LAKE HILLS IRRIGATION PUMP STATION

90% SUBMITTAL

SECTION 22/23 TOWNSHIP 20S RANGE 25E HOWEY-IN-THE-HILLS, FLORIDA JULY 2025

ENGINEER

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TEL: (352)622-7163 EXT. 132

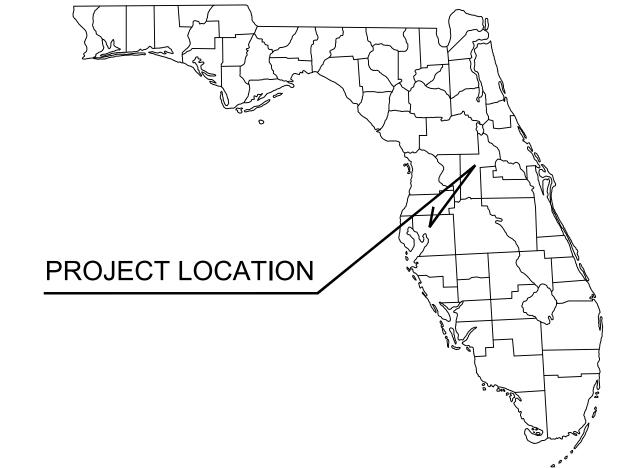
OWNER/DEVELOPER

READER COMMUNITIES
5850 T.G. LEE BOULEVARD
SUITE 200
ORLANDO, FL, 32822
CONTACT: DEAN A. BARBERREE
EMAIL: DEAN@READERCOMMUNITIES.COM
TEL: (407)856-4899



PROJECT MAP

SCALE: 1" = 300'



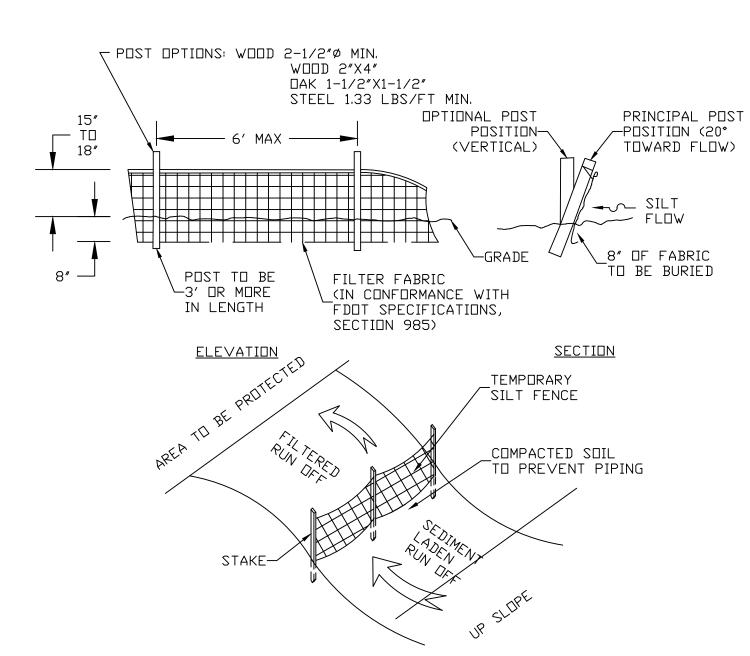


5850 T.G. LEE BOULEVARD, SUITE 200 ORLANDO, FL 32822 TEL. (407)856-4899



INDEX OF SHEETS SHEET TITLE SHEET NO. COVER C-001 C-002 **EROSION CONTROL PLAN** C-101 SITE PLAN C-102 PLAN & PROFILE PLAN & PROFILE (CONT.) C-103 C-201 PUMP STATION PLAN VIEW C-202 PUMP STATION SECTION VIEW C-203 CHLORINE ROOM C-301 **DETAILS** C-302 DETAILS A-101 **INDEX & SPECIFICATIONS** A-201 FLOOR PLAN & ELEVATIONS A-202 WALL SECTION& DETAILS FOUNDATION & ROOF FRAMING S-101 PLANS & DETAILS MECHANICAL NOTES M-001 M-101 FLOOR PLAN MECHANICAL ELECTRICAL SITE PLAN, NOTES, E-01 SYMBOLS & ABBREVIATIONS E-02 SINGLE LINE DIAGRAM E-03 **ELEMENTARY DIAGRAMS** E-04 PUMP STATION POWER PLAN E-05 PUMP STATION LIGHTING PLAN PUMP STATION LIGHTNING E-06 PROTECTION & GROUNDING PLAN E-07 ELECTRICAL DETAILS & SCHEDULES INSTRUMENTATION NOTES, I-01 SYMBOLS, & ABBREVIATIONS I-02 **P&ID EFFLUENT** I-03 SODIUM HYPO SYSTEM P&ID I-04 **NETWORK DIAGRAM**

FLOATING TURBIDITY BARRIER DETAIL NOT TO SCALE



1. THE FOLLOWING LIST REPRESENTS A BASIC EROSION AND SEDIMENT CONTROL PROGRAM WHICH IS TO BE IMPLEMENTED TO HELP PREVENT OFF SITE SEDIMENTATION DURING AND AFTER CONSTRUCTION OF THE PROJECT.

2. TEMPORARY EROSION CONTROL TO BE UTILIZED DURING CONSTRUCTION AT AREAS DESIGNATED BY THE ENGINEER OR AREAS ON SITE WHERE UNSTABILIZED GRADES MAY CAUSE EROSION PROBLEMS. EROSION CONTROL MAY BE REMOVED AFTER UPSLOPE AREA HAS BEEN STABILIZED BY SOD, OR COMPACTED AS DETERMINED BY THE OWNER.

3. PERMANENT EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED AT THE EARLIEST PRACTICAL TIME CONSISTENT WITH GOOD CONSTRUCTION PRACTICES. ONE OF THE FIRST CONSTRUCTION ACTIVITIES SHOULD BE THE PLACEMENT OF PERMANENT AND TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES AROUND THE PERIMETER OF THE PROJECT OR THE INITIAL WORK AREA TO PROTECT THE PROJECT, ADJACENT PROPERTIES AND WATER RESOURCES.

4. TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE COORDINATED WITH PERMANENT MEASURES TO ASSURE ECONOMICAL, EFFECTIVE AND CONTINUOUS CONTROL THROUGHOUT THE CONSTRUCTION PHASE. TEMPORARY MEASURES SHALL NOT BE CONSTRUCTED FOR EXPEDIENCY IN LIEU OF PERMANENT MEASURES.

5. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE ADEQUATELY MAINTAINED TO PERFORM THEIR INTENDED FUNCTION DURING CONSTRUCTION OF THE PROJECT.

6. NECESSARY REPAIRS TO BARRIERS OR REPLACEMENT OF BARRIERS SHALL BE ACCOMPLISHED PROMPTLY.

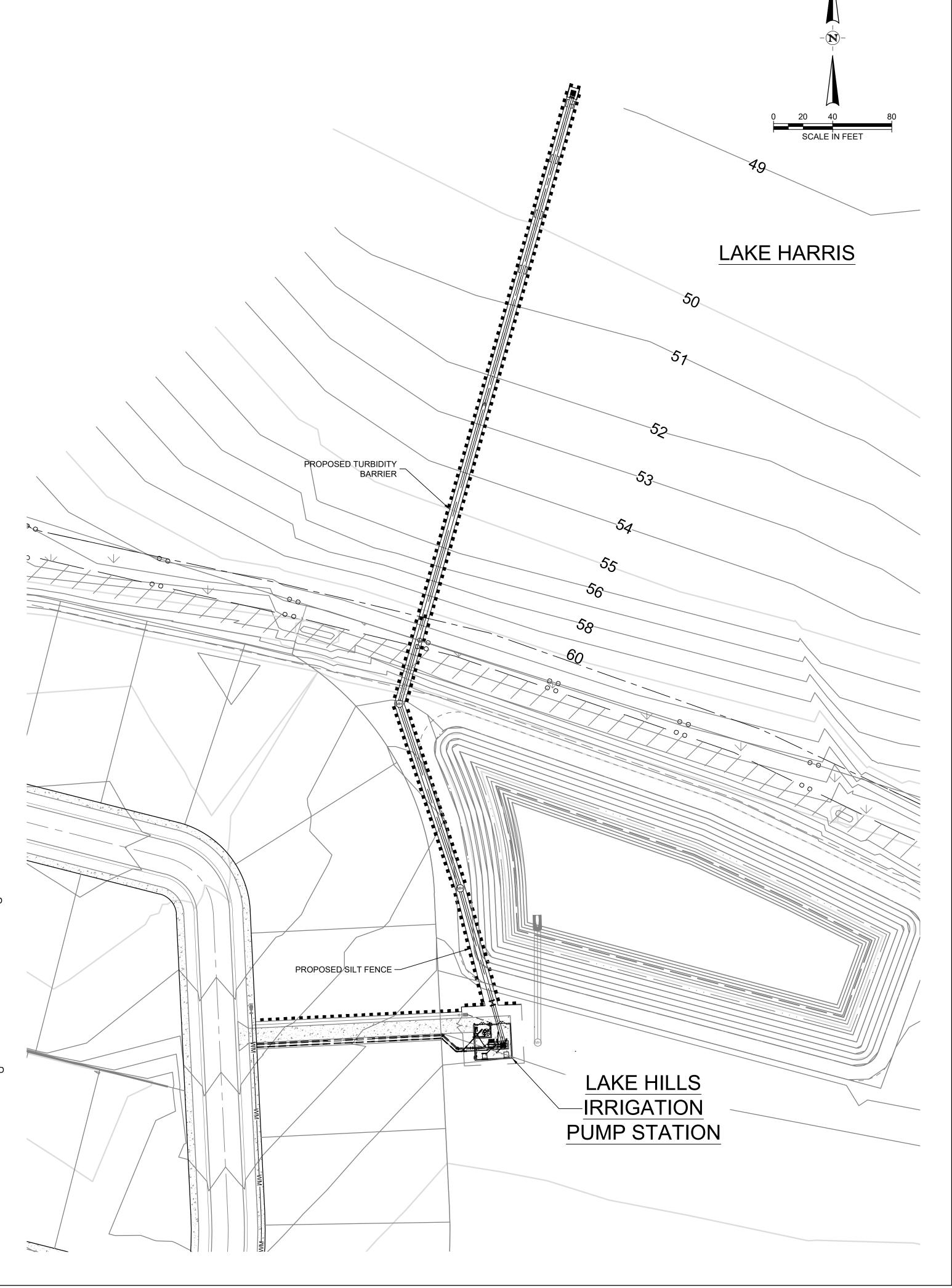
7. SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH RAINFALL. THEY MUST BE REMOVED WHEN THE LEVEL OF DEPOSITION REACHES APPROXIMATELY ONE HALF THE HEIGHT OF THE BARRIER.

8. MATERIAL FROM SEDIMENT TRAPS SHALL NOT BE STOCKPILED OR DISPOSED OF IN A MANNER WHICH MAKES THEM READILY SUSCEPTIBLE TO BEING WASHED INTO ANY WATERCOURSE BY RUNOFF OR HIGH WATER.

9. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE BARRIERS ARE NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED AND SEEDED.

FLORIDA DOT TYPE III SILT FENCE AND EROSION CONTOL

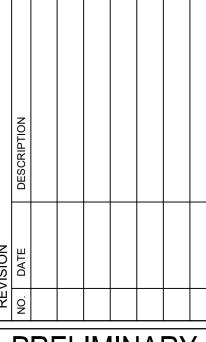
NOT TO SCALE



KE HILLS IRRIGATION
PUMP STATION







PRELIMINAR

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THESE DOCUMENTS ARE FOR IN

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Rob A. Ern 45013

NAME P.E. LICENSE NO. 7/18/2025

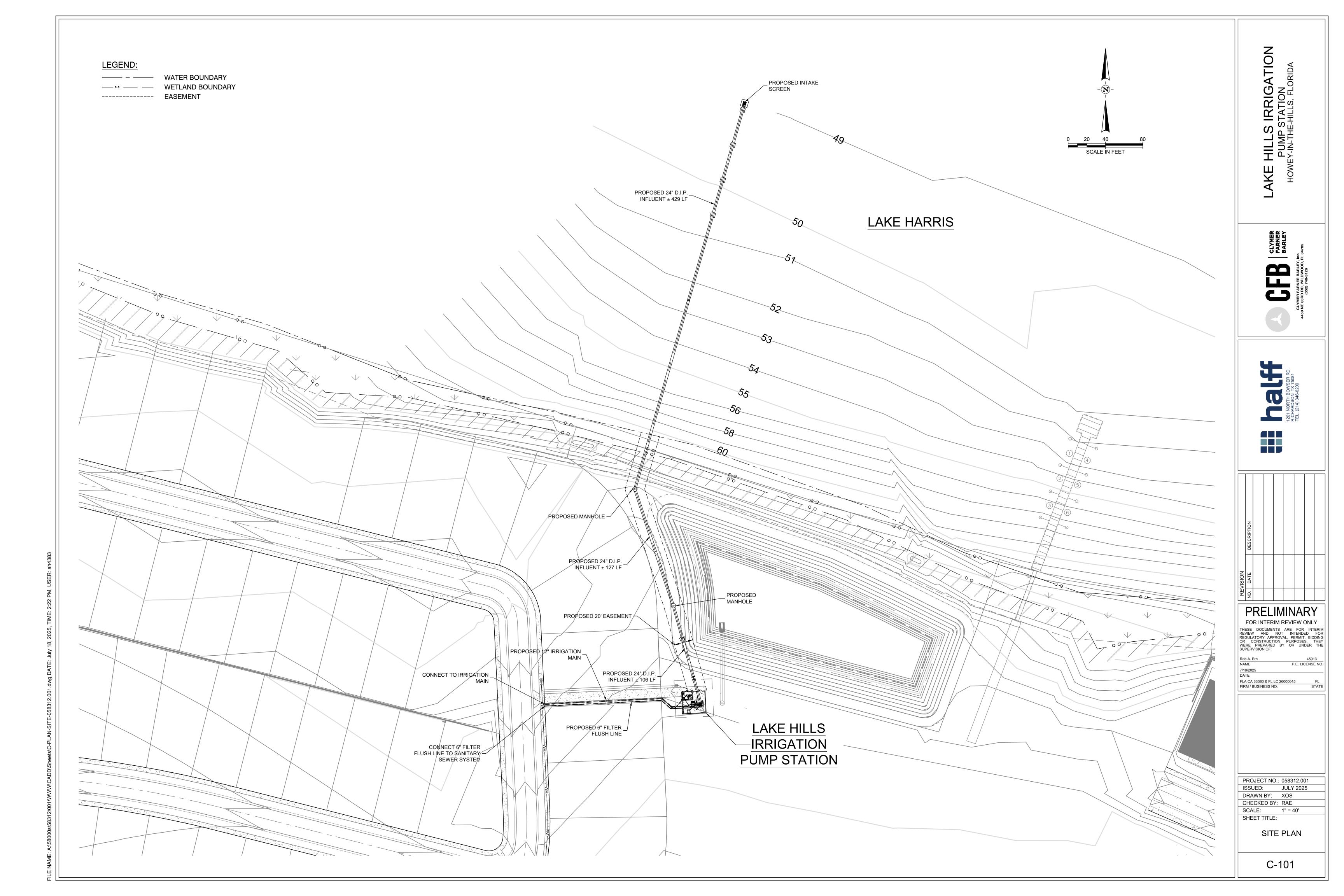
DATE

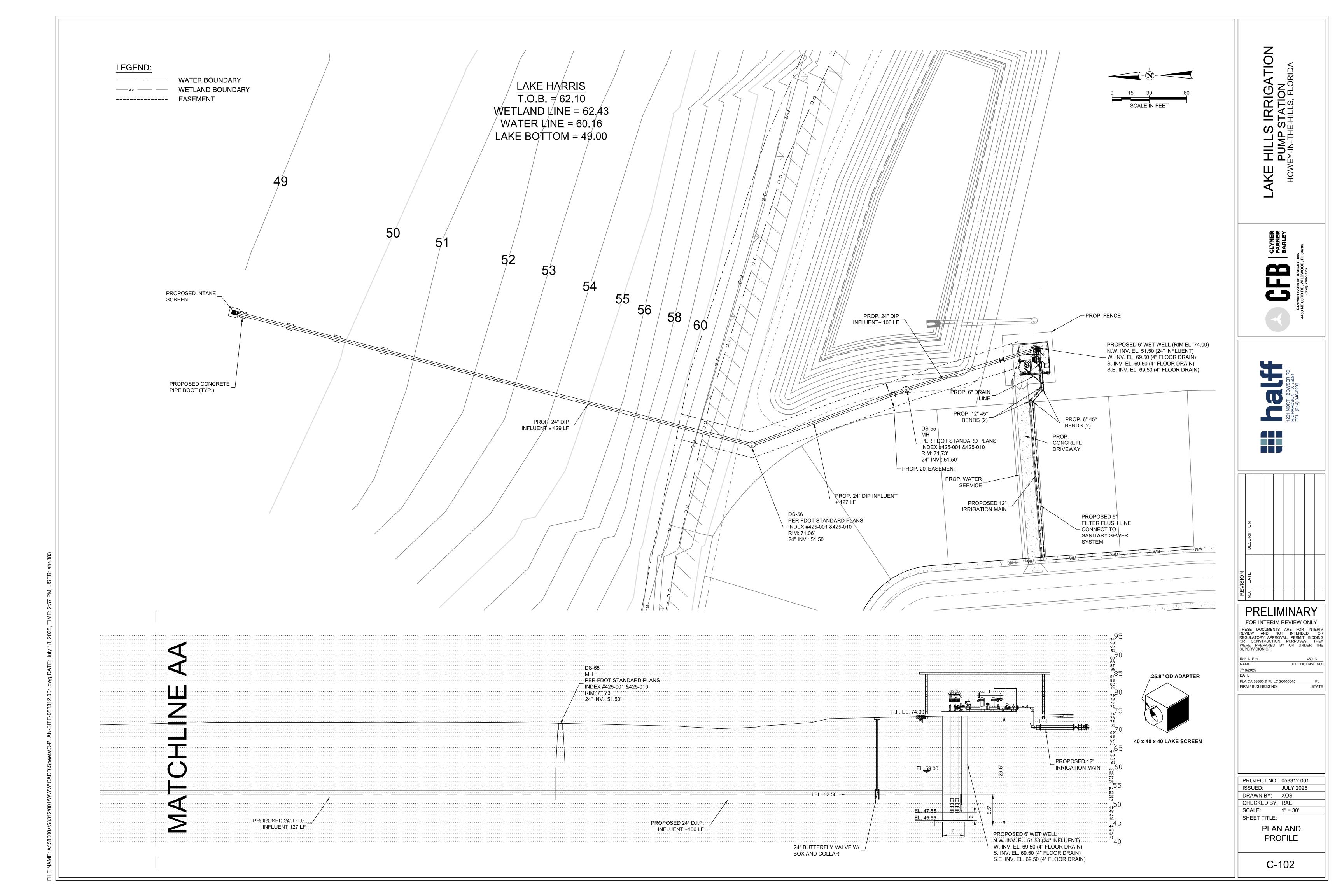
FLA CA 33380 & FL LC 26000645 FL FIRM / BUSINESS NO. STA

