

GENERAL CONSTRUCTION NOTES:

1. OWNER FURNISHED MATERIALS, VERIZON "THE COMPANY" WILL PROVIDE AND THE CONTRACTOR WILL INSTALL

A. BTS EQUIPMENT FRAME (PLATFORM) AND ICEBRIDGE SHELTER (GROUND BUILD/CO-LOCATE ONLY)

B. AC/TELCO INTERFACE BOX (PPC)

C. ICE BRIDGE (CABLE TRAY WITH COVER) (GROUND BUILD/CO-LOCATE ONLY, GC TO FURNISH AND INSTALL FOR ROOFTOP INSTALLATION)

D. TOWERS, MONOPOLES

E. TOWER LIGHTING

F. GENERATORS & LIQUID PROPANE TANK

G. ANTENNA STANDARD BRACKETS, FRAMES AND PIPES FOR MOUNTING

H. ANTENNAS (INSTALLED BY OTHERS)

I. TRANSMISSION LINE

J. TRANSMISSION LINE JUMPERS

K. TRANSMISSION LINE CONNECTORS WITH WEATHERPROOFING KITS

L. TRANSMISSION LINE GROUND KITS

M. HANGERS

N. HOISTING GRIPS

O. BTS EQUIPMENT
2. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL OTHER MATERIALS FOR THE COMPLETE INSTALLATION OF THE SITE INCLUDING, BUT NOT LIMITED TO, SUCH MATERIALS AS FENCING, STRUCTURAL STEEL SUPPORTING SUB-FRAME FOR PLATFORM, ROOFING LABOR AND MATERIALS, GROUNDING RINGS, GROUNDING WIRES, COPPER-CLAD OR XIT CHEMICAL GROUND ROD(S), BUSS BARS, TRANSFORMERS AND DISCONNECT SWITCHES WHERE APPLICABLE, TEMPORARY ELECTRICAL POWER, CONDUIT, LANDSCAPING COMPOUND STONE, CRANES, CORE DRILLING, SLEEPERS AND RUBBER MATTING, REBAR, CONCRETE CAISSONS, PADS AND/OR AUGER MOUNTS, MISCELLANEOUS FASTENERS, CABLE TRAYS, NON-STANDARD ANTENNA FRAMES AND ALL OTHER MATERIAL AND LABOR REQUIRED TO COMPLETE THE JOB ACCORDING TO THE DRAWINGS AND SPECIFICATIONS. IT IS THE POSITION OF VERIZON TO APPLY FOR PERMITTING AND CONTRACTOR RESPONSIBLE FOR PICKUP AND PAYMENT OF REQUIRED PERMITS.
3. ALL WORK SHALL CONFORM TO ALL CURRENT APPLICABLE FEDERAL, STATE, AND LOCAL CODES, INCLUDING ANSI/EIA/TIA-222, AND COMPLY WITH ATC CONSTRUCTION SPECIFICATIONS.
4. CONTRACTOR SHALL CONTACT LOCAL 811 FOR IDENTIFICATION OF UNDERGROUND UTILITIES PRIOR TO START OF CONSTRUCTION.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL REQUIRED INSPECTIONS.
6. ALL DIMENSIONS TO, OF, AND ON EXISTING BUILDINGS, DRAINAGE STRUCTURES, AND SITE IMPROVEMENTS SHALL BE VERIFIED IN FIELD BY CONTRACTOR WITH ALL DISCREPANCIES REPORTED TO THE ENGINEER.
7. DO NOT CHANGE SIZE OR SPACING OF STRUCTURAL ELEMENTS.
8. DETAILS SHOWN ARE TYPICAL; SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS UNLESS OTHERWISE NOTED.
9. THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY WHICH SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
10. CONTRACTOR SHALL BRACE STRUCTURES UNTIL ALL STRUCTURAL ELEMENTS NEEDED FOR STABILITY ARE INSTALLED. THESE ELEMENTS ARE AS FOLLOWS: LATERAL BRACING, ANCHOR BOLTS, ETC.
11. CONTRACTOR SHALL DETERMINE EXACT LOCATION OF EXISTING UTILITIES, GROUNDS DRAINS, DRAIN PIPES, VENTS, ETC. BEFORE COMMENCING WORK.
12. INCORRECTLY FABRICATED, DAMAGED, OR OTHERWISE MISFITTING OR NONCONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE VERIZON REP PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH REMEDIAL ACTION SHALL REQUIRE WRITTEN APPROVAL BY THE VERIZON REP PRIOR TO PROCEEDING.
13. EACH CONTRACTOR SHALL COOPERATE WITH THE VERIZON REP, AND COORDINATE HIS WORK WITH THE WORK OF OTHERS.
14. CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED BY CONSTRUCTION OF THIS PROJECT TO MATCH EXISTING PRE-CONSTRUCTION CONDITIONS TO THE SATISFACTION OF THE VERIZON CONSTRUCTION MANAGER.
15. ALL CABLE/CONDUIT ENTRY/EXIT PORTS SHALL BE WEATHERPROOFED DURING INSTALLATION USING A SILICONE SEALANT.
16. WHERE EXISTING CONDITIONS DO NOT MATCH THOSE SHOWN IN THIS PLAN SET, CONTRACTOR SHALL NOTIFY THE VERIZON REP AND ENGINEER OF RECORD IMMEDIATELY.
17. CONTRACTOR SHALL ENSURE ALL SUBCONTRACTORS ARE PROVIDED WITH A COMPLETE AND CURRENT SET OF DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT.
18. CONTRACTOR SHALL REMOVE ALL RUBBISH AND DEBRIS FROM THE SITE AT THE END OF EACH DAY.
19. CONTRACTOR SHALL COORDINATE WORK SCHEDULE WITH AMERICAN TOWER CORPORATION (ATC) AND TAKE PRECAUTIONS TO MINIMIZE IMPACT AND DISRUPTION OF OTHER OCCUPANTS OF THE FACILITY.
20. CONTRACTOR SHALL FURNISH VERIZON AND AMERICAN TOWER CORPORATION (ATC) WITH A PDF MARKED UP AS-BUILT SET OF DRAWINGS UPON COMPLETION OF WORK.
21. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH VERIZON REP TO DETERMINE WHAT, IF ANY, ITEMS WILL BE PROVIDED. ALL ITEMS NOT PROVIDED SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR. CONTRACTOR WILL INSTALL ALL ITEMS PROVIDED.

22. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH VERIZON REP TO DETERMINE IF ANY PERMITS WILL BE OBTAINED BY CONTRACTOR. ALL REQUIRED PERMITS NOT OBTAINED BY VERIZON MUST BE OBTAINED, AND PAID FOR, BY THE CONTRACTOR.
23. CONTRACTOR SHALL INSTALL ALL SITE SIGNAGE IN ACCORDANCE WITH VERIZON SPECIFICATIONS AND REQUIREMENTS.
24. CONTRACTOR SHALL SUBMIT ALL SHOP DRAWINGS TO VERIZON FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
25. ALL EQUIPMENT SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND LOCATED ACCORDING TO VERIZON SPECIFICATIONS, AND AS SHOWN IN THESE PLANS.
26. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
27. CONTRACTOR SHALL NOTIFY VERIZON REP A MINIMUM OF 48 HOURS IN ADVANCE OF POURING CONCRETE OR BACKFILLING ANY UNDERGROUND UTILITIES, FOUNDATIONS OR SEALING ANY WALL, FLOOR OR ROOF PENETRATIONS FOR ENGINEERING REVIEW AND APPROVAL.
28. CONTRACTOR SHALL BE RESPONSIBLE FOR SITE SAFETY INCLUDING COMPLIANCE WITH ALL APPLICABLE OSHA STANDARDS AND RECOMMENDATIONS AND SHALL PROVIDE ALL NECESSARY SAFETY DEVICES INCLUDING PPE AND PPM AND CONSTRUCTION DEVICES SUCH AS WELDING AND FIRE PREVENTION, TEMPORARY SHORING, SCAFFOLDING, TRENCH BOXES/SLOPING, BARRIERS, ETC.
29. THE CONTRACTOR SHALL PROTECT AT HIS OWN EXPENSE, ALL EXISTING FACILITIES AND SUCH OF HIS NEW WORK LIABLE TO INJURY DURING THE CONSTRUCTION PERIOD. ANY DAMAGE CAUSED BY NEGLECT ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, OR BY THE ELEMENTS DUE TO NEGLECT ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, EITHER TO THE EXISTING WORK, OR TO HIS WORK OR THE WORK OF ANY OTHER CONTRACTOR, SHALL BE REPAIRED AT HIS EXPENSE TO THE OWNER'S SATISFACTION.
30. ALL WORK SHALL BE INSTALLED IN A FIRST CLASS, NEAT AND WORKMANLIKE MANNER BY MECHANICS SKILLED IN THE TRADE INVOLVED. THE QUALITY OF WORKMANSHIP SHALL BE SUBJECT TO THE APPROVAL OF THE VERIZON REP. ANY WORK FOUND BY THE VERIZON REP TO BE OF INFERIOR QUALITY AND/OR WORKMANSHIP SHALL BE REPLACED AND/OR REWORKED AT CONTRACTOR EXPENSE UNTIL APPROVAL IS OBTAINED.
31. IN ORDER TO ESTABLISH STANDARDS OF QUALITY AND PERFORMANCE, ALL TYPES OF MATERIALS LISTED HEREINAFTER BY MANUFACTURER'S NAMES AND/OR MANUFACTURER'S CATALOG NUMBER SHALL BE PROVIDED BY THESE MANUFACTURERS AS SPECIFIED.
32. VERIZON FURNISHED EQUIPMENT SHALL BE PICKED-UP AT THE VERIZON WAREHOUSE, NO LATER THAN 48HR AFTER BEING NOTIFIED INSURED, STORED, UNCRATE, PROTECTED AND INSTALLED BY THE CONTRACTOR WITH ALL APPURTENANCES REQUIRED TO PLACE THE EQUIPMENT IN OPERATION, READY FOR USE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE EQUIPMENT AFTER PICKING IT UP.
33. VERIZON OR HIS ARCHITECT/ENGINEER RESERVES THE RIGHT TO REJECT ANY EQUIPMENT OR MATERIALS WHICH, IN HIS OWN OPINION ARE NOT IN COMPLIANCE WITH THE CONTRACT DOCUMENTS, EITHER BEFORE OR AFTER INSTALLATION AND THE EQUIPMENT SHALL BE REPLACED WITH EQUIPMENT CONFORMING TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS BY THE CONTRACTOR AT NO COST TO VERIZON OR THEIR ARCHITECT/ENGINEER.
- STRUCTURAL STEEL NOTES:
1. STRUCTURAL STEEL SHALL CONFORM TO THE LATEST EDITION OF THE AISC "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS."
2. STRUCTURAL STEEL ROLLED SHAPES, PLATES AND BARS SHALL CONFORM TO THE FOLLOWING ASTM DESIGNATIONS:

A. ASTM A-572, GRADE 50 - ALL W SHAPES, UNLESS NOTED OR A992 OTHERWISE

B. ASTM A-36 - ALL OTHER ROLLED SHAPES, PLATES AND BARS UNLESS NOTED OTHERWISE.

C. ASTM A-500, GRADE B - HSS SECTION (SQUARE, RECTANGULAR, AND ROUND)

D. ASTM A-325, TYPE SC OR N - ALL BOLTS FOR CONNECTING STRUCTURAL MEMBERS

E. ASTM F-1554 07 - ALL ANCHOR BOLTS, UNLESS NOTED OTHERWISE
3. ALL EXPOSED STRUCTURAL STEEL MEMBERS SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION PER ASTM A123. EXPOSED STEEL HARDWARE AND ANCHOR BOLTS SHALL BE GALVANIZED PER ASTM A153 OR B695.
4. ALL FIELD CUT SURFACES, FIELD DRILLED HOLES AND GROUND SURFACES WHERE EXISTING PAINT OR GALVANIZATION REMOVAL WAS REQUIRED SHALL BE REPAIRED WITH (2) BRUSHED COATS OF ZRC GALVILITE COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURER'S RECOMMENDATIONS.
5. DO NOT DRILL HOLES THROUGH STRUCTURAL STEEL MEMBERS EXCEPT AS SHOWN AND DETAILED ON STRUCTURAL DRAWINGS.
6. CONNECTIONS:

A. ALL WELDING TO BE PERFORMED BY AWS CERTIFIED WELDERS AND CONDUCTED IN ACCORDANCE WITH THE LATEST EDITION OF THE AWS WELDING CODE D1.1.

B. ALL WELDS SHALL BE INSPECTED VISUALLY. 25% OF WELDS SHALL BE INSPECTED WITH DYE PENETRANT OR MAGNETIC PARTICLE TO MEET THE ACCEPTANCE CRITERIA OF AWS D1.1.

- REPAIR ALL WELDS AS NECESSARY.
- C. INSPECTION SHALL BE PERFORMED BY AN AWS CERTIFIED WELD INSPECTOR.
- D. IT IS THE CONTRACTORS RESPONSIBILITY TO PROVIDE BURNING/WELDING PERMITS AS REQUIRED BY LOCAL GOVERNING AUTHORITY AND IF REQUIRED SHALL HAVE FIRE DEPARTMENT DETAIL FOR ANY WELDING ACTIVITY.
- E. ALL ELECTRODES TO BE LOW HYDROGEN, MATCHING FILLER METAL, PER AWS D1.1, UNLESS NOTED OTHERWISE.
- F. MINIMUM WELD SIZE TO BE 0.1875 INCH FILLET WELDS, UNLESS NOTED OTHERWISE.
- G. PRIOR TO FIELD WELDING GALVANIZING MATERIAL, CONTRACTOR SHALL GRIND OFF GALVANIZING ½" BEYOND ALL FIELD WELD SURFACES. AFTER WELD AND WELD INSPECTION IS COMPLETE, REPAIR ALL GROUND AND WELDED SURFACES WITH ZRC GALVILITE COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURERS RECOMMENDATIONS.
- H. THE CONTRACTOR SHALL PROVIDE ADEQUATE SHORING AND/OR BRACING WHERE REQUIRED DURING CONSTRUCTION UNTIL ALL CONNECTIONS ARE COMPLETE.
- I. ANY FIELD CHANGES OR SUBSTITUTIONS SHALL HAVE PRIOR APPROVAL FROM THE ENGINEER, AND VERIZON PROJECT MANAGER IN WRITING
- SPECIAL CONSTRUCTION
- ANTENNA INSTALLATION NOTES:
1. WORK INCLUDED:

A. ANTENNA AND COAXIAL CABLES ARE FURNISHED BY VERIZON UNDER A SEPARATE CONTRACT. THE CONTRACTOR SHALL ASSIST ANTENNA INSTALLATION CONTRACTOR IN TERMS OF COORDINATION AND SITE ACCESS. ERECTION SUBCONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF PERSONNEL

B. INSTALL ANTENNAS AS INDICATED ON DRAWINGS AND VERIZON SPECIFICATIONS.

C. INSTALL GALVANIZED STEEL ANTENNA MOUNTS AS INDICATED ON DRAWINGS.

D. INSTALL FURNISHED GALVANIZED STEEL OR ALUMINUM WAVEGUIDE AND PROVIDE PRINTOUT OF THAT TEST.

E. CONTRACTOR SHALL PROVIDE FOUR (4) SETS OF SWEEP TESTS USING ANRITZU-PACKARD 8713B RF SCALAR NETWORK ANALYZER. SUBMIT FREQUENCY DOMAIN REFLECTOMETER(FDR) TESTS RESULTS TO THE PROJECT MANAGER. SWEEP TESTS SHALL BE AS PER ATTACHED RFS "MINIMUM FIELD TESTING RECOMMENDED FOR ANTENNA AND HELIAX COAXIAL CABLE SYSTEMS" DATED 10/5/93. TESTING SHALL BE PERFORMED BY AN INDEPENDENT TESTING SERVICE AND BE BOUND AND SUBMITTED WITHIN ONE WEEK OF WORK COMPLETION.

F. INSTALL COAXIAL CABLES AND TERMINATING BETWEEN ANTENNAS AND EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS. WEATHERPROOF ALL CONNECTIONS BETWEEN THE ANTENNA AND EQUIPMENT PER MANUFACTURER'S REQUIREMENTS. TERMINATE ALL COAXIAL CABLE THREE (3) FEET IN EXCESS OF ENTRY PORT LOCATION UNLESS OTHERWISE STATED.

G. ANTENNA AND COAXIAL CABLE GROUNDING:

2. ALL EXTERIOR #6 GREEN GROUND WIRE "DAISY CHAIN" CONNECTIONS ARE TO BE WEATHER SEALED WITH RFS CONNECTORS/SPlice WEATHERPROOFING KIT #221213 OR EQUAL.

3. ALL COAXIAL CABLE GROUNDING KITS ARE TO BE INSTALLED ON STRAIGHT RUNS OF COAXIAL CABLE (NOT WITHIN BENDS).
- C. ANTENNA AND COAXIAL CABLE GROUNDING:

2. ALL EXTERIOR #6 GREEN GROUND WIRE "DAISY CHAIN" CONNECTIONS ARE TO BE WEATHER SEALED WITH RFS CONNECTORS/SPlice WEATHERPROOFING KIT #221213 OR EQUAL.

3. ALL COAXIAL CABLE GROUNDING KITS ARE TO BE INSTALLED ON STRAIGHT RUNS OF COAXIAL CABLE (NOT WITHIN BENDS).
- CONCRETE AND REINFORCING STEEL NOTES:
1. DESIGN AND CONSTRUCTION OF ALL CONCRETE ELEMENTS SHALL CONFORM TO THE LATEST EDITIONS OF ALL APPLICABLE CODES INCLUDING: ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS", ACI 117 "SPECIFICATIONS FOR TOLERANCES FOR CONCRETE CONSTRUCTION AND MATERIALS", AND ACI 318 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE."
2. MIX DESIGN SHALL BE APPROVED BY VERIZON REP PRIOR TO PLACING CONCRETE.
3. CONCRETE SHALL BE NORMAL WEIGHT, 6 % AIR ENTRAINED (+/- 1.5%) WITH A SLUMP RANGE OF 3-6" AND HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4500 PSI UNLESS OTHERWISE NOTED.
4. THE FOLLOWING MATERIALS SHALL BE USED:

PORTLAND CEMENT: ASTM C150, TYPE 2

REINFORCEMENT: ASTM A185, PLAIN STEEL WELDED WIRE FABRIC

REINFORCEMENT BARS: ASTM A615, GRADE 60, DEFORMED

NORMAL WEIGHT AGGREGATE: ASTM C33

WATER: ASTM C 94/C 94M

WELDED WIRE FABRIC: ASTM A185

ADMIXTURES:

-WATER-REDUCING AGENT: ASTM C 494/C 494M, TYPE A

-AIR-ENTERING AGENT: ASTM C 260/C 260M

-SUPERPLASTICIZER: ASTM C494, TYPE F OR TYPE G

-RETARDING: ASTM C 494/C 494M, TYPE B
5. MINIMUM CONCRETE COVER FOR REINFORCING STEEL SHALL BE NO LESS THAN 3".

6. A 3/4" CHAMFER SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE IN ACCORDANCE WITH ACI 301 SECTION 4.2.4, UNLESS NOTED OTHERWISE.
7. INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHOR SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURE. THE ANCHOR BOLT, DOWEL, OR ROD SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR APPROVAL FROM AN ATC ENGINEER WHEN DRILLING HOLES IN CONCRETE.
8. ADMIXTURES SHALL CONFORM TO THE APPROPRIATE ASTM STANDARD AS REFERENCED IN "METHOD 1" OF ACI 301.
9. DO NOT WELD OR TACK WELD REINFORCING STEEL.
10. ALL DOWELS, ANCHOR BOLTS, EMBEDDED STEEL, ELECTRICAL CONDUITS, PIPE SLEEVES, GROUNDS AND ALL OTHER EMBEDDED ITEMS AND FORMED DETAILS SHALL BE IN PLACE BEFORE START OF CONCRETE PLACEMENT.
11. REINFORCEMENT SHALL BE COLD BENT WHENEVER BENDING IS REQUIRED.
12. DO NOT PLACE CONCRETE IN WATER, ICE, OR ON FROZEN GROUND.
13. FOR COLD-WEATHER (ACI 306) AND HOT-WEATHER (ACI 301M) CONCRETE PLACEMENT, CONFORM TO APPLICABLE ACI CODES AND RECOMMENDATIONS. IN EITHER CASE, MATERIALS CONTAINING CHLORIDE, CALCIUM, SALTS, ETC. SHALL NOT BE USED. PROTECT FRESH CONCRETE FROM WEATHER FOR 7 DAYS, MINIMUM.
14. ALL CONCRETE SHALL HAVE A "SMOOTH FORM FINISH."
15. SPLICING OF REINFORCEMENT IS PERMITTED ONLY AT LOCATIONS SHOWN IN THE CONTRACT DRAWINGS OR AS ACCEPTED BY THE ENGINEER. UNLESS OTHERWISE SHOWN OR NOTED REINFORCING STEEL SHALL BE SPLICED TO DEVELOP ITS FULL TENSILE CAPACITY (CLASS A) IN ACCORDANCE WITH ACI 318.
16. DETAILING OF REINFORCING STEEL SHALL CONFORM TO "ACI MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES" (ACI 315).
17. ALL SLAB CONSTRUCTION SHALL BE CAST MONOLITHICALLY WITHOUT HORIZONTAL CONSTRUCTION JOINTS, UNLESS SHOWN IN THE CONTRACT DRAWINGS.
18. LOCATION OF ALL CONSTRUCTION JOINTS ARE SUBJECT TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS, CONFORMANCE WITH ACI 318, AND ACCEPTANCE OF THE ENGINEER. DRAWINGS SHOWING LOCATION OF DETAILS OF THE PROPOSED CONSTRUCTION JOINTS SHALL BE SUBMITTED WITH REINFORCING STEEL PLACEMENT DRAWINGS.
19. SPLICES OF WWF, AT ALL SPLICED EDGES, SHALL BE SUCH THAT THE OVERLAP MEASURED BETWEEN OUTERMOST CROSS WIRES OF EACH FABRIC SHEET IS NOT LESS THAN THE SPACING OF THE CROSS WIRE PLUS 2 INCHES, NOR LESS THAN 6".
20. BAR SUPPORTS SHALL BE ALL-GALVANIZED METAL WITH PLASTIC TIPS.
21. ALL REINFORCEMENT SHALL BE SECURELY TIED IN PLACE TO PREVENT DISPLACEMENT BY CONSTRUCTION TRAFFIC OR CONCRETE. TIE WIRE SHALL BE OF SUFFICIENT STRENGTH FOR INTENDED PURPOSE, BUT NOT LESS THAN NO. 18 GAUGE.
22. SLAB ON GROUND: COMPACT STRUCTURAL FILL TO 95% DENSITY AND THEN PLACE 6" GRAVEL BENEATH SLAB.
- ELECTRICAL NOTES:
1. ELECTRICAL WORK SHALL BE PERFORMED BY ELECTRICAL CONTRACTOR. ELECTRICAL CONTRACTOR SHALL ENSURE THAT ALL WORK COMPLIES WITH ALL APPLICABLE LOCAL AND STATE CODES AND NATIONAL ELECTRICAL CODE.
2. ALL SUGGESTED ELECTRICAL ELEMENTS (SUCH AS BREAKER SIZES, WIRE SIZES, CONDUITS SIZES) ARE FOR ZONING PURPOSES ONLY. IT IS THE RESPONSIBILITY TO OF THE ELECTRICAL CONTRACTOR TO CONFIRM COMPLIANCE WITH LOCAL ELECTRICAL CODES AND PASS ALL APPLICABLE AND NECESSARY INSPECTIONS. IN SOME EVENTS, IT MAY BE NECESSARY TO PERFORM AN ELECTRICAL LOAD STUDY TO VERIFY THE CAPACITY OF THE EXISTING SERVICE. THIS IS NOT THE RESPONSIBILITY OF ATC. IT IS THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
3. CONTRACTOR SHALL FIELD LOCATE ALL BELOW GRADE GROUNDING CABLES AND UTILITY LINES PRIOR TO CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR RELOCATION OF ALL UTILITIES AND GROUNDING LINES THAT MAY BECOME DISTURBED OR CONFLICTING IN THE COURSE OF CONSTRUCTION.

ALL DISCREPANCIES FROM WHAT IS SHOWN ON THESE CONSTRUCTION DRAWINGS SHALL BE COMMUNICATED TO ATC ENGINEERING IMMEDIATELY FOR CORRECTION OR RE-DESIGN. FAILURE TO COMMUNICATE DIRECTLY WITH ATC ENGINEERING OR ANY CHANGES FROM THE DESIGN CONDUCTED WITHOUT PRIOR APPROVAL FROM ATC ENGINEERING SHALL BE THE SOLE RESPONSIBILITY OF THE GENERAL CONTRACTOR.



