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November 2, 2023

Melanie A. Bachman, Esq.  
Executive Director/Staff Attorney  
Connecticut Siting Council  
10 Franklin Square  
New Britain, CT 06051

Re: **Docket No. 510 – New Cingular Wireless PCS, LLC d/b/a AT&T and Tarpon Towers II, LLC Application for a Certificate of Environmental Compatibility and Public Need for the Construction, Maintenance and Operation of a Telecommunications Facility at 92 Greens Farm Road, Westport, Connecticut**

**Minor Equipment Changes**

Dear Attorney Bachman:

On behalf of Cellco Partnership d/b/a Verizon Wireless (“Cellco”), I respectfully request Siting Council (“Council”) staff approval of two additional equipment changes at the 92 Greens Farm Road Facility. Due to equipment availability and planned upgrades, Cellco will be installing new remote radio heads (RRH) (Model Code RT4423-48A) in lieu of the RT-4401-48A model RRH that was previously approved and a 50-kW diesel generator rather than the 30-kW generator previously approved.

Attached is a revised set of project plans, specifications for the new RRH and 50-kW generator and a letter confirming that the new Tarpon tower is structurally capable of supporting these equipment changes. Please contact me if you have any questions or need any additional information.

Sincerely,



Kenneth C. Baldwin

Copy to:

Tim Parks  
Michael Humphreys

28144660-v1

**SAMSUNG**

# Samsung Micro Radio

CBRS(N48)  
4T4R Micro Radio

Samsung's CBRS 4T4R Micro Radio provides mobile operators with a cost-effective solution to fill coverage gaps encountered when Macro Radios are in use.

**Model Code** RT4423-48A(DC)  
RT4423-48B(AC)



Homepage  
[samsungnetworks.com](https://www.samsungnetworks.com)

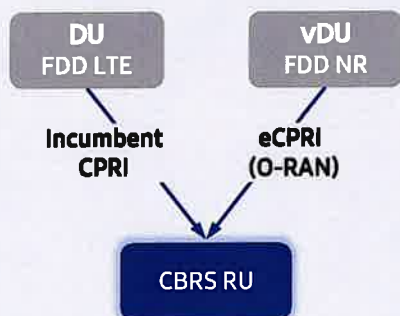


Youtube  
[www.youtube.com/samsung5g](https://www.youtube.com/samsung5g)

# Points of Differentiation

## Dual Personality

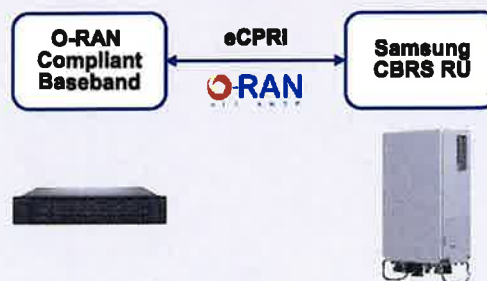
The new CBRS Radio supports existing CPRI and advanced eCPRI Interfaces providing Installation options for both legacy LTE and NR network equipment.



## O-RAN Compliant

A standardized O-RAN radio supports Implementing cost-effective networks capable of enhanced data throughput without compromising existing or new network investments.

Samsung O-RAN products ensure state-of-the-art O-RAN technology will accelerate efforts for creating solid O-RAN ecosystems.



## High Capacity

The number of carriers required varies according to site(region). Supporting multiple carriers is essential to customers as they seek to utilize all frequencies available to them.

The new CBRS radio can support up to 5 carriers which is an increase of 3 carriers over the capacity of the previous CBRS product.



## Compact and Easy Installation

New CBRS RU is compact in its design with a volume of 6L and weighing only about 7kg.

This compact design allows for various installation options including, tower, rooftop, pole, wall and shroud.

A clip on antenna is available providing flexibility to installation requirements.



# Technical Specifications

Item	Specification
Tech	LTE / NR
Band	B48, n48 / TDD
Frequency Band	3,550 – 3,700 MHz
RF Power	20 W (5 W x 4 Ports)
IBW/OBW	150MHz / 100MHz
Installation	Pole, Wall, Side by side (max 3 radio)
Size/ Weight	<p><b>[Radio]</b>                      w/o Clip-on antenna : 8.7 x 11.8 x 3.6 Inch, 5.97L, 7kg                      w/ Clip-on antenna : 8.7 x 11.8 x 5.0 Inch, 8.42L, 8.5kg                      *AC and DC type have same size and weight</p> <p><b>[Bracket Weight]</b>                      Tilting &amp; Swivel (EP97-02038A) : 2.51kg                      Fixed (EP97-02037A) : 1.31kg                      Side by side (EP97-02089A) : 8.0kg</p>

**SD050 | 4.5L | 50 kW**  
**INDUSTRIAL DIESEL GENERATOR SET**  
 EPA Certified Stationary Emergency



**Standby Power Rating**  
 50 kW, 63 KVA, 60 Hz

**Prime Power Rating\***  
 45 kW, 56 KVA, 60 Hz



\*EPA Certified Prime ratings are not available in the US or its Territories

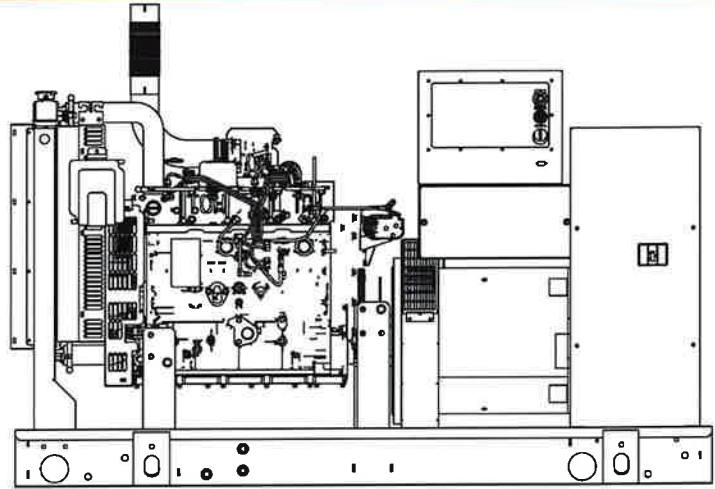


Image used for illustration purposes only

**Codes and Standards**

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

-   UL2200, UL508, UL489, UL142
-  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**

For over 50 years, Generac has provided innovative design and superior manufacturing.

Generac ensures superior quality by designing and manufacturing most of its generator components, including alternators, enclosures and base tanks, control systems and communications software.

Generac gensets utilize a wide variety of options, configurations and arrangements, allowing us to meet the standby power needs of practically every application.

Generac searched globally to ensure the most reliable engines power our generators. We choose only engines that have already been proven in heavy-duty industrial applications under adverse conditions.

Generac is committed to ensuring our customers' service support continues after their generator purchase.

# SD050 | 4.5L | 50 kW INDUSTRIAL DIESEL GENERATOR SET

EPA Certified Stationary Emergency

**GENERAC** | INDUSTRIAL  
POWER

## STANDARD FEATURES

### ENGINE SYSTEM

- Oil Drain Extension
- Air Cleaner
- Fan Guard
- Stainless Steel Flexible Exhaust Connection
- Radiator Duct Adapter (Open Set Only)

### Fuel System

- Fuel Lockoff Solenoid
- Secondary Fuel Filter

### Cooling System

- Closed Coolant Recovery System
- UV/Ozone Resistant Hoses
- Factory-Installed Radiator
- 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
- Protective Thermal Switch

### GENERATOR SET

- Genset Vibration Isolation
- Separation of Circuits - High/Low Voltage
- Separation of Circuits - Dual Breakers
- 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

### TANKS (If Selected)

- UL 142
- Double Wall
- Vents
- Sloped Top
- Sloped Bottom
- Factory Pressure Tested - 2 psi
- Rupture Basin Alarm
- Fuel Level
- Check Valve In Supply and Return Lines
- RhinoCoat™ - Textured Polyester Powder Coat Paint
- Stainless Steel Hardware

## CONTROL SYSTEM



### Digital H Control Panel- Dual 4x20 Display

#### Program Functions

- Programmable Crank Limiter
- 7-Day Programmable Exerciser
- Special Applications Programmable Logic Controller
- RS-232/485 Communications
- All Phase Sensing Digital Voltage Regulator
- 2-Wire Start Capability
- Date/Time Fault History (Event Log)
- Isochronous Governor Control

- Waterproof/Sealed Connectors
- Audible Alarms and Shutdowns
- Not in Auto (Flashing Light)
- Auto/Off/Manual Switch
- E-Stop (Red Mushroom-Type)
- NFPA110 Level I and II (Programmable)
- Customizable Alarms, Warnings, and Events
- Modbus® Protocol
- Predictive Maintenance Algorithm
- Sealed Boards
- Password Parameter Adjustment Protection
- Single Point Ground
- 16 Channel Remote Trending
- 0.2 msec High Speed Remote Trending
- Alarm Information Automatically Annunciated on the Display

#### Full System Status Display

- Power Output (kW)
- Power Factor
- kW Hours, Total, and Last Run
- Real/Reactive/Apparant Power
- All Phase AC Voltage
- All Phase Currents

- Oil Pressure
- Coolant Temperature
- Coolant Level
- Engine Speed
- Battery Voltage
- Frequency

#### Alarms and Warnings

- Oil Pressure
- Coolant Temperature
- Coolant Level
- Engine Overspeed
- Battery Voltage
- Alarms and Warnings Time and Date Stamped
- Snap Shots of Key Operation Parameters During Alarms and Warnings
- Alarms and Warnings Spelled Out (No Alarm Codes)

**SD050 | 4.5L | 50 kW**  
**INDUSTRIAL DIESEL GENERATOR SET**  
EPA Certified Stationary Emergency

**CONFIGURABLE OPTIONS**

**ENGINE SYSTEM**

- Oil Make-Up System
- Oil Heater
- Industrial Silencer
- Critical Silencer

**FUEL SYSTEM**

- Flexible Fuel Lines
- Primary Fuel Filter

**COOLING SYSTEM**

- 120 VAC Coolant Heater
- 208 VAC Coolant Heater
- 240 VAC Coolant Heater

**ELECTRICAL SYSTEM**

- Battery Box
- Battery Heater
- 10A UL Listed Float/Equalize Battery Charger

**ALTERNATOR SYSTEM**

- Main Line Circuit Breaker
- 2nd Circuit Breaker
- 3rd Circuit Breaker
- Alternator Upsizing
- Anti-Condensation Heater
- Tropical Coating
- Permanent Magnet Excitation

**GENERATOR SET**

- Weather Protected Enclosure
- Level 1 Sound Attenuated Enclosure
- Level 2 Sound Attenuated Enclosure
- IBC Seismic Certified/Seismic Rated Vibration Isolators
- Steel Enclosure
- Aluminum Enclosure
- Enclosure Light Kits

**CONTROL SYSTEM**

- NFPA 110 Level 1 Compliant 21-Light Remote Annunciator
- Remote Relay Assembly (8 or 16)
- Spare Inputs (x4) Outputs (x4)
- 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)
- Remote Communication - Modem
- 10A Engine Run Relay
- Ground Fault Annunciator
- 100 dB Alarm Horn

**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

**ENGINEERED OPTIONS**

**ENGINE SYSTEM**

- Coolant Heater Ball Valves
- Fluid Containment Pan

**CONTROL SYSTEM**

- Battery Disconnect Switch

**GENERATOR SET**

- Special Testing
- Battery Box

**ENCLOSURE**

- Door Open Alarm
- Enclosure Heater
- Motorized Dampers

**TANKS**

- Overfill Protection Valve
- ULC S-601
- UL 2085 Tank
- Special Fuel Tanks
- External Vent Extensions
- Tank Risers
- 5 Gallon Spill Box
- Lockable Fuel Fill
- Pipe Flanges
- 90% High Fuel Alarm

# SD050 | 4.5L | 50 kW INDUSTRIAL DIESEL GENERATOR SET

EPA Certified Stationary Emergency



## APPLICATION AND ENGINEERING DATA

### ENGINE SPECIFICATIONS

#### General

Make	Iveco/FPT
EPA Emissions Compliance	Stationary Emergency
EPA Emissions Reference	See Emission Data Sheet
Cylinder #	4
Type	In-Line
Displacement - in <sup>3</sup> (L)	274 (4.5)
Bore - in (mm)	4.1 (105)
Stroke - in (mm)	5.2 (132)
Compression Ratio	17.5:1
Intake Air Method	Turbocharged
Cylinder Head Type	2-Valve
Piston Type	Aluminum
Crankshaft Type	Forged Steel

#### Engine Governing

Governor	Electronic Isochronous
Frequency Regulation (Steady State)	±0.25%

#### Lubrication System

Oil Pump Type	Gear
Oil Filter Type	Full-Flow Cartridge
Crankcase Capacity - qt (L)	14.4 (13.6)

#### Cooling System

Cooling System Type	Closed
Water Pump Type	Belt Driven Centrifugal
Fan Type	Pusher
Fan Speed - RPM	2,538
Fan Diameter - in (mm)	26 (660)

#### Fuel System

Fuel Type	Ultra Low Sulfur Diesel Fuel
Fuel Specifications	ASTM
Fuel Filtering (Microns)	5
Fuel Pump Type	Engine Driven Gear
Injector Type	Mechanical
Fuel Supply Line - in (mm)	0.25 (6.35) NPT
Fuel Return Line - in (mm)	0.25 (6.35) NPT

#### 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	K0050124Y21
Poles	4
Field Type	Revolving
Insulation Class - Rotor	H
Insulation Class - Stator	H
Total Harmonic Distortion	<5%
Telephone Interference Factor (TIF)	<50

Standard Excitation	Synchronous Brushless
Bearings	One, Pre-Lubed and Sealed
Coupling	Direct via Flexible Disc
Prototype Short Circuit Test	Yes
Voltage Regulator Type	Digital
Number of Sensed Phases	3
Regulation Accuracy (Steady State)	±0.25%

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**OPERATING DATA**

**POWER RATINGS**

	Standby	
Single-Phase 120/240 VAC @1.0pf	50 kW	Amps: 208
Three-Phase 120/208 VAC @0.8pf	50 kW	Amps: 174
Three-Phase 120/240 VAC @0.8pf	50 kW	Amps: 151
Three-Phase 277/480 VAC @0.8pf	50 kW	Amps: 75
Three-Phase 346/600 VAC @0.8pf	50 kW	Amps: 60

**MOTOR STARTING CAPABILITIES (skVA)**

skVA vs. Voltage Dip			
277/480 VAC	30%	208/240 VAC	30%
K0050124Y21	98	K0050124Y21	75

**FUEL CONSUMPTION RATES\***

Fuel Pump Lift- ft (m)	Diesel - gph (Lph)	
	Percent Load	Standby
3 (1)	25%	1.15 (4.35)
	50%	2.25 (8.52)
Total Fuel Pump Flow (Combustion + Return) - gph (Lph)	75%	3.21 (12.15)
13.6 (51.5)	100%	4.15 (15.75)

\* Fuel supply installation must accommodate fuel consumption rates at 100% load.

**COOLING**

	Standby	
Coolant Flow	gpm (Lpm)	32.7 (123.8)
Coolant System Capacity	gal (L)	4.5 (17.44)
Heat Rejection to Coolant	BTU/hr (kW)	121,000 (35.5)
Inlet Air	scfm (m <sup>3</sup> /min)	6,360 (180)
Maximum Operating Radiator Air Temperature	°F (°C)	122 (50)
Maximum Ambient Temperature (Before Derate)	See Bulletin No. 0199270SSD	
Maximum Radiator Backpressure	in H <sub>2</sub> O (kPa)	0.5 (0.12)

**COMBUSTION AIR REQUIREMENTS**

	Standby	Prime
Flow at Rated Power scfm (m <sup>3</sup> /min)	205 (5.80)	189 (5.35)

**ENGINE**

	Standby	
Rated Engine Speed	RPM	1,800
Horsepower at Rated kW**	hp	80
Piston Speed	ft/min (m/min)	1,559 (475)
BMEP	psi (kPa)	128.5 (886)

**EXHAUST**

	Standby	
Exhaust Flow (Rated Output)	scfm (m <sup>3</sup> /min)	497 (14.1)
Max. Allowable Backpressure	inHg (kPa)	1.5 (5.1)
Exhaust Temp (Rated Output)	°F (°C)	850 (454)

\*\* 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 10000018933

Prime - See Bulletin 10000018926



**SD050 | 4.5L | 50 kW**  
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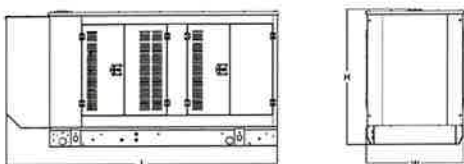


**DIMENSIONS AND WEIGHTS\***



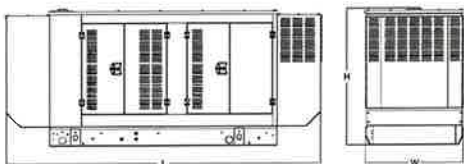
**OPEN SET (Includes Exhaust Flex)**

Run Time - Hours	Usable Capacity - Gal (L)	L x W x H - in (mm)	Weight - lbs (kg)
No Tank	-	76.0 (1,930) x 37.0 (940) x 53.0 (1,346)	1,996 (905)
13	54 (204)	76.0 (1,930) x 37.0 (940) x 66.0 (1,676)	2,476 (1,123)
32	132 (500)	76.0 (1,930) x 37.0 (940) x 78.0 (1,981)	2,706 (1,227)
51	211 (799)	76.0 (1,930) x 37.0 (940) x 90.0 (2,286)	2,915 (1,322)
72	300 (1,136)	93.0 (2,362) x 37.0 (940) x 94.0 (2,388)	2,978 (1,351)
122	510 (1,931)	117.0 (2,972) x 47.0 (1,194) x 96.0 (2,438)	3,361 (1,525)



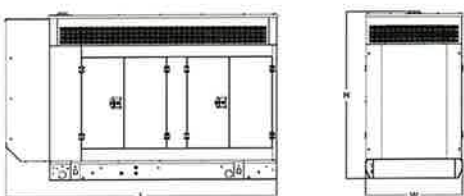
**WEATHER PROTECTED ENCLOSURE**

Run Time - Hours	Usable Capacity - Gal (L)	L x W x H - in (mm)	Weight - lbs (kg)
No Tank	-	95.0 (2,413) x 38.0 (965) x 50.0 (1,270)	2,298 (1,042)
13	54 (204)	95.0 (2,413) x 38.0 (965) x 63.0 (1,600)	2,778 (1,260)
32	132 (500)	95.0 (2,413) x 38.0 (965) x 75.0 (1,905)	3,008 (1,364)
51	211 (799)	95.0 (2,413) x 38.0 (965) x 87.0 (2,210)	3,217 (1,459)
72	300 (1,136)	95.0 (2,413) x 38.0 (965) x 91.0 (2,311)	3,280 (1,488)
122	510 (1,931)	117.0 (2,972) x 47.0 (1,194) x 93.0 (2,362)	3,663 (1,662)



