

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 30, 2021

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

RE: Notice of Exempt Modification 246 East Franklin St., Danielson, CT Latitude: 41.795835 Longitude: -71.870380 T-Mobile Site #: CT11315C\_Hardening

## Dear Ms. Bachman:

T-Mobile currently maintains six (6) antennas at the 137-foot level of the existing 155-foot Monopole Tower at 246 East Franklin St., Danielson, CT. The tower is owned by SBA Properties, LLC. The property is owned by Amanda Martel, Trustee of the Charles R Hutchins Irrevocable Trust. T-Mobile now intends to add one (1) Generac RD025 Diesel generator and 4' x 10' concrete pad, within a 69' 6" x 70' 0" 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
- (1) 1-1/2" RGS conduit for generator heater & Battery
- (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 existing H-Frame (install additional P1000 Unistruct posts



## Remaining:

- PPC & Emerson cabinet & CIENA on existing H-Frame
- Exist. 5' 6" x 7' 0" concrete pad
- T-Mobile cables along existing Ice Bridge
- Existing T-Mobile Ice Bridge
- Existing 10' x 10' lease area
- Existing 5' 6" x 3' 0" concrete pad
- T-Mobile GPS antenna
- Ericsson B160 battery cabinet
- Ericsson RBS6102 equipment cabinet

## 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 Danielson, which is as follows:

## Maximum Continuous Noise Levels (measured in dBA):

The following shall be exempt from this chapter subject to the special conditions noted:

The following shall be exempt from this chapter subject to the special conditions noted:

- (a) Noise generated by the operation of engine-powered or motor-driven lawn care or maintenance equipment during daytime hours provided that noise discharged from exhausts is adequately muffled to prevent loud and/or explosive noises there from.
- (b) Noise generated by any construction equipment operated during day-time hours.



- (c) Noise created by any recreational activities which are sanctioned by the town, including, but not limited to, parades, sporting events, concerts and firework displays. Any equipment related to such recreational activities shall be properly maintained and properly functioning.
- (d) Noise created by blasting provided that the blasting is conducted between 8:00 a.m. and 5:00 p.m. local time and provided that a permit for such blasting has been obtained from state or local authorities.
- (e) Noise created by refuse and solid waste collection, provided that such activity is conducted between 6:00 a.m. and 10:00 p.m.
- (D Noise created by a properly maintained and properly functioning fire or intrusion alarm which, from time of activation of the audible signal, emits noise for a period of time not exceeding ten (10) minutes when such alarm is attached to a vehicle or thirty (30) minutes when attached to any building or structure.
  - > No person shall emit noise exceeding the levels stated herein:

	<u>dBA</u>	dBA	dBA	<u>dBA</u>
Industrial:	70	66	61	51
Business:	62	62	55	45
Residential:	62	55	55	45

The proposed modification will remain within the existing 69' 6" x 70' 0" fenced compound. The new generator and tank will be surrounded by the existing security fence and 15' wide swing gate and will be placed on a plinth secured to a proposed 4' x 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 Killingly's Town Manager, Mary Calorio, and Director Planning & Development, Ann-Marie L. Aubrey, 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 <u>GShepherd@sbasite.com</u> Attachments



## cc: Mary Calorio, Town Manager / with attachments Killingly Town Hall, 172 Main St., 2<sup>nd</sup> Fl. Killingly, CT 06239 Ann-Marie L. Aubrey, Director Planning & Development / with attachments Killingly Town Hall, 172 Main St., 2<sup>nd</sup> Fl. Killingly, CT 06239 Amanda Martel, Trustee of the Charles R. Hutchins Irrevocable Trust / with attachments 246 E. Franklin Street, Killingly, CT 06239

## 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	Town of Killingly 7/13/98
Exhibit 6	Construction Drawings	Chappell 9/1/21
Exhibit 7	Generator Specifications	x
Exhibit 8	Wetlands Map	x

## EXHIBIT 1

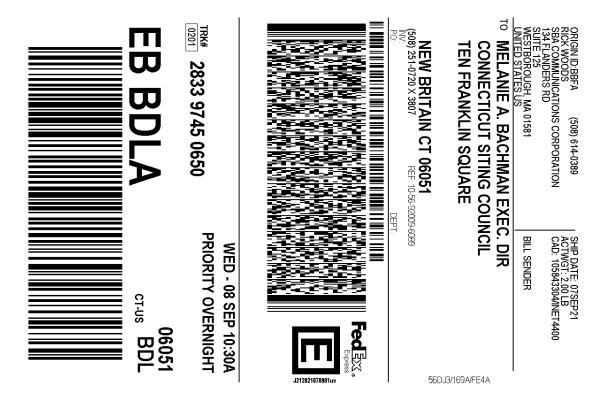
2

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# Copy of Check for filing fee.

## EXHIBIT 2

## FedEx Labels



## After printing this label:

- 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.
- 3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

**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.

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## FedEx.

## TRACK ANOTHER SHIPMENT

283397450650 ADD NICKNAME

## Scheduled delivery: Wednesday, September 8, 2021 before 10:30 am

• • •

IN TRANSIT 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

**To** Melanie A. Bachman Exec. Dir Connecticut Siting Council

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

MANAGE DELIVERY  $\sim$ 

## **Travel History**

TIME ZONE Local Scan Time

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## Wednesday, September 8, 2021

8:37 AM	WINDSOR LOCKS, CT	On FedEx vehicle for delivery
7:37 AM	WINDSOR LOCKS, CT	At local FedEx facility
5:57 AM	EAST GRANBY, CT	At destination sort facility
5:07 AM	NEWARK, NJ	Departed FedEx hub

## Tuesday, September 7, 2021

8:04 PM	FRAMINGHAM, MA	Left FedEx origin facility
6:34 PM	FRAMINGHAM, MA	Picked up
12:45 PM		Shipment information sent to FedEx

## Shipment Facts

https://www.fedex.com/fedextrack/?trknbr=283397450650&trkqual=2459465000~2833974... 9/8/2021

## **TRACKING NUMBER** 283397450650

TOTAL PIECES

**SHIPPER REFERENCE** 10-56-92009-6089

**SHIP DATE** 9/7/21 ⑦

SERVICE FedEx Priority Overnight

TOTAL SHIPMENT WEIGHT 2 lbs / 0.91 kgs

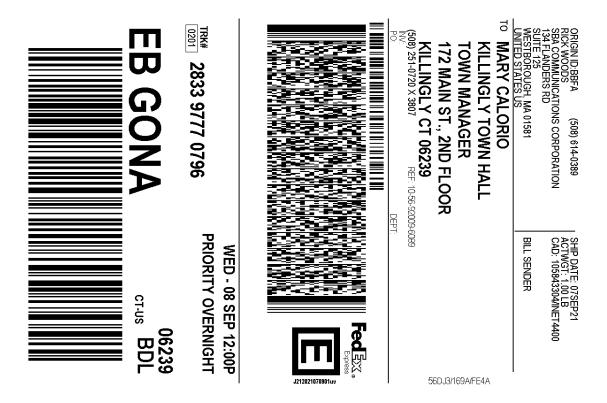
PACKAGING FedEx Envelope

STANDARD TRANSIT 9/8/21 before 10:30 am ? **WEIGHT** 2 lbs / 0.91 kgs

TERMS Shipper

> SPECIAL HANDLING SECTION Deliver Weekday

SCHEDULED DELIVERY 9/8/21 before 10:30 am



## After printing this label:

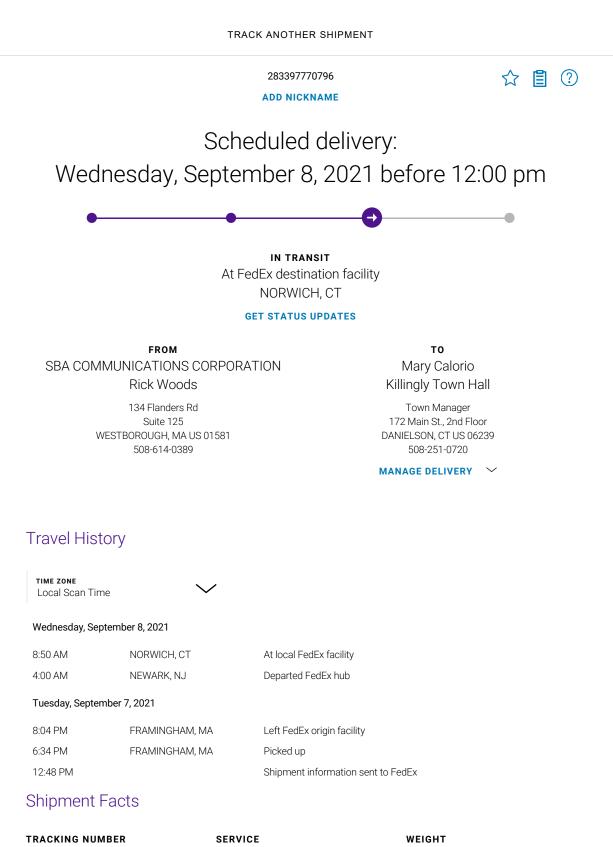
- 1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
- 2. Fold the printed page along the horizontal line.
- 3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