TEP OPCO LLC
326 TRYON ROAD
RALEIGH, NC 27603-3530

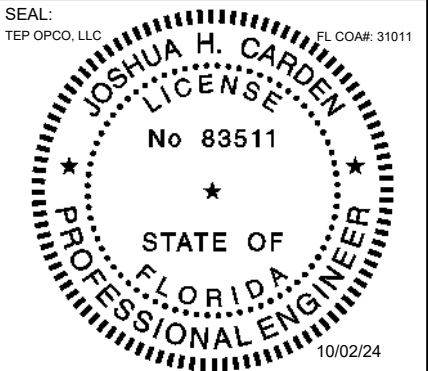
OFFICE: (919) 661-6351
www.tepgroup.net
FL COA#: 31011

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ATC SITE NUMBER: 302769			
ATC SITE NAME: I-75 REST AREA			
VERIZON WIRELESS SITE NAME: I-75 REST AREA COLUMBIA -			
MKT 143- MCR			
SITE ADDRESS: 2212 SE OCTOBER RD LAKE CITY, FL 32024-5533			
REV.	DESCRIPTION	BY	DATE
A	PRELIMINARY	PVW	09/11/24
B	90% CONSTRUCTION	RMJ	09/24/24
C	100% CONSTRUCTION	BJO	10/02/24

DIGITAL/ELECTRONIC SEAL:
THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY JOSHUA H. CARDEN, P.E. ON THE DATE ADJACENT TO THE SEAL.

PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

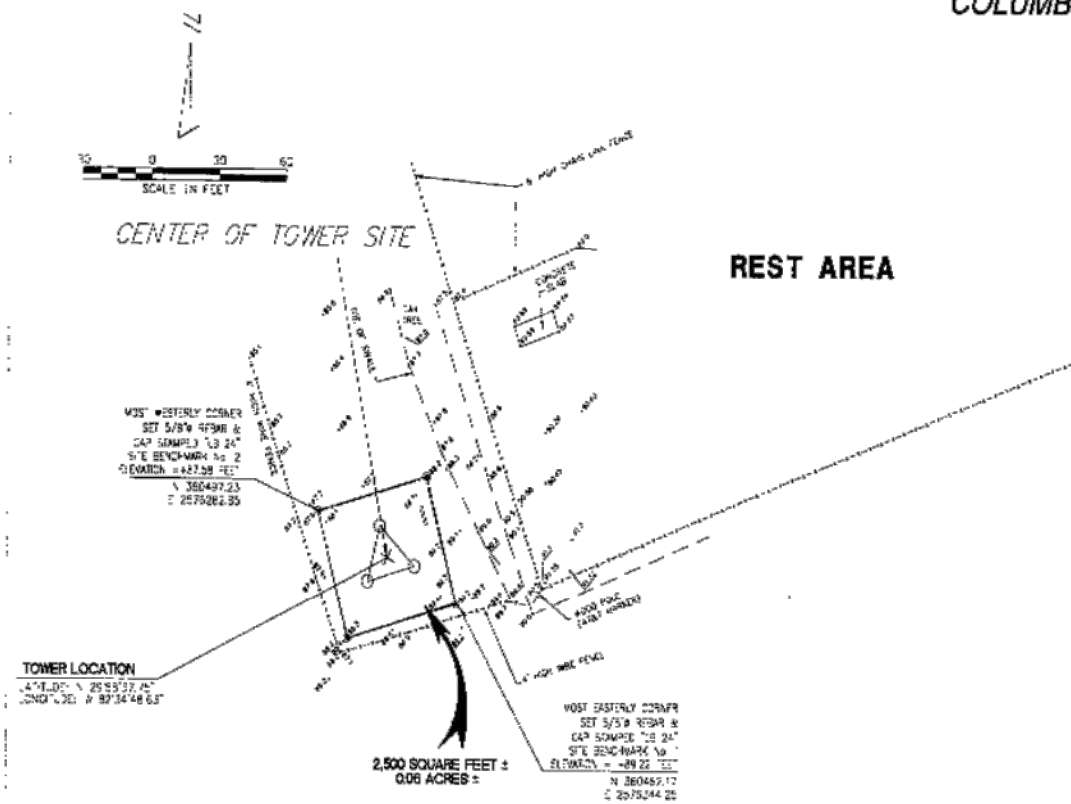


DATE DRAWN:	10/02/24
ATC JOB NO:	14873535
CUSTOMER NAME:	I-75 REST AREA COLUMBIA - MKT 143 - MCR
CUSTOMER ID:	5000957578

GENERAL NOTES

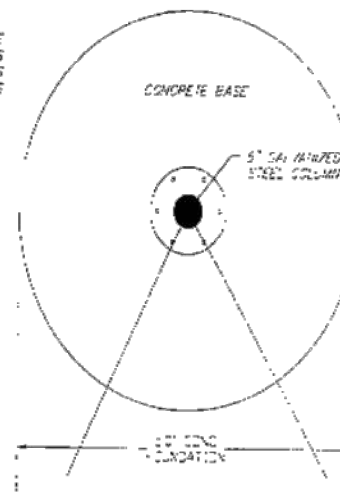
SHEET NUMBER: G-002	REVISION: 0
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SECTION 11, TOWNSHIP 6 SOUTH, RANGE 17 EAST
COLUMBIA COUNTY, FLORIDA



INTERSTATE 75

12 1/4" BASE PLATE
WITH 6 ANCHOR BOLTS
IN 5 1/2" RADIUS
AT 90° ROTATIONS

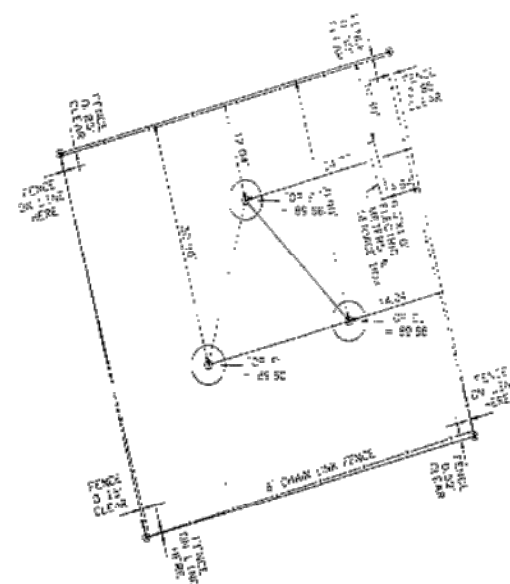


FOOTING DETAIL
NOT TO SCALE

SEE LOCATION DETAIL (RIGHT)

NOTE: SEE SHEET 1 OF 2
FOR BOUNDARY AND
CONTROL INFORMATION

LEGEND:
E. = ELEVATION

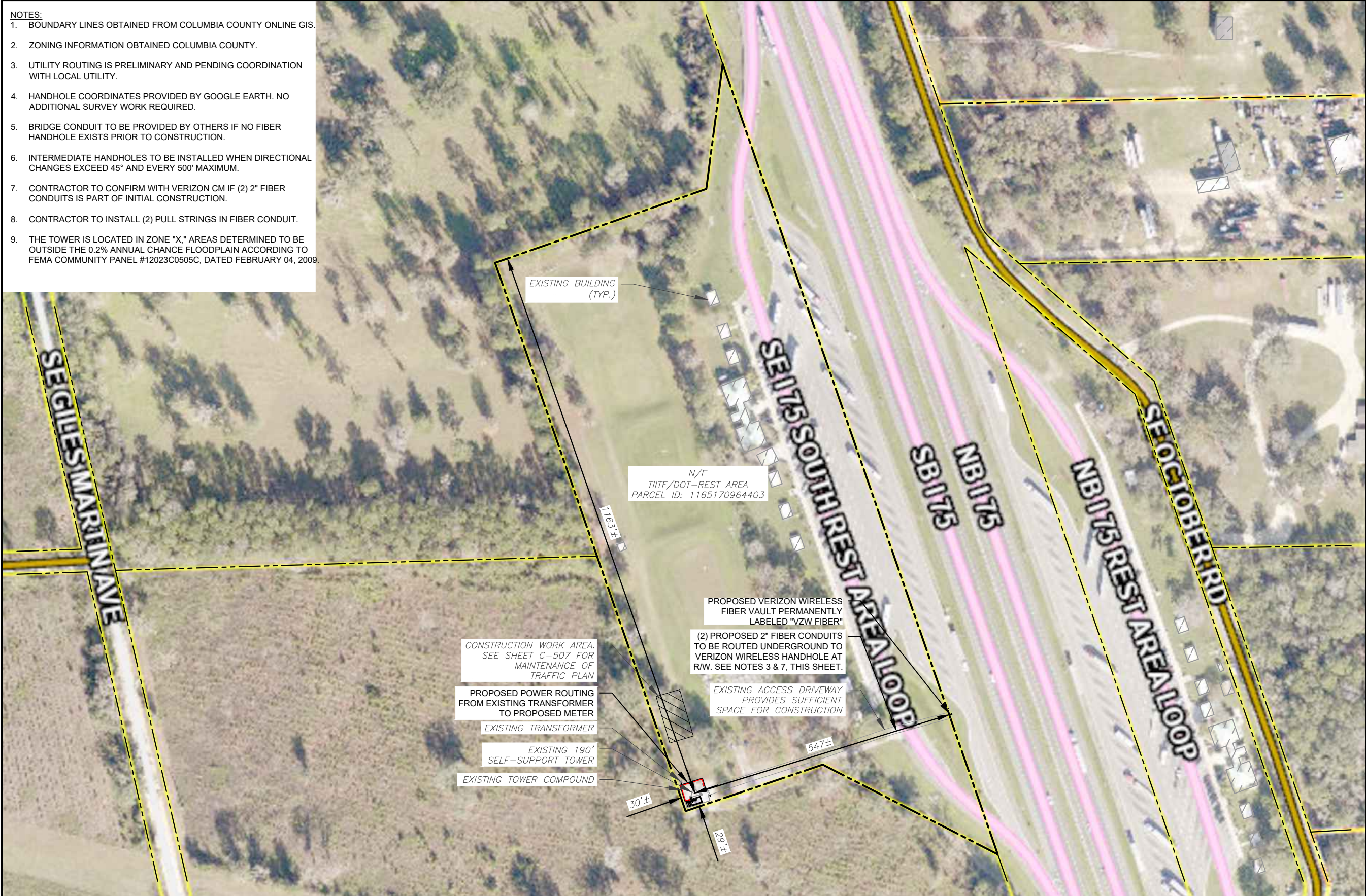


LOCATION DETAIL
NOTE: TIES SHOWN ARE
TO CENTER OF COLUMN



CLIENT	PROJECT	TASK	ORIGINAL	REVISIONS:	JOB NO. 142453.81
530C WEST EXPRESS STREET SUITE 300 TAMPA, FLORIDA 33607 PH. (813) 877-7275	LODESTAR TOWERS, INC. INTERSTATE 75 - REST AREA SOUTH SITE TOWER #2003 COLUMBIA COUNTY, FLORIDA	AS-BUILT, BOUNDARY SURVEY	1 2 3 4 5	6 7 8 9 10 11 12	DRAWN: DLG DESIGNED: WHF CHECKED: GC SHEET 2/2

- NOTES:
- BOUNDARY LINES OBTAINED FROM COLUMBIA COUNTY ONLINE GIS.
 - ZONING INFORMATION OBTAINED COLUMBIA COUNTY.
 - UTILITY ROUTING IS PRELIMINARY AND PENDING COORDINATION WITH LOCAL UTILITY.
 - HANDHOLE COORDINATES PROVIDED BY GOOGLE EARTH. NO ADDITIONAL SURVEY WORK REQUIRED.
 - BRIDGE CONDUIT TO BE PROVIDED BY OTHERS IF NO FIBER HANDHOLE EXISTS PRIOR TO CONSTRUCTION.
 - INTERMEDIATE HANDHOLES TO BE INSTALLED WHEN DIRECTIONAL CHANGES EXCEED 45° AND EVERY 500' MAXIMUM.
 - CONTRACTOR TO CONFIRM WITH VERIZON CM IF (2) 2" FIBER CONDUITS IS PART OF INITIAL CONSTRUCTION.
 - CONTRACTOR TO INSTALL (2) PULL STRINGS IN FIBER CONDUIT.
 - THE TOWER IS LOCATED IN ZONE "X." AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN ACCORDING TO FEMA COMMUNITY PANEL #12023C0505C, DATED FEBRUARY 04, 2009.



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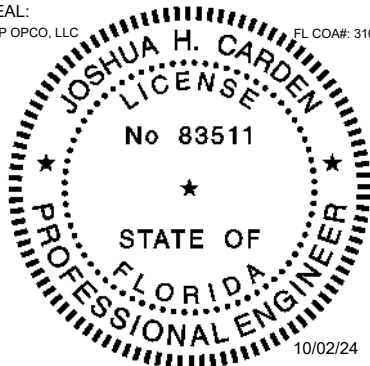
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VERIZON WIRELESS SITE NAME:
I-75 REST AREA COLUMBIA -
MKT 143- MCR
SITE ADDRESS:
2212 SE OCTOBER RD
LAKE CITY, FL 32024-5533

REV.	DESCRIPTION	BY	DATE
A	PRELIMINARY	PVW	09/11/24
B	90% CONSTRUCTION	RMJ	09/24/24
0	100% CONSTRUCTION	BJO	10/02/24

DIGITAL/ELECTRONIC SEAL:
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SEAL:
TEP OPCO, LLC
FL COA#: 31011



DATE DRAWN:	10/02/24
ATC JOB NO:	14873535
CUSTOMER NAME:	I-75 REST AREA COLUMBIA - MKT 143 - MCR
CUSTOMER ID:	5000957578

OVERALL SITE PLAN

SHEET NUMBER:

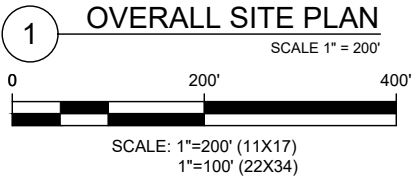
C-001

REVISION:

0

LEGEND

- EXISTING PROPERTY LINE
- EXISTING ADJACENT PROPERTY LINE
- EXISTING LEASE AREA



SITE PLAN NOTES:

1.

THIS SITE PLAN REPRESENTS THE BEST PRESENT KNOWLEDGE AVAILABLE TO THE ENGINEER AT THE TIME OF THIS DESIGN. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO CONSTRUCTION AND VERIFY ALL EXISTING CONDITIONS RELATED TO THE SCOPE OF WORK FOR THIS PROJECT.
2.

ICE BRIDGE, CABLE LADDER, COAX PORT, AND COAX CABLE ARE SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL CONFIRM THE EXACT LOCATION OF ALL PROPOSED AND EXISTING EQUIPMENT AND STRUCTURES DEPICTED ON THIS PLAN. BEFORE UTILIZING EXISTING CABLE SUPPORTS, COAX PORTS, INSTALLING NEW PORTS OR ANY OTHER EQUIPMENT, CONTRACTOR SHALL VERIFY ALL ASPECTS OF THE COMPONENTS MEET THE ATC SPECIFICATIONS.
3.

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH THE VERIZON REPRESENTATIVE AND LOCAL UTILITY COMPANY FOR THE INSTALLATION OF CONDUITS, CONDUCTORS, BREAKERS, DISCONNECTS, OR ANY OTHER EQUIPMENT REQUIRED FOR ELECTRICAL SERVICE. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH LATEST EDITION OF THE STATE AND NATIONAL CODES, ORDINANCES AND REGULATIONS APPLICABLE TO THIS PROJECT.
4.

CONTRACTOR TO CONFIRM WITH VERIZON CM IF (2) 2" FIBER CONDUITS IS PART OF INITIAL CONSTRUCTION.
5.

CONTRACTOR TO INSTALL (2) PULL STRINGS IN FIBER CONDUIT.

LEGEND

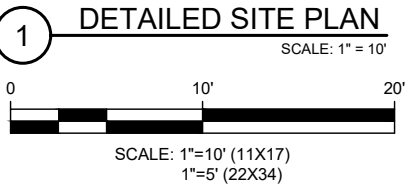
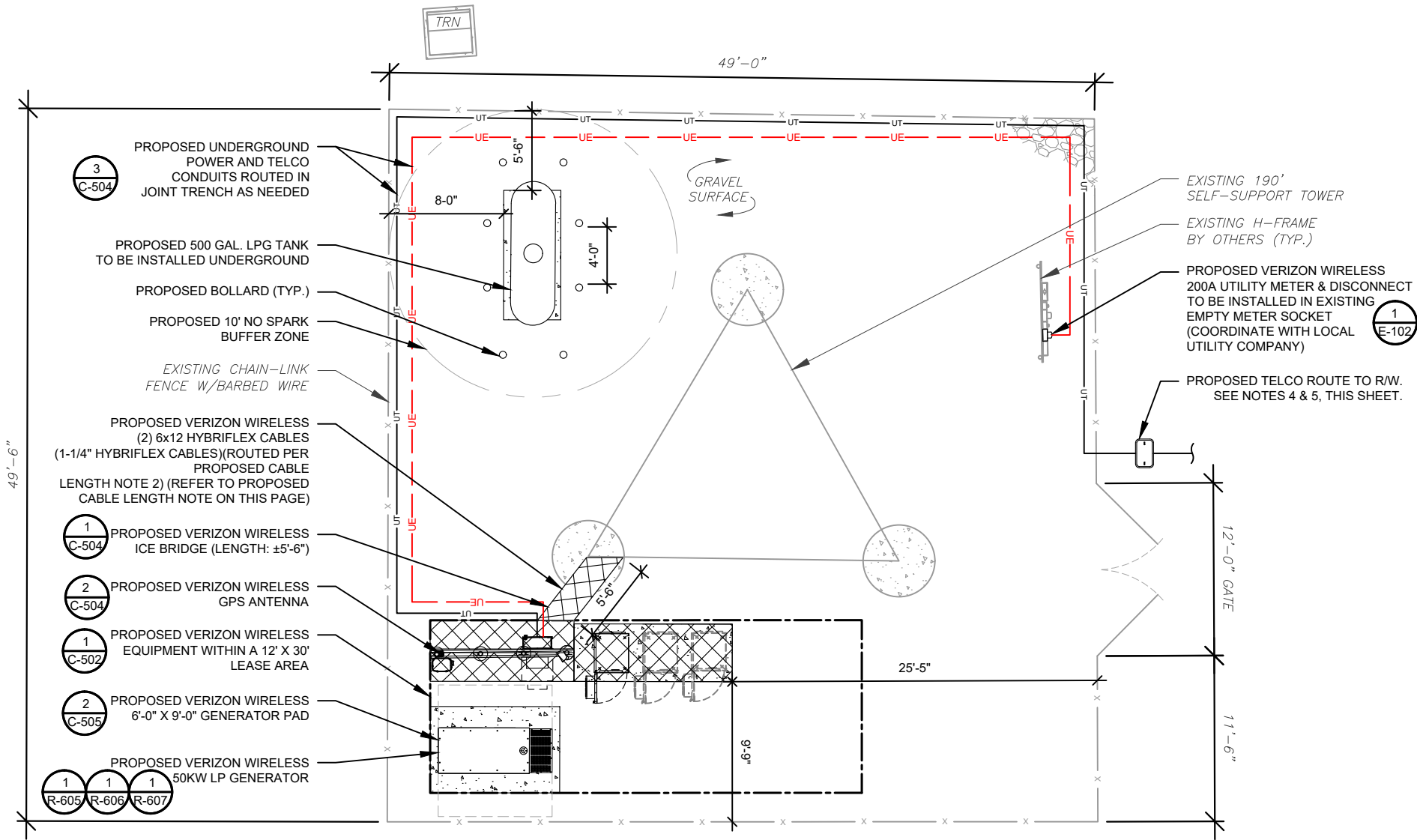
⊗	GROUNDING TEST WELL
ATS	AUTOMATIC TRANSFER SWITCH
B	BOLLARD
CSC	CELL SITE CABINET
D	DISCONNECT
E	ELECTRICAL
F	FIBER
GEN	GENERATOR
G	GENERATOR RECEPTACLE
HH, V	HAND HOLE, VAULT
IB	ICE BRIDGE
K	KENTROX BOX
LC	LIGHTING CONTROL
M	METER
PB	PULL BOX
PP	POWER POLE
T	TELCO
TRN	TRANSFORMER
— x —	CHAINLINK FENCE

PROPOSED CABLE NOTES:

1.

ESTIMATED LENGTH OF PROPOSED CABLE IS **240'**. ESTIMATED LENGTH OF CABLE WAS PROVIDED BY CUSTOMER OR CALCULATED BY ADDING THE RAD CENTER AND THE DISTANCE FROM THE SHELTER ENTRY PLATE TO THE TOWER (ALONG THE ICE BRIDGE) AND A SAFETY FACTOR MEASUREMENT OF 15% (OF THE TWO PREVIOUS VALUES). CDS DEFER TO GREATEST CABLE LENGTH.
2.

ROUTE PROPOSED CABLES ALONG SAME PATH AS EXISTING CABLES AND IN ACCORDANCE WITH STRUCTURAL ANALYSIS. WHERE POSSIBLE UTILIZE EXISTING CABLE SUPPORT STRUCTURES AS PROVIDED FOR CARRIER TO ADEQUATELY SECURE CABLES, USING EITHER APPROPRIATELY SIZED STAINLESS STEEL SNAP-INS OR MOUNTING HARDWARE AND BRACKETS AS SPECIFIED BY CABLE MANUFACTURER. OTHERWISE, ATTACH CABLES TO HORIZONTAL OR DIAGONAL TOWER MEMBERS USING PROPOSED STAINLESS STEEL ADAPTERS (DO NOT ATTACH TO TOWER LEG).



TEP OPCO LLC
326 TRYON ROAD
RALEIGH, NC 27603-3530

OFFICE: (919) 661-6351
www.tepgroup.net
FL COA#: 31011

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ATC SITE NUMBER:
302769

ATC SITE NAME:
I-75 REST AREA

VERIZON WIRELESS SITE NAME:
I-75 REST AREA COLUMBIA -

MKT 143- MCR

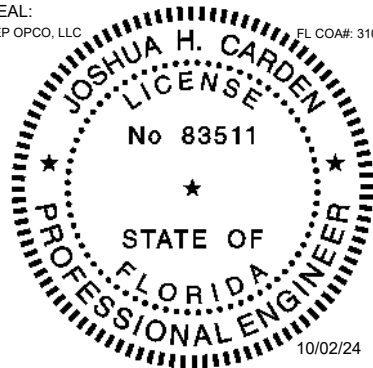
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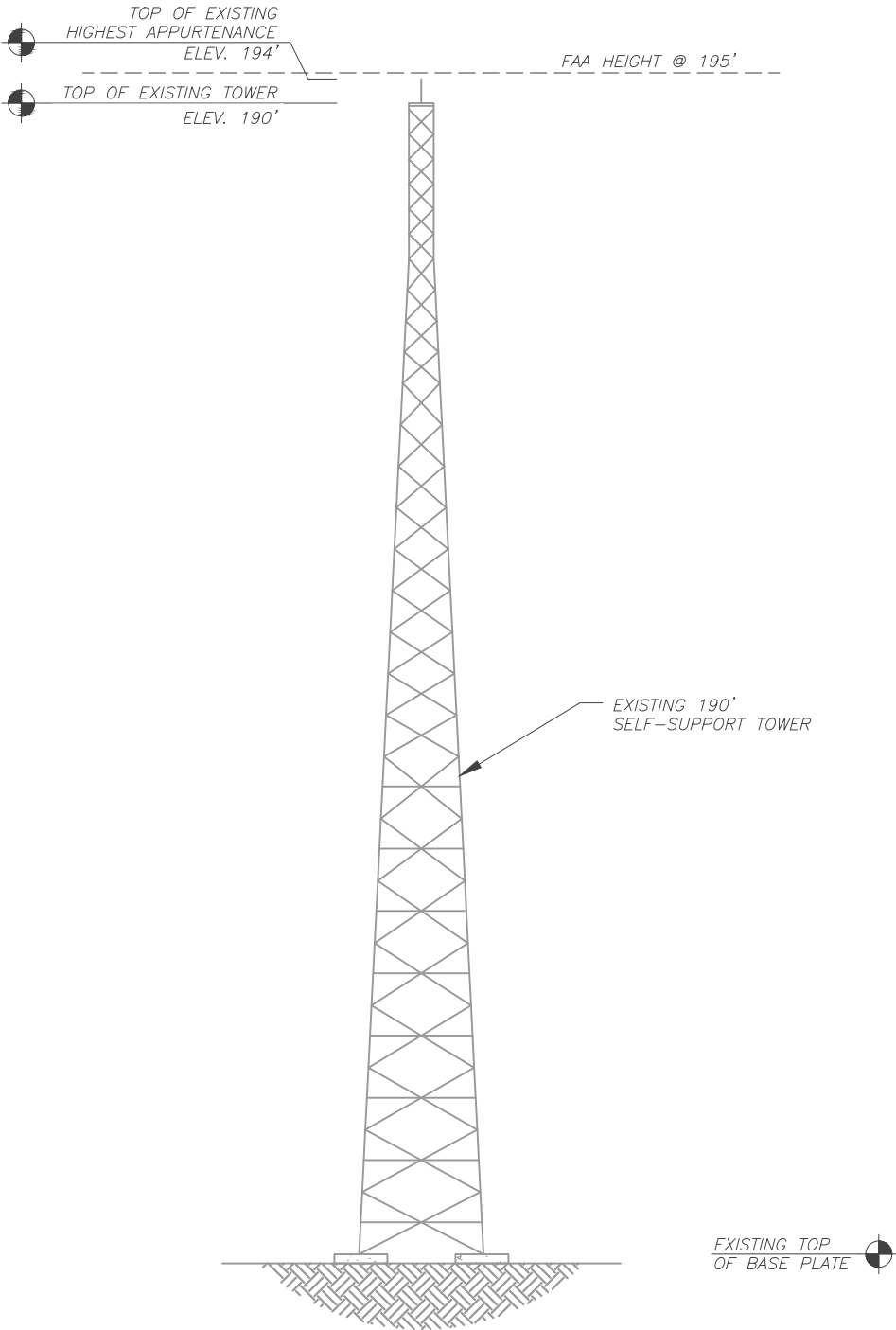


