

Filed by:

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

September 9, 2021

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

Notice of Exempt Modification 39 Ciro Rd., North Branford, CT

> Latitude: 41.331060 Longitude: -72.756172

T-Mobile Site #: CT11372B_Hardening

Dear Ms. Bachman:

T-Mobile currently maintains nine (9) antennas at the 167-foot level of the existing 170-foot Monopole Tower at 39 Ciro Rd., North Branford, CT. The tower is owned by SBA Properties, LLC. The property is owned by Joseph J. Casagrande, Jr. T-Mobile now intends to add one (1) Generac RD025 Diesel generator and 4' x 10' concrete pad, within a 75' x 80' fenced compound lease area. The proposed 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) Generac RD0 25kw Diesel generator
- (1) RGS conduit for Ethernet cable for generator & Alarms
- (1) 2" RGS conduit for emergency power from proposed generator to proposed ATS
- (1) 1-1/2" RGS conduit for generator heater & Battery from PPC to propose generator
- (1) 4' x 10' concrete pad
- (1) 2" RGS conduit for emergency power from proposed ATS & existing PPC
- Generac 200A, 120/240v automatic transfer switch to proposed post



Remaining:

- Exist. Emerson Nextend Compact 2416 fiber cabinet
- Exist. Nortel \$8000
- Exist. Ericsson RBS 6131 cabinet
- Exist. 10' x 11' concrete pad
- Exist. PTS 8003 190AH battery cabinet
- Exist. PPC
- T-Mobile GPS antenna to exist. Ice bridge
- T-Mobile cables along exist. Ice bridge
- T-Mobile ice bridge

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 $84.2'' \times 35'' \times 91.7''$ (w/fuel tank: $103.4'' \times 35'' \times 91.7''$). 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 North Branford, which is as follows:

Maximum Continuous Noise Levels (measured in dBA):

 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:



	С	В	A-Day	A- Night
Class C emitter	70dBA	66dBA	61dBA	5ldBA
to				
Class B emitter	62dBA	62dBA	55dBA	45dBA
to				
Class A emitter	62dBA	55dBA	55dBA	45dBA
to				

The proposed modification will remain within the existing 75' \times 80' fenced compound. The new generator and tank will be surrounded by the existing security fence and 12' wide double swing gate and will be placed on a plinth secured to a proposed 4' \times 10' concrete pad.

Additional safety specifications:

- Automatic Voltage Regulation with Over and Under Protection
- Overspeed Shutdown
- High Tempature 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 North Branford's, Town Manager, Michael T. Paulhus and Zoning Enforcement Officer, Tom Hogarty, as well as, to the property owner. (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
508.366.2610 + F
508.868.6000 + C
GShepherd@sbasite.com

Attachments

cc: Michael T. Paulhus, Town Manager / with attachments

Town of North Branford, 909 Foxon Rd., North Branford, CT 06471

Tom Hogarty, Zoning Enforcement Officer / with attachments

Town of North Branford, 909 Foxon Rd., North Branford, CT 06471

Joseph J. Casagrande, Jr. / with attachments

4 Lochbourne Dr., Clinton, CT 06416-1410 (SBA Address on file)



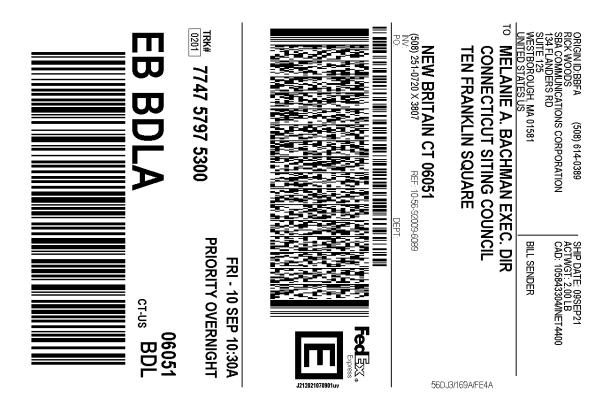
Exhibit List

Exhibit 1	Check Copy	х
Exhibit 2	FedEx Labels	х
Exhibit 3	Construction Plans	Chappell Engineering 8/23/21
Exhibit 4	Diesel Generator Specifications	х
Exhibit 5	Wetlands Map	х

EXHIBIT 1 Copy of Check for filing fee.

EXHIBIT 2

FedEx Labels



After printing this label:

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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.

Detailed Tracking Page 1 of 2



TRACK ANOTHER SHIPMENT

774757975300







ADD NICKNAME

Scheduled delivery: Friday, September 10, 2021 before 10:30 am



On FedEx vehicle for delivery WINDSOR LOCKS, CT

GET STATUS UPDATES

FROM

SBA COMMUNICATIONS CORPORATION Rick Woods

> 134 Flanders Rd Suite 125 WESTBOROUGH, MA US 01581 508-614-0389

то

Melanie A. Bachman Exec. Dir Connecticut Siting Council

> Ten Franklin Square NEW BRITAIN, CT US 06051 508-251-0720

MANAGE DELIVERY ✓



Travel History

TIME ZONE Local Scan Tim	ne 🗸	
Friday, Septemb	er 10, 2021	
8:31 AM	WINDSOR LOCKS, CT	On FedEx vehicle for delivery
7:36 AM	WINDSOR LOCKS, CT	At local FedEx facility
5:45 AM	EAST GRANBY, CT	At destination sort facility
4:55 AM	NEWARK, NJ	Departed FedEx hub
12:18 AM	NEWARK, NJ	In transit
12:16 AM	NEWARK, NJ	Arrived at FedEx hub
12:16 AM	NEWARK, NJ	In transit
Thursday, Septe	mber 9, 2021	
11:28 PM	EAST BOSTON, MA	Local Delay Delay beyond our control

Detailed Tracking Page 2 of 2

11:27 PM EAST BOSTON, MA Local Delay

Delay beyond our control

8:13 PM FRAMINGHAM, MA Left FedEx origin facility

Picked up 5:24 PM FRAMINGHAM, MA

1:30 PM Shipment information sent to FedEx

Shipment Facts

TRACKING NUMBER	SERVICE	WEIGHT
774757975300	FedEx Priority Overnight	2 lbs / 0.91 kgs
TOTAL PIECES	TOTAL SHIPMENT WEIGHT	TERMS
1	2 lbs / 0.91 kgs	Shipper
SHIPPER REFERENCE	PACKAGING	SPECIAL HANDLING SECTION
10-56-92009-6089	FedEx Pak	Deliver Weekday
SHIP DATE	STANDARD TRANSIT	SCHEDULED DELIVERY
9/9/21 ⑦	9/10/21 before 10:30 am 🕐	9/10/21 before 10:30 am



