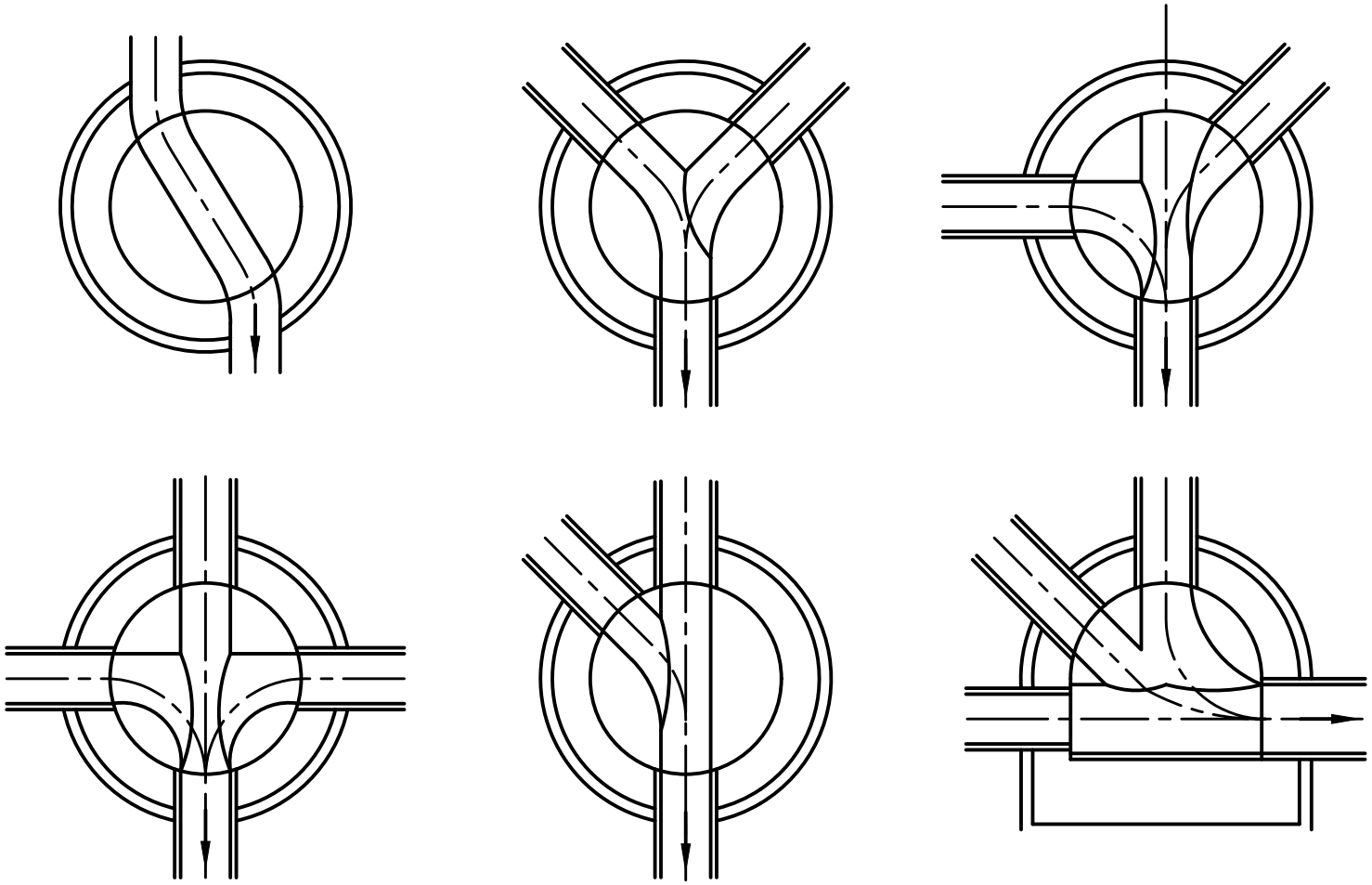
NOTE:
1. LOW PRESSURE SEWER MAIN AND BRANCH SIZES AS INDICATED ELSEWHERE. SIZE FITTINGS TO MATCH SEWER.



SECTION

LOW PRESSURE SEWER TERMINAL END CLEANOUT

SCALE: NONE



NOTES:

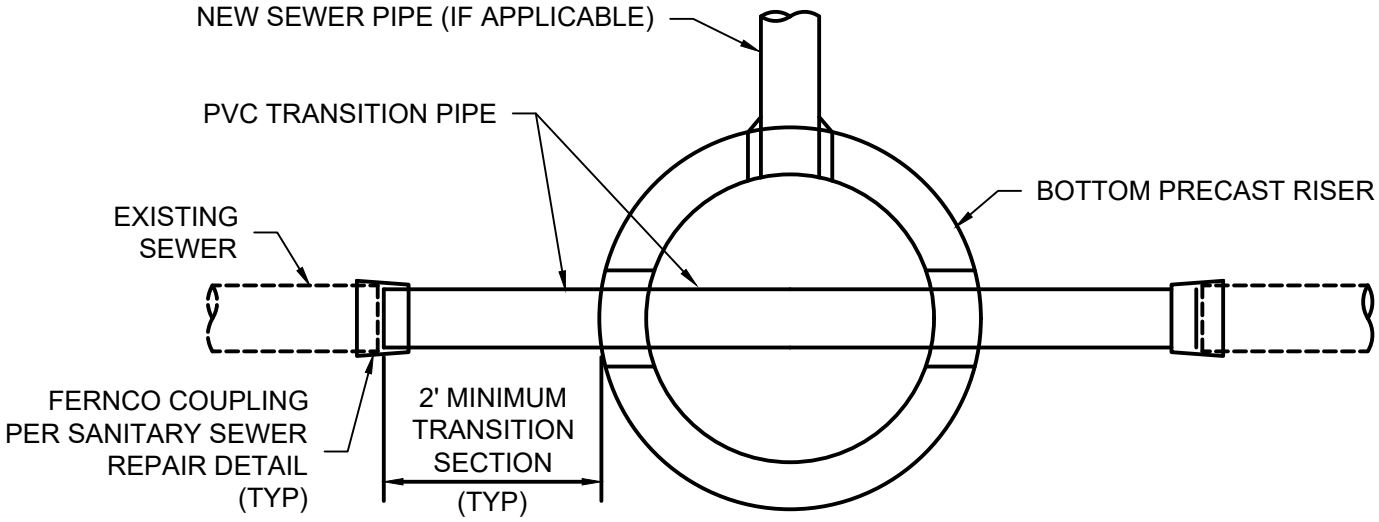
1. SANITARY SEWER BENCH SLOPE = ½" PER FOOT

STANDARD MANHOLE BENCHES

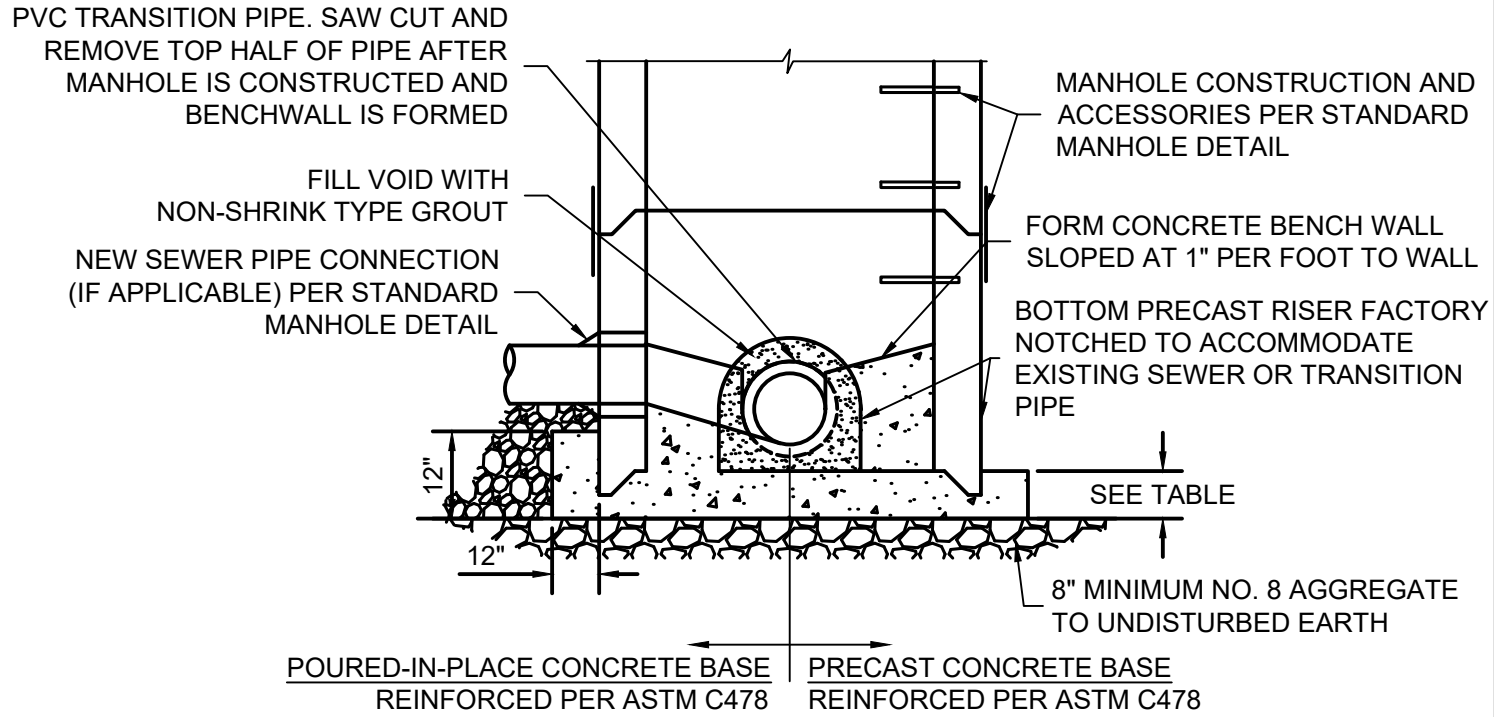
SCALE: NONE

HAMILTON COUNTY, INDIANA
HAMILTON COUNTY REGIONAL UTILITY DISTRICT

DETAIL NO. SS-10
DATE: OCTOBER 2024



PLAN



SECTION - SIDE

MH DIA	BASE THICKNESS
≤ 48"	8"
> 48"	8"

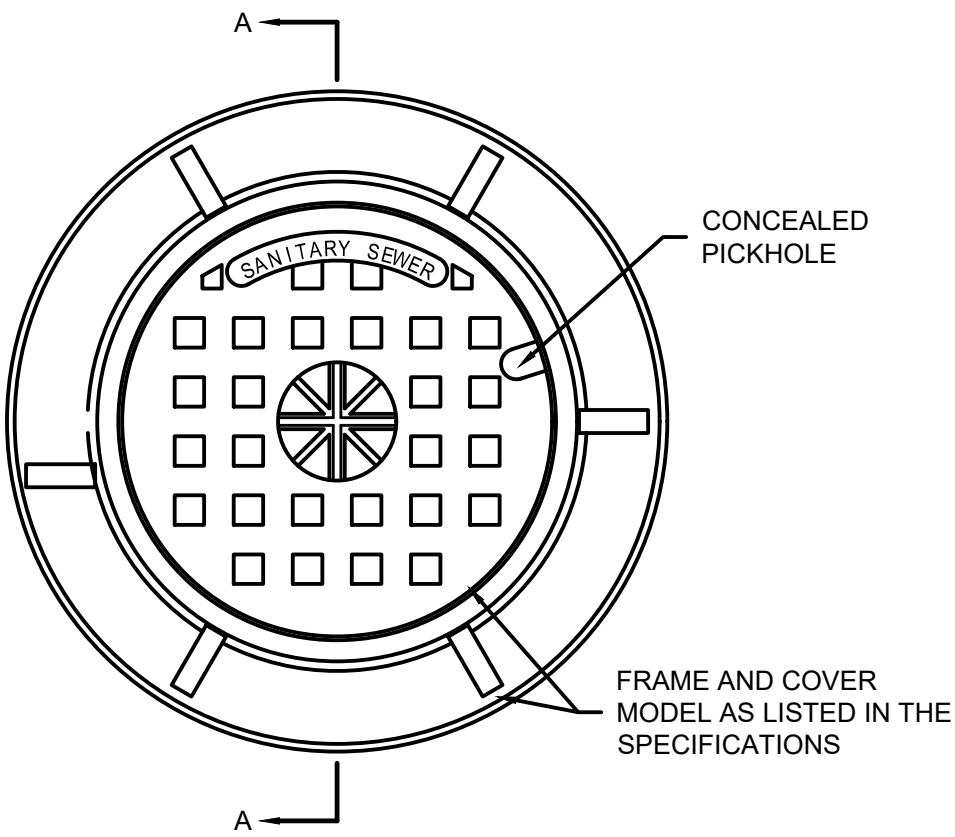
NOTES:
1. MANHOLE CONSTRUCTION AND ACCESSORIES SAME AS SHOWN ON STANDARD MANHOLE DETAIL
2. PROVIDE ADEQUATE PIPE SUPPORT DURING CONSTRUCTION.

SANITARY MANHOLE OVER EXISTING SANITARY SEWER

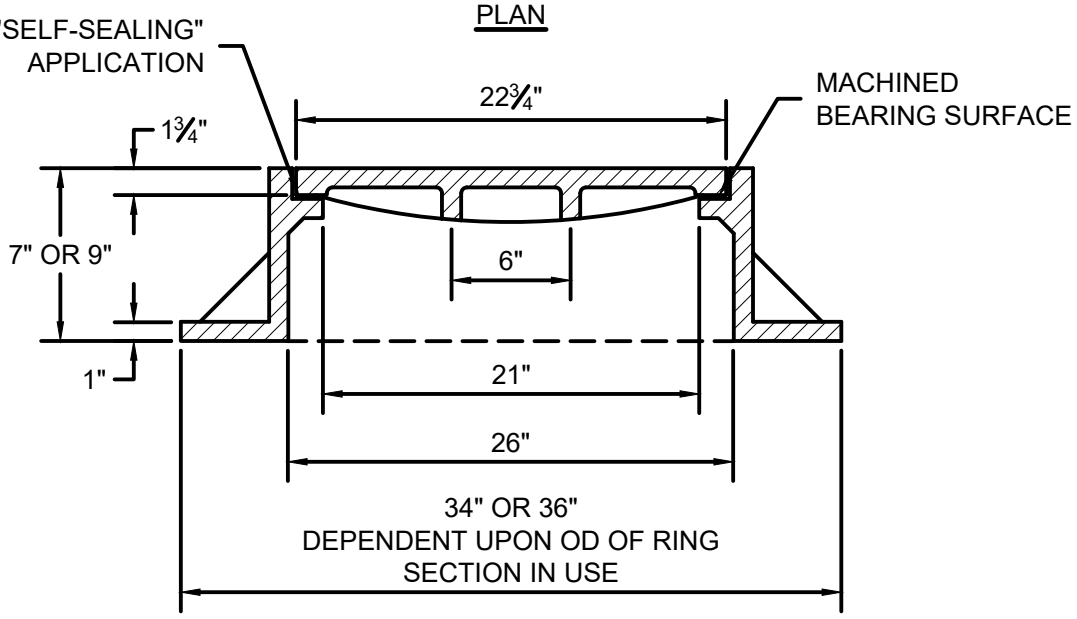
SCALE: NONE

HAMILTON COUNTY, INDIANA
HAMILTON COUNTY REGIONAL UTILITY DISTRICT

DETAIL NO. SS-12
DATE: OCTOBER 2024



PLAN



SECTION A-A

NOTES

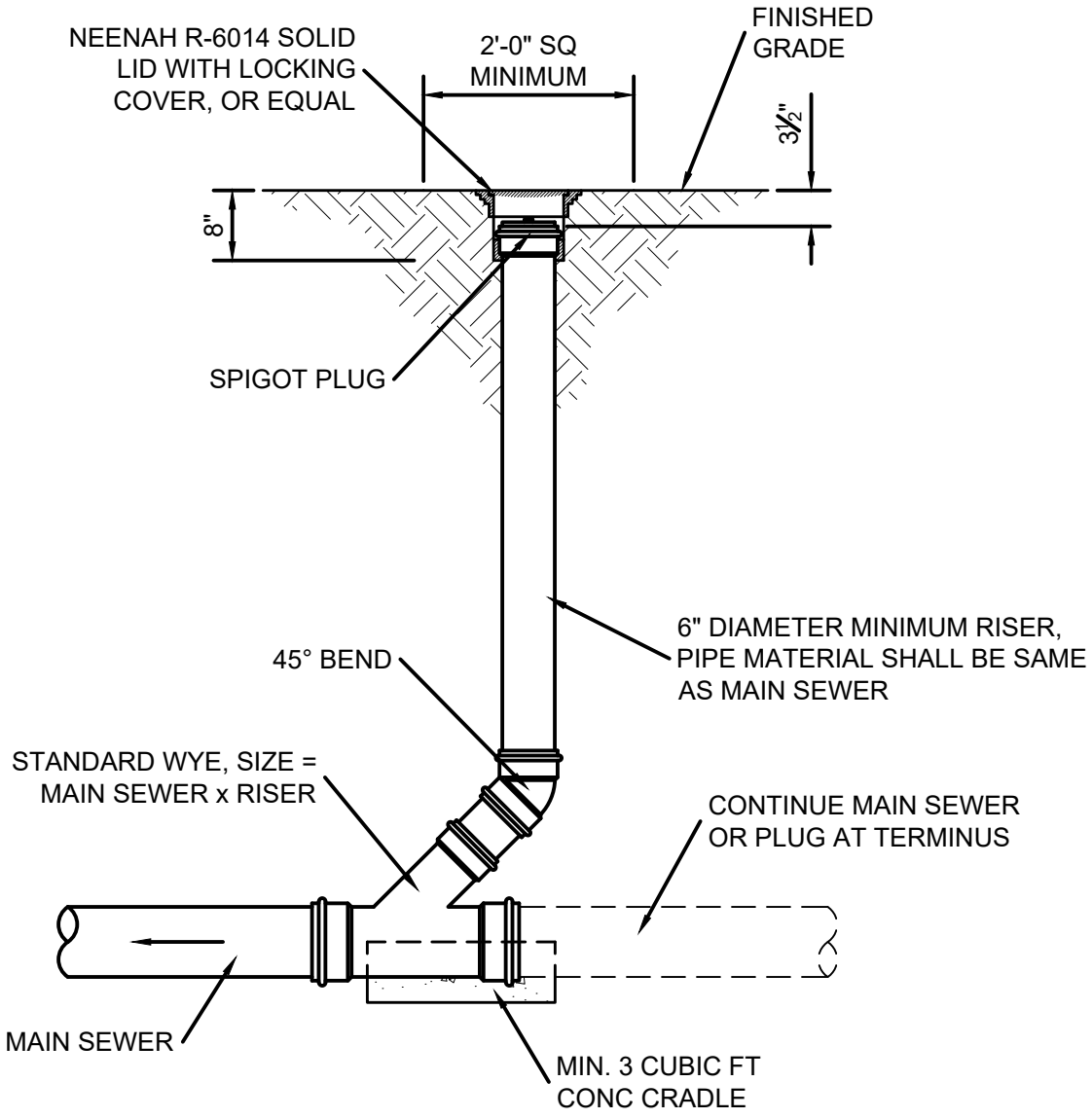
1. MANHOLES SHALL HAVE BOLT DOWN COVERS IN FLOOD PLAINS AND OTHER LOCATIONS NOTED ON PLANS.

