



INSTALL 3-INCH BLOWOFF ASSEMBLY

CUT & CAP EXISTING 3-INCH WATER LINE

STA. 0+00
CONNECT NEW 3-INCH WATER LINE TO EXISTING 3-INCH WATER LINE WITH 3-INCHx3-INCH TAPPING SLEEVE AND VALVE.
LAT: 37°30'52.32"N
LONG: 84°18'59.00"W

INSTALL 3-INCH PVC SDR 17 WATER LINE

INSTALL 4-INCH BLOWOFF ASSEMBLY

EXISTING BLOWOFF ASSEMBLY (TYP.)

RECONNECT EXISTING 1-INCH SERVICE LINE TO NEW 3-INCH WATER LINE

STA. 26+50
INSTALL 3-INCH BLOWOFF ASSEMBLY

EXISTING 1-INCH SERVICE LINE

METER RECONNECTION (TYP.)

RECONNECT TWO (2) EXISTING METERS TO NEW 3-INCH WATER LINE

STA. 0+00 TO STA. 17+50
INSTALL 3-INCH PVC SDR 17 WATER LINE ALONG EDGE OF ROAD

STA. 17+50 TO STA. 20+00
INSTALL 3-INCH PVC SDR 17 WATER LINE IN ROAD, EAST LANE & INSTALL FULL WIDTH PAVEMENT REPLACEMENT

STA. 20+00 TO STA. 22+75
INSTALL 3-INCH PVC SDR 17 WATER LINE ALONG EDGE OF ROAD

STA. 22+75 TO STA. 25+00
INSTALL 3-INCH PVC SDR 17 WATER LINE ALONG PRIVATE EASEMENT, TO AVOID TREES

STA. 25+00 TO STA. 26+50
INSTALL 3-INCH PVC SDR 17 WATER LINE ALONG EDGE OF ROAD

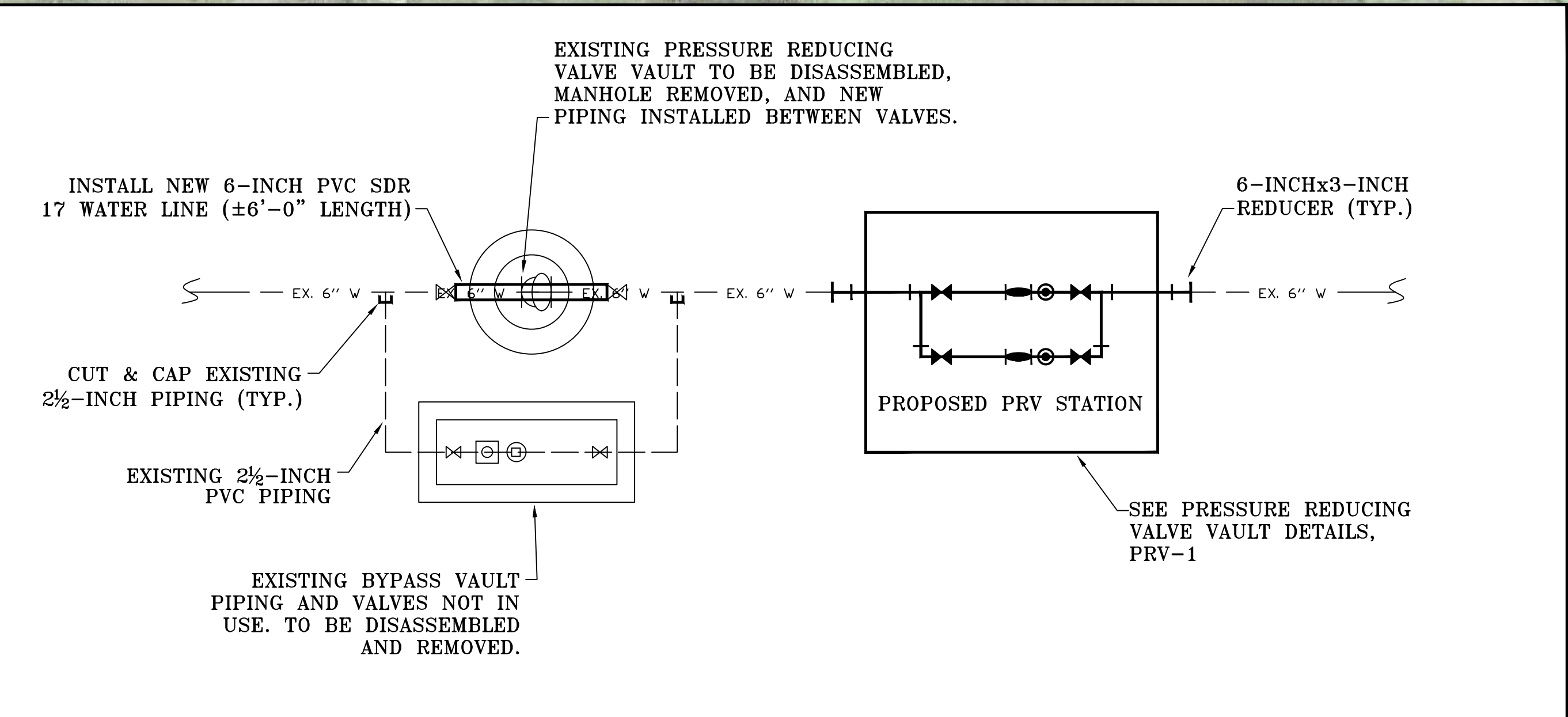
WATER SYSTEM IMPROVEMENTS
WESTERN ROCKCASTLE WATER ASSOCIATION
ROCKCASTLE COUNTY, KENTUCKY

BOONE GAP AREA WATER LINE EXTENSION



M
Monarch Engineering, Inc.
556 CARLTON DRIVE
LAWRENCEBURG, KY 40342

DRAWN BY: JRC	DATE: NOV 2019	REVISED	SHEET
CHECKED BY: JLM	SCALE: 1" = 100'		7
CHECKED BY: DSB	PROJECT: 1935		



EXISTING METER

EXISTING SAMPLE STATION

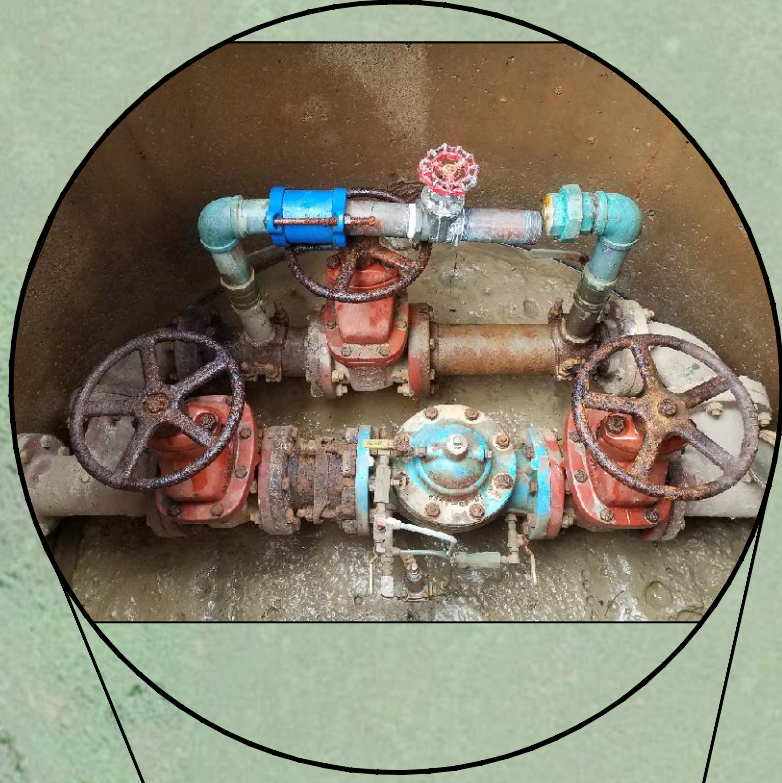
EXISTING GREENFISH HILL PRESSURE REDUCING VAULT NO. 1 REPLACEMENT REPLACE PRESSURE REDUCER AND PIPING. SEE DETAILS, PLAN SHEET PRV-1.
 LAT: 37° 25' 48.83" N
 LONG: 84° 19' 52.49" W

WATER SYSTEM IMPROVEMENTS
 WESTERN ROCKCASTLE WATER ASSOCIATION
 ROCKCASTLE COUNTY, KENTUCKY

GREENFISH HILL PRV #1 REPLACEMENT

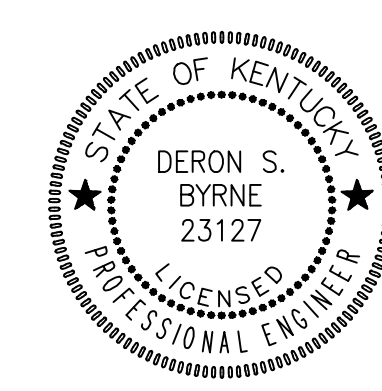
			Monarch Engineering, Inc. 556 CARLTON DRIVE LAWRENCEBURG, KY 40342	
	DRAWN BY: JRC	DATE: NOV 2019		REVISED
	CHECKED BY: JLM	SCALE: 1" = 50'		PROJECT: 1935

8



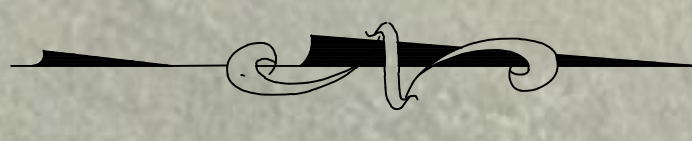
EXISTING GREENFISH HILL PRESSURE REDUCING
VAULT NO. 2 REHABILITATION
REPLACE PRESSURE REDUCER AND PIPING.
SEE DETAILS, PLAN SHEET PRV-2.
LAT: 37° 26' 06.30" N
LONG: 84° 19' 09.24" W

WATER SYSTEM IMPROVEMENTS
WESTERN ROCKCASTLE WATER ASSOCIATION
ROCKCASTLE COUNTY, KENTUCKY
GREENFISH HILL PRV #2 REHABILITATION



M
Monarch Engineering, Inc.
556 CARLTON DRIVE
LAWRENCEBURG, KY 40342

DRAWN BY: JRC	DATE: NOV 2019	REVISED	SHEET
CHECKED BY: JLM	SCALE: 1" = 50'		9
CHECKED BY: DSB	PROJECT: 1935		



CENTRAL KENTUCKY COLLISION AUTO LLC

STA. 0+00
CONNECT NEW 6-INCH WATER LINE TO EXISTING 3-INCH WATER LINE WITH 6-INCHx3-INCH REDUCER AND 3-INCHx3-INCH TAPPING SLEEVE AND VALVE.
LAT: 37° 26' 14.44" N
LONG: 84° 19' 04.53" W

INSTALL 200 LF OF 8-INCH HDPE DR9 WATER LINE VIA DIRECTIONAL BORE

INSTALL CONCRETE RESTRAINT WALL (SEE PLAN SHEET SD-1)

TRANSITION FROM 8-INCH HDPE TO 6-INCH PVC SDR 17 WATER LINE

CONNECT NEW 6-INCH WATER LINE TO EXISTING 3-INCH WATER LINE WITH 3-INCHx3-INCH REDUCER AND 3-INCHx3-INCH TAPPING SLEEVE AND VALVE.

INSTALL 3-INCH BLOWOFF ASSEMBLY

US HIGHWAY 25 (N WILDERNESS ROAD)

TRANSITION FROM 6-INCH PVC SDR 17 TO 8-INCH HDPE WATER LINE

INSTALL CONCRETE RESTRAINT WALL (SEE PLAN SHEET SD-1)

CUT & CAP EXISTING 3-INCH WATER LINE

INSTALL 8-INCH PVC SDR 17 WATER LINE

INSTALL 80 LF OF BORE & CASE FOR 6-INCH WATER LINE
LAT: 37° 26' 19.89" N
LONG: 84° 19' 3.36" W

INSTALL 30 LF OF BORE & CASE FOR 3-INCH WATER LINE

STA. 10+40
CONNECT NEW 6-INCH WATER LINE TO EXISTING 8-INCH WATER LINE WITH 6-INCHx6-INCH TAPPING SLEEVE AND VALVE.

CUT & CAP EXISTING 3-INCH WATER LINE

EXISTING 6-INCH WATER LINE TO BE ABANDONED

CUT & CAP EXISTING 6-INCH WATER LINE

CONNECT NEW 6-INCH WATER LINE TO EXISTING 6-INCH WATER LINE WITH 6-INCHx6-INCH TAPPING SLEEVE AND VALVE.

CONNECT NEW 6-INCH WATER LINE TO EXISTING 6-INCH WATER LINE WITH 6-INCHx6-INCH TAPPING SLEEVE AND VALVE.

JAMIE LEAR

CHRISTIAN & JAMIE SAYLOR

STEVE PONDER CONSTRUCTION

US HIGHWAY 25
M.P. 20.506

REDSMAN DRIVE

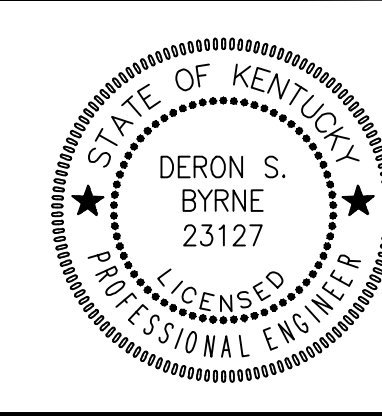
ROUNDSTONE CREEK

WILDLIE ROAD

KY HIGHWAY 1786
M.P. 0.078

KY HIGHWAY 1786
M.P. 0.009

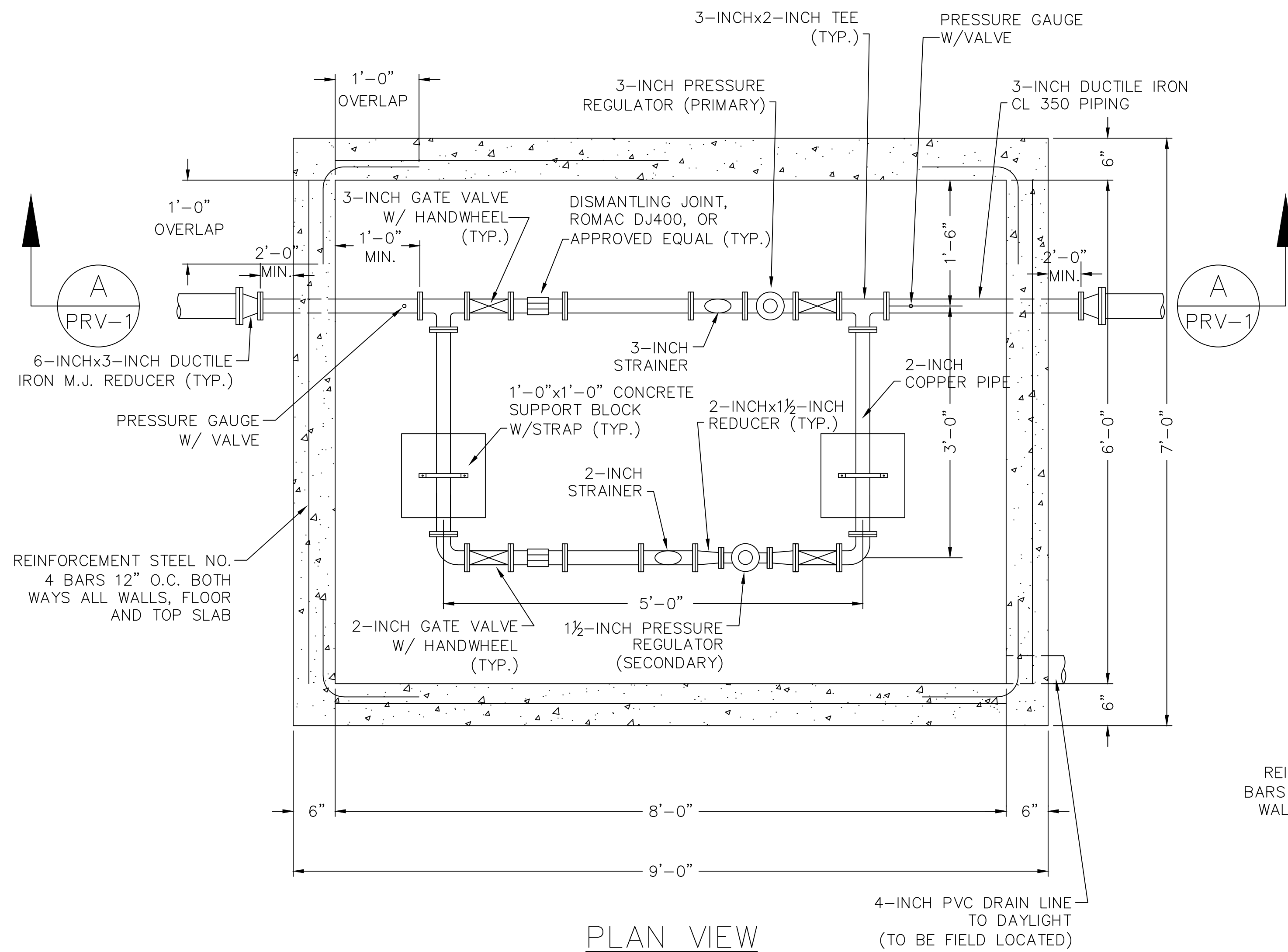
WATER SYSTEM IMPROVEMENTS
WESTERN ROCKCASTLE WATER ASSOCIATION
ROCKCASTLE COUNTY, KENTUCKY
ROUNDSTONE CREEK CROSSING



