

PHASE 12 - WATER SYSTEM IMPROVEMENTS

FOR THE
NICHOLAS COUNTY WATER DISTRICT
1639 OLD PARIS ROAD
CARLISLE, KY 40311

BOARD MEMBERS

Silas Cleaver III, Chairman

Phillip McDowell, Secretary

Deborah Higginbotham

Wendy Sparks

David Tincher

Monica Pryor, Office Manager

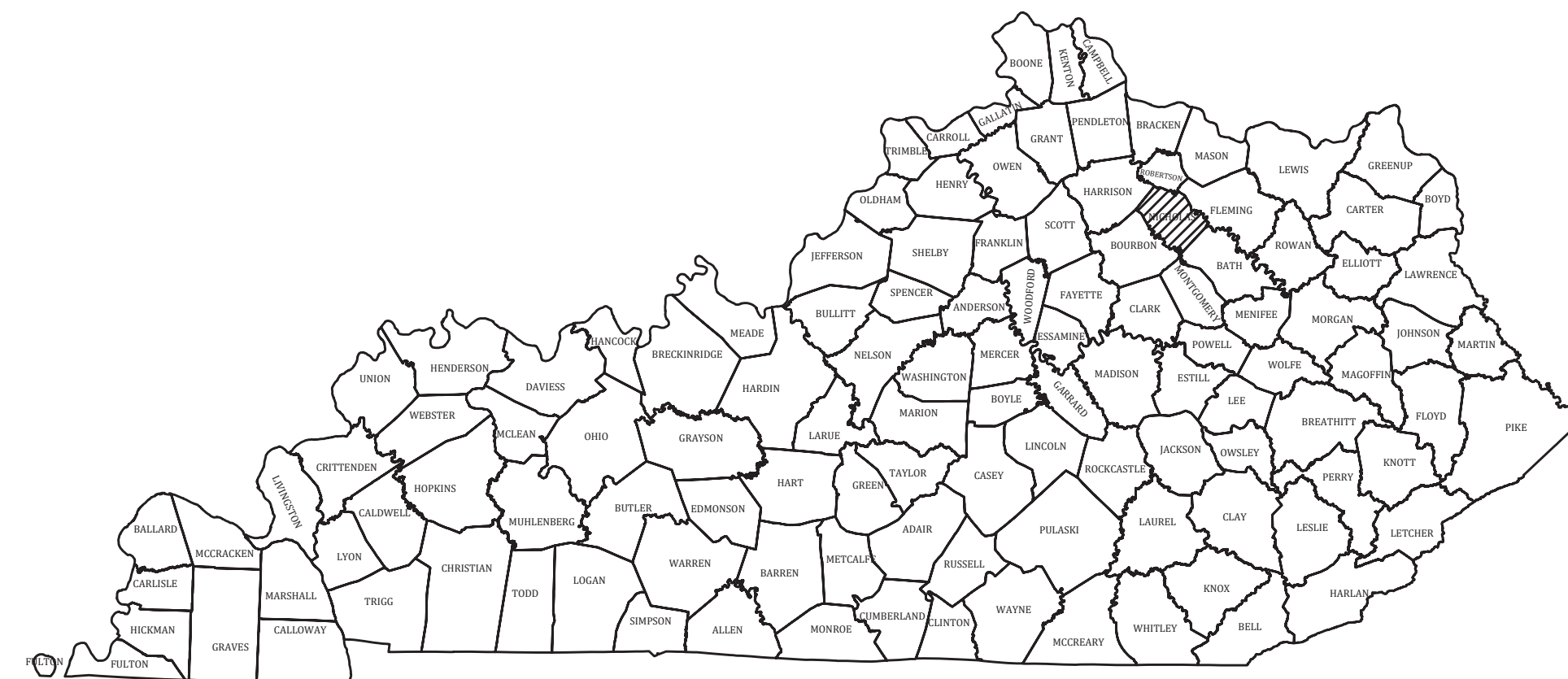
Kirk Robinson, Field Manager

AUGUST 2022

PREPARED BY:



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



PROJECT NO. 20016

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.

IT IS A VIOLATION OF LAW FOR ANY PERSON TO ALTER THIS DRAWING WITHOUT WRITTEN PERMISSION FROM BLUEGRASS ENGINEERING, PLLC AND ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER.

B:\PROJECTS\Nicholas County\20016 - Phase 12 Water System Improvements\Drawings\Contract 1 - Water Lines\20016-01-01.dwg BE 8/29/22

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 BE PERMITTED IN STREETS, ROADS, NARROW RIGHTS-OF-WAY OR OTHER CONSTRICTED AREAS UNLESS OTHERWISE 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 SUBSTITUTED 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:
 - 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.
 - 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.

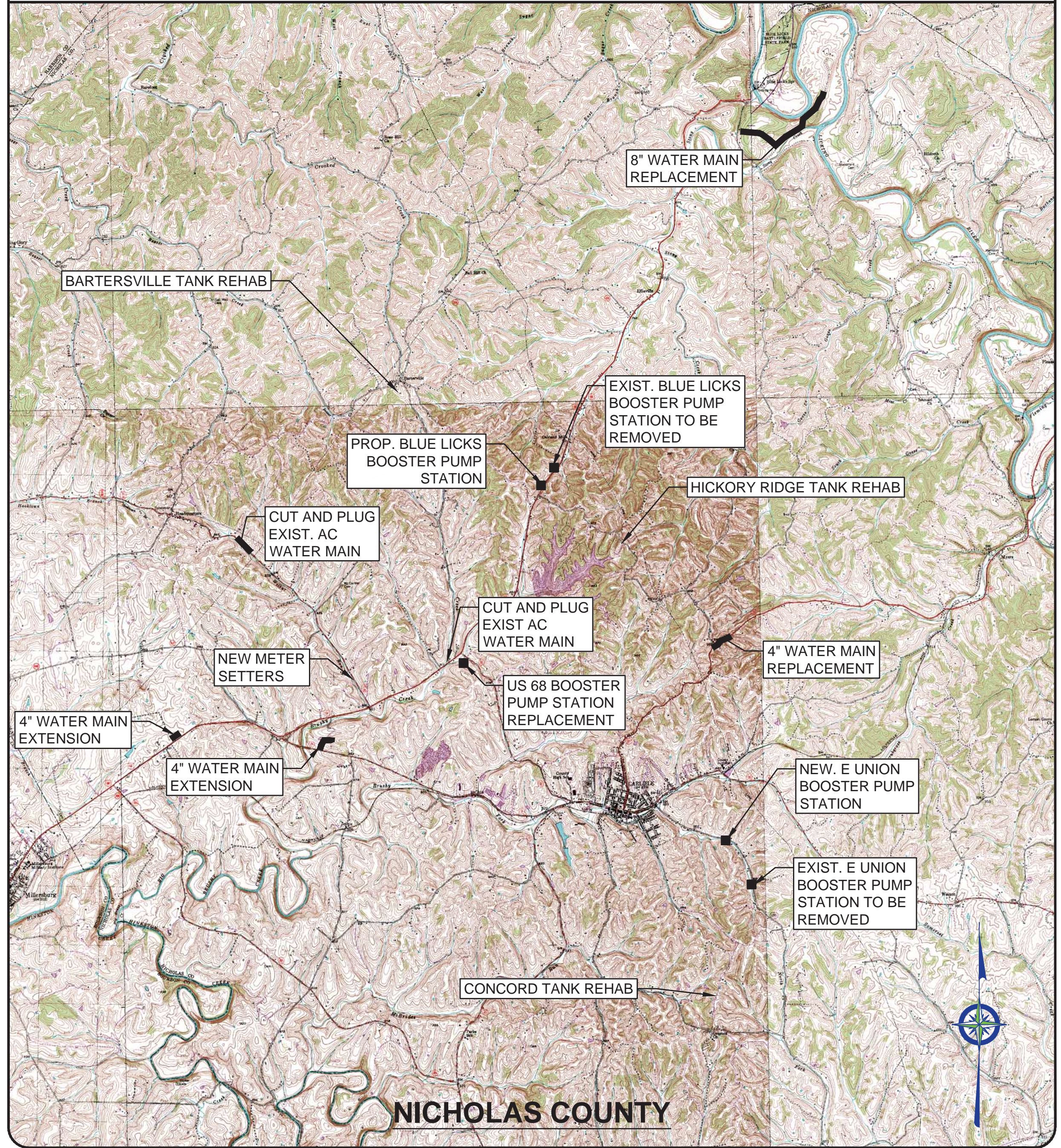
CONSTRUCTION IN KTC RIGHT-OF-WAY

- 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.

DRAWING INDEX

SHT NO.	DESCRIPTION:
-	COVER
01	PROJECT MAP, EXISTING UTILITIES, LEGEND, AND DRAWING INDEX
02	KY 32 (CONCRETE ROAD) EXTENSION
03-05	STONE CREEK & SCOTT ROAD REPLACEMENT
06	MYERS ROAD REPLACEMENT
07	HEADQUARTERS ROAD
08	US 68 (MAYSVILLE) ROAD EXTENSION
09	US 68 (MAYSVILLE) ROAD
10-12	EAST UNION PUMP STATION
13-14	US 68 (OFFICE) PUMP STATION
15-17	BLUE LICKS PUMP STATION
18	EAST UNION & US 68 (OFFICE) PUMP STATION DEMOLITION
19	BLUE LICKS PUMP STATION DEMOLITION
20	STANDARD DETAILS - PIPE LINES
21	STANDARD DETAILS - PIPE LINES
22	STANDARD DETAILS - WATER LINES
23	STANDARD DETAILS - EROSION CONTROL
24	STANDARD DETAILS - BOOSTER STATION

PROJECT MAP



LEGEND

- NEW WATER MAIN
- EXISTING WATER MAIN
- EXISTING CARLISLE W.M.
- 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
- EXISTING MANHOLE
- AIR RELEASE
- BLOW OFF ASSEMBLY

UTILITIES

WATER
NICHOLAS COUNTY WATER DISTRICT
1639 OLD PARIS ROAD
CARLISLE, KY 40311
(859) 289-3157
MONICA PRYOR - OFFICE MANAGER

WATER
CITY OF CARLISLE
107 EAST CHESTNUT STREET CARLISLE, KY 40311
(859) 289-3720
JEFF JEFFERSON - SUPERINTENDENT

GAS
CITY OF CARLISLE
107 EAST CHESTNUT STREET CARLISLE, KY 40311
(859) 289-3720
JEFF JEFFERSON - SUPERINTENDENT

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.

SEWER
CITY OF CARLISLE
107 EAST CHESTNUT STREET CARLISLE, KY 40311
(859) 289-3720
JEFF JEFFERSON - SUPERINTENDENT

ELECTRIC
FLEMING MASON ENERGY
1449 ELIZAVILLE ROAD 41041
(606) 845-2661

NO.	DATE	REVISIONS	BY

PHASE 12 - WATER SYSTEM IMPROVEMENTS
PROJECT MAP, EXISTING UTILITIES & DRAWING INDEX

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

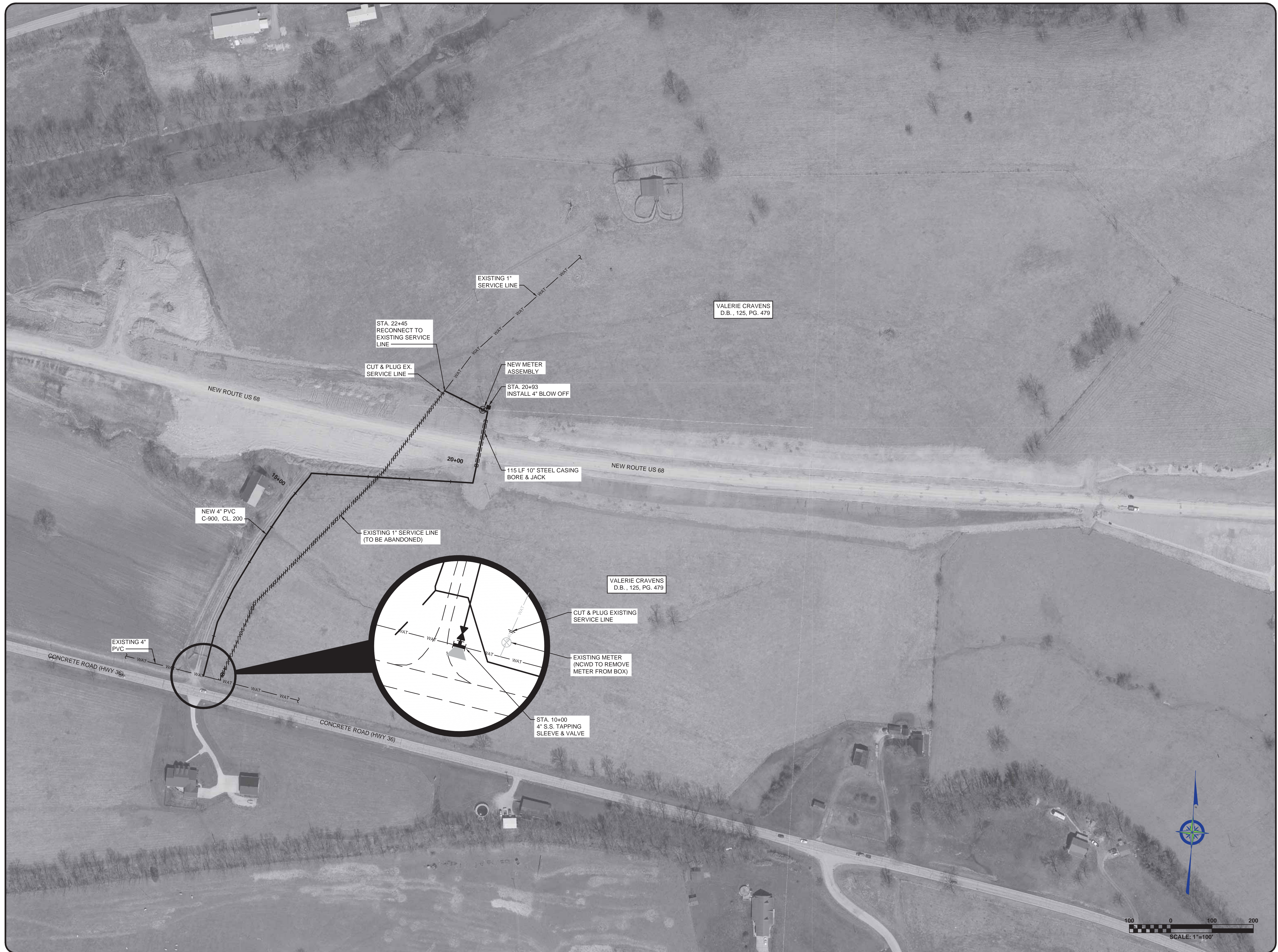
PROJECT #:	20016
DATE:	AUGUST 2022
PROJECT MGR:	LRS
DRAWN BY:	WCM
CHECKED BY:	PBR



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.

IT IS A VIOLATION OF LAW FOR ANY PERSON TO ALTER THIS DRAWING WITHOUT WRITTEN PERMISSION FROM BLUEGRASS ENGINEERING, PLLC AND ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER.

B:\PROJECTS\Nicholas County\20016 - Phase 12 Water System Improvements\Drawings\Contract 1 - Water Lines\concrete-plans.dwg BE 8/29/22



NO.	DATE	REVISIONS	BY

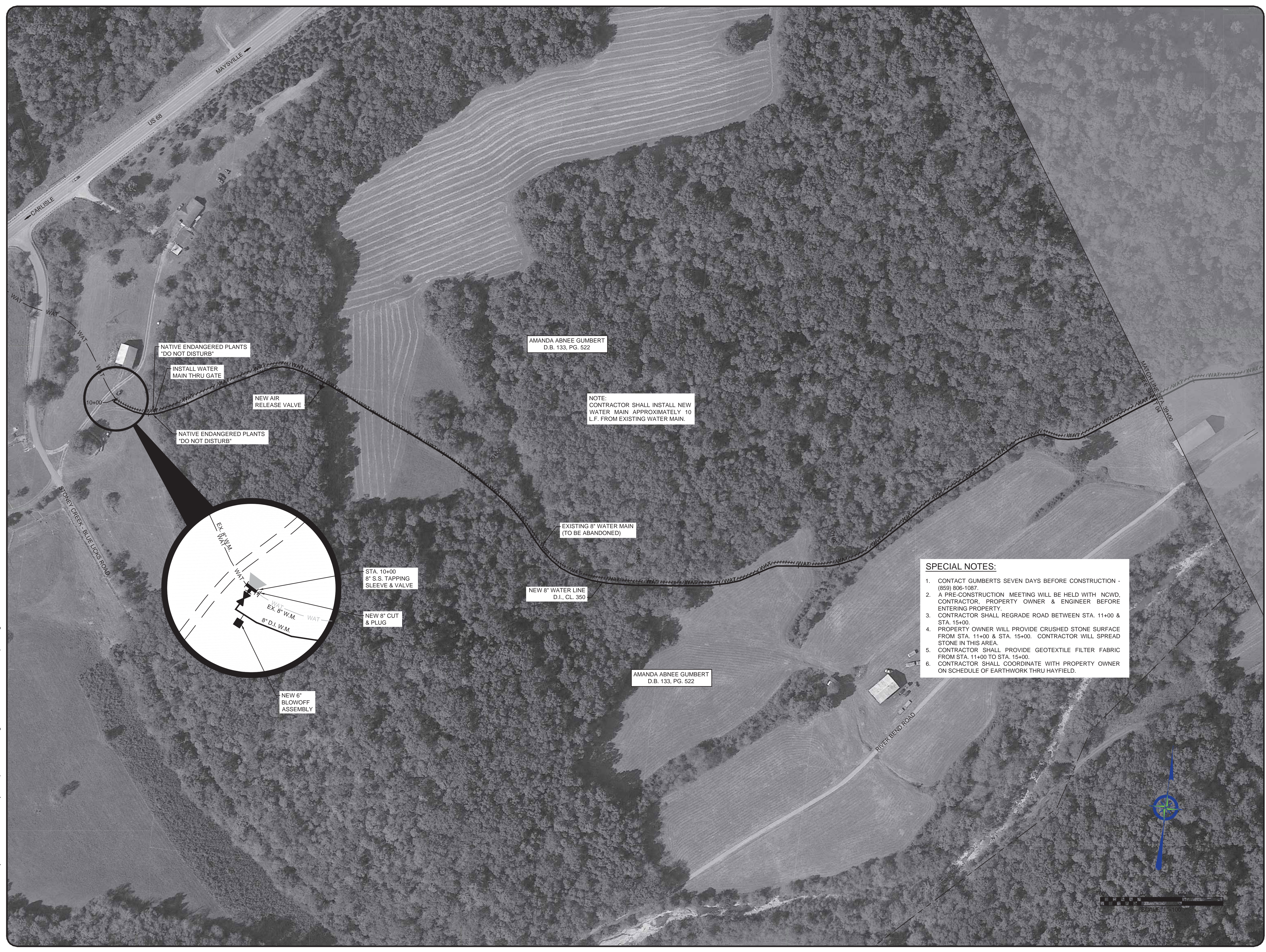
PHASE 12 - WATER SYSTEM IMPROVEMENTS
 KY 36 (CONCRETE ROAD) EXTENSION
 STA. 10+00 TO STA. 22+45



PROJECT #: 20016
 DATE: AUGUST 2022
 PROJECT MGR: LRS
 DRAWN BY: WCM
 CHECKED BY: PBR



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.
 IT IS A VIOLATION OF LAW FOR ANY PERSON TO ALTER THIS DRAWING WITHOUT WRITTEN PERMISSION FROM BLUEGRASS ENGINEERING, PLLC AND ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER.
 B:\PROJECTS\Nicholas County\20016 - Phase 12 Water System Improvements\Drawings\Contract 1 - Water Lines\scott-plans.dwg BE 8/29/22



AMANDA ABNEE GUMBERT
D.B. 133, PG. 522

NOTE:
CONTRACTOR SHALL INSTALL NEW
WATER MAIN APPROXIMATELY 10
L.F. FROM EXISTING WATER MAIN.

EXISTING 8" WATER MAIN
(TO BE ABANDONED)

NEW 8" WATER LINE
D.I., CL 350

AMANDA ABNEE GUMBERT
D.B. 133, PG. 522

SPECIAL NOTES:

1. CONTACT GUMBERTS SEVEN DAYS BEFORE CONSTRUCTION - (859) 806-1087.
2. A PRE-CONSTRUCTION MEETING WILL BE HELD WITH NCWD, CONTRACTOR, PROPERTY OWNER & ENGINEER BEFORE ENTERING PROPERTY.
3. CONTRACTOR SHALL REGRADE ROAD BETWEEN STA. 11+00 & STA. 15+00.
4. PROPERTY OWNER WILL PROVIDE CRUSHED STONE SURFACE FROM STA. 11+00 & STA. 15+00. CONTRACTOR WILL SPREAD STONE IN THIS AREA.
5. CONTRACTOR SHALL PROVIDE GEOTEXTILE FILTER FABRIC FROM STA. 11+00 TO STA. 15+00.
6. CONTRACTOR SHALL COORDINATE WITH PROPERTY OWNER ON SCHEDULE OF EARTHWORK THRU HAYFIELD.

NATIVE ENDANGERED PLANTS
"DO NOT DISTURB"

NATIVE ENDANGERED PLANTS
"DO NOT DISTURB"

INSTALL WATER
MAIN THRU GATE

NEW AIR
RELEASE VALVE

STA. 10+00
8" S.S. TAPPING
SLEEVE & VALVE

NEW 8" CUT
& PLUG

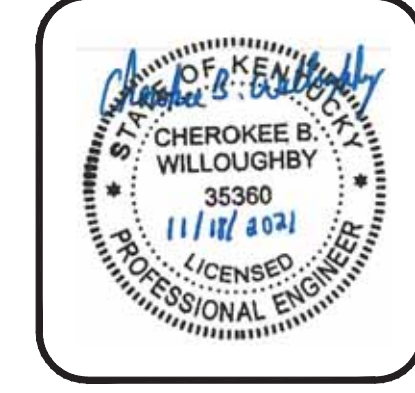
NEW 6"
BLOWOFF
ASSEMBLY

NO.	DATE	REVISIONS	BY

PHASE 12 - WATER SYSTEM
 IMPROVEMENTS CONTRACT 1 -
 WATER MAINS & PUMP STATIONS
 STONEY CREEK SCOTT ROAD REPLACEMENT
 STA. 10+00 TO STA. 39+00



PROJECT #: 20016
 DATE: AUGUST 2022
 PROJECT MGR: LRS
 DRAWN BY: WCM
 CHECKED BY: PBR

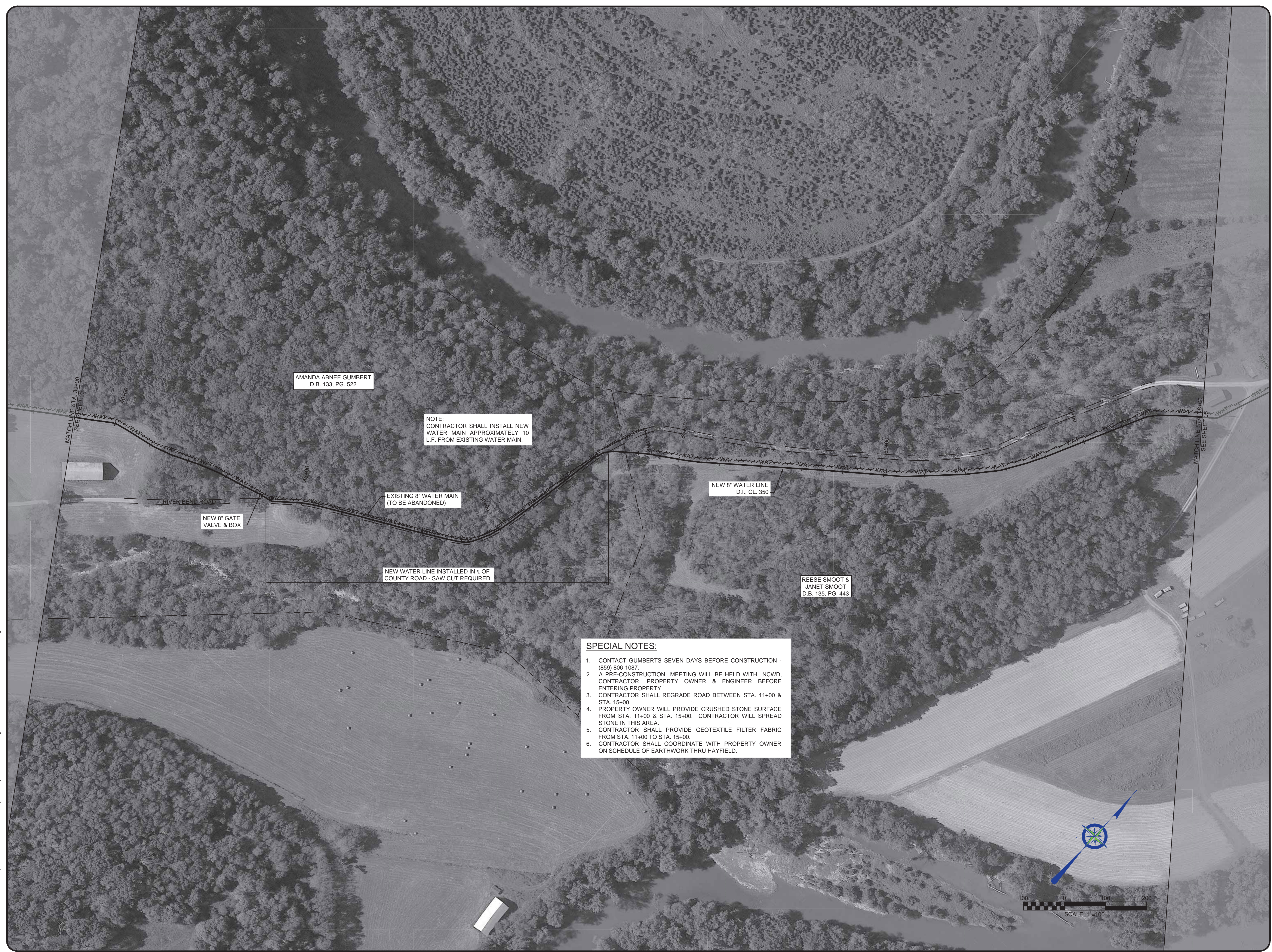


BID SET

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.

IT IS A VIOLATION OF LAW FOR ANY PERSON TO ALTER THIS DRAWING WITHOUT WRITTEN PERMISSION FROM BLUEGRASS ENGINEERING, PLLC AND ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER.

B:\PROJECTS\Nicholas County\20016 - Phase 12 Water System Improvements\Drawings\Contract 1 - Water Lines\scott-plans.dwg BE 8/29/22



AMANDA ABNEE GUMBERT
D.B. 133, PG. 522

NOTE:
CONTRACTOR SHALL INSTALL NEW
WATER MAIN APPROXIMATELY 10
L.F. FROM EXISTING WATER MAIN.

EXISTING 8" WATER MAIN
(TO BE ABANDONED)

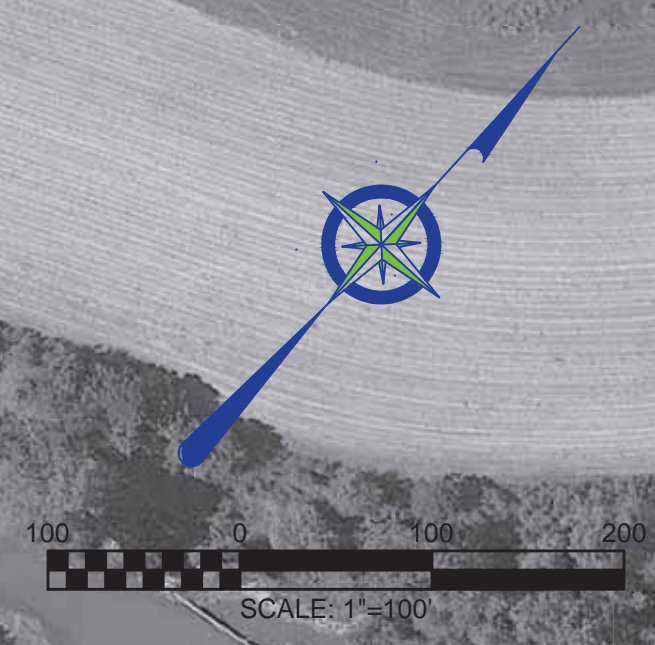
NEW 8" WATER LINE
D.I., CL. 350

NEW 8" GATE
VALVE & BOX

NEW WATER LINE INSTALLED IN 4' OF
COUNTY ROAD - SAW CUT REQUIRED

REESE SMOOT &
JANET SMOOT
D.B. 135, PG. 443

- SPECIAL NOTES:**
1. CONTACT GUMBERTS SEVEN DAYS BEFORE CONSTRUCTION - (859) 806-1087.
 2. A PRE-CONSTRUCTION MEETING WILL BE HELD WITH NCWD, CONTRACTOR, PROPERTY OWNER & ENGINEER BEFORE ENTERING PROPERTY.
 3. CONTRACTOR SHALL REGRADE ROAD BETWEEN STA. 11+00 & STA. 15+00.
 4. PROPERTY OWNER WILL PROVIDE CRUSHED STONE SURFACE FROM STA. 11+00 & STA. 15+00. CONTRACTOR WILL SPREAD STONE IN THIS AREA.
 5. CONTRACTOR SHALL PROVIDE GEOTEXTILE FILTER FABRIC FROM STA. 11+00 TO STA. 15+00.
 6. CONTRACTOR SHALL COORDINATE WITH PROPERTY OWNER ON SCHEDULE OF EARTHWORK THRU HAYFIELD.

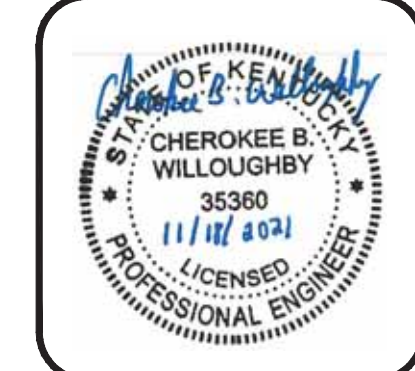


NO.	DATE	REVISIONS	BY

PHASE 12 - WATER SYSTEM
IMPROVEMENTS CONTRACT 1 -
WATER MAINS & PUMP STATIONS
STONEY CREEK SCOTT ROAD REPLACEMENT
STA. 39+00 TO STA. 68+00

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

PROJECT #: 20016
DATE: AUGUST 2022
PROJECT MGR: LRS
DRAWN BY: WCM
CHECKED BY: PBR



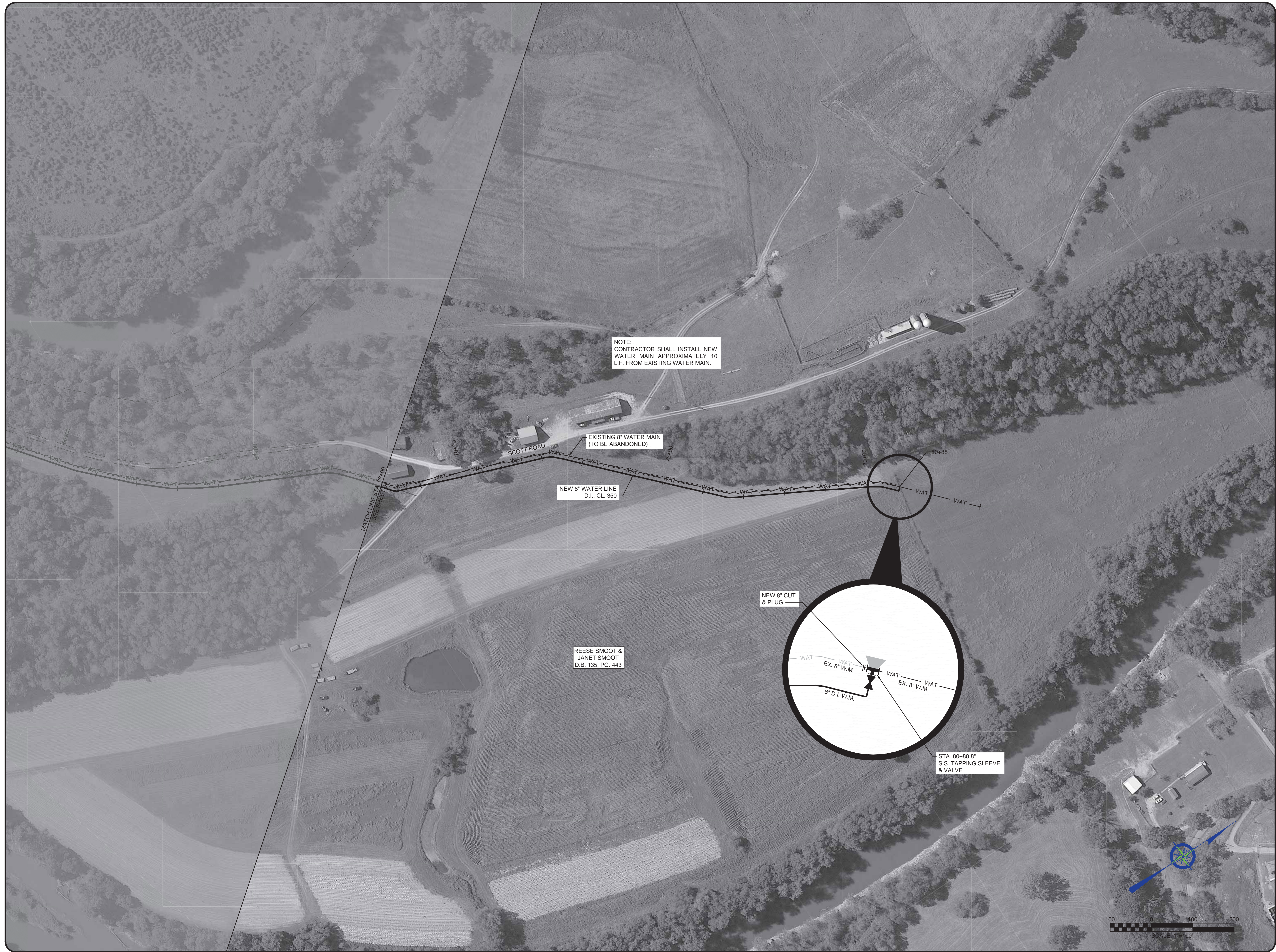
BID SET

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.

IT IS A VIOLATION OF LAW FOR ANY PERSON TO ALTER THIS DRAWING WITHOUT WRITTEN PERMISSION FROM BLUEGRASS ENGINEERING, PLLC AND ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER.

BE 82922Z

B:\PROJECTS\Nicholas County\20016 - Phase 12 Water System Improvements\Drawings\Contract 1 - Water Lines\scott-plans.dwg



NOTE:
CONTRACTOR SHALL INSTALL NEW
WATER MAIN APPROXIMATELY 10
L.F. FROM EXISTING WATER MAIN.

EXISTING 8" WATER MAIN
(TO BE ABANDONED)

NEW 8" WATER LINE
D.I., CL. 350

REESE SMOOT &
JANET SMOOT
D.B. 135, PG. 443

NEW 8" CUT
& PLUG

STA. 80+88.8"
S.S. TAPPING SLEEVE
& VALVE

NO.	DATE	REVISIONS	BY

PHASE 12 - WATER SYSTEM
IMPROVEMENTS CONTRACT 1 -
WATER MAINS & PUMP STATIONS
STONEY CREEK SCOTT ROAD REPLACEMENT
STA. 68+00 TO STA. 80+88



PROJECT #: 20016
DATE: AUGUST 2022
PROJECT MGR: LRS
DRAWN BY: WCM
CHECKED BY: PBR



05

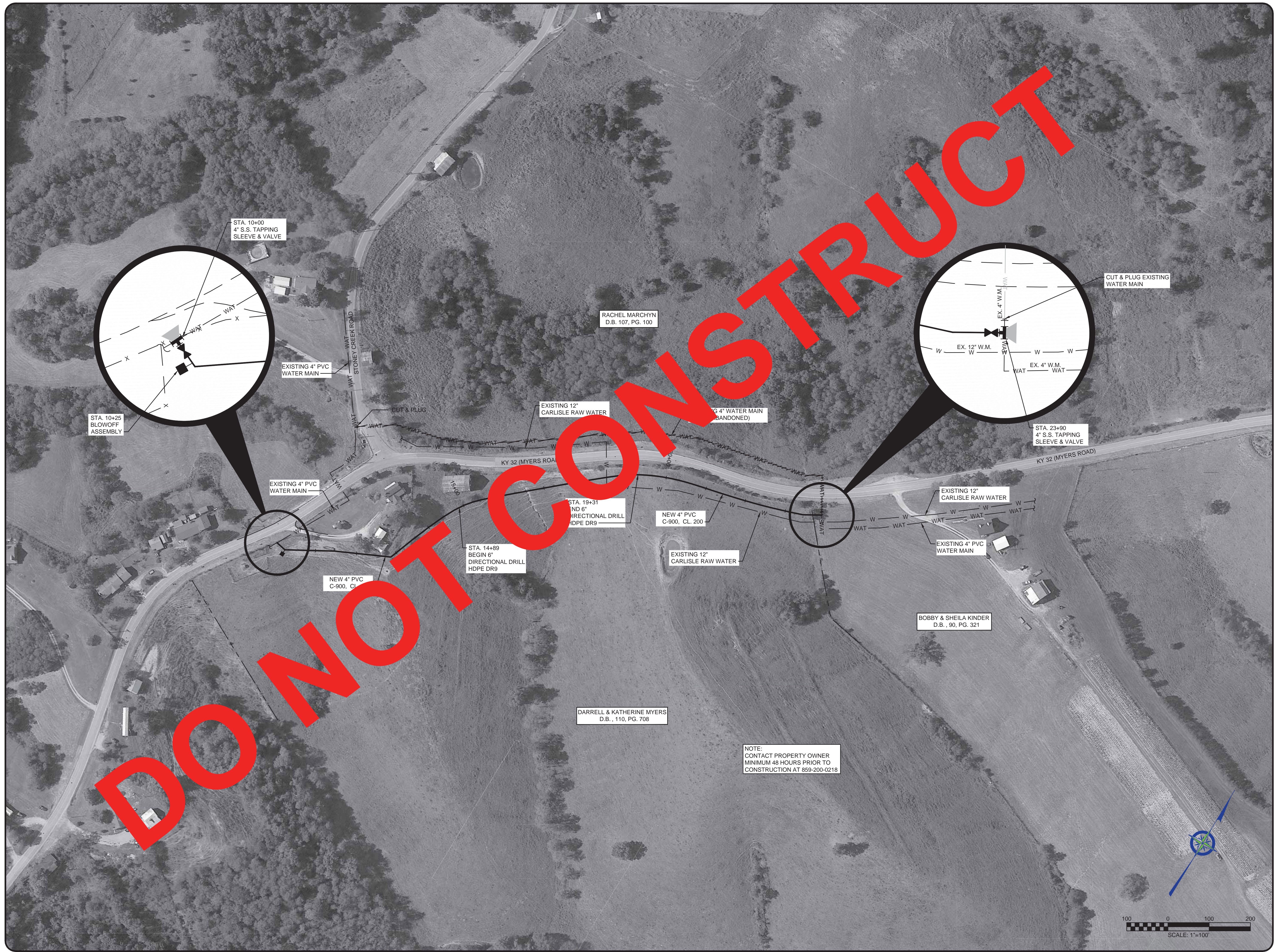
BID SET

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.

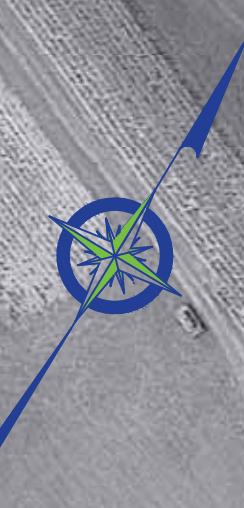
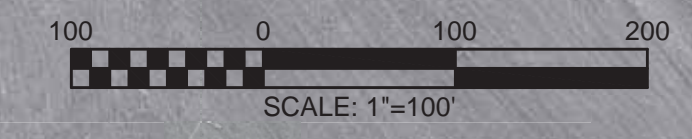
IT IS A VIOLATION OF LAW FOR ANY PERSON TO ALTER THIS DRAWING WITHOUT WRITTEN PERMISSION FROM BLUEGRASS ENGINEERING, PLLC AND ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER.

BE 8/29/22

B:\PROJECTS\Nicholas County\20016 - Phase 12 Water System Improvements\Drawings\Contract 1 - Water Lines\myers-plans.dwg



DO NOT CONSTRUCT



NOTE:
CONTACT PROPERTY OWNER
MINIMUM 48 HOURS PRIOR TO
CONSTRUCTION AT 859-200-0218

DARRELL & KATHERINE MYERS
D.B., 110, PG. 708

BOBBY & SHEILA KINDER
D.B., 90, PG. 321

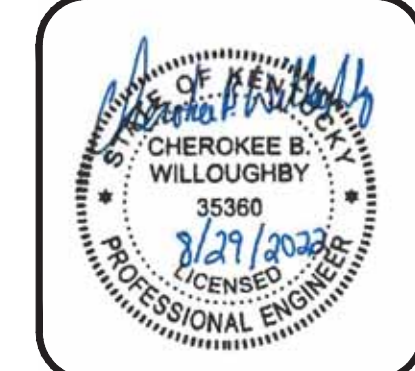
RACHEL MARCHYN
D.B. 107, PG. 100

NO.	DATE	REVISIONS	BY

PHASE 12 - WATER SYSTEM IMPROVEMENTS
MYERS ROAD REPLACEMENT
STA. 10+00 TO STA. 23+90



PROJECT #: 20016
DATE: AUGUST 2022
PROJECT MGR: LRS
DRAWN BY: WCM
CHECKED BY: PBR



06

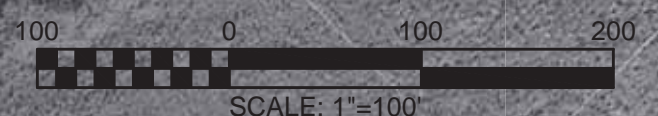
BID SET

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.

