

ELECTRICAL NOTES	
THESE NOTES APPLY TO ENTIRE PROJECT:	
A.	CODES. ALL ELECTRICAL WORK SHALL COMPLY WITH THE DRAWINGS AND SPECIFICATIONS, THE NATIONAL ELECTRICAL CODE AND APPLICABLE LOCAL CODES, WHICHEVER IS MORE STRINGENT.
B.	ENERGY CODE. LIGHT FIXTURES ARE TO COMPLY WITH THE FLORIDA ENERGY CODE. FULL COMPLIANCE WITH THE ENERGY CODE IS REQUIRED, WITH PROVISIONS FOR AUTOMATIC SHUT OFF OF LIGHTING.
C.	CONDUCTORS. ALL CONDUCTORS ARE TO BE COPPER THWN UNLESS OTHERWISE SHOWN OR REQUIRED BY CODES. ALL POWER CONDUITS ARE TO CONTAIN A GROUND WIRE.
D.	RACEWAYS. RIGID GALVANIZED CONDUIT AND ELECTRICAL METAL TUBING IS TO BE USED IN INTERIOR SPACES.
E.	HVAC. THE ELECTRICAL CONTRACTOR IS TO COORDINATE WITH THE HEATING, VENTILATING AND AIR CONDITIONING (HVAC) TRADE TO MAKE CERTAIN ALL POWER CIRCUITS, CONTROL CIRCUITS AND CONDUITS ARE INCLUDED IN THE BIDS. ALL HVAC EQUIPMENT IS TO BE PROTECTED WITH FUSES (OR ELEMENTS) SIZED AS REQUIRED IN ACCORDANCE WITH THE EQUIPMENT LABELS. SPLIT SYSTEM AIR HANDLERS AND CONDENSING UNITS ARE TO BE CONNECTED WITH CONTROL CIRCUITS. DISCONNECTS ARE TO BE LOCATED WHERE REQUIRED BY THE HVAC CONTRACTOR. UNDER NO CONDITIONS WILL OWNER PAY ADDITIONAL CHARGES FOR HVAC ELECTRICAL WORK.
F.	SHOP DRAWINGS. SHOP DRAWINGS SHALL BE SUBMITTED TO ENGINEER FOR APPROVAL FOR ALL ELECTRICAL MATERIALS.
G.	POWER COMPANY. THE ELECTRICAL CONTRACTOR IS TO COORDINATE ALL SERVICE REQUIREMENTS WITH THE POWER COMPANY BEFORE BIDDING TO BE CERTAIN ALL WORK NECESSARY TO MEET POWER COMPANY SPECIFICATIONS IS IN THE BID. ALL ELECTRICAL GEAR SHALL BE APPROVED BY THE POWER COMPANY. THE ELECTRICAL CONTRACTOR SHALL MEET WITH THE POWER COMPANY PRIOR TO BIDDING TO DETERMINE ALL FEATURES, FUNCTIONS AND LOCATIONS OF SERVICE. FURTHERMORE, THE ELECTRICAL CONTRACTOR IS TO MAINTAIN CONTINUOUS CONTACT WITH THE POWER COMPANY DURING THE PROJECT, AND IS TO NOTIFY THE ENGINEER IMMEDIATELY OF ANY CHANGE PROPOSED. THE ELECTRICAL CONTRACTOR SHALL COORDINATE THE SERVICE THOROUGHLY AND DOCUMENT THE COORDINATION.
H.	TELEPHONE. THE ELECTRICAL CONTRACTOR IS TO ARRANGE FOR TELEPHONE SERVICE. PRIOR TO BIDDING, THE ELECTRICAL CONTRACTOR IS TO MEET WITH THE TELEPHONE COMPANY AND COORDINATE THE LOCATION OF THE SERVICE POINT ON THE PROPERTY LINE. THE INCOMING SERVICE CABLES ARE TO BE SELECTED BY THE ARCHITECT. THE ELECTRICAL CONTRACTOR IS TO INSTALL TELEPHONE CABLES (80/2 CATEGORY 3 CABLE) TO TELEPHONE OUTLET POINTS THROUGHOUT THE PROJECT. ALL CABLES ARE TO BE RADIAL WITH INDIVIDUAL HOME RUNS TO TELEPHONE BACKBOARD OR TERMINAL. DO NOT LOOP FROM OUTLET TO OUTLET.
I.	DRAWINGS. THE ELECTRICAL CONTRACTOR IS TO OBTAIN A COMPLETE SET OF DRAWINGS AND SPECIFICATIONS PRIOR TO BIDDING, AND IS TO BECOME THOROUGHLY FAMILAR WITH THE ARCHITECTURAL, CIVIL, STRUCTURAL, MECHANICAL, AND LANDSCAPING FEATURES OF THE PROJECT. PRIOR TO BIDDING, THE ELECTRICAL CONTRACTOR IS TO HAVE A COMPLETE UNDERSTANDING OF CEILING CONFIGURATIONS, WIRING SPACES, FIRE RATED SURFACES, STRUCTURAL FEATURES, AIR CONDITIONING WORK, TEMPORARY POWER REQUIREMENTS, PIPING, PLUMBING AND ALL OTHER FEATURES WHICH BEAR ON THE ELECTRICAL WORK. UNDER NO CONDITION IS THIS PROJECT TO BE BID WITHOUT A COMPLETE SET OF DRAWINGS AND SPECIFICATIONS.
J.	SCALES. DO NOT SCALE OR TAKE DIMENSIONS FROM ELECTRICAL DRAWINGS.
K.	MAIN DISCONNECTS. MAIN DISCONNECTS MAY BE HEAVY DUTY FUSED SWITCHES OR CIRCUIT BREAKERS PROPERLY COORDINATED. FUSES ARE TO BE BUSMAN TYPE LPN-R, LPS-R, OR RXP-C. CIRCUIT BREAKERS ARE TO BE RATED FOR THE AIC SHORT CIRCUITS INDICATED.
L.	UNDERGROUND WORK. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE EXACT ROUTES OF ALL UNDERGROUND WORK. ROUTES SHOWN ARE APPROXIMATE. POWER, TELEPHONE, CABLE COMPANIES, AND ALL OTHER UTILITY COMPANIES SHALL BE CONSULTED, AND LINES SHALL BE STAKED. DIGGING BY HAND IS REQUIRED AROUND EXISTING UTILITIES.
M.	TVSS. THE POWER SERVICE IS TO BE PROTECTED FROM LIGHTNING WITH SURGE SUPPRESSORS THROUGH A 30A/3P BREAKER (42,000AIC).
N.	LED LIGHT FIXTURES. LED LIGHTS ARE TO BE CAPABLE OF DIMMING 0-100 WITH DRIVERS AND DIMMERS PROVIDED BY SAME MANUFACTURER. THE CONTRACTOR IS TO INSTALL MULTIPLE CONDUCTORS REQUIRED BY DRIVERS AND IS TO BE COMPLETELY MEASURE ALL LOCATIONS AND DIMENSIONS. ALL LENSES, ADJUSTABLE MOUNTING HARDWARE, POWER SUPPLIES, METALLIC HOUSINGS TO BE INCLUDED.
O.	LIGHT FIXTURE VOLTAGES. OBTAIN LIGHT FIXTURE VOLTAGES FROM CIRCUITS ON PLANS. DO NOT OBTAIN FROM MODEL NUMBERS ON LIGHT FIXTURE SCHEDULE.
P.	RECEPTACLE HEIGHTS. COORDINATE WITH BUILDING DEPARTMENT THE MINIMUM HEIGHT FOR RECEPTACLES. AMERICAN DISABILITY ACT REQUIRES 18" ABOVE FINISHED FLOOR.
Q.	EQUIPMENT DISCONNECTS. DISCONNECTS SHOWN CAN BE DELETED IF DISCONNECTING MEANS BUILT IN AND PERMITTED BY THE BUILDING DEPARTMENT.
R.	COMPLETION REQUIREMENTS. WITHIN 30 DAYS AFTER SYSTEM ACCEPTANCE, RECORD DRAWINGS OF THE ACTUAL INSTALLATION SHALL BE PROVIDED BY THE CONTRACTOR TO BUILDING OWNER WITH A SINGLE LINE DIAGRAM OF THE DISTRIBUTION SYSTEM PLUS FLOOR PLANS SHOWING LOCATIONS AND AREAS SERVED.
S.	OPERATING AND MAINTENANCE MANUALS. OPERATING AND MAINTENANCE MANUALS FOR EACH PIECE OF EQUIPMENT SHALL BE TURNED OVER BY THE CONTRACTOR TO OWNER WITH SUBMITTAL DATA AND REQUIRED MAINTENANCE PROCEDURES. THE NAME AND ADDRESS OF A QUALIFIED SERVICE AGENCY SHALL BE PROVIDED.
T.	SHARED NEUTRALS. WHENEVER THE CONTRACTOR USES SHARED NEUTRALS, BREAKERS ARE TO HAVE A COMMON HANDLE (1 E 2 POLE OR 3 POLE).
U.	GFCI. OUTLETS INSTALLED OUTDOORS, WITHIN 6' OF A SINK, AND OTHERWISE REQUIRED BY CODE ARE TO BE ON GFCI TYPE CIRCUIT BREAKERS.
V.	WHERE DISCREPANCY EXISTS BETWEEN DRAWINGS, SPECIFICATION, CODES, STANDARDS, QUANTITIES AND THE LIKE THE MORE STRINGENT REQUIREMENT SHALL BE APPLIED.

ELECTRICAL SPECIFICATIONS	
GENERAL PROVISIONS. PROVIDE ALL LABOR, MATERIALS, TOOLS, SUPPLIES, EQUIPMENT AND TEMPORARY POWER FACILITIES TO COMPLETE THE WORK SHOWN ON THE DRAWINGS AND SPECIFICATIONS. ALL SYSTEMS ARE TO BE COMPLETELY OPERATIONAL. ALL ELECTRICAL WORK SHALL COMPLY WITH THE DRAWINGS AND SPECIFICATIONS, THE NATIONAL ELECTRICAL CODE AND APPLICABLE LOCAL CODES, WHICHEVER IS MOST STRINGENT.	
OPERATING CLEARANCES. INSTALL ALL WORK NEARLY 50 AS TO BE PROPERLY ACCESSIBLE FOR OPERATION, MAINTENANCE AND REPAIR.	
JOB SITE VISIT. VISIT THE PROJECT SITE PRIOR TO SUBMITTING A BID. VERIFY ALL DIMENSIONS AND DETERMINE THE CHARACTERISTICS OF EXISTING FACILITIES WHICH WILL AFFECT THE PERFORMANCE OF THE WORK, INCLUDING THOSE NOT SHOWN ON DRAWINGS OR SPECIFICATIONS.	
SUBSTITUTIONS. ALL EQUIPMENT SUBSTITUTIONS MUST BE APPROVED IN WRITING BY THE ENGINEER PRIOR TO BIDDING.	
TEMPORARY LIGHT AND POWER. THE ELECTRICAL CONTRACTOR SHALL INCLUDE IN HIS BID THE COST OF FURNISHING, INSTALLING, MAINTAINING AND REMOVING ALL MATERIAL AND EQUIPMENT REQUIRED TO PROVIDE LIGHT AND POWER TO PERFORM ALL WORK OF ALL TRADES DURING CONSTRUCTION, AND UNTIL WORK IS COMPLETE. COST OF ALL POWER CONSUMED DURING CONSTRUCTION SHALL BE PAID BY THE PARTY DESIGNATED BY THE PRIME CONTRACTOR.	
MATERIAL SUBMITTALS. SUBMIT ELECTRONIC PDF SHOP DRAWINGS AND EQUIPMENT DESCRIPTIONS FOR ALL ELECTRICAL WORK PRIOR TO ORDERING. ELECTRICAL MATERIALS FOUND ON THE PROJECT WHICH DO NOT HAVE THE ENGINEER'S APPROVAL, MUST BE REMOVED AND REPLACED AT THE ELECTRICAL CONTRACTOR'S EXPENSE.	
TRENCHING, BORING AND BACKFILLING. EXCAVATION OR BORING, BACKFILLING AND REPAIRING OF PAVING AND GRASSING IS TO BE IN THE BID OF THE ELECTRICAL CONTRACTOR. THE ACTUAL WORK NEEDED NOT BE PERFORMED BY THE ELECTRICAL TRADES. HOWEVER, THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR ALL EXCAVATION, BORING, DOWATERING, BACKFILLING, TAMING AND GRASSING REQUIRED IN SUPPORT OF ELECTRICAL WORK. LOCATE AND PROTECT EXISTING UTILITIES AND OTHER UNDERGROUND WORK IN A MANNER WHICH WILL ENSURE THAT NO DAMAGE OR SERVICE INTERRUPTION OCCURS. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO UTILITIES OR PROPERTY. PROTECT PROPERTY FROM DAMAGE WHICH MIGHT RESULT FROM EXCAVATING, BORING OR BACKFILLING. PROTECT PERSONS FROM INJURY AT EXCAVATIONS BY BARRICADES WITH WARNINGS AND ILLUMINATION. IN THE EVENT IT IS SUSPECTED THAT ACTIVE ELECTRICAL LINES ARE BURIED IN THE AREA OF WORK, POWER IS TO BE DISCONNECTED. AN UNDERGROUND LOCATOR SERVICE SHALL BE EMPLOYED.	
TESTS. CONDUCT OPERATING TESTS FOR APPROVAL. THE SYSTEMS SHALL BE DEMONSTRATED TO OPERATE IN ACCORDANCE WITH THE REQUIREMENTS OF THESE SPECIFICATIONS AND MANUFACTURERS INSTRUCTIONS. TESTS SHALL BE PERFORMED IN THE PRESENCE OF THE ENGINEER OR AN AUTHORIZED REPRESENTATIVE. FURNISH ALL ITEMS REQUIRED TO PERFORM TESTS.	
DIVISION OF WORK. ALL POWER WIRING IS TO BE BY THE ELECTRICAL CONTRACTOR. THE ELECTRICAL CONTRACTOR SHALL COORDINATE THE INSTALLATION OF DISCONNECTS, STARTERS, THERMOSTATS, FRESTATS, CONTROL TRANSFORMERS, SWITCHES, ETC. WITH THE OTHER CONTRACTORS TO MAKE CERTAIN NO ITEMS ARE LEFT OUT OF THE BIDS. THE PRIME CONTRACTOR SHALL MAKE ANY SPECIAL DECISIONS REGARDING THE DIVISION OF WORK BETWEEN CONTRACTORS. IN NO EVENT SHALL SUCH WORK REQUIRE ADDITIONAL EXPENSE TO THE OWNER.	
LOCATIONS. THE ENGINEER MAY MOVE ANY ELECTRICAL DEVICES BY AS MUCH AS TEN (10) FEET PRIOR TO ROUGH-IN AT NO ADDITIONAL COST.	
CIRCUITS. ALL OUTLETS, LIGHT FIXTURES AND OTHER ITEMS OF EQUIPMENT SHOWN ON DRAWINGS ARE TO BE CIRCUITED.	
BIDDING FROM A FULL SET OF DRAWINGS. THE ELECTRICAL CONTRACTOR IS TO OBTAIN A COMPLETE SET OF DRAWINGS AND SPECIFICATIONS PRIOR TO BIDDING, AND IS TO BECOME THOROUGHLY FAMILAR WITH THE ARCHITECTURAL, CIVIL, STRUCTURAL, MECHANICAL, AND LANDSCAPING FEATURES OF THE PROJECT.	
PRIOR TO BIDDING, THE ELECTRICAL CONTRACTOR IS TO HAVE A COMPLETE UNDERSTANDING OF CEILING CONFIGURATIONS, WIRING SPACES, FIRE RATED SURFACES, FOUNDATIONS, AIR CONDITIONING OUTDOORWORK, SPRINKLER PIPING, PLUMBING AND ALL OTHER FEATURES WHICH BEAR ON THE ELECTRICAL WORK. UNDER NO CONDITIONS IS THIS PROJECT TO BE BID WITHOUT A COMPLETE SET OF DRAWINGS AND SPECIFICATIONS.	
FIRE RATED SURFACES. FIRE WALL, CEILING AND FLOOR PENETRATIONS ARE TO BE MADE WITH METALLIC RACEWAYS IN A U.L. APPROVED MANNER. DO NOT KNOCK HOLES INTO VOID SPACES OR OTHERWISE DEGRADE FIRE WALLS. ALL PASSAGES INTO OR THROUGH FIRE WALLS ARE TO BE PERFORMED IN A MANNER ACCEPTABLE TO THE BUILDING DEPARTMENT. (NO PENETRATIONS ARE PERMITTED THROUGH FOUR (4) HOUR WALLS). ONE (1) HOUR FIRE WALLS ARE TO BE PENETRATED IN EACH STUD CAVITY FROM ONLY ONE (1) SIDE IN A U.L. APPROVED MANNER.	
BASIC MATERIALS AND METHODS	
U.L. APPROVALS. ALL ELECTRICAL MATERIALS ARE TO BE APPROVED BY THE UNDERWRITERS' LABORATORIES.	
GALVANIC ACTION (CORROSION). GALVANIC ACTION (CORROSION) IS TO BE AVOIDED BY JOINING METALS WHICH ARE COMPATIBLE. FOR EXAMPLE, ALUMINUM CONDUITS ARE NOT TO MAKE CONTACT WITH BARE STEEL, GALVANIZED STEEL, OR BRASS. STAINLESS STEEL FITTINGS AND HARDWARE ARE REQUIRED OUTSIDE.	
GALVANIZED RIGID CONDUITS. RIGID STEEL CONDUIT 'GRC' AND FITTINGS ARE TO BE SCHEDULE 40 MILD STEEL PIPE, GALVANIZED. UNDERGROUND GRC CONDUITS ARE TO BE COATED WITH ASPHALT EMULSION TO RESIST CORROSION.	
ELECTRICAL METAL TUBING. TUBING EMT SHALL BE STEEL TUBING, ZINC-COATED INSIDE AND OUTSIDE. FITTINGS SHALL BE ZINC-COATED. BENDS WHICH TURN UP OUT OF CONCRETE SHALL BE TREATED WITH ASPHALT EMULSION TO RESIST CORROSION.	
PVC CONDUITS. NON-METALLIC CONDUITS SHALL BE POLYVINYL CHLORIDE (PVC), U.L. APPROVED FOR 90C, SCHEDULE 40 RIGID, EXCEPT SIZES ARE TO BE SCHEDULE 80. STRAIGHT RUNS ARE TO HAVE EXPANSION COUPLINGS EVERY 40 FEET.	
NON-METALLIC TUBING. EMT MAY NOT BE USED.	
RACEWAY LOCATIONS. LOCATION REQUIREMENTS SET FORTH BY THE BUILDING DEPARTMENT SHALL PREVAIL IF MORE STRINGENT. ALL CONDUITS SHALL BE GRC EXCEPT WHERE OTHERWISE SHOWN ON DRAWINGS, AND AS FOLLOWS. EMT MAY BE USED ONLY IN DOORS. IN DRY LOCATIONS OUT OF SOIL, WHERE NOT PHYSICALLY SUBJECT TO DAMAGE, FLEXIBLE CONDUIT SHALL BE USED ONLY IN SHORT LENGTHS FOR MAKING EQUIPMENT CONNECTIONS. PVC CONDUITS SHALL BE USED ONLY UNDERGROUND OR IN CONCRETE FLOORS. METALLIC RACEWAYS ARE REQUIRED IN CEILING SPACES WHICH SERVE AS RETURN AIR PLUMBING. CONDUITS SHALL NOT BE RUN ABOVE ROOFS.	

