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GENERAL NOTES:

- ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH ALL RELATIVE CITY OF WILDWOOD AND FDEP REGULATIONS, EXCEPT AS MODIFIED HEREIN.
- CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND INSURANCE REQUIRED FOR THE WORK.
- CONTRACTOR IS RESPONSIBLE FOR SCHEDULING A PRE-CONSTRUCTION INSPECTION OF THE SITE PRIOR TO THE BEGINNING OF THE WORK. CONTRACTOR SHALL INFORM THE OWNER, COMPANY REPRESENTATIVE, UTILITY AUTHORITY AND INTERESTED CITY AGENCIES AT LEAST 48 HOURS PRIOR TO THE SCHEDULED INSPECTION.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM, IN THE FIELD, THE LOCATION AND ELEVATION OF ALL UTILITIES PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. SHOULD CONDITIONS VARY FROM THOSE SHOWN ON THE PLANS, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE COMPANY REPRESENTATIVE PRIOR TO CONTINUING CONSTRUCTION.
- CONTRACTOR SHALL LOCATE, VERIFY AND IDENTIFY ALL EXISTING UNDERGROUND UTILITIES SHOWN, OR NOT SHOWN, ON THE PLANS PRIOR TO ANY EXCAVATING ACTIVITIES.
- CONTRACTOR SHALL TAKE ALL MEASURES NECESSARY TO PROTECT EXISTING AND NEWLY CONSTRUCTED UTILITIES DURING THE CONSTRUCTION. SHOULD ANY UTILITY LINE OR COMPONENT BECOME DAMAGED OR REQUIRE RELOCATION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE RESPONSIBLE UTILITY COMPANY, THE COMPANY REPRESENTATIVE AND THE RESPONSIBLE CITY OF WILDWOOD REPRESENTATIVE.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING UTILITIES CAUSED BY HIS OPERATIONS.
- CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION WITH OTHER WORK WHICH MAY BE ONGOING ADJACENT TO, OR AFFECTING, THIS CONSTRUCTION. CONTRACTOR SHALL COOPERATE WITH OTHER CONTRACTORS AND ALL AFFECTED UTILITY COMPANIES.
- CONTRACTOR SHALL NOTIFY ALL APPLICABLE UTILITY COMPANIES, THE COMPANY REPRESENTATIVE 48 HOURS PRIOR TO THE INITIATING OF ANY EXCAVATION ACTIVITIES, OR AS SPECIFIED BY THE UTILITY COMPANY AND ANY PERMITS REQUIRED FOR THE WORK.
- CONTRACTOR SHALL PROTECT EXISTING UTILITIES, SURVEY MARKERS, MONUMENTS, ETC. DURING CONSTRUCTION. CONTRACTOR SHALL RESTORE/REPLACE ANY DAMAGE DURING CONSTRUCTION ACTIVITIES.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL/DISPOSAL OF ANY UNSUITABLE MATERIAL FROM THE CONSTRUCTION OPERATION, FURNISHING AND COMPACTING SUITABLE REPLACEMENT BACKFILL MATERIAL. DISPOSAL OF UNSUITABLE MATERIAL SHALL BE IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS..
- CONTRACTOR SHALL MAINTAIN "AS-BUILT" INFORMATION ON A REGULAR BASIS. CONTRACTOR SHALL EMPLOY THE SERVICES OF A SURVEYOR REGISTERED IN THE STATE OF FLORIDA TO DETERMINE ALL "AS-BUILT" INFORMATION. WITHIN 14 DAYS OF THE COMPLETION OF THE WORK, CONTRACTOR SHALL PROVIDE SIGNED AND SEALED COPIES AND THE DIGITAL CAD FILE OF THE "AS-BUILT" DRAWINGS AND SUPPORTING SURVEY RECORDS TO THE COMPANY REPRESENTATIVE. CAD FILES SHALL BE IN THE AUTOCAD FORMAT.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PRODUCE, SUBMIT, AND OBTAIN APPROVAL OF THE REPRODUCIBLE AS-BUILT DRAWINGS FOR ANY JURISDICTIONAL AGENCIES AS MAY BE REQUIRED.
- CONTRACTOR SHALL GIVE THE COMPANY REPRESENTATIVE A MINIMUM OF 48 HOURS NOTICE OF ALL MEETINGS OR TESTING MEASURES REQUIRED TO BE WITNESSED BY THE CONSTRUCTION ACTIVITIES RELATED TO THE WORK.
- CONTRACTOR SHALL GIVE THE COMPANY REPRESENTATIVE A MINIMUM OF THREE (3) BUSINESS DAYS NOTICE FOR ANY FINAL INSPECTION.

GENERAL UTILITY NOTES:

- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE CITY OF WILDWOOD WATER AND SEWER STANDARD, DETAILS AND SPECIFICATIONS, AS WELL AS ALL APPLICABLE STATE AND LOCAL REGULATIONS, EXCEPT AS MODIFIED HEREIN.
- IF SOLVENT CONTAMINATION IS FOUND IN ANY TRENCH, WORK WILL BE STOPPED AND THE PROPER AUTHORITIES NOTIFIED. THE CITY OF WILDWOOD HEALTH DEPARTMENT MAY GRANT APPROVAL OF THE USE OF DUCTILE IRON PIPE, FITTINGS AND APPROVED SOLVENT RESISTANT GASKET MATERIAL IN THE CONTAMINATED AREA. DUCTILE IRON PIPE SHALL EXTEND AT LEAST 100 FEET BEYOND ANY CONTAMINATED AREA.
- VERTICAL LOCATIONS OF ALL EXISTING UTILITIES SHOWN ON THE PLAN AND PROFILE SHEETS HAVE BEEN ASSUMED. CONTRACTOR SHALL EXERCISE CAUTION DURING EXCAVATION NEAR EXISTING UTILITIES SHOWN ON THE PLANS AND NOTIFY THE ENGINEER IF THE LOCATION DIFFERS FROM THAT SHOWN BEFORE CONTINUING WITH THE CONSTRUCTION.
- UNSUITABLE MATERIALS UNDER PROPOSED PIPING SHALL BE REMOVED AND REPLACED WITH SELECT BACKFILL, PROPERLY COMPACTED TO 95% OF MAXIMUM DENSITY PER AASHTO T-180.
- FITTINGS SHALL BE USED AT LOCATIONS INDICATED ON THE PLANS, UNLESS OTHERWISE APPROVED BY THE OWNER REPRESENTATIVE.
- ALL UNDERGROUND VALVES SHALL BE INSTALLED WITH AN ADJUSTABLE CAST IRON VALVE BOX WITH THE COVER SET TO FINAL GRADE IN ACCORDANCE WITH CITY OF WILDWOOD DETAILS AND SPECIFICATIONS. VALVE BOX COVERS SHALL HAVE APPROPRIATE "WATER" OR "SEWER" CAST INTO THE TOP.
- THE LENGTH OF TRENCH OPEN AT ANY ONE TIME SHALL BE CONTROLLED BY THE PARTICULAR SURROUNDING CONDITIONS, BUT SHALL BE LIMITED TO 300 LINEAR FEET UNLESS APPROVED BY THE CITY OF WILDWOOD UTILITY ENGINEER IN WRITING.
- NO CONNECTIONS TO EXISTING POTABLE WATER SYSTEMS SHALL BE ALLOWED UNTIL ALL PROPOSED WATER LINES HAVE BEEN PRESSURE TESTED, DISINFECTED, CLEARED FOR SERVICE AND ACCEPTED BY THE CITY OF WILDWOOD UTILITY AND FDEP.
- THE BACTERIOLOGICAL SAMPLE POINTS SHALL BE INDICATED IN RED ON THE "AS BUILT" DRAWINGS PRIOR TO THE REQUEST FOR A LETTER OF RELEASE TO PLACE THE CONSTRUCTION INTO SERVICE. THE SAMPLE NUMBERS WILL CORRESPOND TO THOSE ON THE BACTERIOLOGICAL SAMPLE LAB SHEETS.

WATER / SEWER SEPARATION:

- SANITARY SEWERS (INCLUDING LATERALS) SHALL CROSS UNDER WATER MAINS WHENEVER POSSIBLE. SANITARY SEWERS CROSSING WATER MAINS SHALL BE INSTALLED TO PROVIDE A MINIMUM VERTICAL DISTANCE OF 18 INCHES BETWEEN THE INVERT OF THE UPPER PIPE AND THE CROWN OF THE LOWER PIPE WHENEVER POSSIBLE.
- WHERE SANITARY SEWERS MUST CROSS A WATER MAIN WITH LESS THAN 18 INCHES OF VERTICAL DISTANCE, THE WATER MAIN SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE (DIP) AT THE CROSSING. SUFFICIENT LENGTHS OF DIP MUST BE USED TO PROVIDE A MINIMUM SEPARATION OF 10 FEET BETWEEN ANY TWO JOINTS. ALL JOINTS ON THE WATER MAIN WITHIN 20 FEET OF THE CROSSING MUST BE MECHANICALLY RESTRAINED. AN ABSOLUTE MINIMUM OF VERTICAL CLEARANCE OF 6 INCHES MUST BE MAINTAINED AT ALL CROSSINGS.
- A FULL, UN CUT LENGTH OF WATER MAIN PIPE, AT LEAST 20 FEET IN LENGTH, SHALL BE CENTERED AT THE POINT OF CROSSING OF ALL WATER AND SEWER PIPING, REGARDLESS OF THE VERTICAL SEPARATION.
- WATER MAINS SHALL BE LOCATED AT LEAST 10 FEET HORIZONTALLY FROM PIPES CARRYING RAW WASTEWATER, AND 3 FEET HORIZONTALLY FROM PIPES CARRYING RECLAIMED WATER, UNLESS OTHERWISE SPECIFICALLY SHOWN ON THE PLANS. THE DISTANCE SHALL BE MEASURED FROM INSIDE EDGE OF PIPE TO INSIDE EDGE OF PIPE. WATER MAINS SHALL BE LAID TO PROVIDE A SEPARATION OF AT LEAST 18 INCHES BETWEEN THE BOTTOM OF WATER MAIN AND THE TOP OF SEWER OR RECLAIMED WATER PIPE. WATER MAINS SHALL CROSS ABOVE SEWER OR RECLAIMED WATER PIPE WITH A VERTICAL SEPARATION OF AT LEAST 18 INCHES PER SUMTER COUNTY LDC, D.3.2.C.

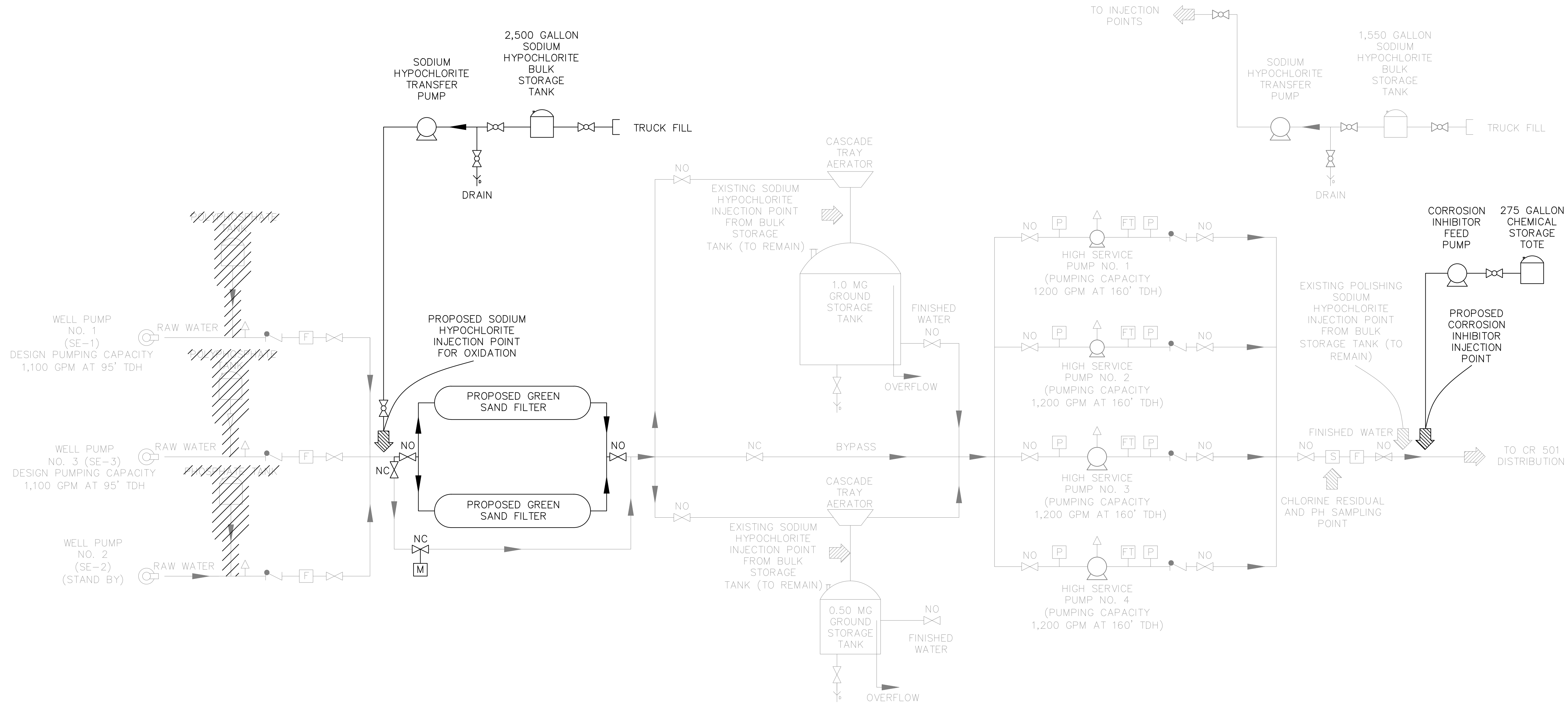
WATER MAIN:

- PVC PIPE OF NOMINAL DIAMETER, SHALL BE MANUFACTURED IN ACCORDANCE WITH AWWA STANDARD C900, LATEST EDITION. ALL PVC PIPE SHALL BE DR-18. PVC WATER PIPE SHALL BE BLUE IN COLOR. PVC PIPE SHALL HAVE INTEGRAL BELL PUSH ON TYPE JOINTS CONFORMING TO ASTM D3139. FITTINGS USED WITH PVC PIPE SHALL CONFORM TO SUMTER COUNTY LDC SECTION D.3.1.D.
- ALL DUCTILE IRON PIPE OF NOMINAL DIAMETER FOUR INCHES THROUGH 20 INCHES SHALL BE CLASS 350 AND FOR PIPE SIZES LARGER THAN 20 INCHES SHALL BE CLASS 250 AND SHALL CONFORM TO ANSI/AWWA A21.51/CL5L. ANY FITTINGS REQUIRED SHALL BE MECHANICAL JOINT DUCTILE IRON OR GRAY IRON CONFORMING TO ANSI/AWWA A21.10/C110, 250 PSI MINIMUM PRESSURE RATING, OR DUCTILE IRON COMPACT FITTINGS IN ACCORDANCE WITH ANSI/AWWA A21.53/C153. JOINTS FOR DUCTILE IRON PIPE AND FITTING JOINTS SHALL BE PUSH-ON OR MECHANICAL JOINTS CONFORMING TO ANSI/AWWA A21.11/C111. WHERE CALLED FOR IN THE PLANS, RESTRAINED OR FLANGED JOINTS SHALL BE PROVIDED. FLANGED JOINTS SHALL CONFORM TO ANSI STANDARD B 16.1-125 LB. RESTRAINED JOINTS SHALL CONFORM TO SECTIONS D.1.5.C. AND D.1. 5.D. WHERE DUCTILE IRON PIPE AND FITTINGS ARE TO BE BELOW GROUND OR INSTALLED IN A CASING PIPE THE COATING SHALL BE A MINIMUM 1.0 MIL THICK IN ACCORDANCE WITH ANSI/AWWA A21.51/C151. WHERE DUCTILE IRON PIPE AND FITTINGS ARE TO BE INSTALLED ABOVE GROUND, PIPE, FITTINGS AND VALVES SHALL BE THOROUGHLY CLEANED AND GIVEN ONE FIELD COAT (MINIMUM 1.5 MILS DRY THICKNESS) OF RUST INHIBITOR PRIMER. INTERMEDIATE AND FINISHED FIELD COATS OF ALKYD SHALL ALSO BE APPLIED BY THE CONTRACTOR (MINIMUM 1.5 MILS DRY THICKNESS EACH COAT). PRIMER AND FIELD COATS SHALL BE COMPATIBLE AND SHALL BE APPLIED IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS. FINAL FIELD COAT SHALL BE GREEN FOR RAW WATER AND BLUE FOR FINISHED WATER. ALL DUCTILE IRON PIPE AND FITTINGS SHALL HAVE AN INTERIOR PROTECTIVE LINING OF CEMENT-MORTAR WITH A SEAL COAT OF ASPHALTIC MATERIAL IN ACCORDANCE WITH ANSI/AWWA A21.4/C104. THE PIPE SHALL BE POLYETHYLENE ENCASED (8 MIL) WHERE SHOWN ON THE DRAWINGS OR REQUIRED BY THE COUNTY IN ACCORDANCE WITH ANSI/AWWA A21.51/C105.
- ALL PIPE MATERIAL AND INSTALLATION SHALL BE IN ACCORDANCE WITH THE APPROPRIATE SECTIONS OF THE CITY OF WILDWOOD LAND DEVELOPMENT CODE.
- ALL UNDERGROUND FITTINGS SHALL BE MECHANICAL JOINT DUCTILE IRON (MJD) OR GRAY IRON CONFORMING TO ANSI/AWWA A21.20/C110, 250 PSI MINIMUM PRESSURE RATING, OR DUCTILE IRON COMPACT FITTINGS IN ACCORDANCE WITH ANSI/AWWA A21.53/C153.
- ALL PIPING MATERIAL SHALL BE HANDLED IN A MANNER TO PREVENT DAMAGE. ACCIDENTAL DAMAGE TO PIPE OR COATINGS SHALL BE REPAIRED TO THE SATISFACTION OF THE COMPANY REPRESENTATIVE OR BE REMOVED FROM SITE. WHEN NOT BEING HANDLED, THE PIPE SHALL BE SUPPORTED ON TIMBER CRADLES OR ON PROPERLY PREPARED GROUND, GRADED TO ELIMINATE ALL ROCK POINTS AND TO PROVIDE UNIFORM SUPPORT ALONG THE FULL LENGTH. PVC PIPE MATERIALS SHALL NOT BE STORED UNCOVERED.
- JOINT GASKETS SHALL BE STORED IN A CLEAN, DARK, DRY LOCATION UNTIL IMMEDIATELY BEFORE USE.
- ALL PVC WATER MAINS SHALL BE INSTALLED WITH LOCATING WIRE AND SUFFICIENT GROUNDING POINTS (MAXIMUM DISTANCE BETWEEN GROUNDING POINTS IS 500 FEET).
- ALL PACKING AND JOINTING MATERIALS FOR NEW OR RELOCATED PIPE SHALL BE IN CONFORMANCE WITH THE APPLICABLE AWWA STANDARDS.
- INSTALLATION OF ALL WATER MAINS SHALL BE IN CONFORMANCE WITH THE APPLICABLE AWWA STANDARDS AND THE CITY OF WILDWOOD LAND DEVELOPMENT CODE. PIPE JOINT RESTRAINT OF ALL BENDS SHALL BE IN ACCORDANCE WITH THE DETAILS SHOWN ON THE PLANS.
- HYDROTESTING PROCEDURES SHALL BE IN ACCORDANCE WITH CITY OF WILDWOOD CONSTRUCTION SPECIFICATIONS AND AWWA C600.
- ALL WATER LINES SHALL BE FLUSHED WITH POTABLE WATER PRIOR TO DISINFECTION. FLUSHING WATER VELOCITY SHALL BE 2.5 FEET PER SECOND OR GREATER. WATER LINE DISINFECTION SHALL BE IN ACCORDANCE WITH THE CITY OF WILDWOOD LAND DEVELOPMENT CODE AND AWWA C651.

PRESSURE PIPE RESTRAINT:

- PRESSURE PIPE FITTINGS AND OTHER ITEMS REQUIRING RESTRAINT SHALL BE IN ACCORDANCE WITH THE RESTRAINED JOINT TABLE IN THE CITY OF WILDWOOD UTILITIES WATER AND SEWER STANDARD DETAILS AND SPECIFICATIONS.

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LICENSED PROFESSIONAL	JAMES E. CLAYTON		FLORIDA LICENSE NUMBER 90813		DATE		
KHA PROJECT 142173320	DATE MAY 2024	SCALE AS SHOWN	DESIGNED BY KHA	DRAWN BY RDC	CHECKED BY PHS		
GENERAL NOTES							
CR 501 WTP IMPROVEMENTS PREPARED FOR CITY OF WILDWOOD							
CITY OF WILDWOOD FLORIDA							
SHEET NUMBER G-02							



PROCESS FLOW DIAGRAM
N.T.S.

LEGEND

	GATE VALVE		PRESSURE GAUGE
	BALL VALVE		VERTICAL TURBINE WELL PUMP
	CHECK VALVE		CHEMICAL FEED PUMP
	SWING CHECK VALVE		CENTRIFUGAL PUMP
	BUTTERFLY VALVE		FLOW TRANSMITTER
	AIR AND/OR VACUUM RELEASE VALVE		DRAIN
	DENOTES THAT FACILITIES ARE TO BE REMOVED		FLOW METER
			EXISTING
			PROPOSED

CR 501 WTP IMPROVEMENTS
PREPARED FOR
CITY OF WILDWOOD
FLORIDA

PROCESS FLOW DIAGRAM

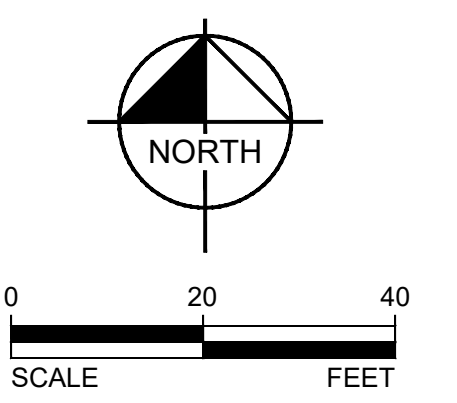
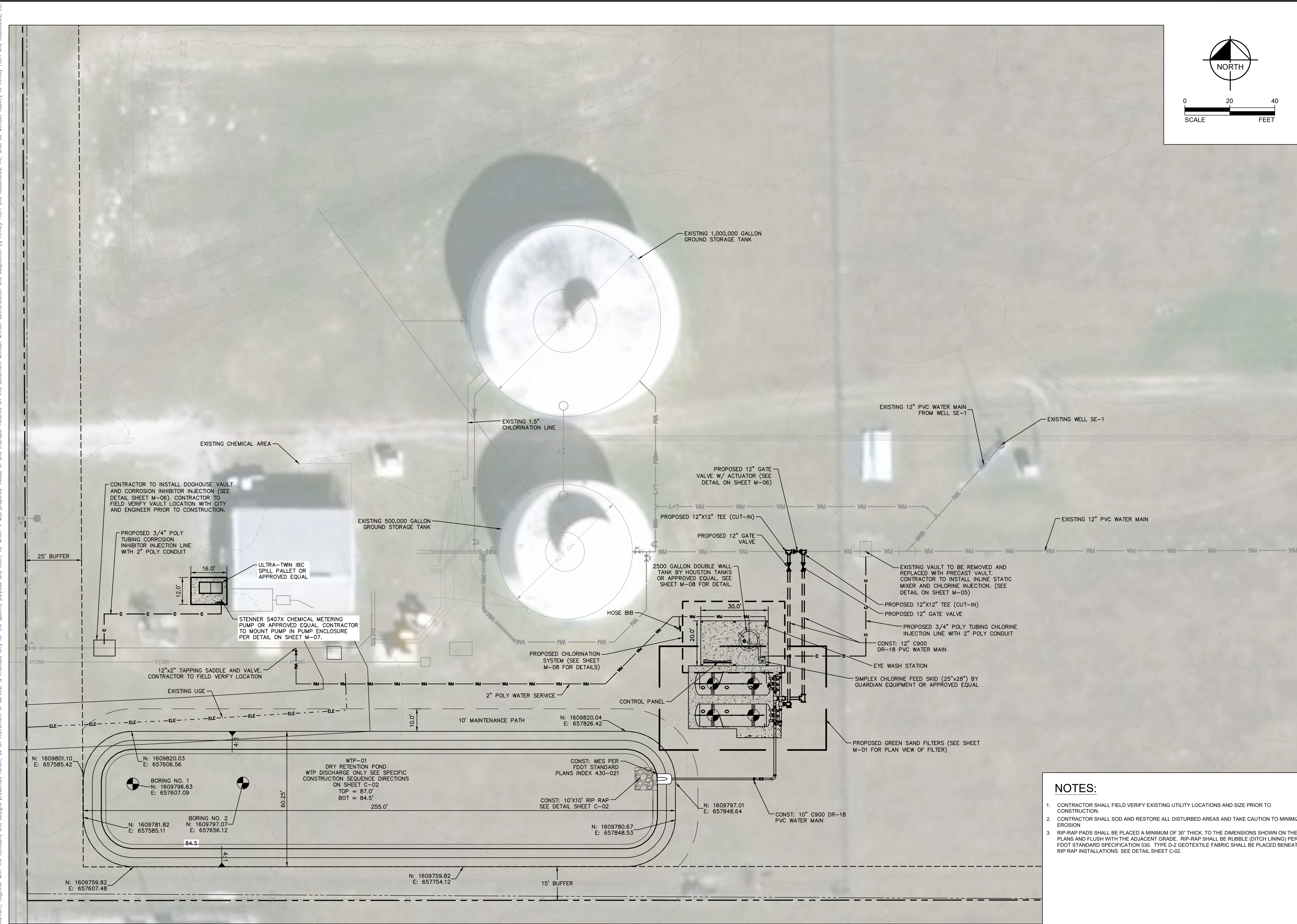
KHA PROJECT 142173320
DATE MAY 2024
SCALE AS SHOWN
DESIGNED BY KHA
DRAWN BY RDC
CHECKED BY PHS

LICENSED PROFESSIONAL
JAMES E. CLAYTON
FLORIDA LICENSE NUMBER 90813

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NO.	REVISIONS	DATE	BY
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K:\024 - Utility\Wildwood\Process\142173320 - CR 501 WTP for EPC\Drawings\1 - YARD PIPING PLAN.dwg, May 07, 2024, 4:46:40pm
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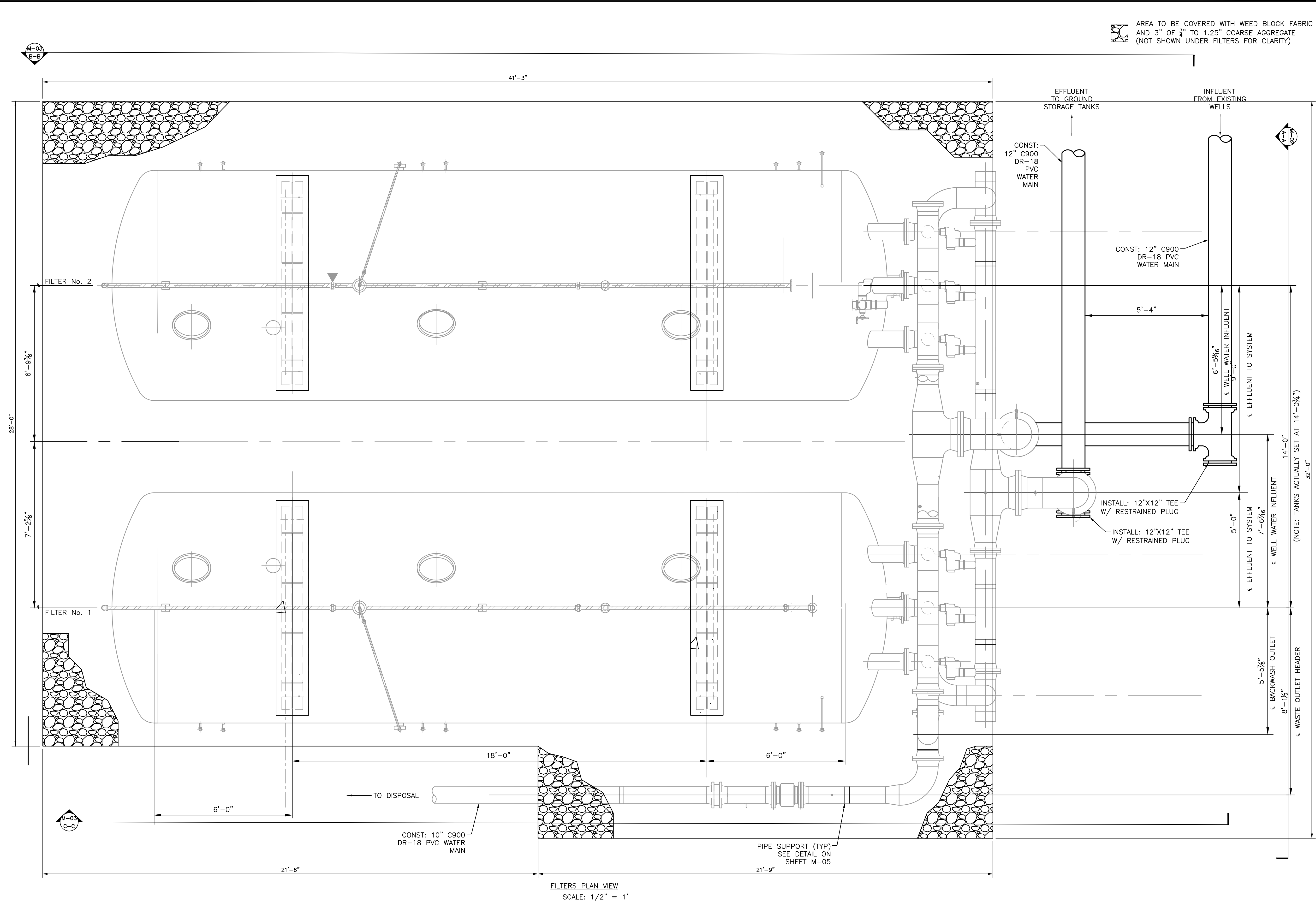


- NOTES:**
- CONTRACTOR SHALL FIELD VERIFY EXISTING UTILITY LOCATIONS AND SIZE PRIOR TO CONSTRUCTION.
 - CONTRACTOR SHALL SOD AND RESTORE ALL DISTURBED AREAS AND TAKE CAUTION TO MINIMIZE EROSION.
 - RIP-RAP PADS SHALL BE PLACED A MINIMUM OF 30\"/>

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KHA PROJECT 142173320	DATE MAY 2024	SCALE AS SHOWN	DESIGNED BY KHA
		DRAWN BY RDC	CHECKED BY PHS
YARD PIPING PLAN		DATE: _____	REVISIONS: _____
CR 501 WTP IMPROVEMENTS PREPARED FOR CITY OF WILDWOOD		DATE	BY
SHEET NUMBER C-01			

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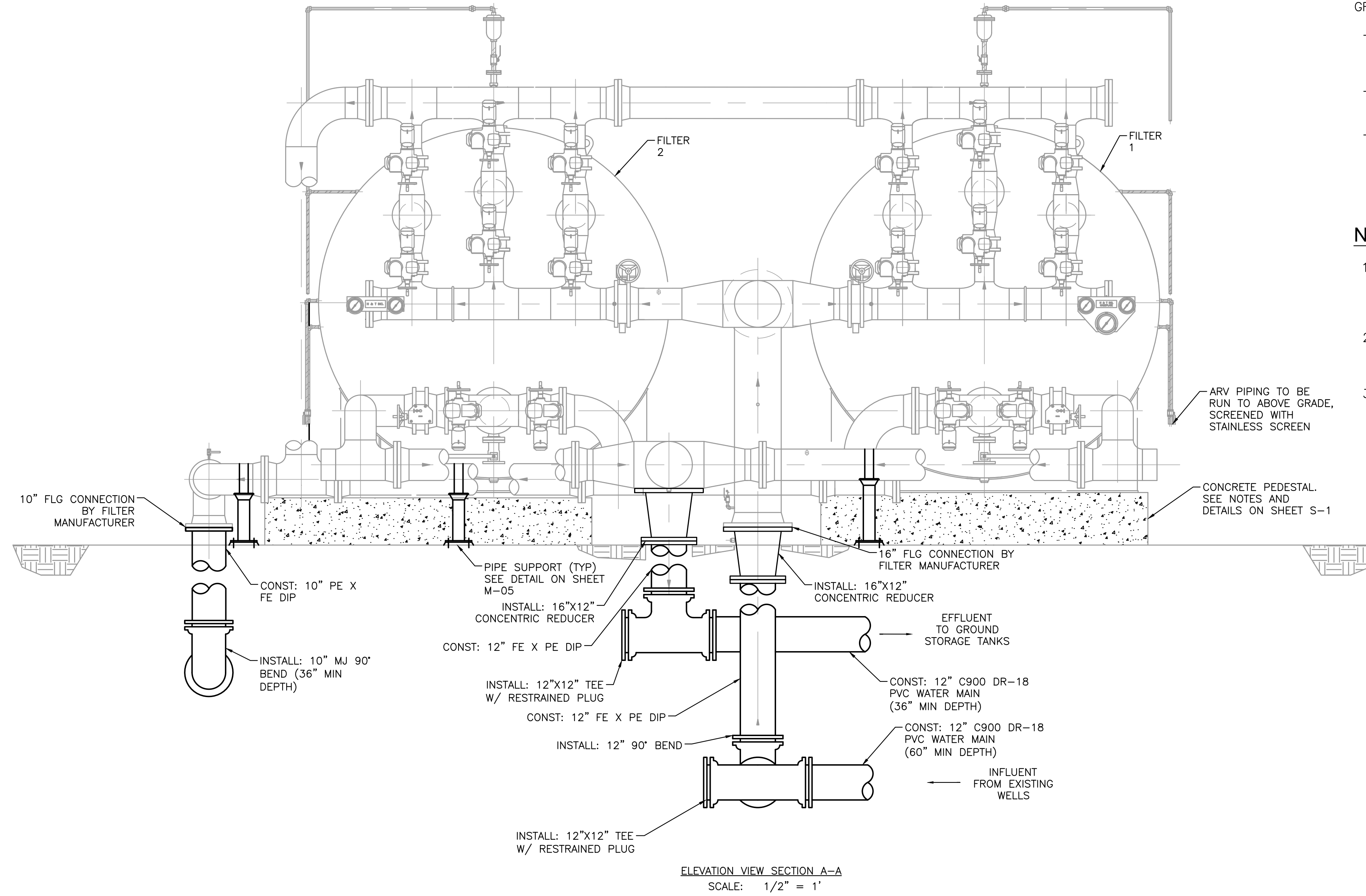
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FILTERS PLAN VIEW
SCALE: 1/2" = 1'

AREA TO BE COVERED WITH WEED BLOCK FABRIC AND 3" OF 3/4" TO 1.25" COARSE AGGREGATE (NOT SHOWN UNDER FILTERS FOR CLARITY)

CR 501 WTP IMPROVEMENTS PREPARED FOR CITY OF WILDWOOD <small>CITY OF WILDWOOD FLORIDA</small>	SHEET NUMBER M-01
	IRON FILTER PLAN LICENSED PROFESSIONAL JAMES E. CLAYTON FLORIDA LICENSE NUMBER 90813
KHA PROJECT 142173320 DATE MAY 2024 SCALE AS SHOWN DESIGNED BY KHA DRAWN BY RDC CHECKED BY PHS	DATE ---
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EQUIPMENT SCHEDULE:

GREENSAND FILTER:

- HUNGERFORD AND TERRY GREENSAND PLUS FILTRATION EQUIPMENT PER SPECIFICATION 11950
- NUMBER OF VESSELS: 2
DIMENSIONS: 10' DIAMETER X 30' LENGTH
- DESIGN FLOW RATE = 2,400 GPM
UNIT FLOW RATE = 1,200 GPM
DESIGN LOADING RATE = 4.0 GPM/FT²

NOTES:

1. SOME PIPE SUPPORTS NOT SHOWN FOR CLARITY. CONTRACTOR TO FIELD VERIFY LOCATIONS WITH ENGINEER PRIOR TO CONSTRUCTION.
2. ALL DIMENSIONS AND SIZES ARE TO BE VERIFIED BY CONTRACTOR WITH RESPECT TO SHOP DRAWING FROM MANUFACTURER.
3. ANCHOR BOLTS FOR TANK SADDLE TO CONCRETE SUPPORT TO BE SUPPLIED BY TANK MANUFACTURER.

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JAMES E. CLAYTON
FLORIDA LICENSE NUMBER
90813

KHA PROJECT
142173320
DATE
MAY 2024
SCALE AS SHOWN
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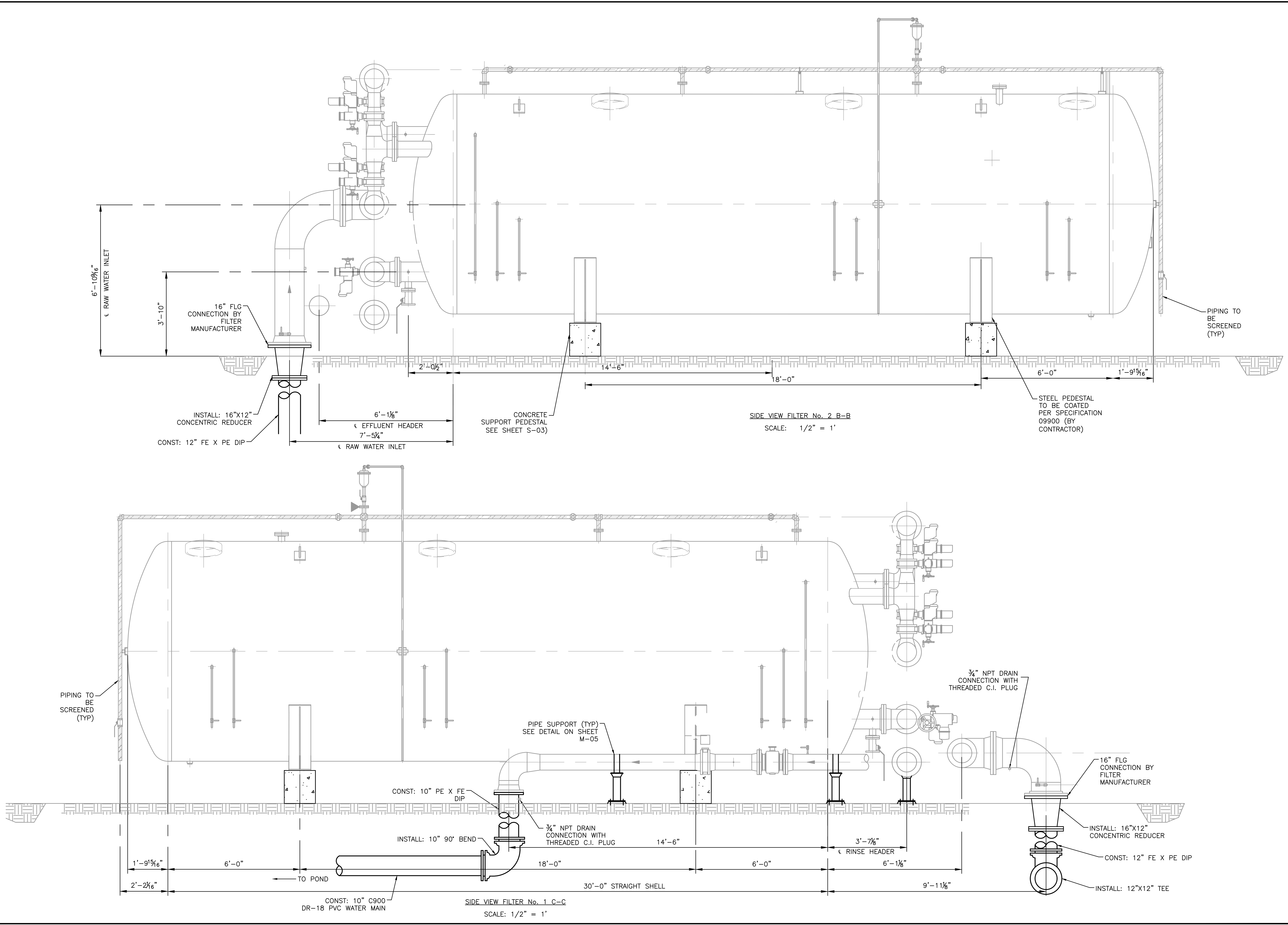
**IRON FILTER
ELEVATION**