IT IS A VIOLATION OF LAW FOR ANY PERSON TO ALTER THIS DRAWING WITHOUT WRITTEN PERMISSION FROM BLUEGRASS ENGINEERING, PLLC AND ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER.

BE 8/29/22

B:\PROJECTS\Nicholas County\20016 - Phase 12 Water System Improvements\Drawings\Contract 1 - Water Lines\headquarters plans.dwg



NO.	DATE	REVISIONS	BY

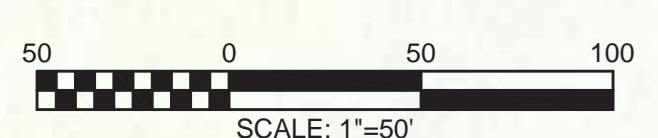
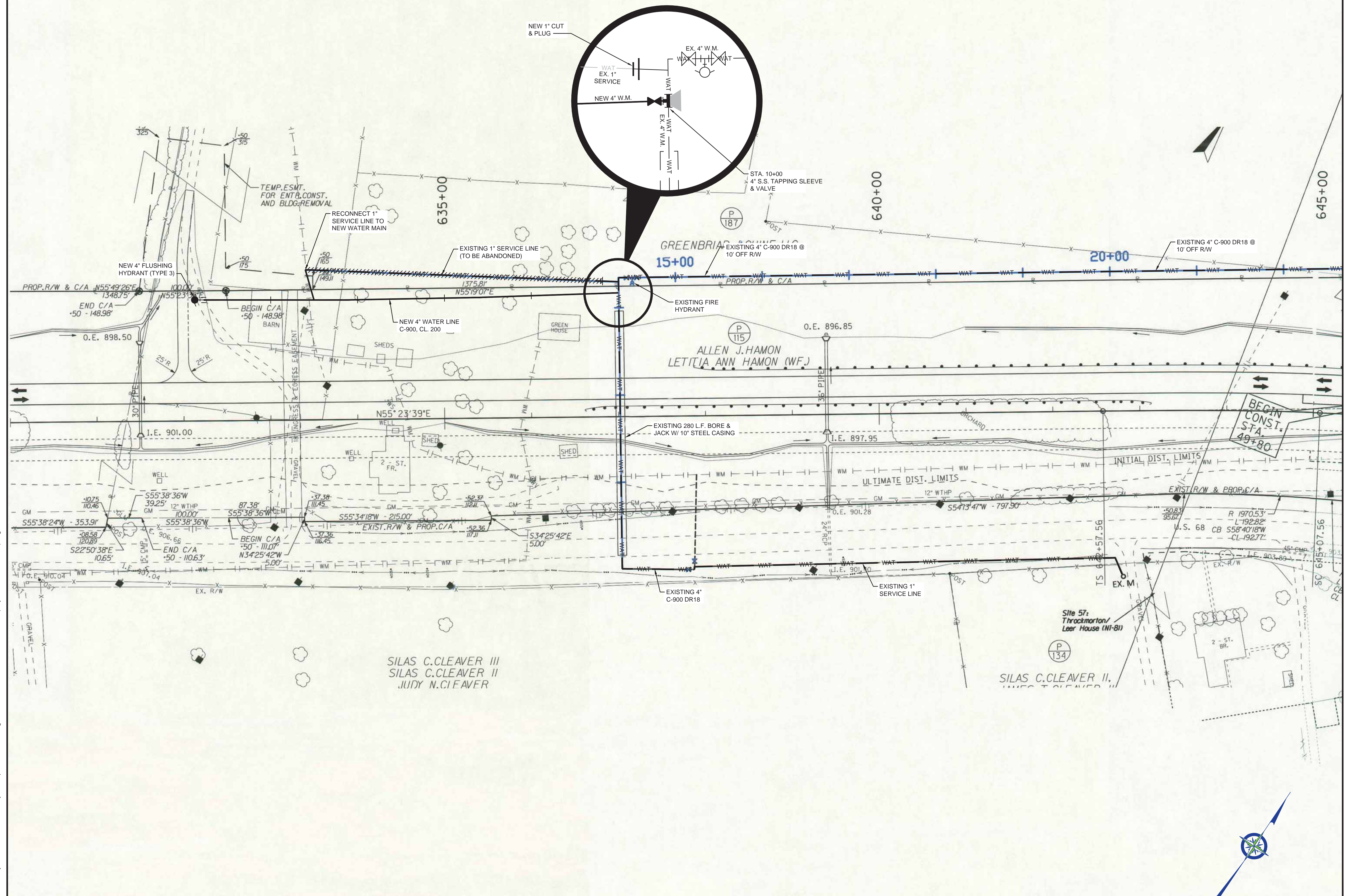
PHASE 12 - WATER SYSTEM IMPROVEMENTS
HEADQUARTERS ROAD

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

PROJECT #: 20016
DATE: AUGUST 2022
PROJECT MGR: LRS
DRAWN BY: WCM
CHECKED BY: PBR



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.
 IT IS A VIOLATION OF LAW FOR ANY PERSON TO ALTER THIS DRAWING WITHOUT WRITTEN PERMISSION FROM BLUEGRASS ENGINEERING, PLLC AND ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER.
 B:\PROJECTS\Nicholas County\20016 - Phase 12 Water System Improvements\Drawings\Contract 1 - Water Lines\2016-01-US 68 (Maysville Road Extension).dwg BE 8/29/22



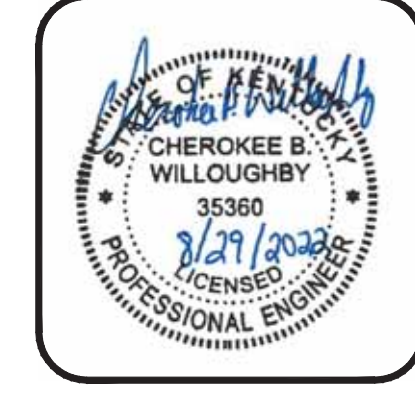
NO.	DATE	REVISIONS	BY

PHASE 12 - WATER SYSTEM IMPROVEMENTS
 US 68 (MAYSVILLE) ROAD EXTENSION

BLUEGRASS ENGINEERING, PLLC

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

PROJECT #:	20016
DATE:	AUGUST 2022
PROJECT MGR:	LRS
DRAWN BY:	WCM
CHECKED BY:	PBR



BID SET

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.

IT IS A VIOLATION OF LAW FOR ANY PERSON TO ALTER THIS DRAWING WITHOUT WRITTEN PERMISSION FROM BLUEGRASS ENGINEERING, PLLC AND ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER.

BE 829222

B:\PROJECTS\Nicholas County\20016 - Phase 12 Water System Improvements\Drawings\Contract 1 - Water Lines\maysville-plans.dwg



NO.	DATE	REVISIONS	BY

PHASE 12 - WATER SYSTEM IMPROVEMENTS
US 68 (MAYSVILLE) ROAD

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

PROJECT #: 20016
 DATE: AUGUST 2022
 PROJECT MGR: LRS
 DRAWN BY: WCM
 CHECKED BY: PBR

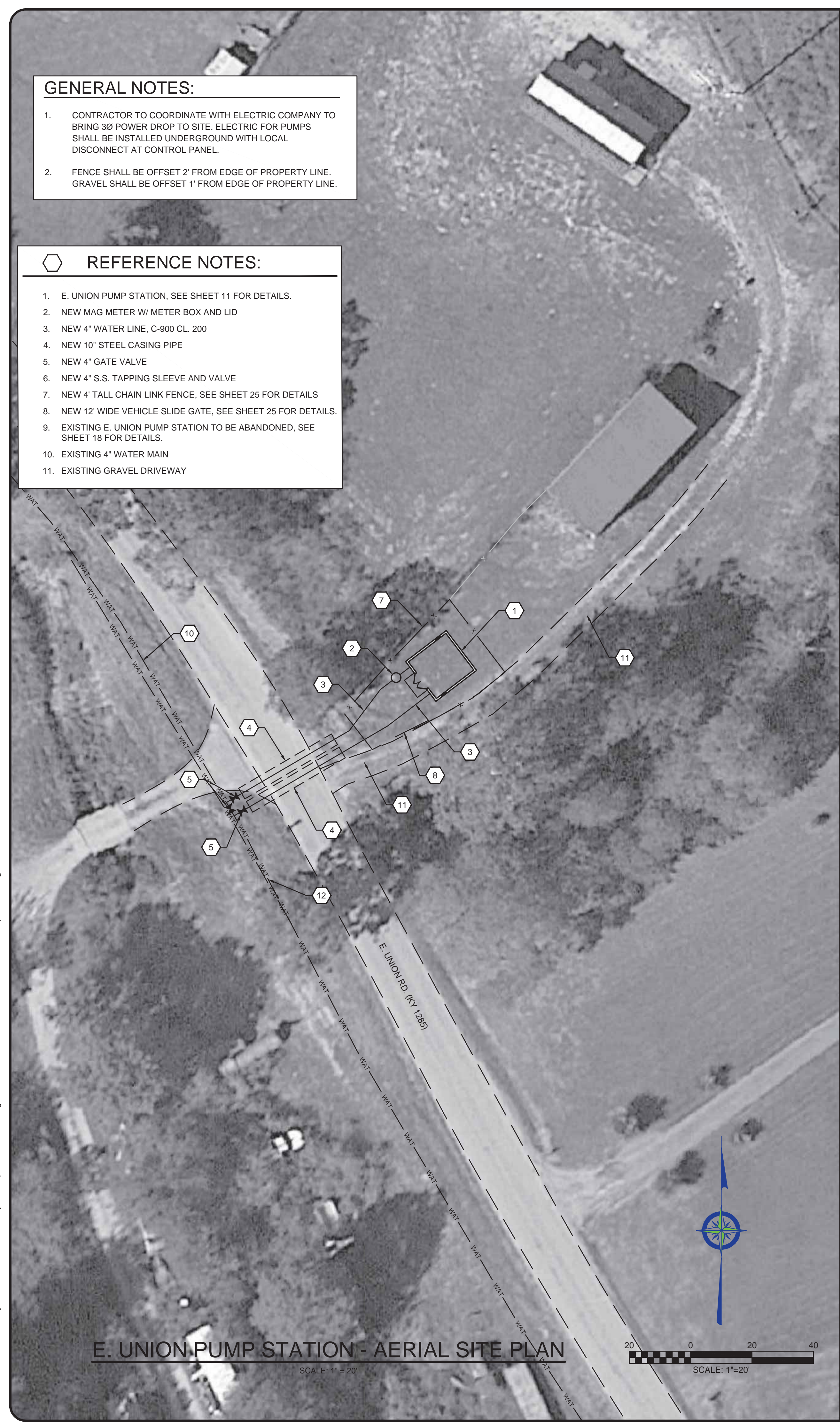


BID SET

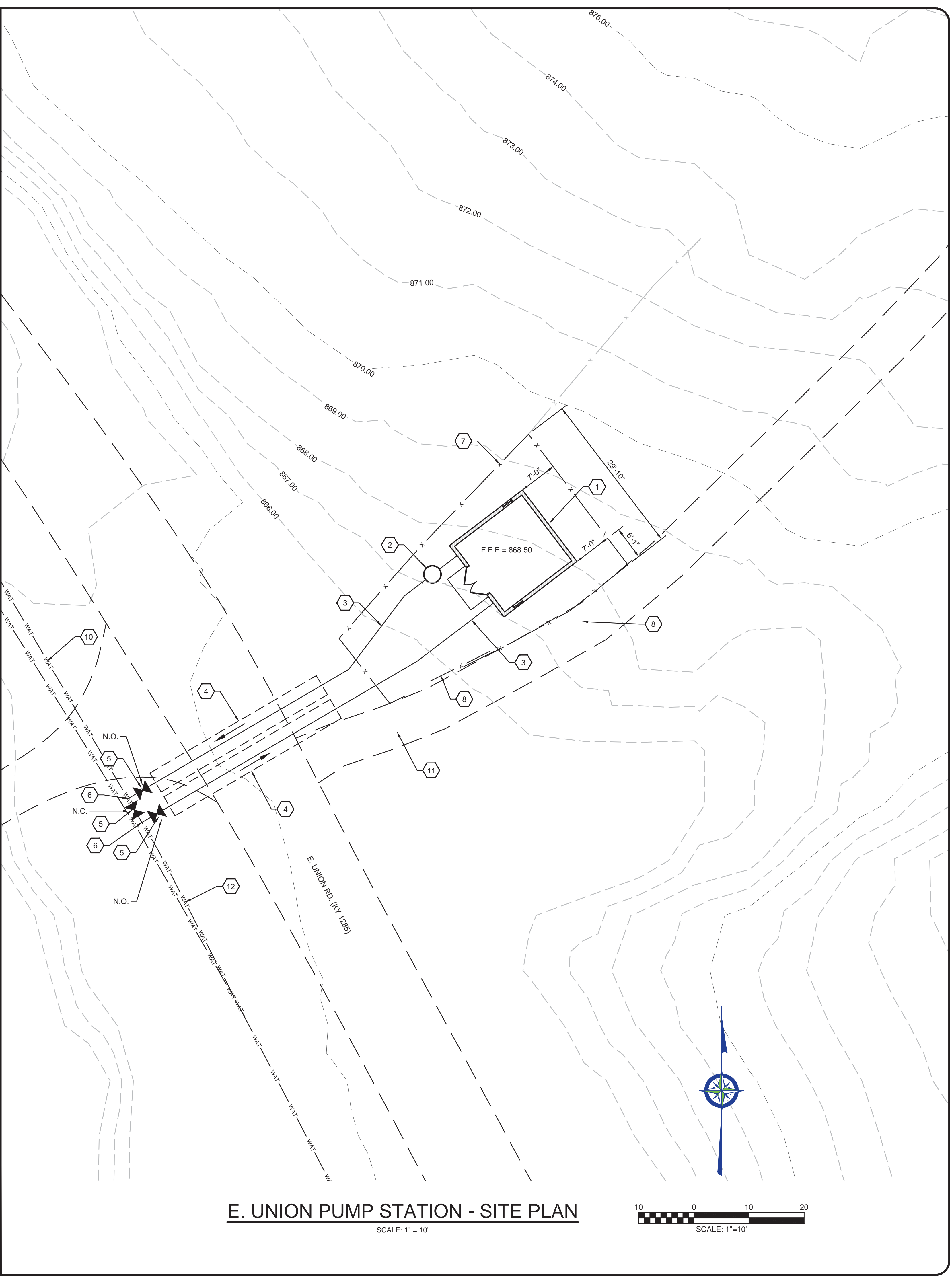
THIS DRAWING HAS BEEN PREPARED AT THE SCALE INDICATED. REPRODUCTION OF THIS DRAWING MAY INTRODUCE INACCURACIES OF THE LISTED SCALE. THE GRAPHIC SCALE BAR SHALL BE USED TO DETERMINE THE ACTUAL SCALE.
 IT IS A VIOLATION OF LAW FOR ANY PERSON TO ALTER THIS DRAWING WITHOUT WRITTEN PERMISSION FROM BLUEGRASS ENGINEERING, PLLC AND ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER.
 BE 829222
 B:\PROJECTS\Nicholas County\20016 - Phase 12 Water System Improvements\Drawings\Contract 1 - Water Lines\20016-01-E. Union Pump Station.dwg

- GENERAL NOTES:**
- CONTRACTOR TO COORDINATE WITH ELECTRIC COMPANY TO BRING 3Ø POWER DROP TO SITE. ELECTRIC FOR PUMPS SHALL BE INSTALLED UNDERGROUND WITH LOCAL DISCONNECT AT CONTROL PANEL.
 - FENCE SHALL BE OFFSET 2' FROM EDGE OF PROPERTY LINE. GRAVEL SHALL BE OFFSET 1' FROM EDGE OF PROPERTY LINE.

- REFERENCE NOTES:**
- E. UNION PUMP STATION, SEE SHEET 11 FOR DETAILS.
 - NEW MAG METER W/ METER BOX AND LID
 - NEW 4" WATER LINE, C-900 CL. 200
 - NEW 10" STEEL CASING PIPE
 - NEW 4" GATE VALVE
 - NEW 4" S.S. TAPPING SLEEVE AND VALVE
 - NEW 4" TALL CHAIN LINK FENCE, SEE SHEET 25 FOR DETAILS
 - NEW 12' WIDE VEHICLE SLIDE GATE, SEE SHEET 25 FOR DETAILS.
 - EXISTING E. UNION PUMP STATION TO BE ABANDONED, SEE SHEET 18 FOR DETAILS.
 - EXISTING 4" WATER MAIN
 - EXISTING GRAVEL DRIVEWAY



E. UNION PUMP STATION - AERIAL SITE PLAN
SCALE: 1"=20'



E. UNION PUMP STATION - SITE PLAN
SCALE: 1"=10'

NO.	DATE	REVISIONS	BY

PHASE 12 - WATER SYSTEM IMPROVEMENTS
EAST UNION PUMP STATION



PROJECT #: 20016
 DATE: AUGUST 2022
 PROJECT MGR: LRS
 DRAWN BY: WCM
 CHECKED BY: PBR



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.

IT IS A VIOLATION OF LAW FOR ANY PERSON TO ALTER THIS DRAWING WITHOUT WRITTEN PERMISSION FROM BLUEGRASS ENGINEERING, PLLC AND ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER.

B:\PROJECTS\Nicholas County\20016 - Phase 12 Water System Improvements\Drawings\Contract 1 - Water Lines\20016-01-E Union Pump Station.dwg BE 8/29/22

GENERAL NOTES:

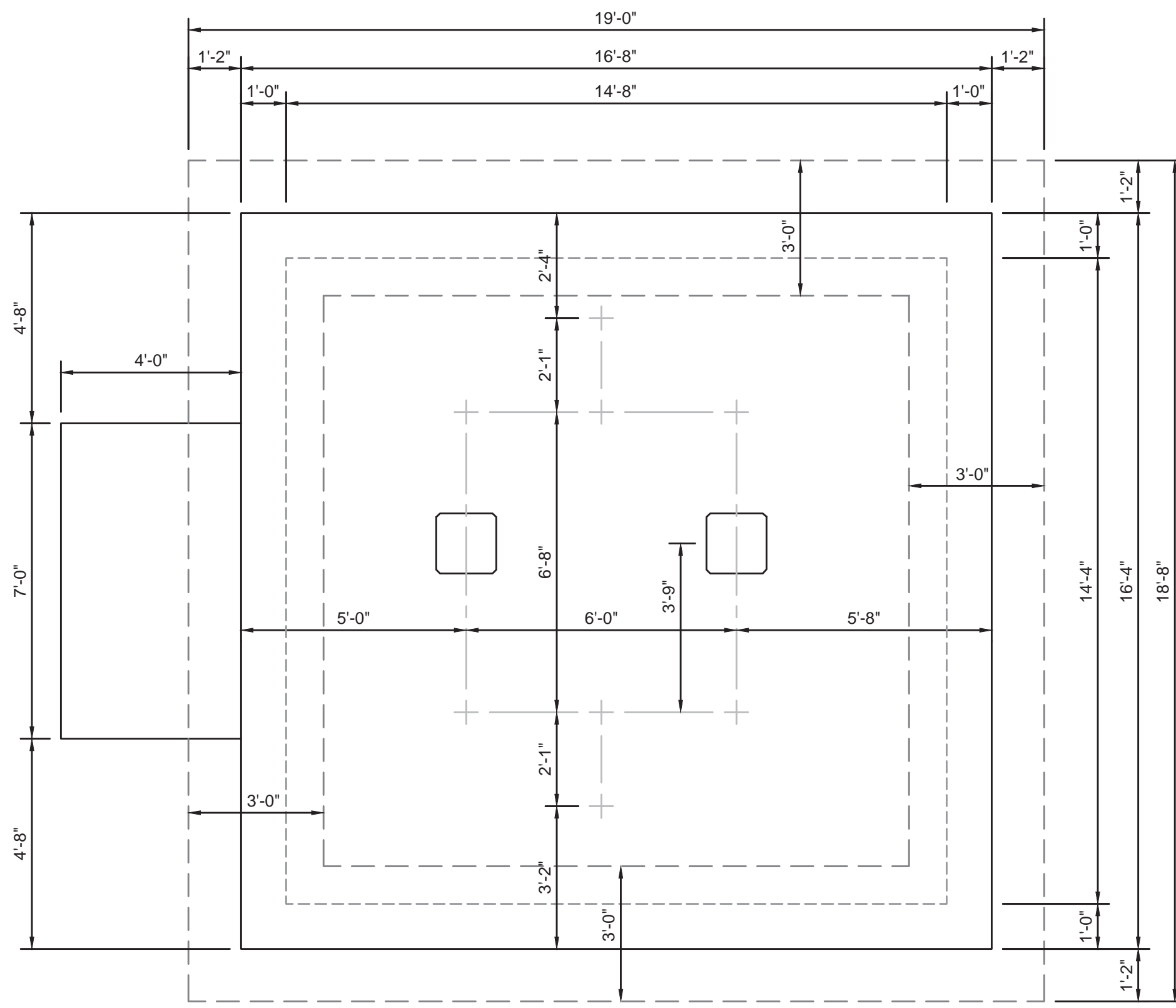
- SEE ELECTRIC DRAWINGS FOR ELECTRICAL SERVICE.
- VERTICAL REINFORCEMENT: PROVIDE #5 @ 32" C/C VERTICAL IN SOLID GROUTED CELLS. LAP 24" WITH FOUNDATION DOWEL. PROVIDE #5 VERTICAL IN GROUTED CELL ALONG EACH SIDE OF ALL PENINGS; AT CORNERS & AT ENDS OF WALLS. THE BARS ARE TO BE FULL WALL HEIGHT & LAP FOUNDATION DOWEL.
- HORIZONTAL REINFORCEMENT: PROVIDE W1.7 LADDER SYLE JOINT REINFORCING @ 16" C/C & WITHIN 8" OF THE TOP & BOTTOM OF ALL WALLS. PROVIDE (2) #4 BARS IN GROUTED BOND BEAM ALONG TOP OF WALLS. PROVIDE CORNER BARS FOR BOND BEAM LAP (24"). PROVIDE (2) #5 BARS ABOVE & BELOW ALL OPENINGS. EXTEND REINFORCING A MINIMUM OF 24" OR TERMINATE WITH 90° STANDARD HOOK IF INSUFFICIENT DEVELOPMENT LENGTH EXISTS.
- CONTRACTOR TO PROVIDE COLOR SAMPLES OF SPLIT FACE CMU, GROUT, & METAL SEAM ROOF FOR OWNER SELECTION PRIOR TO ORDERING MATERIALS.
- NEW BOOSTER PUMPS TO BE CONTROLLED VIA RTU LOCATED OFF OF COMMON DISCHARGE HEADER.

MASONRY FILL INSULATION:

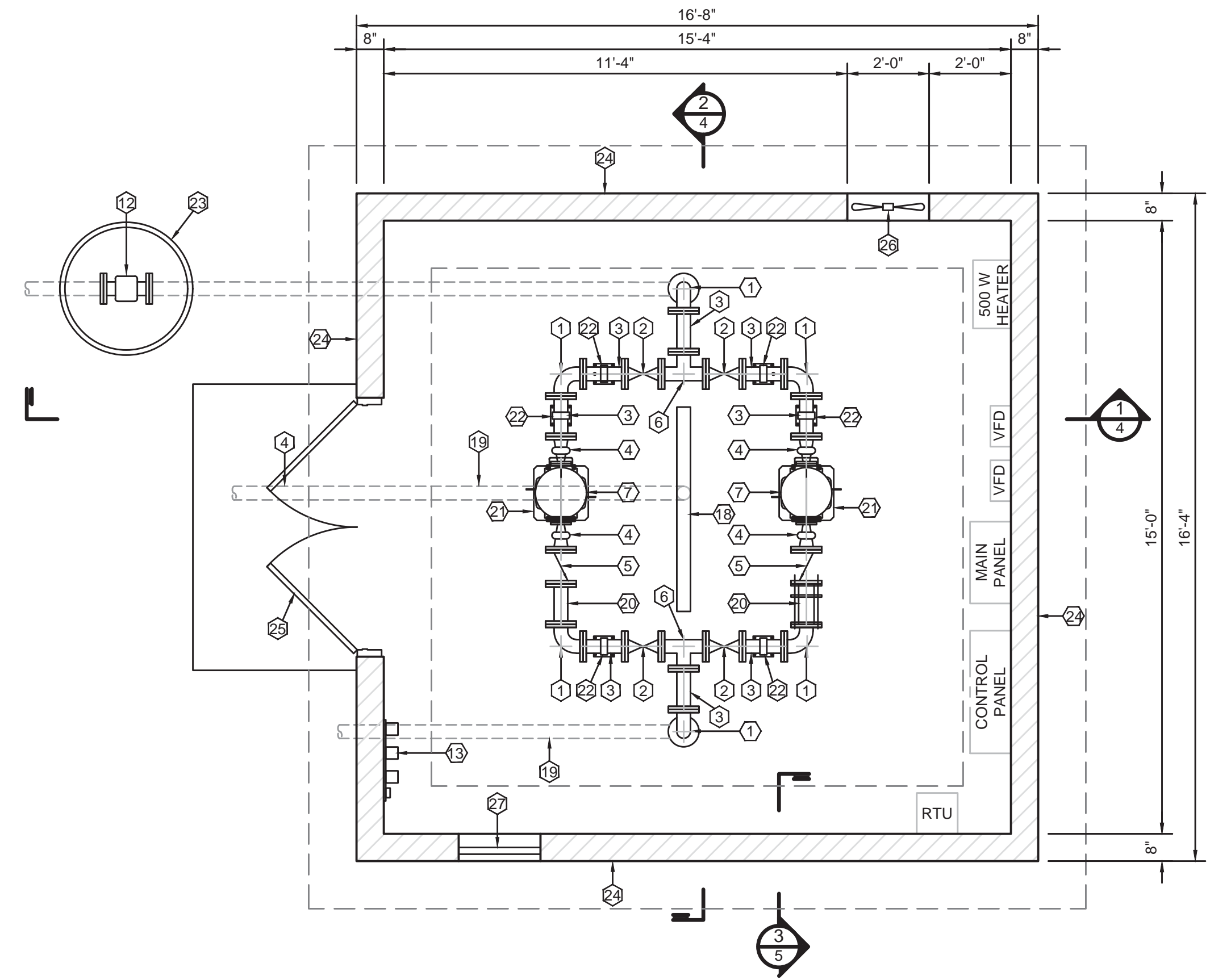
- INSTALL INSULATION IN MASONRY UNIT CELLS OF ALL WALLS.
- PRODUCTS SHALL BE ICON, KOR-FIL FOAM, GRANULAR FILL, OR APPROVED EQUAL.
- GRANULAR FILL INSULATION:
 - VERIFY THAT HOLES AND OPENINGS HAVE BEEN SEALED TO PREVENT ESCAPE OF INSULATION.
 - PLACE MASONRY FILL INSULATION IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTION.
 - ENSURE SPACES ARE FREE OF MORTAR TO ALLOW FREE FLOW OF INSULATION.
 - PLACE AS MASONRY IS ERRECTED, COMPLETELY FILLING SPACE. PLACE IN LIFTS AND ROD TO ELIMINATE AIR POCKETS. PLACE PRIOR TO COVERING CORES WITH BOND BEAMS OR LINTELS.
 - PLACE TEMPORARY SIGNS ON FACE OF INSULATED WALLS WARNING WORKERS TO USE CAUTION TO PREVENT LOSS OF INSULATION IF CUTTING INTO WALLS.

SHEET KEYNOTES:

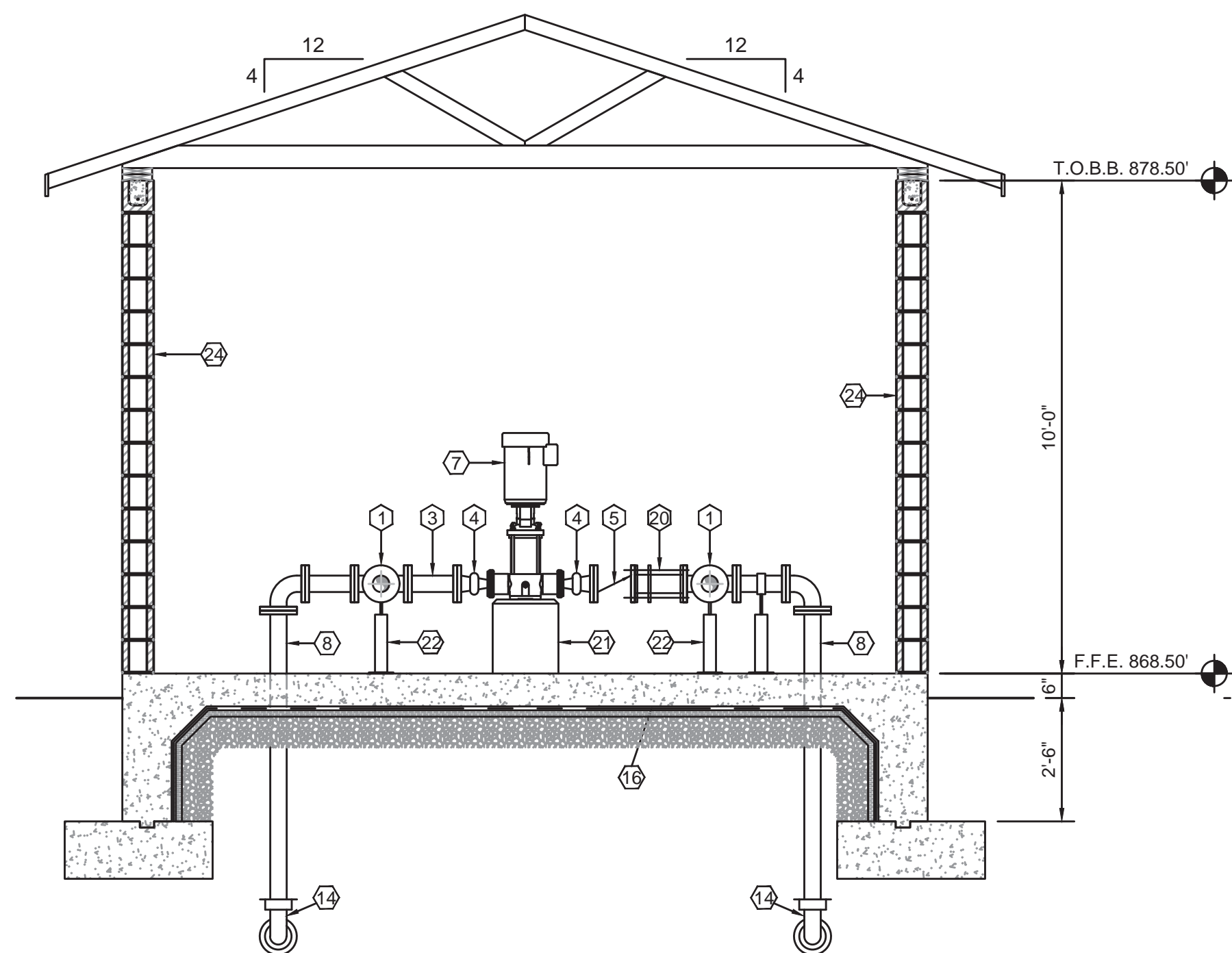
- 4" D.I. FLG'D 90°
- 4" FLG'D GATE VALVE W/ HANDWHEEL
- 4" FLG'D SPOOL PIPE
- 4"x2" FLG'D ECENTRIC REDUCER BY PROCO
- 4" FLG'D SILENT CHECK VALVE W/ WEIGHTED SWING AM
- 4" FLG'D D.I. TEE
- NEW GRUNDFOS 30HP PUMP
- 4" D.I. FLG'D x P.E. PIPE
- 3/4" BALL VALVE W/ HOSE BIBB
- 150 WATT DOME LIGHT
- 4" SCH. 80 PVC DRAIN LINE, FIELD LOCATE AND DRAIN TO DAYLIGHT
- MAG METER AND METER BOX
- PRESSURE GAUGE MOUNTING PANEL
- 4" D.I. M.J. 90°
- ROUGHENED JOINT
- 15 MIL VAPOR BARRIER
- R-5 RIGID CLOSED CELL INSULATION
- 4" WIDE TRENCH DRAIN
- 4" D.I.M.J. PIPE
- 4" D.I. FLG'D DISMANTLING JOINT
- CONCRETE PUMP STAND
- PIPE SUPPORT
- METER BOX AND LID
- 8" C.M.U. WALL
- 36" STEEL DOUBLE DOOR
- FAN
- LOUVER



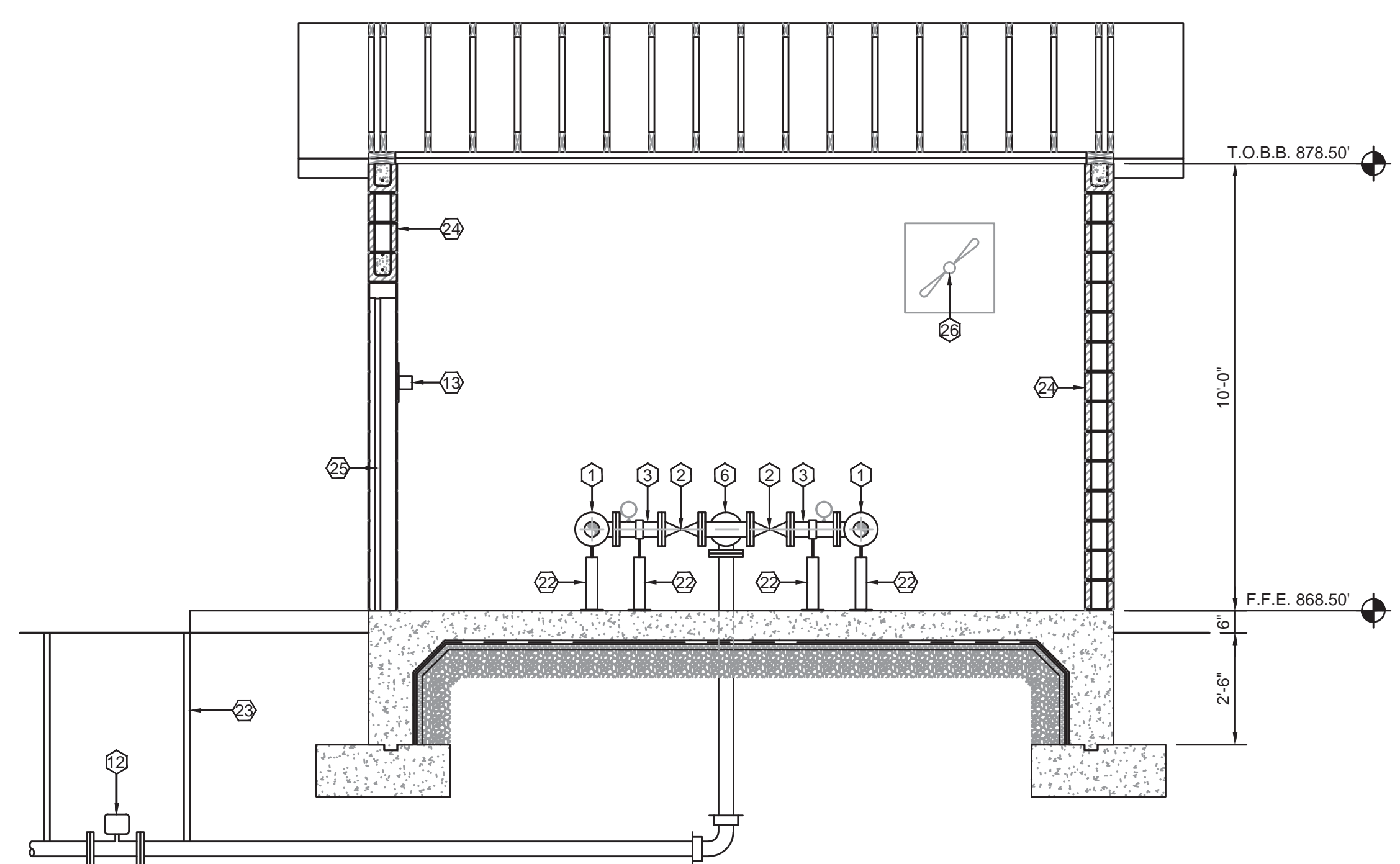
PLAN - SLAB & FOUNDATION
SCALE: 3/8" = 1'-0"



PLAN VIEW - BOOSTER STATION
SCALE: 3/8" = 1'-0"



WALL SECTION
SCALE: 3/8" = 1'-0"



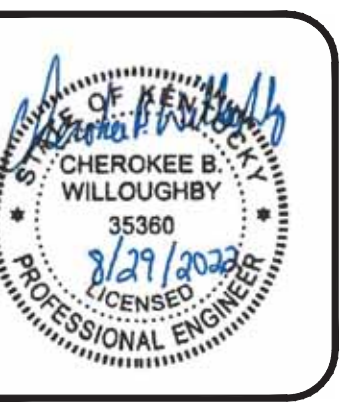
WALL SECTION
SCALE: 3/8" = 1'-0"

NO.	DATE	BY

PHASE 12 - WATER SYSTEM IMPROVEMENTS
EAST UNION PUMP STATION

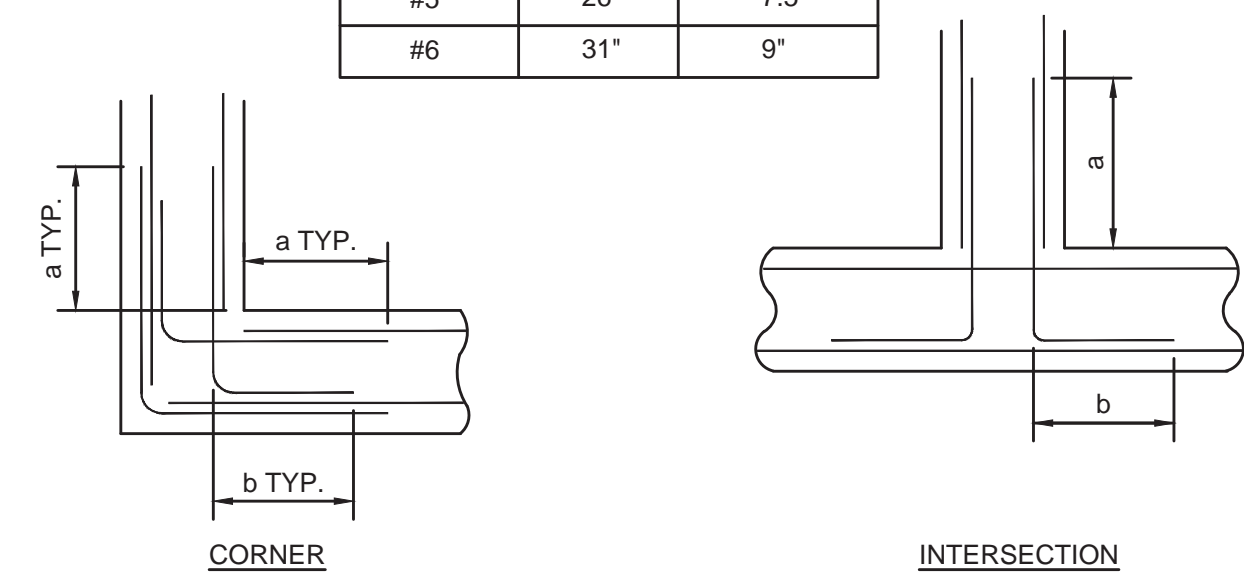
BLUEGRASS ENGINEERING PLLC
222 East Main Street, Ste. 1 • Georgetown, KY 40324

PROJECT #: 20016
DATE: AUGUST 2022
PROJECT MGR: LRS
DRAWN BY: WCM
CHECKED BY: PBR

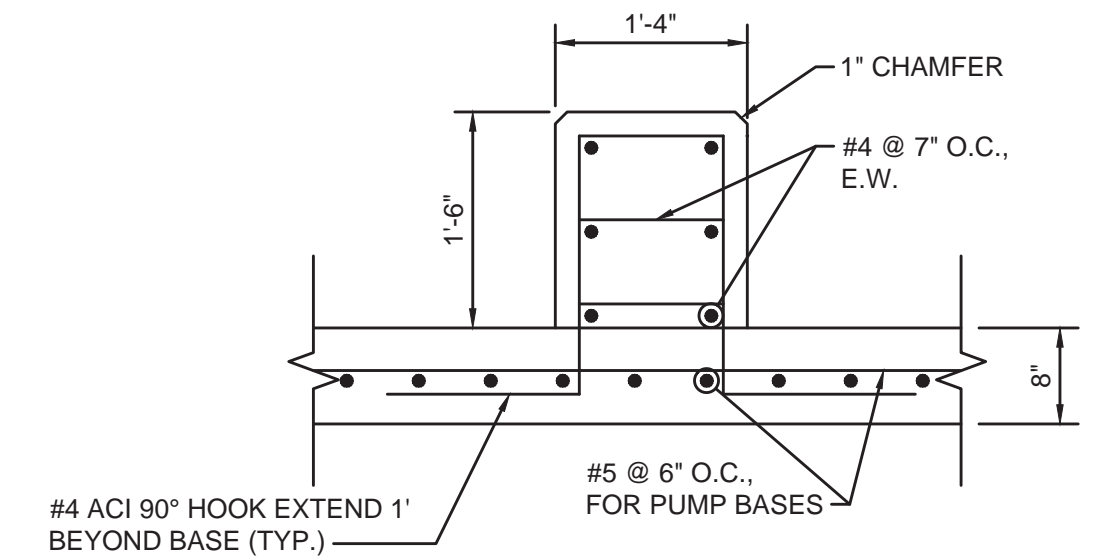


THIS DRAWING HAS BEEN PREPARED AT THE SCALE INDICATED. REPRODUCTION OF THIS DRAWING MAY INTRODUCE INACCURACIES OF THE LISTED SCALE. THE GRAPHIC SCALE BAR SHALL BE USED TO DETERMINE THE ACTUAL SCALE.
 IT IS A VIOLATION OF LAW FOR ANY PERSON TO ALTER THIS DRAWING WITHOUT WRITTEN PERMISSION FROM BLUEGRASS ENGINEERING, PLLC AND ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER.
 B:\PROJECTS\Nicholas County\20016 - Phase 12 Water System Improvements\Drawings\Contract 1 - Water Lines\20016-01-E. Union Pump Station.dwg BE 8/29/22

