

2019 - WATER SYSTEM IMPROVEMENTS

CONTRACT 13 - WATER MAIN REPLACEMENT

FOR THE

SANDY HOOK WATER DISTRICT

APRIL 2022

PREPARED BY:

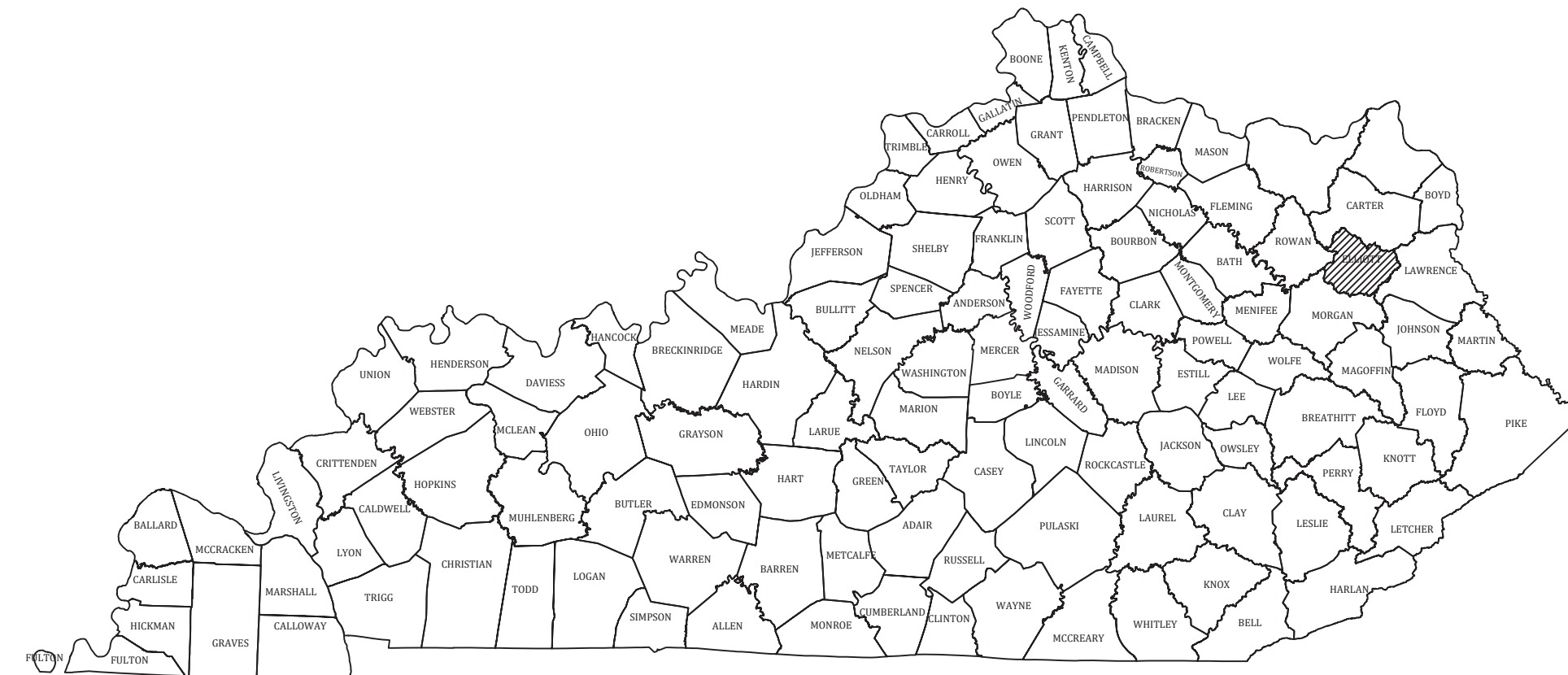
BOARD MEMBERS:

PHILLIP JUSTICE - CHAIRMEN
IRA VEST - SECRETARY
ESTILL HOWARD
BEULIN HILL

BRIDGETT HOWARD - GENERAL MANAGER
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222 East Main Street, Ste. 1 • Georgetown, KY 40324



RECORD DRAWINGS

TO THE BEST OF OUR KNOWLEDGE, INFORMATION AND BELIEF THIS SET OF RECORD DRAWINGS SHOWS THE REPORTED LOCATION OF THE WORK AND SIGNIFICANT CHANGES MADE DURING THE CONSTRUCTION PROCESS. THESE RECORD DOCUMENTS ARE BASED ON UNVERIFIED INFORMATION PROVIDED BY OTHER PARTIES WHICH WILL BE ASSUMED RELIABLE. THE DESIGN PROFESSIONAL CANNOT AND DOES NOT WARRANT THEIR ACCURACY.

BY: BLUEGRASS ENGINEERING, PLLC DATE: MARCH 2023

PROJECT NO. 19003

GENERAL NOTES

- CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES AND THE ENGINEER TWO WORKING DAYS (MINIMUM) BEFORE BEGINNING CONSTRUCTION.
- CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF TRAFFIC IN ACCORDANCE WITH CITY, COUNTY AND STATE REQUIREMENTS.
- THE CONTRACTOR SHALL MAINTAIN A CURRENT SET OF CONSTRUCTION PLANS ON THE JOB SITE DURING ALL PHASES OF CONSTRUCTION.
- EXISTING UTILITIES, ESPECIALLY GAS LINES AND OIL LINES, MAY BE CATHODICALLY PROTECTED. THEREFORE, DUCTILE IRON PIPE, FITTINGS, GATE VALVES, AND/OR BOXES LAID WITHIN 100' OF LINES WITH CATHODIC PROTECTION SHALL BE WRAPPED IN POLYETHYLENE ENCASEMENT. MATERIALS AND INSTALLATION SHALL MEET THE REQUIREMENTS OF AWWA'S LATEST REVISION.
- ALL CONSTRUCTION AND INSTALLATION OF MATERIALS BEING USED SHALL BE IN CONFORMANCE WITH THE PLANS AND SPECIFICATIONS. SUBSTITUTIONS AND DEVIATION SHALL BE PERMITTED ONLY WHEN WRITTEN APPROVAL HAS BEEN ISSUED BY THE ENGINEER.
- SHOP DRAWINGS OF ALL MATERIALS BEING USED SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO INSTALLATION.
- EXISTING UTILITIES HAVE BEEN SHOWN IN THEIR APPROXIMATE LOCATION. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UTILITIES. THE CONTRACTOR SHALL COORDINATE WITH A REPRESENTATIVE WHEN WORKING NEAR EXISTING UTILITIES.
- THE CONTRACTOR SHALL PROTECT ALL UTILITIES AND OTHER IMPROVEMENTS SHOWN ON THESE PLANS AND ALL OTHER UTILITIES AND OTHER IMPROVEMENTS NOT SHOWN. THE CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY FOR REPAIRS OF UTILITIES AND OTHER IMPROVEMENTS DAMAGED DURING CONSTRUCTION.
- UNLESS OTHERWISE NOTED, A SEPARATE BID ITEM HAS NOT BEEN ESTABLISHED FOR FITTINGS. THE FITTINGS INCLUDED BUT NOT LIMITED TO ARE: TEES, BENDS, PLUGS, REDUCERS, CROSSES, COUPLINGS, ETC. CONTRACTORS SHALL INCLUDE THE COST OF THESE ITEMS IN THE BID PRICE FOR THE PIPE.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE TEMPORARY REMOVAL/RELOCATION OF TRAILERS, BUILDINGS, FENCES, TREES, SHRUBS, ETC. AND REPLACEMENT OF SAID ITEMS AFTER CONSTRUCTION ACTIVITIES.
- CONTRACTOR IS TO COORDINATE WITH THE PROPERTY OWNERS AS TO WHETHER OR NOT TEMPORARY FENCING IS REQUIRED AND CONSTRUCT IF NECESSARY.
- ALL PIPING SHALL HAVE 30° MINIMUM COVER.
- WHERE UNSTABLE MATERIAL IS ENCOUNTERED OR WHERE THE DEPTH OF EXCAVATION IN EARTH EXCEEDS FIVE (5) FEET, THE SIDES OF THE TRENCH OR EXCAVATION SHALL BE SUPPORTED BY SUBSTANTIAL SHEETING, BRACING, SHORING OR THE TRENCH SIDES SLOPED. SLOPING THE SIDES OF THE DITCH WILL NOT NOT BE PERMITTED IN STREETS, ROADS, NARROW RIGHTS-OF-WAY OR OTHER CONSTRICTED AREAS UNLESS OTHER WISE SPECIFIED. THE STANDARDS OF THE FEDERAL OCCUPATIONAL SAFETY AND HEALTH ACT AND THE KENTUCKY LABOR CABINET SHALL BE FOLLOWED.
- ALL EXCAVATION IS UNCLASSIFIED. COMPENSATION FOR ALL EXCAVATION SHALL BE INCLUDED IN LUMP SUM BID.
- REGRADE OF SITE SHALL BE SUCH THAT DRAINAGE IS AWAY FROM ALL STRUCTURES.
- BACKFILL AROUND ALL STRUCTURES SHALL BE SUFFICIENTLY COMPACTED TO PRECLUDE SETTLEMENT AND PONDING OF WATER AROUND STRUCTURES AND GRADED TO DIVERT RUNOFF AWAY FROM THE STRUCTURES.
- DIMENSIONS, DETAILS AND REINFORCEMENT MAY VARY WITH MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR SHALL OBTAIN AND MAINTAIN ON SITE, APPROVED SHOP DRAWINGS PRIOR TO BEGINNING CONSTRUCTION.
- ALL VALVES & HYDRANTS SHALL BE LOCATED AT THE BACKSIDE OF THE DITCHLINE.
- FINAL LOCATION OF SERVICES, VALVES, & HYDRANT ORIENTATION ARE TO BE FIELD LOCATED DURING CONSTRUCTION & APPROVED BY THE ENGINEER.
- AT THE CONTRACTORS OPTION, CLASS 350 DUCTILE IRON PIPE MAY BE SUSTITUTED FOR ANY PIPE PARTICULARLY SPECIFIED, BUT AT NO ADDITIONAL COST TO THE OWNER.
- NO PAY ITEM FOR EXTRA TRENCH DEPTH HAS BEEN SET UP. CONTRACTOR SHALL INCLUDE THE COST OF THE ADDITIONAL DEPTH IN HIS BID PRICE.
- ROCK SOUNDINGS WERE NOT PERFORMED BY THE ENGINEER, THE CONTRACTOR SHALL TAKE APPROPRIATE ACTION TO DETERMINE SUBSURFACE CONDITIONS.
- CONTRACTOR TO DIG/EXPOSE EXISTING WATER MAIN FAR ENOUGH AHEAD OF NEW WATER MAIN CONSTRUCTION TO AVOID DAMAGE TO EXISTING WATER MAIN AND/OR INTERRUPTION OF EXISTING CUSTOMER SERVICES.
- ALL NEW SERVICE LINE FROM THE NEW MAIN TO THE SETTERS SHALL BE 3/4" PE CTS TUBING UNLESS SHOWN DIFFERENTLY ON THE PLANS
- THE MAXIMUM ALLOWABLE LENGTH OF SERVICE LINE FROM THE WATER MAIN TO THE CUSTOMER'S METER SERVICE SHALL BE AS FOLLOWS:

SERVICE LINE DIAMETER	MAXIMUM LENGTH
3/4 INCH	125 FEET
1 INCH	150 FEET
1-1/2 INCH	200 FEET
2 INCH	250 FEET
- CONNECTIONS TO EXISTING DISTRIBUTION SYSTEM SHALL BE MADE AS FOLLOWS:
 - A. CONNECT TO EXISTING (SIZE) W.M. (WET TAP) - CONTRACTOR SHALL PROVIDE, FURNISH AND INSTALL ALL FITTINGS, VALVES AND APPURTENANCES TO CONNECT THE PROPOSED WATER MAIN TO THE EXISTING WATER MAIN UNDER PRESSURE.
 - B. CONNECT TO EXISTING (SIZE) W.M. - CONTRACTOR SHALL PROVIDE, FURNISH AND INSTALL ALL FITTINGS AND APPURTENANCES TO CONNECT THE PROPOSED WATER MAIN TO THE EXISTING WATER MAIN. VALVES ARE A SEPARATE PAY ITEM.
- NO BLASTING WILL BE PERMITTED ON THIS PROJECT
- GRIP RINGS SHALL BE INSTALLED ON ALL FITTINGS
- ALL PVC CASING SHALL BE MINIMUM OF 4" LARGER THAN CARRIER PIPE. STEEL CASING MINIMUM 6" LARGER.
- ALL EXISTING METERS SHALL BE RECONNECTED TO NEW WATER MAINS W/NEW 3/4" PE SERVICE LINE.
- NMR - (NEW METER RECONNECT) MARKED ON PLANS WILL NOTE THOSE MATERIALS THAT WILL BE REPLACED WITH NEW METER ASSEMBLY'S (SETTER, BOX, LID, ETC) AND RECONNECTED TO EXISTING SERVICE AND NEW WATER MAIN.
- ANY MAILBOX THAT IS REMOVED FOR THE INSTALLATION OF THE WATER MAIN MUST BE RE-INSTALLED ONCE THE WATER MAIN HAS BEEN INSTALLED.
- ALL CONNECTIONS BETWEEN THE PVC AND HDPE MUST BE SEALED IN PLASTIC AND CONCRETED.

GENERAL NOTES

- NEW LINE AND EXISTING LINES MUST REMAIN IN SERVICE UNTIL ALL METERS ASSEMBLED HAVE BEEN REPLACED AND RECONNECTED TO THE NEW LINE
- NO METERS CAN BE RECONNECTED TO THE NEW WATER MAIN UNTIL TESTING, STERILIZATION AND SAMPLING HAS BEEN SUCCESSFULLY COMPLETED
- COPIES OF ALL BAC-T RESULTS MUST BE PROVIDED TO THE OWNER PRIOR TO RECONNECTS OF ANY METER.
- A NO. 12 AWG INSULATED COPPER LOCATOR WIRE SHALL BE TAPED TO THE TOP OF THE WATER MAIN PIPE. THE INSULATION SHALL BE BLUE FOR WATER. THE WIRE SHALL BE LOOPED OUTSIDE ALL VALVE BOXES W/ ENOUGH SLACK TO ALLOW ACCESS TO THE LOOPS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY PLUMBING PERMITS NECESSARY TO RELOCATE OR RECONNECT ANY CUSTOMERS METER SERVICE OR SERVICE LINE. THE CONTRACTOR SHALL OBTAIN ALL PERMITS, PAY ALL FEES AND EMPLOY THE NECESSARY LICENSED PLUMBER.

FINAL CLEANUP AND RESTORATION

UNLESS SPECIFICALLY APPROVED BY THE OWNER AND ENGINEER, CLEANUP OF DISTURBED AREAS SHALL BE KEPT CURRENT WITH CONSTRUCTION AND RESTORATION EFFORTS BY THE CONTRACTOR INITIATED NO LONGER THAN SEVEN (7) DAYS AFTER THE TRENCH EXCAVATION WORK HAS STARTED. ALL EXCAVATED MATERIAL NOT REQUIRED FOR BACKFILLING OF THE TRENCH AND ANY LARGE ROCKS, STONES OR DEBRIS SHALL BE REMOVED FROM THE SITE, AND SHALL NOT BE A BURDEN TO THE PROPERTY OWNER(S) AND/OR ADJACENT PROPERTIES. THE CONTRACTOR MAY WINDROW OR TRACK-IN THE EXCAVATED MATERIAL OVER THE TRENCH PRIOR TO FINAL CLEANUP TO ALLOW FOR AND TO ASSIST IN THE INITIAL SETTLEMENT OF THE TRENCH. ALL DISTURBED AREAS MUST BE SEEDED AT LEAST WITH A TEMPORARY SEED MIX IF FOR SOME REASON THE AREA CANNOT BE PERMANENTLY SEEDED WITHIN TWO (2) WEEKS.

CONSTRUCTION IN KTC RIGHT-OF-WAY

- ALL EFFECTED KYTC DITCHLINES SHALL REMAIN FREE OF EXCESS SILT OR EROSION AND CONSTRUCTED TO THE NORMAL TYPICAL SECTION OF THE ROADWAY WITH A MINIMUM DEPTH OF 18 INCHES FROM THE SHOULDER BREAK POINT.
- ALL NECESSARY STEPS SHALL BE TAKEN TO PREVENT EROSION OR SILTATION OF THE PUBLIC RIGHT-OF-WAY, ADJOINING PROPERTY AND WATERWAYS.
- ALL VALVES TO BE FLUSH W/ EXISTING GRADE.
- ALL WATER LINE LOCATED WITHIN STATE HIGHWAY R.O.W. SHALL BE CONSTRUCTED OUT AND AROUND THE END OF ALL EXISTING CULVERTS AND HEADWALLS.
- UNDERGROUND UTILITIES INSTALLED INSIDE STATE RIGHT-OF-WAY SHALL BE LOCATED WITHIN 3-5 FEET FROM THE EDGE OF THE RIGHT-OF-WAY UNLESS OTHERWISE SHOWN ON THE PLANS.
- UNDERGROUND UTILITIES SHOWN MORE THAN 5 FEET FROM THE EDGE OF THE RIGHT-OF-WAY SHALL BE INSTALLED WITH A MINIMUM DEPTH OF COVER OF 42 INCHES WITH PRIOR APPROVAL ON A CASE BY CASE BASIS.
- UNDERGROUND UTILITIES CROSSING ANY ENTRANCE OR CROSSROAD PAVED WITH CONCRETE OR ASPHALT SURFACE INSIDE STATE RIGHT-OF-WAY SHALL BE INSTALLED BY BORING UNLESS WRITTEN PERMISSION TO OPEN CUT IS OBTAINED FROM THE PROPERTY OWNER AND APPROVED BY THE KYTC DISTRICT PERMITS ENGINEER.
- UNDERGROUND UTILITIES SHALL NOT BE INSTALLED IN EMBANKMENT FILLS OR BETWEEN EDGE OF PAVEMENT AND DITCHLINE UNLESS SPECIFICALLY NOTED ON PERMITTED PLANS.
- FIRE HYDRANTS OR UTILITY SERVICE BOXES SHALL BE LOCATED WITHIN 2 FEET FROM THE EDGE OF RIGHT-OF-WAY LINE, OR OFF RIGHT-OF-WAY.

INDEX OF DRAWINGS

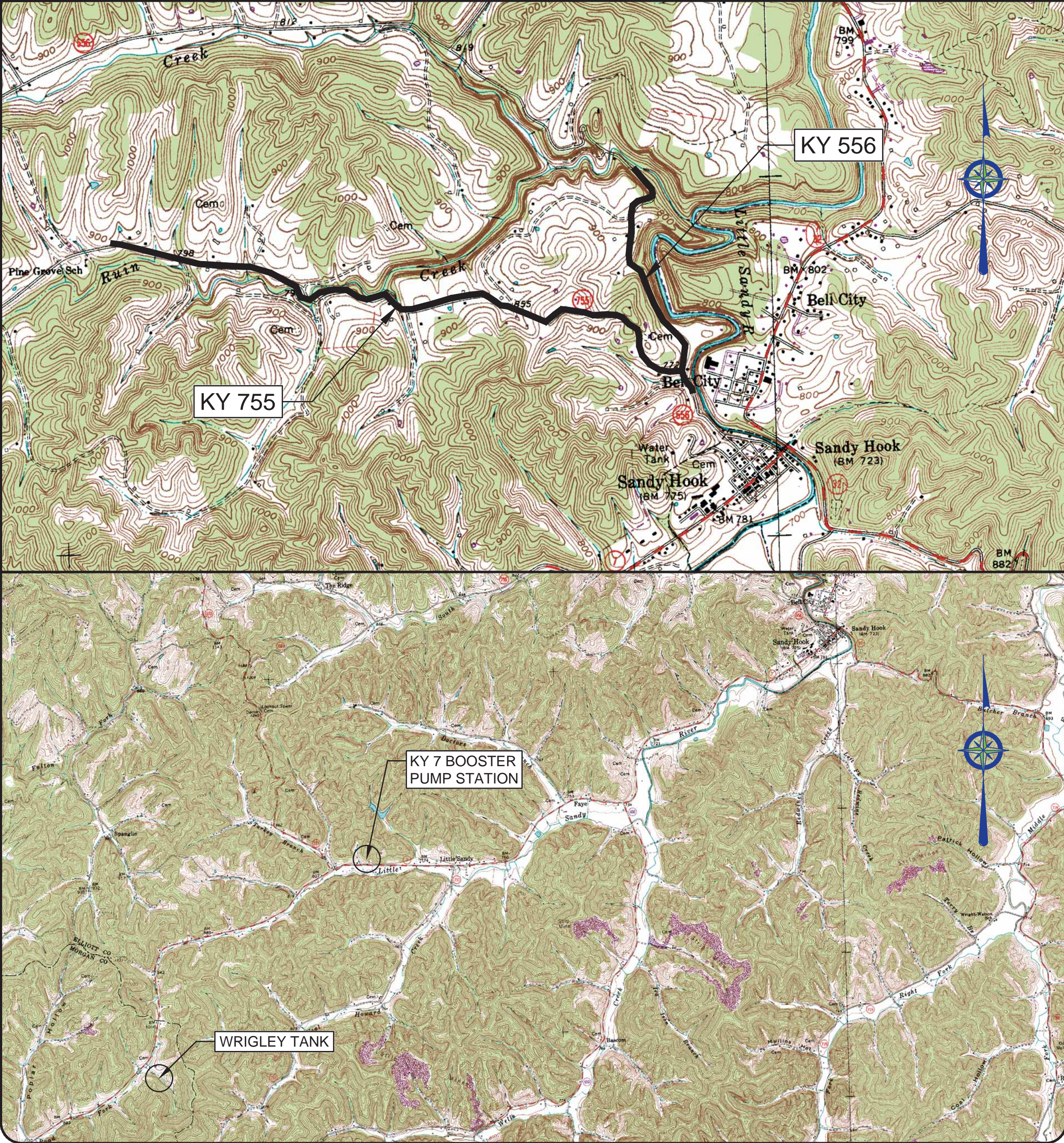
SHT NO.	DESCRIPTION
-	COVER
01	PROJECT MAP, EXISTING UTILITIES, LEGEND, AND DRAWING INDEX
02	AERIAL PLAN - KY 556 - STA. 10+00 TO 40+00
03	AERIAL PLAN - KY 556 - STA. 40+00 TO 47+12
04	AERIAL PLAN - KY 755 - STA. 10+00 TO 33+00
05	AERIAL PLAN - KY 755 - STA. 33+00 TO 61+00
06	AERIAL PLAN - KY 755 - STA. 61+00 TO 86+00
07	AERIAL PLAN - KY 755 - STA. 86+00 TO 114+00
08	AERIAL PLAN - KY 755 - STA. 114+00 TO 143+00
09	AERIAL PLAN - KY 755 - STA. 143+00 TO 155+46
10	WRIGLEY TANK & KY 7 BOOSTER PUMP STATION
11	STANDARD DETAILS
12	STANDARD DETAILS
13	STANDARD DETAILS
14	STANDARD DETAILS

RECORD DRAWINGS

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BY: BLUEGRASS ENGINEERING, PLLC DATE: MARCH 2023

SHEET LOCATION MAP



LEGEND

- NEW WATER MAIN
- EXISTING WATER MAIN
- EXISTING SANITARY SEWER
- EXISTING GAS MAIN
- EXISTING FORCE MAIN
- NEW STEEL CASING
- EXISTING CULVERT
- NEW FLUSHING HYDRANT
- EXISTING FLUSHING HYDRANT
- EXISTING WATER METER
- NEW GATE VALVE & BOX
- NEW GATE VALVE & BOX
- EXISTING MANHOLE
- AIR RELEASE
- BLOW OFF ASSEMBLY
- BLOW OFF ASSEMBLY

UTILITIES

BUD - Before You Dig
1-800-752-6007
or DIAL 811

NOTE:

IN ACCORDANCE WITH KENTUCKY STATE LAW, ANY ACTIVITY THAT RESULTS IN MOVEMENT, PLACEMENT, BORING, PROBING OR DIGGING IN OR ON THE GROUND SHALL CONTACT THE ONE CALL CENTER FOR UNDERGROUND UTILITY LOCATIONS.