DATE DRAWN:	10/02/24
ATC JOB NO:	14873535
CUSTOMER NAME:	I-75 REST AREA COLUMBIA - MKT 143 - MCR
CUSTOMER ID:	5000957578

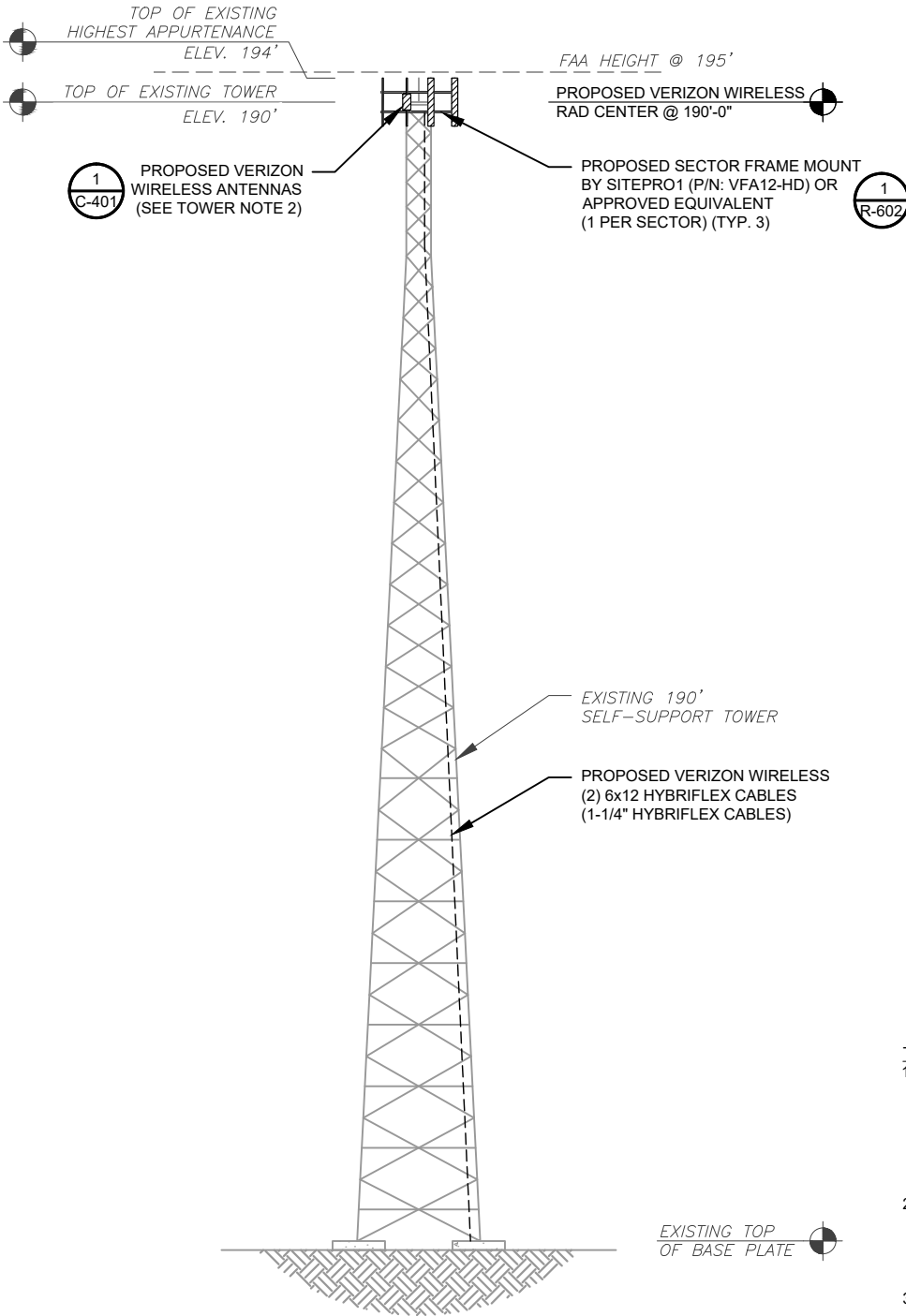
DETAILED SITE PLAN

SHEET NUMBER:
C-101

REVISION:
0



1 EXISTING TOWER ELEVATION
SCALE: N.T.S.



2 PROPOSED TOWER ELEVATION
SCALE: N.T.S.

ATC HAS NOT ANALYZED THE PROPOSED ANTENNA MOUNT(S) TO DETERMINE ADEQUATE STRUCTURAL CAPACITY FOR PROPOSED CARRIER LOADING.

ATC IS CURRENTLY FILED FOR FAA HEIGHT HIGHER THAN THE TOP OF TOWER.

- TOWER NOTES:
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM WITH THE PROJECT MANAGER THAT THEY HAVE THE MOST RECENT VERSION OF THE STRUCTURAL ANALYSIS BEFORE COMMENCING WORK. EXISTING AND PROPOSED TOWER APPURTENANCES, MOUNTS, AND ANTENNAS ARE SHOWN BASED ON THE STRUCTURAL ANALYSIS.
 - WHERE APPLICABLE, ALL NEW ANTENNAS, EQUIPMENT, MOUNTS, CABLING, ETC. SHALL BE PAINTED/SOCKED TO MATCH EXISTING EQUIPMENT IN ACCORDANCE WITH FAA, JURISDICTION, AND/OR OTHER LOCAL REQUIREMENTS.
 - ROUTE PROPOSED CABLES ALONG SAME PATH AS EXISTING CABLES AND IN ACCORDANCE WITH STRUCTURAL ANALYSIS. WHERE POSSIBLE UTILIZE EXISTING CABLE SUPPORT STRUCTURES AS PROVIDED FOR CARRIER TO ADEQUATELY SECURE CABLES, USING EITHER APPROPRIATELY SIZED STAINLESS STEEL SNAP-INS OR MOUNTING HARDWARE AND BRACKETS AS SPECIFIED BY CABLE MANUFACTURER. OTHERWISE, ATTACH CABLES TO HORIZONTAL OR DIAGONAL TOWER MEMBERS USING PROPOSED STAINLESS STEEL ADAPTERS (DO NOT ATTACH TO TOWER LEG).
 - TOWER ELEVATION DEPICTION MAY NOT REFLECT ALL EQUIPMENT INCLUDED IN STRUCTURAL ANALYSIS. REFER TO STRUCTURAL ANALYSIS FOR FULL TOWER LOADING.



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326 TRYON ROAD
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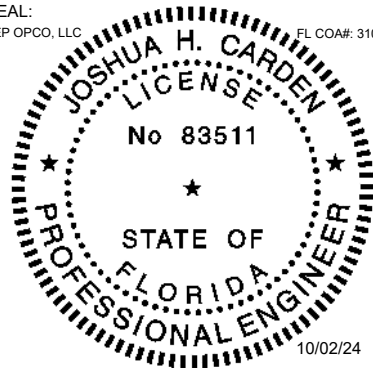
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302769
ATC SITE NAME:
I-75 REST AREA
VERIZON WIRELESS SITE NAME:
I-75 REST AREA COLUMBIA -
MKT 143- MCR
SITE ADDRESS:
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SEAL:
TEP OPCO, LLC
FL COA#: 31011



DATE DRAWN:	10/02/24
ATC JOB NO:	14873535
CUSTOMER NAME:	I-75 REST AREA COLUMBIA - MKT 143 - MCR
CUSTOMER ID:	5000957578

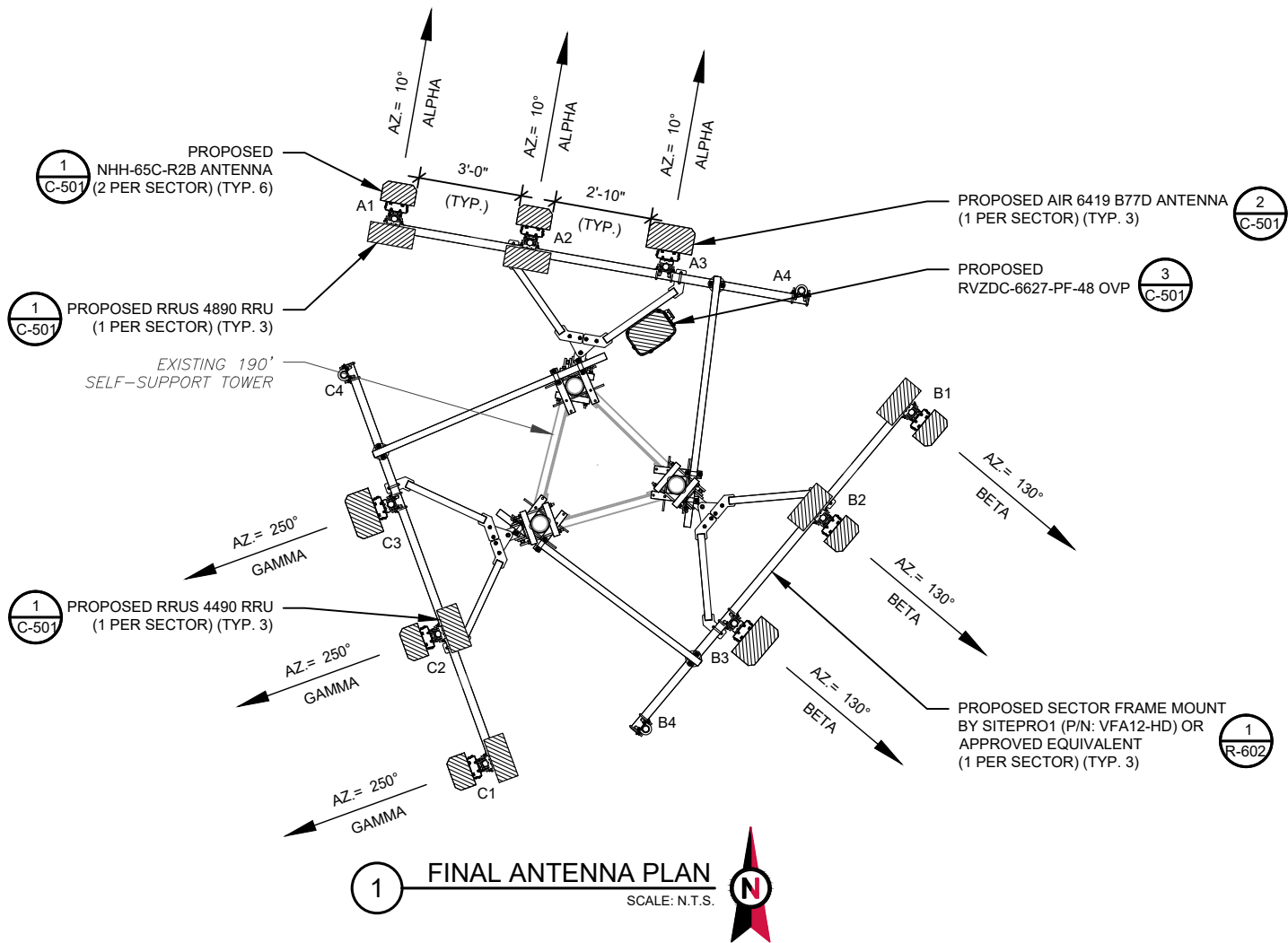
TOWER ELEVATION

SHEET NUMBER:

C-201

REVISION:

0



ATC HAS NOT ANALYZED THE PROPOSED ANTENNA MOUNT(S) TO DETERMINE ADEQUATE STRUCTURAL CAPACITY FOR PROPOSED CARRIER LOADING.

FINAL ANTENNA SCHEDULE									
LOCATION			ANTENNA SUMMARY					NON ANTENNA SUMMARY	
SECTOR	RAD	AZ	POS	ANTENNA	BAND	MECH/ELEC D-TILT	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT	STATUS
ALPHA	190'-0"	10°	A1	NHH-65C-R2B	LTE 700/LTE 1900/ LTE AWS/ LTE AWS3/5G 850/LTE 850	*	ADD	(1) RRUS 4890	ADD
			A2	NHH-65C-R2B	LTE 700/LTE 1900/ LTE AWS/ LTE AWS3/5G 850/LTE 850	*	ADD	(1) RRUS 4490	ADD
			A3	AIR 6419 B77D	5G L-SUB6	*	-	-	-
			A4	-	-	*	-	-	-
BETA	190'-0"	130°	B1	NHH-65C-R2B	LTE 700/LTE 1900/ LTE AWS/ LTE AWS3/5G 850/LTE 850	*	ADD	(1) RRUS 4890	ADD
			B2	NHH-65C-R2B	LTE 700/LTE 1900/ LTE AWS/ LTE AWS3/5G 850/LTE 850	*	ADD	(1) RRUS 4490	ADD
			B3	AIR 6419 B77D	5G L-SUB6	*	-	-	-
			B4	-	-	*	-	-	-
GAMMA	190'-0"	250°	C1	NHH-65C-R2B	LTE 700/LTE 1900/ LTE AWS/ LTE AWS3/5G 850/LTE 850	*	ADD	(1) RRUS 4890	ADD
			C2	NHH-65C-R2B	LTE 700/LTE 1900/ LTE AWS/ LTE AWS3/5G 850/LTE 850	*	ADD	(1) RRUS 4490	ADD
			C3	AIR 6419 B77D	5G L-SUB6	*	-	-	-
			C4	-	-	*	-	-	-

1. CONFIRM WITH VERIZON WIRELESS REP FOR APPLICABLE UPDATES/REVISIONS AND MOST RECENT RFDS FOR NSN CONFIGURATION (CONFIG). GC TO CAP ALL UNUSED PORTS.
2. CONFIRM SPACING OF PROPOSED EQUIP DOES NOT CAUSE TOWER CONFLICTS NOR IMPEDE TOWER CLIMBING PEGS.
* - REFER TO RFDS FOR THE VALUES

CABLE LENGTHS FOR JUMPERS
FIBER DISTRIBUTION/OVP TO RRU: 15'
RRU TO ANTENNA: 10'

2 ANTENNA SCHEDULE

PROPOSED FIBER DISTRIBUTION/OVP BOX		PROPOSED CABLING SUMMARY		
MODEL NUMBER	STATUS	COAX	HYBRID	STATUS
(1) RVZDC-6627-PF-48 OVP	ADD	-	(2) 6x12 [(2) 1-1/4"]	ADD



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ATC SITE NUMBER:
302769

ATC SITE NAME:
I-75 REST AREA

VERIZON WIRELESS SITE NAME:
I-75 REST AREA COLUMBIA - MKT 143- MCR

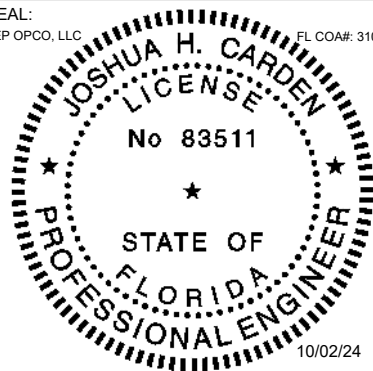
SITE ADDRESS:
2212 SE OCTOBER RD
LAKE CITY, FL 32024-5533

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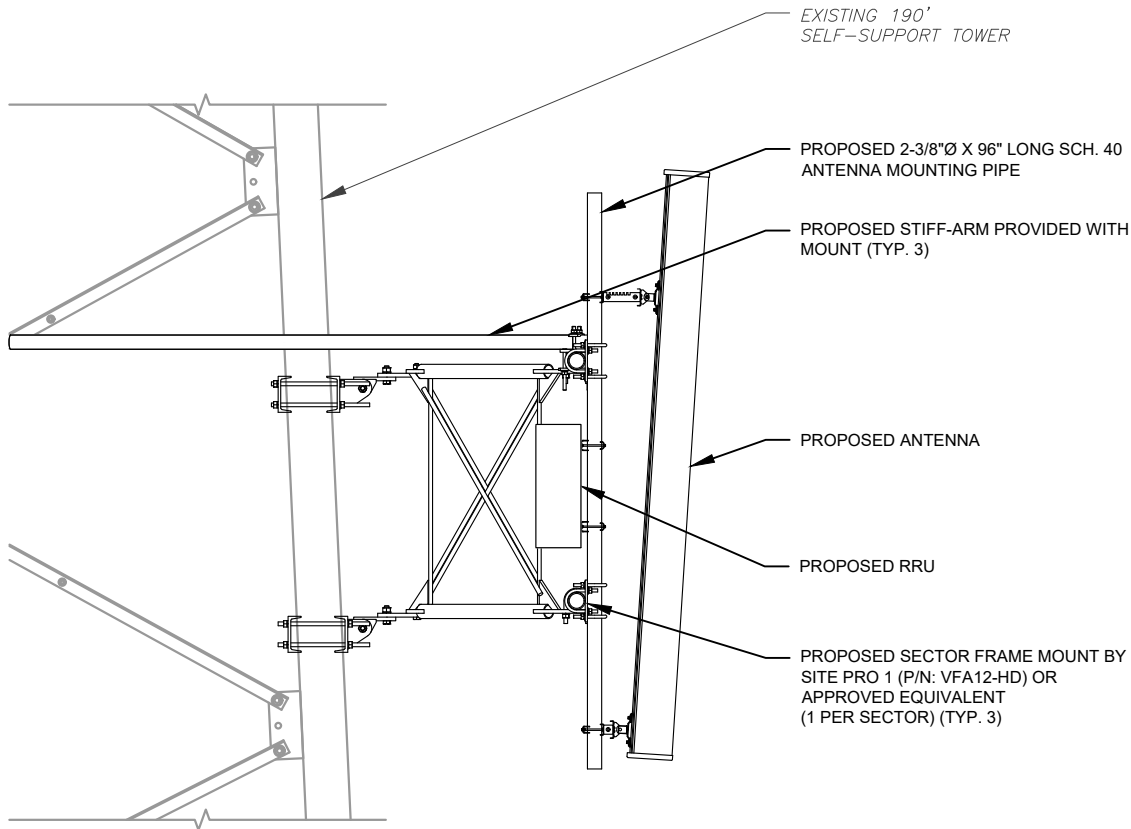


DATE DRAWN:	10/02/24
ATC JOB NO:	14873535
CUSTOMER NAME:	I-75 REST AREA COLUMBIA - MKT 143 - MCR
CUSTOMER ID:	5000957578

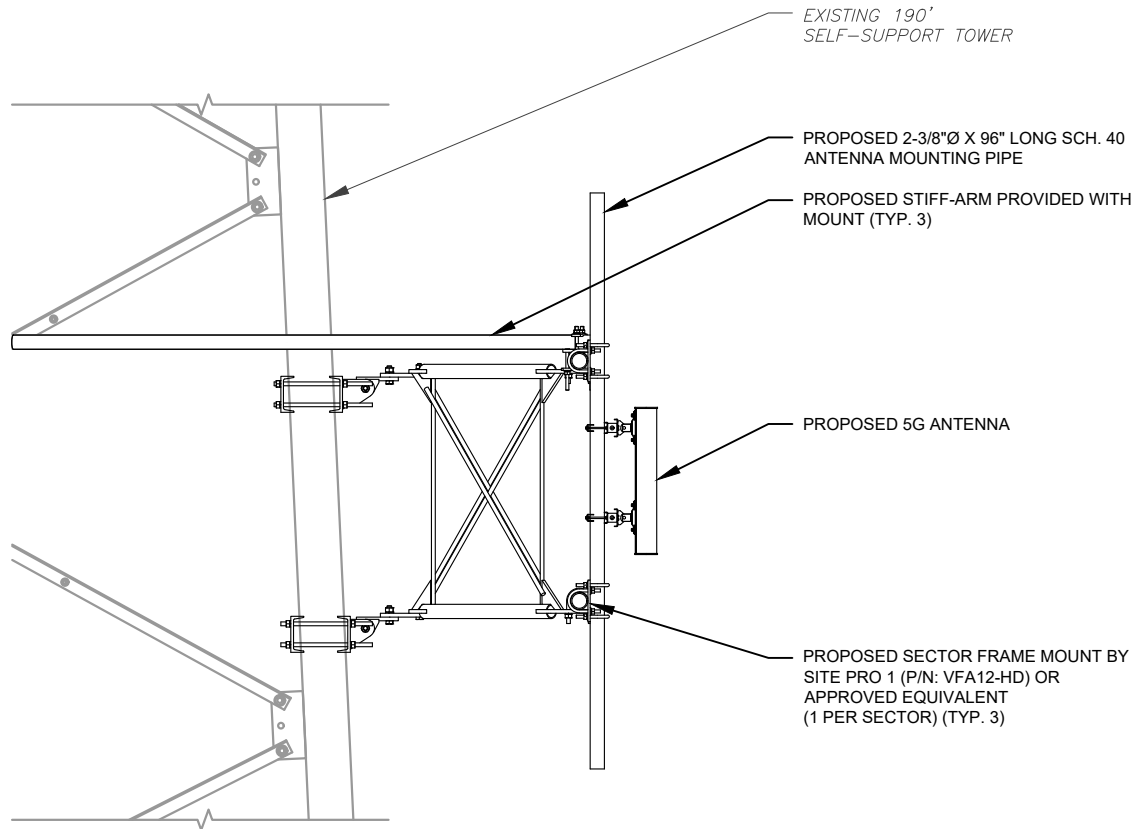
ANTENNA INFORMATION & SCHEDULE

SHEET NUMBER:
C-401

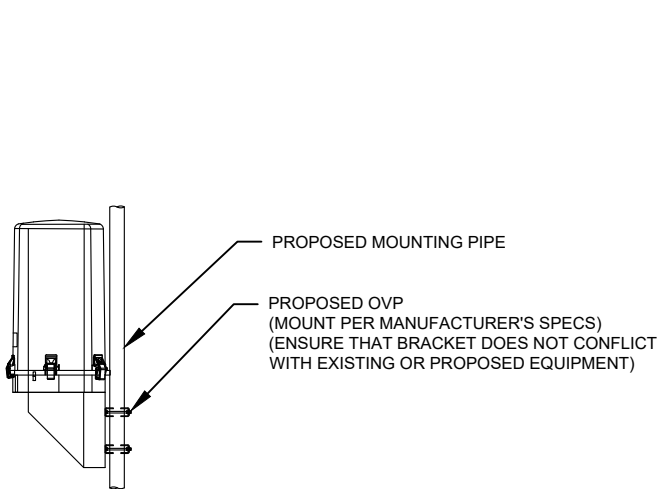
REVISION:
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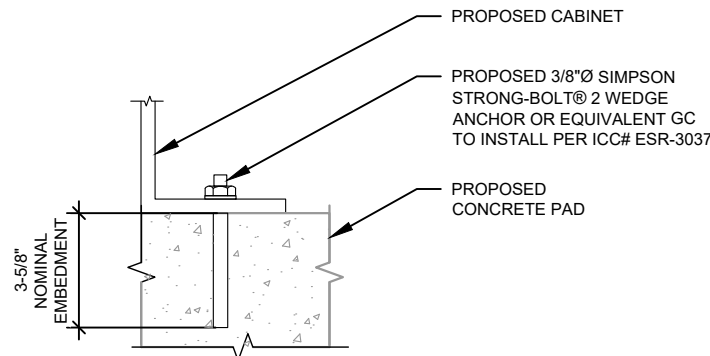
1 PROPOSED ANTENNA MOUNTING DETAIL
SCALE: NOT TO SCALE



2 PROPOSED 5G ANTENNA MOUNTING DETAIL
SCALE: NOT TO SCALE

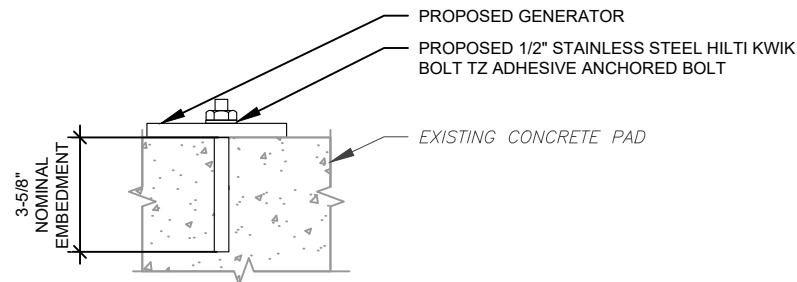


3 PROPOSED OVP MOUNTING DETAIL
SCALE: N.T.S.



- NOTE:
1. INSTALL SIMPSON STRONG-TIE® STRONG-BOLT® 2 WEDGE ANCHOR(S) STRICTLY PER INSTALLATION INSTRUCTIONS INCLUDED WITH PRODUCT OR FOUND ONLINE AT WWW.STRONGTIE.COM. PROPER INSTALLATION IS CRITICAL FOR FULL PERFORMANCE.
 2. SPECIAL INSPECTIONS ARE TO BE COMPLETED IN ACCORDANCE WITH ICC# ESR-3037.

4 CABINET ATTACHMENT DETAIL
SCALE: N.T.S.



NOTE:

INSTALL HILTI KWIK BOLT ANCHORS STRICTLY PER INSTALLATION INSTRUCTIONS INCLUDED WITH PRODUCT OR FOUND ONLINE AT WWW.US.HILTI.COM. PROPER INSTALLATION IS CRITICAL FOR FULL PERFORMANCE.