ELECTRICAL SPECIFICATIONS	
RACEWAY INSTALLATION. WHERE CONDUITS CROSS EXPANSION JOINTS, INSTALL OFFSET EXPANSION JOINTS OR SLOPING EXPANSION JOINTS WITH BONDING STRAPS AND CLAMPS. EXPOSED RUNS OF CONDUIT OR TUBING SHALL BE INSTALLED WITH RUNS PARALLEL OR PERPENDICULAR TO WALLS, STRUCTURAL MEMBERS OR INTERSECTIONS OF VERTICAL PLANES AND CEMENTS. CONDUITS ARE TO BE PLACED BETWEEN THE UPPER AND LOWER LAYERS OF REINFORCING STEEL. CONDUIT RUNS SHALL ALWAYS BE CONCEALED EXCEPT WHERE INDICATED ON PLANS. A PULL WIRE SHALL BE INSTALLED IN ALL EMPTY CONDUITS. CONDUITS SHALL BE SUPPORTED BY APPROVED PIPE STRAPS, SECURED BY MEANS OF TOGGLE BOLTS ON METAL SURFACES, AND WOOD SCREWS ON WOOD CONSTRUCTION. THE USE OF PERFORATED STRAP OR WIRES WILL NOT BE PERMITTED. UNDERGROUND CONDUITS NOT UNDER CONCRETE SLABS ARE TO BE BURIED AT LEAST TWO (2) FEET BELOW FINISHED GRADE FOR CIRCUITS RATED 800 VOLTS OR LESS.	
CABINETS. CABINETS FOR OUTDOOR SWITCHES, PANELBOARDS, BREAKERS, WIREWAYS, RECEPTACLES, FIRE ALARM EQUIPMENT, ETC., SHALL BE RATED WEATHERPROOF. STAINLESS STEEL IS REQUIRED FOR ALL EXTERIOR MOUNTED ELECTRICAL EQUIPMENT ENCLOSURES UNLESS OTHERWISE NOTED OR SPECIFIED.	
MAIN DISCONNECTS. UNLESS SPECIFICALLY SHOWN OTHERWISE, ALL MAIN DISCONNECTS ARE TO BE HEAVY DUTY FUSED SWITCHES OR CIRCUIT BREAKERS. MAIN DISCONNECTS SHALL BE INSTALLED IN ACCORDANCE WITH THE ELECTRICAL CONTRACTOR'S EXPENSE. FUSES SHALL BE REJECTION TYPE, U.L. CLASS RK1, UNLESS SHOWN OTHERWISE.	
SHORT CIRCUIT DESIGN. THE DESIGN CALLS FOR A NUMBER OF SPECIAL CONDITIONS IN ORDER TO HANDLE THE SHORT CIRCUITS AVAILABLE THROUGHOUT THE ELECTRICAL SYSTEM. UNDER NO CONDITIONS MAY THE ELECTRICAL CONTRACTOR DEVIATE FROM THE DESIGN IN TYPES OF SWITCHES, FUSES, CONDUCTORS, BREAKERS OR AIC RATINGS OF INTERRUPTING DEVICES.	
WIRING DEVICES GENERAL. WIRING DEVICES SHALL BE RATED FOR CURRENT, VOLTAGE AND PHASES AS APPLICABLE FOR THE LOADS, WHERE BOXES ARE TO BE MOUNTED ON OPPOSITE SIDES OF A WALL, A MINIMUM SEPARATION OF TWELVE (12") INCHES SHALL BE MAINTAINED. NO THROUGH BOXES ARE PERMITTED. BOXES SHALL BE MOUNTED LEVEL AND PLUMB.	
SWITCHES ARE TO BE SILENT, 20A, 120V.	
RECEPTACLES. NEMA 5-20R RECEPTACLES SHALL BE STANDARD TYPES EXCEPT WHERE SPECIAL RECEPTACLES ARE SHOWN. SPECIAL RECEPTACLES ARE TO MATCH EQUIPMENT PLUGS AS COORDINATED BY THE ELECTRICAL CONTRACTOR. THE ELECTRICAL CONTRACTOR IS TO FURNISH AND INSTALL PLUGS AND CORDS ON WATER HEATERS, DISHWASHERS, DISPOSALS, CLOTHES WASHERS, DRYERS, ETC., UNLESS PROVIDED BY OTHER TRADES. COORDINATE PRIOR TO BIDDING.	
FACE PLATES. FACE PLATES ARE REQUIRED IN INTERIOR SPACES. COLORS ARE TO BE SELECTED BY THE ARCHITECT. OUTSIDE PLATES AND COVERS SHALL BE MOUNTED PLUMB, STRAIGHT, AND FIT FLUSH WITH FINISHED SURFACES WITHOUT THE USE OF SHIMS OR MATS. PLATES SHALL NOT SUPPORT WIRING DEVICES. COMMON GANGED PLATES ARE TO BE EMPLOYED WHEREVER TWO (2) OR MORE DEVICES ARE SHOWN ON THE DRAWINGS IN THE SAME LOCATIONS.	
PANELBOARDS. PANELBOARDS SHALL BE DEAD-FRONT, CIRCUIT BREAKER TYPE, DIRECTORIES SHALL BE COMPLETE AND TYPEWRITTEN. LOADCENTERS ARE NOT PERMITTED.	
MOLDED CASE CIRCUIT BREAKERS. BREAKERS SHALL BE THERMAL-MAGNETIC OPERATED, WITH SHORT CIRCUIT RATINGS IN SYMMETRICAL AMPERES EQUAL TO OR GREATER THAN THE AIC RATINGS SHOWN ON THE DRAWINGS.	
MOTOR PROTECTION. ALL MOTORS ON THIS PROJECT ARE TO BE FULLY PROTECTED IN ACCORDANCE WITH THE NEC. EVERY MOTOR IS TO BE PROTECTED FROM OVERCURRENTS BY THE INSTALLATION OF FUSED SWITCHES LOCATED IN SIGHT OF MOTORS. EACH AIR HANDLING UNIT IS TO BE FED WITH A FUSED SWITCH FOR THE HEATER, AND A SECOND FUSED SWITCH FOR THE MOTOR (MOTOR SWITCH MAY BE ELIMINATED IF THE AHU IS EQUIPPED WITH INTEGRAL PROTECTION COORDINATED PRIOR TO BIDDING).	
IN APPLICATIONS WITH MOTORS OVER ONE (1) HORSEPOWER, AND WHERE CONTROLS OTHER THAN MANUAL 'ON' AND 'OFF' ARE REQUIRED, MAGNETIC COIL OPERATING MOTORS ARE REQUIRED. THE CONTRACTOR IS RESPONSIBLE FOR PROPER VOLTAGE, ENCLOSURE TYPES AND START-STOP OR HAND-OFF-AUTO SWITCHES AS REQUIRED BY THE APPLICATION. OVERLOAD ELEMENTS ARE REQUIRED FOR ALL ABOVE-GROUND. STARTERS SHALL BE ALLEN-BRANDY OR SQUARE D.	
CONDUCTORS. CONDUCTORS SHALL BE RATED FOR 600 VOLTS. ALL CONDUCTORS ARE TO BE COPPER. INSULATION SHALL BE TYPE THWN, EXCEPT WHERE SHOWN OTHERWISE. EVERY RACEWAY IS TO HAVE A GROUND WIRE (EXCEPT SERVICE).	

TWO-WAY EMERGENCY PUBLIC RADIO DESIGN CRITERIA	
THIS BUILDING SHALL REQUIRE THE INSTALLATION OF A TWO-WAY PUBLIC RADIO ENHANCEMENT SYSTEM WHICH COMPLIES WITH THE FOLLOWING REQUIREMENTS:	
1. THE INSTALLER SHALL DETERMINE THE LOCAL AGENCY THAT RESPONDS TO THE SPECIFIC LOCATION WHERE THE NEW SYSTEM WILL BE DEPLOYED (I.E. POLICE, FIRE DEPT., ETC) AND SHALL CONTACT THEM TO DETERMINE THE FREQUENCY BAND THAT IS REQUIRED. MOST PUBLIC AGENCIES UTILIZE 800 MHZ, BUT THIS SHALL BE VERIFIED PRIOR TO INSTALLATION.	
2. THE IN-BUILDING PUBLIC SAFETY RADIO CONVERGE SYSTEM AND OTHER RADIO SYSTEMS OPERATING WITHIN (OR IN THE VICINITY OF) THE FACILITY SHALL NOT INTERFERE WITH EACH OTHER.	
3. CONTRACTOR SHALL DETERMINE THE EXISTING SIGNAL STRENGTH AT THE SITE, PRIOR TO CONSTRUCTION.	
4. FOR THE DOWNLINK SIGNAL, A MINIMUM SIGNAL STRENGTH OF NEGATIVE (-95) DBM THROUGHOUT THE FACILITY WITH A DAQ OF 3.4 OR BETTER IS REQUIRED 100% OF THE TIME.	
5. FOR GENERAL STRUCTURE AREAS, THE IN-BUILDING RF SOLUTION SHALL PROVIDE THE ABOVE SPECIFIED COVERAGE IN 99% OF THE FLOOR AREA. GENERAL STRUCTURE AREAS ARE DEFINED AS LIVING AREAS, BASEMENTS, PARKING GARAGES, ADMINISTRATIVE OFFICES AND CONFERENCE ROOMS.	
6. FOR CRITICAL AREAS, THE IN-BUILDING RF SOLUTION SHALL PROVIDE THE ABOVE SPECIFIED COVERAGE IN 99% OF THE FLOOR AREA. CRITICAL AREAS ARE DEFINED AS MECHANICAL AND UTILITY ROOMS, PUBLIC BATHROOMS, "EMPLOYEE ONLY" ACCESS AREAS, STAIRWELLS, EXIT STAIRS, EXIT PASSAGEWAYS, POLICE HOLDING AREAS, ELEVATOR LOBBIES, FIRE PUMP ROOMS, SPRINKLER SECTIONAL, VALVE LOCATIONS, AND OTHER AREAS CONSIDERED BY THE AHJ. THE CONTRACTOR SHALL CONTACT THE AHJ TO CONFIRM CRITICAL AREAS IN THE NEW CONSTRUCTION.	
7. THE SYSTEM SHALL PROVIDE THE REQUIRED COVERAGE IN THE FREQUENCY BANDS OR CHANNELS AS SPECIFIED BY THE AHJ.	
8. SIGNAL BOOSTERS SHALL BE FCC-TYPE ACCEPTED AND MUST OPERATE IN ACCORDANCE WITH FCC RULES.	
9. ALL ACTIVE COMPONENTS SHALL BE POWERED VIA DEDICATED CIRCUITS ("HOME RUN" AND TWELVE-HOUR BATTERY BACKUP FOR THE IN-BUILDING SYSTEM OPERATING AT 100% CAPACITY.	
10. NEMA TWIST-LOCK ELECTRICAL PLUG AND RECEPTACLE SET SHALL BE UTILIZED TO CONNECT THE ACTIVE COMPONENTS OF THE SYSTEM TO THE AC POWER.	
11. SURGE PROTECTION DEVICE(S) SHALL BE UTILIZED TO PROTECT ACTIVE COMPONENTS OF THE SYSTEM FROM ELECTRICAL TRANSIENTS.	
12. THE SYSTEM MUST MONITOR AND PRODUCE AN ALARM IN THE EVENT OF ANTENNA SYSTEM MALFUNCTION OR SIGNAL BOOSTER FAILURE. ADDITIONALLY, IN CASE THAT AN IN-BUILDING SOLUTION BASED ON RF/BER OPTICS CONVERTERS IS SELECTED, THE SYSTEM SHALL ALSO BE CAPABLE OF ALARMING IN THE EVENT OF A MALFUNCTION OF THE MAIN AND THE EXPANSION HUBS.	
13. THE MAXIMUM RADIO SIGNAL PROPAGATION DELAY INTRODUCED BY THE IN-BUILDING COVERAGE SOLUTION SHALL NOT EXCEED 15 μ s. IF A DELAY GREATER THAN 15 μ s IS EXPECTED BY DESIGN, THEN FURTHER ANALYSIS SHALL BE CONDUCTED IN CONJUNCTION WITH THE AHJ TO EVALUATE POTENTIAL SIGNAL DEGRADATION IN AREAS WHERE THE DIRECT SIGNAL, COMING FROM A RADIO SITE COINCIDES WITH THE SYSTEM OUTDOOR SIGNAL.	
14. AN EXTERIOR ANTENNA SYSTEM (DONOR ANTENNA) SHALL BE INSTALLED ON THE ROOF FOR RECEIPT OF SIGNAL. THE ORIENTATION OF THE DONOR ANTENNA SHALL BE DETERMINED IN COORDINATION WITH THE AHJ. IF REQUIRED BY FAA REGULATIONS, OBSTRUCTION LIGHTING AND/OR MARKING SHALL BE INSTALLED.	
15. ALL EXTERIOR ANTENNAS ARE TO BE NARROWBAND, HIGH-GAIN, VERTICALLY POLARIZED AND DESIGNED FOR THE SPECIFIED FREQUENCY BAND. YAGI OR CORNER REFLECTOR-TYPE ANTENNAS ARE RECOMMENDED. MULTIBAND ANTENNAS ARE NOT AN ADVISABLE OPTION AND ITS USE SHALL BE LIMITED TO, FOR EXAMPLE, A BUILDING WHERE BOTH 700 AND 800 MHZ BANDS SHALL BE IMPLEMENTED.	
16. THE ANTENNA INSTALLATION, INCLUDING THE SHIELD OF THE COAXIAL CABLE SHALL BE SUITABLY CONNECTED TO THE BUILDING'S ELECTRICAL GROUND SYSTEM AT THE BASE OF THE ANTENNA MAST AND AT A COAXIAL LIGHTNING PROTECTOR DESIGNED FOR THE PROPER FREQUENCY BAND SHALL BE INSTALLED IN THE COAXIAL CABLE FEED OUTSIDE THE FACILITY.	
17. THE IN-BUILDING ANTENNA SYSTEM SHALL CONSIST OF A SUFFICIENT BUT NOT EXCESSIVE NUMBER OF IN-DOOR ANTENNAS. THEY SHALL BE DISTRIBUTED THROUGHOUT THE BUILDING IN A MANNER WHICH MEETS THE COVERAGE CRITERIA PREVIOUSLY SPECIFIED.	
18. SPLITTERS AND ANY OTHER ACTIVE OR PASSIVE COMPONENTS INSTALLED IN LOCATIONS OTHER THAN COMMUNICATION CLOSETS SHALL BE MOUNTED IN A SEPARATE COLOR CODE JUNCTION BOX CONSPICUOUSLY LOCATED SO AS TO BE EASILY ACCESSIBLE FOR MAINTENANCE WHILE MAINTAINING THEM SECURE FROM UNAUTHORIZED TAMPERING.	
19. ALL CABLING/CONDUIT SHALL UTILIZE 2-HOUR FIRE RATED CABLE OR BE INSTALLED IN A 2-HOUR ROOM OR SHAFT, AND HAVE A PATHWAY SURVIVABILITY OF LEVEL 3, PER NFPA 72, 24.3.6.8.1.	
20. PRIMARY POWER SUPPLY FOR BDA SHALL COMPLY WITH NFPA 72, 24.5.2.5.1 AND 10.6.5.1.	
21. SECONDARY POWER SUPPLY SHALL CONSIST OF A BATTERY WITH A MINIMUM SUPPLY OF 12 HOURS OF 100% OPERATING CAPACITY PER NFPA 72, 24.5.2.5.5.2. BATTERY SHALL BE ARRANGED PER NFPA 72, 10.6.10.	
22. SIGNAL ISOLATION SHALL BE MAINTAINED BETWEEN THE DONOR ANTENNA AND ALL INSIDE ANTENNAS AND SHALL BE A MINIMUM OF 15 dB ABOVE THE SIGNAL BOOSTER GAIN UNDER ALL OPERATING CONDITIONS.	

ELECTRICAL SYMBOL LEGEND	
SYMBOL	DESCRIPTION
	DUPLEX RECEPTACLE OUTLET NEMA 5-20R
	DUPLEX RECEPTACLE OUTLET NEMA 5-20R SPLIT WIRED
	DUPLEX RECEPTACLE OUTLET NEMA 5-20R OVER COUNTER
	DUPLEX RECEPTACLE OUTLET NEMA 5-20R UNDER COUNTER
	SPECIAL PURPOSE OUTLET MUST MATCH EQUIP. PLUG
	FLOOR OUTLET W/ BRASS PLATE & CARPET RING
	SPST SWITCH
	3-WAY SWITCH
	4-WAY SWITCH
	SWITCH WITH W/ PILOT LIGHT
	DIMMER SWITCH WATTAGE AS NOTED
	LIGHT FIXTURE (SURFACE / RECESSED)
	LIGHT FIXTURE WALL MOUNTED
	FLUORESCENT LIGHT FIXTURE (SURFACE / RECESSED)
	FLUORESCENT LIGHT FIXTURE (SURFACE / RECESSED) EMERG.
	FLUORESCENT STRIP LIGHT FIXTURE
	EMERGENCY BATTERY PACK LIGHT FIXTURE W/ (2) 25W LTS.
	EXIT SIGN, UNIVERSAL MOUNTING (DOUBLE / SINGLE FACE) ARROWS AS INDICATED
	FUSED SWITCH 30A SWITCH, 20A FUSES 2 POLES
	MOTOR STARTER NEMA SIZE 1
	SWITCHGEAR, 30A, NEMA 1, 3 POLE
	PANELBOARDS, SEE SCHEDULES
	TIME CLOCK SWITCH, 4P-ASTRONOMIC WIRESERVE
	TELEPHONE RECEPT-4x4 BOX WITH SINGLE GANG ADAPTER AND 3/4" EMT TO ACCESSIBLE CEILING SPACE
	DATA RECEPT-4x4 BOX WITH SINGLE GANG ADAPTER AND 3/4" EMT TO ACCESSIBLE CEILING SPACE
	MOTOR
	STRIP HEATER W/ INTEGRAL CONTACTOR
	VOLUME CONTROL 1/4"
	QUADPLEX RECEPTACLE
	FIRE ALARM CONTROL PANEL EST-010000
	FIRE ALARM ANNUNCIATOR PANEL RLCD-C
	SMOKE DETECTOR W/BASE SIGA-SD4
	HEAT DETECTOR W/BASE SIGA-HD0
	DUCT DETECTOR SIGA-SD
	REMOTE TEST STATION SD-TRK
	PULL STATION SIGA-278
	CONTROL RELAY MODULE SIGA-CR
	SINGLE INPUT MODULE SIGA-CT1
	DUAL INPUT MODULE SIGA-CT2
	TAMPER SWITCH F.B.O
	WATERFLOW SWITCH F.B.O
	HORN STROBE G4AVRF
	WEATHERPROOF HORN STROBE WG4RF-HYMC
	STROBE G4VRF
	VOLTAGE SURGE PROTECTOR - 120 VAC DITEK DTK-120HV
	VOLTAGE SURGE PROTECTOR - TELEPHONE LINES DITEK DTK-MRJ31XSCPPW
	SYSTEM RECORD DOCUMENTS SSU00689
	CELL DIALER SLE-1TEA.CFB.PS

DEVICE MOUNTING HEIGHTS	
LIGHT SWITCHES	48" A.F.F. TO CENTER LINE OF BOX, UON
RECEPTACLES	18" A.F.F. TO CENTER LINE, UON
COUNTER HEIGHT RECEPTACLES	48" A.F.F. TO CENTER LINE OR 2" ABOVE SPLASHBOARD, UON
DATA OUTLETS	18" A.F.F. TO CENTER LINE, UON
TELEPHONES	48" A.F.F. TO CENTER LINE OF BOX, UON
EXTERIOR RECEPTACLES	24" A.F.G. TO BOTTOM, UON
ALL HEIGHTS ARE BASED ON NON-OBSTRUCTED REACH. MODIFY MOUNTING HEIGHTS IF/AS NECESSARY PER ADA AS REQUIRED. REFER TO ARCHITECTURAL ELEVATION FOR SPECIFIC HEIGHTS SPECIFIED THEREIN.	