WATER DISTRICT

SANDY HOOK WATER DISTRICT
PHONE: 606-738-6282

NO.	DATE	REVISIONS	BY

2019 WATER SYSTEM IMPROVEMENTS
PROJECT

PROJECT MAP, EXISTING UTILITIES,
LEGEND, AND DRAWING INDEX

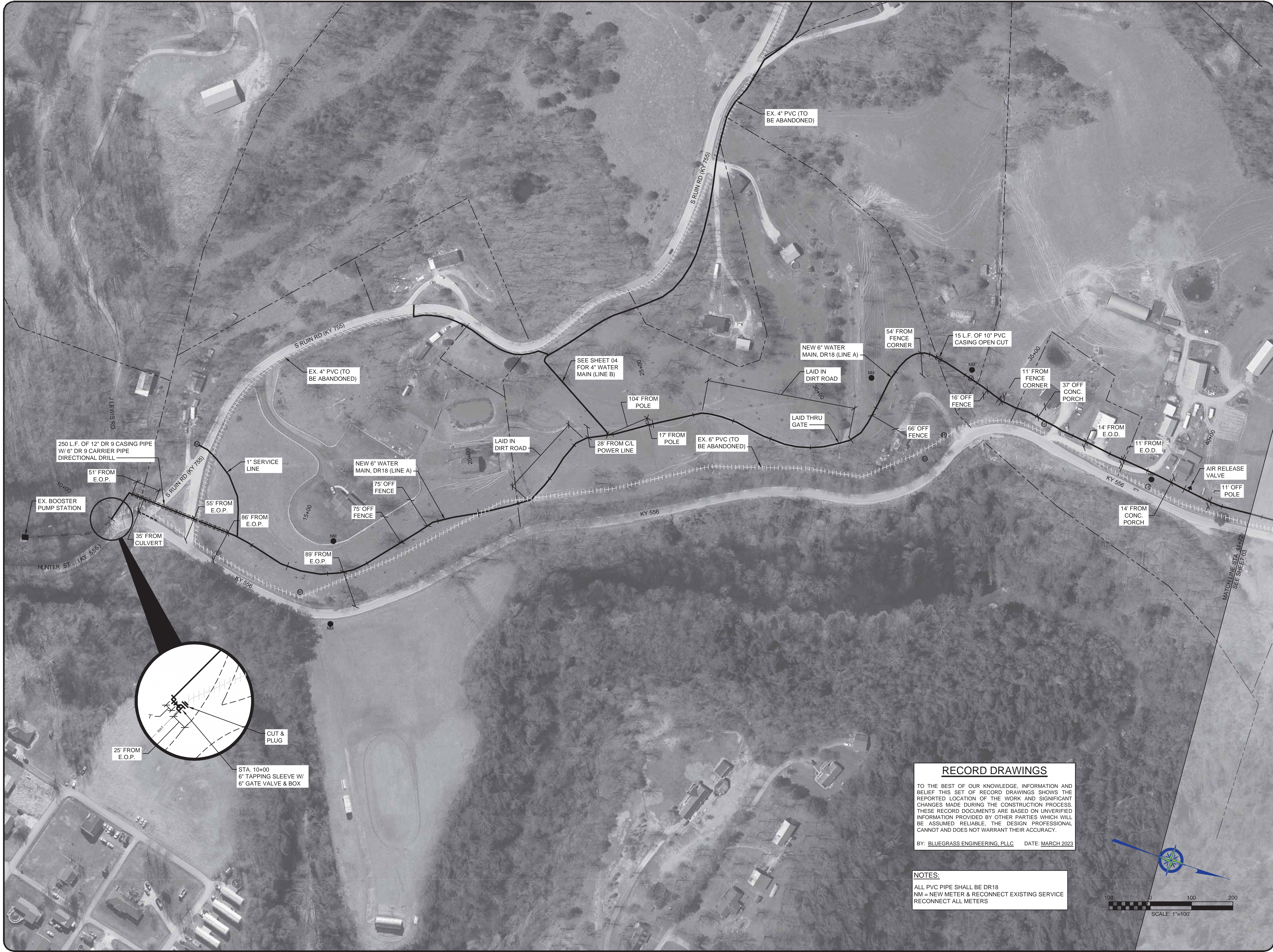


PROJECT #:	19003
DATE:	APRIL 2022
PROJECT MGR:	BKL
DRAWN BY:	WJH
CHECKED BY:	LRS

THIS DRAWING HAS BEEN PREPARED AT THE SCALE INDICATED. REPRODUCTION OF THIS DRAWING MAY INTRODUCE INACCURACIES OF THE LISTED SCALE. THE GRAPHIC SCALE BAR SHALL BE USED TO DETERMINE THE ACTUAL SCALE.

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B:\PROJECTS\Sandy Hook Water\19003 - 2019 Water System Improvements\DWG\Record Drawings\Contract 13\KY 755 & KY 556.dwg BE 3/10/23



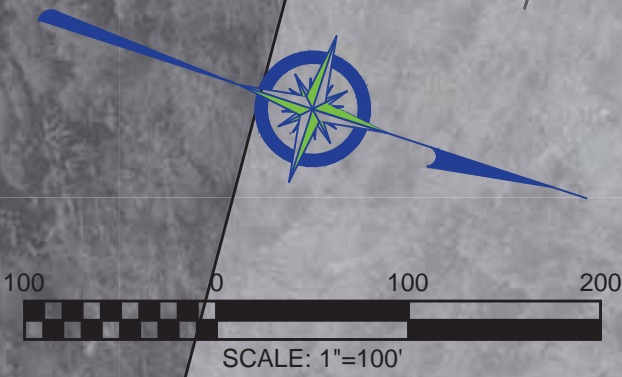
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NOTES:

ALL PVC PIPE SHALL BE DR18
NM = NEW METER & RECONNECT EXISTING SERVICE
RECONNECT ALL METERS



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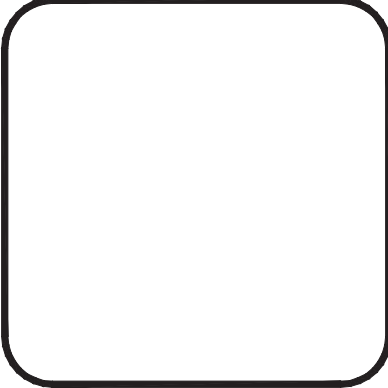
2019 WATER SYSTEM IMPROVEMENTS
PROJECT

KY 556 STA. 10+00 TO STA. 40+00

**BLUEGRASS**
ENGINEERING
PLLC
222 East Main Street, Ste. 1 • Georgetown, KY 40324

**SANDY HOOK**
WATER DISTRICT
Serving Our Community

PROJECT #:	19003
DATE:	APRIL 2022
PROJECT MGR:	LRS
DRAWN BY:	WJH
CHECKED BY:	PBR



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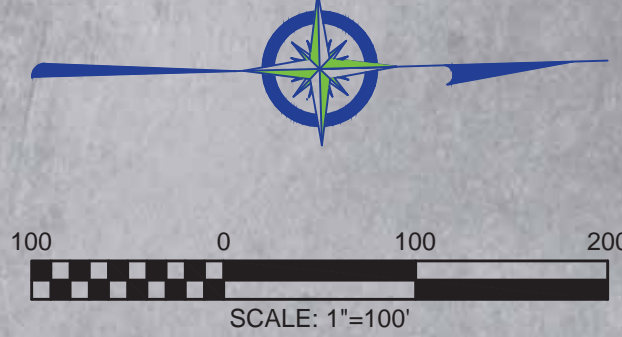
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KY 556 STA. 40+00 TO STA. 47+12

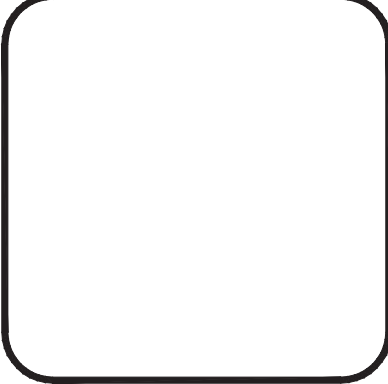


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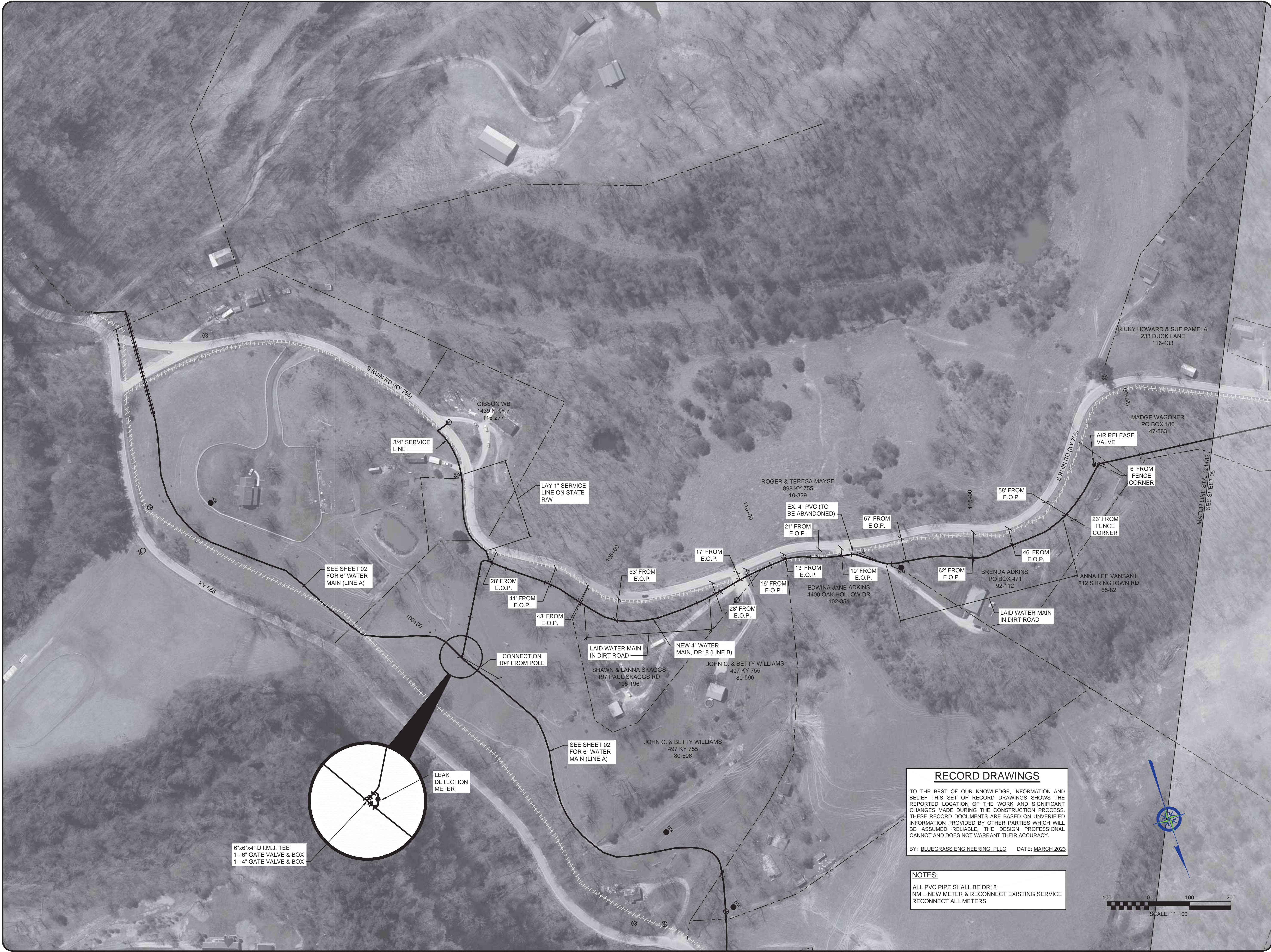
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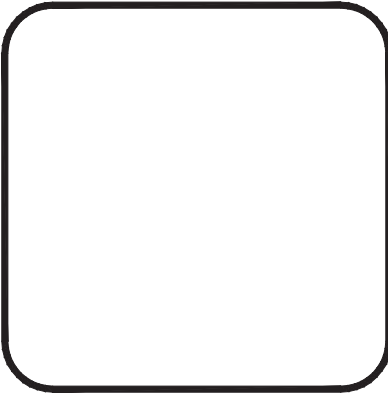
2019 WATER SYSTEM IMPROVEMENTS
PROJECT

KY 755 STA. 100+00 TO STA. 123+00

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222 East Main Street, Ste. 1 - Georgetown, KY 40324

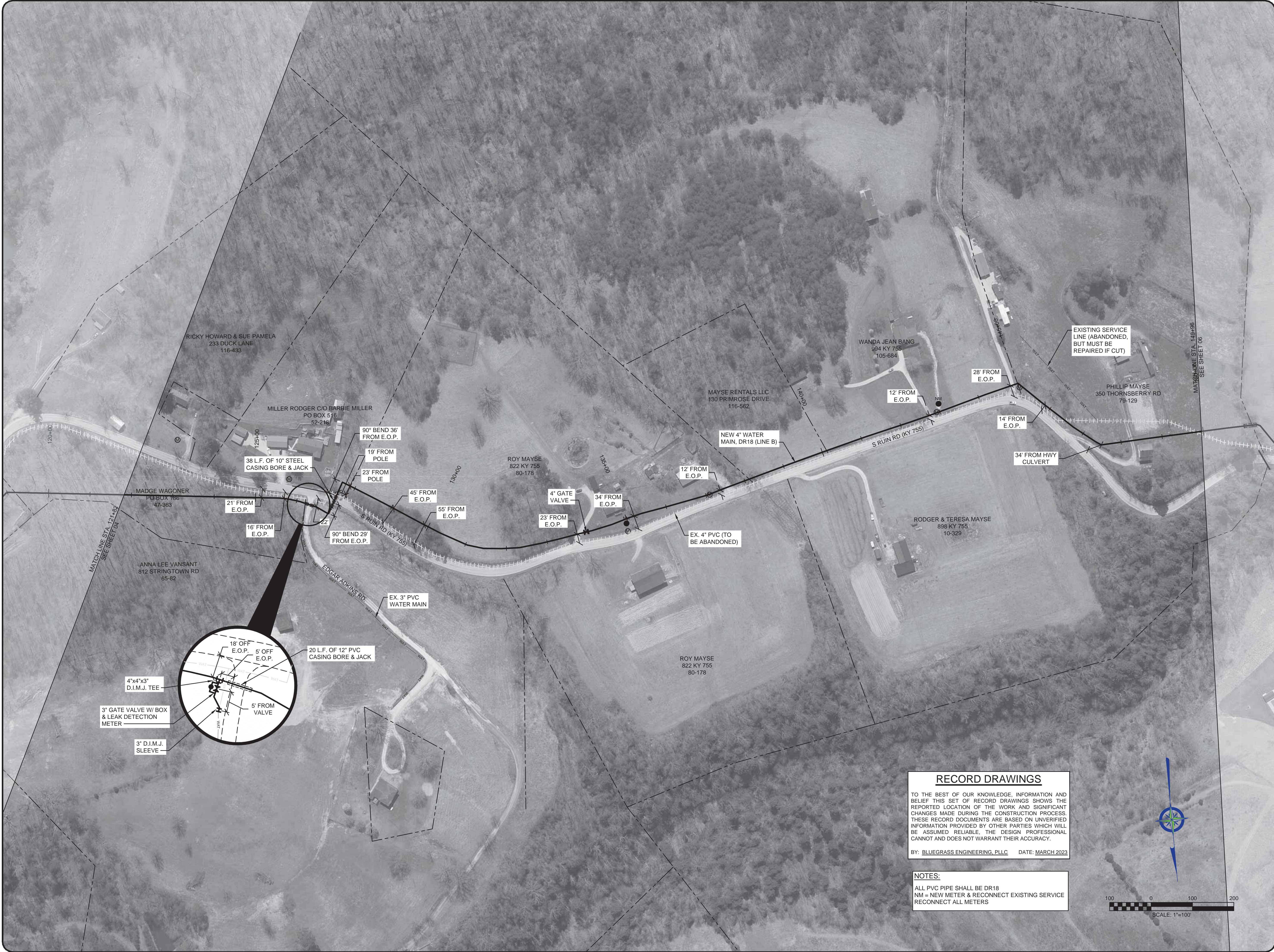
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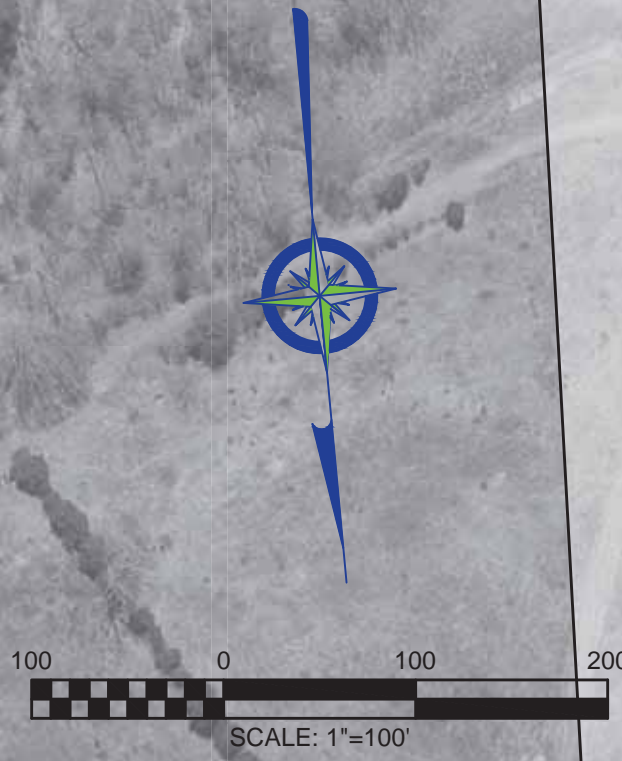
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2019 WATER SYSTEM IMPROVEMENTS
PROJECT

KY 755 STA. 123+00 TO STA. 151+00

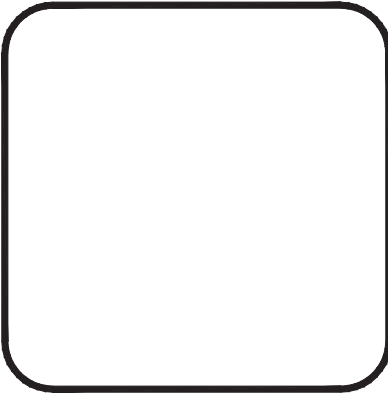


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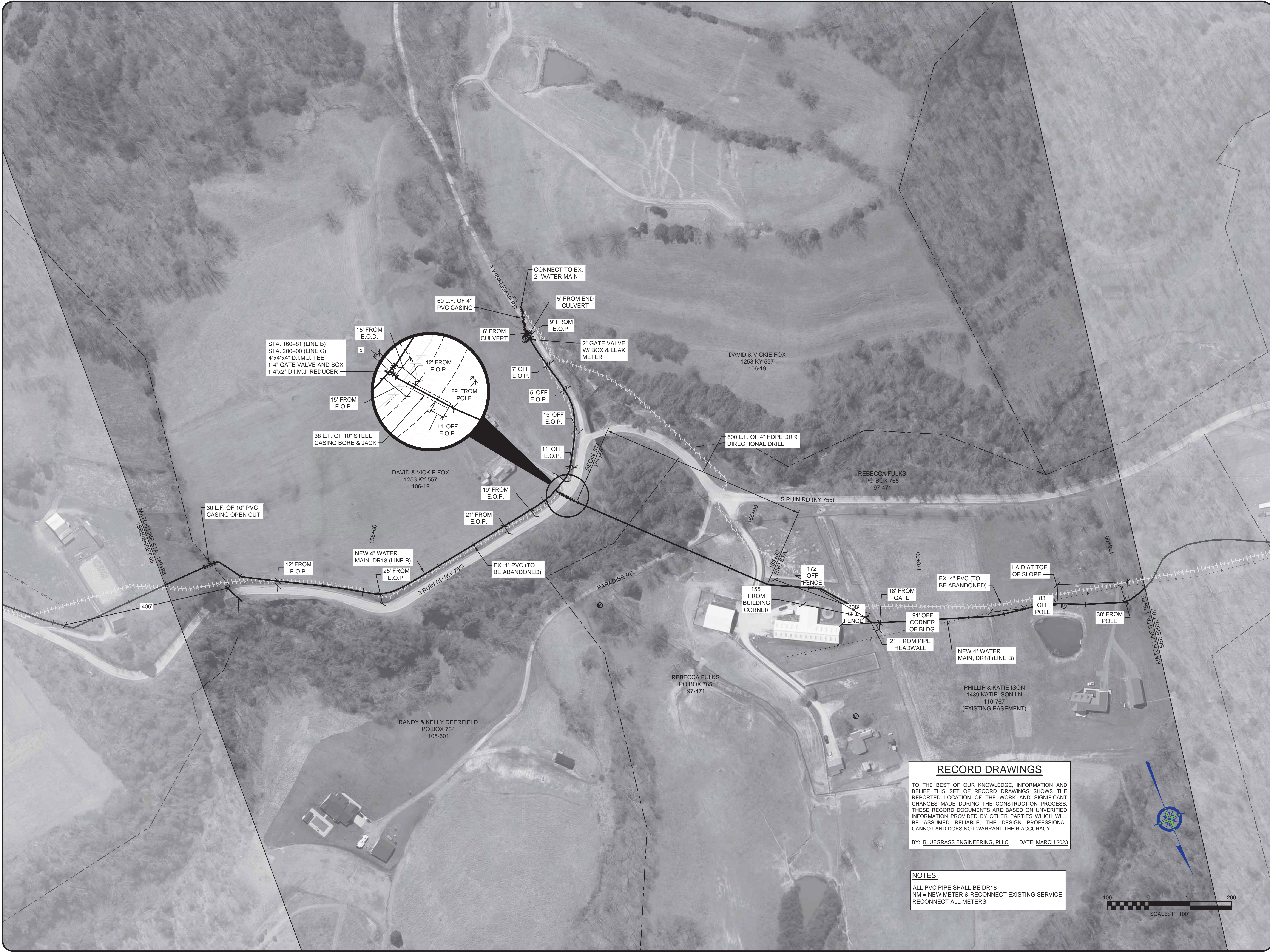
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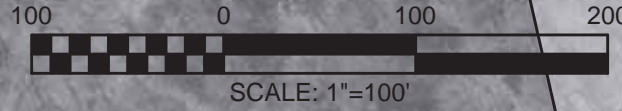
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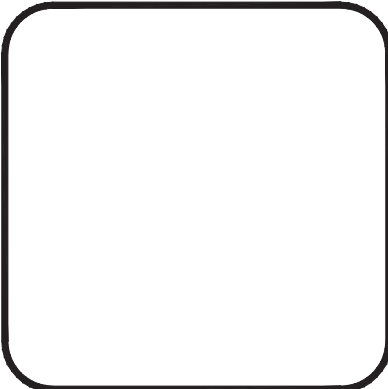
2019 WATER SYSTEM IMPROVEMENTS
PROJECT