**LEVEL 1 SOUND ENCLOSURE**

Run Time - Hours	Usable Capacity - Gal (L)	L x W x H - in (mm)	Weight - lbs (kg)
No Tank	-	112.0 (2,845) x 38.0 (965) x 50.0 (1,270)	2,451 (1,112)
13	54 (204)	112.0 (2,845) x 38.0 (965) x 63.0 (1,600)	2,931 (1,329)
32	132 (500)	112.0 (2,845) x 38.0 (965) x 75.0 (1,905)	3,161 (1,434)
51	211 (799)	112.0 (2,845) x 38.0 (965) x 87.0 (2,210)	3,370 (1,529)
72	300 (1,136)	112.0 (2,845) x 38.0 (965) x 91.0 (2,311)	3,433 (1,557)
122	510 (1,931)	135.0 (3,429) x 47.0 (1,194) x 93.0 (2,362)	3,816 (1,731)

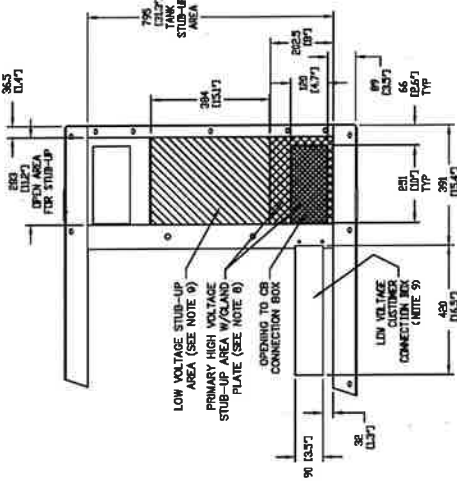
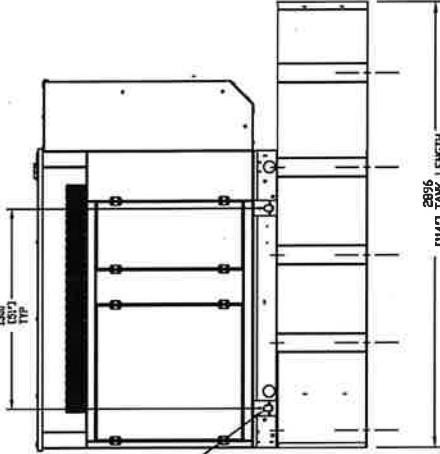
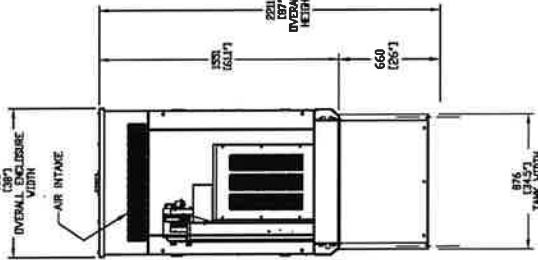
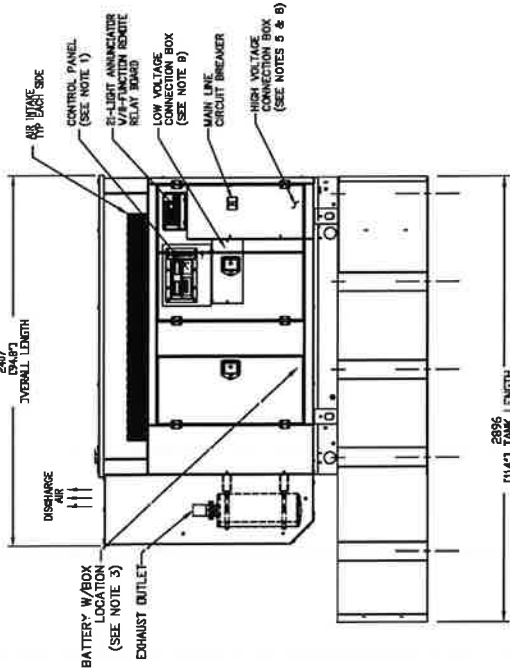
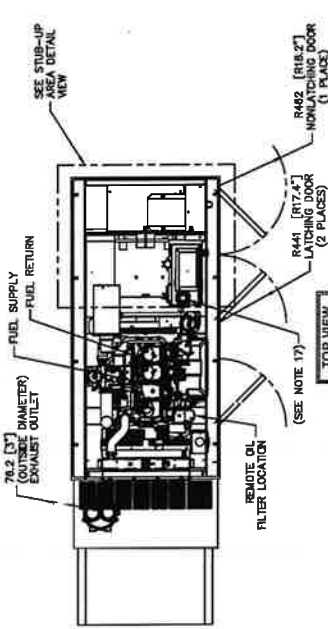


**LEVEL 2 SOUND ENCLOSURE**

Run Time - Hours	Usable Capacity - Gal (L)	L x W x H - in (mm)	Weight - lbs (kg)
No Tank	-	95.0 (2,413) x 38.0 (965) x 62.0 (1,575)	2,456 (1,114)
13	54 (204)	95.0 (2,413) x 38.0 (965) x 75.0 (1,905)	2,936 (1,332)
32	132 (500)	95.0 (2,413) x 38.0 (965) x 87.0 (2,210)	3,166 (1,436)
51	211 (799)	95.0 (2,413) x 38.0 (965) x 99.0 (2,515)	3,375 (1,531)
72	300 (1,136)	95.0 (2,413) x 38.0 (965) x 103.0 (2,616)	3,438 (1,559)
122	510 (1,931)	117.0 (2,972) x 47.0 (1,194) x 105.0 (2,667)	3,821 (1,733)

\* 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.

09092020



RECOMMENDED ELECTRICAL STUB-UPS (SEE DETAILED VIEW & TOP VIEW)	INSIDE BUS
DESCRIPTION	
HIGH VOLTAGE STUB-UP AREA	
1) AC LOAD LEAD CONDUIT AREA	
2) 120/240 VAC FROM UTILITY FOR OPTIONAL LOADS SUCH AS GFC OUTLET, BLOCK HEATER, 120/240 VAC W/SLAND AND OTHER 120/240 VAC OPTIONS (SLAND PLATE INCLUDED)	
LOW VOLTAGE STUB-UP AREA	
1) TRANSFER SWITCH/COMMUNICATIONS CONDUITS	
2) COMMUNICATIONS AND 2-WIRE CONDUIT WITH AC WIRING (SEE NOTE 6)	

- NOTES:**
- CONTROL PANEL W/BATTERY CHARGER, THREE PRONG CORD COMING OUT OF CONTROL PANEL IS FOR THE BATTERY CHARGER.
  - 1500W 120VAC ENGINE BLOCK HEATER W/DOOR.
  - OPTIONAL 2-WIRE COMMUNICATIONS CONDUIT WITH AC WIRING IN CONDUIT WITH AC WIRING.
  - OPTIONAL REMOTE EMERGENCY STOP SHIPPED LOOSE WITH GENERATOR. GENERATOR MUST BE GROUNDED.
  - CENTER OF GRAVITY & WEIGHT MAY SHIFT SLIGHTLY DUE TO TANK STUB-UP AREA.
  - TANK STUB-UP AREA INCLUDES THE AC LOAD LEAD CONNECTION TO THE MAIN LINE CIRCUIT BREAKER (ALSO), THE NEUTRAL CONNECTION, AND AUXILIARY 120/240VAC CONNECTION.
  - CONNECTION POINTS FOR CONTROL WIRES, BOTTOM OF LOW VOLTAGE STUB-UP AREA.
  - MUST ALLOW FREE FLOW OF DISCHARGE AIR AND EXHAUST. SEE SPEC SHEET FOR MINIMUM AIR FLOW AND MAXIMUM RESTRICTION REQUIREMENTS.
  - AIR FLOW AND MAXIMUM RESTRICTION REQUIREMENTS.
  - ENCLOSED SETS - GENERATOR SET MUST BE INSTALLED SUCH THAT THE RESPONSIBILITY OF THE INSTALLATION TECHNICIAN TO ENSURE CODES, STANDARDS, AND REGULATIONS.
  - UNIT IS SHIPPED WITH FUEL SUPPLY AND RETURN LINES DISCONNECTED AND PLUGGED BETWEEN ENGINE AND FUEL TANK. THIS HAS BEEN DONE TO FACILITATE PRESSURE TESTING OF THE TANK IN THE FIELD.
  - RETURN LINES PRIOR TO START UP. SEE THE FUEL TANK FIELD TESTING PROCEDURE (025002) SUPPLIED IN THE TANK LOOSE VENTS KIT, WHICH IS SEE DRAWING 025002 FOR DUCT REMOVAL. REMOVAL OF FRONT DUCT WILL PROVIDE ACCESS TO JUPITER FOR SERVICING.
  - ADDITIONAL 2" FEMALE NPT PORTS - PLUGGED OR EQUIPPED WITH TOP-MOUNT SWITCHES DEFENDING ON UNIT OPTIONS.

UNITS: DIM. INCHES

PRELIMINARY USE ONLY

RIGHT SIDE VIEW

REAR VIEW

LEFT SIDE VIEW

<p><b>GENERATOR POWER SYSTEMS</b>  <b>Waukesha</b>          P.O. BOX 8          WAUKESHA, WIS. 53187</p>		<p>FILE NAME</p> <p>SCALE NTS</p> <p>DWG NO.</p>	<p>SIZE B</p> <p>FIRST USE D4.5 Y02 SSM</p> <p>REV</p>
<p>INSTALLATION D4.5L G17 40KW&amp;50KW</p> <p>ENCLOSED LEVEL 2A - SSM Y02</p> <p>200 UL TERTIARY SPECIAL TANK</p>		<p>09092020</p>	

GENERATOR POWER SYSTEMS DOWNS THE COPYRIGHT OF THIS DRAWING WHICH IS SUPPLIED IN CONFORMANCE AND PART NOT BE USED FOR ANY OTHER PROJECT WITHOUT THE EXPRESS WRITTEN CONSENT OF GENERATOR POWER SYSTEMS.

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INSTALLATION DRAWING

# Michael F. Plahovinsak, P.E.

October 16, 2023

Tarpon Towers II, LLC  
8916 77th Terrace East, Suite 103  
Lakewood Ranch, FL 34202

Re: 124-ft Monopole  
Located in Fairfield Co., CT: Site #CT1024 Westport  
MFP #94122-132 r4 / TAPP TP-22100

I have been asked to address the initial usage/capacity of the proposed communication monopole and foundation. Communication structures are designed in accordance with the Telecommunications Industry Association TIA-222, "Structural Standards for Steel Antenna Towers and Antenna Supporting Structures".

The pole has been designed to withstand a 3-second gusted wind speed of 120 mph ( $V_{ult}$ ) as recommended by TIA-222-H for Fairfield County. *The design also conforms to the requirements of the 2022 Connecticut Building Code.*

I have been asked to evaluate the proposed antenna loading with regards to adequacy of the structure:

Elev.	Antenna / Mounting	Coax	Owner
120'	(3) CCI TPA65R-BU8DA-K Antennas (3) CCI HPA65R-BU8A + (3) DMP65R-BU8DA-K Antennas (3) Ericsson 4478 + (3) E-2 + (3) 4415 + (3) 4449 + (3) 8843 RRU's (3) Raycap DC6-48-60-0-8C-EV Sector Mounts	(6) 5/8" DC + (2) 3/8" Fiber	
110'	(3) Samsung XXDWMM-12.5-65-8TCBRS Antennas (2) Andrew JAHH-45B-R3B + (4) JAHH-65B-R3B Antennas (3) Samsung MT6413-77A Antennas (3) Samsung B2/B66A RRH-ORAN RF4439d-25A (3) Samsung ORAN 700/850 B13/B5 RF4461d-13A (3) Samsung CBRS ORAN 4T4R 20W RU DC (RT4423-48A) RRF's (1) Commscope RVZDC-6627-PF-48 (3) Commscope CBC78T-DS-43-2X Diplexer Platform with Handrails & 2" Side by Side Mounting Bracket	(2) 1 5/8" Hybrid	Verizon
100'	(9) Commscope FFVV-65B-R2 Antennas (9) Fujitsu TA08025-B604 + (9) TA08025-B605 RRF's (1) Raycap RDIDC-3045-PF-48 Platform with Handrails	(1) 1.6"	

The proposed Verizon installation represents a lesser loading than the original EPA 30,000 in2 the pole was originally designed for at this level and a rigorous analysis is not warranted at this time. The pole and foundation will support the loading currently being proposed.

I hope this review of the monopole design has given you a greater degree of comfort regarding the design capacity inherent in pole structures. If you have any additional questions please call me at 614-398-6250 or email [mike@mfpeng.com](mailto:mike@mfpeng.com).

Sincerely,

Michael Plahovinsak 2023.10.16.060442-04'00'  
Michael F. Plahovinsak, P.E.  
Professional Engineer



18301 State Route 161 - Plain City, OH 43064  
(614) 398-6250 - mike@mfpeng.com



# WIRELESS COMMUNICATIONS FACILITY

SITE NAME: WESTPORT 3 CT

TARPON TOWERS #CT1024  
92 GREENS FARMS RD.  
WESTPORT, CT 06880

**verizon**  
WIRELESS COMMUNICATIONS FACILITY  
20 ALEXANDER DRIVE  
WALLINGFORD, CT 06492

**On Air Engineering, LLC**  
88 Foundry Pond Rd.  
Cold Spring, NY 10516  
onair@optonline.net  
201-456-4624

LICENSURE



DAVID WEIDPAHL, P.E.  
CT LIC. NO. 22144

NO.	DATE	SUBMISSIONS
0	07.20.23	REVIEW
1	07.24.23	REVISED PER OWNER COMMENTS
2	09.21.23	REVISED GENERATOR SIZE
3	10.12.23	REVISED EQUIPMENT MODELS

DRAWN BY:	CHECKED BY:
AS	DW

SITE NAME:  
**WESTPORT 3 CT**

PROJECT DESCRIPTION:  
**MACRO NEW BUILD  
FUZE #2118110**

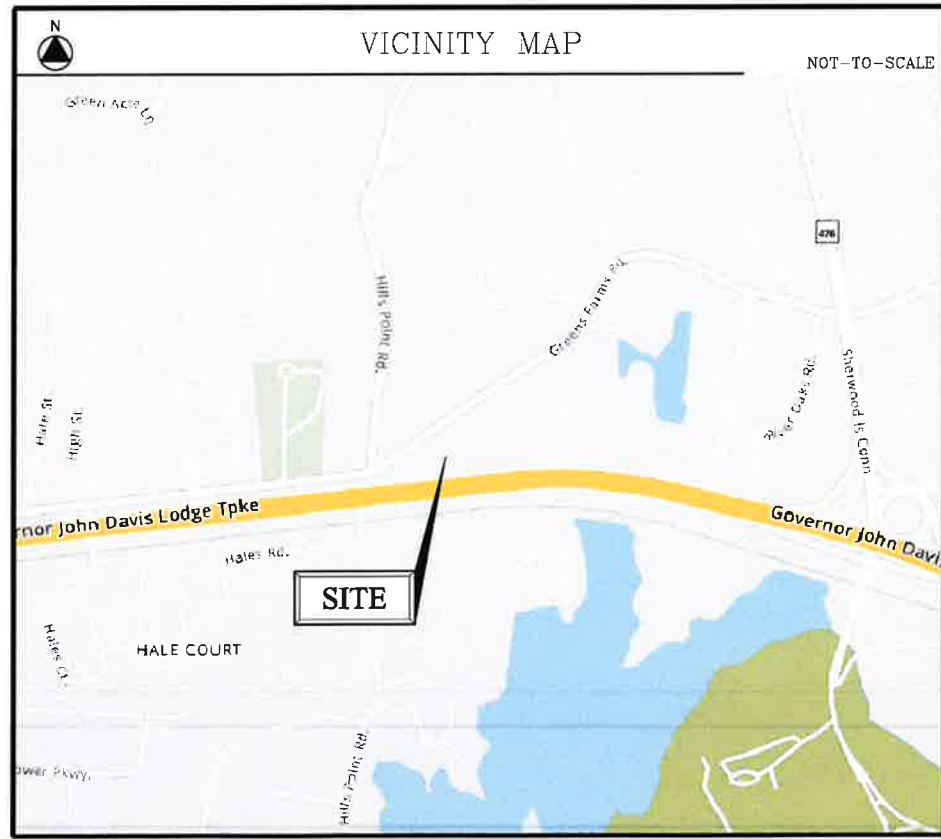
PROJECT INFORMATION:  
**TARPON TOWERS #CT1024  
92 GREEN FARMS RD.  
WESTPORT, CT 06880**

DRAWING TITLE:  
**TITLE SHEET**

SHEET NUMBER:  
**T-1**

PROJECT SUMMARY	
SITE NAME:	WESTPORT 3 CT
SITE ADDRESS:	92 GREEN FARMS RD. WESTPORT, CT 06880
PROPERTY OWNER & MAILING ADDRESS:	PRADIV MAHESH & SHARUNA MOOLA-MAHESH 92 GREEN FARMS RD. WESTPORT, CT 06880
TOWER OWNER:	TARPON TOWERS 110 WASHINGTON AVE. NORTH HAVEN, CT 06473
PARCEL ID:	B06/1074/000
TOWER COORDINATES:	41° 07' 25.39" N 73° 20' 41.26" W
AMSL:	19.5 FT.
APPLICANT:	CELLCO PARTNERSHIP d.b.a. VERIZON WIRELESS 20 ALEXANDER DR. WALLINGFORD, CT 06492
VERIZON WIRELESS CONSTRUCTION:	MIKE HUMPHREYS - CONSTRUCTION STRUCTURE CONSULTING GROUP
LEGAL/REGULATORY COUNSEL:	KENNETH C. BALDWIN, ESQ. ROBINSON & COLE, LLP (860) 275-8345

PROJECT DESCRIPTION
<ul style="list-style-type: none"> <li>- INSTALLATION OF (2) OUTDOOR EQUIPMENT CABINETS AND DIESEL FUELED EMERGENCY GENERATOR ON A NEW 18'x12' CONCRETE PAD WITHIN A FENCED COMPOUND</li> <li>- INSTALLATION OF (12) PANEL ANTENNAS AND ASSOCIATED DEVICES ON THE MONOPOLE</li> <li>- INSTALLATION OF (2) GPS ANTENNAS ON CABLE BRIDGE</li> <li>- INSTALLATION OF CABLING FROM EQUIP. CABINETS TO ANTENNAS</li> <li>- ELECTRIC &amp; TELEPHONE SERVICES ROUTED UNDERGROUND TO EXISTING UTILITY DEMARCATION POINTS AT COMPOUND</li> </ul>



DRAWING SCHEDULE	
SHEET NO.	SHEET DESCRIPTION
T-1	TITLE SHEET
G-1	GENERAL NOTES, B.O.M. & RF PLUMBING DIAGRAM
C-1	SITE LAYOUT
A-1	COMPOUND PLAN, EQUIPMENT PLAN & SOUTH ELEVATION
A-2	ANTENNA PLAN & DETAILS
S-1	STRUCTURAL EQUIP. PLATFORM PLANS & ELEVATIONS
S-2	STRUCTURAL DETAILS
E-1	ELECTRICAL SPECIFICATIONS
E-2	ELECTRICAL PLAN, RISER DIAGRAM & DETAILS
E-3	GROUNDING NOTES, PLAN & SCHEMATIC
E-4	GROUNDING DETAILS

