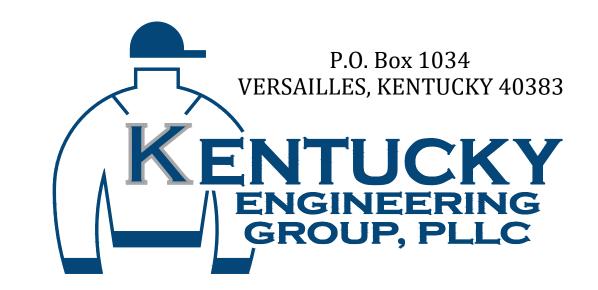
# 2022 WATER SYSTEM IMPROVEMENTS

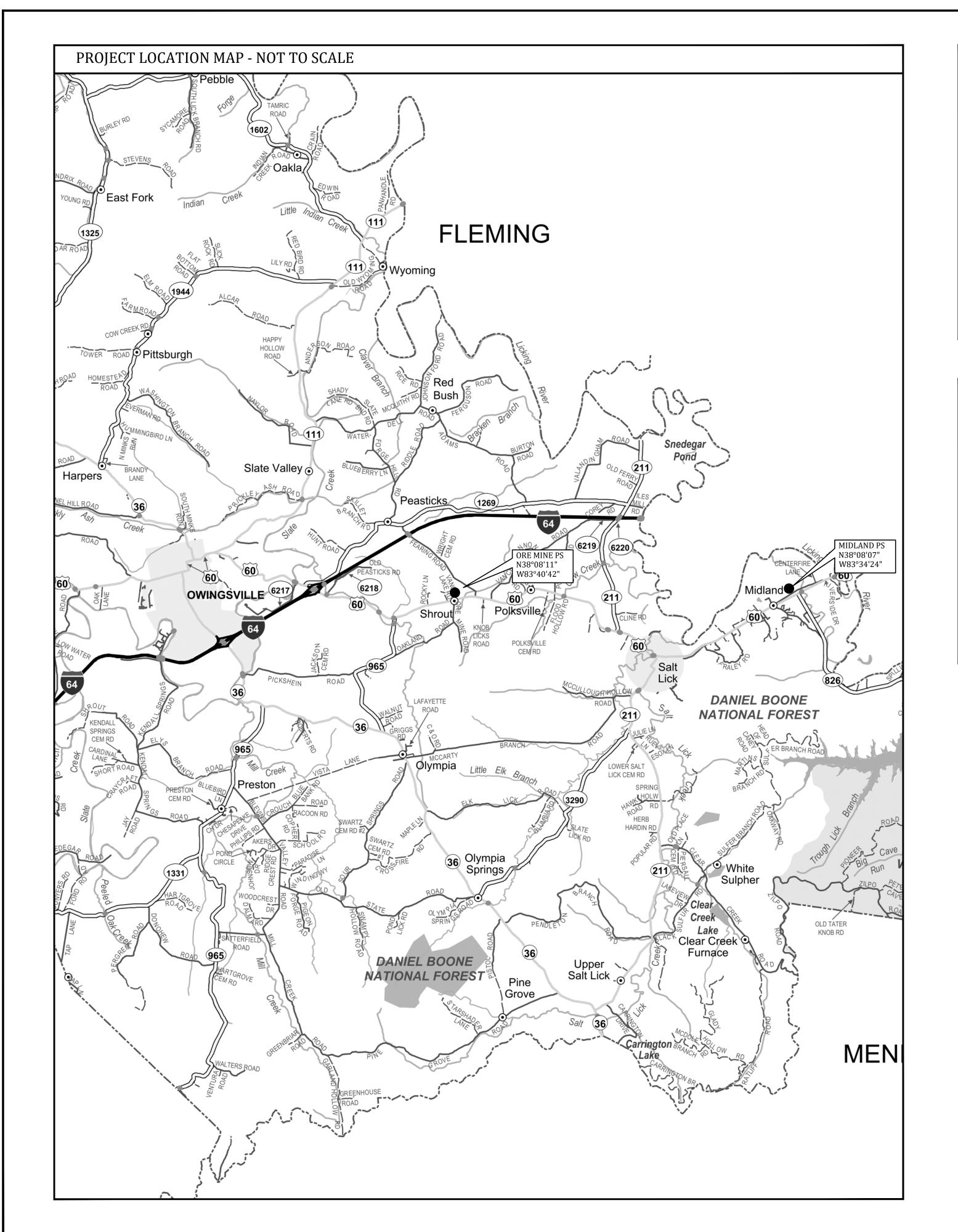
ORE MINES AND MIDLAND PUMP STATIONS

For The

Bath County Water District Bath County, Kentucky

JANUARY, 2023





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### 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.

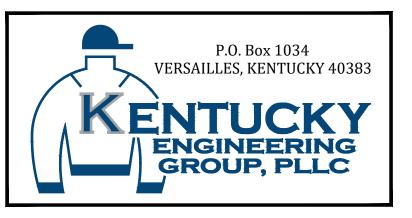
LEGEND DESCRIPTION PVC POLYVINYL CHLORIDE DUCTILE IRON PIPE WATER MAIN FLUSHING HYDRANT ASSEMBLY (YELLOW) **BLOWOFF ASSEMBLY** AIR RELEASE VALVE (ARV) GATE VALVE (GV) WATER MAIN (WM) SPECIAL CROSSING OR CASING PIPE -<del>1<u>---</u>+</del>-WATER MAIN TO BE ABANDONED RIGHT-OF-WAY LINE CENTERLINE OWNER EASEMENT ACQUIRED OWNER EXISTING METERS TO BE REPLACED

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:	JANUARY, 2023
PROJECT MGR:	JCT
DRAWN BY:	JAB
CHECKED BY:	JCT
SCALE:	AS NOTED
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2022 WATER SYSTEM
IMPROVEMENTS PROJECT

ORE MINES AND MIDLAND PUMP STATIONS
FOR THE
BATH COUNTY WATER DISTRICT

PROJECT LOCATION MAP, INDEX OF DRAWINGS, LEGEND and UTILITIES PROJECT NO. 22015

G-1

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- 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 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
- 11. CONTRACTOR IS TO COORDINATE WITH THE PROPERTY OWNERS AS TO WHETHER OR NOT TEMPORARY FENCING IS REQUIRED AND CONSTRUCT IF NECESSARY.
- 12. ALL PIPING SHALL HAVE 36" MINIMUM COVER.
- 13. WHERE UNSTABLE MATERIAL IS ENCOUNTERED OR WHERE THE DEPTH OF EXCAVATION IN EARTH EXCEEDS FIVE (5) FEET, THE SIDES OF THE TRENCH OR EXCAVATION SHALL BE SUPPORTED BY SUBSTANTIAL SHEETING, BRACING, SHORING OR THE TRENCH SIDES SLOPED. SLOPING THE SIDES OF THE DITCH WILL NOT NOT BE PERMITTED IN STREETS, ROADS, NARROW RIGHTS-OF-WAY OR OTHER CONSTRICTED AREAS UNLESS OTHER WISE SPECIFIED. THE STANDARDS OF THE FEDERAL OCCUPATIONAL SAFETY AND HEALTH ACT AND THE KENTUCKY LABOR CABINET SHALL BE FOLLOWED.
- 14. ALL EXCAVATION IS UNCLASSIFIED. COMPENSATION FOR ALL EXCAVATION SHALL BE INCLUDED IN LUMP SUM BID.
- 15. REGRADE OF SITE SHALL BE SUCH THAT DRAINAGE IS AWAY FROM ALL STRUCTURES. 16. 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. 17. DIMENSIONS, DETAILS AND REINFORCEMENT MAY VARY WITH MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR SHALL OBTAIN AND MAINTAIN ON SITE, APPROVED SHOP DRAWINGS PRIOR TO BEGINNING CONSTRUCTION.
- 18. ALL VALVES & HYDRANTS SHALL BE LOCATED AT THE BACKSIDE OF THE DITCHLINE.
- 19. FINAL LOCATION OF SERVICES, VALVES, & HYDRANT ORIENTATION ARE TO BE FIELD LOCATED DURING CONSTRUCTION & APPROVED BY THE ENGINEER.
- 20. 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.
- 21. NO PAY ITEM FOR EXTRA TRENCH DEPTH HAS BEEN SET UP. CONTRACTOR SHALL
- INCLUDE THE COST OF THE ADDITIONAL DEPTH IN HIS BID PRICE. 22. ROCK SOUNDINGS WERE NOT PERFORMED BY THE ENGINEER, THE CONTRACTOR SHALL
- TAKE APPROPRIATE ACTION TO DETERMINE SUBSURFACE CONDITIONS. 23. 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. THIS SHALL BE INCIDENTAL TO THE WATER MAIN INSTALLATION.
- 24. 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 **125 FEET 3/4 INCH** 1 INCH **150 FEET** 1-1/2 INCH **200 FEET** 2 INCH **250 FEET** 

- 25. CONNECTIONS TO EXISTING DISTRIBUTION SYSTEM SHALL BE MADE AS FOLLOWS: a. CONNECT TO EXISTING (SIZE) W.M. (WET TAP) - CONTRACTOR SHALL PROVIDE, FURNISH AND INSTALL ALL FITTINGS, VALVES AND APPURTENANCES TO CONNECT THE PROPOSED WATER MAIN TO THE EXISTING WATER MAIN UNDER PRESSURE.
  - b. CONNECT TO EXISTING (SIZE) W.M. CONTRACTOR SHALL PROVIDE, FURNISH AND INSTALL ALL FITTINGS AND APPURTENANCES TO CONNECT THE PROPOSED WATER MAIN TO THE EXISTING WATER MAIN. VALVES ARE A SEPARATE PAY ITEM.
- 26. DRIVEWAYS WITH ASPHALT PAVING OR CONCRETE SHALL BE BORED AND PVC CASING SHALL BE INSTALLED. GRAVEL DRIVEWAYS SHALL BE OPEN CUT WITH PVC CASING INSTALLED WITH CRUSHED STONE BACKFILL. THIS SHALL BE INCIDENTAL TO THE WATER MAIN INSTALLATION.

### 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 EMBARGOES, VANDALISM AND ABNORMAL WEATHER SHALL BE CORRECTED, REPAIRED, OR REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
- 8. 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. 10. BURNING - BURNING SHALL CONFORM TO ALL APPLICABLE LOCAL, STATE, AND FEDERAL
- 11. 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.
- 12. 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.
- 13. 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
- 14. ADHERENCE TO PERMITS PERMITS REQUIRED BY THE OWNER ARE:
  - a. DIVISION OF WATER CONSTRUCTION PERMIT.
  - b. 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:

- a. 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. b. BEST MANAGEMENT PRACTICES SHALL BE EMPLOYED. TO MINIMIZE SEDIMENT RUNOFF AND SOIL EROSION TO THE WATER COURSE.
- c. EXTREME CARE SHALL BE TAKEN TO PREVENT SPILLS OF FUELS AND LUBRICANT INTO WATERCOURSES. EQUIPMENT WORKS FROM THE STREAM BANK.
- 15. 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)

- 16. 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.
- 19. 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
- 20. ANCHORS CONCRETE ANCHORS SHALL BE PROVIDED WHEN THE PIPE SLOPE IS TWENTY (20) PERCENT OR GREATER. ANCHORS ARE CONSIDERED INCIDENTAL TO THE PIPELINE
- 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.
- 22. 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.
- 23. TESTING THE SEWER 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:
  - a. ACCESS TO RESIDENCE DRIVE MAY NOT BE INTERRUPTED FOR MORE THAN THREE (3) HOURS AT ANY ONE TIME
  - b. ACCESS TO ALL DRIVEWAYS AND PUBLIC THOROUGHFARES MUST BE RESTORED AT THE END OF EACH WORKDAY.
  - c. 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
  - d. THE CONTRACTOR MUST MAKE SPECIAL PROVISIONS FOR ACCESS FOR EMERGENCY VEHICLES: POLICE, FIRE AND AMBULANCE.
  - e. 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.
- 26. SEEDING ALL DISTURBED AREAS SHALL BE SEEDED IN ACCORDANCE WITH TECHNICAL SPECIFICATIONS.
- 27. 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.
- 28. 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.

### **KYDOH NOTES**

- 1. 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.
- 9. 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.
- 10. CONTACT THE DISTRICT PERMITS ENGINEER AT KYC-DOH #9, FLEMINGSBURG, KY AT (606) 845-2551 OR 1-800-817-2551 PRIOR TO BEGINNING WORK

### CONTAMINATION PREVENTION REQUIREMENTS

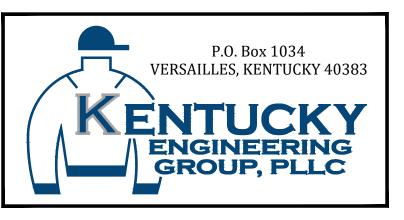
- ALL PIPING, VALVES, FITTINGS, ETC. DELIVERED TO THE JOB SITE SHALL BE STORED ELEVATED ABOVE THE GROUND AND SHALL BE COVERED WITH PLASTIC, TARPS OR SIMILAR MEANS TO PROTECT FROM EXPOSURE TO DUST AND DEBRIS.
- ALL PIPING, FITTINGS AND VALVES SHALL BE THOROUGHLY CLEANED OF DUST, DIRT AND DEPOSITS BY SWABBING 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.

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.

