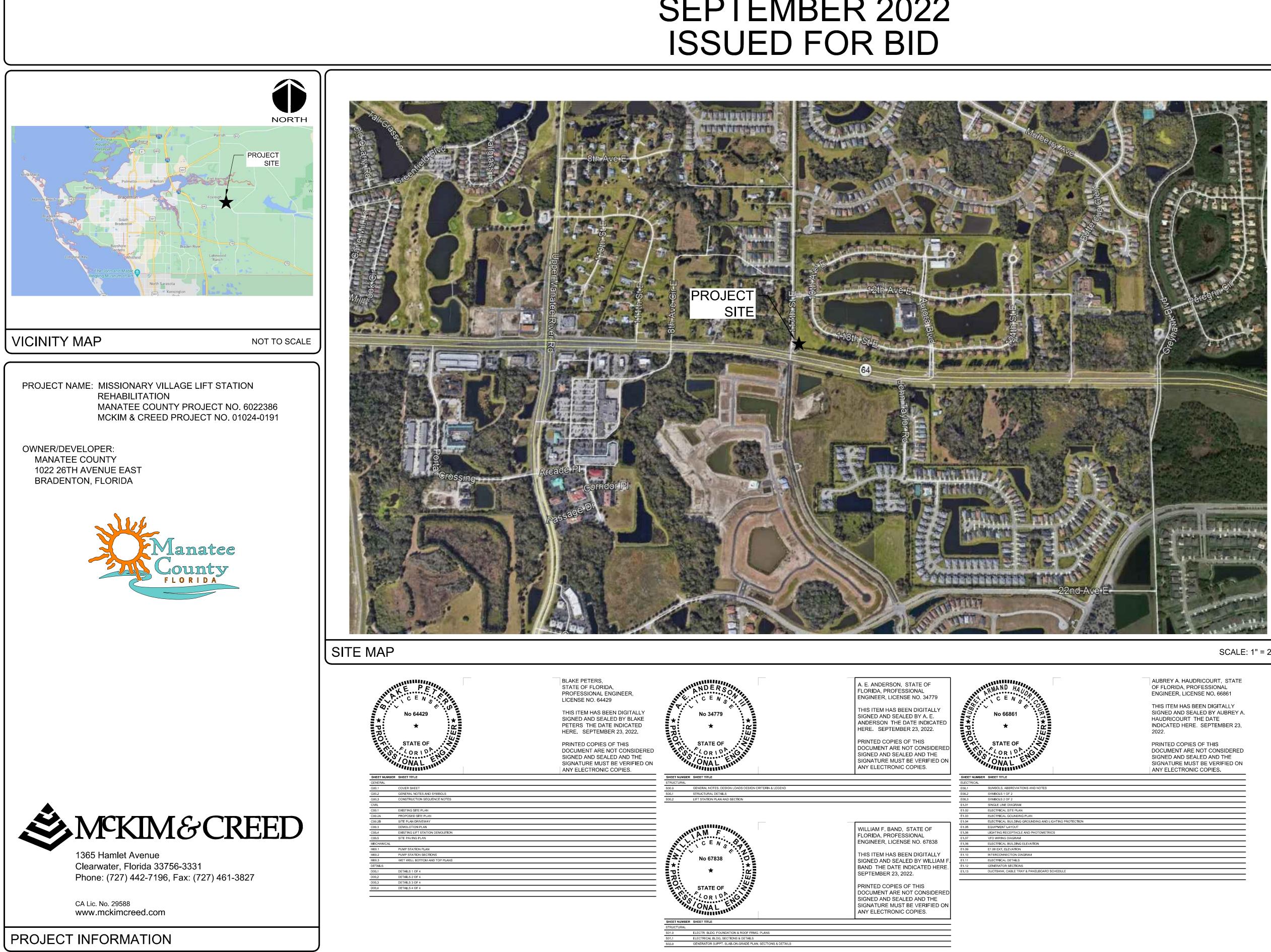
MANATEE COUNTY MISSIONARY VILLAGE LIFT STATION REHABILITATION **PROJECT NO. 6022386** SEPTEMBER 2022 **ISSUED FOR BID**



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SCALE: 1" = 200'

NOTE:

ALL ITEMS AND/OR MATERIALS FURNISHED AND INSTALLED SHALL CONFORM TO THE MANATEE COUNTY APPROVED PRODUCTS LIST. ALL ITEMS LISTED IN THE SUBMITTAL REQUIREMENTS UNDER EACH SECTION SHALL BE REQUIRED TO BE SUBMITTED FOR **REVIEW AND/OR ACCEPTANCE.**



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SHEET INDEX

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GENERAL NOTES

- THESE PLANS ARE SOLELY TO ASSIST THE CONTRACTOR IN ASSESSING THE NATURE AND EXTENT OF THE EXISTING CONDITIONS WHICH MAY BE ENCOUNTERED DURING THE COURSE OF THE WORK. CONTRACTORS ARE DIRECTED TO CONDUCT WHATEVER INVESTIGATION THEY DEEM NECESSARY, PRIOR TO BIDDING, TO DETERMINE THE ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED.
- 2. LOCATIONS, ELEVATIONS AND DIMENSIONS OF EXISTING UTILITIES, STRUCTURES, AND OTHER FEATURES ARE SHOWN BASED ON THE BEST INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF THESE PLANS BUT DO NOT PURPORT TO BE ABSOLUTELY CORRECT. THE CONTRACTOR SHALL VERIFY, PRIOR TO CONSTRUCTION, THE LOCATIONS, ELEVATIONS, AND DIMENSIONS OF ALL EXISTING UTILITIES, STRUCTURES, AND OTHER FEATURES (WHETHER OR NOT SHOWN ON THE PLANS) AFFECTING HIS WORK.
- CONTRACTOR SHALL REVIEW AND VERIFY ALL DIMENSIONS ON THE PLANS AND REVIEW ALL FIELD CONDITIONS THAT MAY AFFECT CONSTRUCTION. SHOULD DISCREPANCIES OCCUR. THE CONTRACTOR SHALL NOTIFY THE ENGINEER TO OBTAIN WRITTEN CLARIFICATION BEFORE COMMENCING WITH CONSTRUCTION.
- CONTRACTOR SHALL PROTECT ALL EXISTING STRUCTURES, STORM DRAINS, SEWERS. UTILITIES, AND OTHER FACILITIES IN THE CONSTRUCTION AREA. THE CONTRACTOR SHALL REPAIR ANY DAMAGES DUE TO HIS CONSTRUCTION ACTIVITIES AT NO ADDITIONAL COST TO THE OWNER.
- WHERE IT IS NECESSARY TO DEFLECT PIPE EITHER HORIZONTALLY OR VERTICALLY, PIPE JOINT DEFLECTION SHALL NOT EXCEED 75% OF THE MANUFACTURER'S MAXIMUM RECOMMENDED DEFLECTION.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF THE EXISTING DRAINAGE SYSTEM WITHIN THE LIMITS OF THE PROJECT AREA FOR THE DURATION OF THE PROJECT.
- CONTRACTOR SHALL PROVIDE CERTIFIED RECORD DRAWINGS AS OUTLINED IN THE SPECIFICATIONS. RED-LINE DRAWINGS SHALL BE CURRENT WITH EACH PAY APPLICATION SUBMITTED AND WILL BE CHECKED AS PART OF THE PAY APPLICATION REVIEW PROCESS. PAYMENT WILL NOT BE MADE TO CONTRACTOR WITHOUT APPROVED RED-LINE DRAWINGS.
- 8. FIELD CONDITIONS MAY NECESSITATE ALIGNMENT AND GRADE DEVIATION OF THE PROPOSED PIPELINES TO AVOID CONFLICTS. NO ADDITIONAL PAYMENT SHALL BE MADE WITHOUT PRIOR APPROVAL OF THE OWNER AND THE OWNER'S ENGINEER.
- CONTRACTOR SHALL INCLUDE IN HIS BID: BY-PASS PUMPING FACILITIES, PUMPS. FITTINGS, LABOR, ETC, AS NECESSARY, BASED ON METHOD AND SEQUENCE OF CONSTRUCTION TO COMPLETE ALL WORK WHILE MAINTAINING THE EXISTING WASTEWATER COLLECTION AND PUMPING SYSTEM OPERATIONS AT ALL TIMES.
- 10. ALL PROPOSED WORK SHALL BE COORDINATED WITH THE MANATEE COUNTY UTILITIES DEPARTMENT AT LEAST TWO WEEKS IN ADVANCE OF PROPOSED CONSTRUCTION.
- 11. CONTRACTOR SHALL FURNISH SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL OF ALL PIPE CONNECTIONS, TRANSITIONS, AND SPECIALS PRIOR TO FABRICATION OR DELIVERY TO THE JOB SITE.
- 12. CONNECTIONS TO EXISTING FACILITIES SHALL BE ACCOMPLISHED IN A NEAT WORKMANLIKE MANNER. WHEN FIELD CONDITIONS INDICATE ANY VARIANCE FROM DETAILED METHODS. THE CONTRACTOR SHALL PROVIDE COMPREHENSIVE AND DETAILED DRAWINGS FOR OWNER REVIEW AND APPROVAL PRIOR TO MAKING THE CONNECTIONS.
- 13. UNLESS OTHERWISE INDICATED OR APPROVED. ALL BELOW GROUND DUCTILE IRON PIPE SHALL HAVE PUSH-ON OR MECHANICAL JOINTS, AND ALL ABOVE GROUND DUCTILE IRON PIPE SHALL HAVE FLANGED JOINTS.
- 14. ALL PIPELINES SHALL HAVE A MINIMUM COVER OF 36" BELOW EXISTING GRADE UNLESS OTHERWISE NOTED OR DIRECTED.
- 15. WATER SHALL NOT BE PERMITTED IN EXCAVATIONS AND TRENCHES DURING CONSTRUCTION. DEWATERING IS REQUIRED TO A MINIMUM OF 18" BELOW BOTTOM OF EXCAVATION.
- 16. CONTRACTOR SHALL NOT ALLOW ANY DISCHARGE OF WASTEWATER TO LANDS AND/OR ADJACENT WATER BODIES OR STORM DRAINS. ANY LEAKAGE MUST BE CONTAINED AND TRANSFERRED BY THE CONTRACTOR TO THE PLANT DRAIN PUMP STATION AT THE SOUTHWEST WATER RECLAMATION FACILITY. THE COUNTY WILL BACKCHARGE THE CONTRACTOR FOR REIMBURSEMENT OF ANY FEES OR FINES DUE TO CONTRACTOR'S MISMANAGEMENT, SPILLAGE AND RELEASE OF WASTEWATER TO THE ADJACENT PROPERTY AND/OR STORM DRAINAGE SYSTEM.
- 17. ALL EXPOSED PIPING SHALL BE PAINTED WITH DESIGNATED COLORS ASSOCIATED WITH THEIR USAGE AS PROVIDED IN THE SPECIFICATIONS.
- 18. ALL NEW PIPELINES SHALL BE FLUSHED, PRESSURE TESTED, AND APPROVED PRIOR TO TIE-INS TO EXISTING FACILITIES. THE CONTRACTOR WILL BE ALLOWED TO USE TEMPORARY PLUGS FOR PRESSURE TESTING.
- 19. ALL CONCRETE THRUST BLOCKS INSTALLED FOR TESTING PURPOSES AND NOT REQUIRED FOR THE PIPELINE SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR PRIOR TO FINAL ACCEPTANCE.
- 20. CONTRACTOR SHALL PROVIDE PROTECTIVE MATTING, FUEL CONTAINMENT AND ALL OTHER MATERIALS, EQUIPMENT AND LABOR TO PROTECT THE STAGING AREA DURING CONSTRUCTION.
- 21. CONTRACTOR SHALL, PRIOR TO BEGINNING CONSTRUCTION, SUBMIT A "FUELING SPILL PREVENTION PLAN" THAT SHALL CLEARLY INDICATE HOW FUEL SPILLS WILL BE PREVENTED WHEN FUELING BOTH WITHIN AND OUTSIDE OF THE STAGING AREA.
- 22. CONTRACTOR SHALL SUBMIT A DEWATERING PLAN FOR APPROVAL PRIOR TO BEGINNING CONSTRUCTION. DEWATERING SHALL BE CONDUCTED IN ACCORDANCE WITH THE BMPS IDENTIFIED IN CHAPTER 4, 4.40 "DEWATERING" OF "THE FLORIDA STORMWATER EROSION AND SEDIMENTATION CONTROL INSPECTOR'S MANUAL".
- 23. CONTRACTOR SHALL EMPLOY A PROFESSIONAL SURVEYOR, LICENSED IN THE STATE OF FLORIDA TO PERFORM CONSTRUCTION STAKING IN ACCORDANCE WITH RULE 61G17-6.004 (3) OF THE FLORIDA ADMINISTRATIVE CODE.
- 24. AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION, THE CONTRACTOR SHALL CONTACT SUNSHINE STATE ONE CALL OF FLORIDA AT 1-800-432-4770 OR THE NATIONAL 811 ONE CALL NUMBER WHEN APPLICABLE FOR UTILITY LOCATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH ALL UTILITIES FOR THE POSSIBLE RELOCATION OR THE TEMPORARY MOVEMENT OF ANY EXISTING UTILITIES WITHIN THE RIGHTS-OF-WAY.

REV.NO.	DESCRIPTION	DATE
D	ISSUED FOR BID	SEPT. 2022
С	100% CLIENT SUBMITTAL - NOT FOR CONSTRUCTION	JULY 2022
В	60% CLIENT SUBMITTAL - NOT FOR CONSTRUCTION	APRIL 2022
Α	30% CLIENT SUBMITTAL	JUNE 2021
	REVISIONS	

GENERAL NOTES CONT.

- 27. ALL CONSTRUCTION ACTIVITIES SHALL BE LIMITED TO WITHIN THE MANATEE COUNTY RIGHT-OF-WAY AND/OR EASEMENTS SHOWN ON THE DRAWINGS.
- 28. CONTRACTOR SHALL COORDINATE THE CUTTING OF DRIVEWAYS WITH THE PROPERTY OWNER PRIOR TO CUT. ALL DRIVEWAYS WILL BE IN PASSABLE CONDITION AT THE END OF THE WORK DAY AND FULLY RESTORED PER PLAN.
- 29. CONTRACTOR SHALL USE APPROPRIATE TECHNIQUES, AS APPROVED, RECOMMENDED OR OFFERED BY FLORIDA POWER AND LIGHT TO PREVENT UNDERMINING OF POWER POLES DURING CONSTRUCTION. IF HOLDING OF POWER POLES IS RECOMMENDED OR REQUIRED BY THE UTILITY, THE CONTRACTOR SHALL COORDINATE THIS ACTIVITY WITH THE UTILITY AND BEAR ALL RELATED COSTS.
- 30. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH ALL UTILITY COMPANIES FOR THE RELOCATION AND ADJUSTMENT OF ALL UTILITIES, INCLUDING, ANY EXISTING POWER POLES AND/OR UTILITY CONDUITS WITHIN RIGHT-OF-WAY.
- 31. JOINT RESTRAINT SHALL BE INSTALLED AS NECESSARY TO PREVENT MOVEMENT OF EXISTING UNRESTRAINED PRESSURE PIPE AT ALL TIE-IN LOCATIONS WHETHER SPECIFICALLY IDENTIFIED ON THE PLANS OR NOT.
- 32. ALL WORK, EQUIPMENT AND MATERIALS SHALL MEET OR EXCEED CURRENT MANATEE COUNTY STANDARDS, UNLESS OTHERWISE STATED IN CONTRACT DOCUMENTS.
- 33. PIPE LENGTHS SHOWN ON PLAN VIEW DRAWINGS ARE IN LINEAR FEET AND DO NOT TAKE INTO ACCOUNT VERTICAL ELEVATION CHANGES, DEFLECTIONS, BENDS, ETC.
- 34. ALL CONSTRUCTION ACTIVITIES SHALL BE COORDINATED WITH MANATEE COUNTY PROJECT MANAGEMENT DIVISION. THE PROJECT ENGINEER II IS BRETT GOCKA, (941-708-7450; EXT. 7232).
- 35. ALL MATERIAL AND EQUIPMENT SHALL BE IN CONFORMANCE WITH THE LATEST VERSION OF THE MANATEE COUNTY APPROVED PRODUCTS LIST AND SPECIFICATIONS UNLESS OTHERWISE INDICATED.
- 36. MANATEE COUNTY HAS THE RIGHT OF FIRST REFUSAL FOR ANY DEMOLISHED OR SALVAGED ITEMS.

RESTORATION AND MISCELLANEOUS NOTES

- 1. CONTRACTOR SHALL PROVIDE AN ASPHALT PATCH FOR TRENCH AREAS CONSTRUCTED IN EXISTING ROADWAYS. ADJUST ALL CASTINGS TO MATCH NEW PAVEMENT SURFACE.
- 2. CONTRACTOR SHALL REPLACE ALL EXISTING PAVING, STABILIZED EARTH, CURBS. SIDEWALKS, FENCES, LANDSCAPING AND OTHER IMPROVEMENTS WITH THE SAME OR BETTER TYPE OF MATERIAL THAT WAS REMOVED DURING CONSTRUCTION OR AS DIRECTED BY THE ENGINEER.
- 3. ALL RESTORATION WORK PERFORMED THROUGHOUT THE PROJECT SHALL CONFORM TO EXISTING LINES AND GRADES UNLESS OTHERWISE NOTED.
- 4. ALL EXISTING FENCES DISTURBED DURING CONSTRUCTION SHALL BE REPLACED AND REINSTALLED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER UNLESS SHOWN TO BE REMOVED ON CONSTRUCTION PLANS.
- LIMITS OF PROPOSED ROADWAY OVERLAY SHOWN ARE APPROXIMATE. CONTRACTOR 5. SHALL OVERLAY ALL DISTURBED AREAS OF ROAD AS PART OF THIS PROJECT IN ACCORDANCE WITH THE DETAILS.
- 6. CONTRACTOR SHALL RESTORE ALL IRRIGATION SYSTEM COMPONENTS TO PRE-CONSTRUCTION CONDITIONS.
- CONTRACTOR SHALL RAISE EXISTING MANHOLE FRAMES AND COVERS TO MATCH FINAL GRADE.
- 8. CONTRACTOR SHALL RESTORE GRADE TO PRECONSTRUCTION ELEVATIONS UNLESS OTHERWISE NOTED.

25. CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE WITH THE FLORIDA TRENCH SAFETY ACT. 90-96, LAWS OF FLORIDA EFFECTIVE OCTOBER 1, 1990 AND THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION EXCAVATION SAFETY STANDARDS. 29 CFR 1926.650, SUBPART P, AS AMENDED. THE CONTRACTOR SHALL INCLUDE IN THE TOTAL BID PRICE ALL COSTS FOR COMPLIANCE WITH THESE REGULATIONS.

26. CONTRACTOR SHALL USE ALL NECESSARY SAFETY PRECAUTIONS TO AVOID CONTACT WITH OVERHEAD AND UNDERGROUND UTILITIES, POWER LINES, ETC.

UTILITY NOTES

1. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE FOLLOWING JURISDICTIONAL BODIES AND UTILITY COMPANIES:

SUNSHINE STATE ONE CALL OF **FLORIDA** 1-(800) 432-4770



BRIGHTHOUSE NETWORKS, LLC TED BINGHAM theodore.bingham@charter.com (727) 329-2847

FLORIDA POWER & LIGHT MEGAN VONSTETINA megan.vonstetina@duke-energy.com (727) 893-9394

TECO PEOPLES GAS

amcfarlane@tecoenergy.com

ALEX McFARLANE

(813) 557–6134

FRONTIER COMMUNICATIONS TONI CANNON toni.cannon@ftr.com (813) 575–1014

MCI-VERIZON EFRAIN RODRIGUEZ efrain.rodriguez@verizon.com (813) 928-9881

MANATEE COUNTY

- 2. ALL UTILITY CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE LATEST VERSION OF THE MANATEE COUNTY UTILITY STANDARDS.
- 3. ALL BELOW GROUND DUCTILE IRON PIPE SHALL BE ENCASED IN A POLYETHYLENE WRAP IN ACCORDANCE WITH AWWA STANDARDS.
- 4. ALL VALVE BOX COVERS SHALL BE PAINTED TO INDICATE THEIR TYPE OF SERVICE.
- 5. ALL TEST POINT TAPPING SHALL BE CUT LOOSE FROM THE CORPORATION STOP AND COMPLETELY REMOVED AND DISPOSED OF BY THE CONTRACTOR PRIOR TO FINAL ACCEPTANCE. THE CORPORATION STOP SHALL BE CAPPED AND REMAIN IN PLACE.

SOIL EROSION & SEDIMENTATION CONTROL NOTES

- 1. ALL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO THE START OF ANY CONSTRUCTION, DEMOLITION, DEWATERING, OR MOBILIZATION ACTIVITIES, MAINTAINED THROUGHOUT CONSTRUCTION AND SHALL REMAIN IN PLACE UNTIL WORK IS COMPLETE.
- 2. CONTRACTOR SHALL FOLLOW BEST MANAGEMENT PRACTICES THROUGHOUT DEMOLITION AND CONSTRUCTION.
- 3. HAY BALES AND/OR SILT SCREENS SHALL BE INSTALLED ADJACENT TO THE WORK AREAS TO PREVENT SEDIMENT TRANSPORT PRIOR TO THE COMMENCEMENT OF WORK.
- 4. INLET PROTECTION SHALL BE PLACED AT ALL INLETS IN OR ADJACENT TO THE PROJECT AREA. 5. AS SOON AS PRACTICAL, ALL DRESSED SLOPES AND DISTURBED AREAS SHALL BE SODDED OR SEEDED AND MULCHED TO PREVENT EROSION.
- 6. NO EXCAVATION SHALL EXTEND BELOW THE DEPTHS/ELEVATIONS SHOWN ON THE DRAWINGS OR IN THE SPECIFICATIONS WITHOUT PRIOR APPROVAL.
- 7. CONTRACTOR SHALL PREPARE AND SUBMIT A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) FOR REVIEW AND APPROVAL PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION ACTIVITIES AND PROVIDE APPROVED FDEP NOI TO COUNTY.
- 8. CONTRACTOR SHALL PREPARE AND SUBMIT A DISPOSAL PLAN FOR EXCAVATION MATERIAL INCLUDING THE LOCATION OF DISPOSAL SITE(S) AND DISPOSAL PLANS SHOWING APPLICABLE BEST MANAGEMENT PRACTICES FOR REVIEW AND APPROVAL PRIOR TO ANY EARTHWORK ACTIVITIES.
- 9. CONTRACTOR SHALL MAINTAIN A CLEAR PATH FOR ALL SURFACE WATER DRAINAGE STRUCTURES AND DITCHES DURING ALL PHASES OF CONSTRUCTION. THE CONTRACTOR SHALL BE REQUIRED TO INSTALL ALL EROSION, SEDIMENT AND TURBIDITY CONTROL MEASURES PRIOR TO CONSTRUCTION OF ANY COMPONENTS ASSOCIATED WITH THE PROJECT. SEDIMENT CONTROL INCLUDES SILT DAMS, TRAPS, EROSION PROTECTION, AND ANY OTHER APPURTENANCES NEEDED BUT NOT NECESSARILY SHOWN ON THESE DRAWINGS.

MAINTENANCE OF TRAFFIC

1. THE CONTRACTOR SHALL BE SUBMIT A SIGNED AND SEALED MAINTENANCE OF TRAFFIC PLAN FOR APPROVAL. THE NECESSARY TRAFFIC CONTROL SHALL INCLUDE, BUT NOT LIMITED TO, SUCH ITEMS AS PROPER CONSTRUCTION WARNING SIGNS, SIGNALS, LIGHTING DEVICES, MARKINGS, BARRICADES, CHANNELIZATION AND HAND SIGNALING DEVICES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING AND MAINTAINING ALL DEVICES AND DETOUR ROUTES AND SIGNAGE FOR THE DURATION OF THE CONSTRUCTION PERIOD. THE CONTRACTOR SHALL UTILIZE THE APPROPRIATE TRAFFIC PLAN FROM THE FDOT MAINTENANCE OF TRAFFIC STANDARDS, SERIES 600 OF THE FDOT ROADWAY AND TRAFFIC DESIGN STANDARDS, LATEST EDITION. AT NO TIME WILL MORE THAN ONE (1) LANE OF A ROADWAY BE CLOSED TO VEHICLES AND PEDESTRIANS WITHOUT AN APPROVED ROAD CLOSURE FROM THE COUNTY TRANSPORTATION DEPARTMENT.





MANATEE COUNTY TRAFFIC LIGHTS, TRAFFIC SIGNALS ANTHONY WILLIAMS tony.williams@mymanatee.org (941) 792-8811 EXT. 5081

MANATEE COUNTY RECLAIMED WATER. SEWER. WATER ANTHONY WILLIAMS tony.williams@mymanatee.org (941) 792-8811 EXT. 5081

INFORMATION TECHNOLOGY SERVICES (ITS) DEPARTMENT BILL KERSEY bill.kersey@mymanatee.org (941) 748-4501 EXT. 5803

MISSIONARY V	/ILLAGE	LIFT STATION	V
REH	ABILITAT	TION	

GENERAL **GENERAL NOTES AND SYMBOLS**

PROJ. START DATE	2021 MARCH	SCALE	
MCE PROJ. #	6022386		G00.2
DRAWN	EJB	HORIZONTAL:	000.2
DESIGNED	LC	NA	DRAWING NUMBER
CHECKED	PJL	VERTICAL:	
PROJ. MGR.	BP	NA	
		\square	REVISION
STATUS:			
		ISSUED	FOR BID

SUGGESTED CONSTRUCTION SEQUENCING NOTES

- 1. THE EXISTING LIFT STATION IS TO STAY IN OPERATION WHILE THE NEW LIFT STATION IS BEING CONSTRUCTED, SO THE EXISTING LIFT STATION SHALL BE PROTECTED FROM ALL CONSTRUCTION OPERATIONS.
- 2. PERFORM EXPLORATORY EXCAVATION TO LOCATE ALL EXISTING VALVES, PIPES, AND STRUCTURES WITHIN THE EXISTING LIFT STATION SITE THAT ARE TO BE PROTECTED FOR PIPE CONNECTIONS ONCE THE NEW LIFT STATION HAS BEEN CONSTRUCTED.
- 3. CONSTRUCT THE WET WELL STRUCTURE, INCLUDING TOP AND HATCHES.
- 4. INSTALL ALL UNDERGROUND CONDUIT FROM THE ELECTRICAL SERVICE POINT TO THE ELECTRICAL EQUIPMENT BUILDING LOCATION AND CONDUITS FROM THE ELECTRICAL EQUIPMENT BUILDING CONNECTING TO THE WET WELL, ODOR CONTROL UNIT, FLOW METER AND RTU ANTENNA.
- 5. IT IS WITHIN THE CONTRACTOR'S MEANS AND METHODS TO PROVIDE MANAGEMENT AND TRANSITION OF WASTEWATER FLOWS FROM THE EXISTING LIFT STATION TO THE NEW LIFT STATION. THE CONTRACTOR SHALL PROVIDE A WRITTEN DESCRIPTION STATING HOW FLOW WILL BE TRANSITIONED AND MANAGED THROUGHOUT THE PERFORMANCE OF THE WORK ON THIS PROJECT.
- 6. CONSTRUCT THE NEW 5' DIAMETER MANHOLE, INCLUDING THE OUTSIDE DROP FOR THE FORCE MAIN. CONNECTION AND THE 20" GRAVITY SEWER BETWEEN THE MANHOLE AND THE WET WELL.
- 7. CONSTRUCT AS MUCH OF THE NEW 12" GRAVITY SEWER AS POSSIBLE WITHOUT DAMAGING THE EXISTING 10" GRAVITY SEWER OR REMOVING ANY PAVEMENT FROM 117TH STREET.
- 8. CONSTRUCT THE CONCRETE PAD SURROUNDING THE WET WELL AND TO THE LIMITS SHOWN ON THE PLANS FOR INSTALLING DISCHARGE PIPE, VALVES AND FLOW METER.
- 9. INSTALL PUMP DISCHARGE CONNECTION, HDPE PUMP DISCHARGE PIPE, GUIDE RAILS AND PUMPS.

10. INSTALL ABOVE GROUND PIPE, VALVES AND FLOW METER.

- 11. CONSTRUCT THE ELECTRICAL EQUIPMENT BUILDING WHERE THE ELECTRIC PANELS, VFDs AND OTHER ELECTRICAL EQUIPMENT WILL BE MOUNTED.
- 12. INSTALL ELECTRICAL PANELS, ABOVEGROUND CONDUIT AND ELECTRICAL WIRING FROM THE ELECTRICAL SERVICE TO THE ELECTRICAL PANELS AND FROM THE ELECTRICAL PANELS TO THE PUMPS, TRANSDUCERS, FLOW METER, ODOR CONTROL UNIT, RTU ANTENNA AND SITE LIGHT AND OTHER MISCELLANEOUS ELECTRICAL AND INSTRUMENTATION DEVICES.
- 13. EVALUATE THE ELECTRICAL SYSTEM TO ASSURE THAT THE PHASE MONITORS ARE CONNECTED PROPERLY AND THAT THE PUMPS ARE ROTATING IN THE PROPER DIRECTION ALONG WITH PROPER OPERATION OF ALL OTHER ELECTRICAL SYSTEMS AND EQUIPMENT.
- 14. CONSTRUCT THE UNDERGROUND PORTION OF THE DISCHARGE FORCE MAIN FROM THE END OF THE ABOVE GROUND PIPE NEAR THE FLOW METER TO THE EXISTING VALVE IN 117TH STREET, TYING THE NEW 12" FORCE MIN TO THE EXISTING VALVE.
- 15. TEST RUN THE NEW STATION BY SUPPLYING FLOW FROM THE EXISTING STATION TO THE NEW STATION'S WET WELL.

16. THE CONTRACTOR SHALL PROVIDE A DETAILED PLAN SHOWING PROCEDURES FOR TESTING THE OPERATION OF THE NEW STATION PRIOR TO PERMANENTLY DIVERTING FLOW FROM THE EXISTING STATION TO THE NEW STATION.

17. HAVE EVOQUA INSTALL THE NEW ODOR CONTROL UNIT.

18. REMOVE THE EXISTING GENERATOR AND DELIVER TO THE SITE DESIGNATED BY MANATEE COUNTY.

19. SET UP TEMPORARY BYPASS PUMPING AND MAKE FINAL GRAVITY SEWER AND FORCEMAIN CONNECTIONS TO PERMANENTLY DIVERT FLOW TO THE NEW LIFT STATION AND PLACE THE NEW LIFT STATION IN FULL TIME OPERATION.

20.PERFORM DEMOLITION OF THE EXISTING LIFT STATION AS SHOWN ON SHEET C00.3.

21. CONSTRUCT THE NEW CONCRETE DRIVEWAY.

22.PERFORM SITE CLEANUP AND FINAL DRESSING AND INSTALL THE PERIMETER FENCE.

