

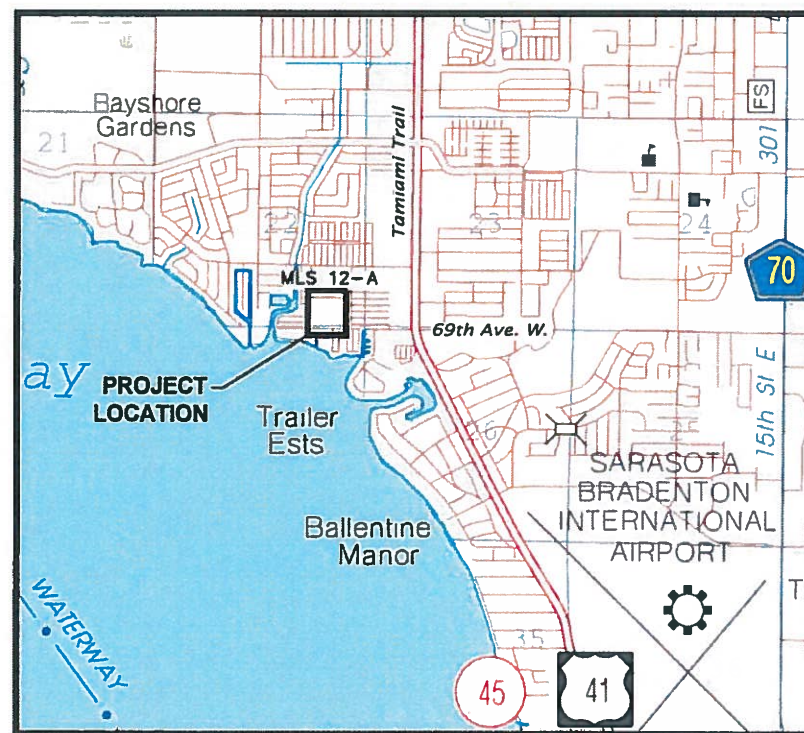


CONTRACT DRAWINGS

MLS 12-A (RTU#139)

EMERGENCY GENERATOR REPLACEMENT FOR MANATEE COUNTY, FLORIDA

COUNTY PROJECT NUMBER: 6022384



INDEX OF SHEETS

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S-1 TO S-3	STRUCTURAL SHEET



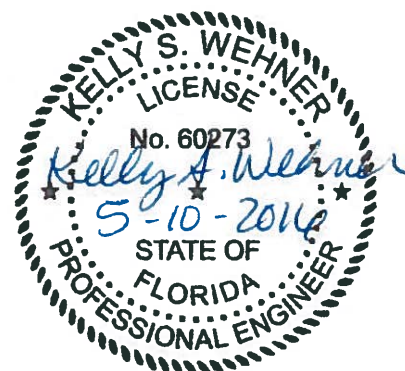
48 HOURS BEFORE DIGGING
"CALL SUNSHINE"
1-800-432-4770

UTILITY WARNING NOTE

ABOVE GROUND AND / OR UNDERGROUND UTILITIES MAY BE IN THE AREA OF THIS PROJECT - PROCEED WITH CAUTION - THE CONTRACTOR SHALL CALL SUNSHINE STATE "ONE CALL" AT 1-800-432-4770 AND THE UTILITY OWNERS IN ADVANCE OF BEGINNING WORK, IN ACCORDANCE WITH CHAPTER 556, FLORIDA STATUTES.

ATTENTION IS DIRECTED TO THE FACT THAT THESE PLANS
MAY HAVE BEEN REDUCED IN SIZE BY REPRODUCTION.
THIS MUST BE CONSIDERED WHEN OBTAINING SCALED DATA.

REVISIONS		
DATE	BY	DESCRIPTION



PLANS PREPARED BY:



380 PARK PLACE BLVD, STE 300, CLEARWATER, FL 33759
TEL: (727) 531-3505 (800) 861-8314
www.cardno.com Certificate of Authorization No. 29915

KELLY S. WEHNER, PE
ENGINEER OF RECORD

60273
FL. LICENSE NO.

DATE: MAY 2016
SHEET: G-1

GENERAL NOTES

1. ALL WORKMANSHIP AND MATERIALS USED IN THE CONSTRUCTION OF THIS PROJECT SHALL BE NEW AND UNUSED AND CONFORM TO, OR EXCEED THE LATEST LOCAL JURISDICTION STANDARDS.
2. CONTACT SUNSHINE STATE ONE CALL FOR UTILITY LOCATES A MINIMUM OF 48-HOURS AND A MAXIMUM OF 5-DAYS PRIOR TO START OF CONSTRUCTION AT 1-800-432-4770
3. THE CONTRACTOR SHALL NOTIFY UTILITY OWNERS A MINIMUM OF 2-DAYS AND A MAXIMUM OF 5-DAYS PRIOR TO START OF CONSTRUCTION.
- | UTILITY OWNER | CONTACT NAME | CONTACT NUMBER |
|-----------------------------------|----------------|--------------------------|
| BRIGHT HOUSE NETWORKS | TOM WRIGHT | (941) 345-1348 EXT 21348 |
| FLORIDA POWER AND LIGHT | TRACY STERN | (800) 868-9554 |
| TECO PEOPLES GAS | DANNY SHANAHAN | (941) 342-4006 |
| VERIZON FLORIDA INC | DAVID WYNNS | (813) 978-2164 |
| MANATEE COUNTY UTILITY OPERATIONS | KATHY McMAHON | (941) 792-8811 EXT 5075 |
4. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT FPL/GTE FOR RESTRAINING OF POLES DURING CONSTRUCTION. ALL ASSOCIATED COSTS WILL BE AT CONTRACTOR'S EXPENSE.
5. THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE FACT THAT ALL CONSTRUCTION ACTIVITIES SHALL CONFORM TO THE LOCAL NOISE ORDINANCE.
6. HOURS OF WORK SHALL BE NON-FEDERAL HOLIDAYS, MONDAY - FRIDAY 7AM - 5PM. WORK OUTSIDE THESE HOURS MUST BE SCHEDULED 48 HOURS IN ADVANCE AND MAY BE SUBJECT TO REIMBURSEMENT FOR ADDITIONAL INSPECTION SERVICES.
7. THE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS PRIOR TO CONSTRUCTION. THESE MAY INCLUDE, BUT ARE NOT LIMITED TO:
- UTILITY CONSTRUCTION PERMIT
 - R.O.W. USE PERMIT
 - EPA NPDES PERMIT
 - DEWATERING PERMIT
 - TREE REMOVAL PERMIT
8. THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY AND THE CONTRACTOR IS SOLELY RESPONSIBLE FOR CONSTRUCTION SAFETY. SPECIAL PRECAUTIONS MAY BE REQUIRED IN THE VICINITY OF POWER LINES AND OTHER UTILITIES.
9. THE CONTRACTOR SHALL FURNISH, ERECT AND MAINTAIN ALL NECESSARY TRAFFIC CONTROL AND SAFETY DEVICES, IN ACCORDANCE WITH THE US DEPARTMENT OF TRANSPORTATION, "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AND THE LATEST FLORIDA DEPARTMENT OF TRANSPORTATION "ROADWAY AND TRAFFIC DESIGN STANDARDS", LATEST EDITION AND CONTRACT SPECIFICATIONS.
10. THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN EFFECTIVE BARRICADES, DANGER SIGNALS, SIGNS AND PEDESTRIAN DETOURS IN ALL AREAS WHERE REQUIRED FOR THE PROTECTION OF THE WORK AND THE SAFETY OF THE PUBLIC.
11. THE CONTRACTOR SHALL PROVIDE ACCESS FOR TRAFFIC AT ALL TIMES DURING CONSTRUCTION. CONSTRUCTION SHALL BE CONDUCTED IN SUCH A MANNER THAT RESIDENTS RETAIN ACCESS TO THEIR DRIVEWAYS AT ALL TIMES.
12. REFERENCES TO FDOT INDEXES REFER TO THE MOST RECENT EDITION OF THE FDOT "ROADWAY AND TRAFFIC DESIGN STANDARDS."
13. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONTROL AND PREVENT EROSION AND THE TRANSPORTATION OF SEDIMENT TO SURFACE DRAINS AND OUTFALLS.
14. THE CONTRACTOR SHALL TAKE ALL REASONABLE MEANS TO ELIMINATE THE TRANSPORT OF DUST FROM THE PROJECT SITE. SPECIAL MEASURES, SUCH AS PERIODICALLY APPLYING WATER TO THE WORK SITE TO PREVENT DUST SHALL BE INCORPORATED INTO THE CONTRACTORS WORK PLAN.
15. THE CONTRACTOR SHALL BE RESPONSIBLE TO MAKE A REVIEW OF THE SITE TO DETERMINE EXISTING CONDITIONS AND ANYTHING NOT SHOWN ON THESE PLANS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER AND SHALL NOT CONSTITUTE AN EXTRA UNLESS APPROVED BY THE ENGINEER.
16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING OR REPLACING ANY DAMAGED ITEMS INCLUDING, BUT NOT LIMITED TO, DRIVEWAYS, IRRIGATION SYSTEMS, MAILBOXES, SIDEWALKS, STREET SIGNS, AND PRIVATE FENCES AS REQUIRED BY E.O.R./OTHER GOVERNING ENTITIES.
17. ALL SECTION CORNERS OR PROPERTY CORNERS DISLOCATED OR DISTURBED BY THE CONSTRUCTION ACTIVITIES SHALL BE RESET BY A REGISTERED LAND SURVEYOR AT THE CONTRACTORS EXPENSE.
18. ALL DISTURBED AREAS SHALL BE RESTORED TO THEIR ORIGINAL CONDITION OR BETTER UNLESS OTHERWISE NOTED. FINAL GRADE IS TO GENERALLY BE THE SAME AS EXISTING GRADE. RESTORE UNIFORMLY AND FOR PROPER DRAINAGE GRADE TOWARD ROADWAY.
19. THE CONTRACTOR IS RESPONSIBLE FOR THE DISPOSAL OF ALL CLEARED VEGETATION WITHIN FIVE (5) DAYS OF CLEARING AND GRUBBING WORK.

20. ALL EXCESS SOIL RESULTING FROM CONSTRUCTION ACTIVITIES THAT IS NOT CLAIMED BY THE OWNER SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND PROPERLY DISPOSED OF BY THE CONTRACTOR.
21. ALL VOIDS AFTER PLACEMENT OF SOD SHALL BE FILLED WITH PREPARED SOIL MIX. THE SOD SHALL BE ROLLED TO MEET THE PROPOSED GRADES. SOD PLACED ON SLOPES (3:1 OR STEEPER) SHALL BE PEGGED.
22. AREAS OF EXPOSED EARTH RESULTING FROM CONSTRUCTION SHALL BE SODDED IN KIND AS DIRECTED BY THE ENGINEER UNLESS OTHERWISE NOTED ON PLANS.
23. LOCATIONS, ELEVATIONS AND DIMENSIONS OF EXISTING UTILITIES, STRUCTURES AND OTHER FEATURES ARE SHOWN ACCORDING TO THE BEST INFORMATION AVAILABLE AT THE TIME OF THE PREPARATION OF THESE PLANS, BUT DO NOT PURPORT TO BE ABSOLUTELY CORRECT. THE CONTRACTOR SHALL VERIFY THE LOCATION, ELEVATIONS AND DIMENSIONS OF ALL EXISTING UTILITIES, STRUCTURES AND OTHER FEATURES AFFECTING HIS WORK PRIOR TO CONSTRUCTION.
24. THE CONTRACTOR SHALL VERIFY IN THE FIELD THE LOCATION AND ELEVATION OF ALL EXISTING UTILITY CONNECTION POINTS PRIOR TO STARTING CONSTRUCTION AND SHALL IMMEDIATELY NOTIFY THE ENGINEER AND OWNER OF ANY DISCREPANCIES FOUND.
25. THE CONTRACTOR'S ATTENTION IS CALLED TO THE FACT THAT THERE MAY BE SOME CONFLICTS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE, PROTECT, AND REPLACE (IF DAMAGED) ANY AND ALL EXISTING UTILITIES ON THIS PROJECT AT THEIR OWN EXPENSE.
26. THE CONSTRUCTION LIMITS INDICATED IN THESE PLANS ARE APPROXIMATE. ACTUAL LIMITS MAY BE SET IN THE FIELD AS DIRECTED BY THE ENGINEER.
27. ALL POTABLE WATER, FIRE, IRRIGATION SYSTEM, SANITARY SYSTEM, STORM SYSTEM AND OTHER UTILITIES COMPONENTS SHALL BE PROTECTED AND SHALL REMAIN OPERATIONAL DURING CONSTRUCTION. THE CONTRACTOR SHALL IMMEDIATELY REPAIR ANY DAMAGE TO THESE SYSTEMS.
28. CONTRACTOR SHALL ENSURE THAT EXCAVATIONS ARE FREE OF DEBRIS PRIOR TO BACKFILLING.
29. THE CONTRACTOR SHALL NOT ENTER OR OCCUPY ANY LAND OUTSIDE THE RIGHTS-OF-WAY OR PRIVATE PROPERTY WITHOUT THE WRITTEN CONSENT OF THE PROPERTY OWNER.
30. WHERE REFERENCED STANDARDS CONFLICT, THE MORE STRINGENT STANDARD SHALL APPLY.
31. CONTRACTOR SHALL SUPPORT AND PROTECT ALL EXISTING UTILITIES AS REQUIRED. THIS SHOULD INCLUDE BY-PASS PUMPING IF REQUIRED.
32. CONTRACTOR SHALL BE MADE AWARE THAT OTHER CONSTRUCTION ACTIVITIES MAY BE UNDER WAY AT THE TIME OF THIS WORK. IT IS THE CONTRACTORS RESPONSIBILITY TO COORDINATE ALL ACTIVITIES WITH COUNTY PERSONNEL AND OTHER CONTRACTORS THAT MAY IMPACT OTHER SITE CONSTRUCTION.
33. THE EXISTING AUTOMATIC TRANSFER SWITCH SHALL BE DISCONNECTED, REMOVED AND DELIVERED TO THE OWNER.
34. ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD MAP THE SITE IS LOCATED WITHIN FLOOD ZONE AE WITH A BASE FLOOD ELEVATION OF 12.0.

SURVEYOR'S NOTES & SYMBOLOGY

NOTE: EXISTING FEATURES ARE SHOWN LIGHT-LINED AND DASHED

LEGEND

- | | |
|-------------------|------------------------------------|
| SITE BENCHMARK | CONCRETE MONUMENT |
| WOOD UTILITY POLE | FOUND BOUNDARY MARKER |
| GRATE INLET | SPOT ELEVATION (TYP) |
| LIGHT POLE | GUY WIRE |
| WATER VALVE | UTILITY MANHOLE |
| FIRE HYDRANT | SANITARY MANHOLE |
| SIGN | FIBER OPTIC MARKER |
| UTILITY BOX | IRRIGATION HEAD |
| STORM MANHOLE | GEOTECH BORINGS AND PAVEMENT CORES |
| TREE | PLAT BOOK |
| PINE TREE | OFFICIAL RECORDS BOOK |
| PALM TREE | PAGE |
| OAK TREE | DEED BOOK |
| MAPLE TREE | MITERED END SECTION |
| | INVERT |
| | ELEVATION |

1. THE FOLLOWING NGS NAVD88 VERTICAL CONTROL MONUMENTS WERE RECOVERED AND UTILIZED FOR THE ELEVATIONS SHOWN HEREIN: MELROSE PARK PID: D01578 ELEVATION 18.18 FEET AND MIRAMAR PID: D01579 ELEVATION 14.57 FEET.

2. THIS SURVEY IS REFERENCED TO A PROJECTION OF THE FLORIDA STATE PLANE COORDINATE SYSTEM (WEST ZONE NAD 1983/2011).

SURVEY PROVIDED BY:

Hyatt Survey Services, Inc.
LB No.: 7203 Geographic Data Specialists
11007 8th Avenue East Bradenton, Florida 34212
Phone: (941) 748-4693 Fax: (941) 744-1643

LINE WORK & SYMBOLOGY

- | | |
|----------------------------|-----------------------|
| ASPHALT ROADWAY | CHAIN LINK FENCE |
| BACK OF CURB | BUILDING BOUNDARY |
| SHELL DRIVEWAY | TOP OF BANK |
| CONCRETE DRIVEWAY | WETLAND LINE |
| RIGHT-OF-WAY/PROPERTY LINE | GUARDRAIL |
| PROPERTY LINE | CONTOUR LINE AND ELEV |

EXISTING UTILITY LINE WORK SYMBOLOGY

NOTE: PIPES 12-INCHES AND LARGER SHOWN WITH DOUBLE LINES.

- | | |
|--------------------|----------------------|
| WATER MAIN | BURIED ELECTRIC |
| BURIED FIBER OPTIC | BURIED TELEPHONE |
| GAS MAIN | SANITARY FORCE MAIN |
| BURIED CABLE TV | RECLAIMED WATER MAIN |
| UNKNOWN UTILITY | TEST HOLE LOCATION |

NOTE: THE LEGEND LISTED REPRESENT A COMPREHENSIVE STANDARD GUIDE INTENDED FOR GENERAL USE. THEREFORE, NOT ALL OF THE SYMBOLS AND ABBREVIATIONS CONTAINED ON THIS SHEET ARE NECESSARILY USED ON THIS PARTICULAR CONTRACT.



MANATEE COUNTY

MLS 12-A EMERGENCY
GENERATOR REPLACEMENT

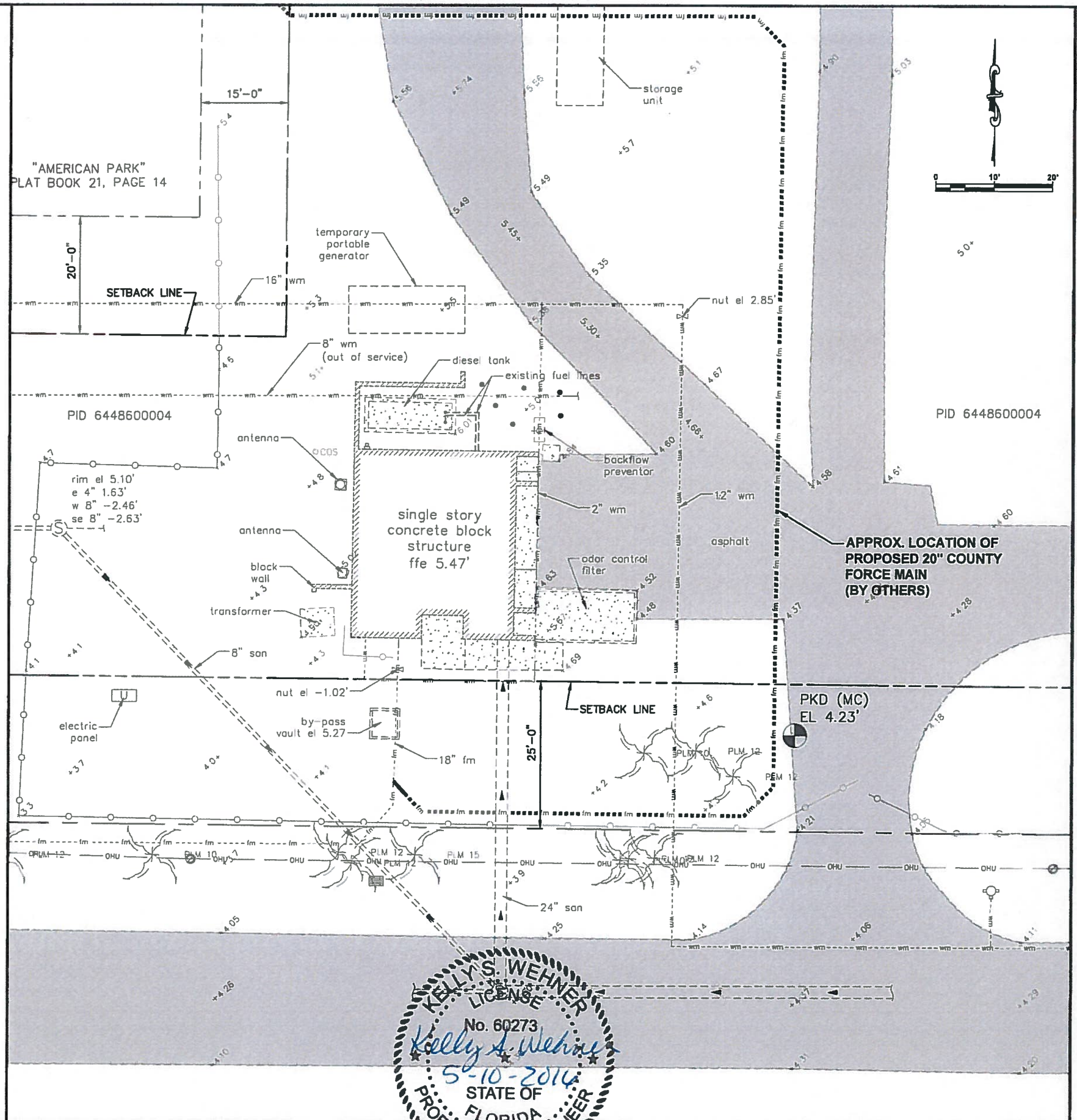
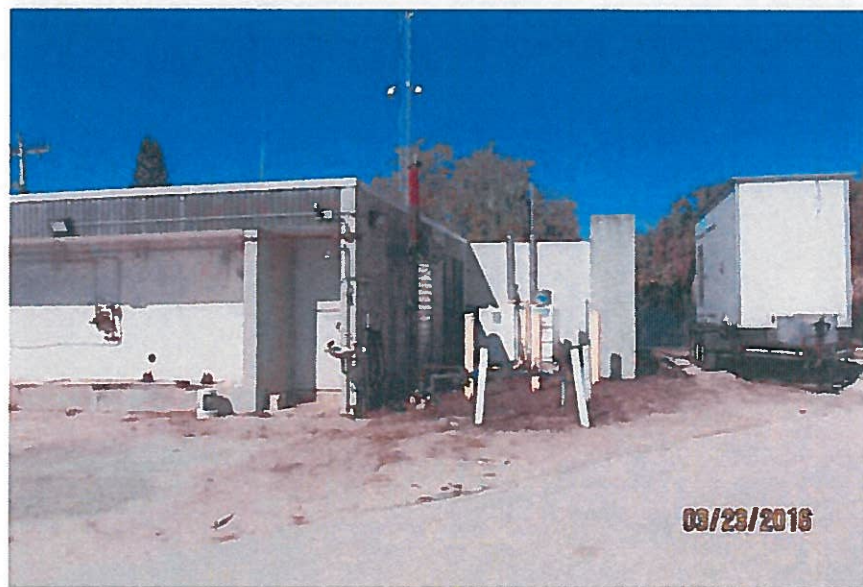
Cardno
Shaping the Future
380 PARK PLACE BLVD, STE 300, CLEARWATER, FL 33759
TEL: (727) 531-3505 (800) 861-8314
www.cardno.com Certificate of Authorization No. 29915