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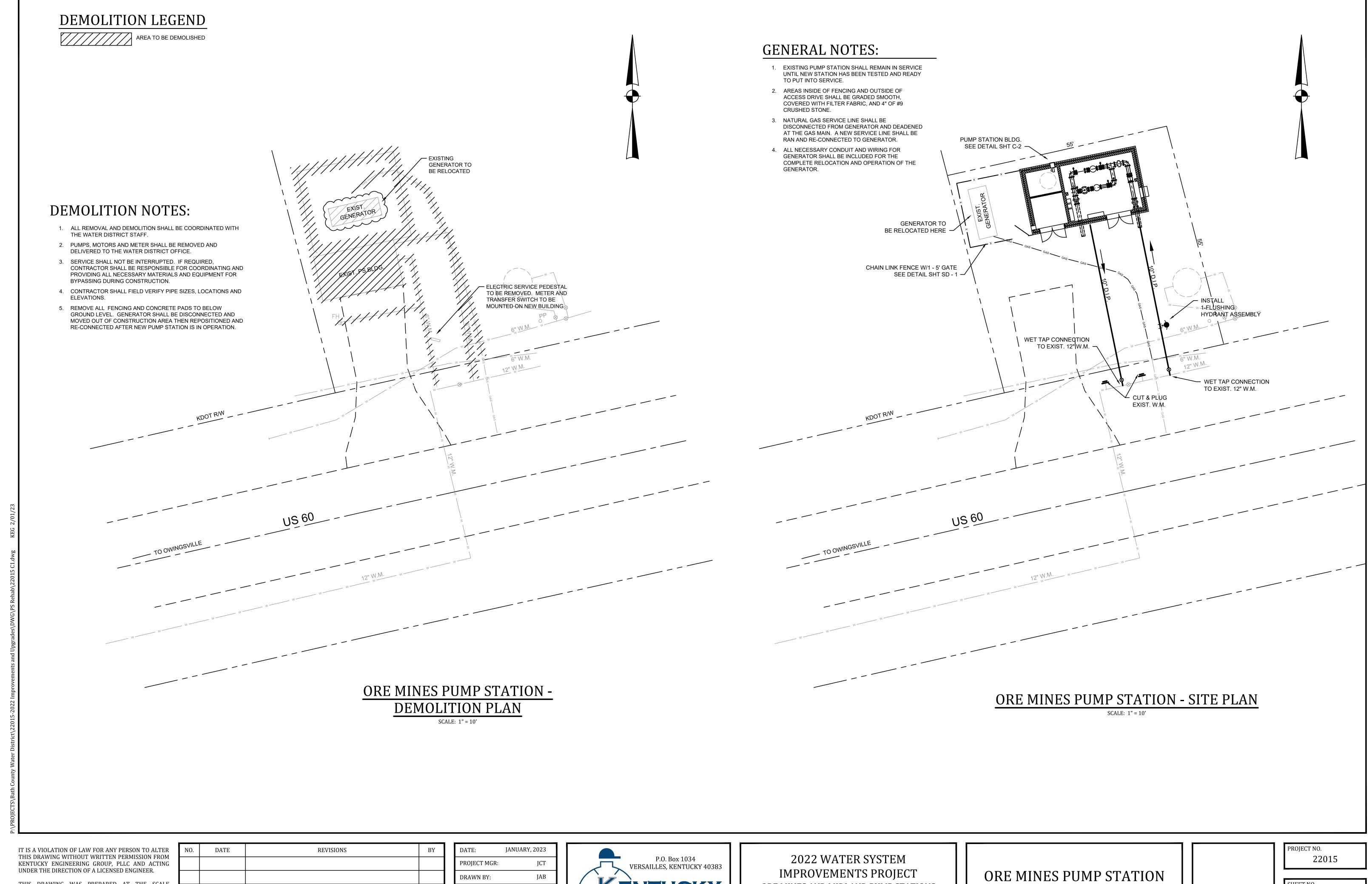
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ORE MINES AND MIDLAND PUMP STATIONS FOR THE BATH COUNTY WATER DISTRICT

GENERAL NOTES

22015

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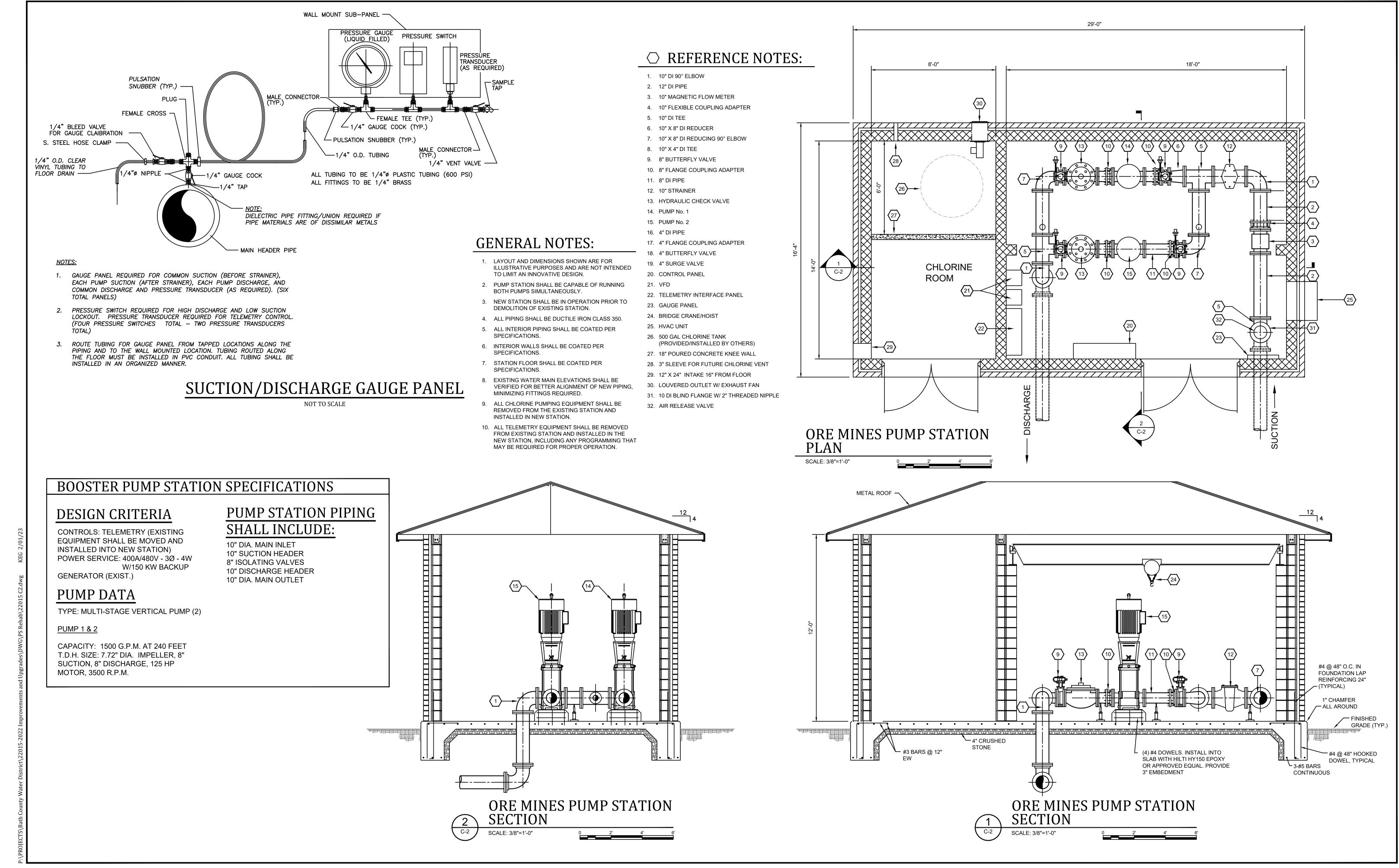
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ORE MINES AND MIDLAND PUMP STATIONS FOR THE BATH COUNTY WATER DISTRICT

**DEMOLITION & SITE PLANS** 

C-1

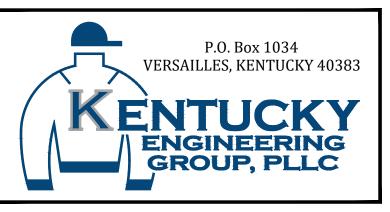


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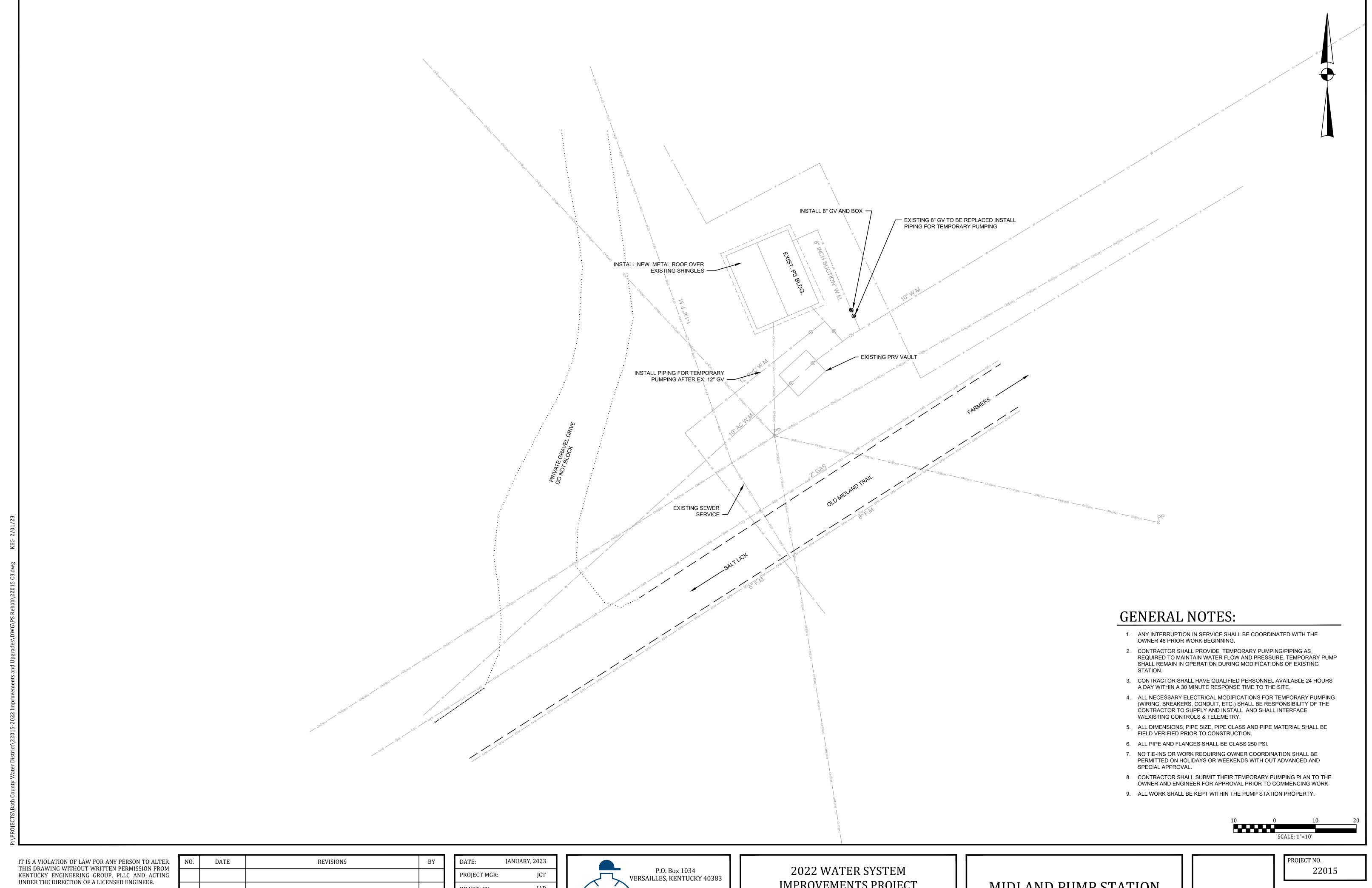
2022 WATER SYSTEM **IMPROVEMENTS PROJECT** 

ORE MINES AND MIDLAND PUMP STATIONS FOR THE BATH COUNTY WATER DISTRICT

ORE MINES PUMP STATION PLAN & SECTIONS

22015

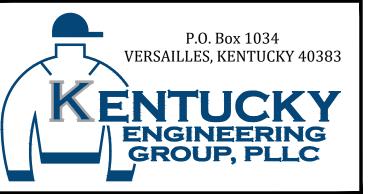
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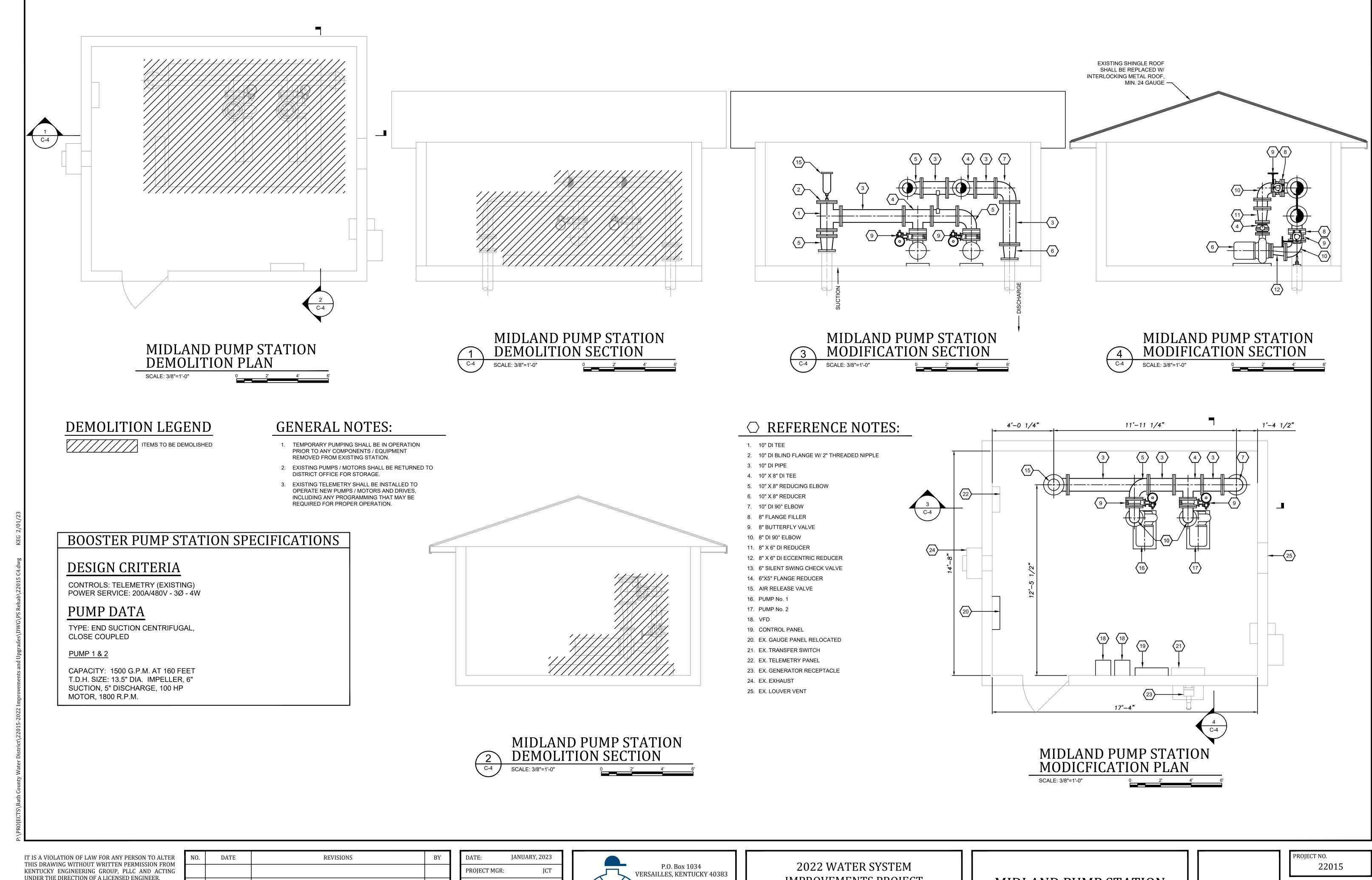
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IMPROVEMENTS PROJECT ORE MINES AND MIDLAND PUMP STATIONS FOR THE BATH COUNTY WATER DISTRICT