REV.NO.	DESCRIPTION	DATE
C ISSUED FOR BID		SEPT. 2022
B 100% CLIENT SUBM	ITTAL - NOT FOR CONSTRUCTION	JULY 2022
A 60% CLIENT SUBMI	ITAL - NOT FOR CONSTRUCTION	APRIL 2022





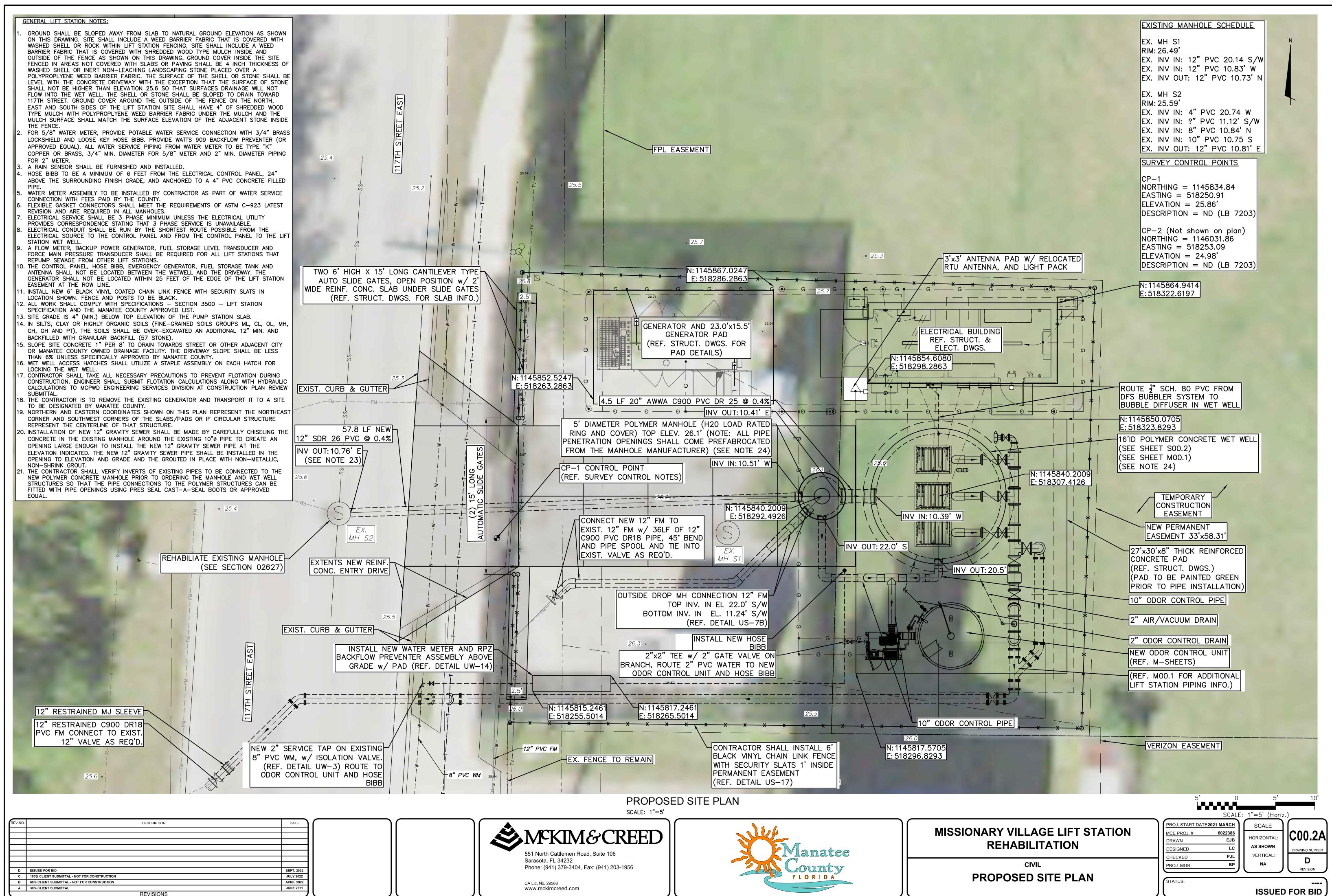
MISSIONARY VILLAGE LIFT STATION REHABILITATION	PROJ. STAR MCE PROJ. # DRAWN DESIGNED CHECKED	T DATE2021 MARCH # 6022386 EJB LC PJL	SCALE HORIZONTAL: N/A VERTICAL:	G00.3
GENERAL CONSTRUCTION SEQUENCE NOTES	PROJ. MGR.	ВР		C REVISION

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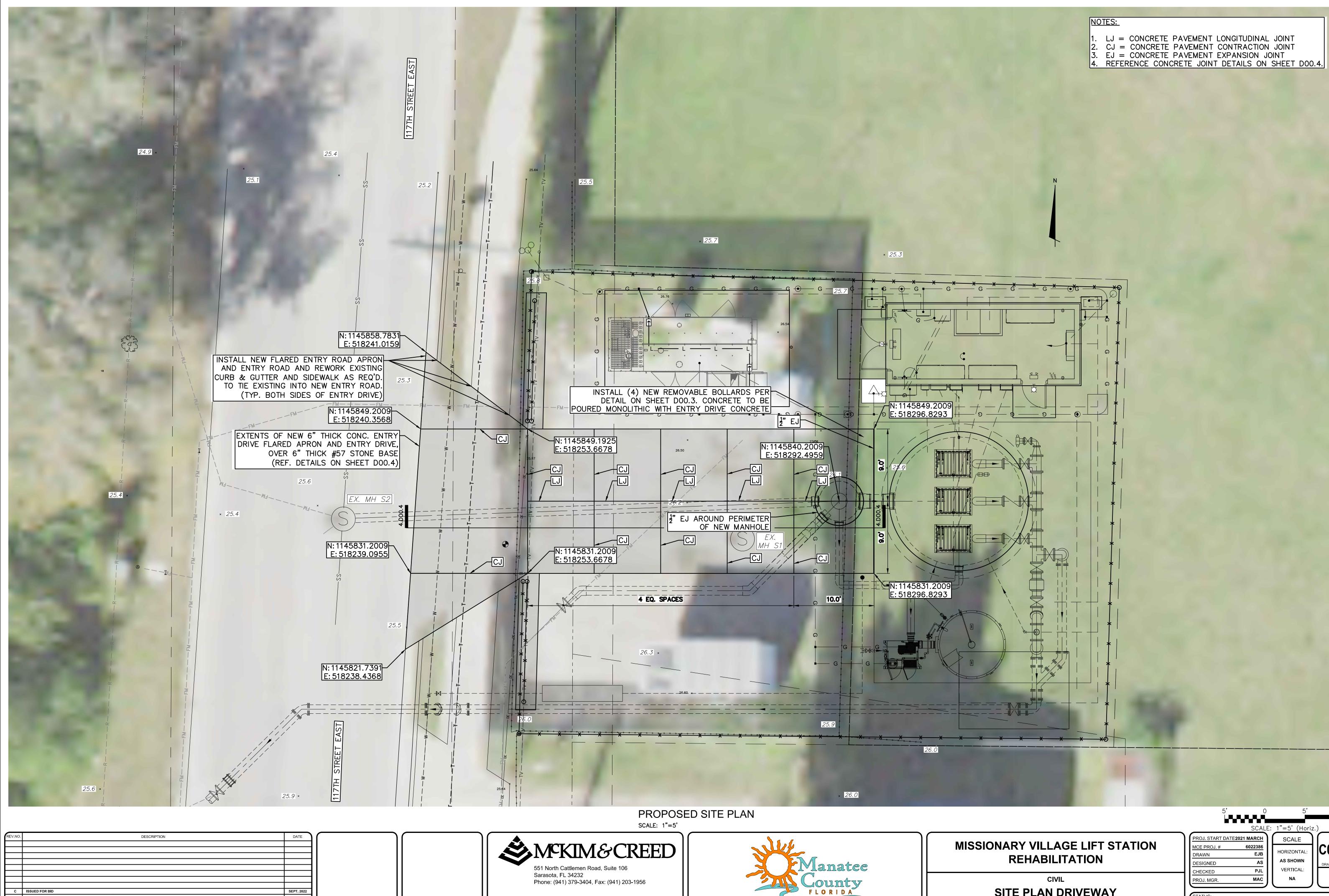


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REV NO.	DESCRIPTION	DATE
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с	100% CLIENT SUBMITTAL - NOT FOR CONSTRUCTION	JULY 2022
В	60% CLIENT SUBMITTAL - NOT FOR CONSTRUCTION	APRIL 2022
Α	30% CLIENT SUBMITTAL	JUNE 2021
	REVISIONS	

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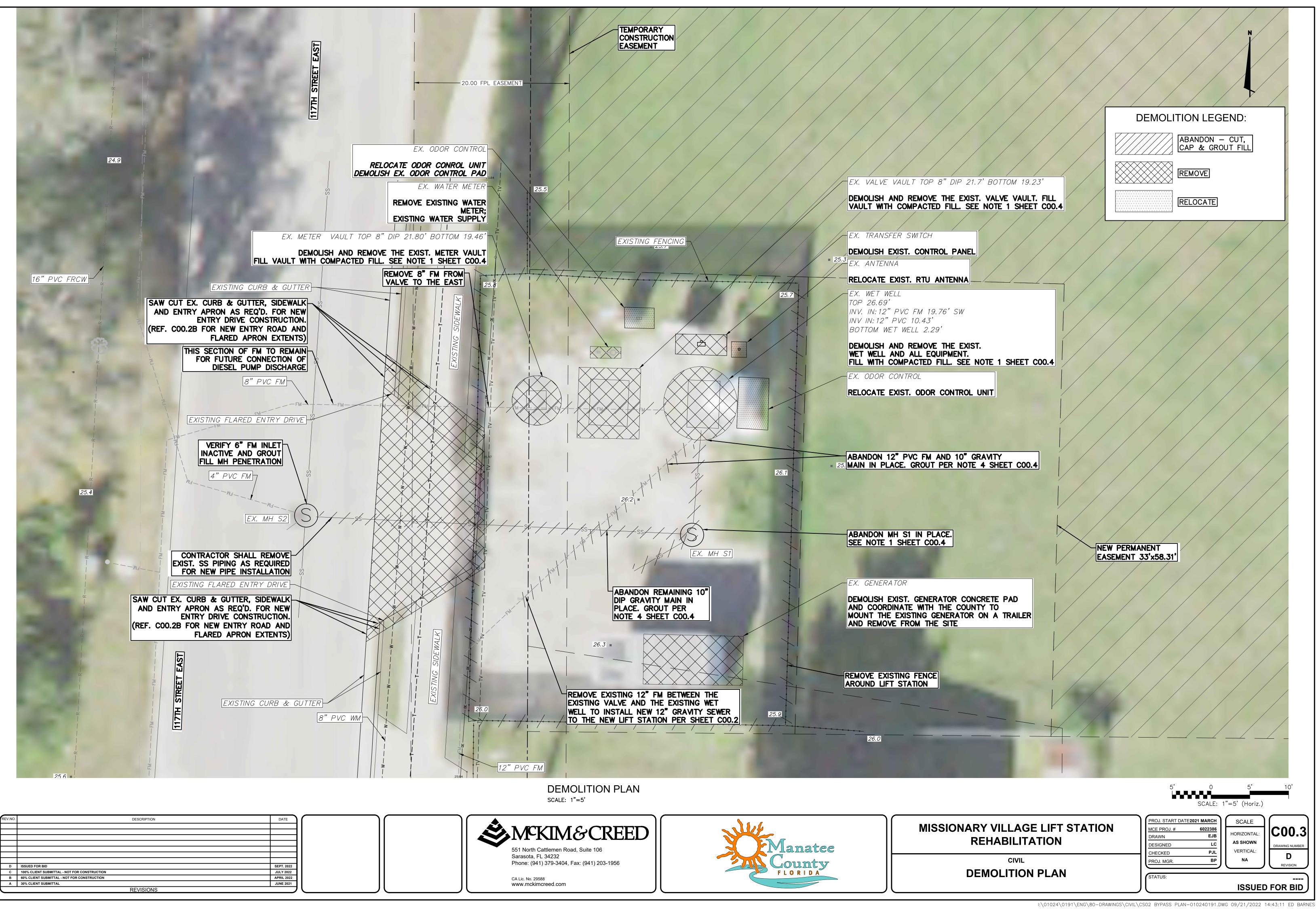
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С	ISSUED FOR BID	SEPT. 2022
В	100% CLIENT SUBMITTAL - NOT FOR CONSTRUCTION	JULY 2022
Α	60% CLIENT SUBMITTAL - NOT FOR CONSTRUCTION	APRIL 2022
	REVISIONS	

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SITE PLAN DRIVEWAY

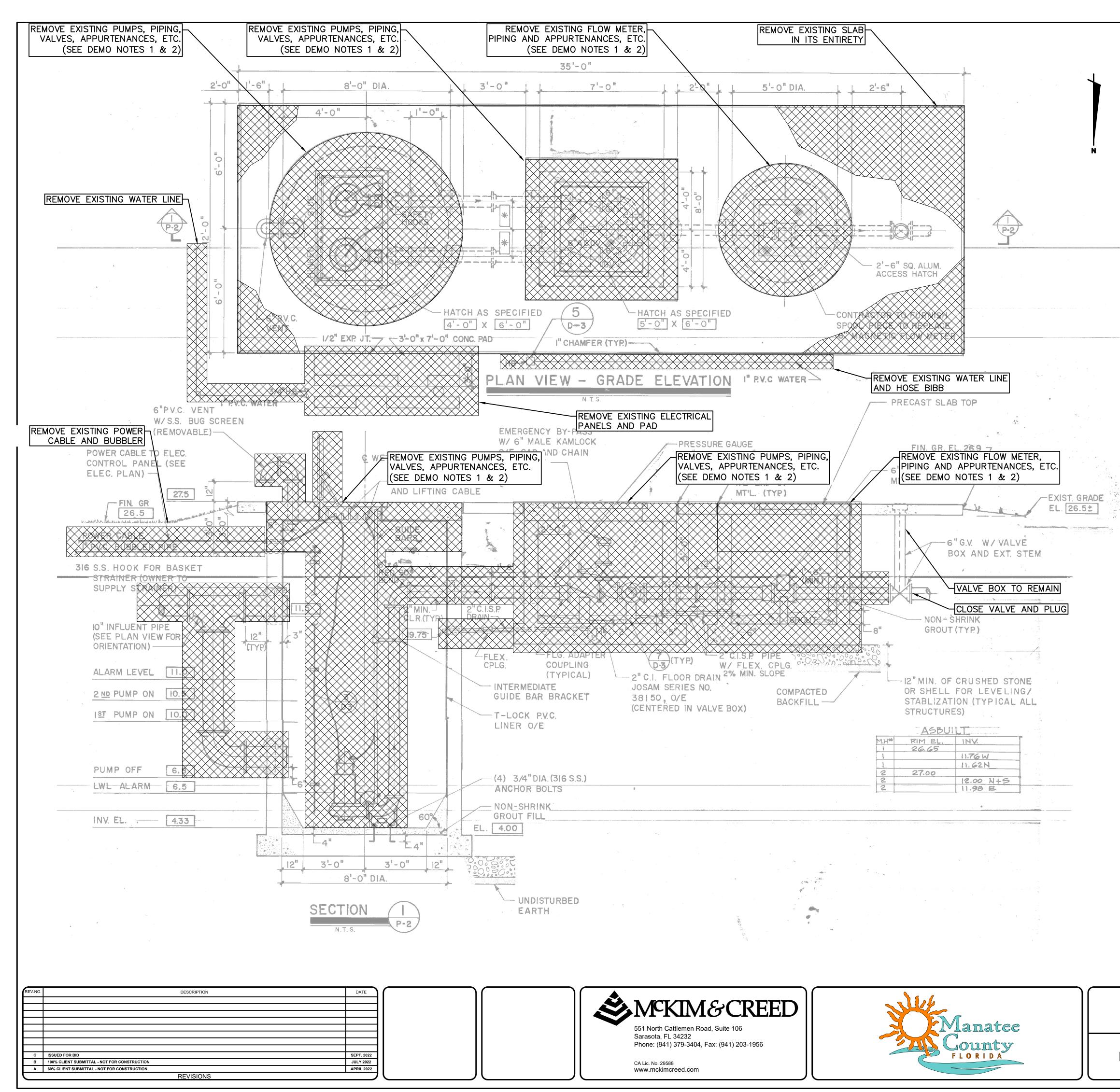
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PROJ. START DATE	2021 MARCH	SCALE	
MCE PROJ. #	6022386		C00.2B
DRAWN	EJB	HORIZONTAL:	
DESIGNED	AS	AS SHOWN	DRAWING NUMBER
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D	ISSUED FOR BID	SEPT. 2022
С	100% CLIENT SUBMITTAL - NOT FOR CONSTRUCTION	JULY 2022
В	60% CLIENT SUBMITTAL - NOT FOR CONSTRUCTION	APRIL 2022
Α	30% CLIENT SUBMITTAL	JUNE 2021
	REVISIONS)





DEMOLITION LEGEND:
ABANDON – CUT, CAP & GROUT FILL
REMOVE
RELOCATE

DEMOLITION NOTES:

- 1. REMOVE TOP 3 FEET OF STRUCTURES, OR FIRST SECTION IF PREFERRED,
- INCLUDING TOP SLABS UNLESS NOTED OTHERWISE.
- 2. DRILL MINIMUM OF (3) 12" DIAMETER HOLES IN ALL STRUCTURE BASE SLABS WITHIN EACH STRUCTURE AND FILL STRUCTURE WITH CLEAN SAND COMPACTED TO 95% RELATIVE COMPACTION.
- 3. EXISTING RECORD DRAWINGS FROM "SOUTHEAST SUBREGIONAL WASTEWATER TREATMENT FACILITIES", PUMP STATION AND FORCE MAIN PHASE I-SEGMENT C-PART 2, DATED MARCH 1989.
- 4. ALL EXISTING GRAVITY MAINS AND FORCE MAINS THAT ARE TO BE ABANDONED-IN-PLACE SHALL BE GROUTED COMPLETELY FULL WITH CEMEX SAP CODE 1386014 OR APPROVED EQUAL AND OPENINGS TO BE SEALED WITH APPROPRIATE PIPE FITTINGS.
- 5. REMOVE THE VALVE AND METER VAULTS IN THEIR ENTIRETY, INCLUDING BASE SLABS.

MISSIONARY VILLAGE LIFT STATION REHABILITATION

MCE PROJ. # DRAWN DESIGNED CHECKED	6022386 EJB AS PJL	HORIZONTAL: AS SHOWN VERTICAL:	COO.4
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	REVISIONS	

1 GENERAL NOTES	3 FOUNDATIONS CTD.
 1.1 ALL WORK IS TO BE PERFORMED IN A GOOD, WORKMANLIKE AND PROFESSIONAL MANNER. 1.2 ALL CONSTRUCTION SHALL BE IN STRICT COMPLIANCE WITH THE REQUIREMENTS OF THE FLORIDA BUILDING CODE, 2020 EDITION, OR LOCAL BUILDING CODE REQUIREMENTS IF MORE STRINGENT. 1.3 THESE DRAWINGS DO NOT SHOW PROVISIONS FOR SAFETY DURING CONSTRUCTION. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO PROVIDE THE REQUIRED BRACING, 	3.10 CONTRACTOR IS TO VERIFY THE ELEVATION AND LOCATION OF ALL EXISTING AND PROPOSED UTILITIES PRIOR TO CONSTRUCTION. ANY "KNOWN" UTILITY LINES DAMAGED WILL BE REPLACED AT THE CONTRACTOR'S EXPENSE. IF ANY "UNKNOWN" UTILITY LINES ARE ENCOUNTERED WHEN EXCAVATING THE CONTRACTOR IS TO CEASE ALL EXCAVATION ACTIVITY UNTIL THE ENGINEER AND OWNER ARE NOTIFIED AND INSTRUCTIONS ARE PROVIDED ABOUT HOW TO PROCEED.
SHORING, AND SAFETY DEVICES THROUGHOUT THE CONSTRUCTION OF THIS PROJECT.	3.11 THE CONTRACTOR SHALL OBTAIN THE OWNER'S PERMISSION BEFORE ENCASING OR BACK FILLING AROUND ANY EXISTING UNDERGROUND STRUCTURE, PIPING, ELECTRICAL, OR OTHER UNDERGROUND WORK.
2 COORDINATION	4 REINFORCING STEEL
2.1 STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH AND COORDINATED WITH ARCHITECTURAL, CIVIL, ELECTRICAL, HVAC, MECHANICAL & PLUMBING DRAWINGS, INCLUDING VENDOR SUBMITTAL DRAWINGS AND OTHER CONTRACT DOCUMENTS.	4.1 BARS SHALL BE ROLLED FROM NEW BILLET-STEEL OF DOMESTIC MANUFACTURE CONFORMING TO "STANDARD SPECIFICATION FOR DEFORMED AND PLAIN BILLET STEEL BARS FOR CONC. REINFORCEMENT," ASTM A615, GRADE 60.
2.2 COORDINATE THE EXACT SIZE AND LOCATION OF ALL SLEEVES AND OPENINGS THROUGH WALLS OR CONCRETE SLABS WITH ARCHITECTURAL, CIVIL, ELECTRICAL, HVAC, MECHANICAL & PLUMBING DRAWINGS, INCLUDING VENDOR SUBMITTAL DRAWINGS AND OTHER CONTRACT DOCUMENTS.	4.2 DETAIL AND FABRICATE REINFORCING STEEL IN ACCORDANCE WITH THE AMERICAN CONCRETE INSTITUTE "ACI DETAILING MANUAL," LATEST PUBLICATION.
2.3 ANY DISCREPANCIES BETWEEN ACTUAL CONDITIONS AND THOSE SHOWN ON THESE DRAWINGS ARE TO BE BROUGHT TO THE ATTENTION OF THE STRUCTURAL ENGINEER BEFORE WORK	4.3 REINFORCING STEEL IN PLACE SHALL BE REVIEWED BY THE OWNER'S CONSTRUCTION REPRESENTATIVE PRIOR TO PLACEMENT OF CONCRETE.
PROCEEDS, INCLUDING ORDERING AND FABRICATING MATERIALS. 2.4 INDEPENDENT TESTING OF MATERIALS SHALL BE PROVIDED AS DEFINED IN PROJECT SPECIFICATIONS. IN GENERAL	4.4 WELDED WIRE FABRIC SHALL CONFORM TO "STANDARD SPECIFICATION FOR WELDED STEEL WIRE FABRIC FOR CONCRETE REINFORCEMENT," ASTM A1064.
 PROJECT INVOLVES THE FOLLOWING: A. SOIL/FILL COMPACTION & BEARING. B. C.I.P. CONCRETE. C. MASONRY. 	4.5 PLACE WELDED WIRE FABRIC AT CENTER OF SLABS-ON-GRADE AND ELEVATED SLAB TOPPINGS OVER METAL DECK, UNLESS NOTED OTHERWISE.
D. STRUCTURAL STEEL.2.5 IF COORDINATION OF INFORMATION PRESENTED CONFLICTS w/	4.6 PROVIDE BARS AT CORNERS AND INTERSECTIONS OF WALLS & FOOTINGS OF THE SAME NUMBER AND SIZE AS LONGITUDINAL BARS, U.N.O. ON THE DRAWINGS.
THE PROJECT SPECIFICATIONS, THE DRAWINGS WILL TAKE PRECEDENCE. 2.6 IN GENERAL CALL-OUTS ARE FOR NEW CONSTRUCTION U.N.O	4.7 FABRICATE CONTINUOUS BARS IN WALLS, SLABS & FOOTINGS TO THE LONGEST PRACTICABLE LENGTHS.
EXISTING CONSTRUCTION CALL-OUTS, ELEVATIONS AND DIMENSIONS OF EXISTING STRUCTURES ARE BASED ON EXISTING RECORD DRAWINGS PROVIDED TO McKIM & CREED. THE (*) SYMBOL	4.8 REINFORCING STEEL SHALL NOT BE BENT AFTER BEING PARTIALLY EMBEDDED IN HARDENED CONCRETE.
ON INDIVIDUAL FACILITY "STRUCTURAL" DRAWINGS INDICATES EXISTING CONSTRUCTION CALL-OUTS, CONDITIONS, ELEVATIONS AND DIMENSIONS TO BE FIELD VERIFIED BY THE GENERAL	4.9 BARS SHALL BE COLD BENT AND SHALL NOT BE HEATED FOR ANY REASON.
CONTRACTOR U.N.O. PRIOR TO CONSTRUCTION, INCLUDING ORDERING AND FABRICATING MATERIALS. RECORD DRAWINGS PROVIDED BY MANATEE	4.10 REINFORCING BARS SHALL NOT BE WELDED U.N.O. ON THE DRAWINGS.
COUNTY UTILIZED INCLUDES: A. NONE. 2.7 SPECIAL INSPECTIONS (IF APPLICABLE): ALL FOUNDATION SOILS, REINF. STEEL, C.I.P. CONCRETE, CONCRETE MASONRY AND	4.11 REFERENCE DRAWINGS FOR REQUIREMENTS FOR LAP SPLICING REINFORCING STEEL IN CONCRETE. ALL "LCS" SHALL CONFORM TO CLASS B SPLICE CRITERIA & IT IS ACCEPTABLE TO LAP SPLICE NON "LCS" A MINIMUM 50 BAR DIAMETERS, UNLESS NOTED OTHERWISE.
STRUCTURAL STEEL WORK SHALL BE REVIEWED AS STATED IN CONJUNCTION w/ THEIR RESPECTIVE NOTES BELOW.	4.12 LAP SPLICED BARS IN CONCRETE ARE TO BE WIRE TIED.
3 FOUNDATIONS	5 CONCRETE
I 3.1 SHALLOW FOUNDATION CRITERIA: DESIGN ALLOWABLE SOIL BEARING PRESSURE - IN ACCORDANCE WITH THE PROJECT GEOTECHNICAL REPORT AS PREPARED BY	5.1 IN GENERAL CONCRETE SHALL DEVELOP 3,000 TO 4,500 PSI MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS. REFERENCE "DESIGN CRITERIA" THIS DWG. & PROJECT SPECIFICATIONS, FOR APPLICATION & SPECIFIC CONCRETE MIX DESIGN REQUIREMENTS.
TERRACON (PROJECT No. HC205091, DATED MAY 26, 2021. SHALLOW FOUNDATIONS HAVE BEEN PROPORTIONED FOR A MINIMUM ALLOWABLE BEARING CAPACITY OF 2,500 PSF AT THE WET WELL MAT AND 2,000 PSF AT THE SLAB-ON-GRADE STRUCTURES. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THIS VALUE PRIOR	5.2 CONCRETE WORK SHALL CONFORM T0 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE", ACI 318 & TO "CODE REQUIREMENTS FOR ENVIRONMENTAL ENGINEERING CONCRETE STRUCTURES", ACI 350 (LATEST EDITIONS).
TO FOUNDATION CONSTRUCTION. IN AREAS WHERE THE SOIL DOES NOT YIELD THIS BEARING STRESS VALUE, ADJUSTMENT IN THE FOOTING DEPTHS AND FOUNDATION DIMENSION MAY BE MADE BY THE ENGINEER BEFORE WORK PROCEEDS. CONTRACTOR IS	5.3 PLACE 1/2 INCH EXPANSION JOINT MATERIAL BETWEEN EDGES OF SLABS AND VERTICAL SURFACES UNLESS NOTED OTHERWISE.
RESPONSIBLE FOR PERFORMING ANY SUCH ADJUSTMENTS. 3.2 PREPARE THE EXISTING SUBGRADE IN ACCORDANCE w/ THE PROJECT GEOTECHNICAL REPORT AS PREPARED BY TERRACON (PROJECT No. HC205091, DATED MAY 26, 2021. IN THE EVENT	5.4 PROVIDE CONSTRUCTION OR CONTROL JOINTS IN SLABS & WALLS AT LOCATIONS SHOWN ON DRAWINGS, AT OFFSETS AND CHANGES IN DIRECTION AND AT THIRTY (30) FEET MAXIMUM U.N.O GENERAL CONTRACTOR TO PROVIDE CONSTRUCTION JOINT LAYOUT PLAN PER THE PROJECT SPECIFICATIONS PRIOR TO
UNUSUAL SOIL CONDITIONS ARE UNCOVERED, INCLUDING CONDITIONS THAT DEVIATE FROM THOSE DESCRIBED IN THE PROJECT GEOTECHNICAL REPORT, NOTIFY THE OWNER AND	CONSTRUCTION, INCLUDING ORDERING & FABRICATING MATERIALS. 5.5 CHAMFER EXPOSED EDGES OF CONCRETE 3/4 INCH, UNLESS
ENGINEER PRIOR TO FOUNDATION CONSTRUCTION FOR INSTRUCTIONS HOW TO PROCEED. ADJUSTMENT IN THE FOOTING DEPTHS AND GENERAL FOUNDATION CONSTRUCTION MAY BE MADE BY THE ENGINEER BEFORE WORK PROCEEDS. CONTRACTOR IS	NOTED OTHERWISE. 5.6 CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER CURING OF ALL CONCRETE. CURING METHODS SHALL CONFORM TO "BUILDING
RESPONSIBLE FOR PERFORMING ANY SUCH ADJUSTMENTS. 3.3 FOOTING & BASE SLAB EXCAVATIONS AND FORMS SHALL BE	CODE REQUIREMENTS FOR REINFORCED CONCRETE", ACI 318, "CODE REQUIREMENTS FOR ENVIRONMENTAL ENGINEERING CONCRETE STRUCTURES" ACI 350 AND "STANDARD PRACTICE FOR
REVIEWED BY AN OWNER'S CONSTRUCTION REPRESENTATIVE PRIOR TO PLACEMENT OF CONCRETE. 3.4 FOOTING & BASE SLAB ELEVATIONS SHALL NOT BE RAISED OR	CURING CONCRETE," ACI 308, LATEST EDITIONS. 5.7 UNLESS NOTED OTHERWISE DOWELS SHALL BE THE SAME NUMBER AND SIZE AS THE LARGEST VERTICAL BAR TO WHICH THEY
LOWERED WITHOUT APPROVAL OF THE STRUCTURAL ENGINEER. 3.5 ALL EXCAVATIONS SHALL BE ADEQUATELY DEWATERED BEFORE PLACEMENT OF CONCRETE. NO CONCRETE OR CONCRETE FILL	ARE SPLICED. 5.8 REFERENCE PROJECT SPECIFICATIONS FOR REQUIRED FINISHES.
SHALL BE PLACED IN STANDING WATER. ACCUMULATION EXCEEDING 1 INCH SHALL BE PUMPED OUT. 3.6 ALL FILL INSIDE THE STRUCTURE/BUILDING'S FOOTPRINT AND	5.9 CONTRACTOR SHALL SUBMIT REBAR SHOP DRAWINGS FOR APPROVAL TO OWNER PRIOR TO FABRICATION. DO NOT FABRICATE REINFORCING PRIOR TO RECEIPT OF APPROVED SHOP DRAWINGS.
BELOW FOUNDATIONS SHALL BE SELECT MATERIAL FREE FROM ROOTS, TRASH WOOD SCRAPS, AND OTHER EXTRANEOUS MATERIALS. PLACE FILL IN LIFTS NOT EXCEEDING THE RECOMMENDATIONS OF THE PROJECT GEOTECHNICAL REPORT AS PREPARED BY TERRACON (PROJECT No. HC205091, DATED MAY 26,	5.10 CAST-IN-PLACE REINFORCED CONCRETE SHALL HAVE A MINIMUM (28) DAY OF COMPRESSIVE STRENGTH AS SPECIFIED IN SECTION 16 - DESIGN CRITERIA. DOCUMENTATION INDICATING THE PROPOSED CONCRETE PROPORTIONS WILL PRODUCE AN AVERAGE COMPRESSIVE STRENGTH EQUAL TO OR GREATER THAN THE DECUMPED AVERAGE COMPRESSIVE STRENGTH IN ACCORDANCE
2021. 3.7 ALL FOOTINGS SHALL BE CENTERED UNDER THE SUPPORTED WALL/COLUMN MEMBER UNLESS NOTED OTHERWISE.	REQUIRED AVERAGE COMPRESSIVE STRENGTH IN ACCORDANCE WITH ACI 301-10, SECTIONS 4.2.3.4.A OR 4.2.3.4.B SHALL BE SUBMITTED FOR ACCEPTANCE PRIOR TO CONCRETE PLACEMENT.
3.8 CONSTRUCTION JOINTS IN FOUNDATION SLABS, WALLS,	5.11 ROUGHEN THE "BASE" CONCRETE POUR SURFACE TO A FULL AMPLITUDE OF 1/4" MINIMUM, WHERE NOTED ON THE CONSTRUCTION DRAWINGS.
FOOTINGS SHALL BE MADE AT LOCATIONS SHOWN ON DRAWINGS.	
FOOTINGS SHALL BE MADE AT LOCATIONS SHOWN ON DRAWINGS. 3.9 ANCHOR BOLTS SHALL BE SET BY MEANS OF TEMPLATE. "FLOATING" ANCHOR BOLTS INTO PLACE IS PROHIBITED.	
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JULY 2022

APRIL 2022

A 60% CLIENT SUBMITTAL - NOT FOR CONSTRUCTION

REVISIONS

CONCRETE CTD. 5

- 5.12 CONCRETE ACCESSORIES AS FOLLOWS: a.) PREFORMED WATERSTOPS SHALL BE PVC 6 INCH LONG w/ 3/8 INCH (MIN.) CENTER BULB & TAPERED RIB ENDS AND IN ACCORDANCE w/ THE PROJECT SPECIFICATIONS.
- b.) EXPANSIVE WATERSTOPS SHALL BE ADEKA ULTRA SEAL TYPE MC-2010M. THE WATERSTOPS CAN BE EITHER ADHERED TO THE CONCRETE WITH 3M-2141 BONDING ADHESIVE OR NAILED IN PLACE USING 1.5 INCH CONCRETE NAILS 3 TO 6 INCHES APART OR AN APPROVED EQUAL.
- c.) RETROFIT WATERSTOPS SHALL BE SIKA WESTEC ENVIROSTOP TPE TYPE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.
- d.) CAULK/SEALANT BASF MASTERSEAL CR125. e.) BONDING AGENT - SHALL BE STRUCTURAL EPOXY ADHESIVE CONFORMING TO ASTM C-881 TYPE I STRENGTH AND II, GRADE 2, CLASS B AND C w/ A MINIMUM BOND STRENGTH OF
- 1900 PSI. 1.) SIKA ARMATEC 110 EpoCem OR AN APPROVED EQUAL.
- 5.13 CONCRETE POST INSTALLED ANCHORS NOTE THE FOLLOWING: a.) BOLTED ANCHORING SYSTEMS EMBEDDED IN CONCRETE SHALL BE RED HEAD, C6 EPOXY ADHESIVE ANCHORING SYSTEM OR AN APPROVED EQUAL. MECHANICAL WEDGE TYPE ANCHORS ARE NOT ALLOWED.
- b.) REBAR ANCHORING SYSTEM EMBEDDED IN CONCRETE SHALL BE RED HEAD, C6 EPOXY ADHESIVE ANCHORING SYSTEM OR AN APPROVED EQUAL. DEPTH OF REBAR EMBEDMENT SHALL MEET MFG.'s RECOMMENDATIONS TO ENSURE DEVELOPMENT OF THE FULL TENSILE STRENGTH OF THE REINFORCING BAR.

GROUT

6

6.1 PROVIDE NON-SHRINK GROUT UNDER ALL COLUMN BASE PLATES AND BEAM BEARING PLATES AND ELSEWHERE AS INDICATED ON DRAWINGS. NON-SHRINK GROUT SHALL CONFORM TO ASTM C1107.

6.2 GROUT SHALL BE NON-METALLIC AND NON-STAINING AND HAVE A MINIMUM COMPRESSIVE STRENGTH OF 5,000 PSI.

MASONRY

7.1 THE CONSTRUCTION OF MASONRY SHALL COMPLY WITH THE REQUIREMENTS OF TMS 402/602-16. SPECIAL ATTENTION SHALL BE GIVEN TO THE MOISTURE CONTENT AND WEATHER CONDITIONS DURING CONSTRUCTION. REFERENCE BUILDING SERIES AND/OR THESE STRUCTURAL DRAWINGS FOR LOCATIONS OF VERTICAL CONTROL/EXPANSION JOINTS.

7.2 CONCRETE MASONRY UNITS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C90. UNITS ARE TO BE NORMAL WEIGHT UNLESS NOTED OTHERWISE. THE NET AREA COMPRESSIVE STRENTH OF CONCRETE MASONRY SHALL BE 2,000 PSI.

7.2 REQUIRED COMPRESSIVE STRENGTH OF MASONRY ASSEMBLAGE, f'm, IS 2,000 psi (MINIMUM), U.N.O. ON THE DRAWINGS.

7.3 MORTAR SHALL CONFORM TO THE REQUIREMENTS OF ASTM C270 AND SHALL BE TYPE "S" w/ PORTLAND CEMENT (ASTM C150), MASONRY SAND (ASTM C144) AND HYDRATED LIME (ASTM C207). CALCIUM CHLORIDE IS PROHIBITED.

7.4 GROUT/CONCRETE FILL FOR HOLLOW MASONRY UNITS SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3.000 PSI & IF CONCRETE, SHALL BE NORMAL WEIGHT PEA-GRAVEL CONCRETE.

7.5 JOINT REINFORCING: "LADDER/TRUSS TYPE" REFERENCE PROJECT SPECIFICATIONS AND/OR THESE STRUCTURAL DRAWINGS.

7.6 JOINT ANCHORS: REFERENCE PROJECT SPECIFICATIONS.

7.7 WALL TO COLUMN TIES: REFERENCE PROJECT SPECIFICATIONS.

7.8 MASONRY CONSTRUCTION INCLUDING GROUT FILL, MORTAR AND HORIZONTAL & VERTICAL REINFORCING TO BE REVIEWED BY THE THE OWNER'S CONSTRUCTION REPRESENTATIVE THROUGHOUT MASONRY & CONCRETE CONSTRUCTION OF THE PROJECT. THESE **REVIEWS SHALL CONFORM TO THE REQUIREMENTS OF CHAPTER 17** OF THE FLORIDA BUILDING CODE.

STRUCTURAL STEEL 8

8.1 STEEL SHALL CONFORM TO "STANDARD SPECIFICATION FOR STRUCTURAL STEEL," ASTM A36 (Fy=36 KSI) FOR ANGLES, PLATES & CHANNELS. WIDE FLANGE SECTIONS SHALL CONFORM TO ASTM A992 (Fy=50 KSI). HOLLOW STEEL SECTIONS (HSS) SHALL CONFORM TO ASTM A500, GRADE B (Fy=46 KSI). STEEL PIPE SHALL CONFORM TO ASTM A53, GRADE B, (Fy=35 KSI). STAINLESS STEEL WHERE INDICATED SHALL BE ASTM A276, TYPE S31603 (316L) (Fy=25 KSI).

8.2 STEEL WORK SHALL CONFORM TO "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL BUILDINGS", OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION, INC., (LATEST EDITION), INCLUDING ALL SUPPLEMENTS AND THE "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES", (LATEST EDITION).

8.3 CONNECTION BOLTS SHALL BE 3/4 INCH DIAMETER CONFORMING TO "STANDARD SPECIFICATION FOR HIGH-STRENGTH BOLTS FOR STRUCTURAL STEEL JOINTS", GROUP A, ASTM F3125, GRADE A325, UNLESS NOTED OTHERWISE CONNECTIONS ARE BEARING TYPE WITH THREADS EXCLUDED FROM SHEAR PLANES (GROUP A-X). STAINLESS STEEL WHERE INDICATED SHALL BE ASTM F593, ALLOY GROUP 2.

8.4 WELDING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE AMERICAN WELDING SOCIETY AWS D1.1 "STRUCTURAL WELDING CODE". WELDING SHALL BE PERFORMED BY CERTIFIED PERSONNEL WHO HAVE BEEN PREVIOUSLY QUALIFIED BY TEST PRESCRIBED IN THE AWS "STRUCTURAL WELDING CODE". ELECTRODES SHALL CONFORM TO AWS 5.5, E70XX.

