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October 13, 2021

Members of the Siting Council  
Connecticut Siting Council  
10 Franklin Square  
New Britain, CT 06051

RE: Notice of Exempt Modification  
75 Wells Road, Wethersfield, CT 06109  
Latitude: 41.705880000  
Longitude: -72.6633300000  
T-Mobile Site#: CTHA506A - Hardening

Dear Ms. Bachman:

T-Mobile currently maintains nine (9) antennas at the 95-foot level of the existing 101-foot monopole at 75 Wells Road in Wethersfield, CT. The property is owned by Southern New England Telephone Company (Frontier Communications). T-Mobile now intends to add a 25Kw generator to a proposed 10'x4' concrete pad within the existing compound.

**Planned Modifications:**

**Ground:**

Install New:

- (1) Generac RD025 25 Kw AC Diesel Generator
- (1) 10' x 4' Concrete Pad (within compound)

This facility has been approved by the Council in Petition No. 1012 dated December 1, 2011. This installation complies with this approval.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies § 16- SOj-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-SOj-73, a copy of this letter is being sent to Mayor Michael Rell, Elected Official, and Peter Gillespie, Director of Planning & Economic Development of the Town of Wethersfield, as well as the owner.

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 modifications 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 modifications 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 telecommunications facility constitute an exempt modification under R.C.S.A. § 16-50j-72(b)(2).

Sincerely,

**Kyle Richers**

Transcend Wireless

Cell: 908-447-4716

Email: [krichers@transcendwireless.com](mailto:krichers@transcendwireless.com)

Attachments

cc: Michael Rell – Mayor of Town of Wethersfield

Peter Gillespie – Director of Planning & Economic Development

Southern New England Telephone Company - Owner

## Kyle Richers

---

**From:** UPS <pkginfo@ups.com>  
**Sent:** Thursday, October 14, 2021 10:36 AM  
**To:** KRICHERS@TRANSCENDWIRELESS.COM  
**Subject:** UPS Delivery Notification, Tracking Number 1ZV257424292742937



**Hello, your package has been delivered.**

**Delivery Date:** Thursday, 10/14/2021

**Delivery Time:** 10:34 AM

**Left At:** INSIDE DELIV

**Signed by:** SUSAN

### TRANSCEND WIRELESS

**Tracking Number:** [1ZV257424292742937](#)

**Ship To:** TOWN OF WETHERSFIELD  
505 SILAS DEANE HIGHWAY  
WETHERSFIELD, CT 06109  
US

**Number of Packages:** 1

**UPS Service:** UPS Ground

**Package Weight:** 1.0 LBS

**Reference Number:** CTHA506A CSC EO



[Download the UPS mobile app](#)

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## Kyle Richers

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**From:** UPS <pkginfo@ups.com>  
**Sent:** Thursday, October 14, 2021 10:37 AM  
**To:** KRICHERS@TRANSCENDWIRELESS.COM  
**Subject:** UPS Delivery Notification, Tracking Number 1ZV257424290168928



**Hello, your package has been delivered.**

**Delivery Date:** Thursday, 10/14/2021

**Delivery Time:** 10:35 AM

**Left At:** INSIDE DELIV

**Signed by:** DENISE

### TRANSCEND WIRELESS

<b>Tracking Number:</b>	<a href="#">1ZV257424290168928</a>
<b>Ship To:</b>	TOWN OF WETHERSFIELD 505 SILAS DEANE HIGHWAY WETHERSFIELD, CT 06109 US
<b>Number of Packages:</b>	1
<b>UPS Service:</b>	UPS Ground
<b>Package Weight:</b>	1.0 LBS
<b>Reference Number:</b>	CTHA506A CSC ZO



[Download the UPS mobile app](#)

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**CERTIFIED MAIL® RECEIPT**  
Domestic Mail Only

For delivery information, visit our website at [www.usps.com](http://www.usps.com)

Add-on TX 75001

7020 1810 0001 6864 4985

Certified Mail Fee	\$3.75	
Extra Services & Fees (check box, add fee as appropriate)	\$3.05	
<input type="checkbox"/> Return Receipt (hardcopy)	\$0.00	
<input type="checkbox"/> Return Receipt (electronic)	\$0.00	
<input type="checkbox"/> Certified Mail Restricted Delivery	\$0.00	
<input type="checkbox"/> Adult Signature Required	\$0.00	
<input type="checkbox"/> Adult Signature Restricted Delivery	\$0.00	
Postage	\$1.56	
Total Postage and Fees	\$8.36	

Sent To Southern New England Telephone Co.  
Street and Apt. No., or PO Box No. PO Box 2629  
City, State, ZIP+4® Addison, TX 75001

Unique ID: 205069

Wethersfield

Card No: 1 of 1

<b>Location:</b>	75 WELLS RD				<b>Map/Lot:</b>	205 069		<b>Zone:</b>	SRD/A	<b>Date Printed:</b>	08-05-21	
<b>911 Address:</b>					<b>Exempt</b>			<b>Nbhd:</b>	C30	<b>Last Update:</b>	08-05-21	
<b>Owner Of Record</b>						<b>Volume/Page</b>	<b>Date</b>	<b>Sales Type</b>		<b>Valid</b>	<b>Sale Price</b>	
SOUTHERN N E TELEPHONE CO C/O FRONTI						0121 /0472	11-30-46			NO	0	
PO BOX 2629 ADDISON , TX 75001												
<b>Additional Owners:</b>												
<b>Prior Owner History</b>												
/												
/												
/												
/												
/												
<b>Permit Number</b>	<b>Date</b>	<b>Cost</b>	<b>New Hous</b>	<b>Status</b>	<b>% Comp</b>	<b>Est Completion</b>	<b>Building Permit</b>					
B-20-0245	05-27-20	20,000	No	Closed	100	10-01-20	Upgrade and replacement of equipment at existing telecommunications fac					
B-19-0561	08-29-19	15,000	No	Closed	100	10-01-19	Upgrade and replacement of equipment at existing telecommunications fac					
P-19-0121	06-19-19	82,500	No	Closed	100	08-21-19	REMOVE EXITING UNDERGROUND OIL STORAGE TANK & INSTALL 1 NEW ABOVE GROUN					
B-19-0278	06-11-19	25,000	No	Closed	100	10-01-19	Swap 3 antennas for new models and add 3 new remote radio units to tie					
B-17-502	10-11-18	5,000	No	Closed	100	06-20-18	CELL TOWER WORK (AT&T)					
B-16-545	11-08-16	25,000	No	Permit Issue	100		REMOVE 3 ANTENNA AND REPL WITH 3 NEWER MODELS. ADD 2 NEW RRUS PER SECT					
				<b>State Item Codes</b>				<b>Appraised Value</b>				
<b>Census/Tract</b>	4922	<b>Code</b>	<b>Quantity</b>	<b>Value</b>	<b>Code</b>	<b>Quantity</b>	<b>Value</b>	<b>Total Land Value</b>		594,000		
<b>Dev Map</b>	<b>Dev Lot</b> 3A	22-Comm Bldg	1.00	148,650				<b>Total Building Value</b>		212,351		
<b>Date</b>	05/25/2018	01/25/2019	25-Comm Outbldg	3.00	480,320			<b>Total Outbuilding Value</b>		686,169		
<b>Inspector</b>	EQ		41-PubUtil Land	0.90	415,790			<b>Total Market Value</b>		1,492,520		
<b>Action</b>	Measure	Hearing-No Chng										
<b>Acres</b>							<b>Influence Factors</b>					
<b>Land Type</b>	<b>Acres</b>	<b>490</b>	<b>Rate</b>	<b>Adj</b>	<b>Influence</b>	<b>Total Value</b>	<b>Land Type</b>	<b>Influence</b>	<b>Reason</b>	<b>Comment</b>		
Pub Util Land	0.90	0.00	216,000	1.00	175	594,000	Pub Util Land	175	Intensive Use			
<b>Total</b>	0.90					594,000						
<b>Assessment History (Prior Years as of Oct 1)</b>							<b>490 Appraised Totals</b>					
	<b>Current</b>	<b>2020</b>	<b>2019</b>	<b>2018</b>	<b>2017</b>		<b>Type</b>	<b>Acres</b>	<b>Value</b>	<b>Type</b>	<b>Acres</b>	<b>Value</b>
<b>Land</b>	415,790	415,790	259,870	259,870	92,100							
<b>Building</b>	148,650	148,650	304,570	304,570	286,300							
<b>Outbuilding</b>	480,320	480,320	480,320	480,320	233,500							
<b>Total</b>	<b>1,044,760</b>	<b>1,044,760</b>	<b>1,044,760</b>	<b>1,044,760</b>	<b>611,900</b>					<b>Totals</b>		
<b>Comments</b>												
CELL POLE 4500 A MONTH, 8 CAP RATE 60 X 36 SLATE ROOF; NO OFFICE FIT UP; NO ACCESS TO UQS - STAIRS REMOVED; CONTROL SWITCH BUILDING ZONING CHANGE PER PLANNING												