MIDLAND PUMP STATION SITE PLAN

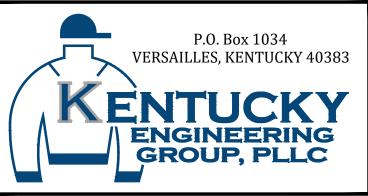


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IMPROVEMENTS PROJECT

BATH COUNTY WATER DISTRICT

ORE MINES AND MIDLAND PUMP STATIONS FOR THE

MIDLAND PUMP STATION PLANS & SECTIONS

**C-4** 

CAST-IN-PLACE CONCRETE - CONT'D 7. REINFORCING TENSION SPLICES SHALL BE LAPPED IN ACCORDANCE WITH THE FOLLOWING TABLE: ITUCKY BUILDING CODE BATH BAR SIZE 3,000 PSI CONC. LAP LENGTH >=4,000 PSI CONC. LAP LENGTH 100 PSF GHT OF FLOOR SYSTEM WEIGHT OF EQUIPMENT ADD 30% FOR HORIZONTAL TOP BARS WITH MORE THAN 12" OF CONCRETE BELOW. 20 PSF ADD 50% FOR BAR C-TO-C SPACING LESS THAN THREE BAR DIAMETERS. 15 PSF LAP LENGTH ADDS ARE CUMULATIVE. 8. CONCRETE PROTECTION FOR REINFORCEMENT SHALL BE IN ACCORDANCE WITH THE FOLLOWING ∣ = 15 PSF CLEAR COVER OVER BARS Ce = 1.0CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH 3" Ct = 1.2CONCRETE EXPOSED TO EARTH OR WEATHER ls = 1.10#6 THROUGH #18 BARS 2" ?r = 0 PSF #5 BAR, W31 OR D31 WIRE AND SMALLER 1 1/2" Pf = 13.9 PSF CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND Ps = 13.9 PSF SLABS, WALLS, AND JOISTS Pm = 16.5 PSF #14 AND #18 BARS 1 1/2" NONE #11 BAR AND SMALLER 3/4" 18. THE TYPICAL DETAILS ON THESE DRAWINGS CONTAIN ADDITIONAL GENERAL CONCRETE CONSTRUCTION NOTES AND INFORMATION. IATE) 90 MPH (SERVICE) ALL CONCRETE SHALL BE REINFORCED UNLESS NOTED OTHERWISE. 20. SUPPORTS TO ADEQUATELY POSITION REINFORCING BARS DURING CONSTRUCTION SHALL BE Iw = 1.15 (SERVICE) 28 PSF (SERVICE) 21. FOUNDATION DOWELS OF THE SAME SIZE AND SPACING AS VERTICAL STEEL SHALL BE INSTALLED FOR ALL WALLS. PIERS. AND COLUMNS. 22. ALL REINFORCING AT WALL AND FOOTING CORNERS AND INTERSECTIONS SHALL BE CONTINUOUS BY THE USE OF BENT BARS OR CORNER BARS UNLESS INDICATED OTHERWISE. 23. CONSTRUCTION JOINTS SHALL BE POSITIONED SO AS NOT TO ADVERSELY AFFECT THE STRUCTURAL Ss = 0.192PERFORMANCE. CONSTRUCTION JOINT LOCATIONS NOT INDICATED ON THE STRUCTURAL DRAWINGS S1 = 0.083SHALL BE APPROVED BY THE STRUCTURAL ENGINEER. Sds = 0.20524. PIPE SLEEVES AND INSERTS SHALL BE INSTALLED IN CONCRETE WORK AT ALL PENETRATIONS. Sd1 = 0.129PENETRATIONS OF BEAMS, JOISTS, COLUMNS OR STRUCTURAL SLABS NOT INDICATED ON THE STRUCTURAL DRAWINGS SHALL BE APPROVED BY THE STRUCTURAL ENGINEER. le = 1.2525. ONLY WELDABLE REINFORCING BARS MAY BE WELDED. BEARING WALL SYSTEM 26. ADMIXTURES CONTAINING CHLORIDE OR OTHER CORROSIVE CHEMICALS SHALL NOT BE USED IN **ASONRY SHEAR WALLS** 27. AGGREGATES SHALL BE FREE OF DELETERIOUS OR NON-DURABLE MATERIALS SUCH AS CHERTS. AL FORCE PROCEDURE 28. REINFORCING SHALL BE ADEQUATELY TIED AND SUPPORTED TO HOLD IT IN THE CORRECT POSITION Cs = 0.128DURING CONSTRUCTION. V = 7.5 KIPS29. CONCRETE SHALL BE CONSOLIDATED ADEQUATELY DURING PLACEMENT BY MECHANICAL VIBRATION IN ACCORDANCE WITH PUBLISHED PRACTICES. 30. PLASTIC CHAIRS SHALL BE USED IN ALL CONCRETE THAT WILL BE EXPOSED TO VIEW IN THE E NOTED ON PLANS OR IN COMPLETED STRUCTURE. OMMENCING WORK. 31. EXPOSED CONCRETE CORNERS SHALL BE CHAMFERED MINIMUM 3/4". NGS AND SPECIFICATIONS 32. FILL POCKETS AROUND CONNECTIONS WITH CONCRETE FLUSH AND SMOOTH UNLESS INDICATED ' WHEN FULLY 33. CONCRETE FINISHES SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS. VERIFY FINISHES PRIOR E RESPONSIBILITY OF THE TO CONSTRUCTION ILIZE AND SUPPORT THE 34. CONCRETE SLAB-ON-GRADE FLATNESS AND LEVELNESS SHALL BE IN ACCORDANCE WITH THE ID INSTALLED BY THE SPECIFICATIONS. VERIFY FLATNESS & LEVELNESS WITH ENGINEER PRIOR TO CONSTRUCTION. Y A LICENSED ENGINEER T EXCEED THE DESIGN CONCRETE MASONRY WALLS SHOWN ON THE STRUCTURAL DRAWINGS ARE STRUCTURAL WALLS. CONCRETE MASONRY WALLS NOT SHOWN ON THE STRUCTURAL DRAWINGS ARE PARTITIONS. REFER MASONRY VENEER AND TO ARCHITECTURAL DRAWINGS FOR DETAILS OF PARTITIONS UNLESS INDICATED OTHERWISE ON THE **GENERALLY NOT SHOWN** S THAT ARE SHOWN ON 2. CONCRETE MASONRY WALLS SHOWN ON STRUCTURAL DRAWINGS SHALL BE CONSTRUCTED IN FRUCTURAL ELEMENTS ACCORDANCE WITH ACI 530.1 "SPECIFICATIONS FOR MASONRY STRUCTURES" DRAWINGS. 3. INSTALLATION DRAWINGS, PRODUCT DATA AND MATERIAL CERTIFICATIONS SHALL BE SUBMITTED FOR S REVIEW AND APPROVAL APPROVAL. THE SUBMITTALS SHALL CONFORM TO THE SPECIFICATIONS. . CONCRETE MASONRY MATERIALS SHALL CONFORM TO THE REQUIREMENTS OF THE SPECIFICATIONS. 5. MINIMUM COMPRESSIVE STRENGTH OF CONCRETE MASONRY (f'm) SHALL BE 1,500 PSI DETERMINED IN ACCORDANCE WITH THE SPECIFICATIONS. CITIES, THEREFORE A FY BEARING CAPACITIES MORTAR CEMENT SHALL BE PORTLAND-LIME CEMENT. MASONRY CEMENT SHALL NOT BE USED. 7. THE TYPICAL DETAILS ON THE DRAWINGS CONTAIN ADDITIONAL GENERAL MASONRY NOTES AND MPANY SHALL BE SUBJECT DETAILS. D BEARING CAPACITIES. 8. BEARING WALLS SHALL BE ANCHORED AT INTERSECTIONS BY GALVANIZED STEEL STRAPS 1 1/2" x 1/4" x 24" WITH 2" BEND AT 90 DEGREES EACH END. INSTALL STRAPS INTO GROUTED CORES OF C.M.U. AT )0 PSF 24" MAXIMUM VERTICAL SPACING. DO NOT INSTALL ANCHORS AT CONTROL JOINTS OR WHERE )0 PSF NON-BEARING PARTITIONS ABUT BEARING WALLS. 0 PSF CORNERS OF LOAD BEARING CONCRETE MASONRY WALLS SHALL BE LAID IN RUNNING BOND. FILL OR COMPETENT 10. PROVIDE SOLID GROUTED CONCRETE MASONRY AROUND BEARING ENDS OF ALL BEAMS AND JOISTS. 11. NO OPENINGS FOR TRADES SHALL OCCUR IN CONCRETE MASONRY WALLS WITHIN 16 INCHES OF BEAM ACCORDANCE WITH ASTM BEARING CENTERLINES. D OTHERWISE. 12. PIPE SLEEVES AND INSERTS SHALL BE INSTALLED IN CONCRETE WORK AT ALL PENETRATIONS. ES AND ALL WALL 13. EMBEDDED ITEM LOCATIONS SHALL BE COORDINATED WITH THE APPROVED SHOP DRAWINGS OF THE CONDITION SHALL BE 14. ONLY WELDABLE REINFORCING BARS MAY BE WELDED. 15. CONCRETE MASONRY IS SUPPOSED TO ABSORB WATER FROM MORTAR AND GROUT. DO NOT PLACE R BEARING CAPACITY OR GROUT WET CONCRETE MASONRY UNITS. 16. WEBS OF MASONRY UNITS FOR PIERS, COLUMNS, PILASTERS, AND THE STARTER COURSE SHALL BE TON SHALL BE LOCATED MORTARED. WEBS OF MASONRY UNITS SHALL ALSO BE MORTARED WHERE REQUIRED TO CONFINE ALL BE TAKEN TO AVOID BEARING AROUND OIL, IN STANDING WATER BACKFILL.

17. CELLS OF MASONRY IN PIERS, COLUMNS, PILASTERS AND WHERE OTHERWISE INDICATED SHALL ALIGN. THIS MAY REQUIRE THE USE OF BLOCK STYLES OTHER THAN STRETCHERS (E.G. SQUARE-END

20. THE MAXIMUM GROUT POUR HEIGHT FOR EACH SPECIFIC TYPE AND SIZE OF CONCRETE MASONRY

23. VERTICAL CONTROL JOINTS SHALL BE INSTALLED BETWEEN ALL NON-LOADBEARING PARTITIONS AND

"SPECIFICATION FOR STRUCTURAL STEEL", (ANSI/AISC 360-10), AISC "CODE OF STANDARD PRACTICE

JANUARY, 2023

JCT

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MWC

AS NOTED

FOR STRUCTURAL STEEL BUILDINGS AND BRIDGES", AISC / RCSC "SPECIFICATION FOR STRUCTURAL

JOINTS USING ASTM A 325 OR A 490 BOLTS" AND AWS D1.1 "STRUCTURAL WELDING CODE."

STEEL. SHOP DRAWINGS SHALL CONFORM TO REQUIREMENTS IN THE SPECIFICATIONS.

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PROJECT MGR:

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2. SHOP DRAWINGS SHALL BE SUBMITTED FOR APPROVAL PRIOR TO FABRICATION OF STRUCTURAL

18. SPACES TO BE FILLED WITH GROUT SHALL BE KEPT CLEAN AND FREE FROM PROTRUSIONS OF MASONRY OR MORTAR. 19. ALL CELLS OF BELOW-GRADE CONCRETE MASONRY UNITS SHALL BE GROUTED

UNIT SHALL NOT EXCEED THE LIMITS SPECIFIED IN ACI 530.1. 21. MASONRY GROUTING SHALL CONFORM TO THE SPECIFICATIONS. 22. VERTICAL CONTROL JOINTS ARE INDICATED ON THE ARCHITECTURAL DRAWINGS.