STRUCTURAL STEEL CTD. 8

8.5 THE CONTRACTOR SHALL PROVIDE ADEQUATE TEMPORARY BRACING, SHORING, AND GUYING OF STEEL FRAMING AGAINST WIND, CONSTRUCTION LOADS, AND OTHER TEMPORARY FORCES UNTIL SUCH PROTECTION IS NO LONGER REQUIRED FOR THE SAFE SUPPORT OF THE FRAMING.

8.6 ANCHOR BOLTS SHALL BE ASTM F1554 OR ASTM A36 & SHALL BE EITHER HEADED w/ NUTS TACK WELDED TO BOLTS OR NON-HEADED W/ HOOKS AS REQUIRED BY THE DRAWINGS. PROVIDE (2) NUTS AND WASHERS WITH EACH ANCHOR BOLT AT COLUMNS UNLESS NOTED OTHERWISE. STAINLESS STEEL WHERE INDICATED SHALL BE ASTM F593, ALLOY GROUP 2.

8.7 ALL DESIGN, DETAILING, FABRICATION AND ERECTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) MANUAL OF STEEL CONSTRUCTION.

8.8 ALL GALVANIZED MATERIALS THAT ARE FIELD CUT, FIELD WELDED OR DAMAGED IN SURFACE FINISH SHALL BE CLEANED AND RE-COATED w/ A 98% ZINC RICH OXIDE AND IN CONFORMANCE w/ THE PROJECT SPECIFICATIONS.

8.9 STRUCTURAL STEEL FRAMING TO BE REVIEWED BY THE THE OWNER'S CONSTRUCTION REPRESENTATIVE.

ALUMINUM 9

NOT APPLICABLE.

PRECAST CONCRETE 10

10.1 PRE-CAST CONCRETE FIELD ASSEMBLED STRUCTURES TO BE POLYMER CONCRETE TYPE IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND DESIGNED BY THE PRE-CAST MANUFACTURER UTILIZING "DESIGN LOADS" PROVIDED THIS DRAWING AND/OR THE RESPECTIVE FACILITY STRUCTURAL DRAWINGS AND IN ACCORDANCE W/ THE PROJECT SPECIFICATIONS. COORDINATE W/ THE CIVIL, ELECTRICAL, MECHANICAL AND VENDOR EQUIPMENT DRAWINGS FOR ADDITIONAL MATERIALS REQUIRED FOR CALCULATION OF THE DEAD LOADS, LIVE LOADS AND EQUIPMENT LOADS, THAT MAY BE SUSPENDED FROM THE SIDES OF WALL PANELS AND UNDERSIDE OF THE TOP SLAB PANELS AS APPLICABLE.

10.2. PRE-CAST CONCRETE FIELD ASSEMBLED STRUCTURES MANUFACTURER IS REQUIRED TO SUBMIT DRAWINGS AND CALCULATION PACKAGES SEALED, SIGNED AND DATED BY AN ENGINEER CURRENTLY LICENSED BY THE STATE OF FLORIDA. FABRICATION OF THE PRE-CAST FIELD ASSEMBLED STRUCTURES COMPONENTS SHOULD NOT OCCUR UNTIL "FINAL" APPROVAL OF THE MANUFACTURER'S DRAWINGS AND CALCULATIONS SUBMITTALS.

10.3 REFERENCE MECHANICAL AND STRUCTURAL DRAWINGS FOR PRE-CAST CONCRETE FIELD ASSEMBLED STRUCTURES FOUNDATION SYSTEMS AND BEARING ELEVATIONS, DIMENSIONS, WALL AND TOP SLAB OPENINGS & TOP SLAB SLOPE REQUIREMENTS.

10.4 REFERENCE MECHANICAL DRAWINGS & PROJECT SPECIFICATIONS FOR ALL INTERIOR AND EXTERIOR WALL AND SLAB SECTIONS FINISH REQUIREMENTS.

10.5 PRE-CAST FIELD ASSEMBLED STRUCTURES WALL AND SLAB SECTIONS TO HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 5,000 PSI.

10.6 REFERENCE ALL PROJECT SPECIFICATIONS RELATED TO THE PRE-CAST CONCRETE FIELD ASSEMBLED STRUCTURES FOR ADDITIONAL REQUIREMENTS AND INFORMATION.

10.7 CONSTRUCTION ACTIVITIES RELATED TO THE PRE-CAST FIELD ASSEMBLED STRUCTURES TO BE REVIEWED BY THE THE OWNER'S CONSTRUCTION REPRESENTATIVE THROUGHOUT CONCRETE CONSTRUCTION OF THE PROJECT.

PRE-ENGR. TIMBER TRUSS 11

NOT APPLICABLE.

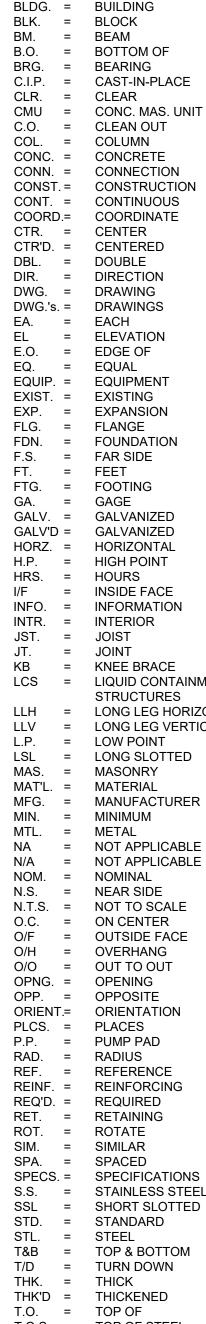
PRE-ENGR. METAL BLDGS. 12

NOT APPLICABLE.

MISC. BUILDING MATERIALS 13

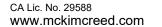
13.1 ALL MISCELLANEOUS MATERIALS ARE TO BE DELIVERED TO SITE & STAGED ON SITE PRIOR TO INSTALLATION. STORE ON SITE AS REQUIRED BY THE MATERIAL MANUFACTURER TO AVOID DAMAGE PRIOR TO INSTALLATION.

13.2 CAULK & SEALANT MATERIAL SHALL BE MASTERSEAL "NP 1" ONE COMPONENT, MOISTURE CURING HIGH PERFORMANCE POLY-URETHANE SEALANT, OR AN APPROVED EQUAL.



STD.	=	STANDARD
STL.	=	STEEL
T&B	=	TOP & BOTTOM
T/D	=	TURN DOWN
THK.	=	THICK
THK'D	=	THICKENED
Т.О.	=	TOP OF
T.O.S	=	TOP OF STEEL
TYP.	=	TYPICAL
U.N.O.	=	UNLESS NOTED
		OTHERWISE
XB	=	CROSS OR "X"-BF
VERT.	=	VERTICAL
W.P.	=	WORK POINT

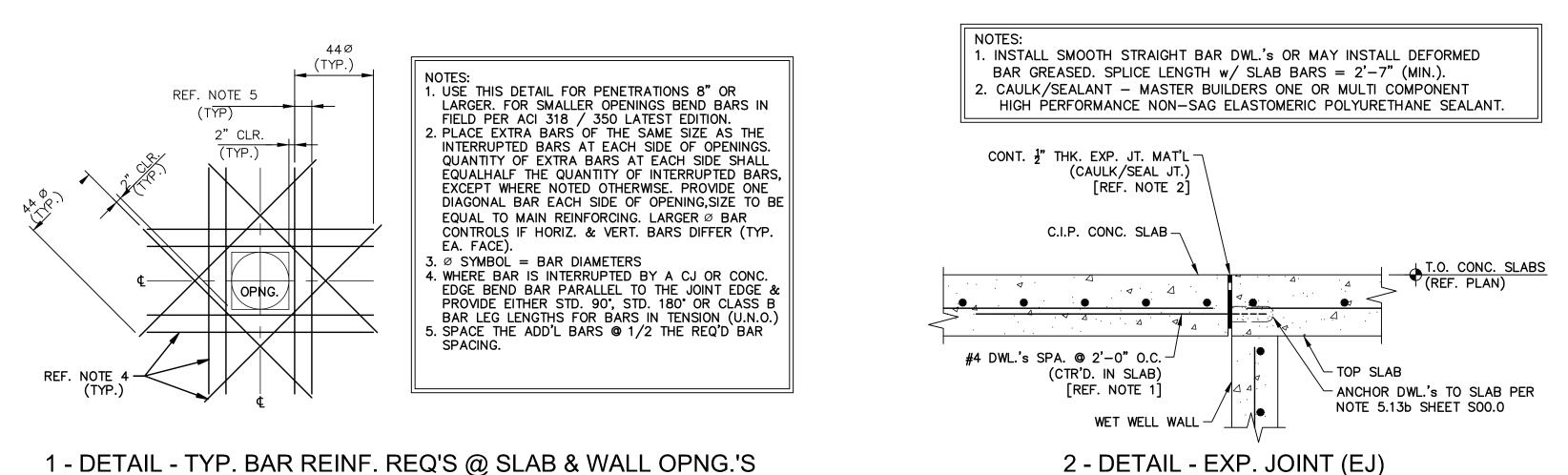






14	ABBR	EVIATIONS	15 DESIGN LOAD)S
14.1 THE F	COLLOWING LIS NT ALL THOSE COMMON AB ADDITIONA ALUMINUM ALTERNAT BUILDING BLOCK BEAM BOTTOM O BEARING CAST-IN-PI CLEAR CONC. MAS CLEAN OU COLUMN CONCRETE CONSTRUC CONSTRUC CONSTRUC CONSTRUC CONSTRUC CONTINUO CONTINUO CONTINUO CONTINUO CONTER CONSTRUC CONTINUO CONTATE SIMILAR SPACED SPECIFICA STANDARE STANDAR	ST OF ABBREVIATIONS IS NOT INTENDED TO USED ON THE DRAWINGS, BUT TO SUPPLEMENT BREVIATIONS USED.	15 DESIGN LOADS DESIGN LOADS BASIS OF DESIGN: FLORIDA BUILDING CODE 2020 EDITION & LIVE LOAD: FLOOR SLABS AND HAT: 200 PSF S00 PSF UNIFOR ROOF LOAD: 20 PSF SNOW LOAD: NA WIND LOAD: S00 PSF UNIFOR CALCULATED WIND BAS VX = 4.11 & VY = 11.5 k (C CV = 4.11 & VY = 11.5 k (C COMPONENTS & CLADD CONC PRESSUR ZONE 2 ROOF PRESSUR ZONE 2 ROOF PRESSUR ZONE 2 ROOF PRESSUR ZONE 3 ROOF PRESSUR ZONE 2 ROOF PRESSUR ZONE 4 WALL PRESSUR SOIL BEARING: REF. "FOUNDATIONS" NOT SOIL BEARING: REF. "FOUNDATIONS" NOT SOIL SONG COMPRESSIVE STREEM SUBSON-GRADDE & NON LCS SLABS MINOR EQUIPMENT PADS & PIPE ENCASE SUBSON-GRADDE & NON LCS SLABS SIDEWARK, DRIVEWAY, CURB & GUITTER: REINFORCING STEEL: YUMINOW VALL, BIAS & VIPE 316 S.S. NON-LOS POOTING STEEL: AUMINUM WELD FILLERS ALLOYS SHALL CONC. MASONRY BLOCK = BRICK VENEER = CONC. MASONRY BLOCK = BRICK VENEER = CONC. WALL, SLAB, ETC. = GRATING <td< th=""><th>ASCE 7-16 FOR WIND DESIGN CHES: MLIVE LOAD AD RISK CATEGORY III SE SHEARS: GENERATOR) ELECTRICAL BLDG.) WIND WIND PRESSURES: RE = 25.2 & -85.1 PSF KE = 25.2 & -107.3 PSF KE = 24.0 & -57.5 PSF TE = 44.0 & -57.5 PSF TE = 44.0 & -57.5 PSF TE = 3.1 ERIA NGTH: fc = 4,000 PSI fc = 4,000 PSIN/A fc = 3,000 PSIN/A fc = 3,0</th></td<>	ASCE 7-16 FOR WIND DESIGN CHES: MLIVE LOAD AD RISK CATEGORY III SE SHEARS: GENERATOR) ELECTRICAL BLDG.) WIND WIND PRESSURES: RE = 25.2 & -85.1 PSF KE = 25.2 & -107.3 PSF KE = 24.0 & -57.5 PSF TE = 44.0 & -57.5 PSF TE = 44.0 & -57.5 PSF TE = 3.1 ERIA NGTH: fc = 4,000 PSI fc = 4,000 PSIN/A fc = 3,000 PSIN/A fc = 3,0
e		MISSIONARY VILLA REHABILI		PROJ. START DATE 2021 MARCH MCE PROJ. # 6022386 DRAWN EJB DESIGNED WFB / AEA OUECKED WEB / PLU SCALE HORIZONTAL: AS SHOWN VERTICAL:
r 1		STRUCT GENERAL NOTES, DES CRITERIA 8	SIGN LOADS, DESIGN	CHECKED WFB / PJL PROJ. MGR. TLC / BRP STATUS: ISSUED FOR BID

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1 - DETAIL - TYP. BAR REINF. REQ'S @ SLAB & WALL OPNG.'S N.T.S.

DEVELOPMENT LENGTH OF STD. HOOKS FOR BARS IN TENSION fy = 60,000 PSIf 'c = 4,000 PSI OR GREATER DEVELOPMENT LENGTH, \mathcal{X} dh BAR SIZE BASIC w/ CONCRETE COVER

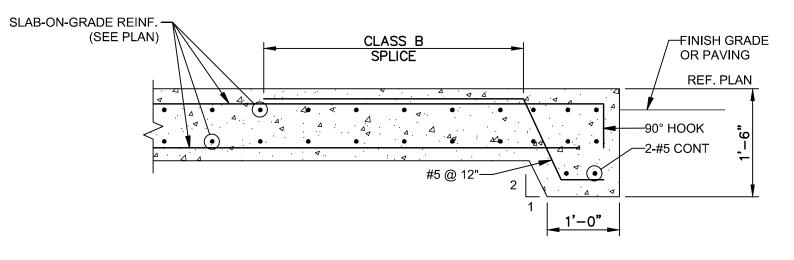
	BASIC	w/ CONCRETE COVER			
# 3	8"	6"			
#4	10"	7"			
# 5	1'-0"	9"			
# 6	1'-2"	10"			
#7	1'-5"	1'-0"			
# 8	1'-7"	1'-1"			
# 9	1'-9"	1'-3"			
#10	2'-0"	1'–5"			
#11	2-2"	1'-6"			
SIDE COVER NORMAL 90° HOOK END COVE	TO PLANE OF H	OOK AT LEAST 2 1/2", AND FOR DE END OF HOOK, AT LEAST 2".			
		∫			

BASIC DEVELOPMENT LENGTH AND SPLICE LENGTH FOR BARS IN COMPRESSION

BASIC DEVE	_OPMENT LENGTH	BAR	SPLICE LENGTH			
BASIC	CONFINEMENT *	SIZE	BASIC	CONFINEMENT **		
8"	8"	#3	1'-0"	1'-0"		
10"	8"	#4	1 ' —3"	1'-1"		
1'-0"	9"	# 5	1'-7"	1'-4"		
1'-3"	1'-0"	# 6	1'—11"	1'-7"		
1'-5"	1'—1"	# 7	2'-2"	1'-10"		
1'-7"	1'-3"	# 8	2'-6"	2'-1"		
1'-9"	1'-4"	# 9	2'-10"	2'-4"		
2'-0"	1'-6"	# 10	3'-2"	2'-7"		
2'-2"	1'-8"	# 11	3'-6"	2'-10"		

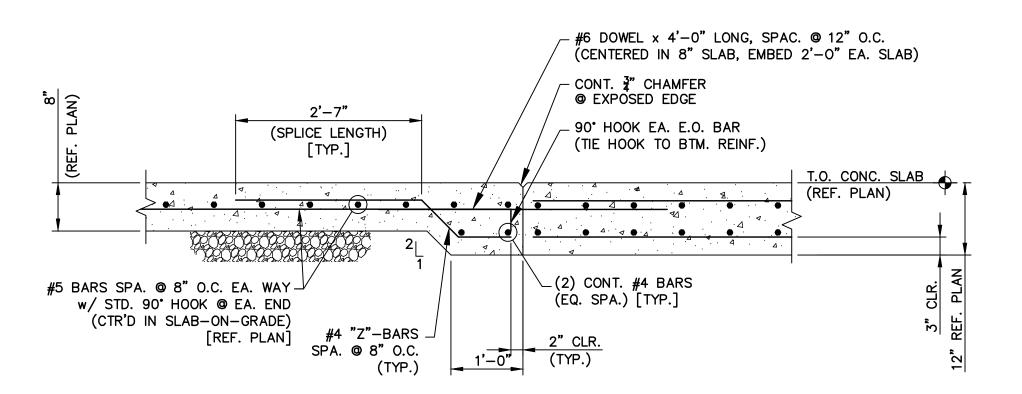
• BAR ENCLOSED w/ IN TIES PER ACI 318 / ACI 350 SECTION 12.17.2.4.

4 - DETAIL - SCHEDULE - REINF. BAR SPLICE REQUIREMENTS N.T.S.



5 - DETAIL - 12" SLAB-ON-GRADE TURN DOWN N.T.S.

REV.NO.	DESCRIPTION	DATE
С	ISSUED FOR BID	SEPT. 2022
в	100% CLIENT SUBMITTAL - NOT FOR CONSTRUCTION	JULY 2022
Α	60% CLIENT SUBMITTAL - NOT FOR CONSTRUCTION	APRIL 2022
	REVISIONS	



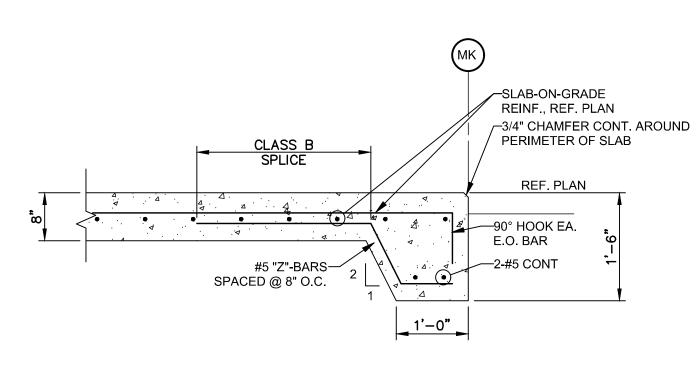
3 - DETAIL - SLAB-ON-GRADE CONSTRUCTION JOINT @ 8" TO 12" N.T.S.

N.T.S.

BASIC DEVELOPMENT LENGTH AND SPLICE LENGTH FOR BARS IN TENSION

fy = 60,000 PSI						f	'c = 4,00	DO PSI OR	GREATER	(NORMAL	WEIGHT CO	NCRETE)
BASIC DEVELOPMENT LENGTH ** (,Ld)							CLASS B	SPLICE LE	NGTH **	(1.3 x	/d)	
CLEAR SPA≥ 4db CLEAR SPA≥ 2db CLEAR SPA. < 2db			BAR SIZE	CLEAR SPA≥ 4db CLEAR SPA.≥ 2db CLEAF			CLEAR SF	SPA. < 2db				
BASIC	TOP *	BASIC	TOP *	BASIC	TOP *		BASIC	TOP *	BASIC	TOP *	BASIC	TOP *
8"	1'-0"	1'-3"	1'-7"	1'-10"	2'-4"	# 3	1'-0"	1'-3"	1'-7"	2'-0"	2'-4"	3'-0"
1'-0"	1'-3"	1'-7"	2'-1"	2'-5"	3'–1"	#4	1'-3"	1'–10"	2'-1"	2'-8"	3'-1"	4'-0"
1'–3"	1'-7"	2'-0"	2'-7"	3'-0"	3'-10"	# 5	1'-7"	2'-1"	2'-7"	3'-4"	3'-10"	5'-0"
1'-6"	1'—11"	2'-5"	3'-1"	3'-7"	4'-8"	# 6	1'-11"	2'-5"	3'-1"	4'-0"	4'-8"	6'-0"
2'-1"	2'-9"	3'-6"	4'-6"	5'-2"	6'-9"	# 7	2'-9"	3'-7"	4'-6"	5 ' —10"	6'-9"	8'-9"
2'-5"	3'–1"	4'-0"	5'-2"	6'-0"	7'-9"	# 8	3'-1"	4'-1"	5'-2"	6'-8"	7'-9"	10'-0"
2'-9"	3'-6"	4'-6"	5'-9"	6'-8"	8'-8"	# 9	3'-6"	4'-7"	5 ' -9"	7'-6"	8'-8"	11'–3"
3'-0"	3'-11"	4'-11"	6'-5"	7'-5"	9'-8"	# 10	3'-11"	5'-1"	6'-5"	8'-4"	9'-8"	12'-6"
3'-4"	4'-3"	5'-5"	7 ' —1"	8'-2"	10'-8"	# 11	4'-3"	5 ' -7"	7'-1"	9'-2"	10'-8"	13'-9"

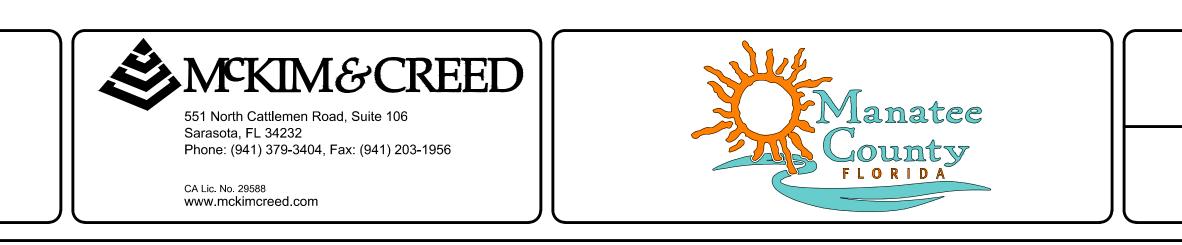
LENGTHS SHOWN IN CHART SHALL BE MODIFIED WHERE REQUIRED TO CONFORM TO THE PROVISIONS OF ACI 318 / ACI 350 SECTION 12.17.2.4.

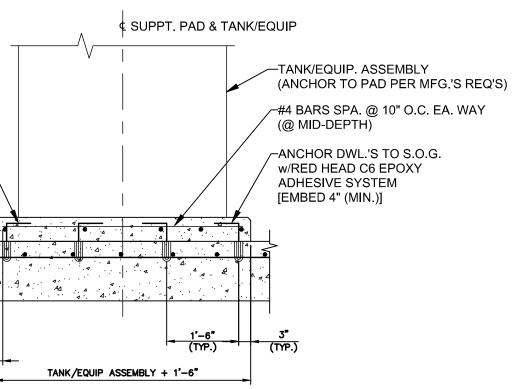


#4 DWL.'S w/STD. 90° HOOK -SPA @ 1' - 6" O.C. EA. WAY CONT. 3/4" CHAMFER-@ E.O. PAD (TYP.) (REF. PLAN) T.O. CONC. SLAB OR MAT (REF. PLAN) (TYP.)

N.T.S.

6 - DETAIL - 8" SLAB-ON-GRADE TURN DOWN N.T.S.

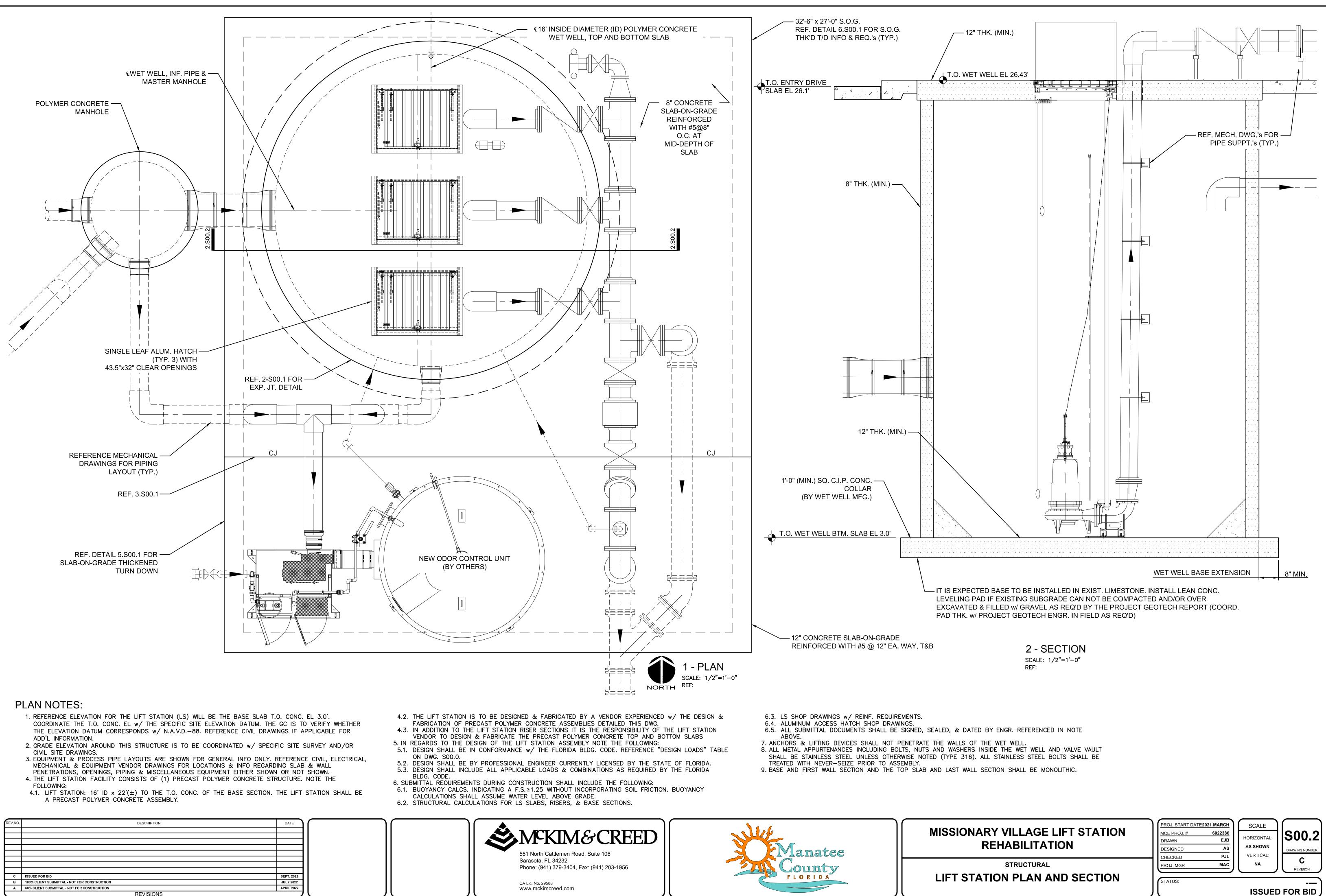




7 - DETAIL - EQUIPMENT PAD

MISSIONARY VILLAGE LIFT STATION REHABILITATION		DEGLONED EA AS SHOWN			S00.1 DRAWING NUMBER
STRUCTURAL STRUCTURAL DETAILS]	PROJ. MGR.	ВР		C REVISION

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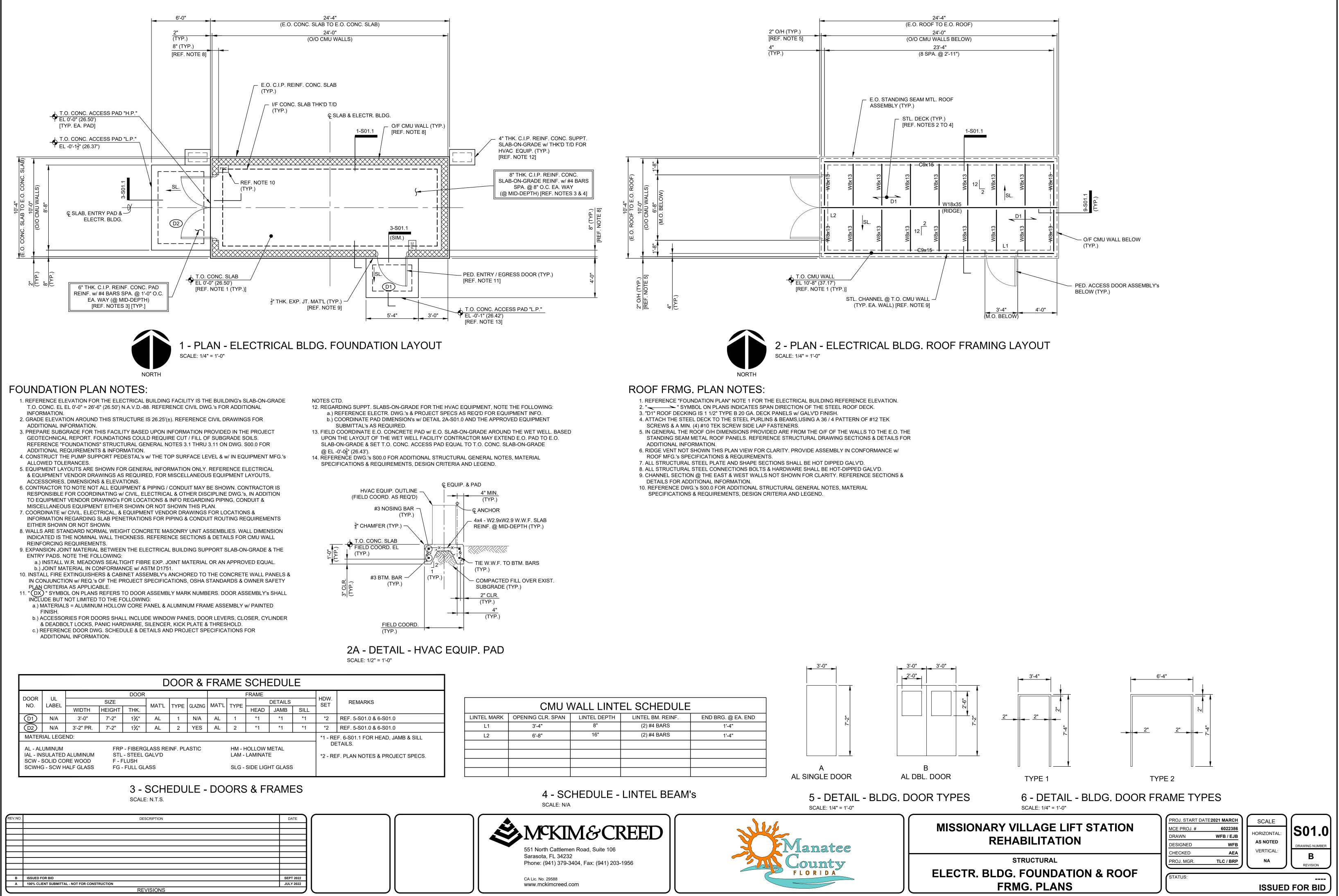
REV.NO.	DESCRIPTION	DATE
с	ISSUED FOR BID	SEPT. 2022
В	100% CLIENT SUBMITTAL - NOT FOR CONSTRUCTION	JULY 2022
Α	60% CLIENT SUBMITTAL - NOT FOR CONSTRUCTION	APRIL 2022
	REVISIONS	

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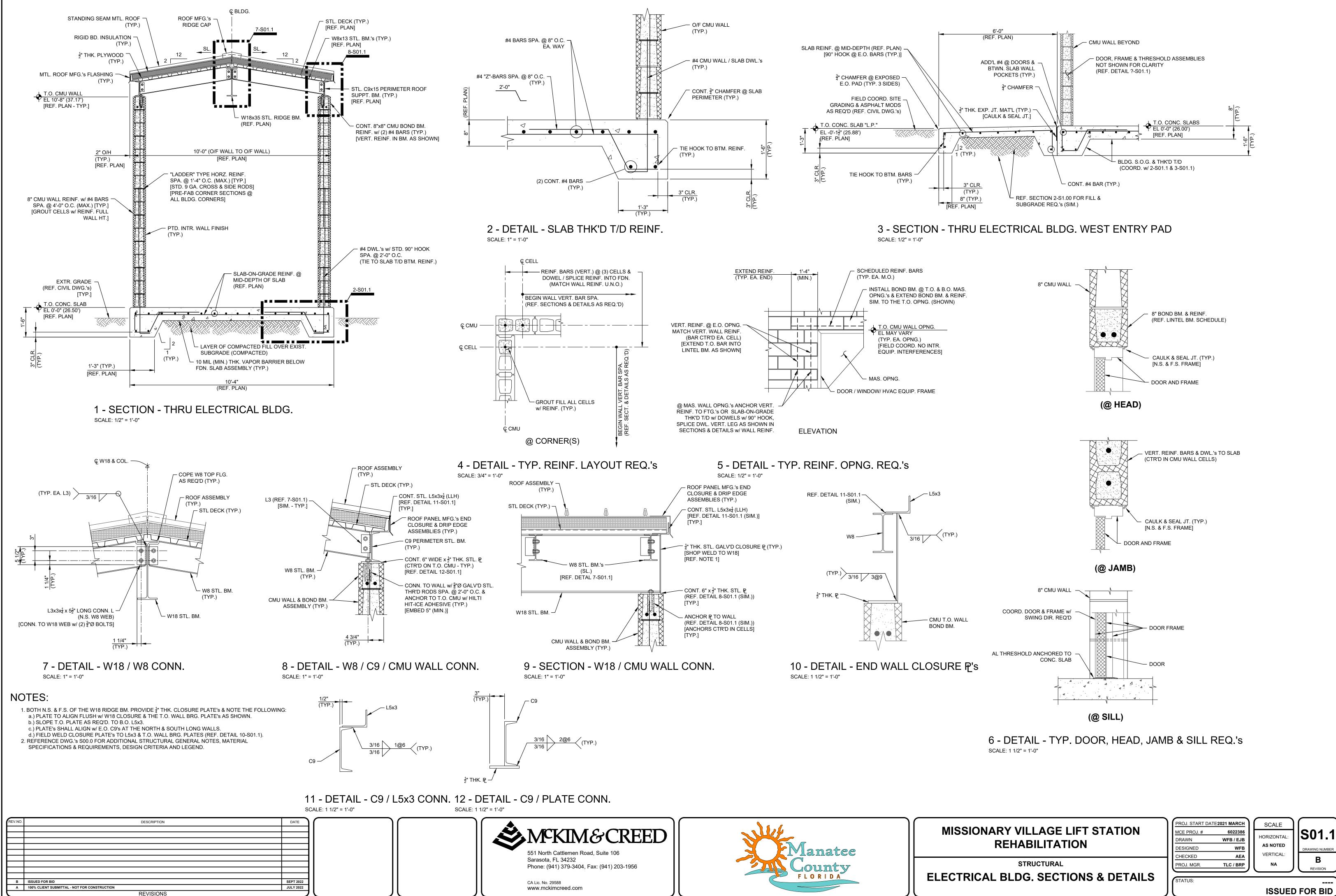
Manatee	
FLORIDA FLORIDA	