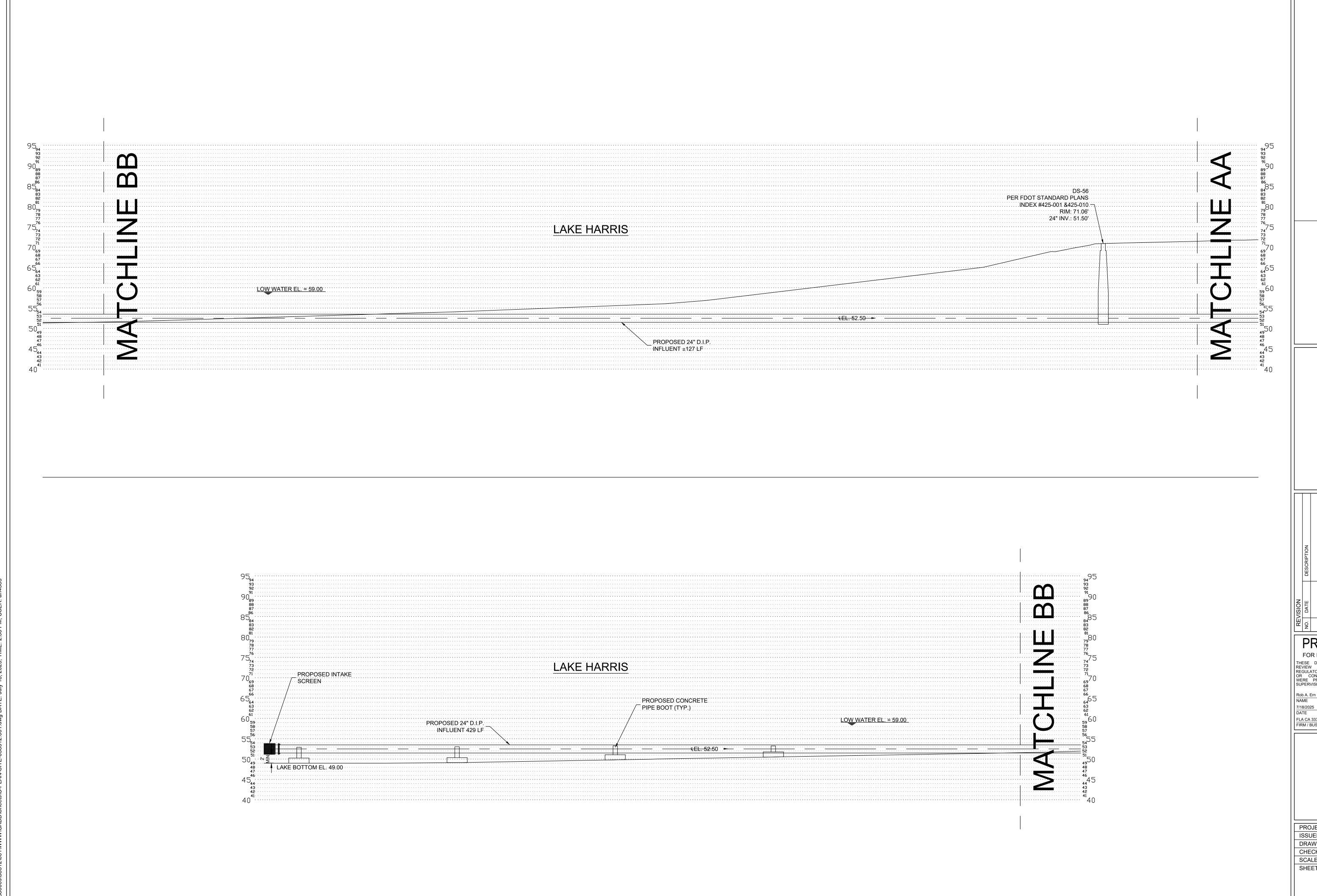
PROJECT NO.: 058312.001
ISSUED: JULY 2025
DRAWN BY: XOS
CHECKED BY: RAE
SCALE: 1" = 40'

EROSION CONTROL PLAN

SHEET TITLE:

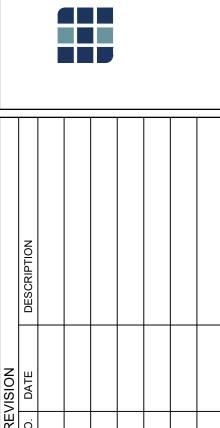






AKE HILLS IRRIGATION
PUMP STATION
HOWEY-IN-THE-HILLS, FLORIDA





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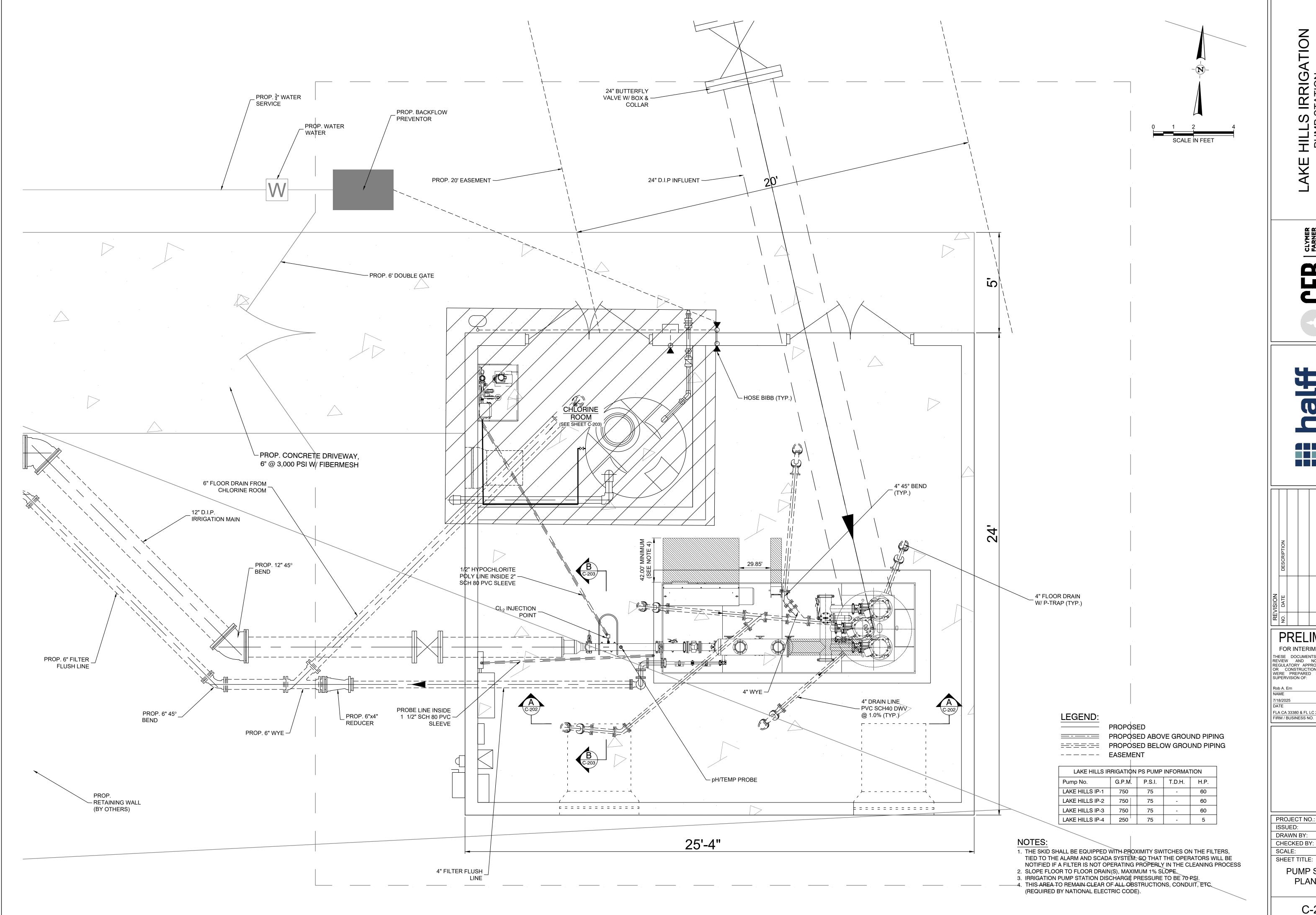
DATE

FLA CA 33380 & FL LC 26000645 FL

FIRM / BUSINESS NO. STATE

PROJECT NO.: 058312.001
ISSUED: JULY 2025
DRAWN BY: XOS
CHECKED BY: RAE
SCALE: 1" = ##'

SHEET TITLE:
PLAN AND
PROFILE
(CONT.)





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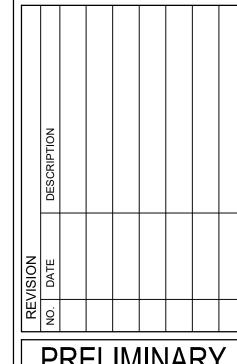
FLA CA 33380 & FL LC 26000645 FIRM / BUSINESS NO.

PROJECT NO.: 058312.001 ISSUED: JULY 2025 DRAWN BY: XOS CHECKED BY: RAE

SCALE: 1" = 2'

> PUMP STATION **PLAN VIEW**





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Rob A. Ern 45013

NAME P.E. LICENSE NO.

7/17/2025

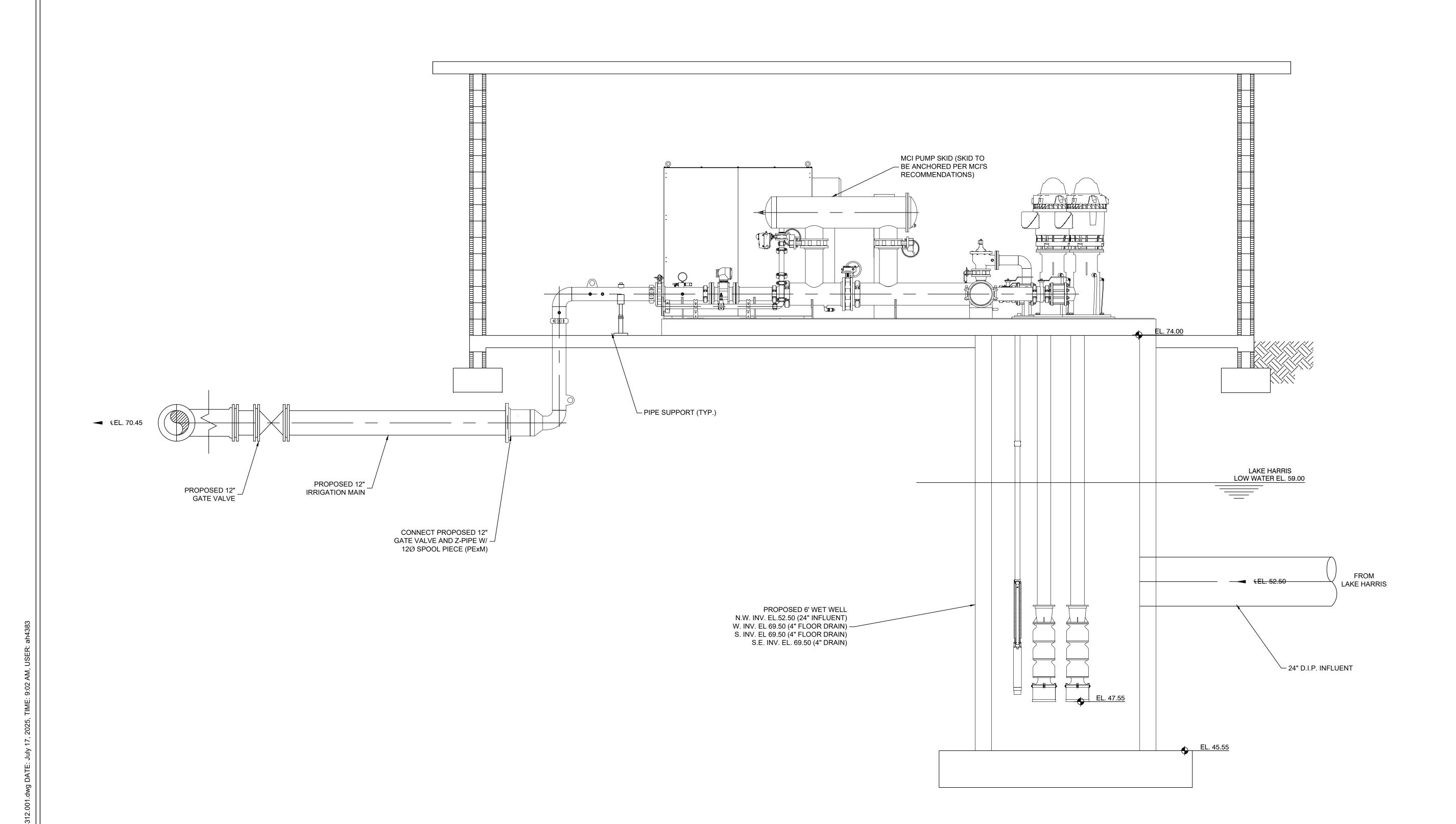
DATE

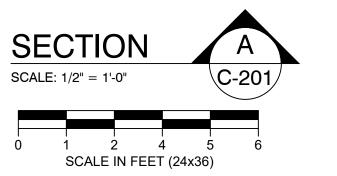
FLA CA 33380 & FL LC 26000645

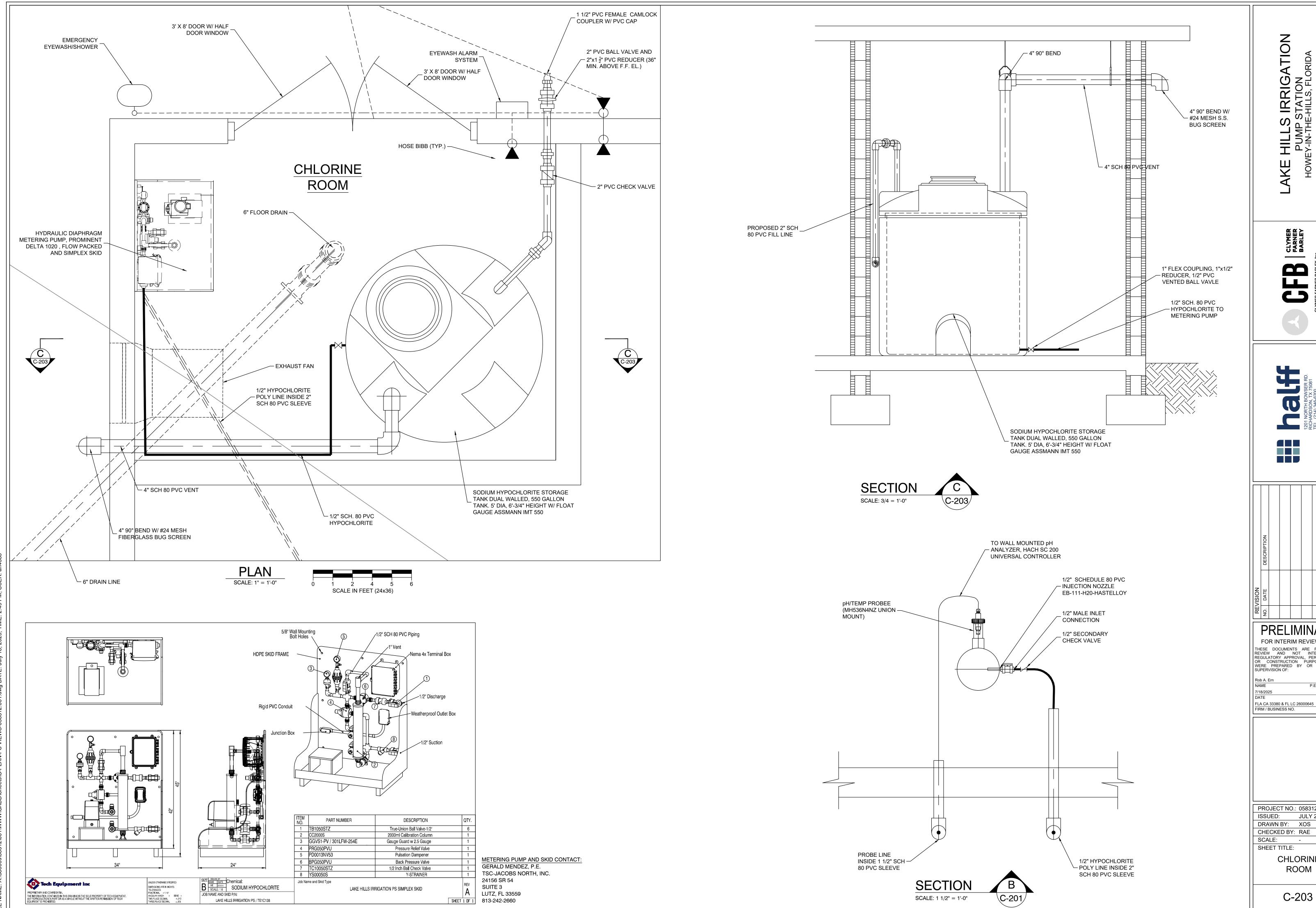
FIRM / BUSINESS NO. STATE

PROJECT NO.: 058312.001
ISSUED: JULY 2025
DRAWN BY: XOS
CHECKED BY: RAE
SCALE: 1" = 24'