BEARING WALLS. 24. SPACING OF CONTROL JOINTS SHALL NOT EXCEED 24 FEET UNLESS NOTED OTHERWISE. 25. DO NOT EMBED ANY NON-STRUCTURAL ITEMS IN STRUCTURAL MASONRY WITHOUT WRITTEN

PERMISSION FROM THE STRUCTURAL ENGINEER.

PPROVAL PRIOR TO

TH THE SPECIFICATIONS. S OF THE LARGER BAR.

CRETE HAS DEVELOPED

ITH ACI 301-10, ACI 318-11.

OT AND COLD WEATHER

IARK OF ALL REINFORCING

PRIOR TO FABRICATION.

**ACI 305 AND ACI 306 AS** 

BE PERFORMED IN

RETE FORMWORK,

OF CONCRETE SPECIFIED.

BY

REVISIONS

DETAILING, FABRICATION, AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE AISC

*SDG* LLC 306 W Main St Ste 410 Frankfort, KY 40601 (859) 351-9169

P.O. Box 1034

VERSAILLES, KENTUCKY 40383

ENGINEERING

GROUP, PLLC

KENTUCK

STRUCTURAL STEEL - CONT'D

3. STRUCTURAL STEEL MEMBERS SHALL CONFORM TO THE FOLLOWING SPECIFICATIONS:

MEMBER TYPE SPECIFICATION WIDE FLANGE **ASTM A 992** STANDARD BEAM ASTM A 36 CHANNEL ASTM A 36 ANGLE ASTM A 36 PLATE ASTM A 36 ASTM A 36 BAR AND ROD RECTANGULAR, SQUARE & ROUND TUBE (HSS) ASTM A 500 GR B ASTM A 53 GR B THREADED ROD ASTM A 36 ANCHOR ROD ASTM F 1554 GR 36 COMMON BOLTS ASTM A 307 GR A ASTM F 1582 HIGH STRENGTH BOLTS (TWIST OFF) HIGH STRENGTH BOLTS (SNUG TIGHT) ASTM A 325 DIRECT TENSION INDICATING WASHERS ASTM F 959 HARDENED WASHERS ASTM F 436 ASTM A 563 ASTM A 108 SHEAR CONNECTORS (STUDS) WELDING ELECTRODE AWS D1.1 E70XX

(EXCEPT AS OTHERWISE REQUIRED) 4. GROUT SHALL CONFORM TO REQUIREMENTS IN THE SPECIFICATIONS.

5. THE TYPICAL DETAILS ON THE DRAWINGS CONTAIN ADDITIONAL GENERAL STEEL CONSTRUCTION NOTES AND DETAILS.

6. HIGH-STRENGTH BOLTED CONNECTIONS SHALL BE FULLY PRETENSIONED UNLESS NOTED AS SNUG TIGHT ON THE DRAWINGS.

HARDENED WASHERS SHALL BE INSTALLED UNDER ALL NUTS FOR FULLY PRETENSIONED BOLTS. 8. HARDENED WASHERS SHALL BE INSTALLED OVER ALL OVERSIZED HOLES, STANDARD SLOTS AND SHORT SLOTTED HOLES. PLATE WASHERS  $\frac{5}{16}$ " THICK SHALL BE WELDED OVER LARGE HOLES AND

9. BOLTED JOINTS WHERE RELATIVE MOVEMENT IS ALLOWED SHALL HAVE JAM NUTS TO PREVENT

10. STRUCTURAL STEEL SURFACE PREPARATION AND FINISHES SHALL CONFORM TO THE REQUIREMENTS IN THE SPECIFICATIONS.

PREFABRICATED WOOD TRUSS CONSTRUCTION

1. TRUSS DESIGN AND MANUFACTURE SHALL CONFORM TO THE CURRENT BUILDING CODE AUTHORIZED EDITION OF ANSI TPI-1, "NATIONAL DESIGN STANDARD FOR METAL-PLATE CONNECTED WOOD TRUSS CONSTRUCTION."

2. TRUSS HANDLING AND ERECTION SHALL CONFORM TO THE LATEST EDITION OF BCSI GUIDES. SEE

WWW.SBCINDUSTRY.COM. 3. TRUSS LAYOUT AND TRUSS SHOP DRAWINGS SHALL BE SUBMITTED FOR APPROVAL. THESE

3.7. A COPY OF THE BCSI JOBSITE PACKAGE, WHICH ARE INSTRUCTIONS FOR SAFE HANDLING AND ERECTION OF WOOD TRUSSES.

3.8. TRUSS LAYOUT SHOWING DIMENSIONED LOCATION AND SHIPPING MARK OF EACH

TRUSS AND LOCATIONS OF ALL COMPRESSION WEB AND CHORD BRACING. 3.7. TRUSS CONFIGURATION, INCLUDING SPAN, PITCH AND LOCATION OF ALL MEMBER INTERSECTIONS.

3.8. SPECIES, STRESS GRADE, AND NOMINAL SIZE OF LUMBER USED.

3.9. DESIGN LOADS INCLUDING POINT LOADS AND REACTIONS AND LOAD COMBINATIONS USED IN DESIGN.

3.10. PRINTOUT OF MEMBER AXIAL AND FLEXURAL STRESSES PLUS INTERACTION OF COMBINED STRESSES FOR THE CONTROLLING LOAD COMBINATION. 3.11. PRINTOUT OF TRUSS DEFLECTIONS UNDER SERVICE LOAD COMBINATIONS.

3.12. JOINT, SPLICE, AND TRUSS TO TRUSS GIRDER CONNECTION DESIGN AND DETAILS. 4. TRUSS LAYOUT, SHOP DRAWINGS, AND CALCULATIONS SHALL BE SEALED BY A PROFESSIONAL

ENGINEER LICENSED IN THE STATE OF KENTUCKY TRUSSES SHALL BE DESIGNED FOR A MAXIMUM VERTICAL DEFLECTION OF 1/480 OF THE SPAN FOR

100% LIVE LOAD AND 1/240 OF THE SPAN FOR 100% TOTAL LOAD.

TRUSS FRAMING MEMBERS SHALL BE SOUTHERN PINE NO. 2 OR BETTER.

 ALL CONNECTIONS PLATES SHALL BE HOT-DIPPED GALVANIZED ACCORDING TO ASTM A153. 8. TRUSSES SHALL BE SPACED AT 2'-0" O.C. MAXIMUM. WEB ARRANGEMENT SHALL BE MANUFACTURER'S STANDARD UNLESS OTHERWISE INDICATED. SEE ARCHITECTURAL AND MECHANICAL DRAWINGS FOR OPENINGS THAT MAY BE REQUIRED IN TRUSSES.

PERMANENT BRACING FOR INDIVIDUAL MEMBERS OF A WOOD TRUSS SHALL BE SHOWN ON THE TRUSS DESIGN DRAWINGS AND SHALL BE INSTALLED BY THE BUILDING CONTRACTOR. PERMANENT BRACING SHALL BE INSTALLED AS INDICATED ON THE TRUSS MANUFACTURER'S DRAWINGS AND INSTRUCTIONS.

10. ALL BRACING THAT TERMINATES AT OR IS INTERRUPTED BY STRUCTURAL BEARING WALLS SHALL BE ATTACHED THERETO.

11. LATERAL BRACE SPLICES SHALL BE LAPPED AT LEAST TWO TRUSSES.

12. TRUSSES DELIVERED TO THE PROJECT IN MORE THAN ONE PIECE AND ALL MULTI-PLY TRUSSES SHALL BE CONNECTED BEFORE INSTALLATION OR ACCORDING TO TRUSS DESIGN DRAWINGS IF INDICATED OTHERWISE

13. CONCENTRATED LOADS FROM CONSTRUCTION MATERIALS (E.G. ROOF SHEATHING BUNDLES) SHALL NOT BE PLACED ON TRUSSES UNTIL ALL REQUIRED BRACING HAS BEEN INSTALLED AND ROOF SHEATHING IS PERMANENTLY NAILED IN PLACE. TRUSSES SHALL NOT BE OVERLOADED WITH CONSTRUCTION MATERIALS.

14. TEMPORARY BRACING TO PREVENT LATERAL MOVEMENT DURING ERECTION SHALL BE INSTALLED ACCORDING TO THE HANDLING AND INSTALLATION GUIDELINES.

15. WORK POINTS, OVERHANGS AND OTHER DIMENSIONS NOT INDICATED ON THE STRUCTURAL DRAWINGS SHOULD BE DETERMINED FROM THE ARCHITECT'S DRAWINGS. CONFLICTING DIMENSIONS SHALL BE CLARIFIED IN WRITING.

ROOF PLYWOOD SHEATHING

1. ALL SHEATHING SHALL BE PLYWOOD (NOT OSB) MANUFACTURED IN ACCORDANCE WITH INDUSTRY SPECIFICATION PS-1 AND SHALL BEAR THE STAMP OF EITHER THE AMERICAN PLYWOOD ASSOCIATION (APA) OR TIMBERCO INC. (TECO).

ALL SHEATHING SHALL BE EXTERIOR GRADE. 3. ALL ROOF AND WALL SHEATHING SHALL HAVE VENEER GRADE B-C OR BETTER.

4. ROOF SHEATHING SHALL HAVE TONGUE AND GROOVE EDGES AND BE EITHER APA "STURD-I-FLOOR" OR TECO "FLOOR SPAN" WITH THICKNESS AND/OR SPAN RATING AS INDICATED ON THE DRAWINGS.

5. MINIMUM NAILING FOR ROOF PLYWOOD SHEATHING SHALL BE 10D COMMON NAILS AT 12" O.C. IN THE PANEL INTERIOR AND 6" O.C. AT PANEL EDGES AND BOUNDARIES.

STRUCTURAL WOOD

1. ALL STRUCTURAL WOOD DIMENSION LUMBER SHALL BE SOUTHERN PINE NO. 2 SPECIES STRESS GRADE AND SHALL BEAR A STAMP BY THE SOUTHERN PINE INSPECTION BUREAU (SPIB) INDICATING

2. ALL STRUCTURAL WOOD CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE AF&PA NATIONAL

DESIGN SPECIFICATION (NDS) FOR WOOD CONSTRUCTION. 3. NAILS SHALL BE COMMON WIRE NAILS UNLESS NOTED OTHERWISE. NAILS EXPOSED TO WEATHER OR IN PRESERVATIVE TREATED WOOD SHALL BE HOT DIPPED GALVANIZED TO ASTM A153. WOOD

MEMBERS SHALL BE NAILED AS INDICATED IN THE WOOD NAILING SCHEDULE OF THE INTERNATIONAL BUILDING CODE IF NOT INDICATED OTHERWISE. 4. CONNECTORS INDICATED AS "SIMPSON" ON THE DRAWINGS SHALL BE MANUFACTURED BY SIMPSON STRONG TIE, INC.

5. PRESERVATIVE TREATED WOOD APPROPRIATE FOR THE SERVICE SHALL BE USED WHERE IN DIRECT CONTACT WITH CONCRETE OR MASONRY OR WHERE EXPOSED TO WEATHER.

6. STRUCTURAL WOOD MEMBERS SHALL BE PROTECTED FROM DIRT, MOISTURE, SUNLIGHT AND DAMAGE DURING MANUFACTURE, FABRICATION, SHIPPING, STORAGE AND CONSTRUCTION.

CHARGED TO THE CONTRACTOR.

AND CHANGE ORDERS AT THE JOBSITE.

BUILDING INSPECTOR UPON REQUEST.

SPECIAL INSPECTION IS REQUIRED ACCORDING TO SECTION 1704 OF THE BUILDING CODE.

2.1.1. CONTRACTOR SHALL SUBMIT A STATEMENT THAT:

2.2. FABRICATORS IN ACCORDANCE WITH SECTION 1704.2

CONCRETE AND MASONRY.

CONNECTION.

REINFORCEMENT.

INSTALLATIONS.

STRUCTURE.

4. INSPECTION REPORTS SHALL INCLUDE THE:

INCORPORATED THEREIN.

ADHESIVE ANCHORS IN CONCRETE.

2. SPECIAL INSPECTIONS SHALL BE PERFORMED FOR THE FOLLOWING WORK AS REQUIRED IN THE

EXERCISE CONTROL QUALITY OF CONSTRUCTION

QUALITY CONTROL REPORTS ARE DISTRIBUTED

2.2.1. SUBMIT REPORT OF INSPECTOR'S APPROVAL OF FABRICATOR'S QC PLAN OR

WITHIN THE CONTRACTOR'S ORGANIZATION.

FABRICATOR'S NATIONALLY RECOGNIZED QC CERTIFICATION.

SUBMITTED AT THE COMPLETION OF SUCH WORK.

2.3.4. SUBMIT REPORT OF VISUAL INSPECTION OF ALL FIELD WELDS.

2.4. CONCRETE CONSTRUCTION IN ACCORDANCE WITH SECTION 1705.3

2.4. MASONRY CONSTRUCTION IN ACCORDANCE WITH SECTION 1705.4

AND ONCE EVERY 5,000 S.F. OF WALL THEREAFTER.

2.5. WOOD CONSTRUCTION IN ACCORDANCE WITH SECTION 1705.5

ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS.

2.6. SOILS CONSTRUCTION IN ACCORDANCE WITH SECTION 1705.6

4.5. PHOTOGRAPHS OF THE WORK INSPECTED FOR THAT REPORT

APPROVED BY THE BUILDING OFFICIAL AND THE STRUCTURAL ENGINEER.

CONTRACTOR, THE CIVIL ENGINEER, THE STRUCTURAL ENGINEER.

NON-INSPECTED AND/OR UNRESOLVED NON-CONFORMANCES.

LIFT UNDER BUILDING STRUCTURE.

INSPECTION AND MAKING THE REPORT.

TESTS, AND INSPECTION METHODS.

4.6. COMPLETE TEST OR INSPECTION DATA.

TESTING AND INSPECTING.

AND DURING EACH PLACEMENT OF GROUT.

