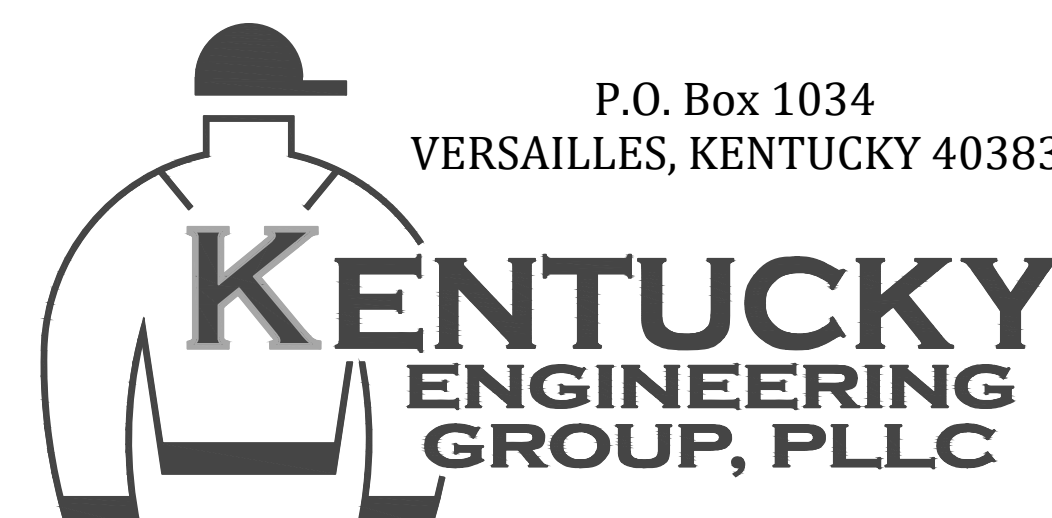


Contract No. 3
EAST - WEST
INTERCONNECT PROJECT
for the
GRAYSON COUNTY WATER DISTRICT
Leitchfield, Kentucky
JUNE, 2019

BOARD MEMBERS:

JOHN TOMES - CHAIRMAN
KIRBY JOHNSON - VICE-CHAIRMAN
KENNETH SHARP - SECRETARY
NANCY CAIN - TREASURER
MICHAEL KIPPER - COMMISSIONER
KEVIN SHAW - DISTRICT MANAGER

PROJECT NO. 18021



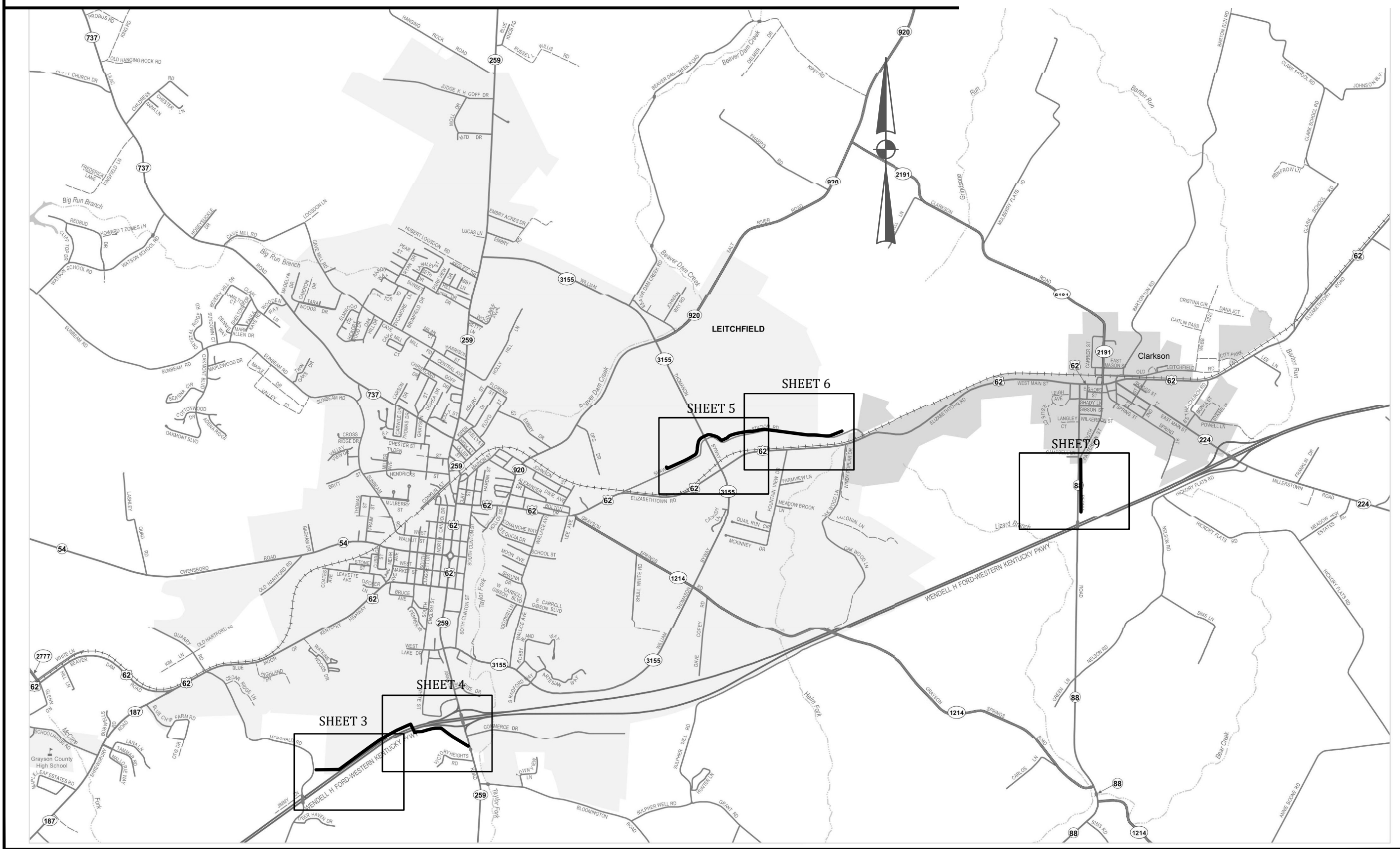
RECORD DRAWINGS

TO THE BEST OF OUR KNOWLEDGE, INFORMATION AND BELIEF THIS SET OF RECORD DRAWING 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: KENTUCKY ENGINEERING GROUP, PLLC DATE: 4/2021

RECORD DRAWINGS

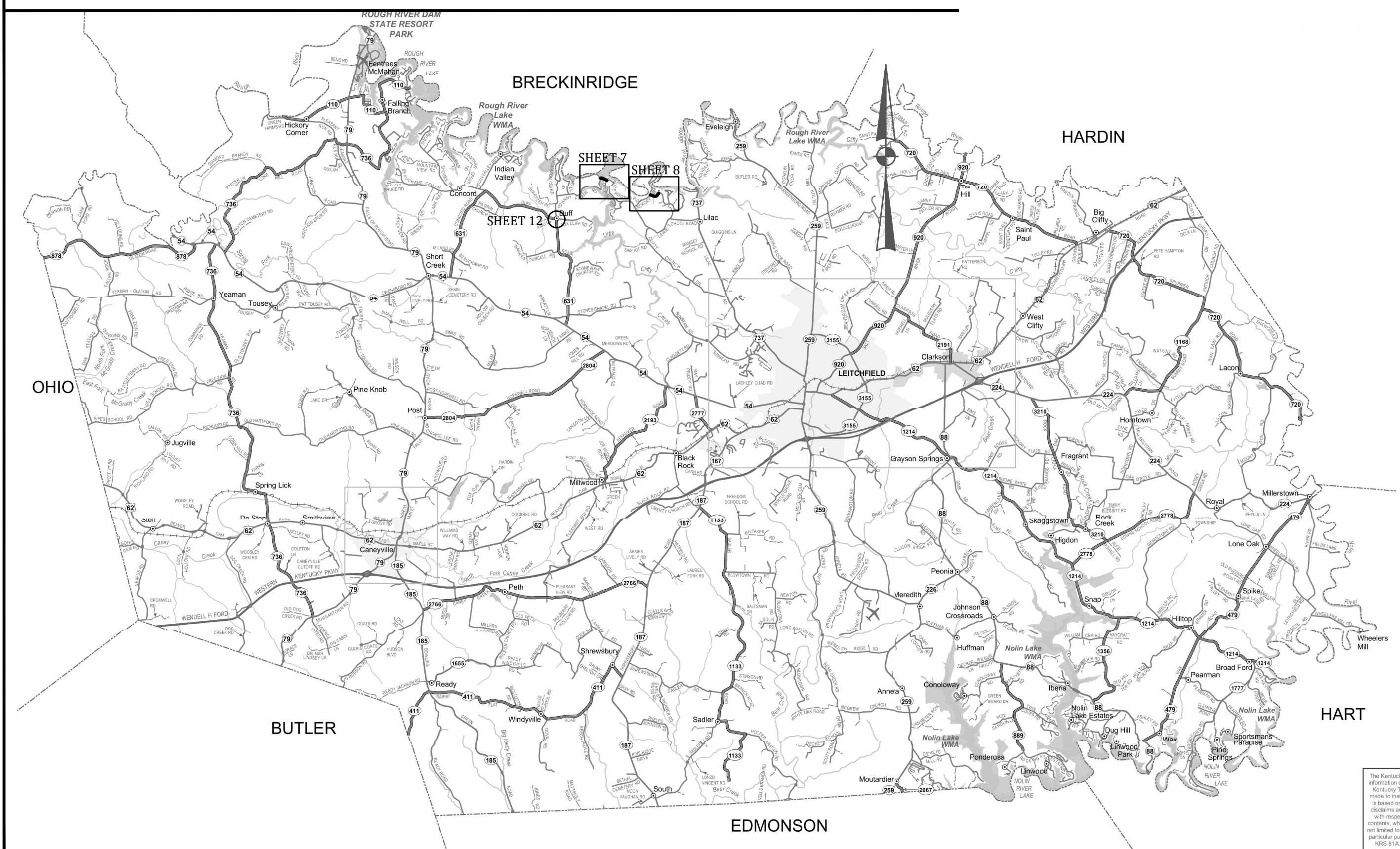
PROJECT LOCATION MAP



CITY OF LEITCHFIELD

NOT TO SCALE

PROJECT LOCATION MAP



GRAYSON COUNTY

NOT TO SCALE

LEGEND

EXISTING	PROPOSED	DESCRIPTION
PVC	PVC	POLYVINYL CHLORIDE
DIP	DIP	DUCTILE IRON PIPE
WM	WM	WATER MAIN
⊕	⬆	HYDRANT ASSEMBLY
⊕	⬆	FLUSHING/BLOWOFF ASSEMBLY
△	▲	AIR RELEASE VALVE (ARV)
⊗	⊗	GATE VALVE (GV)
---	---	WATER MAIN (WM)
---	---	SPECIAL CROSSING OR CASING PIPE
---	---	WATER MAIN TO BE ABANDONED
R/W	R/W	RIGHT-OF-WAY LINE
---	---	CENTERLINE
---	---	PROPERTY LINE
⊙	⊙	CUSTOMER SERVICE METER
---	---	EDGE OF PAVEMENT (WHITE LINE)
	←	X' E.O.P.

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.

GRAYSON COUNTY WATER DISTRICT
KEVIN SHAW, MANAGER

(270) 259-2917

INDEX OF DRAWINGS

SHT. NO.	DESCRIPTION:
--	COVER
1	LOCATION MAP, LEGEND, UTILITY OWNERS and INDEX OF DRAWINGS
2	GENERAL NOTES
3	AERIAL PLAN - KY 259 SOUTH
4	AERIAL PLAN - KY 259 SOUTH
5	AERIAL PLAN - SHAW ROAD
6	AERIAL PLAN - SHAW ROAD
7	AERIAL PLAN - PETER CAVE TO JOHNNY FRANK RD.
8	AERIAL PLAN - LILAC TO PETER CAVE
9	AERIAL PLAN - PEONIA RD.
10	DIRECTIONAL BORE DETAILS
11	HWY 259 SOUTH PRESSURE REDUCING MASTER METER DETAILS
12	DUFF ROAD PRESSURE REDUCING MASTER METER DETAILS
13	STANDARD DETAILS
14	STANDARD DETAILS

RECORD DRAWINGS

TO THE BEST OF OUR KNOWLEDGE, INFORMATION AND BELIEF THIS SET OF RECORD DRAWING 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: KENTUCKY ENGINEERING GROUP, PLLC DATE: 4/2021

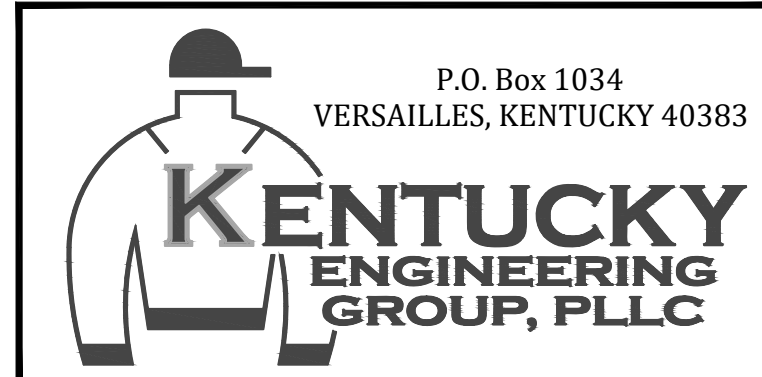
P:\PROJECTS\Grayson County Water District\18021-East - West Interconnect PH 1\DWG\18021-01.dwg REG 12/17/21

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

THIS DRAWING WAS PREPARED AT THE SCALE INDICATED. INACCURACIES IN THE STATED SCALE MAY BE INTRODUCED WHEN DRAWINGS ARE REPRODUCED BY ANY MEANS. USE THE GRAPHIC SCALE BAR IN THE DRAWING OR TITLE BLOCK TO DETERMINE THE ACTUAL SCALE.

NO.	DATE	REVISIONS	BY

DATE:	MAY 2019
PROJECT MGR:	RET
DRAWN BY:	JAB
CHECKED BY:	JCT
SCALE:	AS NOTED
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P.O. Box 1034
VERSAILLES, KENTUCKY 40383

GRAYSON COUNTY WATER DISTRICT
EAST - WEST
INTERCONNECT PROJECT

PROJECT LOCATION MAP,
UTILITIES,
LEGEND and INDEX OF
DRAWINGS

PROJECT NO.
18021

SHEET NO.
1

RECORD DRAWINGS

WATER MAIN 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 ENCASUREMENT. 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 NOT BEEN SHOWN. 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 36" 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 SHALL NOT USE TRENCHING FOR EXCAVATION UNLESS APPROVED BY THE ENGINEER AND OWNER. IF TRENCHING IS APPROVED THE FINAL TRENCH SHALL HAVE A MINIMUM OF 6 INCHES ON EACH SIDE OF THE WATER MAIN BEING INSTALLED.
- CONTRACTOR TO DIG/EXPOSE EXISTING WATER MAIN AT A MINIMUM OF 40' INTERVALS AHEAD OF NEW WATER MAIN CONSTRUCTION TO AVOID DAMAGE TO EXISTING WATER MAIN AND/OR INTERRUPTION OF EXISTING CUSTOMER SERVICES.
- THE MAXIMUM ALLOWABLE LENGTH OF SERVICE LINE FROM THE WATER MAIN TO THE CUSTOMER'S METER SERVICE SHALL BE AS FOLLOWS:

<u>SERVICE LINE DIAMETER</u>	<u>MAXIMUM LENGTH</u>
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.

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.

GENERAL NOTES

- GENERAL PROJECT REQUIREMENTS** - IN THE EVENT OF A CONFLICT BETWEEN ANY PORTION OF THE CONTRACT DOCUMENTS, THE MORE STRINGENT REQUIREMENT SHALL GOVERN.
- PROJECT COMMUNICATIONS / INSPECTION** - THE ENGINEER SHALL BE THE OWNER'S DESIGNATED SITE REPRESENTATIVE. ALL COMMUNICATION FROM THE CONTRACTOR AND TO THE CONTRACTOR, SHALL BE THROUGH THE ENGINEER.
- SAFETY** - THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR INITIATING, MAINTAINING, AND SUPERVISING ALL SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK. THE CONTRACTOR SHALL SELECT THE MEANS, METHODS, SEQUENCES, AND TECHNIQUES OF CONSTRUCTION HE DEEMS APPROPRIATE FOR ACCOMPLISHING THE WORK IN A SAFE MANNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGE TO PERSONS AND PROPERTY RESULTING FROM HIS ACTIVITIES.
- EMERGENCY SHUTOFF** - THE CONTRACTOR SHALL LOCATE EXISTING WATER AND GAS VALVES PRIOR TO STARTING WORK SO THAT IN THE EVENT OF AN EMERGENCY THE UTILITY SERVICE MAY BE QUICKLY SHUT OFF.
- EASEMENTS AND RIGHT-OF-WAY** - THE OWNER IS RESPONSIBLE FOR THE PROCUREMENT OF ALL PERMANENT EASEMENTS NECESSARY OR REQUIRED FOR THE PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR TEMPORARY EASEMENTS FOR HIS STAGING AREAS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBSERVE THE CONDITIONS OF THESE AGREEMENTS AND CONFINE HIS ACTIVITIES TO THE LIMITS OF THE EASEMENTS. CONTRACTOR TO OBTAIN COPIES OF EASEMENTS OBTAINED BY OWNER AND ABIDE BY THE CONDITIONS OF THESE EASEMENTS DURING CONSTRUCTION.
- EXCAVATION** - IT SHALL BE DISTINCTLY UNDERSTOOD THAT ANY REFERENCE TO ROCK, EARTH, OR ANY OTHER MATERIALS ON THE PLANS WHETHER IN NUMBERS, WORDS, LETTERS, OR LINES, IS SOLELY FOR THE OWNER'S INFORMATION AND SHALL NOT BE TAKEN AS AN INDICATION OF CLASSIFIED EXCAVATION OR THE QUANTITY OF EITHER ROCK, EARTH OR ANY OTHER MATERIAL INVOLVED. THE BIDDER MUST DRAW HIS OWN CONCLUSIONS AS TO THE CONDITIONS TO BE ENCOUNTERED. THE CONTRACTOR SHALL PERFORM ALL EXCAVATION NECESSARY OR REQUIRED FOR COMPLETION OF THE PROJECT. THIS WORK SHALL INCLUDE THE REMOVAL AND PROPER DISPOSAL OF ALL MATERIALS OF WHATEVER NATURE ENCOUNTERED. EXCAVATION FOR UTILITIES SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THE WORK AND SHALL NOT BE MEASURED FOR PAYMENT.
- TOTAL SITE RESPONSIBILITY** - IN OCCUPYING THE SITE AND COMMENCING WORK IN ACCORDANCE WITH THE NOTICE TO PROCEED, THE CONTRACTOR ASSUMES TOTAL AND COMPLETE RESPONSIBILITY FOR THE WORK UNTIL FINAL PAYMENT AND RELEASE OF CLAIMS. ANY PORTION OF THE WORK DAMAGED IN THIS TIME PERIOD BY ACTS OF GOD, OR THE PUBLIC ENEMY, ACTS OF THE OWNER, ACTS OF OTHER CONTRACTORS, FIRES, FLOODS, EPIDEMICS, QUARANTINE, STRIKES, FREIGHT EMBARGOS, VANDALISM AND ABNORMAL WEATHER SHALL BE CORRECTED, REPAIRED, OR REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
- ACCESS TO WORK** - THE ENGINEER, HIS REPRESENTATIVES, AND REPRESENTATIVES OF THE OWNER SHALL HAVE FULL ACCESS TO THE WORK AT ALL TIMES.
- BLASTING** - NO BLASTING SHALL BE ALLOWED ON THIS PROJECT.
- BURNING** - BURNING SHALL CONFORM TO ALL APPLICABLE LOCAL, STATE, AND FEDERAL ORDINANCES.
- WASTE AREAS** - THE CONTRACTOR WILL NECESSARILY GENERATE WASTE MATERIALS IN THE FORM OF BRUSH CLIPPINGS, OVERSIZE BOULDERS, MUCK, ETC. THE CONTRACTOR SHALL SUBMIT A WRITTEN PLAN DETAILING THE MANNER IN WHICH WASTE MATERIALS WILL BE HANDLED. THE CONTRACTOR SHALL STRICTLY COMPLY WITH ALL LOCAL, STATE, AND FEDERAL LAWS AND REGULATIONS PERTAINING TO THE DISPOSITION OF CONSTRUCTION RELATED WASTE PRODUCTS. IN NO EVENT SHALL WASTE MATERIALS BE PLACED IN A REGULATORY FLOODWAY (OR FLOODPLAIN) WITHOUT A DOW PERMIT TO CONSTRUCT ALONG OR ACROSS A STREAM. OWNER WILL NOT ASSUME RESPONSIBILITY FOR WASTE AREAS.
- SILT CONTROL** - THE CONTRACTOR SHALL CONDUCT HIS WORK IN AN ENVIRONMENTALLY SOUND MANNER AND SHALL UTILIZE "BEST MANAGEMENT PRACTICES" TO MINIMIZE EROSION. THE CONTRACTOR SHALL HOLD HARMLESS THE OWNER FROM ANY VIOLATIONS ASSOCIATED WITH THE CLEAN WATER ACT.
- DRAINAGE** - CONTRACTOR SHALL MAINTAIN DRAINAGE WORK AREAS DURING ALL PHASES OF CONSTRUCTION. THE OWNER MAY DIRECT THE CONTRACTOR TO CONSTRUCT DITCHES OR BERMS TO ALLEVIATE SITE DRAINAGE PROBLEMS. CONSTRUCTION AND MAINTENANCE OF MINOR DRAINAGE WORKS SHALL BE CONSIDERED AN INTEGRAL PART OF THE OVERALL ACCOMPLISHMENTS OF THE PROJECT AND SHALL NOT BE MEASURED FOR SEPARATE PAYMENT.
- ADHERENCE TO PERMITS** - PERMITS REQUIRED BY THE OWNER ARE:
 - DIVISION OF WATER CONSTRUCTION PERMIT FOR WATER LINE EXTENSIONS.
 - DEPARTMENT OF HIGHWAYS ENCROACHMENT PERMIT.