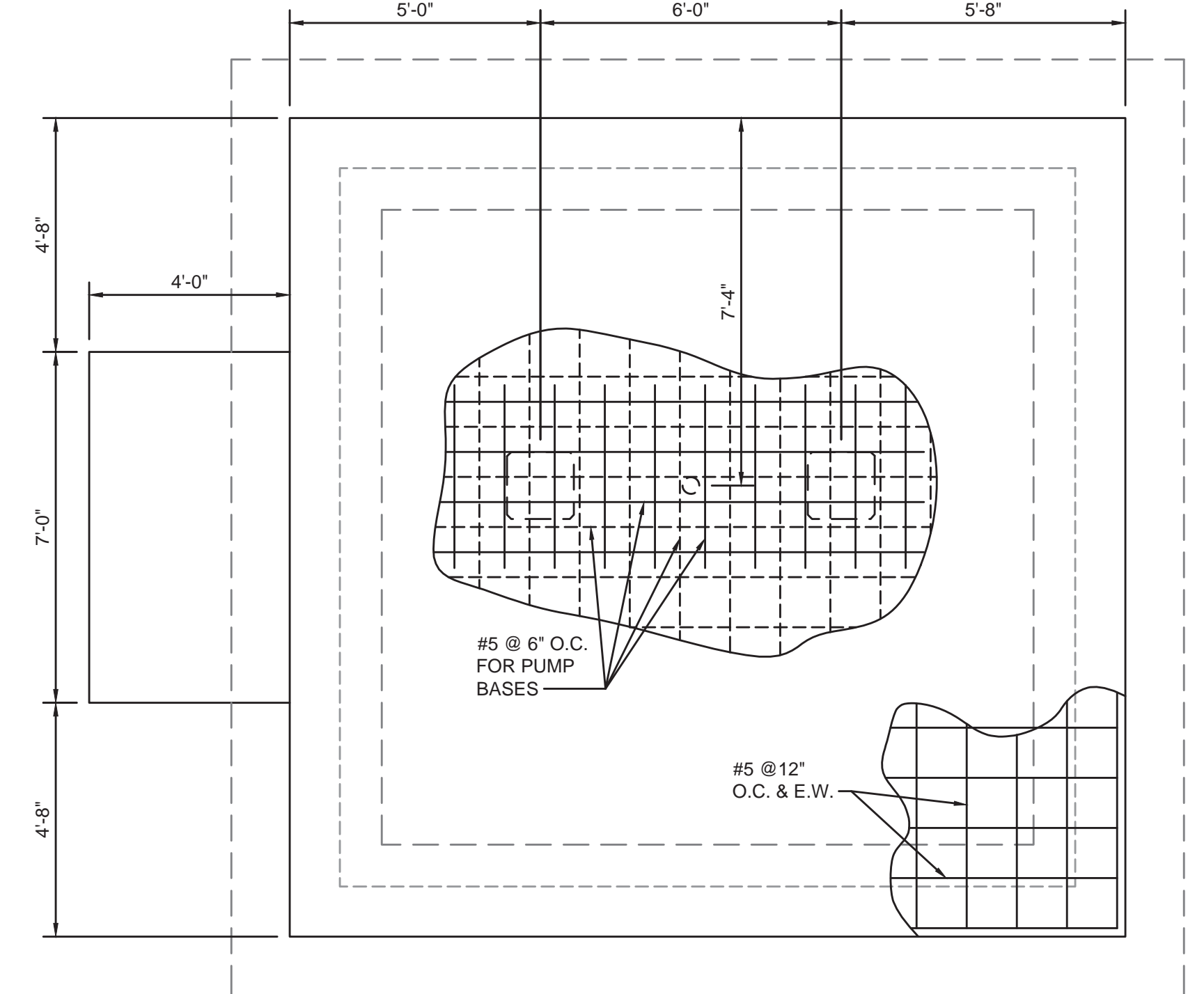
BAR SIZE	a	b
#4	21"	6"
#5	26"	7.5"
#6	31"	9"



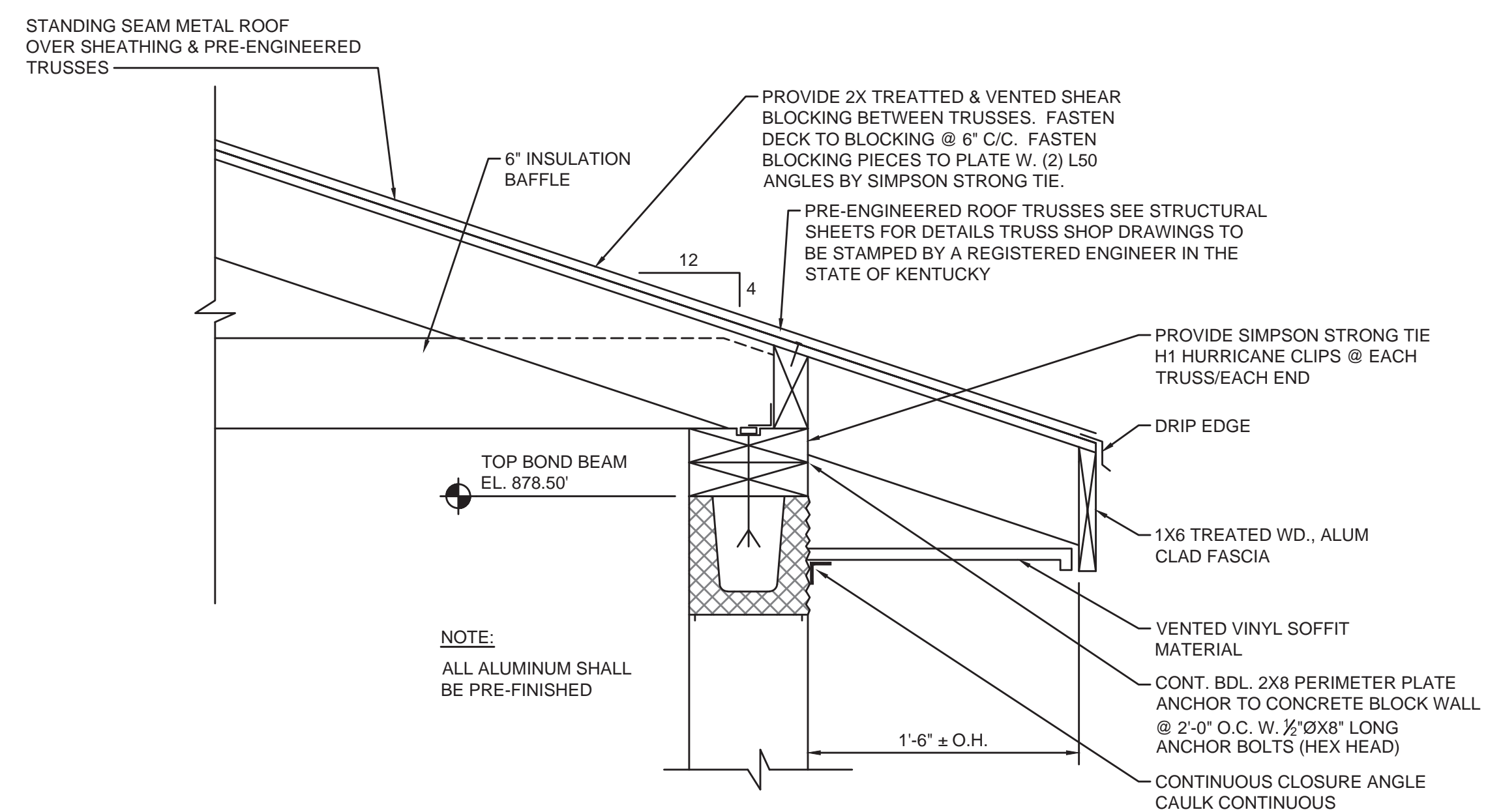
FOUNDATION DETAILS
NOT TO SCALE



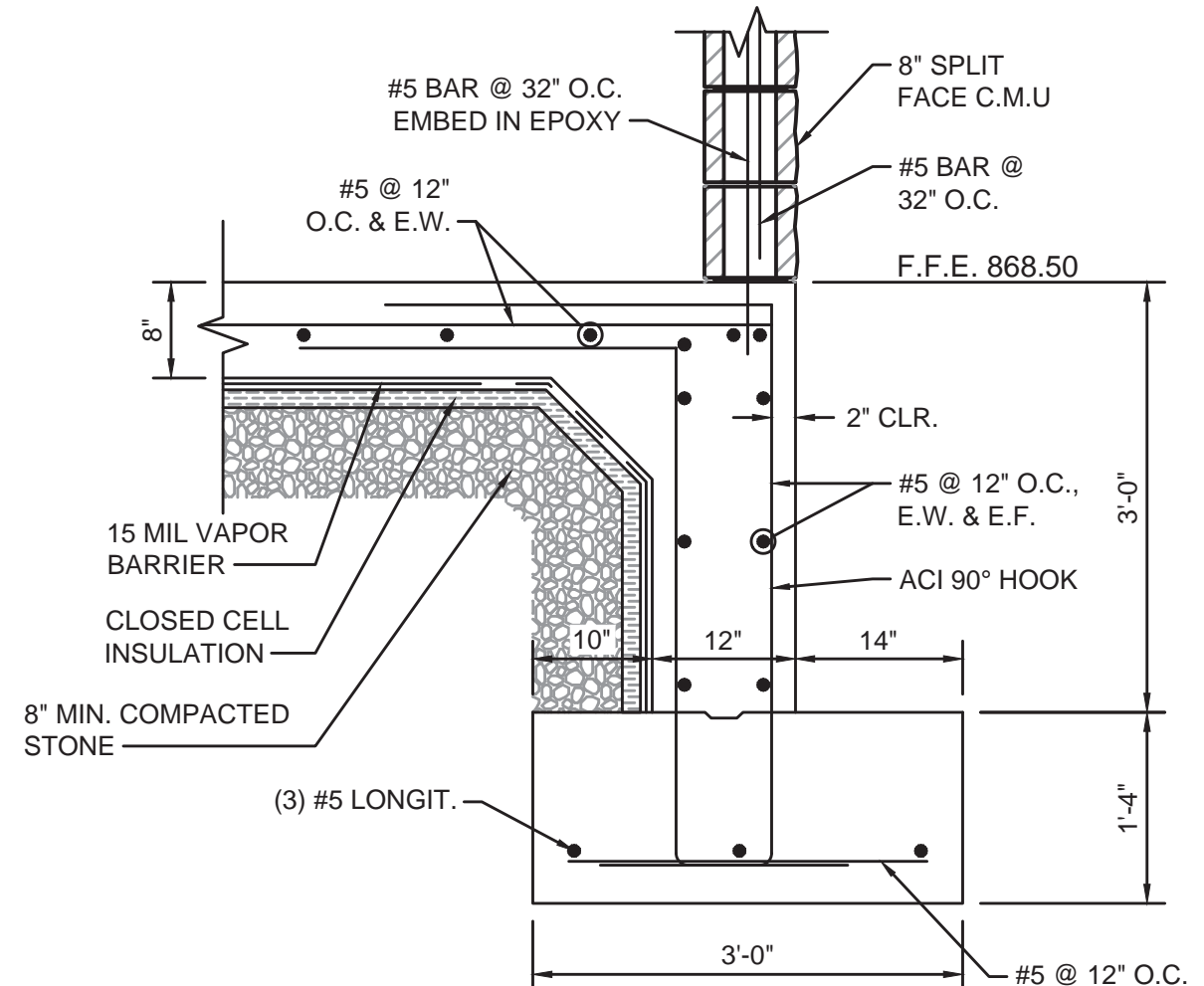
PUMP BASE - DETAIL
NOT TO SCALE



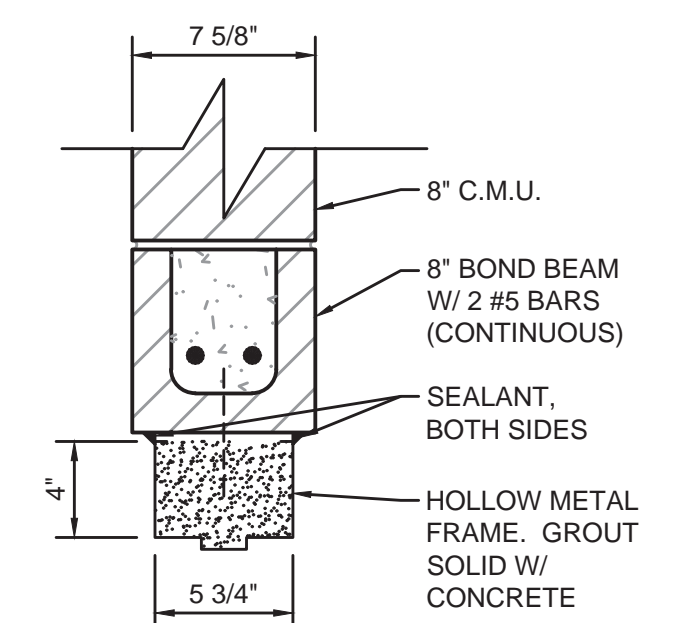
PLAN - SLAB REINFORCEMENT
SCALE: 3/8" = 1'-0"



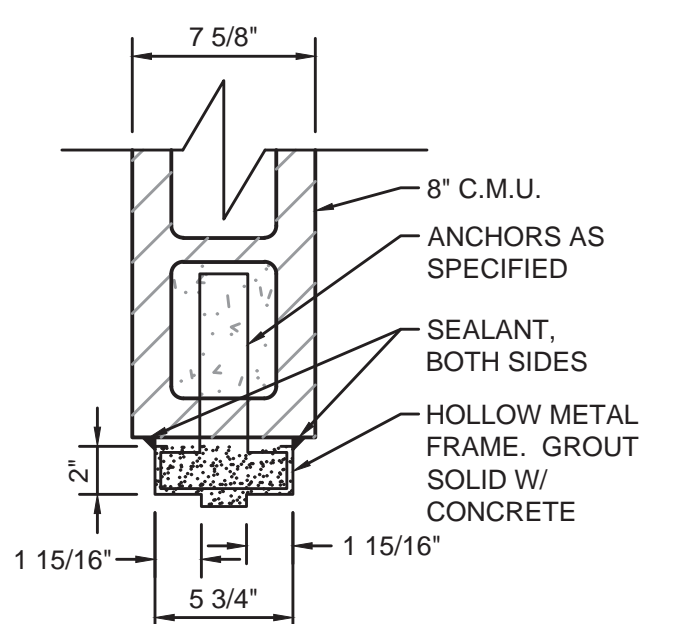
TYPICAL ROOF TRUSS PLAN
NOT TO SCALE



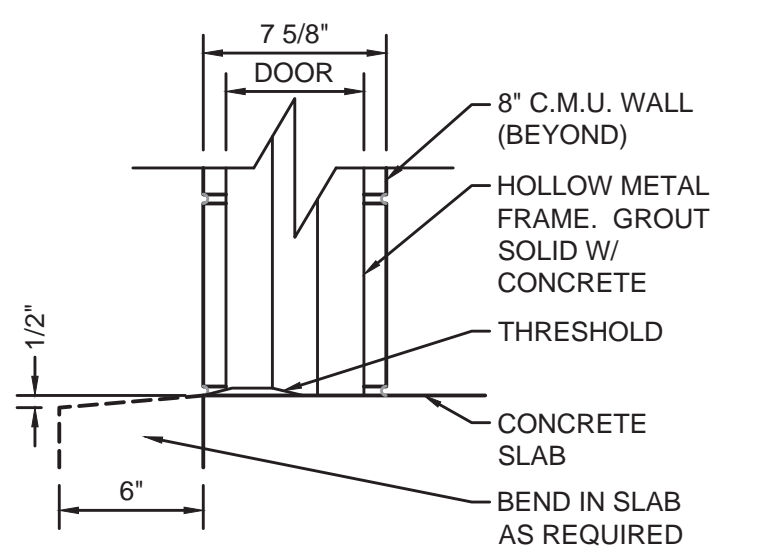
FOUNDATION - DETAIL
NOT TO SCALE



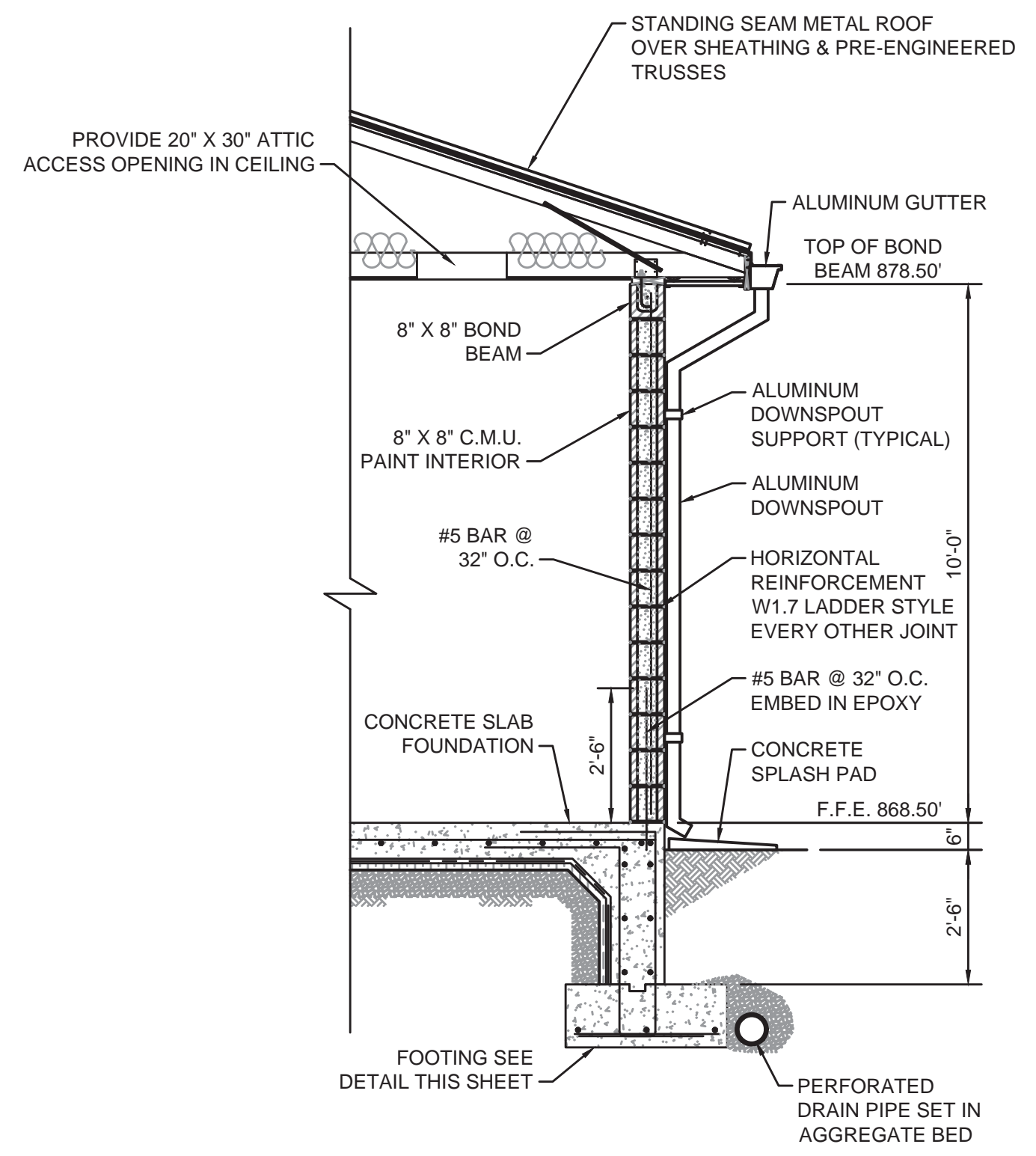
HEAD DETAIL
NOT TO SCALE



JAMB DETAIL
NOT TO SCALE



SILL DETAIL
NOT TO SCALE



TYPICAL DOOR SECTION
NOT TO SCALE

TRUSS NOTES:

- TRUSS SPACING : 18" O.C. UNLESS NOTED OTHERWISE.
- ROOF TRUSS LOADING: 40 P.S.F.
a. TC LL: 20 P.S.F.
b. TC DL: 10 P.S.F.
c. BC DL: 10 P.S.F.
- MAXIMUM TOTAL DEFLECTION = L/240.
- ROOF TRUSS MATERIALS SHALL BE - TREATED SOUTHERN PINE (MIN. GRADE 2)
- TRUSS MANUFACTURER SHALL DESIGN ALL TEMPORARY AND PERMANENT LATERAL BRIDGING AND BRACING.
- ENGINEERING CERTIFICATION: TRUSS MANUFACTURER SHALL FURNISH THE SERVICES OF A REGISTERED STRUCTURAL ENGINEER FOR THE DESIGN AND CERTIFICATION OF PREFABRICATED COMPONENTS (TRUSSES). THE ENGINEER SHALL BE RESPONSIBLE FOR THE CORRECT MANUFACTURING OF THE TRUSSES AND FOR THE LOADING CONDITIONS TO WHICH THE TRUSSES WILL BE SUBJECTED IN THE COMPLETED PROJECT.
- ALLOWABLE TRUSS SPANS: BASED UPON METAL PLATE CONNECTED WOOD TRUSSES, TPI-78, RECOMMENDED DESIGN PRACTICE BY THE TRUSS PLATE INSTITUTE.
- ROOF SHEATHING: PROVIDE MINIMUM 19/32 THICK RATED PLYWOOD ROOF SHEATHING WITH UNBLOCKED EDGES. FASTEN ALL SUPPORTED EDGES AND SHEAR BLOCKING WITH 10D GALVANIZED NAILS AT 6" C/C. FASTEN IN THE FIELD AT 12" C/C.
- GABLE END PANELS: CONNECT BOTTOMS OF GABLE END PANELS TO TOP PLATES WITH HGA10 ANGLES BY SIMPSON STRONG TIE. SPACE ANGLES AT 4'-0" C/C. PROVIDE (3) LINES OF CONTINUOUS 2X4 DIAGONAL BRACING FROM GABLE END TO GABLE END. FASTEN DIAGONALS TO TOP AND BOTTOM "RAT RUNS" WITH (4) 16D GALV. NAILS.

NO.	DATE	BY

PHASE 12 - WATER SYSTEM IMPROVEMENTS
EAST UNION PUMP STATION



PROJECT #: 20016
DATE: AUGUST 2022
PROJECT MGR: LRS
DRAWN BY: WCM
CHECKED BY: PBR



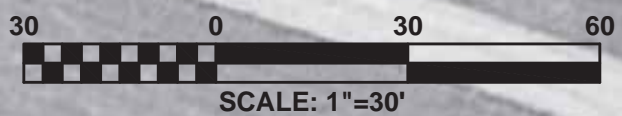
THIS DRAWING HAS BEEN PREPARED AT THE SCALE INDICATED. REPRODUCTION OF THIS DRAWING MAY INTRODUCE INACCURACIES OF THE LISTED SCALE. THE GRAPHIC SCALE BAR SHALL BE USED TO DETERMINE THE ACTUAL SCALE.
 IT IS A VIOLATION OF LAW FOR ANY PERSON TO ALTER THIS DRAWING WITHOUT WRITTEN PERMISSION FROM BLUEGRASS ENGINEERING, PLLC AND ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER.
 BE 8/29/22
 B:\PROJECTS\Nicholas County\20016 - Phase 12 Water System Improvements\Drawings\Contract 1 - Water Lines\20016-01-US 68 (OFFICE) Pump Station.dwg

- GENERAL NOTES:**
- CONTRACTOR TO COORDINATE WITH ELECTRIC COMPANY TO BRING 3Ø POWER DROP TO SITE. ELECTRIC FOR PUMPS SHALL BE INSTALLED UNDERGROUND WITH LOCAL DISCONNECT AT CONTROL PANEL.
 - FENCE SHALL BE OFFSET 2' FROM EDGE OF PROPERTY LINE. GRAVEL SHALL BE OFFSET 1' FROM EDGE OF PROPERTY LINE.

- REFERENCE NOTES:**
- OFFICE PUMP STATION, SEE SHEET 14 FOR DETAILS.
 - NEW MAG METER W/ METER BOX AND LID
 - NEW 6" WATER LINE, C-900 CL. 200
 - NEW 6" GATE VALVE
 - NEW 6" S.S. TAPPING SLEEVE AND VALVE
 - EXISTING 6' TALL CHAIN LINK FENCE
 - EXISTING GATE
 - NEW SECURITY POLE W/ LED BULB. LOCATE PER OWNER'S RECOMMENDATION, SEE ELECTRICAL DRAWINGS.
 - EXISTING OFFICE PUMP STATION TO BE ABANDONED, SEE SHEET 18 FOR DETAILS.
 - EXISTING 6" WATER MAIN
 - EXISTING ASPHALT PARKING LOT
 - EXISTING GRAVEL DRIVEWAY

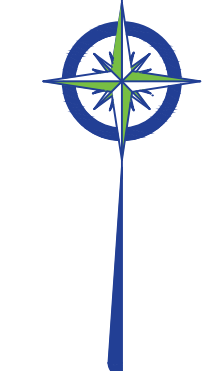
OFFICE PUMP STATION - AERIAL SITE PLAN

SCALE: 1" = 30'



OFFICE PUMP STATION - SITE PLAN

SCALE: 1" = 10'



NO.	DATE	REVISIONS	BY

PHASE 12 - WATER SYSTEM IMPROVEMENTS
US 68 (OFFICE) PUMP STATION

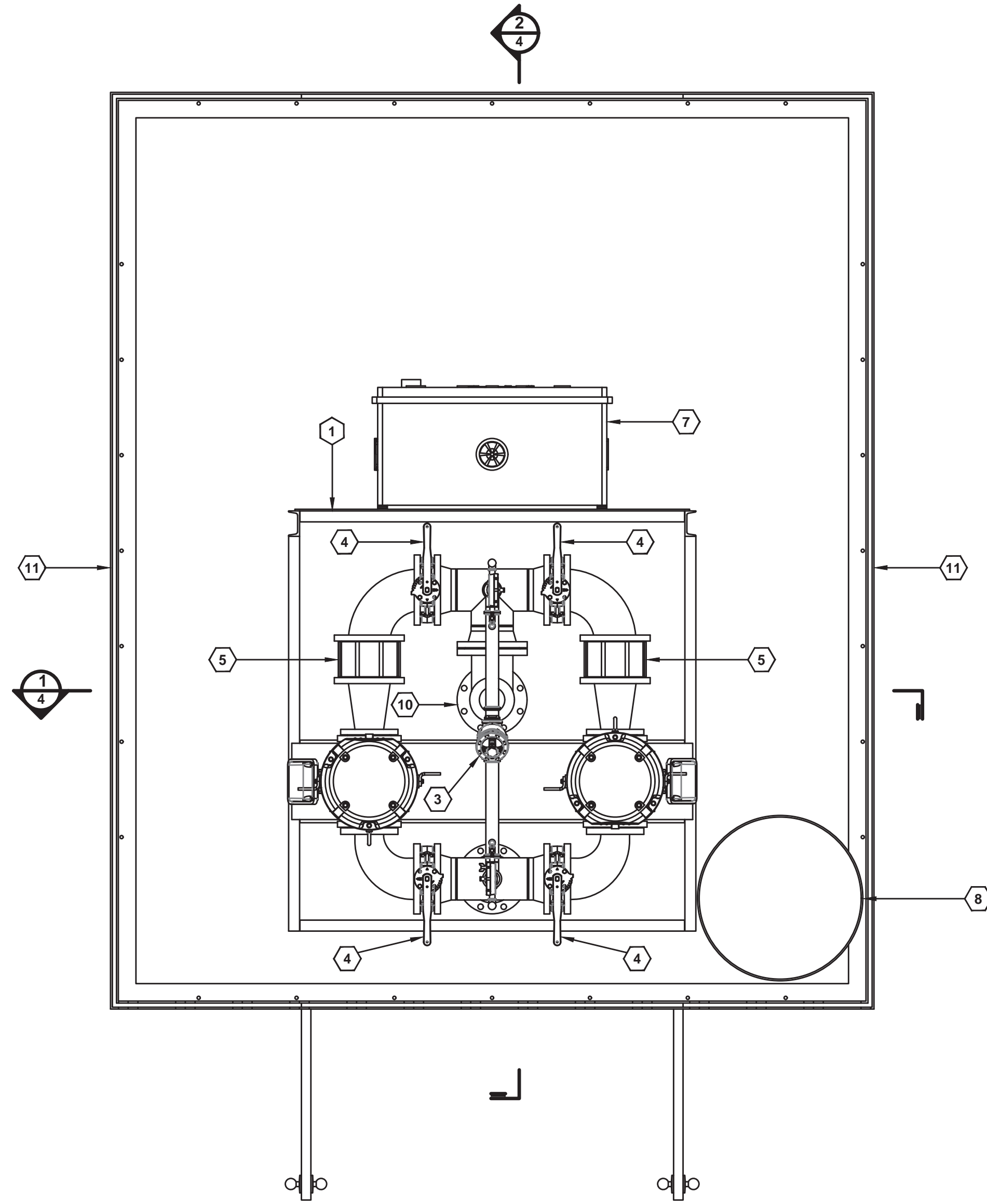
BLUEGRASS ENGINEERING PLLC
 222 East Main Street, Ste. 1 • Georgetown, KY 40324

PROJECT #: 20016
 DATE: AUGUST 2022
 PROJECT MGR: LRS
 DRAWN BY: WCM
 CHECKED BY: PBR



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.

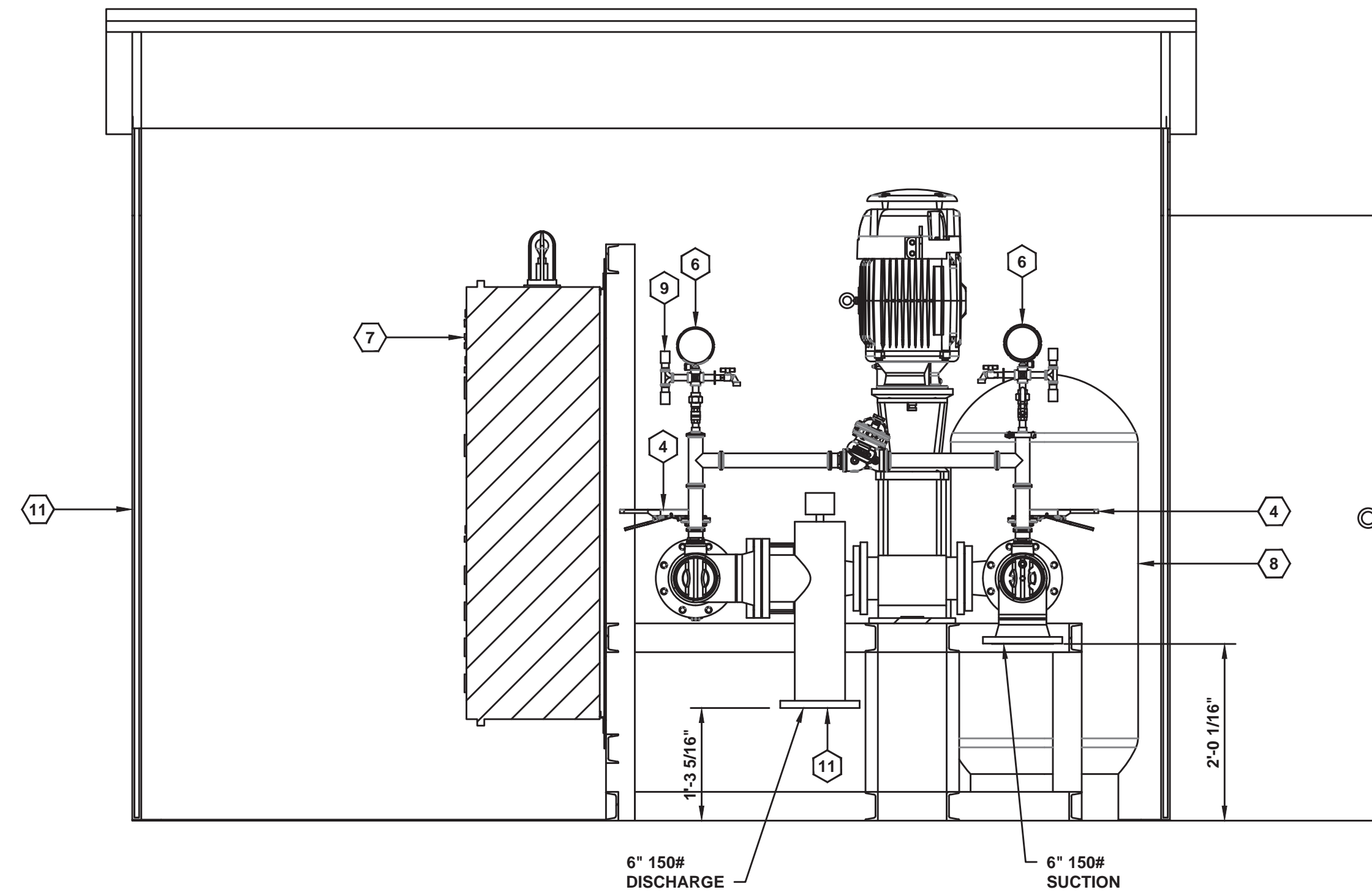
IT IS A VIOLATION OF LAW FOR ANY PERSON TO ALTER THIS DRAWING WITHOUT WRITTEN PERMISSION FROM BLUEGRASS ENGINEERING, PLLC AND ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER.
 BE 8/29/22
 B:\PROJECTS\Nicholas County\20016 - Phase 12 Water System Improvements\Drawings\Contract 1 - Water Lines\20016-01-US 68 (OFFICE) Pump Station.dwg



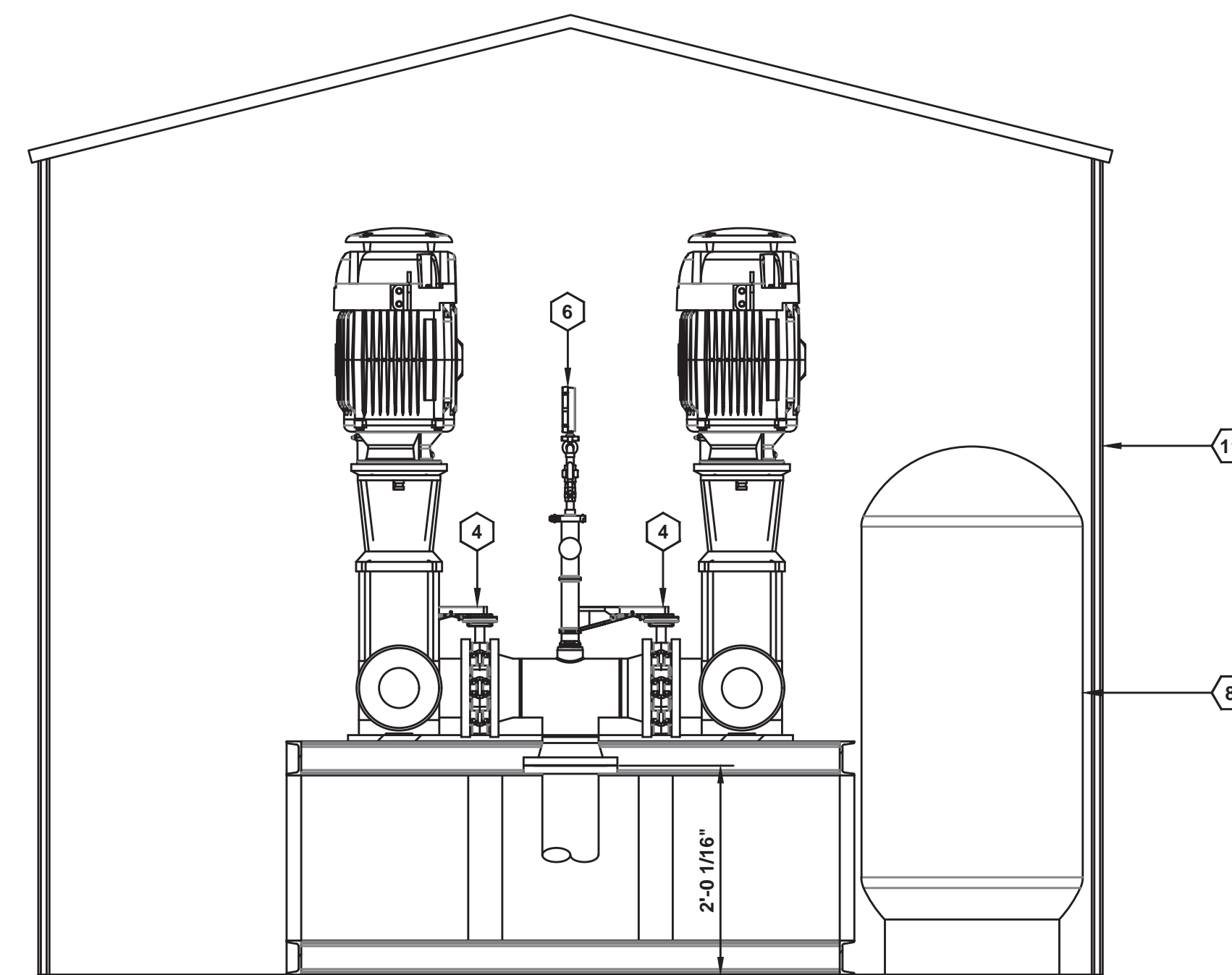
PLAN VIEW - BOOSTER STATION
 SCALE: 3/8" = 1'-0"

- SHEET KEYNOTES:**
1. SKID
 2. 66SV20GM4C60
 3. 2" BERMAD NPT RELIEF VALVE
 4. 6" 150# DELVAL SERIES 50/52-LUG BODY BUTTERFLY VALVE
 5. 6" 150/250# VALMATIC 1400A WAFER CHECK VALVE
 6. PRESSURE GAUGES
 7. CONTROL PANEL 60" x 36" x 16"
 8. AMTROL WELL-X-TROL WX-350
 9. DISCHARGE TRANSDUCERS
 10. 6" 150# MCCROMETER MW800/MM800
 11. ENCLOSURE - 10' x 12' x 9'

- NOTES:**
- ALL WELDING PER AWS D1.1 UNLESS NOTED.
 - ALL MATERIAL TO BE CLEANED AND COATED PER QUALITY CONTROL MANUAL UNLESS SPECIFIED OTHERWISE.
 - ALL COMPONENTS SHALL BE ACCEPTABLE FOR POTABLE WATER USE PER AWWA SPECS.
 - ALL CARBON STEEL AND DUCTILE IRON COMPONENTS TO BE COATED WITH AMERLOCK 2IN SAFETY BLUE PER MANUFACTURER'S SPECS AND PROJECT DATA UNLESS NOTED.
 - 3"-24" DUCTILE IRON FITTINGS ARE TO BE CEMENT-LINED.
 - 1" TO 2.5" DUCTILE IRON FITTINGS TO BE PAINTED/COATED WITH TNEPEC PAINT BY MORROW-WATER TECHNOLOGIES.
 - SLAB TO BE SUPPLIED BY OTHERS.
 - ALL PIPING TO BE CEMENT-LINED DUCTILE IRON AND 304SS.
 - CEMENT-LINE DUCTILE IRON FITTINGS TO BE FLANGED AND 304SS TO BE THREADED.
 - ALL FASTENERS TO BE 304 STAINLESS STEEL UNLESS NOTED.
 - DIMENSIONAL TOLERANCE ± 1/8" UNLESS NOTED.