2.3. STEEL CONSTRUCTION IN ACCORDANCE WITH SECTION 1705.2

2.1. CONTRACTOR'S STATEMENT OF RESPONSIBILITY IN ACCORDANCE WITH SECTION 1704.4

2.1.1.1. ACKNOWLEDGES THE REQUIREMENTS STATED IN THIS STATEMENT OF SPECIAL

2.1.1.2. ACKNOWLEDGES THAT CONTROL WILL BE EXERCISED OVER THE QUALITY OF

2.1.1.3. ACKNOWLEDGES THAT THERE ARE ORGANIZATIONAL PROCEDURES IN PLACE FOR

EXERCISING CONTROL OF QUALITY OF THE CONSTRUCTION INCLUDING:

2.1.1.3.1. APPOINTMENT OF A PERSON WITHIN THE CONTRACTOR'S ORGANIZATION TO

2.1.1.3.2. THE PERSONS WITHIN THE CONTRACTOR'S ORGANIZATION TO WHOM THE

CONSTRUCTION TO CONFORM TO THE APPROVED CONSTRUCTION DOCUMENTS.

SUBMIT FABRICATOR'S CERTIFICATE OF COMPLIANCE STATING THAT THE WORK WAS

PERFORMED IN ACCORDANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS.

2.3.1. SUBMIT MILL TEST REPORTS AND MATERIAL CERTIFICATIONS FOR ALL STEEL MEMBERS,

2.3.2. SUBMIT REPORT OF INSPECTION OF MARKING AND CONNECTION DETAILS FOR ALL

THE CONSTRUCTION DOCUMENTS AND APPROVED ERECTION DRAWINGS.

2.3.3. SUBMIT REPORT OF INSPECTION OF BOLT TENSIONING FOR EACH APPLICABLE

2.4.1. SUBMIT MATERIAL CERTIFICATIONS OF CEMENT, AGGREGATE, ADMIXTURES AND

2.4.2. SUBMIT REPORT OF COMPRESSIVE STRENGTH, SLUMP AND AIR CONTENT TEST

2.4.3. SUBMIT REPORT OF INSPECTION OF FORMS, REINFORCEMENT, AND CONCRETE

2.5.4. SUBMIT REPORT OF INSPECTION OF INSTALLATION OF ALL WEDGE AND CHEMICAL

2.4.1. SUBMIT MATERIAL CERTIFICATIONS OF CEMENT, AGGREGATE, ADMIXTURES AND

2.4.2. SUBMIT REPORT OF TEST OF MORTAR AGGREGATE RATIO AND AIR CONTENT AND

DELIVERY TICKETS PRIOR TO EACH PLACEMENT OF CONCRETE.

FASTENERS, BOLTS, NUTS, WASHERS, DECK, AND REINFORCEMENT STEEL FOR

MEMBERS AND CONNECTIONS. VERIFY ALL STEEL MEMBERS AND STEEL DECK ARE

RESULTS. SAMPLE AND TEST CONCRETE AT LEAST ONCE PER DAY AND ONCE FOR

OBSERVATION OF MORTAR PROPORTIONING. TEST ONCE AT BEGINNING OF PROJECT

2.4.3. SUBMIT REPORT OF PLACEMENT OF MASONRY, REINFORCEMENT AND GROUT PRIOR TO

2.4.4. SUBMIT REPORT OF INSTALLATION OF CHEMICAL ADHESIVE ANCHORAGE IN CONCRETE

2.5.1. SEE "INSPECTION OF FABRICATORS" FOR INSPECTION OF PREFABRICATED WOOD

2.5.3. SUBMIT REPORT OF INSPECTION OF CONNECTION OF ROOF ROOF TRUSSES TO

2.5.4. SUBMIT REPORT OF INSPECTION OF ALL WOOD FRAMING MEMBERS AND THEIR

2.6.1. SUBMIT REPORT THAT SOIL BEARING CAPACITY IS ADEQUATE ACCORDING TO THE

4.1. NAME, ADDRESS, AND TELEPHONE NUMBER OF SPECIAL INSPECTOR PERFORMING THE

4.2. DATES AND LOCATIONS OF SAMPLES AND TESTS OR INSPECTIONS, DATE OF REPORT.

4.4. DESCRIPTION OF THE WORK, IDENTIFICATION OF PRODUCTS, SPECIFICATION SECTION,

5. SPECIAL INSPECTION SHALL BE PERFORMED BY A QUALIFIED INSPECTION AND TESTING AGENCY

6. WORK REQUIRING SPECIAL INSPECTION SHALL BE INSPECTED BY THE SPECIAL INSPECTOR FOR

7. THE SPECIAL INSPECTOR SHALL OBSERVE ACTIVITIES, ACTIONS, AND PROCEDURES PERFORMED

AND SUBSTANTIATE THAT PROPOSED CONSTRUCTION WILL COMPLY WITH REQUIREMENTS.

TO THE CONTRACTOR, THE CIVIL ENGINEER AND THE STRUCTURAL ENGINEER. IMPENDING

SHALL NOT PROCEED WITHOUT WRITTEN APPROVAL. THE CONTRACTOR SHALL MAINTAIN A

9. A FINAL REPORT CERTIFYING COMPLETION OF ALL REQUIRED SPECIAL INSPECTIONS AND

THE SPECIAL INSPECTOR AT THE COMPLETION OF THE PROJECT, OR IF NOT, DETAILING

CONTRACTOR SHALL GIVE TIMELY AND ADEQUATE NOTICE TO THE SPECIAL INSPECTOR.

CONFORMANCE WITH THE APPROVED DRAWINGS AND SPECIFICATIONS. INSPECTION REPORTS

BEFORE AND DURING EXECUTION OF THE WORK TO GUARD AGAINST DEFECTS AND DEFICIENCIES

CONSTRUCTION WORK THAT WOULD IMPEDE ECONOMICAL CORRECTION OF NON-CONFORMING WORK

DISCREPANCY LOG ON THE SITE. LOG SHALL LIST EACH DISCREPANCY DOCUMENTED BY THE SPECIAL

CORRECTION OF ANY NON-CONFORMING WORK NOTED IN THE INSPECTIONS SHALL BE SUBMITTED BY

INSPECTOR, STATE THE DATE OF DISCOVERY AND SPECIAL INSPECTOR'S REPORT NUMBER, AND

COST OF ADDITIONAL RETESTING THAT ARE REQUIRED DUE TO NON-CONFORMING WORK MAY BE

THE CONTRACTOR SHALL NOTIFY THE INSPECTOR WHEN CONSTRUCTION IS READY TO BE INSPECTED.

12. THE CONTRACTOR SHALL RETAIN AT THE JOBSITE ALL SPECIAL INSPECTION RECORDS SUBMITTED BY

THE SPECIAL INSPECTOR AND PROVIDE THESE RECORDS FOR REVIEW BY THE ENGINEER AND

11. THE CONTRACTOR SHALL PROVIDE THE SPECIAL INSPECTOR ACCESS TO PLANS, SHOP DRAWINGS,

ROOM FOR THE SPECIAL INSPECTOR TO SIGN AND DATE WHEN SAID DISCREPANCY IS CORRECTED.

8. ALL SPECIAL INSPECTIONS INDICATING NON-CONFORMING WORK SHALL BE REPORTED IMMEDIATELY

INDICATING THE RESULTS OF SPECIAL INSPECTIONS SHALL BE PROMPTLY SUBMITTED TO THE

4.3. RECORD OF TEMPERATURE AND WEATHER CONDITIONS AT TIME OF SAMPLE TAKING AND

3. THE TYPE AND EXTENT OF EACH TEST AND INSPECTION REQUIRED FOR EACH TYPE OF WORK SHALL BE AS INDICATED IN THE SPECIFICATIONS AND/OR THE BUILDING CODE AND THE REFERENCES

AT BASE OF MASONRY WALLS. INSPECT INSTALLATION OF 10% OF ANCHORAGE

2.5.2. SUBMIT MATERIAL CERTIFICATIONS FOR WOOD MEMBERS, SHEATHING AND FASTENERS.

CONNECTIONS. VERIFY ALL WOOD FRAMING MEMBERS ARE THE CORRECT SIZE AND

GRADE AND ARE INSTALLED IN THE CORRECT LOCATIONS. AND ARE CONNECTED IN

SUBMIT REPORT OF INSPECTION OF NAILING OF ROOF SHEATHING TO TRUSSES AND

GEOTECHNICAL REPORT PRIOR TO EACH PLACEMENT OF FOUNDATION CONCRETE.

2.6.2. SUBMIT REPORT OF DENSITY AND MOISTURE CONTENT OF CONTROLLED FILL FOR EACH

EVERY ADDITIONAL 100 CUBIC YARDS OF CONCRETE PER DAY THEREAFTER.

INSTALLED IN THE CORRECT LOCATIONS AND ARE CONNECTED IN ACCORDANCE WITH

THE METHOD AND FREQUENCY OF REPORTING THE QUALITY CONTROL RESULTS

MATTHEW W. CRAIG

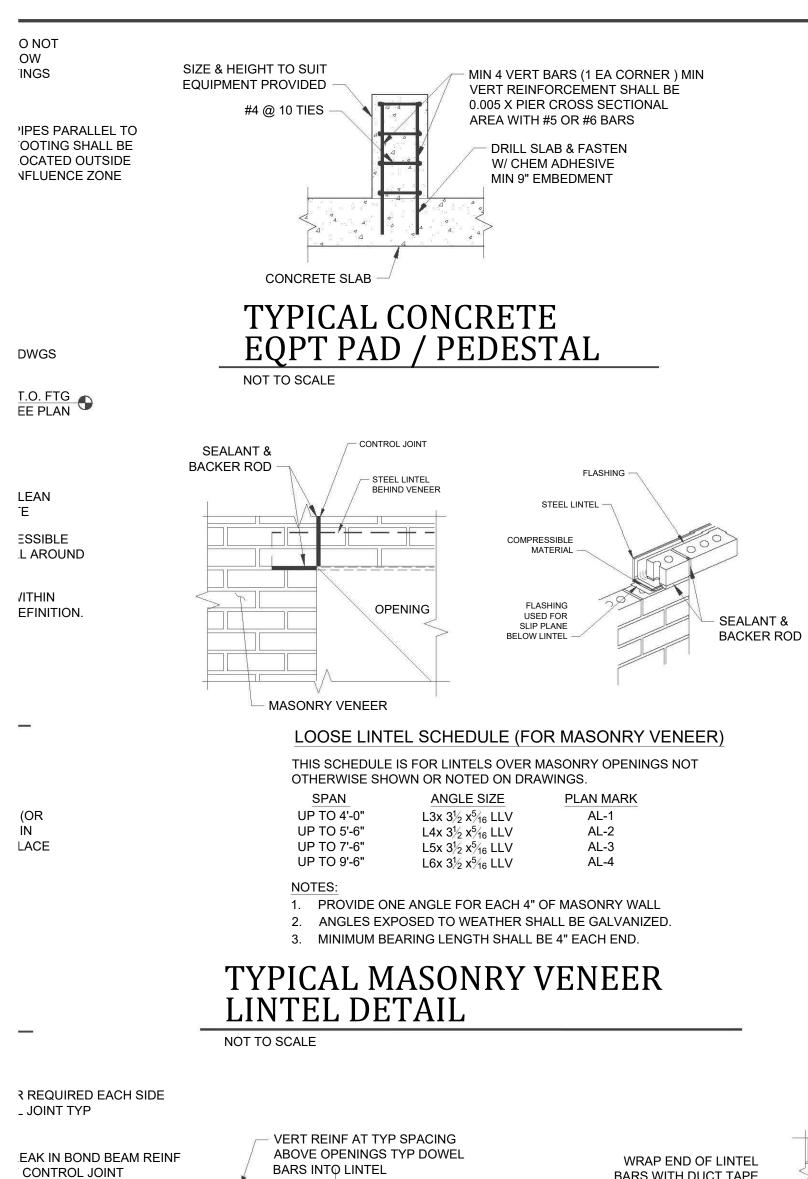
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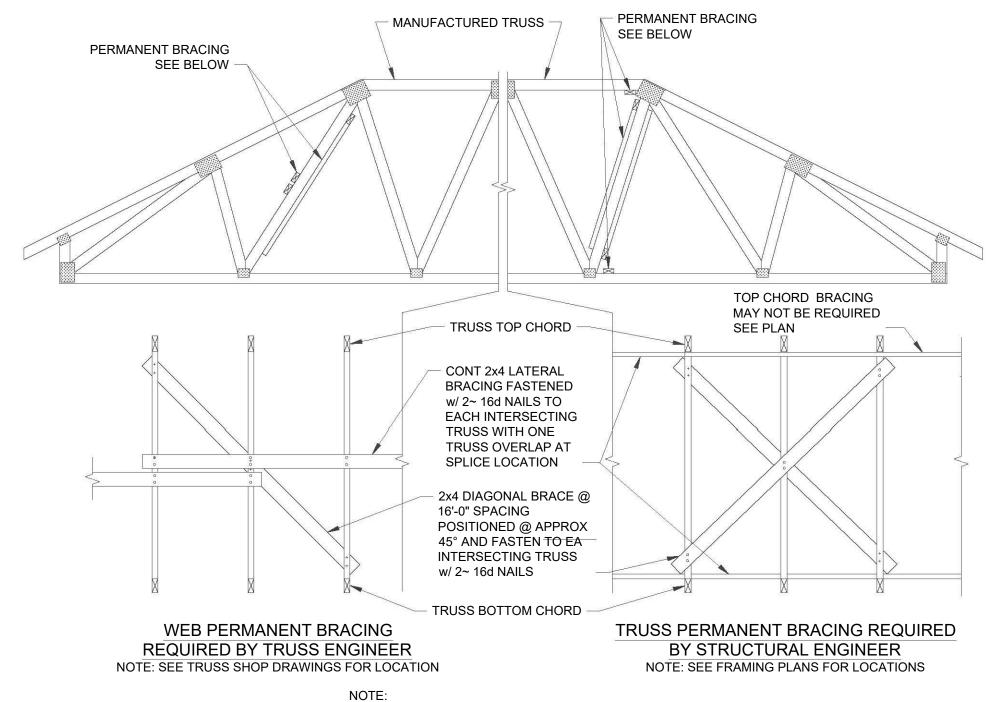
SHEET NO.