THE CONTRACTOR SHALL CONDUCT HIS ACTIVITIES IN STRICT ACCORDANCE WITH THESE PERMITS AT ALL TIMES. IN PARTICULAR, THE CONTRACTOR SHALL STRICTLY OBSERVE THE 401 WATER QUALITIES CERTIFICATION KEY REQUIREMENTS OF THE 401 CERTIFICATION WHICH INCLUDE:

- RE-VEGETATION AND CLEANUP OF AREA ADJACENT TO STREAMS SHALL OCCUR CONCURRENTLY WITH THE PROGRESS OF THE WORK. CONCURRENTLY IS HEREIN DEFINED TO MEAN THAT RE-VEGETATION AND CLEANUP.
 - BEST MANAGEMENT PRACTICES SHALL BE EMPLOYED. TO MINIMIZE SEDIMENT RUNOFF AND SOIL EROSION TO THE WATER COURSE.
 - EXTREME CARE SHALL BE TAKEN TO PREVENT SPILLS OF FUELS AND LUBRICANT INTO WATERCOURSES. EQUIPMENT WORKS FROM THE STREAM BANK.
- EXISTING UTILITIES AND UNDERGROUND FACILITIES** - THE CONTRACTOR'S ATTENTION IS CALLED TO THE PRESENCE OF EXISTING UTILITIES IN CLOSE PROXIMITY TO THE PROJECT SITE. THE CONTRACTOR IS ADVISED TO CAREFULLY REVIEW THE PROJECT REQUIREMENTS REGARDING UTILITY RELOCATIONS. THE CONTRACTOR CAN CALL 1-800-752-6007 A MINIMUM OF TWO AND NO MORE THAN TEN BUSINESS DAYS PRIOR TO EXCAVATION FOR INFORMATION ON THE LOCATION OF EXISTING UNDERGROUND UTILITIES WHICH SUBSCRIBE TO THE BEFORE-U-DIG (BUD) SERVICE. ALL UTILITY REPAIR AND RELOCATION WORK SHALL BE INCIDENTAL TO OTHER ITEMS OF WORK. THE EXISTING CONTRACTOR MUST MAKE DILIGENT EFFORT TO MAINTAIN THE SERVICE OF EXISTING UTILITIES. THE CONTRACTOR SHALL PROVIDE BY-PASS PUMPING OF WASTEWATER TO THE NEAREST PUBLIC SANITARY SEWER WHENEVER HIS ACTIVITIES INTERRUPT THE FLOW OF AN EXISTING SANITARY WASTEWATER DISPOSAL FACILITY (SEWER, SEPTIC TANK, LEACH FIELD, ETC.) BY-PASS PUMPING SHALL BE CONSIDERED AN INCIDENTAL PART OF THE PIPE LAYING ACTIVITY AND SHALL NOT BE MEASURED FOR SEPARATE PAYMENT.

GENERAL NOTES (continued)

- REPLACEMENT OF EXISTING FACILITIES** - THE CONTRACTOR SHALL REPLACE EXISTING ENTRANCE PIPES, RETAINING WALLS, CATCH BASINS, FENCES AND OTHER PROPERTY IMPROVEMENTS, DITCHES, ETC., THAT ARE DAMAGED BY CONSTRUCTION UNLESS SAID FACILITIES ARE SPECIFICALLY SHOWN TO BE REMOVED. IN PARTICULAR, ALL DRAINAGE DITCHES SHALL BE RESTORED TO A CONDITION EQUAL OR BETTER THAN THAT WHICH EXISTED PRIOR TO CONSTRUCTION. UNLESS SAID FACILITY REPLACEMENT IS IDENTIFIED AS A PAY ITEM IN THE DESIGN DRAWINGS OR TECHNICAL SPECIFICATIONS, THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE COST OF LAYING PIPE AND SHALL NOT BE MEASURED FOR PAYMENT
- DAMAGE TO GUARDRAILS, SIGNS, FENCES, STORM DRAINS, ETC.** - ALL GUARDRAIL, SIGNS, FENCES, STORM DRAINS, ETC., DAMAGED AS A RESULT OF THE CONSTRUCTION SHALL BE RESTORED IN LIKE KIND AND CHARACTER TO THE SATISFACTION OF THE OWNER. UNLESS SAID REPLACEMENT IS IDENTIFIED AS A PAY ITEM IN THE DESIGN DRAWINGS OR TECHNICAL SPECIFICATIONS, THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE COST OF LAYING PIPE AND SHALL NOT BE MEASURED FOR PAYMENT.
- STREAM CROSSING** - THE LAST EIGHTEEN (18) INCHES OF BACKFILL IN ALL STREAM BEDS SHALL CONSIST OF KENTUCKY DEPARTMENT OF HIGHWAY CHANNEL LINING CLASS III.
- THRUST BLOCKS** - CONCRETE THRUST BLOCKS OR 'KICKER' BLOCKS SHALL BE INSTALLED IN ALL PRESSURIZED LINES AT INTERSECTION AND CHANGES OF DIRECTION TO RESIST FORCES ACTING UPON THE PIPELINE. THRUST BLOCKS ARE CONSIDERED INCIDENTAL TO THE PIPELINE
- ANCHORS** - CONCRETE ANCHORS SHALL BE PROVIDED WHEN THE PIPE SLOPE IS TWENTY (20) PERCENT OR GREATER. ANCHORS ARE CONSIDERED INCIDENTAL TO THE PIPELINE INSTALLATION.
- SEPARATION OF WATER AND SEWER** - HORIZONTAL- SEWERS SHALL BE LAID AT LEAST TEN (10) FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED WATER MAIN. THIS DISTANCE SHALL BE MEASURED EDGE TO EDGE. IF FIELD CONDITIONS DO NOT ALLOW THIS SEPARATION, THE SEWER SHALL BE LOCATED SUCH THAT THE CROWN OF THE SEWER PIPE IS EIGHTEEN (18) INCHES BELOW THE INVERT OF THE WATER LINE. IF FIELD CONDITIONS DO NOT ALLOW THIS CONDITION TO BE MET THEN THE SEWER SHALL BE CONSTRUCTED OF MECHANICAL JOINT DUCTILE IRON PIPE (PRESSURE TESTED TO 150 PSI) AND ENCASED IN CONCRETE.
- CROSSING** - SEWERS SHALL CROSS UNDER WATER MAINS WITH A MINIMUM OF EIGHTEEN (18) INCHES OF SEPARATION BETWEEN THE CROWN OF THE SEWER AND THE INVERT OF THE WATER MAIN. IF FIELD CONDITIONS ARE SUCH THAT THIS SEPARATION CAN NOT BE MAINTAINED, THE SEWER SHALL BE CONSTRUCTED OF MECHANICAL JOINT DUCTILE IRON PIPE WHICH SHALL BE PRESSURE TESTED TO 150 PSI. THE DUCTILE IRON PIPE MUST BE CENTERED ON THE CROSSING SO THAT THE JOINTS ARE AT LEAST TEN (10) FEET ON EITHER SIDE OF THE CROSSING. NO SEPARATE PAYMENT SHALL BE MADE FOR WORK TO INSURE COMPLIANCE WITH THIS SEPARATION CRITERION. MAINTENANCE OF ADEQUATE SEPARATION SHALL BE CONSIDERED AN INTEGRAL PART OF THE UNIT PRICE BID FOR SEWER PIPE.
- TESTING** - THE WATER LINES SHALL BE TESTED IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS IN THE PRESENCE OF THE ENGINEER AND THE OWNER.
- NOTICE** - THE CONTRACTOR SHALL NOT MOVE EQUIPMENT OR MATERIAL TO THE WORK SITE, NOR BEGIN ANY CONSTRUCTION PRIOR TO THE DATE SPECIFIED IN THE 'NOTICE TO PROCEED.' THE CONTRACTOR MUST NOTIFY THE OWNER AND ENGINEER PRIOR TO OCCUPYING THE SITE IN ACCORDANCE WITH THE REQUIREMENTS OF THE TECHNICAL SPECIFICATIONS.
- TRAFFIC CONTROL** - THE CONTRACTOR'S WORK WILL DISTURB NUMEROUS PRIVATE DRIVEWAYS AND SUBSTANTIAL PORTIONS OF PUBLIC THOROUGHFARES. THE TERRAIN DOES NOT LEND ITSELF TO DETOURS. CONSEQUENTLY, THE CONTRACTOR MUST OBSERVE THE FOLLOWING TRAFFIC PRINCIPLES:
 - ACCESS TO RESIDENCE DRIVE MAY NOT BE INTERRUPTED FOR MORE THAN THREE (3) HOURS AT ANY ONE TIME
 - ACCESS TO ALL DRIVEWAYS AND PUBLIC THOROUGHFARES MUST BE RESTORED AT THE END OF EACH WORKDAY.
 - WORK WITHIN THE LIMITS OF PUBLIC THOROUGHFARE MAY ONLY BE CONDUCTED BETWEEN THE HOURS OF 8:30 A.M. AND 12:00 NOON, BETWEEN 12:30 P.M. AND 3:30 P.M., AND BETWEEN 6:00 P.M. AND 9:30 P.M. THE CONTRACTOR MUST POST SIGNS ADJACENT TO THE WORK STATING THE ROADWAY WILL BE CLOSED DURING THE POSTED HOURS AT LEAST ONE (1) DAY IN ADVANCE OF THE PROPOSED ROAD CLOSURE.
 - THE CONTRACTOR MUST MAKE SPECIAL PROVISIONS FOR ACCESS FOR EMERGENCY VEHICLES: POLICE, FIRE AND AMBULANCE.
 - THE CONTRACTOR SHALL PROVIDE ALL NECESSARY SAFETY DEVICES IN THE FORM OF SIGNS, FLASHERS, BARRICADES, ETC. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CLAIMS ARISING FROM THE PUBLIC WITH RESPECT TO HIS TRAFFIC CONTROL ACTIVITIES.
- SEEDING** - ALL DISTURBED AREAS SHALL BE SEEDED IN ACCORDANCE WITH TECHNICAL SPECIFICATIONS.
- PROTECTION OF TREES** - CARE SHALL BE TAKEN DURING CONSTRUCTION TO AVOID DAMAGE TO VEGETATION. ORNAMENTAL SHRUBBERY AND TREE BRANCHES SHALL BE TEMPORARILY TIED BACK, WHERE APPROPRIATE, TO MINIMIZE DAMAGE. TREES WHICH RECEIVE DAMAGE TO THE BRANCHES SHALL BE TRIMMED OF THOSE BRANCHES TO IMPROVE THE APPEARANCE OF THE TREE. TREE TRUNKS RECEIVING DAMAGE FROM EQUIPMENT SHALL BE TREATED WITH A TREE DRESSING.
- TREE REMOVAL IN PROJECT AREA IS RESTRICTED TO LESS THAN 4" IN DIAMETER FROM APRIL 1st TO NOVEMBER 15th UNLESS APPROVAL IS GRANTED BY U.S. FISH AND WILDLIFE.
- PROPERTY LINES AND OWNER INFORMATION _____

KYDOH NOTES

- 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.
- CONTACT THE DISTRICT PERMITS ENGINEER AT KYC-DOH #4, ELIZABETHTOWN, KY AT (270) 766-5066 OR 1-800-459-3566 PRIOR TO BEGINNING WORK.

CONTAMINATION PREVENTION REQUIREMENTS

- ALL PIPING, VALVES, FITTINGS, ETC. DELIVERED TO THE JOB SITE SHALL BE STORED ELEVATED ABOVE THE GROUND AND SHALL BE COVERED WITH PLASTIC, TARPS OR SIMILAR MEANS TO PROTECT FROM EXPOSURE TO DUST AND DEBRIS.
- ALL PIPING, FITTINGS AND VALVES SHALL BE THOROUGHLY CLEANED OF DUST, DIRT AND DEPOSITS BY SWABBING OR OTHER MEANS ACCEPTABLE. EACH COMPONENT SHALL BE CLEANED ON THE SAME DAY IT IS TO BE INSTALLED.
- ALL OPENINGS IN THE PIPELINE SHALL BE CLOSED WITH AN APPROVED WATERTIGHT PLUG AT THE END OF EACH DAY WHEN PIPE LAYING HAS STOPPED, OR FOR OTHER REASONS SUCH AS REST OR MEAL BREAKS.

RECORD DRAWINGS

TO THE BEST OF OUR KNOWLEDGE, INFORMATION AND BELIEF THIS SET OF RECORD DRAWING 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: KENTUCKY ENGINEERING GROUP, PLLC DATE: 4/2021

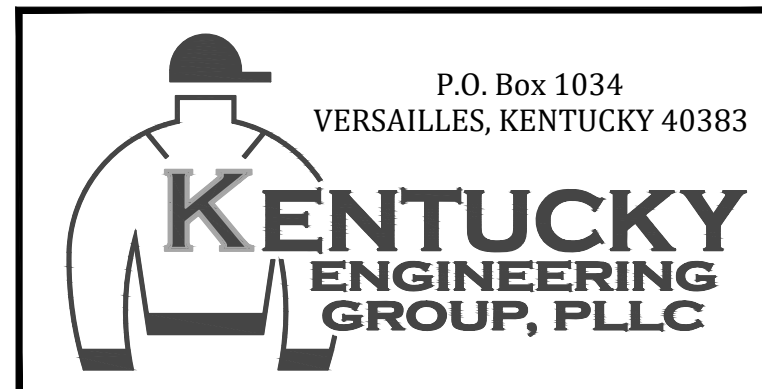
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NO.	DATE	REVISIONS	BY

DATE:	MAY 2019
PROJECT MGR:	RET
DRAWN BY:	JAB
CHECKED BY:	JCT
SCALE:	AS NOTED
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GRAYSON COUNTY WATER DISTRICT
EAST - WEST
INTERCONNECT PROJECT

GENERAL NOTES

PROJECT NO.
18021

SHEET NO.
2

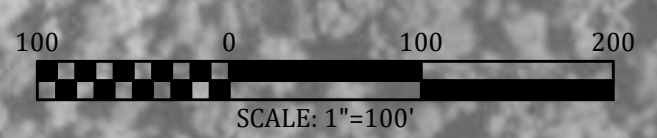
RECORD DRAWINGS

P:\PROJECTS\Grayson County Water District\18021-East - West Interconnect PH 1\DWG\18021-KT259-SOUTH-3-4.dwg REG 12/17/21



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 BY: KENTUCKY ENGINEERING GROUP, PLLC DATE: 4/2021

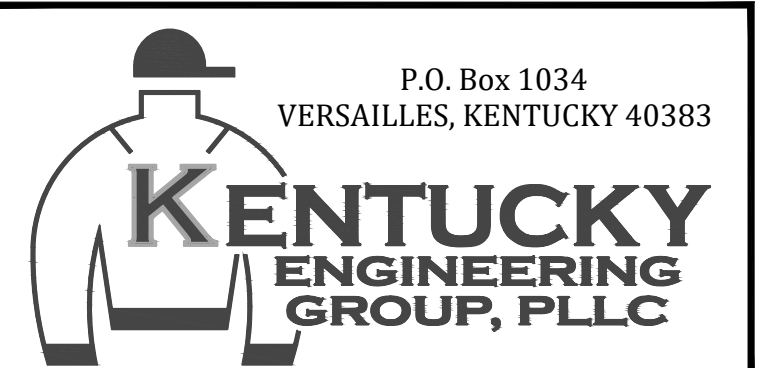
ALL WATER MAIN THIS SHEET SHALL BE PVC CLASS 250 SDR-17



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NO.	DATE	REVISIONS	BY

DATE: MAY 2019
 PROJECT MGR: RET
 DRAWN BY: JAB
 CHECKED BY: JCT
 SCALE: AS NOTED
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GRAYSON COUNTY WATER DISTRICT
 EAST - WEST
 INTERCONNECT PROJECT

AERIAL PLAN
 259 SOUTH

PROJECT NO.
 18021

SHEET NO.
 3

RECORD DRAWINGS

P:\PROJECTS\Grayson County Water District\1802L-East - West Interconnect PH 1\DWG\1802L-KY259-SOUTH-3-4.dwg REG 12/17/21

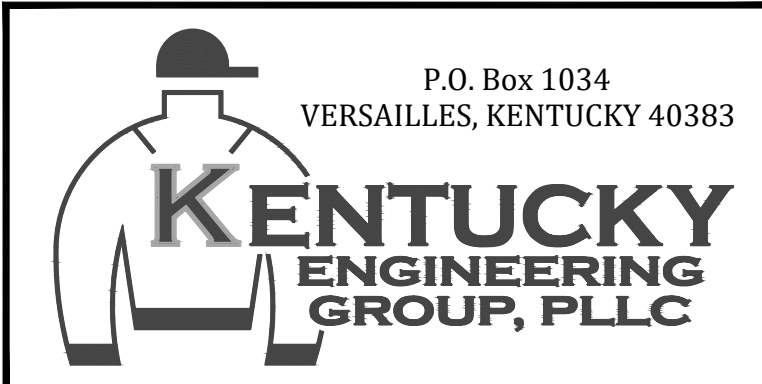


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NO.	DATE	REVISIONS	BY

DATE: MAY 2019
 PROJECT MGR: RET
 DRAWN BY: JAB
 CHECKED BY: JCT
 SCALE: AS NOTED
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GRAYSON COUNTY WATER DISTRICT
 EAST - WEST
 INTERCONNECT PROJECT