KELLY S. WEHNER, PE DATE
LIC. NO.: 60273

DESIGNED KSW
DRAWN DES
QC
APPROVED DRM

GENERAL NOTES &
SYMBOLOGY

PROJECT NO:
00193009 08
DATE:
MAY 2016
SHEET NO:
G-2



MANATEE COUNTY

MLS 12-A EMERGENCY
GENERATOR REPLACEMENT

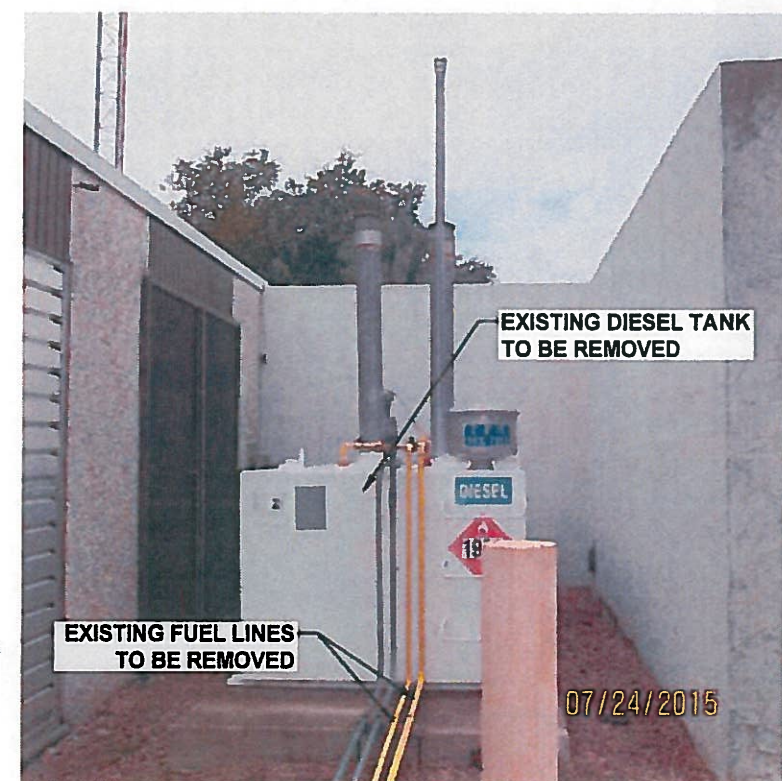
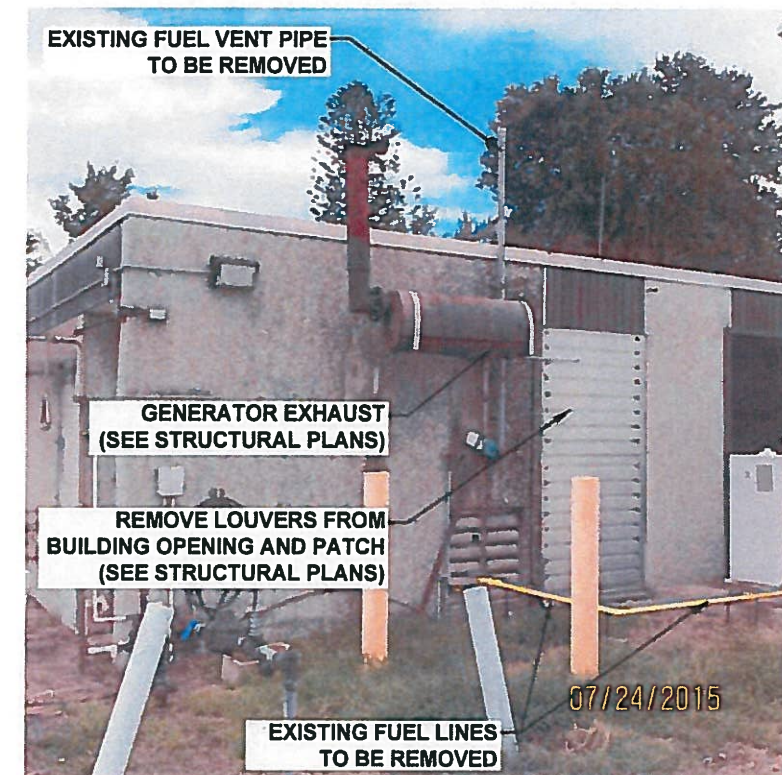
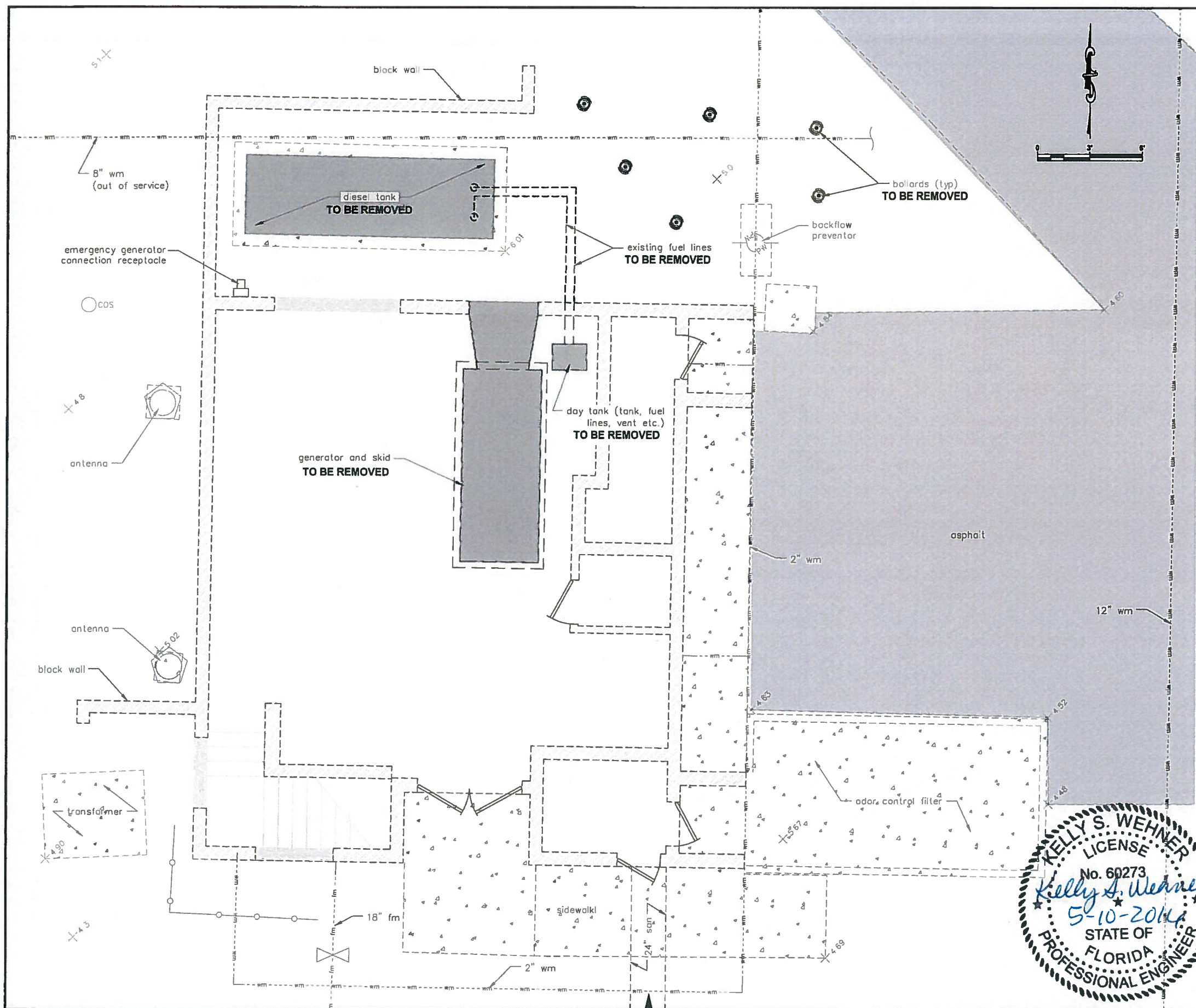
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KELLY S. WEHNER
LICENSE
No. 60273
5-10-2014
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

DESIGNED KSW
DRAWN DES
Q.C. DRM
APPROVED

SITE PLAN

PROJECT NO:
00193009 08
DATE:
MAY 2016
SHEET NO:
C-1



NO	DESCRIPTION	BY	DATE

MANATEE COUNTY

MLS 12-A EMERGENCY
GENERATOR REPLACEMENT

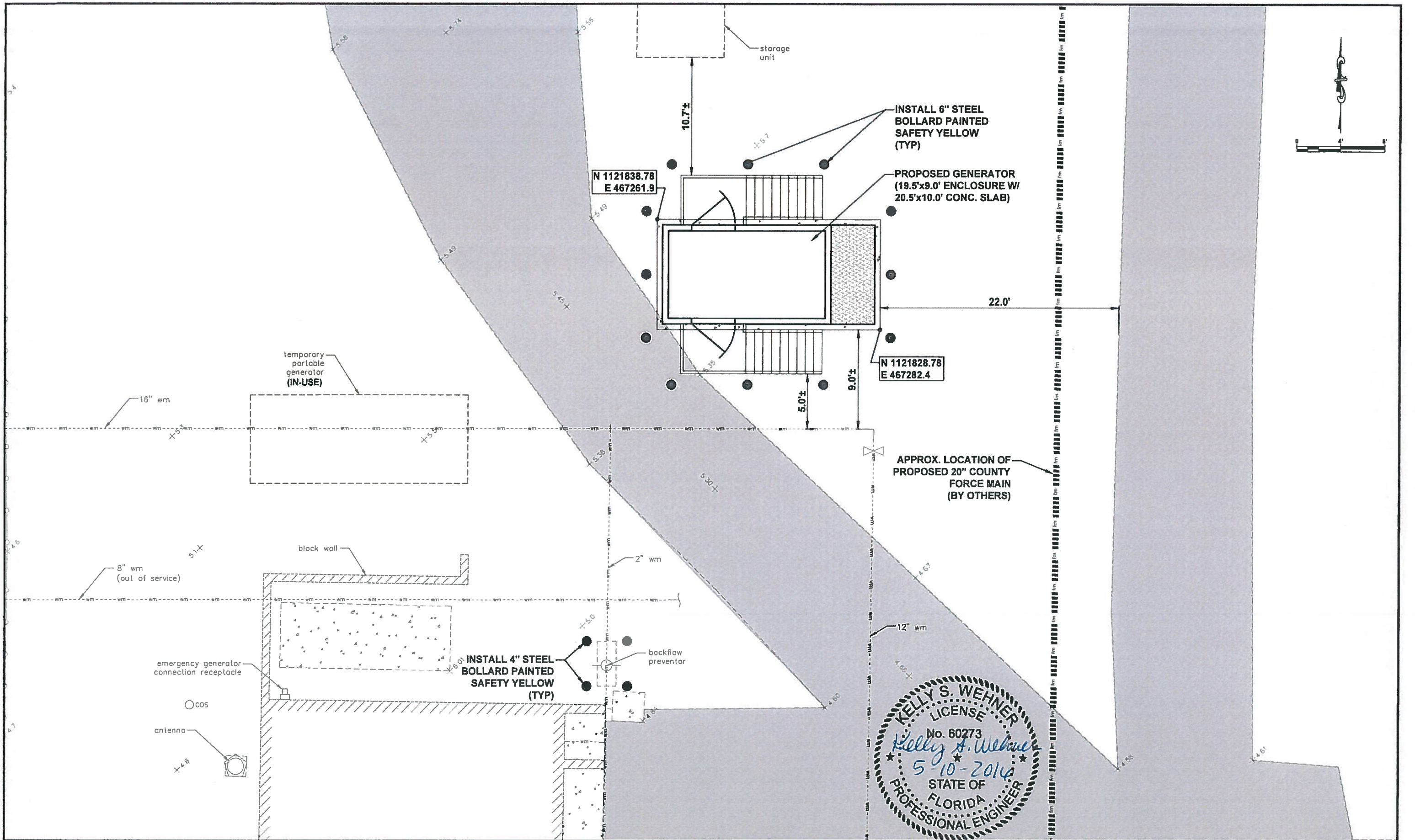


KELLY S. WEHNER, PE
LIC NO: 60273

DESIGNED KSW
DRAWN DES
QC
APPROVED DRM

SITE DEMOLITION PLAN

PROJECT NO:
00193009.08
DATE:
MAY 2016
SHEET NO:
C-2



NO.	DESCRIPTION	BY	DATE

MANATEE COUNTY

MLS 12-A EMERGENCY
GENERATOR REPLACEMENT



KELLY S. WEHNER, PE DATE
LIC NO: 60273

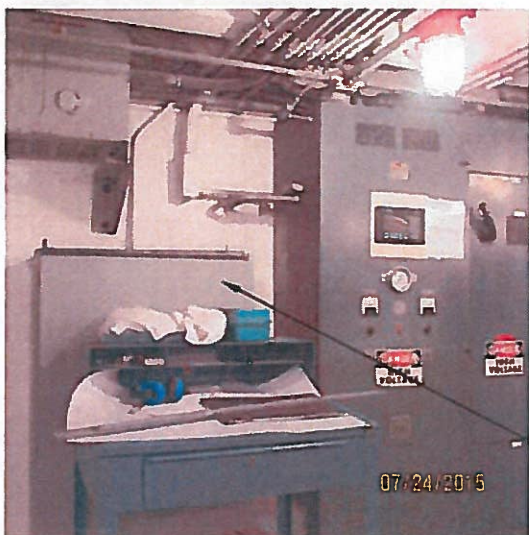
DESIGNED KSW
DRAWN DES
Q.C. DRM
APPROVED

SITE LAYOUT

PROJECT NO:
00193009.08
DATE:
MAY 2016
SHEET NO:
C-3



INTERIOR PHOTO
(FACING NORTH)



INTERIOR PHOTO
(FACING WEST)

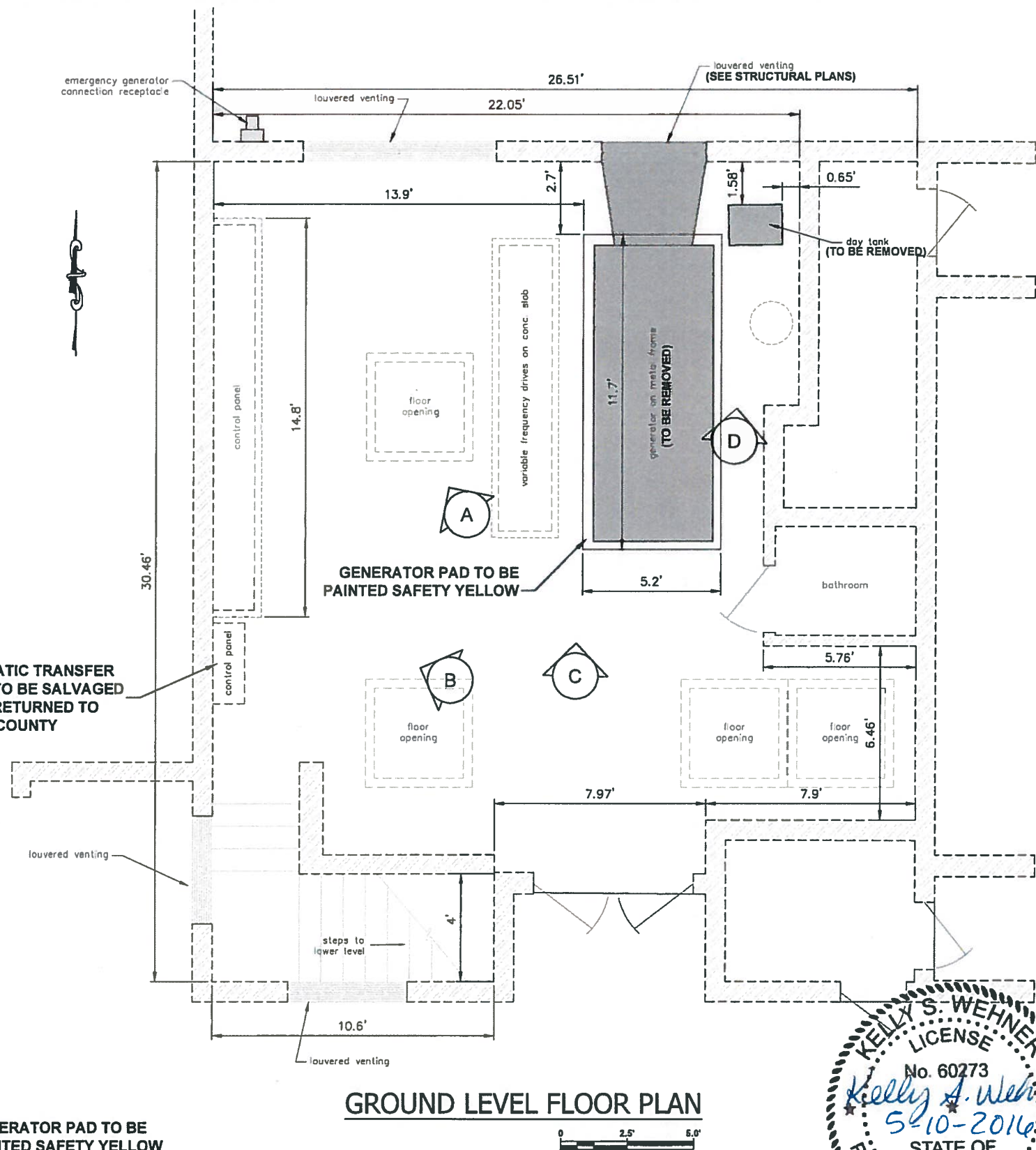


EXISTING GENERATOR
(TO BE REMOVED)