STANDARD SANITARY SEWER FRAME AND COVER

SCALE: NONE

HAMILTON COUNTY, INDIANA
HAMILTON COUNTY REGIONAL UTILITY DISTRICT

DETAIL NO. SS-13
DATE: OCTOBER 2024

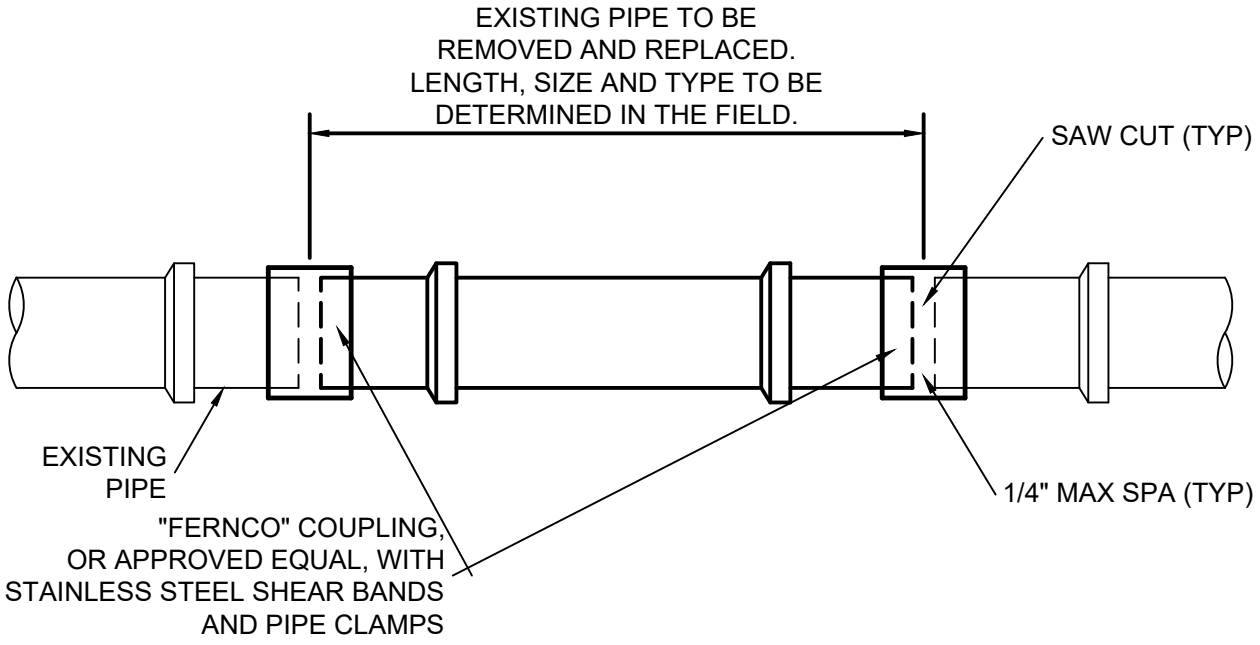


SANITARY SEWER CLEANOUT

SCALE: NONE

HAMILTON COUNTY, INDIANA
HAMILTON COUNTY REGIONAL UTILITY DISTRICT

DETAIL NO. SS-14
DATE: OCTOBER 2024

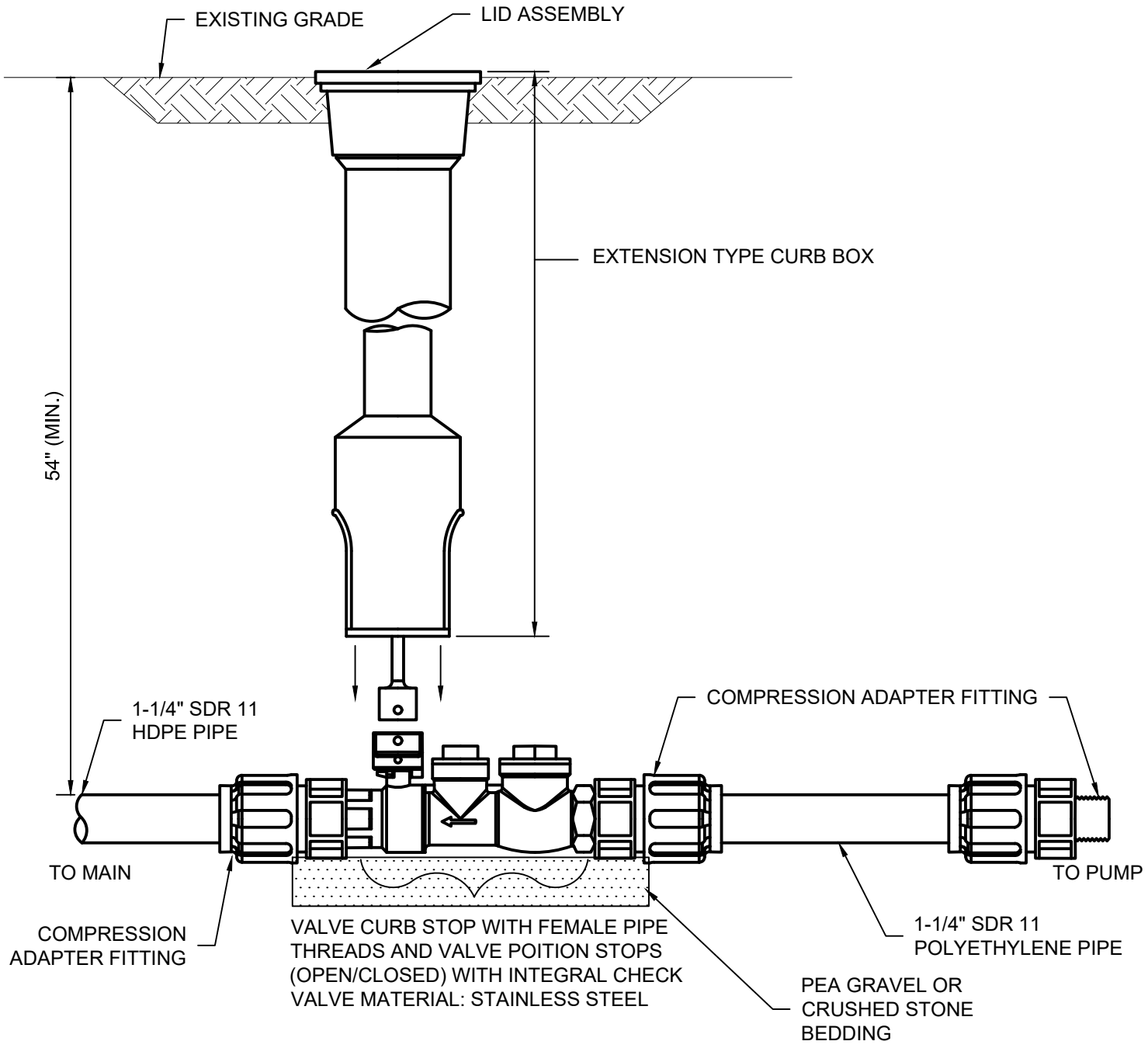


SANITARY SEWER REPAIR

SCALE: NONE

HAMILTON COUNTY, INDIANA
HAMILTON COUNTY REGIONAL UTILITY DISTRICT

DETAIL NO. SS-15
DATE: OCTOBER 2024

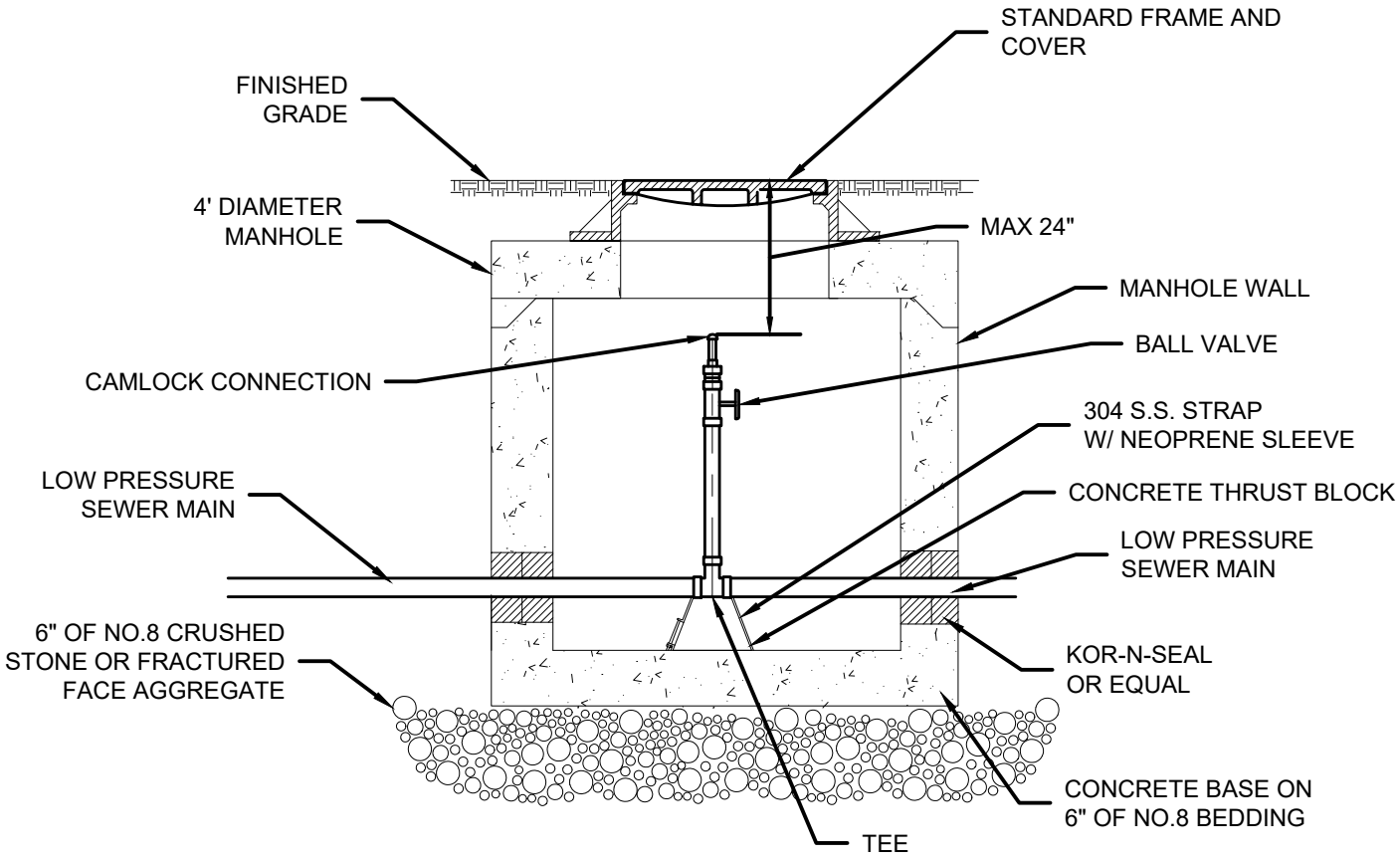


STAINLESS STEEL LATERAL KIT
1-1/4" SDR 11 HDPE PIPE

SCALE: NONE

HAMILTON COUNTY, INDIANA
HAMILTON COUNTY REGIONAL UTILITY DISTRICT

DETAIL NO. SS-16
DATE: OCTOBER 2024

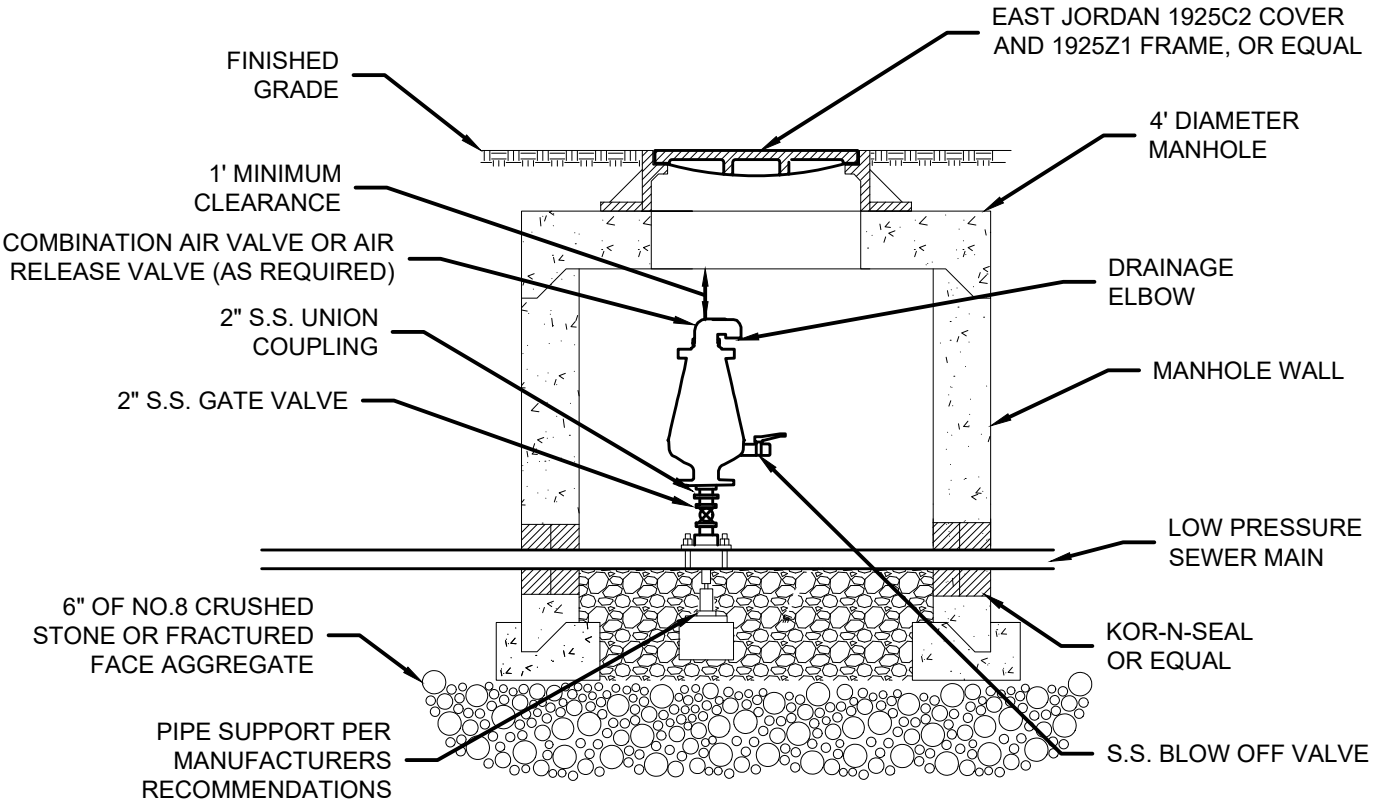


LOW PRESSURE SEWER
INLINE FLUSHING CLEANOUT

SCALE: NONE

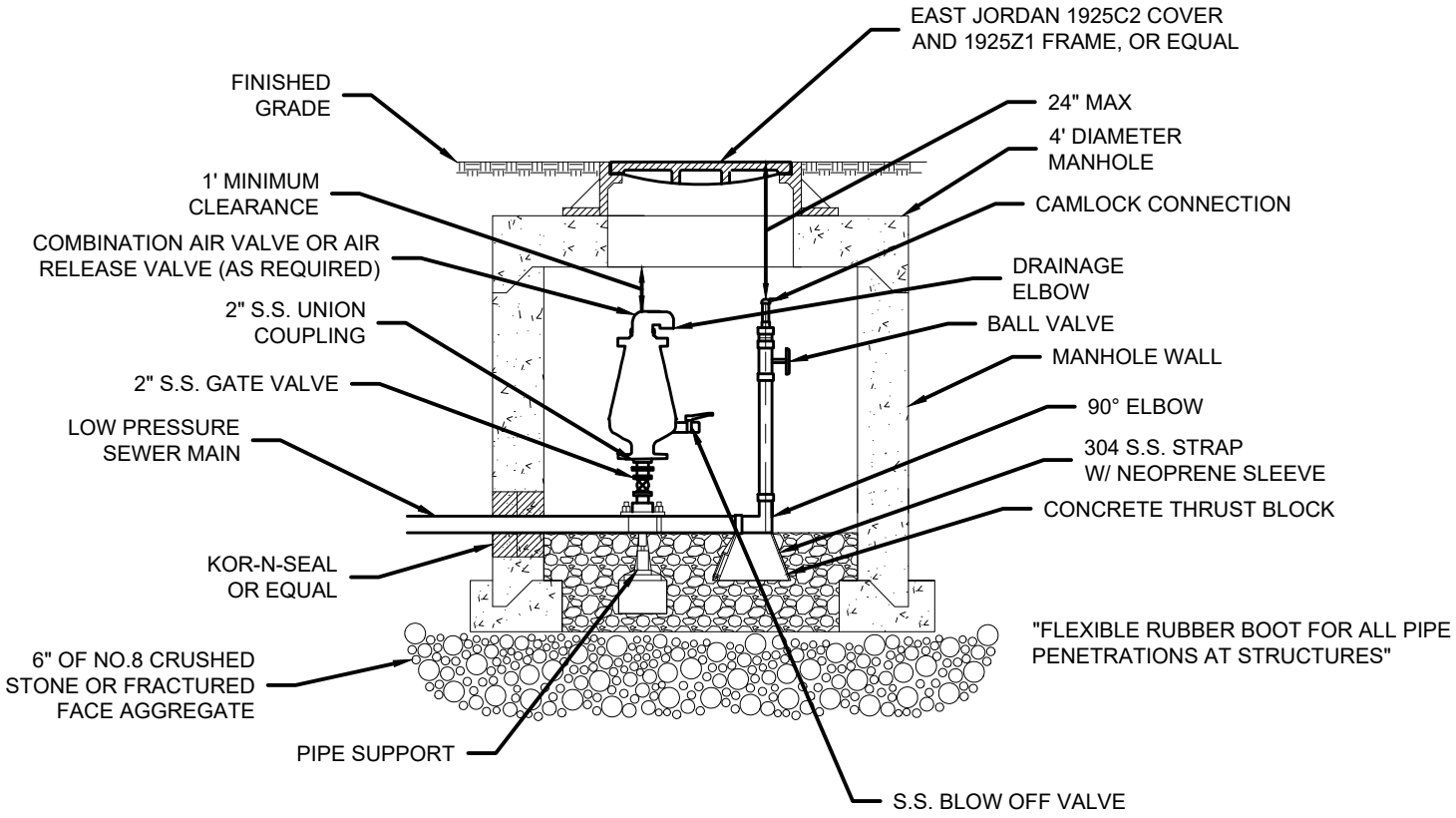
HAMILTON COUNTY, INDIANA
HAMILTON COUNTY REGIONAL UTILITY DISTRICT

DETAIL NO. SS-17
DATE: OCTOBER 2024



LOW PRESSURE SEWER MAIN
INLINE FLUSHING CLEANOUT/ ARV COMBINATION

SCALE: NONE



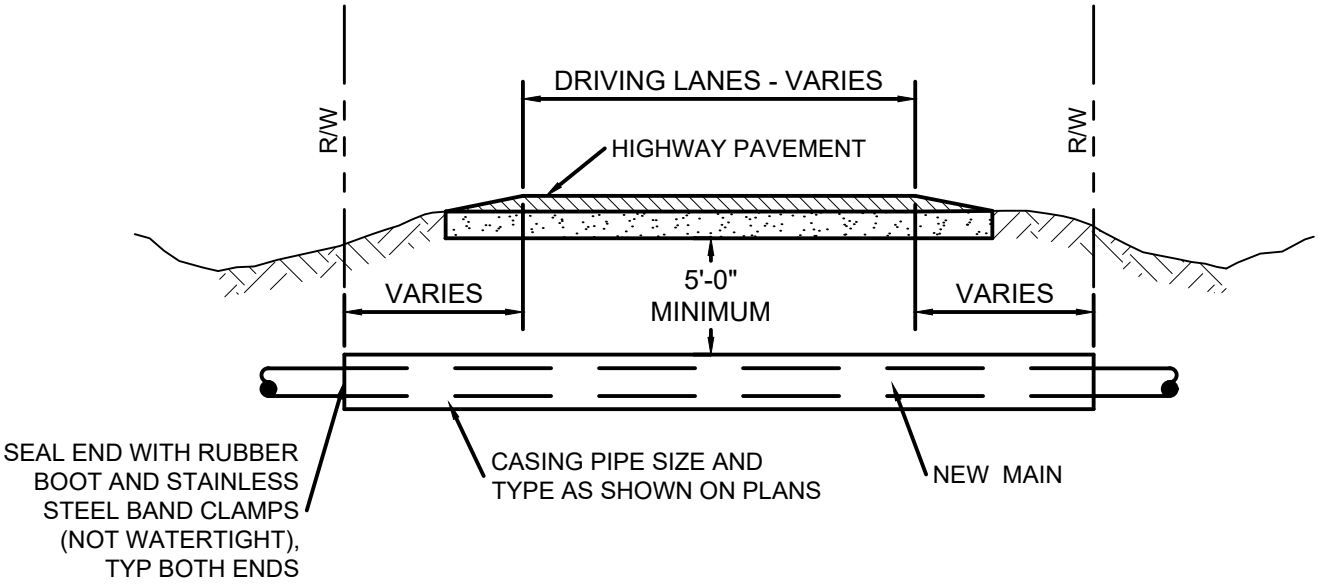
NOTE: ARV OR COMBINATION AIR VALVE AS REQUIRED.

LOW PRESSURE SEWER
TERMINAL FLUSHING CLEANOUT/ ARV COMBINATION

SCALE: NONE

HAMILTON COUNTY, INDIANA
HAMILTON COUNTY REGIONAL UTILITY DISTRICT

DETAIL NO. SS-19
DATE: OCTOBER 2024



NOTES:

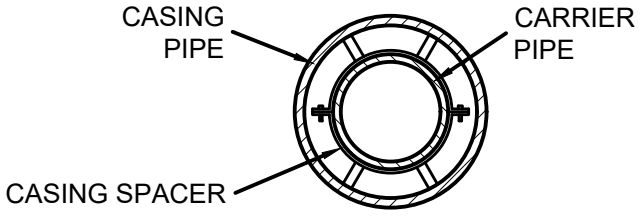
1. ALL PIPE JOINTS WITHIN CASING ARE TO BE RESTRAINED.
2. PIPE CASING SHALL BE LAID TRUE TO LINE AND GRADE WITH NO BENDS OR CHANGES IN GRADE FOR THE FULL LENGTH OF CASING.
3. STEEL CASING SECTIONS SHALL BE CONNECTED BY WELDING. WELD SHALL CONFORM TO AWWA C206.

CASING PIPE

SCALE: NONE

HAMILTON COUNTY, INDIANA
HAMILTON COUNTY REGIONAL UTILITY DISTRICT

DETAIL NO. SS-20
DATE: OCTOBER 2024



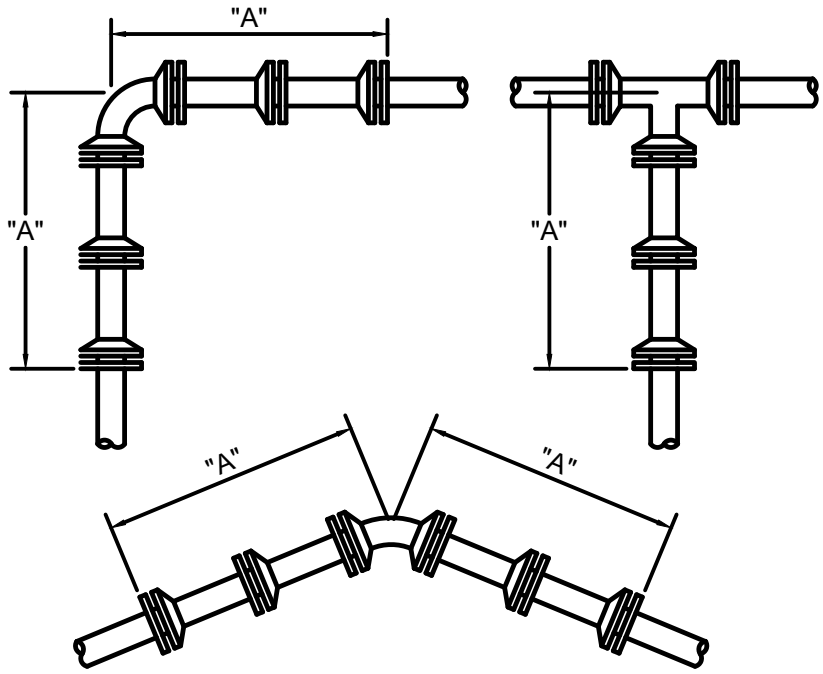
CASING SPACER

SCALE: NONE

HAMILTON COUNTY, INDIANA
HAMILTON COUNTY REGIONAL UTILITY DISTRICT

DETAIL NO. SS-21
DATE: OCTOBER 2024

Joint Restraint Table								
FEET OF RESTRAINED PIPE @ 150 psi								
ON EACH SIDE OF FITTING								
FITTING TYPE	6 INCH	8 INCH	12 INCH	14 INCH	16 INCH	18 INCH	20 INCH	24 INCH
11 1/4°	5	6	8	9	10	11	12	14
22 1/2°	9	11	16	18	20	22	24	28
45°	18	22	32	37	41	45	49	57
90°	42	54	76	87	97	107	117	136
11 1/4°	9	10	15	17	19	21	23	27
22 1/2°	16	20	29	33	37	41	45	53
45°	33	42	60	69	77	85	93	109
90°	79	100	144	165	184	205	224	262
MAIN SIZE x 6"	--	41	103	131	155	--	--	--
MAIN SIZE x 8"	--	--	77	108	135	162	--	--
MAIN SIZE x 10"	--	--	--	--	--	--	--	--
MAIN SIZE x 12"	--	--	--	44	79	112	140	194
MAIN SIZE x 14"	--	--	--	--	41	79	111	169
MAIN SIZE x 16"	--	--	--	--	--	43	79	144
MAIN SIZE x 18"	--	--	--	--	--	--	41	112
MAIN SIZE x 20"	--	--	--	--	--	--	--	79
MAIN SIZE x 24"	--	--	--	--	--	--	--	--
TEE OUTLET	60	82	125	146	166	186	205	243
VALVE OR PLUG	79	100	144	165	184	205	224	262
DEAD END	79	100	144	165	184	205	224	262



NOTES:

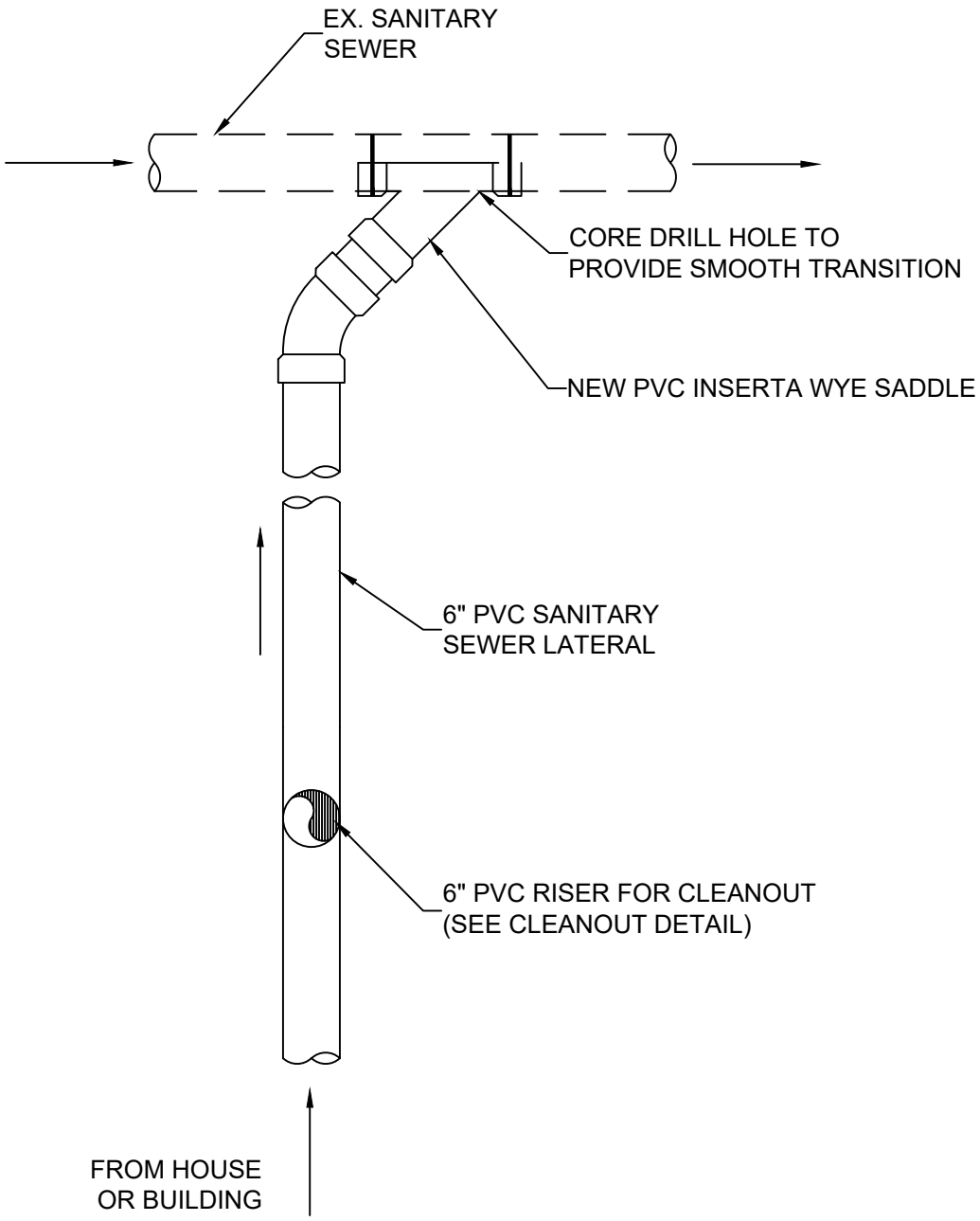
1. LENGTH OF RESTRAINT MEASURED FROM CENTERLINE OF FITTING REQUIRING RESTRAINT. LENGTH OF RESTRAINT FOR VERTICAL BENDS UP ARE EQUAL TO THAT FOR HORIZONTAL BENDS.
2. LENGTH OF RESTRAINT BASED UPON PVC PIPE, 48" COVER, 150 PSI PRESSURE, AND ASTM 2487 SOIL TYPES CL, ML, SC, SM, SP,SW, GC, GM, GP & GW. FOR DIFFERENT PIPE MATERIAL, LESS COVER, HIGHER PRESSURE, OR ASTM D2487 SOIL TYPES PT, OH, CH, MH, & OL, CONSULT DISTRICT.

