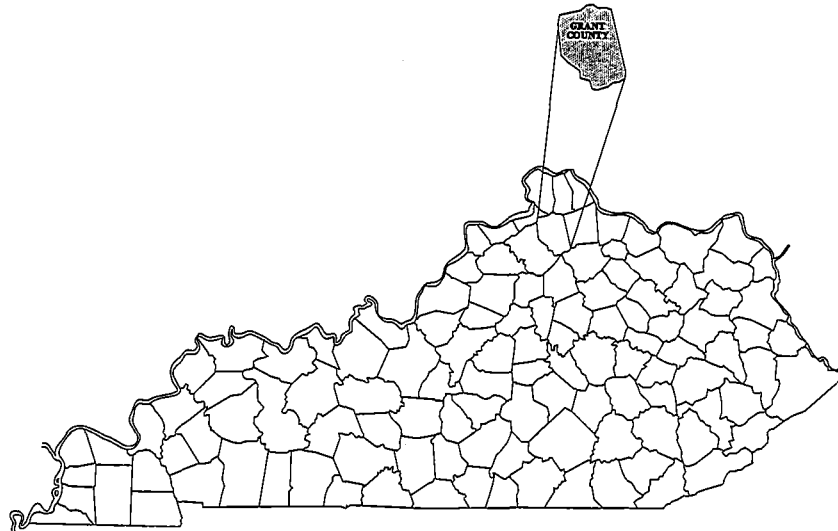


200,000 GALLON EQUALIZATION BASIN GRANT COUNTY SANITARY SEWER DISTRICT GRANT COUNTY, KENTUCKY



BEFORE YOU DIG

↓

The contractor is instructed to call 1-800-752-6007 to reach KY 811, the one-call system for information on the location of existing underground utilities. The call is to be placed a minimum of two (2) and no more than ten (10) business days prior to excavation. The contractor should be aware that owners of underground facilities are not required to be members of the KY 811 one-call Before-Is-Dig (BID) service. The contractor must coordinate excavation with the utility owners, including those whom do not subscribe to KY 811. It may be necessary for the contractor to contact the County Court Clerk to determine what utility companies have facilities in the area.

**AUGUST 2021
EDITION: BID SET
HMB PROJECT NO. 4310.00**



P. BENTON HANSON, P.E.
KENTUCKY REGISTRATION NO. 15,746

Plans Prepared By:



3 HMB Circle (602) 695-9800
Frankfort, Kentucky Fax (602) 695-9810

RFI # 18

GENERAL NOTES

1. THE SITE LAYOUT IS BASED ON CONTROL POINTS AS NOTED. FIELD ADJUSTMENTS MAY BE NECESSARY TO ALIGN WITH EXISTING FEATURES.
2. PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR IS TO VERIFY ALL PROVIDED DIMENSIONS IN THE FIELD AND REPORT ANY DISCREPANCIES TO THE ENGINEER.
3. BENCHMARKS HAVE BEEN PLACED TO INDICATE THE MOST ACCURATE LOCATION OF EXISTING STRUCTURES, PIPES AND UTILITIES PRIOR TO CONSTRUCTION OF THE WORK. REPORT ANY DISCREPANCIES TO THE ENGINEER. TAKE CARE TO PROTECT ALL PIPES AND UTILITIES THAT ARE TO REMAIN. REPAIR ANY DAMAGE ACCORDING TO LOCAL STANDARDS AND AT THE EXPENSE OF THE CONTRACTOR. COORDINATE ALL CONSTRUCTION WITH THE APPROPRIATE UTILITY COMPANY.
4. DIMENSIONS OF EXISTING STRUCTURES AND/OR SIZE RESTRICTIONS ARE APPROXIMATE. ALL NECESSARY DIMENSIONS AND ELEVATIONS OF EXISTING STRUCTURES TOPOGRAPHY SHALL BE VERIFIED BY THE CONTRACTOR IN THE FIELD PRIOR TO HIS CONSTRUCTION OPERATIONS.
5. THE CONTRACTOR SHALL OBTAIN NECESSARY PERMITS AND GIVE ALL NOTICES REQUIRED FOR POSSESSION OF THE WORK. THE CONTRACTOR SHALL PAY FOR ALL PERMITS AND ANY APPLICABLE SERVICE INSPECTION FEES.
6. THE CONTRACTOR'S WORK AND OPERATIONS SHALL CONFORM TO ALL LOCAL, STATE AND FEDERAL CODES AND RECEIVE APPROVAL WHERE NECESSARY PRIOR TO CONSTRUCTION OF THE WORK.
7. ALL MATERIALS BEING REMOVED AND NOT RE-USED IN THE NEW CONSTRUCTION SHALL BE FIRST OFFERED TO THE OWNER. ALL MATERIALS NOT ACCEPTED SHALL BE PROPERLY DISPOSED OF BY THE CONTRACTOR.
8. ALL EXPOSED PIPES SHALL HAVE A MINIMUM OF 3'-0" COVER AS TREATED VERTICALLY FROM FINISHED GRADE TO THE TOP OF PIPE, UNLESS OTHERWISE NOTED.
9. ALL REQUIRED PIPING BENDS MAY NOT BE SHOWN ON THE DRAWINGS. ADDITIONAL BENDS MAY BE NECESSARY TO CONFORM WITH ELEVATION. THE CONTRACTOR SHALL MAINTAIN ADEQUATE GROUND COVER. THE COST OF ANY ADDITIONAL BENDS REQUIRED SHALL BE INCLUDED IN THE LUMP SUM BID PRICE.
10. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR FOR THE PROTECTION OF LIFE DURING CONSTRUCTION. SUFFICIENT BARRIERS OF PROTECTION SHALL BE MAINTAINED TO PROTECT ALL EXISTING UTILITIES AND STRUCTURES. BARRIERS SHALL BE MAINTAINED TO PROTECT ALL EXISTING UTILITIES AND STRUCTURES. BARRIERS SHALL BE MAINTAINED TO PROTECT ALL EXISTING UTILITIES AND STRUCTURES. BARRIERS SHALL BE MAINTAINED TO PROTECT ALL EXISTING UTILITIES AND STRUCTURES.
11. THE PROPERTY LINES SHOWN ON THE DRAWINGS SHALL BE THE LISTS OF CONSTRUCTION. ANY ADDITIONAL BARRIERS REQUIRED SHALL BE OBTAINED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER BY SUBMITTING A REQUEST FOR BUGH TO THE OWNER.
12. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ALL APPLICABLE DRAWINGS AND SPECIFICATIONS AS A PART OF ANY ORIGINAL DELIVERABLES AND SPECIFICATIONS WHICH APPLY SHALL BE CONSULTED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
13. ALL PIPING SUPPORTS MAY NOT BE SHOWN ON THE DRAWINGS. HOWEVER, ALL PIPING, INSIDE AND OUTSIDE, SHALL BE ADEQUATELY SUPPORTED TO PREVENT undue strain OR VIBRATION ON PIPE JOINTS OR EQUIPMENT. ANY ADDITIONAL PIPING SUPPORTS SHALL BE INCLUDED IN THE LUMP SUM BID PRICE.
14. ALL CONCRETE THURST BLOCCS MAY NOT BE SHOWN ON THE DRAWINGS. HOWEVER, CONCRETE THURST BLOCCS SHALL BE SIZED ACCORDINGLY AS SHOWN ON THE CONCRETE THURST BLOCC DETAILS. ALL NECESSARY THURST BLOCCS REQUIRED SHALL BE INCLUDED IN THE LUMP SUM BID PRICE.
15. BOLD STRENGTH LINES REPRESENT PROPOSED WORK. LIGHTWEIGHT LINES REPRESENT EXISTING FACILITIES.
16. EXISTING DRAINING WATER PIPES SHALL BE LAID TO PROVIDE A VERTICAL DISTANCE OF 18 INCHES BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE CENTERLINE OF THE DRAINING WATER MAIN. THE DRAINING WATER MAIN IS EITHER ABOVE OR BELOW THE WATER MAIN. THE DRAINING WATER MAIN IS EITHER ABOVE OR BELOW THE WATER MAIN. THE DRAINING WATER MAIN IS EITHER ABOVE OR BELOW THE WATER MAIN.
17. BARRIERS SHALL BE LAID AT LEAST 18 FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED WATER MAIN UNLESS OTHERWISE NOTED. THE DISTANCE SHALL BE MEASURED EDGE TO EDGE.
18. THE ENGINEER RESERVES THE RIGHT TO MAKE CHANGES FROM ADJUSTMENTS IN THE WORK OR WORKS TO ACCOMMODATE THE INTEREST OF THE OWNER.
19. THE CONTRACTOR SHALL PLACE TEMPORARY STORM WATER CONTROL STRUCTURES AND TAKE ALL NECESSARY PRECAUTIONS TO CONTROL STORM WATER RUNOFF AND EROSION. DO NOT EXPOSE BLOCKS OR OTHER STRUCTURES WITH THE EXISTING STORM WATER SYSTEM. PLACE MAT BARRIERS AND GRASS MATS AS NECESSARY TO CONTROL EROSION.
20. ALL SANDY FILL TO BE COMPACTED IN ACCORDANCE WITH THE SPECIFICATIONS.
21. ALL PIPE CONNECTIONS TO EXISTING CONCRETE STRUCTURES SHALL CONFORM TO THE CORRE AND RESILIENT METHOD.
22. CONTRACTOR SHALL CLEAN STEELWORK THOROUGHLY UNLESS OTHERWISE NOTED.
23. CONTRACTOR SHALL COORDINATE ANY TIE-IN/BRANCH DOWN WITH OWNER PERSONNEL WITH A PRIOR NOTICE OF 7 DAYS. AT NO TIME SHALL MATERIALS BE DISCHARGED OR DUMPED FROM A PIPE OR STRUCTURE. THE CONTRACTOR'S PLAN SHALL BE ACCEPTED BY THE OWNER AND ENGINEER.
24. ALL PIPE JOINTS AND FITTINGS BELOW STRUCTURES SHALL BE RESTRAINED JOINTS.
25. COATINGS SPECIFIED REQUIRED ON ALL EXPOSED STEEL, VALVES, FITTINGS AND FLEX METALS PER SECTION 5900 OF THE SPECIFICATIONS.
26. ALL PLANGED PIPE/FITTINGS CONNECTIONS SHALL BE PROVIDED WITH TYPE 304 STAINLESS STEEL NUTS AND BOLTS/FLANGES.
27. ALL DUCTILE IRON PIPE AND FITTINGS FOR AIR PIPES SHALL BE UNLINED INCLUDING CEEMENT LINING.
28. ALL ANCHOR BOLTS AND HARDWARE SHALL BE TYPE 304 STAINLESS STEEL UNLESS OTHERWISE INDICATED.