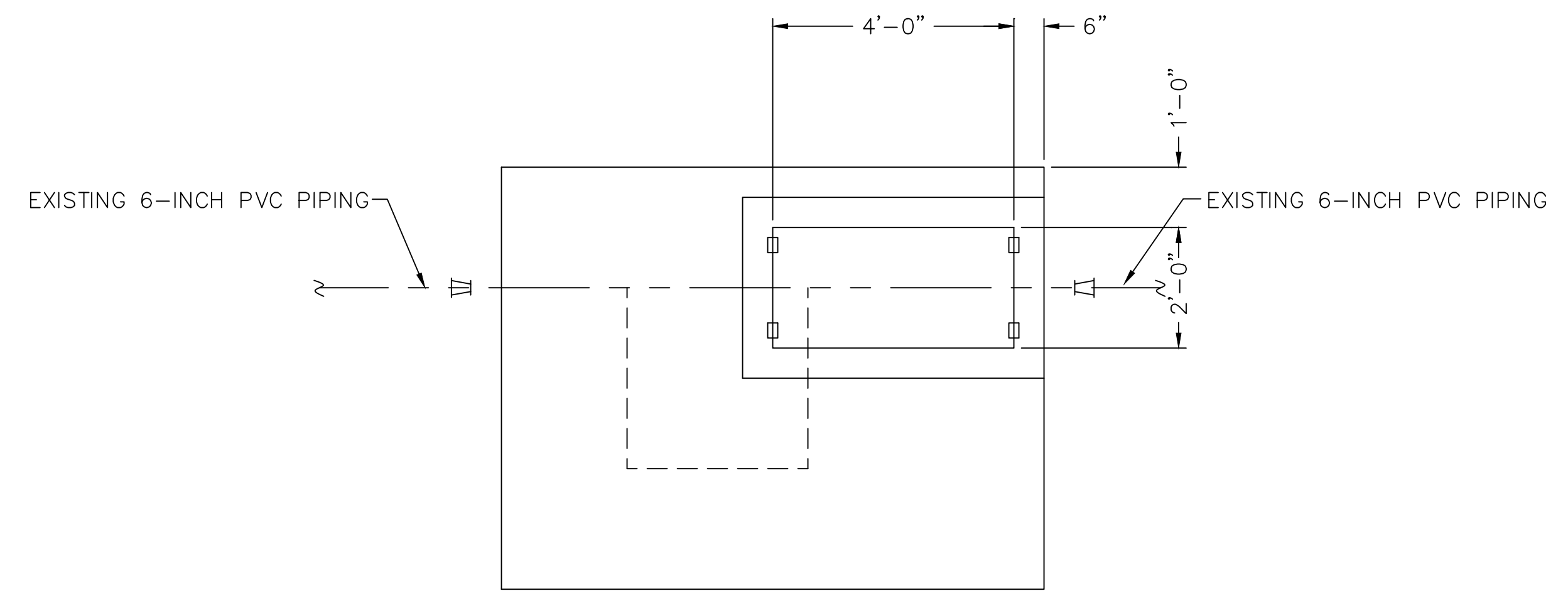
Monarch Engineering, Inc.
556 CARLTON DRIVE
LAWRENCEBURG, KY 40342

ALTERNATE NO. 1

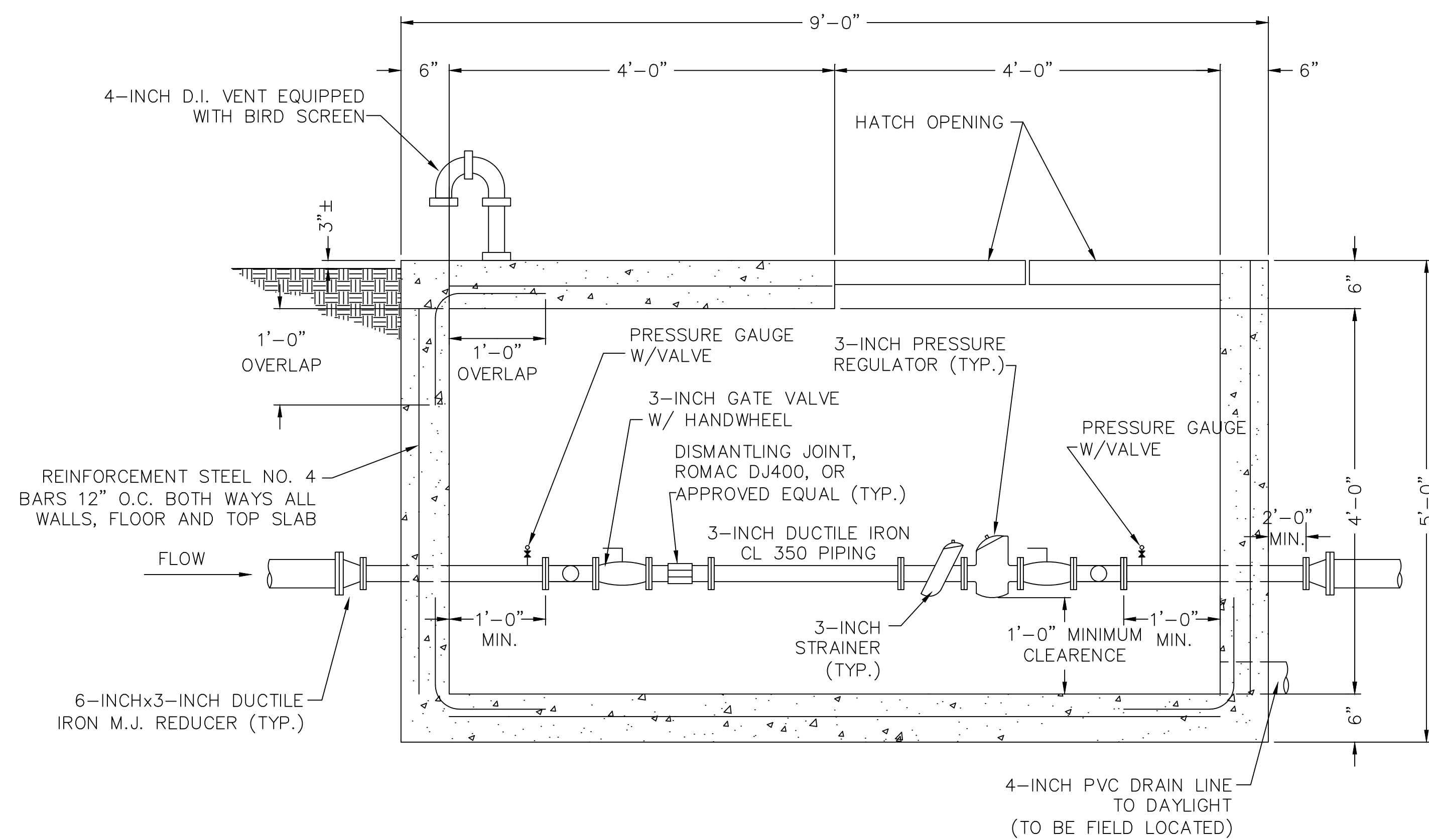
DRAWN BY: JRC	DATE: NOV 2019	REVISED	SHEET
CHECKED BY: JLM	SCALE: 1" = 30'		10
CHECKED BY: DSB	PROJECT: 1935		



PLAN VIEW

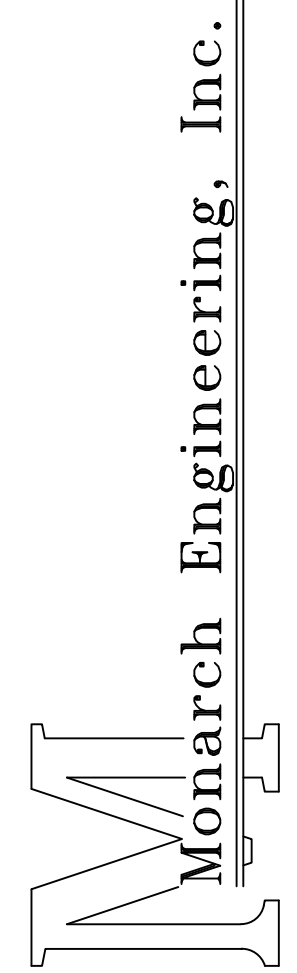


PLAN OF HATCH OPENING DETAIL FOR PRESSURE REGULATING STATION



SECTION A
PRV-1

PRESSURE REGULATING VALVE SETTING CHART		
LOCATION	INLET PSI	SET POINT
PRIMARY (HIGH FLOWS)	60-160	40
SECONDARY (LOW FLOWS)	60-160	45



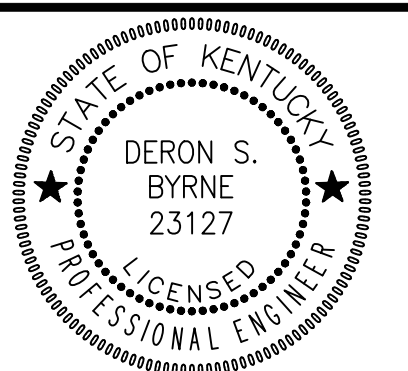
556 CARLTON DRIVE
LAWRENCEBURG, KY 40342

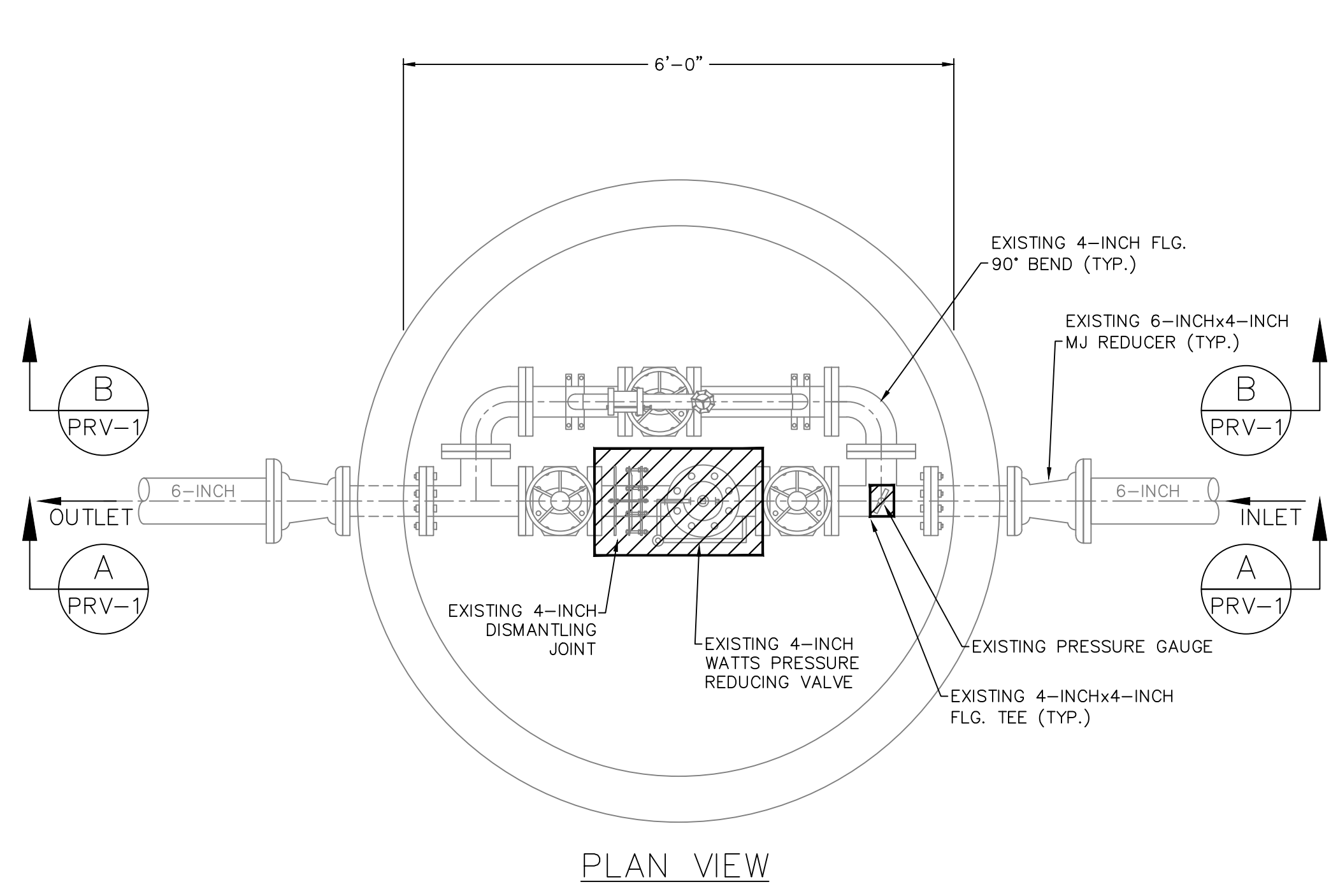
DESCRIPTION:
GREENFISH HILL PRESSURE REDUCING VALVE STATION NO. 1 REPLACEMENT

CUSTOMER:
**WESTERN ROCKCASTLE WATER ASSOCIATION
ROCKCASTLE COUNTY, KENTUCKY**

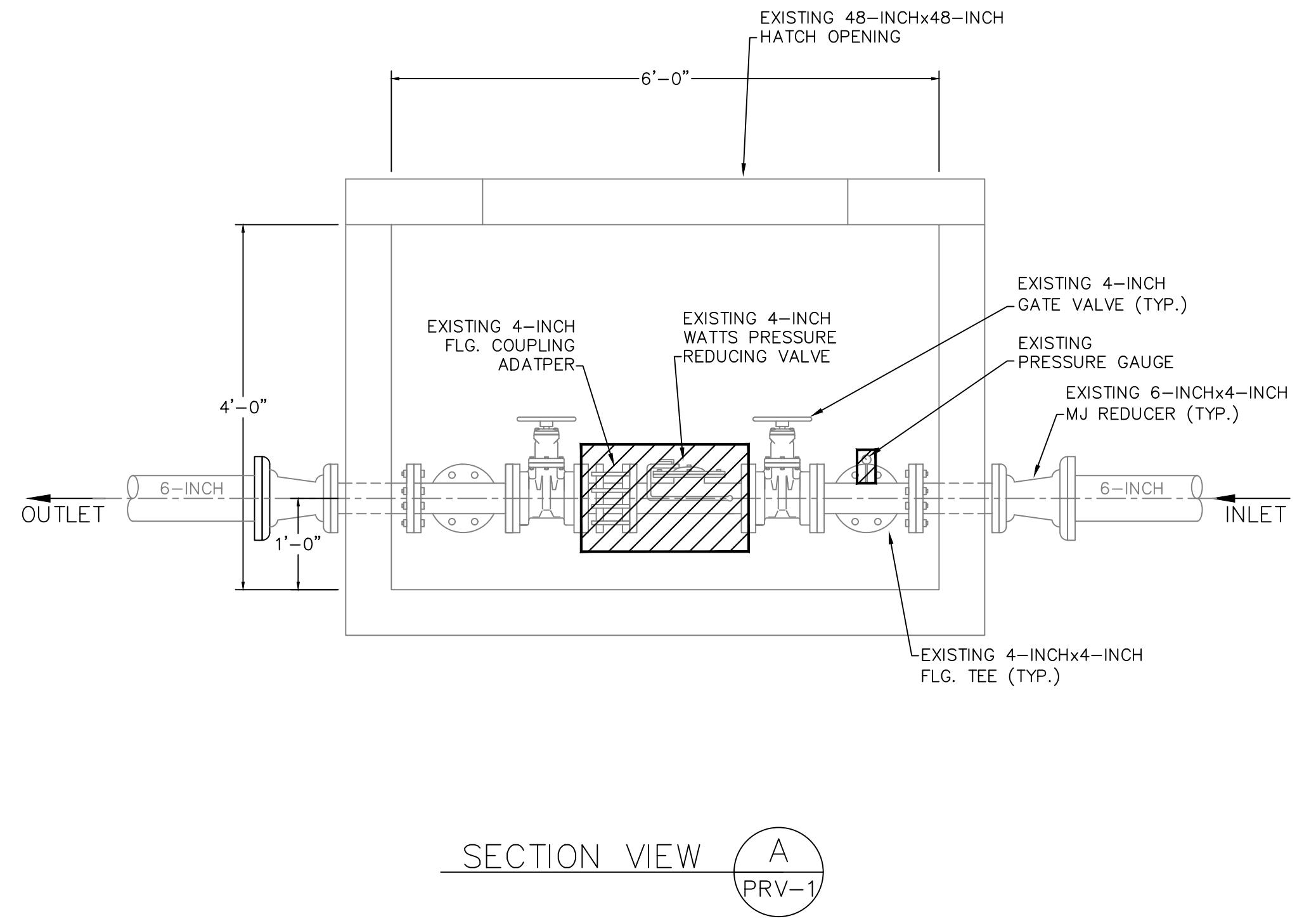
PROJECT NO. 1935
DATE: NOV 2019
DRAWN BY: JRC
CHECKED BY: DSB
CHECKED BY: DMB
SCALE: 1"=1'-0"