**IMPROVEMENTS PROJECT** FOR THE BATH COUNTY WATER DISTRICT

2022 WATER SYSTEM

STRUCTURAL **GENERAL NOTES** 





### TYPICAL C.M.U. WALL DOWEL DETAILS

INSTRUCTIONS

- DRILL CONC BASE & FASTEN DOWEL

ACCORDING FOR FULL STRENGTH OF

SECTION VIEW

WITH CHEMICAL ADHESIVE

PUBLISHED INSTALLATION

DOWEL ACCORDING TO MFR'S

MASONRY VENEER

MASONRY VENEER

**VENEER TIES** 

**EACH WAY** 

SPACED @ 16" O.C.

NOT TO SCALE

NOT TO SCALE

TOOTH INTERSECTING WALLS

NOTED OTHERWISE ON PLANS

2. #5 VERTICAL BAR CENTERED IN

AT INTERSECTION.

INTERSECTION.

CONT VERT #5 BAR

AT INTERSECTION

CONT GROUT FILL

CONT GROUT STOP

NON-FILLED CELLS

VERTICAL REINF SHALL

BE CONTINUOUS THRU

SCREEN OVER

TOGETHER IN RUNNING BOND WITH

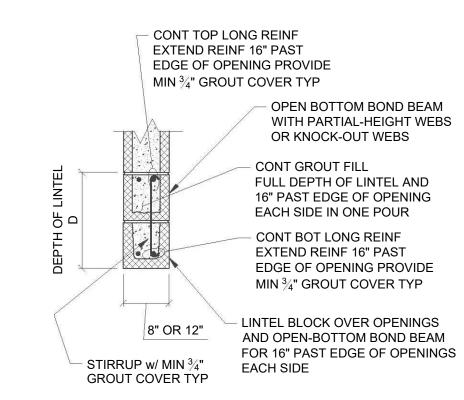
MIN 6" OVERLAP OR USE MASONRY

STRAP EVERY THIRD COURSE UNLESS

GROUTED CELL SHALL BE INSTALLED

HORIZONTAL JOINT REINFORCEMENT

SHALL BE LAPPED MIN 6" AT WALL



LADDER-TYPE HORIZ JOINT REINF

ALL HOT-DIPPED GALV TO ASTM A 153

@ 16" O.C. VERT

WALL VERT REINFORCEMENT

SEE PLANS & OTHER DETAILS

DOWEL SIZES SHALL MATCH

WALL REINF AND SHALL BE

CELLS WHERE MAIN VERT

CONC BASE

FOR SIZE & SPACING

PLACED CENTERED IN

w/ ADJUSTABLE PINTLE & RING

(HOOK & EYE) VENEER TIES

& 9GA SIDE RODS TIES: 3/16"Ø ADJUSTABLE

TYPICAL HORIZ JOINT REINF AND VENEER TIE DETAIL

JOINT REINF: 3/16"Ø SIDE RODS

	MASONRY LINTEL SCHEDULE										
MARK	MAX OPENING SIZE	OPENING D BOTTOM			STIRRUPS						
ML-1	5'-0"	8"	2~#5	NONE	NONE						
ML-2	8'-0"	16"	2~#5	NONE	NONE						
ML-3	11'-8"	24"	2~#5 (8" C.M.U.) 2~#6 (12" C.M.U.)	NONE	NONE						
ML-4	18'-0"	24"	2~#5 (8" C.M.U.) 2~#6 (12" C.M.U.)	2~#5	#3@8"						

1. DO NOT USE THIS SCHEDULE IF CONCENTRATED LOAD IS APPLIED TO THE LINTEL AT A HEIGHT LESS THAN HALF THE SPAN ABOVE THE LINTEL OR IF STACK BOND IS SPECIFIED. 2. IN LIEU OF USING LINTEL BLOCK ON THE BOTTOM OF LINTELS WHICH, REQUIRES SHORING

DURING CONSTRUCTION, CONTRACTOR MAY USE PRESTRESSED, PRECAST CONCRETE LINTELS BY "CAST-CRETE" (WWW.CASTCRETE.COM) OR APPROVED EQUAL. SUBMIT PRODUCT DATA AND A PLAN AND SCHEDULE OF LINTEL LOCATIONS AND SIZES FOR APPROVAL FOR THIS OPTION.

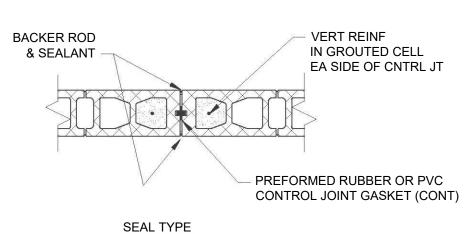
# TYPICAL C.M.U. LINTEL DETAIL

NOT TO SCALE

### BARS WITH DUCT TAPE WHERE IT CROSSES CONTROL JOINT VERTICAL BAR IS NOT ON EDGE OF SAME SIDE OF JOINT OPENING AS OPENING NEOPRENE BRG PAD CAULK BED JOINT HERE

### TYPICAL C.M.U. CONTROL JT @ OPENING

NOT TO SCALE



- 1. SEE ARCHITECTURAL AND/OR STRUCTURAL DRAWINGS FOR CONTROL JOINT LOCATIONS.
- 2. DISCONTINUE HORIZONTAL JOINT REINFORCEMENT AND BOND BEAM REINFORCEMENT AT CONTROL JOINTS.
- 3. UNLESS OTHERWISE SHOWN OR NOTED, SPACING OF CONTROL JOINTS SHALL NOT EXCEED 24 FEET.

### TYPICAL C.M.U. CONTROL JOINT DETAILS

### NFORCEMENT DETAILS

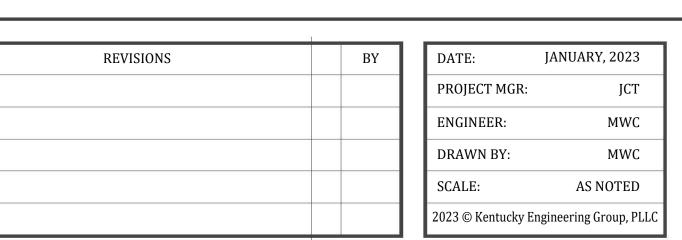
ALIGN FROM FLOOR TO FLOOR.

**ACING** 

RE THEY

INF AND OOR

)F OPENINGS



OPENING

INSTALL BOND BEAM

MIN 2~ #5 BARS REQUIRED EACH SIDE OF ALL

MASONRY OPENINGS THAT

EXCEED 48" IN WIDTH

7. CLEAN MORTAR FROM EDGES OF CELLS SO GROUT CAN

8. USE LINTEL BLOCK OVER OPENINGS AND CONTINUE WITH

OPEN-BOTTOM BOND BEAM FROM EDGE OF OPENING INTO

WALL SO THAT VERTICAL REINFORCING AT JAMB CAN PASS.

OR LINTEL BEARING, PROVIDE 2~ ½" DOWELS ACROSS JOINT

WITH GREASE ON ONE SIDE. DO NOT CONTINUE HORIZONTAL

9. CONTROL JOINTS SHALL EXTEND FULL HEIGHT OF WALL AND

10. WHERE A CONTROL JOINT OCCURS THROUGH A BOND BEAM

FLOW SMOOTHLY AND FILL ENTIRE CELL.

REINFORCING ACROSS CONTROL JOINT.

BELOW ALL OPENINGS



# SDG LLC 306 W Main St Ste 410

### 2022 WATER SYSTEM **IMPROVEMENTS PROJECT** FOR THE

BATH COUNTY WATER DISTRICT

NOT TO SCALE

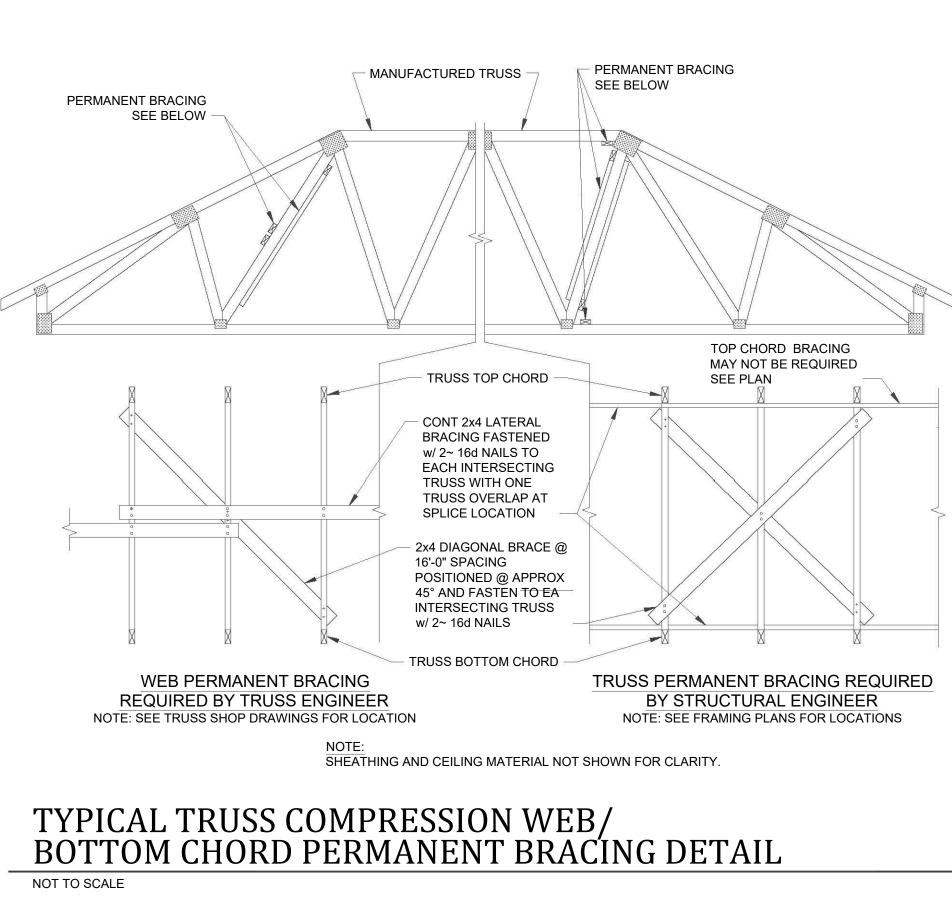
STRUCTURAL TYPICAL DETAILS





22015

**S2** 



MAIN BOND BEAM

SEE OTHER DETAILS

BOND BEAM COURSE

REINFORCING

HAIRPIN BAR MATCHING

REINFORCING

CONT REINFORCEMENT

AS SHOWN IN DETAILS

WHERE REQUIRED

UNIT MANUFACTURED

OR KNOCK OUT WEB -

PROVIDE CORNER BARS

OPEN BOTTOM BOND BEAM

WITH PARTIAL HEIGHT WEB

TYPICAL MASONRY WALL

REINFORCING SHALL HAVE 3/4" MINIMUM

TYPICAL C.M.U.

GROUT COVER TO ALL C.M.U. SURFACES.