MINIMUM CONDUCTOR SIZING FOR 120V/1Ø BRANCH CIRCUITS	
(FOR FBC 13-413.BC.1.2 COMPLIANCE)	
DESIGN LOAD ON CIRCUIT IN VA (FROM PANELBOARD SCHEDULE) UP TO:	
Length of Circuit in Feet	500 1000 1500 2000 2500 3000
50'	12 12 12 12 10 10 10
100'	12 12 12 10 8 8 6
150'	12 12 10 8 6 6 4
200'	10 8 6 4 4 4 4
250'	10 6 6 4 4 4 3
300'	8 6 4 4 4 3 2

MINIMUM CONDUCTOR SIZING FOR 208V/3Ø BRANCH CIRCUITS	
(FOR FBC 13-413.BC.1.2 COMPLIANCE)	
DESIGN LOAD ON CIRCUIT IN VA (FROM PANELBOARD SCHEDULE) UP TO:	
Length of Circuit in Feet	1500 2000 2500 3000 3500 4000 4500 5000
50'	12 12 12 12 12 12 12 12
100'	12 12 12 12 12 12 12 12
150'	12 12 12 12 12 12 10 10
200'	12 12 12 10 10 10 10 10
250'	12 12 10 10 10 10 10 8
300'	12 10 10 10 10 8 8 8

MINIMUM CONDUCTOR SIZING FOR 208V/1Ø BRANCH CIRCUITS	
(FOR FBC 13-413.BC.1.2 COMPLIANCE)	
DESIGN LOAD ON CIRCUIT IN VA (FROM PANELBOARD SCHEDULE) UP TO:	
Length of Circuit in Feet	1000 1500 2000 2500 3000 3500 4000 4500 5000
50'	12 12 12 12 12 10 10 10
100'	12 12 12 12 12 10 10 8
150'	12 12 12 10 10 8 8 8
200'	12 12 10 10 10 8 8 6
250'	12 10 10 8 8 6 6 6
300'	10 8 8 6 6 6 4 4

MINIMUM CONDUCTOR SIZING FOR 277V/1Ø BRANCH CIRCUITS	
(FOR FBC 13-413.BC.1.2 COMPLIANCE)	
DESIGN LOAD ON CIRCUIT IN VA (FROM PANELBOARD SCHEDULE) UP TO:	
Length of Circuit in Feet	2000 3000 4000 5000
50'	12 12 12 10
100'	12 12 10 10
150'	12 12 10 8
200'	12 10 10 8
250'	12 10 8 8
300'	10 8 8 8

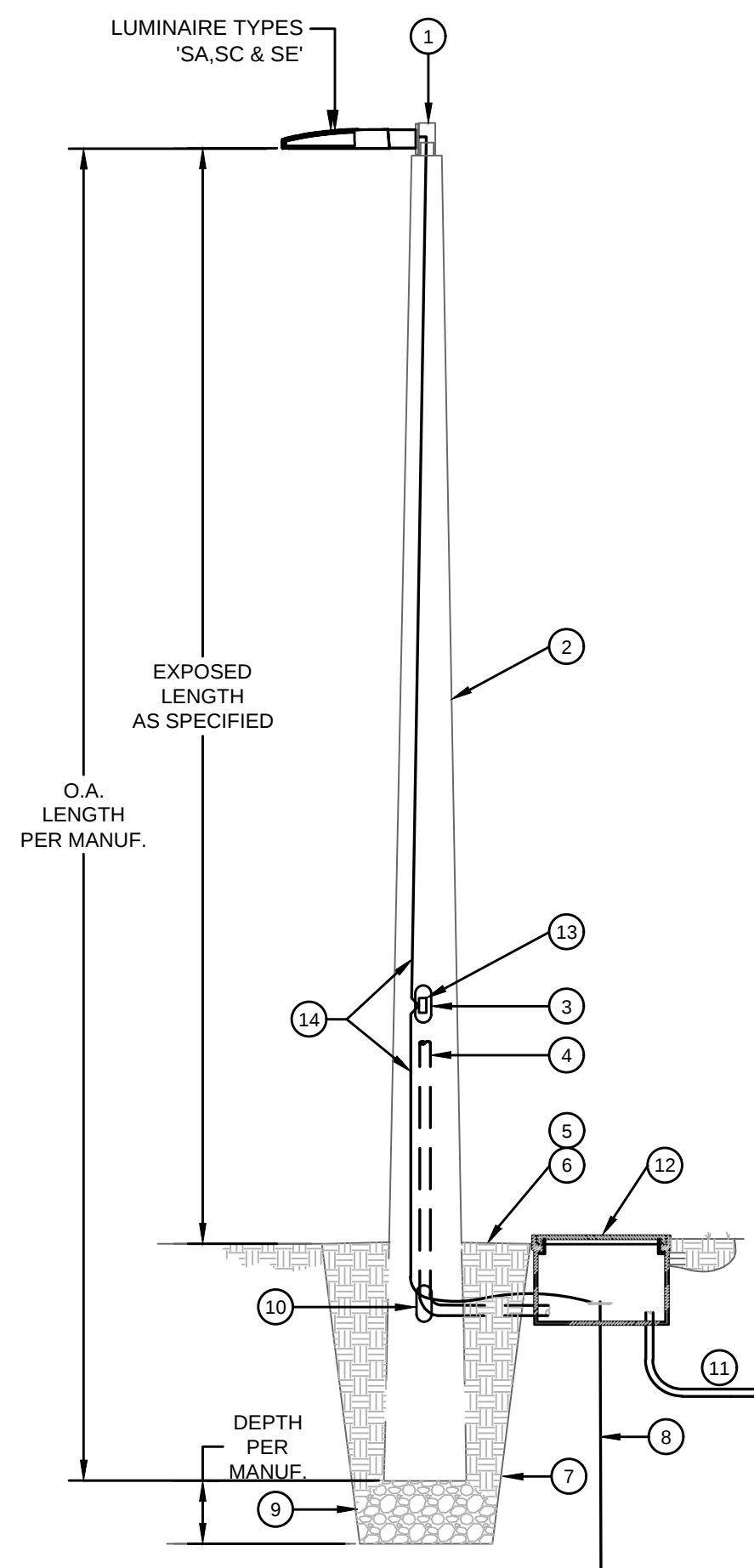
MINIMUM CONDUCTOR SIZING FOR 277V/3Ø BRANCH CIRCUITS	
(FOR FBC 13-413.BC.1.2 COMPLIANCE)	
DESIGN LOAD ON CIRCUIT IN VA (FROM PANELBOARD SCHEDULE) UP TO:	
Length of Circuit in Feet	10,000 15,000 20,000 25,000 30,000
50'	12 12 12 12 12
100'	12 10 8 8 8
150'	12 10 8 8 8
200'	12 10 8 8 8
250'	12 10 8 8 8
300'	12 10 8 8 6

VOLTAGE DROP CONSIDERATIONS

CONDUCTORS SHOWN ON CONTRACT DOCUMENTS ARE MINIMUM SIZE BASED ON OVER-CURRENT PROTECTION PROVIDED. EACH FEEDER AND BRANCH CIRCUIT CONDUCTOR SIZE IS TO BE DETERMINED BY THE CONTRACTOR AFTER ACTUAL CIRCUIT CONDUCTOR LENGTH IS KNOWN AND VOLTAGE DROP CALCULATIONS ARE PERFORMED. PROVIDE REDLINE AS BUILT INFORMATION TO ENGINEER FOR INCORPORATION ON OWNERS RECORD SET WITH ACTUAL CONDUCTOR SIZES USED.</

COLUMBIA STORM PROCESSING									
LIGHTING FIXTURE SCHEDULE									
TYPE	MANUFACTURER	CATALOG NUMBER	DESCRIPTION	LAMPS		VOLTS	DIM TYPE	MOUNTING	REMARKS
				Type	Total Wattage				
SA	GARDCO	PFAS-138L-1A-NW-G2-SF-4-UNV-CM50-IMR17-PCB-FINISH/PTF2-PFAS-1-90-FINISH/CC40/OAH.30'/MTG HT W/ TENON	LED PERFORMANCE SITE ASSEMBLY	LED/4K	452	UNV	0-10V	POLE	
SC	GARDCO	PFAS-138L-1A-NW-G2-SF-4-UNV-CM50-IMR17-PCB-FINISH/PTF2-PFAS-1-90-FINISH/CC40/OAH.30'/MTG HT W/ TENON	LED PERFORMANCE SITE ASSEMBLY	LED/4K	452	UNV	0-10V	POLE	
SD	GARDCO	(4X)PFAS-230L-1A-NW-G2-SF-5W-UNV-CM50-IMR17-PCB-FINISH/PTF2-PFAS-4-90-FINISH/CC60/OAH.50'/MTG HT W/ TENON	QUAD LED PERFORMANCE SITE ASSEMBLY	LED/4K	3016	UNV	0-10V	POLE	
SE	GARDCO	PFAS-138L-1A-NW-G2-SF-4-UNV-CM50-IMR17-PCB-FINISH/PTF2-PFAS-1-90-FINISH/CC40/OAH.30'/MTG HT W/ TENON	LED PERFORMANCE SITE ASSEMBLY	LED/4K	452	UNV	0-10V	POLE	
SF	GARDCO	(4X)PFAS-230L-1A-NW-G2-SF-5W-UNV-CM50-IMR17-PCB-FINISH/PTF2-PFAS-4-90-FINISH/CC70/OAH.60'/MTG HT W/ TENON	QUAD LED PERFORMANCE SITE ASSEMBLY	LED/4K	3016	UNV	0-10V	POLE	
QE	GARDCO	GWM-A10-740-T4-UNV-EC-FINISH	LED WALL PACK W/ BATTERY	LED/4K	45	UNV	0-10V	WALL	
LIGHTING SCHEDULE NOTES:									
1. CONTACT SESCO LIGHTING (PATTY ROSSIELLO) @ 561-632-4192 OR prossiello@secolighting.com									
2. THE ABOVE FIXTURE SCHEDULE IS PREDICATED ON PERFORMANCE AND IS DESIGNED TO MEET CERTAIN AESTHETIC CRITERIA. ALL ALTERNATIVE SELECTIONS MUST BE SUBMITTED TO THE ARCHITECT FOR APPROVAL TEN (10) DAYS PRIOR TO BID DATE.									
3. SUBMITTAL MUST INCLUDE ITL CERTIFIED PHOTOMETRIC FILES FOR REVIEW OF EQUALITY.									
4. NO SUBSTITUTIONS ALLOWED.									

SESCO
LIGHTING



GENERAL POLE NOTES:

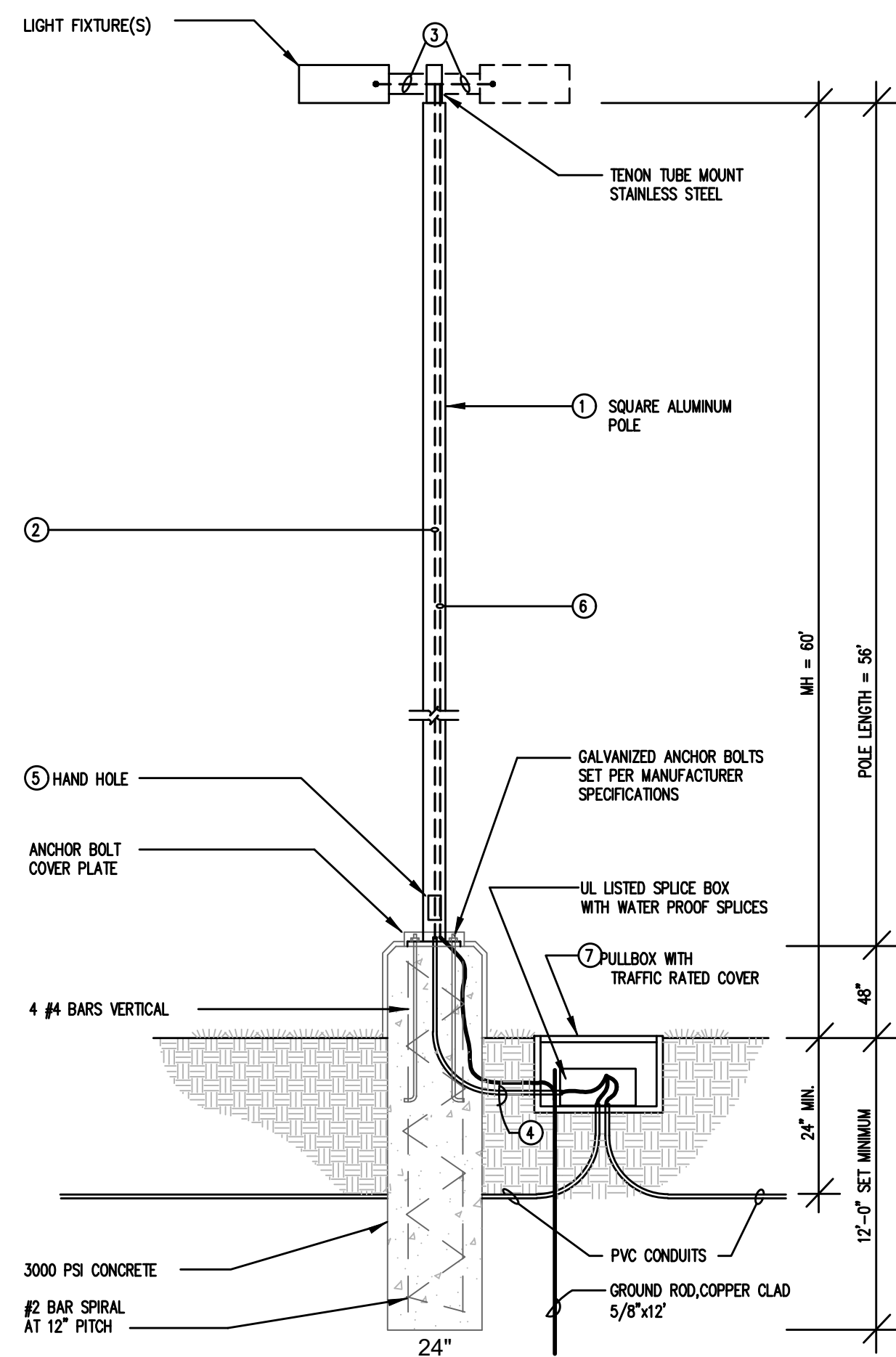
PROVIDE SHOP DRAWINGS AND CALCULATIONS FOR ALL EXTERIOR POLE MOUNTED FIXTURES WITH SIGNATURE AND SEAL OF REGISTERED PROFESSIONAL ENGINEER VERIFYING THAT THE FOUNDATION AND POLE/FIXTURE ASSEMBLY MEETS OR EXCEEDS FLORIDA BUILDING CODE AND ANSI A58.1. THE EXTERIOR POLE MOUNTED LIGHT FIXTURE ASSEMBLIES SHALL BE CAPABLE OF WITHSTANDING WINDLOADS IN ACCORDANCE WITH ASCE 7-10. DESIGN WIND VELOCITY SHALL BE 150MPH, GUST FACTOR OF 1.2

KEYED POLE NOTES:

- 2 3/8" TENON (VERVEY) WITH PROVISION FOR WIRING. COORDINATE WITH POLE AND LUMINAIRE MANUFACTURER.
- 3 VALMONT ALUMINUM HIGH-MAST POLE WITH LOWERING MECHANISM AS SHOWN ON SITE PLAN.
- 4 WIRING HAND-LOLE - MINIMUM 3"x5" WITH ALUMINUM COVER AND STAINLESS STEEL SCREWS.
- 5 TERMINATE CONDUIT INTERNALLY ADJACENT TO HAND-LOLE.
- 6 SLOPE TO SURROUNDING FINISHED GRADE.
- 7 COMPACTED BACKFILL EQUAL TO EXISTING SURROUNDING AREA.
- 8 CONTRACTOR SHALL AUGER HOLE AT POLE LOCATION AS NOT TO DISTURB THE SURROUNDING EARTH. AUGER HOLE TO POLE MANUFACTURER SPECIFIED DEPTH. RINSE HOLE WITH EARTH AND COMPACT.
- 9 55%LC COPPERWELD GROUND ROD AND #6 BARE CU TO FIXTURE AND SURGE SUPPRESSOR.
- 10 12" COARSE GRAVEL SETTING BED AT BOTTOM OF AUGERED HOLE.
- 11 MINIMUM 3"x5" CONDUIT ENTRANCE.
- 12 CONDUIT AND WIRE FROM/TO NEXT FIXTURE.
- 13 HANDHOLE/PULLBOX PER DETAIL THIS PAGE AT EACH POLE WITH GROUND ROD WITHIN.
- 14 PROVIDE SURGE SUPPRESSOR IN EACH POLE HAND-LOLE. PHASE TO GRN. JOSLIN "SHA" SERIES WITH INDICATOR. COORDINATE VOLTAGE. ALSO PROVIDE FUSING.
- 15 #6 BARE CU TO FIXTURE AND SURGE SUPPRESSOR.

DIRECT BURIAL CONCRETE POLE INSTALLATION

NTS



GENERAL POLE NOTES:

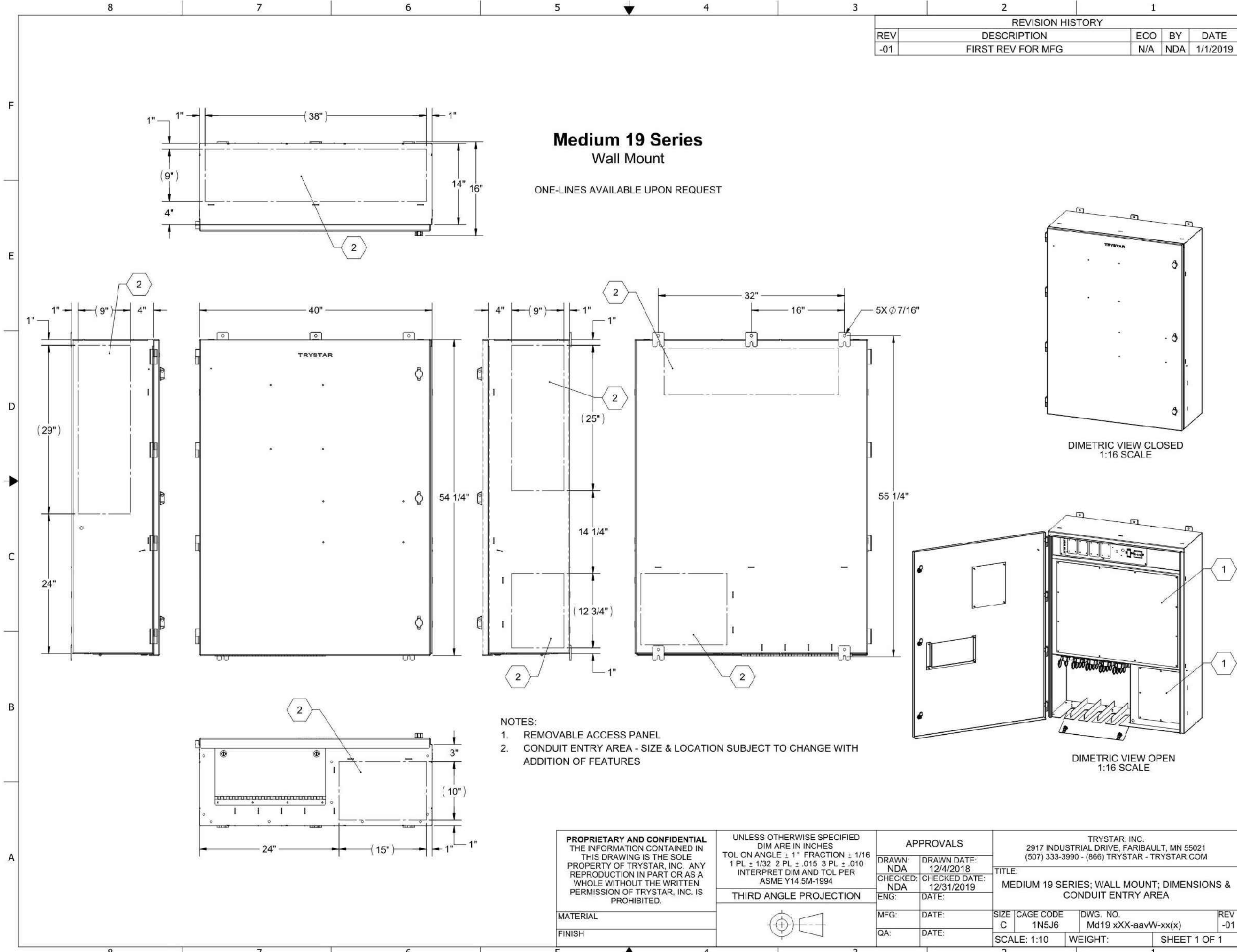
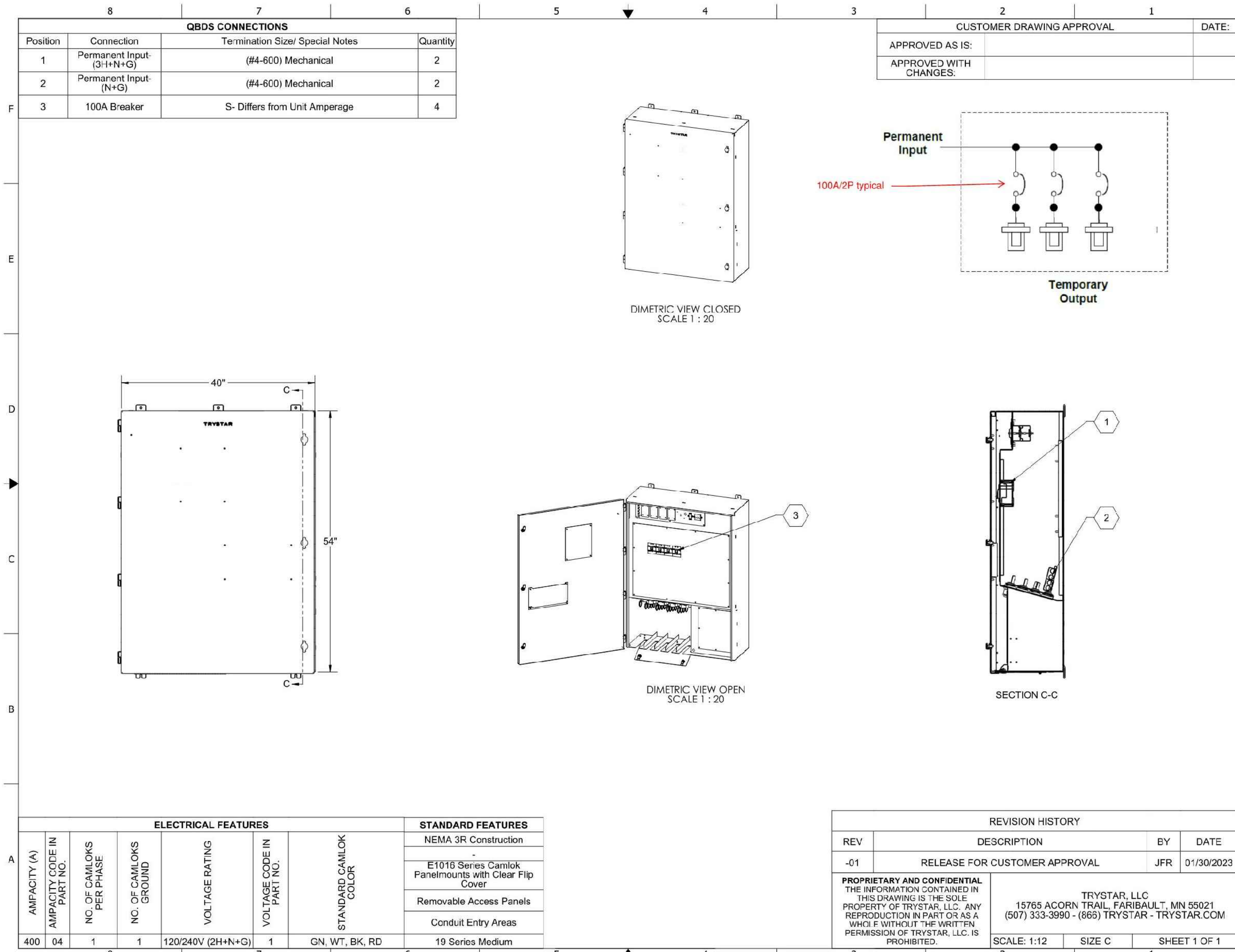
PROVIDE SHOP DRAWINGS AND CALCULATIONS FOR ALL EXTERIOR POLE MOUNTED FIXTURES WITH SIGNATURE AND SEAL OF REGISTERED PROFESSIONAL ENGINEER VERIFYING THAT THE FOUNDATION AND POLE/FIXTURE ASSEMBLY MEETS OR EXCEEDS FLORIDA BUILDING CODE AND ANSI A58.1. THE EXTERIOR POLE MOUNTED LIGHT FIXTURE ASSEMBLIES SHALL BE CAPABLE OF WITHSTANDING WINDLOADS IN ACCORDANCE WITH ASCE 7-10. DESIGN WIND VELOCITY SHALL BE 150MPH, GUST FACTOR OF 1.2