AUTOMATIC TRANSFER
SWITCH TO BE SALVAGED
AND RETURNED TO
COUNTY

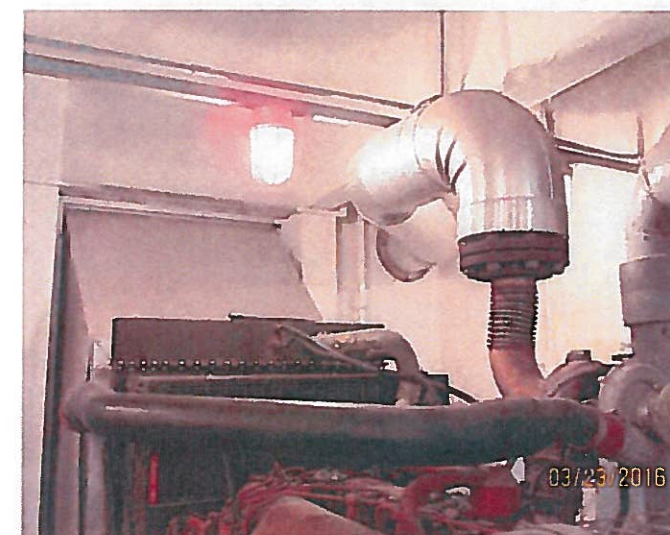
GENERATOR PAD TO BE
PAINTED SAFETY YELLOW



GROUND LEVEL FLOOR PLAN



EXISTING GENERATOR RADIATOR AND DUCT
(TO BE REMOVED)



EXISTING GENERATOR EXHAUST DUCT
(TO BE REMOVED)



EXISTING DAY TANK
(TO BE REMOVED)



DAY TANK

NO.	DESCRIPTION	BY	DATE

MANATEE COUNTY

MLS 12-A EMERGENCY
GENERATOR REPLACEMENT



KELLY S. WEHNER, PE DATE
LIC. NO.: 60273

DESIGNED KSW
DRAWN DES
Q.C. DRM
APPROVED

BUILDING DEMOLITION PLAN

PROJECT NO:
00193009.08
DATE:
MAY 2016
SHEET NO:
C-4



SITE PHOTO
(LOOKING EAST)



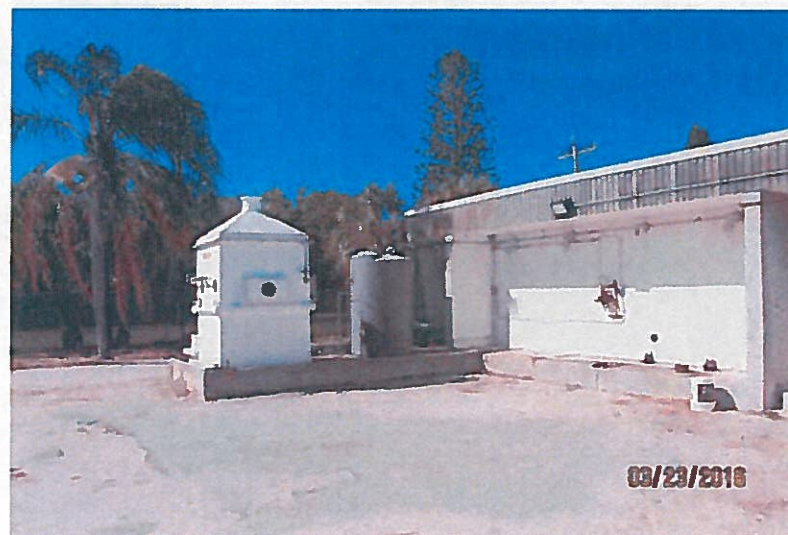
SITE PHOTO
(LOOKING SOUTHWEST)



EXISTING DIESEL TANK - TO BE REMOVED
(LOOKING SOUTHWEST)



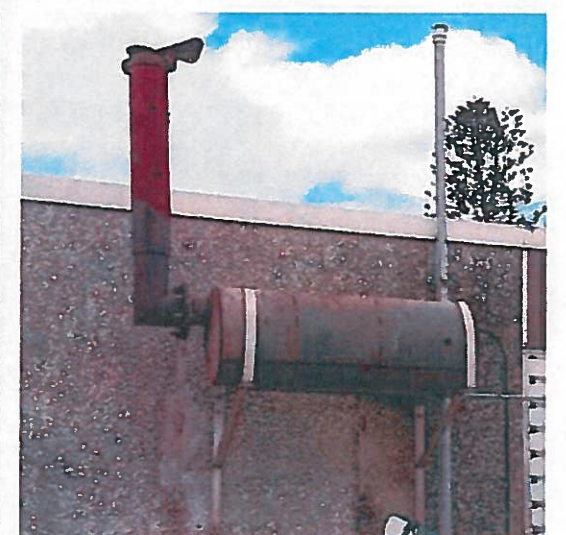
SITE PHOTO
(LOOKING SOUTHEAST)



ODOR CONTROL
(LOOKING SOUTHWEST)



SITE PHOTO
(LOOKING NORTHWEST)



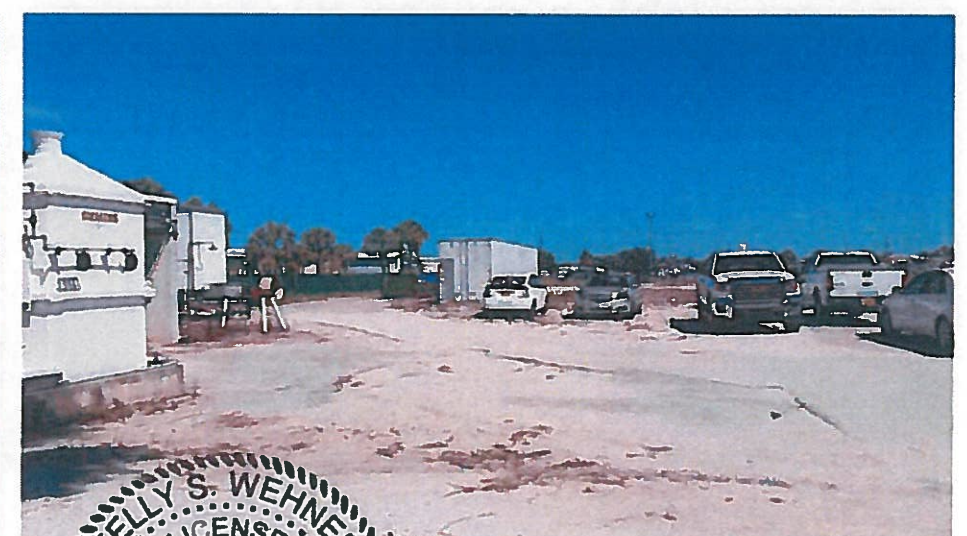
EXISTING GENERATOR MUFFLER - TO BE REMOVED
(LOOKING SOUTH)



TEMPORARY GENERATOR
(LOOKING SOUTH)



ODOR CONTROL
(LOOKING NORTH)



PROPOSED GENERATOR LOCATION
(LOOKING NORTH)

NO.	DESCRIPTION	BY	DATE

MANATEE COUNTY

MLS 12-A EMERGENCY
GENERATOR REPLACEMENT

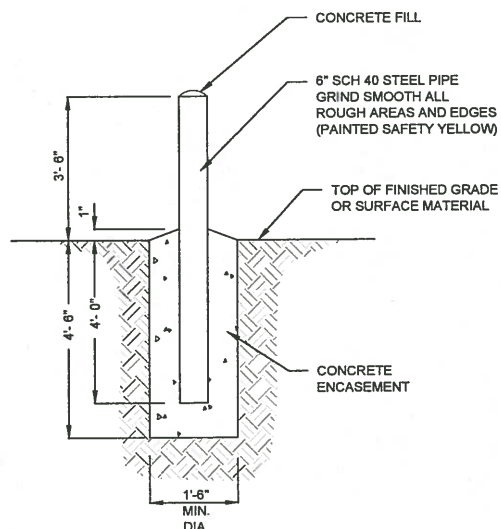
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KELLY S. WEHNER
LICENSE
No. 60273
5-10-2016
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

DESIGNED KSW
DRAWN DES
CHECKED DES
APPROVED DRM

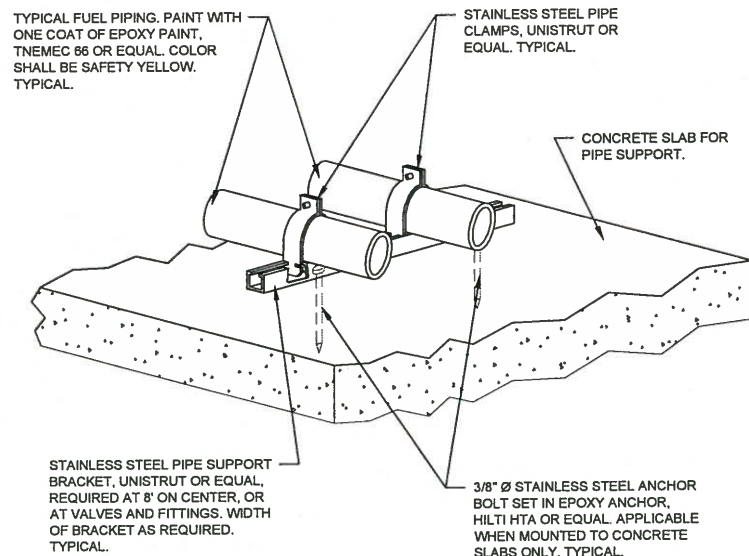
SITE PHOTOS

PROJECT NO:
00193009.08
DATE:
MAY 2016
SHEET NO:
C-5



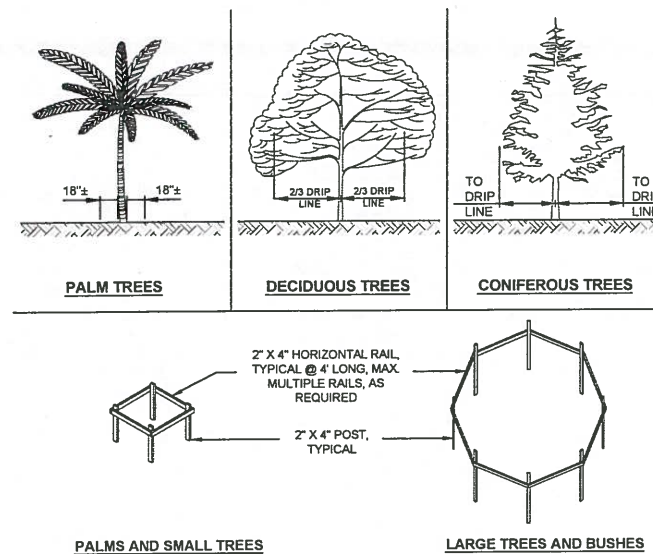
TYPICAL BOLLARD DETAIL

NTS



FUEL PIPING MOUNTING DETAIL

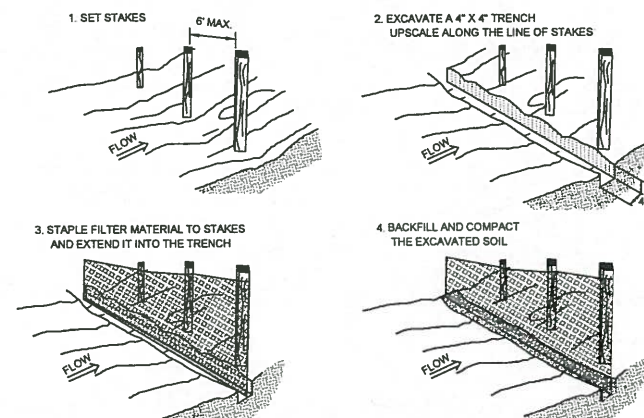
NTS



- NOTES:
1. NO TRUCKS OR HEAVY EQUIPMENT ALLOWED WITHIN BARRIERS, ONLY HAND LABOR ALLOWED.
 2. NO CONSTRUCTION MATERIALS, SOILS DEPOSITS, OR SOLVENTS SHALL BE ALLOWED WITHIN BARRIERS.
 3. BARRIERS ARE TO BE IN PLACE PRIOR TO ANY CONSTRUCTION ACTIVITIES WITHIN TREE AREA.
 4. BARRIERS ARE TO STAY IN PLACE UNTIL ALL PAVING, CONSTRUCTION, AND HEAVY EQUIPMENT IS REMOVED FROM THE AREA.

TREE PROTECTION BARRIERS DETAIL

NTS



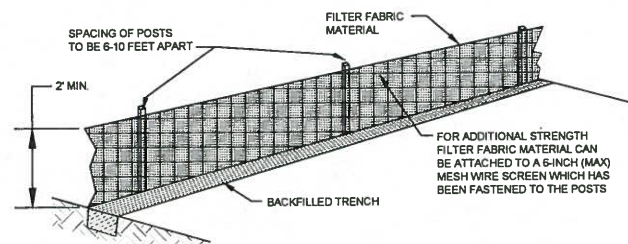
SHEET FLOW INSTALLATION
(PERSPECTIVE VIEW)

NOTES:

1. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONTROL AND PREVENT EROSION AND THE TRANSPORTATION OF SEDIMENT TO SURFACE DRAINS AND OUTFALLS. (REFER TO CONSTRUCTION PLANS, DETAILS, SPECIFICATIONS, AND APPROVED PERMITS FOR DETAILS.)
2. DURING CONSTRUCTION THE CONTRACTOR SHALL PLACE GEOBALE BARRIERS AROUND SUCH STRUCTURES TO PREVENT EROSION AND THE MIGRATION OF SEDIMENT OUTSIDE THE CONSTRUCTION AREA. THE BARRIERS SHALL BE PLACED IN ACCORDANCE WITH THE REQUIREMENTS OF FDOT INDEX NO. 102 OR AS DIRECTED BY THE ENGINEER.
3. THE CONTRACTOR SHALL PROVIDE SILT BARRIERS AS DIRECTED BY THE ENGINEER TO CONTROL EROSION AND SEDIMENTATION FROM TAKING PLACE OUTSIDE THE LIMITS OF THE PROJECT. THE SILT BARRIERS SHALL BE PLACED IN ACCORDANCE WITH THE REQUIREMENTS OF FDOT INDEX NO. 102, 103 AND 104 OR AS DIRECTED BY THE OWNER.
4. REQUIRED EROSION CONTROL MEASURES MUST REMAIN INTACT THROUGHOUT CONSTRUCTION. FAILURE TO INSTALL OR PROPERLY MAINTAIN REQUIRED EROSION CONTROL WILL RESULT IN ENFORCEMENT ACTION WHICH MAY INCLUDE CITATIONS AS PROVIDED BY APPLICABLE LOCAL ORDINANCE AND CHAPTERS 400-4 AND 400-40, F.A.C. INITIATION OF CIVIL PENALTY PROCEDURES PURSUANT TO SECTION 373.129, F.A.C. CAN RESULT IN A PENALTY NOT TO EXCEED \$10,000 PER OFFENSE WITH EACH DATE DURING WHICH SUCH VIOLATION OCCURS CONSTITUTING A SEPARATE OFFENSE.
5. ALL WORK PERFORMED SHALL COMPLY WITH THE REGULATIONS AND ORDINANCES OF THE VARIOUS GOVERNMENTAL AGENCIES HAVING JURISDICTION OVER THE WORK.

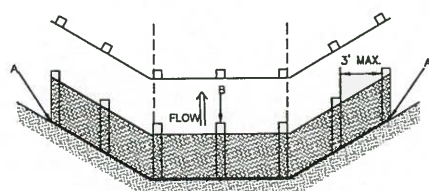
EROSION CONTROL DETAIL

NTS

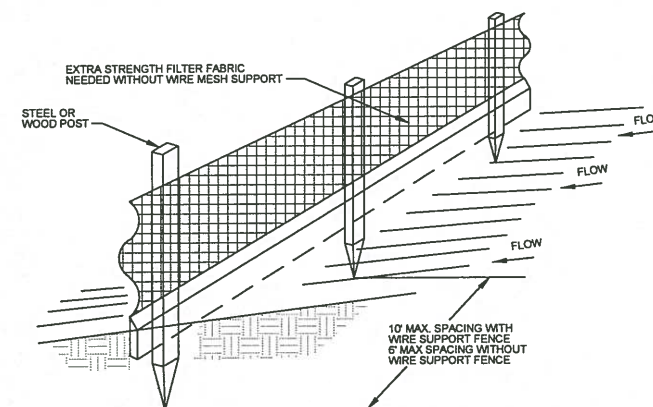


ATTACHING TWO SILT FENCES

- PLACE THE END POST OF THE SECOND FENCE INSIDE THE END POST OF THE FIRST FENCE.
- ROTATE BOTH POSTS AT LEAST 180 DEGREES IN A CLOCKWISE DIRECTION TO CREATE A TIGHT SEAL WITH THE FABRIC MATERIAL.
- DRIVE BOTH POSTS ABOUT 10 INCHES INTO THE GROUND AND BURY FLAP.

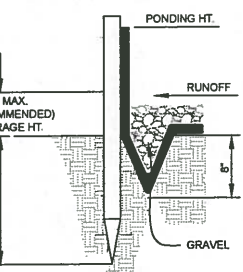


DRAINAGE INSTALLATION
(FRONT ELEVATION)

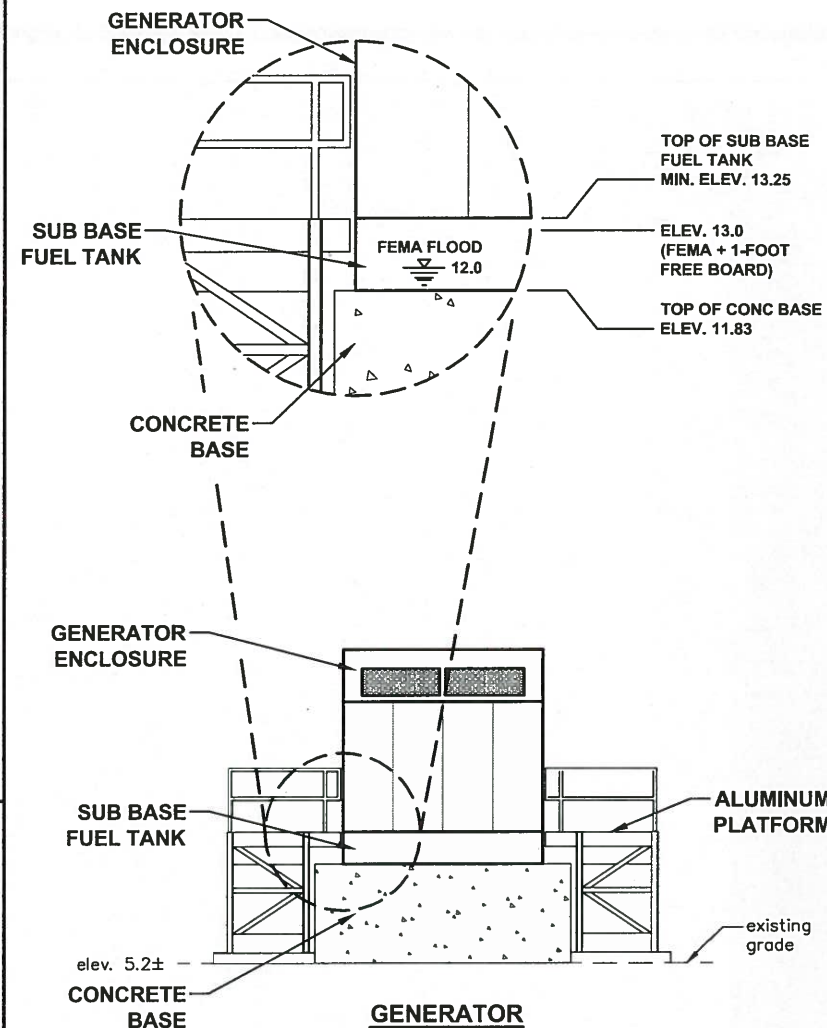


STANDARD DETAIL
TRENCH WITH NATIVE BACKFILL

- NOTES:
1. INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN NECESSARY.
 2. REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT CONTRIBUTE SEDIMENT OFF-SITE AND CAN BE PERMANENTLY STABILIZED.
 3. SILT FENCE SHALL BE PLACED ON SLOPE CONTOURS TO MAXIMIZE PONDING EFFICIENCY.