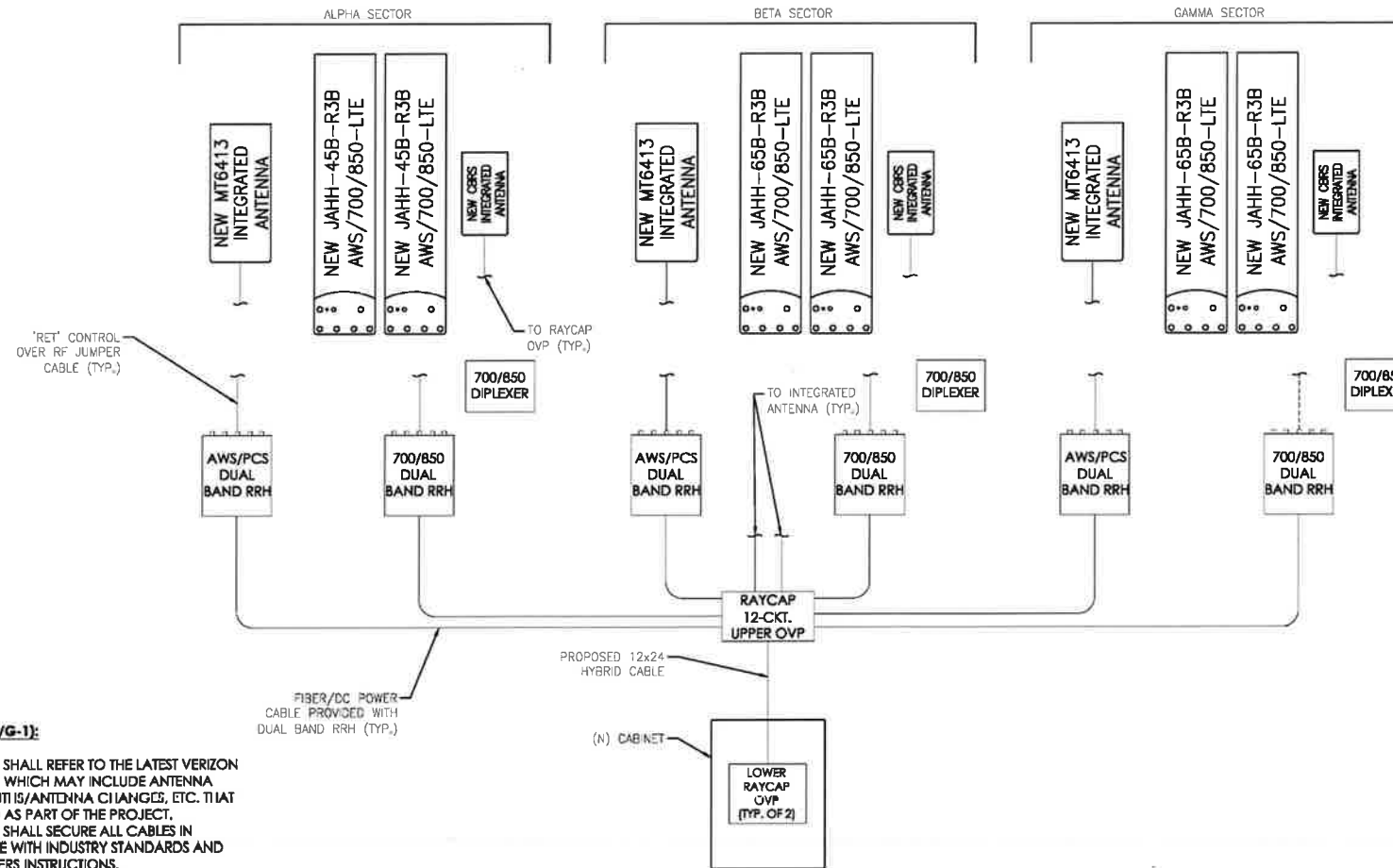
**GENERAL CONSTRUCTION NOTES:**

- CONTRACTOR SHALL NOT COMMENCE ANY WORK UNTIL HE OBTAINS, AT HIS OWN EXPENSE, ALL INSURANCE REQUIRED BY **CELLCO PARTNERSHIP d/b/a VERIZON WIRELESS**, THE PROPERTY OWNER AND/OR PROPERTY MANAGEMENT COMPANY.
- ALL WORK SHALL BE DONE IN ACCORDANCE WITH ALL APPLICABLE CODES AND REGULATIONS AND ALL LOCAL LAWS AND REGULATIONS, CURRENT EDITIONS.
- CONTRACTOR SHALL VISIT THE JOB SITE AND FAMILIARIZE HIMSELF WITH ALL CONDITIONS AFFECTING THE PROPOSED WORK AND MAKE PROVISIONS AS TO THE COST THEREOF. CONTRACTOR SHALL BE RESPONSIBLE FOR FAMILIARIZING HIMSELF WITH ALL CONTRACT DOCUMENTS, FIELD CONDITIONS AND DIMENSIONS AND CONFIRMING THAT THE WORK MAY BE ACCOMPLISHED AS SHOWN PRIOR TO PROCEEDING WITH CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO THE COMMENCEMENT OF WORK.
- CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS, ELEVATIONS, ANGLES AND EXISTING CONDITIONS AT THE SITE PRIOR TO FABRICATION AND/OR INSTALLATION OF ANY WORK IN THE CONTRACT AREA AND SUBMIT TO THE ENGINEER ANY DISCREPANCIES FROM THE DRAWINGS.
- CONTRACTOR IS TO REVIEW ALL DRAWINGS AND SPECIFICATIONS IN THE CONTRACT DOCUMENT SET. CONTRACTOR SHALL COORDINATE ALL WORK SHOWN IN THE SET OF DRAWINGS. CONTRACTOR SHALL PROVIDE A COMPLETE SET OF DRAWINGS TO ALL SUB-CONTRACTORS AND ALL RELATED PARTIES. THE SUB-CONTRACTORS SHALL EXAMINE ALL THE DRAWINGS AND SPECIFICATIONS FOR THE INFORMATION THAT AFFECTS THEIR WORK.
- CONTRACTOR SHALL PROVIDE A COMPLETE BUILD-OUT WITH ALL FINISHES, STRUCTURAL, MECHANICAL AND ELECTRICAL COMPONENTS AND PROVIDE ALL ITEMS AS SHOWN OR INDICATED ON DRAWINGS OR WRITTEN IN SPECIFICATIONS.
- CONTRACTOR SHALL FURNISH ALL MATERIAL, LABOR AND EQUIPMENT TO COMPLETE THE WORK AND FURNISH A COMPLETED JOB IN ACCORDANCE WITH LOCAL AND STATE GOVERNING AUTHORITIES AND OTHER AUTHORITIES HAVING LAWFUL JURISDICTION OVER THE WORK.
- CONTRACTOR SHALL OBTAIN AT HIS OWN EXPENSE ALL PERMITS AND ALL INSPECTIONS REQUIRED FROM FEDERAL AND STATE GOVERNMENTS, COUNTIES, MUNICIPALITIES AND OTHER REGULATORY AGENCIES WHICH MAY BE REQUIRED FOR THE PROJECT.
- DETAILS ARE INTENDED TO SHOW END RESULT OF DESIGN. MINOR MODIFICATIONS MAY BE REQUIRED TO SUIT JOB DIMENSIONS OR CONDITIONS, AND SUCH MODIFICATIONS SHALL BE INCLUDED AS PART OF THE WORK.
- ALL MATERIAL PROVIDED BY **CELLCO PARTNERSHIP d/b/a VERIZON WIRELESS** IS TO BE REVIEWED BY CONTRACTOR AND ALL APPLICABLE SUB-CONTRACTOR PRIOR TO INSTALLATION. ANY DEFICIENCIES TO PROVIDED MATERIALS SHALL BE BROUGHT TO THE CONSTRUCTION MANAGERS ATTENTION IMMEDIATELY.
- THE MATERIALS INSTALLED IN THE WORK SHALL MEET THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. NO SUBSTITUTIONS ARE ALLOWED.
- CONTRACTOR IS SOLELY RESPONSIBLE FOR THE MEANS AND METHODS OF CONSTRUCTION, FOR SEQUENCES AND PROCEDURES TO BE USED, AND TO ENSURE THE SAFETY OF THE EXISTING BUILDING AND ITS COMPONENT DURING CONSTRUCTION. THIS INCLUDES THE ADDITION OF WHATEVER SHORING, BRACING, UNDERPINNING, ETC. THAT MAY BE NECESSARY.
- CONTRACTOR SHALL COORDINATE ALL CIVIL, STRUCTURAL AND ELECTRICAL DRAWINGS FOR THE LOCATION OF ALL OPENINGS, RECESSES, BUILT-IN WORK, ETC.
- CONTRACTOR SHALL RECEIVE CLARIFICATION IN WRITING AND SHALL RECEIVE IN WRITING AUTHORIZATION TO PROCEED BEFORE STARTING WORK ON ANY ITEMS NOT CLEARLY DEFINED OR IDENTIFIED BY THE CONTRACT DOCUMENTS.
- CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER OF ALL PRODUCTS OR ITEMS NOTED AS "EXISTING" WHICH ARE NOT FOUND TO BE IN THE FIELD.
- ERECTION SHALL BE DONE IN A WORKMANLIKE MANNER BY COMPETENT EXPERIENCED WORKMEN IN ACCORDANCE WITH APPLICABLE CODES AND THE BEST-ACCEPTED PRACTICE. ALL MEMBERS SHALL BE LAID PLUMB AND TRUE AS INDICATED ON THE DRAWINGS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF THE WORK AREA, ADJACENT AREAS, AND BUILDING OCCUPANTS THAT ARE LIKELY TO BE AFFECTED BY THE WORK UNDER THIS CONTRACT. WORK SHALL CONFORM TO ALL O.S.H.A REQUIREMENTS.
- CONTRACTOR SHALL COORDINATE HIS WORK AND SCHEDULE HIS ACTIVITIES AND WORKING HOURS IN ACCORDANCE WITH THE REQUIREMENTS OF THE PROPERTY OWNER AND/OR PROPERTY MANAGEMENT COMPANY.
- CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING HIS WORK WITH THE WORK OF OTHERS AS IT MAY RELATE TO RADIO EQUIPMENT, ANTENNAS AND ANY OTHER PORTIONS OF THE WORK.
- CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY INDICATED OR WHERE LOCAL CODES OR REGULATIONS MAY TAKE PRECEDENCE.
- CONTRACTOR SHALL MAKE NECESSARY PROVISIONS TO PROTECT EXISTING SURFACES, EQUIPMENT, IMPROVEMENTS, PIPING, ANTENNA AND ANTENNA CABLES AND REPAIR ANY DAMAGE THAT OCCURS DURING CONSTRUCTION.
- CONTRACTOR SHALL REPAIR ALL EXISTING SURFACES DAMAGED DURING CONSTRUCTION SUCH THAT THEY MATCH AND BLEND WITH ADJACENT SURFACES.

- CONTRACTOR SHALL KEEP CONTRACT AREA CLEAN, HAZARD FREE AND DISPOSE OF ALL DEBRIS AND RUBBISH. EQUIPMENT NOT SPECIFIED AS REMAINING ON THE PROPERTY OF THE OWNER SHALL BE REMOVED. LEAVE PREMISES IN CLEAN CONDITIONS AND FREE FROM PAINT SPOTS, DUST, OR SMUDGES OF ANY NATURE. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL ITEMS UNTIL COMPLETION OF CONSTRUCTION.
- BEFORE FINAL ACCEPTANCE OF THE WORK, CONTRACTOR SHALL REMOVE ALL EQUIPMENT, TEMPORARY WORKS, UNUSED AND USELESS MATERIALS, RUBBISH AND TEMPORARY STRUCTURES.

BILL OF MATERIALS			
SITE NAME: WESTPORT 3 CT		NEW BUILD	
DESCRIPTION	QTY	LENGTH	COMMENTS
6-CKT. LOWER OVP	2	-	LOCATE IN RACK INSIDE OUTDOOR CABINET
12 CKT. UPPER OVP	1	-	LOCATE AT ANTENNA LEVEL ON PLATFORM STANDOFF
12x24 HYBRID CABLE	1	140 FT.	
1x1 HYBRID CABLE	-	-	NOT REQUIRED - CABLES PROVIDED WITH RRH'S
RET CONTROL CABLE	-	-	NOT REQUIRED FOR JAHH ANTENNAS
1/2" JUMPERS	-	-	PROVIDED BY CONTRACTOR
AWS/PCS RRH	3	-	B2/B66A ORAN
700/850 RRH	3	-	B6/B13 ORAN
700/850 DIPLEXER	3	-	CBC78T-DS-43-2X
MT6413 INTEGRATED ANTENNA	3	-	REFER TO RFDS
CBRS INTEGRATED ANTENNA	3	-	REFER TO RFDS
JAHH-45B-R3B ANTENNA	2	-	ALPHA SECTOR
JAHH-65B-R3B ANTENNA	4	-	BETA/GAMMA SECTOR
'SBS' MOUNTING BRACKET	3	-	VERIFY WITH COMMSCOPE

NOTE: ALL ANTENNAS VIEWED FROM REAR



**GENERAL NOTES (1/G-1):**

- CONTRACTOR SHALL REFER TO THE LATEST VERIZON WIRELESS RFDS WHICH MAY INCLUDE ANTENNA SECTOR AZIMUTH IS/ANTENNA CHANGES, ETC. THAT ARE REQUIRED AS PART OF THE PROJECT.
- CONTRACTOR SHALL SECURE ALL CABLES IN ACCORDANCE WITH INDUSTRY STANDARDS AND MANUFACTURERS INSTRUCTIONS.
- CABLES SHALL BE ROUTED AND SECURED ON STRUCTURAL MEMBERS ONLY - DO NOT "LOOSE" THE CABLES IN MID-AIR BETWEEN ANTENNAS
- CONTRACTOR SHALL CAP ALL UN-USED ANTENNA AND RRH PORTS AND TAPE WATERTIGHT.