PRESSURE PIPE
JOINT RESTRAINT

SCALE: NONE

HAMILTON COUNTY, INDIANA
HAMILTON COUNTY REGIONAL UTILITY DISTRICT

DETAIL NO. SS-22
DATE: OCTOBER 2024

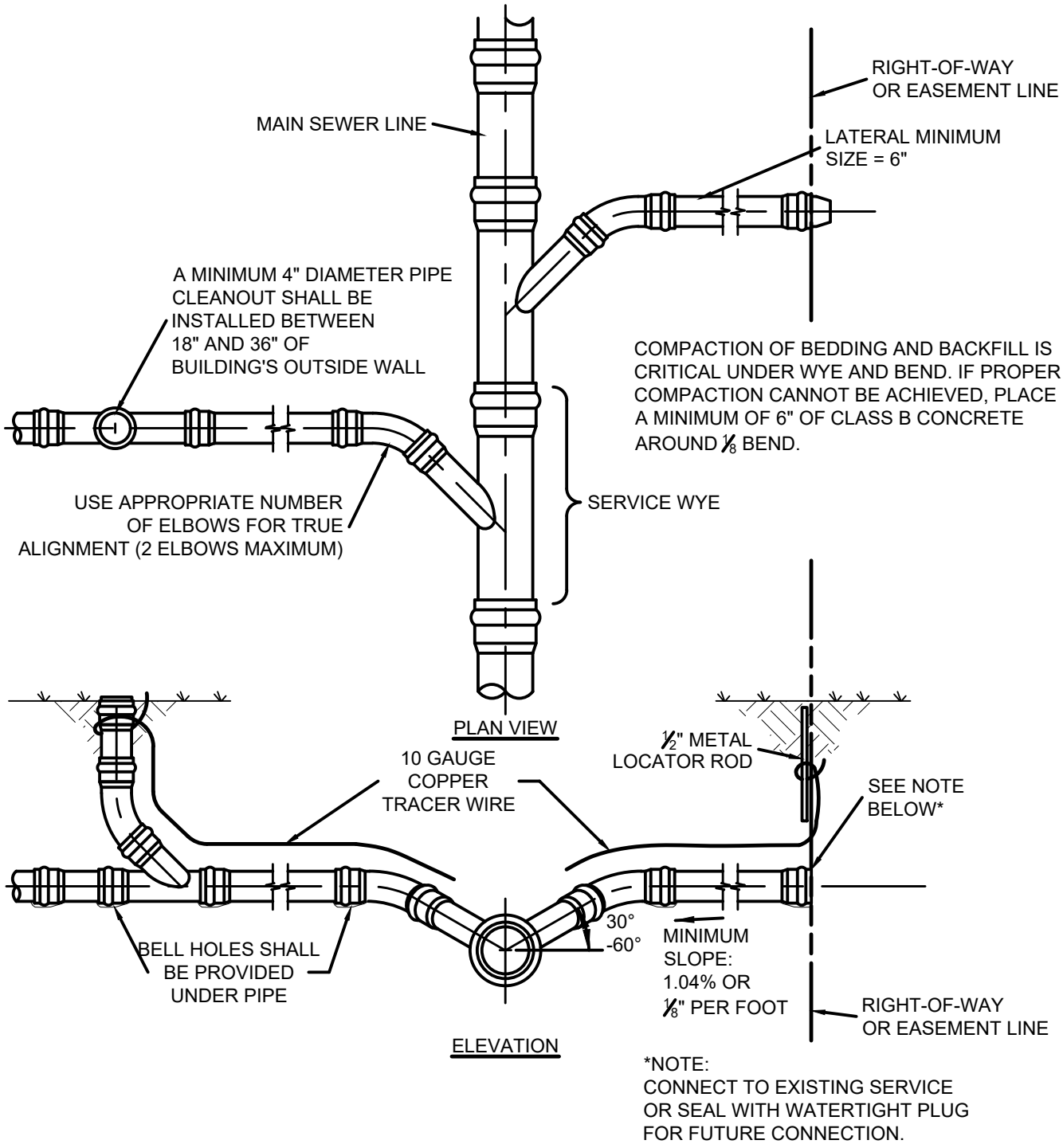


NEW SERVICE CONNECTION TO EXISTING SANITARY SEWER

SCALE: NONE

HAMILTON COUNTY, INDIANA
HAMILTON COUNTY REGIONAL UTILITY DISTRICT

DETAIL NO. SS-23
DATE: OCTOBER 2024



NOTES:

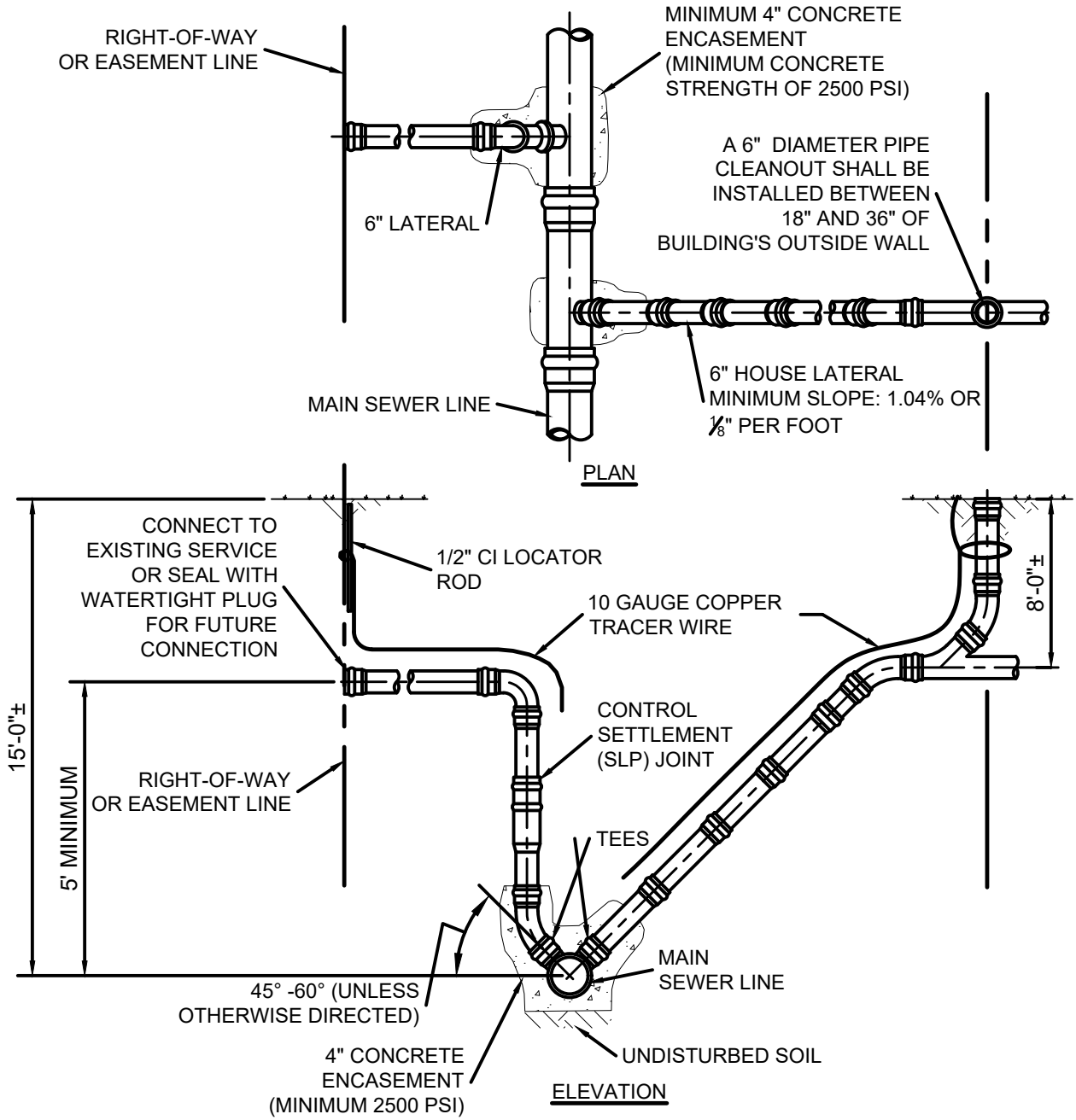
1. WYE BRANCHES SHALL SHALL BE EXTENDED TO PROPERTY LINES OR TO DISTANCES AS SHOWN ON THE DRAWINGS, AND SHALL BE OF 6" PIPE UNLESS OTHERWISE SHOWN.FINAL LOCATIONS TO BE COORDINATED WITH PROPERTY OWNER, BY CONTRACTOR AND APPROVED BY ENGINEER.
2. THE DEPTH OF THE LATERAL AT THE PROPERTY LINE SHALL BE APPROXIMATELY 8'-0" UNLESS SEWER DEPTH IS LESS, IN WHICH EVENT A MINIMUM SLOPE OF 1/8" PER 1'-0" SHALL BE USED.

SANITARY LATERAL FOR SHALLOW SEWERS (LESS THAN 15' DEEP)

SCALE: NONE

HAMILTON COUNTY, INDIANA
HAMILTON COUNTY REGIONAL UTILITY DISTRICT

DETAIL NO. SS-24
DATE: OCTOBER 2024



NOTES:

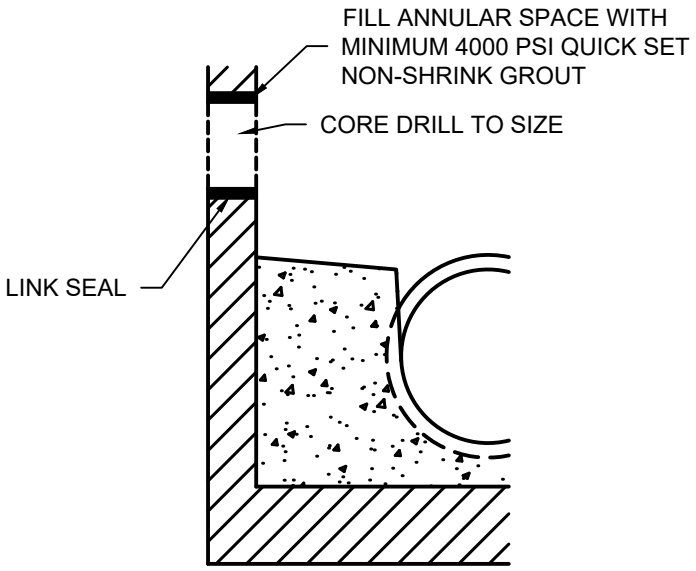
1. SANITARY LATERALS SHALL BE EXTENDED TO RIGHT-OF-WAY LINES OR TO DISTANCES AS SHOWN ON THE DRAWINGS, AND SHALL BE 6" PIPE UNLESS OTHERWISE SHOWN. FINAL LOCATIONS TO BE COORDINATED WITH PROPERTY OWNER, BY CONTRACTOR AND APPROVED BY ENGINEER.
2. THE DEPTH OF THE LATERAL AT THE PROPERTY LINE SHALL BE APPROXIMATELY 8'-0" UNLESS SEWER DEPTH IS LESS, A MINIMUM SLOPE OF 1/8" PER 1'-0" SHALL BE USED.

SANITARY LATERAL FOR DEEP SEWERS (15' DEEP AND OVER)

SCALE: NONE

HAMILTON COUNTY, INDIANA
HAMILTON COUNTY REGIONAL UTILITY DISTRICT

DETAIL NO. SS-25
DATE: OCTOBER 2024



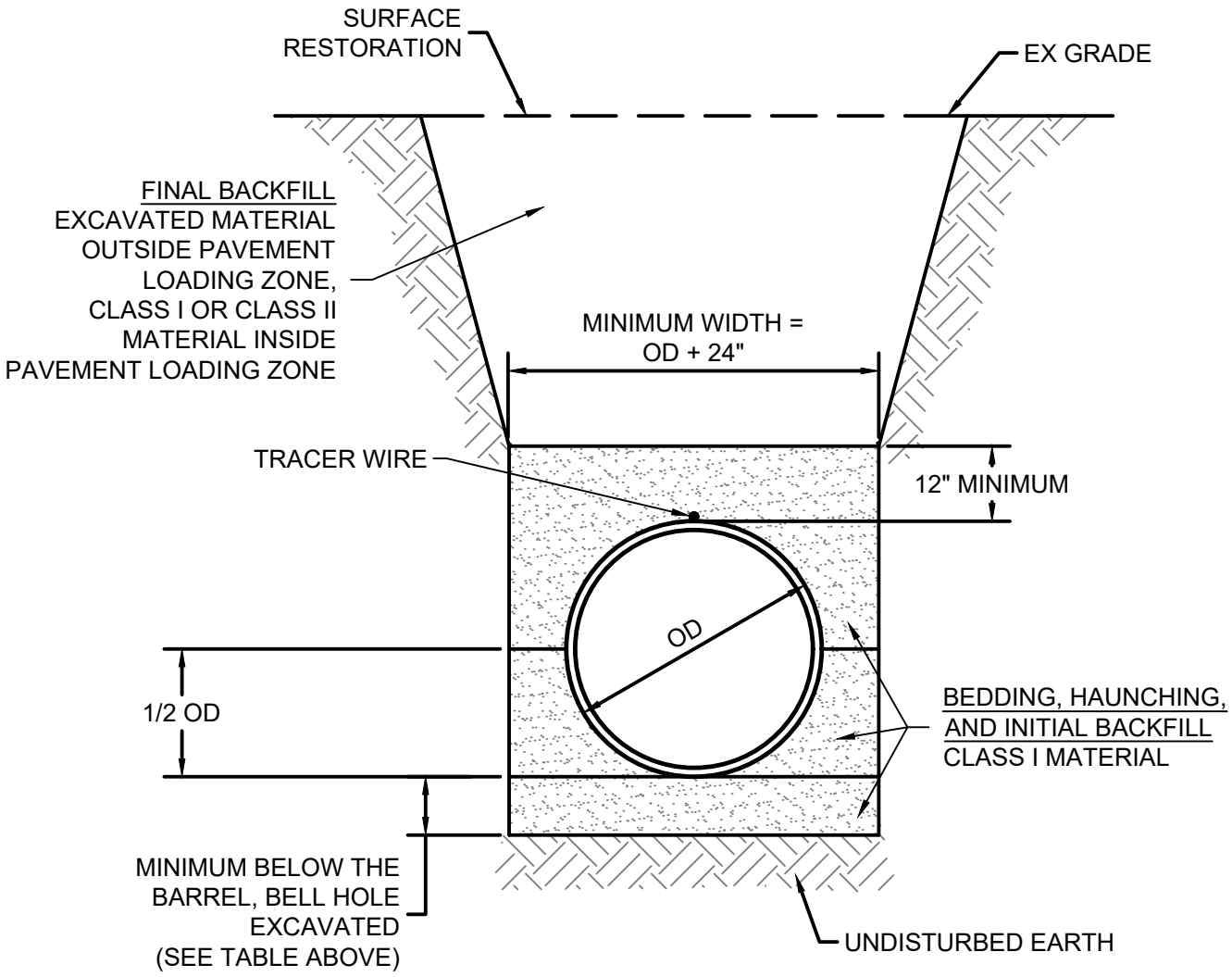
CONNECTION TO EXISTING MANHOLE

SCALE: NONE

HAMILTON COUNTY, INDIANA
HAMILTON COUNTY REGIONAL UTILITY DISTRICT

DETAIL NO. SS-26
DATE: OCTOBER 2024

PIPE SIZE	3" TO 16"	18" TO 30"	32" AND OVER
BEDDING BELOW THE PIPE BARREL	4"	OD / 4	8"



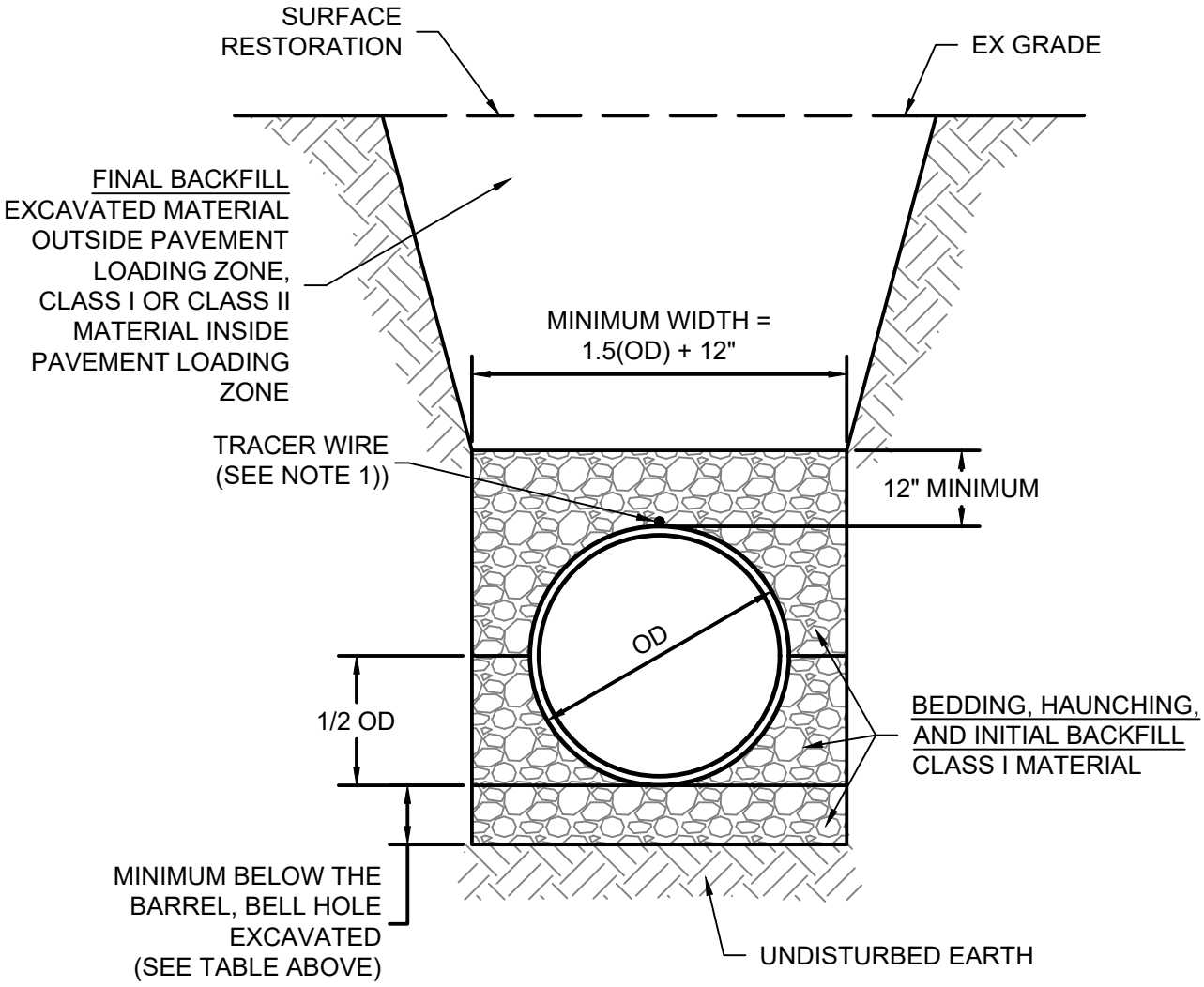
RIGID PRESSURE PIPE TRENCH (DI)

SCALE: NONE

HAMILTON COUNTY, INDIANA
HAMILTON COUNTY REGIONAL UTILITY DISTRICT

DETAIL NO. SS-27
DATE: OCTOBER 2024

PIPE SIZE	3" TO 15"	18" TO 30"	33" AND OVER
MINIMUM BEDDING BELOW THE PIPE BARREL	4"	OD / 4	8"



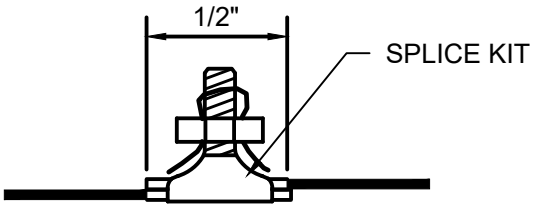
NOTES:
1. OMIT TRACER WIRE FOR GRAVITY PIPES.

PLASTIC PIPE TRENCH (PVC, HDPE)

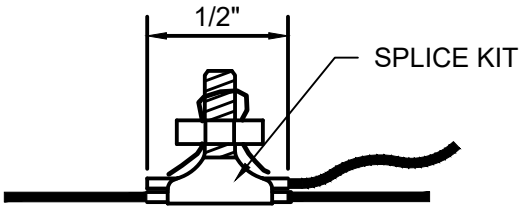
SCALE: NONE

HAMILTON COUNTY, INDIANA
HAMILTON COUNTY REGIONAL UTILITY DISTRICT

DETAIL NO. SS-28
DATE: OCTOBER 2024



EXISTING CONNECTION



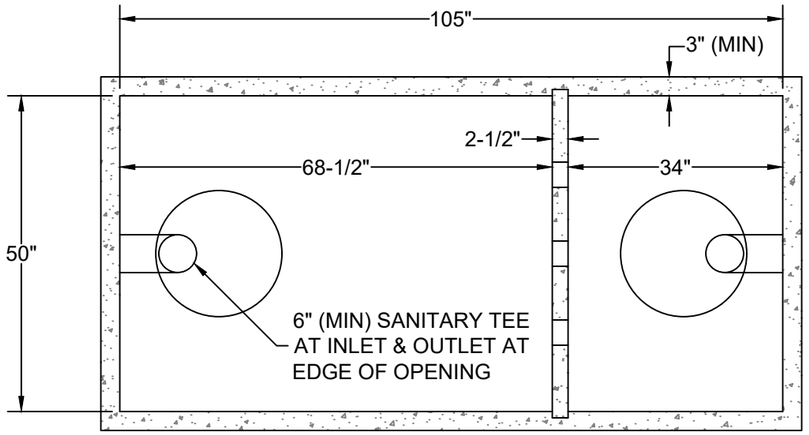
BRANCH CONNECTION

TRACER WIRE
BOLTED CONNECTION

SCALE: NONE

HAMILTON COUNTY, INDIANA
HAMILTON COUNTY REGIONAL UTILITY DISTRICT

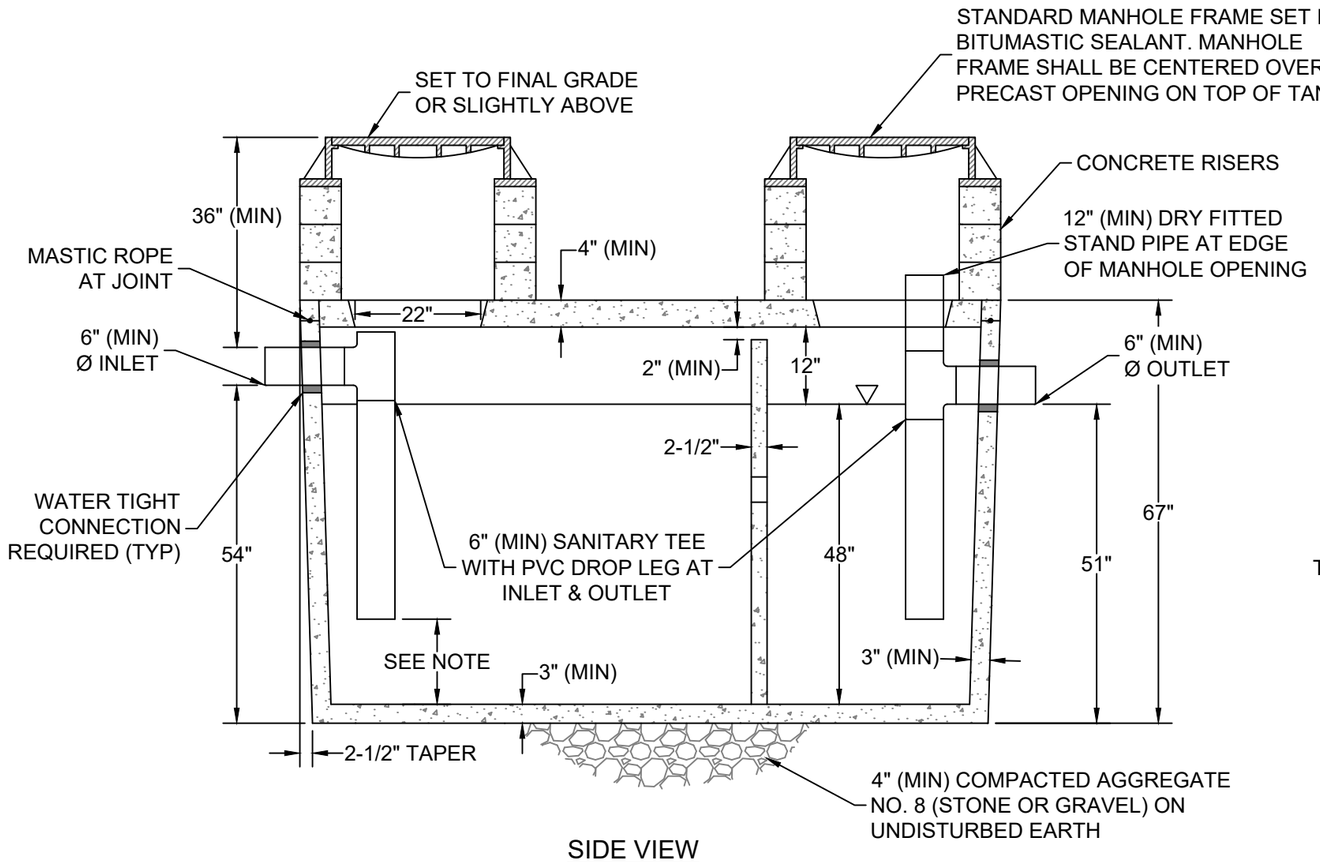
DETAIL NO. SS-29
DATE: OCTOBER 2024



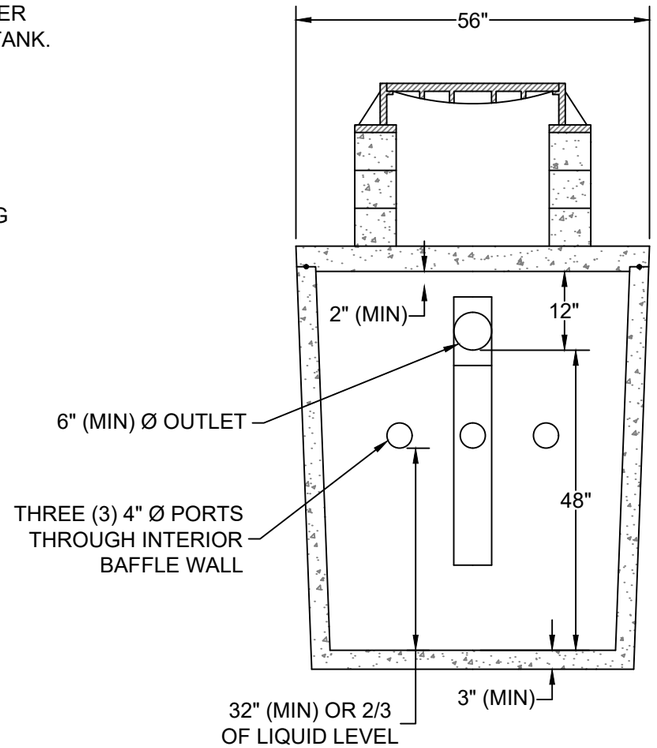
TOP VIEW

NOTES:

1. ALL WASTEWATER RUNNING FROM NEW OR REMODELED BUILDINGS THAT HAS THE POTENTIAL TO CONTAIN OILS OR GREASE FROM FOOD PREPARATION AREAS SHALL RUN THROUGH AN EXTERNAL GREASE INTERCEPTOR UNLESS OTHERWISE APPROVED BY THE CITY.
2. FLOW CALCULATIONS SHALL BE SUBMITTED TO THE CITY IN WRITING FOR THEIR APPROVAL.
3. GREASE INTERCEPTOR SIZE SHALL BE 1000 GAL. MINIMUM UNLESS OTHERWISE APPROVED BY THE CITY.
4. DETAIL SHOWS GENERAL SCHEMATIC REQUIREMENT.
5. ADEQUATE STRUCTURAL STRENGTH SHOULD BE PROVIDED TO ACCOMMODATE VEHICULAR TRAFFIC.
6. RATIO OF L X W X D IS APPROXIMATELY 2:1:1.
7. INTERIOR BAFFLE WALL EITHER PRECAST OR BLOCKED.
8. ANY GREASE INTERCEPTOR OVER 10 FEET LONG NEEDS THIRD MANWAY ADDED.
9. SIX INCH (6") MIN. CLEAN OUT ON INLET 4' FROM FOUNDATION AND 6" MIN. CLEANOUT ON OUTLET END OF INTERCEPTOR.
10. PORTS THROUGH INTERIOR BAFFLE WALL CAN BE ROUND (SHOWN), RECTANGULAR, OR AS APPROVED.



SIDE VIEW



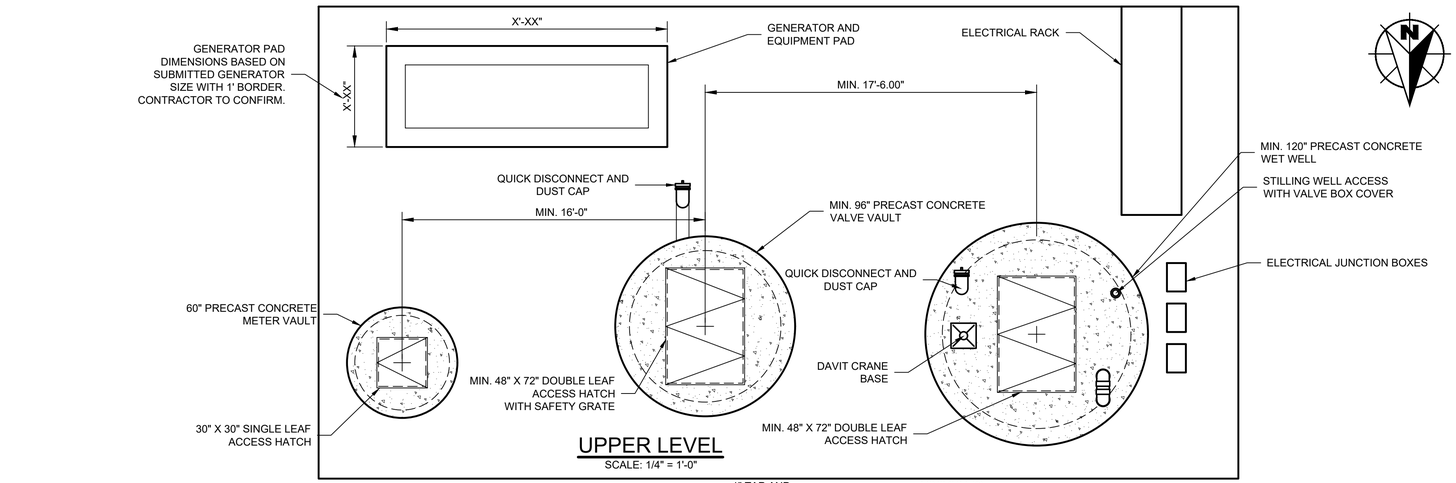
END VIEW

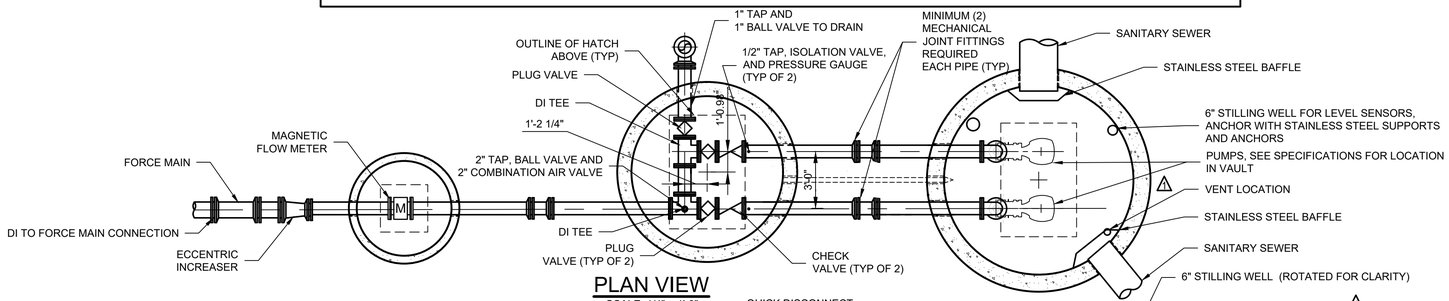
COMMERCIAL GREASE INTERCEPTOR

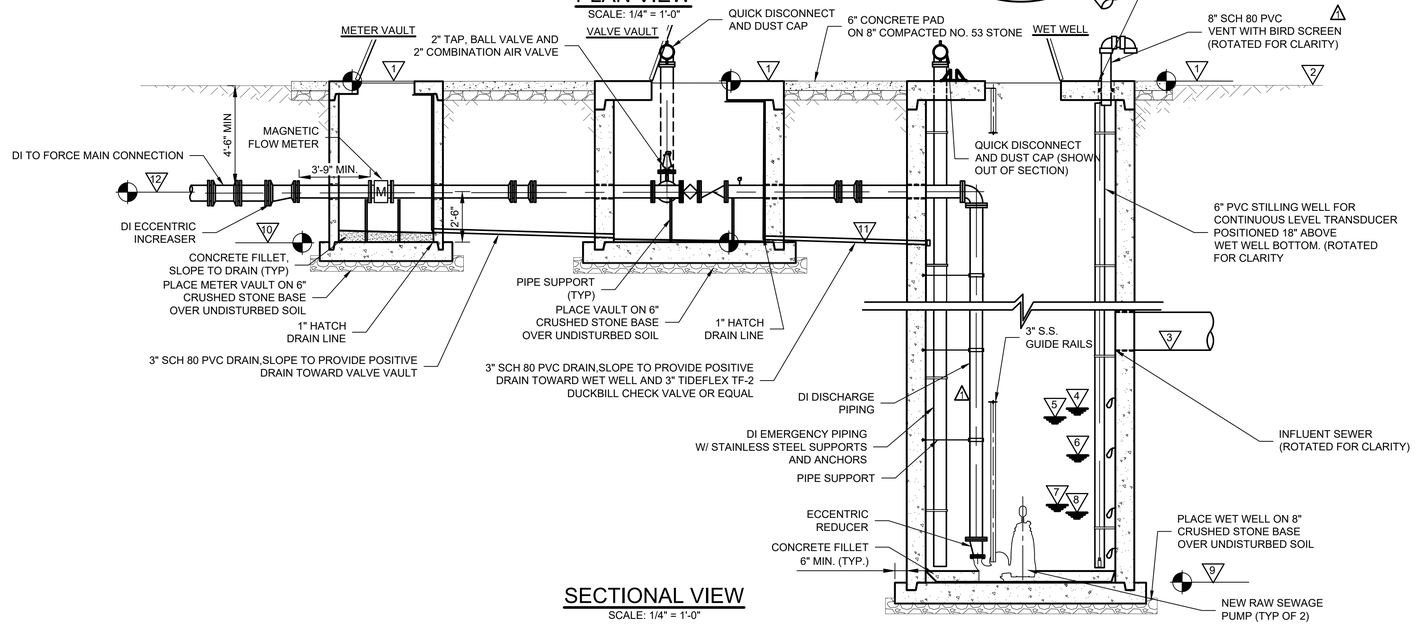
SCALE: NONE

HAMILTON COUNTY, INDIANA
HAMILTON COUNTY REGIONAL UTILITY DISTRICT

DETAIL NO. SS-30
DATE: OCTOBER 2024







LIFT STATION SCHEDULE		
KEYNOTE	DESCRIPTION	
	DUPLEX/TRIPLEX	
	DESIGN CAPACITY (GPM)	
	STATION PIPING SIZE (IN)	
	STATION PIPING MATERIAL	
	FORCE MAIN SIZE (IN)	
	FORCE MAIN MATERIAL	
	FORCE MAIN LENGTH (FT)	
	PUMPS TO:	
	DESIGN TDH (FT)	
	HP (EACH PUMP)	
	PUMP MODEL	
	IMPELLER	
	DISCHARGE SIZE	
	EXISTING GRADE (APPROX)	
	100 YEAR FLOOD ELEVATION	
1	TOP OF WET WELL	
2	FINISH GRADE	
3	INVERT OF LOWEST PIPE	
4	HIGH LEVEL ALARM	
5	LAG ON	
6	LEAD ON	
7	PUMPS OFF	
8	LOW LEVEL ALARM	
9	BOTTOM OF WET WELL	
	WET WELL DIAMETER (FT)	
	VALVE VAULT DIAMETER (FT)	
10	BOTTOM OF METER VAULT	
11	BOTTOM OF VALVE VAULT	
12	FORCE MAIN CENTERLINE ELEVATION	

NOTES:

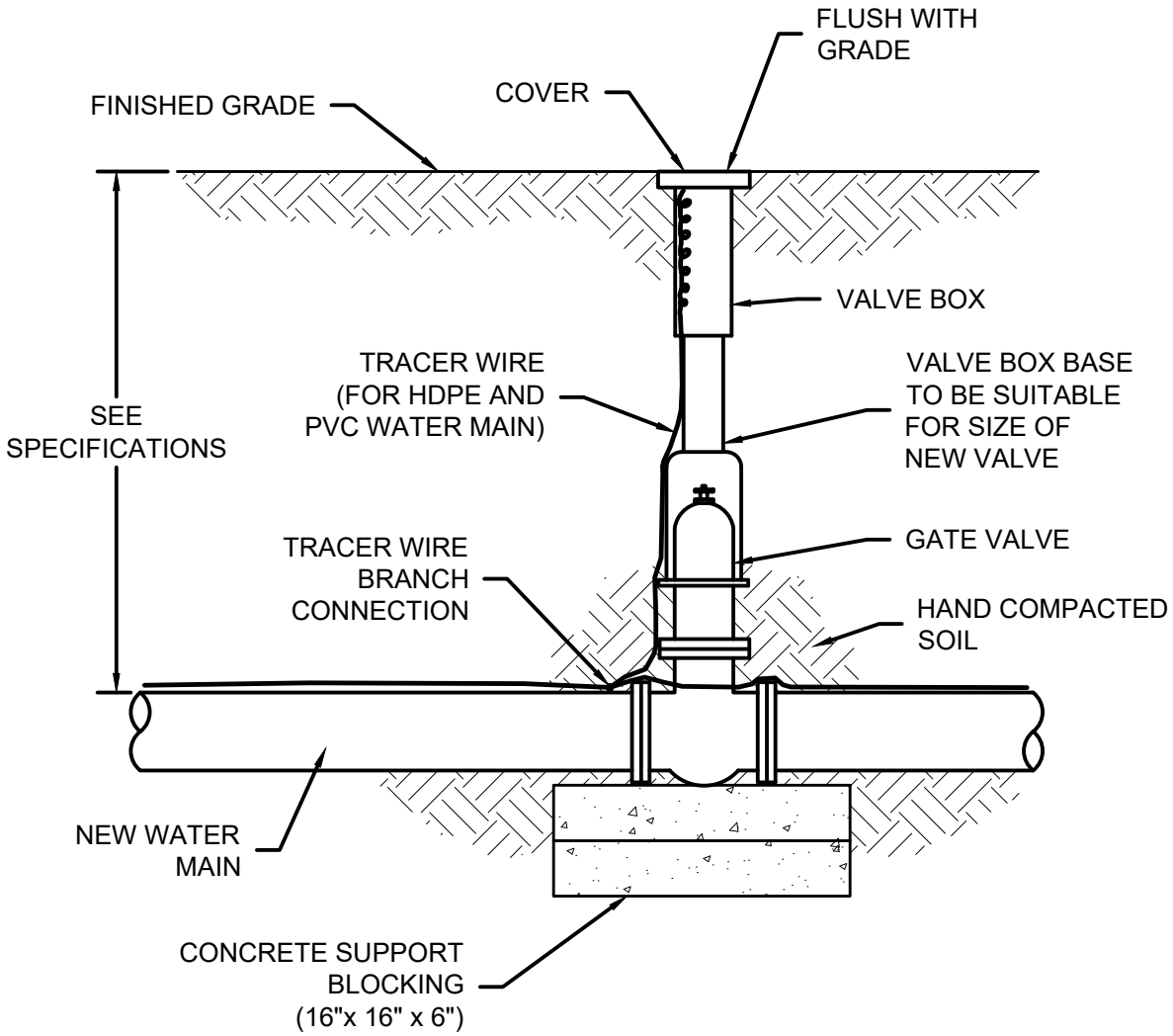
1. THE PUMP EQUIPMENT FOR THE WET WELL, INCLUDING PUMPS, GUIDE RAILS, AND SUPPORT BRACKETS, SHALL BE FURNISHED BY THE SAME MANUFACTURER.
2. INSTALL CONCRETE FILLET INTO THE BOTTOM OF THE WET WELL PER PUMP MANUFACTURER'S RECOMMENDATIONS.
3. NO PIPE PENETRATIONS WITHIN WET WELL OR VALVE VAULT SHALL BE ALLOWED WITHIN 12" OF ANY BARREL SECTION JOINT. BARREL SECTION HEIGHTS SHALL BE COORDINATED ACCORDINGLY.
4. ALL NUTS, BOLTS AND HARDWARE IN ALL LOCATIONS, AND BRACKETS, SUPPORTS AND ALL OTHER APPURTENANCES IN WET WELL SHALL BE 316 STAINLESS STEEL UNLESS SPECIFICATION INDICATES OTHERWISE OR AS DIRECTED BY DISTRICT
5. TAP EACH PUMP DISCHARGE LINE (3 TOTAL) IN THE VALVE VAULT, IMMEDIATELY PRECEDING CHECK. VALVES, WITH A ½" STAINLESS STEEL PIPE, ½" ISOLATION VALVE, AND CUP PROVIDE 0-50 PSI PRESSURE GAUGE TO BE FURNISHED LOOSE TO DISTRICT
6. WET WELL AND VALVE VAULT TOP SLABS SHALL BE PRECAST REINFORCED CONCRETE, BY SAME MANUFACTURER AS BARREL SECTIONS. ACCESS HATCHES SHALL BE INCLUDED IN CASTING OF TOP SLABS. VERIFY EXACT LOCATION OF WET WELL HATCH WITH PUMP MANUFACTURER. VALVE VAULT HATCH SHALL BE CENTERED OVER STRUCTURE, ALIGNED PERPENDICULAR TO FORCE MAIN PIPING.
7. FURNISH AND INSTALL AN ALUMINUM ACCESS LADDER IN THE VALVE VAULT AND METER VAULT. LADDER CONSTRUCTION SHALL BE ALL WELDED RAILS SHALL BE C3X0258, SPACED AT 14" CENTER TO CENTER RUNGS SHALL BE 1⅛" DIA, RIBBED, SPACED AT 12" CENTER TO CENTER MOUNT TO WALL WITH (4) 2½"X⅜" BENT ALUMINUM TABS, WITH ⅜" DIA STAINLESS STEEL EXPANSION ANCHORS. POSITION FOR EASE OF ACCESS INTO VALVE VAULT, AND TO AVOID INTERFERENCE WITH VALVE OPERATORS.
8. ALL RIGID PIPE CONNECTIONS THROUGH THE WET WELL AND VALVE VAULT WALLS SHALL BE THROUGH CORE DRILLED OR FACTORY FORMED PENETRATIONS. INSTALL WITH MECHANICAL WALL SEAL, LINK SEAL OR EQUAL. SIZE OF WALL PENETRATIONS SHALL BE AS RECOMMENDED BY THE MECHANICAL SEAL MANUFACTURER FOR THE SIZE AND MATERIAL OF PIPE TO BE INSTALLED FILL VOIDS BETWEEN MECHANICAL SEAL AND OUTER SURFACES OF THE STRUCTURE WITH NON SHRINK GROUT. THE PVC VALVE VAULT DRAIN SHALL BE INSTALLED BY THE SAME MANNER ALL FLEXIBLE PIPE PENETRATIONS (SEWER) MAY BE INSTALLED BY THE SAME MANNER, OR AS SHOWN IN THE STANDARD SANITARY SEWER MANHOLE DETAIL.
9. FIELD VERIFY ORIENTATION OF QUICK DISCONNECT/DUST CAP WITH DISTRICT.

NEW LIFT STATION DETAIL

SCALE: NONE

HAMILTON COUNTY, INDIANA
HAMILTON COUNTY REGIONAL UTILITY DISTRICT

LIFT STATION DETAIL
DATE: OCTOBER 2024

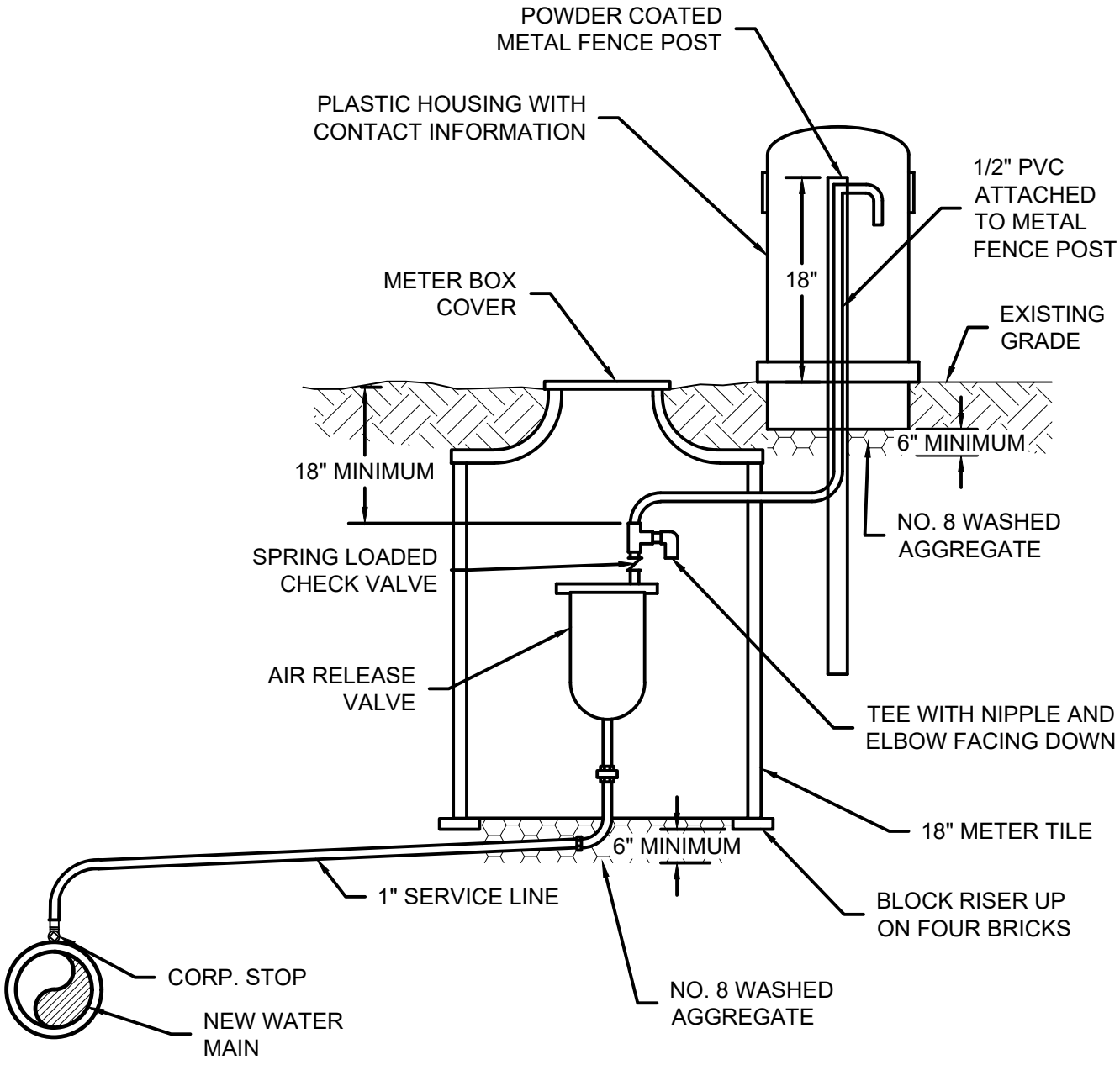


GATE VALVE

SCALE: NONE

HAMILTON COUNTY, INDIANA
HAMILTON COUNTY REGIONAL UTILITY DISTRICT

DETAIL NO. DW-1
DATE: OCTOBER 2024

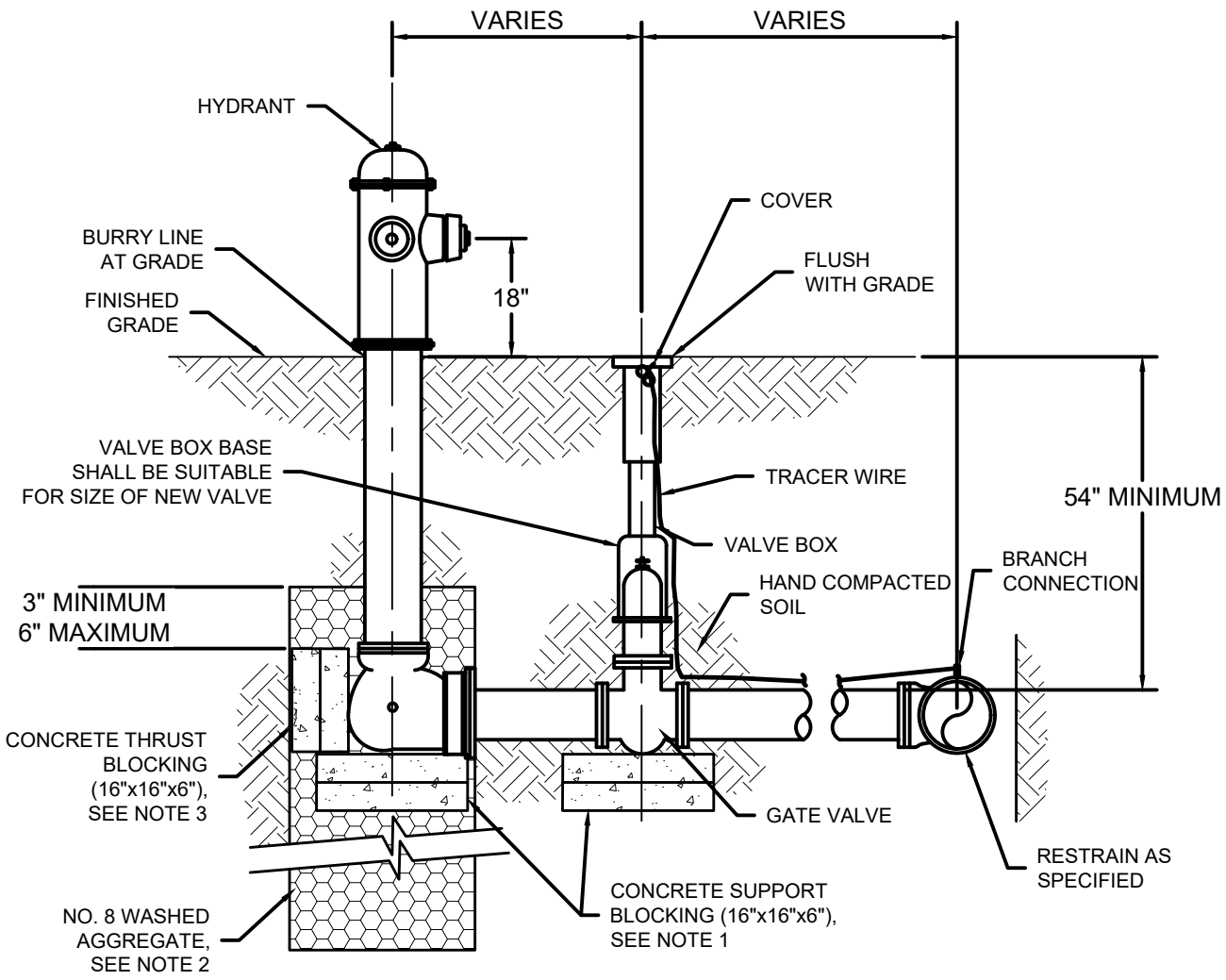


AIR RELEASE VALVE

SCALE: NONE

HAMILTON COUNTY, INDIANA
HAMILTON COUNTY REGIONAL UTILITY DISTRICT

DETAIL NO. DW-2
DATE: OCTOBER 2024

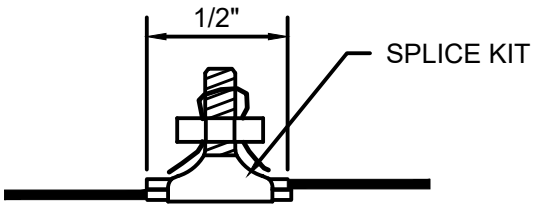


NOTES:

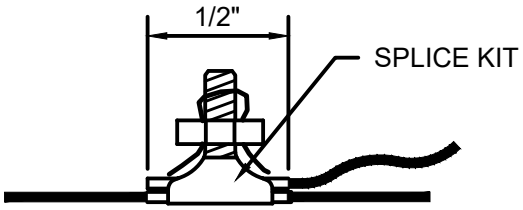
1. SET HYDRANT AND VALVE ON CONCRETE SUPPORT BLOCKING.
2. PLACE 2'x3' DEEP DRAINAGE PIT. EXTEND A MINIMUM OF 3", AND MAXIMUM OF 6", ABOVE HYDRANT BOOT.
3. RESTRAINED FITTINGS SHALL BE USED IN ADDITION TO CONCRETE THRUST BLOCKING. RESTRAINTS MUST BE USED FROM THE DISTRIBUTION MAIN TO THE HYDRANT. PLACE CONCRETE BLOCKS BEHIND HYDRANT TO UNDISTURBED EARTH.
4. VALVE BOX SHALL BE CENTERED AND PLUMB OVER VALVE OPERATING NUT.

HYDRANT ASSEMBLY

SCALE: NONE



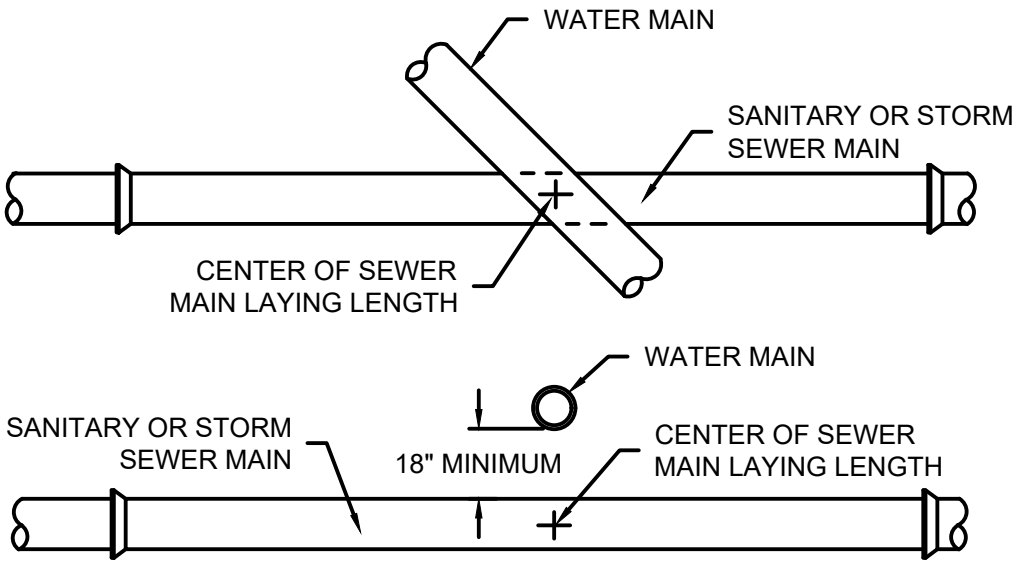
EXISTING CONNECTION



BRANCH CONNECTION

TRACER WIRE
BOLTED CONNECTION

SCALE: NONE

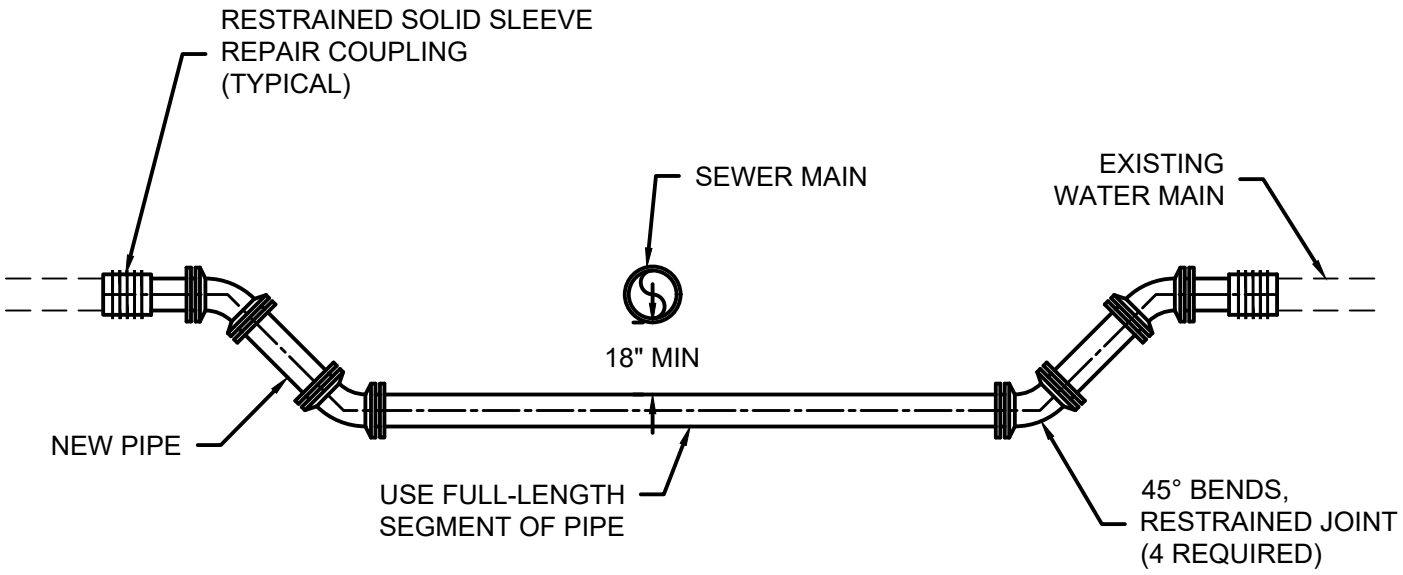


NOTES:

1. WATER MAIN AND SEWER MINIMUM SEPARATION: 18" VERTICAL SEPARATION 10'-0" HORIZONTAL SEPARATION.
2. WHERE WATER MAIN AND SEWER SEPARATION IS LESS THAN 18" VERTICAL OR 10' HORIZONTAL, THE SEWER MUST BE DUCTILE IRON, SDR-21 PVC, OR CONCRETE ENCASED.

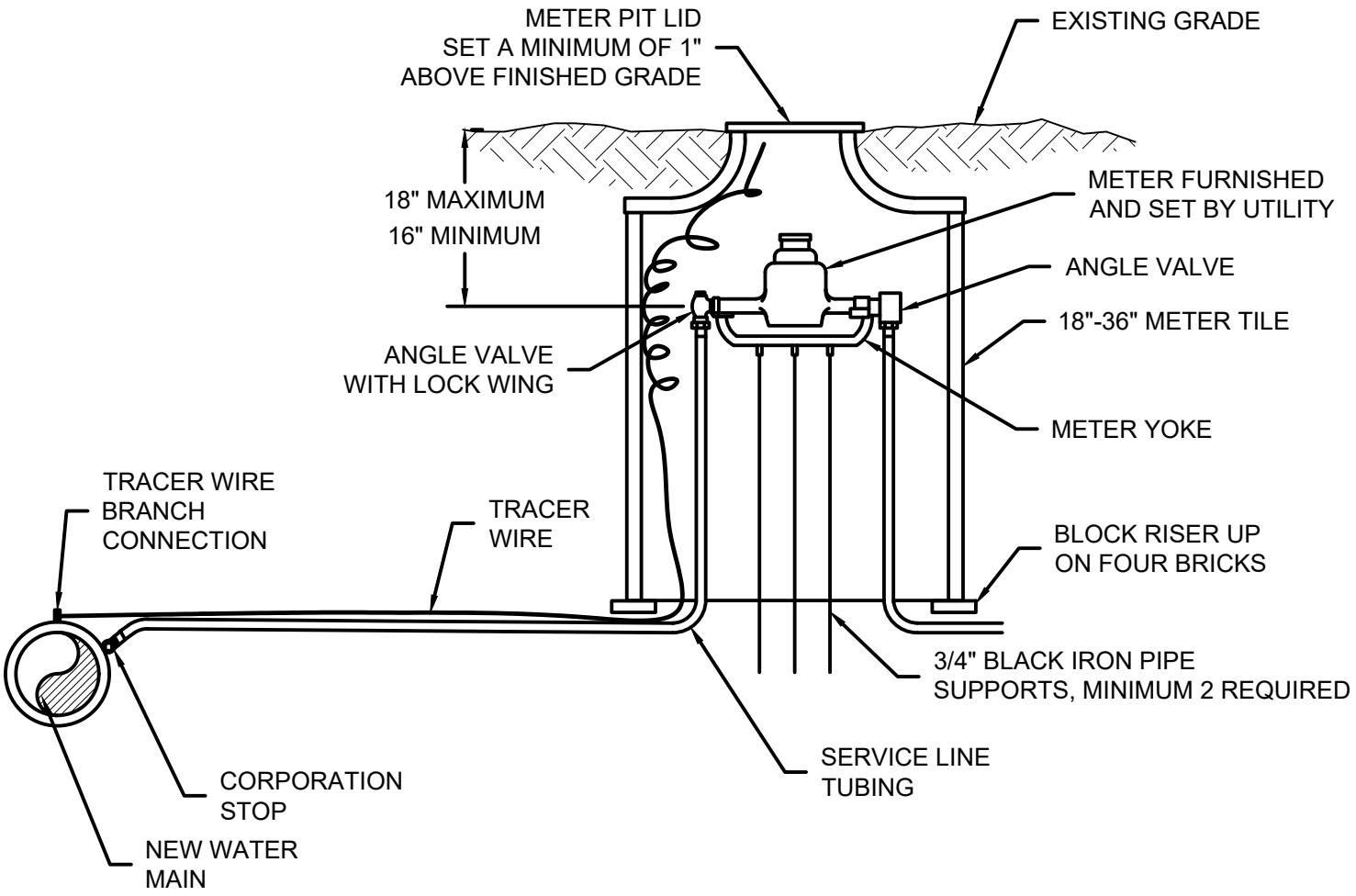
MINIMUM CROSSOVER AND SEPARATION REQUIREMENTS FOR SEWER AND WATER MAINS

SCALE: NONE



WATER MAIN LOWERING

SCALE: NONE

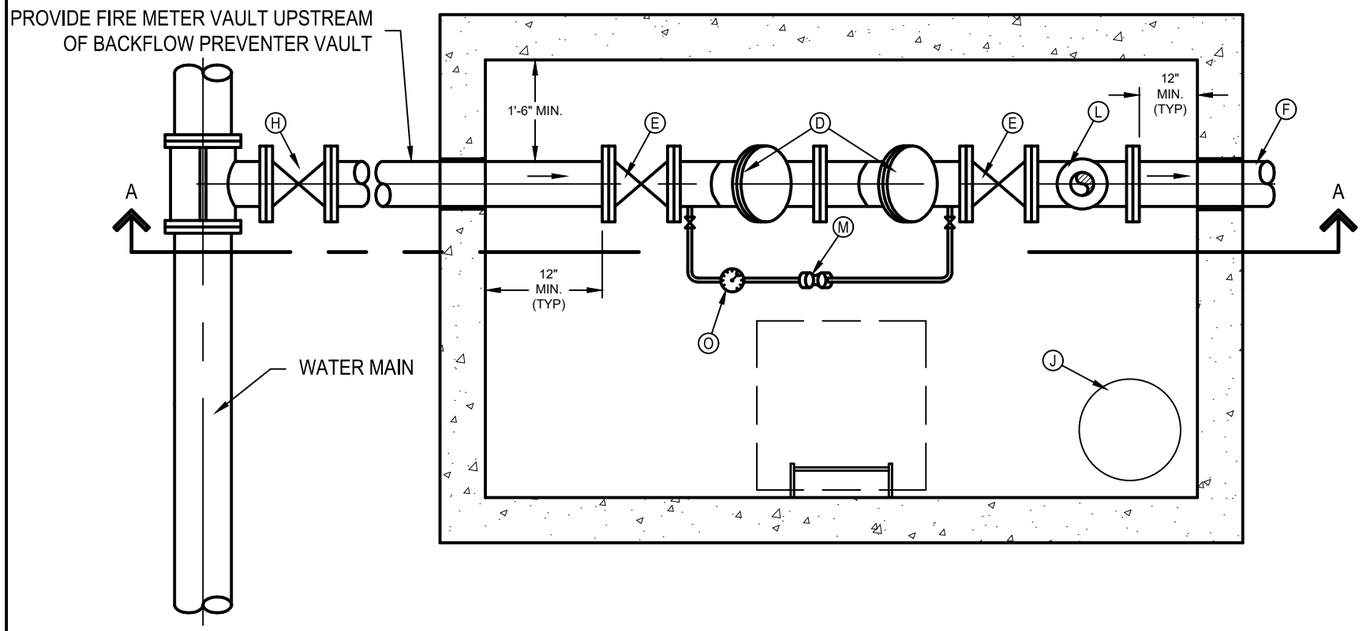


NOTES:

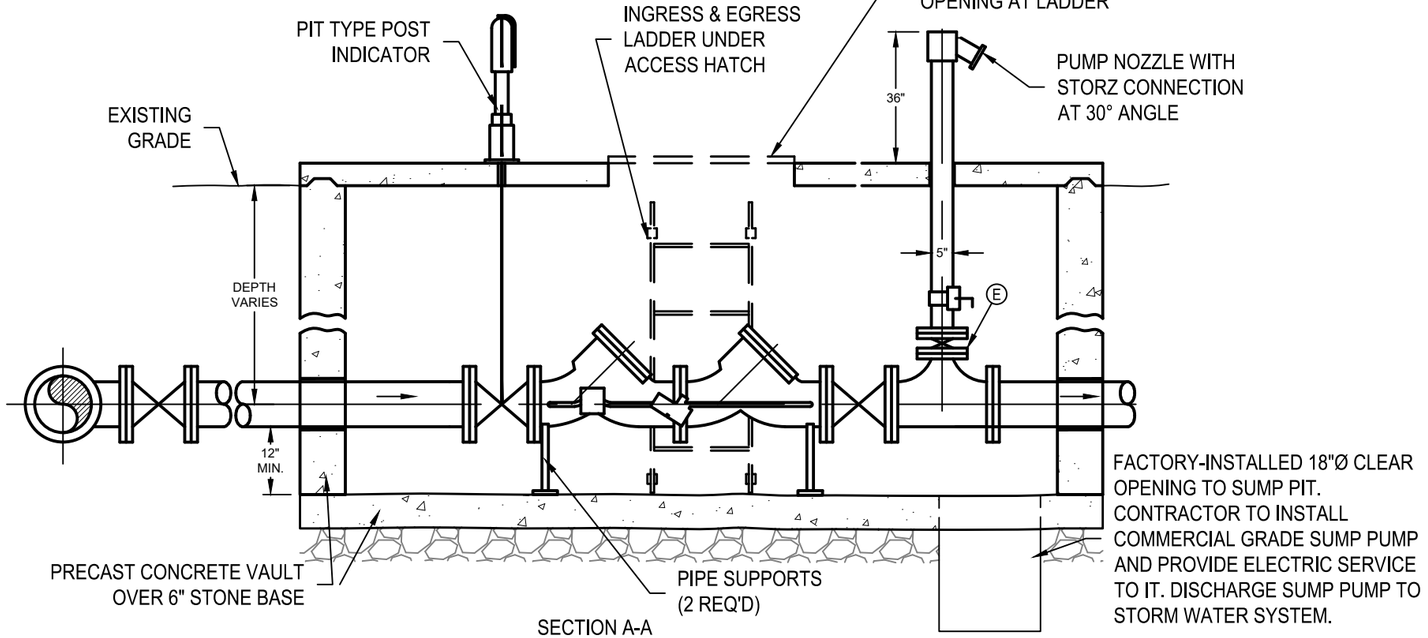
1. NO SPLICES ALLOWED BETWEEN CORPORATION STOP AND ANGLE VALVE WITH LOCK WING.

METER SETTING

SCALE: NONE



PLAN VIEW



SECTION A-A

KEYED NOTES:

- (A) 90° FLANGED BEND WITH PIPE SUPPORT
- (B) BALL VALVE
- (C) REDUCING FLANGE
- (D) DOUBLE DETECTOR CHECK VALVE ASS'Y
- (E) FLANGED OS & Y VALVE
- (F) FIRE LINE
- (G) DOMESTIC SERVICE
- (H) MECHANICAL JOINT GATE VALVE & BOX
- (I) TAPPING SLEEVE w/ TAPPING VALVE & BOX
- (J) SUMP WITH PUMP
- (K) METER - (BY UTILITY)
- (L) FLANGED TEE
- (M) DOUBLE CHECK VALVE
- (N) LOK-PAK
- (O) DETECTOR METER
- (P) FOR DOMESTIC SERVICE 2" AND SMALLER: CURB STOP AND BOX
  FOR 3" AND LARGER: MECHANICAL JOINT GATE VALVE AND BOX
- (Q) METER PIT (BY CONTRACTOR)

NOTES:

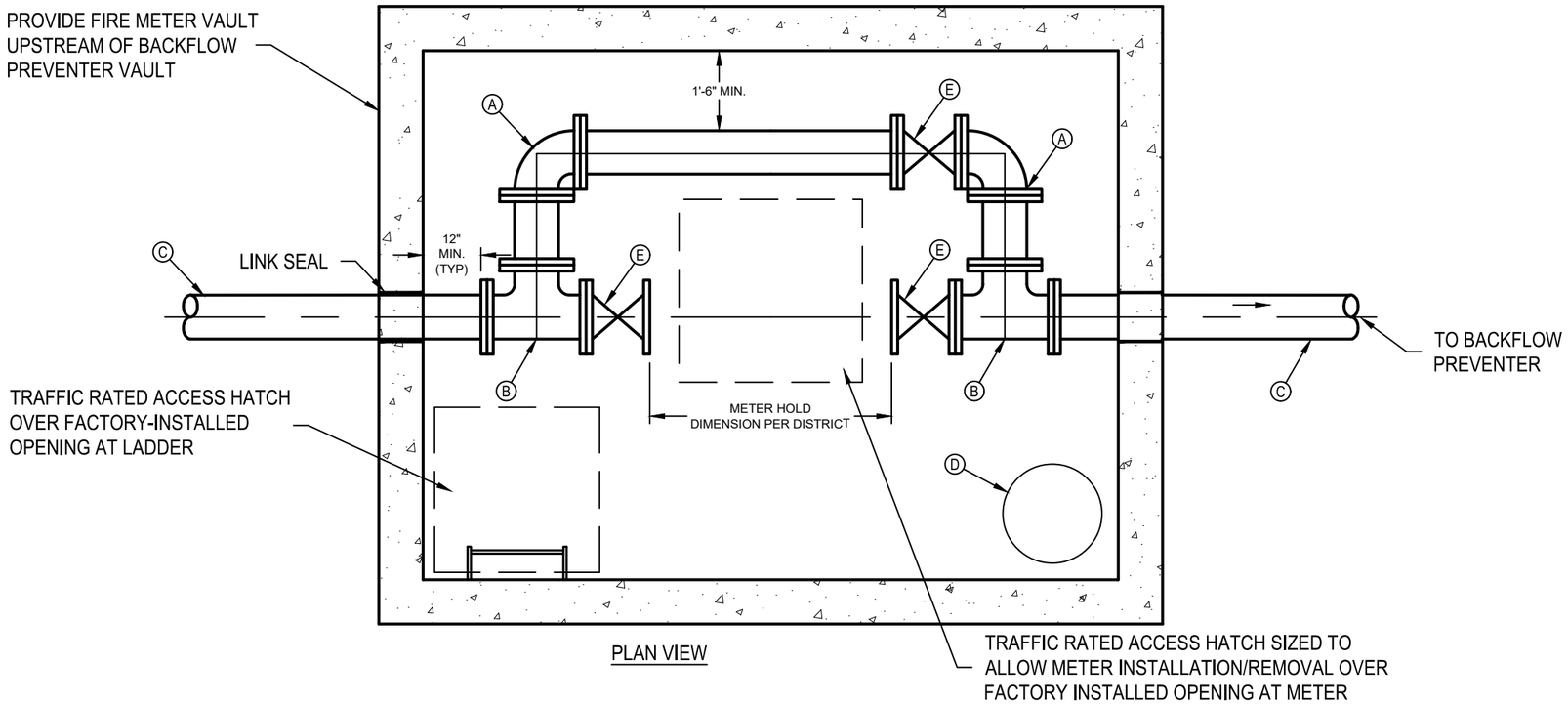
1. CONTRACTOR SHALL CONSTRUCT BACKFLOW PREVENTER VAULT.
2. CONSTRUCTION MATERIALS: PRECAST CONCRETE.
3. INSIDE DIMENSIONS PER DRAWING NOTES. VAULT TO BE SET LENGTHWISE WITH SERVICE.
4. TOP OF VAULT TO BE PRE-CAST CONCRETE, AT LEAST 4" THICK WITH REINFORCING TO SUPPORT AASHTO HS20 TRAFFIC LOAD. TOP OF VAULT SHALL CORRESPOND WITH FINISHED GRADE LEVEL OF SURROUNDING AREA, LEVEL WITH PAVEMENT IF CONSTRUCTED IN PAVED AREA.
5. BOTTOM OF VAULT TO BE PRE-CAST 6" CONCRETE, WITH MINIMUM CLEARANCE OF 12" BELOW BOTTOM OF FIRE/SERVICE LINE.
6. CUSTOMER SHALL FURNISH 2" BALL VALVES ON OUTLET SIDE OF THE METER SETTING, THE SAME SIZE AS THE METER.
7. CUSTOMER SHALL FURNISH DOUBLE DETECTOR CHECK VALVE. METER IS FURNISHED BY UTILITY.
8. CUSTOMER SHALL FURNISH VAULT FRAME AND LID TO BE INSTALLED IN TOP OF VAULT BY CUSTOMER (BILCO J-2AL OR 30"x30" ALUMINUM PCM)
9. UTILITY WILL INSTALL DOMESTIC SERVICE METER INTO THE PIT.
10. CUSTOMER SHALL INSTALL A LADDER IN PIT FOR INGRESS AND EGRESS.
11. A 2" TEST PLUG SHALL BE INSTALLED AT LEAST 2 PIPE DIAMETERS DOWNSTREAM OF 2" OR LARGER METERS.
12. DOMESTIC METER PIT SHALL BE CONSTRUCTED BY CUSTOMER.