WALL SECTION
 SCALE: 3/4" = 1'-0"



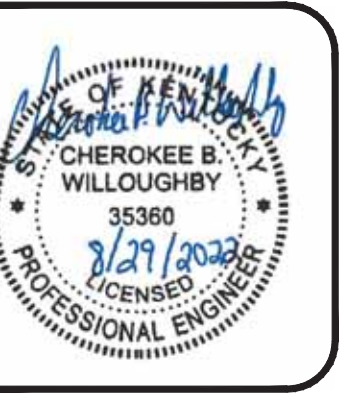
WALL SECTION
 SCALE: 3/4" = 1'-0"

NO.	DATE	REVISIONS	BY

PHASE 12 - WATER SYSTEM IMPROVEMENTS
 US 68 (OFFICE) PUMP STATION



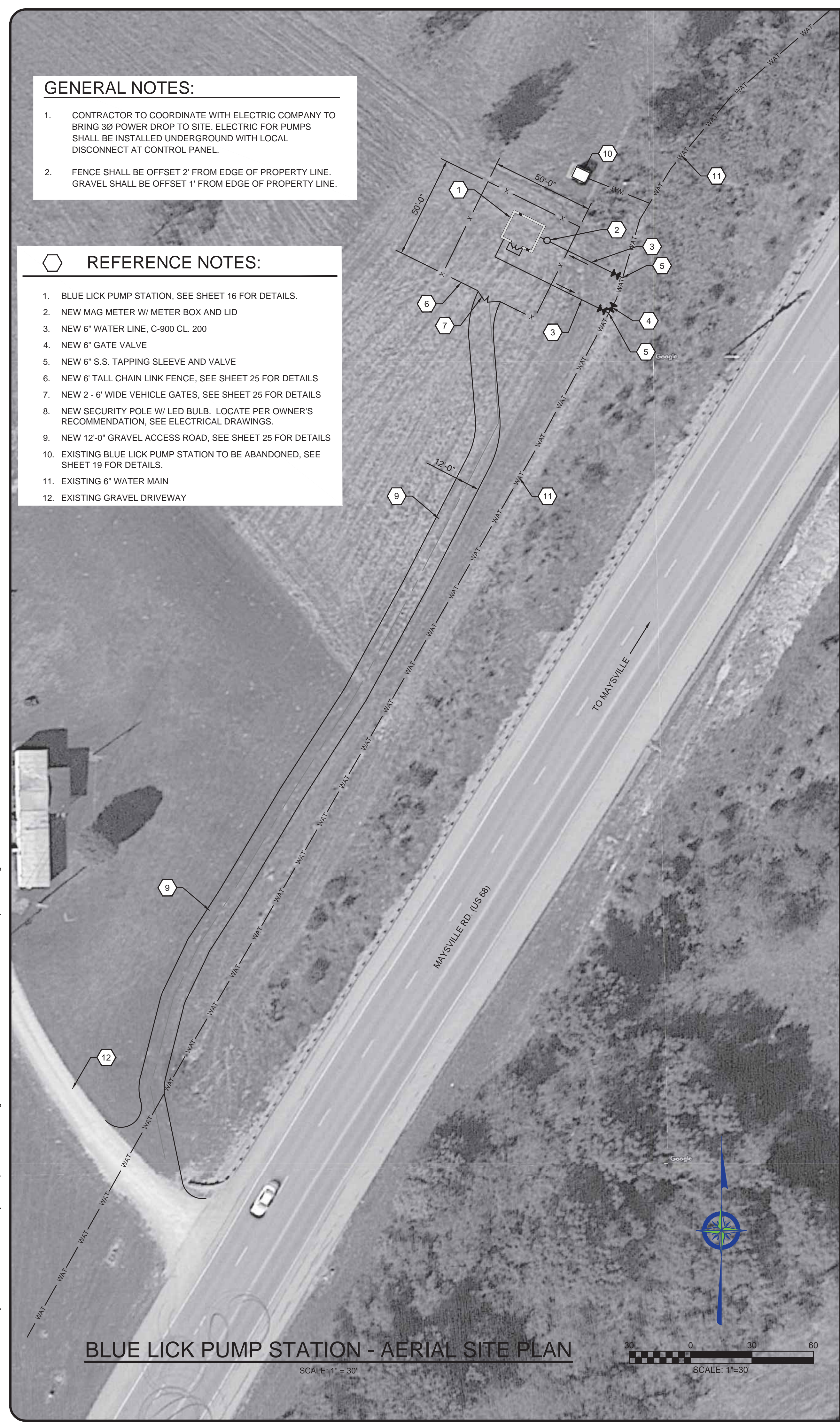
PROJECT #: 20016
 DATE: AUGUST 2022
 PROJECT MGR: LRS
 DRAWN BY: WCM
 CHECKED BY: PBR



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.
 IT IS A VIOLATION OF LAW FOR ANY PERSON TO ALTER THIS DRAWING WITHOUT WRITTEN PERMISSION FROM BLUEGRASS ENGINEERING, PLLC AND ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER.
 BE 8/23/22
 B:\PROJECTS\Nicholas County\20016 - Phase 12 Water System Improvements\Drawings\Contract 1 - Water Lines\20016-01 Blue Licks Pump Station.dwg

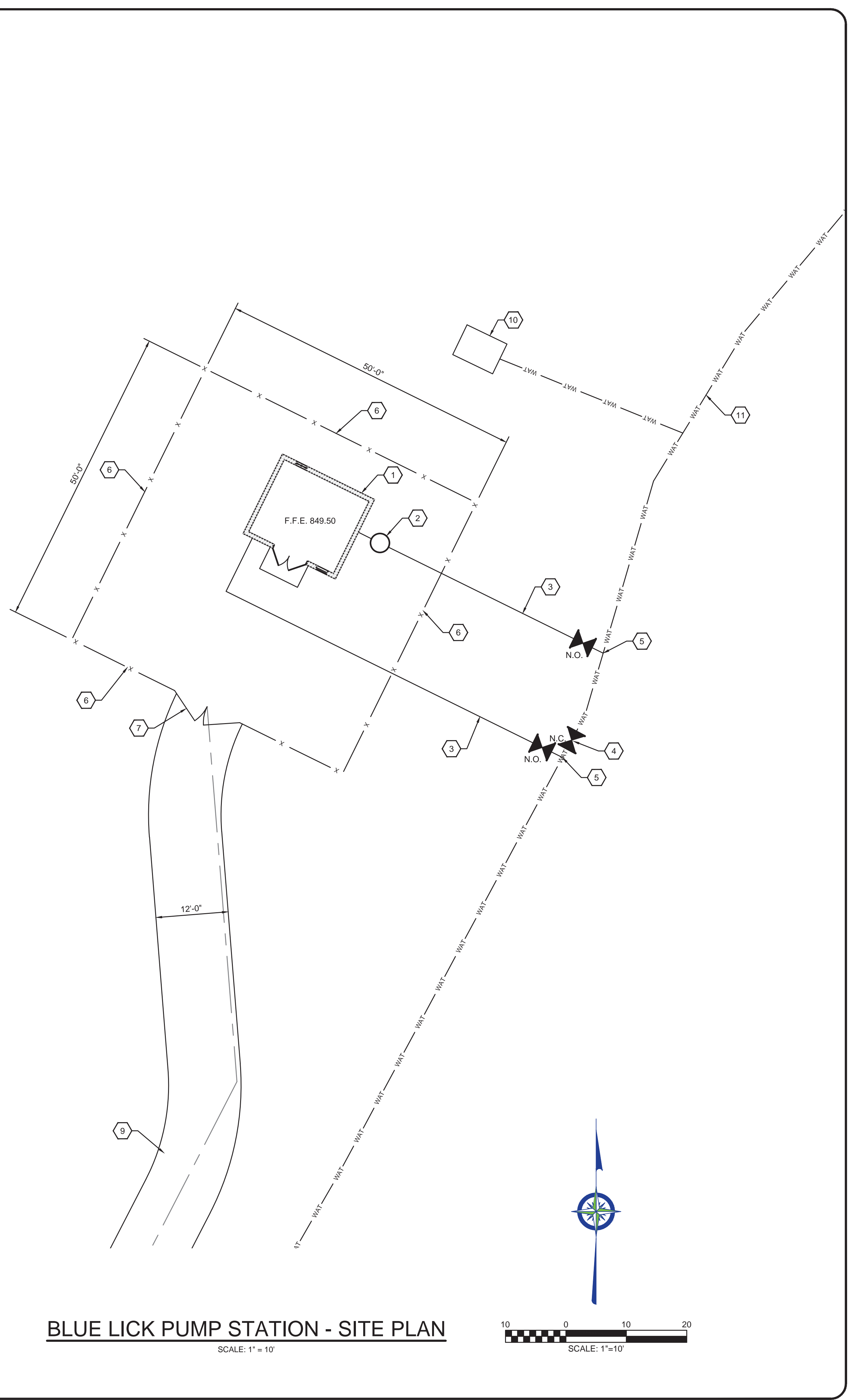
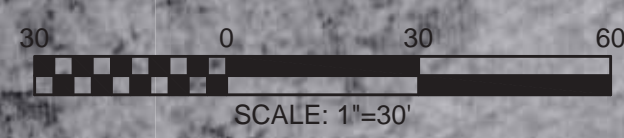
- GENERAL NOTES:**
- CONTRACTOR TO COORDINATE WITH ELECTRIC COMPANY TO BRING 3Ø POWER DROP TO SITE. ELECTRIC FOR PUMPS SHALL BE INSTALLED UNDERGROUND WITH LOCAL DISCONNECT AT CONTROL PANEL.
 - FENCE SHALL BE OFFSET 2' FROM EDGE OF PROPERTY LINE. GRAVEL SHALL BE OFFSET 1' FROM EDGE OF PROPERTY LINE.

- REFERENCE NOTES:**
- BLUE LICK PUMP STATION, SEE SHEET 16 FOR DETAILS.
 - NEW MAG METER W/ METER BOX AND LID
 - NEW 6" WATER LINE, C-900 CL. 200
 - NEW 6" GATE VALVE
 - NEW 6" S.S. TAPPING SLEEVE AND VALVE
 - NEW 6' TALL CHAIN LINK FENCE, SEE SHEET 25 FOR DETAILS
 - NEW 2 - 6' WIDE VEHICLE GATES, SEE SHEET 25 FOR DETAILS
 - NEW SECURITY POLE W/ LED BULB. LOCATE PER OWNER'S RECOMMENDATION, SEE ELECTRICAL DRAWINGS.
 - NEW 12'-0" GRAVEL ACCESS ROAD, SEE SHEET 25 FOR DETAILS
 - EXISTING BLUE LICK PUMP STATION TO BE ABANDONED, SEE SHEET 19 FOR DETAILS.
 - EXISTING 6" WATER MAIN
 - EXISTING GRAVEL DRIVEWAY



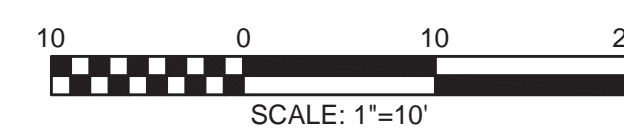
BLUE LICK PUMP STATION - AERIAL SITE PLAN

SCALE: 1" = 30'



BLUE LICK PUMP STATION - SITE PLAN

SCALE: 1" = 10'

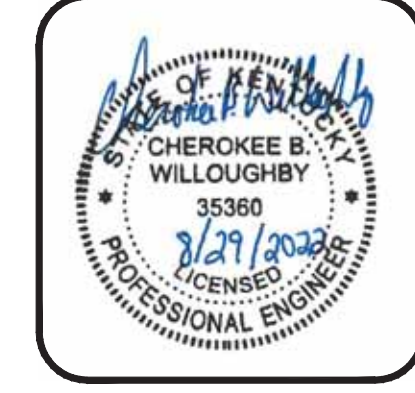


NO.	DATE	REVISIONS	BY

PHASE 12 - WATER SYSTEM IMPROVEMENTS
BLUE LICKS PUMP STATION - SITE PLANS

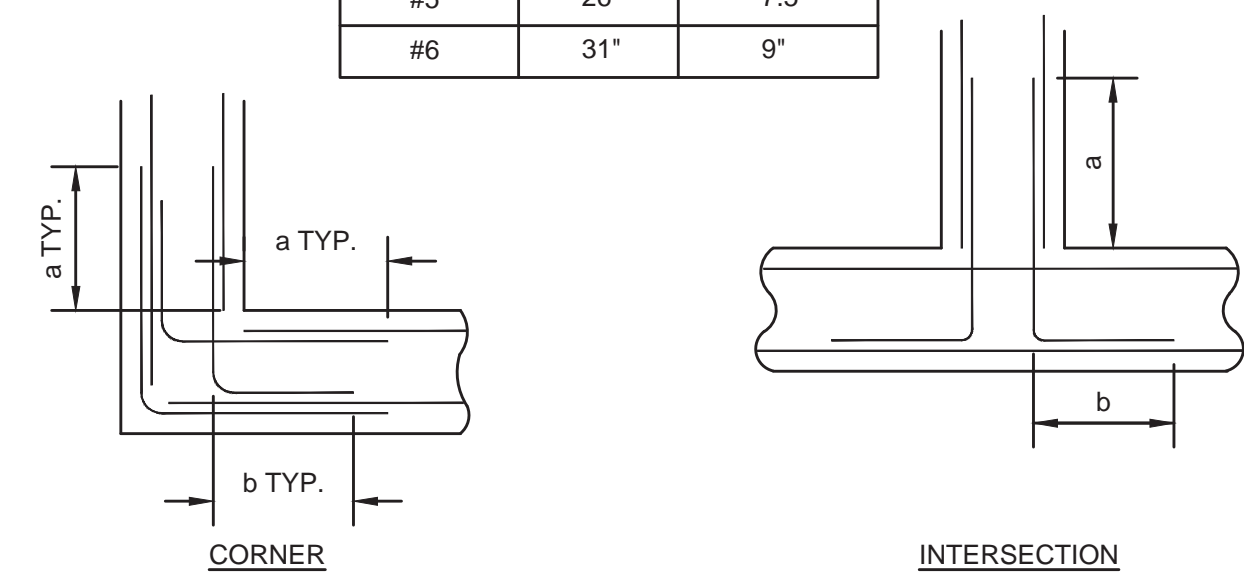


PROJECT #:	20016
DATE:	AUGUST 2022
PROJECT MGR:	LRS
DRAWN BY:	WCM
CHECKED BY:	PBR

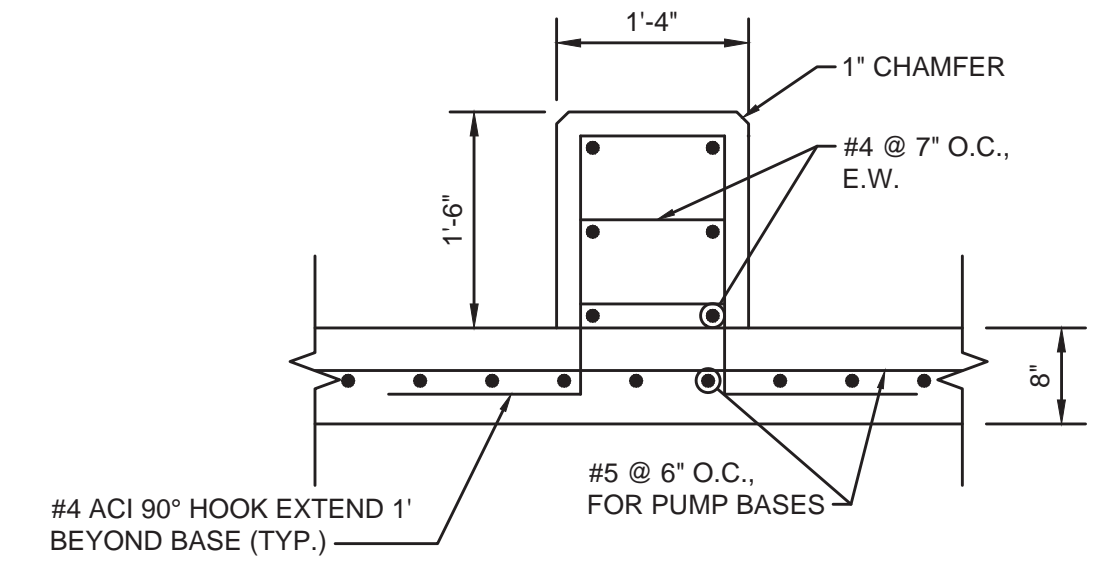


THIS DRAWING HAS BEEN PREPARED AT THE SCALE INDICATED. REPRODUCTION OF THIS DRAWING MAY INTRODUCE INACCURACIES OF THE LISTED SCALE. THE GRAPHIC SCALE BAR SHALL BE USED TO DETERMINE THE ACTUAL SCALE.
 IT IS A VIOLATION OF LAW FOR ANY PERSON TO ALTER THIS DRAWING WITHOUT WRITTEN PERMISSION FROM BLUEGRASS ENGINEERING, PLLC AND ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER.
 BE 8/29/22
 B:\PROJECTS\Nicholas County\20016 - Phase 12 Water System Improvements\Drawings\Contract 1 - Water Lines\20016-01 Blue Licks Pump Station.dwg

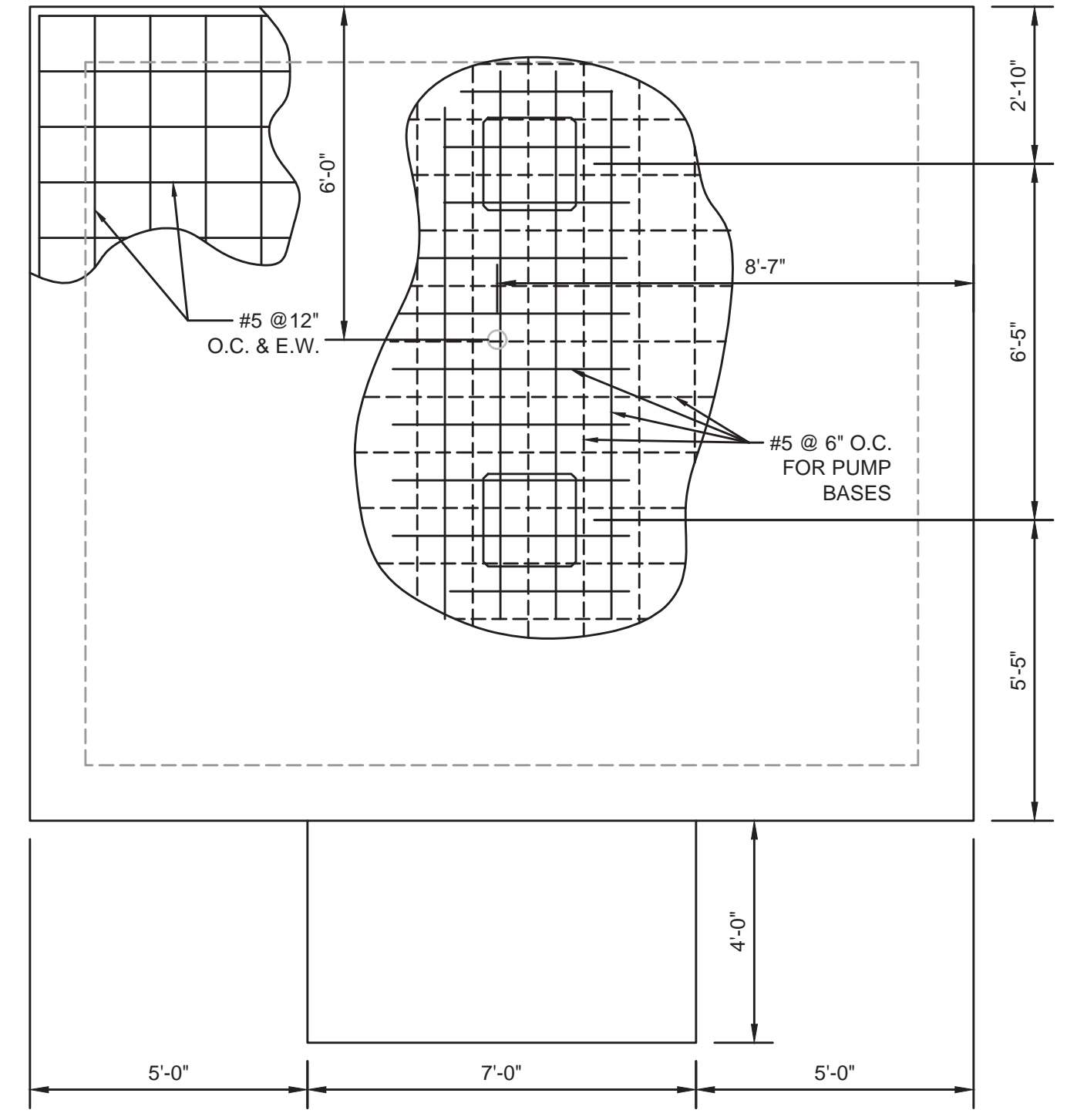
BAR SIZE	a	b
#4	21"	6"
#5	26"	7.5"
#6	31"	9"



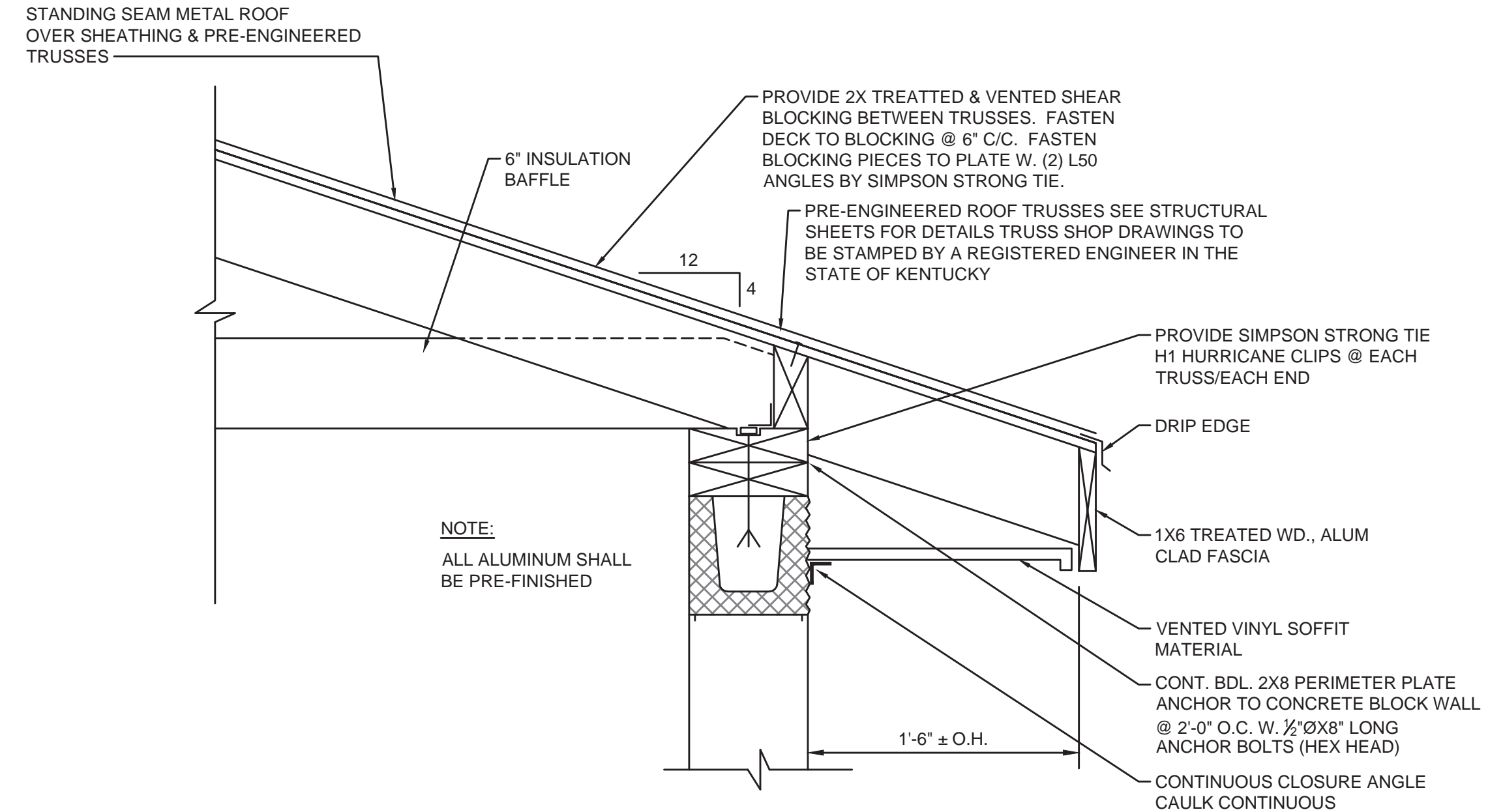
FOUNDATION DETAILS
NOT TO SCALE



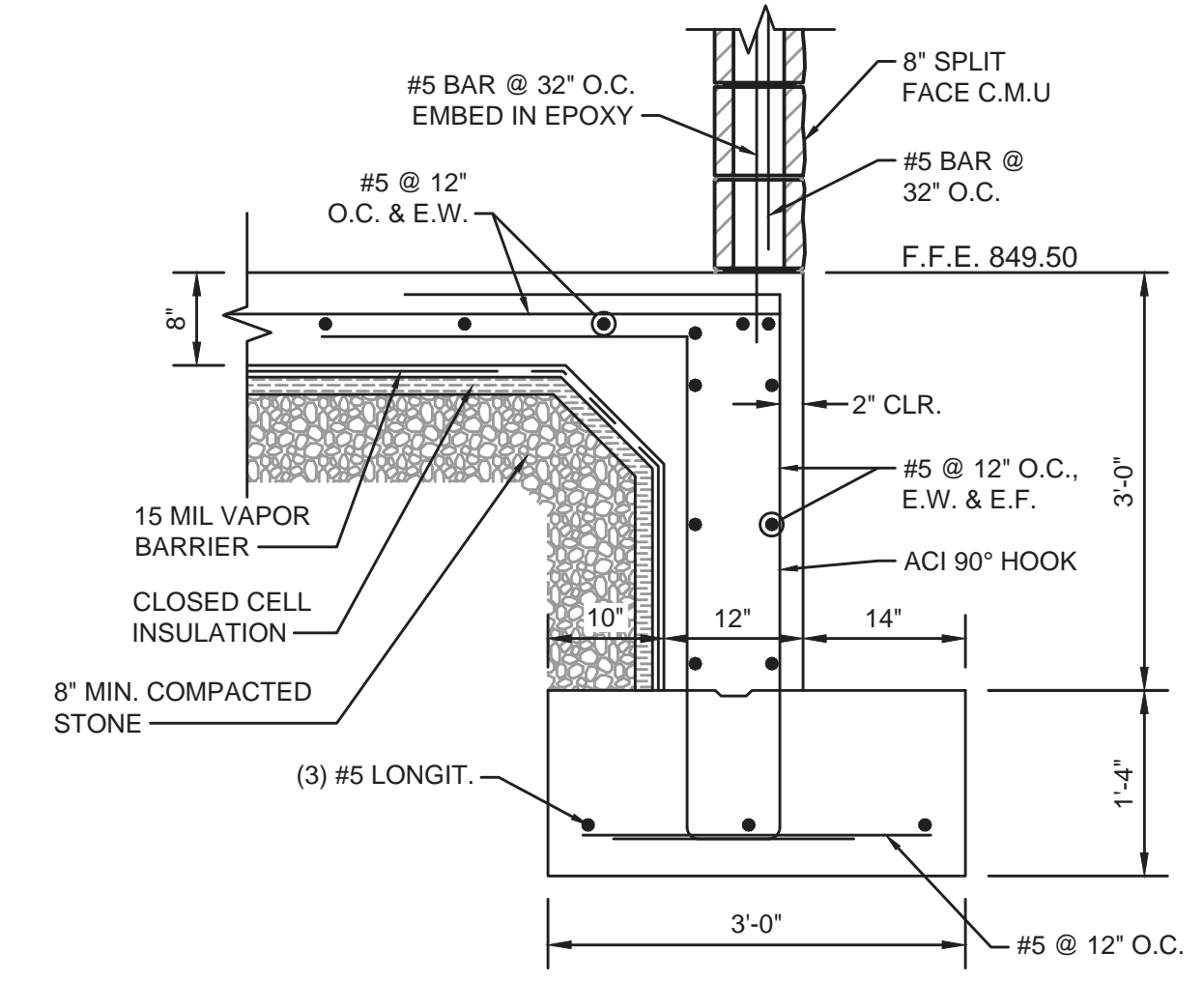
PUMP BASE - DETAIL
NOT TO SCALE



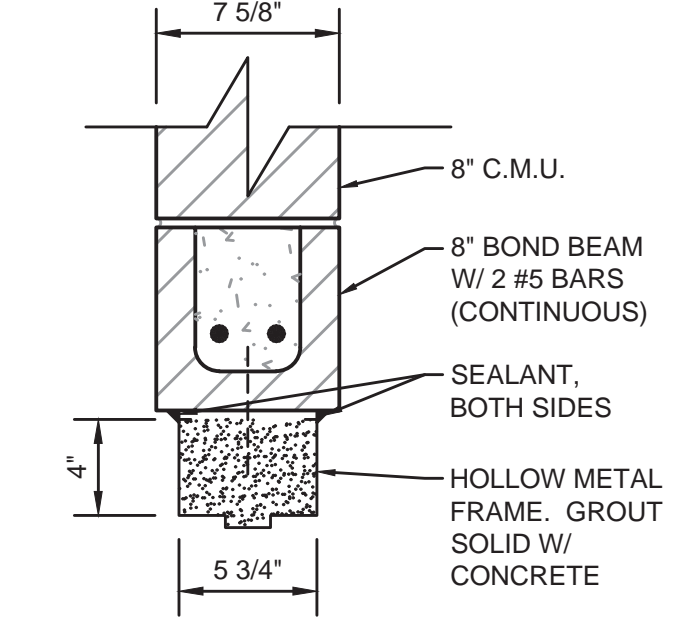
PLAN - SLAB REINFORCEMENT
SCALE: 3/8" = 1'-0"



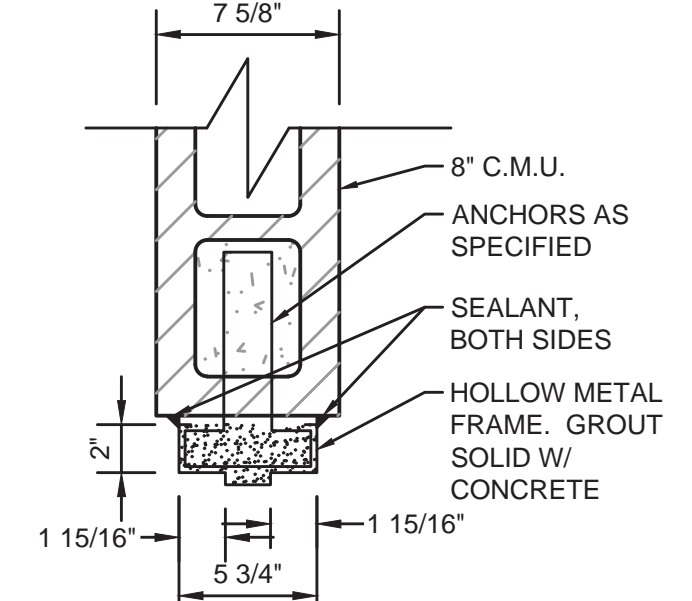
TYPICAL ROOF TRUSS PLAN
NOT TO SCALE



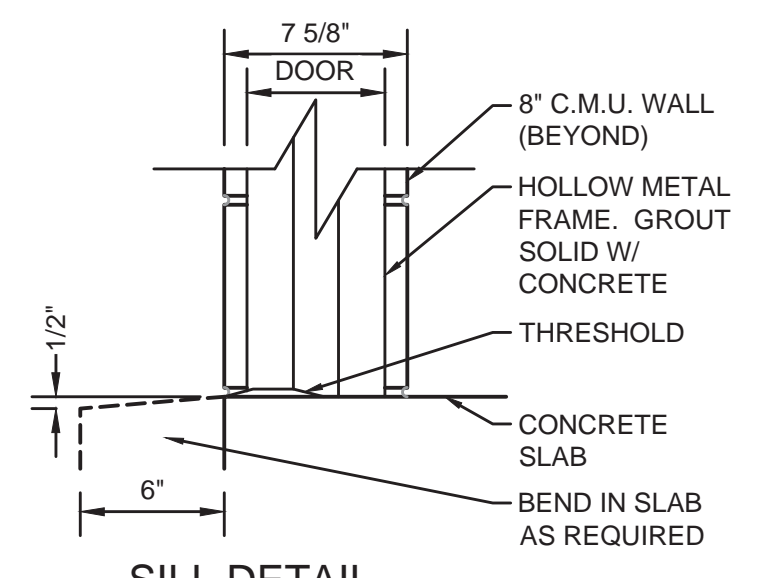
FOUNDATION - DETAIL
NOT TO SCALE



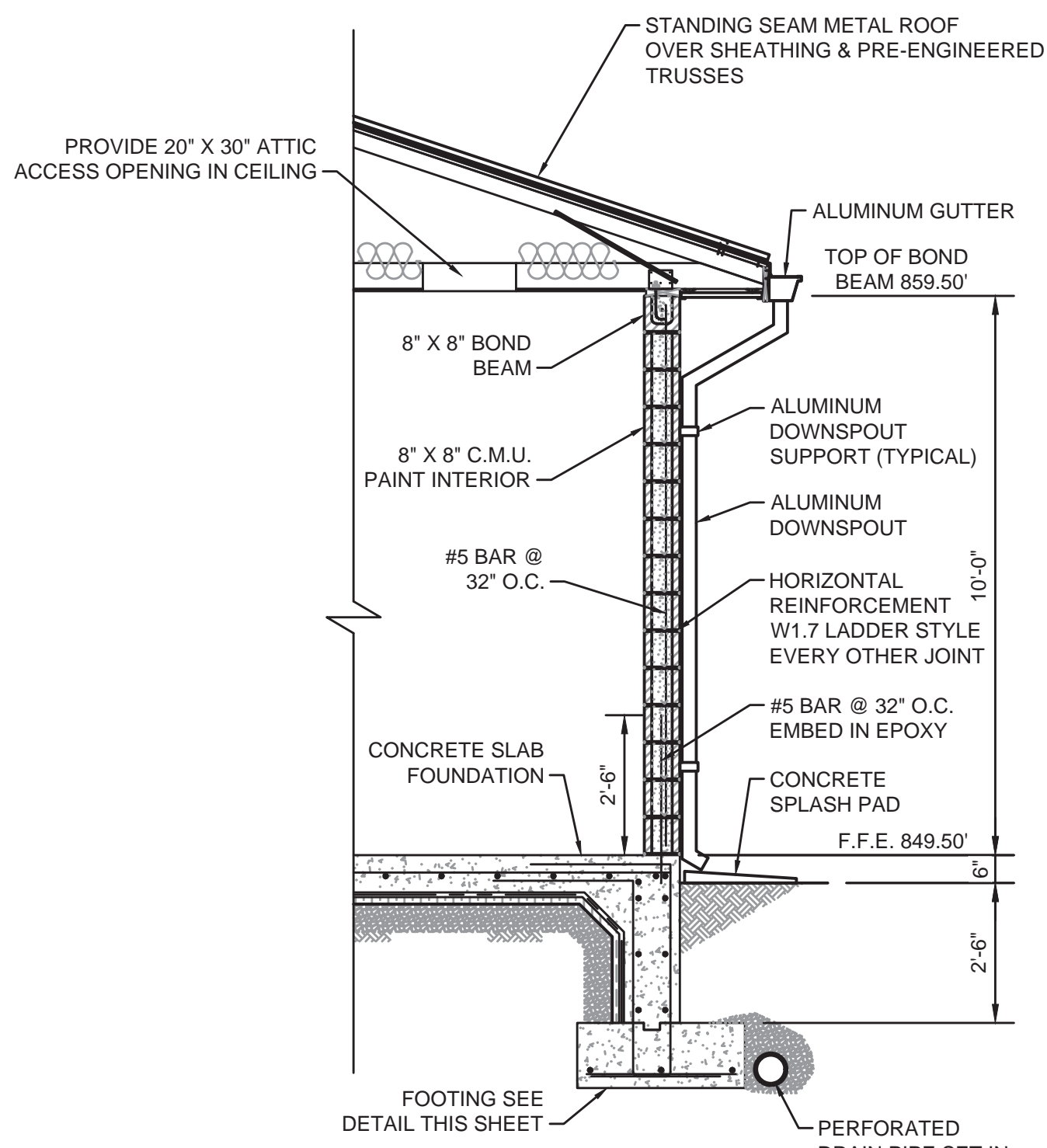
HEAD DETAIL
NOT TO SCALE



JAMB DETAIL
NOT TO SCALE



SILL DETAIL
NOT TO SCALE



TYPICAL DOOR SECTION
NOT TO SCALE

TRUSS NOTES:

- TRUSS SPACING : 18" O.C. UNLESS NOTED OTHERWISE.
- ROOF TRUSS LOADING: 40 P.S.F.
 - TC LL: 20 P.S.F.
 - TC DL: 10 P.S.F.
 - BC DL: 10 P.S.F.
- MAXIMUM TOTAL DEFLECTION = L/240.
- ROOF TRUSS MATERIALS SHALL BE - TREATED SOUTHERN PINE (MIN. GRADE 2)
- TRUSS MANUFACTURER SHALL DESIGN ALL TEMPORARY AND PERMANENT LATERAL BRIDGING AND BRACING.
- ENGINEERING CERTIFICATION: TRUSS MANUFACTURER SHALL FURNISH THE SERVICES OF A REGISTERED STRUCTURAL ENGINEER FOR THE DESIGN AND CERTIFICATION OF PREFABRICATED COMPONENTS (TRUSSES). THE ENGINEER SHALL BE RESPONSIBLE FOR THE CORRECT MANUFACTURING OF THE TRUSSES AND FOR THE LOADING CONDITIONS TO WHICH THE TRUSSES WILL BE SUBJECTED IN THE COMPLETED PROJECT.
- ALLOWABLE TRUSS SPANS: BASED UPON METAL PLATE CONNECTED WOOD TRUSSES, TPI-78, RECOMMENDED DESIGN PRACTICE BY THE TRUSS PLATE INSTITUTE.
- ROOF SHEATHING: PROVIDE MINIMUM 19/32 THICK RATED PLYWOOD ROOF SHEATHING WITH UNBLOCKED EDGES. FASTEN ALL SUPPORTED EDGES AND SHEAR BLOCKING WITH 10D GALVANIZED NAILS AT 6" C/C. FASTEN IN THE FIELD AT 12" C/C.
- GABLE END PANELS: CONNECT BOTTOMS OF GABLE END PANELS TO TOP PLATES WITH HGA10 ANGLES BY SIMPSON STRONG TIE. SPACE ANGLES AT 4'-0" C/C. PROVIDE (3) LINES OF CONTINUOUS 2X4 DIAGONAL BRACING FROM GABLE END TO GABLE END. FASTEN DIAGONALS TO TOP AND BOTTOM "RAT RUNS" WITH (4) 16D GALV. NAILS.

NO.	DATE	BY

PHASE 12 - WATER SYSTEM IMPROVEMENTS
 BLUE LICKS PUMP STATION



PROJECT #: 20016
 DATE: AUGUST 2022
 PROJECT MGR: LRS
 DRAWN BY: WCM
 CHECKED BY: PBR

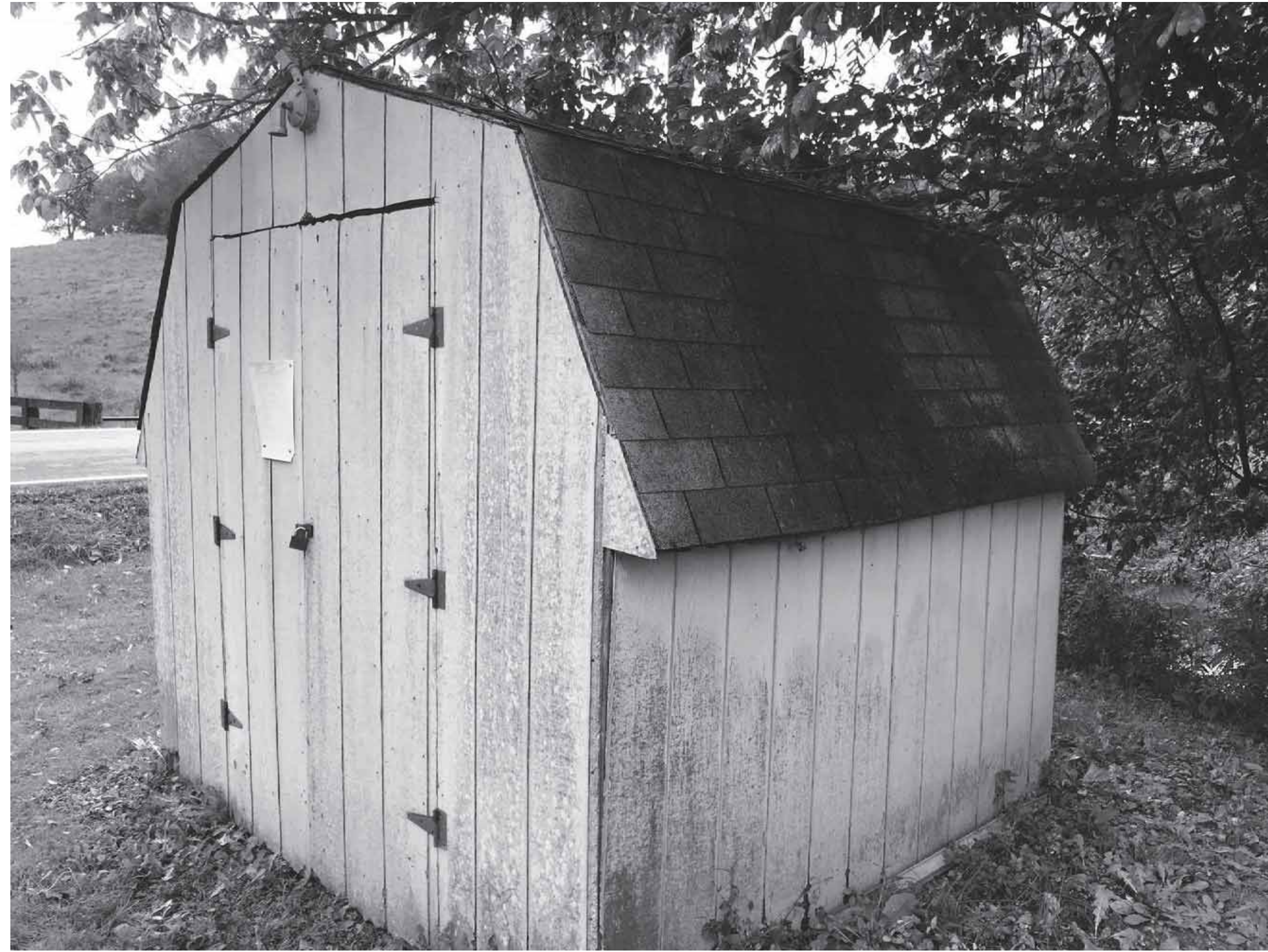


THIS DRAWING HAS BEEN PREPARED AT THE SCALE INDICATED. REPRODUCTION OF THIS DRAWING MAY INTRODUCE INACCURACIES OF THE LISTED SCALE. THE GRAPHIC SCALE BAR SHALL BE USED TO DETERMINE THE ACTUAL SCALE.