KEYED POLE NOTES:

- 1 LIGHTING POLE. THE MANUFACTURER IS TO PROVIDE CERTIFICATION BY FLORIDA PE, SHOWING WIND LOAD RATING OF 140 MPH PER FBC WITH SPECIFIED FIXTURES RATED FOR THE WIND. THE WIND LOAD IS TO BE DETERMINED BY THE PROFESSIONAL ENGINEER.
- 2 INTERNAL WIRING. INTERNAL WIRING TO BE IN UL LISTED CONDUITS, INSIDE POLE. SEE NOTE 3.
- 3 LIGHT FIXTURE CONNECTIONS. REFER TO LIGHT MANUFACTURER FOR REQUIREMENTS, INCLUDING TEMPERATURE REQUIREMENTS (COMMONLY 150C). CONDUCTORS TO BE UL LISTED FIXTURE CONDUCTORS, UL "RECOGNIZED" APPLIANCE WIRES NOT PERMITTED.) OBTAIN BUILDING DEPARTMENT APPROVAL FOR CONDUCTORS, CONNECTORS, AND ACCESSIBILITY.
- 4 CONDUITS. CONDUITS BELOW HAND HOLE IN POLE TO BE UL LISTED WITH "BRANCH CIRCUIT" THWEN CONDUCTORS.
- 5 HAND HOLE. HAND HOLE WITH UL LISTED BOX CAST IN POLE WITH WATERPROOF SPLICES
- 6 GROUND WIRE IN POLE. CONNECT BOTTOM TO GROUND ROD. CONNECT TOP TO GROUND LUG(S) IN FIXTURE(S).
- 7 TRAFFIC RATED PULL BOX. HIGH STRENGTH COMPOSITE CONSTRUCTION RATED FOR DESIGN LOAD OF 22,000 LBS OVER A 10" SQUARE. COVER LEAVING 8" THICKING.
- 8 SITE CONDITIONS. IF SITE CONDITIONS ARE DISCOVERED TO REQUIRE ANY OF THE POLES TO BE MOVED OVER 3 FEET, NOTIFY THE ENGINEER IMMEDIATELY.

60' LIGHT POLE DETAIL

NT:



GENERIC CPORT QUICK CONNECT CABINET SHOWN FOR BASIS OF DESIGN INTENT.
SUBMIT DETAILED SHOP DRAWING FOR APPROVAL.

LITTLE

DIVERSIFIED ARCHITECTURAL CONSULTING

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FPL

CEa

CARDINAL

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ISSUE FOR

BID DOCUMENTS

ISSUE DATE

04.18.2025

REVISIONS

NO.	REASON	DATE
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PROMOTE TEAM

PRINCIPAL IN CHARGE
DAVID LITHGOW

PROJECT MANAGER
DAVID LITHGOW

DESIGN TEAM
CEA

PROJECT NAME

FLORIDA POWER AND LIGHT
STORM PROCESSING FACILITY
PHASE 1 - SITE

PROMOTE NO.

814C632801

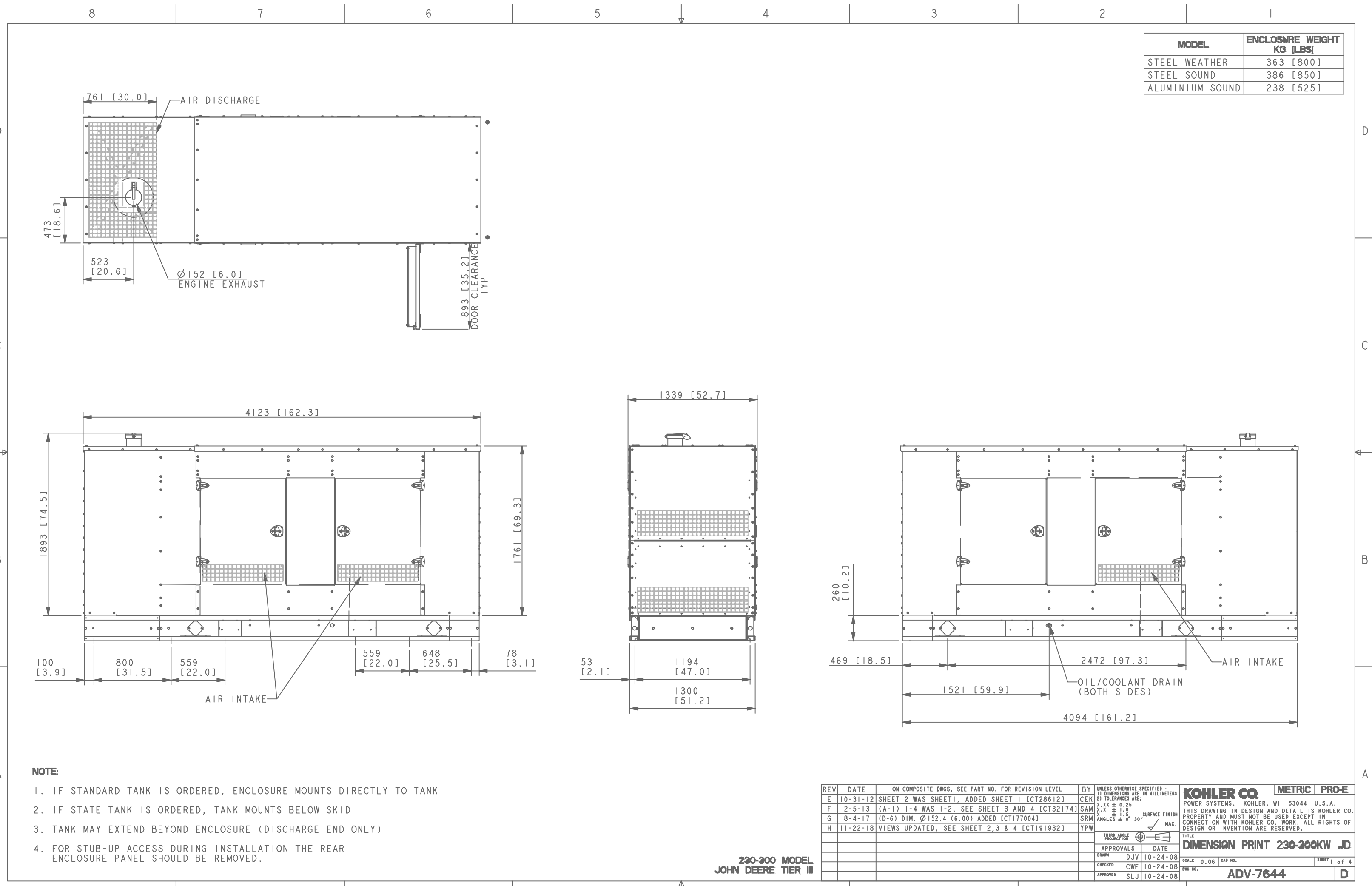
SHEET TITLE

C-FORT
QUICK CONNECT CABINET
SPECIFICATIONS

SHEET NUMBER

Z-E003

Modbus[®] is a registered trademark of Schneider Electric.



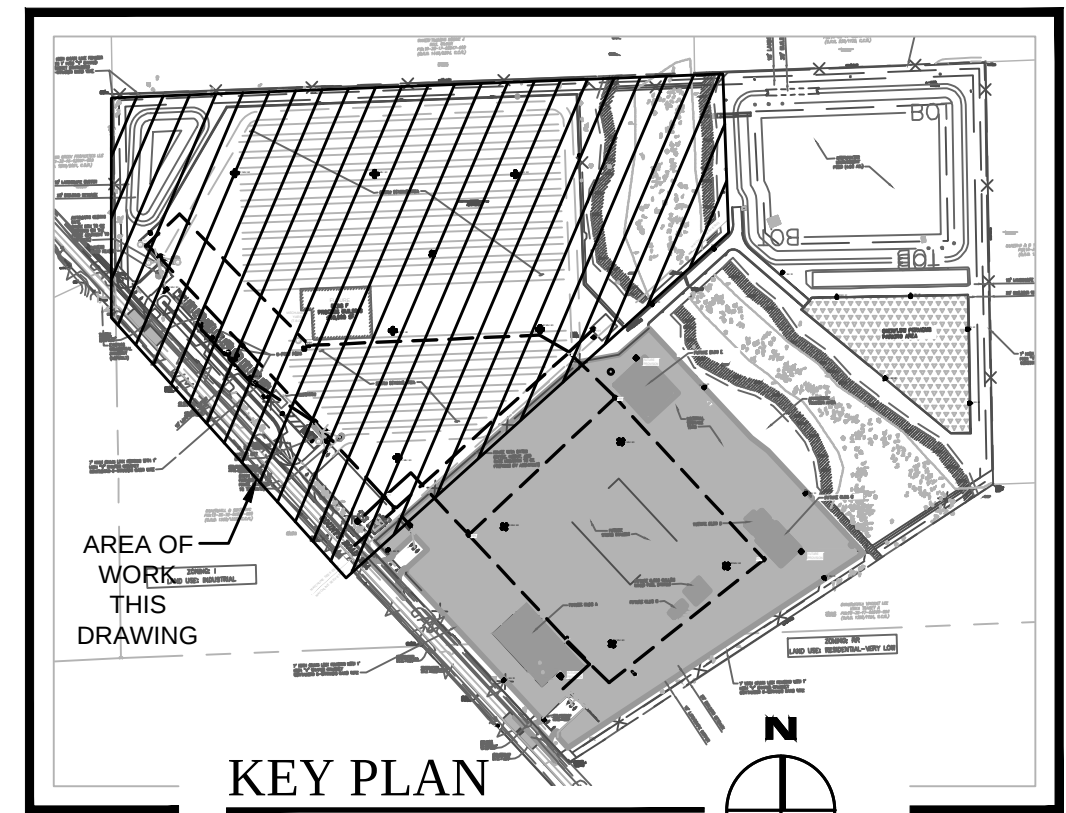
NOTE: SITE LIGHTING ON THE STORM SIDE
IS YET TO BE DETERMINED FOR EXACT LOCATIONS

ZONING: RR
LAND USE: RESIDENTIAL-VERY LOW

OWNER: TIMMONS BOBBIE J
BELL, WILBUR
PID: 18-35-17-05047-000
(O.R.B. 1442/2294, C.C.R.)

ALL PULL BOXES ASSOCIATED WITH LOW VOLTAGE SITE INFRASTRUCTURE AND SECURITY
SYSTEMS MUST BE INSTALLED BEHIND THE SECURED FENCING. NO PULL BOXES ARE
ALLOWED TO BE INSTALLED OUTSIDE OF THE SITE FENCING.

CONDUITS FOR COMMUNICATIONS SERVICE PROVIDER CABLE. CONTRACTOR SHALL STUB
CONDUIT OUT TO THE RIGHT-OF-WAY AND COORDINATE WITH SERVICE PROVIDER FOR
FURTHER CONNECTION REQUIREMENTS.



GENERAL NOTES THIS DRAWING

- COORDINATE ALL UNDERGROUND WORK WITH ALL OTHER TRADES AND ACTUAL FIELD CONDITIONS FOR PROPER CLEARANCES
- REFER TO FPL STANDARDS FOR ALL PRIMARY DUCT BANK INSTALLATION REQUIREMENTS.
- PROVIDE PULL LINES IN ALL CONDUITS.
- ALL UTILITY PRIMARY CONDUIT RUNS SHOWN ON THIS SHEET SHALL BE (2) 6" CONDUITS.
- CONDUIT ROUTING SHOWN IS DIAGRAMMATICAL AND NOT NECESSARILY REPRESENTATIVE OF MOST EFFICIENT ROUTE. CONTRACTOR SHALL FIELD ADJUST ALL SITE CONDUIT ROUTING TO AVOID OBSTRUCTIONS AND STAY OUTSIDE OF BUILDING FOOTPRINTS AS MUCH AS POSSIBLE.
- EXTERIOR LIGHT FIXTURES SHALL BE CONTROLLED BY A PHOTOCELL CONNECTED TO THE LOW VOLTAGE LIGHTING CONTROL PANEL. MOUNT PHOTOCELL ON EXTERIOR WALL 8' AFG WITH UNOBSTRUCTED VIEW FACING NORTH.
- UNLESS OTHERWISE NOTED EMPTY UNDERGROUND CONDUITS SHOWN ARE FOR OWNER PROVIDED AND INSTALLED FIBER AND DATA CABLE FOR SECURITY/IT EQUIPMENT. CONTRACTOR SHALL PROVIDE PULL LINES IN ALL CONDUITS. TOP OF CONDUITS SHALL BE MINIMUM 36" BELOW FINISHED GRADE.
- ALL SITE LIGHTING FIXTURES SHALL BE MOUNTED AT 30' AFG UNLESS NOTED OTHERWISE.

KEYED NOTES (X)

- NOT ALL KEYED NOTES PERTAIN TO CURRENT SHEET
- NEMA 4X HOFFMAN COMLINE ELECTRICAL ENCLOSURE MOUNTED TO FREESTANDING UNISTRUT FRAME. PROVIDE POWER CIRCUIT AND CONDUITS FOR LOW VOLTAGE AS SHOWN. REFER TO DETAIL 2-E502 FOR SPECIFICATIONS AND INSTALLATION REQUIREMENTS
 - PROVIDE CONDUITS FOR COMMUNICATIONS SERVICE PROVIDER CABLE (QUANTITIES AND SIZES PER PLANS). COORDINATE FINAL CONNECTION POINTS (NOT SHOWN) WITH SERVICE PROVIDERS PROJECT ENGINEERS PRIOR TO INSTALLATION.
 - HANDHOLE FOR COMMUNICATIONS PRIMARY LOOP. REFER TO DETAIL 3, 2-E502
 - GATE CARD READER, CALL BOX, PEDESTAL AND ASSOCIATED LOW VOLTAGE PROVIDED BY OWNERS SECURITY CONTRACTOR. CONTRACTOR REQUIRED TO COORDINATE POWER REQUIREMENTS, CONCRETE ISLANDS AND CURBING, CONDUITS, CONCRETE PAD, GATE TRACK GATE MOTOR, POWER DETECTOR LOOPS AND ALL OTHER ASSOCIATED CONNECTIONS WITH OWNER AND OWNER'S SECURITY CONTRACTOR. REFER TO DETAIL 4-E502.
 - 14" PRECAST POLE WHOFFMAN BOX & CAMERA AT 14'-0". REFER TO DETAIL 4, 2-E502 FOR SPECIFICATIONS AND INSTALLATION REQUIREMENTS
 - PROVIDE TWO CHARGEPOINT CT4025-GW1 2 PORT LEVEL 2 ELECTRICAL VEHICLE CHARGING STATIONS AT THIS LOCATION. REFER TO MANUFACTURERS INSTRUCTIONS FOR STUB UP AND ROUGH IN REQUIREMENTS. IN ADDITION TO POWER CIRCUIT HOMERUNS SHOWN PROVIDE A 1" DATA HOMERUN FROM EACH CHARGER TO THE IDF IN THE IT ROOM OF THE BUILDING SERVED.
 - NEMA 4X HOFFMAN COMLINE ELECTRICAL ENCLOSURE MOUNTED TO SITE LIGHTING POLE. REFER TO DETAIL 5, 2-E502 FOR SPECIFICATIONS AND INSTALLATION REQUIREMENTS. PROVIDE CIRCUIT AND CONDUITS FOR LOW VOLTAGE AS SHOWN AND AS REQUIRED BY AUDIO VISUAL SHOP DRAWINGS.
 - PANEL MOUNTED TO FREESTANDING UNISTRUT FRAME. TRANSFORMER TOP INSTALLED ON CONCRETE PAD
 - CFORT STAGING AREA. NOTE THAT CFORT CONVENIENCE UNITS ARE PROVIDED BY OWNER AND ARE NOT PART OF THIS PROJECT. PROVISIONS IN THIS PROJECT ARE INCLUDED FOR POWER AND COMMUNICATIONS CONNECTIONS.
 - PROVIDE WIRING ACCESS FOR SECURITY CAMERAS IN ACCORDANCE WITH APPROVED SHOP DRAWINGS. CONTRACTOR IS RESPONSIBLE FOR REVIEWING AND COORDINATING DEVICE PLACEMENT WITH APPROVED AUDIO VISUAL SHOP DRAWINGS AND SUBJECT TO OWNER'S APPROVAL.
 - PROPOSED UTILITY TRANSFORMER LOCATION
 - UTILITY PRIMARY POLE LOCATION
 - PROPOSED UNDERGROUND UTILITY COMPANY TRANSFORMER PRIMARY FEEDER
 - UTILITY COMPANY HANDHOLE FOR FUTURE PAD MOUNT TRANSFORMER TO FEED FUTURE RADIO ANTENNA SITE
 - STEEL BOLLARD WITH QUAD OUTLET. REFER TO DETAIL 8, 2-E502 FOR ADDITIONAL INFORMATION
 - PROVIDE WIRING ACCESS FOR SECURITY CAMERAS IN ACCORDANCE WITH APPROVED SHOP DRAWINGS. PROVIDE 120V CIRCUIT TO INTERIOR MOUNTED HOFFMAN BOX FOR FIBER TO COPPER IT EQUIPMENT. CONTRACTOR IS RESPONSIBLE FOR REVIEWING AND COORDINATING DEVICE PLACEMENT WITH APPROVED AUDIO VISUAL SHOP DRAWINGS AND SUBJECT TO OWNER'S APPROVAL
 - 3/4" CONDUIT TO BE PROVIDED AT EACH PEDESTAL FOR LPR (LICENSE PLATE READER) CAMERA
 - PROVIDE 1 MAXCELL EDGE 4.00' 4" CELL INNERDUCT WITHIN TWO OF THE 4" COMMUNICATIONS CONDUITS.