SHEET:
PRV-1

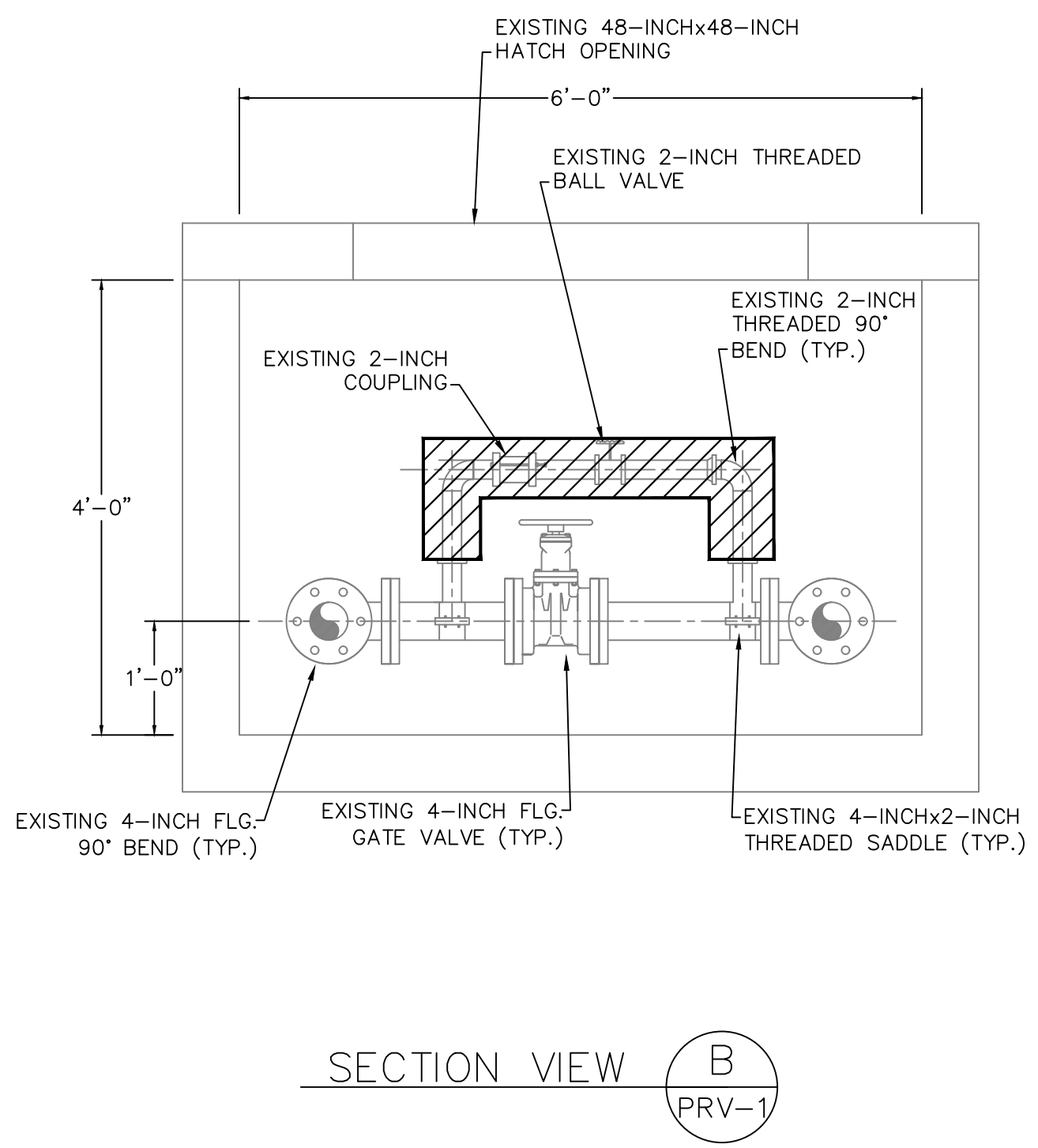




PLAN VIEW



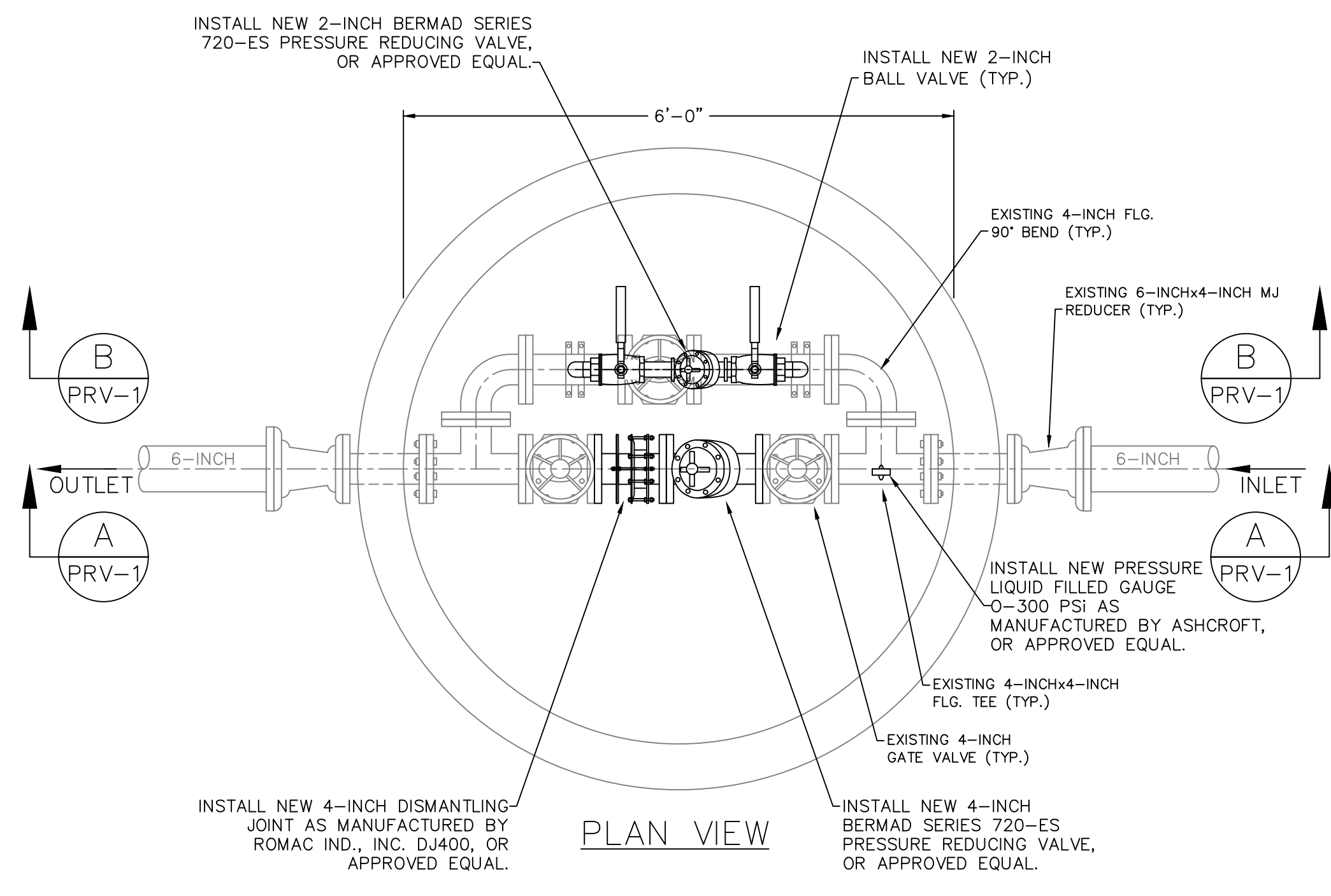
SECTION VIEW A
PRV-1



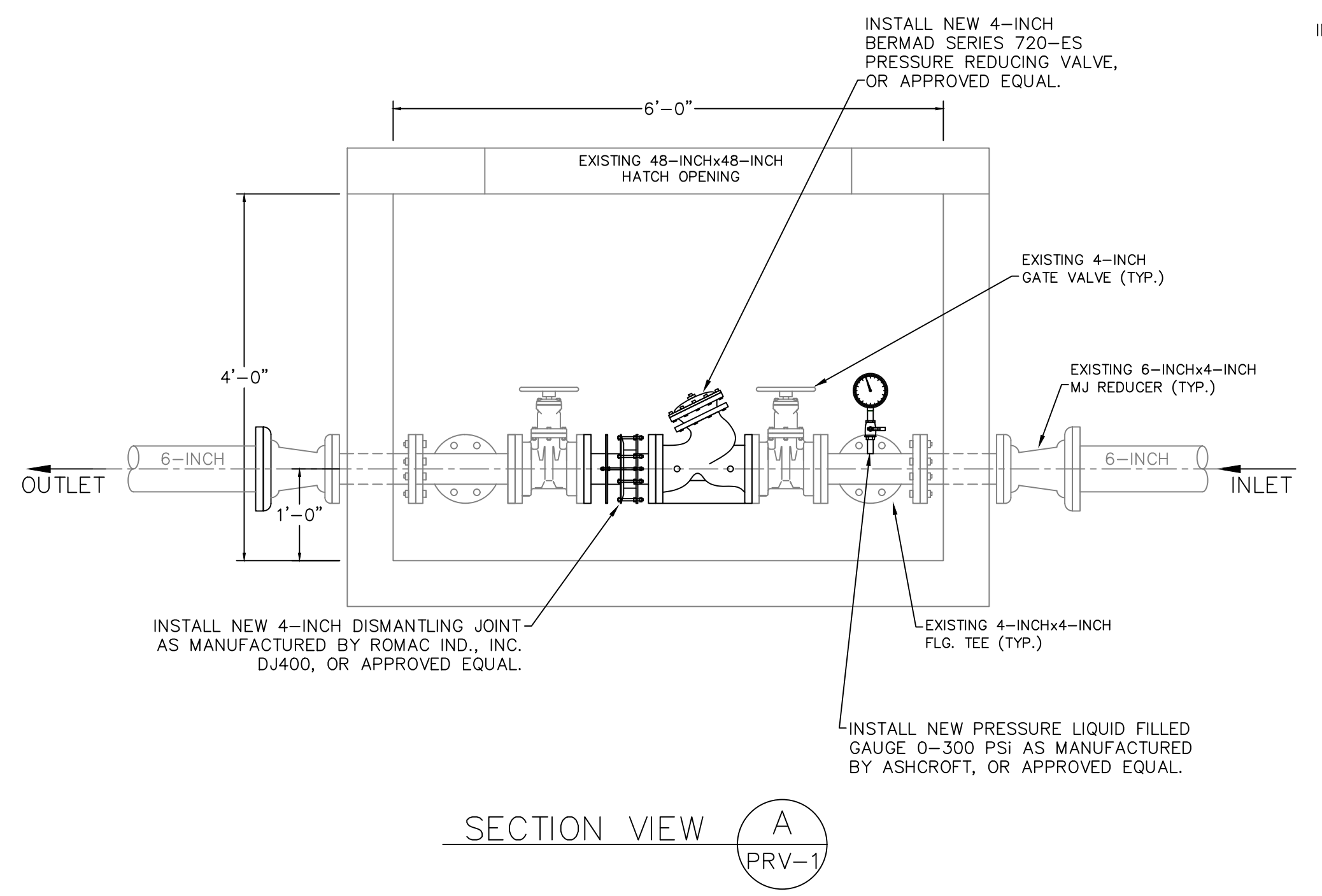
SECTION VIEW B
PRV-1



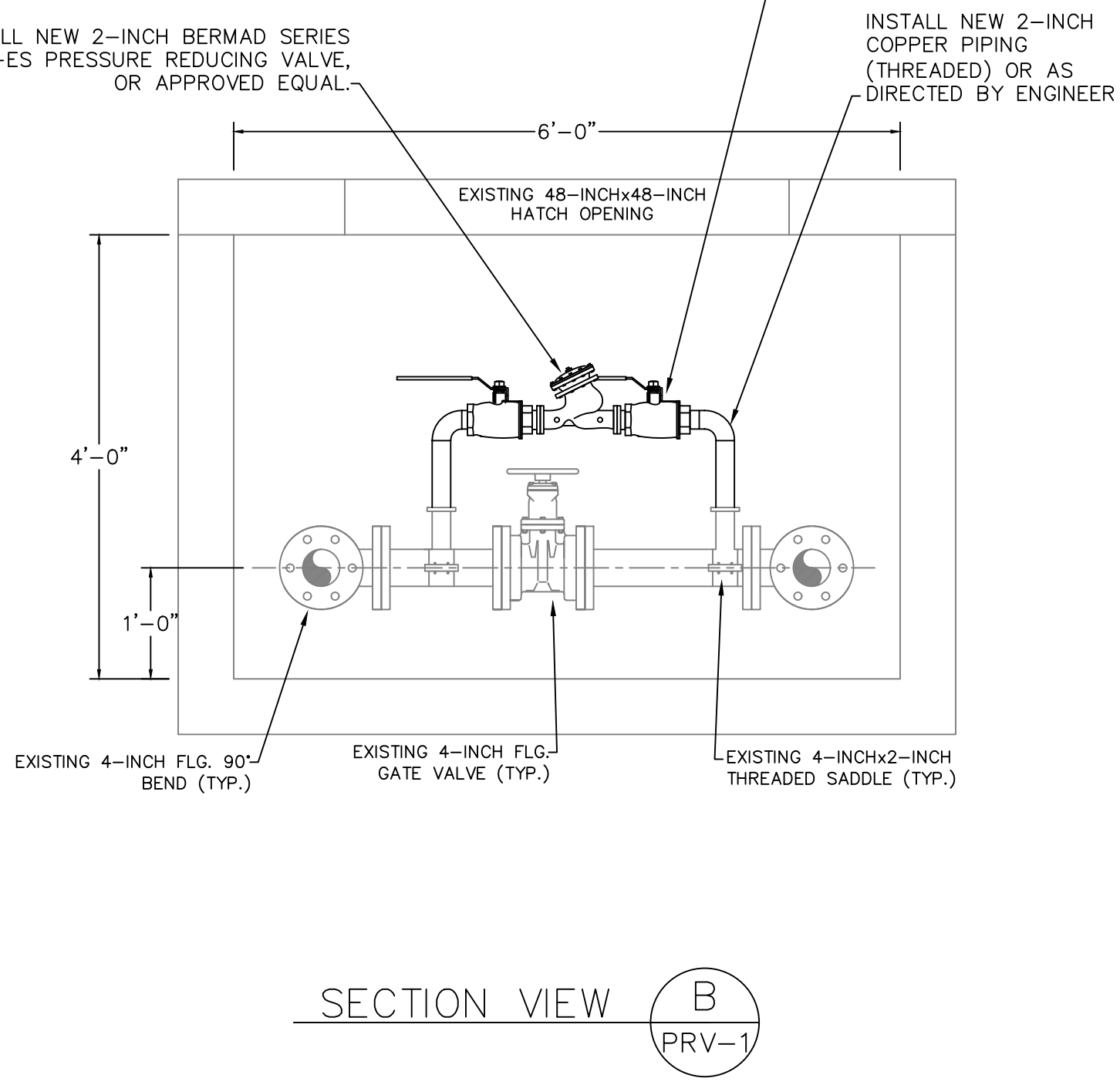
EXISTING PRESSURE REDUCING VALVE VAULT
SCALE: 3/4"=1'-0"



PLAN VIEW

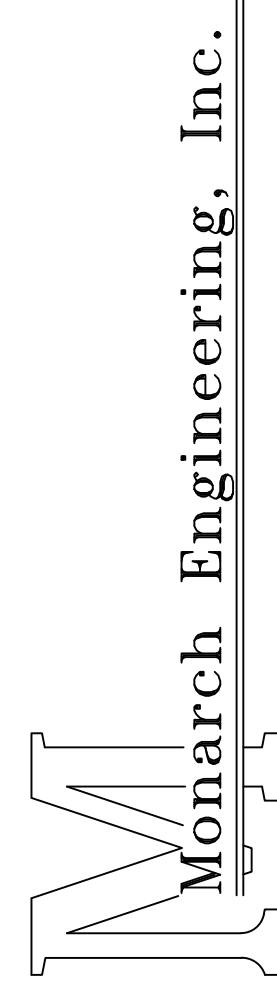


SECTION VIEW A
PRV-1



SECTION VIEW B
PRV-1

PROPOSED PRESSURE REDUCING VALVE VAULT
SCALE: 3/4"=1'-0"



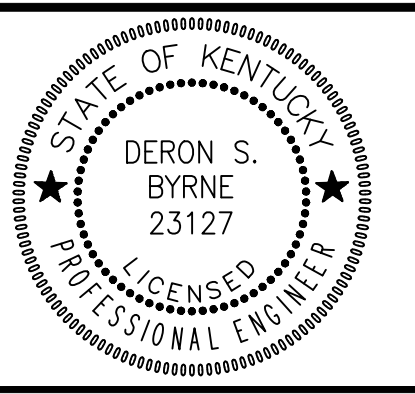
556 CARLTON DRIVE
LAWRENCEBURG, KY 40342

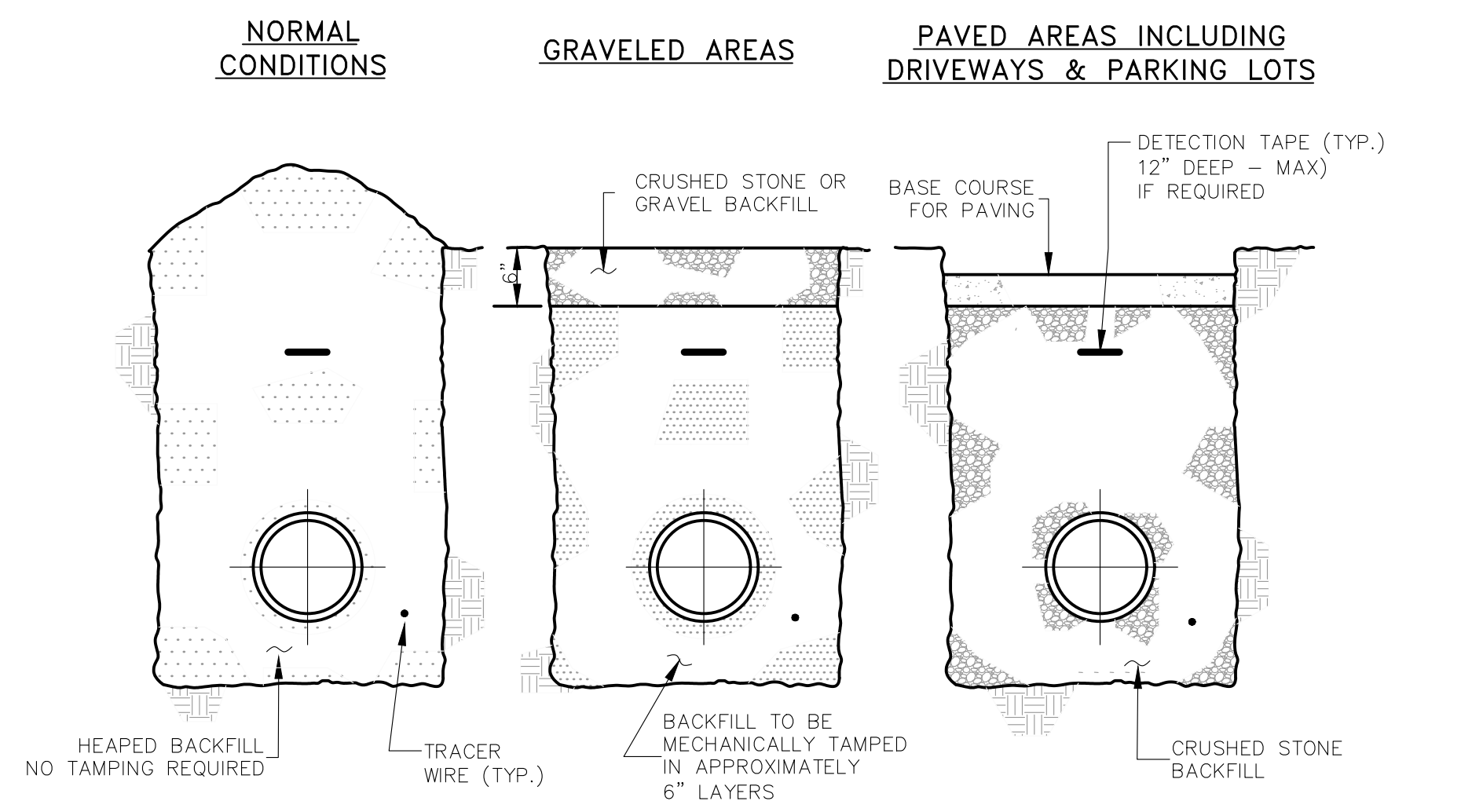
DESCRIPTION:
GREENFISH HILL PRESSURE REDUCING VALVE STATION NO. 2 REHABILITATION