**CR 501 WTP
IMPROVEMENTS
PREPARED FOR
CITY OF WILDWOOD
FLORIDA**

SHEET NUMBER
M-02

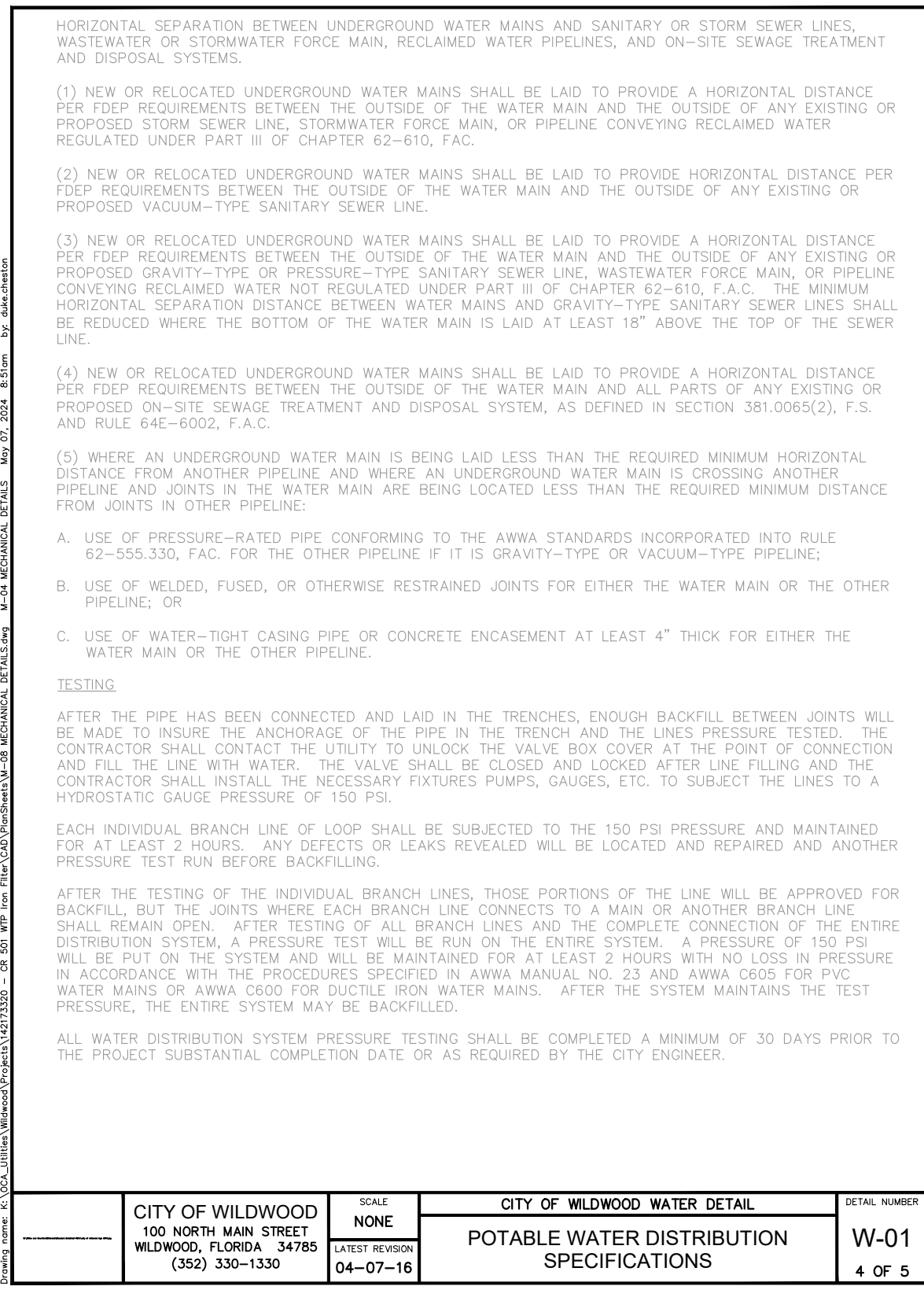
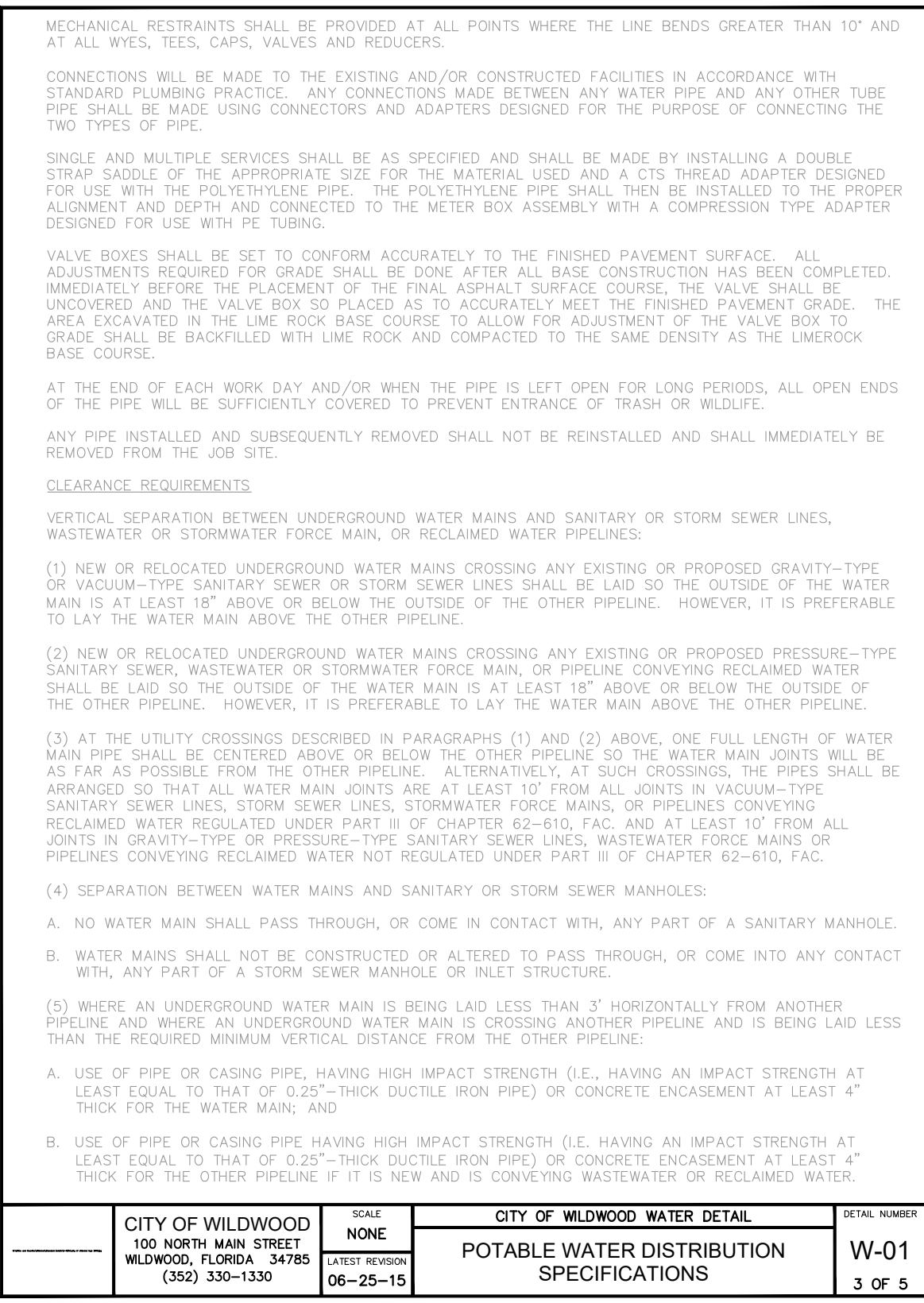
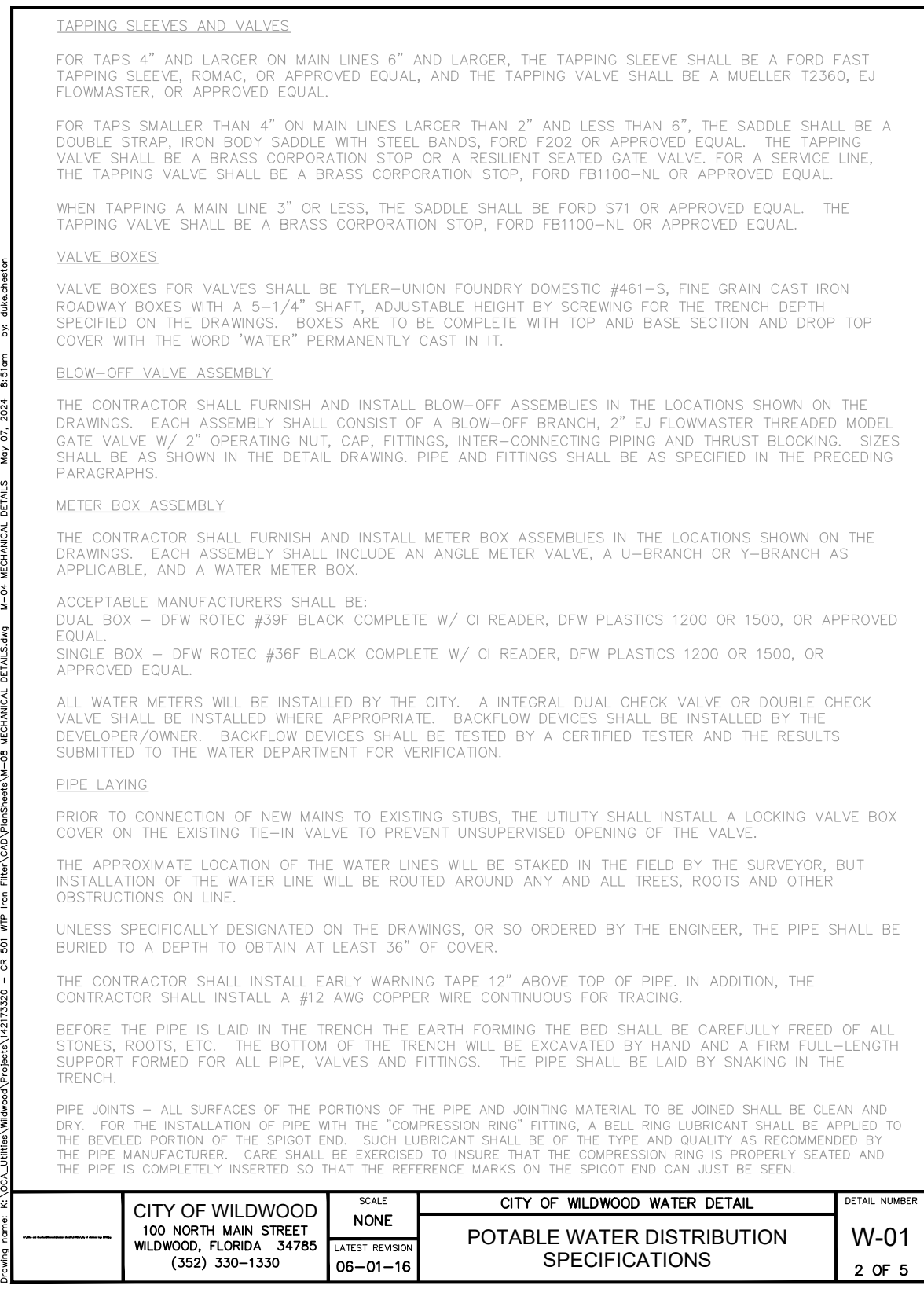
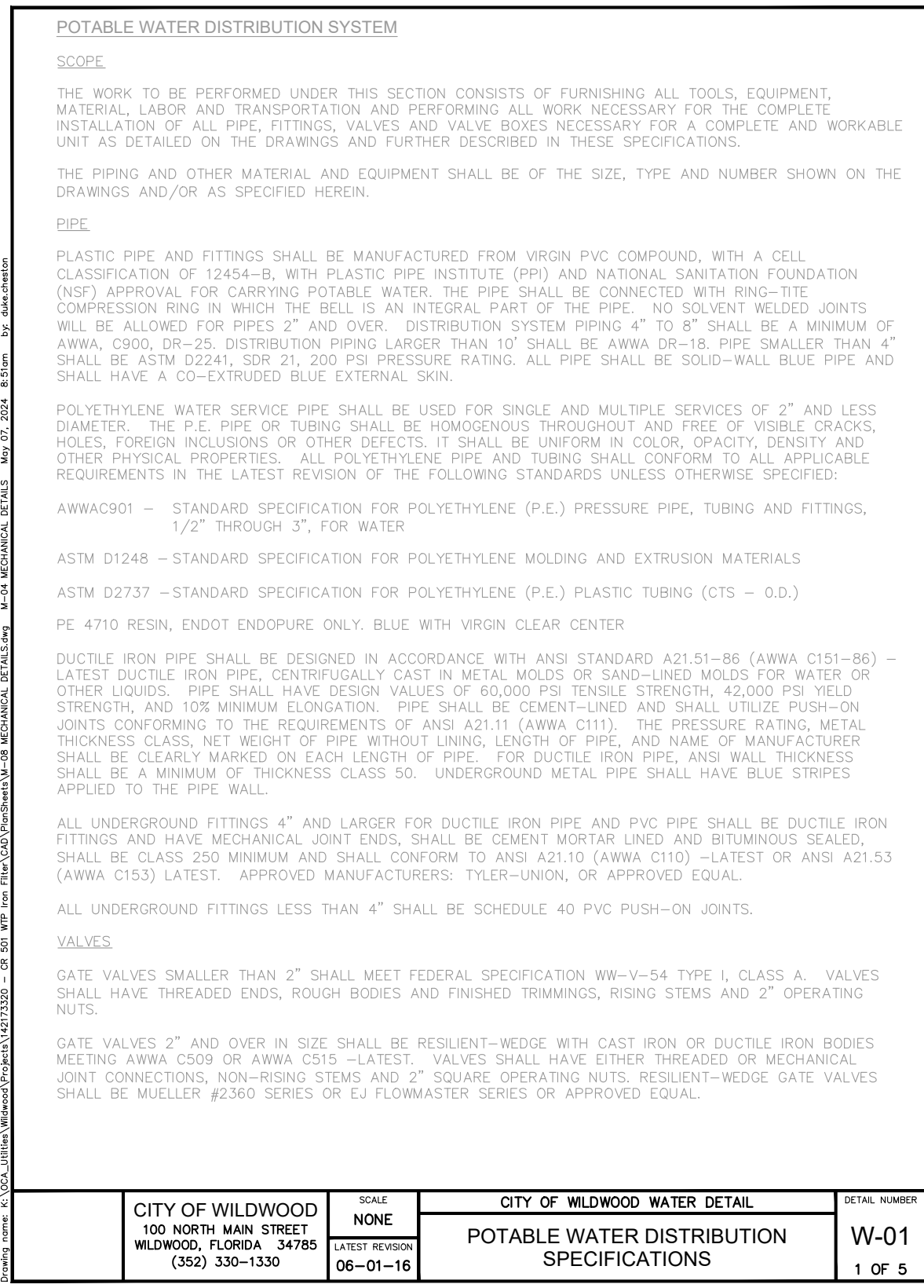
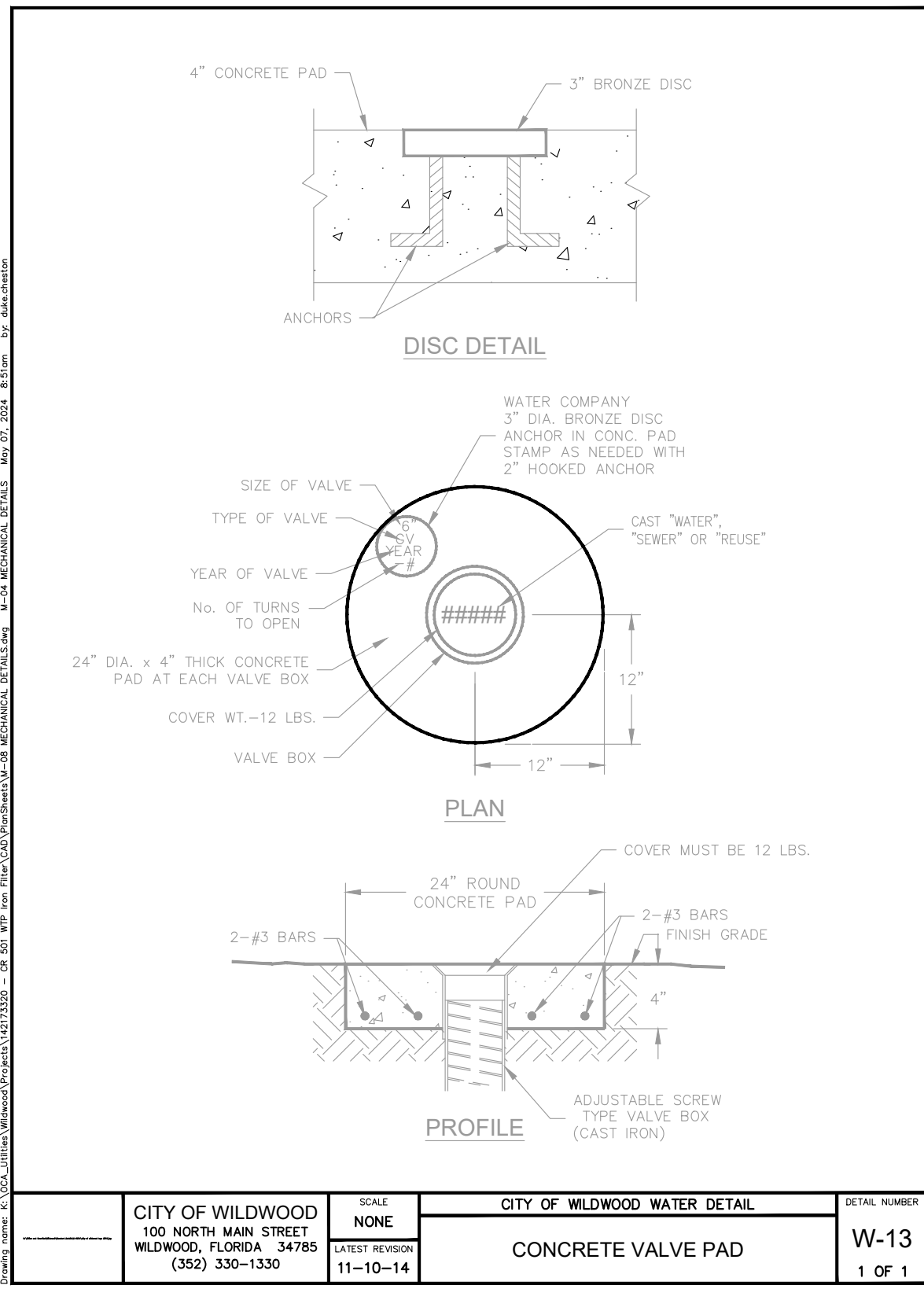
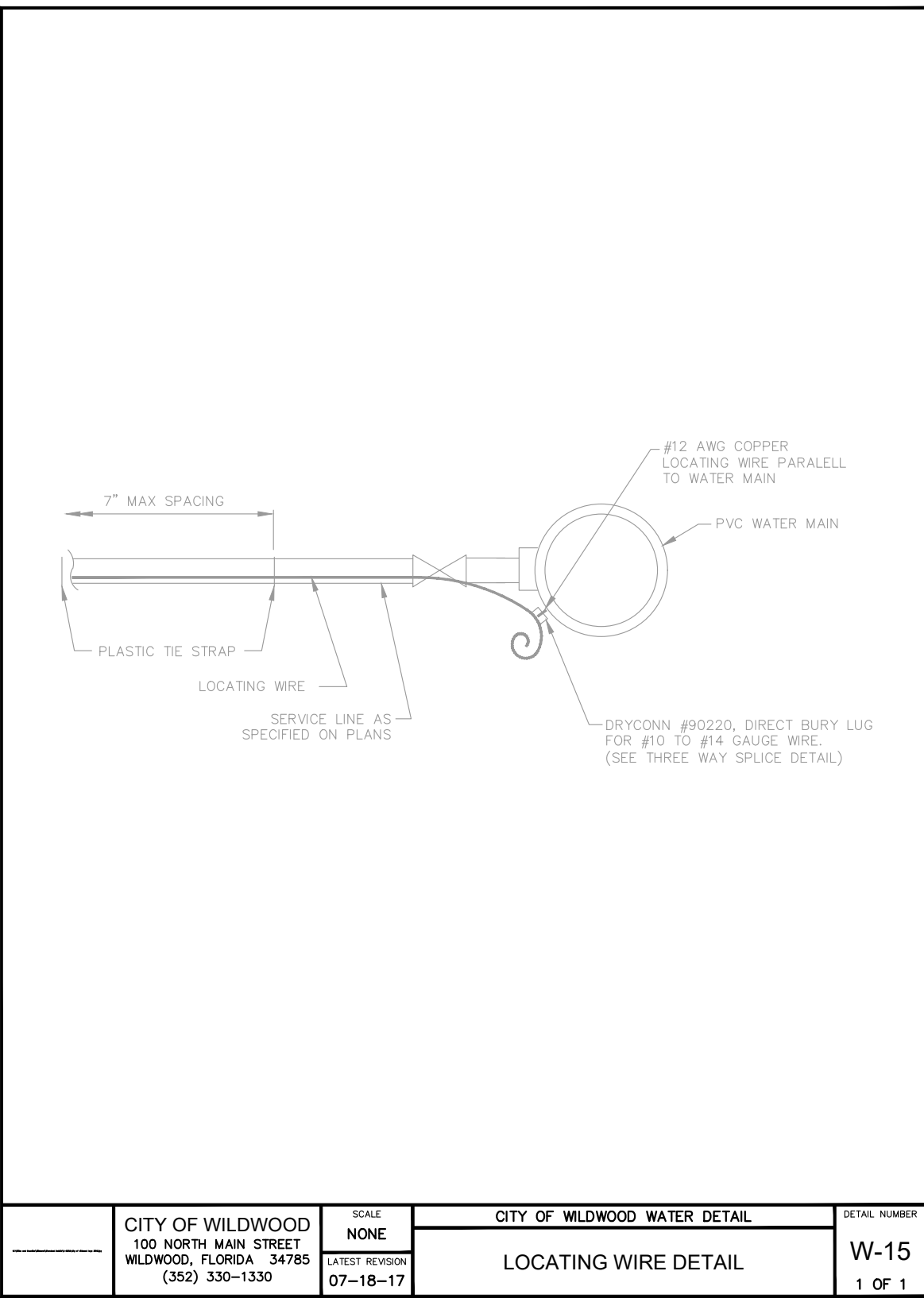
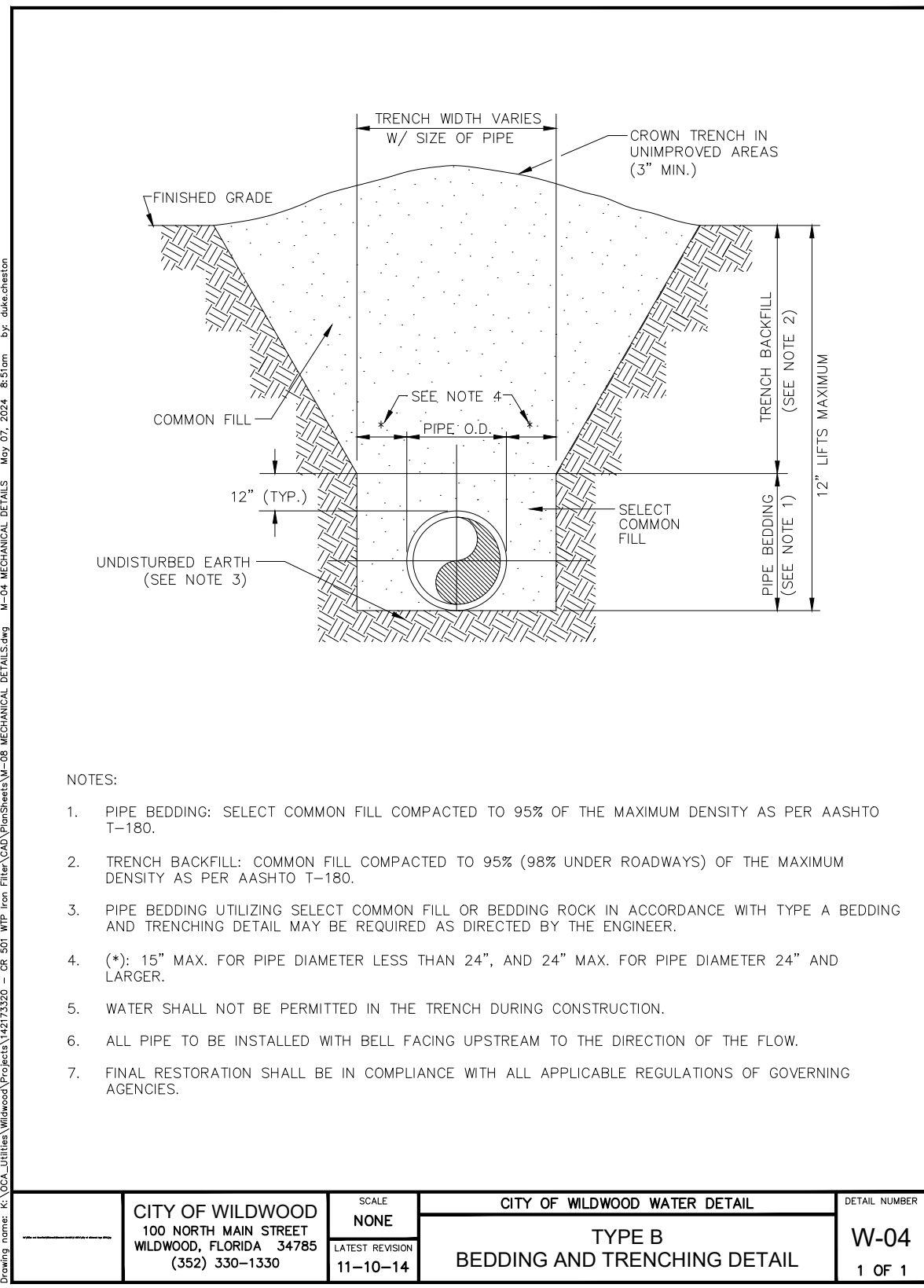
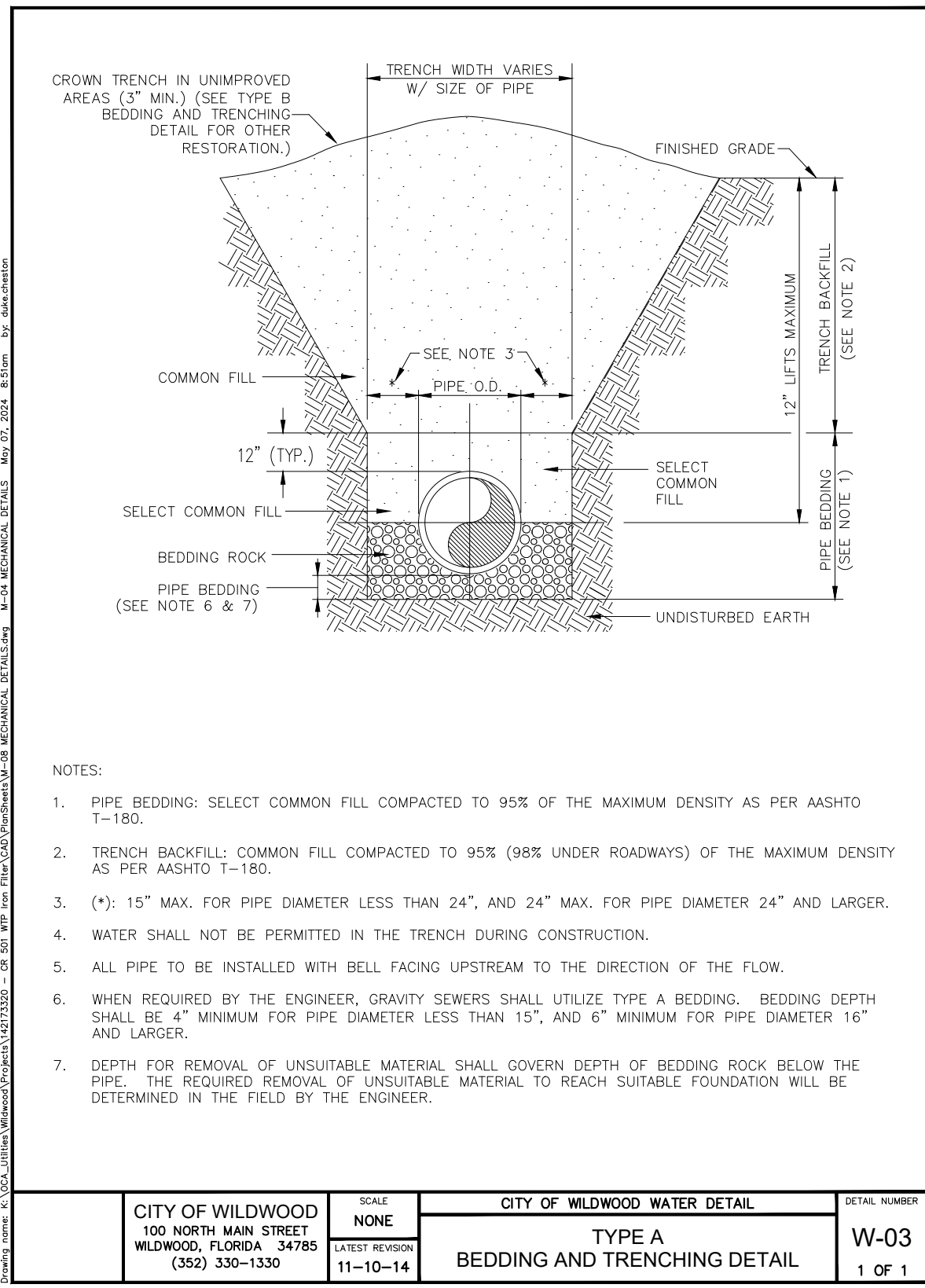
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KHA PROJECT 142173320		DATE MAY 2024	
SCALE AS SHOWN		DESIGNED BY KHA	
DRAWN BY RDC		CHECKED BY PHS	
REVISIONS No. _____ DATE _____ BY _____		NOT FOR CONSTRUCTION	
IRON FILTER SECTIONS		CR 501 WTP IMPROVEMENTS PREPARED FOR CITY OF WILDWOOD FLORIDA	
SHEET NUMBER M-03			

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CITY OF WILDWOOD 100 NORTH MAIN STREET WILDWOOD, FLORIDA 34785 (352) 330-1330	SCALE NONE LATEST REVISION 06-01-16	CITY OF WILDWOOD WATER DETAIL POTABLE WATER DISTRIBUTION SPECIFICATIONS	DETAIL NUMBER W-01 1 OF 5
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CITY OF WILDWOOD 100 NORTH MAIN STREET WILDWOOD, FLORIDA 34785 (352) 330-1330	SCALE NONE LATEST REVISION 06-01-16	CITY OF WILDWOOD WATER DETAIL POTABLE WATER DISTRIBUTION SPECIFICATIONS	DETAIL NUMBER W-01 2 OF 5
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CITY OF WILDWOOD 100 NORTH MAIN STREET WILDWOOD, FLORIDA 34785 (352) 330-1330	SCALE NONE LATEST REVISION 06-25-16	CITY OF WILDWOOD WATER DETAIL POTABLE WATER DISTRIBUTION SPECIFICATIONS	DETAIL NUMBER W-01 3 OF 5
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CITY OF WILDWOOD 100 NORTH MAIN STREET WILDWOOD, FLORIDA 34785 (352) 330-1330	SCALE NONE LATEST REVISION 04-07-16	CITY OF WILDWOOD WATER DETAIL POTABLE WATER DISTRIBUTION SPECIFICATIONS	DETAIL NUMBER W-01 4 OF 5
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CR 501 WTP IMPROVEMENTS PREPARED FOR CITY OF WILDWOOD FLORIDA

SHEET NUMBER M-04

KHA PROJECT 14217.3320	DATE MAY 2024	SCALE AS SHOWN	DESIGNED BY KHA	DRAWN BY RDC	CHECKED BY PHS
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JAMES E. CLAYTON					
FLORIDA LICENSE NUMBER					
90813					
DRAWN BY RDC					
CHECKED BY PHS					
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REVISIONS					
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BACKFILLING

TRENCHES SHALL BE BACKFILLED WITH THE EXCAVATED MATERIALS FROM WHICH LARGE CLODS OR STONES HAVE BEEN REMOVED AND SHALL BE CAREFULLY DEPOSITED IN LAYERS NOT TO EXCEED 12" AND THOROUGHLY AND CAREFULLY RAMMED UNTIL ENOUGH FILL HAS BEEN PLACED TO PROVIDE A COVER OF NOT LESS THAN 2" ABOVE THE PIPE. THE REMAINDER OF THE BACKFILL MATERIAL MAY THEN BE PLACED AND SHOULD BE MOISTENED AND TAMPED TO INSURE PROPER COMPACTION.

BACKFILL SHALL NOT BE PLACED OVER ANY PLASTIC PIPE WHILE IT IS IN A HEATED CONDITION. BEFORE BACKFILLING THE PIPE, THE TEMPERATURE SHALL BE BROUGHT TO THE APPROXIMATE TEMPERATURE OF THE GROUND EITHER BY RUNNING WATER THROUGH IT OR BY BACKFILLING IN THE EARLY MORNING WHEN THE PIPE AND GROUND ARE AT THE SAME TEMPERATURE.

WHENEVER THE TRENCHES HAVE NOT BEEN PROPERLY FILLED, OR IF SETTLEMENT OCCURS, THEY SHALL BE REFILLED, COMPACTED, SMOOTHED OFF, AND FINALLY MADE TO CONFORM TO THE SURFACE OF THE GROUND. BACKFILL IN OPEN TRENCHES ACROSS ROADWAYS OR OTHER AREAS WHICH ARE TO BE REPAVED SHALL BE MADE AS SPECIFIED ABOVE EXCEPT THAT THE ENTIRE FILL ABOVE PIPE SHALL BE DEPOSITED IN LAYERS NOT TO EXCEED 12" IN THICKNESS, MOISTENED AND COMPACTED TO 98% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D 1557-02 SO THAT WHEN BACKFILLING IS COMPLETED, THE ROADWAY PAVING MAY BE PLACED IMMEDIATELY.

DISINFECTING

DISINFECTING THE WATER MAIN AND CONDUCTING BACTERIOLOGICAL SURVEYS AND EVALUATIONS MUST BE DONE IN ACCORDANCE WITH AWWA C651.

AFTER THE INSTALLATION HAS BEEN COMPLETED, THE CONTRACTOR SHALL CONTACT THE UTILITY TO UNLOCK THE VALVE BOX COVER AT THE POINT OF CONNECTION AND THE WATER LINES AND APPURTENANCES SHALL BE THOROUGHLY FLUSHED AND THEN DISINFECTED BY THE APPLICATION OF CHLORINE, EITHER GASEOUS OR IN HYPOCHLORITE FORM, UNTIL A RESIDUAL CHLORINE CONTENT OF AT LEAST 50 PPM IS OBTAINED THROUGHOUT THE SYSTEM. THIS CHLORINATED WATER SHALL REMAIN IN THE LINES FOR A PERIOD OF 24 HOURS, DURING WHICH TIME THE VALVES SHALL BE OPENED SEVERAL TIMES IN ORDER TO WET ALL OF THE PARTS.

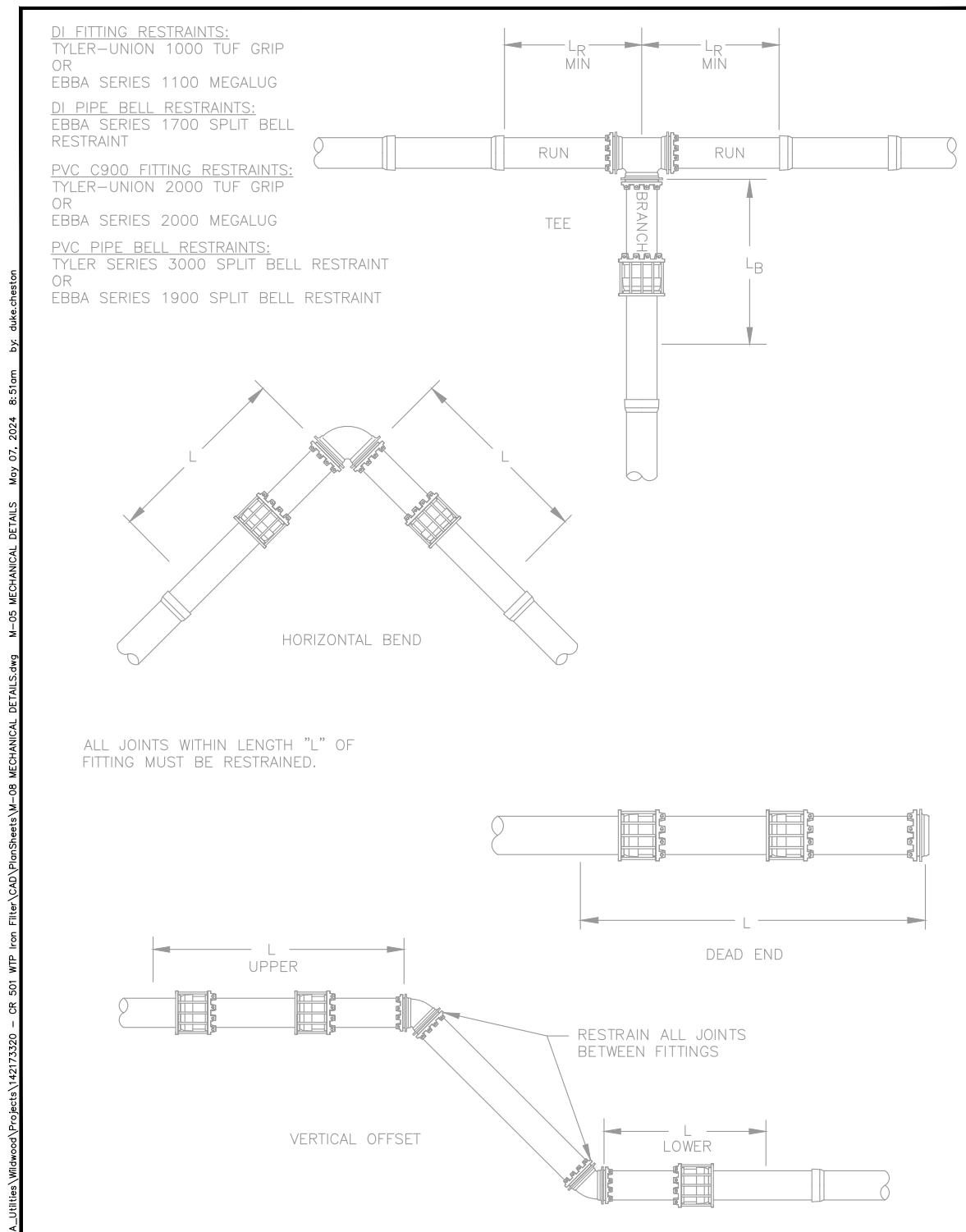
UPON COMPLETION OF THE FLUSHING AND DISINFECTING OF THE WATER LINES, THE CONTRACTOR SHALL HAVE WATER SAMPLES TESTED FOR BACTERIOLOGICAL MAIN CLEARANCE IN ACCORDANCE WITH APPLICABLE STATE OF FLORIDA DEPT. OF ENVIRONMENTAL PROTECTION (F.D.E.P.) REQUIREMENTS. IN THE EVENT THAT THESE TESTS FAIL DUE TO CONTAMINATION, INADEQUATE STERILIZATION, OR FOR ANY OTHER CAUSE DIRECTLY RELATED TO THE WORK OF THE CONTRACTOR, THE WATER LINES SHALL BE DISINFECTED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. THE COST OF THE NECESSARY RE-TESTING FOR BACTERIOLOGICAL MAIN CLEARANCE SHALL BE CHARGED DIRECTLY TO THE CONTRACTOR OR DEDUCTED FROM ANY PAYMENT DUE.

EXCEPT AS REQUIRED FOR FLUSHING, DISINFECTING, AND BACTERIOLOGICAL MAIN CLEARANCE SAMPLING, THE IN-VALVE SHALL REMAIN CLOSED AND LOCKED UNTIL THE NEW SYSTEM HAS BEEN CLEARED FOR SERVICE BY THE F.D.E.P.

PLUMBING CODE

ALL PIPING AND RELATED FITTING SHALL BE INSTALLED ACCORDING TO THE PLUMBING CODE OF THE STATE OF FLORIDA, LOCAL AUTHORITIES AND MANUFACTURER'S RECOMMENDATIONS. WHEREVER THESE SPECIFICATIONS AND/OR DRAWINGS EXCEED THE REQUIREMENTS OF SAID CODES, THESE DOCUMENTS TAKE PRECEDENCE. THE PIPING MUST BE INSTALLED IN A STRONG, NEAT AND WORKMANLIKE MANNER, SUBJECT TO THE RESTRICTIONS INDICATED.

CITY OF WILDWOOD 100 NORTH MAIN STREET WILDWOOD, FLORIDA 34785 (352) 330-1330	SCALE: NONE LATEST REVISION 06-25-15	CITY OF WILDWOOD WATER DETAIL POTABLE WATER DISTRIBUTION SPECIFICATIONS	DETAIL NUMBER W-01 5 OF 5
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CITY OF WILDWOOD 100 NORTH MAIN STREET WILDWOOD, FLORIDA 34785 (352) 330-1330	SCALE: NONE LATEST REVISION 11-10-14	CITY OF WILDWOOD WATER DETAIL MECHANICAL JOINT RESTRAINTS	DETAIL NUMBER W-06 1 OF 2
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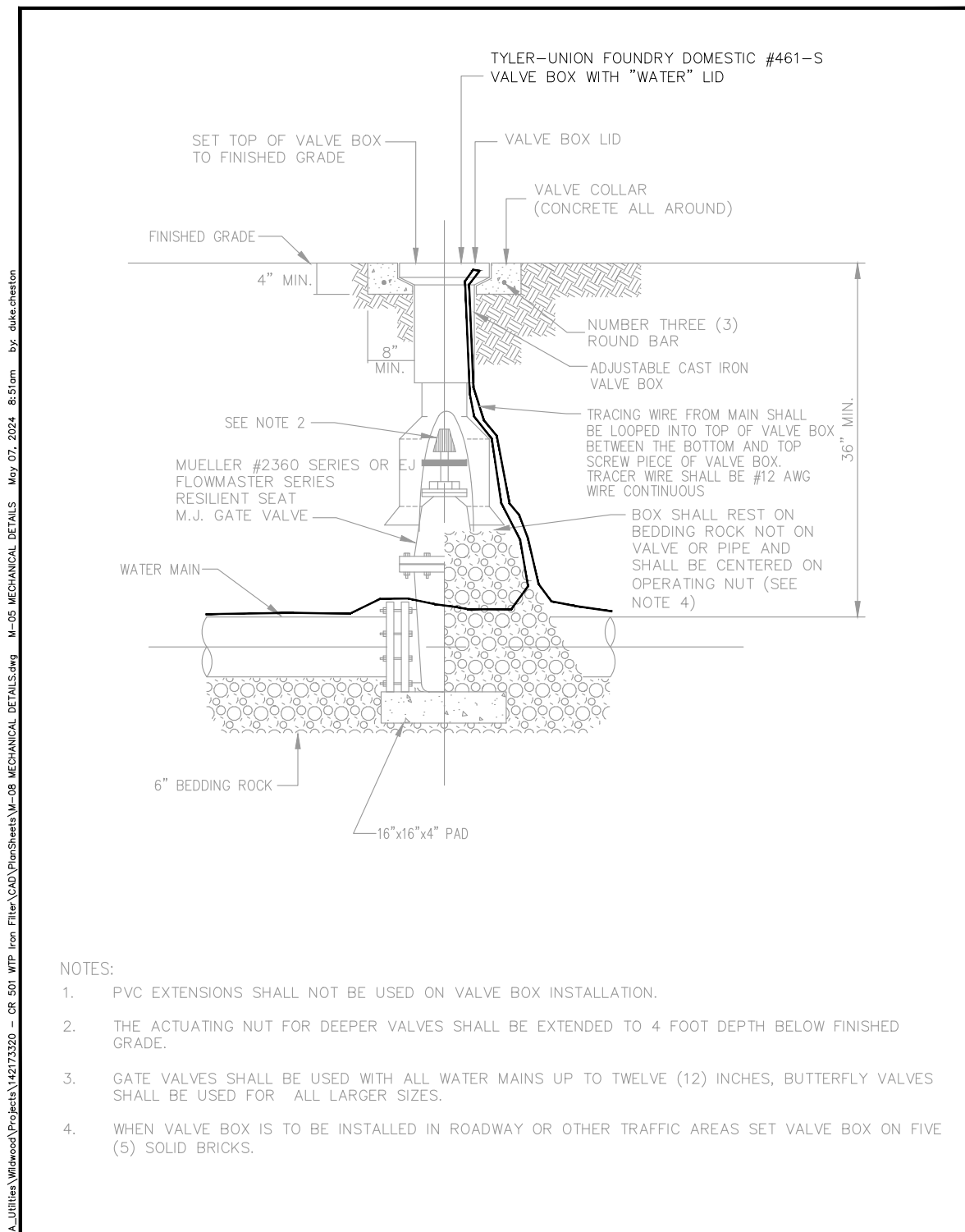
MINIMUM LENGTH OF PIPE "L" (FEET) TO BE RESTRAINED
(SOURCES: EBBA IRON RESTRAINT LENGTH CALCULATION PROGRAM FOR PVC PIPE, RELEASE 3.1, AND DIPRA THRUST RESTRAINT FOR DUCTILE IRON PIPE, RELEASE 3.2)

FITTING TYPE	PIPE SIZE							
	4"	6"	8"	10"	12"	14"	16"	
90° HORIZ. BEND	17	24	31	37	43	49	55	
45° HORIZ. BEND	7	10	13	15	18	20	23	
22.5° HORIZ. BEND	3	5	6	7	9	10	11	
11.25° HORIZ. BEND	2	2	3	4	5	5	6	
45° VERT. OFFSET	UPPER BEND	16	22	29	34	41	46	52
	LOWER BEND	7	10	13	15	18	20	23
22.5° VERT. OFFSET	UPPER BEND	7	12	15	17	20	22	25
	LOWER BEND	3	5	6	7	9	10	11
11.25° VERT. OFFSET	UPPER BEND	4	5	7	8	11	12	14
	LOWER BEND	2	2	3	4	4	5	7
PLUG (DEAD END) VALVE	UPPER	38	53	69	83	98	112	129
	LOWER	35	53	69	83	98	112	129
TEE (BRANCH REST.)	4" x	19	-	-	-	-	-	-
	6" x	10	35	-	-	-	-	-
	8" x	1	28	51	-	-	-	-
	10" x	1	28	46	64	-	-	-
	12" x	1	15	40	60	79	-	-
	14" x	1	8	35	56	75	92	-
REDUCER (LARGER PIPE RESTRAINT)	16" x	1	29	51	71	90	106	-
	6" x	27	-	-	-	-	-	-
	8" x	50	29	-	-	-	-	-
	10" x	88	51	28	-	-	-	-
12" x	85	71	52	48	-	-	-	
14" x	101	89	73	69	29	-	-	
16" x	117	106	92	89	54	29	-	

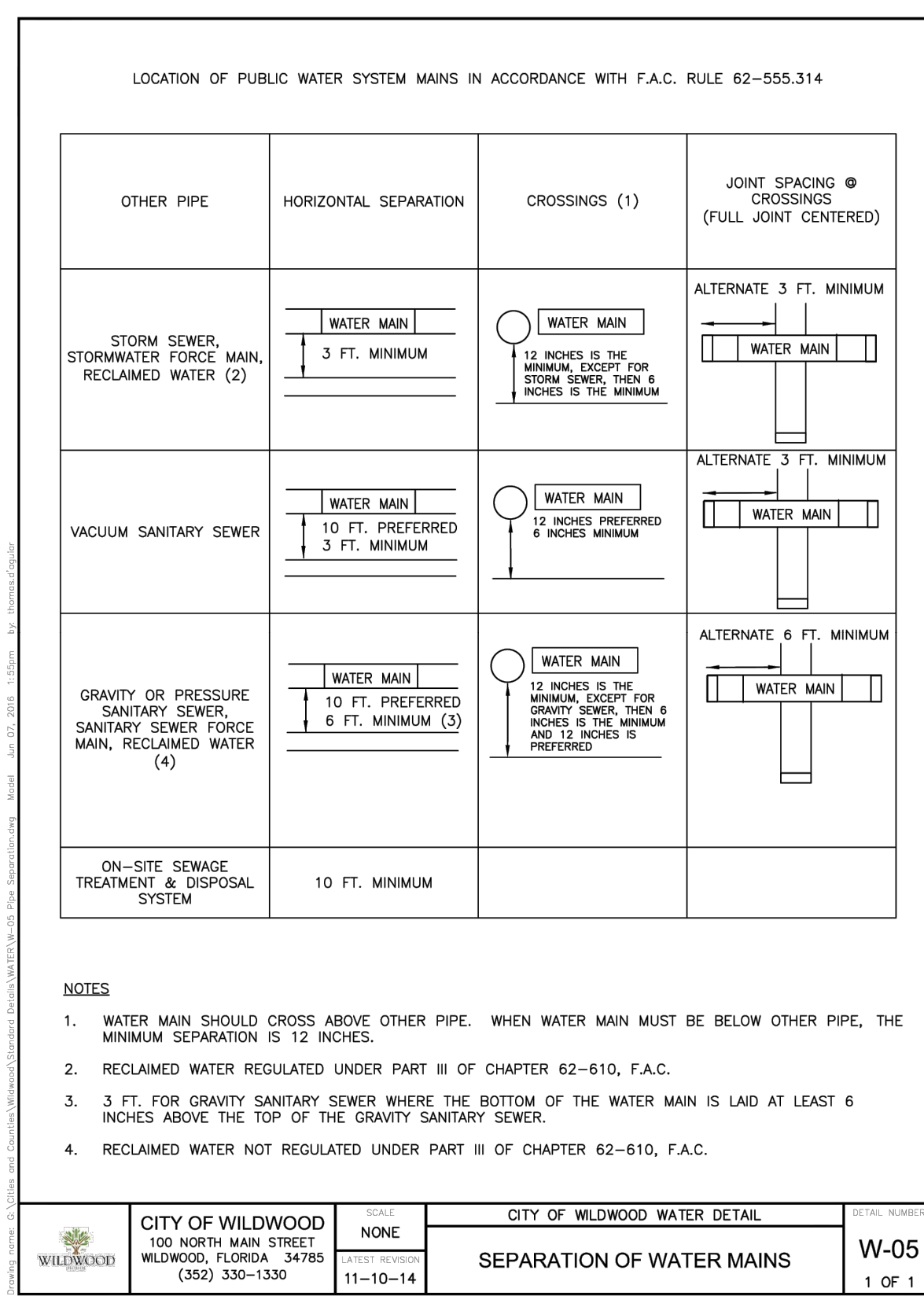
NOTES:

- THE DATA IN THE ABOVE TABLE ARE BASED UPON THE FOLLOWING INSTALLATION CONDITIONS:
SOIL TYPE - SP TRENCH TYPE - 3 TEST PRESSURE - 150 PSI
SAFETY FACTOR - 1.5 DEPTH OF BURY - 3' VERTICAL OFFSET - 3'
- THE RESTRAINED PIPE LENGTHS APPLY TO DUCTILE IRON AND PVC PIPE.
- ALL JOINTS BETWEEN UPPER AND LOWER BENDS SHALL BE RESTRAINED.
- RESTRAINED PIPE LENGTHS FOR VALVES APPLY TO PIPE ON BOTH SIDES OF VALVES.
- THIS TABLE IS FOR SP SOILS. THE ENGINEER IS TO BE NOTIFIED IF OTHER TYPE SOILS ARE ENCOUNTERED.
- ALL PIPES SHALL BE RESTRAINED PER THE LENGTHS AS CALLED FOR IN THE ABOVE REFERENCED TABLE. THE COSTS FOR THESE RESTRAINED JOINTS SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THE PIPE.
- ANY CALL OUTS AS NOTED ON THE PLANS FOR "TUF GRIP" RESTRAINTS OR "MEGALUGS" ARE IN ADDITION TO THOSE AS NOTED AND CALLED FOR IN THE ABOVE TABLE.