5 PROPOSED GENERATOR ATTACHMENT DETAIL
SCALE: NOT TO SCALE



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326 TRYON ROAD
RALEIGH, NC 27603-3530

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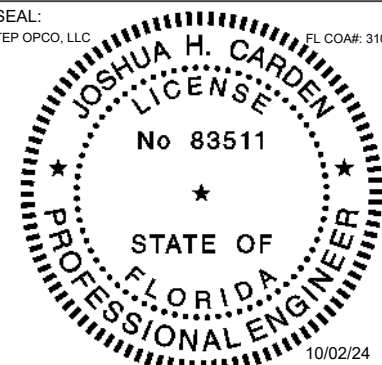
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I-75 REST AREA
VERIZON WIRELESS SITE NAME:
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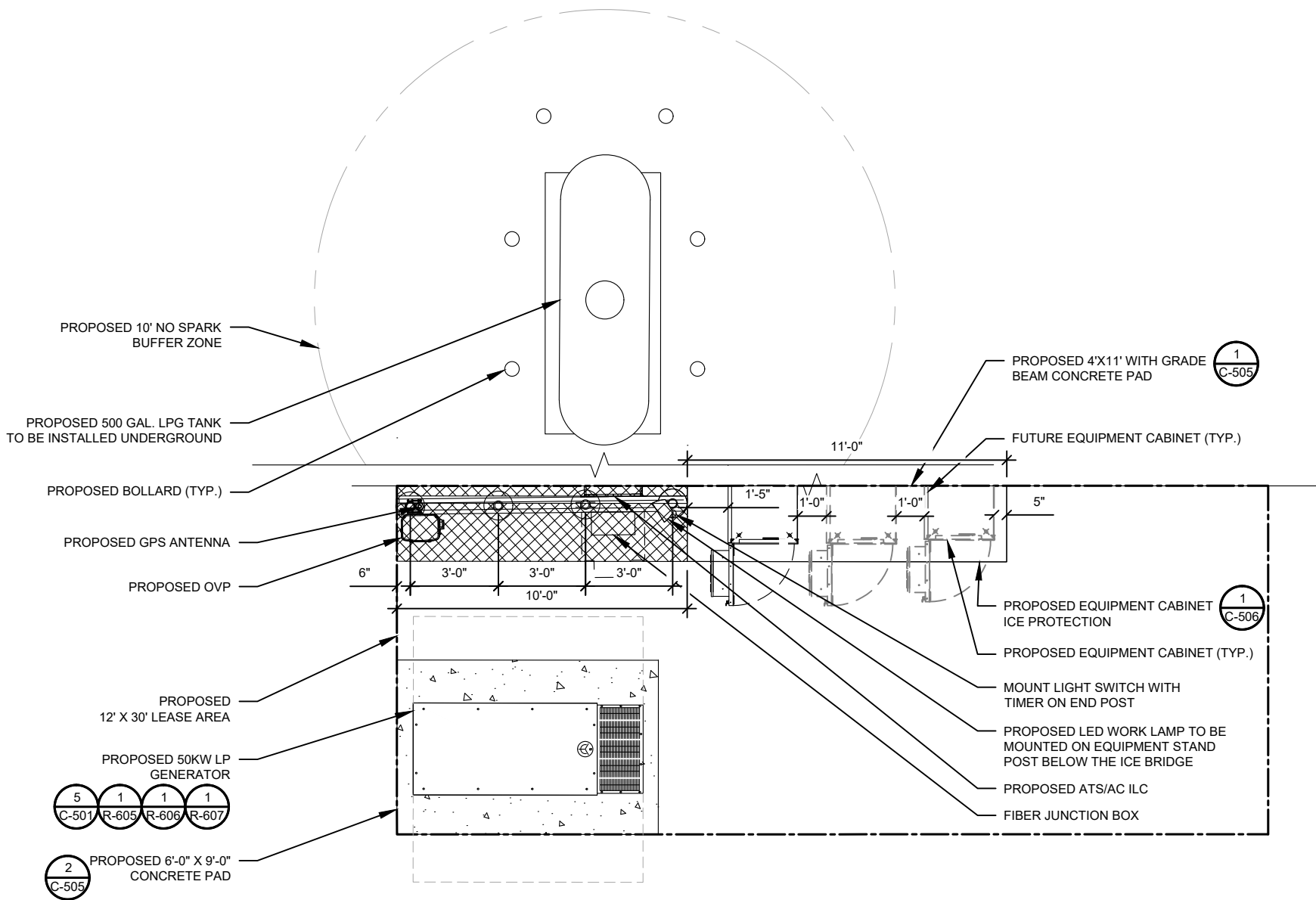
SEAL:
TEP OPCO, LLC
FL COA#: 31011



DATE DRAWN:	10/02/24
ATC JOB NO:	14873535
CUSTOMER NAME:	I-75 REST AREA COLUMBIA - MKT 143 - MCR
CUSTOMER ID:	5000957578

CONSTRUCTION DETAILS

SHEET NUMBER: C-501	REVISION: 0
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VERIZON WIRELESS PROVIDED EQUIPMENT

- CHARLES INDUSTRIES CUBE-SS4B231PX2 EQUIPMENT WITH BATTERY CHARGER
- RAYCAP OVP-12 (RVZDC-6627-PF-48)

CONTRACTOR PROVIDED EQUIPMENT

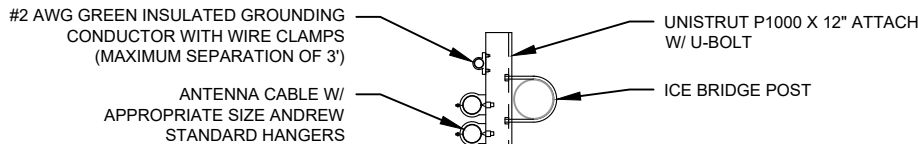
* THIS IS NOT A COMPREHENSIVE LIST. IT SHOULD BE ASSUMED BY THE CONTRACTOR THAT ALL OTHER ITEMS DETAILED IN THIS SET OF DRAWINGS SHALL BE PROVIDED BY THE CONTRACTOR.

- 18"X18" FIBER JUNCTION BOX, NEMA 3R CABINET ENCLOSURE WITH WOODEN BACKBOARD, PADLOCK LATCH, AND COMBINATION LOCK (USE FOR DARK FIBER)

- 26.2" WIDE X 78" TALL X 12.3" DEEP ASCO D300L SERIES POWER TRANSFER LOAD CENTER MODEL AA300G-1PH-N-3R INTEGRATED LOAD CENTER "ILC" WITH COMBINATION PAD LOCK.

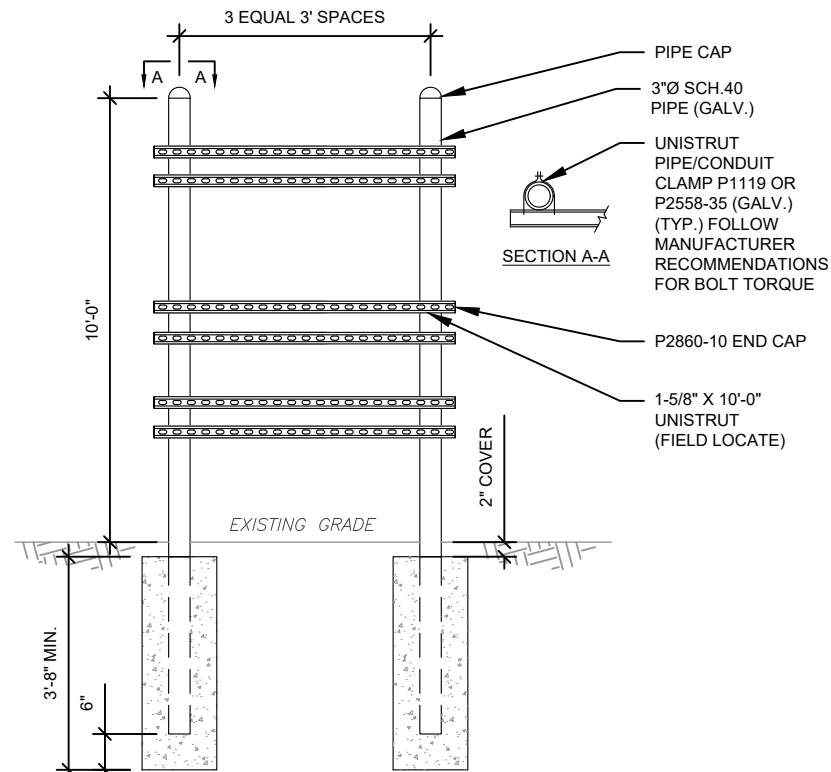
- 22" WIDE X 26" TALL X 20" DEEP CHARLES INDUSTRIES CUBE-RL1003C-1 WITH HEAT EXCHANGER (120V) WITH TRIPP-LITE UPS PART #SM1200RMXL2UTAA INSIDE (ONLY REQUIRED WHEN VZT PROVIDES LIT FIBER. UTILITY COORDINATOR MUST VERIFY IF NEEDED)

- COORDINATE ADDITIONAL ENTRY GATE LOCK(S) WITH CONSTRUCTION MANAGER



2 WAVEGUIDE UNISTRUT
SCALE: NOT TO SCALE

1 DETAILED EQUIPMENT LAYOUT
SCALE: NOT TO SCALE



3 TYPICAL H-FRAME AND ICE BRIDGE POST DETAIL
SCALE: NOT TO SCALE



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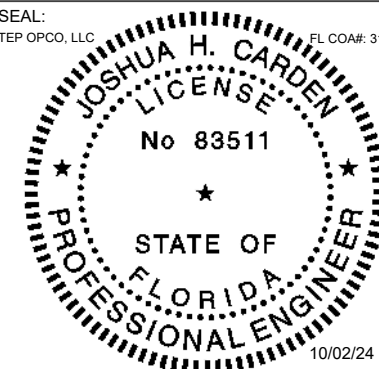
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VERIZON WIRELESS SITE NAME: I-75 REST AREA COLUMBIA -			
MKT 143- MCR			
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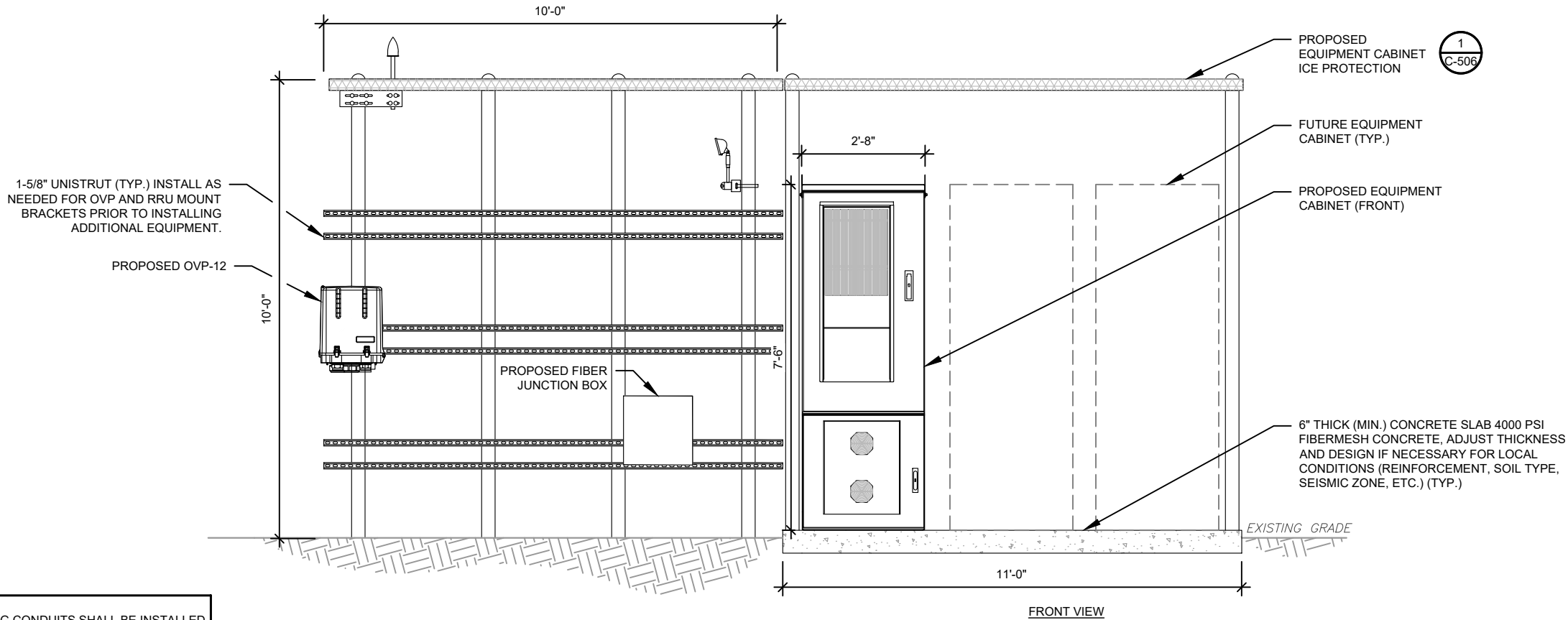
SEAL:
TEP OPCO, LLC
FL COA#: 31011



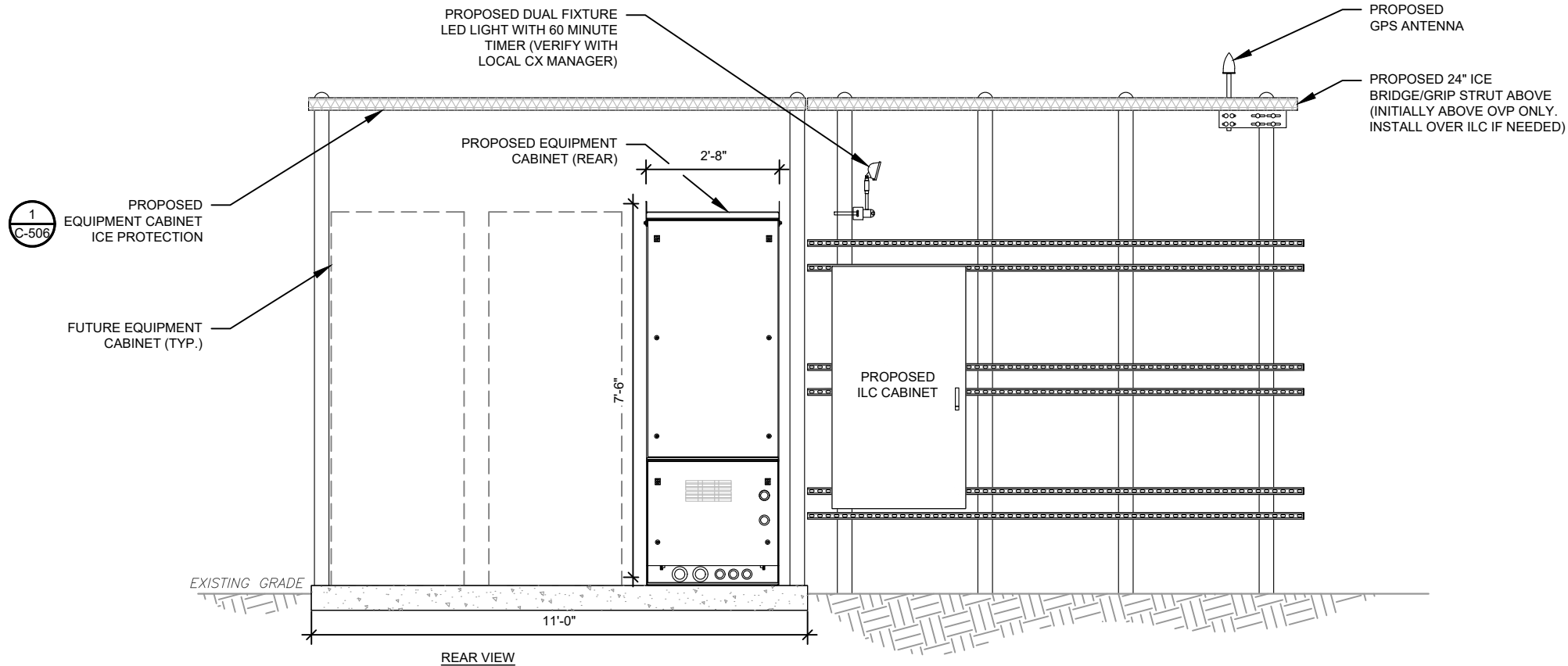
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ATC JOB NO:	14873535
CUSTOMER NAME:	I-75 REST AREA COLUMBIA - MKT 143 - MCR
CUSTOMER ID:	5000957578

CONSTRUCTION
DETAILS

SHEET NUMBER: C-502	REVISION: 0
------------------------	----------------



- NOTES:
- INTERCONNECTING CONDUITS SHALL BE INSTALLED AT OR ABOVE GRADE.
 - BOTTOM OF OVP'S SHALL NOT EXCEED 36" ABOVE FINISHED GRADE.



1 DETAILED H-FRAME LAYOUT

SCALE: NOT TO SCALE



TEP OPCO LLC
326 TRYON ROAD
RALEIGH, NC 27603-3530

OFFICE: (919) 661-6351
www.tepgroup.net
FL COA#: 31011

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ATC SITE NUMBER:
302769

ATC SITE NAME:
I-75 REST AREA

VERIZON WIRELESS SITE NAME:
I-75 REST AREA COLUMBIA -
MKT 143- MCR

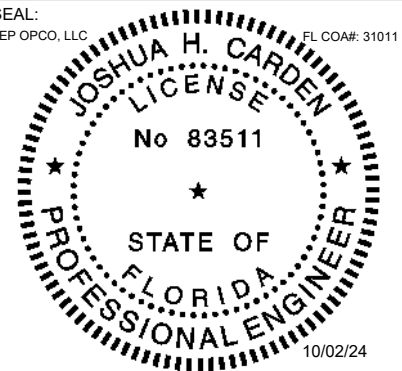
SITE ADDRESS:
2212 SE OCTOBER RD
LAKE CITY, FL 32024-5533

REV.	DESCRIPTION	BY	DATE
A	PRELIMINARY	PVW	09/11/24
B	90% CONSTRUCTION	RMJ	09/24/24
D	100% CONSTRUCTION	BJO	10/02/24

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SEAL:
TEP OPCO, LLC
FL COA#: 31011



DATE DRAWN:	10/02/24
ATC JOB NO:	14873535
CUSTOMER NAME:	I-75 REST AREA COLUMBIA - MKT 143 - MCR
CUSTOMER ID:	5000957578

CONSTRUCTION DETAILS

SHEET NUMBER:
C-503

REVISION:
0

1. INSTALL ICE BRIDGE TO ALLOW 7 FEET CLEARANCE ABOVE GRADE TO LOWEST APPURTENANCE.

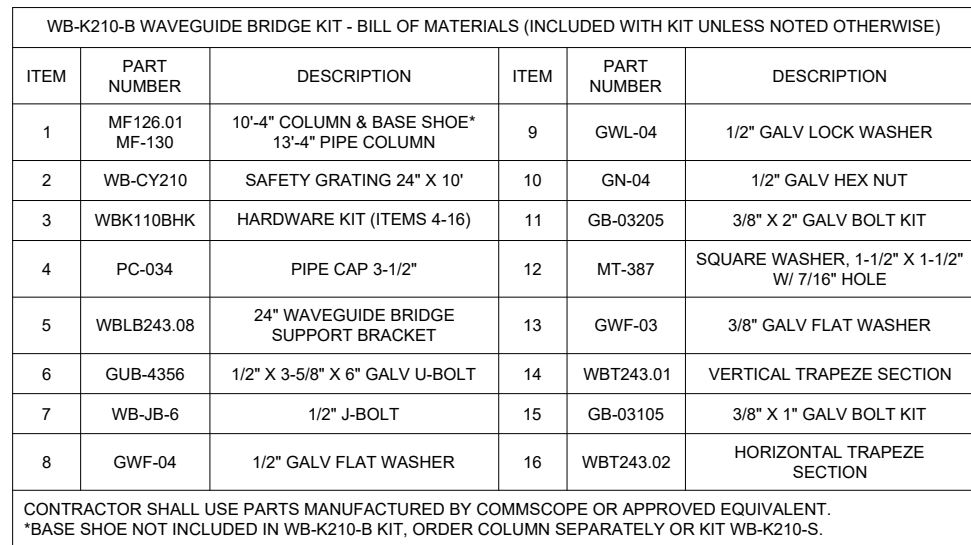


Diagram illustrating the GPS Mount Assembly components and connections:

- G.P.S. ANTENNA (PROVIDED BY VERIZON)
- 1-1/4" SCH 40 X 18" LNG MIN. SS OR GALV PIPE
- PIPE-TO-PIPE CLAMP VERIFY SIZE (GALV.)
- CONDUIT (SHALL BE USED FOR MECHANICAL PROTECTION)
- 1/2"Ø COAX CABLE (OR EQUAL) MIN. BENDING RADIUS PER MFG'S SPECIFICATIONS
- 1/2" X 8" THREADED ROD (GALV.)
- #2 AWG BARE TINNED SOLID COPPER WIRE CADWELDED FROM GPS MOUNT PIPE TO COAX CABLE PIPE SUPPORT OR TOWER MEMBER
- ICE BRIDGE SUPPORT POST OR TOWER MEMBER
- INSULATED METALLIC BUSHING
- #6 AWG GROUNDING KIT CABLE (PROVIDED WITH KIT) 2 HOLE LUG SUITABLE FOR #2 AWG RCW

- NOTES:
1. GPS SHALL BE PLACED WITH CLEAR SIGHT LINE TO THE SOUTHERN SKY.
 2. CONTRACTOR TO SUPPLY COAX FOR GPS UNIT.

Diagram illustrating the cross-section of a trench installation, showing various layers and components:

- EXISTING GRADE**: The top surface of the ground.
- WARNING TAPE**: A horizontal line indicating the location of the trench.
- TRENCH**: The excavation area.
- UNEXCAVATED SOIL**: The soil surrounding the trench.
- 4"**: Dimension indicating the width of the trench.
- COMMUNICATIONS CONDUIT 4" / 2" (AS APPLICABLE)**: Two circular conduits at the bottom of the trench.
- CLEAN SAND SUITABLE FOR CONDUIT BEDDING (SEE NOTE 4)**: The material directly beneath the conduits.
- 12" MIN.**: Dimension indicating the minimum depth of the trench.
- 2'-0" ±**: Dimension indicating the total width of the trench area.
- MATCH EXISTING MATERIAL & GRADE**: Dimension indicating the minimum depth of the trench.
- 24" MIN. OR AS DIRECTED BY LOCAL AUTHORITY**: Dimension indicating the minimum depth of the trench.
- AC POWER CONDUIT(S)**: Dimension indicating the minimum depth of the trench.