CUSTOMER:
**WESTERN ROCKCASTLE WATER ASSOCIATION
ROCKCASTLE COUNTY, KENTUCKY**

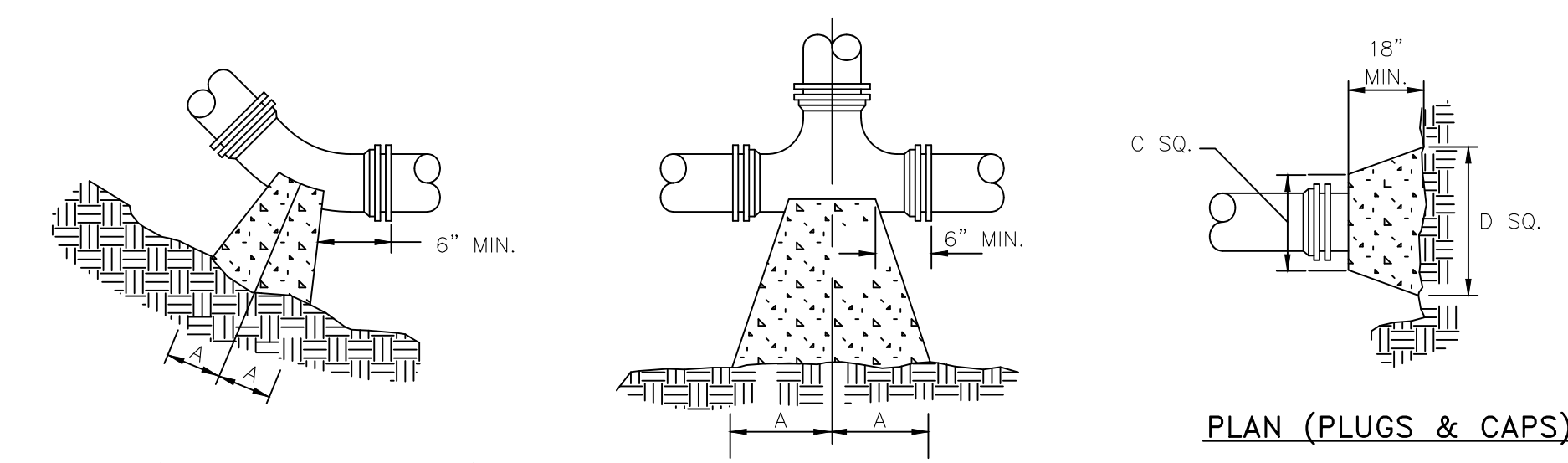
PROJECT NO. 1935
DATE: NOV 2019
DRAWN BY: JRC
CHECKED BY: DSB
CHECKED BY: DMB
SCALE: 3/4"=1'-0"

SHEET:
PRV-2





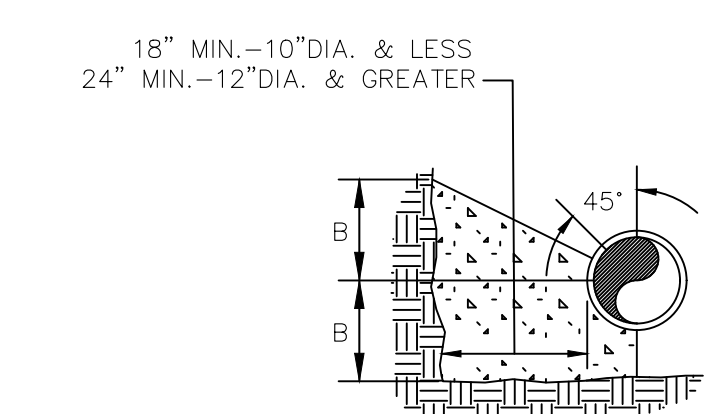
BACKFILLING



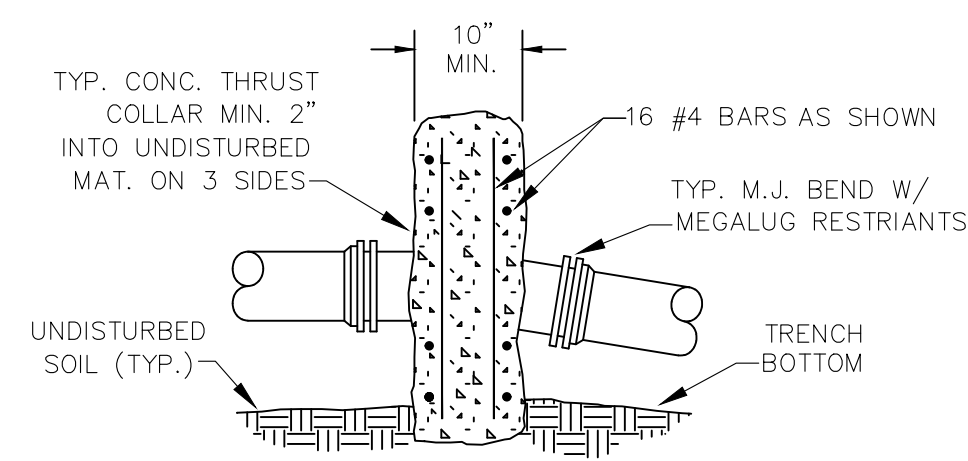
PLAN (HORIZONTAL BENDS)

PLAN (TEES)

PLAN (PLUGS & CAPS)



SECTION (HORIZONTAL BENDS & TEES)

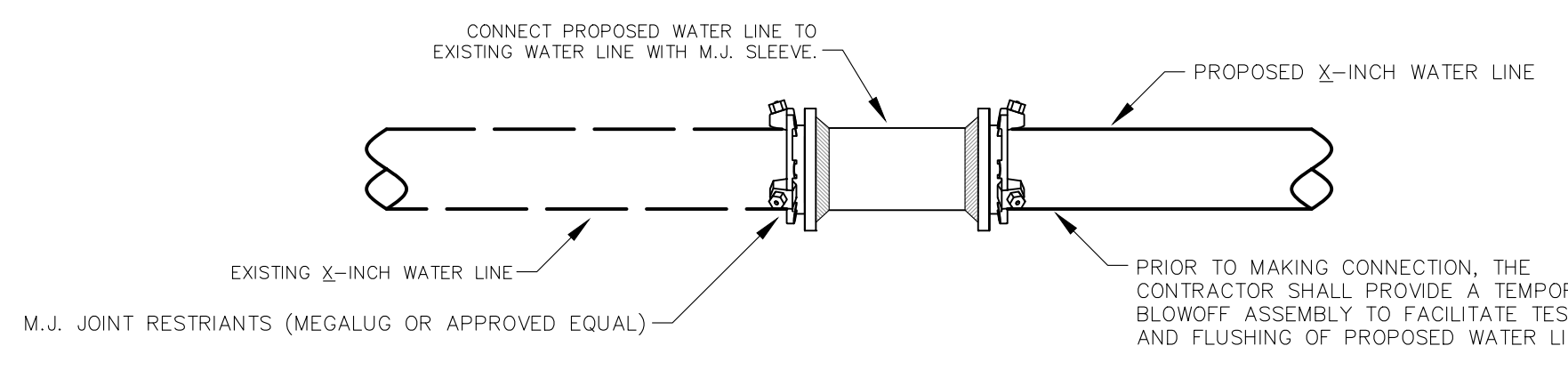


SECTION (VERTICAL BENDS)

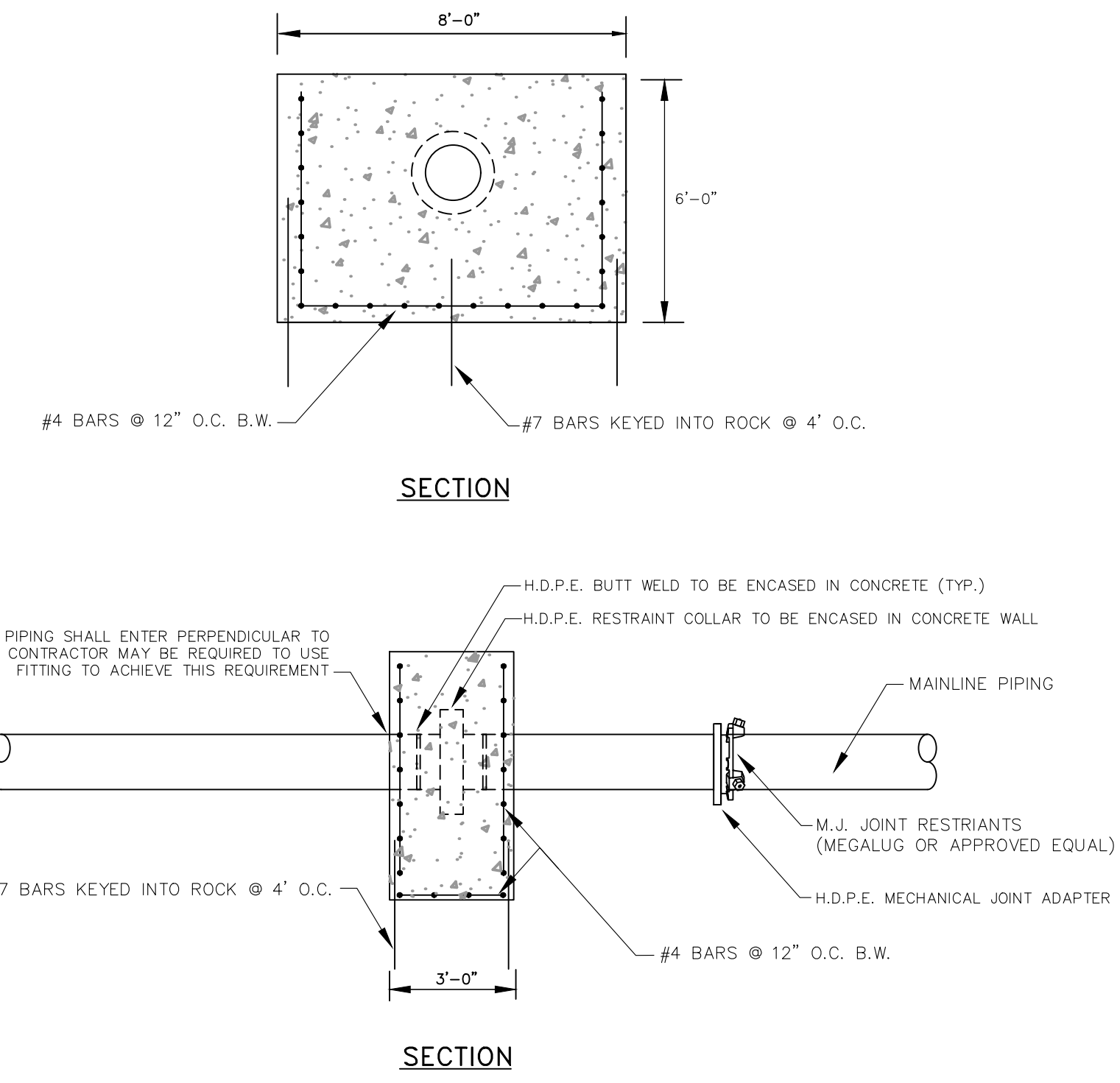
PIPE SIZE	90° BEND		45° BEND		22 1/2° BEND		11 1/4° BEND		TEE		PLUG	
	A	B	A	B	A	B	A	B	A	B	C	D
4"	8"	12"	8"	8"	6"	6"	6"	6"	11"	9"	10"	6"
6"	18"	12"	8"	10"	8"	8"	8"	8"	11"	10"	12"	18"
8"	18"	13"	10"	10"	8"	8"	8"	8"	11"	12"	12"	24"
10"	20"	16"	12"	14"	8"	12"	8"	12"	14"	16"	16"	30"
12"	20"	16"	12"	14"	8"	12"	8"	12"	14"	16"	16"	30"
16"	26"	20"	16"	18"	11"	13"	11"	13"	18"	20"	20"	36"
24"	82"	42"	62"	30"	44"	22"	22"	16"	82"	42"	82"	42"
30"	185"	42"	100"	42"	52"	42"	40"	30"	185"	42"	185"	42"

- NOTES:
- FOR VERT. BEND DOWN IN EXCESS OF 11 1/4° BEND, ANCHORAGE SHALL BE DESIGNED BY ENGINEER.
 - FOR VERT. BEND UPWARD, BLOCKING TO BE SIMILAR TO THAT FOR HORIZ. BEND.
 - GLANDS & BOLTS SHALL REMAIN ACCESSIBLE AND MUST BE PROTECTED FROM CONCRETE BY PLASTIC SHEETING OR OTHERWISE.
 - ALL THRUST BLOCK & SUPPORT CONCRETE SHALL BE 3000 PSI READY MIX
 - THRUST BLOCKS WITH "B" DIMENSION GREATER THAN 30" SHALL HAVE THE RESTRAINED PIPE INSTALLED WITH A MINIMUM OF 4' OF COVER.
 - DESIGN CRITERIA:
LINE PRESSURE = 200 psi
SOIL BEARING CAPACITY = 2000 psf
FACTOR OF SAFETY = 1.5

