



Filed by:

G. Scott Shepherd, Sr. Property Specialist - SBA Communications
134 Flanders Rd., Suite 125, Westborough, MA 01581
508.251.0720 x 3807 - GShepherd@sbsite.com

October 29, 2021

Melanie A. Bachman
Executive Director
Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06051

RE: Notice of Exempt Modification
130 Welles Rd., Groton, CT 06340
Latitude: 41.392666
Longitude: -71.969805
T-Mobile Site #: CTNL225A_Hardening

Dear Ms. Bachman:

T-Mobile currently maintains six (6) antennas at the 108-foot level of the existing 118-foot Monopole Tower at **130 Welles Rd., Groton, CT**. The 118-foot tower is owned by SBA 2012 TC Assets, LLC. The property is owned by the Town of Groton. T-Mobile now intends to add one (1) Generac RD025 Diesel generator to a proposed 4' x 10' concrete pad, within an existing fenced in lease area with 12' 6" wide double swing gate. The generator and concrete pad will sit fully within the leased area of the compound and will not require additional space for the supplementary tank.

Ground

Install New:

- (1) 2" RGS conduit for emergency power from prop. ATS to exist. PPC
- (1) 1-1/2" RGS conduit for generator & Heater from exist. PPC to prop. generator
- (1) 2" RGS conduit for ethernet cable for generator controls & Alarms.
- (1) Generac RD0 25kw Diesel generator
- 4' x 10' concrete pad
- (2) 2" RGS conduit for emergency power from prop. generator to prop. ATS
- Generac 200A, 120/240v, Automatic Transfer switch mounted to existing H-Frame



Remaining:

- T-Mobile 10' x 16' concrete pad
- Ericsson RBS6201 ODE equip. Cabinet
- ALU EZBF Battery cabinet
- T-Mobile Ice bridge
- Cables routed along existing Ice bridge
- GPS antenna mounted to existing Ice bridge post
- Existing Ice Bridge (by others)
- T-Mobile Nextend Compact 2416 fiber cabinet mounted to existing pipe

Reason for Request / Change in Generator Size and Fuel

In an effort to further enhance network reliability, T-Mobile is proposing to install a diesel-based backup generator, the Generac RD025 25kw Diesel Generator. T-Mobile is currently in the middle of a National Hardening Project.

The proposed diesel generator measures 84.2" x 35" x 91.7" (w/fuel tank: 103.4" x 35" x 91.7"). It will sit fully within the leased area of the compound and will not require additional space for the supplementary tank.

Generac's RD025 25kw Diesel Generator carries up to 98 hours of run time with 100% load, 125 hours of run time with a 75% load and 161 hours of run time with a 50% load. It can operate in temperatures of 122 degrees Fahrenheit.

Monitoring, Prevention and Containment Measures

It will be filled by a licensed fuel filling company. The Generac's RD025 25kw Diesel Generator is fuel efficient, rodent and corrosion resistant, and has a sound attenuated aluminum enclosure with a Rated Load Sound Output at 23ft. of -65dB. It further supports advanced, remote monitoring for diagnostics and control and is installed with a tank alarm system. The Sound Output from the Generac RD025kw meets/exceeds the allowable noise emissions levels for the Town of Groton, New London County, which is as follows:

Maximum Continuous Noise Levels (measured in dBA):

1. No person shall cause or allow the emission of excessive noise beyond the boundaries of his/her noise zone as measured at any point on a receptor's tract or parcel of land, so as to exceed the levels stated herein:



Receptor Noise Zone Class

	C	B	A-Day	A- Night
Class C emitter to	70dBA	66dBA	61dBA	51dBA
Class B emitter to	62dBA	62dBA	55dBA	45dBA
Class A emitter to	62dBA	55dBA	55dBA	45dBA

The proposed modification will remain within the existing, fenced-in compound. The new generator and tank will be surrounded by the existing security fence and gate.

Additional safety specifications:

- Automatic Voltage Regulation with Over and Under Protection
- Overspeed Shutdown
- High Temperature Shutdown
- Meets ANSI/IEEE C62.41, SA CSA 22.2, SAE J1349, NFPA 37, 70 99

Revised Construction Drawings and Full Spec Sheets referencing the above are attached herewith.

The revised ground configuration continues to meet all requirements for a Notice of Exempt Modifications. The request remains technically, legally, environmentally, and economically feasible and meets public safety concerns per Connecticut General Statute Section 16-50aa.

There is no environmental impact associated with the revised ground configuration, including, but not limited to, visibility, wetlands and water resources, air quality or noise.

T-Mobile's revised ground configuration:

- Will not have any significant adverse visual impact on the surrounding areas
- Does not affect or alter the existing site with regard to wetlands, water resources or air quality
- The generator would only be used in cases of emergency and would provide backup time of approximately 60 hours in time of need.



The proposed work is not thought to have any substantial adverse environmental impact. Public Need for the additional coverage outweighs any minor environmental effects that would result from the construction, operation, and maintenance of the proposed collocation.

A Map of the Site Showing Nearest Wetlands, depicted in feet, is attached herewith.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies §16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. §16.50j-72(b)(2). In accordance with R.C.S.A. § 16.50j-73, a copy of this letter is being sent to the Town of Groton's Town Manager, John Burt, and AICP, Planning & Zoning, Deborah G. Jones. The property is owned by the Town of Groton. (Separate notice is not being sent to tower owner, as it belongs to SBA.)

The planned modifications to the facility fall squarely within those activities explicitly provided for in R.C.S.A. §16.50j-72(b)(2).

1. The proposed modifications will not result in an increase in the height of the existing structure.
2. The proposed modification will not require the extension of the site boundary.
3. The proposed modifications will not increase noise levels at the facility by six decibels or more, or to levels that exceed state and local criteria.
4. The operation of the replacement antennas will not increase radio frequency emissions at the facility to a level at or above the Federal Communications Commission safety standard.
5. The proposed modification will not cause a change or alteration in the physical or environmental characteristics of the site.
6. The existing structure and its foundation can support the proposed loading.

For the foregoing reasons, T-Mobile respectfully submits that the proposed modifications to the above-referenced telecommunication facility constitute an exempt modifications under R.C.S.A. § 16-50j-72(b)(2).

Sincerely,

G. Scott Shepherd
Sr. Property Specialist
SBA COMMUNICATIONS CORPORATION
134 Flanders Rd., Suite 125
Westborough, MA 01581
508.251.0720 x3807 + T
508.868.6000 + C
GShepherd@sbsite.com

Attachments

cc:

John Burt, Town Manager / with attachments
Town of Groton, CT 45 Fort Hill Rd., Groton, CT 06340
Deborah G. Jones, AICP, Planning & Zoning / with attachments
Town of Groton, CT 45 Fort Hill Rd., Groton, CT 06340



Exhibit List

Exhibit 1	Check Copy	x
Exhibit 2	FedEx Labels	x
Exhibit 3	Property Card	x
Exhibit 4	Property Map	x
Exhibit 5	Zoning Documents	CSC Docket 230
Exhibit 6	Construction Drawings	Chappell 10/27/21
Exhibit 7	Generator Specifications	x
Exhibit 8	Wetlands Map	x

EXHIBIT 1

Copy of Check for filing fee.

EXHIBIT 2

FedEx Labels

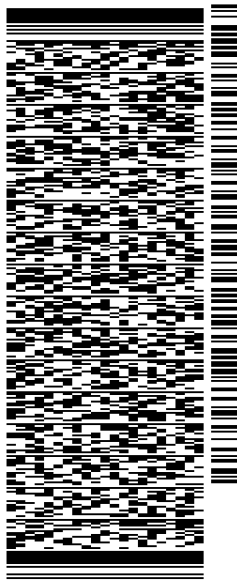
ORIGIN ID:BFBA (508) 614-0389
RICK WOODS
SBA COMMUNICATIONS CORPORATION
134 FLANDERS RD
SUITE 125
WESTBOROUGH, MA 01581
UNITED STATES US

SHIP DATE: 29OCT21
ACTWGT: 2.00 LB
CAD: 105843304/NET4400
BILL SENDER

TO **MELANIE A. BACHMAN EXEC. DIR**
CONNECTICUT SITING COUNCIL
TEN FRANKLIN SQUARE

NEW BRITAIN CT 06051

(508) 251-0720 X.3807 REF: 105692009-6089
INV# DEPT:
PO:

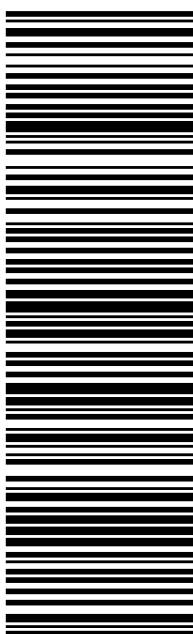


J212221101801uv

56DJ3/14BA/FE4A

TRK# 7750 6519 5328
0201
MON - 01 NOV 10:30A
PRIORITY OVERNIGHT

SEBDLA
CT-US **BDL**
06051



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1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
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Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.

Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com. FedEx will not be responsible for any claim in excess of \$100 per package, whether the result of loss, damage, delay, non-delivery, misdelivery, or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim. Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental, consequential, or special is limited to the greater of \$100 or the authorized declared value. Recovery cannot exceed actual documented loss. Maximum for items of extraordinary value is \$1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.



TRACK ANOTHER SHIPMENT

775065195328



ADD NICKNAME

ON TIME

Scheduled delivery:
Monday, 11/1/2021



PICKED UP
WESTBOROUGH, MA

GET STATUS UPDATES

FROM
SBA COMMUNICATIONS CORPORATION
Rick Woods
134 Flanders Rd
Suite 125
WESTBOROUGH, MA US 01581
508-614-0389

TO
Melanie A. Bachman Exec. Dir
Connecticut Siting Council
Ten Franklin Square
NEW BRITAIN, CT US 06051
508-251-0720

MANAGE DELIVERY

Travel History

Shipment Facts

Travel History

TIME ZONE
Local Scan Time

Friday, October 29, 2021

2:05 PM

WESTBOROUGH, MA

Picked up
Tendered at FedEx Office

8:47 AM

Shipment information sent to FedEx

Shipment Facts

TRACKING NUMBER
775065195328

SERVICE
FedEx Priority Overnight

WEIGHT
2 lbs / 0.91 kgs

TOTAL PIECES
1

TOTAL SHIPMENT WEIGHT
2 lbs / 0.91 kgs

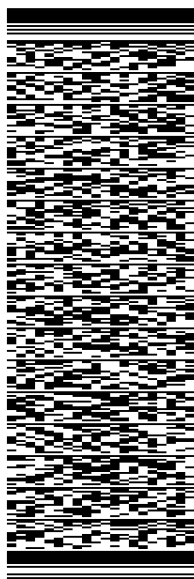
TERMS

ORIGIN ID:BFBA (508) 614-0389
RICK WOODS
SBA COMMUNICATIONS CORPORATION
134 FLANDERS RD
SUITE 125
WESTBOROUGH, MA 01581
UNITED STATES US

SHIP DATE: 29OCT21
ACTWGT: 1.00 LB
CAD: 105843304/NET4400
BILL SENDER

TO JOHN BURT
TOWN OF GROTON
TOWN MANAGER
45 FORT HILL RD
GROTON CT 06340
(508) 251-0720 X 3807
REF: 1056920096089
PO: DEPT:

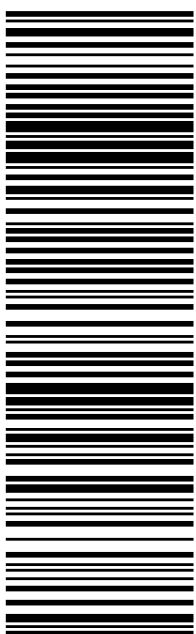
56DJ3/14BA/FE4A



J212221101801uv

TRK# 7750 6521 6374
0201
MON - 01 NOV 10:30A
PRIORITY OVERNIGHT

XE GONA
06340
CT-US BDL



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775065216374



[ADD NICKNAME](#)

ON TIME

Scheduled delivery:
Monday, 11/1/2021



PICKED UP
WESTBOROUGH, MA

[GET STATUS UPDATES](#)

FROM
SBA COMMUNICATIONS CORPORATION
Rick Woods
134 Flanders Rd
Suite 125
WESTBOROUGH, MA US 01581
508-614-0389

TO
John Burt
Town of Groton
Town Manager
45 Fort Hill Rd
GROTON, CT US 06340
508-251-0720

[MANAGE DELIVERY](#)

Travel History

Shipment Facts

Travel History

TIME ZONE
Local Scan Time



Friday, October 29,
2021

2:05 PM

WESTBOROUGH, MA

Picked up
Tendered at FedEx Office

8:49 AM

Shipment information sent to FedEx

Shipment Facts

TRACKING NUMBER
775065216374

SERVICE
FedEx Priority Overnight

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TOTAL PIECES
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TOTAL SHIPMENT WEIGHT
0.5 lbs / 0.23 kgs

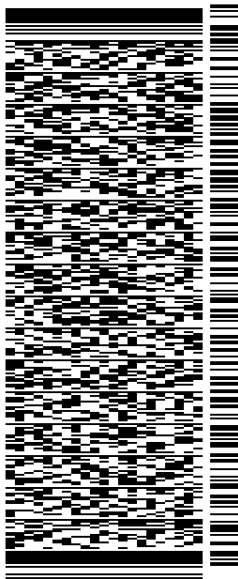
TERMS
Shipper

ORIGIN ID:BFBA (508) 614-0389
RICK WOODS
SBA COMMUNICATIONS CORPORATION
134 FLANDERS RD
SUITE 125
WESTBOROUGH, MA 01581
UNITED STATES US

SHIP DATE: 29OCT21
ACTWGT: 1.00 LB
CAD: 105843304/NET4400
BILL SENDER

TO **DEBORAH G. JONES**
TOWN OF GROTON
AICP, PLANNING & ZONING
45 FORT HILL RD
GROTON CT 06340
(508) 251-0720 X 3807
REF: 105692009-6089
PO: DEPT:

56DJ3/14BA/FE4A

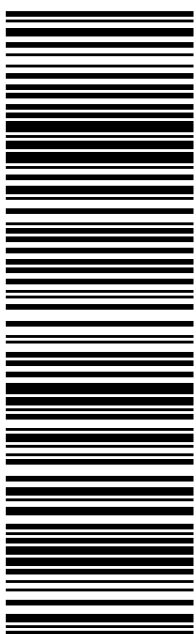


J212221101801uv

TRK# 7750 6522 5953
0201
MON - 01 NOV 10:30A
PRIORITY OVERNIGHT

XE GONA

06340
CT-US BDL



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775065225953



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Scheduled delivery:
Monday, 11/1/2021



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WESTBOROUGH, MA

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FROM
SBA COMMUNICATIONS CORPORATION
Rick Woods
134 Flanders Rd
Suite 125
WESTBOROUGH, MA US 01581
508-614-0389

TO
Deborah G. Jones
Town of Groton
AICP, Planning & Zoning
45 Fort Hill Rd
GROTON, CT US 06340
508-251-0720

MANAGE DELIVERY

Travel History

Shipment Facts

Travel History

TIME ZONE
Local Scan Time



Friday, October 29,
2021

2:05 PM

WESTBOROUGH, MA

Picked up
Tendered at FedEx Office

8:50 AM

Shipment information sent to FedEx

Shipment Facts

TRACKING NUMBER
775065225953

SERVICE
FedEx Priority Overnight

WEIGHT
0.5 lbs / 0.23 kgs

TOTAL PIECES
1

TOTAL SHIPMENT WEIGHT
0.5 lbs / 0.23 kgs

TERMS
Standard

EXHIBIT 3

Property Card

Commercial Property Card

Card 1 of 1

Account 271014348692 E	Location 130 WELLES RD	Zoning RU-80	Deed Book/Page 137/622	Acres 8.55
District OLD MYSTIC	Use Code MUNICIPALITIES			

Current Owner

GROTON TOWN OF
45 FORT HILL RD
GROTON CT 06340

Property Picture



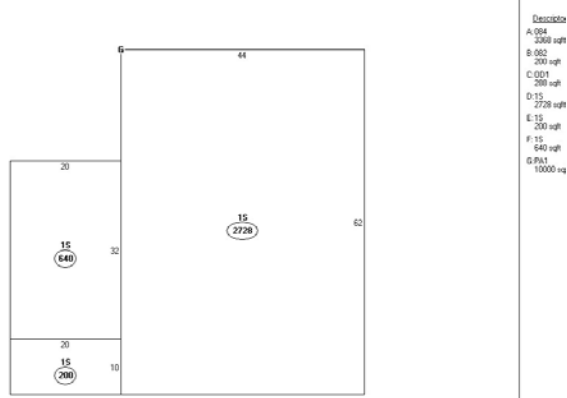
Building Information

Building No:	1
Year Built:	1990
No of Units:	1
Structure Type:	MANUFACTURING
Building Total Area:	3568 sqft.
Grade:	C
Identical Units:	1

Valuation

Land:	\$246,300
Building:	\$109,700
Total:	\$356,000
Total Assessed Value:	\$249,200

Building Sketch



Recent Sales

Book/Page	Date	Price
137/622	8/29/1952	\$0

Sketch Legend

----	Main Living Area	LSMA	Masonry	GRHS	Attached Greenhouse
1FR	Frame	OMP	Open Masonry Porch	CAT	Cathedral Ceiling
OFF	Open Frame Porch	EMP	Enclosed Msry Porch	SOP	Screen Open Frame Prch
EFP	Enclosed Frame Porch	MUB	Masonry Utility	SMP	Screen Open Msrny Prch
FUB	Frame Utility Building	MB	Masonry Bay	CPAT	Concrete Patio
FB	Frame Bay	MOH	Masonry Overhang	B	Basement
FG	Frame Garage	.SMA	1/2 Story Masonry		
FOH	Frame Overhang	MP	Masonry Patio		
.SFR	1/2 Story Frame	WD	Wood Deck		
A(U)	Attic (Unfinished)	CPY	Canopy		
A(F)	Attic (Finished)				