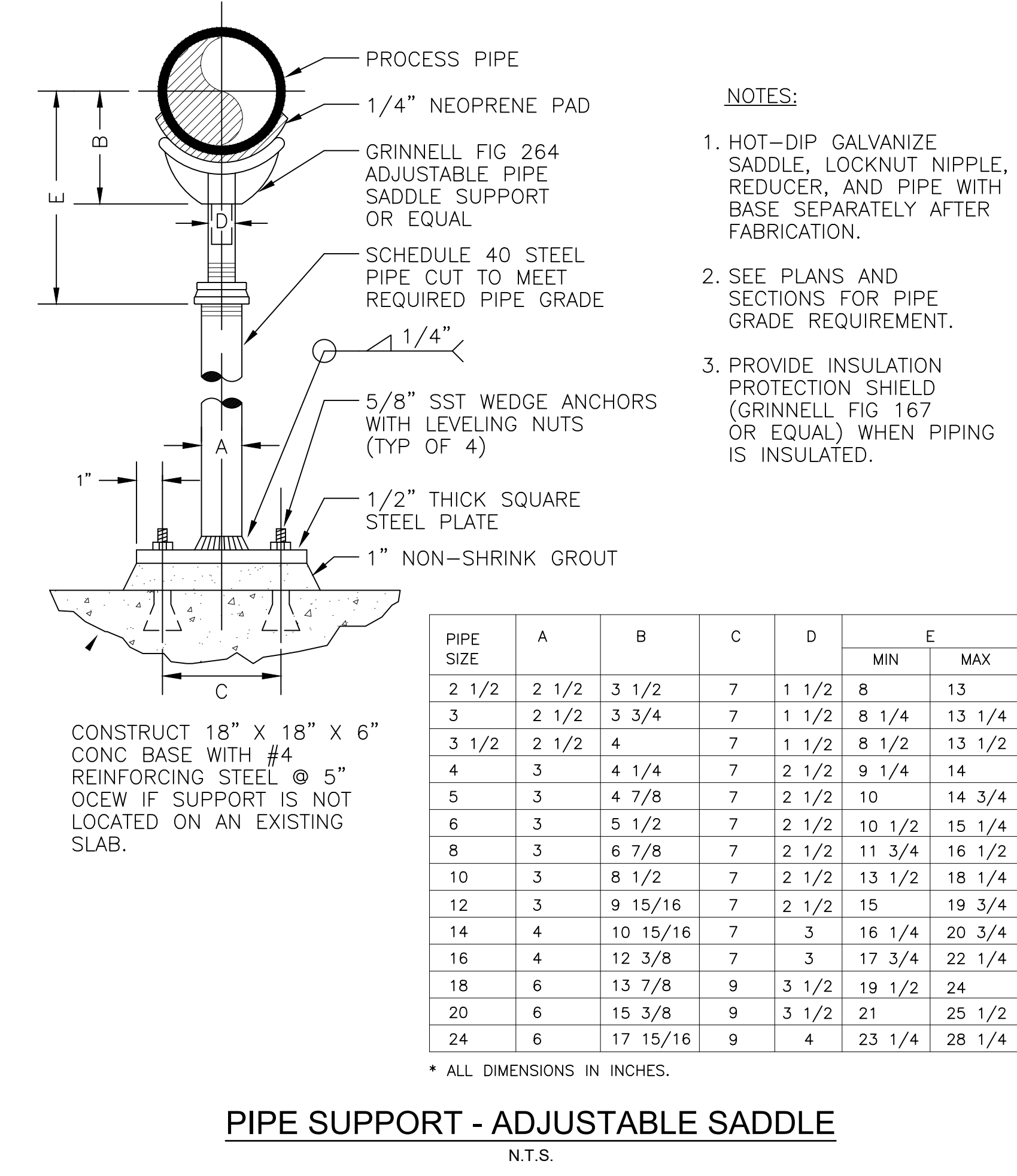
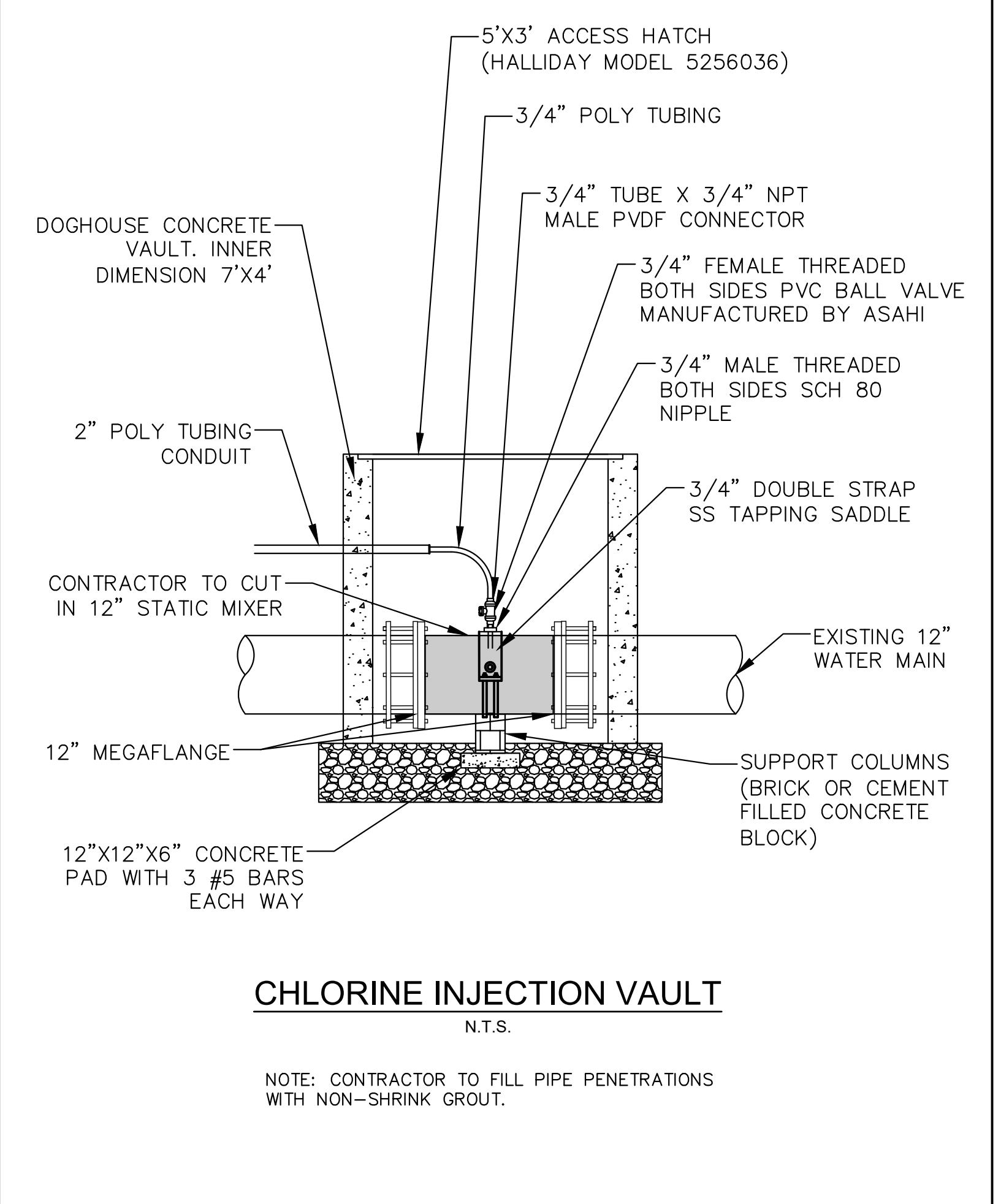
CITY OF WILDWOOD 100 NORTH MAIN STREET WILDWOOD, FLORIDA 34785 (352) 330-1330	SCALE: NONE LATEST REVISION 11-10-14	CITY OF WILDWOOD WATER DETAIL MECHANICAL JOINT RESTRAINTS	DETAIL NUMBER W-06 2 OF 2
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CITY OF WILDWOOD 100 NORTH MAIN STREET WILDWOOD, FLORIDA 34785 (352) 330-1330	SCALE: NONE LATEST REVISION 11-17-14	CITY OF WILDWOOD WATER DETAIL GATE VALVE AND BOX DETAIL	DETAIL NUMBER W-08 1 OF 1
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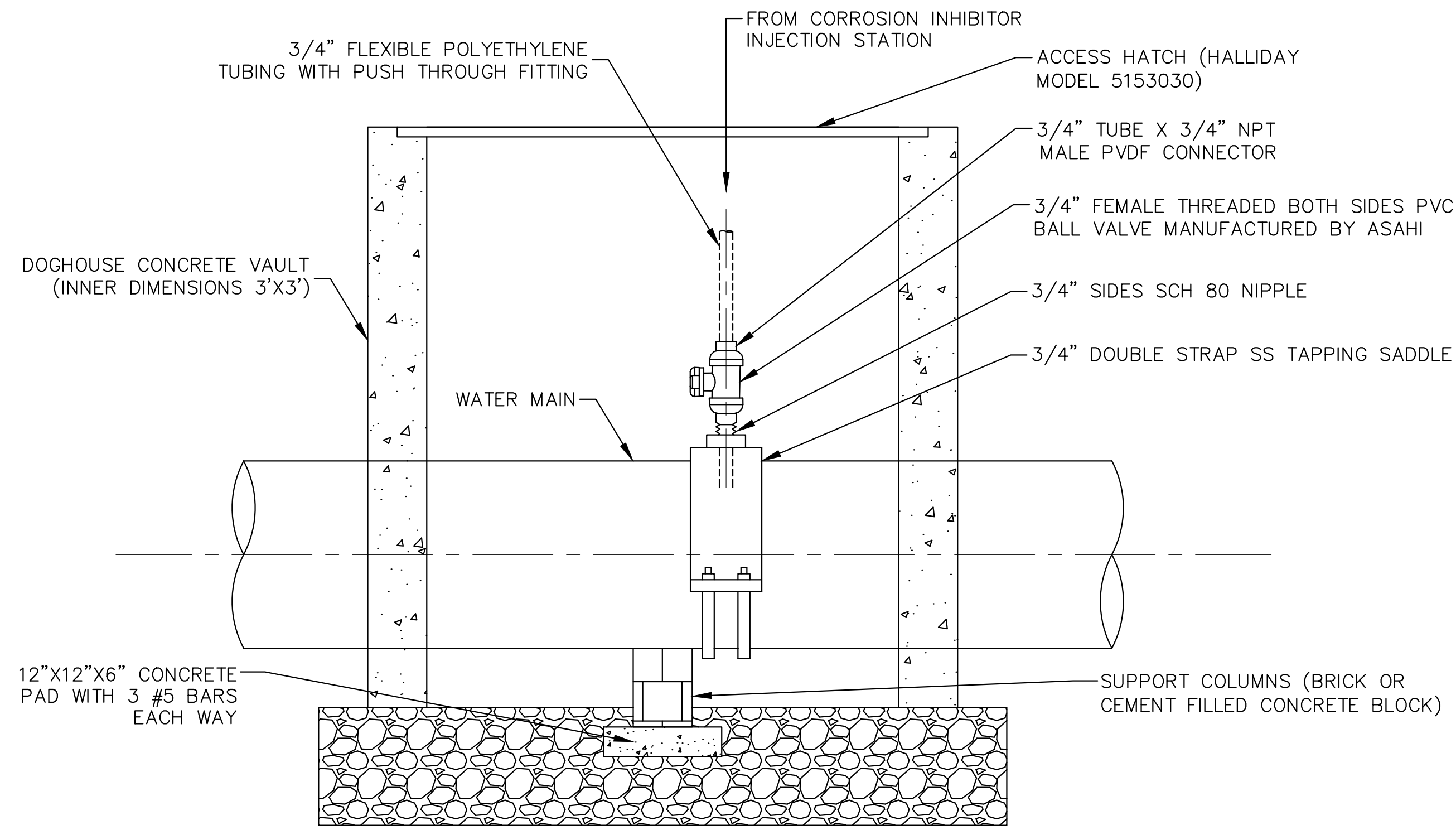


CITY OF WILDWOOD 100 NORTH MAIN STREET WILDWOOD, FLORIDA 34785 (352) 330-1330	SCALE: NONE LATEST REVISION 11-10-14	CITY OF WILDWOOD WATER DETAIL SEPARATION OF WATER MAINS	DETAIL NUMBER W-05 1 OF 1
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KHA PROJECT 14217.3320		DATE MAY 2024		SCALE AS SHOWN		DESIGNED BY KHA		DRAWN BY RDC		CHECKED BY PHS		DATE	
LICENSED PROFESSIONAL JAMES E. CLAYTON				FLORIDA LICENSE NUMBER 90813				WWW.KIMLEY-HORN.COM REGISTRY NO. 35106					
MECHANICAL DETAILS												REVISIONS	
CR 501 WTP IMPROVEMENTS PREPARED FOR CITY OF WILDWOOD FLORIDA												NOT FOR CONSTRUCTION	
M-05												No.	

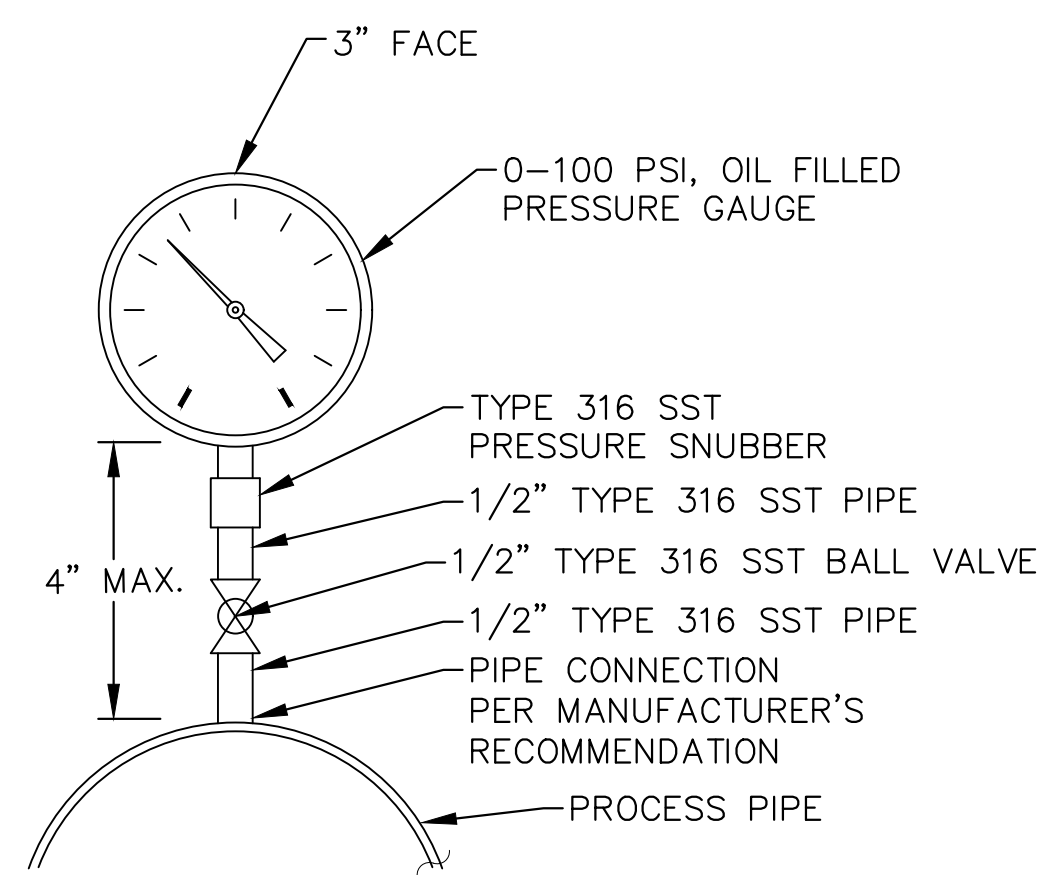
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CORROSION INHIBITOR INJECTION LINE DETAIL

N.T.S.

NOTE: CONTRACTOR TO FILL PIPE PENETRATIONS WITH NON-SHRINK GROUT.

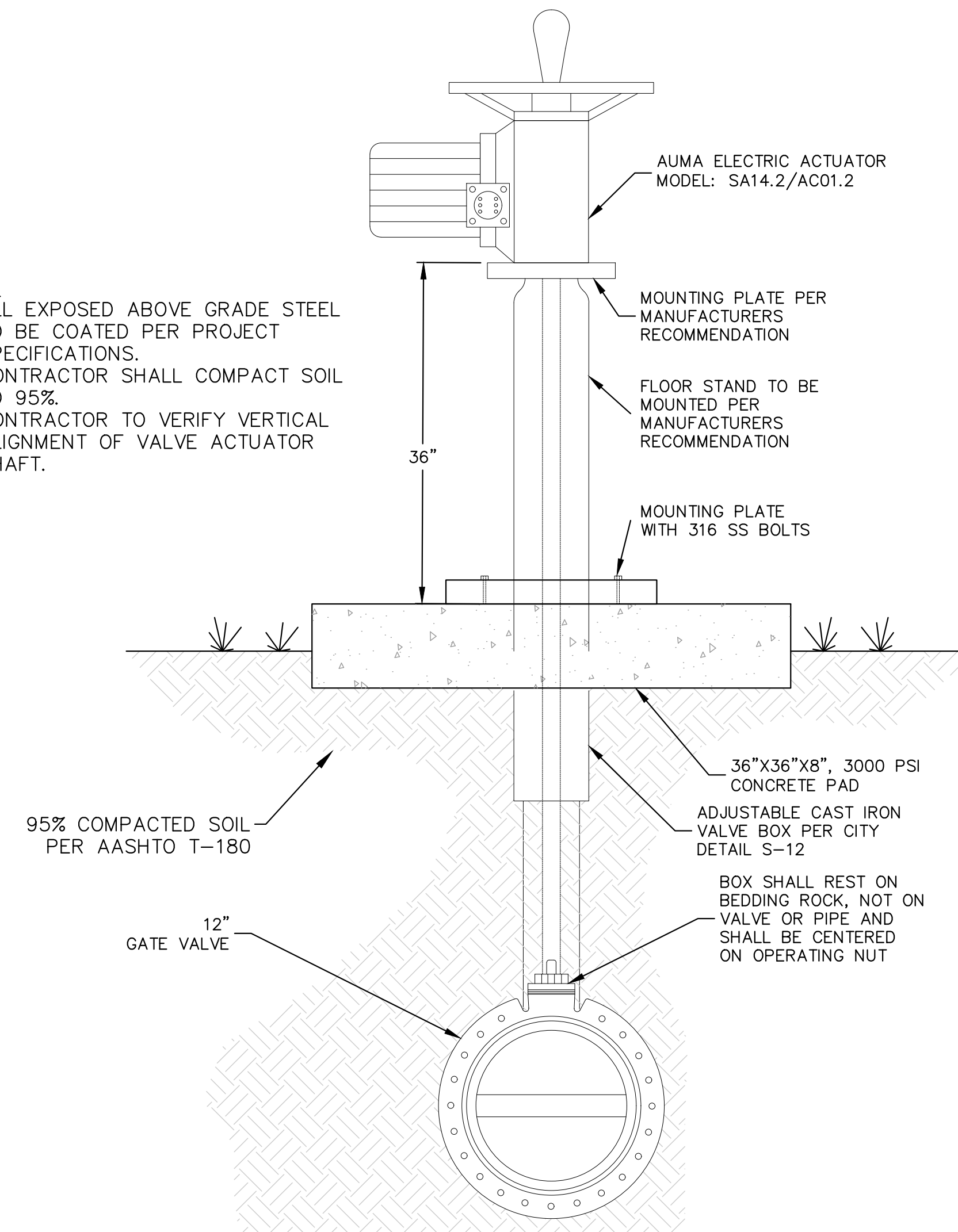


PRESSURE GAUGE DIRECT MOUNT DETAIL

N.T.S.

NOTE:

1. ALL EXPOSED ABOVE GRADE STEEL TO BE COATED PER PROJECT SPECIFICATIONS.
2. CONTRACTOR SHALL COMPACT SOIL TO 95%.
3. CONTRACTOR TO VERIFY VERTICAL ALIGNMENT OF VALVE ACTUATOR SHAFT.



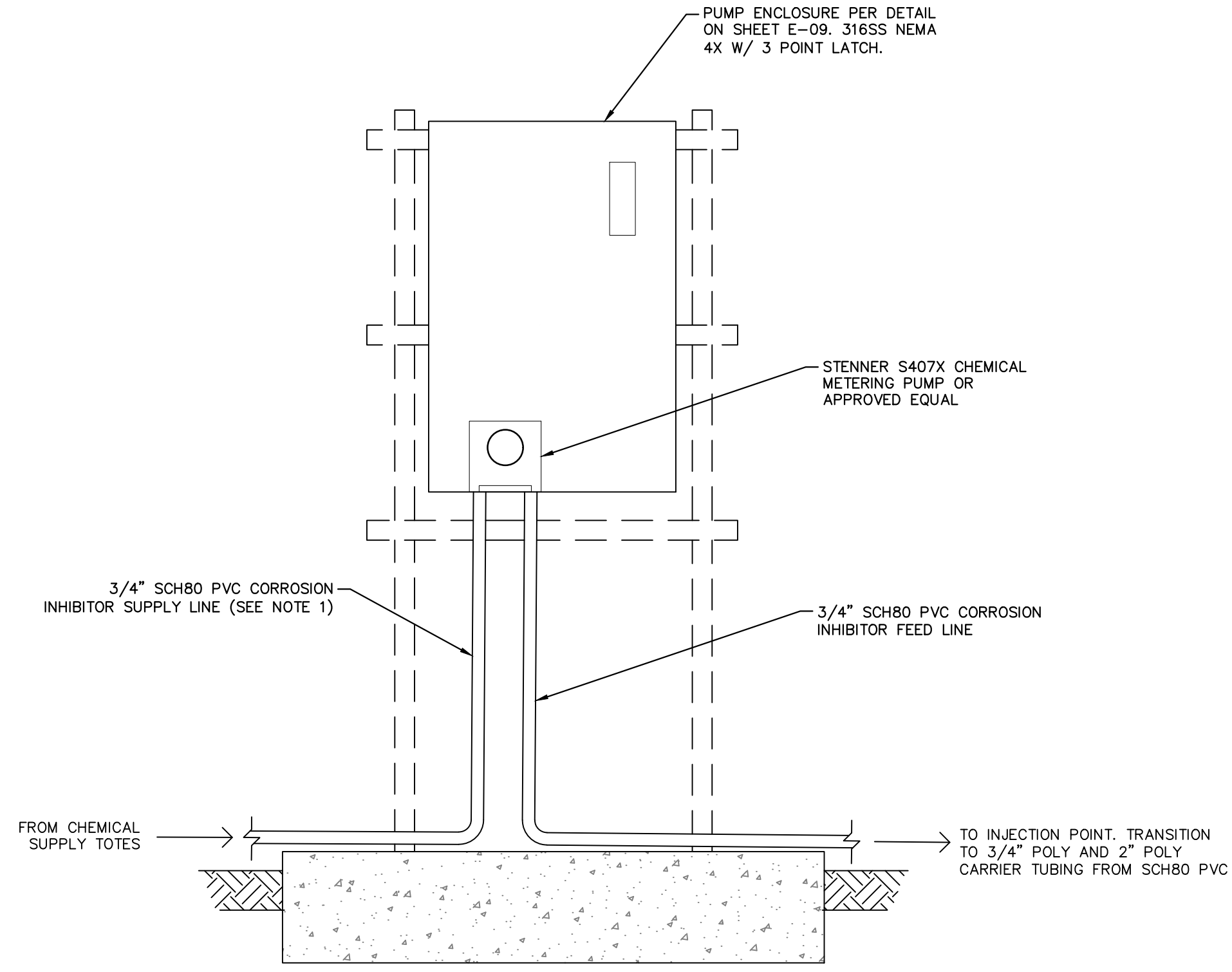
BELOW GRADE GATE VALVE WITH ELECTRIC OPERATED MOTOR ACTUATOR

N.T.S.

NO.	REVISIONS	DATE	BY

MECHANICAL DETAILS

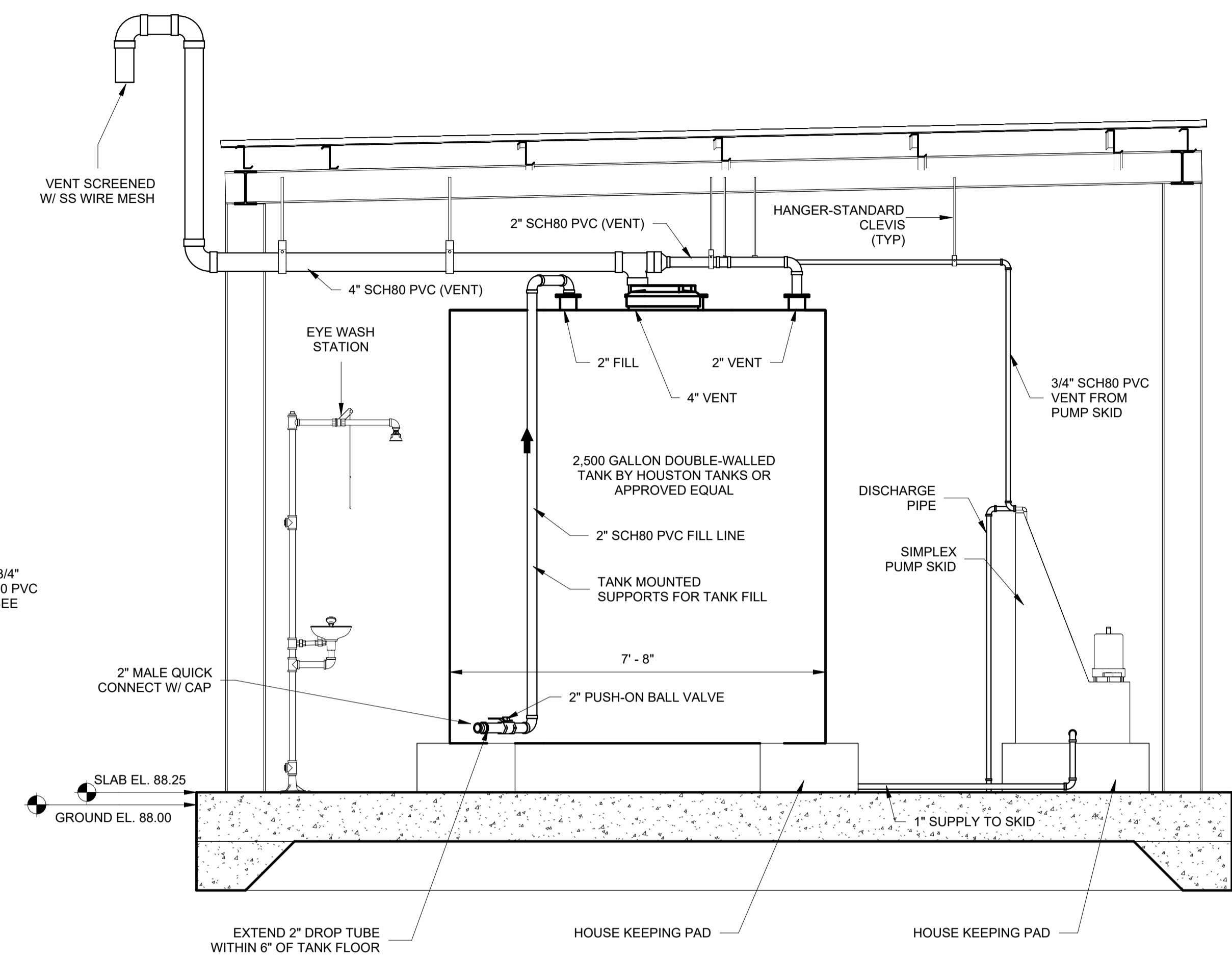
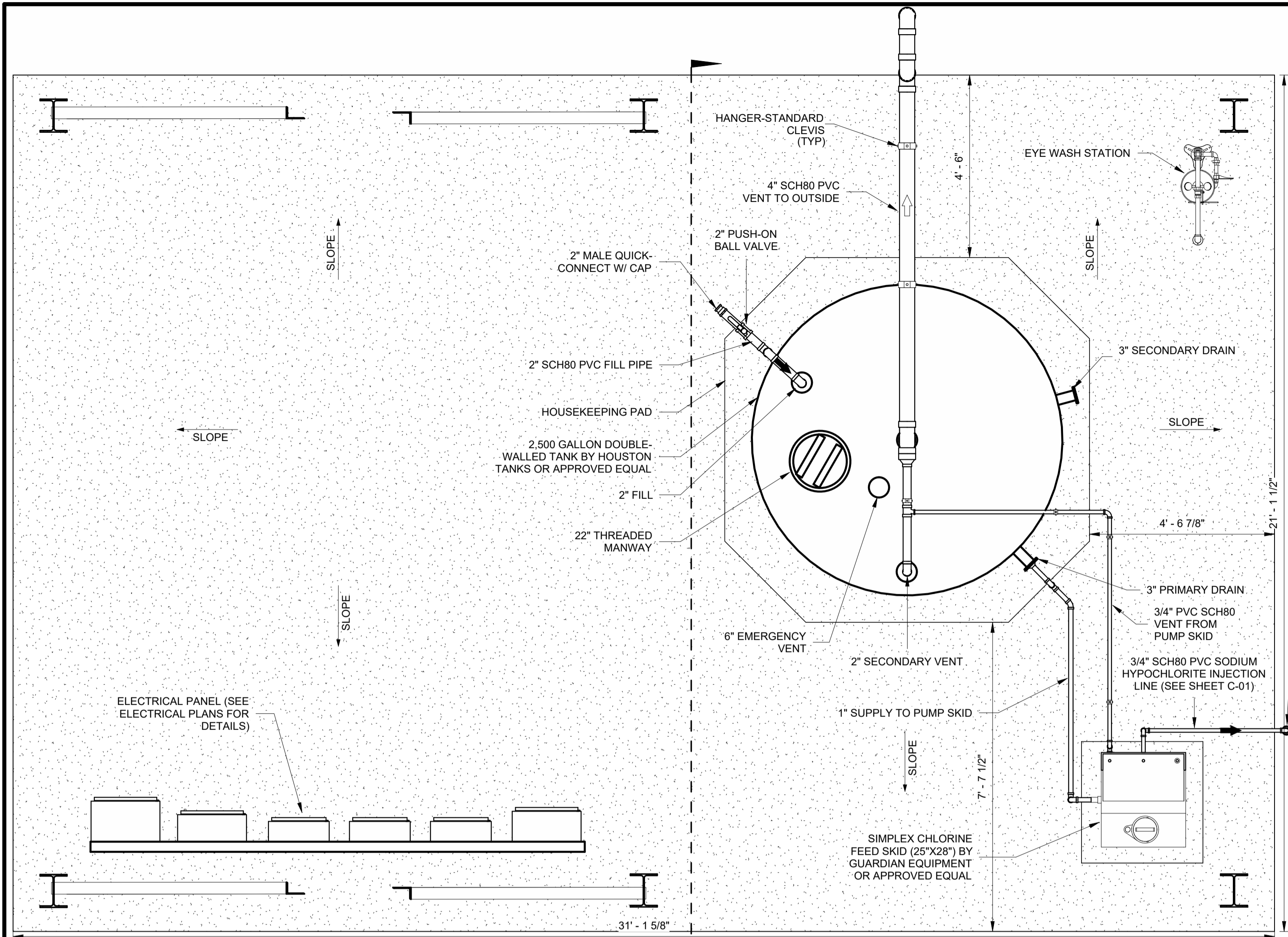
CR 501 WTP IMPROVEMENTS PREPARED FOR CITY OF WILDWOOD
CITY OF WILDWOOD FLORIDA



A POLYPHOSPHATE PUMP ENCLOSURE DETAIL
 N.T.S.

NOTES
 1) CONTRACTOR TO COORDINATE CONNECTION TO CHEMICAL SUPPLY TOTES WITH CITY AND ENGINEER

CR 501 WTP IMPROVEMENTS PREPARED FOR CITY OF WILDWOOD <small>CITY OF WILDWOOD FLORIDA</small>		LICENSED PROFESSIONAL JAMES E. CLAYTON <small>FLORIDA LICENSE NUMBER 90813</small>			© 2024 KIMLEY-HORN AND ASSOCIATES, INC. 1700 SE 17TH STREET, SUITE 200, OCALA, FLORIDA 34471 WWW.KIMLEY-HORN.COM REGISTRY NO. 35106
		KHA PROJECT 142173320	DATE MAY 2024		
SHEET NUMBER M-07		DRAWN BY RDC	CHECKED BY PHS	DATE -----	REVISIONS No. DATE BY

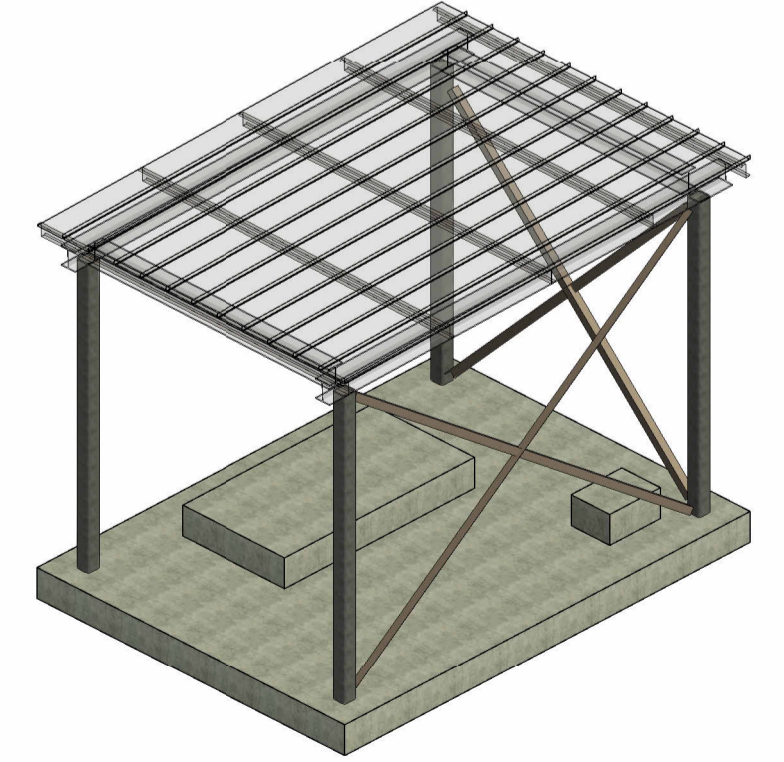
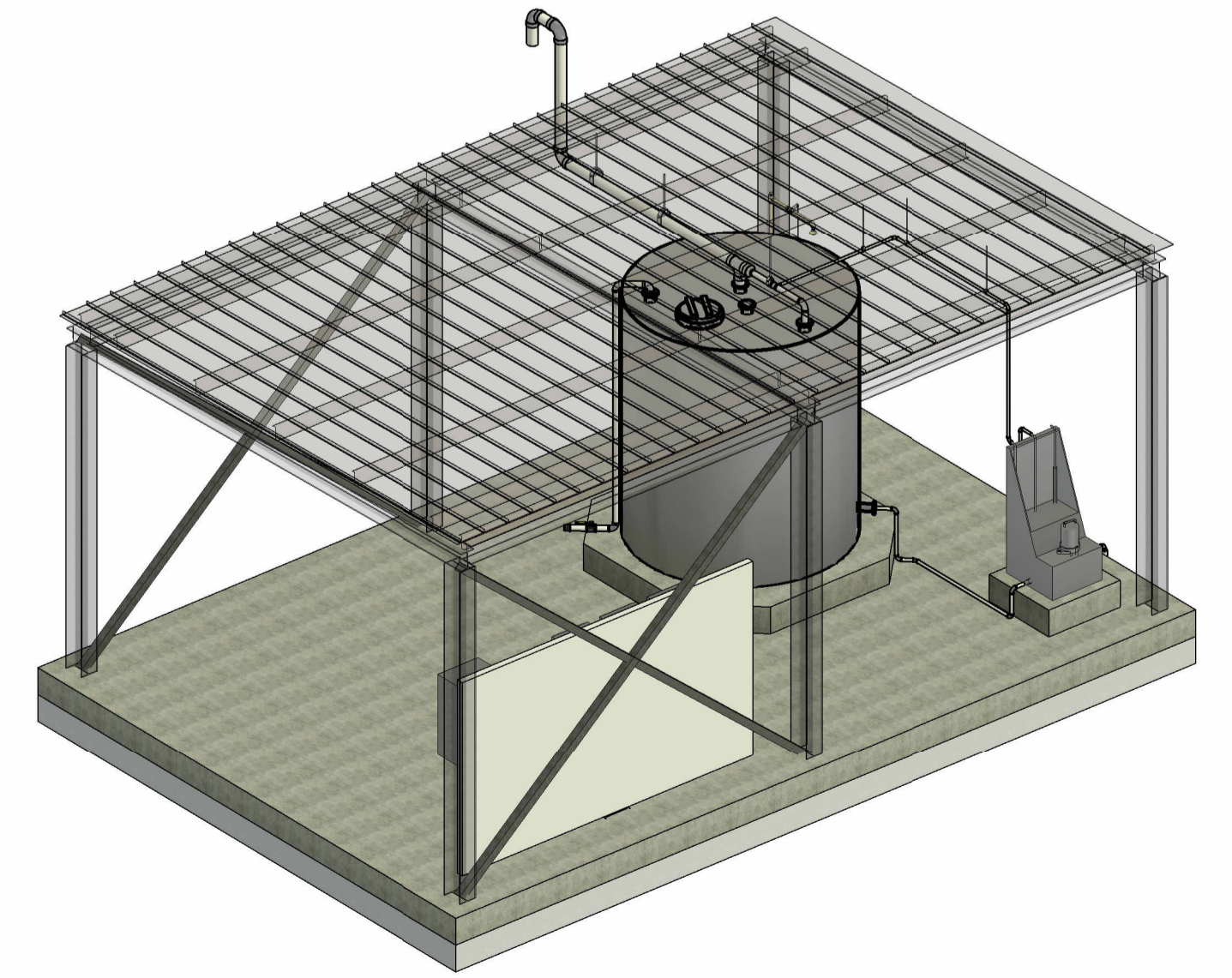
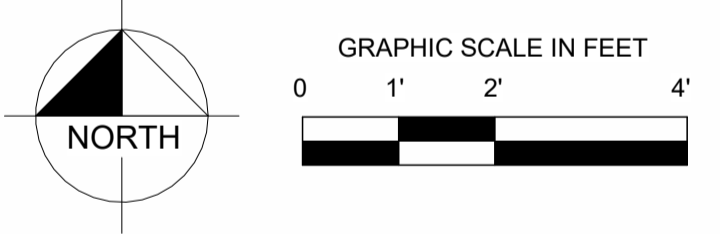


3
M-08

2
M-08

1
S-05
CHEMICAL SLAB PLAN
1/2" = 1'-0"

2
M-08
CHEMICAL SLAB SECTION
1/2" = 1'-0"



3
CHEMICAL SLAB ISOMETRIC VIEW
N.T.S.

4
ULTRA TWIN IBC SPILL PALLET
N.T.S.

NO.	REVISIONS	DATE	BY

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 1700 SE 17TH STREET, SUITE 300, OCALA, FL 34471
 PHONE: 352-486-3000
 WWW.KIMLEY-HORN.COM

LICENSED PROFESSIONAL:
 JAMES E. CLAYTON
 FL LICENSE NUMBER
 90813
 DATE: MAY 2024

KHA PROJECT
 142173320
 DATE
 MAY 2024
 SCALE AS SHOWN
 DESIGNED BY KHA
 DRAWN BY RDC
 CHECKED BY JEC

**CHEMICAL SLAB
 DETAIL**

**CR 501 WTP
 IMPROVEMENTS**
 PREPARED FOR
CITY OF WILDWOOD

SHEET NUMBER
M-08

BID SET

Autodesk Docs://142173320_CR501_WTP/Slab and tank.rvt

GENERAL NOTES

- 1. THESE NOTES ARE NOT INTENDED TO REPLACE THE PROJECT SPECIFICATIONS OR CONSTRUCTION DRAWING NOTES & DETAILS. IN CASE OF CONFLICT BETWEEN THE REQUIREMENTS OF THE SPECIFICATIONS/CONSTRUCTION DRAWINGS AND THESE NOTES, THE MORE STRINGENT REQUIREMENT SHALL APPLY.
2. THE GOVERNING CODE FOR THIS PROJECT IS THE FLORIDA BUILDING CODE, EIGHTH EDITION (2023).
3. THE CONTRACT DOCUMENTS HAVE MADE NO INTENT TO GIVE SPECIFIC INSTRUCTIONS CONCERNING THE MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES AND ASSIGNMENT OF WORK.
4. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR SUPERVISING AND DIRECTING THE WORK. TO THE BEST OF OUR KNOWLEDGE, THE DRAWINGS AND SPECIFICATIONS COMPLY WITH THE APPLICABLE REQUIREMENTS OF THE GOVERNING BUILDING CODE.
5. CONSTRUCTION SHALL COMPLY WITH REQUIREMENTS OF THE GOVERNING BUILDING CODE AND ALL OTHER APPLICABLE FEDERAL, STATE AND LOCAL CODES, STANDARDS, REGULATIONS AND LAWS.
6. THE STRUCTURAL DRAINS ARE TO BE USED IN CONJUNCTION WITH THOSE OF THE OTHER TRADES. IF A CONFLICT EXISTS, THE MORE STRINGENT REQUIREMENT SHALL APPLY.
7. CONTRACTOR SHALL VISIT PROJECT SITE AND BE FAMILIAR WITH THE PROPOSED WORK. TAKE FIELD MEASUREMENTS AND VERIFY ALL FIELD CONDITIONS, AND REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO CONSTRUCTION.
8. CONTRACTOR SHALL REVIEW ALL CONTRACT DOCUMENTS, DIMENSIONS AND SITE CONDITIONS AND COORDINATE WITH FIELD DIMENSIONS AND PROJECT SHOP DRAWINGS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS GIVEN ON STRUCTURAL DRAWINGS RELATING TO GRID LINES, COLUMN AND WALL LOCATIONS, STRUCTURAL AND FINISHED FLOOR ELEVATIONS, MEMBER SIZES, ETC. WITH THE DRAWINGS OF OTHER TRADES BEFORE STARTING ANY WORK. REPORT ANY DISCREPANCIES VERBALLY AND IN WRITING IMMEDIATELY TO ENGINEER PRIOR TO PROCEEDING WITH WORK. WORK SHALL NOT COMMENCE UNTIL THE DISCREPANCIES ARE RESOLVED. DO NOT CHANGE SIZE OR DIMENSIONS OF STRUCTURAL MEMBERS WITHOUT WRITTEN INSTRUCTIONS FROM THE PROJECT ENGINEER OF RECORD.
9. DISCREPANCIES, OMISSIONS OR VARIATIONS NOTED ON THE DRAWINGS OR IN THE SPECIFICATIONS DISCOVERED DURING AND AFTER THE BIDDING PERIOD SHALL BE IMMEDIATELY COMMUNICATED IN WRITING TO THE ENGINEER.
10. CONTRACTOR SHALL PROTECT EXISTING FACILITIES, STRUCTURES AND UTILITY LINES FROM DAMAGE AND SHALL PROTECT HIS WORK, ADJACENT PROPERTY AND THE PUBLIC. CONTRACTOR IS SOLELY RESPONSIBLE FOR JOB SITE SAFETY, CONSTRUCTION PROCEDURES AND DAMAGE OR INJURY DUE TO HIS ACT OR NEGLIGENCE.
11. CONTRACTOR SHALL SUITABLY DOCUMENT EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF THE WORK, AND SHALL RESTORE ALL DAMAGED OR DISTURBED AREAS TO MEET OR EXCEED ORIGINAL SITE CONDITIONS TO THE OWNER'S SATISFACTION.
12. DO NOT REPRODUCE THE STRUCTURAL DRAWINGS FOR USE AS ERECTION, PLACING, FABRICATION OR SHOP DRAWINGS.
13. SCALING OF DRAWINGS SHALL NOT BE USED TO OBTAIN OR VERIFY ANY DIMENSION SHOWN ON THE DRAWINGS. THE CONTRACTOR SHALL REFER TO THE ENGINEER FOR INSTRUCTION FOR ANY DIMENSION NOT GIVEN ON DRAWINGS.
14. SEE DRAWINGS OF OTHER TRADES FOR SIZE AND LOCATION OF POSSIBLE ADDITIONAL OPENINGS IN STRUCTURES NOT SHOWN IN STRUCTURAL DRAWINGS.
15. DETAILS LABELED "TYPICAL DETAILS" ON THE DRAWINGS APPLY TO ALL SITUATIONS THAT ARE THE SAME OR SIMILAR TO THOSE SPECIFICALLY DETAILED. SUCH DETAILS APPLY WHETHER OR NOT THEY ARE KEYPED IN AT EACH LOCATION. QUESTIONS REGARDING APPLICABILITY OF TYPICAL DETAILS SHALL BE RESOLVED BY THE ENGINEER.
16. CONTRACTOR SHALL PROVIDE 48 HOURS MINIMUM ADVANCE NOTICE TO ENGINEER FOR ALL REQUIRED FIELD REVIEWS.
17. CONTRACTOR SHALL COORDINATE WITH OWNER ALL ITEMS TO BE CONTRACTED, SUPPLIED OR INSTALLED BY OWNER.
18. CONTRACTOR IS RESPONSIBLE FOR ALL BUILDING, PERMIT, REVIEW, LICENSE AND DEVELOPMENT FEES REQUIRED TO COMPLETE THE PROJECT.
19. CONTRACTOR SHALL ASSEMBLE AND INSTALL MATERIALS AND PRODUCTS IN STRICT ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS AND WITH INDUSTRY/ASSOCIATION STANDARDS.
20. MATERIALS OR WORK DESCRIBED IN WORDS WHICH HAVE A WELL-KNOWN TECHNICAL TRADE MEANING SHALL BE HELD TO REFER TO THE RECOGNIZED STANDARD. ALL MATERIALS SHALL BE NEW, U.O.N.
21. PROVIDE FIRE STOPPERS AND SEAL ALL PIPE AND CONDUIT PENETRATIONS THROUGH FIRE RATED FLOORS, WALLS AND CEILINGS IN ORDER TO PREVENT THE PASSAGE OF SMOKE OR FIRE. ALL SEALANTS AND RELATED PRODUCTS SHALL COMPLY WITH THE MINIMUM FIRE RATED REQUIREMENTS FOR THE FLOORS, WALLS AND CEILINGS. ONLY NON-COMBUSTIBLE MATERIALS SHALL BE USED AT PENETRATIONS.
22. MINOR DEVIATIONS FROM THE DESIGN LAYOUT ARE ANTICIPATED AND SHALL BE CONSIDERED AS PART OF THE WORK, HOWEVER, NO CHANGES THAT ALTER THE CHARACTER INTENT OF THE DESIGN WILL BE MADE WITHOUT A CHANGE ORDER.

UTILITIES

- 1. CONTRACTOR SHALL LOCATE IN THE FIELD ALL UTILITIES OCCURRING WITHIN THE LIMITS OF EXCAVATION.
2. CONTRACTOR SHALL CALL SUNSHINE STATE ONE CALL OF FLORIDA, INC. (1-800-432-4770) AT LEAST 48 HOURS BEFORE COMMENCEMENT OF ANY EXCAVATION OPERATIONS ON SITE.
3. DATA CONCERNING TYPE AND LOCATION OF UNDERGROUND AND OTHER UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL-INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATIONS AS TO THE TYPE AND LOCATION OF UNDERGROUND AND OTHER UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.

DOCUMENTS AND LIMITATIONS

- 1. THE DRAWINGS, CALCULATIONS, AND REPRODUCTIONS RELATING TO THE STRUCTURAL PART OF THE PROJECT ARE INSTRUMENTS OF SERVICE TO BE USED FOR THIS PROJECT ONLY.
2. IT IS UNDERSTOOD THAT THE ENGINEER MAKES NO WARRANTY, EITHER EXPRESSED OR IMPLIED, AS TO THE FINDINGS, DESIGNS, RECOMMENDATIONS, SPECIFICATIONS, OR PROFESSIONAL ADVICE EXCEPT THAT THESE INSTRUMENTS OF SERVICE HAVE BEEN PREPARED IN ACCORDANCE WITH CURRENT GENERALLY ACCEPTED PROFESSIONAL ENGINEERING PRACTICES.

SHOP DRAWINGS AND OTHER SUBMITTALS

- 1. REVIEW OF SUBMITTALS BY THE ENGINEER IS FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT AS PRESENTED BY THE CONTRACT DOCUMENTS. NO DETAILED CHECK OF QUANTITIES OR DIMENSIONS WILL BE MADE. ONLY THOSE SUBMITTALS REQUIRED TO BE SUBMITTED WILL BE REVIEWED. ALL OTHERS WILL BE RETURNED WITHOUT REVIEW.
2. ALL SUBMITTALS SHALL BE ACCOMPANIED BY A LETTER OF TRANSMITTAL. CONTRACTOR'S SUBMITTAL NUMBER SHALL BE INDICATED ON TRANSMITTAL. DO NOT COMBINE DIFFERENT SUBMITTALS ON THE SAME TRANSMITTAL. SUBMIT SHOP DRAWINGS IN A TIMELY MANNER, CONSISTENT WITH THE ABOVE, AND PRIOR TO FABRICATION, INSTALLATION OR COMMENCEMENT OF THE WORK. ALLOW UP TO 10 WORKING DAYS FOR ENGINEER TO REVIEW AND RETURN SHOP DRAWINGS. NUMBER OF COPIES OF EACH SUBMITTED SHOP DRAWING SHALL BE SUFFICIENT FOR ENGINEER TO RETAIN 2 COPIES.
3. ALL SUBMITTALS MUST BEAR EVIDENCE OF CONTRACTOR'S REVIEW (INCLUDING COMPANY STAMP AND DATED SIGNATURE OF REVIEWER) AND MUST BE APPROVED OR APPROVED AS NOTED BY HIM PRIOR TO SUBMITTING TO THE ENGINEER.
4. ALL CHANGES AND ADDITIONS MADE ON RESUBMITTALS MUST BE CLEARLY FLAGGED AND NOTED. THE PURPOSE OF THE RESUBMITTALS MUST BE CLEARLY NOTED ON THE LETTER OF TRANSMITTAL. ENGINEER REVIEW WILL BE LIMITED TO THOSE ITEMS CAUSING THE RESUBMITTAL. DO NOT REPRODUCE THE STRUCTURAL DRAWINGS FOR USE AS ERECTION, PLACING OR FABRICATION DRAWINGS.
5. SUBMITTALS NOT MEETING THE ABOVE CRITERIA OR SUBMITTED AFTER FABRICATION WILL NOT BE REVIEWED.

- 7. SUBMITTALS: AS A MINIMUM, THE FOLLOWING SHALL BE SUBMITTED, AS APPLICABLE, TO THE ENGINEER FOR REVIEW AND COMPLIANCE WITH THE INTENT OF THE CONTRACT DOCUMENTS PRIOR TO FABRICATION, INSTALLATION, OR COMMENCEMENT OF THE WORK:
A. CONCRETE, MORTAR AND GROUT MIX DESIGNS, INCLUDING ADMIXTURE DATA SHEETS.
B. BILL OF REINFORCING AND LAYOUT.
C. MISCELLANEOUS METAL FABRICATIONS.
D. HANDRAIL, GUARDRAIL AND LADDER DETAILS, INCLUDING SUPPORT MEMBERS CONNECTIONS, AND CALCULATIONS.
E. JOINT LAYOUT PLAN AND MATERIALS.
F. PAINT, SEALANT, TOPPING AND OTHER FINISH PRODUCTS.
G. SHORING.
H. TEMPORARY RETAINING WALL DESIGN DRAWINGS AND CALCULATIONS.

IN ADDITION, CUT SHEETS FOR WATERPROOFING, VAPOR BARRIERS, WATER STOPS, PROPRIETARY ANCHORS, FASTENERS, OTHER STANDARD ATTACHMENTS, EXPANSION JOINTS, MORTAR, BONDING AGENT, DOORS, WINDOWS, INSULATION, AND OTHER MATERIALS AND APPROPRIATE CERTIFICATIONS SHALL ALSO BE SUBMITTED.

- 8. WELDER CERTIFICATIONS FOR ALL WELDERS SHALL BE SUBMITTED. CERTIFICATIONS MUST HAVE BEEN ISSUED WITHIN 3 YEARS PRIOR TO PERFORMING WORK ON THE PROJECT.
9. REQUESTS FOR SUBSTITUTIONS SHALL BE SUBMITTED IN WRITING TO THE ENGINEER FOR REVIEW. SUBMIT 3 COPIES OF ALL PRODUCT DATA AND CUT SHEETS AS NECESSARY TO SHOW COMPLIANCE WITH THE PROJECT REQUIREMENTS. CONTRACTOR SHALL BEAR THE BURDEN OF OBTAINING AUTHORIZATION FOR USE OF ITEMS TO BE SUBSTITUTED. ENGINEER DECISION REGARDING SUBSTITUTION SHALL BE FINAL.
10. FOR ADDITIONAL CRITERIA APPLICABLE TO SUBMITTALS REQUIRING ENGINEERING INPUT BY A DELEGATED ENGINEER, SEE BELOW.