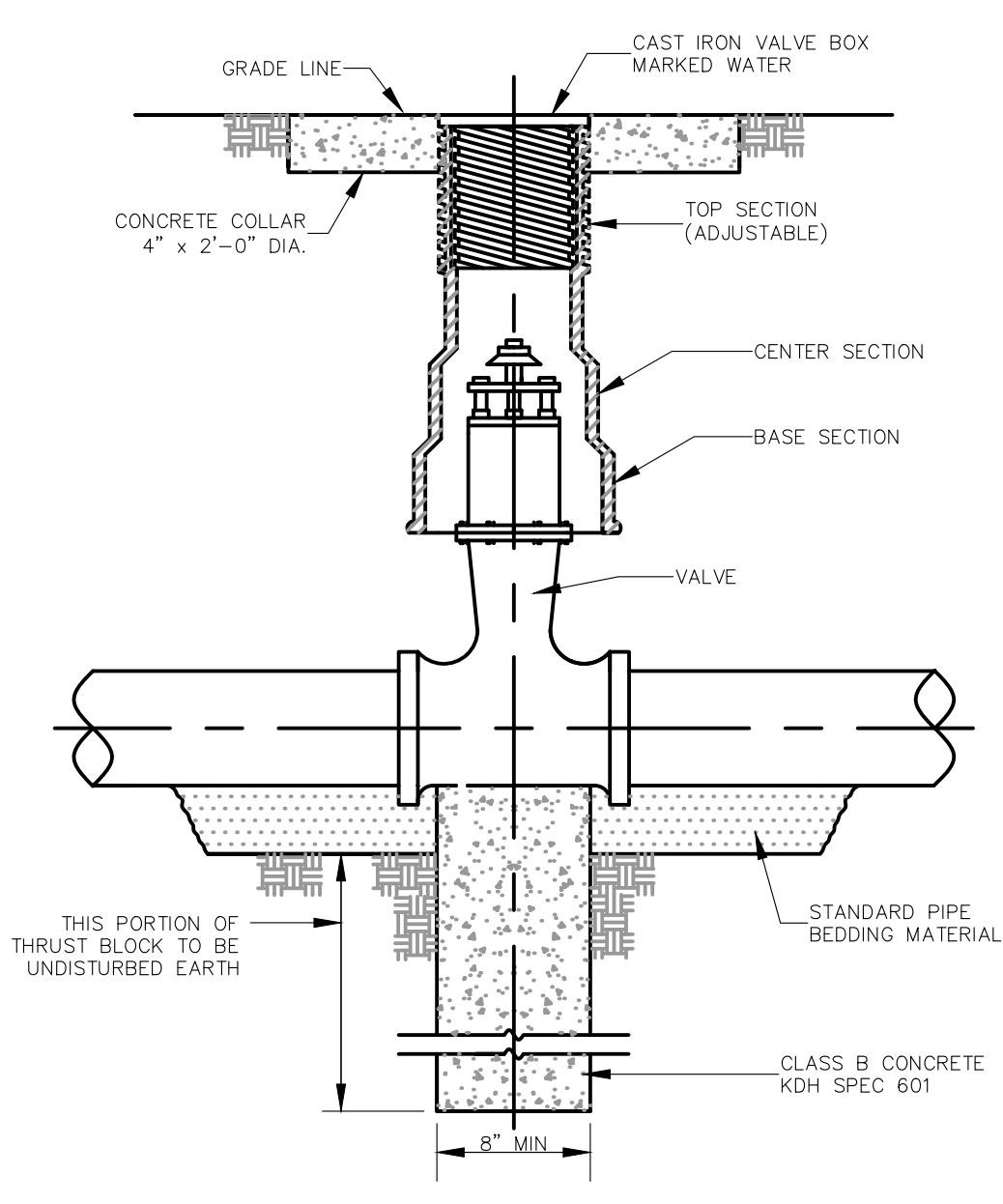
THRUST BLOCK DETAILS



DIRECT CONNECTION

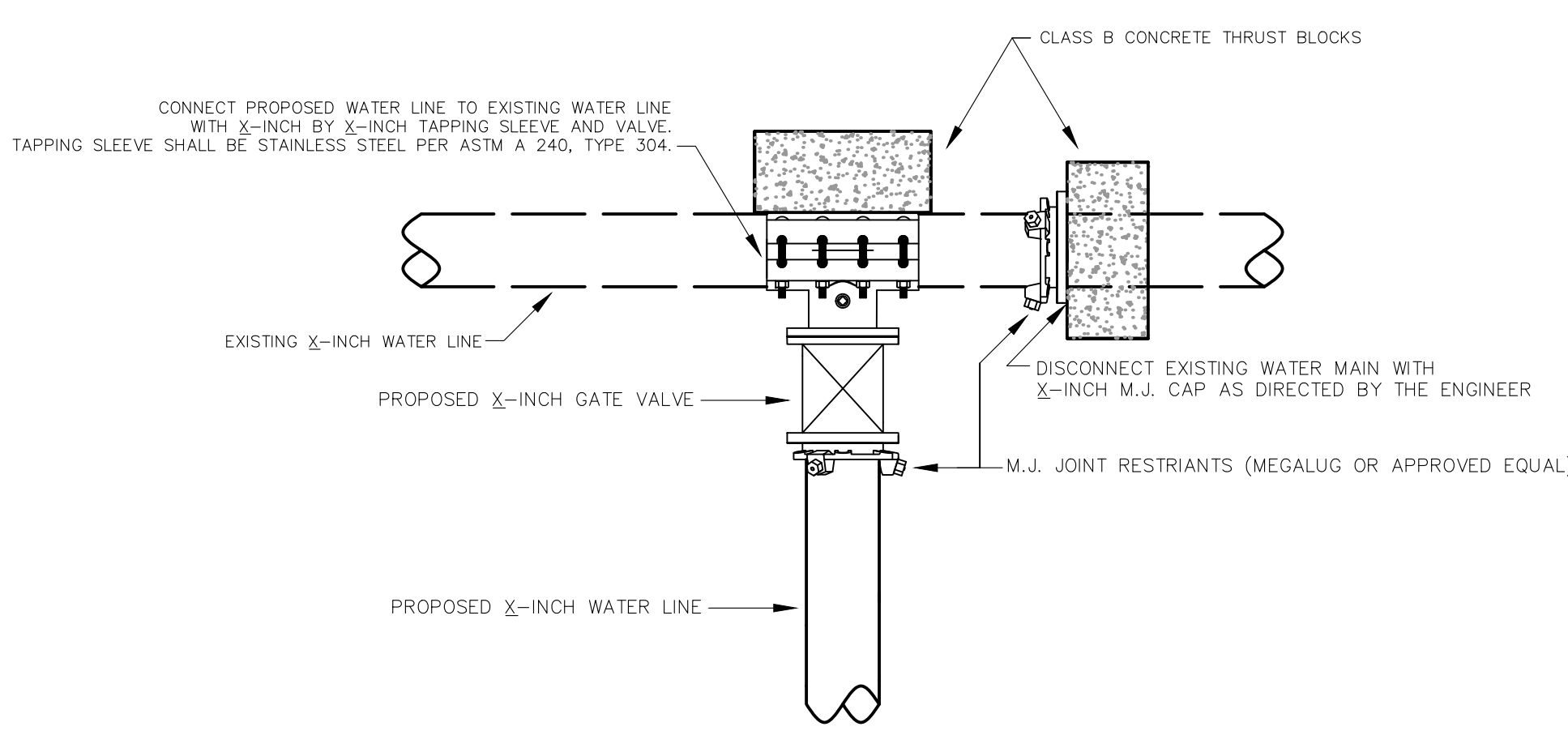


HDPE RESTRAINT WALL

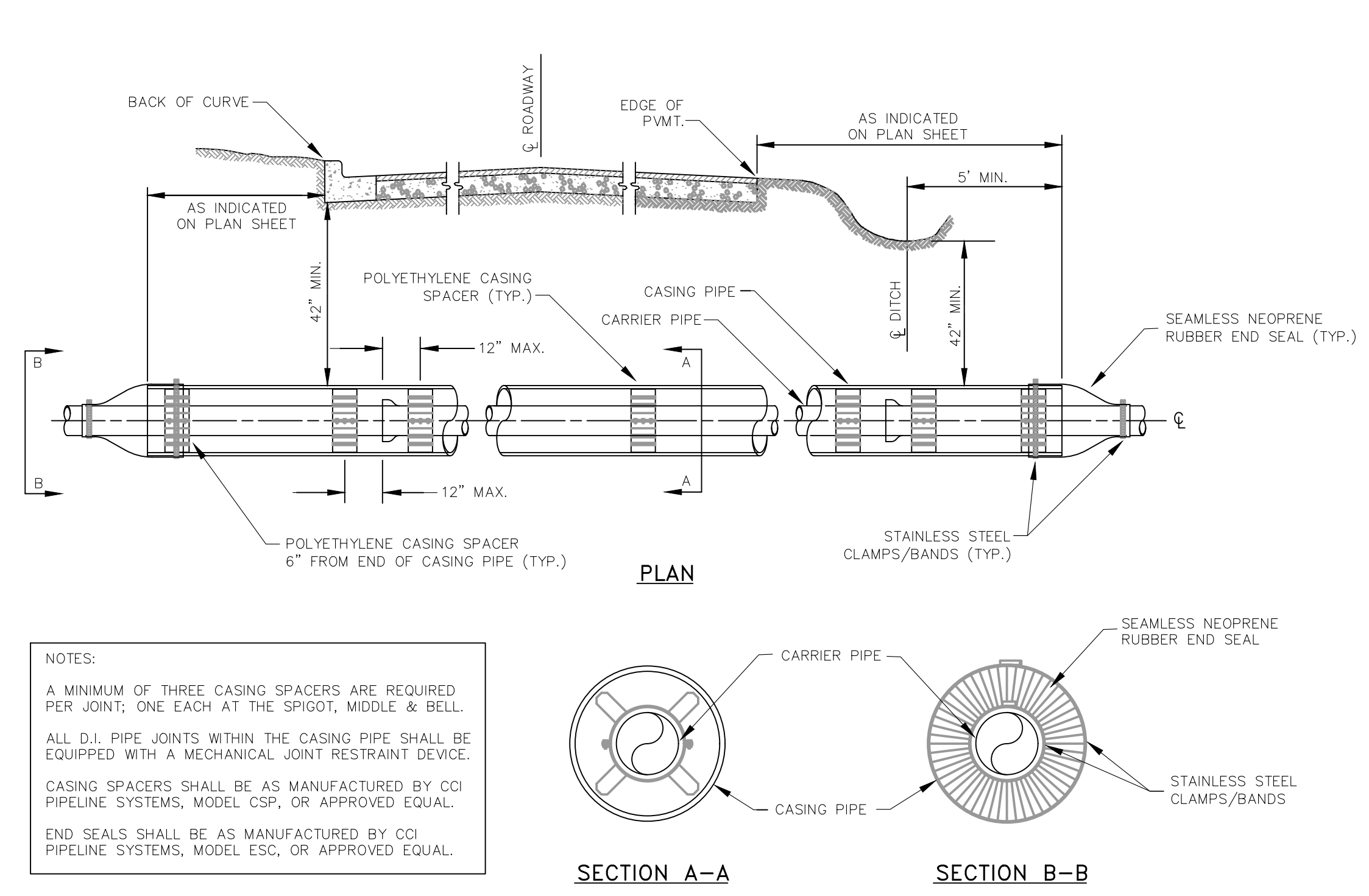


NOTE: SEE SPECIFICATION FOR PIPING MATERIALS AND PIPING JOINTS

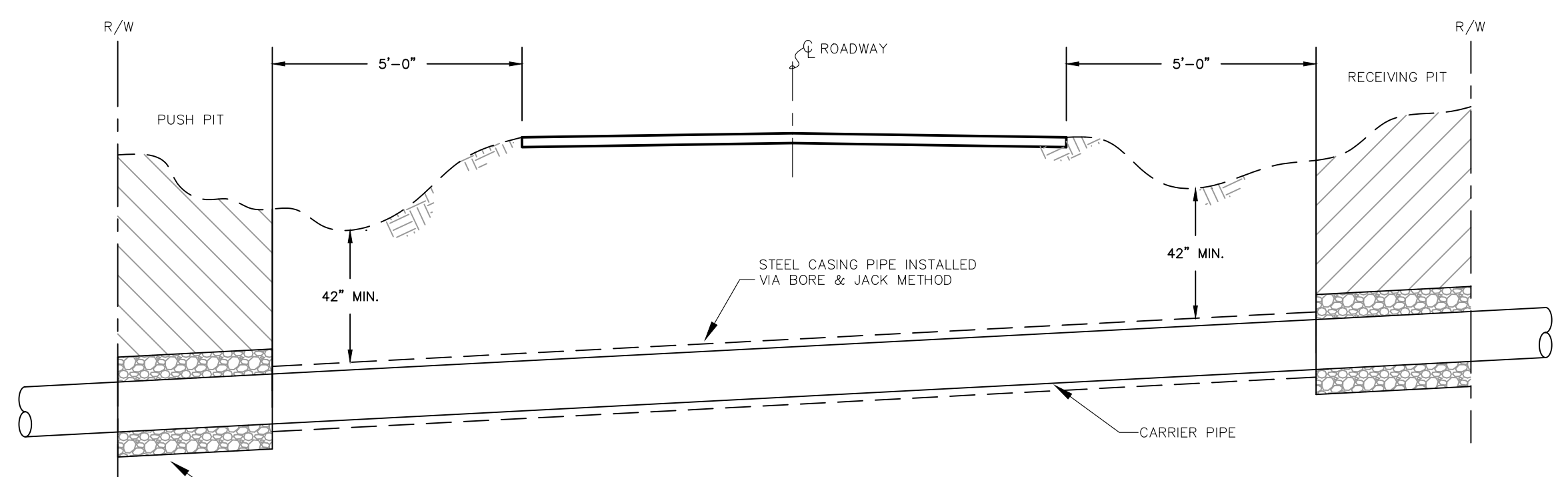
GATE VALVE



TYPE I CONNECTION

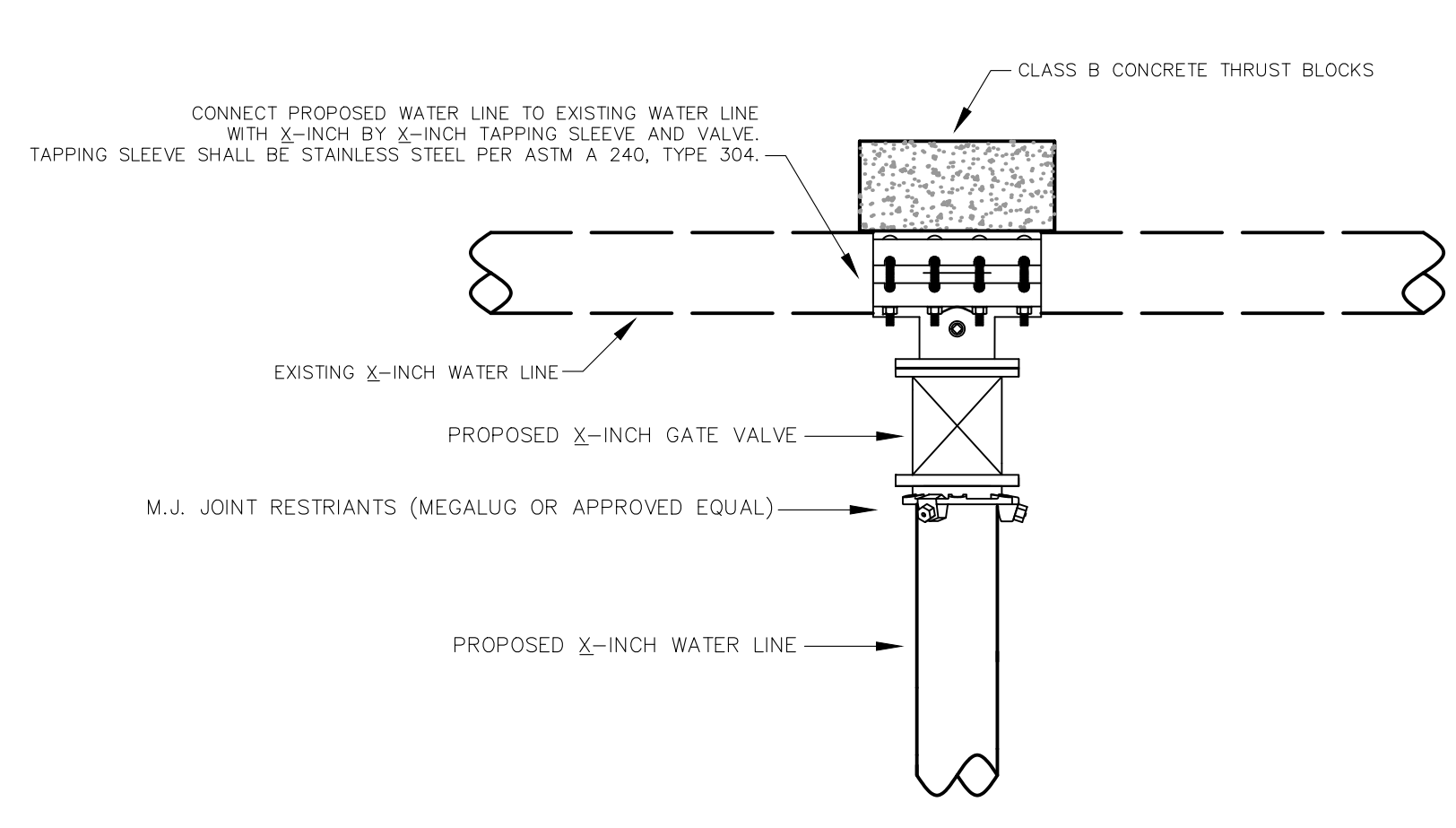


ENCASEMENT PIPE DETAILS



- NOTES:
- PUSH & RECEIVING PITS TO BE BACKFILLED AND THOROUGHLY COMPACTED IMMEDIATELY FOLLOWING INSTALLATION.
 - ALL HIGHWAY DITCHLINES TO REMAIN FREE AND CLEAR FOLLOWING INSTALLATION.
 - GROUND COVER SHALL BE RESTORED IN ALL DISTURBED AREAS VIA SEED AND STRAW AS SOON AS POSSIBLE.

STATE HIGHWAY ENCASED BORE CROSSING



TYPE II CONNECTION

Monarch Engineering, Inc.
556 CARLTON DRIVE
LAWRENCEBURG, KY 40342

STANDARD DETAIL DRAWINGS

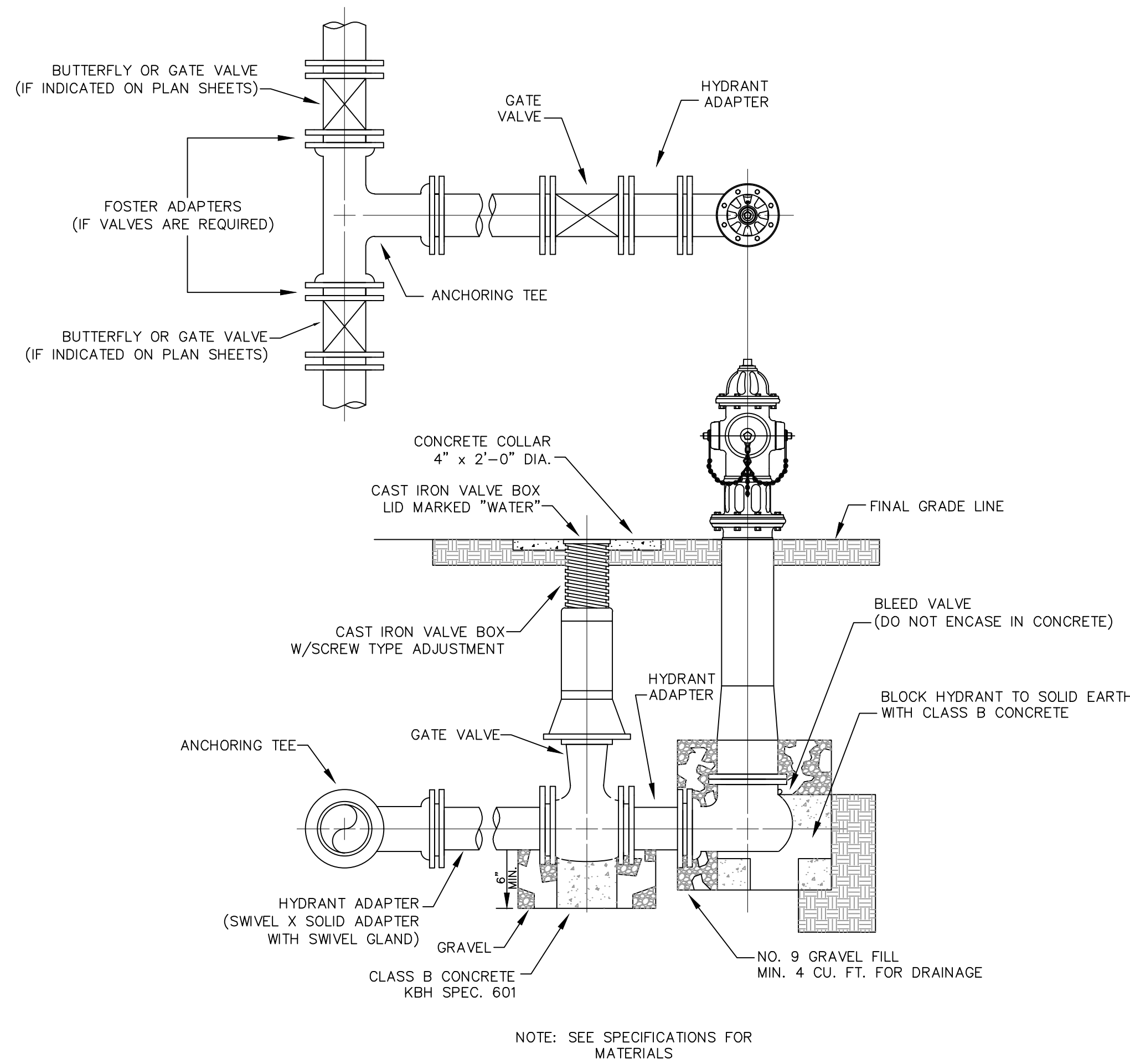
WESTERN ROCKCASTLE WATER ASSOCIATION
ROCKCASTLE COUNTY, KENTUCKY

DESCRIPTION:

PROJECT NO. 1935
DATE: NOV 2019
DRAWN BY: JRC
CHECKED BY: DSB
CHECKED BY: DMB
SCALE: N.T.S.