AERIAL PLAN
 259 SOUTH

PROJECT NO.
 18021

SHEET NO.
 4

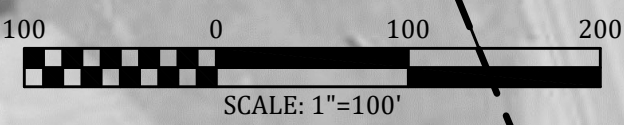
RECORD DRAWINGS

RECORD DRAWINGS

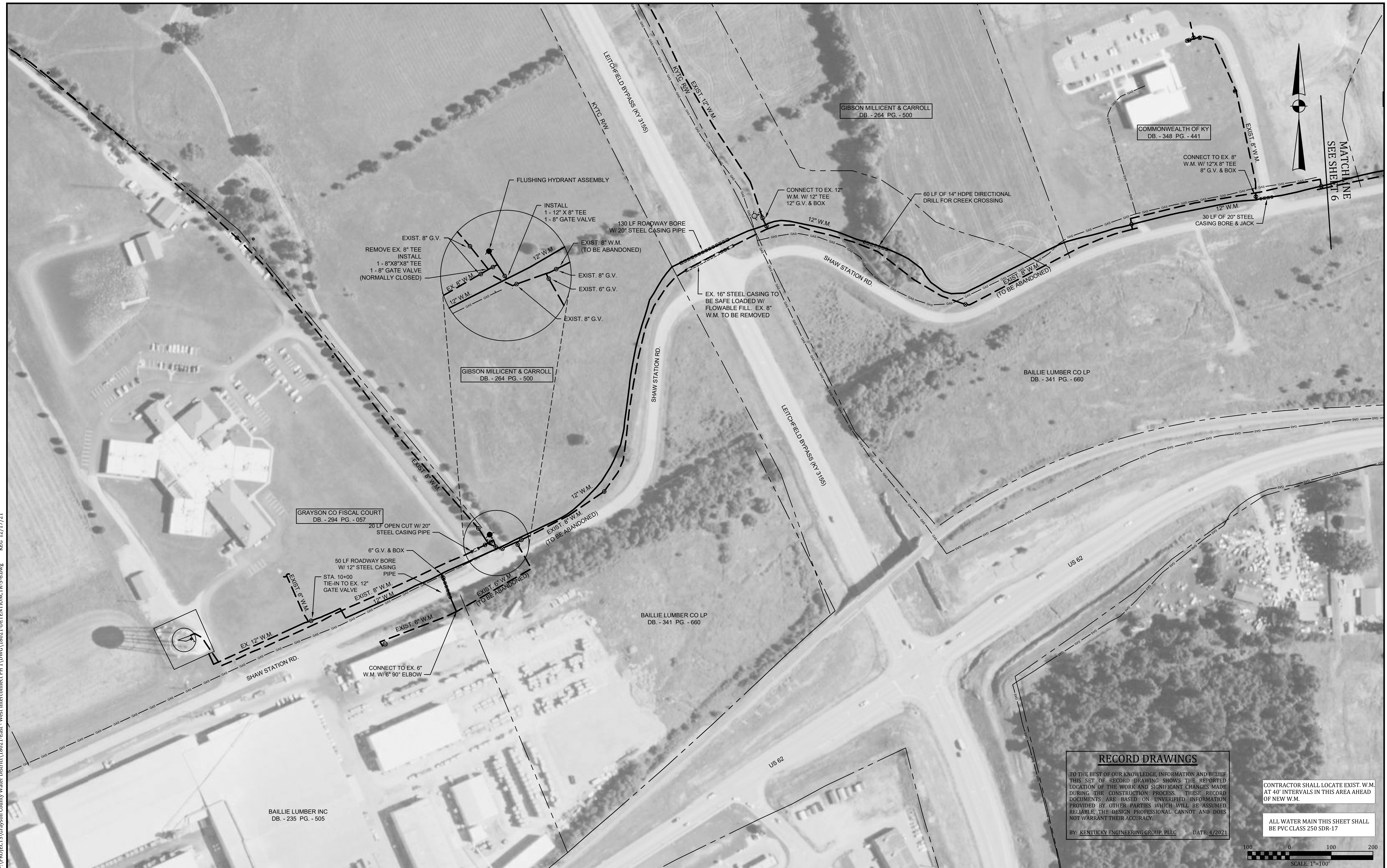
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BY: KENTUCKY ENGINEERING GROUP, PLLC DATE: 4/2021

ALL WATER MAIN THIS SHEET SHALL BE PVC CLASS 250 SDR-17



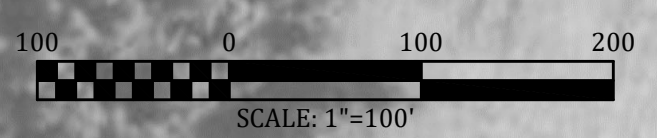
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 BY: KENTUCKY ENGINEERING GROUP, PLLC DATE: 4/2021

CONTRACTOR SHALL LOCATE EXIST. W.M. AT 40' INTERVALS IN THIS AREA AHEAD OF NEW W.M.

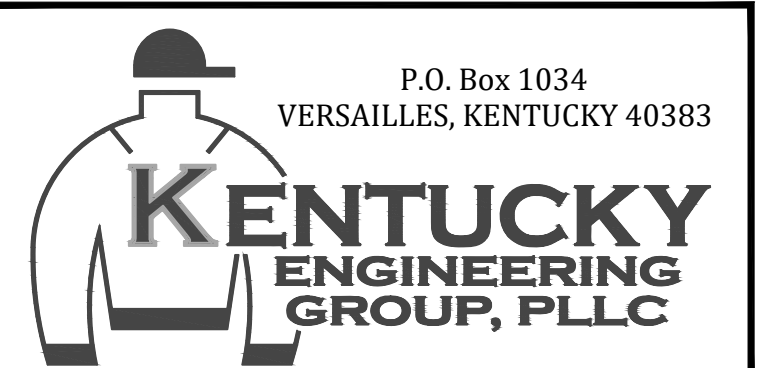
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NO.	DATE	REVISIONS	BY

DATE: MAY 2019
 PROJECT MGR: RET
 DRAWN BY: JAB
 CHECKED BY: JCT
 SCALE: AS NOTED
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GRAYSON COUNTY WATER DISTRICT
 EAST - WEST
 INTERCONNECT PROJECT

AERIAL PLAN
 DETENTION CENTER
 EXTENSION

PROJECT NO.
 18021

SHEET NO.
 5

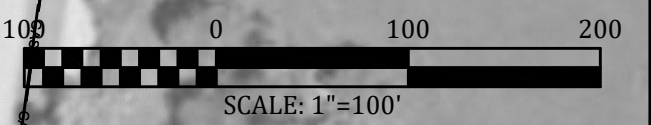
RECORD DRAWINGS

P:\PROJECTS\Grayson County Water District\1802L-East - West Interconnect PH 1\DWG\1802L-DETENTIONCTR-5.dwg REG 12/17/21



RECORD DRAWINGS
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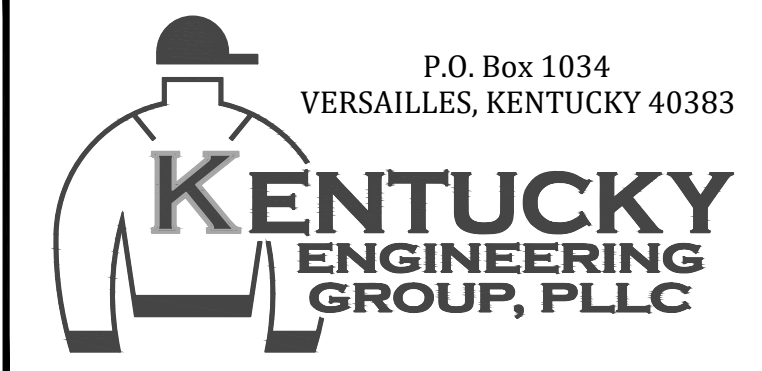
ALL METERS SHALL BE RECONNECTED WITH NEW SERVICE TUBING FROM THE NEW MAIN TO THE EXISTING METER.
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 ALL WATER MAIN THIS SHEET SHALL BE PVC CLASS 250 SDR-17



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 PROJECT MGR: RET
 DRAWN BY: JAB
 CHECKED BY: JCT
 SCALE: AS NOTED
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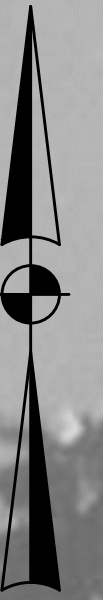
GRAYSON COUNTY WATER DISTRICT
 EAST - WEST
 INTERCONNECT PROJECT

AERIAL PLAN
 DETENTION CENTER
 EXTENSION

PROJECT NO.
 18021

SHEET NO.
 6

RECORD DRAWINGS



P:\PROJECTS\Grayson County Water District\18021-East - West Interconnect PH 1\DWG\18021-PETERCAVE-7-8.dwg KEG 12/17/21

REFERENCE NOTES:		
1.	BORTH BARBARA A & ROBERT A	- DB-293 PG.-350
2.	BORTH BARBARA A & ROBERT A	- DB-293 PG.-350
3.	WARDMAN MARGARET (DOLPH)	- DB-180 PG.-528
4.	TRABITS SYLVIA JEAN	- DB-167 PG.-618
5.	FENTRESS GEORGE JR FAMILY LLC	- DB-310 PG.-137
6.	WOODRIGE DANIEL R	- DB-361 PG.-129
7.	MARREN JOHN P & INGA N	- DB-391 PG.-023
8.	COX ALMA R REVOCABLE LIVING TRUST	- DB-340 PG.-093
9.	FENTRESS GEORGE JR FAMILY LLC	- DB-310 PG.-137
10.	WOODRIGE DANIEL R	- DB-361 PG.-129
11.	MARREN JOHN P & INGA N	- DB-391 PG.-023
12.	COX ALMA R REVOCABLE LIVING TRUST	- DB-340 PG.-093
13.	HODGE JAMES G	- DB-375 PG.-134
14.	HODGE JAMES G	- DB-406 PG.-069
15.	FENTRESS GEORGE JR FAMILY LLC	- DB-310 PG.-137
16.	FENTRESS GEORGE JR FAMILY LLC	- DB-310 PG.-137
17.	FENTRESS GEORGE JR FAMILY LLC	- DB-310 PG.-137
18.	FENTRESS GEORGE JR FAMILY LLC	- DB-310 PG.-137
19.	HODGE JAMES G	- DB-375 PG.-134
20.	HODGE JAMES G	- DB-406 PG.-069
21.	FENTRESS GEORGE JR FAMILY LLC	- DB-310 PG.-137
22.	FENTRESS GEORGE JR FAMILY LLC	- DB-310 PG.-137
23.	FENTRESS GEORGE JR FAMILY LLC	- DB-310 PG.-137
24.	KHUN PETER K	- DB-282 PG.-518
25.	KHUN PETER K	- DB-300 PG.-387
26.	KHUN NANCY GILMER	- DB-287 PG.-418
27.	SMITH LUCINDA	- DB-475 PG.-295
28.	CANNON STEVE	- DB-475 PG.-027
29.	CITY OF LITCHFIELD	- DB-093 PG.-177
30.	CITY OF LITCHFIELD	- DB-404 PG.-312
31.	CANNON ROBERT & MELANIE J	- DB-440 PG.-299
32.	SMITH LUCINDA	- DB-475 PG.-295
33.	CANNON ROBERT STEVEN	- DB-352 PG.-209
34.	JACKIE ERIC T & TAMMIE G	- DB-462 PG.-125
35.	SIMS THOMAS S & SUZANNE E	- DB-463 PG.-449
36.	FORWITH KEITH D & SUSAN M TRUSTEES	- DB-440 PG.-158
37.	FORWITH KEITH D & SUSAN M TRUSTEES	- DB-456 PG.-447
38.	SIMS THOMAS S & SUZANNE E	- DB-463 PG.-449
39.	FORWITH MEGAN	- DB-462 PG.-168
40.	FORWITH MEGAN	- DB-462 PG.-168
41.	FORWITH KEITH D & SUSAN M TRUSTEES	- DB-440 PG.-158
42.	FORWITH KEITH D & SUSAN M TRUSTEES	- DB-440 PG.-158
43.	FORWITH KEITH D & SUSAN M TRUSTEES	- DB-390 PG.-653
44.	FORWITH KEITH D & SUSAN M TRUSTEES	- DB-390 PG.-653
45.	FORWITH KEITH D & SUSAN M TRUSTEES	- DB-462 PG.-165
46.	FORWITH KEITH D & SUSAN M TRUSTEES	- DB-390 PG.-653
47.	CARTER CHARLES KEITH	- DB-440 PG.-054
48.	FORWITH KEITH D & SUSAN M TRUSTEES	- DB-390 PG.-653
49.	US GOVERNMENT	



RECORD DRAWINGS

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BY: KENTUCKY ENGINEERING GROUP, PLLC DATE: 4/2021

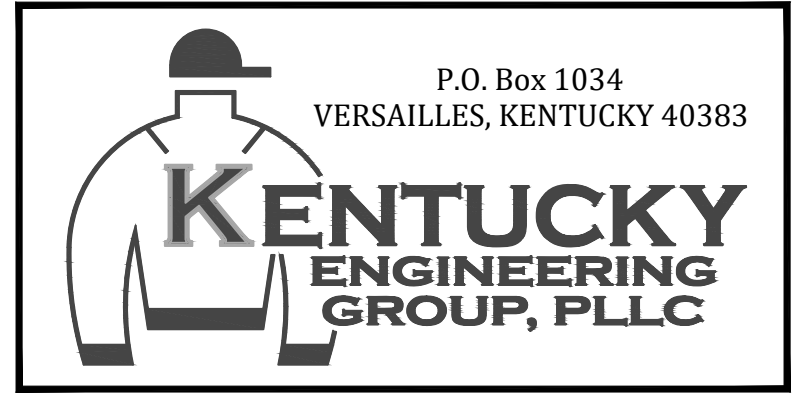
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SCALE: 1"=100'

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NO.	DATE	REVISIONS	BY

DATE:	MAY 2019
PROJECT MGR:	RET
DRAWN BY:	JAB
CHECKED BY:	JCT
SCALE:	AS NOTED
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**GRAYSON COUNTY WATER DISTRICT
EAST - WEST
INTERCONNECT PROJECT**

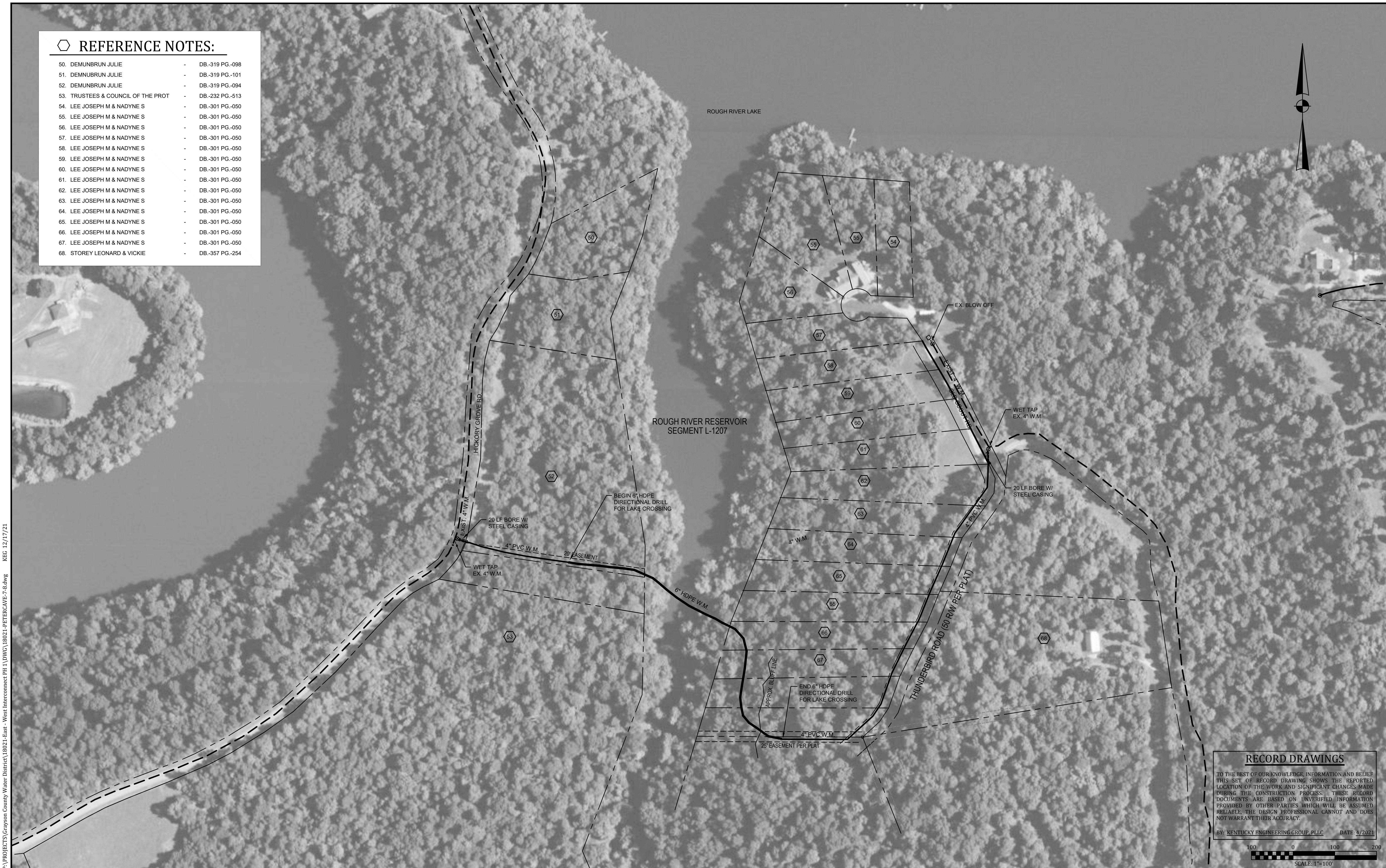
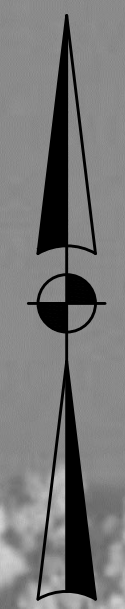
**AERIAL PLAN
PETER CAVE TO JOHNNY
FRANK RD.**

PROJECT NO.	18021
SHEET NO.	7

RECORD DRAWINGS

REFERENCE NOTES:

- 50. DEMUNBRUN JULIE - DB-319 PG.-098
- 51. DEMUNBRUN JULIE - DB-319 PG.-101
- 52. DEMUNBRUN JULIE - DB-319 PG.-094
- 53. TRUSTEES & COUNCIL OF THE PROT - DB-232 PG.-513
- 54. LEE JOSEPH M & NADYNE S - DB-301 PG.-050
- 55. LEE JOSEPH M & NADYNE S - DB-301 PG.-050
- 56. LEE JOSEPH M & NADYNE S - DB-301 PG.-050
- 57. LEE JOSEPH M & NADYNE S - DB-301 PG.-050
- 58. LEE JOSEPH M & NADYNE S - DB-301 PG.-050
- 59. LEE JOSEPH M & NADYNE S - DB-301 PG.-050
- 60. LEE JOSEPH M & NADYNE S - DB-301 PG.-050
- 61. LEE JOSEPH M & NADYNE S - DB-301 PG.-050
- 62. LEE JOSEPH M & NADYNE S - DB-301 PG.-050
- 63. LEE JOSEPH M & NADYNE S - DB-301 PG.-050
- 64. LEE JOSEPH M & NADYNE S - DB-301 PG.-050
- 65. LEE JOSEPH M & NADYNE S - DB-301 PG.-050
- 66. LEE JOSEPH M & NADYNE S - DB-301 PG.-050
- 67. LEE JOSEPH M & NADYNE S - DB-301 PG.-050
- 68. STOREY LEONARD & VICKIE - DB-357 PG.-254