Unique ID: 205069

Wethersfield

Location: 75 WELLS RD

Unit

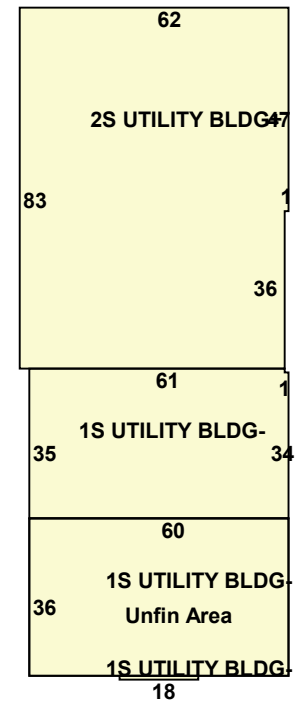
FRONTIER							
Use	Class	Quality	Stry	WH	Area	BG	Units
Utility Bldg	Masonry	B	2	10	14,497	NO	

Commercial Building Description	Description	Area/Qty	Value
<b>Building Use</b> Utility Buildin	Base Value	14,497	453,031
<b>Class</b> Masonry	Central Air	453,031	6,795
<b>Overall Condition</b> Very Good	Unfinished Basement Area	5,110	102,200
<b>Construction Quality</b> B	Value Before Depr.	0	562,027
<b>Stories</b> 2.00	Depr/Adjust Amount	0	123,646
<b>Year Built</b> 1939	Final Value (After Depr)	0	438,381
<b>Remodel</b>			
<b>Percent Complete</b> 100			
<b>GLA</b> 14,497			
<b>Basement</b>			
<b>Basement Area</b> 5110			
<b>Basement Unfinished Area</b>			
<b>HVAC</b>			
<b>Heating Type</b> Hot Water			
<b>Fuel Type</b> Oil			
<b>Cooling Type</b> Central 100 %			

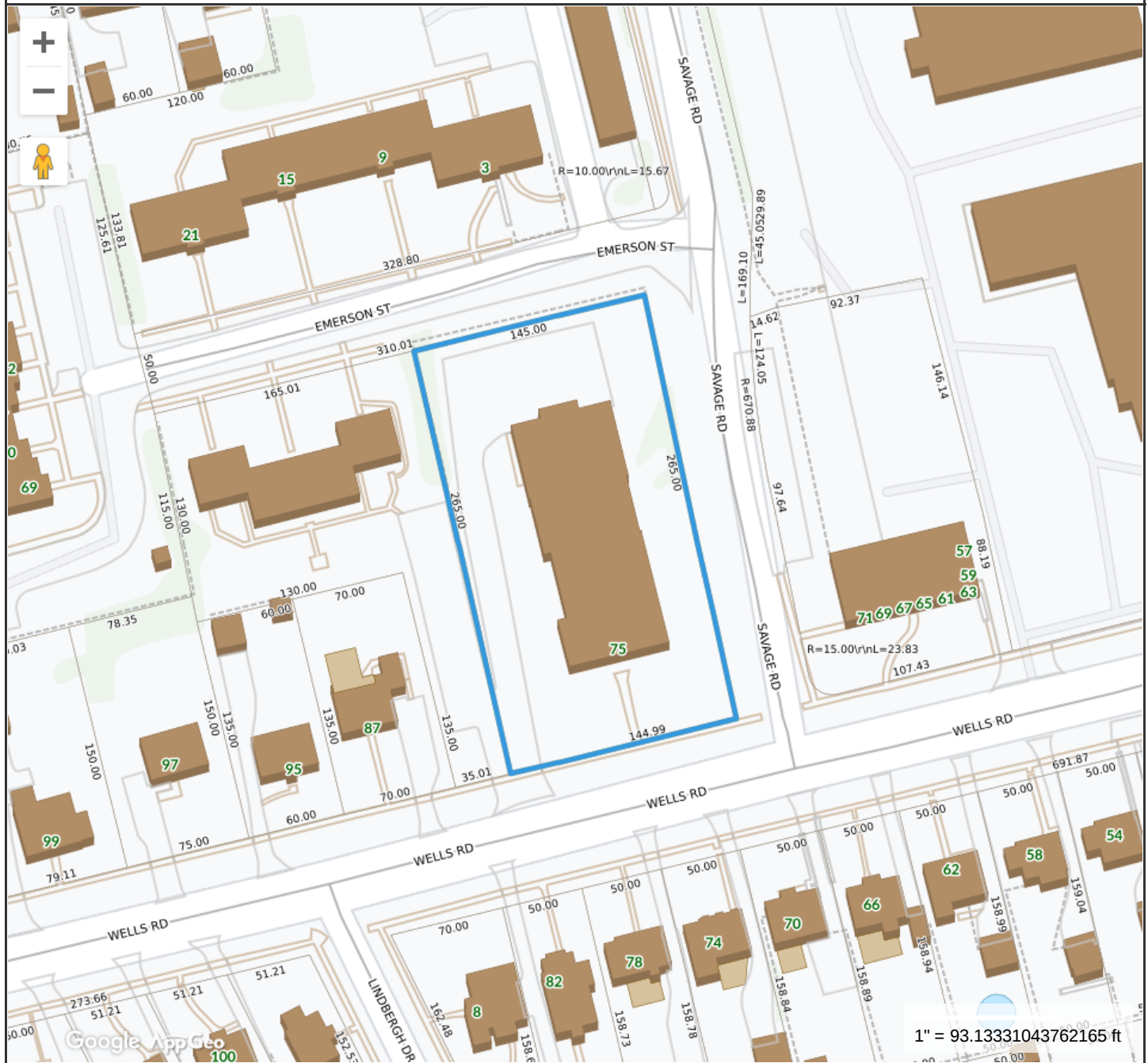
Attached Component Computations			
Type	Yr Bilt	Condition	Area/Qty Value
Unfinished Area	1939	Good	2,160 48,838