LITTLE
OVERSEAS ARCHITECTURAL CONSULTING

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ISSUE FOR
BID DOCUMENTS

ISSUE DATE
04.18.2025

REVISIONS

NO. REASON DATE

PROJECT TEAM
PROJECT CHAIRMAN
DAVID LITHGOW
PROJECT MANAGER
DAVID LITHGOW
DESIGN TEAM
CEA

FLORIDA POWER AND LIGHT
STORM PROCESSING FACILITY
PHASE 1 - SITE

PROJECT NO.
814C632801

SHEET TITLE
PARTIAL ELECTRICAL
SITE PLAN

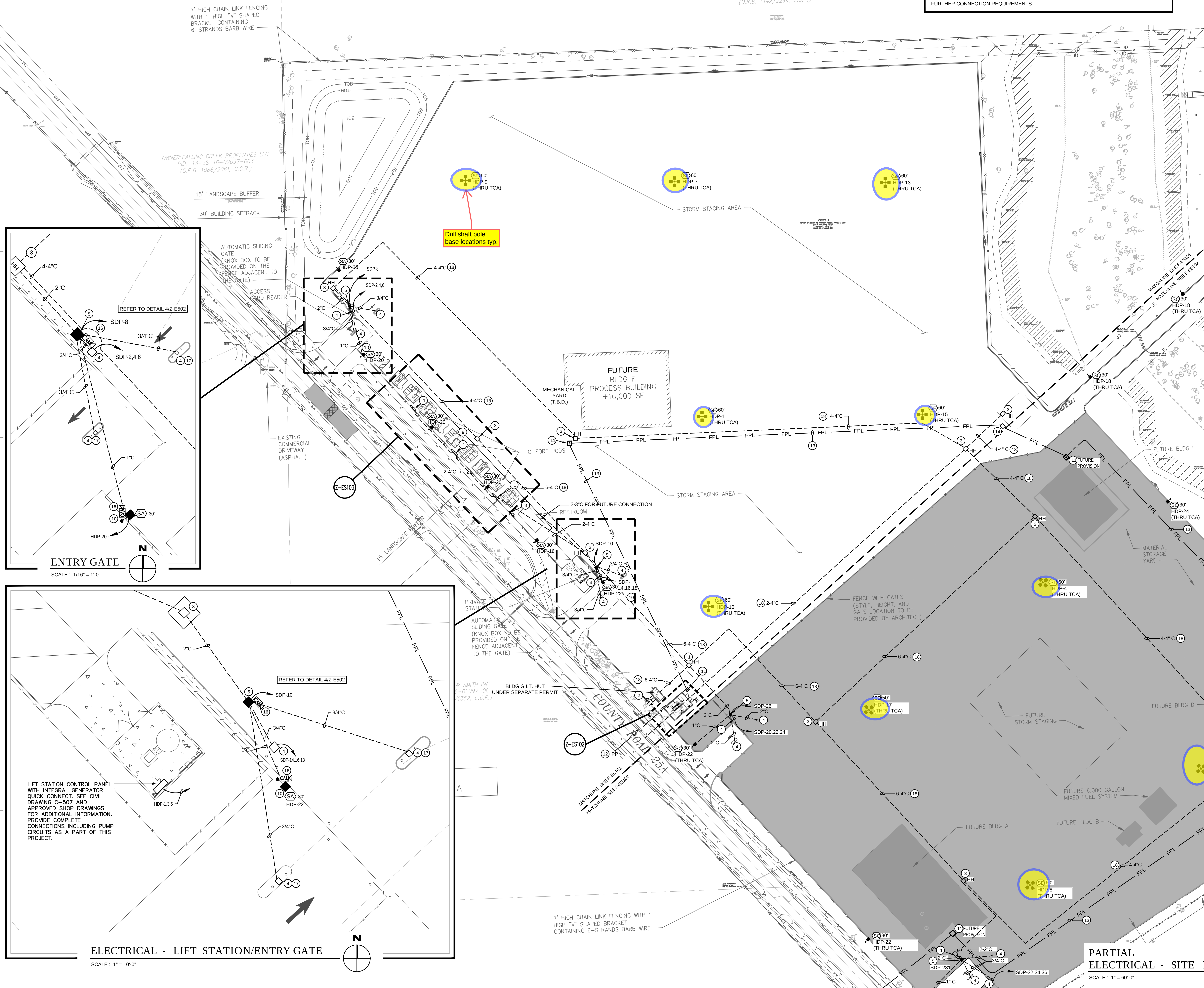
SHEET NUMBER

Z-ES101



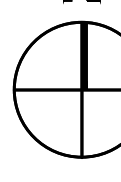
PARTIAL
ELECTRICAL - SITE PLAN

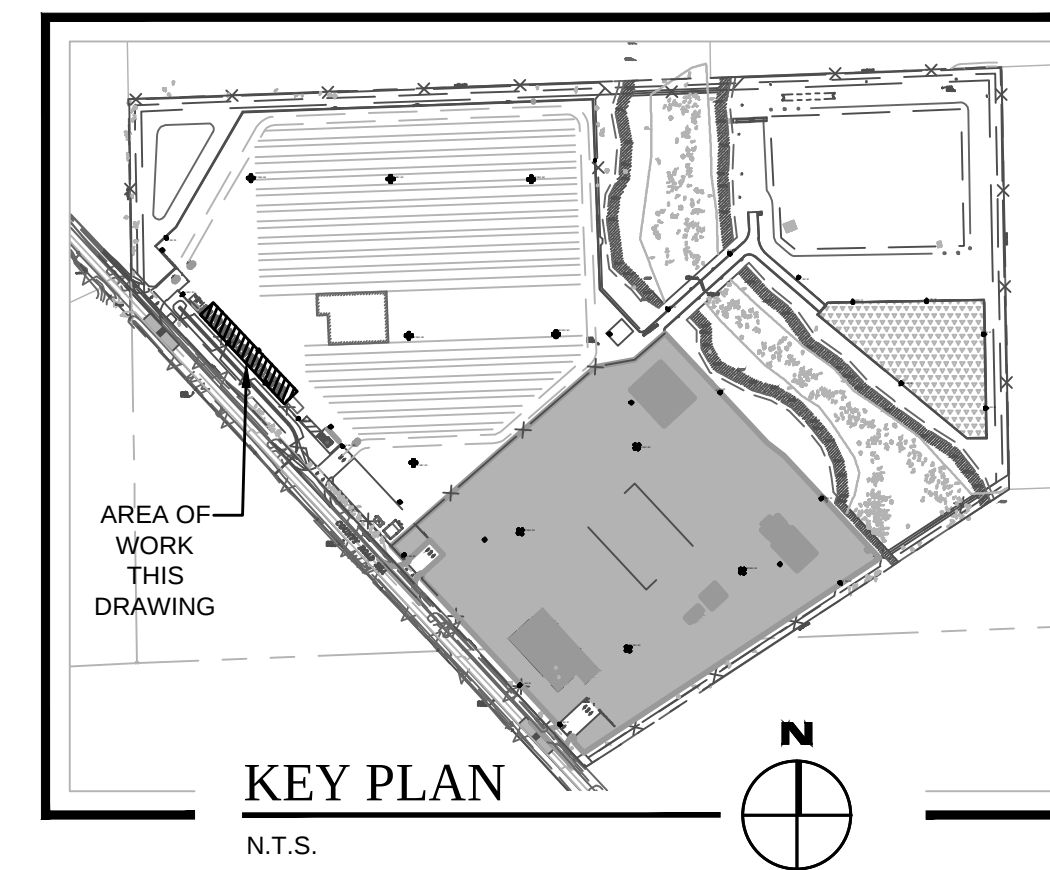
SCALE: 1" = 60'-0"



ELECTRICAL - LIFT STATION/ENTRY GATE

SCALE: 1" = 10'-0"





GENERAL NOTES THIS DRAWING

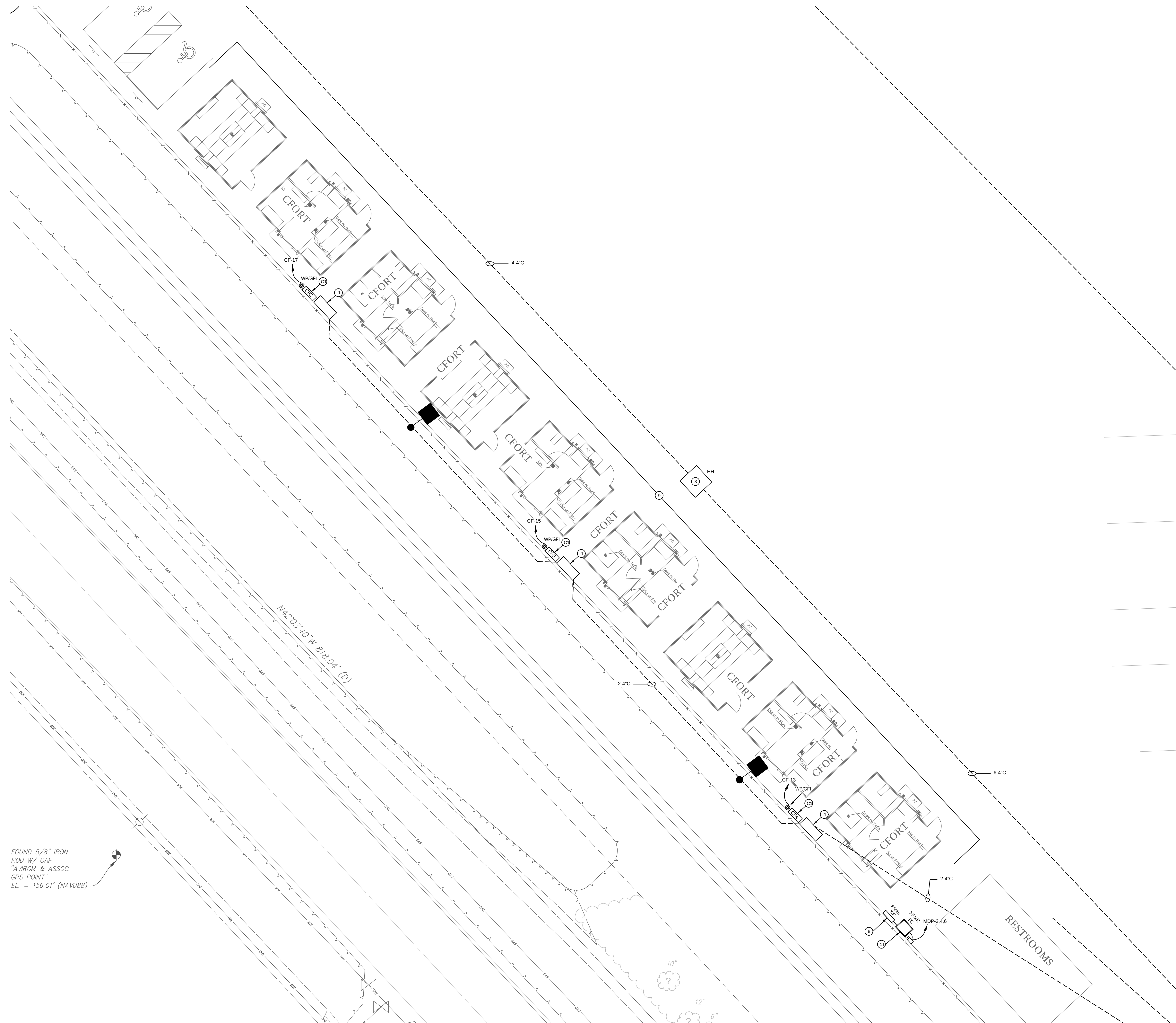
- COORDINATE ALL UNDERGROUND WORK WITH ALL OTHER TRADES AND ACTUAL FIELD CONDITIONS FOR PROPER CLEARANCES
- REFER TO FPLM STANDARDS FOR ALL PRIMARY DUCT BANK INSTALLATION REQUIREMENTS.
- PROVIDE PULL LINES IN ALL CONDUITS.
- ALL UTILITY PRIMARY CONDUIT RUNS SHOWN ON THIS SHEET SHALL BE 2" (6") CONDUITS.
- CONDUIT ROUTING SHOWN IS DIAGRAMMATICAL AND NOT NECESSARILY REPRESENTATIVE OF MOST EFFICIENT ROUTE. CONTRACTOR SHALL FIELD ADJUST ALL SITES TO BEST FIT ROUTING TO ALL UTILITIES AND STAYS OUTSIDE OF BUILDING FOOTPRINTS AS MUCH AS POSSIBLE.
- EXTERIOR LIGHT FIXTURES SHALL BE CONTROLLED BY A PHOTOCELL CONNECTED TO THE LOW VOLTAGE LIGHTING CONTROL PANEL. MOUNT PHOTOCELL ON EXTERIOR WALL 6' AFS WITH UNOBSTRUCTED VIEW FACING NORTH.
- UNLESS OTHERWISE NOTED NERVE UNDERGROUND CONDUITS SHALL BE SHOWN AND IDENTIFIED BY COLOR AND INSTALLED FIBER AND DATA CABLEING FOR SECURITY/IT EQUIPMENT. CONTRACTOR SHALL PROVIDE PULL LINES IN ALL CONDUITS. TOP OF CONDUITS SHALL BE MINIMUM 36" BELOW FINISHED GRADE.
- ALL SITE LIGHTING FIXTURES SHALL BE MOUNTED AT 30' AFS UNLESS NOTED OTHERWISE.

KEYED NOTES (X)

- 1 NEMA 4X HOFFMAN COMLINE ELECTRICAL ENCLOSURE MOUNTED TO FREESTANDING UNSTRUCT FRAME. PROVIDE POWER CIRCUIT AND CONDUITS FOR LOW VOLTAGE AS SHOWN. REFER TO DETAIL 7, 2.5002 FOR SPECIFICATIONS AND INSTALLATION REQUIREMENTS.
- 2 PROVIDE CONDUITS FOR COMMUNICATIONS SERVICE PROVIDER CABLEING TO EACH CAMERA. COORDINATE FINAL CONNECTION POINTS (NOT SHOWN) WITH SERVICE PROVIDERS PROJECT ENGINEERS PRIOR TO INSTALLATION.
- 3 HANDLE FOR COMMUNICATIONS PRIMARY LOOP. REFER TO DETAIL 3, 5.2502
- 4 GATE CARD READER, CALL BOX, PEDESTAL AND ASSOCIATED LOW VOLTAGE PROVIDED BY OWNERS SECURITY CONTRACTOR. CONTRACTOR REQUIRED TO PROVIDE POWER REQUIREMENTS FOR CARD READER AND CUBING, CONDUITS, CONCRETE PAD, GATE TRACK, GATE MOTOR, POWER DETECTOR LOOPS AND ALL OTHER ASSOCIATED CONNECTIONS WITH OWNER AND OWNERS SECURITY CONTRACTOR. REFER TO DETAIL 4, 4.2502.
- 5 1# PRECAST POLE WH/FORMAN BOX & CAMERA AT 14'0". REFER TO DETAIL 4, 2.5002 FOR SPECIFICATIONS AND INSTALLATION REQUIREMENTS
- 6 PROVIDE TWO CHARGEPOINT CT400S-GW1, 2 PORT LEVEL 2 ELECTRICAL VEHICLE CHARGING STATIONS AT THIS LOCATION. REFER TO MANUFACTURERS INSTRUCTIONS FOR SETUP AND ROUGH IN REQUIREMENTS. IN ADDITION TO PROVIDING CHARGEPOINT STATIONS PROVIDE A 1" DATA-HOMERUN FROM EACH VEHICLE TO THE IDF IN THE IT ROOM OF THE BUILDING. VERIFY
- 7 NEMA 4X HOFFMAN COMLINE ELECTRICAL ENCLOSURE MOUNTED TO SITE LIGHTING POLE AS SHOWN. REFER TO DETAIL 7, 2.5002 FOR SPECIFICATIONS AND INSTALLATION REQUIREMENTS. PROVIDE CARD READER AND CONDUITS FOR LOW VOLTAGE AS SHOWN AND AS REQUIRED BY AUDIO VISUAL SHOP. SHOP DRAWINGS REQUIRED.
- 8 PANEL MOUNTED TO FREESTANDING UNSTRUCT FRAME. TRANSFORMER TFC INSTALLED ON CONCRETE PAD.
- 9 COURT STAGING AREA. NOTE THAT COURT CONEX US ARE PROVIDED BY OWNER AND ARE NOT PART OF THIS PROJECT. PROVIDES IN THIS PROJECT ARE INCLUDED FOR POWER AND COMMUNICATIONS CONNECTIONS.
- 10 PROVIDE WIRING ACCESS FOR SECURITY CAMERAS IN ACCORDANCE WITH APPROVED SHOP DRAWINGS. PROVIDE 120V CIRCUIT TO INTERIOR MOUNTED TO THE FRAME FOR FIBER OPTIC POWER TO INTERIOR. OWNER'S CONTRACTOR RESPONSIBLE FOR REVIEWING AND COORDINATING DATE PLACEMENT WITH APPROVED AUDIO VISUAL SHOP. SHOP DRAWINGS AND SUBJECT TO OWNER'S APPROVAL.
- 11 PROPOSED UTILITY TRANSFORMER LOCATION.
- 12 UTILITY PRIMARY POLE LOCATION
- 13 PROPOSED UNDERGROUND UTILITY COMPANY TRANSFORMER PRIMARY FEEDER.
- 14 UTILITY COMPANY HANDLE FOR FUTURE PAD MOUNT TRANSFORMER TO FEED FUTURE RADIO ANTENNA SITE.
- 15 STEEL BOLLARD WITH QUAD OUTLET. REFER TO DETAIL 8, 4.5002 FOR ADDITIONAL INFORMATION
- 16 PROVIDE WIRING ACCESS FOR SECURITY CAMERAS IN ACCORDANCE WITH APPROVED SHOP DRAWINGS. PROVIDE 120V CIRCUIT TO INTERIOR MOUNTED TO THE FRAME FOR FIBER OPTIC POWER TO INTERIOR. OWNER'S CONTRACTOR RESPONSIBLE FOR REVIEWING AND COORDINATING DATE PLACEMENT WITH APPROVED AUDIO VISUAL SHOP. SHOP DRAWINGS AND SUBJECT TO OWNER'S APPROVAL.
- 17 3/4" CONDUIT TO BE PROVIDED AT EACH PEDESTAL FOR LPR LICENSE PLATE READER CAMERA.
- 18 PROVIDE 1 MAXWELL EDGE 400' C CIL INTERCONNECT WITH TWO OF THE 4' COMMUNICATIONS CONDUITS.

CFORT KEYED NOTES (X)

- C1** QUICK CONNECT BOX FOR CFORT POD CONNECTIONS. NEMA 4X, 300A MLO WITH EIGHT (3) 100A/2P OUTPUT BREAKERS FEEDING THREE SETS OF 3 WIRE PLUS GROUND E1016 400A CAM-LOK OUTPUT CONNECTORS AT BASE OF CABINET WITH CABLE ACCESS PROVISIONS. COORDINATE ALL CONNECTION DETAILS WITH OWNER'S CFORT MANAGEMENT TEAM



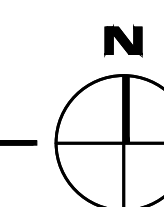
ELECTRICAL - CFORT

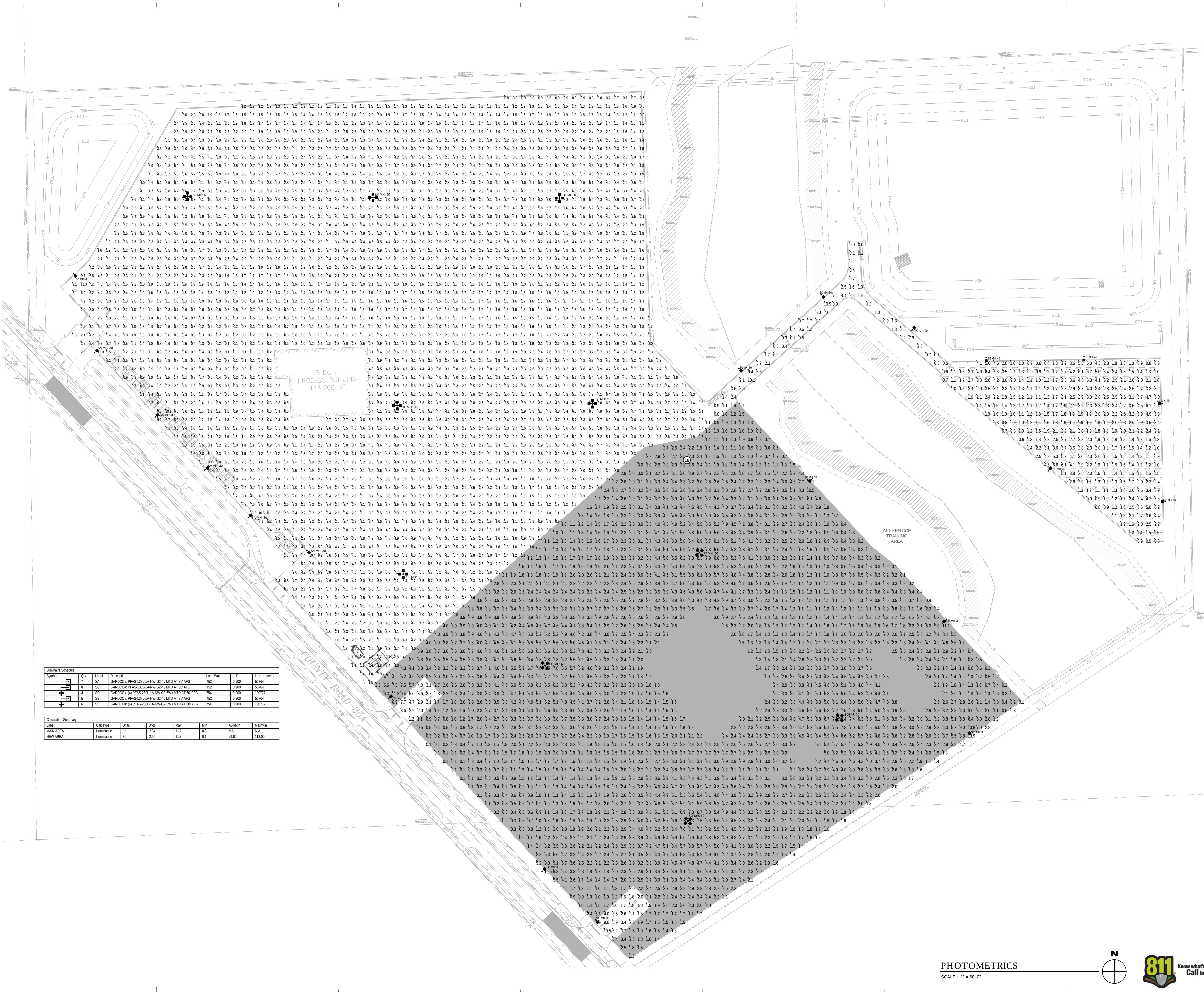
SCALE : 1" = 10'-0"



PARTIAL
ELECTRICAL - SITE PLAN

SCALE : 1" = 60'-0"

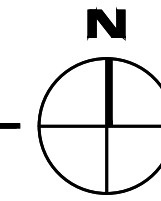




Luminaire Schedule						
Symbol	Qty	Label	Description	Lum. Wels	LLC	Lum. Lumens
	7	SA	GARDOL: PFAS-138L-1A-NW-G2-4 / MTD AT 30' AFG	452	0.900	56764
	8	SC	GARDOL: PFAS-138L-1A-NW-G2-4 / MTD AT 30' AFG	452	0.900	56764
	4	SD	GARDOL: (4) PFAS-230L-1A-NW-G2-5W / MTD AT 60' AFG	754	0.900	100777
	5	SE	GARDOL: PFAS-138L-1A-NW-G2-4 / MTD AT 30' AFG	452	0.900	56764
	6	SF	GARDOL: (6) PFAS-230L-1A-NW-G2-5W / MTD AT 60' AFG	754	0.900	100777

Calculation Summary						
Label	CalcType	Units	Avg	Max	Min	Avg/Min
MAIN AREA	Illuminance	FC	2.84	11.2	0.0	N/A
NEW AREA	Illuminance	FC	2.96	11.3	0.1	29.60

PHOTOMETRICS
SCALE: 1" = 60'-0"



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ISSUE FOR BID DOCUMENTS

ISSUE DATE 04.18.2025

REVISIONS

NO.	REASON	DATE
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PROJECT TEAM

DAVID LITTHGOW

PROJECT MANAGER

DAVID LITTHGOW

DESIGN TEAM

CEA

PROJECT NAME

FLORIDA POWER AND LIGHT STORM PROCESSING FACILITY PHASE 1 - SITE

PROJECT NO.