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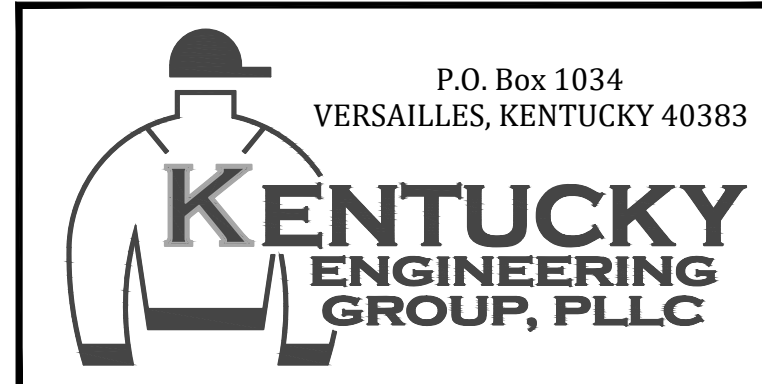
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SCALE: 1"=100'

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NO.	DATE	REVISIONS	BY

DATE: MAY 2019
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 CHECKED BY: JCT
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 VERSAILLES, KENTUCKY 40383

**GRAYSON COUNTY WATER DISTRICT
 EAST - WEST
 INTERCONNECT PROJECT**

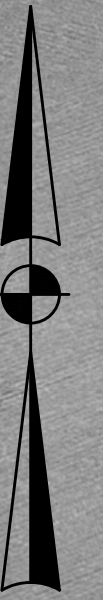
**AERIAL PLAN
 LILAC TO PETER CAVE**

PROJECT NO.
18021

SHEET NO.
8

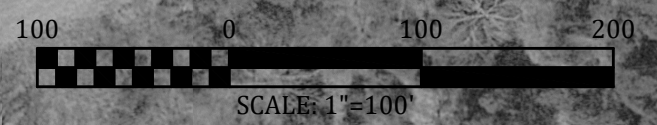
RECORD DRAWINGS

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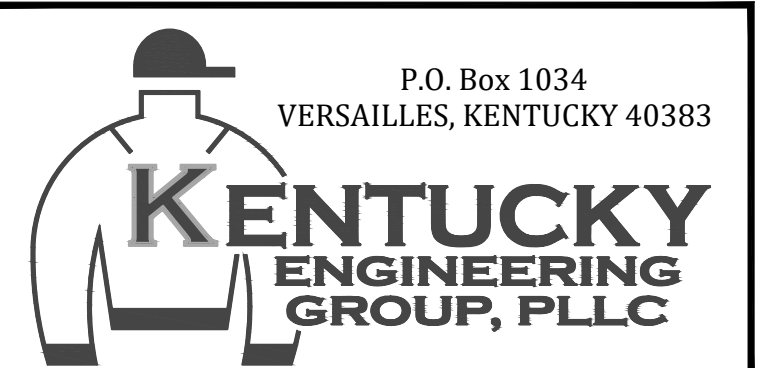
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 ALL WATER MAIN THIS SHEET SHALL BE PVC CLASS 250 SDR-17



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SCALE:	AS NOTED
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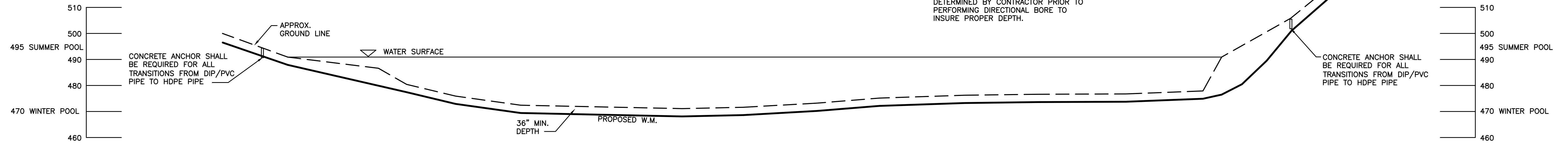
GRAYSON COUNTY WATER DISTRICT
 EAST - WEST
 INTERCONNECT PROJECT

AERIAL PLAN
 PEONIA RD.

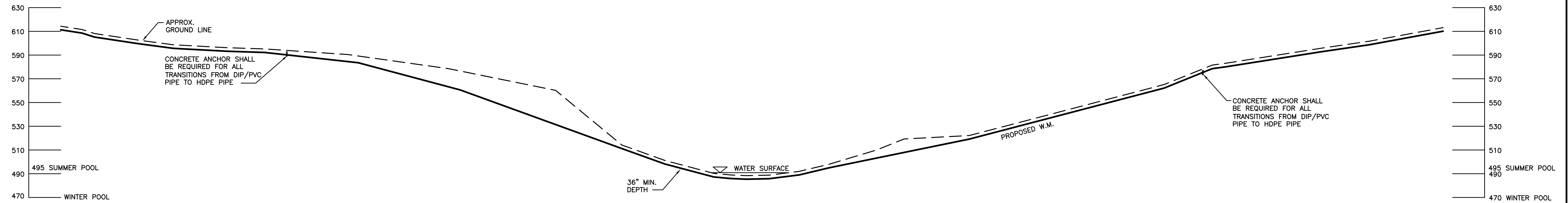
PROJECT NO. 18021
SHEET NO. 9

RECORD DRAWINGS

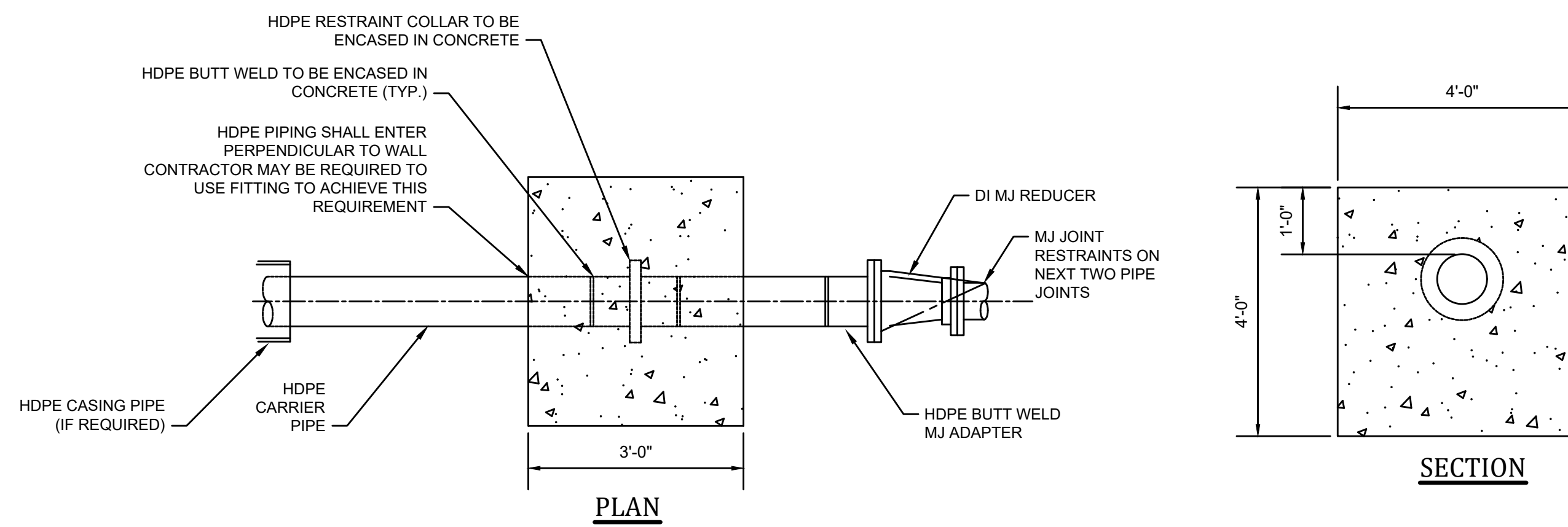
NOTE:
ACTUAL GROUND PROFILE SHALL BE DETERMINED BY CONTRACTOR PRIOR TO PERFORMING DIRECTIONAL BORE TO INSURE PROPER DEPTH.



PETER CAVE TO JOHNNY FRANK DIRECTIONAL BORE
DETAIL
NOT TO SCALE



HICKORY GROVE TO TUNDERBIRD DIRECTIONAL BORE
DETAIL
NOT TO SCALE



HDPE RESTRAINT WALL
NOT TO SCALE

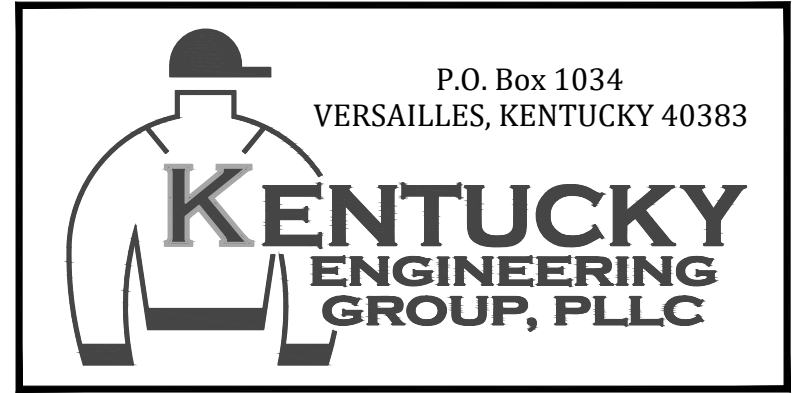
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P:\PROJECTS\Grayson County Water District\18021-East - West Interconnect PH 1\DWG\18021-09.dwg REG 12/17/21

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NO.	DATE	REVISIONS	BY

DATE:	MAY 2019
PROJECT MGR:	RET
DRAWN BY:	JAB
CHECKED BY:	JCT
SCALE:	AS NOTED
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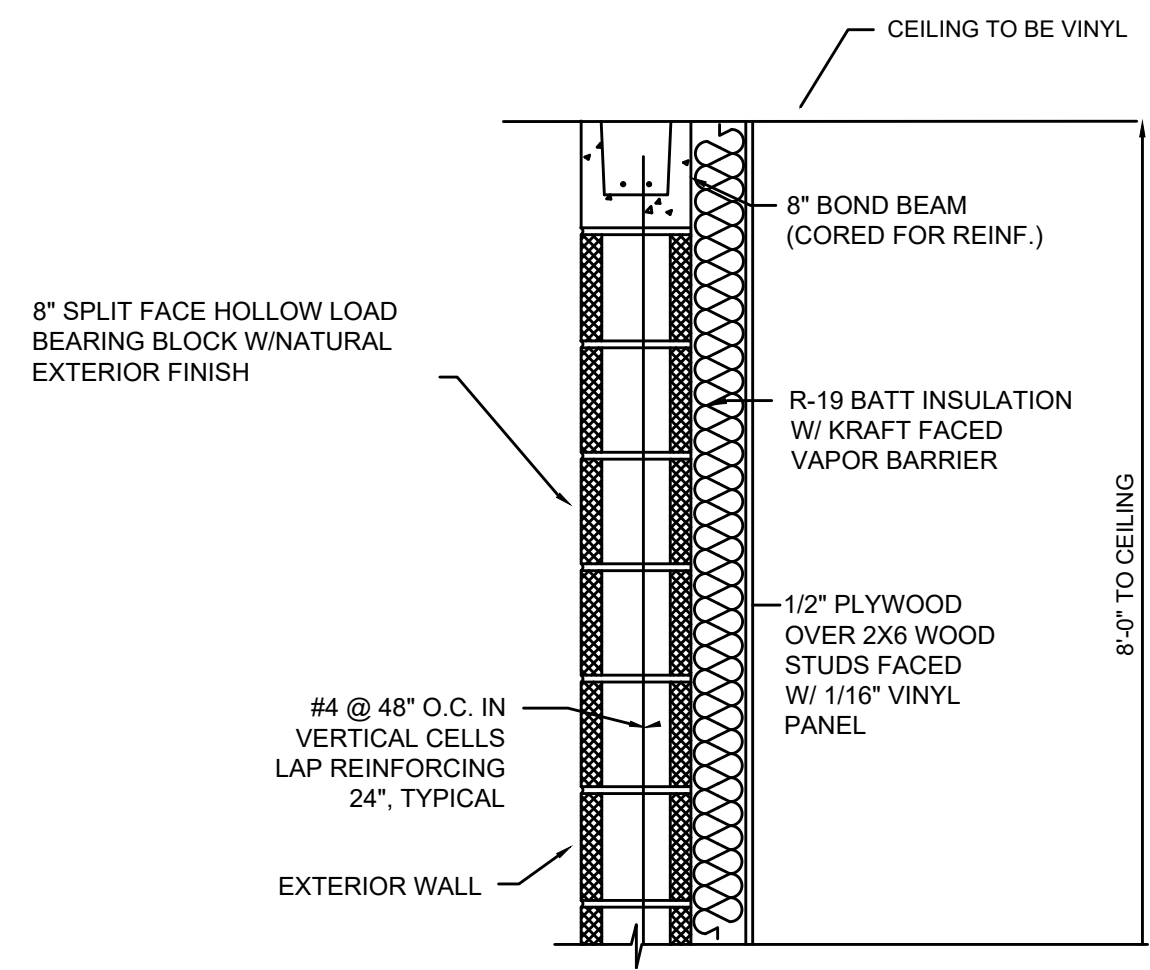