PUMP STATION SECTION VIEW







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PROJECT NO.: 058312.001 JULY 2025 DRAWN BY: XOS CHECKED BY: RAE

CHLORINE

ROOM

PROJECT NO.: 058312.001 ISSUED: JULY 2025 1" = 1'

DETAILS

C-301

8' MIN. (NO JOINTS ALLOWED) 8' MIN. (NO JOINTS ALLOWED) ON LARGER MAIN REDUCER RESTRAINTS REQ. (a) ALL SIDES (TYP.) 11.25° BEND DEAD END/PLUG 90° BEND

TABLE OF THRUST RESTRAINT LENGTHS															
PIPE SIZE (inches)	90° BEND		45° BEND		22 1/2° BEND		11 1/4" BEND		TEES		DEAD END & PLUG		REDUCER		
	P.V.C. (L)	DUCTILE IRON (L)	P.V.C. (L)	DUCTILE IRON (L)	P.V.C. (L)	DUCTILE IRON (L)	P.V.C. (L)	DUCTILE IRON (L)	P.V.C. (L)	DUCTILE IRON (L)	P.V.C. (L)	DUCTILE IRON (L)	PIPE SIZES	P.V.C. (L)	DUCTILE IRON (L)
4	20'	16'	8'	7'	4¹	3'	2'	2'	15'	10'	45'	29'	6"x4"	33'	21'
6	28'	22'	12'	9'	6'	4'	3'	2'	33'	21'	63'	40'	8"x6"	34'	22'
8	36'	29'	15'	12'	7'	6'	4'	3'	52'	33'	82'	52'	10"x8"	33'	21'
10	43'	34'	18'	14'	9'	7'	4'	3'	68'	43'	98'	63'	12"x10"	34'	22'
12	50'	40'	21'	17'	10'	8'	5'	4'	84'	54'	116'	74'	16"x12"	63'	40'
16	63'	51'	26'	21'	13'	10'	6'	5'	116'	74'	148'	94'	18"x16"	33'	21'
18	70,	56'	29'	23'	14'	11'	7'	6'	131'	83'	163'	103'	20"x18"	33'	21'
20	75'	61'	31'	25'	15'	12'	7'	6'	145'	92'	178'	113'	20"x20"	62'	39'
24	86'	70'	36'	29'	17'	14'	9'	7'	173'	110'	207'	132'			

THRUST RESTRAINT DETAILS

THRUST RESTRAINT DESIGN NOTES

- RESTRAINT JOINTS, FITTINGS, & VALVE REQUIREMENTS CALCULATED BY THE THRUST RESTRAINT DESIGN PROGRAM PROVIDED BY UNI-FLANGE, THE FORD METER BOX COMPANY, INC.
- 2. DATA BASED ON MAX. PRESSURE OF 150 P.S.I., THE UNIFIED SOILS CLASSIFICATION SYSTEM (SOIL TYPE SP) THE PIPE BEDDED IN NATIVE SOIL W/A MINIMUM OF 2.5' COMPACTED FILL OVER THE PIPE, AND USING A SAFETY FACTOR OF 1.5 FOR THE DATA.
- 3. ALL FITTINGS & VALVES SHALL HAVE RESTRAINED JOINTS PER SPECIFICATIONS & ALL BELL & SPIGOT JOINTS TO BE RESTRAINED WITH A RESTRAINING HARNESS WITHIN THE REQUIRED LENGTH OF RESTRAINED PIPE (L).
- 4. THRUST BLOCKS SHALL BE USED ONLY AS SPECIFIED BY PROJECT ENGINEER.

#14 THW LOCATING WIRE

(SOLID COPPER WIRE

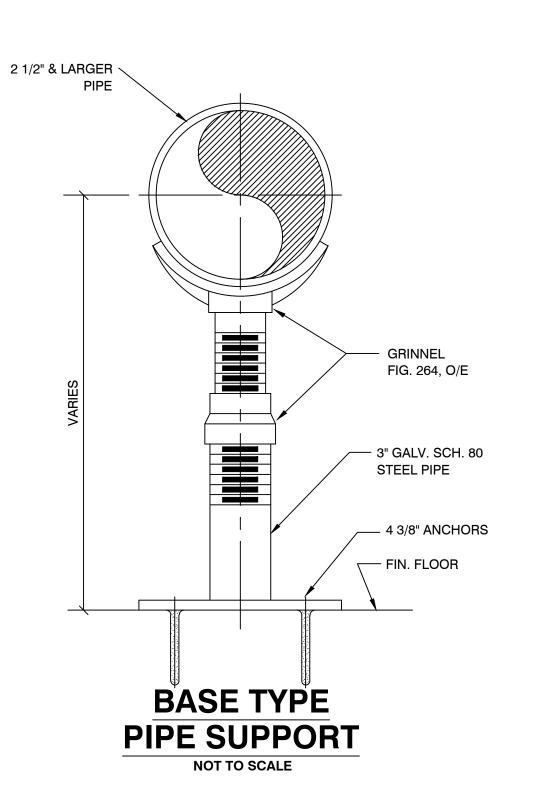
WITH BLUE COATING)

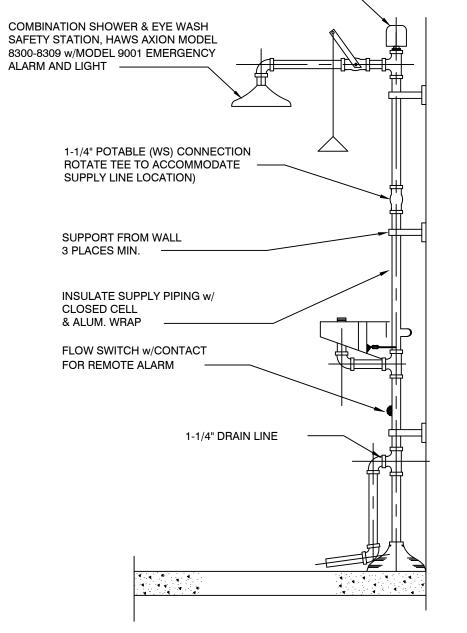
UTILITY SEPARATIONS

PIG TAIL WIRE AFTER

PASSING THROUGH SPLIT BOLT

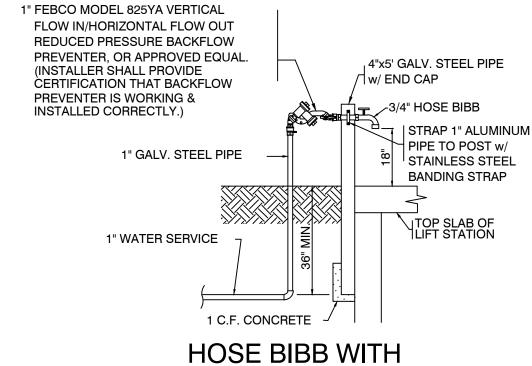
1/4" x 3/4" SPLIT BOLT





EMERGENCY LIGHT AND HORN

EMERGENCY EYE WASH AND SHOWER NOT TO SCALE



BACKFLOW PREVENTER

NOT TO SCALE

-6"x6"x10/10 WWF

(TYP.)

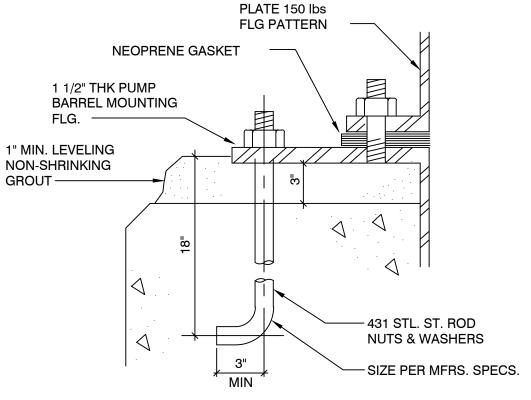
5'-0"

4" (MIN.)

PUMP BASE SOLE - 431 STL. ST. ROD NUTS & WASHERS

PUMP BASE ANCHOR

NOT TO SCALE



LOCATING WIRE SPLICING NOT TO SCALE

1. THE ENDS OF ALL LOCATING WIRES, WHETHER THEY ARE

SPLICED, CONNECTED, OR TERMINATED, SHALL HAVE THE

LAST THREE INCHES PIG TAILED AS DETAILED HEREON.

2. AFTER INSTALLATION OF THE LOCATING WIRE THE SYSTEM

TO ENSURE THAT THE SYSTEM IS FUNCTIONAL.

SHALL BE SUBJECTED TO TESTING. IN THE PRESENCE OF

THE TOWN UTILITIES STAFF PRIOR TO BACKFILL, IN ORDER

acuum-Type Sanitary Sewer Reclaimed Water Main DETAIL OF ITEM 1.(a) DETAIL OF ITEM 1.(b) DETAIL OF ITEM 1.(c) 12" Minimum cuum-Type Sanitary Sewer torm Water Force Main 12" MINIMUM 12" Minimum Water Main Water Main Water Main DETAIL OF ITEM 2.(b) DETAIL OF ITEM 2.(c) DETAIL OF ITEM 2.(a)

General Water Notes

- WATER SYSTEM COMPONENTS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH ALL LOCAL CODES AND REGULATIONS, CLEANED, DISINFECTED AND BACTERIOLOGICALLY CLEARED FOR SERVICE IN ACCORDANCE WITH THE LATEST AWWA STANDARDS AND CHAPTER 62-555 FLORIDA ADMINISTRATIVE CODE
- ALL PIPING SHALL BEAR THE "NSF" SEAL FOR POTABLE WATER. WATER MAINS SHALL BE PVC CONFORMING TO AWWA C-900, DR 25 FOR PIPE SIZES 4"-12". PIPES 14" OR LARGER SHALL BE AWWA C-905, DR 18.
 ALL COUPLINGS, CLEANING COMPOUNDS, SOLVENTS, LUBRICANTS, AND PIPE PREPARATION, FOR LAYING, SHALL BE IN ACCORDANCE WITH THE PIPE MANUFACTURERS LATEST RECOMMENDATIONS.
- DEPTH OF WATER LINES TO BE 36" MINIMUM COVER FROM FINISH GRADE. . WATER MAINS TO BE LOCATED 6.00' FROM BACK OF CURB OR EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
- ALL SLEEVES UNDER PAVEMENT SHALL EXTEND 5' BEYOND THE BACK DISINFECTING: FOLLOWING THE PRESSURE TESTING, THE CONTRACTOR SHALL DISINFECT ALL SECTIONS OF THE WATER DISTRIBUTION SYSTEM.
- DISINFECTION SHALL BE IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF AWWA STANDARD C651 "DISINFECTING WATER MAINS", AND ALL APPROPRIATE AGENCY APPROVAL.
- ALL HYDROSTATIC TEST SHALL BE IN ACCORDANCE WITH AWWA C600 FOR DUCTILE IRON PIPE AND C605/M23 FOR PVC PIPE.
- ALL WATER MAINS SHALL BE INSTALLED. PRESSURE AND LEAK TESTED IN ACCORDANCE WITH AWWA C600, (62-555.320(21)(b)1 AND 62-555.330, F.A.C. ALL INSTALLATION, TESTING AND FIELD PROCEDURES MUST BE PROVIDED AND MUST CONFORM TO THE APPLICABLE AWWA STANDARDS.
- . ALL PIPING MATERIALS AND SPECIFICATIONS COVERING PIPES, JOINTS AND PACKING MATERIALS, INTERNAL COATING AND LININGS, FITTINGS, SPECIALS AND APPURTENANCES SHALL ALL BE IN ACCORDANCE WITH THE CORRESPONDING AWWA STANDARDS AND BE CONFORMING TO NSF REQUIREMENTS, AS MAY BE APPLICABLE, WITH EXCEPTIONS ALLOWED ONLY IF DOCUMENTATION AND ASSURANCES ARE PROVIDED IN COMPLIANCE WITH PARAGRAPHS 62-555.320(3) (d) 62-555.320 (3) (b), AND 62-555.320 (21) (c), F.A.C. THE LEAD USE PROHIBITION IN RULE 62-555.322. F.A.C. SHALL ALSO APPLY. POLYETHYLENE TUBING SHALL BE PER AWWA C901. UNDERGROUND SERVICE LINES,

All water main pipe, including fittings, installed on or after August 28, 2003, except pipe installed under a construction permit for which the Department received a complete application before August 28, 2003, shall be color coded or marked using blue as a predominate color to differentiate drinking water from reclaimed or other water. Underground plastic pipe shall be solid-wall blue pipe, shall have a co-extruded blue external skin, or shall be white or black pipe with blue stripes incorporated into, or applied to, the pipe wall; and underground metal or concrete pipe shall have blue stripes applied to the pipe wall. Pipe striped during manufacturing of the pipe shall have continuous stripes that run parallel to the axis of the pipe, that are located at no greater than 90° intervals around the pipe, and will remain intact during and after installation of the pipe. If tape or paint is used to stripe pipe during installation of the pipe, the tape or paint shall be applied in a continuous line that runs parallel to the axis of the pipe and that is located along the top of the pipe; for pipes with an internal diameter of 24 inches or greater, tape or paint shall be applied in continuous lines along each side of the pipe as well as along the top of the pipe. Aboveground pipe as drinking water treatment plants shall be color coded and labeled in accordance with subsection 62-555.320(10), F.A.C., and all other aboveground pipe shall be painted blue or shall be color coded or marked like underground pipe.

Utility Construction Notes (DEP)

- 62-555.314 Location of Public Water System Mains: For the purpose of this section, the phrase "Water Mains" shall mean Mains, including treatment Plant process piping, conveying either raw, partially treated, or finished drinking water; Fire Hydrani leads; and service lines that are under the control of a Public Water System and that have an inside
- diameter of three (3") inches or greater. (1) Horizontal Separation Between Underground Water Mains and Sanitary or Storm Sewers, Wastewater or Storm water Force Mains, Reclaimed Water Pipelines, and On-site Sewage
- Treatment and Disposal Systems: (a) New or relocated, underground WATER MAINS shall be laid to provide a horizontal distance of at least (3) Three Feet between the outside of the WATER MAIN and the outside of any existing or proposed Storm Sewer, Storm water Force Main, or pipeline conveying reclaimed water regulate under Part III of Chapter 62-610, F.A.C. (b) New or relocated, underground WATER MAINS shall be laid to provide a horizontal distance of at least (3) three feet, and preferably (10) Ten Feet, between the outside of the WATER MAIN and
- the outside of any existing or proposed vacuum-type Sanitary Sewer.