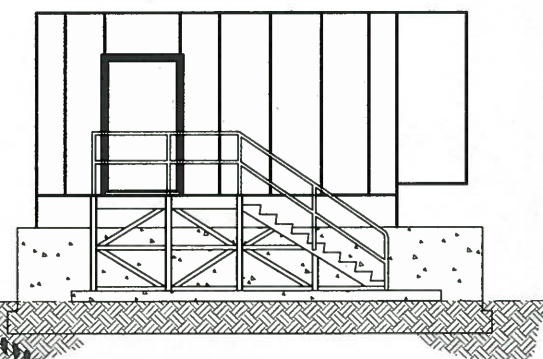


ALTERNATE DETAIL
TRENCH WITH GRAVEL



GENERATOR
FRONT ELEVATION

NTS
SEE "S" SHEETS FOR STRUCTURAL DETAILS
SEE "E" SHEETS FOR ELECTRICAL DETAILS



GENERATOR
SIDE ELEVATION

NTS
SEE "S" SHEETS FOR STRUCTURAL DETAILS
SEE "E" SHEETS FOR ELECTRICAL DETAILS



NO.	DESCRIPTION	BY	DATE

MANATEE COUNTY

MLS 12-A EMERGENCY
GENERATOR REPLACEMENT



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TEL: (727) 531-3505 (800) 861-8314
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KELLY S. WEHNER, PE DATE
LIC. NO.: 60273

DESIGNED	KSW
DRAWN	DES
Q.C.	DRM
APPROVED	

DETAIL SHEET

PROJECT NO:
00193009.08
DATE:
MAY 2016
SHEET NO:
C-6

CONDUIT RUN EXPOSED
CONDUIT RUN CONCEALED UNDERGROUND
CONDUIT RUN CONCEALED IN FLOOR OR SLAB
GROUNDING ELECTRODE CONDUCTOR

CONDUIT STUB OUT AND CAP

GROUND ROD

JUNCTION BOX

JUNCTION BOX WITH FLEXIBLE CONNECTION

480V
15 KVA, 1*
120/240V
TRANSFORMER, 480V INDICATED PRIMARY VOLTAGE, 120/240V INDICATES SECONDARY VOLTAGE, 15 KVA REPRESENTS POWER RATING, AND 1* INDICATES SINGLE PHASE (THREE PHASE IF NOT INDICATED)

3P
30A
THERMAL MAGNETIC CIRCUIT BREAKER WITH NUMBER OF POLES AND AMPERE RATING

COMBINATION MAGNETIC STARTER WITH CONTROL POWER TRANSFORMER (SIZED FOR LOAD). LETTERS INDICATE TYPE:
N - NON-REVERSING
R - REVERSING
2S - TWO-SPEED
C - CONTACTOR
SS - SOLID STATE SOFT START

XXX

XXX DEVICE

DESCRIPTION

HLS HIGH LEVEL SWITCH
HOA HAND-OFF-AUTO
LD LEAK DETECTION
LLS LOW LEVEL SWITCH
LOR LOCAL-OFF-REMOTE
PB PUSH BUTTON
RTU REMOTE TERMINAL UNIT
SS SOFT STARTER
SS/B SOFT START OR BYPASS
TS TEMPERATURE SWITCH
TVSS TRANSIENT VOLTAGE SURGE SUPPRESSOR
ZS POSITION SENSOR (LIMIT SWITCH)

FUSE

MOTOR

THERMAL OVERLOAD

UTILITY METER

TRANSFER SWITCH

ELECTRIC PANELBOARD

DISCONNECT OR SAFETY SWITCH

FLOAT SWITCH. OPENS ON LOW LEVEL.

FLOAT SWITCH. CLOSING ON LOW LEVEL.

NORMALLY OPEN (N.O.) CONTACT

NORMALLY CLOSED (N.C.) CONTACT

GROUND CONNECTION

INDICATING PILOT LIGHT LETTER INDICATES COLOR OF LENS

DISCONNECT OR TOGGLE SWITCH

NORMALLY OPEN MOMENTARY CIRCUIT CLOSING PUSH-BUTTON SWITCH. SPRING OPEN. NUMBER OF ELECTRICAL CONTACTS ON SWITCH SHOWN ON CONTROL SCHEMATIC

NORMALLY CLOSED MOMENTARY CIRCUIT OPENING PUSH-BUTTON SWITCH. SPRING CLOSE. NUMBER OF ELECTRICAL CONTACTS ON SWITCH SHOWN ON CONTROL SCHEMATIC

LIMIT SWITCH NORMALLY CLOSED CONTACT. CONTACT OPENS WHEN ACTUATED

TORQUE SWITCH NORMALLY CLOSED CONTACT. CONTACT OPENS WHEN ACTUATED

PUMP THERMAL SENSOR

3-PHASE, 480V CAPACITOR

ABBREVIATIONS:

A AMPS
AFF ABOVE FINISHED FLOOR
AFG ABOVE FINISHED GRADE
ATL ACROSS-THE-LINE
C CONDUIT
CU COPPER
EX EXISTING
ELEC ELECTRICAL
EXP EXPLOSION PROOF
FU FUSE
GFI GROUND FAULT INTERRUPTER
GND GROUNDING CONDUCTOR
HP HORSEPOWER
HZ HERTZ
IG ISOLATED GROUND
KVA KILOVOLT AMPERES
KW KILOWATTS
MAX MAXIMUM
MIN MINIMUM
N/A NOT APPLICABLE
PH PHASE
RECP RECEPTACLE
RPM REVOLUTIONS PER MINUTE
RTU REMOTE TERMINAL UNIT
SPD SURGE PROTECTION DEVICE
TYP TYPICAL
V VOLTS
WP WEATHERPROOF

EXAMPLE OF SECTION CUT AND DETAIL

SECTION

SCALE : 1/4" = 1'-0" E-1 E-2

SHEET NUMBER WHERE SECTION IS CUT

SECTION (LETTERS USED)

SHEET NUMBER WHERE SECTION IS SHOWN

SECTION (LETTERS USED)

SHEET NUMBER WHERE SECTION IS CUT

SHEET NUMBER WHERE SECTION IS SHOWN

DETAIL (NUMBERS USED)

DETAIL

SCALE : 1/4" = 1'-0" E-1 E-2

SHEET NUMBER WHERE DETAIL IS SHOWN

SHEET NUMBER WHERE DETAIL IS ENLARGED

GENERAL NOTES

THE WORK CONSIST OF FURNISHING ALL LABOR, MATERIALS, EQUIPMENT, AND TECHNICAL SUPERVISION TO INSTALL A NEW GENERATOR, TRANSFER SWITCH AND ASSOCIATED EQUIPMENT AS INDICATED AND SHOWN. THE WORK INCLUDES, BUT IS NOT LIMITED TO, THE FOLLOWING:

- CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL PRIOR TO PURCHASING EQUIPMENT OR COMMENCING CONSTRUCTION.
- CONTROL CONDUCTORS SHALL BE STRANDED COPPER, 14 AWG MINIMUM, WITH THWN INSULATION, UNLESS OTHERWISE NOTED.
- ALL WIRING SHALL BE IDENTIFIED WITH NUMBERS AT ALL TERMINALS AND ON WIRING DIAGRAMS.
- FIELD VERIFY ALL EQUIPMENT LOCATIONS AND CONNECTIONS PRIOR TO COMMENCING CONSTRUCTION.
- ALL NEW EQUIPMENT SHALL BE PERMANENTLY IDENTIFIED WITH A BLACK ON WHITE LAMACOID TAG ENGRAVED WITH MINIMUM 3/16 INCH LETTERING.
- ALL CIRCUITS SHALL HAVE A GROUNDING CONDUCTOR ROUTED INSIDE EACH CONDUIT WITH POWER CONDUCTORS.
- ALL CONDUCTOR LENGTHS SHALL BE CONTINUOUS. NO SPLICES OR CONDUCTOR TERMINATIONS SHALL BE PERMITTED UNLESS SPECIFICALLY DESIGNATED IN THE DRAWINGS.
- ALL EXISTING INSTALLATIONS DENOTED ON THE DRAWINGS ARE FOR THE CONTRACTORS REFERENCE ONLY. ALL EXISTING INSTALLATIONS SHALL BE FIELD VERIFIED PRIOR TO SUBMITTING A BID AND PRIOR TO COMMENCING CONSTRUCTION.
- CONDUITS SHALL BE RIGID HEAVY WALL ALUMINUM. FLEXIBLE CONDUITS SHALL BE NONMETALLIC LIQUID TIGHT.
- MAKE MODIFICATIONS TO THE EXISTING MOTOR CONTROL CENTER AS SHOWN AND SPECIFIED.
- PROVIDE AND INSTALL GENERATOR WITH WEATHER-PROOF, SOUND ATTENUATED ENCLOSURE AS SHOWN AND SPECIFIED.
- MAKE REQUIRED INTERCONNECTIONS BETWEEN MOTOR CONTROL CENTER COMPONENTS AND NEW GENERATOR AS SHOWN AND SPECIFIED.
- PROVIDE AND INSTALL STAINLESS STEEL CHANNEL ERECTOR SYSTEMS TO MOUNT AND SUPPORT ENCLOSURES, BOXES, CONDUITS AND OTHER EQUIPMENT. ALL MOUNTING HARDWARE SHALL BE 316 SS.
- ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE 2014 NATIONAL ELECTRICAL CODE (NEC).
- AFTER COMPLETING THE EQUIPMENT INSTALLATION, THE SYSTEM SHALL BE TESTED TO SHOW FUNCTIONALITY.
- TEST AND START-UP REPORTS FOR THE GENERATOR SYSTEM AND WIRE SHALL BE INCLUDED IN THE OPERATION AND MAINTENANCE (O&M) MANUALS PROVIDED UNDER THIS CONTRACT.

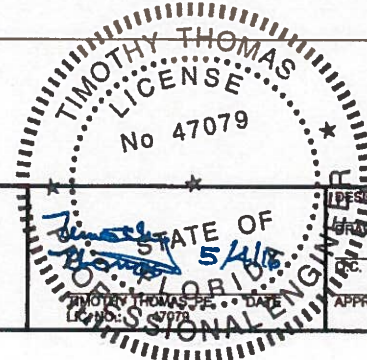
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MANATEE COUNTY

MLS 12-A EMERGENCY
GENERATOR REPLACEMENT

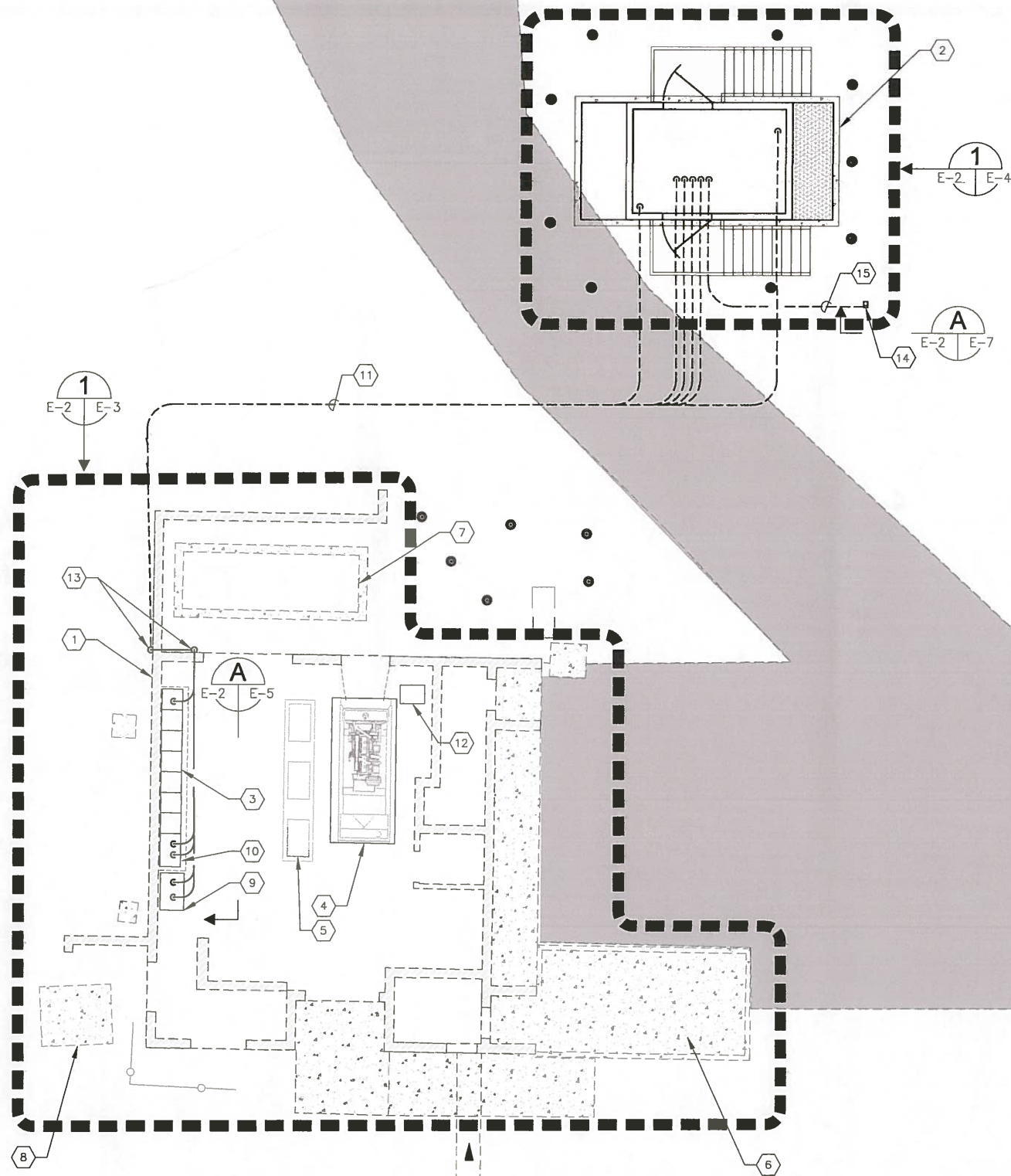
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**ELECTRICAL LEGEND
AND ABBREVIATIONS**

PROJECT NO:
00193009.08
DATE:
APRIL 2016
SHEET NO:
E-1



KEYED NOTES:

- 1 EXISTING BUILDING FOR LIFT STATION 12-A. REFER TO SHEET E-3 FOR WORK REQUIRED WITHIN THE LIFT STATION BUILDING.
- 2 NEW 480V, 400 KW GENERATOR IN WEATHER-PROOF, SOUND ATTENUATED ENCLOSURE. REFER TO SHEET E-4 FOR GENERATOR DETAILS.
- 3 EXISTING MOTOR CONTROL CENTER (MCC) FOR LIFT STATION 12-A. REFER TO SHEET E-5 FOR MCC ELEVATION AND WORK REQUIRED.
- 4 EXISTING GENERATOR SET TO BE REMOVED. REFER TO CIVIL/MECHANICAL SHEETS FOR DETAILS.
- 5 EXISTING VARIABLE FREQUENCY DRIVES (VFD'S) NO WORK REQUIRED.
- 6 EXISTING ODOR CONTROL FILTER. NO WORK REQUIRED.
- 7 EXISTING DIESEL STORAGE TANK. REFER TO CIVIL/MECHANICAL SHEETS FOR ANY WORK REQUIRED.
- 8 EXISTING UTILITY TRANSFORMER. NO WORK REQUIRED.
- 9 EXISTING TRANSFER SWITCH FOR LIFT STATION 12-A. EXISTING TRANSFER SWITCH TO BE REPLACED. REFER TO SHEETS E-5 AND E-7 FOR WORK REQUIRED.
- 10 EXISTING PLC CONTROL CABINET FOR LIFT STATION 12-A. REFER TO SHEET E-5 FOR PLC CONTROL CABINET ELEVATION AND WORK REQUIRED.
- 11 CONTRACTOR TO PROVIDE AND INSTALL THE FOLLOWING :
 PROVIDE AND INSTALL 8-#12 THWN CU + 1-#12 THWN CU GND IN 3/4" CONDUIT. FIELD ROUTE CONDUIT FROM PLC CONTROL CABINET TO NEW GENERATOR FOR SCADA MONITORING OF GENERATOR. 2-#12 FOR GENERATOR RUNNING INDICATION, 2-#12 FOR GENERATOR FAIL INDICATION AND 4-#12 SPARE.
 PROVIDE AND INSTALL 8-#12 THWN CU + 1-#12 THWN CU GND IN 3/4" CONDUIT TO EXISTING PLC CONTROL CABINET FOR SCADA MONITORING OF BASE TANK. 2-#12 BASE TANK LEAK DETECTION ALARM, 2-#12 FOR BASE TANK FUEL LOW LEVEL ALARM, 2-#12 FOR BASE TANK FUEL HIGH LEVEL ALARM AND 2-#12 SPARE. CONTRACTOR SHALL COORDINATE/VERIFY CONNECTION LOCATION AND TYPE WITH ENCLOSURE MANUFACTURER.
 PROVIDE AND INSTALL TWO (2) PARALLEL RUNS CONSISTING OF 3-350kcmil THWN CU + 1-#1 THWN CU GND IN 3" CONDUIT. FIELD ROUTE CONDUIT FROM NEW TRANSFER SWITCH TO NEW GENERATOR FOR 480V STANDBY POWER FEEDER CIRCUIT.
 PROVIDE AND INSTALL 4-#12 THWN CU + 1-#12 THWN CU GND IN 3/4" CONDUIT. FIELD ROUTE CONDUIT FROM NEW TRANSFER SWITCH TO NEW GENERATOR FOR GENERATOR START SIGNAL. CONTRACTOR TO COORDINATE/VERIFY GENERATOR STARTER CONTROL REQUIREMENTS WITH GENERATOR AND TRANSFER SWITCH MANUFACTURERS.
 PROVIDE AND INSTALL 3-#8 THWN CU + 1-#10 THWN CU GND IN 1" CONDUIT. FIELD ROUTE CONDUIT FROM NEW MCC FEEDER CIRCUIT BREAKER TO NEW GENERATOR DISCONNECT SWITCH FOR 480V ANCILLARY EQUIPMENT FEEDER CIRCUIT.
- 12 EXISTING DAY TANK TO BE REMOVED. REFER TO CIVIL/MECHANICAL SHEETS FOR DETAILS.
- 13 CORE DRILL PENETRATION 1/4" LARGER THAN CONDUIT DIAMETER. FILL VOID WITH PAINTABLE SILICONE CHALK (BOTH SIDES OF WALL). PAINT WITH COLOR TO MATCH EXISTING WALL. TYPICAL FOR ALL EXTERIOR WALL PENETRATIONS.
- 14 GENERATOR EMERGENCY SHUT DOWN PUSH BUTTON STATION. MAINTAINED 2 POSITION SWITCH WITH 1-5/8" DIA. OPERATOR, 1 N.O. & 1 N.C. CONTACT MOUNTED IN A NEMA 4X SS ENCLOSURE, 4'-6" ABOVE FINISHED CONCRETE PAD GRADE. REFER TO SHEET E-7 FOR DETAILS.
- 15 PROVIDE AND INSTALL 2-#12 THWN CU + 1-#12 THWN CU GND IN 3/4" CONDUIT. FIELD ROUTE CONDUIT FROM PUSH BUTTON STATION TO NEW GENERATOR FOR SHUT DOWN SIGNAL.

GENERAL NOTES :

1. THIS DRAWING SHOWS EXISTING CONDITIONS USING THE BEST AS-BUILT INFORMATION AVAILABLE AT THE TIME OF DESIGN. IT IS PROVIDED FOR REFERENCE ONLY. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING INSTALLATIONS PRIOR TO SUBMITTING A BID AND PRIOR TO COMMENCING CONSTRUCTION.
2. CONDUIT ROUTING SHOWN IS DIAGRAMMATICAL. CONTRACTOR SHALL FIELD ROUTE CONDUIT BASED ON EXISTING FIELD CONDITIONS. CONTRACTOR SHALL PROVIDE JUNCTION BOXES, PULL BOXES AND/OR CONDUIT LB FITTING AS REQUIRED TO MEET THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE.