1. IF FREE OF ORGANIC OR OTHER DELETERIOUS MATERIAL, EXCAVATED MATERIAL MAY BE USED FOR BACKFILL. IF NOT, PROVIDE CLEAN, COMPACTABLE MATERIAL.
2. COMPACT IN 8" LIFTS. REMOVE ANY LARGE ROCKS PRIOR TO BACKFILLING. CONTRACTOR TO VERIFY LOCATION OF EXISTING U/G UTILITIES PRIOR TO DIGGING.
3. IF CURRENT AS-BUILT DRAWINGS ARE NOT AVAILABLE CONTRACTOR SHALL HAND DIG U/G TRENCHING.
4. USE COMMUNICATIONS ONLY TRENCH FOR COMMUNICATIONS CONDUIT UNLESS TRAVELING UNDER PATH OF VEHICLE TRAVEL, THEN CONDUIT MUST BE 24" MIN. BELOW GRADE.
5. CONFIRM SPACING AND DEPTH WITH NEC OR LOCAL CODE REQUIREMENTS

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<u>B</u>	90% CONSTRUCTION	RMJ	09/24/24
<u>0</u>	100% CONSTRUCTION	BJO	10/02/24
<u> </u>			
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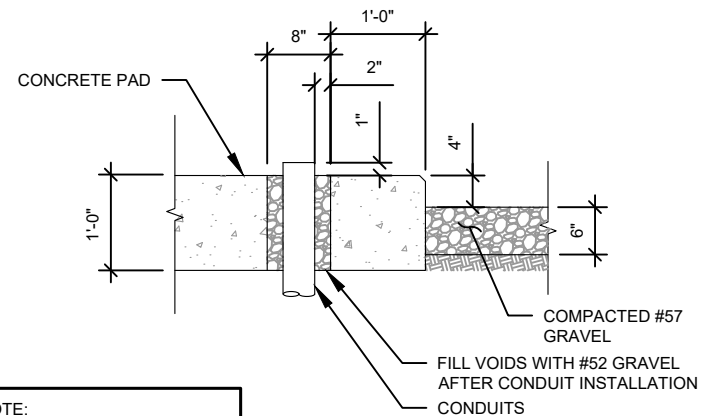
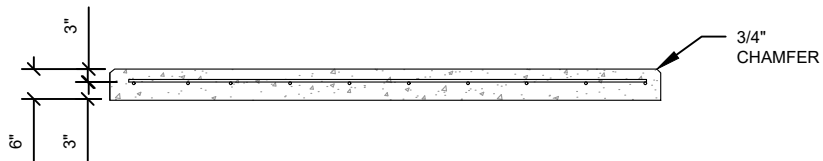
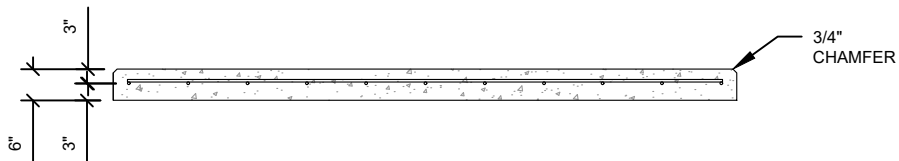
10/02/24



DATE DRAWN:	10/02/24
ATC JOB NO:	14873535
CUSTOMER NAME:	I-75 REST AREA COLUMBIA - MKT 143 - MCR
CUSTOMER ID:	5000957578

C-504

0





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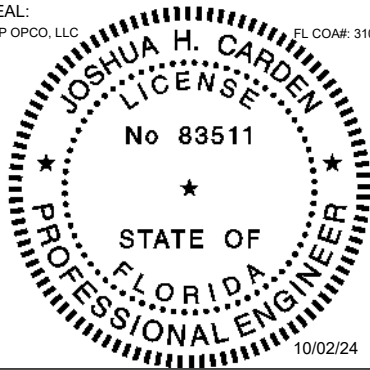
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VERIZON WIRELESS SITE NAME:
I-75 REST AREA COLUMBIA -
MKT 143- MCR
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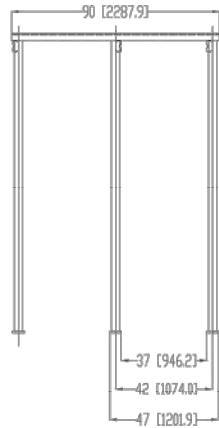
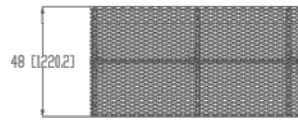
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FL COA#: 31011



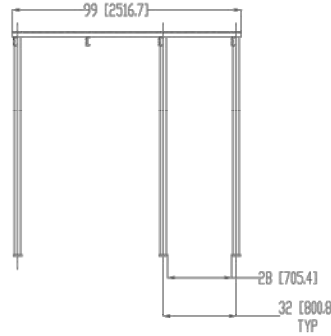
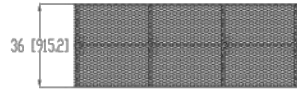
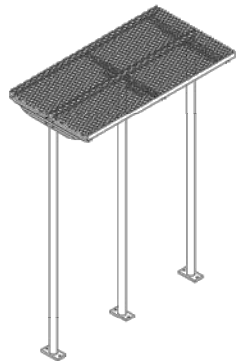
DATE DRAWN:	10/02/24
ATC JOB NO:	14873535
CUSTOMER NAME:	I-75 REST AREA COLUMBIA - MKT 143 - MCR
CUSTOMER ID:	5000957578

CONSTRUCTION
DETAILS

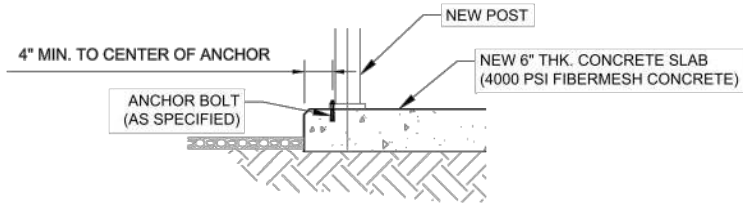
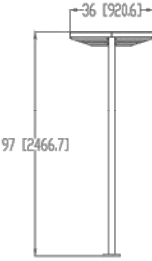
SHEET NUMBER: C-506	REVISION: 0
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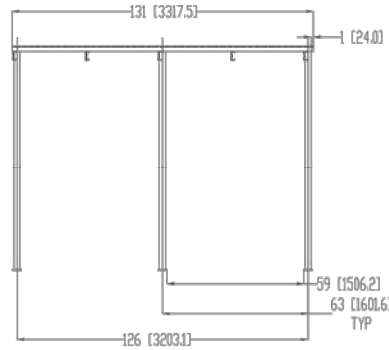
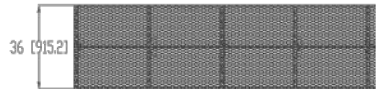
2 CABINETS ICE PROTECTION



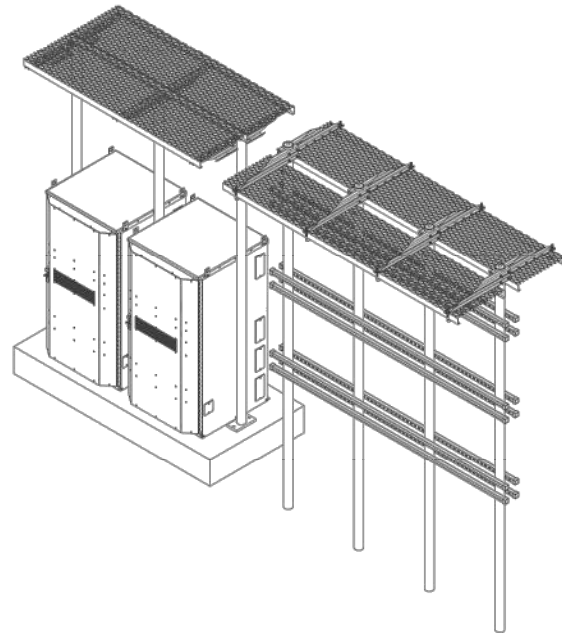
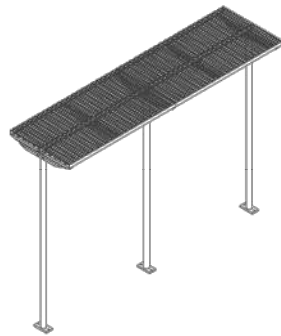
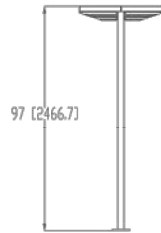
3 CABINETS ICE PROTECTION



POST ANCHOR DETAIL



4 CABINETS ICE PROTECTION



CONCEPTUAL VIEW



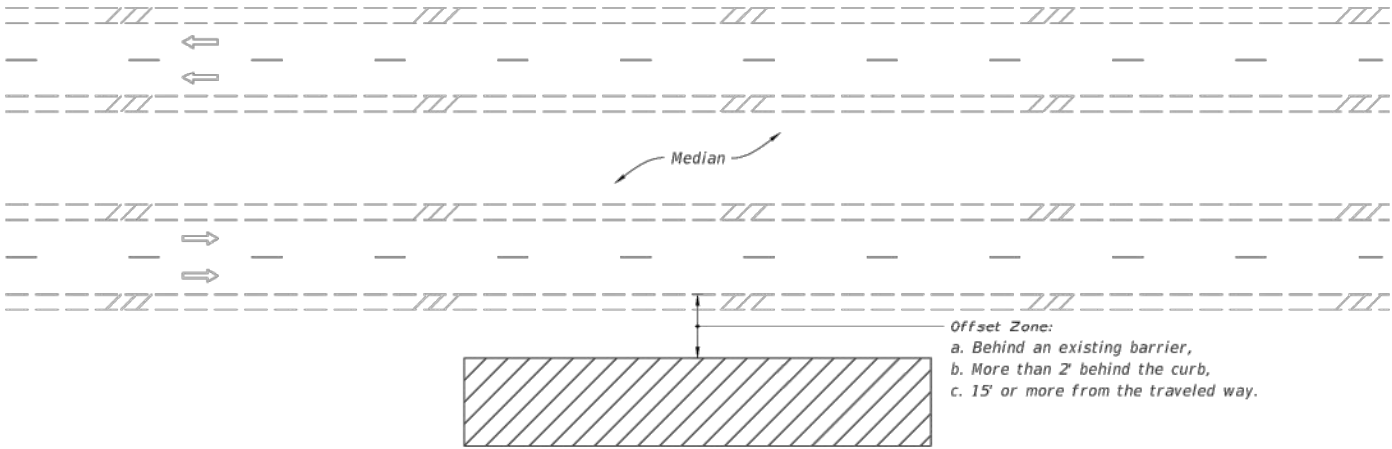
Certificate:
604757
Issued: 01/09/2023
Expires: 01/06/2027
Instructor: M. H

THOMAS BAKER

Has Completed a FDOT Approved Temporary Traffic Control: Advanced Course.

Training Provider:
myTTConline
83 Geneva Dr. Ste. 621394
Oviedo, FL 32762
Ph: 407-901-0206

Verify this Certificate at www.motadmin.com.



MULTILANE ROADWAY SHOWN, TWO-LANE ROADWAY SIMILAR

- NOTES:**

 1. This Index applies to Two-Lane, Two-Way and Multilane Roadways, including Medians of divided roadways, with work beyond the shoulder.
 2. Use Index 102-602 when the work operation (excluding establishing and terminating the work area) requires that two or more work vehicles cross the Offset Zone in any one hour period.
 3. Use Index 102-660 when Work Area encroaches a Sidewalk.
- SYMBOLS:**

 -  Work Area
 -  Lane Identification and Direction of Traffic

10/6/2022 1:23:45 PM

LAST REVISION	DESCRIPTION:	FDOT	FY 2023-24 STANDARD PLANS	TWO-LANE AND MULTILANE ROADWAY, WORK BEYOND THE SHOULDER	INDEX	SHEET
11/01/20					102-601	1 of 1

1 MAINTENANCE OF TRAFFIC (TYPICAL)
SCALE: N.T.S.

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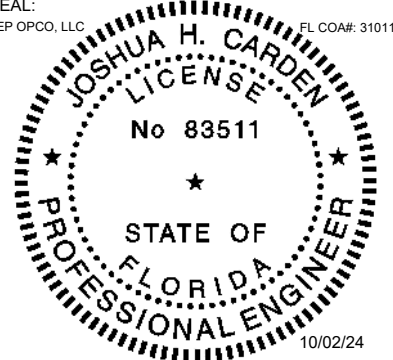
ATC SITE NUMBER:
302769
ATC SITE NAME:
I-75 REST AREA
VERIZON WIRELESS SITE NAME:
I-75 REST AREA COLUMBIA - MKT 143- MCR
SITE ADDRESS:
2212 SE OCTOBER RD
LAKE CITY, FL 32024-5533

REV.	DESCRIPTION	BY	DATE
A	PRELIMINARY	PVW	09/11/24
B	90% CONSTRUCTION	RMJ	09/24/24
C	100% CONSTRUCTION	BJO	10/02/24

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FL COA#: 31011





DATE DRAWN:	10/02/24
ATC JOB NO:	14873535
CUSTOMER NAME:	I-75 REST AREA COLUMBIA - MKT 143 - MCR
CUSTOMER ID:	5000957578

MAINTENANCE OF TRAFFIC

SHEET NUMBER: C-507	REVISION: 0
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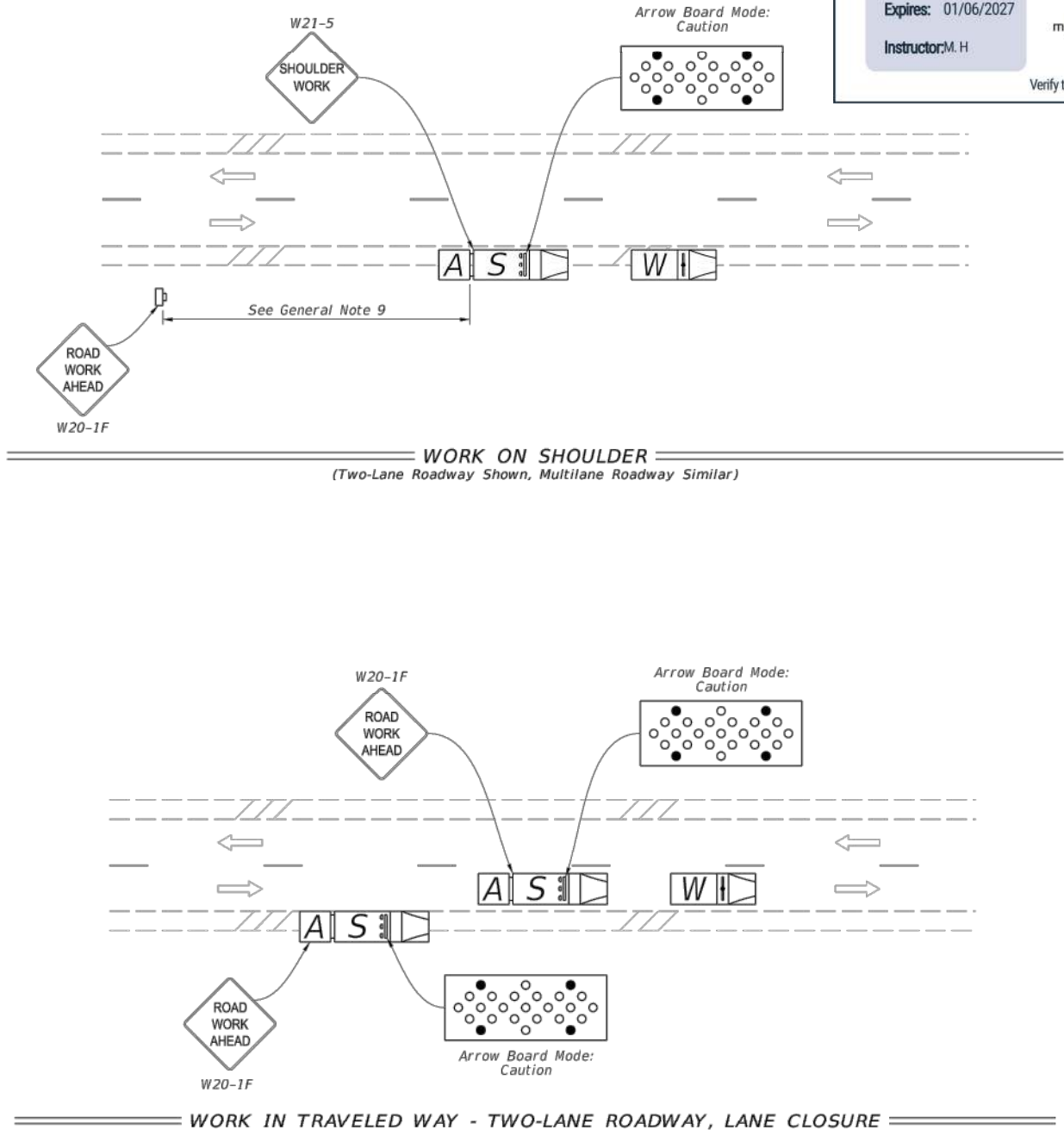
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GENERAL NOTES:

1. This Index applies to two-lane, two-way and multilane roadways with work that requires a moving operation.
2. Mount vehicle-mounted signs with the bottom of the sign at a minimum height of 48 inches above the pavement. Vehicle mounted changeable message signs may be used in lieu of truck mounted static signs and arrow boards. Ensure changeable message signs flash alternately to read "Left or Right Lane" or "Two Left or Two Right Lanes", "Closed Ahead", and the arrow symbol. Do not use arrow boards in combination with truck mounted changeable message signs or obscure boards with equipment, supplies, signs, or enclosure. Cover or turn sign legends from view when work is not in progress.
3. For multilane roadways with curb and no paved shoulder, omit the shadow vehicle that would have been used on the paved shoulder. In such instances, the warning sign should be mounted on the shadow vehicle farthest from the work vehicle.
4. Where work activities within 2' of the edge of travel way are incidental (i.e., Mowing, Litter Removal), the Engineer may omit requirements for signs and the Shadow vehicle on the shoulder.
5. Minimize the longitudinal spacing between vehicles to deter road users from driving in between.
6. Use inverted plan of the illustrations for work on left side of roadways.
7. Ensure that all vehicles in the mobile operation convoy have functional two-way communication.
8. If the speed of the mobile operation exceeds the existing posted minimum speed limit on limited access roadways and one half the existing posted speed limit on other roadways, the Engineer may delete requirements for shadow vehicles and attenuators. In such situations, mount arrow board and sign on the work vehicle.
9. The distance between the advance warning sign and the work location should not exceed 5 miles.

SYMBOLS:

- ➡ Lane Identification and Direction of Traffic
- A Truck/Trailer Mounted Attenuator (TMA)
- W Work Vehicle With Warning Lights
- S Shadow (S) Vehicle With Warning Lights And Arrow Board
- Work Zone Sign



Certificate:
604757

Issued: 01/09/2023
Expires: 01/06/2027

Instructor: M. H

THOMAS BAKER

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I-75 REST AREA

VERIZON WIRELESS SITE NAME:

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MKT 143- MCR

SITE ADDRESS:

2212 SE OCTOBER RD

LAKE CITY, FL 32024-5533

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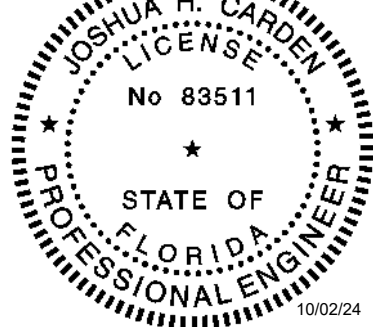
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FL COA#: 31011



DATE DRAWN:	10/02/24
ATC JOB NO:	14873535
CUSTOMER NAME:	I-75 REST AREA COLUMBIA - MKT 143 - MCR
CUSTOMER ID:	5000957578

MAINTENANCE OF
TRAFFIC

SHEET NUMBER:

C-508

REVISION:

0

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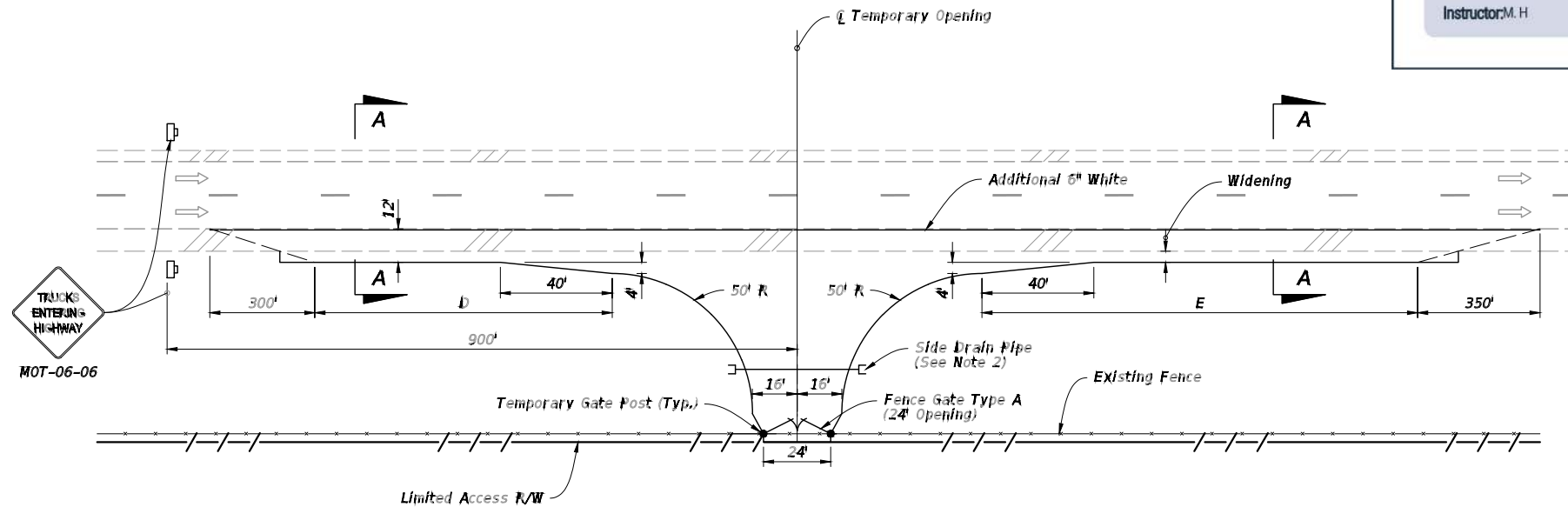
1 MAINTENANCE OF TRAFFIC (TYPICAL)
SCALE: N.T.S.



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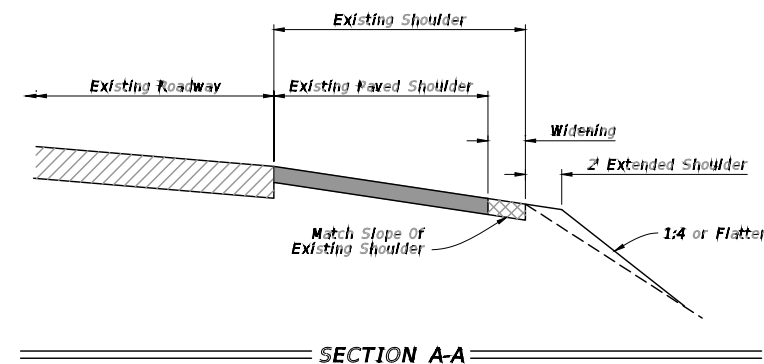
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1. X = Work Zone Sign Distance, see Index 102-600 for "X" value.
2. Use mitered end sections for any end sections within the clear zone.
3. Match cross slope of existing shoulder for widening.
4. Provide 2' of unpaved shoulder outside of the widening.
5. No more than two (2) access openings will be allowed on each project.
6. Do not vary from the plan detail without approval of the Engineer.

- Work Zone Sign
- Lane Identification and Direction of Traffic

LENGTH OF ACCESS LANES		
Grade	D (feet)	E (feet)
2% or less	590	1540
3 to 4% Upgrade	530	2310
3 to 4% Downgrade	710	925



LAST REVISION 11/01/20	REVISION	DESCRIPTION:	 FY 2023-24 STANDARD PLANS	LIMITED ACCESS TEMPORARY OPENING	INDEX 102-665	SHEET 1 of 1
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**FY 2023-24
STANDARD PLANS**

LIMITED ACCESS TEMPORARY OPENING

INDEX
102-665

SHEET
1 of 1

1 MAINTENANCE OF TRAFFIC (TYPICAL)

SCALE: N.T.S.