SUBMITTALS REQUIRING ENGINEERING INPUT BY DELEGATED (SPECIALTY) ENGINEER

- 1. DELEGATED ENGINEER:
A. DEFINITION — A FLORIDA PROFESSIONAL ENGINEER WHO UNDERTAKES A SPECIALTY SERVICE AND PROVIDES SERVICES OR CREATIVE WORK (DELEGATED ENGINEERING DOCUMENT) REGARDING A PORTION OF THE ENGINEERING PROJECT. THE DELEGATED ENGINEER IS THE ENGINEER OF RECORD FOR THAT PORTION OF THE ENGINEERING PROJECT.
B. SHALL BE: (1) AN INDEPENDENT CONSULTANT, (2) AN EMPLOYEE OR OFFICER OF AN ENTITY SUPPLYING COMPONENTS TO A FABRICATOR OR CONTRACTOR, SO LONG AS THE ENGINEER ACTS AS AN INDEPENDENT CONSULTANT OR THROUGH A DULY QUALIFIED ENGINEERING CORPORATION, OR (3) AN EMPLOYEE OR OFFICER OF A FABRICATOR OR CONTRACTOR, SO LONG AS THE ENGINEER ACTS AS AN INDEPENDENT CONSULTANT OR THROUGH A DULY QUALIFIED ENGINEERING CORPORATION.
2. SUBMITTALS FOR CUSTOM DESIGNED, MANUFACTURED OR FABRICATED LOAD — CARRYING ITEMS AND CUSTOM FABRICATED ITEMS WHICH ARE REQUIRED BY CODES OR STANDARDS TO RESIST FORCES AND STRESSES, INCLUDING THEIR CONNECTIONS, ANCHORAGES AND ATTACHMENTS REQUIRE A DELEGATED ENGINEER.
3. AS A MINIMUM, THE FOLLOWING SYSTEMS AND COMPONENTS REQUIRE FABRICATION AND ERECTION DRAWINGS WITH INPUT BY A DELEGATED ENGINEER:
A. REDESIGN OF ANY STRUCTURAL ELEMENTS OR CONNECTIONS.
B. TEMPORARY SHORING.
C. HANDRAILS, GUARDRAILS, CATWALK/WALKWAYS, LADDERS, GRATING AND STAIRS.
4. FOR EACH CATEGORY OF SUBMITTALS REQUIRING INPUT FROM A DELEGATED ENGINEER, THE CONTRACTOR SHALL ATTACH TO THE FIRST SUBMITTAL A SIGNED AND SEALED LETTER FROM THE RESPONSIBLE DELEGATED ENGINEER STATING "I CERTIFY THAT THE DESIGN AND DRAFTING OF THE SHOP DRAWINGS WHICH ARE SIGNED AND SEALED BY ME WERE PREPARED UNDER MY DIRECT SUPERVISION AND CONTROL, AND TO THE BEST OF MY KNOWLEDGE, THE SHOP DRAWINGS COMPLY WITH THE APPLICABLE MINIMUM BUILDING CODES AND THE CONTRACT DOCUMENTS."
5. SUBMITTALS SHALL CLEARLY IDENTIFY THE SPECIFIC PROJECT AND APPLICABLE CODES, LIST THE DESIGN CRITERIA, AND SHOW ALL DETAILS AND PLANS NECESSARY FOR PROPER FABRICATION AND INSTALLATION. CALCULATIONS AND SHOP DRAWINGS SHALL IDENTIFY SPECIFIC PRODUCTS UTILIZED. GENERIC PRODUCTS WILL NOT BE ACCEPTED.
6. SHOP DRAWINGS AND CALCULATIONS REQUIRE THE IMPRESSED SEAL, DATE AND SIGNATURE OF THE DELEGATED ENGINEER. COMPUTER PRINTOUTS ARE AN ACCEPTABLE SUBSTITUTE FOR MANUAL COMPUTATIONS PROVIDED THEY ARE ACCOMPANIED BY SUFFICIENT DESCRIPTIVE INFORMATION TO PERMIT THEIR PROPER EVALUATION. SUCH DESCRIPTIVE INFORMATION SHALL BEAR THE IMPRESSED SEAL AND SIGNATURE OF THE DELEGATED ENGINEER AS AN INDICATION THAT HE HAS ACCEPTED RESPONSIBILITY FOR THE RESULTS. IF ACCOMPANYING SIGNED AND SEALED BLUELINE PRINTS ARE PROVIDED, SEPIAS DO NOT REQUIRE SIGNATURE AND SEAL. THE ENGINEER WILL RETAIN 2 SIGNED AND SEALED BLUELINE PRINTS FOR HIS RECORDS.
7. CALCULATIONS ARE THE SOLE RESPONSIBILITY OF THE DELEGATED ENGINEER. CALCULATIONS ARE SUBMITTED TO THE ENGINEER FOR HIS RECORDS.
8. CATALOG INFORMATION ON STANDARD PRODUCTS (i.e. "CUT SHEETS") DOES NOT REQUIRE THE SEAL OF A DELEGATED ENGINEER.
9. REVIEW BY THE PROJECT ENGINEER OF RECORD OF SUBMITTALS IS LIMITED TO VERIFYING THE FOLLOWING:
A. THAT THE SPECIFIED STRUCTURAL SUBMITTALS HAVE BEEN FURNISHED.
B. THAT THE STRUCTURAL SUBMITTALS HAVE BEEN SIGNED AND SEALED BY THE DELEGATED ENGINEER.
C. THAT THE DELEGATED ENGINEER HAS UNDERSTOOD THE DESIGN INTENT AND HAS USED THE SPECIFIED STRUCTURAL CRITERIA. (NO DETAILED CHECK OF CALCULATIONS WILL BE MADE.)
D. THAT THE CONFIGURATION SET FORTH IN THE STRUCTURAL SUBMITTALS IS CONSISTENT WITH THE CONTRACT DOCUMENTS. (NO DETAILED CHECK OF DIMENSIONS OR QUANTITIES WILL BE MADE.)
10. SUBMITTALS NOT MEETING THE ABOVE CRITERIA, OR SUBMITTED AFTER FABRICATION, WILL NOT BE REVIEWED.

DESIGN LOADS

- 1. SEE INDIVIDUAL PLAN SHEETS FOR DESIGN CRITERIA APPLICABLE TO SPECIFIC SITE COMPONENTS.
2. LOADS SHALL MEET THE MINIMUM DESIGN REQUIREMENTS SET FORTH IN THE FLORIDA BUILDING CODE, SEVENTH EDITION (2020), UNLESS A MORE STRINGENT REQUIREMENT IS INDICATED.
3. FILL HEIGHTS AS SHOWN ON THE PLANS.
4. SEE SHEET S-02 FOR SPECIFIC DESIGN LOADS.
5. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE FOR SUPPORTING OF CONSTRUCTION LOADS THAT EXCEED THE ABOVE LOADINGS.

FOUNDATIONS/SLAB ON GRADE

- 1. FOUNDATION CONSTRUCTION, SITE PREPARATION AND SOIL PREPARATION BELOW FOUNDATION SHALL BE PERFORMED IN ACCORDANCE WITH GEOTECHNICAL REPORT RECOMMENDATIONS.
2. FOUNDATIONS SHALL BE SUPPORTED ON COMPACTED MATERIAL WITH A MINIMUM SOIL BEARING CAPACITY OF 2800 PSF, U.O.N.

- 2. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY OF ANY EXISTING FOUNDATION CONDITIONS OR DETAILS THAT ARE IN CONFLICT WITH THOSE INDICATED AND SHOWN ON THE DRAWINGS.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION, SHORING, UNDERPINNING, AND ISOLATION, ETC. OF ALL EXISTING FOUNDATION CONDITIONS AS REQUIRED TO PREVENT ANY DISTURBANCE TO EXISTING FOUNDATION CONDITIONS AS A RESULT OF THE WORK.
4. ANCHOR BOLTS SIDE SLEEVES AND OTHER EMBEDDED ITEMS ARE TO BE PLACED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
5. TO HELP CONTROL SHRINKAGE CRACKS, AT SLAB ON GRADE PENETRATIONS COMPRISED OF BOX — OUTS AND CLOSELY SPACED OR BUNDLED CONDUITS, PIPES, ETC., PROVIDE DIAGONAL #4 BARS ABOUT PERIMETER OF PENETRATION AREA IN ADDITION TO REINFORCEMENT. ORIENT BARS NORMAL TO ANTICIPATED PATH OF CRACK FORMATION. BAR ENDS SHALL EXTEND 12 INCHES MINIMUM BEYOND OVERLAPS WITH ADJACENT BARS. PROVIDE 2 INCH CLEAR COVER TO TOP SURFACE OF SLAB.
6. CHAIR WELDED WIRE FABRIC (WWF) AND REINFORCING BARS DURING CONCRETE PLACEMENT TO ENSURE PROPER POSITION IN SLAB. CHAIRS SHALL BE OF NON-CORROSIVE MATERIAL INCLUDING, BUT NOT LIMITED TO, FIBER GLASS, PLASTIC, AND CONCRETE BLOCK.
7. ALL SOIL BENEATH BUILDING FLOOR SLABS AND FOUNDATIONS SHALL BE TREATED FOR SUBTERRANEAN TERMITE PREVENTION BY A LICENSED PEST CONTROL COMPANY. THE PEST CONTROL COMPANY SHALL PROVIDE A CERTIFICATE OF COMPLIANCE TO THE CONTRACTOR FOR SUBMITTAL TO THE OWNER AND LOCAL BUILDING DEPARTMENT IF REQUIRED. TREATMENT SHALL PRECEDE CONCRETE POUR BY NO MORE THAN 72 HOURS.
8. FLOOR AND FOUNDATION SLAB SHALL BE WET CURED FOR A MINIMUM OF 7 DAYS PRIOR TO FURTHER CONSTRUCTION.
9. CRACK CONTROL JOINTS SHALL BE SAWCUT IN ACCORDANCE WITH ACI 301 AND ACI 302. COMPLETE SAWCUTTING WITHIN 12 HOURS AFTER CONCRETE PLACEMENT.
10. UNLESS OTHERWISE NOTED, PLACE CRACK CONTROL JOINTS AT 20 FEET MAX. SPACING SO AS TO LIMIT SURFACE AREA BETWEEN JOINTS TO 400 SQ. FT., AND SUCH THAT THE LENGTH TO — WIDTH RATIO IS LESS THAN 1.5.
11. PLACE CRACK CONTROL JOINTS AT 10 FEET MAX. SPACING FOR SIDEWALKS AND/OR WALKWAYS, SUCH THAT THE LENGTH TO — WIDTH RATIO IS LESS THAN 1.5.
12. SEE "REINFORCED CONCRETE" NOTES FOR ADDITIONAL INFORMATION PERTAINING TO CONCRETE AND REINFORCEMENT.

REINFORCED CONCRETE

- 1. ALL CONCRETE MATERIALS, PLACING AND HANDLING SHALL BE IN ACCORDANCE WITH AMERICAN CONCRETE INSTITUTE PUBLICATIONS ACI 301, ACI 318 AND ACI 350 - LATEST EDITIONS.
2. CURING OF CONCRETE SHALL BE IN STRICT ACCORDANCE WITH ACI 301 PROVISIONS.
3. ALL STRUCTURAL CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 5000 PSI (MAX. W/C=0.40). THE CONCRETE FUTURE EXPANSION PROTECTIVE CAP IN THE STRUCTURAL DETAILS SHALL HAVE A 28-DAY DESIGN COMPRESSIVE STRENGTH OF 2500 PSI. USE NORMAL WEIGHT CONCRETE (135 PCF MIN.) FOR ALL STRUCTURAL MEMBERS. DO NOT USE CALCIUM CHLORIDE IN ANY CONCRETE.
4. PROVIDE A 4 INCH SLUMP WITH A TOLERANCE OF +/- 1 INCH. FOR WALLS 8 INCHES OR LESS IN THICKNESS, PROVIDE 5 INCH SLUMP WITH A TOLERANCE OF +/- 1/2 INCH AND 1 INCH. IF CONCRETE IS PUMPED, SLUMP MAY BE INCREASED TO 6 INCHES AT THE TRUCK, PROVIDED THE SLUMP SPECIFIED ABOVE IS MAINTAINED AT THE DISCHARGE END. USE A MINIMUM 4 INCH PUMP. FOR PUMPED CONCRETE, TAKE CONCRETE SAMPLES FOR SLUMP TEST AT END OF TRUCK CHUTE AND AT DISCHARGE END OF HOSE, AND TAKE SAMPLES FOR CYLINDER TESTING AT DISCHARGE END OF HOSE.
5. WATER SHALL NOT BE ADDED TO CONCRETE AT THE JOBSITE UNLESS SPECIFIC AUTHORIZATION IS INDICATED ON THE DELIVERY TICKET. NOTIFY ENGINEER OF TOTAL QUANTITY OF WATER ADDED TO ANY TRUCK. REPEAT NECESSARY TESTING IF WATER IS ADDED AFTER INITIAL SAMPLING.
6. COARSE AGGREGATE SHALL CONFORM TO ASTM C33. PEA ROCK AGGREGATE SHALL NOT BE USED.
7. ALL ANCHOR BOLTS SHALL BE ACCURATELY SET WITHIN A TOLERANCE OF +/- 1/16 INCH IN BOTH ELEVATION AND LOCATION.
8. ALL CONCRETE SHALL BE PLACED IN THE DRY. ALL FORMS SHALL BE FREE OF STANDING WATER.
9. ALL CONCRETE SHALL BE VIBRATED IN PLACE IN ACCORDANCE WITH ACI RECOMMENDED PRACTICES. NO PLACING OF CONCRETE WILL BE COMMENCED UNLESS THERE ARE A MINIMUM OF TWO OPERABLE CONCRETE VIBRATORS ON THE JOB SITE.
10. CONCRETE COVER OVER REINFORCING STEEL SHALL BE AS FOLLOWS, U.O.N.:
A. CONCRETE CAST AGAINST EARTH OR EXPOSED TO LIQUID: 3 IN.
B. ALL OTHER CONCRETE: 2 IN.
11. PROVIDE 3/4 INCH CHAMFERS ON ALL EXPOSED EDGES, EXCEPT AS OTHERWISE NOTED.
12. FORM TIES AND REINFORCING BAR SUPPORTS SHALL BE OF NON-CORROSIVE MATERIAL INCLUDING, BUT NOT LIMITED TO, FIBER GLASS, PLASTIC, AND CONCRETE BLOCK. BAR SUPPORTS PLACED ATOP VAPOR BARRIERS SHALL BE CONCRETE BLOCK.
13. ANY TIES, STRAPS OR OTHER METALLIC FORMWORK ITEMS SHALL BE REMOVED TO A DEPTH OF 1 — 1/2 INCHES MINIMUM BELOW FINISHED CONCRETE SURFACE. CONCRETE SHALL BE REPAIRED IN ACCORDANCE WITH ACI 301.
14. CONCRETE FINISHES:
A. FORMER SURFACES SHALL RECEIVE A SMOOTH — FORM FINISH IN ACCORDANCE WITH ACI 301 OFFSET BETWEEN ADJACENT PIECES OF FORMWORK FACING MATERIAL SHALL NOT EXCEED "CLASS A" TOLERANCE REQUIREMENTS OF ACI 117 (i.e. 1/8 INCH MAX. OFFSET).
B. SLAB SURFACES SHALL RECEIVE A TROWELED FINISH IN ACCORDANCE WITH ACI 301. FINISH TOLERANCES SHALL BE IN ACCORDANCE WITH "VERY FLAT" CLASSIFICATION REQUIREMENTS OF ACI 117 (i.e. 1/8 INCH MAX. IN 10 FEET).
C. WHERE A NON-SLIP FINISH IS REQUIRED (WALKWAY SURFACES), GIVE THE SURFACE A BROOM FINISH OR DRY — SHAKE APPLICATION OF FINELY CRUSHED ABRASIVE PARTICLES.
15. COORDINATE SIZE, TYPE AND LOCATION OF ALL PENETRATIONS, CONDUIT, CHAMFERS AND EMBEDDED ITEMS PRIOR TO CONCRETE PLACEMENT.
16. DO NOT IMPOSE SERVICE LOADS ON CONCRETE ELEMENTS UNTIL THE CONCRETE HAS REACHED ITS SPECIFIED MINIMUM COMPRESSIVE STRENGTH.
17. ALL GROUT FOR BASE PLATES SHALL BE HIGH STRENGTH NON — SHRINK, NON — METALLIC. CONTRACTOR SHALL SUBMIT A CONSTRUCTION JOINT PLAN FOR THE ENGINEER'S REVIEW PRIOR TO CONSTRUCTION.

REINFORCING STEEL

- 1. REINFORCING STEEL SHALL BE OF DOMESTIC MANUFACTURE AND IN ACCORDANCE WITH ASTM A615 WITH SUPPLEMENT, GRADE 60; MAXIMUM WORKING STRESS OF 24,000 PSI.
2. TOLERANCES FOR REINFORCING BAR FABRICATION SHALL CONFORM TO THE CURRENT CRSI MANUAL OF STANDARD PRACTICE.
3. ALL REINFORCING STEEL SHALL BE UNCOATED (BLACK) DEFORMED BARS AND SHALL BE FREE FROM LOOSE RUST, SCALE OR OTHER COATINGS.
4. ALL REINFORCING STEEL SHALL BE ACCURATELY PLACED, RIGIDLY SUPPORTED AND FIRMLY TIED IN PLACE WITH BAR SUPPORTS AND SPACERS. VERIFY THAT PLACEMENT OF REINFORCING STEEL WILL NOT CONFLICT WITH SUBSEQUENT INSTALLATION OF ANCHOR BOLTS, FASTENERS OR FIELD — DRILLED COMPONENTS.
5. UNLESS OTHERWISE NOTED, LAP BOTTOM STEEL OVER STRUCTURAL SUPPORTS AND TOP STEEL AT MIDSPAN.
6. ALL LAP LENGTHS SHALL BE IN ACCORDANCE WITH ACI 318, ACI 530 AND CRSI STANDARD PRACTICES LATEST EDITIONS, U.O.N.
7. HOOK DISCONTINUOUS ENDS OF ALL TOP BARS AND ALL BARS IN WALLS U.O.N.
8. ACI STANDARD HOOKS SHALL BE USED AS A MINIMUM, U.O.N.
9. ALL DIMENSIONS PERTAINING TO LOCATION OF REINFORCING BARS ARE TO CENTERLINE OF BARS EXCEPT WHERE THE CLEAR DIMENSION IS SHOWN TO FACE OF CONCRETE.
10. SUBMIT SHOP DRAWINGS TO ENGINEER FOR REVIEW PRIOR TO FABRICATING REINFORCING STEEL. DO NOT REPRODUCE THE STRUCTURAL DRAWINGS FOR USE AS PLACING DRAWINGS OR SHOP DRAWINGS.
11. PROVIDE CONSTRUCTION JOINTS IN ACCORDANCE WITH ACI 318 AND SUBMIT DRAWINGS SHOWING LOCATIONS AND DIRECTION OF POUR FOR ENGINEER'S REVIEW. PROVIDE KEYWAYS, WATERSTOPS AND ADEQUATE DOWELS AT ALL CONSTRUCTION JOINTS IN ACCORDANCE WITH THE STRUCTURAL DRAWINGS.
12. PROVIDE REINFORCING STEEL ERECTOR WITH A SET OF STRUCTURAL DRAWINGS FOR FIELD USE. INSPECT REINFORCING STEEL PLACEMENT FROM SHOP DRAWINGS.

BID SET

Table with columns: No., DATE, REVISIONS

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LICENSED PROFESSIONAL: JAMES E. CLAYTON, FL LICENSE NUMBER 90913, DATE: -----

STRUCTURAL GENERAL NOTES

CR 501 WTP IMPROVEMENTS PREPARED FOR CITY OF WILDWOOD

WELDED WIRE FABRIC (WWF)

- 1. WWF SHALL BE IN ACCORDANCE WITH ASTM A185, PLAIN (SMOOTH) TYPE, IN FLAT SHEETS.
2. ALL WWF SHALL BE ACCURATELY PLACED, RIGIDLY SUPPORTED AND FIRMLY TIED IN PLACE WITH BAR SUPPORTS AND SPACERS. DO NOT PLACE WWF ON GRADE AND SUBSEQUENTLY RAISE INTO POSITION DURING CONCRETE PLACEMENT.
3. FOR SLABS ON GRADE, EXTEND WWF TO WITHIN 2 INCHES OF THE CONCRETE EDGE.
4. LAP EDGES AND ENDS OF WWF SHEETS A MINIMUM OF ONE MESH SPACING PLUS 2 INCHES.
5. LOCATE WWF 2 INCHES BELOW THE TOP SURFACE OF THE SLAB.
6. SEE "SLABS ON GRADE" NOTES ABOVE FOR ADDITIONAL REINFORCEMENT REQUIRED AT SLAB PENETRATIONS.

FORM WORK AND SHORING

- 1. PROVIDE, AS A PACKAGE, SHORING DRAWINGS PREPARED BY OR UNDER THE DIRECT SUPERVISION OF A DELEGATED ENGINEER.
2. FORMS SHALL CONFORM TO THE SHAPE, LINES AND DIMENSIONS OF THE MEMBERS AS CALLED FOR IN THE PLANS, AND SHALL BE SUBSTANTIAL AND SUFFICIENTLY TIGHT TO PREVENT LEAKAGE OF MORTAR. THEY SHALL BE PROPERLY BRACED OR TIED TOGETHER SO AS TO MAINTAIN POSITION AND SHAPE.
3. DESIGN FORMS AND SHORES FOR HORIZONTAL CONCRETE MEMBERS FOR ALL IMPOSED DEAD AND LIVE LOADS, BUT NOT LESS THAN DEAD LOAD (INCLUDING FILL HEIGHTS IF APPLICABLE) PLUS AASHTO HS20 - 44 TRUCK CONSTRUCTION LIVE LOAD, WHERE APPLICABLE. DESIGN WOOD SHORES WITH A SAFETY FACTOR OF 3, AND METAL SHORES WITH A SAFETY FACTOR OF 2.
4. REMOVAL OF FORMWORK IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR, HOWEVER FORMS SHALL NOT BE REMOVED LESS THAN 24 HOURS AFTER CONCRETE PLACEMENT. REMOVE FORMS IN SUCH A MANNER AS TO INSURE JOB SAFETY AND TO PREVENT DAMAGE TO AND CREEP DEFLECTION OF THE STRUCTURE.
5. THE SHORING IS TO BE INSPECTED BY THE DELEGATED ENGINEER OR HIS AUTHORIZED REPRESENTATIVE. PRIOR TO EACH CONCRETE POUR, HE SHALL SUBMIT A WRITTEN INSPECTION REPORT TO THE SPECIAL INSPECTOR AND CONTRACTOR STATING THAT THE WORK IS IN GENERAL COMPLIANCE WITH THE SHORING DRAWINGS. THE FIELD REPORTS SHALL BE SIGNED BY THE INDIVIDUAL CONDUCTING THE INSPECTION. COPIES OF THE FIELD REPORTS SHALL BE SUBMITTED EVERY WEEK TO THE ENGINEER, SPECIAL INSPECTOR AND BUILDING OFFICIAL UNDER A COVER LETTER SIGNED, SEALED AND DATED BY THE DELEGATED ENGINEER.
6. THE SHORING REPORT SHALL CONTAIN, AS A MINIMUM, THE FOLLOWING:
A. NAME AND LOCATION OF PROJECT, NAME OF DELEGATED ENGINEER AND FIELD REPRESENTATIVE, PERMIT NUMBER, DATE, TIME OF DAY, WORKING CONDITIONS (INCLUDING WEATHER AND TEMPERATURE).
B. ITEMS REQUIRING CORRECTIONS.
C. ACCEPTED DEVIATIONS FROM SHORING DRAWINGS.
7. AS SOON AS FORMS ARE REMOVED, ALL IRREGULAR PROJECTIONS SHALL BE CHIPPED OFF FLUSH WITH THE CONCRETE SURFACES. ALL VOIDS OR HONEYCOMBING SHALL BE POINTED UP WITH GROUT AND TROWELED FLUSH WITH THE CONCRETE SURFACE. ALL FORM TIES SHALL BE REMOVED TO A DEPTH OF 1 - 1/2 INCHES MINIMUM AND GROUTED FLUSH WITH THE CONCRETE SURFACE.

STRUCTURAL STEEL

- 1. DESIGN, FABRICATE AND ERECT STRUCTURAL STEEL IN CONFORMANCE WITH AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) "STEEL CONSTRUCTION MANUAL" - CURRENT EDITION, " CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES" - CURRENT EDITION, AND SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS" - CURRENT EDITION.
2. VERIFY ALL DIMENSIONS AS REQUIRED PRIOR TO FABRICATION OF ANY STRUCTURAL STEEL.
3. MATERIALS:
- ROUND HSS SHALL CONFORM TO ASTM A 500 OR B (Fy= 42KSI, Fu= 58KSI), U.O.N.
- RECTANGULAR AND SQUARE HSS SHALL CONFORM TO ASTM A 500 OR B (Fy= 46KSI, Fu= 58KSI), U.O.N.
- STEEL PIPE SHALL CONFORM TO ASTM A53 GR. B (Fy= 35KSI, Fu= 60KSI).
- STRUCTURAL PLATES SHALL CONFORM TO ASTM A36 (Fy= 36KSI, Fu= 58KSI).
- STRUCTURAL W - SHAPES SHALL CONFORM TO ASTM A 992 (Fy= 50KSI, Fu= 65KSI).
- STRUCTURAL CHANNELS SHALL CONFORM TO ASTM A36 (Fy= 36KSI, Fu= 58KSI).
- ANGLES SHALL CONFORM TO ASTM A36 (Fy= 36KSI, Fu= 58KSI).
- BOLTS SHALL CONFORM TO ASTM A 325 - X, TYPE 1.
- ANCHOR RODS SHALL CONFORM TO ASTM F1554, GR. 55 MINIMUM.
4. BOLTS FOR CONNECTIONS SHALL BE INSTALLED IN ACCORDANCE WITH AISC "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A 325 OR A 490 BOLTS - 2004." UNLESS OTHERWISE NOTED, ALL BOLTS SHALL BE PROVIDED WITH HEAVY HEX NUTS CONFORMING TO ASTM A563, AND HARDENED.
5. STEEL WASHERS CONFORMING TO ASTM F436. PLACE HARDENED WASHERS UNDER PART BEING TURNED.
6. PROVIDE ALL BOLTS, NUTS AND WASHERS IN SETS THAT ARE NEW AND DOMESTICALLY MANUFACTURED. DO NOT REUSE BOLTS.
7. HOT DIP GALVANIZE ALL STRUCTURAL STEEL, FASTENERS, AND MISCELLANEOUS METAL FABRICATIONS IN ACCORDANCE WITH ASTM A123 OR ASTM A153, AS APPLICABLE. TOUCH UP ALL FIELD WELDS AND ABRADED AREAS WITH TWO COATS OF GALVANIZED PAINT. REPAIR OF ABRADED OR UNCOATED AREAS SHALL CONFORM TO ASTM A780.
8. USE STRUCTURAL STEEL THAT IS FULLY WELDABLE WITHIN GRADES AND FROM ANY GRADE TO ANY OTHER GRADE. WELD ALL SHOP CONNECTIONS, U.O.N.
9. USE ELECTRODES CONFORMING TO AWS D1.1, E70 SERIES, U.O.N.
10. ALL WELDING SHALL BE DONE BY AN AWS CERTIFIED WELDER AND IN COMPLIANCE WITH AWS D1.1. IN ADDITION, FOR PROJECTS IN MIAMI - DADE COUNTY, WELDER MUST ALSO BE A MIAMI - DADE COUNTY CERTIFIED WELDER. ALL WELD SIZES SHALL BE THE MAXIMUM ALLOWED BY THE MATERIAL BEING WELDED WITH E70XX ELECTRODES.
11. AT THE CONTRACTOR'S OPTION, SUBSTITUTION OF SHOP WELDS FOR FIELD WELDS MAY BE REQUESTED. ALL SUCH SUBSTITUTIONS SHALL BE CLEARLY NOTED ON THE SHOP DRAWINGS AND SUBMITTED TO THE ENGINEER FOR REVIEW.
12. CAP OR SEAL ALL PIPES AS REQUIRED TO PREVENT RAINWATER INTRUSION.
13. AT THE CONTRACTOR'S OPTION, FIELD SPLICES MAY BE REQUESTED FOR ERECTION PURPOSES. ALL SUCH SPLICES SHALL BE CLEARLY NOTED ON THE SHOP DRAWINGS AND SUBMITTED TO THE ENGINEER FOR REVIEW. FOR EACH PROPOSED SPLICE LOCATION, SUBMIT STRUCTURAL DESIGN CALCULATIONS AND DETAILS SIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF FLORIDA.
14. CONNECTIONS NOT DETAILED IN THE STRUCTURAL DRAWINGS AT THE TIME DRAWINGS ARE ISSUED FOR CONSTRUCTION SHALL BE DESIGNED AND DETAILED BY FABRICATOR ACCORDING TO AISC SPECIFICATIONS.
15. ALL STRUCTURAL STEEL SHALL BE FABRICATED TO FIT AT BOLTED CONNECTIONS WITHIN 1/16 INCH TOLERANCE. MISSING OR MISALIGNED BOLT HOLES SHALL BE CORRECTED BY DRILLING OR PUNCHING. FLAME CUTTING OF NEW BOLT HOLES OR FOR ENLARGING EXISTING HOLES WILL NOT BE PERMITTED. MINIMUM EDGE DISTANCE REQUIREMENTS SHALL CONFORM TO AISC SPECIFICATIONS.
16. SEE DRAWINGS OF OTHER TRADES FOR MISCELLANEOUS STRUCTURAL STEEL NOT SHOWN ON STRUCTURAL DRAWINGS.
17. SUBMIT STRUCTURAL STEEL SHOP DRAWINGS TO ENGINEER FOR REVIEW PRIOR TO FABRICATION. DO NOT REPRODUCE THE STRUCTURAL DRAWINGS FOR USE AS SHOP DRAWINGS.

TEMPORARY WALLS

- 1. CONTRACTOR SHALL SUBMIT, IN THE FORM OF A SHOP DRAWING, THE DESIGN AND LAYOUT OF ANY TEMPORARY SHEETPILE WALLS REQUIRED FOR CONSTRUCTION. SUBMITTED DOCUMENTS SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF FLORIDA.
2. WHERE TEMPORARY WALLS ARE TO BE INSTALLED NEAR OR ADJACENT TO EXISTING STRUCTURES OR UTILITIES, CONTRACTOR SHALL USE DUE CAUTION AS TO NOT DAMAGE SUCH EXISTING STRUCTURES OR UTILITIES.

CLEAN -UP

- 1. THE CONTRACTOR SHALL AT ALL TIMES KEEP THE SITE FREE FROM ACCUMULATION OF WASTE MATERIALS OR RUBBISH CAUSED BY HIS EMPLOYEES.
2. CONTRACTOR SHALL VISUALLY INSPECT INTERIOR AND EXTERIOR SURFACES AND REMOVE ALL TRACES OF SOIL, WASTE MATERIALS, SMUDGES, STAINS, SPLASHED MATERIAL, PAINT DROPPINGS AND OTHER FOREIGN MATTER PRIOR TO COMPLETION OF THE WORK.

RECORD DRAWINGS

- 1. CONTRACTOR SHALL PREPARE AND MAINTAIN CURRENT A SET OF REDLINED DRAWINGS SHOWING ALL DEVIATIONS AND CHANGES MADE TO THE CONSTRUCTION DRAWINGS.
2. DRAWINGS SHALL BE MADE AVAILABLE TO THE ENGINEER FOR REVIEW UPON REQUEST AT ANY TIME DURING THE COURSE OF THE PROJECT.
3. CONTRACTOR SHALL SUBMIT THE ORIGINAL DRAWINGS TO THE ENGINEER WITHIN ONE WEEK FROM THE DATE OF FINAL COMPLETION, AND PRIOR TO OWNER'S ACCEPTANCE OF CONTRACTOR'S FINAL VOICE.
4. SUBMITTED DRAWINGS WILL REMAIN THE PROPERTY OF THE ENGINEER.

BID ITEMS

- 1. PAYMENT FOR ALL INCIDENTALS IS TO BE INCLUDED IN THE PRICE BID FOR CONTRACT ITEMS.
2. COST FOR REMOVAL AND DISPOSAL OF VARIOUS MATERIALS, WHERE REQUIRED, SHALL BE INCLUDED IN THE PRICE BID FOR CONTRACT ITEMS.

ALUMINUM

- 1. ALUMINUM FABRICATION SHALL BE IN CONFORMANCE WITH THE ALUMINUM ASSOCIATION, INC. "SPECIFICATIONS FOR ALUMINUM STRUCTURES" (LATEST EDITION).
2. UNLESS NOTED OTHERWISE, MATERIALS SHALL BE:
A. PLATE & SHEET - ASTM B 209; 6061 - T6, 6061 - T651 ALLOY.
B. EXTRUDED SHAPES - ASTM B221; 6061 - T6, 6061 - T651 ALLOY. PIPE SECTIONS ARE SCHEDULE 40 U.N.O.
C. CASTINGS - ASTM B108; 214 ALLOY.
3. ALUMINUM SHALL BE SEPARATED FROM DIRECT CONTACT WITH OTHER MATERIALS (STEEL, CONCRETE, ETC.) BY PRESSURE SENSITIVE TAPE, BITUMASTIC COATING, OR OTHER PROTECTIVE METHOD SUBMITTED BY THE CONTRACTOR AND APPROVED BY THE OWNER'S CONSTRUCTION REPRESENTATIVE.
4. WELDING ALUMINUM SHALL CONFORM TO AWS D1.2 & AWS A5.10 AND THE REQUIREMENTS OF THE ALUMINUM ASSOCIATIONS "ALUMINUM DESIGN MANUAL" (LATEST EDITION) TABLE 7.1 - 1 FOR WELD FILLERS FOR WROUGHT ALLOYS.
5. REFERENCE PROJECT SPECIFICATIONS FOR HANDRAIL & GUARDRAIL REQUIREMENTS.
6. FASTENERS: UNLESS NOTED OTHERWISE, ALL FASTENERS SHALL BE TYPE 316 STAINLESS STEEL MEETING THE REQUIREMENTS OF ASTM F593 OR ASTM A193 FOR BOLTS AND ASTM F594 OR ASTM A194 FOR NUTS.

ABBREVIATIONS

Table with 2 columns: Abbreviation and Full Name. Includes ALT (ALTERNATE), A.F.F (ABOVE FINISH FLOOR), C.J (CONTROL JOINT), CL (CENTERLINE), CLR (CLEAR), CMU (CONCRETE MASONRY UNIT), CONC (CONCRETE), CONST (CONSTRUCTION), CONT (CONTINUOUS), EA (EACH), E.F. (EACH FACE), E.J (EXPANSION JOINT), EL (ELEVATION), EQ (EQUAL), E.W. (EACH WAY), F.F.E. (FINISHED FLOOR ELEVATION MAX.), FG (FINISHED GRADE), HORIZ (HORIZONTAL), JT (JOINT), MAX (MAXIMUM), MIN. (MINIMUM), M.O. (MASONRY OPENING), NTS. (NOT TO SCALE), O.C./O.C. (ON CENTER), PROJ (PROJECTION), P.T. (PRESERVATIVE TREATED), SIM (SIMILAR), SOG (SLAB ON GRADE), SS (STAINLESS STEEL), STD (STANDARD), T&B (TOP & BOTTOM), TOS (TOP OF SLAB), T.O.F. (TOP OF FOUNDATION), T.O.W. (TOP OF WALL), TYP. (TYPICAL), U.O.N. (UNLESS OTHERWISE NOTED), VERT (VERTICAL), W.P. (WORK POINT).

REFERENCE: MILLENNIUM PARK REUSE EXTENSION, WILDWOOD, FLORIDA, GEOTECHNICAL SITE EXPLORATION REPORT PREPARED BY GEO-TECHNOLOGIES, INC., DATED NOVEMBER 10, 2021, PROJECT NO. 21-1729.85.1.

CONTRACTOR TO VERY ASSUMED SOIL VALUES: 2000 PSF.

DESIGN:

FLORIDA BUILDING CODE EIGHTH EDITION (2023)

WIND LOADS - PER ASCE 7 - 16:

WIND SPEED (ULTIMATE) 150 MPH

RISK CATEGORY IV

EXPOSURE C

DEAD LOAD:

SEWAGE 63.6 PSF

SELF-WEIGHT OF MATERIALS

LIVE LOAD:

GRATTING AND CATWALK 100PSF

STAIRS 100 PSF

TANK WALKWAYS 100 PSF

DEFLECTION LIMIT FOR GRATING AND WALKWAYS = 0.25"

PUMP ALUMINUM SUN SHADE/CANOPY (DELEGATED DESIGN)

ASSUMED MAXIMUM FACTORED COLUMN BASE REACTIONS FOR FOUNDATION DESIGN (ALUMINUM CANOPY ENGINEER TO VERIFY REACTIONS WITH KIMLEY-HORN PRIOR TO FABRICATION). DESIGN INTENT IS FOR ALL SUPPORT POINTS TO BE CONSIDERED "PINNED," AS SUCH NO MOMENT REACTIONS ARE EXPECTED.

CHLORINATION ROOF SHADE STRUCTURE

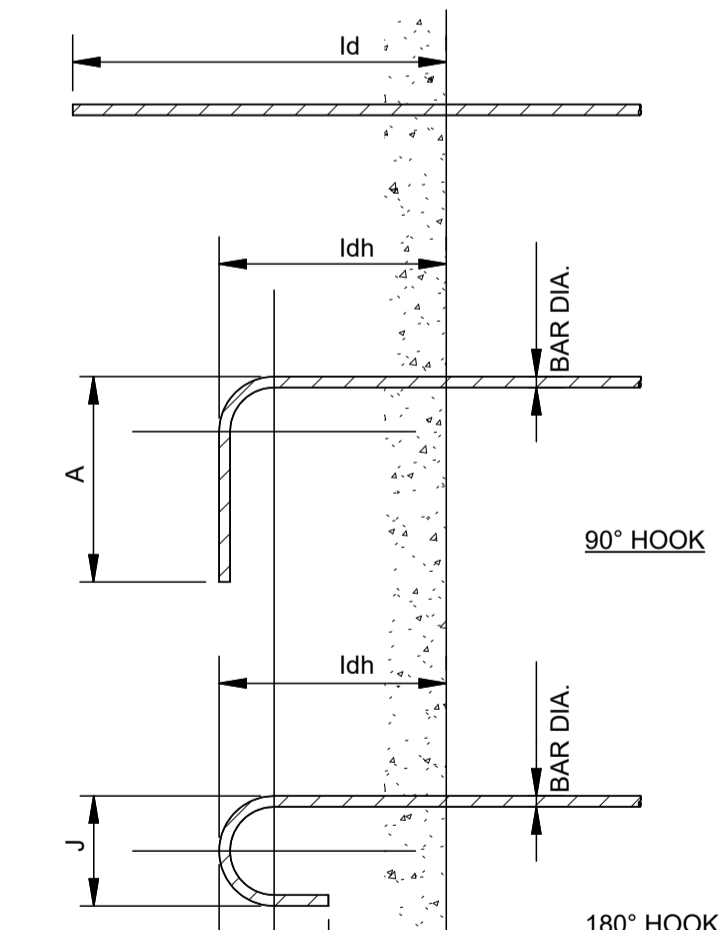
Table with 4 columns: COLUMN, HORIZONTAL (K), VERTICAL UP (K), VERTICAL DOWN (K). Rows for INTERIOR and EXTERIOR.

TWIN IBC SPILL PALLET ROOF SHADE STRUCTURE

Table with 4 columns: COLUMN, HORIZONTAL (K), VERTICAL UP (K), VERTICAL DOWN (K). Row for CORNERS.

REBAR MINIMUM TENSION DEVELOPMENT & LAP/SPLICE LENGTHS. Table with columns for BAR SIZE, DEVELOPMENT LENGTH, LAP LENGTH (CLASS B SPLICE), and BAR SIZE. Includes notes on grade 60 uncoated reinforcement and splice lengths.

STANDARD HOOK DEVELOPMENT LENGTH. Table with columns for BAR SIZE, 90° STD HOOK 'A', 180° STD HOOK 'J', and DEVELOPMENT LENGTH, ldh. Includes notes on hook geometry and requirements.



STANDARD REINFORCEMENT DETAILS

1 STANDARD REINFORCEMENT DETAILS N.T.S.

Table with columns: No., REVISIONS, DATE, BY.

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LICENSED PROFESSIONAL: JAMES E. CLAYTON, FL LICENSE NUMBER 90813. PROJECT: KHA PROJECT 142173320, DATE: MAY 2024, SCALE: AS SHOWN, DESIGNED BY: KHA, DRAWN BY: RDC, CHECKED BY: JEC.

STRUCTURAL GENERAL NOTES

CR 501 WTP IMPROVEMENTS PREPARED FOR CITY OF WILDWOOD

BID SET

STRUCTURAL NOTES

1. GENERAL:

- (A) PROTECT EXISTING FACILITIES, STRUCTURES AND UTILITY LINES FROM ALL DAMAGE. CONTRACTOR SHALL PROTECT THE WORK, ADJACENT PROPERTY, AND THE PUBLIC. CONTRACTOR IS SOLELY RESPONSIBLE FOR DAMAGE OR INJURY DUE TO HIS ACT OR NEGLIGENCE.
- (B) THE CONTRACTOR IS SOLELY RESPONSIBLE FOR JOB SAFETY AND CONSTRUCTION PROCEDURES.
- (C) PRIOR TO CONSTRUCTION, FIELD VERIFY ALL DIMENSIONS IN THE DRAWINGS AND DETAILS AND REPORT ANY DISCREPANCIES IMMEDIATELY TO THE ENGINEER.
- (D) REFER TO THE ENGINEER FOR INSTRUCTION FOR ANY DIMENSION NOT GIVEN ON DRAWINGS. SCALING OF DRAWINGS SHALL NOT BE USED TO OBTAIN OR VERIFY ANY DIMENSION SHOWN ON THE DRAWINGS.

2. CONCRETE:

- (A) ALL CONCRETE MATERIALS, PLACING AND HANDLING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF ACI 318 AND ACI 301.
- (B) ALL STRUCTURAL CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4000 PSI (UNLESS OTHERWISE NOTED).
- (C) PROVIDE 3" CONCRETE COVER OVER REINFORCING BARS EXCEPT AS OTHERWISE NOTED.
- (D) FORM TIES AND REINFORCING BAR SUPPORTS SHALL BE OF NON-CORROSIVE MATERIAL INCLUDING, BUT NOT LIMITED TO, FIBERGLASS, PLASTIC, AND/OR PRECAST CONCRETE MEETING THESE SPECIFICATIONS.
- (E) CONCRETE FINISHES:
 - 1. FORMED SURFACE-SMOOTH FORM FINISH PER ACI 301.
 - 2. BROOM FINISH FOR TANK SLAB.
- (F) ALL GROUT SHALL BE NON-SHRINK, NON-METALLIC.
- (G) CONCRETE SHALL BE CURED IMMEDIATELY AFTER FINISHING OPERATIONS IN ACCORDANCE WITH ONE OF THE FOLLOWING METHODS:
 - 1. APPLY A LIQUID MEMBRANE CHEMICAL CURING COMPOUND IN ACCORDANCE WITH ASTM C-309.
 - 2. WET CURE IN ACCORDANCE WITH ACI 301.
- (H) ALL CONCRETE CONSTRUCTION SHALL BE DONE IN THE DRY.
- (I) PROVIDE 3/4" CHAMFER ON ALL EXPOSED EDGES UNLESS OTHERWISE NOTED.
- (J) CONCRETE SHALL BE IN ACCORDANCE WITH ASTM C94:
 - 1. TYPE II PORTLAND CEMENT - ASTM C150
 - 2. AGGREGATES (3/4" MAX.) - ASTM C33
 - 3. USE OF CALCIUM CHLORIDE IS NOT PERMITTED
 - 4. AIR ENTRAINING (4% MAX.) - ASTM C260
 - 5. WATER REDUCING - ASTM C494
 - 6. WATER - CLEAN AND POTABLE
 - 7. MAXIMUM WATER CEMENT RATIO FOR 4,000 PSI, 28-DAY COMPRESSIVE STRENGTH = 0.45
- (K) REQUIRED SLUMP: 2" TO 4"
- (L) CONTRACTOR IS RESPONSIBLE FOR THE PROPER DESIGN AND CONSTRUCTION OF ALL FORMWORK AND SHORING. DESIGN SHALL BE PERFORMED BY A LICENSED FLORIDA PROFESSIONAL ENGINEER.

- (M) A QUALIFIED TESTING LABORATORY SHALL BE RETAINED TO PERFORM THE FOLLOWING CONCRETE TESTS:
 - 1. CYLINDER STRENGTH TESTS - ASTM C39. ONE SET OF FIVE CYLINDERS FOR EACH 50 CUBIC YARDS OR FRACTION THEREOF PLACED. TEST ONE AT 3 DAYS, ONE AT 7 DAYS, TWO AT 28 DAYS, AND HOLD ONE.
 - 2. SLUMP TESTS - ASTM C143

- (N) ONE COPY OF ALL TEST REPORTS SHALL BE SENT DIRECTLY TO OWNER, ENGINEER, AND CONTRACTOR.
- (P) CONCRETE SHALL BE PLACED WITHIN 90 MINUTES OF BATCH TIME
- (Q) ALL CONCRETE SHALL BE CONSOLIDATED IN PLACE USING INTERNAL VIBRATORS
- (R) SUBMITTALS:
 - 1. SUBMIT PROPOSED CONCRETE MIX DESIGN PRIOR TO CONSTRUCTION
 - 2. SUBMIT DETAILED SHOP DRAWINGS OF REINFORCING BARS SHOWING NUMBER, SIZE, AND LOCATION. INCLUDE BAR LISTS AND BEND DIAGRAMS.

3. REINFORCEMENT:

- (A) REINFORCING STEEL SHALL BE A.S.T.M. A-615 WITH SUPPLEMENT, GRADE 60: MINIMUM WORKING STRESS - 24,000 PSI.
- (B) ALL REINFORCEMENT SHALL BE UNCOATED (BLACK).
- (C) ALL DIMENSIONS PERTAINING TO LOCATION OF REINFORCING BARS ARE TO CENTERLINE OF BARS EXCEPT WHERE THE CLEAR DIMENSION IS SHOWN TO FACE OF CONCRETE.
- (D) ACI STANDARD HOOKS SHALL BE USED UNLESS OTHERWISE NOTED.
- (E) ALL LAP AND SPLICE LENGTHS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF ACI 318 AND CRSI STANDARD PRACTICES, EXCEPT AS OTHERWISE NOTED.