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Page 1 of 2 **Detailed Tracking**



TRACK ANOTHER SHIPMENT

774758025970







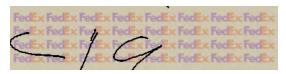
ADD NICKNAME

Delivered Friday, September 10, 2021 at 9:32 am



DELIVERED

Signed for by: R.SMITH



GET STATUS UPDATES

OBTAIN PROOF OF DELIVERY

FROM

SBA COMMUNICATIONS CORPORATION

Rick Woods

134 Flanders Rd Suite 125 WESTBOROUGH, MA US 01581 508-614-0389

то

Michael T. Paulhus Town of North Branford

Town Manager 909 Foxon Rd. NORTH BRANFORD, CT US 06471 508-251-0720

Travel History

TIME ZONE Local Scan Time



Friday, September 10, 2021

9:32 AM	NORTH BRANFORD, CT	Delivered
8:54 AM	NORTH HAVEN, CT	On FedEx vehicle for delivery
8:01 AM	NORTH HAVEN, CT	At local FedEx facility
4:00 AM	NEWARK, NJ	Departed FedEx hub
12:18 AM	NEWARK, NJ	In transit
12:16 AM	NEWARK, NJ	Arrived at FedEx hub
12:16 AM	NEWARK, NJ	In transit

Thursday, September 9, 2021

Detailed Tracking Page 2 of 2

11:28 PM EAST BOSTON, MA Local Delay Delay beyond our control 11:27 PM EAST BOSTON, MA Local Delay Delay beyond our control 8:13 PM FRAMINGHAM, MA Left FedEx origin facility 5:24 PM FRAMINGHAM, MA Picked up 1:32 PM Shipment information sent to FedEx

Shipment Facts

TRACKING NUMBER	SERVICE	WEIGHT
774758025970	FedEx Priority Overnight	1 lbs / 0.45 kgs
DELIVERY ATTEMPTS	DELIVERED TO	TOTAL PIECES
1	Receptionist/Front Desk	1
TOTAL SHIPMENT WEIGHT	TERMS	SHIPPER REFERENCE
TOTAL SHIPMENT WEIGHT	TERMS	SHIFFER REFERENCE
1 lbs / 0.45 kgs	Shipper	10-56-92009-6089
PACKAGING	SPECIAL HANDLING SECTION	SHIP DATE
FedEx Pak	Deliver Weekday	9/9/21 ?
OTANDARD TRANSIT	ACTUAL DELIVERY	
STANDARD TRANSIT	ACTUAL DELIVERY	
9/10/21 before 10:30 am ?	9/10/21 at 9:32 am	



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Page 1 of 2 **Detailed Tracking**



TRACK ANOTHER SHIPMENT

774758043190







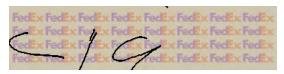
ADD NICKNAME

Delivered Friday, September 10, 2021 at 9:32 am



DELIVERED

Signed for by: R.SMITH



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OBTAIN PROOF OF DELIVERY

FROM

SBA COMMUNICATIONS CORPORATION

Rick Woods

134 Flanders Rd Suite 125 WESTBOROUGH, MA US 01581 508-614-0389

то

Tom Hogarty Town of North Branford

Zone Enforcement Officer 909 Foxon Rd.

NORTH BRANFORD, CT US 06471 508-251-0720

Travel History

TIME ZONE Local Scan Time



Friday, September 10, 2021

9:32 AM	NORTH BRANFORD, CT	Delivered
8:54 AM	NORTH HAVEN, CT	On FedEx vehicle for delivery
7:58 AM	NORTH HAVEN, CT	At local FedEx facility
4:00 AM	NEWARK, NJ	Departed FedEx hub
12:18 AM	NEWARK, NJ	In transit
12:16 AM	NEWARK, NJ	Arrived at FedEx hub
12:16 AM	NEWARK, NJ	In transit

Thursday, September 9, 2021

Detailed Tracking Page 2 of 2

11:28 PM	EAST BOSTON, MA	Local Delay Delay beyond our control
11:27 PM	EAST BOSTON, MA	Local Delay Delay beyond our control
8:13 PM	FRAMINGHAM, MA	Left FedEx origin facility
5:24 PM	FRAMINGHAM, MA	Picked up
1:33 PM		Shipment information sent to FedEx

Shipment Facts

TRACKING NUMBER	SERVICE	WEIGHT
774758043190	FedEx Priority Overnight	1 lbs / 0.45 kgs
DELIVERY ATTEMPTS	DELIVERED TO	TOTAL PIECES
1	Receptionist/Front Desk	1
TOTAL OURDANNA WELCHT	TERMO	OUIDDED DEFENSAGE
TOTAL SHIPMENT WEIGHT	TERMS	SHIPPER REFERENCE
1 lbs / 0.45 kgs	Shipper	10-56-92009-6089
PACKAGING	SPECIAL HANDLING SECTION	SHIP DATE
FedEx Pak	Deliver Weekday	9/9/21 ②
	•	
STANDARD TRANSIT	ACTUAL DELIVERY	
9/10/21 before 10:30 am 🕐	9/10/21 at 9:32 am	



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Detailed Tracking Page 1 of 2



TRACK ANOTHER SHIPMENT

774758160129







ADD NICKNAME

Scheduled delivery: Friday, September 10, 2021 before 12:00 pm



NORTH HAVEN, CT

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FROM

SBA COMMUNICATIONS CORPORATION

Rick Woods

134 Flanders Rd Suite 125 WESTBOROUGH, MA US 01581 508-614-0389

то

Joseph J. Casagrande, Jr.

