

CITY OF DAYTONA BEACH

BETHUNE POINT WATER RECLAMATION FACILITY

GENERATOR REPLACEMENT

201 E. PINE STREET, SUITE 1000
 ORLANDO, FLORIDA 32801
 PHONE: (407) 839-3955 FAX: (407) 839-3790



ENGINEERING BUSINESS NO. 2429 www.tetratech.com



THE CITY OF DAYTONA BEACH
 UTILITIES DEPARTMENT
 ENGINEERING DIVISION

CITY MANAGER
 JAMES V. CHISHOLM

DIRECTOR OF UTILITIES
 SHANNON PONITZ



PROJECT LOCATION:
 1 SHADY PLACE
 DAYTONA BEACH, FL 32114

CLIENT INFORMATION:
 CITY OF DAYTONA BEACH
 125 BASIN ST, SUITE 131
 DAYTONA BEACH, FL 32114

Tt PROJECT No.:
 200-26561-18002

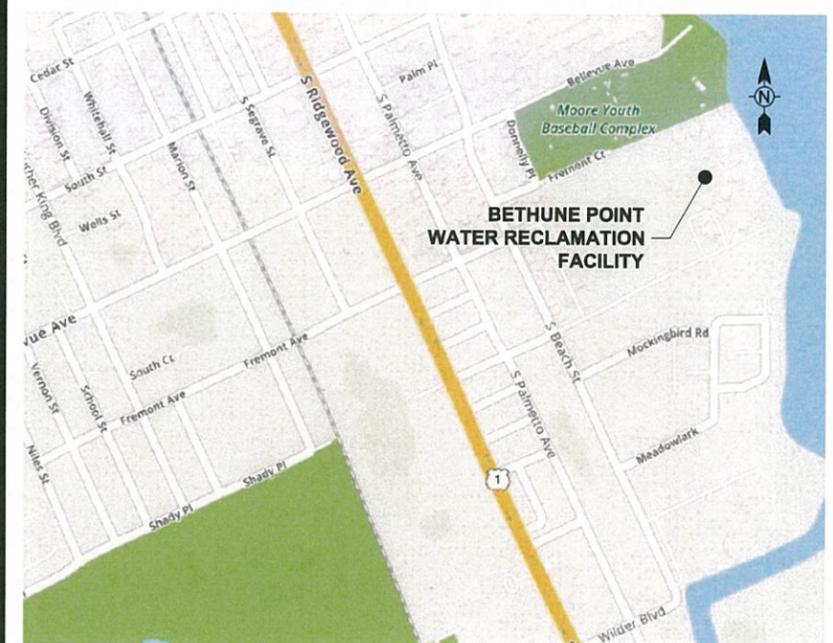
PROJECT DESCRIPTION / NOTES:

UPGRADE STANDBY POWER SYSTEM TO PROVIDE ADEQUATE CAPACITY TO OPERATE A 6.5 MGD PROCESS TRAIN. PROVIDE AN AUTOMATIC, SAFE MEANS OF SWITCHING BETWEEN UTILITY AND STANDBY POWER SOURCES. THE PLANT MUST REMAIN OPERATIONAL DURING ANY ELECTRICAL UPDATES.

ISSUED:

ISSUED FOR BID - DECEMBER 2019

VICINITY MAP:

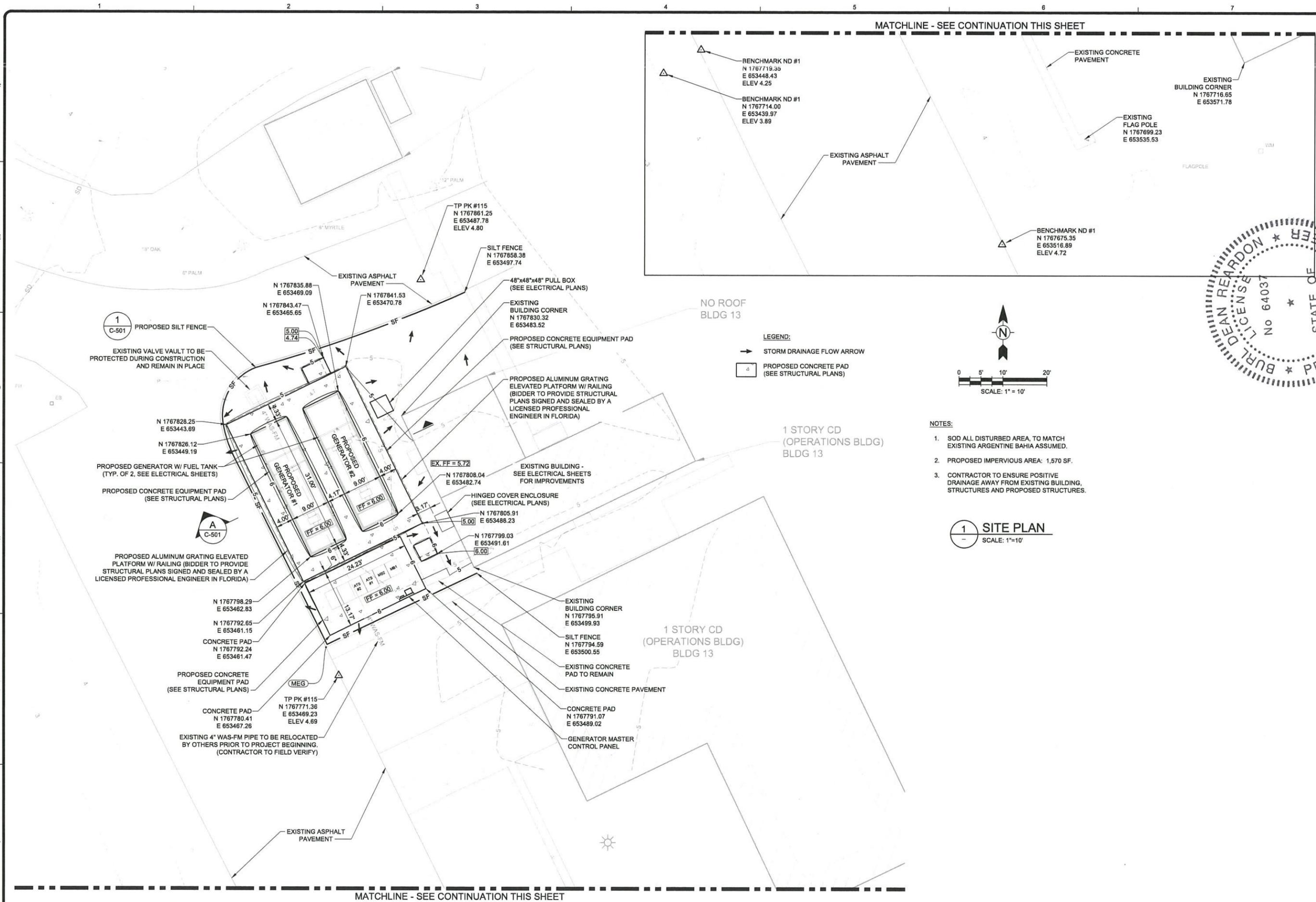


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GENERAL NOTES

- IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT LOCATION, DEPTH AND CHARACTER OF ALL UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE OWNER AS LISTED BELOW AND FIELD VERIFY LOCATIONS AND ELEVATIONS OF UTILITIES AT LEAST THREE (3) BUSINESS DAYS IN ADVANCE OF WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE CAUSED BY HIS OPERATIONS.
- EXISTING UTILITIES AS SHOWN ARE APPROXIMATE LOCATIONS AND WERE BASED ON RECORD DRAWINGS AND HAVE NOT BEEN FIELD VERIFIED. THE EXISTING UTILITIES SHOWN SHALL NOT BE CONSTRUED AS BEING ALL INCLUSIVE OF UTILITIES IN THE AREA. ANY INTERRUPTION OF SERVICE SHALL BE COORDINATED WITH THE OWNER OF THE UTILITY.
- ALL PIPING SHALL HAVE 3 FEET MINIMUM COVER UNLESS OTHERWISE NOTED. CONTRACTOR SHALL PROVIDE PROPER GRADE ELEVATIONS AND ALIGNMENTS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROJECT COMPLYING WITH APPLICABLE STATE WATER QUALITY STANDARDS DURING CONSTRUCTION AS SPECIFIED IN THE PERMITS. ALL WATER AND WIND EROSION SHALL BE MINIMIZED AS DEFINED IN THE SPECIFICATIONS AND PERMITS. THE SPECIFICATIONS PROVIDE ONLY A MINIMUM REQUIREMENT FOR EROSION AND SEDIMENTATION CONTROL. IT IS THE CONTRACTOR'S RESPONSIBILITY TO IMPLEMENT CONTROL MEASURES NOT SHOWN IN SPECIFICATIONS. ALL COSTS ASSOCIATED WITH TURBIDITY CONTROL AND SEDIMENT STABILIZATION SHALL BE BORNE BY THE CONTRACTOR.

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BURL DEAN REARDON
 LICENSE No. 64037
 STATE OF FLORIDA
 PROFESSIONAL ENGINEER
 1/21/20

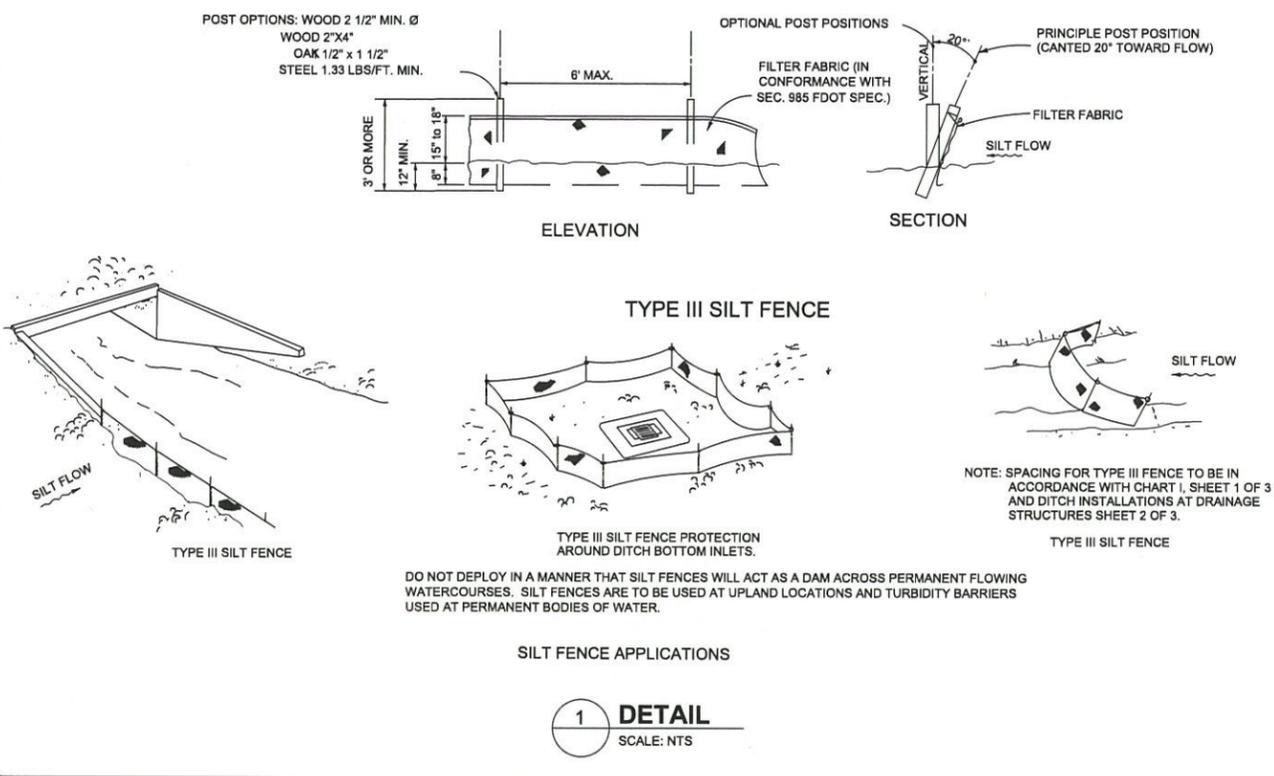
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CITY OF DAYTONA BEACH
 BETHUNE POINT WATER RECLAMATION FACILITY - GENERATOR REPLACEMENT
GEOMETRY AND GRADING PLAN

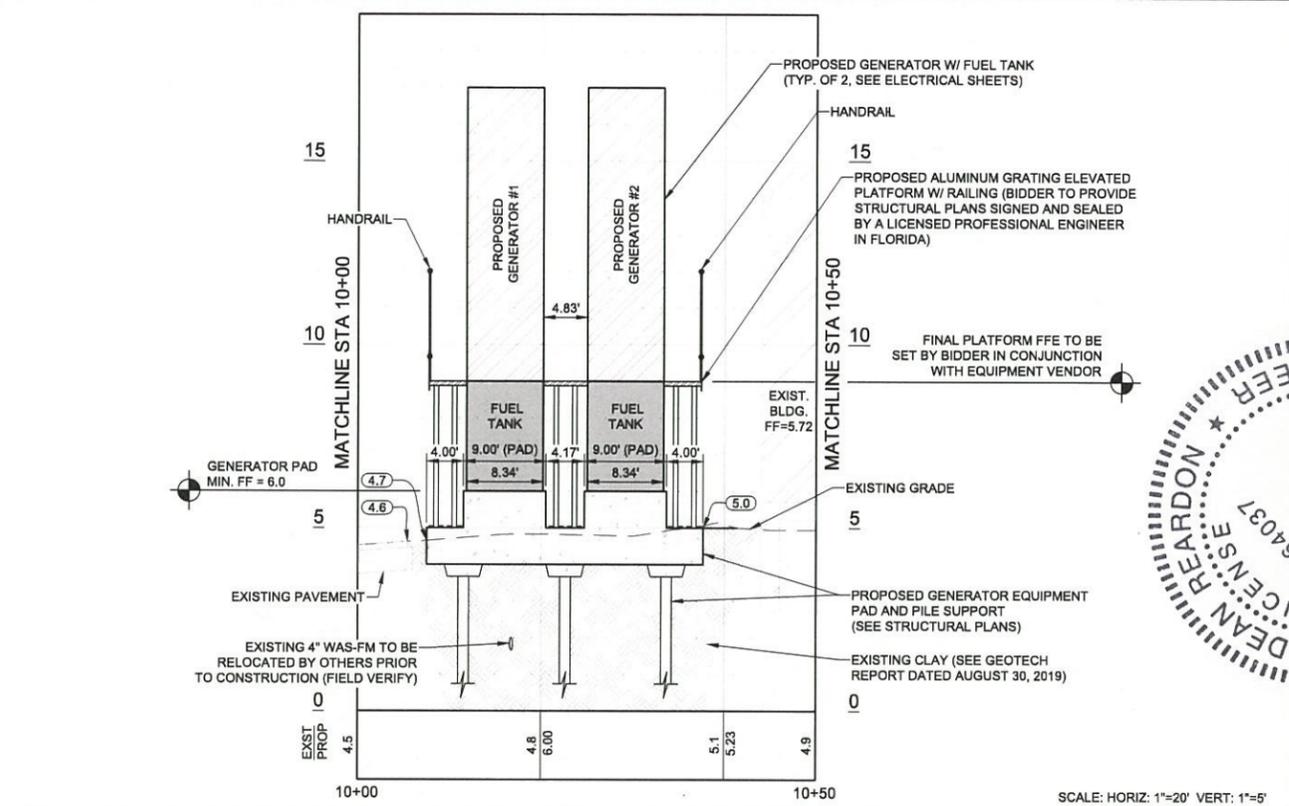
Project No.: 200-26561-18002
 Designed By: BDR
 Drawn By: RLM
 Checked By:

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SILT FENCE - TYPE III (PER FDOT STANDARD INDEX NO. 102)



DESIGN CONCEPT SECTION "A-A" AT PROPOSED GENERATOR



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DEAN BEARDON, P.E.
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Orlando, Florida 32801
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DATE: 12/12/20

MARK	DATE	DESCRIPTION

CITY OF DAYTONA BEACH
BETHUNE POINT WATER RECLAMATION FACILITY - GENERATOR REPLACEMENT
CIVIL DETAILS

Project No.: 200-26561-18002
Designed By:
Drawn By:
Checked By:

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STRUCTURAL GENERAL NOTES

- A. THESE GENERAL NOTES PRESENT AND/OR SUMMARIZE KEY PROJECT INFORMATION FOR THE DRAWING READER'S CONVENIENCE. SEE ALSO INDIVIDUAL DRAWING NOTES AND PROJECT SPECIFICATIONS FOR FURTHER DETAILS AND REQUIREMENTS.
B. ALL REFERENCES TO REFERENCE STANDARDS HEREIN ARE TO MOST RECENT ISSUE IN EFFECT AS OF THE DATE OF THESE DOCUMENTS, UNLESS NOTED OTHERWISE IN PROJECT SPECIFICATIONS OR ON THE DRAWING
C. ALL EXISTING DIMENSIONS SHOWN WITH THE ± SYMBOL ARE APPROXIMATE AND SHALL BE FIELD VERIFIED BY THE CONTRACTOR BEFORE FABRICATION AND CONSTRUCTION.
D. DIMENSIONS MARKED WITH A "X" SHALL BE DETERMINED BY EQUIPMENT MANUFACTURER AND COORDINATE BY CONTRACTOR
E. SUBMIT SHOP DRAWINGS, PROJECT DATA AND SAMPLES AS SPECIFIED IN PROJECT SPECIFICATIONS.
F. ABBREVIATIONS

Table with 4 columns: Abbreviation, Description, Unit, and Material/Type. Includes entries for ANCHOR BOLT, ADD'L, AISC, ALUM., APPROX., ARCH., B.M., B.O., BLDG., BOT., BRG., BTWN., CCJ, CJ, CL, CLR, CMU, COL, CONC, CONST, CONT, COORD, CTR, DIA, DIM, DIST, DTL, DWG(S), DWL, EA, EF, EL / ELEV., ELEC, ENGR, EQ, EQUIP, EW, F.V., FIN, FLG, FLR, FND, FRMG, FOOT, FTG, GA, GALV, GR, GRGT, H.R., HK, HORIZ, HT, I.D., I.F., I.J., IN, L, LBS, LF, LOC, MATL, MAX, MECH, MFR, MID, MIN, MISC., MTL, N, N.T.S., NA, NO, NOM, O.C., O.D., OPNG, OPP, ORIG, PERP, PL, PLF, PRCST, PREFAB, PSF, PSI, QTY, R, RAD, REF, REINF., REQ, REQD, REV, SCHED, SF, SHT., SIM., SPA, SPEC, SQ, SS, STAG., STD, STL, STRUCT, SYM, T, T/2, TEMP, THK, TOF, TOS, TRANSV., TYP, UNO, V.I.F., VERT, W, W/O, WS, WWF, POUNDS PER SQUARE INCH, QUANTITY, RISER, RADIUS, REFERENCE, REINFORCEMENT, REQUIRE, REQUIRED, REVISION, SCHEDULE, SQUARE FOOT, SHEET, SIMILAR, SPACE, SPECIFICATIONS, SQUARE, STAINLESS STEEL, STAGGER, STANDARD, STEEL, STRUCTURE(AL), SYMMETRICAL, TREAD, TOP OF, TEMPORARY, THICKNESS, TOP OF FOOTING, TOP OF SLAB, TRANSVERSE, TYPICAL, UNLESS NOTED OTHERWISE, VERIFY IN FIELD, VERTICAL, WITH, WITHOUT, WATER STOP, WELDED WIRE FABRIC.

DESIGN CRITERIA

- A. REFERENCES:
1. ICC INTERNATIONAL BUILDING CODE, 2015 EDITION
RISK CATEGORY III IN ACCORDANCE WITH TABLE 1604.5
2. STATE BUILDING CODE: 2017 FLORIDA BUILDING CODE, 6TH ED. BUILDING CODE
3. ASCE/SEI 7-10 - MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES
B. DEAD LOADS:
GENERATOR = 74 KIPS (WET WEIGHT)
LIVE LOADS (U.N.O.):
STAIRS, WALKWAYS, OR PLATFORMS = 100 PSF
SLAB ON GRADE = 100 PSF
C. WIND LOAD:
ULTIMATE DESIGN WIND SPEED, VuIt = 150 MPH
RISK CATEGORY = III
WIND EXPOSURE CATEGORY = C
DIRECTIONALITY FACTOR, Kd = 0.85
TOPOGRAPHY = 1.0
INTERNAL PRESSURE COEFFICIENT, Gcpl = 0.0
BUILDING ENCLOSURE CLASSIFICATION = OPEN
DESIGN WIND PRESSURE = 45 PSF
D. DESIGN FLOOD ELEVATION = 4.0 FT

FOUNDATIONS

- A. SEE GEOTECHNICAL/SUBSURFACE INVESTIGATION REPORT BY ARDAMAN & ASSOCIATES, INC., DATED NOVEMBER 22, 2019: IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE WHETHER OR NOT ADDITIONAL GEOTECHNICAL INFORMATION IS REQUIRED AND TO PROVIDE SUCH INFORMATION AS THE CONTRACTOR DEEMS NECESSARY.
B. DESIGN CRITERIA:
14" DIA. AUGER-CAST PILE CAPACITY = 46 KIPS (COMPRESSION)
14" DIA. AUGER-CAST PILE CAPACITY = 23 KIPS (TENSION/UPLIFT)
C. GEOTECHNICAL ENGINEER SHALL BE RETAINED BY OWNER TO PROVIDE OBSERVATION AND TESTING SERVICES DURING THE GRADING AND FOUNDATION PHASE OF CONSTRUCTION. INSPECTION AND TESTING REPORTS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER.
D. PRIOR TO PLACING ENGINEERED FILL, THE SITE SHALL BE STRIPPED AND PROOF ROLLED. ANY SOFT SPOTS ENCOUNTERED SHALL BE REMOVED AND REPLACED WITH ENGINEERED FILL. REFER TO EARTHWORK SPECIFICATION FOR ADDITIONAL INFORMATION.