**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.

283397770796

## **FedEx**.



0.5 lbs / 0.23 kgs

FedEx Priority Overnight



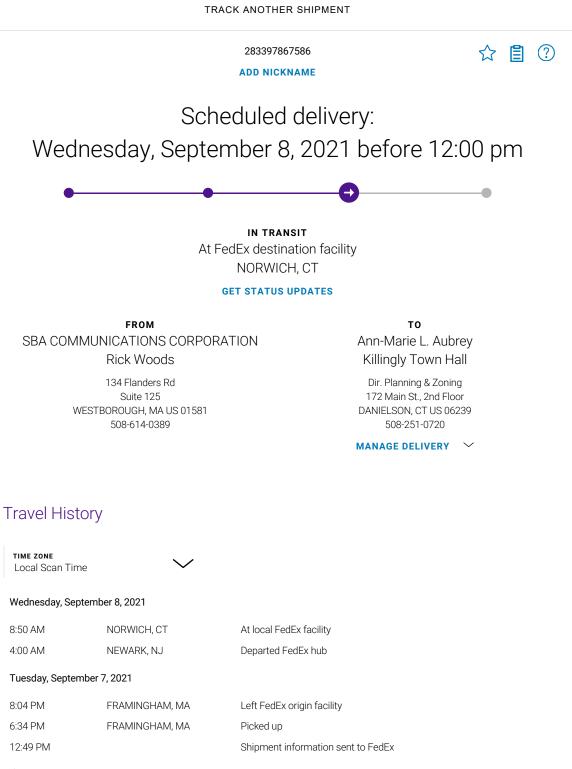
## After printing this label:

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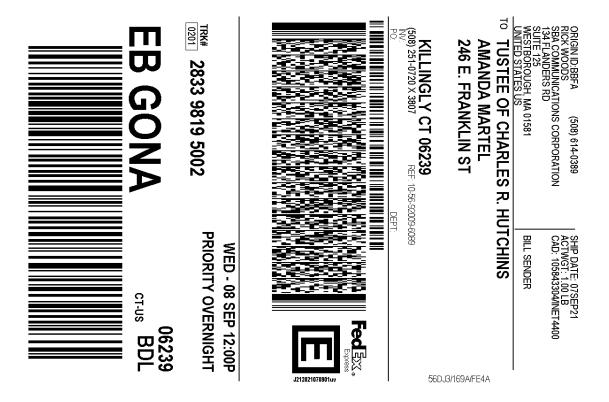
## FedEx.



## Shipment Facts

TRACKING NUMBER	SERVICE	WEIGHT
283397867586	FedEx Priority Overnight	0.5 lbs / 0.23 kgs

https://www.fedex.com/fedextrack/?trknbr=283397867586&trkqual=2459465000~2833978... 9/8/2021



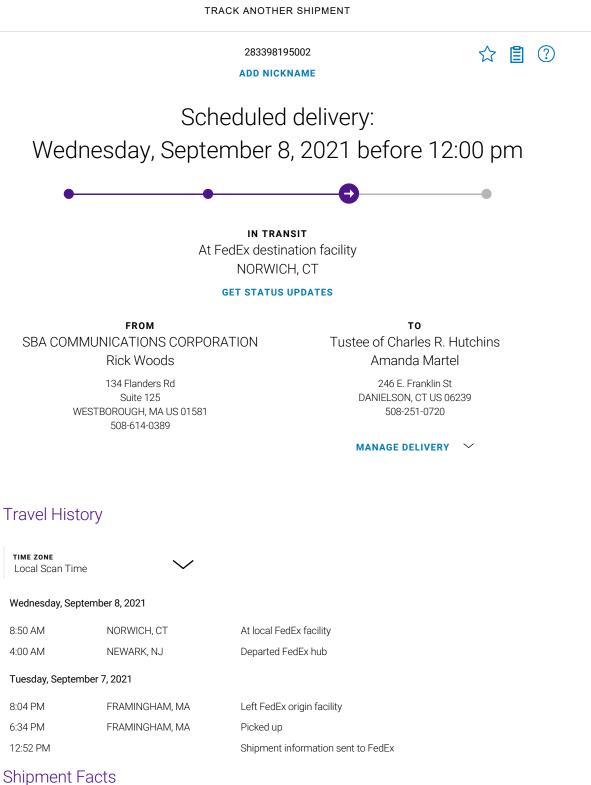
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## FedEx.



## Shipment Facts

TRACKING NUMBER	SERVICE	WEIGHT
283398195002	FedEx Priority Overnight	0.5 lbs / 0.23 kgs

## EXHIBIT 3

# Property Card

## 

## 

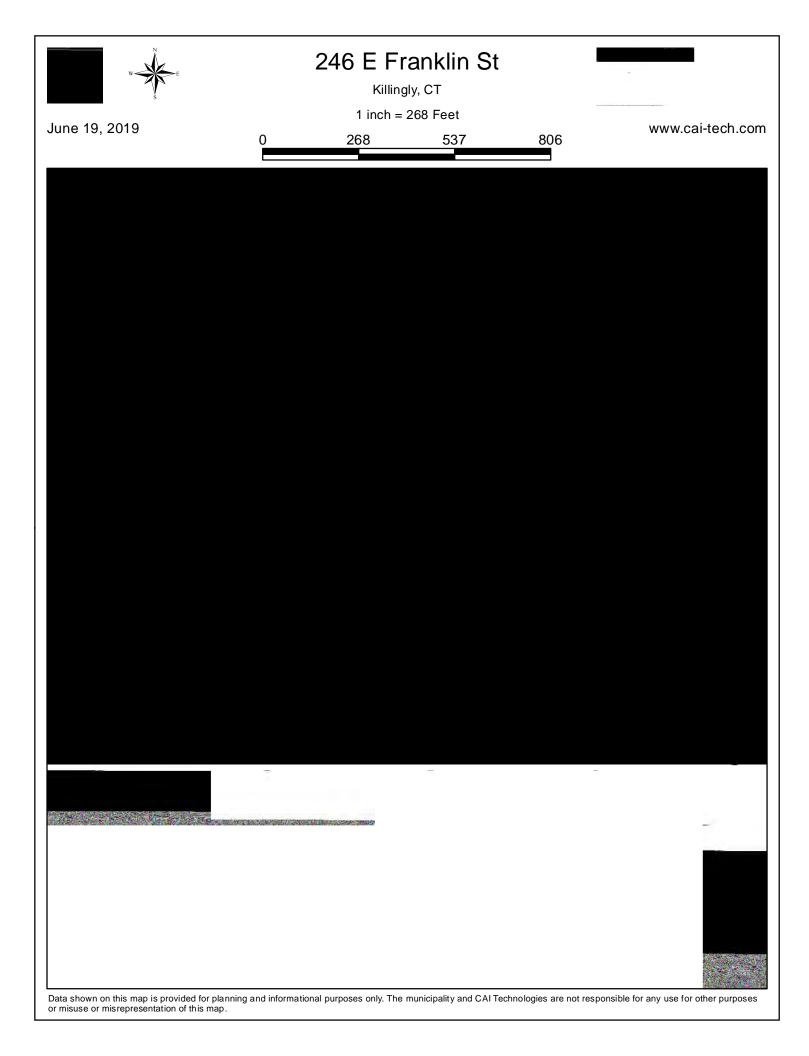
tyler clt division RESIDENTIAL PRO	PERTY RECORD CARD 2018					TOWN OF	KILLINGLY		
Situs : 246 E FRANKLIN ST	Map ID: 002601		Class: Sing	gle Family Re	esidence	Card: 1	of 1 Pr	inted: February 7, 2	019
CURRENT OWNER HUTCHINS CHARLES R 246 E FRANKLIN ST KILLINGLY CT 06239	GENERAL INFORMATIONLiving Units1Neighborhood102Alternate Id216-12Vol / Pg555/118District7ZoningRURAL DEVELOPMClass100								
	Property Notes								
L	and Information				A	ssessment In	formation		
Type         Size           Primary         AC         5.5000           Primary         AC         0.5000           Waste         AC         1.0000           Rear         AC         10.0000           Total Acres: 17         Spot:         From the second		Value 57,880 44,000 250 10,000	Va	Land Building Total	Assessed 78,470 173,670 252,140 ST APPROAC 7600	E	Cost 112,100 248,100 360,200 I Override Reas Base Date of Val ctive Date of Val	<b>ue</b> 10/01/2018	92,100 236,900 329,000
En	trance Information					Permit Infor	mation		
DateIDEntry Code04/02/18DMData Mailer Ro11/10/09MHBVie wed10/11/06LAExt W/Info	Source		Date Issued 04/06/18 05/11/17 08/03/15 12/11/14 10/06/14	<b>Number</b> 25925 25284 23794 23346 23221	15,000 40,000 15,000 15,000	<b>Purpose</b> 81 CELE 97 BPP 97 BPP 97 BPP 74 CRER	Adding 3 Anter Telecom -Modif Repl Existing A Repl Old Panel/		995 995
		Sales/Owr	ership Histo	ory					
Transfer Date Price T	ype Validity		Dee	ed Reference	e Deed Typ	e	Grantee		
Iranster Date Price T	ype Validity		Dee	ad Referenco	e Deed Typ	e	Grantee		

**RESIDENTIAL PROPERTY RECORD CARD** 2018

tyler clt division

## TOWN OF KILLINGLY

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	Basement												
Basement <sup>Full</sup> FBLA Size × Rec Rm Size ×	# Car Bsmt Gar FBLA Type Rec Rm Type		26	в	28 <sup>22</sup>		A		26	D	-46		
Heating & Cool	ling Fireplace	es			1								
Heat Type Basic Fuel Type Oil System Type Hot Wai	Stacks Openings <sup>ter</sup> Pre-Fab	1		25	4 1	10 44	14 2	16	10	10 20			
	Room Detail												
Bedrooms <sup>4</sup> Family Rooms Kitchens <sup>1</sup> Total Rooms <sup>9</sup>	Full Baths Half Baths Extra Fixtures								uilding	Data			
Kitchen Type <sup>Typical</sup> Kitchen Remod <sup>No</sup>	Bath Type Bath Remod	Typical No	Type Poultry				Size: 1 x 12	132		<b>Yr Blt</b> 2000	Grade D	Р	<b>Valu</b> 390
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Int vs Ext <sup>Same</sup> Cathedral Ceiling ×	Unfinished Area Unheated Area												
	Grade & Depreciation												
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Ground Floor Area	1,132												
Total Living Area	4,142 <b>Dwelling Value</b>	118,900							tion Def	tails			
			Line #			2nd	3rd	Value					
	Building Notes		2	50 50	10 35 10	10		23,600 41,300					