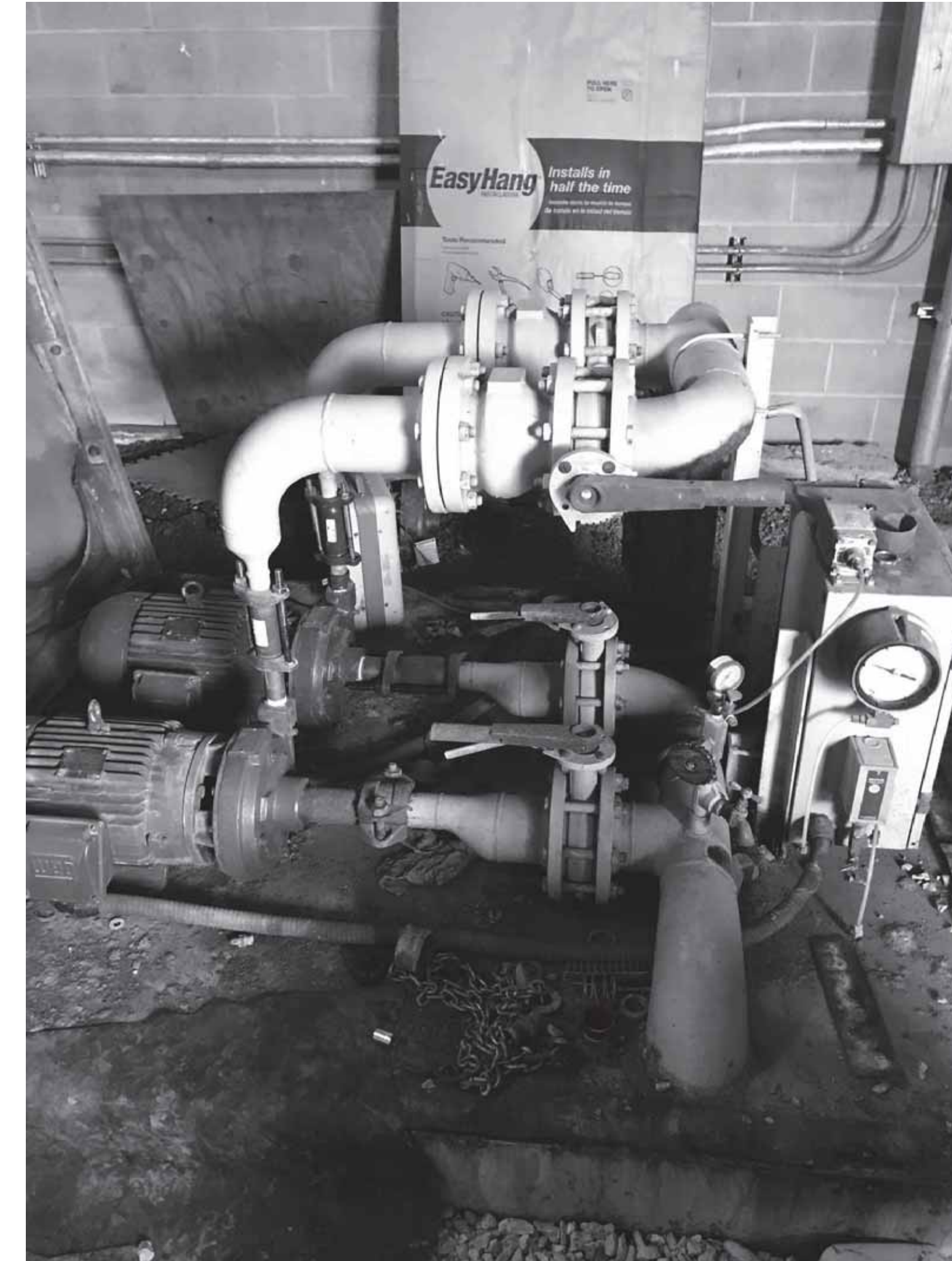
IT IS A VIOLATION OF LAW FOR ANY PERSON TO ALTER THIS DRAWING WITHOUT WRITTEN PERMISSION FROM BLUEGRASS ENGINEERING, PLLC AND ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER.

BE 8/29/22
B:\PROJECTS\Nicholas County\20016 - Phase 12 Water System Improvements\Drawings\Contract 1 - Water Lines\20016-01 Demo Pump Stations 1.dwg

EXISTING EAST UNION BOOSTER PUMP STATION

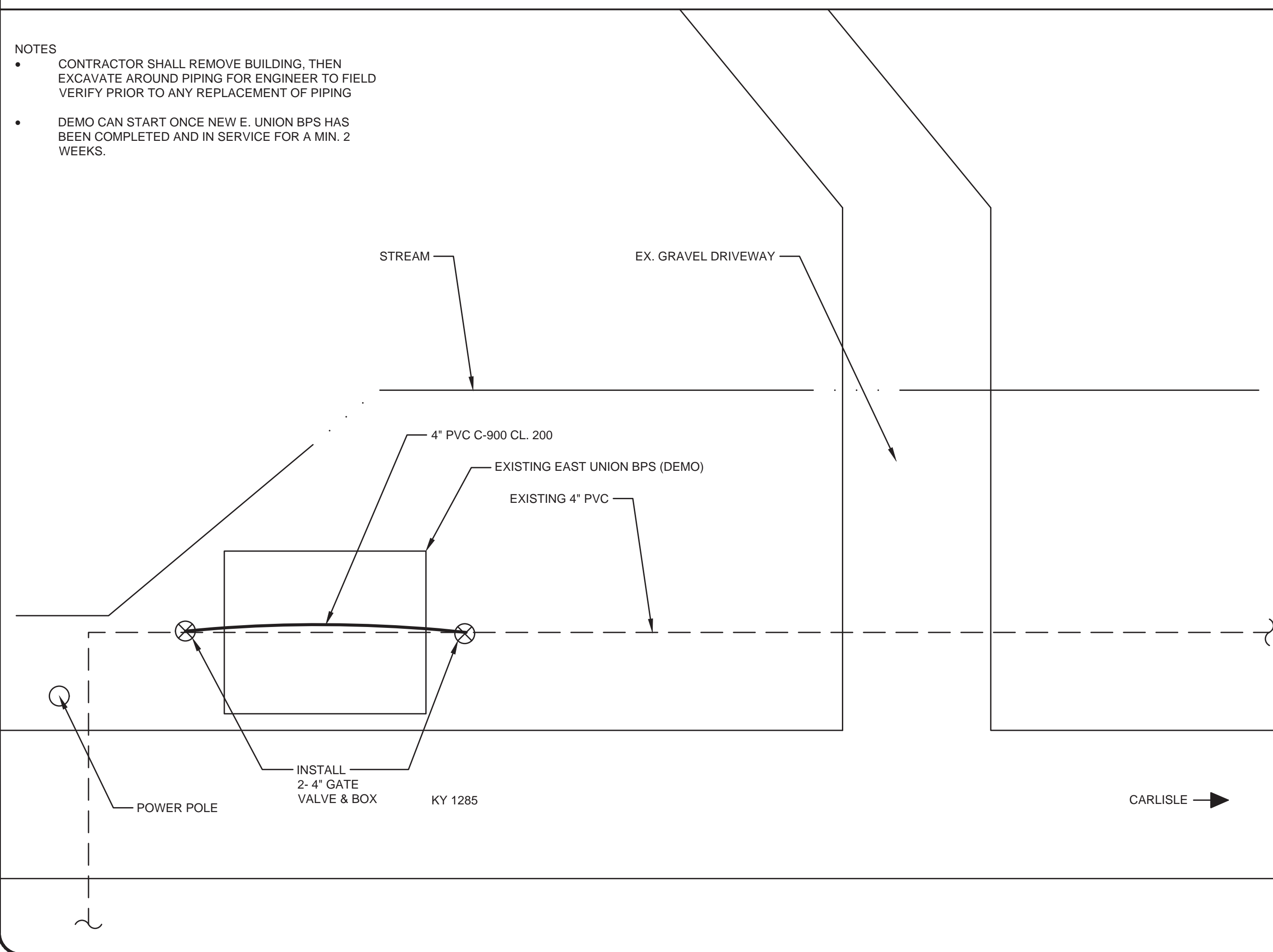


EXISTING US 68 (OFFICE) BOOSTER PUMP STATION



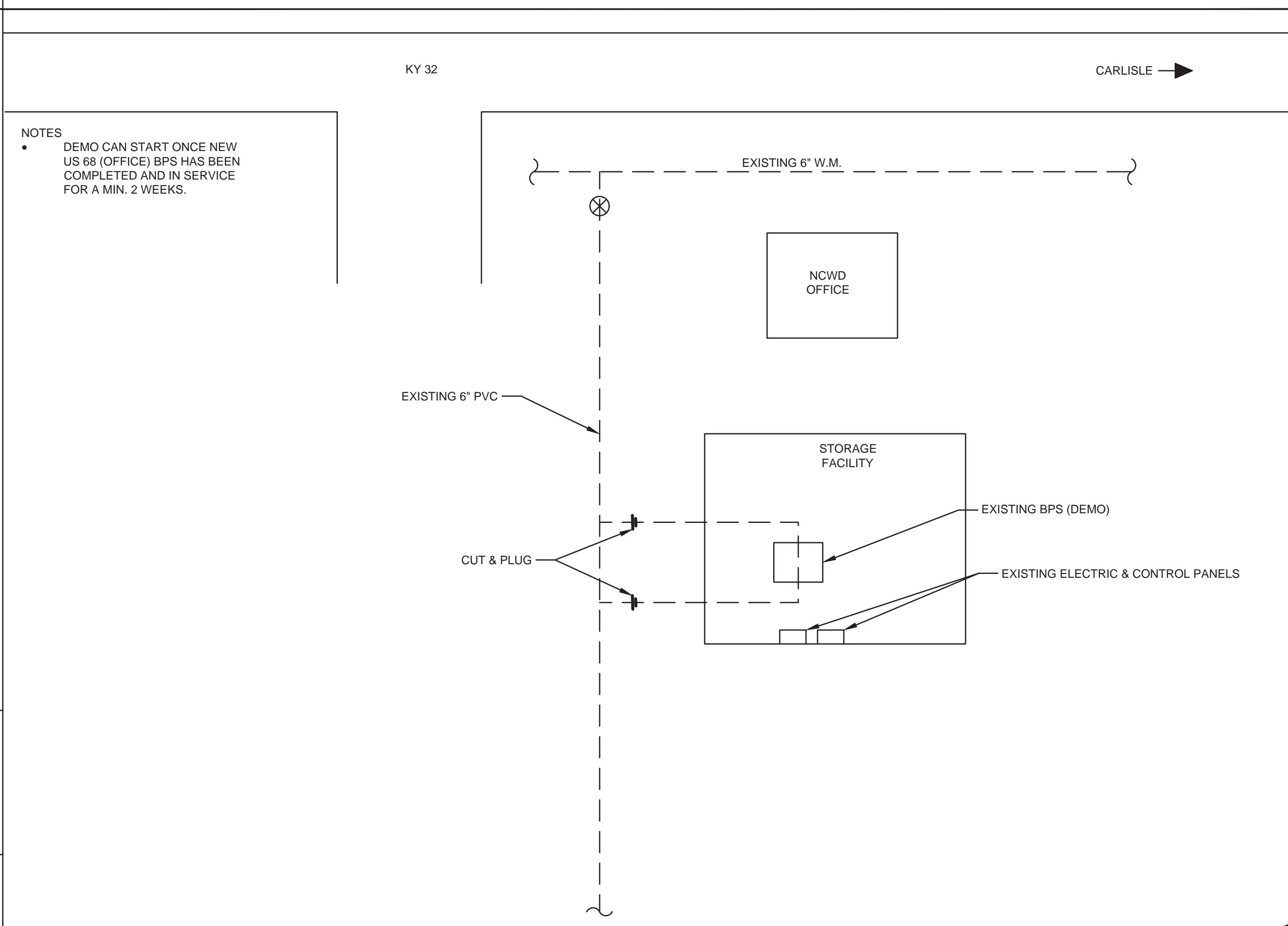
DEMO OF EXISTING EAST UNION BOOSTER PUMP STATION

- NOTES
- CONTRACTOR SHALL REMOVE BUILDING, THEN EXCAVATE AROUND PIPING FOR ENGINEER TO FIELD VERIFY PRIOR TO ANY REPLACEMENT OF PIPING
 - DEMO CAN START ONCE NEW E. UNION BPS HAS BEEN COMPLETED AND IN SERVICE FOR A MIN. 2 WEEKS.



DEMO OF EXISTING US 68 (OFFICE) BOOSTER PUMP STATION

- NOTES
- DEMO CAN START ONCE NEW US 68 (OFFICE) BPS HAS BEEN COMPLETED AND IN SERVICE FOR A MIN. 2 WEEKS.



NO.	DATE	BY

PHASE 12 - WATER SYSTEM IMPROVEMENTS
EAST UNION & US 68 (OFFICE) PUMP STATION DEMOLITION



PROJECT #: 20016
DATE: AUGUST 2022
PROJECT MGR: LRS
DRAWN BY: WCM
CHECKED BY: PBR

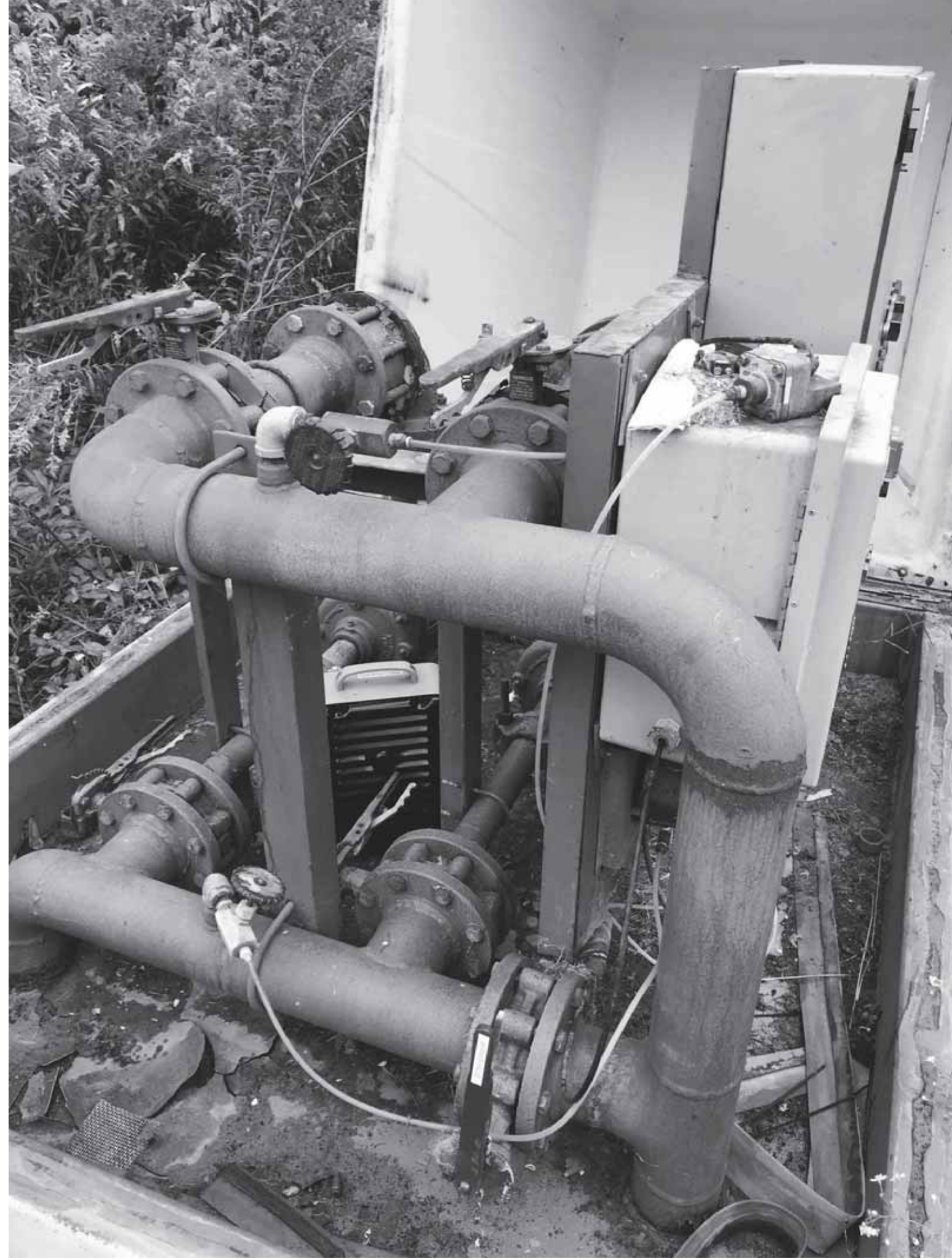


THIS DRAWING HAS BEEN PREPARED AT THE SCALE INDICATED. REPRODUCTION OF THIS DRAWING MAY INTRODUCE INACCURACIES OF THE LISTED SCALE. THE GRAPHIC SCALE BAR SHALL BE USED TO DETERMINE THE ACTUAL SCALE.

IT IS A VIOLATION OF LAW FOR ANY PERSON TO ALTER THIS DRAWING WITHOUT WRITTEN PERMISSION FROM BLUEGRASS ENGINEERING, PLLC AND ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER.

B:\PROJECTS\Nicholas County\20016 - Phase 12 Water System Improvements\Drawings\Contract 1 - Water Lines\20016-01 Demo Pump Stations 2.dwg BE 8/29/22

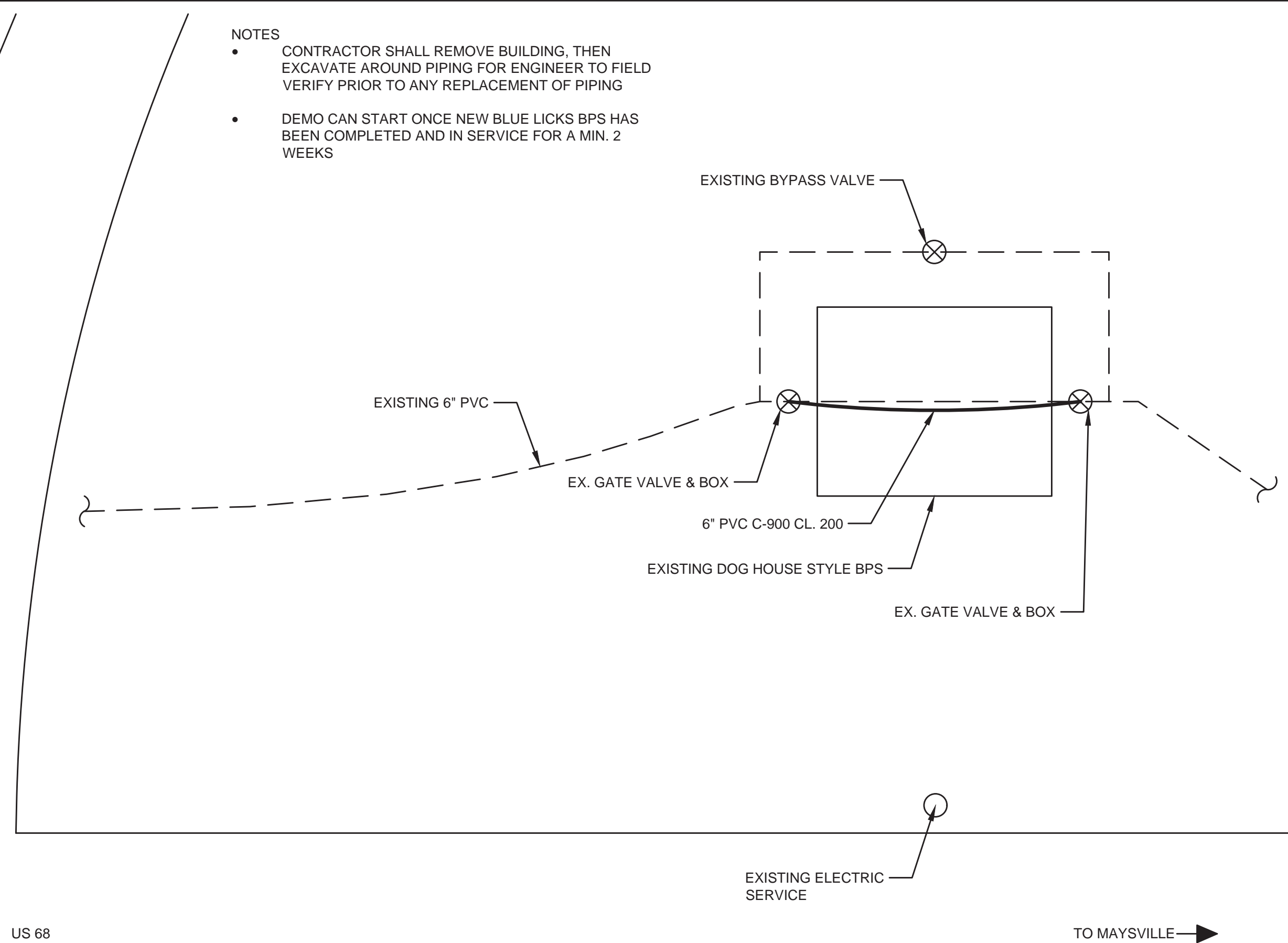
EXISTING BLUE LICKS BOOSTER PUMP STATION



DEMO OF EXISTING BLUE LICKS BOOSTER PUMP STATION

NOTES

- CONTRACTOR SHALL REMOVE BUILDING, THEN EXCAVATE AROUND PIPING FOR ENGINEER TO FIELD VERIFY PRIOR TO ANY REPLACEMENT OF PIPING
- DEMO CAN START ONCE NEW BLUE LICKS BPS HAS BEEN COMPLETED AND IN SERVICE FOR A MIN. 2 WEEKS



US 68

EXISTING ELECTRIC SERVICE

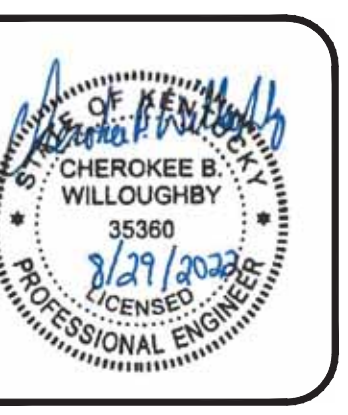
TO MAYSVILLE →

NO.	DATE	REVISIONS	BY

PHASE 12 - WATER SYSTEM IMPROVEMENTS
 BLUE LICKS PUMP STATION DEMOLITION



PROJECT #: 20016
 DATE: AUGUST 2022
 PROJECT MGR: LRS
 DRAWN BY: WCM
 CHECKED BY: PBR

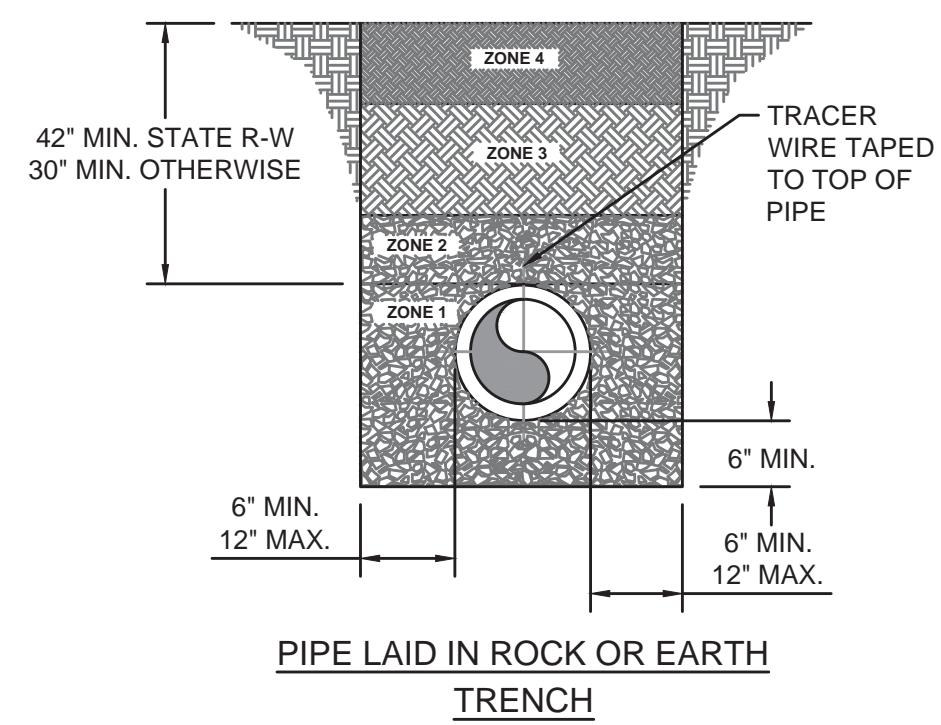


THIS DRAWING HAS BEEN PREPARED AT THE SCALE INDICATED. REPRODUCTION OF THIS DRAWING MAY INTRODUCE INACCURACIES OF THE LISTED SCALE. THE GRAPHIC SCALE BAR SHALL BE USED TO DETERMINE THE ACTUAL SCALE.

IT IS A VIOLATION OF LAW FOR ANY PERSON TO ALTER THIS DRAWING WITHOUT WRITTEN PERMISSION FROM BLUEGRASS ENGINEERING, PLLC AND ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER.

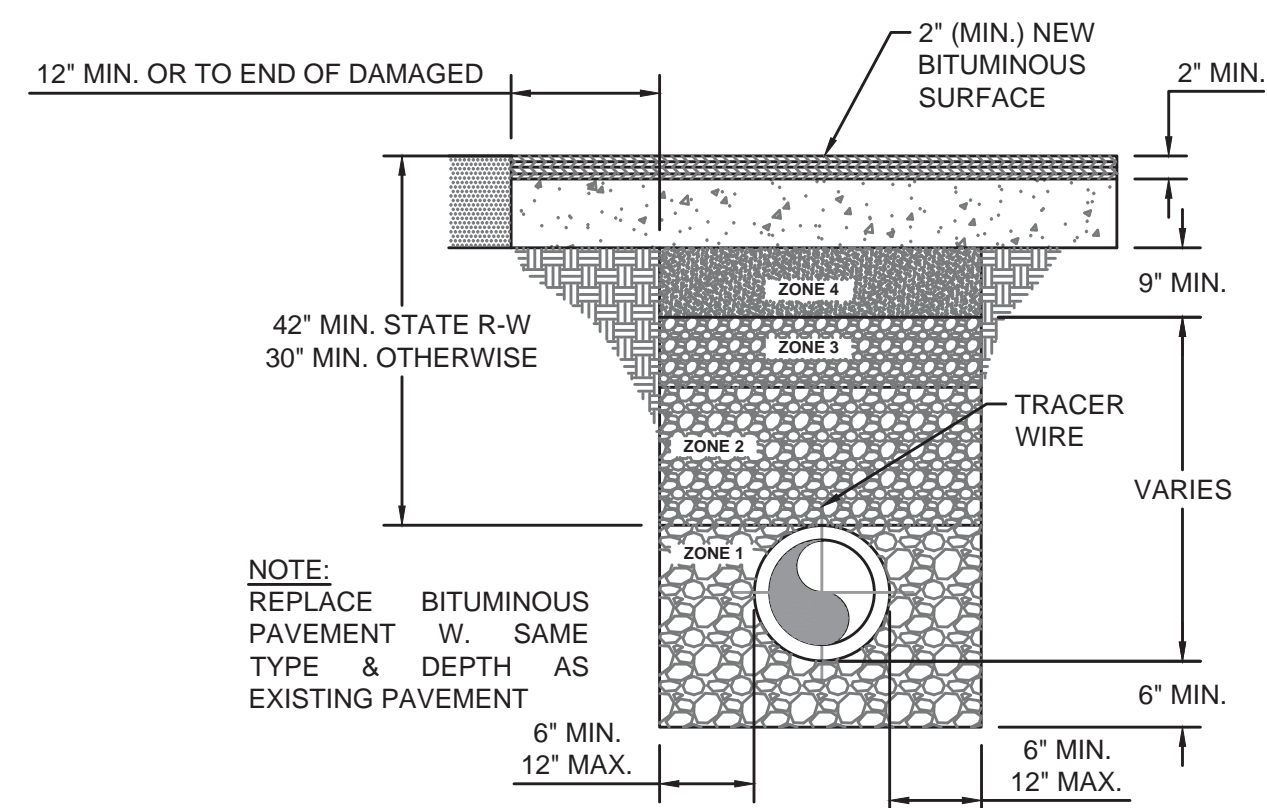
BE 8292Z

B:\PROJECTS\Nicholas County\20016 - Phase 12 Water System Improvements\Drawings\Contract 1 - Water Lines\20016-01-20.dwg



DETAIL NOTES:

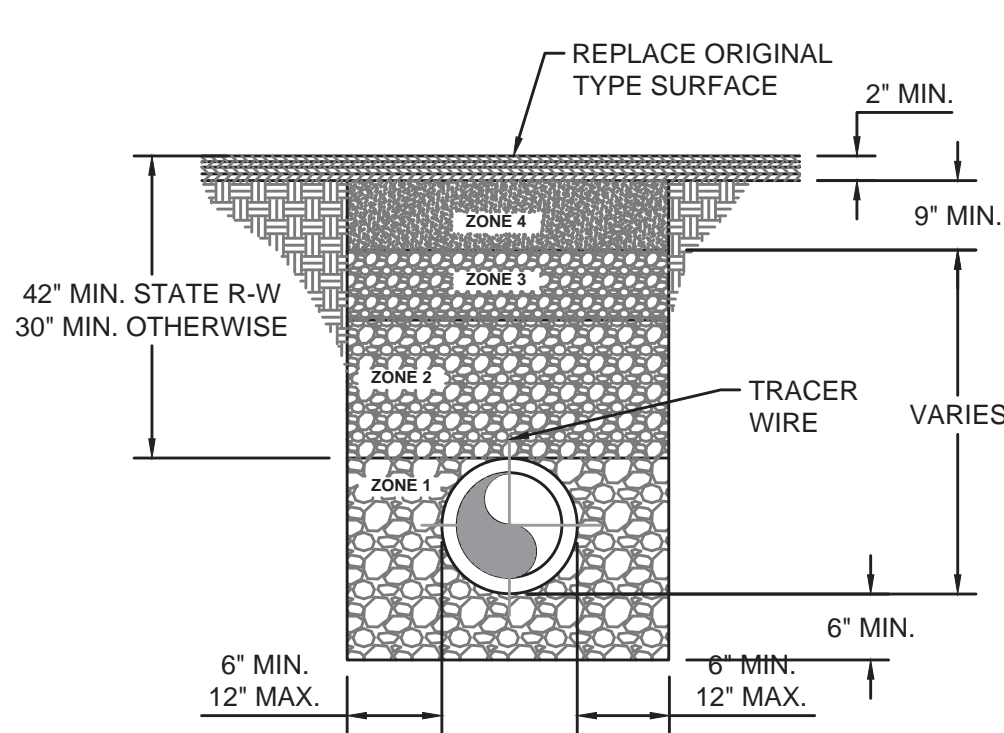
- COVER UP TO AND INCLUDING ZONE 4 SHALL BE ESTABLISHED BEFORE TRENCH EXCAVATION.
- ZONE 4 - 6" MIN. CONSOLIDATION EARTH BACKFILL INCLUDING TOPSOIL, NO ROCK ALLOWED.
- ZONE 3 - CONSOLIDATED SOIL, (NO ROCK GREATER THAN 6" DIAMETER) NO. 9, 57 OR 78 STONE
- ZONE 2 - FROM THE SPRINGLINE OF THE PIPE TO A DISTANCE 12 INCHES ABOVE THE PIPE, THE CONTRACTOR SHALL USE THE SAME MATERIAL AS SPECIFIED FOR BEDDING. COMPACTION IS REQUIRED IN AREAS SUBJECT TO TRAFFIC.
- ZONE 1 - BEDDING MATERIAL, IN EARTH EXCAVATION AREAS, SHALL BE CLEAN EARTH, FREE FROM ROCKS, DEBRIS OR OTHER FOREIGN MATERIAL. THE CONTRACTOR SHALL USE CRUSHED STONE, SAND OR GRAVEL AS BEDDING MATERIAL WHERE ROCK EXCAVATION IS ENCOUNTERED.



NOTE:
REPLACE BITUMINOUS PAVEMENT W. SAME TYPE & DEPTH AS EXISTING PAVEMENT

ORIGINAL BITUMINOUS SURFACING OVER 2"

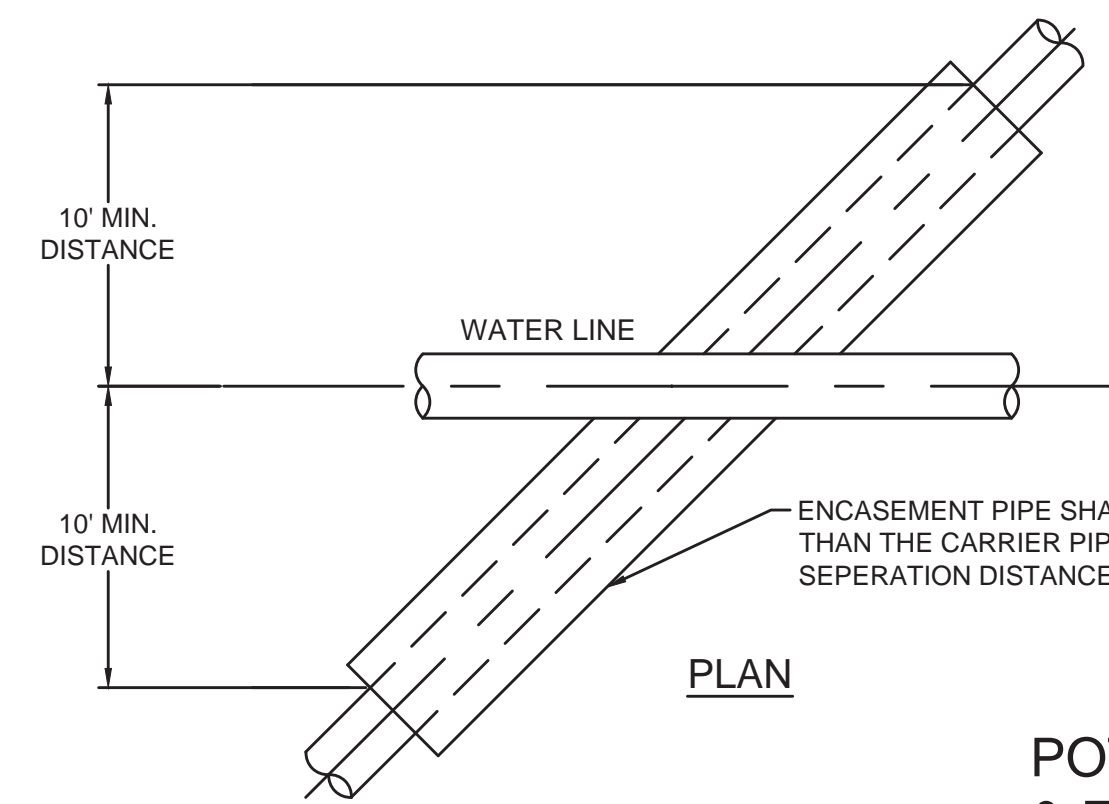
ZONE 4 - COMPACTED DGA
ZONE 3 - NO. 9, 57, OR 78 STONE
ZONE 2 - 12" MIN. NO. 9 STONE
ZONE 1 - NO. 9 STONE



ORIGINAL BITUMINOUS SURFACING 2" OR LESS AND TRAFFIC BOUND MACADAM

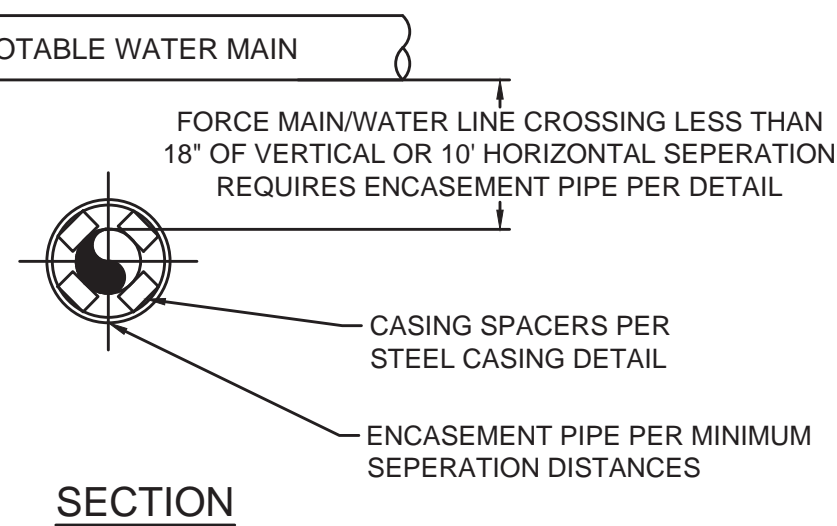
PIPE BACKFILL - DETAIL

NOT TO SCALE

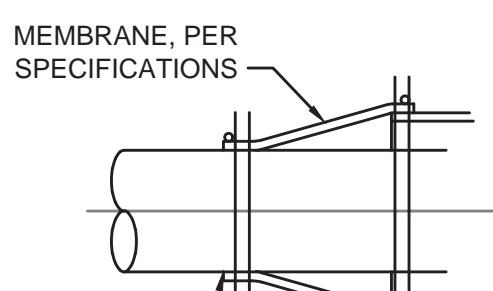
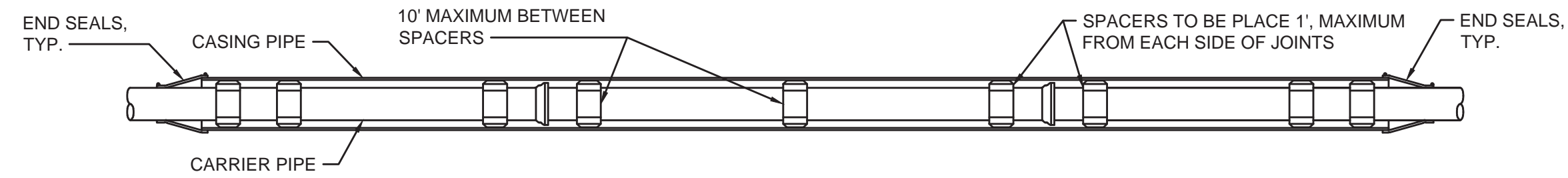


POTABLE WATER LINE & FORCE MAIN CROSSING - DETAIL

NOT TO SCALE



SECTION



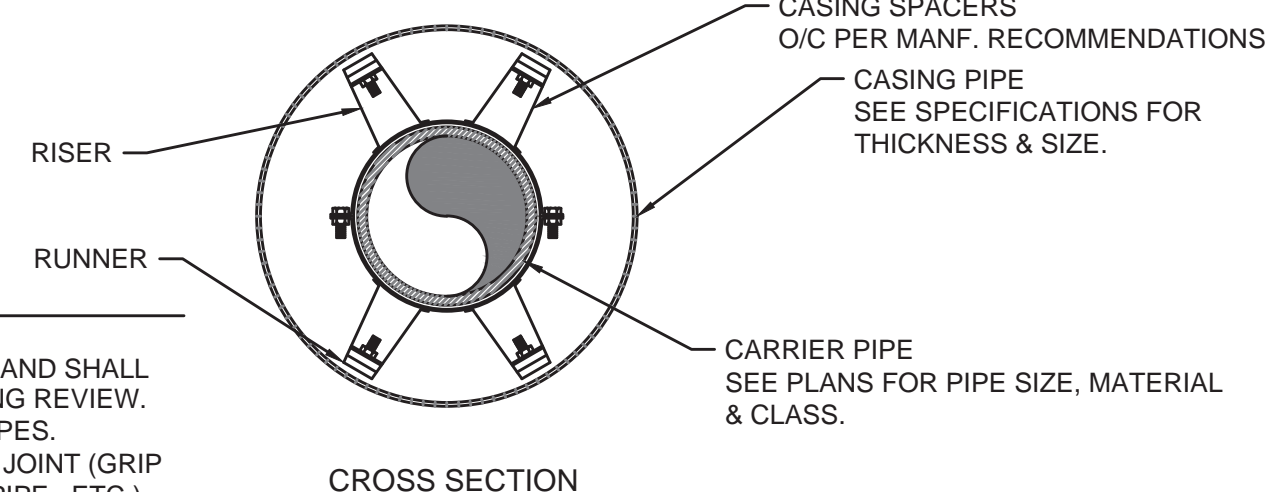
DETAIL - END SEAL

DETAIL NOTES:

- RUNNER HEIGHTS VARY FROM 1/2" TO 2" AND SHALL BE DETERMINED DURING SHOP DRAWING REVIEW.
- SPACERS SHALL BE USED IN CASING PIPES.
- CARRIER PIPES SHALL BE RESTRAINED JOINT (GRIP GASKETS, MECHANICAL, YELLOWMITE PIPE, ETC.)