AUGER-CAST PILES

- A. AUGER-CAST PILES SHALL BE A HIGH STRENGTH MORTAR PILE (5,000 PSI MIN.) THAT IS OBTAINED BY WITH DRAWING A CONTINUOUS FLIGHT HOLLOW SHAFT AUGER IN THE GROUND TO A DEPTH AS SPECIFIED. LOWER 5 FEET OF PILE TO BE DOUBLE REAMED. PILE SIZE AND CAPACITY TO BE 14" DIA., 23 TONS, REINFORCED WITH (1) #8 CONTINUOUS BAR IN THE CENTER, ADDITIONAL REINFORCEMENT (IF ANY) AS SHOWN IN THE DRAWINGS. THE RATIO OF ACTUAL VOLUME OF GROUT PLACED IN PILE DIVIDED BY THEORETICAL VOLUME OF PILE SHALL NOT BE LESS THAN 1.2. PILE CONTRACTOR TO SUBMIT SPECIFICATIONS FOR APPROVAL PRIOR TO INSTALLATION WHICH SHALL BE OBSERVED AND CERTIFIED BY AN APPROVED TESTING LAB OF STRUCTURAL ENGINEER
B. ADJACENT PILES SHALL NOT BE PLACED UNTIL THE MORTAR IN THE PILES HAS REACHED ITS INITIAL SET IN ORDER THAT THERE WILL BE NO INTERCONNECTION BETWEEN ADJACENT PILES WHILE THE MORTAR IS IN A FLUID STATE.
C. GROUNDWATER SHOULD BE EXPECTED AND CONTROLLED BY CONTRACTOR AS REQUIRED FOR PILE INSTALLATION.
AN AS-BUILT SURVEY OF PILE LOCATIONS SHALL BE PERFORMED BY A REGISTERED LAND SURVEYOR. PILES SHALL BE LOCATED ON THE AS-BUILT DRAWINGS HORIZONTALLY AND VERTICALLY FROM THE COLUMN CENTERLINES. SUBMIT THE AS-BUILT DRAWINGS TO THE STRUCTURAL ENGINEER FOR APPROVAL.
D. ONE PILE LOAD TEST IS REQUIRED. THE TEST PILE IS TO BE LOADED TO TWICE THE DESIGN LOAD IN ACCORDANCE WITH THE STANDARD BUILDING CODE. VERIFICATION THAT THE LOAD TEST REQUIREMENTS HAVE BEEN MET SHALL BE MADE BY AN INDEPENDENT GEOTECHNICAL CONSULTANT EMPLOYED BY THE OWNER AND APPROVED BY THE ENGINEER.
E. REFER TO PILE SPECIFICATION FOR ADDITIONAL INFORMATION.

STRUCTURAL CONCRETE

- A. REFERENCES:
1. ACI 318-14 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE
2. ACI SP-66 ACI DETAILING MANUAL
3. ACI 301-16 SPECIFICATION FOR STRUCTURAL CONCRETE
4. ACI 117-10 SPECIFICATION FOR TOLERANCES FOR CONCRETE CONSTRUCTION AND MATERIALS
5. CRSI MSP-2-01 MANUAL OF STANDARD PRACTICE
6. CRSI REINFORCING BAR DETAILING
7. CRSI PLACING REINFORCING BARS
B. MATERIALS
1. STRUCTURAL CONCRETE
a) MINIMUM COMPRESSIVE STRENGTH OF PILE CAPS AND EQUIPMENT PADS AT 28 DAYS (f'c).....4000 PSI
b) ALL CONCRETE AGGREGATE SHALL COMPLY WITH ASTM C33 (NORMAL WEIGHT).
2. REINFORCEMENT
a) REINFORCING BARS: ASTM A615, GRADE 60
b) WELDED SMOOTH WIRE FABRIC - ASTM A185 (SHEETS ONLY, ROLL FABRIC NOT ALLOWED)
3. ACCESSORIES
a) BAR SUPPORTS CLASS 1, MAXIMUM PROTECTION (CRSI MANUAL OF STANDARD PRACTICE) FOR ALL SLABS AND BEAMS WITH SOFFITS EXPOSED TO VIEW
4. ANCHOR RODS
a) SHALL BE GALVANIZED, FURNISHED WITH CHAMFERED ENDS, AND SHALL MEET STRENGTH AND DUCTILITY REQUIREMENTS EQUIVALENT ASTM F1554, GR 55 WELDABLE MATERIAL.
5. MECHANICAL (TORQUE-CONTROLLED) ANCHORS
a) APPROVED SYSTEMS INCLUDE HILTI KWIK BOLT TZ (ICC ESR 1917) OR HILTI KWIK HUS-EZ (ICC ESR 3027) OR EQUAL CONSIDERING LOAD RESISTANCE. MECHANICAL ANCHORS SHALL BE APPROVED FOR USE WITH CRACKED CONCRETE PER AC 193. CURRENT ICC-ESR SHALL BE SUBMITTED. ALL PERSONNEL INSTALLING ANCHORS SHALL BE TRAINED BY THE MANUFACTURER ON PROPER INSTALLATION TECHNIQUE. TRAINING DOCUMENTATION FROM THE MANUFACTURER SHALL BE AVAILABLE ON REQUEST
6. ADHESIVE ANCHORS
a) APPROVED SYSTEMS INCLUDE HILTI HIT-RE 500 V3 (ICC ESR 3814) OR HILTI HIT-HY 200 WITH SAFESET TECHNOLOGY (ICC ESR 3187) OR EQUAL CONSIDERING LOAD RESISTANCE, IN-SERVICE AND INSTALLATION TEMPERATURE, AVAILABILITY OR COMPREHENSIVE INSTALLATION INSTRUCTIONS, AND CREEP. ADHESIVE ANCHORS SHALL BE APPROVED FOR USE WITH CRACKED CONCRETE PER AC 308. CURRENT ICC-ESR SHALL BE SUBMITTED.
b) ALL PERSONNEL INSTALLING ANCHORS SHALL BE TRAINED BY THE MANUFACTURER ON PROPER INSTALLATION TECHNIQUE. TRAINING DOCUMENTATION FROM THE MANUFACTURER SHALL BE AVAILABLE ON REQUEST.
c) HOLE SIZES AND INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS (MPII)
d) ADHESIVE FOR REBAR AND ANCHORS SHALL HAVE BEEN TESTED IN ACCORDANCE WITH ACI 355.4 AND ICC-ES AC308 FOR CRACKED CONCRETE AND SEISMIC APPLICATIONS. DESIGN ADHESIVE BOND STRENGTH HAS BEEN BASED ON ACI 355.4 TEMPERATURE CATEGORY A WITH INSTALLATIONS INTO WATER SATURATED HOLES DRILLED USING A CARBIDE DRILL BIT INTO CONCRETE THAT HAS BEEN CURED FOR AT LEAST 21 DAYS.
e) ANY ADHESIVE ANCHOR INSTALLED HORIZONTALLY OR IN A VERTICALLY INCLINED PLANE SHALL BE INSTALLED BY CERTIFIED ADHESIVE ANCHOR INSTALLER, PER ACI 318-14 17.8.2.2, AND SHALL BE INSPECTED PER ACI 318-14 17.8.2.4.
f) FILL IN ALL ABANDONED HOLES WITHIN 2" OF NEW ANCHOR LOCATIONS.
1. FREQUENCY OF PROOF LOADING BASED ON ANCHOR TYPE, DIAMETER, AND EMBEDMENT.
2. PROOF LOADS BY ANCHOR TYPE, DIAMETER, EMBEDMENT, AND LOCATION.
3. ACCEPTABLE DISPLACEMENTS AT PROOF LOAD.
4. REMEDIAL ACTION IN THE EVENT OF FAILURE TO ACHIEVE PROOF LOAD OR EXCESSIVE DISPLACEMENT.