# EXHIBIT 4 Property Map

# EXHIBIT 5 Zoning Documents

# EXHIBIT 6

# **Construction Drawings**

				7
APPROVALS				
PROJECT MANAGER:	<u>DATE:</u>	ZONING/SITE ACQ.:	DATE:	
<u>CONSTRUCTION:</u>	DATE:	<u>OPERATIONS:</u>	DATE:	
<u>RF ENGINEERING:</u>	DATE:	TOWER OWNER:	DATE:	
T-MOBILE TECHNIC	CIAN SITE	SAFETY NOTES		_
SECTOR A:ACCESSSECTOR B:ACCESSSECTOR C:ACCESS	RICTED RICTED RICTED	CLIMBER CLIMBER CLIMBER		
GENERAL NOTES				]   [vicinity
1. THE CONTRACTOR SHALL GIVE ALL NOTICES A LAWS, ORDINANCES, RULES, REGULATIONS AN ANY PUBLIC AUTHORITY, MUNICIPAL AND UTIL	D LAWFUL ORDERS OF ITY COMPANY SDICTIONAL CODES RK. THE WORK ERIALS INSTALLED SHALL ABLE CODES, EFFORT TO SET FORTH MENTS THE COMPLETE THE JOB IS SIONS OR ERRORS IN LL NOT EXCUSE SAID ET AND IMPROVEMENTS IN DOLUMENTS.	CONSTRUCTION ON OR ABOUT THE PROP 13. THE CONTRACTOR SHALL KEEP THE GENE HAZARD FREE DURING CONSTRUCTION AN	ERTY. ERAL WORK AREA CLEAN AND D DISPOSE OF ALL DIRT, IT NOT SPECIFIED AS SHALL BE LEFT IN CLEAN S, DUST, OR SMUDGES OF LL OSHA REQUIREMENTS AS DJECT OWNER'S CURS ON ANY OF THE R IS NOT TO ORDER DF THE WORK THAT IS IN	
NOTIFYING (IN WRITING) THE OMNIPOINT REPF CONFLICTS, ERRORS, OR OMISSIONS PRIOR T CONTRACTOR'S PROPOSAL OR PERFORMANCE OF DISCREPANCIES THE CONTRACTOR SHALL OR EXTENSIVE WORK, UNLESS DIRECTED IN	O THE SUBMISSION OF OF WORK. IN THE EVENT PRICE THE MORE COSTLY	REPRESENTATIVE. 16. THE CONTRACTOR SHALL VERIFY ALL DIMI PROPERTY LINES, ETC. ON THE JOB.	ENSIONS, ELEVATIONS,	
<ul> <li>4. THE SCOPE OF WORK, UNLESS DIRECTED IN THE EQUIPMENT, LABOR AND ALL OTHER MATERIAL NECESSARY TO COMPLETE THE WORK/PROJECT HEREIN.</li> </ul>	SHING ALL MATERIALS, LS AND LABOR DEEMED	17. ALL UNDERGROUND UTILITY INFORMATION SURFACE INVESTIGATIONS AND EXISTING F CONTRACTOR SHALL LOCATE ALL UNDERG FIELD PRIOR TO ANY SITE WORK.	PLANS OF RECORD. THE	
5. THE CONTRACTOR SHALL VISIT THE JOB SITE SUBMISSION OF BIDS OR PERFORMING WORK WITH THE FIELD CONDITIONS AND TO VERIFY BE CONSTRUCTED IN ACCORDANCE WITH THE	TO FAMILIARIZE HIMSELF THAT THE PROJECT CAN			
6. THE CONTRACTOR SHALL OBTAIN AUTHORIZAT CONSTRUCTION PRIOR TO STARTING WORK ON DEFINED BY THE CONSTRUCTION DRAWINGS/C	N ANY ITEM NOT CLEARLY			
<ol> <li>THE CONTRACTOR SHALL INSTALL ALL EQUIPM ACCORDING TO THE MANUFACTURER'S/VENDO UNLESS NOTED OTHERWISE OR WHERE LOCAL TAKE PRECEDENCE.</li> </ol>	R'S SPECIFICATIONS	AT LEAST 72 HOURS DIGGING, THE CONTR REQUIRED TO CALL DIG	ACTOR IS	
8. THE CONTRACTOR SHALL PROVIDE A FULL SE DOCUMENTS AT THE SITE UPDATED WITH THE ADDENDUMS OR CLARIFICATIONS AVAILABLE FO PERSONNEL INVOLVED WITH THE PROJECT.	LATEST REVISIONS AND			1 de
9. THE CONTRACTOR SHALL SUPERVISE AND DIR DESCRIBED HEREIN. THE CONTRACTOR SHALL RESPONSIBLE FOR ALL CONSTRUCTION MEANS TECHNIQUES, SEQUENCES AND PROCEDURES ALL PORTIONS OF THE WORK UNDER THE CO	BE SOLELY S, METHODS, AND FOR COORDINATING		a demonstration of the second s	TURN LEFT ONTO S ONTO I-495 NORTH
10. THE CONTRACTOR IS RESPONSIBLE FOR PRO CONSTRUCTION CONTROL SURVEYS, ESTABLISH ALL LINES AND GRADES REQUIRED TO CONST AS SHOWN HEREIN.	HING AND MAINTAINING	manti		13B TO MERGE ON TOWARD WOONSOCH WEST TOWARD HAR
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PERMITS AND INSPECTIONS WHICH MAY BE R BY THE ARCHITECT/ENGINEER, THE STATE, CO GOVERNMENT AUTHORITY.	EQUIRED FOR THE WORK			JOHNSTON/SCITUAT ON US-6 WEST. TU LEFT.
12. THE CONTRACTOR SHALL MAKE NECESSARY F EXISTING IMPROVEMENTS, EASEMENTS, PAVING CONSTRUCTION. UPON COMPLETION OF WORK	, CURBING, ETC. DURING			

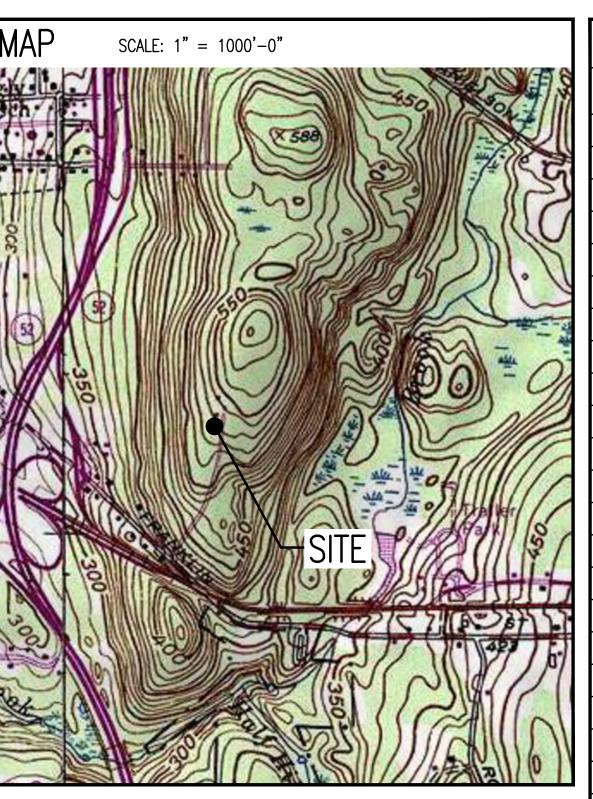
# PLAINFIELD/I-395-1

246 EAST FRANKLIN STREET DANIELSON, CT 06239 WINDHAM COUNTY

# SITE NO.: CT11315C

SITE TYPE:  $155' \pm$  MONOPOLE

PROJECT TYPE: NATIONAL HARDENING PROJECT



# DIRECTIONS

WASHINGTON ST. TURN RIGHT ONTO MA-123 E. TURN LEFT TO MERGE H TOWARD MANSFIELD/MARLBORO. MERGE ONTO I-495 NORTH. TAKE EXIT ITO I-95 SOUTH TOWARD PROVIDENCE RI. TAKE EXIT 4 FOR I-295 SOUTH KET/WARWICK. CONTINUE ONTO I-295 SOUTH. TAKE EXIT9C-A FOR US-6 RTFORD CT. KEEP RIGHT AT THE FORK, FOLLOW SIGNS FOR E/FOSTER AND MERGE ONTO US-6 WEST. CONTINUE STRAIGHT ON TO STAY URN RIGHT ONTO EAST FRANKLIN STREET. TURN RIGHT, SITE WILL BE ON THE

SHE	ET INDEX	
SHEET NO.	DESCRIPTION	REV. NO.
T-1	TITLE SHEET	2
GN-1	GENERAL NOTES	2
A-1	COMPOUND & EQUIPMENT PLANS	2
A-2	GENERATOR DETAILS	2
A-3	GENERATOR SPECIFICATIONS 1	2
A-4	GENERATOR SPECIFICATIONS 2	2
E-1	ELECTRIC & GROUNDING DETAILS	2
		_
	DO NOT SCALE DRAWINGS	

CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND

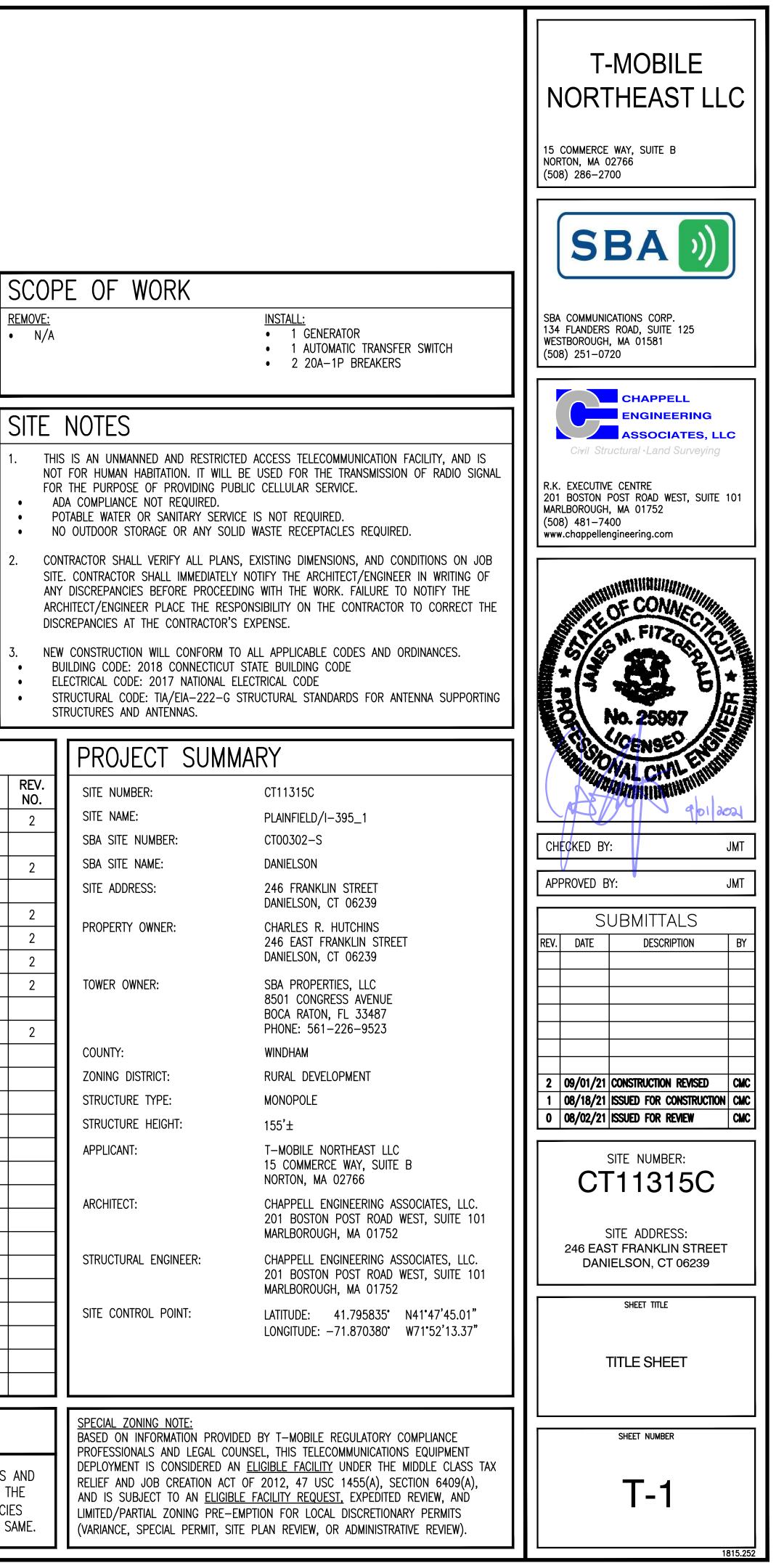
CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE

PROJECT OWNER'S REPRESENTATIVE IN WRITING OF DISCREPANCIES

BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME

REMOVE:

• N/A



1 FOR THE DURDASE OF CONSTRUCTION DRAWINGS THE FOULOWING DEFINITIONS SHALL ARRIVE	
<ol> <li>FOR THE PURPOSE OF CONSTRUCTION DRAWINGS, THE FOLLOWING DEFINITIONS SHALL APPLY: CONTRACTOR – T-MOBILE SUBCONTRACTOR – GENERAL CONTRACTOR (CONSTRUCTION) OWNER – T-MOBILE</li> </ol>	
OEM - ORIGINAL EQUIPMENT MANUFACTURER	
2. 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.	
3. 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.	
6. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.	
7. THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.	
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 OF THE OWNER.	
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	
PROCEEDING WITH CONSTRUCTION. 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 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:	
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 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.	
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 DISPOSED OF LEGALLY.	
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. 7. THE SUB GRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE	
APPLICATION. 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 CONTROL.	
11. THE SUBCONTRACTOR SHALL PROVIDE SITE SIGNAGE IN ACCORDANCE WITH THE T—MOBILE SPECIFICATION FOR SITE SIGNAGE.	

## ETE AND REINFORCING STEEL NOTES:

NCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 301, ACI 318, ACI 336, ASTM A184, ASTM A185 AND THE ND CONSTRUCTION SPECIFICATION FOR CAST-IN-PLACE CONCRETE.

NCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS, UNLESS NOTED OTHERWISE. A FRENGTH (400PSI) MAY BE USED. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 381 CODE ENTS

RCING STEEL SHALL CONFORM TO ASTM A 615. GRADE 60. DEFORMED UNLESS NOTED OTHERWISE. WELDED WIRE IALL CONFORM TO ASTM A 185 WELDED STEEL WIRE FABRIC UNLESS NOTED OTHERWISE. SPLICES SHALL BE CLASS ALL HOOKS SHALL BE STANDARD, UNO.

DLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON

CRETE EXPOSED TO EARTH OR WEATHER: #6 AND LARGER ......2 IN. ≸5 AND SMALLER & WWF ......1½ IN.

CRETE NOT EXPOSED TO EARTH OR WEATHER NOT CAST AGAINST THE GROUND:

SLAB AND WALL ..... ...%/ IN.

MFER 3/4" SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE, UNO, IN ACCORDANCE WITH ACI 301 SECTION

ATION OF CONCRETE EXPANSION/WEDGE ANCHORS SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDED E. THE ANCHOR BOLT, DOWEL OR ROD SHALL CONFORM TO THE MANUFACTURERS RECOMMENDATION FOR EMBEDMENT AS SHOWN ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR CONTRACTOR APPROVAL WHEN DRILLING CONCRETE. SPECIAL INSPECTIONS, REQUIRED BY GOVERNING CODES, SHALL BE PERFORMED IN ORDER TO MAINTAIN URER'S MAXIMUM ALLOWABLE LOADS. ALL EXPANSION/WEDGE ANCHORS SHALL BE STAINLESS STEEL OR HOT DIPPED D. EXPANSION BOLTS SHALL BE PROVIDED BY SIMPSON OR APPROVED EQUAL.

ETE CYLINDER TIES ARE NOT REQUIRED FOR SLAB ON GRADE WHEN CONCRETE IS LESS THAN 50 CUBIC YARDS 3.2.3) IN THAT EVENT THE FOLLOWING RECORDS SHALL BE PROVIDED BY THE CONCRETE SUPPLIER; SULTS OF CONCRETE CYLINDER TEST PERFORMED AT THE SUPPLIERS PLANT. RTIFICATION OF MINIMUM COMPRESSIVE STRENGTH FOR THE CONCRETE GRADE SUPPLIED. TER THAN 50 CUBIC YARDS THE GC SHALL PERFORM THE CONCRETE CYLINDER TEST.

ALTERNATIVE TO ITEM 7. TEST CYLINDERS SHALL BE TAKEN INITIALLY AND THEREAFTER FOR EVERY 50 YARDS OF FROM EACH DIFFERENT BATCH PLANT.

IENT SHALL NOT BE PLACED ON NEW PADS FOR SEVEN DAYS AFTER PAD IS POURED, UNLESS IT IS VERIFIED BY TESTS THAT COMPRESSIVE STRENGTH HAS BEEN ATTAINED.

## <u>TURAL STEEL NOTES:</u>

EEL WORK SHALL BE PAINTED OR GALVANIZED IN ACCORDANCE WITH THE DRAWINGS AND T-MOBILE SPECIFICATIONS THERWISE NOTED. STRUCTURAL STEEL SHALL BE ASTM-A-36 UNLESS OTHERWISE NOTED ON THE SITE SPECIFIC STEEL DESIGN, INSTALLATION AND BOLTING SHALL BE IN ACCORDANCE WITH THE AMERICAN INSTITUTE OF STEEL TION (AISC) "MANUAL OF STEEL CONSTRUCTION".

LDING SHALL BE PERFORMED USING E70XX ELECTRODES AND WELDING SHALL CONFORM TO AISC AND AWS D1.1. LET WELD SIZES ARE NOT SHOWN, PROVIDE THE MINIMUM SIZE PER TABLE J2.4 IN THE AISC "MANUAL OF STEEL TION", 9TH EDITION. PAINTED SURFACES SHALL BE TOUCHED UP.

CONNECTIONS SHALL USE BEARING TYPE ASTM A325 BOLTS  $(\frac{3}{4})^{\circ}$  and shall have minimum of two bolts OTED OTHERWISE. ALL BOLTS SHALL BE GALVANIZED OR STAINLESS STEEL.

TRUCTURAL CONNECTIONS FOR STEEL GRATING MAY USE  $\frac{5}{6}$ " DIA. ASTM A 307 BOLTS (GALV) UNLESS NOTED

ACTOR SHALL SUBMIT SHOP DRAWINGS FOR ENGINEER REVIEW & APPROVAL ON PROJECTS REQUIRING STRUCTURAL

RUCTURAL STEEL WORK SHALL BE DONE IN ACCORDANCE WITH AISC SPECIFICATIONS.