4 Lochbourne Drive CLINTON, CT US 06413 508-251-0720

MANAGE DELIVERY ✓



Travel History

11:27 PM

Local Scan Time	~	
Friday, September 10	, 2021	
9:10 AM	NORTH HAVEN, CT	On FedEx vehicle for delivery
7:57 AM	NORTH HAVEN, CT	At local FedEx facility
4:00 AM	NEWARK, NJ	Departed FedEx hub
12:18 AM	NEWARK, NJ	In transit
12:16 AM	NEWARK, NJ	Arrived at FedEx hub
12:16 AM	NEWARK, NJ	In transit
Thursday, September	9, 2021	
11:28 PM	EAST BOSTON, MA	Local Delay

EAST BOSTON, MA

Local Delay

Delay beyond our control

Delay beyond our control

Detailed Tracking Page 2 of 2

8:13 PM FRAMINGHAM, MA Left FedEx origin facility

5:24 PM FRAMINGHAM, MA Picked up

1:39 PM Shipment information sent to FedEx

Shipment Facts

TRACKING NUMBERSERVICE
WEIGHT
774758160129
FedEx Priority Overnight
2 lbs / 0.91 kgs

TOTAL PIECESTOTAL SHIPMENT WEIGHTTERMS12 lbs / 0.91 kgsShipper

SHIPPER REFERENCE PACKAGING SPECIAL HANDLING SECTION

10-56-92009-6089 FedEx Pak Deliver Weekday

SHIP DATESTANDARD TRANSITSCHEDULED DELIVERY9/9/21 ①9/10/21 before 12:00 pm ②9/10/21 before 12:00 pm

EXHIBIT 3

Construction Drawings

SBA N BRANFORD EAST

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

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

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

- 13. 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 CLAN CONDITION AND FREE FROM PAINT SPOTS, DUST, OR SMUDGES OF
- CONFLICT UNTIL CONFLICT IS RESOLVED BY THE LESSEE/LICENSEE

- THE CONTRACTOR SHALL VISIT THE JOB SITE PRIOR TO THE SUBMISSION OF BIDS OR PERFORMING WORK TO FAMILURATE HIMSELF WITH THE FIELD CONDITIONS AND TO VERIFY THAT THE PROJECT CAN BE CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

SPECIFICATIONS, AND LOCAL AND STATE JURISDICTIONAL CODES

BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES,

BEARING ON THE PERFORMANCE OF THE WORK, THE WORK PERFORMED ON THE PROJECT AND THE MATERIALS INSTALLED SHALL

THE ARCHITECT/ENGINEER HAVE MADE EVERY EFFORT TO SET FORTH

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 OMNIPOINT 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

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

GENERAL NOTES

- 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 MOTED 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 THE CONTRICTOR SHALL SOPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRICTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SOLUENCES 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
- 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.

VICINITY MAP

- 14. THE CONTRACTOR SHALL COMPLY WITH ALL OSHA REQUIREMENTS AS THEY APPLY TO THIS PROJECT.
- 15. THE CONTRACTOR SHALL NOTIFY THE PROJECT OWNER'S REPRESENTATIVE WHERE A CONFLICT OCCURS ON ANY OF THE CONTRACT DOCUMENTS. THE CONTRACTOR IS NOT TO GROER MATERIAL OR CONSTRUCT ANY PORTION OF THE WORK THAT IS IN
- 17. 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



39 CIRO ROAD NORTH BRANFORD, CT 06471 NEW HAVEN COUNTY

SITE NO.: CT11372B

SITE TYPE: 170'± MONOPOLE

PROJECT TYPE: NATIONAL HARDENING PROJECT

I SHEET INDEX

П	OHEEL WALK		
	SHEET NO.	DESCRIPTION	
è	T-1	TITLE SHEET	
ì			
	GN-1	GENERAL NOTES	
١			
Š	A-1	COMPOUND & EQUIPMENT PLANS	
Ź	A-2	GENERATOR DETAILS	
ê	A-3	GENERATOR SPECIFICATIONS 1	
	A-4	GENERATOR SPECIFICATIONS 2	
1			
á	E-1	ELECTRIC & GROUNDING DETAILS	
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1			
6			
3			
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3			
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DIRECTIONS

TURN LEFT ONTO S WASHINGTON ST. TURN RIGHT ONTO MA-123 E. TURN LEFT TO MERGE ONTO I-495 NORTH TOWARD MANSFIELD/MARLBORO. MERGE ONTO I-495 NORTH. TAKE EXIT 33B TO MERGE ONTO I-95 SOUTH. TAKE EXIT 57 TOWARD US-1 SOUTH. TURN RIGHT ONTO US-1 SOUTH. TURN RIGHT ONTO CT-22 WEST. TURN RIGHT ONTO CT-80 EAST. TURN RIGHT ONTO CIRO ROAD. SITE WILL BE ON THE RIGHT.

W North Branford

SCALF: 1" = 1000'-0"

SCOPE OF WORK

REMOVE: INSTALL:

• 1 GENERATOR N/A

1 AUTOMATIC TRANSFER SWITCH
 2 20A-1P BREAKERS

SITE NOTES

REV.

- 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

IPROJECT SUMMARY

SITE NUMBER: CT11372B SBA SITE NUMBER: CT04066-S SBA SITE NAME: NORTH BRANFORD FAST SITE ADDRESS: 39 CIRO ROAD

NORTH BRANFORD CT 06471 CASAGRANDE JOSEPH J. JR PROPERTY OWNER:

4 LOCHBOURNE DRIVE CLINTON, CT 06413-1412 TOWER OWNER: SBA PROPERTIES, LLC

8501 CONGRESS AVENUE BOCA RATON FL 33487 PHONE: 561-226-9523

COUNTY: NFW HAVEN ZONING DISTRICT: 12 (INDUSTRIAL) STRUCTURE TYPE: MONOPOLE

STRUCTURE HEIGHT 170'+

APPLICANT: T-MOBILE NORTHEAST LLC 15 COMMERCE WAY, SUITE B

NORTON, MA 02766 SBA RSM: STEPHEN ROTH PHONE: 860-539-4920

CHAPPELL ENGINEERING ASSOCIATES, LLC. ARCHITECT: 201 BOSTON POST ROAD WEST, SUITE 101

FMAIL · SRoth@shasite.com

MARI BOROUGH, MA 01752 STRUCTURAL ENGINEER: CHAPPELL ENGINEERING ASSOCIATES, LLC.

201 BOSTON POST ROAD WEST, SUITE 101 MARLBOROUGH, MA 01752

SITE CONTROL POINT: LATITUDE: N.41.331060* N41*19'51.82" LONGITUDE W.72.756172* W72*45'22.22"

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.

SPECIAL ZONING NOTE:
BASED ON INFORMATION PROVIDED BY T-MOBILE REGULATORY COMPLIANCE PROFESSIONALS AND LEGAL COUNSEL, THIS TELECOMMUNICATIONS EQUIPMENT DEPLOYMENT IS CONSIDERED AN <u>ELIGIBLE FACILITY</u> 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).