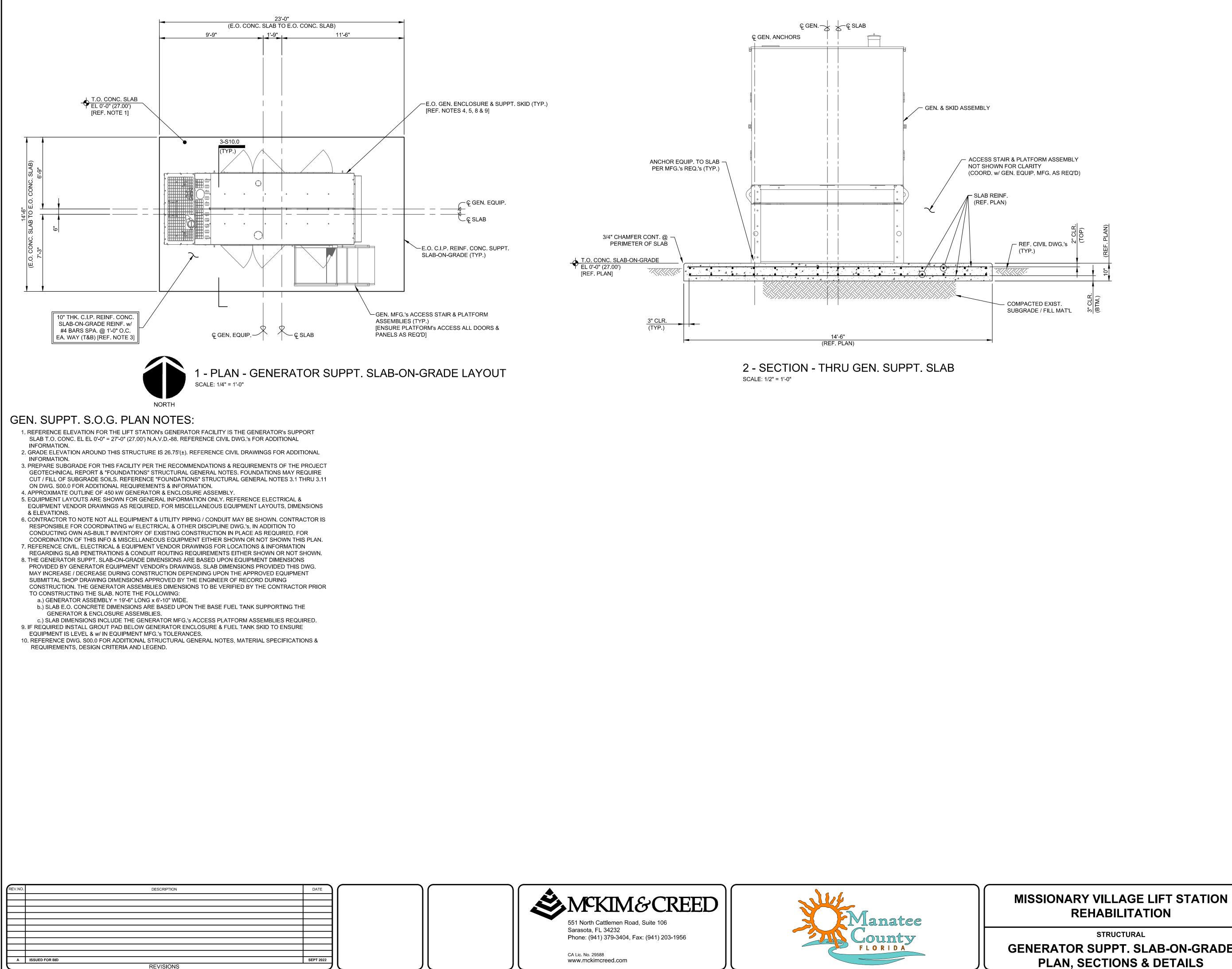
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					3'-0"	3'-0" 2'-0"
	CMU V	VALL LINTI	EL SCHEDULE			
LINTEL MARK	OPENING CLR. SPAN	LINTEL DEPTH	LINTEL BM. REINF.	END BRG. @ EA. END	-2"	
L1	3'-4"	8"	(2) #4 BARS	1'-4"	<u>۲</u>	
L2	6'-8"	16"	(2) #4 BARS	1'-4"		
					A	
					AL SINGLE DOOR	AL DI
	4 - SC SCALE: N/A		LINTEL BEAM	'S	5 - DETAIL - BI SCALE: 1/4" = 1'-0"	_DG. DC

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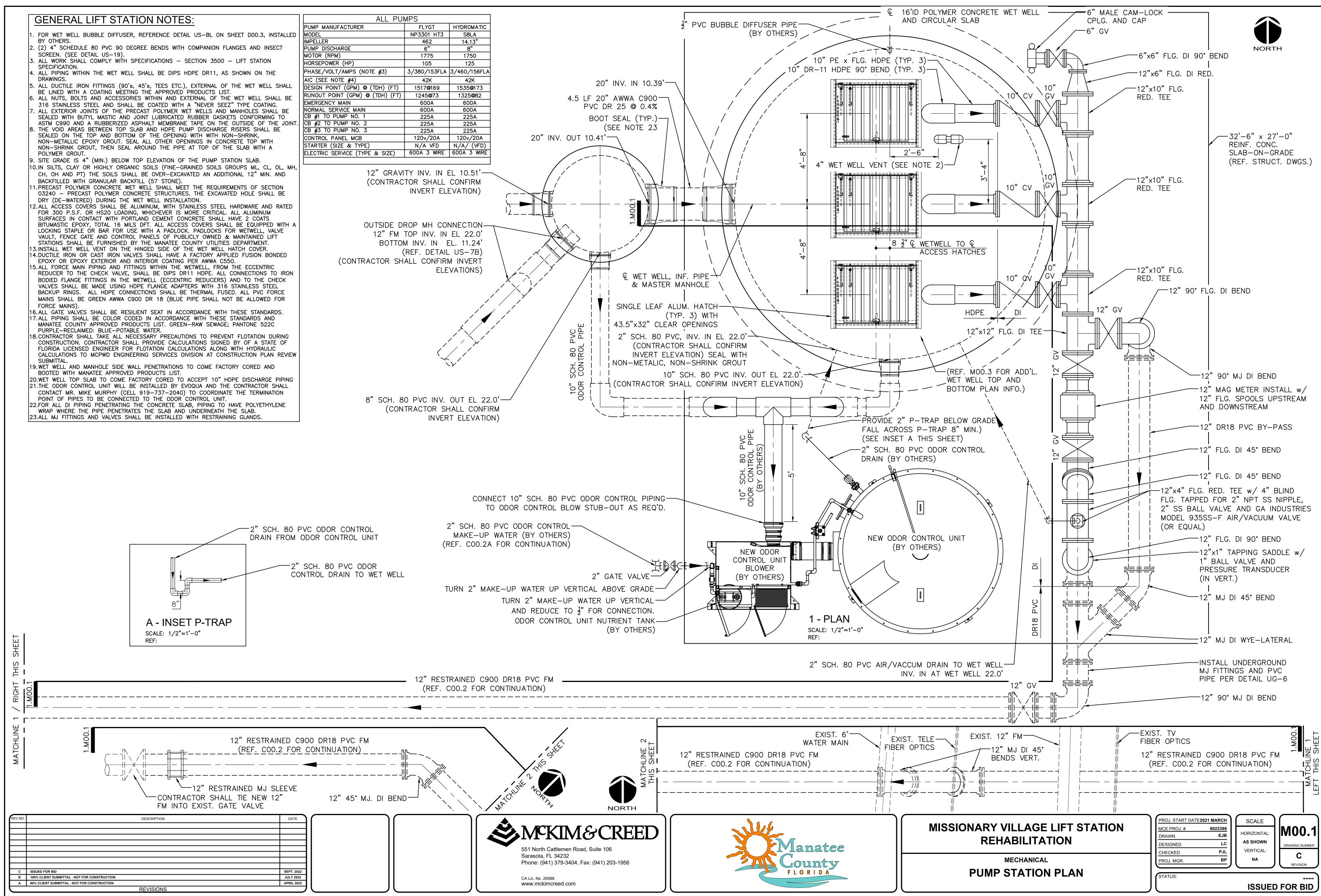




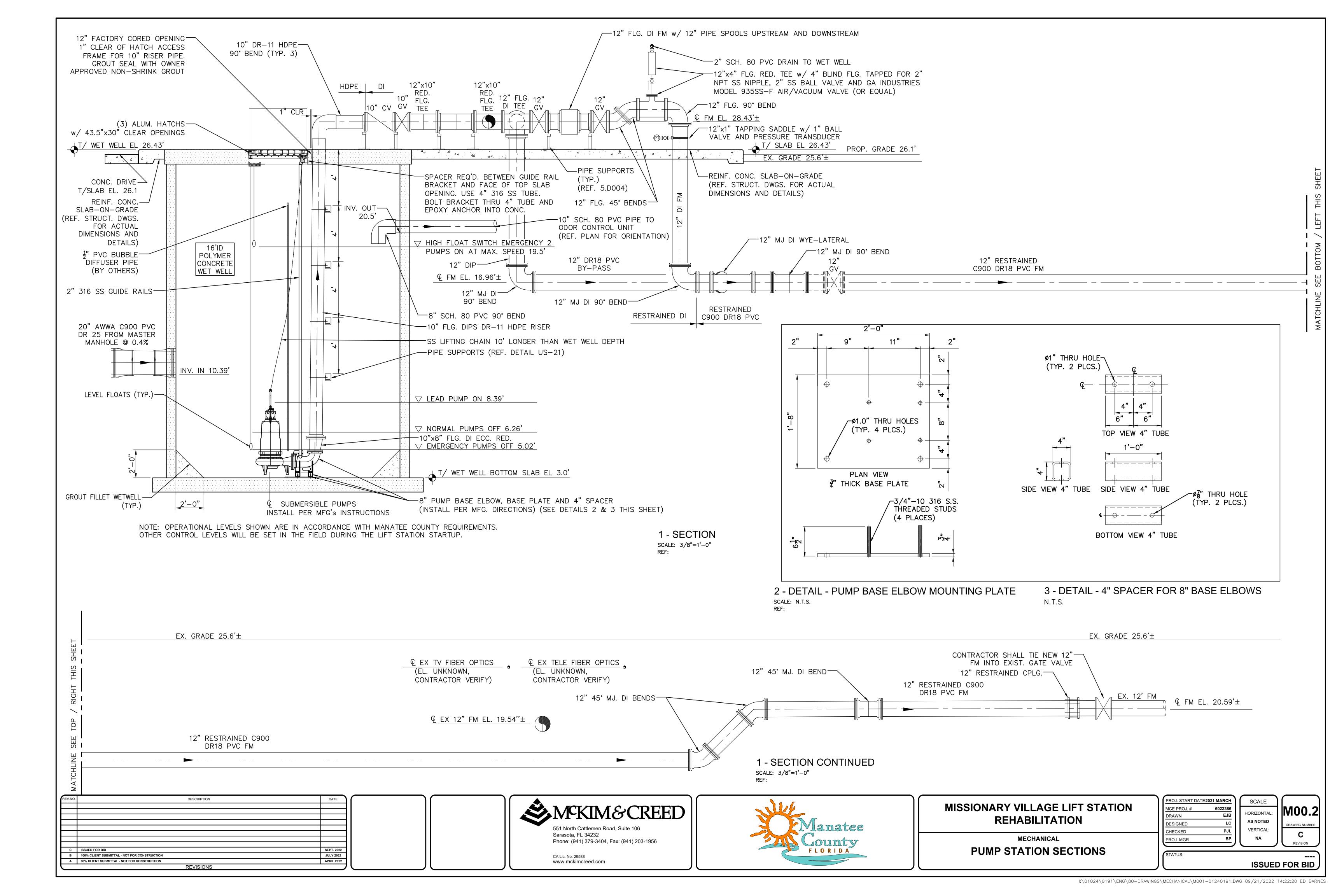
MISSIONARY	VILLAGE	LIFT STATION
RE	HABILITA	ΓΙΟΝ

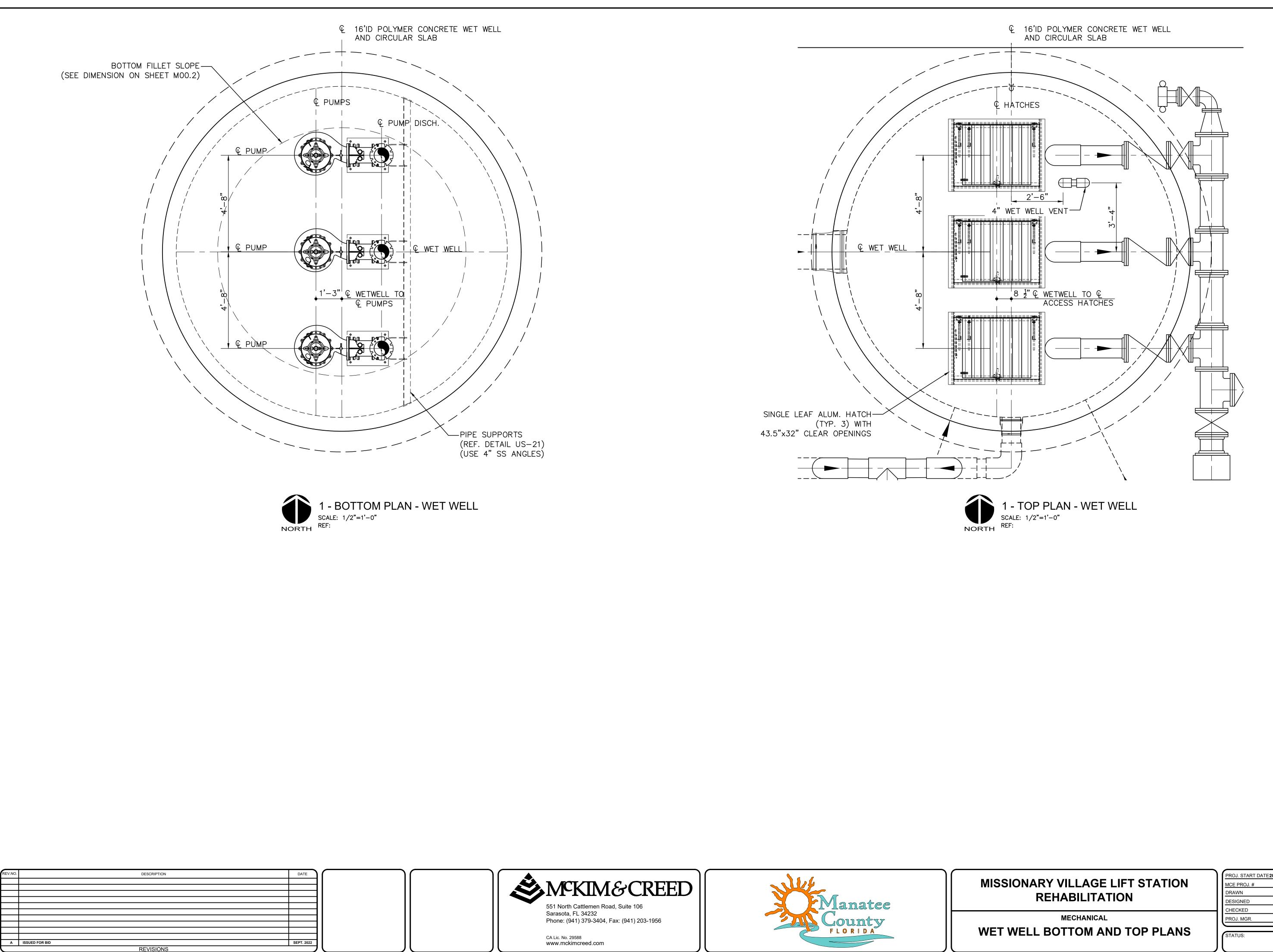
STRUCTURAL **GENERATOR SUPPT. SLAB-ON-GRADE PLAN, SECTIONS & DETAILS**

PROJ. START DA	TE2021 MARCH	SCALE	
MCE PROJ. #	6022386		 S02.0
DRAWN	WFB	HORIZONTAL:	
DESIGNED	WFB	AS NOTED	DRAWING NUMBER
CHECKED	AEA	VERTICAL:	Α
PROJ. MGR.	TLC / BRP	NA	REVISION
			REVISION
STATUS:			
		ISSUE	D FOR BID



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PROJ. START DATE	2021 MARCH	SCALE	
MCE PROJ. #	6022386	HORIZONTAL:	M00.3
DRAWN	DMP		
DESIGNED	AS	AS SHOWN	DRAWING NUMBER
CHECKED	MAC	VERTICAL:	Α
PROJ. MGR.	MAC	NA	REVISION
			REVISION
STATUS:			
		ISSUED	FOR BID

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1	ABBREVIATIONS			
IOTE: ALL A	I ABBREVIATIONS MAY NOT BE UTILIZED FOR THIS PROJECT			2
, AMP	AMMETER / AMPERE	MCC	MOTOR CONTROL CENTER	2
CV FD	AIR OPERATED CONTROL VALVE ADJUSTABLE FREQUENCY DRIVE	MCP MDP	MOTOR CIRCUIT PROTECTOR MAIN DISTRIBUTION PANEL	
\FF \FG	ABOVE FINISHED FLOOR ABOVE FINISHED GRADE	MFR MH	MANUFACTURER MANHOLE	2
NC	AIR HANDLING UNIT AMPERE INTERRUPTING CAPACITY	MIN MLO	MINIMUM MAIN LUGS ONLY	2
IT	ANALYTICAL INDICATION TRANSMITTER	MS	MOISTURE SENSOR	2
IL IRMS	ALUMINUM ARC-FLASH REDUCTION SYSTEM	MSB MTD	MAIN SWITCHBOARD MOUNTED/MOUNTING	
IS ITS	AMMETER SWITCH AUTOMATIC TRANSFER SWITCH	MTG MTS	MOUNTING MANUAL TRANSFER SWITCH	
WG	AUXILIARY AMERICAN WIRE GAUGE	MV NA	MEDIUM VOLTAGE - MOTOR VIBRATION DETECTOR NON-AUTOMATIC	
.QD KR	ARC QUENCHING DEVICE BREAKER	N/A NC	NOT APPLICABLE NORMALLY CLOSE	2
LDG V	BUILDING BUTTERFLY VALVE	NEC N, NEU	NATIONAL ELECTRIC CODE	2
; AB	CONDUIT CABINET	NO NIC	NORMALLY OPEN NOT IN CONTRACT	
В	CIRCUIT BREAKER	NTS	NOT TO SCALE	
BV CTV	CABLE BY VENDOR, INSTALLED BY CONTRACTOR CLOSED CIRCUIT TELEVISION	OFCI OL	OWNER FURNISHED, CONTRACTOR INSTALLED OVERLOAD RELAY	· _
:НН :KT	COMMUNICATION HANDHOLE CIRCUIT	P PA	POLE PUBLIC ADDRESS	
LG L2	CEILING CHLORINE	PB P/B	PUSH BUTTON PULL BOX	5
MH P	COMMUNICATION MANHOLE CONTROL PANEL	PCP PF	PUMP CONTROL PANEL POWER FACTOR	
PT R	CONTROL POWER TRANSFORMER CONTROL RELAY, CORROSION RESISTANT	PFC PFD	POWER FACTOR CORRECTION CAPACITORS PULL FUSE DISCONNECT	5
S SH	CONTROL STATION	φ, PH	PHASE	
т	DIAPHRAGM LEAK DETECTOR CURRENT TRANSFORMER	PIT PLC	PRESSURE INDICATION TRANSMITTER PROGRAMMABLE LOGIC CONTROLLER	5
TRL U	CONTROL COPPER	PNL PP	PANEL POWER PANEL, POWER POLE	5
:V B	CONTROL VALVE DECIBEL	PR PRI	PAIR PRIMARY	
IC ICS	DIRECT CURRENT DISTRIBUTED CONTROL SYSTEM	PS PT	PRESSURE SWITCH POTENTIAL TRANSFORMER	5
ETD	DUAL ELEMENT TIME DELAY DISCONNECT	PTZ PVC	PAN-TILT-ZOOM POLYVINYL CHLORIDE	
N PDT	DOWN DOUBLE POLE DOUBLE THROW	REC REQ'D	RECEPTACLE REQUIRED	
PSH	DIFFERENTIAL PRESSURE SWITCH	RGS	RIGID GALVANIZED STEEL	
NG C	DISCONNECT SWITCH DRAWING EMBTY CONDUIT	RMC R/S	RIGIDREMOTE TELEMETRY UNIT RUN/STOP HAND SWITCH REDUCED VOLTACE SOFT STARTER	
C F	EMPTY CONDUIT EXHAUST FAN	RVSS SCCR	REDUCED VOLTAGE SOFT STARTER SHORT CIRCUIT CURRENT RATING	8.
HH L, ELEV	ELECTRICAL HANDHOLE ELEVATION	SCADA SEC	SUPERVISORY CONTROL AND DATA ACQUISITION SECONDARY	
LTU MER	ELECTRONIC TRIP UNIT EMERGENCY	SP SPEC	SPARE SPECIFICATION	8.
MH MT	ELECTRICAL MANHOLE ELECTRICAL METALLIC TUBING	SPD SS	SURGE PROTECTION DEVICE SELECTOR SWITCH	8.
NCL PRF	ENCLOSURE EXPLOSION PROOF	SS SST ST	STAINLESS STEEL SHUNT TRIP	8. 8.
QUIP	EQUIPMENT	SV	SOLENOID VALVE	8. 8.
WC WH	ELECTRIC WATER COOLER ELECTRIC WATER HEATER	SW SWBD	SWITCH SWITCHBOARD	8.
XIST A	EXISTING FIRE ALARM	SWGR TB	SWITCH GEAR TERMINAL BOX	8.
AAP ACP	FIRE ALARM ANNUNCIATOR PANEL FIRE ALARM CONTROL PANEL	TEL TEMP	TELEPHONE TEMPERATURE	
DR IT	FEEDER FLOW INDICATION TRANSMITTER	TEW TIT	THERMOCOUPLE EXTENSION WIRE TEMPERATURE INDICATION TRANSMITTER	8.
IXT LA	FIXTURE FULL LOAD AMPS	TMTU TS	THERMAL-MAGNETIC TRIP UNIT TEMPERATURE SWITCH	
LOUR MC	FLUORESCENT FLEXIBLE METALLIC CONDUIT	TYP UG	TYPICAL UNDERGROUND	8.
S T	FLOW SWITCH FEET OR FOOT	UH UON	UNIT HEATER UNLESS OTHERWISE NOTED	8.
ut VNR	FUTURE FULL VOLTAGE NON-REVERSING STARTER	UPS V	UNINTERRUPTIBLE POWER SUPPLY VOLTMETER	
WE	FURNISHED WITH EQUIPMENT	VAC	VOLTS ALTERNATING CURRENT	8.
GND GALV	GROUND GALVANIZED	VFD VLV	VARIABLE FREQUENCY DRIVE MANUAL OPERATED VALVE	
SEC SEN	GROUNDING ELECTRODE CONDUCTOR GENERATOR	VS WS	VOLTMETER SWITCH TORQUE SWITCH	
FI FIC	GROUND FAULT INTERRUPTER GROUND FAULT CIRCUIT INTERRUPTER	WH WP	WATT-HOUR WEATHERPROOF	
IDG IH	HOT DIPPED GALVANIZED HANDHOLE	XFMR XP	TRANSFORMER EXPLOSION PROOF	
IOA IP	HAND-OFF-AUTO HORSE POWER	ZI ZC	ZONE INTERLOCK STROKE POSITIONER	
IPF IPS	HIGH POWER FACTOR HIGH PRESSURE SODIUM	ZS ZSC	LIMIT SWITCH LIMIT SWITCH CLOSED	
ITR	HEATER	ZSO	LIMIT SWITCH CLOSED	
V Z	HIGH VOLTAGE HERTZ			9.
) HH	INTERIOR DIAMETER INSTRUMENTATION HANDHOLE			9.
ИС ИН	INTERMEDIATE METALLIC CONDUIT (GALVANIZED) INSTRUMENTATION MANHOLE			9.
ИТ N	INTERMEDIATE METALLIC INCHES			9.
B B	INSTRUMENT TERMINAL BOX JUNCTION BOX			9.
A	THOUSAND			9.
AIC	KILOVOLT AMPERE THOUSAND AMPERES INTERRUPTING CURRENT			
CMIL VA	THOUSAND CIRCULAR MILLS THOUSAND VOLT AMPERES			
W WH	KILOWATTS KILOWATT-HOURS			
A CP	LIGHTNING ARRESTOR LOCAL CONTROL PANEL			
ED FMC	LIGHT-EMITTING DIODE LIQUIDTIGHT FLEXIBLE METAL CONDUIT			
FNC FNC IT	LIQUIDTIGHT FLEXIBLE METAL CONDUIT LIQUIDTIGHT FLEXIBLE NONMETALLIC CONDUIT LEVEL INDICATION TRANSMITTER			
Р	LIGHTING PANEL, LIGHT POLE			
S TG	LEVEL SWITCH LIGHTING			
V I	LOW VOLTAGE MOTOR			
IA IB	MILLIAMPERE MOTOR BEARINGDETECTOR			
ICB	MAIN CIRCUIT BREAKER			
0.	DESCRIPTION		DATE	
+				
1				
			 _ _	
ISSUED FOR	R BID		SEPT. 2022	

CONTRACTOR RESPONSIBILITIES

CONTRACTOR SHALL REFERENCE ALL SPECIFICATIONS, DRAWINGS AND CONTRACT DOCUMENTS FOR ADDITIONAL REQUIREMENTS AND CONTRACT RESPONSIBILITIES PRIOR TO COMMENCING WORK. CONTRACTOR SHALL COMPLY WITH ALL STATE, COUNTY, AND CITY STANDARDS, DETAILS, AND SPECIFICATIONS, WHERE APPLICABLE.

THE GENERAL NOTES AS STATED ON THIS SHEET ARE APPLICABLE TO ALL CONTRACT DOCUMENTS AND SCOPE OF WORK UNDER THIS CONTRACT UNLESS NOTED OTHERWISE. ALL ELECTRICAL WORK SHALL COMPLY WITH THE CURRENT NFPA, NEC, NESC AND LOCAL CODES

INCLUDING OWNERS STANDARDS AND REQUIREMENTS. CONTRACTOR SHALL COORDINATE WITH THE LOCAL ELECTRICAL UTILITY TO ESTABLISH NEW ELECTRICAL SERVICE(S) AND FINAL CONNECTIONS TO PROVIDE UTILITY POWER AS REQUIRED TO INCLUDE ESTABLISHING TEMPORARY UTILITY ACCOUNT TO PROVIDE ELECTRICAL POWER FOR START-UP AND COMMISSIONING.

THE ELECTRICAL INSTALLATION SHALL MEET THE REQUIREMENTS OF ALL APPLICABLE NECA/NEIS STANDARDS TO INCLUDE OWNER CONSTRUCTION STANDARDS.

CONTRACTOR SHALL PLAN AND COORDINATE ELECTRICAL CONSTRUCTION WITH ALL CRAFT/TRADE TO ACHIEVE AN EFFICIENT AND EFFECTIVE ELECTRICAL INSTALLATION.

THE SCHEDULING AND DURATION OF ANY PROCESS OR FACILITY SHUTDOWN TO REMOVE AND/OR INSTALL EQUIPMENT SHALL BE COORDINATED IN ADVANCE WITH FACILITY MANAGEMENT, ENGINEER, OWNER OR OWNER REPRESENTATIVE.

ELECTRICAL EQUIPMENT

600V RATED ELECTRICAL EQUIPMENT SHALL HAVE AN AMPERE INTERRUPTING CAPACITY (AIC) RATINGS AS SHOWN ON THE CONTRACT DRAWINGS. EQUIPMENT SHALL BE ARRANGED AND INSTALLED TO COMPLY WITH ALL CODE-REQUIRED,

MANUFACTURER-RECOMMENDED AND HEAT-DISSIPATION CLEARANCES. EQUIPMENT INSTALLATIONS AND PLACEMENTS SHALL COMPLY WITH NEC ARTICLE

110 FOR ALL CLEARANCE REQUIREMENTS.

EQUIPMENT SHALL FIT INTO THOSE SPACES AS SHOWN ON THE CONTRACT

DRAWINGS. CONTRACTOR IS RESPONSIBLE TO PROVIDE EQUIPMENT WHICH MEETS THE SPACE

REQUIREMENTS. CONTRACTOR SHALL PROVIDE ALL NECESSARY COMPONENTS REQUIRED FOR MAKING FINAL CONNECTIONS FOR ALL EQUIPMENT INSTALLED AND/OR MODIFIED UNDER CONTRACT.

GROUNDING AND BONDING

ROUNDING AND BONDING SYSTEMS SHALL COMPLY WITH NFPA 70 AND NFPA 780 TO INCLUDE THOSE EQUIREMENTS IN IN APPLICABLE SPECIFICATION SECTIONS

EFERENCE GROUNDING INSTALLATION DETAILS AS SHOWN ON CONTRACT DOCUMENTS L DIRECT-BURIED GROUNDING SYSTEM CONDUCTORS SHALL BE BARE 4/0AWG COPPER L CONCRETE ENCASED GROUNDING SYSTEM CONDUCTORS SHALL BE TINNED 4/0AWG COPPER L GROUNDING AND BONDING TAPS SHALL BE TINNED #2AWG COPPER MINIMUM

ROUNDING SYSTEM CONDUCTORS SHALL BE BURIED 30-INCH BELOW FINISHED GRADE

IDERGROUND OR CONCRETE ENCASED GROUNDING SYSTEM CONNECTIONS SHALL BE MADE WITH COTHERMIC WELDS

ONNECTIONS TO STRUCTURAL STEEL AND/OR REBAR SHALL BE MADE WITH EXOTHERMIC WELDS ECTRICAL EQUIPMENT AND/OR FRAMING SUPPORTS SHALL BE BONDED TO GROUNDING SYSTEM SING TINNED #2AWG COPPER; MECHANICAL LUGS; 316L STAINLESS-STEEL, ANTI-VIBRATION STENERS AND BLUE 'LOCTITE' OR EQUAL THREAD COMPOUND (MINIMUM 2 LOCATIONS)

AECHANICAL EQUIPMENT AND/OR SKID FRAMING SHALL BE BONDED TO GROUNDING SYSTEM USING NNED #2AWG COPPER; MECHANICAL LUGS; 316L STAINLESS-STEEL, ANTI-VIBRATION FASTENERS ND BLUE 'LOCTITE' OR EQUAL THREAD COMPOUND (MINIMUM 2 LOCATIONS)

AN-WAY AND/OR EQUIPMENT HATCH FRAMES SHALL BE BONDED TO GROUNDING SYSTEM USING INED #2AWG COPPER; MECHANICAL LUGS; 316L STAINLESS-STEEL, ANTI-VIBRATION FASTENERS ND BLUE 'LOCTITE' OR EQUAL THREAD COMPOUND (MINIMUM 2 LOCATIONS)

GROUND TEST WELLS SHALL BE 15-INCH MINIMUM ROUND CONCRETE WITH CAST IRON COVER WITH EAD WELDED LETTERING, "GROUND" AND RATED AASHTO H-10 LOADING

J&R CONCRETE PRODUCTS P/N E6-RT-BOX OR EQUAL

GROUNDING SYSTEM EXTENSIONS: PROVIDE SUFFICIENT SLACK GROUNDING CABLE TO MAKE CONNECTIONS TO FUTURE GROUNDING CONDUCTORS, DUCTBANKS AND/OR EQUIPMENT

INSTALL 2.0-INCH PVC PIPE 48-INCH ABOVE FINISHED GRADE AT LOCATION AND INDICATE ON AS-BUILD DRAWINGS WITH A MINIMUM OF THREE (3) MEASUREMENTS FROM NEAREST STRUCTURES

LIGHTING SYSTEMS

DNTRACTOR SHALL REFERENCE ALL CONTRACT DRAWINGS PRIOR TO EXCAVATION AND INSTALLATION OF IDERGROUND RACEWAYS, DUCTBANKS AND GROUNDING/BONDING COMPONENTS. L SITE LIGHTING POWER "RUN" CONDUCTORS SHALL BE #6AWG STRANDED COPPER W/600V TYPE XHHW-2,

°C INSULATION. SITE LIGHTING POWER "TAP" CONDUCTORS SHALL BE #10AWG STRANDED COPPER W/ 600V TYPE HN/THWN, 90°C INSULATION.

_ TAP AND RUN CONNECTIONS SHALL BE WATER-PROOF.

RANSITIONS THROUGH FINISHED GRADE AND CONCRETE SHALL BE PVC-COATED ALUMINUM CONDUIT

TENDING 12-INCHES ABOVE AND BELOW TRANSITION.

L SITE LIGHTING BRANCH CIRCUITS SHALL BE DIRECT-BURIED SCH-80 2.0" PVC CONDUIT UNLESS SHOWN THERWISE ON THE CONTRACT DRAWINGS.

POWER AND CONTROL RACEV 3

3.1. EXPOSED CONDUIT SHALL BE RIGID ALUMINUM CONDUIT (RAC). GRS, ACCEPTABLE.

CONCEALED CONDUIT EMBEDDED IN CONCRETE SHALL BE SCH-40 PV 3.2. 3.3. DIRECT-BURIED CONDUIT SHALL BE DIRECT-BURIED SCH-80 PVC

3.4.

- TRANSITIONS THROUGH FINISHED GRADE AND/OR CONCRETE SHAL
- DRAWINGS DEPICT MAJOR DUCTBANK, CABLE-TRAY, BUS-DUCT, WIRE 3.5. RACEWAY, CONDUIT, ETC., TO INCLUDE CABLE, CONDUCTOR AND WI DIAGRAMMATIC FORMATS. THE CONTRACTOR SHALL REFERENCE AL MANUFACTURER INSTRUCTIONS FOR ADDITIONAL INSTALLATION REG

RACEWAY INSTALLATION AND/OR ARRANGEMENT LAYOUTS ARE NOT 3.6. DRAWINGS. CONTRACTOR SHALL DEVELOP LOGICAL GROUPINGS, RC DUCTBANK, CABLE-TRAY, BUS-DUCT, WIRE-WAY, TRENCH/FLOOR DUC SHALL NOT BE ROUTED THROUGH OR INTERFERE WITH ANY STRUCT SHALL SUBMIT THESE RACEWAY INSTALLATION AND/OR ARRANGEME SPECIFICATIONS FOR ENGINEER REVIEW PRIOR TO INSTALLATION.

RACEWAY ROUTINGS SHALL BE ORGANIZED AND GROUPED IN A PRAC 3.7. CROSS-OVERS AND SADDLES. RACEWAY INSTALLATIONS SHALL BE FOR DIRECT CONDUCTOR TERMINATIONS.

- RACEWAYS SHALL BE INSTALLED CONCEALED UNLESS OTHERWISE 38 RUN PARALLEL TO LANDSCAPE AND STRUCTURAL FEATURES WHILE 1 MADE BY MEANS OF LARGE RADII FITTINGS.
- 3.9. PROVIDE FLEXIBLE RACEWAY CONNECTIONS TO ALL EQUIPMENT SUB VIBRATION. CONTRACTOR SHALL MAKE RACEWAY CONNECTIONS CO THE SPECIFICATIONS.
- CONTRACTOR SHALL PROVIDE ALL REQUIRED PULL BOXES, TERMINA 3.10. INSTALLATION FOR THE WIRING SYSTEMS IN ACCORDANCE WITH THE BOXES MAY NOT BE INDICATED ON THE DRAWINGS.
- SPARE CONDUITS SHALL BE CAPPED OR PLUGGED WITH A PVC FITTI 3.11. POLYPROPYLENE PULL STRING.