P.O. Box 1034
VERSAILLES, KENTUCKY 40383
GRAYSON COUNTY WATER DISTRICT
EAST - WEST
INTERCONNECT PROJECT

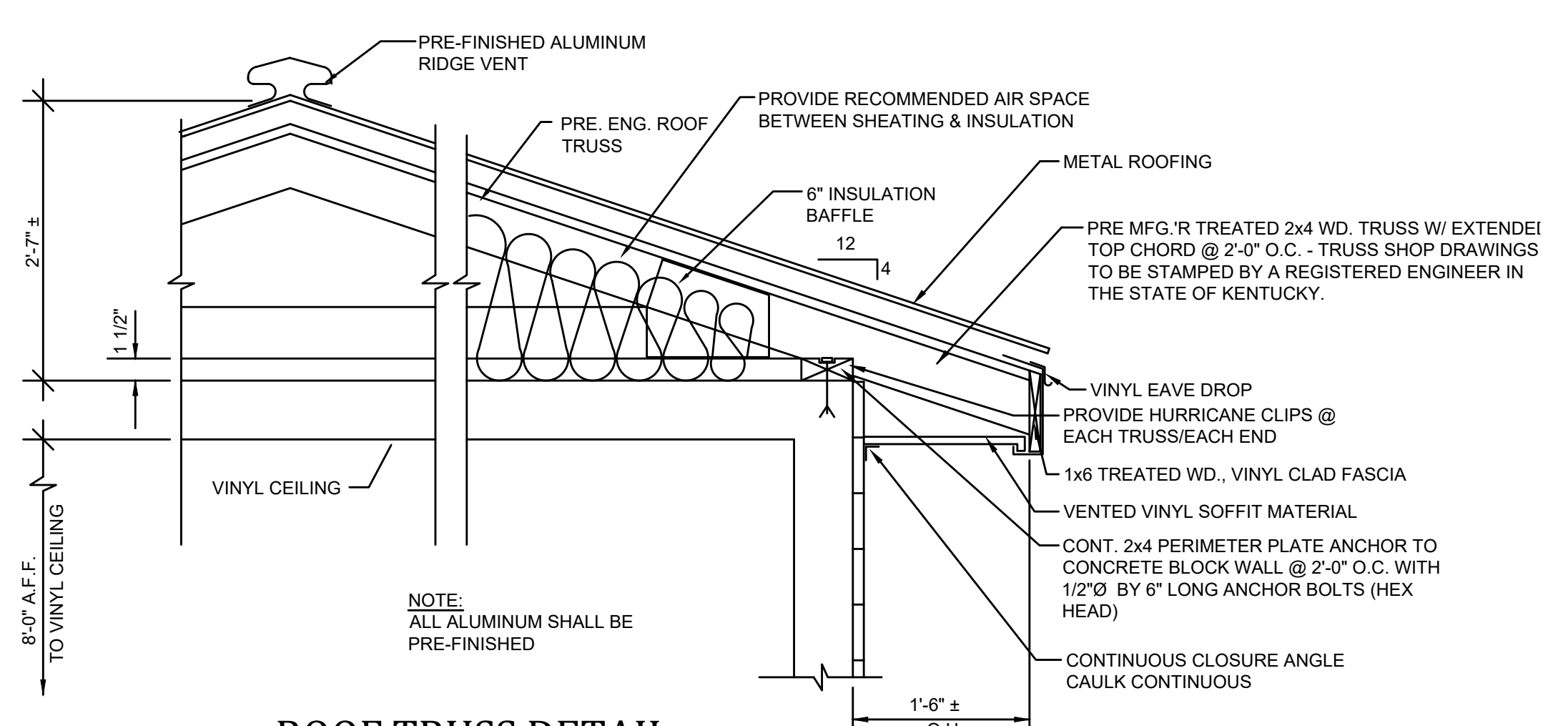
DIRECTIONAL BORE
DETAILS

PROJECT NO.
18021
SHEET NO.
10

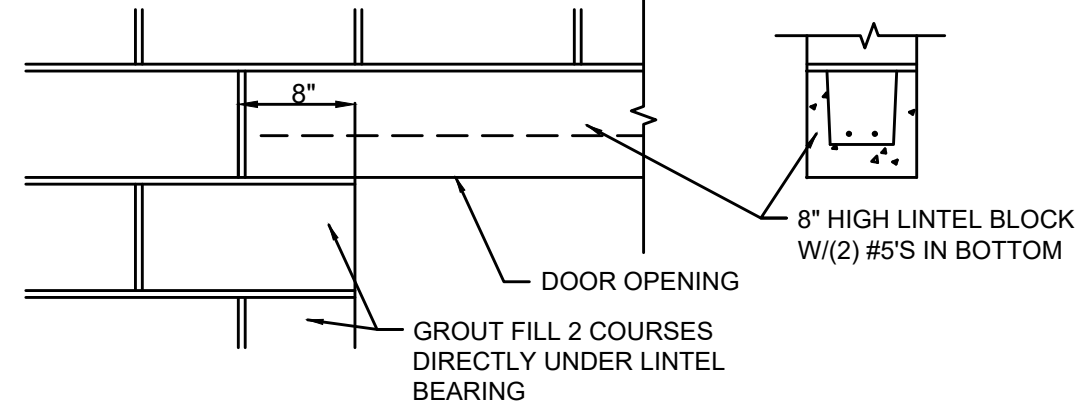
RECORD DRAWINGS



TYPICAL WALL SECTION
NOT TO SCALE

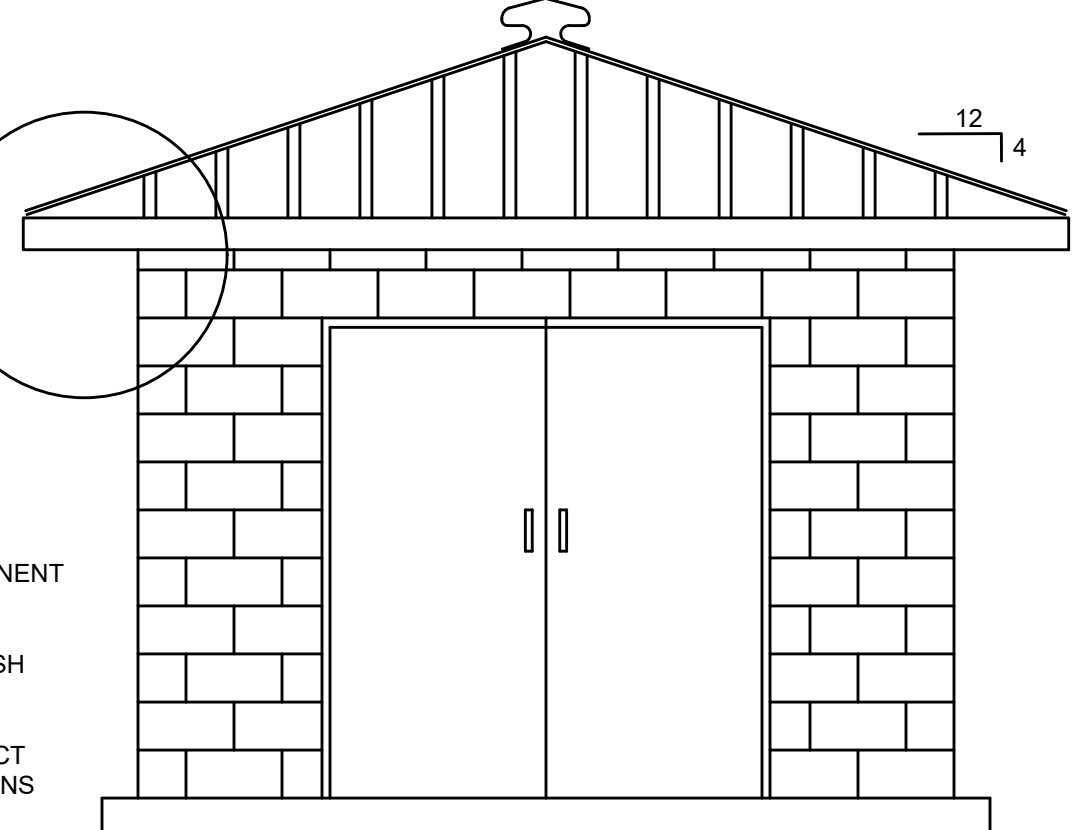


ROOF TRUSS DETAIL
NOT TO SCALE



LINTEL DETAIL
NOT TO SCALE

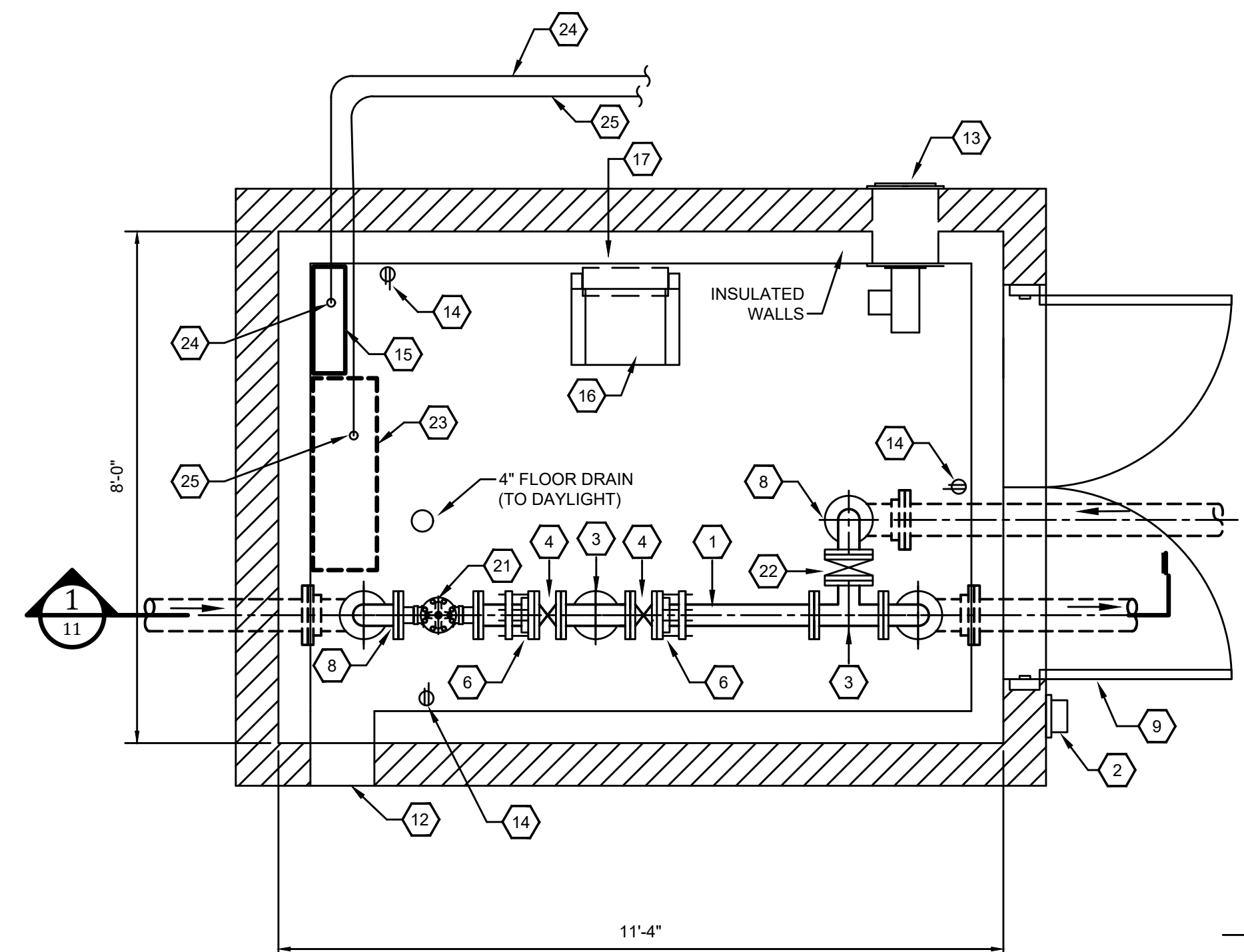
- TRUSS NOTES:**
- TRUSS SPACING: 24" O.C. UNLESS NOTED OTHERWISE.
 - ROOF TRUSS LOADING: 40 P.S.F.
 - A. TC LL: 20 P.S.F.
 - B. TC DL: 10 P.S.F.
 - C. BC DL: 10 P.S.F.
 - MAXIMUM TOTAL DEFLECTION = L/240
 - ROOF TRUSS MATERIALS SHALL BE - SOUTHERN PINE (MIN. GRADE 2).
 - TRUSS MANUFACTURER SHALL DESIGN 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.



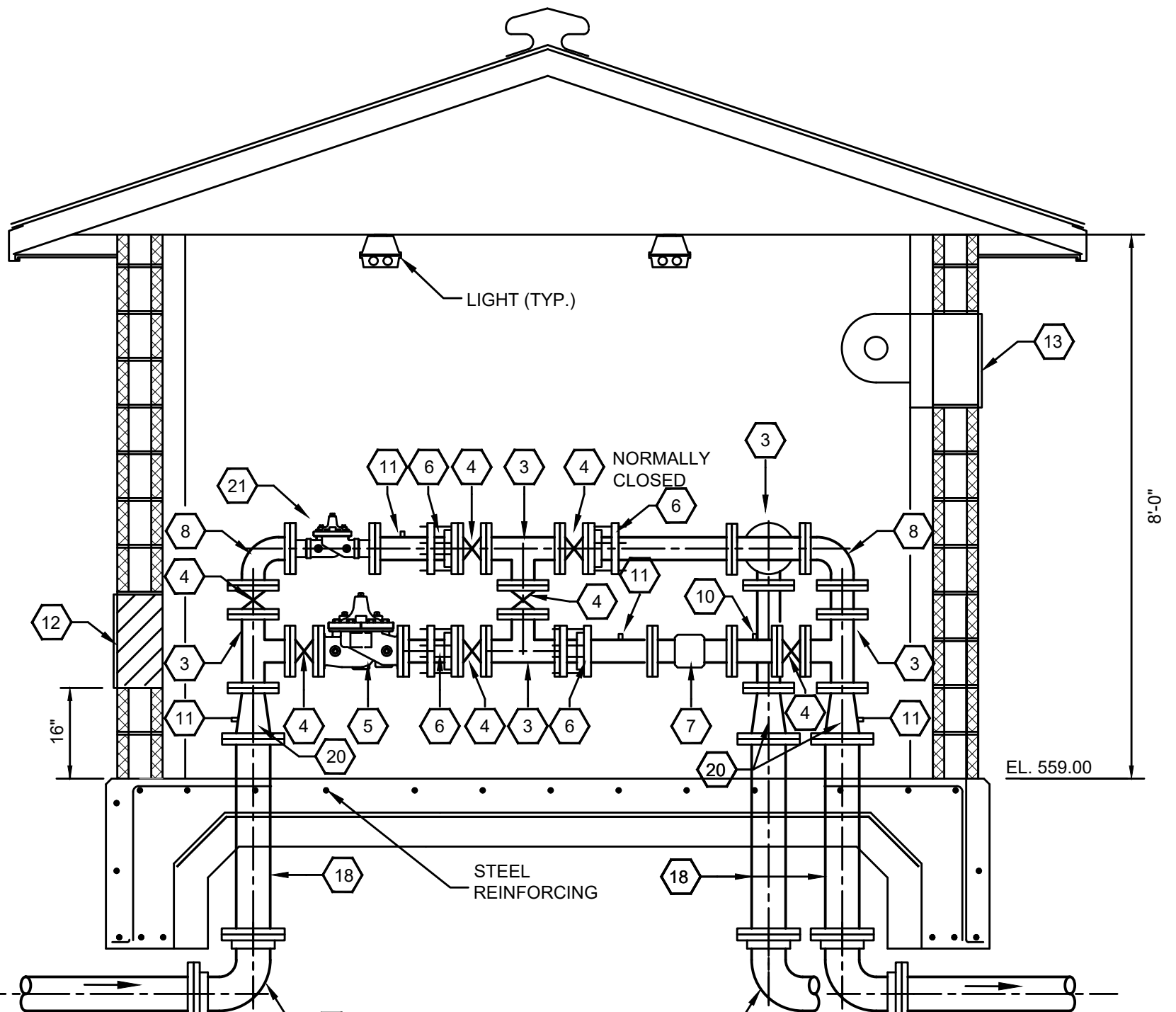
FRONT ELEVATION VIEW
NOT TO SCALE

REFERENCE NOTES:

- 4" DI PIPE
- EXTERIOR LIGHT
- 4" DI TEE
- 4" BUTTERFLY VALVE
- 4" PRV
- 4" FLANGE COUPLING ADAPTER
- 4" ULTRASONIC METER (PROVIDED BY OWNER)
- 4" 90° ELBOW
- DOUBLE DOOR
- TEST PORT
- 1/4" TAP AND BALL VALVE
- 12" X 24" INTAKE 16" FROM FLOOR
- LOUVERED OUTLET W/ EXHAUST FAN
- ELECTRICAL OUTLET
- ELECTRICAL PANEL
- MOUNT HEATER 30" FROM FLOOR
- FLOOR MOUNT DEHUMIDIFIER
- 6" DI PIPE
- 6" DI MJ 90° ELBOW
- 6" X 4" DI REDUCER
- 2" PRV
- 4" BUTTERFLY VALVE W/ ACTUATOR
- TELEMETRY PANEL (BY ALLOWANCE)
- 3#2, 1#8, 1 1/2" C TO SERVICE / ANTENNA POLE. ROUTE UNDERGROUND AND UNDER SLAB TO PANEL.
- 1" C W/ PULL WIRE TO SERVICE / ANTENNA POLE. ROUTE UNDERGROUND AND UNDER SLAB AND STUB UP.



ABOVE GROUND MASTER METER - PLAN
SCALE: 1/2" = 1'-0"



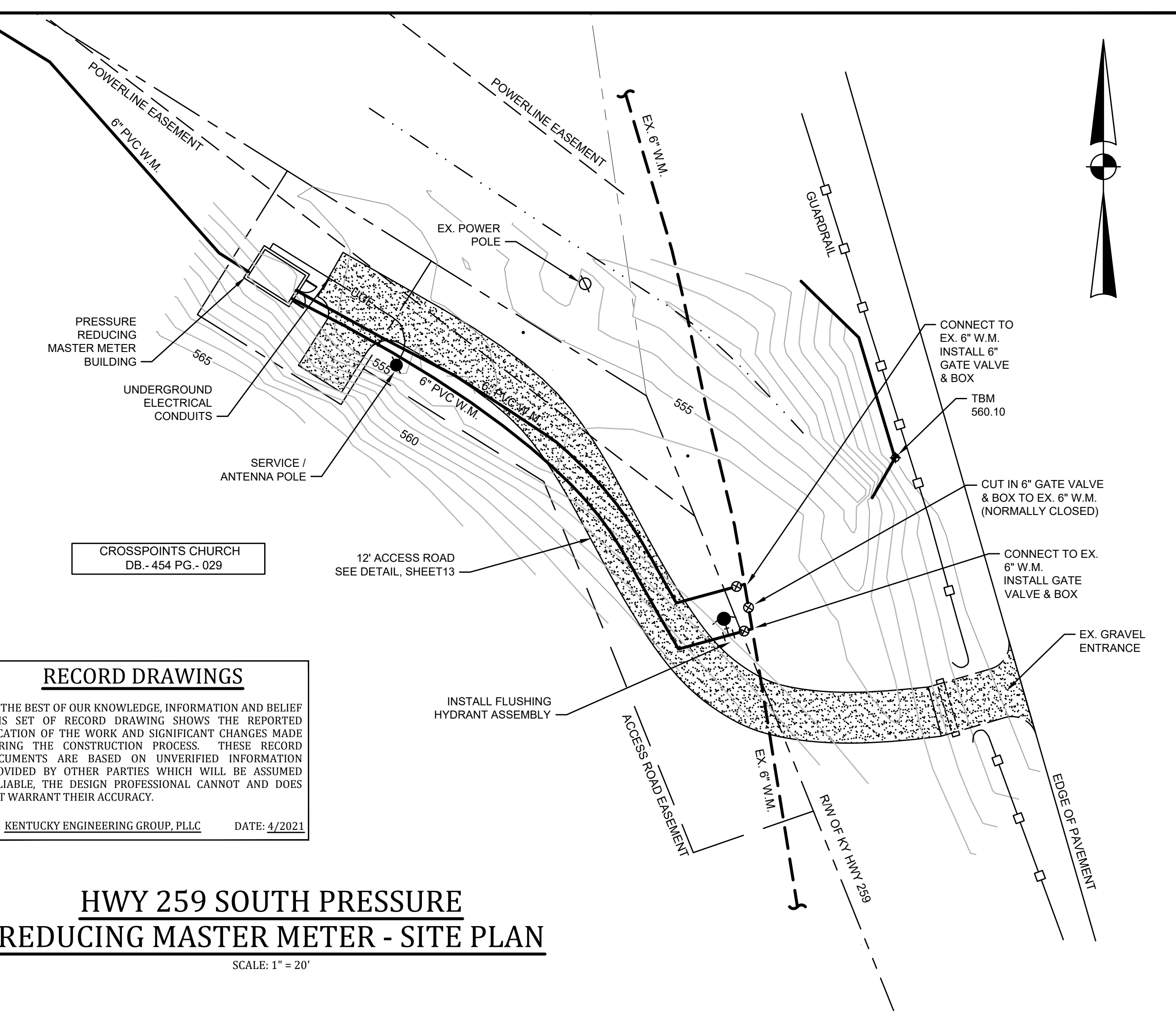
SECTION
SCALE: 1/2" = 1'-0"

RECORD DRAWINGS

TO THE BEST OF OUR KNOWLEDGE, INFORMATION AND BELIEF THIS SET OF RECORD DRAWING 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: KENTUCKY ENGINEERING GROUP, PLLC DATE: 4/2021

HWY 259 SOUTH PRESSURE REDUCING MASTER METER - SITE PLAN
SCALE: 1" = 20'



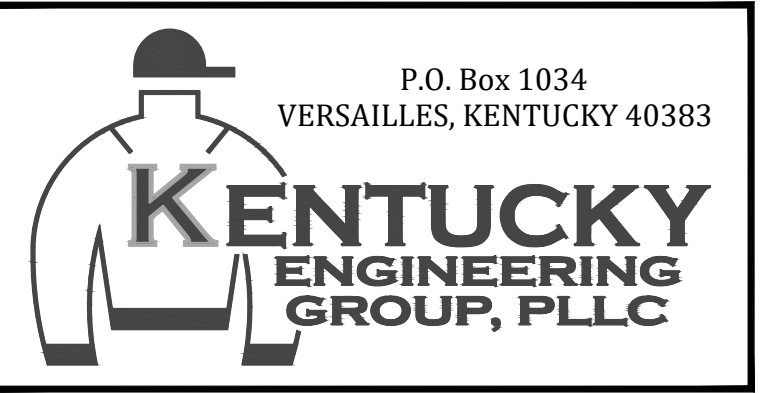
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NO.	DATE	REVISIONS	BY
1	9/22/20	FIELD REVISION OF BUILDING LAYOUT	JCT

DATE:	MAY 2019
PROJECT MGR:	RET
DRAWN BY:	JAB
CHECKED BY:	JCT
SCALE:	AS NOTED
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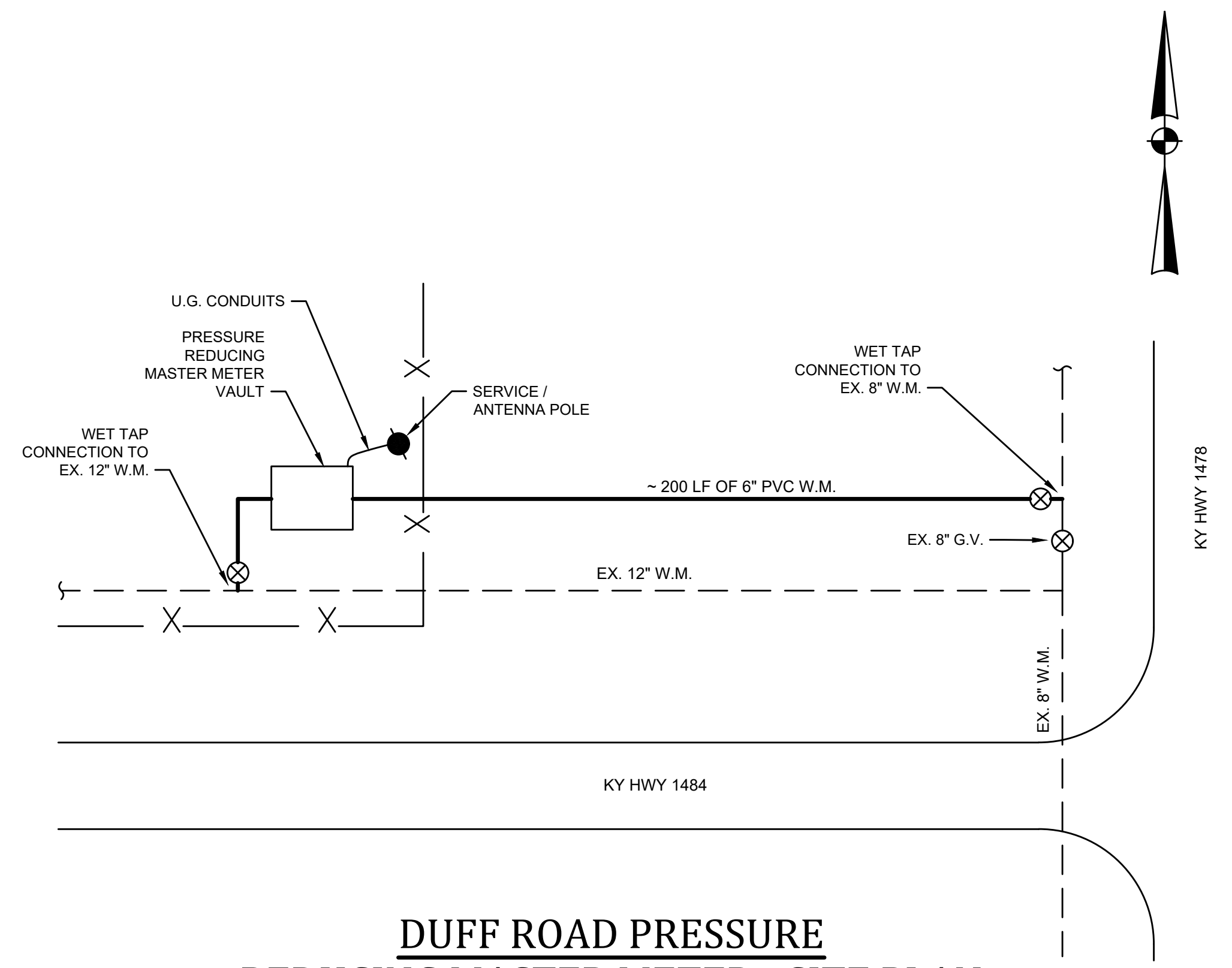