Detached Component Computations				
Type	Year	Condition	Area/Qty	Value
PreCastConCel	2003	Good	200	7,905
Paving	1999	Good	2,400	3,264
Cell Tower	2000	Average	1	675,000

<b>Total Building Value</b>			
<b>Building 1 Value</b>		<b>487,219</b>	
<b>Valuation Method</b>	I		



### CTHA506A - GIS Map



**Property Information**

**Property ID** 205069  
**Location** 75 WELLS RD  
**Owner** SOUTHERN N E TELEPHONE CO



**MAP FOR REFERENCE ONLY  
NOT A LEGAL DOCUMENT**

Town of Wethersfield, CT makes no claims and no warranties, expressed or implied, concerning the validity or accuracy of the GIS data presented on this map.

Geometry updated 11/14/17  
Data updated daily

Print map scale is approximate. Critical layout or measurement activities should not be done using this resource.



Petition No. 1012  
MetroPCS  
75 Wells Road, Wethersfield, Connecticut  
Staff Report  
December 1, 2011

On October 26, 2011, the Connecticut Siting Council (Council) received a petition (Petition) from MetroPCS for a declaratory ruling that no Certificate of Environmental Compatibility and Public Need is required for the proposed modifications to an existing telecommunications facility at 75 Wells Road in Wethersfield. Specifically, MetroPCS seeks to co-locate on an existing 104-foot tall monopole owned by New Cingular Wireless PCS LLC (AT&T). The existing tower, located adjacent to the east side of an existing building, currently supports AT&T. T-Mobile and Verizon have existing leases for tower space but have not located on the tower to date.

MetroPCS seeks to install six panel antennas on t-arms at the 75-foot level of the tower. The tower and foundation would require modifications to support the new equipment.

MetroPCS would install three equipment cabinets adjacent to the existing fenced compound area. The ground equipment would require MetroPCS to expand the existing compound and lease area to the south. The new fenced area would extend 17 feet to the south, then angle 12 feet to the west, terminating at the existing building. The new fence would match the existing. Three new plantings would be installed along the east side of the new fenced area to screen views from Wells Road and Savage Road. Staff recommends one additional evergreen planting along the south side of the compound extension to provide further screening.

There are no wetlands at the site. One evergreen shrub would be removed. The addition of new plantings along the fence line of the compound expansion area would mitigate views of the compound from the south and east. Evergreens along the east side and north side of the existing compound would remain. The maximum worst-case power density including AT&T's existing and T-Mobile's and Verizon's proposed equipment, would be 53 percent of the applicable limit.