DUCTBANK SYSTEMS 6

- 6.1. DUCTBANK SYSTEM ROUTING AND SECTIONS ARE SHOWN ON THE CON DIAGRAMMATIC, CONTRACTOR SHALL SUBMIT PROPOSED DUCTBANK IN ENGINEER REVIEW PRIOR TO EXCAVATION, FABRICATION AND/OR INSTA
- 6.2. DUCTBANK SYSTEMS SHALL NOT INTERFERE WITH ANY STRUCTURAL F 6.3. DUCTBANK SYSTEMS SHALL HAVE A MINIMUM OF 18-INCH OF CLEAN CO
- OTHERWISE STATED IN THE CONTRACT DOCUMENTS 6.4. DUCTBANK SYSTEMS ROUTED UNDER ROADWAYS SHALL BE CONSTRUC
- STRUCTURAL ENGINEER OF RECORD DESIGN REQUIREMENTS 6.5. DUCTBANK SYSTEMS SHALL INCLUDE A BARE 4/0AWG COPPER GROUND
- 12-INCHES ABOVE DUCTBANK AND ROUTED INTO EACH MAN-HOLE 6.6. DUCTBANK GROUNDING CONDUCTOR SHALL BE CONNECTED WITH EXO
- SYSTEMS AS SHOWN THE DRAWINGS 6.7. DUCTBANK SYSTEMS SHALL BE ARRANGED TO ALLOW 1.5 TO 2.0-INCH M RACEWAYS
- 6.8. ABS PLASTIC DUCT-SPACERS SHALL BE UTILIZED AND INSTALLED TO MA DURING PLACEMENT OF CONCRETE
- UNDERGROUND DEVICES INC. P/N DUCT DONUT 2C OR APPROVEI 6.8.1. 6.9. RACEWAYS SHALL BE SECURED TO PREVENT FLOATATION DURING CON HOLD-DOWN ASSEMBLIES
- 6.9.1. UNDERGROUND DEVICES, INC. P/N HOLD-DOWN BAR H5X-XX-2X
- 6.10. ALL RACEWAYS BENDS SHALL BE MADE WITH LARGE SWEEP RADII, TO M
- 6.11. ALL RACEWAYS SHALL BE REAMED, DE-BURRED AND CLEAN PRIOR TO 6.12. ALL PVC RACEWAYS SHALL BE JOINED WITH GREY HEAVY-BODIED PVC
- SLIP-COUPLING OR FITTING 6.13. ALL PVC RACEWAYS SHALL ENTER MAN-HOLE WALLS PERPENDICULAR
- INSTALLED PRIOR TO DRAWING WIRES OR CABLES 6.14. RACEWAY ARRANGEMENTS SHALL BE MADE TO MAXIMUM THE DISTANC FEEDER AND BRANCH CONDUCTORS FROM LOW-VOLTAGE AND FIBER O
- 6.15. DUCTBANK EXTENSIONS:
- 6.15.1. BULK-HEAD DUCTBANK CONCRETE POUR AND REMOVE ALL FORM 6.15.2. EXTEND ALL REBAR AND CONDUITS 24" MINIMUM FROM END OF
- GLUE PVC END CAPS ON ALL CONDUITS. SLEEVE REBAR WITH PV 6.15.3.
- INSTALL 2.0-INCH PVC PIPE 48-INCH ABOVE FINISHED GRADE AT L 6.15.4. AS-BUILD DRAWINGS WITH A MINIMUM OF THREE (3) MEASUREME

WIRING DEVICES

10.1. GENERAL

- 10.1.1. INDOORS OR NON PROCESS AREAS SHALL BE INSTALLED CONCE FLUSH WITH STAINLESS-STEEL DEVICE COVER PLATES.
- 10.1.2. OUTDOORS OR IN PROCESS AREAS SHALL BE INSTALLED WITHIN PROOF, CORROSION RESISTANT DEVICE BOXES WITH METALLIC I WATER-TIGHT DEVICE COVER PLATES.
- 10.2. RECEPTACLES/GROUND FAULT CURRENT INTERRUPTING (GFCI) 10.2.1. SHALL BE INDIVIDUAL GFCI RECEPTACLE DEVICES RATED FOR 20
- LED POWER INDICATOR. 10.2.2. GFCI RECEPTACLE DEVICES SHALL NOT SHARE NEUTRAL CONDU

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THREE-PHASE SYSTEMS

WAYS	4	CABLE TRAY
, IMC AND EMT ARE NOT VC L BE PVC-COATED RAC CONDUIT. E-WAY, TRENCH/FLOOR DUCTS, IRING IN SCHEMATIC AND/OR L EQUIPMENT SPECIFICATIONS AND QUIREMENTS. TYPICALLY SHOWN ON THE OUTING AND MARSHALLING OF CT, RACEWAY, CONDUIT, ETC., THESE FURAL ELEMENTS. CONTRACTOR ENT LAYOUTS PER THE ACTICAL MANNER TO MINIMIZE ARRANGED TO ENTER EQUIPMENT NOTED OR SHOWN. THESE SHALL THE BENDS AND TURNS SHALL BE IBJECT TO MOVEMENT AND/OR DMPLETE AND IN ACCORDANCE WITH AL BOXES AND JUNCTION BOXES FOR E SPECIFICATIONS THOUGH ALL ING AND INCLUDE 200# TEST ITRACT DOCUMENTS AS NSTALLATION LAYOUT DRAWINGS FOR ALLATION. OUNDATION AND/OR FEATURE	STAN 4.1.1. M 4.1.2. M 4.2. ALL C SPAC SPAC 4.3. THE N 4.4. THE C SECT MANU 4.5. SPLIC GREA SUPF 4.6. ALL N BEST A.7. 4.7. ALUM MAIN CONN 4.7.1. W 4.7.2. C 4.7.3. A SUPF ABEST 4.7. ALUM MAIN CONN 4.7.1. W 4.7.2. C 4.7.3. A SUPF ADEC 4.10. ALL C 'TY-W USEC TRAY STRE 4.11. THE C MAKIN CONT 4.12. MANU 4.13. STRU	CABLE TRAY INSTALLATION SHALL MEET ALL THE REQUIREMENTS OF ALL APPLICABLE NECA/NEIS IDARDS. THESE INCLUDE BUT ARE NOT LIMITED TO THE FOLLOWING: WECA 1: STANDARD PRACTICES FOR GOOD WORKMANSHIP IN ELECTRICAL CONSTRUCTION WECA/NEMA 105-2015. STANDARD FOR INSTALLING METAL CABLE TRAY CABLE TRAYS SHALL BE ALUMINUM LADDER TYPE WITH 4-INCH SIDE WALLS AND 9-INCH RUNG ING. WANUFACTURER'S RECOMMENDED MECHANICAL LOADING SHALL NOT BE EXCEEDED. CABLE TRAY SHALL BE CAREFULLY ALIGNED AND LEVELED PLUMB AND TRUE. CABLE TRAY 10NS AND FITTINGS SHALL BE ASSEMBLED ON THEIR SUPPORTS AND JOINED TOGETHER, USING JFACTURER'S STANDARD CONNECTOR UNITS, PROPERLY ALIGNED AND SECURED. C2S SHOULD BE LOCATED AS CLOSE AS POSSIBLE TO POINTS ONE-THIRD THE DISTANCE BETWEEN YORT AND MIDPOINT OF THE SPAN. STRAIGHT SECTION LENGTHS SHOULD BE EQUAL TO OR ATER THAN THE SPAN LENGTH TO ENSURE NOT MORE THAN ONE SPLICE PLATE BETWEEN YORTS. METALLIC CABLE TRAYS ARE TO BE GROUNDED IN ACCORDANCE WITH NEC ARTICLE 392.60 AND INDUSTRIAL PRACTICES. INNUM CABLE TRAY SYSTEMS OR SECTIONS, CONDUCTIVITY SHALL BE ESTABLISHED AND TAINED BY PERFORMING THE FOLLOWING OPERATION AT EACH BONDING JUMPER LUG VECTION: MIRE-BRUSH ALUMINUM SURFACES TO EXPOSE A BRIGHT 'WHITE' METAL SURFACE. CLEAN BRUSHED SURFACES WITH DENATURED ALCOHOL. APPLY ANTI-OXIDIZING COMPOUND GOND PENTROX OR APPROVED EQUAL) TO CLEAN, BRUSHED SURFACES. A TIME PERIOD OF LESS THAN 5 MINUTES MUST NOT ELAPSE BETWEEN STEPS 'A' AND C: PPLY ANTI-OXIDIZING COMPOUND AS REQUIRED AND BOLT LUG COMPONENTS. TOICHN SPACE SHALL BE PROVIDED AND MAINTAINED ABOUT THE CABLE TRAYS TO ALLOW JUATE ACCESS FOR INSTALLING AND MAINTAINED ABOUT THE CABLE TRAYS TO ALLOW JUATE ACCESS FOR INSTALLING AND MAINTAINED ABOUT THE CABLE TRAYS TO ALLOW JUATE ACCESS FOR INSTALLING AND MAINTAINED ABOUT THE CABLE TRAYS TO ALLOW JUATE ACCESS FOR INSTALLING AND MAINTAINING CABLING. SABLES AND CABLE TIES CHAIL BE SECURED TO CABLE TRAY RUNGS. UV-RESISTANT NYLON RAPPS ARE ACCEPTABLE FOR HORIZONTAL, CABLE TERS SHALL BE OF SUFFICIENT TENSILE INGTH AND RIGIDIT
OMPACTED COVER UNLESS		
DING CONDUCTOR LAID 6 TO DTHERMIC WELDS TO GROUNDING MINIMUM SEPARATION BETWEEN AINTAIN RACEWAY SEPARATION ED EQUAL NCRETE PLACEMENT WITH METALLIC OR APPROVED EQUAL MANUFACTURERS STANDARDS. COUPLING CEMENT AND FULLY SEATED IN AND HAVE BELL-END FITTINGS DE BETWEEN 480/277V AND 208/120V OPTIC SIGNAL CABLING	CABLES/ CONDUCTORS, CABLING, WIRING AND RESPECTIVE RACEWAYS DEPICTED ON CONTRACT DOCUMENTS ARE SELECTED UPON THE BASIS OF DESIGN, STANDARD ELECTRICAL PONENTS AND/OR STANDARD EQUIPMENT WITH DIRECT ROUTED CONNECTIONS. IRACTOR MAY SUBMIT FOR REVIEW BY ENGINEER AND PRIOR TO INSTALLATION, LOGICAL DUCTOR AND RACEWAY GROUPINGS IN COMPLIANCE WITH APPLICABLE CODES, STANDARDS AND CHICATIONS WITHOUT A DDITIONAL COST TO OWNER. IRACTOR SHALL PROVIDE A CIRCUIT IDENTIFICATION LABEL AT EACH END OF EACH POWER, ICH, CONTROL AND INSTRUMENTATION CIRCUIT CABLE ASSEMBLY, CONDUCTOR OR WIRE. ER/FEEDER CONTRACTOR SHALL NOT EXCEED CABLE MANUFACTURER SPECIFICATIONS FOR SIDE-WALL AND TENSION LIMITS WHEN DRAWING POWER CABLES INTO RACEWAYS. CONTRACTOR SHALL DRAW POWER CABLES AND CONDUCTORS WITHIN RACEWAYS UTILIZING POLYWATER LUBRICANT J OR APPROVED EQUAL. NO SPLICES TO POWER CONDUCTORS AND/OR CABLING SHALL BE MADE WITHOUT ENGINEER APPROVAL. NO JUNCTIONS SHALL BE MADE BELOW GRADE WITHOUT APPROVAL OF ENGINEER. ER/BRANCH RACEWAY AND WIRING FOR LIGHTING, RECEPTACLES AND BRANCH CIRCUITS ARE NOT TYPICALLY SHOWN ON THE CONTRACT DRAWINGS BUT SHALL BE PROVIDED AS REQUIRED UNDER THIS CONTRACT	
CONCRETE DUCTBANK VC PIPE LOCATION AND INDICATE ON IENTS FROM NEAREST STRUCTURES		
EALED AND N WEATHER- IN-USE AND/OR 0A/120V WITH UCTORS ON	in the structure in the	HARDWARE AND SUPPORTS ASTENERS AND HARDWARE SHALL BE STAINLESS-STEEL 316L. IT-CHANNEL SHALL NOT BE BENT, DRILLED, CUT OR OTHERWISE MODIFIED TO PRODUCE FITTINGS, ESG OR BRACKETS FOR CONDUIT AND EQUIPMENT SUPPORTS. JFACTURED STRUT-CHANNEL BRACES, BRACKETS, FITTINGS OR POST BASES L BE PROVIDED AND INSTALLED WITH ASSOCIATED HARDWARE AND FASTENERS CONDUIT AND EQUIPMENT SUPPORTS. ITRACTOR SHALL PROVIDE ALL SUPPORTS AND FASTENING HARDWARE FOR SWITCHBOARDS, EBOARDS, TRANSFORMERS, CONTROL PANELS, ETC., AS JIRED IN THE SPECIFICATIONS. ITRACTOR SHALL PROVIDE AND INSTALL CONCRETE EMBEDDED LEVELING CHANNEL SUPPORTS FOR R MOUNTED EQUIPMENT SPANNING DISTANCES 48° AND GREATER ENGTH OR 36° AND GREATER IN DEPTH. ICTURAL MEMBERS SHALL NOT BE DRILED, CUT, WELDED TO, OR OTHERWISE MODIFIED WITHOUT R APPROVAL OF THE ENGINEER OF RECORD.
MISSIONARY VIL REHAI	LAGE L BILITATI	DRAWN SS HORIZONTAL: DESIGNED SS AS NOTED CHECKED AAH VERTICAL:
	ectrical	PROJ. MGR. BP N/A C REVISION

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STATUS

1 ANY E	BLOCKS			 2	POV	VER SY
MCC	ANY GENERAL PANEL			₽		CLASS 1/2 E CONDUIT SI
XX	ANY SQUARE			000	$\hat{\mathbf{u}}$	LOCAL CON WITH THRE LOWER-RIG
(XX)	ANY CIRCLE			0		LOCAL CON WITH TWO S
FD	ANY FIRE BLOCK			Ø		LOWER-RIG
^{3R} CB1 30AF - 30AT o ELTU	ANY CIRCUIT BREAKER					LOCATED A LOCATED A LOCATED A MOUNTED (
A1 LP-100/15 a	ANY LIGHTING			P S R EO)	DRAW-OUT WITH PROG 'EO' DENOT
A A1 A D EM LP-100/15	ANY EMERGENCY LIGHTING			A S R Ø	 +	FIXED-MOU WITH ADJUS
ССТУ	ANY AUXILIARY			°\ 0 ⁷	 +	CIRCUIT BR 'TMTU' 'ELTU'
L21-30	ANY OUTLET			°\ 0'	CB1 F ELTU CB2	CIRCUIT BR
M M o/c	ANY VALVE				F CB3	
$\overline{\bullet}$	ANY GROUND BLOCK				-	CIRCUIT BR
4 GENE	RAL ELECTRICAL	SYMBC)LS	م بر بر	 +	CIRCUIT BR TOP NUMBE BOTTOM NU UPPER LEF
	LIGHTING, INSTRUMENT OR RECE	PTACLE PANELBO	DARD	FU1	FU1 [30A]	FUSE, GENE
	POWER PANELBOARD				4	
CP MCC	CONTROL PANEL MOTOR CONTROL CENTER			FU1 30A 600V RK1	FU1 30A 600V RK1	FUSE, GENE TOP NUMBE BOTTOM NU MIDDLE NU
	POWER MONITOR	VS	VOLTMETER SWITCH			WIRING DEN
	AMMETER AMMETER SWITCH	FS	FLOAT/FLOW SWITCH LIMIT SWITCH	PR1	Ľ21-30	WIRING DE
(AS) (V)	VOLTMETER	LS) PS	PRESSURE SWITCH		L21-30	NEMA CONF
		T	THERMOSTAT	60 42 0	P1 0V 0A	PANELBOAI
JB	JUNCTION BOX, SIZE PER NEC					
Ē	ELECTRICAL EQUIPMENT CONNEC	CTION				
	ELECTRICAL MANHOLE / HANDHO INDICATE THE TYPE OF THE HOLE		ERS	ADDITIONAL	SYMBOLS	T BE UTILIZED NOT SHOWN GS WILL INCLU
REV.NO.	DESCRIPTION		DATE			
C ISSUED FOR BID			SEPT. 2022			
B 60% CLIENT SUBMITTAL - NOT FC A 30% CLIENT SUBMITTAL	DR CONSTRUCTION REVISIONS		APRIL 2022 JUNE 2021			

SYMBOLS			3	CONT
1/2 DIVISION I/II	, XF1			
T SEAL-OFF FITTING	Ø	TRANSFORMER, POWER TYPE AND RATINGS AS NOTED ON THE DRAWINGS		- M(
IREE OR MORE SELECTOR/PUSH SWITCHES RIGHT SYMBOL INDICATES MOUNTING LOCATION		TRANSFORMER, SHIELDED ISOLATION TYPE AND RATINGS AS NOTED ON THE DRAWINGS		N ک
CONTROL STATION VO SELECTOR/PUSH SWITCHES RIGHT SYMBOL INDICATES MOUNTING LOCATION		TRANSFORMER, CURRENT 'CT' TYPE AND RATINGS AS NOTED ON THE DRAWINGS	0 PB4 0 1	MI
CONTROL STATION NE SELECTOR/PUSH SWITCH RIGHT SYMBOL INDICATES MOUNTING LOCATION			TG1	
ED AT FIELD DEVICE ED AT MAIN CONTROL PANEL ED AT LOCAL CONTROL PANEL ED ON DOOR	PT1 100:1	TRANSFORMER, POTENTIAL 'PT' OR 'VT' TYPE AND RATINGS AS NOTED ON THE DRAWINGS	TG2 SS1 	
OUT POWER CIRCUIT BREAKER ROGRAMMABLE SOLID STATE RELAY NOTES ELECTRICALLY OPERATED	N E	AUTOMATIC OR MANUAL TRANSFER SWITCH, STAND-ALONE TYPE AND RATINGS AS NOTED ON THE DRAWINGS		2 Tł
IOUNT POWER CIRCUIT BREAKER DJUSTABLE SOLID STATE RELAY	FVNR 4X/SS	SAFETY / DISCONNECT SWITCH TOP NUMBER DENOTES FUSE SIZE (NF=NON-FUSED) BOTTOM NUMBER DENOTES FRAME SIZE RIGHT NUMBER DENOTES NEMA ENCLOSURE RATING	LS1 LS2	
BREAKER, GENERIC FIXED-MOUNT THERMAL-MAGNETIC TRIP UNIT ELECTRONIC TRIP UNIT	00 <u>21-70AT</u> 7AF FVNR 12	MOTOR CONTROLLER, STAND-ALONE WITH EXTERNAL DISCONNECT: UPPER LEFT NUMBER DENOTES NEMA FRAME SIZE UPPER RIGHT NUMBERS DENOTE AMPERE AND FRAME RATINGS CENTER RIGHT NUMBER DENOTES NEMA ENCLOSURE RATING LETTERS WITHIN THE SYMBOL DENOTE THE FOLLOWING: FVNR FULL VOLTAGE NON-REVERSE	LS3 LS4	
BREAKER, GENERIC		FVRFULL VOLTAGE REVERSIBLETS1WTWO SPEED - SINGLE WINDINGTS2WTWO SPEED - DUAL WINDINGRVSSREDUCED VOLTAGE SOFT STARTERRVATREDUCED VOLTAGE AUTO TRANSFORMER	TS1 ~~~ TS2 ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	<u>с</u> NG 2 ТЕ
BREAKER, THERMAL	¹ TS2W	VFD VARIABLE FREQUENCY DRIVE MOTOR CONTROLLER, FULL-VOLTAGE MCC UNIT: UPPER LEFT NUMBER DENOTES NEMA FRAME SIZE LETTERS WITHIN THE SYMBOL DENOTE THE FOLLOWING: FVNR FULL VOLTAGE NON-REVERSE	FLS FLS2	2 FL
BREAKER, MOTOR CIRCUIT PROTECTOR	¹ TS1W	FVRFULL VOLTAGE REVERSIBLEMOTOR CONTROLLER, PART-WINDING MCC UNIT: UPPER LEFT NUMBER DENOTES NEMA FRAME SIZE LETTERS WITHIN THE SYMBOL DENOTE THE FOLLOWING: TS1WTS1WTWO SPEED - SINGLE WINDINGTS2WTWO SPEED - DUAL WINDING	FS1 FS2 PS1	PF PF PF PF
BREAKER, THERMAL ENCLOSED MBER DENOTES TRIP I NUMBER DENOTES FRAME SIZE LEFT NUMBER DENOTES NEMA ENCLOSURE RATING	1 RVSS	MOTOR CONTROLLER, REDUCED-VOLTAGE MCC UNIT: UPPER LEFT NUMBER DENOTES NEMA FRAME SIZE LETTERS WITHIN THE SYMBOL DENOTE THE FOLLOWING: RVSS REDUCED VOLTAGE SOFT STARTER RVAT REDUCED VOLTAGE AUTO TRANSFORMER	PS2 の五 TD1 の大	
	1	MOTOR CONTROLLER, VARIABLE FREQUENCY DRIVE, MCC UNIT: UPPER LEFT NUMBER DENOTES NEMA FRAME SIZE LETTERS WITHIN THE SYMBOL DENOTE THE FOLLOWING: VFD VARIABLE FREQUENCY DRIVE		το ΝΟ ΝΟ
ENERIC MBER DENOTES TRIP I NUMBER DENOTES VOLTAGE CLASS	3%	LINE OR LOAD REACTOR CENTER RIGHT NUMBER DENOTES PERCENT IMPEDANCE		0 N0 N0
NUMBER DENOTES TYPE DEVICE, POWER RECEPTACLE	dV/dT	MOTOR PROTECTION FILTER	LT1	O NO NO
TEGRAL DISCONNECT / LOAD BREAK ONFIGURATION SHOWN LOWER RIGHT DEVICE, POWER RECEPTACLE ONFIGURATION SHOWN LOWER RIGHT	M 1~ 460V 21.0 FLA XXX	AC MOTOR SINGLE OR THREE PHASE AS NOTED		W R
OARD	\/ /\	CABLE-TRAY TYPE AS NOTED ON THE DRAWINGS	0,70	
		WIRE WAY TYPE AS NOTED ON THE DRAWINGS		
		ENCLOSURE FAN, 120VAC UON		
ZED FOR THIS PROJECT. WWN ON THIS DRAWING MAY BE SHOWN ELSEWHERE ON THE EL CLUDE THE "IEC" AND "IP" PREFIX.	ECTRICAL DRAWINGS. IF		ADDITIONAL	ULS MAY NOT E L SYMBOLS N . IF REQUIRED





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CONTROL DIAGRAM AND SCHEMATIC SYMBOLS

	REHABILITATION	DESIGNE	D SS AS NOTED DRAWING NUMBE
	MISSIONARY VILLAGE LIFT S	STATION	SCALE HORIZONTAL: E00.2
SYMB	Y NOT BE UTILIZED FOR THIS PROJECT. BOLS NOT SHOWN ON THIS DRAWING MAY BE SHOWN ELSEWI QUIRED, IEC RATINGS WILL INCLUDE THE "IEC" AND "IP" PREFIX.	HERE ON THE ELECTRICAL	
	INDICATION LIGHT, PUSH-TO-TEST W - WHITE G - GREEN A - AMBER R - RED B - BLUE C - CLEAR		
	INDICATION LIGHT W - WHITE G - GREEN A - AMBER R - RED B - BLUE C - CLEAR		
	NOTO OFF DELAY TIME RELAY NORMALLY CLOSED TIMED CLOSED NCTC	\bigtriangledown	NEW ANY GEN BLOCK
	NCTO OFF DELAY TIME RELAY NORMALLY OPENED TIMED OPENED	s X	SOLENOID VALVE O/C OPEN/CLOSE
	ON DELAY TIME RELAY NORMALLY CLOSED TIMED OPENED		
	NORMALLY CLOSED ON DELAY TIME RELAY NORMALLY OPENED TIMED CLOSED	M M o/c	MOTOR ACTUATED VALVE M MODULATING O/C OPEN/CLOSE
	NORMALLY OPENED PRESSURE SWITCH	1 1	
	PRESSURE SWITCH	BAT1	BATTERY OR DC POWER SOURCE
	FLOW SWITCH NORMALLY OPENED FLOW SWITCH		RATINGS AS NOTED ON THE DRAWINGS
	FLOAT SWITCH NORMALLY CLOSED	XF3	TRANSFORMER, CONTROL POWER
	FLOAT SWITCH NORMALLY OPENED		ANNUNCIATION
	TEMPERATURE SWITCH NORMALLY CLOSED	AH2	HORN, ALARM A/V INDICATES AUDIO AND VISUAL
	TEMPERATURE SWITCH NORMALLY OPENED		
	LIMIT SWITCH HELD CLOSED		
	LIMIT SWITCH HELD OPENED		
	LIMIT SWITCH NORMALLY CLOSED	ETM	ELAPSED TIME METER, ELECTRONIC
	LIMIT SWITCH NORMALLY OPENED	R1 0-/\/-0	HEATING ELEMENT, GENERIC
	THREE-POSITION BUTTON NORMALLY OPENED	SOL1 o-1-o	SOLENOID, GENERIC
	TWO-POSITION SWITCH NORMALLY OPENED	LR1 N	CONTACT, NORMALLY CLOSED TOP ID TAG DENOTES PARENT RELAY
	TOGGLE SWITCH NORMALLY CLOSED	CR1 	CONTACT, NORMALLY OPENED TOP ID TAG DENOTES PARENT RELAY
	NORMALLY CLOSED TOGGLE SWITCH NORMALLY OPENED	LR1 L	CONTROL RELAY, LATCHING
	NORMALLY CLOSED MUSHROOM PUSH BUTTON NORMALLY OPENED MUSHROOM PUSH BUTTON		MX AUXILIARY RELAY TR TIMING RELAY AR ALARM RELAY RR READY RELAY
	MOMENTARY PUSH BUTTON	\bigcirc	DESIGNATIONS: CR CONTROL RELAY

ELECTRICAL SYMBOLS 1 OF 2

STATUS:			FOR BID
PROJ. MGR.	ВР	N/A	REVISION
 CHECKED	ААН	VERTICAL:	C
DESIGNED	SS	AS NOTED	DRAWING NUMBER
DRAWN	33		

LIGHTING AND RECEPTACLE SYMBOLS 5

A1 a LP-100/15	LIGHT FIXTURE, VARIOUS TYPES UPPERCASE CHARACTERS "A1" DENOTES TYPE, REFER TO LIGHTING SCHEDULE OR DRAWING NOTES LOWERCASE LETTER "a" DENOTES CONTROL SWITCH	L21-30	WIRING DEVICE, POWER RECEPTACLE WITH INTEGRAL DISCONNECT / LOAD BREAK NEMA CONFIGURATION SHOWN LOWER RIGHT
	DUAL SWITCHING INDICATED BY PAIRS OF LOWERCASE LETTERS "a,b" NUMBER "LP-100/15" DENOTES LIGHTING PANEL AND CIRCUIT NUMBER "NL" DENOTES NIGHT LIGHT, CIRCUIT AHEAD OF CONTROL SWITCHES.	PR1 L21-30	WIRING DEVICE, POWER RECEPTACLE NEMA CONFIGURATION SHOWN LOWER RIGHT
A1 LP-100/15 A	LIGHT FIXTURE, VARIOUS TYPES EMERGENCY / EGRESS BATTERY BACK-UP POWER	$\Phi_{\rm gf}$	WIRING DEVICE, SINGLE DUPLEX RECEPTACLE, TYPIC LOWER RIGHT CHARACTERS DENOTE THE FOLLOWIN GF GROUND FAULT CIRCUIT INTERRUPTER IG ISOLATED GROUND
A1 a A1 a P-100/15 LP-100/15	PENDANT OR CEILING MOUNTED LIGHTING FIXTURE		SS SURGE PROTECTIVE WP WEATHER-PROOF GF/WP GROUND FAULT CIRCUIT INTERRUPTER /
⊢ A A1 LP-100/15	WALL MOUNTED LIGHTING FIXTURE	⊕ _{GF/WP}	WIRING DEVICE, DUPLEX RECEPTACLE GROUND FAULT CIRCUIT INTERRUPTER / WEATHERPI NEMA 5-20 125V 20A UNLESS OTHERWISE NOTED ON
A A1 O LP-100/15	POLE OR STANCHION MOUNTED LIGHTING FIXTURE	•	WIRING DEVICE, DUPLEX RECEPTACLE SPLIT-WIRED / SWITCHED
A A1 LP-100/15	TWO (2) POLE OR STANCHION MOUNTED LIGHTING FIXTURE		NEMA 5-20 125V 20A UNLESS OTHERWISE NOTED ON
GF A A1 CON LP-100/15	POLE OR STANCHION MOUNTED LIGHTING FIXTURE WITH RECEPTACLE	⊕	WIRING DEVICE, QUADPLEX RECEPTACLE NEMA 5-20 125V 20A UNLESS OTHERWISE NOTED ON
A A1 J D EM LP-100/15	TWO (2) LAMP EMERGENCY / EGRESS LIGHTING FIXTURE LETTERS DENOTE TYPE		WIRING DEVICE, QUADPLEX RECEPTACLE FLOOR BOX MOUNTED NEMA 5-20 125V 20A UNLESS OTHERWISE NOTED ON
*	EXIT SIGN WALL MOUNTED (SINGLE FACE WITH INDICATING ARROWS) WITH BATTERY PACK ARROW INDICATES DIRECTION OF EXIT DOOR	\bigotimes	WIRING DEVICE, HEAT-TRACE OR SPECIAL PURPOSE REFERENCE DRAWINGS FOR ADDITIONAL DETAILS
	EXIT SIGN PENDANT MOUNTED (DOUBLE FACE WITH INDICATING ARROWS) WITH BATTERY PACK ARROWS INDICATE DIRECTION OF EXIT DOOR		
D 150 10'-0" AFF	FIXTURE DESIGNATION SYMBOL. SEE LIGHTING FIXTURE SCHEDULE FOR DESCRIPTION AND TYPE. ALL FIXTURES SHOWN IN A ROOM WITH THIS SYMBOL SHALL BE OF TYPE INDICATED BY LETTER; NUMBER IN SYMBOL INDICATES LAMP WATTAGE AND NUMBER OF LAMPS WHERE	\bigtriangledown	WIRING DEVICE, TELEPHONE RJ-11 UNLESS OTHERWISE NOTED ON DRAWINGS
	MORE THAN ONE (UNLESS OTHERWISE NOTED). NUMBER BELOW SYMBOL INDICATES MOUNTING HEIGHT ABOVE FINISHED FLOOR OR AS NOTED.	$\mathbf{\nabla}$	WIRING DEVICE, TELEPHONE AND DATA RJ-11 AND RJ-45 UNLESS OTHERWISE NOTED ON DRA
a S ₂	WIRING DEVICE LIGHTING CONTROL SWITCHES: UPPER-LEFT CHARACTER "a" DENOTES SWITCH DESIGNATION. LOWER-RIGHT CHARACTER "4" DENOTES SWITCH CONTROL	▼	WIRING DEVICE, DATA RJ-45 UNLESS OTHERWISE NOTED ON DRAWINGS
a b SS 3 D	 2 TWO POLE 3 THREE-WAY SWITCH CONTROL 4 FOUR-WAY SWITCH CONTROL D DIMMER CONTROL OS OCCUPANCY SENSOR 		WIRING DEVICE, TELEPHONE AND DATA FLOOR BOX MOUNTED RJ-11 AND RJ-45 UNLESS OTHERWISE NOTED ON DRA
abc SSS 234	M MOTOR RATED SWITCH T 24V DC MOMENTARY CONTACT SWITCH V VARIABLE SPEED FAN SWITCH		

RACEWAY/LINE WEIGHTS 8 ----- CONCEALED RACEWAY(S) IN FLOOR SLAB, UNDERGROUND, ETC. — — — — — — — — EXISTING RACEWAY(S) AND/OR CABLES RACEWAY SYSTEM CALL-OUTS: CT110 CT - CABLE TRAY BD - BUS DUCT DB - DUCTBANK EC - EXPOSED CONDUIT WW - WIRE WAY/TROUGH 042000 RACEWAY AND/OR CABLE ID NUMBER — E —— RACEWAY HOMERUN TO EQUIPMENT ID TAG AS SHOWN. LINE 1 TYPE DESIGNATES CONCEALED, EXPOSED, ETC. _____ E ____ E LP-3 NUMBERS/TEXT DESIGNATE HOMERUN EQUIPMENT (I.E. PANEL BOARD CIRCUIT NUMBER). — — T — — OHE -----CONDUCTOR/CABLE CALL-OUT WITHIN RACEWAY ____ C TO PLC-1 - OHT ------[—] 9#14 #12G 0.75"C UGE UGT ------— G — _ _ _ _ NE _____ G ____ *E*> _____ L ____ NE NOTES: ALL SYMBOLS MAY NOT BE UTILIZED FOR THIS PROJECT.

ADDITIONAL SYMBOLS NOT SHOWN ON THIS DRAWING MAY BE SHOWN ELSEWHERE ON THE ELECTRICAL DRAWINGS. IF REQUIRED, IEC RATINGS WILL INCLUDE THE "IEC" AND "IP" PREFIX.