4. FOUNDATIONS:

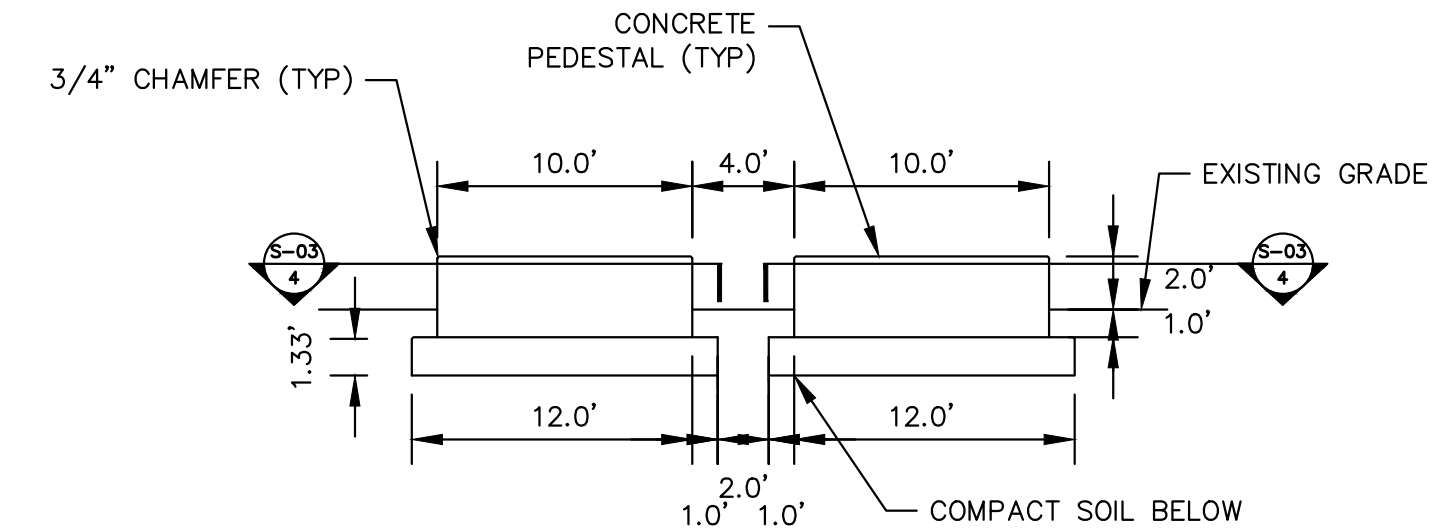
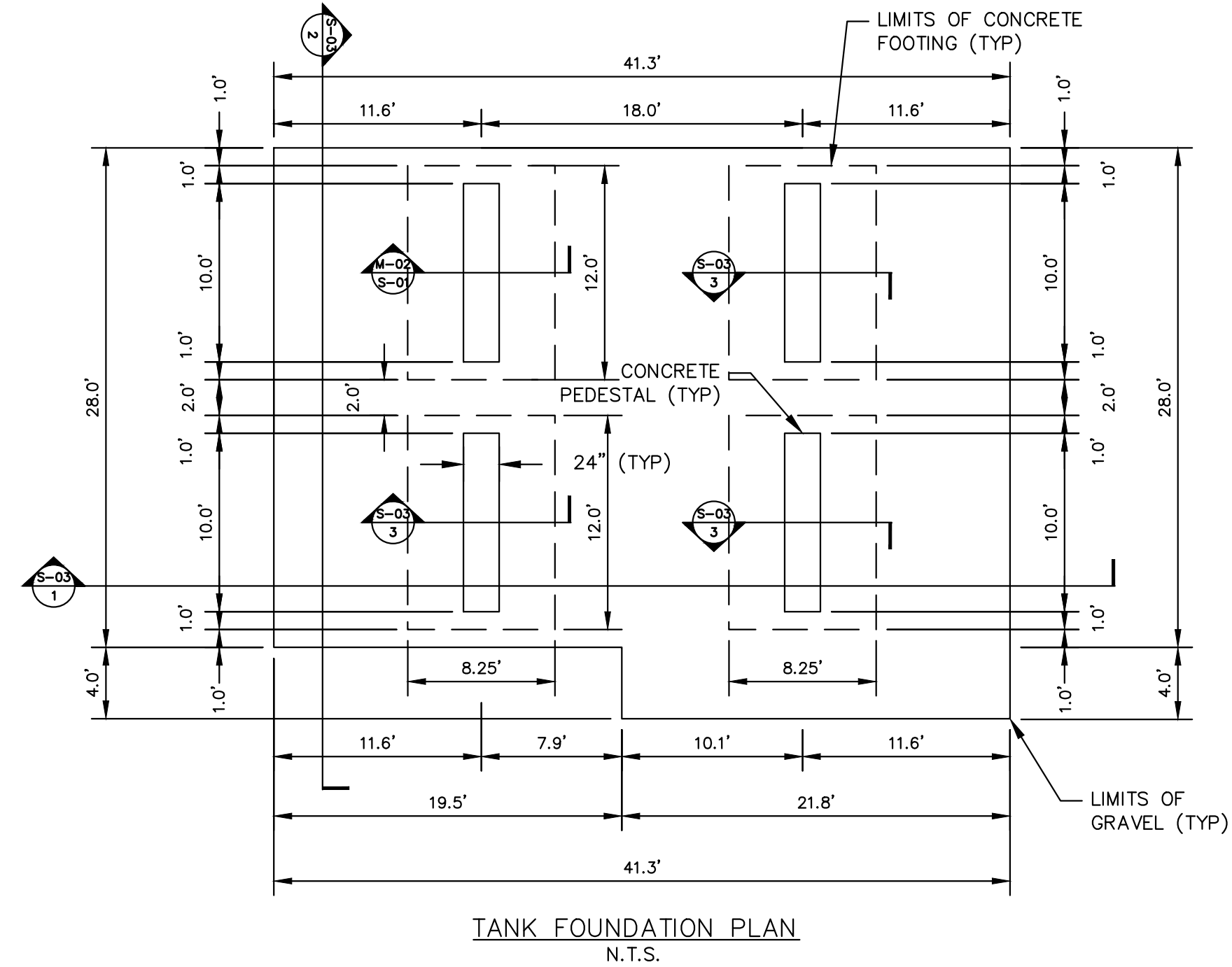
- (A) A GEOTECHNICAL REPORT OF SUBSURFACE CONDITIONS HAS BEEN PREPARED BY GEO-TECH, INC. (DATED JANUARY 7, 2020, PROJECT NO. 19-1729.46). ANY ADDITIONAL GEOTECHNICAL WORK WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- (B) NOTIFY THE ENGINEER IMMEDIATELY OF ANY EXISTING FOUNDATION CONDITIONS OR DETAILS THAT ARE IN CONFLICT WITH THOSE INDICATED AND SHOWN IN THE DRAWINGS.

- (C) ADHERE TO THE RECOMMENDATIONS MADE IN THE SITE PREPARATION SECTION OF THE GEOTECHNICAL REPORT.
- (D) ALL FILL AND COMPACTION SHALL BE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT.
- (E) ALLOWABLE SOIL BEARING PRESSURE = 2000 PSF. CONTRACTOR'S TESTING LABORATORY SHALL CONFIRM SOIL PREPARATION PROCEDURES AND SPECIFY COMPACTION REQUIREMENTS NECESSARY TO OBTAIN THE DESIGN SOIL BEARING PRESSURE.

DESIGN CRITERIA:

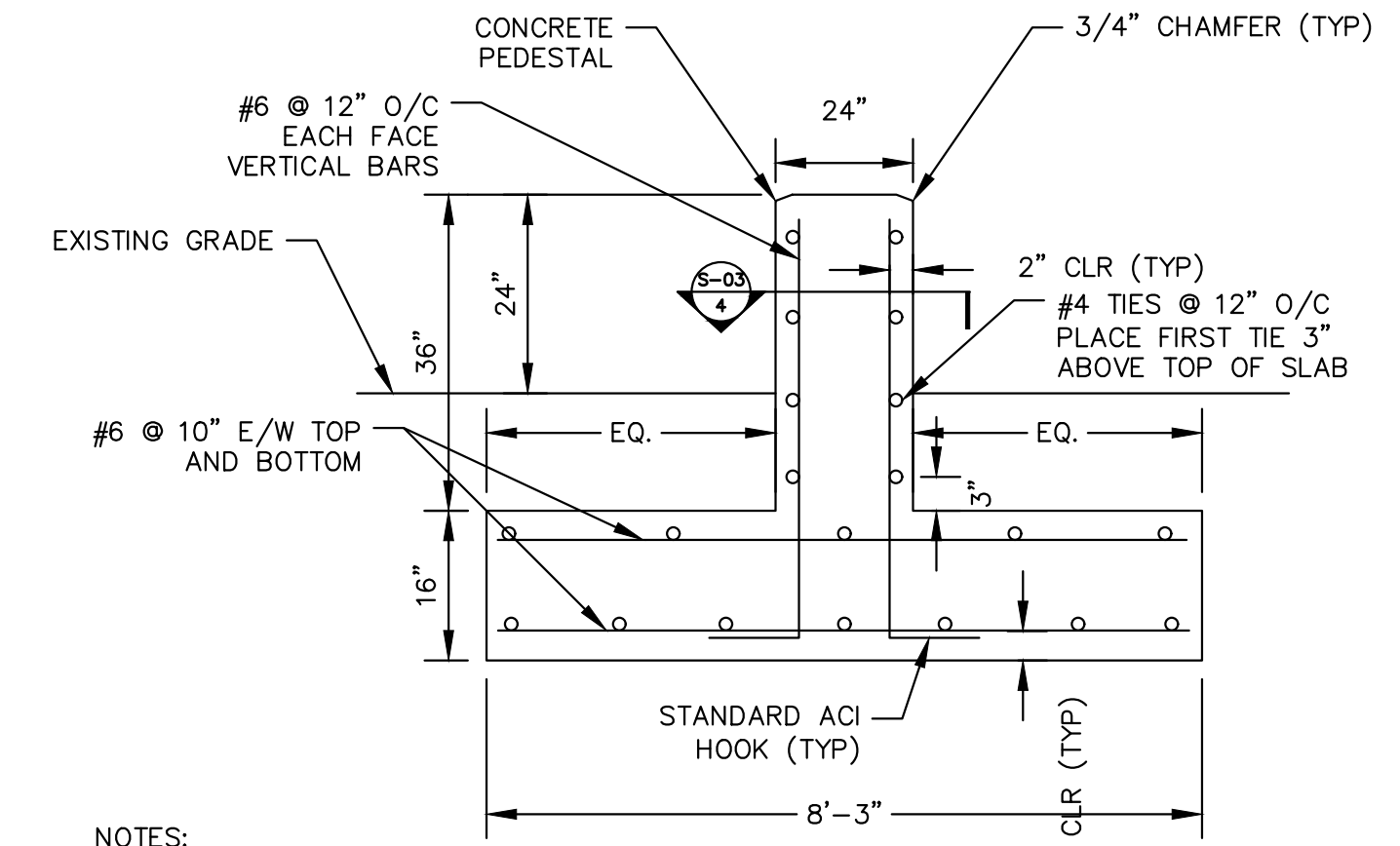
CODE: 2017 FLORIDA BUILDING CODE WITH SUPPLEMENTS
 DEAD LOAD (TANK): 16850 LB
 LIVE LOADS (TANK): 283150 LB

WIND LOAD:
 BASIC WIND SPEED 140 MPH
 EXPOSURE C
 RISK CATEGORY III

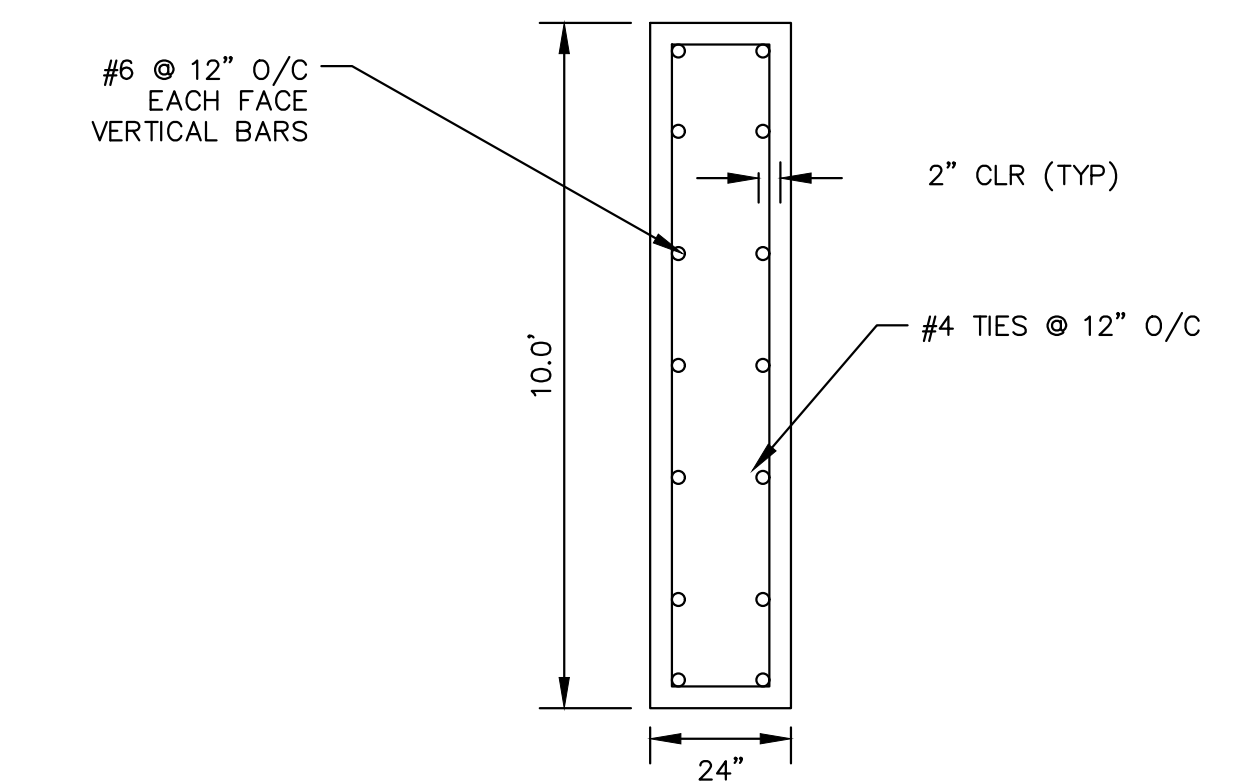


NOTES:
 1) TANK NOT SHOWN FOR CLARITY
 2) SEE SECTIONS 3 AND 4 FOR SLAB AND PEDESTAL REINFORCEMENT

COMPACT SOIL BELOW FOUNDATION PER RECOMMENDATIONS IN THE GEOTECHNICAL REPORT, BUT NO LESS THAN 95% OF MODIFIED PROCTOR MAXIMUM DRY DENSITY (ASTM D1557) TO A MINIMUM DEPTH OF 2'-0" BELOW THE BOTTOM OF THE FOUNDATIONS



NOTES:
 1) TANK NOT SHOWN FOR CLARITY



K:\024_11610\WIP\02411610\CR 501 WTP for Iron Filter Structural Notes and Details.dwg, Layer: \$L01 IRON FILTER STRUCTURAL NOTES AND DETAILS, May 07, 2024, dlmaheshwari
 P:\024_11610\WIP\02411610\CR 501 WTP for Iron Filter Structural Notes and Details.dwg, Layer: \$L01 IRON FILTER STRUCTURAL NOTES AND DETAILS, May 07, 2024, dlmaheshwari
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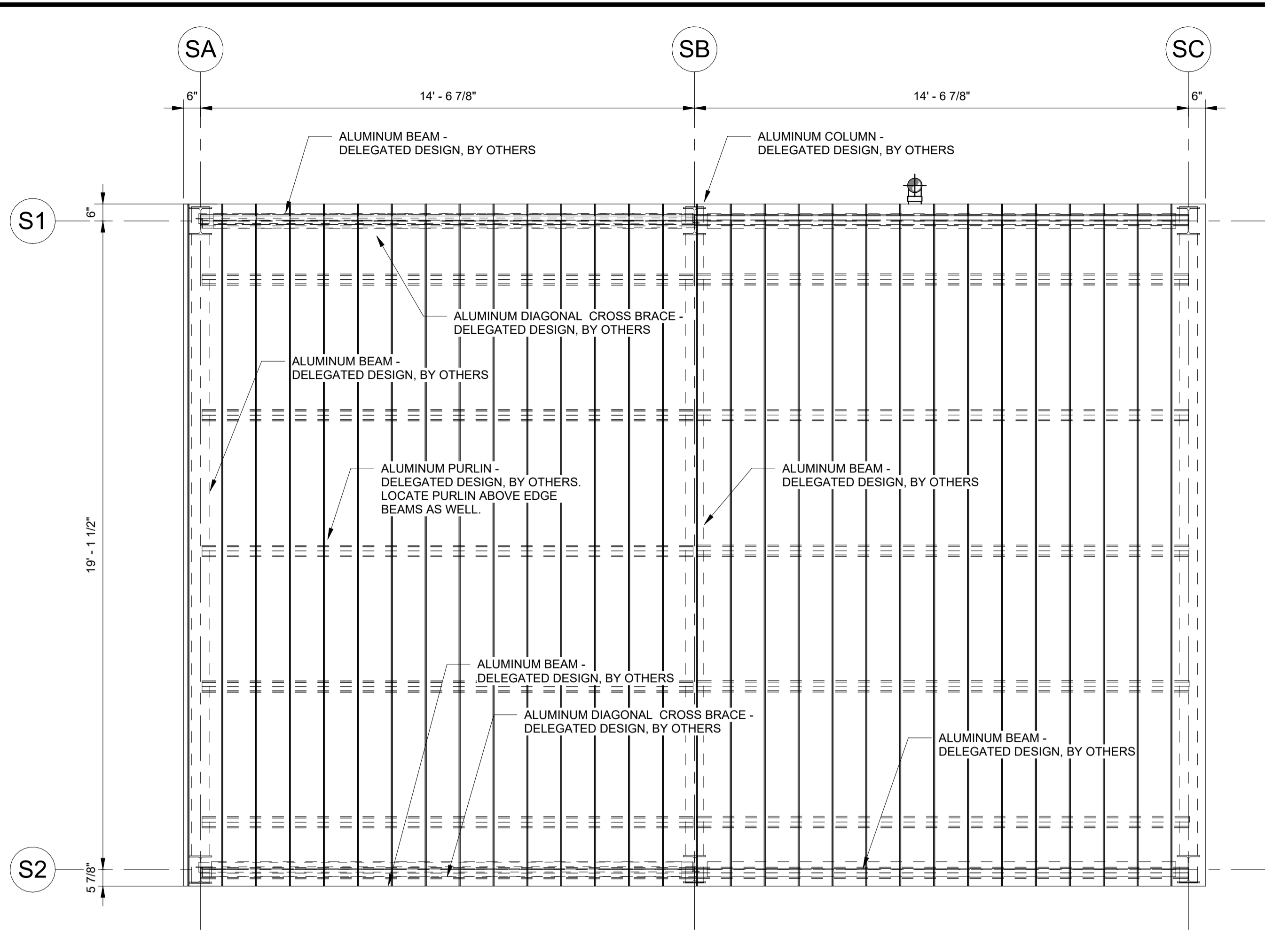
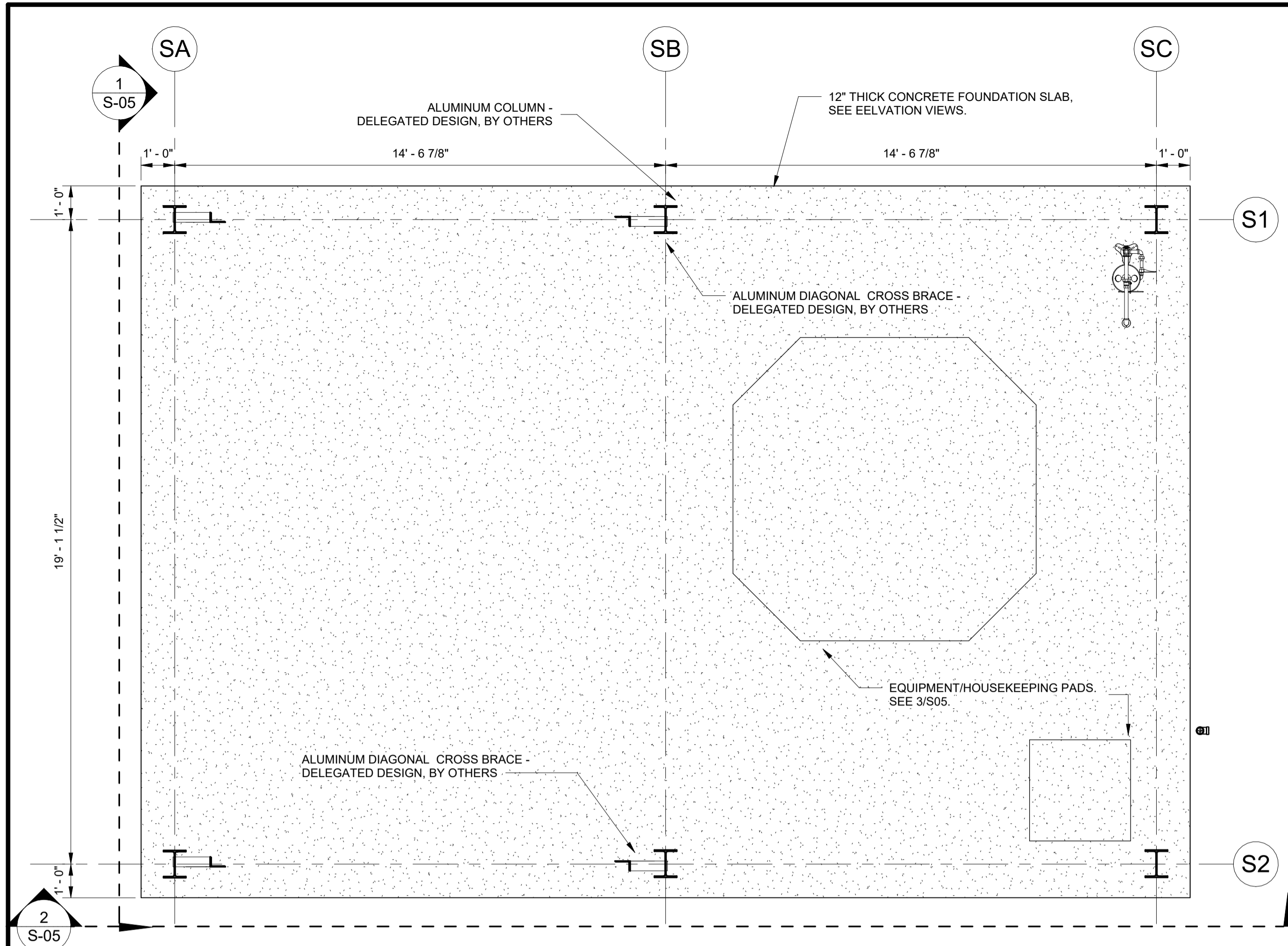
JAMES E. CLAYTON
 FLORIDA LICENSE NUMBER 90813

KHA PROJECT 142173320
 DATE MAY 2024
 SCALE AS SHOWN
 DESIGNED BY KHA
 DRAWN BY RDC
 CHECKED BY PHS

IRON FILTER STRUCTURAL NOTES AND DETAILS

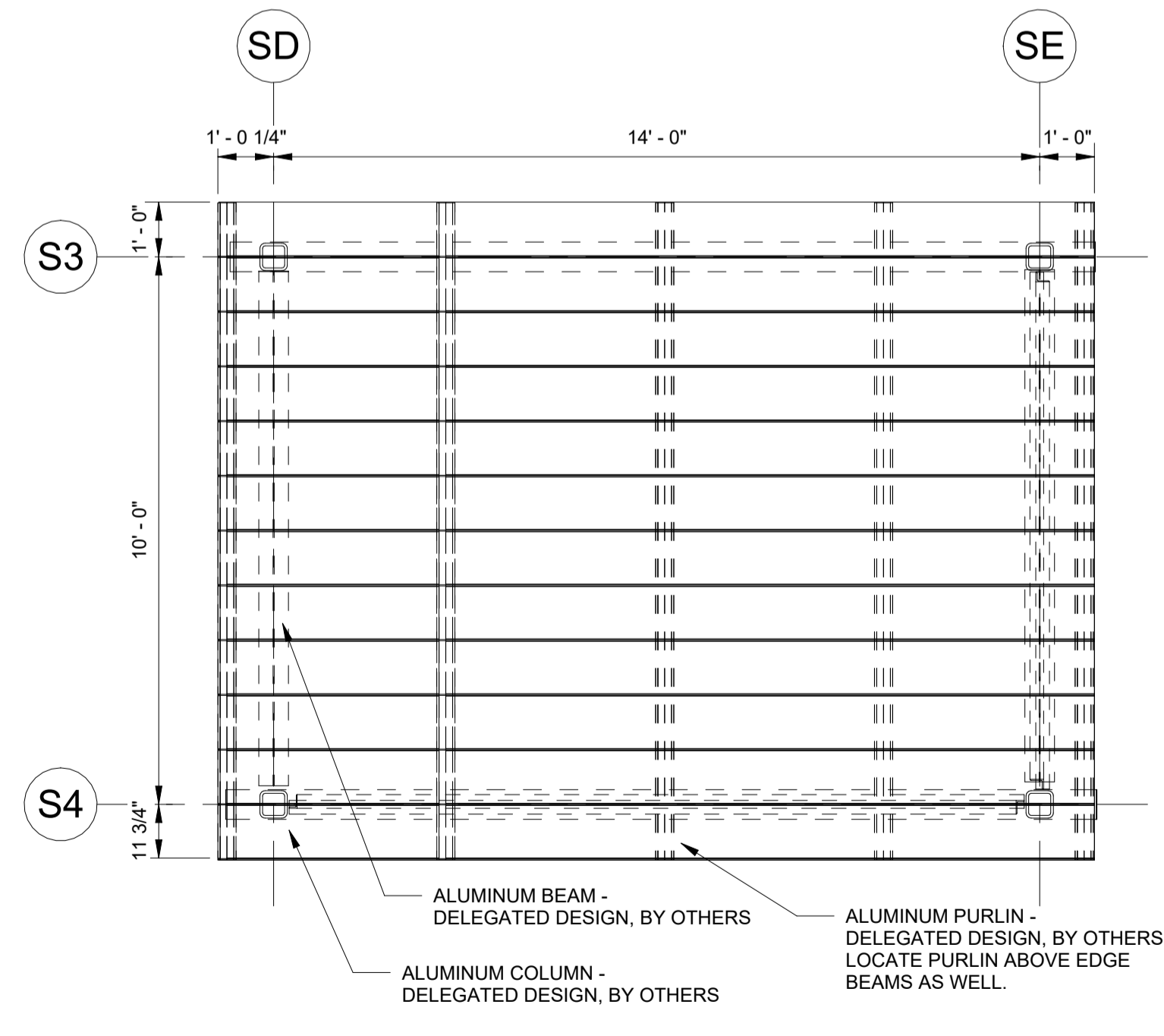
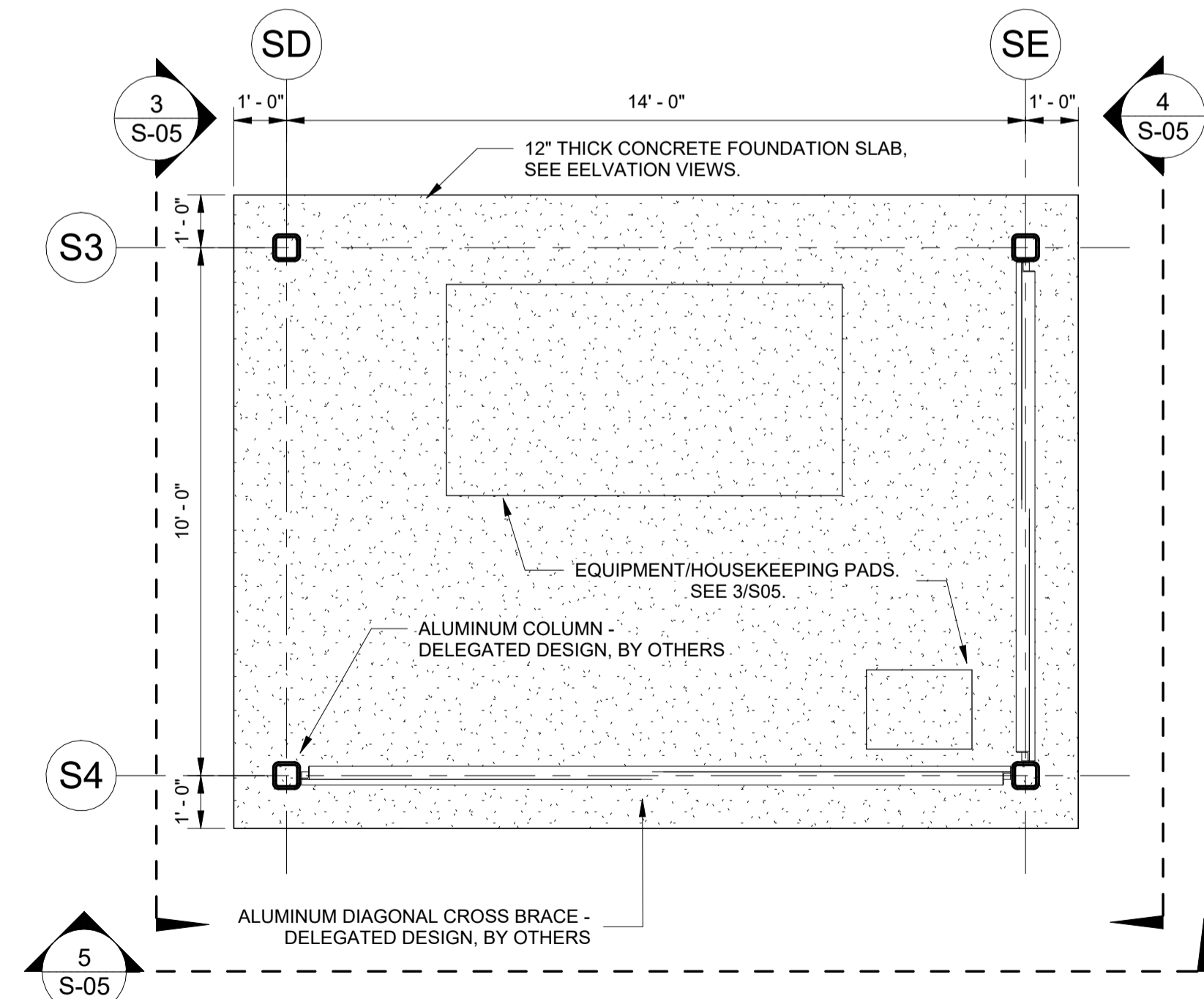
CR 501 WTP IMPROVEMENTS PREPARED FOR CITY OF WILDWOOD

FLORIDA CITY OF WILDWOOD



1 FOUNDATION PLAN - PROPOSED CHLORINATION SYSTEM
S-04 3/8" = 1'-0"

2 ROOF FRAMING PLAN - PROPOSED CHLORINATION SYSTEM
S-04 3/8" = 1'-0"



3 FOUNDATION PLAN - PROPOSED TWIN SPILL PALLET
S-04 3/8" = 1'-0"

4 ROOF FRAMING PLAN - PROPOSED TWIN SPILL PALLET
S-04 3/8" = 1'-0"

Autodesk Docs://142173320_CRS01_WTP/Seb and tank.rvt

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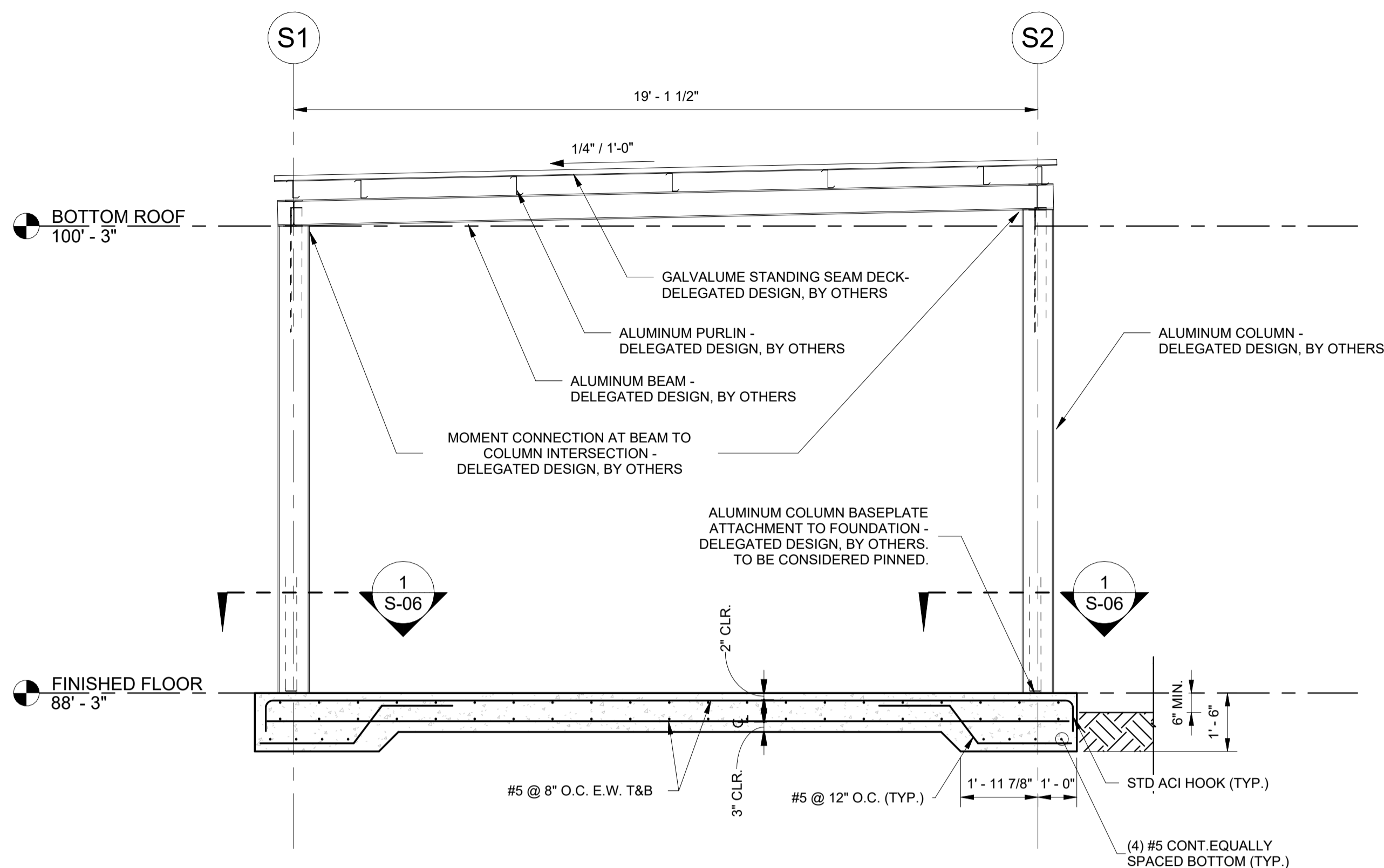
LICENSED PROFESSIONAL:	JAMES E. CLAYTON
FL LICENSE NUMBER:	90813
DATE:	----
KHA PROJECT:	142173320
DATE:	MAY 2024
SCALE AS SHOWN:	KHA
DESIGNED BY:	RDC
DRAWN BY:	JEC
CHECKED BY:	JEC

STRUCTURAL PLANS

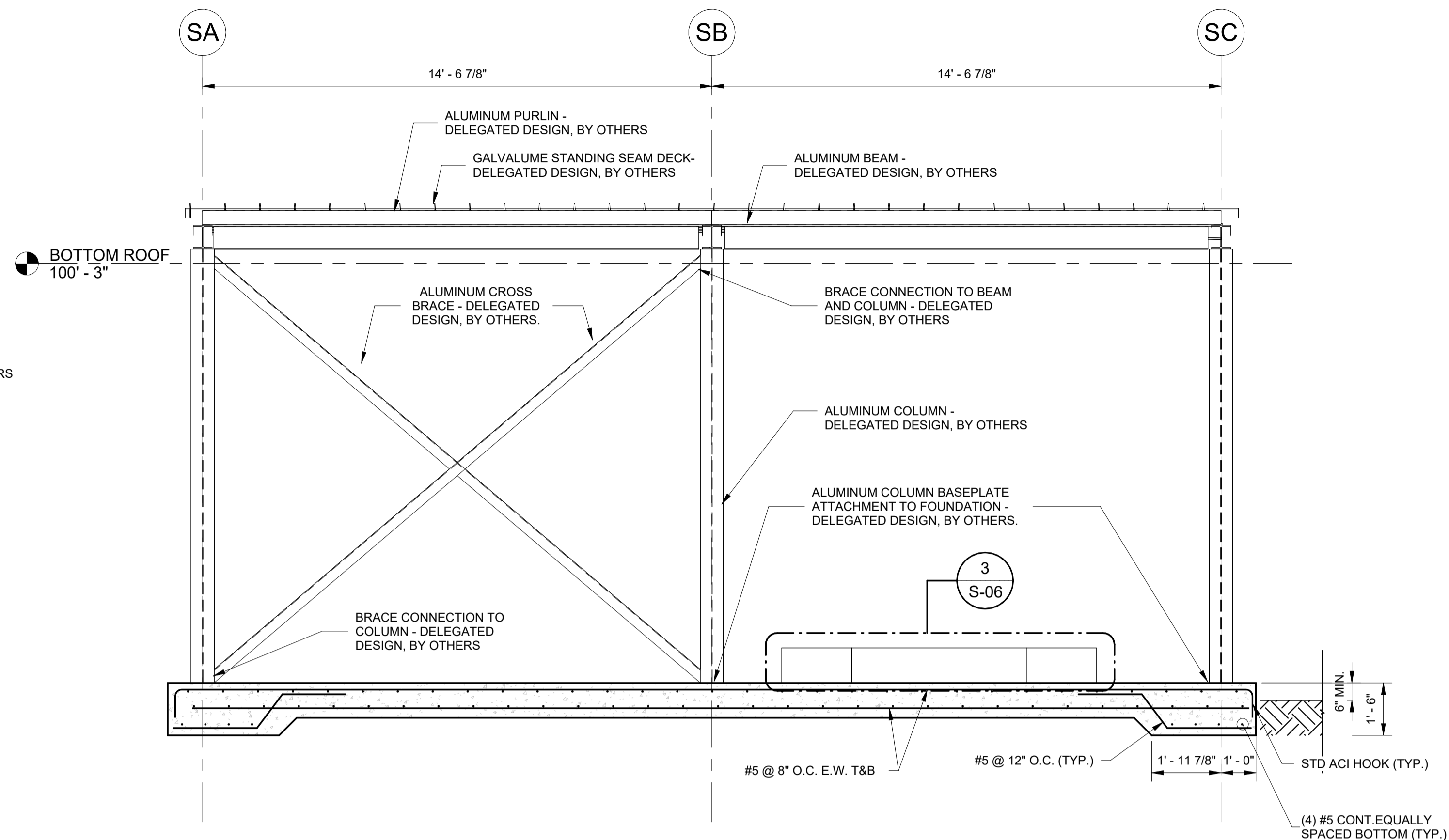
CR 501 WTP IMPROVEMENTS
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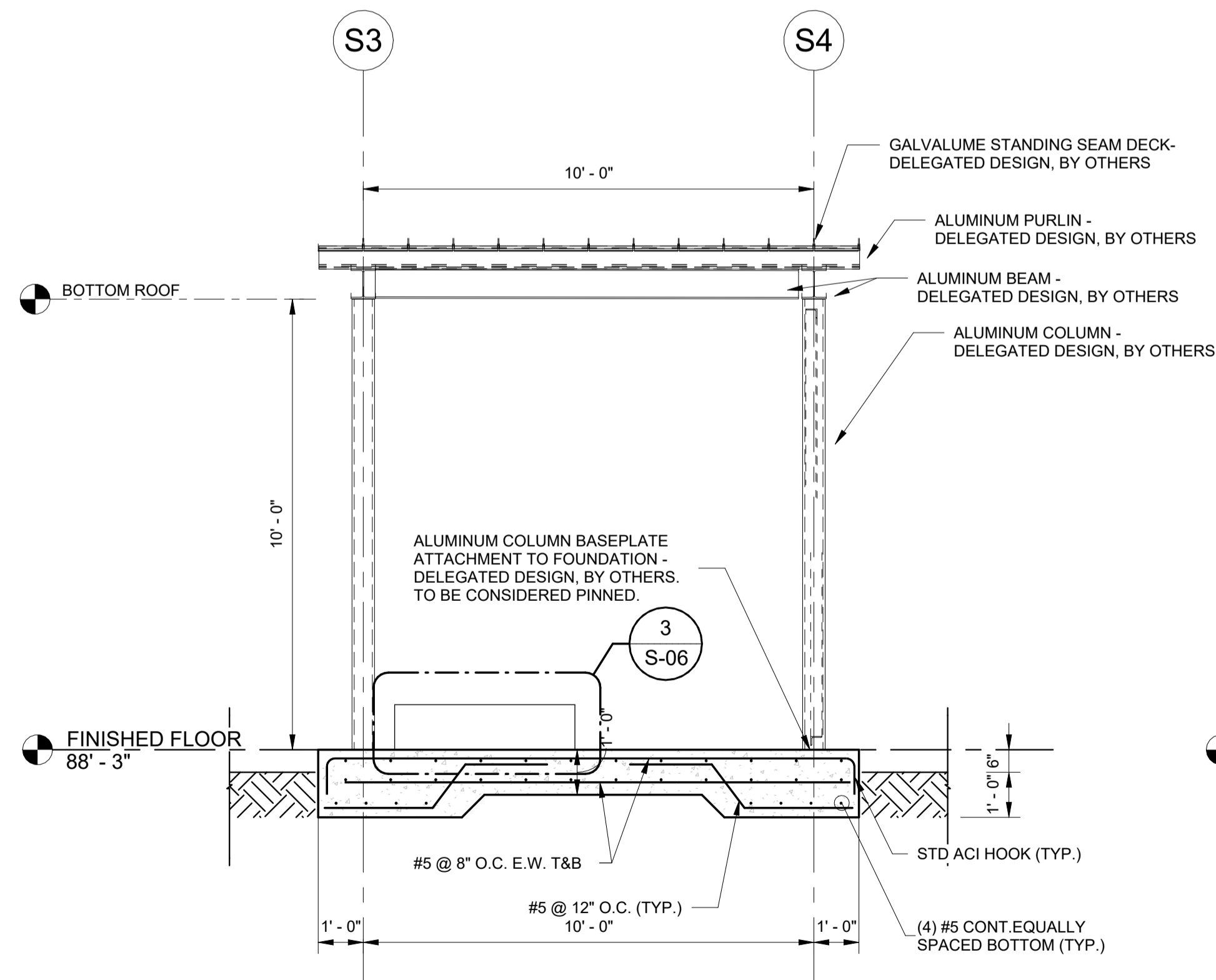
SHEET NUMBER
S-04



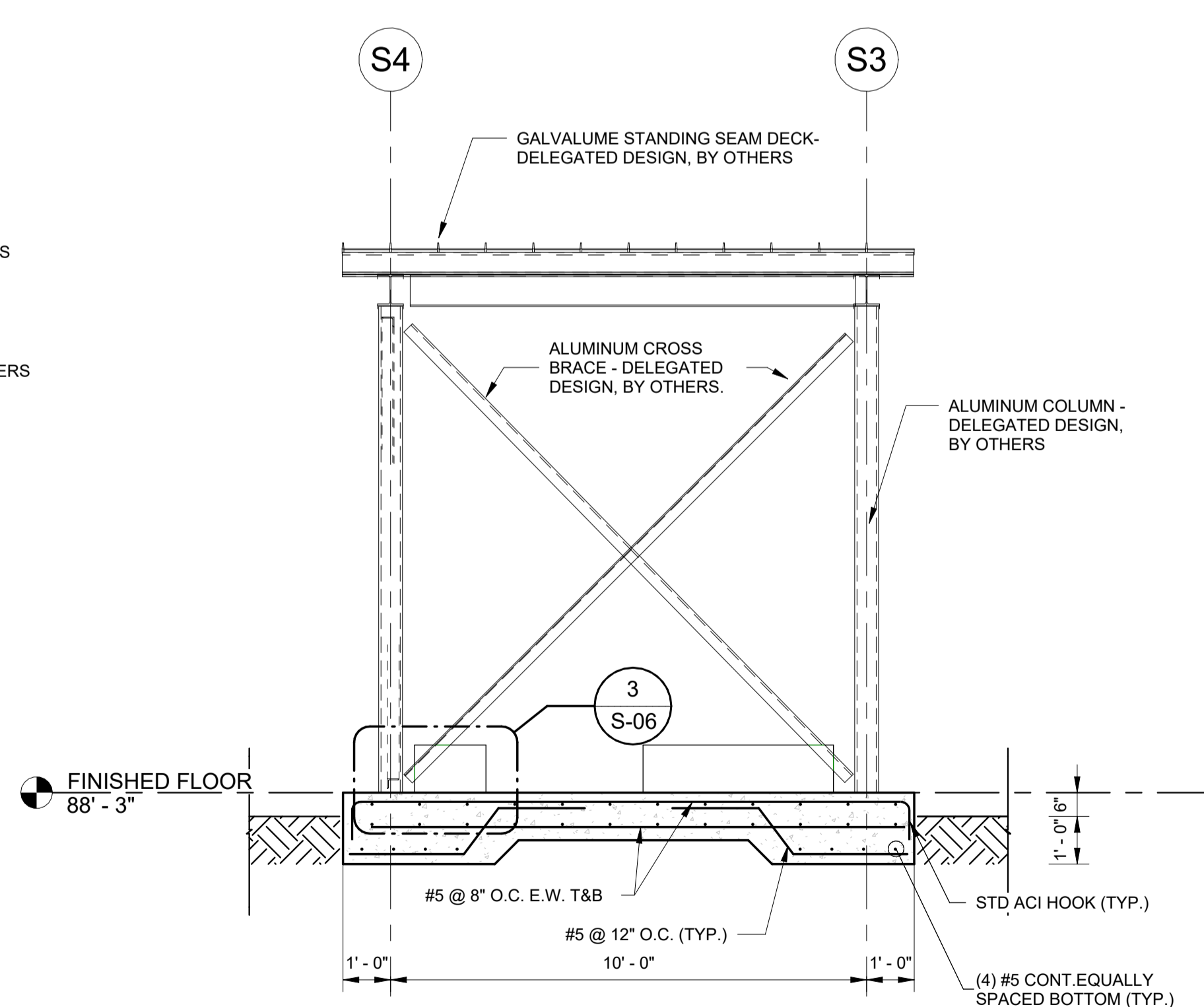
1 EAST-WEST ELEVATION VIEW
3/8" = 1'-0"



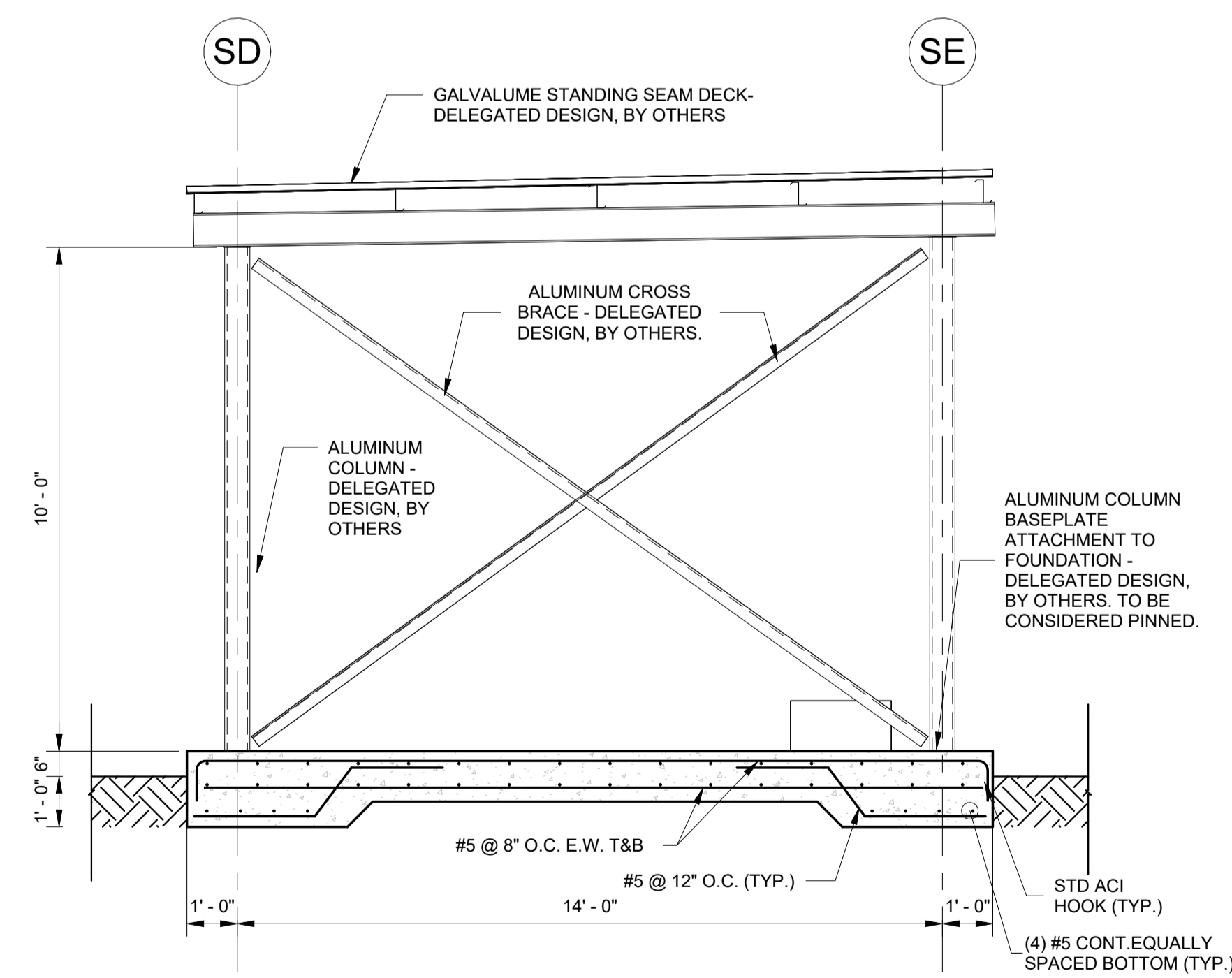
2 NORTH-SOUTH ELEVATION VIEW
3/8" = 1'-0"