Exterior/Interior Information

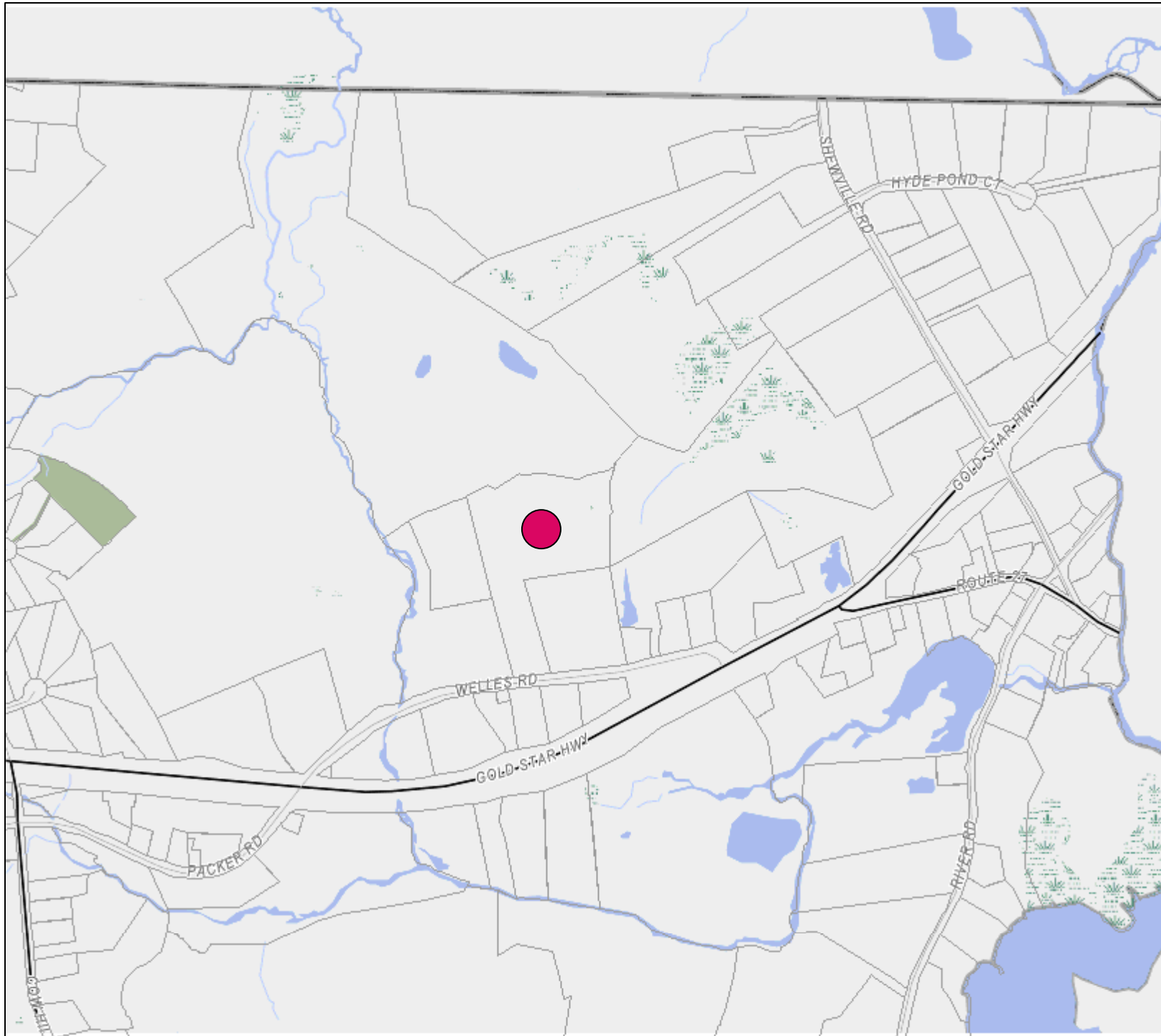
Levels	Use Type	Ext. Walls	Const. Type	Heating	A/C	Condition
01 - 01	MULTI-USE STORAGE	METAL,LIGHT	LIGHT STEEL	NONE	NONE	NORMAL
01 - 01	MULTI-USE OFFICE	METAL,LIGHT	LIGHT STEEL	ELECTRIC	NONE	NORMAL

EXHIBIT 4
Property Map

Town of Groton



GIS Map



Disclaimer:

The planimetric and topographic information depicted on this map was compiled by The Seaborn Map Company based on an aerial flight performed in April 2009. The parcel and property line information depicted on this map has been compiled from recorded deeds, maps, assessor records, and other sources of information in the Town of Groton. The intent of this map is to depict a graphical representation of real property information relative to the planimetric features for the Town of Groton and is subject to change as a more accurate survey may disclose. The Town of Groton and the mapping companies assume no legal responsibility for the information contained in this data. THIS MAP IS NOT TO BE USED FOR THE TRANSFER OF PROPERTY.

Horizontal Datum:
Geometric State Plane Coordinates, North American Datum of 1983 (NAD83 Feet)

Vertical Datum:
North American Vertical Datum of 1988 (NAVD88)



1 inch = 651 feet

Date: October 29, 2021

Google Maps 130 Welles Rd



Imagery ©2021 Maxar Technologies, USDA Farm Service Agency, Map data ©2021 200 ft

EXHIBIT 5

Zoning Documents

SITE NAME: South Ledyard- Town Dump SITE ID: CT46142-A
Transaction: TowerCo

ZONING/PERMITTING COMPLETION FORM

Address: 130 Welles Road, Groton, CT 06340

Jurisdiction: Connecticut Siting Council Zoning District: _____

Zoning Approval Type: Certificate of Environmental Case #: Docket No. 230
Compatibility and Public Need

Approval Date: 12/19/2002 Approved Height: 120'

Conditions of Approval:	Yes
Removal Bond _____	<input type="checkbox"/>
Site Plan Submittal _____	<input type="checkbox"/>
Fall Zone _____	<input type="checkbox"/>
Periodic Inspections _____	<input type="checkbox"/>
Periodic Reporting _____	<input type="checkbox"/>
Approval Renewal _____	<input type="checkbox"/>
Additional Conditions _____	<input type="checkbox"/>

****According to Town there is no record of a final inspection. They believe it may have been an oversight; not signed off.**

JURISDICTION POC/DEPT.

Planning/Zoning: _____

Phone: _____ Email: _____

Bldg./Code Enforcement: Town of Groton – Kevin A. Quinn

Phone: 860-446-5982 Email: kquinn@groton-ct.gov

Submitted by: _____ Date: _____

Zoning Compliance

TO BE COMPLETED BY CORPORATE

	<u>Yes</u>	<u>No</u>	<u>N/A</u>	
Zoning Approval Attached (required)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Building Permit Attached (required)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>Date Recd</u>
<u># 03-288</u>				<u>6/29/2003</u>
Certificate of Occupancy or Compliance (CO) attached (required)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Zoning Manager Approval: _____				<u>Date</u> _____
<u>Diane E. Borchardt, AICP</u>				



STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

Ten Franklin Square
New Britain, Connecticut 06051
Phone: (860) 827-2935
Fax: (860) 827-2950

December 23, 2002

Thomas J. Regan, Esquire
Brown Rudnick Berlack Israels LLP
CityPlace 1, 38th Floor
185 Asylum Street
Hartford, CT 06103-3402

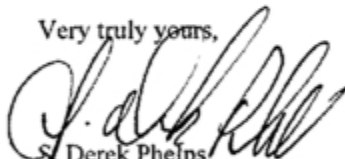
RE: **DOCKET NO. 230** – Sprint Spectrum, L. P. application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance and operation of a cellular telecommunications facility at Welles Road, Groton, Connecticut.

Dear Attorney Regan:

By its Decision and Order dated December 19, 2002, the Connecticut Siting Council (Council) granted a Certificate of Environmental Compatibility and Public Need (Certificate) for the construction, maintenance and operation of a cellular telecommunications facility at Welles Road, Groton, Connecticut.

Enclosed are the Council's Certificate, Findings of Fact, Opinion, and Decision and Order.

Very truly yours,


Derek Phelps
Executive Director

SDP/laf

Enclosures (4)



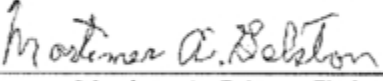
STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

Ten Franklin Square
New Britain, Connecticut 06051
Phone: (860) 827-2935
Fax: (860) 827-2950

CERTIFICATE
OF
ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED
DOCKET NO. 230

Pursuant to General Statutes § 16-50k, as amended, the Connecticut Siting Council hereby issues a Certificate of Environmental Compatibility and Public Need to Sprint Spectrum, L. P. for the construction, maintenance and operation of a cellular telecommunications facility at Welles Road, Groton, Connecticut. This Certificate is issued in accordance with and subject to the terms and conditions set forth in the Decision and Order of the Council on December 19, 2002.

By order of the Council,


Mortimer A. Gelston, Chairman

December 19, 2002

DOCKET NO. 230 – Sprint Spectrum, L. P. application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance and operation of a cellular telecommunications facility at Welles Road, Groton, Connecticut.	} Connecticut
	} Siting
	} Council
	} November 22, 2002

Findings of Fact

Introduction

1. Sprint Spectrum, L. P. (Sprint), in accordance with provisions of General Statutes § 16-50g through 16-50aa, applied to the Connecticut Siting Council (Council) on July 26, 2002 for the construction, operation, and maintenance of a 120-foot telecommunications facility in the Town of Groton, Connecticut. The proposed site is located at the Town of Groton's bulky waste landfill on Welles Road in Groton, Connecticut. The purpose of the proposed facility is to provide wireless coverage to existing coverage gaps in the Groton area along Route 184, and local roads. (Sprint 1, pp. 2, 4, Attachment 13)
2. Sprint is a wholly owned subsidiary of WirelessCo L.P., licensed by the Federal Communications Commission (FCC) to provide wireless personal communication service (PCS). Sprint operates in 32 major trading areas within the United States including Connecticut. (Sprint 1, pp. 1, 2)
3. Pursuant to General Statute § 16-50m, the Council, after giving due notice thereof, held a public hearing on October 3, 2002, beginning at 3:00 p.m. and continued at 7:00 p.m. in the Groton Town Hall Annex, 134 Groton Long Point Rd., Groton, Connecticut. The party in this proceeding is the applicant (Council's Hearing Notice dated August 19, 2002; Transcript, October 3, 2002, 3:00 p.m. [Tr. 1], pp. 2, 4; Transcript, October 3, 2002, 7:00 p.m. [Tr. 2], p. 2)
4. The Council and its staff made an inspection of the proposed site on October 3, 2002. During the field inspection, the applicant flew a four-foot diameter balloon at the proposed site from 10:00 am to 5:00 p.m. to simulate the height of the proposed 120-foot tower. (Council's Hearing Notice dated August 19, 2002; Tr. 1, p. 93)
5. Sprint notified the Mayor of the Town of Groton, Dolores E. Hauber, and Groton's Zoning Enforcement Officer, Kevin Quinn, of its intent of constructing a telecommunications facility at the proposed site on September 28, 2001. Town officials of Ledyard and Stonington, both located within a mile of the proposed site, were notified on February 12, 2002. Sprint sent an informational package by certified mail to the Mayor of the Town of Ledyard, Wesley Johnson, Ledyard's Town Planner, Barbara Goodrich, the First Selectman of the Town of Stonington, Peter Dibble, and Stonington's Town Planner, Mary Villa. (Sprint 1, p. 16, Attachment 12, Attachment 13)
6. The town's Zoning Commission reviewed the application on October 13, 2001 and discussed the application at meetings held on November 7 and 19, 2001. The town's Inland Wetlands Agency discussed the application at a meeting on October 24, 2001. The town did not contact Sprint prior to the meetings. The Town of Groton's Planning Department submitted written comments to the applicant on November 27, 2001. These comments were included in the application. (Sprint 1, Attachment 13; Tr. 1, pp. 60, 61)
7. Notice of the application was provided to all abutting landowners by certified mail. All return receipts from the certified mailings have been received. Public notice of the application was published in The Day and the Mystic River Press on May 9 and May 16, 2002. (Sprint 1, p. 3)

8. Pursuant to General Statutes § 16-50j (h), the following state agencies were requested to submit written comments regarding the proposed facility on August 19 and October 4, 2002; Department of Environmental Protection (DEP), Department of Public Health (DPH), Council on Environmental Quality (CEQ), Department of Public Utility Control (DPUC), Office of Policy and Management (OPM), Department of Economic and Community Development (DECD), and the Department of Transportation (DOT). Comments were received from the DEP on October 2, 2002. The following agencies did not offer comments on the application: DPH, CEQ, DPUC, OPM, DECD, and the DOT. (Record)

Wireless Service Design

9. Sprint operates a digital personal communications service network using a 1900-megahertz (MHz) frequency signal allocated by the FCC. This high frequency signal is twice that of traditional cellular service in the 800 MHz range and degrades quickly in areas of hilly terrain and dense foliage. To ensure adequate service and to accommodate the needs of other carriers in the hilly terrain of the search area, Sprint proposes a 120-foot facility. Topography surrounding the proposed site is characterized by rolling hills, ranging in elevation from approximately 45 feet to 220 feet amsl. (Sprint 1, pp. 4, 17, 18)
10. Existing Sprint facilities that would hand off traffic with the proposed facility are as follows:

<u>Location</u>	<u>Distance and Direction from the Proposed Site</u>	<u>Antenna Height (agl-ft)</u>
Oral School Road, Groton	1.2 miles south	82
New London Road, Groton	3.9 miles southwest	88
Taugwonk Road, Stonington	3.6 miles east	140
Norwich Westerly Road, North Stonington	5.6 miles northeast	120
113 Broadway Ext., Stonington	3.0 miles south	137
Stonington Westerly Road, Stonington	5.1 miles southeast	140

(Sprint 2, Q. 2)

11. Use of alternative technologies like microcells or repeaters are useful for filling coverage in small areas or providing service in buildings, but are limited as to coverage and capacity. These alternatives would not provide adequate coverage to the identified coverage gaps. (Sprint 1, p. 17)

Site Alternatives

12. Sprint investigated a total of eight potential sites in the Groton area, one of which was selected as the proposed site. Six sites, including one utilizing an existing Northeast Utilities H-Mount Transmission Line structure, were rejected due to inadequate coverage on Route 184. A site at 205 Shewville Road was rejected due to the close proximity to residential neighborhoods. (Sprint 1, pp. 18, 19; Sprint 3, Q. 17; Tr. 1, pp. 89, 90)
13. Locating antennas on existing tower facilities at 741 Flanders Road in Groton, approximately 2.5 miles southwest of the proposed site, and at 72 Jerry Brown Road in Stonington, approximately 1.5 miles south of the proposed site, would not provide adequate coverage to Route 184 due to area topography. (Sprint 3, Q. 18; Tr. 1, pp. 45-47)

Proposed Site

14. The proposed site is located on Welles Road on an approximate 8.5-acre parcel identified as Lot 8692 and owned by the Town of Groton. The site parcel abuts town owned land to the north, Lot 4427, east, Lot 8906, and west, Lot 4560, land used as the town's bulky waste disposal facility. The proposed tower site is located in the northeast corner of the site parcel in an area dominated by shrubby vegetation. Access to the proposed tower site would be from a 12-foot wide gravel surfaced road approximately 70 feet in length extending from an existing asphalt drive. (Sprint 1, pp. 4, 8, Attachment 7; DEP comments dated October 2, 2002)
15. Sprint would construct a 120-foot monopole, designed to support three antenna platforms, on a 100-foot by 100-foot lease area at the proposed site. The tower would be constructed of galvanized steel that would weather to a non-reflective gray finish. The tower would be designed in accordance with Electronic Industries Association Standard EIA/TIA 222-F, Structural Standards for Steel Antenna Towers and Support Structures. The final tower design has not been determined. Sprint could design the tower and foundation to support a future tower extension to 150 feet agl. (Sprint 1, pp. 4, 6, 7, 13, Attachment 7; Tr. 1, p. 94)
16. Sprint would install twelve 5-foot panel type directional antennas at a centerline height of 117 feet agl. A GPS antenna would be mounted at a height of 50 feet agl. (Sprint 1, p. 8, Attachment 7)
17. The proposed tower would be located in the central portion of a 60-foot by 40-foot compound area at an elevation of 48 feet above mean sea level (amsl). The facility compound would contain a gravel surface and would be enclosed by a 6-foot high chain-link fence topped with barbed wire. Sprint would install six equipment cabinets on a 20-foot by 10-foot concrete pad within the compound. Electric and telephone utilities would be installed underground within the access easement from an existing utility pole on the waste facility access road to the proposed compound. Vegetative screening composed of six-foot high blue spruce trees would be installed on three sides of the compound. An approximate 75-foot by 22-foot level area would be created south of the proposed compound to accommodate future compound expansion. (Sprint 1, pp. 4, 7, Attachment 7; Tr. 1, p. 103)
18. The proposed site is zoned RU-80, residential. The Town's Zoning Regulations permit telecommunication towers in RU-80 zone districts, subject to issuance of a Special Permit. Adjacent property consists of a State of Connecticut Department of Transportation Highway Maintenance Facility and town owned land to the east, town owned vacant land and an indoor tennis center to the west, town owned land used as part of the town's bulky waste facility to the north, and a residence and a fire district community center to the south. There are four residential properties within 1,000 feet of the compound site: 170 Welles Road, 657 feet south, 184 Welles Road, 631 feet south, 194 Welles Road, 707 feet south, and 218 Welles Road, 783 feet southeast. The closest residential building is located 780 feet south of the proposed site at 170 Welles Road. (Sprint 1, pp. 13, 14, Attachment 7; Sprint 2, Q. 6, Q. 7)
19. The tower radius would extend beyond the site parcel to the north by 50 feet onto town owned land used as part of the town's bulky waste disposal facility. The tower site does not meet town setback requirements set forth in the town's zoning regulations. (Sprint 1, Attachment 7, Attachment 13; Sprint 2, Q. 14)

The approximate cost of construction for the proposed facility is as follows:

Site work	\$50,000
Road installation	55,000
Electrical and telephone	55,000
Foundation	45,000
Compound	60,000
Tower	20,000
Total	\$285,000

(Sprint 1, Attachment 18; Tr. 1, p. 96)

21. Sprint did not consider a flagpole facility at this site. A 120-foot flagpole facility would result in a reduction in coverage due to the antenna arrangement required for a flagpole design. Coverage objectives on Route 184 could be compromised. (Tr. 2, pp. 2-6)