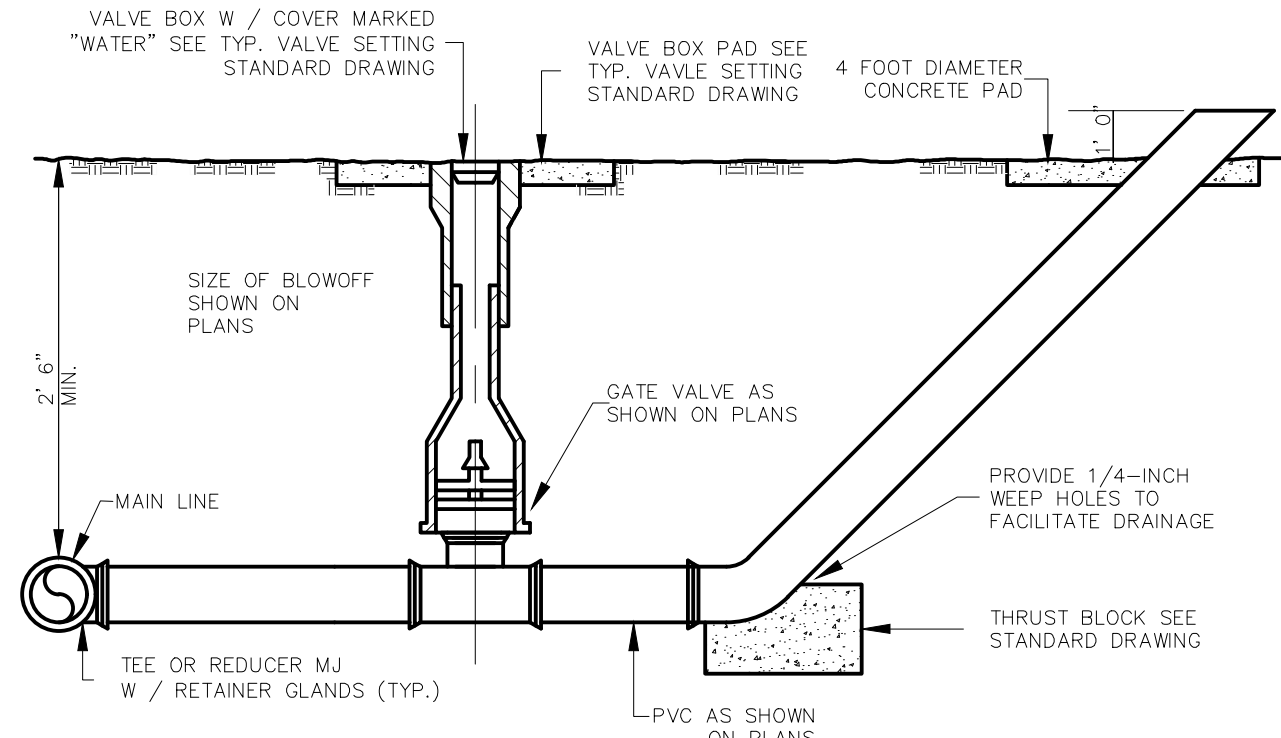
SHEET:
SD-1

STATE OF KENTUCKY
DERON S. BYRNE
23127
LICENSED PROFESSIONAL ENGINEER



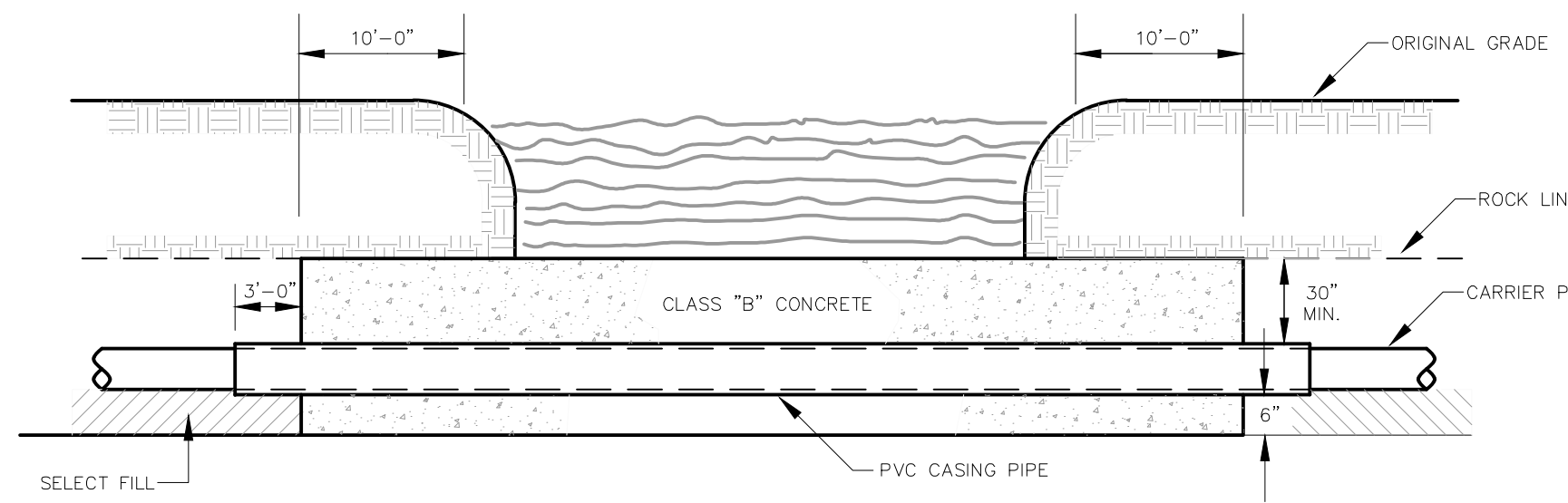
FLUSH HYDRANT ASSEMBLY

NOTE: SEE SPECIFICATIONS FOR MATERIALS

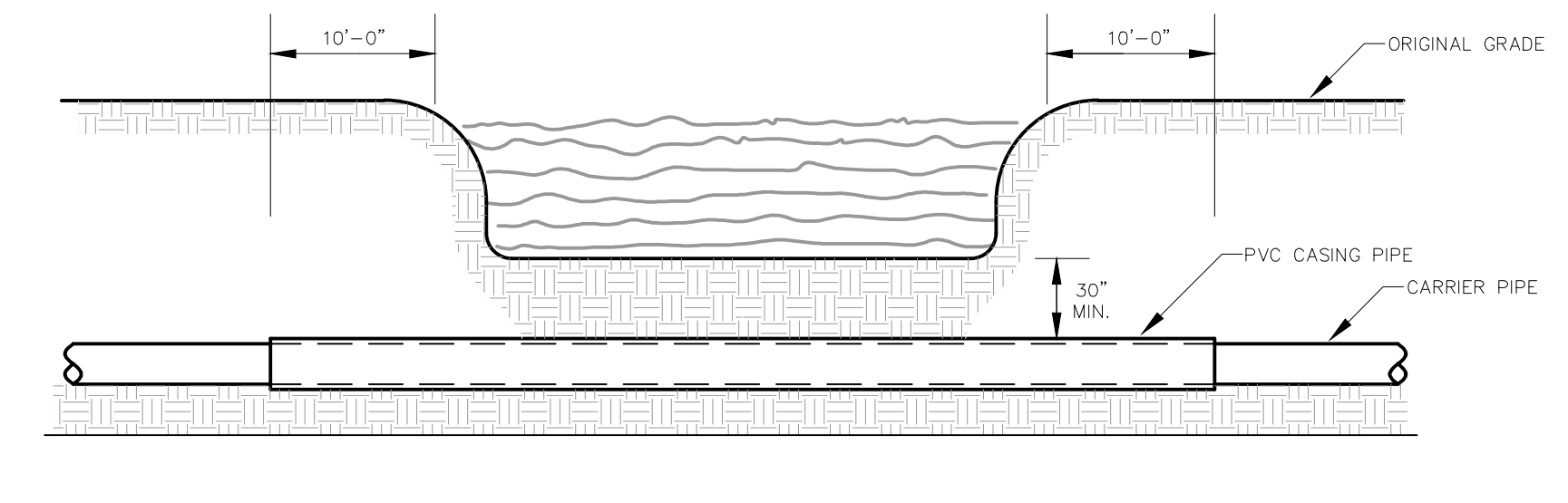


NOTE: WHERE BLOWOFF ASSEMBLIES ARE REQUIRED AT THE END OF A LINE NO TEE OR REDUCER IS REQUIRED. AT THESE LOCATIONS VALVES AND PIPES ARE TO BE THE SAME SIZE AS THE WATER MAIN.

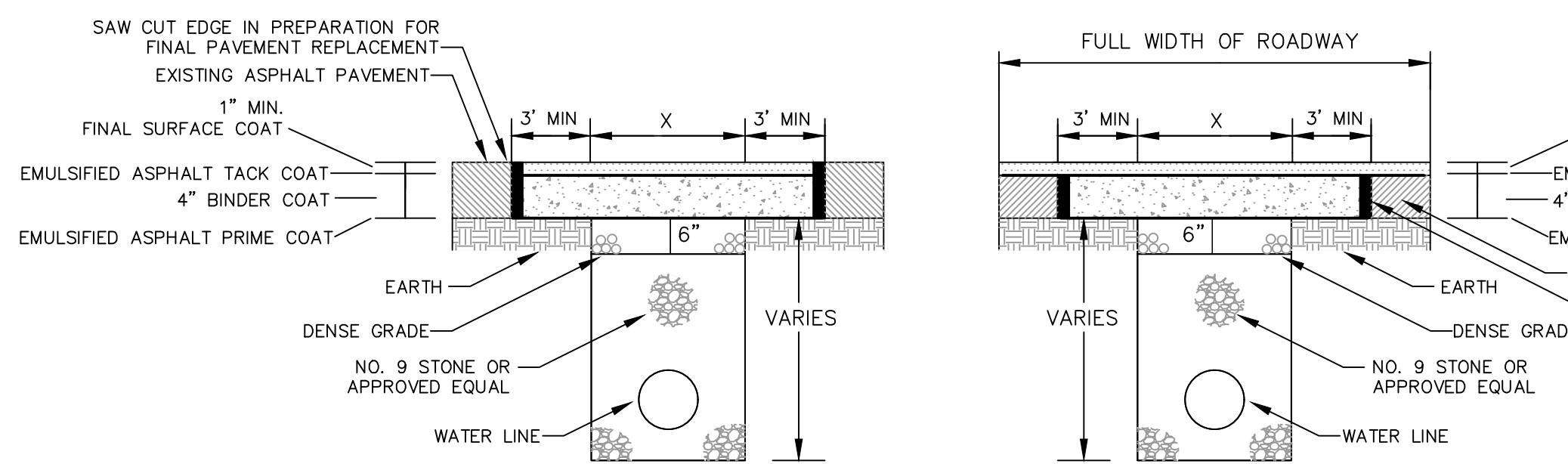
BLOWOFF ASSEMBLY



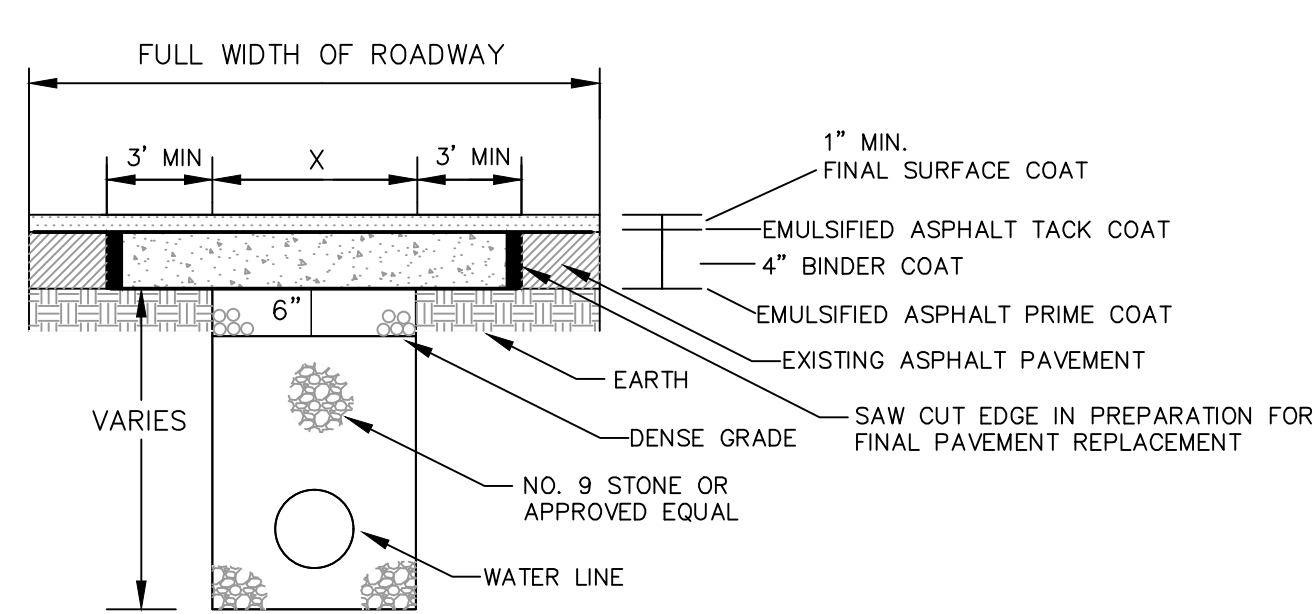
CREEK CROSSING IN ROCK



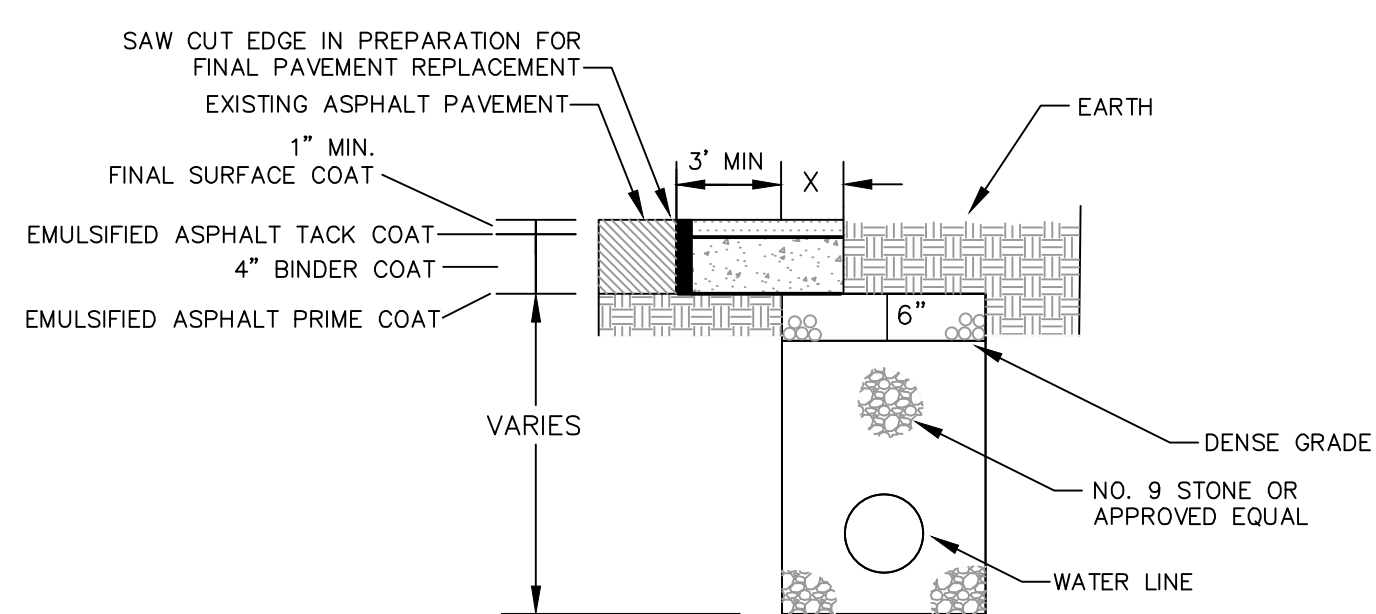
CREEK CROSSING IN SOIL



PAVEMENT REPLACEMENT



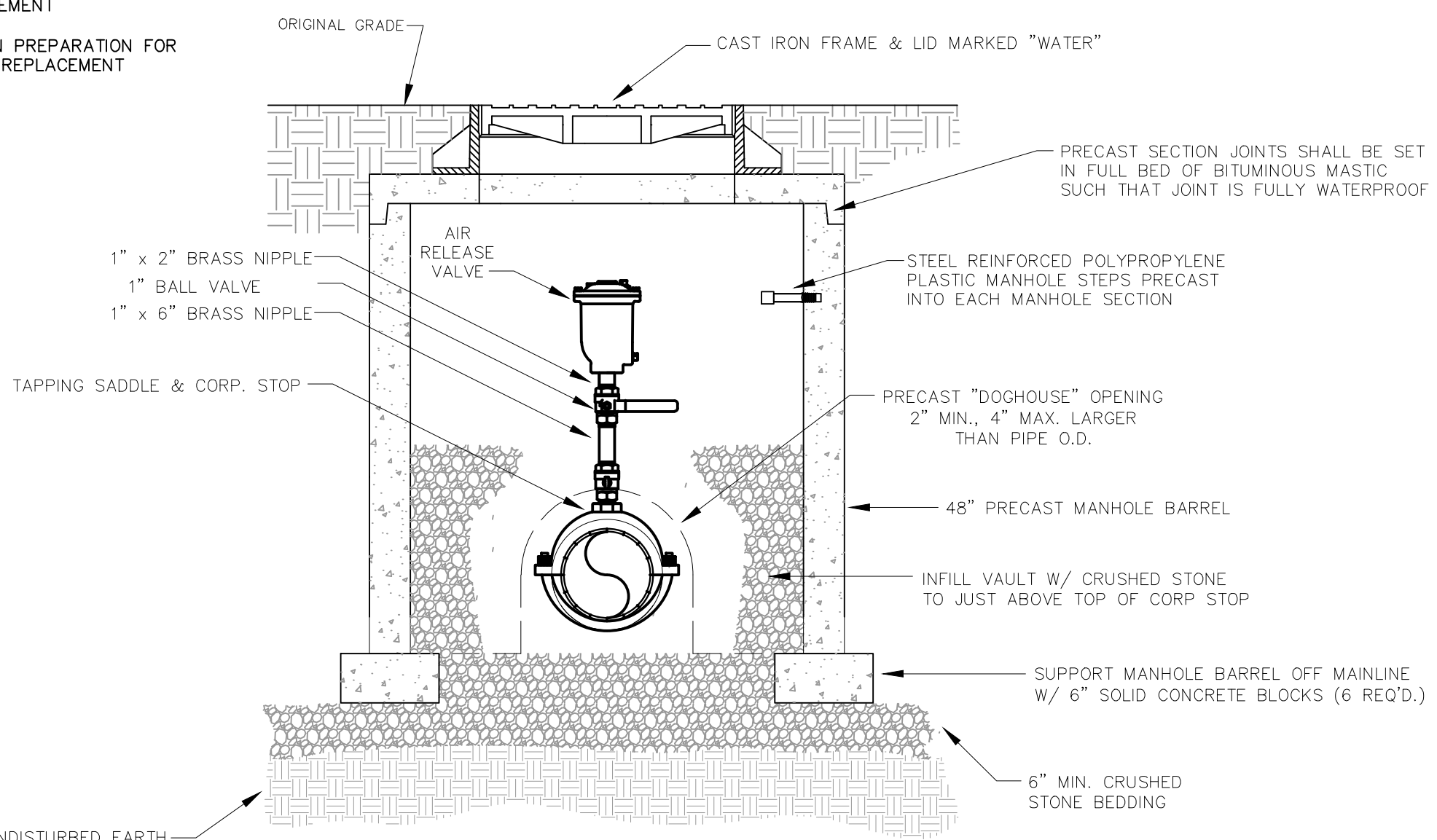
FULL WIDTH PAVEMENT REPLACEMENT



PARTIAL PAVEMENT REPLACEMENT

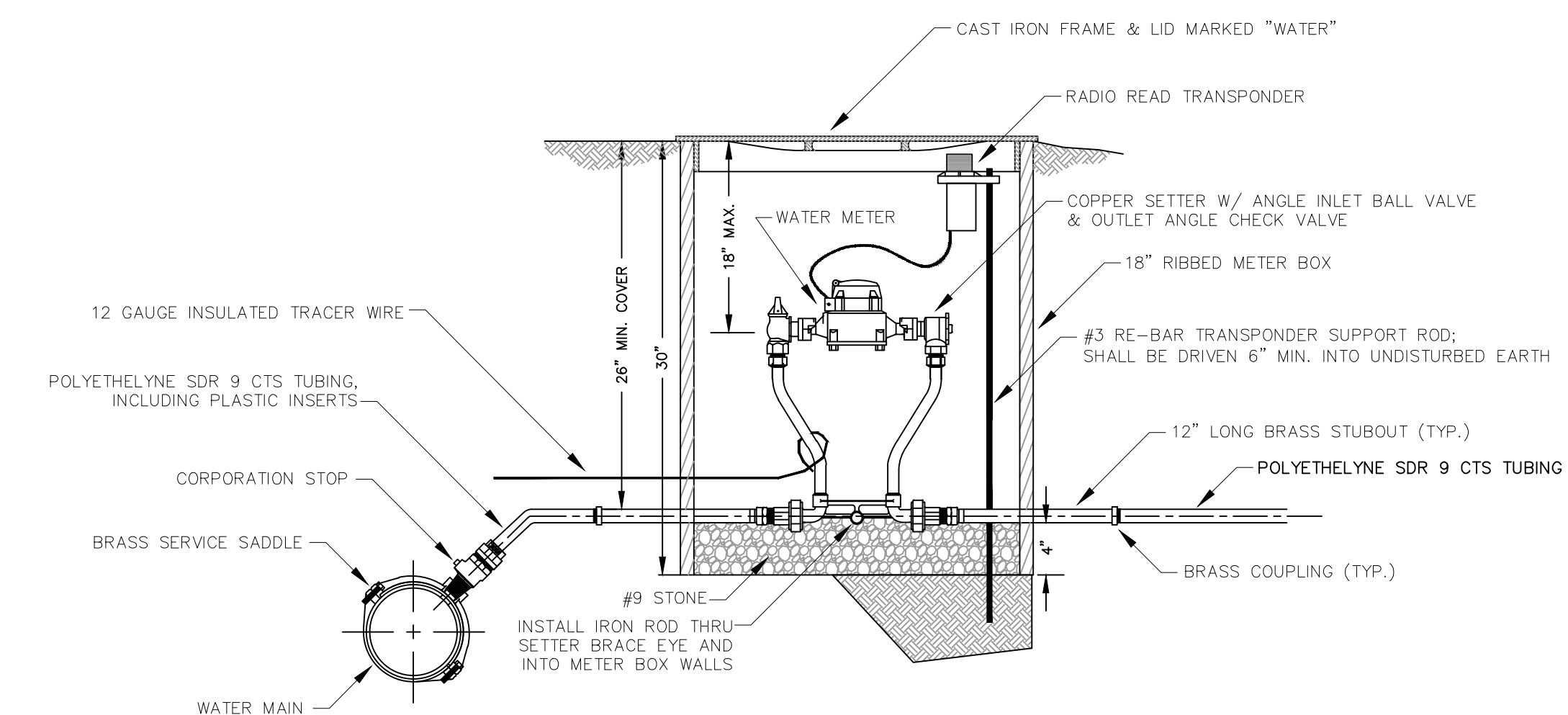
NOTES:
 ANY TRENCH THAT DISTURBS PAVEMENT SHALL BE BACKFILLED WITH STONE
 REPLACE BITUMINOUS PAVEMENT WITH SAME TYPE AND DEPTH AS EXISTING PAVEMENT
 ANY PUBLICLY TRAVELED AREA (I.E. COUNTY ROADS, BUSINESS ENTRANCES, BUSINESS AND PUBLIC PARKING LOTS, ETC.) SHALL BE TEMPORARILY RESTORED AT THE END OF EACH WORK DAY USING AN APPROVED COLD PATCH ASPHALT PAVEMENT