**verizon**  
WIRELESS COMMUNICATIONS FACILITY

20 ALEXANDER DRIVE  
WALLINGFORD, CT 06492

**On Air Engineering, LLC**

88 Foundry Pond Rd.  
Cold Spring, NY 10516  
onair@optonline.net  
201-456-4624

LICENSURE



DAVID WEINHART, P.E.  
CT LIC. NO. 22144

NO.	DATE	SUBMISSIONS
0	07.20.23	REVIEW
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DRAWN BY:	CHECKED BY:
AS	DW

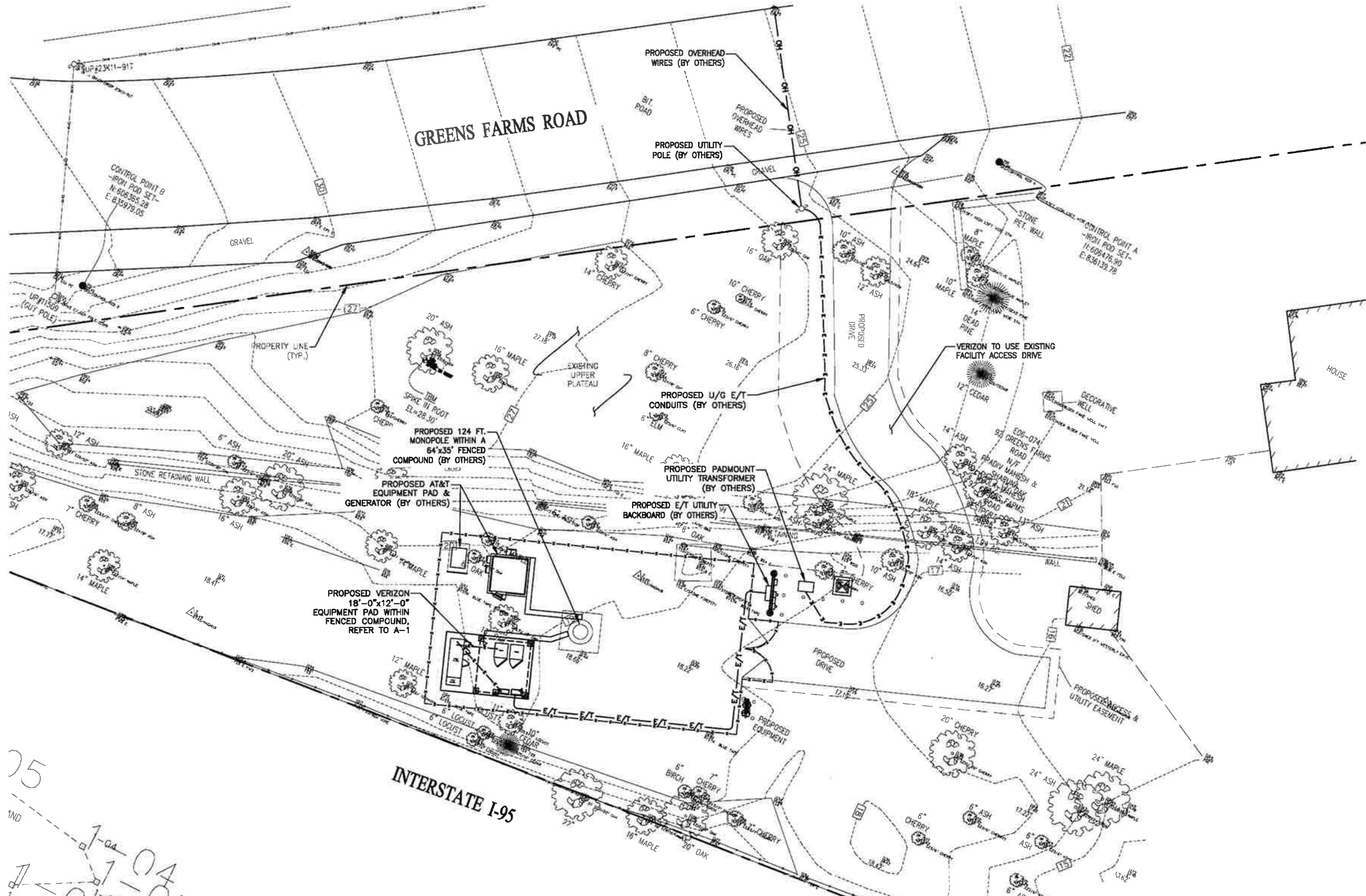
SITE NAME:  
**WESTPORT 3 CT**

PROJECT DESCRIPTION:  
**MACRO NEW BUILD  
FUZE #2118110**

PROJECT INFORMATION:  
**TARPON TOWERS #CT1024  
92 GREEN FARMS RD.  
WESTPORT, CT 06880**

DRAWING TITLE:  
**GENERAL NOTES, B.O.M. &  
RF PLUMBING DIAGRAM**

SHEET NUMBER:  
**G-1**



Handwritten notes: 75, 1-04, 1-04, 1-04

**1 SITE LAYOUT**  
Scale: N.T.S.



WIRELESS COMMUNICATIONS FACILITY  
20 ALEXANDER DRIVE  
WALLINGFORD, CT 06492

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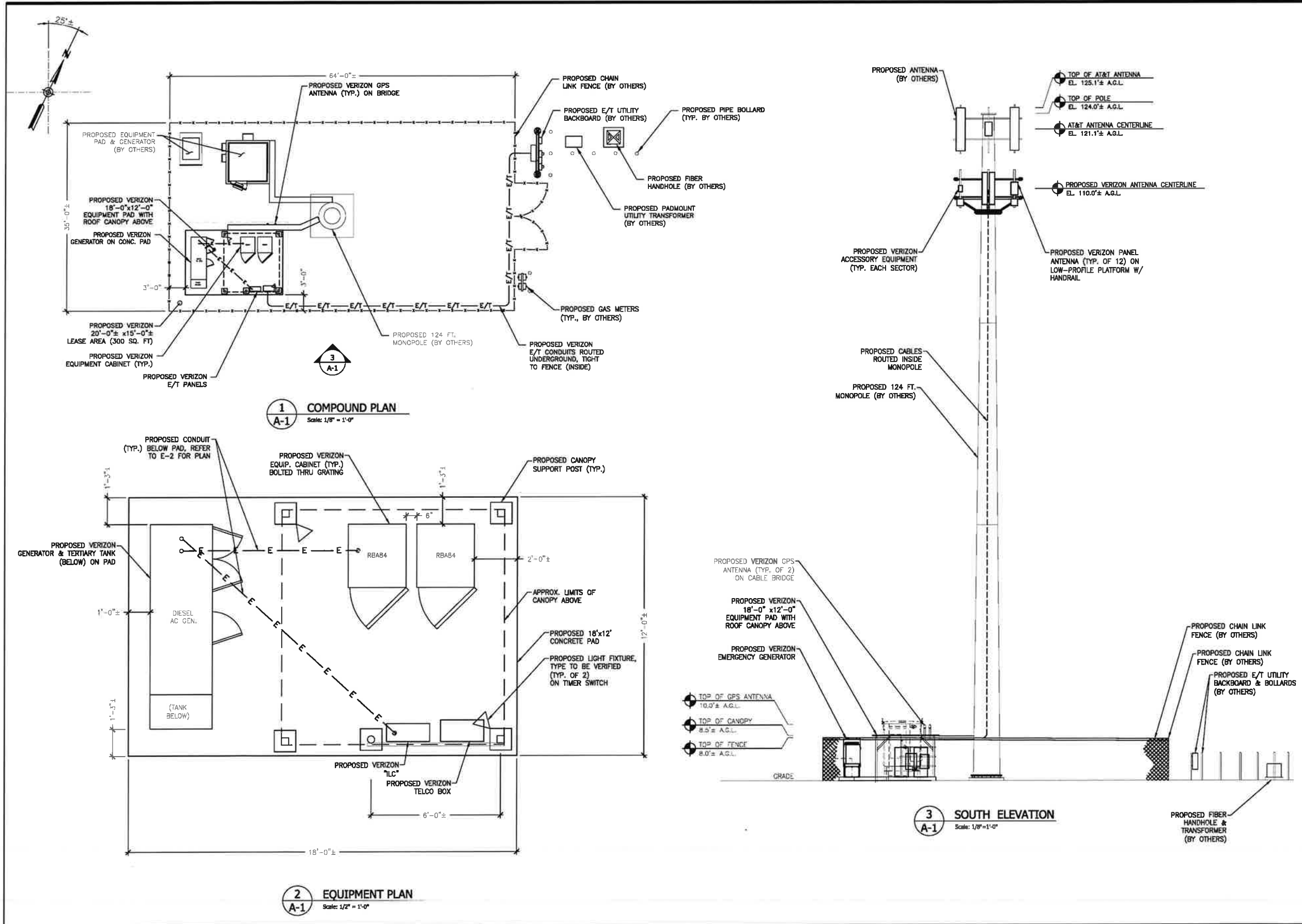
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**WESTPORT 3 CT**

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FUZE #2118110**

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92 GREEN FARMS RD.  
WESTPORT, CT 06880**

DRAWING TITLE:  
**SITE LAYOUT**

SHEET NUMBER:  
**C-1**



**verizon**  
WIRELESS COMMUNICATIONS FACILITY

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WALLINGFORD, CT 06492

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LICENSE NO. 22144  
DAVID WEINPAHL, P.E.  
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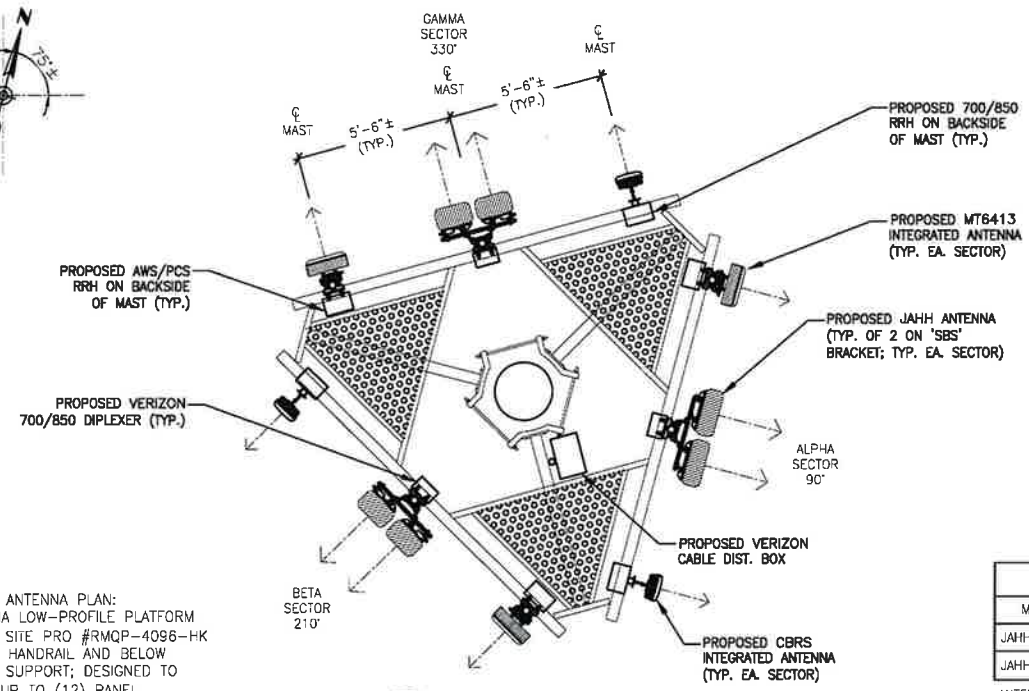
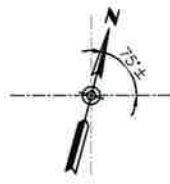
SITE NAME: WESTPORT 3 CT

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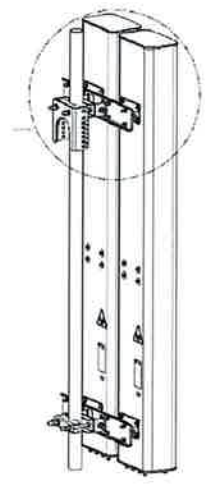
DRAWING TITLE: COMPOUND PLAN,  
EQUIPMENT PLAN &  
SOUTH ELEVATION

SHEET NUMBER: A-1



NOTES TO ANTENNA PLAN:  
 1. ANTENNA LOW-PROFILE PLATFORM SHALL BE SITE PRO #RMQP-4096-HK INCLUDING HANDRAIL AND BELOW PLATFORM SUPPORT; DESIGNED TO SUPPORT UP TO (12) PANEL ANTENNAS AND (12) RRH'S.  
 2. CONTRACTOR SHALL SET ALPHA PLATFORM FACE AT 90° AZIMUTH.

**1 ANTENNA PLAN @ 110 FT. A.G.L.**  
 Scale: 3/8" = 1'-0"



PANEL ANTENNA SPECIFICATIONS		
MODEL #	SIZE	SECTOR
JAHH-45B-R38	72.0"Hx18.0"Wx7.0"D; 91.5 LBS.	ALPHA
JAHH-65B-R38	72.0"Hx13.8"Wx8.2"D; 63.3 LBS.	BETA/GAMMA

ANTENNAS TO BE MOUNTED ON SIDE-BY-SIDE BRACKETS PROVIDED BY MANUFACTURER; (2) ANTENNAS PER BRACKET

**2 JAHH PANEL ANTENNA**  
 Scale: N.T.S.

MT6413 ANTENNA/RRH SPECIFICATIONS				
HEIGHT	WIDTH	DEPTH	WEIGHT	
28.9"	15.75"	5.5"	57.3 LBS	

**3 MT6413 INTEGRATED ANTENNA**  
 Scale: N.T.S.

CBRS INTEGRATED ANTENNA SPECIFICATIONS				
COMPONENT	HEIGHT	WIDTH	DEPTH	WEIGHT
ANTENNA	12.3"	8.7"	1.4"	4.4 LBS
RRH	11.8"	8.7"	4.2"	18.7 LBS

**4 CBRS INTEGRATED ANTENNA**  
 Scale: N.T.S.



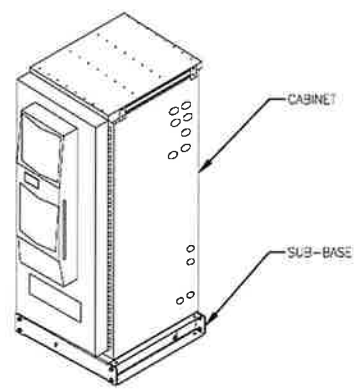
SAMSUNG RRH AWS/PCS ORAN SPECIFICATION				
HEIGHT	WIDTH	DEPTH	WEIGHT	
15"	15"	10"	74.7 LBS	

**5 RRH DETAIL - AWS/PCS**  
 Scale: N.T.S.



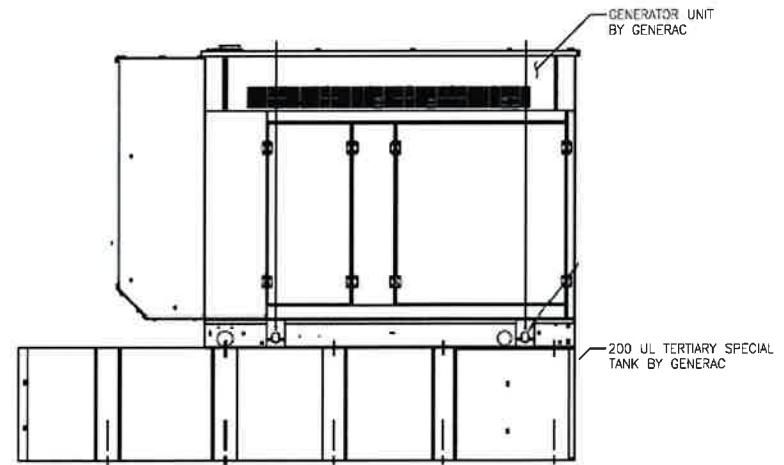
COMMSCOPE DIPLEXER SPECIFICATIONS				
MODEL #	HEIGHT	WIDTH	DEPTH	WEIGHT
CBC78T-DS-43-2X	9.6"	6.3"	6.9"	24.8 LBS

**7 DIPLEXER DETAIL**  
 Scale: N.T.S.



COMMSCOPE EQUIPMENT SPECIFICATIONS				
MODEL #	HEIGHT	WIDTH	DEPTH	WEIGHT
RBA84	85.2"	32.0"	35.4"	1,955 LBS (1)
760238731	6"	32.0"	36.6"	50 LBS (2)

**9 EQUIPMENT CABINET DETAIL**  
 Scale: 3" = 1'-0"



50kW GENERAC GENERATOR SPECIFICATIONS				
MODEL #	LENGTH	WIDTH	HEIGHT	WEIGHT
SD050	94.8"	38.0"	61.1"	X,XXX lbs
TANK	114.0"	34.5"	26.0"	X,XXX lbs

**10 GENERATOR DETAIL**  
 Scale: N.T.S.



SAMSUNG RRH 700/850 ORAN SPECIFICATION				
HEIGHT	WIDTH	DEPTH	WEIGHT	
15"	15"	10.2"	79.2 LBS	

**6 RRH DETAIL - 700/850**  
 Scale: N.T.S.



RAYCAP EQUIPMENT SPECIFICATIONS					
MODEL #	HEIGHT	WIDTH	DEPTH	WEIGHT	COLOR
RV7DC-6627-PF-4R	29.5"	16.5"	12.6"	32 LBS	LIGHT GREY

**8 CABLE DIST. BOX DETAIL**  
 Scale: N.T.S.

**verizon**  
 WIRELESS COMMUNICATIONS FACILITY

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DRAWN BY: AS      CHECKED BY: DW

SITE NAME:  
**WESTPORT 3 CT**

PROJECT DESCRIPTION:  
**MACRO NEW BUILD FUZE #2118110**

PROJECT INFORMATION:  
**TARPON TOWERS #CT1024  
 92 GREEN FARMS RD.  
 WESTPORT, CT 06880**

DRAWING TITLE:  
**ANTENNA PLAN & DETAILS**

STREET NUMBER:  
**A-2**



**GENERAL STRUCTURAL NOTES:**

1. ALL EQUIPMENT SHALL BE INSTALLED PLUMB AND LEVEL.
2. ALL WIDE FLANGE STRUCTURAL STEEL SHALL CONFORM WITH A992 SPECIFICATIONS. ALL STRUCTURAL STEEL SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST AISC CODE AND ASTM SPECIFICATION. STEEL SHALL CONFORM TO ASTM A-36. PIPE SHALL CONFORM TO ASTM A-501 OR ASTM TYPE EOR S A-53 (GRADE B).
3. ALL CONNECTIONS OF STRUCTURAL STEEL MEMBERS SHALL BE MADE USING SPECIFIED WELDS WITH WELDING ELECTRODES E-70XX OR SPECIFIED HIGH STRENGTH BOLTS TO BE ASTM A325. THREAD EXCLUDED FROM SHEAR PLANE.
4. ALL STEEL EXPOSED TO MOISTURE SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION PER ASTM A-123. ALL DAMAGED SURFACES, WELDED AREAS AND AUTHORIZED NON-GALVANIZED MEMBERS OR PARTS (EXISTING OR NEW) SHALL BE PAINTED WITH 2 COATS OF ZRC COLD GALVANIZING COMPOUND MANUFACTURED BY ZRC CHEMICAL PRODUCTS CO. QUINCY, MA, OR USE THERMAL SPRAYING WITH PLATIZINC 85/15 AS MANUFACTURED BY PLATT BROTHERS & COMPANY, WATERBURY, CT 1-800-752-8276.
5. ALL SHOP AND FIELD WELDING SHALL BE DONE BY WELDERS QUALIFIED AS DESCRIBED IN THE "AMERICAN WELDING SOCIETY'S STANDARD QUALIFICATION PROCEDURE" TO PERFORM THE TYPE OF WORK REQUIRED.
6. ALL PIPE SIZES ARE NOMINAL DIAMETER (INSIDE DIAMETER).

**CAST-IN-PLACE CONCRETE:**

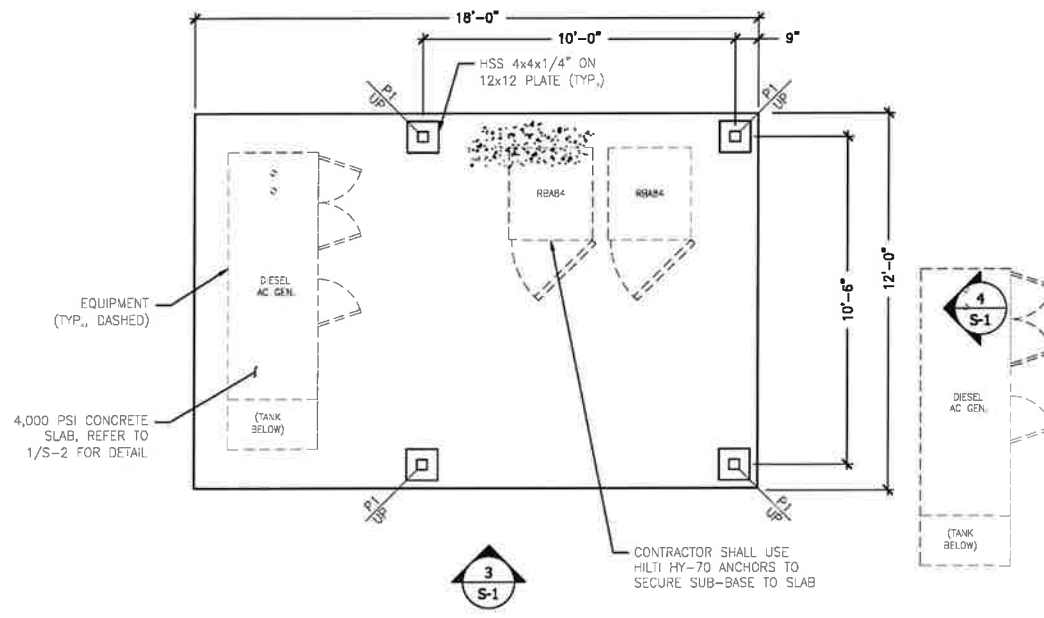
1. ALL CONCRETE WORK SHALL CONFORM TO THE LATEST EDITION OF THE ACI BUILDING CODE.
2. ALL CONCRETE SHALL ATTAIN 4000 PSI COMPRESSIVE STRENGTH AT 28 DAYS.
3. READY MIX: COMPLY WITH ACI-301 AND ASTM C-94. ALL CONCRETE EXPOSED TO THE GROUND OR WEATHER SHALL BE AIR ENTRAINED.
4. COLD WEATHER CONCRETE POURING SHALL BE IN ACCORDANCE WITH ACI-306.
5. THROUGHOUT CONSTRUCTION THE CONCRETE WORK SHALL BE ADEQUATELY PROTECTED AGAINST DAMAGE DUE TO EXCESSIVE LOADING, CONSTRUCTION EQUIPMENT, MATERIALS OR THODS, ICE, RAIN, SNOW, EXCESSIVE HEAT AND FREEZING TEMPERATURES.
6. EARLY DRYING OUT OF CONCRETE, ESPECIALLY DURING THE FIRST 24 HOURS, SHALL BE CAREFULLY GUARDED AGAINST. ALL SURFACES SHALL BE PROTECTED USING MOST CURING OR A MEMBRANE CURING AGENT APPLIED AS SOON AS FORMS ARE REMOVED OR FINISHING OPERATIONS ARE COMPLETE. CARE SHALL BE EXERCISED SO AS NOT TO DAMAGE COATING.
7. APPLY NON-SUP BROOM FINISH IMMEDIATELY AFTER TROWEL FINISHING.
8. CONTRACTOR TO COORDINATE REQUIREMENTS OF STRUCTURAL, CIVIL, MECHANICAL AND ELECTRICAL DRAWINGS INCLUDING ANY AND ALL PENETRATIONS SPECIFIED PRIOR TO POURING CONCRETE.
9. CONTRACTOR SHALL PROVIDE A 3/4" CHAMFER ON ALL CONCRETE SLABS.