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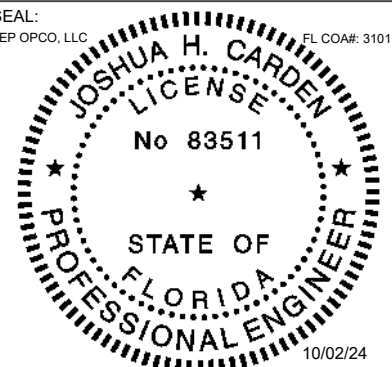
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CUSTOMER NAME:	I-75 REST AREA COLUMBIA - MKT 143 - MCR
CUSTOMER ID:	5000957578

MAINTENANCE OF TRAFFIC

SHEET NUMBER:

C-509

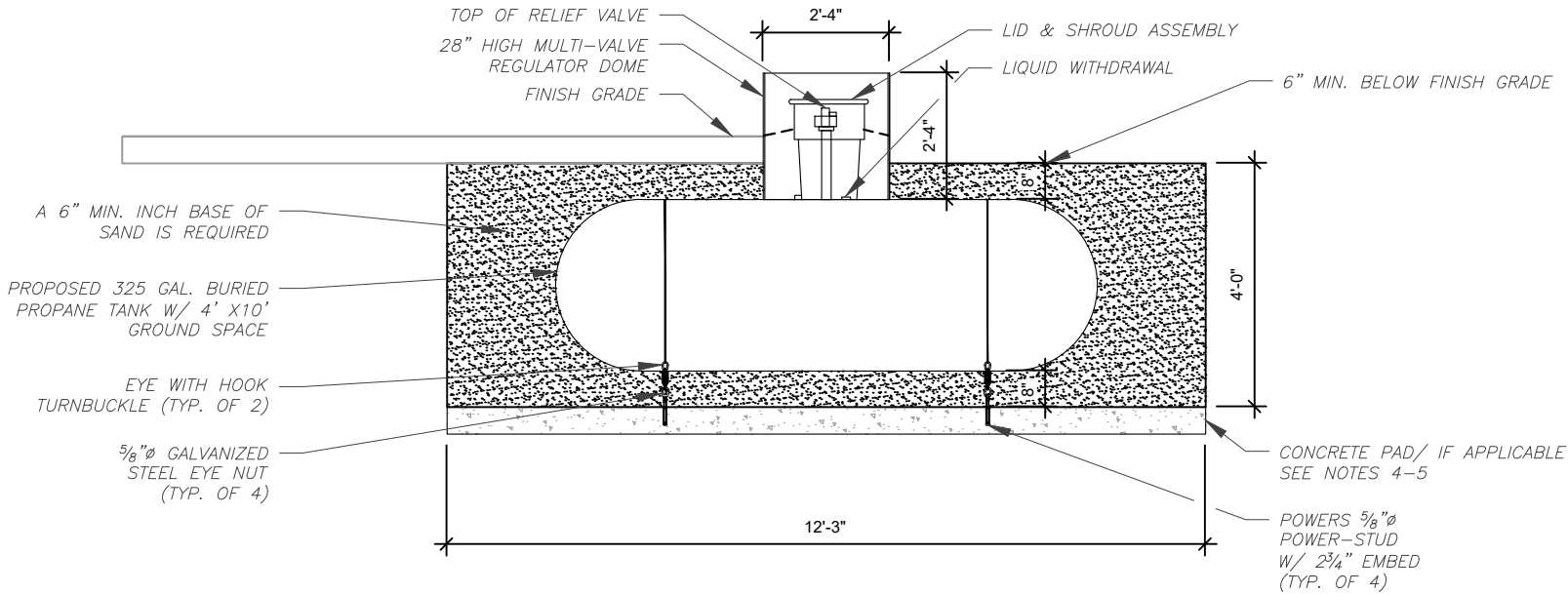
REVISION:

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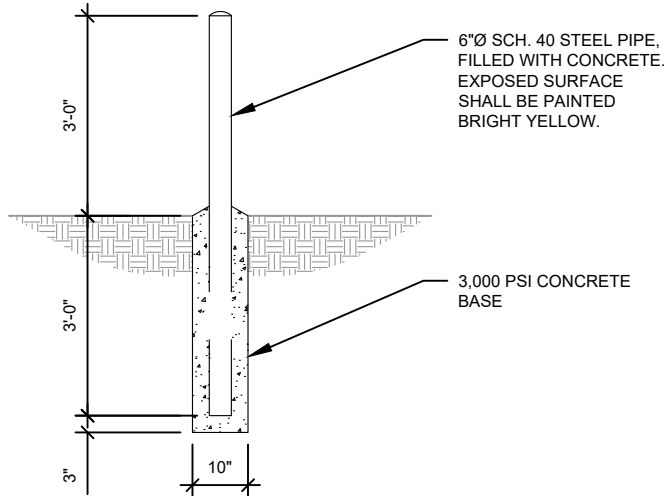
10/20/2022 8:21:05 AM

NOTES:

- SIX INCHES OF SAND IN THE BOTTOM OF THE HOLE ARE REQUIRED.
- PRIOR TO BACK FILLING: ONE 17 LB ANODE BAG CONNECTED TO TANK FOR 500 GAL OR LESS, 2 BAGS FOR 501 TO 1000 GAL. PLACE AT LEAST 2' AWAY FROM TANK AND LOW IN THE HOLE, POUR 1 GALLON OF WATER ON BAG AND IMMEDIATELY COVER WITH SAND.
- BACK-FILL: ONCE TANK IS PLACE AND INSPECTED BY THE LOCAL AHJ, IF REQUIRED, BACK FILL THE ENTIRE HOLE WITH SAND. GRADE DOWNWARD AND AWAY FROM HOUSING DOME. THIS PREVENTS WATER FROM COLLECTING AND RUNNING INTO OR STANDING AROUND THE HOUSING DOME.
- CONFIRM IF A CONCRETE PAD IS REQUIRED UNDER THE TANK WITH AHJ AND FUEL PROVIDER.
- IF A CONCRETE PAD IS REQUIRED, DEPTH OF HOLE MUST BE 6" DEEPER TO ACCOMMODATE A 6" CONCRETE PAD IN THE DIMENSIONS OF THE TANK WITH 4 ANCHOR EYE BOLTS (ONE I EACH CORNER OF THE PAD) ATTACH STAINLESS STEEL OR SIMILAR STRAPPING FROM LIFTING LUGS DOWN TO EYE BOLTS.
- TANK INSTALLATION SHALL CONFORM TO REQUIREMENTS OF NFPA 58.



1 PROPOSED LPG TANK INSTALLATION DETAIL
SCALE: N.T.S.



2 PROPOSED BOLLARD DETAIL
SCALE: N.T.S.



TEP OPCO LLC
326 TRYON ROAD
RALEIGH, NC 27603-3530

OFFICE: (919) 661-6351
www.tepgroup.net
FL COA#: 31011

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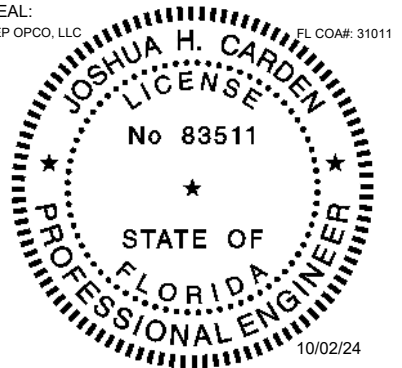
ATC SITE NUMBER:
302769
ATC SITE NAME:
I-75 REST AREA
VERIZON WIRELESS SITE NAME:
I-75 REST AREA COLUMBIA -
MKT 143- MCR
SITE ADDRESS:
2212 SE OCTOBER RD
LAKE CITY, FL 32024-5533

REV.	DESCRIPTION	BY	DATE
A	PRELIMINARY	PVW	09/11/24
B	90% CONSTRUCTION	RMJ	09/24/24
0	100% CONSTRUCTION	BJO	10/02/24

DIGITAL/ELECTRONIC SEAL:
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SEAL:
TEP OPCO, LLC
FL COA#: 31011



DATE DRAWN:	10/02/24
ATC JOB NO:	14873535
CUSTOMER NAME:	I-75 REST AREA COLUMBIA - MKT 143 - MCR
CUSTOMER ID:	5000957578

MAINTENANCE OF
TRAFFIC

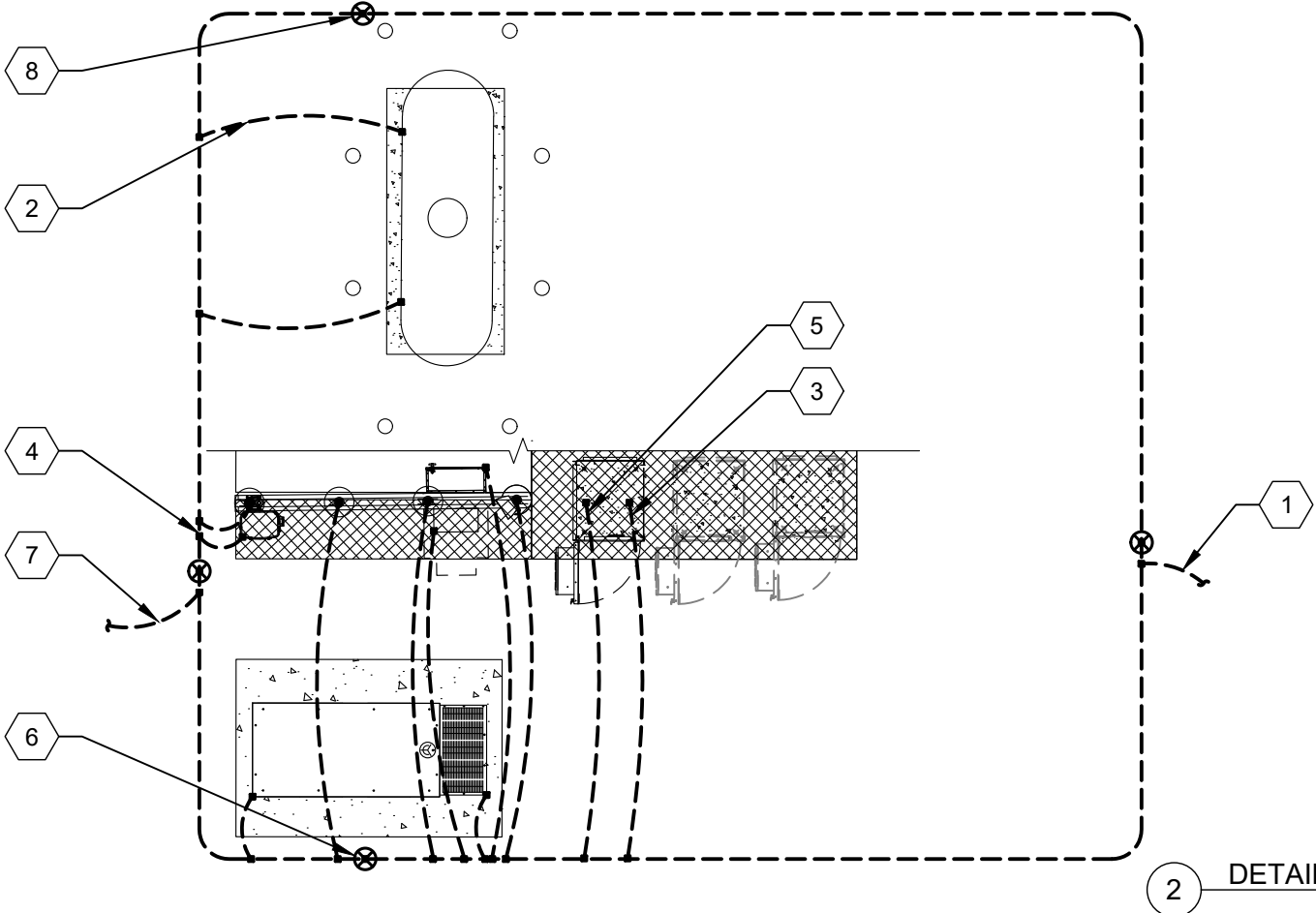
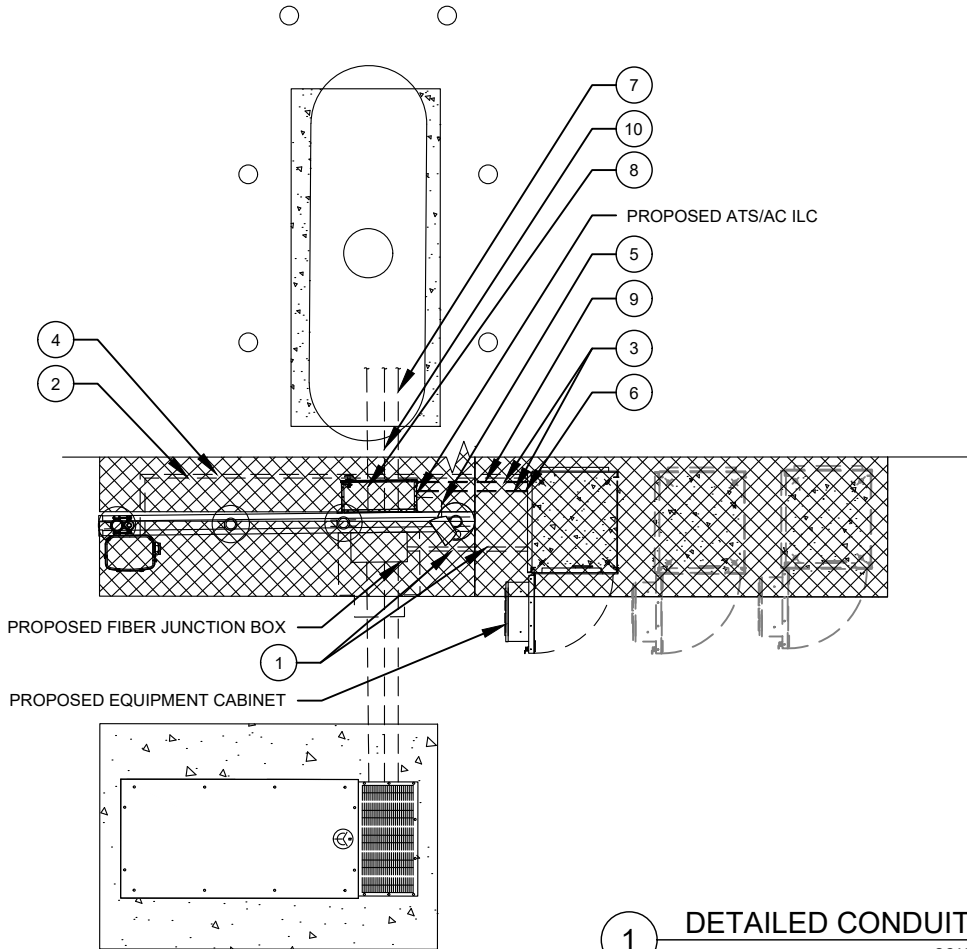
SHEET NUMBER:
C-510

REVISION:
0

CONDUIT KEYED NOTES:

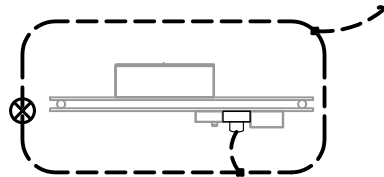
- 1 FIBER CONDUITS
(2) 2" SCH. 40 PVC CONDUIT WITH MULE TAPE FROM TELCO BOX TO THE EQUIPMENT CABINET.
- 2 (1) 1-1/2" LFMC FOR FIBER & ALARM FROM EQUIPMENT CABINET TO OVP
- 3 AC POWER CONDUITS
(2) 1" CONDUIT EACH W/ (6) #8 AWG + (2) #10 GND FROM THE ILC TO THE EQUIPMENT CABINET FOR (4) 30 AMP 2-POLE CIRCUITS.
- 4 (1) 2" LFMC WITH (12) #6 (6 PAIRS) & (6) # 6 G FROM EQUIPMENT CABINET TO OVP.
- 5 (1) 3/4" CONDUIT WITH (2) #12 & (1) #10 G FROM ILC TO GFI RECEPTACLE/LIGHT.
- 6 (1) 1-1/2" CONDUIT WITH PULLSTRING FOR FUTURE RECTIFIER CIRCUITS FROM EQUIPMENT CABINET TO ILC.
- 7 (1) 2" CONDUIT WITH (3) #3/0 & (1) #4 GND FROM THE ILC TO THE GENERATOR.
- 8 (1) 1" CONDUIT WITH (4) #12 & (2) #10 GND FROM ILC TO GENERATOR. (GEN HEATER & BATTERY CHARGER)
- 9 ALARM/MISCELLANEOUS CONDUITS
(1) 1" CONDUIT FROM ILC TO EQUIPMENT CABINET FOR ILC ALARMS.
- 10 (1) 1" CONDUIT FROM ILC TO GENERATOR FOR GEN CONTROLS & ALARMS.

NOTE:
BELOW GRADE CONDUIT SHALL BE SCHEDULE 80 PVC. ABOVE GRADE CONDUIT SHALL BE GALVANIZED RIGID CONDUIT. BELOW GRADE PVC CONDUIT SHALL TRANSITION TO GRC PRIOR TO RISING ABOVE GRADE. ALL BENDS SHALL HAVE MINIMUM 24" RADIUS. ALL FITTINGS SHALL BE SUITABLE FOR USE WITH THREADED RIGID CONDUIT. VERIFY CONDUIT TYPE WITH LOCAL CONSTRUCTION MANAGER AND ADJUST AS NECESSARY. ALL CONDUIT SHALL MEET NEC, STATE, AND LOCAL CODE REQUIREMENTS AS REQUIRED.



GROUNDING KEYED NOTES:

- 1 BOND TO TOWER GROUND RING
- 2 #2 AWG BOND FROM VERTICAL H-FRAME AND ICE BRIDGE POST TO EXTERNAL GROUND RING (TYP. EVERY POST).
- 3 EQUIPMENT BOND TO GROUND RING (TYP.).
- 4 #2 GROUND RING
- 5 GROUNDING ELECTRODE CONDUCTOR PER NEC
- 6 GROUNDING ELECTRODE (TYP.)
- 7 BOND TO COMPOUND GROUND RING
- 8 GROUNDING ELECTRODE WITH TEST WELL



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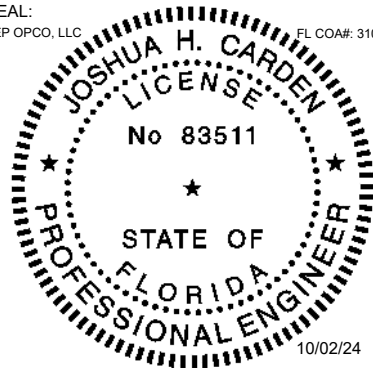
ATC SITE NUMBER:
302769
ATC SITE NAME:
I-75 REST AREA
VERIZON WIRELESS SITE NAME:
I-75 REST AREA COLUMBIA -
MKT 143- MCR
SITE ADDRESS:
2212 SE OCTOBER RD
LAKE CITY, FL 32024-5533

REV.	DESCRIPTION	BY	DATE
A	PRELIMINARY	PVW	09/11/24
B	90% CONSTRUCTION	RMJ	09/24/24
0	100% CONSTRUCTION	BJO	10/02/24

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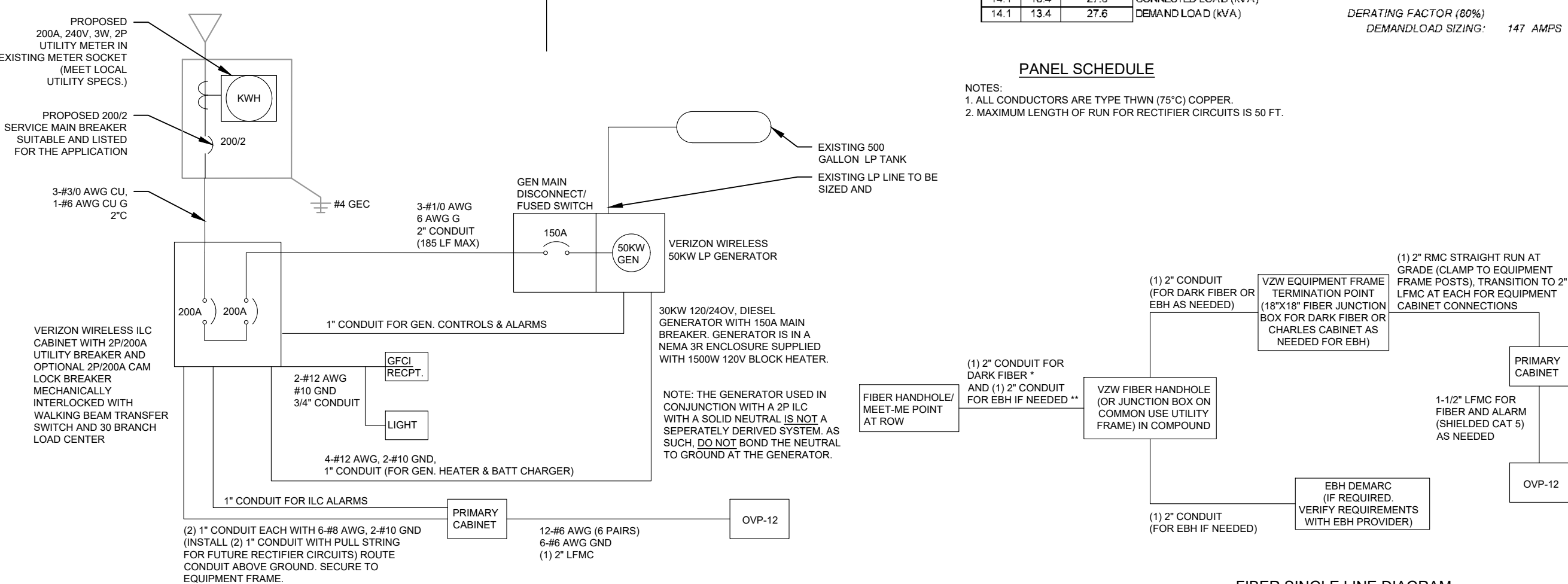
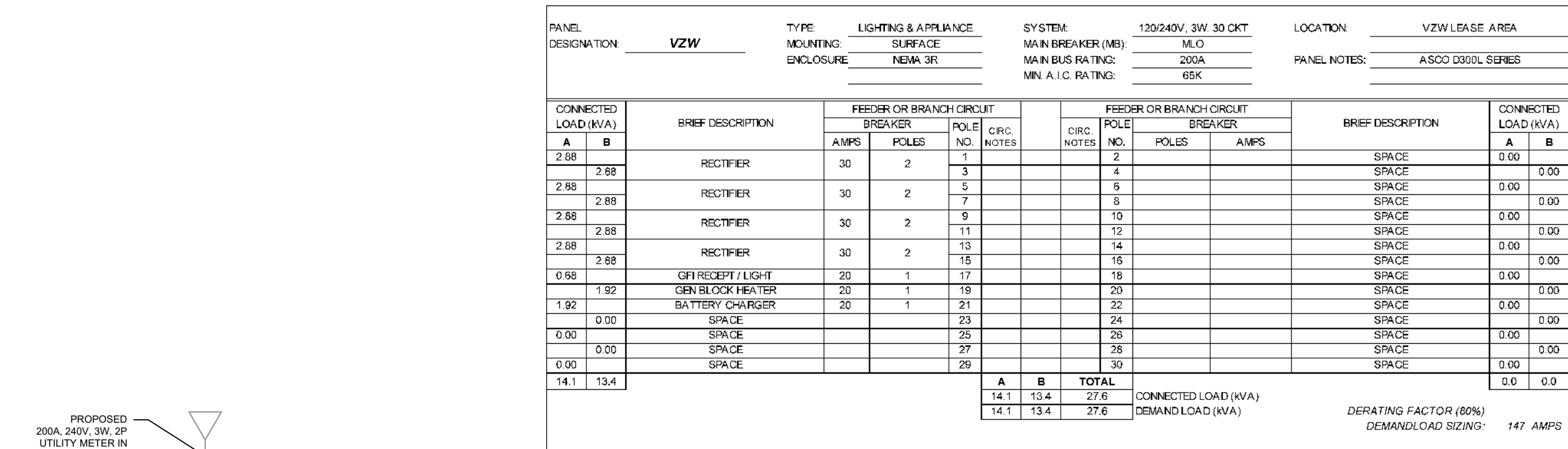
SEAL:
TEP OPCO, LLC
FL COA#: 31011



DATE DRAWN:	10/02/24
ATC JOB NO:	14873535
CUSTOMER NAME:	I-75 REST AREA COLUMBIA - MKT 143 - MCR
CUSTOMER ID:	5000957578

GROUNDING PLAN
AND NOTES

SHEET NUMBER: E-101	REVISION: 0
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ELECTRICAL SINGLE LINE DIAGRAM

- NOTES:
- ALL EQUIPMENT SHALL BE NEMA 3R RATED.
 - ALL EQUIPMENT SHALL BE GROUNDED IN ACCORDANCE WITH TIA-222-G AND VERIZON WIRELESS STANDARDS.
 - CONDUCTOR SIZES AND DISTANCES HAVE BEEN SIZED FOR 3% MAX VOLTAGE DROP. (TOTAL SYSTEM VOLTAGE DROP ON BOTH FEEDERS AND BRANCH CIRCUITS TO THE FARTHEST DEMAND SHALL NOT EXCEED 5%)
 - WIRE SIZING AND MAXIMUM DISTANCE FROM GENERATOR TO ILC ASSUMES POWER FACTOR OF 0.9.
 - BELOW GRADE PVC CONDUIT SHALL TRANSITION TO RMC PRIOR TO RISING ABOVE GRADE, ALL BENDS SHALL HAVE A MINIMUM 24" RADIUS. ALL FITTINGS SHALL BE SUITABLE FOR USE WITH THREADED RIGID CONDUIT. VERIFY CONDUIT TYPE WITH LOCAL CONSTRUCTION MANAGER AND ADJUST IF NECESSARY. ALL CONDUIT SHALL MEET NEC, STATE, AND LOCAL CODE REQUIREMENTS AS REQUIRED.

PANEL SCHEDULE

- NOTES:
- ALL CONDUCTORS ARE TYPE THWN (75°C) COPPER.
 - MAXIMUM LENGTH OF RUN FOR RECTIFIER CIRCUITS IS 50 FT.