KY 755 STA. 151+00 TO STA. 176+00

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PLLC
222 East Main Street, Ste. 1 - Georgetown, KY 40324

PROJECT #:	19003
DATE:	NOVEMBER 2021
PROJECT MGR:	LRS
DRAWN BY:	CBW
CHECKED BY:	PBR



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2019 WATER SYSTEM IMPROVEMENTS PROJECT	KY 755 STA. 176+00 TO STA. 204+00
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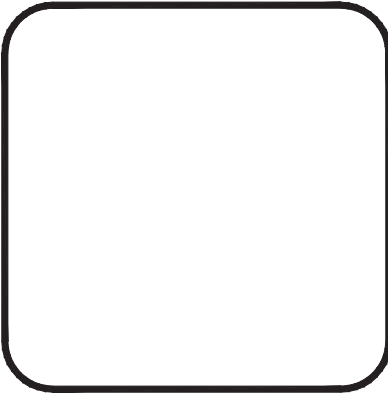


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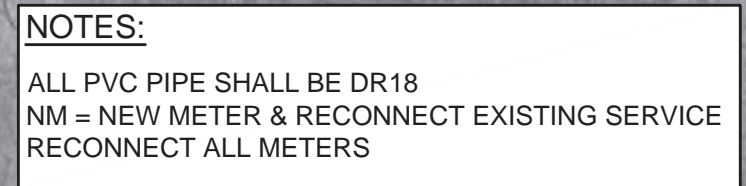


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PROJECT MGR:	LRS
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PROJECT #:	19003
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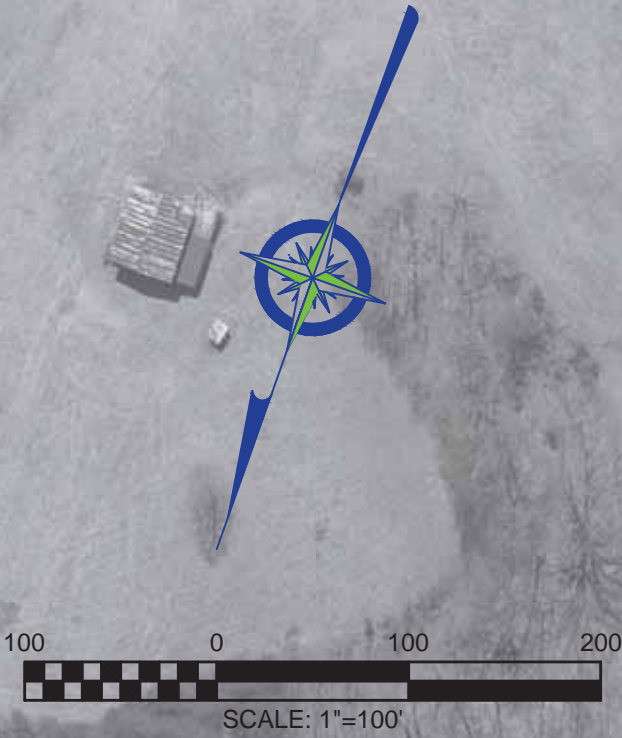
RECORD DRAWINGS

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BY: BLUEGRASS ENGINEERING, PLLC DATE: MARCH 2023

NOTES:


ALL PVC PIPE SHALL BE DR18
NM = NEW METER & RECONNECT EXISTING SERVICE
RECONNECT ALL METERS




NO.	DATE	REVISIONS	BY

2019 WATER SYSTEM IMPROVEMENTS
PROJECT

KY 755 STA. 233+00 TO STA. 245+46

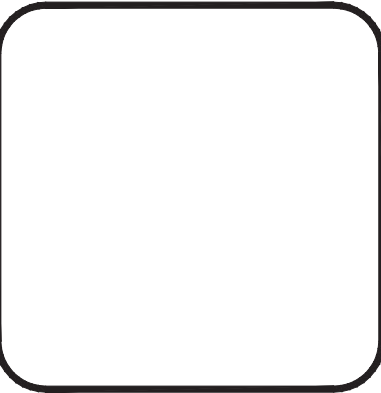


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ELEVATION VIEW - WRIGLEY TANK

NOT TO SCALE

COORDINATES

LATITUDE: 38° 02' 13.70" N
LONGITUDE: -83° 13' 35.64" W

GENERAL NOTES

- HIGH-PRESSURE POWER WASH THE INTERIOR TO REMOVE SEDIMENT AND STAINING
- SSPC SP-3 SURFACE PREPARATION FOR ALL CORROSION SPOTS
- APPLY NSF APPROVED MASTIC TO ALL CLEANED SPOTS
- REPAIR FLOAT FOR INDICATOR BOARD
- INSTALL NEW SACRIFICIAL ANODES
- ALL FAILING SPOTS SHOULD BE POWER TOOL CLEANED BARE (SSPC-SP-3) AND COATED WITH MASTIC COATING
- APPLY NSF APPROVED MASTIC TO ALL INTERIOR SEAMS (2 COATS REQUIRED)
- NOTE: DRILLING OF HOLES OR REMOVAL OF BOLTS ON ANY PART OF THE TANK FOR RIGGING PURPOSES WILL NOT BE ALLOWED.



ELEVATION VIEW - EX. KY 7 BOOSTER PUMP STATION

NOT TO SCALE

COORDINATES

LATITUDE: 38° 03' 43.04" N
LONGITUDE: -83° 11' 47.79" W

GENERAL NOTES

- CONTRACTOR SHALL SUPPLY TWO NEW 10 HP 90 GPM GRUNDFOS PUMPS AND TWO (2) NEW DANFOSS VARIABLE FREQUENCY DRIVES (VFD'S), MODEL VLT AQUA, NEMA 12 WALL MOUNTED, WITH INTEGRAL DISCONNECT, RATED FOR 25 AMPS AND INTERFACING WITH THE NEW PUMPS.
- VFD'S SHALL BE CAPABLE OF CONSTANT PRESSURE CONTROL UTILIZING TWO (2) DANFOSS MBS30000, 0-200 PSI PRESSURE TRANSMITTERS.
- VFD'S SHALL ALSO INTERFACE WITH A NEW PILOT PANEL THAT WILL INCLUDE NECESSARY COMPONENTS FOR SWITCHING FROM TELEMETRY CONTROL TO CONSTANT PRESSURE CONTROL WITH A CONTACT SWITCH.
- THE PILOT PANEL SHALL ALSO INCLUDE A 24 HOUR TIMER FOR ALTERNATION OF THE PUMPS DURING CONSTANT PRESSURE CONTROL.
- ALL WIRING AND CONDUIT SHALL MEET NEC REQUIREMENTS, AND WORK SHALL BE PERFORMED BY A LICENSED MASTER ELECTRICIAN.
- VFD'S SHALL HAVE CAPABILITY TO HAVE DISCHARGE AND SUCTION PRESSURE EMERGENCY SHUT OFFS BASED ON 150 PSI FOR THE DISCHARGE AND 30 PSI FOR THE SUCTION PRESSURE.
- THIS PUMP STATION MUST BE ABLE TO OPERATE OFF THE VFD CONSTANT PRESSURE MODE WHILE THE WRIGLEY TANK IS BEING REHABILITATED.

RECORD DRAWINGS

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BY: BLUEGRASS ENGINEERING, PLLC DATE: MARCH 2023

NO.	DATE	REVISIONS	BY

2019 WATER SYSTEM IMPROVEMENTS PROJECT	WRIGLEY TANK KY 7 BOOSTER PUMP STATION
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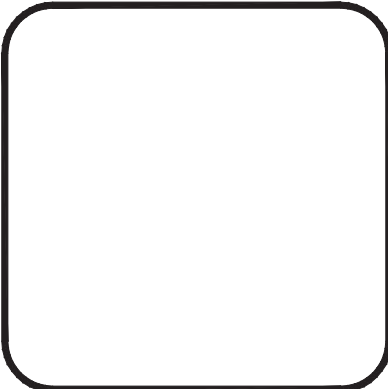


