

VICINITY MAP



AMERICAN TOWER®

ATC SITE NAME: I-75 EXIT 81

ATC SITE NUMBER: 302825

VERIZON SITE NAME: I75 HWY47

VERIZON SITE NUMBER: 5000165925

VERIZON FUZE PID: 16066137

SITE ADDRESS: ROUTE 10, BOX 1010  
LAKE CITY, FL 32024



LOCATION MAP

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VERIZON COLLOCATION PLAN

COMPLIANCE CODE	PROJECT SUMMARY	PROJECT DESCRIPTION
ALL WORK SHALL BE PERFORMED AND MATERIALS INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNMENT AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES.  1. 2023 FLORIDA BUILDING CODE, 8TH EDITION 2. ANSI/TIA-222-H 3. 8TH EDITION FLORIDA FIRE PREVENTION CODE (NFPA 70) 4. 2020 NATIONAL ELECTRICAL CODE. 5. CITY/COUNTY ORDINANCES	<u>SITE ADDRESS:</u>  ROUTE 10, BOX 1010 LAKE CITY, FL 32024 COUNTY: COLUMBIA  <u>GEOGRAPHIC COORDINATES:</u>  LATITUDE: 30.117738° 30-07-03.86N NAD83 LONGITUDE: -82.655222° 82-39-18.80W GROUND ELEVATION: 197' (AGL)  <u>ZONING INFORMATION:</u>  JURISDICTION: UNINC. COLUMBIA COUNTY, FL	THE PROPOSED PROJECT INCLUDES PLACING EQUIPMENT CABINETS AND A 48KW LP GENERATOR ON PROPOSED CONCRETE PAD INSIDE A 12'-0"x30'-0" GROUND SPACE AND A PROPOSED 500 GAL, BURIED LPG TANK W/ 4'-0"x10'-0" GROUND SPACE WITHIN THE EXISTING COMPOUND, AND PLACING NEW ANTENNAS ON PROPOSED SECTOR FRAMES MOUNTED TO EXISTING TOWER.
DESIGN CRITERIA		PROJECT NOTES
ULTIMATE WIND SPEED: 119 mph (3-second gust) SERVICE WIND SPEED: N/A RISK CATEGORY: II EXPOSURE CATEGORY: C TOPOGRAPHIC FACTOR: 1.00	<u>PROJECT TEAM</u>  <u>TOWER OWNER:</u> AMERICAN TOWER 10 PRESIDENTIAL WAY WOBURN, MA 01801  <u>APPLICANT:</u> VERIZON WIRELESS  <u>PROFESSIONAL OF RECORD:</u>  ROBERT J. LARA, AIA 2 S UNIVERSITY DR., UNIT 245 PLANTATION, FL 33324 (954) 577-4668 rlara@morrisonhershfield.com  <u>PROPERTY OWNER:</u> ATC OWNED TOWER <u>MANAGEMENT AGREEMENT:</u> FDOT	1. THE FACILITY IS UNMANNED. 2. A TECHNICIAN WILL VISIT THE SITE APPROXIMATELY ONCE A MONTH FOR ROUTINE INSPECTION AND MAINTENANCE. 3. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT LAND DISTURBANCE OR EFFECT OF STORM WATER DRAINAGE. 4. NO SANITARY SEWER, POTABLE WATER OR TRASH DISPOSAL IS REQUIRED. 5. HANDICAP ACCESS IS NOT REQUIRED. 6. THE PROJECT DEPICTED IN THESE PLANS QUALIFIES AS AN ELIGIBLE FACILITIES REQUEST ENTITLED TO EXPEDITED REVIEW UNDER 47 U.S.C. § 1455(A) AS A MODIFICATION OF AN EXISTING WIRELESS TOWER THAT INVOLVES THE COLLOCATION, REMOVAL, AND/OR REPLACEMENT OF TRANSMISSION EQUIPMENT THAT IS NOT A SUBSTANTIAL CHANGE UNDER CFR § 1.61000 (B)(7).
UTILITY COMPANIES		PROJECT LOCATION DIRECTIONS
POWER COMPANY: N/A PHONE: N/A TELEPHONE COMPANY: N/A PHONE: N/A		SITE IS LOCATED DIRECTLY OFF OF I-75 AT EXIT 81 (MILE MARKER 424), AT STATE ROUTE 47.

Call 811 or visit sunshine811.com two full business days before digging to have buried facilities located and marked.  
  
check positive response codes before you dig!



2 S UNIVERSITY DR., UNIT 245  
PLANTATION, FL 33324  
Tel: 954.577.4655  
www.morrisonhershfield.com

DO NOT SCALE DRAWING. CONTRACTOR MUST VERIFY ALL DIMENSIONS AND ADVISE CONSULTANTS OF ANY ERRORS OR OMISSIONS. THE INFORMATION CONTAINED IN THIS SET OF DOCUMENTS IS PROPRIETARY BY NATURE. ANY USE OR DISCLOSURE OTHER THAN WHICH IS RELATED TO NAMED CLIENT IS STRICTLY PROHIBITED. NEITHER THE ARCHITECT NOR THE ENGINEER WILL BE PROVIDING ON-SITE CONSTRUCTION REVIEW OF THIS PROJECT. ALL PREVIOUS ISSUES OF THIS DRAWING ARE SUPERSEDED BY THE LATEST REVISION.

REV.	DESCRIPTION	BY	DATE
A	PRELIM	RA	12/15/23
B	REVISED AS PER RFDS	RA	02/02/24
C	REVISED AS PER COMMENTS	RA	02/21/24
D	FINAL	JK	04/03/24
1	FINAL	RA	06/04/24

ATC SITE NUMBER:

302825

ATC SITE NAME:

I-75 EXIT 81

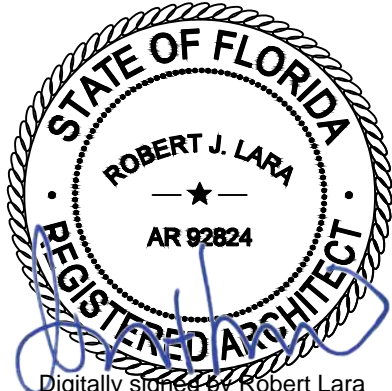
VERIZON SITE NAME:

I75 HWY47

SITE ADDRESS:

ROUTE 10, BOX 1010  
LAKE CITY, FL 32024

SEAL:



Digitally signed by Robert Lara  
Date: 2024.06.05 14:13:41-04'00'



MH PROJ NO:	240013800
ATC JOB NO:	14538915
CUSTOMER ID:	I75 HWY47
CUSTOMER #:	5000165925

TITLE SHEET

SHEET NUMBER:

G-001

REVISION:

1



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 ¼" 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).

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.



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REV.	DESCRIPTION	BY	DATE
<u>A</u>	PRELIM	RA	12/15/23
<u>B</u>	REVISED AS PER RFDS	RA	02/02/24
<u>C</u>	REVISED AS PER COMMENTS	RA	02/21/24
<u>D</u>	FINAL	JK	04/03/24
<u>1</u>	FINAL	RA	06/04/24

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302825

ATC SITE NAME:

I-75 EXIT 81

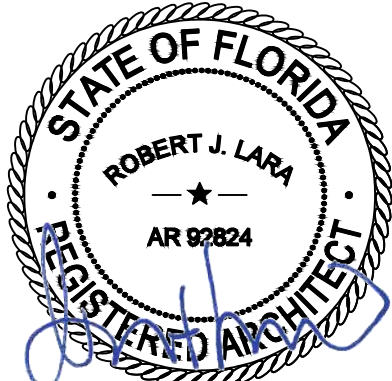
VERIZON SITE NAME:

I75 HWY47

SITE ADDRESS:

ROUTE 10, BOX 1010  
LAKE CITY, FL 32024

SEAL:



Digitally signed by Robert Lara

Date: 2024.06.05 14:13:59-04'00'



MH PROJ NO:	240013800
ATC JOB NO:	14538915
CUSTOMER ID:	I75 HWY47
CUSTOMER #:	5000165925

GENERAL NOTES

SHEET NUMBER:

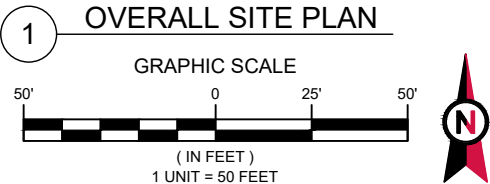
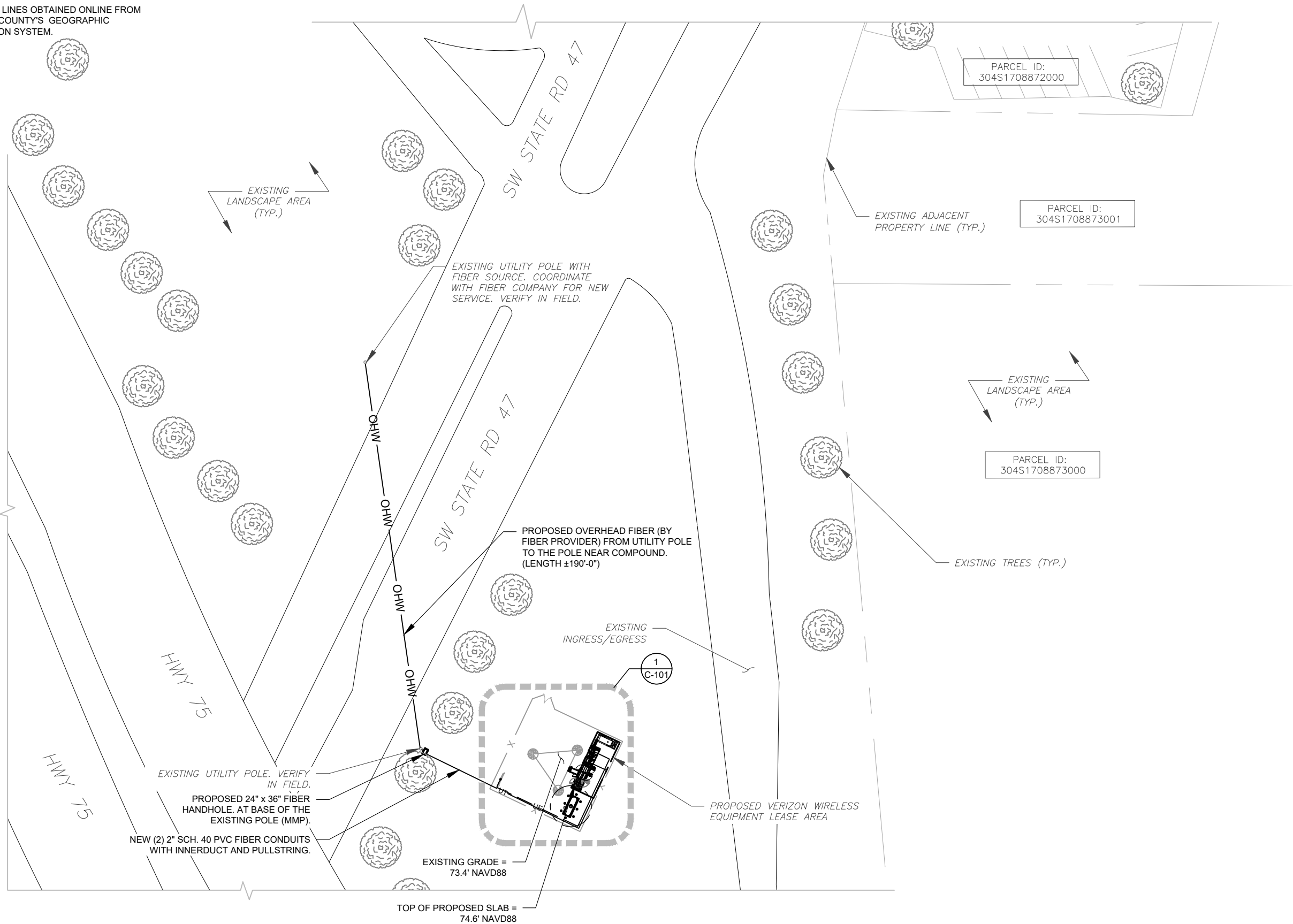
G-002

REVISION:

1

NOTES:

- BOUNDARY LINES OBTAINED ONLINE FROM COLUMBIA COUNTY'S GEOGRAPHIC INFORMATION SYSTEM.



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1	FINAL	RA	06/04/24

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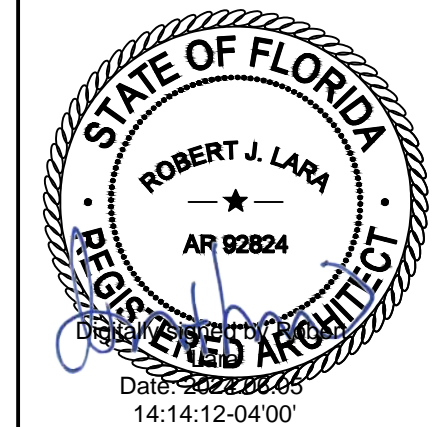
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VERIZON SITE NAME:

I75 HWY47

SITE ADDRESS:  
ROUTE 10, BOX 1010  
LAKE CITY, FL 32024

SEAL:



MH PROJ NO:	240013800
ATC JOB NO:	14538915
CUSTOMER ID:	I75 HWY47
CUSTOMER #:	5000165925

OVERALL SITE PLAN

SHEET NUMBER:

C-001

REVISION:

1

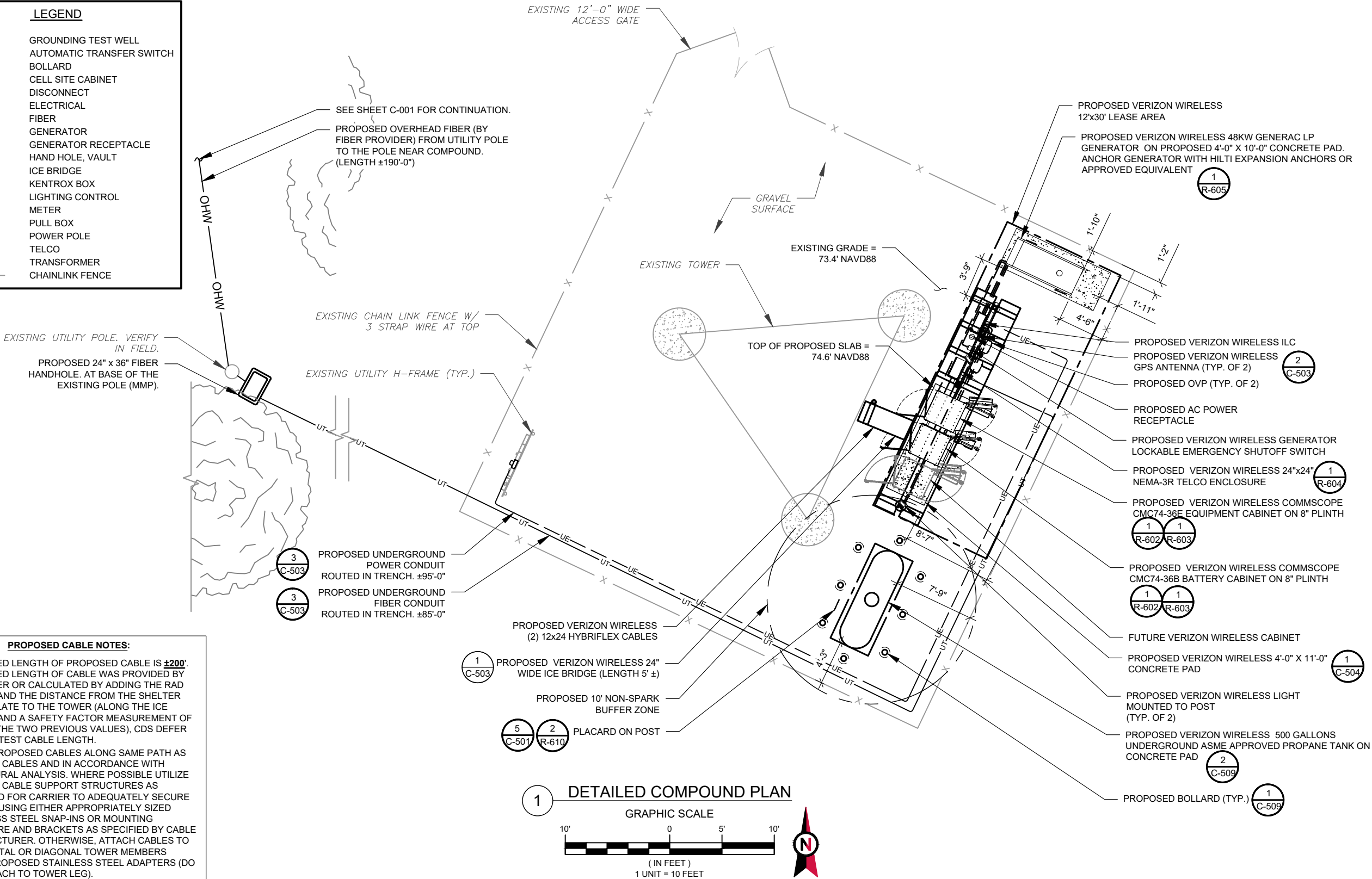


COMPOUND PLAN NOTES:

- THIS COMPOUND 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.
- 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.
- 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.

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
—	CHAINLINK FENCE



PROPOSED CABLE NOTES:

- ESTIMATED LENGTH OF PROPOSED CABLE IS **±200'**. 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.
- 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).



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C	REVISED AS PER COMMENTS	RA	02/21/24
D	FINAL	JK	04/03/24
1	FINAL	RA	06/04/24

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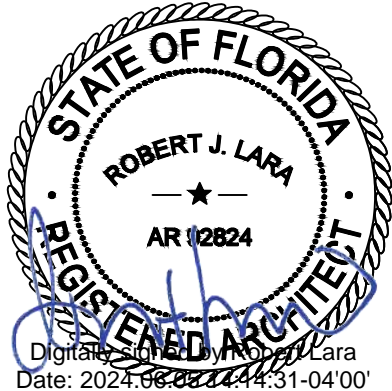
I-75 EXIT 81

VERIZON SITE NAME:

I75 HWY47

SITE ADDRESS:  
ROUTE 10, BOX 1010  
LAKE CITY, FL 32024

SEAL:



MH PROJ NO:	240013800
ATC JOB NO:	14538915
CUSTOMER ID:	I75 HWY47
CUSTOMER #:	5000165925

DETAILED COMPOUND PLAN

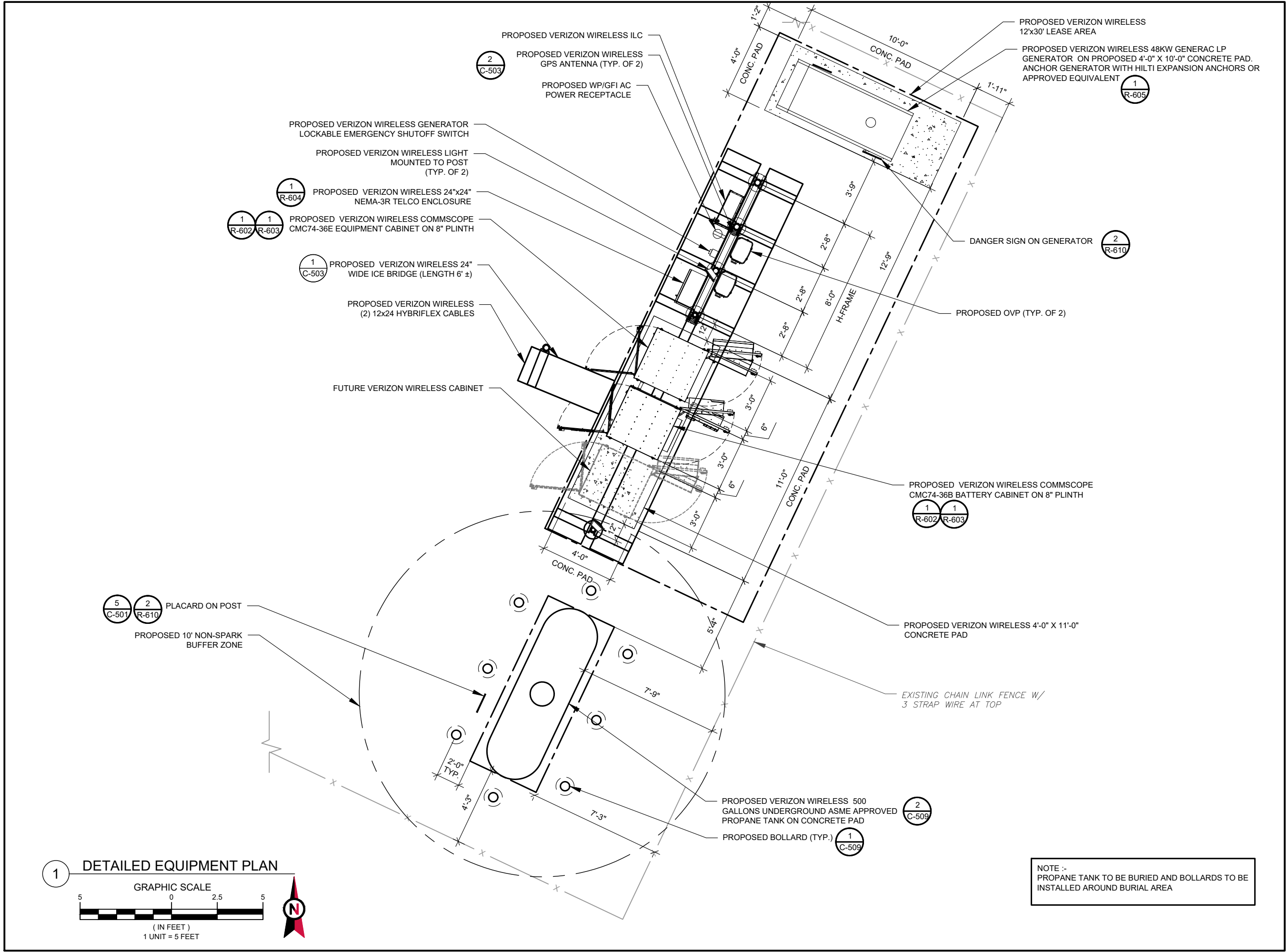
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C-101

REVISION:

1





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302825

ATC SITE NAME:  
I-75 EXIT 81

VERIZON SITE NAME:  
I75 HWY47

SITE ADDRESS:  
ROUTE 10, BOX 1010  
LAKE CITY, FL 32024

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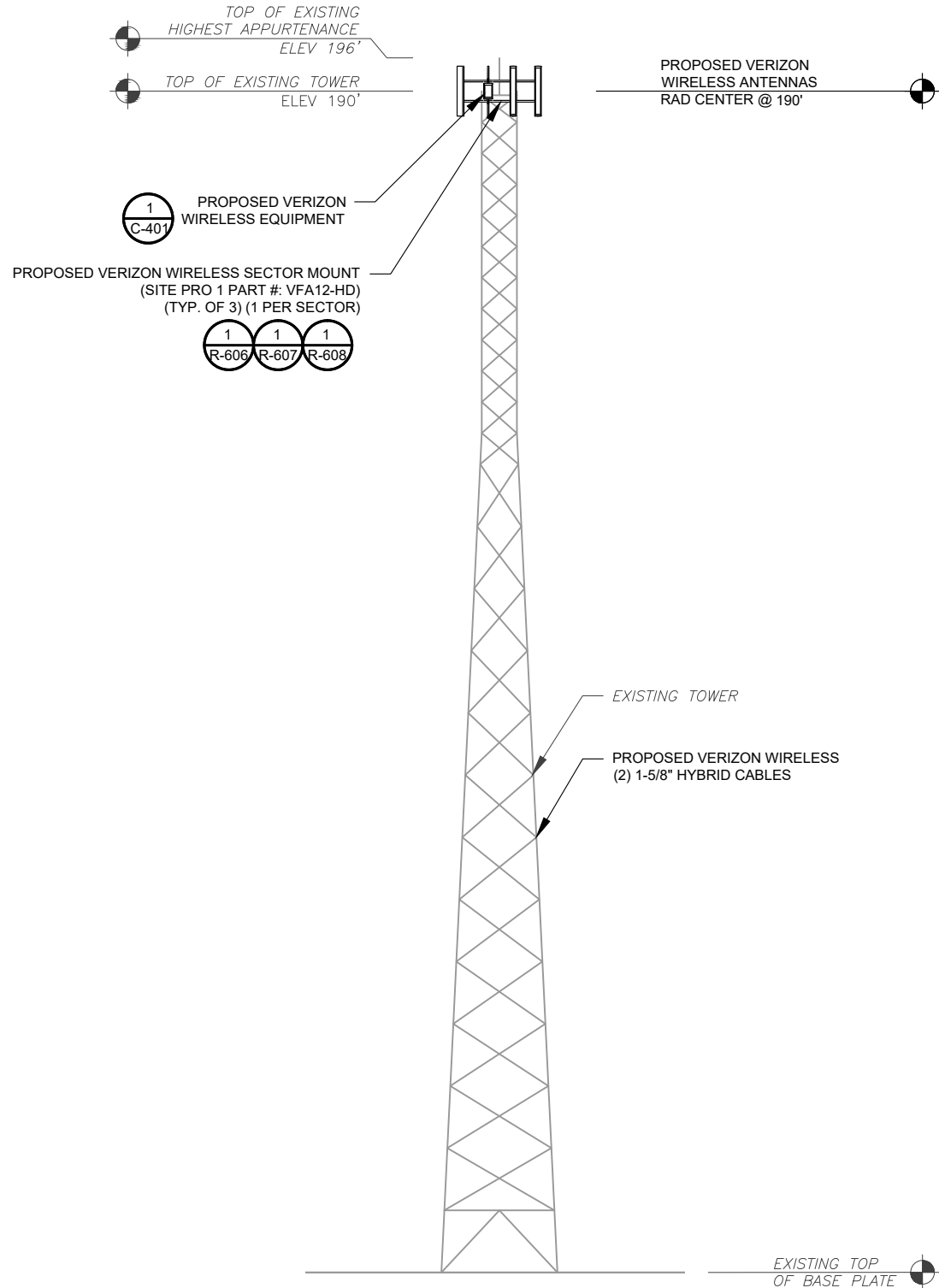
verizon

MH PROJ NO:	240013800
ATC JOB NO:	14538915
CUSTOMER ID:	I75 HWY47
CUSTOMER #:	5000165925

DETAILED EQUIPMENT PLAN

SHEET NUMBER: C-102	REVISION: 1
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ATC IS ANALYZING THE ANTENNA MOUNT UNDER A SEPARATE PROJECT. CONSTRUCTION IS NOT TO PROCEED UNTIL THE MOUNT ANALYSIS IS COMPLETE AND INDICATES THE ADDITIONAL LOADING DOES NOT OVERSTRESS THE MOUNT.

- TOWER NOTE:**
- 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 ELEVATIONS ARE MEASURED FROM TOP OF BASE PLATE TO MATCH STRUCTURAL ANALYSIS. ELEVATIONS DO NOT REFLECT TRUE ABOVE GROUND LEVEL (A.G.L.).
  - TOWER ELEVATION DEPICTION MAY NOT REFLECT ALL EQUIPMENT INCLUDED IN STRUCTURAL ANALYSIS. REFER TO STRUCTURAL ANALYSIS FOR FULL TOWER LOADING.

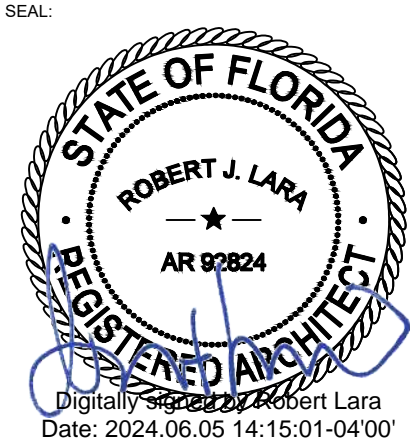


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302825  
ATC SITE NAME:  
I-75 EXIT 81  
VERIZON SITE NAME:  
I75 HWY47  
SITE ADDRESS:  
ROUTE 10, BOX 1010  
LAKE CITY, FL 32024



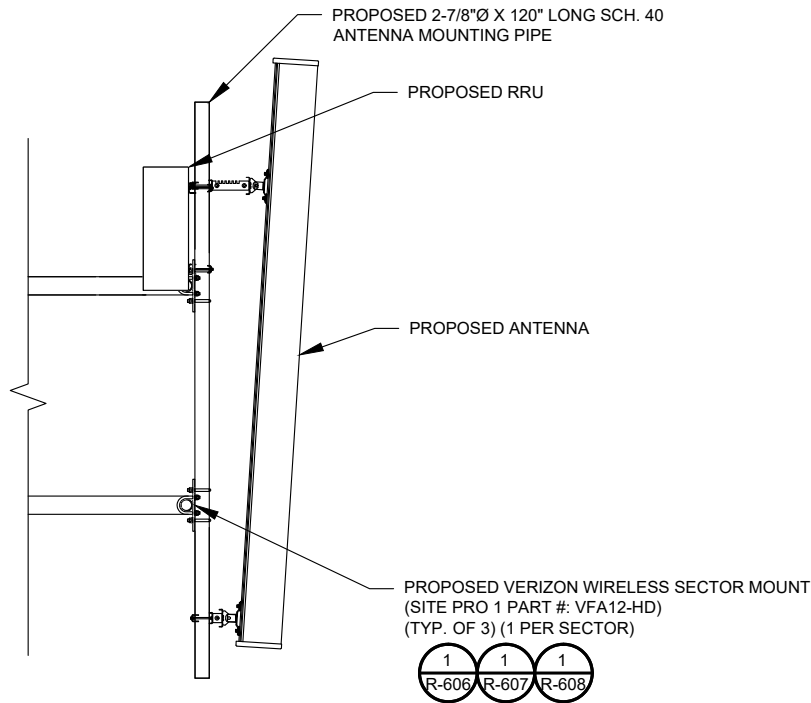
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CUSTOMER #:	5000165925

### TOWER ELEVATION

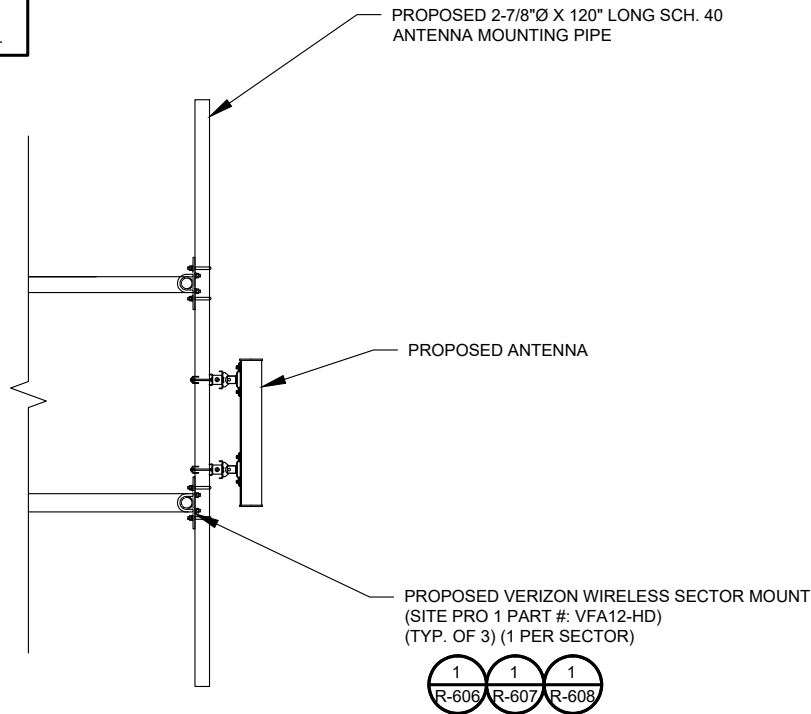
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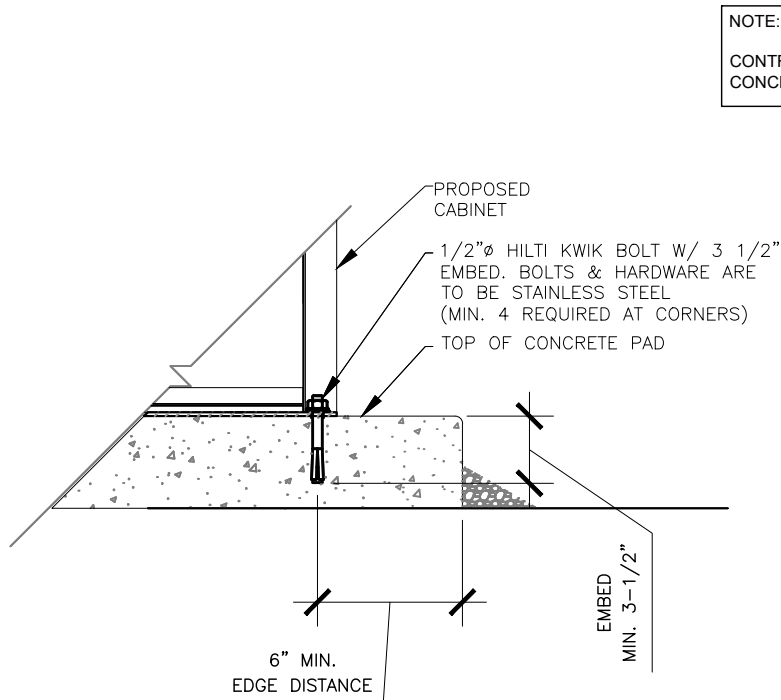


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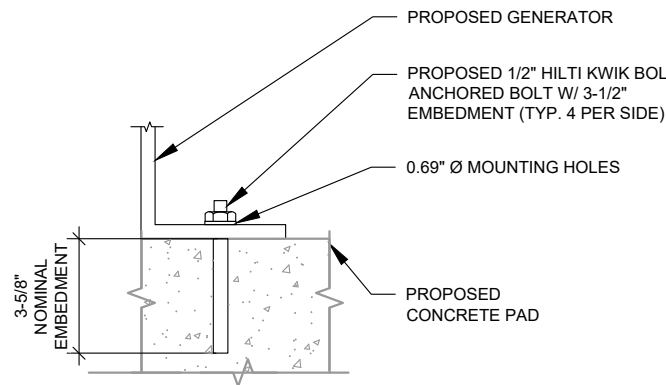


1 PROPOSED ANTENNA MOUNTING DETAIL (ELEVATION)  
SCALE: NOT TO SCALE

2 PROPOSED 5G ANTENNA MOUNTING DETAIL - TYPICAL  
SCALE: N.T.S.



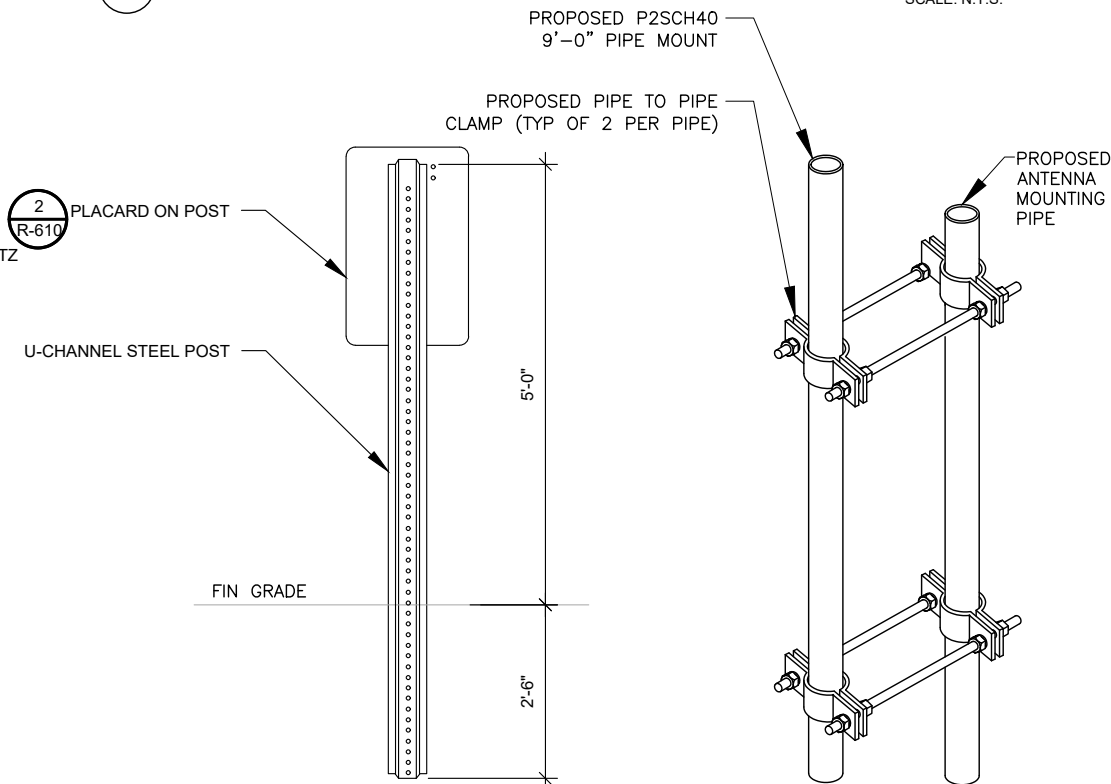
NOTE:  
CONTRACTOR TO VERIFY 3" MIN. FROM EDGE OF CONCRETE TO NEW MOUNTING BOLT.



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

3 CABINET MOUNTING DETAIL  
SCALE: N.T.S.

4 GENERATOR ATTACHMENT DETAIL  
SCALE: NOT TO SCALE



5 SIGN POST DETAIL  
SCALE: N.T.S.

6 PIPE TO PIPE MOUNT  
SCALE: N.T.S.



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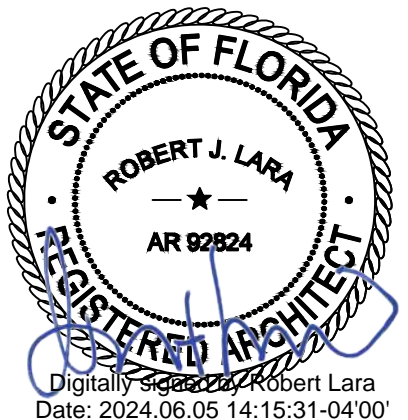
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ROUTE 10, BOX 1010  
LAKE CITY, FL 32024

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CUSTOMER #:	5000165925

## CONSTRUCTION DETAILS

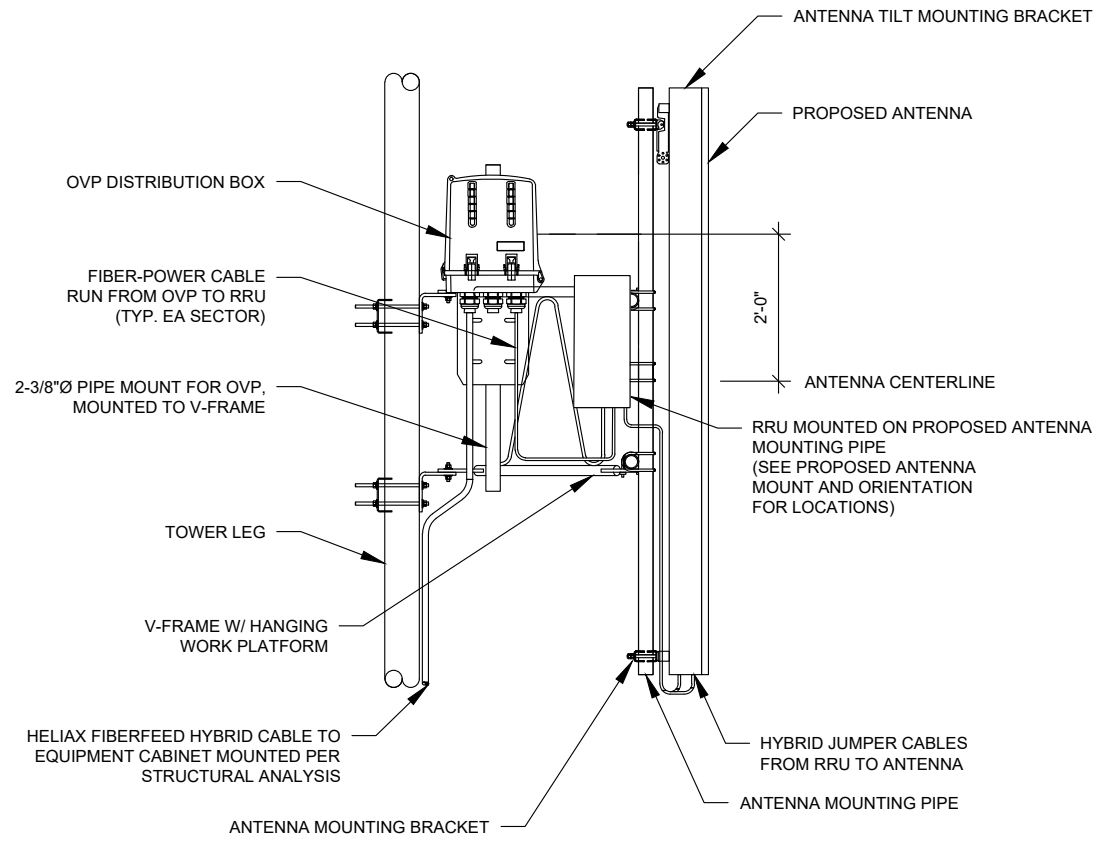
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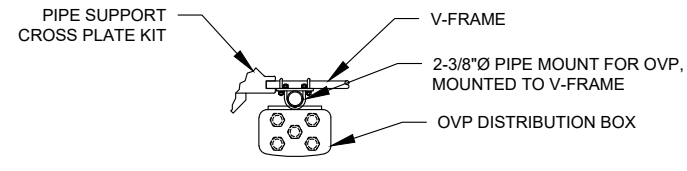
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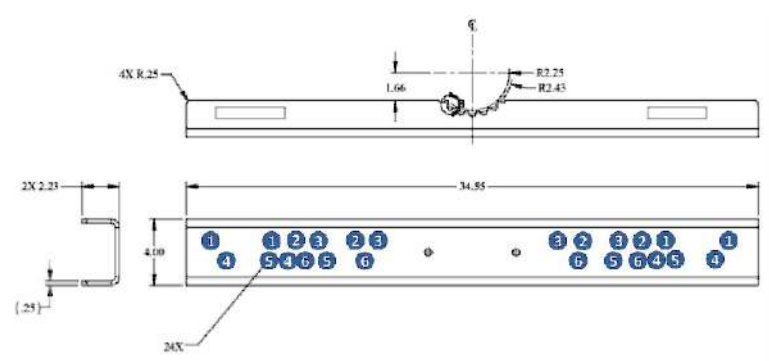




1 PROPOSED OVP/RRU/ANTENNA DETAIL  
SCALE: N.T.S.



2 OVP DETAIL  
SCALE: N.T.S.



3 MOUNTING BRACKET DETAIL  
SCALE: N.T.S.



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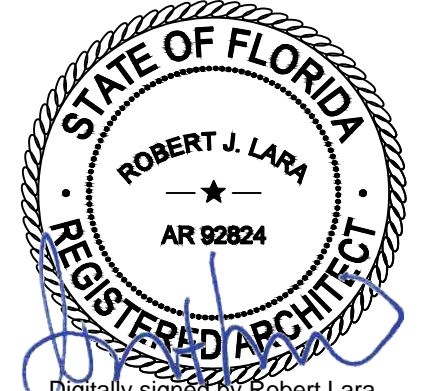
I-75 EXIT 81

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ROUTE 10, BOX 1010  
LAKE CITY, FL 32024

SEAL:



Digitally signed by Robert Lara  
Date: 2024.06.05 14:15:47-04'00'

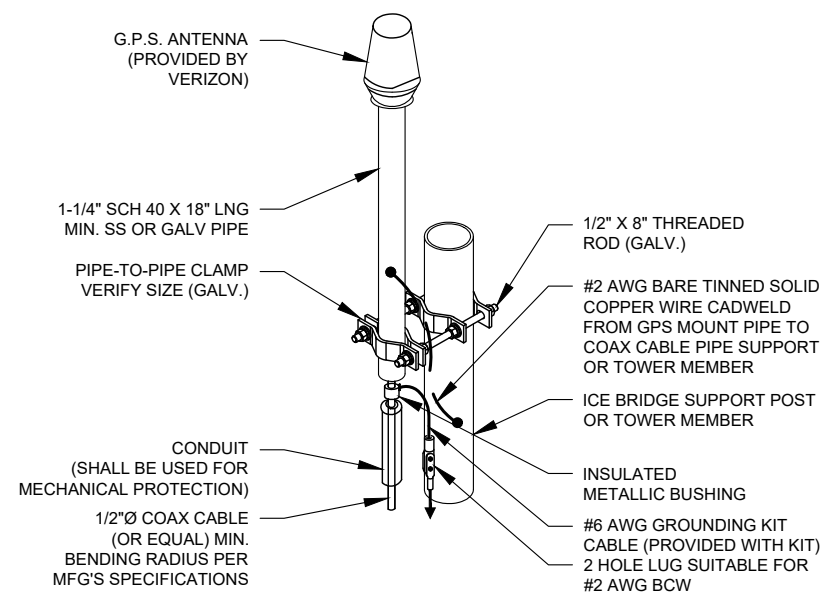
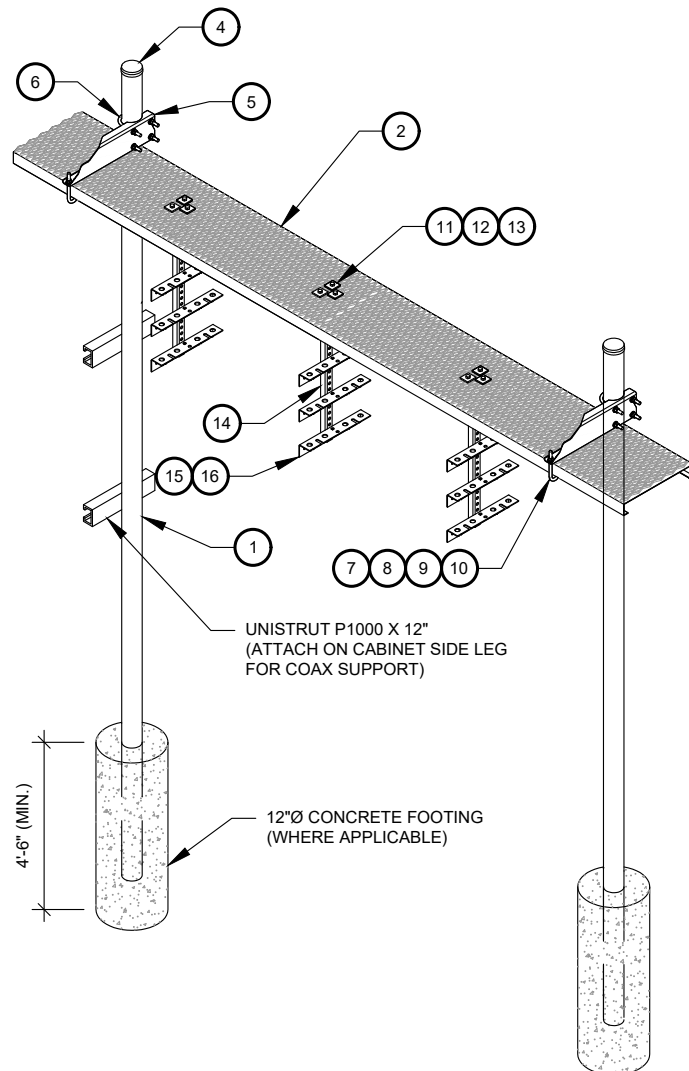