INDEX OF SHEETS

- 1 COVER
- 2 GENERAL NOTES, LOCATION MAP, SURVEY DATA & INDEX OF SHEETS
- 3 EXISTING SITE PLAN
- 4 GRADING PLAN & PIPING PLAN
- 5 EQUALIZATION BASIN PLAN & AIR LINE DIAGRAM
- 6 FLOW DIVERSION / 80 LITTER BOX - PLANS & SECTIONS
- 7 EQUALIZATION BASIN SECTIONS, VALVE VAULT PLANS & SECTIONS, MH-1 & MH-2 PLAN & SECTION
- SD-1 STANDARD DETAILS
- SD-2 STANDARD DETAILS
- SD-3 STANDARD DETAILS
- SD-4 STANDARD DETAILS
- SD-5 STANDARD DETAILS
- ECD-1 EROSION CONTROL DETAILS

LEGEND:

SEWER LINE

EXISTING:

WATER

AIR

FORCE MAIN

MANHOLE

CONTROL POINT

BORE LOCATION

PROPOSED:

W

A

FM

⊙

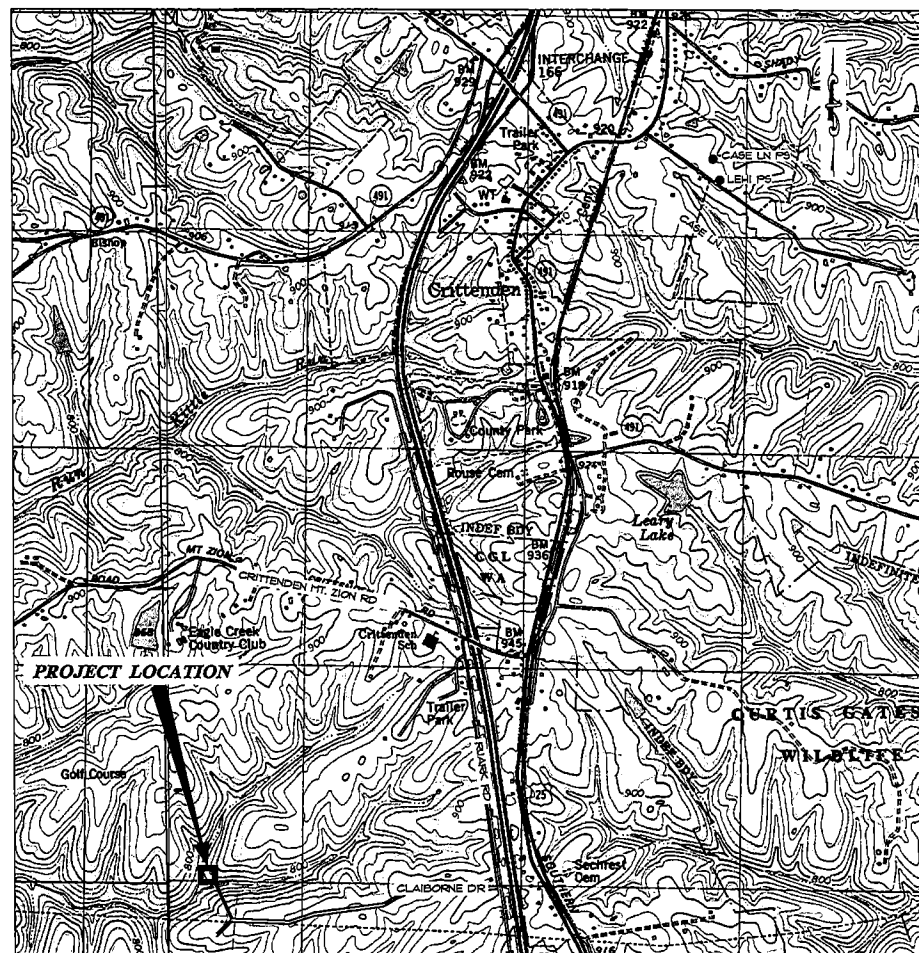
⊙

⊙

CONTACT INFORMATION

WATER & SEWER
GRANT COUNTY SANITARY SEWER DISTRICT # BULLOCK PEN WATER DISTRICT
BRIAN BISHOP, SUPERINTENDENT
ERNIE RTAN, WUPF OPERATOR
1 FARRELL DRIVE
CRITTENDEN, KY, 41030
(859)428-2112

ELECTRIC
QUENT ELECTRIC
MIKE MARSTON
(502) 563-3520
(502) 563-3470



LOCATION MAP

SCALE: N.T.S.

BEFORE YOU DIG

The contractor is instructed to call 1-800-752-6007 to reach KY 811, the one-call system for information on the location of existing underground utilities. The call is to be placed a minimum of two (2) and no more than ten (10) business days prior to excavation. The contractor should be aware that owners of underground facilities are not required to be members of the KY 811 one-call Before-You-Dig (BUD) service. The contractor must coordinate excavation with the utility owners, including those whom do not subscribe to KY 811. It may be necessary for the contractor to contact the County Court Clerk to determine what utility companies have facilities in the area.

| NO. | DATE | REVISIONS | CHKD | APPRD | DATE |
|-----|------|-----------|------|-------|------|
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

| | |
|------------------|-----------------|
| PROJECT: 4310/02 | DATE: AUG. 2021 |
| SCALE: AS NOTED | |
| DESIGNED BY | NAME DATE |
| DRAWN BY | SAB |
| CHECKED BY | RCD |
| RECORD DSGN. | |



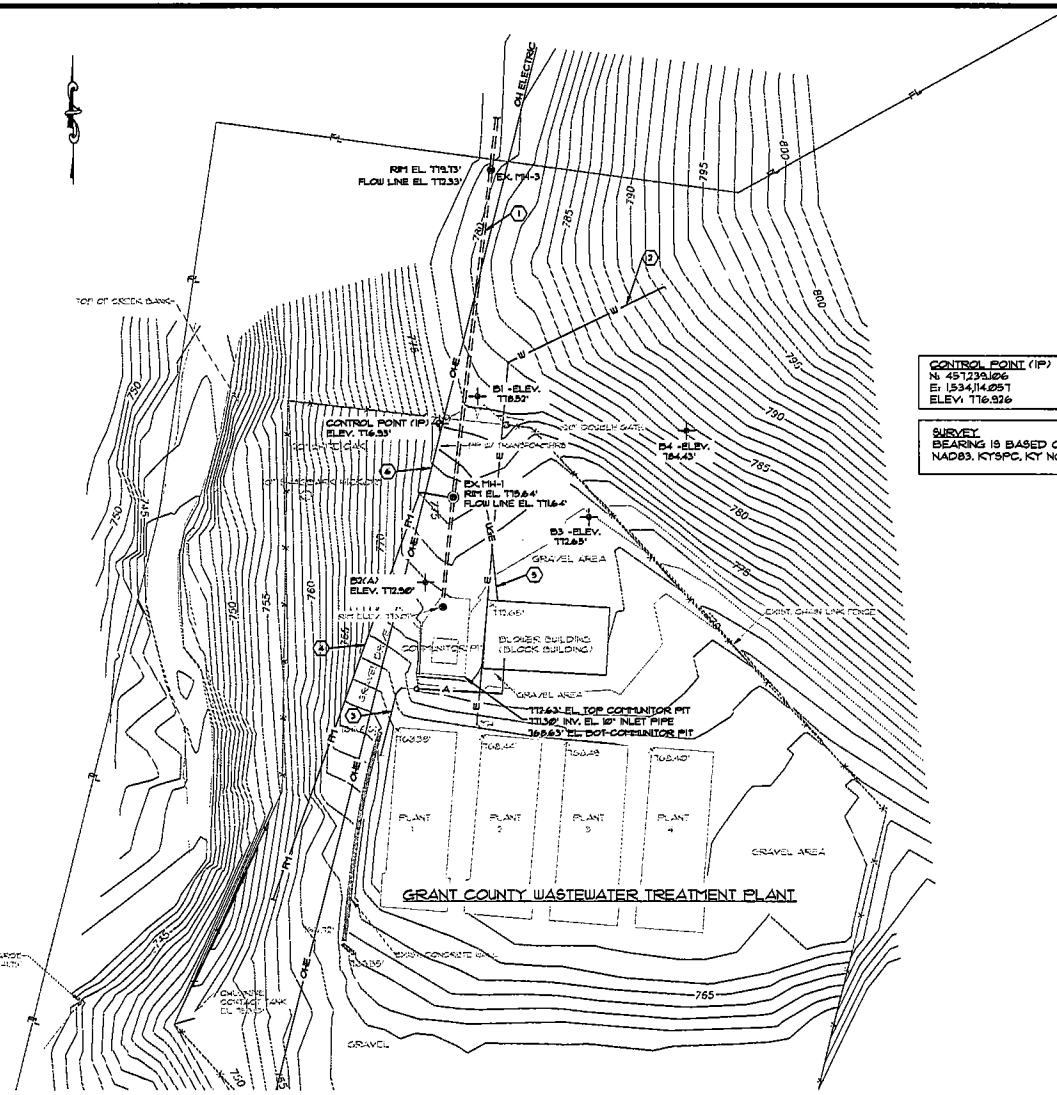
3 HMB CIRCLE
FRANKFORT, KENTUCKY
(502) 635-3800
(502) 635-3810 FAX