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CHECKED: TDT
APPROVED: TDT

ELECTRICAL SITE PLAN

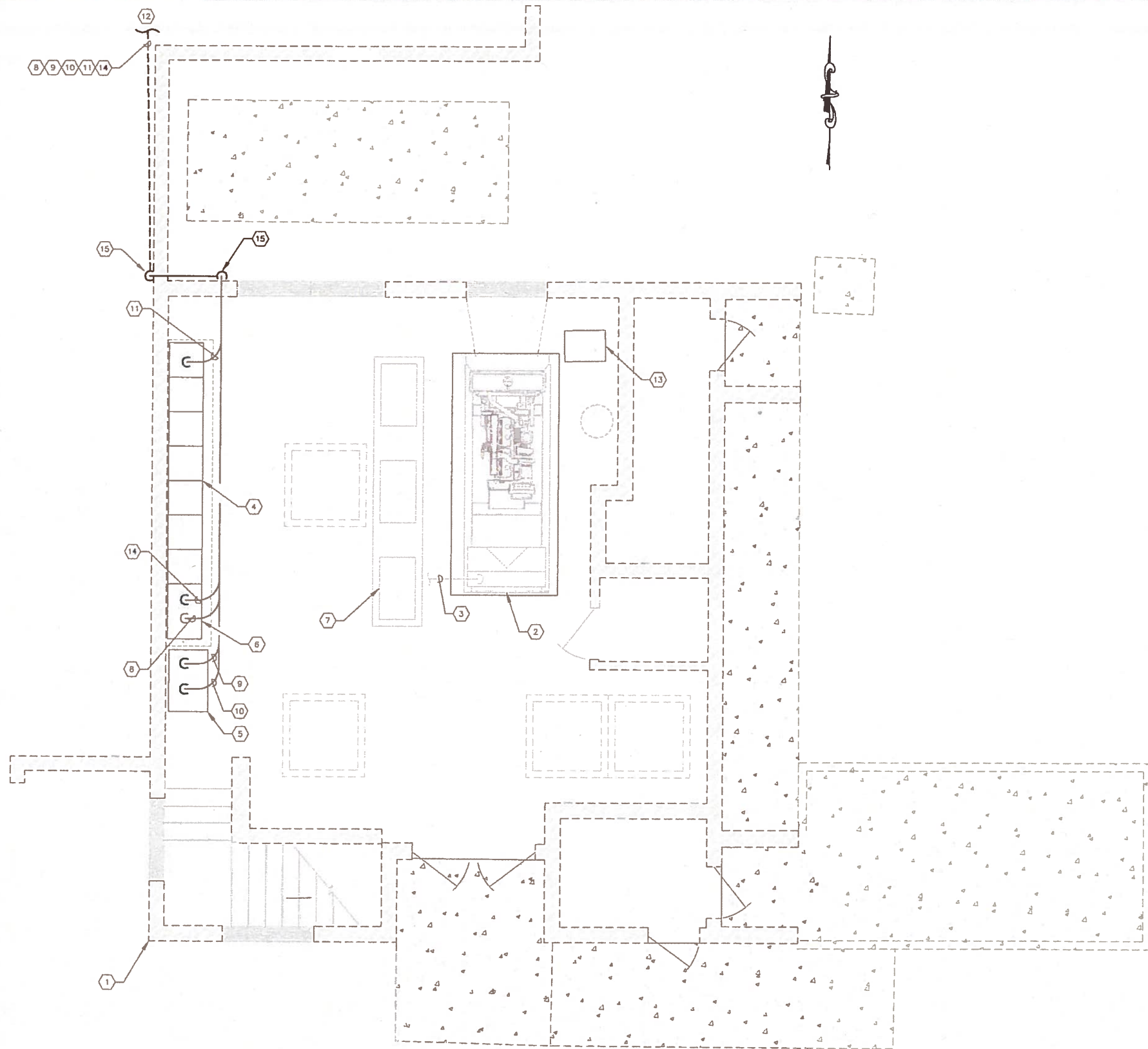
PROJECT NO: 00193009.08
DATE: APRIL 2016
SHEET NO: E-2

NO.	DESCRIPTION	BY	DATE

MANATEE COUNTY

MLS 12-A EMERGENCY GENERATOR REPLACEMENT

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**BUILDING GROUND LEVEL
FLOOR PLAN**

SCALE : N.T.S.

1
E-2 E-3

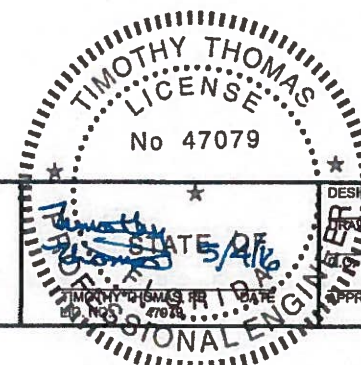
KEYED NOTES:

- 1 EXISTING BUILDING FOR LIFT STATION 12-A.
- 2 EXISTING GENERATOR SET TO BE REMOVED. REFER TO CIVIL/MECHANICAL SHEETS FOR DETAILS.
- 3 EXISTING GENERATOR 480V FEEDER TO BE REMOVED. FEEDER CONDUCTORS ARE ROUTED TO EXISTING TRANSFER SWITCH VIA EXISTING MCC AND WIREWAY. CONTRACTOR SHALL REMOVE ENTIRE LENGTH OF CONDUCTORS AND CONDUIT. CONTRACTOR SHALL ALSO REMOVE ALL ANCILLARY EQUIPMENT CONDUCTORS AND CONDUIT (BATTERY CHARGER CIRCUIT, GENERATOR STARTER CIRCUIT, ETC., NOT SHOWN FOR CLARITY).
- 4 EXISTING MOTOR CONTROL CENTER (MCC) FOR LIFT STATION 12-A. REFER TO SHEET E-5 FOR MCC ELEVATION AND WORK REQUIRED.
- 5 EXISTING TRANSFER SWITCH FOR LIFT STATION 12-A TO BE REPLACED. REFER TO SHEETS E-5 AND E-7 FOR TRANSFER SWITCH ELEVATION AND WORK REQUIRED.
- 6 EXISTING PLC CONTROL CABINET. REFER TO SHEET E-5 FOR ELEVATION OF PLC CONTROL CABINET ELEVATION AND WORK REQUIRED.
- 7 EXISTING VARIABLE FREQUENCY DRIVE (VFD). TYPICAL OF THREE (3). NO WORK REQUIRED FOR ANY VFD.
- 8 PROVIDE AND INSTALL 8-#12 THWN CU + 1-#12 THWN CU GND IN 3/4" CONDUIT. FIELD ROUTE CONDUIT FROM PLC CONTROL CABINET TO NEW GENERATOR FOR SCADA MONITORING OF GENERATOR. 2-#12 FOR GENERATOR RUNNING INDICATION, 2-#12 FOR GENERATOR FAIL INDICATION AND 4-#12 SPARE.
- 9 PROVIDE AND INSTALL TWO (2) PARALLEL RUNS CONSISTING OF 3-350 kcmil THWN CU + 1-#1 THWN CU GND IN 3" CONDUIT. FIELD ROUTE CONDUIT FROM NEW TRANSFER SWITCH TO NEW GENERATOR FOR 480V STANDBY POWER FEEDER CIRCUIT.
- 10 PROVIDE AND INSTALL 4-#12 THWN CU + 1-#12 THWN CU GND IN 3/4" CONDUIT. FIELD ROUTE CONDUIT FROM NEW TRANSFER SWITCH TO NEW GENERATOR FOR GENERATOR START SIGNAL. CONTRACTOR TO COORDINATE/VERIFY GENERATOR STARTER CONTROL REQUIREMENTS WITH GENERATOR AND TRANSFER SWITCH MANUFACTURERS.
- 11 PROVIDE AND INSTALL 3-#8 THWN CU + 1-#10 THWN CU GND IN 1" CONDUIT. FIELD ROUTE CONDUIT FROM NEW MCC FEEDER CIRCUIT BREAKER TO NEW GENERATOR DISCONNECT SWITCH FOR 480V ANCILLARY EQUIPMENT FEEDER CIRCUIT.
- 12 FOR CONTINUATION OF CONDUITS TO GENERATOR REFER TO SHEET E-4.
- 13 EXISTING DAY TANK TO BE REMOVED. REFER TO CIVIL/MECHANICAL SHEETS FOR DETAILS.
- 14 PROVIDE AND INSTALL 8-#12 THWN CU + 1-#12 THWN CU GND IN 3/4" CONDUIT TO EXISTING PLC CONTROL CABINET FOR SCADA MONITORING OF BASE TANK. 2-#12 BASE TANK LEAK DETECTION ALARM, 2-#12 FOR BASE TANK FUEL LOW LEVEL ALARM, 2-#12 FOR BASE TANK FUEL HIGH LEVEL ALARM AND 2-#12 SPARE. CONTRACTOR SHALL COORDINATE/VERIFY CONNECTION LOCATION AND TYPE WITH ENCLOSURE MANUFACTURER.
- 15 CORE DRILL PENETRATION 1/4" LARGER THAN CONDUIT DIAMETER. FILL VOID WITH PAINTABLE SILICONE CHALK (BOTH SIDES OF WALL). PAINT WITH COLOR TO MATCH EXISTING WALL. TYPICAL FOR ALL EXTERIOR WALL PENETRATIONS.

GENERAL NOTES :

1. THIS DRAWING SHOWS EXISTING CONDITIONS USING THE BEST AS-BUILT INFORMATION AVAILABLE AT THE TIME OF DESIGN. IT IS PROVIDED FOR REFERENCE ONLY. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING INSTALLATIONS PRIOR TO SUBMITTING A BID AND PRIOR TO COMMENCING CONSTRUCTION.
2. CONDUIT ROUTING SHOWN IS DIAGRAMMATICAL. CONTRACTOR SHALL FIELD ROUTE CONDUIT BASED ON EXISTING FIELD CONDITIONS. CONTRACTOR SHALL PROVIDE JUNCTION BOXES, PULL BOXES AND/OR CONDUIT LB FITTING AS REQUIRED TO MEET THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE.

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MANATEE COUNTY

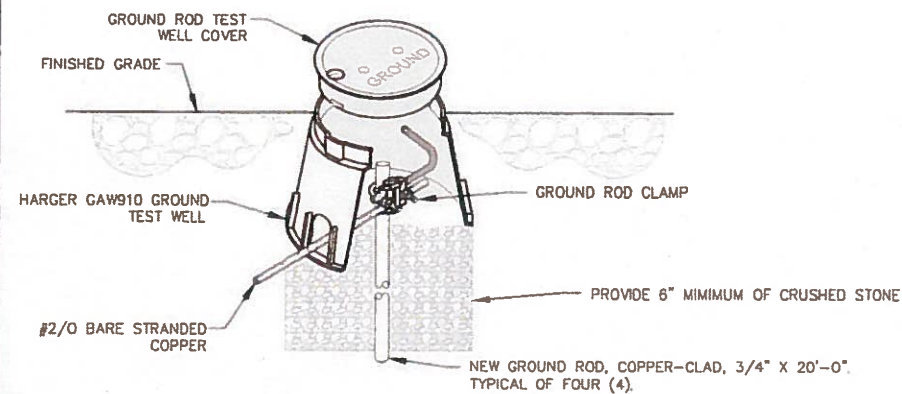
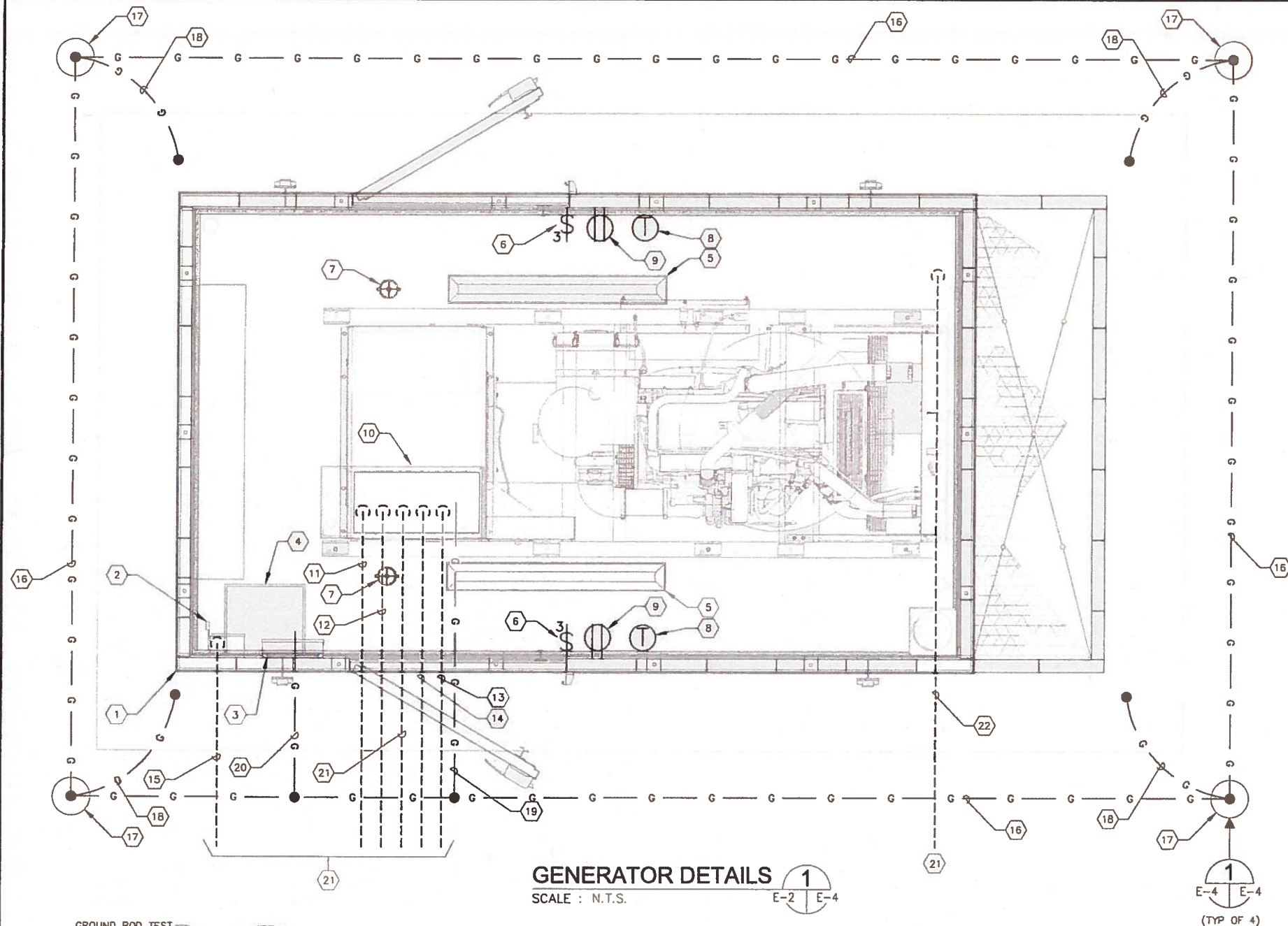
**MLS 12-A EMERGENCY
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**BUILDING LAYOUT
GROUND LEVEL**

PROJECT NO:
00193009.08
DATE:
APRIL 2016
SHEET NO:
E-3



KEYED NOTES:

- NEW 480V, 400 KW GENERATOR IN WEATHER-PROOF, SOUND ATTENUATED ENCLOSURE. REFER ALSO TO SPECIFICATIONS.
- 60 AMPERE FUSED DISCONNECT SWITCH PROVIDED AND INSTALLED AS PART OF THE ENCLOSURE PACKAGE.
- 100 AMPERE, 120/208V, 3 ϕ , MCB LOADCENTER PROVIDED AND INSTALLED AS PART OF THE ENCLOSURE PACKAGE.
- 25 KVA, 480V-120/208V, 3 ϕ , TRANSFORMER PROVIDED AND INSTALLED AS PART OF THE ENCLOSURE PACKAGE. TRANSFORMER LOCATED ABOVE DISCONNECT AND LOADCENTER.
- DUAL TUBE FLUORESCENT LIGHT FIXTURE PROVIDED AND INSTALLED AS PART OF THE ENCLOSURE PACKAGE.
- 3-WAY SWITCHES PROVIDED AND INSTALLED AS PART OF THE ENCLOSURE PACKAGE.
- DC LIGHT FIXTURES PROVIDED AND INSTALLED AS PART OF THE ENCLOSURE PACKAGE.
- 60 MINUTE TIMER SWITCHES FOR DC LIGHT FIXTURES PROVIDED AND INSTALLED AS PART OF THE ENCLOSURE PACKAGE.
- 20A, 125V DUPLEX GFCI RECEPTACLE PROVIDED AND INSTALLED AS PART OF THE ENCLOSURE PACKAGE.
- STUBUP LOCATION FOR 480V FEEDER CIRCUIT, GENERATOR STARTER CIRCUIT, GENERATOR SHUT DOWN AND SCADA I/O. COORDINATE/VERIFY EXACT LOCATION WITH ENCLOSURE MANUFACTURER.
- PROVIDE AND INSTALL 8-#12 THWN CU + 1-#12 THWN CU GND IN 3/4" CONDUIT TO EXISTING PLC CONTROL CABINET FOR SCADA MONITORING OF GENERATOR. 2-#12 FOR GENERATOR RUNNING INDICATION, 2-#12 FOR GENERATOR FAIL INDICATION AND 4-#12 SPARE.
- PROVIDE AND INSTALL 4-#12 THWN CU + 1-#12 THWN CU GND IN 3/4" CONDUIT TO EXISTING TRANSFER SWITCH FOR GENERATOR START SIGNAL. CONTRACTOR TO COORDINATE/VERIFY GENERATOR STARTER CONTROL REQUIREMENTS WITH GENERATOR AND TRANSFER SWITCH MANUFACTURERS.
- PROVIDE AND INSTALL 2-#12 THWN CU + 1-#12 THWN CU GND IN 3/4" CONDUIT TO NEW EMERGENCY SHUT DOWN PUSH BUTTON STATION FOR SHUT DOWN SIGNAL.
- PROVIDE AND INSTALL TWO (2) PARALLEL RUNS CONSISTING OF 3-350 kcmil THWN CU + 1-#1 THWN CU GND IN 3" CONDUIT TO EXISTING TRANSFER SWITCH FOR 480V STANDBY POWER FEEDER CIRCUIT.
- PROVIDE AND INSTALL 3-#8 THWN CU + 1-#10 THWN CU GND IN 1" CONDUIT TO NEW MCC FEEDER CIRCUIT BREAKER FOR 480V ANCILLARY EQUIPMENT FEEDER CIRCUIT.
- CONTRACTOR TO PROVIDE AND INSTALL GROUND RING CONSISTING OF #2/0 BARE STRANDED COPPER DIRECT BURIED IN SOIL A MINIMUM OF 24" BELOW GRAVEL BASE.
- CONTRACTOR TO PROVIDE AND INSTALL NEW GROUND ROD, COPPER-CLAD, 3/4" X 20'-0" AND GROUND ROD TEST WELL. REFER ALSO TO GROUND ROD DETAIL ON THIS SHEET. TYPICAL OF FOUR (4).
- CONTRACTOR TO PROVIDE AND INSTALL A #2/0 AWG BARE COPPER CONDUCTOR BETWEEN THE GROUND ROD AND THE REINFORCING STEEL EMBEDDED IN THE GENERATOR CONCRETE PAD. PROVIDE EXOTHERMIC WELDS.
- CONTRACTOR TO PROVIDE AND INSTALL #2/0 BARE STRANDED COPPER GROUNDING ELECTRODE CONDUCTOR FOR GENERATOR FRAME. PROVIDE EXOTHERMIC WELD TO GROUNDING GRID.
- CONTRACTOR TO PROVIDE AND INSTALL #8 BARE STRANDED COPPER GROUNDING ELECTRODE CONDUCTOR FOR ANCILLARY TRANSFORMER GROUNDING. PROVIDE EXOTHERMIC WELD TO GROUNDING GRID.
- FOR CONTINUATION OF CONDUITS TO PUMP STATION 12-A BUILDING REFER TO SHEET E-3.
- PROVIDE AND INSTALL 8-#12 THWN CU + 1-#12 THWN CU GND IN 3/4" CONDUIT TO EXISTING PLC CONTROL CABINET FOR SCADA MONITORING OF BASE TANK. 2-#12 BASE TANK LEAK DETECTION ALARM, 2-#12 FOR BASE TANK FUEL LOW LEVEL ALARM, 2-#12 FOR BASE TANK FUEL HIGH LEVEL ALARM AND 2-#12 SPARE. CONTRACTOR SHALL COORDINATE/VERIFY CONNECTION LOCATION AND TYPE WITH ENCLOSURE MANUFACTURER.

GENERAL NOTES :

- THIS DRAWING SHOWS LAYOUTS AND DIMENSIONS BASED ON A PARTICULAR MANUFACTURER. THE CONTRACTOR SHALL COORDINATE DIMENSIONS, STUBUP LOCATIONS AND EQUIPMENT LOCATIONS WITH THE MANUFACTURER SUBMITTED/PROVIDED.
- THE GENERATOR ENCLOSURE SHALL BE PROVIDED WITH A 60 AMPERE DISCONNECT SWITCH, 120/208V, 3 ϕ , MCB LOADCENTER, 25 KVA, 480V-120/208V, 3 ϕ , TRANSFORMER, FLUORESCENT LIGHTING FIXTURES, 3-WAY SWITCHES, DC LIGHTING FIXTURES, 60 MINUTE TIMER SWITCHES FOR DC LIGHT FIXTURES, DUPLEX GFCI RECEPTACLES, BASE TANK, BASE TANK SUPPLY AND RETURN PUMPS AND BASE TANK CONTROLLER AS NOTED AND SPECIFIED. ALL EQUIPMENT PROVIDED BY THE SUPPLIER OF THE ENCLOSURE PACKAGE SHALL BE PROVIDED AND INSTALLED WITH ALL ASSOCIATED CONDUIT AND CONDUCTORS FOR POWER AND CONTROLS AS REQUIRED FOR A COMPLETE AND FUNCTIONING UNIT.