MH PROJ NO:	240013800
ATC JOB NO:	14538915
CUSTOMER ID:	I75 HWY47
CUSTOMER #:	5000165925

### CONSTRUCTION DETAILS

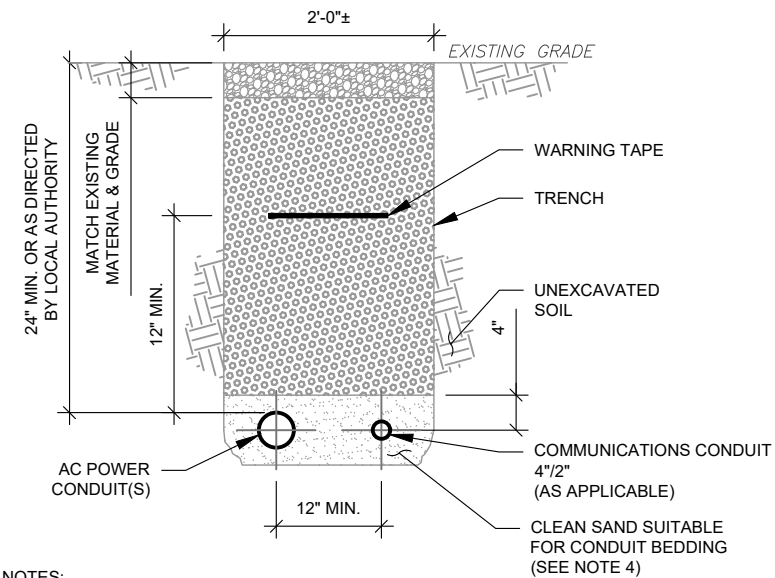
SHEET NUMBER: <b>C-502</b>	REVISION: <b>1</b>
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1. INSTALL ICE BRIDGE TO ALLOW 7 FEET CLEARANCE ABOVE GRADE TO LOWEST APPURTENANCE.



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

## 2 GPS ANTENNA ATTACHMENT DETAIL



1. IF FREE OF ORGANIC OR OTHER DELETERIOUS MATERIAL, EXCAVATED MATERIAL MAY BE USED FOR BACKFILL. IF NOT, PROVIDE CLEAN, COMPACTIBLE 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

### 3 POWER/TELCO CONDUIT TRENCH DETAILS

WB-K210-B WAVEGUIDE BRIDGE KIT - BILL OF MATERIALS (INCLUDED WITH KIT UNLESS NOTED OTHERWISE)					
ITEM	PART NUMBER	DESCRIPTION	ITEM	PART NUMBER	DESCRIPTION
1	MF126.01 MF-130	10'-4" COLUMN & BASE SHOE* 13'-4" PIPE COLUMN	9	GWL-04	1/2" GALV LOCK WASHER
2	WB-CY210	SAFETY GRATING 24" X 10'	10	GN-04	1/2" GALV HEX NUT
3	WBK110BHK	HARDWARE KIT (ITEMS 4-16)	11	GB-03205	3/8" X 2" GALV BOLT KIT
4	PC-034	PIPE CAP 3-1/2"	12	MT-387	SQUARE WASHER, 1-1/2" X 1-1/2" W/ 7/16" HOLE
5	WBLB243.08	24" WAVEGUIDE BRIDGE SUPPORT BRACKET	13	GWF-03	3/8" GALV FLAT WASHER
6	GUB-4356	1/2" X 3-5/8" X 6" GALV U-BOLT	14	WBT243.01	VERTICAL TRAPEZE SECTION
7	WB-JB-6	1/2" J-BOLT	15	GB-03105	3/8" X 1" GALV BOLT KIT
8	GWF-04	1/2" GALV FLAT WASHER	16	WBT243.02	HORIZONTAL TRAPEZE SECTION

CONTRACTOR SHALL USE PARTS MANUFACTURED BY COMSCOPE OR APPROVED EQUIVALENT.  
 \*BASE SHOE NOT INCLUDED IN WB-K210-B KIT, ORDER COLUMN SEPARATELY OR KIT WB-K210-S.

## 1 WAVEGUIDE BRIDGE KIT

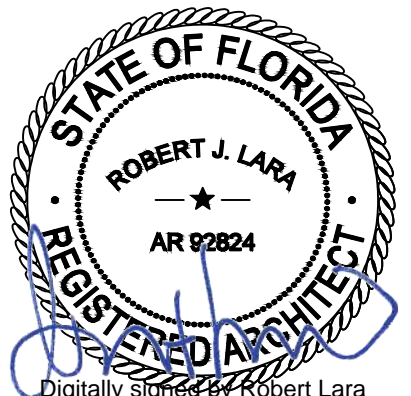


2 S UNIVERSITY DR., UNIT 245  
PLANTATION, FL 33324  
Tel: 954.577.4655  
[www.morrisonhershfield.com](http://www.morrisonhershfield.com)

REV.	DESCRIPTION	BY	DATE
<u>A</u>	PRELIM	RA	12/15/23
<u>B</u>	REVISED AS PER RFDS	RA	02/02/24
<u>C</u>	REVISED AS PER COMMENTS	RA	02/21/24
<u>0</u>	FINAL	JK	04/03/24
<u>1</u>	FINAL	RA	06/04/24

SITE ADDRESS:  
ROUTE 10, BOX 1010  
LAKE CITY, FL 32024

SEAL:



Digitally signed by Robert Lara  
Date: 2024.06.05 14:16:03-04'00'



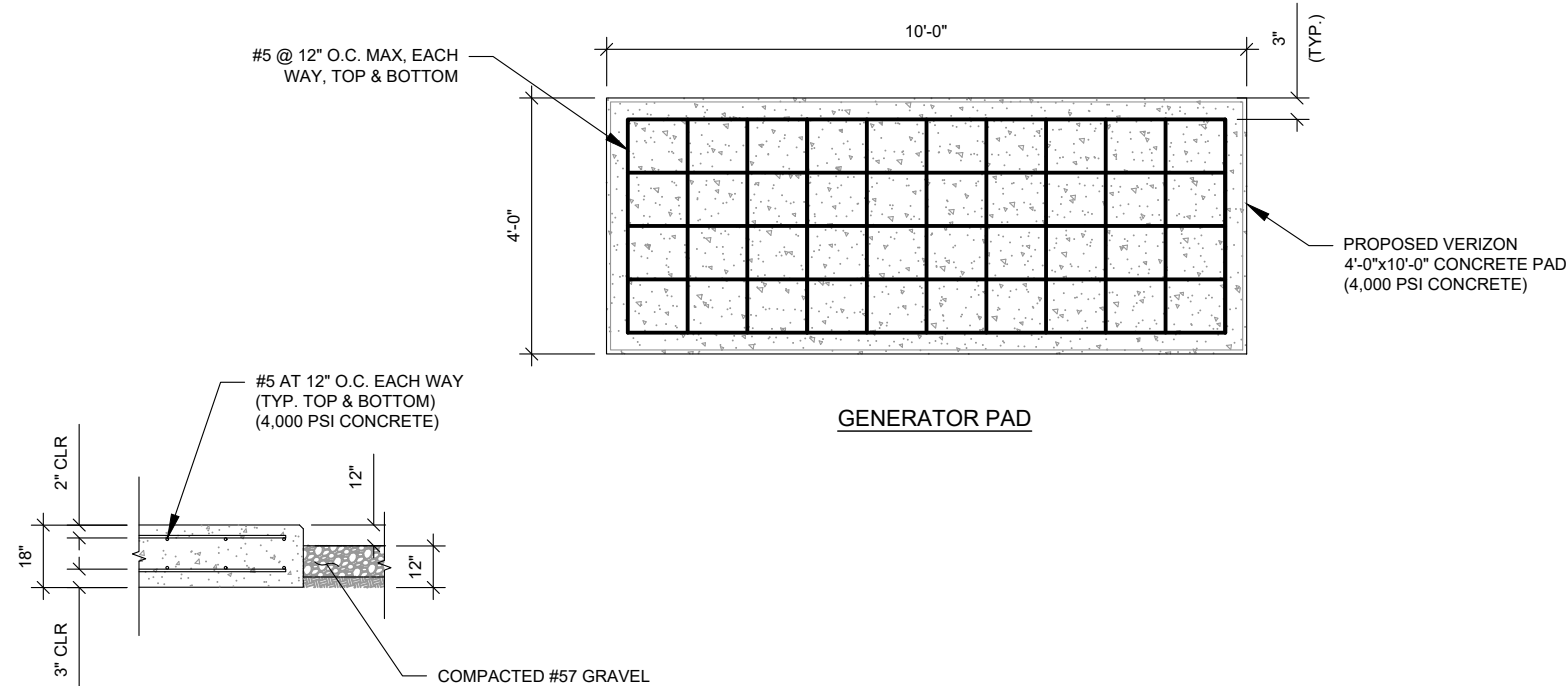
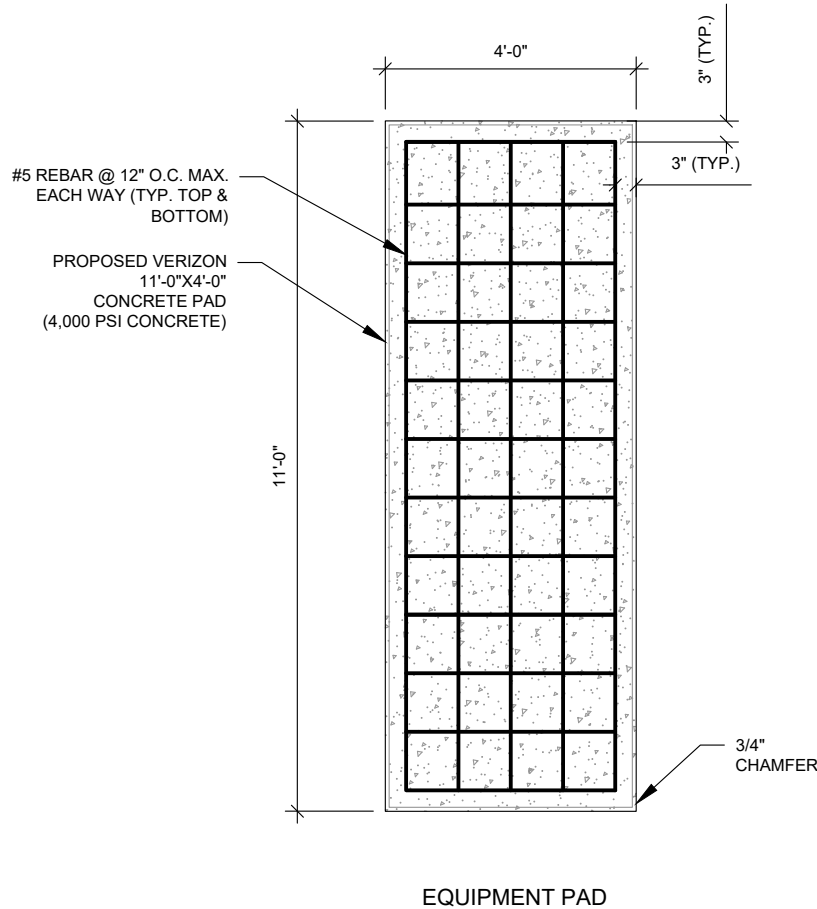
MH PROJ NO:	240013800
ATC JOB NO:	14538915
CUSTOMER ID:	I75 HWY47
CUSTOMER #:	5000165925

## CONSTRUCTION DETAILS

C-503

1

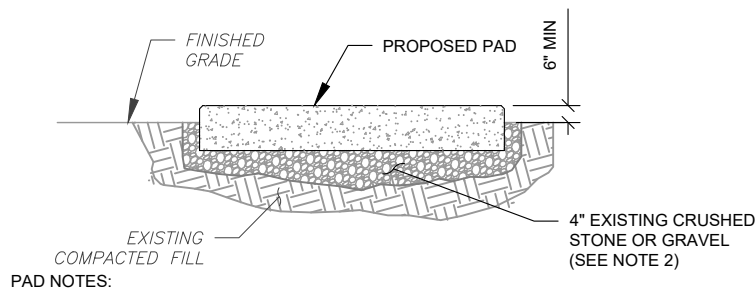




- PAD NOTES:
- CONCRETE DESIGN & REINFORCEMENT IN ACCORDANCE WITH "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" (A.C.I. 318) AND WITH "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT" (A.C.I. 315).
  - THIS DESIGN ASSUMES A 1500 PSF ALLOWABLE SOIL BEARING PRESSURE.

## 1 CONCRETE PAD DESIGN

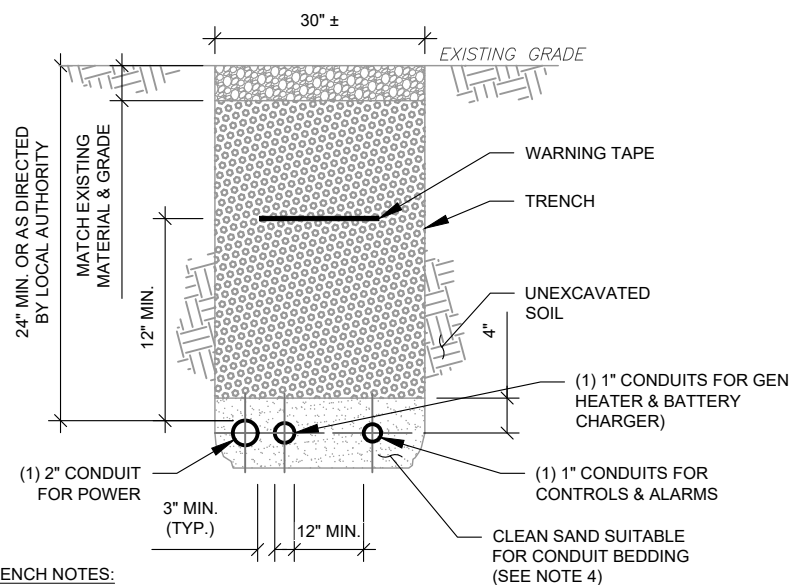
SCALE: N.T.S.



- PAD NOTES:
- SUBGRADE AND FILL SHALL CONSIST OF CLEAN SOIL. DELETRIOUS MATERIAL AND ORGANICS SHALL BE REMOVED.
  - MECHANICALLY COMPACT FOOTPRINT OF PAD PLUS 2' PERIMETER.
  - USE GALVANIZED HILTI EXPANSION ANCHORS OR, APPROVED EQUAL, FOR EQUIPMENT ANCHORAGE.
  - FOR SIZE AND LOCATION OF ANCHORS AND OTHER REQUIREMENT, SEE EQUIPMENT VENDOR DRAWINGS.

## 2 GRAVEL PREPARATION

SCALE: NOT TO SCALE



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

## 3 GENERATOR CONDUIT TRENCH DETAILS

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D	FINAL	JK	04/03/24
1	FINAL	RA	06/04/24

ATC SITE NUMBER:

302825

ATC SITE NAME:

I-75 EXIT 81

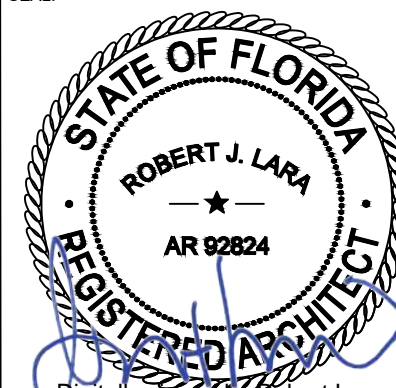
VERIZON SITE NAME:

I75 HWY47

SITE ADDRESS:

ROUTE 10, BOX 1010  
LAKE CITY, FL 32024

SEAL:



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Date: 2024.06.05 14:16:24-04'00'



MH PROJ NO:	240013800
ATC JOB NO:	14538915
CUSTOMER ID:	I75 HWY47
CUSTOMER #:	5000165925

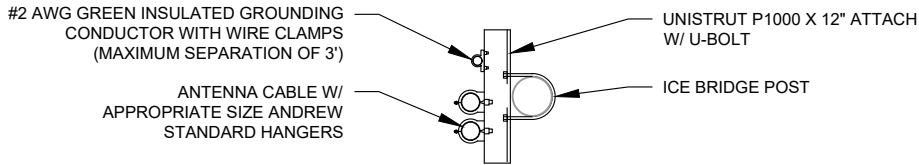
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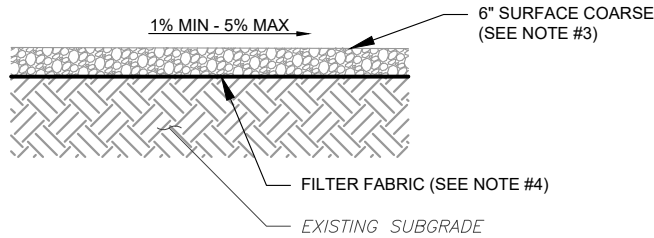
C-504

REVISION:

1



1 WAVEGUIDE UNISTRUT  
SCALE: N.T.S.



NOTES:

1. CONTRACTOR TO CONTACT ALL UTILITIES FOR LOCATION OF UNDERGROUND SERVICES. SERVICE LOCATIONS TO BE CONFIRMED PRIOR TO CONSTRUCTION.
2. REMOVE ALL UNSUITABLE OR DELETERIOUS MATERIAL AS REQUIRED. COMPACT UNDERLYING SOIL TO 90% OF MAXIMUM DENSITY. REPLACE REMOVED SOIL WITH 8" LIFTS OF GRANULAR "B" MATERIAL TO A DEPTH OF 4" BELOW PROPOSED GRADE. COMPACT TO MINIMUM 95% OF MAXIMUM DRY DENSITY ALL COMPACTION SHALL BE IN ACCORDANCE WITH THE MOST RECENT IBC. REVIEW WITH PROJECT MANAGER AND GEOTECT PRIOR TO CONSTRUCTION.
3. SURFACE COARSE OF GRANULAR "A" MATERIAL SHALL CONSIST OF EVENLY GRADED MIXTURE OF CRUSHED STONE OR GRAVEL, WITH 100% PASSING THROUGH 3/4" SIEVE AND NOT MORE THAN 5% PASSING THROUGH #4 SIEVE.
4. PROVIDE GEOTEXTILE FABRIC UNDER WASHED CHIPPED STONE COMPOUND UNLESS NOTED OTHERWISE. WOVEN GEOTEXTILE:US FABRICS: US 230 OR APPROVED EQUIVALENT. CONTRACTOR MAY SUBMIT DESIGN ALTERNATIVE AS OUTLINED IN THE AMERICAN TOWER MASTER SPECIFICATIONS.

2 COMPOUND CROSS SECTION  
SCALE: N.T.S.



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1	FINAL	RA	06/04/24

ATC SITE NUMBER:

302825

ATC SITE NAME:

I-75 EXIT 81

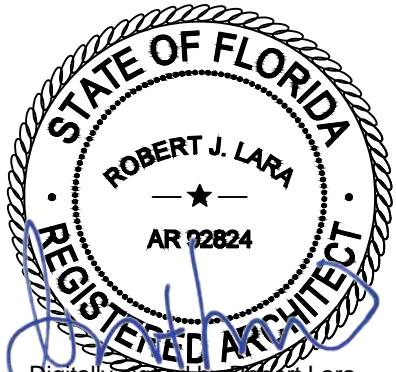
VERIZON SITE NAME:

I75 HWY47

SITE ADDRESS:

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LAKE CITY, FL 32024

SEAL:



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ATC JOB NO:	14538915
CUSTOMER ID:	I75 HWY47
CUSTOMER #:	5000165925

CONSTRUCTION  
DETAILS

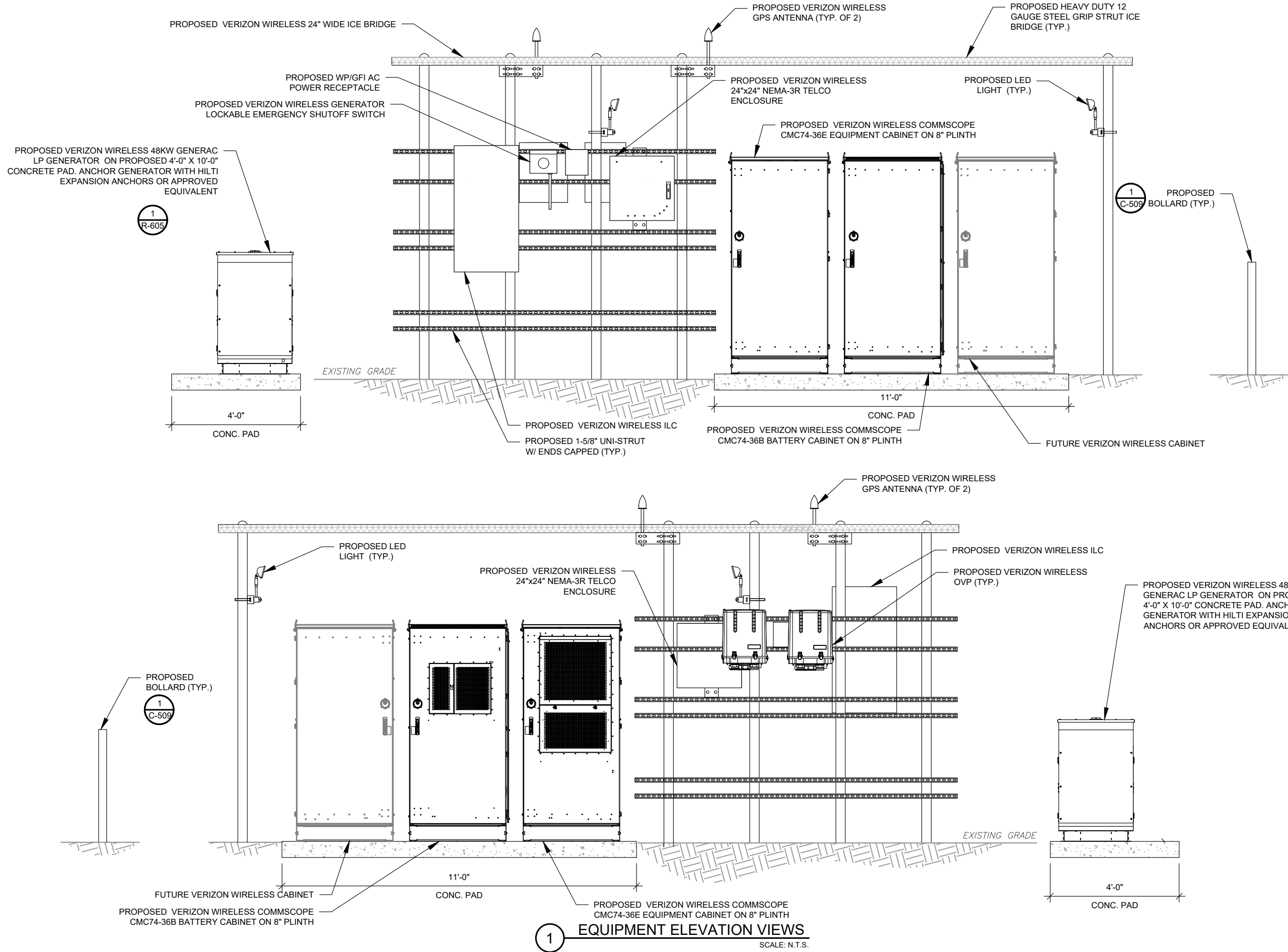
SHEET NUMBER:

C-505

REVISION:

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1 EQUIPMENT ELEVATION VIEWS  
SCALE: N.T.S.