200,000 GALLON EQUALIZATION BASIN
GRANT COUNTY SEWER DISTRICT
GRANT COUNTY, KENTUCKY

GENERAL NOTES, LOCATION MAP,
SURVEY DATA & INDEX OF SHEETS

SHEET
1



- KEY NOTES**
- ① 8" PVC GRAVITY SEWER (CONTRACTOR TO VERIFY PIPE MATERIAL & DEPTH AT ALL CONNECTION LOCATIONS). EXPECT A FLOW RATE UP TO 800 GPM
 - ② 1 1/2" PVC WATERLINE (CONTRACTOR TO VERIFY PIPE MATERIAL, DEPTH, SIZE, & LOCATION AT ALL CONNECTIONS AND PENCE LOCATIONS)
 - ③ 4" DI AIR LINE
 - ④ 4" PVC CLARIBORNE PB FORCE MAIN (CONTRACTOR TO VERIFY PIPE MATERIAL, DEPTH & LOCATION AT ALL CONNECTION LOCATIONS). CONTRACTOR SHALL TEMPORARILY RELOCATE FRT DURING CONSTRUCTION OF EQ BASIN. EXPECT A PUMP RATE OF APPROXIMATELY 150 GPM
 - ⑤ UNDERGROUND ELECTRIC FOR THE TREATMENT PLANT. CONTRACTOR SHALL LOCATE AND SUBMIT A PLAN ON HOW WORK WILL PROCEED. PROTECT UNDERGROUND ELECTRIC OR HOW THE UNDERGROUND ELECTRIC WILL BE RELOCATED TO ALLOW CONSTRUCTION ACTIVITIES
 - ⑥ OVERHEAD ELECTRIC SERVICE PROVIDED BY OWEN ELECTRIC. THE CONTRACTOR SHALL CONTACT OWEN AND COORDINATE ALL WORK WITHIN THE SAFETY ZONE OF OVERHEAD POWER. CONTRACTOR SHALL FOLLOW ALL OWEN ELECTRIC'S REQUIREMENTS & SAFETY PLAN SHALL BE SUBMITTED PRIOR TO STARTING WORK.

CONTROL POINT (IP)
 N: 451234.006
 E: 153414.051
 ELEV: 116.926

SURVEY BEARING IS BASED ON GRID NORTH
 NAD83, KTSFC, KY NORTH ZONE 1621

EXCAVATION PLAN
 CONTRACTOR SHALL SUBMIT AN EXCAVATION PLAN TWO WEEKS BEFORE STARTING EXCAVATION OF THE EQ BASIN THAT ADDRESSES HOW THE EXCAVATION (SOIL AND ROCK EXPOSED SURFACE) WILL BE KEPT STABLE AND PROTECTED FROM SLUMPING POTENTIAL DUE TO EXPOSURE OF WEATHERED SHALE UNTIL BACKFILL AND DRAINAGE SYSTEM ARE INSTALLED.

OWEN ELECTRIC REQUIREMENTS

1. THE EQ BASIN SHALL BE CONSTRUCTED A MINIMUM OF 13 FEET FROM THE POWER POLE
2. THE CONTRACTOR MUST NOT TOUCH THE BOTTOM WIRE OF POWER SERVICE.
3. TWO WEEKS BEFORE STARTING EXCAVATION, OWEN ELECTRIC SHALL BE CONTACTED. THEY WILL COME TO THE SITE AND INSTALL INSULATORS ON OVERHEAD POWER LINES
4. EXCAVATION SHALL NOT BE CLOSER THAN 6 FEET FROM TRANSFORMER POLE.

| NO. | DATE | REVISIONS | CHKD | APPRD | DATE |
|-----|------|-----------|------|-------|------|
| | | | | | |

PROJECT: 4310200 DATE: AUG. 2021
 SCALE: 1" = 20'

| DESIGNED BY | NAME | DATE |
|--------------|------|------|
| | PBH | |
| DRAWN BY | NAP | |
| CHECKED BY | PBH | |
| RECORD DWSG. | | |



3 HMB CIRCLE
 FRANKFORT, KENTUCKY
 (502) 695-3000
 (502) 695-3910 FAX



200,000 GALLON EQUALIZATION BASIN
 GRANT COUNTY SEWER DISTRICT
 GRANT COUNTY, KENTUCKY

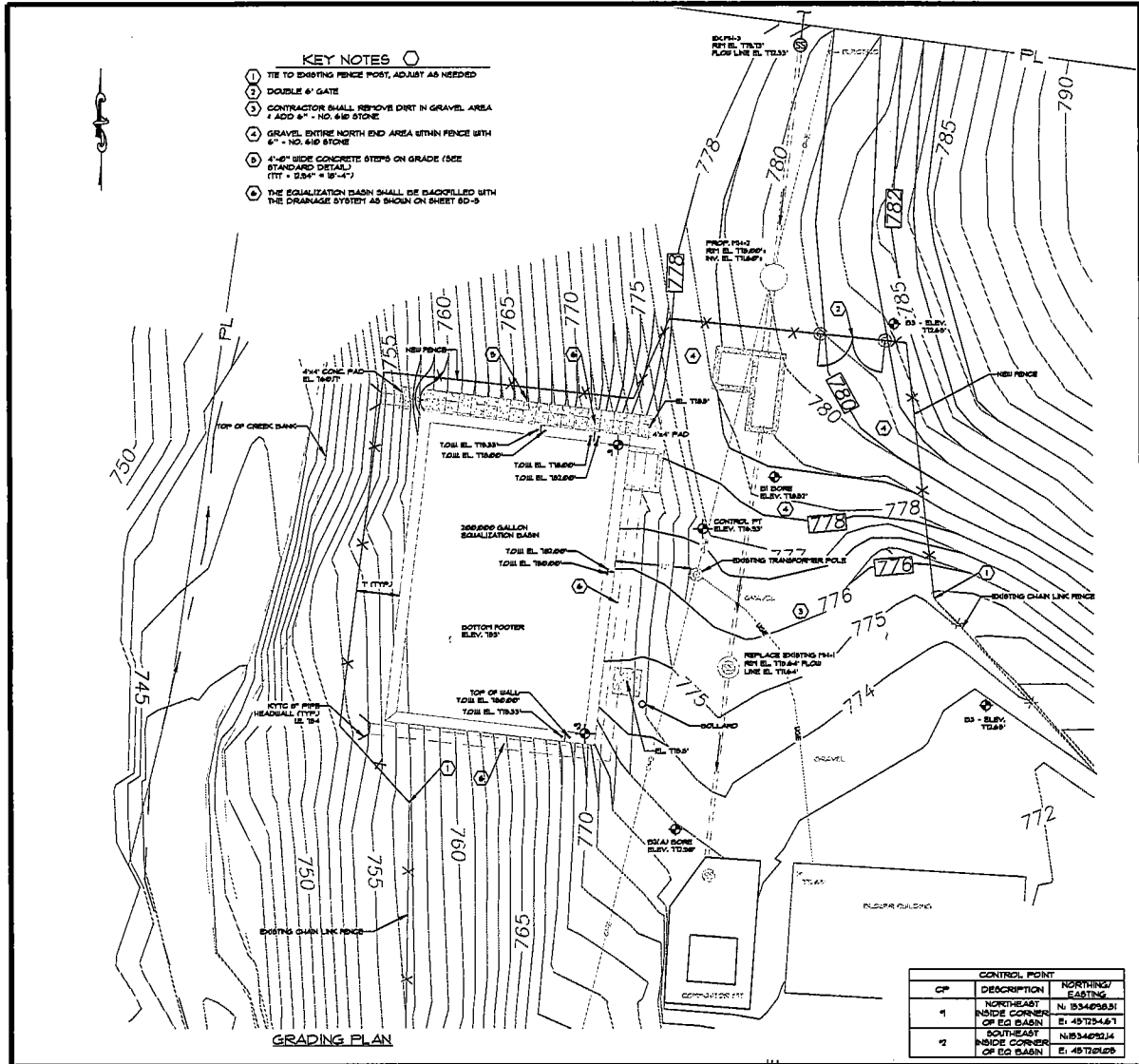
EXISTING SITE PLAN

KEY NOTES

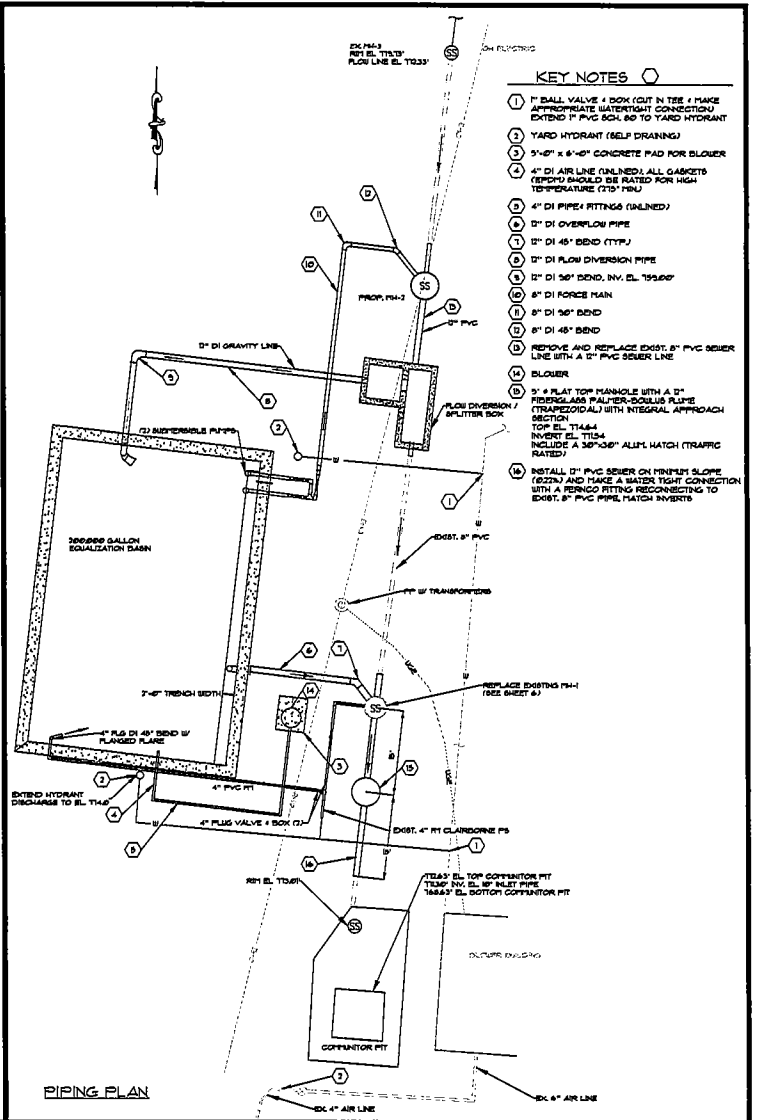
- 1 TIE TO EXISTING FENCE POST, ADJUST AS NEEDED
- 2 DOUBLE 6" GATE
- 3 CONTRACTOR SHALL REMOVE DIRT IN GRAVEL AREA & ADD 6" - NO. 410 STONE
- 4 GRAVEL ENTIRE NORTH END AREA WITHIN FENCE WITH 6" - NO. 410 STONE
- 5 4"-6" WIDE CONCRETE STEPS ON GRADE (SEE STANDARD DETAILS) (FIT = 2.54" = 10^-4")
- 6 THE EQUALIZATION BASIN SHALL BE BACKFILLED WITH THE DRAINAGE SYSTEM AS SHOWN ON SHEET 80-9