 (c) New or relocated, underground WATER MAINS shall be laid to provide a horizontal distance of at least (6) Six Feet, and preferably (10) Ten Feet, between the outside of the WATER MAIN and the outside of any existing or proposed Gravity- or Pressure-type Sanitary Sewer, Wastewater Force Main, or pipeline conveying reclaimed water not regulated under Part III of Chapter 62-610 F.A.C. shall be reduced to (3) Three Feet where the BOTTOM of the WATER MAIN is laid at least (6) Six Inche above the Top of the Sewer. (d) New or relocated, underground WATER MAINS shall be laid to provide a horizontal distance of a
- least (10) Ten Feet between the outside of the WATER MAIN and all parts of any existing or propose "On site Sewage Treatment and Disposal System" as defined in Section 381.0065(2). F.S. and Rule (2) Vertical Separation Between Underground WATER MAINS and Sanitary or Storm Sewers, Wastewater or Storm water Force Mains, and Reclaimed
- (a) New or relocated underground WATER MAINS crossing any existing or proposed gravityor vacuum-type sanitary sewer or storm sewer shall be laid so the outside of the WATER MAIN is at least (6) Six inches, and preferably 12 inches above, or at least 12 Inches below the outside of the other pipeline. However, it is preferable to lay the WATER MAIN
- (b) New or relocated, Underground WATER MAINS crossing any existing or proposed pressure-type sanitary sewer, wastewater or stormwater Force Main, or Pipeline conveying reclaimed water shall be laid so the outside of the WATER MAIN is at least (12) inches ABOVE or BELOW the Outside of the other pipeline. However, it is preferable to lay the WATER MAIN above the other pipeline.
- At the Utility crossings described in paragraphs (a) & (b) Above, one full length of Water Main Pipe shall be centered above or below the other pipeline so the WATER MAIN Joints will be as far as possible from the other ipeline. Alternatively, at such crossings, the pipes shall be arranged so that all WATER MAIN Joints are at least (3) Three feet from all joints in Vacuum-type Sanitary Sewers, Storm Sewers, Stormwater Force Mains, or pipelines conveying reclaimed water regulated under Part III of Chapter 62-610, F.A.C., and at least (6) Six Feet from all Joints in Gravity- or Pressure-
- type Sanitary Sewers, Wastewater force mains, or pipelines conveying reclaimed water not regulated under Part III of Chapter 62-610, F.A.C. (3) Separation Between WATER MAINS and Sanitary or Storm Sewer Manholes (a) No WATER MAIN shall pass thru, or come into contact with any part of a Sanitary Manhole or a Storm Sewer Manhole.
- Separation Between Fire Hydrant Drains and Sanitary or Storm Sewers, Wastewater or Stormwater Force Mains, reclaimed Water Pipelines, and On-Site Sewage Treatment and Disposal Systems. New or relocated Fire Hydrants with underground Drains shall be located so that the drains are at least (3) Three Feet from any existing or proposed storm sewer, Stormwater force main, or pipeline conveying reclaimed water regulated under Part III of Chapter 62-610, F.A.C.; at least (3) Three Feet, and preferably (10) Ten Feet, from any existing or proposed gravity- or Pressure-type Sanitary Sewer Wastewater force main, or pipeline conveying reclaimed water not regulated under Part III of Chapter 62-610, F.A.C.; and at least (10) Ten Feet from any existing or proposed "on-site sewage treatment and disposal system" as defined in Section 381.0065(2), F.S. and Rule 64E-6.002, F.A.C.
- Adherence to the above Constraints and Separations in Items 1 through 4 shall be Complied to, "WITHOUT EXCEPTION". If for some reason where it is not technically feasible or Economically Sensible that Items 1 through 4 cannot be complied with, Contractor will Stop Work and Notify the Engineer of record for the appropriate solution, which will be submitted to "The Department of Environmental Protection" for APPROVAL, prior to work commencement.

CONCRETE WALKWAY DETAIL

5'-0"

15'-0" BETWEEN JOINTS

<u>PROFILE</u>

5'-0" UNLESS OTHERWISE NOTED

ON DRAWINGS

SLOPE 1/8" / FT.

3000 P.S.I.

CONC. —

-1/2" EXPANSION

JÖINT (TYP.)

5'-0"

(TYP.)

2% MAX. CROSS SLOPE

NOT TO SCALE

AND VALVES SHALL BE PER AWWA C800. COLOR CODING

> DRAWN BY: CHECKED BY: --SCALE: SHEET TITLE:

BOTTOM

#4 BARS ALL

AROUND —

12"

1. BRONZE IDENTIFICATION DISC SHALL BE REQUIRED FOR ALL VALVES

NUMBER OF TURNS FOR MUELLER GATE VALVES (ASSUMING WITHOUT GEARING) VALVE SIZE NO. OF TURNS VALVE SIZE NO. OF TURNS

VALVE COLLAR

NOT TO SCALE

20"

24"

26.5

33

38.5

10"

12"

CLASS "A" BEDDING SPECIAL CONDITIONS

BEDDING MATERIAL

SELECTED BACKFILL **BEDDING AND BACKFILL TO BE** PLACED IN LIFTS NOT EXCEEDING 6" IN THICKNESS NORMAL - TRENCH

12" MAX

>/>/>//>//>//>//>//>//>//>//>//>//>// BEDDING AND BACKFILL COMPACTION DENSITY TO 95% MODIFIED PROCTOR A.A.S.H.O. T-180 (ASTM D-1557)

> SANITARY SEWER PIPE BEDDING

> > 24" x 24" x 4" THICK CONC. PAD

3" DIA. BRONZE DISC

STAMP AS REQ'D

(SEE NOTE 1)

SIZE OF VALVE

TYPE OF VALVE

DIRECTION & NO.

SERVICE -

OF TURNS TO

VALVE BOX

AND COVER

CONCRETE MIN.

(TYP.) —

2500 P.S.I.

OPEN -

TYP. EACH VALVE BOX. —

ANCHORED IN CONC. PAD

CLASS "B" BEDDING NORMAL CONDITIONS

0.5 Bc (TOTAL)

—— 3" DIA. BRONZE

DISC ANCHORED IN

CONC. PAD STAMP

ANCHORS

228 (BEVEL GR'ING)

252 (BEVEL GR'ING)

300 (BEVEL GR'ING)

NOTES: FOR BEDDING AND TRENCHING

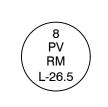
1. Dimension Bc = Pipe O.D. Dimension Bd = Trench Width at Top of Pipe Maximum Bd = Bc + 30" Minimum Bd = Maximum Dimension of Bell + 8" (Unsheeted Trench)

2. Depth for removal for unsuitable material shall be as required to reach suitable foundation. For rock or other non-cushioning material, depth shall be 6" below bottom of utility.

3. All backfill and select material under all roadways, drives (including dirt drives), and parking areas shall be compacted to 98% of the modified proctor maximum dry density. (AASHTO T-180). Backfill and select material under all other areas shall be compacted as follows: From bottom of trench to 12" above top of pipe - 95% of modified proctor maximum dry density (AASHTO T-180). From 12" above top of pipe to top of backfill - 90% of modified proctor maximum dry density (AASHTO

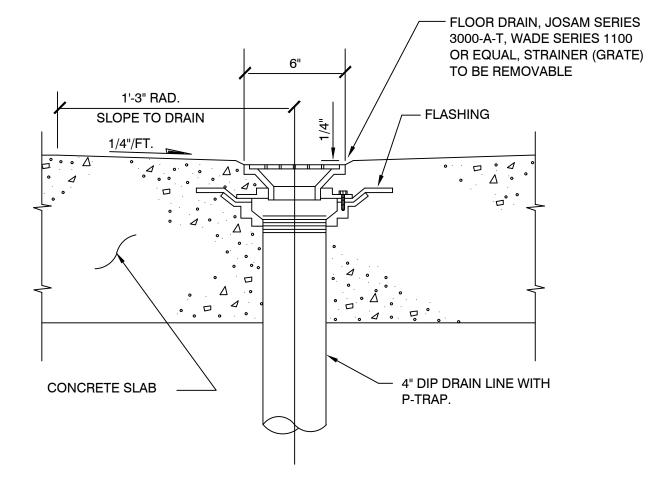
BEDDING AND TRENCHING DETAILS

NOT TO SCALE



RECLAIM MAIN BRONZE IDENTIFICATION

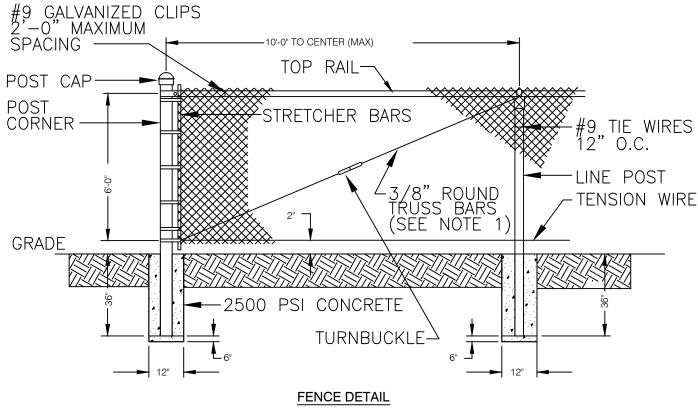
> DISC NOT TO SCALE

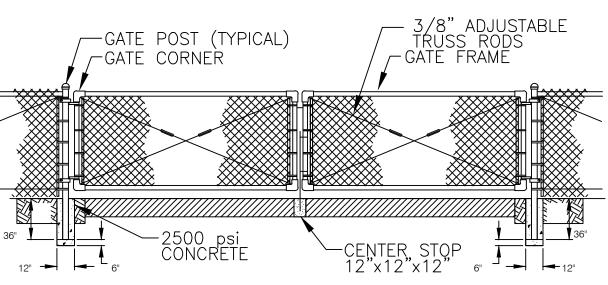


1. P. TRAP IS NOT REQUIRED FOR DRAINS LOCATED ON CONC. PADS OR BLDGS. NOT ENCLOSED ON ALL SIDES.

COVER TO BE LETTERED

FLOOR DRAIN NOT TO SCALE



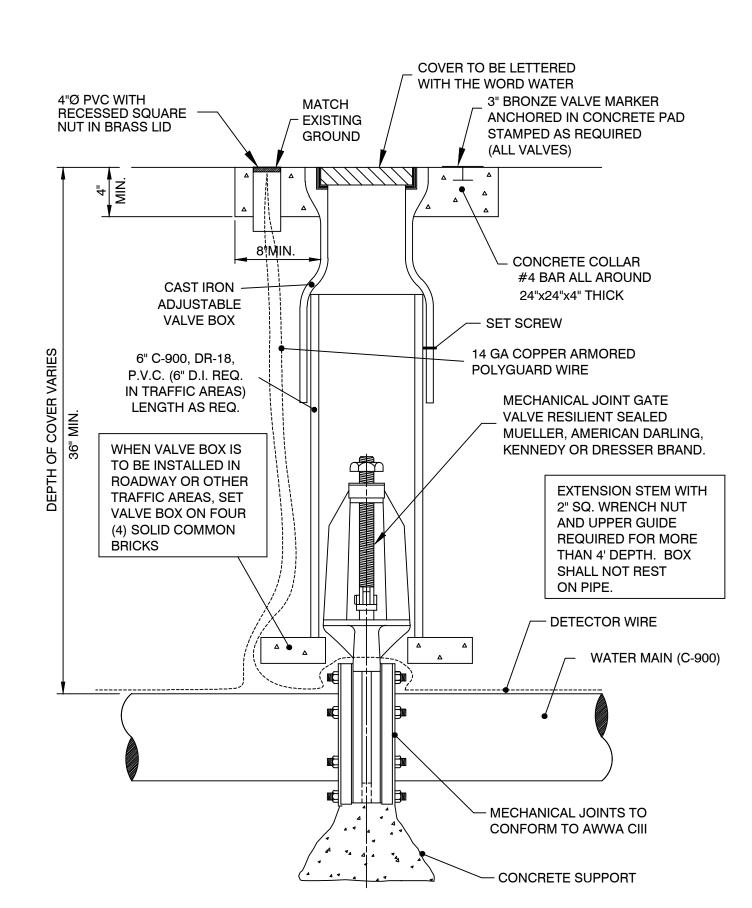


DOUBLE SWING GATE DETAIL

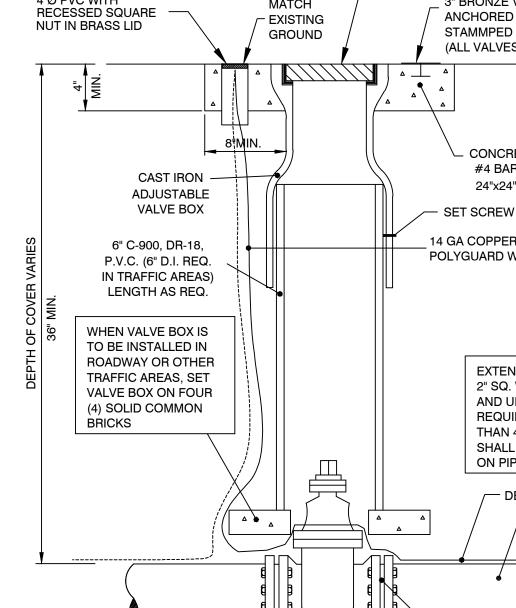
1. TRUSS BARS ARE REQUIRED FOR EACH GATE SECTION AND THE FIRST SPAN ON EACH SIDE OF A CORNER POST ONLY.

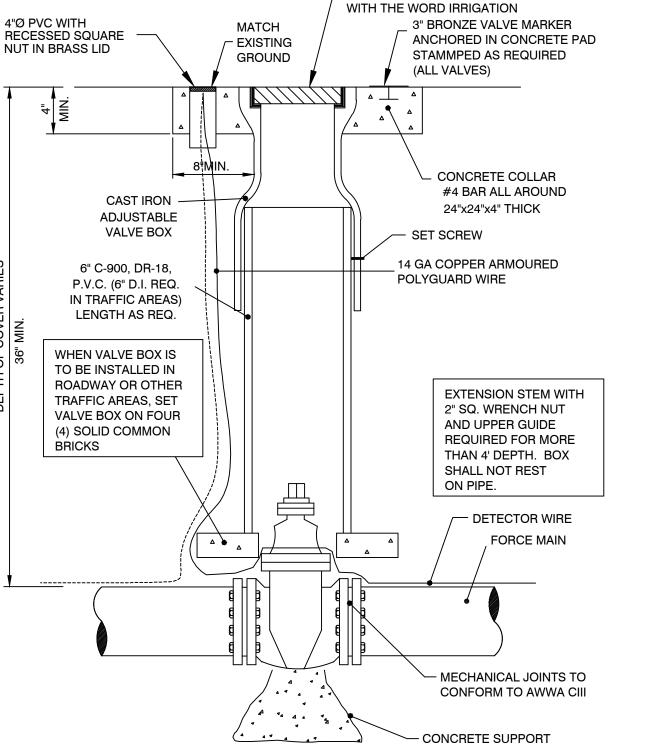
- 2. FENCING SHALL BE 6' HIGH VINYL COATED CHAIN
- 3. FENCE POSTS SHALL NOT BE IN CONFLICT WITH UNDERGROUND PIPING.

CHAIN LINK FENCE DETAIL NOT TO SCALE



PLUG VALVE & BOX NOT TO SCALE





GATE VALVE & BOX NOT TO SCALE

C-302

PROJECT NO.: 058312.001

JULY 2025

1" = 1'

DETAILS

ISSUED:

SCALE:

DRAWN BY: --

CHECKED BY: --

SHEET TITLE:

IRRIG,

FOR INTERIM REVIEW ONLY

THESE DOCUMENTS ARE FOR INTERIM REVIEW AND NOT INTENDED FOR REGULATORY APPROVAL, PERMIT, BIDDING OR CONSTRUCTION PURPOSES. THEY WERE PREPARED BY OR UNDER THE SUPERVISION OF:

FLA CA 33380 & FL LC 26000645

FIRM / BUSINESS NO.

P.E. LICENSE NO.