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ATC SITE NUMBER:  
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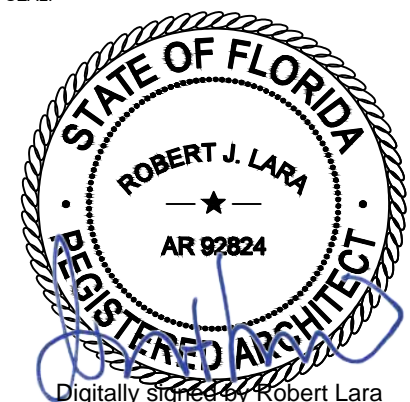
I-75 EXIT 81

VERIZON SITE NAME:

I75 HWY47

SITE ADDRESS:  
ROUTE 10, BOX 1010  
LAKE CITY, FL 32024

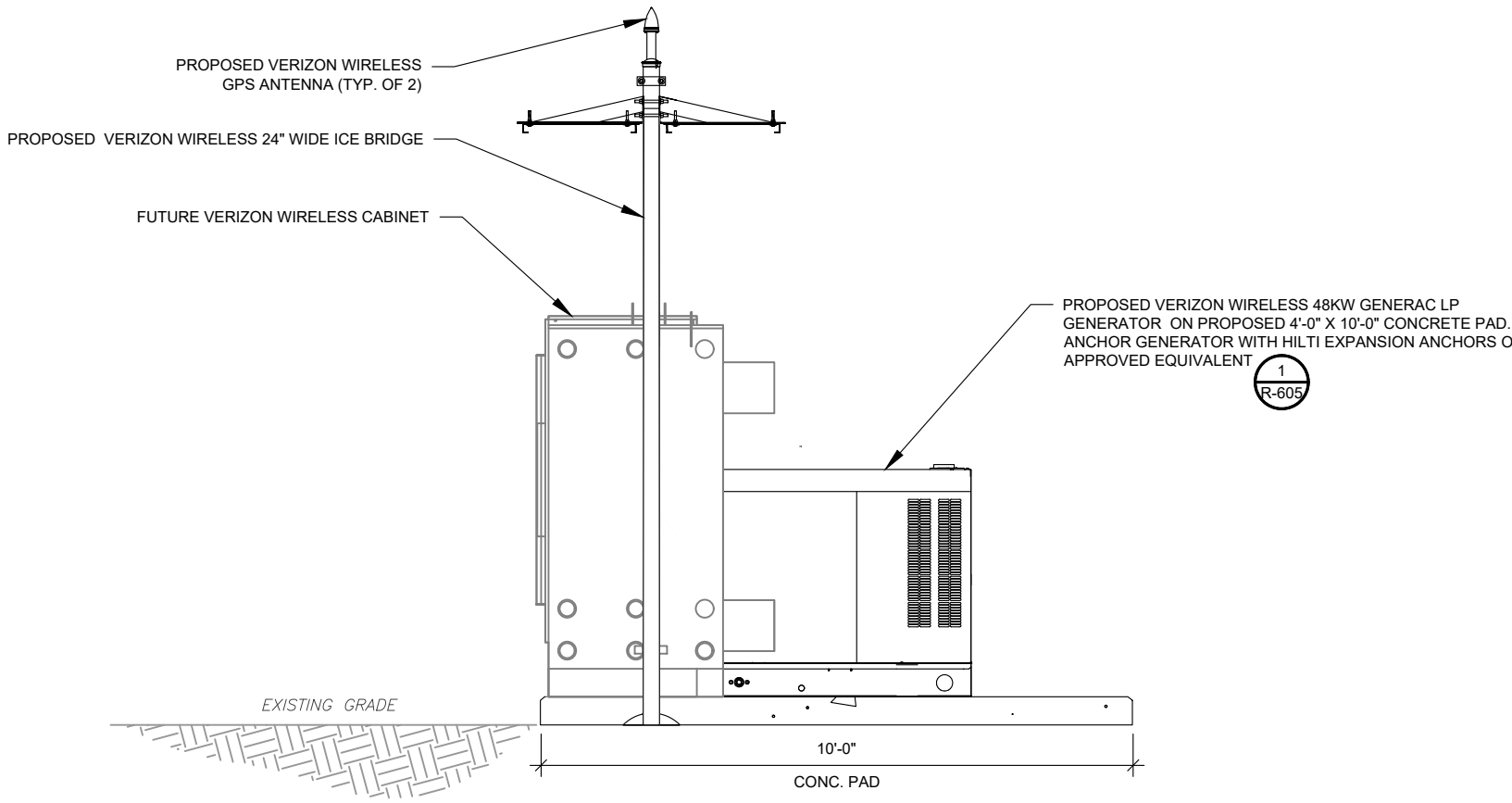
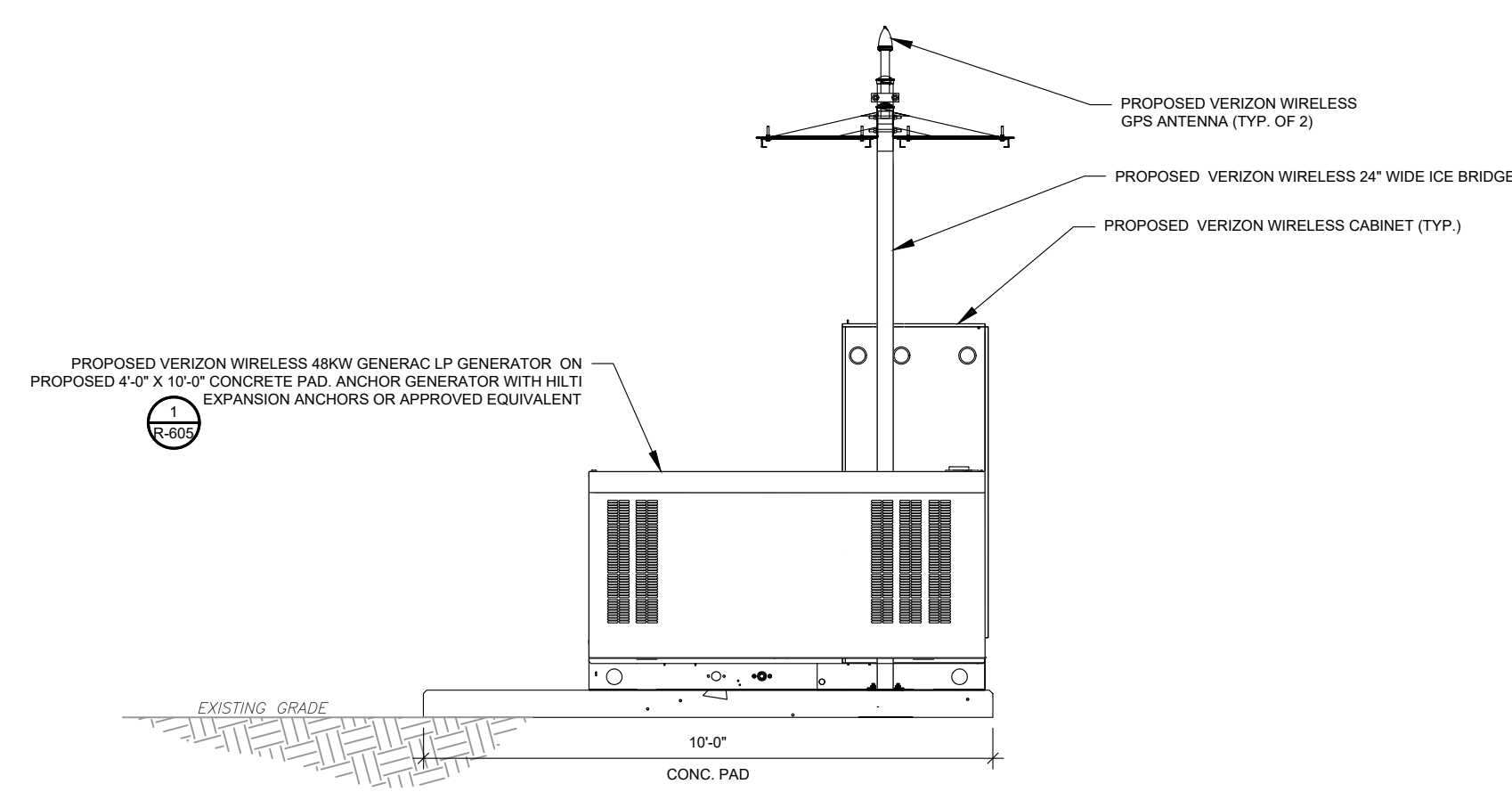
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MH PROJ NO:	240013800
ATC JOB NO:	14538915
CUSTOMER ID:	I75 HWY47
CUSTOMER #:	5000165925

### CONSTRUCTION DETAILS

SHEET NUMBER: <b>C-506</b>	REVISION: <b>1</b>
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1 EQUIPMENT ELEVATION VIEWS  
SCALE: N.T.S.



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1	FINAL	RA	06/04/24

ATC SITE NUMBER:  
302825  
ATC SITE NAME:  
I-75 EXIT 81  
VERIZON SITE NAME:  
I75 HWY47  
SITE ADDRESS:  
ROUTE 10, BOX 1010  
LAKE CITY, FL 32024

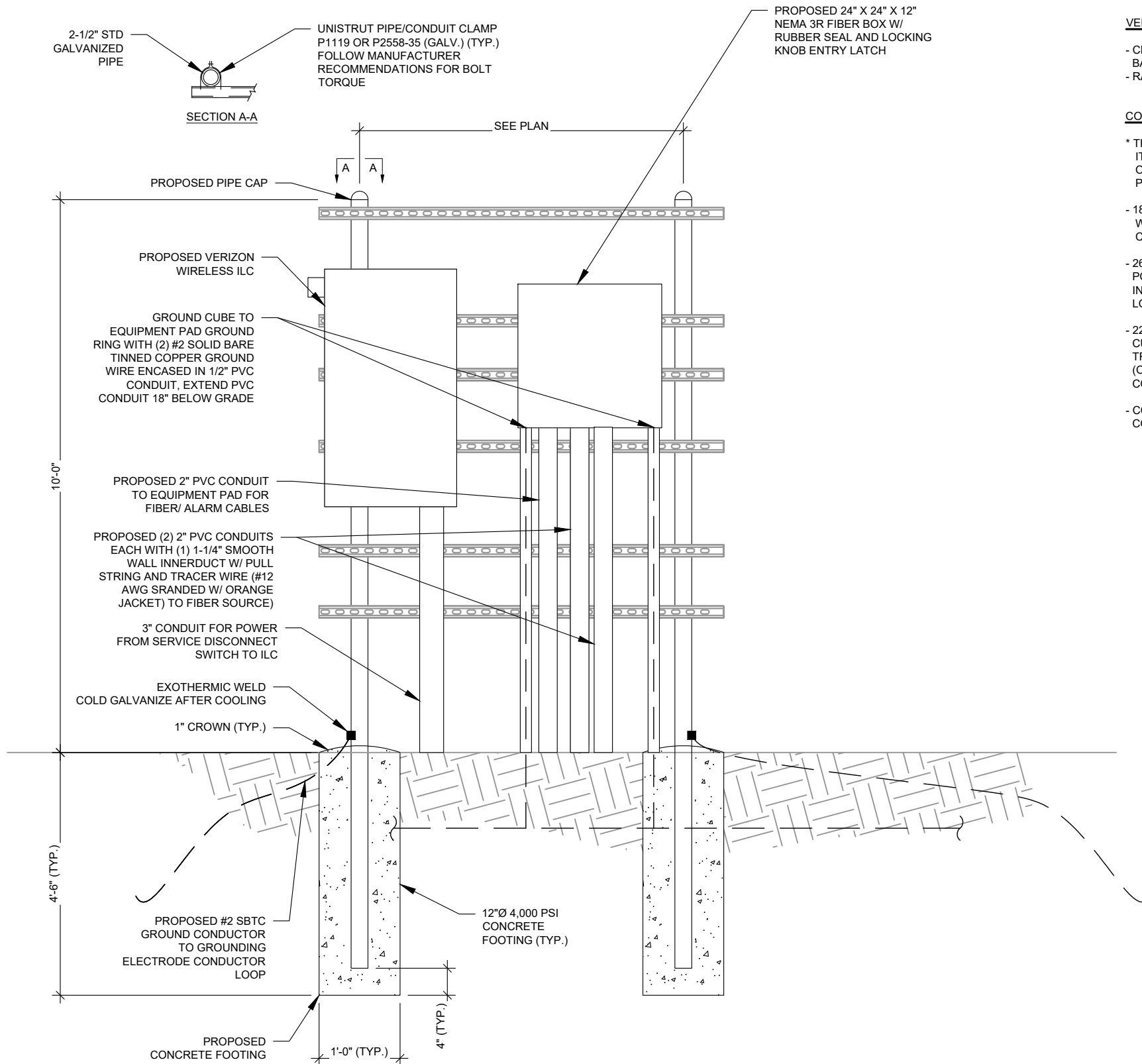
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Date: 2024.06.05 14:17:20-04'00'



MH PROJ NO:	240013800
ATC JOB NO:	14538915
CUSTOMER ID:	I75 HWY47
CUSTOMER #:	5000165925

CONSTRUCTION DETAILS	
SHEET NUMBER: C-507	REVISION: 1



- H-FRAME NOTES:
- IF IT IS NECESSARY TO EXTEND THE H-FRAME, AN ADDITIONAL POST WILL ALWAYS BE REQUIRED.
  - PROPOSED UNISTRUTS TO BE FIELD CUT AND SHOULD NOT EXTEND MORE THAN 6 INCHES BEYOND THE LAST POST.
  - SPRAY ENDS OF UNISTRUT WITH COLD GALVANIZING SPRAY PAINT, ALLOW TO DRY, THEN COVER WITH RUBBER PROTECTIVE CAPS FOR SAFETY.
  - UNISTRUT TO BE CUT FLUSH WITH NO SHARP OR JAGGED EDGES.
  - ALL PROPOSED HARDWARE TO BE MOUNTED AND GROUNDED PER MANUFACTURERS SPECS.
  - ALL ITEMS ARE PROPOSED UNLESS OTHERWISE NOTED.

1 H-FRAME  
SCALE: NOT TO SCALE

VERIZON WIRELESS PROVIDED EQUIPMENT

- CHARLES INDUSTRIES CUBE-SS4B231PX2 EQUIPMENT WITH BATTERY CHARGER
- RAYCAP OVP-12 (RCMDC-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 #SM1200RML2UTAA INSIDE (ONLY REQUIRED WHEN VZT PROVIDES LIT FIBER. UTILITY COORDINATOR MUST VERIFY IF NEEDED)
  - COORDINATE ADDITIONAL ENTRY GATE LOCK(S) WITH CONSTRUCTION MANAGER



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1	FINAL	RA	06/04/24

ATC SITE NUMBER:

302825

ATC SITE NAME:

I-75 EXIT 81

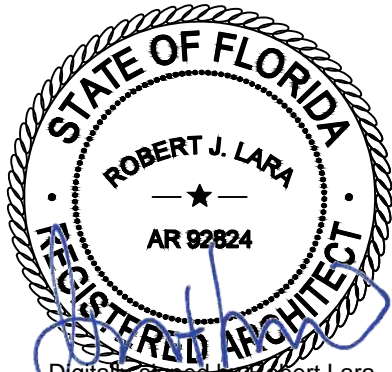
VERIZON SITE NAME:

I75 HWY47

SITE ADDRESS:

ROUTE 10, BOX 1010  
LAKE CITY, FL 32024

SEAL:



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Date: 2024.06.05 14:17:53-04'00'



MH PROJ NO:	240013800
ATC JOB NO:	14538915
CUSTOMER ID:	I75 HWY47
CUSTOMER #:	5000165925

CONSTRUCTION  
DETAILS

SHEET NUMBER:

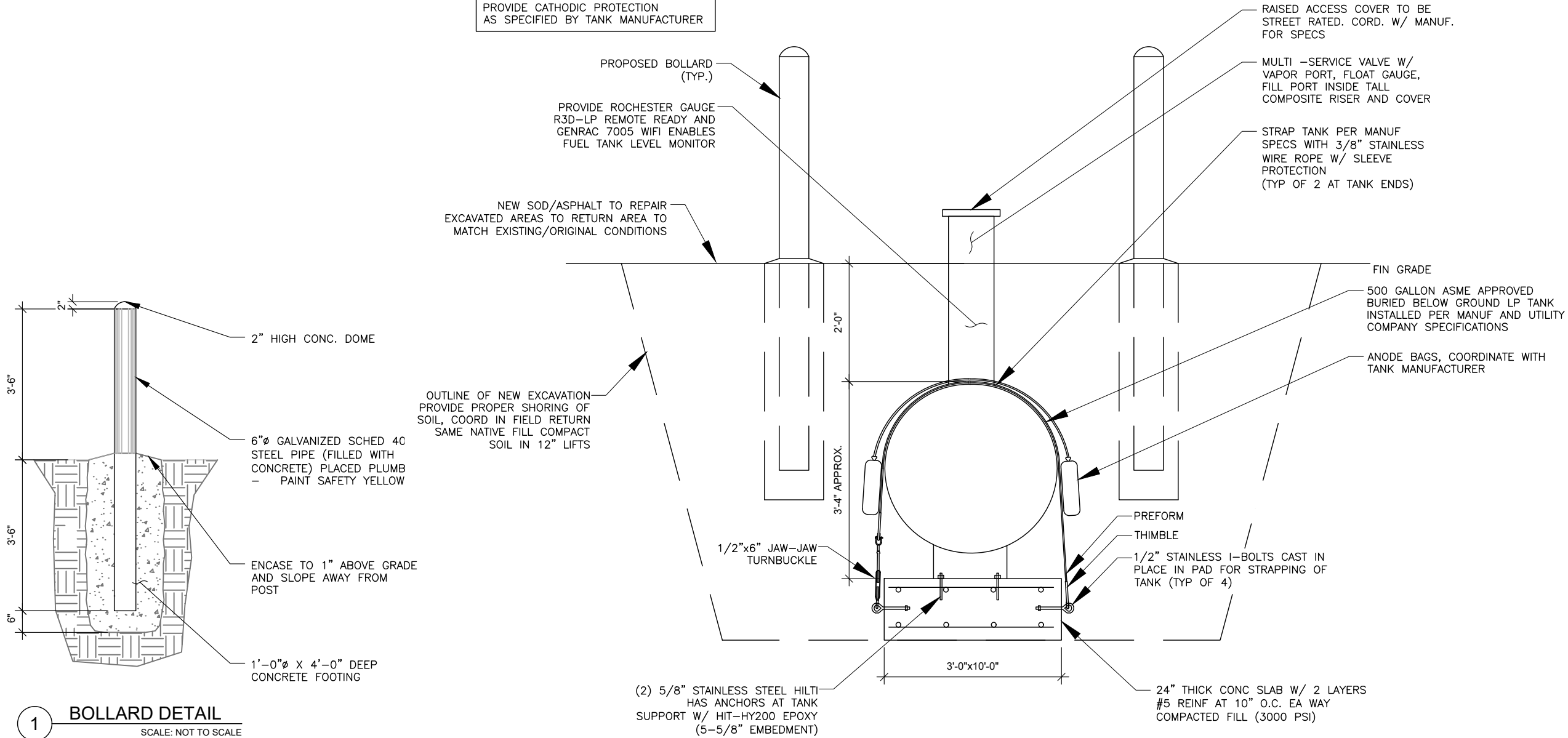
C-508

REVISION:

1



NOTE:  
PROVIDE CATHODIC PROTECTION  
AS SPECIFIED BY TANK MANUFACTURER



1 BOLLARD DETAIL  
SCALE: NOT TO SCALE

2 500 GALLON UNDERGROUND TANK MOUNTING DETAIL

**AMERICAN TOWER®**

**MORRISON HERSHFIELD**

**Stantec**

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ATC SITE NUMBER:  
302825

ATC SITE NAME:  
I-75 EXIT 81

VERIZON SITE NAME:  
I75 HWY47

SITE ADDRESS:  
ROUTE 10, BOX 1010  
LAKE CITY, FL 32024

SEAL:

STATE OF FLORIDA  
ROBERT J. LARA  
REGISTERED ARCHITECT  
AR 92824

Digitally signed by Robert Lara  
Date: 2024.06.05 14:18:18-04'00'