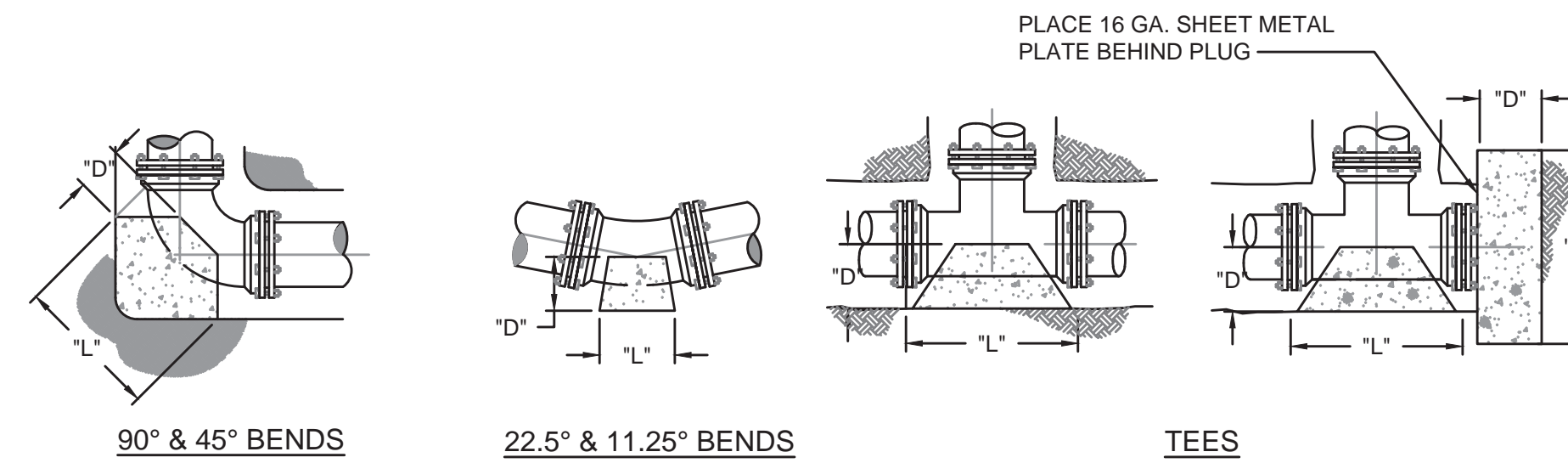
CASING - DETAIL

NOT TO SCALE



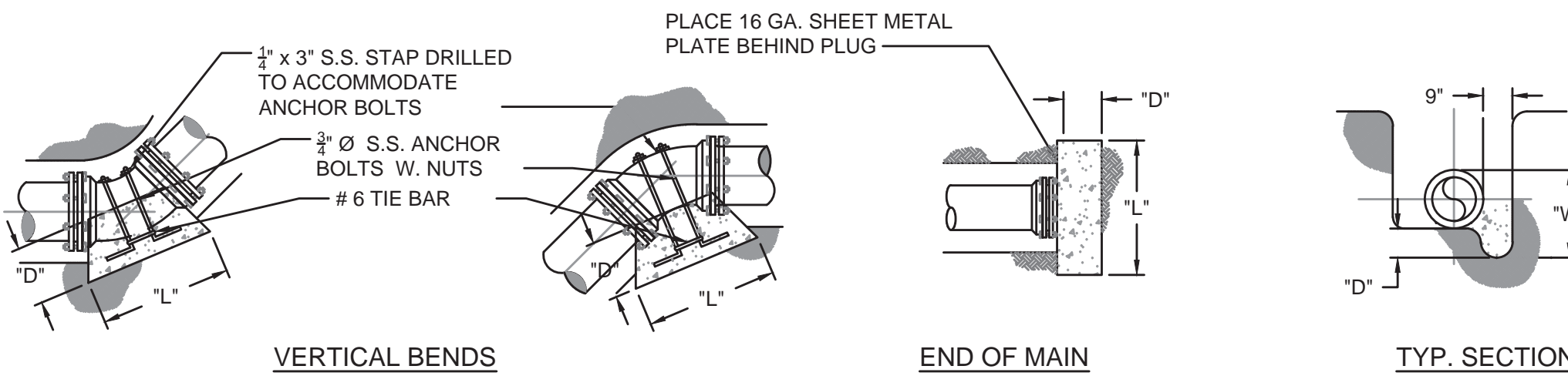
CROSS SECTION

PIPE SIZE	SOIL TYPE - SAND & GRAVEL BEARING STRENGTH = 3000 PSF																	
	90° BEND			45° BEND			22 1/2° BEND			11 1/2° BEND			TEE & DEAD ENDS					
	BEARING AREA	YDS OF CONCRETE	D W L	BEARING AREA	YDS OF CONCRETE	D W L	BEARING AREA	YDS OF CONCRETE	D W L	BEARING AREA	YDS OF CONCRETE	D W L	BEARING AREA	YDS OF CONCRETE	D W L	BEARING AREA	YDS OF CONCRETE	D W L
4"	3.750	.21	18 30 18	1.750	.10	18 18 14	1.000	.06	18 12 12	.500	.02	12 12 6	2.250	.13	18 18 18			
6"	7.000	.39	18 42 24	3.750	.21	18 30 18	2.000	.11	18 24 12	1.000	.04	12 12 12	5.000	.28	18 30 24			
8"	12.250	.91	24 42 42	7.500	.56	24 36 30	4.000	.30	24 24 24	2.000	.11	18 24 12	9.000	.67	24 36 36			
10"	20.000	1.48	24 60 48	10.500	.78	24 42 36	6.000	.44	24 36 24	3.000	.17	18 24 18	14.000	1.04	24 48 42			
12"	30.000	2.78	30 72 60	15.750	1.46	30 54 42	7.500	.69	30 36 30	4.000	.30	24 24 24	20.000	1.85	30 60 48			
14"	39.000	4.33	36 78 72	20.000	2.22	36 60 48	10.500	1.17	36 42 36	6.000	.56	30 36 24	27.500	3.06	36 66 60			
16"	49.000	6.35	42 84 84	27.500	3.56	42 66 60	14.000	1.81	42 48 42	7.500	.83	36 36 30	37.500	4.63	42 78 66			



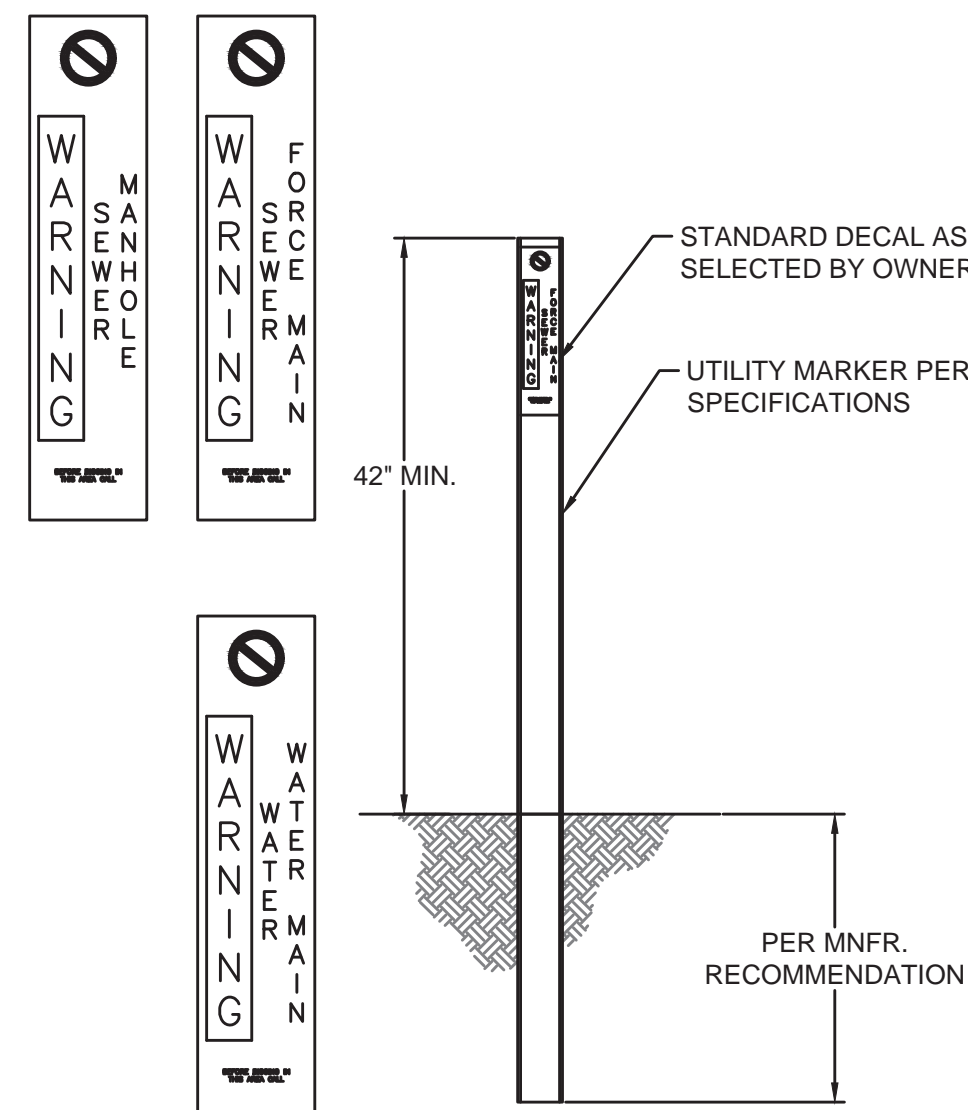
NOTE:

- 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



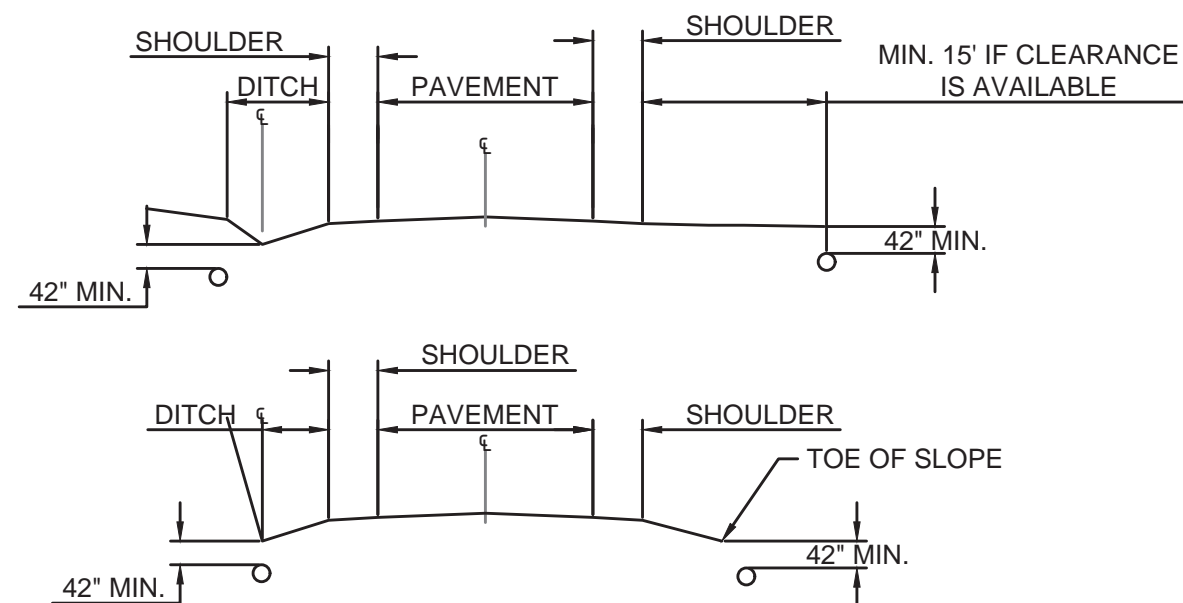
CONCRETE THRUST BLOCK - DETAIL

NOT TO SCALE



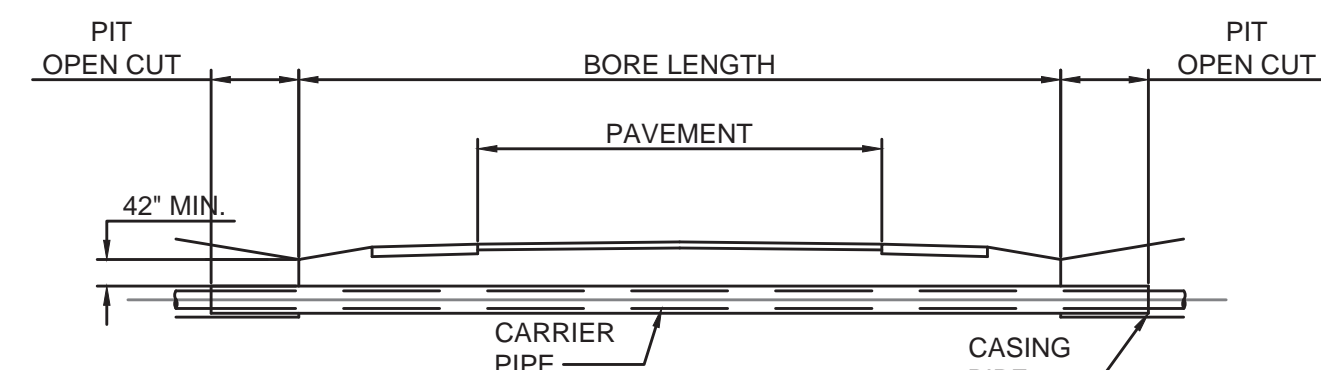
UTILITY MARKER - DETAIL

NOT TO SCALE

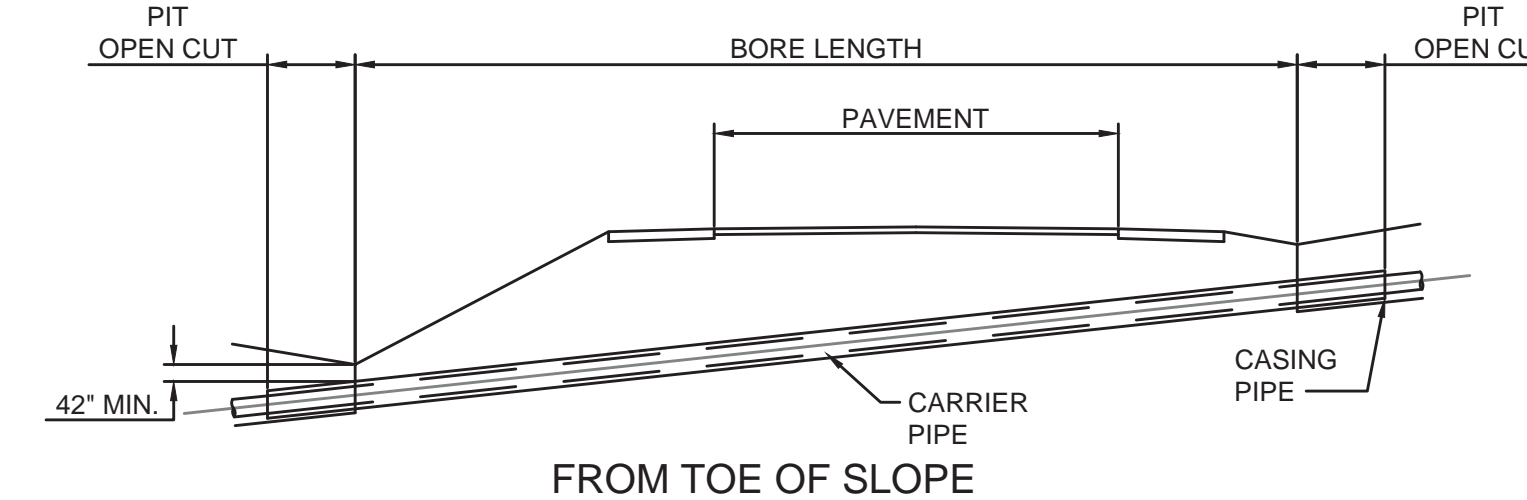


UTILITY PIPELINE WITHIN KTC ROW - DETAIL

NOT TO SCALE



OFFSET FROM EDGE OF PAVEMENT



KTC CROSSING - DETAIL

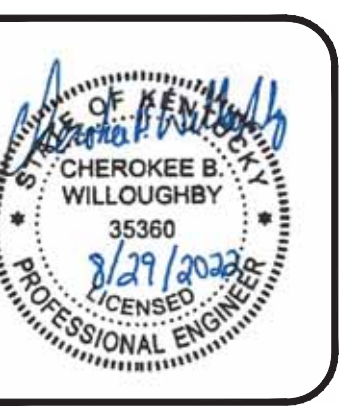
NOT TO SCALE

NO.	DATE	REVISIONS	BY

PHASE 12 - WATER SYSTEM IMPROVEMENTS
STANDARD DETAILS - PIPE LINES



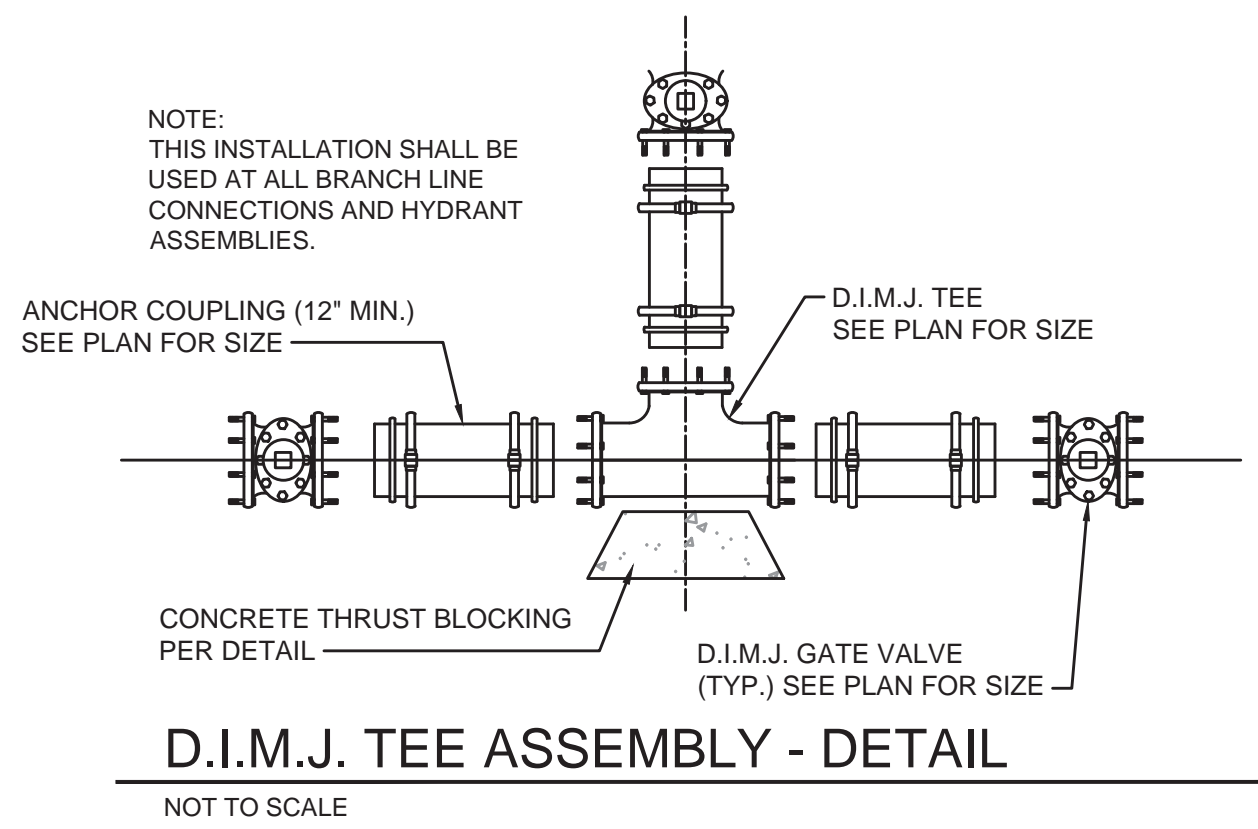
PROJECT #: 20016
DATE: AUGUST 2022
PROJECT MGR: LRS
DRAWN BY: WCM
CHECKED BY: PBR



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.

IT IS A VIOLATION OF LAW FOR ANY PERSON TO ALTER THIS DRAWING WITHOUT WRITTEN PERMISSION FROM BLUEGRASS ENGINEERING, PLLC AND ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER.

B:\PROJECTS\Nicholas County\20016 - Phase 12 Water System Improvements\Drawings\Contract 1 - Water Lines\20016-01-12.dwg BE 8/29/22

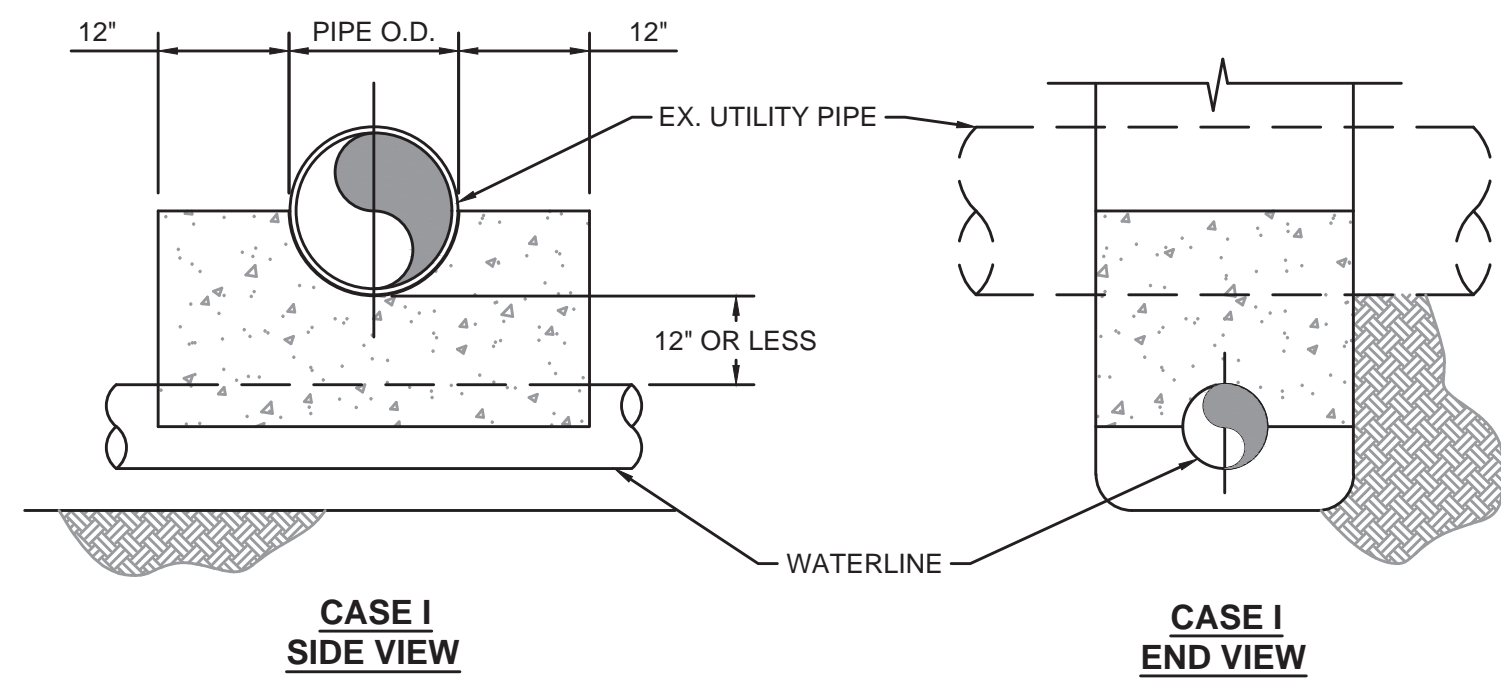


D.I.M.J. TEE ASSEMBLY - DETAIL

NOT TO SCALE

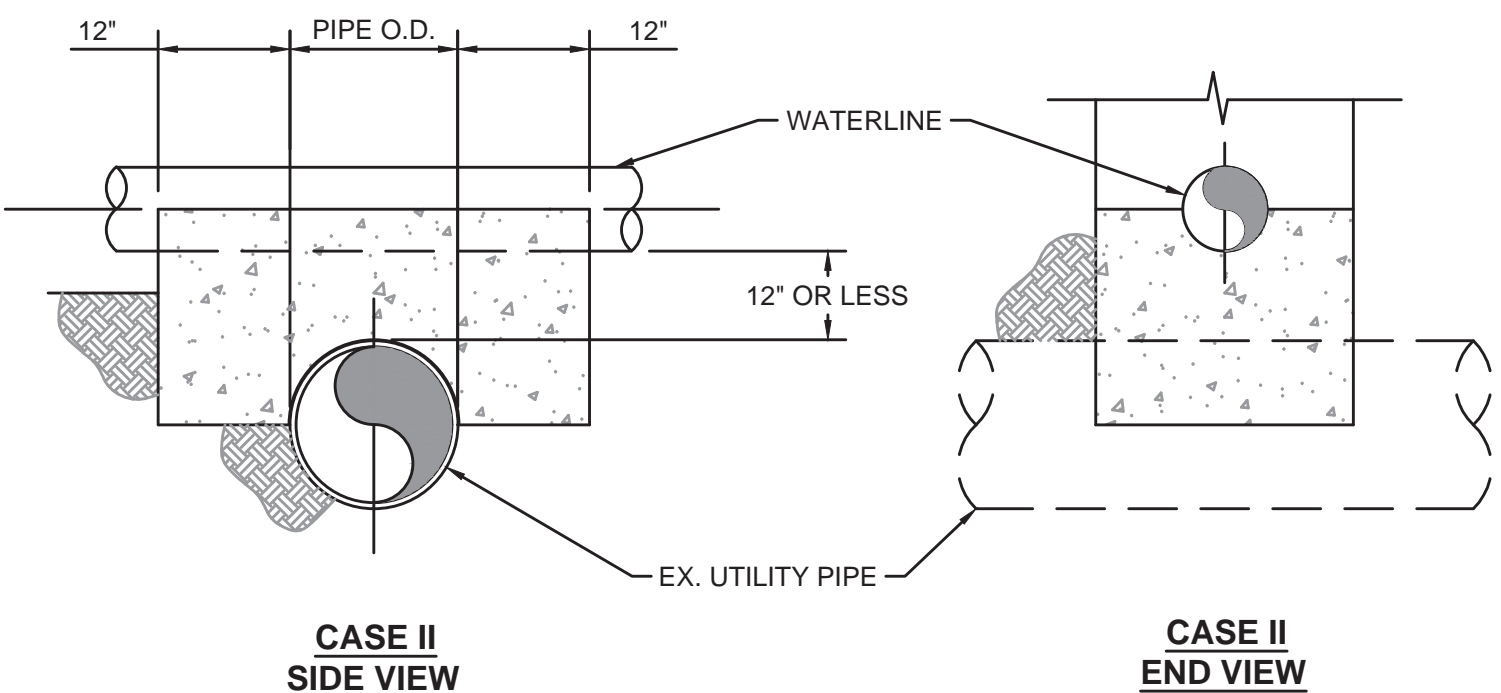
NOTES:

1. THIS DETAIL IS ONLY FOR NON-CONTAMINATE PIPE/CONDUIT. UTILITY PIPE IS DEFINED AS WATER, NATURAL GAS, TELEPHONE, ELECTRICAL CONDUITS OR STORM SEWER.
2. IF "UTILITY PIPE" IS A SANITARY SEWER PIPE (FORCE MAIN OR GRAVITY) SEE DETAIL FOR POTABLE WATER & FORCE MAIN CROSSING.
3. 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

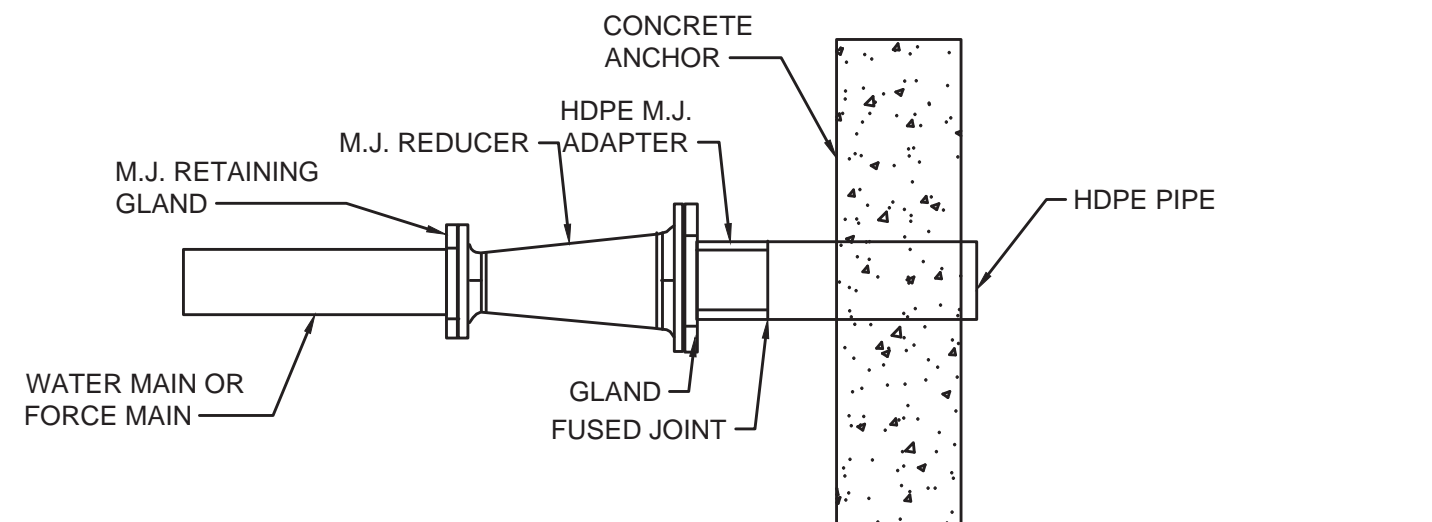
CASE II END VIEW

UTILITY CROSSING CONCRETE ASSEMBLY - DETAIL

NOT TO SCALE

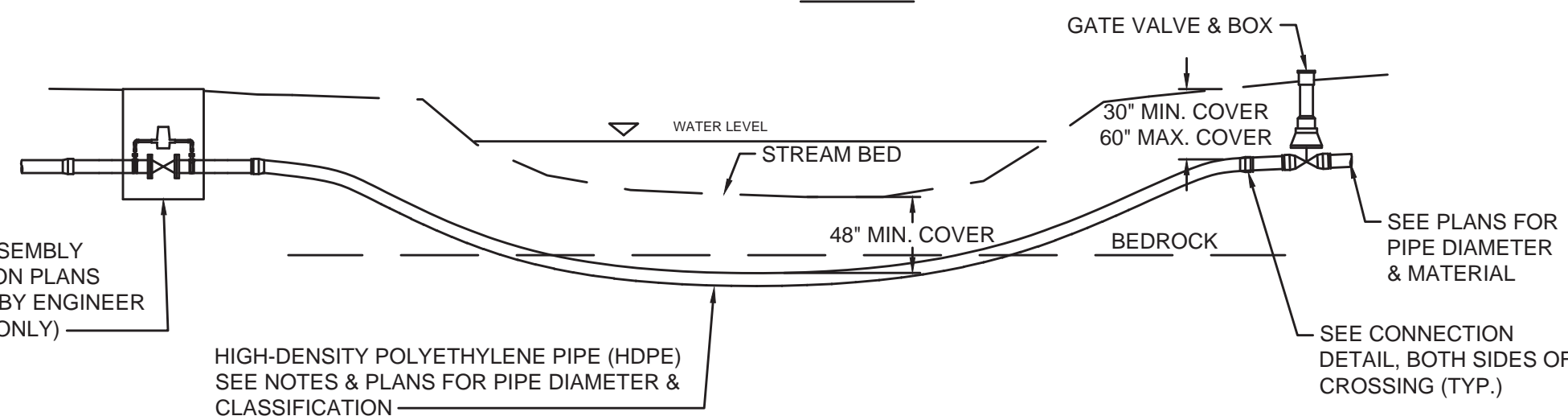
NOTES:

1. CONNECTION OF THE HDPE TO THE PVC OR DUCTILE IRON WATERLINE SHALL BE NO DEEPER THAN 5 FEET FROM THE GROUND ELEVATION.
2. DIRECTIONAL BORE SHALL BE MADE IN BED ROCK WITH A MIN DEPTH OF 36\"/>



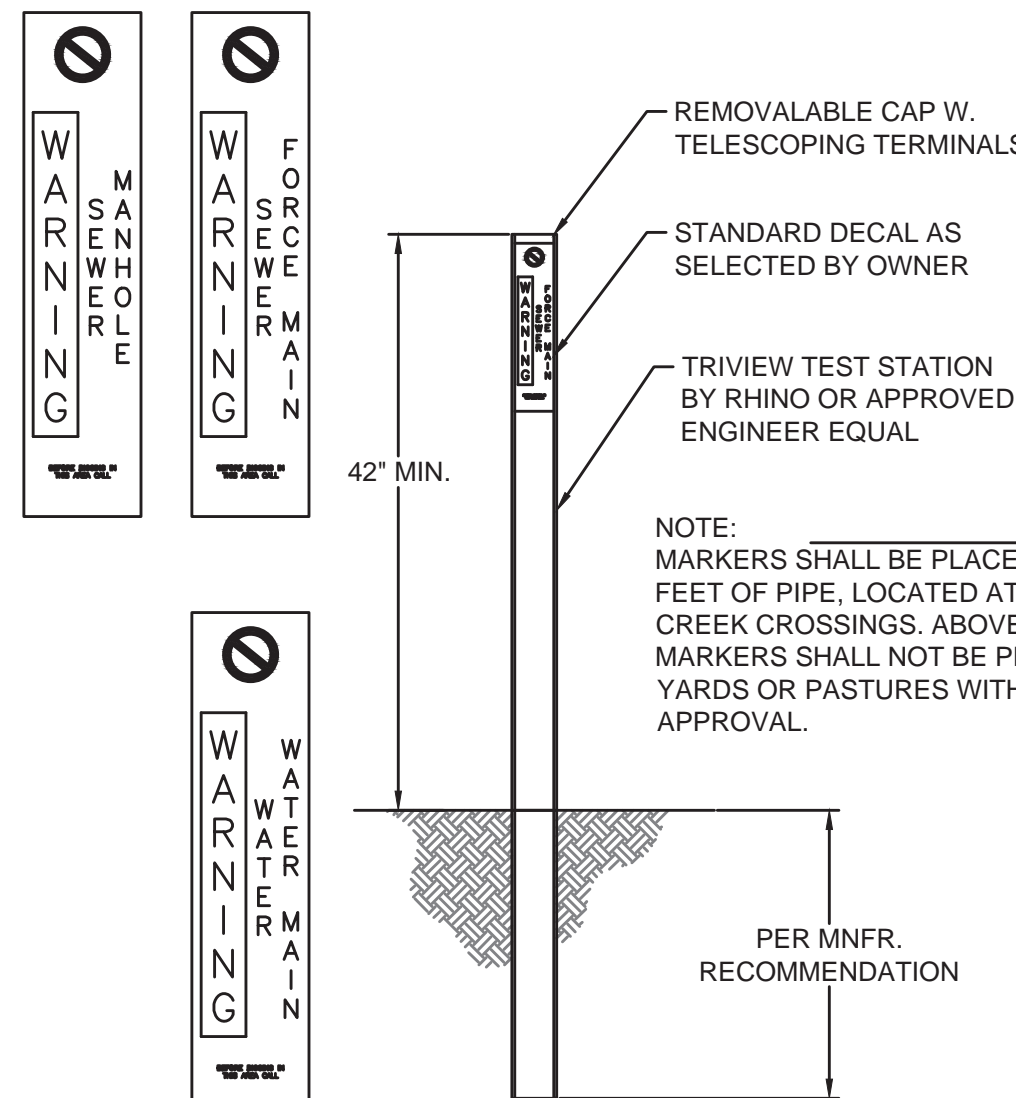
CONNECTION DETAIL

LEAK DETECTION ASSEMBLY LOCATE AS SHOWN ON PLANS OR FIELD DIRECTED BY ENGINEER OR OWNER (WATER ONLY)