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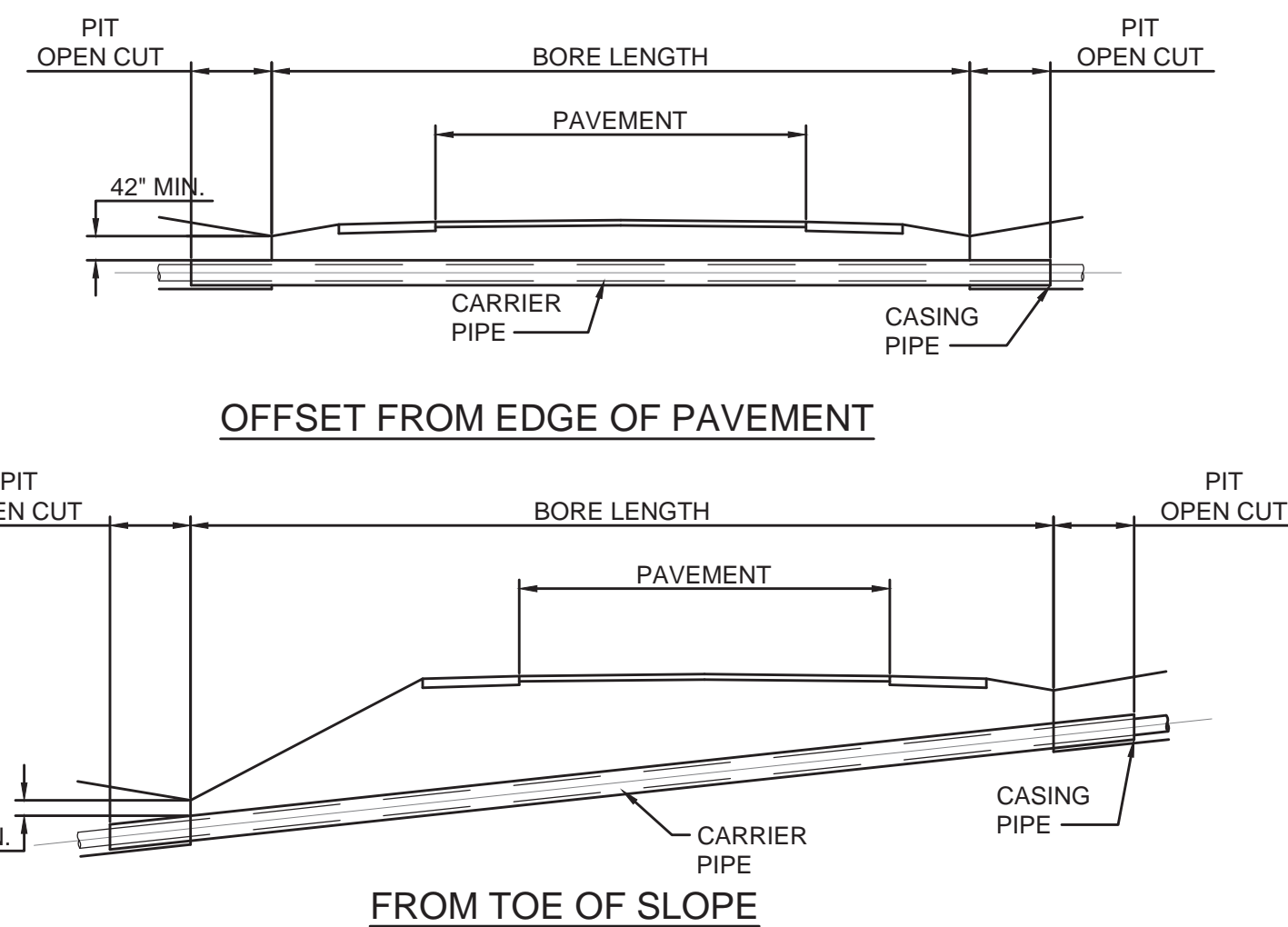
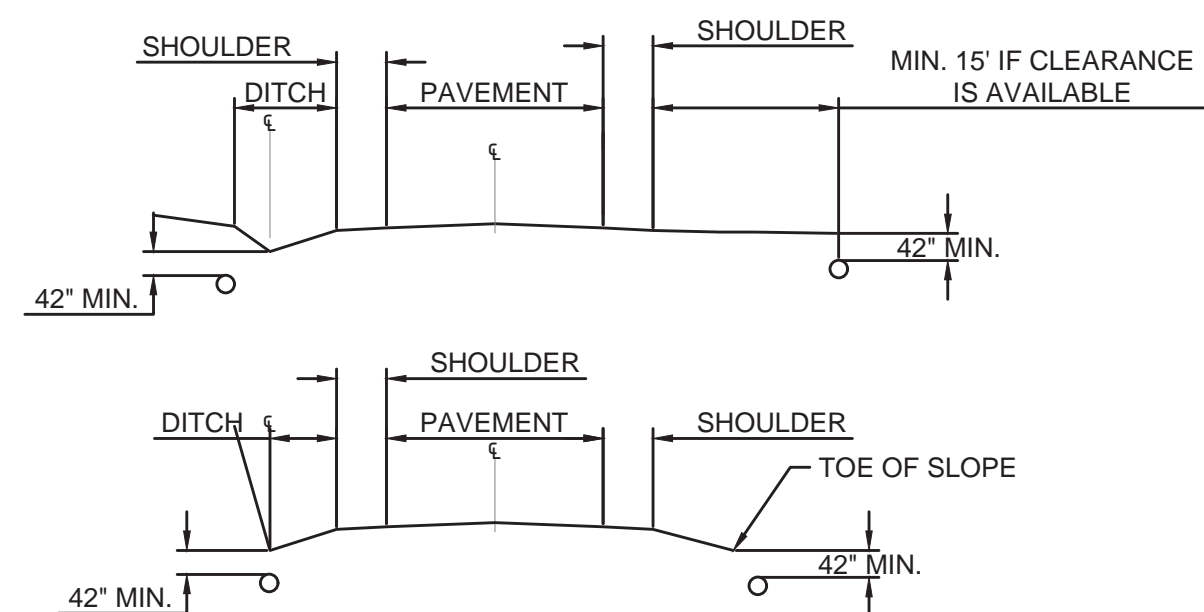
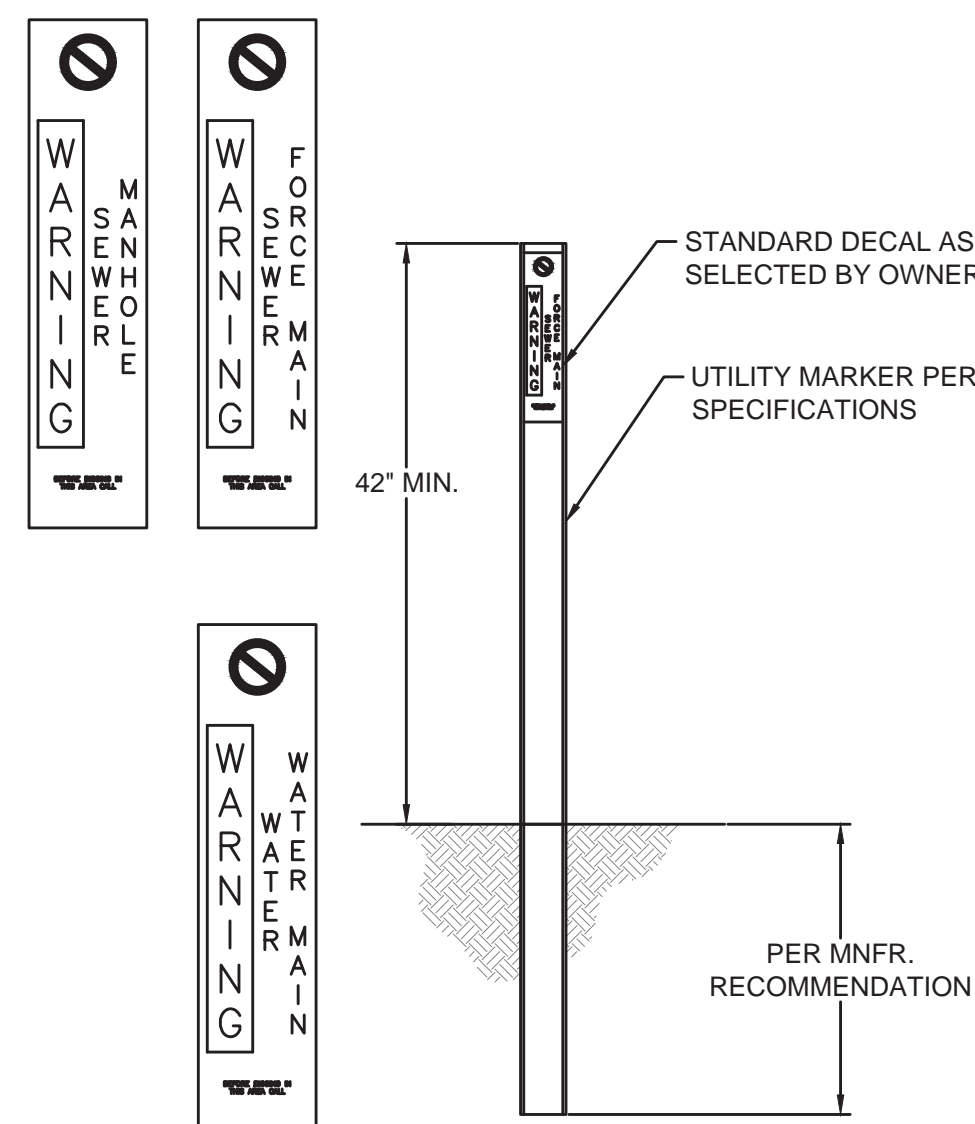
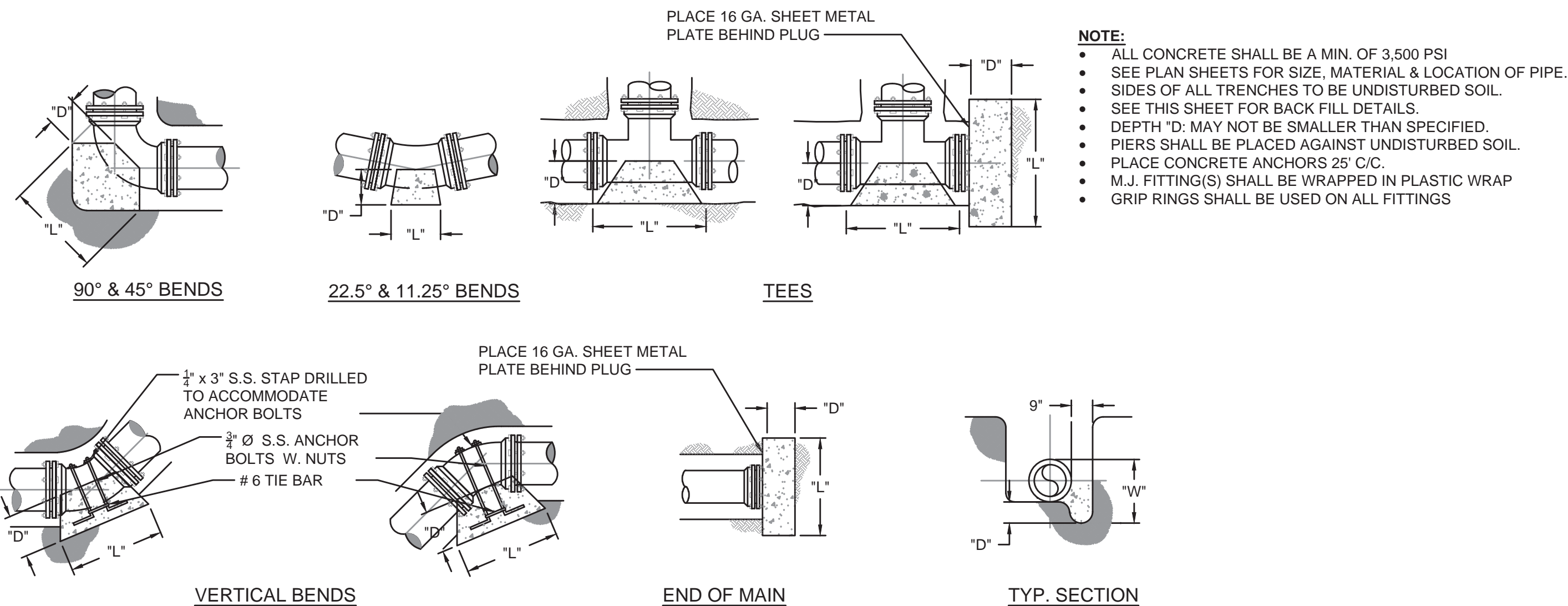
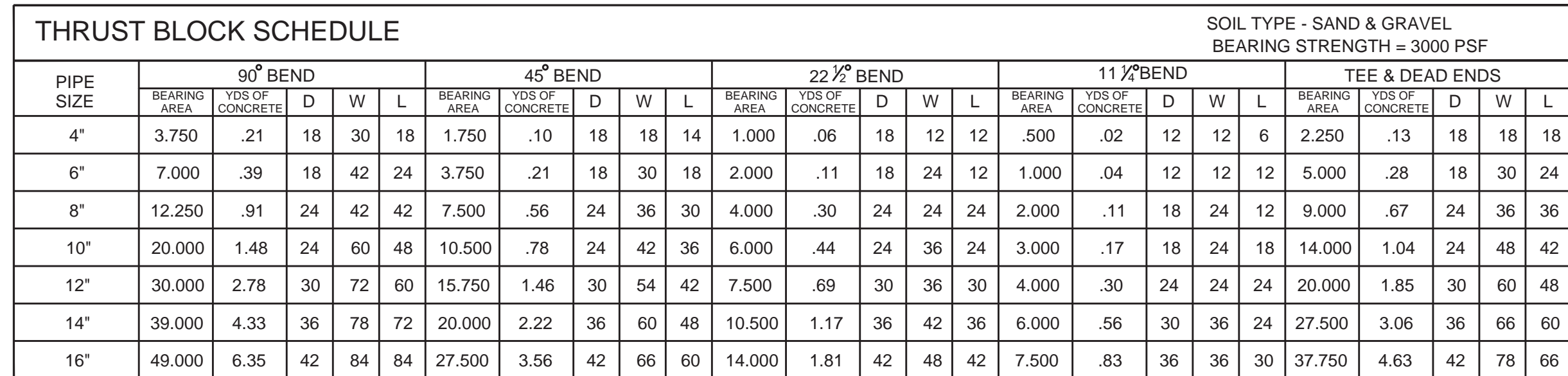
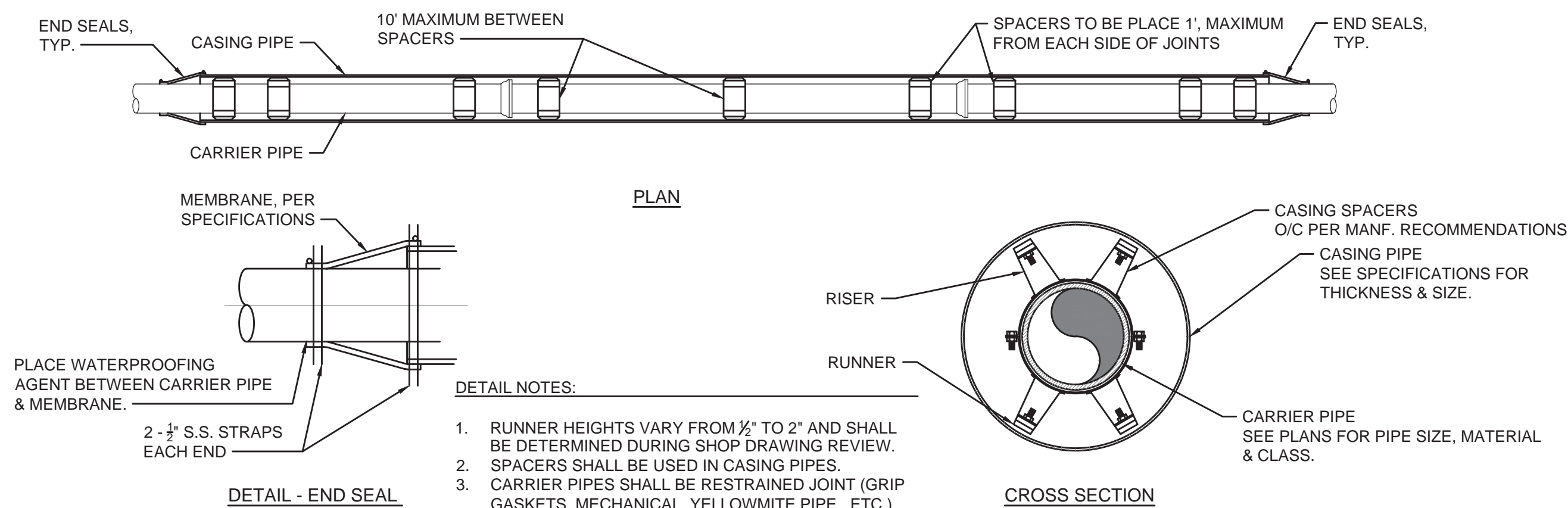
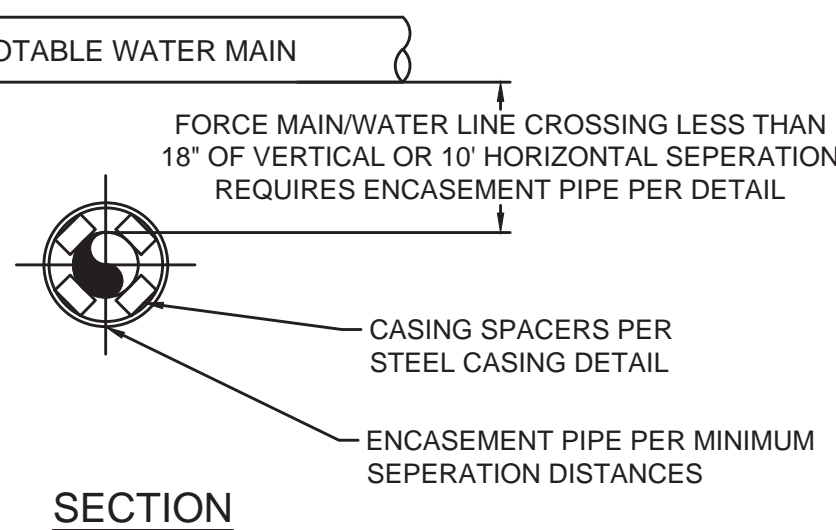
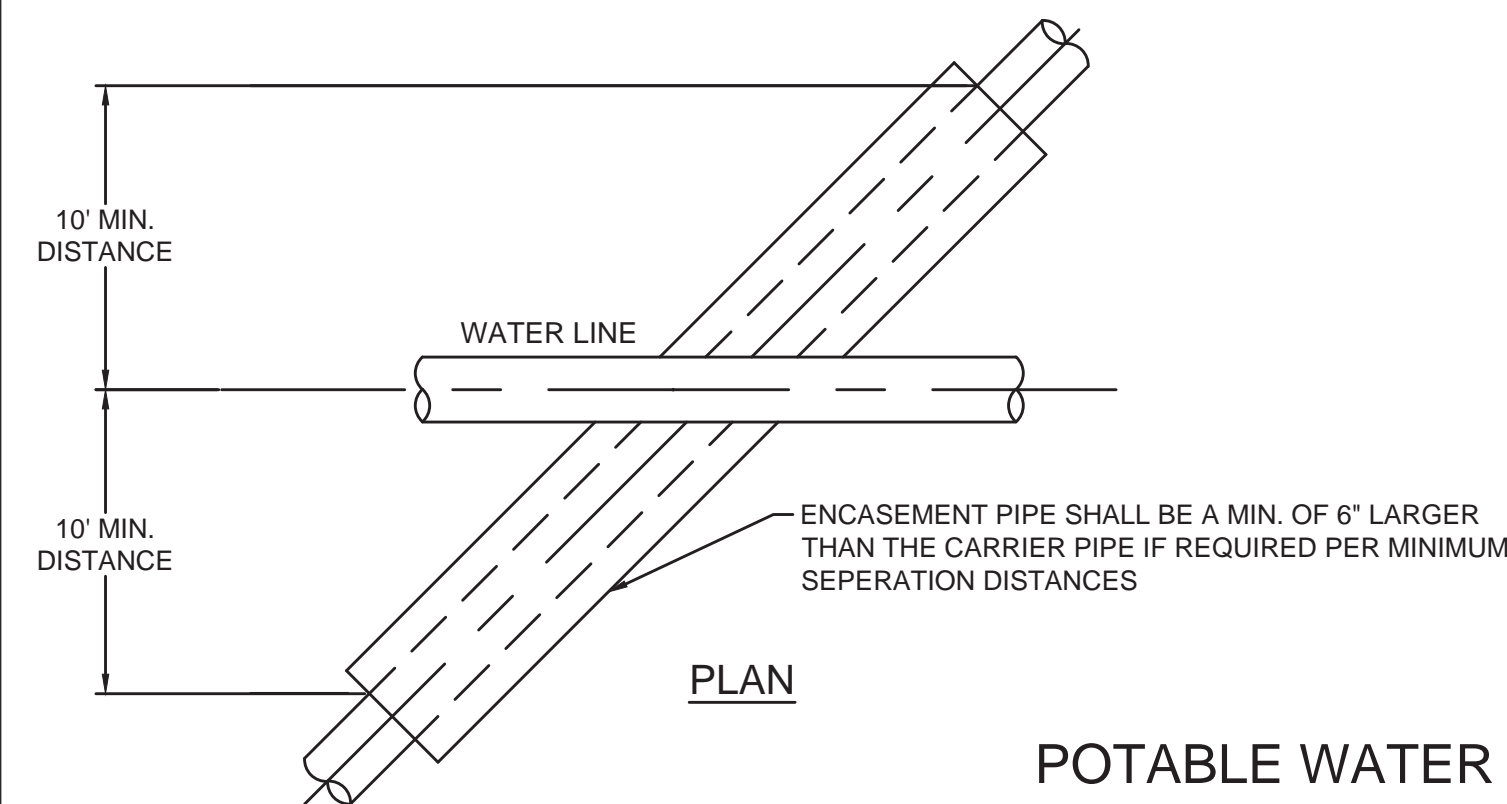
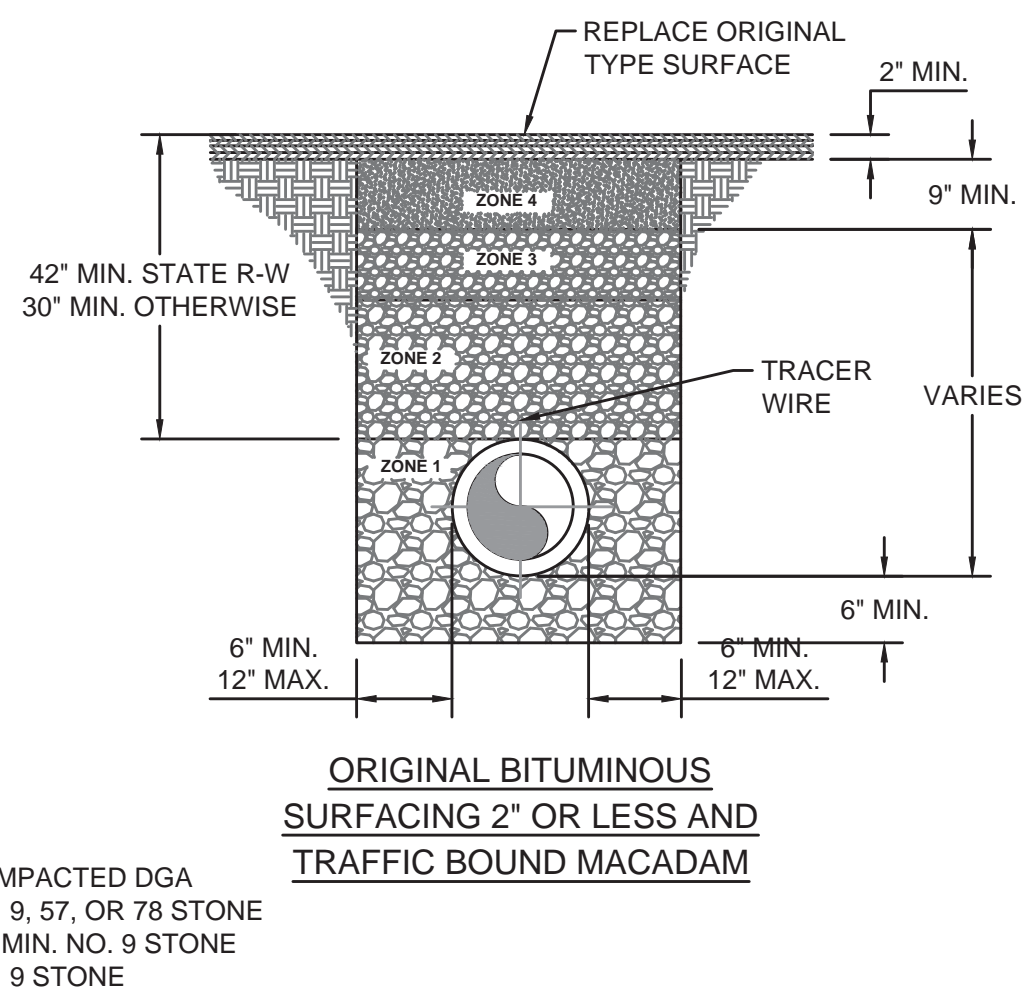
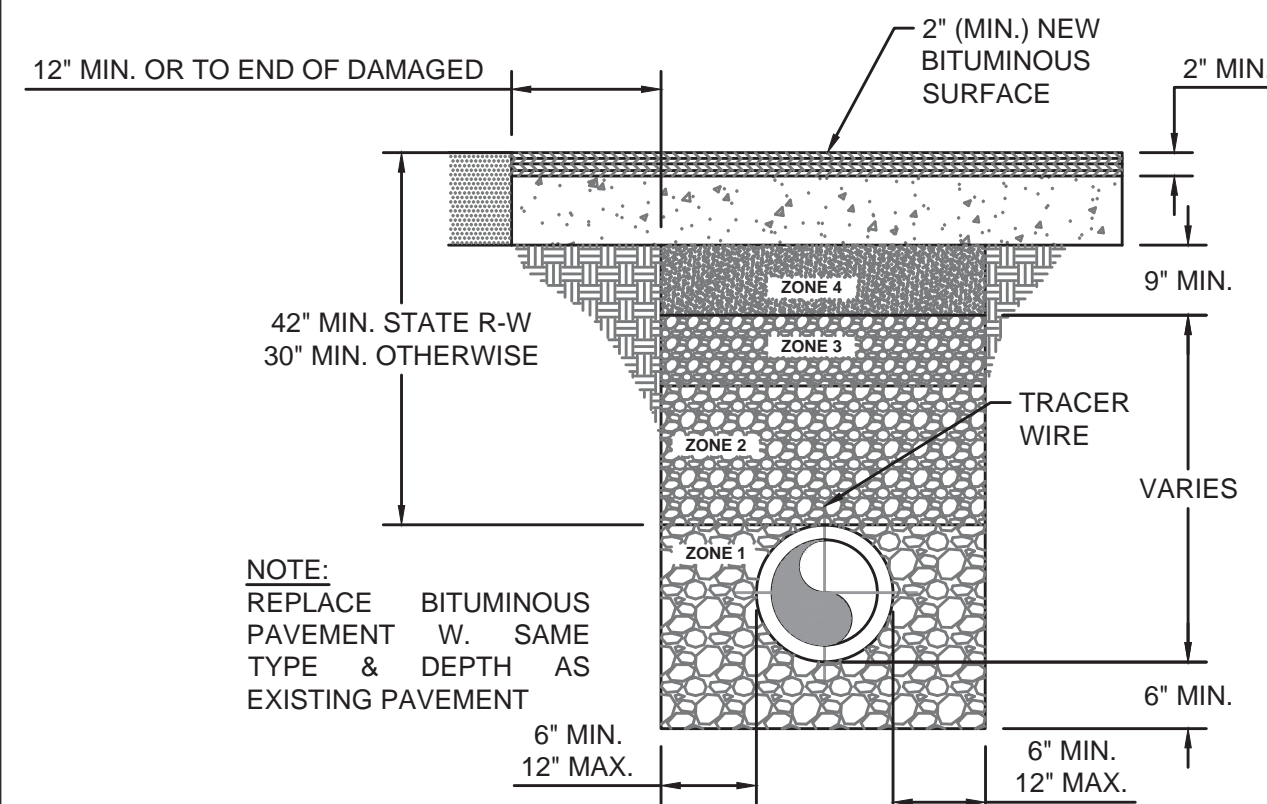
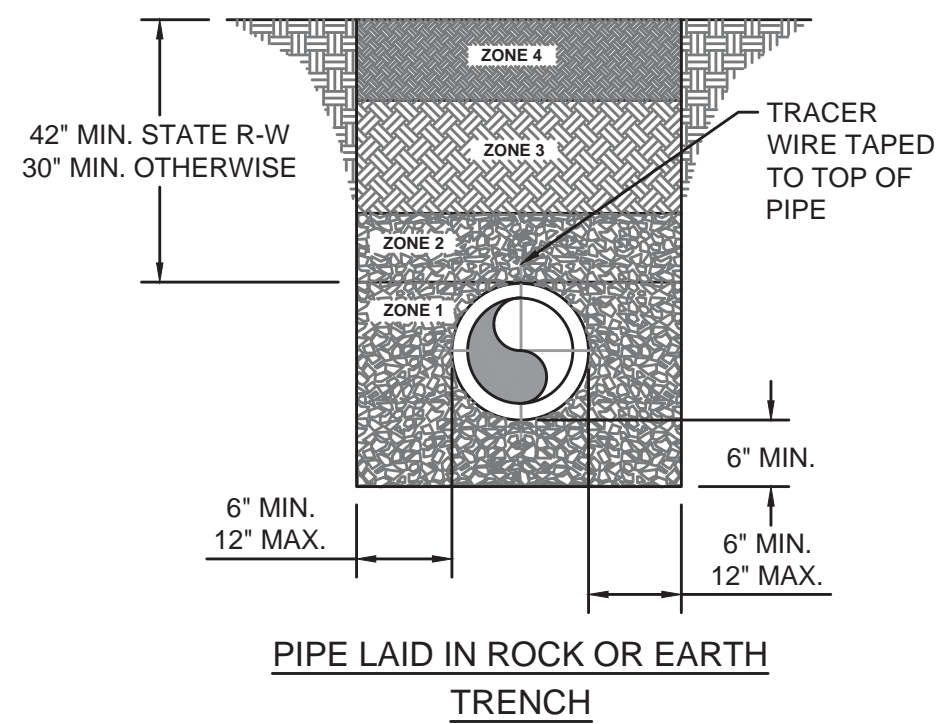


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NOTE:

- ALL CONCRETE SHALL BE A MIN. OF 3,500 PSI
- SEE PLAN SHEETS FOR SIZE, MATERIAL & LOCATION OF PIPE.
- SIDES OF ALL TRENCHES TO BE UNDISTURBED SOIL.
- SEE THIS SHEET FOR BACK FILL DETAILS.
- DEPTH 'D' MAY NOT BE SMALLER THAN SPECIFIED.
- PIERS SHALL BE PLACED AGAINST UNDISTURBED SOIL.
- PLACE CONCRETE ANCHORS 25' C/C.
- M.J. FITTING(S) SHALL BE WRAPPED IN PLASTIC WRAP
- GRIP RINGS SHALL BE USED ON ALL FITTINGS

RECORD DRAWINGS

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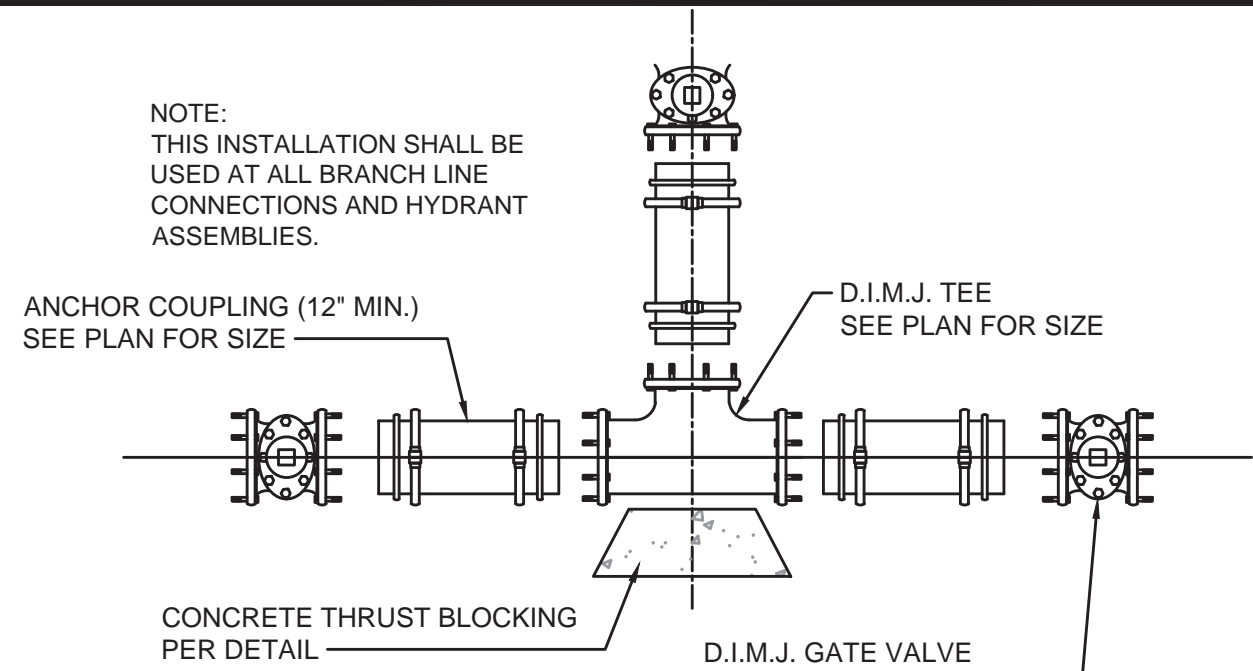
NOTE:

1. ALL JOINTS OF STEEL CASING SHALL BE SOLIDLY WELDED. END OF CASING SHALL BE SEALED AFTER LINE HAS BEEN INSTALLED AND TESTED.
2. MINIMUM DEPTHS MAY INCREASE IN AREAS WHICH REQUIRE MINIMUM SEPARATION WITH OTHER FACILITIES.
3. OPEN TRENCH NO CLOSER THAN THE DITCHLINE OR TOE OF FILL FROM THE EGDE OF THE PAVEMENT OR AS DIRECTED BY THE SPECIFICATIONS.
4. HIGHWAY CROSSINGS SHALL UTILIZE STEEL CASING PIPE. STEEL CASING PIPES WALL THICKNESS & DIAMETER PER SPECIFICATIONS. ALL BORED AND JACKED ENCASEMENT PIPE SHALL BE INSTALLED IN BORE HOLES NO LARGER THEN THE OUTSIDE DIA-METER OF THE ENCASEMENT PIPE.
5. SEE CASING SPACER DETAIL FOR PLACEMENT OF SPACER.