Environmental, Historic, and Safety Concerns

22. The State Historic Preservation Office has determined that construction of the proposed facility would have no effect on historic, architectural, or archaeological resources listed on or eligible for the National Register of Historic Places. (Sprint 1, Attachment 20)
23. The Burnett's Corner National Historic District is the nearest historic district to the proposed site, approximately 1,400 feet to the southwest. The district consists of the western portion of Welles Road and the eastern portion of Packer Road. (Sprint 1, Attachment 20)
24. There are no known existing populations of federal or state endangered, threatened or special concern species occurring at the proposed site, based on a review of the Connecticut Department of Environmental Protection Natural Diversity Database. (Sprint 1, Attachment 20; Sprint 2, Q. 13)
25. The applicant performed an aeronautical study that determines the impact of the proposed facility on nearby airports in accordance with Federal Airspace Regulations. The analysis, performed by Airspace Safety Analysis Corporation, determined that the Groton-New London Airport is 5.07 nautical miles from the proposed facility and obstruction marking and lighting of the proposed tower would not be required. The study was performed using a tower height of 180 feet. (Sprint 1, Attachment 17)
26. Dense shrubby vegetation covers the site. No significant trees will be removed during site development. (Sprint 2, Q. 15, DEP letter dated October 2, 2002)
27. Three wetland areas are within 120 feet of the site development area, the nearest of which is approximately 40 feet to the southeast. The town's Inland Wetlands Agency prefers a tower location that provides a greater buffer to the wetland areas. Sprint would be willing to move the development area approximately 20 feet to the north to increase the buffer to the wetland areas. Sprint would be willing to reduce the amount of proposed grading south of the compound to enlarge the buffer area. (Sprint 1, Attachment 7, Attachment 13; Tr. 1, pp. 7, 47-53, 103)
28. The total electromagnetic radio-frequency (RF) power density, calculated using FCC Office of Engineering Bulletin 65, using conservative worst-case exposures at the base of the proposed tower, would not exceed the American National Standards Institute (ANSI) standard and is estimated as 7.2% of the ANSI standard. (Sprint 1, Attachment 16)

EXHIBIT 6

Construction Drawings

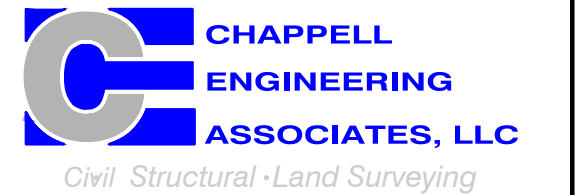
TOWERCO GROTON MONOPOLE

**T-MOBILE
NORTHEAST LLC**

15 COMMERCE WAY, SUITE B
NORTON, MA 02766
(508) 286-2700



SBA COMMUNICATIONS CORP.
134 FLANDERS ROAD, SUITE 125
WESTBOROUGH, MA 01581
(508) 251-0720



R.K. EXECUTIVE CENTRE
201 BOSTON POST ROAD WEST, SUITE 101
MARLBOROUGH, MA 01752
(508) 481-7400
www.chappellengineering.com



CHECKED BY: JMT

APPROVED BY: JMT

SUBMITTALS			
REV.	DATE	DESCRIPTION	BY
1	10/27/21	ISSUED FOR CONSTRUCTION	CMC
0	10/13/21	ISSUED FOR REVIEW	CMC

SITE NUMBER:
CTNL225A

SITE ADDRESS:
132 WELLES ROAD
MYSTIC, CT 06355

SHEET TITLE
TITLE SHEET

SHEET NUMBER
T-1

APPROVALS

PROJECT MANAGER:	DATE:	ZONING/SITE ACQ.:	DATE:
CONSTRUCTION:	DATE:	OPERATIONS:	DATE:
RF ENGINEERING:	DATE:	TOWER OWNER:	DATE:

132 WELLES ROAD
MYSTIC, CT 06355
NEW LONDON COUNTY

SITE NO.: CTNL225A

SITE TYPE: 118'± MONOPOLE

PROJECT TYPE: NATIONAL HARDENING PROJECT

SCOPE OF WORK

REMOVE:	INSTALL:
• NONE	• 1 GENERATOR • 1 AUTOMATIC TRANSFER SWITCH • 2 20A-1P BREAKERS

SITE NOTES

- THIS IS AN UNMANNED AND RESTRICTED ACCESS TELECOMMUNICATION FACILITY, AND IS NOT FOR HUMAN HABITATION. IT WILL BE USED FOR THE TRANSMISSION OF RADIO SIGNAL FOR THE PURPOSE OF PROVIDING PUBLIC CELLULAR SERVICE.
 - ADA COMPLIANCE NOT REQUIRED.
 - POTABLE WATER OR SANITARY SERVICE IS NOT REQUIRED.
 - NO OUTDOOR STORAGE OR ANY SOLID WASTE RECEPTACLES REQUIRED.
- CONTRACTOR SHALL VERIFY ALL PLANS, EXISTING DIMENSIONS, AND CONDITIONS ON JOB SITE. CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT/ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK. FAILURE TO NOTIFY THE ARCHITECT/ENGINEER PLACE THE RESPONSIBILITY ON THE CONTRACTOR TO CORRECT THE DISCREPANCIES AT THE CONTRACTOR'S EXPENSE.
- NEW CONSTRUCTION WILL CONFORM TO ALL APPLICABLE CODES AND ORDINANCES.
 - BUILDING CODE: 2018 CONNECTICUT STATE BUILDING CODE
 - ELECTRICAL CODE: 2017 NATIONAL ELECTRICAL CODE
 - STRUCTURAL CODE: TIA/EIA-222-G STRUCTURAL STANDARDS FOR ANTENNA SUPPORTING STRUCTURES AND ANTENNAS.

T-MOBILE TECHNICIAN SITE SAFETY NOTES

LOCATION	SPECIAL RESTRICTIONS
SECTOR A:	ACCESS BY CERTIFIED CLIMBER
SECTOR B:	ACCESS BY CERTIFIED CLIMBER
SECTOR C:	ACCESS BY CERTIFIED CLIMBER
SECTOR D:	ACCESS BY CERTIFIED CLIMBER
GPS/LMU:	UNRESTRICTED
RADIO CABINETS:	UNRESTRICTED
PPC DISCONNECT:	UNRESTRICTED
MAIN CIRCUIT D/C:	UNRESTRICTED
NIU/T DEMARC:	UNRESTRICTED
OTHER/SPECIAL:	NONE

GENERAL NOTES

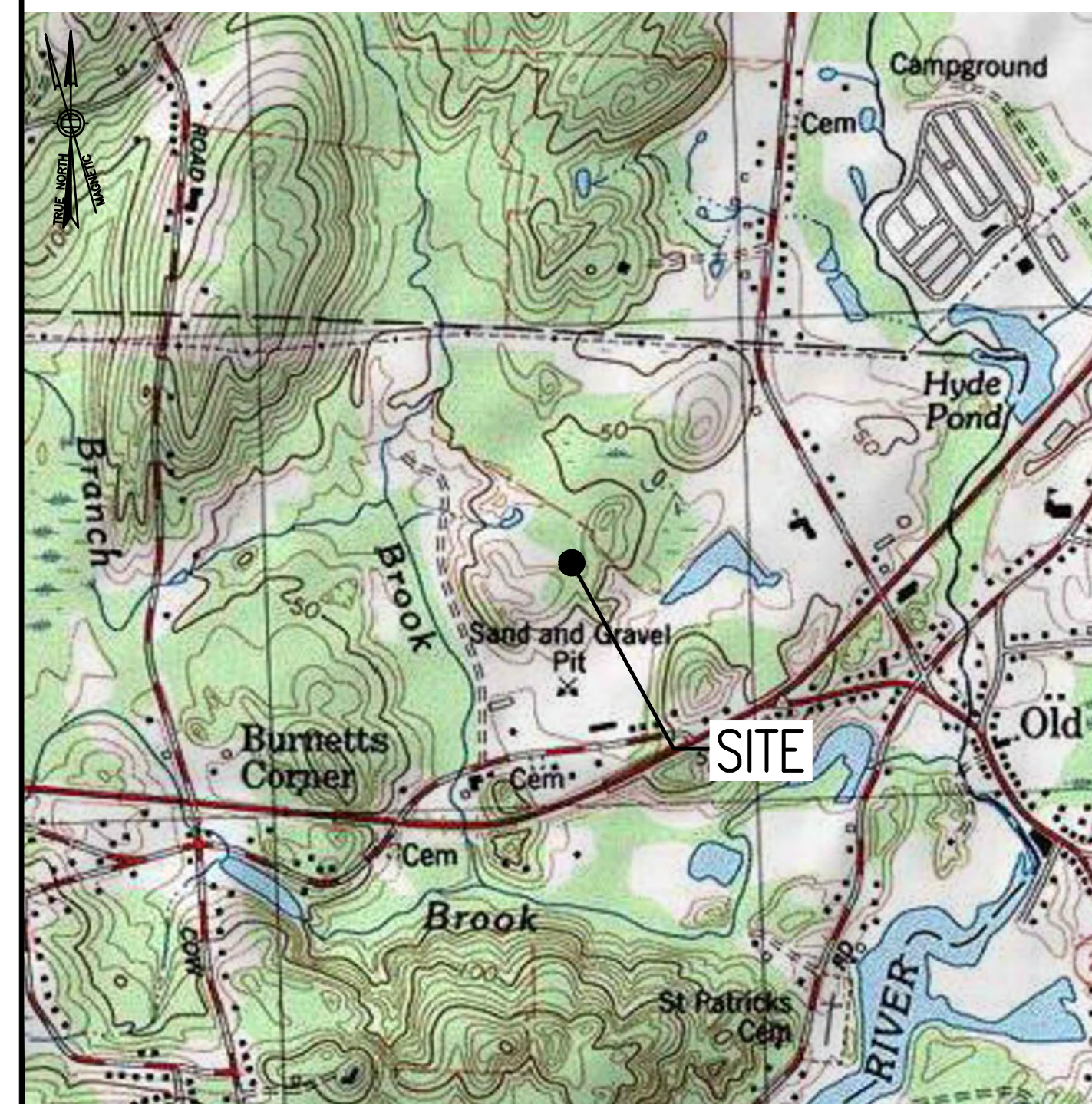
- THE CONTRACTOR SHALL GIVE ALL NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY, MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS, AND LOCAL AND STATE JURISDICTIONAL CODES BEARING ON THE PERFORMANCE OF THE WORK. THE WORK PERFORMED ON THE PROJECT AND THE MATERIALS INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES.
- THE ARCHITECT/ENGINEER HAVE MADE EVERY EFFORT TO SET FORTH IN THE CONSTRUCTION AND CONTRACT DOCUMENTS THE COMPLETE SCOPE OF WORK THE CONTRACTOR BIDDING THE JOB IS NEVERTHELESS CAUTIONED THAT MINOR OMISSIONS OR ERRORS IN THE DRAWINGS AND OR SPECIFICATIONS SHALL NOT EXCUSE SAID CONTRACTOR FROM COMPLETING THE PROJECT AND IMPROVEMENTS IN ACCORDANCE WITH THE INTENT OF THESE DOCUMENTS.
- THE CONTRACTOR OR BIDDER SHALL BEAR THE RESPONSIBILITY OF NOTIFYING (IN WRITING) THE OMINPOINT REPRESENTATIVE OF ANY CONFLICTS, ERRORS, OR OMISSIONS PRIOR TO THE SUBMISSION OF CONTRACTOR'S PROPOSAL OR PERFORMANCE OF WORK. IN THE EVENT OF DISCREPANCIES THE CONTRACTOR SHALL PRICE THE MORE COSTLY OR EXTENSIVE WORK, UNLESS DIRECTED IN WRITING OTHERWISE.
- THE SCOPE OF WORK SHALL INCLUDE FURNISHING ALL MATERIALS, EQUIPMENT, LABOR AND ALL OTHER MATERIALS AND LABOR DEEMED NECESSARY TO COMPLETE THE WORK/PROJECT AS DESCRIBED HEREIN.
- THE CONTRACTOR SHALL VISIT THE JOB SITE PRIOR TO THE SUBMISSION OF BIDS OR PERFORMING WORK TO FAMILIARIZE HIMSELF WITH THE FIELD CONDITIONS AND TO VERIFY THAT THE PROJECT CAN BE CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
- THE CONTRACTOR SHALL OBTAIN AUTHORIZATION TO PROCEED WITH CONSTRUCTION PRIOR TO STARTING WORK ON ANY ITEM NOT CLEARLY DEFINED BY THE CONSTRUCTION DRAWINGS/CONTRACT DOCUMENTS.
- THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS ACCORDING TO THE MANUFACTURER'S/VENDOR'S SPECIFICATIONS UNLESS NOTED OTHERWISE OR WHERE LOCAL CODES OR ORDINANCES TAKE PRECEDENCE.
- THE CONTRACTOR SHALL PROVIDE A FULL SET OF CONSTRUCTION DOCUMENTS AT THE SITE UPDATED WITH THE LATEST REVISIONS AND ADDENDUMS OR CLARIFICATIONS AVAILABLE FOR THE USE BY ALL PERSONNEL INVOLVED WITH THE PROJECT.
- THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
- THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL NECESSARY CONSTRUCTION CONTROL SURVEYS, ESTABLISHING AND MAINTAINING ALL LINES AND GRADES REQUIRED TO CONSTRUCT ALL IMPROVEMENTS AS SHOWN HEREIN.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS WHICH MAY BE REQUIRED FOR THE WORK BY THE ARCHITECT/ENGINEER, THE STATE, COUNTY OR LOCAL GOVERNMENT AUTHORITY.
- THE CONTRACTOR SHALL MAKE NECESSARY PROVISIONS TO PROTECT EXISTING IMPROVEMENTS, EASEMENTS, PAVING, CURBING, ETC. DURING CONSTRUCTION. UPON COMPLETION OF WORK, THE CONTRACTOR SHALL REPAIR ANY DAMAGE THAT MAY HAVE OCCURRED DUE TO CONSTRUCTION ON OR ABOUT THE PROPERTY.
- THE CONTRACTOR SHALL KEEP THE GENERAL WORK AREA CLEAN AND HAZARD FREE DURING CONSTRUCTION AND DISPOSE OF ALL DIRT, DEBRIS, RUBBISH AND REMOVE EQUIPMENT NOT SPECIFIED AS REMAINING ON THE PROPERTY. PREMISES SHALL BE LEFT IN CLEAN CONDITION AND FREE FROM PAINT SPOTS, DUST, OR SMUDGES OF ANY NATURE.
- THE CONTRACTOR SHALL COMPLY WITH ALL OSHA REQUIREMENTS AS THEY APPLY TO THIS PROJECT.
- THE CONTRACTOR SHALL NOTIFY THE PROJECT OWNER'S REPRESENTATIVE WHERE A CONFLICT OCCURS ON ANY OF THE CONTRACT DOCUMENTS. THE CONTRACTOR IS NOT TO ORDER MATERIAL OR CONSTRUCT ANY PORTION OF THE WORK THAT IS IN CONFLICT UNTIL CONFLICT IS RESOLVED BY THE LESSEE/LICENSEE REPRESENTATIVE.
- THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, PROPERTY LINES, ETC. ON THE JOB.
- ALL UNDERGROUND UTILITY INFORMATION WAS DETERMINED FROM SURFACE INVESTIGATIONS AND EXISTING PLANS OF RECORD. THE CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN THE FIELD PRIOR TO ANY SITE WORK.

AT LEAST 72 HOURS PRIOR TO DIGGING, THE CONTRACTOR IS REQUIRED TO CALL DIG SAFE AT 811



VICINITY MAP

SCALE: 1" = 1000'-0"



DIRECTIONS

MERGE ONTO I-495 NORTH TOWARD MANSFIELD/MARLBORO. TAKE EXIT 33B FOR I-95 SOUTH TOWARD PROVIDENCE RI. KEEP RIGHT AT FORK TO STAY ON I-95 SOUTH. TAKE EXIT 90 FOR CT-27 TOWARD MYSTIC. TURN RIGHT ONTO CT-27 NORTH. TAKE SLIGHT LEFT ONTO CT-27 NORTH/OLD MYSTIC CENTER ROAD. TAKE SLIGHT LEFT ONTO CT-184 WEST. TURN RIGHT ONTO WELLES ROAD. SITE IS LOCATED ON THE RIGHT HAND SIDE.

SHEET INDEX

SHEET NO.	DESCRIPTION	REV. NO.
T-1	TITLE SHEET	1
GN-1	GENERAL NOTES	1
A-1	COMPOUND & EQUIPMENT PLANS	1
A-2	GENERATOR DETAILS	1
A-3	GENERATOR SPECIFICATIONS 1	1
A-4	GENERATOR SPECIFICATIONS 2	1
E-1	ELECTRIC & GROUNDING DETAILS	1

DO NOT SCALE DRAWINGS

CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE PROJECT OWNER'S REPRESENTATIVE IN WRITING OF DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

PROJECT SUMMARY

SITE NUMBER:	CTNL225A
SITE NAME:	TOWERCO GROTON MONOPOLE
SBA SITE NUMBER:	CT46142-A
SBA SITE NAME:	SOUTH LEDYARD - TOWN DUMP
SITE ADDRESS:	132 WELLES ROAD MYSTIC, CT 06355
PROPERTY OWNER:	TOWN OF GROTON 45 FORT HILL ROAD GROTON, CT 06340
TOWER OWNER:	SBA TOWERS II, LLC 8501 CONGRESS AVENUE BOCA RATON, FL 33487 PHONE: 561-226-9523
COUNTY:	NEW LONDON
ZONING DISTRICT:	RU-80 (RURAL RESIDENTIAL)
STRUCTURE TYPE:	MONOPOLE
STRUCTURE HEIGHT:	118'±
APPLICANT:	T-MOBILE NORTHEAST LLC 15 COMMERCE WAY, SUITE B NORTON, MA 02766
ARCHITECT:	CHAPPELL ENGINEERING ASSOCIATES, LLC. 201 BOSTON POST ROAD WEST, SUITE 101 MARLBOROUGH, MA 01752
STRUCTURAL ENGINEER:	CHAPPELL ENGINEERING ASSOCIATES, LLC. 201 BOSTON POST ROAD WEST, SUITE 101 MARLBOROUGH, MA 01752
SITE CONTROL POINT:	LATITUDE: 41.392700° N41°23'33.72" LONGITUDE: -71.969800° W71°58'11.28"

SPECIAL ZONING NOTE:
BASED ON INFORMATION PROVIDED BY T-MOBILE REGULATORY COMPLIANCE PROFESSIONALS AND LEGAL COUNSEL, THIS TELECOMMUNICATIONS EQUIPMENT DEPLOYMENT IS CONSIDERED AN ELIGIBLE FACILITY UNDER THE MIDDLE CLASS TAX RELIEF AND JOB CREATION ACT OF 2012, 47 USC 1455(A), SECTION 6409(A), AND IS SUBJECT TO AN ELIGIBLE FACILITY REQUEST, EXPEDITED REVIEW, AND LIMITED/PARTIAL ZONING PRE-EMPTION FOR LOCAL DISCRETIONARY PERMITS (VARIANCE, SPECIAL PERMIT, SITE PLAN REVIEW, OR ADMINISTRATIVE REVIEW).