LAKE HILLS IRRIGATION PUMP STATION HOWY-IN-THE-HILLS, LAKE COUNTY, FLORIDA

DIVISION OI - GENERAL NOTES

- I.I ALL WORK SHALL CONFORM TO AT LEAST THE MINIMUM STANDARDS OF THE FLORIDA BUILDING CODE (FBC), EIGHTH EDITION (2023) AND ALL APPLICABLE LOCAL OPPINANCES
- I.2 EVERY REASONABLE EFFORT HAS BEEN MADE TO ENSURE COORDINATION BETWEEN THESE DRAWINGS AND THE BOUND SPECIFICATIONS. SHOULD THERE BE ANY DISCREPANCIES THE CONTRACTOR SHALL THEN REQUEST A CLARIFICATION IN WRITING.
- I.3 DESIGN LOADINGS ARE INDICATED WITHIN THE STRUCTURAL DRAWINGS.
- I.4 TO THE BEST OF THE ARCHITECT'S KNOWLEDGE, THE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE BUILDING CODE.
- 1.5 THE CONTRACTOR SHALL NOTIFY THE ARCHITECT OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL REVIEW AND DETERMINE THAT DIMENSIONS ARE COORDINATED BETWEEN ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING AND STRUCTURAL DRAWINGS BEFORE FABRICATION OR CONSTRUCTION. THE ARCHITECT WILL MAKE AVAILABLE UPON REQUEST THE BASE FLOOR PLAN(S) & REFLECTED CEILING PLAN(S) IN AUTOCAD R2000 DWG FORMAT FOR SUB—CONTRACTOR USE IN PREPARATION OF SHOP DRAWINGS. FILES SHALL BE SENT ONLY UPON RECEIPT OF ARCHITECTS ELECTRONIC RELEASE FORM SIGNED BY INDIVIDUAL REQUESTING THE FILE(S) AND A \$100 PER FILE TRANSFER FEE.
- I.6 WHENEVER AMBIGUITY OR CONFLICT WITHIN THESE CONSTRUCTION DOCUMENTS MAY EXIST, THE MOST STRINGENT REQUIREMENT SHALL APPLY AS INTERPRETED BY THE ARCHITECT.
- I.7 THE CONTRACTOR SHALL SUBMIT SUBSTITUTIONS OF PRODUCTS, MATERIALS, EQUIPMENT AND METHODS OF CONSTRUCTION FROM THOSE REQUIRED IN THE CONSTRUCTION DOCUMENTS IN WRITING TO THE ARCHITECT FOR REVIEW AND CONSIDERATION. THE CONTRACTOR SHALL STATE WHY SPECIFIED PRODUCTS OR FABRICATIONS CANNOT BE PROVIDED AND HOW PROPOSED SUBSTITUTIONS COORDINATE WITH OTHER PARTS OF THE WORK.
- 1.8 SUBMITTALS SHALL BE MADE TO THE ARCHITECT FOR ALL PRODUCTS CONSISTING OF WRITTEN AND GRAPHIC INFORMATION AND/OR PHYSICAL SAMPLES. SUBMITTALS SHALL BE CLEARLY IDENTIFIED AND HAVE BEEN REVIEWED BY THE GENERAL CONTRACTOR AND HAVE HIS REVIEW STAMP AFFIXED PRIOR TO REVIEW BY THE ARCHITECT OR HIS CONSULTANTS. SUBMITTALS MAY BE MADE IN ELECTRONIC (PDF. FORMAT OR SUPPLY (1) ONE HARD COPY FOR REVIEW. SUBMITTAL PACKAGES SHALL BE MADE IN SINGLE INDEXED FILES CLEARLY IDENTIFIED WITH THE PROJECT NAME, PRODUCT OR DIVISION, CONTRACTOR, PREPARER AND OTHER RELEVANT INFORMATION. THE ARCHITECT SHALL HAVE (10) TEN BUSINESS DAYS TO REVIEW SUBMITTALS AND RETURN THEM TO THE CONTRACTOR. SUBMITTALS RECEIVED WITHOUT PRIOR CONTRACTOR REVIEW WILL BE RETURNED WITHOUT ACTION.
- I.9 IF COMPLIANCE WITH TWO OR MORE STANDARDS IS SPECIFIED AND THE STANDARDS ESTABLISH DIFFERENT OR CONFLICTING REQUIREMENTS, THE MOST STRINGENT REQUIREMENT SHALL APPLY.

DIVISION 02 - SITEWORK (UNO BY STRUCTURAL ENGINEER)

- 2.1 SOIL COMPACTION: 95% MIN W/ 12" LIFTS MAXIMUM.
- 2.2 SOIL BEARING CAPACITY: ALL FOUNDATION DESIGN BASED ON MIN SOIL BEARING CAPACITY OF 2000psi AND ON RECOMMENDATIONS OF SOILS ENGINEER (IF APPLICABLE).
- 2.3 SOIL POISONING: TO THE SOIL AREAS TREATED, APPLY THE FOLLOWING CHEMICAL AT NO LESS THAN THE DESIGNATED CONCENTRATIONS; TERMIDOR 80 WG AT 0.06% APPLIED IN WATER EMULSION AS MANUFACTURED BY THE AVENTIS GROUP (I-20I-307-9700). OTHER MATERIALS MAY BE USED PROVIDED THEY ARE ACCEPTABLE TO THE ARCHITECT AND PROVIDED THEY HAVE MET A FIVE YEAR TEST CONDUCTED BY THE U.S. FOREST SERVICES,

DIVISION 03 - CONCRETE (U.N.O. BY STRUCTURAL ENGINEER)

- 3.1 CONCRETE SLAB AND FOOTINGS STRENGTH SHALL BE MIN F'c=3000psi AT 28 DAYS, SLUMP 3" TO 5".
- 3.2 ALL REINFORCING STEEL SHALL BE GRADE 60 DEFORMED BARS. CONCRETE COVERAGE SHALL BE 3" MIN WHEN ADJACENT TO GRADE AND I—I/2" AT ALL OTHER LOCATIONS. CORNER BARS SHALL BE LAPPED 48 BAR DIAMETERS MINIMUM. VERTICAL DOWELS SHALL HAVE A IO" STANDARD HOOK AND SHALL LAP VERTICAL BLOCK REINFORCING 48 BAR DIAMETERS MINIMUM. DOWEL HOOK EMBEDMENT SHALL BE 6" MINIMUM.
- 3.3 ALL SLABS SHALL BE REINFORCED WITH A MIN. 6 x 6 W2.9/W2.9 WWF.
- 3.4 PROVIDE A MINIMUM IO MIL POLY VAPOR BARRIER UNDER ALL COVERED CONCRETE SLABS. JOINTS AND ALL PENETRATIONS TO BE TAPE AND/OR SEALED.

DIVISION 04 - MASONRY (U.N.O. BY STRUCTURAL ENGINEER)

- 4.1 CONCRETE BLOCK SHALL BE NOMINAL 8" x 8" x 16"
 STANDARD WEIGHT, RUNNING BOND AND SHALL CONFORM
 TO THE REQUIREMENTS OF ASTM C-90 AND SHALL HAVE
 A MIN NET AREA COMPRESSIVE STRENGTH OF 1900 PSI.
- 4.2 UNLESS NOTED OTHERWISE ALL 8" PRECAST LINTELS SHALL HAVE (I) ONE #5 REBAR AND ALL 12" PRECAST LINTELS SHALL HAVE (2) #5 REBAR. FULLY GROUT ALL LINTELS WITH 3000 PSI PEA GRAVEL CONCRETE. PROVIDE 8" MINIMUM BEARING FOR ALL LINTELS. GENERAL CONTRACTOR TO SUPPLY FLORIDA PRODUCT APPROVALS AND MANUFACTURER'S SPAN CHARTS FOR LINTELS (MASONRY OR STEEL) TO BE USED.
- 4.3 MORTAR SHALL BE TYPE 'S' OR 'M' AND HAVE A MIN 2500 PSI IN 28 DAYS AND SHALL CONFORM TO ASTM-270.
- 4.4 REINFORCE MASONRY WALLS WITH TRUSS TYPE HORIZONTAL JOINT REINFORCEMENT EQUAL TO HOHMANN AND BARNARD #120 TRUSS MESH. 9 GA., GALVANIZED JOINT REINFORCEMENT IN BED JOINTS AT 16" OC VERTICALLY. LAP ALL HORIZONTAL JOINTS A MINIMUM OF 8". WIRE SHALL CONFORM TO ASTM A 82. CROSS WIRES SHALL BE SPACED AT 16".
- 4.6 MASONRY GROUT SHALL HAVE A MAXIMUM COARSE AGGREGATE SIZE OF 3/8" PLACED AT AN 8" TO II" SLUMP AND SHALL HAVE A MINIMUM SPECIFIED COMPRESSIVE STRENGTH OF 2000psi AT 28 DAYS AND BE IN ACCORDANCE WITH ASTM C-476. GROUT PLACEMENT STOPPED FOR ONE HOUR OR MORE SHALL BE STOPPED I-1/2" BELOW THE TOP OF THE MASONRY UNIT TO PROVIDE A KEY FOR SUBSEQUENT GROUTING.
- 4.7 GROUT LIFTS SHALL BE LIMITED TO FIVE FEET (5 FT). EACH LIFT SHALL BE CONSOLIDATED BY MECHANICAL VIBRATION AFTER INITIAL WATER LOSS AND SETTLEMENT HAS OCCURRED.

DIVISION 06 - WOOD (U.N.O. BY STRUCTURAL ENGINEER)

- 6.I UNLESS NOTED OTHERWISE, ALL LUMBER SHALL BE EQUAL TO SOUTHERN YELLOW PINE, GRADES AS FOLLOWS: 2x4's, 2x6's & 2x8's = No.2 2x10's & 2x12's = No.1 4x4's AND LARGER = No.1
- 6.2 ROOF SHEATHING OVER WOOD FRAMING SHALL BE 5/8" PLYWD ATTACHED WITH IOD COMMON OR RING SHANK NAILS AT 6" O.C. AT PANEL EDGES AND 6" O.C. IN FIELD UNLESS NOTED OTHERWISE.
- 6.3 PRESSURE TREATED LUMBER: PER AWPA, ALL PT LUMBER USED ABOVE GRADE SHALL BE GRADE "UC3A", COATED WITH RAPID WATER RUNOFF. WHEN USED IN CONTACT WITH GROUND US GRADE "UC4A". WHEN IN CONTACT WITH GALV METAL USE SODIUM BORATE (SBX/DOT) TREATED LUMBER.
- 6.4 WALL SHEATHING: MIN ½" PLYWOOD UNLESS NOTED OTHERWISE ON CONSTRUCTION DOCUMENTS ATTACHED WITH 8D NAILS @ 6"O.C. EDGE & 12"O.C. FIELD.
- 6.5 GABLE END VERTICAL SHEATHING: MIN ½" PLYWOOD ATTACHED WITH 8D NAILS @ 6" O.C. TOP & BOTTOM PLATE. 6" O.C. EDGE & 6" O.C. FIELD.

DIVISION 07 - THERMAL & MOISTURE

- 7.1 ALL SLOPED ROOFS SHALL HAVE ONE LAYER SELF ADHERING 60 MIL BORAL TILESEAL HT PRO UNDERLAYMENT BY BORAL TILE OR ARCHITECT APPROVED EQUAL.
- 7.2 SHINGLE NAILING PATTERN (WHERE APPLICABLE); (6) I-1/4" NAILS PER SHINGLE. FOR VALLEYS AS APPLICABLE 90# ROLLED ROOFING. SHINGLES MEET ASTM03462 OR ASM0225.
- 7.3 DAMPROOFING: ALL EXTERIOR FACES OF CMU SHALL BE COATED WITH DAMPROOFING EQUAL TO KARNAK 83F FIBERED DAMPROOFING. OTHER ALTERNATES ACCEPTED: ARE HENRY HE789—FIB, LAMBERT WATERBAN 60SM OR SIKA SIKALASTIC 315. APPLY PER THE MANUFACTURER'S WRITTEN INSTRUCTIONS.
- 7.4 SEALANT: ALL EXTERIOR SEALANT SHALL BE DOW 790 UNLESS NOTED OTHERWISE.
- 7.5 ALL EXTERIOR TRIM CAULKING TO BE OSI PROFESSIONAL GRADE QUAD VOC WINDOW, DOOR & SIDING SEALANT UNLESS NOT RECOMMENDED BY MANUFACTURER. APPLY PER MANUFACTURERS WRITTEN INSTALLATION INSTRUCTIONS.

DIVISION 08 - DOORS & WINDOWS

- 8.1 ALL HOLLOW METAL DOOR FRAMES SHALL BE 16 GA., GALV., FULLY WELDED, FULLY GROUTED, PLUGGED AND READY FOR PAINT.
- 8.2 ALL EXTERIOR FIBERGLASS DOORS SHALL BE 0.120 FIBERGLASS REINFORCED PLASTIC FACE SHEETS WITH I-1/2" POLYURETHANE CORE (R-II) OR MINERAL CORE (FIRE RATED DOORS)

8.3 ALL HARDWARE LOCKS EQUAL TO SCHLAGE HD
CYLINDRICAL ND SERIES, RHODES, 626 FINISH, STORAGE RM
LOCK U.N.O.. HINGES 4.5"H FIVE KNUCKLE, HD FULL
MORTISE TEMPLATE TYPE. PROVIDE MIN 3 HINGES/DR LEAF
(FOUR 5"H HINGES FOR DOORS OVER 36"W) FINISH 652.
PANIC DEVISE IN CHLORINE ROOM TO HAVE US32D
STAINLESS STEEL (316) FINISH.

DIVISION 09 - FINISHES

- 9.1 FLOOR FINISHES SHALL HAVE A MINIMUM CRITICAL RADIANT FLUX. RATINGS TO BE CLASS II.
- 9.2 FLAME SPREAD RATINGS FOR WALL COVERINGS SHALL BE 'CLASS A' IN UNSPRINKLED BUILDINGS AND MIN. 'CLASS B' IN SPRINKLED BUILDINGS
- 9.3 PAINTS SHALL BE APPLIED WITH (I) ONE COAT OF PRIMER AND (2) FINISH COATS. FIRST FINISH COAT SHALL BE TINTED ONE SHADE LIGHTER THAN THE FINAL COAT.
- 9.4 ALL EXTERIOR TRIM SHALL BE EQUAL TO AZEK AND BE INSTALLED PER THE MANUFACTURER'S WRITTEN INSTRUCTIONS. USE ONLY THE MANUFACTURER'S RECOMMENDED GLUE FOR ALL BONDING APPLICATIONS.
- 9.5 ALL CEMENTITIOUS SIDING SHALL BE BY JAMES HARDIE OR ARCHITECT APPROVED EQUAL. INSTALL PER MANUFACTURER'S WRITTEN INSTRUCTIONS. COMPLY WITH ALL INSTRUCTIONS FOR FASTENING, FLASHING, BUTT JOINT APPLICATIONS AND SEALANT APPLICATIONS.
- 9.6 ALL SOFFITS AND EXTERIOR CEILINGS SHALL BE ALUMINUM INSTALLED PER MANUFACTURER'S WRITTEN INSTRUCTIONS.

9.7 PAINT SCHEDULE:

EXTERIOR FINISHES ..

CONCRETE, STUCCO, CMU OR SPLIT FACE CMU
I COAT LOXON MASONRY PRIMER (LOXON SURFACER)
2 COATS CON—FLEX WL HIGH BUILD SMOOTH
CEMENTITIOUS SIDING & CPVC TRIM:

I COAT LOXON EXTERIOR ACRYLIC PRIMER
2 COATS 'SUPERPAINT' EXTERIOR LATEX SATIN
CPVC TRIM/PANEL: (PAINT COLOR EQUAL TO OR LESS
THAN LRV VALUE OF 55)

I COAT EXTREME BOND PRIMER B51W01150 2 COATS: EMERALD EXTERIOR LATEX

KW-48W00051

GALVN METAL & ALUMINUM:
I COAT GALVITE HS SOLVENT BASED ACRYLIC COATING.

2 COATS METAL LATEX SEMI GLOSS
FERROUS METALS:
1 COAT KEM KROMIK UNIVERSAL METAL PRIMER
2 COATS METAL LATEX SEMI GLOSS

INTERIOR FINISHES:

INTERIOR PAINT FINISHES SHALL BE AS FOLLOWS: EXPOSED CONCRETE SLAB:

H&C "CLEARPROTECT" HP INDUSTRIAL CLEAR COAT

CONCRETE SEALER
MASONRY EPOXY:

I COAT HD BLOCK FILLER 2 COATS HI—BILD WB CATALIZED EPOXY

DRYWALL EPOXY:

I COAT PREPRITE 200 LATEX PRIMER
2 CAOTS HI-BILD WB CATALIZED EPOXY
FERROUS METALS:

I COAT KEM KROMIK UNIVERSAL METAL PRIMER 2 COATS PROMAR 200 ALKYD EG-SHELL WOOD PAINTED:

I COAT PREPRITE WOOD OIL PRIMER/UNDERCT 2 COATS PROMAR 400 LATEX EG-SHELL.

DIVISION IO - SPECIALTIES

- 10.1 FIRE EXTINGUISHERS: (FE-I) SHALL BE MULTI PURPOSE DRY CHEMICAL, MINIMUM RATING OF 4A-80BC, 5 LBS. (FE-2) SHALL BE A WATER MIST, MIN RATING OF 2A-C 1.75 GAL. FE'S INSTALLED IN MECHANICAL SPACES SHALL HAVE WALL MOUNT BRACKET WITH STRAP TO SECURE FE.
- IO.2 SIX INCH NUMERICAL NUMBERS WITH CONTRASTING
 BACKGROUND IDENTIFYING THE BUILDING ADDRESS NUMBER
 SHALL BE DISPLAYED ON THE STREET SIDE OF THE
 BUILDING.

APPLICABLE CODES:

FLORIDA BUILDING CODE 8th ED 2023.
FLORIDA ACCESSIBILITY CODE 8th ED 2023.
FLORIDA MECHANICAL CODE 8th ED 2023.
FLORIDA PLUMBING CODE 8th ED 2023.
FLORIDA ENERGY CONSERVATION CODE 8th ED 2023.
FLORIDA FIRE PREVENTION CODE 8th ED 2023.

NFPA 70 NATIONAL ELECTRICAL CODE (NEC) 2020 ED. NFPA 10 - STANDARD FOR PORTABLE FIRE EXTINGUISHERS 2018 ED.