## COMPACTION NOTES FOR SLAB ON GRADE:

TE AS REQUIRED TO REMOVE VEGETATION AND TOPSOIL TO EXPOSE NATURAL SUBGRADE AND PLACE CRUSHED STONE

CTION CERTIFICATION: AN INSPECTION AND WRITTEN CERTIFICATION BY A QUALIFIED GEOTECHNICAL TECHNICIAN OR IS ACCEPTABLE.

ALTERNATE TO INSPECTION AND WRITTEN CERTIFICATION. THE "UNDISTURBED SOIL" BASE SHALL BE COMPACTED WITH ON EQUIPMENT". LISTED BELOW, TO AT LEAST 90% MODIFIED PROCTOR MAXIMUM DENSITY PER ASTM D 1557

CTED SUBBASE SHALL BE UNIFORM AND LEVELED. PROVIDE 6" MINIMUM CRUSHED STONE OR GRAVEL COMPACTED IN ABOVE COMPACTED SOIL. GRAVEL SHALL BE NATURAL OR CRUSHED WITH 100% PASSING #1 SIEVE.

ALTERNATE TO ITEMS 2 AND 3, THE SUBGRADE SOILS WITH 5 PASSES OR A MEDIUM SIZED VIBRATORY PLATE R (SUCH AS BOMAG BPR 30/38) OR HAND-OPERATED SINGLE DRUM VIBRATORY ROLLER (SUCH AS BOMAG BW 55E). AREAS THAT ARE ENCOUNTERED SHOULD BE REMOVED AND REPLACED WITH A WELL-GRADED GRANULAR FILL AND D AS STATED ABOVE.

## CTION EQUIPMENT:

DPERATED DOUBLE DRUN, VIBRATORY ROLLER, VIBRATORY PLATE COMPACTOR OR JUMPING JACK COMPACTOR.

## RUCTION NOTES:

/ERIFICATION: ACTOR SHALL FIELD VERIFY SCOPE OF WORK, T-MOBILE ANTENNA PLATFORM LOCATION AND UTILITY TRENCHWORK.

## INATION OF WORK:

ACTOR SHALL COORDINATE RF WORK AND PROCEDURES WITH CONTRACTOR.

LADDER RACK:

ACTOR SHALL FURNISH AND INSTALL CABLE LADDER RACK, CABLE TRAY AND/OR ICE BRIDGE, AND CONDUIT AS 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 AND TELCORDIA.

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 TELCORDIA.

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, ½ 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 SPECIFIED.

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 OTHERWISE SPECIFIED.

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 SPECIFIED.

14. 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).

15. RACEWAY AND CABLE TRAY SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE AND NEC.

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.

18. ELECTRICAL METALLIC TUBING (EMT), ELECTRICAL NONMETALLIC TUBING (ENT), OR RIGID NONMETALLIC CONDUIT (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 GRADF.

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. UL, ANSI/IEEE AND NEC.

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 BETTER) OUTDOORS.

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.

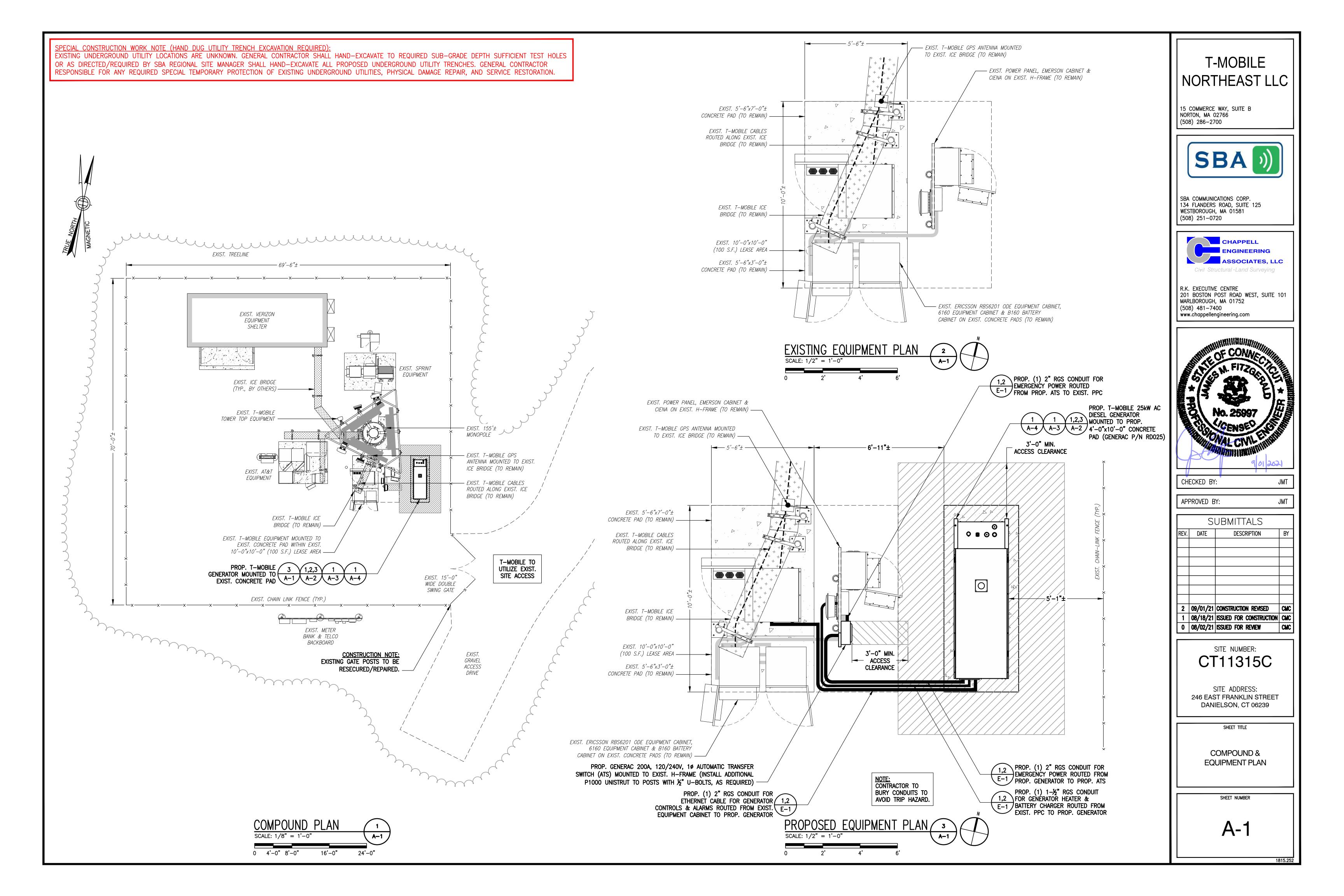
29. THE SUBCONTRACTOR SHALL NOTIFY AND OBTAIN NECESSARY AUTHORIZATION FROM THE CONTRACTOR BEFORE COMMENCING WORK ON THE AC POWER DISTRIBUTION PANELS.

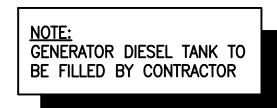
30. THE SUBCONTRACTOR SHALL PROVIDE NECESSARY TAGGING ON THE BREAKERS. CABLES AND DISTRIBUTION PANELS IN ACCORDANCE WITH THE APPLICABLE CODES AND STANDARDS TO SAFEGUARD AGAINST LIFE AND PROPERTY. 31. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, NEC AND ALL

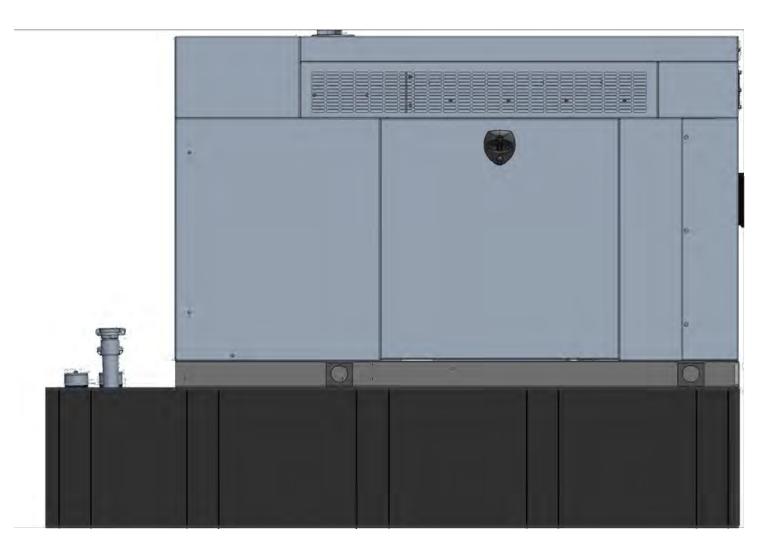
32. CONDUIT ROUTINGS ARE SCHEMATIC. SUBCONTRACTOR SHALL INSTALL CONDUITS SO THAT ACCESS TO EQUIPMENT IS NOT BLOCKED.

APPLICABLE LOCAL CODES.