**REINFORCING:**

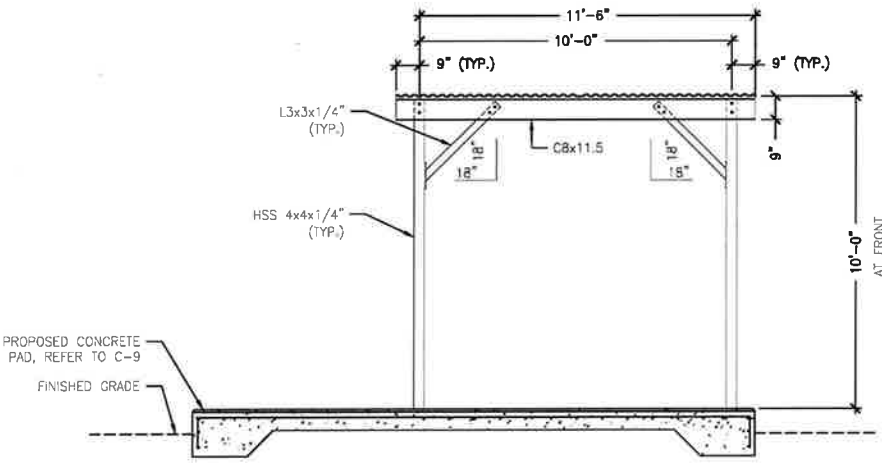
1. ALL REINFORCING BAR SHALL CONFORM TO THE LATEST ACI CODE AND DETAILING MANUAL.
2. WHERE REINFORCING IS CALLED OUT IN THE CONSTRUCTION DOCUMENTS IT SHALL BE 3" CLEAR COVER (MINIMUM UNLESS OTHERWISE NOTED).
3. ALL BARS SHALL BE ASTM A-615, GRADE 60.
4. WELDED WIRE FABRIC SHALL BE ASTM A-185.
5. WHERE CONTINUOUS BARS ARE CALLED FOR, THEY SHALL BE RUN CONTINUOUSLY AROUND CORNERS AND LAPPED AT NECESSARY SPLICES OR HOOKED AT DISCONTINUOUS ENDS. LAP SHALL BE 40 BAR DIAMETERS.

**FOUNDATION**

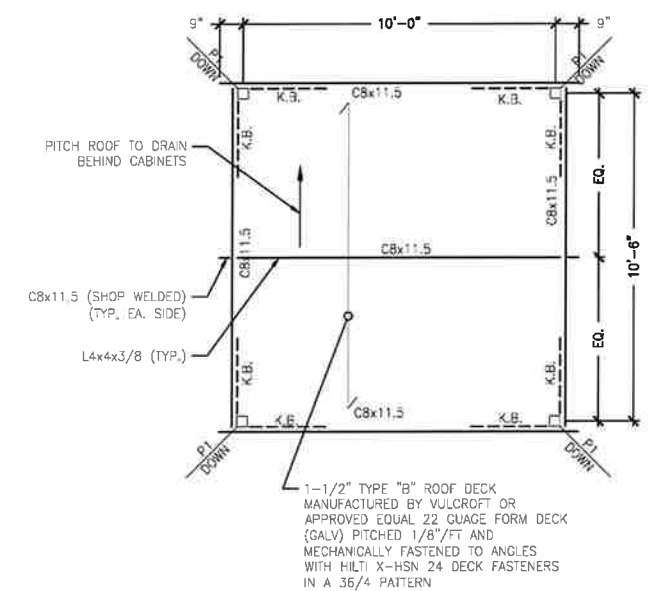
FOOTINGS SHALL BEAR ON UNDISTURBED SOIL AND /OR SUPERVISED COMPACTED FILL, FREE OF FROST, HAVING A MINIMUM ALLOWABLE BEARING CAPACITY OF 1 1/2 TONS PER SQUARE FOOT



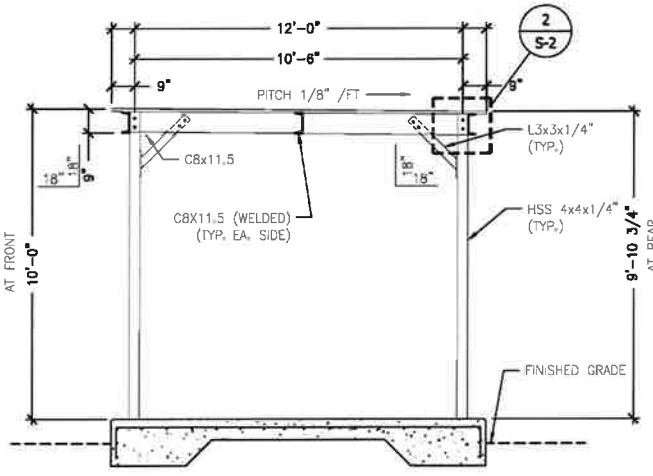
**1 EQUIPMENT PLAN**  
Scale: 3/8" = 1'-0"



**3 EQUIPMENT PAD AND CANOPY FRONT ELEVATION**  
Scale: 3/8" = 1'-0"



**2 EQUIPMENT CANOPY ROOF FRAMING PLAN**  
Scale: 3/8" = 1'-0"



**4 EQUIPMENT PAD AND CANOPY SIDE ELEVATION**  
Scale: 3/8" = 1'-0"

PLAN NOTES	
1. VERIFY ALL DIMENSIONS, ELEVATIONS, EXISTING FRAMING MEMBER SIZES AND GENERAL CONDITIONS PRIOR TO COMMENCEMENT OF WORK. NOTIFY ENGINEER OF RECORD OF ANY DISCREPANCIES BETWEEN THESE DRAWINGS AND EXISTING CONDITIONS.	
LEGEND	
	INDICATES HSS 4x4x1/4 ASTM A500 GR. B (Fy=48ksi) STEEL POST.
	INDICATES SPAN DIRECTION
	INDICATES L3x3x1/4 ASTM A36 (Fy=36ksi) STEEL ANGLE

**verizon**  
WIRELESS COMMUNICATIONS FACILITY  
20 ALEXANDER DRIVE  
WALLINGFORD, CT 06492

**On Air Engineering, LLC**  
88 Foundry Pond Rd.  
Cold Spring, NY 10516  
onair@optonline.net  
201-456-4624

LICENSE

DAVID WEDPAHL, P.E.  
CT LIC. NO. 22144

NO.	DATE	SUBMISSIONS
0	07.20.23	REVIEW
1	07.24.23	REVISED PER OWNER COMMENTS
2	09.21.23	REVISED GENERATOR SIZE
3	10.12.23	REVISED EQUIPMENT MODELS

DRAWN BY:	CHECKED BY:
AS	DW

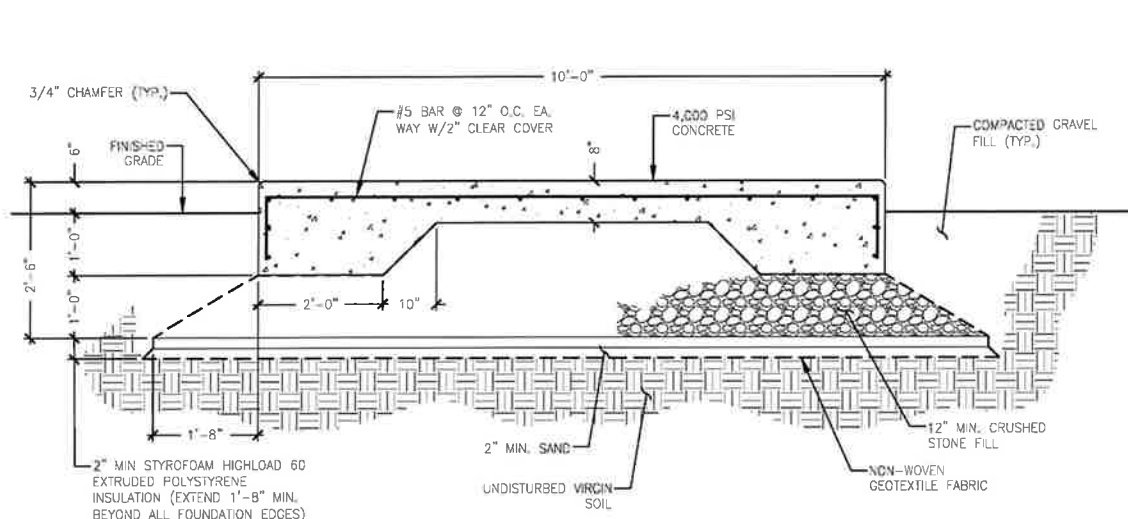
SITE NAME:  
**WESTPORT 3 CT**

PROJECT DESCRIPTION:  
**MACRO NEW BUILD  
FUZE #2118110**

PROJECT INFORMATION:  
**TARPON TOWERS #CT1024  
92 GREEN FARMS RD.  
WESTPORT, CT 06880**

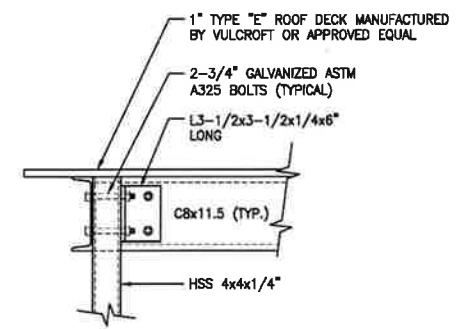
DRAWING TITLE:  
**STRUCTURAL EQUIP.  
PLATFORM PLANS &  
ELEVATIONS**

SHEET NUMBER:  
**S-1**

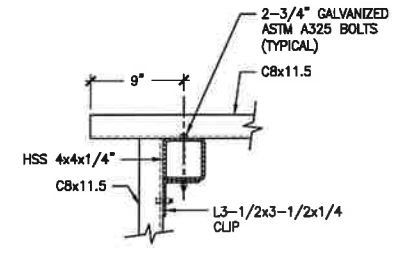


**1 CONCRETE SLAB SECTION**  
Scale: 3/4" = 1'-0"

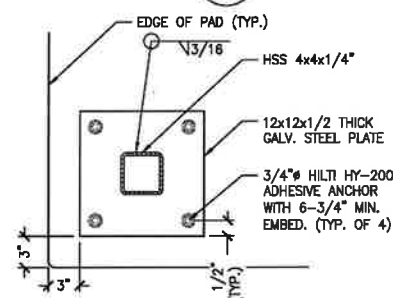
NOTE: MINIMUM SAFE ALLOWABLE BEARING CAPACITY ON VIRGIN SOIL OR ENGINEER CONTROLLED COMPACTED FILL TO BE 3000 PSF.



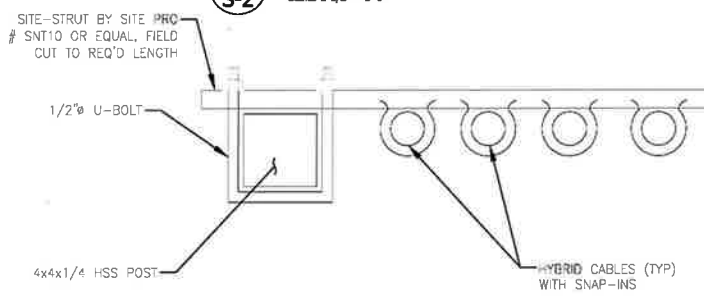
**2 CANOPY CONNECTION SECTION**  
Scale: 1" = 1'-0"



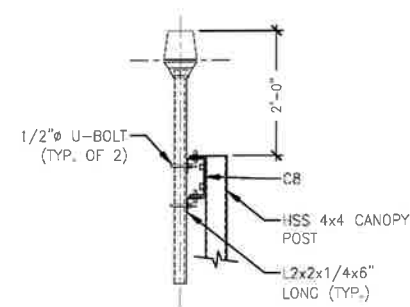
**3 CANOPY CONNECTION PLAN**  
Scale: 1-1/2" = 1'-0"



**4 CANOPY POST PLAN DETAIL**  
Scale: 1-1/2" = 1'-0"

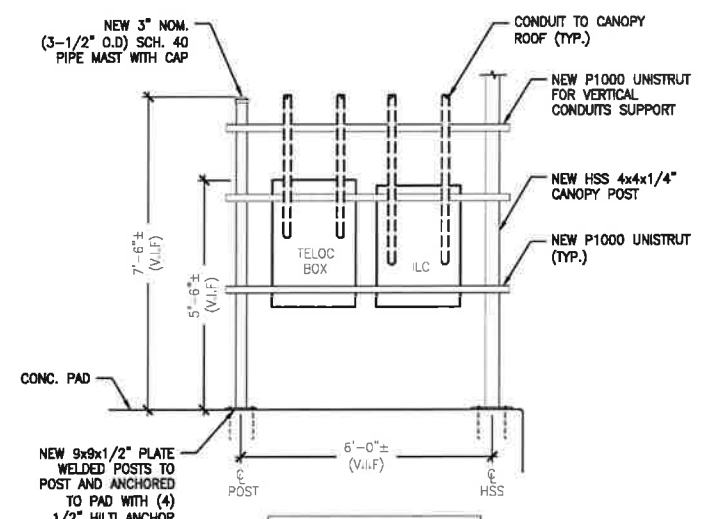


**5 CABLE ROUTE PLAN AT EQUIPMENT**  
Scale: N.T.S.



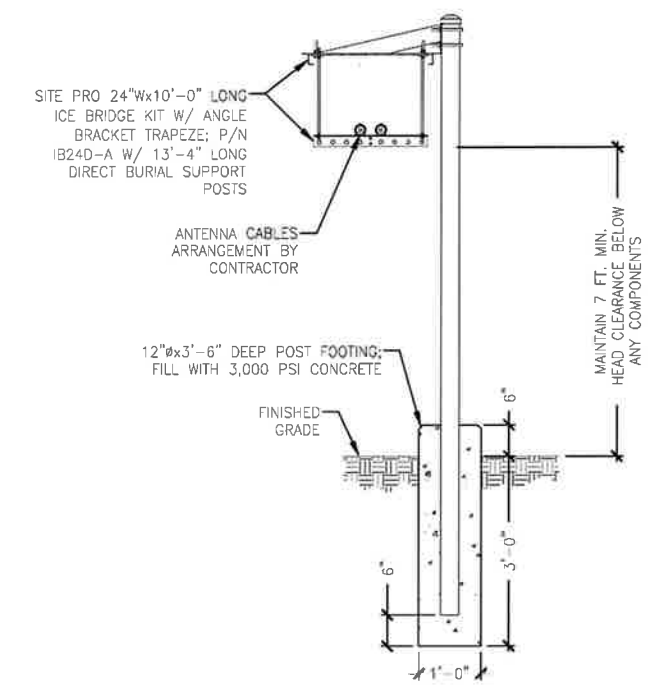
**6 GPS GROUNDING/MOUNTING BRACKET DETAIL**  
Scale: N.T.S.

- NOTES:**
- THE GPS ANTENNA MOUNT IS DESIGNED TO FASTEN TO A STANDARD 2-1/2" DIAMETER, SCHEDULE 40, GALVANIZED STEEL OR STAINLESS STEEL PIPE. THE PIPE MUST NOT BE THREADED AT THE ANTENNA MOUNT END. THE PIPE SHALL BE CUT TO THE REQUIRED LENGTH (MINIMUM OF 24 INCHES) USING A HAND OR ROTARY PIPE CUTTER TO ASSURE A SMOOTH AND PERPENDICULAR CUT. A HACK SAW SHALL NOT BE USED. THE CUT PIPE END SHALL BE DEBURRED AND SMOOTH IN ORDER TO SEAL AGAINST THE NEOPRENE GASKET ATTACHED TO THE ANTENNA MOUNT.
  - ATTACH TO POST NEAREST EQUIPMENT WITH CLEAN VIEW OF SKY.
  - PRIOR TO INSTALLATION CONTRACTOR SHALL TEST GPS LOCATION WITH HAND HELD AND MOVE GPS ANTENNA TO OTHER ICE BRIDGE POSTS AS REQUIRED TO ACHIEVE ADEQUATE SIGNAL. FAILURE TO ACHIEVE ADEQUATE SIGNAL WITH A HAND HELD GPS SHALL BE REPORTED TO CONSTRUCTION MANAGER AND ENGINEER TO DETERMINE ALTERNATE INSTALLATION LOCATION FOR GPS ANTENNA.



**7 E/T FRAME DETAIL**  
Scale: 1/2" = 1'-0"

NOTE: UNISTRUT AND PIPE CLAMPS FOR EQUIPMENT ATTACHMENT IS NOT SHOWN



**8 CABLE BRIDGE DETAIL**  
Scale: N.T.S.

**verizon**  
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PROJECT INFORMATION:  
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92 GREEN FARMS RD.  
WESTPORT, CT 06880**