# SITE NAME: AT&T WETHERSFIELD MONOPOLE

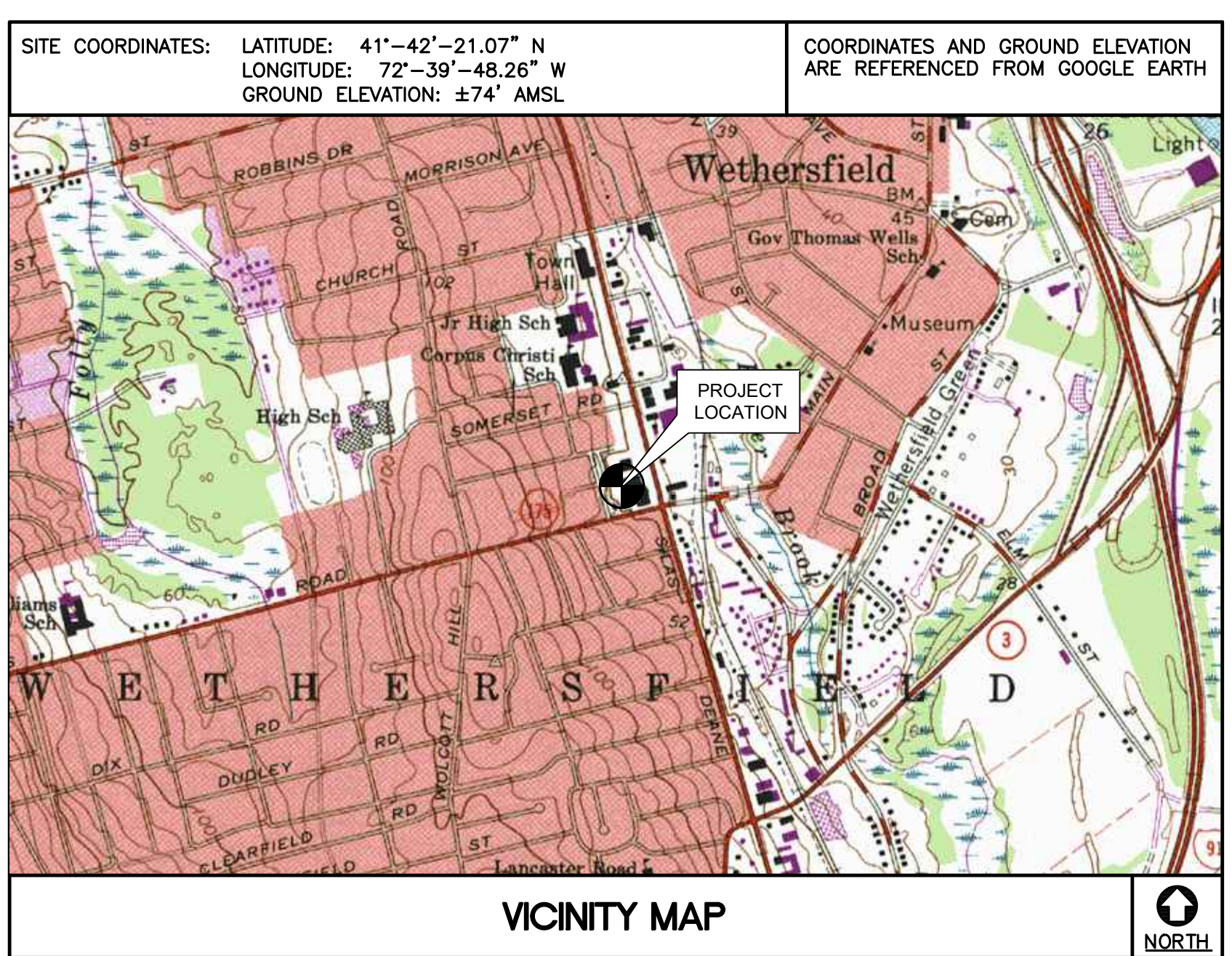
## SITE ID: CTHA506A

### 75 WELLS ROAD

### WETHERSFIELD, CT 06109

GENERAL NOTES	
1. ALL WORK SHALL BE IN ACCORDANCE WITH THE 2015 INTERNATIONAL BUILDING CODE AS MODIFIED BY THE 2018 CONNECTICUT SUPPLEMENT, INCLUDING THE TIA/EIA-222 REVISION "G" STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWERS AND SUPPORTING STRUCTURES, 2017 CONNECTICUT FIRE SAFETY CODE, NATIONAL ELECTRICAL CODE AND LOCAL CODES.	10. ALL UTILITY WORK SHALL BE IN ACCORDANCE WITH LOCAL UTILITY COMPANY REQUIREMENTS AND SPECIFICATIONS.
2. CONTRACTOR SHALL REVIEW ALL DRAWINGS AND SPECIFICATIONS IN THE CONTRACT DOCUMENT SET. CONTRACTOR SHALL COORDINATE ALL WORK SHOWN IN THE SET OF DRAWINGS. THE CONTRACTOR SHALL PROVIDE A COMPLETE SET OF DRAWINGS TO ALL SUBCONTRACTORS AND ALL RELATED PARTIES. THE SUBCONTRACTORS SHALL EXAMINE ALL THE DRAWINGS AND SPECIFICATIONS FOR THE INFORMATION THAT AFFECTS THEIR WORK.	11. ALL EQUIPMENT AND PRODUCTS PURCHASED ARE TO BE REVIEWED BY CONTRACTOR AND ALL APPLICABLE SUBCONTRACTORS FOR ANY CONDITION PER MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR TO SUPPLY THESE ITEMS AT NO COST TO OWNER OR CONSTRUCTION MANAGER.
3. CONTRACTOR SHALL PROVIDE A COMPLETE BUILD-OUT WITH ALL FINISHES, STRUCTURAL, MECHANICAL, AND ELECTRICAL COMPONENTS AND PROVIDE ALL ITEMS AS SHOWN OR INDICATED ON THE DRAWINGS OR IN THE WRITTEN SPECIFICATIONS.	12. ANY AND ALL ERRORS, DISCREPANCIES, AND 'MISSED' ITEMS ARE TO BE BROUGHT TO THE ATTENTION OF THE T-MOBILE CONSTRUCTION MANAGER DURING THE BIDDING PROCESS BY THE CONTRACTOR. ALL THESE ITEMS ARE TO BE INCLUDED IN THE BID. NO 'EXTRA' WILL BE ALLOWED FOR MISSED ITEMS.
4. CONTRACTOR SHALL FURNISH ALL MATERIAL, LABOR AND EQUIPMENT TO COMPLETE THE WORK AND FURNISH A COMPLETED JOB ALL IN ACCORDANCE WITH LOCAL AND STATE GOVERNING AUTHORITIES AND OTHER AUTHORITIES HAVING LAWFUL JURISDICTION OVER THE WORK.	13. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ON-SITE SAFETY FROM THE TIME THE JOB IS AWARDED UNTIL ALL WORK IS COMPLETE AND ACCEPTED BY THE OWNER.
5. CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS AND ALL INSPECTIONS REQUIRED AND SHALL ALSO PAY FEES REQUIRED FOR THE GENERAL CONSTRUCTION, PLUMBING, ELECTRICAL, AND HVAC. PERMITS SHALL BE PAID FOR BY THE RESPECTIVE SUBCONTRACTORS.	14. CONTRACTOR TO REVIEW ALL SHOP DRAWINGS AND SUBMIT COPY TO ENGINEER FOR APPROVAL. DRAWINGS MUST BEAR THE CHECKER'S INITIALS BEFORE SUBMITTING TO THE CONSTRUCTION MANAGER FOR REVIEW.
6. CONTRACTOR SHALL MAINTAIN A CURRENT SET OF DRAWINGS AND SPECIFICATIONS ON SITE AT ALL TIMES AND INSURE DISTRIBUTION AND SPECIFICATIONS ON SITE AT ALL TIMES AND INSURE DISTRIBUTION OF NEW DRAWINGS TO SUBCONTRACTORS AND OTHER RELEVANT PARTIES AS SOON AS THEY ARE MADE AVAILABLE. ALL OLD DRAWINGS SHALL BE MARKED VOID AND REMOVED FROM THE CONTRACT AREA. THE CONTRACTOR SHALL FURNISH AN 'AS-BUILT' SET OF DRAWINGS TO OWNER UPON COMPLETION OF PROJECT.	15. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS, ELEVATIONS, ANGLES AND EXISTING CONDITIONS AT THE SITE, PRIOR TO FABRICATION AND/OR INSTALLATION OF ANY WORK IN THE CONTRACT AREA.
7. LOCATION OF EQUIPMENT, AND WORK SUPPLIED BY OTHERS THAT IS DIAGRAMMATICALLY INDICATED ON THE DRAWINGS SHALL BE DETERMINED BY THE CONTRACTOR. THE CONTRACTOR SHALL DETERMINE LOCATIONS AND DIMENSIONS SUBJECT TO STRUCTURAL CONDITIONS AND WORK OF THE SUBCONTRACTORS.	16. COORDINATION, LAYOUT, FURNISHING AND INSTALLATION OF CONDUITS AND ALL APPURTENANCES REQUIRED FOR PROPER INSTALLATION OF ELECTRICAL AND TELECOMMUNICATION SERVICE SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
8. THE CONTRACTOR IS SOLELY RESPONSIBLE TO DETERMINE CONSTRUCTION PROCEDURE AND SEQUENCE AND TO ENSURE THE SAFETY OF THE EXISTING STRUCTURES AND ITS COMPONENT PARTS DURING CONSTRUCTION. THIS INCLUDES THE ADDITION OF WHATEVER SHORING, BRACING, UNDERPINNING, ETC. THAT MAY BE NECESSARY.	17. ALL DAMAGE CAUSED TO ANY EXISTING STRUCTURE SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR WILL BE HELD LIABLE FOR ALL REPAIRS REQUIRED FOR EXISTING STRUCTURES IF DAMAGED DURING CONSTRUCTION ACTIVITIES.
9. DRAWINGS INDICATE THE MINIMUM STANDARDS, BUT IF ANY WORK SHOULD BE INDICATED TO BE SUBSTANDARD TO ANY ORDINANCES, LAWS, CODES, RULES, OR REGULATIONS BEARING ON THE WORK, THE CONTRACTOR SHALL INCLUDE IN HIS WORK AND SHALL EXECUTE THE WORK CORRECTLY IN ACCORDANCE WITH SUCH ORDINANCES, LAWS, CODES, RULES OR REGULATIONS WITH NO INCREASE IN COSTS.	18. THE CONTRACTOR SHALL CONTACT 'CALL BEFORE YOU DIG' AT LEAST 48 HOURS PRIOR TO ANY EXCAVATIONS AT 1-800-922-4455. ALL UTILITIES SHALL BE IDENTIFIED AND CLEARLY MARKED. CONTRACTOR SHALL MAINTAIN AND PROTECT MARKED UTILITIES THROUGHOUT PROJECT COMPLETION.
	19. CONTRACTOR SHALL COMPLY WITH THE OWNER'S ENVIRONMENTAL ENGINEER ON ALL METHODS AND PROVISIONS FOR ALL EXCAVATION ACTIVITIES INCLUDING SOIL DISPOSAL. ALL BACKFILL MATERIALS TO BE PROVIDED BY THE CONTRACTOR.