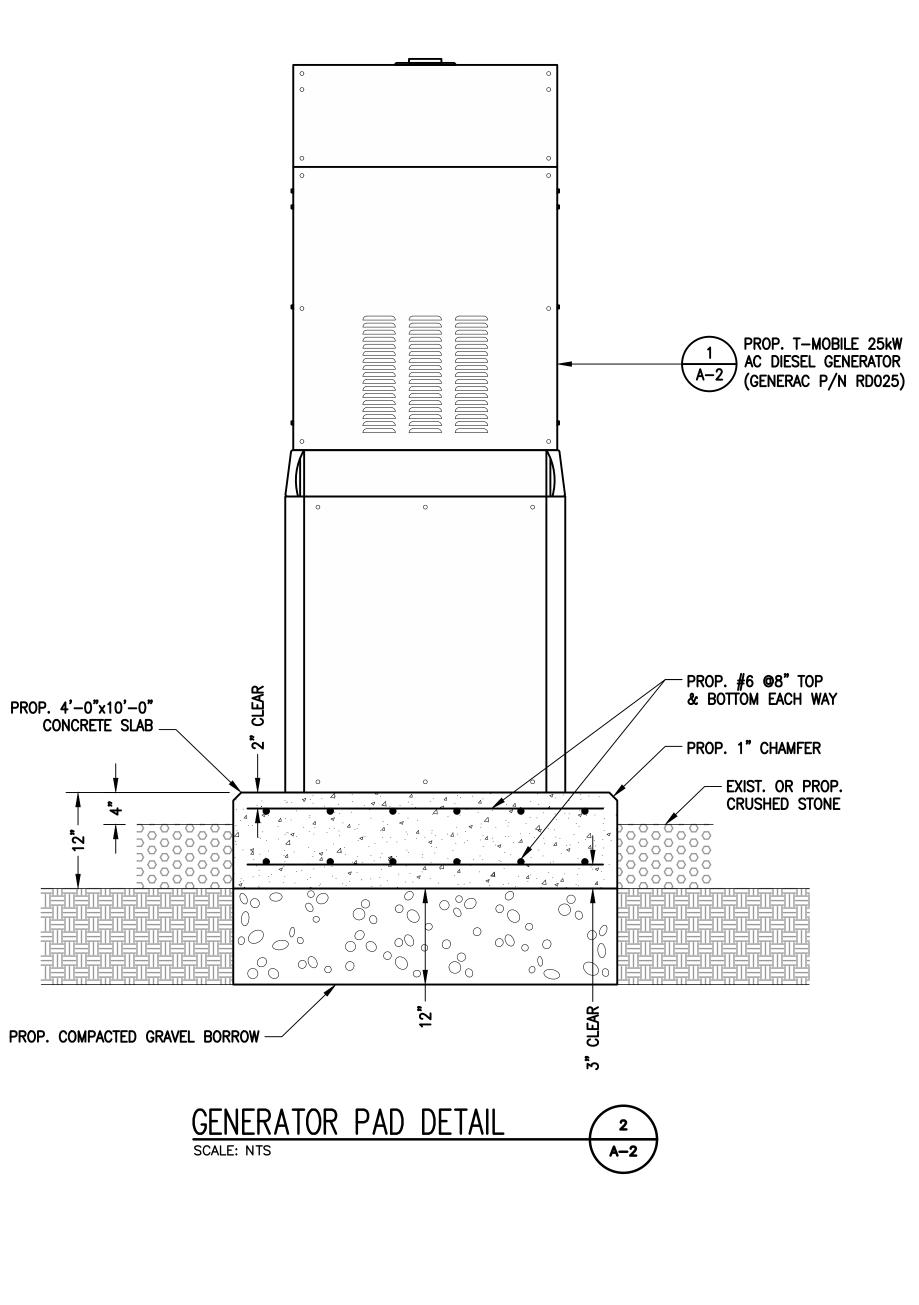


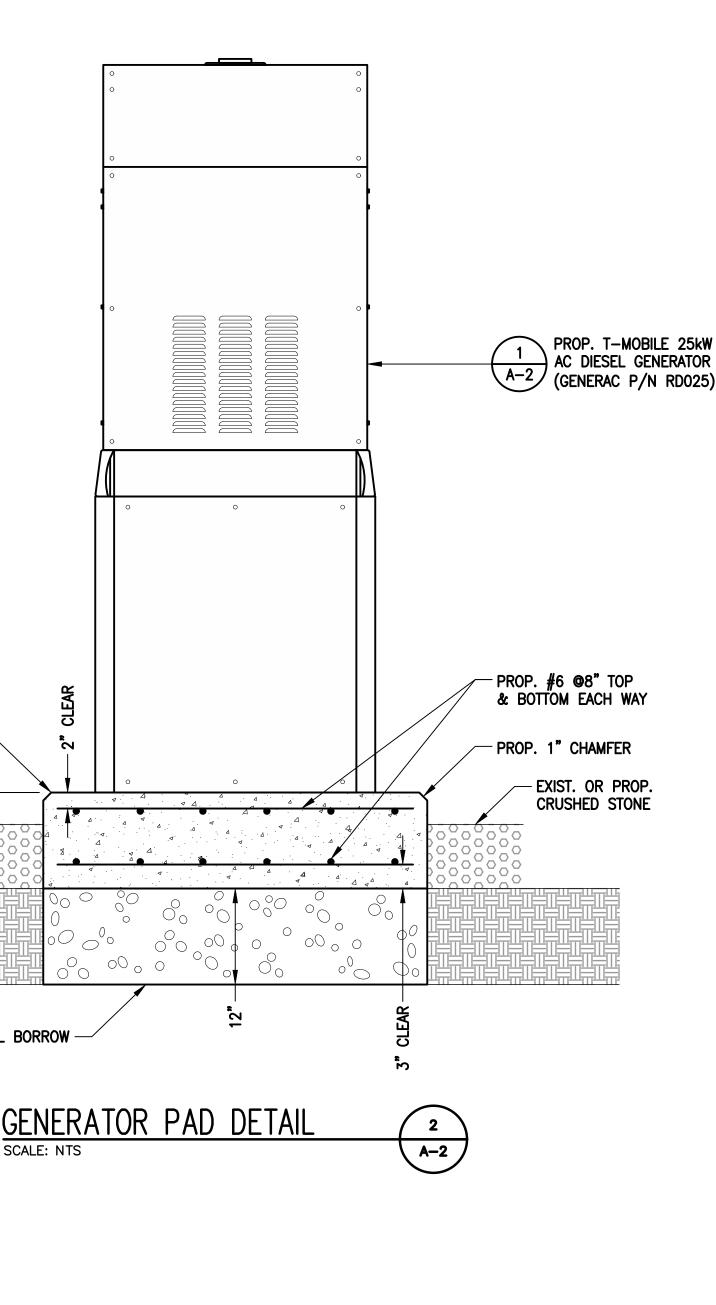


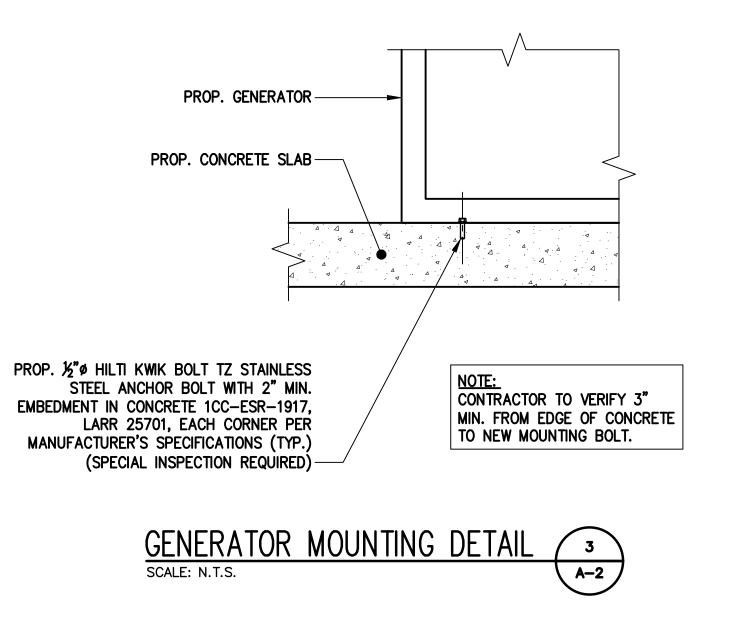


GENERAC RD025 25kW AC DIESEL GENERATOR DIMENSIONS: 103.4"L x 35.0"W x 91.7"H WEIGHT: 2,946 lbs QUANTITY: TOTAL OF 1 GENERATOR DETAIL SCALE: N.T.S.