DRAWING TITLE:  
**STRUCTURAL DETAILS**

SHEET NUMBER:  
**S-2**

**ELECTRICAL SPECIFICATIONS**

**SECTION 16010**

- 1.01. SCOPE OF WORK
- A. WORK SHALL INCLUDE ALL LABOR, EQUIPMENT AND SERVICES REQUIRED TO COMPLETE (MAKE READY FOR OPERATION) ALL THE ELECTRICAL WORK INCLUDING, BUT NOT LIMITED TO, THE FOLLOWING:
    1. ALL EQUIPMENT AND HAND TRENCHING FOR POWER, TELECOMMUNICATION AND GROUNDING SYSTEM INSTALLATIONS.
    2. PROVIDE TELECOMMUNICATION CONDUIT TO THE WIRELESS CARRIER EQUIPMENT ENCLOSURE.
    3. PROVIDE A 240V, 2P, 200 AMP SERVICE WITH MAIN DISCONNECT CONFORMING TO LOCAL UTILITY REQUIREMENTS IN EXISTING METER CENTER.
    4. PROVIDE ALL THE NECESSARY CONDUIT AND WIRING FROM THE REVENUE METER TO THE ELECTRICAL PANELBOARD/MANUAL TRANSFER SWITCH.
    5. PROVIDE A COMPLETE EXTERIOR GROUNDING SYSTEM, CONSISTING OF ANTENNA GROUNDING, GROUND RODS, GROUNDING CABLE, COMPRESSION AND EXOTHERMIC CONNECTIONS.
    6. PROVIDE GROUNDING SYSTEM TEST FOR THE EXISTING SITE (BEFORE CONNECTION OF THE NEW WIRELESS CARRIER CELLULAR SITE). PROVIDE REPORT TO WIRELESS CARRIER CONSTRUCTION MANAGER. PROVIDE NEW WIRELESS CARRIER CELLULAR SITE GROUNDING TEST AND A GROUNDING SYSTEM TEST FOR WHEN ALL SYSTEMS ARE CONNECTED. PROVIDE SEPARATE REPORTS FOR EACH TEST TO CONSTRUCTION MANAGER.
    7. COORDINATE ALL WORK SHOWN, ON THESE PLANS WITH LOCAL UTILITY COMPANIES.
  - B. LOCAL UTILITY COMPANIES SHALL PROVIDE THE FOLLOWING:
    1. 120/240AC, 200 AMP., 1Ø, 3 WIRE REVENUE METER.
  - C. CONTRACTOR SHALL CONFER WITH LOCAL UTILITY COMPANIES TO ASCERTAIN THE LIMITS OF THEIR WORK AND SHALL INCLUDE IN BID ANY CHARGES OR FEES MADE BY THE UTILITY COMPANIES FOR THEIR PORTION OF THE WORK AND SHALL PROVIDE AND INSTALL ALL ITEMS REQUIRED, BUT NOT PROVIDED BY UTILITY COMPANY.
  - D. ELECTRICAL CONTRACTOR SHALL COORDINATE ELECTRICAL INSTALLATION WITH ELECTRIC UTILITY CO. PRIOR TO INSTALLATION.
  - E. CONTRACTOR SHALL COORDINATE WITH TELEPHONE UTILITY COMPANY FOR LOCATION OF TELEPHONE SERVICE AND TO DETERMINE ANY REQUIRED EQUIPMENT TO BE INSTALLED BY CONTRACTOR.
- 1.02. GENERAL REQUIREMENTS
- A. THE ENTIRE ELECTRICAL INSTALLATION SHALL BE MADE IN STRICT ACCORDANCE WITH ALL LOCAL, STATE AND NATIONAL CODES AND REGULATIONS WHICH MAY APPLY AND NOTHING IN THE DRAWINGS OR SPECIFICATIONS SHALL BE INTERPRETED AS AN INFRINGEMENT OF SUCH CODES OR REGULATIONS.
  - B. THE ELECTRICAL CONTRACTOR IS TO BE RESPONSIBLE FOR THE COMPLETE INSTALLATION AND COORDINATION OF THE ENTIRE ELECTRICAL SERVICE. ALL ACTIVITIES TO BE COORDINATED THROUGH OWNERS REPRESENTATIVE, DESIGN ENGINEER AND OTHER AUTHORITIES HAVING JURISDICTION OF TRADES.
  - C. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND PAY ALL FEES AS MAY BE REQUIRED FOR THE ELECTRICAL WORK AND FOR SCHEDULING OF ALL INSPECTIONS AS MAY BE REQUIRED BY THE LOCAL AUTHORITY.
  - D. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION WITH THE BUILDING OWNER FOR NEW AND/OR DEMOLITION WORK INVOLVED.
  - E. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION WITH LOCAL TELEPHONE COMPANY AS MAY BE REQUIRED FOR THE INSTALLATION OF TELEPHONE SERVICE TO THE PROPOSED CELLULAR SITE.
  - F. NO MATERIAL OTHER THAN THAT CONTAINED IN THE "LATEST LIST OF ELECTRICAL FITTINGS" APPROVED BY THE UNDERWRITERS' LABORATORIES, SHALL BE USED IN ANY PART OF THE WORK. ALL MATERIAL FOR WHICH LABEL SERVICE HAS BEEN ESTABLISHED SHALL BEAR THE U.L. LABEL.
  - G. THE CONTRACTOR SHALL GUARANTEE ALL NEW WORK FOR A PERIOD OF ONE YEAR FROM THE ACCEPTANCE DATE BY THE OWNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING WARRANTIES FROM ALL EQUIPMENT MANUFACTURERS FOR SUBMISSION TO THE OWNER.
  - H. DRAWINGS INDICATE GENERAL ARRANGEMENT OF WORK INCLUDED IN CONTRACT. CONTRACTOR SHALL WITHOUT EXTRA CHARGE, MAKE MODIFICATIONS TO THE LAYOUT OF THE WORK TO PREVENT CONFLICT WITH WORK OF OTHER TRADES AND FOR THE PROPER INSTALLATION OF WORK. CHECK ALL DRAWINGS AND VISIT JOB SITE TO VERIFY SPACE AND TYPE OF EXISTING CONDITIONS IN WHICH WORK WILL BE DONE. PRIOR TO SUBMITTAL OF BID.
  - I. THE ELECTRICAL CONTRACTOR SHALL SUPPLY THREE (3) COMPLETE SETS OF APPROVED DRAWINGS, ENGINEERING DATA SHEETS, MAINTENANCE AND OPERATING INSTRUCTION MANUALS FOR ALL SYSTEMS AND THEIR RESPECTIVE EQUIPMENT. THESE MANUALS SHALL BE INSERTED IN VINYL COVERED 3-RING BINDERS AND TURNED OVER TO OWNER'S REPRESENTATIVE ONE(1) WEEK PRIOR TO FINAL PUNCH LIST.
  - J. ALL WORK SHALL BE INSTALLED IN A NEAT AND WORKMAN LIKE MANNER AND WILL BE SUBJECT TO THE APPROVAL OF THE OWNER'S REPRESENTATIVE.
  - K. ALL EQUIPMENT AND MATERIALS TO BE INSTALLED SHALL BE NEW, UNLESS OTHERWISE NOTED.
  - L. BEFORE FINAL PAYMENT, THE CONTRACTOR SHALL PROVIDE A COMPLETE SET OF PRINTS (AS-BUILTS), LEGIBLY MARKED IN RED PENCIL TO SHOW ALL CHANGES FROM THE ORIGINAL PLANS.
  - M. PROVIDE TEMPORARY POWER AND LIGHTING IN WORK AREAS AS REQUIRED.
  - N. SHOP DRAWINGS
    1. CONTRACTOR SHALL SUBMIT SIX (6) COPIES OF SHOP DRAWINGS ON ALL EQUIPMENT AND MATERIALS PROPOSED FOR USE ON THIS PROJECT, GIVING ALL DETAILS, WHICH INCLUDE DIMENSIONS, CAPACITIES, ETC.
    2. CONTRACTOR SHALL SUBMIT SIX (6) COPIES OF ALL TEST REPORTS CALLED FOR IN THE SPECIFICATIONS AND DRAWINGS.

**SECTION 16111**

- 1.01. CONDUIT
- A. MINIMUM CONDUIT SIZE FOR BRANCH CIRCUITS, LOW VOLTAGE CONTROL AND ALARM CIRCUITS SHALL BE 3/4". CONDUIT MATERIAL SHALL BE AS FOLLOWS:
    1. RIGID GALVANIZED CONDUIT (RGS) - FEEDERS AND CIRCUITS EXPOSED TO EXTERIOR AND CONDUIT STUB UP FROM FINISHED GRADE, ALL CONDUIT 45° AND 90° ELBOWS BELOW FINISHED GRADE AND STUB UPS.
    2. PVC CONDUIT - BELOW FINISHED GRADE AND AS INDICATED ON THE CONTRACT DOCUMENTS.

**SECTION 16123**

- 1.01. CONDUCTORS
- A. ALL CONDUCTORS SHALL BE TYPE THWN (INT. APPLICATION) AND XHHW (EXT. APPLICATION), 75 DEGREE C, 600 VOLT INSULATION, SOFT ANNEALED STRANDED COPPER, #10 AWG AND SMALLER SHALL BE SPLICED USING ACCEPTABLE SOLDERLESS PRESSURE CONNECTORS, #8AWG AND LARGER SHALL BE SPLICED USING IRREVERSIBLE COMPRESSION OR SPLIT-BOLT TYPE CONNECTORS, #12 AWG SHALL BE THE MINIMUM SIZE CONDUCTOR FOR LINE VOLTAGE BRANCH CIRCUITS. CONDUCTORS SHALL BE COLOR CODED FOR CONSISTENT PHASE IDENTIFICATION:
 

LINE	120/240V/1PH
	3/0/0/0
A	BLACK
B	RED
N	CONTINUOUS WHITE
G	CONTINUOUS GREEN
  - B. MINIMUM BENDING RADIUS FOR CONDUCTORS SHALL BE 12 TIMES THE LARGEST DIAMETER OF BRANCH CIRCUIT CONDUCTOR.

**SECTION 16130**

- 1.01. BOXES
- A. FURNISH AND INSTALL OUTLET BOXES FOR ALL SPECIFIED DEVICES, SWITCHES, RECEPTACLES, ETC., BOXES TO BE GALVANIZED STEEL.
  - B. FURNISH AND INSTALL PULL BOXES IN MAIN FEEDERS RUNS WHERE REQUIRED. PULL BOXES SHALL BE GALVANIZED STEEL WITH SCREW REMOVABLE COVERS, SIZE AND QUANTITY AS REQUIRED, PROVIDE WEATHERPROOF CONSTRUCTION IN WET LOCATIONS.

**SECTION 16140**

- 1.01. WIRING DEVICES
- A. THE FOLLOWING LIST IS PROVIDED TO CONVEY THE QUALITY AND RATING OF WIRING DEVICES WHICH ARE TO BE INSTALLED. A COMPLETE LIST OF ALL DEVICES MUST BE SUBMITTED BEFORE INSTALLATION FOR APPROVAL.
 

DUPLEX RECEPTACLE - P&S #2091-S (GFC) SPECIFICATION GRADE
SINGLE POLE SWITCH - P&S #5021-1 (20A-120V HARD USE) SPECIFICATION GRADE
DUPLEX RECEPTACLE - P&S #5342-1 (20A-120V HARD USE) SPECIFICATION GRADE
  - B. COVERPLATES - ALL PLATES USED SHALL BE CORROSION RESISTANT TYPE 304 STAINLESS STEEL. PLATES SHALL BE FROM SAME MANUFACTURER AS SWITCHES AND RECEPTACLES, PROVIDE WEATHERPROOF HOUSING FOR DEVICES LOCATED IN WET LOCATIONS.
  - C. OTHER MANUFACTURERS OF THE SWITCHES, RECEPTACLES AND PLATES MAY BE SUBMITTED FOR APPROVAL BY THE ENGINEER.

**SECTION 16170**

- 1.01. DISCONNECT SWITCHES
- A. FUSIBLE AND NON-FUSIBLE, 600V, HEAVY DUTY DISCONNECT SWITCHES SHALL BE AS MANUFACTURED BY SQUARE "D". PROVIDE FUSES AS CALLED FOR ON THE CONTRACT DRAWINGS. AMPERE RATING SHALL BE CONSISTENT WITH LOAD BEING SERVED. DISCONNECT SWITCH COVER SHALL BE MECHANICALLY INTERLOCKED TO PREVENT COVER FROM OPENING WHEN THE SWITCH IS IN THE "ON" POSITION. EXTERIOR APPLICATIONS SHALL BE NEMA 3R CONSTRUCTION WITH PADLOCK FEATURE.

**SECTION 16190**

- 1.01. SEISMIC RESTRAINT
- A. ALL DEVICES SHALL BE INSTALLED IN ACCORDANCE WITH ZONE 2 SEISMIC REQUIREMENTS.

**SECTION 16195**

- 1.01. LABELING AND IDENTIFICATION NOMENCLATURE FOR ELECTRICAL EQUIPMENT
- A. CONTRACTOR SHALL FURNISH AND INSTALL NON-METALLIC ENGRAVED BACK-LIT NAMEPLATES ON ALL PANELS AND MAJOR ITEM OF ELECTRICAL EQUIPMENT.
  - B. LETTERS TO BE WHITE ON BLACK BACKGROUND WITH LETTERS 1-1/2 INCH HIGH WITH 1/4 INCH MARGIN.
  - C. IDENTIFICATION NOMENCLATURE SHALL BE IN ACCORDANCE WITH OWNER.
  - D. PROVIDE NAMEPLATE FOR PORTABLE ENGINE/GENERATOR CONNECTION SHOWING VOLTAGE KVA/KW RATING, # PHASE AND # OF WIRES. PLATE TO BE PLASTIC ENGRAVED, RED WITH WHITE LETTERS.
  - E. ALL RECEPTACLES, SWITCHES, DISCONNECT SWITCHES, ETC. SHALL BE LABELED WITH THE CORRECT BRANCH CIRCUIT NUMBER SERVED BY MEANS OF PERMANENT PRESSED TYPE BLACK 1/4" TRANSFER LETTERING. (FOR EXAMPLE: "WDP-5", ETC.).
  - F. PROVIDE A NAMEPLATE AT THE SERVICE EQUIPMENT INDICATING NAME OF WIRELESS CARRIER AND THE TYPE AND LOCATION OF THE ON SITE GENERATOR.

**SECTION 16450**

- (SUPPLIED BY OWNER, INSTALLED BY CONTRACTOR)
- 1.01. GROUNDING
- A. REFER TO CONTRACT DRAWINGS FOR DETAILS AND SCHEDULES.

**SECTION 16450**

- 1.01. GROUNDING
- A. ALL NON-CURRENT CARRYING PARTS OF THE ELECTRICAL AND TELEPHONE CONDUIT SYSTEMS SHALL BE MECHANICALLY AND ELECTRICALLY CONNECTED TO PROVIDE AN INDEPENDENT RETURN PATH TO THE EQUIPMENT GROUNDING SOURCES.
  - B. GROUNDING SYSTEM WILL BE IN ACCORDANCE WITH THE LATEST ACCEPTABLE EDITION OF THE NATIONAL ELECTRICAL CODE AND REQUIREMENTS PER LOCAL INSPECTOR HAVING JURISDICTION.
  - C. GROUNDING OF PANELBOARDS:
    1. PANELBOARD SHALL BE GROUNDED BY TERMINATING THE PANELBOARD FEEDER'S EQUIPMENT GROUND CONDUCTOR TO THE EQUIPMENT GROUND BAR KIT(S) LUGGED TO THE CABINET. ENSURE THAT THE SURFACE BETWEEN THE KIT AND CABINET ARE BARE METAL TO BARE METAL, PRIME AND PAINT OVER TO PREVENT CORROSION.
    2. CONDUIT(S) TERMINATING INTO THE PANELBOARD SHALL HAVE GROUNDING TYPE BUSHINGS, THE BUSHINGS SHALL BE BONDED TOGETHER WITH #10 AWG BARE COPPER CONDUCTOR WHICH IN TURN IS TERMINATED INTO THE PANELBOARD'S EQUIPMENT GROUND BAR KIT(S).
  - D. EQUIPMENT GROUNDING CONDUCTOR:
    1. EACH EQUIPMENT GROUND CONDUCTOR SHALL BE SIZED IN ACCORDANCE WITH THE NEC REQUIREMENTS.
    2. THE MINIMUM SIZE OF EQUIPMENT GROUND CONDUCTOR SHALL BE NO. 12 AWG COPPER.
    3. EACH FEEDER OR BRANCH CIRCUIT SHALL HAVE EQUIPMENT GROUND CONDUCTOR(S) INSTALLED IN THE SAME RACEWAY(S).
  - E. CELLULAR GROUNDING SYSTEM:
    - CONTRACTOR SHALL PROVIDE A CELLULAR GROUNDING SYSTEM WITH THE MAXIMUM AC RESISTANCE TO GROUND OF 5 OHM BETWEEN ANY POINT ON THE GROUNDING SYSTEM AS MEASURED BY 3-POINT GROUNDING TEST. (REFER TO SECTION 16960).
    - PROVIDE THE CELLULAR GROUNDING SYSTEM AS SPECIFIED ON DRAWINGS, INCLUDING, BUT NOT LIMITED TO:
      1. GROUND BARS.
      2. GROUND RODS AND GROUND RING.
      3. EXTERIOR GROUNDING.
      4. ANTENNA SYSTEM GROUND CONNECTIONS AND PLATES.
      5. ICE BRIDGE GROUND CONNECTIONS.
  - F. CONTRACTOR, AFTER COMPLETION OF THE COMPLETE GROUNDING SYSTEM BUT PRIOR TO CONCEALMENT/BURIAL OF SAME, SHALL NOTIFY OWNERS WIRELESS PROJECT ENGINEER WHO WILL HAVE A DESIGN ENGINEER VISIT SITE AND MAKE A VISUAL INSPECTION OF THE GROUNDING GRID AND CONNECTIONS OF THE SYSTEM.
  - G. ALL EQUIPMENT SHALL BE BONDED TO GROUND AS REQUIRED BY NEC, MFG. SPECIFICATIONS AND OWNERS SPECIFICATIONS.

**SECTION 16470**

- 1.01. DISTRIBUTION EQUIPMENT
- A. REFER TO CONTRACT DRAWINGS FOR DETAILS AND SCHEDULES.

**SECTION 16477**

- 1.01. FUSES
- A. FUSES SHALL BE NONRENEWABLE TYPE AS MANUFACTURED BY "BUSSMAN" OR APPROVED EQUAL. FUSES RATED 1/10 AMPERE UP TO 600 AMPERES SHALL BE EQUIVALENT TO BUSSMAN TYPE LPN-RK (250V) UL CLASS RK1, LOW PEAK, DUAL ELEMENT, TIME-DELAY FUSES. FUSES SHALL HAVE SEPARATE SHORT CIRCUIT AND OVERLOAD ELEMENTS AND HAVE AN INTERRUPTING RATING OF 200 KAIC. UPON COMPLETION OF WORK PROVIDE ONE SPARE SET OF FUSES FOR EACH TYPE INSTALLED.

**SECTION 16960**

- 1.01. TESTS BY INDEPENDENT ELECTRICAL TESTING FIRM
- A. CONTRACTOR SHALL RETAIN THE SERVICES OF A LOCAL INDEPENDENT ELECTRICAL TESTING FIRM (WITH MINIMUM 5 YEARS COMMERCIAL EXPERIENCE IN THE ELECTRICAL TESTING INDUSTRY) AS SPECIFIED BY WIRELESS CARRIER AND/OR EXISTING CARRIER(S) TO PERFORM:
    - TEST 1: THERMAL OVERLOAD AND MAGNETIC TRIP TEST, AND CABLE INSULATION TEST FOR ALL CIRCUIT BREAKERS RATED 100 AMPS OR GREATER.
    - TEST 2: RESISTANCE TO GROUND TEST ON THE CELLULAR GROUNDING SYSTEM AS MEASURED BY THE 3-POINT GROUNDING TEST AS FOLLOWS:
      1. TEST OF EXISTING GROUND RING PRIOR TO COMMENCEMENT OF WORK.
      2. TEST OF COMPLETE GROUNDING RING.
      3. TEST OF COMPLETE WIRELESS CARRIER IN CONJUNCTION WITH EXISTING GROUND RING'S.
  - THE TESTING FIRM SHALL INCLUDE THE FOLLOWING INFORMATION WITH THE REPORT:
    1. TESTING PROCEDURE INCLUDING THE MAKE AND MODEL OF TEST EQUIPMENT.
    2. CERTIFICATION OF TESTING EQUIPMENT CALIBRATION WITHIN SIX (6) MONTHS OF DATE OF TESTING, INCLUDE CERTIFICATION LAB ADDRESS AND TELEPHONE NUMBER.
    3. GRAPHICAL DESCRIPTION OF TESTING METHOD ACTUALLY IMPLEMENTED.
  - B. THESE TESTS SHALL BE PERFORMED IN THE PRESENCE AND TO THE SATISFACTION OF CONSTRUCTION REPRESENTATIVES. TESTING DATA SHALL BE INITIALED AND DATED BY THE CONSTRUCTION REPRESENTATIVES AND INCLUDED WITH THE WRITTEN REPORT/ANALYSIS.
  - C. THE CONTRACTOR SHALL FORWARD SIX (6) COPIES OF THE INDEPENDENT ELECTRICAL TESTING FIRM REPORT/ANALYSIS TO ENGINEER A MINIMUM OF TEN (10) WORKING DAYS PRIOR TO THE JOB TURNOVER.
  - D. CONTRACTOR TO PROVIDE A MINIMUM OF ONE (1) WEEK NOTICE TO OWNER AND ENGINEER FOR ALL TESTS REQUIRING WITNESSING.