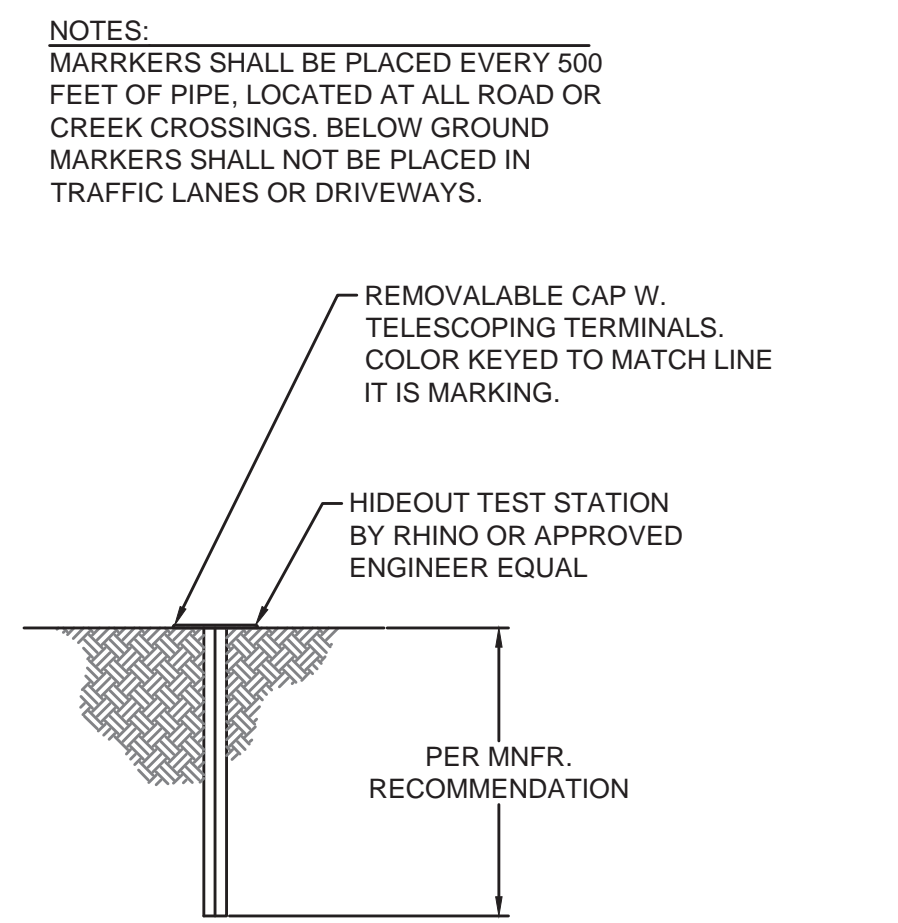
DIRECTIONAL DRILLED CREEK CROSSING - DETAIL

NOT TO SCALE



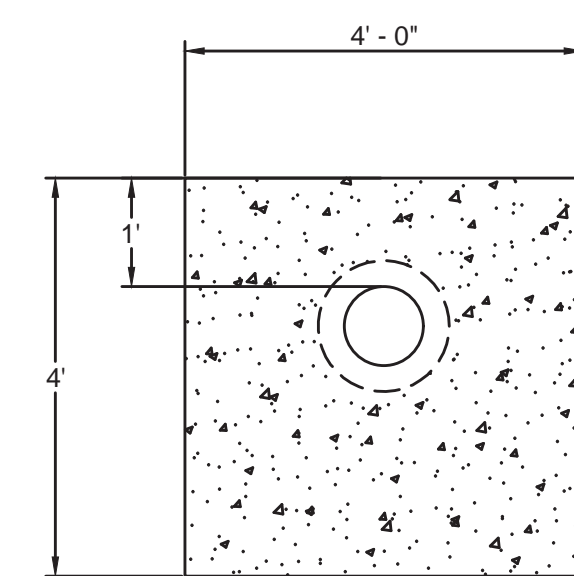
ABOVE GROUND TEST STATION - DETAIL

NOT TO SCALE

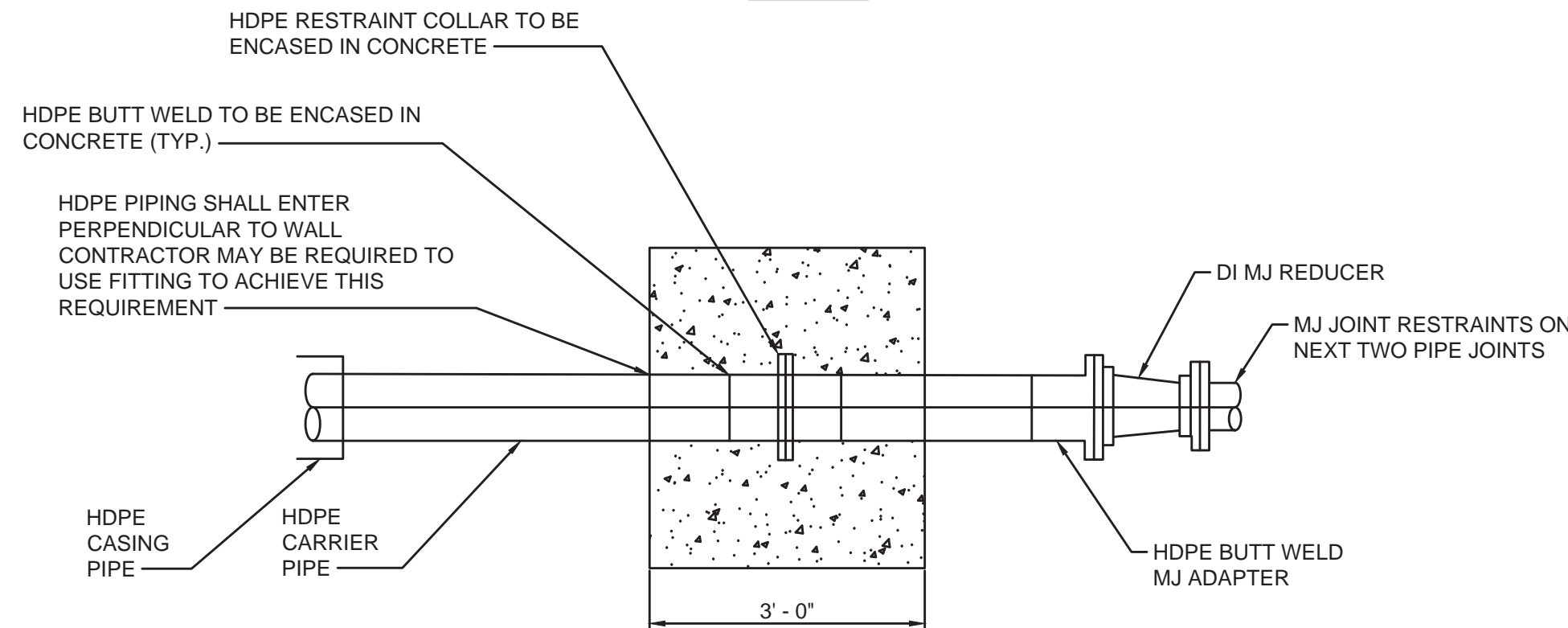


BELOW GROUND TEST STATION - DETAIL

NOT TO SCALE

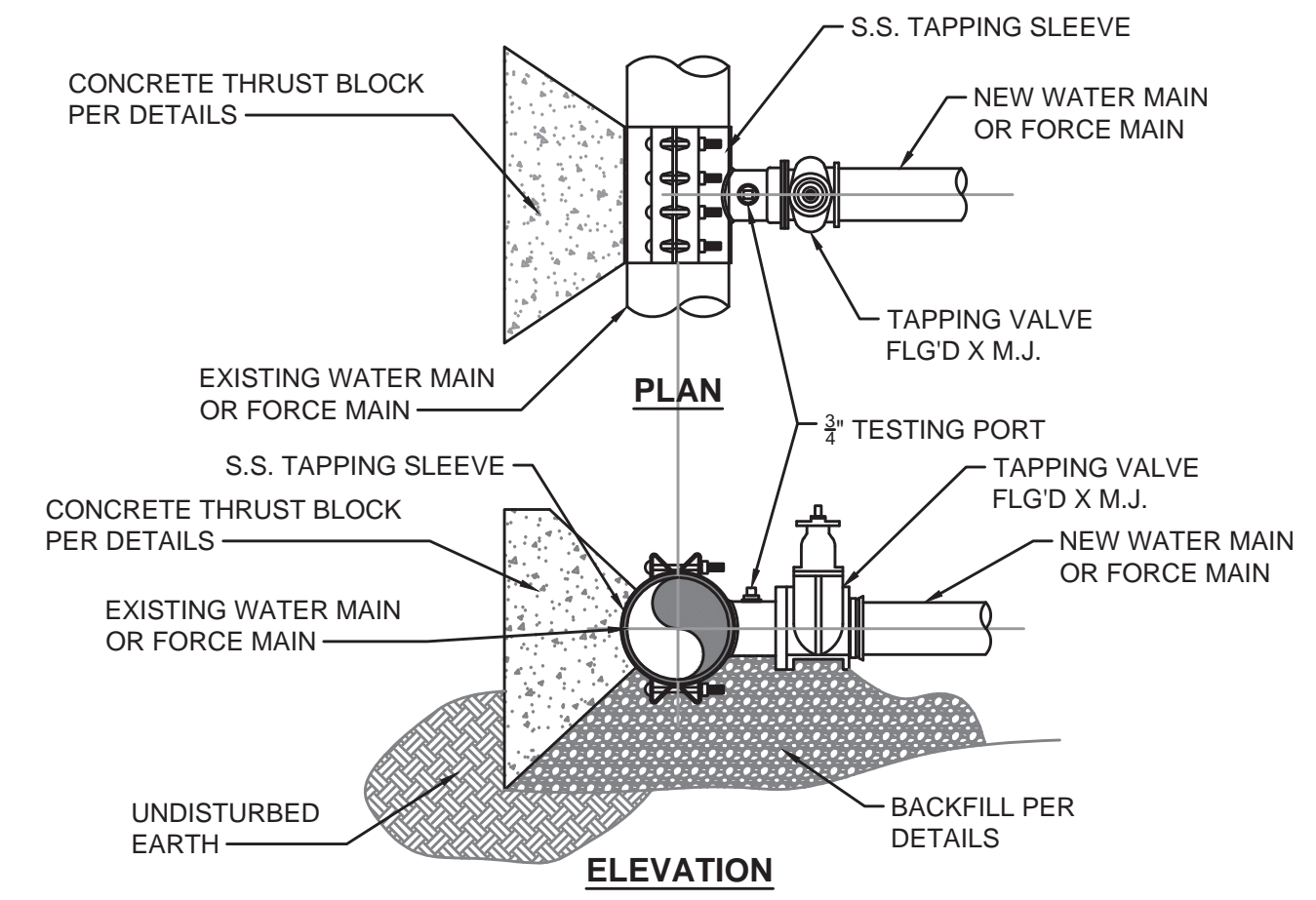


SECTION



HDPE RESTRAINT WALL

NOT TO SCALE

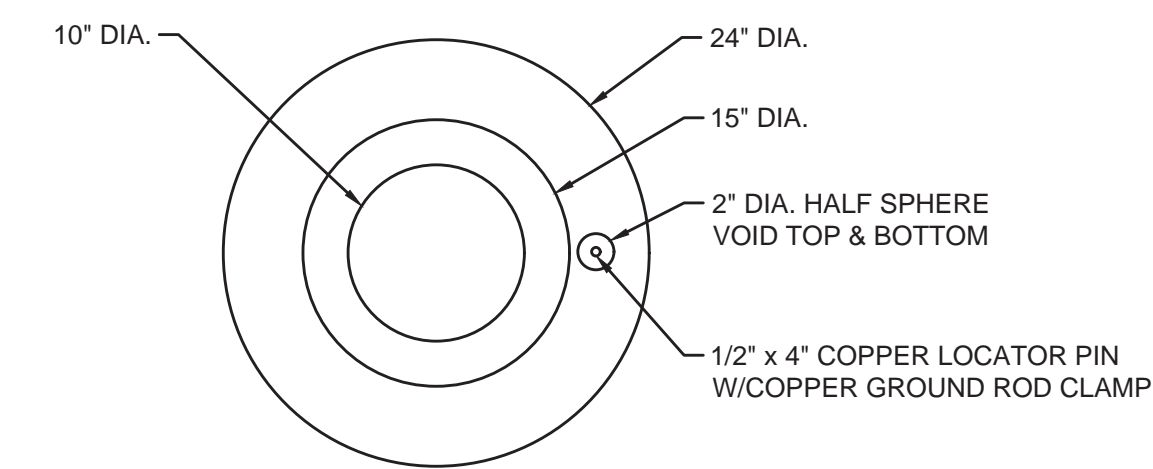


STAINLESS STEEL TAPPING SLEEVE & VALVE ASSEMBLY - DETAIL

NOT TO SCALE

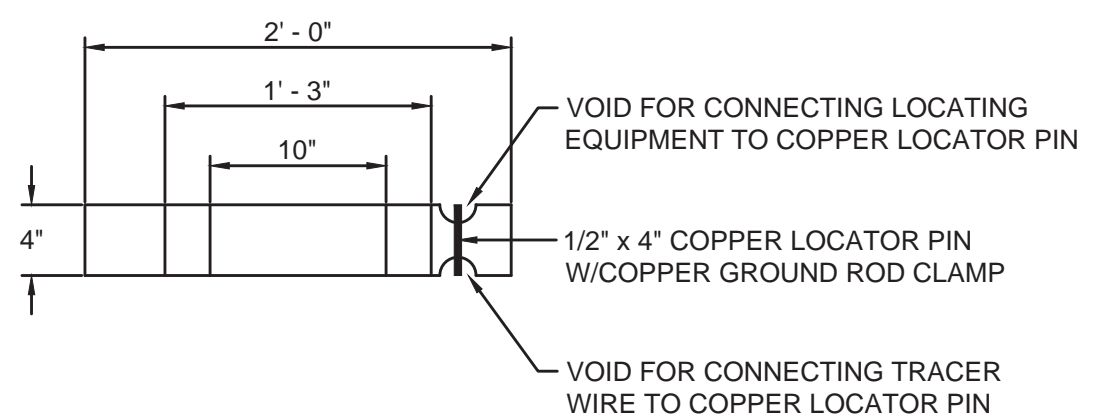
NOTE:

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



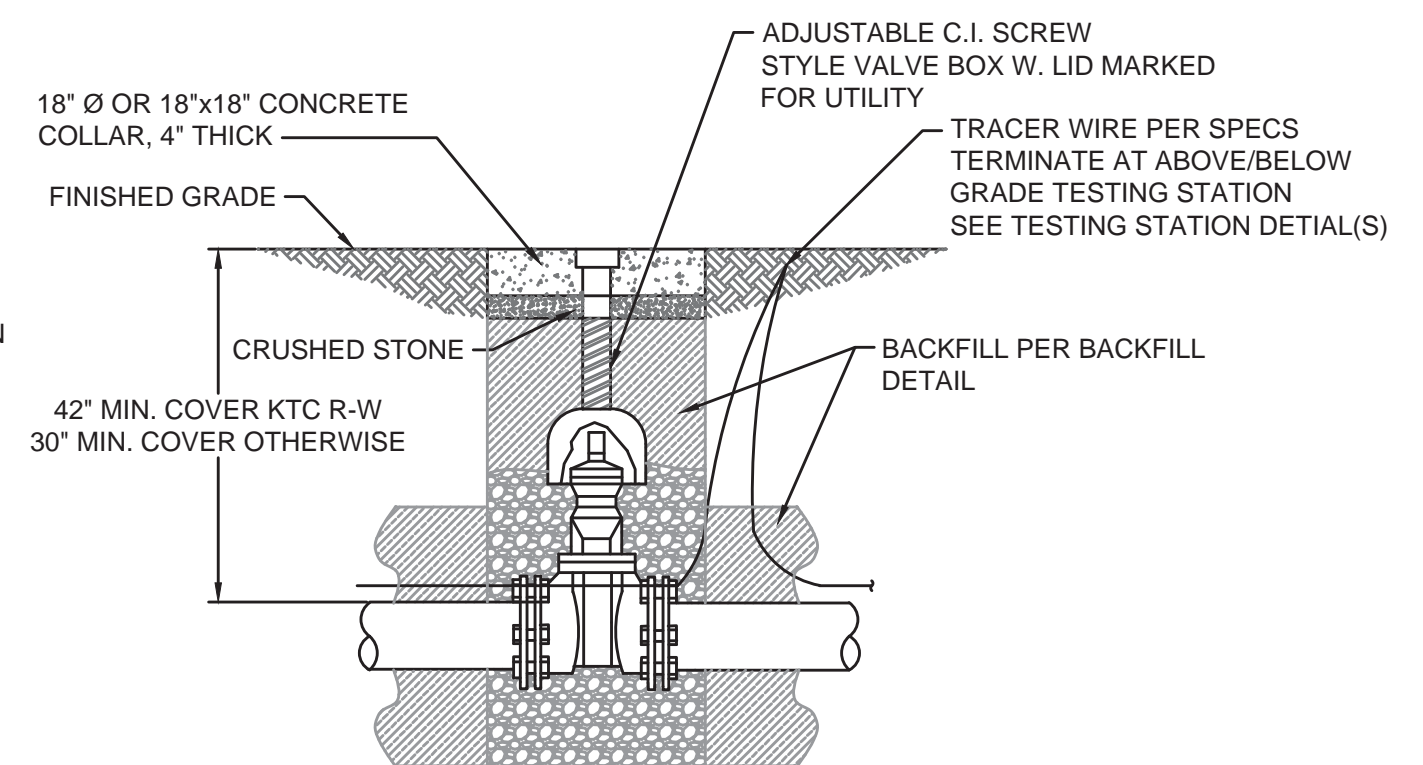
24\"/>

NOT TO SCALE



24\"/>

NOT TO SCALE



GATE VALVE ASSEMBLY - DETAIL

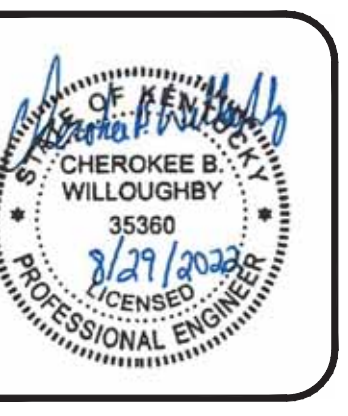
NOT TO SCALE

NO.	DATE	REVISIONS	BY

PHASE 12 - WATER SYSTEM IMPROVEMENTS
STANDARD DETAILS - PIPE LINES

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

PROJECT #:	20016
DATE:	AUGUST 2022
PROJECT MGR:	LRS
DRAWN BY:	WCM
CHECKED BY:	PBR

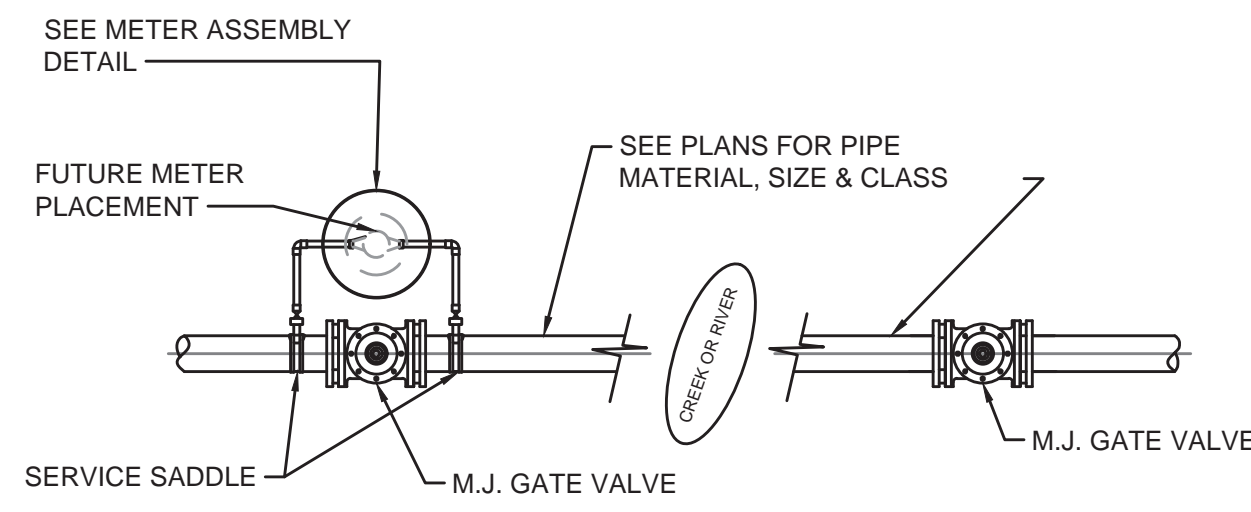


THIS DRAWING HAS BEEN PREPARED AT THE SCALE INDICATED. REPRODUCTION OF THIS DRAWING MAY INTRODUCE INACCURACIES OF THE LISTED SCALE. THE GRAPHIC SCALE BAR SHALL BE USED TO DETERMINE THE ACTUAL SCALE.

IT IS A VIOLATION OF LAW FOR ANY PERSON TO ALTER THIS DRAWING WITHOUT WRITTEN PERMISSION FROM BLUEGRASS ENGINEERING, PLLC AND ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER.

BE 82922

B:\PROJECTS\Nicholas County\20016 - Phase 12 Water System Improvements\Drawings\Contract 1 - Water Lines\20016-01-22.dwg



LEAK DETECTION ASSEMBLY - DETAIL

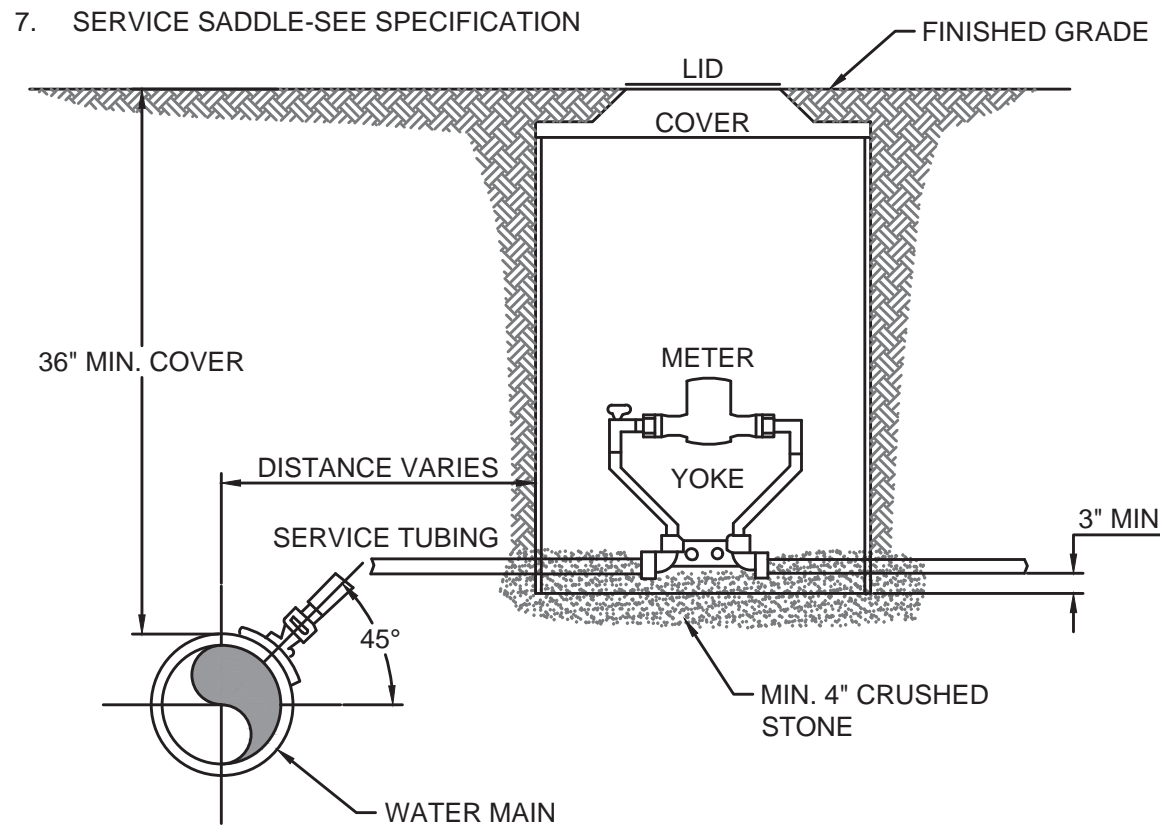
NOT TO SCALE

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.

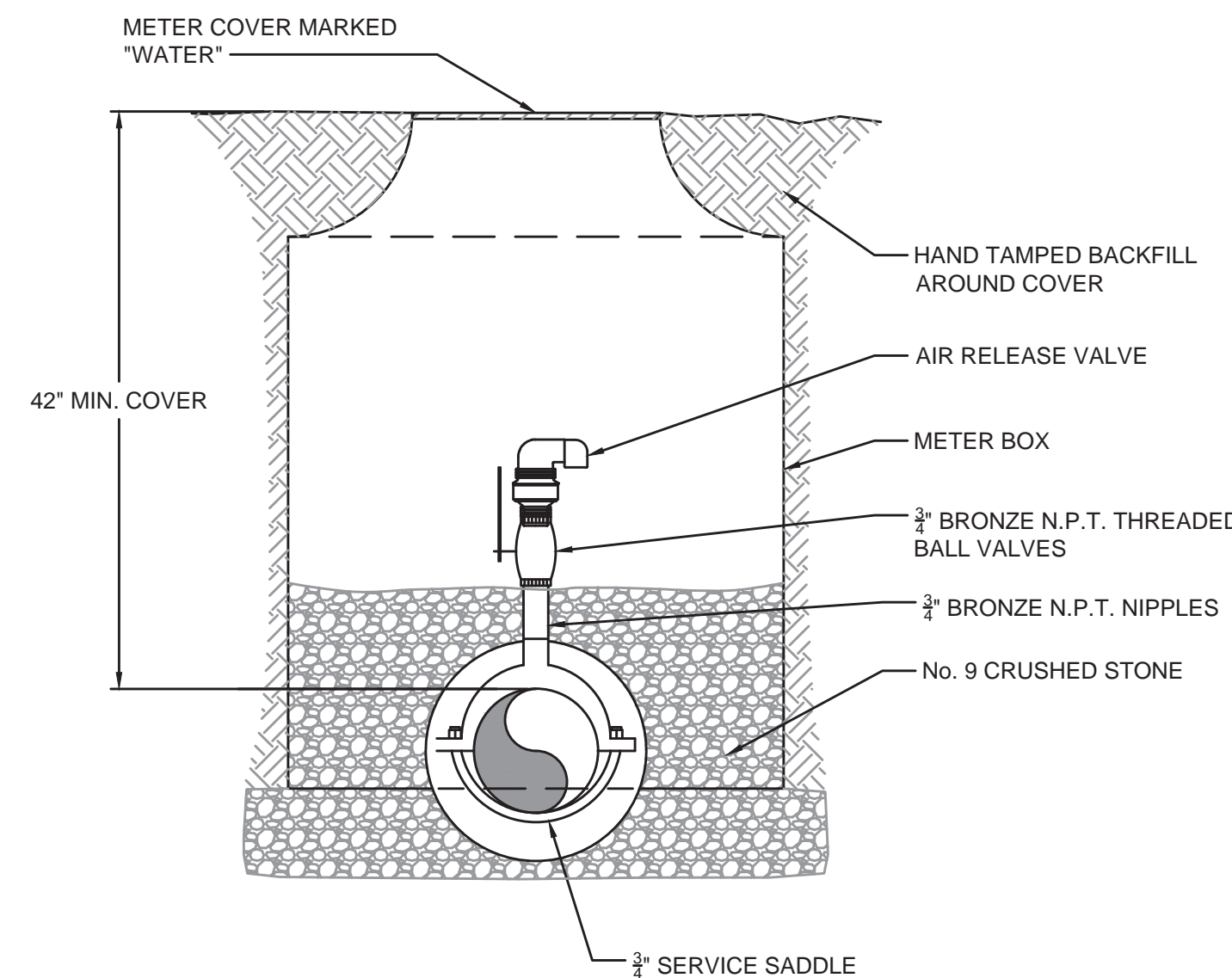
METER MATERIAL SCHEDULE

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



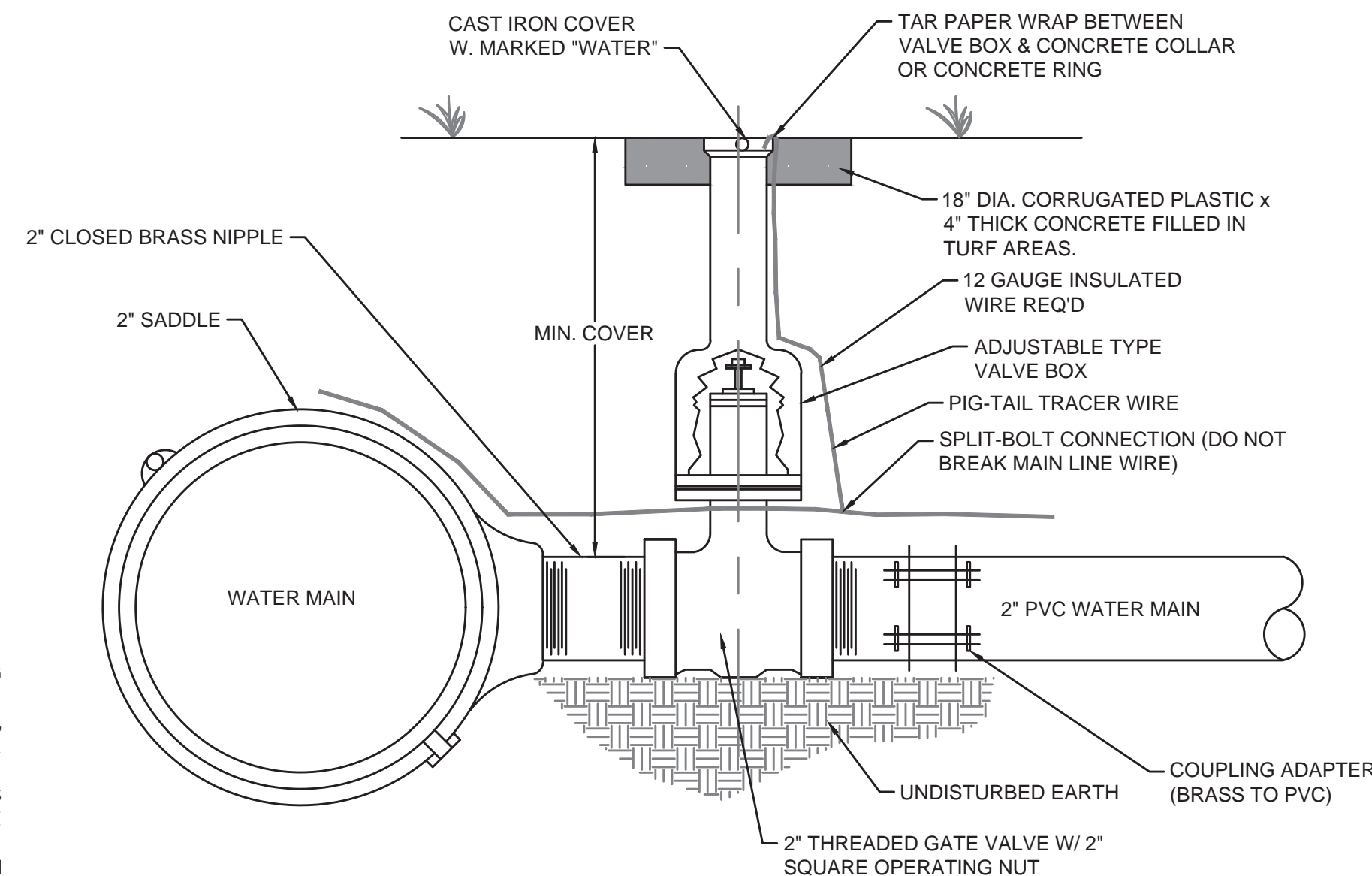
METER ASSEMBLY - DETAIL

NOT TO SCALE



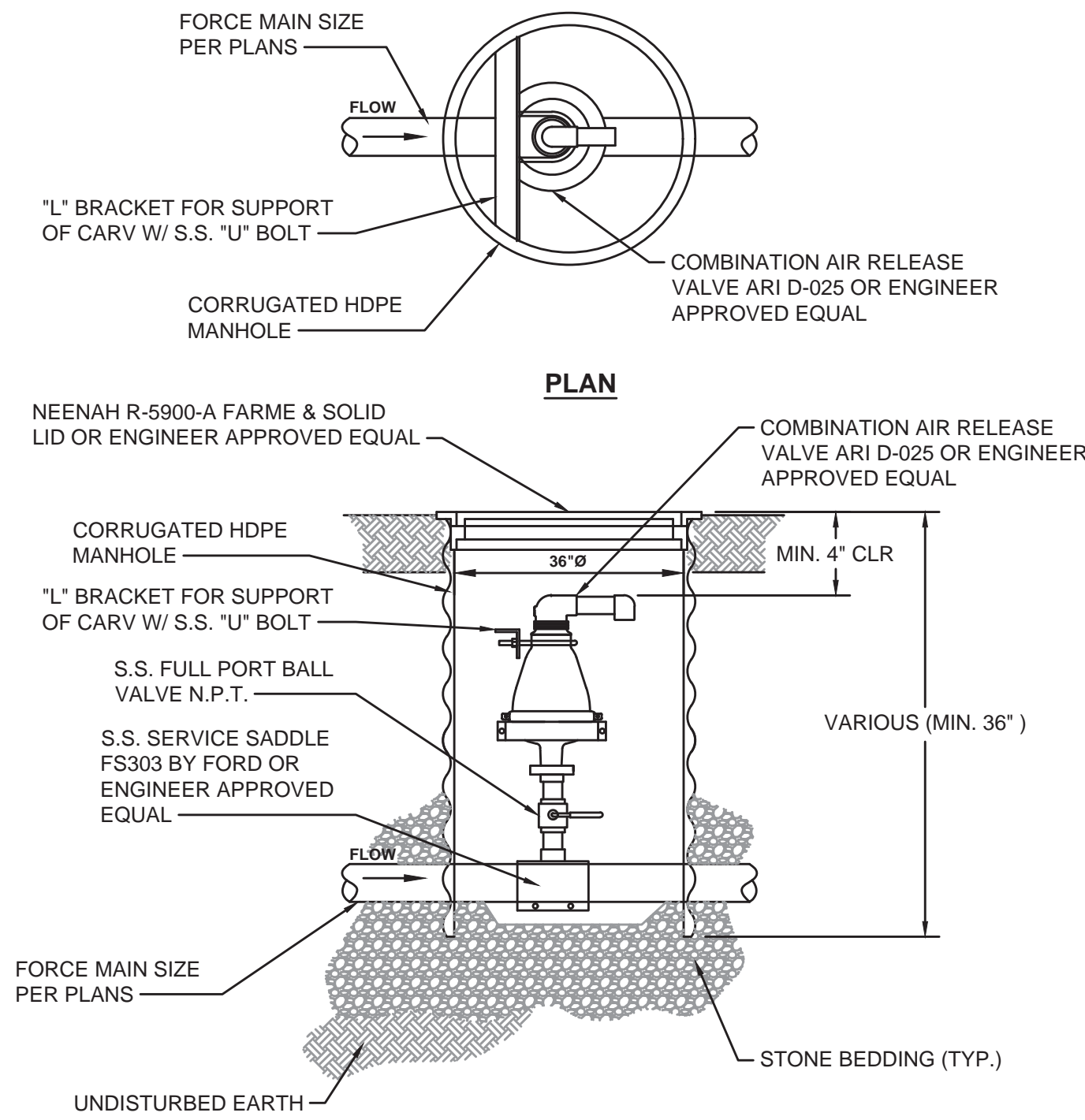
AIR RELEASE VALVE ASSEMBLY WATERLINE ONLY - DETAIL

NOT TO SCALE



CONNECTION FOR 2" WATER MAINS

NOT TO SCALE



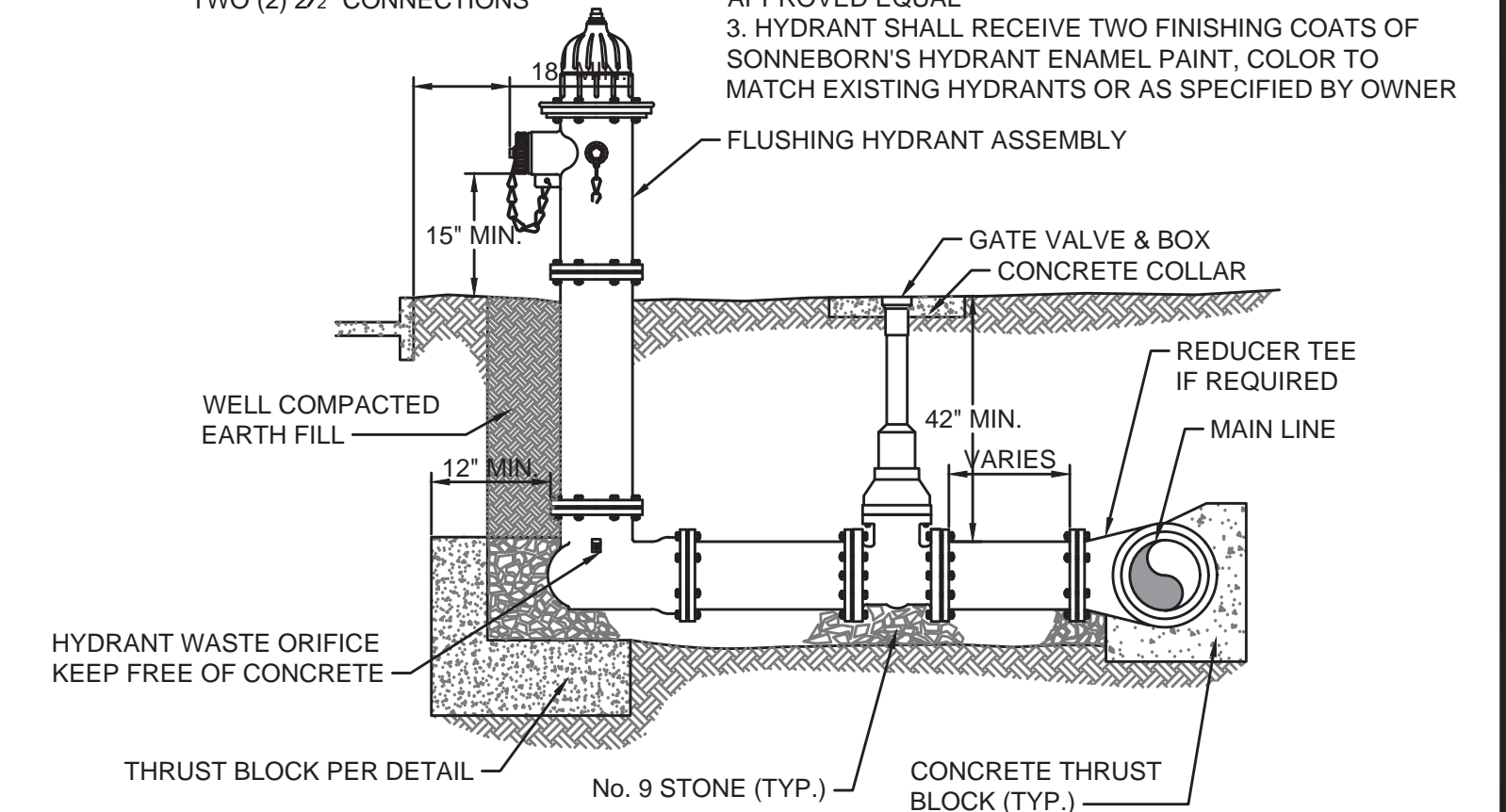
COMBINATION AIR RELEASE VALVE ASSEMBLY FORCE MAIN ONLY - DETAIL

NOT TO SCALE

SANITARY SEWER AIR & VACUUM RELEASE VALVES SHALL BE A.R.I. MODEL D-025 OR ENGINEER APPROVED EQUAL W/2" INLET AND OUTLET. ALL VALVES SHALL BE PROVIDED W/ BACKFLUSHING ATTACHMENTS.

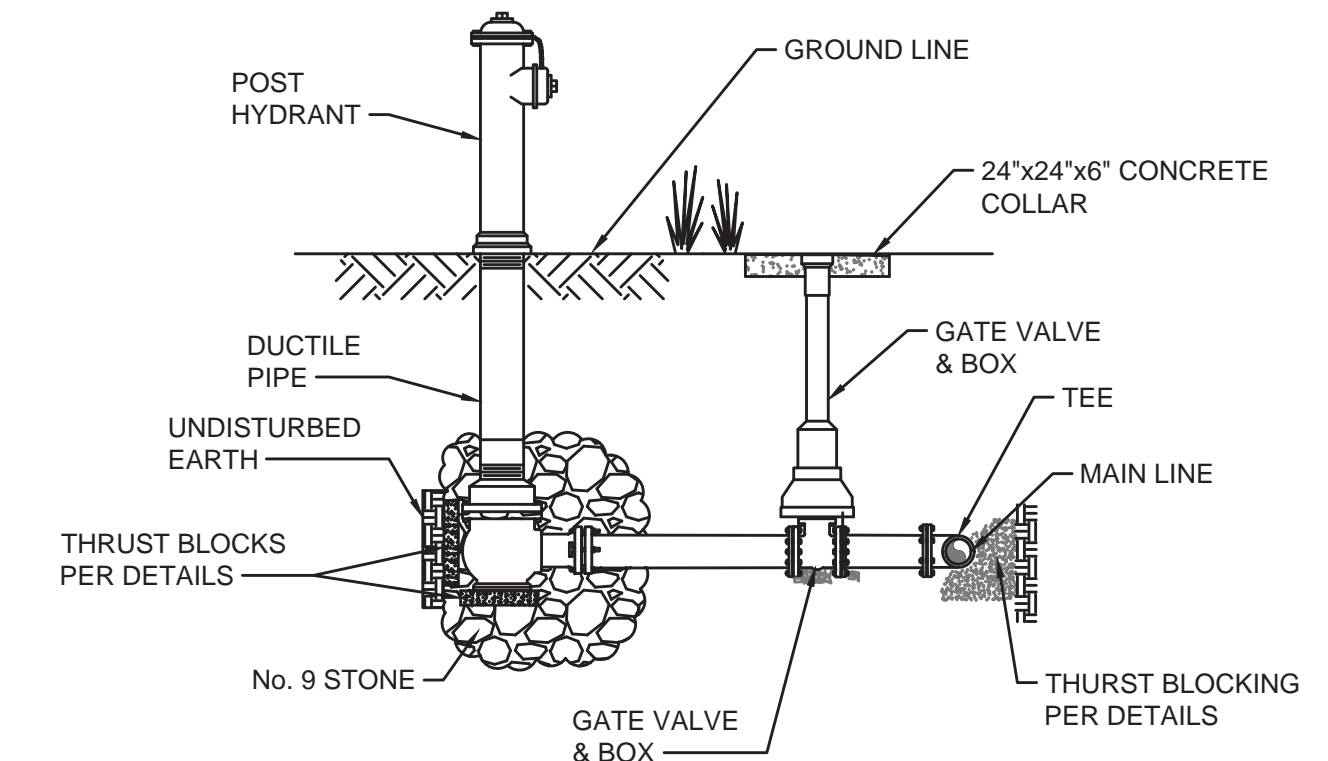
NOTE:
TYPE 1 FLUSHING HYDRANT
TWO (2) 2" CONNECTIONS AND
ONE (1) 4" CONNECTION

NOTE: BEFORE FINAL INSPECTION
1. ENSURE ADEQUATE VOLUME OF OIL AS SHIPPED BY THE MANUFACTURER
2. HYDRANT SHALL BE CLEANED, WIRE BRUSHED AND TOUCHED UP WITH "KROMIK PRIMER E4IN" OR ENGINEER APPROVED EQUAL
3. HYDRANT SHALL RECEIVE TWO FINISHING COATS OF SONNEBORN'S HYDRANT ENAMEL PAINT, COLOR TO MATCH EXISTING HYDRANTS OR AS SPECIFIED BY OWNER



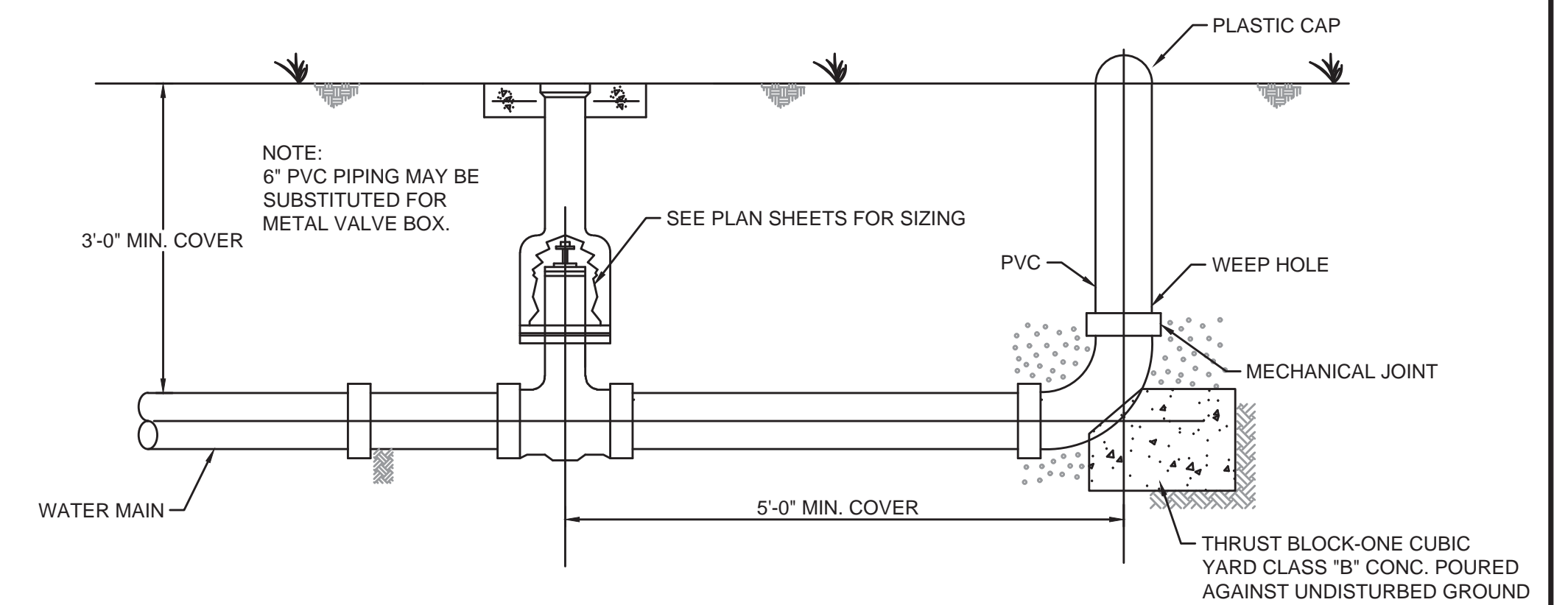
FLUSHING HYDRANT ASSEMBLY TYPE 1 & 2 - DETAIL

NOT TO SCALE



FLUSHING HYDRANT ASSEMBLY, TYPE 3 - DETAIL

NOT TO SCALE



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

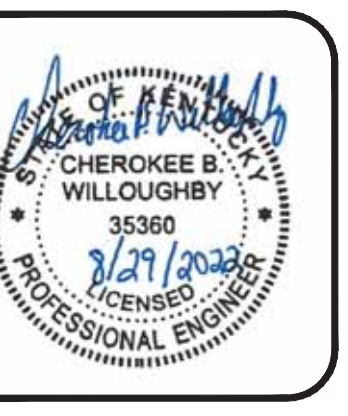
NOT TO SCALE

NO.	DATE	REVISIONS	BY

PHASE 12 - WATER SYSTEM IMPROVEMENTS
STANDARD DETAILS - WATER LINES

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

PROJECT #:	20016
DATE:	AUGUST 2022
PROJECT MGR:	LRS
DRAWN BY:	WCM
CHECKED BY:	PBR

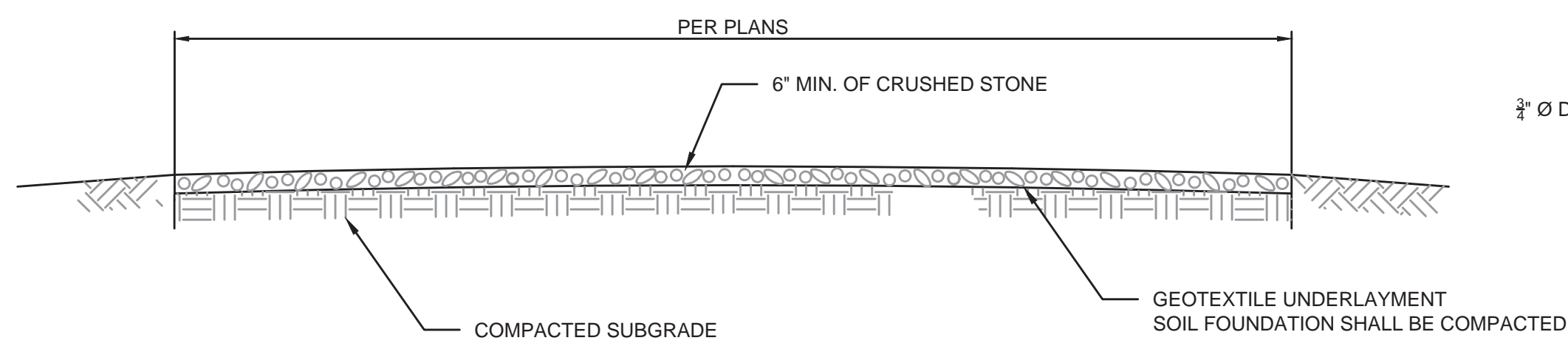


THIS DRAWING HAS BEEN PREPARED AT THE SCALE INDICATED. REPRODUCTION OF THIS DRAWING MAY INTRODUCE INACCURACIES OF THE LISTED SCALE. THE GRAPHIC SCALE BAR SHALL BE USED TO DETERMINE THE ACTUAL SCALE.