SBA D SBA COMMUNICATIONS CORP

T-MOBILE

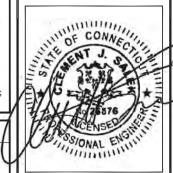
NORTHEAST LLC

134 FLANDERS ROAD, SUITE 125 WESTBOROUGH, MA 01581

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



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JMT APPROVED BY:

SUBMITTALS REV. DATE DESCRIPTION 08/23/21 ISSUED FOR CONSTRUCTION JRV 0 08/04/21 ISSUED FOR REVIEW

SITE NUMBER: CT11372B

SITE ADDRESS: 39 CIRO ROAD NORTH BRANFORD, CT 06471

TITLE SHEET

T-1

GENERAL NOTES:

1. 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 MILLARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS JOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE
- 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.
- 4. 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.
- 5. 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
- 8. IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE SUBCONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY THE CONTRACTOR.
- 9. 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.
- 10. THE SUBCONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT SUBCONTRACTOR'S EXPENSE TO THE SATISFACTION
- 11. SUBCONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY.
- 12. SUBCONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION AND RETURN DISTURBED AREAS TO ORIGINAL CONDITIONS
- 13. 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.
- 14. 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.
- 15. CONSTRUCTION SHALL COMPLY WITH ALL T-MOBILE STANDARDS AND SPECIFICATIONS.
- 16. 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
- 17. 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.
- 18. IF THE EXISTING CELL SITE IS ACTIVE, ALL SAFETY PRECAUTIONS MUST BE TAKEN WHEN WORKING AROUND HIGH LEVELS OF ELECTROMAGNETIC RADATION. EQUIPMENT SHOULD BE SHUTDOWN PRIOR TO PERFORMING ANY WORK THAT COULD EXPOSE THE WORKERS TO BANGER. PERSONAL RF EXPOSURE MONITORS ARE TO BE WORN TO ALERT OF ANY DANGEROUS EXPOSURE LEVELS.

SITE WORK GENERAL NOTES:

- 1. THE SUBCONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION.
- 2. 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 CALITON 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.
- 3. ALL SITE WORK SHALL BE AS INDICATED ON THE DRAWINGS AND PROJECT SPECIFICATIONS.
- 4. IF NECESSARY, RUBBISH, STUMPS, DEBRIS, STICKS, STONES AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND
- 5. THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE BTS EQUIPMENT AND TOWER AREAS.
- 6. 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
- 8. 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.
- 9. 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.
- 10. 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
- 11. THE SUBCONTRACTOR SHALL PROVIDE SITE SIGNAGE IN ACCORDANCE WITH THE T-MOBILE SPECIFICATION FOR SITE

CONCRETE AND REINFORCING STEEL NOTES:

- 1. 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.
- 2. 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
- 3. 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, UNO.
- 4. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON

CONCRETE CAST AGAINST FARTH #5 AND SMALLER & WWF1½ IN.
CONCRETE NOT EXPOSED TO EARTH OR WEATHER OR NOT CAST AGAINST THE GROUND:

- 5. A CHAMFER 3/4" SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE, UNO, IN ACCORDANCE WITH ACI 301 SECTION
- 6. 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 CLIV WITHOUT PRIOR CONTRACTOR PAPROVAL 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.
- 7. 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.
- 9. 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:

- 1. 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, INSTILLATION AND BOLTING SHALL BE IN ACCORDANCE WITH THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) "MANUAL OF STEEL CONSTRUCTION".
- 2. 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.
- 3. BOLTED CONNECTIONS SHALL USE BEARING TYPE ASTM A325 BOLTS $(\frac{3}{4}\%)$ AND SHALL HAVE MINIMUM OF TWO BOLTS UNLESS NOTED OTHERWISE. ALL BOLTS SHALL BE GALVANIZED OR STAINLESS STEEL.
- 4. NON-STRUCTURAL CONNECTIONS FOR STEEL GRATING MAY USE %" DIA. ASTM A 307 BOLTS (GALV) UNLESS NOTED
- 5. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ENGINEER REVIEW & APPROVAL ON PROJECTS REQUIRING STRUCTURAL
- 6. 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
- 2. COMPACTION CERTIFICATION: AN INSPECTION AND WRITTEN CERTIFICATION BY A QUALIFIED GEOTECHNICAL TECHNICIAN OR
- 3. 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
- 4. 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.
- 5. 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:

1. HAND OPERATED DOUBLE DRUN, VIBRATORY ROLLER, VIBRATORY PLATE COMPACTOR OR JUMPING JACK COMPACTOR.

CONSTRUCTION NOTES:

1. FIELD VERIFICATION

SUBCONTRACTOR SHALL FIELD VERIFY SCOPE OF WORK, T-MOBILE ANTENNA PLATFORM LOCATION AND UTILITY TRENCHWORK.

BCONTRACTOR SHALL COORDINATE RF WORK AND PROCEDURES WITH CONTRACTOR.

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:

- 1. WIRING, RACEWAY, AND SUPPORT METHODS AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE NEC
- 2. SUBCONTRACTOR SHALL MODIFY OR INSTALL CABLE TRAY SYSTEM AS REQUIRED TO SUPPORT RF AND TRANSPORT CABLING TO THE NEW BTS EQUIPMENT. SUBCONTRACTOR SHALL SUBMIT MODIFICATIONS TO CONTRACTOR FOR APPROVAL.
- 3. ALL CIRCUITS SHALL BE SEGREGATED AND MAINTAIN MINIMUM CABLE SEPARATION AS REQUIRED BY THE NEC AND
- 4. CABLES SHALL NOT BE ROUTED THROUGH LADDER-STYLE CABLE TRAY RUNGS.
- 5. 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.
- 6. 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.
- 7. 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).
- 8. PANELBOARDS (ID NUMBERS) AND INTERNAL CIRCUIT BREAKERS (CIRCUIT ID NUMBERS) SHALL BE CLEARLY LABELED WITH ENGRAVED LAMACOID PLASTIC LABELS.
- 9. ALL TIE WRAPS SHALL BE CUT FLUSH WITH APPROVED CUTTING TOOL TO REMOVE SHARP EDGES.
- 10. 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
- 11. 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
- 12. SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED OUTDOORS, OR BELOW GRADE, SHALL BE SINGLE CONDUCTOR #2 AWG SOLID TINNED COPPER CABLE, UNLESS OTHERWISE SPECIFIED.
- 13. 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
- 14 ALL POWER AND GROUNDING CONNECTIONS SHALL BE CRIMP-STYLE COMPRESSION WIRE LUGS AND WIRENLITS BY HARGER (OR EQUAL). LUGS AND WIRENUTS SHALL BE RATED FOR OPERATION AT NO LESS THAN 75°C (90°C IF
- 15. RACEWAY AND CABLE TRAY SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL,
- 16. NEW RACEWAY OR CABLE TRAY WILL MATCH THE EXISTING INSTALLATION WHERE POSSIBLE
- 17. 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.
- (RIGID PVC, SCHEDULE 40) SHALL BE USED FOR CONCEALED INDOOR LOCATIONS.
- 19. GALVANIZED STEEL INTERMEDIATE METALLIC CONDUIT (IMC) SHALL BE USED FOR OUTDOOR LOCATIONS ABOVE
- 20. 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.
- 21. LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT (LIQUID-TITE FLEX) SHALL BE USED INDOORS AND OUTDOORS, WHERE VIBRATION OCCURS OR FLEXIBILITY IS NEEDED.
- 22. CONDUIT AND TUBING FITTINGS SHALL BE THREADED OR COMPRESSION—TYPE AND APPROVED FOR THE LOCATION USED. SETSCREW FITTINGS ARE NOT ACCEPTABLE.
- 23. CABINETS, BOXES AND WIREWAYS SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA.
- 24. CABINETS, BOXES AND WIREWAYS TO MATCH THE EXISTING INSTALLATION WHERE POSSIBLE.
- 25. 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
- 26. 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
- 27. 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.
- 28. 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
- 29. THE SUBCONTRACTOR SHALL NOTIFY AND OBTAIN NECESSARY AUTHORIZATION FROM THE CONTRACTOR BEFORE COMMENCING WORK ON THE AC POWER DISTRIBUTION PANELS.
- 30. 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. 31. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, NEC AND ALL
- 32. CONDUIT ROUTINGS ARE SCHEMATIC. SUBCONTRACTOR SHALL INSTALL CONDUITS SO THAT ACCESS TO EQUIPMENT IS NOT BLOCKED.

T-MOBILE NORTHEAST LLC

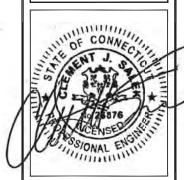
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CHECKED BY