**SECTION 16961**

- 1.01. TESTS BY CONTRACTOR
- A. ALL TESTS AS REQUIRED UPON COMPLETION OF WORK, SHALL BE MADE BY THIS CONTRACTOR. THESE SHALL BE CONTINUITY AND INSULATION TESTS; TEST TO DETERMINE THE QUALITY OF MATERIALS, ETC. AND SHALL BE MADE IN ACCORDANCE WITH NEC RECOMMENDATIONS. ALL FEEDERS AND BRANCH CIRCUIT WIRING (EXCEPT CLASS 2 SIGNAL CIRCUITS) MUST BE TESTED FREE FROM SHORT CIRCUIT AND GROUND FAULT CONDITIONS AT 500V IN A REASONABLY DRY AMBIENT OF APPROXIMATELY 70 DEGREES F.
  - B. CONTRACTOR SHALL PERFORM LOAD PHASE BALANCING TESTS. CIRCUITS SHALL BE SO CONNECTED TO THE PANELBOARDS SUCH THAT THE NEW LOAD IS DISTRIBUTED AS EQUALLY AS POSSIBLE BETWEEN EACH LOAD AND NEUTRAL. 10% SHALL BE CONSIDERED AS A REASONABLE AND ACCEPTABLE ALLOWANCE. BRANCH CIRCUITS SHALL BE BALANCED ON THEIR OWN PANELBOARDS; FEEDER LOADS SHALL IN TURN BE BALANCED ON THE SERVICE EQUIPMENT. REASONABLE LOAD TEST SHALL BE ARRANGED TO VERIFY LOAD BALANCE IF REQUESTED BY THE ENGINEER.
  - C. ALL TESTS, UPON REQUEST, BE REPEATED IN THE PRESENCE OF WIRELESS CARRIER CONSTRUCTION MANAGER. ALL TESTS SHALL BE DOCUMENTED AND TURNED OVER TO WIRELESS CARRIER. WIRELESS CARRIER SHALL HAVE THE AUTHORITY TO STOP ANY OF THE WORK NOT BEING PROPERLY INSTALLED. ALL SUCH DETECTED WORK SHALL BE REPAIRED OR REPLACED AT NO ADDITIONAL EXPENSE TO THE OWNER AND THE TESTS SHALL BE REPEATED.

**verizon**  
WIRELESS COMMUNICATIONS FACILITY  
20 ALEXANDER DRIVE  
WALLINGFORD, CT 06492

**On Air Engineering, LLC**  
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LICENSURE



DAVID WEINPAAL, P.E.  
CT LIC. NO. 22144

NO.	DATE	SUBMISSIONS
0	07.20.23	REVIEW
1	07.24.23	REVISED PER OWNER COMMENTS
2	09.21.23	REVISED GENERATOR SIZE
3	10.12.23	REVISED EQUIPMENT MODELS

DRAWN BY: <b>AS</b>	CHECKED BY: <b>DW</b>
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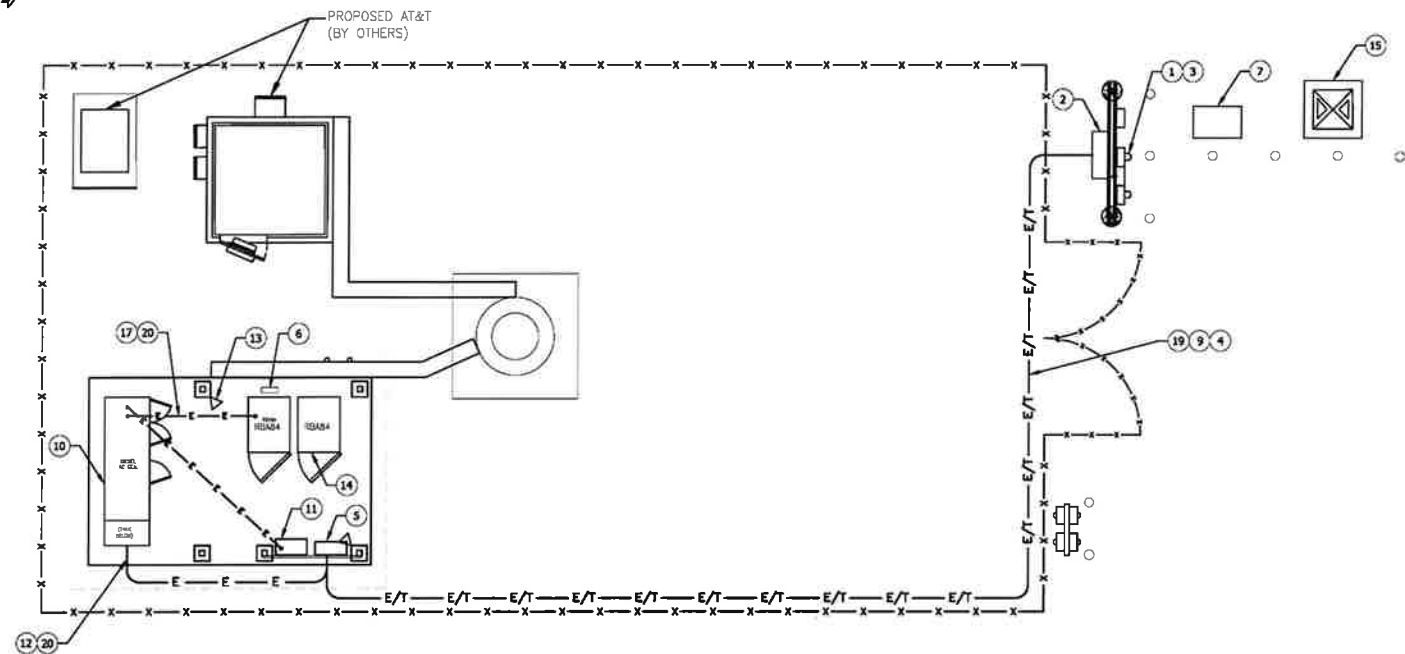
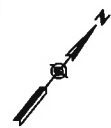
SITE NAME:  
**WESTPORT 3 CT**

PROJECT DESCRIPTION:  
**MACRO NEW BUILD  
FUZE #2118110**

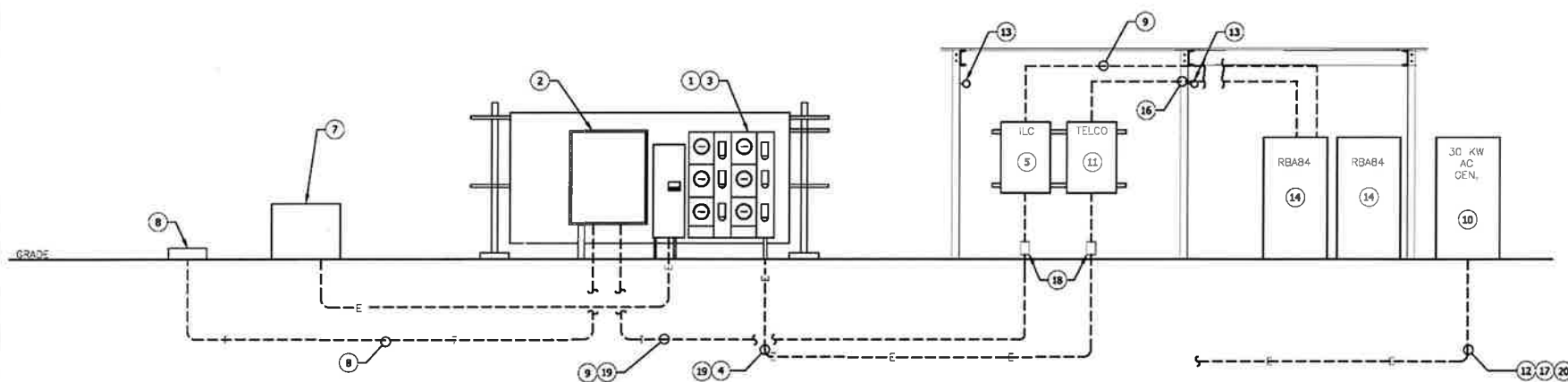
PROJECT INFORMATION:  
**TARPON TOWERS #CT1024  
92 GREEN FARMS RD.  
WESTPORT, CT 06880**

DRAWING TITLE:  
**ELECTRICAL  
SPECIFICATIONS**

SHEET NUMBER:  
**E-1**



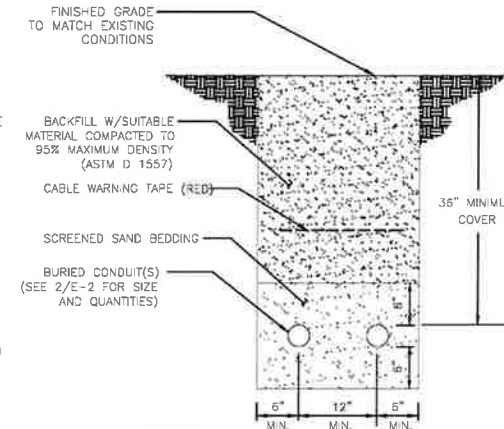
1 ELECTRICAL COMPOUND PLAN  
Scale: 3/16" = 1'-0"



2 ELECTRICAL POWER RISER DIAGRAM  
Scale: N.T.S.

**ELECTRICAL NOTES**

- 1 PROPOSED 120/240V, 1-PH, 3W, 800 AMP, 6-GANG MULTIMETER CENTER (BY OTHERS).
- 2 PROPOSED TELCO BOX (BY OTHERS)
- 3 PROVIDE 120/240AC, 200 AMP., 1Ø, 3 WIRE UTILITY METER W/200A, 1Ø BREAKER IN SPARE METER AND BREAKER LOCATION. (ALL SERVICE EQUIPMENT MUST BE UTILITY CO. APPROVED) PROVIDE LABEL AT METER STATING "VERIZON WIRELESS" AND IDENTIFYING TYPE AND LOCATION OF VERIZON WIRELESS ON-SITE GENERATOR.
- 4 ELECTRICAL SERVICE: 2-1/2"Ø, 3-3/0 AWG AND 1-#6 AWG GROUND FOR NEW ELECTRICAL SERVICE TO EQUIPMENT.
- 5 INTEGRATED LOAD CENTER SUPPLIED WITH GENERATOR
- 6 MASTER GROUND BAR
- 7 UTILITY PADMOUNT TRANSFORMER (BY OTHERS)
- 8 PROPOSED U/G E/T 4" CONDUITS (4 TOTAL) (BY OTHERS).
- 9 TELCO SERVICES: (1) 4" WITH PULL STRING OR SIZE AS DETERMINED BY VERIZON C.M. AND/OR FIBER PROVIDER
- 10 NEW GENERATOR PROVIDED BY VERIZON
- 11 NEW TELCO BOX AS PER VERIZON/FIBER PROVIDER SPECS.
- 12 2-1/2"Ø, 3-3/0 AWG AND 1-#6 AWG GROUND FROM GENERATOR TO ILC EMERGENCY BREAKER
- 13 PROPOSED FLOODLIGHT PER VZM SPECS (TYP. OF 2)
- 14 VERIZON WIRELESS RADIO CABINET; INSTALL PER MANUFACTURE'S SPECIFICATIONS
- 15 TELCO HANDHOLE (BY OTHERS)
- 16 POWER CONDUITS AND CONDUCTORS FOR EQUIPMENT CABINET AS REQUIRED BY MANUFACTURER FOR PROPER OPERATION.
- 17 PROVIDE ALL REQUIRED ALARM CABLING ETC, PER VERIZON
- 18 EXPANSION COUPLER (TYP.)
- 19 CONDUITS ROUTED UNDERGROUND; CONTRACTOR IS RESPONSIBLE FOR ALL UTILITY AND PRIVATE MARKOUTS
- 20 GENERATOR CONDUITS TO BE LOCATED BELOW GRADE AND THRU SLAB; REFER TO MFG. SPECS FOR STUB-UP LOCATIONS



**NOTES:**

- 1. THE CLEAN FILL SHALL PASS THROUGH A 3/8" MESH SCREEN AND SHALL NOT CONTAIN SHARP STONES, OTHER BACKFILL SHALL NOT CONTAIN ASHES, CINDERS, SHELLS, FROZEN MATERIAL, LOOSE DEBRIS OR STONES LARGER THAN 2" IN MAXIMUM DIMENSION.
- 2. WHERE EXISTING UTILITIES ARE LIKELY TO BE ENCOUNTERED, CONTRACTOR SHALL HAND DIG AND PROTECT EXISTING UTILITIES.

3 TYPICAL ELECTRICAL TRENCH DETAIL  
Scale: N.T.S.

**GENERAL NOTES**

- 1. REFER TO DRAWING A-1 FOR ACTUAL LOCATIONS OF STRUCTURES ON SITE.
- 2. COORDINATION, LAYOUT AND FURNISHING OF CONDUIT, CABLE AND ALL APPURTENANCES REQUIRED FOR PROPER INSTALLATION OF ELECTRICAL/TELECOMMUNICATIONS SERVICES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- 3. ALL UTILITY WORK SHALL BE IN ACCORDANCE WITH LOCAL UTILITY COMPANY REQUIREMENTS AND SPECIFICATIONS.

**ELECTRICAL LEGEND**

SYMBOL	DESCRIPTION
---	GROUND RING
-T-----T-	UNDERGROUND COMMUNICATION CONDUIT
-E-----E-	UNDERGROUND ELECTRICAL CONDUIT AS INDICATED
⊞	GROUND BAR
-x-----x-	PERIMETER CHAIN LINK FENCE
⊗	5/8" DIAMETER x 10'-0" COPPER GROUND ROD OR 24"x24" GROUND PLATE ABOVE MATT FOUNDATION.
⊗	5/8" DIAMETER x 10'-0" COPPER GROUND ROD WITH ACCESS.
■	EXOTHERMIC WELD TYPE "TA"
●	MECHANICAL CONNECTION

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LICENSE



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DRAWN BY: AS CHECKED BY: DW

SITE NAME:  
**WESTPORT 3 CT**

PROJECT DESCRIPTION:  
**MACRO NEW BUILD  
FUZE #2118110**

PROJECT INFORMATION:  
**TARPON TOWERS #CT1024  
92 GREEN FARMS RD.  
WESTPORT, CT 06880**

DRAWING TITLE:  
**ELECTRICAL PLAN,  
RISER DIAGRAM &  
DETAILS**

SHEET NUMBER:  
**E-2**

## CELLULAR GROUNDING NOTES

### OBJECTIVE

PROVIDE A CELLULAR GROUNDING SYSTEM WITH MAXIMUM ALTERNATING CURRENT RESISTANCE OF 5 OHMS BETWEEN ANY POINT ON THE GROUNDING SYSTEM AND REFERENCE GROUND. PROVIDE EXTERIOR GROUNDING SCHEME WITH SELL ATLANTIC ENGINEER'S APPROVAL AS REQUIRED TO ACHIEVE DESIRED MAXIMUM AC RESISTANCE TO GROUND.

### TESTING

CONTRACTOR TO PROVIDE AN INDEPENDENT TESTING CONTRACTOR TO DETERMINE THE GROUNDING SYSTEM RESISTANCE BY USE OF THE THREE POINT TEST AND AN AEMC MODEL 4500, OR APPROVED EQUAL, TEST TO BE PERFORMED PRIOR TO CONNECTION OF POWER SUPPLY TO THE CELL SITE AND CONNECTION OF THE GROUNDING SYSTEM TO THE WATER MAIN OR AC SUPPLY AS APPLICABLE.

### CONDUCTOR USED FOR CELLULAR GROUNDING SYSTEM

EGR - #2 AWG ANNEALED SOLID TINNED BARE COPPER  
 IGR - #2 AWG ANNEALED STRANDED (7 STRAND) THW GREEN COLORED INSULATION  
 INTER-BUS EXTENSION (FROM IGR TO EGR) - SEE DETAILS  
 EXTERNAL BOND CONNECTIONS TO EGR - #2 ANNEALED SOLID TINNED BARE COPPER  
 INTERIOR BOND CONNECTIONS TO IGR - #6 ANNEALED STRANDED (7 STRAND) THW GREEN COLORED INSULATION  
 MINIMUM BENDING RADIUS

IGR #2 ± 1'-0" NOMINAL AND 8" MINIMUM  
 EGR #2 ± 2'-0" NOMINAL AND 8" MINIMUM  
 CELLULAR GROUNDING CONDUCTOR SHALL BE AS STRAIGHT AS POSSIBLE WITH MINIMUM 6" BENDING RADIUS.

### FASTENER FOR CELLULAR GROUNDING CONDUCTOR

USE NON-METALLIC FASTENER AND STANDOFF 'CLIC' (AVAIL. FROM NEFCO 203-289-0285) TO SURFACE SUPPORT CONDUCTOR 3" AWAY FROM SURFACES.

SPACING OF FASTENERS: 2'-0" O.C. OUTSIDE BUILDING  
 3'-0" O.C. INSIDE BUILDING

### GROUNDING ELECTRODE

GROUNDING ELECTRODE SHALL BE 5/8" DIA. X 10'-0" L, COPPER CLAD STEEL ROD, ADJUST LOCATION OF GROUNDING ELECTRODE IF SOIL CONDITION IS NOT CONDUCTIVE (GRAVEL, SANDY SOIL, ROCKS), SPACE GROUNDING ELECTRODES 8'-0" TO 10'-0" APART, ELECTRODES SHALL BE DRIVEN ONLY WITH PROPER DRIVER SLEEVE TO PREVENT MUSHROOMING TOP OF ROD. WHEN ROCK BOTTOM IS ENCOUNTERED, THE ELECTRODE SHALL BE DRIVEN AT AN OBLIQUE ANGLE NOT TO EXCEED 45° FROM THE VERTICAL AWAY FROM STRUCTURES, TOP OF GROUNDING ELECTRODE SHALL BE MIN. 3'-6" BELOW FINISH GRADE.

### CONNECTIONS ABOVE GRADE (MECHANICAL)

COMPRESSION LUG CONNECTOR - 15 TON COMPRESSION, 2 HOLE, LONG BARREL, ELECTRO TINNED PLATED, HIGH CONDUCTIVITY, COPPER 600V RATED. USE 1/4" Ø BOLT, 3/4" SPACING LUGS TO BOND OBJECTS FROM THE IGR. (CONNECTOR SHALL BE BURNDY HYLUG SERIES OR EQUAL)

EXOTHERMIC WELD LUG CONNECTOR - 2 HOLE, OFFSET, ELECTRO TINNED PLATED, HIGH CONDUCTIVITY, COPPER 600V. USE 1/2" Ø BOLT, 1-3/4" SPACING LUGS. CONNECTOR SHALL BE CADWELD CONNECTION STYLE (CABLE TO SURFACE) TYPE LA, LUG SIZE 1/8 X 1. EXOTHERMIC WELD TO LUG AS REQUIRED. C-TAP COMPRESSION CONNECTOR - HIGH CONDUCTIVITY COPPER FOR MAIN TO BRANCH LINE TAPPING. (CONNECTOR SHALL BE BURNDY HYTAP SERIES OR EQUAL)

### MECHANICAL CONNECTIONS

USE MATCHING MANUFACTURER TOOL AND DIE FOR COMPRESSION CONNECTION.

APPLY ANTI-OXIDANT CONDUCTIVITY ENHANCER COMPOUND ON SURFACES THAT ARE COMPRESSED.

SURFACES INTENDED TO BE CONNECTED WITH MECHANICAL CONNECTORS SHALL BE BARE METAL TO BARE METAL. PRIME AND PAINT OVER BONDED AREA TO PREVENT CORROSION.

### WHEN BONDING #2 TO #2

EXTERIOR OF BUILDING - USE EXOTHERMIC WELD CONNECTION.  
 INTERIOR OF BUILDING - USE COMPRESSION CONNECTION ON STRANDED CONDUCTORS ONLY.  
 - USE EXOTHERMIC WELD CONNECTION ON SOLID CONDUCTOR.