BUILDING PLANNING

OCCUPANCY: <u>UTILITY, U</u>

MIXED OCCUPANCY? <u>NO</u>

REQUIRED FIRE SEPARATION: <u>NA</u>

TYPE OF CONSTRUCTION: CONSTRUCTION TYPE: <u>V-B</u>

TYPE OF CONSTRUCTION: CONSTRUCTION TYPE: V-B

GENERAL BUILDING DATA

TOTAL BUILDING AREA: 608 SF
ALLOWABLE AREA INCREASE: NO CODE REFERENCES: 506.3
ALLOWABLE FLOOR AREA: 5,500 SF CODE REFERENCE: TABLE 506.2
HEIGHT OF BUILDING: 13'-0"
ALLOWABLE HEIGHT OF BUILDING: 40'-0" CODE REFERENCE: 504.3
NUMBER OF STORIES: 1

ALLOWED NUMBER OF STORIES: 1 CODE REFERENCE: 504.4
FIRE PROTECTION SYSTEMS

FIRE PROTECTION SYSTEM FIRE DISTRICT: NO FIRE SPRINKLER SYSTEM: NO STANDPIPE SYSTEM: NO

STANDPIPE SYSTEM: NO SMOKE CONTROL: NO MEANS OF EGRESS

OCCUPANT LOAD: <u>3 OCCUPANTS</u>

NUMBER OF PROVIDED EXITS: <u>2@ 140.0" TOTAL</u>

REQUIRED EXIT WIDTH: <u>0.6"</u>

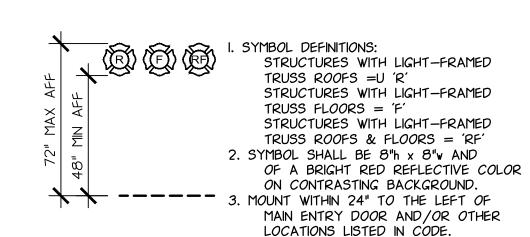
TRAVEL DISTANCE PROVIDED: <u>32'-0"</u>

MAXIMUM TRAVEL DISTANCE ALLOWED: 300'-0"

WIND LOADS:

ULTIMATE WIND SPEED: 140 mph
WIND EXPOSURE CATEGORY: C
SURFACE ROUGHNESS: C
STRUCTURE RISK CATEGORY: II
INTERNAL PRESSURE COEFF.: +0.18 & -0.18 (ENCLOSED)
COMPONENTS & CLADDING
WALLS: +48.6 psf & -65.1psf
ROOFS: -77.4 psf
OVERHANGS: -114.5 psf

PARAPETS: EDGE +111.5 psf, CORNERS +148.6 PSF

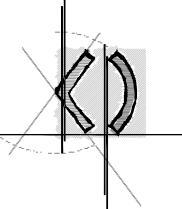


FLORIDA FIRE PREVENTION CODE 69A-60.0081

NOTICE REQUIRED FOR STRUCTURES WITH LIGHT-FRAME
TRUSS-TYPE CONSTRUCTION

STRUCTURE IDENTIFICATION SIGN

INDEX OF SHEETS						
SHT. No.	ISSUE DATE	NO.	REVISION DATE	CONTENTS		
A-101	00-00-00			INDEX, SPECIFICATIONS		
A-201				FLOOR PLAN & ELEVATIONS		
A-202				WALL SECTIONS, DETAINS & DOOR SCHEDULE		
A-S01				FOUNDATION PLAN AND ROOF FRAMING PLAN		
M-001				MECHANICAL NOTES		
M-101				FLOOT PLAN MECHANICAL		



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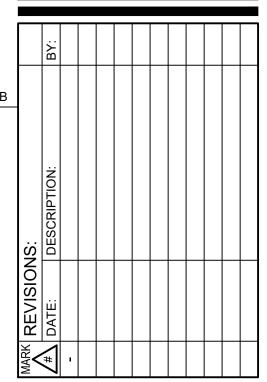
KP STUDIO ARCHITECT P.A. 537 NE 8th Avenue Ocala Florida 34470 Phone: 352.622.7163 Fax: 352.622.6556

Fax: 352.622.6556 mailbox@kpstudioarchitect.com Web site: kpstudioarchitect.com License No. #AA0002357

PROJE

PUMP STATION
HOWEY IN THE HILLS





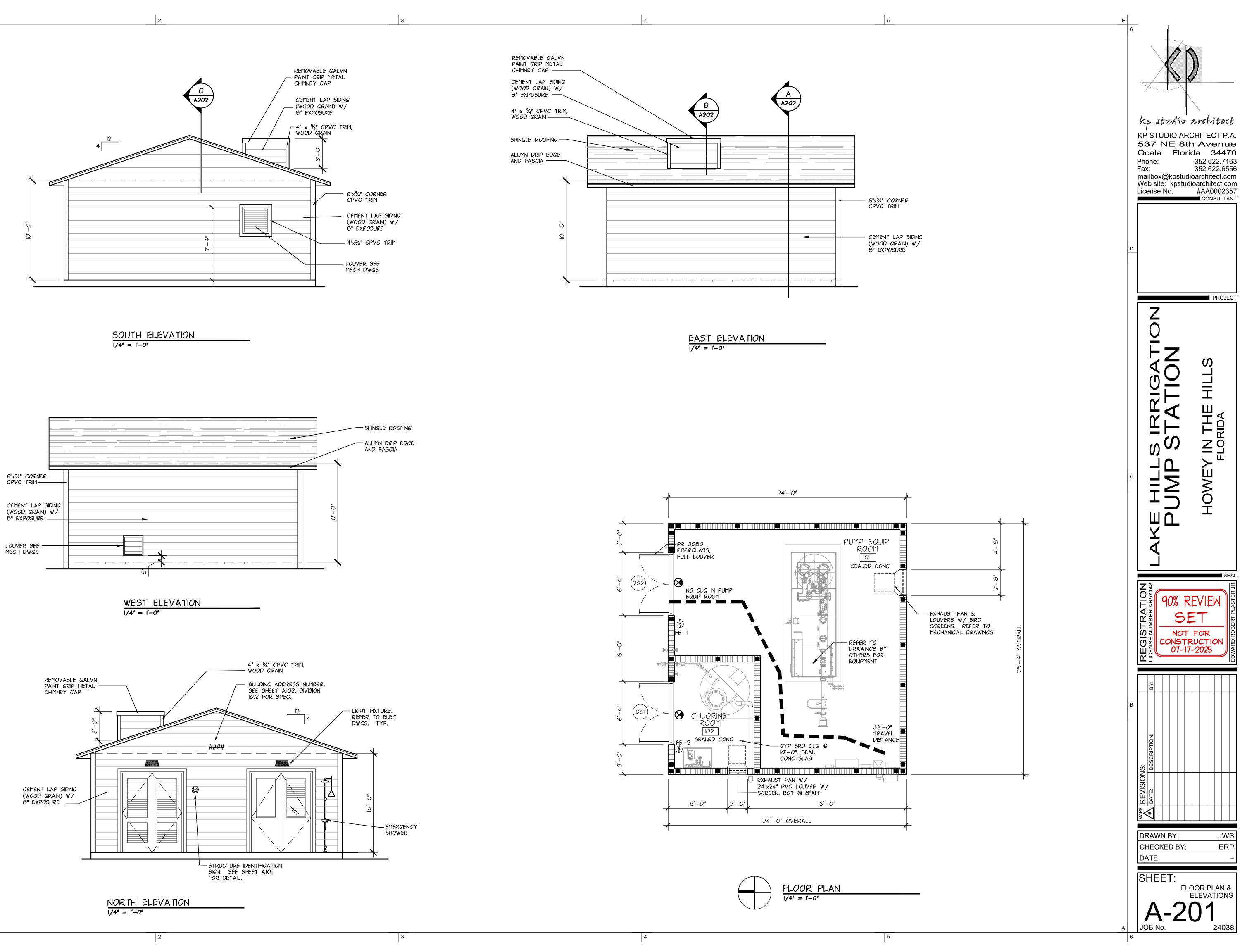
DRAWN BY: JW:
CHECKED BY: ERI

SHEET:
INDEX & SPECIFICATIONS

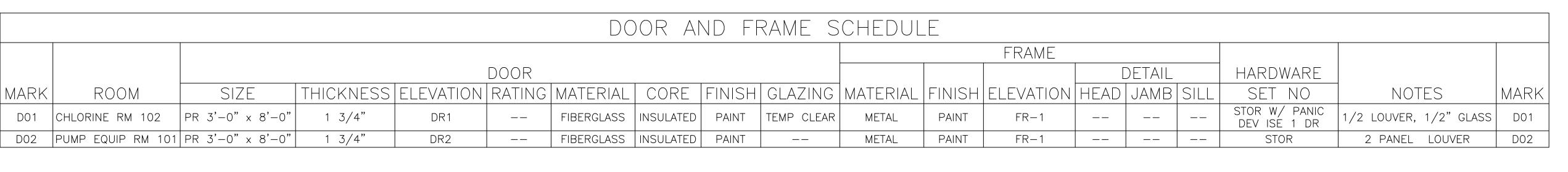
A-101

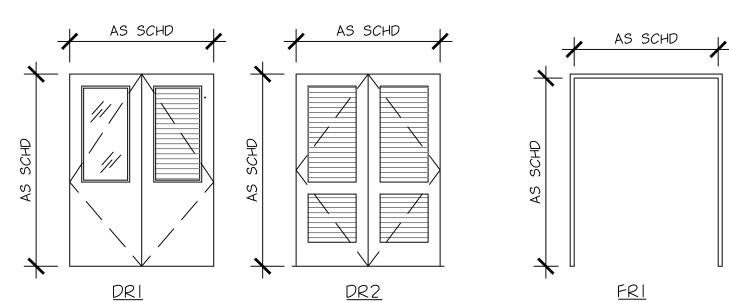
A-101

JOB No. 2403



ERP





DOOR ELEVATIONS

SCALE 1/4'' = 1'-0''

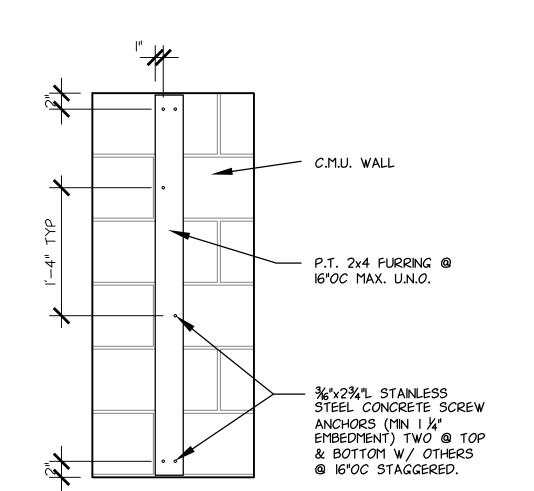
HARDWARE SETS

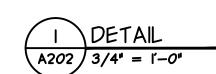
FRAME ELEVATIONS

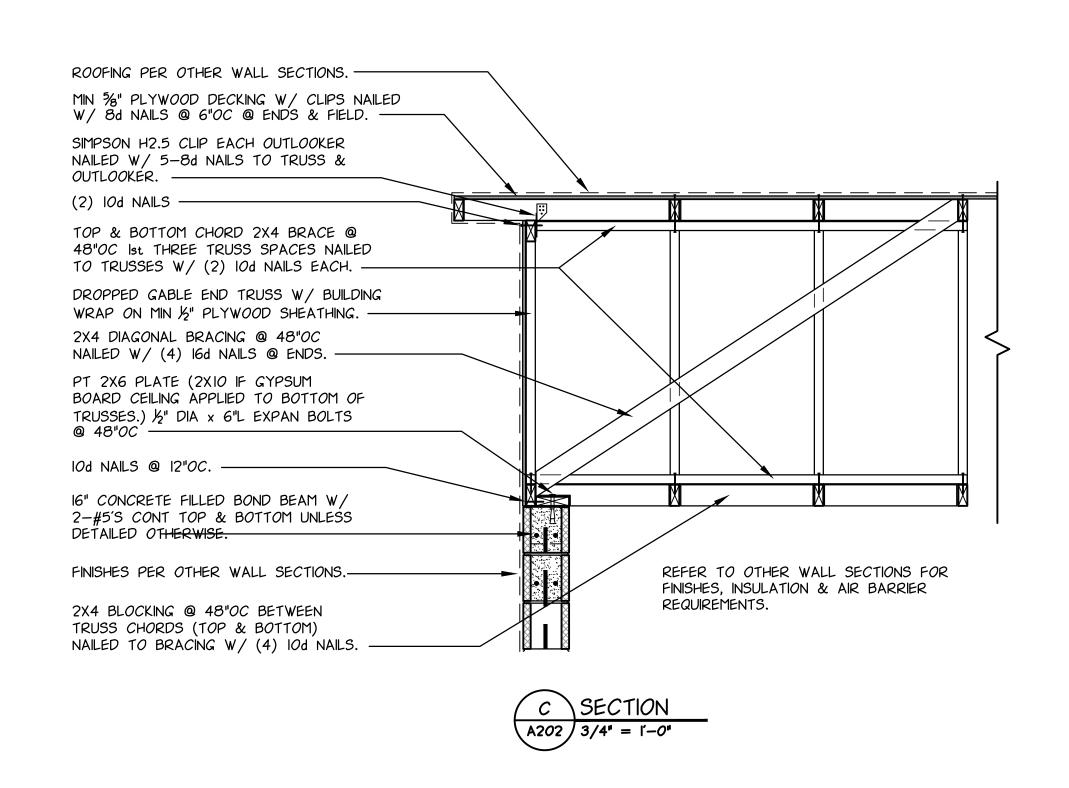
SCALE 1/4'' = 1'-0''

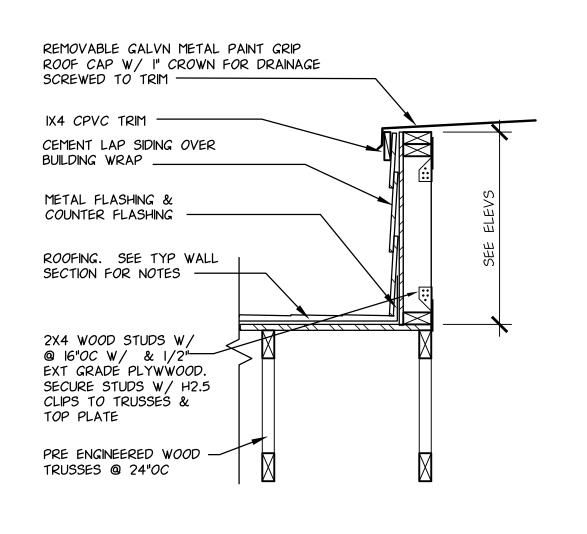
I) IT IS THE RESPONSIBILITY OF THE HARDWARE SUPPLIER TO DETERMINE COMPLETE HARDWARE REQUIREMENTS.

2) ALL EXTERIOR DOOR SILLS TO BE ADA COMPLIANT.