BITUMINOUS PAVEMENT REPLACEMENT



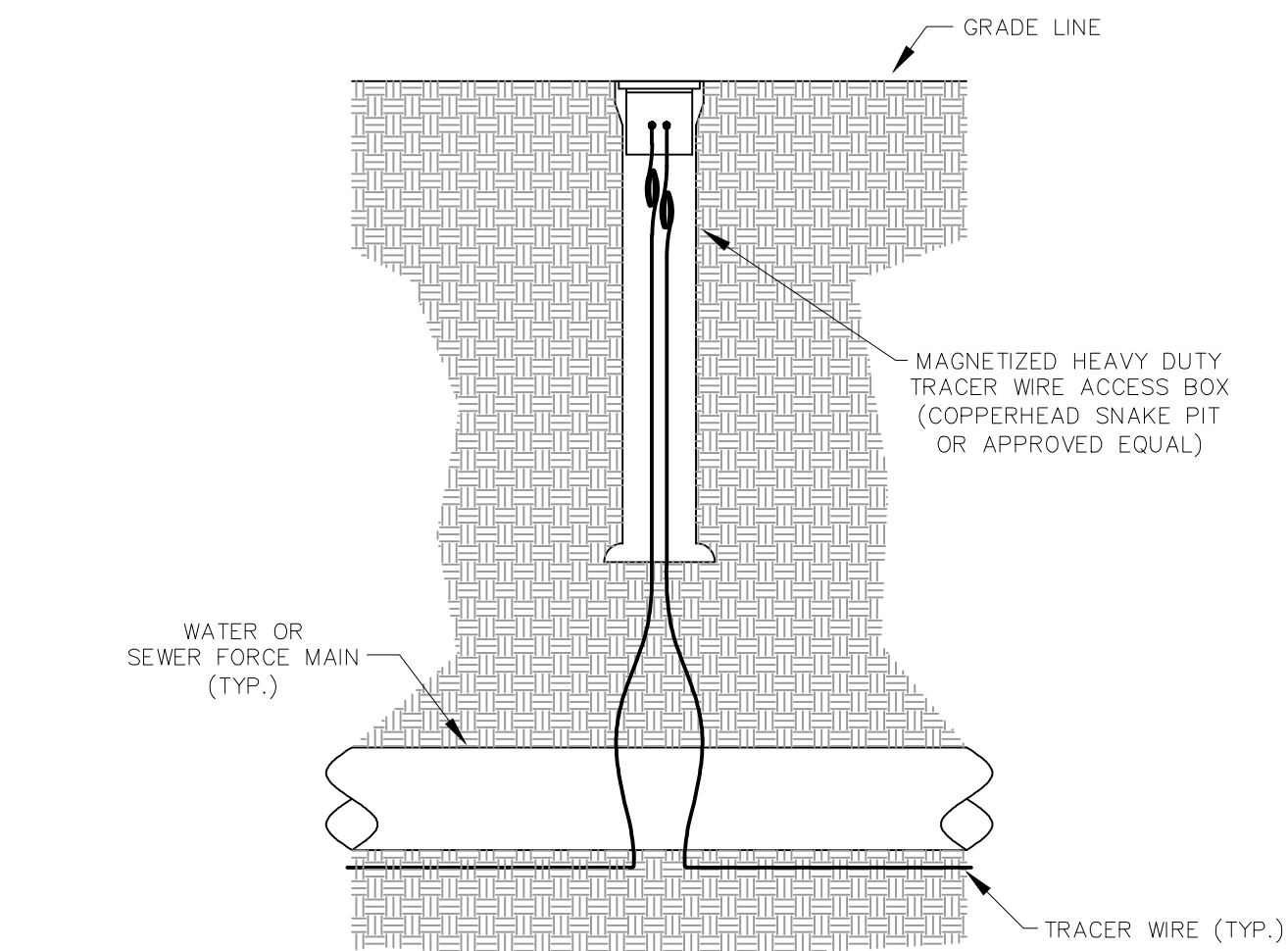
NOTE:
 WHERE THE WATER LINE IS LOCATED IN A STREET OR ROAD, THE AIR RELEASE VALVE AND BOX ARE TO BE LOCATED OFF THE ROAD AS DIRECTED BY THE ENGINEER AND CONNECTED TO THE MAINLINE BY 1\"/>

AIR RELEASE VALVE

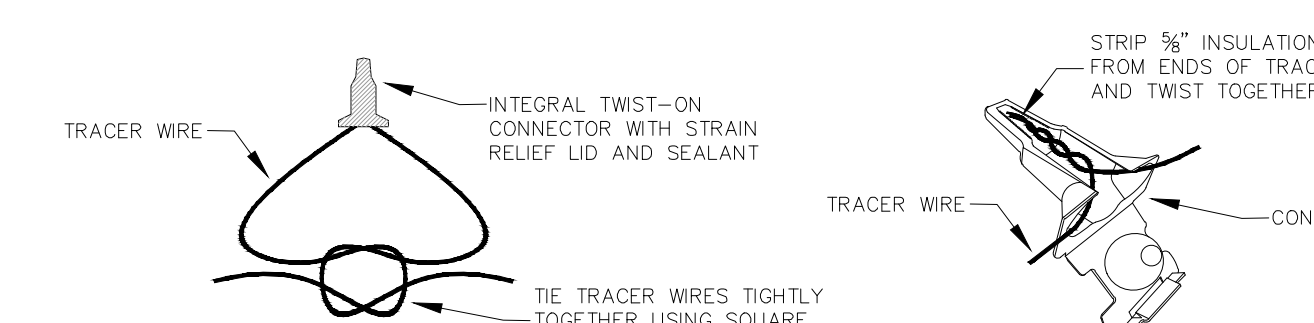


NOTE: INSTALL 12 GA. TRACER WIRE FROM WATER MAIN TO THE METER BOX. THE SERVICE LINE TRACER WIRE SHALL BE CONNECTED TO THE MAIN LINE TRACER WIRE VIA A WATER TIGHT CONNECTION. THE WIRE SHALL BE ROUTED INTO THE METER BOX AND SHALL BE ACCESSIBLE FOR LOCATOR CONNECTION.
 METER SETTING SHALL BE PLACED 2 FEET INSIDE PROPERTY LINE UNLESS OTHERWISE DIRECTED BY ENGINEER.

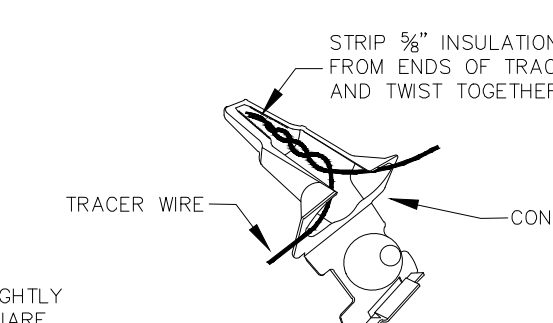
METER SETTING



TRACER WIRE ACCESS BOX



TRACER WIRE CONNECTION



TRACER WIRE CONNECTOR DETAIL

NOTES:
 FOR OPEN CUT INSTALLATION, TRACER WIRE IS TO BE #12 AWG SOLID COPPER WITH 30 MIL BLUE HMWPE INSULATION. FOR TRENCHLESS INSTALLATION, TRACER WIRE IS TO BE #12 AWG SOLID COPPER CLAD STEEL CORE WITH 45 MIL BLUE HDPE INSULATION.
 TRACER WIRE SHALL BE INSTALLED WITH THE PIPE AT THE TRENCH BOTTOM. ACCESS BOXES SHALL BE INSTALLED AT EACH VALVE, HYDRANT AND AIR RELEASE VALVE. TRACER WIRE ACCESS BOXES SHALL BE SPACED NO FURTHER THAN 1000' APART. A MINIMUM OF 3 FEET OF TRACER WIRE SHOULD BE COILED UP INSIDE OF EACH ACCESS BOX.

TRACER WIRE DETAILS

STANDARD DETAIL DRAWINGS

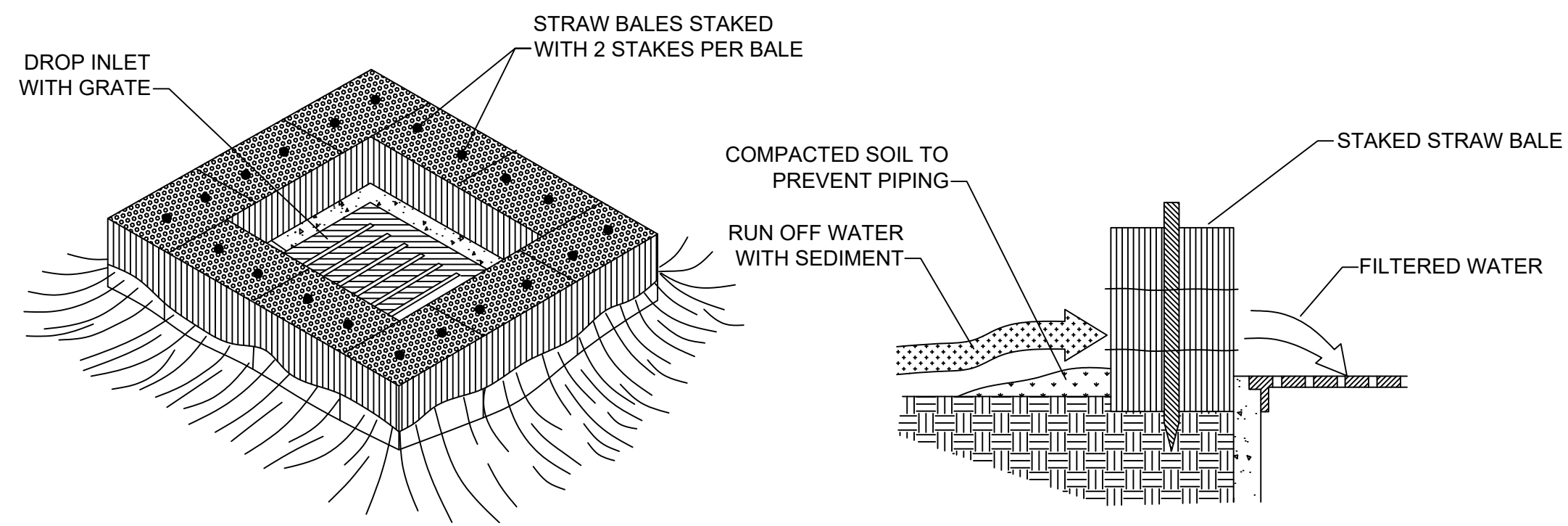
DESCRIPTION: **WESTERN ROCKCASTLE WATER ASSOCIATION**
 CUSTOMER: **ROCKCASTLE COUNTY, KENTUCKY**

PROJECT NO. 1935
 DATE: NOV 2019
 DRAWN BY: JRC
 CHECKED BY: DSB
 CHECKED BY: DMB
 SCALE: N.T.S.

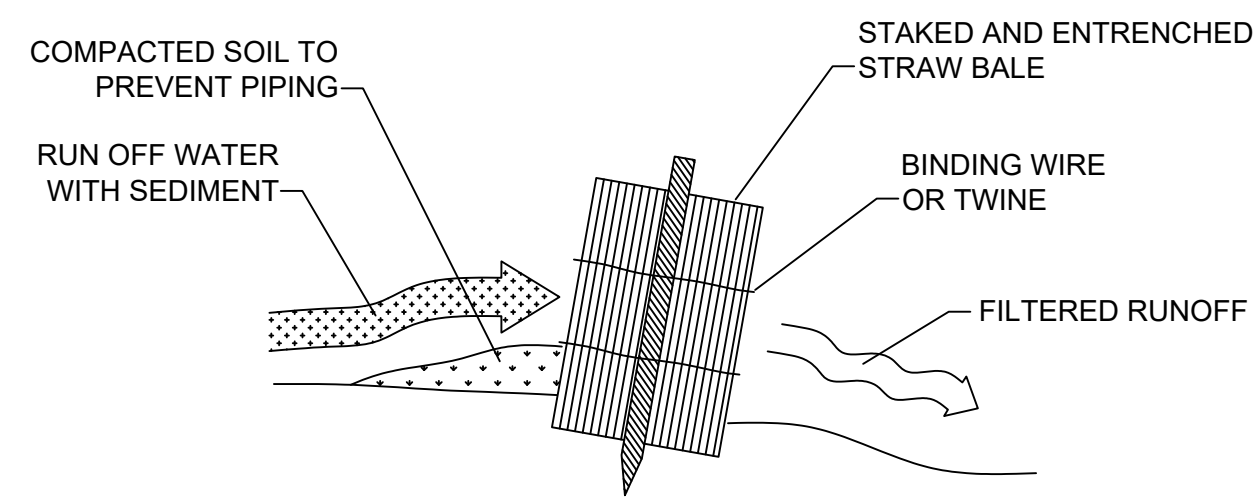
SHEET: **SD-2**

DERON S. BYRNE
 23127
 LICENSED PROFESSIONAL ENGINEER

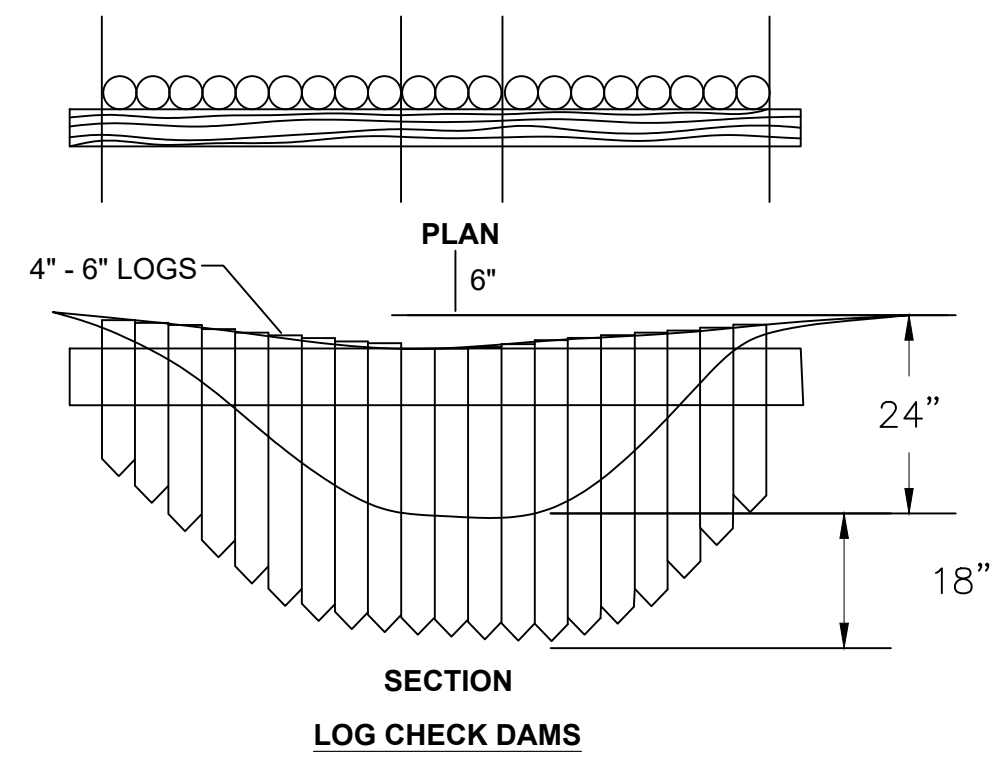
Monarch Engineering, Inc.
 556 CARLTON DRIVE
 LAWRENCEBURG, KY 40342



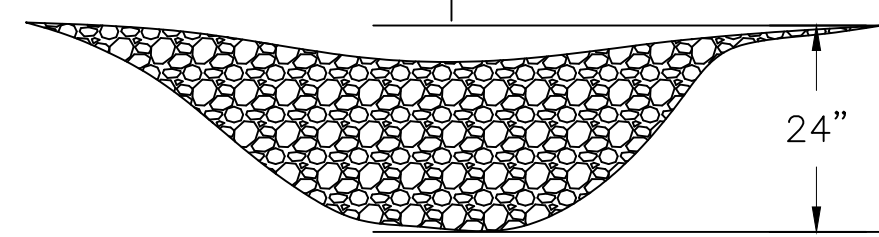
STRAW BALE DROP INLET SEDIMENT FILTER
N.T.S.