JMT

APPROVED BY JMT

SUBMITTALS REV. DATE DESCRIPTION 1 08/23/21 ISSUED FOR CONSTRUCTION JRV 0 08/04/21 ISSUED FOR REVIEW

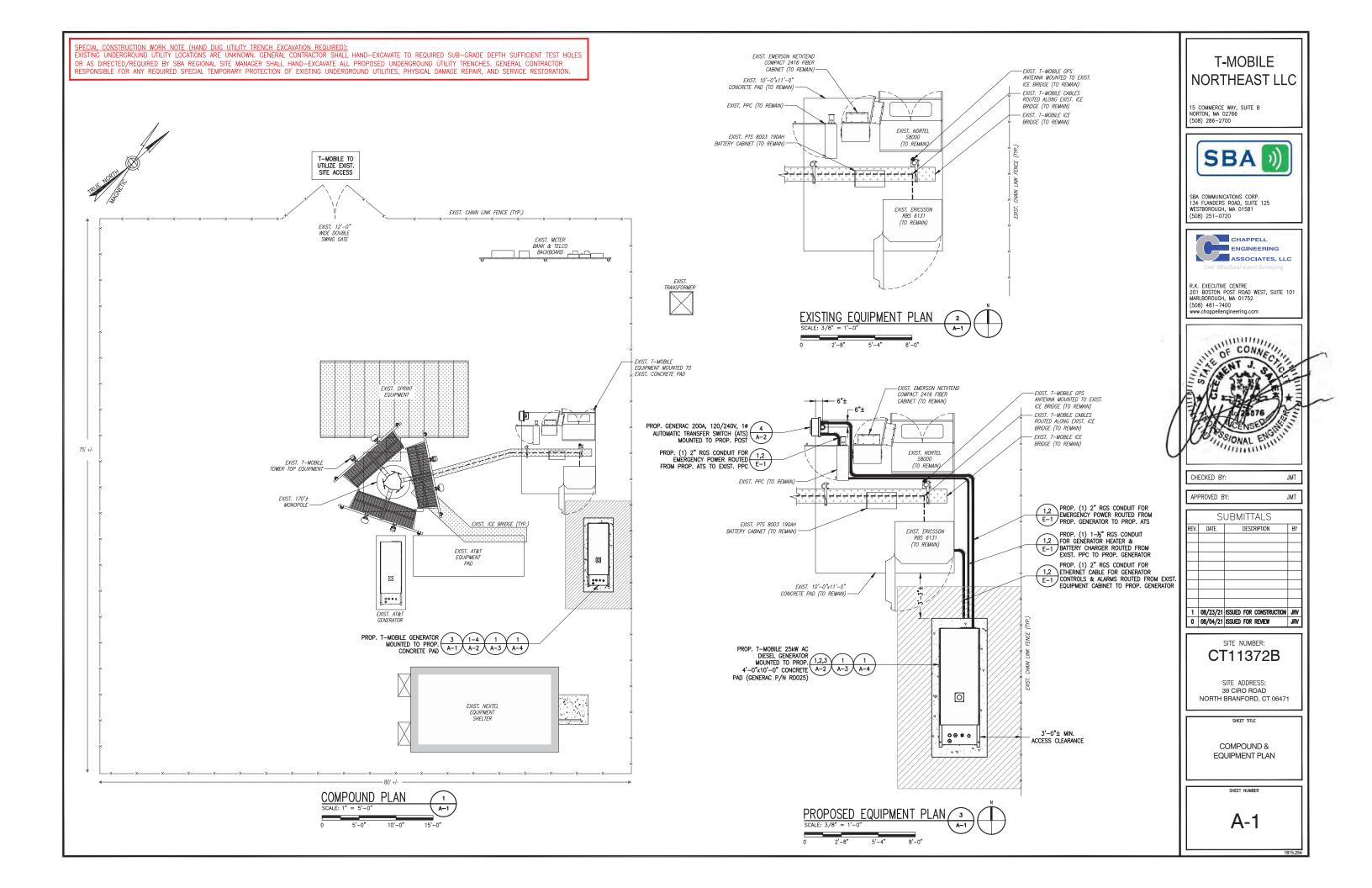
> SITE NUMBER: CT11372B

SITE ADDRESS: 39 CIRO ROAD NORTH BRANFORD, CT 06471

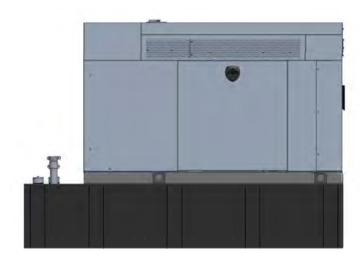
SHEET TITLE

GENERAL NOTES

GN-1



NOTE: GENERATOR DIESEL TANK TO BE FILLED BY CONTRACTOR



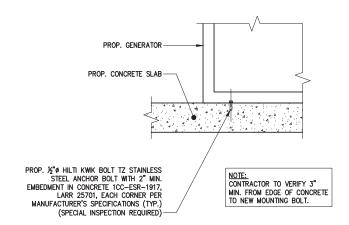
GENERAC RD025 25kW AC DIESEL GENERATOR

DIMENSIONS: 103.4"L x 35.0"W x 91.7"H WEIGHT: 2,946 lbs QUANTITY: TOTAL OF 1

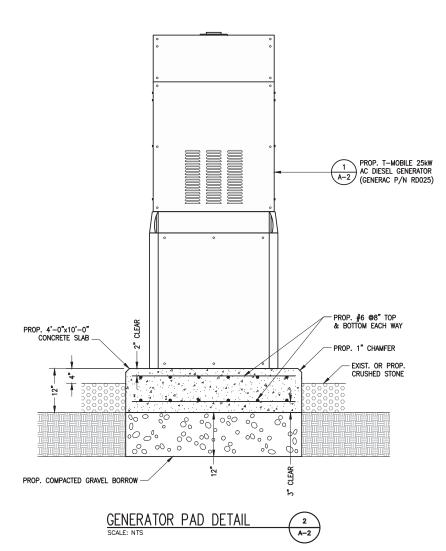
GENERATOR DETAIL

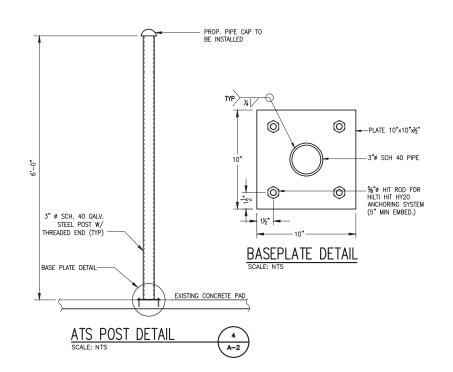
SCALE: N.T.S.

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A-2









T-MOBILE NORTHEAST LLC

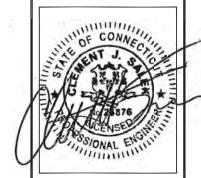
15 COMMERCE WAY, SUITE B NORTON, MA 02766 (508) 286-2700



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:

APPROVED BY: JMT

JMT

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	5	UBMITTALS	
REV.	DATE	DESCRIPTION	В
1		ISSUED FOR CONSTRUCTION	J
0	08/04/21	ISSUED FOR REVIEW	JI