EV.NO.	DESCRIPTION	DATE	
			41
			11
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			41
			11
С	ISSUED FOR BID	SEPT. 2022	11
в	60% CLIENT SUBMITTAL - NOT FOR CONSTRUCTION	APRIL 2022	11
Α	30% CLIENT SUBMITTAL	JUNE 2021]
	REVISIONS		7

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DOWN		GROUNDING / BONDING CONNECTION
UP		EXOTHERMIC WELD
TED / CAPPED OFF		GROUNDING / BONDING CONNECTION MECHANICAL
D / ABANDONED		
		GROUND, EARTH
EW ELECTRICAL RACEWAY(S) XISTING ELECTRICAL RACEWAY(S)	G	GROUNDING / BONDING CONDUCTOR (REFERENCE CONTRACT DOCUMENTS FOR REQUIREMENTS)
EW TELEPHONE LINE(S)		
XISTING TELEPHONE LINE(S) VERHEAD ELECTRICAL UTILITY VERHEAD TELEPHONE UTILITY	L L L	LIGHTNING PROTECTION CONDUCTOR (REFERENCE CONTRACT DOCUMENTS FOR REQUIREMENTS)
NDERGROUND ELECTRICAL UTILITY NDERGROUND TELEPHONE UTILITY		
EW GROUNDING / BONDING XISTING GROUNDING / BONDING		
EW LIGHTNING PROTECTION CONDUCTOR		ZED FOR THIS PROJECT. WWN ON THIS DRAWING MAY BE SHOWN ELSEWHERE ON THE ELECTRICAL TINGS WILL INCLUDE THE "IEC" AND "IP" PREFIX.
)	
		Manatee

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GROUNDING / BONDING SYMBOLS 9

GROUND ROD TEST WELL

GROUND ROD

THERWISE NOTED ON DRAWINGS

E AND DATA

THERWISE NOTED ON DRAWINGS

E OR SPECIAL PURPOSE RECEPTACLE R ADDITIONAL DETAILS

RECEPTACLE S OTHERWISE NOTED ON DRAWINGS

RECEPTACLE S OTHERWISE NOTED ON DRAWINGS

CEPTACLE S OTHERWISE NOTED ON DRAWINGS

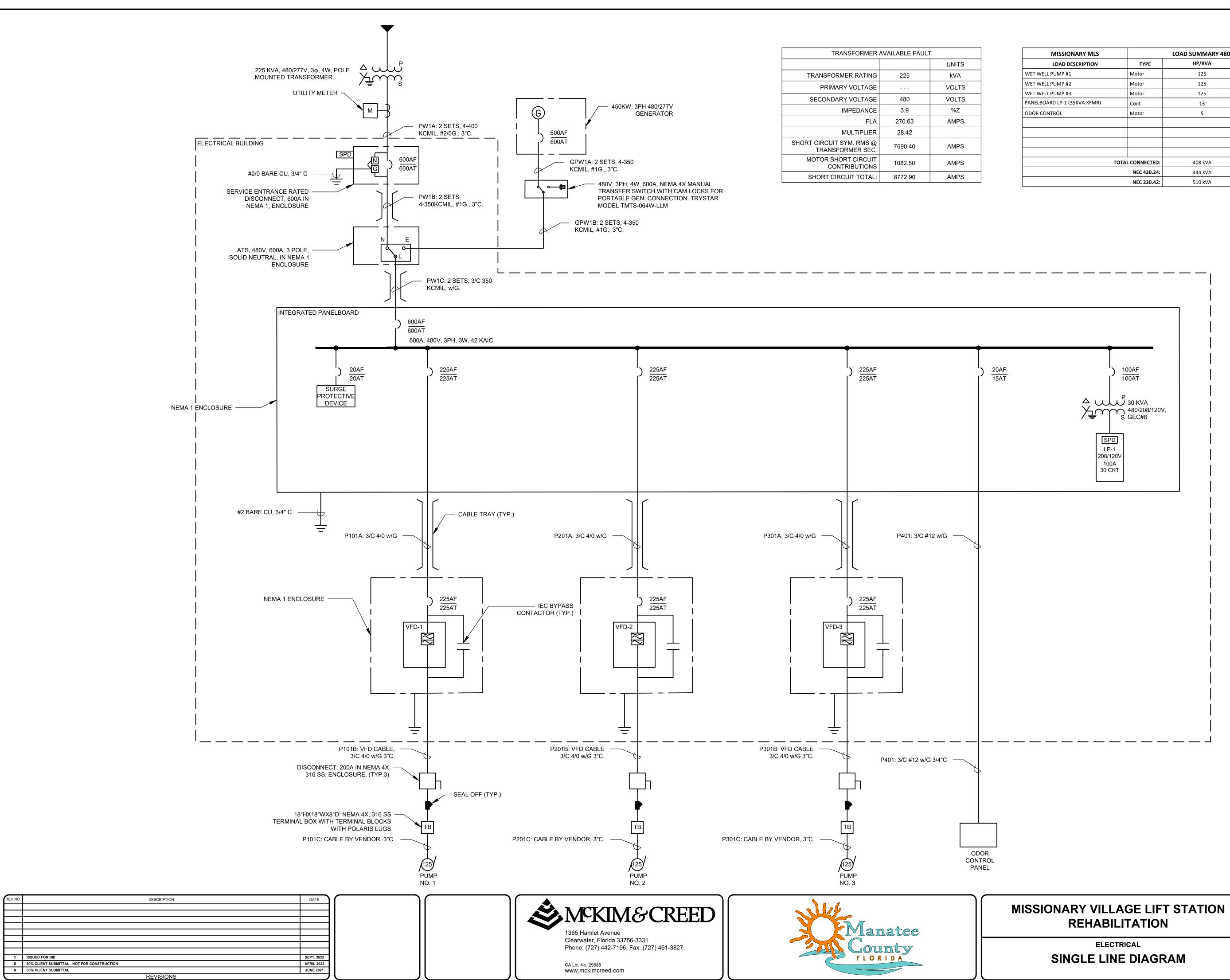
CEPTACLE ERRUPTER / WEATHERPROOF S OTHERWISE NOTED ON DRAWINGS

ND IVE CIRCUIT INTERRUPTER / WEATHERPROOF

PLEX RECEPTACLE, TYPICAL S DENOTE THE FOLLOWING: CIRCUIT INTERRUPTER

MISSIONARY VILLAGE LIFT STATION	PROJ. START DATE 2021 MARCH SCALE
REHABILITATION	MCE PROJ. # 6022386 DRAWN SS HORIZONTAL: E00.3
RENADILITATION	DESIGNED SS AS NOTED CHECKED AAH VERTICAL:
ELECTRICAL	Official John PROJ. MGR. BP N/A C REVISION
SYMBOLS 2 OF 2	STATUS:
	│ ISSUED FOR BID ↓

\\MCKIMCREED.COM\NASUNI\DATA\PROJ\01024\0191\ENG\80-DRAWINGS\ELECTRICAL\SYMBOLS, ABBREVIATIONS AND NOTES.DWG 09/21/2022 11:16:42 SUVATH SENG

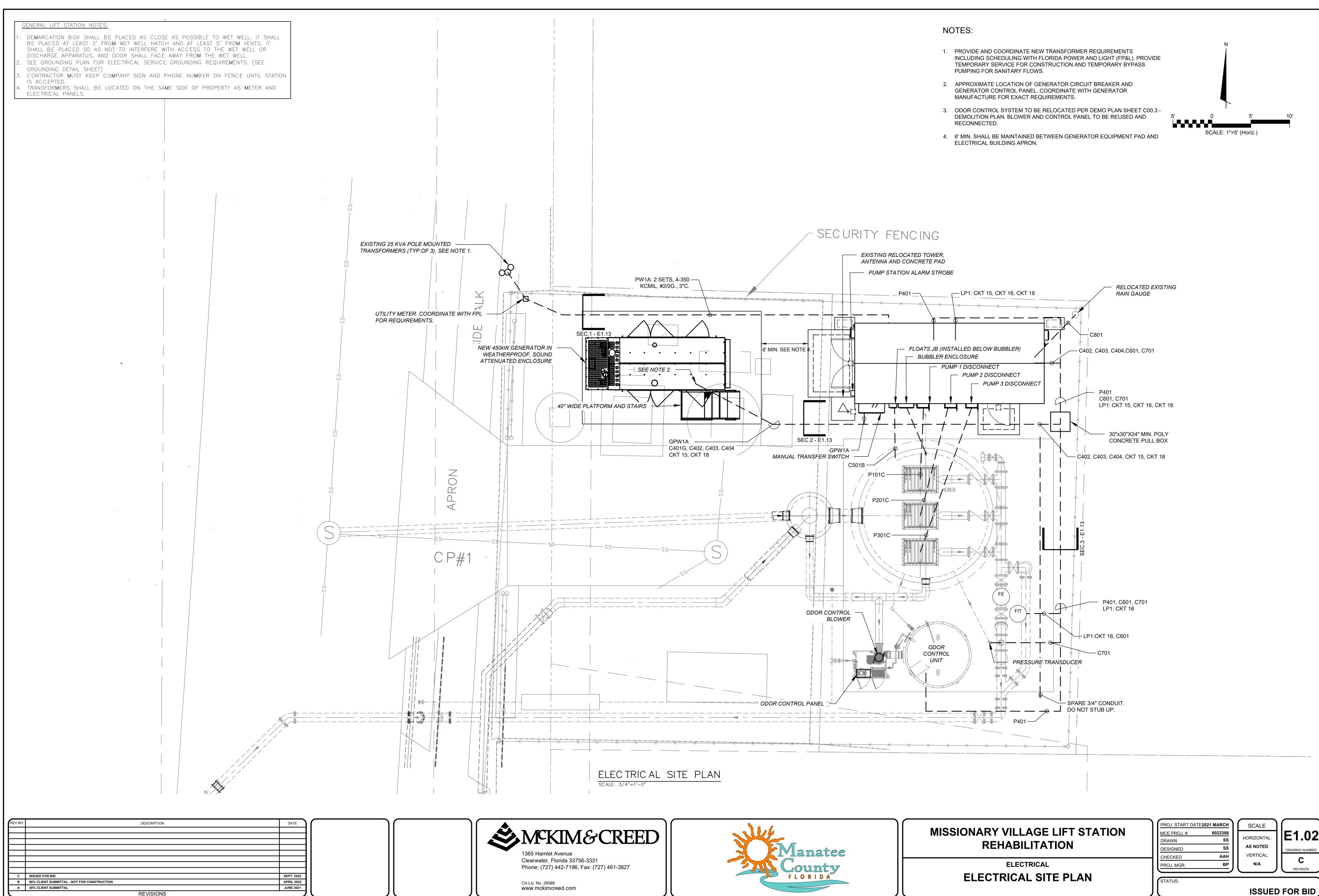


TRANSFORMER AVAILABLE FAULT								
		UNITS						
TRANSFORMER RATING	225	kVA						
PRIMARY VOLTAGE		VOLTS						
SECONDARY VOLTAGE	480	VOLTS						
IMPEDANCE	3.9	%Z						
FLA	270.63	AMPS						
MULTIPLIER	28.42							
SHORT CIRCUIT SYM. RMS @ TRANSFORMER SEC.	7690.40	AMPS						
MOTOR SHORT CIRCUIT CONTRIBUTIONS	1082.50	AMPS						
SHORT CIRCUIT TOTAL:	8772.90	AMPS						

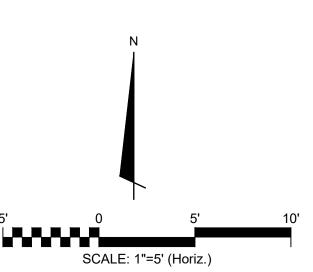
MISSIONARY MLS		LOAD SUMMARY 480	V
LOAD DESCRIPTION	ТҮРЕ	HP/KVA	FLA
WET WELL PUMP #1	Motor	125	156
WET WELL PUMP #2	Motor	125	156
WET WELL PUMP #3	Motor	125	156
PANELBOARD LP-1 (35KVA XFMR)	Cont	13	16
ODOR CONTROL	Motor	5	8
	TOTAL CONNECTED:	408 kVA	491 AMPS
	NEC 430.24:	444 kVA	534 AMPS
	NEC 230.42:	510 kVA	614 AMPS

PROJ. START DATE 2	021 MARCH	SCALE	
MCE PROJ. #	6022386		E1.01
DRAWN	SS	HORIZONTAL:	
DESIGNED	SS	AS NOTED	DRAWING NUMBER
CHECKED	AAH	VERTICAL:	С
PROJ. MGR.	BP	N/A	
		\square	REVISION
STATUS:			
		ISSUED	FOR BID

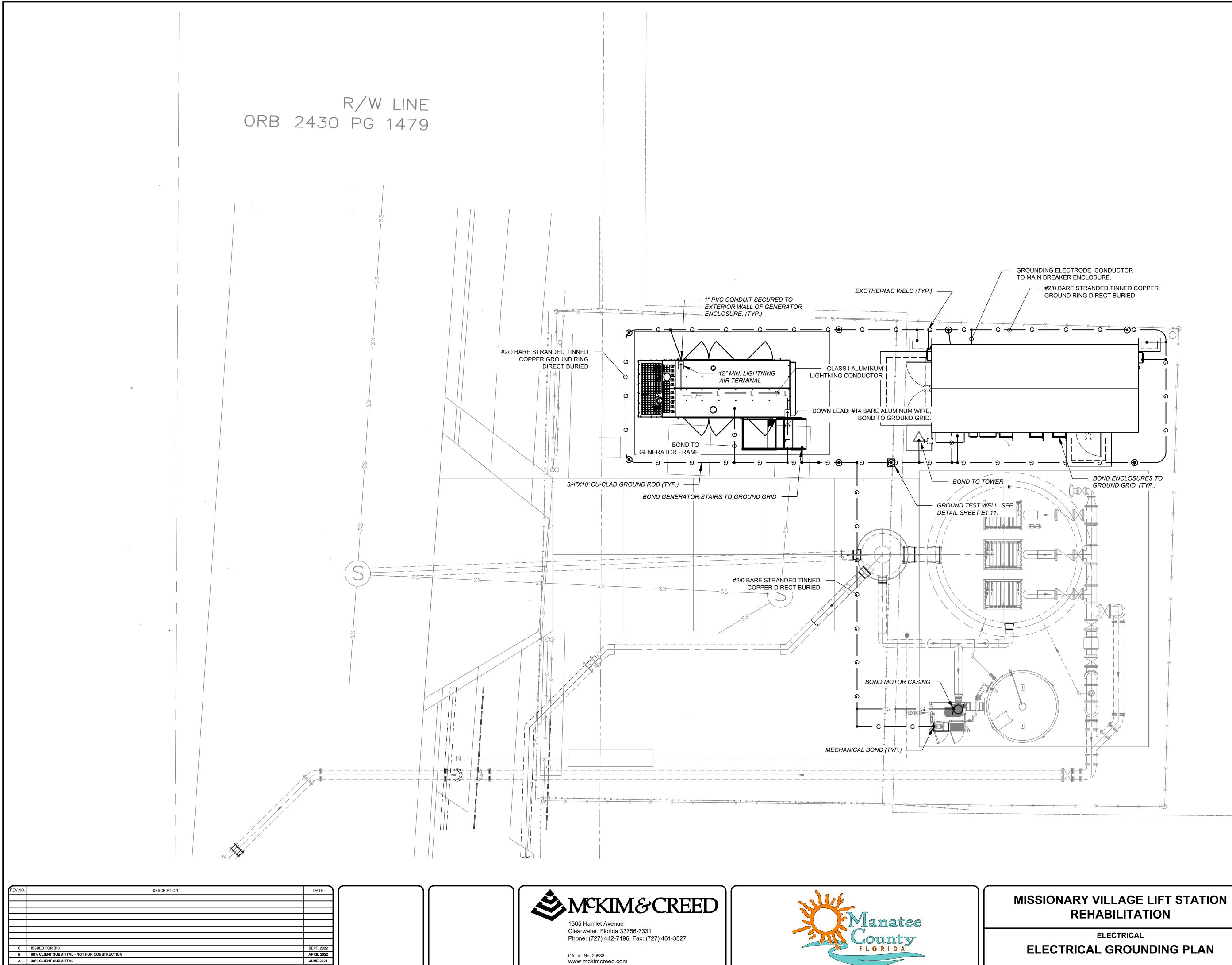
\\MCKIMCREED.COM\NASUNI\DATA\PROJ\01024\0191\ENG\80-DRAWINGS\ELECTRICAL\E1.01 SINGLE LINE DIAGRAM.DWG 09/21/2022 11:16:52 SUVATH SENG



REVISIONS

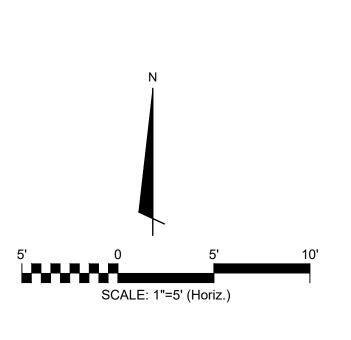


\\MCKIMCREED.COM\NASUNI\DATA\PROJ\01024\0191\ENG\80-DRAWINGS\ELECTRICAL\ELECTRICAL SITE PLAN.DWG 09/21/2022 11:17:34 SUVATH SENG



REVISIONS

ELECTRICAL		CHECKED PROJ. MGR.	N/A	C REVISION
ELECTRICAL GROUNDING PLAN	1	STATUS:		
	Л	l	ISSUED	FOR BID



PROJ. START DATE 2021 MARCH

6022386

SS

SS

MCE PROJ. #

DRAWN

DESIGNED

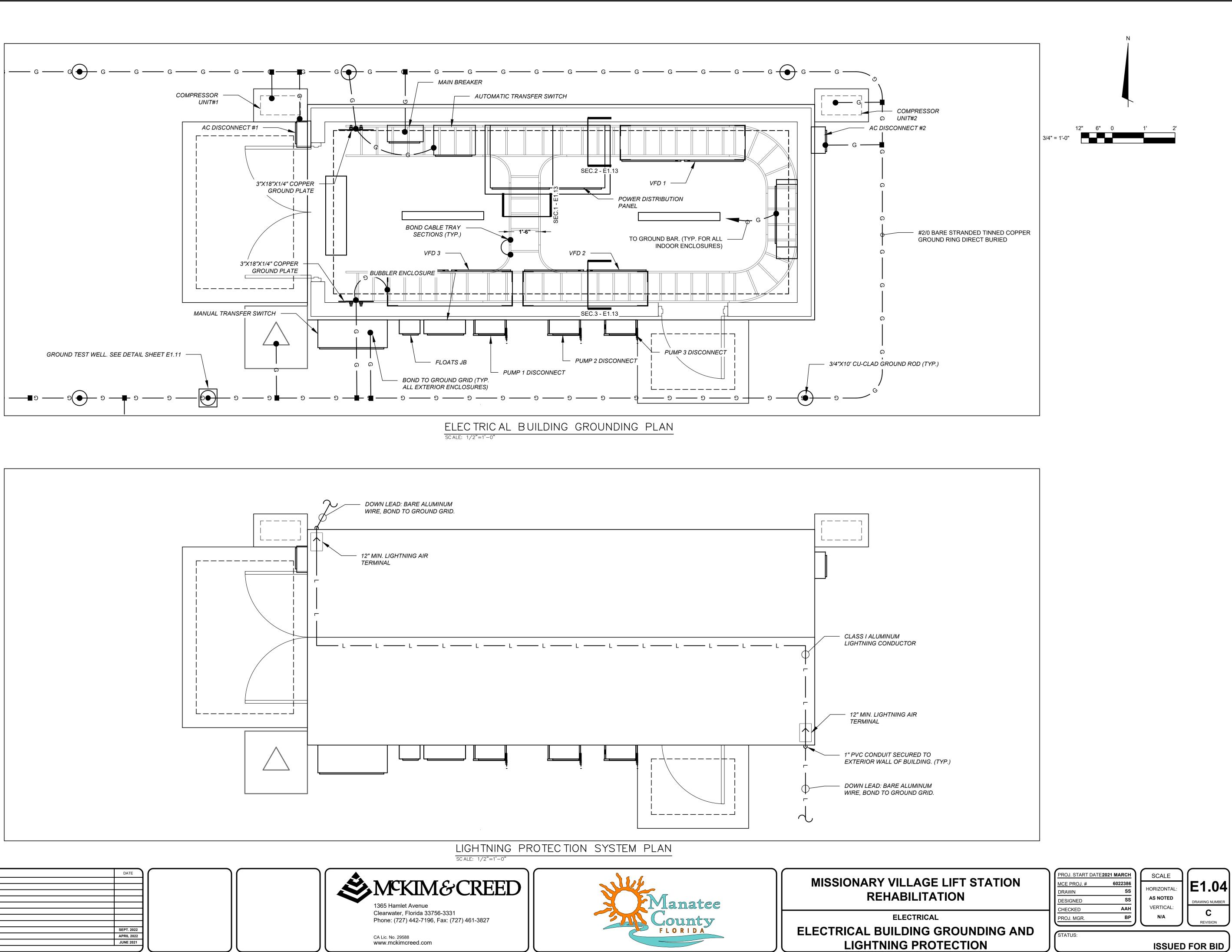
SCALE

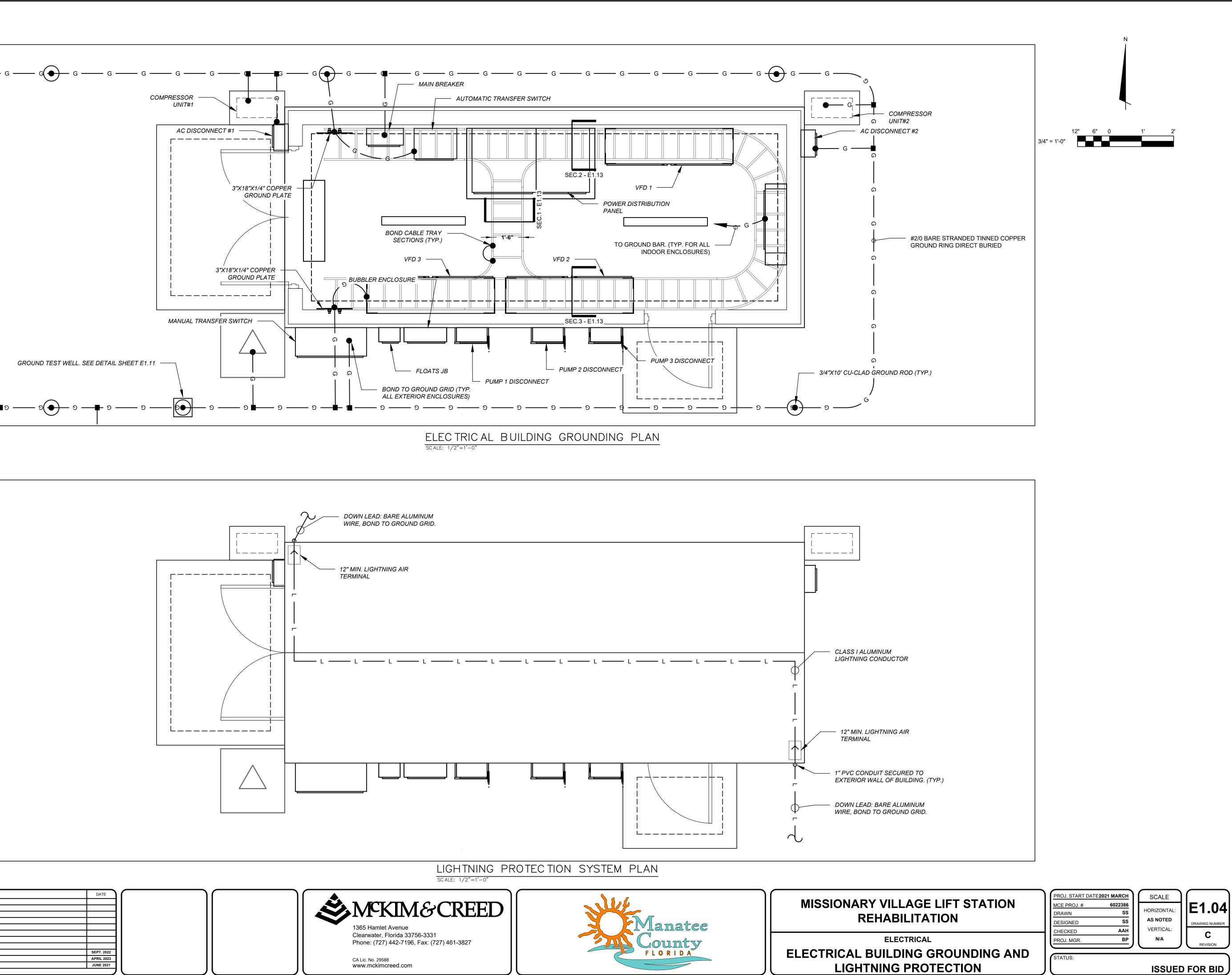
HORIZONTAL

AS NOTED

E1.03

AWING NUM

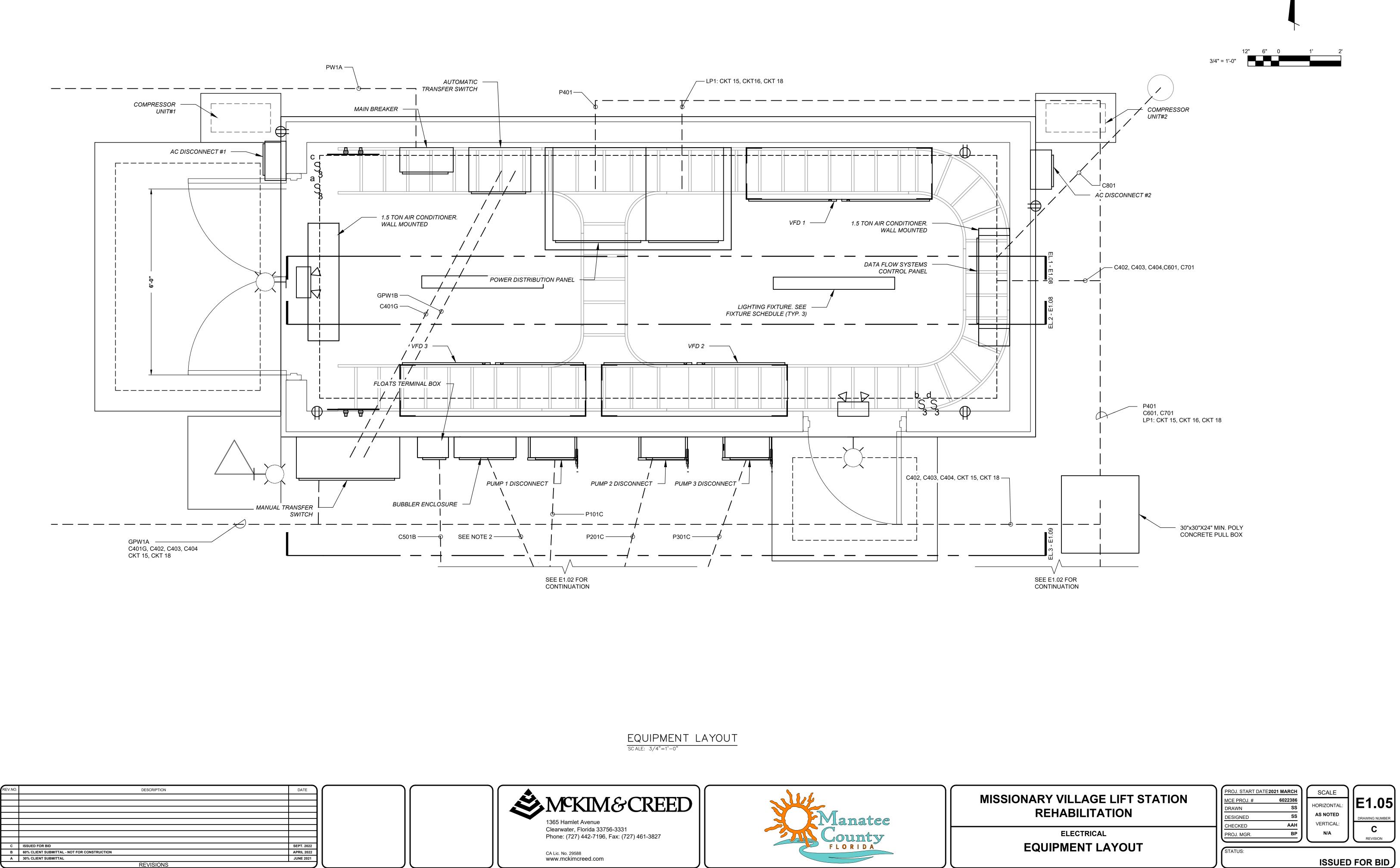




/.NO.	DESCRIPTION	DATE
ISSUED FOR BID		SEPT. 2022
60% CLIENT SUBMITTAL - NOT FOR CONSTRUC	TION	APRIL 2022
A 30% CLIENT SUBMITTAL		JUNE 2021
	REVISIONS	

<u>.IGHTNING</u>	PROTECTION	

\\MCKIMCREED.COM\NASUNI\DATA\PROJ\01024\0191\ENG\80-DRAWINGS\ELECTRICAL\ELECTRICAL EQUIPMENT LAYOUT.DWG 09/21/2022 11:18:10 SUVATH SENG



NOTES:

- 1. CABLE TRAY NOT SHOWN FOR CLARITY. SEE SHEET E1.04
- 2. COORDINATE WITH DFS FOR SIZE AND INSTALLATION RECOMMENDATIONS.

\\MCKIMCREED.COM\NASUNI\DATA\PROJ\01024\0191\ENG\80-DRAWINGS\ELECTRICAL\ELECTRICAL EQUIPMENT LAYOUT.DWG 09/21/2022 11:18:15 SUVATH SENG

LIGHTING SCHEDULE

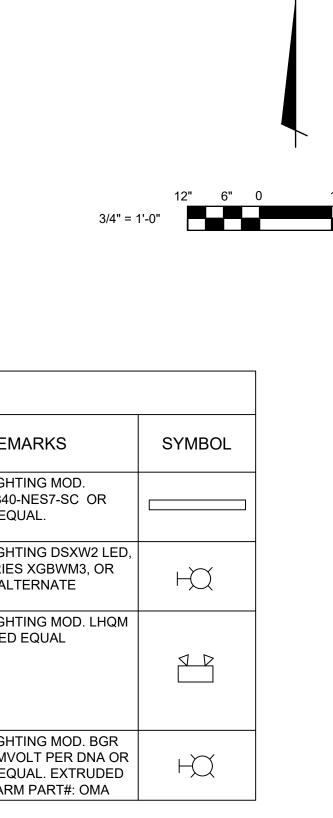
LETTER	DESCRIPTION	LAMPS	REM
A	4' SURFACE MOUNT LED LUMINAIRE. ROLLED STEEL HOUSING. IMPACT MODIFIED LINEAR FACETED REFRACTOR. INTEGRAL OCCUPANCY SENSOR.	LED MIN CRI 82, L90/60,000HRS, 39W, 4000K	LITHONIA LIGH WL4-40L-LP840 APPROVED EQ
В	LED OUTDOOR RATED WALL PACK. TYPE II MEDIUM DISTRIBUTION. INTEGRAL BALLAST & PHOTOCELL. FULL CUTOFF. DARK BRONZE.	20 LED 73W 4000K	LITHONIA LIGH LSI INDUSTRIES APPROVED ALT
С	WALL MOUNT EMERGENCY EXIT LIGHT W/SIGN. INJECTION-MOLDED, FLAME-RETARDANT, HIGH-IMPACT, THERMOPLASTIC HOUSING. BATTERY BACKUP. TEST SWITCH FOR MANUAL ACTIVATION OF 30-SECOND DIAGNOSTIC TESTING. SELF DIAGNOSTIC TESTING EVERY 30 DAYS.	LED, RED LENS <1W, 120V	LITHONIA LIGH OR APPROVED
D	POST MOUNTED LED LIGHT FIXTURE WITH MOUNTING ARM. FULL CUTOFF FIXTURE.	LED, 4000K, 55.9 W, 120V	LITHONIA LIGH LED P2 40K MV APPROVED EQ MOUNTING ARM

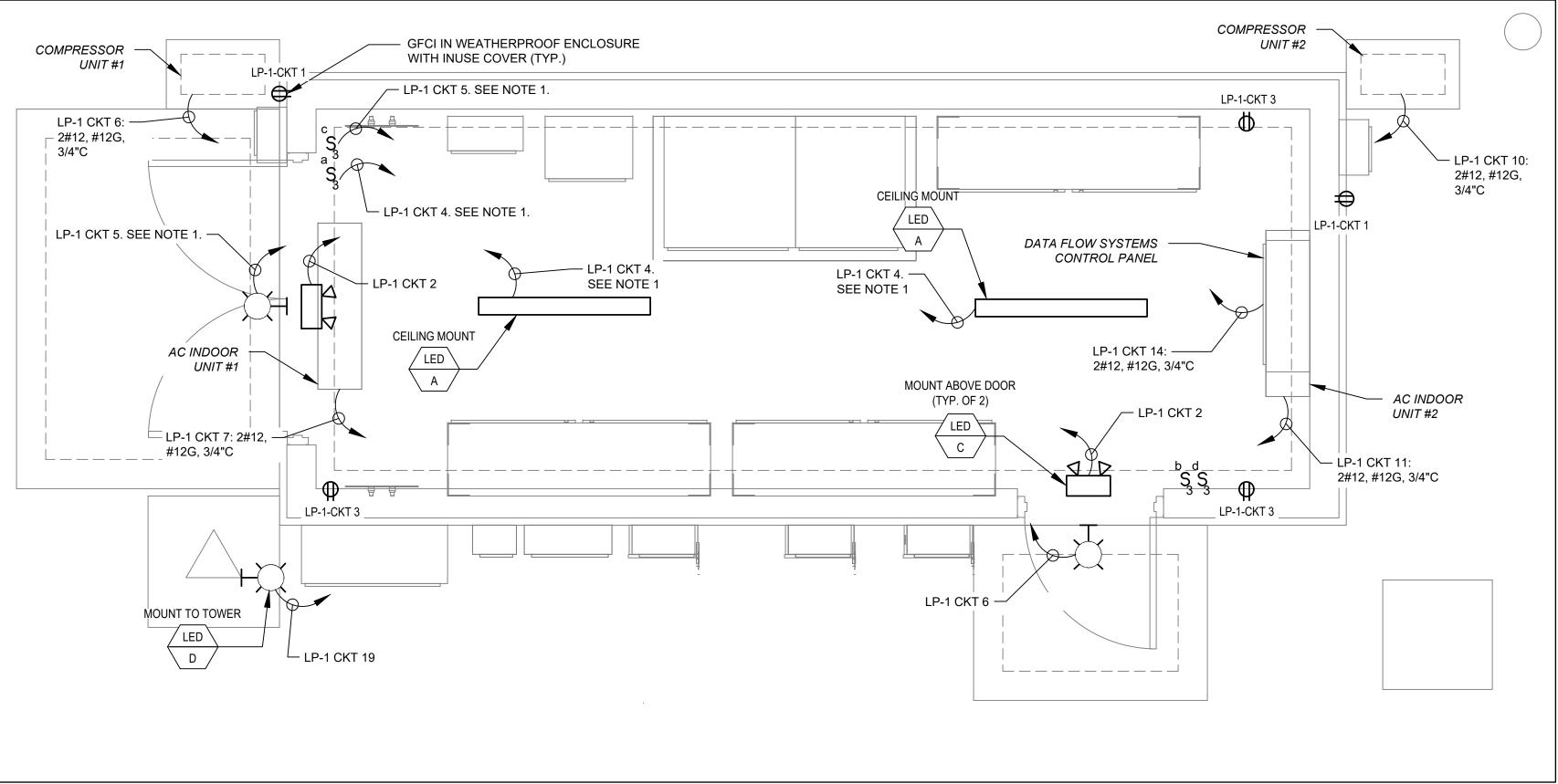
CKT NO.	TRIP AMPS	DESCRIPTION OF LOAD	LOAD KVA	AMPS	POLES	KVA PEI A	R PHASE B	POLES	AMPS	LOAD KVA	DESCRIPTION OF LOAD	TRIP AMPS	CKT NO.
1	20	RECEPTACLES OUTSIDE	0.36	3.46	1	0.540		1	1.73	0.18	EMERGENCY EXIT LIGHT	20	2
3	20	RECEPTACLES INSIDE	0.72	6.92	1		1.520	1	7.69	0.8	INTERIOR LIGHTING	20	4
5	20	EXTERIOR LIGHTING WALL PACKS	0.5	4.81	1	2.100		2	15.38	1.6	AC OUTDOOR UNIT #1	25	6
7	15	AC INDOOR UNIT #1	0.1	0.96	2		1.700			1.6		25	
			0.1			1.700		2	15.38	1.6	AC OUTDOOR UNIT #2	25	10
11	15	AC INDOOR UNIT #2	0.1	0.96	2		1.700			1.6		25	
			0.1			1.100		1	9.62	1	DFS CONTROL PANEL	20	14
15	20	GENERATOR BLOCK HEATER	0.08	0.08	2		0.120	1	0.38	0.04	FLOW TRANSMITTER (FIT)	15	16
	20	GENERATOR BLOCK HEATER	0.08	0.08		0.290		1	2.02	0.21	GENERATOR BATTERY CHARGER	20	18
19	20	LIGHT FIXTURE - DFS TOWER	0.3	2.88	1		0.300	1			SPARE	20	20
21	20	SPARE			1	0.000		1			SPARE	20	22
23	20	SPARE			1		0.000	1			SPARE	20	24
25	20	SURGE PROTECTION DEVICE	0.1	0.8	3	0.100		1			SPARE	20	26
	20		0.1				0.1	1			SPARE	20	28
	20		0.1			0.1		1			SPARE	20	30
			то	TAL KVA		5.930	5.440				SERVICE CHARACTERISTICS		
	PANE	L LP-1				3.830	5.440		VOLTS:	208/120			A MLO
	OCATION BUILDING	N ELEC. BUILDING G	GRAND	CONNEC	TED T	OTAL KVA	11.370		PHASE: WIRE:	3 4	-	100	A MCB
	NOTES	S:	0					-	10k	MIN AIC S	SYMM, FULLY RATED ASSEMBLY		