**verizon**

MH PROJ NO: 240013800

ATC JOB NO: 14538915

CUSTOMER ID: I75 HWY47

CUSTOMER #: 5000165925

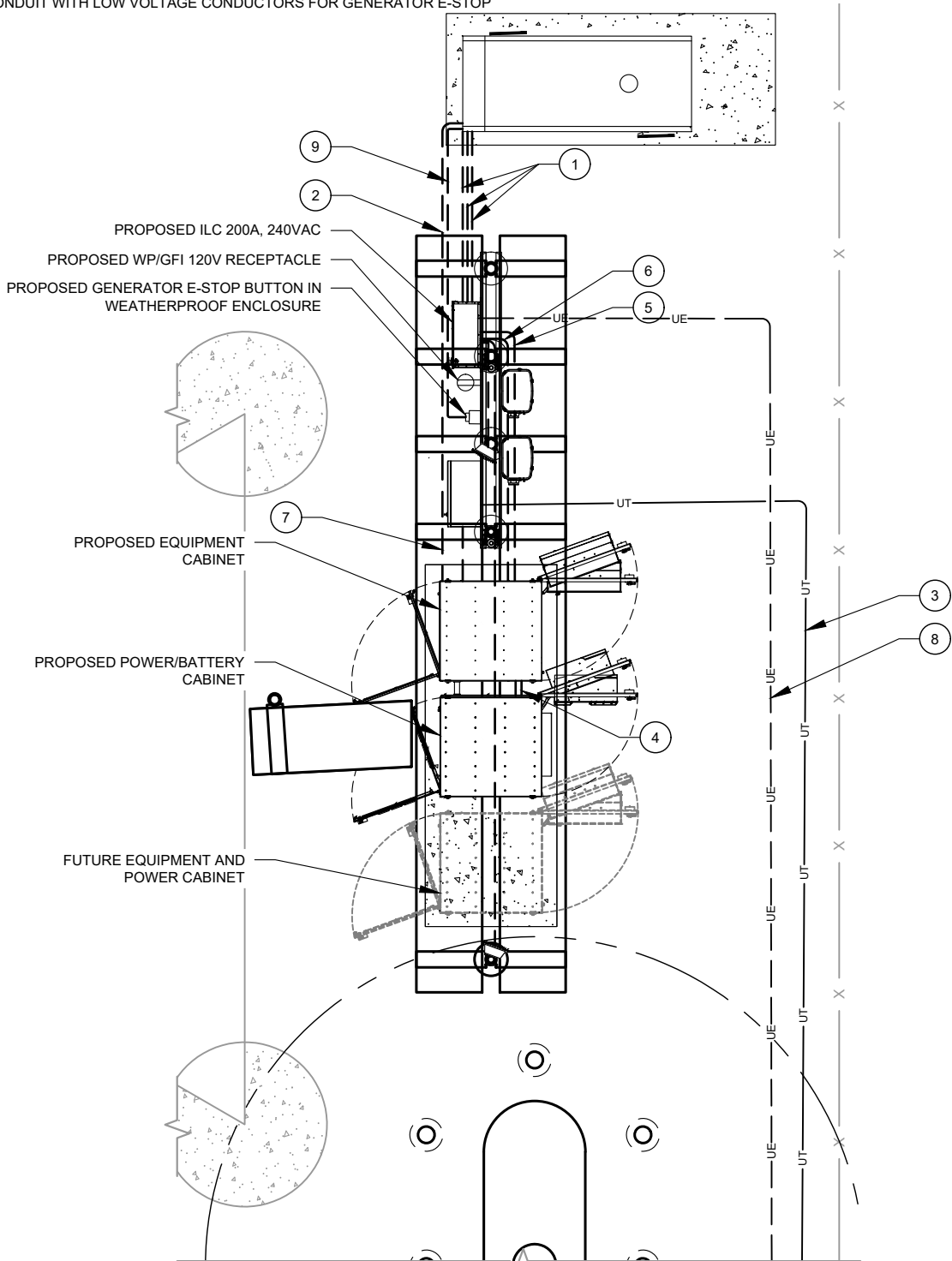
CONSTRUCTION  
DETAILS

SHEET NUMBER:  
C-509

REVISION:  
1

CONDUIT KEYED NOTES:

- 1 (1) 1", (1) 1-1/2", & (1) 3" SCH. 40 PVC BURIED AT DEPTH IN ACCORDANCE WITH ZONING
- 2 (1) 1" CONDUIT TO SITE BOSS FOR MONITORING
- 3 (2) 2" SCH. 40 CONDUIT WITH PULL STRING FOR FIBER TO 24"x36" GTE FIBER HANDHOLE.
- 4 (3) 3" CONDUIT FOR POWER
- 5 (1) 1" CONDUIT FOR ALARMS
- 6 (1) 2" SCH. 40 PVC CONDUIT FOR POWER TO POWER BAY
- 7 (1) 2" SCH. 40 PVC CONDUIT FOR FIBER AND ALARMS FROM 24"x24" NEMA-3R TELCO CABINET. TO PRIMARY CABINET
- 8 (1) 3" CONDUIT FOR POWER FROM SERVICE DISCONNECT SWITCH TO ILC
- 9 1" CONDUIT WITH LOW VOLTAGE CONDUCTORS FOR GENERATOR E-STOP



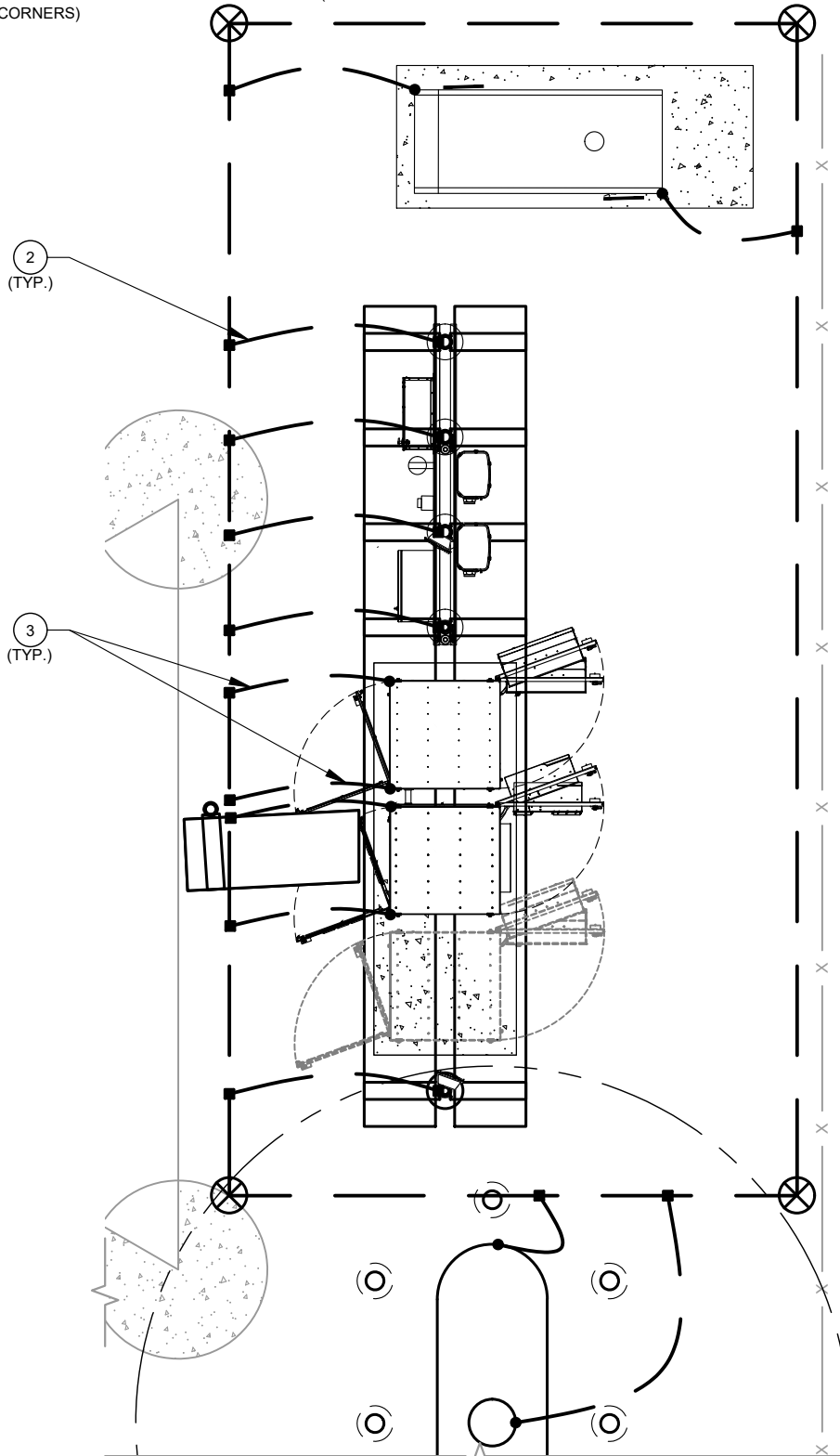
1 DETAILED CONDUIT LAYOUT  
SCALE: N.T.S.

GROUNDING KEYED NOTES:

- 1 BOND TO TOWER GROUND RING W/ (2) #2 AWG SBTC CONDUCTORS.
- 2 #2 AWG BOND FROM H-FRAME & ICE BRIDGE POST TO EXTERNAL GROUND RING (TYP. EVERY POST).
- 3 #2 AWG SBTC EQUIPMENT BOND TO GROUND RING (TYP.)
- 4 5/8Ø" X 10 FT GROUND ROD.
- 5 #2 AWG SBTC GROUND RING.
- 6 #2 AWG SBTC BONDING GENERATOR TO GROUND RING (ONE EACH AT OPPOSITE CORNERS)

GROUNDING PLAN LEGEND:

- EXISTING GROUND WIRE
- GROUND WIRE
- EXOTHERMIC WELD
- MECHANICAL CONNECTION
- COPPER GROUND ROD
- TEST WELL



2 DETAILED GROUNDING LAYOUT  
SCALE: N.T.S.



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302825

ATC SITE NAME:

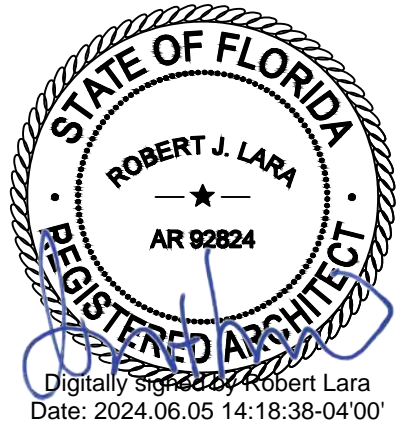
I-75 EXIT 81

VERIZON SITE NAME:

I75 HWY47

SITE ADDRESS:  
ROUTE 10, BOX 1010  
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SEAL:



MH PROJ NO:	240013800
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CUSTOMER ID:	I75 HWY47
CUSTOMER #:	5000165925

GROUNDING PLAN  
AND NOTES

SHEET NUMBER:

E-101

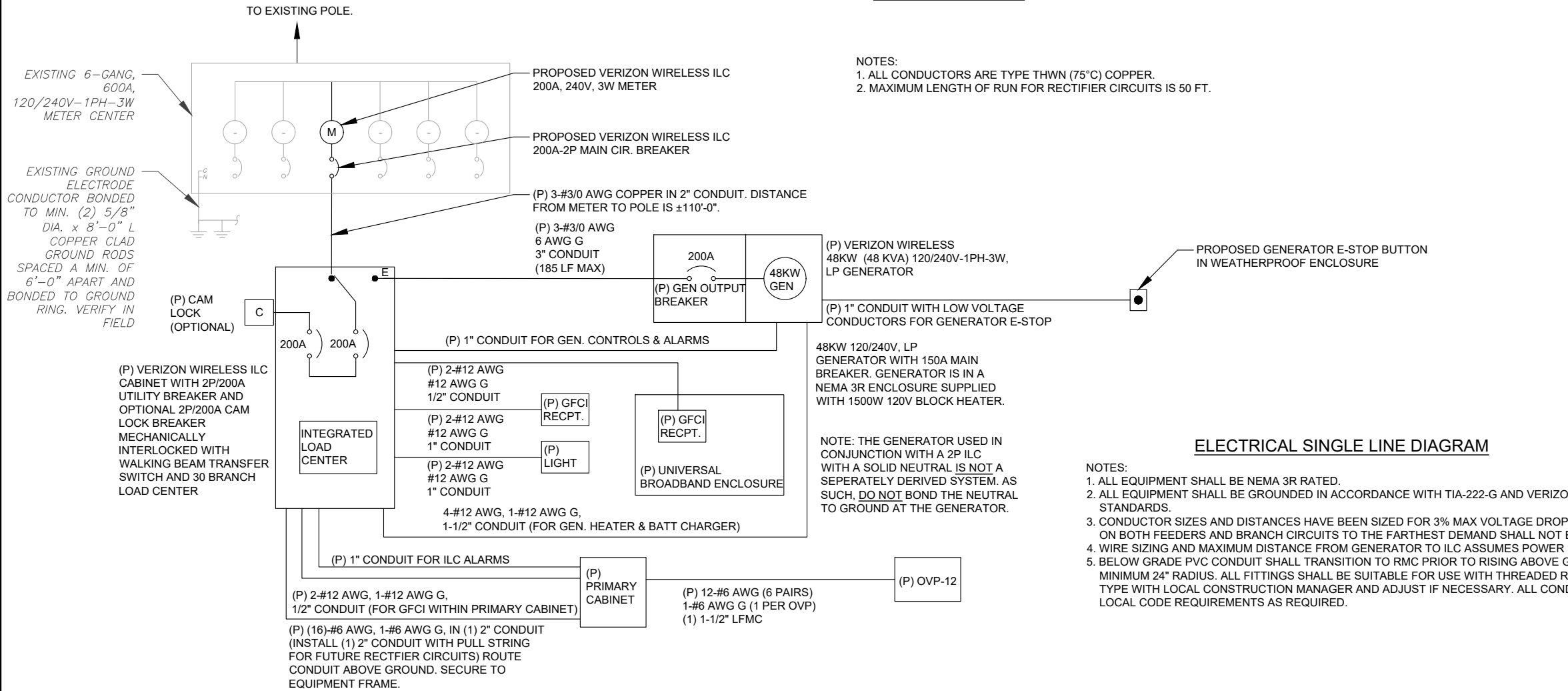
REVISION:

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PANEL DESIGNATION: <b>VZW</b>		TYPE: <b>LIGHTING &amp; APPLIANCE</b>	SYSTEM: <b>120/240V, 3W, 30 CKT</b>		LOCATION: <b>VZW LEASE AREA</b>	
		MOUNTING: <b>SURFACE</b>	MAIN BREAKER (MB): <b>200A</b>			
		ENCLOSURE: <b>NEMA 3R</b>	MAIN BUS RATING: <b>200A</b>		PANEL NOTES: <b>ASCO D300L SERIES</b>	
			MIN. A.I.C. RATING: <b>65K</b>			

CONNECTED LOAD (kVA)		BRIEF DESCRIPTION	FEEDER OR BRANCH CIRCUIT					FEEDER OR BRANCH CIRCUIT				CONNECTED LOAD (kVA)	
A	B		BREAKER		POLE NO.	CIRC. NOTES		BREAKER		POLE NO.	CIRC. NOTES	A	B
1.50		3KW RECTIFIER	30	2	1					2		1.50	
	1.50				3					4			1.50
1.50		3KW RECTIFIER	30	2	5					6		1.50	
	1.50				7					8			1.50
1.50		3KW RECTIFIER	30	2	9					10		1.50	
	1.50				11					12			1.50
1.50		3KW RECTIFIER	30	2	13					14		1.50	
	1.50				15					16			1.50
0.50		LIGHT	20	1	17					18		0.00	
	0.18	GFCI	20	1	19					20			0.00
0.18		GFCI	20	1	21					22		0.00	
	1.50	GEN BLOCK HEATER	20	1	23					24			0.00
1.20		GEN BATTERY CHARGER	20	1	25					26		0.00	
	0.18	GFCI	20	1	27					28			0.00
0.00		SPACE			29					30		0.00	
7.9	7.9											6.0	6.0
					A	B	TOTAL						
					13.9	13.9	27.8	CONNECTED LOAD (kVA)					
					14.0	13.9	27.9	DEMAND LOAD (kVA)					
								DEMAND LOAD AMPS:		116 AMPS			

PANEL SCHEDULE



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PLANTATION, FL 33324  
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REV.	DESCRIPTION	BY	DATE
A	PRELIM	RA	12/15/23
B	REVISED AS PER RFDS	RA	02/02/24
C	REVISED AS PER COMMENTS	RA	02/21/24
D	FINAL	JK	04/03/24
1	FINAL	RA	06/04/24

ATC SITE NUMBER:

302825

ATC SITE NAME:

I-75 EXIT 81

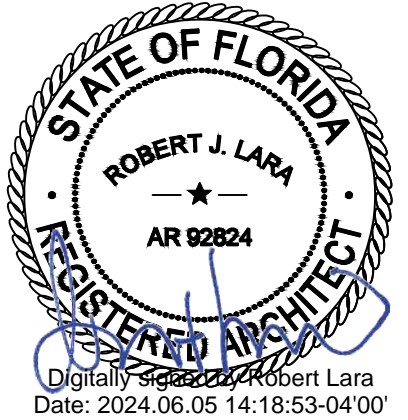
VERIZON SITE NAME:

I75 HWY47

SITE ADDRESS:

ROUTE 10, BOX 1010  
LAKE CITY, FL 32024

SEAL:



MH PROJ NO:	240013800
ATC JOB NO:	14538915
CUSTOMER ID:	I75 HWY47
CUSTOMER #:	5000165925

ONE-LINE DIAGRAM AND  
PANEL SCHEDULE

SHEET NUMBER:

E-102

REVISION:

1





- 1 TYPICAL ANTENNA GROUNDING DIAGRAM

SCALE: N.T.S.



- ### 3 MAIN GROUND BAR DETAIL

SCALE: N.T.S.



- ### GROUND ROD DETAIL

SCALE: N.T.S.



- 2 TOWER GROUND BAR DETAIL

SCALE: N.T.S.



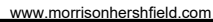
SCALE: N.T.S.



SCALE: N.T.S.

GENERATOR INSTALLATION NOTE:

INSTALL GENERATOR AND TRANSFER SWITCH WITH ALL SUPPLIED ACCESSORIES PER MANUFACTURER'S INSTALLATION INSTRUCTIONS AND SPECIFICATIONS. THIS INCLUDES, BUT IS NOT LIMITED TO, ACCESSORIES FOR THE EXHAUST SYSTEM, FUEL SYSTEM, ENCLOSURE INTEGRITY (CAPS, PLUGS, COVERS, ETC.), ELECTRICAL CONNECTIONS, AND GROUNDING CONNECTIONS.



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ATC SITE NAME:

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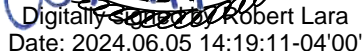
VERIZON SITE NAME:

175 HWY47

SITE ADDRESS:

ROUTE 10, BOX 1010  
LAKE CITY, FL 32024

SEAL:



MH PROJ NO:	240013800
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ATC JOB NO:	14538915
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CUSTOMER ID:	I75 HWY47
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CUSTOMER #:	5000165925
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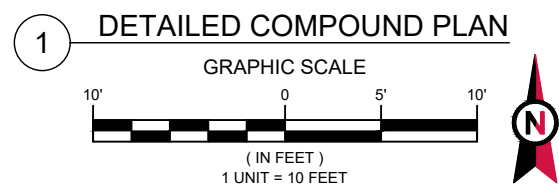
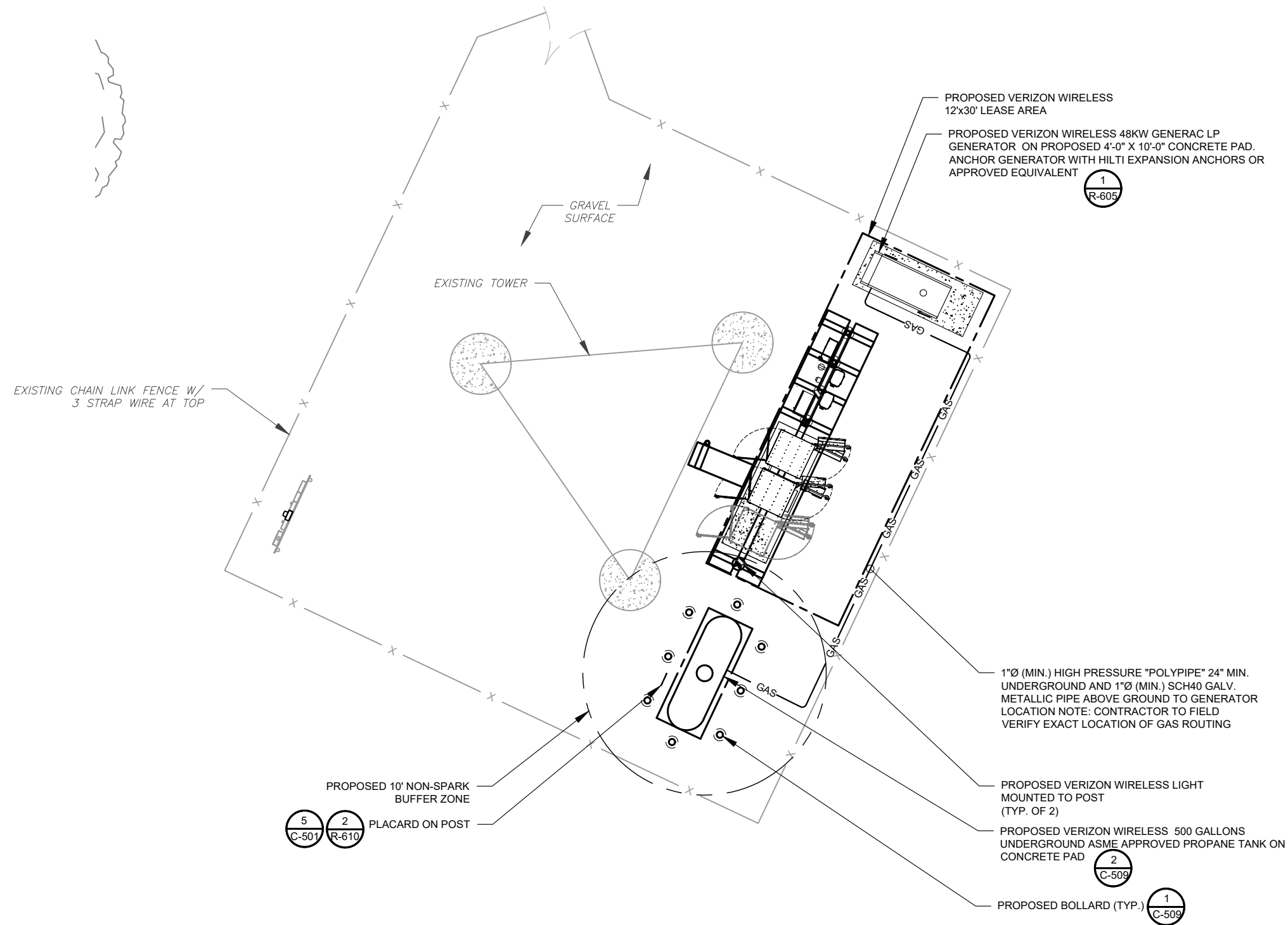
## GROUNDING DETAILS

SHEET NUMBER:

E-501

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1



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D	FINAL	JK	04/03/24
1	FINAL	RA	06/04/24

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302825

ATC SITE NAME:

I-75 EXIT 81

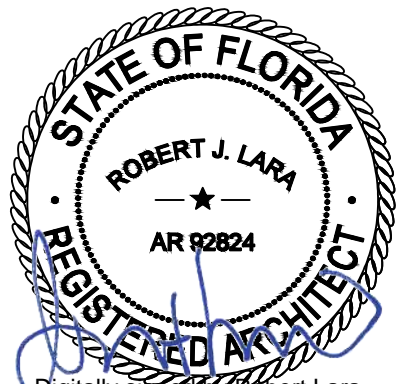
VERIZON SITE NAME:

I75 HWY47

SITE ADDRESS:

ROUTE 10, BOX 1010  
LAKE CITY, FL 32024

SEAL:



Digitally signed by Robert Lara  
Date: 2024.06.05 14:19:29-04'00'



MH PROJ NO:	240013800
ATC JOB NO:	14538915
CUSTOMER ID:	I75 HWY47
CUSTOMER #:	5000165925

## PLUMBING COMPOUND PLAN

SHEET NUMBER:

P-101

REVISION:

1

NOTES

1. THIS INSTALLATION SHALL COMPLY WITH THE INTERNATIONAL FUEL GAS CODE.
2. THE CONTRACTOR SHALL FIELD VERIFY ALL CONDUIT LENGTH, ROUTING AND PLAN DIMENSIONS AND SHALL IMMEDIATELY NOTIFY CONSTRUCTION MANAGER AND ENGINEER OF ANY DISCREPANCIES.
3. FOR OTHER THAN BLACK STEEL PIPE, EXPOSED GAS PIPING SHALL BE IDENTIFIED BY A YELLOW LABEL MARKED "GAS" IN BLACK LETTERS. THE MARKING SHALL BE SPACED AT INTERVALS NOT EXCEEDING 5 FEET. THE MARKING SHALL NOT BE REQUIRED ON PIPE LOCATED IN THE SAME ROOM AS THE EQUIPMENT SERVED.
4. PIPING SHALL BE MARKED WITH AN APPROVED PERMANENT IDENTIFICATION BY THE INSTALLER SO THAT THE PIPING SYSTEM SUPPLIED BY EACH METER IS READILY IDENTIFIABLE.
5. THE MAXIMUM DESIGN OPERATING PRESSURE FOR PIPING SYSTEMS LOCATED INSIDE BUILDING SHALL NOT EXCEED 5 POUNDS PER SQUARE INCH GAUGE (PSIG).
6. PIPING SHALL BE SCHEDULE 40 METALLIC, SEMI-RIGID COPPER TUBING (TYPE K OR L), CORRUGATED STAINLESS STEEL TUBING (CSST) OR POLYETHYLENE PLASTIC PIPE SUITABLE FOR NATURAL GAS.
7. STEEL AND WROUGHT-IRON PIPE SHALL BE AT LEAST OF STANDARD WEIGHT AND SHALL COMPLY WITH ONE OF THE FOLLOWING STANDARDS:

A. ASME B 36.10, 10M

B. ASTM A 53

C. ASTM A 106
8. METALLIC PIPING AND FITTINGS COATED WITH A CORROSION – RESISTANT MATERIAL SHALL BE USED.
9. STEEL TUBING SHALL COMPLY WITH ASTM A 254 OR ASTM A 539.
10. CORRUGATED STAINLESS STEEL TUBING SHALL BE TESTED AND LISTED IN COMPLIANCE WITH THE CONSTRUCTION, INSTALLATION AND PERFORMANCE REQUIREMENTS OF ANSI LC 1/CSA 6.26.
11. PLASTIC PIPE, TUBING AND FITTINGS SHALL BE USED OUTSIDE, UNDERGROUND ONLY AND SHALL CONFORM TO ASTM D 2513. PIPE SHALL BE MARKED "GAS" AND "ASTM D 2513".
12. PIPE TUBING AND FITTINGS SHALL BE CLEAR AND FREE FROM CUTTING, BURNS AND DEFECTS IN STRUCTURE OR THREADING AND SHALL BE THOROUGHLY BRUSHED, CHIP AND SCALE BLOWN. DEFECTS IN PIPE, TUBING AND FITTINGS SHALL NOT BE REPAIRED. DEFECTIVE PIPE, TUBING AND FITTINGS SHALL BE REPLACED.
13. METALLIC PIPE AND FITTINGS THREADS SHALL BE TAPER PIPE THREADS AND SHALL COMPLY WITH ASME B1.20.1.
14. PIPE JOINTS SHALL BE THREADED, FLANGED, BRAZED OR WELDED. WHERE NONFERROUS PIPE IS BRAZED, THE BRAZING MATERIALS SHALL HAVE A MELTING POINT IN EXCESS OF 1,000°F (538°C). BRAZING ALLOYS SHALL NOT CONTAIN MORE THAN 0.05 PERCENT PHOSPHOROUS.
15. METALLIC FITTINGS, INCLUDING VALVES, STRAINERS AND FILTERS, SHALL COMPLY WITH THE FOLLOWING:

A. FITTINGS USED WITH STEEL OR WROUGHT-IRON PIPE SHALL BE STEEL, BRASS, BRONZE, MALLEABLE CAST IRON.

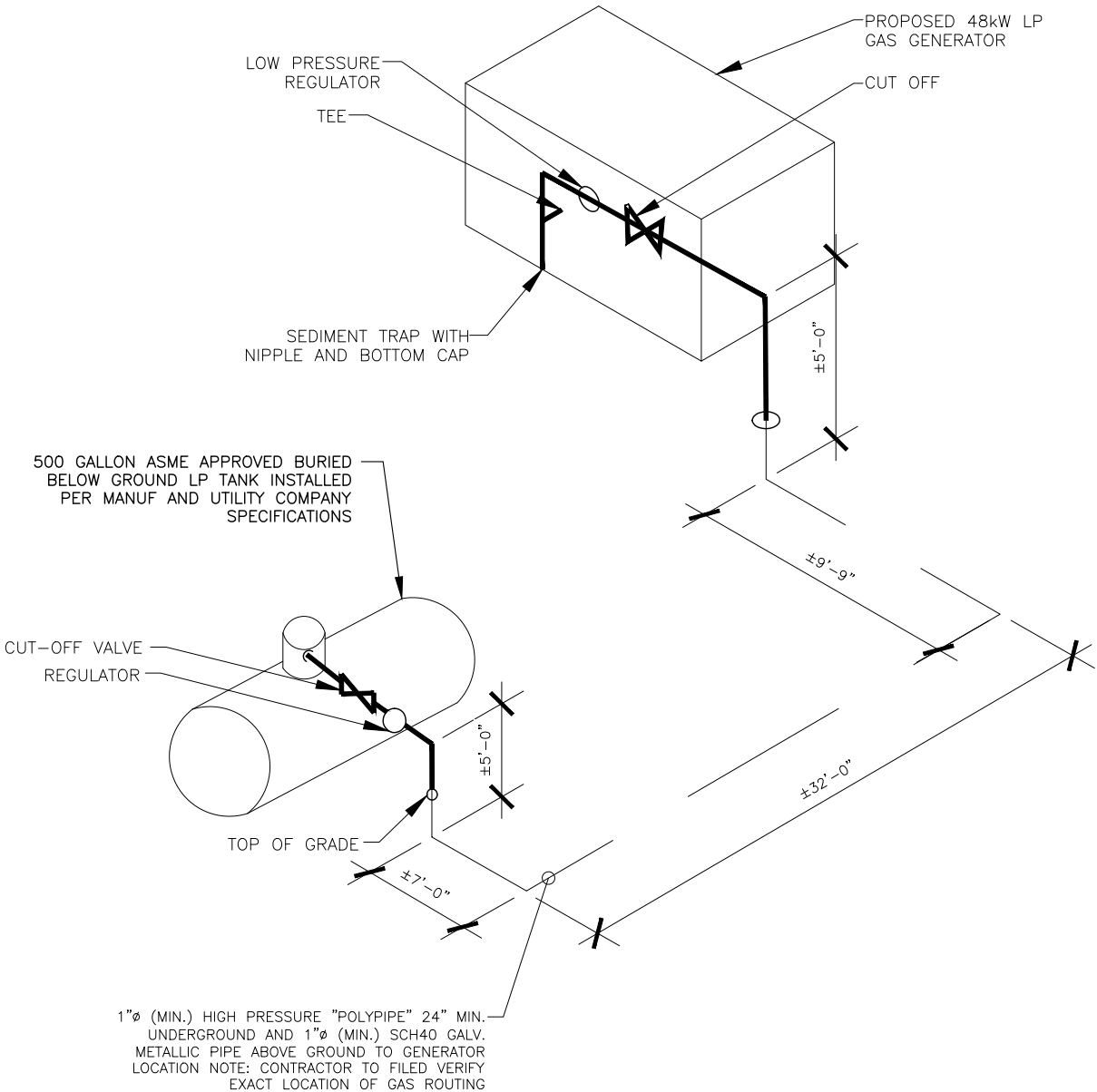
B. FITTING USED WITH COPPER OR BRASS PIPE SHALL BE COPPER, BRASS OR BRONZE.
16. PORTIONS OF A PIPING SYSTEM INSTALLED IN CONCEALED LOCATIONS SHALL NOT HAVE UNIONS, TUBING FITTINGS, RIGHT AND LEFT COUPLINGS, BUSHINGS, COMPRESSION COUPLINGS AND SWING JOINTS MADE BY COMBINATIONS OF FITTINGS.
17. UNDERGROUND PIPING, WHERE INSTALLED BELOW GRADE THROUGH THE OUTER FOUNDATION OR BASEMENT WALL OF A BUILDING, SHALL BE ENCASED A PROTECTIVE PIPE SLEEVE. THE ANNULAR SPACE BETWEEN THE GAS PIPING AND THE SLEEVE SHALL BE SEALED.
18. ALL PIPING INSTALLED OUTDOORS SHALL BE ELEVATED NOT LESS THAN 3-1/2" ABOVE GROUND AND WHERE INSTALLED ACROSS ROOF SURFACES, SHALL BE ELEVATED NOT LESS THAN 3-1/2" ABOVE ROOF SURFACE. PIPING INSTALLED ABOVE GROUND, OUTDOORS AND INSTALLED ACROSS THE SURFACE OF ROOFS SHALL BE SECURELY SUPPORTED AND LOCATED WHERE IT WILL BE PROTECTED FROM PHYSICAL DAMAGE. WHERE PASSING THROUGH AN OUTSIDE WALL, THE PIPING SHALL ALSO BE PROTECTED AGAINST CORROSION BY COATING OR WRAPPING WITH AN INERT MATERIAL. WHERE PIPING IS ENCASED IN A PROTECTIVE PIPE SLEEVE, THE ANNULAR SPACE BETWEEN THE PIPING AND THE SLEEVE SHALL BE SEALED.
19. UNDERGROUND PIPING SYSTEMS SHALL BE INSTALLED, A MINIMUM DEPTH OF 12 INCHES BELOW GRADE. INDIVIDUAL LINES TO OUTSIDE LIGHTS, GRILLS OR OTHER APPLIANCES SHALL BE INSTALLED A MINIMUM OF 8 INCHES BELOW FINISHED GRADE, PROVIDED THAT SUCH INSTALLATION IS APPROVED AND IS INSTALLED IN A LOCATION NOT SUSCEPTIBLE TO PHYSICAL DAMAGE.
20. PIPING SHALL BE SUPPORTED WITH PIPE HOOKS, METAL PIPE STRAPS, BANDS, BRACKETS, OR HANGERS SUITABLE FOR THE SIZE OF PIPING, OF ADEQUATE STRENGTH AND QUALITY AND LOCATE AT INTERVALS SO AS TO PREVENT OR DAMP OUT EXCESSIVE VIBRATION. PIPING SHALL BE ANCHORED TO PREVENT UNDUE STRAINS ON CONNECTED EQUIPMENT AND SHALL NOT BE SUPPORTED BY OTHER PIPING. PIPE HANGERS AND SUPPORTS SHALL CONFORM TO THE REQUIREMENTS OF MSS SP-58 AND SHALL BE SPACED IN ACCORDANCE WITH SECTION 415 OF THE 2004 FUEL GAS CODE. SUPPORTS, HANGERS AND ANCHORS SHALL BE INSTALLED SO AS NOT TO INTERFERE WITH THE FREE EXPANSION AND CONTRACTION OF THE PIPING BETWEEN ANCHORS. ALL PARTS OF THE SUPPORTING EQUIPMENT SHALL BE DESIGNED AND INSTALLED SO THEY WILL NOT BE DISENGAGED BY MOVEMENT OF THE SUPPORTED PIPING.

DESIGN PARAMETERS	
HIGH P. REG SETTING	2.0 PSI
HIGH P. DESIGN DROP	1.0 PSI
HIGH P. RUN LENGTH	±55'-0"
PIPE SIZE (TABLE 402.4(27), 402.4(36))	3/4"ø
PIPE LOW P. REG SETTING	10 WC
LOW P. DESIGN DROP	0.5 WC
LOW P. RUN LENGTH	5' ±*
LOW P. PIPE SIZE (TAB 402.4(28), 402.4(35))	3/4"ø
EQUIPMENT INLET PRESSURE	10 WC
EQUIPMENT OPERATION PRESSURE	7-11 WC
DESIGN CONSUMPTION RATE @ 100% LOAD	258 FT³ / HR

\* = EQUIVALENT LENGTH  
\*\* = MAXIMUM LENGTH FOR THIS SIZE PIPE.  
EXACT DISTANCE TO BE DETERMINED IN FIELD  
AND SHALL NOT EXCEED DISTANCE SHOWN.

NOTE:

EXACT ROUTE OF GAS PIPE  
AND NUMBER OF BENDS TO  
BE DETERMINED IN FIELD



GAS PIPING ISOMETRIC

NTS

1



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1	FINAL	RA	06/04/24

ATC SITE NUMBER:

302825

ATC SITE NAME:

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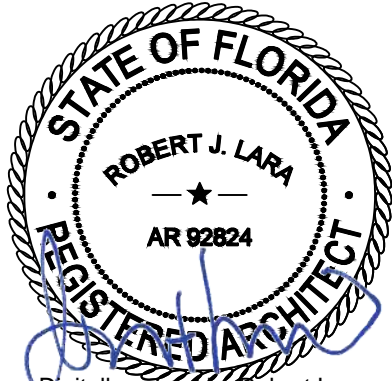
VERIZON SITE NAME:

I75 HWY47

SITE ADDRESS:

ROUTE 10, BOX 1010  
LAKE CITY, FL 32024

SEAL:



Digitally signed by Robert Lara

Date: 2024.06.05 14:19:53-04'00'



MH PROJ NO:	240013800
ATC JOB NO:	14538915
CUSTOMER ID:	I75 HWY47
CUSTOMER #:	5000165925

GAS PIPING ISOMETRIC

SHEET NUMBER:

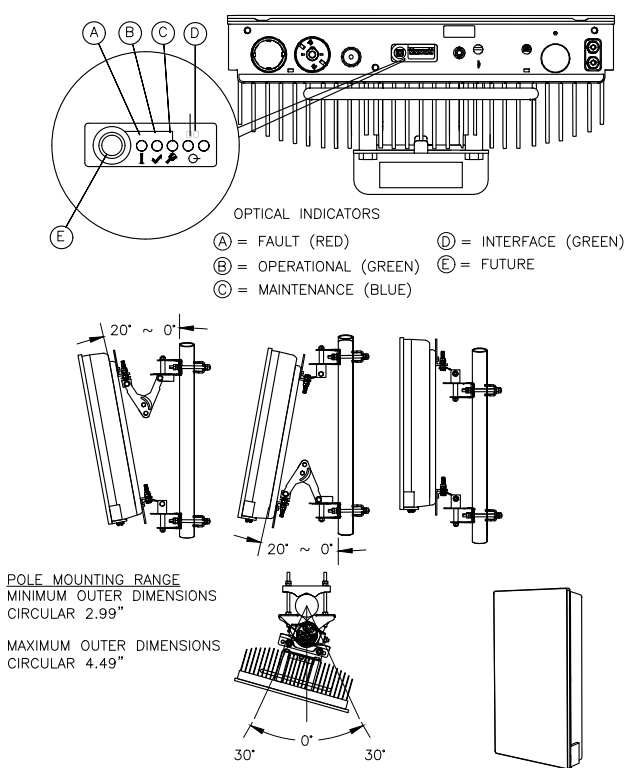
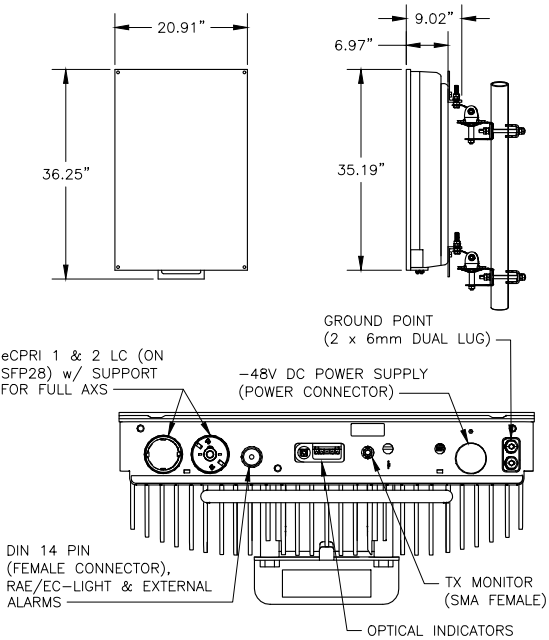
P-501

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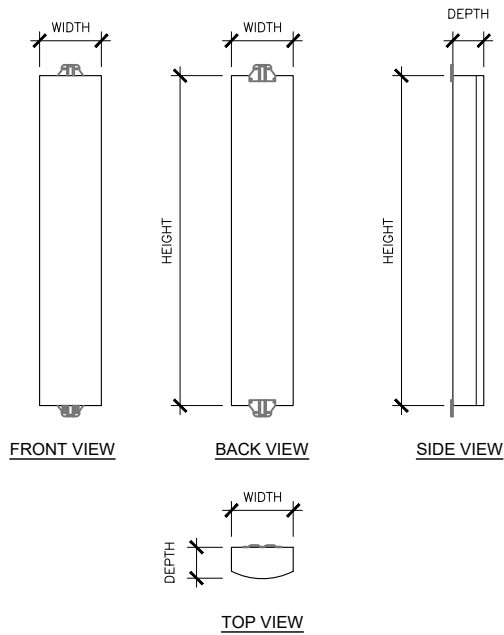
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MANUFACTURER:	ERICSSON
MODEL:	AIR 6419 N77G (2.5GHz M-MIMO)
DIMENSIONS:	30" x 15.7" x 6.7" NOT TO EXCEED (H x W x D)
WEIGHT:	70.0 LBS (EXCLUDING MOUNTING KIT)
MOUNT WEIGHT:	13.5 LBS (SXX109 2016/1)



1 ERICSSON AIR 6419  
SCALE: N.T.S.

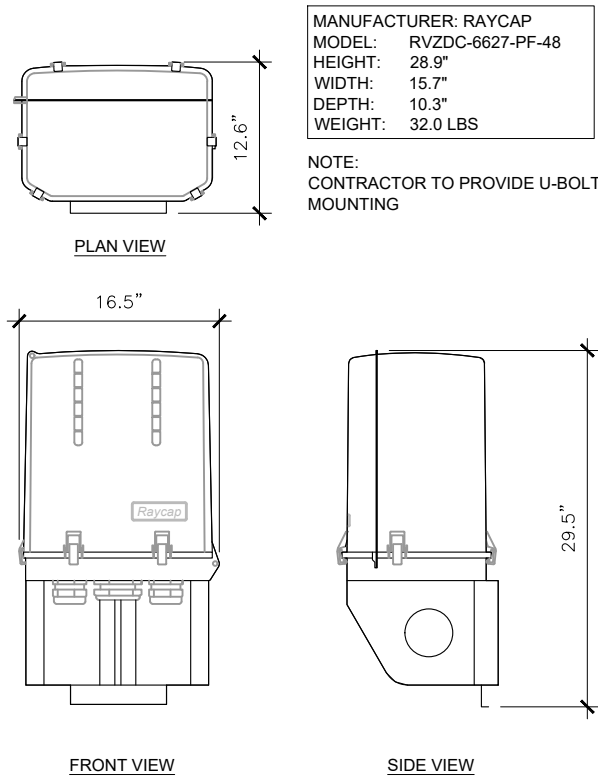


JMA - MX06FIT865-02

SIZE AND WEIGHT TABLE

HEIGHT	WIDTH	DEPTH	WEIGHT
95.9"	11.9"	10.7"	50.0 LBS

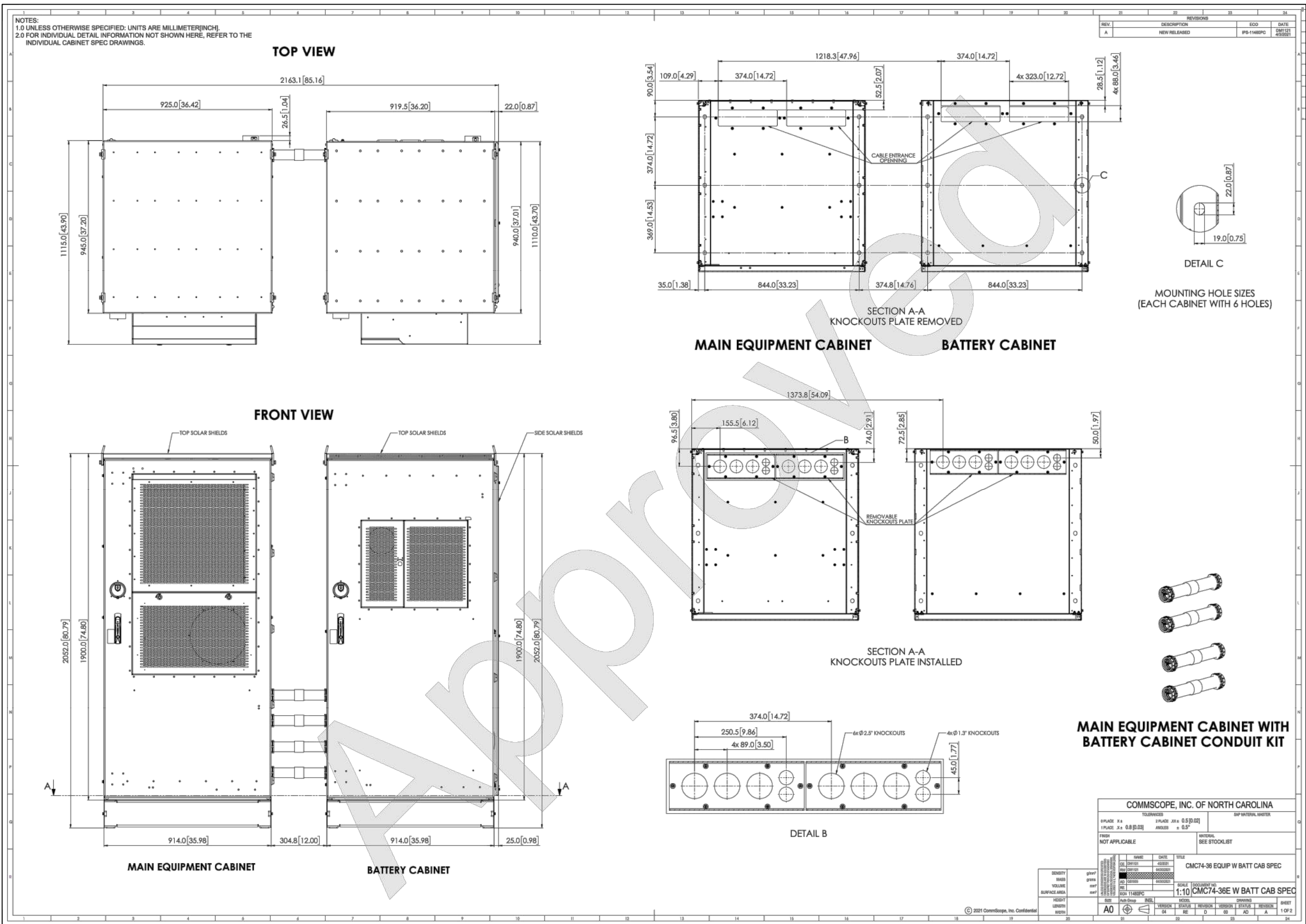
2 ANTENNA SPECIFICATIONS  
SCALE: N.T.S.