GENERAL NOTES:

- FOR THE PURPOSE OF CONSTRUCTION DRAWINGS, THE FOLLOWING DEFINITIONS SHALL APPLY:
CONTRACTOR – T-MOBILE
SUBCONTRACTOR – GENERAL CONTRACTOR (CONSTRUCTION)
OWNER – T-MOBILE
OEM – ORIGINAL EQUIPMENT MANUFACTURER
- PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING SUBCONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF CONTRACTOR.
- ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. SUBCONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK.
- ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL, STATE AND FEDERAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
- DRAWINGS PROVIDED HERE ARE NOT TO BE SCALED AND ARE INTENDED TO SHOW OUTLINE ONLY.
- UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
- THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
- IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE SUBCONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY THE CONTRACTOR.
- SUBCONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER, T1 CABLES AND GROUNDING CABLES AS SHOWN ON THE POWER, GROUNDING AND TELCO PLAN DRAWING. SUBCONTRACTOR SHALL UTILIZE EXISTING TRAYS AND/OR SHALL ADD NEW TRAYS AS NECESSARY. SUBCONTRACTOR SHALL CONFIRM THE ACTUAL ROUTING WITH THE CONTRACTOR AND/OR LANDLORD PRIOR TO CONSTRUCTION.
- THE SUBCONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT SUBCONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER.
- SUBCONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY.
- SUBCONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION AND RETURN DISTURBED AREAS TO ORIGINAL CONDITIONS.
- THE SUBCONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE SUBCONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
- SUBCONTRACTOR SHALL NOTIFY CHAPPELL ENGINEERING ASSOCIATES, LLC 48 HOURS IN ADVANCE OF POURING CONCRETE OR BACKFILLING TRENCHES, SEALING ROOF AND WALL PENETRATIONS AND POST DOWNS, FINISHING NEW WALLS OR FINAL ELECTRICAL CONNECTIONS FOR ENGINEERING REVIEW.
- CONSTRUCTION SHALL COMPLY WITH ALL T-MOBILE STANDARDS AND SPECIFICATIONS.
- SUBCONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS MUST BE VERIFIED. SUBCONTRACTOR SHALL NOTIFY THE CONTRACTOR OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.
- THE EXISTING CELL SITES ARE IN FULL COMMERCIAL OPERATION. ANY CONSTRUCTION WORK BY SUBCONTRACTOR SHALL NOT DISRUPT THE EXISTING NORMAL OPERATION. ANY WORK ON EXISTING EQUIPMENT MUST BE COORDINATED WITH CONTRACTOR. ALSO, WORK SHOULD BE SCHEDULED FOR AN APPROPRIATE MAINTENANCE WINDOW USUALLY IN LOW TRAFFIC PERIODS AFTER MIDNIGHT.
- IF THE EXISTING CELL SITE IS ACTIVE, ALL SAFETY PRECAUTIONS MUST BE TAKEN WHEN WORKING AROUND HIGH LEVELS OF ELECTROMAGNETIC RADIATION. EQUIPMENT SHOULD BE SHUTDOWN PRIOR TO PERFORMING ANY WORK THAT COULD EXPOSE THE WORKERS TO DANGER. PERSONAL RF EXPOSURE MONITORS ARE TO BE WORN TO ALERT OF ANY DANGEROUS EXPOSURE LEVELS.

SITE WORK GENERAL NOTES:

- THE SUBCONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION.
- ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES, AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY ENGINEERS. EXTREME CAUTION SHOULD BE USED BY THE SUBCONTRACTOR WHEN EXCAVATING OR DRILLING PIERS AROUND OR NEAR UTILITIES. SUBCONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW. THIS WILL INCLUDE BUT NOT BE LIMITED TO A) FALL PROTECTION B) CONFINED SPACE C) ELECTRICAL SAFETY D) TRENCHING AND EXCAVATION.
- ALL SITE WORK SHALL BE AS INDICATED ON THE DRAWINGS AND PROJECT SPECIFICATIONS.
- IF NECESSARY, RUBBISH, STUMPS, DEBRIS, STICKS, STONES AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.
- THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE BTS EQUIPMENT AND TOWER AREAS.
- NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUND. FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT.
- THE SUB GRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION.
- ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND/OR CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJECT TO THE APPROVAL OF ENGINEERING, OWNER AND/OR LOCAL UTILITIES.
- THE AREAS OF THE OWNERS PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE TOWER, EQUIPMENT OR DRIVEWAY, SHALL BE GRADED TO A UNIFORM SLOPE AND STABILIZED TO PREVENT EROSION AS SPECIFIED IN THE PROJECT SPECIFICATIONS.
- SUBCONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE LOCAL GUIDELINES FOR EROSION AND SEDIMENT CONTROL.
- THE SUBCONTRACTOR SHALL PROVIDE SITE SIGNAGE IN ACCORDANCE WITH THE T-MOBILE SPECIFICATION FOR SITE SIGNAGE.

CONCRETE AND REINFORCING STEEL NOTES:

- ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 301, ACI 318, ACI 336, ASTM A184, ASTM A185 AND THE DESIGN AND CONSTRUCTION SPECIFICATION FOR CAST-IN-PLACE CONCRETE.
- ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS, UNLESS NOTED OTHERWISE. A HIGHER STRENGTH (400PSI) MAY BE USED. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 381 CODE REQUIREMENTS
- REINFORCING STEEL SHALL CONFORM TO ASTM A 615, GRADE 60, DEFORMED UNLESS NOTED OTHERWISE. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185 WELDED STEEL WIRE FABRIC UNLESS NOTED OTHERWISE. SPLICES SHALL BE CLASS "B" AND ALL HOOKS SHALL BE STANDARD, UNDO.
- THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON DRAWINGS:
CONCRETE CAST AGAINST EARTH.....3 IN.
CONCRETE EXPOSED TO EARTH OR WEATHER:
#6 AND LARGER2 IN.
#5 AND SMALLER & WWF1½ IN.
CONCRETE NOT EXPOSED TO EARTH OR WEATHER OR NOT CAST AGAINST THE GROUND:
SLAB AND WALL¾ IN.
BEAMS AND COLUMNS½ IN.
- A CHAMFER ¾" SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE, UNO, IN ACCORDANCE WITH ACI 301 SECTION 4.2.4.
- INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHORS SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURE. THE ANCHOR BOLT, DOWEL OR ROD SHALL CONFORM TO THE MANUFACTURERS RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR CONTRACTOR APPROVAL WHEN DRILLING HOLES IN CONCRETE. SPECIAL INSPECTIONS, REQUIRED BY GOVERNING CODES, SHALL BE PERFORMED IN ORDER TO MAINTAIN MANUFACTURER'S MAXIMUM ALLOWABLE LOADS. ALL EXPANSION/WEDGE ANCHORS SHALL BE STAINLESS STEEL OR HOT DIPPED GALVANIZED. EXPANSION BOLTS SHALL BE PROVIDED BY SIMPSON OR APPROVED EQUAL.
- CONCRETE CYLINDER TIES ARE NOT REQUIRED FOR SLAB ON GRADE WHEN CONCRETE IS LESS THAN 50 CUBIC YARDS (IBC1905.6.2.3) IN THAT EVENT THE FOLLOWING RECORDS SHALL BE PROVIDED BY THE CONCRETE SUPPLIER;
(A) RESULTS OF CONCRETE CYLINDER TEST PERFORMED AT THE SUPPLIERS PLANT.
(B) CERTIFICATION OF MINIMUM COMPRESSIVE STRENGTH FOR THE CONCRETE GRADE SUPPLIED.
FOR GREATER THAN 50 CUBIC YARDS THE GC SHALL PERFORM THE CONCRETE CYLINDER TEST.
- AS AN ALTERNATIVE TO ITEM 7. TEST CYLINDERS SHALL BE TAKEN INITIALLY AND THEREAFTER FOR EVERY 50 YARDS OF CONCRETE FROM EACH DIFFERENT BATCH PLANT.
- EQUIPMENT SHALL NOT BE PLACED ON NEW PADS FOR SEVEN DAYS AFTER PAD IS POURED, UNLESS IT IS VERIFIED BY CYLINDER TESTS THAT COMPRESSIVE STRENGTH HAS BEEN ATTAINED.

STRUCTURAL STEEL NOTES:

- ALL STEEL WORK SHALL BE PAINTED OR GALVANIZED IN ACCORDANCE WITH THE DRAWINGS AND T-MOBILE SPECIFICATIONS UNLESS OTHERWISE NOTED. STRUCTURAL STEEL SHALL BE ASTM-A-36 UNLESS OTHERWISE NOTED ON THE SITE SPECIFIC DRAWINGS. STEEL DESIGN, INSTALLATION AND BOLTING SHALL BE IN ACCORDANCE WITH THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) "MANUAL OF STEEL CONSTRUCTION".
- ALL WELDING SHALL BE PERFORMED USING E70XX ELECTRODES AND WELDING SHALL CONFORM TO AISC AND AWS D1.1. WHERE FILLET WELD SIZES ARE NOT SHOWN, PROVIDE THE MINIMUM SIZE PER TABLE J2.4 IN THE AISC "MANUAL OF STEEL CONSTRUCTION", 9TH EDITION. PAINTED SURFACES SHALL BE TOUCHED UP.
- BOLTED CONNECTIONS SHALL USE BEARING TYPE ASTM A325 BOLTS (¾") AND SHALL HAVE MINIMUM OF TWO BOLTS UNLESS NOTED OTHERWISE. ALL BOLTS SHALL BE GALVANIZED OR STAINLESS STEEL.
- NON-STRUCTURAL CONNECTIONS FOR STEEL GRATING MAY USE ¾" DIA. ASTM A 307 BOLTS (GALV) UNLESS NOTED OTHERWISE.
- CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ENGINEER REVIEW & APPROVAL ON PROJECTS REQUIRING STRUCTURAL STEEL
- ALL STRUCTURAL STEEL WORK SHALL BE DONE IN ACCORDANCE WITH AISC SPECIFICATIONS.

SOIL COMPACTION NOTES FOR SLAB ON GRADE:

- EXCAVATE AS REQUIRED TO REMOVE VEGETATION AND TOPSOIL TO EXPOSE NATURAL SUBGRADE AND PLACE CRUSHED STONE AS REQUIRED.
- COMPACTION CERTIFICATION: AN INSPECTION AND WRITTEN CERTIFICATION BY A QUALIFIED GEOTECHNICAL TECHNICIAN OR ENGINEER IS ACCEPTABLE.
- AS AN ALTERNATE TO INSPECTION AND WRITTEN CERTIFICATION, THE "UNDISTURBED SOIL" BASE SHALL BE COMPACTED WITH "COMPACTION EQUIPMENT", LISTED BELOW, TO AT LEAST 90% MODIFIED PROCTOR MAXIMUM DENSITY PER ASTM D 1557 METHOD C.
- COMPACTED SUBBASE SHALL BE UNIFORM AND LEVELED. PROVIDE 6" MINIMUM CRUSHED STONE OR GRAVEL COMPACTED IN 3" LIFTS ABOVE COMPACTED SOIL. GRAVEL SHALL BE NATURAL OR CRUSHED WITH 100% PASSING #1 SIEVE.
- AS AN ALTERNATE TO ITEMS 2 AND 3, THE SUBGRADE SOILS WITH 5 PASSES OR A MEDIUM SIZED VIBRATORY PLATE COMPACTOR (SUCH AS BOMAG BPR 30/38) OR HAND-OPERATED SINGLE DRUM VIBRATORY ROLLER (SUCH AS BOMAG BW 55E). AND SOFT AREAS THAT ARE ENCOUNTERED SHOULD BE REMOVED AND REPLACED WITH A WELL-GRADED GRANULAR FILL AND COMPACTED AS STATED ABOVE.

COMPACTION EQUIPMENT:

- HAND OPERATED DOUBLE DRUM, VIBRATORY ROLLER, VIBRATORY PLATE COMPACTOR OR JUMPING JACK COMPACTOR.

CONSTRUCTION NOTES:

- FIELD VERIFICATION:
SUBCONTRACTOR SHALL FIELD VERIFY SCOPE OF WORK, T-MOBILE ANTENNA PLATFORM LOCATION AND UTILITY TRENCHWORK.
- COORDINATION OF WORK:
SUBCONTRACTOR SHALL COORDINATE RF WORK AND PROCEDURES WITH CONTRACTOR.
- CABLE LADDER RACK:
SUBCONTRACTOR SHALL FURNISH AND INSTALL CABLE LADDER RACK, CABLE TRAY AND/OR ICE BRIDGE, AND CONDUIT AS REQUIRED TO SUPPORT CABLES TO THE NEW BTS LOCATION.

ELECTRICAL INSTALLATION NOTES:

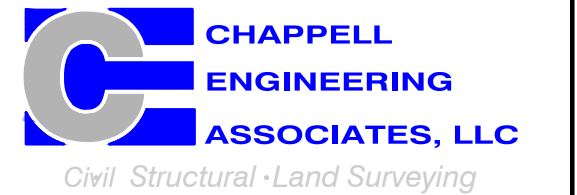
- WIRING, RACEWAY, AND SUPPORT METHODS AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE NEC AND TELCORDIA.
- SUBCONTRACTOR SHALL MODIFY OR INSTALL CABLE TRAY SYSTEM AS REQUIRED TO SUPPORT RF AND TRANSPORT CABLE TO THE NEW BTS EQUIPMENT. SUBCONTRACTOR SHALL SUBMIT MODIFICATIONS TO CONTRACTOR FOR APPROVAL.
- ALL CIRCUITS SHALL BE SEGREGATED AND MAINTAIN MINIMUM CABLE SEPARATION AS REQUIRED BY THE NEC AND TELCORDIA.
- CABLES SHALL NOT BE ROUTED THROUGH LADDER-STYLE CABLE TRAY RUNGS.
- EACH END OF EVERY POWER, GROUNDING, AND T1 CONDUCTOR AND CABLE SHALL BE LABELED WITH COLOR-CODED INSULATION OR ELECTRICAL TAPE (3M BRAND, 1/2 INCH PLASTIC ELECTRICAL TAPE WITH UV PROTECTION, OR EQUAL). THE IDENTIFICATION METHOD SHALL CONFORM WITH NEC AND OSHA, AND MATCH INSTALLATION REQUIREMENTS.
- POWER PHASE CONDUCTORS (I.E., HOTS) SHALL BE LABELED WITH COLOR-CODED INSULATION OR ELECTRICAL TAPE (3M BRAND, 1/2 INCH PLASTIC ELECTRICAL TAPE WITH UV PROTECTION, OR EQUAL). PHASE CONDUCTOR COLOR CODES SHALL CONFORM WITH THE NEC AND OSHA.
- ALL ELECTRICAL COMPONENTS SHALL BE CLEARLY LABELED WITH ENGRAVED LAMACOID PLASTIC LABELS. ALL EQUIPMENT SHALL BE LABELED WITH THEIR VOLTAGE RATING, PHASE CONFIGURATION, WIRE CONFIGURATION, POWER OR AMPACITY RATING, AND BRANCH CIRCUIT ID NUMBERS (I.E., PANELBOARD AND CIRCUIT ID'S).
- PANELBOARDS (ID NUMBERS) AND INTERNAL CIRCUIT BREAKERS (CIRCUIT ID NUMBERS) SHALL BE CLEARLY LABELED WITH ENGRAVED LAMACOID PLASTIC LABELS.
- ALL TIE WRAPS SHALL BE CUT FLUSH WITH APPROVED CUTTING TOOL TO REMOVE SHARP EDGES.
- POWER, CONTROL, AND EQUIPMENT GROUND WIRING IN TUBING OR CONDUIT SHALL BE SINGLE CONDUCTOR (#34 AWG OR LARGER), 600 V, OIL RESISTANT THHN OR THWN-2, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND DRY) OPERATION; LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED, UNLESS OTHERWISE SPECIFIED.
- SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED INDOORS SHALL BE SINGLE CONDUCTOR (#6 AWG OR LARGER), 600 V, OIL RESISTANT THHN OR THWN-2 GREEN INSULATION, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND DRY) OPERATION; LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED, UNLESS OTHERWISE SPECIFIED.
- SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED OUTDOORS, OR BELOW GRADE, SHALL BE SINGLE CONDUCTOR #2 AWG SOLID TINNED COPPER CABLE, UNLESS OTHERWISE SPECIFIED.
- POWER AND CONTROL WIRING, NOT IN TUBING OR CONDUIT, SHALL BE MULTI-CONDUCTOR, TYPE TC CABLE (#34 AWG OR LARGER), 600 V, OIL RESISTANT THHN OR THWN-2, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND DRY) OPERATION; WITH OUTER JACKET; LISTED OR LABELED FOR THE LOCATION USED, UNLESS OTHERWISE SPECIFIED.
- ALL POWER AND GROUNDING CONNECTIONS SHALL BE CRIMP-STYLE, COMPRESSION WIRE LUGS AND WIRENUTS BY HARGER (OR EQUAL). LUGS AND WIRENUTS SHALL BE RATED FOR OPERATION AT NO LESS THAN 75°C (90°C IF AVAILABLE).
- RACEWAY AND CABLE TRAY SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANS/IEEE AND NEC.
- NEW RACEWAY OR CABLE TRAY WILL MATCH THE EXISTING INSTALLATION WHERE POSSIBLE.
- ELECTRICAL METALLIC TUBING (EMT) OR RIGID NONMETALLIC CONDUIT (I.E., RIGID PVC SCHEDULE 40 OR RIGID PVC SCHEDULE 80 FOR LOCATIONS SUBJECT TO PHYSICAL DAMAGE) SHALL BE USED FOR EXPOSED INDOOR LOCATIONS.
- ELECTRICAL METALLIC TUBING (EMT), ELECTRICAL NONMETALLIC TUBING (ENT), OR RIGID NONMETALLIC CONDUIT (RIGID PVC, SCHEDULE 40) SHALL BE USED FOR CONCEALED INDOOR LOCATIONS.
- GALVANIZED STEEL INTERMEDIATE METALLIC CONDUIT (IMC) SHALL BE USED FOR OUTDOOR LOCATIONS ABOVE GRADE.
- RIGID NONMETALLIC CONDUIT (I.E., RIGID PVC SCHEDULE 40 OR RIGID PVC SCHEDULE 80) SHALL BE USED UNDERGROUND, DIRECT BURIED, IN AREAS OF OCCASIONAL LIGHT VEHICLE TRAFFIC OR ENCASED IN REINFORCED CONCRETE IN AREAS OF HEAVY VEHICLE TRAFFIC.
- LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT (LIQUID-TITE FLEX) SHALL BE USED INDOORS AND OUTDOORS, WHERE VIBRATION OCCURS OR FLEXIBILITY IS NEEDED.
- CONDUIT AND TUBING FITTINGS SHALL BE THREADED OR COMPRESSION-TYPE AND APPROVED FOR THE LOCATION USED. SETSCREW FITTINGS ARE NOT ACCEPTABLE.
- CABINETS, BOXES AND WIREWAYS SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANS/IEEE AND NEC.
- CABINETS, BOXES AND WIREWAYS TO MATCH THE EXISTING INSTALLATION WHERE POSSIBLE.
- WIREWAYS SHALL BE EPOXY-COATED (GRAY) AND INCLUDE A HINGED COVER, DESIGNED TO SWING OPEN DOWNWARD; SHALL BE PANDUIT TYPE E (OR EQUAL); AND RATED NEMA 1 (OR BETTER) INDOORS, OR NEMA 3R (OR BETTER) OUTDOORS.
- EQUIPMENT CABINETS, TERMINAL BOXES, JUNCTION BOXES, AND PULL BOXES SHALL BE GALVANIZED OR EPOXY-COATED SHEET STEEL, SHALL MEET OR EXCEED UL 50, AND RATED NEMA 1 (OR BETTER) INDOORS, OR NEMA 3R (OR BETTER) OUTDOORS.
- METAL RECEPTACLE, SWITCH, AND DEVICE BOXES SHALL BE GALVANIZED, EPOXY-COATED, OR NON-CORRODING; SHALL MEET OR EXCEED UL 514A AND NEMA OS 1; AND RATED NEMA 1 (OR BETTER) INDOORS, OR WEATHER PROTECTED (WP OR BETTER) OUTDOORS.
- NONMETALLIC RECEPTACLE, SWITCH, AND DEVICE BOXES SHALL MEET OR EXCEED NEMA OS 2; AND RATED NEMA 1 (OR BETTER) INDOORS, OR WEATHER PROTECTED (WP OR BETTER) OUTDOORS.
- THE SUBCONTRACTOR SHALL NOTIFY AND OBTAIN NECESSARY AUTHORIZATION FROM THE CONTRACTOR BEFORE COMMENCING WORK ON THE AC POWER DISTRIBUTION PANELS.
- THE SUBCONTRACTOR SHALL PROVIDE NECESSARY TAGGING ON THE BREAKERS, CABLES AND DISTRIBUTION PANELS IN ACCORDANCE WITH THE APPLICABLE CODES AND STANDARDS TO SAFEGUARD AGAINST LIFE AND PROPERTY.
- ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, NEC AND ALL APPLICABLE LOCAL CODES.
- CONDUIT ROUTINGS ARE SCHEMATIC. SUBCONTRACTOR SHALL INSTALL CONDUITS SO THAT ACCESS TO EQUIPMENT IS NOT BLOCKED.