STRUCTURAL CONCRETE

- UNLESS OTHERWISE DIRECTED BY THE ENGINEER OR DESIGN PROFESSIONAL OF RECORD, PROOF LOADS SHALL BE APPLIED AS CONFINED TENSION TESTS (4.7.2.3). PROOF LOADS LEVELS SHALL NOT EXCEED THE LESSER OF 50 PERCENT OF THE EXPECTED PEAK LOAD BASED ON ADHESIVE BOND STRENGTH OR 80 PERCENT IF THE ANCHOR YIELD STRENGTH. MAINTAIN THE PROOF LOAD AT THE REQUIRED LOAD LEVEL FOR A MINIMUM OF 10 SECONDS.
7. GROUT: HIGH STRENGTH, NON-SHRINK STRUCTURAL GROUT. SEE SPECIFICATIONS.
C. REINFORCEMENT DETAILING
1. ALL REINFORCING STEEL DETAILS SHALL BE IN ACCORDANCE WITH THE ACI CODE REQUIREMENTS (ACI 318).
2. REINFORCING STEEL PLACING DRAWINGS AND BAR LISTS SHALL CONFORM TO THE ACI OR CRSI DETAILING MANUALS. ALL BAR AND MESH SUPPORTS MUST BE CLEARLY DETAILED
3. CONCRETE COVER FOR REINFORCING SHALL BE INDICATED ON THE APPLICABLE REINFORCING STEEL SHOP DRAWINGS. HOWEVER, NO REINFORCING IN AREAS EXPOSED TO EARTH, WEATHER OR WATER SHALL HAVE COVER LESS THAN TWO INCHES.
4. SPECIFIED COVER FOR REINFORCING PER ACI 318:
FOOTINGS (BOTTOM).....3.0" (CAST AGAINST EARTH)
FOOTINGS.....2.0" (FORMED)
SLAB-ON-GRADE (WWF).....2.0" DEPTH FROM TOP OF SLAB
SLAB-ON-GRADE (REBAR).....2" FROM TOP OF SLAB (U.N.O.)
ALL OTHER STRUCTURES.....2.0" U.N.O.
5. PROVIDE CORNER BARS AT ALL WALL AND FOUNDATION CORNERS TO BE LAPPED WITH THE HORIZONTAL BARS. CORNER BARS ARE TO MATCH THE HORIZONTAL BARS IN SIZE, GRADE AND SPACING UNLESS OTHERWISE SHOWN.
6. HOOKS AND BENDS SHALL MEET ACI STANDARD UNLESS OTHERWISE INDICATED.
7. SPLICES: CONTINUOUS REINFORCING BARS SHALL BE FURNISHED WITH CLASS 'B' TENSION LAP SPLICES INCLUDING CORNER BARS, UNLESS NOTED OTHERWISE.
8. MECHANICAL SPLICES SHALL NOT BE PERMITTED UNLESS SHOWN ON THE DRAWINGS OR APPROVED BY THE ENGINEER
9. REINFORCING STEEL FABRICATION AND PLACEMENT SHALL BE IN ACCORDANCE WITH CRSI MANUAL OF STANDARD PRACTICE AND CRSI PLACING REINFORCING BARS (LATEST EDITIONS).
10. REINFORCING STEEL IN FOOTINGS SHALL BE ASSEMBLED IN MAT GRILLES EQUALLY SPACED AND SECURELY WIRED TOGETHER BEFORE THE CONCRETE IS POURED.
11. SPREAD BARS AROUND SMALL OPENINGS AND SLEEVES IN SLABS AND WALLS WHERE POSSIBLE AND WHERE BAR SPACING WILL NOT EXCEED 1.5 TIMES THE NORMAL SPACING. DISCONTINUE BARS AT LARGE OPENINGS WHERE NECESSARY AND PROVIDE AN AREA OF REINFORCEMENT EQUAL TO THE INTERRUPTED REINFORCEMENT DISTRIBUTING ONE-HALF OF THIS REINFORCEMENT EACH SIDE OF THE OPENING (TENSION LAP SPLICED). HOLES LARGER THAN 12 INCHES IN ANY DIRECTION SHALL HAVE (2) #6 X 4'-0" DIAGONAL BARS IN BOTH FACES AT EACH CORNER
12. ALL REINFORCING SHALL BE HELD SECURELY IN POSITION WITH STANDARD ACCESSORIES IN CONCRETE
13. NO REINFORCING STEEL SHALL BE FIELD BENT WITHOUT THE APPROVAL OF THE STRUCTURAL ENGINEER. FIELD BENDING OF PLAIN REINFORCEMENT, IF PERMITTED, SHALL BE PERFORMED USING AN APPROVED AND APPROPRIATE SIZED PORTABLE HYDRAULIC DEVICE THAT MAKES ACI STANDARD RADIUS BENDS. NO OTHER FIELD BENDING METHOD SHALL BE PERMITTED.
14. WELDING, INCLUDING TACK WELDING, FOR REINFORCING STEEL IS PROHIBITED. WELDING OF REINFORCING STEEL AND HIGH STRENGTH BOLTS, IE. A36, F1554, WILL BE PERMITTED ONLY BY WRITTEN APPROVAL OF THE ENGINEER.
15. ALL OPENINGS THROUGH WALLS, SLABS OR OTHER STRUCTURAL ELEMENTS NOT DETAILED ON THE STRUCTURAL DRAWINGS MUST BE LOCATED BY THE CONTRACTOR AND SHOWN ON THE APPLICABLE REINFORCING STEEL SHOP DRAWINGS. THE FINAL LOCATION OF ALL OPENINGS MUST BE REVIEWED BY THE ENGINEER BEFORE THE CONCRETE IS POURED.
D. FORMWORK
1. SEE SPECIFICATIONS
2. CAMBER: PROVIDE CAMBER TO COMPENSATE FOR DISPLACEMENT OF FORMS (SEE ALSO SPECS.) AND TO PROVIDE AS-CAST MEMBER CAMBER AS NOTED ON DRAWINGS.
3. RUSTICATION STRIPS, CHAMFERS, DRIPS, MISC. EMBEDS, ETC. SEE DRAWINGS AND/OR ARCHITECTURAL DRAWINGS.
4. PROVIDE 3/4" CHAMFER AT ALL EXPOSED CORNERS OF SLABS UNLESS OTHERWISE NOTED.
5. OPENINGS FOR MEP TRADES ARE TO BE INCLUDED IN THE BID. ALL HOLES FOR OTHER TRADES WHICH MUST BE CUT OR FORMED AND WHICH ARE NOT SHOWN ON THE STRUCTURAL DESIGN(S) DRAWINGS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER DESIGNER FOR REVIEW AND APPROVAL. ANY STRENGTHENING OR ADDITIONAL REINFORCEMENT REQUIRED SHALL BE FURNISHED BY THE CONTRACTOR WITHOUT ADDITIONAL COST TO THE OWNER.
E. CONCRETE FINISHES: SEE SPECIFICATIONS
1. FORMED SURFACES:
a) EXPOSED TO VIEW: GROUT CLEANED FINISH.
b) COVERED OR AS NOTED ON PLANS: AS-CAST
2. FLATWORK:
a) EXPOSED TO VIEW: LIGHT BROOM
F. CURING AND PROTECTION: SEE SPECIFICATIONS.
G. SEE THE MECHANICAL, ELECTRICAL, AND SUPPLIERS DRAWINGS AND THE SPECIFICATIONS FOR THE LOCATIONS OF SPECIAL ANCHORS, CHAMFERS, SLEEVES, PIPES, CONDUITS AND OTHER DETAILS NOT SHOWN ON THE STRUCTURAL DRAWINGS.
H. EMBEDDED PIPES OR CONDUIT. MAXIMUM DIAMETER ONE THIRD X SLAB OR WALL THICKNESS, SPACED MINIMUM OF 3 TIMES DIAMETER ON CENTER. ALL EMBEDDED PIPES OR CONDUIT SHALL BE APPROVED BY ENGINEER OF RECORD PRIOR TO INSTALLING.
I. SIZE AND LOCATION OF EQUIPMENT PADS AND ANCHOR BOLTS SHALL BE AS REQUIRED BY THE EQUIPMENT MANUFACTURER. ALL CONDUIT PLACED IN SLAB SHALL BE APPROVED BY STRUCTURAL ENGINEER OF RECORD PRIOR TO INSTALLING CONDUIT AND POURING SLAB.
J. SUBMITTALS
1. CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTING THE FOLLOWING DOCUMENTS TO THE ENGINEER OF RECORD:
a) CONCRETE MIX DESIGN
b) CONCRETE REINFORCING DRAWINGS



Table with 3 columns: MARK, DATE, DESCRIPTION. Includes a row for 'BY' and 'DESCRIPTION'.