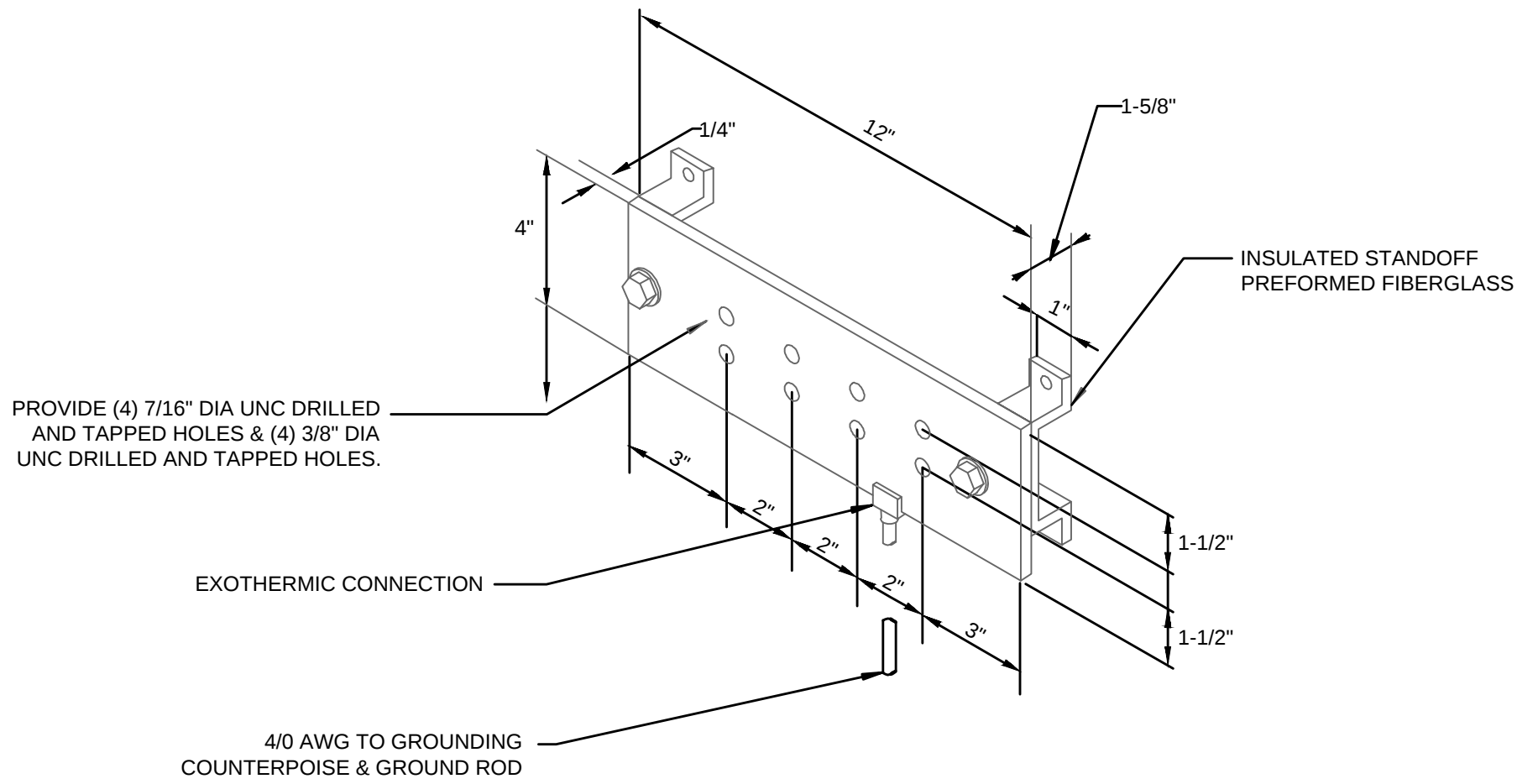
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SHEET TITLE

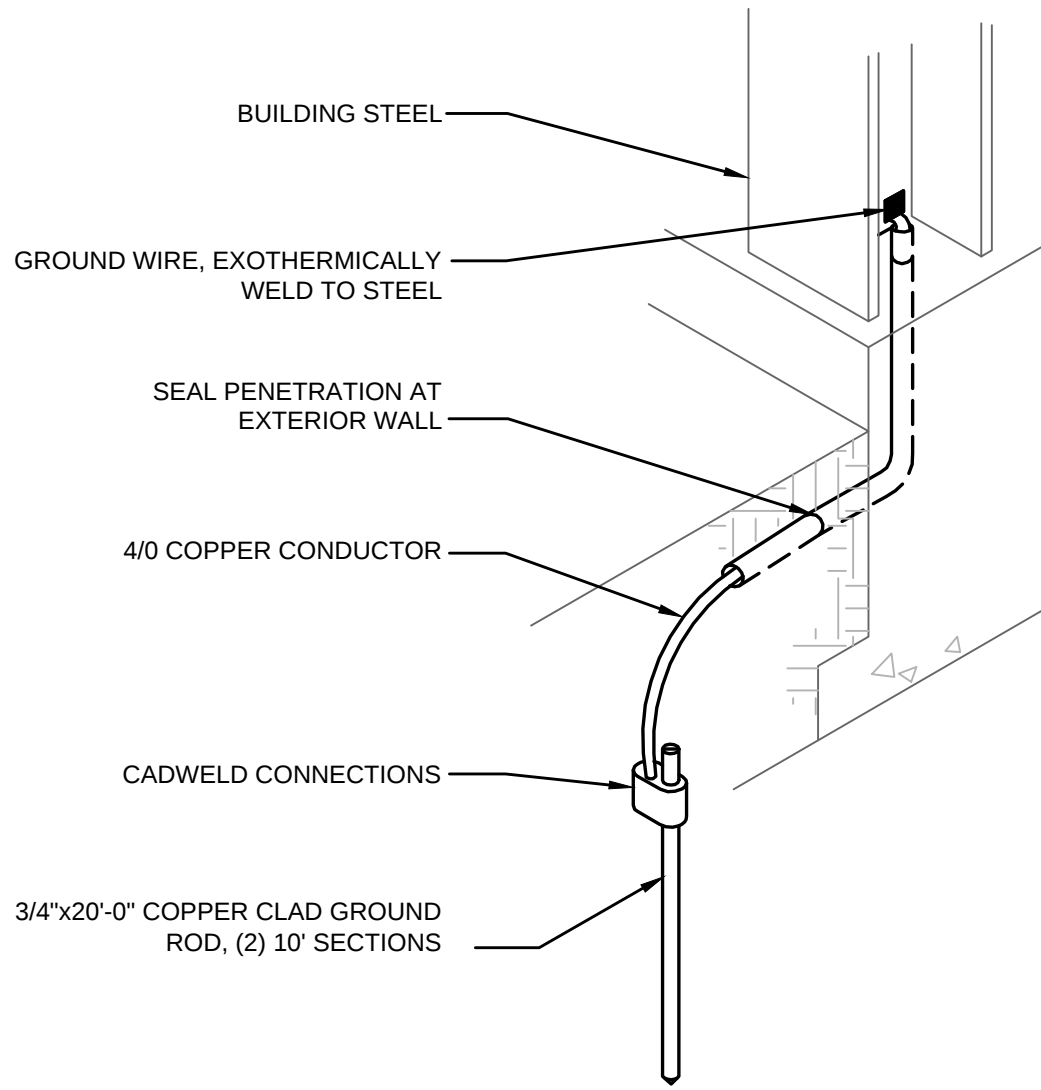
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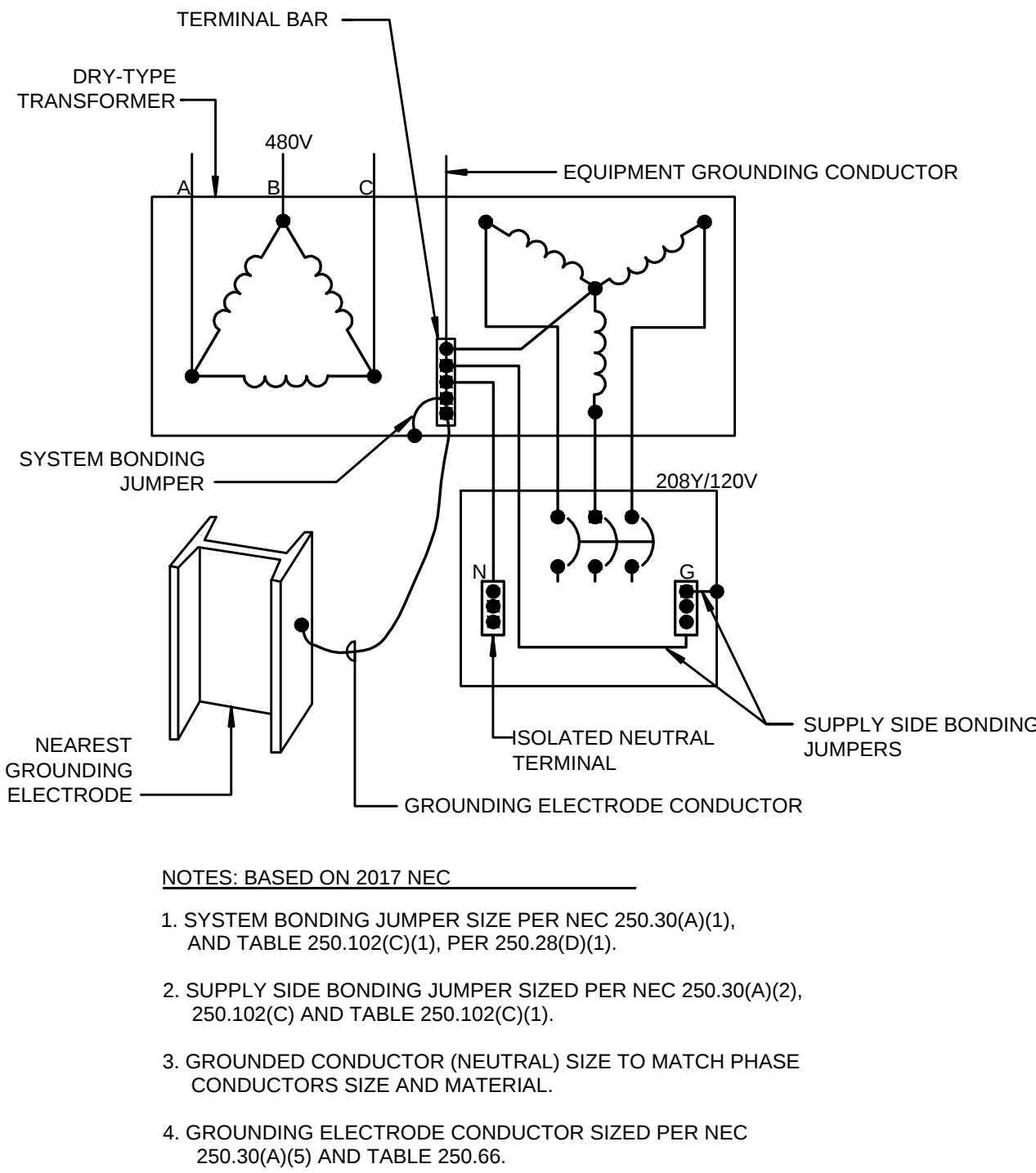
Z-ES104