SITE NUMBER: CT11372B

SITE ADDRESS: 39 CIRO ROAD NORTH BRANFORD, CT 06471

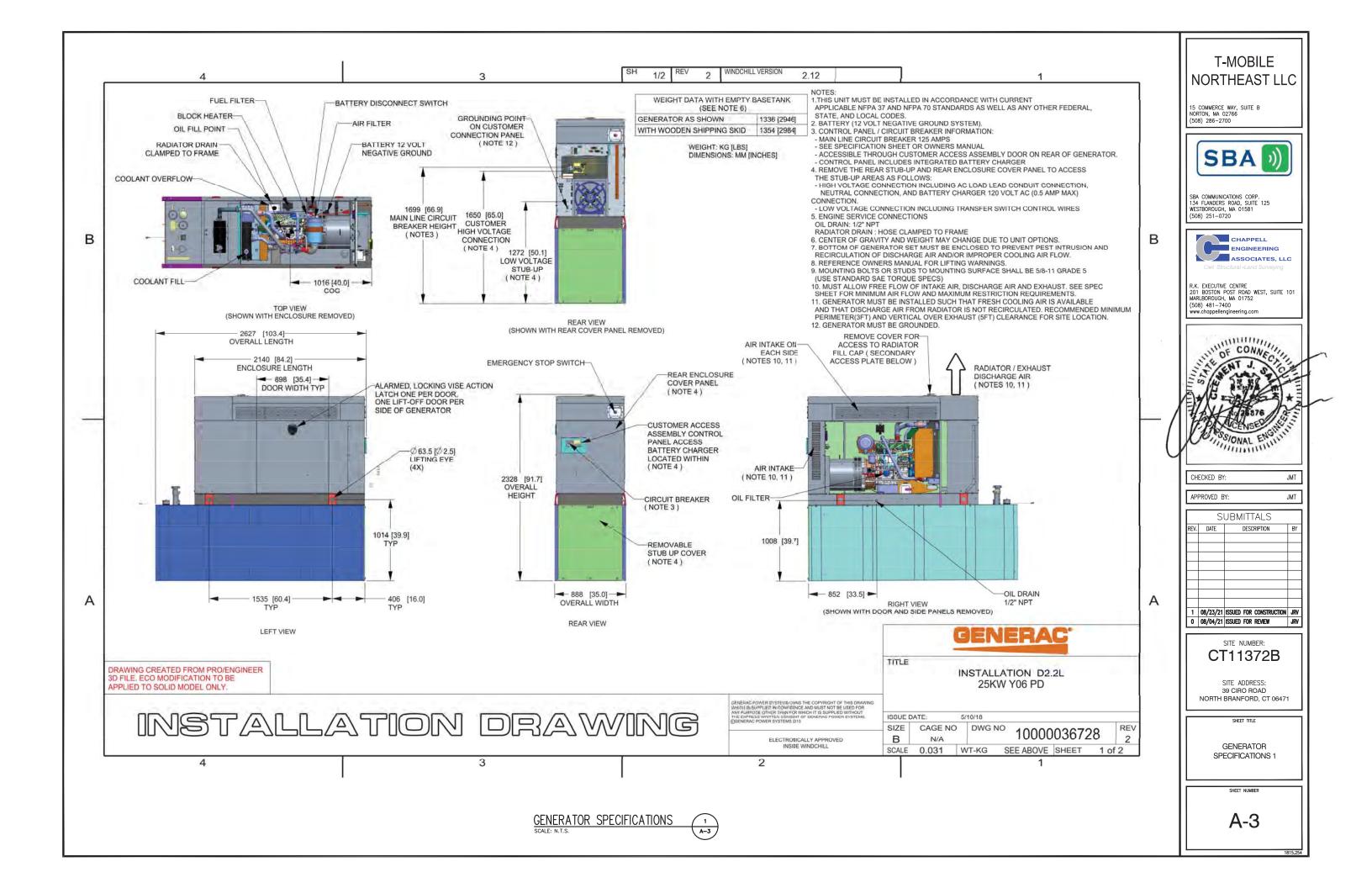
SHEET TITL

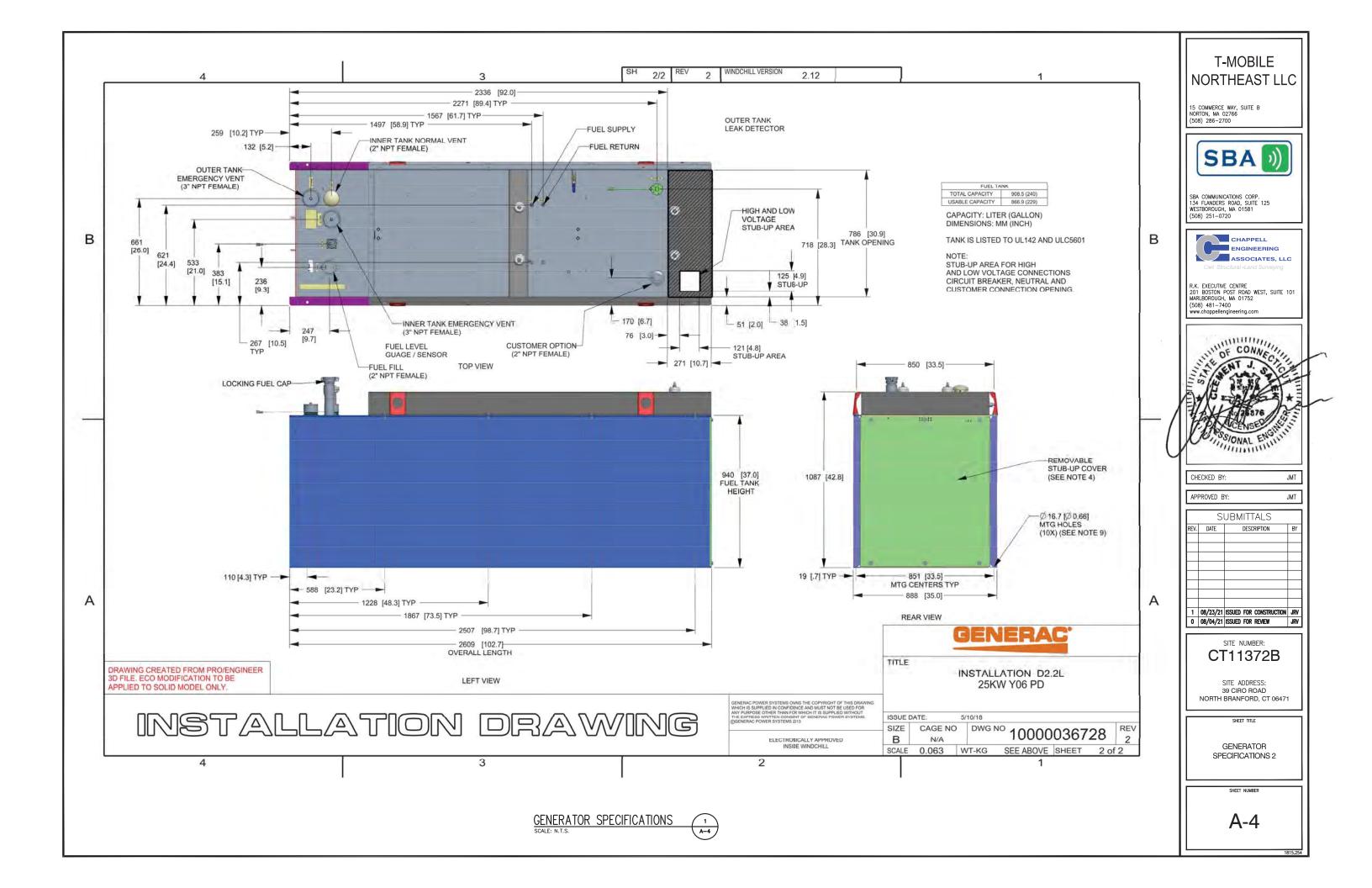
GENERATOR DETAILS

SHEET NUMBI

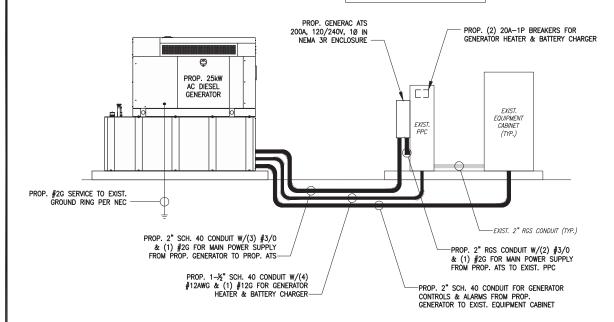
A-2

1815.25





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



ONE-LINE POWER DIAGRAM

ANDREW LIGBKIT2

- CADWELD

(LOWER EGB)

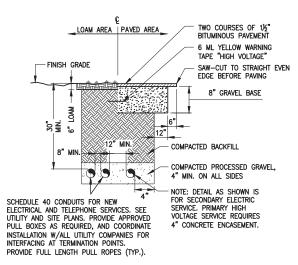
E-1

TO GROUNDING RING

ANTENNA MOUNT GROUND

GROUND BAR (EGB)

COAX CABLE



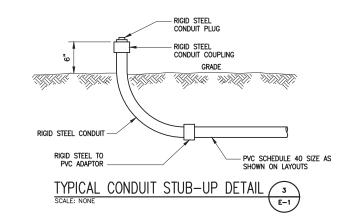
E-1

BURIED CONDUIT DETAIL

FLAT WASHER, TYP.