KEY NOTES

- 1 1" BALL VALVE 4 BOX CUT IN THE 4" MAKE APPROPRIATE WATER TIGHT CONNECTION; EXTEND 1" PVC SOL. 40 TO YARD HYDRANT
- 2 YARD HYDRANT (SELF DRAINING)
- 3 5'-0" x 6'-0" CONCRETE PAD FOR BLOWER
- 4 4" DI AIR LINE (UNLINED); ALL GASKETS (PERIOD) SHOULD BE RATED FOR HIGH TEMPERATURE (715° F MIN)
- 5 4" DI PIPE & FITTINGS (UNLINED)
- 6 1" DI OVERFLOW PIPE
- 7 1" DI 45° BEND (TYPE)
- 8 1" DI FLOW DIVERSION PIPE
- 9 1" DI 90° BEND, INV. EL. 1756.67
- 10 8" DI FORCE MAIN
- 11 8" DI 90° BEND
- 12 8" DI 45° BEND
- 13 REMOVE AND REPLACE EXIST. 8" PVC SEWER LINE WITH A 12" PVC SEWER LINE
- 14 BLOWER
- 15 3" x 6" PLAT TOP HANDLE WITH A 12" FIBERGLASS PALMER-BOLLUS PLUM (TRAPEZOIDAL) WITH INTEGRAL APPROACH SECTION TOP EL. 1754.4; INVERT EL. 1754.4; INCLUDE A 36"x36" ALUM. HATCH (TRAFFIC RATED)
- 16 INSTALL 12" PVC SEWER ON MINIMUM SLOPE (.02%) AND MAKE A WATER TIGHT CONNECTION WITH A PERICO FITTING RECONNECTING TO EXIST. 8" PVC PIPE; HATCH INVERTS



GRADING PLAN



PIPING PLAN

| CP | DESCRIPTION | NORTHING/ EASTING |
|----|--|-------------------------------|
| 1 | NORTHEAST SIDE CORNER OF EQ. BASIN | N: 1534298.51 E: 457254.67 |
| 2 | SOUTHEAST SIDE CORNER OF EQ. BASIN | N: 1534292.14 E: 457229.20 |

| NO. | DATE | REVISIONS | CHK'D | APPR'D | DATE |
|-----|------|-----------|-------|--------|------|
| | | | | | |

| | |
|------------------|-----------------|
| PROJECT: 4310/00 | DATE: AUG. 2021 |
| SCALE: 1" = 10' | |
| DESIGNED BY: FSH | NAME: FSH |
| DRAWN BY: NAF | NAME: NAF |
| CHECKED BY: FSH | NAME: FSH |
| RECORD DWS. | |



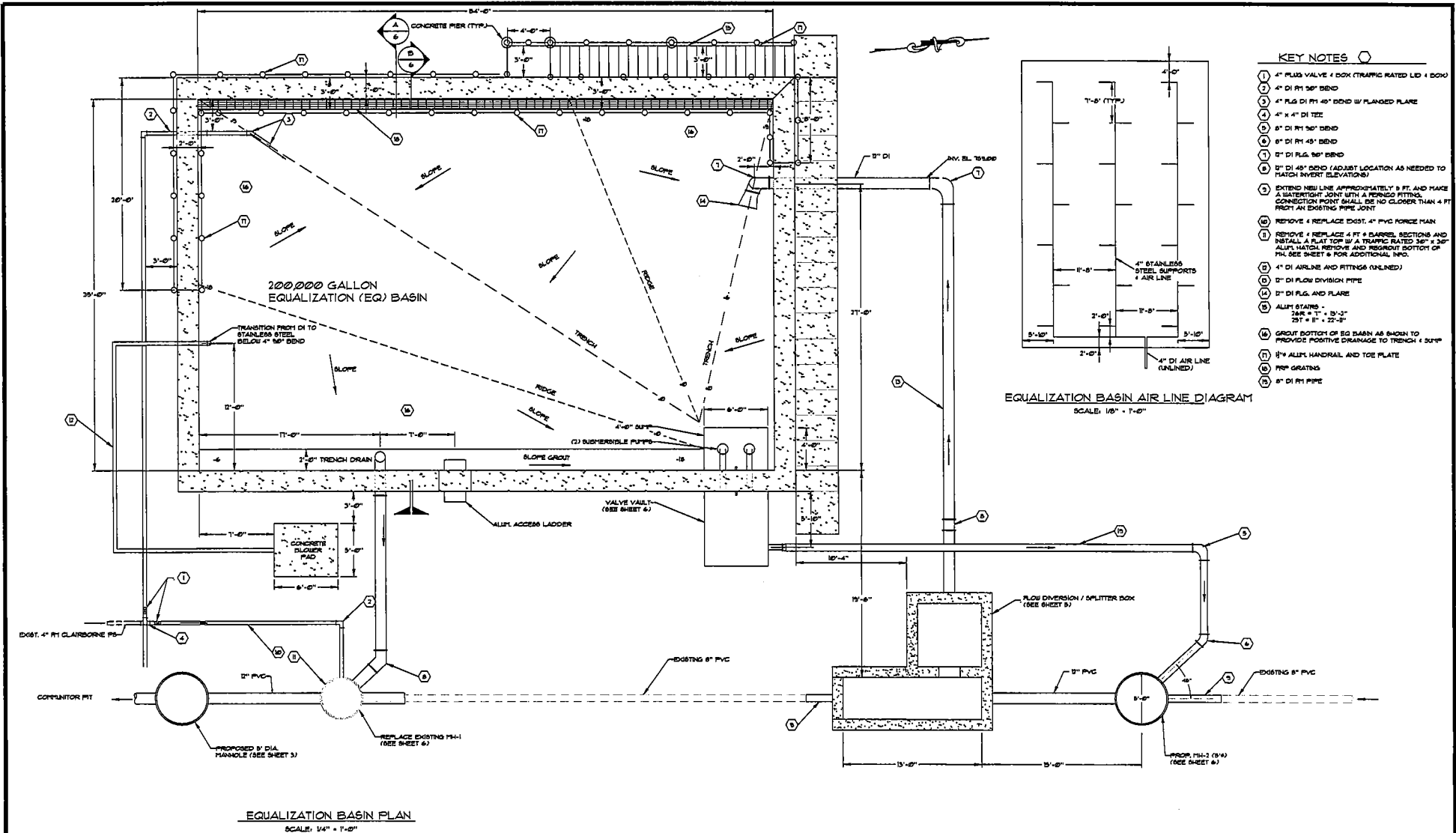
3 HMB CIRCLE
FRANKFORT, KENTUCKY
(502) 695-3800
(502) 695-3810 FAX



200,000 GALLON EQUALIZATION BASIN
GRANT COUNTY SEWER DISTRICT
GRANT COUNTY, KENTUCKY

GRADING PLAN AND PIPING PLAN

SHEET
3



| | | | |
|-------------|------|-----------------------------------|-----------------------------|
| | | PROJECT: 4310/210 DATE: AUG. 2021 | |
| | | SCALE: 1/4" = 1'-0" | |
| DESIGNED BY | NAME | DATE | |
| DRAWN BY | NAF | | |
| CHECKED BY | PSH | | |
| NO. | DATE | REVISIONS | CHCD APPRD DATE RECORD DWSG |

HMB
PROFESSIONAL ENGINEERS, INC.