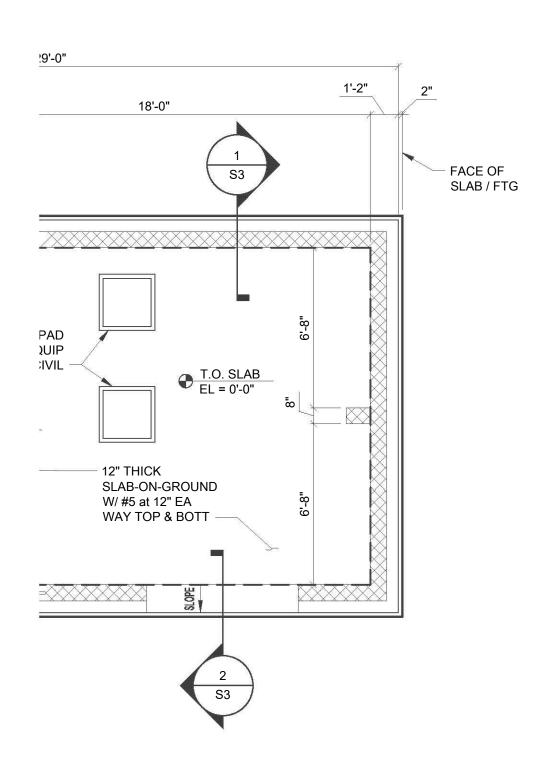
**BOND BEAM DETAIL** 

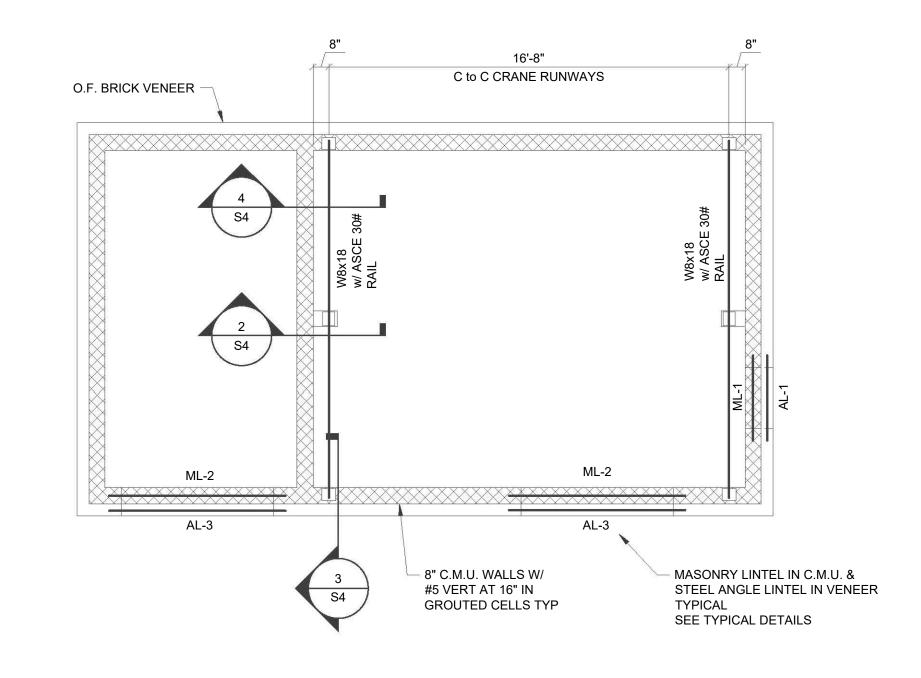
INTERSECTION DETAIL

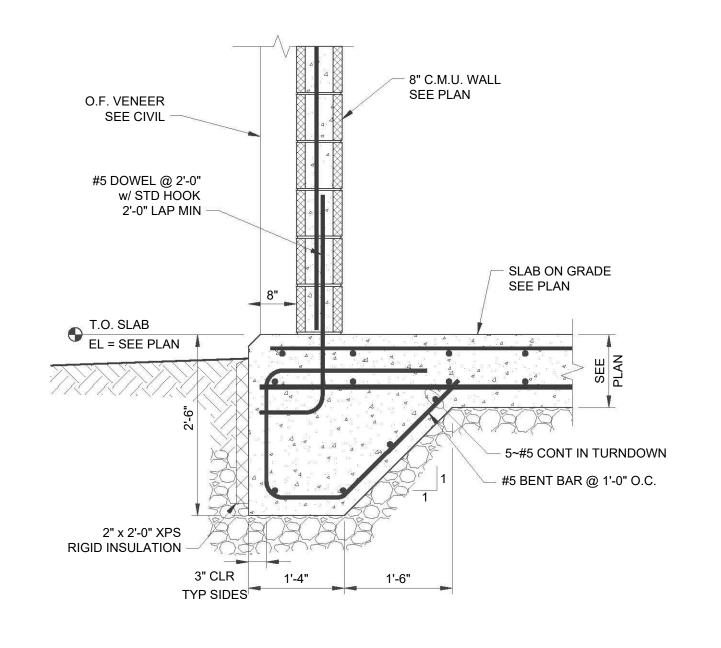
SIZE OF BOND BEAM REINF

LAP WITH MAIN BOND BEAM

NOT TO SCALE

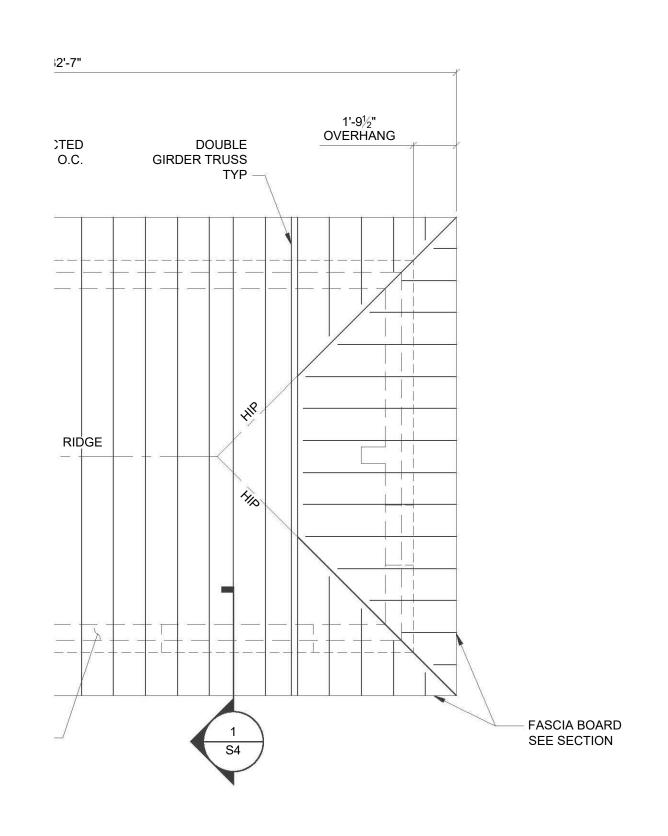




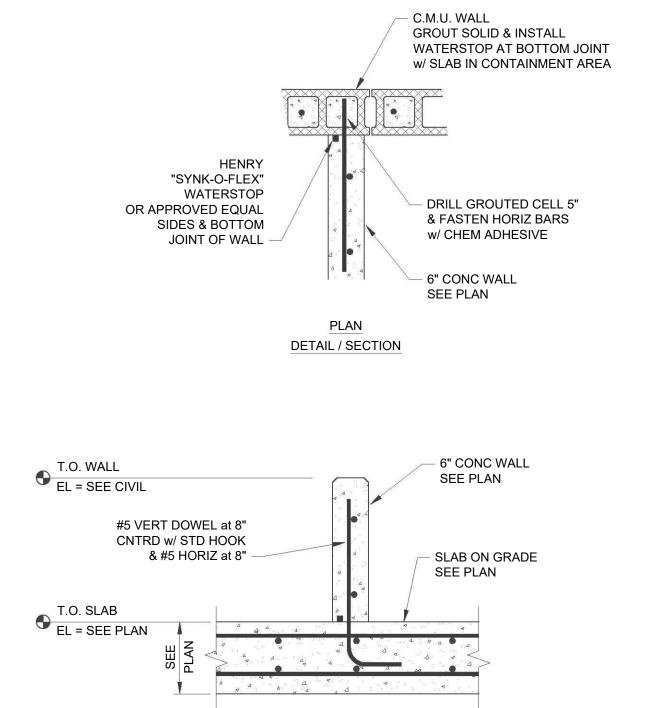


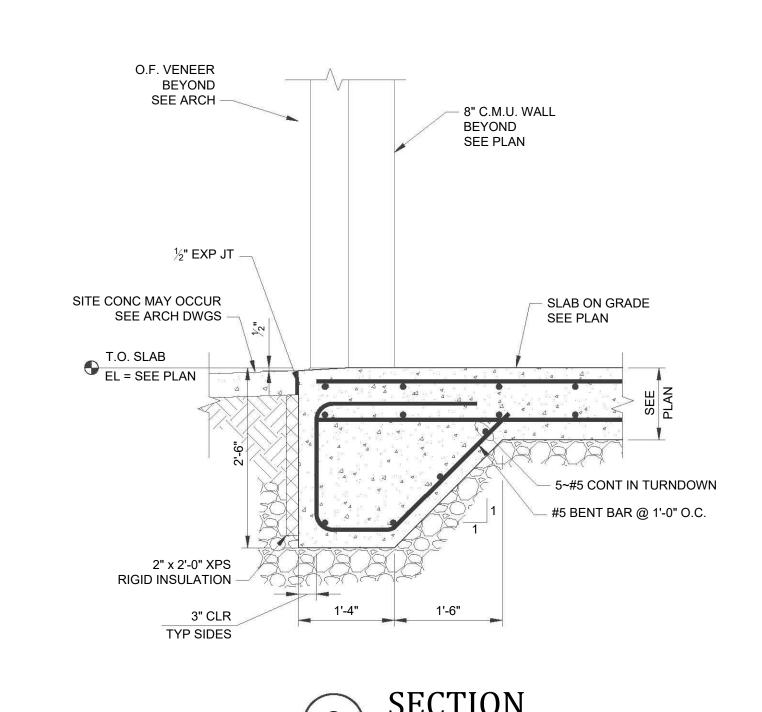
# SECTION SCALE: 3/4"=1'-0"

### N AND SLAB PLAN



# HOIST BEAM FRAMING PLAN SCALE: 1/4"=1'-0"





MING PLAN

				JUU
REVISIONS	ВУ	DATE:	JANUARY, 2023	
		PROJECT MGR:	ЈСТ	
		ENGINEER:	MWC	
		DRAWN BY:	MWC	
		SCALE:	AS NOTED	
		2023 © Kentucky En	gineering Group, PLLC	

P.O. Box 1034
VERSAILLES, KENTUCKY 40383

KENTUCKY 40383

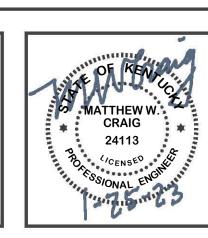
KENTUCKY 40383

2022 WATER SYSTEM IMPROVEMENTS PROJECT FOR THE BATH COUNTY WATER DISTRICT

SECTION

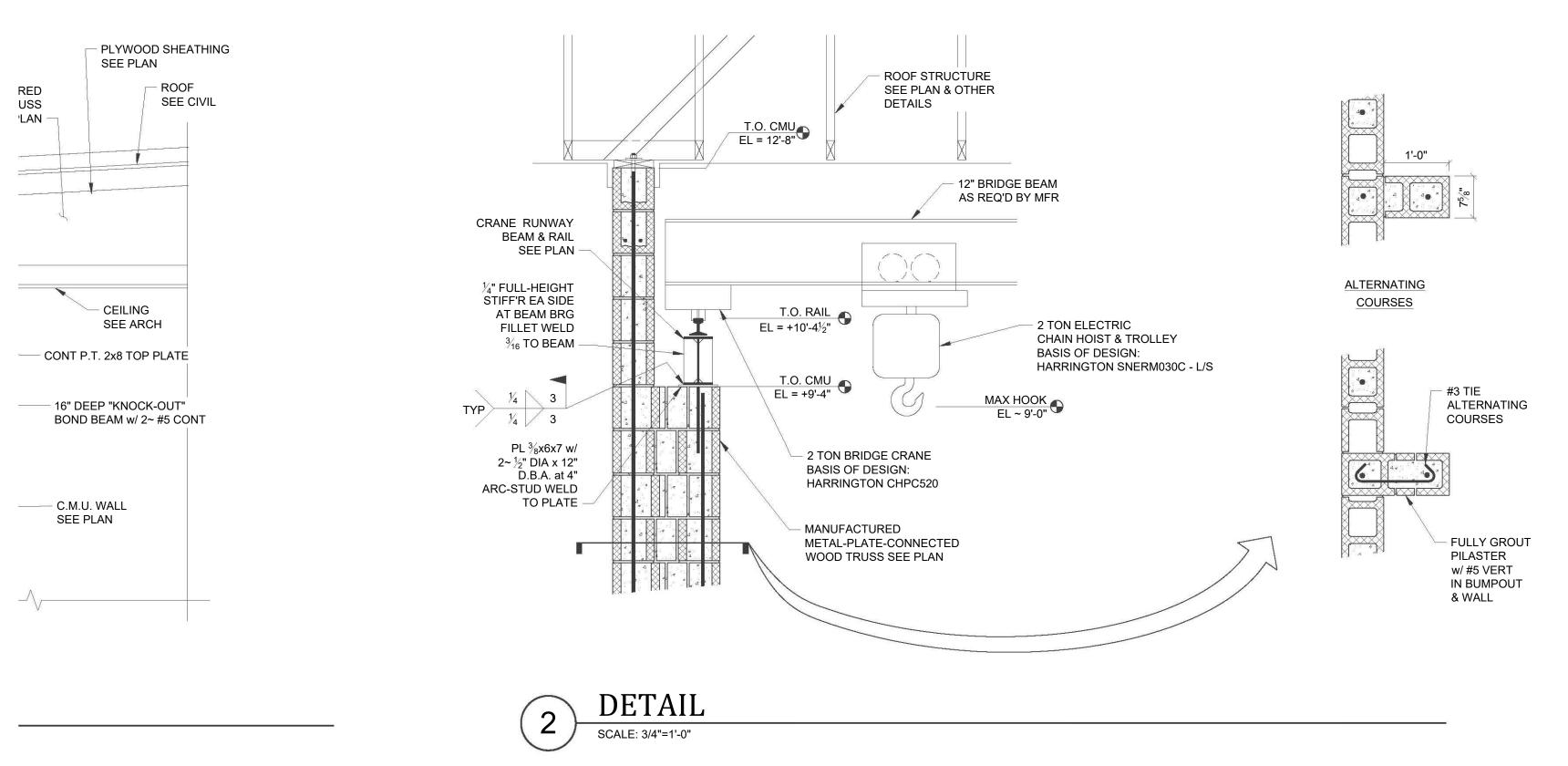
SCALE: 3/4"=1'-0"

STRUCTURAL PLANS, SECTIONS & DETAILS

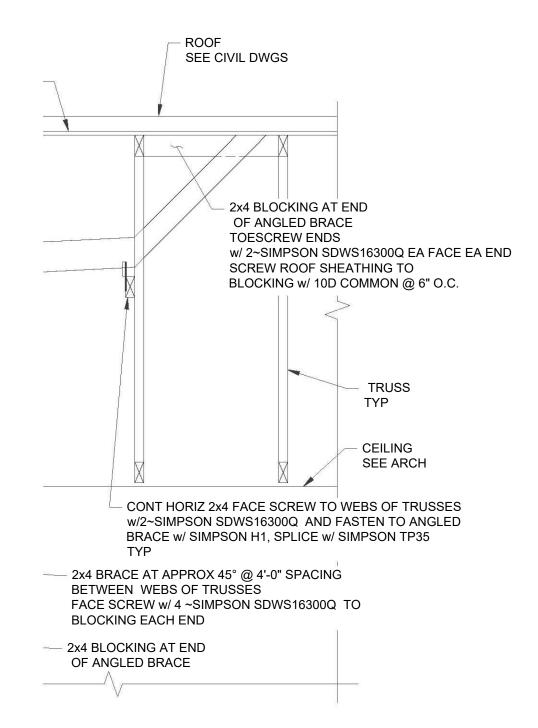


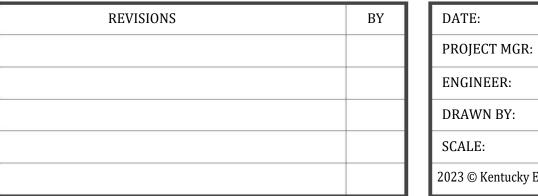
SCALE: 3/4"=1'-0"

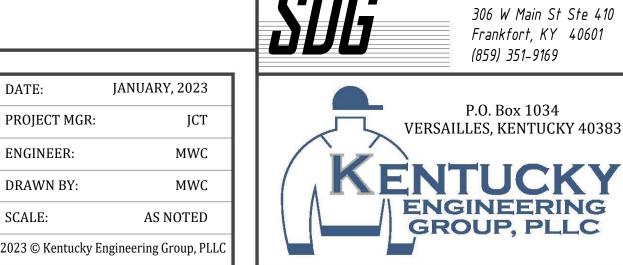
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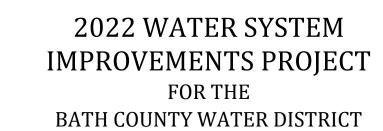
NOTES:
FASTEN RAIL TO RUNWAY WITH APPROVED PROPRIETARY FASTENING METHOD THAT ALLOWS FOR ADJUSTMENT & ALIGNMENT.
OVERALL RUNWAY AND RAIL ALIGNMENT, ELEVATION, AND OTHER TOLERANCES SHALL CONFORM TO CMAA 70 AND / OR 74 AS APPLICABLE.