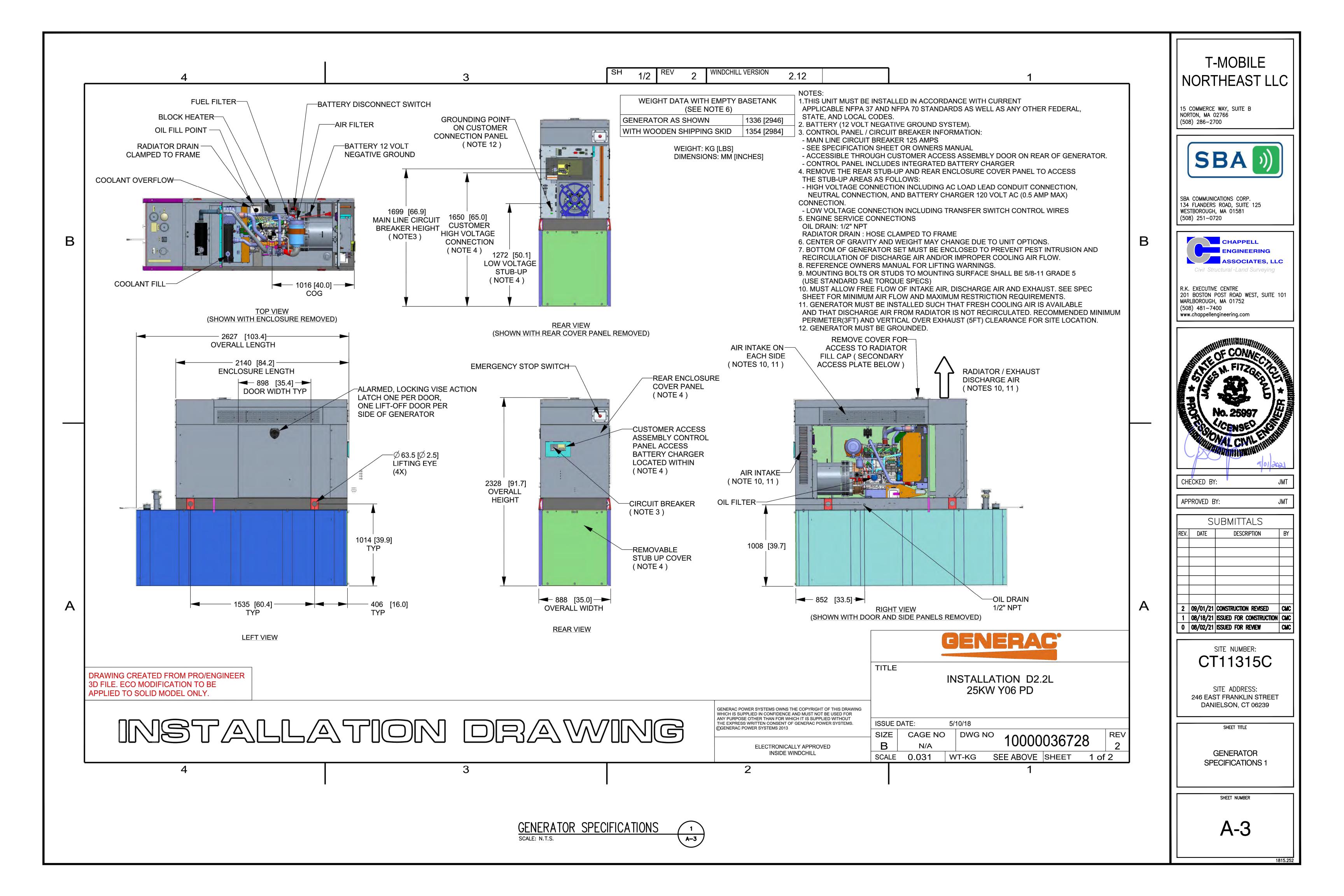
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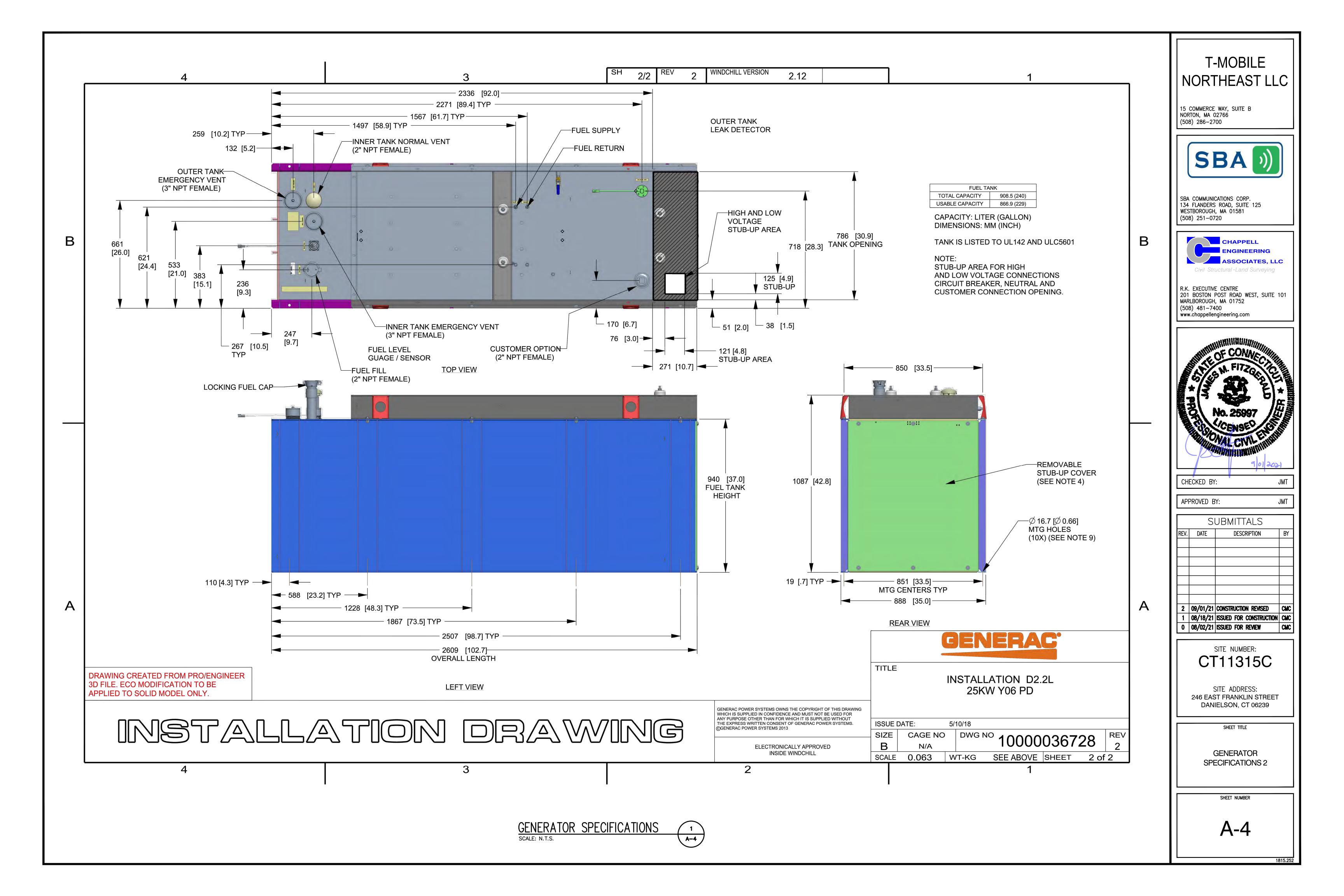


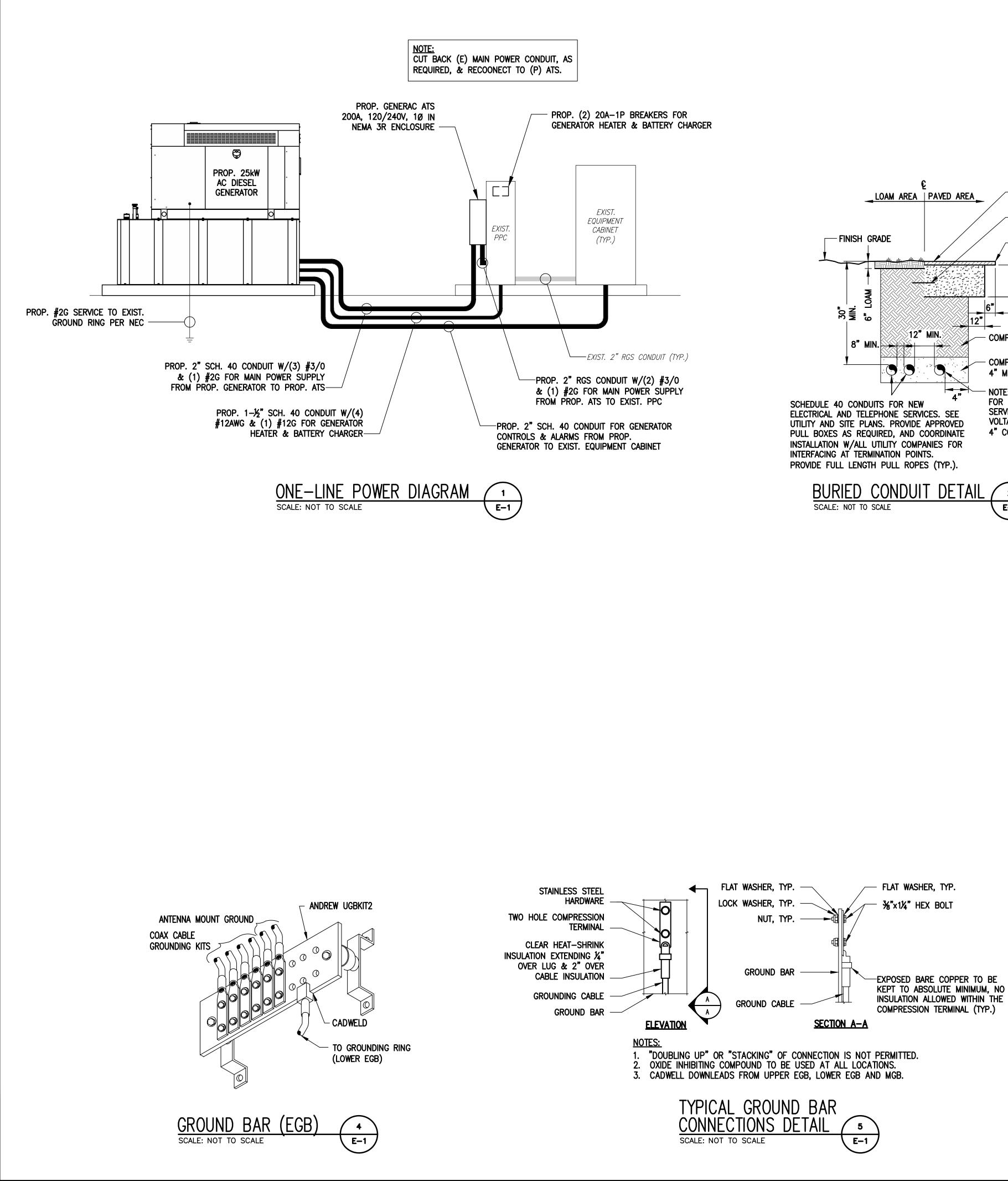


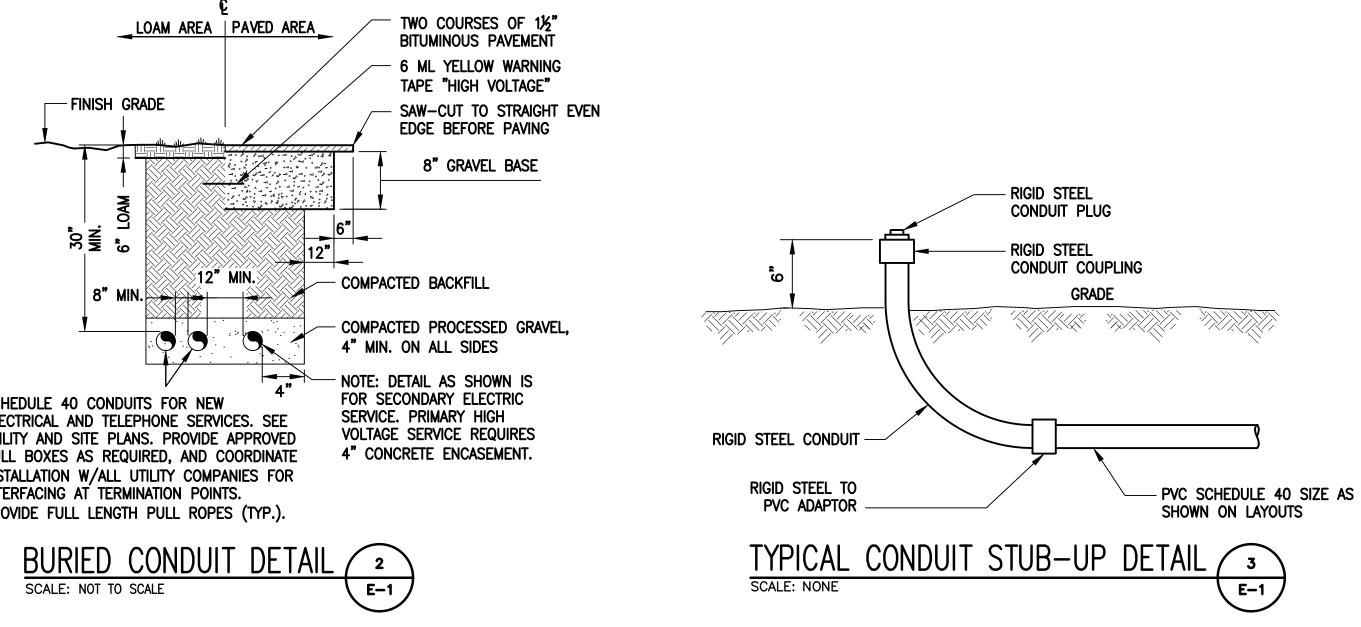


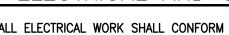












- AND LOCAL CODES.
- 4. GENERAL CONTRACTOR SHALL PAY FEES FOR PERMITS, AND IS RESPONSIBLE FOR OBTAINING SAID PERMITS AND COORDINATION OF
- INSPECTIONS.
- 6. BURIED CONDUIT SHALL BE SCHEDULE 40 PVC.
- 7. ELECTRICAL WIRING SHALL BE COPPER WITH TYPE XHHW, THWN, OR THININSULATION.
- 9. RUN TELCO CONDUIT OR CABLE BETWEEN TELEPHONE UTILITY DEMARCATION POINT AND PROJECT OWNER CELL SITE TELCO CABINET AND BTS MEASURING TAPE AT EACH END.
- 11. ALL EQUIPMENT LOCATED OUTSIDE SHALL HAVE NEMA 3R ENCLOSURE.
- 12. PPC SUPPLIED BY PROJECT OWNER.
- ACCORDANCE WITH "T-MOBILE BTS SITE GROUNDING STANDARDS".
- OWNER.
- BARE COPPER WIRE TO BE IN CONTACT WITH GALVANIZED STEEL.
- RING
- ALL LOCATIONS.
- 19. APPLY OXIDE INHIBITING COMPOUND TO ALL COMPRESSION TYPE GROUND CONNECTIONS.
- RESISTANCE REQUIRED.
- RECORD RESULTS FOR PROJECT CLOSE OUT.

## ELECTRICAL AND GROUNDING NOTES

1. ALL ELECTRICAL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE (NEC) AS WELL AS APPLICABLE STATE

2. ALL ELECTRICAL ITEMS SHALL BE U.L. APPROVED OR LISTED AND PROCURED PER SPECIFICATION REQUIREMENTS.

3. THE ELECTRICAL WORK INCLUDES ALL LABOR AND MATERIAL DESCRIBED BY DRAWINGS AND SPECIFICATION INCLUDING INCIDENTAL WORK TO PROVIDE COMPLETE OPERATING AND APPROVED ELECTRICAL SYSTEM.

5. 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.

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.

CABINET AS INDICATED ON THIS DRAWING PROVIDE FULL LENGTH PULL ROPE IN INSTALLED TELCO CONDUIT. PROVIDE GREENLEE CONDUIT

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.

13. GROUNDING SHALL COMPLY WITH NEC ART. 250. ADDITIONALLY, GROUNDING, BONDING AND LIGHTNING PROTECTION SHALL BE DONE IN

14. GROUND COAXIAL CABLE SHIELDS MINIMUM AT BOTH ENDS USING MANUFACTURERS COAX CABLE GROUNDING KITS SUPPLIED BY PROJECT

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. 16. ALL GROUND CONNECTIONS TO BE BURNDY HYGROUND COMPRESSION TYPE CONNECTORS OR CADWELD EXOTHERMIC WELD. DO NOT ALLOW

17. 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

18. CONNECTIONS TO GROUND BARS SHALL BE MADE WITH TWO HOLE COMPRESSION TYPE COPPER LUGS. APPLY OXIDE INHIBITING COMPOUND TO

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. 21. CONTRACTOR SHALL TEST COMPLETED GROUND SYSTEM AND RECORD RESULTS FOR PROJECT CLOSE-OUT DOCUMENTATION. 5 OHMNS MINIMUM

22. CONTRACTOR SHALL CONDUCT ANTENNA, COAX, AND LNA RETURN-LOSS AND DISTANCE- TO-FAULT MEASUREMENTS (SWEEP TESTS) AND



# EXHIBIT 4

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



GENERAC

Image used for illustration purposes only

INDUSTRIAL

## **Codes and Standards**

ANSI

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



## **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

## **CONTROL SYSTEM**



## **Electrical System**

- Battery Charging Alternator
- Battery Cables
- Battery Tray •
  - **Rubber-Booted Engine Electrical Connections**
- Solenoid Activated Starter Motor ٠
- 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

## Evolution <sup>™</sup> Controller

- Two-Line Plain Text LCD Display
- Programmable Start Delay Between 10-30 seconds
- 10 second Engine Start Sequence ۰
- 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 Maintance Kit

## **CONTROL SYSTEM**

○ Mobile Link <sup>™</sup> and Adapter Kit

## TANKS

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

SPEC SHEET





EPA Certified Stationary Emergency

## **APPLICATION AND ENGINEERING DATA**

## **ENGINE SPECIFICATIONS**

## General

Make	Perkins
EPA Emission Compliance	Tier 4 Interim
Cylinder #	4
Туре	In-Line
Displacement - in <sup>3</sup> (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
51	0
Engine Governing	

## **Cooling System**

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

**GENERAC**<sup>®</sup>

## 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 Governing

Governor	Electronic
Frequency Regulation (Steady State)	±0.25%
Lubrication System	
Oil Pump Type	Gear
Oil Filter Type	Full Flow Cartridge

11.2 (10.6)

## **ALTERNATOR SPECIFICATIONS**

Crankcase Capacity with Filters- qt (L)

Standard Model	Generac	Standard Excitation	Direct
Poles	4	Bearings	Single Sealed
Field Type	Rotating	Coupling	Flexible Disc
Insulation Class - Rotor	H	Prototype Short Circuit Test	Yes
Insulation Class - Stator	Н	Voltage Regulator Type	Full Digital
Total Harmonic Distortion	<5%	Number of Sensed Phases	2
Telephone Interference Factor (TIF)	<50	Regulation Accuracy (Steady State)	±1%

INDUSTRIAL

Fuel Type	Ultra Low Sulfur Diesel Fuel
Fuel Specification	ASTM
Fuel Pump Type	Mechanical Engine Driven Gea
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

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, S	Single-Phase at 0.4pf	168
120/208 V, T	Three-Phase at 0.4pf	144
120/240 V, T	Three-Phase at 0.4pf	125
120/240 V, T	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 <sup>3</sup> /min (m <sup>3</sup> /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 <sub>2</sub> O (kPa)	0.50 (0.12)

## **COMBUSTION AIR REQUIREMENTS**

Flow at Rated Power ft<sup>3</sup>/min (m<sup>3</sup>/min)

## Standby

88 (2.5)

ENGINE			EXHAUST		
		Standby			Standby
Rated Engine Speed	rpm	1,800	Exhaust Flow (Rated Output)	ft <sup>3</sup> /min (m <sup>3</sup> /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



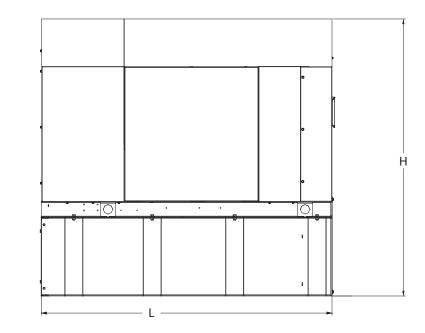


## RD025 | 2.2L | 25kW

## INDUSTRIAL DIESEL GENERATOR SET

EPA Certified Stationary Emergency

## **DIMENSIONS AND WEIGHTS\***



## Weights and Dimensions

– W –

Unit Weight - Ibs	eight - 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 Consumptio		with fuel ta 103.4" 35"	
Fuel Tank Gross To	tal 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		-
	0 IF · · B ·			

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.

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 5

Map showing nearest wetlands