FIBER SINGLE LINE DIAGRAM

- NOTES:
- * ADD (1) ADDITIONAL 2" CONDUIT FOR DARK FIBER (2 TOTAL) IF REQUIRED BY LOCAL MARKET FACILITIES. VERIFY PRIOR TO CONSTRUCTION. (ADD 2 PULL STRINGS TO EACH CONDUIT)
 - ** VERIFY EBH REQUIREMENTS WITH TELCO PROVIDER PRIOR TO CONSTRUCTION. (ADD 2 PULL STRINGS TO EACH CONDUIT)



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302769

ATC SITE NAME:
I-75 REST AREA

VERIZON WIRELESS SITE NAME:
I-75 REST AREA COLUMBIA -

MKT 143- MCR

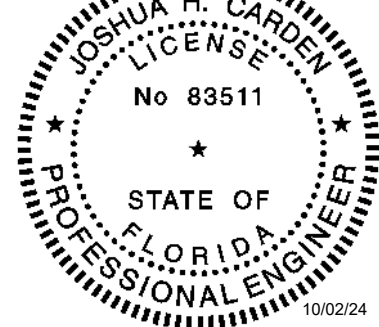
SITE ADDRESS:
2212 SE OCTOBER RD
LAKE CITY, FL 32024-5533

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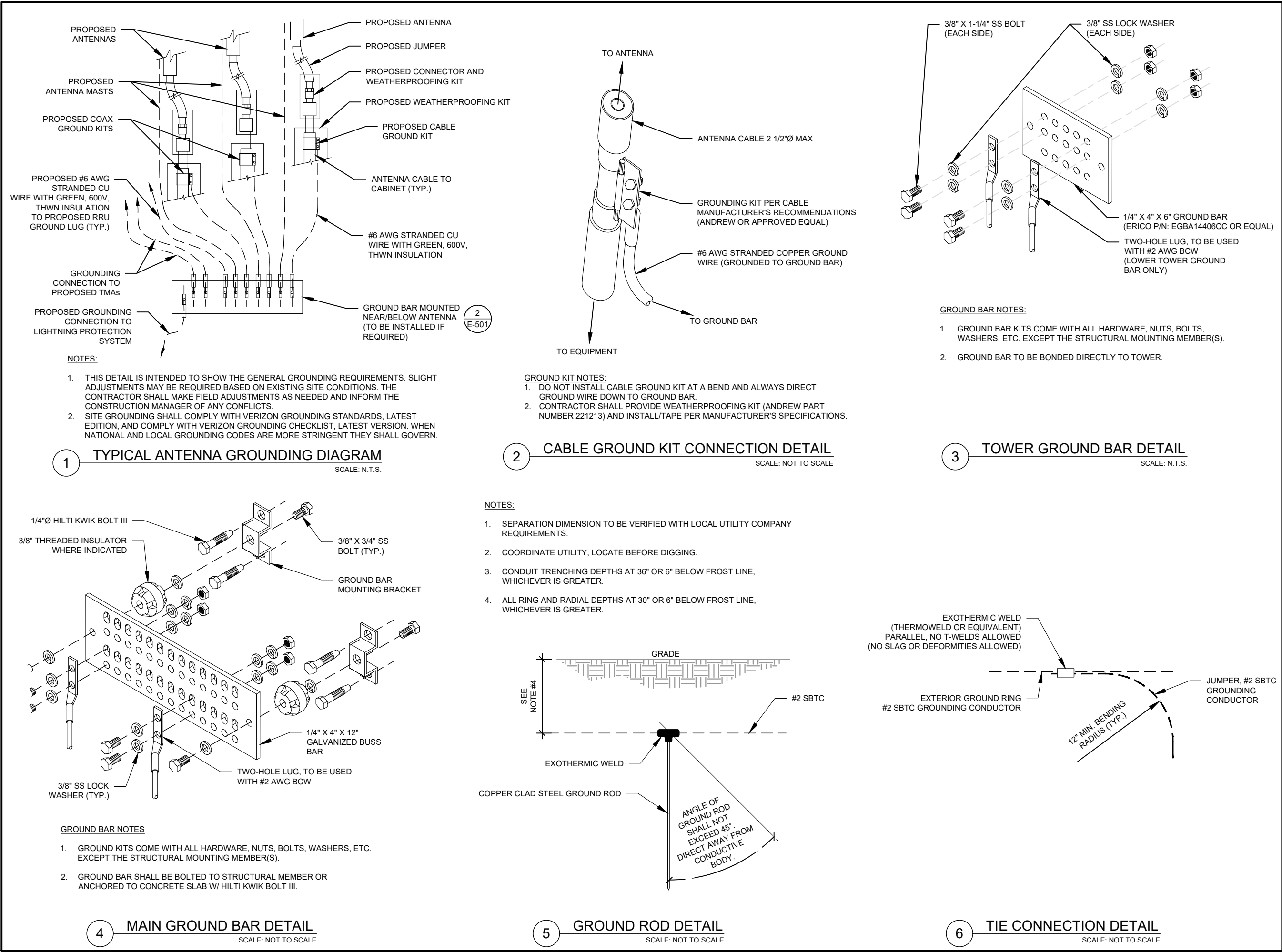


DATE DRAWN:	10/02/24
ATC JOB NO:	14873535
CUSTOMER NAME:	I-75 REST AREA COLUMBIA - MKT 143 - MCR
CUSTOMER ID:	5000957578

GROUNDING PLAN AND NOTES

SHEET NUMBER:
E-102

REVISION:
0





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RALEIGH, NC 27603-3530

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MKT 143- MCR

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SEAL:
TEP OPCO, LLC

FL COA#: 31011

JOSHUA H. CARDEN
LICENSE
No 83511
STATE OF FLORIDA
PROFESSIONAL ENGINEER
10/02/24

DATE DRAWN: 10/02/24

ATC JOB NO: 14873535

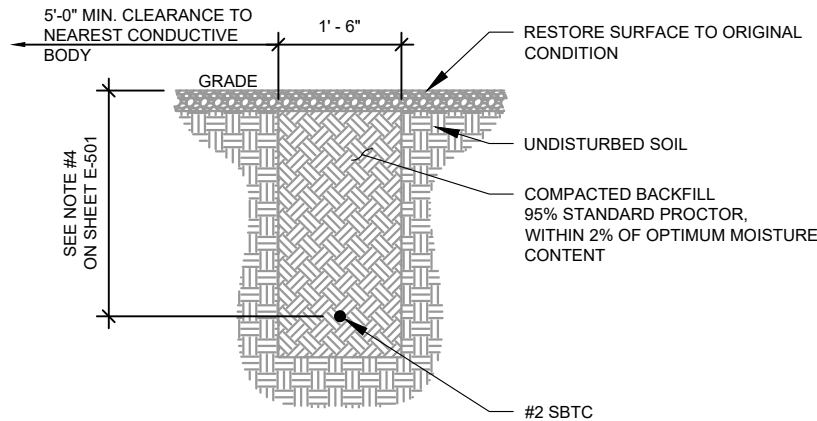
CUSTOMER NAME: I-75 REST AREA COLUMBIA - MKT 143 - MCR

CUSTOMER ID: 500095758

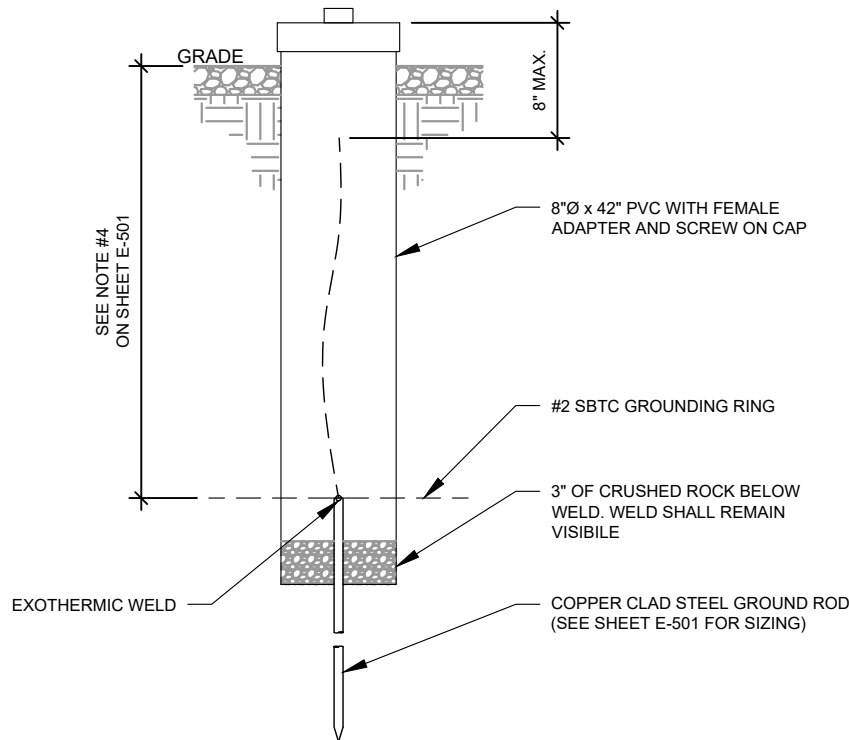
GROUNDING DETAILS

SHEET NUMBER:
E-501

REVISION:
0



1 GROUND CONNECTION TRENCH DETAIL (STD.)
SCALE: NOT TO SCALE



2 TEST WELL DETAIL
SCALE: NOT TO SCALE



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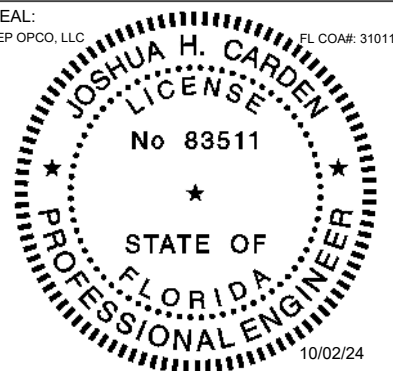
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302769
ATC SITE NAME:
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I-75 REST AREA COLUMBIA -
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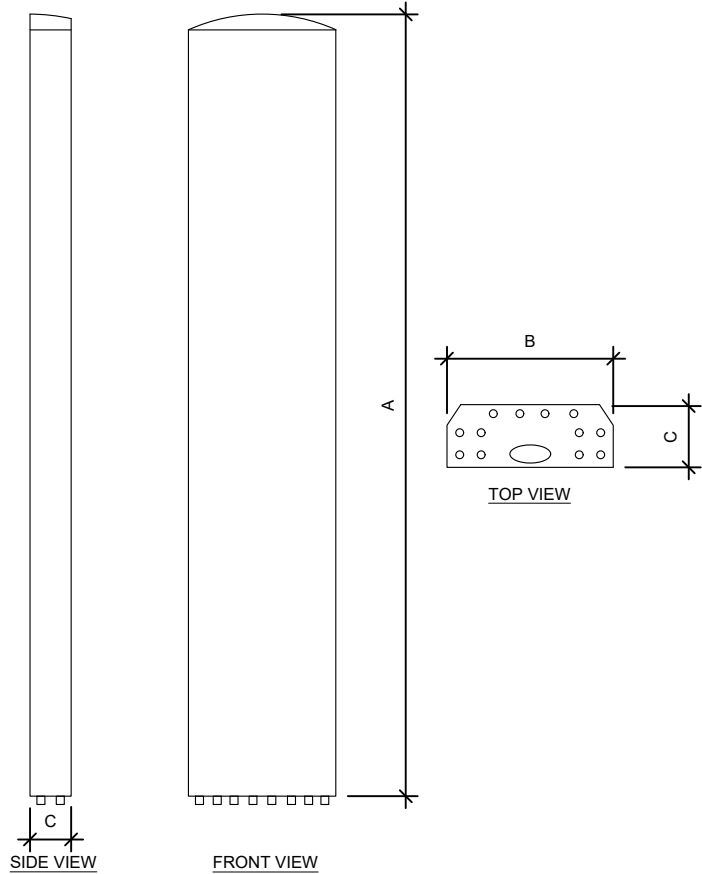
SEAL:
TEP OPCO, LLC
FL COA#: 31011



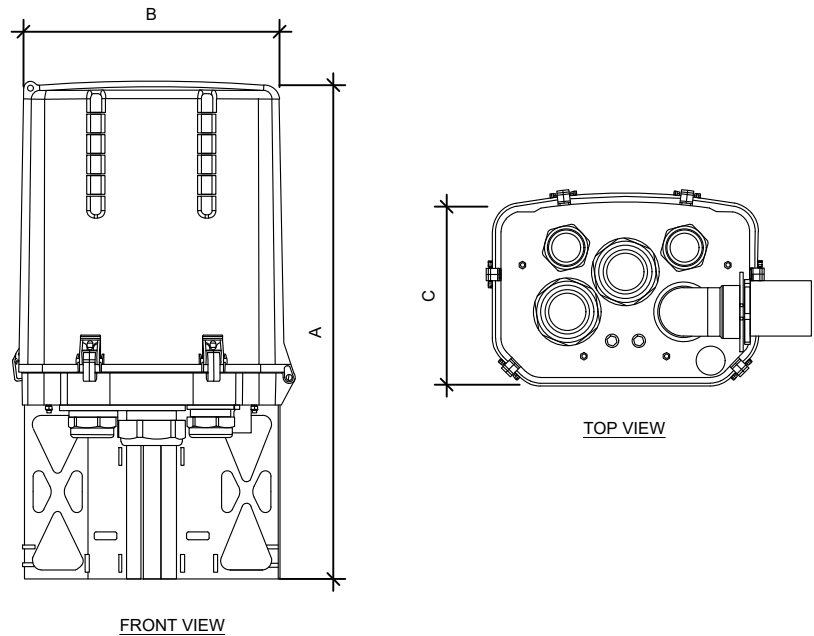
DATE DRAWN:	10/02/24
ATC JOB NO:	14873535
CUSTOMER NAME:	I-75 REST AREA COLUMBIA - MKT 143 - MCR
CUSTOMER ID:	5000957578

GROUNDING DETAILS

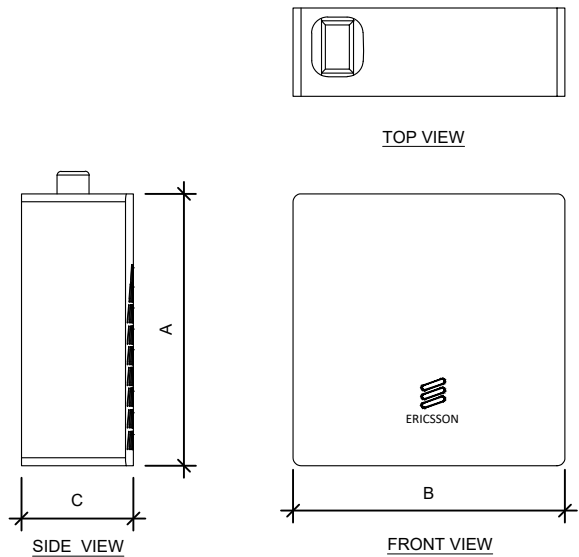
SHEET NUMBER: E-502	REVISION: 0
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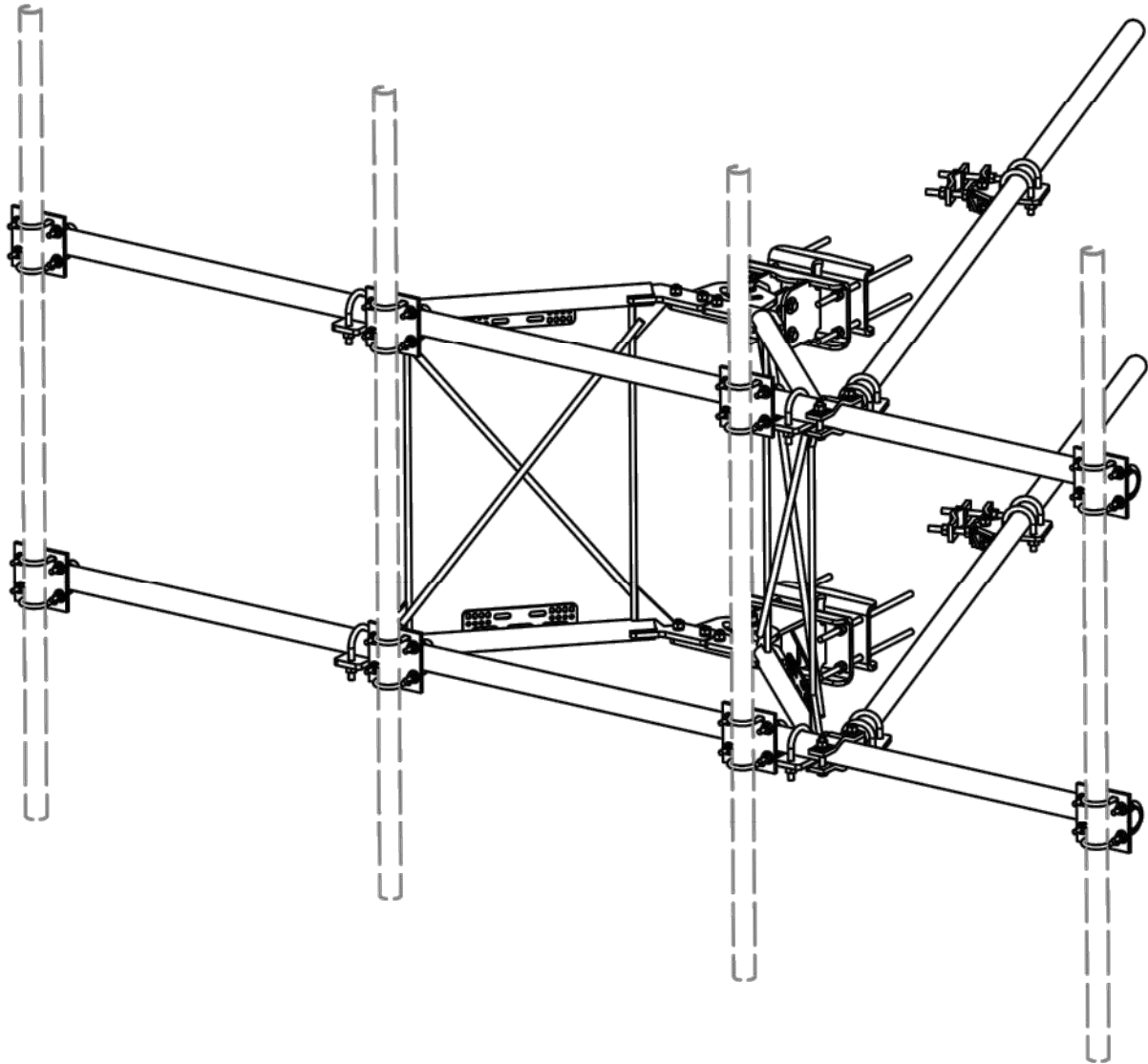
ANTENNA SPECIFICATIONS				
ANTENNA MODEL	A	B	C	WEIGHT (LBS)
AIR6419 B77D	31.2"	16.1"	9.1"	63.1
NHH-65C-R2B	96.0"	11.9"	7.1"	51.6



OVP SPECIFICATIONS				
RAYCAP MODEL	A	B	C	WEIGHT (LBS)
RVZDC-6627-PF-48	28.9"	15.7"	10.3"	32.0



RRU SPECIFICATIONS				
RRU MODEL	A	B	C	WEIGHT (LBS)
RRUS 4490	20.6"	15.7"	7.0"	68.4
RRUS 4890	20.6"	15.7"	7.2"	69.5



PARTS LIST						
ITEM	QTY	PART NO.	PART DESCRIPTION	LENGTH	UNIT WT.	NET WT.
1	2	X-VFAW	SUPPORT ARM		71.41	142.81
2	1	X-HDCAMTBW	CLAMP WELDMENT FOR BCAM-HD		33.86	33.86
3	1	X-MHTPHD	MULTI-HOLE TAPER PLATE WELDMENT		36.24	36.24
4	2	X-VFAPL4	VFA-HD PIVOT PLATE	12 in	15.88	31.77
5	2	X-LCBP4	BENT BACKING PLATE	13 in	20.04	40.09
6	1	X-HDCAMSS	ANGLE ADJUSTMENT WELDMENT FOR BCAM-HD		16.39	16.39
7	4	X-SPTB	SLIDING PIPE TIE BACK PLATE	5 1/2 in	5.87	23.49
8	1	X-HDCAMSP	POSITIONING PLATE WELDMENT FOR BCAM-HD		2.58	2.58
9	4	X-TBCA	TIE BACK CLIP ANGLE		2.01	8.02
10	8	SCX2	CROSSOVER PLATE	7 in	4.80	38.37
11	4	MCP	CLAMP HALF 1/2" THICK, 11-5/8" LONG	12 1/16 in	3.59	14.37
12	8	DCP	1/2" THICK, 5-3/4" CNTER TO CENTER CLAMP HALF	8 1/8 in	2.36	18.90
13	2	P2126	2-3/8" X 126" (2" SCH. 40) GALVANIZED PIPE	126 in	40.75	81.50
14	2	P30150	2-7/8" X 150" (2-1/2" SCH. 40) GALVANIZED PIPE	150 in	76.94	153.87
15	4	A34212	3/4" x 2-1/2" UNC HEX BOLT (A325)	2 1/2 in	0.48	1.92
16	4	G34FW	3/4" HDG USS FLATWASHER		0.06	0.24
17	4	G34LW	3/4" HDG LOCKWASHER		0.04	0.17
18	4	G34NUT	3/4" HDG HEAVY 2H HEX NUT		0.21	0.85
19	8	G58R-18	5/8" x 18" THREADED ROD (HDG.)		1.57	12.54
20	4	G58R-12	5/8" x 12" THREADED ROD (HDG.)		1.05	4.18
21	4	G58R-8	5/8" x 8" THREADED ROD (HDG.)		0.70	2.79
22	4	X-UB5300	5/8" X 3" X 5-1/4" X 2-1/2" U-BOLT (HDG.)		1.15	4.60
23	8	X-UB5258	5/8" X 2-5/8" X 4-1/2" X 2" U-BOLT (HDG.)		1.00	8.00
24	2	G5807	5/8" x 7" HDG HEX BOLT GR5 FULL THREAD	7 in	0.70	1.41
25	1	G5806	5/8" x 6" HDG HEX BOLT GR5 FULL THREAD	6 in	0.62	0.62
26	8	G5804	5/8" x 4" HDG HEX BOLT GR5		0.44	3.55
27	4	G5802	5/8" x 2" HDG HEX BOLT GR5		0.27	1.08
28	8	A582114	5/8" x 2-1/4" HDG A325 HEX BOLT	2 1/4 in	0.31	2.50
29	25	G58FW	5/8" HDG USS FLATWASHER	1/8 in	0.07	1.76
30	66	G58LW	5/8" HDG LOCKWASHER		0.03	1.72
31	71	G58NUT	5/8" HDG HEAVY 2H HEX NUT		0.13	9.22
32	32	X-UB1300	1/2" X 3" X 5" X 2" GALV U-BOLT		0.74	23.64
33	16	X-UB1212	1/2" X 2-1/2" X 4-1/2" X 2" U-BOLT (HDG.)		0.60	9.56
34	64	G12FW	1/2" HDG USS FLATWASHER	3/32 in	0.03	2.18
35	64	G12LW	1/2" HDG LOCKWASHER	1/8 in	0.01	0.89
36	64	G12NUT	1/2" HDG HEAVY 2H HEX NUT		0.07	4.58
TOTAL WT. #						740.26

TOLERANCE NOTES

TOLERANCES ON DIMENSIONS, UNLESS OTHERWISE NOTED ARE:
SAWED, SHEARED AND GAS CUT EDGES ($\pm 0.030"$)
DRILLED AND GAS CUT HOLES ($\pm 0.030"$) - NO CONING OF HOLES
LASER CUT EDGES AND HOLES ($\pm 0.010"$) - NO CONING OF HOLES
BENDS ARE $\pm 1/2$ DEGREE
ALL OTHER MACHINING ($\pm 0.030"$)
ALL OTHER ASSEMBLY ($\pm 0.060"$)

PROPRIETARY NOTE:
THE DATA AND TECHNIQUES CONTAINED IN THIS DRAWING ARE PROPRIETARY INFORMATION OF VALMONT INDUSTRIES AND CONSIDERED A TRADE SECRET. ANY USE OR DISCLOSURE WITHOUT THE CONSENT OF VALMONT INDUSTRIES IS STRICTLY PROHIBITED.

DESCRIPTION

12' 6" HEAVY DUTY
V-FRAME ASSEMBLY
WITH TWO STIFF ARMS



Engineering
Support Team:
1-888-753-7446

Locations:
New York, NY
Atlanta, GA
Los Angeles, CA
Plymouth, IN
Salem, OR
Dallas, TX

A valmont COMPANY

REV	DESCRIPTION OF REVISIONS	CPD	BY	DATE
D	UPDATED BCAM VERSION 1 TO BCAM VERSION 2		CEK	6/29/2018
C	UPDATED PIN LEG CONNECTION TO B-CAM CONNECTION		CEK	12/7/2017
B	CHANGED TIE-BACK BACK CONNECTION		CEK	7/31/2017
A	CHANGED TIE-BACK FRONT CONNECTION		CEK	2/2/2017
REVISION HISTORY				

CPD NO.	DRAWN BY CEK 1/25/2017	ENG. APPROVAL
CLASS	SUB	DRAWING USAGE
81	02	CUSTOMER

PART NO.	VFA12-HD
DWG. NO.	VFA12-HD

PAGE
1 OF 5

1 PROPOSED SECTOR MOUNT DETAIL
SCALE: N.T.S.

NOTE: THIS SHEET WAS CREATED BY OTHERS AND PROVIDED AT THE REQUEST OF THE CUSTOMER WITHOUT EDIT.

SUPPLEMENTAL

SHEET NUMBER:

R-602

REVISION:

-

SG050NA | 4.5L | 50 kW
INDUSTRIAL SPARK-IGNITED GENERATOR SET
EPA Certified Stationary



Standby Power Rating
50 kW, 63 kVA, 60 Hz

Demand Response Rating
50 kW, 63 kVA, 60 Hz

Prime Power Rating
45 kW, 56 kVA, 60 Hz

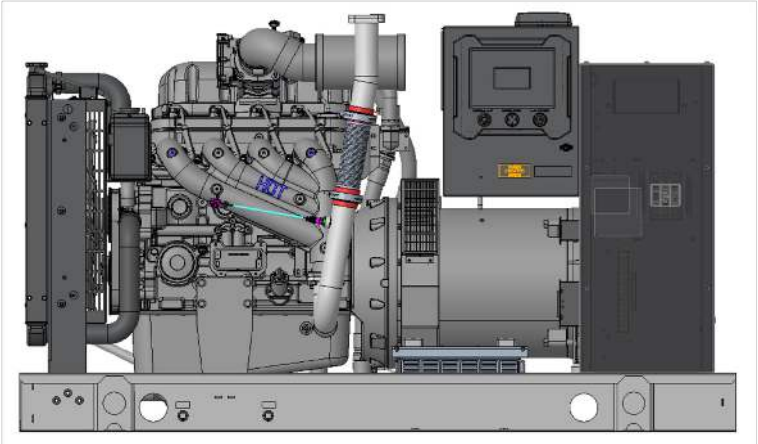


Image used for illustration purposes only

Codes and Standards

Not all codes and standards apply to all configurations. Contact factory for details.