3 OVP SPECIFICATIONS  
SCALE: N.T.S.

SUPPLEMENTAL

SHEET NUMBER:	REVISION:
R-601	

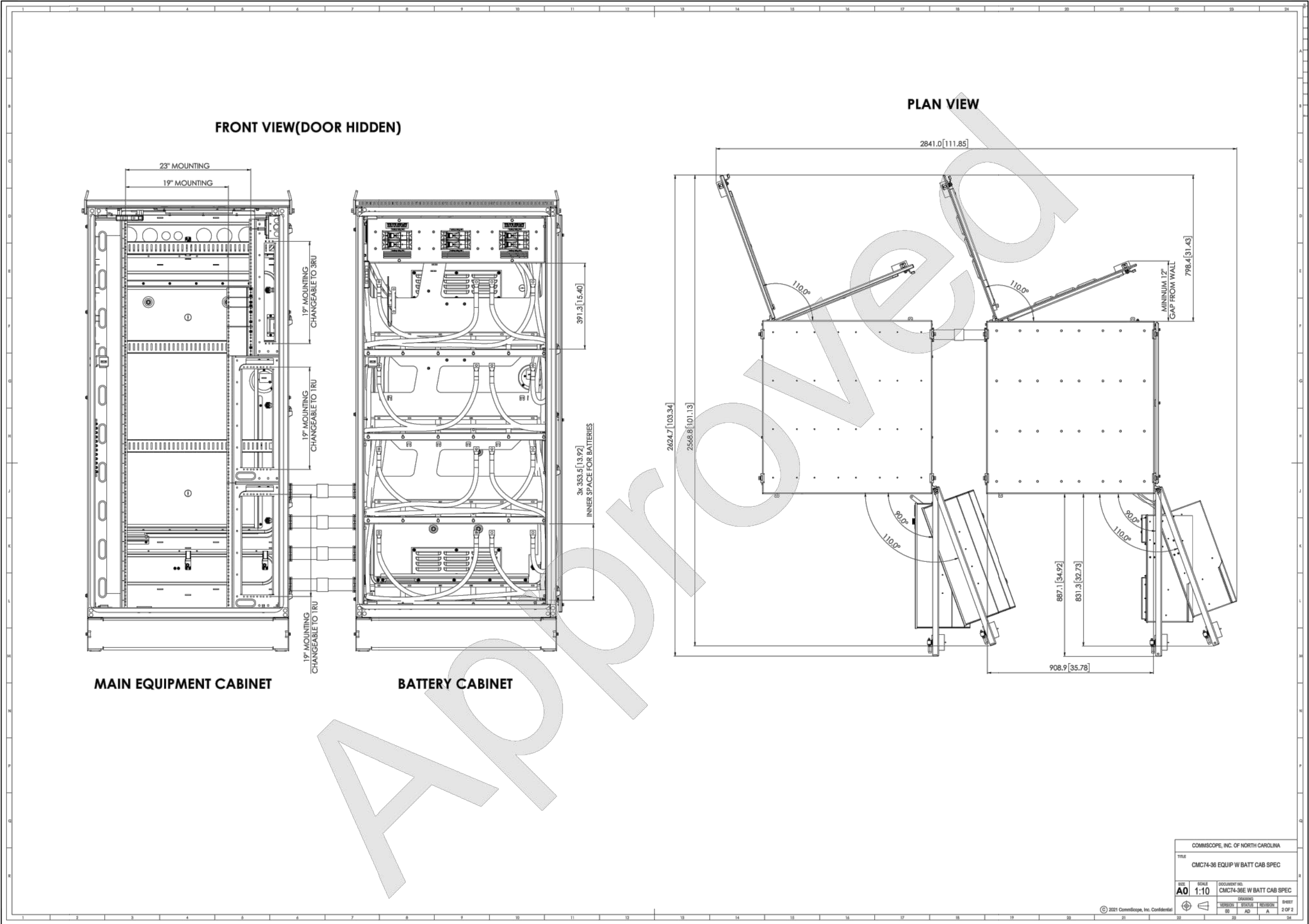


SUPPLEMENTAL

SHEET NUMBER: REVISION:

R-602

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



SUPPLEMENTAL

SHEET NUMBER:  
R-603

REVISION:



2. PRODUCT DESCRIPTION

All CUBE's in the series consist of a single compartment that is equipped with a 21"x21" backplane for mounting equipment. See Table 2 for the features specific to each model. For models with an aluminum mesh backplane, the backplane is perforated with Ø0.140" holes that fit #8 self-tapping screws (customer supplied).

Figure 2 shows the CUBE dimensions. Figure 3 shows the rear view of a CUBE that is typical for all models in this family. Figures 4 through 10 show the main components of the CUBE's by model.

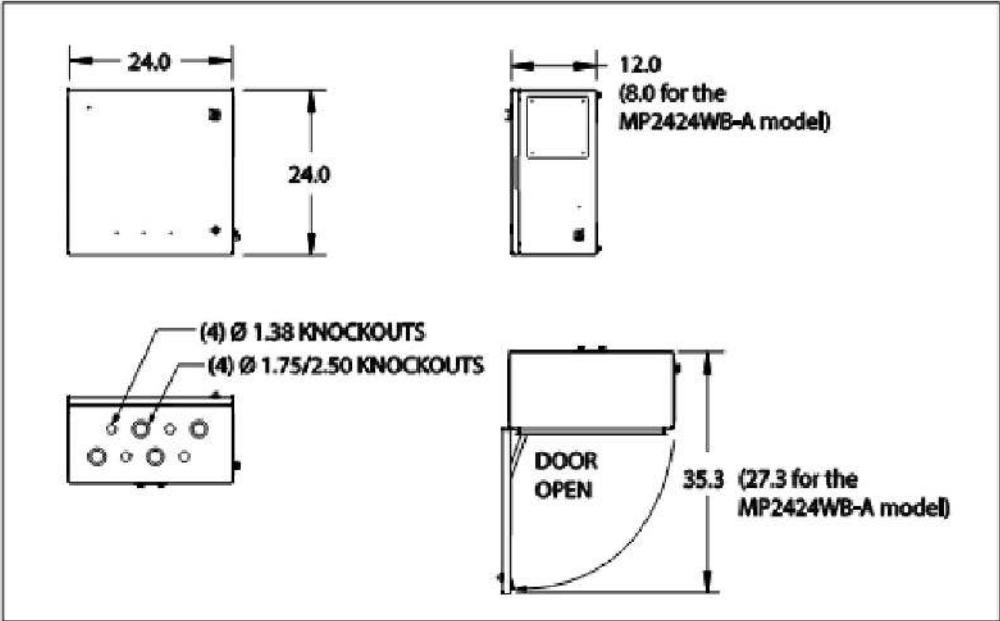


Figure 2 CUBE Dimensions (in inches)  
MP2424WB-A and MP2424WV-A have different cable entry configurations; see Section 3.7.5.

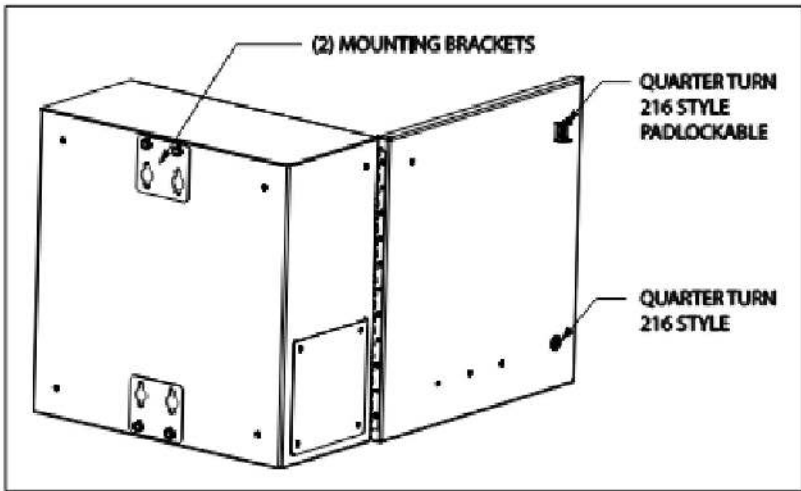


Figure 3 CUBE Rear View (Typical for all Models)

7. SPECIFICATIONS

7.1. Regulatory Specifications

- GR-487 Certified
- UL-60950 Recognized
- GFCI: UL-943 Listed

7.2. Product Specifications

Physical	
Dimensions	24"Hx24"Wx12"D MP2424WB-A: 24"Hx24"Wx8"D
Materials	.125 welded aluminum
Color	Off-White
Electrical	
Bonding and Grounding	(1) 2x6 position ground bar
Cable Entry	See Section 3.7.5
Thermal	
100CFM DAC Fans (MP2424MF-A only)	NMB Technologies NMB4715MS-12T-BS0-A00
Environmental	
Operating Temp. Range, Outside Enclosure	-40° to +115°F, -40° to 46°C
Operating Temp Range, Inside Enclosure	-40° to +149°F, -40° to 65°C
Humidity	0 to 95% (non-condensing)
Altitude	Up to 2,000 meters (6560 feet)
Kits and Replacement Parts	
Touch-up Paint	02-000290-0
216 Type Security Tool	07-002070-0
1/4 Turn Latch	39-000142-0
1/4 Turn Latch with Padlock Hasp	39-000311-0
20A GFCI outlet (MP2424WV-A only)	04-100186-0
Fan Thermostat (MP2424MF-A only)	99-004234-0
Replacement Fan (MP2424MF-A only)	18-950446-0
Replacement Splice Box (MP2424GVMP only)	80-004021-A

Table 1 CUBE Specifications

Model	Description	Approx. Weight as Shipped (lbs)
CUBE-MP242412-A	Aluminum mesh backplane	42
CUBE-MP2424GSWX	Plywood backplane	37
CUBE-MP2424GVMP	Aluminum mesh backplane, louvered side vents, fiber splice tray on back wall	53
CUBE-MP2424GVWX	Plywood backplane, louvered side vents	42
CUBE-MP2424MA-A	NEMA 4, aluminum mesh backplane	42
CUBE-MP2424MF-A	Aluminum mesh backplane, vented fan on door	55
CUBE-MP2424WB-A	NEMA 4, plywood backplane	11
CUBE-MP2424WV-A	NEMA 3R, plywood backplane with 2 ventilated shelves, GFCI	50

Table 2 CUBE Descriptions by Model

## Protector® Series

# GENERAC®

## PROTECTOR® SERIES Standby Generators Liquid-Cooled Gaseous Engine

Protector® Series

1 of 9

### INCLUDES:

- Two-Line LCD Multilingual Digital Evolution™ Controller (English/Spanish/French/Portuguese) With External Viewing Window for Easy Indication of Generator Status and Breaker Position
- Isochronous Electronic Governor
- Sound Attenuated Enclosure
- Closed Coolant Recovery System
- Smart Battery Charger
- UV/Ozone Resistant Hoses
- ±1% Voltage Regulation
- Field Convertible Fuel Type With No Mechanical Adjustment Required.
- 5 Year Limited Warranty
- UL 2200 Listed
- Listed and labeled by the Southwest Research Institute allowing installation as close as 18 in (457 mm) to a structure\*

\*Must be located away from doors, windows, and fresh air intakes and in accordance with local codes.  
[https://assets.sri.org/library/DirectoryOfListedProducts/ConstructionIndustry/973\\_DoC\\_204\\_13264-01-01\\_Rev9.pdf](https://assets.sri.org/library/DirectoryOfListedProducts/ConstructionIndustry/973_DoC_204_13264-01-01_Rev9.pdf)

Standby Power Rating  
Model RG048 (Aluminum - Bisque) - 48 kW 60 Hz  
Model RG060 (Aluminum - Bisque) - 60 kW 60 Hz  
Model RG080 (Aluminum - Bisque) - 80 kW 60Hz



Meets EPA Emission Regulations  
CA / MA Emission Compliant

## FEATURES

- INNOVATIVE DESIGN & PROTOTYPE TESTING** are key components of GENERAC'S success in "IMPROVING POWER BY DESIGN." But it doesn't stop there. Total commitment to component testing, reliability testing, environmental testing, destruction and life testing, plus testing to applicable CSA, NEMA, EESS, and other standards, allows you to choose GENERAC POWER SYSTEMS with the confidence that these systems will provide superior performance.
- TEST CRITERIA:**
  - ✓ PROTOTYPE TESTED
  - ✓ NEMA MG1-22 EVALUATION
  - ✓ SYSTEM TORSIONAL TESTED
  - ✓ MOTOR STARTING ABILITY
- MOBILE LINK® CONNECTIVITY:** Free with select Protector Series standby generator sets, Mobile Link Wi-Fi allows users to monitor the generator set status from anywhere in the world using a smartphone, tablet, or PC. Easily access information such as the current operating status and maintenance alerts. Users can connect an account to an authorized service dealer for fast, friendly, and proactive service. With Mobile Link, users are taken care of before the next power outage.
- SOLID-STATE, FREQUENCY COMPENSATED VOLTAGE REGULATION.** This state-of-the-art power maximizing regulation system is standard on all Generac models. It provides optimized FAST RESPONSE to changing load conditions and MAXIMUM MOTOR STARTING CAPABILITY by electronically torque-matching the surge loads to the engine. Digital voltage regulation at ±1%.
- SINGLE SOURCE SERVICE RESPONSE** from Generac's extensive dealer network provides parts and service know-how for the entire unit, from the engine to the smallest electronic component.
- GENERAC TRANSFER SWITCHES.** Long life and reliability are synonymous with GENERAC POWER SYSTEMS. One reason for this confidence is the GENERAC product line is offered with its own transfer systems and controls for total system compatibility.

# GENERAC®



## 48 / 60 / 80 kW

### GENERATOR OUTPUT VOLTAGE/kW - 60 Hz

		kW LPG	Amp LPG	kW Nat. Gas	Amp Nat. Gas	CB Size (Both)
RG048	120/240 V, 1Ø, 1.0 pf	48	200	48	200	200
	120/208 V, 3Ø, 0.8 pf	48	167	48	167	175
	120/240 V, 3Ø, 0.8 pf	48	144	48	144	150
	277/480 V, 3Ø, 0.8 pf	48	72	48	72	80
RG060	120/240 V, 1Ø, 1.0 pf	60	250	60	250	300
	120/208 V, 3Ø, 0.8 pf	60	208	60	208	200
	120/240 V, 3Ø, 0.8 pf	60	180	60	180	200
	277/480 V, 3Ø, 0.8 pf	60	90	60	90	100
RG080	120/240 V, 1Ø, 1.0 pf	75	312	80	333	400
	120/208 V, 3Ø, 0.8 pf	75	260	80	278	300
	120/240 V, 3Ø, 0.8 pf	75	226	80	241	300
	277/480 V, 3Ø, 0.8 pf	75	113	80	120	150

# GENERAC®

## operating data

Protector® Series

3 of 9

### SURGE CAPACITY IN AMPS

		Voltage Dip @ < .4 pf	
		15%	30%
RG048	120 / 240 V, 1Ø	100	300
	120 / 208 V, 3Ø	118	242
	120 / 240 V, 3Ø	144	260
	277 / 480 V, 3Ø	64	123
RG060	120 / 240 V, 1Ø	150	413
	120 / 208 V, 3Ø	135	313
	120 / 240 V, 3Ø	117	289
	277 / 480 V, 3Ø	54	122
RG080	120 / 240 V, 1Ø	283	600
	120 / 208 V, 3Ø	236	500
	120 / 240 V, 3Ø	204	432
	277 / 480 V, 3Ø	102	192

### ENGINE FUEL CONSUMPTION

		Natural Gas		Propane	
		(ft <sup>3</sup> / hr)	(m <sup>3</sup> / hr)	(gal / hr)	(l / hr)
RG048	Exercise cycle	101	2.86	0.67	24.5
	25% of rated load	201	5.7	2.88	104.7
	50% of rated load	336	9.5	4.16	151.3
	75% of rated load	447	12.7	5.28	192
	100% of rated load	604	17.1	6.61	240.4
RG060	Exercise cycle	103	2.9	0.9	33.2
	25% of rated load	257	7.3	2.1	78
	50% of rated load	432	12.2	4.4	161.2
	75% of rated load	618	17.5	6.8	247.2
	100% of rated load	808	22.9	8.4	305.6
RG080	Exercise cycle	103	2.9	0.9	33.2
	25% of rated load	292	8.3	2.6	93.6
	50% of rated load	534	15.1	5.7	208.8
	75% of rated load	799	22.6	8.3	303.2
	100% of rated load	1,063	30.1	10.8	393.2

Note: Fuel pipe must be sized for full load.

For Btu content, multiply ft<sup>3</sup> / hr x 2,520 (LPG) or ft<sup>3</sup> / hr x 1,000 (NG).

For megajoule content, multiply m<sup>3</sup> / hr x 93.15 (LPG) or m<sup>3</sup> / hr x 37.26 (NG).

Refer to "Emissions Data Sheets" for maximum fuel flow for EPA and SCAQMD permitting purposes.

STANDBY RATING: Standby ratings apply to installations served by a reliable utility source. The standby rating is applicable to varying loads for the duration of a power outage. There is no overload capability for this rating. Ratings are in accordance with ISO-9046-1. Design and specifications are subject to change without notice.

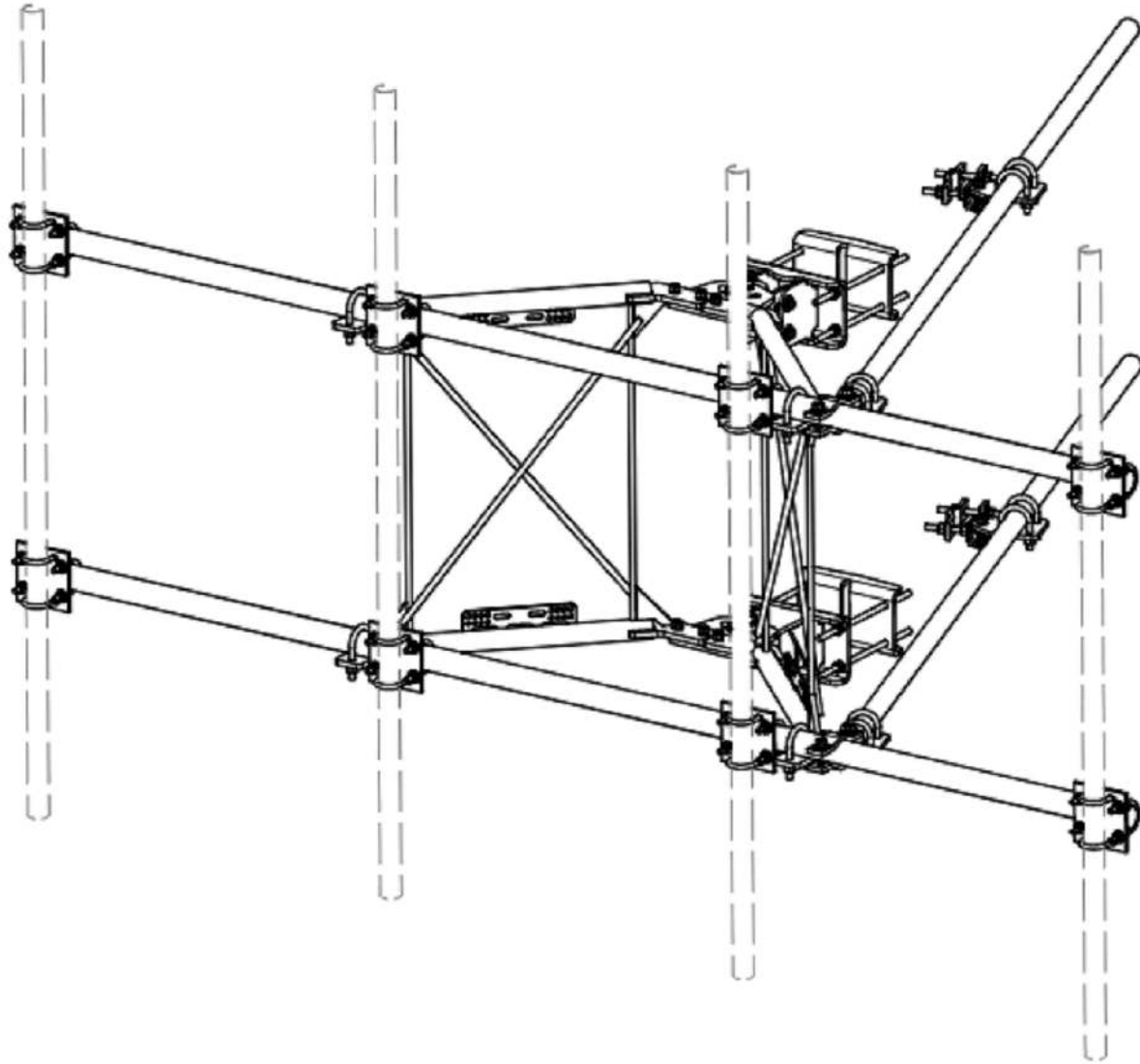
## SUPPLEMENTAL

SHEET NUMBER:

# R-605

REVISION:





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	19.00	38.01
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" CTR 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.)	18 in	0.40	3.19
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" X 3" X 1-1/4" 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. #						738.06