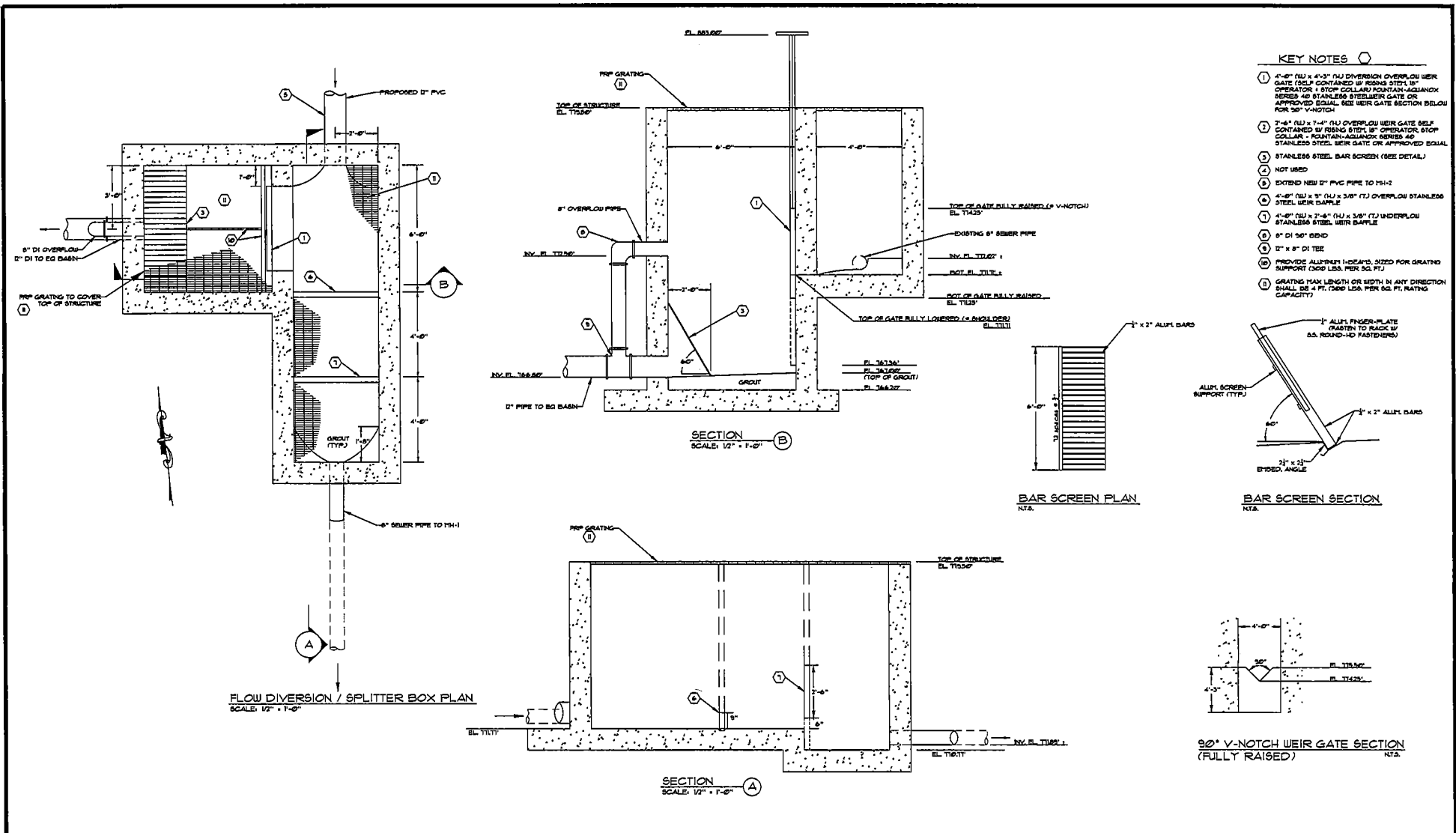
3 HMB CIRCLE
FRANKFORT, KENTUCKY
(502) 695-9800
(502) 695-9810 FAX

UNIVERSITY OF KENTUCKY
PHILIP EDWARDS HANCOCK
13,748
1924

200,000 GALLON EQUALIZATION BASIN
GRANT COUNTY SEWER DISTRICT
GRANT COUNTY, KENTUCKY

EQUALIZATION BASIN PLAN AND AIR LINE DIAGRAM

SHEET
4



- KEY NOTES**
- ① 4'-0" (U) x 4'-3" (U) DIVERSION OVERFLOW WEIR GATE (SELF CONTAINED W/ RISING STOP, 18" OPERATOR, 1 STOP COLLAR) HOUTASK-AGLANSKO SERIES 400 STAINLESS STEEL WEIR GATE OR APPROVED EQUAL. SEE WEIR GATE SECTION BELOW FOR 90° V-NOTCH.
 - ② 2'-6" (U) x 1'-4" (U) OVERFLOW WEIR GATE SELF CONTAINED W/ RISING STOP, 18" OPERATOR, STOP COLLAR - HOUTASK-AGLANSKO SERIES 400 STAINLESS STEEL WEIR GATE OR APPROVED EQUAL.
 - ③ STAINLESS STEEL BAR SCREEN (SEE DETAIL)
 - ④ NOT USED
 - ⑤ EXTEND NEW 6" PVC PIPE TO MH-2
 - ⑥ 4'-0" (U) x 8" (U) x 3/8" (T) OVERFLOW STAINLESS STEEL WEIR Baffle
 - ⑦ 4'-0" (U) x 2'-6" (U) x 3/8" (T) UNDERFLOW STAINLESS STEEL WEIR Baffle
 - ⑧ 8" DI 50' BEND
 - ⑨ 12" x 8" DI TEE
 - ⑩ PROVIDE ALUMINUM I-BEAMS, SIZED FOR GRATING SUPPORT (500 LBS. PER SQ. FT.)
 - ⑪ GRATING MAX LENGTH OR WIDTH IN ANY DIRECTION SHALL BE 4 FT. (500 LBS. PER SQ. FT. RATING CAPACITY)

| NO. | DATE | REVISIONS | CHKD | APPRD | DATE |
|-----|------|-----------|------|-------|------|
| | | | | | |
| | | | | | |
| | | | | | |

| | | |
|-----------------------------------|------|------|
| PROJECT: 4310.000 DATE: AUG. 2021 | | |
| SCALE: AS NOTED | | |
| DESIGNED BY | NAME | DATE |
| DRAWN BY | NAP | |
| CHECKED BY | FBH | |
| RECORD DWSG. | | |



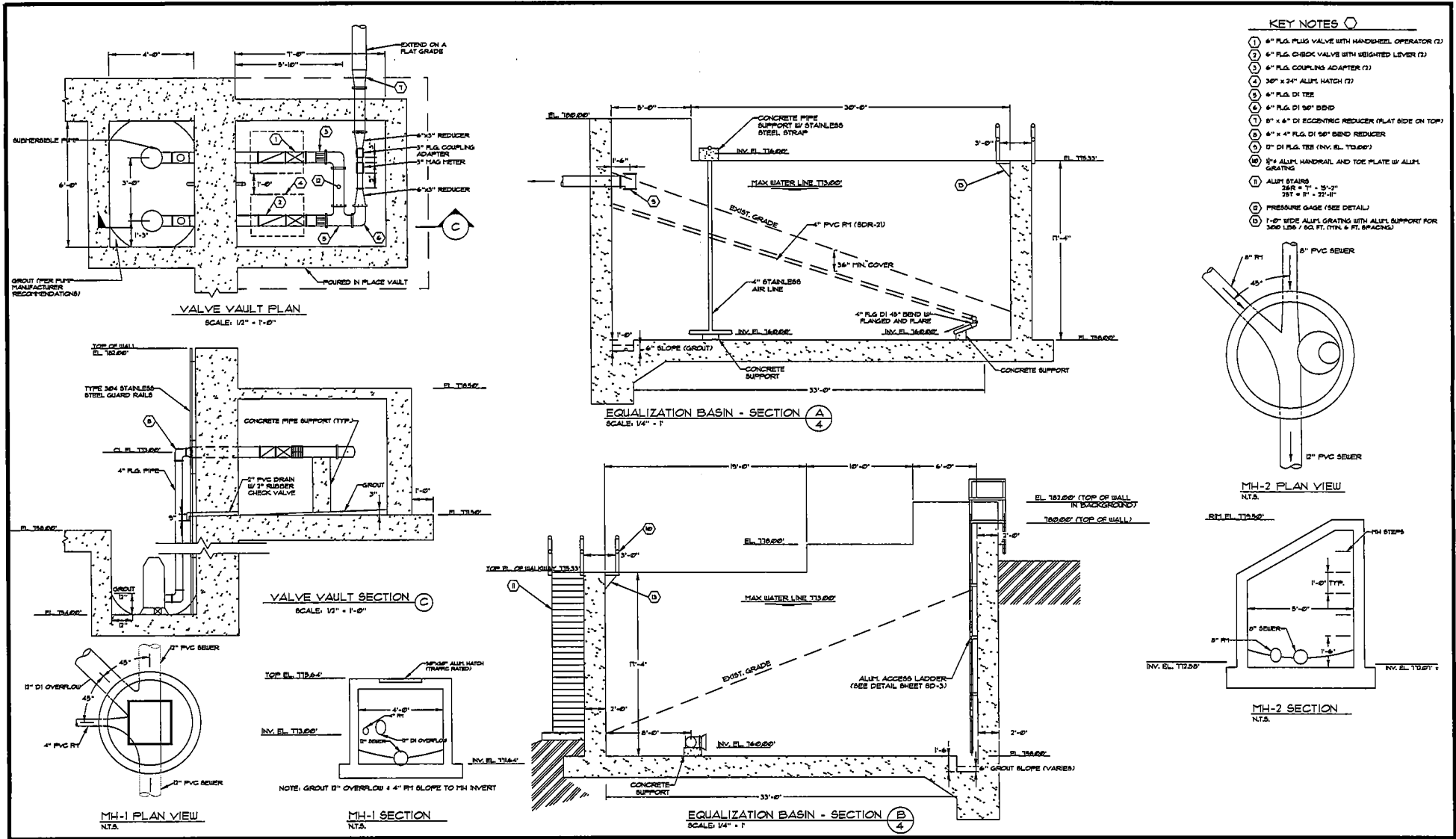
3 HMB CIRCLE
FRANKFORT, KENTUCKY
(502) 695-3800
(502) 695-3802 FAX



200,000 GALLON EQUALIZATION BASIN
GRANT COUNTY SEWER DISTRICT
GRANT COUNTY, KENTUCKY

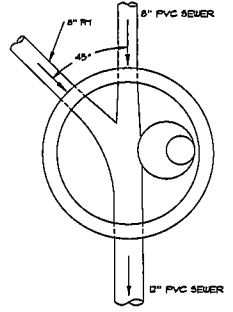
FLOW DIVERSION / SPLITTER BOX - PLANS AND SECTIONS

SHEET
5

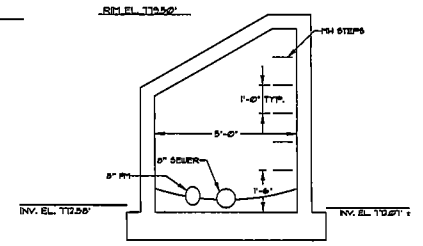


KEY NOTES

- ① 4" PLG. VALVE WITH HAND-HEEL OPERATOR (2)
- ② 6" PLG. CHECK VALVE WITH WEIGHTED LEVER (2)
- ③ 6" PLG. COUPLING ADAPTER (2)
- ④ 30" x 24" ALUM. HATCH (2)
- ⑤ 4" PLG. DI TEE
- ⑥ 4" PLG. DI 90° BEND
- ⑦ 3" x 4" DI ECCENTRIC REDUCER (FLAT SIDE ON TOP)
- ⑧ 4" x 4" PLG. DI 90° BEND REDUCER
- ⑨ 3" DI PLG. TEE (INV. EL. 103.00')
- ⑩ 2" ALUM. HANDRAIL AND TOE PLATE W/ ALUM. GRATING
- ⑪ ALUM. STAIRS
28R = 1" x 3'-2"
28T = 2" x 27'-11"
- ⑫ PRESSURE GAUGE (SEE DETAIL)
- ⑬ 1'-0" SIDE ALUM. GRATING WITH ALUM. SUPPORT FOR 300# LBS / SQ. FT. (TYP. @ FT. SPACING)



MH-2 PLAN VIEW
N.T.S.