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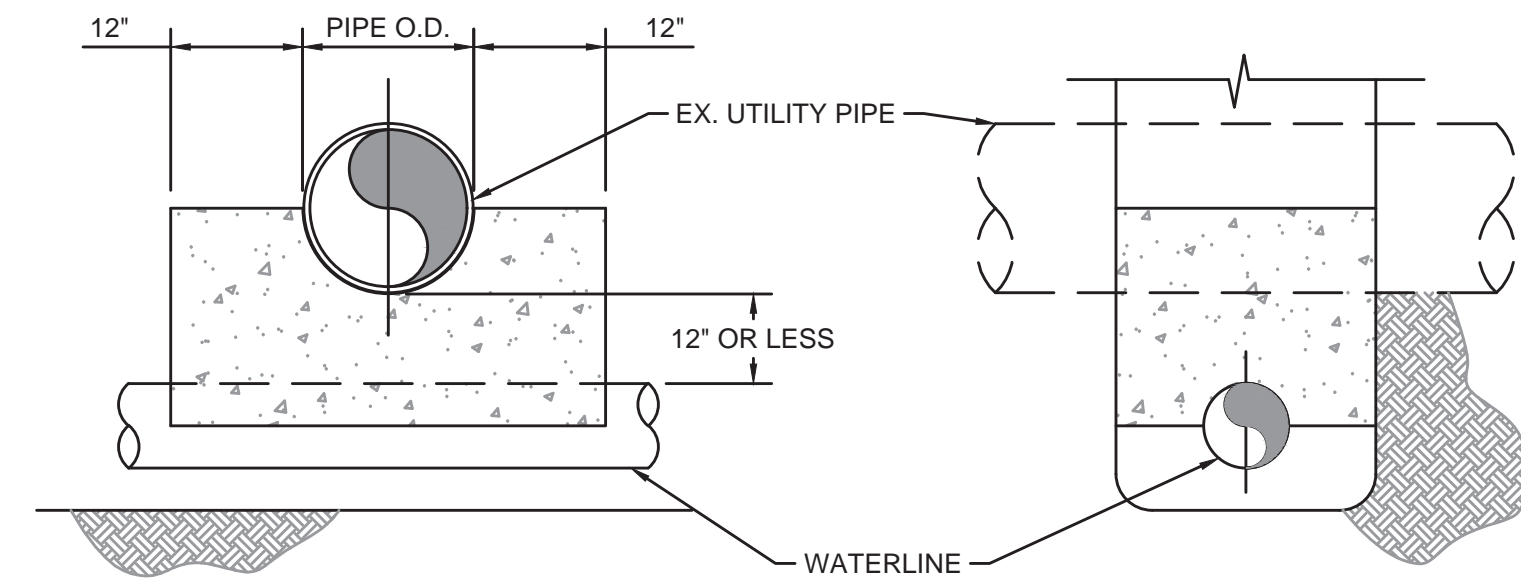


D.I.M.J. TEE ASSEMBLY - DETAIL

NOT TO SCALE

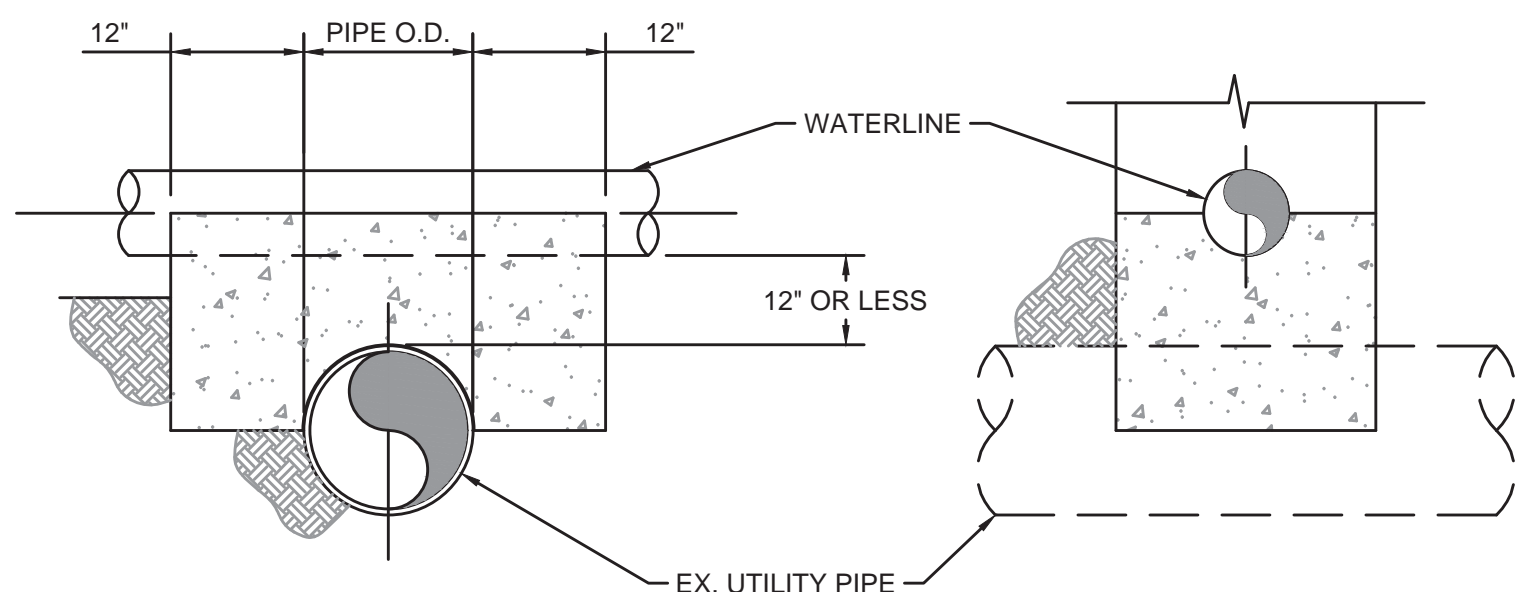
NOTES:

- THIS DETAIL IS ONLY FOR NON-CONTAMINATE PIPE/CONDUIT. UTILITY PIPE IS DEFINED AS WATER, NATURAL GAS, TELEPHONE, ELECTRICAL CONDUITS OR STORM SEWER.
- IF "UTILITY PIPE" IS A SANITARY SEWER PIPE (FORCE MAIN OR GRAVITY) SEE DETAIL FOR POTABLE WATER & FORCE MAIN CROSSING.
- CONCRETE SEPARATOR SHALL BE USED WHEN CLEARANCE BETWEEN NEW WATERLINE & EXISTING UTILITY PIPE/CONDUIT IS LESS THAN 12".



CASE I
SIDE VIEW

CASE I
END VIEW



CASE II
SIDE VIEW

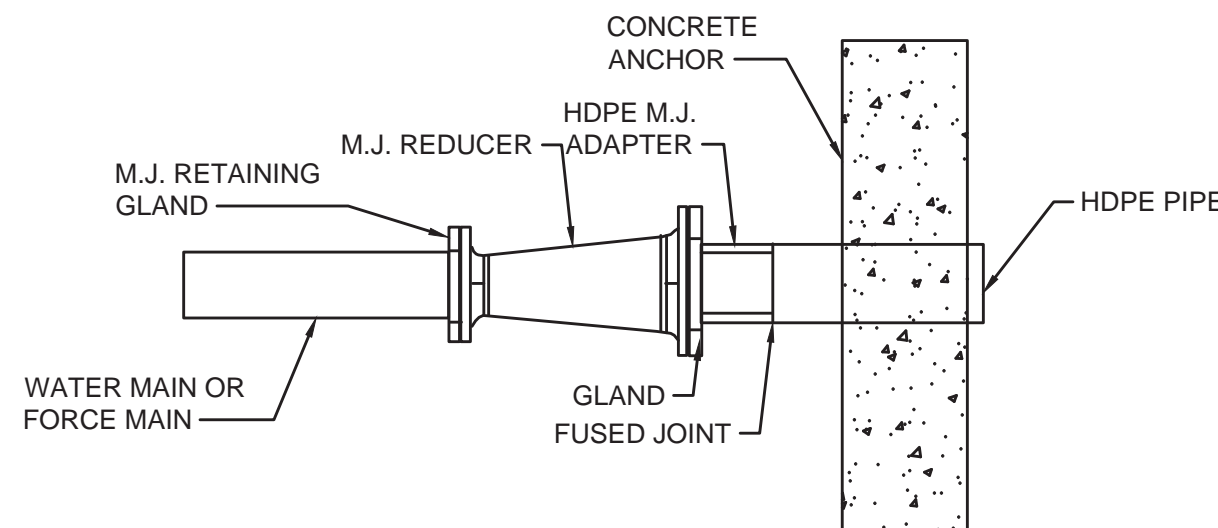
CASE II
END VIEW

UTILITY CROSSING CONCRETE ASSEMBLY - DETAIL

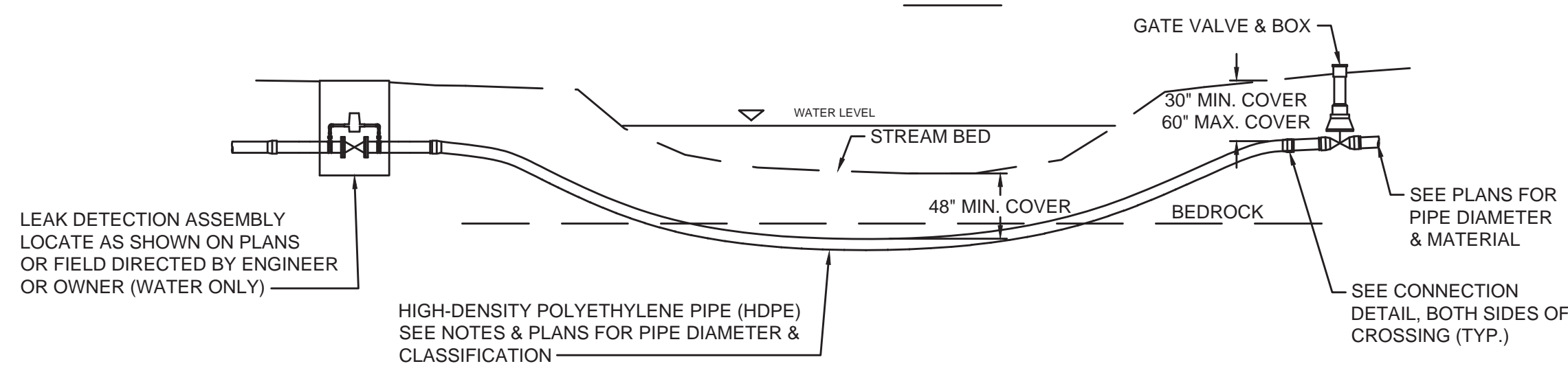
NOT TO SCALE

NOTES:

- CONNECTION OF THE HDPE TO THE PVC OR DUCTILE IRON WATERLINE SHALL BE NO DEEPER THAN 5 FEET FROM THE GROUND ELEVATION.
- DIRECTIONAL BORE SHALL BE MADE IN BED ROCK WITH A MIN DEPTH OF 36".
- WHEN USING HDPE THE PIPE SHALL BE SIZED UP ONE PIPE SIZE TO ALLOW THE I.D. OF THE HDPE TO EQUAL THE I.D. OF THE CONNECTING PIPE.
- SEE PLANS FOR PIPE LOCATION, MATERIAL & SIZE.
- USE ANGLED FITTINGS AS NECESSARY TO MAKE CONNECTION BETWEEN PIPES.

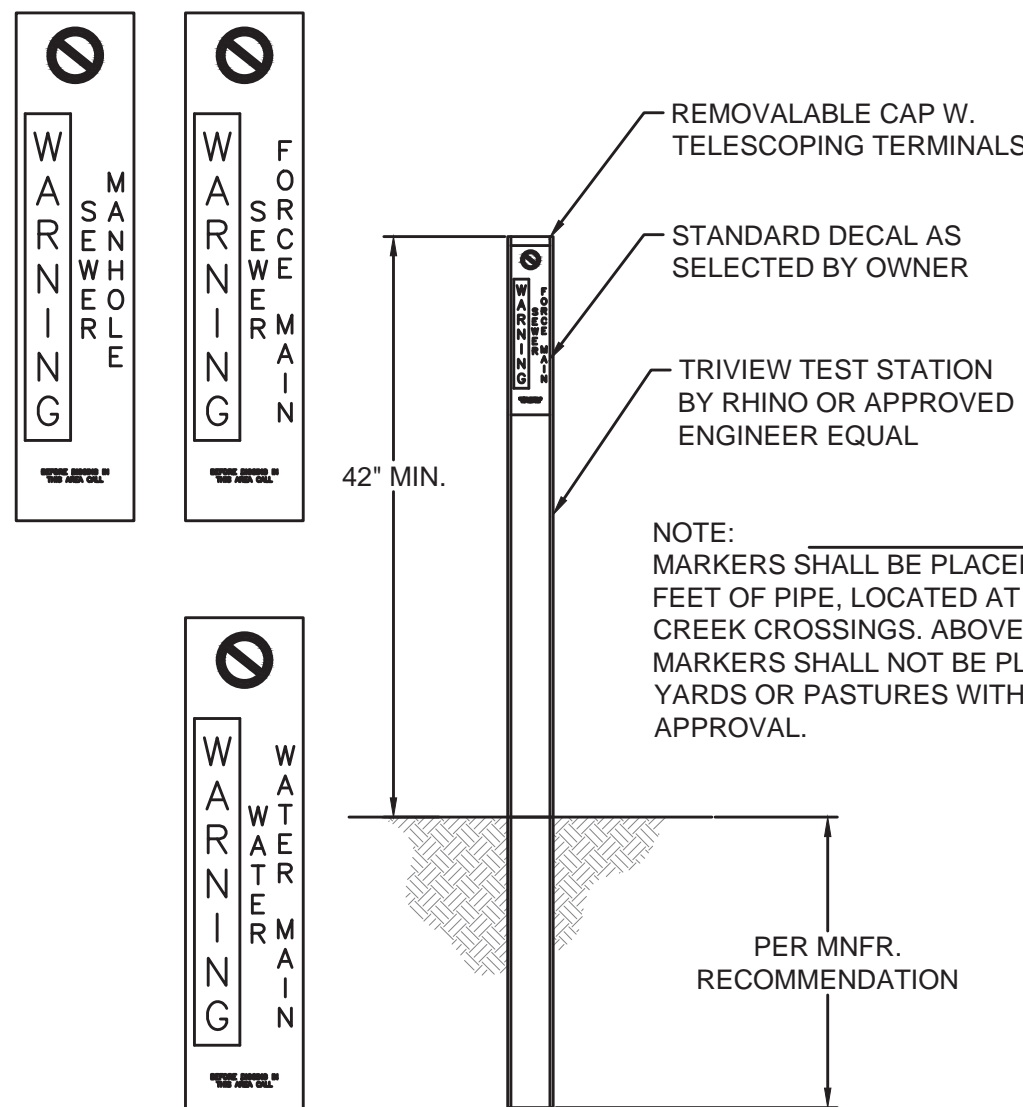


CONNECTION
DETAIL



DIRECTIONAL DRILLED CREEK CROSSING - DETAIL

NOT TO SCALE



ABOVE GROUND TEST STATION - DETAIL

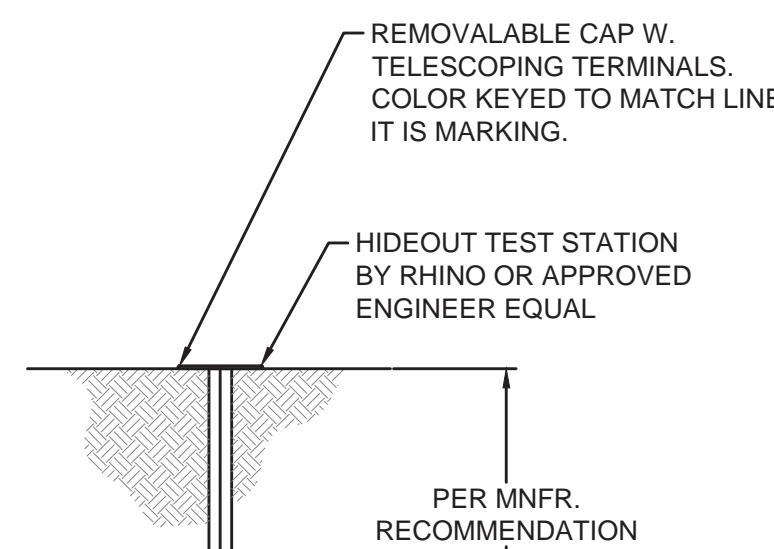
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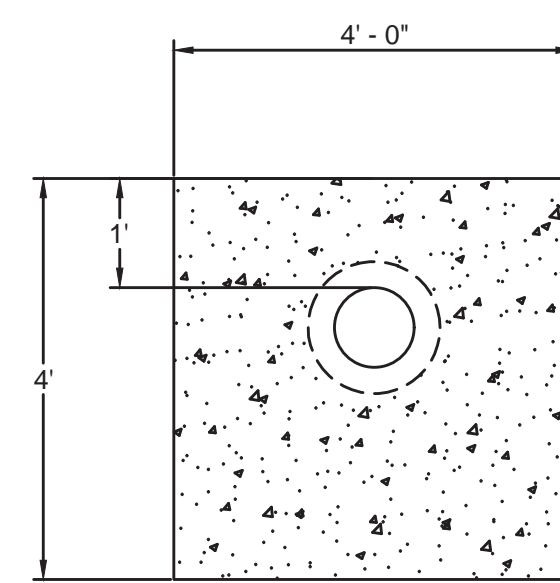
BY: BLUEGRASS ENGINEERING, PLLC DATE: MARCH 2023

- NOTES:
- MARKERS SHALL BE PLACED EVERY 500 FEET OF PIPE, LOCATED AT ALL ROAD OR CREEK CROSSINGS. BELOW GROUND MARKERS SHALL NOT BE PLACED IN TRAFFIC LANES OR DRIVEWAYS.

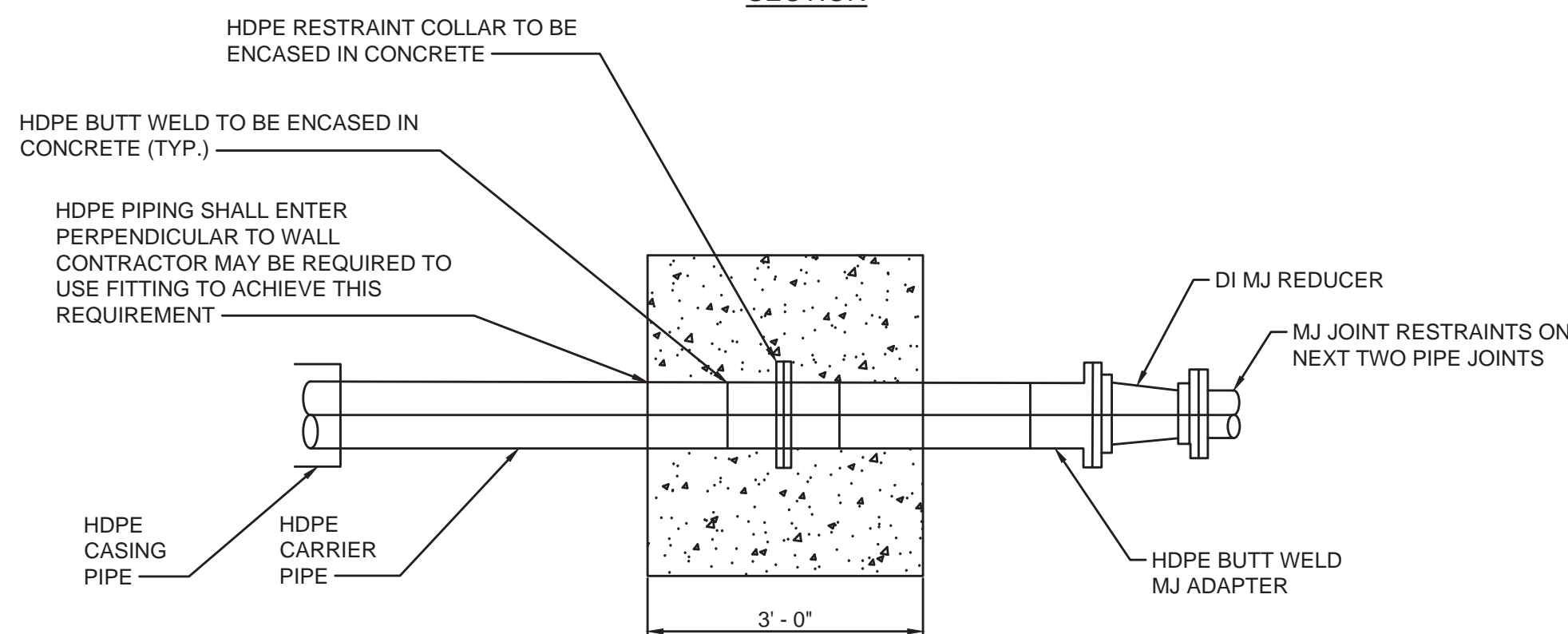


BELOW GROUND TEST STATION - DETAIL

NOT TO SCALE

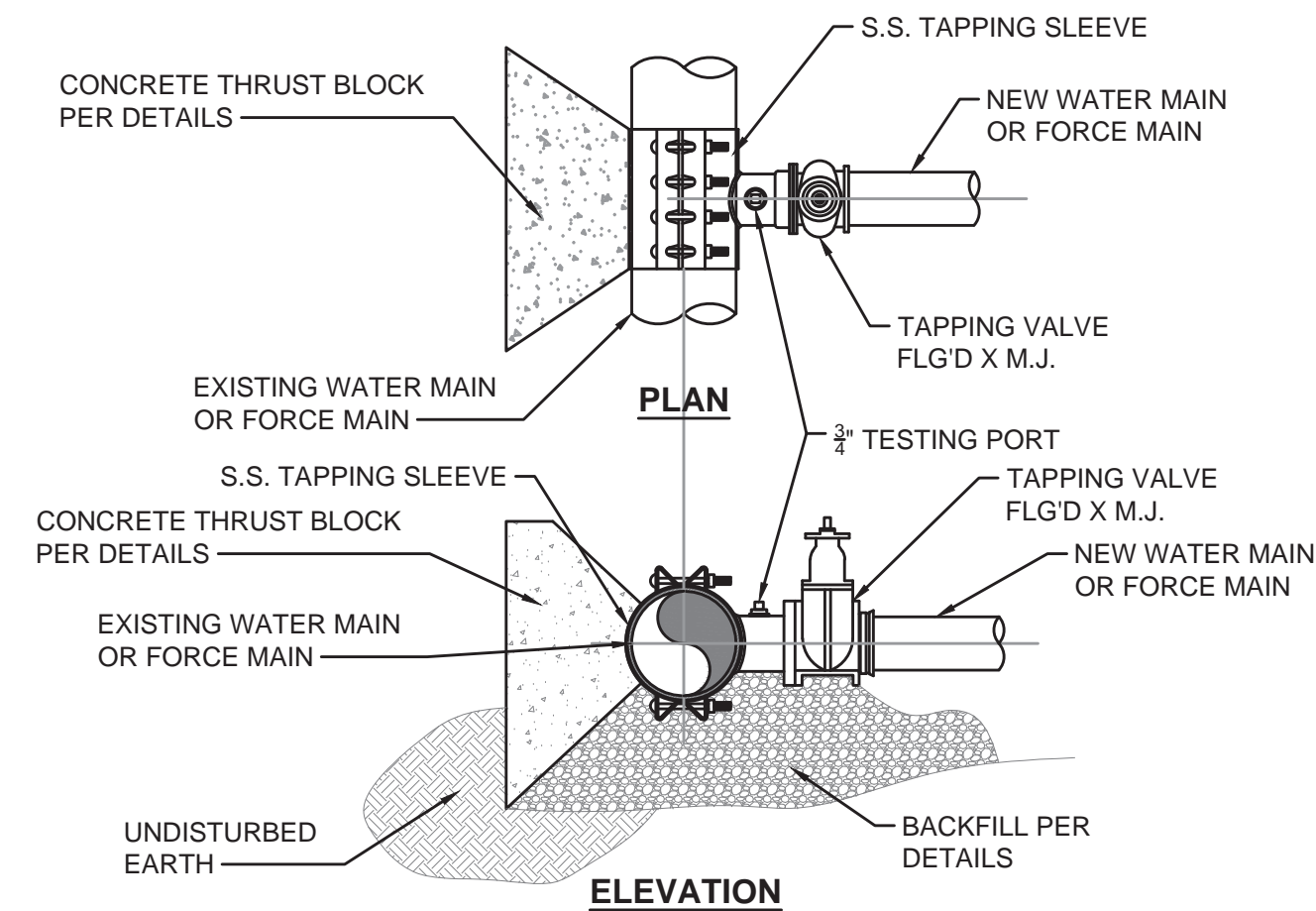


SECTION



HDPE RESTRAINT WALL

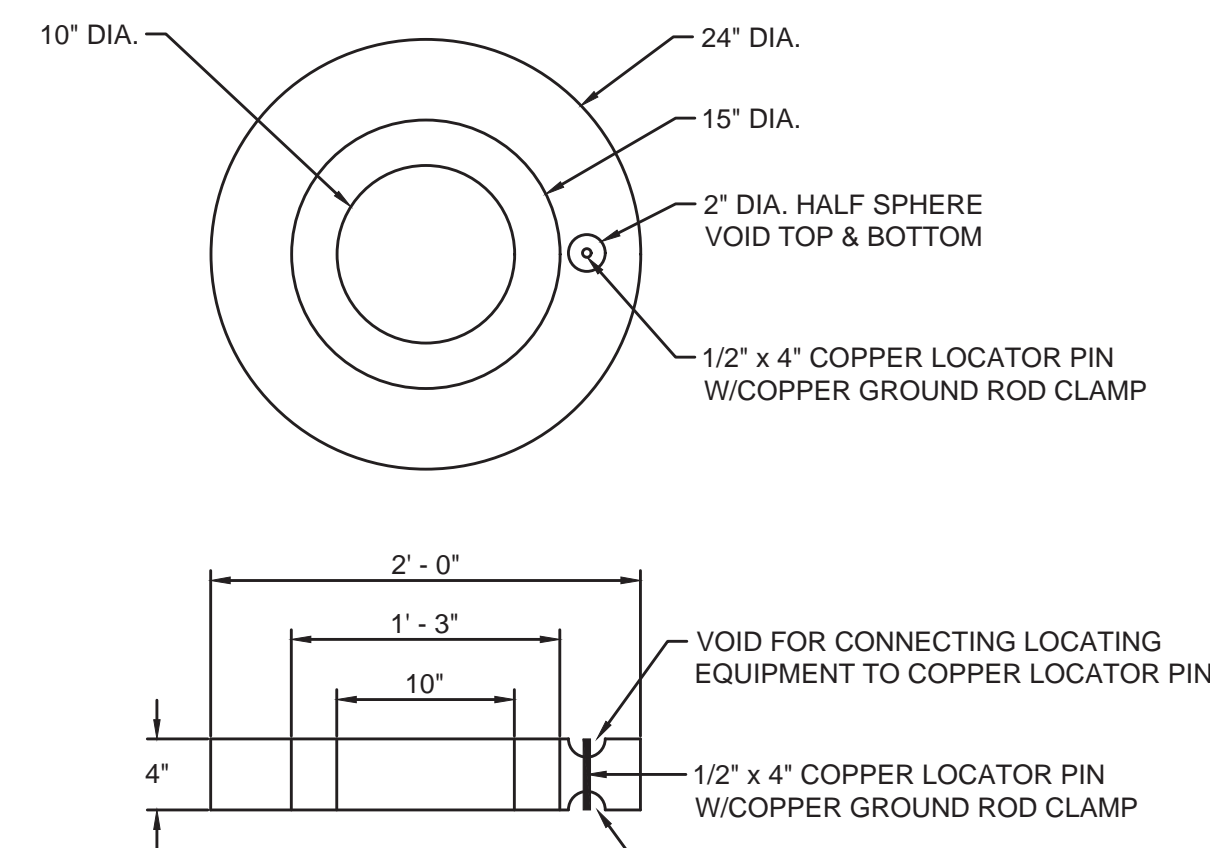
NOT TO SCALE



- NOTE:
- TAPPING SLEEVE & VALVE TO BE TESTED PER MANUFACTURERS RECOMMENDATIONS
 - NO SIZE FOR SIZE TAPPING SLEEVE ALLOWED WITHOUT WRITTEN APPROVAL OF MUPB.