### WHEN BONDING #2 TO FENCE POST

USE EXOTHERMIC WELD 'CADWELD TYPE VS' CONNECTION TO FENCE POST STEEL SURFACE. TEST WELD FOR POSSIBLE BURN THRU. PATCH WELDED AREA WITH GALVANIZED COATING AS REQUIRED FOR PROPER WELDED PERMANENT BOND. REFER TO MANUFACTURER'S REQUIREMENTS FOR DETAILS.

### GROUNDING SYSTEM INTERCONNECTION

BOND THE EGR DOWN CONDUCTORS, AND/OR BURIED GROUND RING TO ANY METALLIC OBJECT OR EXISTING GROUNDING SYSTEM WITHIN 6".

### WHEN BONDING #2 TO TOWER GROUND PLATE

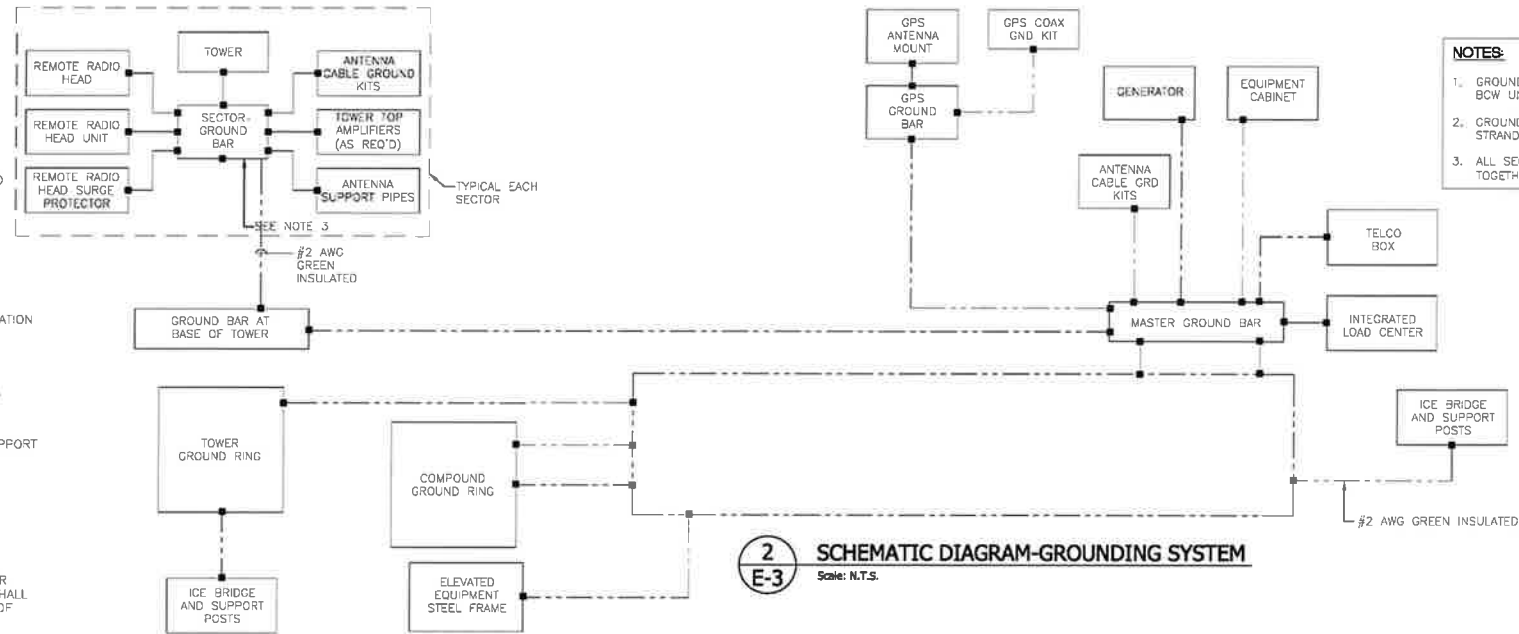
TOWER GROUND PLATE SHALL BE 8" X 8" X 1/4" COPPER AND BE MADE AVAILABLE TO TOWER CONTRACTOR TO BE INSTALLED DURING TOWER CONSTRUCTION. USE EXOTHERMIC WELD 'CADWELD TYPE HS' TO TOWER GROUND PLATE TEST WELD FOR POSSIBLE BURN THRU. COORDINATE THE SIZE OF THE MOUNTING HOLE WITH TOWER CONTRACTOR.

### METALLIC CONDUITS

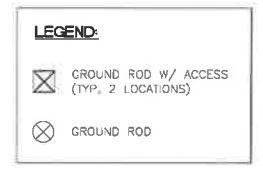
BOND ALL STEEL CONDUITS TO PANELS AT POINT OF CONTACT WITH APPROVED GROUNDING BUSHING.

## ELECTRICAL LEGEND

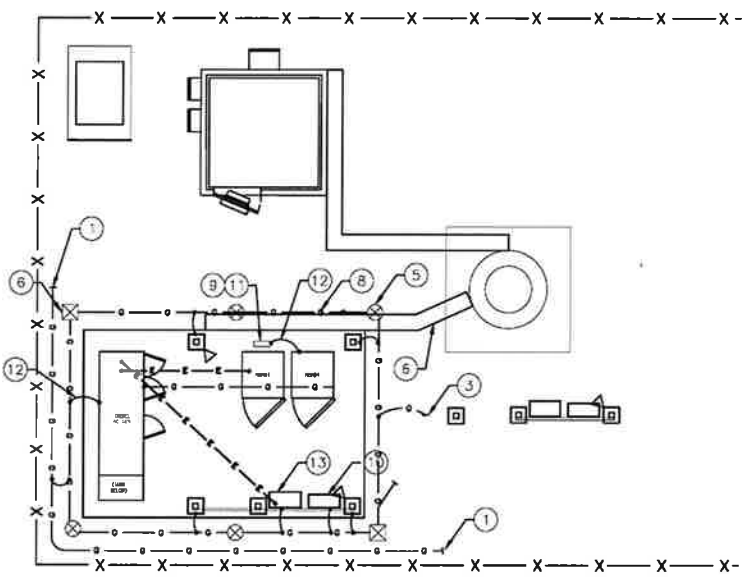
SYMBOL	DESCRIPTION
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⊗	5/8" DIAMETER X 10'-0" COPPER GROUND ROD WITH ACCESS.
■	EXOTHERMIC WELD TYPE "A"
●	MECHANICAL CONNECTION



- NOTES:**
- GROUND CONDUCTORS SHOWN SHALL BE #2 AWG BCW UNLESS OTHERWISE NOTED.
  - GROUND CABLE TRAY SECTIONS TOGETHER WITH #6 STRANDED GREEN INSULATED JUMPERS.
  - ALL SECTOR GROUND BARS SHALL BE BONDED TOGETHER WITH A #2 AWG BCW.



- GROUNDING PLAN NOTES:**
- EXISTING COMPOUND GROUND RING (V.I.F.)
  - NEW EQUIPMENT GROUND RING.
  - TO EXISTING TOWER GROUND RING (V.I.F.)
  - GROUNDING ROD WITH ACCESS (TYP.) PER DETAIL 9/E-4.
  - GROUNDING ROD (TYP.) PER DETAIL 5/E-4.
  - ICE BRIDGE POST AND COVER. BOND EACH SECTION AND SUPPORT TO GROUND RING PER DETAIL 7/E-4.
  - CADWELD EQUIPMENT RING TO STEEL POST (TYP. EACH CORNER).
  - GROUND GPS ANTENNA
  - BOND GROUND BAR TO NEW EQUIPMENT GROUND RING (TYP OF 2). CONTRACTOR TO VERIFY LOCATION IN FIELD.
  - GROUND ILC TO MGB TO GROUND RING
  - GROUND EQUIP. CABINET TO MGB
  - GROUND GENERATOR TO MGB GROUND RING
  - GROUND TELCO BOX TO MGB GROUND RING
  - EQUIPMENT GROUND BAR PER DETAIL 3/E-4.



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CT LIC. NO. 22144

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DRAWN BY: <b>AS</b>	CHECKED BY: <b>DW</b>
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**WESTPORT 3 CT**

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**PROJECT DESCRIPTION:**  
**MACRO NEW BUILD  
 FUZE #2118110**

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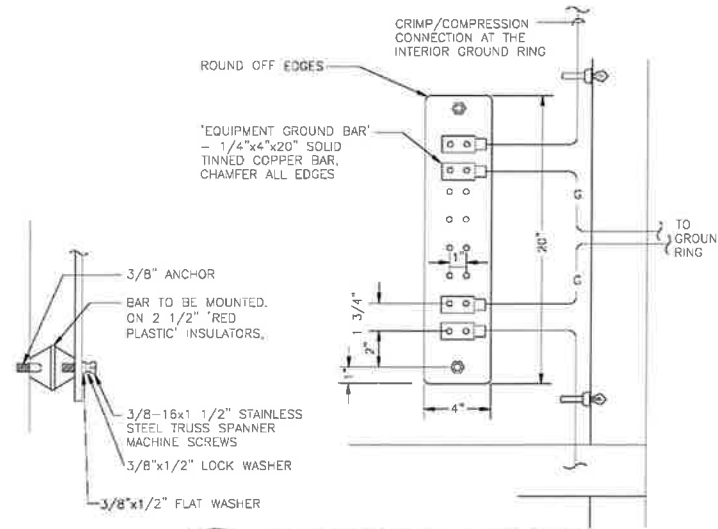
**PROJECT INFORMATION:**  
**TARPON TOWERS #CT1024  
 92 GREEN FARMS RD.  
 WESTPORT, CT 06880**

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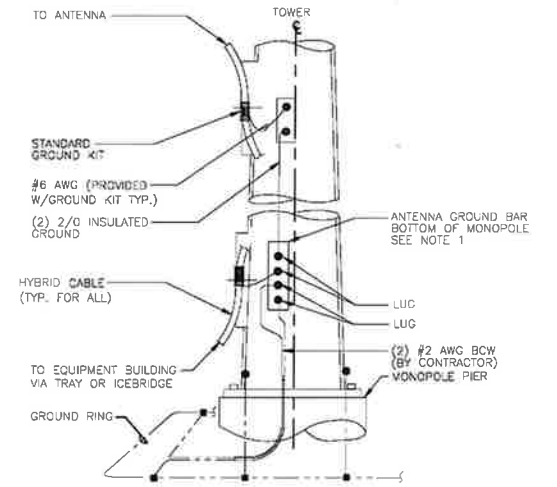
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**GROUNDING NOTES,  
 PLAN & SCHEMATIC**

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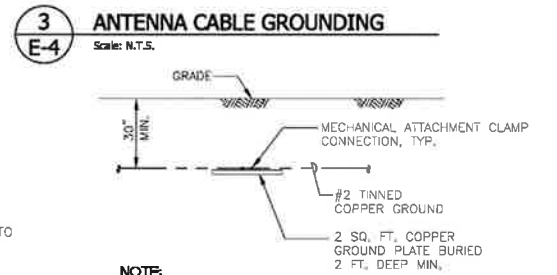
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**E-3**



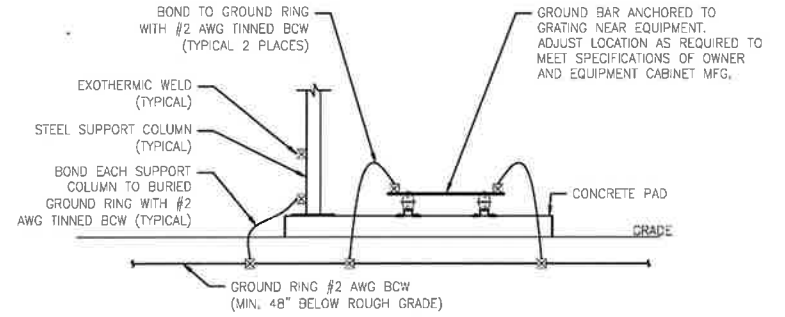
**1 EQUIPMENT GROUND BAR DETAIL**  
Scale: N.T.S.



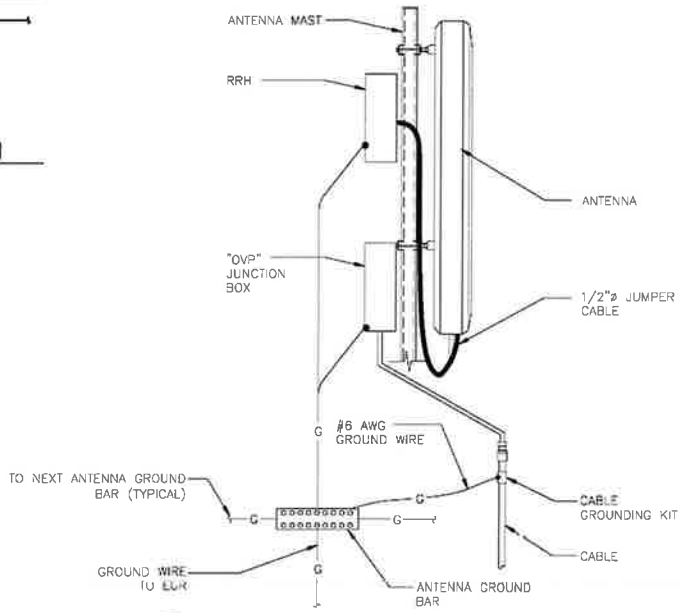
**3 ANTENNA CABLE GROUNDING**  
Scale: N.T.S.



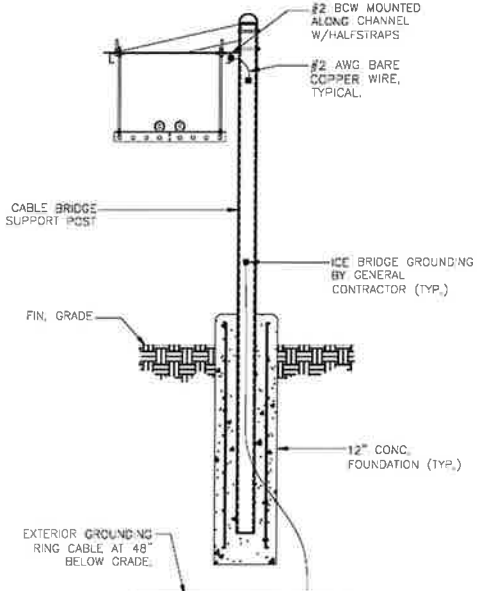
**4 GROUND PLATE DETAIL**  
Scale: N.T.S.



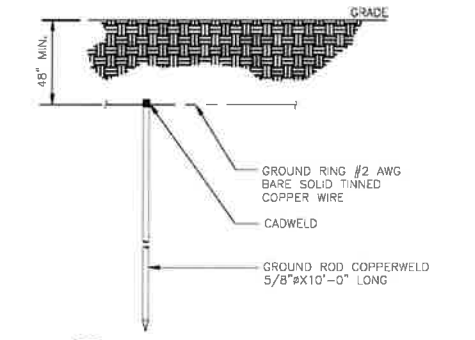
**2 GROUNDING AND BONDING AT PLATFORM**  
Scale: 1/2\"/>



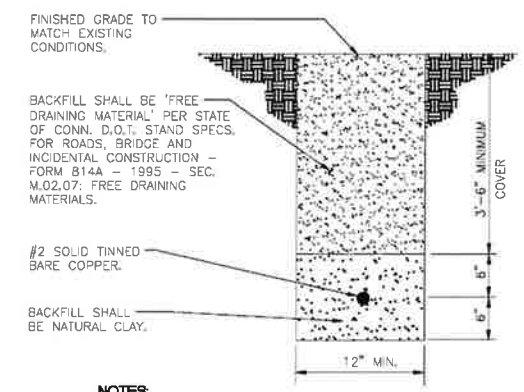
**5 TYPICAL ANTENNA GROUNDING DETAIL**  
Scale: N.T.S.



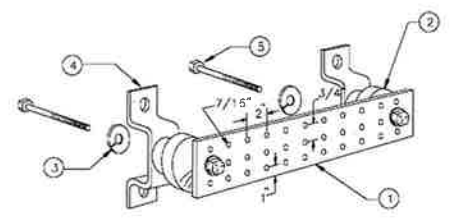
**6 CABLE BRIDGE BONDING DETAIL**  
Scale: N.T.S.



**7 GROUND ROD DETAIL**  
Scale: N.T.S.

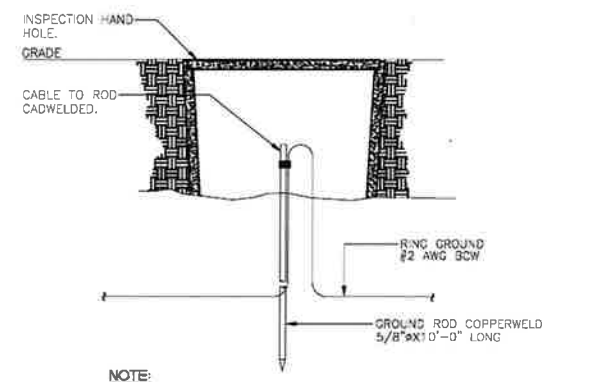


**8 EGR TRENCH/BACKFILL DETAIL**  
Scale: N.T.S.



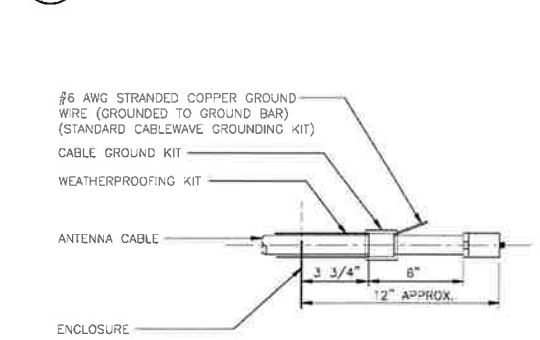
**9 GROUND BAR DETAIL**  
Scale: N.T.S.

- LEGEND**
1. TINNED COPPER GROUND BAR, 1/4" X 4" X 20", NEWTON INSTRUMENT CO. HOLE CENTERS TO MATCH NEMA DOUBLE LUG CONFIGURATION.
  2. INSULATORS, NEWTON INSTRUMENT CAT. NO. 3061-4.
  3. 5/8" LOCK WASHERS, NEWTON INSTRUMENT CO. CAT. NO. 3015-8.
  4. WALL MOUNTING BRACKET, NEWTON INSTRUMENT CO. CAT. NO. A-6056.
  5. 5/8-11 X 1" STAINLESS STEEL TRUSS SPANNER MACHINE SCREWS.



**10 GROUND ROD WITH ACCESS DETAIL**  
Scale: N.T.S.

- NOTE:**
1. INSPECTION HAND HOLE MAY BE CONCRETE OR PVC AND SHALL BE A MINIMUM OF 12" DIA X 18" DEEP.



**11 CABLE GROUNDING ANTENNA DETAIL**  
Scale: N.T.S.

- NOTE:**
1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.

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**CHECKED BY:** DW

**SITE NAME:**  
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**DRAWING TITLE:**  
**GROUNDING DETAILS**

**SHEET NUMBER:**  
**E-4**