SITE DIRECTIONS	
<b>FROM:</b> 35 GRIFFIN ROAD SOUTH BLOOMFIELD, CT 06002	<b>TO:</b> 75 WELLS ROAD WETHERSFIELD, CT 06109
1. HEAD NORTH ON GRIFFIN ROAD S. TOWARD HARTMAN RD.	0.30 MI.
2. TAKE THE 2ND RIGHT ONTO DAY HILL RD.	0.14 MI.
3. TAKE THE 1ST RIGHT ONTO BLUE HILLS AVENUE EXT/CT-187	1.89 MI.
4. TURN LEFT ONTO CT-305/OLD WINDSOR RD.	2.33 MI.
5. MERGE ONTO I-91 S TOWARD HARTFORD	8.33 MI.
6. MERGE ONTO US-5 S/CT-15 S via EXIT 28 TOWARD WETHERSFIELD/NEWINGTON/BERLIN TPKE	0.97 MI.
7. MERGE ON SILAS DEANE HWY/CT-99 S via EXIT 85 TOWARD ROCKY HILL/WETHERSFIELD	1.71 MI.
8. TURN RIGHT ONTO WELLS RD/CT-175	0.11 MI.
9. 75 WELLS RD, WETHERSFIELD, CT 06109-3050, 75 WELLS RD IS ON THE RIGHT	



PROJECT SUMMARY	
1. THE PROPOSED SCOPE OF WORK CONSISTS OF A MODIFICATION TO THE EXISTING UNMANNED TELECOMMUNICATIONS FACILITY INCLUDING THE FOLLOWING:	
A.	INSTALL (1) NEW 25 KW DIESEL FUELED BACK-UP AC GENERATOR ON A PROPOSED 10' x 4' CONCRETE PAD
B.	INSTALL (1) 200A AUTOMATIC TRANSFER SWITCH.

PROJECT INFORMATION	
SITE NAME:	AT&T WETHERSFIELD MONOPOLE
SITE ID:	CTHA506A
SITE ADDRESS:	75 WELLS ROAD WETHERSFIELD, CT 06109
APPLICANT:	T-MOBILE NORTHEAST, LLC 35 GRIFFIN ROAD SOUTH BLOOMFIELD, CT 06002
CONTACT PERSON:	DAN REID (PROJECT MANAGER) TRANSCEND WIRELESS, LLC (203) 592-8291
ENGINEER OF RECORD:	CEN TEK ENGINEERING, INC. 63-2 NORTH BRANFORD RD. BRANFORD, CT 06405  CARLO F. CENTORE, PE (203) 488-0580 EXT. 122
PROJECT COORDINATES:	LATITUDE: 41°-42'-21.07" N LONGITUDE: 72°-39'-48.26" W GROUND ELEVATION: ±74' AMSL  SITE COORDINATES AND GROUND ELEVATION REFERENCED FROM GOOGLE EARTH.

SHEET INDEX		
SHT. NO.	DESCRIPTION	REV.
T-1	TITLE SHEET	0
N-1	GENERAL NOTES AND SPECIFICATIONS	0
C-1	EQUIPMENT LAYOUT PLANS AND COMPOUND PLAN	0
C-2	TYPICAL EQUIPMENT DETAILS	0
E-1	CONDUIT ROUTING AND RISER DIAGRAM	0
E-2	ELECTRICAL SPECIFICATIONS	0

PROFESSIONAL ENGINEER SEAL	CONSTRUCTION DRAWINGS - ISSUED FOR CONSTRUCTION
	DATE: 09/12/21
	SCALE: AS NOTED
	JOB NO. 21003.30
T-MOBILE NORTHEAST LLC AT&T WETHERSFIELD MONOPOLE SITE ID: CTHA506A 75 WELLS ROAD WETHERSFIELD, CT 06109	TITLE SHEET
	T-1
	Sheet No. 1 of 6



**NOTES AND SPECIFICATIONS**

**DESIGN BASIS:**

GOVERNING CODE: 2015 INTERNATIONAL BUILDING (IBC) AS MODIFIED BY THE 2018 CONNECTICUT STATE BUILDING CODE.

- DESIGN CRITERIA:
  - RISK CATEGORY III (BASED ON IBC TABLE 1604.5)
  - NOMINAL DESIGN SPEED (OTHER STRUCTURE): 97 MPH ( $V_{99d}$ ) (EXPOSURE C/ IMPORTANCE FACTOR 1.0 BASED ON ASCE 7-10).

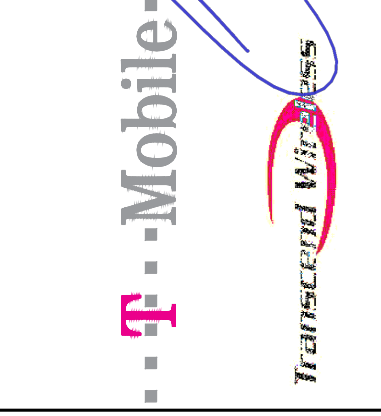
**SITE NOTES**

- THE CONTRACTOR SHALL CALL UTILITIES PRIOR TO THE START OF CONSTRUCTION.
- ACTIVE EXISTING UTILITIES, WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES. THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY, PRIOR TO PROCEEDING, SHOULD ANY UNCOVERED EXISTING UTILITY PRECLUDE COMPLETION OF THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
- THE AREAS OF THE COMPOUND DISTURBED BY THE WORK SHALL BE RETURNED TO THEIR ORIGINAL CONDITION.
- CONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, SHALL BE IN CONFORMANCE WITH THE LOCAL GUIDELINES FOR EROSION AND SEDIMENT CONTROL.
- IF ANY FIELD CONDITIONS EXIST WHICH PRECLUDE COMPLIANCE WITH THE DRAWINGS, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER AND SHALL PROCEED WITH AFFECTED WORK AFTER CONFLICT IS SATISFACTORILY RESOLVED.