3 WEST ELEVATION VIEW
3/8" = 1'-0"



4 EAST ELEVATION VIEW
3/8" = 1'-0"



5 SOUTH ELEVATION VIEW
3/8" = 1'-0"

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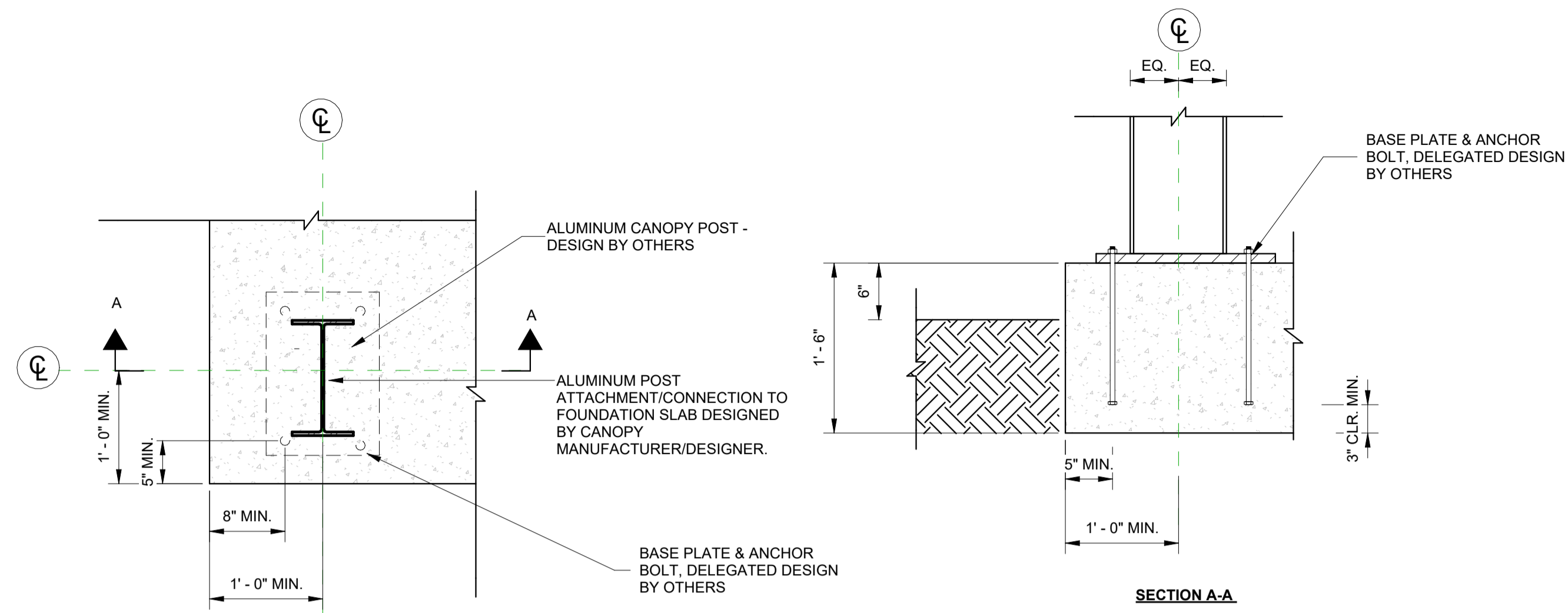
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 JAMES E. CLAYTON
 FL LICENSE NUMBER 90813
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STRUCTURAL ELEVATIONS

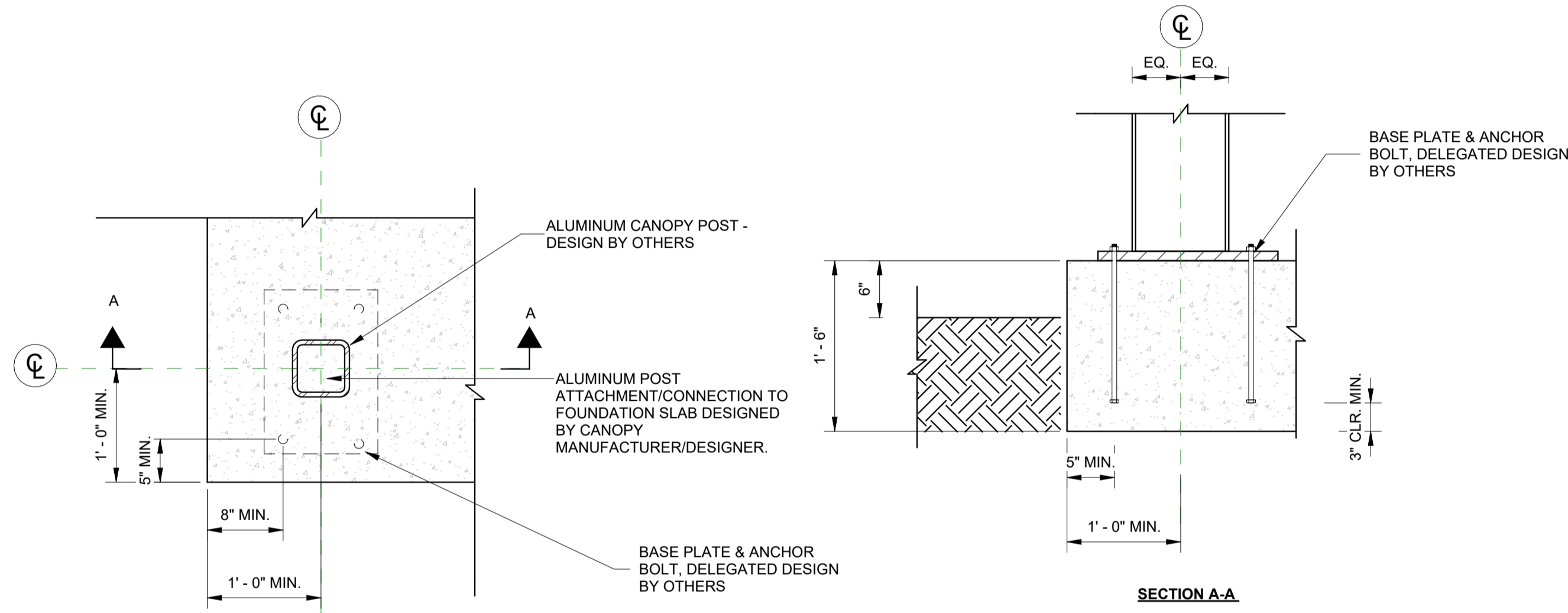
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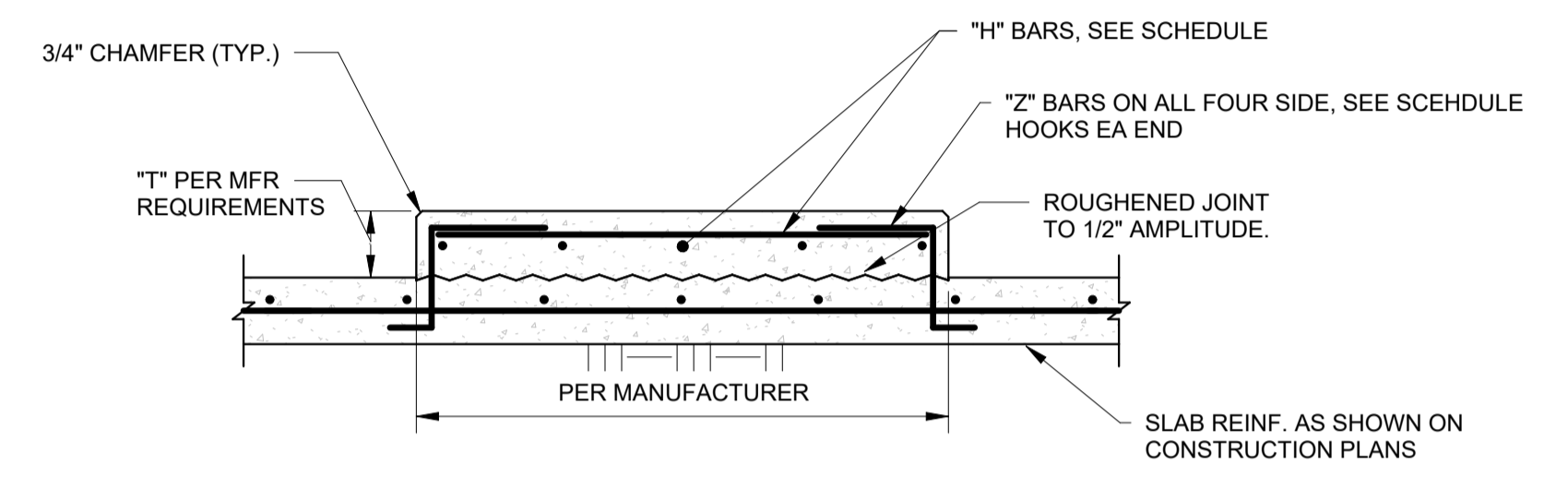
1 BASEPLATE EDGE DISTANCE DETAIL - W SHAPED COLUMN
S-06 1" = 1'-0"



2 BASEPLATE EDGE DISTANCE DETAIL - SQUARED TUBE COLUMN
S-06 1" = 1'-0"

EQUIPMENT/HOUSEKEEPING PAD SCHEDULE			
"T"	Z BARS	"H" BARS	SIDE BARS
8"	#3@6"O.C.	#3@6"O.C. CENTERED ON PAD	N/A
12"	#3@6"O.C.	#4@8"O.C. CENTERED ON PAD	N/A
24"	#4@6"O.C.	#4@9"O.C. TOP & BOTTOM	N/A
36"	#4@6"O.C.	#4@6"O.C. TOP & BOTTOM	(2)#4 EACH FACE
48"	#5@6"O.C.	#5@6"O.C. TOP & BOTTOM	#4@8"O.C. EACH FACE
60"	#6@6"O.C.	#6@6"O.C. TOP & BOTTOM	#4@8"O.C. EACH FACE

* SLAB DIMENSIONS TO BE CONFIRMED BY CONTRACTOR AFTER SELECTION OF GENERATOR.



3 EQUIPMENT/HOUSEKEEPING PAD
S-06 3/4" = 1'-0"

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FL LICENSE NUMBER 90813
DATE: _____

KHA PROJECT 142173320
DATE MAY 2024
SCALE AS SHOWN
DESIGNED BY KHA
DRAWN BY RDC
CHECKED BY JEC

STRUCTURAL DETAILS

CR 501 WTP IMPROVEMENTS
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CITY OF WILDWOOD

SHEET NUMBER
S-06

BID SET

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ELECTRICAL SYMBOLS

SINGLE LINE DIAGRAMS	CONTROL WIRING DIAGRAMS	PLANS																																																																																																												
AMMETER VOLTMETER METER GENERATOR KILOWATT HOUR METER AMMETER SWITCH VOLTMETER SWITCH GROUND CONNECTION CURRENT TRANSFORMER POTENTIAL TRANSFORMER POWER TRANSFORMER CONTROL TRANSFORMER DRAW OUT TYPE EQUIPMENT DRAW OUT TYPE HIGH VOLTAGE MOTOR STARTER PLUG-IN TYPE EQUIPMENT CIRCUIT BREAKER DISCONNECT SWITCH, 3 POLE UNLESS OTHERWISE INDICATED OIL FUSE CUTOUTS FUSE TRANSFER SWITCH, AUTOMATIC MAGNETIC MOTOR STARTER. "1" INDICATES SIZE 1. RV INDICATES REDUCED VOLTAGE. 2S INDICATES 2 SPEED. R INDICATES REVERSING. MAGNETIC CONTACTOR ELECTRONIC OVER LOAD CONDUIT NUMBER E-###. SEE CONDUIT AND WIRING SCHEDULE FOR SIZES AND QUANTITIES OF CONDUIT AND WIRES. GROUND KIRK KEY INTERLOCKING OF EQUIPMENT PHASE FAILURE RELAY SURGE ARRESTER EXISTING MOTOR (# = HP) NEW MOTOR (# = ESTIMATED HP) FUTURE MOTOR (# = ESTIMATED HP) EYS SEAL	<table border="1"> <thead> <tr> <th>NORMALLY OPEN</th> <th>NORMALLY CLOSED</th> <th>DEVICE</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td>CONTACT</td> </tr> <tr> <td></td> <td></td> <td>LIMIT SWITCH</td> </tr> <tr> <td></td> <td></td> <td>LIMIT SWITCH HELD CLOSED</td> </tr> <tr> <td></td> <td></td> <td>LIMIT SWITCH HELD OPEN</td> </tr> <tr> <td></td> <td></td> <td>PRESSURE OR VACUUM SWITCH</td> </tr> <tr> <td></td> <td></td> <td>LIQUID LEVEL SWITCH</td> </tr> <tr> <td></td> <td></td> <td>TEMPERATURE ACTUATED SWITCH</td> </tr> <tr> <td></td> <td></td> <td>FLOW SWITCH (AIR, WATER, ETC.)</td> </tr> <tr> <td></td> <td></td> <td>PUSH BUTTON SINGLE CIRCUIT MOMENTARY CONTACT.</td> </tr> <tr> <td></td> <td></td> <td>PUSH BUTTON SINGLE CIRCUIT LOCK-OUT (LOCATED AT MOTOR UNLESS OTHERWISE NOTED)</td> </tr> <tr> <td></td> <td></td> <td>TIMED CONTACT. CONTACT ACTION RELAY ON ENERGIZATION.</td> </tr> <tr> <td></td> <td></td> <td>TIMED CONTACT. CONTACT ACTION RELAY ON DE-ENERGIZATION.</td> </tr> <tr> <td></td> <td></td> <td>ON-OFF SWITCH.</td> </tr> <tr> <td></td> <td></td> <td>EMERGENCY STOP PUSH BUTTON (MAINTAINED CONTACT)</td> </tr> <tr> <td></td> <td></td> <td>STOP -START PUSH-BUTTON STATION (MAINTAINED CONTACTS).</td> </tr> <tr> <td></td> <td></td> <td>HAND-OFF-AUTO SELECTOR SWITCH SEE NOTE 3. (THREE POSITION).</td> </tr> <tr> <td></td> <td></td> <td>TWO POSITION SELECTOR SWITCH SEE NOTE 3.</td> </tr> <tr> <td></td> <td></td> <td>PILOT LIGHT, Y=YELLOW, R=RED, A=AMBER, SEE NOTE 3. B=BLUE, W=WHITE, G=GREEN.</td> </tr> <tr> <td></td> <td></td> <td>BELL</td> </tr> <tr> <td></td> <td></td> <td>HORN OR SIREN</td> </tr> <tr> <td></td> <td></td> <td>CONTROL RELAY</td> </tr> <tr> <td></td> <td></td> <td>STARTER COIL.</td> </tr> <tr> <td></td> <td></td> <td>TIME DELAY RELAY. (0-30 SECONDS UNLESS OTHERWISE NOTED).</td> </tr> <tr> <td></td> <td></td> <td>MOTOR STARTER OVERLOAD RELAY CONTACTS</td> </tr> <tr> <td></td> <td></td> <td>CONTROL TRANSFORMER</td> </tr> <tr> <td></td> <td></td> <td>MANUAL MOTOR STARTER</td> </tr> <tr> <td></td> <td></td> <td>SOLENOID OPERATED CONTROL VALVE</td> </tr> <tr> <td></td> <td></td> <td>120 VOLT, 1 PHASE, MOTOR (UNLESS OTHERWISE NOTED)</td> </tr> <tr> <td></td> <td></td> <td>RUNNING TIME METER. (ELAPSED TIME METER)</td> </tr> <tr> <td></td> <td></td> <td>SPACE HEATERS. (LOCATED AT MOTOR UNLESS OTHERWISE NOTED).</td> </tr> <tr> <td></td> <td></td> <td>TERMINALS IN MOTOR CONTROL CENTER/MCP</td> </tr> <tr> <td></td> <td></td> <td>CONTACT OR DEVICE REMOTE FROM MOTOR CONTROL CENTER/MCP</td> </tr> <tr> <td></td> <td></td> <td>TERMINALS IN MOTOR CONTROL CENTER/MCP CONTACT IN MOTOR CONTROL CENTER FOR CONNECTION TO REMOTE DEVICE/MCP</td> </tr> <tr> <td></td> <td></td> <td>DEVICE SIGNAL OUTPUT</td> </tr> <tr> <td></td> <td></td> <td>DEVICE SIGNAL INPUT</td> </tr> </tbody> </table>	NORMALLY OPEN	NORMALLY CLOSED	DEVICE			CONTACT			LIMIT SWITCH			LIMIT SWITCH HELD CLOSED			LIMIT SWITCH HELD OPEN			PRESSURE OR VACUUM SWITCH			LIQUID LEVEL SWITCH			TEMPERATURE ACTUATED SWITCH			FLOW SWITCH (AIR, WATER, ETC.)			PUSH BUTTON SINGLE CIRCUIT MOMENTARY CONTACT.			PUSH BUTTON SINGLE CIRCUIT LOCK-OUT (LOCATED AT MOTOR UNLESS OTHERWISE NOTED)			TIMED CONTACT. CONTACT ACTION RELAY ON ENERGIZATION.			TIMED CONTACT. CONTACT ACTION RELAY ON DE-ENERGIZATION.			ON-OFF SWITCH.			EMERGENCY STOP PUSH BUTTON (MAINTAINED CONTACT)			STOP -START PUSH-BUTTON STATION (MAINTAINED CONTACTS).			HAND-OFF-AUTO SELECTOR SWITCH SEE NOTE 3. (THREE POSITION).			TWO POSITION SELECTOR SWITCH SEE NOTE 3.			PILOT LIGHT, Y=YELLOW, R=RED, A=AMBER, SEE NOTE 3. B=BLUE, W=WHITE, G=GREEN.			BELL			HORN OR SIREN			CONTROL RELAY			STARTER COIL.			TIME DELAY RELAY. (0-30 SECONDS UNLESS OTHERWISE NOTED).			MOTOR STARTER OVERLOAD RELAY CONTACTS			CONTROL TRANSFORMER			MANUAL MOTOR STARTER			SOLENOID OPERATED CONTROL VALVE			120 VOLT, 1 PHASE, MOTOR (UNLESS OTHERWISE NOTED)			RUNNING TIME METER. (ELAPSED TIME METER)			SPACE HEATERS. (LOCATED AT MOTOR UNLESS OTHERWISE NOTED).			TERMINALS IN MOTOR CONTROL CENTER/MCP			CONTACT OR DEVICE REMOTE FROM MOTOR CONTROL CENTER/MCP			TERMINALS IN MOTOR CONTROL CENTER/MCP CONTACT IN MOTOR CONTROL CENTER FOR CONNECTION TO REMOTE DEVICE/MCP			DEVICE SIGNAL OUTPUT			DEVICE SIGNAL INPUT	<p> CONDUIT RUN CONCEALED UNDER SLAB OR BELOW GRADE. (CONCEALED IN SLAB WHERE SO NOTED OR WHERE ALLOWED PER SPECIFICATIONS). CONDUIT RUN EXPOSED UNLESS OTHERWISE NOTED EXISTING CONDUIT RUN GROUND WIRE CONDUIT UP (OUT TOP OF EQUIPMENT) CONDUIT DOWN (OUT BOTTOM OF EQUIPMENT) CONDUIT STUBBED OUT AND CAPPED CEILING MOUNTED LIGHTING FIXTURE BRACKET MOUNTED LIGHTING FIXTURE FLOODLIGHT FLUORESCENT LIGHTING FIXTURE POLE MOUNTED LIGHT FIXTURE EXIT LIGHT LIGHTING FIXTURES CONNECTED TO EMERGENCY CIRCUITS LIGHTING FIXTURE TYPE A, 100 WATTS, WITH 1 LAMP. SEE LIGHTING FIXTURE SCHEDULE SINGLE POLE, SINGLE THROW TOGGLE SWITCH DOUBLE POLE, SINGLE THROW TOGGLE SWITCH THREE-WAY TOGGLE SWITCH FOUR-WAY TOGGLE SWITCH MANUAL MOTOR STARTER DUPLEX CONVENIENCE RECEPTACLE AT +12" OR AS NOTED SINGLE CONVENIENCE RECEPTACLE AT +12" OR AS NOTED SPECIAL PURPOSE RECEPTACLE AT +12" OR AS NOTED, RATING AS INDICATED JUNCTION BOX, SIZE AS REQUIRED BY CODE THERMOSTAT OUTLET AT +54" CLOCK OUTLET AT +7-6" OR AS NOTED TELEPHONE OUTLET AT +12" OR AS NOTED HORN CONTROL DEVICE PD = PRESSURE TRANSDUCER FS = FLOAT SWITCH L = LEVEL SWITCH V = CONTROL VALVE CONTROL STATION: PUSH-BUTTON STATION OR SELECTOR SWITCH. SEE CONTROL WIRING DIAGRAMS FOR REQUIREMENTS. GROUND WELL GROUND ROD EXOTHERMIC WELD DISCONNECT SWITCH. SEE SINGLE LINE DIAGRAM FOR SIZE. LIGHTING PANEL. SURFACE MOUNTED. ELECTRICAL GEAR (SWITCHBOARD, DISTRIBUTION PANEL MOTOR CONTROL CENTER, ETC.) EQUIPMENT BY OTHERS INDICATES TO REFER TO NOTE (1) ON DRAWING W.P. WEATHERPROOF. PROVIDE GASKETS AS REQUIRED C.O. CONDUIT ONLY PULL BOX (SIZE AS REQUIRED) OUTPUT TERMINAL INPUT TERMINAL PROPOSED TRANSFORMER YAGI DIRECTIONAL ANTENNA REMOVABLE BOLLARD POLE MOUNTED TRANSFORMER MOTORIZED VALVE </p>
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ELECTRICAL ABBREVIATIONS

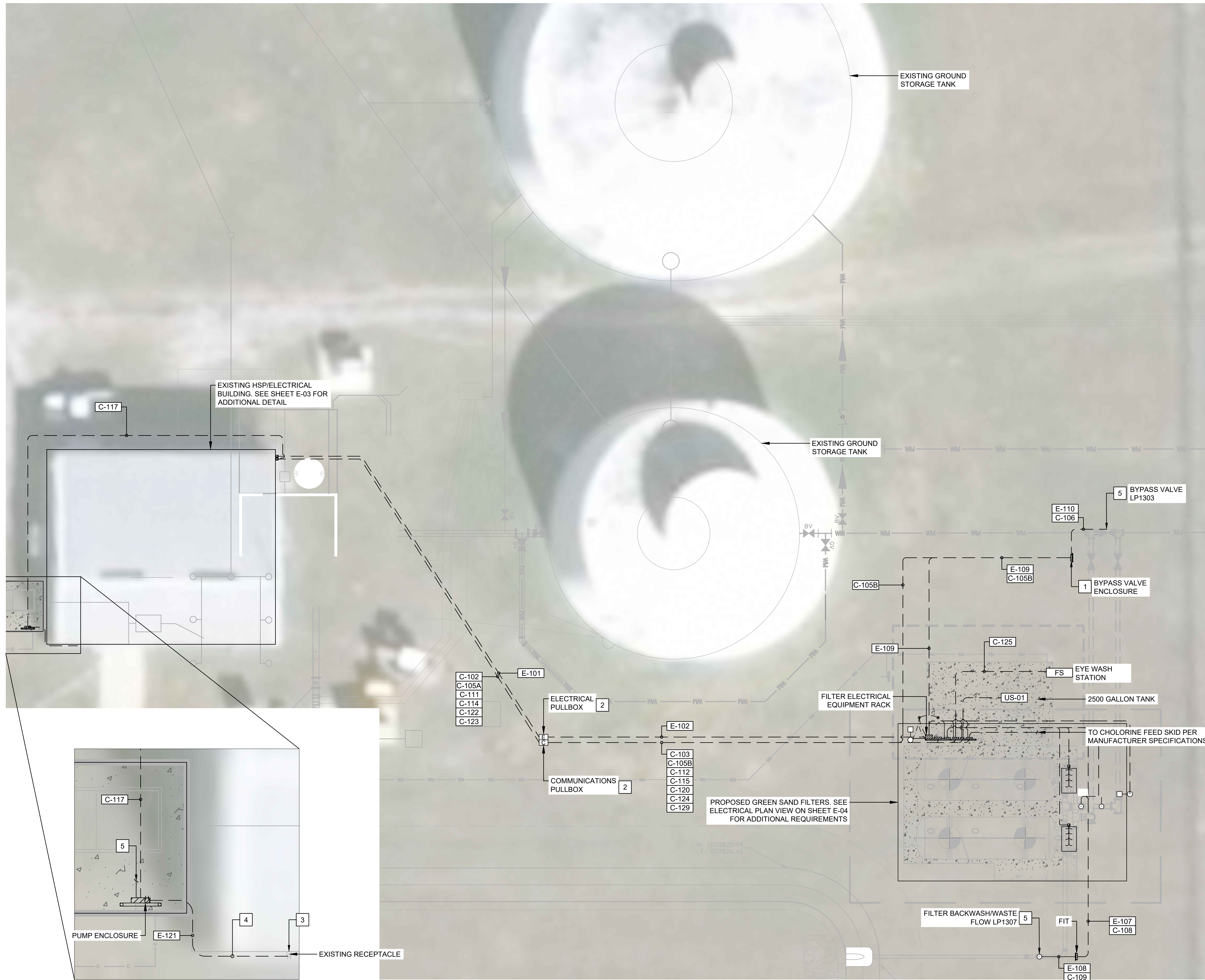
AG	ABOVE GROUND	HP	HORSE POWER	PLC	PROGRAMMABLE LOGIC CONTROLLER
AMP	AMPERE	HZ	HERTZ (CYCLES PER SECOND)	PNL	PANEL
AL	ALUMINUM	IC	INTERRUPTING CAPACITY	PR	PAIR
ATS	AUTOMATIC TRANSFER SWITCH	ID	INTERNAL DIAMETER	PVC	POLYVINYL CHLORIDE
AWG	AMERICAN WIRE GAUGE	KV	KILOVOLTS	REC	RECEPTACLE
BRK	BREAKER	LCL	LONG CONTINUOUS LOAD	RGS	RIGID GALVANIZED STEEL
CAT	CATALOG	LED	LIGHT EMITTING DIODE	RTU	REMOTE TERMINAL UNIT
CR	CARD READER	LTG	LIGHTING	SCE	SOUTHERN CALIFORNIA EDISON
CIRC.	MIL CIRCULAR MILS (AWG)	LS	LEVEL SWITCH	SCHED	SCHEDULE
C.O.	CONDUIT ONLY	MAX	MAXIMUM	SES	SERVICE ENTRANCE SECTION
CKT	CIRCUIT	MCC	MOTOR CONTROL CENTER	SPECS	SPECIFICATIONS
CP	CONTROL PANEL	MCP	MAIN CONTROL PANEL	SS	SOFT STARTER
DIA	DIAMETER	MCM	THOUSAND CIRCULAR MIL (AWG)	SSS	SOLID STATE STARTER
DS	DOOR SWITCH	MFR	MANUFACTURER	TEL	TELEPHONE
DWG	DRAWING	MIN	MINIMUM	TDR	TIME DELAY RELAY
EA	EACH	MIS	MISCELLANEOUS	TRX	TRANSITION
ELECT	ELECTRICAL	MOV	MOTOR OPERATED VALVE	TSP	TWISTED SHIELDED PAIR
ELEV	ELEVATION	MPZ	MINI POWER ZONE	TTB	TELEPHONE TERMINAL BACKBOARD
EXIST	EXISTING	MTG	MOUNTING	TYP	TYPICAL
FLA	FULL LOAD AMPS	MTS	MANUAL TRANSFER SWITCH	US	ULTRASONIC SENSOR
FUT	FUTURE	N.C.	NORMALLY CLOSED	UG	UNDER GROUND
FMNR	FULL VOLTAGE, NON-REVERSING	NEC	NATIONAL ELECTRICAL CODE	UCP	UNIT CONTROL PANEL
GFCI	GROUND FAULT CIRCUIT INTERRUPTER	N.O.	NORMALLY OPEN	V	VOLTS
GND	GROUND	NO.	NUMBER	VFD	VARIABLE FREQUENCY DRIVE
				WP	WEATHERPROOF
				XFMR	TRANSFORMER

GENERAL ELECTRICAL REQUIREMENTS

- THE COMPLETED INSTALLATION SHALL CONFORM TO ALL APPLICABLE FEDERAL, STATE AND LOCAL CODE ORDINANCES AND REGULATIONS. CONTRACTOR SHALL OBTAIN NECESSARY PERMITS AND INSPECTIONS REQUIRED BY THE AUTHORITIES HAVING JURISDICTION. ALL WORK SHALL BE DONE IN A NEAT, WORKMANLIKE, FINISHED AND SAFE MANNER, ACCORDING TO THE LATEST PUBLISHED N.E.C.A. STANDARDS OF INSTALLATION, UNDER COMPETENT SUPERVISION. INSTALL GROUNDING AS REQUIRED BY THE CODE(S).
- VISIT THE SITE PRIOR TO BIDDING TO BECOME FAMILIAR WITH EXISTING CONDITIONS AND ALL OTHER FACTORS WHICH MAY AFFECT THE EXECUTION OF THIS WORK. INCLUDE ALL RELATED COSTS IN THE INITIAL BID PROPOSAL.
- ALL MATERIALS SHALL BE NEW AND OF THE BEST QUALITY, MANUFACTURED IN ACCORDANCE WITH NEMA, ANSI, U.L. OR OTHER APPLICABLE STANDARDS. THE USE OF MANUFACTURER'S NAMES, MODELS, AND NUMBERS IS INTENDED TO ESTABLISH STYLE, QUALITY, APPEARANCE, USEFULNESS AND BID PRICE. PROPOSED SUBSTITUTIONS SHALL BE SUBMITTED IN WRITING AND REVIEWED BY THE ENGINEER BEFORE ORDERING.
- PROTECT ALL ELECTRICAL MATERIAL AND EQUIPMENT INSTALLED UNDER DIVISION 6 AGAINST DAMAGE BY OTHER TRADES, WEATHER CONDITIONS OR ANY OTHER CAUSES. EQUIPMENT FOUND DAMAGED OR IN OTHER THAN NEW CONDITION WILL BE REJECTED AS DEFECTIVE.
- LEAVE THE SITE CLEAN. REMOVE ALL DEBRIS, EMPTY CARTONS, TOOLS, CONDUIT, WIRE SCRAPS AND ALL MISCELLANEOUS SPARE EQUIPMENT AND MATERIALS USED IN THE WORK DURING CONSTRUCTION. ALL COMPONENTS SHALL BE FREE OF DUST, GRIT AND FOREIGN MATERIALS, LEFT AS NEW BEFORE FINAL ACCEPTANCE OF WORK.
- CIRCUIT CONDUCTORS #2 AWG OR SMALLER TO BE COPPER TYPE "XHHW" FOR BELOW GRADE INSTALLATION OR COPPER TYPE THHN/THWN FOR ABOVE GRADE INSTALLATIONS. #1 AWG OR LARGER SHALL BE COPPER TYPE "XHHW-2" STRANDED COPPER. MINIMUM CONDUCTOR SIZE TO BE #12 AWG WITH #12 GND.
- UNDERGROUND CONDUITS TO BE SCHEDULE 40 PVC. MINIMUM DEPTH 30", MINIMUM SIZE 1", UNLESS OTHERWISE SHOWN ON THE PLANS. CONDUITS AS SHOWN ARE FOR INFORMATION ONLY. EXACT CONDUIT ROUTING SHALL BE DETERMINED IN THE FIELD BY THE CONTRACTOR.
- OUTDOOR CONDUITS EXPOSED TO BE PVC COATED RGS. MINIMUM SIZE 3/4", UNLESS OTHERWISE NOTED ON THE PLANS. GRS CONDUIT SHALL EXTEND BELOW GRADE TO THE FIRST ELBOW. ALL GRS CONDUIT EXPOSED TO EARTH SHALL BE HALF LAPPED WRAPPED IN SCOTCHRAP 50 MIL TAPE OR EQUAL. EXTEND WRAP TO A HEIGHT OF 12" ABOVE GRADE. INDOOR CONDUITS SHALL BE IMC OR EMT UNLESS OTHERWISE SHOWN ON PLAN.
- ALL SAFETY SWITCHES AND OTHER DISTRIBUTION AND CONTROL ELECTRICAL EQUIPMENT SHALL BE U.L. LISTED AND RATED FOR HEAVY DUTY SERVICE.
- ALL ELECTRICAL EQUIPMENT, CONDUIT, WIRING, BOXES, ETC. SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO ORDERING. THE SUBMITTALS SHALL BE NEATLY GROUPED AND ORGANIZED. PERTINENT INFORMATION SHALL BE HIGHLIGHTED, AND THE SPECIFIC PRODUCT SHALL BE IDENTIFIED. ALL SUBMITTALS SHALL BE COMPLETE, AND PRESENTED IN ONE PACKAGE. THE SUBMITTAL SHALL INCLUDE A COMPLETE LIST OF THE EQUIPMENT AND MATERIALS, INCLUDING THE MANUFACTURER'S NAME, PRODUCT SPECIFICATION, DESCRIPTIVE DATA, TECHNICAL LITERATURE, PERFORMANCE CHARTS, CATALOG CUTS, INSTALLATION INSTRUCTIONS, AND SPARE PART RECOMMENDATIONS FOR EACH DIFFERENT ITEM OF THE EQUIPMENT SPECIFIED.
- IT IS THE OBLIGATION OF THE CONTRACTOR TO ORGANIZE HIS WORK, SO THAT A COMPLETE ELECTRICAL, INSTRUMENTATION, AND CONTROL SYSTEM FOR THE FACILITY WILL BE PROVIDED, AND WILL BE SUPPORTED BY ACCURATE SHOP AND RECORD DRAWINGS, AND O & M MANUALS.

		LICENSED PROFESSIONAL ERKAN GUNGOR FLORIDA LICENSE NUMBER 85201	
KHA PROJECT 14217320	DATE MAY 2024	SCALE AS SHOWN	DESIGNED BY KHA
ELECTRICAL COVER PAGE		DRAWN BY RDC	CHECKED BY PHS
CR 501 WTP IMPROVEMENTS PREPARED FOR CITY OF WILDWOOD		FLORIDA	
SHEET NUMBER E-01		REVISIONS No.	DATE BY

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ELECTRICAL NOTES

- 1 20A, 3P MAG ONLY CIRCUIT BREAKER RATED 65KAIL IN NEMA 3R 316 SS ENCLOSURE RACKMOUNTED. SEE SHEET E-06 FOR ADDITIONAL DETAIL.
- 2 PROVIDE 2' x 1' ELECTRICAL PULLBOX PER DETAIL D ON SHEET E-07.
- 3 CONTRACTOR SHALL TAP CONDUCTORS FROM EXISTING RECEPTACLE AND EXTEND POWER TO NEW RECEPTACLE IN STRUT-MOUNTED ENCLOSURE FOR THE POLYPHOSPHATE PUMP. LABEL BREAKER FEEDING THE RECEPTACLE "POLYPHOSPHATE PUMP ENCLOSURE"
- 4 INSTALL (1) 1" SCHED 40 PVC CONDUIT WITH (2) #12 AWG AND (1) #12 GND WIRE FROM EXISTING RECEPTACLE TO STRUT RECEPTACLE.
- 5 PROVIDE EQUIPMENT AND INSTALL PER MANUFACTURER'S INSTRUCTIONS. CONTRACTOR TO STUB POWER FEEDER CONDUIT INTO PANEL AND MAKE FINAL CONNECTION FOR POWER. CONTRACTOR TO COMPLETE NECESSARY COMMUNICATION AND CONTROL TERMINATIONS FROM IN FIELD EQUIPMENT TO PANEL AS NECESSARY FOR A COMPLETE WORKING SYSTEM.

No.	REVISIONS	DATE	BY

Kimley-Horn

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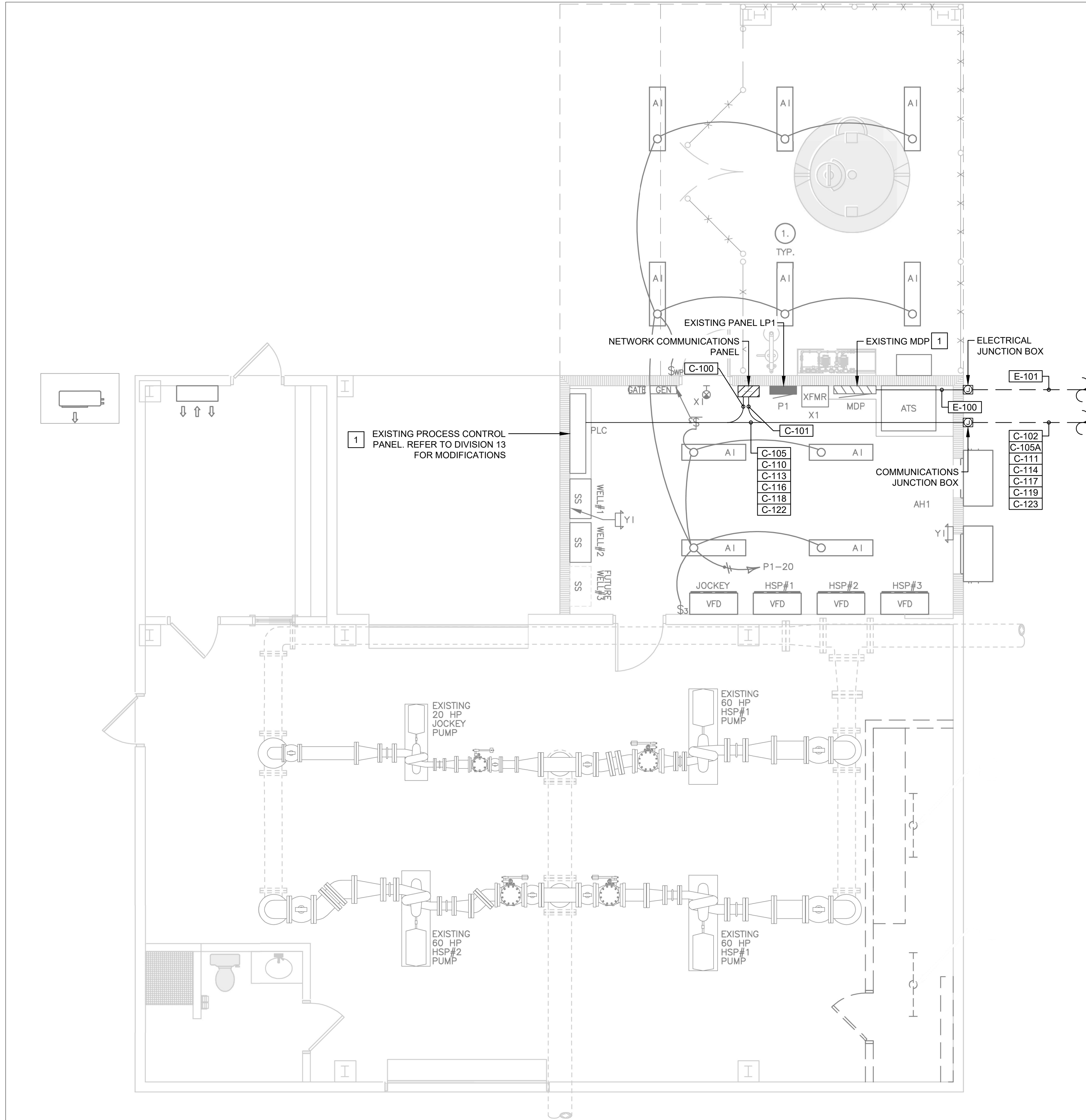
KHA PROJECT	142175320
DATE	MAY 2024
SCALE	AS SHOWN
DESIGNED BY	KHA
DRAWN BY	RDC
CHECKED BY	PHS
DATE	

OVERALL SITE PLAN

CR 501 WTP IMPROVEMENTS PREPARED FOR CITY OF WILDWOOD FLORIDA

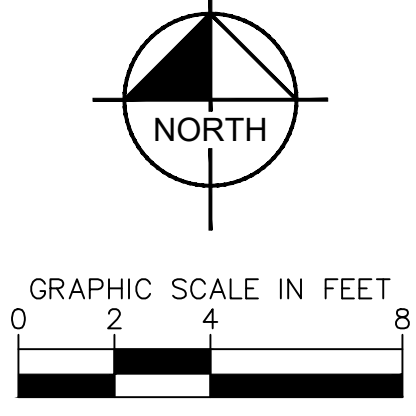
SHEET NUMBER **E-02**

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1 EXISTING PROCESS CONTROL PANEL. REFER TO DIVISION 13 FOR MODIFICATIONS

ELECTRICAL NOTES
 1 SEE SINGLE LINE AND RISER DIAGRAMS ON SHEET E-05 FOR EQUIPMENT INTERCONNECTIONS



TO ELECTRICAL PULLBOX, SEE SHEET E-02 FOR CONTINUATION
 TO COMMUNICATIONS PULLBOX, SEE SHEET E-02 FOR CONTINUATION

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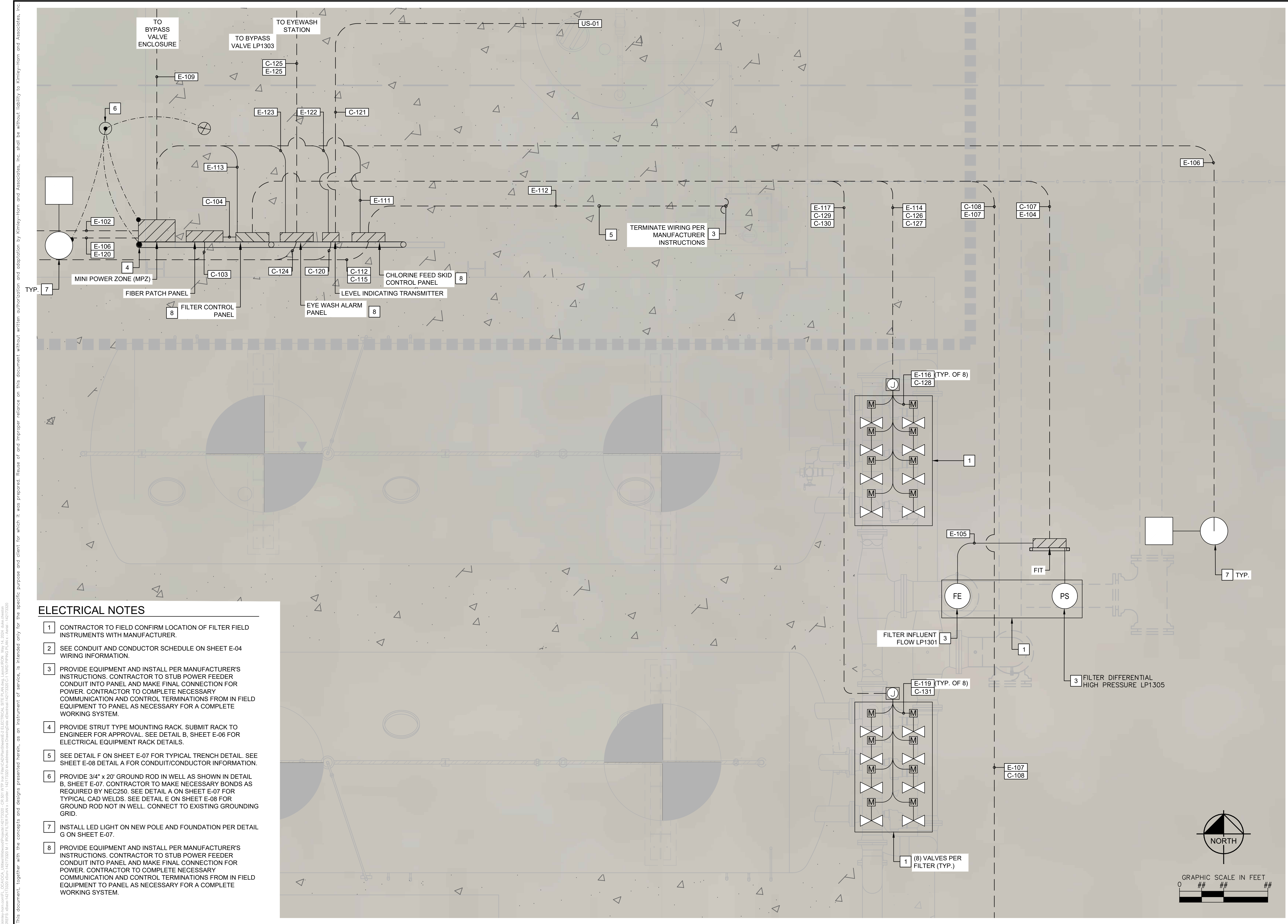
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DATE	MAY 2024
SCALE	AS SHOWN
DESIGNED BY	KHA
DRAWN BY	RDC
CHECKED BY	PHS
LICENSED PROFESSIONAL	ERKAN GUNGOR
FLORIDA LICENSE NUMBER	85201

ELECTRICAL ROOM

CR 501 WTP IMPROVEMENTS
 PREPARED FOR
CITY OF WILDWOOD
 FLORIDA

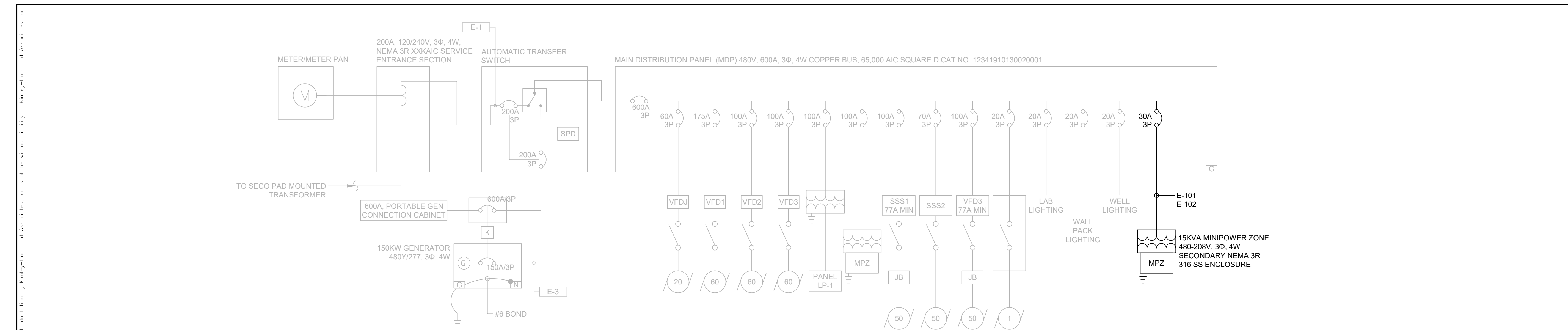
SHEET NUMBER
E-03



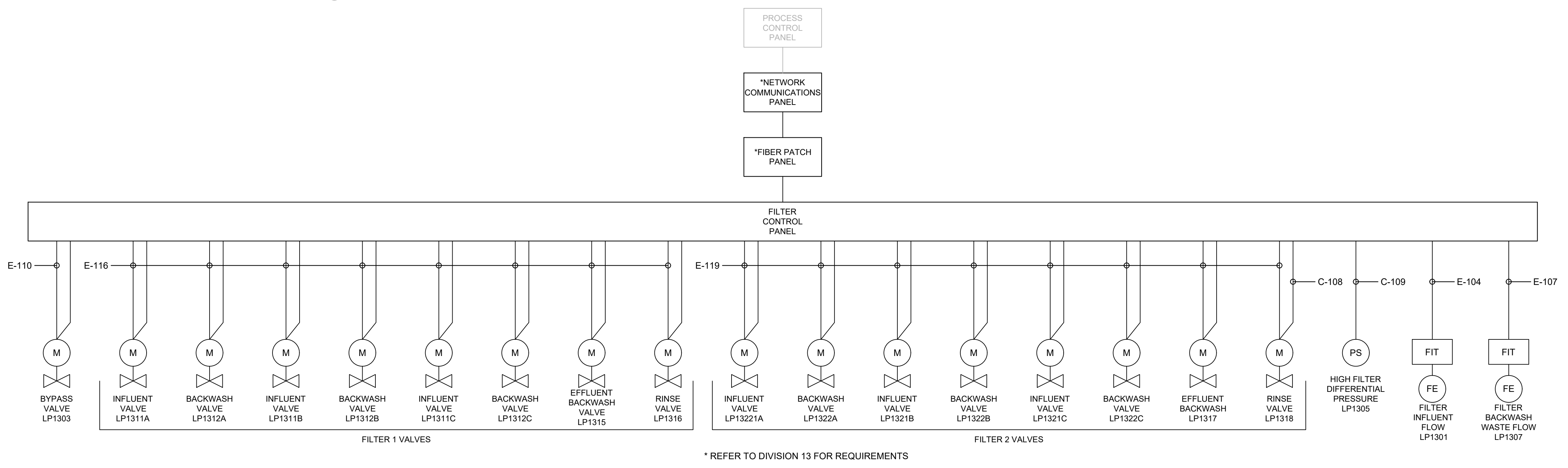
- ELECTRICAL NOTES**
- CONTRACTOR TO FIELD CONFIRM LOCATION OF FILTER FIELD INSTRUMENTS WITH MANUFACTURER.
 - SEE CONDUIT AND CONDUCTOR SCHEDULE ON SHEET E-04 WIRING INFORMATION.
 - PROVIDE EQUIPMENT AND INSTALL PER MANUFACTURER'S INSTRUCTIONS. CONTRACTOR TO STUB POWER FEEDER CONDUIT INTO PANEL AND MAKE FINAL CONNECTION FOR POWER. CONTRACTOR TO COMPLETE NECESSARY COMMUNICATION AND CONTROL TERMINATIONS FROM IN FIELD EQUIPMENT TO PANEL AS NECESSARY FOR A COMPLETE WORKING SYSTEM.
 - PROVIDE STRUT TYPE MOUNTING RACK. SUBMIT RACK TO ENGINEER FOR APPROVAL. SEE DETAIL B, SHEET E-06 FOR ELECTRICAL EQUIPMENT RACK DETAILS.
 - SEE DETAIL F ON SHEET E-07 FOR TYPICAL TRENCH DETAIL. SEE SHEET E-08 DETAIL A FOR CONDUIT/CONDUCTOR INFORMATION.
 - PROVIDE 3/4" x 20' GROUND ROD IN WELL AS SHOWN IN DETAIL B, SHEET E-07. CONTRACTOR TO MAKE NECESSARY BONDS AS REQUIRED BY NEC250. SEE DETAIL A ON SHEET E-07 FOR TYPICAL CAD WELDS. SEE DETAIL E ON SHEET E-08 FOR GROUND ROD NOT IN WELL. CONNECT TO EXISTING GROUNDING GRID.
 - INSTALL LED LIGHT ON NEW POLE AND FOUNDATION PER DETAIL G ON SHEET E-07.
 - PROVIDE EQUIPMENT AND INSTALL PER MANUFACTURER'S INSTRUCTIONS. CONTRACTOR TO STUB POWER FEEDER CONDUIT INTO PANEL AND MAKE FINAL CONNECTION FOR POWER. CONTRACTOR TO COMPLETE NECESSARY COMMUNICATION AND CONTROL TERMINATIONS FROM IN FIELD EQUIPMENT TO PANEL AS NECESSARY FOR A COMPLETE WORKING SYSTEM.