FIRE BACKFLOW PREVENTER VAULT AND DOMESTIC SERVICE, DOMESTIC METERS 2" AND SMALLER

SCALE: NONE

HAMILTON COUNTY, INDIANA
HAMILTON COUNTY REGIONAL UTILITY DISTRICT

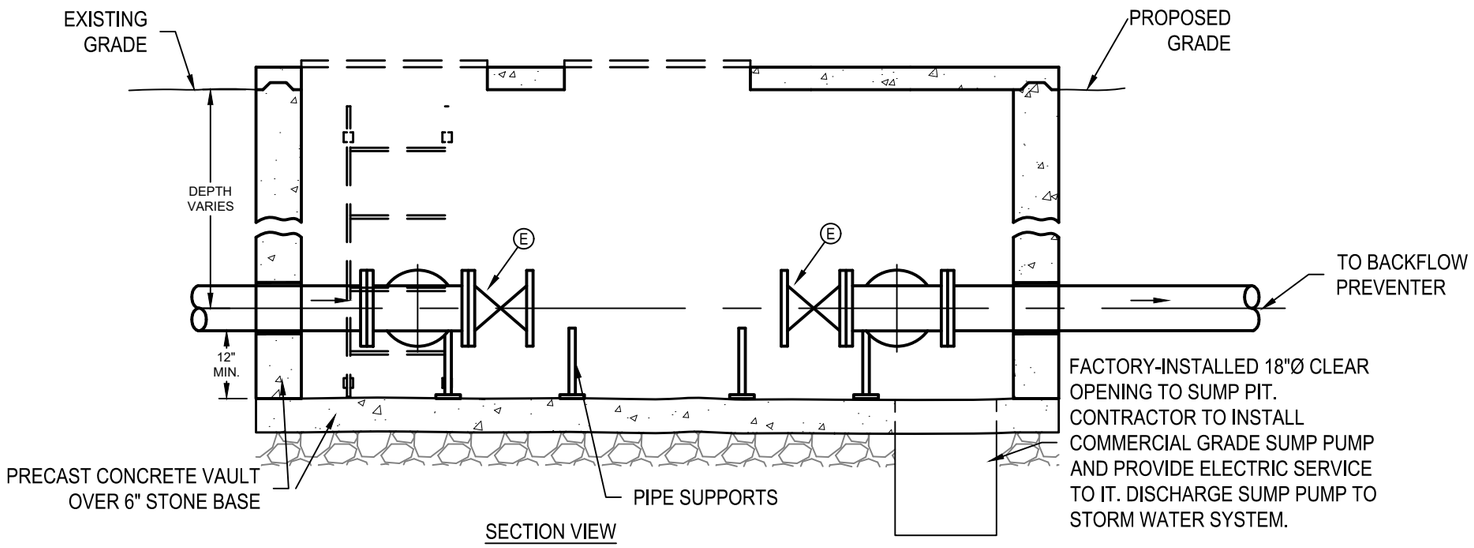
DETAIL NO. DW-08
DATE: OCTOBER 2024



PLAN VIEW

KEYED NOTES:

- (A) 90° FLANGED BEND WITH PIPE SUPPORT
- (B) FLANGED TEE
- (C) FIRE LINE
- (D) SUMP WITH PUMP
- (E) FLANGED OS & Y VALVE



SECTION VIEW

NOTES:

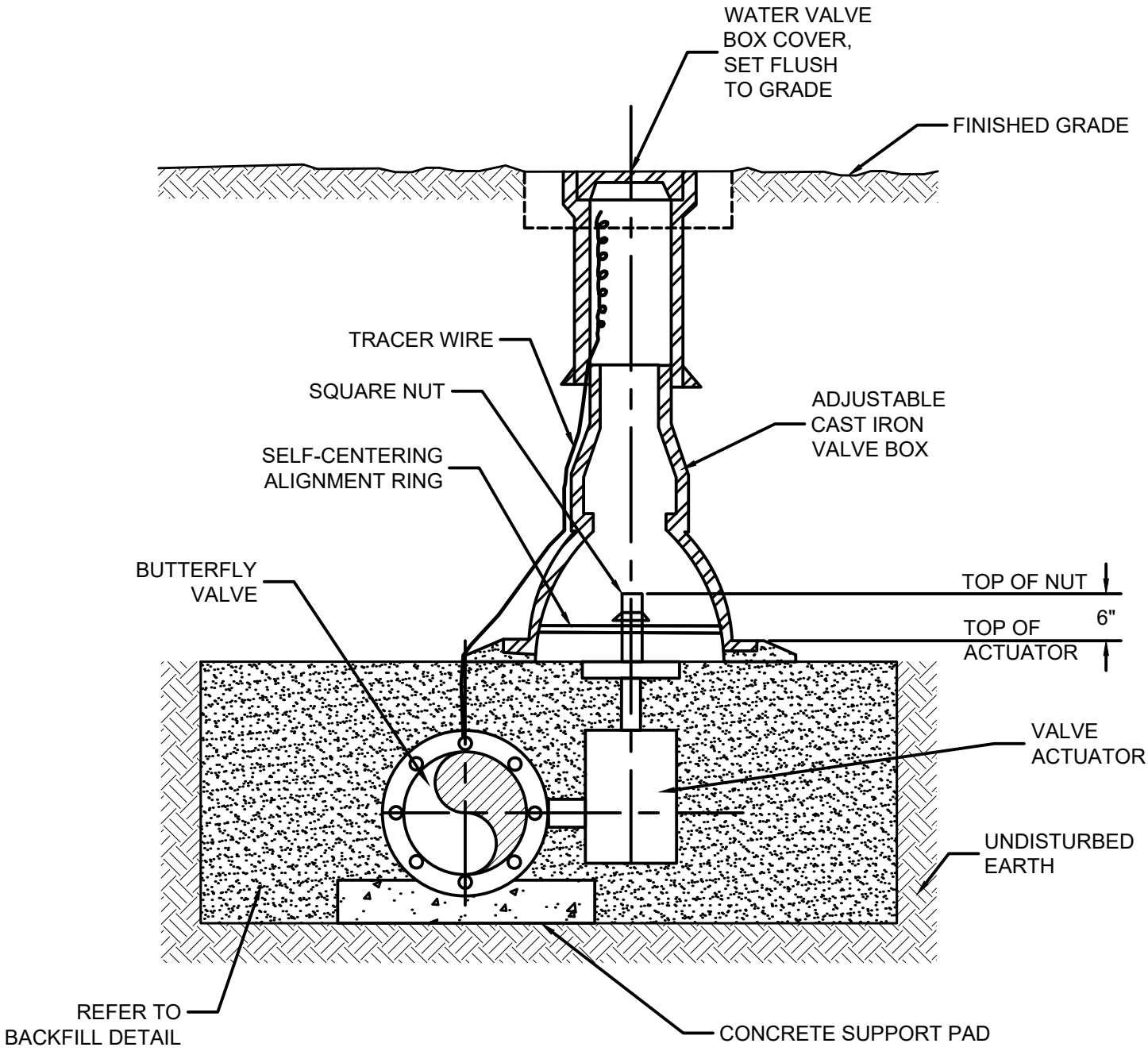
1. CONTRACTOR SHALL CONSTRUCT METER VAULT.
2. CONSTRUCTION MATERIALS: PRECAST CONCRETE.
3. INSIDE DIMENSIONS PER DRAWING NOTES. VAULT TO BE SET LENGTHWISE WITH SERVICE.
4. TOP OF VAULT TO BE PRE-CAST CONCRETE, AT LEAST 4" THICK WITH REINFORCING TO SUPPORT AASHTO HS20 TRAFFIC LOAD. TOP OF VAULT SHALL CORRESPOND WITH FINISHED GRADE LEVEL OF SURROUNDING AREA, LEVEL WITH PAVEMENT IF CONSTRUCTED IN PAVED AREA.
5. BOTTOM OF VAULT TO BE PRE-CAST 6" CONCRETE, WITH MINIMUM CLEARANCE OF 12" BELOW BOTTOM OF FIRE/SERVICE LINE.
6. METER IS FURNISHED BY UTILITY.
7. CUSTOMER SHALL INSTALL A LADDER IN VAULT FOR INGRESS AND EGRESS.
8. CUSTOMER SHALL FURNISH VAULT FRAME AND LIDS TO BE INSTALLED IN TOP OF VAULT BY CUSTOMER. LADDER HATCH SHALL BE BILCO J-2A OR 30"x30" ALUMINUM J OR PCM SIZED TO ALLOW EASY INSTALLATION AND REMOVAL OF METER.

FIRE METER VAULT

SCALE: NONE

HAMILTON COUNTY, INDIANA
HAMILTON COUNTY REGIONAL UTILITY DISTRICT

DETAIL NO. DW-09
DATE: OCTOBER 2024

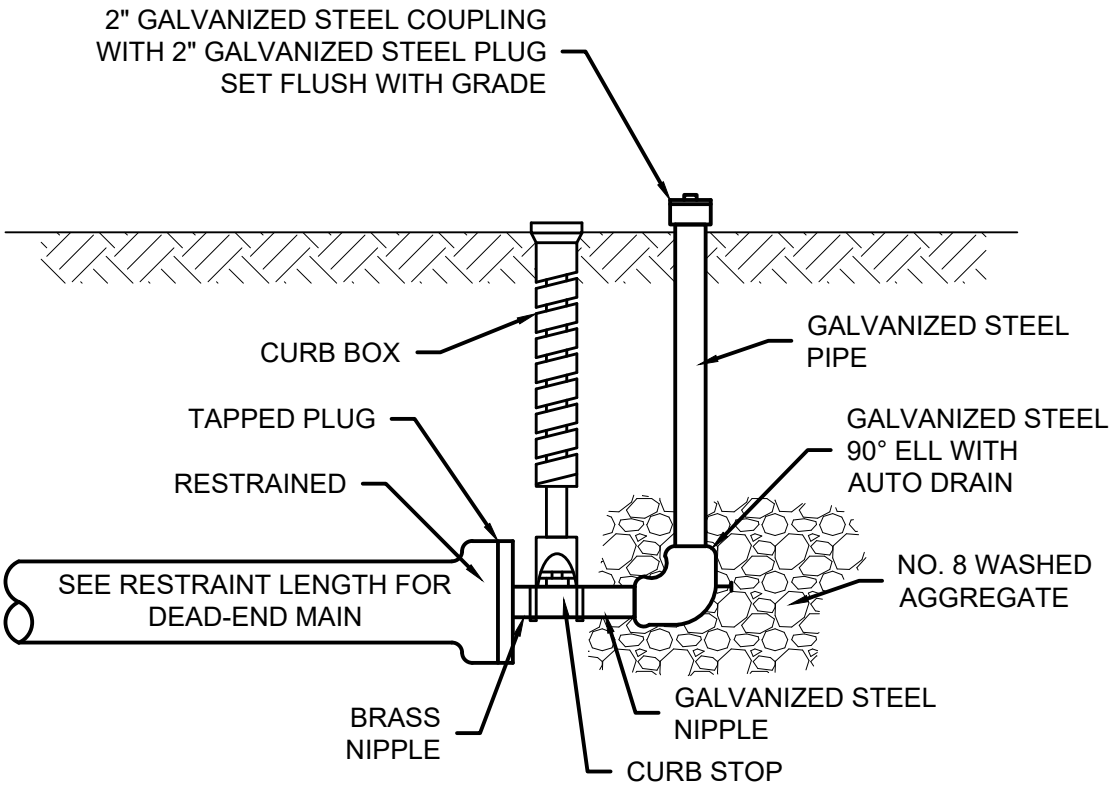


BUTTERFLY VALVE

SCALE: NONE

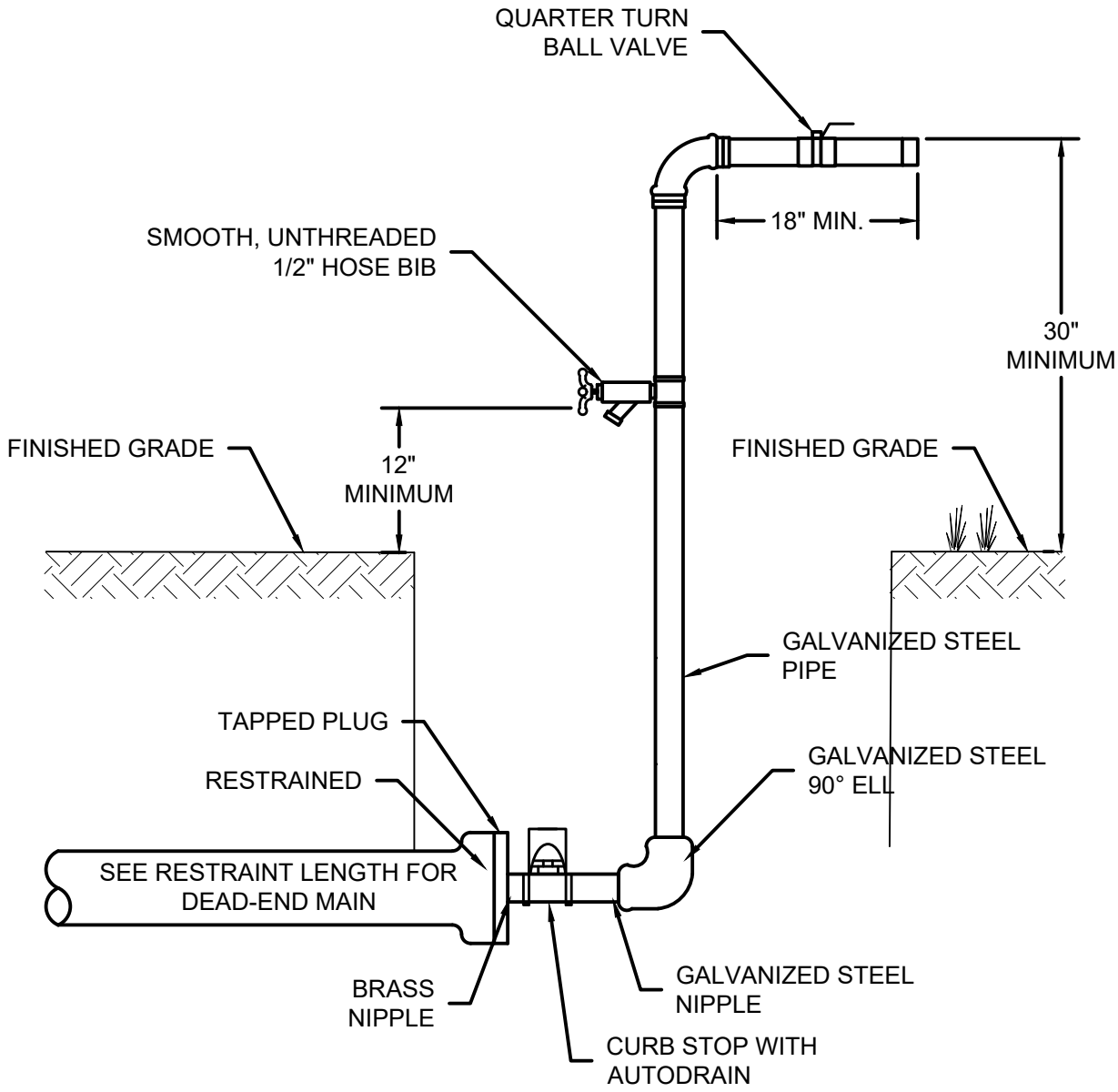
HAMILTON COUNTY, INDIANA
HAMILTON COUNTY REGIONAL UTILITY DISTRICT

DETAIL NO. DW-10
DATE: OCTOBER 2024



BLOW-OFF INSTALLATION

SCALE: NONE



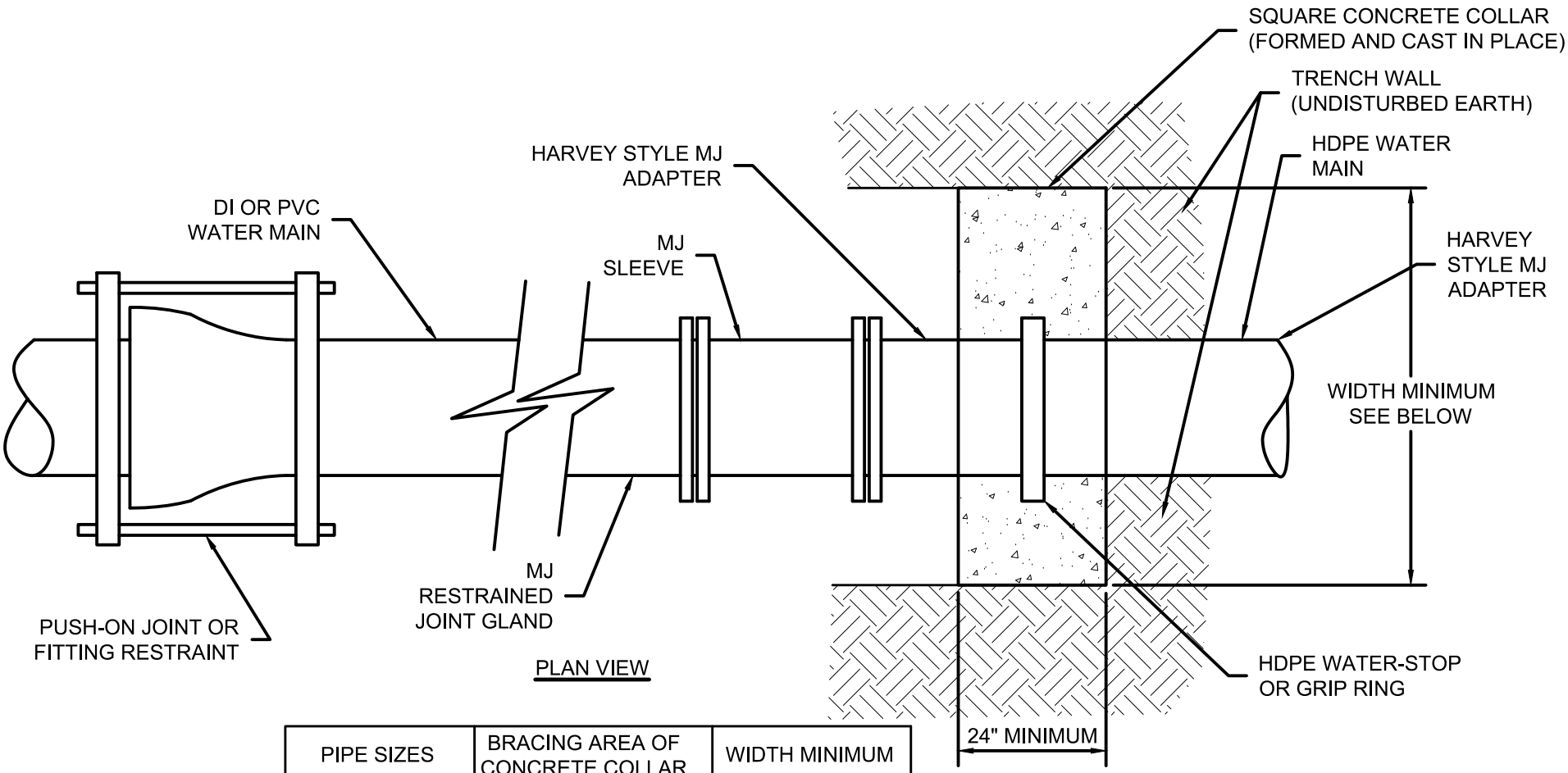
TEMPORARY BLOW-OFF ASSEMBLY

SCALE: NONE

NOTE:

1. FOR SAMPLING, HOSE BIB SHALL BE SAFELY ACCESSIBLE

HAMILTON COUNTY, INDIANA
HAMILTON COUNTY REGIONAL UTILITY DISTRICT



PLAN VIEW

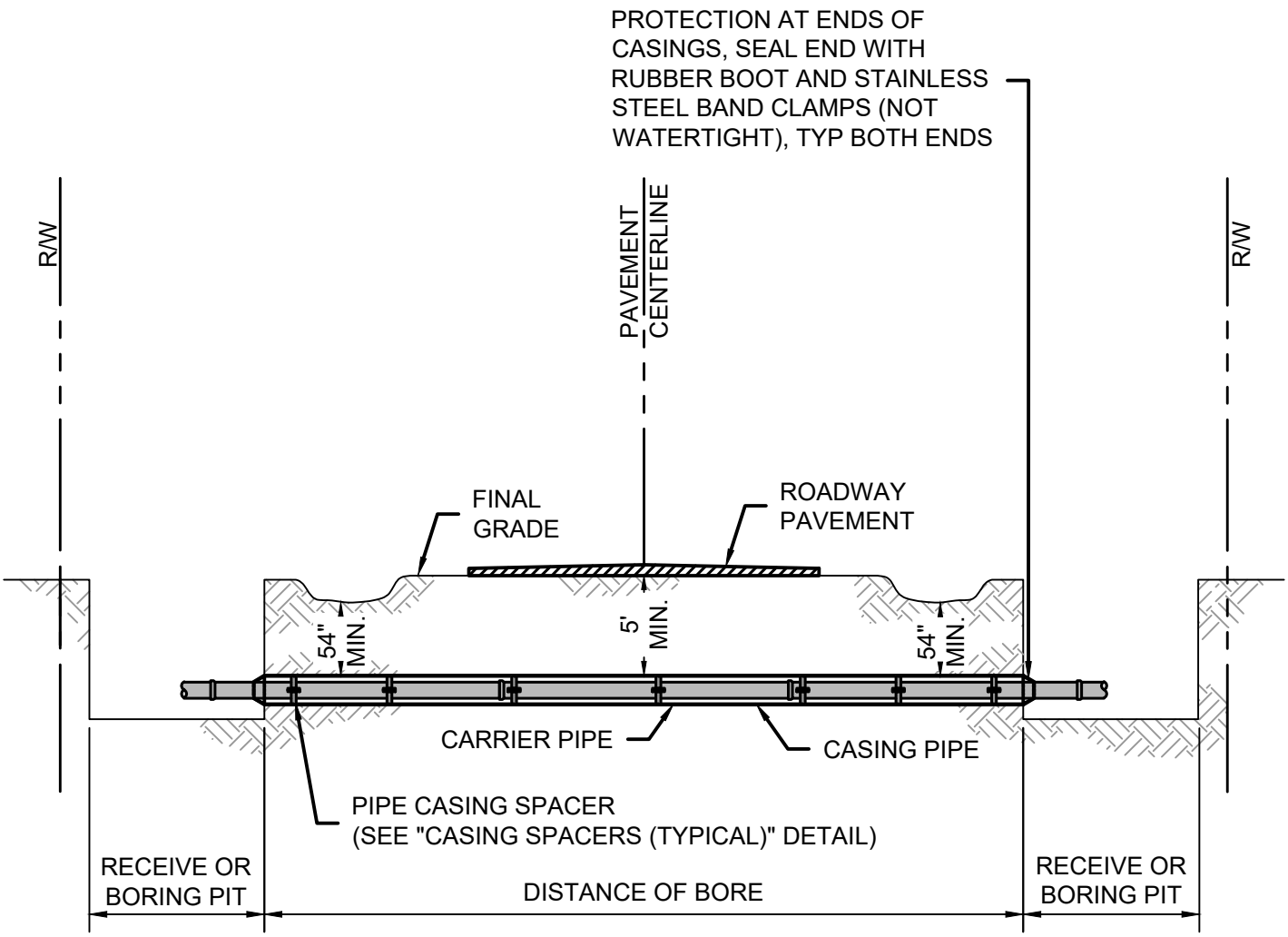
PIPE SIZES	BRACING AREA OF CONCRETE COLLAR	WIDTH MINIMUM
8"	9 SF	3'-6"
12"	18 SF	4'-3"
14"	20 SF	4'-6"
16"	21 SF	4'-9"
18"	22 SF	4'-9"
20"	24 SF	5'-0"
24"	27 SF	5'-2"

NOTES:
1. INSTALL AT ALL TRANSITIONS BETWEEN HDPE AND OTHER PIPE MATERIALS
2. FOR PIPE SIZE LARGER THAN 24", CONSULT WITH DISTRICT AND DISTRICT ENGINEER

HDPE PIPE TRANSITION

SCALE: NONE

DETAIL NO. DW-13
DATE: SEPTEMBER 2024

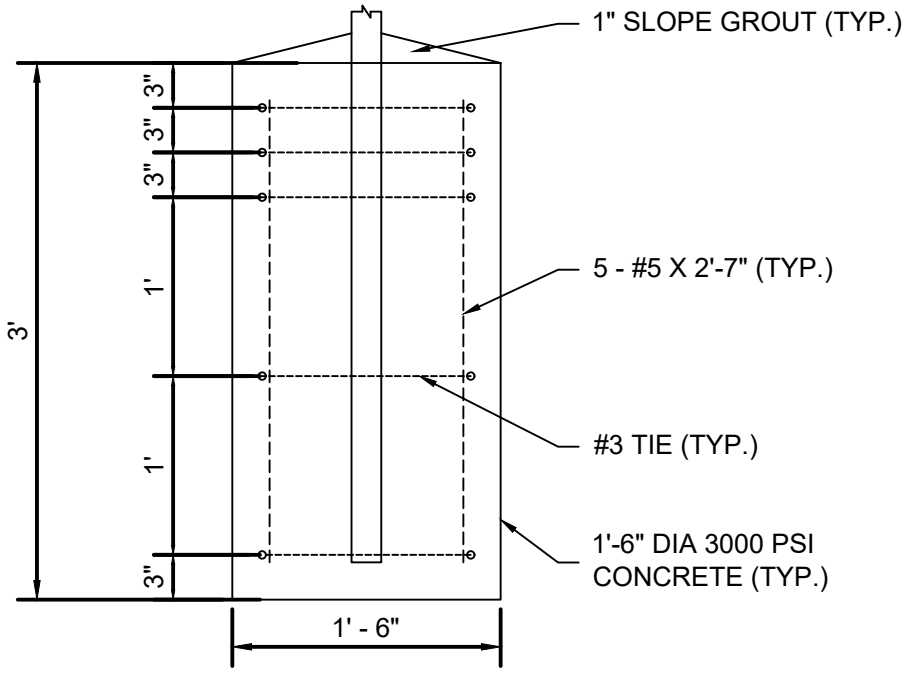


NOTES:

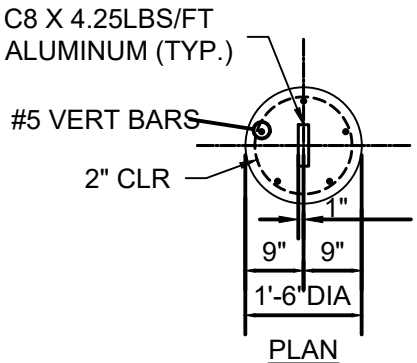
1. ALL PIPE JOINTS WITHIN THE CASING ARE TO BE RESTRAINED
2. PIPE CASING SHALL BE LAID TRUE TO LINE AND GRADE WITH NO BENDS OR CHANGES IN GRADE FOR THE FULL LENGTH OF THE CASING.
3. STEEL CASING SECTIONS SHALL BE CONNECTED BY WELDING. WELD SHALL CONFORM TO AWWA C206.