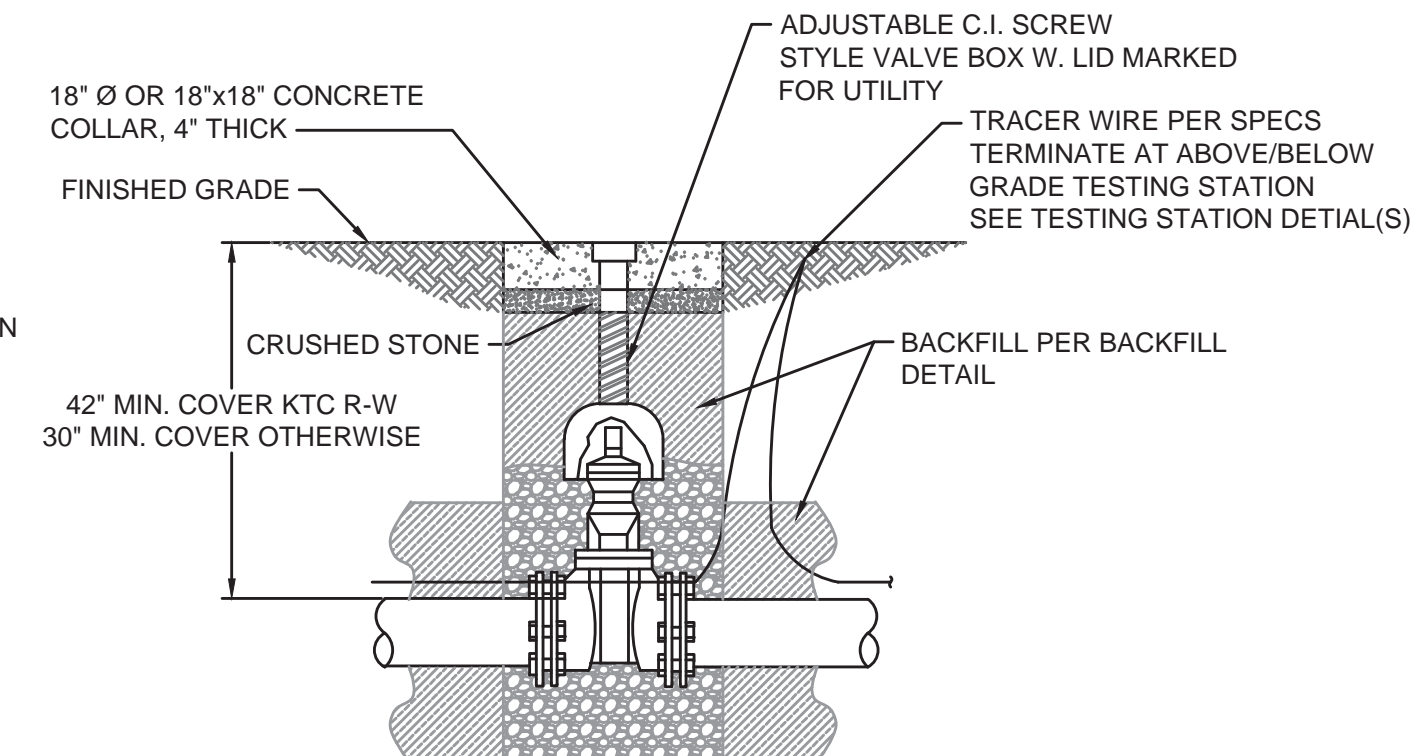
STAINLESS STEEL TAPPING SLEEVE & VALVE ASSEMBLY - DETAIL

NOT TO SCALE



24" DIAMETER CONCRETE VALVE BOX PROTECTOR RING W/COPPER LOCATOR PIN

NOT TO SCALE



GATE VALVE ASSEMBLY - DETAIL

NOT TO SCALE

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2019 WATER SYSTEM IMPROVEMENTS
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STANDARD DETAILS - PIPE LINES

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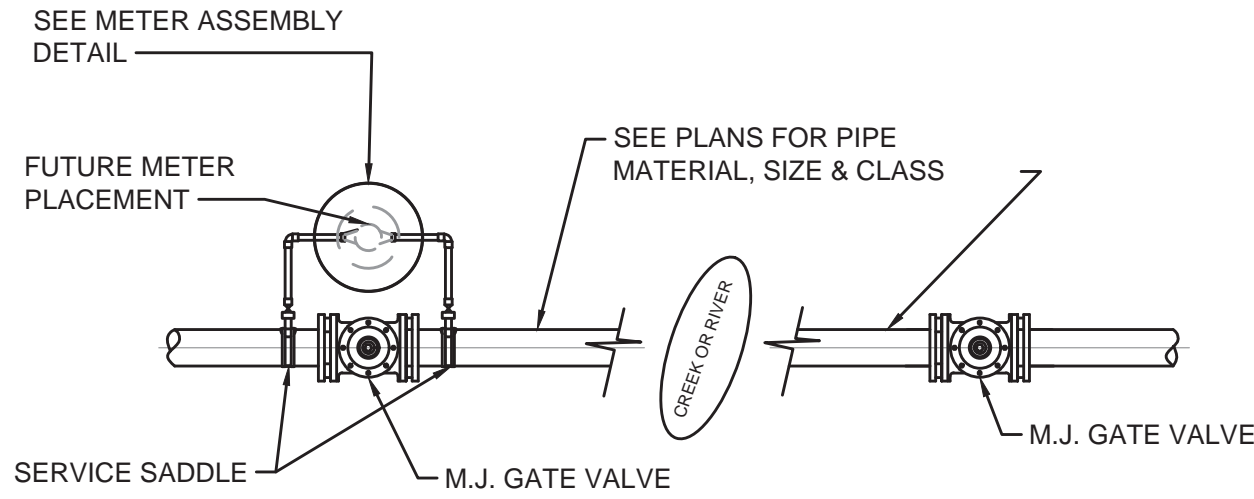
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LEAK DETECTION
ASSEMBLY - DETAIL

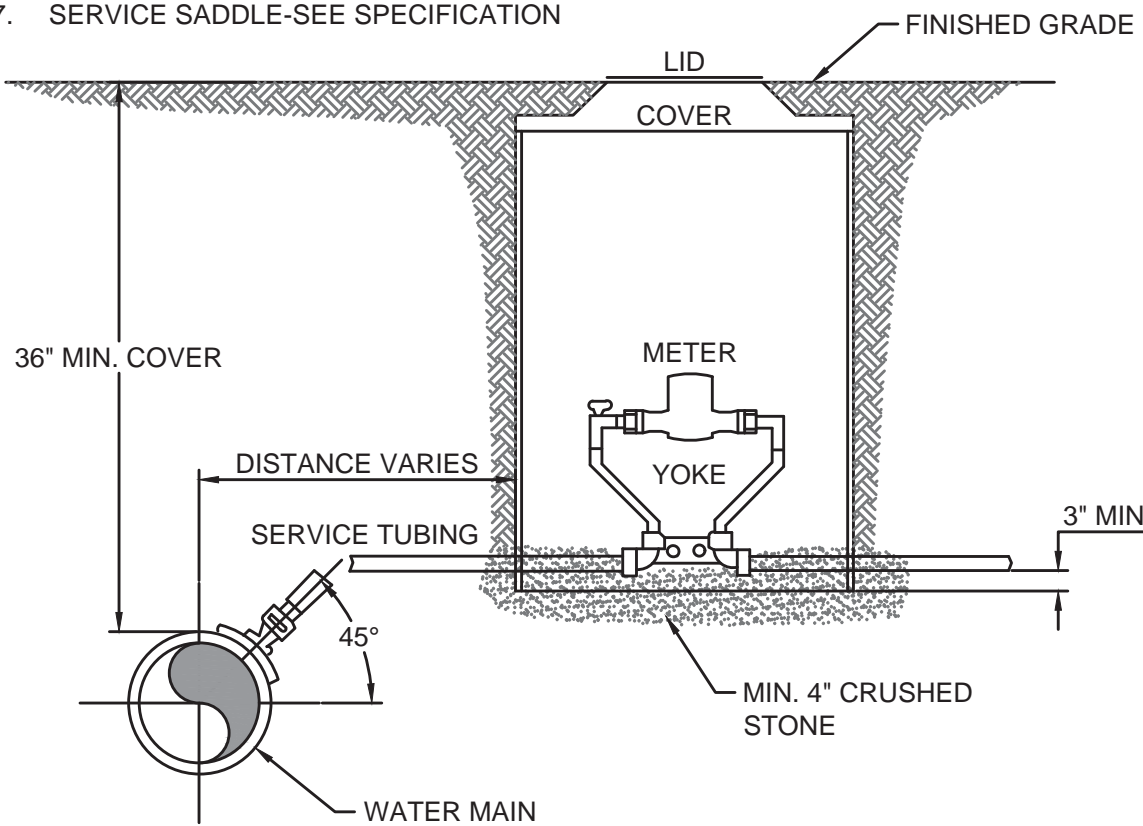
NOT TO SCALE

METER MATERIAL SCHEDULE

1. YOKE-SEE SPECIFICATIONS
2. METER BOX-SEE SPECIFICATIONS
3. COVER-SEE SPECIFICATIONS
4. METER-SEE SPECIFICATIONS
5. INDIVIDUAL PRESSURE REDUCING VALVE (IPRV)-SEE SPECIFICATIONS
6. CORPORATION STOP-SEE SPECIFICATION
7. SERVICE SADDLE-SEE SPECIFICATION

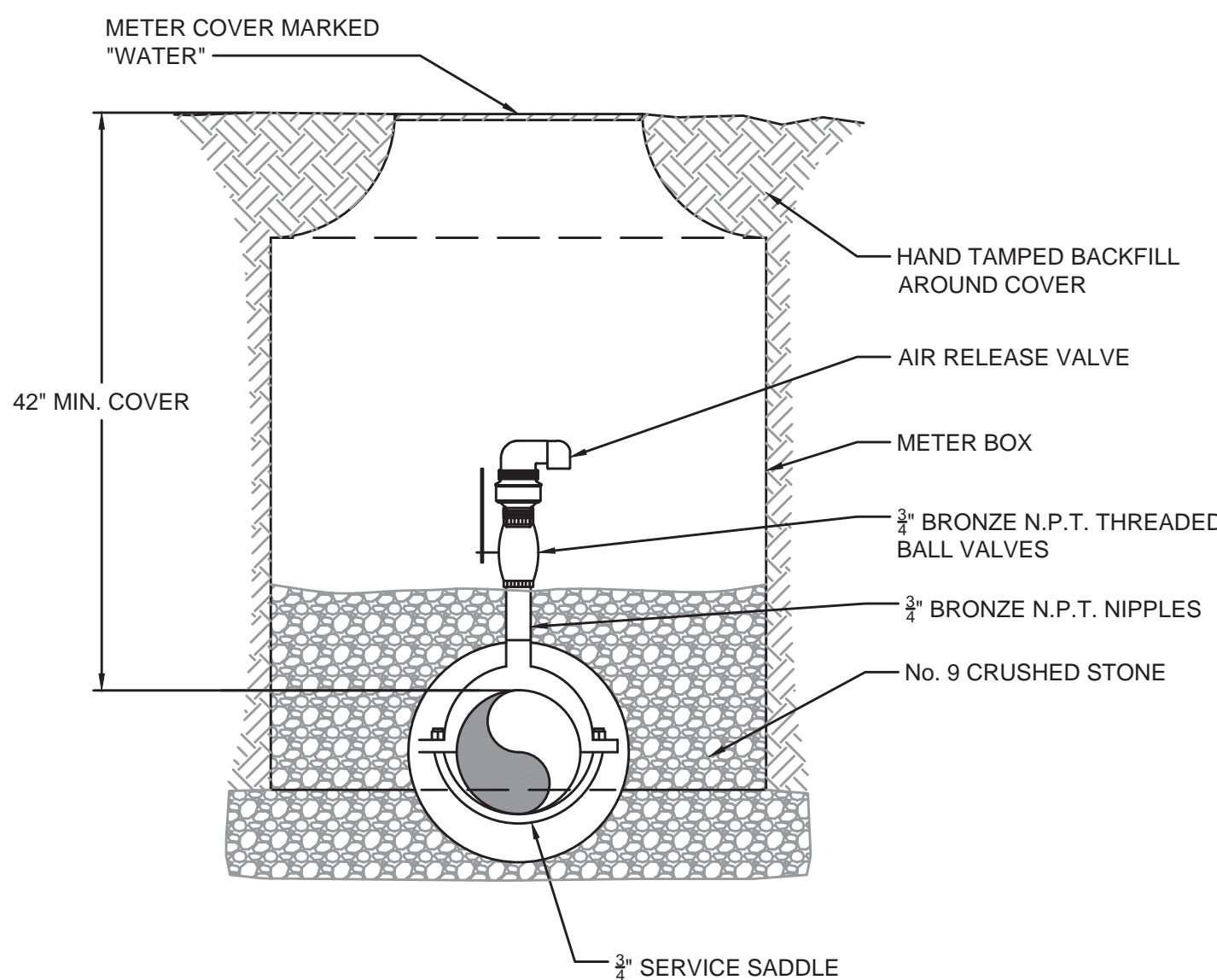
NOTE:

1. CONTRACTOR IS RESPONSIBLE FOR ALL PLUMBING PERMITS & ASSOCIATED COSTS.
2. SEE SPECIFICATIONS REGARDING SPECIFIC MAKE, MODEL, TYPE & STYLE OF FITTINGS, METER, METER BOX, COPPER SETTERS, IPRVs, BOX LID, ETC.
3. INDIVIDUAL PRESSURE REDUCING VALVES REQUIRED ON ALL METERS WHERE PRESSURE EXCEEDS 90 PSI.
4. TRACER WIRE TO BE CONNECTED TO WATER MAIN TRACER WIRE AND RAN ON NEW SERVICE TUBING AND TERMINATING IN THE METER BOX.