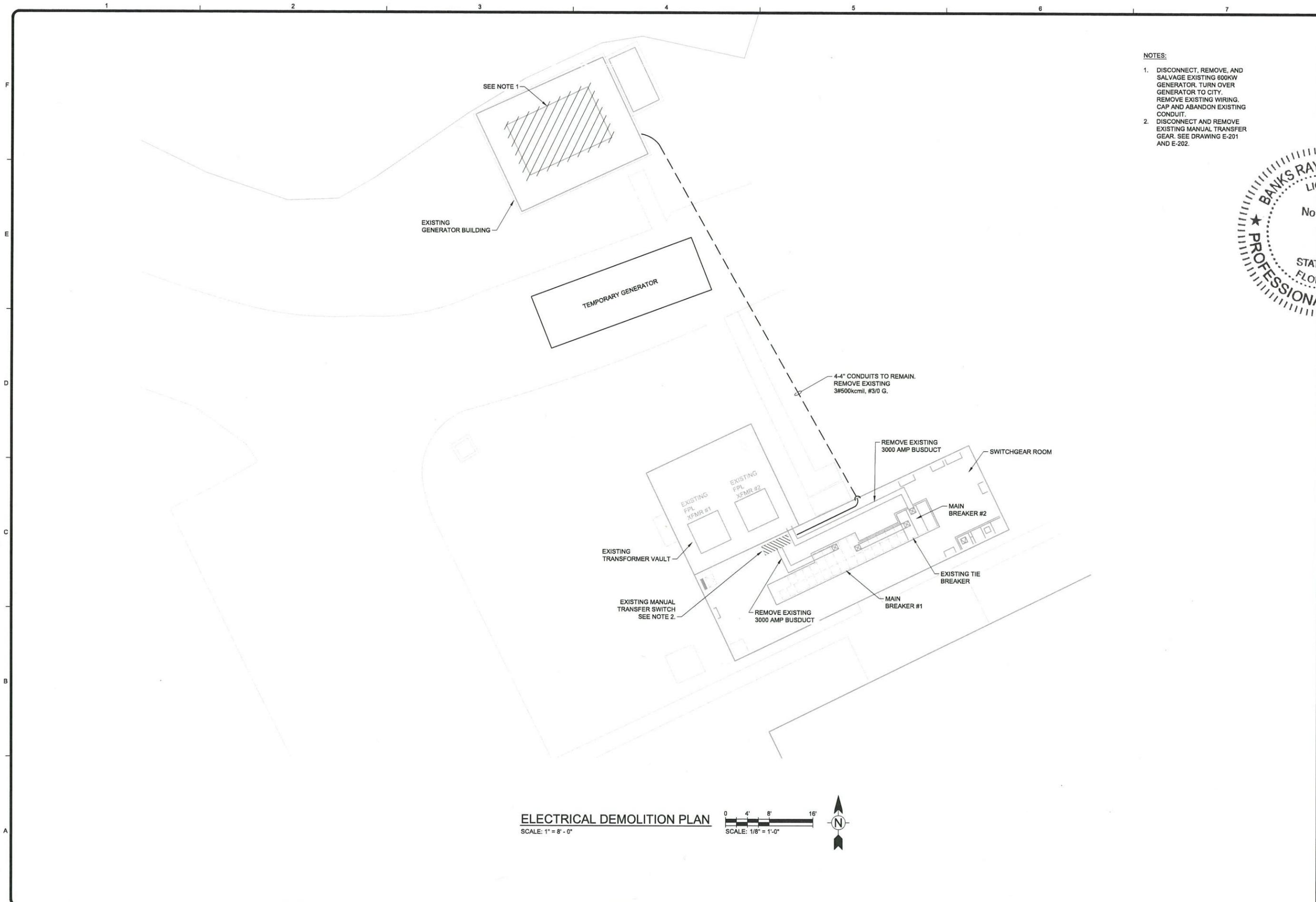
CITY OF DAYTONA BEACH
BETHUNE POINT WASTE WATER TREATMENT PLANT
STRUCTURAL GENERAL NOTES

Table with 2 columns: Field, Value. Includes PROJ: 200-26561-18002, DESN: TJW, DRWN: TJW, CHKD: JLB

S-001

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12/11/2019 3:56:59 PM - \\TTS1818\F2\PROJECTS\NER\26561\200-26561-18002\CAD\SHHEETFILES\E-101 ELECTRICAL SITE DEMOLITION PLAN.DWG - REYES, HECTOR

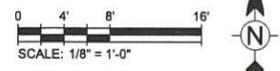


- NOTES:**
- DISCONNECT, REMOVE, AND SALVAGE EXISTING 800KW GENERATOR. TURN OVER GENERATOR TO CITY. REMOVE EXISTING WIRING, CAP AND ABANDON EXISTING CONDUIT.
 - DISCONNECT AND REMOVE EXISTING MANUAL TRANSFER GEAR. SEE DRAWING E-201 AND E-202.



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ELECTRICAL DEMOLITION PLAN
 SCALE: 1" = 8' - 0"