CASING DETAIL PROFILE VIEW

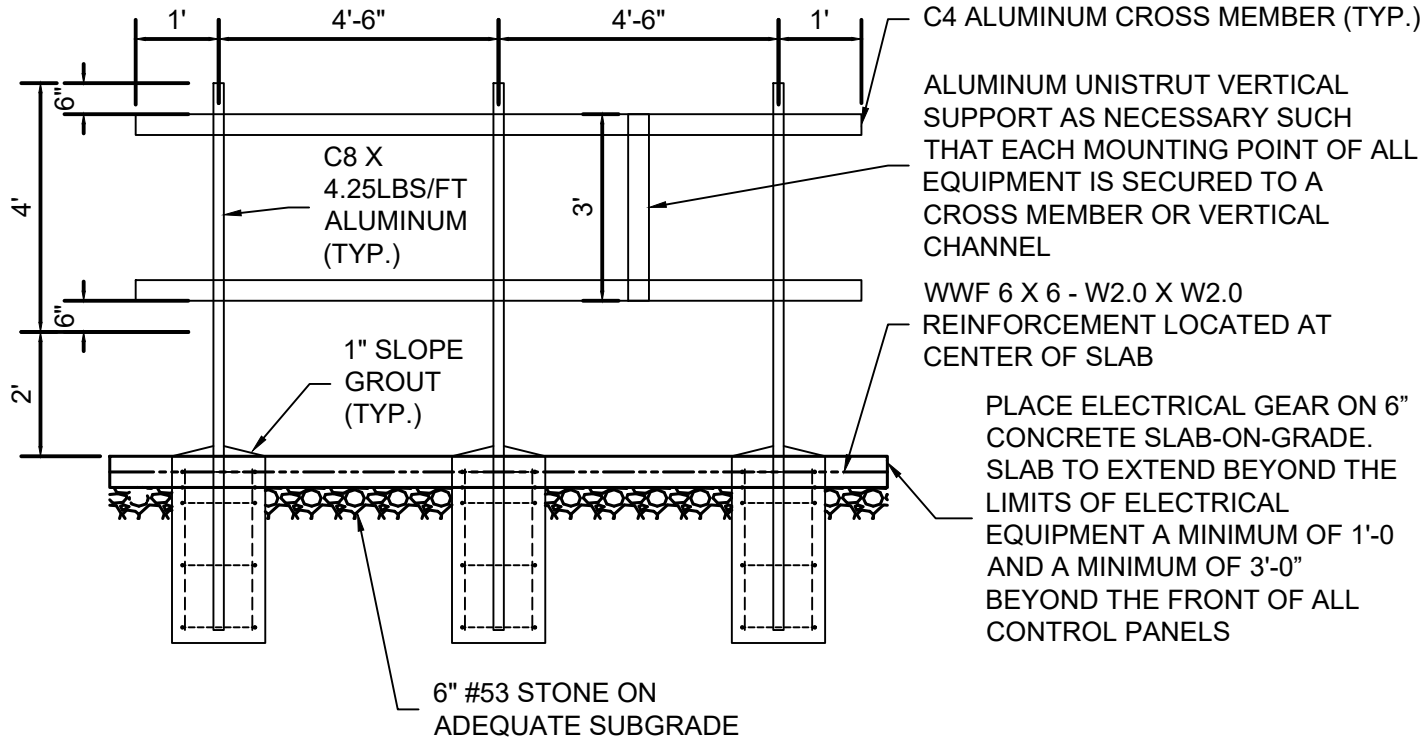
SCALE: NONE



SECTION



PLAN



NOTES:

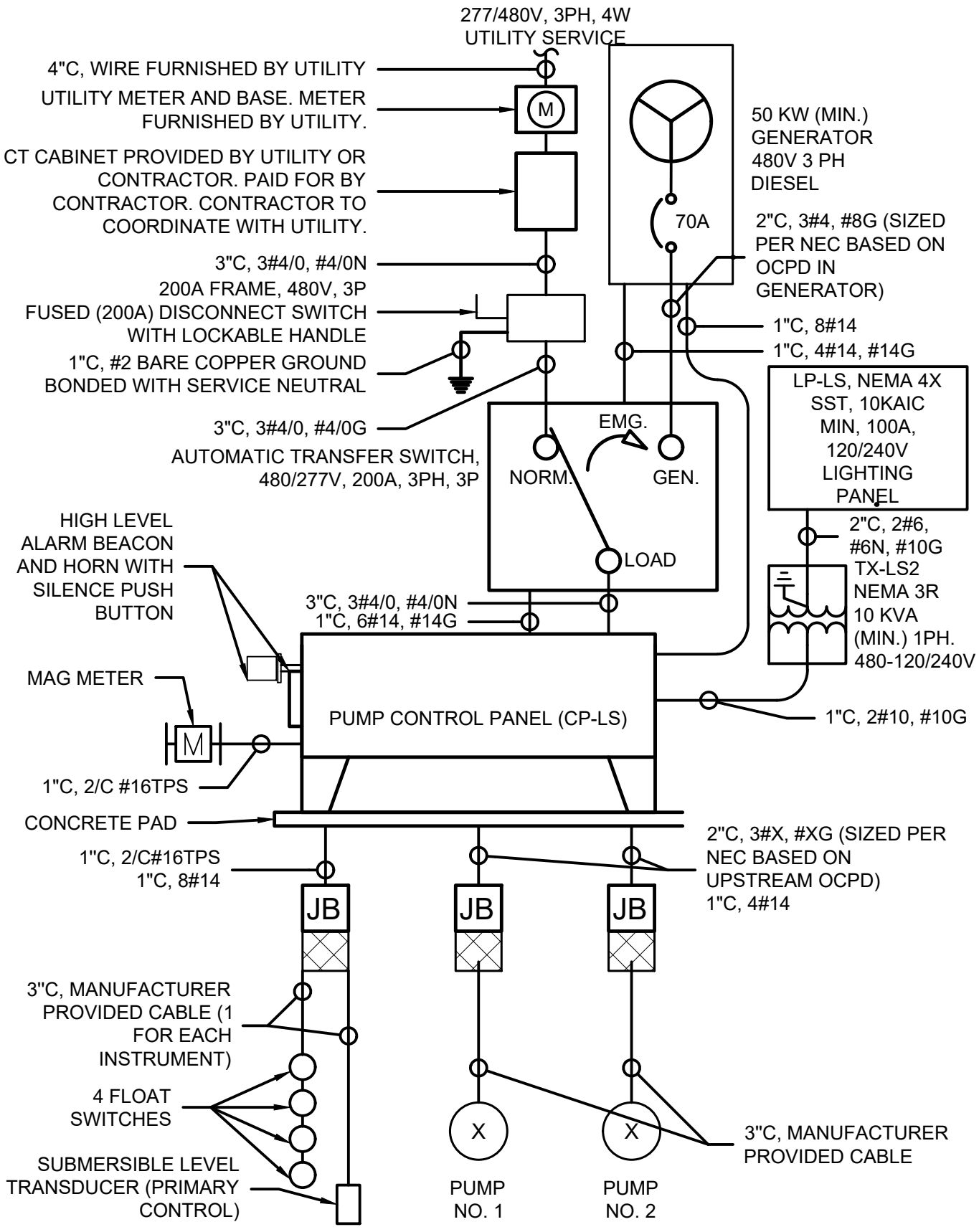
1. ALL HARDWARE ANCHORS, BOLTS, WASHERS AND ALL OTHER HARDWARE TO BE STAINLESS STEEL, 1/2" DIA.
2. WHERE ALUMINUM COMES IN CONTACT WITH CONCRETE, COAT WITH BITUMINOUS.
3. DETAILS ARE TYPICAL OF ALL FOUNDATIONS
4. MOUNT ELECTRICAL GEAR TO CROSS MEMBER USING STAINLESS STEEL HARDWARE.
5. FOR SMALLER EQUIPMENT, USE TWO POSTS WITH SAME DIMENSIONING AS SHOWN ABOVE BUT WITH 4'-6" LESS WIDTH (TOTAL WIDTH OF CROSS MEMBERS WILL BE 6'-6")

ELECTRICAL EQUIPMENT RACK

SCALE: NONE

HAMILTON COUNTY, INDIANA
HAMILTON COUNTY REGIONAL UTILITY DISTRICT

DETAIL NO. E-1
DATE: OCTOBER 2024

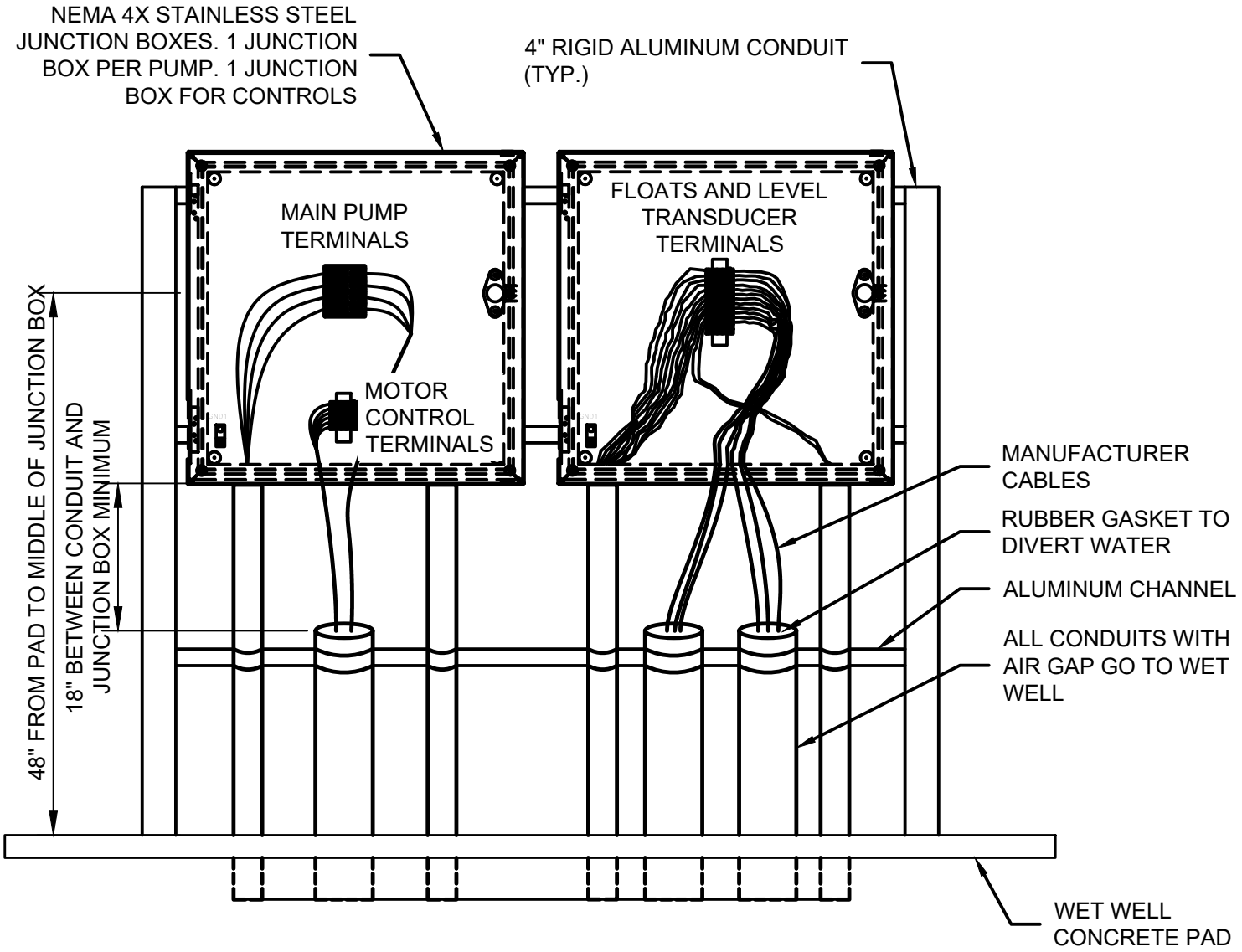


TYPICAL ONE LINE DIAGRAM

SCALE: NONE

HAMILTON COUNTY, INDIANA
HAMILTON COUNTY REGIONAL UTILITY DISTRICT

DETAIL NO. E-2
DATE: OCTOBER 2024



NOTES:

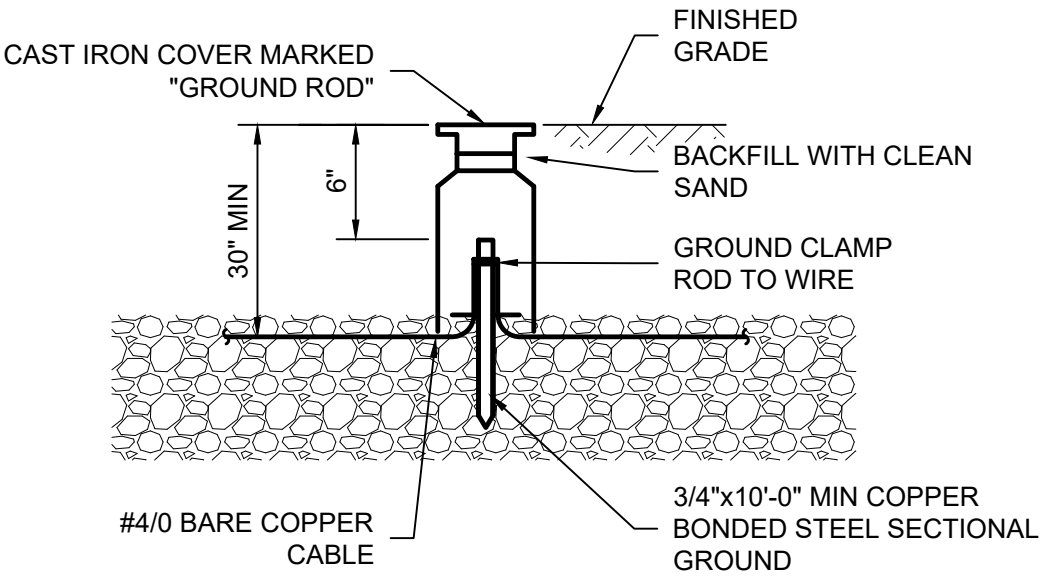
1. ALL HARDWARE ANCHORS, BOLTS, WASHERS AND ALL OTHER HARDWARE TO BE STAINLESS STEEL.
2. WHERE ALUMINUM COMES IN CONTACT WITH CONCRETE, COAT WITH BITUMINOUS.
3. MOUNT ELECTRICAL GEAR TO CROSS MEMBER USING STAINLESS STEEL HARDWARE.
4. PROVIDE STRAIN RELIEF FOR MANUFACTURERS CABLES ENTERING JUNCTION BOX.
5. ALL CONDUIT TO BE PVC COATED
6. SEE ONE LINE DIAGRAM FOR CONDUIT QUANTITIES AND SIZES. THEY ARE LIKELY NOT ALL REPRESENTED IN THIS DETAIL.

WET WELL JUNCTION BOXES

SCALE: NONE

HAMILTON COUNTY, INDIANA
HAMILTON COUNTY REGIONAL UTILITY DISTRICT

DETAIL NO. E-3
DATE: OCTOBER 2024



NOTES:

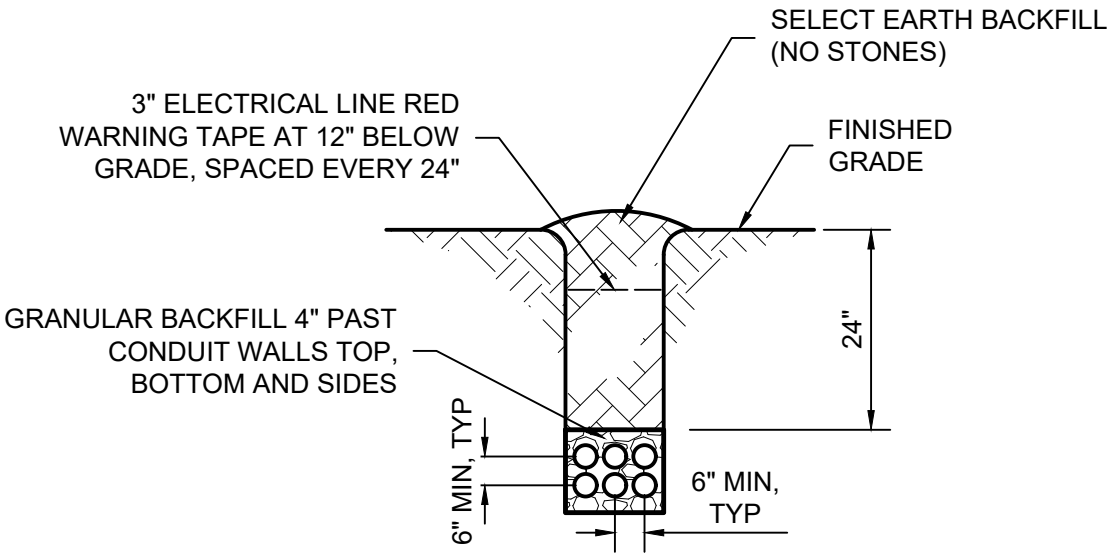
1. REFER TO JOB SPECIFICATION FOR MINIMUM SYSTEM RESISTANCE TO GROUND. IF THE RESISTANCE CANNOT BE MET WITH SINGLE 10'-0" RODS, ADD ADDITIONAL SECTIONS TO RODS OR ADD NEW RODS AS REQUIRED, SPACED 6'-0" TO 10'-0" FROM EXISTING RODS.

ELECTRICAL INSTALLATION AND GROUND ROD ASSEMBLY

SCALE: NONE

HAMILTON COUNTY, INDIANA
HAMILTON COUNTY REGIONAL UTILITY DISTRICT

DETAIL NO. E-4
DATE: OCTOBER 2024

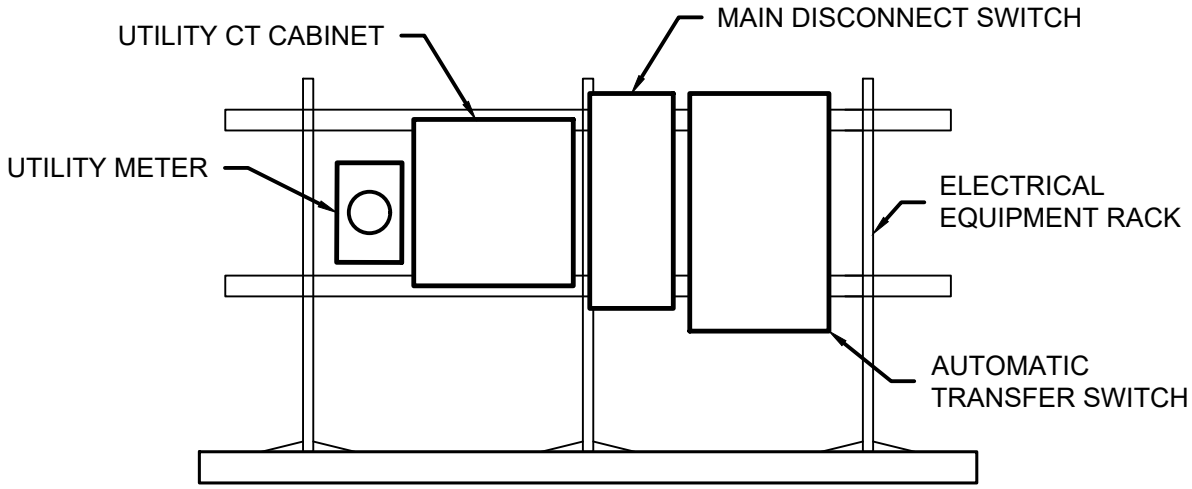


CONDUIT TRENCH

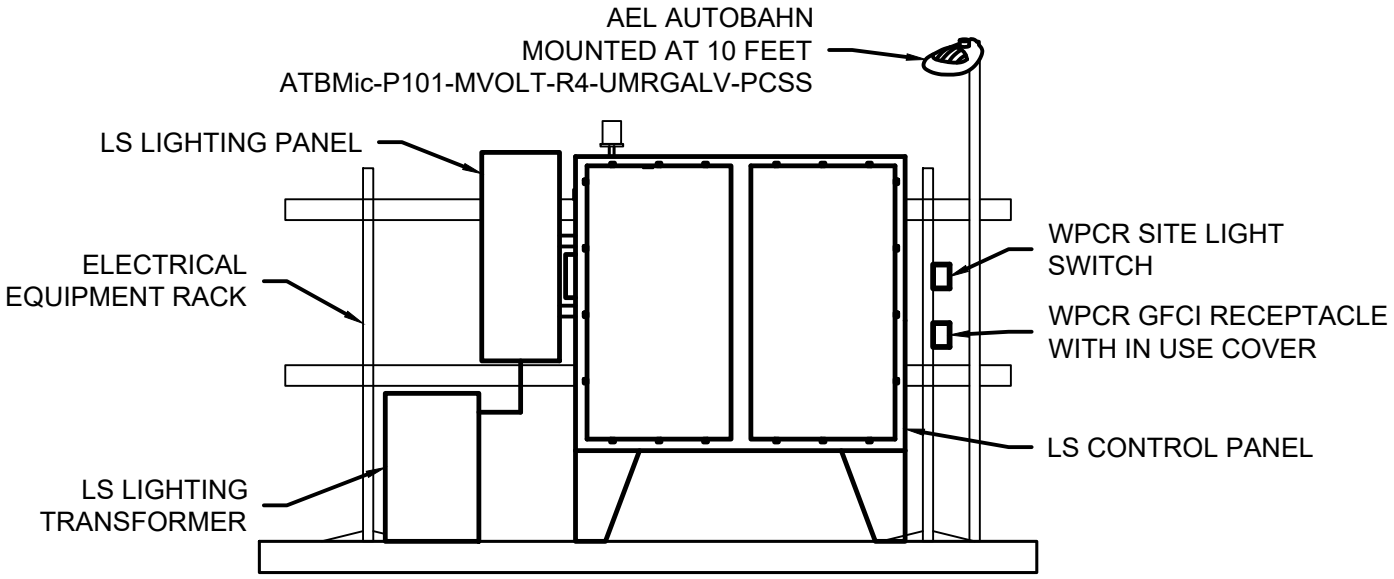
SCALE: NONE

HAMILTON COUNTY, INDIANA
HAMILTON COUNTY REGIONAL UTILITY DISTRICT

DETAIL NO. E-5
DATE: OCTOBER 2024



BACK OF RACK (FACING AWAY FROM WET WELL)



FRONT OF RACK (FACING TOWARD WET WELL)

NOTES:

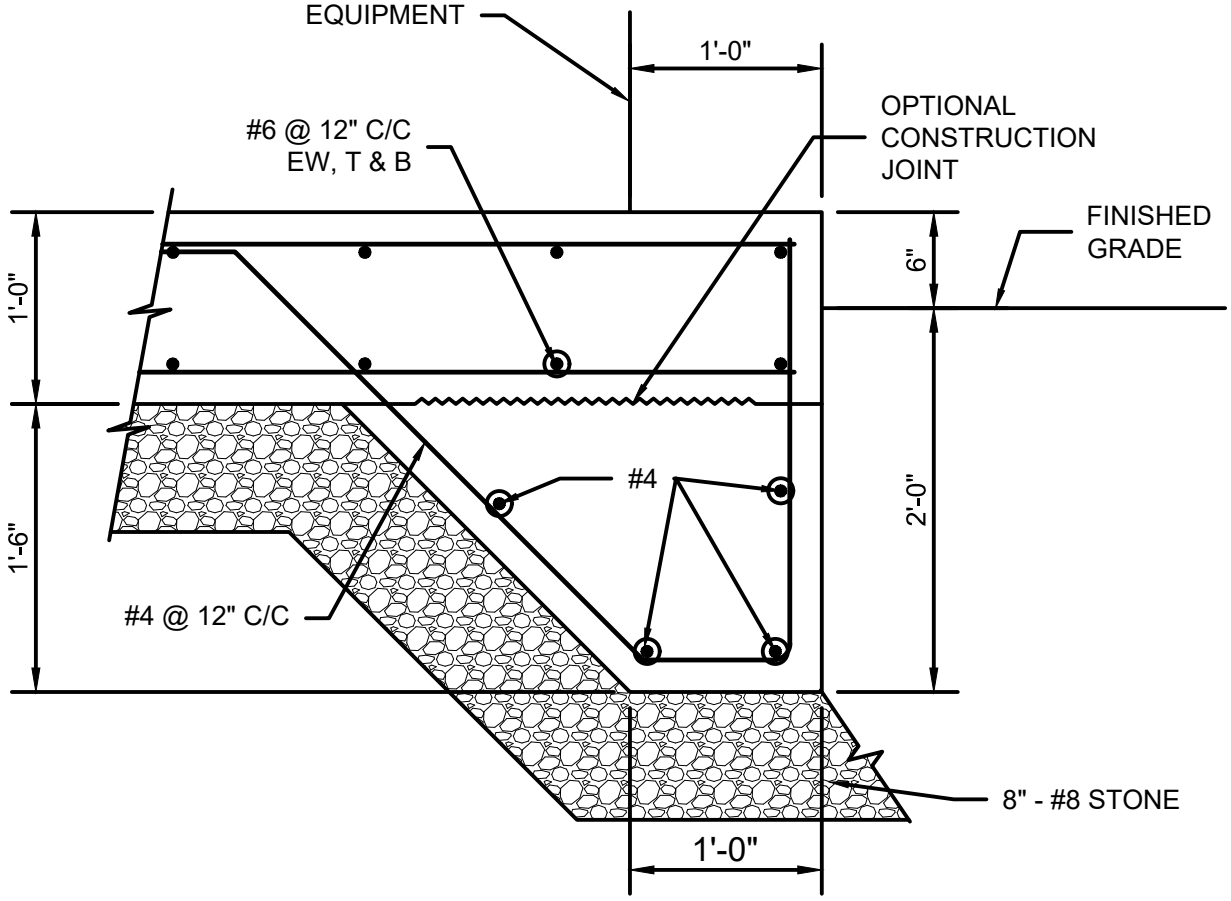
1. UTILITY EQUIPMENT TO BE ON RACK AS REQUIRED. IF UTILITY TRANSFORMER IS PAD MOUNTED, A CT CABINET AND METER MAY NOT BE REQUIRED. CONTRACTOR TO COORDINATE WITH UTILITY.
2. SEE ONE LINE DIAGRAM AND PANEL SCHEDULE FOR CONDUIT QUANTITIES AND SIZES.