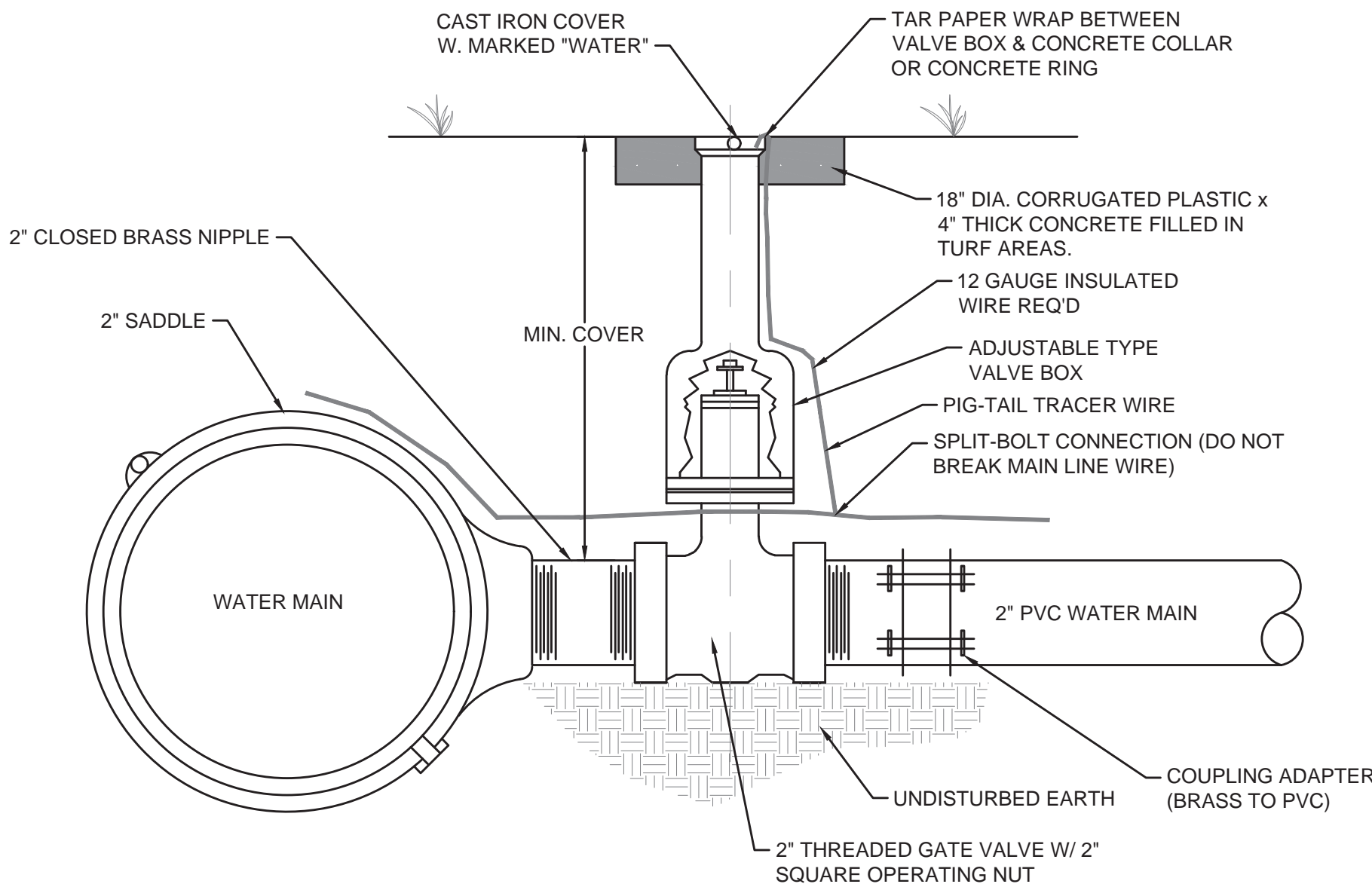
METER ASSEMBLY - DETAIL

NOT TO SCALE



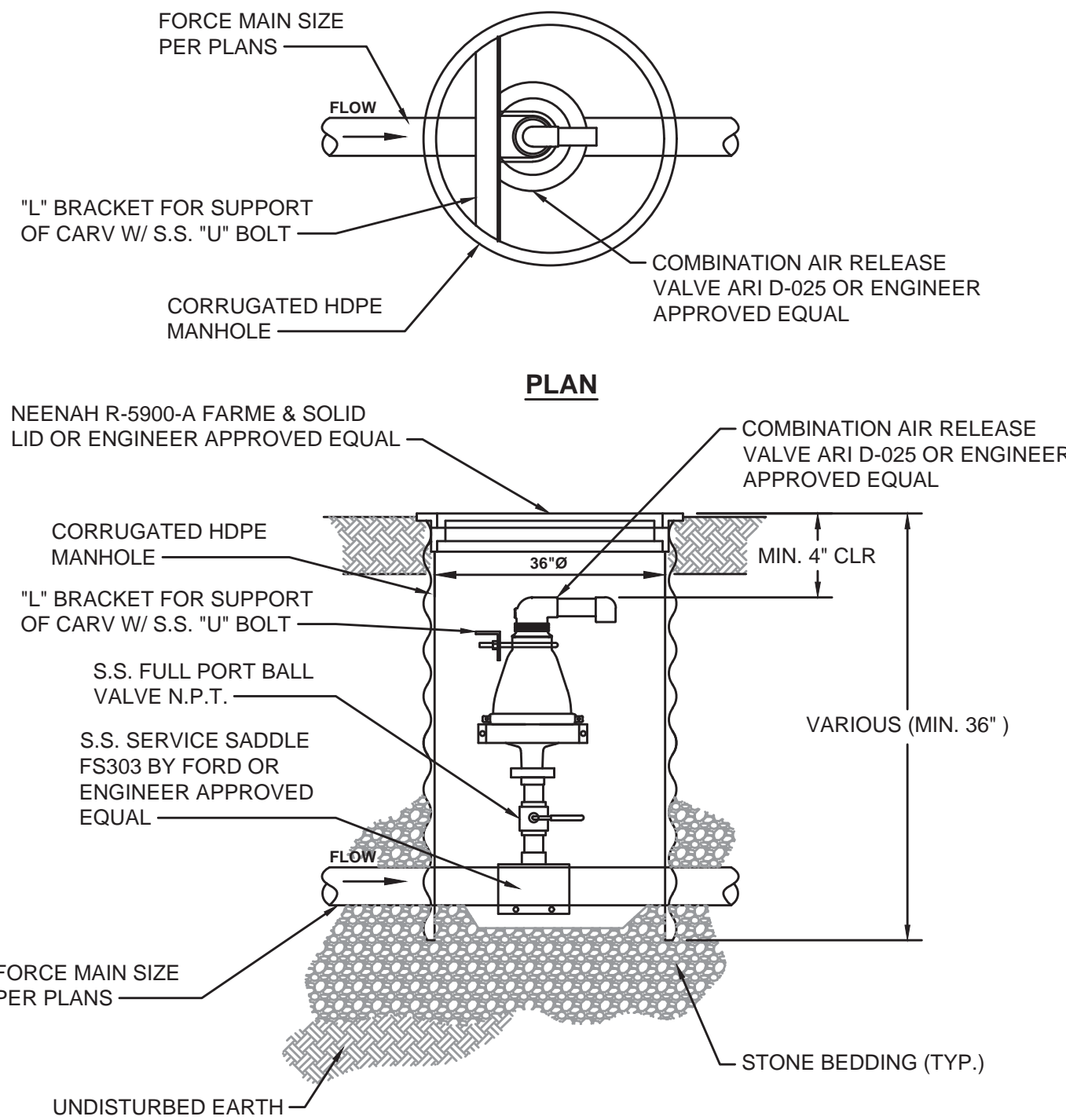
AIR RELEASE VALVE ASSEMBLY
WATERLINE ONLY - DETAIL

NOT TO SCALE



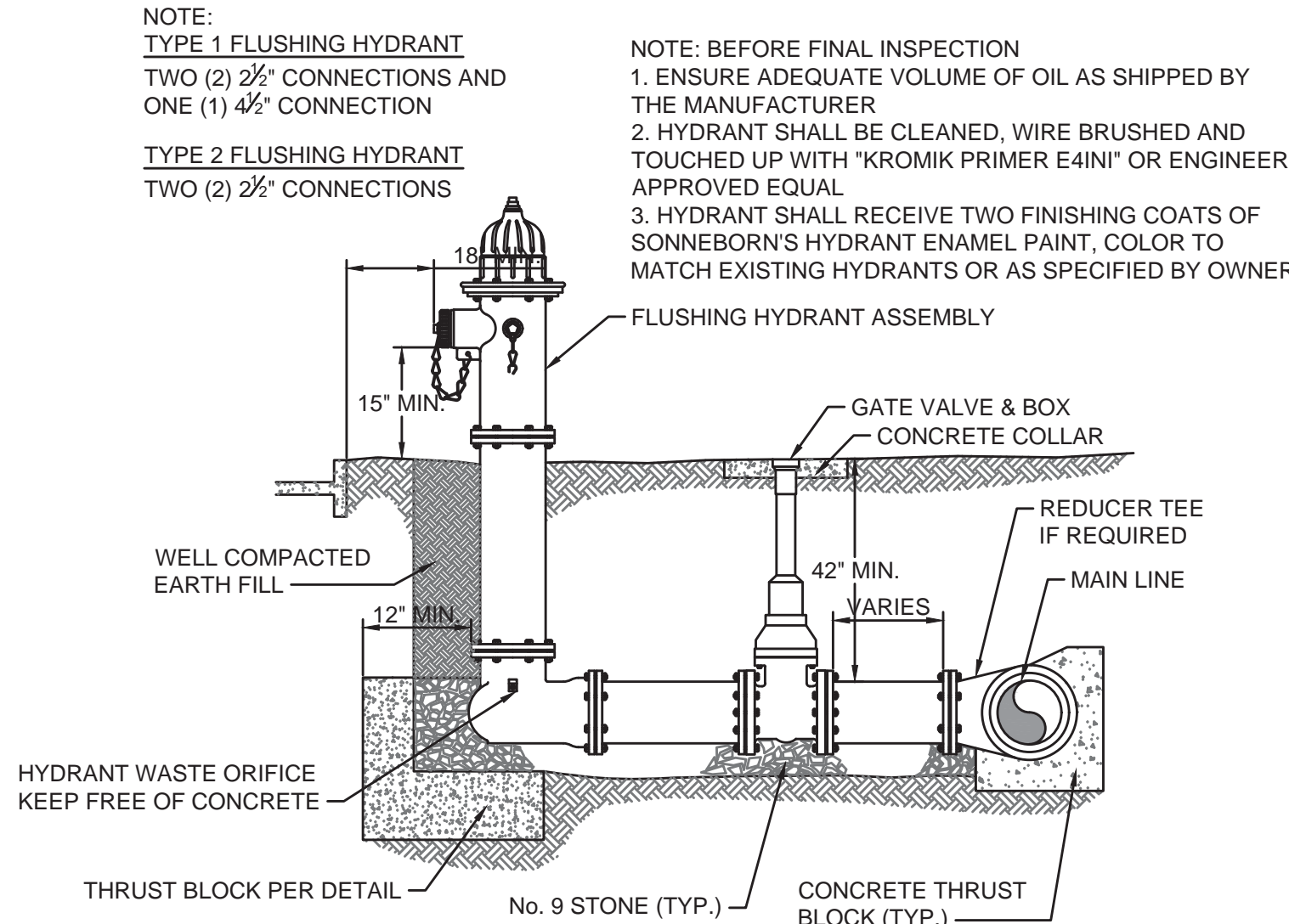
CONNECTION
FOR 2" WATER MAINS

NOT TO SCALE



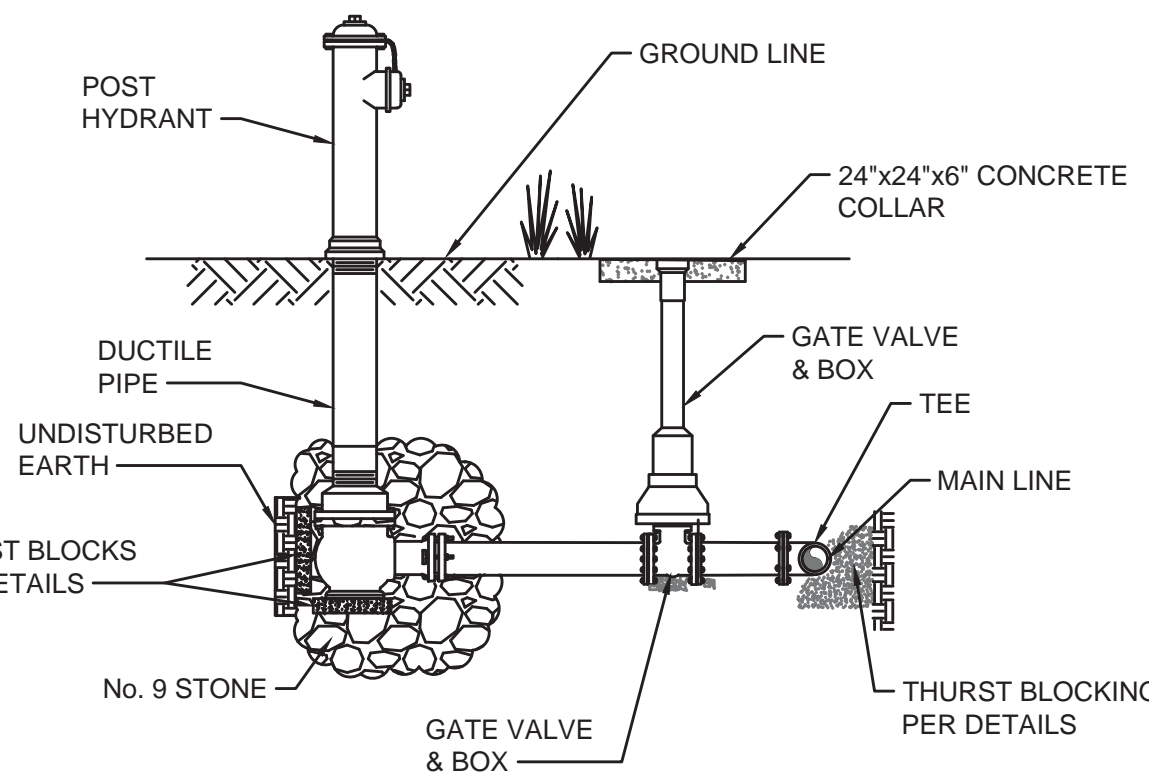
COMBINATION AIR RELEASE VALVE
ASSEMBLY FORCE MAIN ONLY - DETAIL

NOT TO SCALE



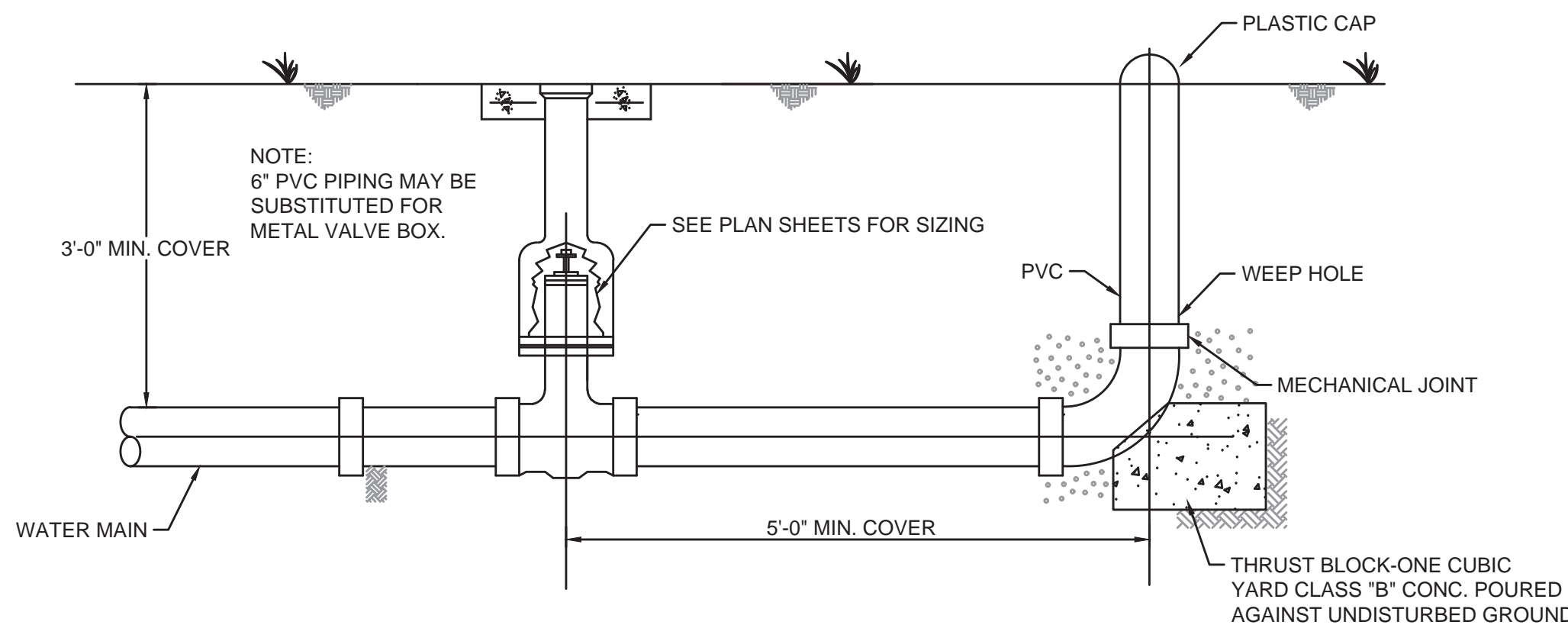
FLUSHING HYDRANT
ASSEMBLY TYPE 1 & 2 - DETAIL

NOT TO SCALE



FLUSHING HYDRANT
ASSEMBLY, TYPE 3 - DETAIL

NOT TO SCALE



E.O.L. 2", 3", OR 4" UNDERGROUND
BLOWOFF ASSEMBLY

NOT TO SCALE

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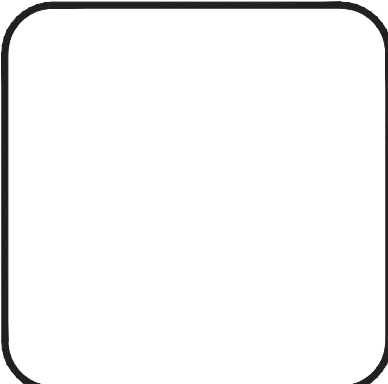
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2019 WATER SYSTEM IMPROVEMENTS PROJECT	STANDARD DETAILS - WATER LINES
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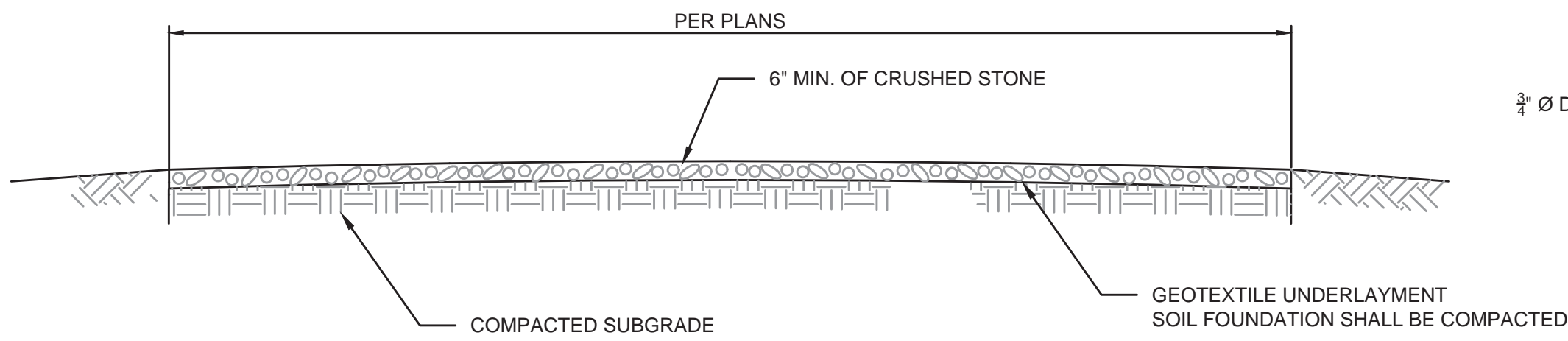
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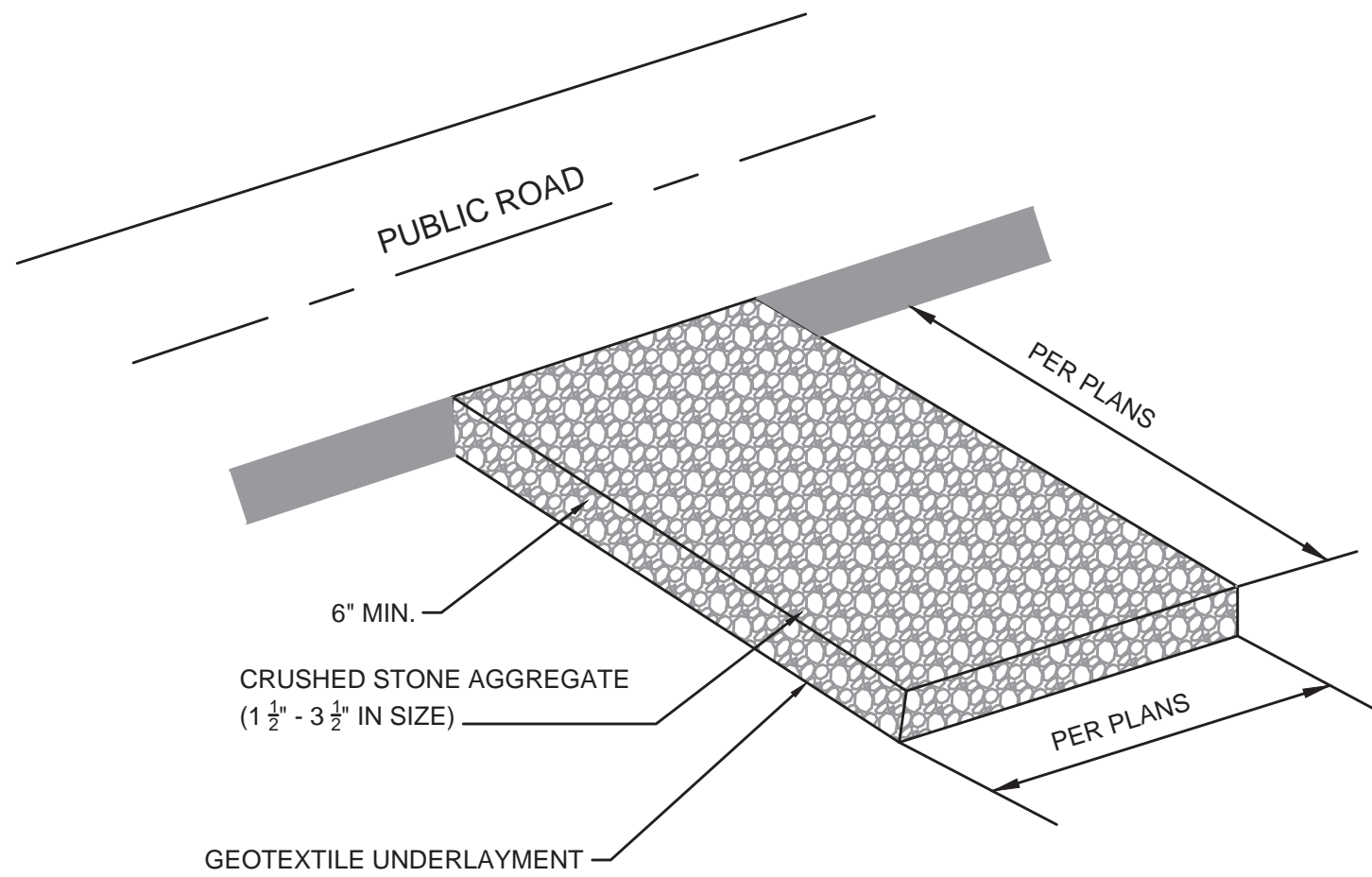
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STABILIZED CONSTRUCTION ENTRANCE - SECTION

NOT TO SCALE



NOTES:

1. A STABILIZED ENTRANCE PAD OF CRUSHED STONE SHALL BE LOCATED WHERE TRAFFIC WILL ENTER OR LEAVE THE CONSTRUCTION SITE ONTO A PUBLIC STREET.
2. GEOTEXTILE (KYTC TYPE III) SHALL BE USED AS A BASE FOR THE CONSTRUCTION ENTRANCE.
3. TREES, STUMPS, ROOTS, BRUSH, WEEDS, AND OTHER OBJECTIONABLE MATERIALS SHALL BE REMOVED FROM THE WORK AREA.
4. UNSUITABLE MATERIAL SHALL BE REMOVED FROM THE ROADBED AND PARKING AREAS.
5. GRADING, SUBGRADE PREPARATION, AND COMPACTION SHALL BE DONE AS NEEDED. FILL MATERIAL SHALL BE DEPOSITED IN LAYERS NOT TO EXCEED 9 INCHES AND COMPACTED WITH THE CONTROLLED MOVEMENT OF COMPACTING AND EARTH MOVING EQUIPMENT.
6. THE ROADBED SHALL BE GRADED TO THE ELEVATION AS SHOWN. SUBGRADE PREPARATION AND PLACEMENT OF THE SURFACE COURSE SHALL BE IN ACCORDANCE WITH SPECIFICATIONS.
7. ALL CUT AND FILLS SHALL BE 2:1 OR FLATTER TO THE EXTENT POSSIBLE.
8. WATER BREAKS OR BARS MAY BE USED TO CONTROL SURFACE RUNOFF.

STABILIZED CONSTRUCTION ENTRANCE - DETAIL

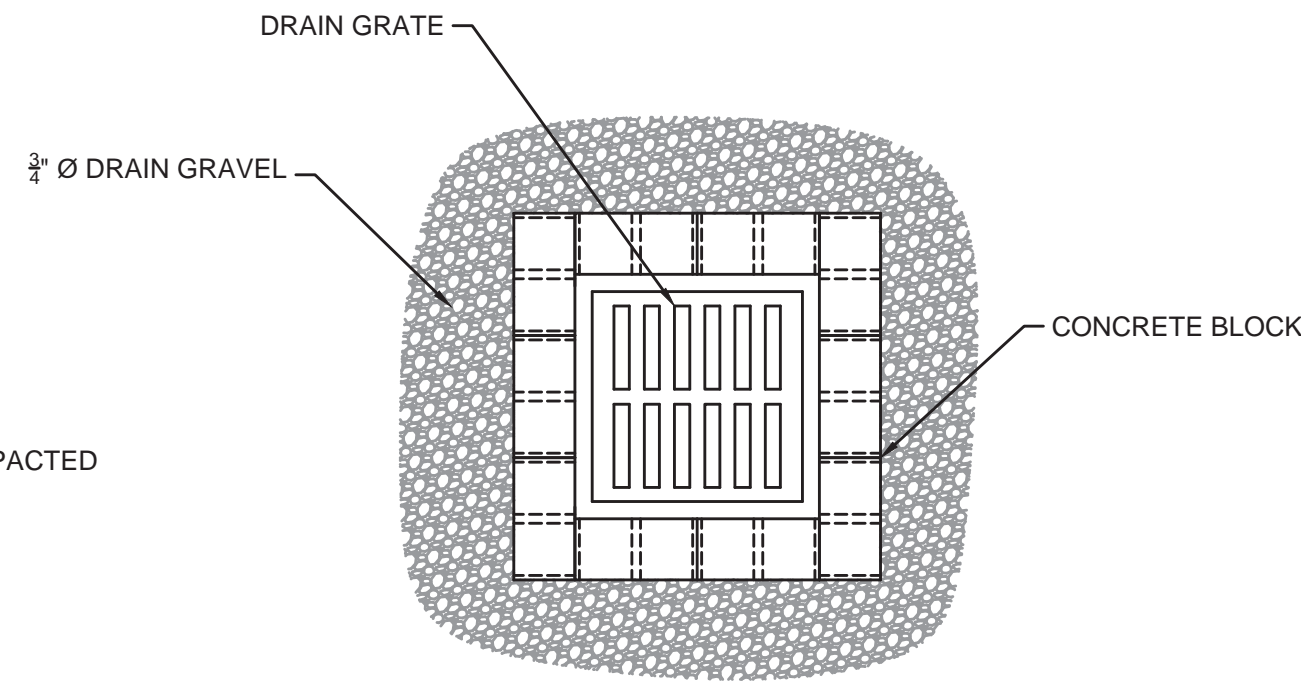
NOT TO SCALE

EROSION CONTROL NOTES:

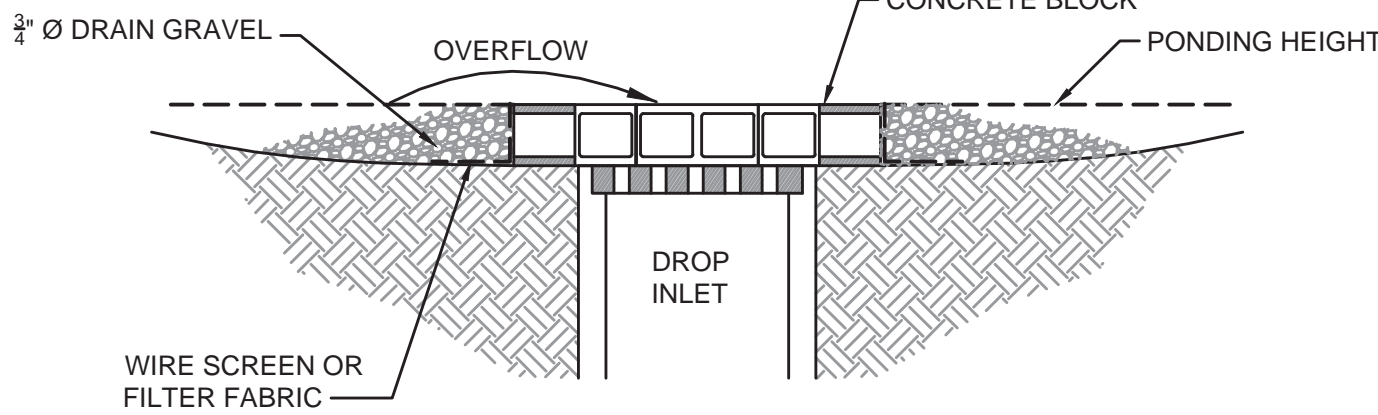
1. A KPDES STORMWATER PERMIT IS REQUIRED. COVERAGE STARTS WHEN THE KY DIVISION OF WATER ACKNOWLEDGES RECEIPT OF A NOTICE OF INTENT FOR COVERAGE.
2. FINAL STABILIZATION SHALL BEGIN WITHIN 14 DAYS ON AREAS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE PERMANENTLY CEASED OR HAVE BEEN SUSPENDED FOR MORE THAN 180 DAYS. WHEN SNOW COVER CAUSES DELAYS, STABILIZATION SHALL BEGIN AS SOON AS POSSIBLE. STABILIZATION PRACTICES INCLUDE SEEDING, MULCHING, PLACING SOD, PLANTING TREES OR SHRUBS, AND USING GEOTEXTILE FABRICS AND OTHER APPROPRIATE MEASURES. SEEDING RATES, DATES, AND MATERIALS MAY BE OBTAINED FROM THE LOCAL NATURAL RESOURCES CONSERVATION SERVICE FIELD OFFICE.
3. FOR ALL CRITICAL AREAS (WITHIN 25' OF A STREAM), SOIL STABILIZATION TECHNIQUES SHALL BE IMPLEMENTED WITHIN 24 HOURS OR AS SOON AS PRACTICAL AFTER COMPLETION OF GRADING OR DISTURBANCE. TEMPORARY STABILIZATION PRACTICES SHALL BE INITIATED WITHIN 14 DAYS OF CESSATION OF CONSTRUCTION ACTIVITIES.
4. A STORMWATER POLLUTION PREVENTION PLAN (SWPPP) SHALL BE DEVELOPED AND IMPLEMENTED AS OUTLINED IN THE KPDES STORMWATER PERMIT KYR 10.
5. SEDIMENT BASINS (DEBRIS BASINS, DESILTING BASINS, OR SEDIMENT TRAPS) SHALL BE PROPERLY DESIGNED.
6. SEDIMENT BASINS (DEBRIS BASINS, DESILTING BASINS, OR SEDIMENT TRAPS) SHALL BE INSTALLED DURING THE INITIAL GRADING AT LOCATIONS THAT WILL PROVIDE THE BEST PROTECTION FROM OFF-SITE DAMAGES.
7. ALL SLOPES EXCEEDING 3:1 SHALL HAVE EXTRA SLOPE PROTECTION SUCH AS NETTING.
8. INLET PROTECTION IS REQUIRED TO MINIMIZE DISCHARGE OF SEDIMENT LADEN WATER.
9. SITE PERIMETER CONTROLS ARE REQUIRED AND SHALL BE INSTALLED TO PREVENT THE DEPOSIT OF SOIL AND DEBRIS FROM GRADED SURFACES ONTO PUBLIC STREETS, INTO DRAINAGE CHANNELS OR SEWERS, OR ONTO ADJOINING LAND.
10. EROSION CONTROL MEASURES SHOWN ARE THE MINIMUM REQUIRED, CONTRACTOR SHALL PROVIDE ADDITIONAL CONTROL AND REVISE THE CONTROLS AS NEEDED.