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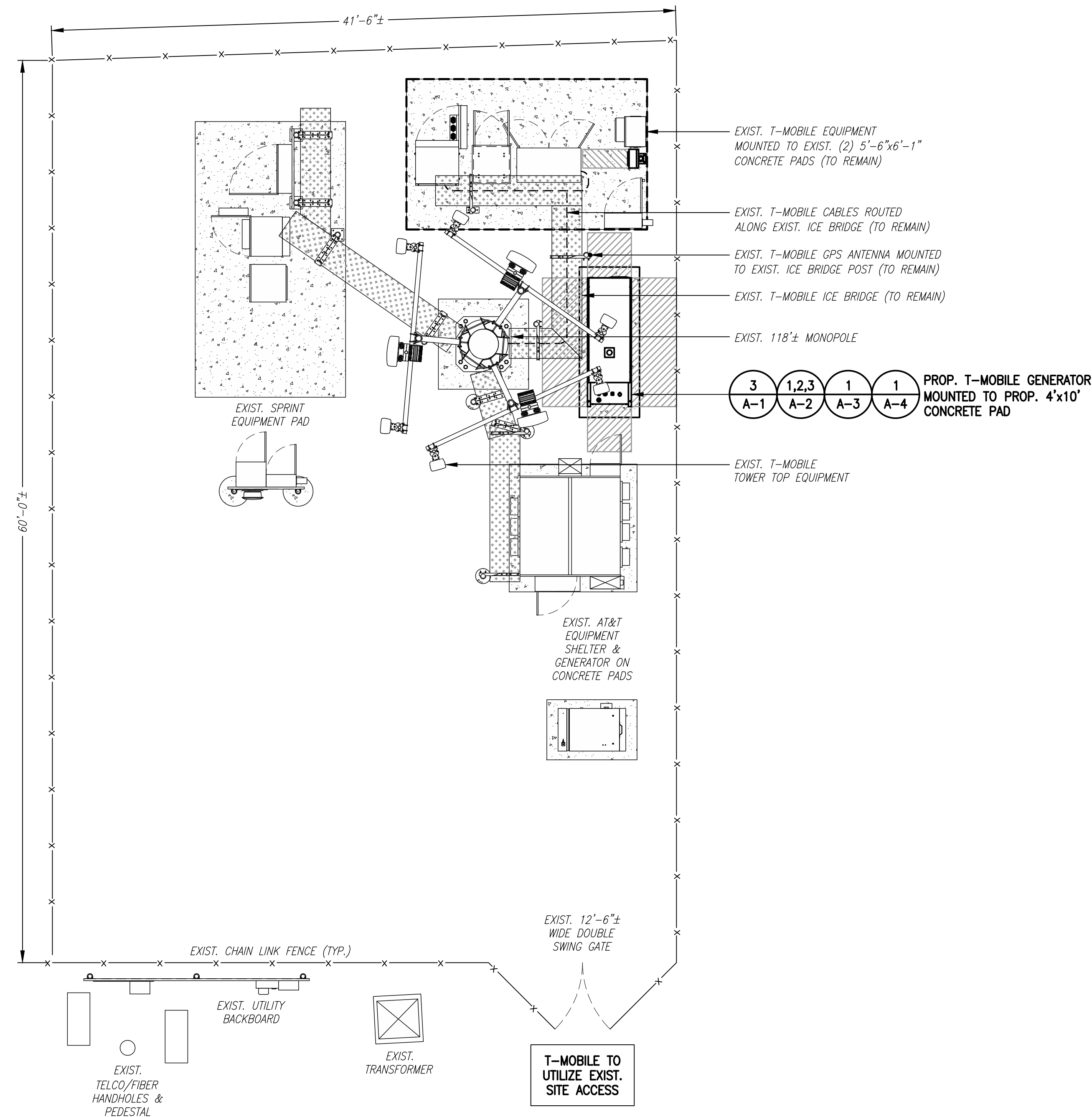
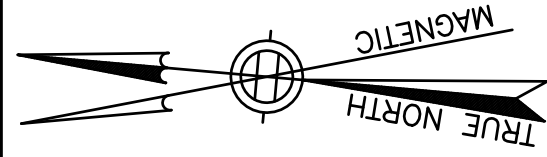
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CTNL225A

SITE ADDRESS:
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MYSTIC, CT 06355

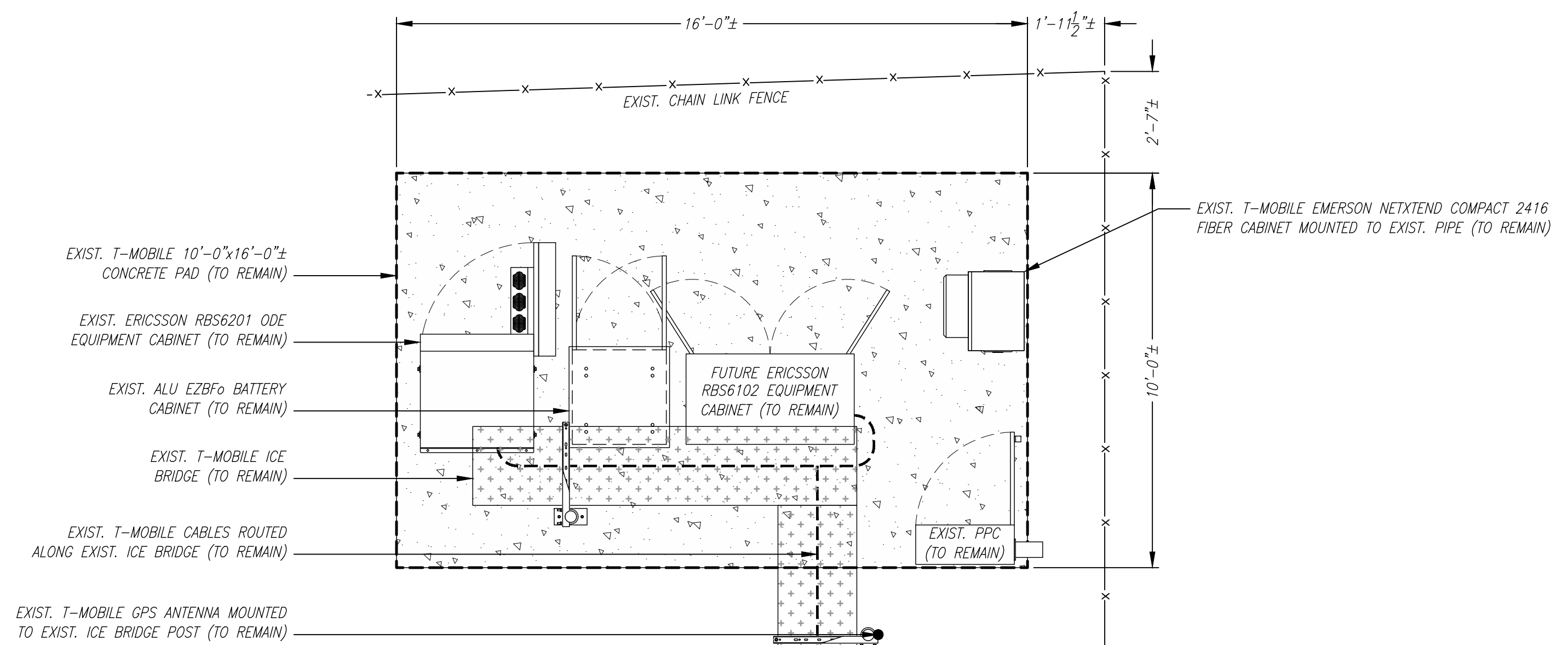
SHEET TITLE
GENERAL NOTES

SHEET NUMBER
GN-1

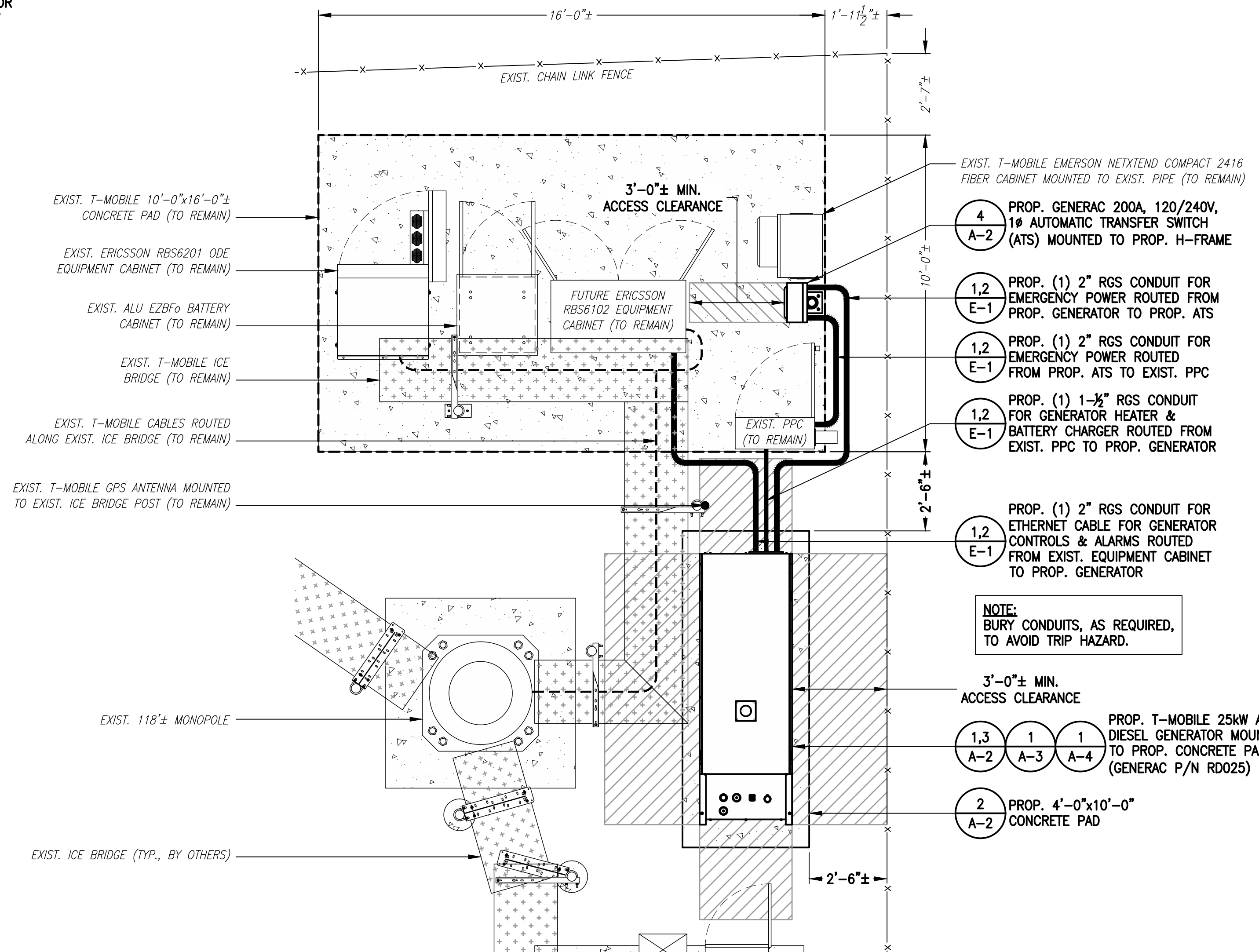
SPECIAL CONSTRUCTION WORK NOTE (HAND DUG UTILITY TRENCH EXCAVATION REQUIRED):
 EXISTING UNDERGROUND UTILITY LOCATIONS ARE UNKNOWN. GENERAL CONTRACTOR SHALL HAND-EXCAVATE TO REQUIRED SUB-GRADE DEPTH SUFFICIENT TEST HOLES OR AS DIRECTED/REQUIRED BY SBA REGIONAL SITE MANAGER SHALL HAND-EXCAVATE ALL PROPOSED UNDERGROUND UTILITY TRENCHES. GENERAL CONTRACTOR RESPONSIBLE FOR ANY REQUIRED SPECIAL TEMPORARY PROTECTION OF EXISTING UNDERGROUND UTILITIES, PHYSICAL DAMAGE REPAIR, AND SERVICE RESTORATION.



COMPOUND PLAN 1
 SCALE: 3/16" = 1'-0"
 0 5'-4" 10'-8" 16'-0"



EXISTING EQUIPMENT PLAN 2
 SCALE: 3/8" = 1'-0"
 0 2'-8" 5'-4" 8'-0"



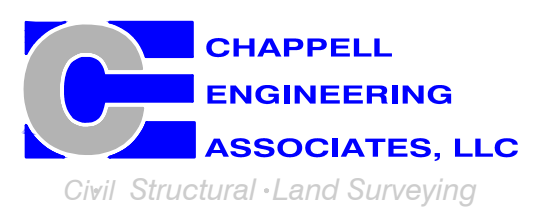
PROPOSED EQUIPMENT PLAN 3
 SCALE: 3/8" = 1'-0"
 0 2'-8" 5'-4" 8'-0"

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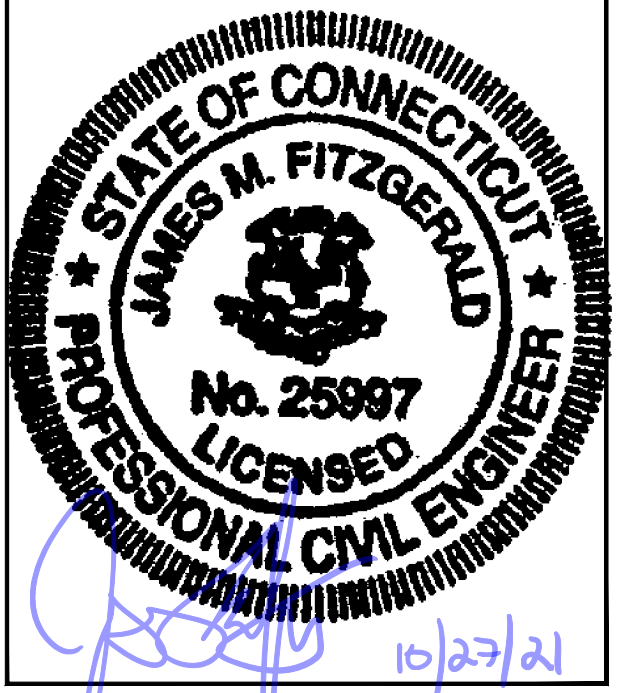
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SHEET TITLE
COMPOUND & EQUIPMENT PLAN