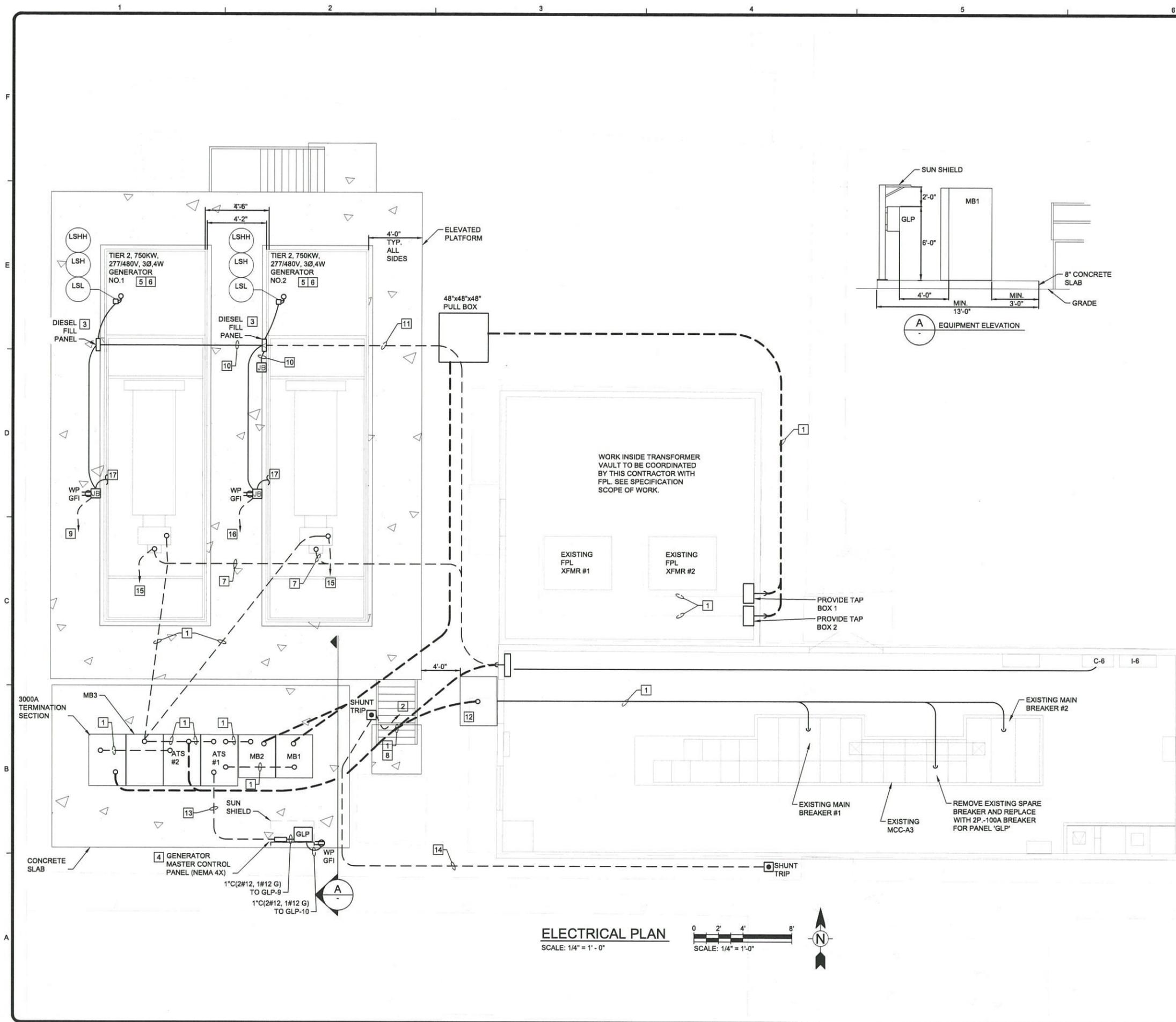
MARK	DATE	DESCRIPTION	BY

CITY OF DAYTONA BEACH
 BETHUNE POINT WATER RECLAMATION
 FACILITY - GENERATOR REPLACEMENT
**ELECTRICAL SITE
 DEMOLITION PLAN**

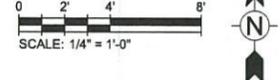
Project No.: 200-26561-18002
 Designed By: AMR
 Drawn By: AMR
 Checked By: BRW

E-101

12/11/2019 3:57:45 PM - I:\TTS18\FSD\PROJECTS\IER\26561-18002\CAD\SHEET\FILESE-102 ELECTRICAL PLAN.DWG - REYES, HECTOR



ELECTRICAL PLAN
SCALE: 1/4" = 1' - 0"



- SPECIFIC NOTES:**
- SEE DRAWING E-603 & E-604 FOR POWER CONDUIT AND WIRE SIZE.
 - 1" C(2#12, 1#12 G.) TO MB1, MB2 AND GENERATORS.
 - PROVIDE AND INSTALL DIESEL FILL PANEL WITH REQUIRED LEVEL INDICATION DEVICES AND ASSOCIATED CONDUIT AND WIRE.
 - PROVIDE AND INSTALL GENERATOR CONTROL PANEL AND ASSOCIATED CONDUIT AND WIRE.
 - SOUND ATTENUATED, WEATHERPROOF, ENCLOSURE:
 - ENCLOSURE SUITABLE FOR 150 MPH WIND LOADING (PE CERTIFICATES ARE AVAILABLE AT AN ADDITIONAL CHARGE)
 - ENCLOSURE TO BEAR THE INSIGNIA OF THE FLORIDA DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION TO DOCUMENT COMPLIANCE WITH THE 2014 FLORIDA BUILDING CODE.
 - PROVIDE ELEVATED PLATFORM AND STAIRS AROUND GENERATORS.
 - WIRE MISC. 120 VOLTS ITEMS TO GENERATOR TO LOAD CENTER.
 - MOUNT AND WIRE BATTERY CHARGERS TO LOAD CENTER AND DC OUTPUT TO BATTERIES
 - WIRE GENERATORS JACKET WATER HEATERS TO LOAD CENTER.
 - ALL ELECTRICAL TO BE RUN IN EMT OR FLEXIBLE CONDUIT TO MEET NFPA 70.
 - PROVIDE, INSTALL AND WIRE (2) 48" LED LIGHT FIXTURES WITH A SWITCH LOCATED BY ENTRANCE DOOR.
 - PROVIDE, INSTALL AND WIRE AN INTERNALLY MOUNTED R-1 DUAL LAMP EMERGENCY LIGHT ABOVE THE DOOR.
 - PROVIDE, INSTALL AND WIRE (2) 20A, 125V DUCT EX-GFCI RECEPTACLES LOCATED BY ENTRANCE DOOR.
 - SUB BASE FUEL TANK:
 - INTERSTITIAL SPACE WITH FDEP APPROVED LEAK DETECTION SWITCH (MADISON M-7000 EQ#682)
 - MECHANICAL FUEL LEVEL GAUGE (VISIBLE AT FILL POINT)
 - SUPPLY AND RETURN CONNECTIONS
 - 2" FILL WITH LOCKABLE CAP WITH FDEP SPILL CONTAINMENT
 - NORMAL AND EMERGENCY VENT FITTINGS INSTALLED PER UL-142
 - LOW LEVEL FUEL ALARM SWITCH (MADISON M-7000 EQ#682) SET @ 40% REMAINING CAPACITY WIRED TO CONTROL PANEL TERMINAL STRIP
 - HIGH LEVEL FUEL ALARM SWITCH (MADISON M-7000 EQ#682) SET @ 90% TANK CAPACITY WIRED TO CONTROL PANEL TERMINAL STRIP
 - CABLE STUB UP OPENING UNDER CIRCUIT BREAKER
 - GENERATOR MOUNTING PADS
 - 2 LIFTING POINTS PER SIDE (4 TOTAL) FOR LIFTING GENERATOR SET, ENCLOSURE AND TANK (EMPTY)
 - TANK PRIMED WITH TWO PART EPOXY PRIMER AND PAINTED GLOSS BLACK
 - 1" C(12#14, 1#14 G.) FROM GENERATOR TO C-6
 - 1" C(12#14, 1#14 G.) FROM ATS#1 AND ATS#2 TO C-6
 - 1" C(4#12, 2#6, 1#10 G.) TO GLP-1,2,3,6. (BATTERY CHARGER, JACKET WATER HEATER, LIGHTS AND MISC.)
 - 1" C(6#14, 1#14 G.)
 - 1" C(12#14, 1#14 G.) TO C-6
 - PROVIDE 48"Wx36"Dx48"H NEMA 4X HINGED COVER ENCLOSURE. REMOVE EXISTING WINDOW AND MOUNT ENCLOSURE OVER WINDOW. SEAL AROUND ENCLOSURE. PROVIDE WARNING LABELS.
 - 1" C(4#14, 1#14 G.) FROM ATS#1 AND ATS#2
 - 1" C(2#12, 1#12 G.)
 - 1" C(CAT.6) TO GENERATOR MASTER CONTROL PANEL.
 - 1" C(4#12, 2#6, 1#10 G.) TO GLP-4,5,7,8. (BATTERY CHARGER, JACKET WATER HEATER, LIGHTS AND MISC.)