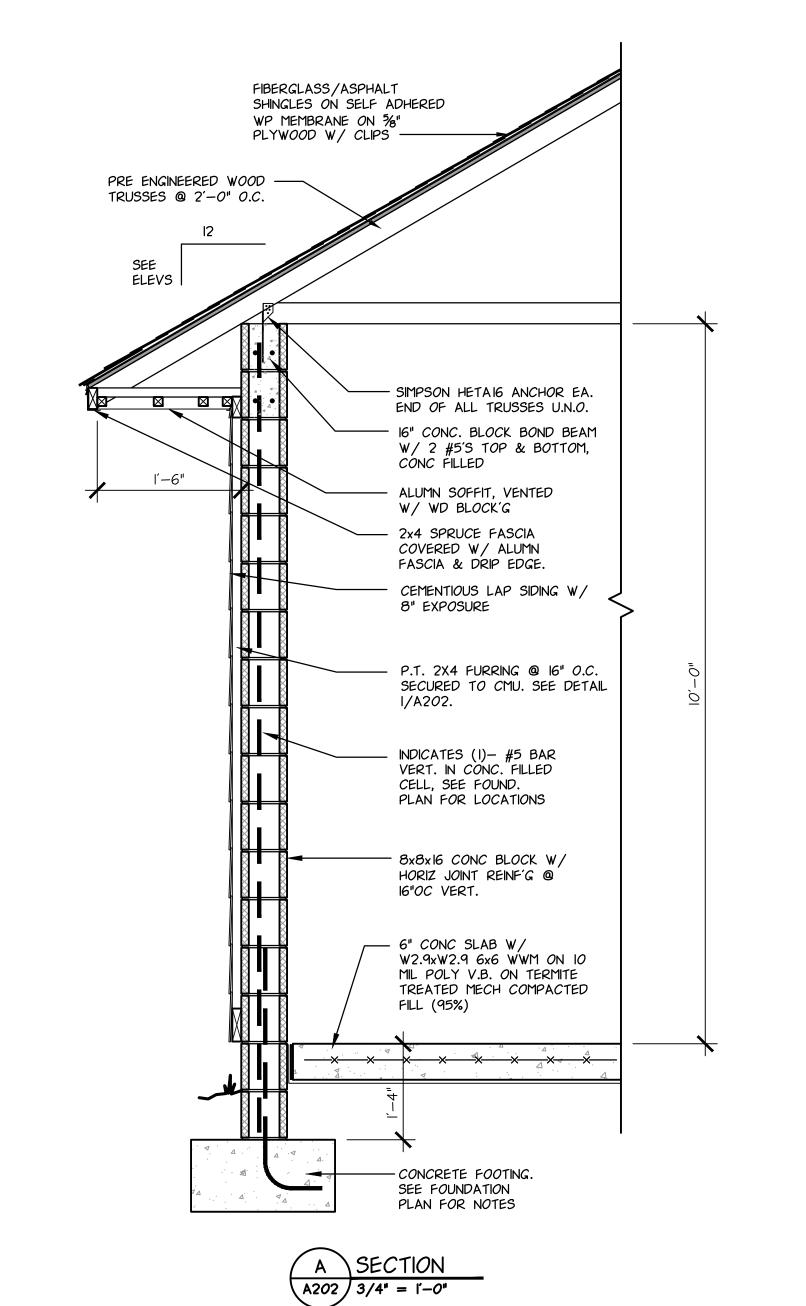


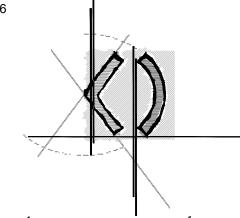












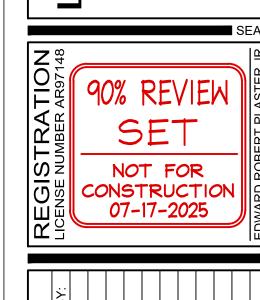
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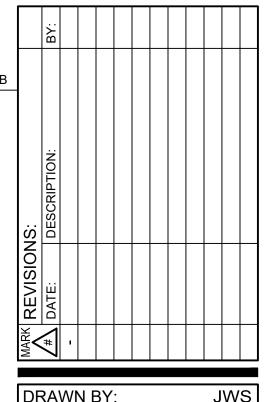
KP STUDIO ARCHITECT P.A. 537 NE 8th Avenue Ocala Florida 34470 352.622.7163 Phone:

352.622.6556 Fax: mailbox@kpstudioarchitect.com Web site: kpstudioarchitect.com License No. #AA0002357

CONSULTANT

/ IN THE FLORIDA

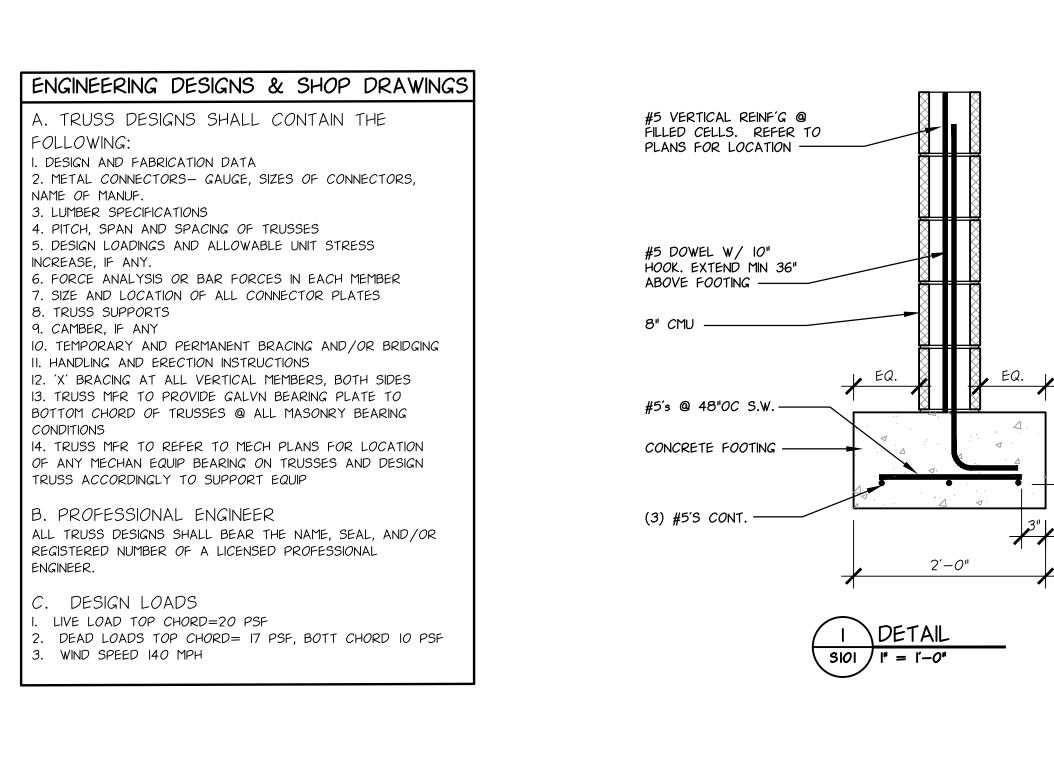


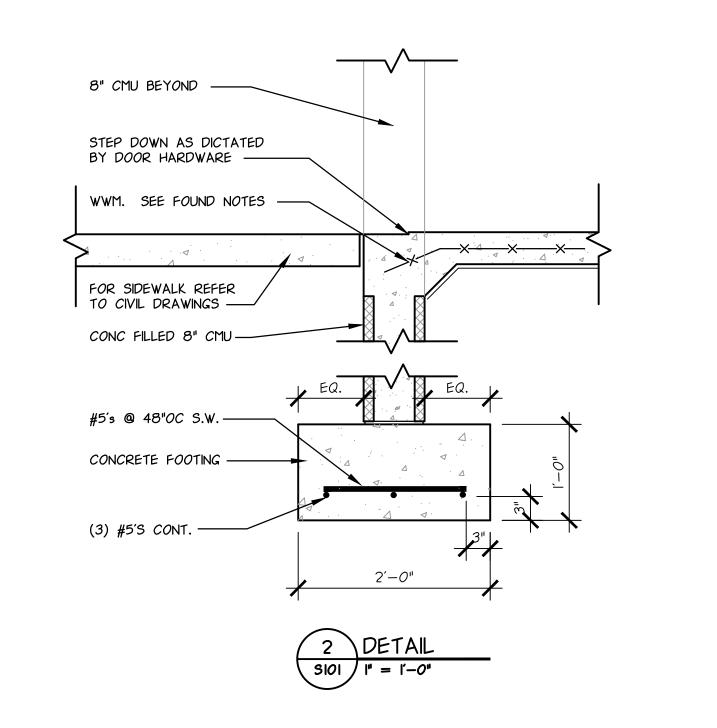


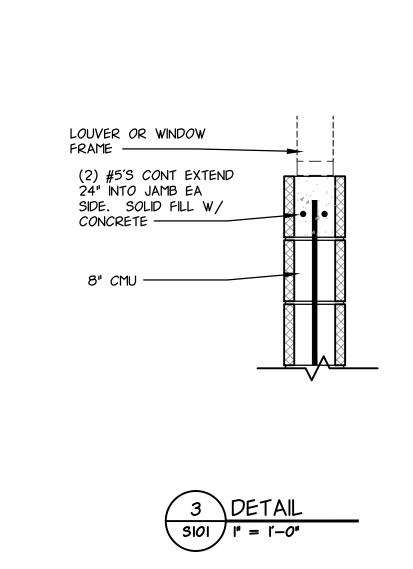
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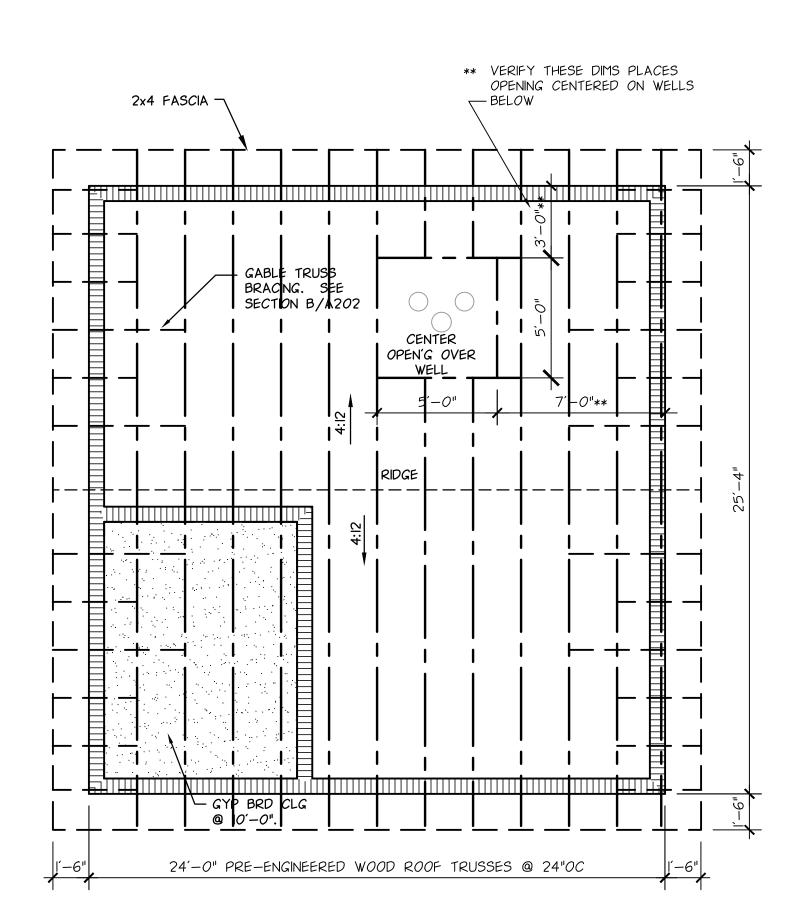
SHEET: **WALL SECTIONS &**

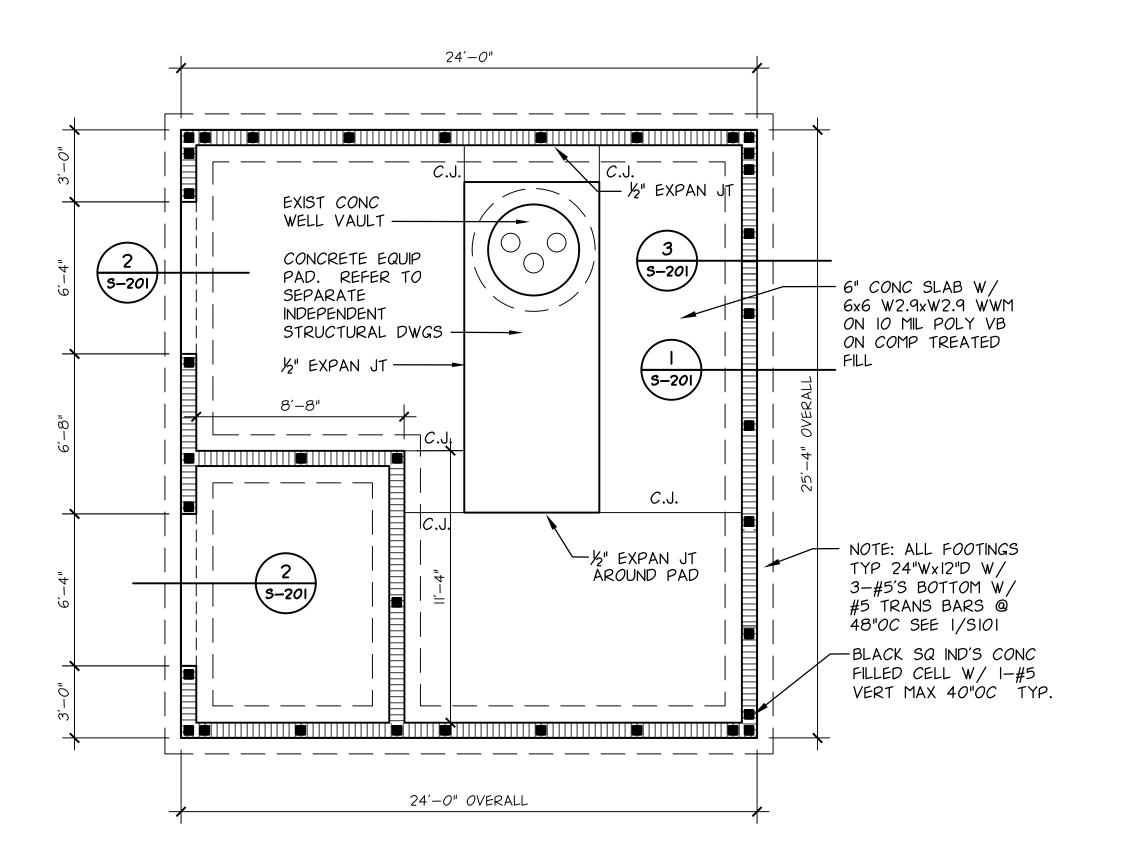
JOB No.

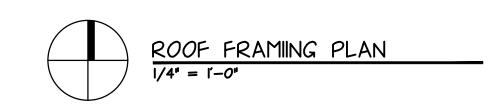




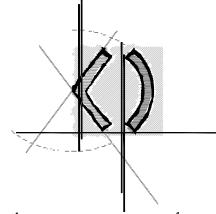












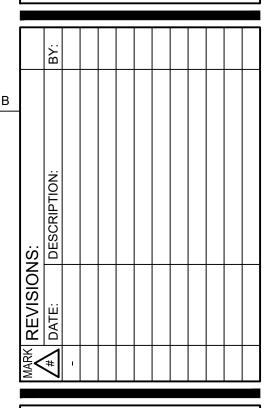
kp studio architect

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DRAWN BY: CHECKED BY:

SHEET: FOUNDATION & ROOF FRAMING PLANS & DETAILS

JOB No.

GENERAL MECHANICAL NOTES

GENERAL

MECHANICAL CONTRACTOR SHALL COMPLETELY FAMILIARIZE HIMSELF WITH ALL CONDITIONS AFFECTING HIS WORK INCLUDING VISIT TO THE SITE BEFORE PREPARING HIS PROPOSAL. ALL WORK IS TO BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE CODES AND STANDARDS ISSUED BY ALL AUTHORITIES HAVING JURISDICTION OVER THE WORK. WHERE CONFLICT EXISTS BETWEEN THE APPLICABLE CODES AND STANDARDS OR THE PLANS AND SPECIFICATIONS, THE MOST STRINGENT AS DETERMINED BY THE ENGINEER WILL APPLY. CONTRACTOR SHALL NOTIFY ENGINEER OF CONFLICTING CONDITIONS AFFECTING HIS WORK AND ADVISE ENGINEER FOR CLARIFICATION. ALL CONSTRUCTIONS TO COMPLY WITH ALL LOCAL, STATE, AND FEDERAL AUTHORITIES HAVING JURISDICTION OVER THE WORK, INCLUDING THE FOLLOWING CODES:

FLORIDA BUILDING CODE – BUILDING EIGHTH EDITION (2023)
FLORIDA BUILDING CODE – MECHANICAL EIGHTH EDITION (2023)
FLORIDA BUILDING CODE – PLUMBING EIGHTH EDITION (2023)
FLORIDA BUILDING CODE – FUEL GAS EIGHTH EDITION (2023)
FLORIDA BUILDING CODE – ENERGY CONSERVATION EIGHTH EDITION (2023)
NFPA 90A – 2015 EDITION

ALL MATERIALS TO BE MANUFACTURED INCORPORATED INTO THE WORK TO BE MANUFACTURED IN THE USA UNLESS OTHERWISE NOTED OR SCHEDULED ON THE DRAWINGS.

CONTRACTOR TO FAMILIARZE HIMSELF COMPLETELY WITH EXISTING CONDITIONS IN EXISTING CONSTRUCTIONS PRIOR TO PROVIDING ANY PROPOSAL FOR ANY WORK. CONTRACTOR TO INCLUDE IN HIS WORK ALL DEMOLITION, CUTTING, PATCHING, FIELD MEASUTRING, AND INTERCONNECTION TO EXISTING SYSTEMS. CONTRACTOR TO SCHEDULE REQUIRED SITE VISIT WITH OWNER'S DESIGNATED REPRESENTATIVE NOT LESS THAN 10 WORKING DAYS PRIOR TO SUBMISSION OF ANY PROPOSAL OR BIDDING FOR THE WORK DESCRIBED IN THE CONSTRUCTION DOCUMENTS. WITHIN TWO WORKING DAYS OF SITE VISIT, CONTRACTOR TO REQUEST ANY ADDITIONAL INFORMATION OR ACCESS HE MAY REQUIRE TO REASONABLY PERFORM THE WORK OF THE CONSTRUCTION DOCUMENTS.

MECHANICAL CONTRACTOR TO PROVIDE COMPLETE AND FUNCTIONING SYSTEMS. CONTRACTOR TO PROVIDE ALL REQUIRED MATERIALS AND LABOR AS NEEDED TO PROVIDE COMPLETE AND FUNCTIONING SYSTEM AS DESCRIBED IN THE CONSTRUCTION DOCUMENTS.

QUALITY ASSURANCE:

USE ADEQUATE NUMBERS OF SKILLED WORKMEN WHO ARE THOROUGHLY TRAINED AND EXPERIENCED IN THE NECESSARY CRAFTS AND WHO ARE COMPLETELY FAMILIAR WITH THE SPECIFIED REQUIREMENTS AND THE METHODS NEEDED FOR PROPER PERFORMANCE OF THE WORK OF THIS SECTION.