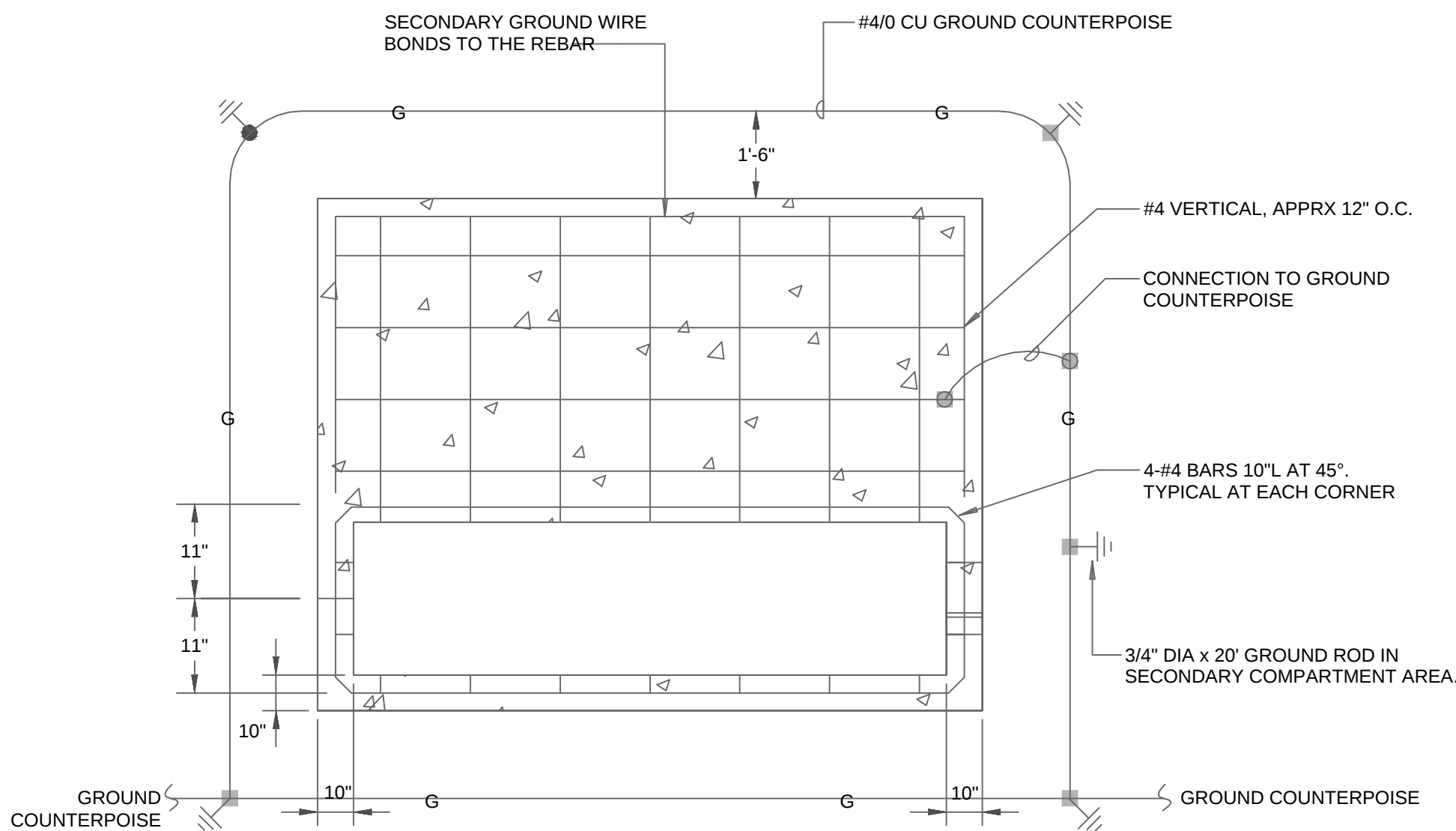
1 COPPER GROUND BAR DETAIL
Z-E501 NTS



2 BUILDING STEEL CONNECTION TO GROUND
Z-E501 NTS



3 TRANSFORMER GROUNDING DETAIL
Z-E501 NTS



5 TYPICAL TRANSFORMER PAD DETAIL
Z-E501 NTS



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PROMOTE TEAM

PRINCIPAL IN CHARGE
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PROJECT MANAGER
DAVID LITHGOW

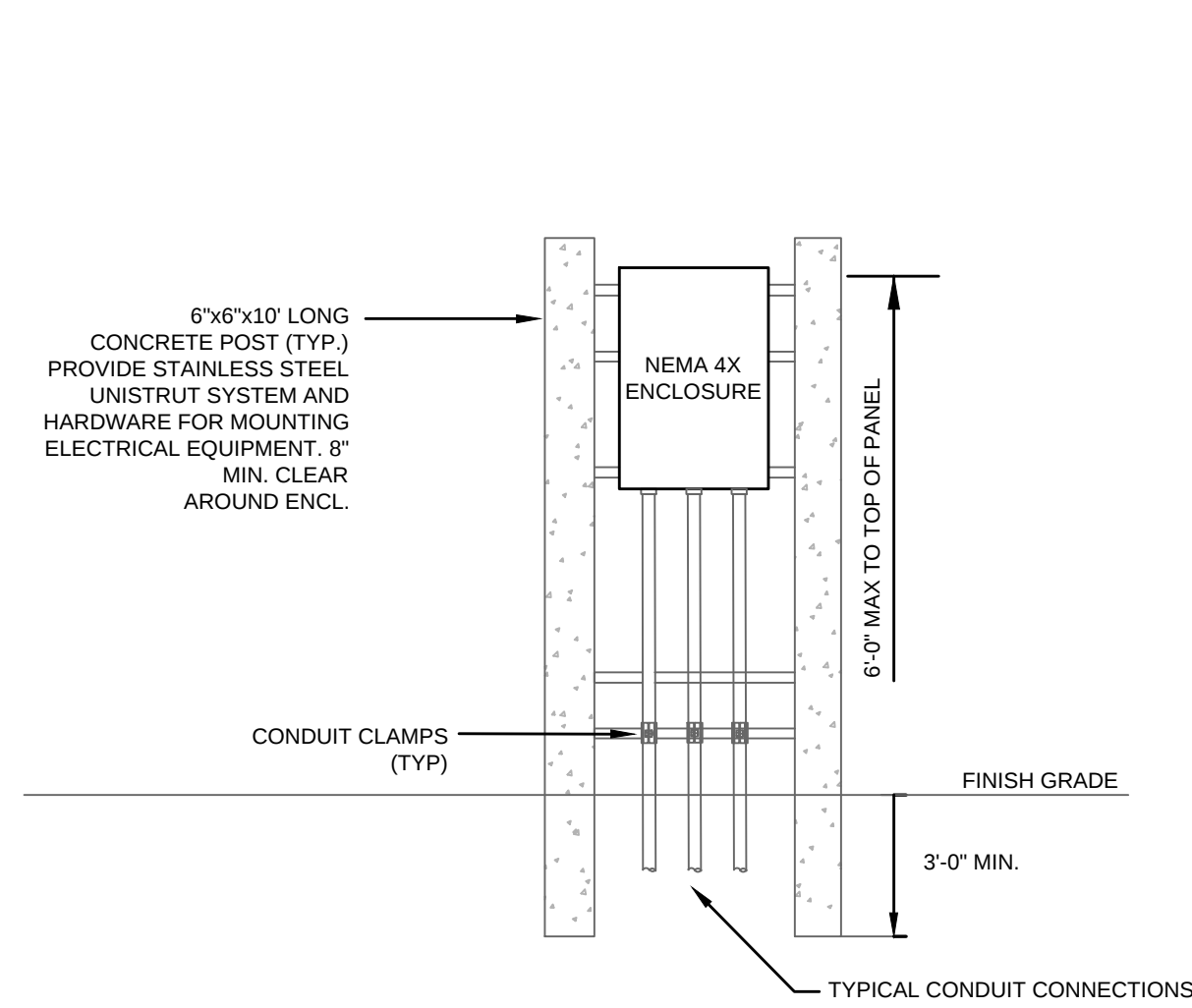
DESIGN TEAM
CEA

PROJECT NAME
FLORIDA POWER AND LIGHT
STORM PROCESSING FACILITY
PHASE 1 - SITE

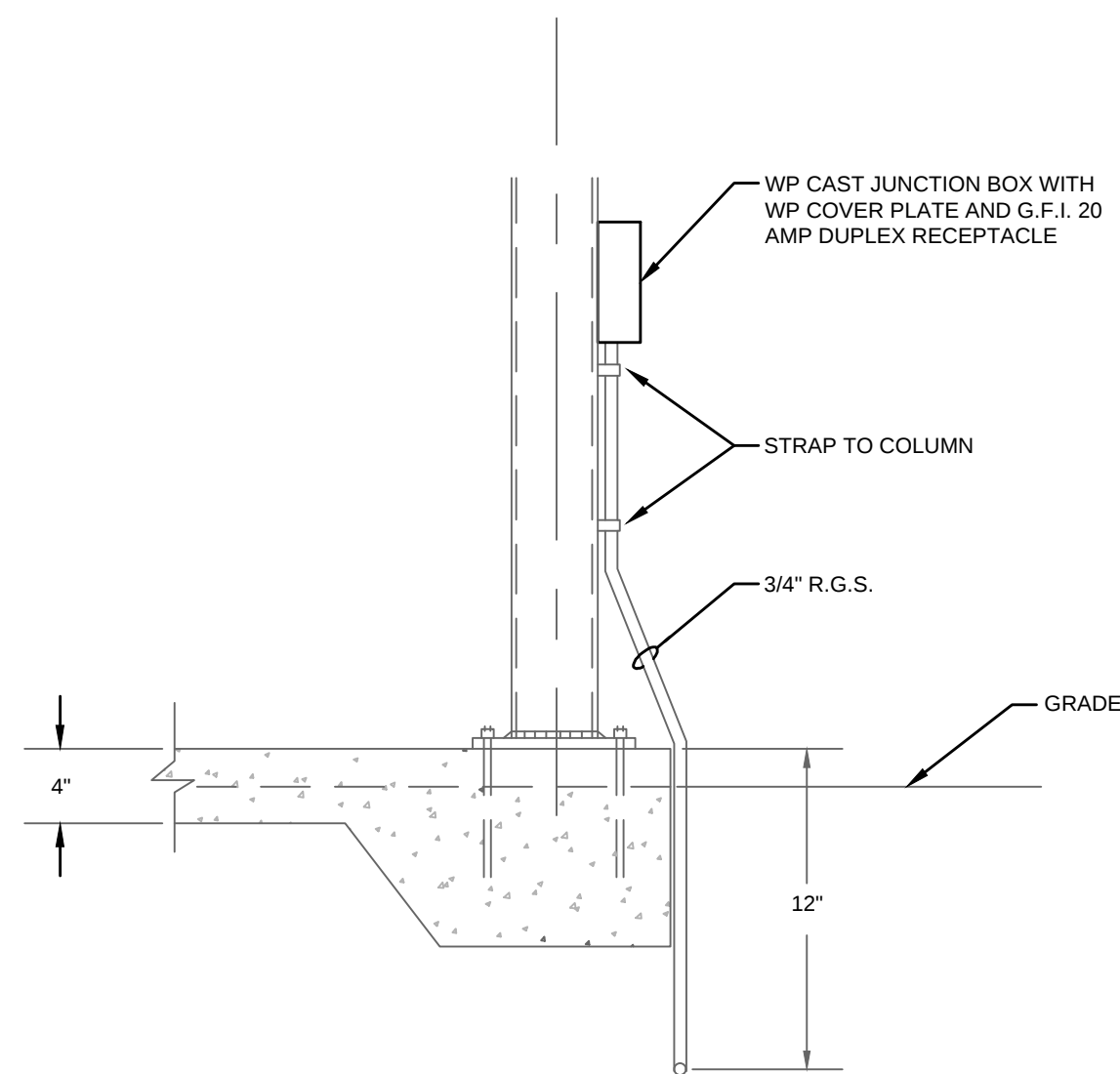
PROJECT NO.
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SHEET TITLE
DETAILS

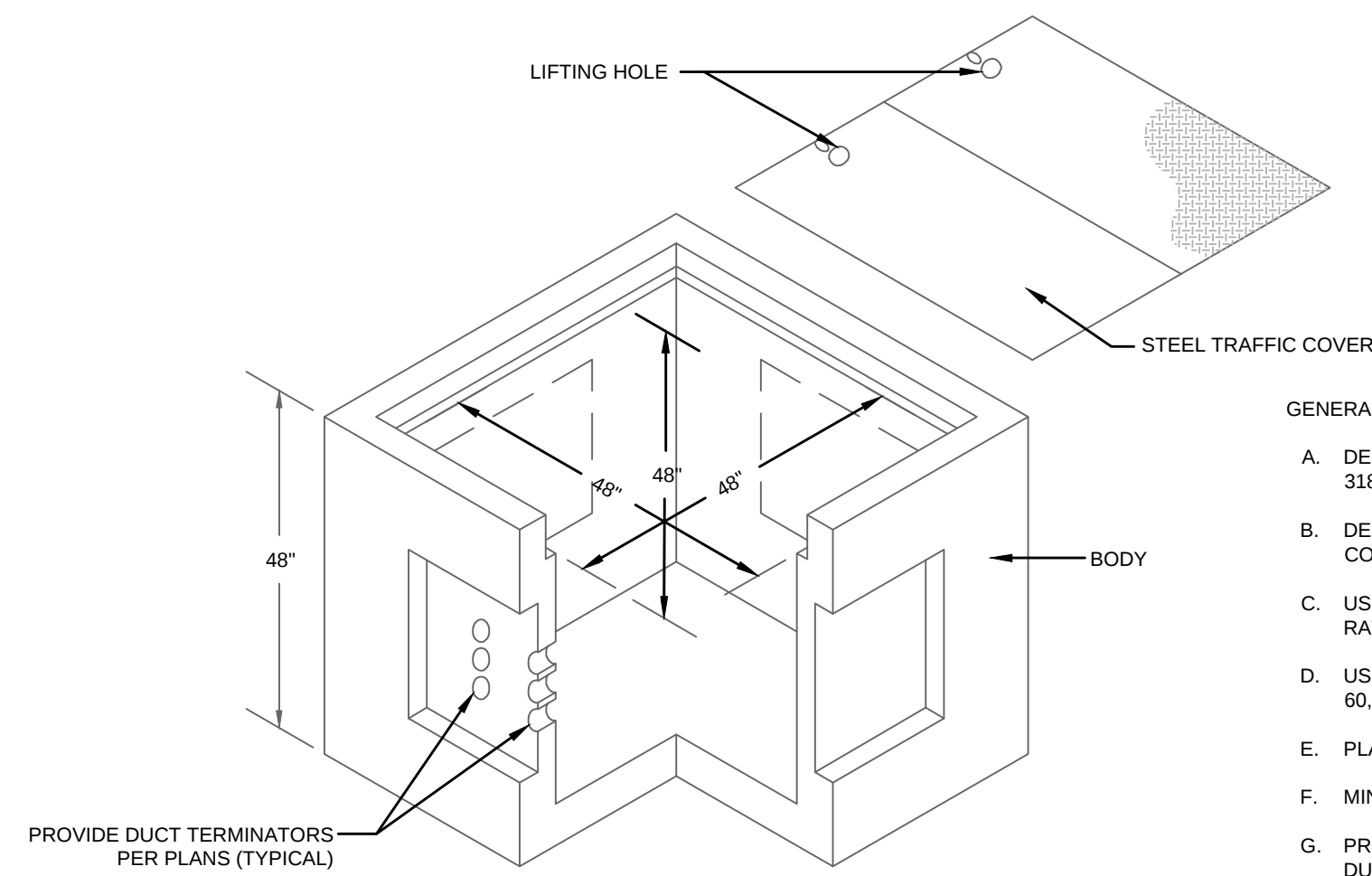
SHEET NUMBER
Z-E501



1 TYPICAL EQUIPMENT MOUNTING FRAME
Z-E502 NTS

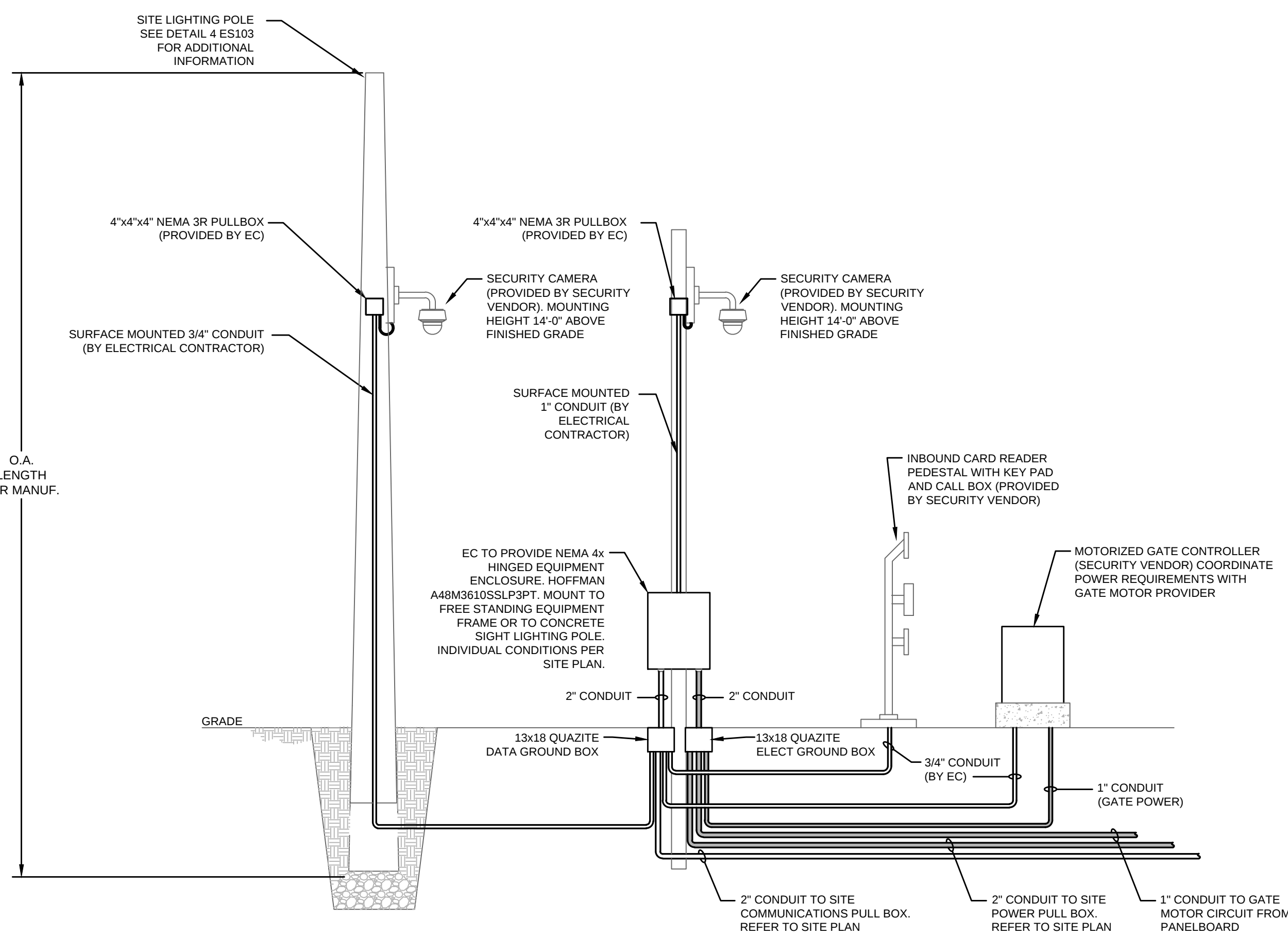


2 RECEPTACLE CONDUIT STUB-UP DETAIL
Z-E502 NTS

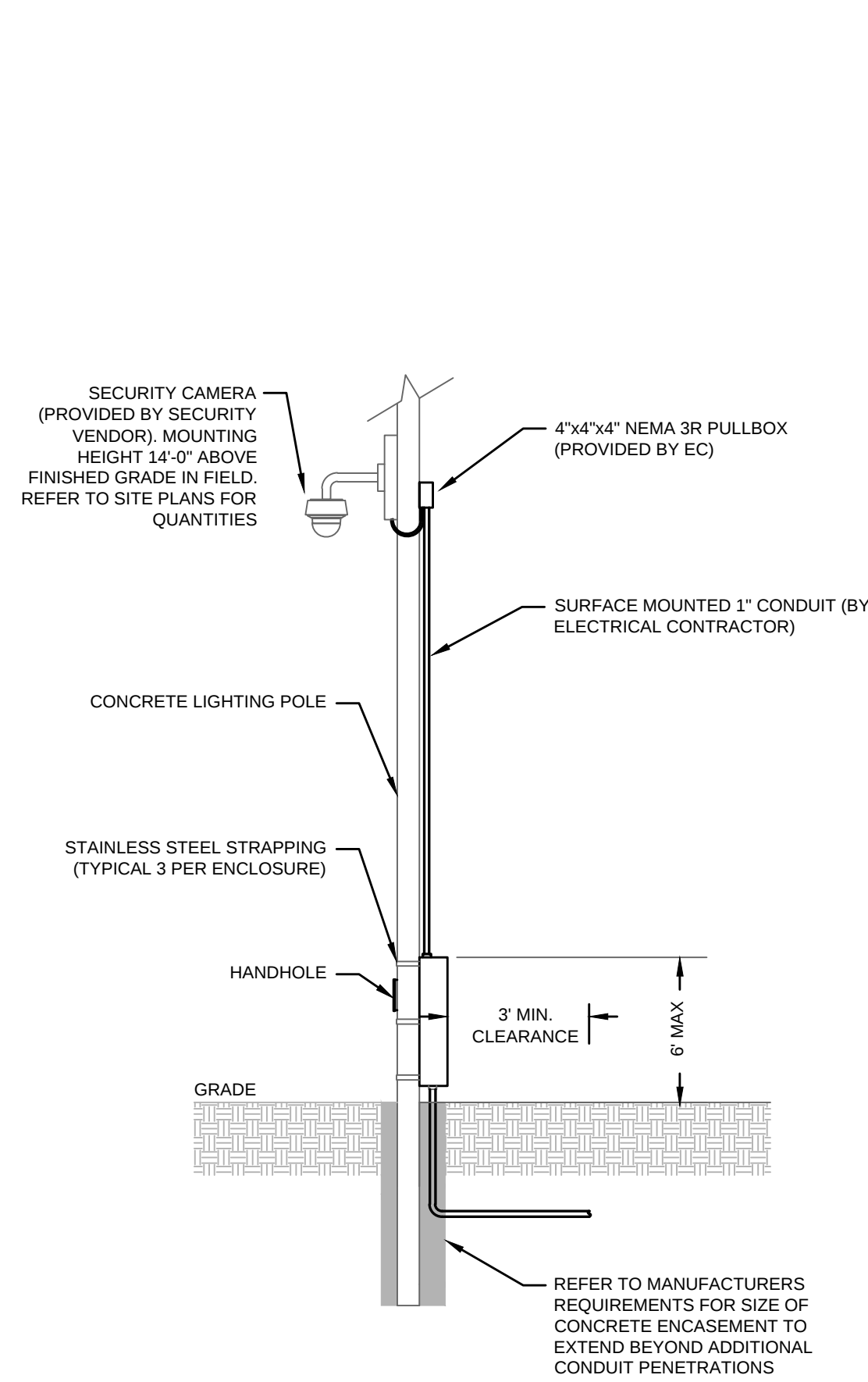


3 TYPICAL SYSTEMS PULLBOX DETAILS
Z-E502 NTS

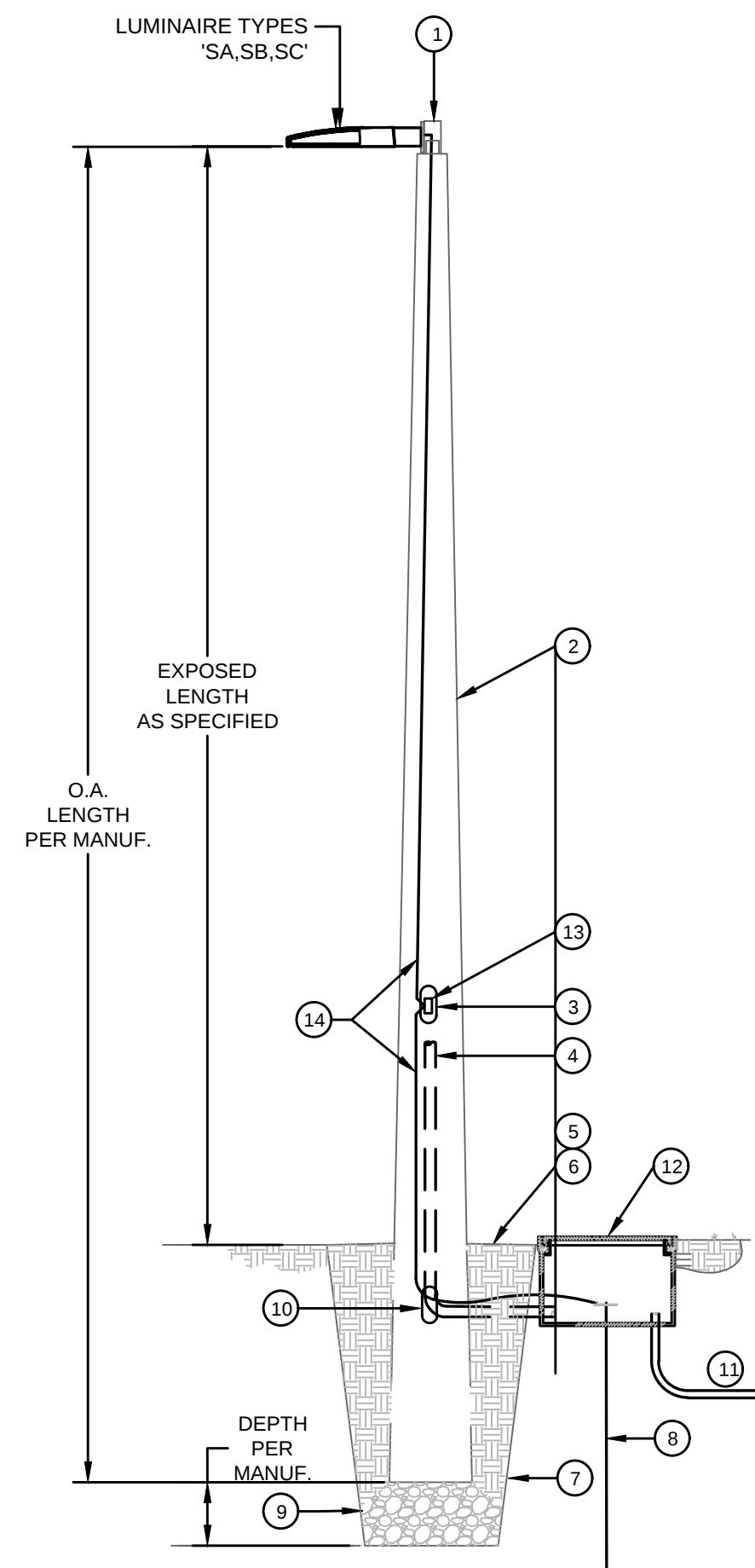
- GENERAL NOTES:
- DESIGN PULLBOX IN ACCORDANCE WITH ACI 318, AASHTO & ASYM C857.
 - DESIGN CONCRETE STRUCTURE AND STEEL COVER FOR HS-20-44 LOADING.
 - USE CONCRETE HAVING 5500 psi COMPRESSIVE RATING AT 28 DAYS.
 - USE ASTM A-615 REINFORCING STEEL WITH 60,000psi YIELD STRENGTH.
 - PLACE HANHOLE ON 6" MIN. GRAVEL BASE.
 - MIN. EXCAVATION 6'-0"x6'-0"x4'-6" DEPTH
 - PROVIDE PULL EYES ON WALLS OPPOSITE ALL DUCT ENTRIES.
 - PROVIDE INSERTS FOR TWO CABLE RACKS ON EACH WALL. LOCATE INSERTS TO CLEAR DUCT ENTRIES.