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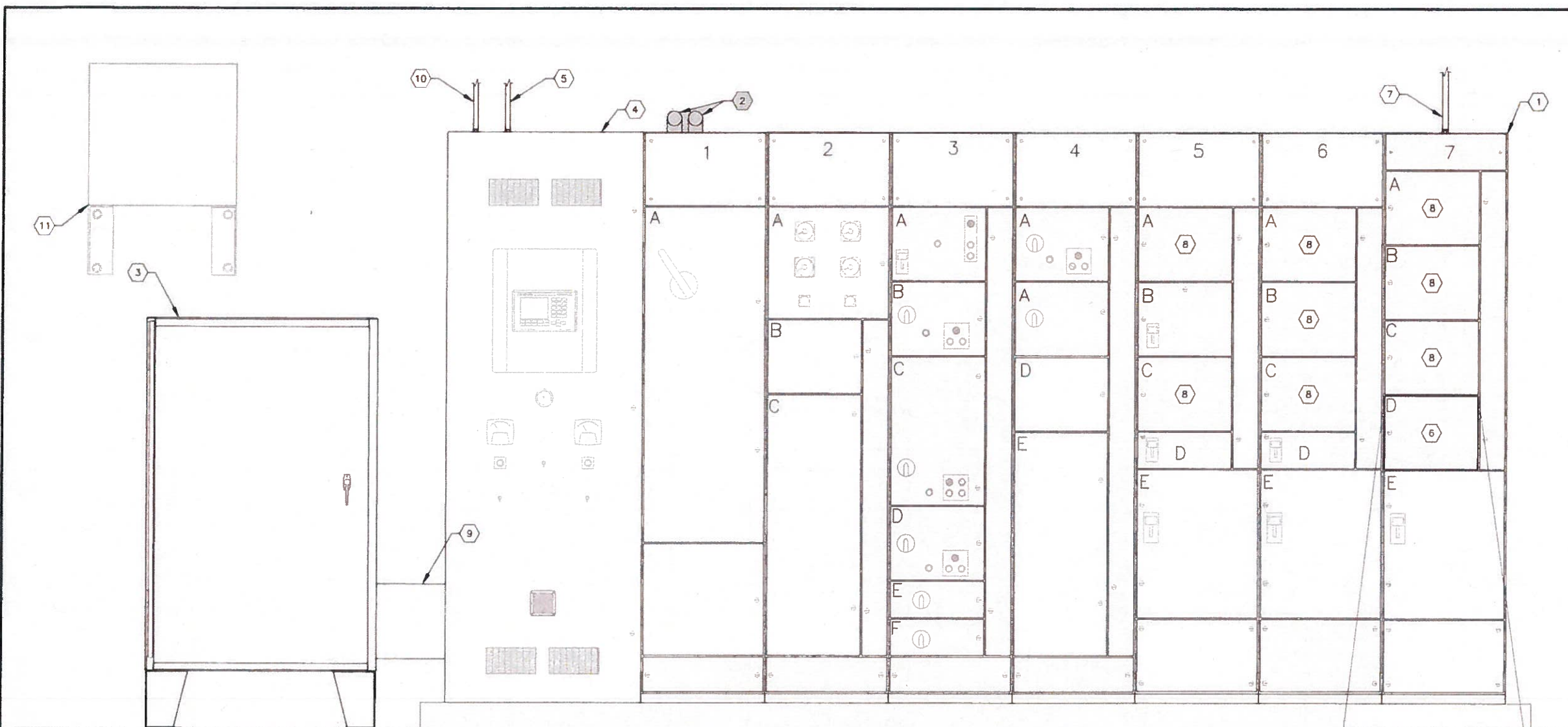
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GENERATOR DETAILS

PROJECT NO:
00193009.08
DATE:
APRIL 2018
SHEET NO:
E-4

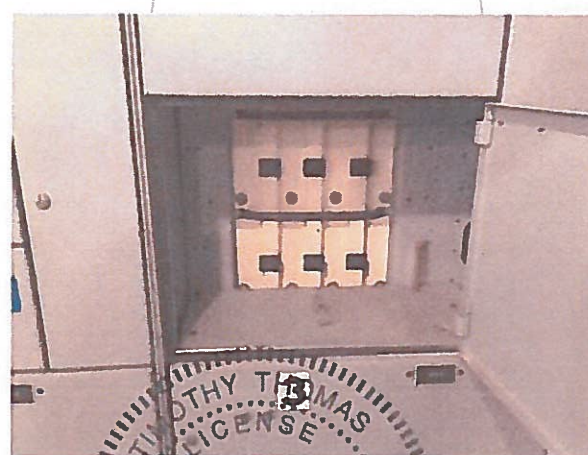


- KEYED NOTES:**
- 1 EXISTING GE 7700 LINE MOTOR CONTROL CENTER FOR LIFT STATION 12-A.
 - 2 EXISTING FEEDERS FROM EXISTING GENERATOR. EXISTING GENERATOR TO BE REMOVED. CONTRACTOR SHALL REMOVE EXISTING FEEDER (CONDUITS AND CONDUCTORS) FROM EXISTING AUTOMATIC TRANSFER SWITCH (ATS) TO EXISTING GENERATOR.
 - 3 EXISTING 600A, 480V, 3-POLE, ATS TO BE REPLACED. REFER TO SHEET E-7 FOR DETAILS.
 - 4 EXISTING PLC CONTROL CABINET.
 - 5 PROVIDE AND INSTALL 8-#12 THWN CU + 1-#12 THWN CU GND IN 3/4" CONDUIT. FIELD ROUTE CONDUIT FROM PLC CONTROL CABINET TO NEW GENERATOR FOR SCADA MONITORING OF GENERATOR. 2-#12 FOR GENERATOR RUNNING INDICATION, 2-#12 FOR GENERATOR FAIL INDICATION AND 4-#12 SPARE.
 - 6 EXISTING SPARE 12" SPACE IN GE 7700 LINE MCC (AT 7D). CONTRACTOR SHALL PROVIDE NEW 480V, 3-POLE, 40A CIRCUIT BREAKER FOR THE NEW GENERATOR 480V ANCILLARY EQUIPMENT FEEDER CIRCUIT. CONTRACTOR SHALL PROVIDE CIRCUIT BREAKER AND ALL ASSOCIATED EQUIPMENT (BUCKET, CIRCUIT BREAKER DOOR, CIRCUIT BREAKER THROUGH-DOOR OPERATING HANDLE, CIRCUIT BREAKER STABS, ETC.) FOR COMPLETE INSTALLATION.
 - 7 PROVIDE AND INSTALL 3-#8 THWN CU + 1-#10 THWN CU GND IN 1" CONDUIT. FIELD ROUTE CONDUIT FROM NEW MCC FEEDER CIRCUIT BREAKER TO NEW GENERATOR DISCONNECT SWITCH FOR 480V ANCILLARY EQUIPMENT FEEDER CIRCUIT.
 - 8 ALTERNATE SPARE 12" BUCKETS IN GE 7700 LINE MCC.
 - 9 EXISTING WIREWAY AND CONDUIT USED AS RACEWAY FOR CONDUCTORS FROM EXISTING MCC TO NEW ATS. CONDUCTORS FOR EXISTING GENERATOR (GENERATOR TO BE REMOVED) SHALL BE REMOVED. REFER ALSO TO SHEET E-7.
 - 10 PROVIDE AND INSTALL 8-#12 THWN CU + 1-#12 THWN CU GND IN 3/4" CONDUIT TO EXISTING PLC CONTROL CABINET FOR SCADA MONITORING OF DAY TANK. 2-#12 DAY TANK LEAK DETECTION ALARM, 2-#12 FOR DAY TANK FUEL LOW LEVEL ALARM, 2-#12 FOR DAY TANK FUEL HIGH LEVEL ALARM AND 2-#12 SPARE. CONTRACTOR SHALL COORDINATE/VERIFY CONNECTION LOCATION AND TYPE WITH ENCLOSURE MANUFACTURER.
 - 11 EXISTING TRANSFORMER MOUNTED ON WALL ABOVE EXISTING TRANSFER SWITCH. NO WORK REQUIRED.

LIFT STATION 12-A MCC ELEVATION
SCALE : N.T.S.

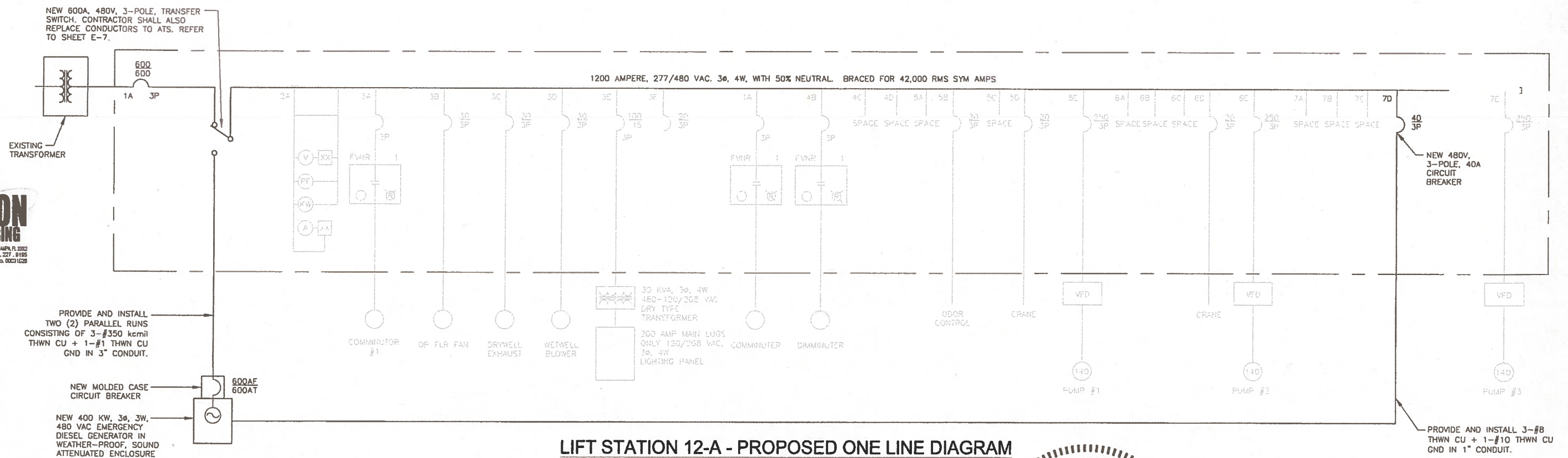
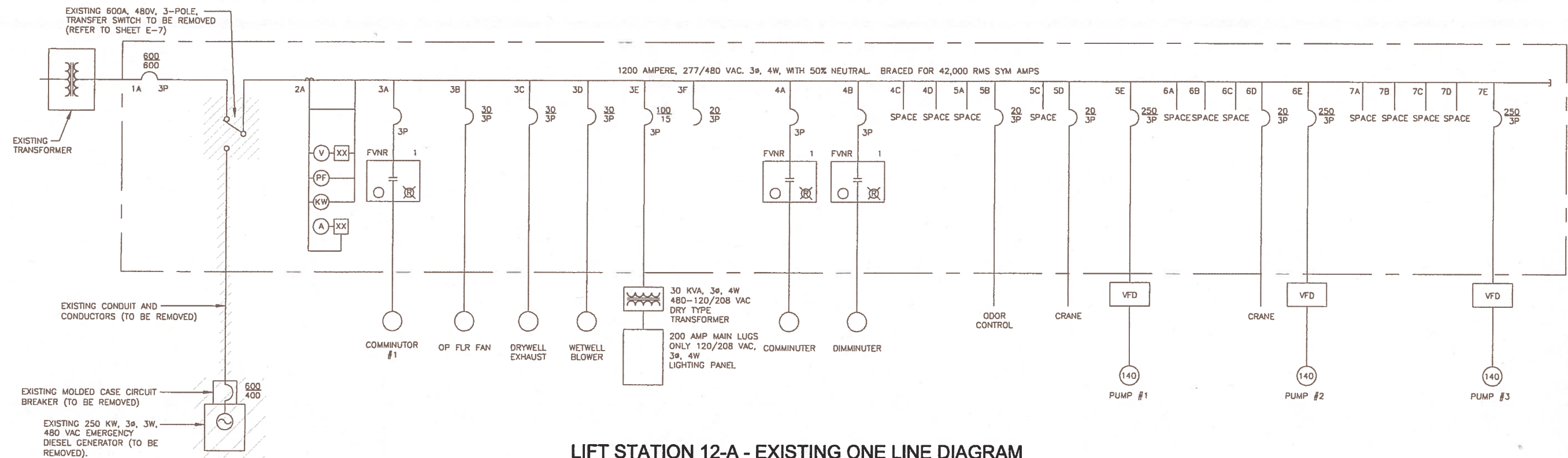
- GENERAL NOTES:**
1. THE CONTRACTOR SHALL PROVIDE FOR THE NEW SCADA INPUT/OUTPUTS (I/O) AS REQUIRED FOR THE NEW GENERATOR INSTALLATION. THE NEW SCADA I/O SHALL CONSIST OF THE FOLLOWING :

DISCRETE INPUT - GENERATOR RUNNING INDICATION
DISCRETE INPUT - GENERATOR FAIL INDICATION
DISCRETE INPUT - BASE TANK LEAK DETECTION ALARM
DISCRETE INPUT - BASE TANK FUEL LOW LEVEL ALARM
DISCRETE INPUT - BASE TANK FUEL HIGH LEVEL ALARM
 2. THE CONTRACTOR SHALL PROVIDE NEW CONDUCTORS AND CONDUIT AS INDICATED ON THE DRAWINGS FOR THE NEW SCADA I/O. THE CONTRACTOR SHALL TERMINATE ALL NEW CONDUCTORS ON THE EXISTING CONTROLLER AND PROVIDE FOR THE PROGRAMMING OF THE EXISTING CONTROLLER IN ORDER TO INTEGRATE THE NEW I/O INTO THE COUNTY'S EXISTING SCADA SYSTEM. THE CONTRACTOR SHALL COORDINATE THIS WORK WITH MANATEE COUNTY.



TRICON
ENGINEERING
777 E. Main Street, Suite 200, Tampa, FL 33602
813.227.9190 FAX 813.227.9195
Certificate of Authorization No. 00031028

				MANATEE COUNTY				MLS 12-A EMERGENCY GENERATOR REPLACEMENT				 Cardno Shaping the Future 380 PARK PLACE BLVD, STE 300, CLEARWATER, FL 33759 TEL: (727) 531-3505 (800) 861-8314 www.cardno.com Certificate of Authorization No. 29615								<div>DESIGNED TDT</div> <div>BY JHL</div> <div>DATE TDT</div> <div>APPROVED</div>				LIFT STATION 12-A MCC ELEVATION				PROJECT NO: 00193009.08 DATE: APRIL 2016 SHEET NO: E-5																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
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MANATEE COUNTY

MLS 12-A EMERGENCY GENERATOR REPLACEMENT



LIFT STATION 12-A

ONE LINE DIAGRAMS

PROJECT NO:	00193009.08
DATE:	APRIL 2016
SHEET NO:	E-6

PROVIDE PHENOLIC NAMEPLATE ABOVE PUSH BUTTON STATION. NAMEPLATE SHALL BE THREE-PLY PHENOLIC RED-WHITE-RED ENGRAVED THROUGH THE FIRST RED LAYER. LETTERING SHALL BE 1/2" MIN., EDGES OF NAMEPLATE SHALL BE BEVELED 45 DEG. NAMEPLATE SHALL READ AS FOLLOWS: "GENERATOR EMERGENCY SHUT DOWN".

GENERATOR EMERGENCY SHUT DOWN PUSH BUTTON STATION. MAINTAINED 2 POSITION SWITCH w/ 1-5/8" DIA. OPERATOR, 1 N.O. & 1 N.C. CONTACT MOUNTED IN A NEMA 4X SS ENCLOSURE, 4'-6" ABOVE FINISHED CONCRETE PAD GRADE.

ALUMINUM CONDUIT CLAMP (TYPICAL).

PROVIDE AND INSTALL 2-#12 THWN CU + 1-#12 THWN CU GND IN 3/4" CONDUIT. FIELD ROUTE CONDUIT FROM PUSH BUTTON STATION TO NEW GENERATOR FOR SHUT DOWN SIGNAL.

PROVIDE AND INSTALL 10" X 10" X 1/2" ALUMINUM BASE PLATE.

1/2" FLAT WASHER, LOCK WASHER AND HEX NUT (TYP).

1/2" X 10" J-BOLT (TYP).

PROVIDE AND INSTALL 4" SQUARE ALUMINUM POST WITH 1/4" WALL THICKNESS. WELD 1/4" CAP TO TOP OF POST.

4'-6"

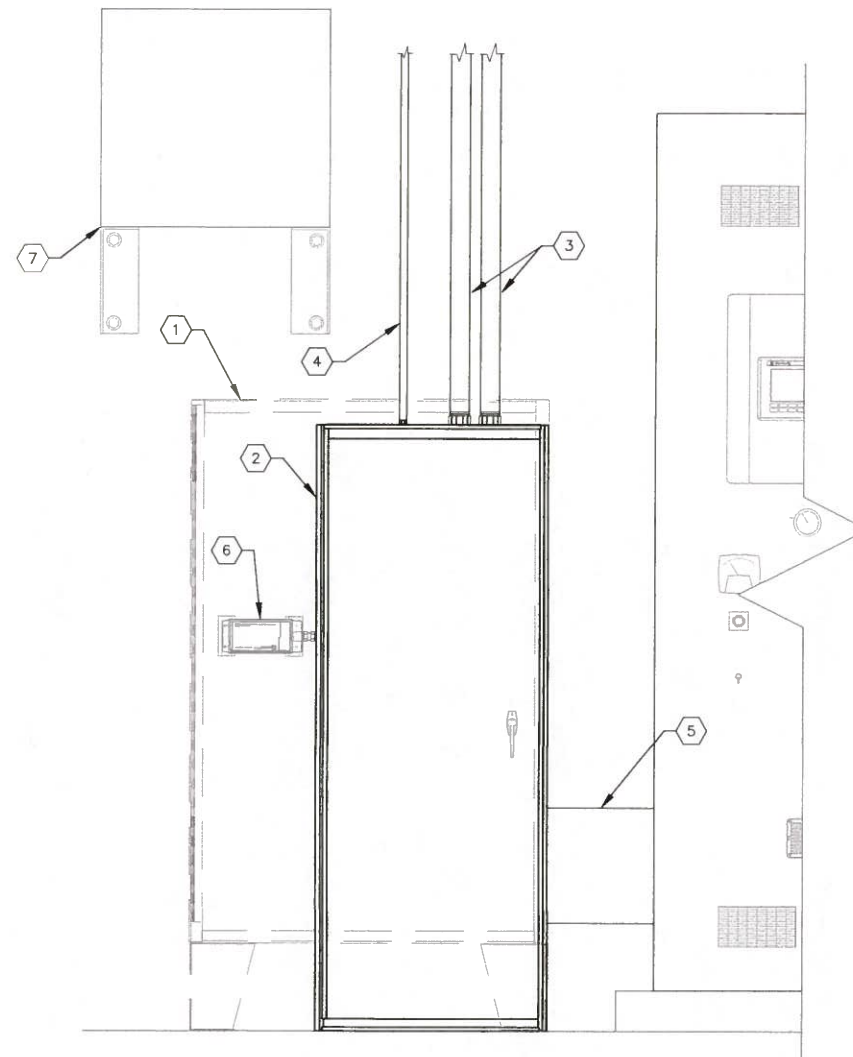
GROUT

REFER TO STRUCTURAL SHEETS FOR CONCRETE PAD/STAIRS DETAIL.