**GENERAL NOTES**

- ALL WORK SHALL BE IN ACCORDANCE WITH THE 2015 INTERNATIONAL BUILDING CODE AS MODIFIED BY THE 2018 CONNECTICUT SUPPLEMENT, INCLUDING THE TIA/EIA-222 REVISION "G" "STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWERS AND SUPPORTING STRUCTURES." 2017 CONNECTICUT FIRE SAFETY CODE, NATIONAL ELECTRICAL CODE AND LOCAL CODES.
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- CONTRACTOR SHALL FURNISH ALL MATERIAL, LABOR AND EQUIPMENT TO COMPLETE THE WORK AND FURNISH A COMPLETED JOB ALL IN ACCORDANCE WITH LOCAL AND STATE GOVERNING AUTHORITIES AND OTHER AUTHORITIES HAVING LAWFUL JURISDICTION OVER THE WORK.
- CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS AND ALL INSPECTIONS REQUIRED AND SHALL ALSO PAY FEES REQUIRED FOR THE GENERAL CONSTRUCTION, PLUMBING, ELECTRICAL AND HVAC. PERMITS SHALL BE PAID FOR BY THE RESPECTIVE SUBCONTRACTORS.
- CONTRACTOR SHALL MAINTAIN A CURRENT SET OF DRAWINGS AND SPECIFICATIONS ON SITE AT ALL TIMES AND INSURE DISTRIBUTION OF NEW DRAWINGS TO SUBCONTRACTORS AND OTHER RELEVANT PARTIES AS SOON AS THEY ARE MADE AVAILABLE. ALL OLD DRAWINGS SHALL BE MARKED VOID AND REMOVED FROM THE CONTRACT AREA. THE CONTRACTOR SHALL FURNISH AN "AS-BUILT" SET OF DRAWINGS TO OWNER UPON COMPLETION OF PROJECT.
- LOCATION OF EQUIPMENT AND WORK SUPPLIED BY OTHERS THAT IS DIAGRAMMATICALLY INDICATED ON THE DRAWINGS, SHALL BE DETERMINED BY THE CONTRACTOR. THE CONTRACTOR SHALL DETERMINE LOCATIONS AND DIMENSIONS SUBJECT TO STRUCTURAL CONDITIONS AND WORK OF THE SUBCONTRACTORS.
- THE CONTRACTOR IS SOLELY RESPONSIBLE TO DETERMINE CONSTRUCTION PROCEDURE AND SEQUENCE, AND TO ENSURE THE SAFETY OF THE EXISTING STRUCTURES AND IT'S COMPONENT PARTS DURING CONSTRUCTION. THIS INCLUDES THE ADDITION OF WHATEVER SHORING, BRACING, UNDERPINNING, ETC. THAT MAY BE NECESSARY.
- DRAWINGS INDICATE THE MINIMUM STANDARDS, BUT IF ANY WORK SHOULD BE INDICATED TO BE SUBSTANDARD TO ANY ORDINANCES, LAWS, CODES, RULES, OR REGULATIONS BEARING ON THE WORK, THE CONTRACTOR SHALL INCLUDE IN HIS WORK AND SHALL EXECUTE THE WORK CORRECTLY IN ACCORDANCE WITH SUCH ORDINANCES, LAWS, CODES, RULES OR REGULATIONS WITH NO INCREASE IN COSTS.
- ALL UTILITY WORK SHALL BE IN ACCORDANCE WITH LOCAL UTILITY COMPANY REQUIREMENTS AND SPECIFICATIONS.
- ALL EQUIPMENT AND PRODUCTS PURCHASED ARE TO BE REVIEWED BY CONTRACTOR AND ALL APPLICABLE SUBCONTRACTORS FOR ANY CONDITION PER MFR.'S RECOMMENDATIONS. CONTRACTOR TO SUPPLY THESE ITEMS AT NO COST TO OWNER OR CONSTRUCTION MANAGER.
- ANY AND ALL ERRORS, DISCREPANCIES, AND "MISSED" ITEMS, ARE TO BE BROUGHT TO THE ATTENTION OF THE SITE OWNER'S CONSTRUCTION MANAGER DURING THE BIDDING PROCESS BY THE CONTRACTOR. ALL THESE ITEMS ARE TO BE INCLUDED IN THE BID. NO 'EXTRA' WILL BE ALLOWED FOR MISSED ITEMS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ON-SITE SAFETY FROM THE TIME THE JOB IS AWARDED UNTIL ALL WORK IS COMPLETE AND ACCEPTED BY THE OWNER.
- CONTRACTOR TO REVIEW ALL SHOP DRAWINGS AND SUBMIT COPY TO ENGINEER FOR APPROVAL. DRAWINGS MUST BEAR THE CHECKER'S INITIALS BEFORE SUBMITTING TO THE CONSTRUCTION MANAGER FOR REVIEW.
- THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS, ELEVATIONS, ANGLES, AND EXISTING CONDITIONS AT THE SITE, PRIOR TO FABRICATION AND/OR INSTALLATION OF ANY WORK IN THE CONTRACT AREA.
- COORDINATION, LAYOUT, FURNISHING AND INSTALLATION OF CONDUIT AND ALL APPURTENANCES REQUIRED FOR PROPER INSTALLATION OF ELECTRICAL AND TELECOMMUNICATION SERVICE SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- ALL DAMAGE CAUSED TO ANY EXISTING STRUCTURE SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR WILL BE HELD LIABLE FOR ALL REPAIRS REQUIRED FOR EXISTING STRUCTURES IF DAMAGED DURING CONSTRUCTION ACTIVITIES.
- THE CONTRACTOR SHALL CONTACT "DIG SAFE" (DIAL 811) AT LEAST 48 HOURS PRIOR TO ANY EXCAVATIONS. ALL UTILITIES SHALL BE IDENTIFIED AND CLEARLY MARKED. CONTRACTOR SHALL MAINTAIN AND PROTECT MARKED UTILITIES THROUGHOUT PROJECT COMPLETION.
- CONTRACTOR SHALL COMPLY WITH OWNER'S ENVIRONMENTAL ENGINEER ON ALL METHODS AND PROVISIONS FOR ALL EXCAVATION ACTIVITIES INCLUDING SOIL DISPOSAL. ALL BACKFILL MATERIALS TO BE PROVIDED BY THE CONTRACTOR.
- THE COUNTY/CITY/TOWN WILL MAKE PERIODIC FIELD OBSERVATION AND INSPECTIONS TO MONITOR THE INSTALLATION, MATERIALS, WORKMANSHIP AND EQUIPMENT INCORPORATED INTO THE PROJECT TO ENSURE COMPLIANCE WITH THE DESIGN PLANS, SPECIFICATIONS, CONTRACT DOCUMENTS AND APPROVED SHOP DRAWINGS.
- THE COUNTY/CITY/TOWN MUST BE NOTIFIED (2) WORKING DAYS PRIOR TO CONCEALMENT/BURIAL OF ANY SYSTEM OR MATERIAL THAT WILL PREVENT THE DIRECT INSPECTION OF MATERIALS, METHODS OR WORKMANSHIP. EXAMPLES OF THESE PROCESSES ARE BACKFILLING A GROUND RING OR TOWER FOUNDATION, POURING TOWER FOUNDATIONS, BURYING GROUND RODS, PLATES OR GRIDS, ETC. THE CONTRACTOR MAY PROCEED WITH THE SCHEDULED PROCESS (2) WORKING DAYS AFTER PROVIDING NOTICE UNLESS NOTIFIED OTHERWISE BY THE COUNTY/CITY/TOWN.