LIFT STATION ELECTRICAL RACK LAYOUT

SCALE: NONE

HAMILTON COUNTY, INDIANA
HAMILTON COUNTY REGIONAL UTILITY DISTRICT

DETAIL NO. E-6
DATE: OCTOBER 2024



GENERATOR PAD

SCALE: 1" = 1'-0"

HAMILTON COUNTY, INDIANA
HAMILTON COUNTY REGIONAL UTILITY DISTRICT

DETAIL NO. E-7
DATE: OCTOBER 2024

PANEL SCHEDULE		DESIGNATION:		STANDARD LS LIGHTING PANEL				MAINS:				50 AMP MAIN CIRCUIT BREAKER	
		LOCATION:		LIFT STATION NO.X				BUS SIZE				125 AMP	
		VOLTAGE:		120/240 V AC				ENCLOSURE RATING:				NEMA 4X S.S.	
		PHASE:		1 PHASE, 3 WIRE				ALL BREAKERS:				10000 A.I.C. (MINIMUM)	
CKT. NO.	LOAD DESCRIPTION	#	KVA	CKT. BKR. AMPS	CKT. BKR. POLE	KVA A	KVA B	CKT. BKR. AMPS	CKT. BKR. POLE	KVA	#	LOAD DESCRIPTION	CKT. NO.
1	GENERATOR BATTERY CHARGER	2	1.20	20	2	1.70		20	1	0.50	1	SITE LIGHTING	2
3			1.20				1.70	20	1	0.50	1	MAGMETER	4
5	GENERATOR COOLANT HEATER	1	1.50	20	1	2.50		20	1	1.00	1	CONVENIENCE RECEPTACLE	6
7	GENERATOR ALTERNATOR HEATER	1	0.10	20	1		0.10	20	1			SPARE	8
9	SPARE			20	1	0.00		20	1			SPARE	10
11	SPARE			20	1		0.00	20	1			SPARE	12
13	SPARE			20	1	0.00		20	1			SPARE	14
15	SPARE			20	1		0.00	20	1			SPARE	16
17	SPARE			20	1	0.00		20	1			SPARE	18
19	SPARE			20	1		0.00	20	1			SPARE	20
21	SPARE			20	1	0.00		30	2		3	SPD	22
23	SPARE			20	1		0.00						24
	TOTAL CONNECTED LOAD:					4.20	1.80	TOTAL =		6.00	KVA		
#	ONE (1) OR TWO (2) DIGIT NUMBERS REFER TO CONDUIT & WIRE SCHEDULE ON THIS SHEET.												
	20 1-pole 20A breakers, 1 2-pole 20A breaker, 1 2-pole 30A breaker												

CONDUIT & WIRE SCHEDULE:

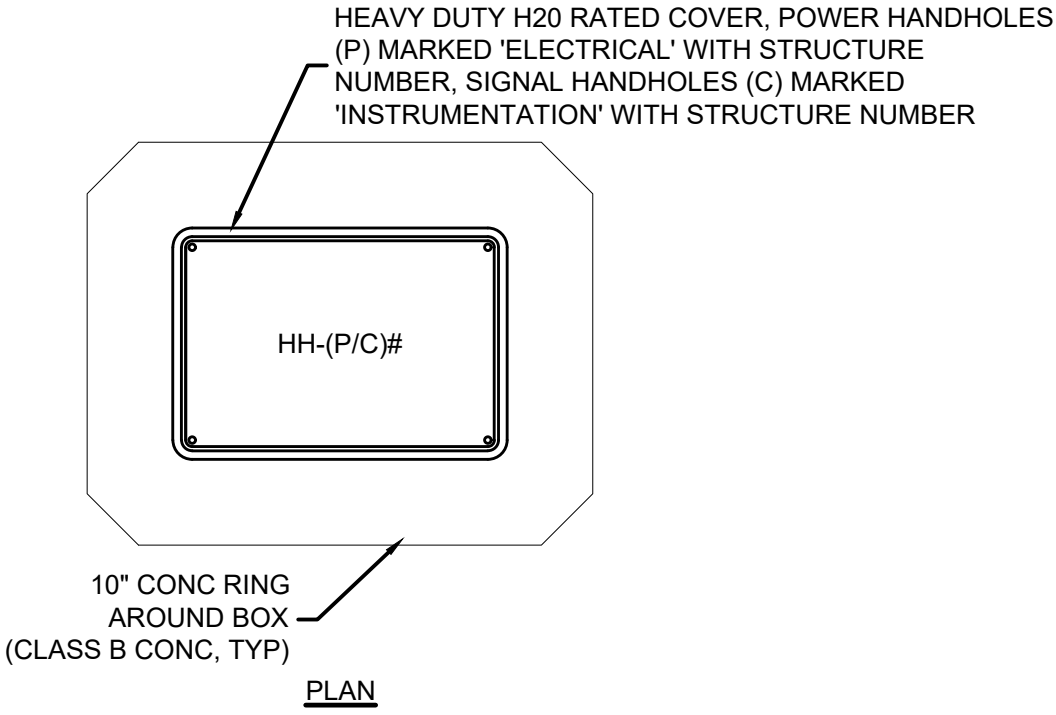
1. 1"C, 1#12, 1#12N, #12G
2. 1"C, 2#12, #12G
3. 1"C, 2#10, #10N, #10G

NOTES:

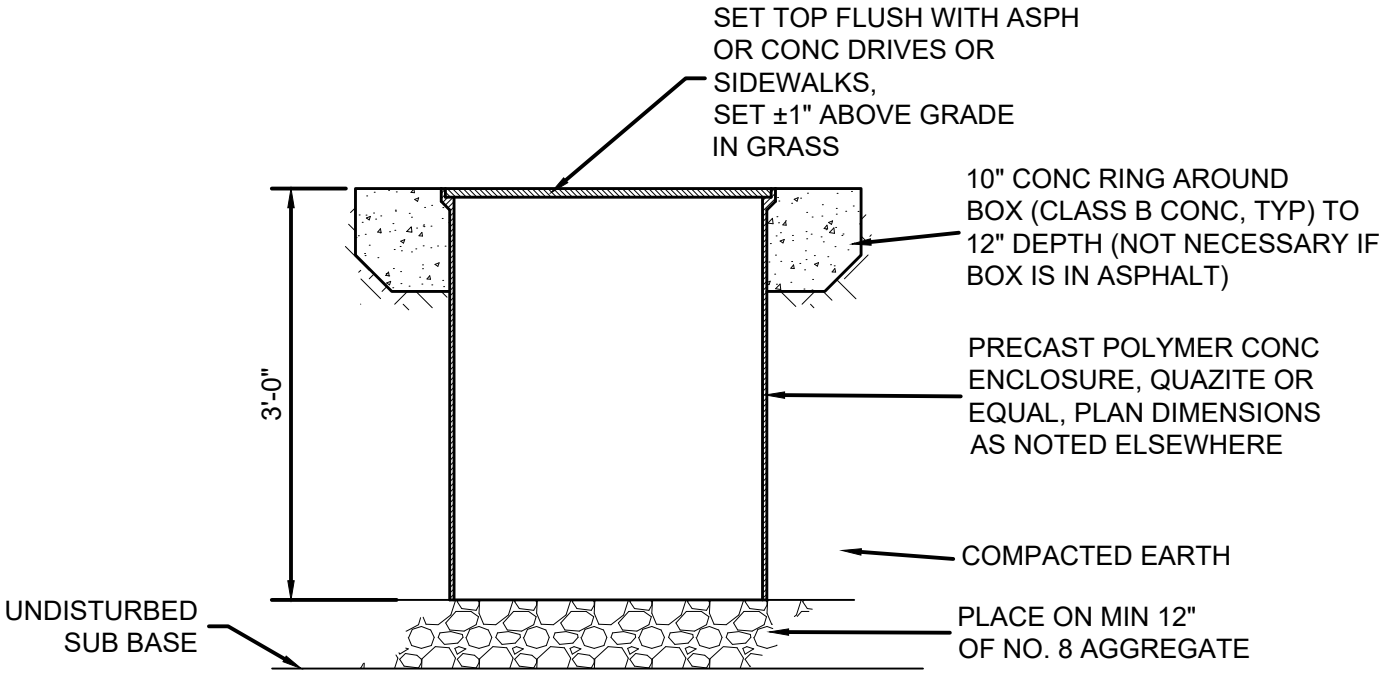
1. THREE (3) CIRCUITS ARE SHOWN FOR MISCELLANEOUS GENERATOR LOADS. MISCELLANEOUS GENERATOR LOADS MAY VARY BY MANUFACTURER AND MODEL. CONTRACTOR TO PROVIDE ADDITIONAL CONDUIT, WIRE, BREAKERS, AND ANY OTHER ASSOCIATED EQUIPMENT REQUIRED FOR ADDITIONAL MISCELLANEOUS GENERATOR LOADS.

TYPICAL LIFT STATION LIGHTING PANEL SCHEDULE

SCALE: NONE



PLAN



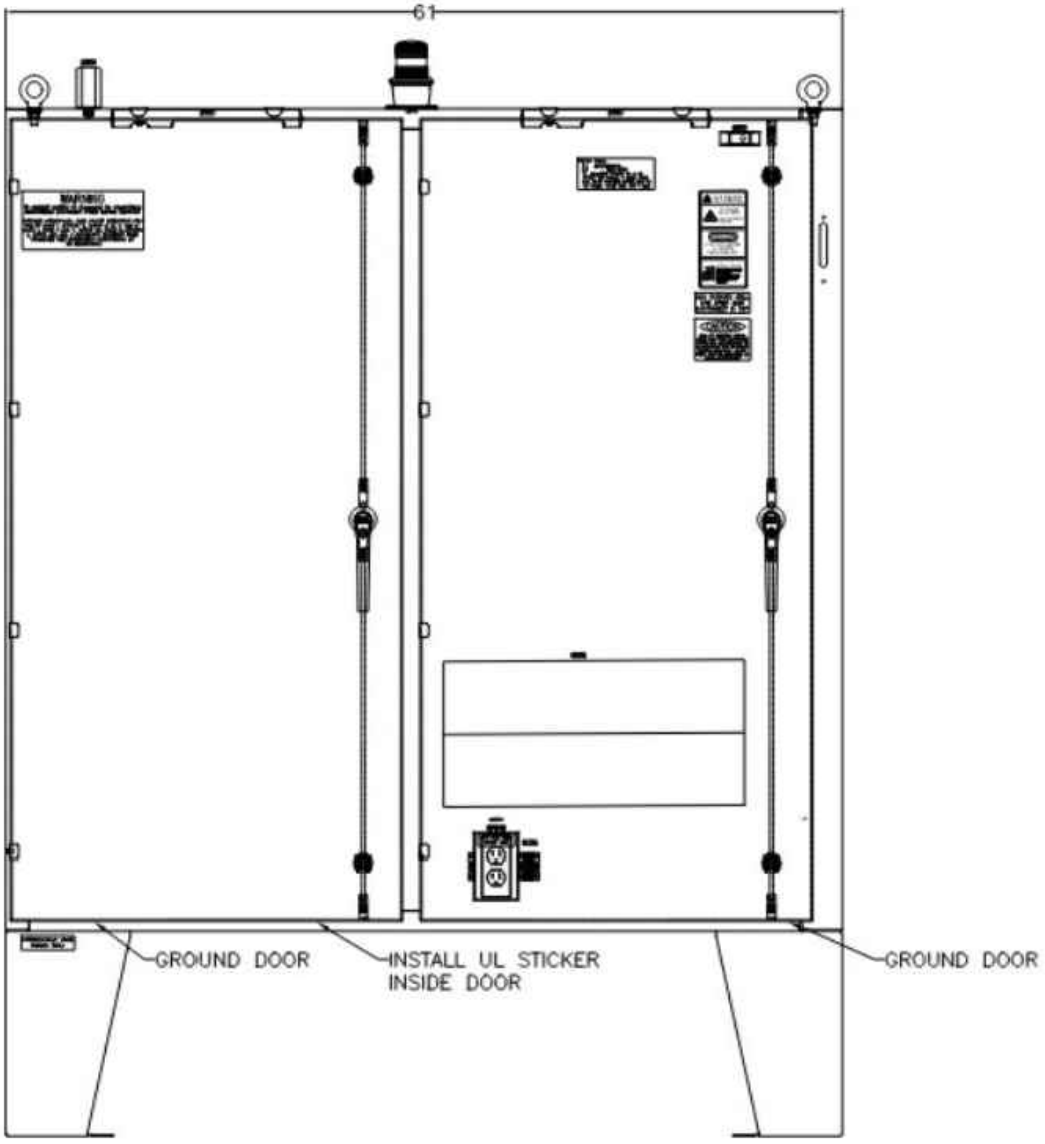
SECTION

PULL BOX AND HANDHOLE (HH) INSTALLATION

SCALE: NONE

HAMILTON COUNTY, INDIANA
HAMILTON COUNTY REGIONAL UTILITY DISTRICT

DETAIL NO. E-9
DATE: OCTOBER 2024

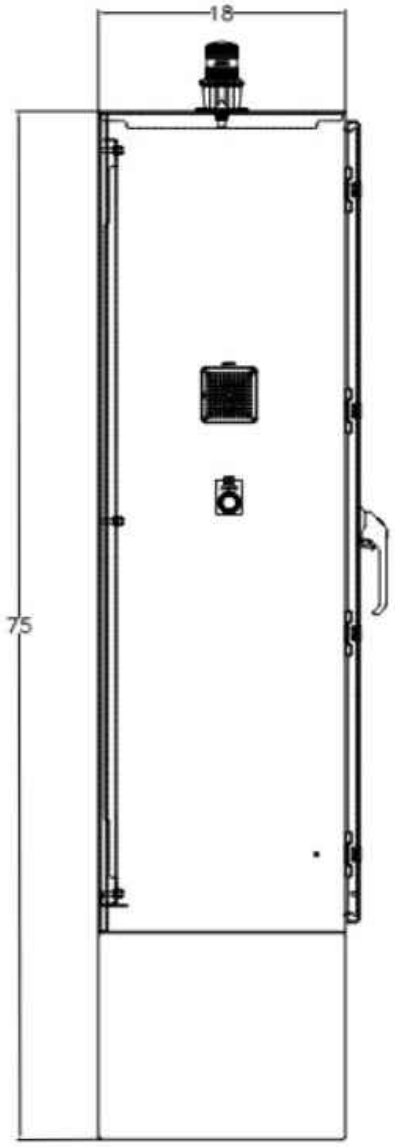


CONTROL PANEL FRONT EXTERIOR LAYOUT

SCALE: NONE

HAMILTON COUNTY, INDIANA
HAMILTON COUNTY REGIONAL UTILITY DISTRICT

DETAIL NO. C-1
DATE: OCTOBER 2024

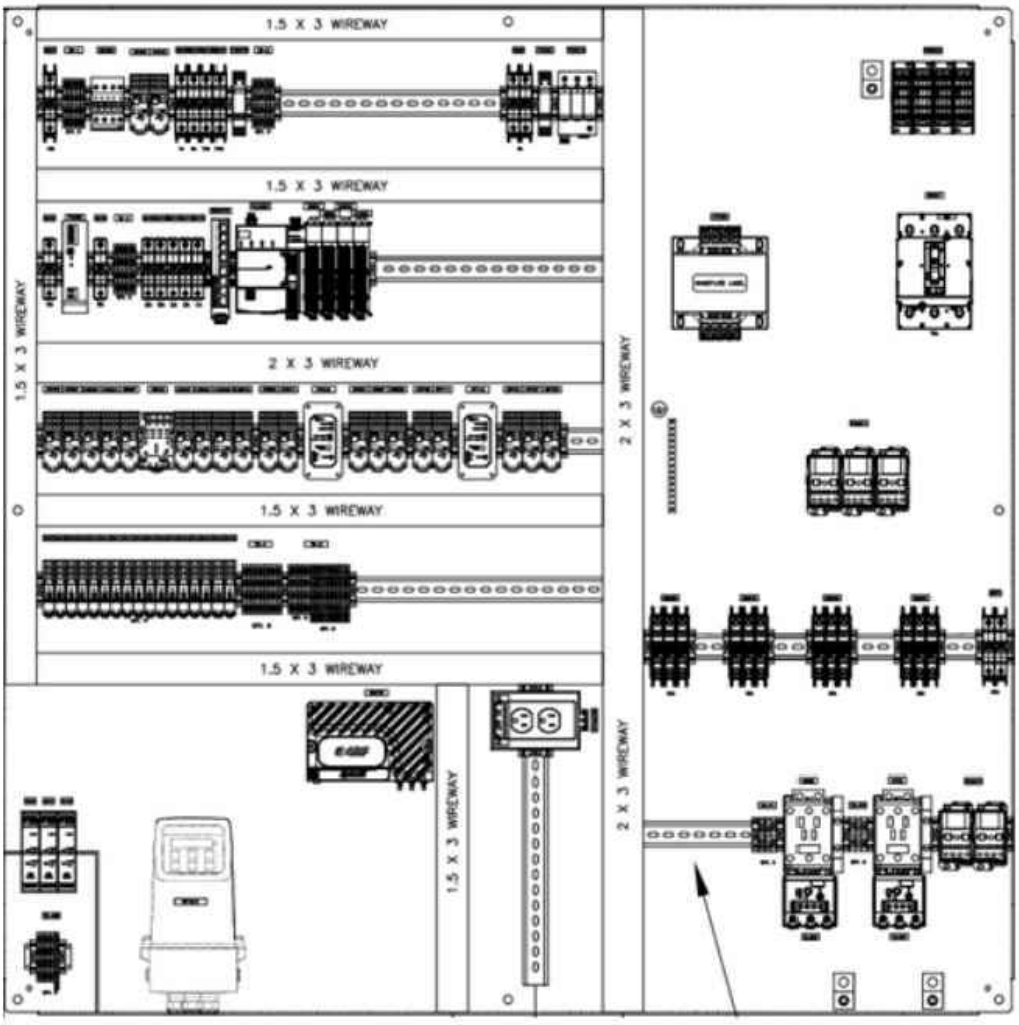


CONTROL PANEL SIDE EXTERIOR LAYOUT

SCALE: NONE

HAMILTON COUNTY, INDIANA
HAMILTON COUNTY REGIONAL UTILITY DISTRICT

DETAIL NO. C-2
DATE: OCTOBER 2024

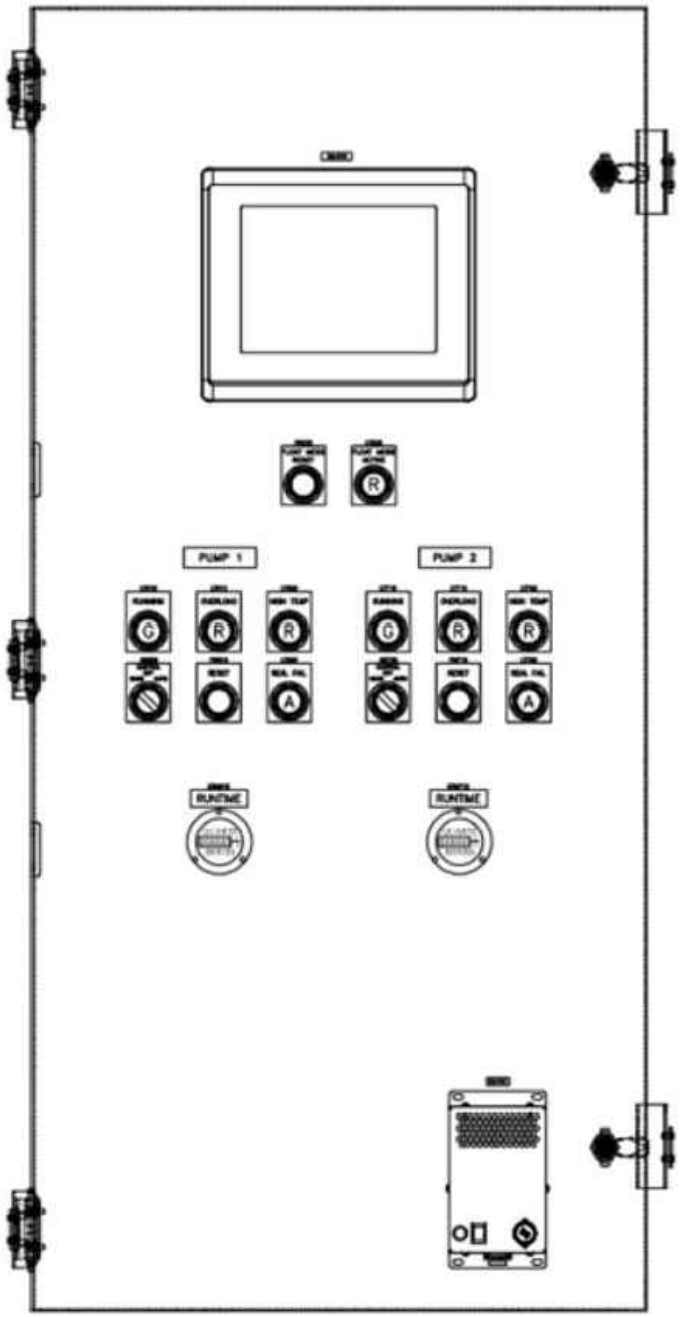


CONTROL PANEL BACKPLANE INTERIOR LAYOUT

SCALE: NONE

HAMILTON COUNTY, INDIANA
HAMILTON COUNTY REGIONAL UTILITY DISTRICT

DETAIL NO. C-3
DATE: OCTOBER 2024



CONTROL PANEL SWING PANEL INTERIOR LAYOUT

SCALE: NONE

HAMILTON COUNTY, INDIANA
HAMILTON COUNTY REGIONAL UTILITY DISTRICT

DETAIL NO. C-4
DATE: OCTOBER 2024