GRAYSON COUNTY WATER DISTRICT
EAST - WEST
INTERCONNECT PROJECT

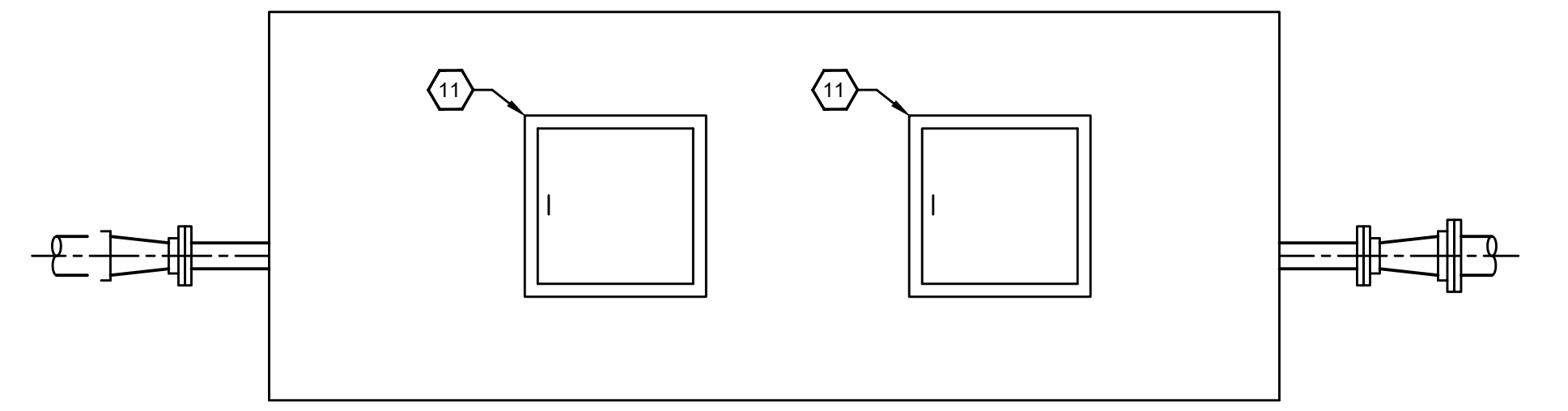
HWY 259 SOUTH
PRESSURE REDUCING
MASTER METER
DETAILS

PROJECT NO.	18021
SHEET NO.	11

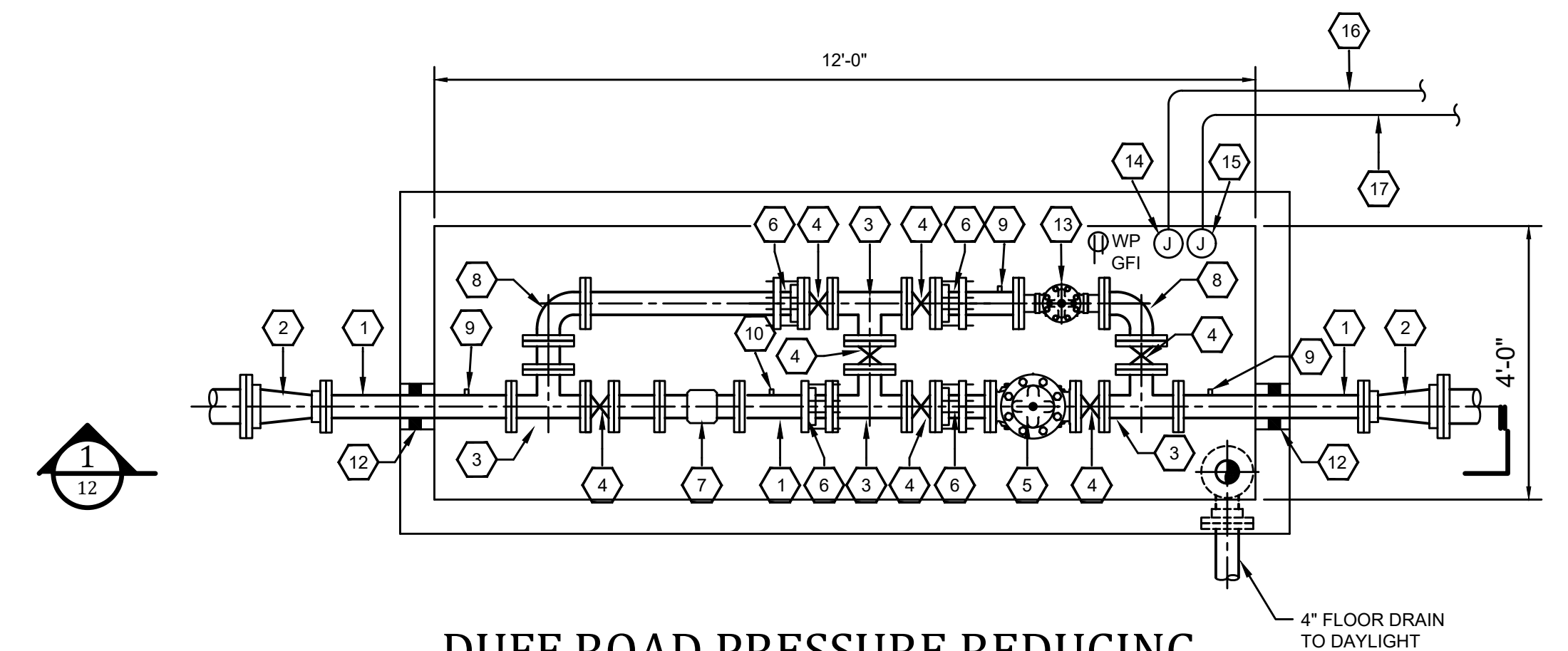
RECORD DRAWINGS



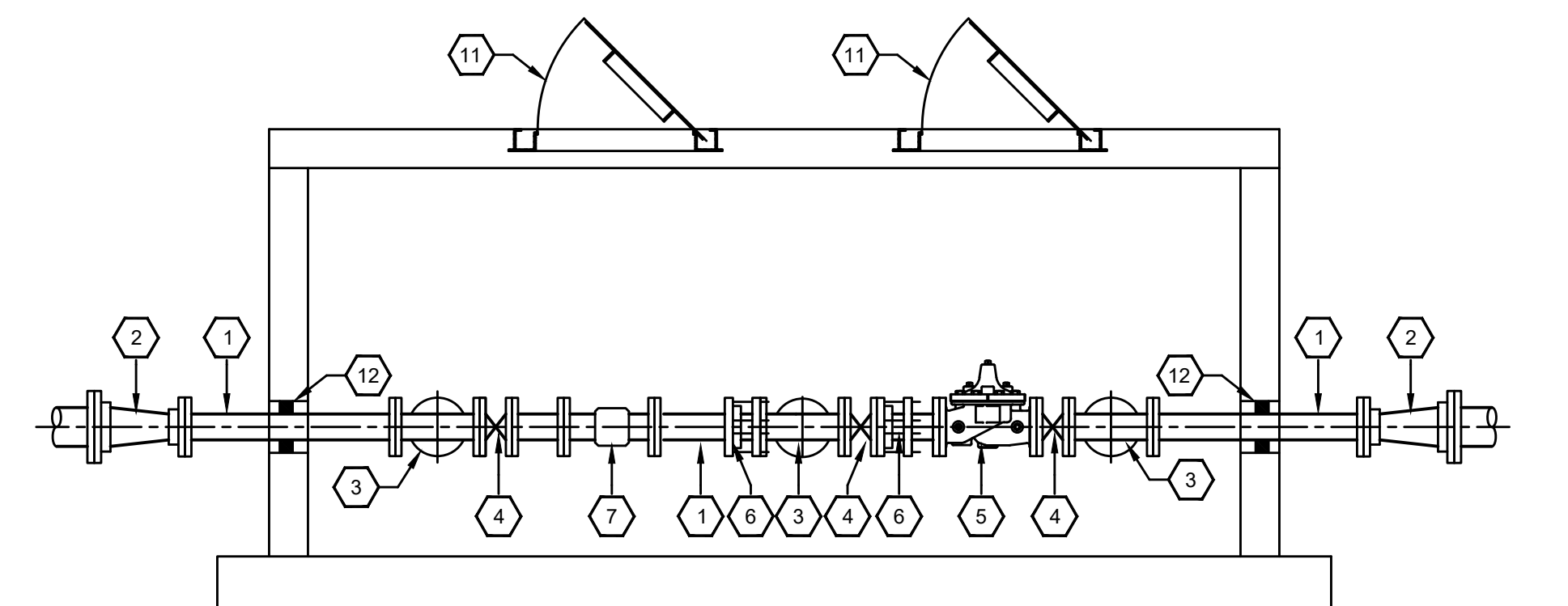
DUFF ROAD PRESSURE REDUCING MASTER METER - SITE PLAN
NOT TO SCALE



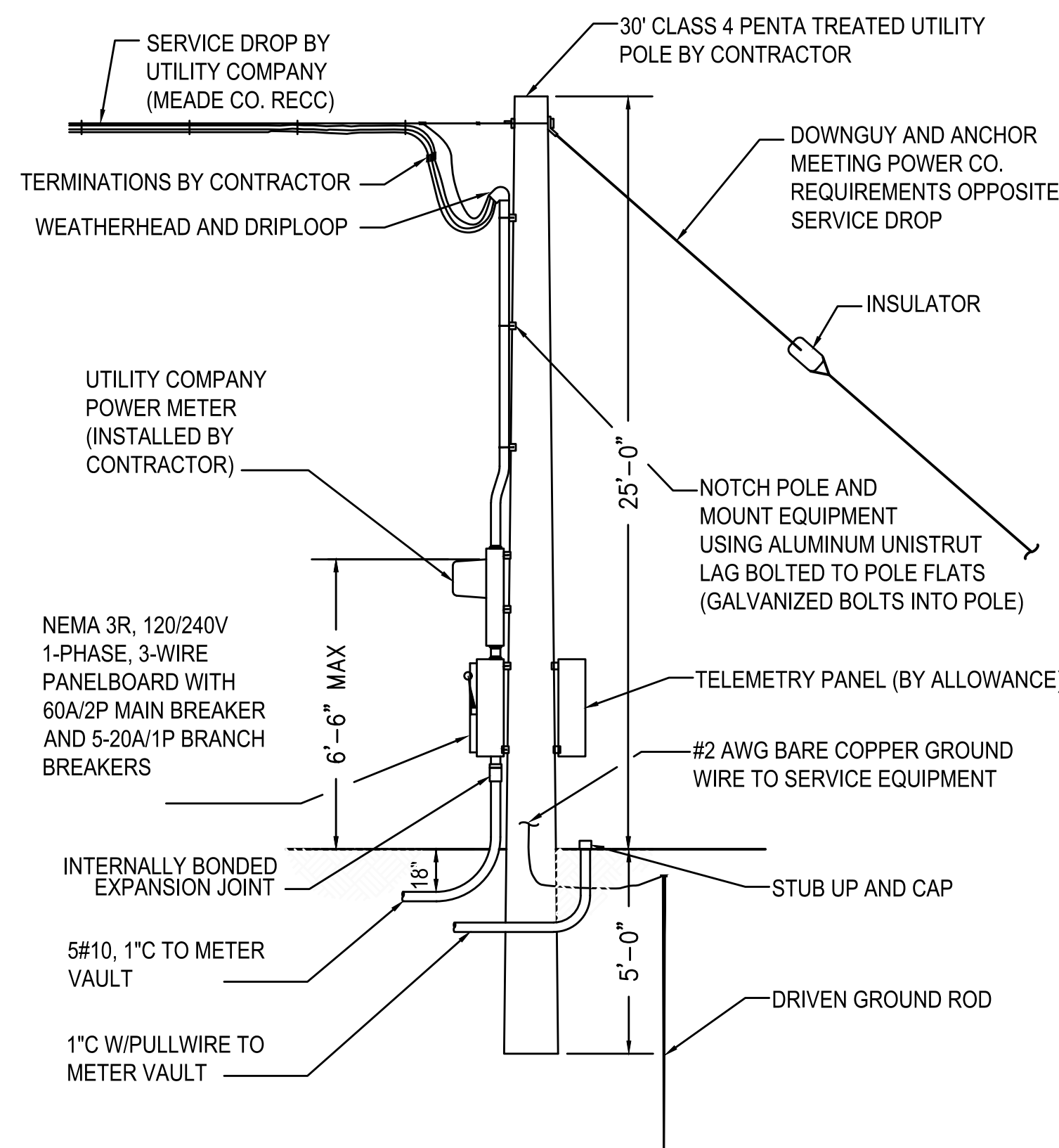
DUFF ROAD PRESSURE REDUCING MASTER METER - TOP SLAB PLAN
SCALE: 1/2" = 1'-0"



DUFF ROAD PRESSURE REDUCING MASTER METER - PLAN
SCALE: 1/2" = 1'-0"



SECTION
SCALE: 1/2" = 1'-0"



SERVICE / ANTENNA POLE DETAIL
DUFF ROAD MASTER METER
NOT TO SCALE

REFERENCE NOTES:

1. 4" DI PIPE
 2. 6" X 4" DI MJ REDUCER
 3. 4" DI TEE
 4. 4" BUTTERFLY VALVE
 5. 4" PRV
 6. 4" FLANGE COUPLING ADAPTER (PROVIDED BY OWNER)
 7. 4" ULTRASONIC METER
 8. 4" DI 90° ELBOW
 9. 1/4" TAP W/ BALL VALVE
 10. TEST PORT
 11. 2'-0" X 2'-0" ALUMINUM WATER TIGHT ACCESS HATCH
 12. LINK SEAL
 13. 2" PRV
 14. NEMA 4X JUNCTION BOX FOR POWER TO FLOW METER AND RECEPTACLE
 15. NEMA 4X JUNCTION BOX FOR FUTURE SIGNALS
 16. 5#10, 1" C TO PANELBOARD
 17. 1" C W/ PULL WIRE TO POLE
- NOTE:
2" LIQUID FILLED PRESSURE GAUGES LOCATED AT COMMON INLET/OUTLET, W/ 1/4" TAP AND BALL VALVE

RECORD DRAWINGS

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BY: KENTUCKY ENGINEERING GROUP, PLLC DATE: 4/2021

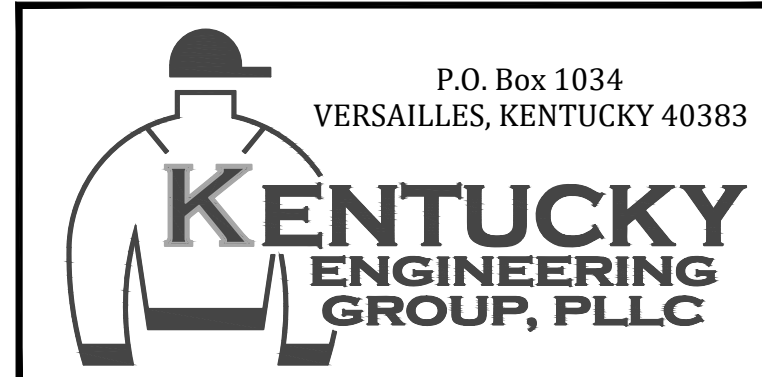
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NO.	DATE	REVISIONS	BY

DATE:	MAY 2019
PROJECT MGR:	RET
DRAWN BY:	JAB
CHECKED BY:	JCT
SCALE:	AS NOTED
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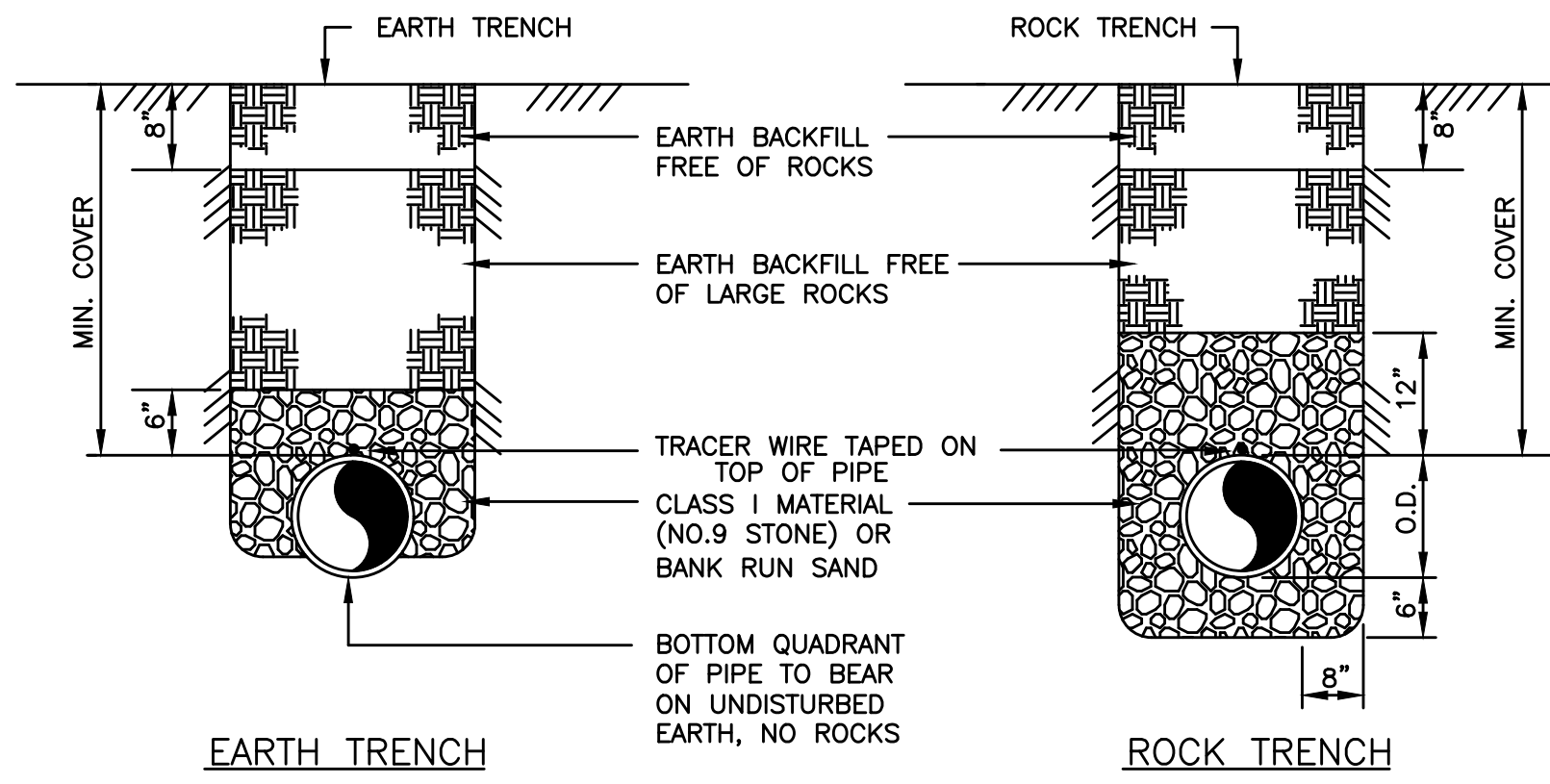
GRAYSON COUNTY WATER DISTRICT
EAST - WEST
INTERCONNECT PROJECT