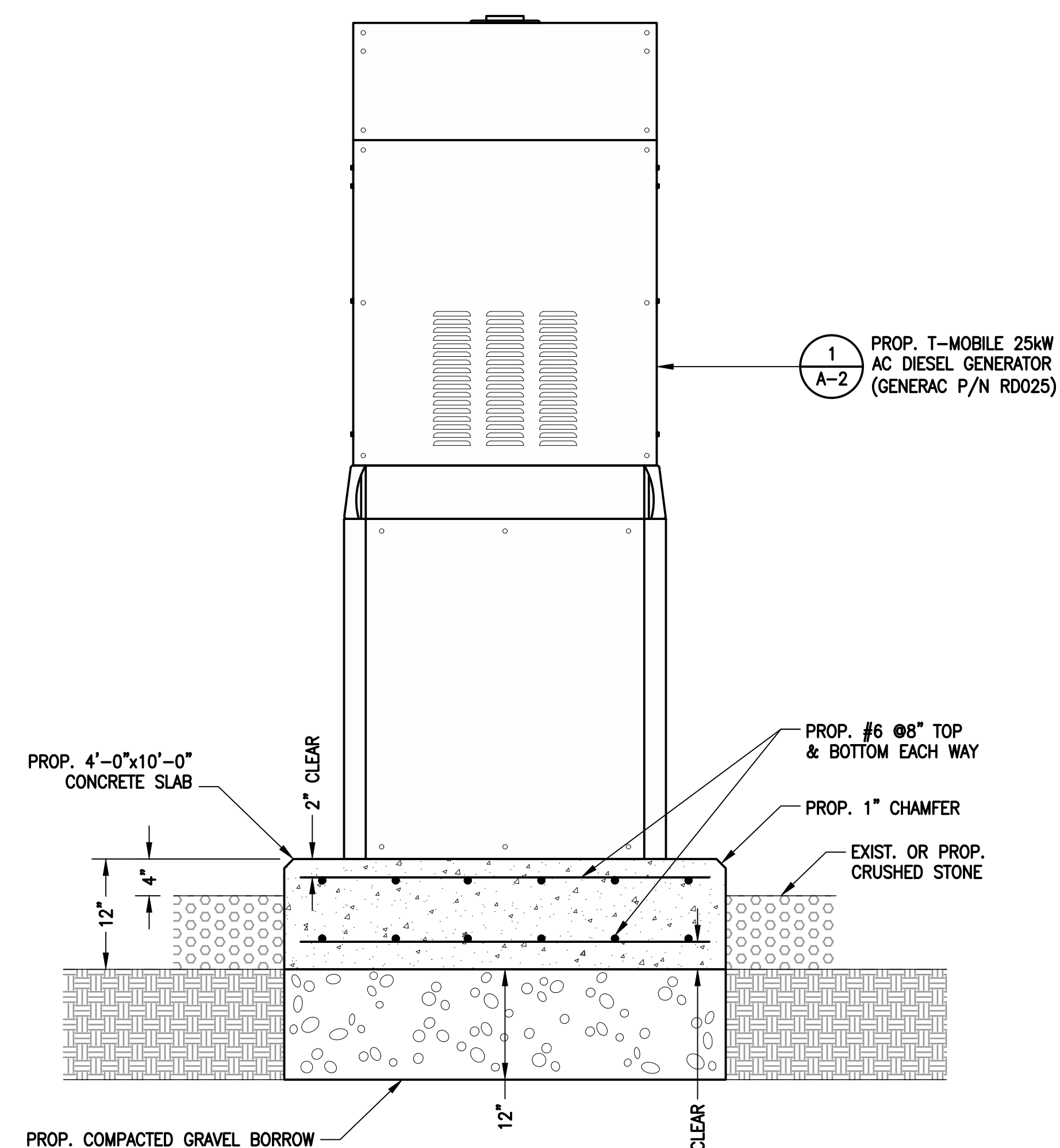
SHEET NUMBER
A-1

NOTE:
GENERATOR DIESEL TANK TO
BE FILLED BY CONTRACTOR

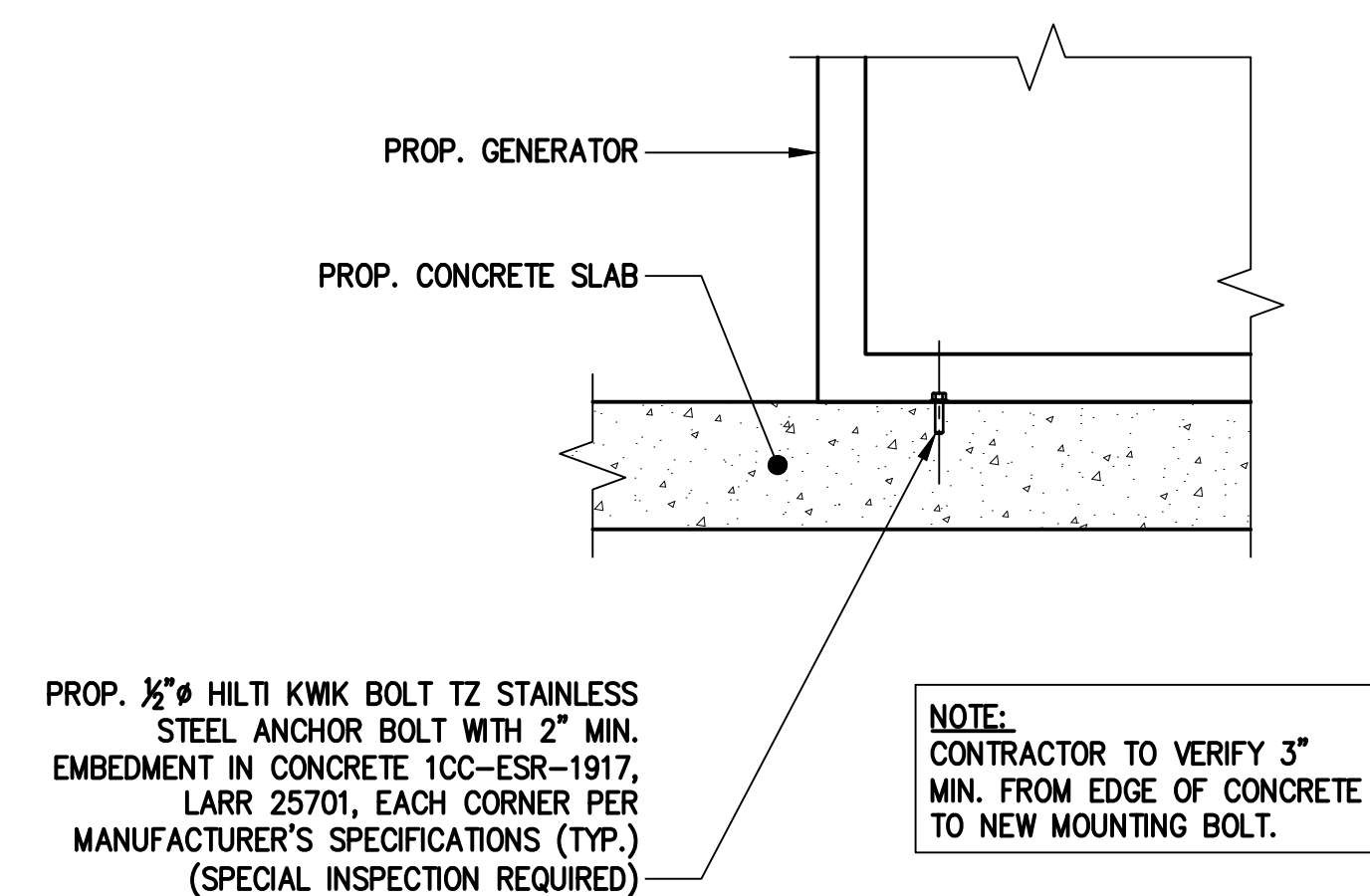


GENERAC RD025 25kW AC DIESEL GENERATOR
 DIMENSIONS: 103.4"L x 35.0"W x 91.7"H
 WEIGHT: 2,946 lbs
 QUANTITY: TOTAL OF 1

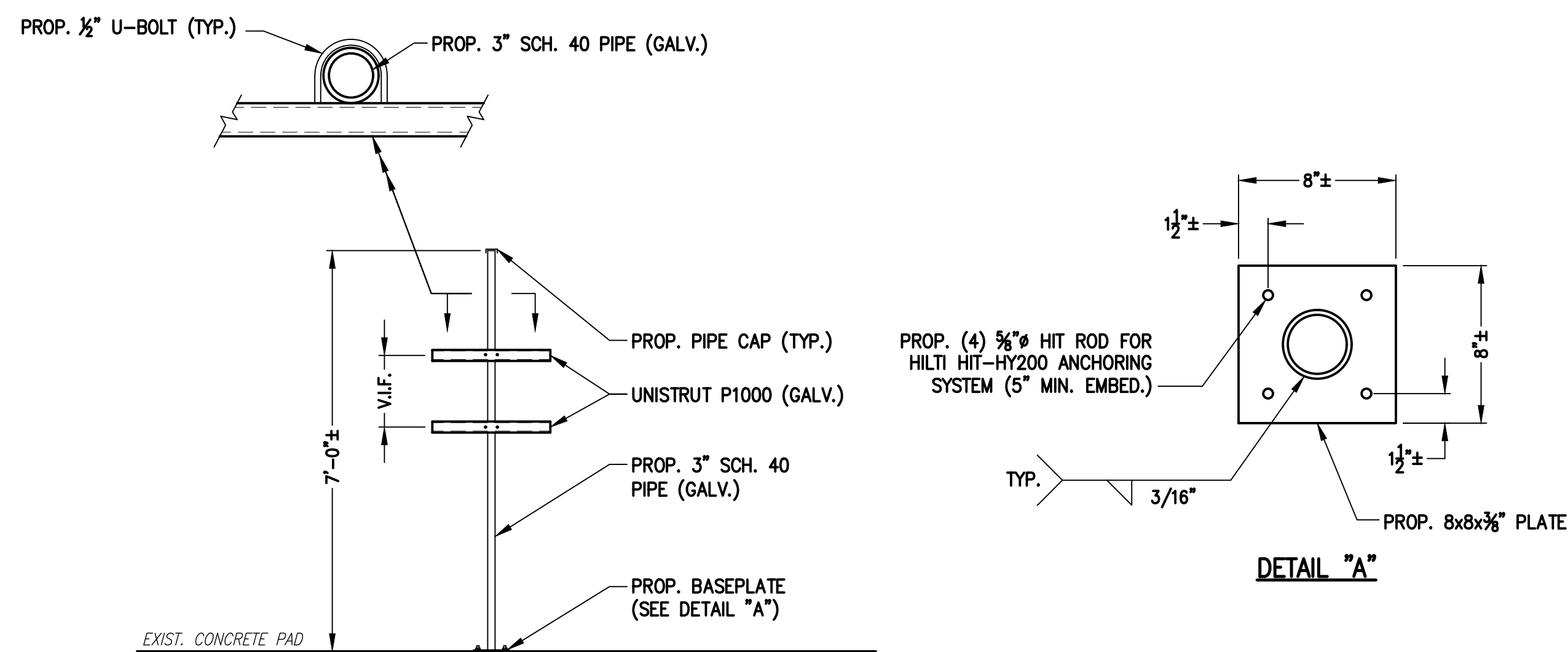
GENERATOR DETAIL 1
A-2
 SCALE: N.T.S.



GENERATOR PAD DETAIL 2
A-2
 SCALE: N.T.S.



GENERATOR MOUNTING DETAIL 3
A-2
 SCALE: N.T.S.



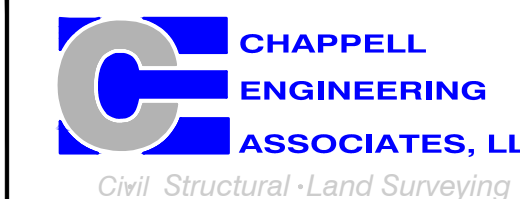
H-FRAME DETAIL 4
A-2
 SCALE: N.T.S.

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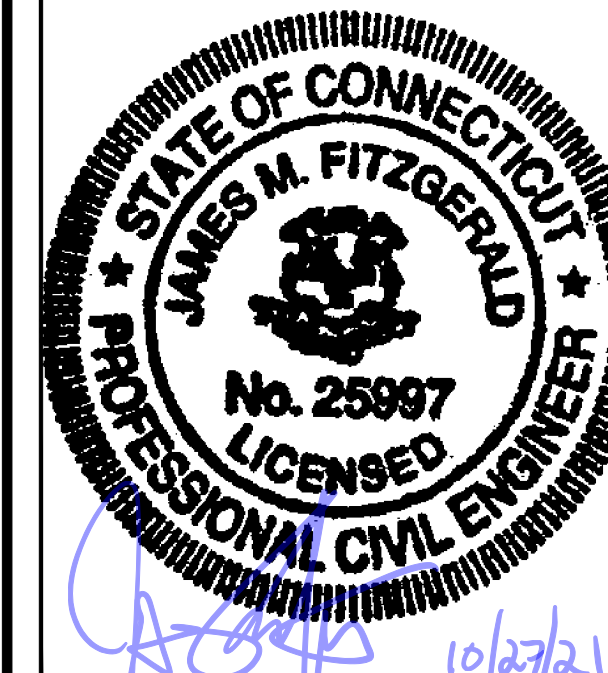
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SHEET TITLE
GENERATOR DETAILS

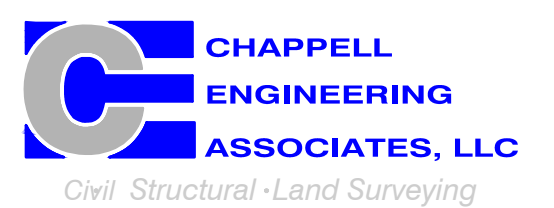
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A-2

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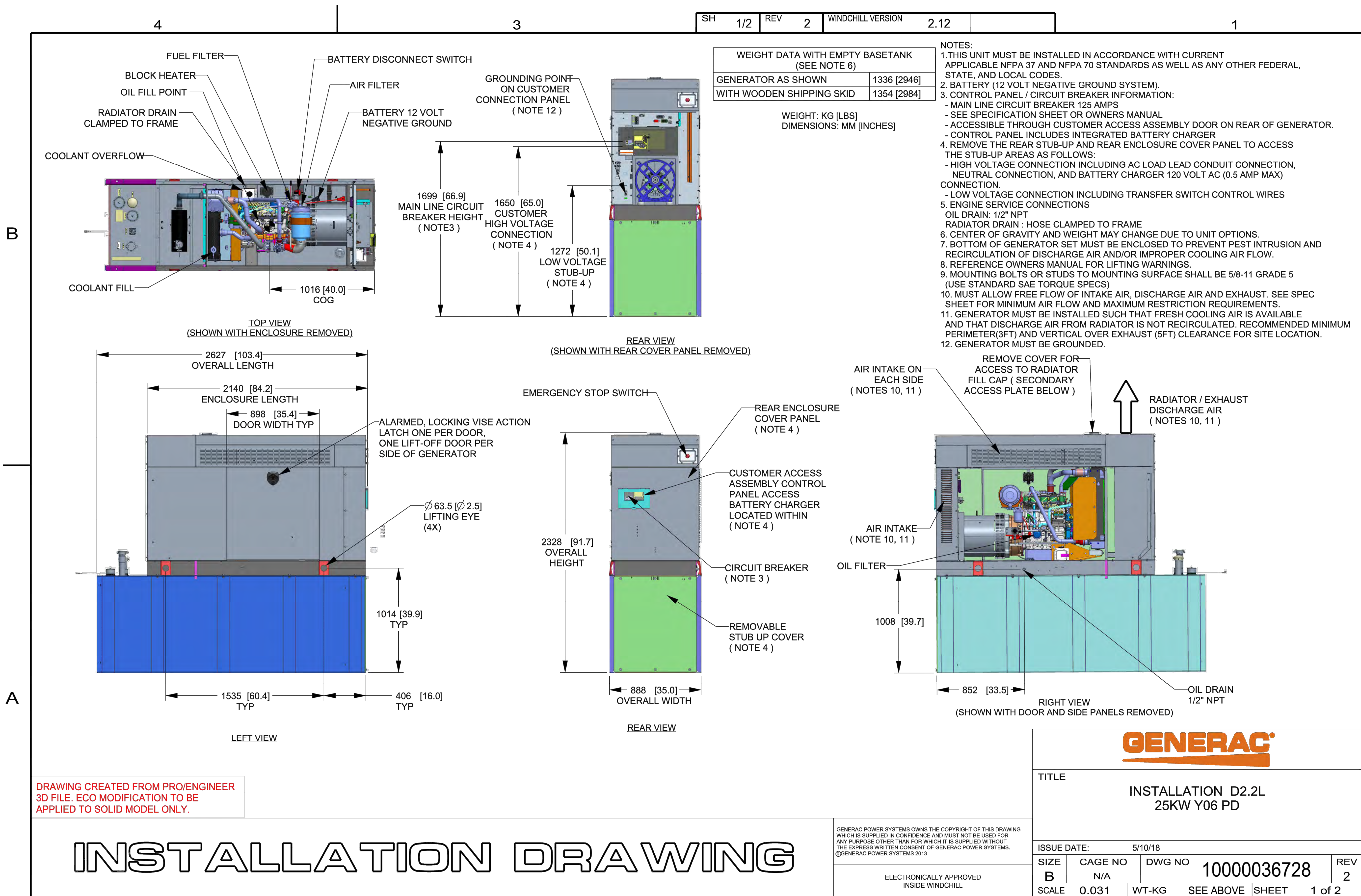
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SHEET TITLE
GENERATOR SPECIFICATIONS 1

SHEET NUMBER
A-3



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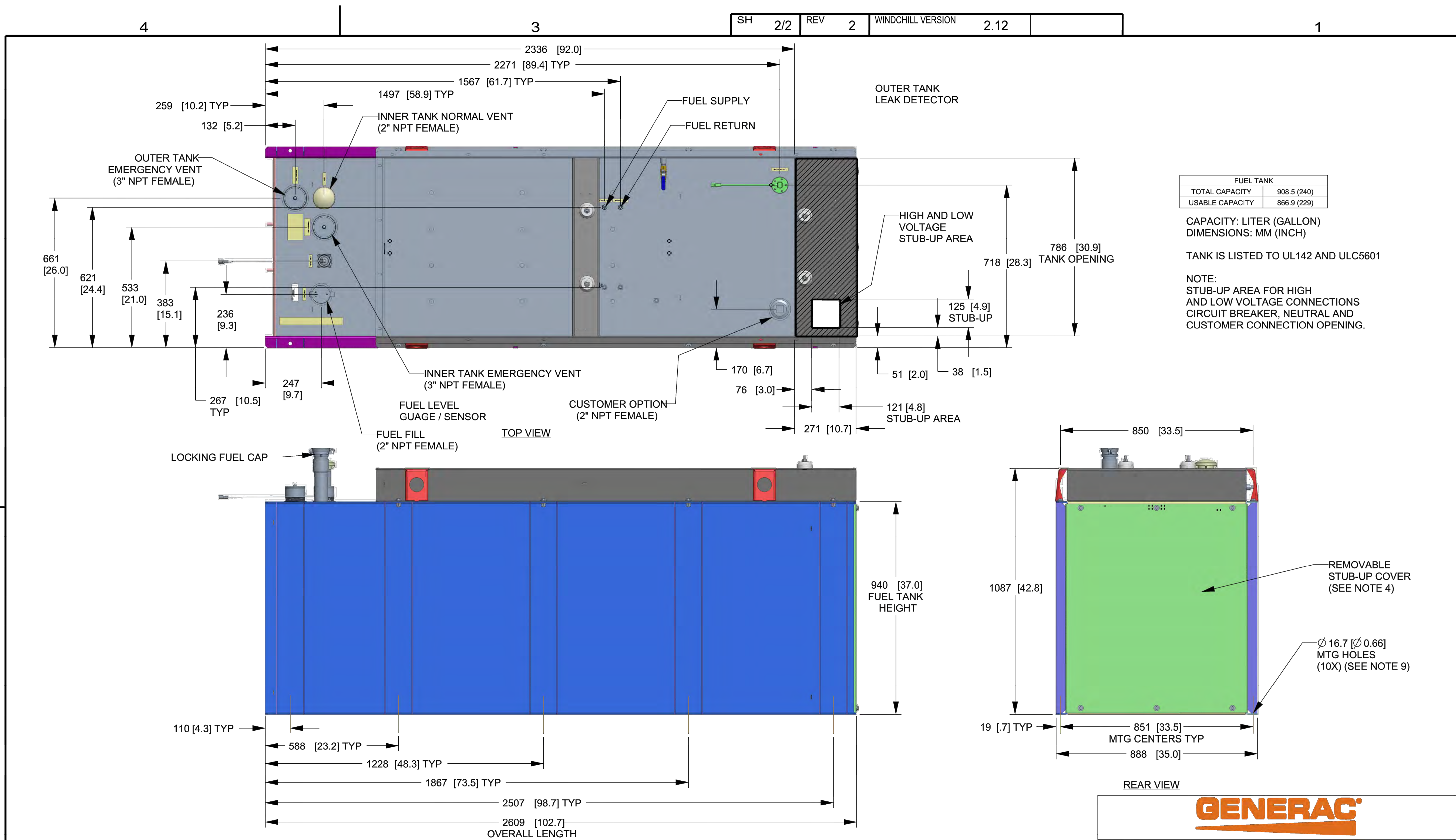
TITLE
**INSTALLATION D2.2L
25KW Y06 PD**

ISSUE DATE: 5/10/18

SIZE	CAGE NO	DWG NO	REV
B	N/A	10000036728	2

SCALE 0.031 WT-KG SEE ABOVE SHEET 1 of 2

SH 2/2 REV 2 WINDCHILL VERSION 2.12



FUEL TANK	
TOTAL CAPACITY	908.5 (240)
USABLE CAPACITY	866.9 (229)

CAPACITY: LITER (GALLON)
DIMENSIONS: MM (INCH)

TANK IS LISTED TO UL142 AND ULC5601

NOTE:
STUB-UP AREA FOR HIGH AND LOW VOLTAGE CONNECTIONS CIRCUIT BREAKER, NEUTRAL AND CUSTOMER CONNECTION OPENING.