MH-2 SECTION
N.T.S.

| NO. | DATE | REVISIONS | CHKD. | APPRD. | DATE |
|-----|------|-----------|-------|--------|------|
| | | | | | |
| | | | | | |
| | | | | | |

| | | | |
|------------------|------|-----------------|--|
| PROJECT: 4360.00 | | DATE: AUG. 2021 | |
| SCALE: AS NOTED | | | |
| DESIGNED BY | NAME | DATE | |
| DRAWN BY | NAP | | |
| CHECKED BY | FBH | | |
| RECORD DWSG. | | | |

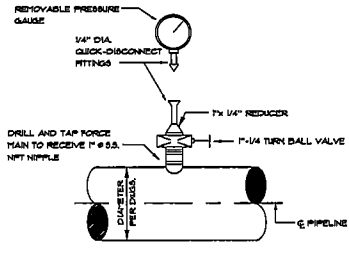


3 HMB CIRCLE
FRANKFORT, KENTUCKY
(502) 635-3800
(502) 635-3010 FAX

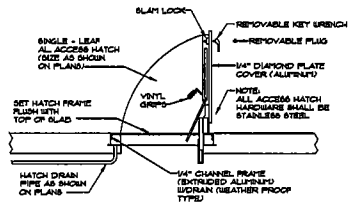


200,000 GALLON EQUALIZATION BASIN
GRANT COUNTY SEWER DISTRICT
GRANT COUNTY, KENTUCKY

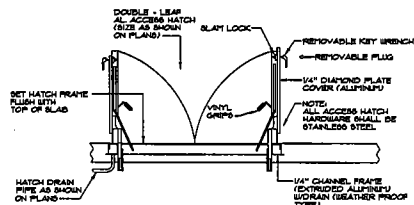
EQUALIZATION BASIN SECTIONS, VALVE VAULT PLAN & SECTIONS,
MH-1 & MH-2 PLAN & SECTION



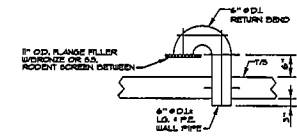
PRESSURE GAUGE TAP
SCALE: N.T.S.



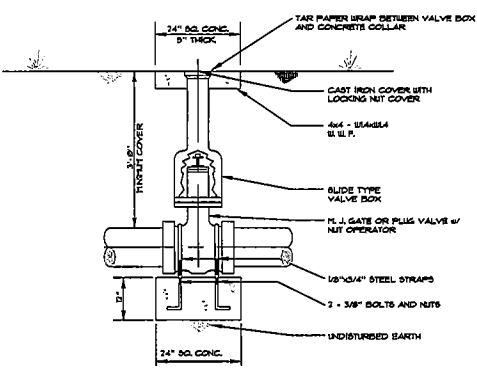
SINGLE - LEAF ALUMINUM ACCESS HATCH
SCALE: N.T.S.



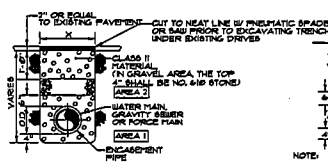
DOUBLE - LEAF ALUMINUM ACCESS HATCH
SCALE: N.T.S.



GRAVITY VENT DETAIL
SCALE: N.T.S.



BURIED VALVE & BOX
SCALE: N.T.S.



BITUMINOUS (GRAVEL) DRIVEWAY AREA

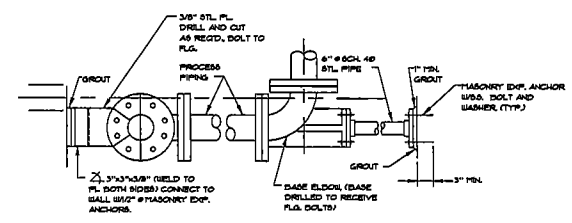
- NOTES:
1. AREA 1 MATERIAL: WATER MAIN, GRAVITY SEWER, AND FORCE MAIN - NO. 3 CRUSHED STONE.
2. AREA 2 - NO. 3 CRUSHED STONE. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE TRENCH SURFACE IN A CONDITION SUITABLE FOR VEHICULAR TRAFFIC.

NORMAL BEDDING

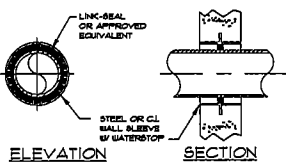
PRESSURE OR GRAVITY

3. REPLACE BITUMINOUS PAVEMENT WITH SAME TYPE AND THICKNESS (7 MIN) AS EXISTING PAVEMENT.
4. IF ROCK IS ENCOUNTERED, A MINIMUM OF 6\"/>

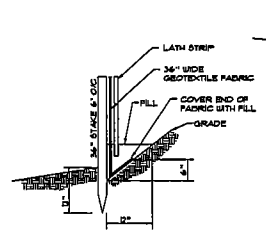
PIPE BEDDING AND BACKFILLING DETAILS
SCALE: N.T.S.



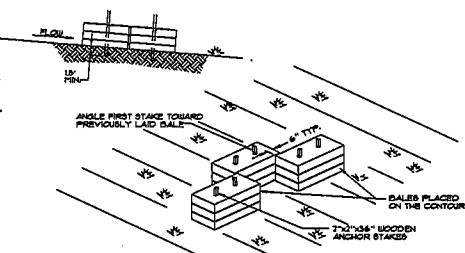
PIPE BRACE DETAIL
SCALE: N.T.S.



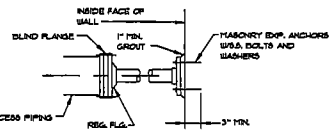
WALL PENETRATION
SCALE: N.T.S.



SILT FENCE TOE-IN DETAIL
SCALE: N.T.S.



STRAW BALE SILT CHECK DETAIL (STEEP SLOPE)
SCALE: N.T.S.



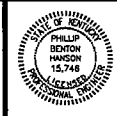
PIPE SUPPORT
SCALE: N.T.S.

| NO. | DATE | REVISIONS | CHKD | APPRD | DATE |
|-----|------|-----------|------|-------|------|
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

| | | |
|-----------------|-----------------|-------|
| PROJECT: 491000 | DATE: AUG. 2001 | |
| SCALE: AS NOTED | | |
| DESIGNED BY: | NAME: RCB | DATE: |
| DRAWN BY: | NAME: SAB | |
| CHECKED BY: | NAME: RCB | |
| RECORD DRWG. | | |



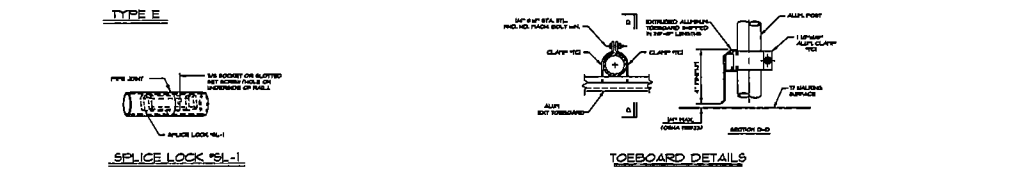
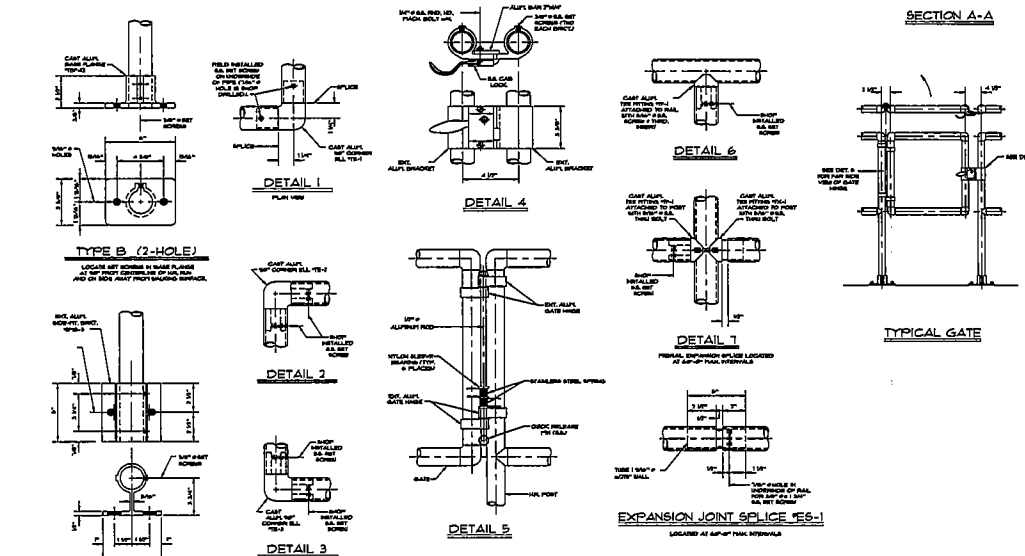
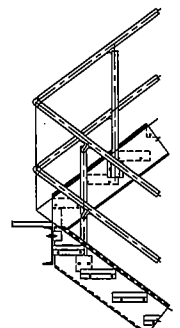
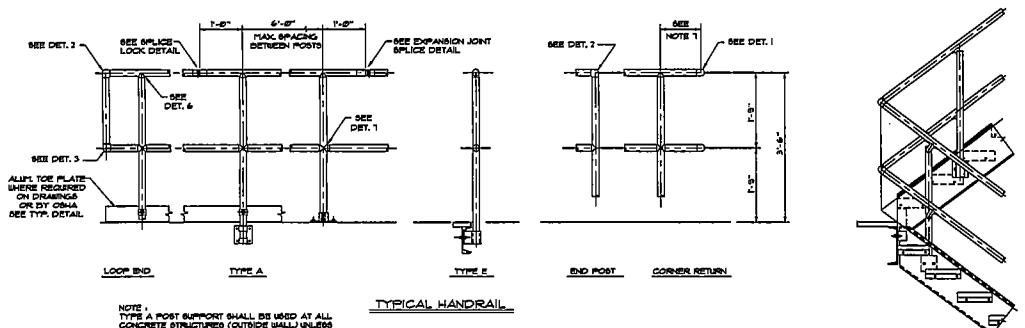
3 HMB CIRCLE
FRANKFORT, KENTUCKY
(502) 635-3800
(502) 635-3810 FAX