DUFF ROAD
PRESSURE REDUCING
MASTER METER
DETAILS

PROJECT NO.
18021

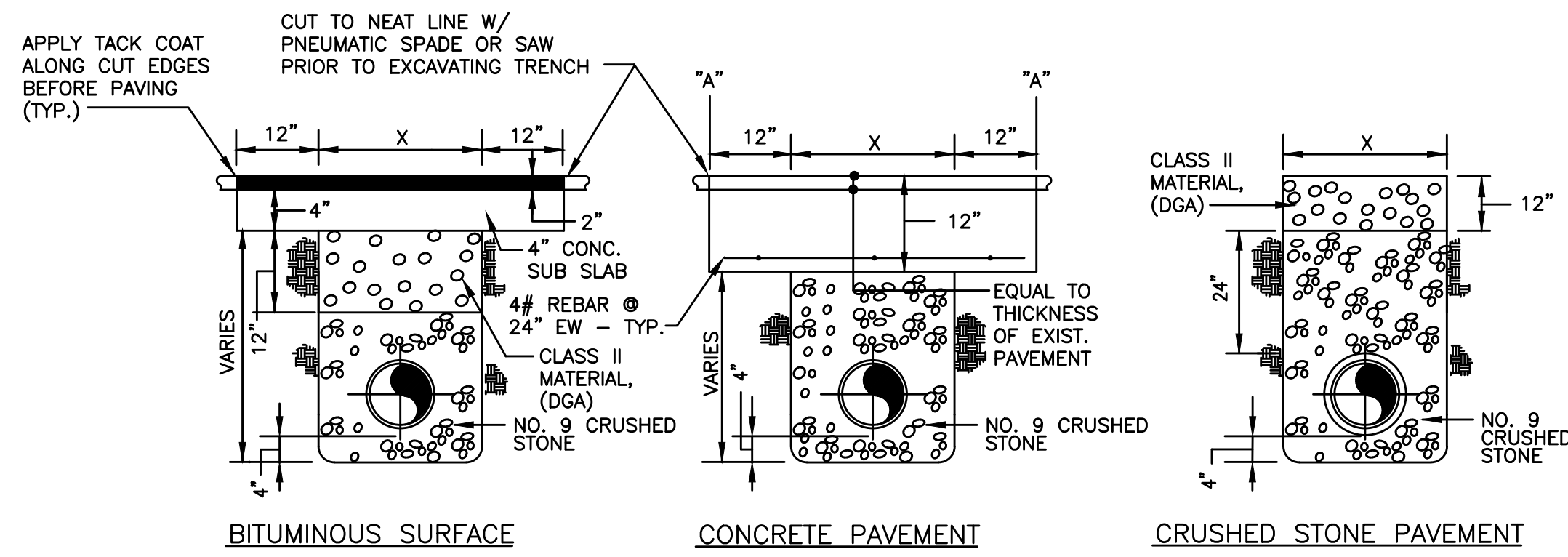
SHEET NO.
12

RECORD DRAWINGS



TYPICAL BEDDING and BACKFILL

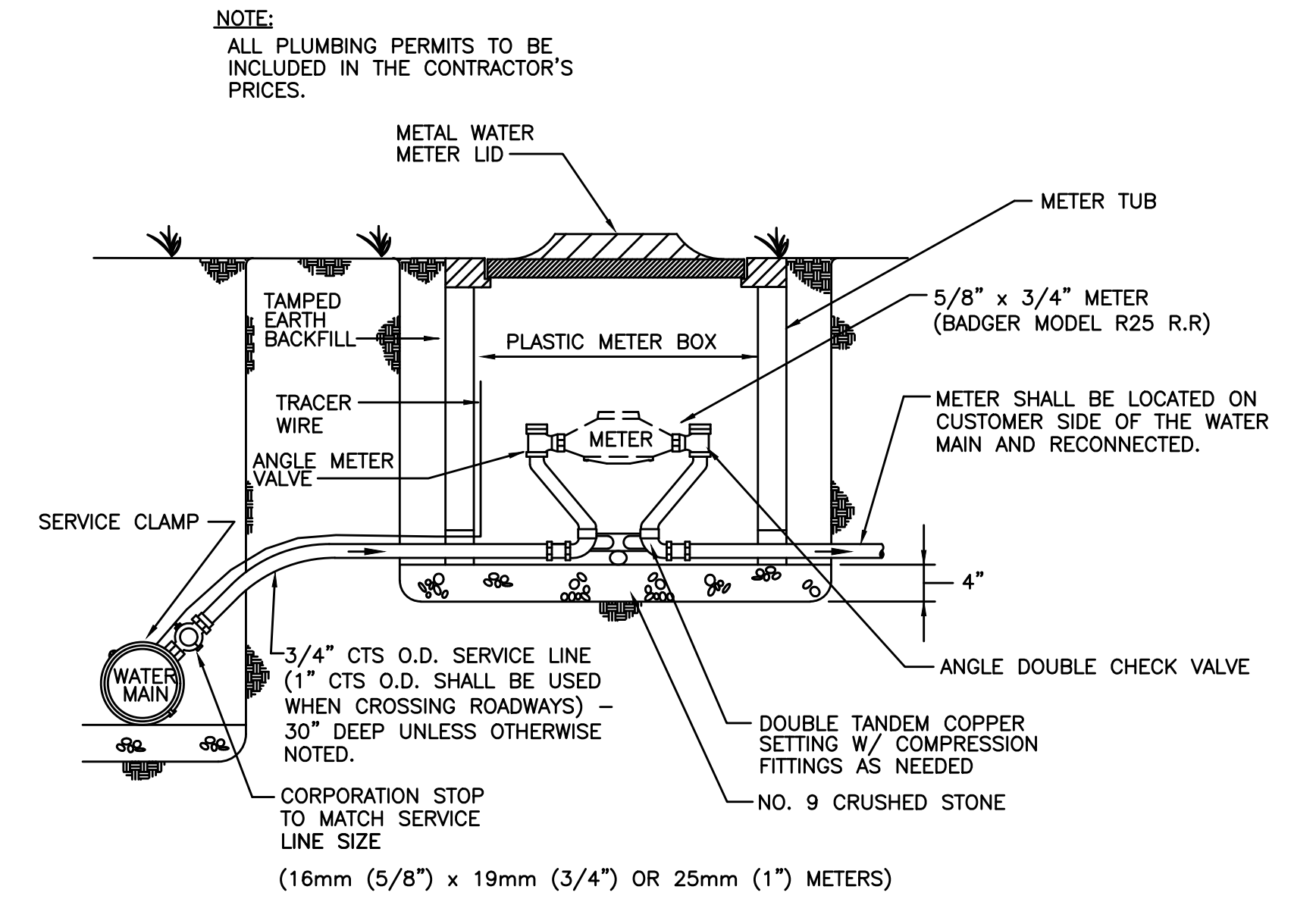
NOT TO SCALE



PAVEMENT REPLACEMENT

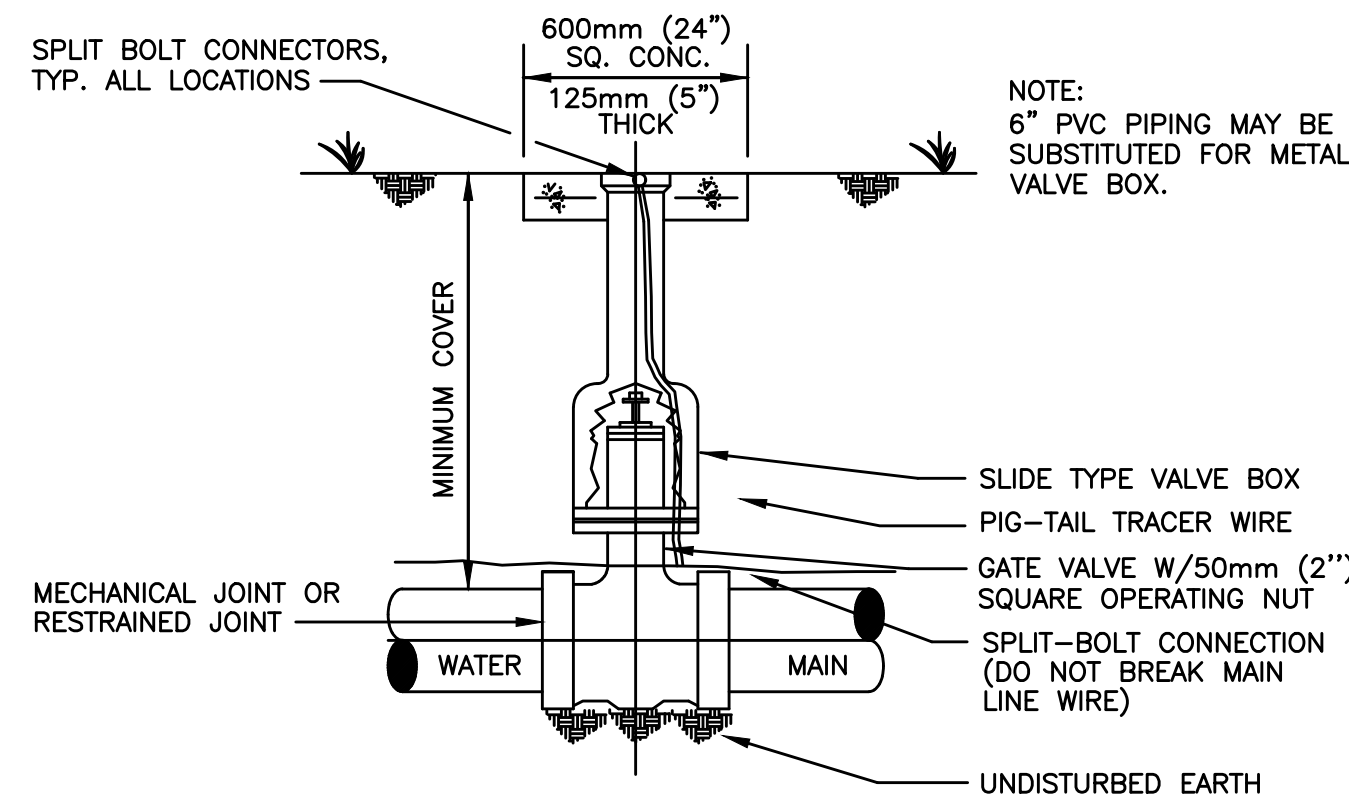
NOT TO SCALE

NOTE:
WATER MAIN INSTALLED WHERE FUTURE PAVEMENT IS TO BE CONSTRUCTION SHALL BE BACKFILLED IN ACCORDANCE WITH CRUSHED STONE PAVEMENT REPLACEMENT