SDG LLC



STRUCTURAL SECTIONS & DETAILS

SEE OTHER DETAILS

FOR ADDT'L INFO =

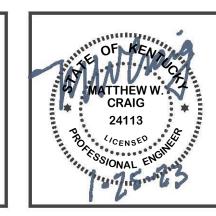
GROUT POCKET FLUSH

AFTER ERECTION —

**DETAIL** 

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

BRG



	PROJECT NO.
	22015
l '	F.

T.O. CMU EL = 12'-8"

T.O. RAIL

EL = +10'-4 $\frac{1}{2}$ "

WHEEL STOP

PC L3x3x<sup>3</sup>/<sub>8</sub> WELDED TO RAIL

CRANE RUNWAY

BEAM & RAIL

SEE PLAN

— PL <sup>3</sup>⁄<sub>8</sub>x6x7 w/ 2∼ <sup>1</sup>⁄<sub>2</sub>" DIA x 12" D.B.A. at 4"

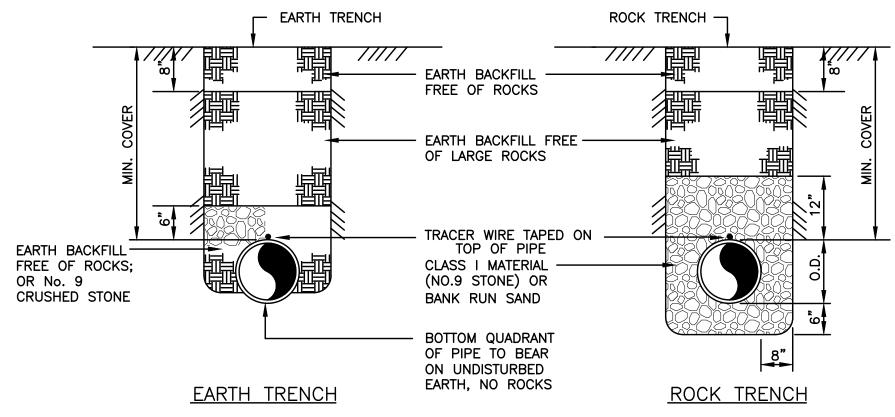
TO PLATE

ARC-STUD WELD

ET NO.

BID DOCUMI

# GATE VALVE INSTALLATION NOT TO SCALE



### TYPICAL - BEDDING AND BACKFILL

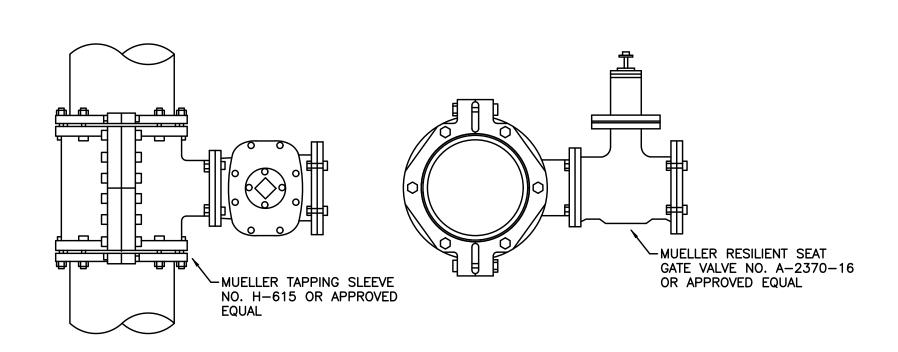
<u>NOTES</u>

- 1. REPLACE BITUMINOUS PAVEMENT WITH SAME TYPE AND THICKNESS (2" MIN.) AS EXISTING PAVEMENT.
- 2. IF ROCK IS ENCOUNTERED, A MINIMUM OF 6" NO. 9
  CRUSHED STONE MUST BE PLACED UNDER THE ENCASEMENT
- 3. X = MAX. WIDTH OF TRENCH AT SURFACE UNDER NORMAL CONDITIONS (36" + PIPE O.D.)

**TOP VIEW** 

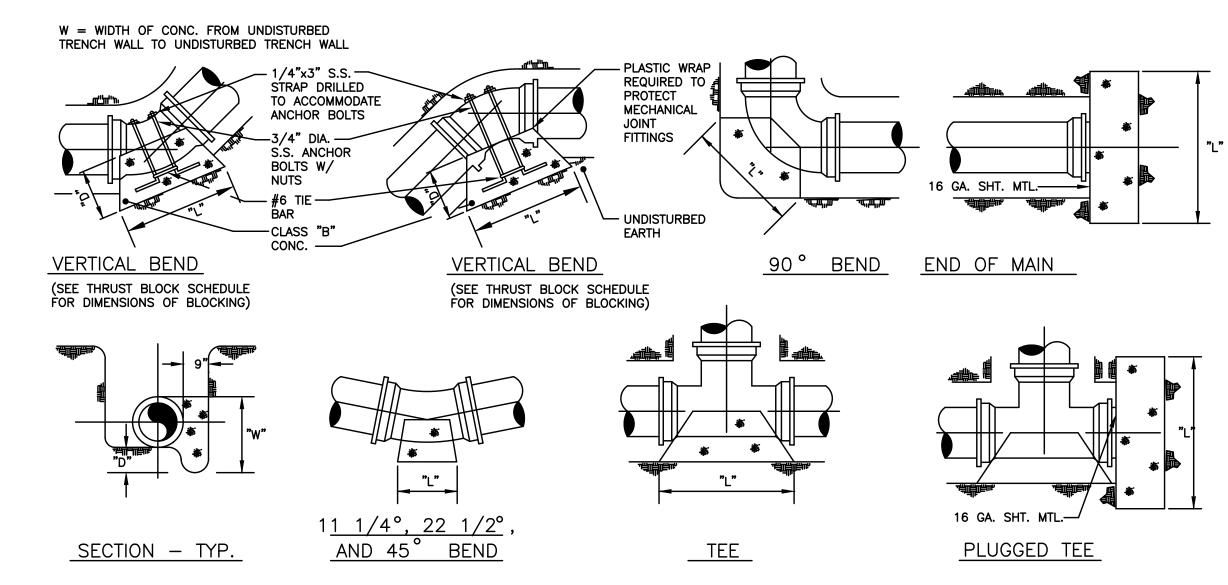
- 4. FROM POINTS "A" TO NEAREST JOINT OR BREAK IN PAVEMENT MUST BE AT LEAST 6' OR MORE. IF LESS THAN 6' REMOVE PAVEMENT TO JOINT OR BREAK AND REPLACE ENTIRE SLAB.
- NO. 610 CRUSHED STONE MAY BE SUBSTITUTED FOR MECHANICALLY TAMPED EARTH BACKFILL WITH PRIOR APPROVAL OF THE ENGINEER.
- 6. 1' SAW CUT OUTSIDE OF TRENCH LINES, BITUMINOUS PATCH PLACED IN 2" LIFTS WITH TACK COAT ON EACH SIDE, EACH LIFT COMPACTED WITH SMALL ROLLER.

NOTE: ALL WATER LINES CONSTRUCTED WITHIN 3' OF A COUNTY ROAD SHALL BE BACKFILLED WITH DGA TO FULL DEPTH.



TYPICAL - WET TAP

NOT TO SCALE

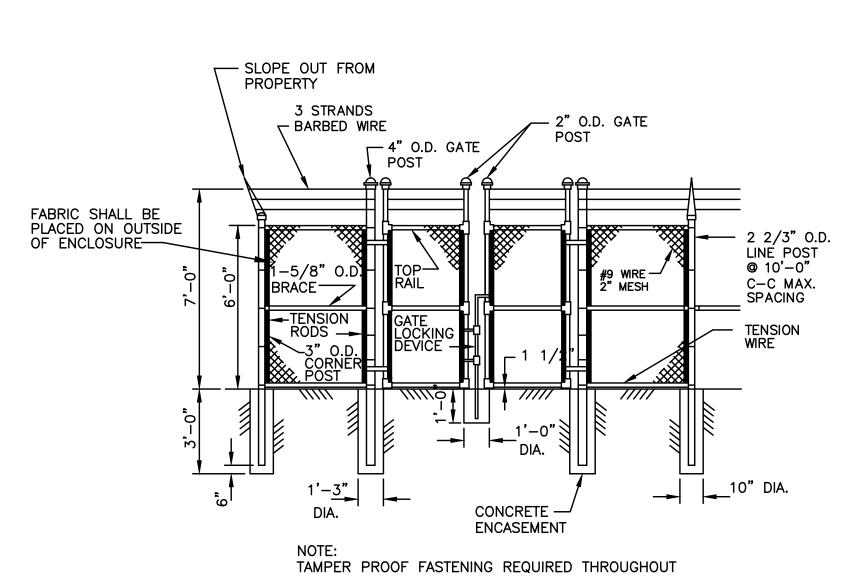


NOTE: ALL FITTINGS AND VALVES SHALL INCLUDE GRIP RING GLAND W/MIN. 10' PIPE PRIOR TO FITTINGS.

THRUS	ST BLOCK SCHEDULE — CLASS 250 PVC  SOIL TYPE — SAND & GRAVEL BEARING STRENGTH = 3000 PSF																								
PIPE SIZE	BEARING AREA	90° YDS OF CONCRETE	BEND D	w	L	45° BEND  BEARING YDS OF D W L  AREA CONCRETE D W L		L	BEARING AREA	22 ½° BEND  BEARING YDS OF D W L			11 ¼° BEND  BEARING YDS OF D W L  AREA CONCRETE D W L				TEE & DEAD ENDS  BEARING YDS OF AREA CONCRETE D W L								
4"	2.667	.10	12	24	16	1.500		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

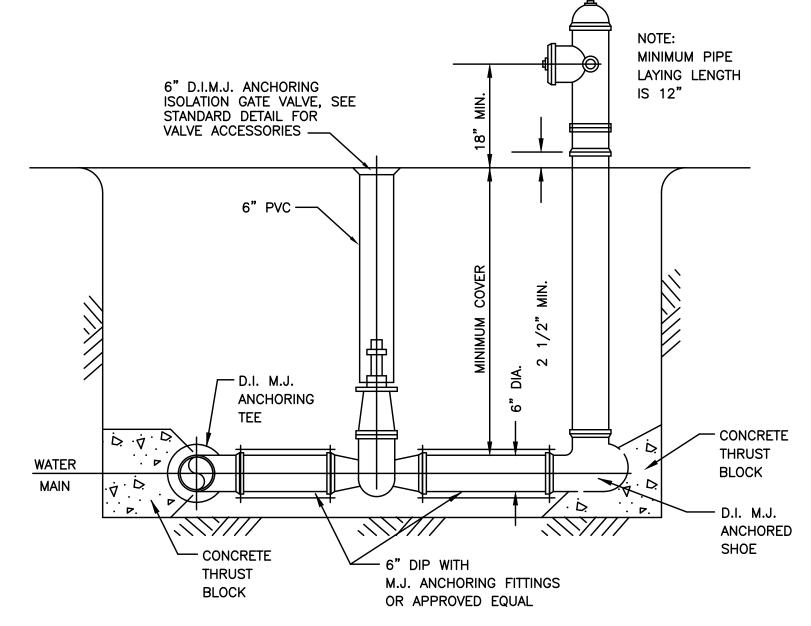
### WATER MAIN THRUST BLOCKS

(SEE THRUST BLOCK SCHEDULE FOR DIMENSIONS OF BLOCKING)
NOT TO SCALE



## CHAIN LINK FENCE WITH SWINGING GATES - DETAIL

NOT TO SCALE



FLUSHING ASSEMBLY
NOT TO SCALE

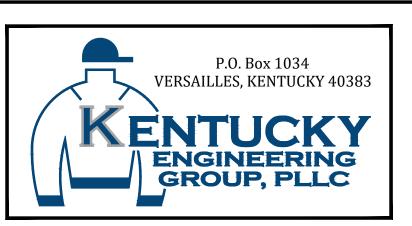
IT IS A VIOLATION OF LAW FOR ANY PERSON TO ALTER THIS DRAWING WITHOUT WRITTEN PERMISSION FROM KENTUCKY ENGINEERING GROUP, PLLC AND ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER.

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.

DATE	REVISIONS	BY
	DATE	DATE REVISIONS

SIDE VIEW

OATE:	JANUARY, 2023				
ROJECT MGR:	ЈСТ				
PRAWN BY:	JAB				
HECKED BY:	JCT				
CALE:	AS NOTED				
23 © Kentucky Engineering Group, PLLC					



# 2022 WATER SYSTEM IMPROVEMENTS PROJECT

ORE MINES AND MIDLAND PUMP STATIONS FOR THE

BATH COUNTY WATER DISTRICT

STANDARD DETAILS

PROJECT NO. 22015

SD-1

D DOCUMENTS