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TITLE
INSTALLATION D2.2L
25KW Y06 PD

ISSUE DATE: 5/10/18

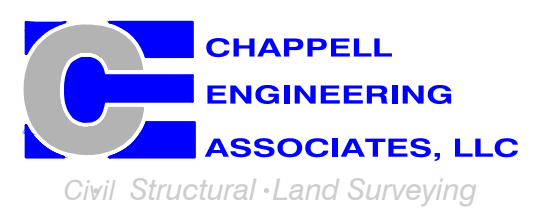
SIZE B	CAGE NO N/A	DWG NO 10000036728	REV 2
SCALE 0.063	WT-KG	SEE ABOVE	SHEET 2 of 2

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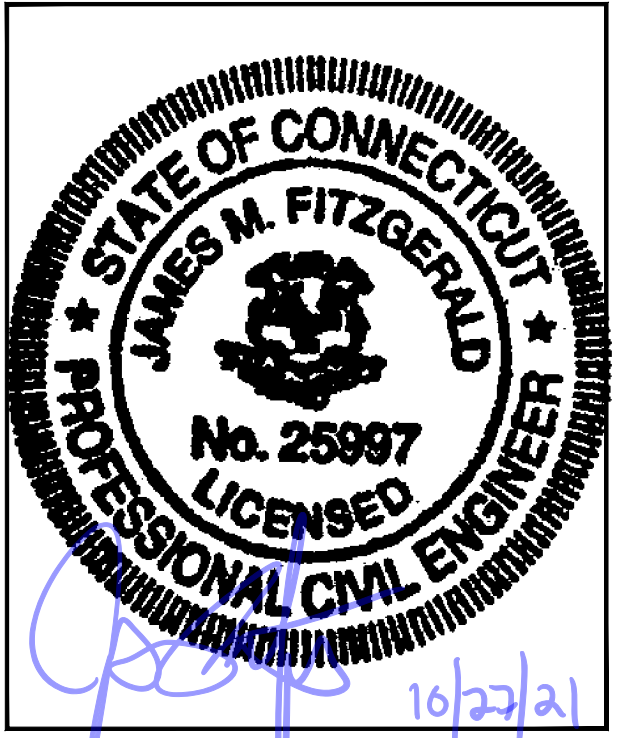
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APPROVED BY: JMT

SUBMITTALS			
REV.	DATE	DESCRIPTION	BY
1	10/27/21	ISSUED FOR CONSTRUCTION	CMC
0	10/13/21	ISSUED FOR REVIEW	CMC

SITE NUMBER:
CTNL225A

SITE ADDRESS:
132 WELLES ROAD
MYSTIC, CT 06355

SHEET TITLE
GENERATOR SPECIFICATIONS 2

SHEET NUMBER
A-4

T-MOBILE NORTHEAST LLC

15 COMMERCE WAY, SUITE B
NORTON, MA 02766
(508) 286-2700



SBA COMMUNICATIONS CORP.
134 FLANDERS ROAD, SUITE 125
WESTBOROUGH, MA 01581
(508) 251-0720



R.K. EXECUTIVE CENTRE
201 BOSTON POST ROAD WEST, SUITE 101
MARLBOROUGH, MA 01752
(508) 481-7400
www.chappellengineering.com



CHECKED BY: JMT

APPROVED BY: JMT

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
1	10/27/21	ISSUED FOR CONSTRUCTION	CMC
0	10/13/21	ISSUED FOR REVIEW	CMC

SITE NUMBER:
CTNL225A

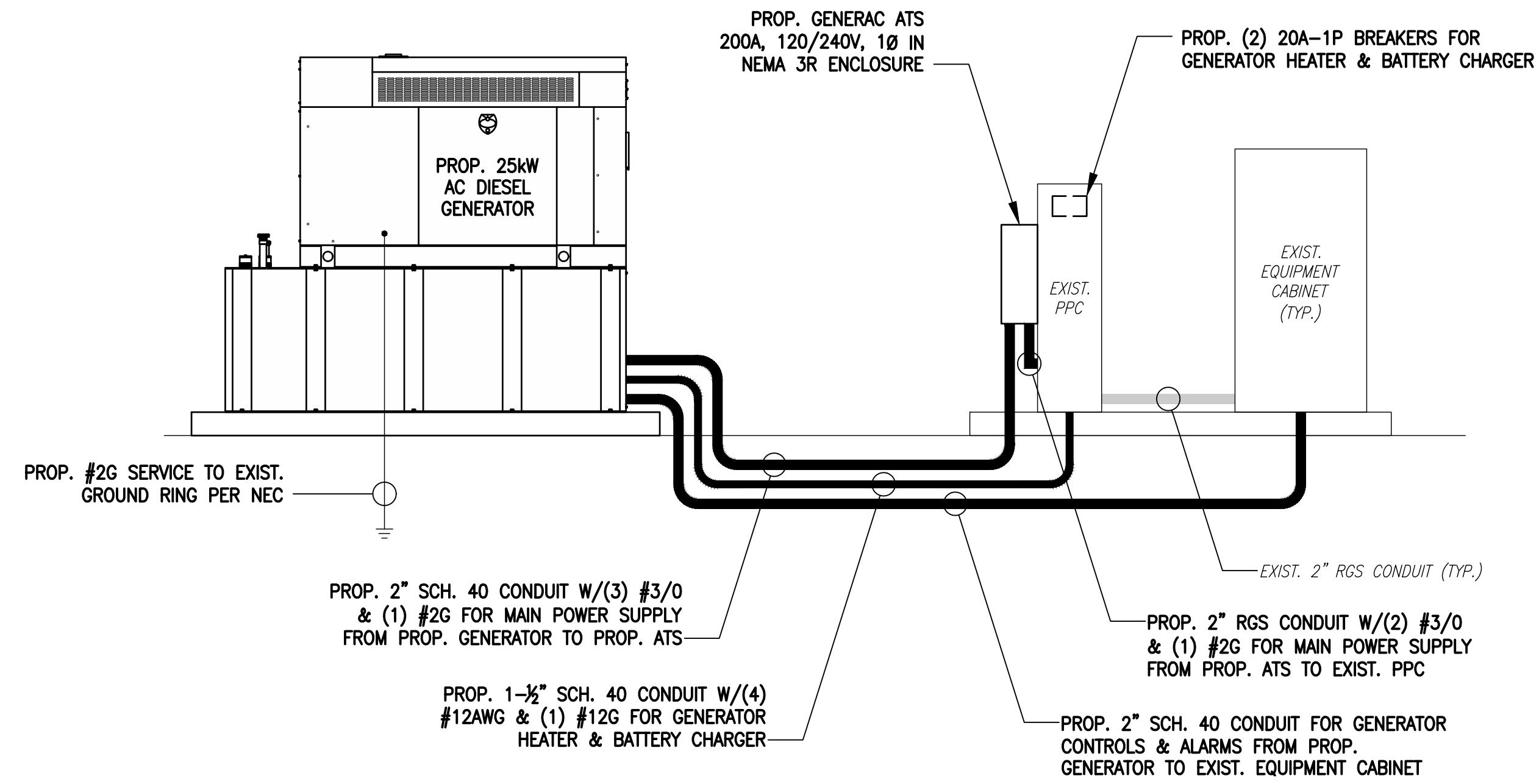
SITE ADDRESS:
132 WELLES ROAD
MYSTIC, CT 06355

SHEET TITLE
**ELECTRIC & GROUNDING
DETAILS**

SHEET NUMBER

E-1

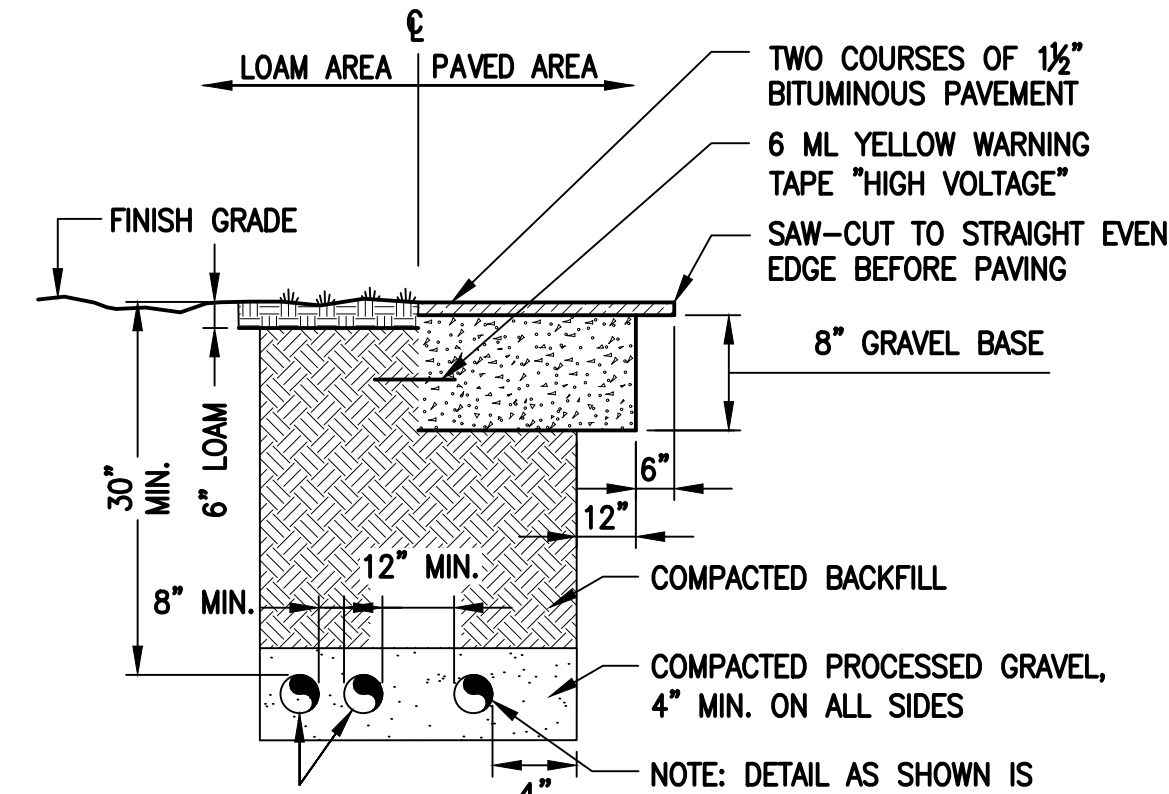
NOTE:
CUT BACK (E) MAIN POWER CONDUIT, AS
REQUIRED, & RECONNECT TO (P) ATs.



ONE-LINE POWER DIAGRAM

SCALE: NOT TO SCALE

1
E-1

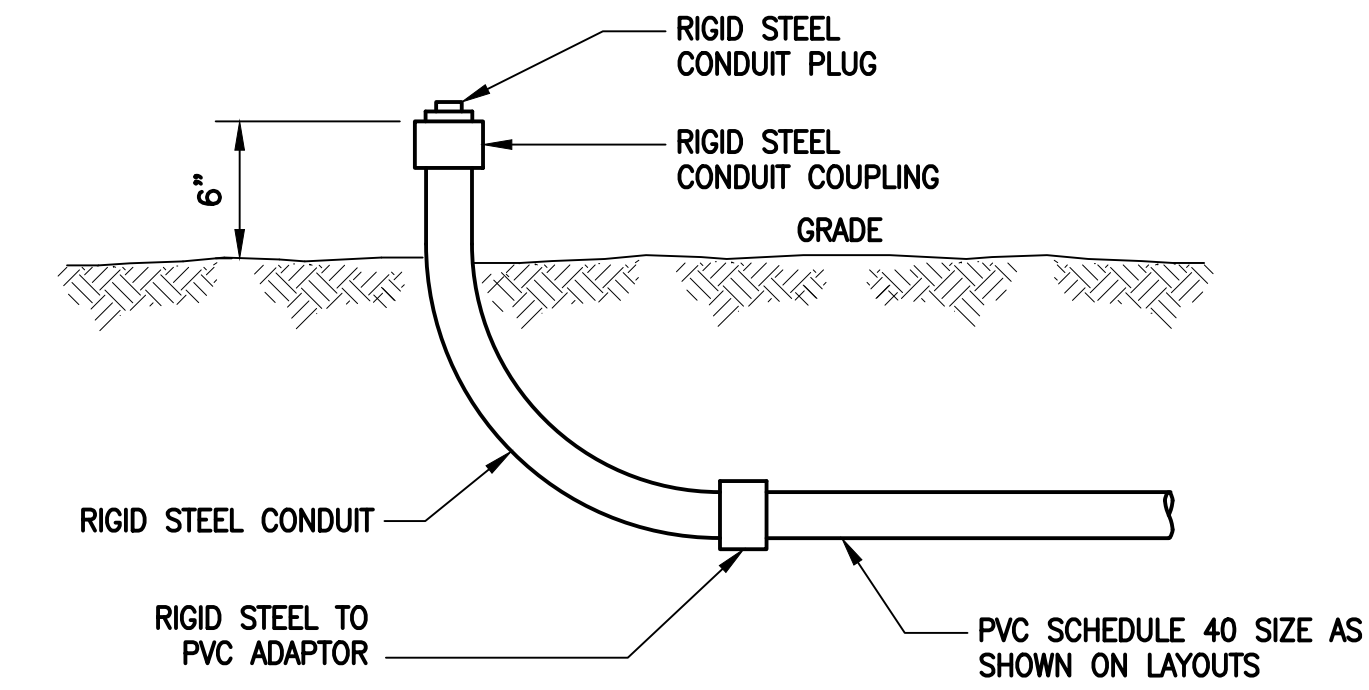


SCHEDULE 40 CONDUITS FOR NEW ELECTRICAL AND TELEPHONE SERVICES. SEE UTILITY AND SITE PLANS. PROVIDE APPROVED PULL BOXES AS REQUIRED, AND COORDINATE INSTALLATION W/ALL UTILITY COMPANIES FOR INTERFACING AT TERMINATION POINTS. PROVIDE FULL LENGTH PULL ROPES (TYP.).