¾"x1¼" HEX BOLT

SCALE: NOT TO SCALE



T-MOBILE NORTHEAST LLC

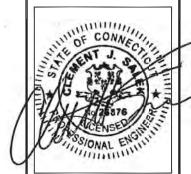
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CHECKED BY:

JMT

APPROVED BY: JMT

SUBMITTALS

REV. DATE DESCRIPTION B

1 08/23/21 ISSUED FOR CONSTRUCTION JRV 0 08/04/21 ISSUED FOR REVIEW JRV

SITE NUMBER: CT11372B

SITE ADDRESS: 39 CIRO ROAD NORTH BRANFORD, CT 06471

SHEET TITL

ELECTRIC & GROUNDING DETAILS

SHEET NUMBE

E-1

GROUND BAR

GROUND CABLE

GROUND CABLE

GROUND CABLE

GROUND CABLE

EXPOSED BARE COPPER TO BE KEPT TO ABSOLUTE MINIMUM, NO INSULATION ALLOWED WINIMUM, NO INSULATION ALLOWED WINIMUM, NO COMPRESSION TERMINAL (TYP.)

SECTION A-A

NOTES:

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

TYPICAL GROUND BAR

CONNECTIONS DETAIL

5

SCALE: NOT TO SCALE

FLAT WASHER, TYP.

LOCK WASHER, TYP.

NUT. TYP.

STAINLESS STEEL

TWO HOLE COMPRESSION

CLEAR HEAT-SHRINK INSULATION EXTENDING 1/2"

OVER LUG & 2" OVER

GROUNDING CABLE

GROUND BAR

HARDWARE

TERMINAL

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.
- 2. 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.
- 5. ELECTRICAL AND TELCO WIRING OUTSIDE A BUILDING AND EXPOSED TO WEATHER SHALL BE IN WATER TIGHT CALVANIZED RIGID STEEL CONDUITS OR SCHEDULE 80 PVC (AS PERMITTED BY CODE) AND WHERE REQUIRED IN LIQUID TIGHT FLEXIBLE METAL OR NONMETALLIC CONDUITS.
- 6. BURIED CONDUIT SHALL BE SCHEDULE 40 PVC.
- 7. ELECTRICAL WIRING SHALL BE COPPER WITH TYPE XHHW, THWN, OR THININSULATION.
- 8. 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.
- 9. 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.
- 10. 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.
- 11. ALL EQUIPMENT LOCATED OUTSIDE SHALL HAVE NEMA 3R ENCLOSURE.
- 12. 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".
- 14. GROUND COAXIAL CABLE SHIELDS MINIMUM AT BOTH ENDS USING MANUFACTURERS COAX CABLE GROUNDING KITS SUPPLIED BY PROJECT OWNER.
- 15. 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 BURNDY HYGROUND 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, ALMAIS MAKE AT LEAST 12" RADIUS BENDS, #6 WINDOWN CAN BE BENT AT 6" RADIUS WHEN NCCESSARY, BOND ANY METAL OBJECTS WITHIN 6 FEET OF PROJECT OWNER EQUIPMENT OR CABINET TO MASTER GROUND BAR OR GROUNDING RING.
- 18. CONNECTIONS TO GROUND BARS SHALL BE MADE WITH TWO HOLE COMPRESSION TYPE COPPER LUGS. APPLY OXIDE INHIBITING COMPOUND TO ALL LOCATIONS.
- 19. APPLY OXIDE INHIBITING COMPOUND TO ALL COMPRESSION TYPE GROUND CONNECTIONS.
- 20. 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 OHMNS MINIMUM RESISTANCE REQUIRED.
- 22. CONTRACTOR SHALL CONDUCT ANTENNA, COAX, AND LNA RETURN-LOSS AND DISTANCE- TO-FAULT MEASUREMENTS (SWEEP TESTS) AND RECORD RESULTS FOR PROJECT CLOSE OUT.

EXHIBIT 4

Generac RD025 25 KW 25kw Diesel Specifications

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



an National Standards Institute 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.

RD025 | 2.2L | 25 kW

INDUSTRIAL DIESEL GENERATOR SET

EPA Certified Stationary Emergency

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

GENERAC[®]

INDUSTRIAL

- 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

- O Paint Kit
- O Scheduled Maintance Kit

CONTROL SYSTEM

○ Mobile Link TM and Adapter Kit

TANKS

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

RD025 | 2.2L | 25 kW

INDUSTRIAL DIESEL GENERATOR SET

EPA Certified Stationary Emergency



APPLICATION AND ENGINEERING DATA

ENGINE SPECIFICATIONS

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l-	e	n	Н.	ГA	

Make	Perkins
EPA Emission Compliance	Tier 4 Interim
Cylinder #	4
Туре	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	Н
Insulation Class - Stator	Н
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

GENERAC* | INDUSTRIAL

		•	
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)	ft³/min (m³/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 I	No. 0199270SSD
Maximum Radiator Backpressure	in H ₂ O (kPa)	0.50 (0.12)

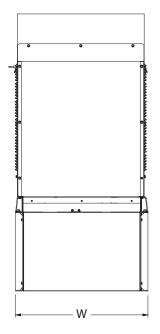
COMBUSTION AIR REQUIREMENTS

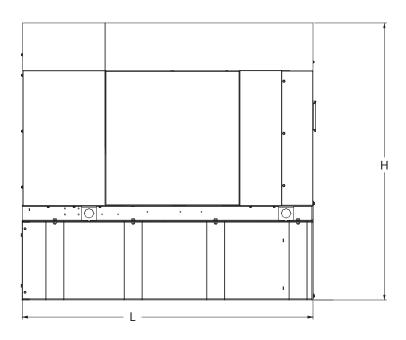
	Standby
Flow at Rated Power ft ³ /min	(m ³ /min) 88 (2.5)

ENGINE			EXHAUST		
		Standby			Standby
Rated Engine Speed	rpm	1,800	Exhaust Flow (Rated Output)	ft³/min (m³/min)	296.6 (8.4)
			Exhaust Temp (Rated Output - Post Silencer)	°F (°C)	930 (499)

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DIMENSIONS AND WEIGHTS*





Weights and Dimensions

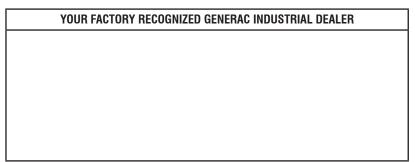
Unit Weight - Ibs	Unit Weight with Skid - Ibs	Dimensions (L x W x H) in
2,811	2,849	84.2 x 35.0 x 91.7

25kW Fuel Consumption	with fuel tank 103.4" 35" x 91.7"
Fuel Tank Gross Total Capacity	240 103.4 33 X 91.7
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

Sound Emission Data

Rated Load Sound Output at 23ft - dB(A) 65

^{*} All measurements are approximate and for estimation purposes only. Drawing is for illustration purposes only, not to scale.



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 5

Map showing nearest wetlands