REV.	0	10/06/21	RTS	TJR	CONSTRUCTION DRAWINGS - ISSUED FOR CONSTRUCTION
					DESCRIPTION
					DATE
					DRAWN BY/CHK'D BY



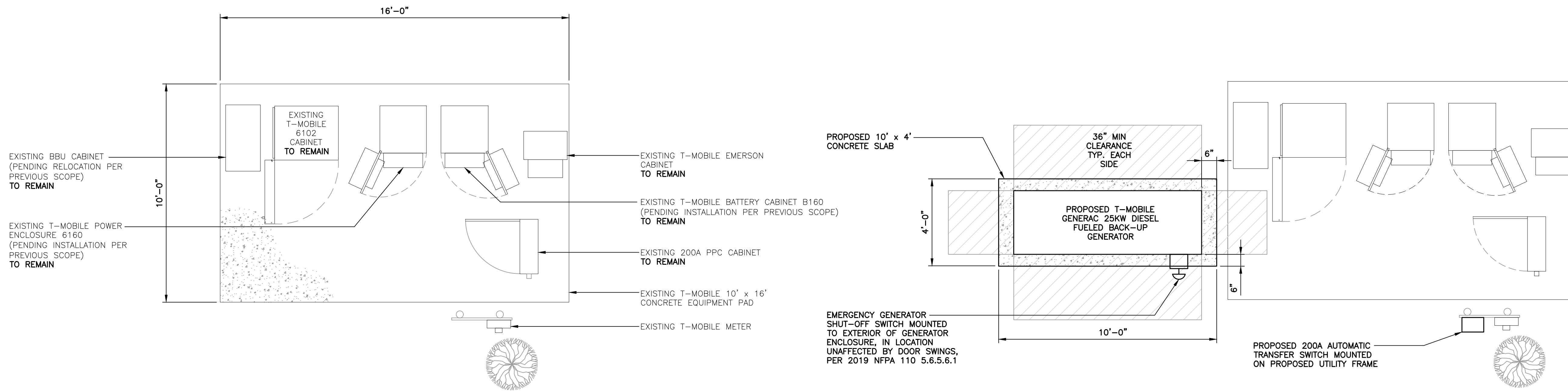
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**T-MOBILE NORTHEAST LLC**  
**AT&T WETHERSFIELD MONOPOLE**  
 SITE ID: CTHA506A  
 75 WELLS ROAD  
 WETHERSFIELD, CT 06109