200,000 GALLON EQUALIZATION BASIN
GRANT COUNTY SEWER DISTRICT
GRANT COUNTY, KENTUCKY

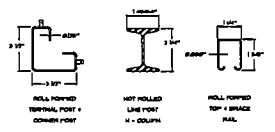
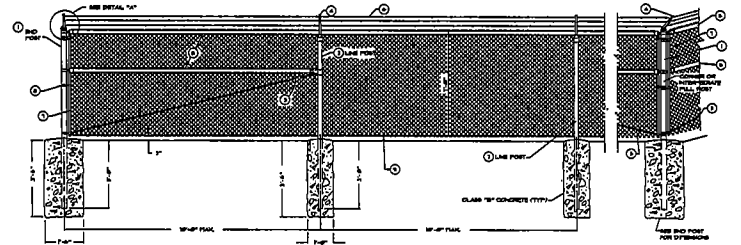
STANDARD DETAILS

SHEET
SD-1



OSHA DESIGN SPECIFICATIONS

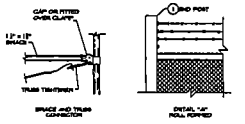
- Handrail shall be the product of a company normally engaged in the manufacture of pipe railing. Railing shall be shop assembled in lengths not to exceed 24 feet for field erection.
- Handrails shall be designed to withstand a 200° concentrated load applied in any direction to the top rail.
- The manufacturer shall submit calculations to the Engineer for approval. Testing of these castings or base assemblies by an independent lab or manufacturer's lab (if manufacturer's lab meets the requirements of the Aluminum Association) will be an acceptable substitute for calculations. Calculations will be required for approval of all other design aspects.
- Post spacing shall be a maximum of 6'-0". Posts and railings shall be a minimum of 1-1/2" schedule 40 aluminum pipe alloy 6063-T6, 6061-T6 or 6051-B-231. The handrail manufacturer shall show that their posts are of adequate strength to meet the loading requirements. If the manufacturer's posts are not of adequate strength, the manufacturer may reduce the post spacing or add reinforcing elements or sag down in order to meet loading requirements.
- The handrail shall be made of pipe joined together with component fittings. Samples of all components, bases, toe plates and pipe must be submitted for approval. Components that are pop-riveted or glued at the joints will not be acceptable. All components must be mechanically fastened with stainless steel hardware.
- Posts shall not interrupt the continuation of the top rail at any point along the railing, including corners and end terminations (OSHA 1926.25). The top surface of the top railing shall be smooth and shall not be interrupted by projecting fittings.
- The sidewall at a corner return shall be able to withstand a 200° load without loosening. The manufacturer is to determine this dimension for their system. Provide physical tests from a laboratory to confirm compliance.
- Expansion bolts shall be spaced 18" apart and 5d edge distance for no reduction in pullout strength. A safety factor of 4 shall be used on expansion bolts, pullout values published by the manufacturer. Expansion bolts shall be stainless steel type 303 wedge bolts and shall be furnished by the handrail manufacturer.
- Toe plate shall conform to OSHA standards. The plate shall be a minimum of 4" high and shall be an extension that attaches to the posts with clamp action will allow for expansion and contraction between posts. Toe plates shall be 1/2" above the walking surface. Toe plates shall be provided on handrails as required by OSHA and/or as shown on drawings. Toe plates shall be shipped loose in stock lengths with pre-manufactured covers for field installation.
- Openings in the railing shall be guarded by a self-closing gate (OSHA 1926.25). Safety chains shall not be used unless specifically shown on the drawings.
- Finish shall be Aluminum Association 900-CC-44 (90-18). The pipe shall be plastic wrapped. The plastic wrap is to be removed after erection.
- Aluminum surfaces in contact with concrete, ground or dissimilar metals will be protected with a coat of bituminous polyurethane isolators or other approved material.



CONSTRUCTION REQUIREMENTS:
ALL POSTS SHALL BE SET IN CONCRETE TO THE DIMENSIONS SHOWN ON THIS DRAWING.
1 1/2" NPS OR A 1 1/2" X 1 1/2" ROLL FORMED SECTION BOTTOM RAIL SHALL BE PROVIDED AROUND ALL ENTRY INSTALLATIONS AND AT OTHER LOCATIONS DETERMINED BY THE ENGINEER.
FINISH:
P-1: HMB FINISH SHALL HAVE 7 FABRIC WELLS. V-1: HMB FINISH SHALL HAVE 6 FABRIC WELLS. H-1: HMB FINISH SHALL HAVE 6 FABRIC WELLS. H-2: HMB FINISH SHALL HAVE 6 FABRIC WELLS.
P-2: HMB FINISH SHALL HAVE 7 FABRIC WELLS.
ALL FINISH FITTERS SHALL COMPLY WITH AESTY-F-04.
POST CAPS AND SOCKET TYPE BRACE AND CONNECTIONS SHALL BE GALVANNEED FRAMED STEEL, CAP FOR ON OTHER TYPE AS APPROVED BY THE ENGINEER. THEY SHALL BE PROVIDED IN A MANNER TO EXCLUDE FOREIGN PROY FROM THE POSTS AND RAILS.
NPS = NOMINAL PIPE SIZE - ASTM F1554 AND F1554 HEAVY INDUSTRIAL POSTS SHALL COMPLY.

LEGEND / ALTERNATES

| TUBULAR | ROLL FORMED |
|----------------------------------|-----------------------------------|
| 1 1/2" NPS END POST | 3 1/2" X 3 1/2" END POST |
| 2" NPS LINE POST | 2 1/4" X 2 1/4" LINE POST |
| 3/4" DIA. TRUSS ROD AND TIGHTNER | 3/8" DIA. TRUSS ROD AND TIGHTNER |
| BARBED WIRE ARMS | BARBED WIRE ARMS |
| 1 1/4" NPS TOP RAIL, 4 BRACE | 1 1/4" X 1 1/2" TOP RAIL, 4 BRACE |
| BARBED WIRE | BARBED WIRE |
| FLAT TENSION BAR | NOT REQUIRED |
| BRACE BAND AND TENSION BAND | NOT REQUIRED |
| TENSION WIRE | TENSION WIRE |



| | | | | | | |
|-----|------|-----------|------|-------|------|--------------|
| NO. | DATE | REVISIONS | CHKD | APPRD | DATE | RECORD DESG. |
| | | | | | | |

PROJECT: 430200 DATE: AUG. 2021
SCALE: AS NOTED

| | | | |
|-------------|-----|------|------|
| DESIGNED BY | RCD | NAME | DATE |
| DRAWN BY | SAB | NAME | DATE |
| CHECKED BY | RCD | NAME | DATE |



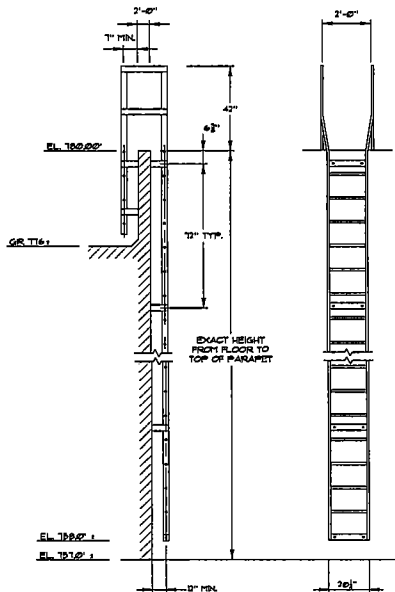
3 HMB CIRCLE
FRANKFORT, KENTUCKY
(502) 695-9800
(502) 695-9810 FAX



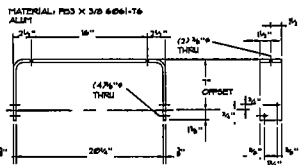
200,000 GALLON EQUALIZATION BASIN
GRANT COUNTY SEWER DISTRICT
GRANT COUNTY, KENTUCKY

SHEET
SD-2

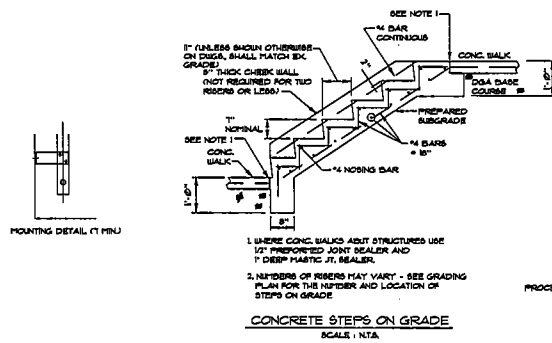
STANDARD DETAILS



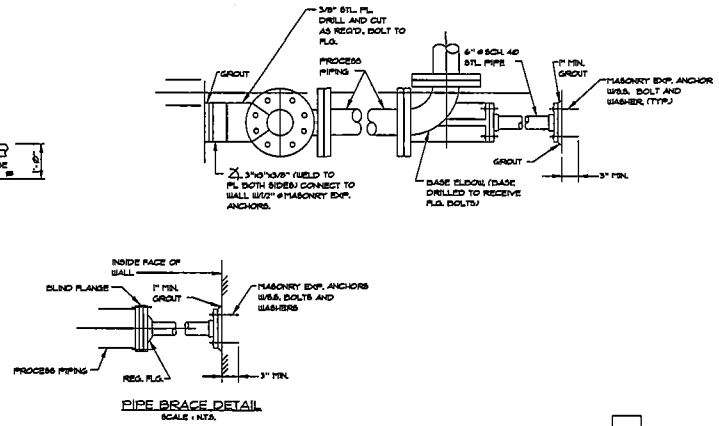
MODEL 562 ALUMINUM LADDER
SCALE: N.T.S.