PANELBOARD SCHEDULE SCALE: NTS

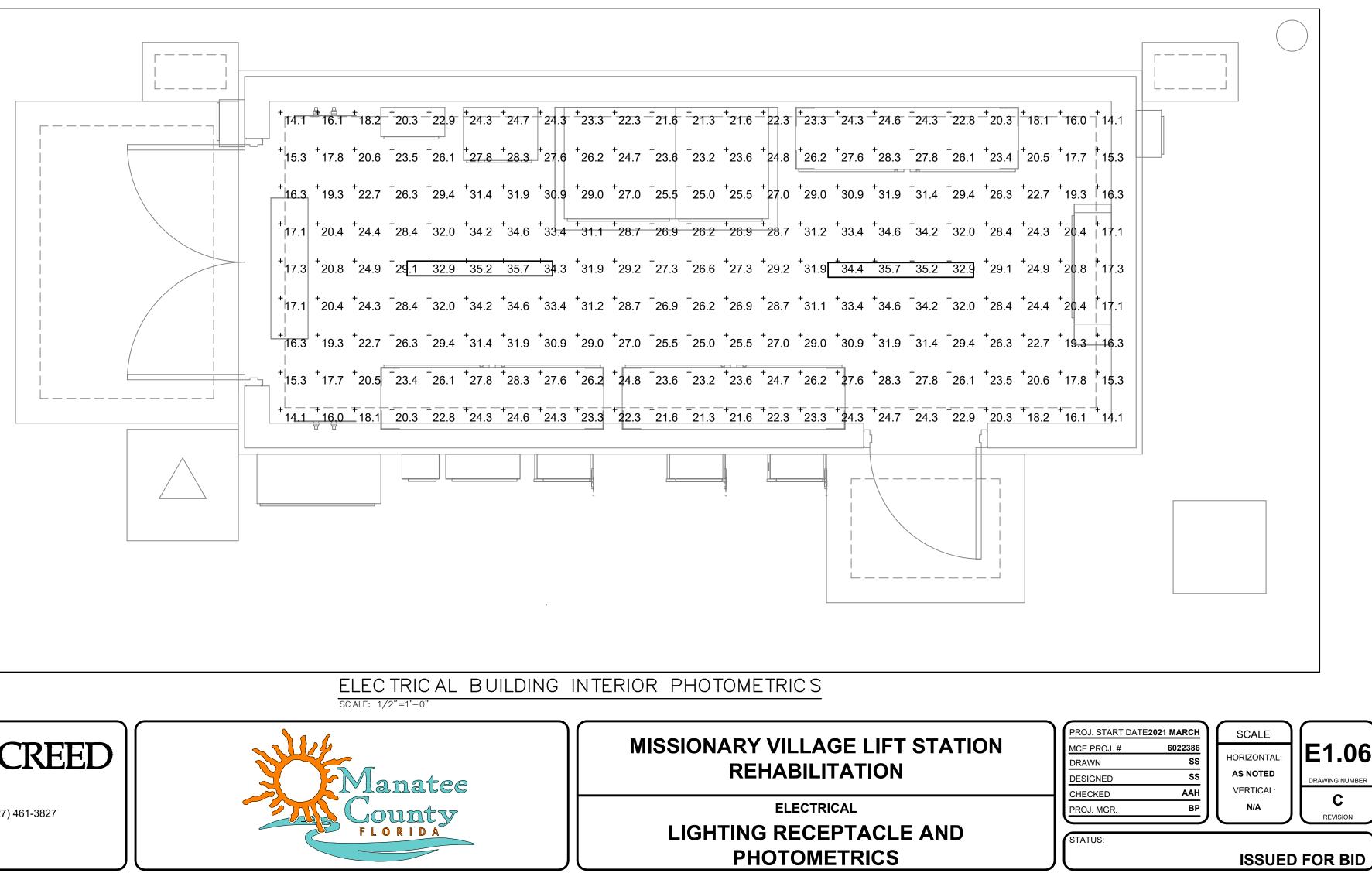
DESCRIPTION DATE SEPT. 2022 C ISSUED FOR BID APRIL 2022 JUNE 2021 B 60% CLIENT SUBMITTAL - NOT FOR CONSTRUCTION A 30% CLIENT SUBMITTAL REVISIONS

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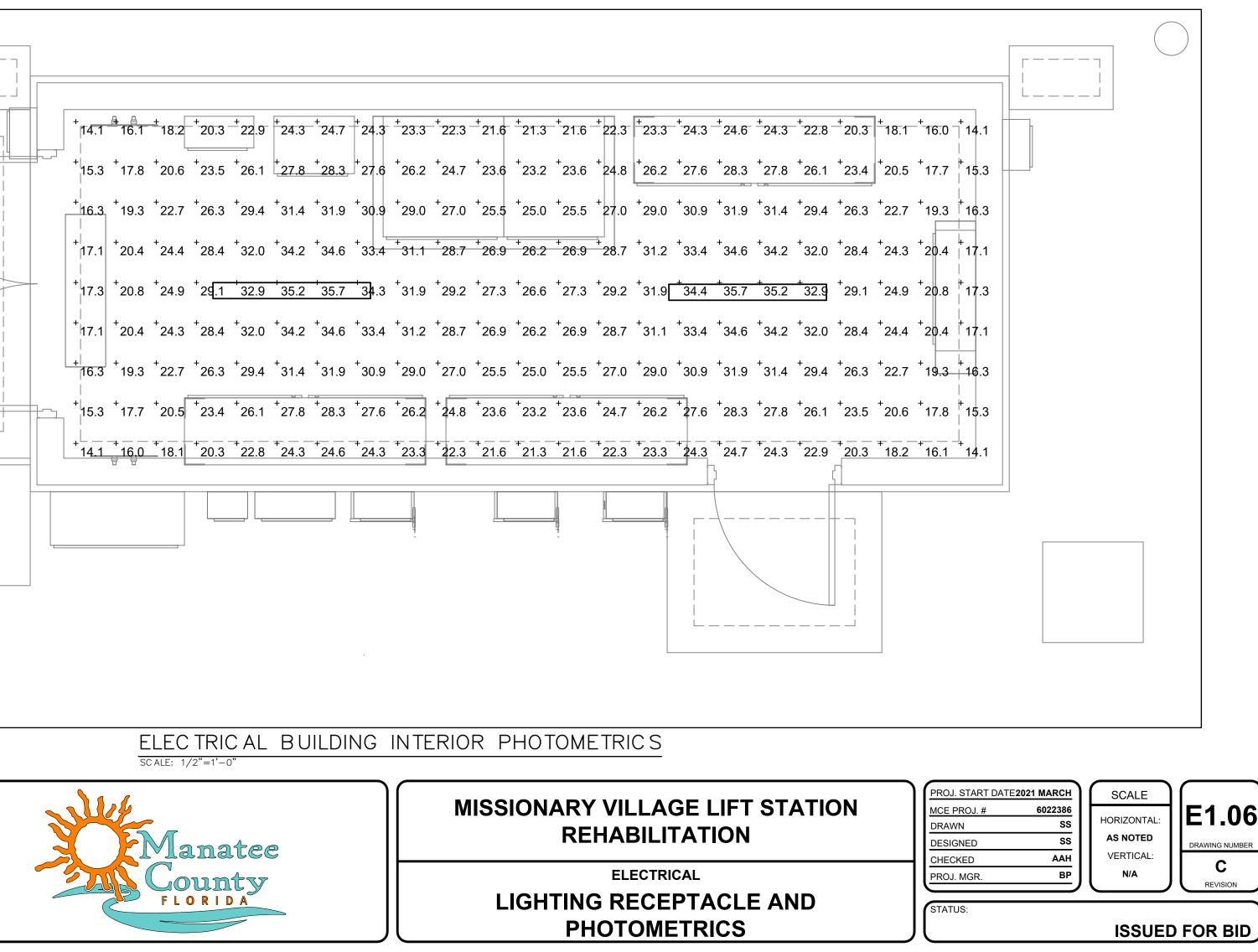


SC ALE: 1/2"=1'-0"





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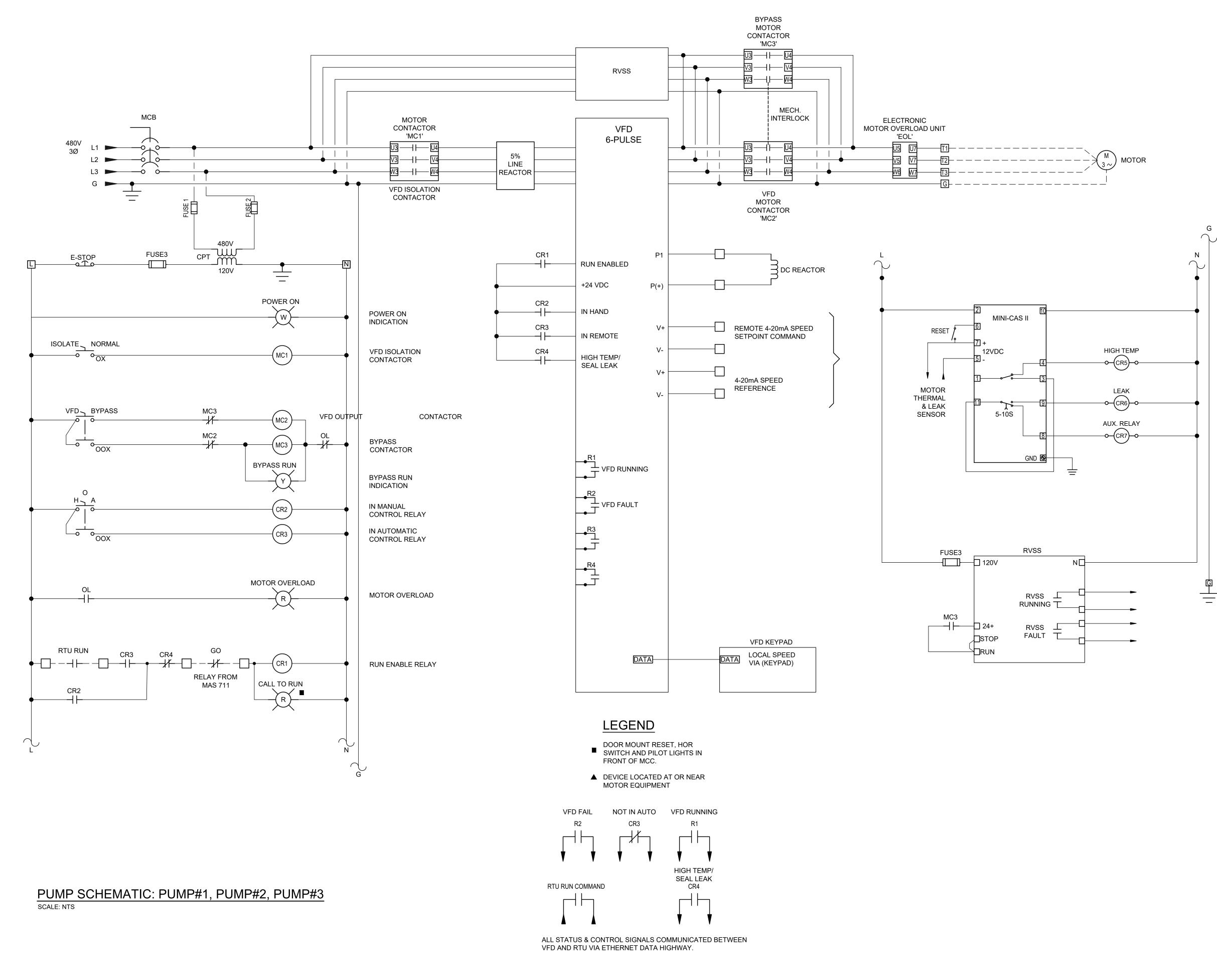


NOTES:

- 1. LIGHTING FIXTURE SHALL BE WIRED 3 WAY SWITCHABLE.
- 2. ALL LIGHTING AND RECEPTACLE CIRCUITS SHALL BE 2#12, #12G., 3/4" C.
- 3. PHOTOMETRIC SHOWN IS WITH WORKING PLANE SET AT 3'.
- 4. CABLE TRAY NOT SHOWN FOR CLARITY.

ELECTRICAL BUILDING LIGHTING AND RECEPTACLE

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EV.NO.	DESCRIPTION	DATE	(
C ISSUED FOR BID		SEPT. 2022	
B 60% CLIENT SUBMITTAL - NOT F	OR CONSTRUCTION	APRIL 2022	
A 30% CLIENT SUBMITTAL		JUNE 2021	



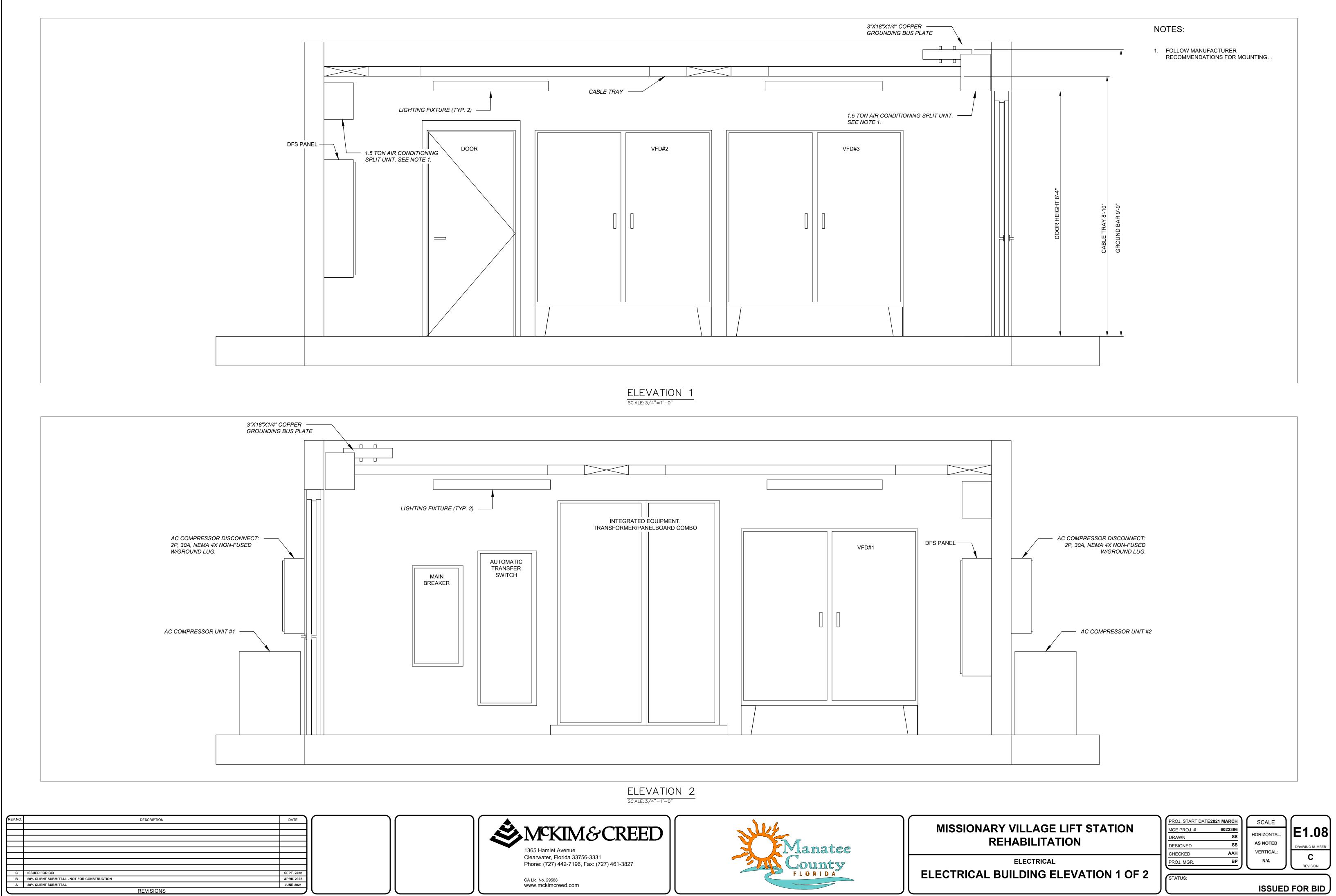


MISSIONARY VILLAGE LIFT STATION REHABILITATION

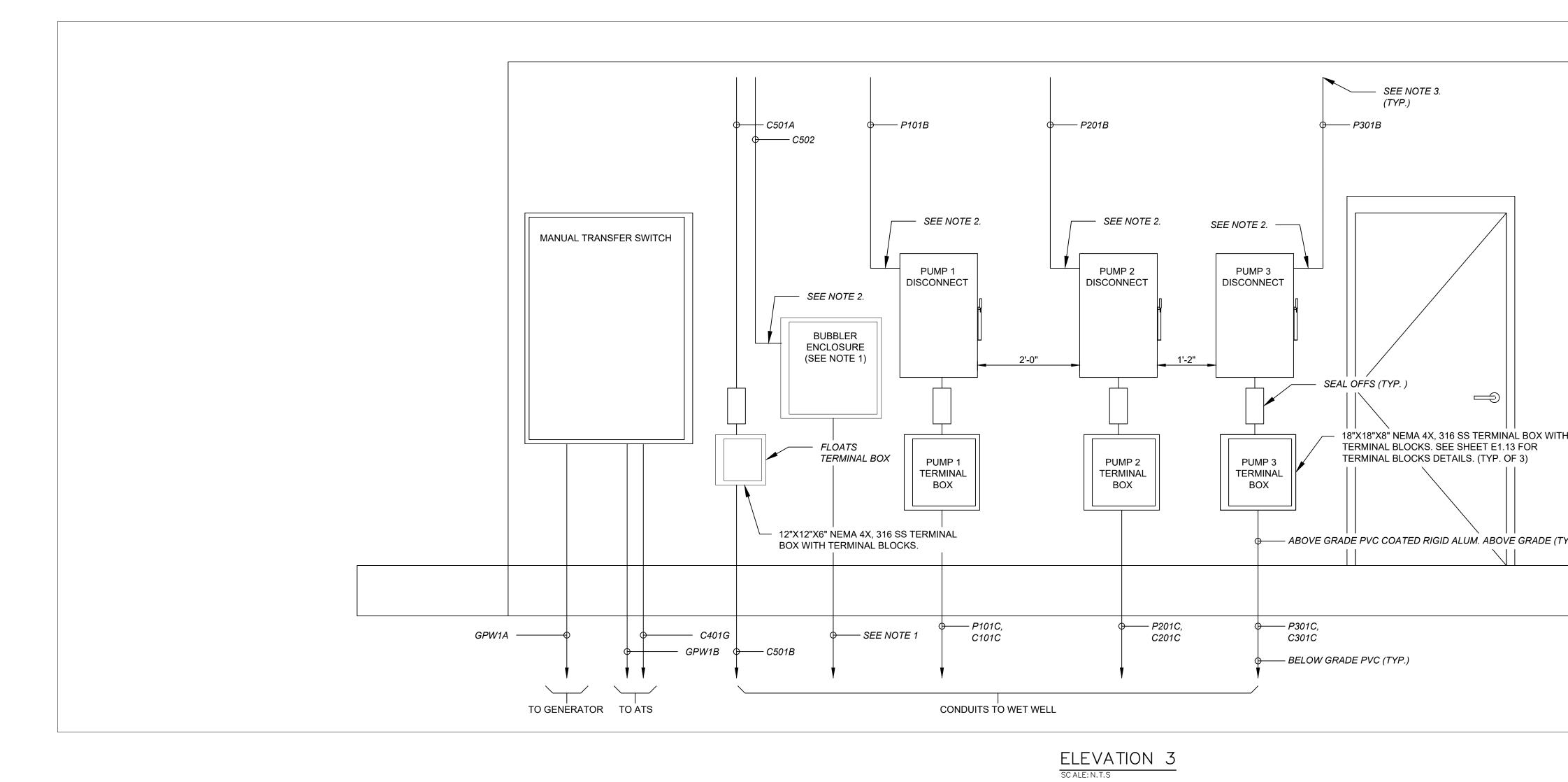
ELECTRICAL VFD WIRING DIAGRAM

PROJ. START DATE 2	021 MARCH	SCALE	(
MCE PROJ. #	6022386		E1.07
DRAWN	SS	HORIZONTAL:	
DESIGNED	SS	AS NOTED	DRAWING NUMBER
CHECKED	AAH	VERTICAL:	С
PROJ. MGR.	BP	N/A	REVISION
			REVISION
STATUS:			
		ISSUED	FOR BID

\\MCKIMCREED.COM\NASUNI\DATA\PROJ\01024\0191\ENG\80-DRAWINGS\ELECTRICAL\VFD WIRING DIAGRAM.DWG 09/21/2022 11:18:27 SUVATH SENG



\\MCKIMCREED.COM\NASUNI\DATA\PROJ\01024\0191\ENG\80-DRAWINGS\ELECTRICAL\E-1.07 MTS, PANELBOARD AND VFD ELEVATION.DWG 09/21/2022 11:18:38 SUVATH SENG



REV.NO.	DESCRIPTION	DATE
с	ISSUED FOR BID	SEPT. 2022
В	60% CLIENT SUBMITTAL - NOT FOR CONSTRUCTION	APRIL 2022
Α	30% CLIENT SUBMITTAL	JUNE 2021
	REVISIONS	



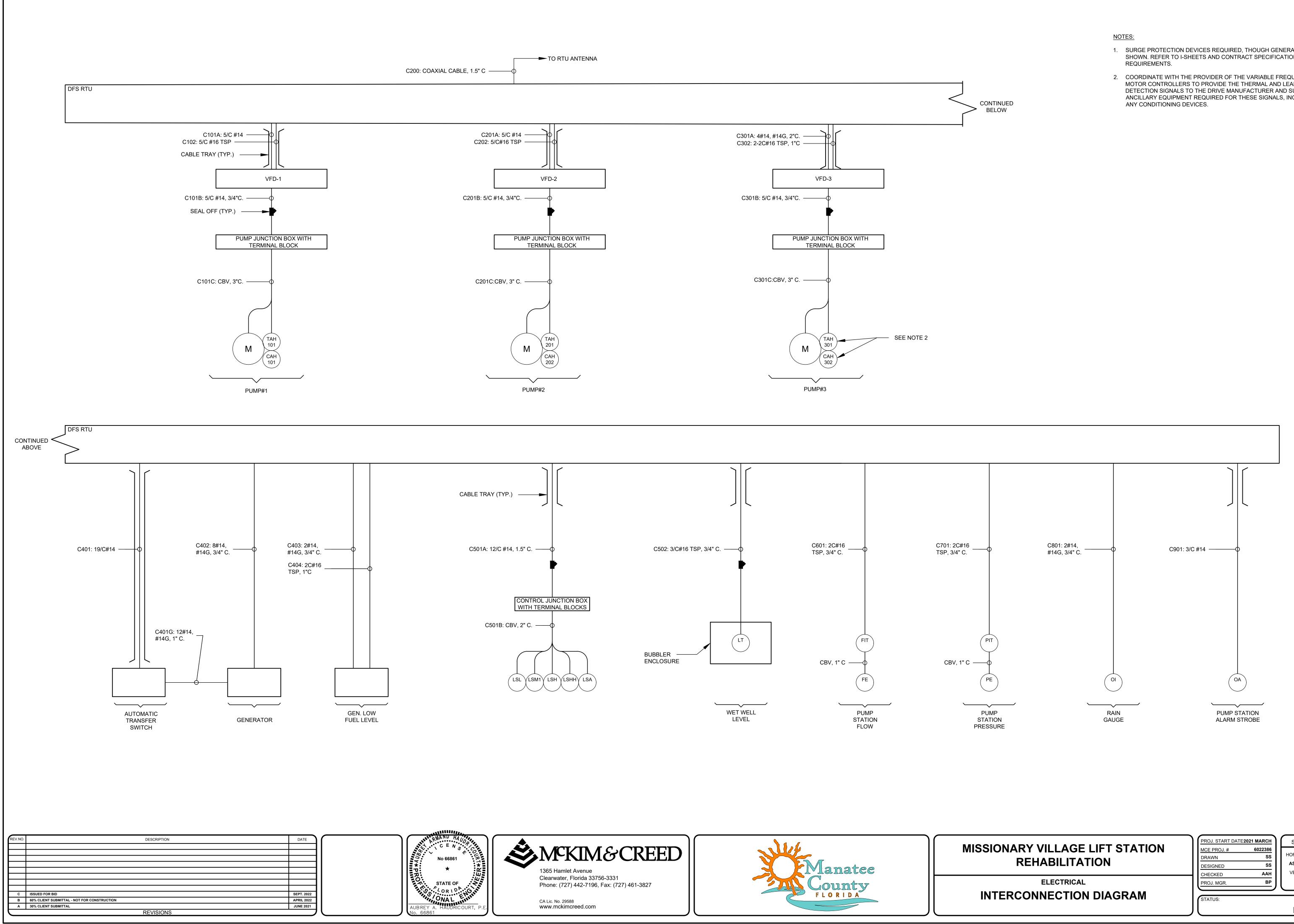
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	Ν	IOTES:
	1.	COORDINATE WITH DFS FOR SIZE AND INSTALLATION RECOMMENDATIONS.
	2	. UTILIZE LBD TO MAKE 90 DEGREE TURN UP.
	3	UTILIZE LBD TO MAKE 90 DEGREE TURN INTO THE BUILDING AND ONTO THE CABLE TRAY.
Н		
YP.)		

		_
MISSIONARY VILLAGE LIFT STATION REHABILITATION	PROJ. START DATE2021 MARCH MCE PROJ. # 6022386 DRAWN SS DESIGNED SS CHECKED AAH SCALE HORIZONTAL: AS NOTED VERTICAL:	-
ELECTRICAL BUILDING ELEVATION 2 OF 2	STATUS:))

\\MCKIMCREED.COM\NASUNI\DATA\PROJ\01024\0191\ENG\80-DRAWINGS\ELECTRICAL\E-1.07 MTS, PANELBOARD AND VFD ELEVATION.DWG 09/21/2022 11:18:43 SUVATH SENG



- 1. SURGE PROTECTION DEVICES REQUIRED, THOUGH GENERALLY NOT SHOWN. REFER TO I-SHEETS AND CONTRACT SPECIFICATIONS FOR
- 2. COORDINATE WITH THE PROVIDER OF THE VARIABLE FREQUENCY MOTOR CONTROLLERS TO PROVIDE THE THERMAL AND LEAK DETECTION SIGNALS TO THE DRIVE MANUFACTURER AND SUPPLY ANY ANCILLARY EQUIPMENT REQUIRED FOR THESE SIGNALS, INCLUDING

MISSIONARY VILLAGE LIFT STATION REHABILITATION	PROJ. START DATE2021 MARCH MCE PROJ. # 6022386 DRAWN SS DESIGNED SS CHECKED AAH SCALE HORIZONTAL: AS NOTED VERTICAL:
ELECTRICAL	STATUS:

\\MCKIMCREED.COM\NASUNI\DATA\PROJ\01024\0191\ENG\80-DRAWINGS\ELECTRICAL\INTERCONNECTION DIAGRAM.DWG 09/21/2022 11:18:54 SUVATH SENG

REV.NO.	DESCRIPTION	DATE	
		0557.000	
C ISSUED FOR BID		SEPT. 2022	
B 60% CLIENT SUBMITTAL - NOT	FOR CONSTRUCTION	APRIL 2022	
A 30% CLIENT SUBMITTAL		JUNE 2021	
	REVISIONS		

SCALE: N.T.S.

1. BURIAL DEPTH OF CONDUIT OR DUCTBANK SHALL BE BASED ON THE LARGEST CONDUIT RADII SUCH THAT THE THREADED CONNECTION TO THE PVC-COATED RAC CONDUIT TRANSITION IS 6" MINIMUM BELOW BOTTOM OF

CONCRETE FLOOR SLAB

DETAIL NOTES:

PVC SCH-40 OR SCH-80 CONDUIT ----

SEE NOTE 1.

CLEAN COMPACTED FILL WITH STONE LESS THAN 3/4"

18" - 3/4" CU-CLAD GROUND ROD

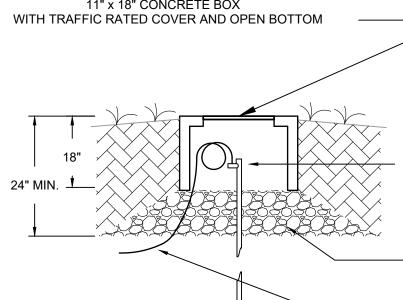
GROUND ROD TEST WELL SCALE: N.T.S.

FINISHED GRADE (SLOPE AWAY FROM BOX) MECHANICAL CONNECTION

#57 CRUSHED STONE

BARE COPPER GROUND

12" MIN.



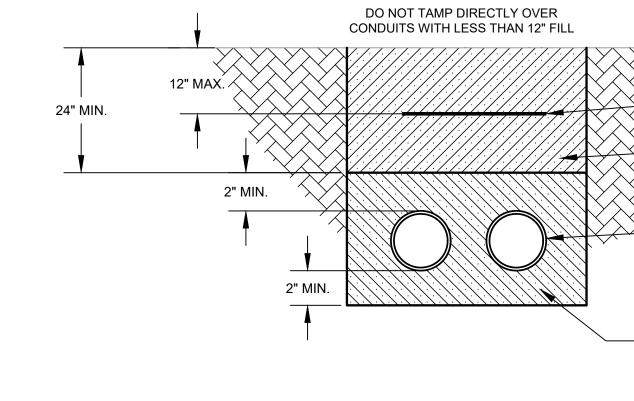
11" x 18" CONCRETE BOX

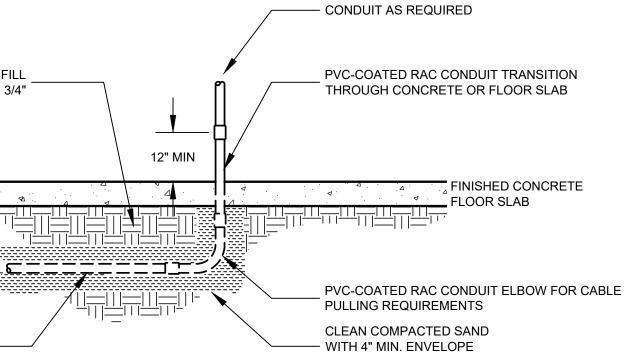




SCALE: N.T.S.

TYPICAL UNDERSLAB CONDUIT STUB-UP INSTALLATION





AROUND CONDUIT OR DUCTBANK

SCALE: N.T.S.

EXOTHERMIC WELD 'GT' CONNECTION

EXOTHERMIC WELD 'VB' CONNECTION

CU-CLAD GROUND ROD -----

— GROUNDING CONDUCTOR

TYPE 'GT' EXOTHERMIC WELD MOLD

SCALE: N.T.S.

SCALE: N.T.S.

2-HOLE 1/2"Ø MECHANICAL LUG GROUNDING CONDUCTOR

SCALE: N.T.S.

TYPE 'VB' EXOTHERMIC WELD MOLD

GROUNDING CONDUCTOR -

FLAT PLATE

BUILDING STEEL

TYPE 'LA' EXOTHERMIC WELD MOLD

EXOTHERMIC WELD 'LA' CONNECTION

TYPE 'TA' EXOTHERMIC WELD MOLD

EXOTHERMIC WELD 'TA' CONNECTION

-FINISHED GRADE

– 2" MIN. WARNING TAPE

- COMPACTED FILL

SCHEDULE 80 PVC CONDUIT, SIZE AND QUANTITY AS REQUIRED

SELECT COMPACTED BACKFILL CONTAINING NO MATERIALS OR STONE LARGER THAN 3/4"

DIRECT BURIED DUCTBANK

MISSIONARY VILLAGE LIFT STATION REHABILITATION

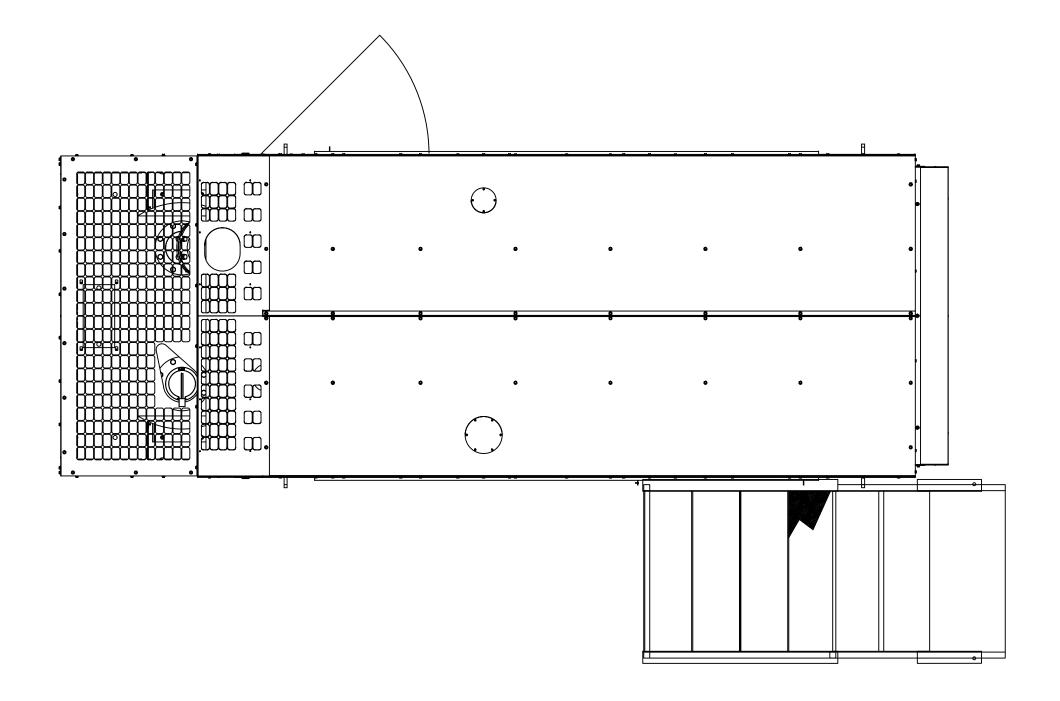
> ELECTRICAL ELECTRICAL DETAILS

ROJ. START DATE	2021 MARCH	ſ	SCALE		
ICE PROJ. #	6022386	F			E1.11
RAWN	SS		HORIZONTAL:		
ESIGNED	SS		AS NOTED		DRAWING NUMBER
HECKED	ААН		VERTICAL:		С
PROJ. MGR.	BP	I	N/A		•
			\square		REVISION
STATUS:					
			ISSUE)	FOR BID

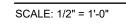
\\MCKIMCREED.COM\NASUNI\DATA\PROJ\01024\0191\ENG\80-DRAWINGS\ELECTRICAL\DETAILS.DWG 09/21/2022 11:19:35 SUVATH SENG

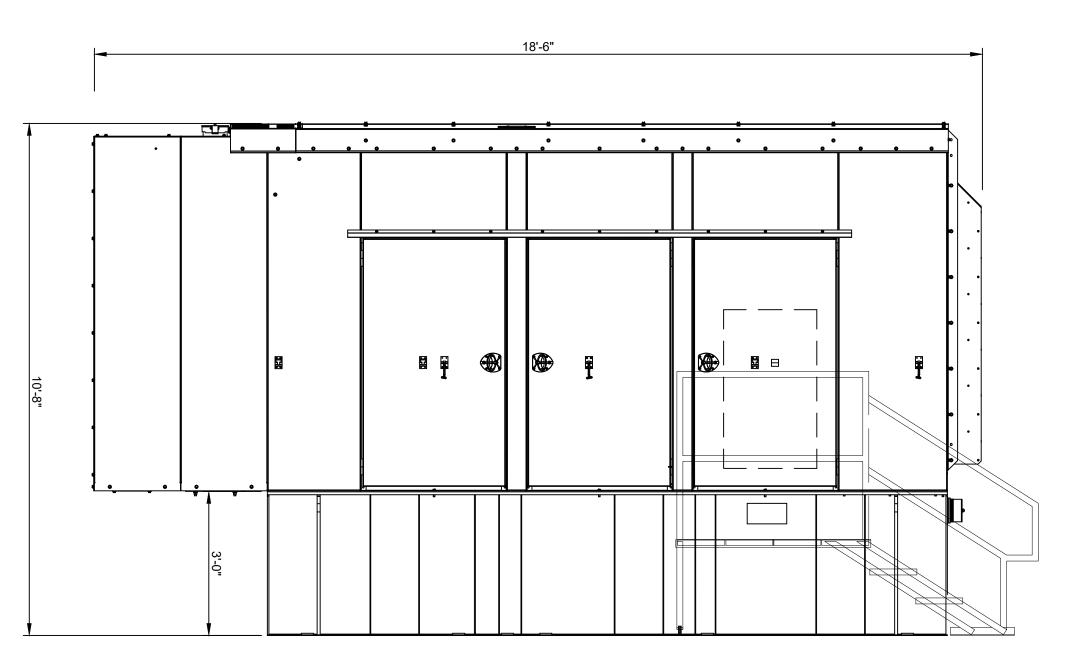
REV.NO.	DESCRIPTION	DATE
С	ISSUED FOR BID	SEPT. 2022
В	60% CLIENT SUBMITTAL - NOT FOR CONSTRUCTION	APRIL 2022
Α	30% CLIENT SUBMITTAL	JUNE 2021
	REVISIONS	

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	J



GENERATOR TOP VIEW





GENERATOR ELEVATION VIEW SCALE: 1/2" = 1'-0"





NOTES:

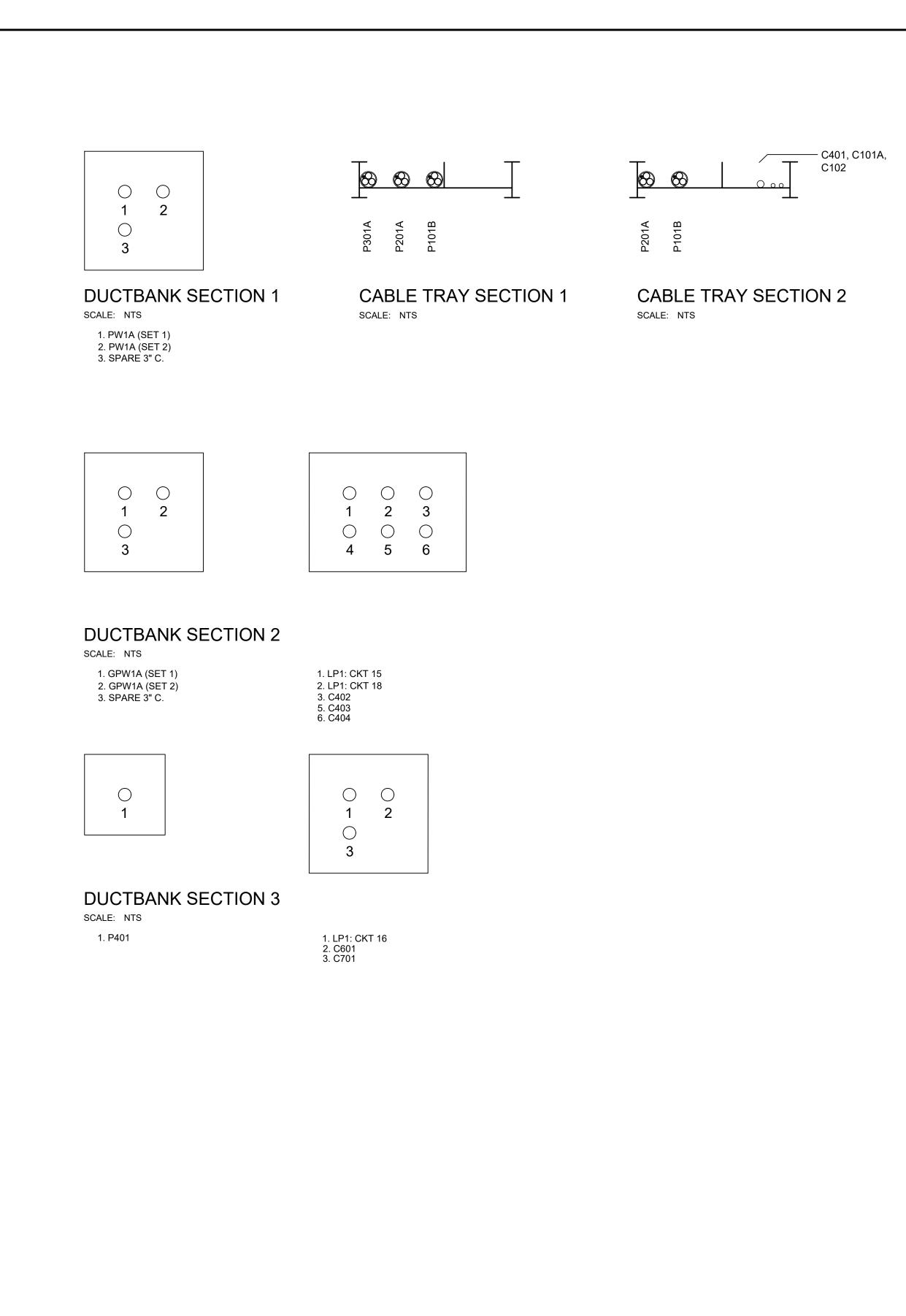
 DRAWING ARE CONCEPTUAL ONLY. DRAWINGS ARE ONLY A REPRESENTATION AND MAY NOT REFLECT ACTUAL GENERATOR SET DESIGN. COORDINATE WITH SELECTED MANUFACTURER FOR GENERATOR SET FOR DIMENSIONS.