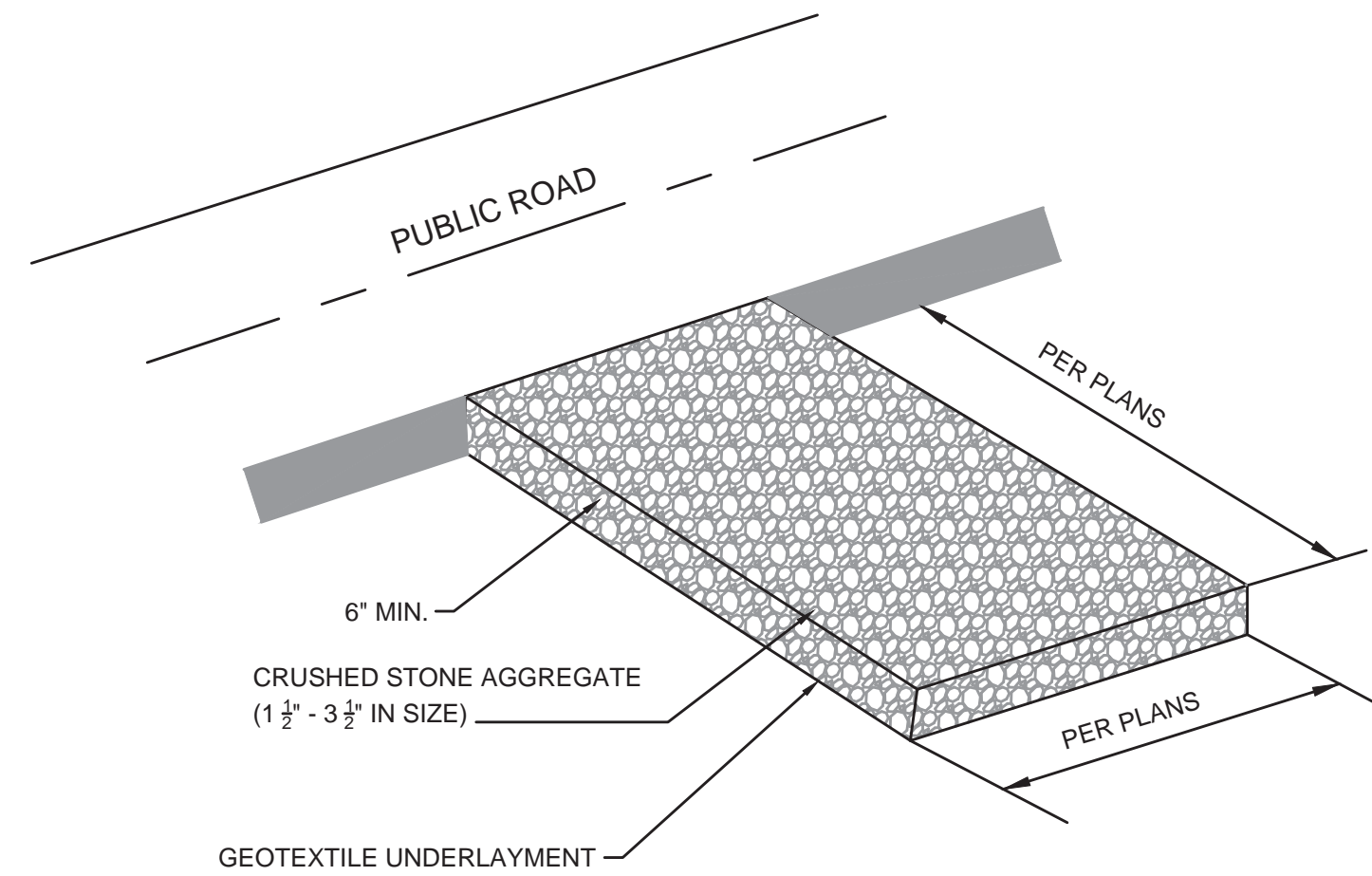
IT IS A VIOLATION OF LAW FOR ANY PERSON TO ALTER THIS DRAWING WITHOUT WRITTEN PERMISSION FROM BLUEGRASS ENGINEERING, PLLC AND ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER.

BE 82922

B:\PROJECTS\Nicholas County\20016 - Phase 12 Water System Improvements\Drawings\Contract 1 - Water Lines\20016-01-123.dwg



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 COMPACTION WITH THE CONTROLLED MOVEMENT OF COMPACTION 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.

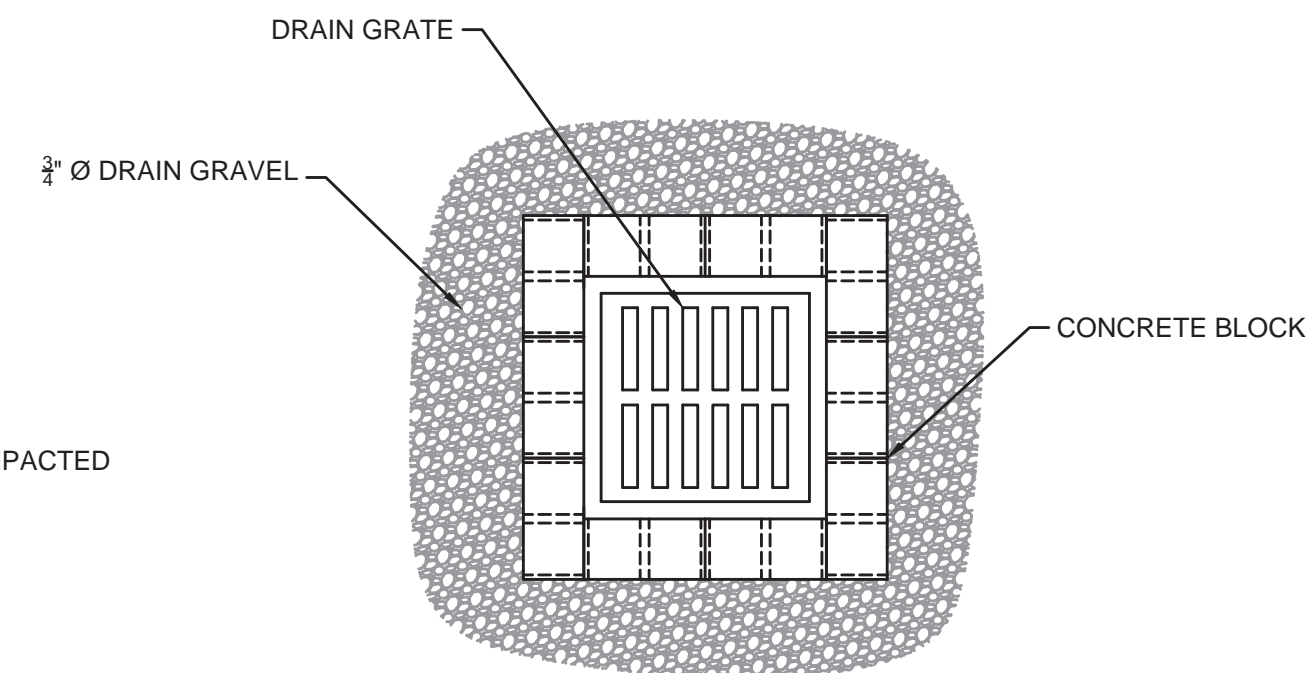
STABILIZED CONSTRUCTION ENTRANCE - DETAIL
NOT TO SCALE

EROSION CONTROL NOTES:

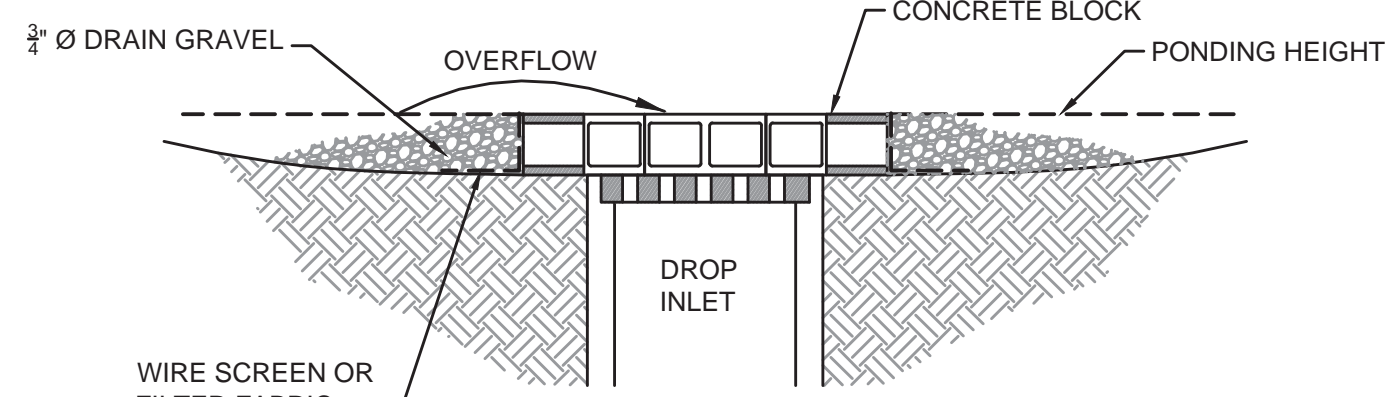
1. A KPDES STORMWATER PERMIT IS REQUIRED. COVERAGE STARTS WHEN THE KY DIVISION OF WATER ACKNOWLEDGES RECEIPT OF A NOTICE OF INTENT FOR COVERAGE.
2. FINAL STABILIZATION SHALL BEGIN WITHIN 14 DAYS ON AREAS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE PERMANENTLY CEASED OR HAVE BEEN SUSPENDED FOR MORE 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

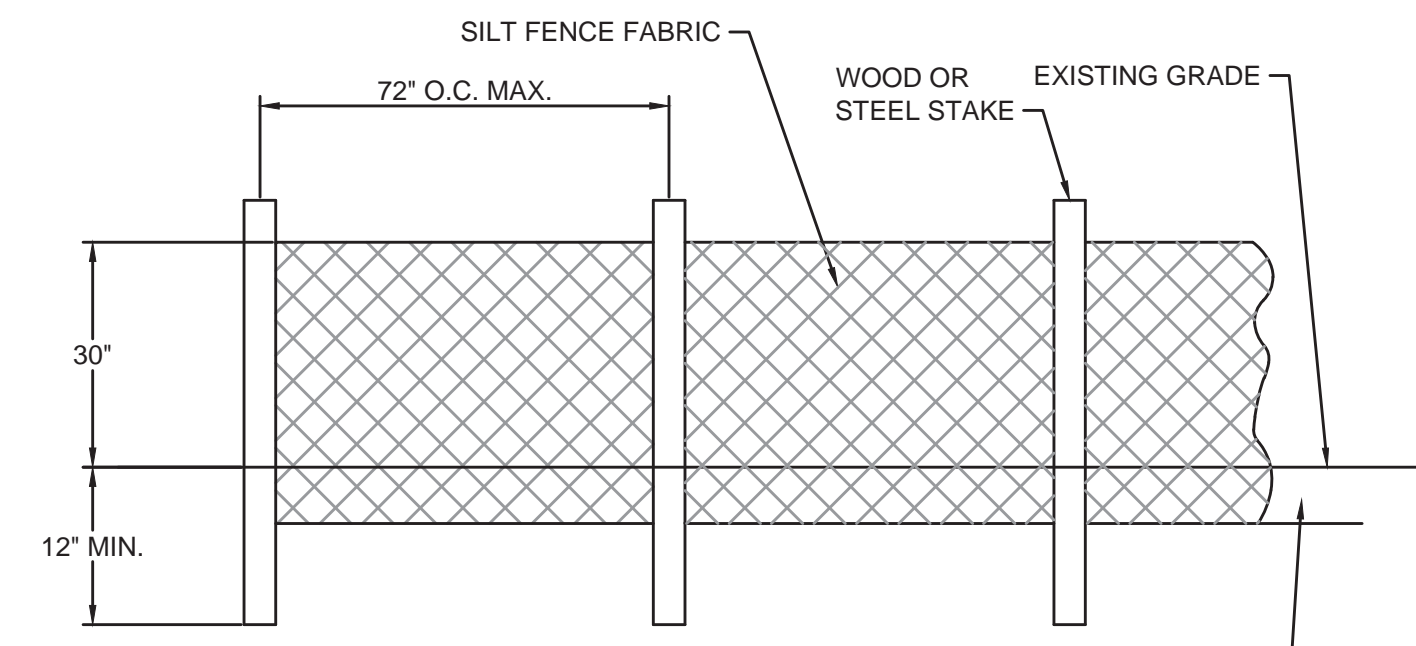


SECTION

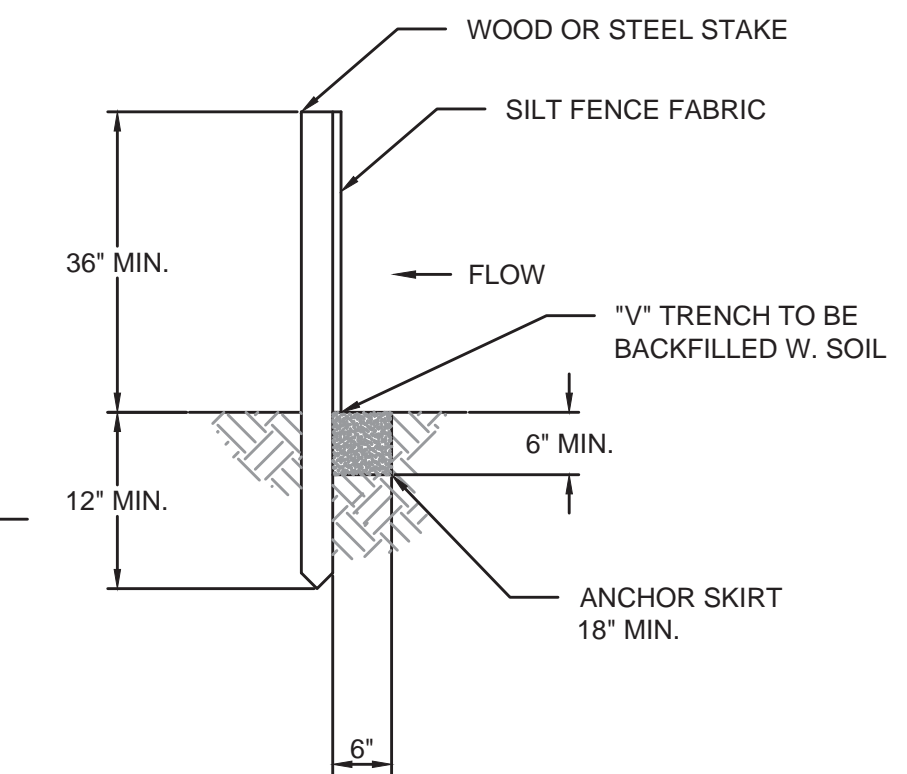
NOTES:

1. DROP INLET PROJECTION 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



ELEVATION VIEW

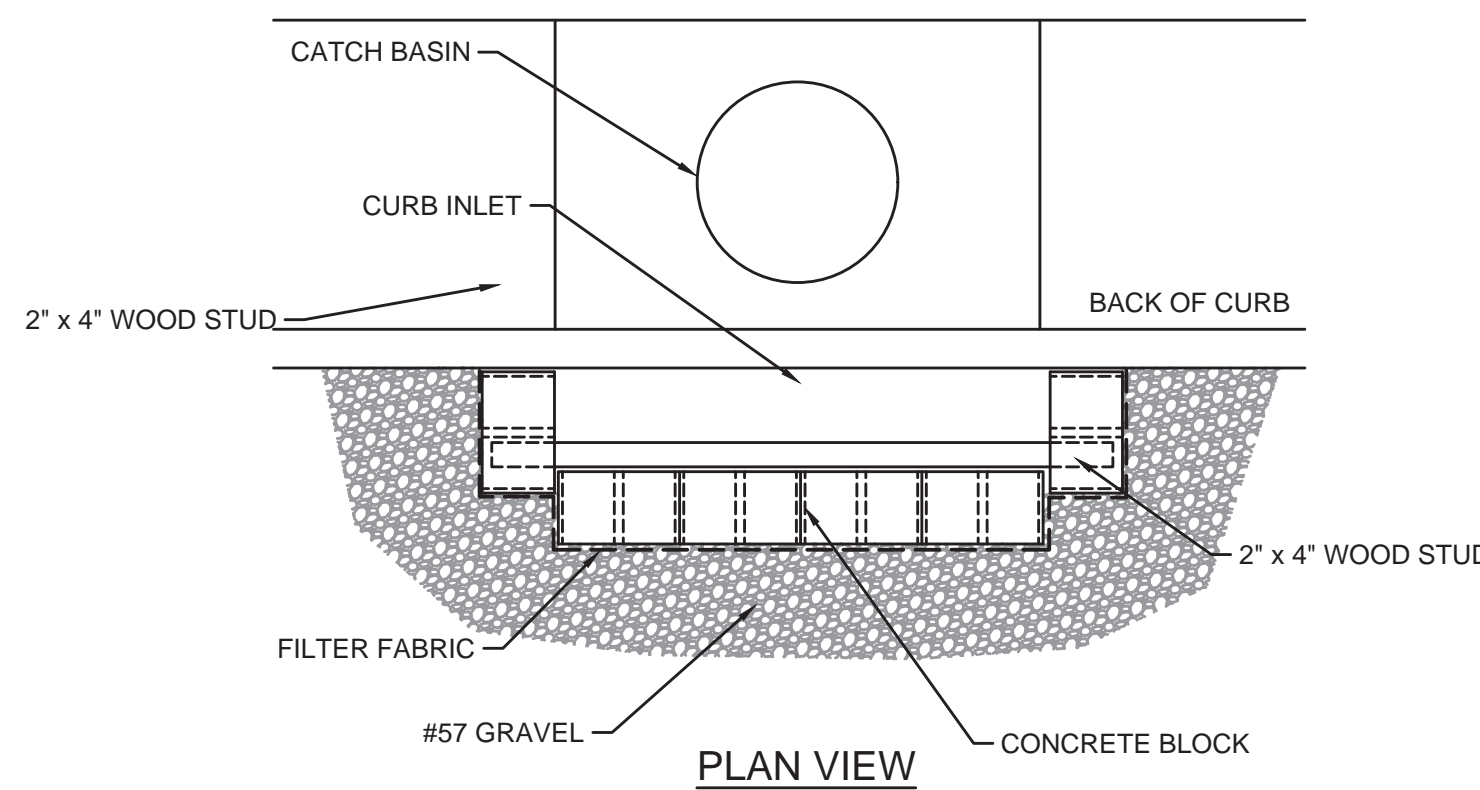


SECTION VIEW

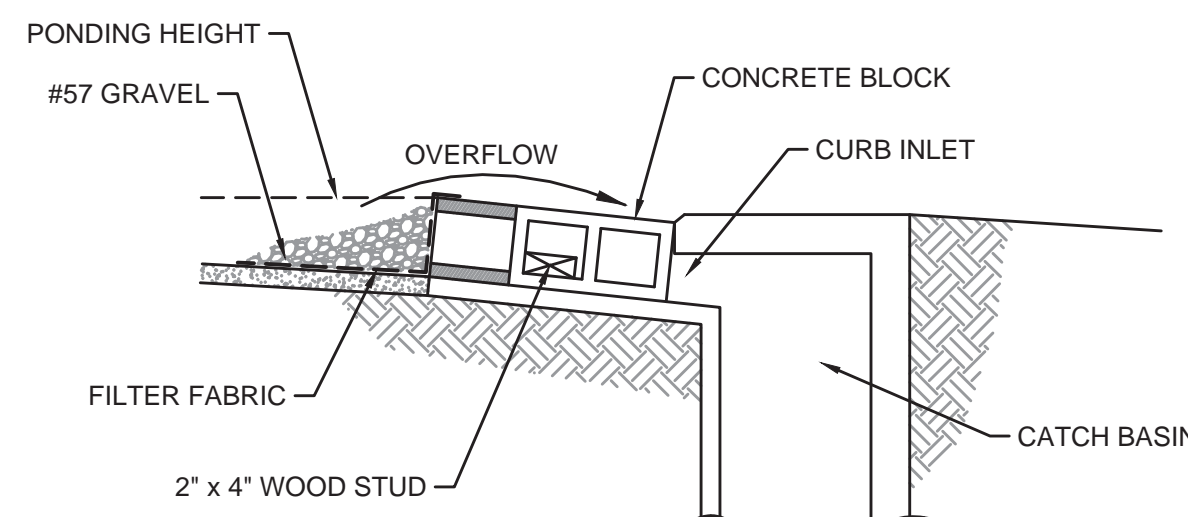
NOTES:

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. POSTS 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 1/3 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



PLAN VIEW

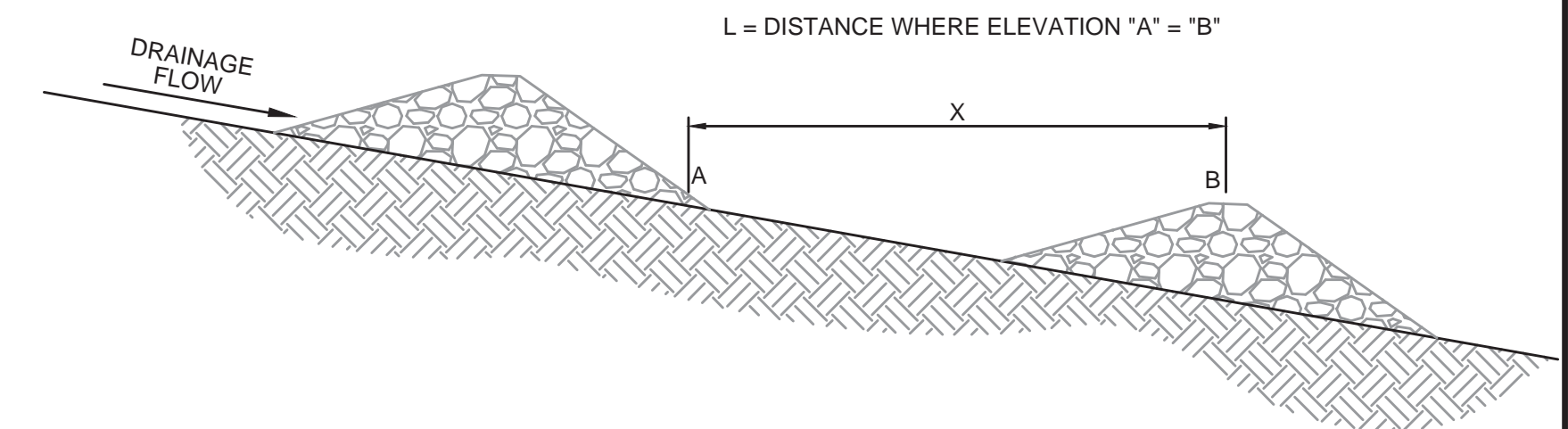


SECTION VIEW

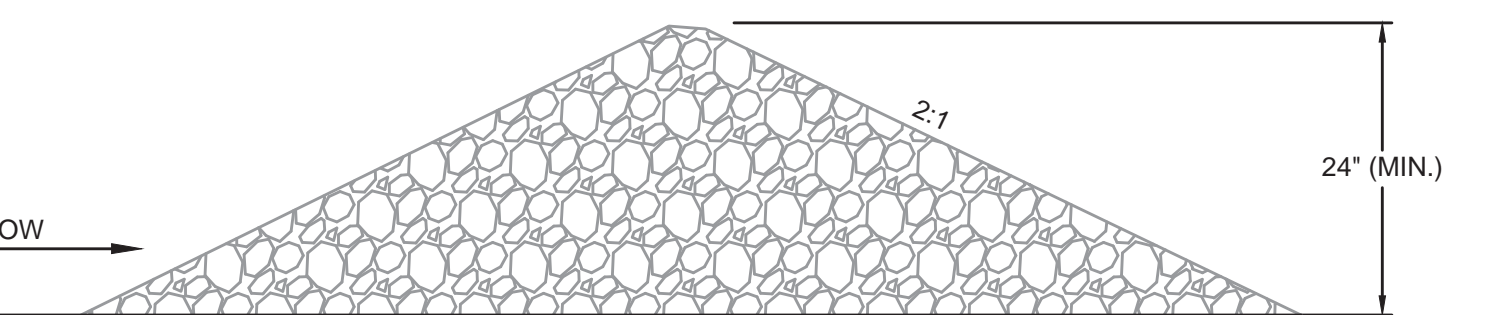
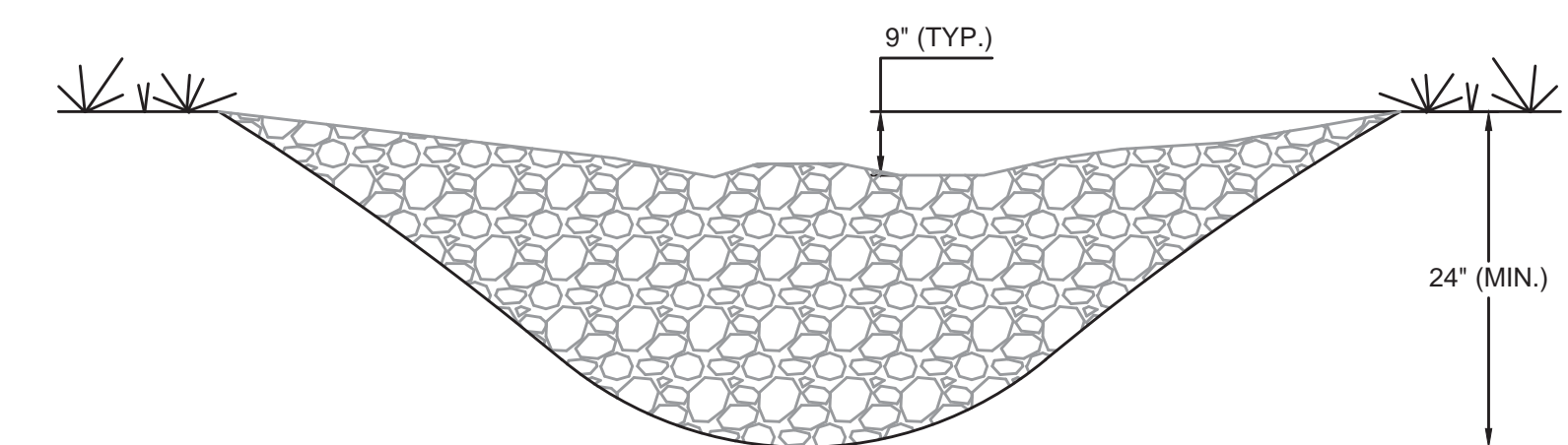
NOTES:

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



SECTION



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.

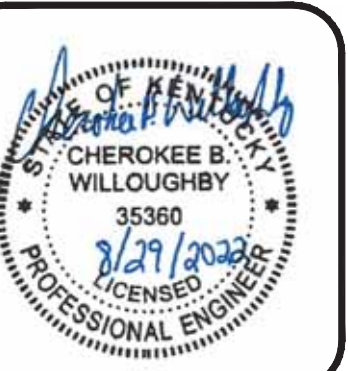
ROCK CHECK DAM - DETAIL
NOT TO SCALE

NO.	DATE	BY	REVISIONS

PHASE 12 - WATER SYSTEM IMPROVEMENTS
STANDARD DETAILS - EROSION CONTROLS

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

PROJECT #: 20016
DATE: AUGUST 2022
PROJECT MGR: LRS
DRAWN BY: WCM
CHECKED BY: PBR

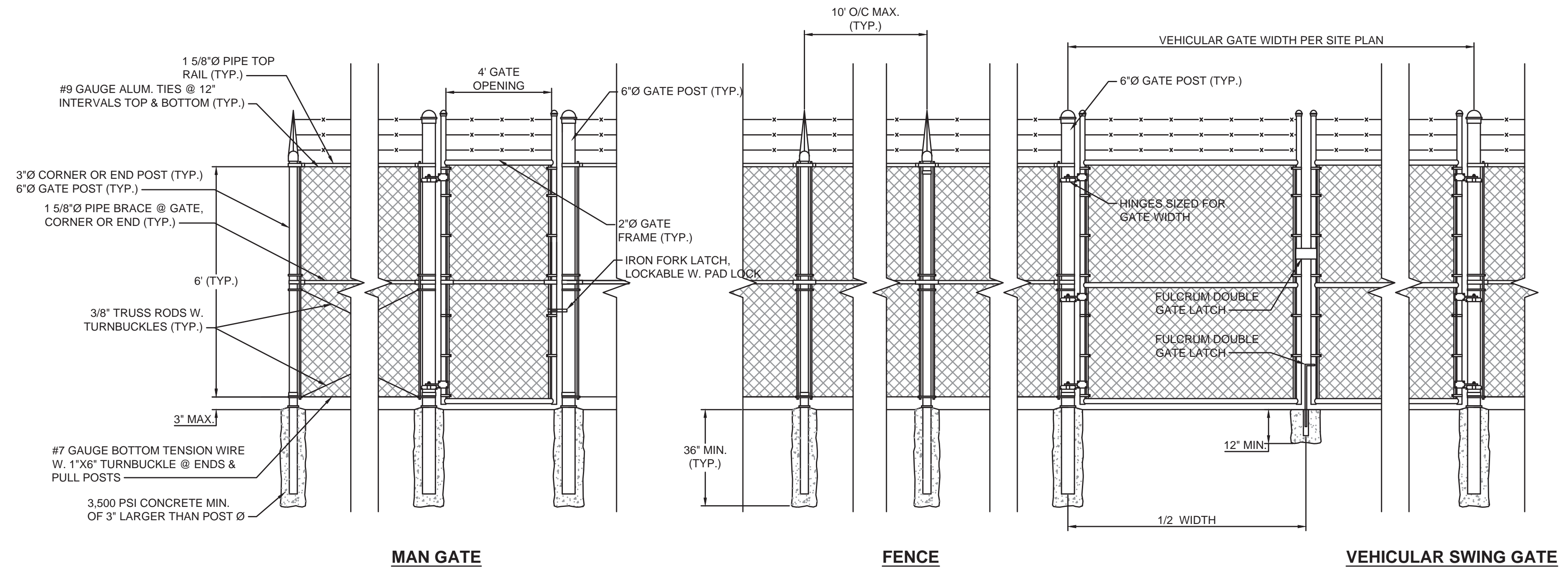


THIS DRAWING HAS BEEN PREPARED AT THE SCALE INDICATED. REPRODUCTION OF THIS DRAWING MAY INTRODUCE INACCURACIES OF THE LISTED SCALE. THE GRAPHIC SCALE BAR SHALL BE USED TO DETERMINE THE ACTUAL SCALE.

IT IS A VIOLATION OF LAW FOR ANY PERSON TO ALTER THIS DRAWING WITHOUT WRITTEN PERMISSION FROM BLUEGRASS ENGINEERING, PLLC AND ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER.

BE 8292Z

B:\PROJECTS\Nicholas County\20016 - Phase 12 Water System Improvements\Drawings\Contract 1 - Water Lines\20016-01-24.dwg

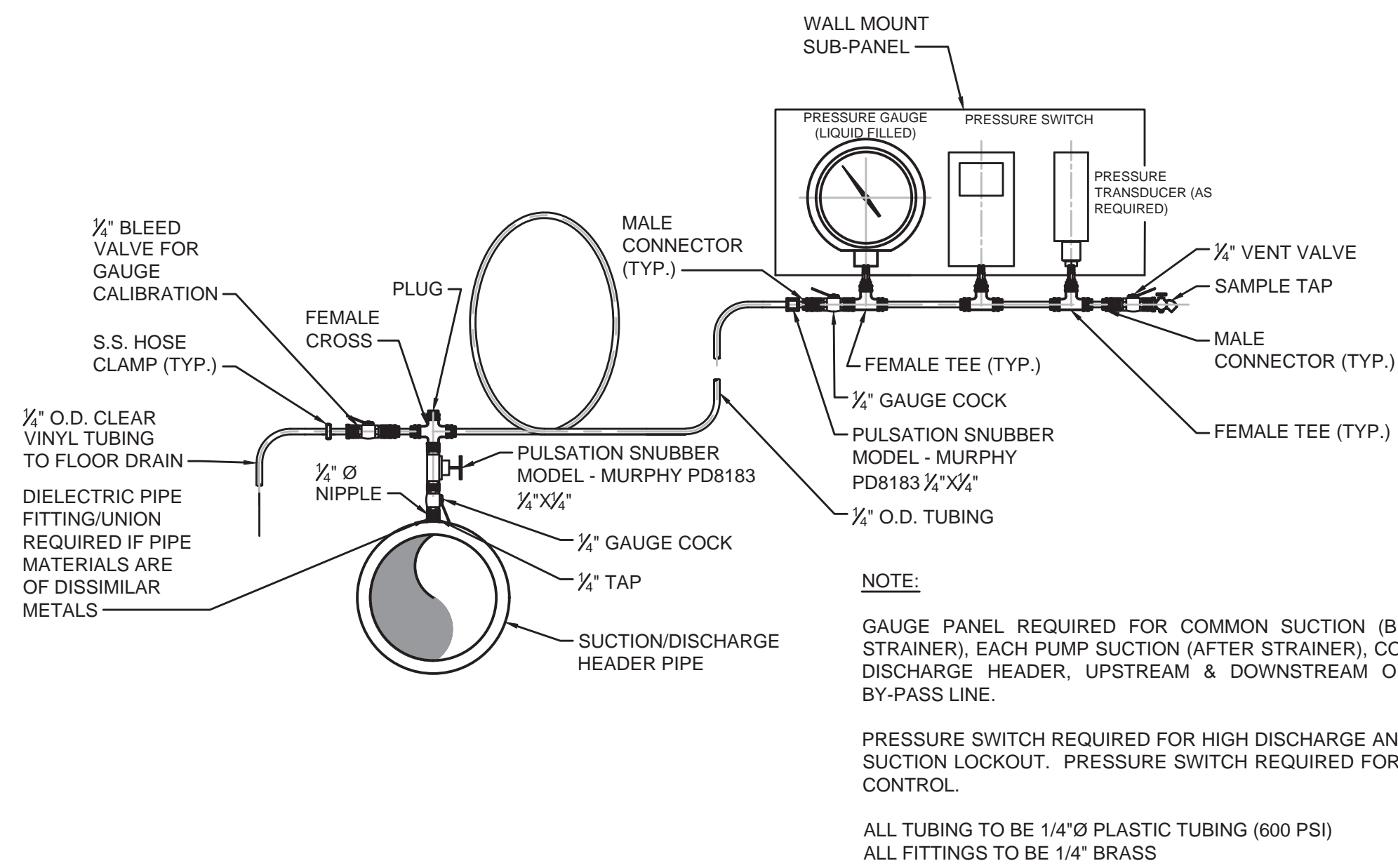


NOTES:

- MISCELLANEOUS HARDWARE SIMILAR TO THAT USED IN LINE FENCE.
- SUBMIT SHOP DRAWINGS FOR APPROVAL.

SECURITY FENCE, MAN GATE & VEHICLE GATE - DETAIL

NOT TO SCALE

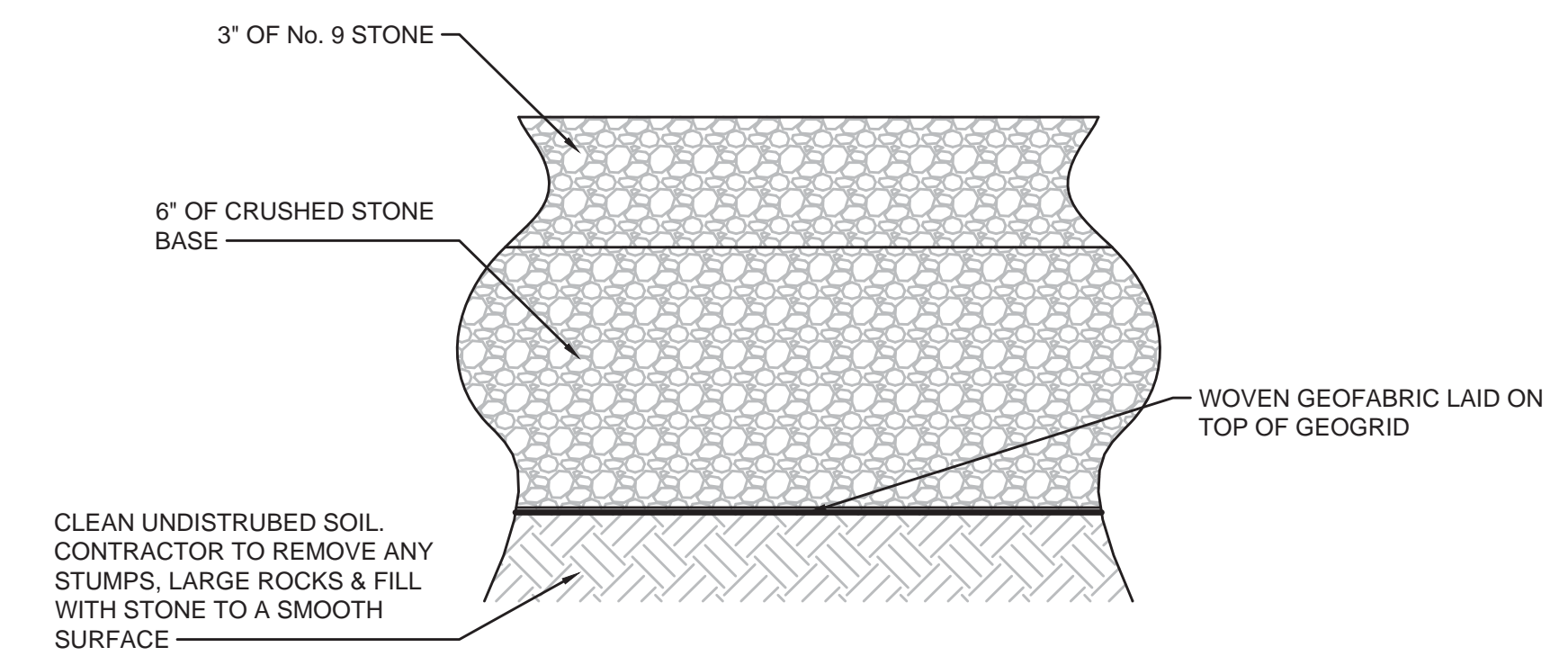


NOTE:

- GAUGE PANEL REQUIRED FOR COMMON SUCTION (BEFORE STRAINER), EACH PUMP SUCTION (AFTER STRAINER), COMMON DISCHARGE HEADER, UPSTREAM & DOWNSTREAM OF PRV BY-PASS LINE.
- PRESSURE SWITCH REQUIRED FOR HIGH DISCHARGE AND LOW SUCTION LOCKOUT. PRESSURE SWITCH REQUIRED FOR PUMP CONTROL.
- ALL TUBING TO BE 1/4" O.D. PLASTIC TUBING (600 PSI)
- ALL FITTINGS TO BE 1/4" BRASS

SUCTION/DISCHARGE GAUGE PANEL

NOT TO SCALE



PARKING AREA - DETAIL

NOT TO SCALE

NO.	DATE	REVISIONS	BY

PHASE 12 - WATER SYSTEM IMPROVEMENTS
STANDARD DETAILS - BOOSTER STATION



PROJECT #:	20016
DATE:	AUGUST 2022
PROJECT MGR:	LRS
DRAWN BY:	WCM
CHECKED BY:	PBR