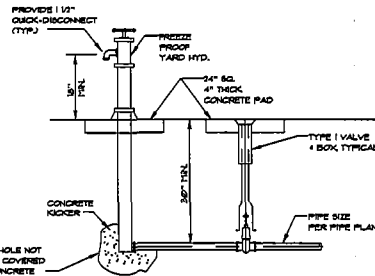
562 BRACKET DETAIL
SCALE: N.T.S.



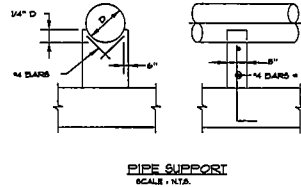
CONCRETE STEPS ON GRADE
SCALE: N.T.S.



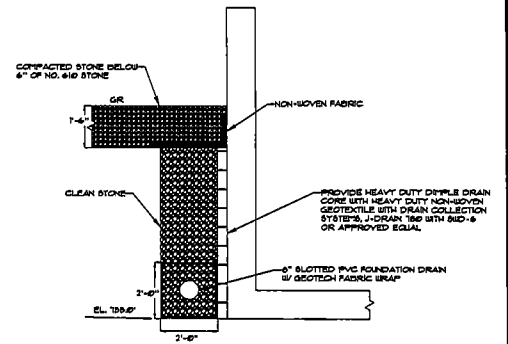
PIPE BRACE DETAIL
SCALE: N.T.S.



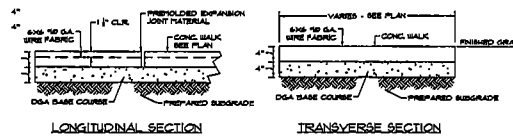
FREEZEPROOF YARD HYDRANT
SCALE: N.T.S.



PIPE SUPPORT
SCALE: N.T.S.



EQUALIZATION BASIN BACKFILL/DRAINAGE REQUIREMENTS
SCALE: N.T.S.



CONCRETE SIDEWALK - TYPE 2
SCALE: N.T.S.

NOTE:
1. EXPANSION JOINTS TO BE 34'-0\"/>

| NO. | DATE | REVISIONS | CHKD | APPRD | DATE |
|-----|------|-----------|------|-------|------|
| | | | | | |
| | | | | | |
| | | | | | |

| | | |
|----------------------------------|------|------|
| PROJECT: 4310.00 DATE: AUG. 2021 | | |
| SCALE: AS NOTED | | |
| DESIGNED BY | NAME | DATE |
| DRAWN BY | NAP | |
| CHECKED BY | PSH | |
| RECORD DRAWG. | | |



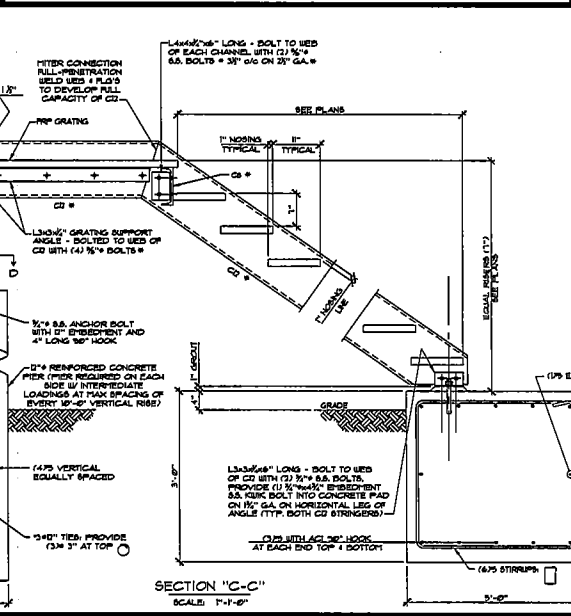
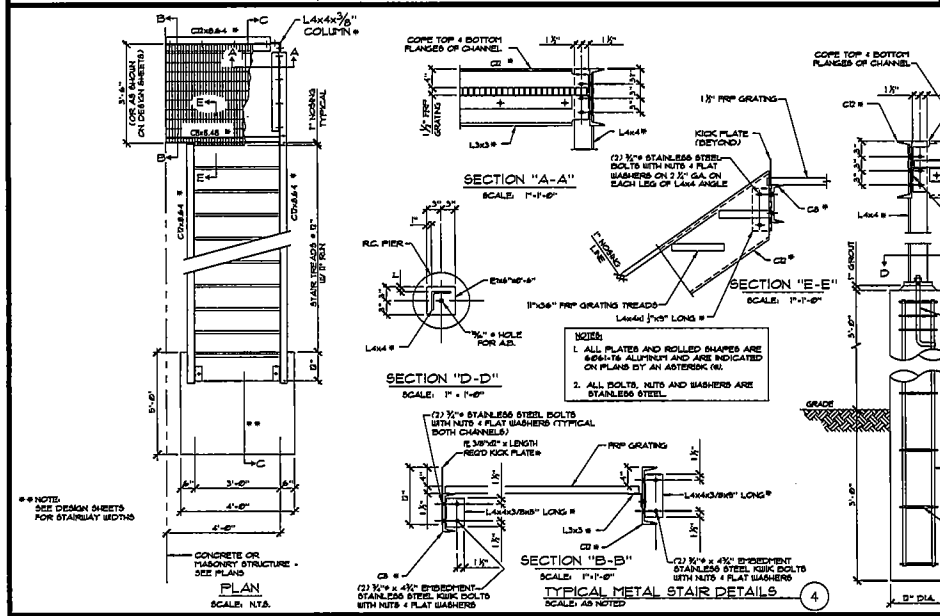
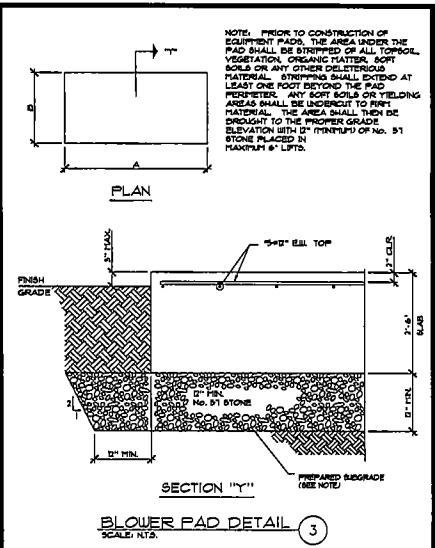
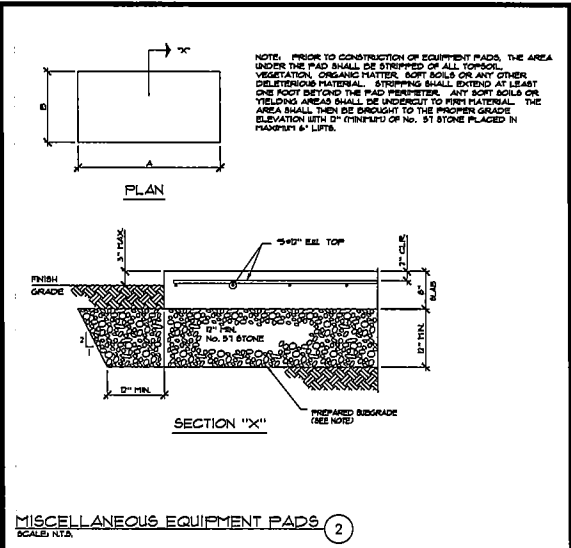
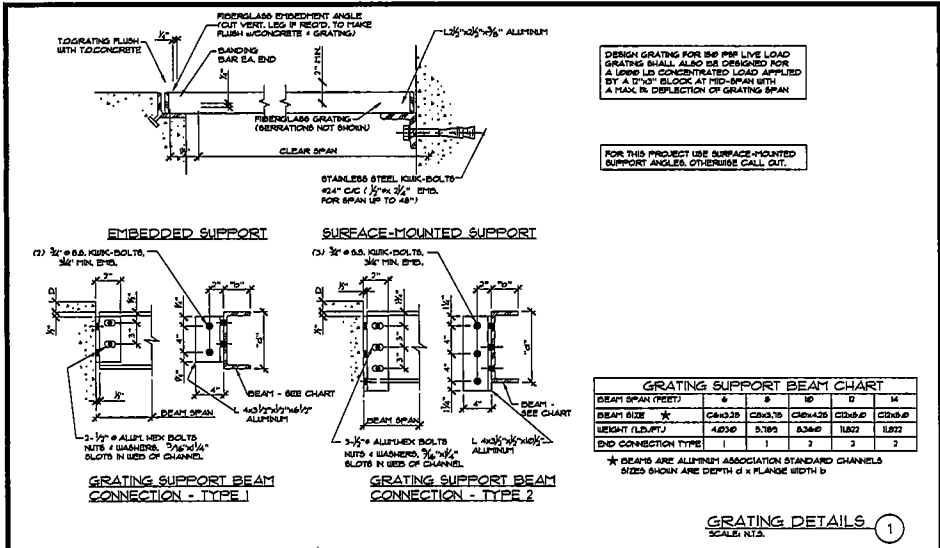
3 HMB CIRCLE
FRANKFORT, KENTUCKY
(502) 695-3800
(502) 695-3810 FAX



200,000 GALLON EQUALIZATION BASIN
GRANT COUNTY SEWER DISTRICT
GRANT COUNTY, KENTUCKY

STANDARD DETAILS

SHEET
SD-3



| NO. | DATE | REVISION | CHK'D | APPR'D | DATE |
|-----|------|----------|-------|--------|------|
| | | | | | |

| | |
|------------------|----------------|
| PROJECT: 4360.00 | DATE: AUG 2021 |
| SCALE: AS NOTED | |
| DESIGNED BY: RCB | NAME: RCB |
| DRAWN BY: SDB | DATE: |
| CHECKED BY: RCB | |
| RECORD DWG.: | |



3 HMB CIRCLE
FRANKFORT, KENTUCKY
(502) 695-3800
(502) 695-3810 FAX



200,000 GALLON EQUALIZATION BASIN
GRANT COUNTY SEWER DISTRICT
GRANT COUNTY, KENTUCKY

STANDARD DETAILS

SHEET
SD-4