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 DATE MAY 2024
 SCALE AS SHOWN
 DESIGNED BY KHA
 DRAWN BY RDC
 CHECKED BY PHS
 DATE

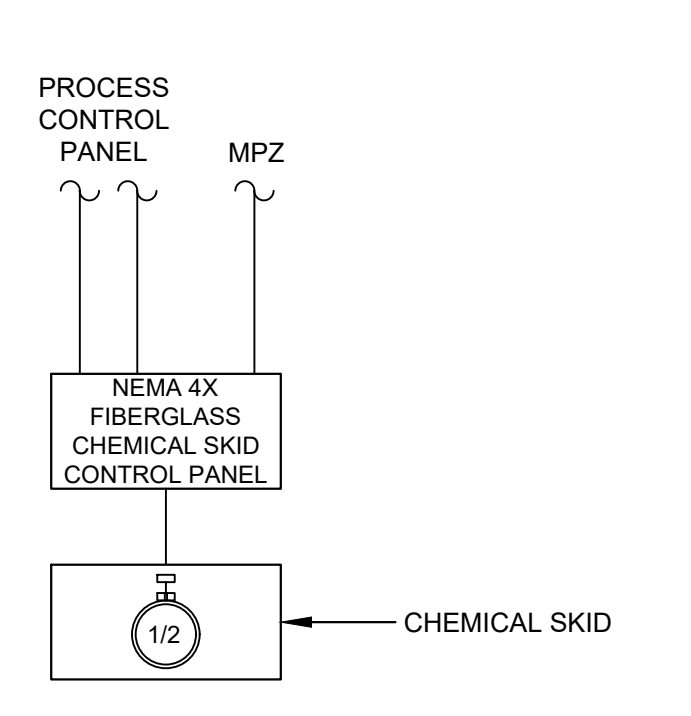
KHA PROJECT 142175320		LICENSED PROFESSIONAL ERKAN GUNGOR		© 2024 KIMLEY-HORN AND ASSOCIATES, INC. 1700 SE 17TH STREET, SUITE 200, OCALA, FLORIDA 34471 WWW.KIMLEY-HORN.COM REGISTRY NO. 35106	
DATE MAY 2024	SCALE AS SHOWN	DESIGNED BY KHA	DRAWN BY RDC	FLORIDA LICENSE NUMBER 85201	REVISIONS
IRON FILTER ELECTRICAL			CR 501 WTP IMPROVEMENTS PREPARED FOR CITY OF WILDWOOD FLORIDA		
SHEET NUMBER E-04			DATE		



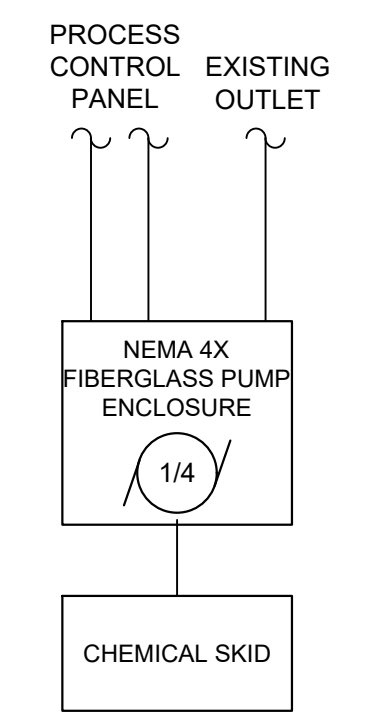
A SINGLE LINE DIAGRAM



B RISER DIAGRAM



C SODIUM HYPOCHLORITE SYSTEM



D CORROSION-INHIBITOR SYSTEM

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SINGLE LINE DIAGRAM							
CR 501 WTP IMPROVEMENTS PREPARED FOR CITY OF WILDWOOD FLORIDA							
SHEET NUMBER F-05							

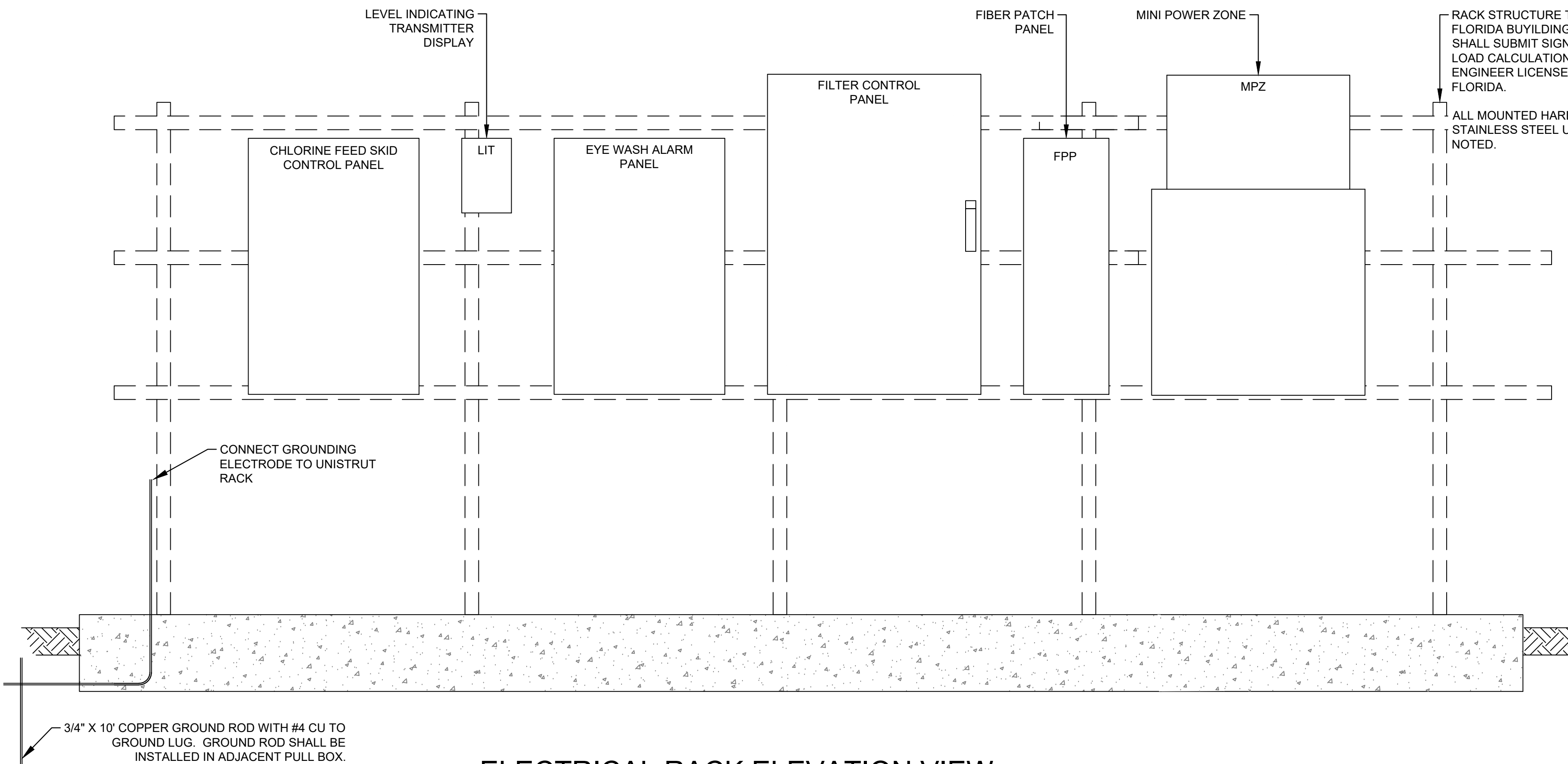
LOAD CALCULATION	
LOAD DESCRIPTION	
LOADS (GRAY MARKS EXISTING, BLACK MARKS PROPOSED)	
*JOCKEY PUMP (20HP)	21.0 AMPS
*HIGH SERVICE PUMP (3X80HP)	231.0 AMPS
PANEL LP-1	36.0 AMPS
MINI-POWER ZONE	6 AMPS
*WELL PUMP	34 AMPS
*WELL PUMP	130 AMPS
*EXHAUST FAN	2.1 AMPS
LAB LIGHTING	14 AMPS
WALL PACK LIGHTING	14 AMPS
WELL LIGHTING	14 AMPS
MPZ	18 AMPS
25% (PER NEC)	19.3 AMPS
TOTAL LOAD (@480V, 3 PHASE)	539.4 AMPS
TOTAL KVA	448 KVA
SERVICE SIZE	600 AMPS
PERCENT LOADED	90 %

A LOAD SUMMARY

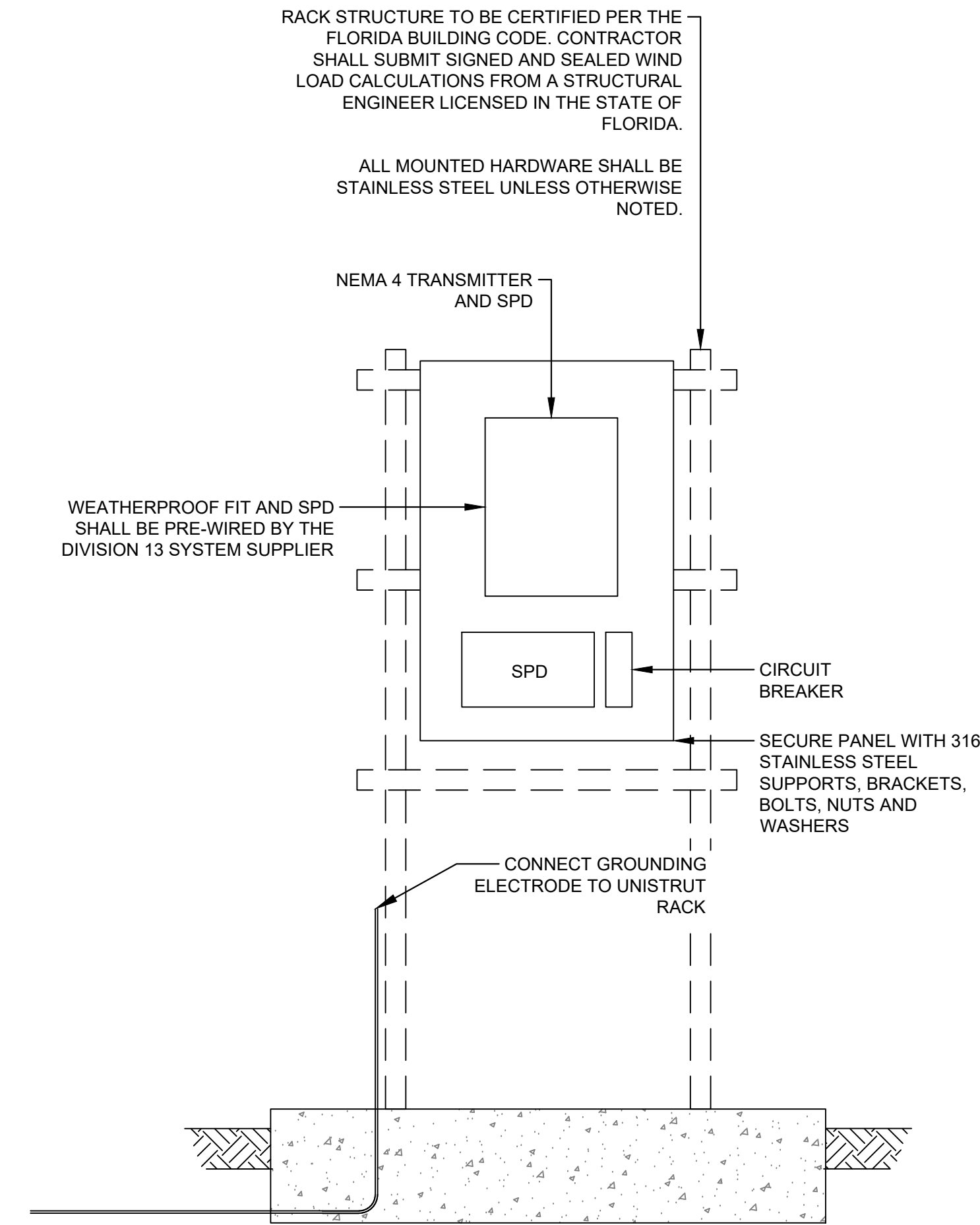
PANEL: "MPZ"										
VOLTAGE: 120/208			PANEL BUS: 60 AMPS							
PHASE WIRES: 3Ø, 4W			MAIN: 60 BREAKER							
SCCR (AMPS): 22,000			SOURCE: MDP							
DESCRIPTION	VA	CB	CKT	A	B	C	CKT	CB	VA	DESCRIPTION
CHEMICAL FEED CONTROL PANEL	500.0	20/1	1	4			2			SPD
LIGHTING	250.0	20/1	3		2		4			
LTG POLE RCPT.	180.0	20/1	5			2	6			
BYPASS VALVE ENCLOSURE	300	20/1	7	33			8	40/1	3600.0	FILTER CONTROL PANEL
SPACE			9		0		10			SPACE
SPACE			11			2	12			SPACE
SPACE			13	3			14			SPACE
SPACE			15		0		16			SPACE
SPACE			17			0	18			SPACE
SPACE			19	0			20			SPACE
SPACE			21				22			SPACE
SPACE			23			0	24			SPACE
TOTALS				39.2	2.1	3.6	AMPS			

LOAD CALCULATIONS: SUBTOTAL (VA): 4830
+25% PER NEC (VA): 1208
TOTAL (VA): 6038 @ 208V, 3Ø = 16.8 AMPS

B PANEL SCHEDULE



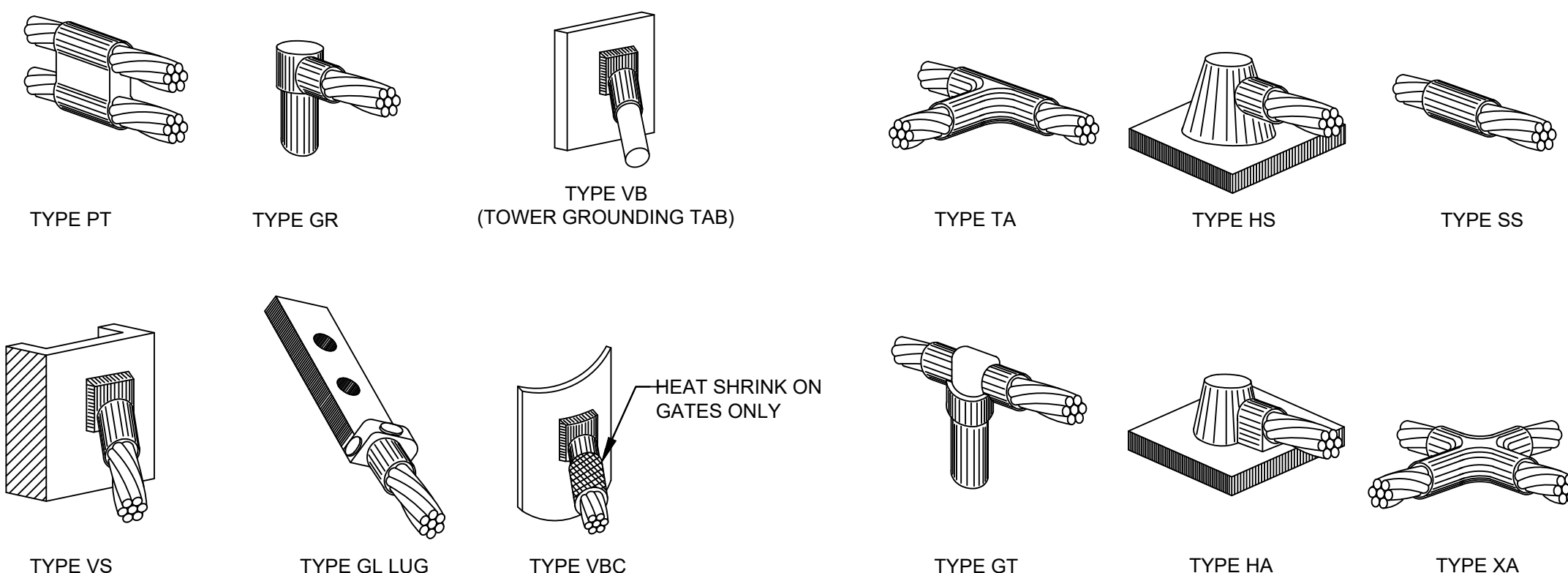
B ELECTRICAL RACK ELEVATION VIEW
N.T.S.



B TRANSMITTER MOUNTING DETAIL
N.T.S.

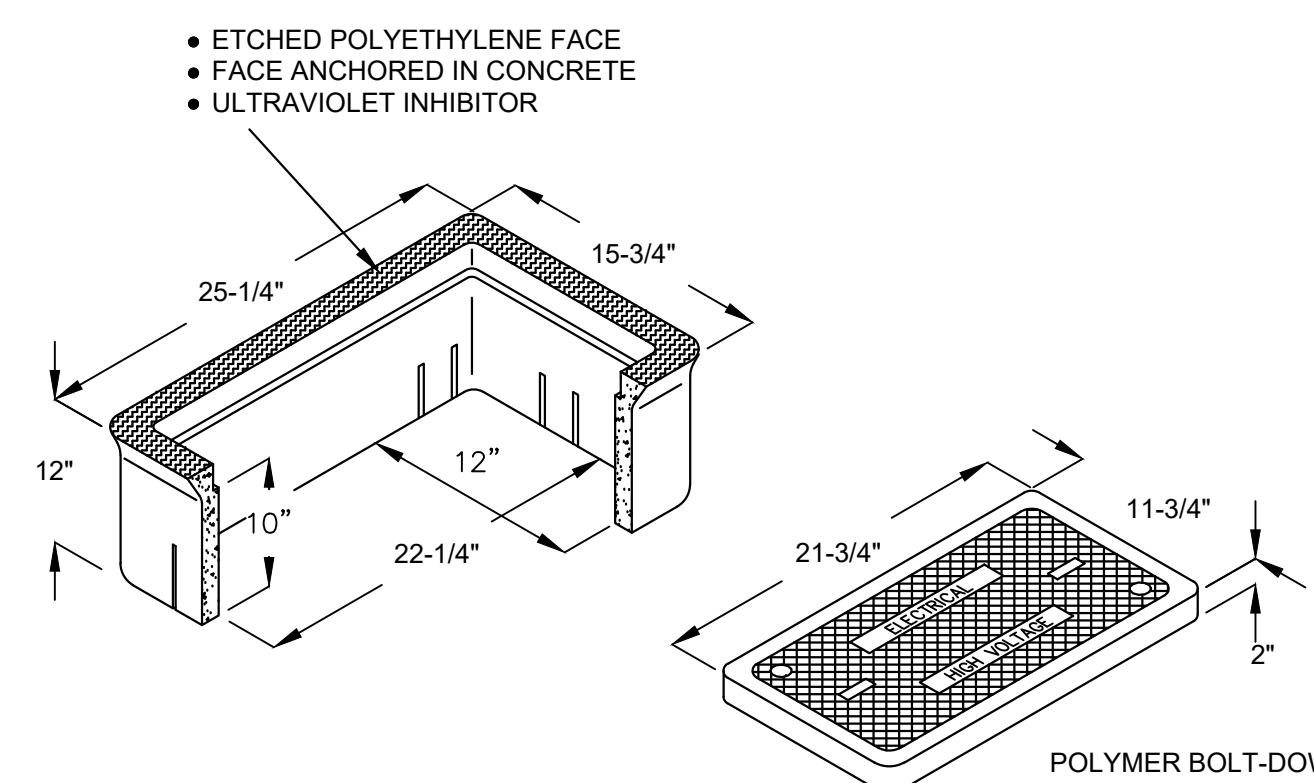
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LICENSED PROFESSIONAL ERKAN GUNGOR FLORIDA LICENSE NUMBER 85201		KHA PROJECT 142175320 DATE MAY 2024 SCALE AS SHOWN DESIGNED BY KHA DRAWN BY RDC CHECKED BY PHS DATE	
ELECTRICAL SCHEDULES		CR 501 WTP IMPROVEMENTS PREPARED FOR CITY OF WILDWOOD FLORIDA	
SHEET NUMBER F-06		REVISIONS No. DATE BY	

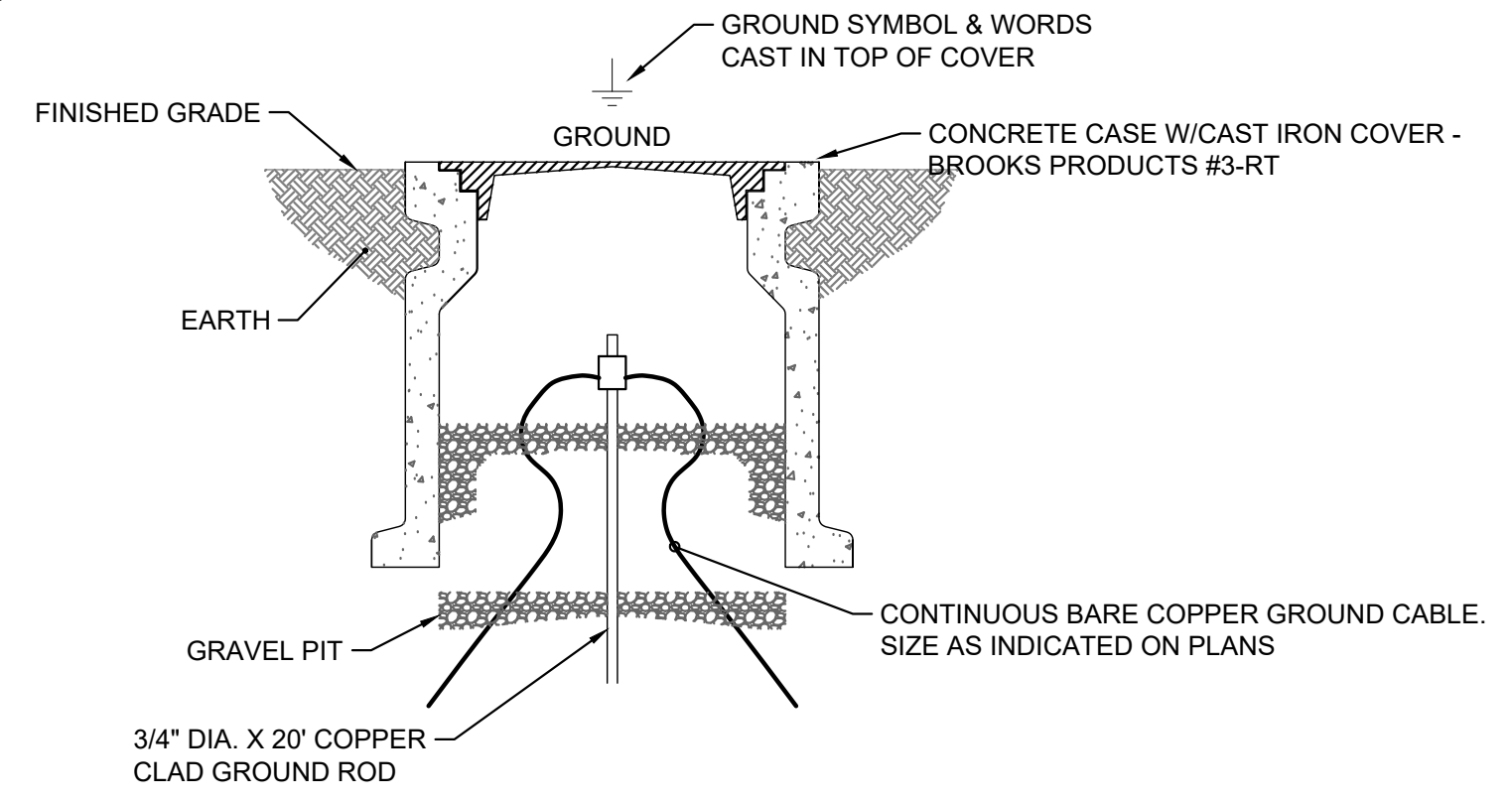


NOTES:
1. CADWELD "TYPES" SHOWN ABOVE ARE EXAMPLES. PROVIDE APPROPRIATE TYPES AS REQUIRED.

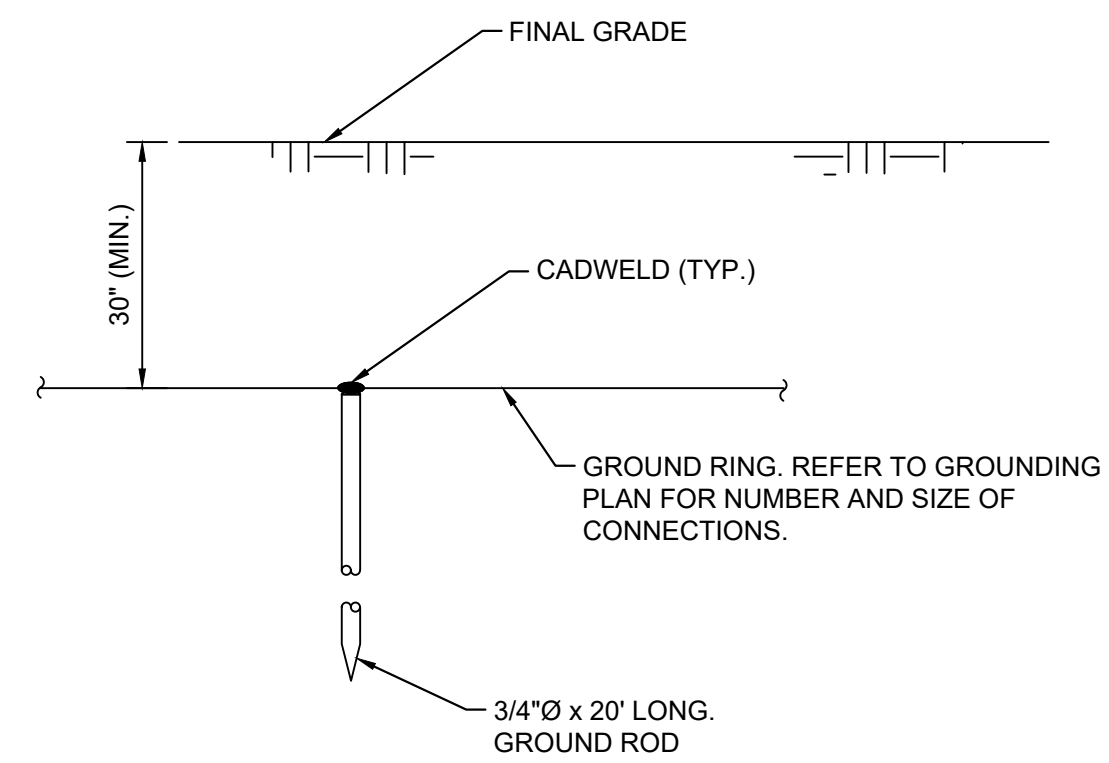
A TYPICAL CAD WELDS
N.T.S.



D PULLBOX DETAIL
N.T.S.

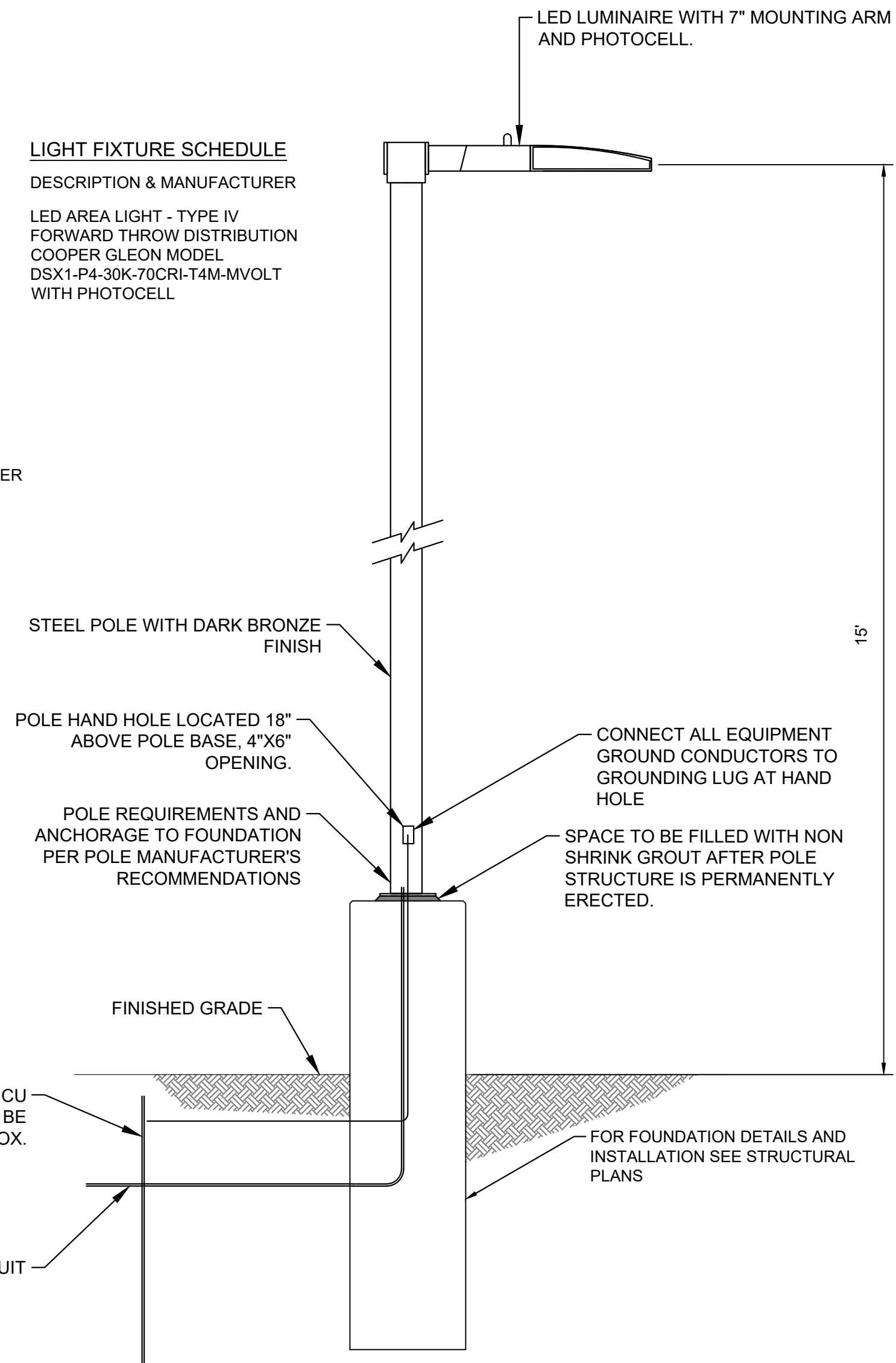


B GROUNDING ROD AND WELL DETAIL
N.T.S.

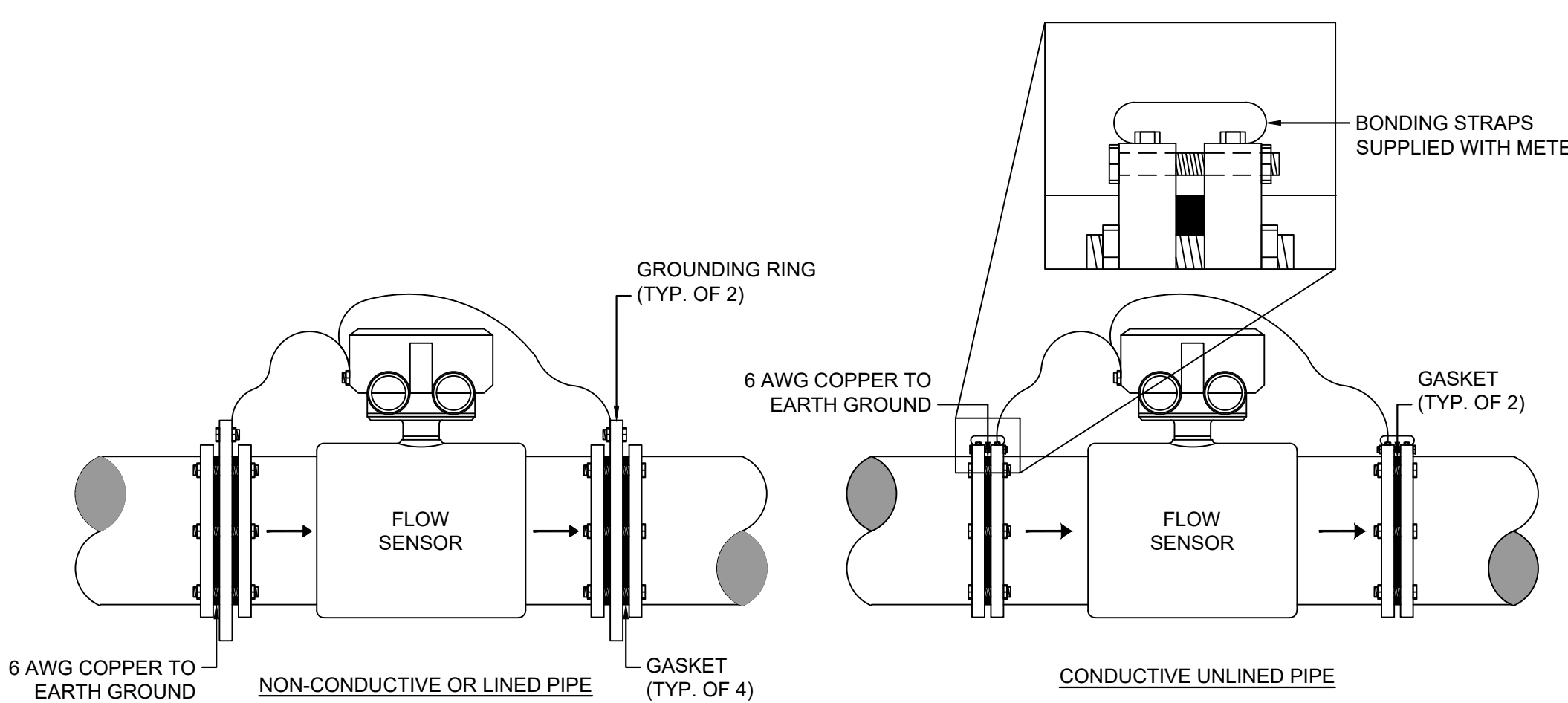


E GROUND ROD DETAIL
N.T.S.

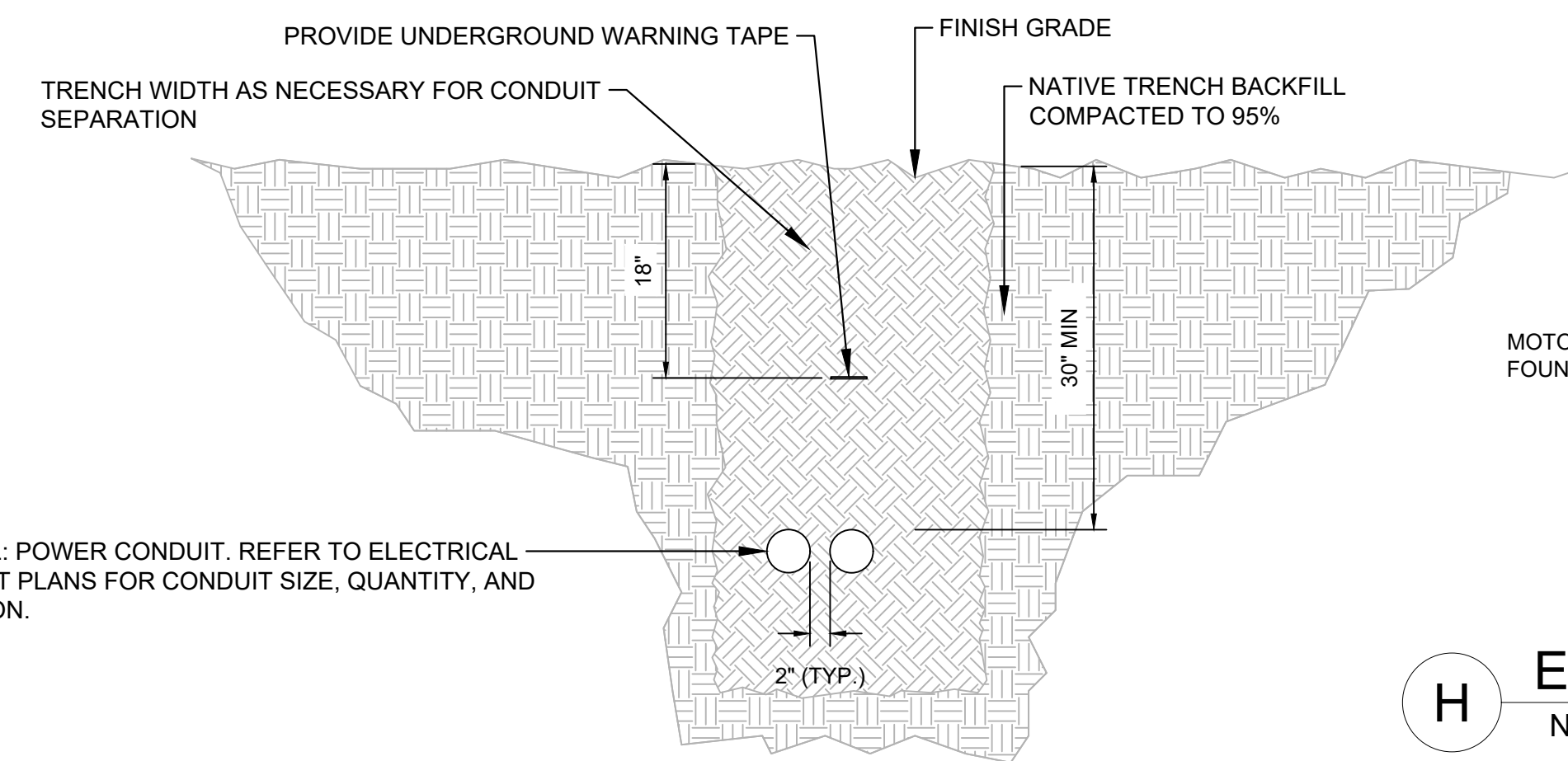
LIGHT FIXTURE SCHEDULE
DESCRIPTION & MANUFACTURER
LED AREA LIGHT - TYPE IV
FORWARD THROW DISTRIBUTION
COOPER GLEON MODEL
DSX1-P4-30K-70CRI-T4M-MVOLT
WITH PHOTOCELL



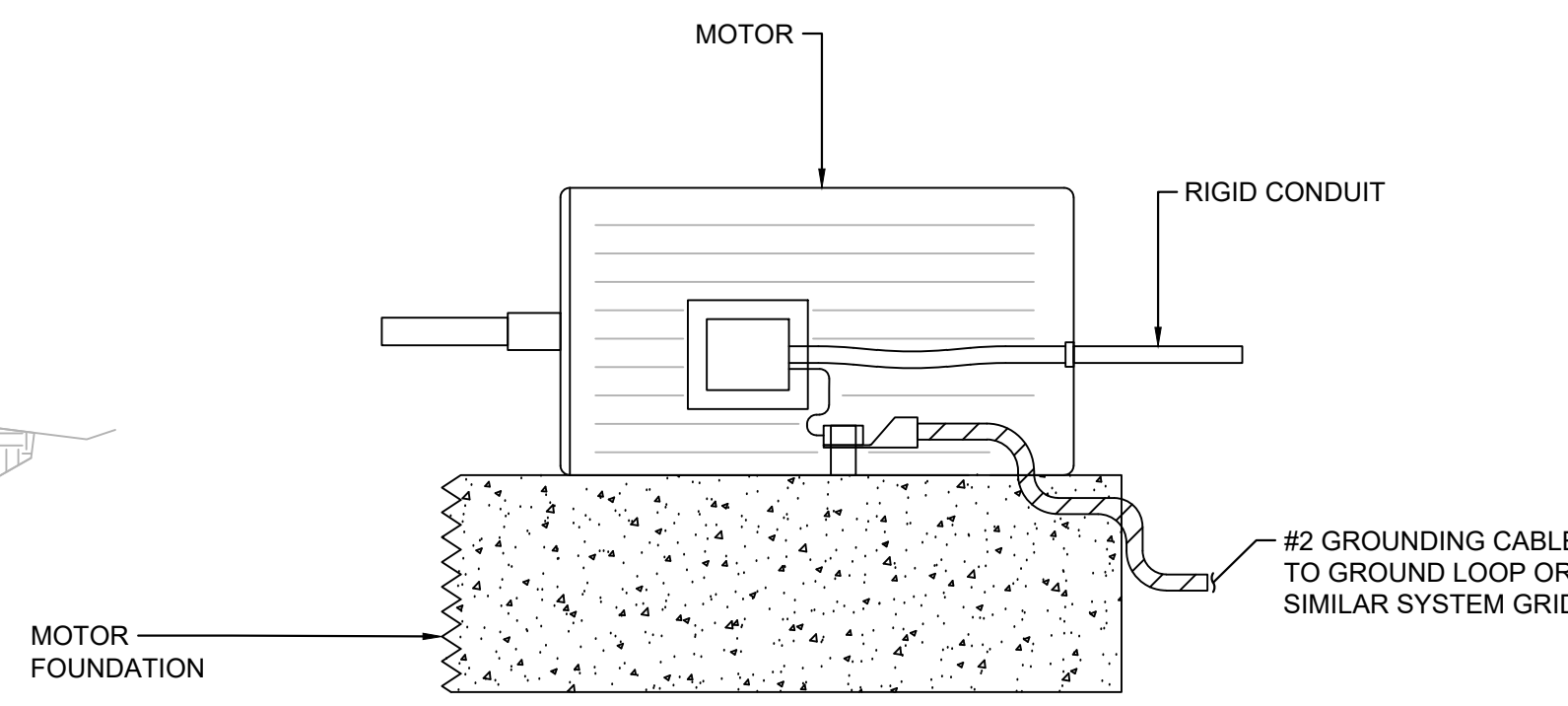
G SITE LIGHT POLE DETAIL
N.T.S.



C FLOW SENSOR GROUNDING DETAIL
N.T.S.



F TRENCH DETAIL
N.T.S.



H EQUIPMENT GROUNDING DETAIL
N.T.S.