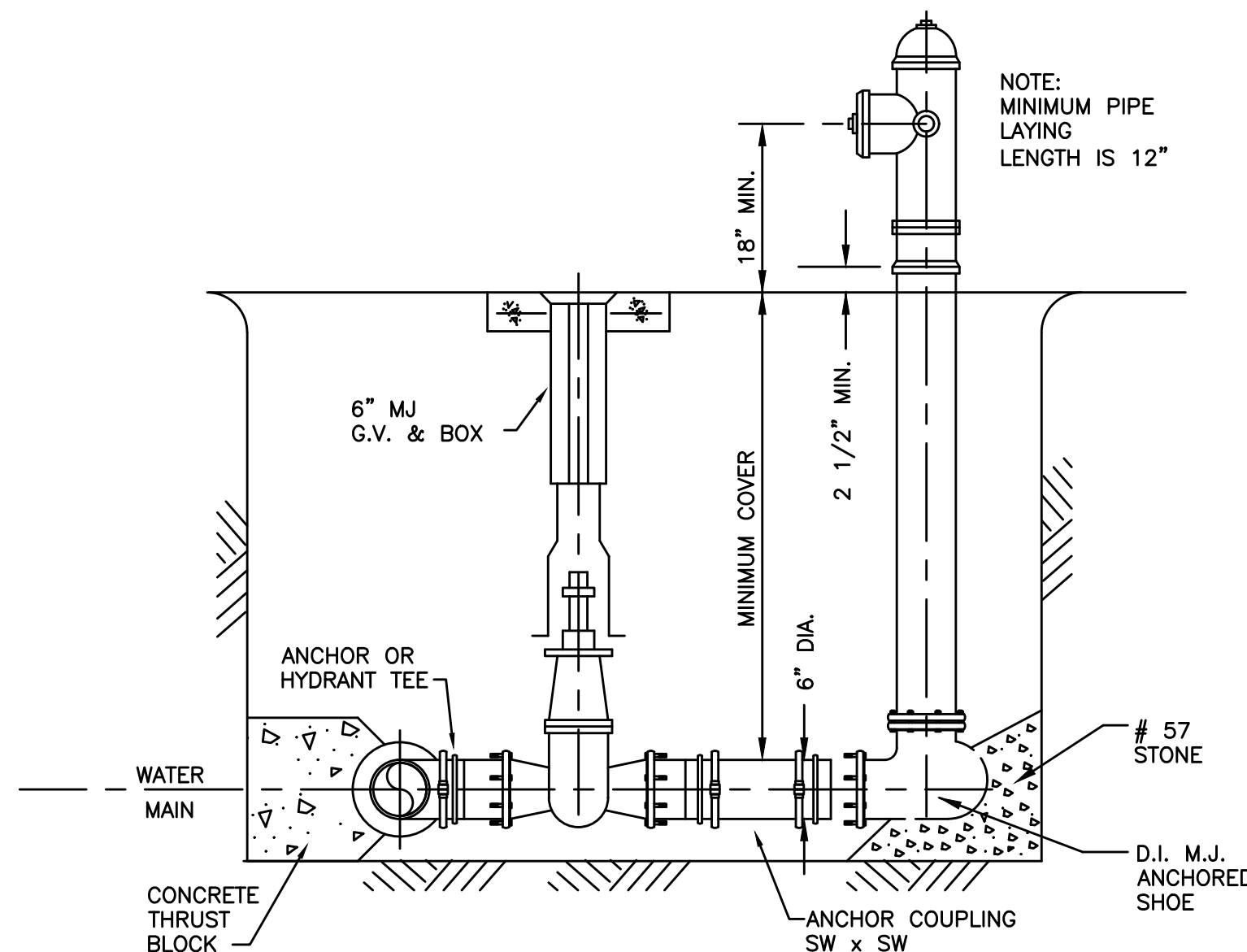
TYPICAL SERVICE CONNECTION

NOT TO SCALE



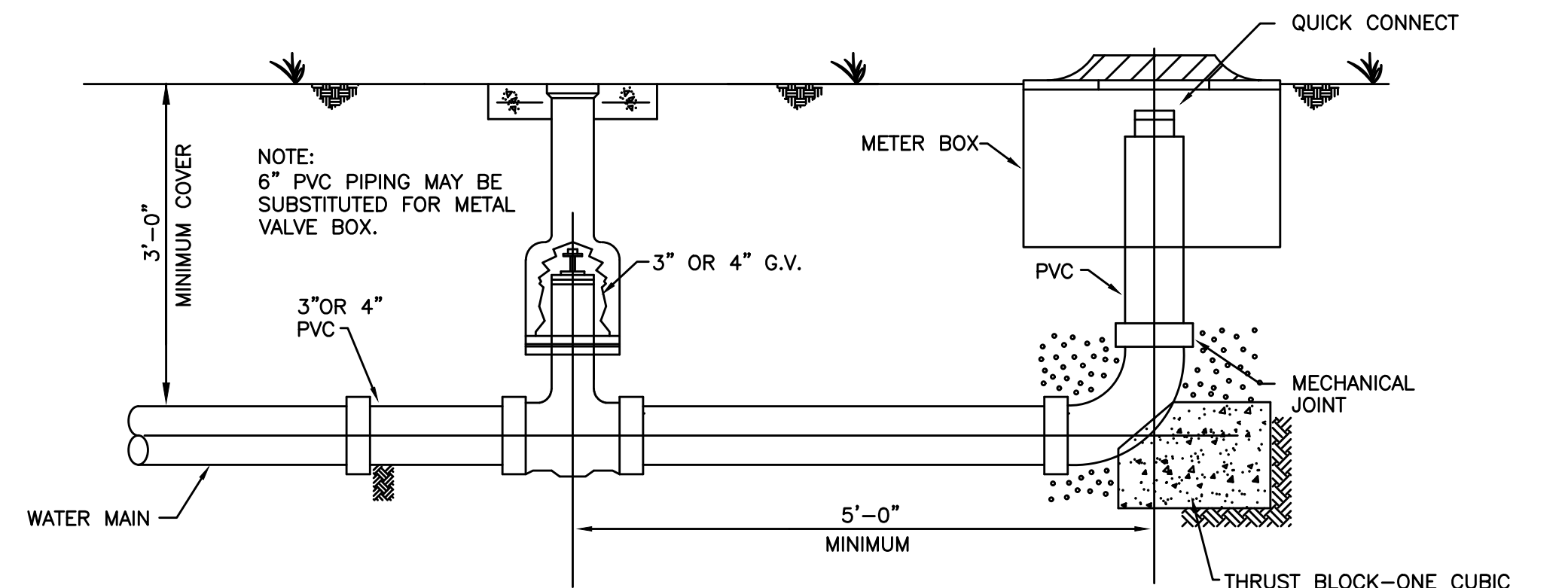
GATE VALVE INSTALLATION

NOT TO SCALE



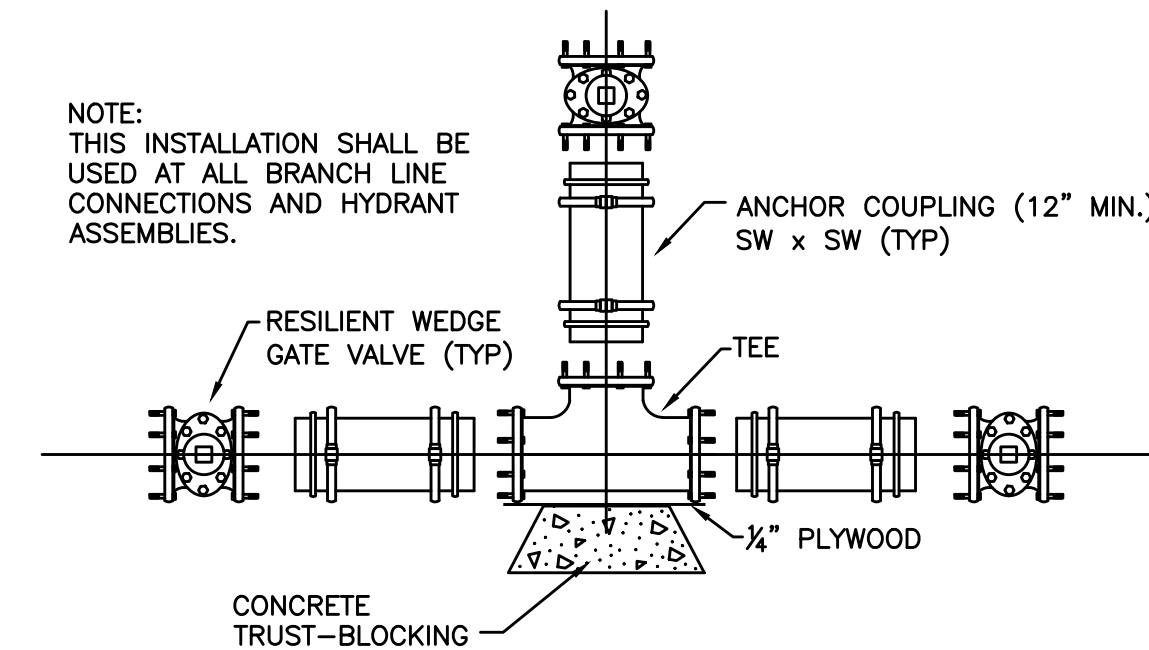
FLUSHING HYDRANT ASSEMBLY

NOT TO SCALE



BLOWOFF HYDRANT ASSEMBLY

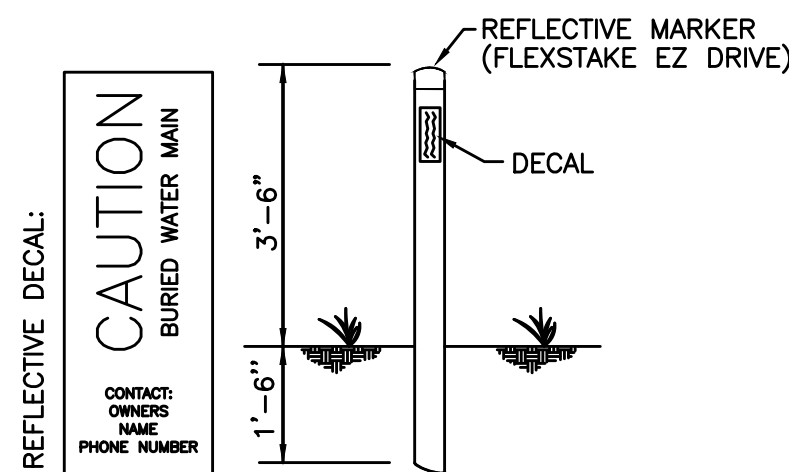
NOT TO SCALE



TEE INSTALLATION

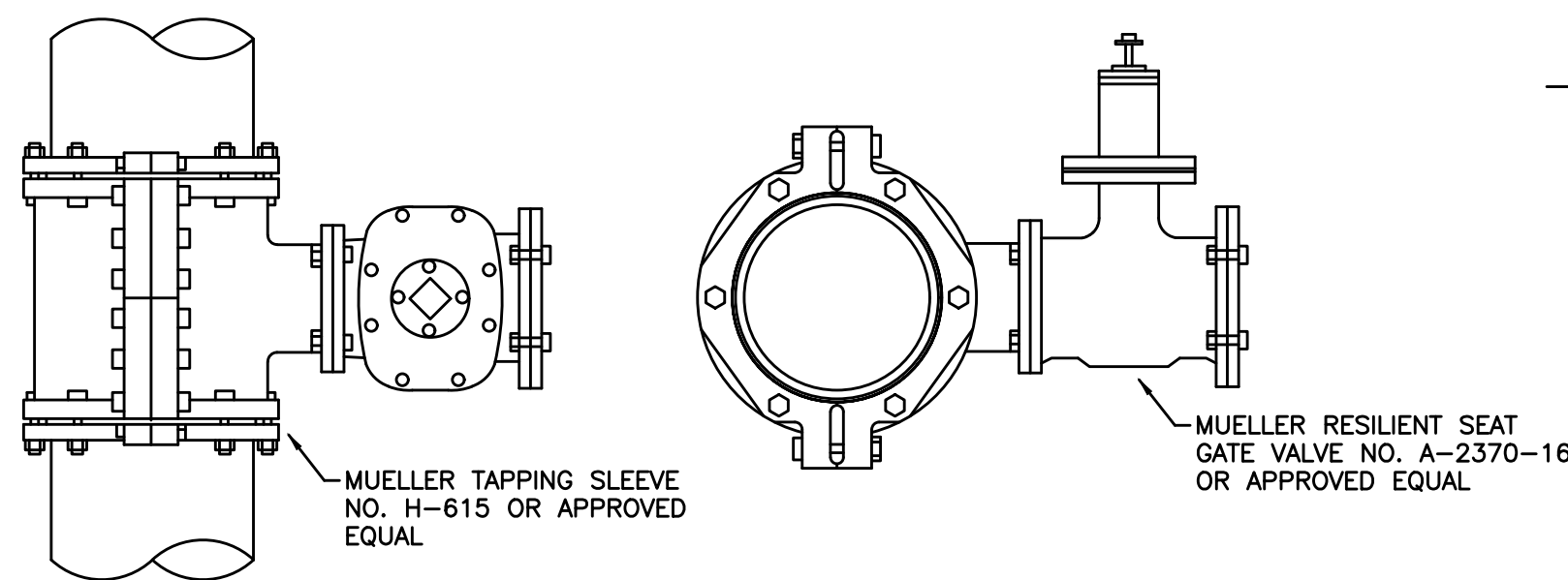
NOT TO SCALE

NOTE:
WATER MARKERS SHALL BE PLACED WHENEVER A ROAD CROSSING IS MADE AT EACH SIDE OF THE ROAD AND AT EACH VALVE OR SET OF VALVES.



WATER MARKER DETAIL

NOT TO SCALE



TOP VIEW

SIDE VIEW

TYPICAL - WET TAP

NOT TO SCALE

NOTE:
THIS INSTALLATION SHALL BE USED AT ALL BRANCH LINE CONNECTIONS AND HYDRANT ASSEMBLIES.

RECORD DRAWINGS

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BY: KENTUCKY ENGINEERING GROUP, PLLC DATE: 4/2021

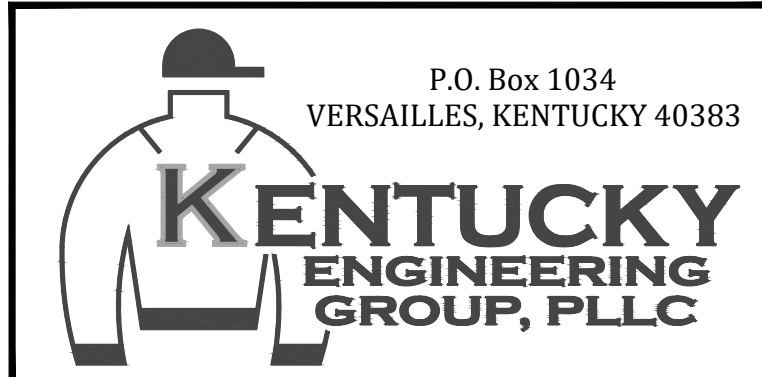
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NO.	DATE	REVISIONS	BY

DATE:	MAY 2019
PROJECT MGR:	RET
DRAWN BY:	JAB
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SCALE:	AS NOTED
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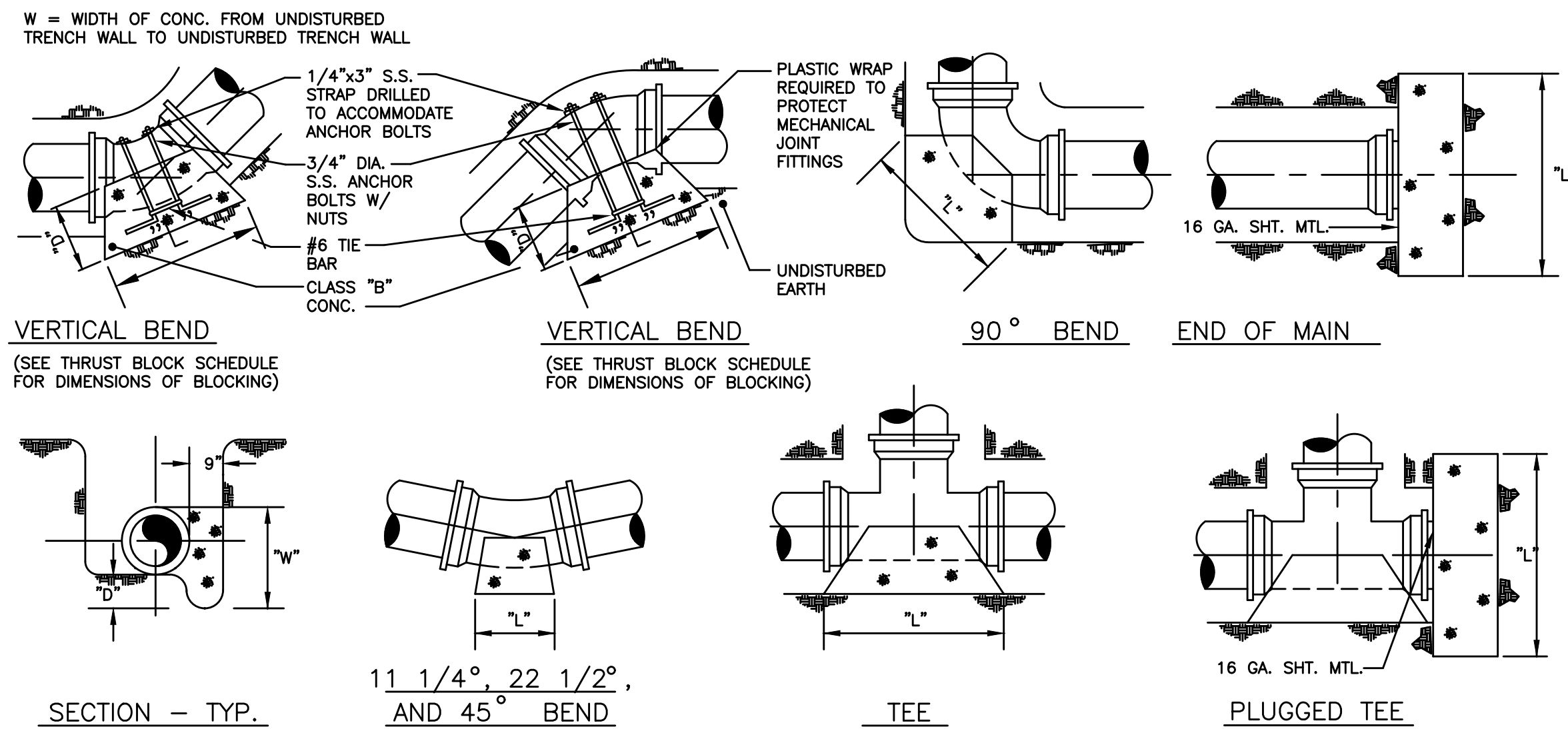
P.O. Box 1034
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GRAYSON COUNTY WATER DISTRICT
EAST - WEST
INTERCONNECT PROJECT

STANDARD DETAILS

PROJECT NO.
18021

SHEET NO.
13

RECORD DRAWINGS



NOTE: ALL FITTINGS AND VALVES SHALL INCLUDE GRIP RING GLAND

THRUST BLOCK SCHEDULE - CLASS 250 PVC

SOIL TYPE - SAND & GRAVEL BEARING STRENGTH = 3000 PSF

PIPE SIZE	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
4"	2.667	.10	12 24 16	1.500	.06	12 18 12	.750	.03	12 12 9	.500	.01	6 12 6	1.667	.06	12 24 10
6"	5.000	.19	12 36 20	3.000	.11	12 24 18	1.500	.06	12 18 12	.750	.01	6 12 9	4.000	.15	12 24 24
8"	9.000	.50	18 36 36	5.000	.28	18 36 20	3.000	.17	18 24 18	1.500	.06	12 18 12	7.000	.39	18 42 24
10"	9.255	.78	18 48 42	7.500	.42	18 36 30	4.167	.23	18 30 20	2.250	.08	12 18 18	10.500	.58	18 42 36
12"	13.327	1.11	18 60 48	12.000	.67	18 48 36	6.000	.33	18 36 24	3.000	.11	12 24 18	14.000	.78	18 48 42
14"	18.139	2.00	24 72 54	15.750	1.17	24 54 42	7.500	.56	24 36 30	4.000	.22	18 24 24	20.000	1.48	24 60 48
16"	23.692	2.65	24 78 66	20.000	1.48	24 60 48	10.500	.78	24 42 36	5.000	.28	18 30 24	27.000	2.00	24 72 54

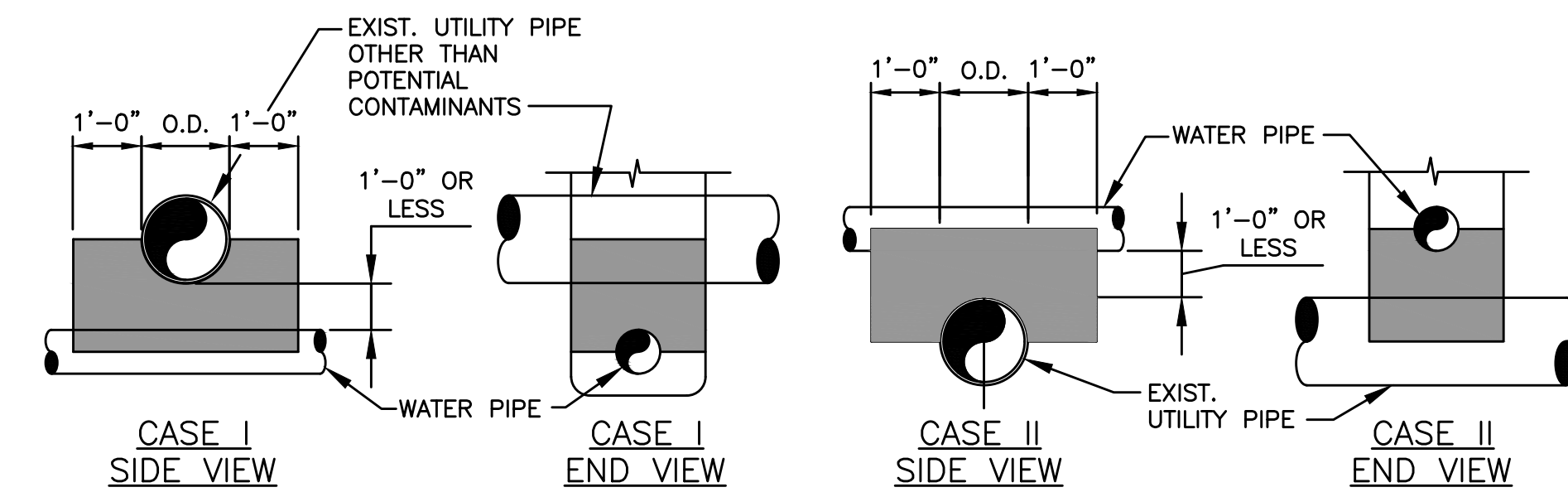
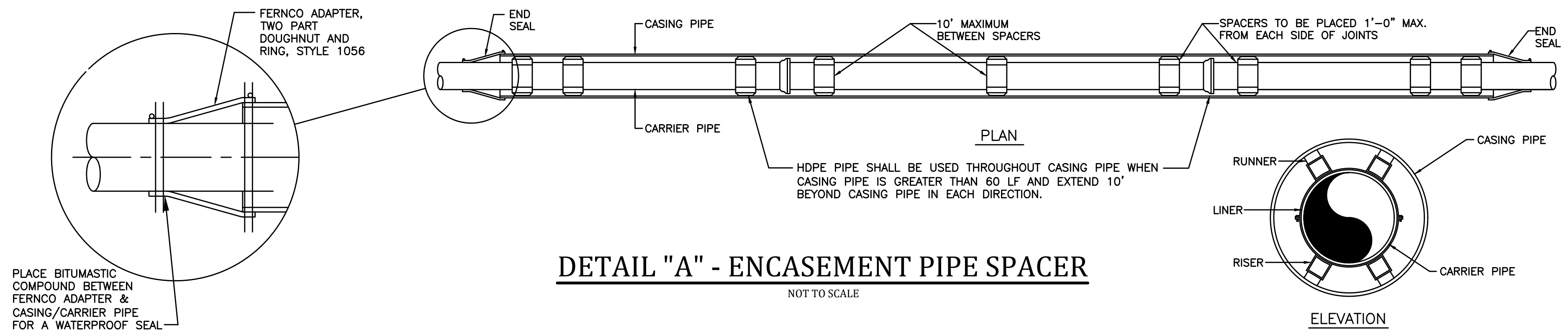
THRUST BLOCK SCHEDULE - CLASS 350 D.I.P.

SOIL TYPE - SAND & GRAVEL BEARING STRENGTH = 3000 PSF

PIPE SIZE	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
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

THRUST-BLOCKING SCHEDULE

NOT TO SCALE



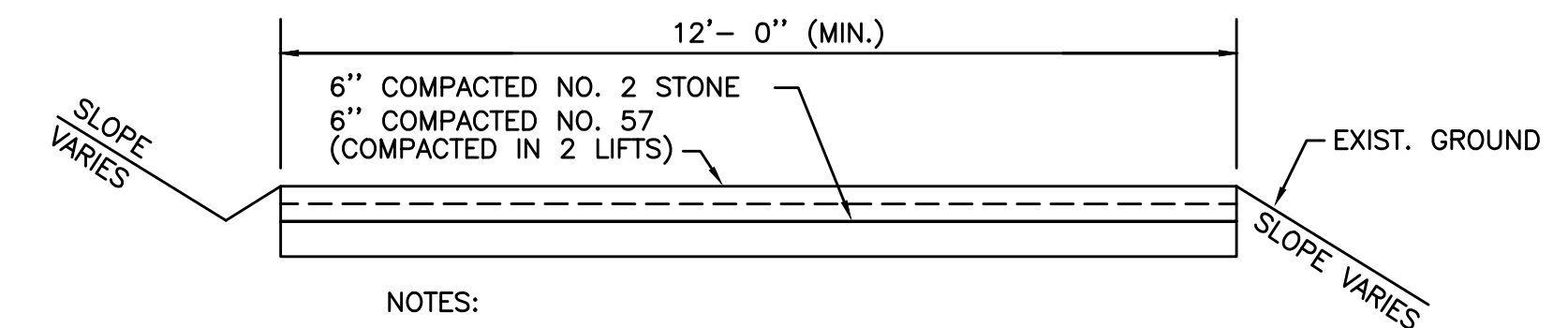
NOTES:

- CONCRETE SEPARATOR SHALL BE USED WHEN CLEARANCE BETWEEN WATER LINE AND UTILITY PIPE IS 12" OR LESS.
- "UTILITY PIPE" INCLUDES UNDERGROUND WATER, NATURAL GAS, TELEPHONE, ELECTRICAL CONDUITS, STORM SEWER OR TYPICALLY NON-CONTAMINATING FACILITIES. WHEN CROSSING SANITARY SEWER OR POTENTIAL CONTAMINANTS SEE DETAIL "WATER/SANITARY SEWER CROSSING".
- STEEL ENCASEMENT PIPE MAY BE USED IN LIEU OF CONCRETE ENCASEMENT AS SHOWN IN WATER/SANITARY SEWER CROSSING - ENCASEMENT DETAIL.

W = WIDTH OF CONC. FROM UNDISTURBED

UTILITY CROSSING CONCRETE SEPARATOR

NOT TO SCALE



ACCESS ROAD

NOT TO SCALE

RECORD DRAWINGS

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BY: KENTUCKY ENGINEERING GROUP, PLLC DATE: 4/2021

REG 12/17/21

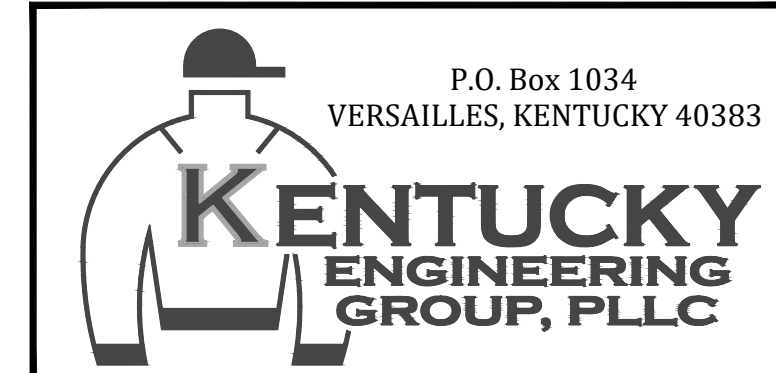
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DATE:	MAY 2019
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SCALE:	AS NOTED
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GRAYSON COUNTY WATER DISTRICT
EAST - WEST
INTERCONNECT PROJECT

STANDARD DETAILS

PROJECT NO.
18021

SHEET NO.
14

RECORD DRAWINGS