TOLERANCE NOTES					DESCRIPTION			SITE PRO 1		
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 ( $\pm 0.060"$ )					12' 6" HEAVY DUTY V-FRAME ASSEMBLY WITH TWO STIFF ARMS			Locations: New York, NY Atlanta, GA Los Angeles, CA Plymouth, IN Salem, OR Dallas, TX		
D	UPDATED BCAM VERSION 1 TO BCAM VERSION 2	CEK	6/29/2018		CPD NO.	DRAWN BY	ENG. APPROVAL	PART NO.		
C	UPDATED PIN LEG CONNECTION TO B-CAM CONNECTION	CEK	12/7/2017			CEK 1/25/2017		VFA12-HD		
B	CHANGED TIE-BACK BACK CONNECTION	CEK	7/31/2017		CLASS	SUB	DRAWING USAGE	DWG. NO.		
A	CHANGED TIE-BACK FRONT CONNECTION	CEK	2/2/2017		81	02	CUSTOMER	VFA12-HD		
REV	DESCRIPTION OF REVISIONS	CPD	BY	DATE	CHECKED BY					
REVISION HISTORY					BMC 12/13/2017					
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.								A valmont COMMERCIAL		

PAGE  
1 OF 5

SUPPLEMENTAL

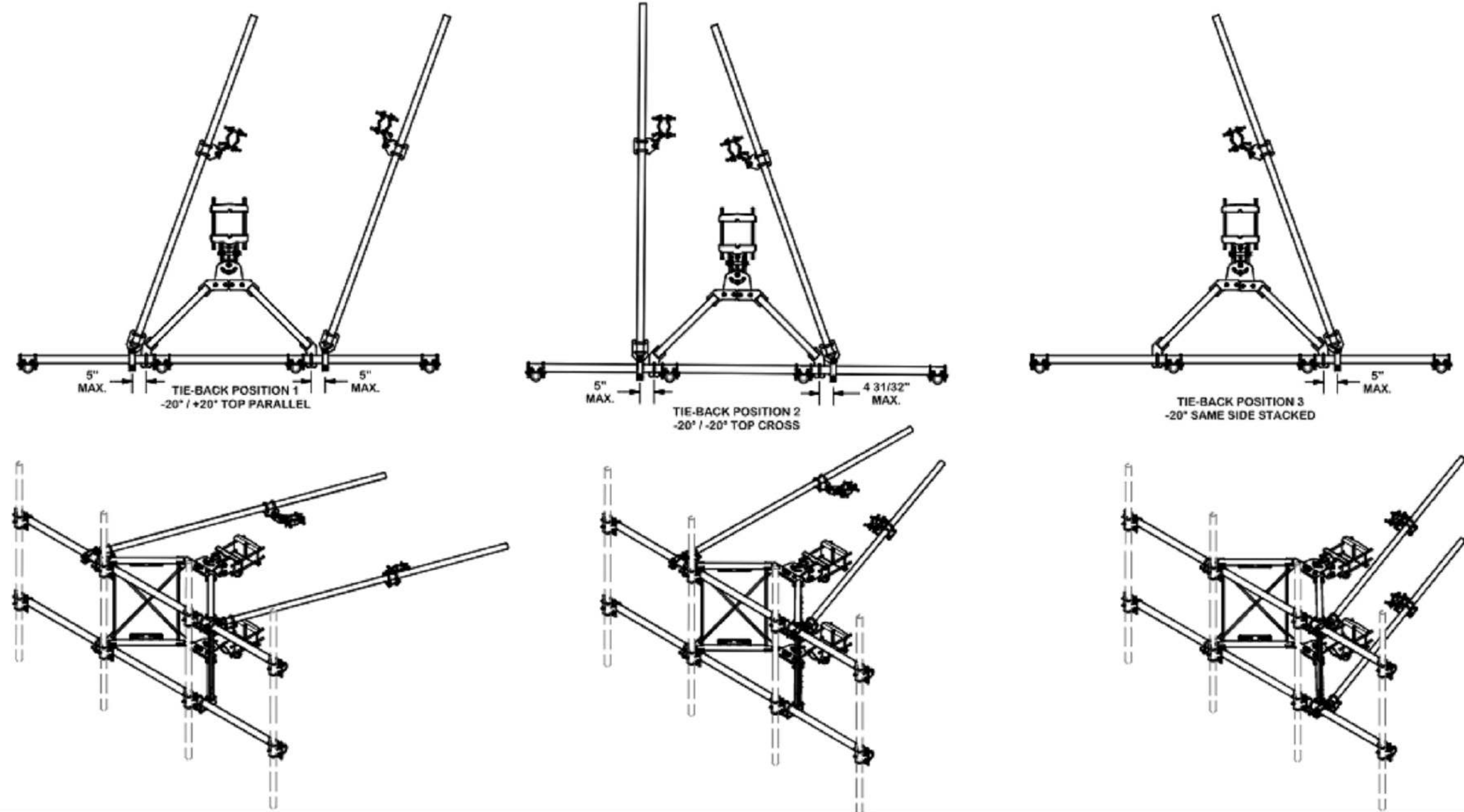
SHEET NUMBER:



R-606

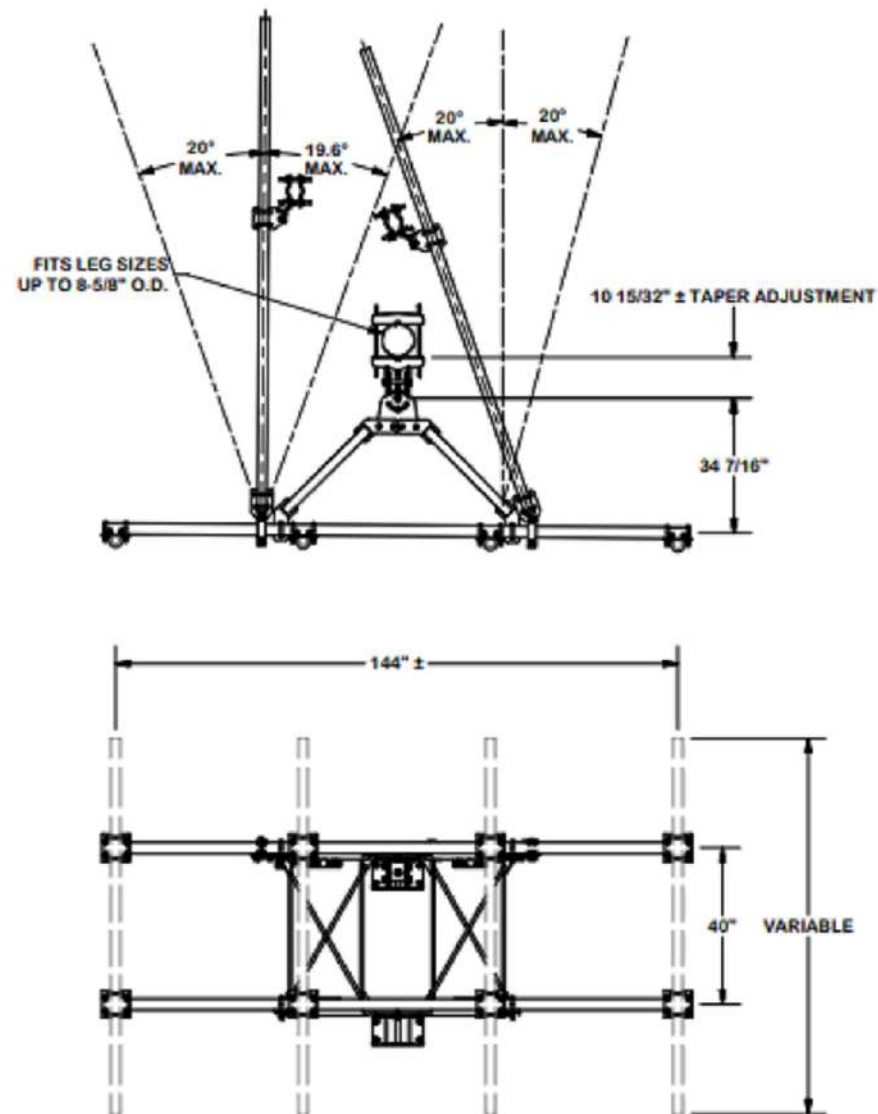
REVISION:



TIE-BACK POSITIONS

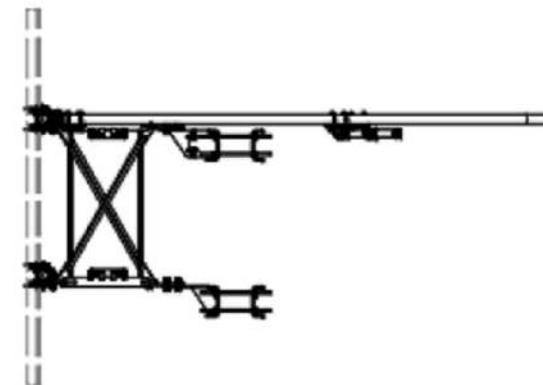
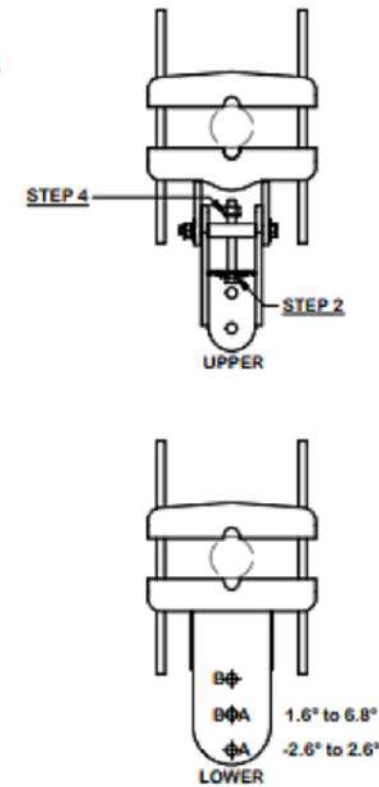


				<b>TOLERANCE NOTES</b>		<b>DESCRIPTION</b>		 <div>Locations: New York, NY Atlanta, GA Los Angeles, CA Plymouth, IN Salem, OR Dallas, TX</div> <div>Engineering Support Team: 1-888-753-7446</div> <div>A valmont  COMPANY</div>		<div>2 OF 5</div> <div>PAGE</div>						
				TOLERANCES ON DIMENSIONS, UNLESS 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 ( $\pm 0.060"$ )		12' 6" HEAVY DUTY V-FRAME ASSEMBLY WITH TWO STIFF ARMS										
				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.		CPD NO.		DRAWN BY CEK 1/25/2017			ENG. APPROVAL		PART NO. VFA12-HD			
D UPDATED BCAM VERSION 1 TO BCAM VERSION 2				CEK	6/29/2018	CLASS		SUB			DRAWING USAGE		CHECKED BY		DWG. NO.	
C UPDATED PIN LEG CONNECTION TO B-CAM CONNECTION				CEK	12/7/2017	81		02			CUSTOMER		BMC 12/13/2017		VFA12-HD	
B CHANGED TIE-BACK BACK CONNECTION				CEK	7/31/2017											
A CHANGED TIE-BACK FRONT CONNECTION				CEK	2/2/2017											
REV		DESCRIPTION OF REVISIONS		CPD	BY	DATE										
REVISION HISTORY																



**ANGLE CALIBRATING PROCEDURE:**

1. MEASURE TOWER TAPER AND PICK LOWER BRACKET HOLE:
  - HOLE A = -2.6° TO 2.6°
  - HOLE B = 1.6° TO 6.8°
2. USE CALIBRATING BOLT TO ADJUST FRAME TO DESIRED TAPER
3. TORQUE LOCKING BOLTS TO 100 ft.-lbs.
4. ADVANCE LOCKING NUT TO POSITIONING PLATE, THEN TIGHTEN.



REVISION HISTORY				TOLERANCE NOTES		DESCRIPTION		SITE PRO 1		Engineering Support Team: 1-888-753-7446		Locations: New York, NY; Atlanta, GA; Los Angeles, CA; Plymouth, IN; Salem, OH; Dallas, TX	
D	UPDATED BCAM VERSION 1 TO BCAM VERSION 2	CEK	6/29/2018	<b>TOLERANCES ON DIMENSIONS, UNLESS OTHERWISE NOTED ARE: SAWED, SHEARED AND GAS CUT EDGES (<math>\pm 0.030</math>) DRILLED AND GAS CUT HOLES (<math>\pm 0.030</math>) - NO CONING OF HOLES LASER CUT EDGES AND HOLES (<math>\pm 0.010</math>) - NO CONING OF HOLES BENDS ARE <math>\pm 1/2</math> DEGREE ALL OTHER MACHINING (<math>\pm 0.030</math>) ALL OTHER ASSEMBLY (<math>\pm 0.060</math>)</b>		12' 6" HEAVY DUTY V-FRAME ASSEMBLY WITH TWO STIFF ARMS		<b>valmont</b>		PART NO. VFA12-HD		PAGE 3 OF 5	
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										
REV	DESCRIPTION OF REVISIONS	CPD	BY	DATE	PROPERTY 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.		CLASS 81	SUB 02	DRAWING USAGE CUSTOMER	CHECKED BY BMC	12/13/2017	DWG. NO. VFA12-HD	

SUPPLEMENTAL

SHEET NUMBER:

R-608

REVISION:



# NOTICE

DISCONNECT FOR  
UTILITY POWER TO  
GENERATOR IS LOCATED  
INSIDE THIS ENCLOSURE

CAUTION: TWO  
SOURCES OF SUPPLY.  
STANDBY  
GENERATOR  
LOCATED OUTDOOR.

WARNING: SHOCK HAZARD  
EXISTS IF GROUNDING  
ELECTRODE CONDUCTOR OR  
BONDING JUMPER CONNECTION  
IN THE EQUIPMENT REMOVED  
WHILE ALTERNATE SOURCE IS  
ENENERGIZED.

1 REQUIRED SIGNS  
SCALE: N.T.S.

SUPPLEMENTAL

SHEET NUMBER:

R-609

REVISION:



# **WARNING**

**THIS UNIT MAY START  
AUTOMATICALLY. FOLLOW  
OPERATING PROCEDURES TO  
DISABLE AUTO-START FUNCTION ON  
ALL AVAILABLE A.T.S. BEFORE  
SERVICING**

**ACCESS  
BY AUTHORIZED  
PERSONNEL ONLY**



2 PLACARD ON POST  
SCALE: N.T.S.

1 REQUIRED SIGNS  
SCALE: N.T.S.



3 DANGER SIGN ON GENERATOR  
SCALE: N.T.S.

SUPPLEMENTAL

SHEET NUMBER:

R-610

REVISION:







SHEET	TABLE OF CONTENTS
1	General Notes, TTC Tables
2	Definitions Temporary Traffic Control Devices Overhead Work Railroads Sight Distance Above Ground Hazard
3	Clear Zone Widths For Work Zones Superelevation Length Of Lane Closures Overweight/Oversize Vehicles Lane Widths High-Visibility Safety Apparel Speed Reduction Signing
4	Flagger Control Survey Work Zones Signs
5	Work Zone Sign Supports
6	Commonly Used Warning and Regulatory Signs In Work Zones
7	Manholes/Crosswalks/Joints Truck Mounted Attenuators Signals Channelizing Devices Channelizing Devices Consistency Advanced Warning Arrow Boards
8	Drop-Offs In Work Zones
9	Business Entrance Temporary Asphalt Separator
10	Channelizing Devices Notes Temporary Barrier Notes
11	Pavement Markings

#### GENERAL NOTES:

1. This Index contains information specific to the Federal and State guidelines and standards for the preparation of traffic control plans and for the execution of traffic control in work zones, for construction and maintenance operations and utility work on highways, roads and streets on the State Highway System. Certain requirements in this Index are based on the high volume nature of State Highways. For highways, roads and streets off the State Highway System, the local agency (City/County) having jurisdiction may adopt requirements based on the minimum requirements provided in the MUTCD.
2. Use this Index in accordance with the Plans and Indexes 102-601 through 102-680. Indexes 102-601 through 102-680 are Department-specific typical applications of commonly encountered situations. Adjust device location or number thereof as recommended by the Worksite Traffic Supervisor and approved by the Engineer. Devices include, but are not limited to, flaggers, portable temporary signals, signs, pavement markings, and channelizing devices. Comply with MUTCD or applicable Department criteria for any changes and document the reason for the change.
3. Except for emergencies, any road closure on State Highway System must comply with Section 335.15, F.S.

TABLE 1 CHANNELIZING DEVICE SPACING				
Work Zone Speed (mph)	Max. Spacing (feet)			
	Cones or Temporary Tubular Markers		Type I Barricades, Type II Barricades, Vertical Panels, or Drums	
	Taper	Tangent	Taper	Tangent
≤ 45	25	50	25	50
≥ 50	25	50	50	100

TABLE 2 TAPER LENGTH "L"	
Work Zone Speed (mph)	Min. Length (feet)
≤ 40	$L = \frac{WS^2}{60}$
≥ 45	$L = WS$
Where: W = width of offset in feet S = speed in mph	

TABLE 3 WORK ZONE SIGN SPACING "X"	
Road Type	Min. Spacing (feet)
Arterials and Collectors with Work Zone Speed ≤ 40 mph	200
Arterials and Collectors with Work Zone Speed ≥ 45 mph	500
Limited Access Roadways *	1,500
* For Limited access roadways with work zone speed ≤ 55 mph, the minimum spacing may be reduced in accordance with the MUTCD and as approved by the Engineer.	

TABLE 4 BUFFER LENGTH "B"	
Work Zone Speed (mph)	Min. Length (feet)
25	155
30	200
35	250
40	305
45	360
50	425
55	495
60	570
65	645
70	730
Note: When Buffer Length "B" cannot be attained due to geometric constraints, use the greatest length possible, but not less than 155 feet.	



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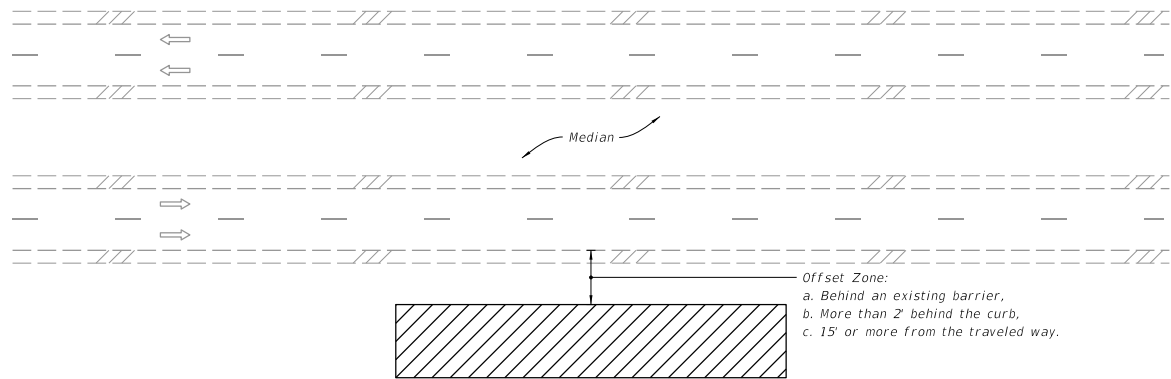
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Date Expires: 03/25/2026 Certificate # 83590  
Instructor: Messler R. Gilchrist FDOT Provider # 140

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Dade, Broward, Palm Beach, FL 33441  
metrofloridasafetycouncil.com  
mlyons@metrofloridasafetycouncil.com

LAST REVISION 11/01/20	DESCRIPTION:	FY 2023-24 STANDARD PLANS	GENERAL INFORMATION FOR TRAFFIC CONTROL THROUGH WORK ZONES	INDEX 102-600	SHEET 1 of 11
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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

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Metro Florida Safety Council  
Phone: 954-403-1909  
Tri-County  
Dade, Broward, Palm Beach, FL 33441  
metrofloridasafetycouncil.com  
mtyons@metrofloridasafetycouncil.com

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FLORIDA SAFETY COUNCIL

10/6/2022 1:23:55 PM

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

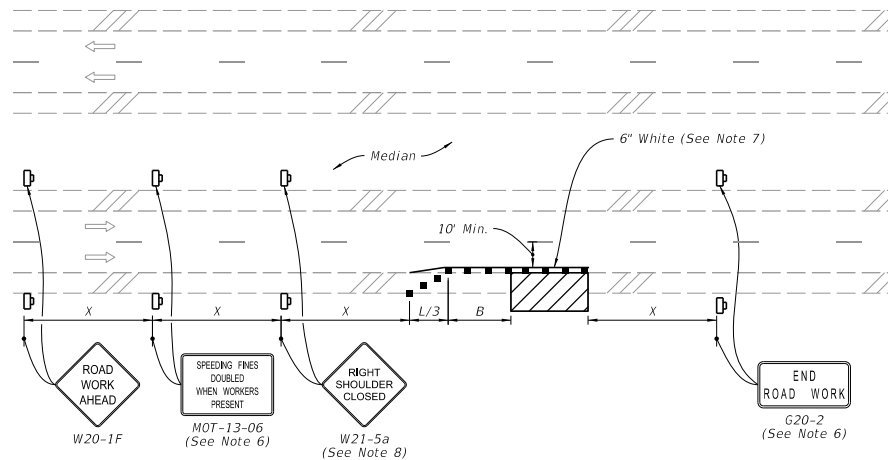
DRAWN BY:  
Tony Britten

 **MOT Plans**

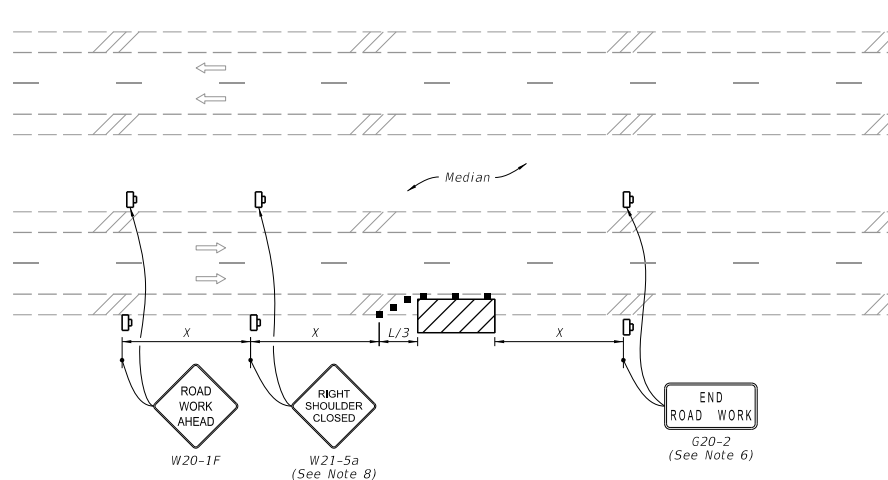
631 NE 45 Street  
Oakland Park, FL 33334  
(954) 560-0450

DATE: 2/16/2024

SITE LOCATION:



MULTILANE ROADWAY  
SHOULDER WORK LESS THAN 2' FROM THE TRAVELED WAY  
WITH WORK ZONE SPEED OF 45 MPH OR LESS



MULTILANE ROADWAY  
SHOULDER WORK BETWEEN 2' AND 15' FROM THE TRAVELED WAY

SYMBOLS:

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

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FY 2023-24  
STANDARD PLANS

TWO-LANE AND MULTILANE, WORK ON SHOULDER

INDEX  
102-602

SHEET  
2 of 2