EMERGENCY SHUTOFF PUSH BUTTON ELEVATION

NO SCALE

A
E-2 | E-7



NEW ATS INSTALLATION ELEVATION

NO SCALE

KEYED NOTES:

- EXISTING ATS TO BE SALVAGED AND RETURNED TO MANATEE COUNTY.
- NEW 600A, 480V, 3-POLE, ATS WITH SOLID NEUTRAL IN FREE-STANDING ENCLOSURE. REFER ALSO TO SPECIFICATIONS. NEW TRANSFER SWITCH DIMENSIONS ARE APPROXIMATELY 24"W x 63"H x 17"D.
- PROVIDE AND INSTALL TWO (2) PARALLEL RUNS CONSISTING OF 3-350 kcmil THWN CU + 1-#1 THWN CU GND IN 3" CONDUIT TO NEW GENERATOR. FIELD ROUTE CONDUIT FROM NEW TRANSFER SWITCH TO NEW GENERATOR FOR 480V STANDBY POWER FEEDER CIRCUIT.
- PROVIDE AND INSTALL 4-#12 THWN CU + 1-#12 THWN CU GND IN 3/4" CONDUIT. FIELD ROUTE CONDUIT FROM NEW ATS TO NEW GENERATOR FOR GENERATOR START SIGNAL. CONTRACTOR TO COORDINATE/VERIFY GENERATOR STARTER CONTROL REQUIREMENTS WITH GENERATOR AND TRANSFER SWITCH MANUFACTURERS.
- EXISTING WIREWAY AND CONDUIT USED AS RACEWAY FOR EXISTING CONDUCTORS. CONTRACTOR SHALL -
REMOVE EXISTING WIREWAY AND PROVIDE NEW WIREWAY OF THE SAME MATERIALS/DIMENSIONS TO EXTEND TO NEW ATS.
REMOVE EXISTING NORMAL POWER CONDUCTORS FROM EXISTING MAIN CIRCUIT BREAKER TO EXISTING ATS AND REPLACE WITH TWO (2) PARALLEL RUNS CONSISTING OF 3-350 kcmil CU + 1/0 THWN CU NEUTRAL + 1-#1 THWN CU GND.
REMOVE EXISTING ATS LOAD SIDE CONDUCTORS TO MCC AND REPLACE WITH TWO (2) PARALLEL RUNS CONSISTING OF 3-350 kcmil THWN CU + 1/0 THWN CU NEUTRAL + 1-#1 THWN CU GND.
- CONTRACTOR TO PROVIDE AND INSTALL NEW SURGE PROTECTION DEVICE (SPD). 480V, 3Ø, 4-WIRE + GROUND. ADVANCED PROTECTION TECHNOLOGIES (APT) CAT# TE04XCS10. PROVIDE AND INSTALL 3-#10 XHHW-2 CU + 1-#10 XHHW-2 CU GND IN 3/4" CONDUIT FROM NEW SURGE PROTECTION DEVICE TO LOAD SIDE OF NEW ATS. MOUNT SPD ON WALL WITH 1-5/8" X 1-5/8" STAINLESS STEEL UNISTRUT.
- EXISTING TRANSFORMER MOUNTED ON WALL ABOVE EXISTING TRANSFER SWITCH. NO WORK REQUIRED.

ATS GENERAL NOTES:

- THE CONTRACTOR SHALL PROVIDE LUGS AS REQUIRED TO ACCOMMODATE THE NEW CONDUCTORS TO BE INSTALLED.
- THE CONTRACTOR SHALL CONNECT ALL EQUIPMENT GROUND CONDUCTORS (NOT SHOWN FOR CLARITY).
- CONTRACTOR TO REMOVE ALL EXISTING CONTROL CONDUCTORS FROM EXISTING GENERATOR (TO BE REMOVED) TO EXISTING ATS (TO BE REMOVED). PROVIDE NEW CONTROL CONDUCTORS/CONDUIT AS INDICATED ON THIS SHEET.
- REFER TO SPECIFICATION SECTION 00800 FOR TEMPORARY POWER REQUIREMENTS.
- CONTRACTOR SHALL DUPLICATE ALL EXISTING CONDUCTOR ROUTES/SIZES/QUANTITIES. CONTRACTOR TO FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO ORDERING MATERIALS/EQUIPMENT OR COMMENCING CONSTRUCTION.

NO.	DESCRIPTION	BY	DATE

MANATEE COUNTY

MLS 12-A EMERGENCY
GENERATOR REPLACEMENT

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APPROVED

LIFT STATION 12-A
ATS REPLACEMENT
DETAILS

PROJECT NO:
00193009.08
DATE:
APRIL 2016
SHEET NO:
E-7

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GENERAL STRUCTURAL NOTES

DESIGN CRITERIA

CODES:

2014 FLORIDA BUILDING CODE

REINFORCED CONCRETE: "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" - ACI 318-11

MASONRY: "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES" (TMS 402-11/ACI 530-11/ASCE 5-11)

ALUMINUM: ALUMINUM DESIGN MANUAL: PART 1 - A SPECIFICATION FOR ALUMINUM STRUCTURES (ADM1-2010)

DESIGN LIVE LOADS:

- PROCESS RELATED STRUCTURES

WALKWAYS, STAIRWAYS AND LANDINGS 100 PSF
ELEVATED SLABS 200 PSF

SUPERIMPOSED DEADLOADS:

- ROOFS AS NOTED
- FLOORS AS NOTED

WIND LOADS:

- ULTIMATE DESIGN WIND SPEED, V_{ULT} (3-SECOND GUST) 156 MPH
- NOMINAL DESIGN WIND SPEED, V_{ASD} 121 MPH
- RISK CATEGORY III
- EXPOSURE CATEGORY B
- ENCLOSURE CLASSIFICATION PARTIALLY ENCLOSED
- INTERNAL PRESSURE COEFFICIENT, G_{CPI} ±0.55
- DESIGN PRESSURES: PER ASCE 7-10

FOUNDATIONS

- ALLOWABLE BEARING PRESSURE FOR MAT FOOTINGS OVER SUBSURFACE PREPARED AS PER DRAWINGS: 2500 PSF

GENERAL CONDITIONS

ALL STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE MECHANICAL, CIVIL, ELECTRICAL, AND SHOP DRAWINGS AND SPECIFICATIONS.

THE CONTRACTOR SHALL REVIEW AND VERIFY DIMENSIONS SHOWN IN ALL PLANS AND REVIEW ALL FIELD CONDITIONS THAT MAY AFFECT THE INSTALLATION OF THE WORK SHOWN. SHOULD DISCREPANCIES APPEAR, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING TO OBTAIN ENGINEER'S CLARIFICATION BEFORE COMMENCING WITH THE WORK.

FOR ALL ITEMS EMBEDDED IN OR PASSED THROUGH CONCRETE, THE CONTRACTOR SHALL INITIALLY REFER TO MECHANICAL, HEATING, AND VENTILATION DRAWINGS FOR TYPE, SIZE, LOCATION, AND SPECIAL INSTALLATION REQUIREMENTS FOR THESE ITEMS.

THE CONTRACTOR SHALL TAKE ANY AND ALL NECESSARY MEASURES TO PROTECT EXISTING STRUCTURES FROM DAMAGE WHEN WORKING IN AND AROUND EXISTING STRUCTURES PERFORMING WORK SUCH AS DEMOLITION, FOUNDATION EXCAVATION, AND OTHERS.

SIZE AND LOCATION OF EQUIPMENT PADS AND ANCHOR BOLTS SHALL BE PER EQUIPMENT MANUFACTURERS REQUIREMENTS.

ANY EQUIPMENT THAT MAY INDUCE VIBRATION TO THE STRUCTURE SHALL BE ADEQUATELY ISOLATED FROM THE STRUCTURES.

ALL DETAILS AND SECTIONS SHOWN ON THE DRAWINGS ARE INTENDED TO BE TYPICAL AND SHALL BE CONSTRUED TO APPLY TO ANY SIMILAR SITUATION ELSEWHERE ON THE PROJECT, EXCEPT WHERE A DIFFERENT DETAIL IS SHOWN.

STANDARD DETAILS APPLY TO ALL SIMILAR SITUATIONS ON THE PROJECT EXCEPT WHERE A DIFFERENT DETAIL IS SHOWN.

REINFORCING STEEL

REINFORCEMENT SHALL CONFORM TO ASTM A615, GRADE 60 REQUIREMENTS. WELDED WIRE FABRIC, ASTM A185, ALL ACCESSORIES SHALL BE IN CONFORMANCE WITH ACI 315 REQUIREMENTS. REINFORCING STEEL SHALL HAVE THE FOLLOWING CLEAR COVER UNLESS OTHERWISE NOTED:

- CONCRETE CAST AGAINST EARTH 3"
- FORMED SURFACES 2"

LAP SPLICES SHALL BE AS SHOWN ON THE DRAWINGS. FOR LAP SPLICES NOT SHOWN ON THE DRAWINGS, THE CONTRACTOR SHALL OBTAIN ENGINEERS APPROVAL.

THE CONTRACTOR SHALL PREPARE PLACING DRAWINGS AND SCHEDULES IN CONFORMANCE WITH ACI 315 REQUIREMENTS.

UNLESS OTHERWISE NOTED, THE MINIMUM REINFORCING FOR ALL CONCRETE WALLS AND SLABS SHALL BE AS FOLLOWS:

MINIMUM REINFORCING						
THICKNESS	6"	8"	10"	12"-16"	18"-22"	24"
REINF. EACH WAY	#4AT12"	#5AT12"	#4AT12"	#5AT12"	#6AT12"	#7AT12"
LOCATION	CENTER	CENTER	EF	EF	EF	EF

MASONRY

- DESIGN COMPRESSIVE STRENGTH OF MASONRY AT 28 DAYS f'_m = 1500 PSI

- ALLOWABLE STEEL STRESS f_s = 24,000 PSI

MATERIALS:

- BLOCK: CONFORM TO ASTM C90 - LOAD BEARING, NORMAL WEIGHT TWO-CELL, 8"x8"x16", 12"x8"x16".

- MORTAR: CONFORM TO ASTM C270, TYPE S, MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS - 1800 PSI. UTILIZE TYPE II CEMENT AND TYPE S LIME. MASONRY CEMENT WILL NOT BE CONSIDERED.

- GROUT: CONFORM TO C476, COURSE GROUT, MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS - 2500 PSI

- STEEL: BOND BEAM AND FILLED CELL REINFORCEMENT AS NOTED ON DRAWINGS (ASTM A615, GRADE 60). DUR-O-WALL OR EQUAL JOINT REINFORCEMENT AT EVERY OTHER COURSE (16" O.C.).

CONSTRUCTION

- THE CONCRETE FOR FILLED CELLS SHALL BE RODDED OR PUDDLED DURING PLACEMENT TO INSURE COMPLETE FILLING TO THE BLOCK CORE.

- PROVIDE CLEAN OUT AND INSPECTION BLOCK OUT IN CELLS CONTAINING REINFORCEMENT FOR GROUT LIFTS EXCEEDING 5'-0"

CONCRETE

ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL BE IN ACCORDANCE WITH ACI 318 REQUIREMENTS (LATEST EDITION)

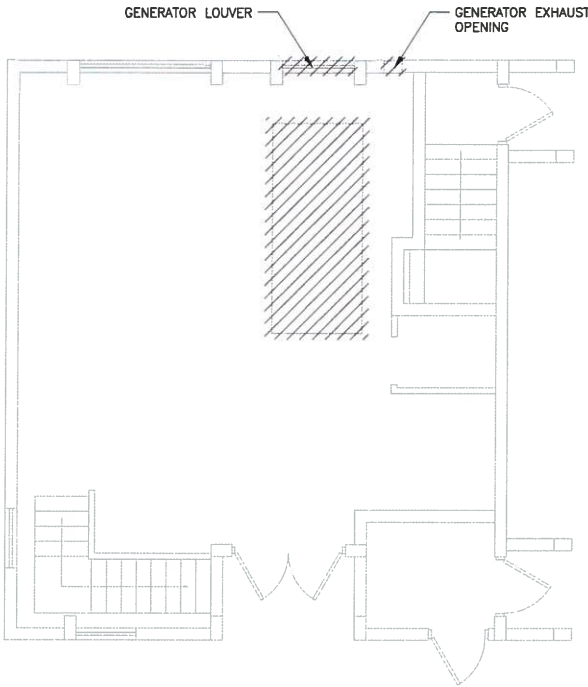
ALL CONCRETE SHALL BE AIR-ENTRAINED WITH 4000 PSI COMPRESSIVE STRENGTH AT 28 DAYS UNLESS OTHERWISE NOTED.

WATER REDUCING AGENT SHALL BE IN ACCORDANCE WITH ASTM C494

ALL CONCRETE SURFACES EXPOSED TO AIR, UNLESS OTHERWISE NOTED IN SPECIFICATIONS, SHALL BE TREATED WITH AN APPROPRIATE CURING COMPOUND AS SOON AS CEMENT FINISHING IS COMPLETED OR FORMS ARE REMOVED.

ALL EXPOSED CORNERS SHALL HAVE A MINIMUM CHAMFER OF 3/8" UNLESS OTHERWISE NOTED.

THE CONTRACTOR SHALL OBTAIN ENGINEER'S APPROVAL FOR THE LOCATIONS OF CONSTRUCTION JOINTS THAT ARE NOT SHOWN ON THE DRAWINGS.

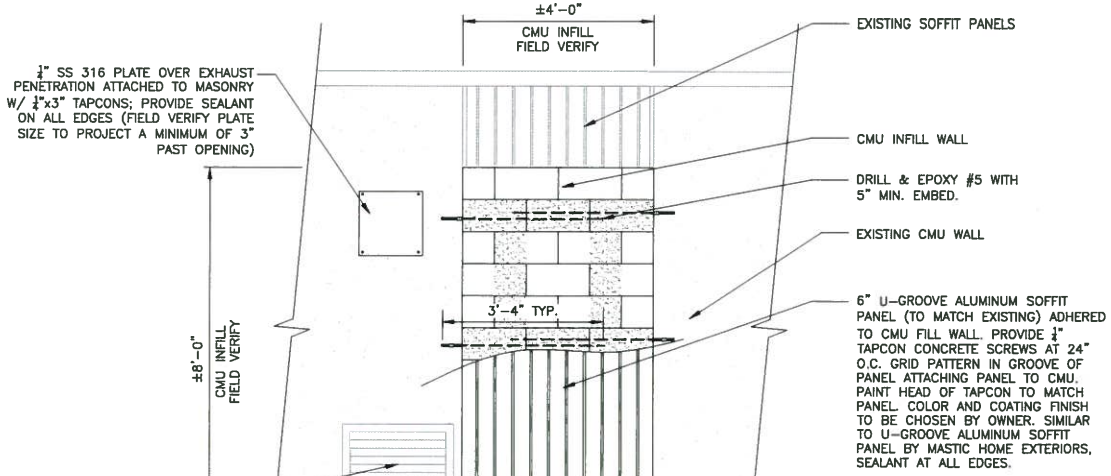


EXISTING SITE PLAN 3/16"=1'-0"

INDICATES ITEMS TO BE REMOVED



PHOTOGRAPH #1 - TYPICAL VIEW OF EXTERIOR OF BUILDING SHOWING LOUVER AND EXHAUST MUFFLER.



ABBREVIATIONS

STRUCTURAL ABBREVIATIONS APPLY TO "S" SHEETS ONLY

AL, ALU, ALUM	ALUMINUM	EJ	EXPANSION JOINT	MANUF	MANUFACTURER	SPECS	SPECIFICATIONS
ADD'L	ADDITIONAL	EL	ELEVATIONS	MAT'L	MATERIAL	SS	STAINLESS STEEL
BTWN	BETWEEN	EW	EACH WAY	MAX	MAXIMUM	STD	STANDARD
BLD	BUILDING	EXP	EXPANSION	MIN	MINIMUM	STL	STEEL
BOT	BOTTOM	FE	FIRE EXTINGUISHER	MO	MASONRY OPENING	REINF	REINFORCEMENT
CJ	CONTROL JOINT	FF	FAR FACE	MISC	MISCELLANEOUS	TB	TIE BEAM
CMU	CONCRETE MASONRY UNIT	FRP	FIBER REINFORCED PLASTIC	NTS	NOT TO SCALE	T&B	TOP AND BOTTOM
CONST JT	CONSTRUCTION JOINT	FTG	FOOTING	OC	ON CENTER	T/STRUCTURE	TOP OF STRUCTURE
CONT	CONTINUOUS	HORIZ	HORIZONTAL	PLF	POUNDS PER LINEAR FOOT	TYP	TYPICAL
DA	DIAMETER	HP	HIGH POINT	PT	PRESSURE TREATED	UNO	UNLESS NOTED OTHERWISE
DO	DITTO	ID	INSIDE DIAMETER	PROJ	PROJECTION	VERT	VERTICAL
DWG	DRAWING	JT	JOINT	PSF	POUNDS PER SQUARE FOOT	WWF	WELDED WIRE FABRIC
EF	EACH FACE	LP	LOW POINT	PSI	POUNDS PER SQUARE INCH	SJ	SAWCUT JOINT

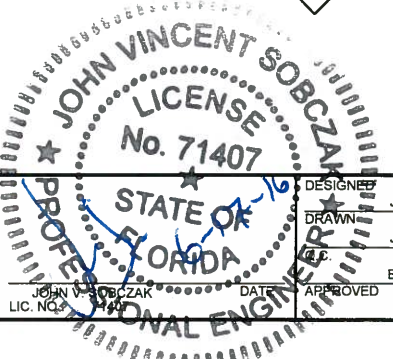
e/T ENGINEERING TECHNOLOGIES, INC.

3551 W. LAKE MARY BLVD., SUITE 210
LAKE MARY, FL 32746
PHONE: (407) 322-0500 FAX: (407) 322-0023
ET PROJECT NO. - 15-161

MANATEE COUNTY

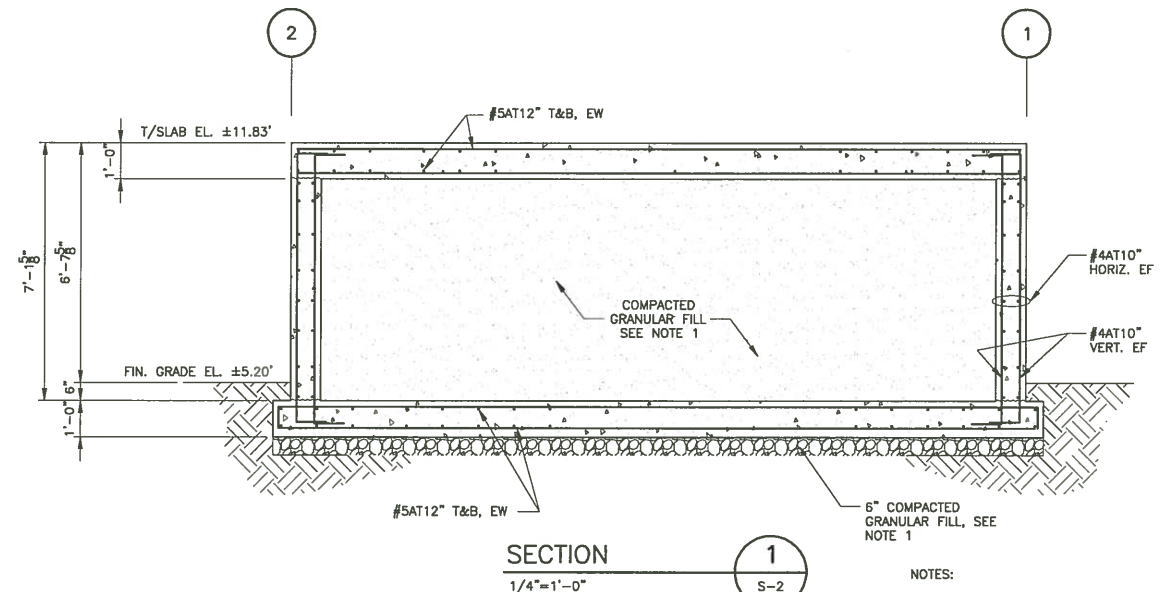
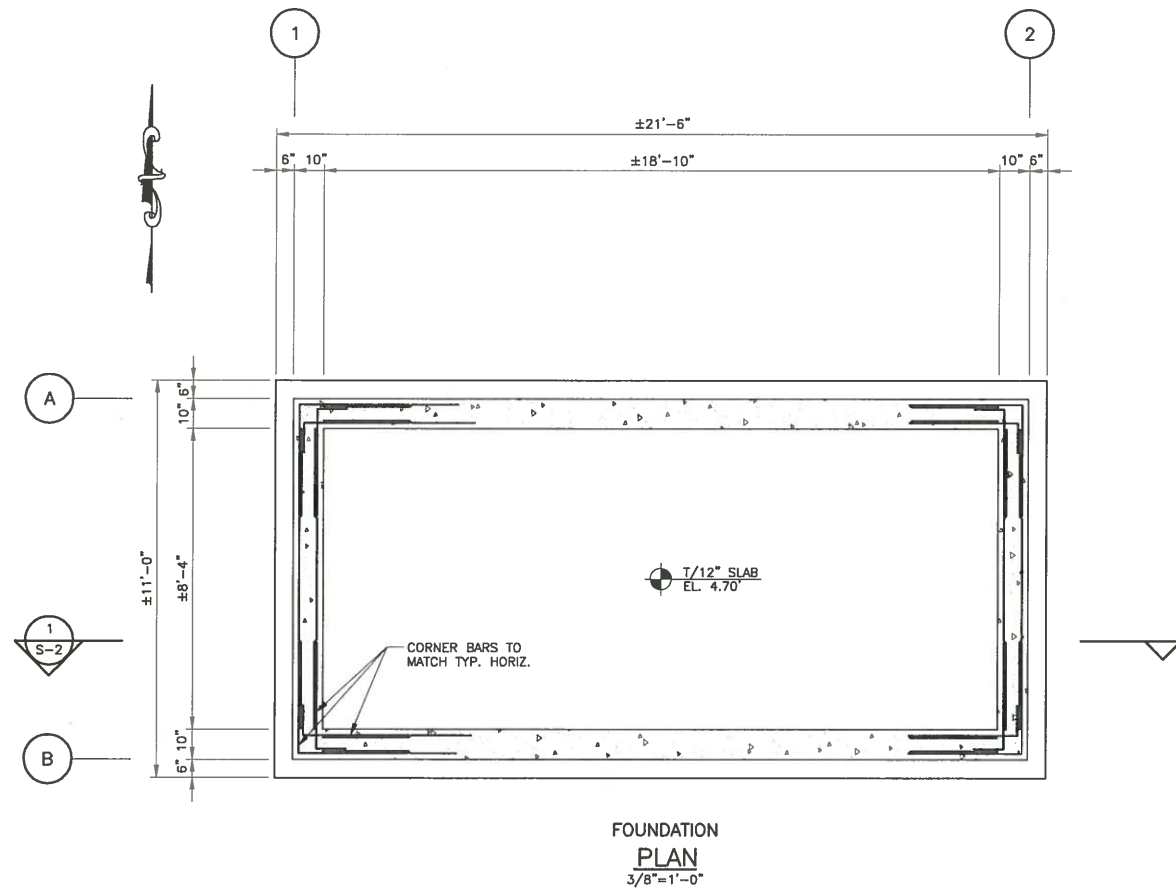
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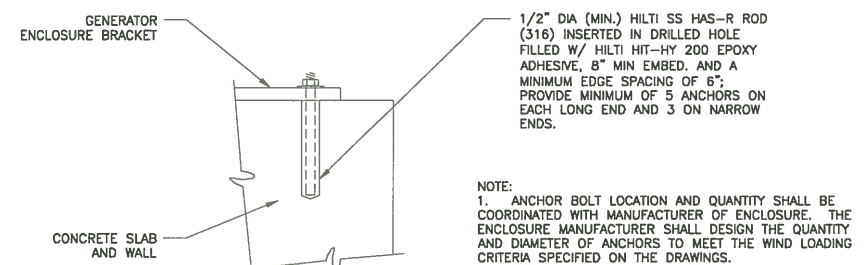
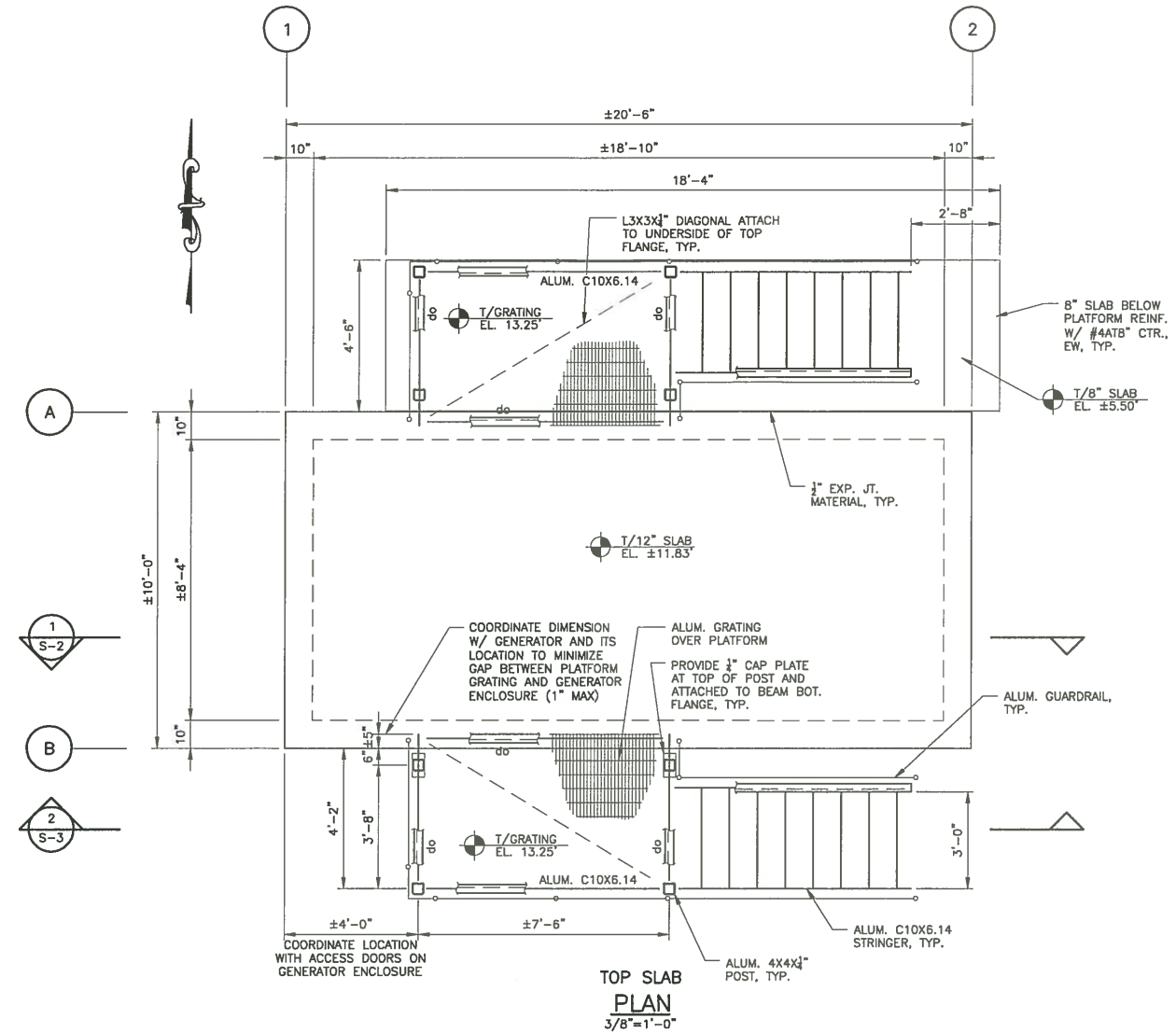


GENERAL NOTES, DEMOLITION PLAN AND WALL ELEVATION

PROJECT NO: 00193009.08
DATE: JUNE 2016
SHEET NO: S-1



- NOTES:
- BACKFILL SHALL BE CLEAN GRANULAR FILL FREE OF ANY ORGANICS AND DELETERIOUS MATERIAL. BACKFILL SHALL BE COMPACTED IN 8" LIFTS WITH PLATE COMPACTOR, TO 95 PERCENT OF MAXIMUM MODIFIED PROCTOR D-1557 DRY DENSITY.
 - SLAB SUPPORTING GENERATOR SHALL BE COORDINATED WITH GENERATOR MANUFACTURER PRIOR TO ANY CONSTRUCTION TO ENSURE MINIMUM DIMENSIONS ARE MET.



GENERATOR ENCLOSURE TO CONCRETE CONNECTION

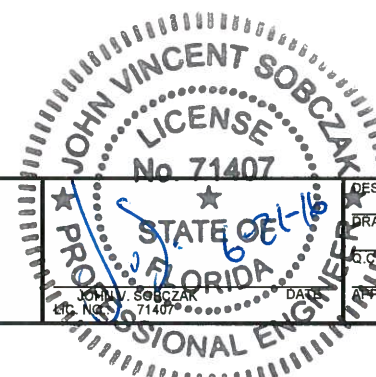
DETAIL
NTS

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ET PROJECT NO. - 15-161

MANATEE COUNTY

MLS 12-A EMERGENCY
GENERATOR REPLACEMENT

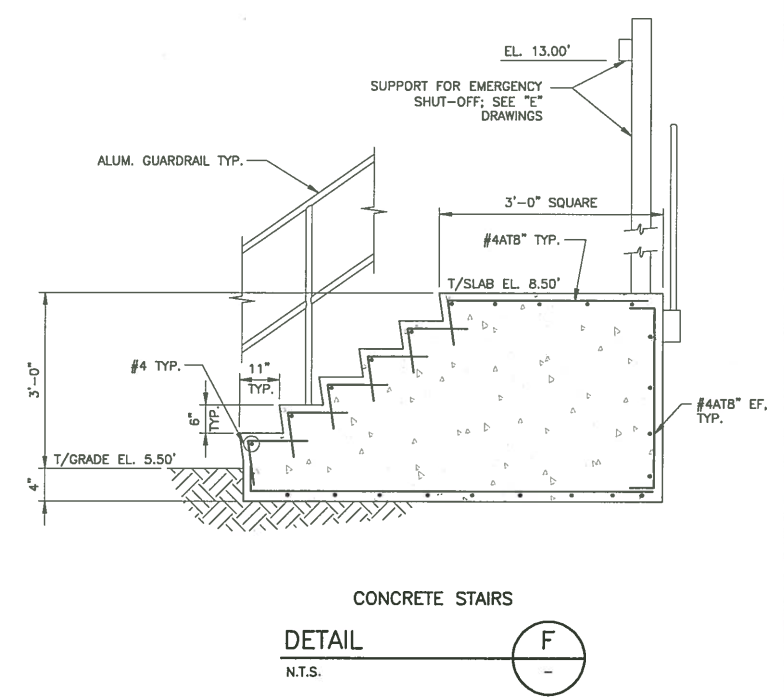
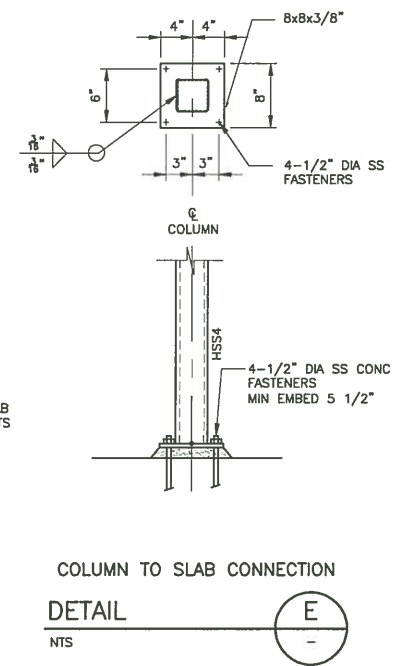
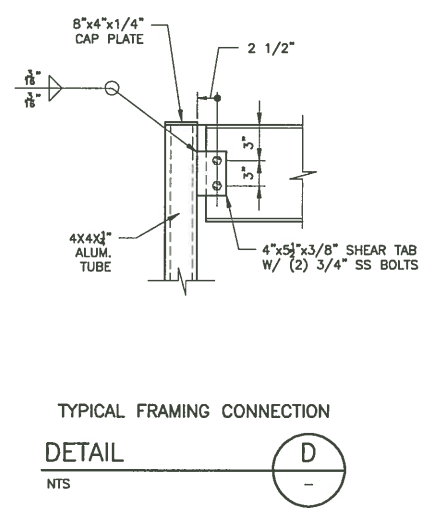
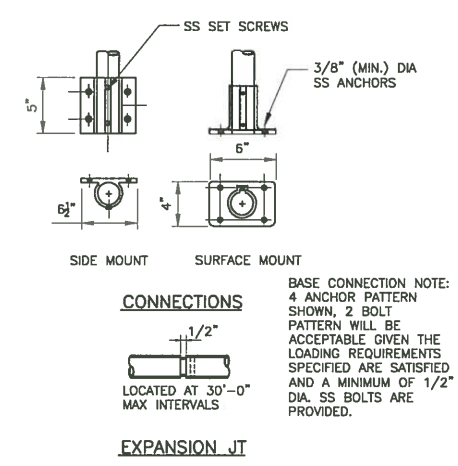
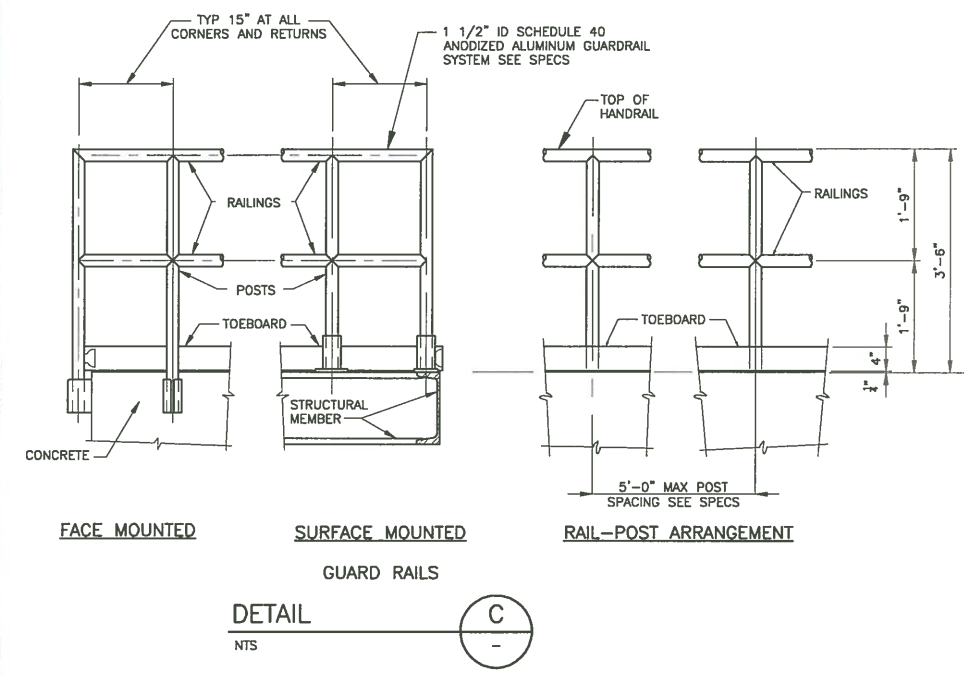
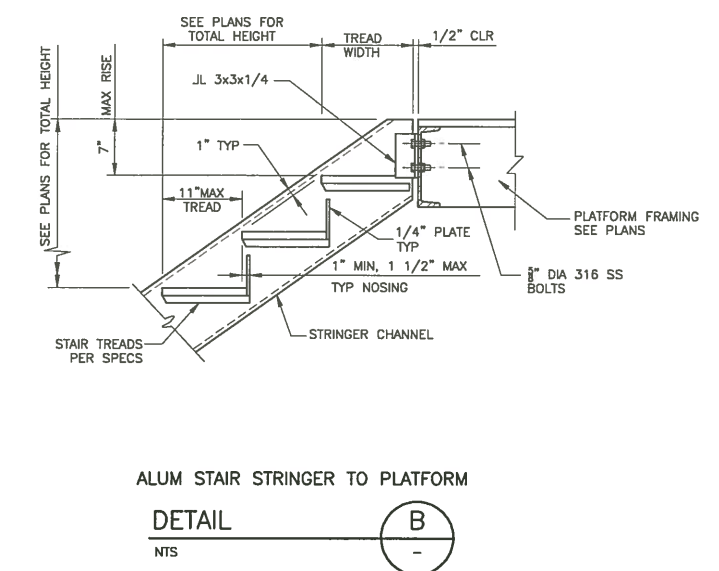
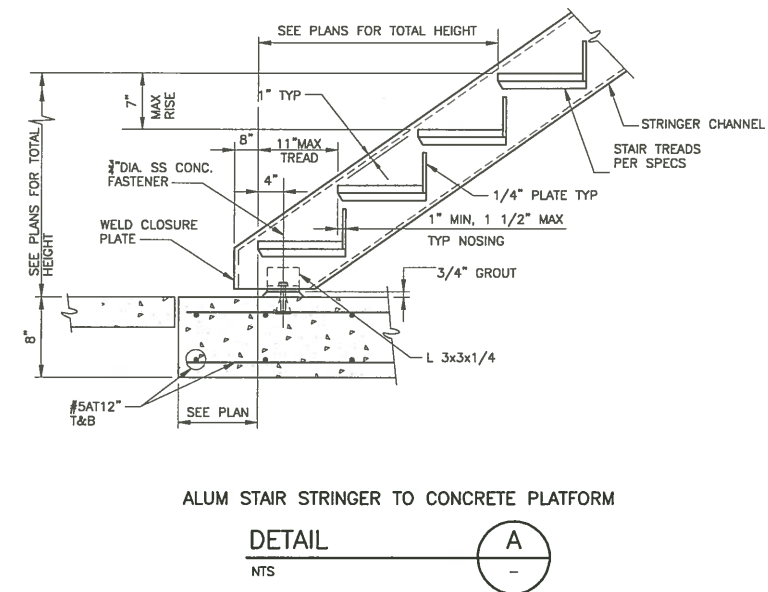
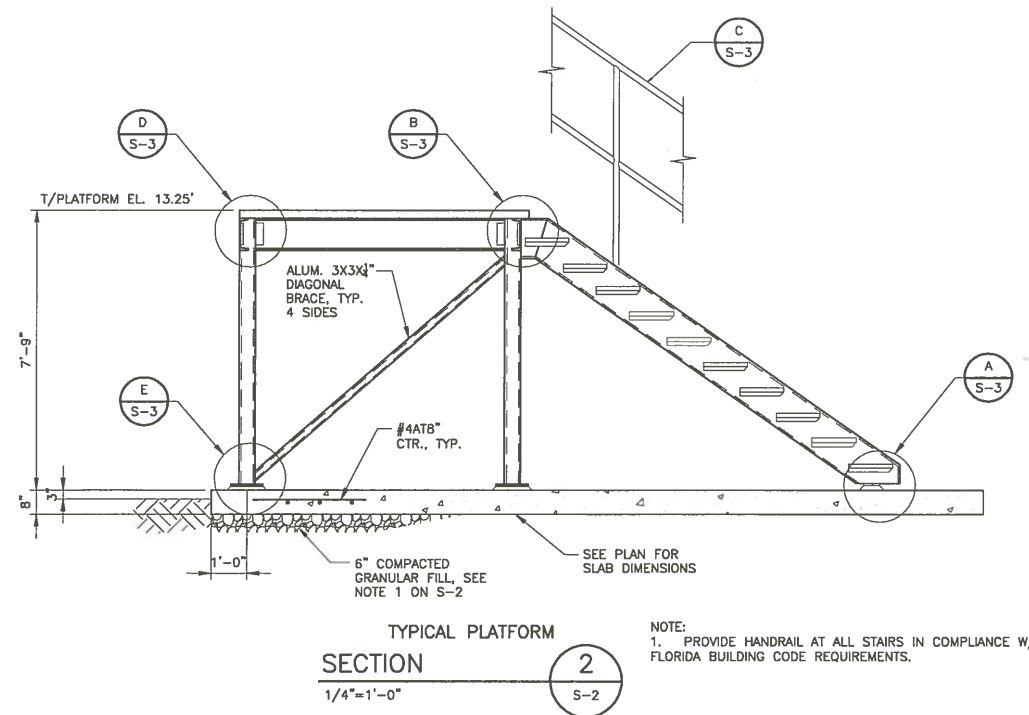
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DESIGNED JS
DRAWN JS
CHECKED BE
APPROVED

**GENERATOR SLAB PLAN,
SECTION, AND DETAILS**

PROJECT NO:
00193009.08
DATE:
JUNE 2016
SHEET NO:
S-2



e/T ENGINEERING TECHNOLOGIES, INC.
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 ET PROJECT NO. - 15-161

MANATEE COUNTY

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JOHN VINCENT SOBCZAK
 LICENSE No. 71407
 STATE OF FLORIDA
 PROFESSIONAL ENGINEER

STRUCTURAL DETAILS

PROJECT NO: 00193009.05
 DATE: JUNE 2016
 SHEET NO: **S-3**