- UL2200, UL6200, UL1236, UL489
- CSA C22.2
- BS5514 and DIN 6271
- SAE J1349
- NFPA 37, 70, 99, 110
- NEC700, 701, 702, 708
- ISO 3046, 7637, 8528, 9001
- NEMA ICS10, MG1, 250, ICS6, AB1
- ANSI C62.41
- IBC 2009, CBC 2010, IBC 2012, ASCE 7-05, ASCE 7-10, ICC-ES AC-156 (2012)

Powering Ahead

Generac ensures superior quality by designing and manufacturing most of its generator components, such as alternators, enclosures, control systems and communications software. Generac also makes its own spark-ignited engines, and you'll find them on every Generac gaseous-fueled generator. We engineer and manufacture them from the block up — all at our facilities throughout Wisconsin. Applying natural gas and LP-fueled engines to generators requires advanced engineering expertise to ensure reliability, durability and necessary performance. By designing specifically for these dry, hotter-burning fuels, the engines last longer and require less maintenance. Building our own engines also means we control every step of the supply chain and delivery process, so you benefit from single-source responsibility.

Plus, Generac Industrial Power's distribution network provides all parts and service so you don't have to deal with third-party suppliers. It all leads to a positive owner experience and higher confidence level. Generac spark-ignited engines give you more options in commercial and industrial generator applications as well as extended run time from utility-supplied natural gas.

SG050NA | 4.5L | 50 kW
INDUSTRIAL SPARK-IGNITED GENERATOR SET
EPA Certified Stationary



STANDARD FEATURES

ENGINE SYSTEM

- Oil Drain Extension
- Air Cleaner
- Fan Guard
- Stainless Steel Flexible Exhaust Connection
- Factory Filled Oil and Coolant
- Critical Silencer
- Oil Temperature Sender with Alarm
- Air Filter Restriction Indicator

Fuel System

- Fuel Line - NPT Connection
- Primary and Secondary Fuel Shutoff

Cooling System

- Closed Coolant Recovery System
- UV/Ozone Resistant Hoses
- Factory-Installed Radiator
- 50/50 Ethylene Glycol Antifreeze
- Radiator Drain Extension

Electrical System

- Battery Charging Alternator
- Battery Cables
- Battery Tray
- Rubber-Booted Engine Electrical Connections
- Solenoid Activated Starter Motor

ALTERNATOR SYSTEM

- UL2200 GENprotect™
- Class H Insulation Material
- 2/3 Pitch
- Skewed Stator
- Brushless Excitation
- Sealed Bearing
- Full Load Capacity Alternator

GENERATOR SET

- Internal Genset Vibration Isolation
- Separation of Circuits - High/Low Voltage
- Separation of Circuits - Multiple Breakers
- Wrapped Exhaust Piping
- Standard Factory Testing
- 2 Year Limited Warranty (Standby Rated Units)
- 1 Year Limited Warranty (Prime Rated Units)

ENCLOSURE (If Selected)

- Rust-Proof Fasteners with Nylon Washers to Protect Finish
- High Performance Sound-Absorbing Material (Sound Attenuated Enclosures)
- Gasketed Doors
- Stamped Air-Intake Louvers
- Upward Facing Discharge Hoods (Radiator and Exhaust)
- Stainless Steel Lift Off Door Hinges
- Stainless Steel Lockable Handles
- RhinoCoat™ - Textured Polyester Powder Coat Paint

CONTROL SYSTEM

Power Zone Pro® Controller

- NFPA 110 Level 1 Compliant
- Engine Protective Functions
- Alternator Protective Functions
- Digital Engine Governor Control
- Digital Voltage Regulator
- Multiple Programmable Inputs and Outputs
- Remote Display Capability
- Remote Communication via Modbus® RTU, Modbus TCP/IP, and Ethernet 10/100
- Alarm and Event Logging with Real Time Stamping
- Expandable Analog and Digital Inputs and Outputs
- Remote Wireless Software Update Capable
- Wi-Fi, Bluetooth, BMS, and Remote Telemetry
- Built-In Programmable Logic Eliminates the Need for External Controllers Under Most Conditions
- Programmable I/O Channel Properties
- Built-In Diagnostics

Alarms and Warnings

- High/Low Oil Pressure
- High/Low Coolant Level
- High/Low Coolant Temperature
- Sender/Sensor Failure
- High/Low Oil Temperature
- Over Total kW
- Over/Under Speed
- Over/Under Voltage
- Over/Under Frequency
- Over Current
- High/Low Battery Voltage
- Battery Charger Current
- Phase to Phase and Phase to Neutral Short Circuits (I²T Algorithm)

4.3 Inch Color Touch Screen Display

- Resistive Color Touch Screen
- Easily Identifiable Icons
- Multi-Lingual
- On Screen Editable Parameters
- Key Function Monitoring
- Three Phase Voltage, Amperage, kW, kVA, and kVAR
- Selectable Line to Line or Line to Neutral Measurements
- Frequency
- Engine Speed
- Engine Coolant Temperature
- Engine Oil Pressure
- Engine Oil Temperature
- Battery Voltage
- Hourmeter
- Warning and Alarm Indication
- Diagnostics
- Maintenance Events/Information

SPEC SHEET

SPEC SHEET

SUPPLEMENTAL

UNDERGROUND/ABOVEGROUND TANKS (AG/UG)



WHY CHOOSE QUALITY STEEL UNDERGROUND TANKS?

- 120 - 1,990 WG CAPACITY
- General Specifications
 - Conforms to the latest edition of ASME Rules for Construction of Pressure Vessels, Section VIII, Division 1.
 - Complies with NFPA 58.
 - Rated at 250 psig from -20° F to 125° F. All vessels registered with National Board.
 - Two service options available:
 - Option 1: Ready-to-bury underground option, coated with either powder coated phenolic epoxy finish or liquid applied epoxy primer coat followed by urethane top coat, supplied with composite AG/UG dome
 - Option 2: Aboveground option, coated with either powder coated TGIC polyester finish or liquid applied epoxy primer coat followed by urethane top coat, supplied with steel AG/UG dome
- Family & employee owned
- Financing and leasing available
- Customized delivery programs available



2914 U.S. 61 · Cleveland, MS 38732 · 800-345-2495 · www.propanetank.com

HOW DO I FIND MY SALES REP?

Visit our website, www.propanetank.com to view a list of our reps. Once on our site you'll be able to choose the Commercial options and from there you'll be taken to a list of US states where you can choose your location and view the contact information for your local sales rep. If you don't see your sales rep. please give us a call at 800-345-2495.

Our manufacturing locations are strategically located to help serve your tank needs.

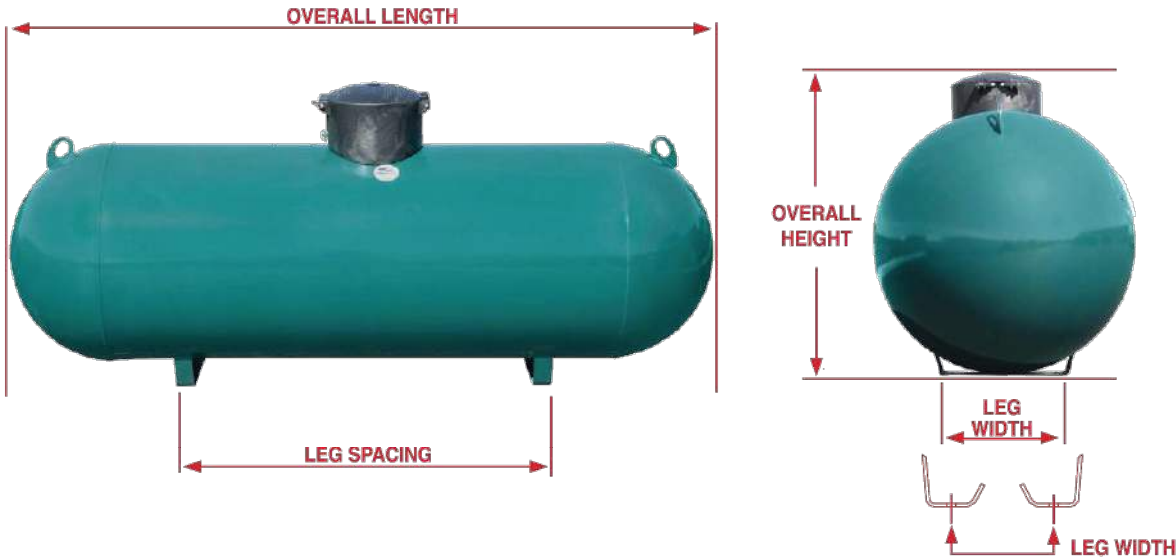
OHIO LOCATION
721 Graham Drive
Fremont, OH 43420
419-334-2664

UTAH LOCATION
5601 Axel Park Rd.
West Jordan, UT 84081
801-280-1133

HOME OFFICE
2914 U.S. 61
Cleveland, MS 38732
800-345-2495

UNDERGROUND/ABOVEGROUND TANKS (AG/UG)

Consult our dimension and specification chart below to find the tank that best fits your needs. Visit our website at www.propanetank.com for more information.



APPROXIMATE ABOVEGROUND/UNDEGROUND (AG/UG) VESSEL DIMENSIONS AND SPECIFICATIONS

WATER CAPACITY	DIAMETER (OD)	HEAD TYPE	OVERALL LENGTH	OVERALL HEIGHT	LEG* WIDTH	LEG** SPACING	WEIGHT (lbs.)	**QUANTITY	
								FULL LOAD	PER STACK
*120 wg.	24"	Ellip.	5'-8"	3'	1'-1 1/2"	2'-10 1/2" or 3'-11"	260	108 96	16 12
*250 wg.	30"	Hemi.	7'-10"	3'-8"	1'-5"	4'-11"	480	54	9
*320 wg.	30"	Hemi.	9'-7"	3'-8"	1'-5"	5'	620	45	9
500 wg.	37 1/2"	Hemi.	10'	4'-2"	1'-8"	5'	950	37 30	8 6
1000 wg.	41"	Hemi.	16'	4'-5"	1'-8"	10'-1"	1,800	17 15	6 5
1450 wg.	46 1/2"	Ellip.	17'-4"	4'-11"	1'-9"	11'-7"	2,650	12	4
1990 wg.	46 1/2"	Ellip.	23'-11"	4'-11"	1'-9"	16'	3,520	8	4

Dimensions and specifications shown are approximate. Individual vessels may vary

* Leg spacing +/- 2". Leg widths and spacing may vary based on mfg. location. Check with your salesperson for details. 120, 250, 320 wg. standard tanks - no holes in legs (one center hole on request). 500 and 1000 wg. standard tanks - 2 holes 16" on center. 1450 wg. and up as shown above.

** Full load and stack quantities vary by shipping location. Check with your salesperson for details.



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Quality Steel 6/2017 S2

SG050NA | 4.5L | 50 kW

INDUSTRIAL SPARK-IGNITED GENERATOR SET

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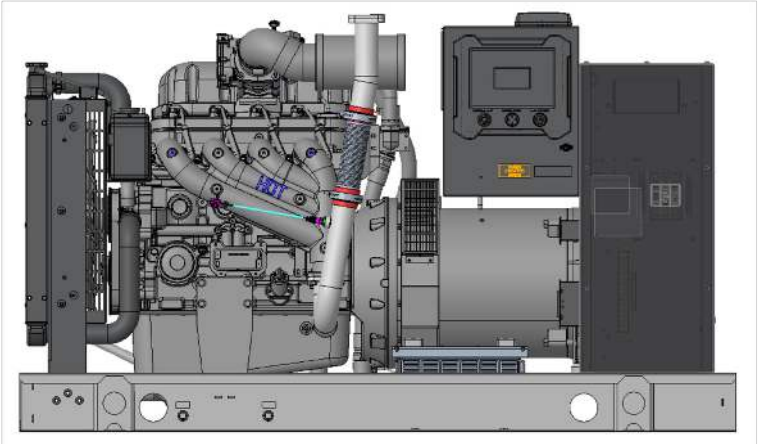


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SPEC SHEET

SPEC SHEET

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SUPPLEMENTAL

SHEET NUMBER:	REVISION:
R-605	-

SD030 | 2.2L | 30 kW

INDUSTRIAL DIESEL GENERATOR SET

EPA Certified Stationary Emergency



CONFIGURABLE OPTIONS

ENGINE SYSTEM

- Oil Heater
- Critical Silencer (Open Set Only)
- Radiator Stone Guard
- Level 1 Fan and Belt Guards (Enclosed Units Only)

FUEL SYSTEM

- NPT Flexible Fuel Line

ELECTRICAL SYSTEM

- 10A UL Listed Battery Charger
- Battery Warmer

ALTERNATOR SYSTEM

- Alternator Upsizing
- Anti-Condensation Heater
- Tropical Coating
- Permanent Magnet Excitation

GENERATOR SET

- Extended Factory Testing
- 8 Position Load Center
- Pad Vibration Isolation

ENGINEERED OPTIONS

ENGINE SYSTEM

- Coolant Heater Isolation Ball Valves
- Fluid Containment Pan

CONTROL SYSTEM

- Spare Inputs (x4) / Outputs (x4)
- Battery Disconnect Switch

CIRCUIT BREAKER OPTIONS

- Main Line Circuit Breaker
- 2nd Main Line Circuit Breaker
- Shunt Trip and Auxiliary Contact
- Electronic Trip Breakers

ENCLOSURE

- Weather Protected Enclosure
- Level 1 Sound Attenuation
- Level 2 Sound Attenuation
- Level 2 Sound Attenuation with Motorized Dampers
- Steel Enclosure
- Aluminum Enclosure
- Up to 200 MPH Wind Load Rating (Contact Factory for Availability)
- AC/DC Enclosure Lighting Kit
- Door Open Alarm Switch
- Enclosure Heater
- Damper Alarm Contacts

WARRANTY (Standby Gensets Only)

- 2 Year Extended Limited Warranty
- 5 Year Limited Warranty
- 5 Year Extended Limited Warranty
- 7 Year Extended Limited Warranty
- 10 Year Extended Limited Warranty

CONTROL SYSTEM

- NFPA 110 Compliant 21-Light Remote Annunciator
- Remote Relay Assembly (8 or 16)
- Oil Temperature Indication and Alarm
- Remote E-Stop (Break Glass-Type, Surface Mount)
- Remote E-Stop (Red Mushroom-Type, Surface Mount)
- Remote E-Stop (Red Mushroom-Type, Flush Mount)
- 100 dB Alarm Horn
- Ground Fault Annunciation
- 120V GFCI and 240V Outlets
- Remote Communication - Modem
- 10A Engine Run Relay

FUEL TANKS (Size On Last Page)

- 8 in (203.2 mm) Fill Extension
- 13 in (330.2 mm) Fill Extension
- 19 in (482.6 mm) Fill Extension
- Overfill Protection Valve
- 5 Gallon Spill Box Return Hose
- 5 Gallon Spill Box
- Tank Risers
- Fuel Level Switch and Alarm
- 12' Vent System
- Fire Rated Stainless Steel Fuel Hose

SD030 | 2.2L | 30 kW

INDUSTRIAL DIESEL GENERATOR SET

EPA Certified Stationary Emergency



APPLICATION AND ENGINEERING DATA

ENGINE SPECIFICATIONS

General

Make	Perkins
EPA Emissions Compliance	Stationary Emergency
EPA Emissions Reference	See Emission Data Sheet
Cylinder #	4
Type	In-Line
Displacement - in³ (L)	135 (2.22)
Bore - in (mm)	3.3 (84)
Stroke - in (mm)	3.9 (100)
Compression Ratio	23.3:1
Intake Air Method	Turbocharged
Cylinder Head	Cast Iron
Piston Type	Aluminum
Crankshaft Type	Forged Steel

Engine Governing

Governor	Electronic Isochronous
Frequency Regulation (Steady State)	±0.5%

Lubrication System

Oil Pump Type	Gear
Oil Filter Type	Full-Flow
Crankcase Capacity - qt (L)	11.2 (10.6)

Cooling System

Cooling System Type	Closed Recovery
Water Pump Type	Pre-Lubed, Self Sealing
Fan Type	Pusher
Fan Speed - RPM	1,980
Fan Diameter - in (mm)	18 (457)

Fuel System

Fuel Type	Ultra Low Sulfur Diesel Fuel #2
Fuel Specifications	ASTM
Fuel Filtering (Microns)	5
Fuel Inject Pump	Distribution Injection Pump
Fuel Pump Type	Engine Driven Gear
Injector Type	Mechanical
Fuel Supply Line - in (mm)	0.31 (7.9) ID
Fuel Return Line - in (mm)	0.2 (4.8) ID

Engine Electrical System

System Voltage	12 VDC
Battery Charger Alternator	Standard
Battery Size	See Battery Index 0161970SBY
Battery Voltage	12 VDC
Ground Polarity	Negative

ALTERNATOR SPECIFICATIONS

Standard Model	K0035124Y21
Poles	4
Field Type	Revolving
Insulation Class - Rotor	H
Insulation Class - Stator	H
Total Harmonic Distortion	<5% (3-Phase Only)
Telephone Interference Factor (TIF)	< 50

Standard Excitation	Synchronous Brushless
Bearings	Single Sealed
Coupling	Direct via Flexible Disc
Load Capacity - Standby	100%
Prototype Short Circuit Test	Yes
Voltage Regulator Type	Digital
Number of Sensed Phases	All
Regulation Accuracy (Steady State)	±0.25%

SPEC SHEET

3 of 6

SPEC SHEET

4 of 6

SD030 | 2.2L | 30 kW
INDUSTRIAL DIESEL GENERATOR SET
EPA Certified Stationary Emergency



OPERATING DATA

POWER RATINGS

Standby		
Single-Phase 120/240 VAC @1.0pf	30 kW	Amps: 125
Three-Phase 120/208 VAC @0.8pf	30 kW	Amps: 104
Three-Phase 120/240 VAC @0.8pf	30 kW	Amps: 90
Three-Phase 277/480 VAC @0.8pf	30 kW	Amps: 45
Three-Phase 346/600 VAC @0.8pf	30 kW	Amps: 36

MOTOR STARTING CAPABILITIES (skVA)

skVA vs. Voltage Dip					
120/240 VAC 1Ø	30%	277/480 VAC 3Ø	30%	208/240 VAC 3Ø	30%
A0035044N21	20	K0035124Y21	61	K0035124Y21	46
A0040044N21	24	K0040124Y21	76	K0040124Y21	58
A0050044N21	31	K0050124Y21	98	K0050124Y21	75

FUEL CONSUMPTION RATES*

Fuel Pump Lift- ft (m)	Diesel - gph (Lph)	
	Percent Load	Standby
3 (1)	25%	1.0 (3.7)
	50%	1.4 (5.2)
	75%	2.0 (7.5)
	100%	2.8 (10.5)
* Fuel supply installation must accommodate fuel consumption rates at 100% load.		
Total Fuel Pump Flow (Combustion + Return) - gph (Lph)		
16.6 (63)		

COOLING

Standby		
Coolant Flow	gpm (Lpm)	14.9 (56.2)
Coolant System Capacity	gal (L)	2.5 (9.5)
Heat Rejection to Coolant	BTU/hr (kW)	128,638 (136)
Inlet Air	cfm (m³/hr)	2,800 (4,757)
Maximum Operating Ambient Temperature	°F (°C)	122 (50)
Maximum Operating Ambient Temperature (Before Derate)	See Bulletin No. 0199280SSD	
Maximum Additional Radiator Backpressure	in H ₂ O (kPa)	0.5 (0.12)

COMBUSTION AIR REQUIREMENTS

Standby
Flow at Rated Power - cfm (m³/min)
88 (2.5)

ENGINE

Standby		
Rated Engine Speed	RPM	1,800
Horsepower at Rated kW**	hp	49
Piston Speed	ft/min (m/min)	1,181 (360)
BMEP	psi (kPa)	159 (1,096)

** Refer to "Emissions Data Sheet" for maximum bHP for EPA and SCAQMD permitting purposes.

Deration – Operational characteristics consider maximum ambient conditions. Derate factors may apply under atypical site conditions. Please contact a Generac Power Systems Industrial Dealer for additional details. All performance ratings in accordance with ISO3046, BS5514, ISO8528, and DIN6271 standards. Standby - See Bulletin 0187500SSB
Prime - See Bulletin 0187510SSB

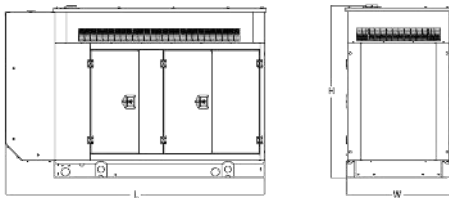
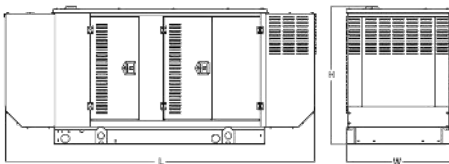
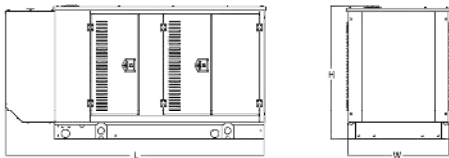
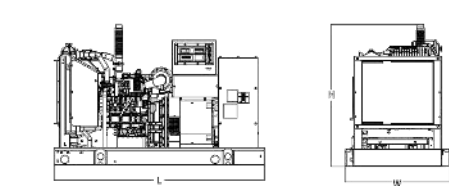
EXHAUST

Standby		
Exhaust Flow (Rated Output)	cfm (m³/min)	296.6 (8.4)
Max. Allowable Backpressure (Post Turbocharger)	inHg (kPa)	1.5 (5.1)
Exhaust Temperature (Rated Output)	°F (°C)	892 (478)

SD030 | 2.2L | 30 kW
INDUSTRIAL DIESEL GENERATOR SET
EPA Certified Stationary Emergency



DIMENSIONS AND WEIGHTS*



OPEN SET

Run Time - Hours	Usable Capacity - Gal (L)	L x W x H - in (mm)	Weight - lbs (kg)	
			Steel	Aluminum
No Tank	-	76.0 (1,930) x 37.4 (950) x 44.8 (1,138)	1,456 - 1,641 (661 - 745)	
19	54 (204)	76.0 (1,930) x 37.4 (950) x 57.8 (1,468)	1,936 - 2,121 (879 - 963)	
47	132 (500)	76.0 (1,930) x 37.4 (950) x 69.8 (1,773)	2,166 - 2,351 (983 - 1,067)	
67	190 (719)	76.0 (1,930) x 37.4 (950) x 79.3 (2,014)	2,380 - 2,565 (1,081 - 1,165)	
75	211 (799)	76.0 (1,930) x 37.4 (950) x 81.8 (2,078)	2,375 - 2,560 (1,078 - 1,162)	
107	300 (1,136)	92.9 (2,360) x 37.4 (950) x 85.3 (2,167)	2,438 - 2,623 (1,106 - 1,190)	

WEATHER PROTECTED ENCLOSURE

Run Time - Hours	Usable Capacity - Gal (L)	L x W x H - in (mm)	Weight - lbs (kg)	
			Enclosure Only	
			Steel	Aluminum
No Tank	-	94.8 (2,409) x 38.0 (965) x 49.5 (1,258)		
19	54 (204)	94.8 (2,409) x 38.0 (965) x 62.5 (1,588)		
47	132 (500)	106.0 (2,692) x 38.0 (965) x 84.0 (2,134)	372 (169)	241 (109)
67	190 (719)	94.8 (2,409) x 38.0 (965) x 84.0 (2,134)		
75	211 (799)	76.0 (1,930) x 38.0 (965) x 86.5 (2,198)		
107	300 (1,136)	92.9 (2,360) x 38.0 (965) x 90.0 (2,287)		

LEVEL 1 SOUND ATTENUATED ENCLOSURE

Run Time - Hours	Usable Capacity - Gal (L)	L x W x H - in (mm)	Weight - lbs (kg)	
			Enclosure Only	
			Steel	Aluminum
No Tank	-	112.5 (2,857) x 38.0 (965) x 49.5 (1,258)		
19	54 (204)	112.5 (2,857) x 38.0 (965) x 62.5 (1,588)		
47	132 (500)	112.5 (2,857) x 38.0 (965) x 74.5 (1,893)	505 (229)	338 (153)
67	190 (719)	112.5 (2,857) x 38.0 (965) x 84.0 (2,134)		
75	211 (799)	112.5 (2,857) x 38.0 (965) x 86.5 (2,198)		
107	300 (1,136)	112.5 (2,857) x 38.0 (965) x 90.0 (2,287)		

LEVEL 2 SOUND ATTENUATED ENCLOSURE

Run Time - Hours	Usable Capacity - Gal (L)	L x W x H - in (mm)	Weight - lbs (kg)	
			Enclosure Only	
			Steel	Aluminum
No Tank	-	94.8 (2,409) x 38.0 (965) x 49.5 (1,258)		
19	54 (204)	94.8 (2,409) x 38.0 (965) x 62.5 (1,588)		
47	132 (500)	94.8 (2,409) x 38.0 (965) x 74.5 (1,893)	510 (231)	341 (155)
67	190 (719)	106.0 (2,692) x 38.0 (965) x 84.0 (2,134)		
75	211 (799)	94.8 (2,409) x 38.0 (965) x 86.5 (2,198)		
107	300 (1,136)	94.8 (2,409) x 38.0 (965) x 90.0 (2,287)		

* All measurements are approximate and for estimation purposes only. Specification characteristics may change without notice. Please contact a Generac Power Systems Industrial Dealer for detailed installation drawings.

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