BURIED CONDUIT DETAIL

SCALE: NOT TO SCALE

2
E-1



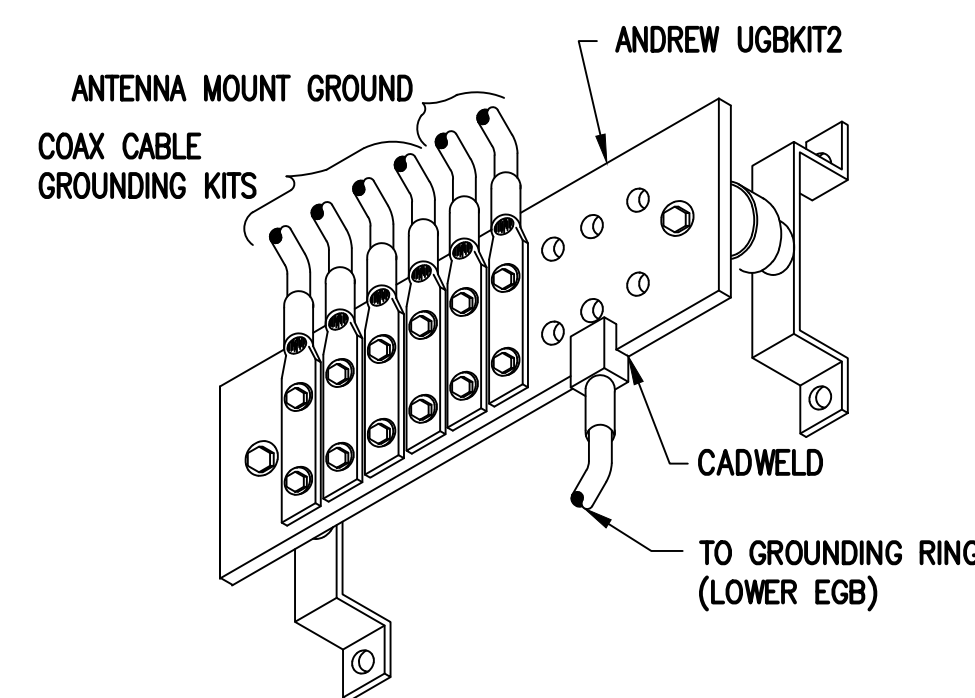
TYPICAL CONDUIT STUB-UP DETAIL

SCALE: NONE

3
E-1

ELECTRICAL AND GROUNDING NOTES

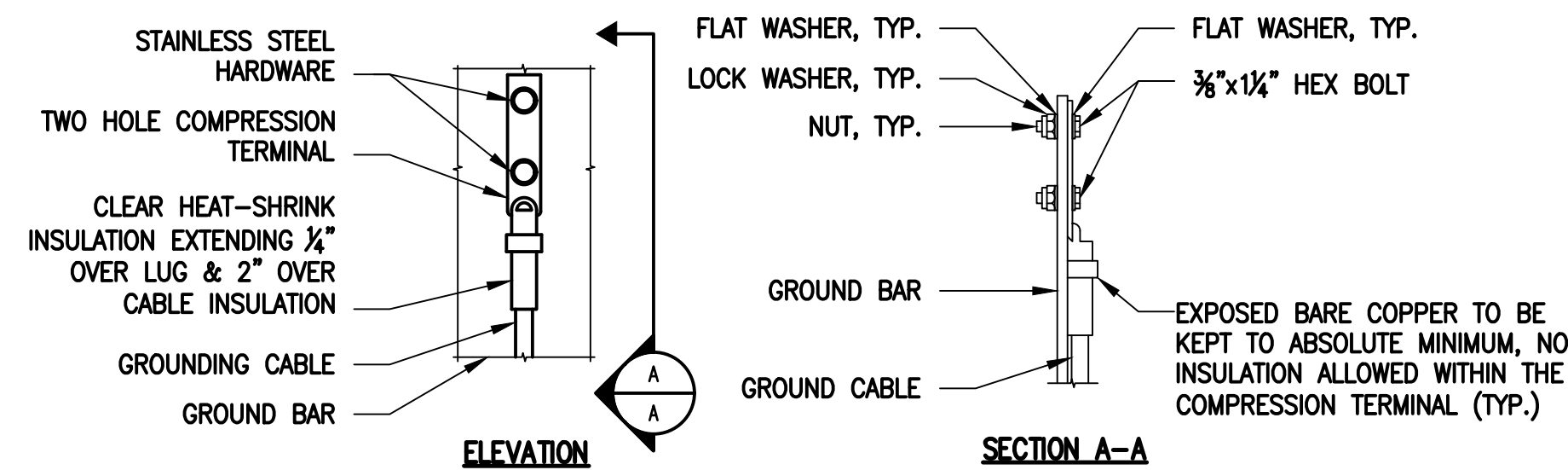
- ALL ELECTRICAL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE (NEC) AS WELL AS APPLICABLE STATE AND LOCAL CODES.
- ALL ELECTRICAL ITEMS SHALL BE U.L. APPROVED OR LISTED AND PROCURED PER SPECIFICATION REQUIREMENTS.
- THE ELECTRICAL WORK INCLUDES ALL LABOR AND MATERIAL DESCRIBED BY DRAWINGS AND SPECIFICATION INCLUDING INCIDENTAL WORK TO PROVIDE COMPLETE OPERATING AND APPROVED ELECTRICAL SYSTEM.
- GENERAL CONTRACTOR SHALL PAY FEES FOR PERMITS, AND IS RESPONSIBLE FOR OBTAINING SAID PERMITS AND COORDINATION OF INSPECTIONS.
- ELECTRICAL AND TELCO WIRING OUTSIDE A BUILDING AND EXPOSED TO WEATHER SHALL BE IN WATER TIGHT GALVANIZED RIGID STEEL CONDUITS OR SCHEDULE 80 PVC (AS PERMITTED BY CODE) AND WHERE REQUIRED IN LIQUID TIGHT FLEXIBLE METAL OR NONMETALLIC CONDUITS.
- BURIED CONDUIT SHALL BE SCHEDULE 40 PVC.
- ELECTRICAL WIRING SHALL BE COPPER WITH TYPE XHHW, THWN, OR THININSULATION.
- RUN ELECTRICAL CONDUIT OR CABLE BETWEEN ELECTRICAL UTILITY DEMARCATION POINT AND PROJECT OWNER CELL SITE PPC AS INDICATED ON THIS DRAWING. PROVIDE FULL LENGTH PULL ROPE. COORDINATE INSTALLATION WITH UTILITY COMPANY.
- RUN TELCO CONDUIT OR CABLE BETWEEN TELEPHONE UTILITY DEMARCATION POINT AND PROJECT OWNER CELL SITE TELCO CABINET AND BTS CABINET AS INDICATED ON THIS DRAWING PROVIDE FULL LENGTH PULL ROPE IN INSTALLED TELCO CONDUIT. PROVIDE GREENLEE CONDUIT MEASURING TAPE AT EACH END.
- WHERE CONDUIT BETWEEN BTS AND PROJECT OWNER CELL SITE PPC AND BETWEEN BTS AND PROJECT OWNER CELL SITE TELCO SERVICE CABINET ARE UNDERGROUND USE PVC, SCHEDULE 40 CONDUIT. ABOVE THE GROUND PORTION OF THESE CONDUITS SHALL BE PVC CONDUIT.
- ALL EQUIPMENT LOCATED OUTSIDE SHALL HAVE NEMA 3R ENCLOSURE.
- PPC SUPPLIED BY PROJECT OWNER.
- GROUNDING SHALL COMPLY WITH NEC ART. 250. ADDITIONALLY, GROUNDING, BONDING AND LIGHTNING PROTECTION SHALL BE DONE IN ACCORDANCE WITH "T-MOBILE BTS SITE GROUNDING STANDARDS".
- GROUND COAXIAL CABLE SHIELDS MINIMUM AT BOTH ENDS USING MANUFACTURERS COAX CABLE GROUNDING KITS SUPPLIED BY PROJECT OWNER.
- USE #6 COPPER STRANDED WIRE WITH GREEN COLOR INSULATION FOR ABOVE GRADE GROUNDING (UNLESS OTHERWISE SPECIFIED) AND #2 SOLID TINNED BARE COPPER WIRE FOR BELOW GRADE GROUNDING AS INDICATED ON THE DRAWING.
- ALL GROUND CONNECTIONS TO BE BURIED HYSGROUND COMPRESSION TYPE CONNECTORS OR CADWELD EXOTHERMIC WELD. DO NOT ALLOW BARE COPPER WIRE TO BE IN CONTACT WITH GALVANIZED STEEL.
- ROUTE GROUNDING CONDUCTORS ALONG THE SHORTEST AND STRAIGHTEST PATH POSSIBLE, EXCEPT AS OTHERWISE INDICATED. GROUNDING LEADS SHOULD NEVER BE BENT AT RIGHT ANGLE. ALWAYS MAKE AT LEAST 12" RADIUS BENDS. #6 WIRE CAN BE BENT AT 6" RADIUS WHEN NECESSARY. BOND ANY METAL OBJECTS WITHIN 6 FEET OF PROJECT OWNER EQUIPMENT OR CABINET TO MASTER GROUND BAR OR GROUNDING RING.
- CONNECTIONS TO GROUND BARS SHALL BE MADE WITH TWO HOLE COMPRESSION TYPE COPPER LUGS. APPLY OXIDE INHIBITING COMPOUND TO ALL LOCATIONS.
- APPLY OXIDE INHIBITING COMPOUND TO ALL COMPRESSION TYPE GROUND CONNECTIONS.
- CONTRACTOR SHALL PROVIDE AND INSTALL OMNI DIRECTIONAL ELECTRONIC MARKER SYSTEM (EMS) BALLS OVER EACH GROUND ROD AND BONDING POINT BETWEEN EXIST. TOWER/ MONOPOLE GROUNDING RING AND EQUIPMENT GROUNDING RING.
- CONTRACTOR SHALL TEST COMPLETED GROUND SYSTEM AND RECORD RESULTS FOR PROJECT CLOSE-OUT DOCUMENTATION. 5 OHMS MINIMUM RESISTANCE REQUIRED.
- CONTRACTOR SHALL CONDUCT ANTENNA, COAX, AND LNA RETURN-LOSS AND DISTANCE- TO-FAULT MEASUREMENTS (SWEEP TESTS) AND RECORD RESULTS FOR PROJECT CLOSE-OUT.



GROUND BAR (EGB)

SCALE: NOT TO SCALE

4
E-1



NOTES:

- "DOUBLING UP" OR "STACKING" OF CONNECTION IS NOT PERMITTED.
- OXIDE INHIBITING COMPOUND TO BE USED AT ALL LOCATIONS.
- CADWELD DOWNLEADS FROM UPPER EGB, LOWER EGB AND MGB.

TYPICAL GROUND BAR CONNECTIONS DETAIL

SCALE: NOT TO SCALE

5
E-1

EXHIBIT 7

Generac RD025 25 KW
25kw Diesel Specifications

RD025 | 2.2L | 25 kW

INDUSTRIAL DIESEL GENERATOR SET

EPA Certified Stationary Emergency

Standby Power Rating

25 kW, 31.25 kVA, 60 Hz



Image used for illustration purposes only



Codes and Standards

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



UL2200, UL508, UL489, UL142



CSA 22.2



BS5514 and DIN 6271



SAE J1349



NFPA 37, 70, 99



ISO 3046, 8528, 9001



NEMA ICS1, ICS10, MG1, 250, ICS6, AB1



ANSI/IEEE C62.41

Powering Ahead

For over 50 years, Generac has led the industry with 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's 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 application under adverse conditions.

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

Standard Features

ENGINE SYSTEM

- Cold Weather Kit
- Oil Drain Extension
- Heavy Duty Air Cleaner
- Fan Guard
- Stainless Steel Flexible Exhaust Connection
- Factory Filled Oil & Coolant
- Critical Exhaust Silencer

GENERATOR SET

- Sound Attenuated Aluminum Enclosure
- Internal Genset Vibration Isolation
- Separation of Circuits - High/Low Voltage
- Wrapped Exhaust Piping
- Standard Factory Testing
- 5 Year Limited Warranty
- Ready to Accept Full Load in <10 Seconds
- E-Stop

Electrical System

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

ALTERNATOR SYSTEM

- Class H Insulation Material
- 2/3 Pitch
- Skewed Stator
- Sealed Bearings
- Low Temperature Rise (>120°C)
- Low THD (<5%)

Cooling System

- Closed Coolant Recovery System
- Factory-Installed Radiator
- 50/50 Ethylene Glycol Antifreeze
- Radiator Drain Extension
- Can Operate at up to 122°F (50°C) Ambient Temperature

Fuel System

- Fuel Lockoff Solenoid
- Primary Fuel Filter
- Stainless Steel Fuel Lines

TANKS

- 24 Hour Run Time Tank
- UL142 Listed Tank

CONTROL SYSTEM



Evolution™ Controller

- Two-Line Plain Text LCD Display
- Programmable Start Delay Between 10-30 seconds
- 10 second Engine Start Sequence
- 5 second Engine Warm Up
- 1 minute Engine Cool-Down
- Starter Lock-Out
- Smart Battery Charger
- Automatic Voltage Regulation with Over and Under Protection
- Automatic Low Oil Pressure Shutdown
- Overspeed Shutdown
- High Temperature Shutdown
- Overcrank Protection
- Safety Fused
- Failure to Transfer Protection
- Low Battery Protection
- 50 Even Run Log
- Future Set Capable Exerciser
- Incorrect Wiring Protection
- Internal Fault Protection
- Common External Fault Capability
- Governor Failure Protection

Optional Shipped Loose and Field Install Kits

ENGINE SYSTEM

- Base Plug Kit

GENERATOR SET

- Paint Kit
- Scheduled Maintenance Kit

CONTROL SYSTEM

- Mobile Link™ and Adapter Kit

TANKS

- Spill Box
- 90% Fuel Alarm
- Tank Risers
- Spill Box Drainback Kit
- Vent Extension Support Kit
- 5 Day Run Time Tank

APPLICATION AND ENGINEERING DATA

ENGINE SPECIFICATIONS

General

Make	Perkins
EPA Emission Compliance	Tier 4 Interim
Cylinder #	4
Type	In-Line
Displacement - in ³ (L)	2.22 (135)
Bore - in (mm)	3.3 (84.0)
Stroke - in (mm)	3.9 (100.0)
Compression Ratio	23.3:1
Intake Air Method	Turbocharged/Aftercooled
Piston Type	Aluminum
Crankshaft Type	Forged Steel
Engine Block Type	Cast Iron

Engine Governing

Governor	Electronic
Frequency Regulation (Steady State)	±0.25%

Lubrication System

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

Cooling System

Cooling System Type	Closed Recovery
Fan Type	Pusher
Fan Speed- rpm	1,980
Fan Diameter - in (mm)	18.0 (457.2)

Fuel System

Fuel Type	Ultra Low Sulfur Diesel Fuel
Fuel Specification	ASTM
Fuel Pump Type	Mechanical Engine Driven Gear
Injector Type	Mechanical
Fuel Supply Lin (mm/in)	7.94/0.31 (ID)
Fuel Return Line (mm/in)	4.76/.19 (ID)
Fuel Filtering (microns)	25

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

Standard Excitation	Direct
Bearings	Single Sealed
Coupling	Flexible Disc
Prototype Short Circuit Test	Yes
Voltage Regulator Type	Full Digital
Number of Sensed Phases	2
Regulation Accuracy (Steady State)	±1%

RD025 | 2.2L | 25 kW

INDUSTRIAL DIESEL GENERATOR SET

EPA Certified Stationary Emergency

OPERATING DATA

POWER RATINGS

		Standby
Single-Phase 120/480 VAC @0.1pf	25 kW	Amps: 104
Three-Phase 120/208 VAC @0.8pf	25 kW	Amps: 87
Three-Phase 120/240 VAC @0.8pf	25 kW	Amps: 75
Three-Phase 277/480 VAC @0.8pf	25 kW	Amps: 37

MOTOR STARTING CAPABILITIES (sKVA)

sKVA vs. Voltage Dip at 30%

120/240 V, Single-Phase at 0.4pf	168
120/208 V, Three-Phase at 0.4pf	144
120/240 V, Three-Phase at 0.4pf	125
120/240 V, Three-Phase at 0.4pf	64

FUEL CONSUMPTION RATES*

Percent Load	Diesel gal/hr (L/hr)
25%	0.97 (3.67)
50%	1.37 (5.19)
75%	1.97 (7.46)
100%	2.77 (10.49)

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

COOLING

		Standby
Air Flow (Radiator and Alternator)	ft ³ /min (m ³ /min)	2800 (79)
Coolant System Capacity	gal (L)	2.5 (9.5)
Heat Rejection to Coolant	BTU/hr (MJ/hr)	128,638 (135.7)
Max. Operating Ambient Temperature	°F (°C)	122 (50)
Maximum Operating Ambient Temperature (Before Derate)	See Bulletin No. 0199270SSD	
Maximum Radiator Backpressure	in H ₂ O (kPa)	0.50 (0.12)

COMBUSTION AIR REQUIREMENTS

	Standby
Flow at Rated Power ft ³ /min (m ³ /min)	88 (2.5)

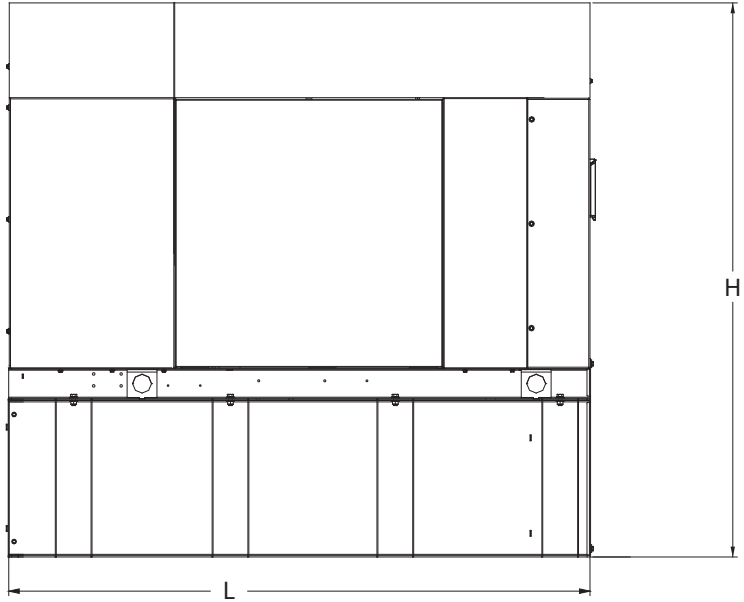
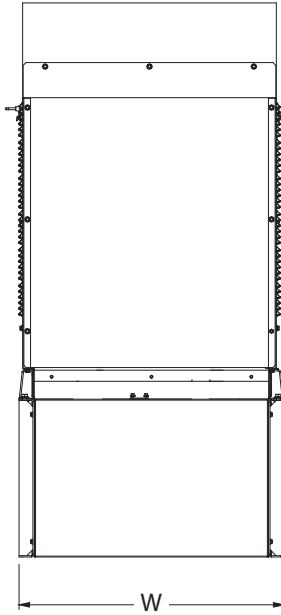
ENGINE

EXHAUST

ENGINE			EXHAUST		
		Standby			Standby
Rated Engine Speed	rpm	1,800	Exhaust Flow (Rated Output)	ft ³ /min (m ³ /min)	296.6 (8.4)
			Exhaust Temp (Rated Output - Post Silencer)	°F (°C)	930 (499)

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

DIMENSIONS AND WEIGHTS*



Weights and Dimensions

Unit Weight - lbs	Unit Weight with Skid - lbs	Dimensions (L x W x H) in
2,811	2,849	84.2 x 35.0 x 91.7

25kW Fuel Consumption

Fuel Tank Gross Total Capacity	240
Fuel Tank Gross Usable Capacity	229
Fuel Tank Net Usable Capacity (Run Hours Based on Net Usable Capacity)	206
Run Hours 100% Load	98
Run Hours 75% Load	125
Run Hours 50% Load	161

**with fuel tank
103.4" 35" x 91.7"**

Sound Emission Data

Rated Load Sound Output at 23ft - dB(A)	65
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* All measurements are approximate and for estimation purposes only. Drawing is for illustration purposes only, not to scale.

YOUR FACTORY RECOGNIZED GENERAC INDUSTRIAL DEALER

Specification characteristics may change without notice. Dimensions and weights are for preliminary purposes only. Please consult a Generac Power Systems Industrial Dealer for detailed installation drawings.

EXHIBIT 8

Map showing nearest wetlands

BASEMAPS >

MAP LAYERS >

- Wetlands
- Riparian
- Riparian Mapping Areas
- Data Source
 - Source Type
 - Image Scale
 - Image Year
- Areas of Interest
- FWS Managed Lands
- Historic Wetland Data



1:2,257
41.391 | -71.971