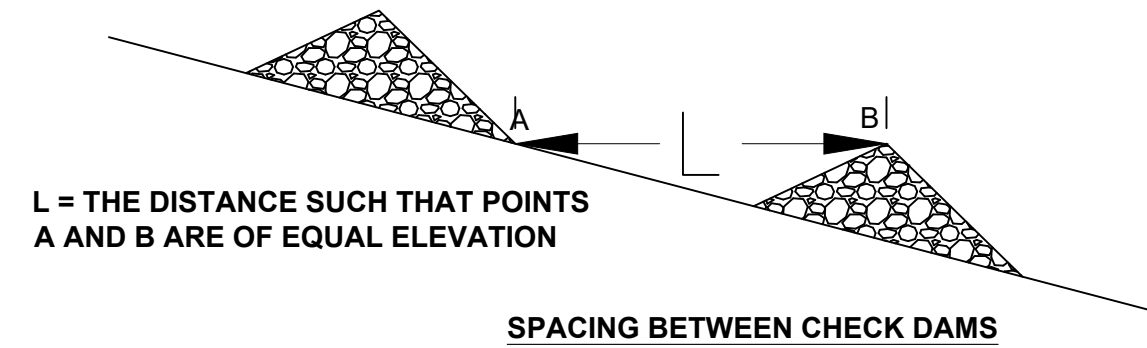
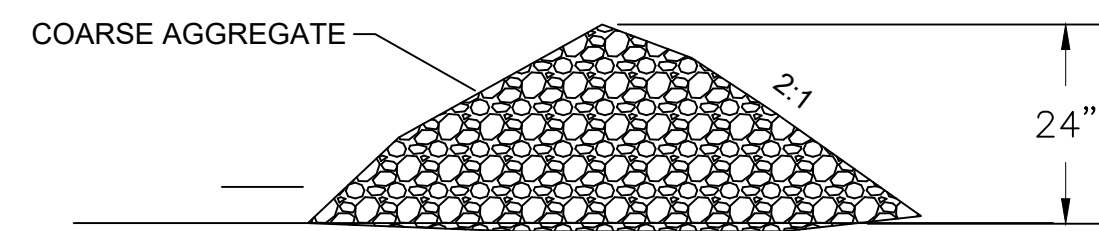
STRAW BALE INSTALLATION PROCEDURES
N.T.S.



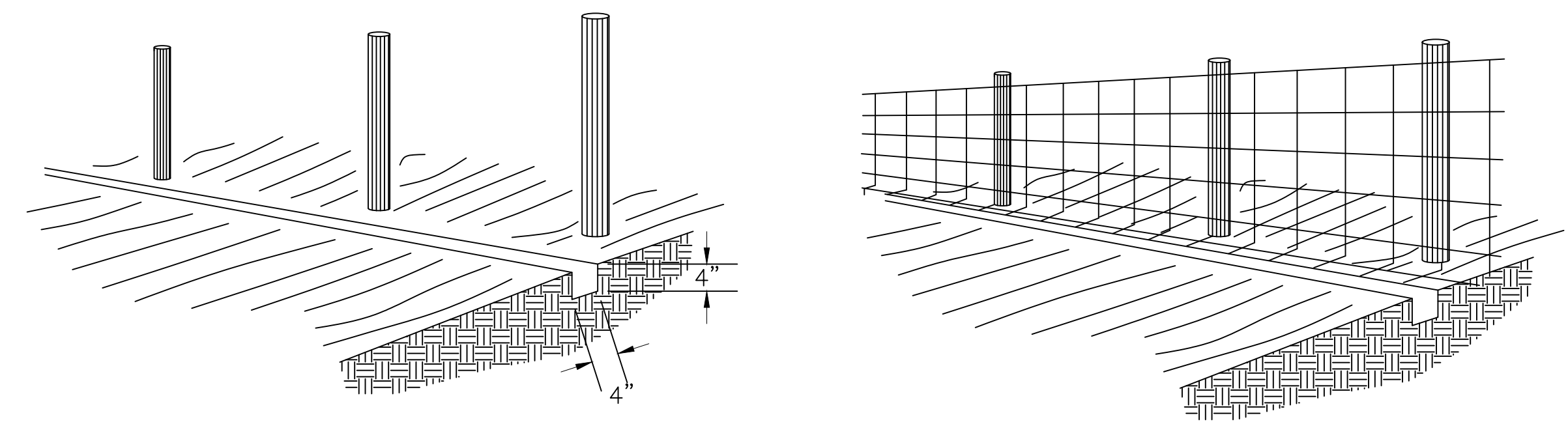
LOG CHECK DAMS



ROCK CHECK DAMS

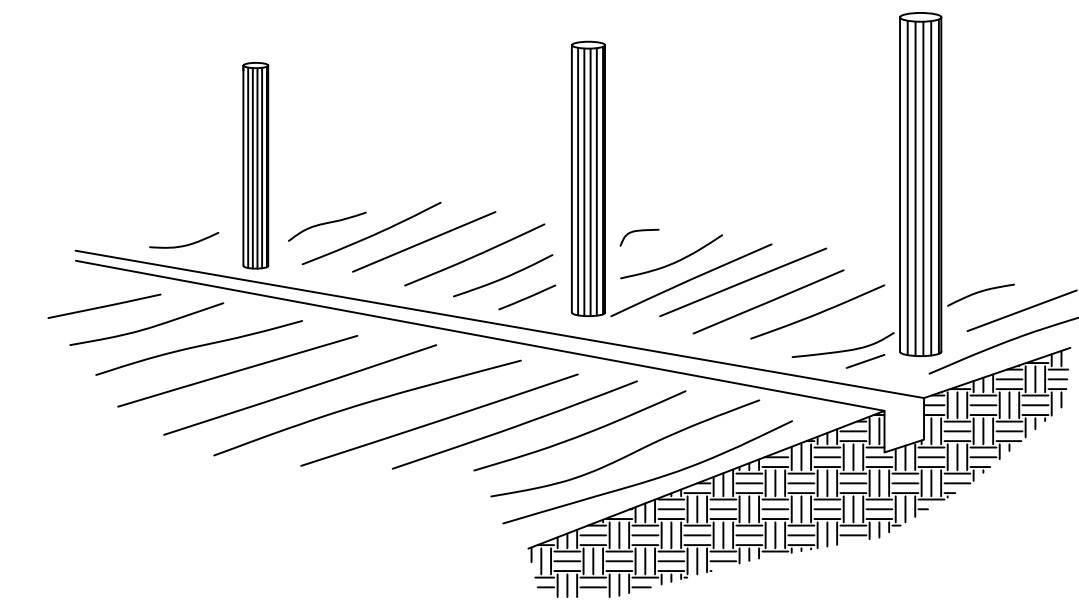


CHECK DAM DETAILS
N.T.S.

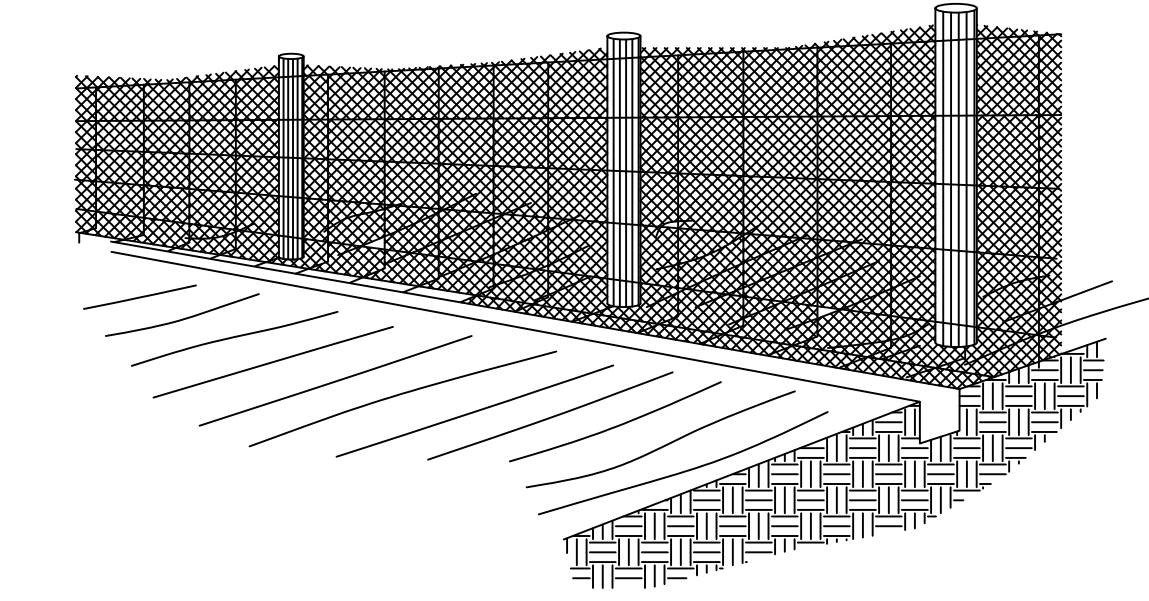


1. SET POSTS AND EXCAVATE A 4" x 4" TRENCH UPSLOPE ALONG THE LINE OF POSTS

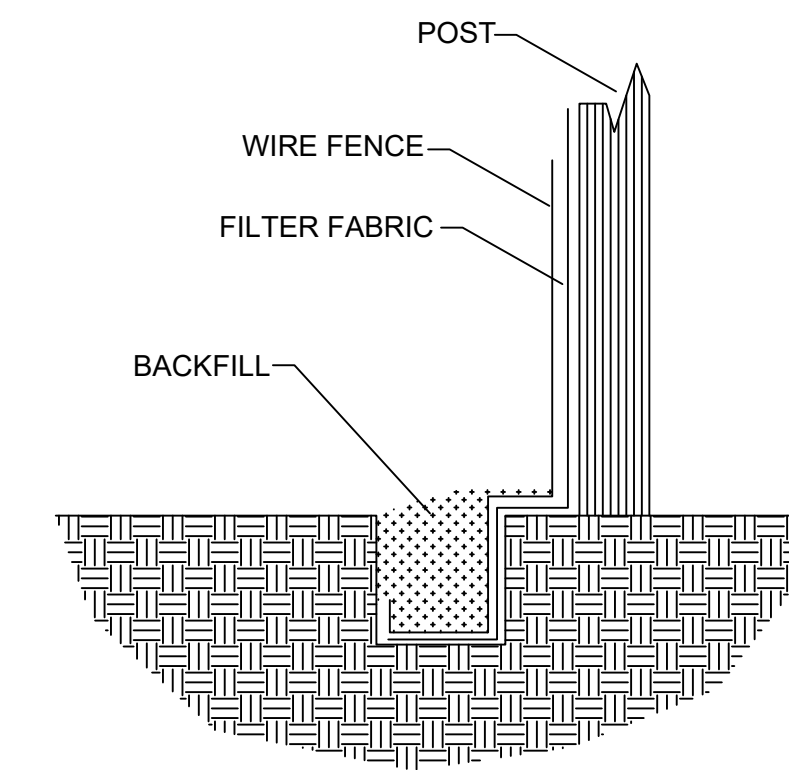
2. STAPLE WIRE FENCING TO POSTS



3. ATTACH THE FILTER FABRIC TO THE WIRE FENCE AND EXTEND IT INTO THE TRENCH

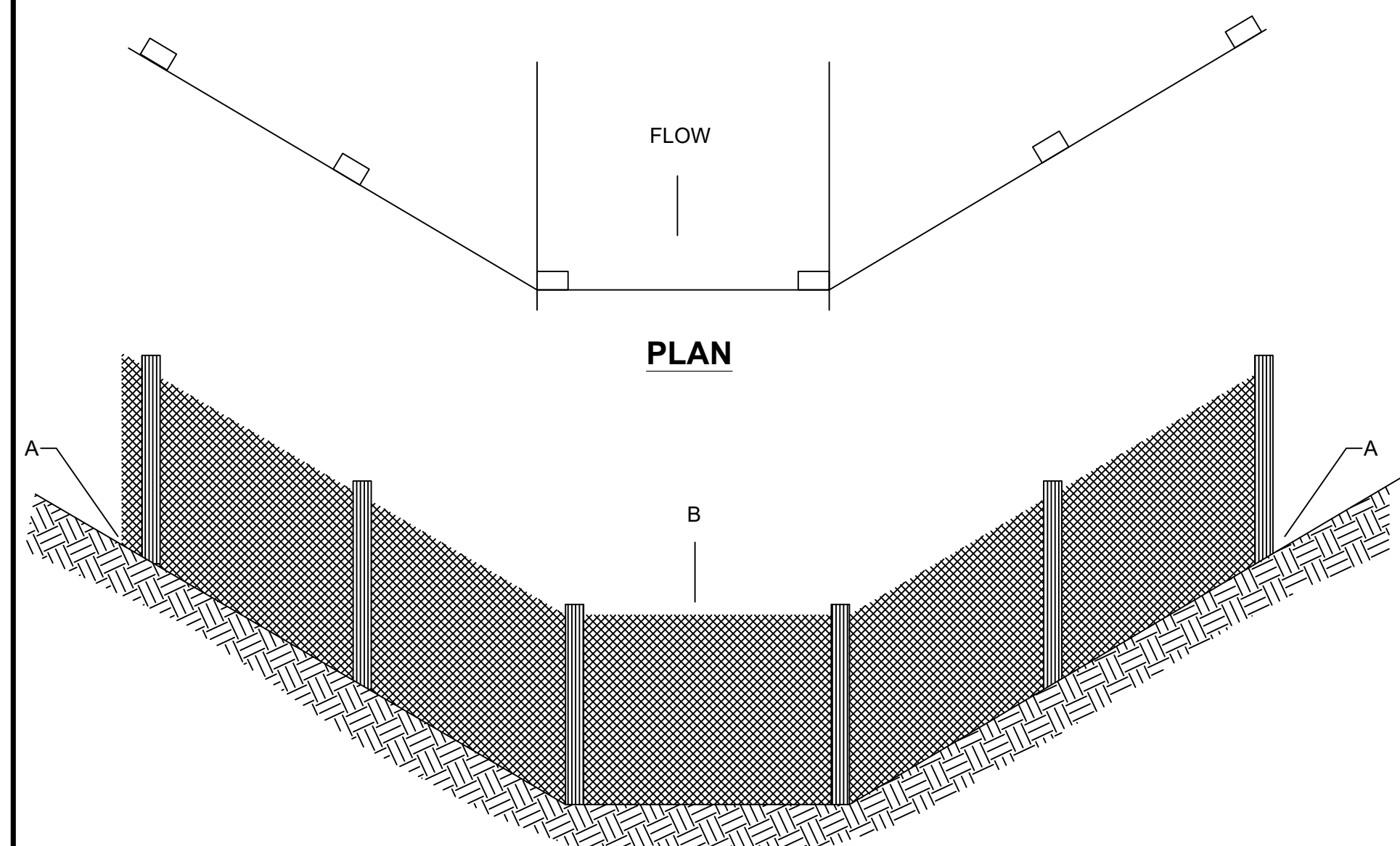


4. BACKFILL AND COMPACT THE EXCAVATED SOIL



EXTENSION OF FABRIC AND WIRE INTO THE TRENCH

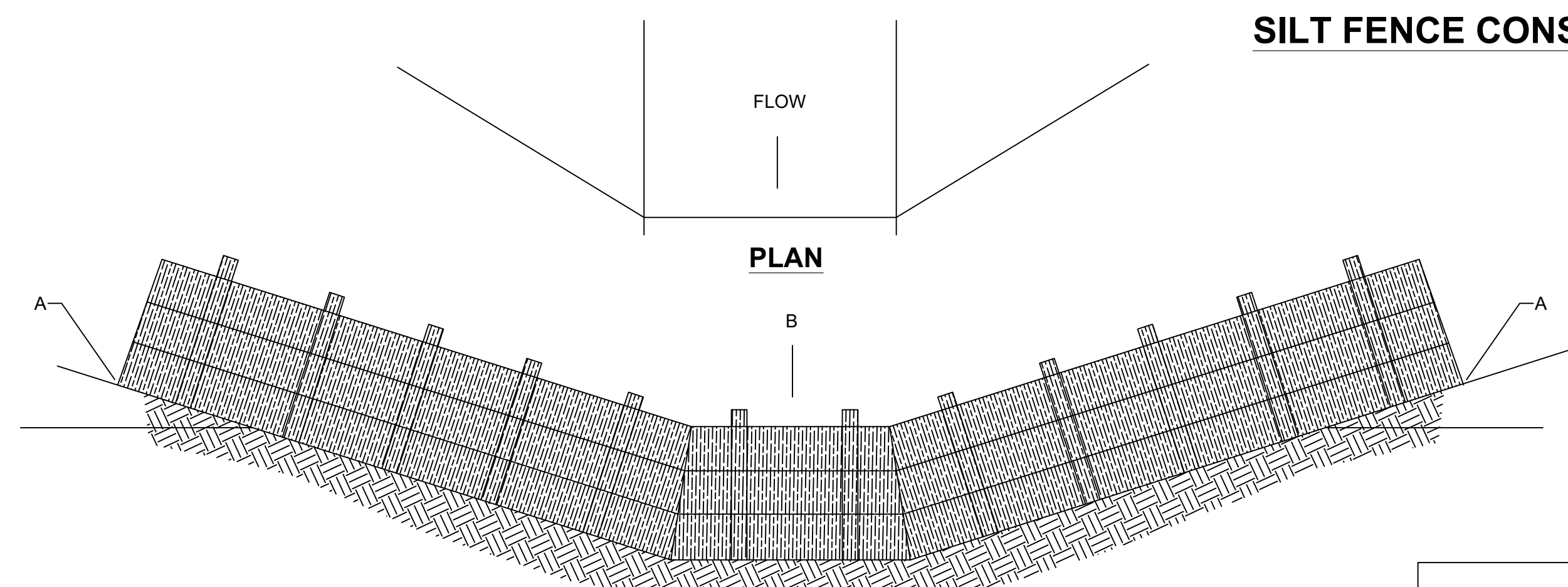
SILT FENCE CONSTRUCTION PROCEDURES
N.T.S.



ELEVATION

POINT A SHOULD BE HIGHER THAN POINT B

PLACEMENT OF FILTER BARRIER
N.T.S.



ELEVATION

POINT A SHOULD BE HIGHER THAN POINT B

PLACEMENT OF STRAW BALE BARRIER
N.T.S.

EROSION CONTROL DETAILS
N.T.S.

The Contractor shall do all work and take all measures necessary to control soil erosion resulting from construction operations, and shall prevent the flow of sediment from the construction site, and shall contain construction materials (including excavation and backfill) within their protected working area so as to prevent damage to the adjacent wetlands and water courses. The Contractor shall use any of the acceptable methods necessary to control soil erosion and prevent the flow of sediment to the maximum extent possible. These methods shall include, but not be limited to, the use of water diversion structures, diversion ditches, and settling basins.