4 TYPICAL SITE EQUIPMENT ENCLOSURE DETAIL
Z-E502 NTS



5 TYPICAL SITE EQUIPMENT ENCLOSURE MOUNTED TO SITE LIGHTING POLE
Z-E502 NTS

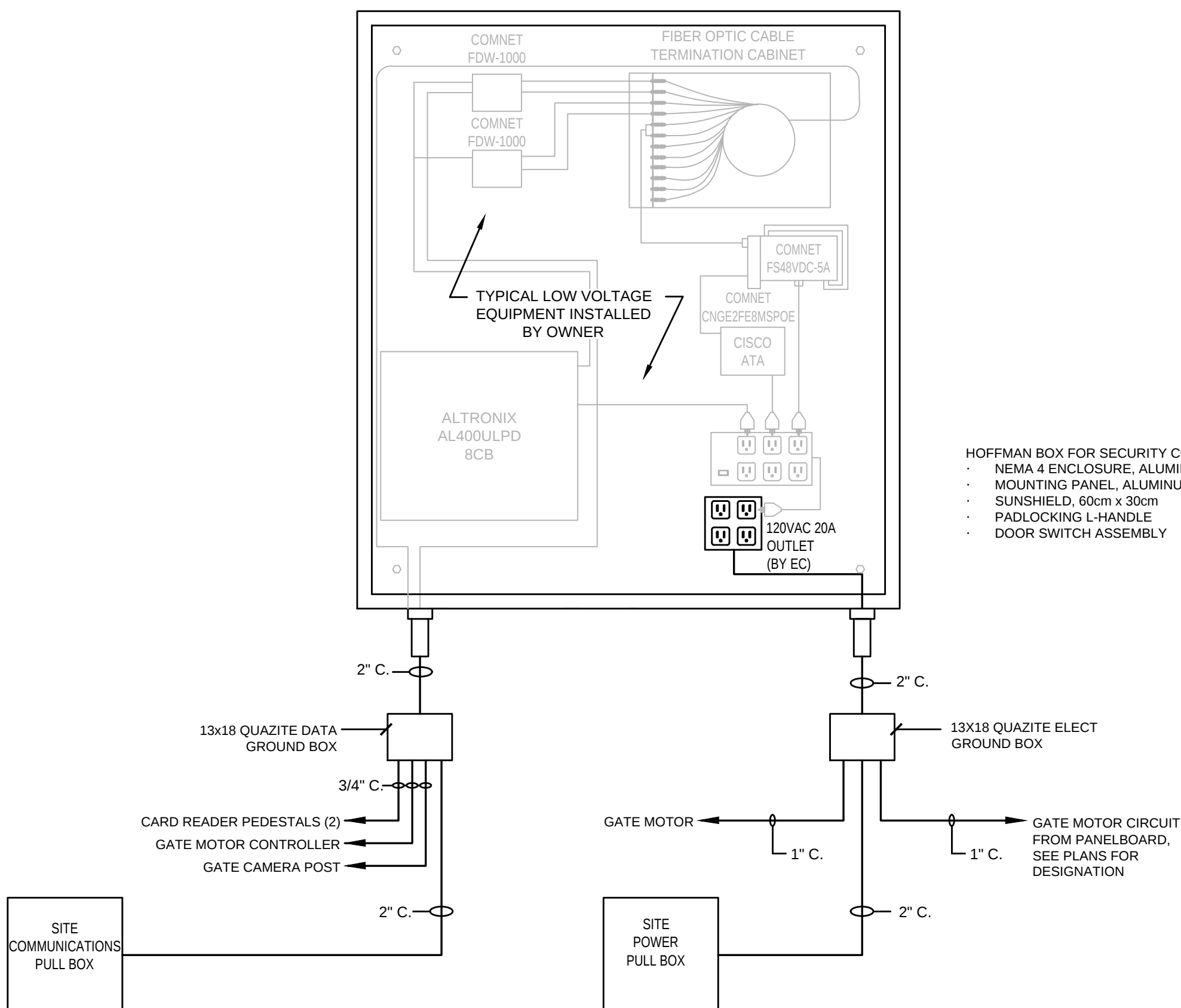


6 DIRECT BURIAL CONCRETE POLE INSTALLATION
Z-E502 NTS

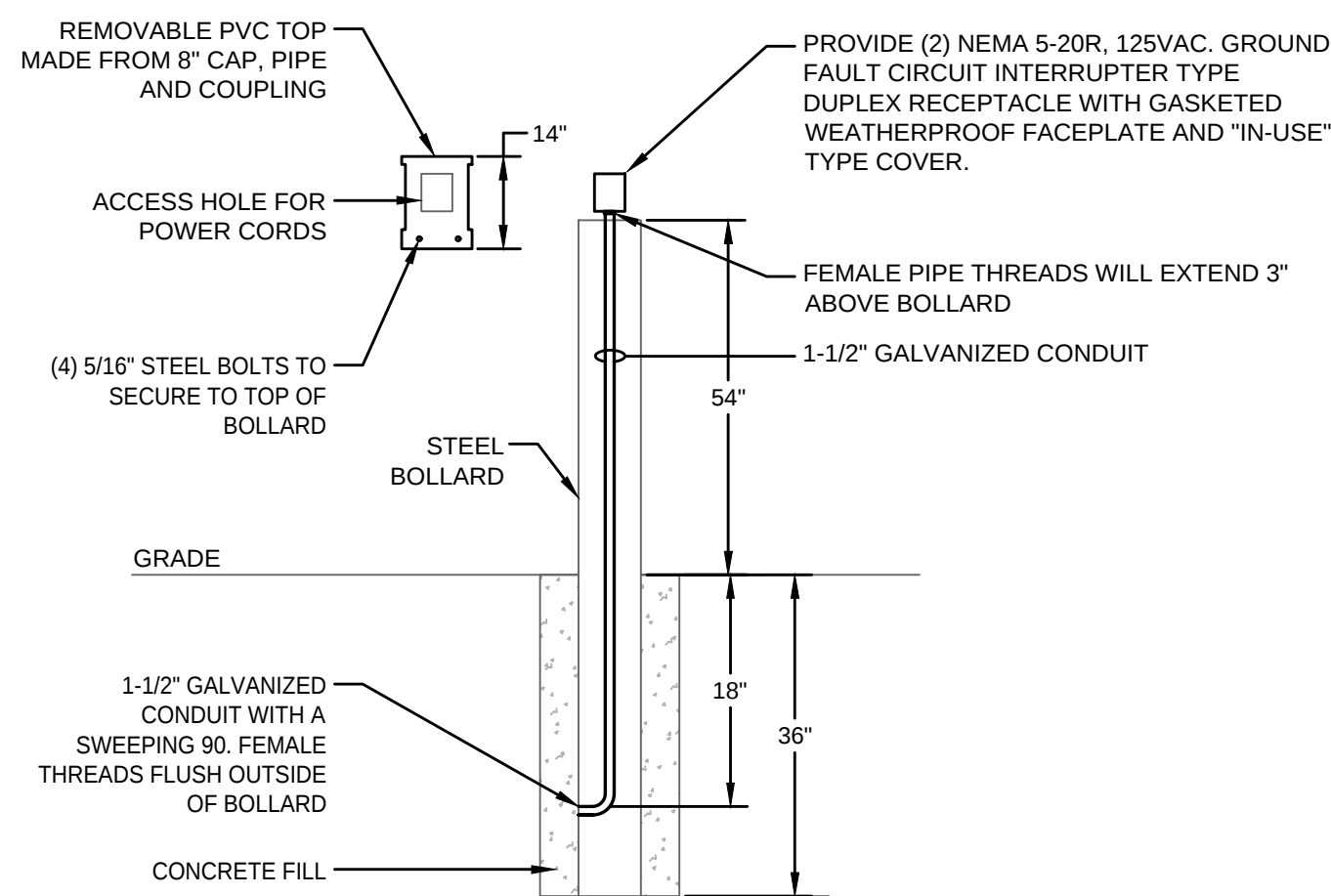
- GENERAL POLE NOTES:
- PROVIDE SHOP DRAWINGS AND CALCULATIONS FOR ALL EXTERIOR POLE MOUNTED FIXTURES WITH SIGNATURE AND SEAL OF REGISTERED PROFESSIONAL ENGINEER VERIFYING THAT THE FOUNDATION AND POLE FIXTURE ASSEMBLY MEETS OR EXCEEDS FLORIDA BUILDING CODE AND ANSI A88.1. THE EXTERIOR POLE MOUNTED LIGHT FIXTURE ASSEMBLIES SHALL BE CAPABLE OF WITHSTANDING WINDLOADS IN ACCORDANCE WITH ASCE 7-10. DESIGN WIND VELOCITY SHALL BE 150MPH, GUST FACTOR OF 1.2

KEYED POLE NOTES:

- 2-3/8" TENON (VERIFY) WITH PROVISION FOR WIRING, COORDINATE WITH POLE AND LUMINAIRE MANUFACTURER.
- SQUARE TAPERED CONCRETE, TYPE III LOCATE POLES AS SHOWN ON SITE PLAN.
- WIRING HANDHOLE - MINIMUM 3"x5" WITH ALUMINUM COVER AND STAINLESS STEEL SCREWS.
- TERMINATE CONDUIT INTERNALLY ADJACENT TO HANDHOLE.
- SLOPE TO SURROUNDING FINISHED GRADE.
- COMPACTED BACKFILL EQUAL TO EXISTING SURROUNDING AREA.
- CONTRACTOR SHALL AUGER HOLE AT POLE LOCATION AS NOT TO DISTURB THE SURROUNDING EARTH. AUGER HOLE TO POLE MANUFACTURER RECOMMENDED DEPTH. FILL IN HOLE WITH EARTH AND COMPACT.
- 5/8"x10" COPPERWELD GROUND ROD AND #6 BARE CU. TO FIXTURE AND SURGE SUPPRESSER.
- 12" COARSE GRAVEL SETTING BED AT BOTTOM OF AUGERED HOLE.
- MINIMUM 3"x5" CONDUIT ENTRANCE.
- CONDUIT AND WIRE FROM/TO NEXT FIXTURE
- HANDHOLE/PULLBOX PER DETAIL THIS PAGE AT EACH POLE WITH GROUND ROD WITHIN.
- PROVIDE SURGE SUPPRESSER IN EACH POLE HANDHOLE. PHASE TO GRN. JOSLYN 'SHA' SERIES WITH INDICATOR. COORDINATE VOLTAQGE, ALSO PROVIDE FUSING.
- #6 BARE CU TO FIXTURE AND SURGE SUPPRESSER.



7 TYPICAL SITE ENCLOSURE DETAIL
Z-E502 NTS



8 BOLLARD RECEPTACLE STATION DETAIL
Z-E502 NTS

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PROJECT TEAM

PRINCIPAL IN CHARGE
DAVID LITHGOW

PROJECT MANAGER
DAVID LITHGOW

DESIGN TEAM
CEA

PROJECT NAME

FLORIDA POWER AND LIGHT
STORM PROCESSING FACILITY
PHASE 1 - SITE

PROJECT NO.

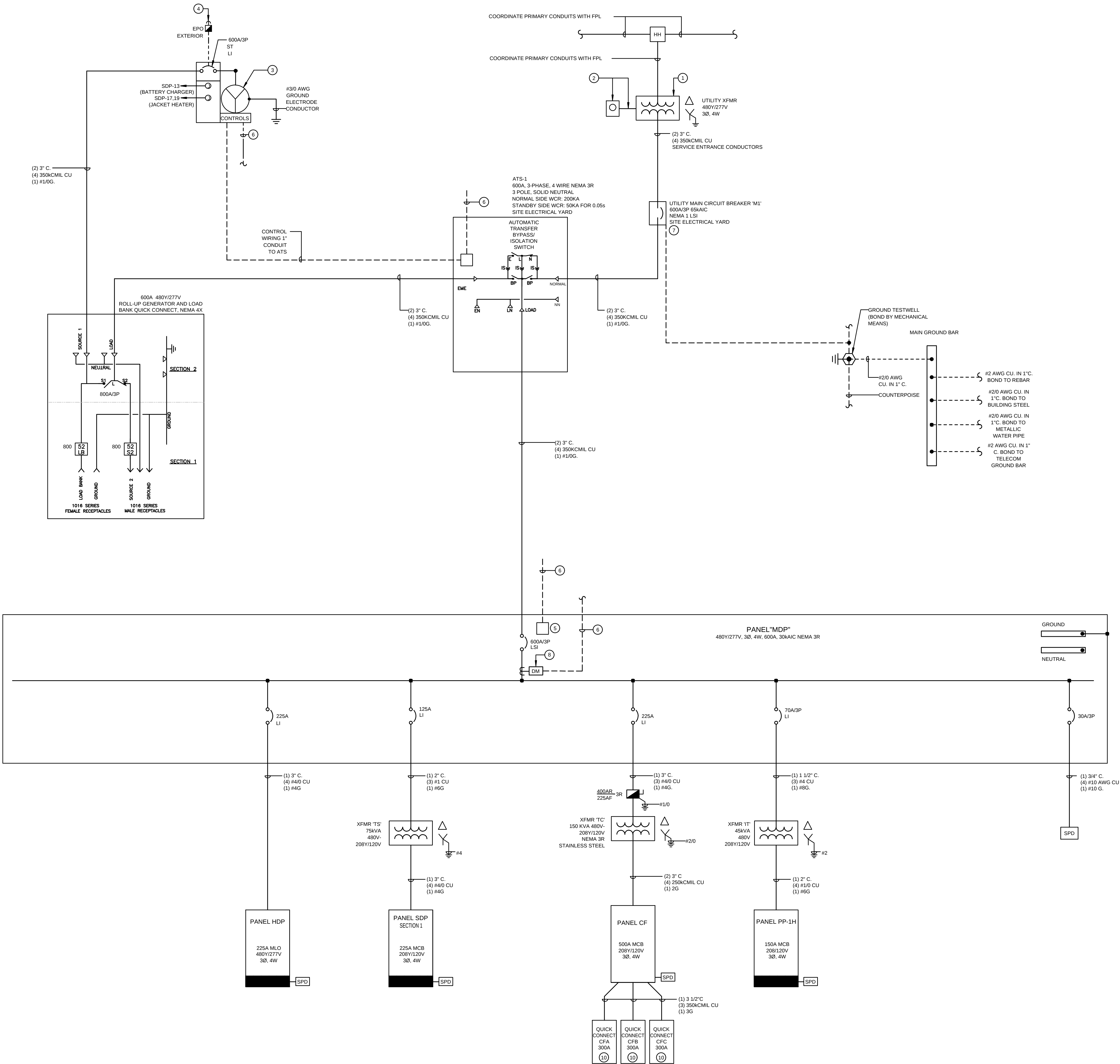
814C632801

SHEET TITLE

DETAILS

SHEET NUMBER

Z-E502



ELECTRICAL ONE-LINE DIAGRAM

GENERAL NOTES THIS DRAWING

1. PROVIDE LABELS ON MAIN SERVICE PANEL INDICATING (AT MINIMUM) MAXIMUM FAULT CURRENT, "SERVICE ENTRANCE", AND OTHER LABELS AS REQUIRED BY SPECIFICATIONS, APPLICABLE CODES, AND AHJ. LABEL ALL PANELS AS REQUIRED PER NEC AND AHJ REQUIREMENTS. INCLUDE ARC-FLASH HAZARD LABELS.
2. PROVIDE TERMINAL LUGS ON EQUIPMENT SUITABLE TO ACCOMMODATE CONDUCTOR QUANTITIES AND SIZES INDICATED.
3. OVERCURRENT PROTECTIVE DEVICE FRAMES RATED AT 250 AMP OR LARGER AT MAIN DISTRIBUTION PANEL BOARD SHALL BE 100% RATED, WITH ELECTRONIC TRIP CHARACTERISTICS, WITH ADJUSTABLE SETTINGS IN THE LONG-TIME, SHORT-TIME, AND INSTANTANEOUS TIME-CURRENT CURVE REGIONS. PROVIDE GROUND FAULT TRIP FUNCTIONALITY WHERE INDICATED.
4. REFER TO DRAWING Z-E501, DETAIL 3, FOR TYPICAL DRY TYPE TRANSFORMER GROUNDING DETAIL.
5. TRANSFORMER SECONDARY CONDUCTORS SHALL BE LIMITED TO 10'-0" MAXIMUM LENGTH PER NEC 240.21(C)(2).
6. PANELBOARD NAMEPLATE. SEE DETAIL 1, Z-E701.
7. SPD. SEE DETAIL 2, Z-E701.

KEYED NOTES (X)

1. NEW UTILITY TRANSFORMER AND PRE-FABRICATED CONCRETE PAD PROVIDED BY FPL&. CONTRACTOR SHALL INSTALL CONCRETE PAD PER FPL& STANDARDS.
2. PROVIDE 1-1/2" CONDUIT WITH PULL STRING FOR CT CABLING PROVIDED BY FPL&. PROVIDE UTILITY METER ENCLOSURE PER FPL& STANDARDS.
3. INSTALL 300kW/375kVA, 480Y/277V, 3-PHASE, 4-WIRE, EMERGENCY STAND-BY DIESEL ENGINE GENERATOR SET WITH A WEATHERPROOF ENCLOSURE CAPABLE OF WITHSTANDING CATEGORY 5 HURRICANE WINDS, CRITICAL GRADE SILENCER, AND LEVEL 2 SOUND ATTENUATED HOUSING. GENERATOR SHALL BE CLASSIFIED AS NFPA 110 LEVEL 2, TYPE 60, CLASS 72 WITH DOUBLE CONTAINMENT SUB-BASE DIESEL FUEL TANK. INSTALL AS A NON-SEPARATELY DERIVED SYSTEM.
4. PROVIDE WEATHERPROOF BUILDING SHUNT TRIP BREAK GLASS STATION. INSTALL ENGRAVED PHENOLIC SIGN WITH 1.5" HIGH WHITE LETTERS ON A RED BACKGROUND LABELED: "GENERATOR EMERGENCY STOP". MOUNT SIGN WITHIN 6" RADIUS OF DEVICE.
5. PROVIDE CUSTOMER METERING ON THE LOAD SIDE OF EACH MAIN DEVICE FOR MONITORING OF POWER STATUS. CONNECT VIA BACNET PROTOCOL TO BUILDING MANAGEMENT SYSTEM. MAIN BREAKER TO BE PROVIDED WITH AUXILIARY CONTACTS AND BACNET PROTOCOL OUTPUT TO REPORT BREAKER STATUS TO BMS AND OFF-SITE REMOTE MONITORING SYSTEM. FULLY COORDINATE REQUIRED COMPONENTS AND WIRING WITH CONTROLS VENDOR PRIOR TO BIDS TO ENSURE A COMPLETE FUNCTIONING SYSTEM IS INCLUDED.
6. PROVIDE 3/4" C. WITH CONTROL/COMMUNICATIONS WIRING AS REQUIRED TO THE BUILDING MANAGEMENT SYSTEMS MAIN CONTROLLER. COORDINATE WITH MECHANICAL CONTRACTOR FOR LOCATION OF CONTROLLER.
7. THE NEUTRAL CONDUCTOR IS BONDED TO GROUND AT THIS LOCATION IN COMPLIANCE WITH NEC 250.24(A). DO NOT BOND NEUTRAL TO GROUND BUSBARS INSIDE ELECTRICAL EQUIPMENT BEYOND THIS POINT.
8. FACTORY INSTALLED DIGITAL POWER METER, BASIS OF DESIGN: SCHNEIDER ELECTRIC MODEL #PM5330.
9. FACTORY INSTALLED INTEGRAL SURGE PROTECTION. PROVIDE CIRCUIT BREAKER AS RECOMMENDED BY SURGE PROTECTIVE DEVICE MANUFACTURER.
10. QUICK CONNECT BOX FOR CFORT POD CONNECTIONS. NEMA 4X, 300A MLO WITH THREE (3) 100A/2P OUTPUT BREAKERS FEEDING THREE SETS OF 3 WIRE PLUS GROUND E1016 CAM-LOK OUTPUT CONNECTORS AT BASE OF CABINET WITH CABLE ACCESS PROVISIONS. COORDINATE ALL CONNECTION DETAILS WITH OWNER'S CFORT MANAGEMENT TEAM. SEE Z-003 FOR ADDITIONAL INFORMATION.

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FLORIDA POWER AND LIGHT
STORM PROCESSING FACILITY
PHASE 1 - SITE

PROJECT NO.
814C632801

SHEET TITLE
ONE LINE DIAGRAM

SHEET NUMBER
Z-E601