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CITY OF DAYTONA BEACH
BETHUNE POINT WATER RECLAMATION
FACILITY - GENERATOR REPLACEMENT
ELECTRICAL PLAN

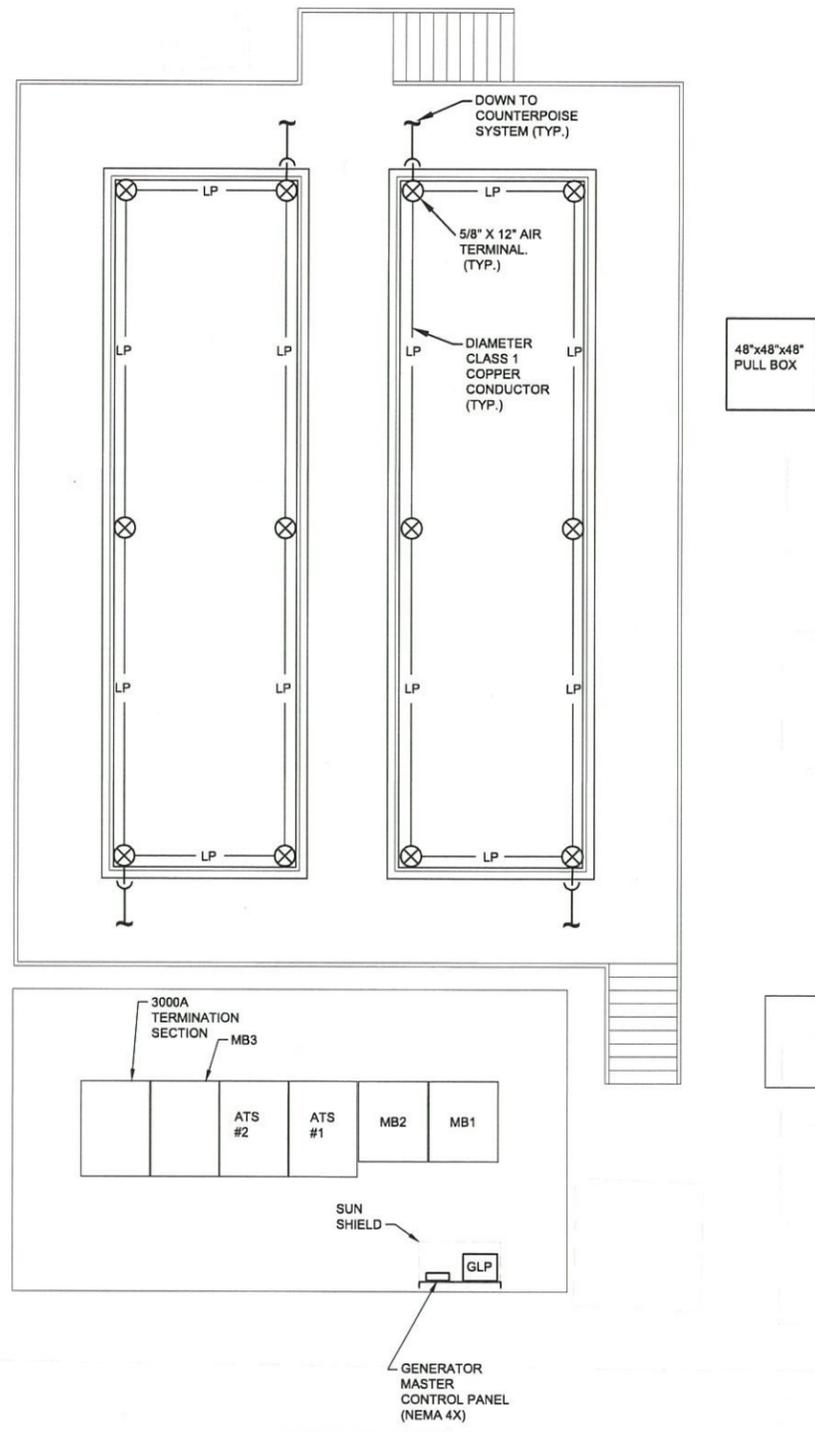
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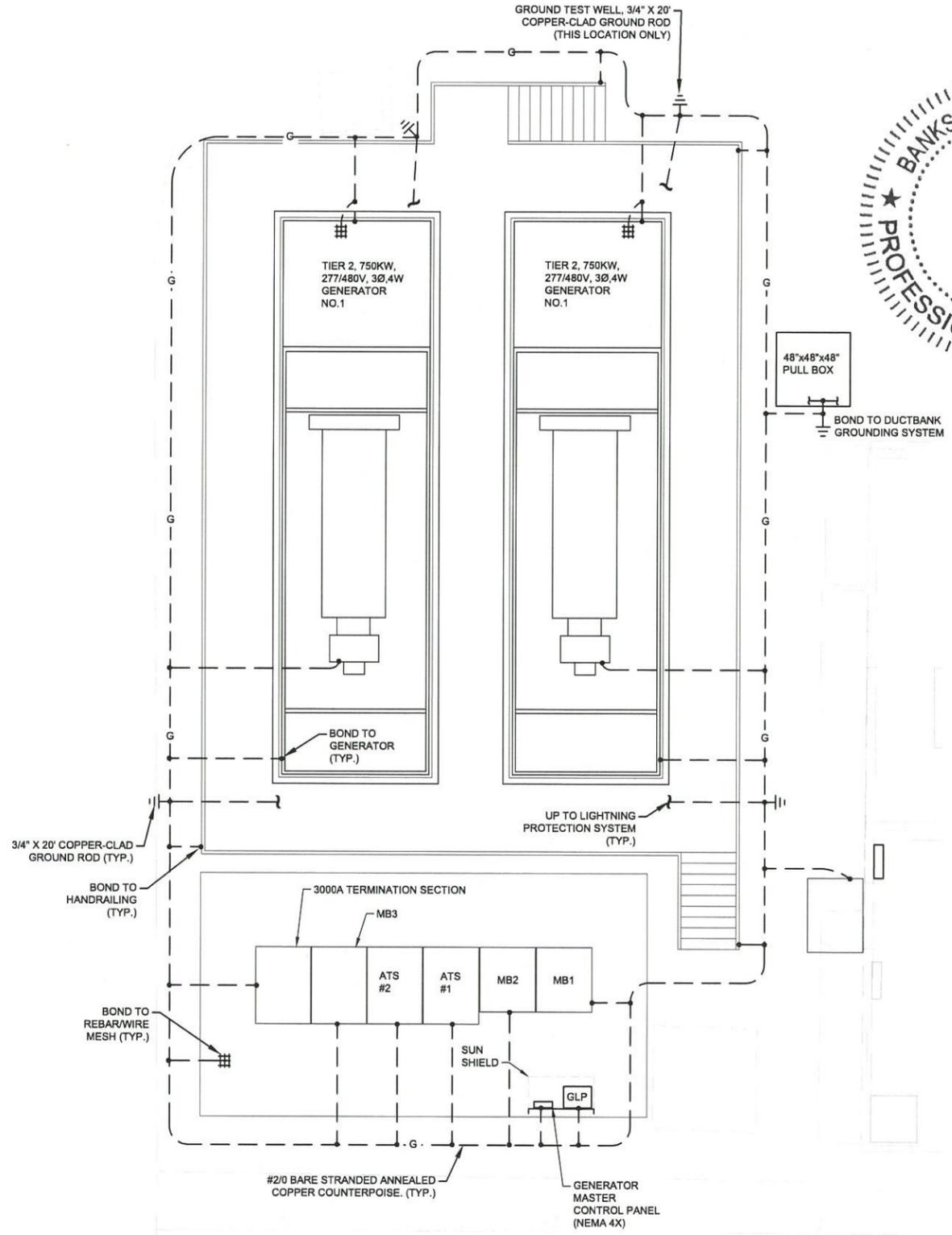
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Bar Measures 1 inch

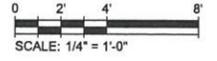
12/11/2019 3:56:14 PM - I:\LOCAL\PROJECTS\ORLANDO\18002\CAD\SHEET\FILESE-103 LIGHTNING PROTECTION AND GROUNDING PLAN.DWG - REYES, HECTOR



LIGHTNING PROTECTION PLAN
SCALE: 1/4" = 1'-0"



GROUNDING PLAN
SCALE: 1/4" = 1'-0"



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MARK	DATE	DESCRIPTION

CITY OF DAYTONA BEACH
BETHUNE POINT WATER RECLAMATION
FACILITY - GENERATOR REPLACEMENT
**LIGHTNING PROTECTION
AND GROUNDING PLAN**

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E-103