MISSIONARY VILLAGE LIFT STATION REHABILITATION

ELECTRICAL
GENERATOR SECTIONS

PROJ. START DATE	E2021 MARCH	SCALE				
MCE PROJ. #	6022386		E1.12			
DRAWN	SS	HORIZONTAL:				
DESIGNED	SS	AS NOTED	DRAWING NUMBER			
CHECKED	AAH	VERTICAL:	С			
PROJ. MGR.	BP	N/A	REVISION			
			REVISION			
STATUS:						
ISSUED FOR BID						

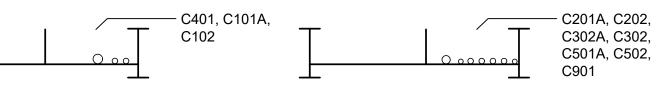
\\MCKIMCREED.COM\NASUNI\DATA\PROJ\01024\0191\ENG\80-DRAWINGS\ELECTRICAL\DETAILS.DWG 09/21/2022 11:19:41 SUVATH SENG



REV.NO.	DESCRIPTION	DATE
с	ISSUED FOR BID	SEPT. 2022
В	60% CLIENT SUBMITTAL - NOT FOR CONSTRUCTION	APRIL 2022
Α	30% CLIENT SUBMITTAL	JUNE 2021
	REVISIONS	



SCALE: NTS



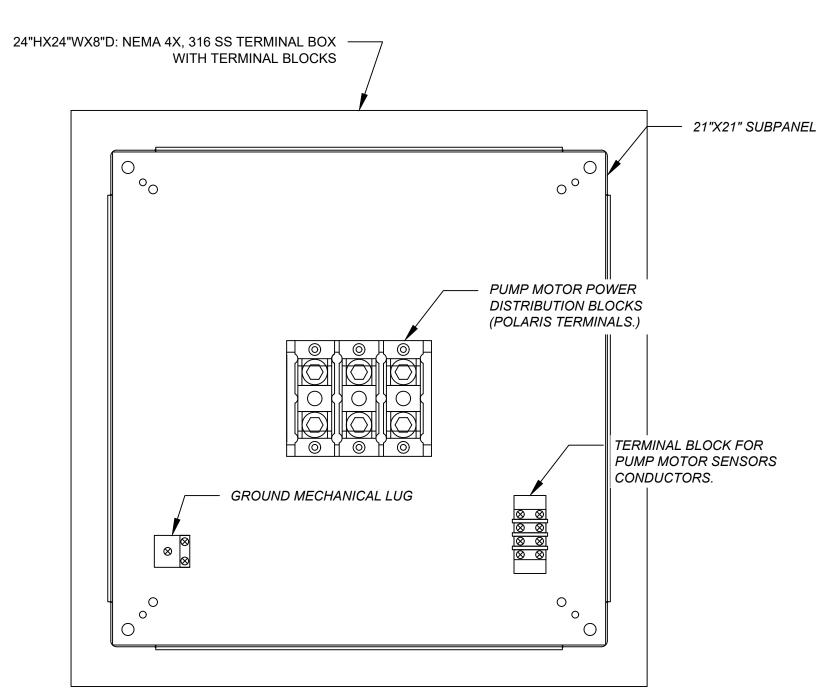
CABLE TRAY SECTION 2

CABLE TRAY SECTION 3 SCALE: NTS

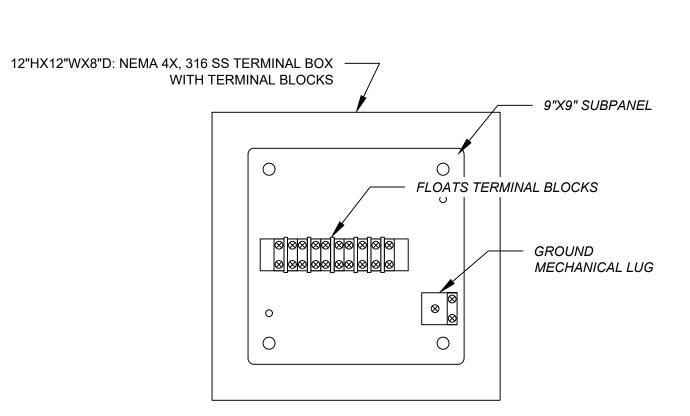


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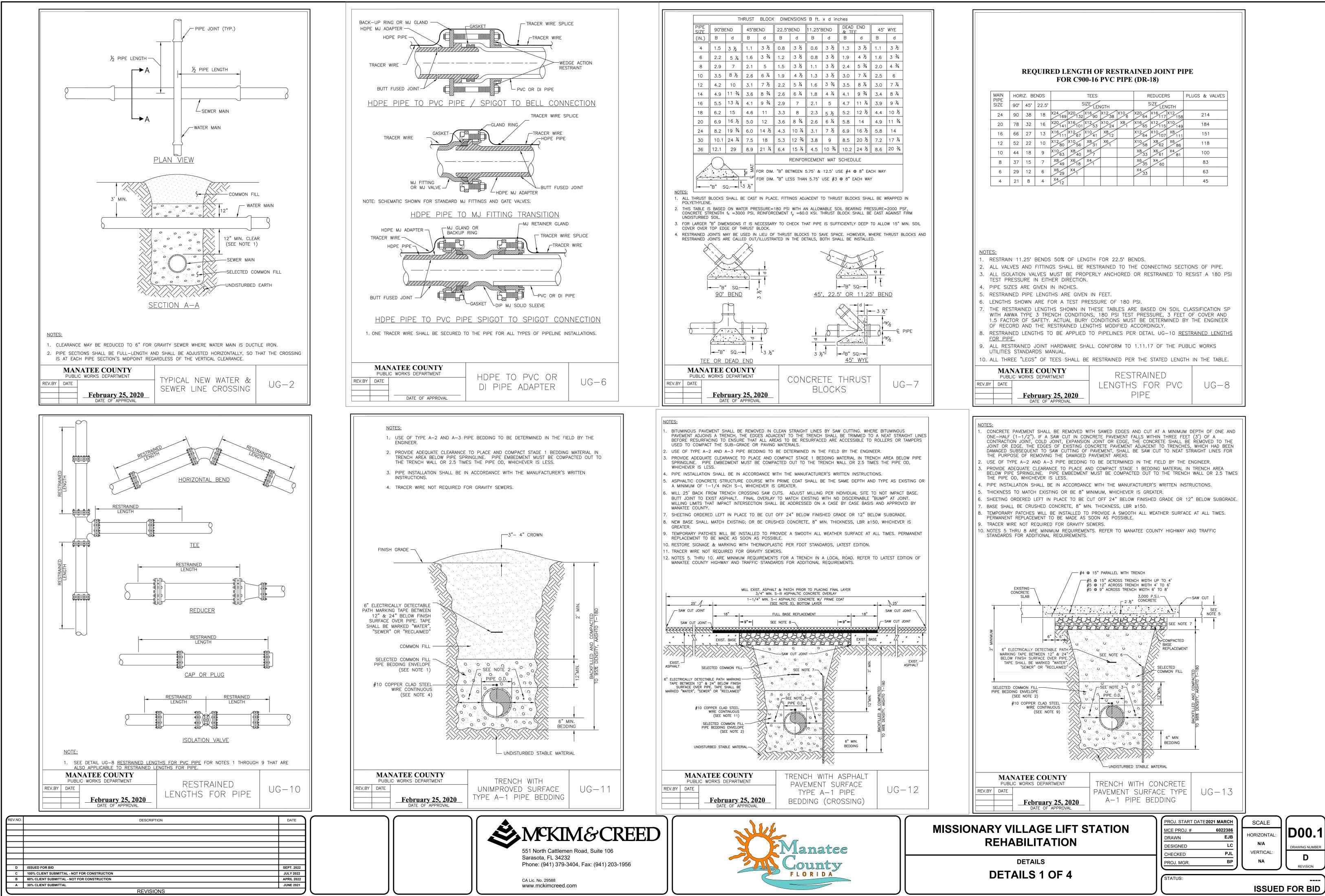
PUMP TERMINAL BOX DETAILS SCALE: 3"=1'



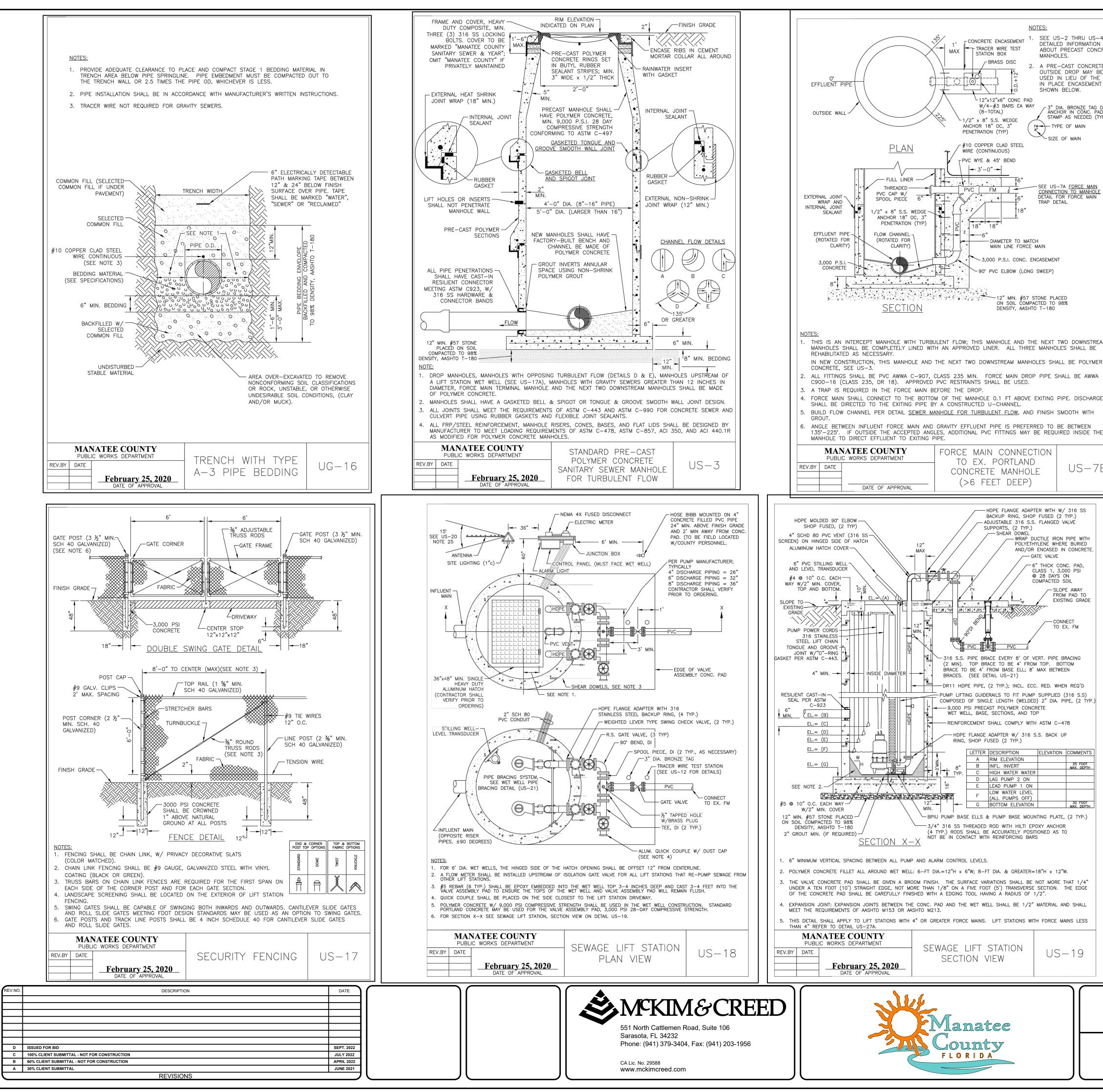
FLOATS TERMINAL BOX DETAILS SCALE: 3"=1'

MISSIONARY VILLAGE LIFT STATION REHABILITATION	PROJ. START DATE2021 MARCH MCE PROJ. # 6022386 DRAWN SS DESIGNED SS CHECKED AAH SCALE HORIZONTAL: AS NOTED VERTICAL:
	PROJ. MGR. BP N/A C REVISION
JCTBANK, CABLE TRAY & TERMINAL BOX DETAILS	STATUS:

\\MCKIMCREED.COM\NASUNI\DATA\PROJ\01024\0191\ENG\80-DRAWINGS\ELECTRICAL\DETAILS.DWG 09/21/2022 11:19:50 SUVATH SENG





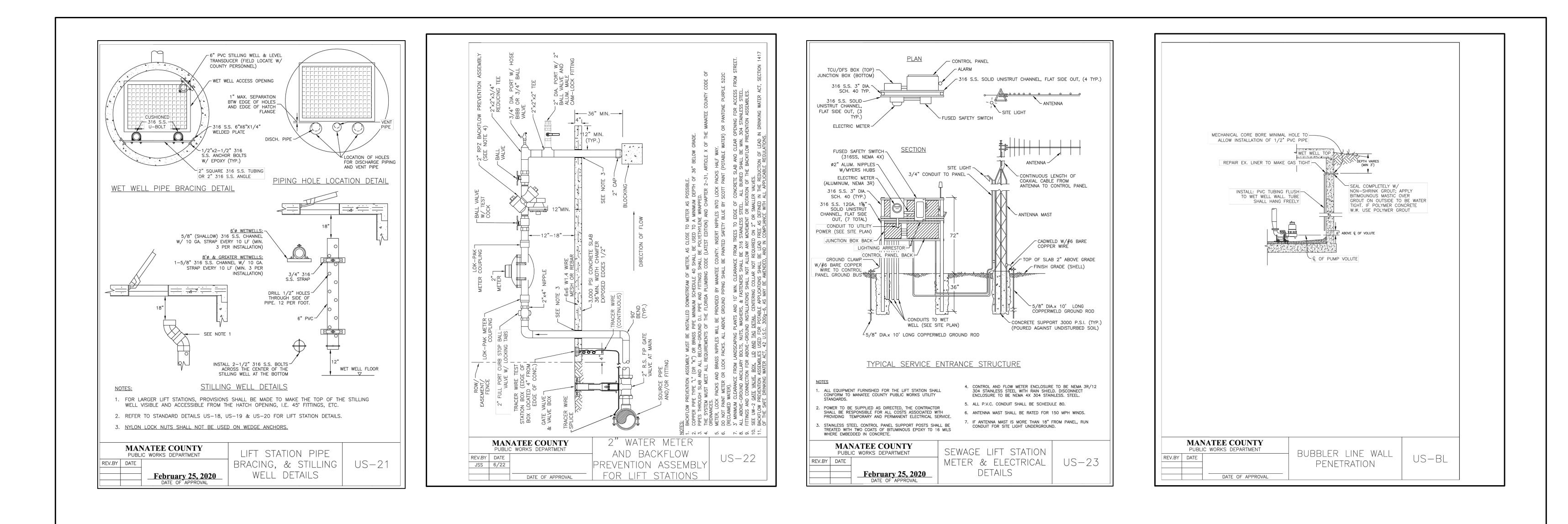


I:\01024\0191\ENG\	80-DRAWINGS\DETAILS	D001-010240191.DWG	09/21/2022	14:22:40 ED BARNES

ISSUED FOR BID

STATUS:

	3" DIA BRONZE TAG DISC ANCHOR IN SIZE OF VALVE (TYP.)	
4 FOR CRETE	3" DIA. BRONZE TAG DISC ANCHOR IN CONC. PAD; STAMP AS NEEDED (TYP.) SERVICE TYPE-"S"(SEWER)- (PLANT VALVE ID#) DIRECTION & NO. OF TURNS TO OPEN (TYP.)	
FE E CAST	VALVE BOX W/ SEWER CAST INTO LID (LID PAINTED GREEN)	
	TRACER WIRE TEST STATION BOX (SEE NOTES 6 & 7)	
DISC D; YP.)	24'x 24"x 6" CONC. PAD TO BE INSTALLED AT EACH VALVE BOX. CONCRETE PAD PAD PIPELINE DIRECTION COVER SHALL BE MARKED	
	TRACER WIRE TEST STATION BOX (SEE NOTES 6 & 7) FINISHED GRADE 1	
	ADJUSTABLE VALVE	
	BOX AND COVER. TRENCH ADAPTER WITH CAST IRON TOP	
	WILLERE DECUMPED LISE 716 SS VALVE	
	WHERE REQUIRED, USE 316 SS VALVE OPERATOR EXTENSION WITH CENTERING COLLAR. ANCHOR EXTENSION TO OPERATING NUT WITH STAINLESS STEEL BOLT.	
	#10 COPPER CLAD STEEL WIRE (CONTINUOUS)	
	FORCE MAIN	
AM	NOTES: 1. 'SV" TO BE IMPRESSED INTO THE NEWLY-POURED CONCRETE CURB, ALONG WITH DISTANCE IN FEET TO THE VALVE. IF NO CURB, INSTALL A GREEN DISC WITH "SV" AND A 1/8" × 1" GALVANIZED STEEL SCREW IN THE EDGE OF	
۲	 PAVEMENT WITH THE FOOTAGE FROM THE DISC TO THE VALVE. 2. ALL EXISTING AND PROPOSED VALVE BOXES SHALL BE ADJUSTED TO FINISHED GRADES AS DETERMINED IN THE FIELD. 3. VALVES SHALL NOT BE PLACED IN HANDICAPPED RAMPS, CURBS OR GUTTERS. 	
E	 PRECAST CONCRETE PADS AND THRUST BLOCKS SHALL NOT BE USED. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1/2". USE NON-TRAFFIC RATED BOXES FOR NORMAL YARD SERVICE. WHERE VALVE WILL BE IN STREET OR PARKING UNDER VEHICLE TRAFFIC, USE TRAFFIC RATED BOXES. WHERE POSSIBLE, LOCATE TRACE WIRE TESTING STATION 	
_	OUTSIDE OF TRAVEL LANE OR IN MEDIAN, CENTERED IN SEPARATE CONCRETE PAD SIMILAR TO STANDARD VALVE BOX PAD. 7. TRACER WIRE BOX SHALL BE LOCATED OUTSIDE THE ROADWAY ON THOROUGHFARES, LOCAL ARTERIAL AND STATE ROADWAYS.	
E	 THE BRASS TAG SHALL HAVE A "PLANT VALVE ID# WHEN VALVES ARE INSTALLED WITHIN THE COUNTY TREATMENT PLANT LIMITS. THE PLANT VALVE ID# SHALL BE SHOWN ON THE CONSTRUCTION PLANS AND RECORD DRAWINGS. REFER TO SECTION 1.11 IN THE PUBLIC WORKS UTILITY STANDARDS MANUAL FOR FURTHER DETAILS. 	
B	MANATEE COUNTY PUBLIC WORKS DEPARTMENT VALVE, BOX, REV.EY DATE COVER AND	
	February 25, 2020 COVER AND TAG DATE OF APPROVAL DATE OF APPROVAL	
	CALE AND CONTROL PARELS OF PUBLICLY OWNED & MAINTANED LET STATIONS SHALL BE FURNISHED BY THE MANTLE COUNT UNLESS DEFAURTIN, UPON ACCEPTANCE. 2. INSTALL WET WELL VENT ON THE HINGED SIDE OF THE WELL HATCH COVER, BETWEEN DISCHARGE PIPING AND MATCH HEIGHT. 3. GEVENTIAL BE SUBJECT DWAY TRON SAME AND TO NUTLING CONTROL IN ALL DIRECTORS, A 4-MCH RETARM. SHALL BE CONTROL WHY MASHED THE STATION FRONCES STELL INCLUDE A WED BARRIER FABRIC THAT IS COVERED WITH WSHED SHELL OR ORCH WITH HITT STATION FRONCES, STELS SHALL INCLUDE A WED BARRIER FABRIC THAT IS COVERED WITH SHEDDED WOOD TIME MULCH UNDER THE SHRUBS AND UP TO OUTSIDE OF THE FERSE TOR A MAINAIN DISTANCE OF STELE TO THE EDDE OF THE STATION FROME SHALL BE MODE THE ALL STATUS TREADED WOOD-TYPE MULCH SHALL BE INSTALLED ON THE REST FOR A MAINAIN DISTANCE OF STELE DEDE OF THE FERSE FOR A MAINAIN DISTANCE OF STELE DEDE OF THE KESS FOR A MAINAIN DISTANCE OF STELE DEDE OF THE KESS FOR A MAINAIN DISTANCE OF STELE DEDE OF THE KESS FOR A MAINAIN DISTANCE OF STELE DEDE OF THE KESS FOR A MAINAIN DISTANCE OF STELE DEDE OF THE KESS FOR A MAINAIN DISTANCE OF STELE DEDE OF THE KESS FOR A MAINAIN DISTANCE OF STELE DEDE OF THE KESS FOR A MAINAIN DISTANCE OF STELE DEDE OF THE KESS FOR A MAINAIN DISTANCE OF STELE DEDE OF THE KESS FOR A MAINAIN DISTANCE OF STELE DEDE OF THE KESS FOR A MAINAIN DISTANCE OF STELE DEDE OF THE KESS FOR A MAINAIN DISTANCE OF STELE DEDE OF THE KESS FOR A MAINAINES MULE DISTANCE OF STELE DATA. A ALL ROPORTEMAN PERMIT DISTANCE DEDE STANLESS STELL BADAUP RINGS, MAIL DE MAINES MAIL DE MAINTE DISTANCE DEDE STANLESS STELL BADAUP RINGS. ALL PRING DISTANCE OF STELE AND STATUS STALL DE KENNEL PRINCE ON THE CASS PARLE DISTANCE ON THE VERL MAINAINE DISTANCE OF THE WELL CAMPED TO THE VILLE PRINCE DISTANCE STREAMENT STATUS STALL DESTANCE DISTANCES STREAMENT STATUS STREAMENT	
	MANATEE COUNTY PUBLIC WORKS DEPARTMENT PUBLIC WORKS DEPARTMENT LIFT STATION NOTES REV.BY DATE February 25, 2020 LIFT STATION NOTES	
	DATE OF APPROVAL PROJ. START DATE 2021 MARCH	SCALE
MISS	IONARY VILLAGE LIFT STATION REHABILITATIONMCE PROJ. # 6022386 DRAWNDRAWNEJB DESIGNEDLC	HORIZONTAL: DOO0.2
	DETAILS IS IN THE DESIGNED IS INTERPORTED IS IN THE DESIGNED IS INTERPORTED IST. ILLE AND IS INTERPORTED IS INTERPORTED IST. ILLE AND IS INTERPORTED IS INTERPORTED IS INTERPORTED IS INTERPORTED IST. ILLE AND IST. ILLE AND IST. ILLE AND IS INTER	VERTICAL:
	DETAILS 2 OF 4	



REV.NO.	DESCRIPTION	DATE
		1 1
D	ISSUED FOR BID	SEPT. 2022
С	100% CLIENT SUBMITTAL - NOT FOR CONSTRUCTION	JULY 2022
В	60% CLIENT SUBMITTAL - NOT FOR CONSTRUCTION	APRIL 2022
Α	30% CLIENT SUBMITTAL	JUNE 2021
	REVISIONS)

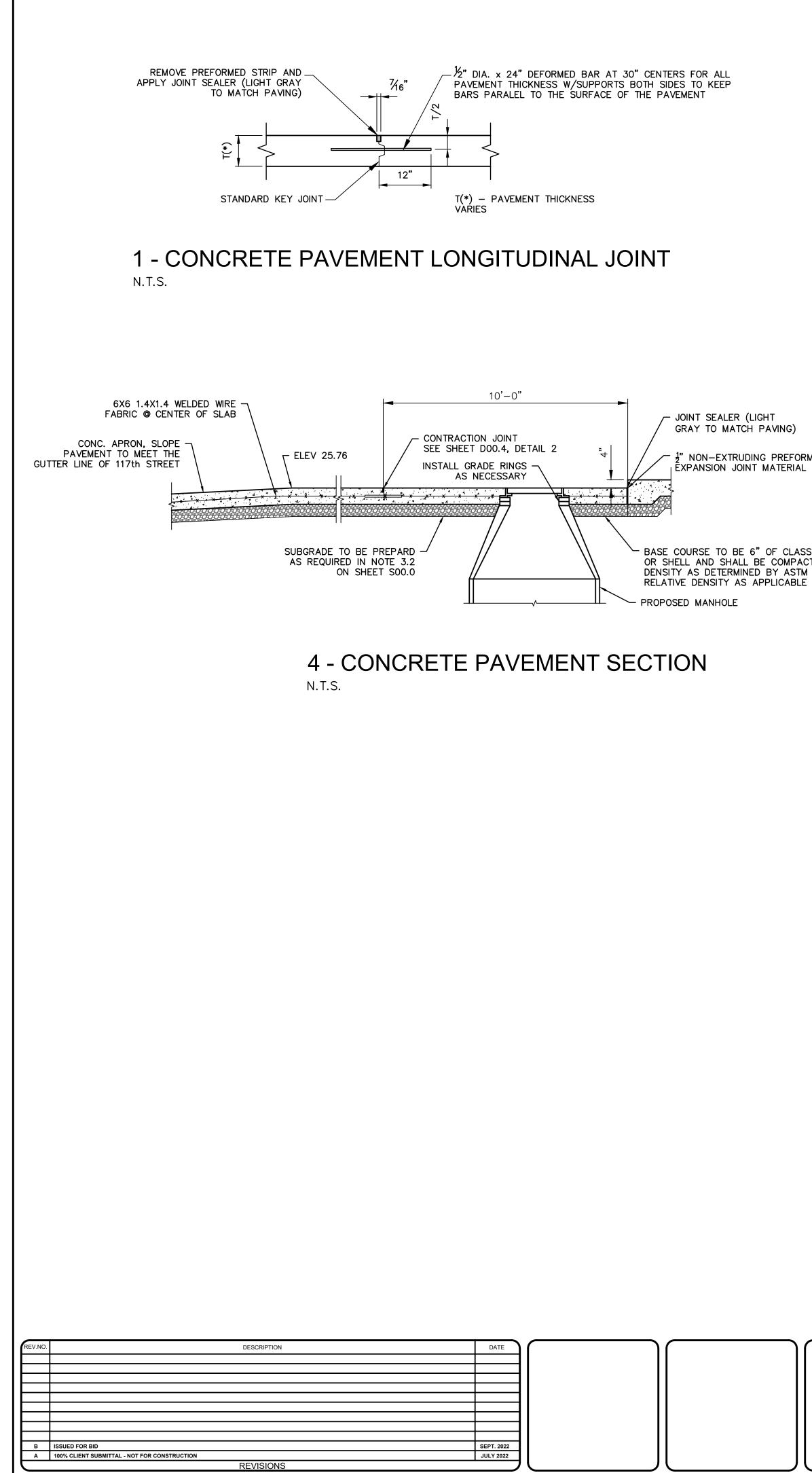
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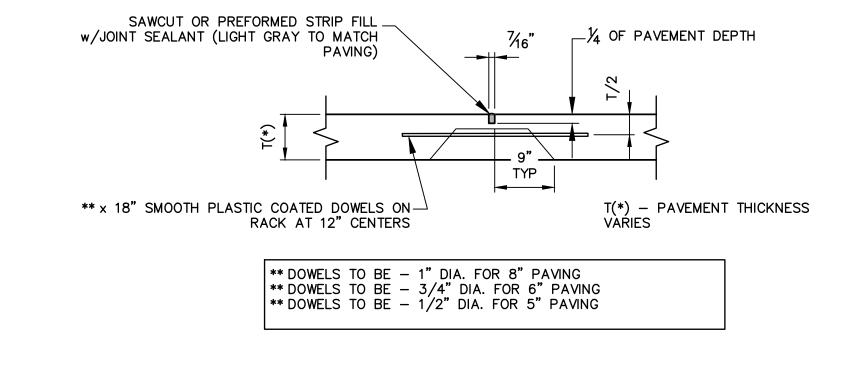




MISSIONARY VILLAGE LIFT STATION REHABILITATION	PROJ. START DATE 2021 MARCHMCE PROJ. #6022386DRAWNEJBDESIGNEDLCCHECKEDPJL	SCALE HORIZONTAL: N/A VERTICAL:	D00.3
DETAILS DETAILS 3 OF 4	PROJ. MGR. BP		D REVISION FOR BID

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2 - CONCRETE PAVEMENT CONTRACTION JOINT N.T.S.

¹ NON-EXTRUDING PREFORMED EXPANSION JOINT MATERIAL

- BASE COURSE TO BE 6" OF CLASS 57 GRANULAR MATERIAL OR SHELL AND SHALL BE COMPACTED TO 95% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D1557 OR EQUIVALENT

c	

CLASS 125 FLANGE SIZE	304 SS ITEM NO.	FLANGE PLATE DIMENSIONS	THREADED ROD	BASE PLATE	EXTENSION PIPE SIZE	MIN. HEIGHT FROM FLOOR	
3"	364-5890	6" x 3-1/4" x 1/4"		1/4" x 4" x 6"	2" Sch 40		
4"	364-5891	4-1/2" x 2-1/2" x 1/4"				7"	
6"	364-5892	5-1/4" x 2-1/2" x 1/4"	1"-8 NC x 6"				
8"	364-5893	6-1/2" x 2-1/2" x 1/4"					
10"	364-5894	6" x 2-1/2" x 1/4"					
12"	364-5895	6-1/2" x 2-1/2" x 1/4"					
14"	364-5896				3" Sch 40		
16"	364-5897		1-1/2"-6 NC x 6"				
18"	364-5898	7-1/2" × 3-1/2" × 3/8"		1/2" x 8" x 8"		10"	
20"	364-5899		2"-4 NC × 6"		4" Sch 40		
24"	364-5900						

N.T.S.





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MISSIONARY VILLAGE LIFT STATIO	N
REHABILITATION	

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MCE PROJ. #	6022386 EJB	HORIZONTAL:	D00 .
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CHECKED	PJL	VERTICAL:	В
PROJ. MGR.	BP	NA	REVISION

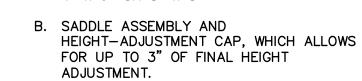
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DETAILS				
DETAILS 4	OF	4		

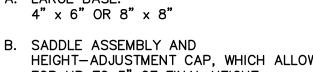
5 - PIPE SUPPORT DETAIL

∕_ A

B



4" x 6" OR 8" x 8"



C. EXTENSION PIPE, AT THE LENGTH REQUIRED

A. LARGE BASE:

