

**SITE NAME:** JEA OTIS ROAD  
**STRUCTURE TYPE:** 300' AGL SELF-SUPPORT TOWER  
**MARKET:** DUVAL COUNTY  
**PROPOSED SELF-SUPPORT TOWER, SHELTER & ANTENNAS**  
**JAX CDN #: 4161.315**

**TOWER DATA (NAD 83)**

TOWER: 300' SELF-SUPPORT/TOP OF APPURTENANCES 310' (AGL)  
LATITUDE: 30° 18' 44.7021" NORTH  
LONGITUDE: 81° 53' 42.7842" WEST  
GROUND ELEVATION: 84.4 FEET (N.A.V.D. 1988)

**ZONING INFORMATION**

PERMITTING JURISDICTION: DUVAL COUNTY  
ZONING CLASS: AGR  
STRAP #: 001721 0000

**SCOPE OF WORK**

INSTALL A NEW UNMANNED WIRELESS BASE TRANSMISSION STATION TO INCLUDE:

1. NEW 300' SELF-SUPPORT TOWER;
2. NEW FENCED COMPOUND;
3. NEW ACCESS DRIVE;
4. NEW ANTENNAS & COAX CABLES;
5. NEW EQUIPMENT SHELTER ON NEW CONCRETE PAD;
6. NEW ELECTRICAL SERVICE;
7. NEW TELCO/ FIBER SERVICE;

**HANDICAP REQUIREMENTS**

FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION;  
HANDICAP ACCESS REQUIREMENTS ARE NOT REQUIRED:

**PLUMBING REQUIREMENTS**

FACILITY HAS NO SANITARY OR POTABLE WATER.



**DRAWING INDEX**

**SITE GENERAL ARRANGEMENT PLANS**

T-1 TITLE SHEET  
N-1 GENERAL NOTES  
N-2 GENERAL NOTES  
N-3 GENERAL NOTES

**ARCHITECTURAL/ CIVIL PLANS**

C-1 OVERALL SITE PLAN WITH AERIAL  
C-1.1 OVERALL SITE PLAN  
C-2 COMPOUND SITE PLAN  
C-3 GRADING PLAN AND TREE REMOVAL  
C-3.1 FDOT INDEX 603  
C-3.2 CITY OF JACKSONVILLE DRIVEWAY DETAILS  
C-3.3 FDOT INDEX 272  
C-4 TOWER ELEVATION AND ANTENNA DETAILS  
C-5 ICE BRIDGE DETAILS

**STRUCTURAL PLANS**

S-1 JEA SHELTER DETAILS  
S-2 CONSTRUCTION DETAILS

**ELECTRICAL PLANS**

E-1 GROUNDING PLAN  
E-2 SINGLE LINE DIAGRAM AND PANEL SCHEDULE  
E-3 JEA RISER DIAGRAM AND ELEC DETAILS  
E-4 FENCE GROUNDING DETAILS

**SURVEY**

SHELTER DRAWINGS

BASED ON THE INFORMATION PROVIDED BY THE TOWER OWNER AND TOWER ENGINEER (SABRE), THE PROPOSED TOWER IS CERTIFIED FOR THE FOLLOWING:

- THE TOWER IS DESIGNED TO ACCOMMODATE TWO FUTURE CO-LOCATORS.
- IN EVENT OF STRUCTURAL FAILURE, THE TOWER IS DESIGNED TO FALL WITHIN THE 50' RADIUS AS SHOWN ON THE PLANS

**SITE HAZARD INFORMATION**

THIS FACILITY DOES NOT POSE A RISK OF EXPLOSION, FIRE OR OTHER DAMAGE DUE TO PROXIMITY TO VOLATILE, FLAMMABLE OR EXPLOSIVE MATERIALS.

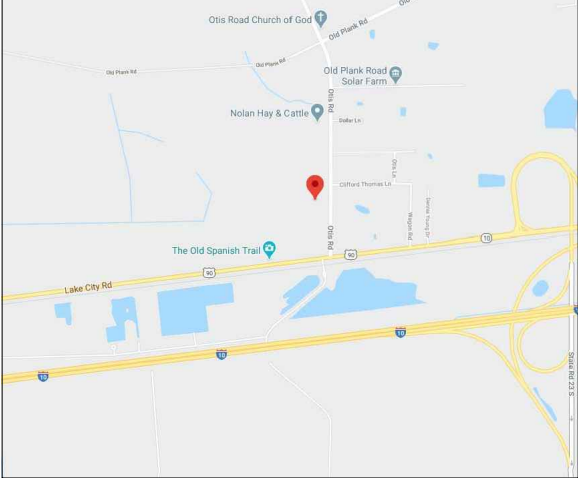
**FLOOD HAZARD AREA NOTE**

BY GRAPHIC PLOTTING ONLY, THE SUBJECT PROPERTY APPEARS TO LIE IN ZONE "X" OF THE FLOOD INSURANCE RATE MAP COMMUNITY PANELS NO. 12031C0310H & 12031C0320H, WHICH BEARS AN EFFECTIVE DATE OF JUNE 3, 2013 AND IS NOT IN A SPECIAL FLOOD HAZARD AREA.  
ZONE 'X': AREAS DETERMINED TO BE OUTSIDE THE 0.2% CHANCE ANNUAL FLOODPLAIN.

**APPLICABLE CODES**

- FLORIDA BUILDING CODE 2017 (6TH EDITION)  
WIND DESIGN CRITERIA  
A. ASCE 7 - 10  
ULTIMATE WIND SPEED = 165 MPH  
RISK CATEGORY = III  
EXPOSURE = C  
B. ANSI/ TIA-222-G  
(ALLOWED PER EXEMPTION # 5 OF 1609.1.1, FBC 2014)  
STRUCTURE CLASS = III  
TOPOGRAPHIC CATEGORY = 1
- FLORIDA FIRE PREVENTION CODE - 2017 EDITION
- NATIONAL ELECTRIC CODE (NFPA 70-2017)
- COUNTY ORDINANCES
- JEA REQUIREMENTS

**LOCATION MAP**



**DRIVING DIRECTIONS**

**From I-10 & I-95 (Jacksonville):**

1. Head west on I-10 W (go 10.8 mi)
2. Use the right lane to take exit 350 for FL-23 S toward Cecil Commerce Center Parkway (go 0.4 mi)
3. Keep right at the fork to continue toward W Beaver St (go 0.9 mi)
4. Keep right at the fork and merge onto W Beaver St (go 0.7 mi)
5. Turn right onto Otis Rd (go 0.2 mi)
6. Destination will be on the left

**PROJECT CONTACTS**

**PROPERTY OWNER**

JEA  
21 W. CHURCH ST  
JACKSONVILLE, FL 32202  
PHONE: 904-665-7953  
CELL: 904-509-3416

STEVE TANNER  
EMAIL: tannsc@jea.com

**DEVELOPER**

JEA  
21 W. CHURCH ST  
JACKSONVILLE, FL 32202  
PHONE: 904-665-7383  
FAX: 904-665-7386  
CELL: 904-482-2376

GARY VONDRASEK  
EMAIL: vondgr@jea.com

**SURVEYOR**

JOHNSON SURVEYING AND MAPPING, INC.  
10250 NORMANDY BLVD., SUITE 604  
JACKSONVILLE, FL 32221  
PH: (904) 619-6630  
FAX: (904) 619-6786

**TELEPHONE COMPANY**

N/A

**POWER COMPANY**

ROBERT E. HADDOCK  
SENIOR TECHNICAL SPECIALIST  
FLORIDA POWER & LIGHT COMPANY  
YULEE, FLORIDA 32041

NO.	DATE	REVISIONS AND RECORD OF ISSUE	BY	CHK	APP	FLM
1	08-05-20	FOR PERMIT/ CONSTRUCTION				
0	07-21-20	FOR PERMIT/ CONSTRUCTION				



6505 N HIMES AVE  
TAMPA, FLORIDA 33614  
(770) 853-1233  
FL CA # 31014

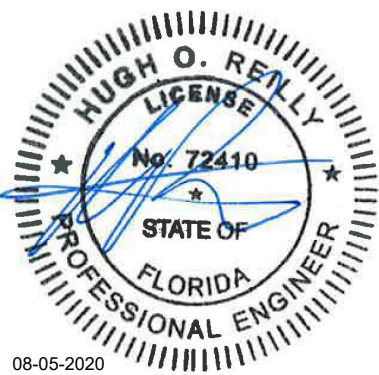
**DRAWING INDEX TITLE SHEET**

JEA OTIS ROAD  
148 OTIS RD  
JACKSONVILLE, FL 32220

**DRAWING**

**T-1**

DATE:  
08-05-2020



### GENERAL NOTES:

- CONTRACTOR(S) SHALL VISIT PROJECT SITE TO BE FAMILIARIZED WITH ALL EXISTING CONDITIONS PRIOR TO SUBMITTING BIDS. NO CHANGE ORDERS WILL BE ALLOWED AS A RESULT OF ANY FORESEEABLE EXISTING CONDITION PRIOR TO SUBMITTING A BID AND WORK SHALL BE COMPLETED AT NO ADDITIONAL COST TO THE OWNER.
2. THE COMPLETE BID PACKAGE INCLUDES A SET OF CONSTRUCTION DRAWINGS HEREIN AND TOWER DRAWINGS, OTHER REFERENCED DRAWINGS, SPECIFICATIONS, STANDARDS, AND MANUFACTURER'S CATALOG DATA AS MAY BE REQUIRED SUCH THAT A FULL UNDERSTANDING OF THE WORK REQUIRED IS PROVIDED. CONTRACTOR(S) IS RESPONSIBLE FOR REVIEW OF TOTAL BID PACKAGE DOCUMENTS PRIOR TO SUBMITTAL OF BIDS. THE TERM "CONSTRUCTION MANAGER" SHALL MEAN JEA SITE DEVELOPMENT PROJECT MANAGER, CONSTRUCTION MANAGER, OR SITE REPRESENTATIVE THAT IS DEEMED IN RESPONSIBLE CHARGE OF SAID CONTRACT.
3. THE CONTRACTOR SHALL MAINTAIN A RECORD OF ALL CHANGES AND SUBSTITUTIONS FROM THE PLANS TO THE FINAL "AS-BUILT" INSTALLATION. A RECORD OF CHANGES SHALL BE MADE ON A CLEAN SET OF CONTRACT DRAWINGS MARKED "AS-BUILT" TO BE TURNED OVER TO THE CONSTRUCTION MANAGER UPON COMPLETION AND ACCEPTANCE OF THE WORK. CHANGES OR SUBSTITUTIONS ARE PERMITTED ONLY BY WRITTEN ACCEPTANCE FROM "CONSTRUCTION MANAGER".
4. THE GENERAL CONTRACTOR SHALL MAINTAIN COMPLETE RESPONSIBILITY FOR THE WORK SITE CONDITIONS, INCLUDING THE SAFETY (SEE NOTE #4-PERMIT AND CODE REQUIREMENTS) OF ALL PERSONS AND PROPERTY DURING THE COURSE OF THE CONSTRUCTION UNTIL FINAL ACCEPTANCE AND RELEASE. RESPONSIBILITY OF THE WORK SITE SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE CONTRACTOR(S) FURTHER AGREE TO INDEMNIFY AND HOLD DESIGN ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH PERFORMANCE OF WORK AS SPECIFIED. ANY DAMAGE TO ADJACENT PROPERTIES AS A RESULT OF WORK PERFORMED WILL BE CORRECTED BY THE CONTRACTOR AT NO EXTRA COST TO THE CONTRACT.
5. CONTRACTOR SHALL COORDINATE THE CONSTRUCTION SCHEDULE WITH PROPERTY OWNER SO AS TO AVOID INTERRUPTIONS TO PROPERTY OPERATIONS.
6. ALL WORK SHALL BE COMPLETED IN A SATISFACTORY, PROFESSIONAL, WORKMANLIKE MANNER, SUBJECT TO PERIODIC AND/OR REQUIRED INSPECTIONS DURING CONSTRUCTION, AND FOR FINAL ACCEPTANCE OF COMPLETED WORK BY THE CONSTRUCTION MANAGER. THE CONTRACTOR SHALL USE ADEQUATE NUMBER OF SKILLED WORKERS WHO ARE THOROUGHLY TRAINED AND EXPERIENCED IN THE NECESSARY CRAFTS AND WHO ARE COMPLETELY FAMILIAR WITH SPECIFIED REQUIREMENTS AND METHODS NEEDED FOR PROPER PERFORMANCE OF WORK.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING AN APPROVED TRAFFIC CONTROL PLAN, AS REQUIRED, FOR THE PUBLIC SAFETY ADJACENT TO CONSTRUCTION SITE. THE TRAFFIC CONTROL PLAN MUST BE IN ACCORDANCE WITH LATEST TRAFFIC CONTROL REGULATIONS.
8. CONTRACTOR SHALL SUPPLY/ PROVIDE ALL MATERIALS, EQUIPMENT, AND MAN POWER EXCEPT AS PROVIDED IN THE JEA B.O.M. OF ALL MATERIAL AND EQUIPMENT TO BE FURNISHED BY JEA.

## ENVIRONMENTAL:

3. ALL WORK PERFORMED SHALL BE DONE IN ACCORDANCE WITH ISSUED PERMITS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PAYMENT OF FINES AND PROPER CLEAN UP FOR AREAS IN VIOLATION.
2. CONTRACTOR AND/OR DEVELOPER SHALL BE RESPONSIBLE FOR CONSTRUCTION AND MAINTENANCE OF EROSION AND SEDIMENTATION CONTROLS DURING CONSTRUCTION FOR PROTECTION OF ADJACENT PROPERTIES, ROADWAYS AND WATERWAYS AND SHALL BE MAINTAINED IN PLACE THROUGH FINAL JURISDICTIONAL INSPECTION & RELEASE OF SITE.
3. CONTRACTOR SHALL INSTALL/CONSTRUCT ALL NECESSARY SEDIMENT/SILT CONTROL FENCING AND PROTECTIVE MEASURES WITHIN THE LIMITS OF SITE DISTURBANCE PRIOR TO CONSTRUCTION.
4. NO SEDIMENT SHALL BE ALLOWED TO EXIT THE PROPERTY. THE CONTRACTOR IS RESPONSIBLE FOR TAKING ADEQUATE MEASURES FOR CONTROLLING EROSION. ADDITIONAL SEDIMENT CONTROL FENCING MAY BE REQUIRED IN ANY AREAS SUBJECT TO EROSION.
5. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING POSITIVE DRAINAGE ON THE SITE AT ALL TIMES WITH SILT AND EROSION CONTROL MEASURES MAINTAINED ON THE DOWNSTREAM SIDE OF SITE DRAINAGE. ANY DAMAGE TO ADJACENT PROPERTY AS A RESULT OF EROSION WILL BE CORRECTED AT THE CONTRACTORS EXPENSE.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR DAILY INSPECTIONS AND ANY REPAIRS OF ALL SEDIMENT CONTROL MEASURES INCLUDING SEDIMENT REMOVAL AS NECESSARY.
7. CLEARING OF VEGETATION AND TREE REMOVAL SHALL BE ONLY AS PERMITTED AND BE HELD TO A MINIMUM. ONLY TREES NECESSARY FOR CONSTRUCTION OF THE FACILITIES SHALL BE REMOVED.
8. SEEDING AND MULCHING OF THE SITE WILL BE ACCOMPLISHED AS SOON AS POSSIBLE AFTER COMPLETION OF THE PROJECT FACILITIES AFFECTING LAND DISTURBANCE.
9. CONTRACTOR SHALL PROVIDE ALL EROSION AND SEDIMENTATION CONTROL MEASURES AS REQUIRED BY LOCAL, COUNTY AND STATE CODES AND ORDINANCES TO PROTECT EMBANKMENTS FROM SOIL LOSS AND TO PREVENT ACCUMULATION OF SOIL AND SILT IN STREAMS AND DRAINAGE PATHS LEAVING THE CONSTRUCTION AREA. THIS MAY INCLUDE SUCH MEASURES AS SILT FENCES, STRAW BALE SEDIMENT BARRIERS, AND CHECK DAMS.
10. RIP RAP OF SIZES INDICATED SHALL CONSIST OF CLEAN, HARD, SOUND, DURABLE, UNIFORM IN QUALITY STONE FREE OF ANY DETRIMENTAL QUANTITY OF SOFT, FRIABLE, THIN, ELONGATED OR LAMINATED PIECES, DISINTEGRATED MATERIAL, ORGANIC MATTER, OIL, ALKALI, OR OTHER DELETERIOUS SUBSTANCES.

## PERMITS AND CODE REQUIREMENTS:

- ALL WORK SHALL BE ACCOMPLISHED IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL CODES OR ORDINANCES. THE MOST STRINGENT SHALL APPLY IN THE CASE OF DISCREPANCIES OR DIFFERENCES IN THE CODE REQUIREMENTS. ALL CONSTRUCTION, INSTALLATIONS AND MATERIALS SHALL COMPLY WITH THE MOST RECENT EDITIONS OF THE FLORIDA BUILDING CODE, ANY APPLICABLE COUNTY CODES AND REGULATIONS AND SHALL MEET OR EXCEED THE STRICTER OF SAID REQUIREMENT. THE CONSTRUCTION MANAGER WILL CONFIRM APPLICABLE CODE REQUIREMENTS PRIOR TO CONSTRUCTION.
2. CONTRACTOR(S) SHALL SECURE ALL THE NECESSARY REGULATORY PERMITS FOR THIS WORK FROM ALL APPLICABLE GOVERNMENT AGENCIES. CONTRACTOR SHALL BE RESPONSIBLE FOR ABIDING BY ALL THE CONDITIONS AND REQUIREMENTS OF THE PERMITS. GENERAL CONTRACTOR SHALL OBTAIN AND PAY FOR REQUIRED PERMITS, LICENSES, FEES, INSPECTIONS, ETC..
3. THE CONTRACTOR IS RESPONSIBLE FOR SCHEDULING OF REQUIRED INSPECTIONS AND ALLOWING TIMELY NOTICE TO THE BUILDING INSPECTION DEPARTMENT; A MINIMUM OF 24 HOURS OF NOTICE SHALL BE GIVEN.
4. ALL WORK SHALL COMPLY WITH OSHA (OCCUPATIONAL SAFETY HAZARD ADMINISTRATION) AND ANY STATE SAFETY REQUIREMENTS. PROCEDURES FOR THE PROTECTION OF EXCAVATIONS, EXISTING CONSTRUCTION AND UTILITIES SHALL BE ESTABLISHED PRIOR TO ANY ACTIVITIES. IN ADDITION, CONTRACTOR AND ALL PERSONEL SHALL COMPLY WITH JEA CONTRACT SAFETY REQUIREMENTS THAT MAY MEET OR EXCEED OTHER REFERENCED STANDARDS, I.E. MINIMUM WORK CLOTHING OF SHIRT, LONG PANTS, WORK BOOTS, HARD HAT, AND SAFETY GLASSES.
5. CONTRACTOR(S) ARE RESPONSIBLE FOR ALL TEMPORARY CONSTRUCTION STAGING, BRACING, SHORING, TIES, FORM-WORK ETC.. AS MAY BE NECESSARY OR REQUIRED TO PERFORM THE WORK TO IT'S COMPLETION IN A SAFE MANNER. ALL TEMPORARY WORK SHALL BE DONE IN ACCORDANCE WITH ALL LOCAL, STATE AND NATIONAL CODES TO SAFELY EXECUTE WORK.
6. FAA/FCC COMPLIANCE COORDINATION AND NOTIFICATIONS SHALL BE HANDLED BY JEA.
7. CONTRACTOR SHALL REMOVE ALL DEBRIS AND EMPTY COAXIAL CABLE REELS FROM THE SITE UPON COMPLETION OF THE PROJECT.
8. BOUNDARY, TOPOGRAPHY AND EXISTING SITE FEATURES ARE BASED ON PROPERTY SURVEY. CONTRACTOR SHALL UTILIZE SURVEY TO ESTABLISH LOCATIONS OF PROPERTY BOUNDARIES ELEVATIONS, BENCHMARKS AND OTHER SITE INFORMATION. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS AND DIMENSIONS AND IMMEDIATELY NOTIFY THE CONSTRUCTION MANAGER/ENGINEER OF ANY DISCREPANCIES BETWEEN THE SURVEY (OR EXISTING CONDITIONS) AND THE DRAWINGS PRIOR TO PROCEEDING WITH WORK.
9. CONTRACTOR SHALL DOCUMENT THE EXISTING LOCATIONS OF ALL BURIED UTILITIES, INCLUDING POWER, GROUNDING, CONDUIT SIZES AND LOCATIONS, ETC.
10. CONTRACTOR SHALL PROTECT ALL SURVEY MONUMENTS DURING THE CONSTRUCTION AND REESTABLISH ANY DISTURBED MONUMENTS BY A PROFESSIONAL LAND SURVEYOR.
11. ANTENNA TOWER AND TOWER FOUNDATIONS ARE SHOWN ONLY FOR ILLUSTRATIVE PURPOSES ONLY. REFER TO TOWER RELEASE DRAWINGS AND/OR TOWER AS-BUILTS FOR TOWER DETAILS.
12. WHERE REQUIRED, MAINTAIN A MINIMUM OF 10 FT. CLEARANCE DISTANCE FROM TANK FILL CONNECTION AND ANY EXTERIOR SOURCE OF IGNITION.
13. ANY SUBSTITUTIONS OF MATERIALS, EQUIPMENT OR ALTERATIONS FROM THE PLANS AND/OR SPECIFICATIONS SHALL BE APPROVED BY THE CONSTRUCTION MANAGER PRIOR TO ORDERING OR INSTALLATIONS.
14. COLOR OPTIONS SHALL BE SELECTED BY CONSTRUCTION MANAGER.
15. ANY MATERIALS STORED ON SITE SHALL BE STORED IN CLOSED OR COVERED CONTAINERS AND ALL EXCESS WASTE MATERIALS SHALL BE PROPERLY DISPOSED.

## DESIGN CRITERIA:

1. DESIGN IS IN ACCORDANCE WITH THE 2017 (6TH EDITION) FLORIDA BUILDING CODE WITH ALL AMENDMENTS.
2. EQUIPMENT LOADS:
  - A. NEW UTILITY H-FRAME W/ CABINETS = 800 LBS
3. DESIGN LOADS: NASSAU COUNTY, FLORIDA
  - A. 137 MPH 3-SECOND-GUST WIND SPEED. BUILDING CATEGORY III, IMPORTANCE FACTOR 1.15, EXPOSURE CATEGORY C.
  - B. ALL OTHER LOADS ARE PER ASCE 7-05
4. EQUIPMENT PAD-ON-GRADE DESIGN IS BASED ON MINIMUM ALLOWABLE SOIL BEARING CAPACITY OF 2000 PSF.
5. DESIGN OF ANTENNAS, MOUNTING HARDWARE, EQUIPMENT CABINETS AND ACCESSORIES ARE BY OTHERS.

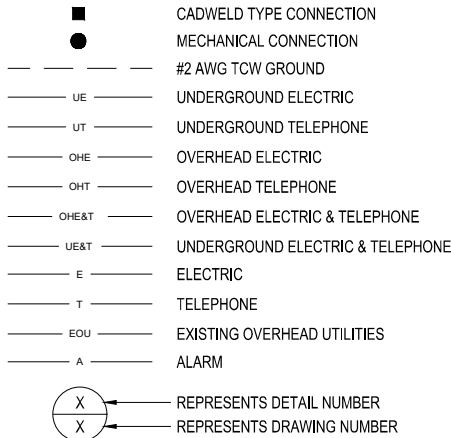
## REINFORCED CONCRETE:

1. PREPARATION, TESTING, AND PLACING OF CONCRETE AND REINFORCEMENT SHALL BE PER ACI-318, "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE", LATEST EDITION.
2. ALL CONCRETE SHALL BE NORMAL WEIGHT FIBER MESH AND OBTAIN A MINIMUM COMPRESSIVE STRENGTH OF 4,500 PSI AT END OF 28 DAYS AS DETERMINED BY ASTM C31 AND C39. CONTRACTOR SHALL SUBMIT CONCRETE TEST RESULTS TO THE CONSTRUCTION MANAGER IN A TIMELY MANNER TO NOT DELAY CONSTRUCTION SEQUENCE OF ACTIVITIES. ALL CONCRETE TEST RESULTS FOR 7 DAY AND FOR 28 DAY SHALL BE SUBMITTED FOR ACCEPTANCE. CONCRETE THAT DOES NOT MEET THE STRENGTH REQUIREMENTS SHALL BE REPLACED AT NO ADDITIONAL COST INCLUDING ANY ASSOCIATED COSTS WITH REMOVING AND REINSTALLING EQUIPMENT.
3. FIBER REINFORCED CONCRETE SHALL COMPLY WITH ASTM A820 WITH MINIMUM DOSAGE RATE OF 80 LBS PER CUBIC YARD OF CONCRETE.
4. REINFORCING BARS SHALL HAVE A MINIMUM TENSILE YIELD STRENGTH OF 60,000 PSI AND SHALL COMPLY WITH ASTM A615.
5. PROVIDE MINIMUM OF 3 INCHES OF CONCRETE COVER OVER STEEL REINFORCING.
6. DURING PLACEMENT OF CONCRETE, MAINTAIN TEMPERATURE BETWEEN 50° AND 90° FAHRENHEIT.
7. CONTRACTOR SHALL NOTIFY CONSTRUCTION MANAGER PRIOR TO ANY CONCRETE PLACEMENT.
8. ALL CONCRETE ANCHORAGE SUCH AS EXPANSION ANCHORS, WEDGE ANCHORS & ADHESIVE ANCHORS SHALL BE INSTALLED PER MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURES. ANCHOR BOLTS, DOWELS AND/OR THREADED RODS, SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION FOR EMBEDMENT DEPTH, OR AS SHOWN ON DRAWINGS.

## STRUCTURAL STEEL:

1. ALL WORK ON SELF-SUPPORT TOWER SHALL COMPLY WITH TOWER STRUCTURAL REQUIREMENTS.
2. STRUCTURAL PIPE SHALL COMPLY WITH ASTM A53, TYPE E OR S, GRADE B, FY = 35KSI. WIDE FLANGE SHAPES SHALL COMPLY WITH ASTM A992, GRADE 50. ALL OTHER STRUCTURAL SHAPES & PLATES SHALL COMPLY WITH ASTM A36.
3. ALL EXPOSED STEEL SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION PER ASTM A153 OR A123.
4. WELDING: ALL WELDING IS TO BE DONE BY PRE-QUALIFIED WELDERS, HOLDING CURRENT CERTIFICATE FROM A RECOGNIZED TESTING LABORATORY. CONSTRUCTION MANAGER SHALL RECEIVE ON FILE CERTIFICATES OF WELDERS FOR APPROVAL PRIOR TO ANY WELDING OPERATIONS. ALL WELDS ARE TO BE PER AWS D1.1, LATEST EDITION. ALL WELDS SHALL BE 3/16" MINIMUM FILLET WELDS U.O.N. ELECTRODES SHALL BE E70XX.
5. ON SITE WELDING SHALL NOT BE ALLOWED OTHER THAN THE WELDING SHOWN ON THESE DRAWINGS AS FIELD WELDS. TORCH CUTTING OF STEEL IS NOT ALLOWED.
6. APPLY TWO COATS OF ZINC-RICH RUST-OLEUM #2185 PAINT TO ALL FIELD DRILLED HOLES AND EXPOSED CUT SURFACES, INCLUDING ALL ENDS OF CUT 'UNI-STRUT' INSTALLED AS PART OF WORK. GLID-GUARD EPOXY #5465 COATING SHALL BE APPLIED TO ALL AREAS WHERE GALVANIZED SURFACES NEED TO BE RECONDITIONED, INCLUDING ALL WELD AREAS. THOROUGHLY CLEAN SURFACE PRIOR TO APPLICATION OF ANY CORROSION INHIBITING COMPOUND OR PRODUCTS.
7. FASTENERS SHALL BE DOMESTIC, NEW HIGH STRENGTH GALVANIZED BOLTS, BEARING TYPE "X" (THREADS EXCLUDED) AND SHALL COMPLY WITH ASTM A325 SPECIFICATIONS, U.O.N.
8. BOLTS SHALL BE TIGHTENED USING TURN-OF-THE-NUT METHOD, U.O.N. EXCEPT TORQUE MECHANICAL AND ADHESIVE ANCHORS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

### ELECTRICAL LEGEND:



## ABBREVIATIONS

ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAUGE
BATT	BATTERY
BGR	BURIED GROUND RING
C	CONDUIT
CONC	CONCRETE
CGB	COAX GROUND BAR
DOT	DEPARTMENT OF TRANSPORTATION
GEN	GENERATOR
GPS	GLOBAL POSITIONING SYSTEM
FNMC	FLEXIBLE NON-METALIC CONDUIT
MTS	MANUAL TRANSFER SWITCH
N.T.S.	NOT TO SCALE
O.C.	ON CENTER
PPC	POWER PROTECTION CABINET
RBS	RADIO BASE STATION
RGS	RIGID GALVANIZED STEEL
TCW	TINNED COPPER WIRE (#2 AWG SOLID)
TYP	TYPICAL

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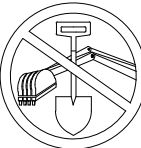
## GENERAL NOTES

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DRAWING

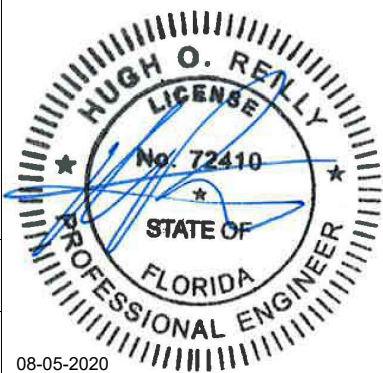
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DATE:  
08-05-2020



SUNSHINE STATE  
ONE-CALL CALL:  
STATEWIDE 1-800-432-4770  
48 HOURS BEFORE YOU  
DIG

**CAUTION:**  
CONTRACTOR SHALL EXERCISE CAUTION DURING  
EXCAVATION, SO AS TO NOT DISTURB ANY  
EXISTING UNDERGROUND UTILITIES OR  
GROUNDING SYSTEMS.





ELECTRICAL:

- ELECTRICAL CONTRACTOR SHALL SUPPLY AND INSTALL ANY/ALL ELECTRICAL WORK INDICATED. ANY/ALL CONSTRUCTION SHALL BE IN ACCORDANCE W/DRAWINGS AND ANY/ALL APPLICABLE SPECIFICATIONS. IF ANY PROBLEMS ARE ENCOUNTERED BY COMPLYING WITH THESE REQUIREMENTS, CONTRACTOR SHALL NOTIFY 'CONSTRUCTION MANAGER' AS SOON AS POSSIBLE, AFTER THE DISCOVERY OF THE PROBLEMS, AND SHALL NOT PROCEED WITH THAT PORTION OF WORK, UNTIL THE 'CONSTRUCTION MANAGER' HAS DIRECTED THE CORRECTIVE ACTIONS TO BE TAKEN.
- ELECTRICAL CONTRACTOR SHALL VISIT THE JOB SITE AND FAMILIARIZE HIMSELF WITH ANY/ALL CONDITIONS AFFECTING ELECTRICAL AND COMMUNICATION INSTALLATION AND MAKE PROVISIONS AS TO THE COST THEREOF. ALL EXISTING CONDITIONS OF ELECTRICAL EQUIP., LIGHT FIXTURES, ETC., THAT ARE PART OF THE FINAL SYSTEM, SHALL BE VERIFIED BY THE CONTRACTOR, PRIOR TO THE SUBMITTING OF HIS BID. FAILURE TO COMPLY WITH THIS PARAGRAPH WILL IN NO WAY RELIEVE CONTRACTOR OF PERFORMING ALL WORK NECESSARY FOR A COMPLETE AND WORKING SYSTEM.
- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF THE NEC AND ALL CODES AND LOCAL ORDINANCES OF THE LOCAL POWER & TELEPHONE COMPANIES HAVING JURISDICTION AND SHALL INCLUDE BUT NOT BE LIMITED TO:
  - NFC - NATIONAL FIRE CODES
  - UL - UNDERWRITERS LABORATORIES
  - NEC - NATIONAL ELECTRICAL CODE
  - NEMA - NATIONAL ELECTRICAL MANUFACTURERS ASSOC.
  - OSHA - OCCUPATIONAL SAFETY AND HEALTH ACT
  - SBC - STANDARD BUILDING CODE
- DO NOT SCALE ELECTRICAL DRAWINGS, REFER TO SITE PLANS AND ELEVATIONS FOR EXACT LOCATIONS OF ALL EQUIPMENT, AND CONFIRM WITH 'CONSTRUCTION MANAGER' ANY SIZES AND LOCATIONS WHEN NEEDED.
- EXISTING SERVICES: CONTRACTOR SHALL NOT INTERRUPT EXISTING SERVICES WITHOUT WRITTEN PERMISSION OF THE OWNER.
- CONTRACTOR SHALL PAY FOR ANY/ALL PERMITS, FEES, INSPECTIONS AND TESTING. CONTRACTOR IS TO OBTAIN PERMITS AND APPROVED SUBMITTALS PRIOR TO THE WORK BEGINNING OR ORDERING EQUIPMENT.
- THE TERM "PROVIDE" USED IN CONSTRUCTION DOCUMENTS AND SPECIFICATIONS, INDICATES THAT THE CONTRACTOR SHALL FURNISH AND INSTALL.
- CONTRACTOR SHALL CONFIRM WITH LOCAL UTILITY COMPANY ANY/ALL REQUIREMENTS SUCH AS THE: LUG SIZE RESTRICTIONS, CONDUIT ENTRY, SIZE OF TRANSFORMERS, SCHEDULED DOWNTIME FOR THE OWNERS' CONFIRMATION, ETC... ANY/ALL CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE CONSTRUCTION MANAGER, PRIOR TO BEGINNING ANY WORK.
- MINIMUM WIRE SIZE SHALL BE #12 AWG, NOT INCLUDING CONTROL WIRING, UNLESS NOTED OTHERWISE. ALL CONDUCTORS SHALL BE COPPER WITH THHN / THWN INSULATION.
- OUTLET BOXES SHALL BE PRESSED STEEL IN DRY LOCATIONS, CAST ALLOY WITH THREADED HUBS IN WET/DAMP LOCATIONS AND SPECIAL ENCLOSURES FOR OTHER CLASSIFIED AREAS.
- IT IS NOT THE INTENT OF THESE PLANS TO SHOW EVERY MINOR DETAIL OF THE CONSTRUCTION. CONTRACTOR IS EXPECTED TO FURNISH AND INSTALL ALL ITEMS FOR A COMPLETE ELECTRICAL SYSTEM AND PROVIDE ALL REQUIREMENTS FOR THE EQUIPMENT TO BE PLACED IN PROPER WORKING ORDER.
- ELECTRICAL SYSTEM SHALL BE AS COMPLETELY AND EFFECTIVELY GROUNDED, AS REQUIRED BY SPECIFICATIONS, SET FORTH BY JEA.
- ALL WORK SHALL BE PERFORMED BY A LICENSED ELECTRICAL CONTRACTOR IN A FIRST CLASS, WORKMANLIKE MANNER. THE COMPLETED SYSTEM SHALL BE FULLY OPERATIVE AND SUBJECT TO REGULATORY INSPECTION AND APPROVAL BY CONSTRUCTION MANAGER.
- ALL WORK SHALL BE COORDINATED WITH OTHER TRADES TO AVOID INTERFERENCE WITH THE PROGRESS OF CONSTRUCTION.
- CONTRACTOR SHALL GUARANTEE ANY/ALL MATERIALS AND WORK FREE FROM DEFECTS FOR A PERIOD OF NOT LESS THAN TWO YEARS FROM DATE OF ACCEPTANCE.**
- THE CORRECTION OF ANY DEFECTS SHALL BE COMPLETED WITHOUT ANY ADDITIONAL CHARGE AND SHALL INCLUDE THE REPLACEMENT OR THE REPAIR OF ANY OTHER PHASE OF THE INSTALLATION, WHICH MAY HAVE BEEN DAMAGED THEREIN.
- ADEQUATE AND REQUIRED LIABILITY INSURANCE SHALL BE PROVIDED FOR PROTECTION AGAINST PUBLIC LOSS AND ANY/ALL PROPERTY DAMAGE FOR THE DURATION OF WORK.
- PROVIDE AND INSTALL CONDUIT, CONDUCTORS, PULL WIRES, BOXES, COVER PLATES AND DEVICES FOR ALL OUTLETS AS INDICATED.
- DITCHING AND BACK FILL: CONTRACTOR SHALL PROVIDE FOR ALL UNDERGROUND INSTALLED CONDUIT AND/OR CABLES INCLUDING EXCAVATION AND BACKFILLING AND COMPACTION. REFER TO NOTES AND REQUIREMENTS 'EXCAVATION, AND BACKFILLING.
- MATERIALS, PRODUCTS AND EQUIPMENT, INCLUDING ALL COMPONENTS THEREOF, SHALL BE NEW AND SHALL APPEAR ON THE LIST OF U.L. APPROVED ITEMS AND SHALL MEET OR EXCEED THE REQUIREMENTS OF THE NEC, NEMA AND IECE.
- CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OR MANUFACTURES CATALOG INFORMATION OF ANY/ALL LIGHTING FIXTURES, SWITCHES AND ALL OTHER ELECTRICAL ITEMS FOR APPROVAL BY THE CONSTRUCTION MANAGER PRIOR TO INSTALLATION.
- ANY CUTTING OR PATCHING DEEMED NECESSARY FOR ELECTRICAL WORK IS THE ELECTRICAL CONTRACTORS RESPONSIBILITY AND SHALL BE INCLUDED IN THE COST FOR WORK AND PERFORMED TO THE SATISFACTION OF THE 'CONSTRUCTION MANAGER' UPON FINAL ACCEPTANCE.
- THE ELECTRICAL CONTRACTOR SHALL LABEL ALL PANELS WITH ONLY TYPEWRITTEN DIRECTORIES. ALL ELECTRICAL WIRING SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
- DISCONNECT SWITCHES SHALL BE H.P. RATED HEAVY-DUTY, QUICK-MAKE AND QUICK-BREAK ENCLOSURES, AS REQUIRED BY EXPOSURE TYPE.
- ALL CONNECTIONS SHALL BE MADE WITH A PROTECTIVE COATING OF AN ANTI-OXIDE COMPOUND SUCH AS "NO-OXIDE A" BY DEARBORNE CHEMICAL CO. COAT ALL WIRE SURFACES BEFORE CONNECTING. EXPOSED COPPER SURFACES, INCLUDING GROUND BARS, SHALL BE TREATED - NO SUBSTITUTIONS.

ELECTRICAL (CONT'D):

- RACEWAYS: CONDUIT SHALL BE SCHEDULE 80 PVC MEETING OR EXCEEDING NEMA TC2 - 1990. CONTRACTOR SHALL PLUG AND CAP EACH END OF SPARE AND EMPTY CONDUITS AND PROVIDE TWO SEPARATE PULL STRINGS - 200 LBS TEST POLYETHYLENE CORD. ALL CONDUIT BENDS SHALL BE A MINIMUM OF 2 FT. RADIUS. CONTRACTOR SHALL USE RIGID ALUMINUM CONDUIT FOR ABOVE GROUND APPLICATIONS; UNDERGROUND USE SCH. 80 ELECTRICAL PVC; ALL RADIUS BENDS SHALL BE LONG SWEEP, OR RIGID ALUMINUM; ALL ELECTRICAL PVC JOINTS SHALL BE PROPERLY GLUED TO PREVENT ANY ELEMENTS FROM THE GROUND FROM ENTERING THE CONDUITS.
- SUPPORT OF ALL ELECTRICAL WORK SHALL BE AS REQUIRED BY NEC.
- CONDUCTORS: CONTRACTOR SHALL USE 98% CONDUCTIVITY COPPER WITH TYPE THHN / THWN INSULATION, 600 V OR AS APPROVED BY JEA UPON SUBMITTAL, COLOR CODED. USE SOLID CONDUCTORS FOR WIRE UP TO AND INCLUDING NO. 8 AWG. USE STRANDED CONDUCTORS FOR WIRE ABOVE NO. 8 AWG.
- CONNECTORS FOR POWER CONDUCTORS: CONTRACTOR SHALL USE PRESSURE TYPE INSULATED TWIST-ON CONNECTORS FOR NO. 10 AWG AND SMALLER. USE SOLDERLESS MECHANICAL TERMINAL LUGS FOR NO. 8 AWG AND LARGER.
- SERVICE: 240/120V, SINGLE PHASE, 3 WIRE CONNECTION AVAILABLE FROM UTILITY COMPANY. OWNER OR OWNERS AGENT WILL APPLY FOR POWER.
- TELEPHONE SERVICE: CONTRACTOR SHALL PROVIDE EMPTY CONDUITS WITH PULL STRINGS AS INDICATED ON DRAWINGS.
- ELECTRICAL AND TELCO RACEWAYS TO BE BURIED A MINIMUM OF 2' DEPTH.
- CONTRACTOR SHALL PLACE TWO LENGTHS OF WARNING TAPE AT A DEPTH OF 12" BELOW GROUND AND DIRECTLY ABOVE ELECTRICAL AND TELCO SERVICE CONDUITS. CAUTIONS TAPE TO READ "CAUTION BURIED ELECTRIC" OR "BURIED TELECOMM".
- ALL BOLTS, NUTS, AND WASHERS SHALL BE STAINLESS STEEL(LOW CARBON GRADE).

UTILITIES:

- DAMAGE TO ALL UTILITIES, LAND, DRIVEWAY AREAS AND PROPERTY OF OTHERS, DISTURBED BY CONSTRUCTION ACTIVITIES, SHALL BE RETURNED TO ITS ORIGINAL CONDITION OR BETTER FOR FINAL ACCEPTANCE.
- CONTRACTOR SHALL COORDINATE WITH THE LOCAL POWER AND TELEPHONE UTILITIES, AND THE 'CONSTRUCTION MANAGER', TO CONFIRM THE SOURCE OF SERVICE PRIOR TO INSTALLATION OF CONDUITS.
- CONTRACTOR SHALL INSTALL THE UNDERGROUND POWER AND TELEPHONE SERVICE TO EQUIPMENT, AS INDICATED ON ELECTRICAL PLAN AND CONDUIT TRENCH DETAIL.
- CONTRACTOR SHALL CONTACT SUBSURFACE UTILITY LOCATOR FOR EXACT LOCATION OF EXISTING UTILITIES, PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES. CONTRACTOR SHALL VERIFY EXISTING UTILITY LOCATIONS BY TEST PIT, AS NECESSARY TO OBTAIN EXACT LOCATION OF UTILITIES. THE UTILITIES SHOWN ON PLANS ARE APPROXIMATE AND FOR SCHEMATIC PURPOSES ONLY.
- CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITIES AND PROVIDE PROTECTION DURING CONSTRUCTION ACTIVITIES AS REQUIRED.
- ALL INTERFACING SURFACES OF DISSIMILAR METALS THAT SHALL BE COATED WITH 'NO-OX' TO PROHIBIT OXIDATION.
- UTILITIES LOCATED WITHIN ROADWAYS SHALL BE BACK FILLED WITH MIN 18" THICK DENSELY GRADED COARSE AGGREGATE SUB BASE.
- HAND EXCAVATION SHALL BE REQUIRED IN ANY AREAS WHERE EXISTING UTILITIES MAY BE UNCOVERED OR NEAR BY. EXISTING ACTIVE UTILITIES SHALL BE PROTECTED AND MAINTAINED AT ALL TIMES.

GROUNDING:

- SITE GROUNDING SHALL COMPLY WITH JEA GROUNDING STANDARDS, LATEST EDITION, AND COMPLY WITH THE GROUNDING CHECKLIST, LATEST VERSION. WHEN NATIONAL AND LOCAL REQUIREMENTS ARE MORE STRINGENT THEY SHALL GOVERN. GROUNDING SHALL BE COMPLETED BEFORE ERECTION OF TOWER AND/OR INSTALLATION OF ANTENNAS AS SHOWN.
- GROUNDING OF ANTENNA MOUNTS, COAX AND EQUIPMENT SHALL BE IN ACCORDANCE WITH JEA SPECIFICATIONS.
- GROUND RING TO EARTH RESISTIVITY SHALL BE 5 OHMS OR LESS.
- GROUND RODS TO BE 5/8"Ø X 10' LONG COPPER CLAD STEEL RODS TO BE DRIVEN TO A DEPTH OF 30 INCHES AND SPACED AT A MAXIMUM OF 10 FEET ALONG EQUIPMENT GROUND RINGS.
- EXOTHERMIC WELDS SHALL BE USED FOR ALL BELOW GRADE CONNECTIONS, EXCEPT FOR ROD TO ROD CONNECTION.
- EXOTHERMIC WELDS SHALL BE USED FOR ALL LUG FITTINGS TO GROUND WIRE CONNECTIONS AT ANTENNA GROUND BAR AND COLLECTOR BARS.
- TOWER GROUND RING SHALL BE ATTACHED TO STRUCTURE IN THREE LOCATIONS ON THE FLANGE OF TOWER OR POLE BASE. DO NOT WELD TO POLE SHAFT OR TOWER LEGS.
- TOWER AND EQUIPMENT RING SHALL TIE BACK TO BELOW GRADE WITH TWO LEADS.
- TOWER GROUND RING TO BE INSTALLED WITHIN 3' FROM TOWER FOUNDATION.
- EQUIPMENT GROUND RING TO BE INSTALLED WITHIN 3' FROM CONCRETE FOUNDATION.
- TCW SIZE #2 SHALL USED THROUGHOUT EXCEPT WHERE SPECIFICALLY CALLED OUT OTHERWISE ON DRAWINGS.
- CONNECT GATE TO GATE POST (TYP 2 PLACES) WITH A CONNECT-IT FLEXIBLE GATE JUMPER 4/0 STRANDED (CIW PART #38-5534-24) OR APPROVED EQUAL (FURNISHED BY CONTRACTOR). LENGTH TO ALLOW FOR FULL SWING OPERATION OF ALL GATES.
- WHERE MECHANICAL CONNECTORS ARE USED, APPLY A LIBERAL PROTECTIVE COATING OF AN ANTI-OXIDE COMPOUND SUCH AS "NO OXIDE A" BY DEARBORNE CHEMICAL COMPANY OR EQUAL. THOROUGHLY CLEAN AND REMOVE ALL PAINT FROM SURFACES REQUIRING GROUND CONNECTIONS. USE STAINLESS STEEL HARDWARE FOR ALL COMPRESSION TYPE LUGS. USE ONLY SILICON BRONZE HARDWARE FOR THERMOWELD LUG CONNECTIONS. USE S.S. BOLTS 1/2 INCH DIA. MIN. WITH WASHER HEAD & NUT & LOCKWASHER FOR LUG CONNECTIONS
- GROUND ALL ICE BRIDGE POSTS TO THE EQUIPMENT GROUND RING.
- GROUND RING SHALL BE BURIED A MINIMUM 30" BELOW GRADE.
- WELD TYPES TO BE: "T" TYPE FOR GROUND RODS AND PARALLEL CONNECTIONS OF SIZE #2.

FOUNDATION, EXCAVATION AND BACKFILL:

- ALL FINAL GRADED SLOPES SHALL BE A MAXIMUM OF 3 HORIZONTAL TO 1 VERTICAL.
- ALL EXCAVATIONS PREPARED FOR PLACEMENT OF CONCRETE SHALL BE OF UNDISTURBED SOILS, SUBSTANTIALLY HORIZONTAL AND FREE FROM ANY LOOSE, UNSUITABLE MATERIAL OR FROZEN SOILS, AND WITHOUT THE PRESENCE OF PONDING WATER. DEWATERING FOR EXCESS GROUND WATER SHALL BE PROVIDED WHEN REQUIRED. COMPACTION OF SOILS UNDER CONCRETE PAD FOUNDATIONS SHALL NOT BE LESS THAN 95% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY FOR THE SOIL IN ACCORDANCE WITH ASTM D1557.
- CONCRETE FOUNDATIONS SHALL NOT BE PLACED ON ORGANIC OR UNSUITABLE MATERIAL. IF INADEQUATE BEARING CAPACITY IS REACHED AT THE DESIGNED EXCAVATION DEPTH, THE UNSATISFACTORY SOIL SHALL BE EXCAVATED TO ITS FULL DEPTH AND EITHER BE REPLACED WITH MECHANICALLY COMPACTED GRANULAR MATERIAL OR THE EXCAVATION SHALL BE FILLED WITH CONCRETE OF THE SAME TYPE SPECIFIED FOR THE FOUNDATION. CRUSHED STONE MAY BE USED TO STABILIZE THE BOTTOM OF THE EXCAVATION. ANY STONE SUB BASE MATERIAL, IF USED, SHALL NOT SUBSTITUTE FOR REQUIRED THICKNESS OF CONCRETE.
- ALL EXCAVATIONS SHALL BE CLEAN OF UNSUITABLE MATERIAL SUCH AS VEGETATION, TRASH, DEBRIS, AND SO FORTH PRIOR TO BACK FILLING. BACK FILL SHALL CONSIST OF APPROVED MATERIALS SUCH AS EARTH, SANDY CLAY, SAND AND GRAVEL, OR SOFT SHALE, FREE FROM CLODS OR LARGE STONES OVER 2 1/2" MAX DIMENSIONS. ALL BACK FILL SHALL BE PLACED IN COMPACTED LAYERS.
- ALL FILL MATERIALS AND FOUNDATION BACK FILL SHALL BE PLACED IN MAXIMUM 6"THICK LIFTS BEFORE COMPACTION. EACH LIFT SHALL BE WETTED IF REQUIRED AND COMPACTED TO NOT LESS THAN 95% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY FOR SOIL IN ACCORDANCE WITH ASTM D1557.
- NEWLY PLACED CONCRETE FOUNDATIONS SHALL CURE A MINIMUM OF 72 HRS PRIOR TO BACK FILLING.
- FINISHED GRADING SHALL BE SLOPED TO PROVIDE POSITIVE DRAINAGE AND PREVENT STANDING WATER. THE FINAL (FINISH) ELEVATION OF SLAB FOUNDATIONS SHALL SLOPE AWAY IN ALL DIRECTIONS FROM THE CENTER. FINISH GRADE OF CONCRETE PADS SHALL BE A MAXIMUM OF 4 INCHES ABOVE FINAL FINISH GRADE ELEVATIONS. PROVIDE SURFACE FILL GRAVEL TO ESTABLISH SPECIFIED ELEVATIONS WHERE REQUIRED.
- NEWLY GRADED SURFACE AREAS TO RECEIVE GRAVEL SHALL BE COVERED WITH GEOTEXTILE FABRIC TYPE: MIRAFI 500X GEO TEXTILE FABRIC AS MANUFACTURED BY "CONSTRUCTION MATERIAL 1-800-239-3841" OR AN APPROVED EQUIVALENT, SHOWN ON PLANS. THE GEOTEXTILE FABRIC SHALL BE BLACK IN COLOR TO CONTROL THE RECURRENCE OF VEGETATIVE GROWTH AND EXTEND TO WITHIN 1 FOOT OUTSIDE THE SITE FENCING OR ELECTRICAL GROUNDING SYSTEM PERIMETER WHICH EVER IS GREATER. ALL FABRIC SHALL BE COVERED WITH A MINIMUM OF 2" DEEP COMPACTED CRUSHED LIMESTONE FOR GENERAL COMPOUND AREAS AND 4" DEEP COMPACTED LIMESTONE FOR ACCESS DRIVE AND UNDER CONCRETE PADS (CRUSHED RECYCLED CONCRETE IS NOT ACCEPTABLE) AS SPECIFIED. I.E. FDOT TYPE NO. 57 FOR FENCED COMPOUND; FDOT TYPE NO. 67 FOR ACCESS DRIVE AREA.
- IN ALL AREAS TO RECEIVE FILL, REMOVE ALL VEGETATION, TOPSOIL, DEBRIS, WET AND UNSATISFACTORY SOIL MATERIALS, OBSTRUCTIONS, AND DELETERIOUS MATERIALS FROM GROUND SURFACE. PLOW STRIP OR BREAK UP SLOPED SURFACES STEEPER THAN 1 VERTICAL TO 4 HORIZONTAL SUCH THAT FILL MATERIAL WILL BIND WITH EXISTING/PREPARED SOIL SURFACE.
- WHEN SUB GRADE OR PREPARED GROUND SURFACE HAS A DENSITY LESS THAN THAT REQUIRED FOR THE FILL MATERIAL, SCARIFY THE GROUND SURFACE TO DEPTH REQUIRED, PULVERIZE, MOISTURE-CONDITION AND/OR AERATE THE SOILS AND RECOMPACT TO THE REQUIRED DENSITY PRIOR TO PLACEMENT OF FILLS.
- IN AREAS WHICH EXISTING GRAVEL SURFACING IS REMOVED OR DISTURBED DURING CONSTRUCTION OPERATIONS, REPLACE GRAVEL SURFACING TO MATCH ADJACENT GRAVEL SURFACING AND RESTORED TO THE SAME THICKNESS AND COMPACTION AS SPECIFIED. ALL RESTORED GRAVEL SURFACING SHALL BE FREE FROM CORRUGATIONS AND WAVES.
- EXISTING GRAVEL SURFACING MAY BE EXCAVATED SEPARATELY AND REUSED WITH THE CONDITION THAT ANY UNFAVORABLE AMOUNTS OF ORGANIC MATTER, OR OTHER DELETERIOUS MATERIALS ARE REMOVED PRIOR TO REUSE. FURNISH ANY ADDITIONAL GRAVEL RESURFACING MATERIAL AS NEEDED TO PROVIDE A FULL DEPTH COMPACTED SURFACE THROUGHOUT SITE.
- GRAVEL SUB SURFACE SHALL BE PREPARED TO REQUIRED COMPACTION AND SUB GRADE ELEVATIONS BEFORE GRAVEL SURFACING IS PLACED AND/OR RESTORED. ANY LOOSE OR DISTURBED MATERIALS SHALL BE THOROUGHLY COMPACTED AND ANY DEPRESSIONS IN THE SUB GRADE SHALL BE FILLED AND COMPACTED WITH APPROVED SELECTED MATERIAL. GRAVEL SURFACING MATERIAL SHALL NOT BE USED FOR FILLING DEPRESSIONS IN THE SUB GRADE.
- PROTECT EXISTING GRAVEL SURFACING AND SUB GRADE FEATURES SUCH AS CULVERTS ETC. IN AREAS WHERE EQUIPMENT LOADS WILL OPERATE. USE PLANKING 'MATT'S' OR OTHER SUITABLE PROTECTION DESIGNED TO SPREAD EQUIPMENT LOADS AS MAY BE NECESSARY. REPAIR ANY DAMAGE TO EXISTING GRAVEL SURFACING OR SUB GRADE WHERE SUCH DAMAGE IS DUE TO THE CONTRACTORS OPERATIONS.
- DAMAGE TO EXISTING STRUCTURES AND/OR UTILITIES RESULTING FROM CONTRACTORS NEGLIGENCE SHALL BE REPAIRED AND/ OR REPLACED TO THE OWNERS SATISFACTION AT NO ADDITIONAL COST TO THE CONTRACT.
- ALL SUITABLE BORROW MATERIAL FOR BACK FILL OF THE SITE SHALL BE INCLUDED IN THE BID. EXCESS TOPSOIL AND UNSUITABLE MATERIAL SHALL BE DISPOSED OF OFF SITE AT LOCATIONS APPROVED BY GOVERNING AGENCIES AT NO ADDITIONAL COST TO THE CONTRACT. APPROVED LOCATIONS SHALL BE KNOWN PRIOR TO DISPOSAL ACTIVITIES.

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GENERAL NOTES

JEA OTIS ROAD  
148 OTIS RD  
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DRAWING

N-2

DATE:  
08-05-2020



ANTENNA/COAXIAL CABLE GENERAL NOTES:

- 1. VERIFY EACH COAXIAL CABLE LENGTH, DIAMETER, ROUTING, COLOR CODING AND ALL APPURTENANCES WITH JEA.
- 2. THE MAXIMUM COAXIAL CABLE LENGTH AND CORRESPONDING COAXIAL CABLE DIAMETER HAS BEEN ESTIMATED ON SHEET C-4. THIS CABLE LENGTH IS APPROXIMATE, AND IS NOT TO BE USED FOR FABRICATION OR CONSTRUCTION. ACTUAL ANTENNA CABLE LENGTH(S) MAY VARY FROM ESTIMATED MAXIMUM LENGTH AND MUST BE VERIFIED.
- 3. ALL MAIN CABLES SHALL UTILIZE GROUND KITS, GROUNDED AS FOLLOWS:
  - A. NEAR ANTENNA RAD CENTER ELEVATION,
  - B. MIDDLE OF TOWER (MID-HEIGHT OF ANTENNA), IF CABLE RUN IS OVER 200',
  - C. BOTTOM OF TOWER,
  - D. AT MASTER GROUND BAR INSIDE JEA SHELTER.
- 4. ALL TOP JUMPERS SHALL BE LENGTHS AS SHOWN, AND INSTALLED BY CONTRACTOR.
- 5. ALL MAIN CABLES SHALL BE COLOR CODED AT THREE (3) LOCATIONS AS FOLLOWS:
  - A. AT ANTENNA PRIOR TO JUMPER
  - B. AT THE BOTTOM OF TOWER
  - C. AT THE MASTER GROUND BAR.
- 6. BANDING SHALL BE AS FOLLOWS:
  - A. MAIN LINE COLOR BANDS SHALL BE 2" WIDE. MAINTAIN 1" SPACING BETWEEN COLORS.
  - B. JUMPER COLOR BANDS SHALL BE 1" WIDE. WITH 1" SPACE.
  - C. START COLOR BANDS 2" BEYOND WEATHERPROOFING.
  - D. START SELECTOR COLOR NEXT TO END CONNECTORS.
- 7. FINAL COAXIAL ANTENNA CABLE SIZES SHALL BE DETERMINED BY JEA RF ENGINEER. SEE ANTENNA SCHEDULE SHEET C-4.
- 8. SEE CONSTRUCTION MANAGER FOR ANTENNA SUPPORT ASSEMBLY TYPE.
- 9. ALL COAXIAL CABLE WILL BE SECURED TO THE DESIGNED SUPPORT STRUCTURE AT DISTANCES NOT TO EXCEED 3' OR THE CABLE MANUFACTURES SPECIFICATIONS WHICHEVER IS LESS, WITH HARDWARE SPECIFIED IN THE COAXIAL CABLE ROUTING DETAILS OF THE SUPPLIED STRUCTURAL REPORT.
- 10. PROVIDE AT LEAST 6" OF SLACK IN THE MAIN COAXIAL CABLES AT THE ANTENNA MOUNTING ELEVATION TO PROVIDE FOR FUTURE CONNECTOR REPLACEMENT.

NATIONAL CODES & SPECIFICATIONS:

- 1. ANSI C84.1-1982, VOLTAGE RATINGS (60 HZ) FOR ELECTRICAL POWER SYSTEMS AND EQUIPMENT
- 2. NFPA 70, NATIONAL ELECTRICAL CODE, 2014 EDITION
- 3. UL 508, INDUSTRIAL CONTROL EQUIPMENT
- 4. UL 1581, ELECTRICAL WIRE, CABLES, AND FLEXIBLE CORDS

WOVEN WIRE FENCING:

- (INSTALL FENCING PER ASTM F-567, SWING GATES PER ASTM F-900)
- 1. CORNER, TERMINAL OR PULL POSTS: 3", SCHEDULE 40. GATE POSTS: 4", SCHEDULE 40, FOR GATE WIDTHS UP TO 6', PER ASTM F-1083.
  - 2. LINE POST: 2 1/2", SCHEDULE 40 PIPE, PER ASTM F-1083.
  - 3. GATE FRAME: 1 1/2", SCHEDULE 40 PIPE, PER ASTM F-1083. TOP
  - 4. FENCE FABRIC: 9 GA CORE WIRE, SIZE 2 1/4" MESH, CONFORM TO ASTM A-392.
  - 5. TIE WIRE: 9 GA MINIMUM GALVANIZED STEEL AT POSTS AND RAILS, SINGLE WRAP OF FABRIC TIE AND AT TENSION WIRE W/HOG RINGS, SPACED AT 24" INTERVALS MAXIMUM.
  - 6. TENSION WIRE: 7 GA GALVANIZED STEEL.
  - 7. BARBED WIRE: DOUBLE STRAND, 12 1/2 GA, TWISTED WIRE TO MATCH W/FABRIC, 4-POINT BARBS SPACED AT APPROXIMATELY 5" OC; CLASS 1 GALVANIZED BARBED WIRE.
  - 8. GATE LATCH: 1 3/8" PLUNGER ROD W/MUSHROOM-TYPE CATCH AND LOCK; KEYED ALIKE FOR ALL SITES IN GIVEN MTA.
  - 9. LOCAL ORDINANCE FOR BARBED WIRE PERMIT REQUIREMENT SHALL BE COMPLIED WITH, IF REQUIRED.
  - 10. HEIGHT: 8'-0" VERTICAL DIMENSION FOR FENCE + 1'-0" VERTICAL DIMENSION FOR BARBED WIRE.

NOTE: ALL ELECTRICAL WORK SHALL COMPLY WITH FP&L "ELECTRIC SERVICE STANDARDS" LATEST EDITION  
(<https://www.fpl.com/partner/builders/service-standards.html>)

EQUIPMENT NOTES:

- 1. JEA SHALL SUPPLY THE SHELTER AND METER CENTER TO BE INSTALLED BY CONTRACTOR.
- 2. GC SHALL FURNISH AND INSTALL ALL GROUNDING COMPONENTS (INCLUDING BUT NOT LIMITED TO: GROUNDING RODS, GROUNDING CONDUCTORS, AND INSPECTION WELLS) FOR THE TOWER, SHELTER, AND COMPOUND, AND COORDINATE WITH THE RF CONTRACTOR TO CONNECT TO THE RF GROUNDING.
- 3. ALL CONTRACTOR PROVIDED MATERIAL MUST BE SUBMITTED FOR REVIEW AND APPROVAL BY JEA PRIOR TO ORDERING.

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OVERALL SITE PLAN WITH AERIAL

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OVERALL SITE PLAN WITH AERIAL

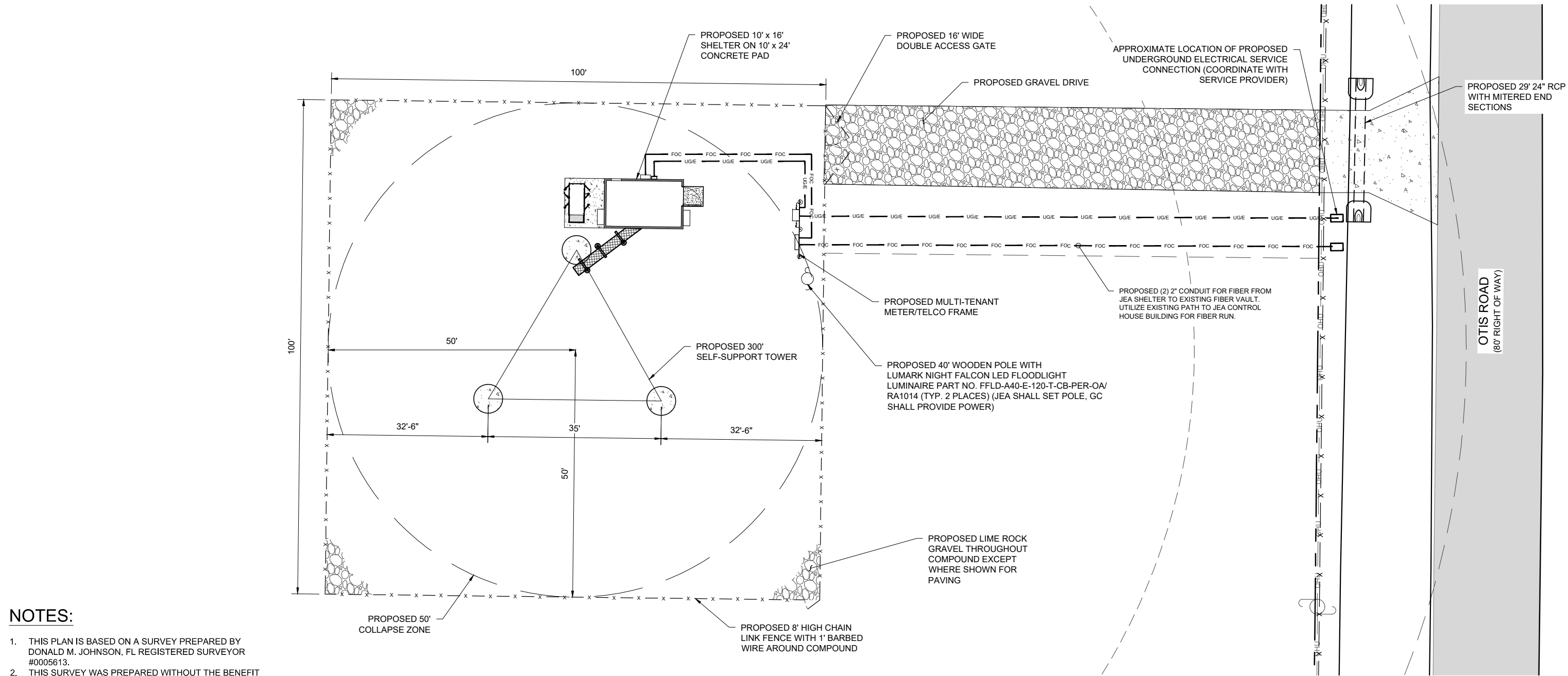
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C-1

DATE:  
08-05-2020







NOTES:

1. THIS PLAN IS BASED ON A SURVEY PREPARED BY DONALD M. JOHNSON, FL REGISTERED SURVEYOR #0005613.
2. THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A TITLE ABSTRACT.
3. UNDERGROUND IMPROVEMENTS, SUCH AS FOUNDATIONS AND UTILITIES, WERE NOT LOCATED.
4. ALL DIMENSIONS, PROPERTY LINES, AND RIGHT OF WAYS ARE APPROXIMATE BASED UPON AVAILABLE ONLINE AND OWNER- PROVIDED RESOURCES.
5. CONTRACTOR SHALL RESTORE AND REPAIR ANY DAMAGE TO OFFSITE AREAS CAUSED BY CONSTRUCTION, TO ORIGINAL OR BETTER CONDITION.
6. ALL NEW WORK TO BE PERFORMED PER LATEST JEA STANDARDS & SPECIFICATIONS.

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COMPOUND SITE PLAN

JEA OTIS ROAD  
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C-2

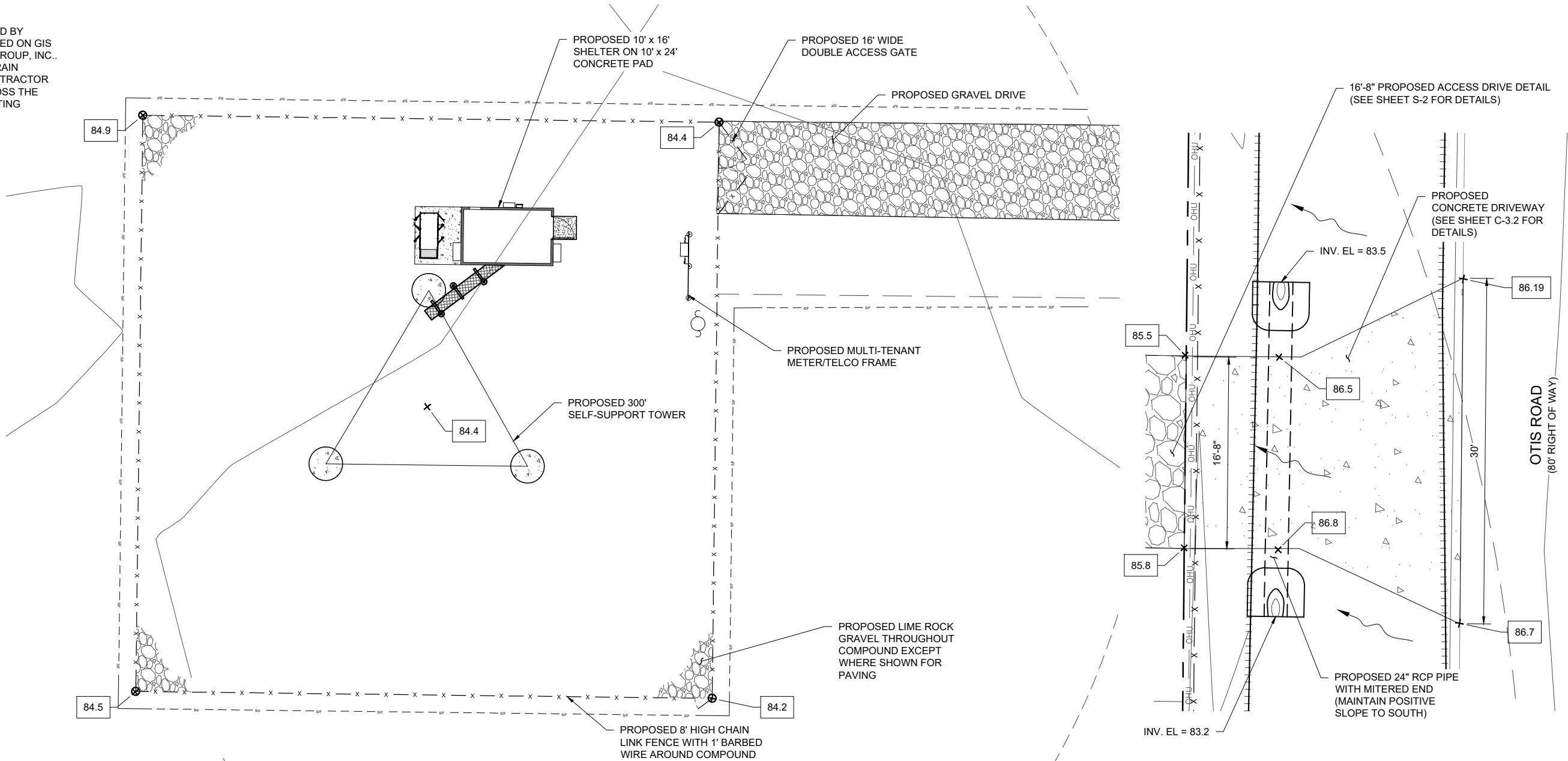
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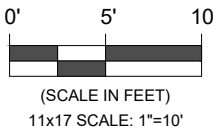
GRADING NOTES:

EXISTING SPOT ELEVATIONS ARE PROVIDED BY SURVEY. CONTOURS ARE ESTIMATED BASED ON GIS TOPO PREPARED BY SMW ENGINEERING GROUP, INC.. THE GROUND IS FLAT AND APPEARS TO DRAIN PRIMARILY TO THE SOUTHWEST. THE CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE ACROSS THE PROPOSED COMPOUND, FOLLOWING EXISTING DRAINAGE PATTERNS.



CONCRETE DRIVEWAY DETAIL

GRAPHIC SCALE

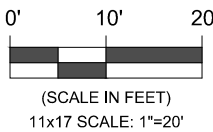


LEGEND

- 19.2 EXISTING SPOT ELEVATION
- SP --- PROPOSED SILT FENCE
- xxx- EXISTING MINOR CONTOUR
- xxx- EXISTING MAJOR CONTOUR
- xxx--- PROPOSED CONTOUR
- ~> DIRECTION OF WATER FLOW
- xxx.X PROPOSED SPOT ELEVATION

GRADING PLAN

GRAPHIC SCALE



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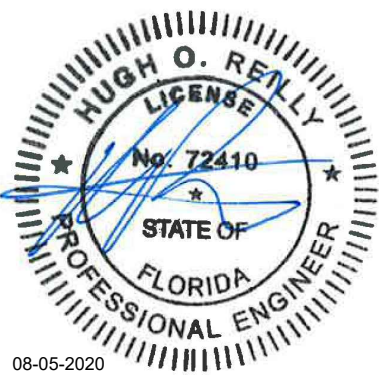
GRADING PLAN

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C-3

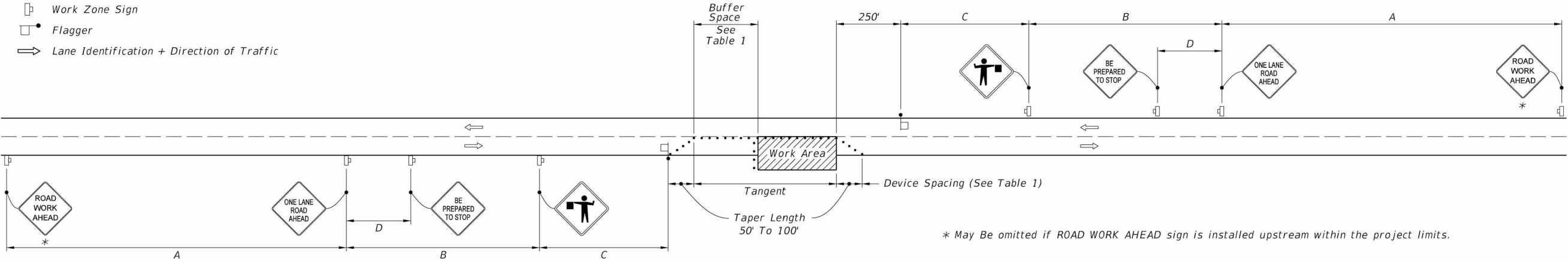
DATE:  
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SYMBOLS:

- Work Area
- Channelizing Device (See Index 102-600)
- Work Zone Sign
- Flagger
- Lane Identification + Direction of Traffic



WITHOUT TEMPORARY RAISED RUMBLE STRIPS

GENERAL NOTES:

1. Special Conditions may be required in accordance with these notes and the following sheets:

A. Railroad Crossings:

a. If an active railroad crossing is located closer to the Work Area than the queue length plus 300 feet, extend the Buffer Space as shown on Sheet 3.

b. If the queuing of vehicles across an active railroad crossing cannot be avoided, provide a uniformed traffic control officer or flagger at the highway-rail grade crossing to prevent vehicles from stopping within the highway-rail grade crossing, even if automatic train warning devices are in place.

B. If the Work Area encroaches on the Centerline, use the Layout for Temporary Lane Shift to Shoulder on Sheet 3 only if the Existing Paved Shoulder width is sufficient to provide for an 11' lane between the Work Area and the Edge of Existing Paved Shoulder. Reduce the posted speed when appropriate.
2. Temporary Raised Rumble Strips:

A. Use when both of the following conditions are met concurrently:

a. Existing Posted Speed is 55 mph or greater;

b. Work duration is greater than 60 minutes.

B. Use a consistent Strip color throughout the work zone.

C. Place each Rumble Strip Set transversely across the lane at locations shown.

D. Use Option 1 or Option 2 as shown on Sheet 2. Use only one option throughout work zone.
3. Additional one-way control may be provided by the following means:

A. Flag-carrying vehicle;

B. Official vehicle;

C. Pilot vehicles;

D. Traffic signals.
4. When a side road intersects the highway within the TTC zone, place additional TTC devices in accordance with other applicable TCZ Indexes.

5. The two channelizing devices directly in front of the work area may be omitted provided vehicles in the work area have high-intensity rotating, flashing, oscillating, or strobe lights operating.

6. When Buffer Space cannot be attained due to geometric constraints, use the greatest attainable length, not less than 200 ft, for posted speeds greater than 25 mph.

7. ROAD WORK AHEAD and the BE PREPARED TO STOP signs may be omitted if all of the following conditions are met:

A. Work operations are 60 minutes or less.

B. Speed limit is 45 mph or less.

C. There are no sight obstructions to vehicles approaching the work area for a distance equal to the Buffer Space shown in Table 1.

D. Vehicles in the work area have high-intensity, rotating, flashing, oscillating, or strobe lights operating.

E. Volume and complexity of the roadway has been considered.

F. If a railroad crossing is present, vehicles will not queue across rail tracks.

G. AFADs are not in use.
8. See Index 102-600 for general TCZ requirements and additional information.

9. Automated Flagger Assistance Devices (AFADs) may be used in accordance with Specifications Section 102, 990 and the APL vendor drawings.

When flaggers are the sole means of one-way control, the flaggers must be in sight of each other or in direct communication at all times.

TABLE 1

Posted Speed	DEVICE SPACING				Distance Between Signs				Buffer Space
	Maximum Spacing of Cones or Tubular Markers		Maximum Spacing of Type I or Type II Barricades/Panels/Drums						
	On a Taper	On a Tangent	On a Taper	On a Tangent	A	B	C	D	
25	20'	50'	20'	50'	200'	200'	200'	100'	155'
30	20'	50'	20'	50'	200'	200'	200'	100'	200'
35	20'	50'	20'	50'	200'	200'	200'	100'	250'
40	20'	50'	20'	50'	200'	200'	200'	100'	305'
45	20'	50'	20'	50'	350'	350'	350'	175'	360'
50	20'	50'	20'	100'	500'	500'	500'	250'	425'
55	20'	50'	20'	100'	2640'	1500'	1000'	500'	495'
60	20'	50'	20'	100'	2640'	1500'	1000'	500'	570'
65	20'	50'	20'	100'	2640'	1500'	1000'	500'	645'
70	20'	50'	20'	100'	2640'	1500'	1000'	500'	730'

CONDITIONS

WHERE ANY VEHICLE, EQUIPMENT, WORKERS OR THEIR ACTIVITIES ENCROACH THE AREA BETWEEN THE CENTERLINE AND A LINE 2' OUTSIDE THE EDGE OF TRAVEL WAY.

LAST REVISION	DESCRIPTION:	FDOT	FY 2019-20 STANDARD PLANS	TWO-LANE, TWO-WAY, WORK WITHIN THE TRAVEL WAY	INDEX	SHEET
11/01/17					102-603	1 of 3

NO.	DATE	REVISIONS AND RECORD OF ISSUE	BY	CHK	APP	FLM
1	08-05-20	FOR PERMIT/ CONSTRUCTION				
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FDOT INDEX 603

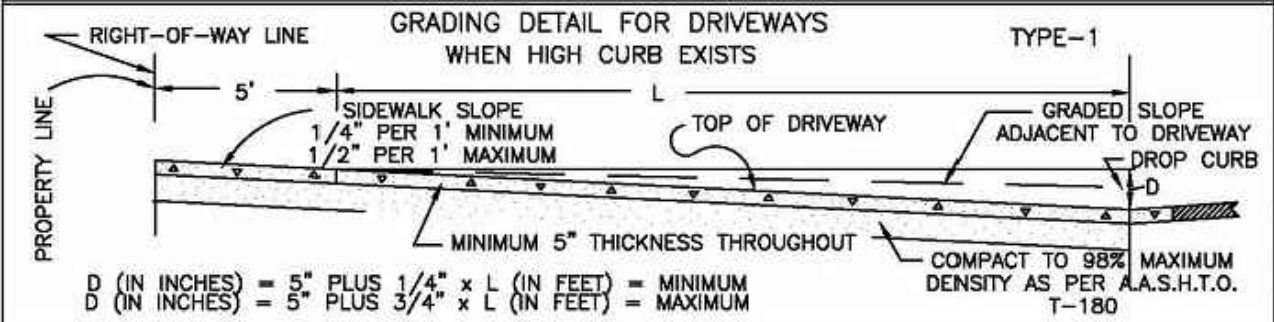
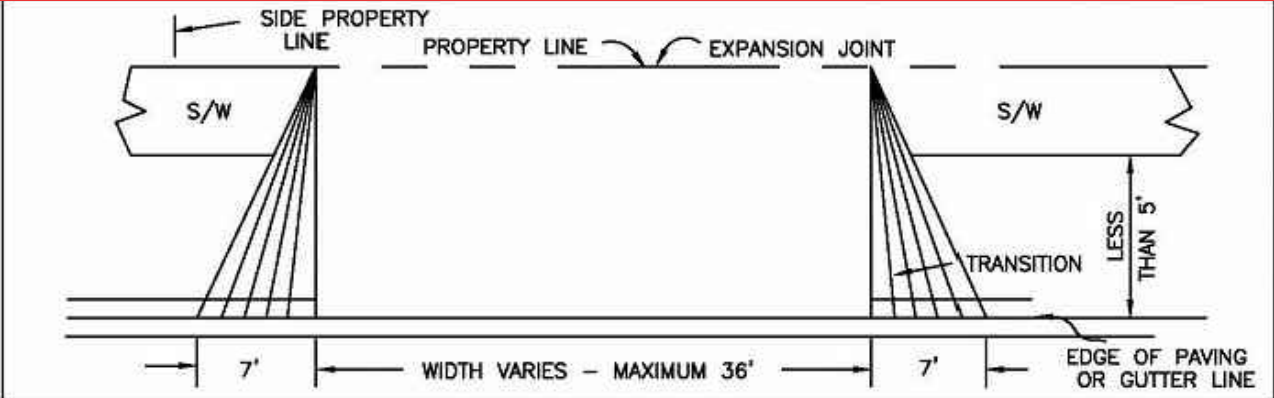
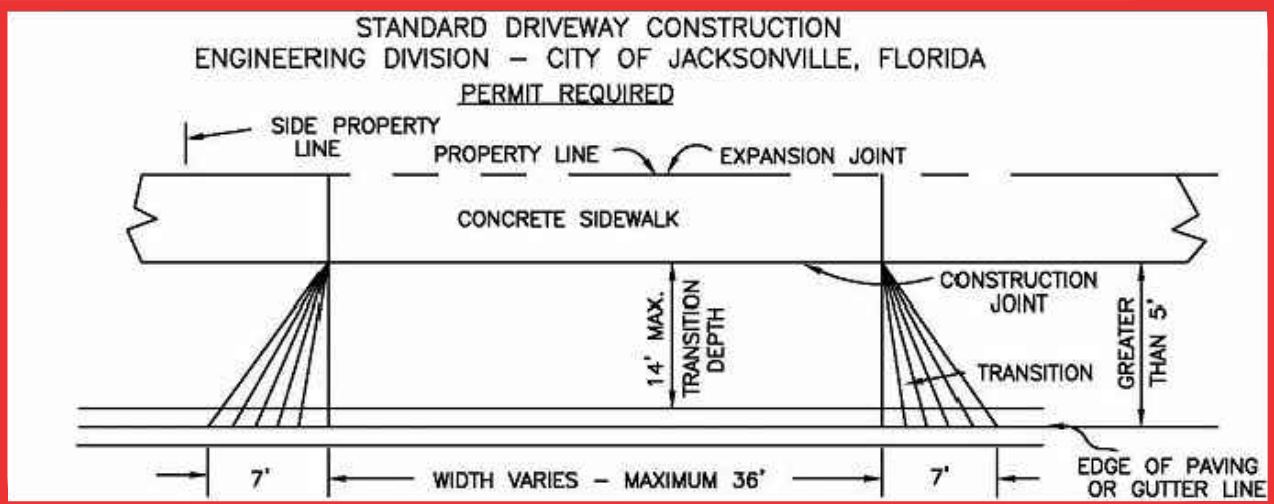
JEAN OTIS ROAD  
148 OTIS RD  
JACKSONVILLE, FL 32220

DRAWING  
C-3.1

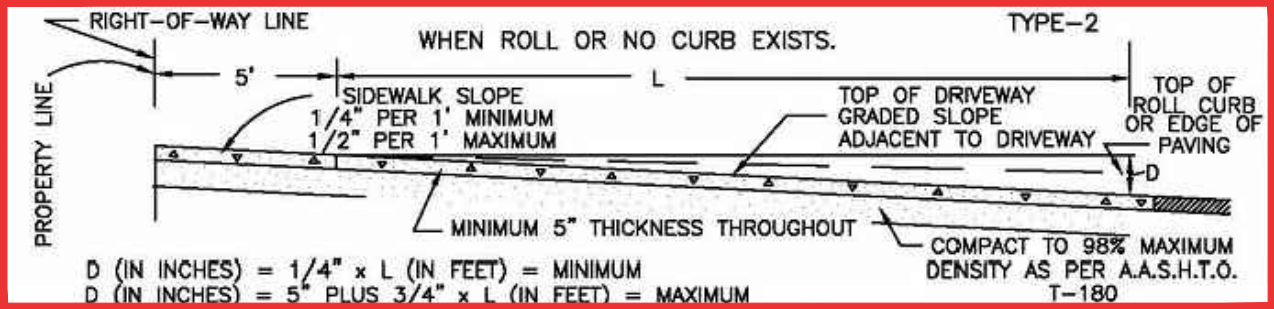
DATE:  
08-05-2020



EXISTING CONDITIONS



EXISTING CONDITIONS



NOTE: MOST DRIVEWAY GRADES CAN BE MADE TO FIT THE ABOVE STANDARDS. DRIVEWAYS AND CROSS-OVERS TO BE A MINIMUM OF 2500 P.S.I. CONCRETE. DRIVEWAY NOT TO EXCEED LIMIT OF SIDE PROPERTY LINE. UNDERGROUND UTILITIES MAY EXIST ON SITE. CONTACTOR SHALL CONTACT PROPER AUTHORITIES PRIOR TO CONSTRUCTION.

OPTIONAL FLARED COMMERCIAL CONCRETE DRIVEWAY DETAILS	CITY OF JACKSONVILLE STANDARD	N.T.S.	PLATE P-206
		DATE DRAWN	JULY 1978
		REVISED DATE	9/5/03

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CITY OF JACKSONVILLE DRIVEWAY DETAILS

JEA OTIS ROAD  
148 OTIS RD  
JACKSONVILLE, FL 32220

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C-3.2

DATE:  
08-05-2020



08-05-2020



DIMENSIONS AND QUANTITIES																					See General Note No. 5. See Sheet 5 For 3" Slab Quantities		
D	X	A	B	C	E	F	G	H ■	M				N	5½" CONCRETE SLAB (CY) ▣				SODDING (SY)					
									Single	Double	Triple	Quad.		Single	Double	Triple	Quad.	Single	Double	Triple			Quad.
									Pipe	Pipe	Pipe	Pipe		Pipe	Pipe	Pipe	Pipe	Pipe	Pipe	Pipe			Pipe
1:2 Slope	15"	2'-7"	1.92'	2.18'	4.10'	2.06'	5'	1.22'	2.9'	4.63'	7.21'	9.79'	12.37'	1.19'	0.38	0.58	0.77	0.96	21	24	27	30	
	18"	2'-10"	1.97'	2.74'	4.71'	2.56'	6'	1.41'	3.4'	4.92'	7.75'	10.58'	13.42'	1.21'	0.44	0.65	0.87	1.09	22	25	28	31	
	24"	3'-5"	2.06'	3.85'	5.91'	3.56'	7'	1.73'	3.4'	5.50'	8.92'	12.33'	15.75'	1.25'	0.54	0.83	1.12	1.42	24	28	32	35	
	30"	4'-3"	2.15'	4.95'	7.10'	4.56'	8'	2.00'	3.4'	6.08'	10.33'	14.58'	18.83'	1.29'	0.66	1.09	1.50	1.91	26	31	35	40	
	36"	5'-1"	2.25'	6.08'	8.33'	5.56'	9'	2.24'	3.4'	6.67'	11.75'	16.83'	21.92'	1.33'	0.81	1.38	1.95	2.51	28	34	39	45	
	42"	6'-0"	2.34'	7.21'	9.55'	6.56'	10'	2.45'	3.4'	7.25'	13.25'	19.25'	25.25'	1.38'	0.97	1.70	2.45	3.19	30	37	43	50	
	48"	6'-9"	2.43'	8.33'	10.76'	7.56'	11'	2.65'	3.4'	7.83'	14.58'	21.33'	28.08'	1.42'	1.13	2.04	2.93	3.84	32	39	47	54	
	54"	7'-8"	2.52'	9.44'	11.96'	8.56'	12'	2.83'	3.4'	8.42'	16.08'	23.75'	31.42'	1.46'	1.31	2.44	3.58	4.72	34	42	51	59	
	60"	8'-6"	2.62'	10.56'	13.18'	9.56'	14'	3.00'	4.4'	9.00'	17.50'	26.00'	34.50'	1.50'	1.51	2.89	4.28	5.68	36	45	55	64	
	66"	9'-2"	2.71'	11.68'	14.39'	10.56'	15'	3.18'	4.4'	9.58'	18.75'	27.92'	37.08'	1.54'	1.68	3.25	4.84	6.43	38	48	58	68	
1:4 Slope	72"	10'-0"	2.80'	12.80'	15.60'	11.56'	16'	3.30'	4.4'	10.16'	20.16'	30.16'	40.16'	1.58'	1.89	3.74	5.59	7.45	40	51	62	73	
	15"	2'-7"	2.27'	4.09'	6.36'	4.03'	8'	1.22'	4.0'	4.63'	7.21'	9.79'	12.37'	1.19'	0.57	0.87	1.15	1.44	23	26	29	32	
	18"	2'-10"	2.36'	5.12'	7.48'	5.03'	9'	1.41'	4.0'	4.92'	7.75'	10.58'	13.42'	1.21'	0.66	0.99	1.31	1.65	25	28	31	35	
	24"	3'-5"	2.53'	7.18' ▴	9.71'	7.03' ▴	11'	1.73'	4.0'	5.50'	8.92'	12.33'	15.75'	1.25'	0.85	1.30	1.75	2.20	28	32	36	40	
	30"	4'-3"	2.70'	9.25'	11.95'	9.03'	13'	2.00'	4.0'	6.08'	10.33'	14.58'	18.83'	1.29'	1.10	1.74	2.39	3.05	31	36	41	46	
	36"	5'-1"	2.87'	11.31' ◇	14.18'	11.03' ◇	15'	2.24'	4.0'	6.67'	11.75'	16.83'	21.92'	1.33'	1.32	2.21	3.08	3.96	34	40	46	52	
	42"	6'-0"	3.05'	13.37'	16.42'	13.03'	17'	2.45'	4.0'	7.25'	13.25'	19.25'	25.25'	1.38'	1.58	2.76	3.91	5.09	38	44	51	58	
	48"	6'-9"	3.22'	15.43'	18.65'	15.03'	19'	2.65'	4.0'	7.83'	14.58'	21.33'	28.08'	1.42'	1.85	3.30	4.73	6.17	41	48	56	63	
	54"	7'-8"	3.39'	17.49'	20.88'	17.03'	21'	2.83'	4.0'	8.42'	16.08'	23.75'	31.42'	1.46'	2.14	3.95	5.77	7.58	44	52	61	69	
	60"	8'-6"	3.56'	19.55'	23.11'	19.03'	23'	3.00'	4.0'	9.00'	17.50'	26.00'	34.50'	1.50'	2.45	4.66	6.87	9.07	47	56	66	75	
	66"	9'-2"	3.73'	21.62'	25.35'	21.03'	25'	3.18'	4.0'	9.58'	18.75'	27.92'	37.08'	1.54'	2.88	5.54	8.18	10.84	49	59	69	80	
	72"	10'-0"	3.91'	23.68'	27.59'	23.03'	27'	3.30'	4.0'	10.16'	20.16'	30.16'	40.16'	1.58'	3.54	6.61	9.87	13.13	52	63	74	85	
B E ▴ 6.42' ▴ 6.25' Dimensions permitted to allow use of 8' standard pipe lengths.																							
◇ 10.40' ◇ 10.10' Dimensions permitted to allow use of 12' standard pipe lengths.																							
▴ ◇ Concrete slab shall be deepened to form bridge across crown of pipe. See section below.																							

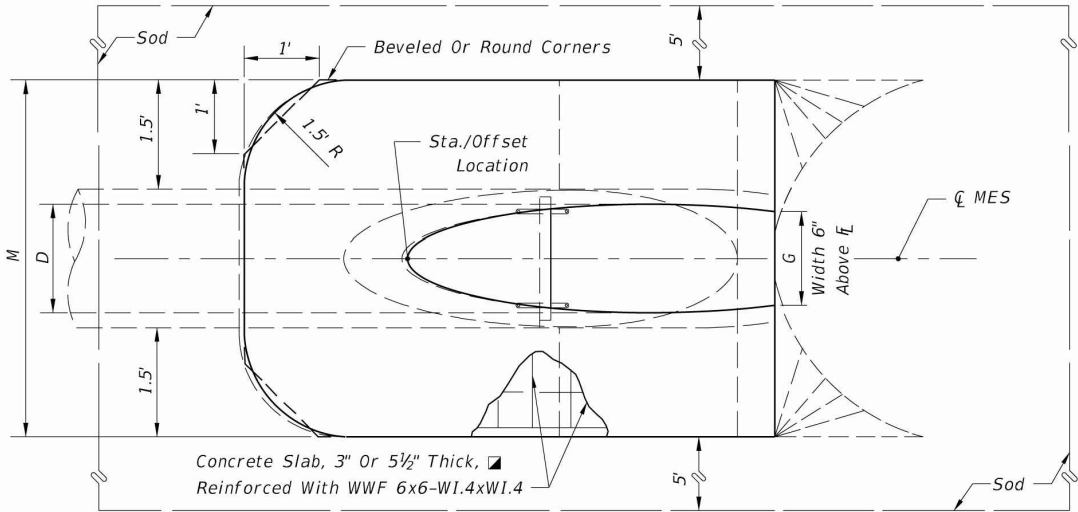
▣ See General Note No. 5.  
See Sheet 5 For 3" Slab Quantities

■ Values shown for estimating pipe quantities and are for information only.

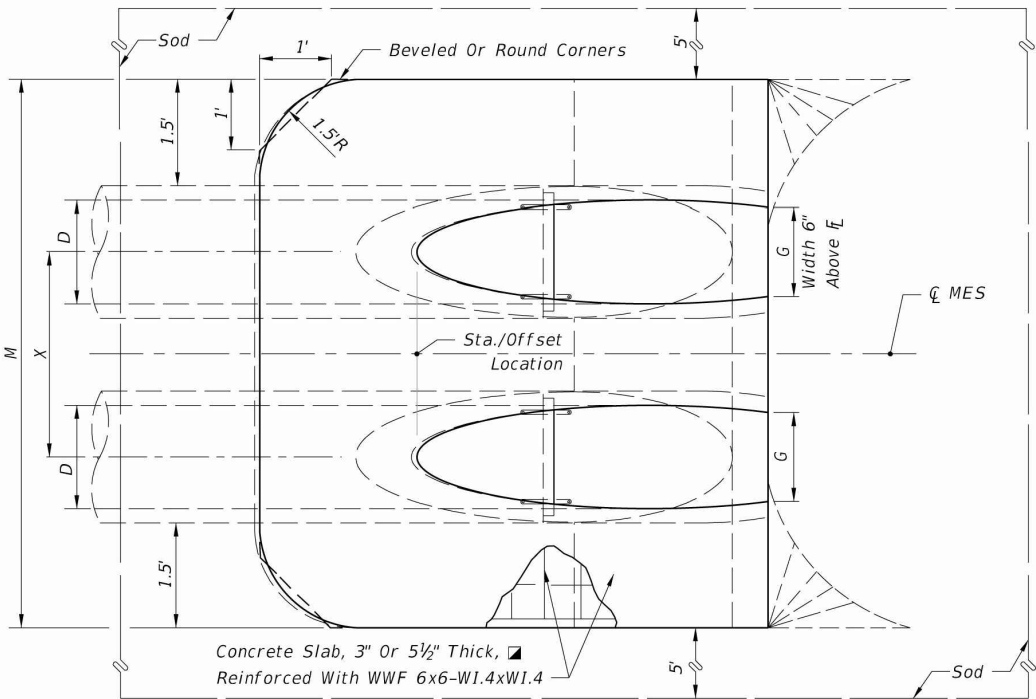
B      E  
△ 6.42'    △ 6.25'    Dimensions permitted to allow use of 8' standard pipe lengths.

◇ 10.40'    ◇ 10.10'    Dimensions permitted to allow use of 12' standard pipe lengths.

△ ◇ Concrete slab shall be deepened to form bridge across crown of pipe. See section below.



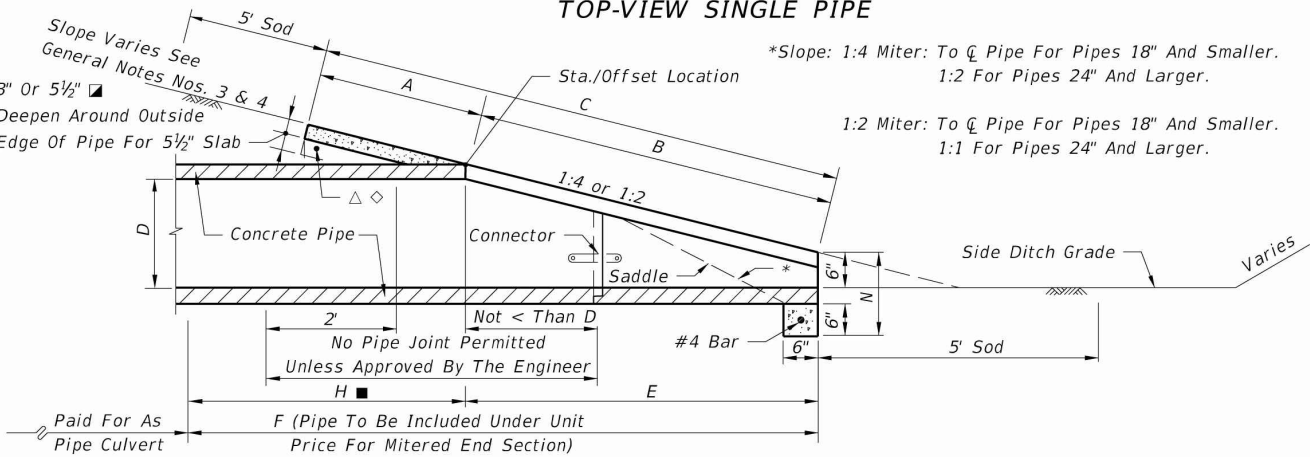
TOP-VIEW SINGLE PIPE



TOP-VIEW MULTIPLE PIPE

NOTE: See sheet 6 for details and notes.

SINGLE AND MULTIPLE ROUND CONCRETE PIPE



SECTION

LAST REVISION	DESCRIPTION:	FY 2017-18 DESIGN STANDARDS	CROSS DRAIN MITERED END SECTION	INDEX NO.	SHEET NO.
11/01/16				272	1 of 6

NO.	DATE	REVISIONS AND RECORD OF ISSUE	BY	CHK	APP	FLM
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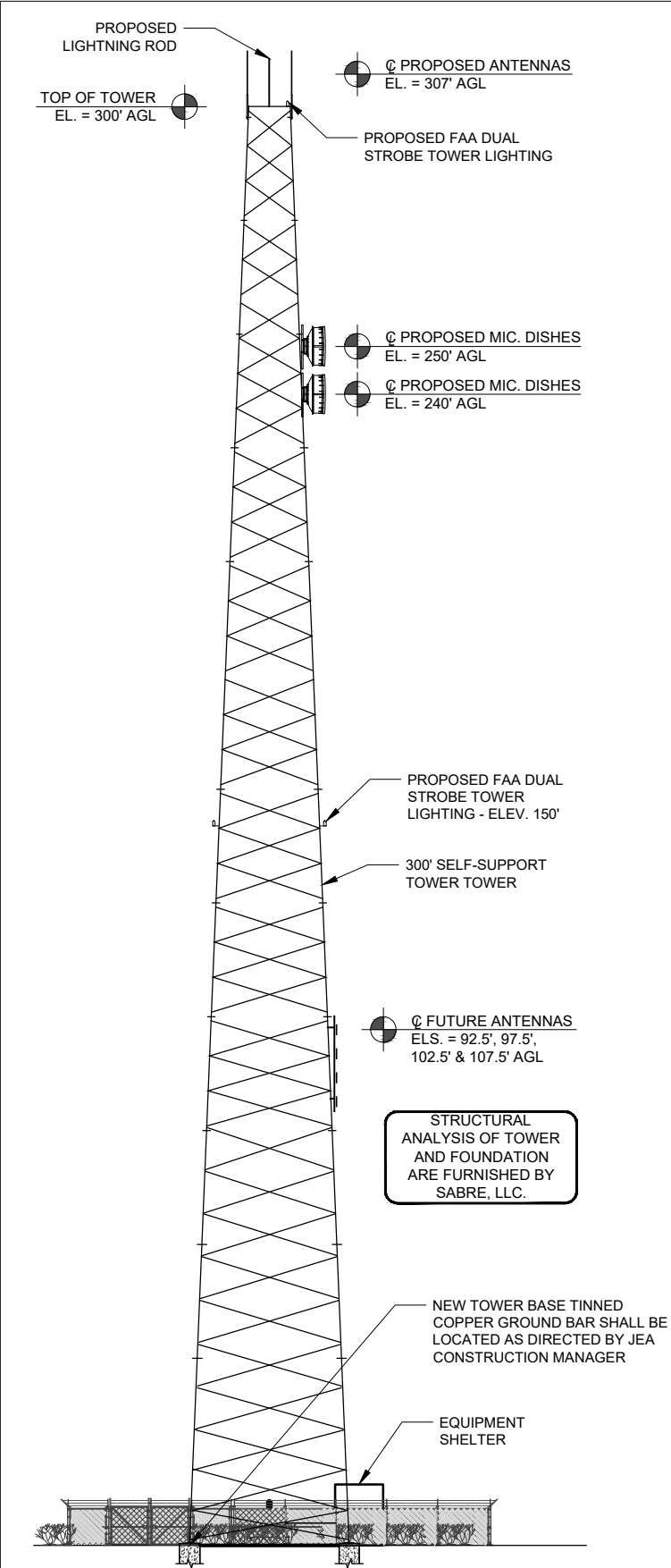
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FDOT INDEX 272  
JEA OTIS ROAD  
148 OTIS RD  
JACKSONVILLE, FL 32220

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C-3.3  
DATE:  
08-05-2020





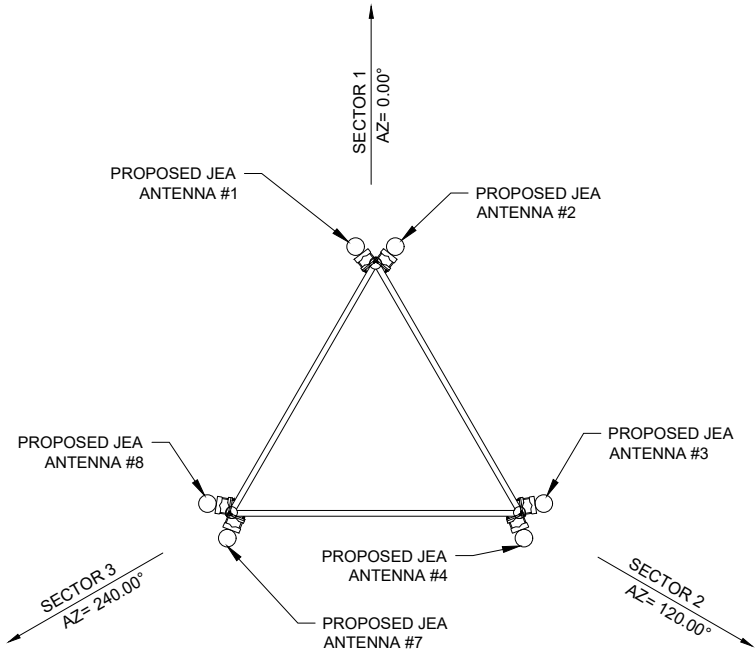


TOWER ELEVATION  
NOT TO SCALE

JEA ANTENNA & CABLING SCHEDULE											
Sector	Antenna #	Mounting Position	Antenna Type	Azimuth	Down-Tilt Mech/Elec	RAD Center	Coax Diameter	Type	Color Code	Mount Type	Remarks
Alpha	1		DB589-Y	0	NA	307'	1-5/8"	AVA OR EUPEN	RED	Boom Sector Mounts near 300'	Distribution Automation
	2		DB589-Y	0	NA	307'	1-5/8"	AVA OR EUPEN	GREEN		Spare
Beta	3		DB589-Y	120	NA	307'	1-5/8"	AVA OR EUPEN	BLUE		Water (Licensed)
	4		DB589-Y	120	NA	307'	1-5/8"	AVA OR EUPEN	BROWN	Pipe Mount	Spare
	5		VHLP6-6WA-6WH	240	Mech	250	EW P63-59	EUPEN	NONE		Microwave Link to SJRPP
Gamma	6		VHLP6-6WA-6WH	240	Mech	240	EW P63-59	EUPEN	NONE	Pipe Mount	Microwave Link to SJRPP
	7		DB589-Y	240	NA	307'	1-5/8"	AVA OR EUPEN	YELLOW	Boom Sector Mounts near 300'	Wastewater (Licensed)
Beta	8		DB589-Y	240	NA	307'	1-5/8"	AVA OR EUPEN	ORANGE		Spare
	9		FG9023 *	120	NA	107' - 6"	1 EA. 7/8" PER ANTENNA	AVA OR EUPEN	WHITE 1	(2 EA) 2' STANDOFF MOUNTS & 2" SCH 40 BY 20' LONG RGS MOUNTING MAST	AMR
	10		FG9023 *	120	NA	102' - 6"			WHITE 2		
	11		FG9023 *	120	NA	97' - 6"			WHITE 3		
	12		FG9023 *	120	NA	92' - 6"			WHITE 4		

Note: Height of tower is300'; max. height 330' AGL w/ appurtenances.  
(Platform height is estimated based on 5'-0 high mounting collar)

\* This antenna is a LAIRD Model FG9023 Omni; four of them are mounted on a 20' Hot Dipped Galvanized Standard Steel Pipe; the top antenna is mounted 2'-6" from the end of the pipe to the centerline of the mount; the other antennas are mounted on 5'-0 centers from the center of the top antenna mount. The entire mast assembly is mounted to the self-support using two 2' standoff mounts.



ANTENNA ORIENTATIONS  
SCALE: N.T.S.

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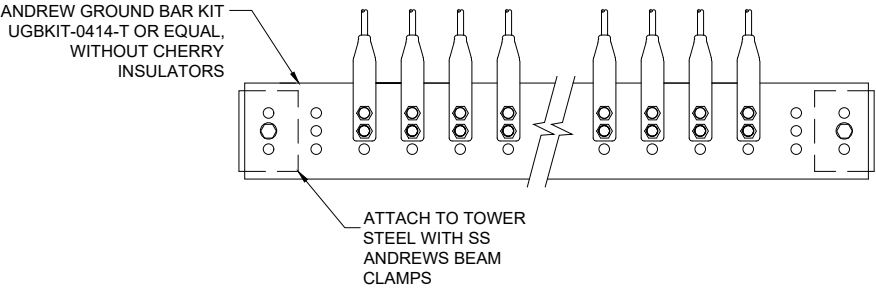
TOWER ELEVATION & ANTENNA MOUNTS

JEA OTIS ROAD  
148 OTIS RD  
JACKSONVILLE, FL 32220

DRAWING  
C-4

DATE:  
08-05-2020

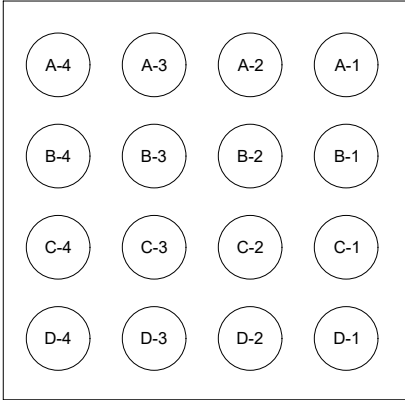




ANTENNA GROUND BAR

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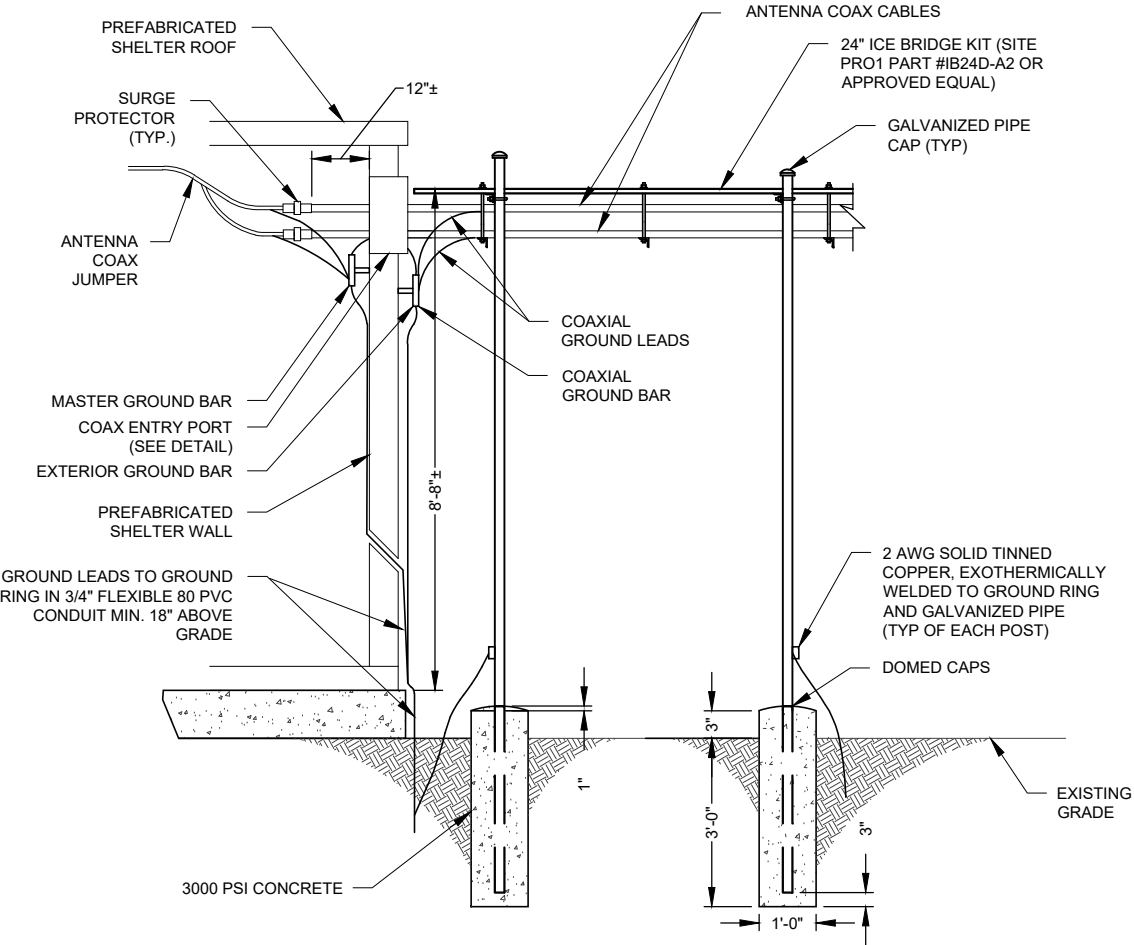
- NOTES:
- CONDUCTORS TO BE EXOTHERMIC WELDED TO LUGS & BOLTED WITH MIN. 1/2" DIA. STAINLESS STEEL BOLT WITH HEAD & NUT FLAT WASHER & NUT LOCK WASHER TYP.



COAX ENTRY PORT VIEW FROM OUTSIDE SHELTER

COAX ENTRY PORT DETAIL

NOT TO SCALE



ICE BRIDGE DETAIL

NOT TO SCALE

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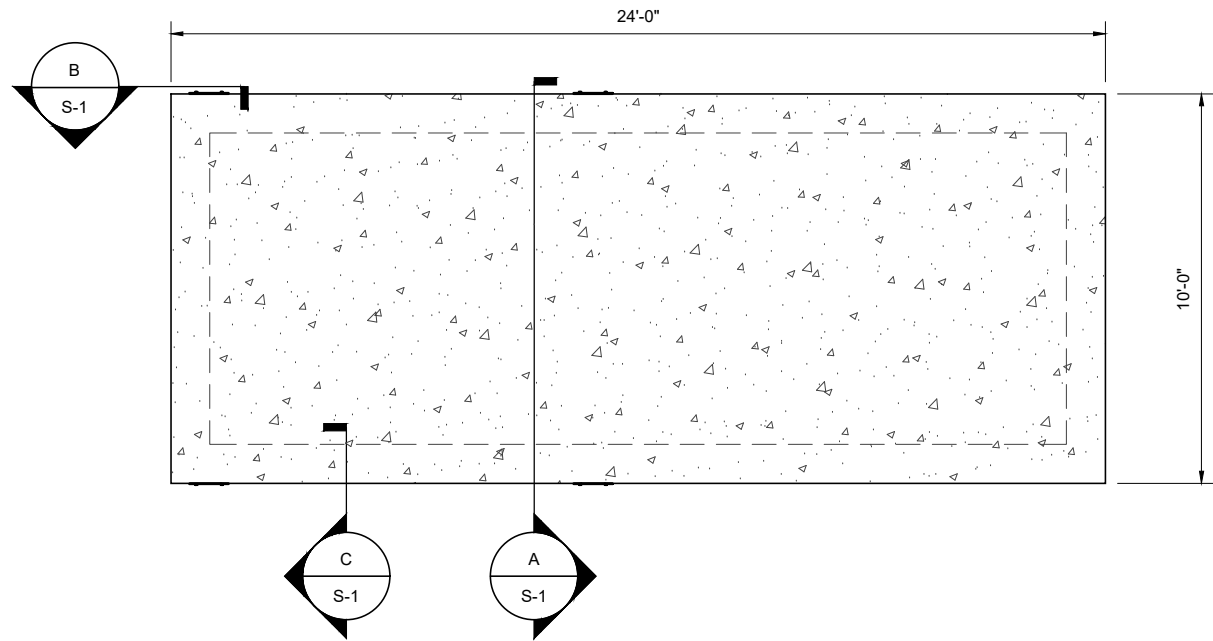
ICE BRIDGE DETAILS

JEA OTIS ROAD  
148 OTIS RD  
JACKSONVILLE, FL 32220

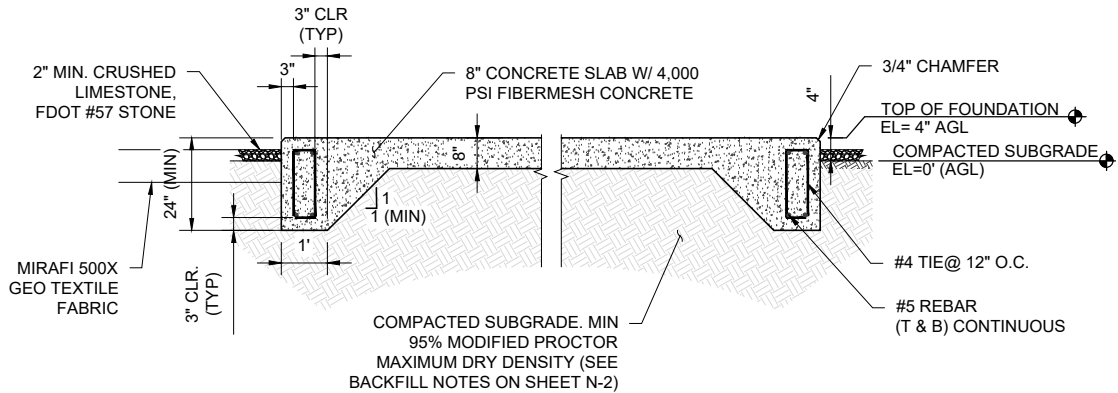
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C-5

DATE:  
08-05-2020

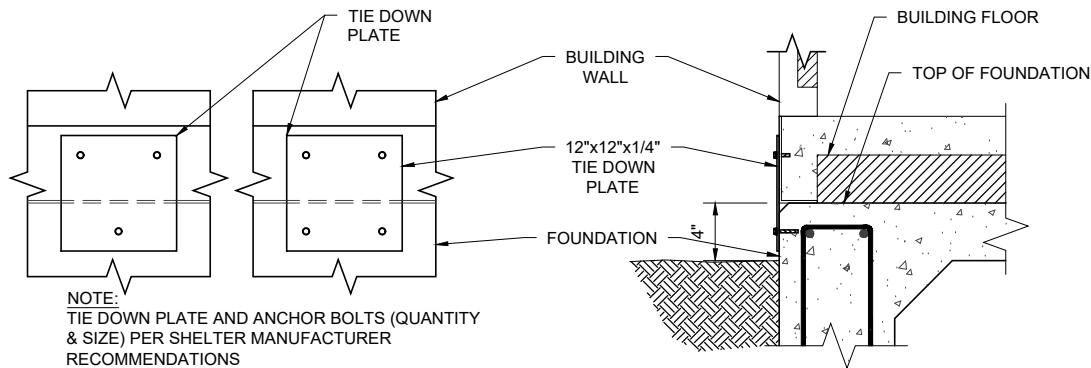




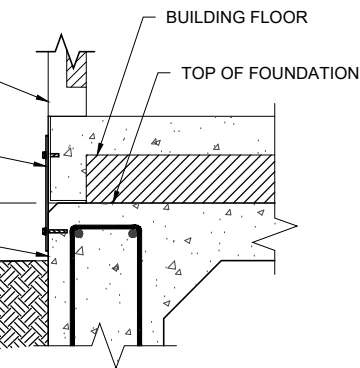
SHELTER FOUNDATION DETAIL  
NOT TO SCALE



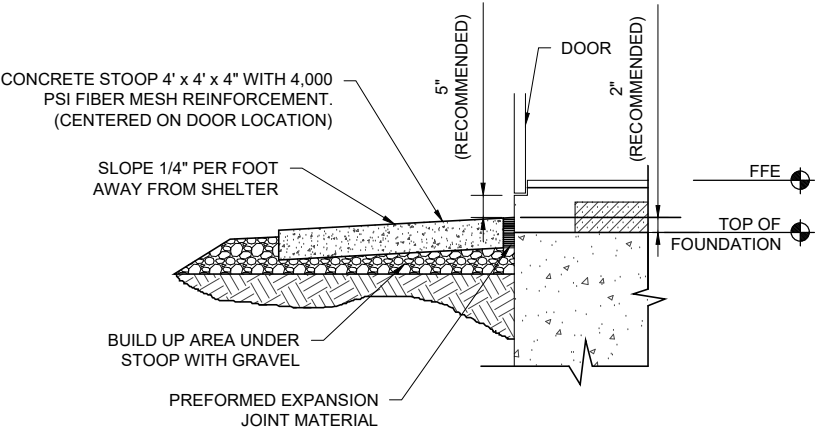
SECTION A  
NOT TO SCALE



SECTION B  
NOT TO SCALE



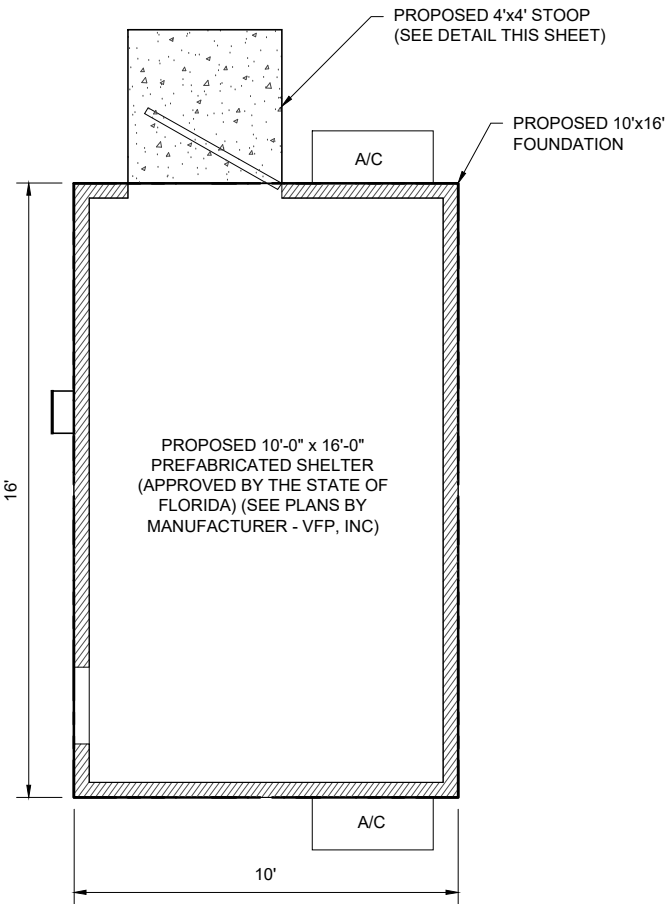
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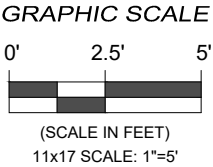
STOOP DETAIL  
NOT TO SCALE

SHELTER FOUNDATION NOTES:

1. SLAB TO BE LEVEL ( $\pm$ ) 1/4".
2. FOOTING TO EXTEND A MINIMUM OF 18" BELOW UNDISTURBED SOIL.
3. FINAL SITE DESIGN IS THE RESPONSIBILITY OF THE CONTRACTOR.
4. SLAB FOUNDATION DESIGNED ASSUMING ALLOWABLE SOIL BEARING PRESSURE OF 2,000 PSF.
5. SLAB FOUNDATION DESIGNED ASSUMING MAXIMUM SOIL PLASTICITY INDEX OF 27.
6. FOUNDATION SHALL HAVE A MINIMUM 4" PROJECTION ABOVE GRADE.
7. FOUNDATION DESIGN SHALL BE 4,500 PSI FIBERMESH.
8. GROUT SHALL BE A MINIMUM 5,000 PSI.
9. TIE DOWN CONNECTION PLATE SHALL BE INSTALLED ABOVE GRADE.
10. OVERLAP SPLICES ARE ALLOWED FOR REINFORCING BAR, USE 18" MINIMUM LAP.
11. ALL REINFORCING STEEL SHALL CONFORM TO ASTM 615, GRADE 60.
12. ALL REQUIRED TIE DOWN PLATES, SHIMS, BOLTS AND ANCHORS SHALL BE PLACED INSIDE SHELTER PRIOR TO SHIPMENT FROM MANUFACTURER.
13. USE SHIMS AS REQUIRED TO ASSURE SHELTER IS BEARING AT PERIMETER. SEAL PERIMETER w/ GROUT IF SHIMS ARE USED.
14. TOP 8" OF FOUNDATION SIDES MUST BE FORMED FLAT TO ACCEPT TIE DOWN PLATES.
15. ENGINEER SHALL APPROVE SHOP DRAWINGS PRIOR TO FABRICATION.
16. NOTES, DETAILS, AND SPECIFICATIONS ON THIS PLAN PERTAIN TO THE CONCRETE FOUNDATION FOR THE SHELTER, ONLY. SHELTER DESIGN AND SPECIFICATIONS ARE THE RESPONSIBILITY OF OTHERS.



SHELTER DETAIL



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SHELTER DETAILS

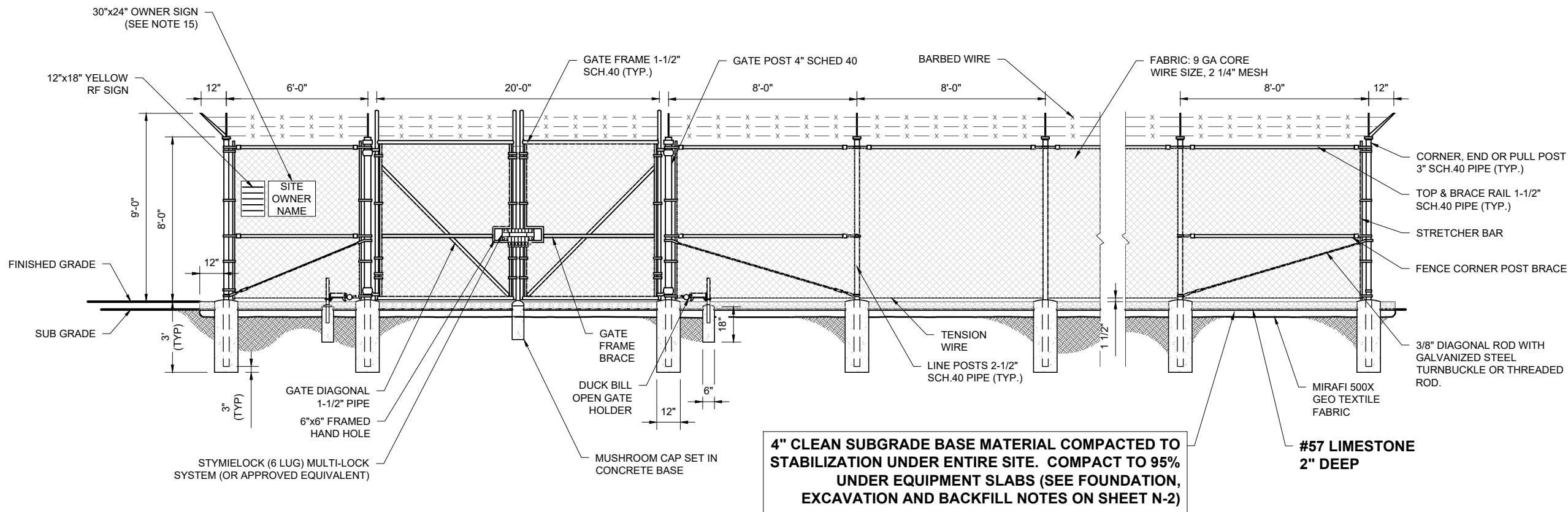
JEA OTIS ROAD  
148 OTIS RD  
JACKSONVILLE, FL 32220

DRAWING  
S-1

DATE:  
08-05-2020







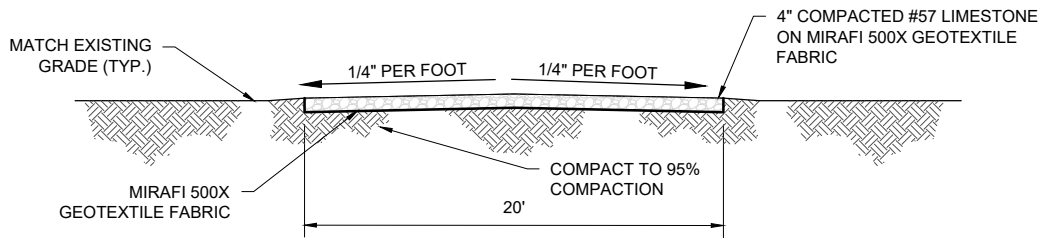
**NOTE:**  
1. ORIENTATION SHOWN FOR REFERENCE ONLY, SEE SHEET C-2 FOR LOCATION OF GATE.

**NOTE:**  
FENCE GROUNDING SHALL BE IN STRICT ACCORDANCE WITH THE JEA STANDARD FENCE GROUNDING DETAILS AS SHOWN ON SHEET E-4

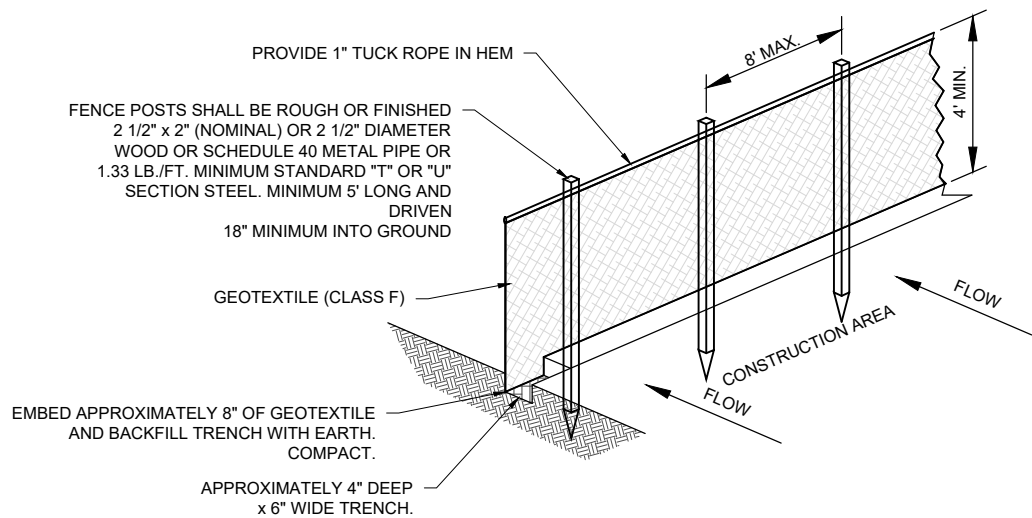
**FENCE NOTES:**

1. FINISH POSTS SHALL CONFORM TO ASTM-F1083
2. FINISH FABRIC SHALL CONFORM TO ASTM-A392
3. INSTALL FENCING PER ASTM F-567
4. INSTALL SWING GATES PER ASTM F-900
5. LOCAL ORDINANCE OF BARBED WIRE PERMIT REQUIREMENT SHALL BE COMPLIED IF REQUIRED.
6. POSTS & GATE PIPE SIZES ARE INDUSTRY STANDARDS. ALL PIPES TO BE SI HOT DIP, ASTM A120 GRADE "A" STEEL. ALL GATE FRAMES SHALL BE WELDED. ALL WELDING SHALL BE COATED WITH (3) COATS OF COLD GALV. (OR EQUAL).
7. ALL POSTS AND HARDWARE SHALL BE PAINTED BLACK, AND FENCE MESH SHALL BE BLACK VINYL COATED.
8. ALL OPEN POSTS SHALL HAVE END-CAPS.
9. USE GALVANIZED HOG-RING WIRE TO MOUNT ALL SIGNS.
10. ALL SIGNS SHALL BE MOUNTED ON INSIDE OF FENCE FABRIC.
11. TIE WIRE SHALL BE MINIMUM 9 GA GALVANIZED STEEL AT POSTS AND RAILS.
12. TENSION WIRE SHALL BE 7 GA GALVANIZED STEEL.
13. BARBED WIRE SHALL BE DOUBLE STRAND TWISTED WIRE TO MATCH WITH FABRIC 12 1/2 GA, 4 PT. BARBS SPACED ON APPROXIMATELY 5" CENTERS.
14. FINISH GRADE SHALL BE UNIFORM AND LEVEL.
15. CONCRETE FOUNDATIONS SHALL CONSIST OF 2000 PSI CONCRETE.
16. TOWER INFORMATION SIGN, MEASURING NO MORE THAN 30" WIDE BY 24" HEIGHT, IDENTIFYING THE FOLLOWING:
  - 16.1. PRIMARY PARTY RESPONSIBLE FOR THE OPERATION AND MAINTENANCE OF THE FACILITY.
  - 16.2. THE ADDRESS AND TELEPHONE NUMBER OF THAT PARTY.
  - 16.3. FAA REGISTRATION NUMBER
  - 16.4. E911 ADDRESS

**FENCE / COMPOUND DETAIL**  
NOT TO SCALE



**GRAVEL ACCESS DRIVE DETAIL**  
NOT TO SCALE



**SILT FENCE DETAIL**  
NOT TO SCALE

**SILT FENCE NOTES:**

- 1) GEOTEXTILE FABRIC TO BE FASTENED SECURELY TO FENCE POST BY WIRE TIES OR HOG RINGS.(3 FASTENERS PER POST.)
- 2) ENDS OF INDIVIDUAL ROLLS OF GEOTEXTILE SHALL BE SECURELY FASTENED TO A COMMON POST OR OVERLAPPED 3' MINIMUM.
- 3) CONFIGURATION SHOWN IS INTENDED TO CONTROL SHEET FLOW ONLY. DO NOT USE IN AREAS OF CONCENTRATED FLOW WITH A DRAINAGE AREA OF 1/2 ACRE OR MORE. INLOCATION OF DRAINAGE DITCH, STABILIZE SILT FENCE WITH SAND BAGS ON BOTH SIDES.
- 4) ALL SILT FENCING SHALL BE INSTALLED PRIOR TO COMMENCING ANY LAND DISTURBING ACTIVITIES, AND SHALL REMAIN IN PLACE UNTIL ALL CONSTRUCTION ACTIVITIES ARE COMPLETED.

NO.	DATE	REVISIONS AND RECORD OF ISSUE	BY	CHK	APP	FLM
1	08-05-20	FOR PERMIT/ CONSTRUCTION				
0	07-21-20	FOR PERMIT/ CONSTRUCTION				



6505 N HIMES AVE  
TAMPA, FLORIDA 33614  
(770) 853-1233  
FL CA # 31014

**FENCE DETAILS**

JEA OTIS ROAD  
148 OTIS RD  
JACKSONVILLE, FL 32220

**DRAWING**

**S-2**

DATE:  
08-05-2020



LEGEND

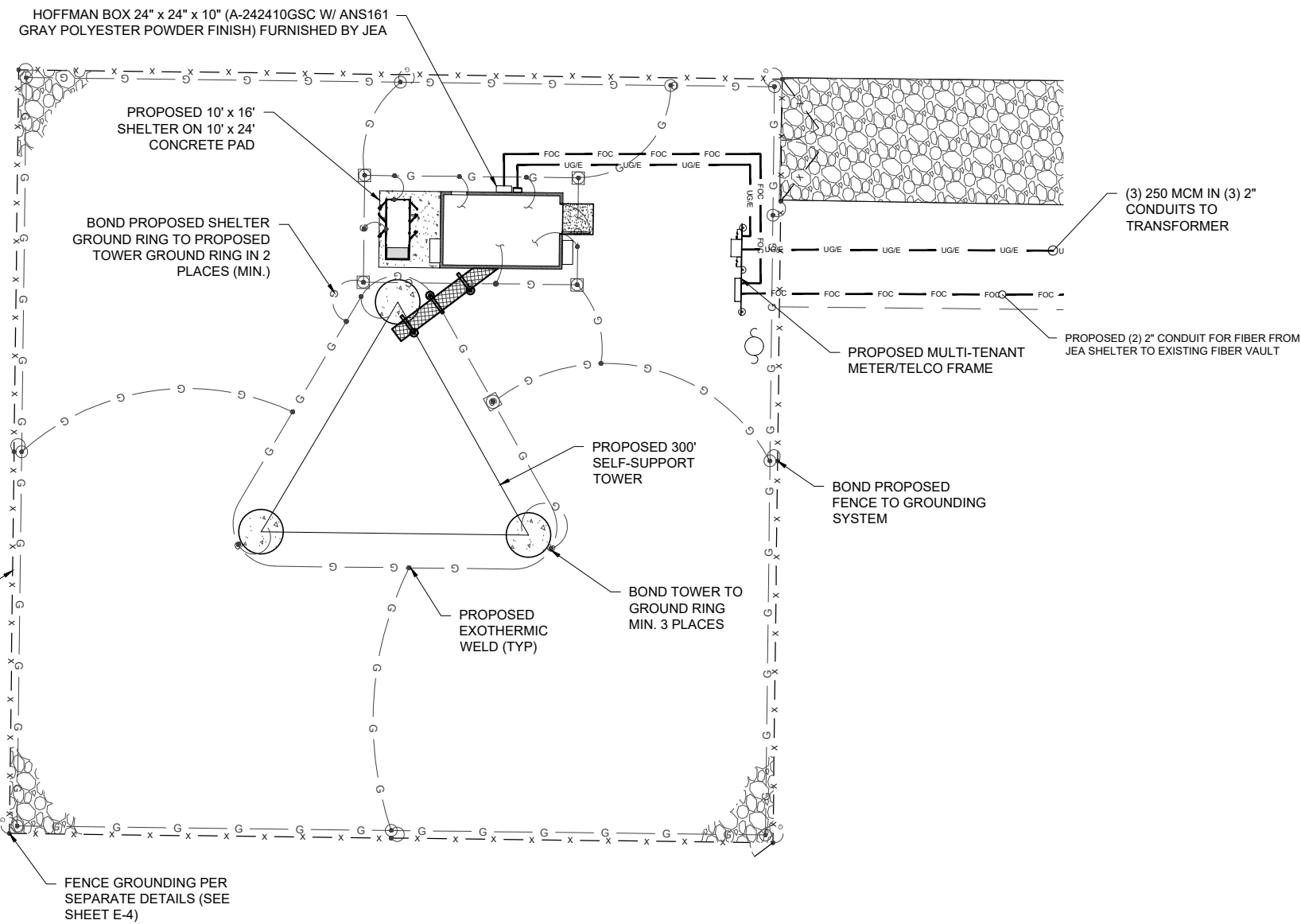
- PROPOSED GROUND ROD TEST WELL
- PROPOSED GROUND ROD
- PROPOSED EXOTHERMIC WELD
- PROPOSED GROUND BUSS BAR
- PROPOSED GROUNDING SYSTEM
- PROPOSED POWER ROUTING
- PROPOSED TELCO ROUTING

POWER NOTES AND SPECIFICATIONS:

- SEE ALSO NOTES ON SHEET E-4.
- ALL ELECTRICAL WORK SHALL COMPLY WITH NEC, STATE, AND LOCAL CODES.
- CONTRACTOR SHALL OBTAIN ANY ADDITIONAL TOWER OWNER DOCUMENTS AND DRAWINGS AND REVIEW FOR ADDITIONAL DETAILS AND REQUIREMENTS THAT MAY NOT BE SHOWN IN THESE DRAWINGS. CONTRACTOR SHALL COMPLY WITH ANY ADDITIONAL TOWER OWNER SPECIFICATIONS AND REQUIREMENTS THAT MAY BE ADDRESSED IN OTHER DOCUMENTS AND DRAWINGS.
- PRIOR TO PURCHASING EQUIPMENT, THE CONTRACTOR SHALL CONTACT THE ELECTRIC UTILITY AND OBTAIN IN WRITING THE MAXIMUM AVAILABLE FAULT CURRENT AT THE UTILITY SERVICE POINT. THE CONTRACTOR SHALL ENSURE ALL ELECTRICAL EQUIPMENT, CIRCUIT BREAKERS, DISCONNECTS, FUSES, AND PANELBOARDS HAVE A FAULT CURRENT INTERRUPTING RATING GREATER THAN THE AVAILABLE FAULT CURRENT. IN NO CASE SHALL THE FAULT CURRENT INTERRUPTING RATING BE LESS THAN 22,000 AMPS.
- THE GROUNDED SERVICE CONDUCTOR (NEUTRAL CONDUCTOR) SHALL BE GROUNDED AT THE SERVICE DISCONNECT ONLY.
- ALL POWER CIRCUITS SHALL USE COPPER CONDUCTORS WITH THHN/THWN INSULATION. ALL TERMINATIONS SHALL BE RATED FOR AT LEAST 75 DEGREES C.
- CONTRACTOR SHALL ENSURE ALL NEUTRAL CONDUCTORS HAVE WHITE INSULATION AND EQUIPMENT GROUND CONDUCTORS HAVE GREEN INSULATION. COLOR TAPE IDENTIFICATION OF THESE CONDUCTORS IS NOT ALLOWED.

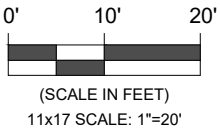
GROUNDING NOTES AND SPECIFICATIONS:

- THE GROUND RING SHALL CONSIST OF 2 AWG BARE SOLID TINNED COPPER CONDUCTOR, UNLESS NOTED OTHERWISE, BURIED AT 30" BELOW FINISHED GRADE AND WITHIN 3 FEET OUTSIDE OF EQUIPMENT PAD.
- ALL GROUNDING CONNECTIONS SHALL BE MADE USING AN EXOTHERMIC WELD, UNLESS NOTED OTHERWISE. CLEAN ALL SURFACES PRIOR TO CONNECTION. SPRAY EXOTHERMICALLY WELDED CONNECTIONS WITH ANTI-OXIDATION PAINT.
- ALL GROUNDING DEVICES SHALL BE UL APPROVED OR LISTED FOR THEIR INTENDED USE.
- ROUTE ALL GROUND CONDUCTORS ALONG THE SHORTEST ROUTE AND AVOID SHARP BENDS. THE BEND RADIUS SHALL NOT BE LESS THAN 12".
- GROUND ROD SPACING MAX 10' AND AS SHOWN.
- PRIOR TO INSTALLING LUGS ON GROUND CONDUCTORS OR BOLTING GROUND LUGS, APPLY THOMAS & BETTS KOPR-SHIELD OR EQUIVALENT.
- SPLIT BOLTS SHALL NOT BE USED.
- ENSURE THAT NO CONTINUOUS METAL RING SURROUNDS A GROUNDING CONDUCTOR. USE PVC SUPPORT CLAMPS. ENSURE ANY GROUNDING CONDUCTORS RUN THROUGH METAL CONDUIT IS BONDED TO THE CONDUIT AT BOTH ENDS.
- CONTRACTOR SHALL BOND THE TOWER TO THE GROUND RING AT MINIMUM 3 POINTS USING 2 AWG BARE SOLID TINNED COPPER CONDUCTORS AND EXOTHERMIC WELDS.
- ALL GROUNDING/BONDING CONDUCTORS RUN FROM ABOVE GRADE TO THE GROUND RING SHALL BE INSTALLED IN 3/4" PVC CONDUIT FROM 1 FOOT ABOVE GRADE AND SEALED WITH A SILICONE SEALANT.
- CONTRACTOR SHALL NOTIFY THE TOWER OWNER CONSTRUCTION MANAGERS TO ALLOW THE CONSTRUCTION MANAGERS TO INSPECT THE GROUNDING SYSTEM PRIOR TO BACKFILLING.
- GROUND SYSTEMS SHALL BE TESTED AND SHALL HAVE A RESISTANCE OF 5 OHMS OR LESS. IF RESISTANCE VALUE IS EXCEEDED , NOTIFY TOWER OWNER FOR FURTHER INSTRUCTIONS. SUBMIT A COPY OF THE TEST REPORT TO TOWER OWNER AND CARRIER.
- CONTRACTOR IS RESPONSIBLE TO PROPERLY GROUND ALL ELECTRICAL EQUIPMENT AND METALLIC / NON-METALLIC ITEMS THAT ARE INSTALLED ON THE EXTERIOR OF THE COMMUNICATIONS SHELTER FROM VFP INC. THE INTERIOR HALO RING SHALL BE CONNECTED TO THE GROUND RING IN A MINIMUM OF FOUR PLACES (REFER TO THE VFP INC. SHELTER DRAWINGS FOR ADDITIONAL INFORMATION).



SITE GROUNDING PLAN

GRAPHIC SCALE



1	08-05-20	FOR PERMIT/ CONSTRUCTION							
0	07-21-20	FOR PERMIT/ CONSTRUCTION							
NO.	DATE	REVISIONS AND RECORD OF ISSUE	BY	CHK	APP	FLM			



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TAMPA, FLORIDA 33614  
(770) 853-1233  
FL CA # 31014

SITE GROUNDING PLAN

JEA OTIS ROAD  
148 OTIS RD  
JACKSONVILLE, FL 32220

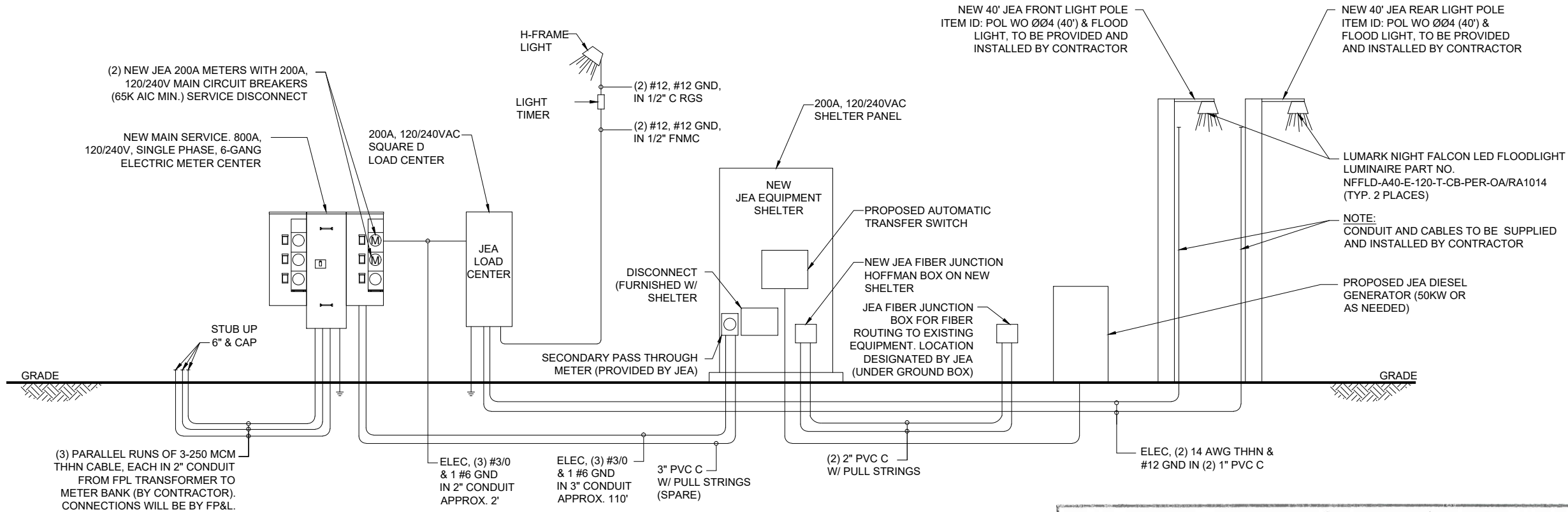
DRAWING

E-1

DATE:  
08-05-2020







NOTE:  
1. ALL ABOVE GROUND CONDUITS SHALL BE RIGID ALUMINUM CONDUIT. UNDERGROUND CONDUITS SHALL BE SCH. 80 PVC, TO COMPLY WITH LATEST NEC, STATE, AND LOCAL CODES.

DISTRIBUTION RISER DIAGRAM  
SCALE: N.T.S.

NOTE: ALL ELECTRICAL WORK SHALL COMPLY WITH FP&L "ELECTRIC SERVICE STANDARDS" LATEST EDITION  
(<https://www.fpl.com/partner/builders/service-standards.html>)

NOTES & SPECIFICATIONS

- CONTRACTOR TO FIELD VERIFY CONDUCTOR, BREAKER, AND EQUIPMENT RATINGS PRIOR TO USE. UPGRADE AS NEEDED.
- ALL ELECTRICAL WORK SHALL COMPLY WITH NEC, STATE, AND LOCAL CODES.
- CONTRACTOR SHALL OBTAIN OWNER/TENANT EQUIPMENT DRAWINGS AND REVIEW FOR ADDITIONAL DETAILS AND REQUIREMENTS THAT MAY NOT BE SHOWN IN THESE DRAWINGS. CONTRACTOR SHALL COMPLY WITH ANY ADDITIONAL OWNER/TENANT SPECIFICATIONS AND REQUIREMENTS THAT MAY BE ADDRESSED IN THE EQUIPMENT SHELTER DRAWINGS.
- PRIOR TO PURCHASING EQUIPMENT, CONTRACTOR SHALL CONTACT THE LOCAL UTILITY & OBTAIN IN WRITING THE MAXIMUM AVAILABLE FAULT CURRENT AT THE UTILITY SERVICE POINT. THE CONTRACTOR SHALL ENSURE ALL ELECTRICAL EQUIPMENT, CIRCUIT BREAKERS, DISCONNECTS, FUSES, AND PANELBOARDS HAVE A FAULT CURRENT INTERRUPTING RATING GREATER THAN THE AVAILABLE FAULT CURRENT. IN NO CASE SHALL THE FAULT CURRENT INTERRUPTING RATING BE LESS THAN 10,000 AMPS.
- THE GROUNDED SERVICE CONDUCTOR (NEUTRAL CONDUCTOR) SHALL BE GROUNDED AT THE SERVICE DISCONNECT ONLY.
- ALL POWER CIRCUITS SHALL USE COPPER CONDUCTORS WITH THHN/THWN INSULATION. ALL TERMINATIONS SHALL BE RATED FOR AT LEAST 75 DEGREES C.
- CONTRACTOR SHALL PROVIDE GROUND FAULT CIRCUIT INTERRUPTER (GFCI) TYPE RECEPTACLES FOR ALL UTILITY RECEPTACLES.
- CONTRACTOR SHALL ENSURE ALL NEUTRAL CONDUCTORS HAVE WHITE INSULATION AND EQUIPMENT GROUND CONDUCTORS HAVE GREEN INSULATION. COLOR TAPE IDENTIFICATION OF THESE CONDUCTORS IS NOT ALLOWED.
- UNDERGROUND CONDUITS SHALL BE SCHEDULE 80 PVC UNLESS NOTED OTHERWISE. USE RGS FOR ELBOWS AND RISERS.
- 50KW GENERATOR WITH 200A MAIN BREAKER. CONTRACTOR SHALL COORDINATE WITH OWNER/TENANT FOR GENERATOR CONFIGURATIONS AND OPTIONS. COMPLY WITH MANUFACTURER'S SPECIFICATIONS FOR EXACT WIRING REQUIREMENTS. GENERATOR PROVIDED BY AND INSTALLED BY GENERATOR CONTRACTOR.
- THE GENERATOR USED IN CONJUNCTION WITH A 2-POLE ATS WITH A SOLID NEUTRAL IS NOT A SEPARATELY DERIVED SYSTEM. AS SUCH, DO NOT BOND THE NEUTRAL TO GROUND AT THE GENERATOR.

POWER PANEL SCHEDULE					
120/240 VAC, 200A, SINGLE PHASE, 3 WIRE					
200A MAIN BREAKER					
DESCRIPTION	BRKR	NO.	NO.	BRKR	DESCRIPTION
GFI RECEPTACLE	20A	1	2	20A	SITE LIGHT
FRONT POLE LIGHT	20A	3	4	20A	REAR POLE LIGHT
SPACE	-	5	6	-	SPACE
SPACE	-	7	8	-	SPACE
SPACE	-	9	10	-	SPACE
SPACE	-	11	12	-	SPACE

BREAKER 65,000 AIC RATED @ 240 VOLTS TOTAL CONNECTED LOAD: 1.494kVA 11.6A

POWER PANEL SCHEDULE

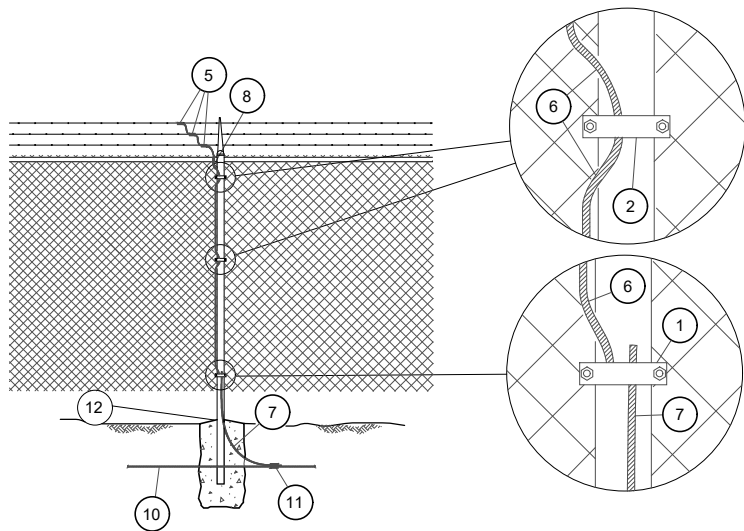
NOTES:

- BREAKER SIZES ARE REPRESENTATIVE AND SHALL BE VERIFIED BY CONTRACTOR FOR SPECIFIC EQUIPMENT INSTALLED.

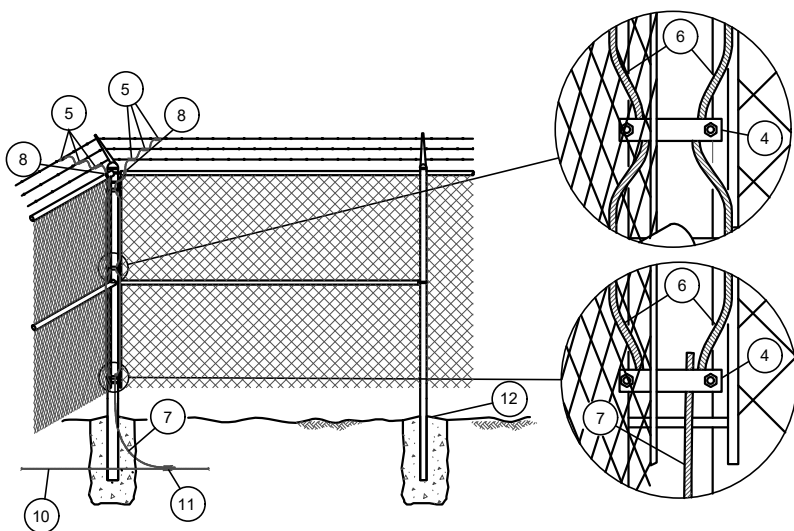
PP1 UTILITY												225A 120/240VAC, 1Ø/3W, 60Hz, M.LUG											
LOAD	VOLT AMPERES		WIRE	BREAKER				BREAKER	WIRE	VOLT AMPERES		LOAD											
	A	B		P	TRIP					TRIP	P		A	B									
** RECTIFIER R-1	-	-	8	2	40	1	2	40	2	8	-	** RECTIFIER R-4											
** RECTIFIER R-2	-	-	8	2	40	5	6	40	2	8	-	** RECTIFIER R-5											
** RECTIFIER R-3	-	-	8	2	40	9	10	40	2	8	-	** RECTIFIER R-6											
SPARE	-	-	-	2	40	13	14	40	2	-	-	SPARE											
SPARE	-	-	-	1	20	17	18	20	1	-	-	SPARE											
RECEPTACLE - EXT	-	180	12	1	20	19	20	15	1	-	-	SPARE											
LIGHTS. INT / EXR/PAR	634	-	12	1	20	21	22	15	1	-	-	SPARE											
RECEPTACLE- INT	-	540	12	1	20	23	24	20	2	-	-	** EQUIPMENT RACK											
SPARE	-	-	-	1	20	25	26	-	-	-	-	** EQUIPMENT RACK											
** EQUIPMENT RACKS	-	-	-	2	20	27	28	20	2	-	-	** EQUIPMENT RACK											
** TOWER LIGHTS	-	-	12	1	20	31	32	20	2	-	-	** IRRIGATION PUMP											
SPARE	-	-	-	1	40	33	34	-	-	-	-	SPARE											
ACH2	-	3480	8	2	35	35	36	35	2	8	3480	ACH1											
POWER FAIL ALARM	-	120	12	2	15	39	40	30	2	10	60	LIGHTNING ARRESTOR											
VOLT AMPERES PER PHASE		4234	4320							3540	3540	VOLT AMPERES PER PHASE											
* ASSUMED LOADS						7774		7860		TOTAL VOLT AMPERES													
** BY OTHERS						65		66		TOTAL AMPS PER PHASE													
						83				AMPS x125%													
						91				MAIN=AMPS X 110%													



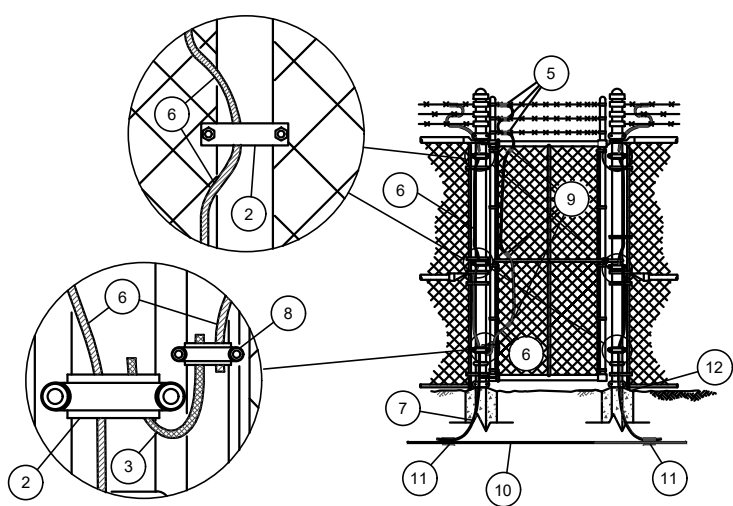




FENCE GROUNDING DETAIL - INTERMEDIATE POST  
NOT TO SCALE



FENCE GROUNDING DETAIL - CORNER POST  
NOT TO SCALE

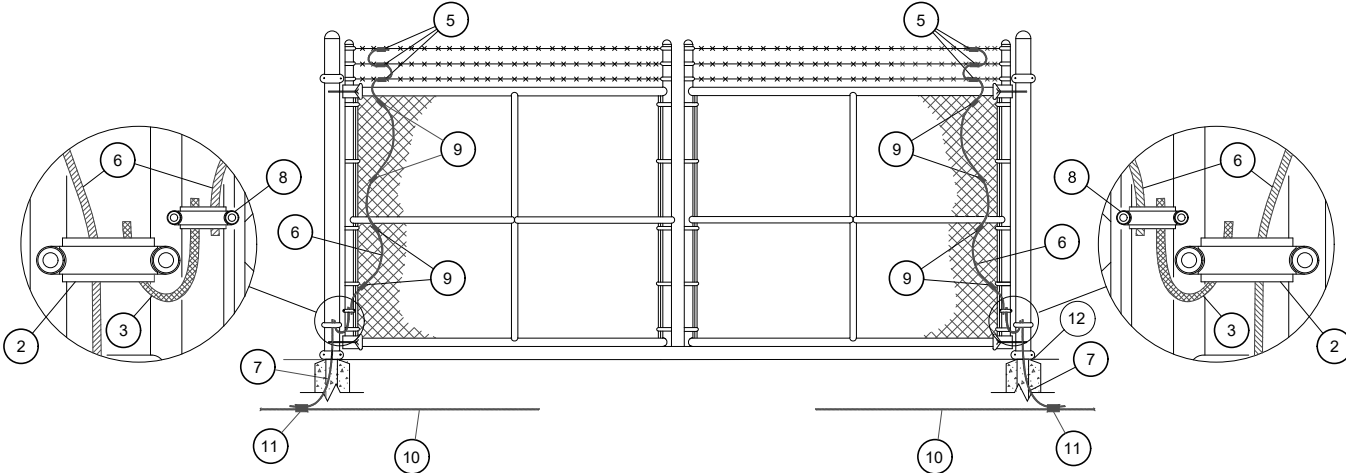


FENCE GROUNDING DETAIL - SINGLE GATE  
NOT TO SCALE

ITEM	DESCRIPTION	MODEL NO.
1	GROUND CONNECTOR, BRONZE BOLTED, TWO (2) CABLES TO 2 1/2" PIPE. CONDUCTOR RANGE SHALL BE FOR 2/0 SOLID - 250 KCM CU	SEFCOR GU1-5812 -OR- BURNDY NO. GD1929
2	GROUND CONNECTOR, BRONZE BOLTED, TWO (2) CABLES TO 2 1/2" PIPE. CONDUCTOR RANGE SHALL BE FOR #4 SOLID - 2/0 STRANDED	SEFCOR GU1-5809 -OR- BURNDY NO. GD1926
3	FLEXIBLE COPPER BRAID, FURNISHED BY CONTRACTOR	BURNDY NO. BD12
4	GROUND CONNECTOR, BRONZE BOLTED, TWO (2) CABLES TO 3" PIPE. CONDUCTOR RANGE SHALL BE FOR #4 SOLID - 2/0 STRANDED	SEFCOR GU1-6009 -OR- BURNDY NO. GD2026
5	GROUND CONNECTOR, BRONZE, SERVIT POST TYPE FOR TWO (2) #10-#2 SOLID AWG CONDUCTORS	SEFCOR BN-N-3SP -OR- BURNDY NO. K2C22
6	#2 TINNED SOLID COPPER CONDUCTOR, FURNISHED BY THE CONTRACTOR	
7	7#5 COPPERWELD CONDUCTOR, FURNISHED BY THE CONTRACTOR.	
8	GROUND CONNECTOR, BRONZE BOLTED, FOR ONE CONDUCTOR TO 1 1/4" O.D. PIPE, TOP RAIL, CONDUCTOR RANGE SHALL BE #4 SOL. TO 2/0 STR	
9	SPLIT BOLT CONNECTOR	BURNDY NO. KS22, SERVIT
10	19#8 COPPERWELD CONDUCTOR, STATION GRID 18" BELOW GRADE FURNISHED BY CONTRACTOR (CONTRACTOR TO PURCHASE FROM JEA).	
11	WELDED GROUND CONNECTION, 19#8 CABLE MAIN TO 7#5 CABLE TAP, CADWELD PLUS MOLD TYPE TAC3D2V AND (1) #200 WELD METAL AS REQUIRED (CONTRACTOR TO PURCHASE FROM JEA).	
12	MOUND CONCRETE AT BASE OF FENCE POLE IN ORDER TO PREVENT POOLING OF WATER AT BASE.	

NOTES

- GROUND INSTALLATION SHALL BE PROVIDED AT INTERMEDIATE POSTS, SPACED NO MORE THAN FORTY (40') FEET APART. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL ABOVE GRADE GROUND CONNECTORS AND GROUND CONDUCTOR.
- GROUND INSTALLATION SHALL BE PROVIDED AT ALL CORNER POSTS. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL ABOVE GRADE GROUND CONNECTORS AND GROUND CONDUCTOR.
- THE CONTRACTOR SHALL PROVIDE AT LEAST THREE (3) BOND POINTS TO THE FENCE POST.
- THE CONTRACTOR SHALL FURNISH AND INSTALL A CONTINUOUS #2 SOLID COPPER CONDUCTOR THROUGH THE BOND POINTS. THE CONDUCTOR SHALL BE WOVEN INTO THE FENCE FABRIC AND POSITIVELY BONDED TO EACH STRAND OF BARBED WIRE.
- THE CONTRACTOR SHALL REMOVE ANY THREAD PROJECTION IN EXCESS OF ,1/4" BEYOND THE NUT.
- CONTRACTOR TO FURNISH AND INSTALL THE ABOVE GROUNDING MATERIALS FOR THE SUBSTATION ENTRANCE GATE.



FENCE GROUNDING DETAIL - DOUBLE GATE  
NOT TO SCALE

NO.	DATE	REVISIONS AND RECORD OF ISSUE	BY	CHK	APP	FLM
1	08-05-20	FOR PERMIT/ CONSTRUCTION				
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FENCE GROUNDING DETAILS

JEA OTIS ROAD  
148 OTIS RD  
JACKSONVILLE, FL 32220

DRAWING

E-4

DATE:  
08-05-2020



A PART OF THE NW 1/4 OF SECTION 22, TOWNSHIP 2 SOUTH, RANGE 24 EAST, DUVAL COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE INTERSECTION OF THE NORTHERLY LINE OF BEAVER STREET (A 68 FOOT RIGHT OF WAY) AND THE WESTERLY RIGHT OF WAY LINE OF OTIS ROAD (AN 80 FOOT RIGHT OF WAY); THENCE NORTH 07°35'20" EAST ALONG SAID WESTERLY RIGHT OF WAY LINE, A DISTANCE OF 1083.68 FEET; THENCE NORTH 89°24'40" WEST, A DISTANCE OF 100.00 FEET TO THE **POINT OF BEGINNING**; THENCE CONTINUE NORTH 89°24'40" WEST, A DISTANCE OF 100.00 FEET; SOUTH 07°35'20" WEST AND PARALLEL TO SAID WESTERLY RIGHT OF WAY LINE, A DISTANCE OF 100.00 FEET; THENCE SOUTH 89°24'40" WEST, A DISTANCE OF 100.00 FEET; THENCE NORTH 07°35'20" EAST AND PARALLEL TO SAID WESTERLY RIGHT OF WAY LINE, A DISTANCE OF 100.00 FEET TO THE **POINT OF BEGINNING**.

TOGETHER WITH A 30 FOOT EASEMENT FOR INGRESS, EGRESS, AND UTILITIES/FIBER BEING DESCRIBED AS FOLLOWS:



● = FOUND 1/2" IRON PIPE NO ID UNLESS OTHERWISE NOTED	○ = CHAIN LINK FENCE
— SET 1/2" IRON PIPE LB 6888	— X = WIRE FENCE
— SET 4"x4" CONCRETE MONUMENT NO ID UNLESS OTHERWISE NOTED	— = MOOD FENCE
— SET 4"x4" CONCRETE MONUMENT LB 6888	— = NET LAKE NO ID
— FOUND PK NAIL NO ID UNLESS OTHERWISE NOTED	= TOP OF BANK
— SET PK NAIL LB 6888	— = BOTTOM OF BANK
Δ = DELTA	⊙ = SEWER MANHOLE
R = RADIUS	⊙ = SEWER VALVE
L = ARC LENGTH	☼ = MAPLE TREE
CB = CHORD BEARING	○ = PECAN TREE
CD = CHORD LENGTH	✱ = PINE TREE
PC = POINT OF CURVATURE	⊙ = OAK TREE
PT = POINT OF TANGENT	⊙ = CEDAR TREE
D = DEED BOOK	
O.R. = OFFICIAL RECORD BOOK	
PG. = PAGE	
ID = IDENTIFICATION	
LB = LICENSED BUSINESS	
(W) = FIELD MEASURED	
(C) = CALCULATED	
(D) = DEED	
N. = NUMBER	
W. = WORKING ORDER	
A.C. = AIR CONDITIONING UNIT	
W. = WORKER POLE W/OUT	
☆ = METAL POLE	
★ = SATELLITE DISH	
⊙ = PIPE ANCHOR	
— = INFORMATION SIGN	
⊙ = WATER METER	
⊙ = FIRE HYDRANT	
WV = WATER VALVE	
⊙ = MAIL BOX	
	00' = TREE SIZE
	LD = LIVE OAK
	LI = LONG LEAF PINE
	TR = TRIF
	M = MULTIPLE
	CMP = CORRUGATED METAL PIPE
	RCP = REINFORCED CONCRETE PIPE
	CPV = CORRUGATED PLASTIC PIPE
	PVC = POLYVINYL CHLORIDE PLASTIC PIPE
	INV. = INVERT
	B.M. = BENCH MARK
	F.F.C. = FINISHED FLOOR ELEVATION
	ELEVATION
	(00.00) = HARD ELEVATION
	(00.00) = SLOE ELEVATION
	A = ASPHALT
	G = GUTTER
	C = CURB
	E = EDGE OF GUTTER
	ASPHALT

- 1.) THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A TITLE ABSTRACT OR RECORD HEREON THERE MAY BE ADDITIONAL MATTERS OF RECORD NOT SHOWN HEREON THAT MAY BE FOUND IN THE CURRENT PUBLIC RECORDS OF DUVAL COUNTY, FLORIDA.
- 2.) UNDERGROUND IMPROVEMENTS SUCH AS FOUNDATIONS AND UTILITIES WERE NOT LOCATED.
- 3.) A BEARING OF N 00°35'20" E WAS ASSUMED ON THE WESTERLY RIGHT OF WAY LINE OF OTIS ROAD.
- 4.) PROPERTY HERON LIES IN FLOOD ZONE "X" AS SCALED FROM FLOOD INSURANCE RATE MAPS 12031C0310H & 12031C0320H, BOTH DATED JUNE 3, 2013.
- 5.) ALL MEASURED BEARINGS SHOWN HEREON ARE ESTABLISHED BY STATE PLANE COORDINATES AND ARE BASED ON NAD 83 (2012) FLORIDA EAST ZONE (9901).

**JOHNSON**  
SURVEYING & MAPPING, INC.

PHONE (904) 619-6630  
FAX (904) 619-6786

W.O. NO.: D-19161