INSPECTIONS AND MAINTENANCE

1. ALL EROSION CONTROL MEASURES, DISCHARGE LOCATIONS, VEHICLE EXITS, DISTURBED AREAS OF THE SITE, AND MATERIALS STORAGE AREAS SHALL BE INSPECTED WEEKLY AND WITHIN 24 HOURS OF THE END OF A STORM THAT IS 0.5 INCHES OR GREATER. EACH INSPECTION MUST BE DOCUMENTED IN ACCORDANCE WITH THE KPDES GENERAL PERMIT FOR STORMWATER POINT SOURCE DISCHARGES FROM CONSTRUCTION ACTIVITIES (KYR10).
2. SEDIMENT ACCUMULATED AT THE SILT FENCES, INLET PROTECTION AREAS, AND OTHER SILT CHECK DEVICES SHOULD BE REMOVED NO LATER THAN WHEN IT REACHES 1/3 HEIGHT OF THE FENCE OR 9 INCHES MAXIMUM.
3. SEDIMENT MUST BE REMOVED FROM ANY SEDIMENT BASINS WHEN THE NO MORE THAN 1/3 VOLUME HAS BEEN FILLED WITH COLLECTED SEDIMENT.
4. ALL REQUIRED REPAIRS ARE TO BE MADE IMMEDIATELY.
5. REMOVED SEDIMENT MUST BE SPREAD AND VEGETATED OR OTHERWISE STABILIZED IN A MANNER THAT DOES NOT RESULT IN MUDDY RUNOFF TO NEARBY DITCHES AND WATERBODIES.
6. INSPECT THE CONSTRUCTION ENTRANCE DAILY TO ENSURE NO TRACKING OR DIRT ONTO LOCAL ROADWAYS. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC ROADS MUST BE REMOVED IMMEDIATELY. SEE NOTE 3 FOR HANDLING OF REMOVED SEDIMENT.
7. MAINTAIN THE ENTRANCE AS NECESSARY TO PREVENT TRACKING OF DIRT.



PLAN



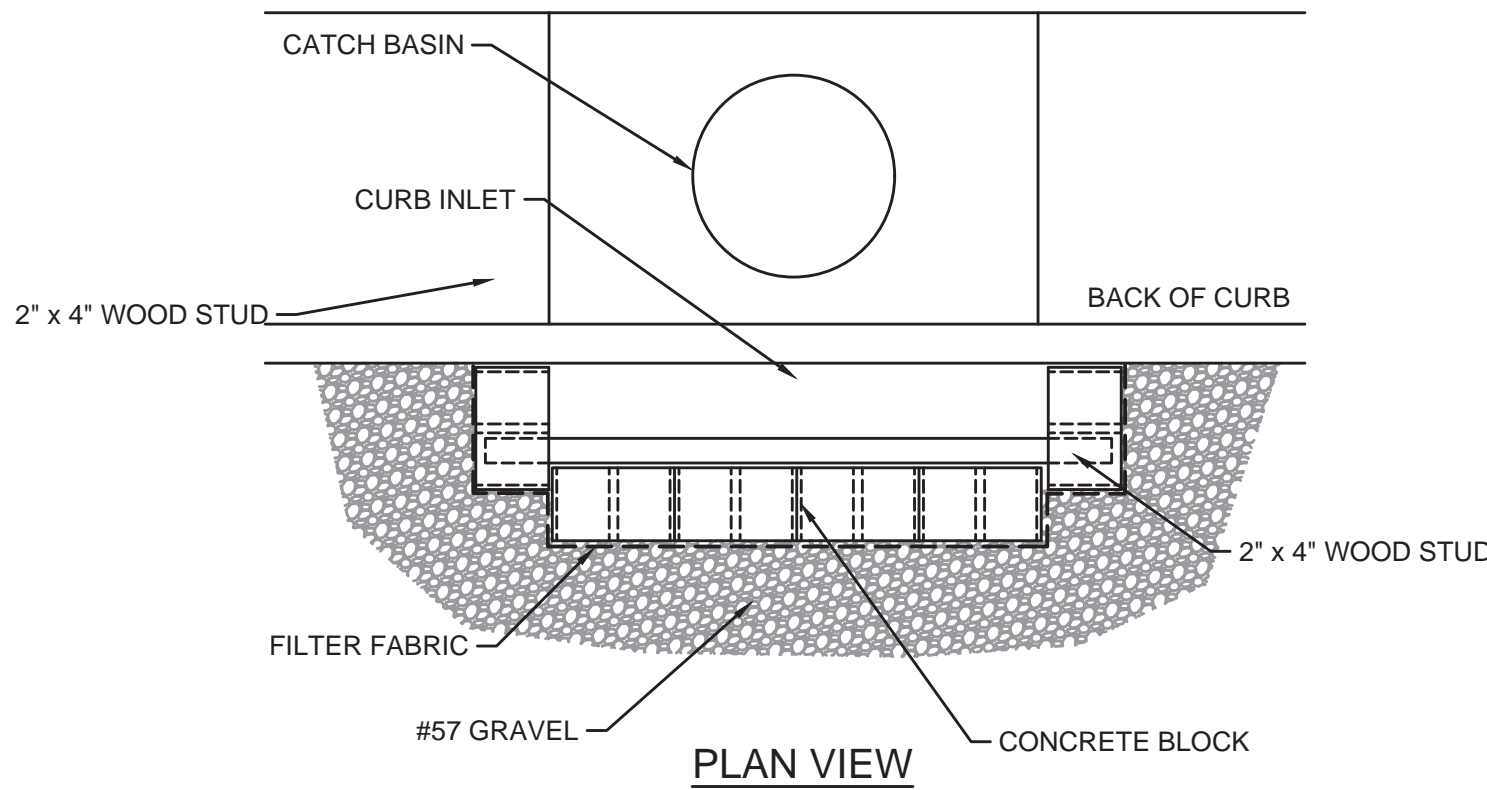
SECTION

NOTES:

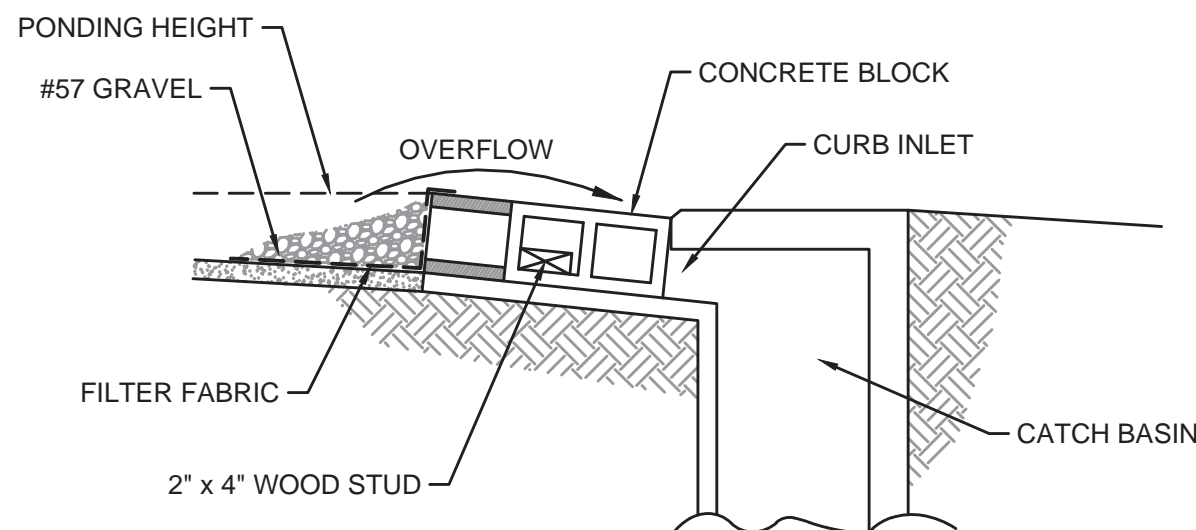
1. DROP INLET PROTECTION ARE TO BE USED FOR NEARLY LEVEL DRAINAGE AREAS.
2. EXCAVATE A BASIN OF SUFFICIENT SIZE ADJACENT TO THE DROP INLET.
3. THE TOP OF THE STRUCTURE (PONDING HEIGHT) MUST BE BELOW THE GROUND ELEVATION DOWNSLOPE TO PREVENT RUNOFF FROM BYPASSING THE INLET. A TEMPORARY DIKE MAY BE NECESSARY ON THE DOWNSLOPE SIDE OF THE STRUCTURE.

DROP INLET PROTECTION - DETAIL

NOT TO SCALE



PLAN VIEW



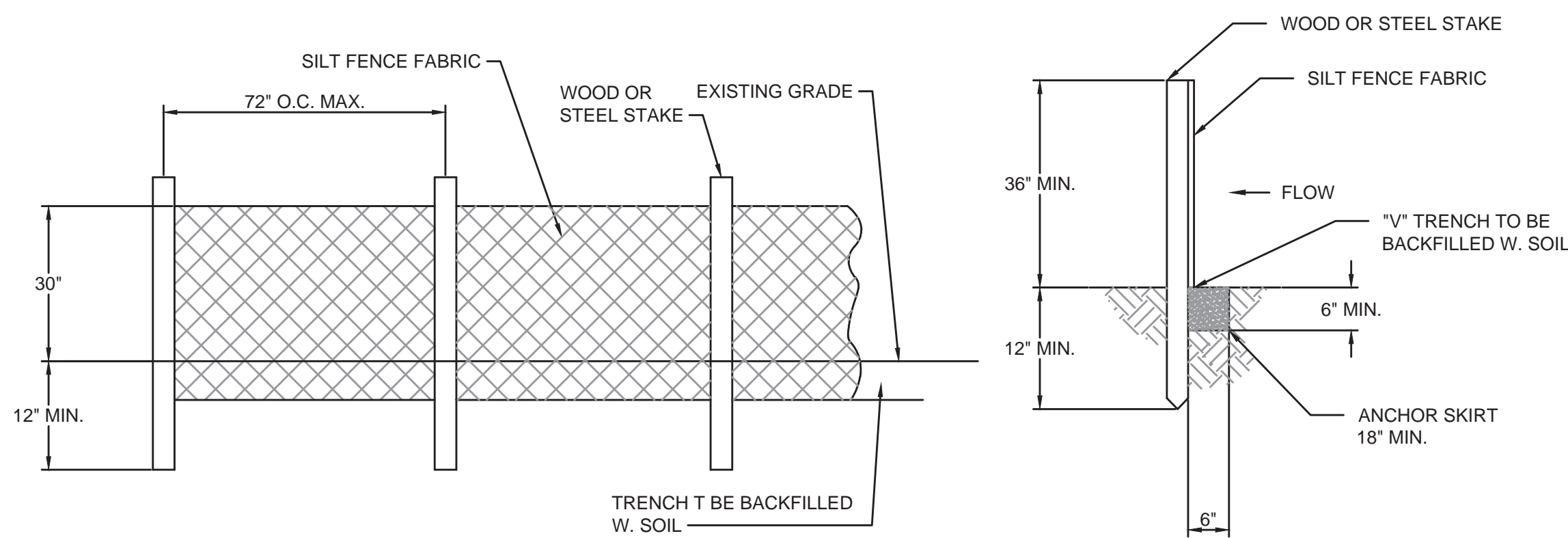
SECTION VIEW

NOTES:

1. USE BLOCK AND GRAVEL TYPE SEDIMENT BARRIER WHEN CURB INLET IS LOCATED IN GENTLY SLOPING STREET SEGMENT WHERE WATER CAN POND AND ALLOW SEDIMENT TO SEPARATE FROM RUNOFF.
2. BARRIER SHALL ALLOW FOR OVERFLOW FROM SEVERE STORM EVENT.
3. INSPECT BARRIERS AND REMOVE SEDIMENT AFTER EACH STORM EVENT. SEDIMENT AND GRAVEL MUST BE REMOVED FROM THE TRAVELED WAY IMMEDIATELY.

CURB INLET SEDIMENT BARRIER - DETAIL

NOT TO SCALE



ELEVATION VIEW

SECTION VIEW

NOTES:

1. SILT FENCE FABRIC SHALL BE PURCHASED IN A CONTINUOUS ROLL AND CUT TO THE LENGTH OF THE OF THE BARRIER. WHEN JOINTS CANNOT BE AVOID, SILT FENCE FABRIC SHALL BE SPLICED TOGETHER ONLY AT A POST WITH 3 FOOT MIN. OVERLAP, AND SECURELY SEALED.
2. POSTED SHALL BE AT LEAST 5 FEET IN LENGTH.
3. STEEL POSTS SHALL HAVE PROJECTIONS FOR FASTENING WIRE AND FABRIC.
4. WOOD POSTS SHALL BE 2 INCHES BY 2 INCHES OR EQUIVALENT. STEEL POSTS SHALL BE 1/33 LBS PER LINEAR FOOT.
5. IF REQUIRED, A WIRE MESH SUPPORT FENCE SHALL BE FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS USING HEAVY DUTY WIRE STAPLES AT LEAST 1 INCH IN LENGTH, WIRE TIES, OR HOG RINGS. THE WIRE SHALL EXTEND INTO THE TRENCH A MINIMUM OF 2 INCHES AND SHALL NOT EXTEND MORE THAN 36 INCHES ABOVE THE ORIGINAL GROUND SURFACE
6. TURN SILT FENCE UP SLOPE AT ENDS.

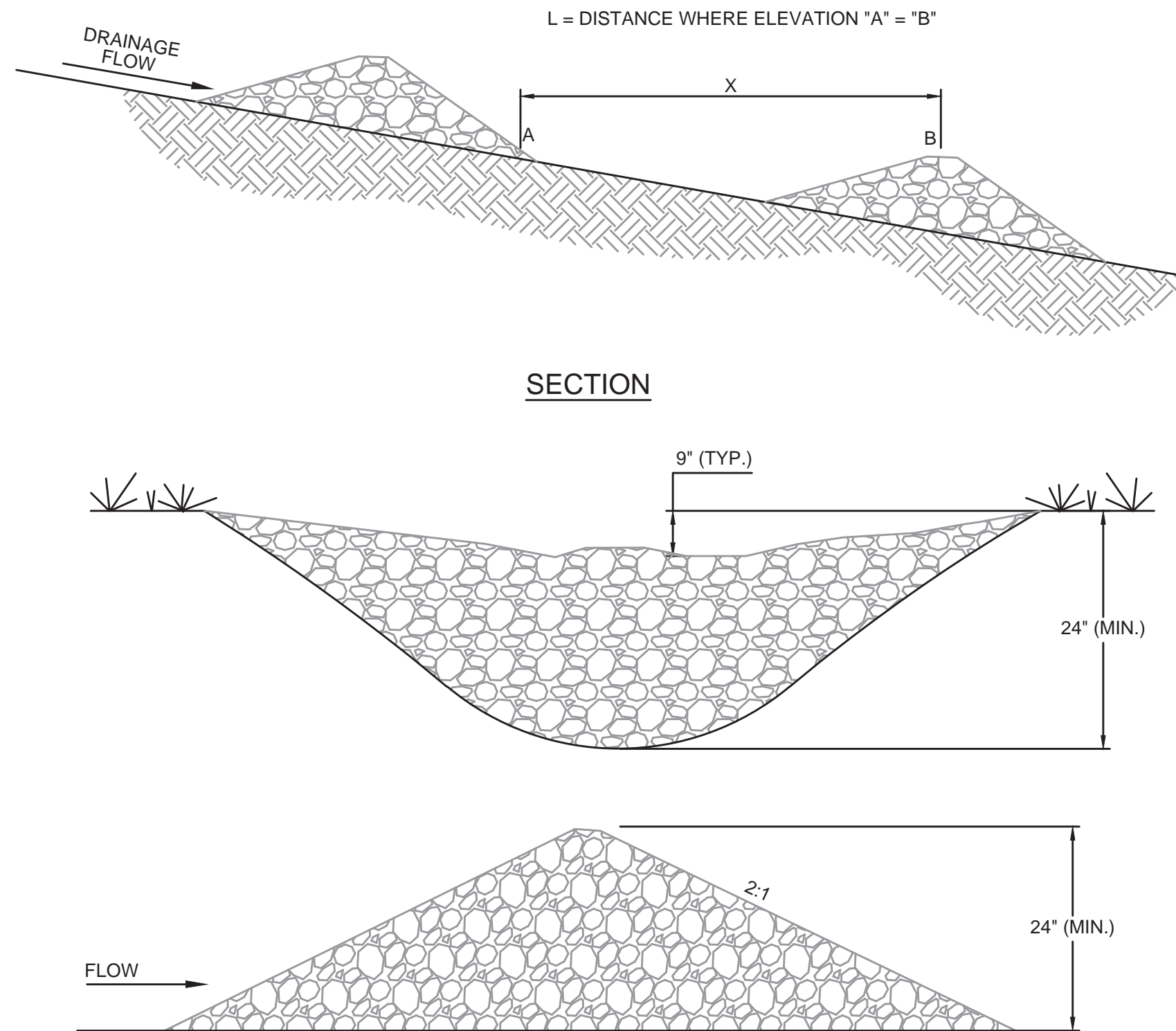
SILT FENCE - DETAIL

NOT TO SCALE

RECORD DRAWINGS

TO THE BEST OF OUR KNOWLEDGE, INFORMATION AND BELIEF THIS SET OF RECORD DRAWINGS SHOWS THE REPORTED LOCATION OF THE WORK AND SIGNIFICANT CHANGES MADE DURING THE CONSTRUCTION PROCESS. THESE RECORD DOCUMENTS ARE BASED ON UNVERIFIED INFORMATION PROVIDED BY OTHER PARTIES WHICH WILL BE ASSUMED RELIABLE. THE DESIGN PROFESSIONAL CANNOT AND DOES NOT WARRANT THEIR ACCURACY.

BY: BLUEGRASS ENGINEERING, PLLC DATE: MARCH 2023



NOTES:

1. ROCK CHECK DAMS SHOULD BE CONSTRUCTED OF GRADED 5 TO 10 INCH STONE. MECHANICAL OR HAND PLACEMENTS SHALL BE REQUIRED TO ENSURE COMPLETE COVERAGE OF THE ENTIRE WIDTH OF DITCH OR SWALE AND THAT THE CENTER OF THE DAM IS LOWER THAN THE EDGES.
2. INSPECT BEHIND RIPRAP CHECKDAM DAILY AND CLEAN WHEN COLLECTED DEBRIS EXCEEDS HALF OF ITS DEPTH.

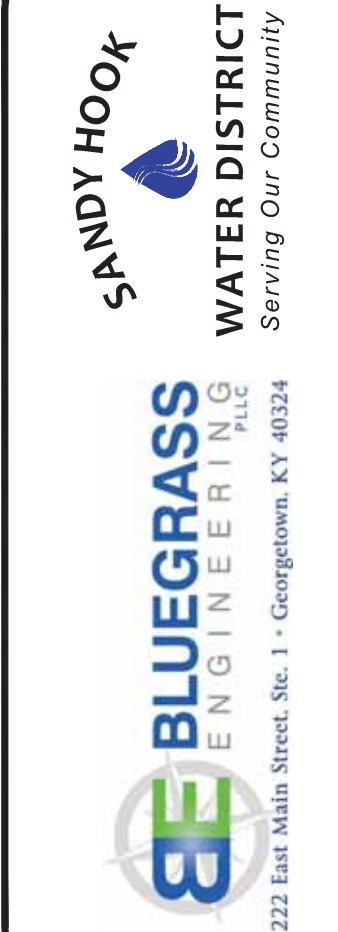
ROCK CHECK DAM - DETAIL

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NO.	DATE	BY	REVISIONS

2019 WATER SYSTEM IMPROVEMENTS PROJECT

STANDARD DETAILS - EROSION CONTROLS



PROJECT #:	19003
DATE:	APRIL 2022
PROJECT MGR:	BKL
DRAWN BY:	WJH
CHECKED BY:	LRS