No.	REVISIONS	DATE	BY

Kimley»Horn
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PHONE: 352-438-3000
WWW.KIMLEY-HORN.COM REGISTRY NO. 35106

LICENSED PROFESSIONAL	ERKAN GUNGOR
KHA PROJECT	142175320
DATE	MAY 2024
SCALE	AS SHOWN
DESIGNED BY	KHA
DRAWN BY	RDC
CHECKED BY	PHS
DATE	

**ELECTRICAL
DETAILS**

**CR 501 WTP
IMPROVEMENTS
PREPARED FOR
CITY OF WILDWOOD**
FLORIDA

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Kimley-Horn and Associates, Inc. 142175320 - CR 501 WTP - Final EDP/Notes/Details - Electrical Notes and Details.dwg - Layout 01 - May 14, 2024 - d.kimley-horn.com

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POWER CONDUIT SCHEDULE						
CONDUIT TAG	CONDUIT TYPE	CONDUIT SIZE	FROM	TO	CONDUCTOR (EACH CONDUIT)	COMMENTS
E-100	RGS	1"	EXISTING MDP	ELECTRICAL JUNCTION BOX	(3) #10 AWG + (1) #10 GND	MPZ POWER
E-101	RGS/SCHED 40 UG	1"	ELECTRICAL JUNCTION BOX	ELECTRICAL PULLBOX	(3) #10 AWG + (1) #10 GND	MPZ POWER
E-102	SCHED 40 UG/RGS	1"	ELECTRICAL PULLBOX	MPZ	(3) #10 AWG + (1) #10 GND	MPZ POWER
E-103	NOT USED					
E-104	SCHED 40 UG/RGS	1"	FILTER CONTROL PANEL	FIT - LP1301	(2) #12 AWG + (1) #12 GND	TRANSMITTER POWER
E-105	PVC COATED RGS	1"	FIT - LP1301	FLOW ELEMENT	MANUFACTURER CABLE	SEE MANUFACTURER SPECIFICATIONS FOR WIRING
E-106	RGS/SCHED 40 UG	1"	MPZ	LIGHTING	(2) #12 AWG + (1) #12 GND	LIGHTING POWER
E-107	RGS/SCHED 40 UG	1"	FILTER CONTROL PANEL	FIT - LP1307	(2) #12 AWG + (1) #12 GND	TRANSMITTER POWER
E-108	PVC COATED RGS	1"	FIT - LP1307	FLOW ELEMENT	MANUFACTURER CABLE	SEE MANUFACTURER SPECIFICATIONS FOR WIRING
E-109	RGS/SCHED 40 UG	1"	MPZ	BYPASS VALVE ENCLOSURE	(2) #12 AWG + (1) #12 GND	BYPASS VALVE POWER
E-110	PVC COATED RGS	1"	BYPASS VALVE ENCLOSURE	BYPASS VALVE LP1303	MANUFACTURER CABLE	SEE MANUFACTURER SPECIFICATIONS FOR BY PASS VALVE WIRING
E-111	RGS	1"	MPZ	CHEMICAL FEED CONTROL PANEL	(2) #12 AWG + (1) #12 GND	SODIUM HYPOCHLORITE CP POWER
E-112	PVC COATED RGS	1"	CHEMICAL FEED CONTROL PANEL	CHEMICAL SKID	(2) #12 AWG + (1) #12 GND	TO CHEMICAL SKID POWER
E-113	RGS	1"	MPZ	FILTER CONTROL PANEL	(2) #8 AWG + (1) #8 GND	FILTER CONTROL PANEL POWER
E-114	PVC COATED RGS	1.5"	FILTER CONTROL PANEL	FILTER NO.1 VALVE J-BOX	(4) #10 AWG + (1) #10 GND	VALVE POWER
E-115	NOT USED					
E-116	PVC COATED RGS	1"	FILTER NO.1 VALVE J-BOX	MOTORIZED VALVES	(2) #12 AWG + (1) #12 GND (PER VALVE)	4 VALVES PER CIRCUIT OR AS DESIGNED BY MANUFACTURER. DAISY CHAIN POWER
E-117	PVC COATED RGS	1.5"	FILTER CONTROL PANEL	FILTER NO.2 VALVE J-BOX	(4) #10 AWG + (1) #10 GND	VALVE POWER
E-118	NOT USED					
E-119	PVC COATED RGS	1"	FILTER NO.2 VALVE J-BOX	MOTORIZED VALVES	(2) #12 AWG + (1) #12 GND (PER VALVE)	4 VALVES PER CIRCUIT OR AS DESIGNED BY MANUFACTURER. DAISY CHAIN POWER
E-120	RGS/SCHED 40 UG	1"	MPZ	LTG POLE RECEP	(2) #12 AWG + (1) #12 GND	LIGHT POLE RECEPTACLE POWER
E-121	RGS	1"	OUTDOOR RECEPTACLE	POLY PHOSPHATE PUMP ENCLOSURE	(2) #12 AWG + (1) #12 GND	POLY PHOSPHATE PUMP ENCLOSURE POWER
E-122	RGS	1"	MPZ	EYE WASH ALARM PANEL	(2) #12 AWG + (1) #12 GND	LEVEL INDICATING TRANSMITTER POWER
E-123	RGS	1"	MPZ	LEVEL INDICATING TRANSMITTER	(2) #12 AWG + (1) #12 GND	LEVEL INDICATING TRANSMITTER POWER

COMMUNICATIONS CONDUIT SCHEDULE						
C-XXX	RGS	1"	PROCESS CONTROL PANEL	NETWORK COMMUNICATIONS PANEL	CAT 6	REFER TO DIVISION 13 FOR REQUIREMENTS
C-100	RGS	1"	PROCESS CONTROL PANEL	NETWORK COMMUNICATIONS PANEL	CAT 6	REFER TO DIVISION 13 FOR REQUIREMENTS
C-101	RGS	1"	NETWORK COMMUNICATIONS PANEL	COMMUNICATIONS JUNCTION BOX	3 PAIR FIBER OPTIC	REFER TO DIVISION 13 FOR REQUIREMENTS
C-102	RGS/SCHED 40 UG	1"	COMMUNICATIONS JUNCTION BOX	COMMUNICATIONS PULLBOX	FIBER PATCH CABLE	REFER TO DIVISION 13 FOR REQUIREMENTS
C-103	SCHED 40 UG/RGS	1"	COMMUNICATIONS PULLBOX	FIBER PATCH PANEL	FIBER PATCH CABLE	REFER TO DIVISION 13 FOR REQUIREMENTS
C-104	RGS	1"	FIBER PATCH PANEL	FILTER CONTROL PANEL	FIBER PATCH CABLE	REFER TO DIVISION 13 FOR REQUIREMENTS
C-105	RGS/SCHED 40 UG	1"	PROCESS CONTROL PANEL	COMMUNICATIONS JUNCTION BOX	(6) #14 AWG + (1) #14 GND	REFER TO SPECIFICATION 11950 FOR REQUIREMENTS
C-105A	RGS/SCHED 40 UG	1"	COMMUNICATIONS JUNCTION BOX	COMMUNICATIONS PULLBOX	(6) #14 AWG + (1) #14 GND	REFER TO SPECIFICATION 11950 FOR REQUIREMENTS
C-105B	RGS/SCHED 40 UG	1"	COMMUNICATIONS PULLBOX	BYPASS VALVE ENCLOSURE	(6) #14 AWG + (1) #14 GND	REFER TO SPECIFICATION 11950 FOR REQUIREMENTS
C-106	PVC COATED RGS	1"	BYPASS VALVE ENCLOSURE	BYPASS VALVE LP1303	(8) #14 AWG + (1) #14 GND	SEE MANUFACTURER SPECIFICATIONS FOR WIRING
C-107	RGS/SCHED 40 UG	1"	FILTER CONTROL PANEL	HIGH FILTER DIFFERENTIAL PRESSURE LP1305	(2) #14 AWG + (1) #14 TSP	PER MANUFACTURER SPECIFICATIONS
C-108	RGS/SCHED 40 UG	1"	FILTER CONTROL PANEL	FIT	(1) #14 AWG TSP	PER MANUFACTURER SPECIFICATIONS
C-109	PVC COATED RGS	1"	FIT	FLOW ELEMENT LP1307	MANUFACTURER CABLE	SEE MANUFACTURER SPECIFICATIONS FOR WIRING
C-110	RGS	1"	PROCESS CONTROL PANEL	COMMUNICATIONS JUNCTION BOX	(1) #10 AWG + (1) #10 GND	DIGITAL SIGNAL TO CHLORINE SKID
C-111	RGS/SCHED 40 UG	1"	COMMUNICATIONS JUNCTION BOX	COMMUNICATIONS PULLBOX	(1) #10 AWG + (1) #10 GND	DIGITAL SIGNAL TO CHLORINE SKID
C-112	SCHED 40 UG/RGS	1"	COMMUNICATIONS PULLBOX	CHLORINE SKID	(1) #10 AWG + (1) #10 GND	DIGITAL SIGNAL TO CHLORINE SKID
C-113	RGS	1"	PROCESS CONTROL PANEL	COMMUNICATIONS JUNCTION BOX	(2) #16 AWG TSP	ANALOG SIGNAL TO CHLORINE SKID
C-114	RGS/SCHED 40 UG	1"	COMMUNICATIONS JUNCTION BOX	COMMUNICATIONS PULLBOX	(2) #16 AWG TSP	ANALOG SIGNAL TO CHLORINE SKID
C-115	SCHED 40 UG/RGS	1"	COMMUNICATIONS PULLBOX	CHLORINE SKID	(2) #16 AWG TSP	ANALOG SIGNAL TO CHLORINE SKID
C-116	RGS	1"	PROCESS CONTROL PANEL	COMMUNICATIONS JUNCTION BOX	(2) #12 AWG + (1) #12 GND	POLYPHOSPHATE SKID SPEED
C-117	RGS/SCHED 40 UG	1"	COMMUNICATIONS JUNCTION BOX	POLYPHOSPHATE PUMP ENCLOSURE	1- #12 TSP	POLYPHOSPHATE SKID SPEED
C-118	RGS	1"	PROCESS CONTROL PANEL	COMMUNICATIONS JUNCTION BOX	1- #12 TSP	ULTRASONIC SENSOR
C-119	RGS/SCHED 40 UG	1"	COMMUNICATIONS JUNCTION BOX	COMMUNICATIONS PULLBOX	1- #12 TSP	ULTRASONIC SENSOR
C-120	SCHED 40 UG/RGS	1"	COMMUNICATIONS PULLBOX	LIT	1- #12 TSP	ULTRASONIC SENSOR TRANSMITTER
C-121	SCHED 40 UG/RGS	1"	LIT	US-01	MANUFACTURER CABLE	ULTRASONIC SENSOR TRANSMITTER PER MANUFACTURER STANDARDS
C-122	RGS	1"	PROCESS CONTROL PANEL	COMMUNICATIONS JUNCTION BOX	(2) #12 AWG + (1) #12 GND	EYE WASH SIGNAL
C-123	RGS/SCHED 40 UG	1"	COMMUNICATIONS JUNCTION BOX	COMMUNICATIONS PULLBOX	(2) #12 AWG + (1) #12 GND	EYE WASH SIGNAL
C-124	SCHED 40 UG/RGS	1"	COMMUNICATIONS PULLBOX	EYE WASH ALARM PANEL	(2) #12 AWG + (1) #12 GND	EYE WASH SIGNAL
C-125	RGS	1"	EYE WASH ALARM PANEL	EYE WASH FLOW SWITCH	(2) #12 AWG + (1) #12 GND	EYE WASH SIGNAL
C-126	RGS/SCHED 40 UG	2"	FILTER CONTROL PANEL	FILTER NO.1 VALVE J-BOX	8- #16 TSP + (1) #12 GND (PER VALVE)	TERMINATE WIRES ON MOTOR VALVE PER MANUFACTURER INSTRUCTIONS
C-127	RGS/SCHED 40 UG	2"	FILTER CONTROL PANEL	FILTER NO.1 VALVE J-BOX	8- #16 TSP + (1) #12 GND (PER VALVE)	PER MANUFACTURER SPECIFICATIONS
C-128	PVC COATED RGS	1"	FILTER NO.1 VALVE J-BOX	MOTORIZED VALVES	2- #16 TSP + (1) #12 GND (PER VALVE)	TYPICAL OF 8 VALVES
C-129	RGS/SCHED 40 UG	2"	FILTER CONTROL PANEL	FILTER NO.2 VALVE J-BOX	8- #16 TSP + (1) #12 GND (PER VALVE)	TERMINATE WIRES ON MOTOR VALVE PER MANUFACTURER INSTRUCTIONS
C-130	RGS/SCHED 40 UG	2"	FILTER CONTROL PANEL	FILTER NO.2 VALVE J-BOX	8- #16 TSP + (1) #12 GND (PER VALVE)	PER MANUFACTURER SPECIFICATIONS
C-131	PVC COATED RGS	1"	FILTER NO.2 VALVE J-BOX	MOTORIZED VALVES	2- #16 TSP + (1) #12 GND (PER VALVE)	TYPICAL OF 8 VALVES

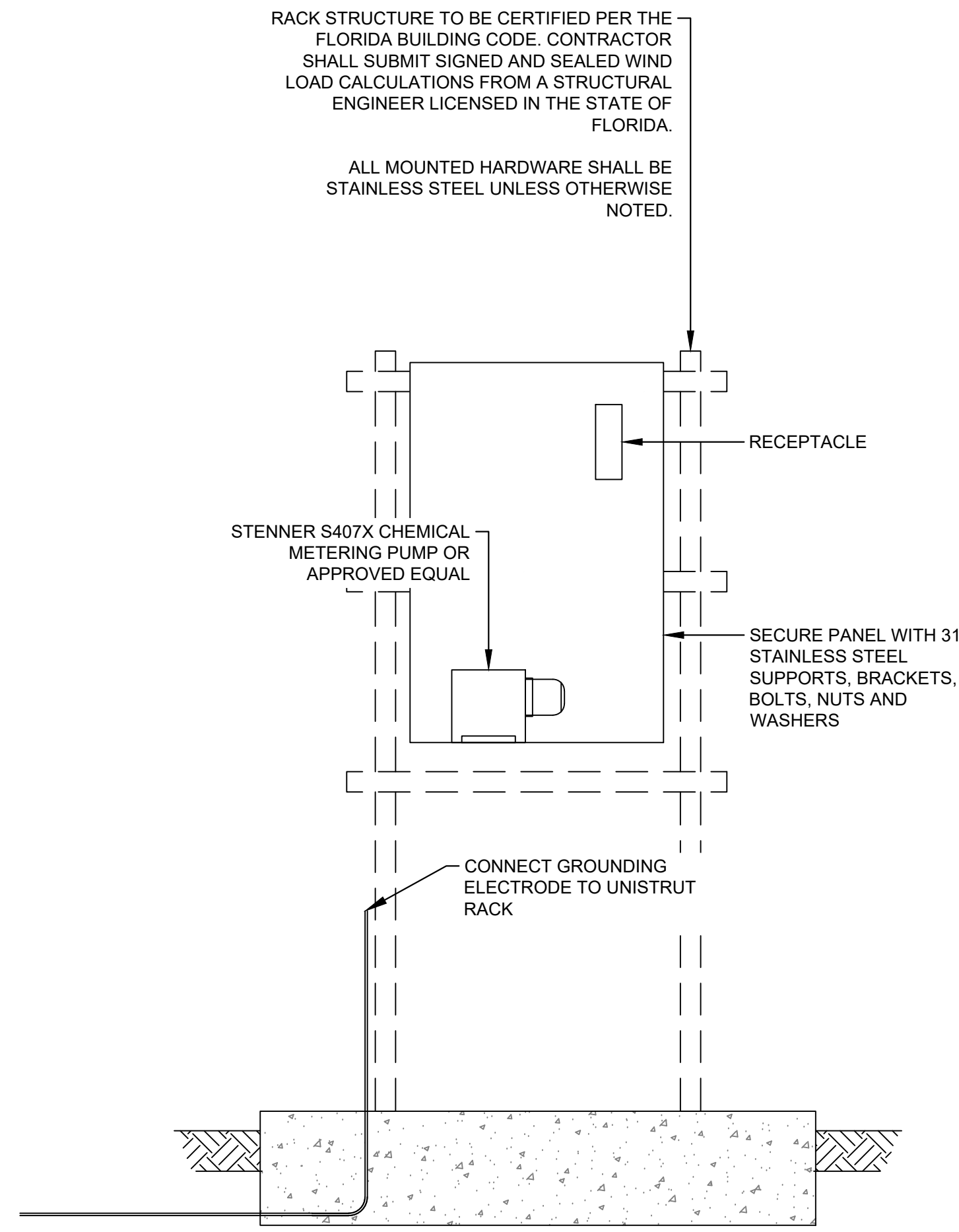
A CONDUIT AND CONDUCTOR SCHEDULE

KHA PROJECT 142175320	DATE MAY 2024	SCALE AS SHOWN	DESIGNED BY KHA DRAWN BY KHA CHECKED BY PHS	DATE	REVISIONS No. DATE BY
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LICENSED PROFESSIONAL ERKAN GUNGOR FLORIDA LICENSE NUMBER 85201					
C&C SCHEDULE					
CR 501 WTP IMPROVEMENTS PREPARED FOR CITY OF WILDWOOD FLORIDA					
SHEET NUMBER F-08					

N.A.

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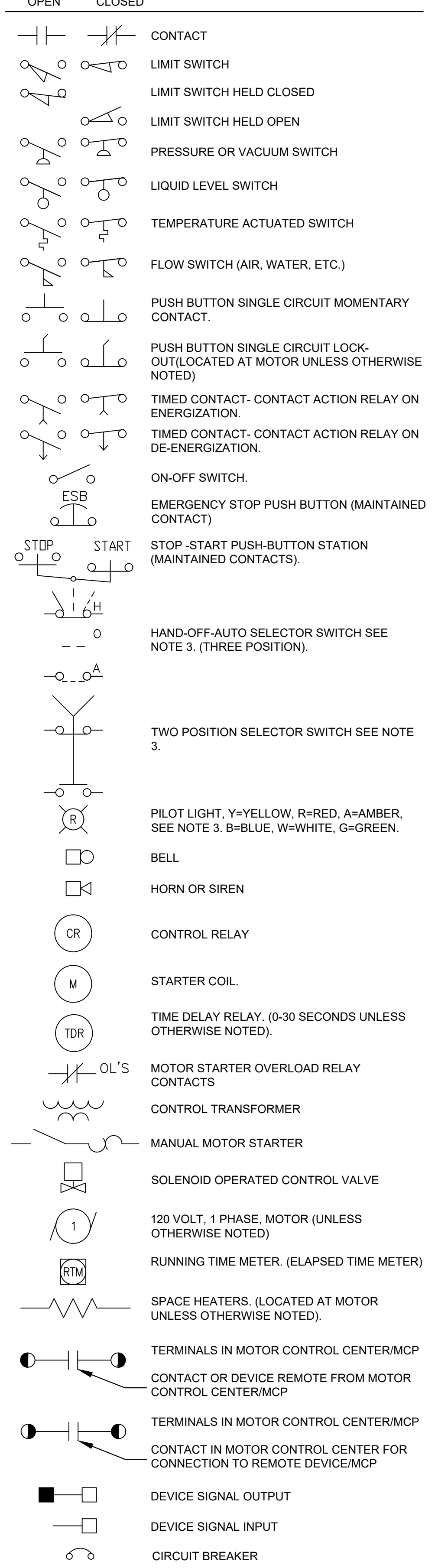
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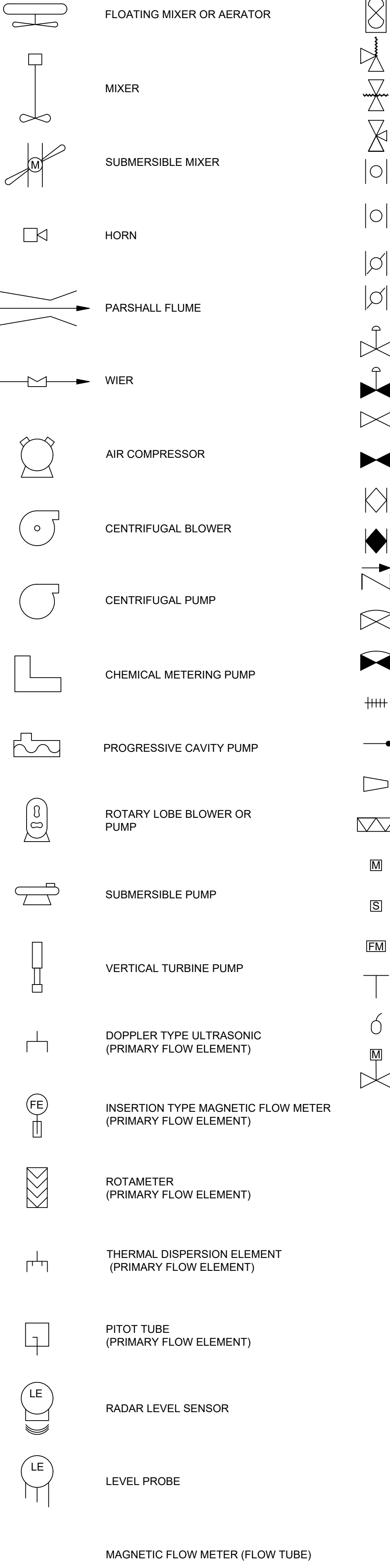
A POLYPHOSPHATE PUMP ENCLOSURE DETAIL
N.T.S.

CR 501 WTP IMPROVEMENTS PREPARED FOR CITY OF WILDWOOD <small>FLORIDA</small>	STRUT-MOUNTED PUMP ENCLOSURE DETAIL		KHA PROJECT 14217320	LICENSED PROFESSIONAL ERKAN GUNGOR	 <small>© 2024 KIMLEY-HORN AND ASSOCIATES, INC. 1700 SE 17TH STREET, SUITE 200, OCALA, FLORIDA 34471 WWW.KIMLEY-HORN.COM PHONE 352-438-3000 REGISTRY NO. 35106</small>
	SHEET NUMBER F-09	DATE MAY 2024	SCALE AS SHOWN	FLORIDA LICENSE NUMBER 85201	
	DESIGNED BY KHA	DRAWN BY RDC	CHECKED BY PHS	DATE	REVISIONS
					No. DATE BY

NORMALLY OPEN NORMALLY CLOSED DEVICE



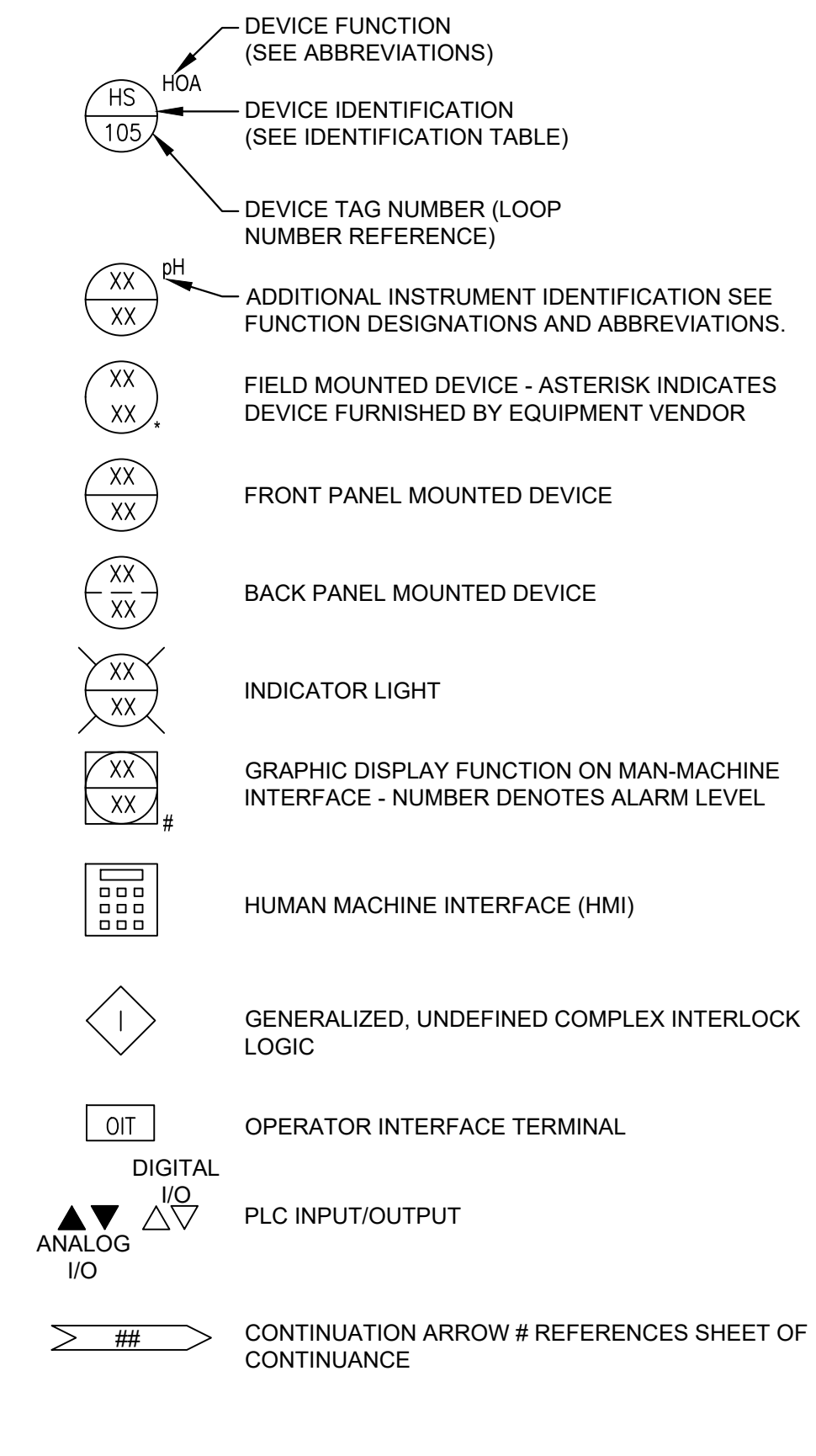
INSTRUMENT SYMBOLS



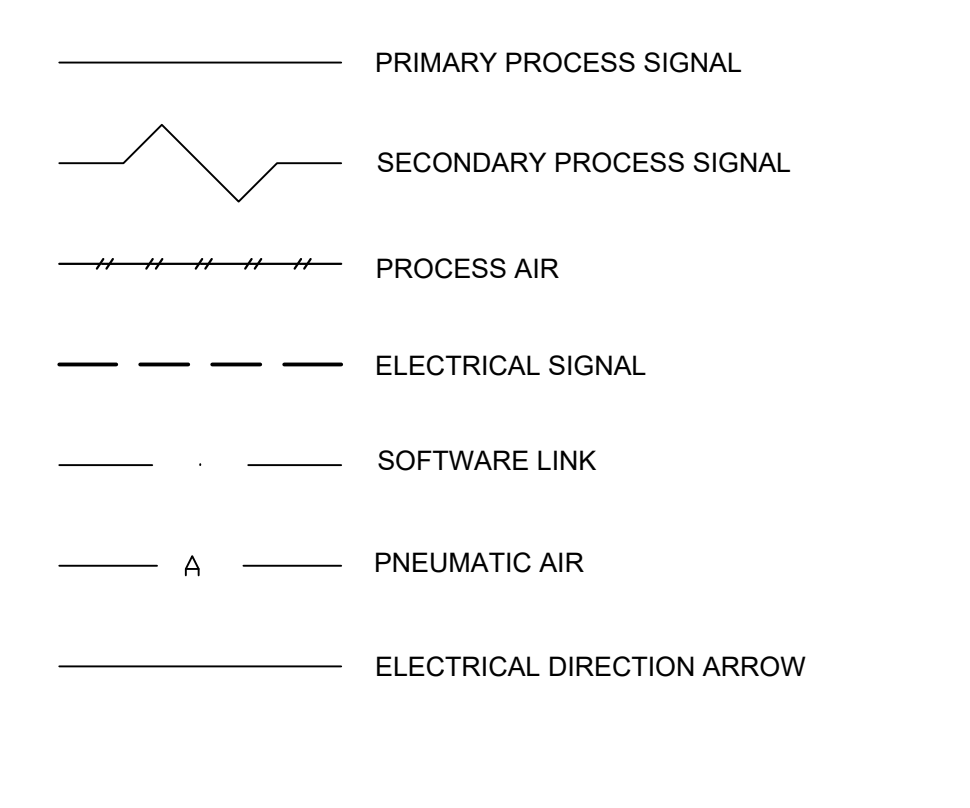
ELECTRICAL ABBREVIATIONS

AI	ANALOG INPUT
AO	ANALOG OUTPUT
CLL	CHLORINE LIQUID
CLS	CHLORINE SOLUTION
CV	CONTROL VALVE
DCS	DECANT WATER
DI	DIGITAL INPUT
DO	DIGITAL OUTPUT
DS	DISTRIBUTED CONTROL SYSTEM
ES	DIGESTED SLUDGE
ETM	EMERGENCY STOP
EX	EXISTING
FC	ELAPSED TIME METER
FE	FAIL CLOSED
FECL3	FERRIC CHLORIDE
F/S	FAST/SLOW
GEN	GENERATOR
GR	GRIT
HOA	HAND-OFF-AUTO
HOR	HAND-OFF-REMOTE
HS	HYDRAULIC SUPPLY
HMI	HUMAN MACHINE INTERFACE
I/O	INPUT/OUTPUT
IAS	INSTRUMENT AIR SUPPLY
L/R	LOCAL/REMOTE
LAN	LOCAL AREA NETWORK
LCP	LOCAL CONTROL PANEL
LOR	LOCAL-OFF-REMOTE
MA	MANUAL/AUTO
MCC	MOTOR CONTROL CENTER
ML	MIXED LIQUOR
MLR	MIXED LIQUOR RECYCLE
MMI	MAN MACHINE INTERFACE
MH	MANHOLE
NaOCl	SODIUM HYPOCHLORITE
NaOH	SODIUM HYDROXIDE
NS	NITROGEN SUPPLY
NaHSO3	SODIUM BISULFITE
NG	NATURAL GAS
NTU	TURBIDITY
OF	OVER FLOW
OIT	OPERATOR INTERFACE TERMINAL
OL	OVERLOAD
OR	VERRIDE
O/O	ON/OFF (MAINTAINED)
PCP	PROCESS CONTROL PANEL
PE	PRIMARY EFFLUENT
PFS	PRIMARY FINE SCREENINGS
PI	PROCESS INFLEUNT
PLC	PROGRAMMABLE LOGIC CONTROLLER
POT	SPEED POTENTIOMETER
PS	PRIMARY SLUDGE
PW	POTABLE WATER
RAS	RETURN ACTIVATED SLUDGE
RF	RADIO FREQUENCY
RIO	REMOTE INPUT/OUTPUT
RS	RAW SEWAGE
RST	RESET
RVSS	REDUCED VOLTAGE SOFT STARTER
SBR	SEQUENCING BATCH REACTOR
SD	SANITARY DRAIN
SE	SECONDARY EFFLUENT
SLC	SINGLE LOOP CONTROLLER
SP	SET POINT
SPD	SPEED
SPC	SET POINT CONTROL
S/S	START/STOP (MOMENTARY)
STR	START
SW	SEAL WATER
TPS	THICKENED PRIMARY SLUDGE
TWAS	THICKENED WASTE ACTIVATED SLUDGE
UW	UTILITY PROCESS WATER
VFD	VARIABLE FREQUENCY DRIVE
WAS	WASTE ACTIVATED SLUDGE
1/2/B	PUMP1/PUMP2/BOTH

INSTRUMENT SYMBOLS



INSTRUMENT LINES



FIRST LETTER	SUCCEEDING LETTER(S)	MEASURED VARIABLE	OUTPUT FUNCTION	MODIFIER
A		ANALYSIS	ALARM	
B		BURNER, COMBUSTION		
C		CONDUCTIVITY	CONTROL	CLOSED
D		DENSITY	DIFFERENTIAL	
E		VOLTAGE	PRIMARY ELEMENT	
F		FLOW RATE	FAILURE	FAST
G		GAUGE	GLASS, VIEWING DEVICE	
H		HAND (MANUAL)		HIGH
I		CURRENT (ELECTRICAL)	INDICATE	
J		POWER		
K		TIME, RATE OF CHANGE		
L		LEVEL	LIGHT	LOW
M		MOTION		MIDDLE
N		INTRUSION		NORMAL
O		TORQUE		OPEN
P		PRESSURE, VACUUM		
Q		QUANTITY	INTEGRATE, TOTALIZE	
R		RADIATION	RECORD OR PRINT	
S		SPEED, FREQUENCY	SWITCH	SLOW
T		TEMPERATURE	TRANSMIT	
U		MULTIVARIABLE	MULTIFUNCTION	MULTIFUNCTION
V		VIBRATION	VALVE, LOUVER	
W		WEIGHT, FORCE	WELL	
X		UNCLASSIFIED		UNCLASSIFIED
Y		EVENT, STATE, PRESENCE	RELAY, COMPUTE, CONVERT	
Z		POSITION	DRIVER, ACTUATOR	

GENERAL ELECTRICAL REQUIREMENTS

1. THE COMPLETED INSTALLATION SHALL CONFORM TO ALL APPLICABLE FEDERAL, STATE AND LOCAL CODE ORDINANCES AND REGULATIONS. CONTRACTOR SHALL OBTAIN NECESSARY PERMITS AND INSPECTIONS REQUIRED BY THE AUTHORITIES HAVING JURISDICTION. ALL WORK SHALL BE DONE IN A NEAT, WORKMANLIKE, FINISHED AND SAFE MANNER, ACCORDING TO THE LATEST PUBLISHED N.E.C.A. STANDARDS OF INSTALLATION, UNDER COMPETENT SUPERVISION. INSTALL GROUNDING AS REQUIRED BY THE CODE(S).
2. VISIT THE SITE PRIOR TO BIDDING TO BECOME FAMILIAR WITH EXISTING CONDITIONS AND ALL OTHER FACTORS WHICH MAY AFFECT THE EXECUTION OF THIS WORK. INCLUDE ALL RELATED COSTS IN THE INITIAL BID PROPOSAL.
3. ALL MATERIALS SHALL BE NEW AND OF THE BEST QUALITY, MANUFACTURED IN ACCORDANCE WITH NEMA, ANSI, U.L. OR OTHER APPLICABLE STANDARDS. THE USE OF MANUFACTURER'S NAMES, MODELS, AND NUMBERS IS INTENDED TO ESTABLISH STYLE, QUALITY, APPEARANCE, USEFULNESS AND BID PRICE. PROPOSED SUBSTITUTIONS SHALL BE SUBMITTED IN WRITING AND REVIEWED BY THE ENGINEER BEFORE ORDERING.
4. PROTECT ALL ELECTRICAL MATERIAL AND EQUIPMENT INSTALLED AGAINST DAMAGE BY OTHER TRADES. WEATHER CONDITIONS OR ANY OTHER CAUSES. EQUIPMENT FOUND DAMAGED OR IN OTHER THAN NEW CONDITION WILL BE REJECTED AS DEFECTIVE.
5. LEAVE THE SITE CLEAN, REMOVE ALL DEBRIS, EMPTY CARTONS, TOOLS, CONDUIT, WIRE SCRAPS AND ALL MISCELLANEOUS SPARE EQUIPMENT AND MATERIALS USED IN THE WORK DURING CONSTRUCTION. ALL COMPONENTS SHALL BE FREE OF DUST, GRIT AND FOREIGN MATERIALS. LEFT AS NEW BEFORE FINAL ACCEPTANCE OF WORK.
6. CIRCUIT CONDUCTORS #2 AWG OR SMALLER TO BE COPPER TYPE "XHHW" FOR BELOW GRADE INSTALLATION OR COPPER TYPE THHN/THWN FOR ABOVE GRADE INSTALLATIONS. #1 AWG OR LARGER SHALL BE COPPER TYPE "XHHW-2" STRANDED COPPER. MINIMUM CONDUCTOR SIZE TO BE #12 AWG WITH #12 GND.
7. UNDERGROUND CONDUITS TO BE SCHEDULE 40 PVC. MINIMUM DEPTH 30", MINIMUM SIZE 1", UNLESS OTHERWISE SHOWN ON THE PLANS. CONDUITS AS SHOWN ARE FOR INFORMATION ONLY. EXACT CONDUIT ROUTING SHALL BE DETERMINED IN THE FIELD BY THE CONTRACTOR.
8. OUTDOOR CONDUITS EXPOSED TO BE GALVANIZED RIGID STEEL, MINIMUM SIZE 3/4", UNLESS OTHERWISE NOTED ON THE PLANS. GRS CONDUIT SHALL EXTEND BELOW GRADE TO THE FIRST ELBOW. ALL GRS CONDUIT EXPOSED TO EARTH SHALL BE HALF LAPPED WRAPPED IN SCOTCHRAIP 50 10 MIL TAPE OR EQUAL. EXTEND WRAP TO A HEIGHT OF 12" ABOVE GRADE. INDOOR CONDUITS SHALL BE IMC OR EMT UNLESS OTHERWISE SHOWN ON PLAN.
9. ALL SAFETY SWITCHES AND OTHER DISTRIBUTION AND CONTROL ELECTRICAL EQUIPMENT SHALL BE U.L. LISTED AND RATED FOR HEAVY DUTY SERVICE.
10. ALL ELECTRICAL EQUIPMENT, CONDUIT, WIRING, BOXES, ETC. SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO ORDERING. THE SUBMITTALS SHALL BE NEATLY GROUPED AND ORGANIZED. PERTINENT INFORMATION SHALL BE HIGHLIGHTED, AND THE SPECIFIC PRODUCT SHALL BE IDENTIFIED. ALL SUBMITTALS SHALL BE COMPLETE, AND PRESENTED IN ONE PACKAGE. THE SUBMITTAL SHALL INCLUDE A COMPLETE LIST OF THE EQUIPMENT AND MATERIALS, INCLUDING THE MANUFACTURER'S NAME, PRODUCT SPECIFICATION, DESCRIPTIVE DATA, TECHNICAL LITERATURE, PERFORMANCE CHARTS, CATALOG CUTS, INSTALLATION INSTRUCTIONS, AND SPARE PART RECOMMENDATIONS FOR EACH DIFFERENT ITEM OF THE EQUIPMENT SPECIFIED.
11. IT IS THE OBLIGATION OF THE CONTRACTOR TO ORGANIZE HIS WORK, SO THAT A COMPLETE ELECTRICAL, INSTRUMENTATION, AND CONTROL SYSTEM FOR THE FACILITY WILL BE PROVIDED, AND WILL BE SUPPORTED BY ACCURATE SHOP AND RECORD DRAWINGS, AND O & M MANUALS.

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PHONE: 352-438-3000
WWW.KIMLEY-HORN.COM REGISTRY NO. 35108

KHA PROJECT
14217320

ERKAN GUNGOR
FLORIDA LICENSE NUMBER
85201

DATE
MAY 2024

SCALE
AS SHOWN

DESIGNED BY
RKC

DRAWN BY
RKC

CHECKED BY
PHS

**INSTRUMENTATION
NOTES & LEGEND**

CR 501 WTP
IMPROVEMENTS
PREPARED FOR
CITY OF WILDWOOD

FLORIDA

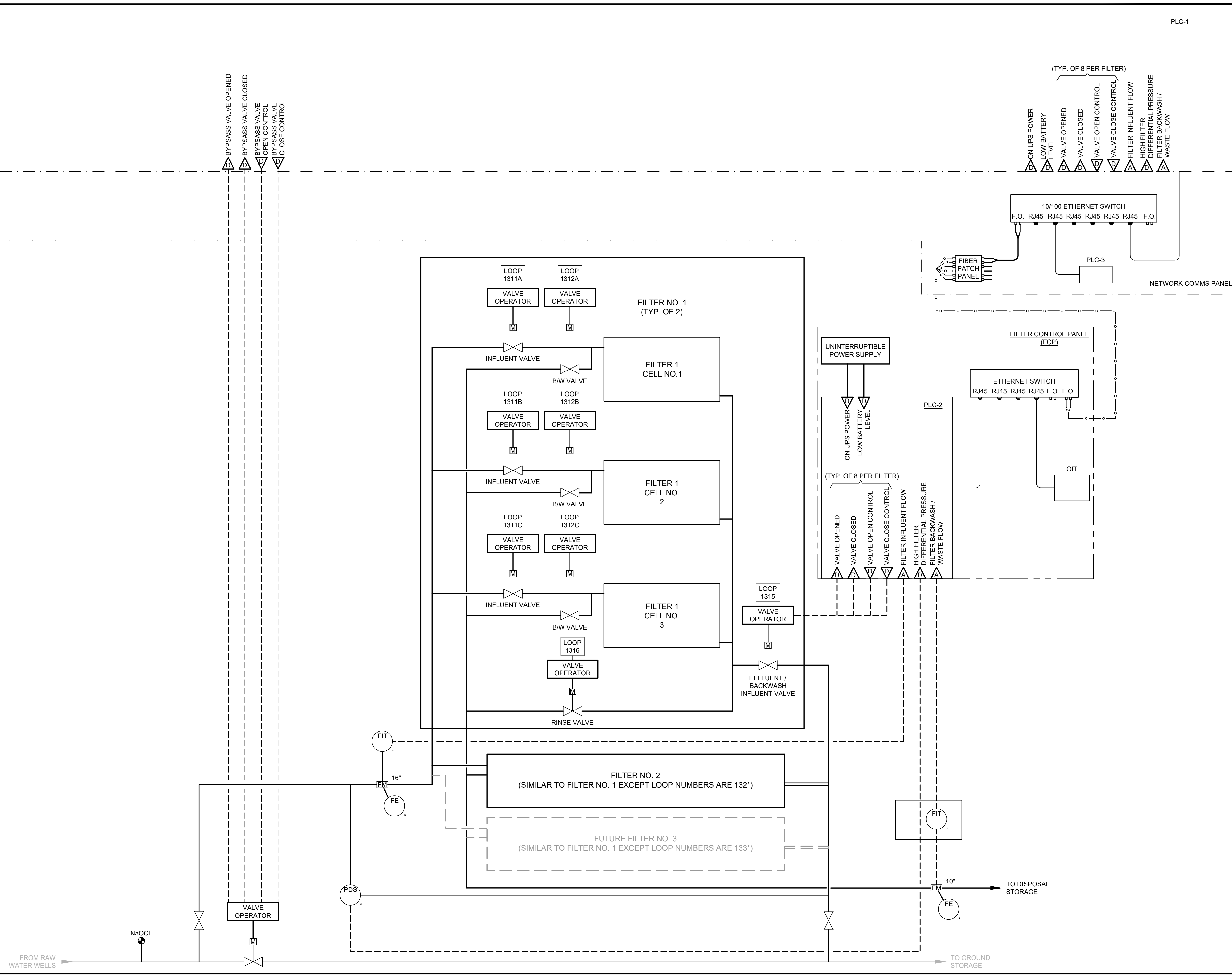
SHEET NUMBER
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LICENSED PROFESSIONAL	ERKAN GUNGOR
FLORIDA LICENSE NUMBER	85201
DESIGNED BY	KHA
DRAWN BY	RDC
CHECKED BY	PHS
DATE	

P&ID DIAGRAM

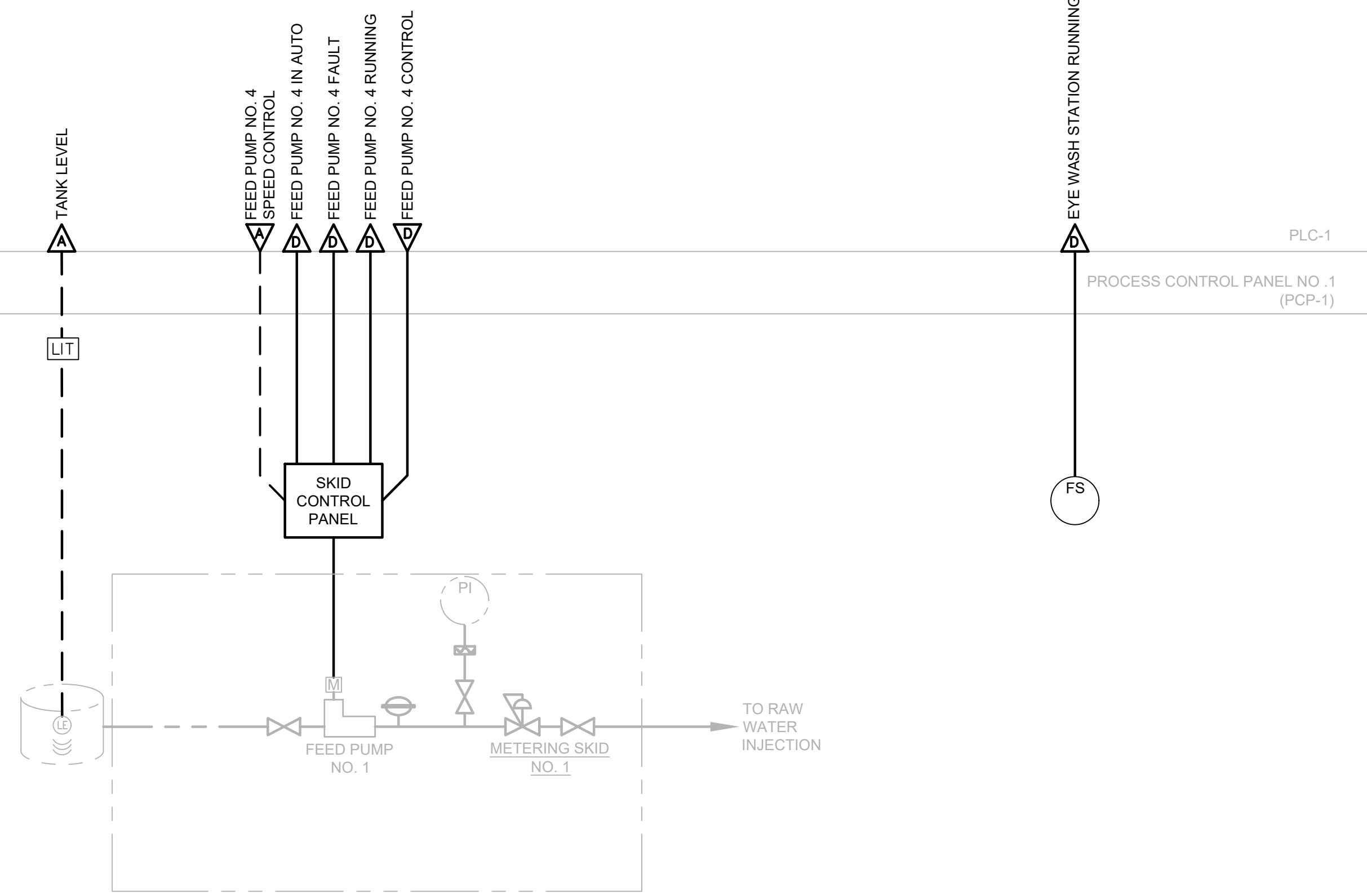
CR 501 WTP IMPROVEMENTS PREPARED FOR CITY OF WILDWOOD
 FLORIDA

SHEET NUMBER
T-02

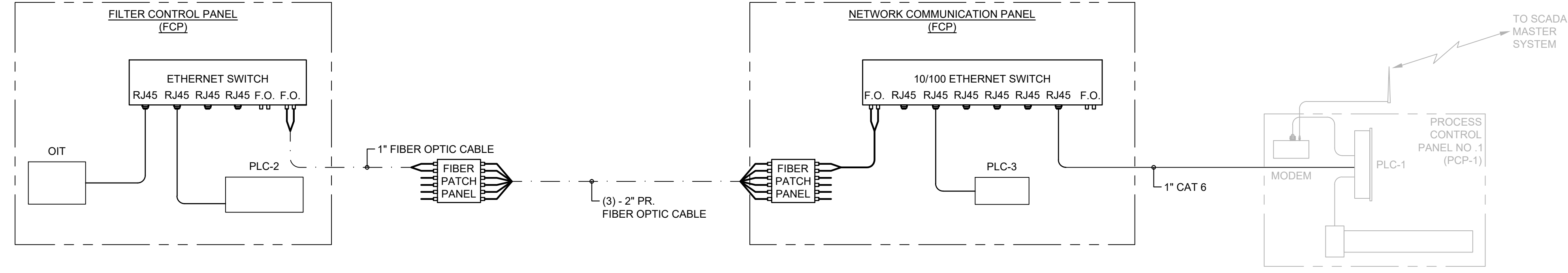
\\msk01\proj\CR_501_WTP_Improvements\Drawings\Process\Process\14217320 - CR 501 WTP Raw Water CAD\Drawings\ELECTRICAL NOTES AND DETAILS.dwg, Layout (R) May 14, 2024, d.kimball
 P&ID - Sodium Hypochlorite, Chlorine and Eye Wash System - 14217320 - 14217320.dwg, d.kimball

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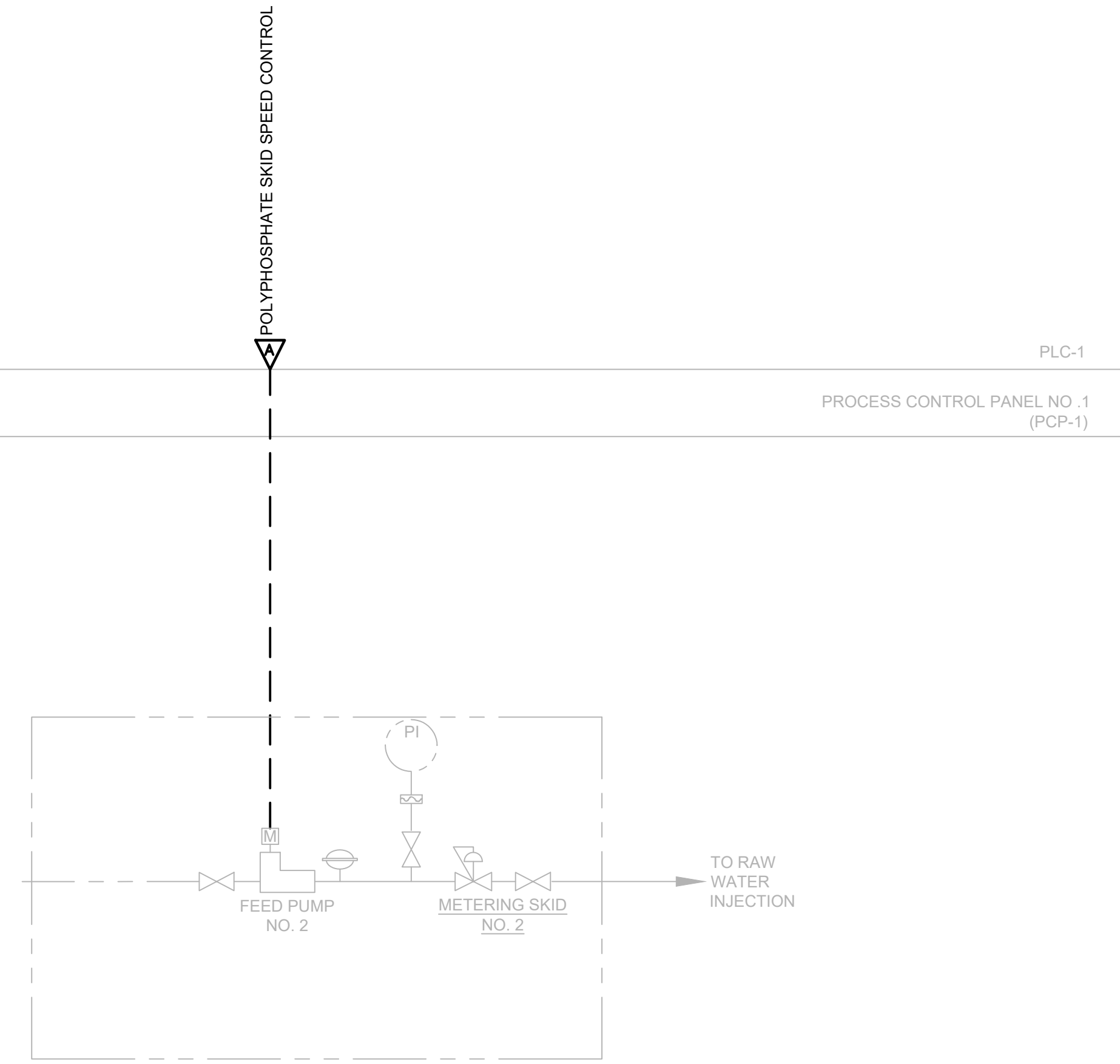
P&ID - SODIUM HYPOCHLORITE, CHLORINE AND EYE WASH SYSTEM



SYSTEM DIAGRAM



P&ID - POLYPHOSPHATE FEED SYSTEM



CR 501 WTP IMPROVEMENTS
 PREPARED FOR
CITY OF WILDWOOD
 FLORIDA

CONTROL SYSTEM DETAILS

KHA PROJECT: 14217320
 DATE: MAY 2024
 SCALE: AS SHOWN
 DESIGNED BY: KHA
 DRAWN BY: RDC
 CHECKED BY: PHS
 LICENSED PROFESSIONAL: ERKAN GUNGOR
 FLORIDA LICENSE NUMBER: 85201

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