WITHOUT ADDITIONAL COST TO THE OWNER, PROVIDE SUCH OTHER LABOR AND MATERIALS AS ARE REQUIRED TO COMPLETE THE WORK OF THIS SECTION IN ACCORDANCE WITH THE REQUIREMENTS OF GOVERNMENTAL AGENCIES HAVING JURISDICTION, REGARDLESS OF WHETHER SUCH MATERIALS AND ASSOCIATED LABOR ARE CALLED FOR ELSEWHERE IN THESE CONTRACT DOCUMENTS.

SUBMITTALS AND SHOP DRAWINGS:

CONTRACTOR TO PREPARE SUBMITTALS AND SHOP DRAWINGS FOR ALL MECHANICAL WORK AS REQUIRED BY THE CONSTRUCTION DOCUMENTS INTO SINGLE COMPLETE PACKAGE FOR ENGINEERS REVIEW. PACKAGE TO BE IN THREE RING BINDER WITH ALL SHOP DRAWINGS ATTACHED. BINDER AND DRAWINGS TO CLEARLY STATE PROJECT NAME, PROJECT ARCHITECT, PROJECT ENGINEER, PROJECT OWNER, CONTRACTOR NAME, AND SITE ADDRESS. WHERE ALLOWED BY OWNER AND ARCHITECT ELECTRONIC SUBMITTALS MAY BE ACCEPTABLE TO ENGINEER WHEN PROVIDED FOR REVIEW NOT ONLY IN ELECTRONIC FORMAT BUT ALSO ACCOMPANIED BY ONE HARD COPY AS DESCRIBED ABOVE. INCOMPLETE SUBMITTAL PACKAGES WILL BE AVAILABLE AT THE ENGINEERS OFFICE FOR CONTRACTOR PICK—UP AND COMPLETION BEFORE ANY REVIEW BY THE ENGINEER OTHER THAN CURSORY REVIEW AS REQUIRED TO DETERMINE COMPLETENESS OF SUBMITTAL PACKAGE.

CONTRACTOR TO SUBMIT NAME AND QUALIFICATIONS OF TEST AND BALANCE COMPANY BEING PROPOSED BY CONTRACTOR FOR TEST AND BALANCE WORK. TEST AND BALANCE CONTRACTOR SUBMITTAL INFORMATION TO INCLUDE DOCUMENTATION OF EXPERIENCE AS WELL AS COPY OF TEST AND BALANCE CONTRACTORS ENGINEERING CORPORATION LICENSE SHOWING NAME OF QUALIFYING REGISTERED PROFESSIONAL ENGINEER AS WELL AS COPY OF QUALIFYING PROFESSIONAL ENGINEERS CURRENT LICENSE.

COORDINATION OF WORK:

ENGINEERS DRAWINGS AND CONSTRUCTION DOCUMENTS ARE DIAGRAMMATIC. CONTRACTOR OF WORK THIS TRADE TO COORDINATE WITH ALL WORK OF CONTRACTORS OF OTHER TRADES AND GENERAL CONTRACTOR. CONTRACTORS TO FIELD MEASURE PRIOR TO FABRICATION OF ANY WORK. CONTRACTOR OF WORK OF THIS TRADE TO COMMUNICATE WITH GENERAL CONTRACTOR AND CONTRACTORS OF OTHER TRADES AND PREPARE DRAWINGS, SKETCHES, AND PROVIDE INFORMATION AS NEEDED TO COMMUNICATE WITH OTHER TRADES FOR CONSTRUCTION OF COMPLETE AND OPERATING SYSTEM WITHOUT ADDITIONAL COST TO OWNER. PRIOR TO BEGINNING WORK OF THIS TRADE, CONTRACTOR OF THIS TRADE TO CONTRACTOR OF OTHER TRADES AND GENERAL CONTRACTOR FOR PURPOSES OF COORDINATION. CONTRACTORS' FAILURES TO COORDINATE WILL NOT BE CAUSE FOR RECOVERY OF ADDITIONAL COMPENSATION FOR CORRECTION OR MODIFICATION WORK WHICH IN THE SOLE OPINION OF THE ENGINEER IS NOT WELL COORDINATED.

MOTORS:

PROVIDE MOTORS DESIGNED FOR THE SUPPLY VOLTAGES MADE AVAILABLE FOR THIS PORTION OF THE WORK, AND WITH THE FOLLOWING ATTRIBUTES:

SIZED TO DEVELOP THE REQUIRED BRAKE HORSEPOWER AND TO OPERATE SATISFACTORILY WITH A VOLTAGE VARIATION OF PLUS OR MINUS 10 CONFORMING TO NEMA MOTOR STANDARDS; DYNAMICALLY BALANCED, AND HELD TO COMMERCIAL TOLERANCE; WHERE T-FRAME MOTORS ARE USED, OVERSIZED AT LEAST 10 SELECTED SO THAT, WHEN AMBIENT TEMPERATURE REACHES 20 DEGREES F FOR A PERIOD OF TWO HOURS OR MORE, THE MOTOR WILL OPERATE SATISFACTORILY WITHOUT FAILURE, AND WITH A MINIMUM SERVICE FACTOR OF 1.25; WITH SQUIRREL-CAGE TYPE DRIP-PROOF ENCLOSURE, UNLESS OTHERWISE INDICATED, CONSTANT SPEED, ACROSS-THE-LINE NORMAL STARTING TORQUE DESIGNED FOR QUIET OPERATION; EACH MOTOR OF AMPLE SIZE TO OPERATE ITS UNIT AT PROPER FULL LOAD AND SPEED CONTINUOUSLY, WITHOUT HEATING IN ANY PART MORE THAN 40 DEGREES C ABOVE THE TEMPERATURE OF THE SURROUNDING ATMOSPHERE.

WHERE MOTOR IS USED WITH V BELT DRIVE, EQUIP WITH A SLIDING BASE AND BELT GUARD, AND MOTOR SHEAVE.

CONTROLS

CONTRACTOR TO PROVIDE COMPLETE SYSTEM OF THERMOSTATS, SENSORS, AND OTHER DEVICES AND COMPONENTS INCLUDING SOFTWARE, IF NEEDED, TO DELIVER SEQUENCES OF OPERATION REQUIRED BY THE CONSTRUCTION DOCUMENTS. CONTRACTOR TO PROVIDE CONTROLS SUBMITTALS AND SHOP DRAWINGS SHOWING RISER DIAGRAMS AND ALL SYSTEM COMPONENTS WITH COMPONENT CUTSHEETS AND COMPLETE PRODUCT INFORMATION. SUBMITTAL TO CLEARLY STATE THE SEQUENCE OF OPERATION FOR EACH SYSTEM.

PROVIDE OTHER MATERIALS, NOT SPECIFICALLY DESCRIBED BUT REQUIRED FOR A COMPLETE AND PROPER INSTALLATION, AS SELECTED BY THE CONTRACTOR SUBJECT TO THE APPROVAL OF THE ARCHITECT.

EST AND BALANCE

PRIOR TO CONTRACTORS REQUEST FOR SUBSTANTIAL COMPLETION INSPECTION, CONTRACTOR TO PROVIDE INDEPENDENT TEST AND BALANCE BY FIRM WITH NOT LESS THAN 10 YEARS DEMONSTRABLE EXPERIENCE SPECIALIZING IN TEST AND BALANCE WORK. ENGINEER WILL NOT PERFORM SUBSTANTIAL COMPLETION INSPECTION OF WORK BEFORE RECEIPT OF TEST AND BALANCE REPORT. TEST AND BALANCE TO BE PERFORMED IN ACCORDANCE WITH THE WRITTEN PROCEDURES OF SMACNA, AABC, OR NEBB AND COMPANY CERTIFIED BY AABC OR NEBB. CONTRACTOR TO PROVIDE NOT LESS THAN FOUR COPIES OF CERTIFIED TEST AND BALANCE REPORT TO ENGINEER. ALL TEST AND BALANCE WORK TO BE PERFORMED UNDER THE SUPERVISION OF A LICENSED PROFESSIONAL ENGINEER AND ALL REPORTS TO BEAR THE ORIGINAL SEAL AND SIGNATURE OF LICENSED PROFESSIONAL ENGINEER.

TEST AND ADJUST EACH PIECE OF EQUIPMENT AND EACH SYSTEM AS REQUIRED TO ASSURE PROPER BALANCE AND OPERATION. TEST AND REGULATE VENTILATION SYSTEMS TO CONFORM TO THE AIR VOLUMES SHOWN ON THE APPROVED DESIGN DRAWINGS. MAKE TESTS AND ADJUSTMENTS IN APPARATUS SECURING THE PROPER VOLUME OF AIR FOR EACH INLET OR OUTLET. WHERE REQUIRED, PROVIDE PULLEYS FOR FANS AT NO ADDITIONAL COST TO THE OWNER, AND SET TO DRIVE THE FANS AT THE SPEED NEEDED TO GIVE THE INDICATED VOLUME.

AIR SYSTEMS:

FOR EACH SYSTEM, TAKE THE FOLLOWING DATA IN TABULATED FORM: AIR VOLUMES AT ALL EXHAUST OUTLETS;

MOTOR SPEED, FAN SPEED, AND INPUT AMPERE RATING FOR EACH FAN.

EXECUTION:

SURFACE CONDITIONS:

EXAMINE THE AREAS AND CONDITIONS UNDER WHICH WORK OF THIS SECTION WILL BE PERFORMED. CORRECT CONDITIONS DETRIMENTAL TO TIMELY AND PROPER COMPLETION OF THE WORK. DO NOT PROCEED UNTIL UNSATISFACTORY CONDITIONS ARE CORRECTED.

COORDINATION

COORDINATE AS REQUIRED WITH OTHER TRADES TO ASSURE PROPER AND ADEQUATE PROVISION IN THE WORK OF THOSE TRADES FOR INTERFERENCE WITH THE WORK OF THIS SECTION.

PREPARATION

HOLES IN CONCRETE: PROVIDE SLEEVES, ACCURATELY DIMENSIONED AND SHAPED TO PERMIT PASSAGE OF ITEMS OF THIS SECTION. DELIVER ALL SUCH SLEEVES, WITH ACCURATE SETTING DRAWINGS AND SETTING INFORMATION, TO THE TRADES PROVIDING SURFACES THROUGH WHICH SUCH ITEMS MUST PENETRATE AND IN A TIMELY MANNER TO ASSURE INCLUSION IN THE WORK.

FLASHING: WHERE ITEMS OF THIS SECTION PENETRATE THE ROOF, OUTER WALLS, AT WATERPROOFING OF ANY KIND, PROVIDE UNDER THIS SECTION ALL BASE FLASHING AND COUNTERFLASHING REQUIRED AT SUCH PENETRATION. PROVIDE ON

EACH PIPE PASSING THROUGH THE ROOF A 4 LB SEAMLESS LEAD FLASHING AND COUNTERFLASHING ASSEMBLY.

EQUIPMENT INTERFACE:
FOR ELECTRICALLY OPERATED EQUIPMENT, VERIFY THE ELECTRICAL CHARACTERISTICS ACTUALLY AVAILABLE FOR THE

WORK OF THIS SECTION AND PROVIDE EQUIPMENT MEETING THOSE CHARACTERISTICS.

PAINTING:
PAINT INSIDE OF ALL AIR OUTLETS AND CONNECTING PLENUMS WITH ONE COAT OF BLACK PAINT, OR PROVIDE ALL SUCH ITEMS FACTORY PREPAINTED FOR ROOF—MOUNTED FOLLIPMENT, PROVIDE FACTORY PREFINISH ON ALL EXPOSED.

SUCH ITEMS FACTORY PREPAINTED. FOR ROOF—MOUNTED EQUIPMENT, PROVIDE FACTORY PREFINISH ON ALL EXPOSED SURFACES. TOUCH—UP SCRATCHES AND ABRASIONS TO BE INVISIBLE TO THE UNAIDED EYE FROM A DISTANCE OF 5'0".

NSTRUCTIONS:

UPON COMPLETION OF THIS PORTION OF THE WORK, AND PRIOR TO ITS ACCEPTANCE BY THE OWNER, PROVIDE A QUALIFIED ENGINEER AND FULLY INSTRUCT THE OWNER'S MAINTENANCE PERSONNEL IN THE PROPER OPERATION AND MAINTENANCE OF ITEMS PROVIDED UNDER THIS SECTION.

WARRANTY:

CONTRACTOR TO WARRANTY ALL MATERIALS, WORKMANSHIP, AND SYSTEM PERFORMANCE FOR A PERIOD OF NOT LESS THAN TWO YEARS FROM TIME OF SUBSTANTIAL COMPLETION. WHERE MANUFACTURERS STANDARD WRITTEN WARRANTIES OR WARRANTY REQUIREMENTS STATED ELSEWHERE IN THE CONSTRUCTION DOCUMENTS ARE OF A PERIOD OF GREATER THAN TWO YEARS, CONTRACTOR OR MANUFACTURER ARE TO PROVIDE WARRANTY OF LONGER DURATION. WARRANTY TO INCLUDE AT A MINIMUM COMPLETE QUARTERLY MAINTENANCE INCLUDING, BUT NOT LIMITED TO, LUBRICATION, BELT REPLACEMENT, AND ALL RECOMMENDED OR SUGGESTED ROUTINE MAINTENANCE OF THE EQUIPMENT MANUFACTURER.

CONTRACTOR TO NOTIFY OWNER'S REPRESENTATIVE OF DATE OF SUBSTANTIAL COMPLETION AT TIME OF SUBSTANTIAL COMPLETION.

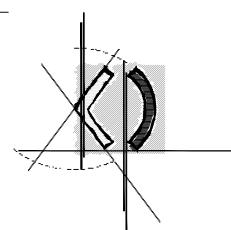
BUILDING MECHANICAL INDEX OF DRAWINGS

SHEET NUMBER CONTENTS

M-001 MECHANICAL - NOTES

M-101 FLOOR PLAN - MECHANICAL

MECHANICAL - NOTES



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REGISTERED ENGINEERING BUSINESS FL LIC. #: 6061

PROJECT

HOWEY IN THE HILLS

90% REVIEW SET
NOT FOR
CONSTRUCTION
07/17/2025

MARK REVISIONS:

DATE: DESCRIPTION: BY:

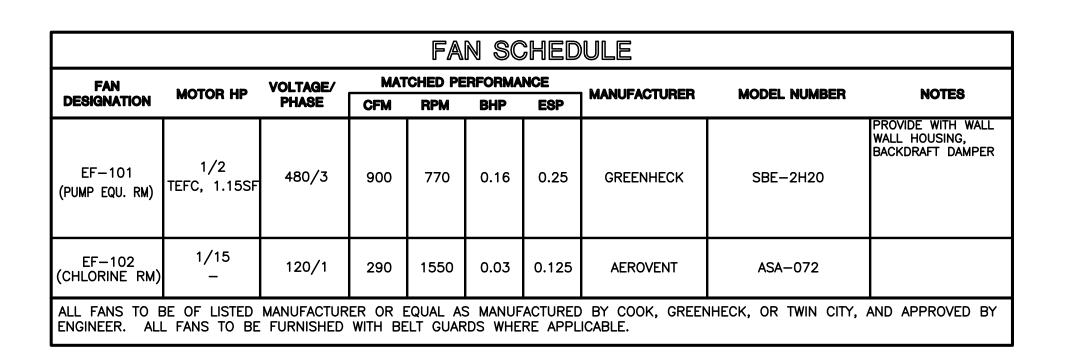
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CHECKED BY: JSE
DATE: ??/??/????

SHEET:

MECHANICAL NOTES

MOTES

3



FAN STARTER AND DISCONNECT AND THERMOSTAT PROVIDED BY ELECTRICAL CONTRACTOR; SEE CDs PREPARED BY BAILEY ENGINEERING CONSULTANTS 'BEC' FOR CONTROL REQUIREMENTS— FULL LOUVER FULL LOUVER FAN STARTER AND DISCONNECT PROVIDED
BY DIV. 16 CONTRACTOR, FAN TO RUN;
CONTINUOUSLY SEE CDs PREPARED BY
'BEC' FOR CONTROL REQUIREMENTS

FLOOR PLAN - MECHANICAL

PLAN NOTES (MECHANICAL)

HURRICANE RATED LOUVER WITH HURRICANE RATED INSTALLATION
TO BE RUSKIN MODEL ELF6375DXD WITH AAMA 2605 PVDF
COATING, COORDINATE COLOR SELECTION WITH ARCHITECT PRIOR
TO SUBMITTAL; EQUAL BY GREENHECK; PROVIDE WITH OWNER
REQUIRED 316SS INSECT SCREEN

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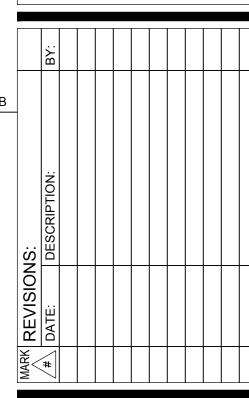
EBS

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DRAWN BY: CHECKED BY: ??/??/????

SHEET:

FLOOR PLAN MECHANICAL

No. Date DESCRIPTION △ 07/17/2025 90% REVIEW SET

Revisions