DATE: 09/12/21  
 SCALE: AS NOTED  
 JOB NO. 21003.30

GENERAL NOTES AND SPECIFICATIONS

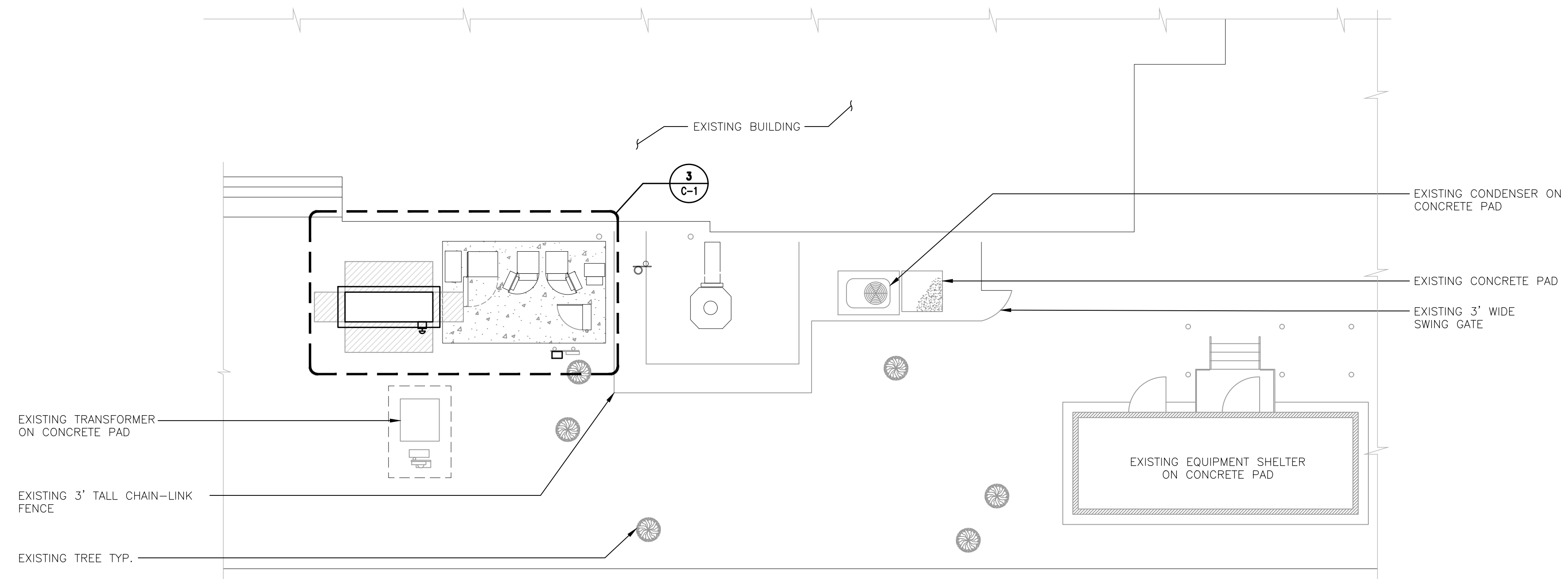
**N-1**  
 Sheet No. 2 of 6



**2** EQUIPMENT PLAN - EXISTING  
C-1 SCALE: 1" = 5' APPROXIMATE NORTH

**3** EQUIPMENT PLAN - PROPOSED  
C-1 SCALE: 1" = 5' APPROXIMATE NORTH

NOTE: OVERHEAD ICE BRIDGE NOT SHOWN FOR CLARITY



**1** PARTIAL COMPOUND PLAN - PROPOSED  
C-1 SCALE: 1" = 5' APPROXIMATE NORTH

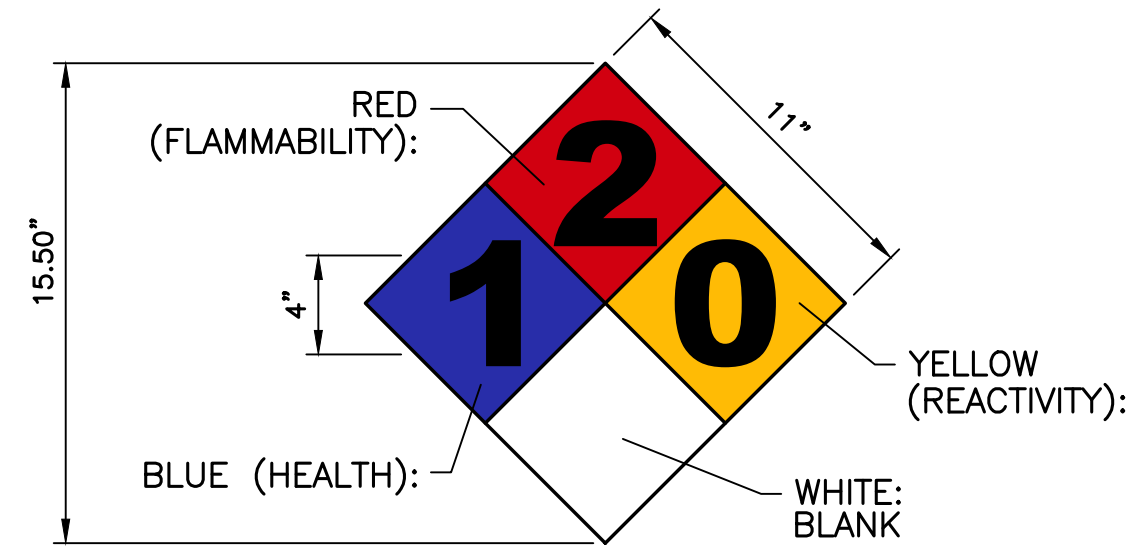
PROFESSIONAL ENGINEER SEAL	CONSTRUCTION DRAWINGS - ISSUED FOR CONSTRUCTION
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CENTER engineering Centered on Solutions	
(203) 488-0580 (203) 488-8587 Fax 65-2 North Branford Road Branford, CT 06405 www.CenterEng.com	
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AT&T WETHERSFIELD MONOPOLE	
SITE ID: CTHA506A	
75 WELLS ROAD	
WETHERSFIELD, CT 06109	
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JOB NO. 21003.30	
EQUIPMENT LAYOUT PLANS AND COMPOUND PLAN	
<b>C-1</b>	
Sheet No. 3 of 6	





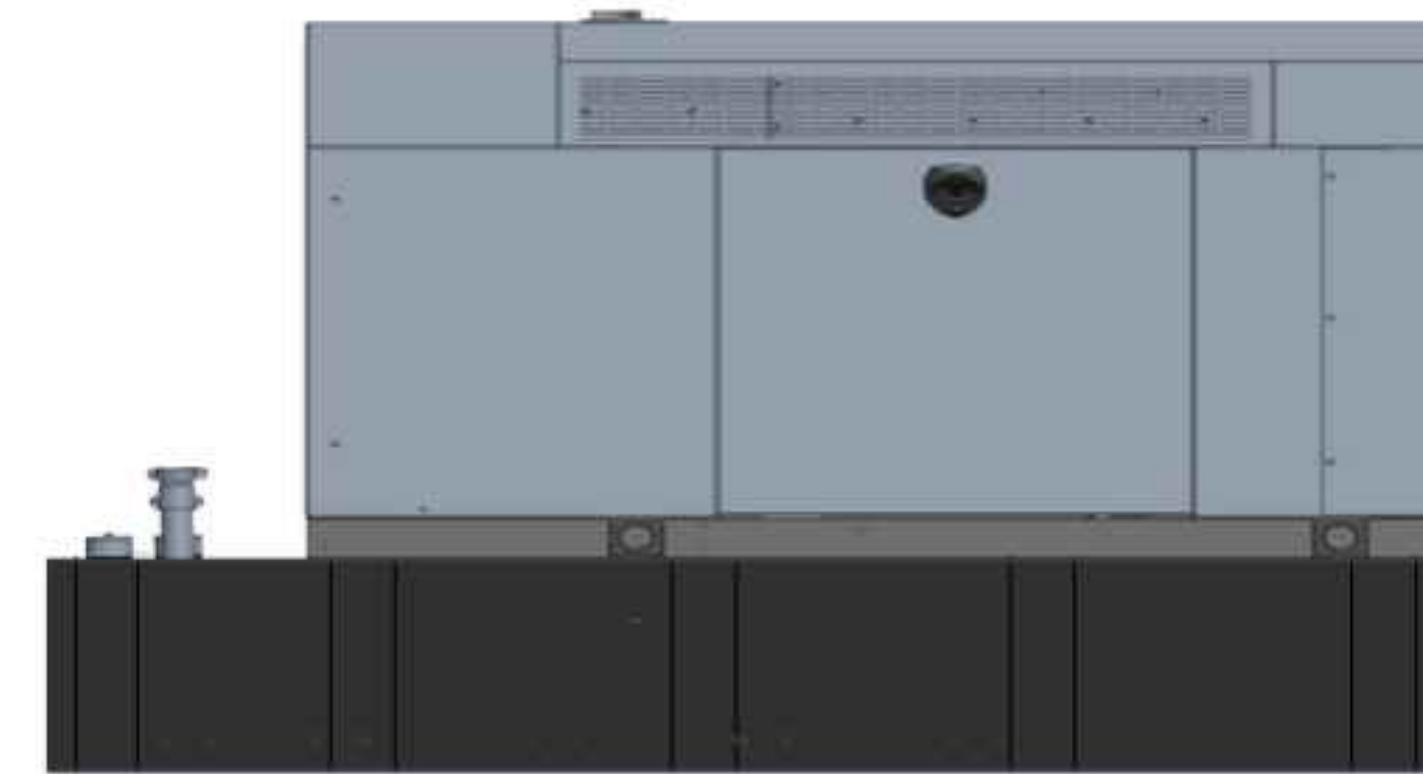
AUTOMATIC TRANSFER SWITCH					
EQUIPMENT	PHASE	VOLTAGE	ENCLOSURE	AMP	DIMENSIONS
MAKE: GENERAC MODEL: RXSC200A3	1-PHASE	120/240	NEMA-3R	200	17.3"L x 12.5"W

**1 AUTOMATIC TRANSFER SWITCH DETAIL**  
SCALE: NOT TO SCALE



SIGN NAME: REGULATORY, NFPA 704 HAZARD ID  
 DESCRIPTION: MOUNT ON GENERATOR ACCESS DOOR. CONSULT WITH GENERATOR MANUFACTURER MSDS SHEET FOR BLUE AND RED POSITIONS  
 NOTES:  
 1) SIGNS EXPOSED TO WEATHER SHOULD BE CHECKED ANNUALLY FOR READABILITY.  
 2) SIGNS MUST BE UPDATED IF CHEMICAL STORAGE OR HAZARD INFORMATION FOR THE LOCATION CHANGES.  
 3) THE GC MUST REVIEW WITH LOCAL JURISDICTION WHEN FILING FOR PERMITS, AS EACH JURISDICTION MAY HAVE DIFFERENT REQUIREMENTS AND COMPLY WITH POSTING REQUIREMENTS OR DIRECTIVES FROM THE LOCAL JURISDICTION.

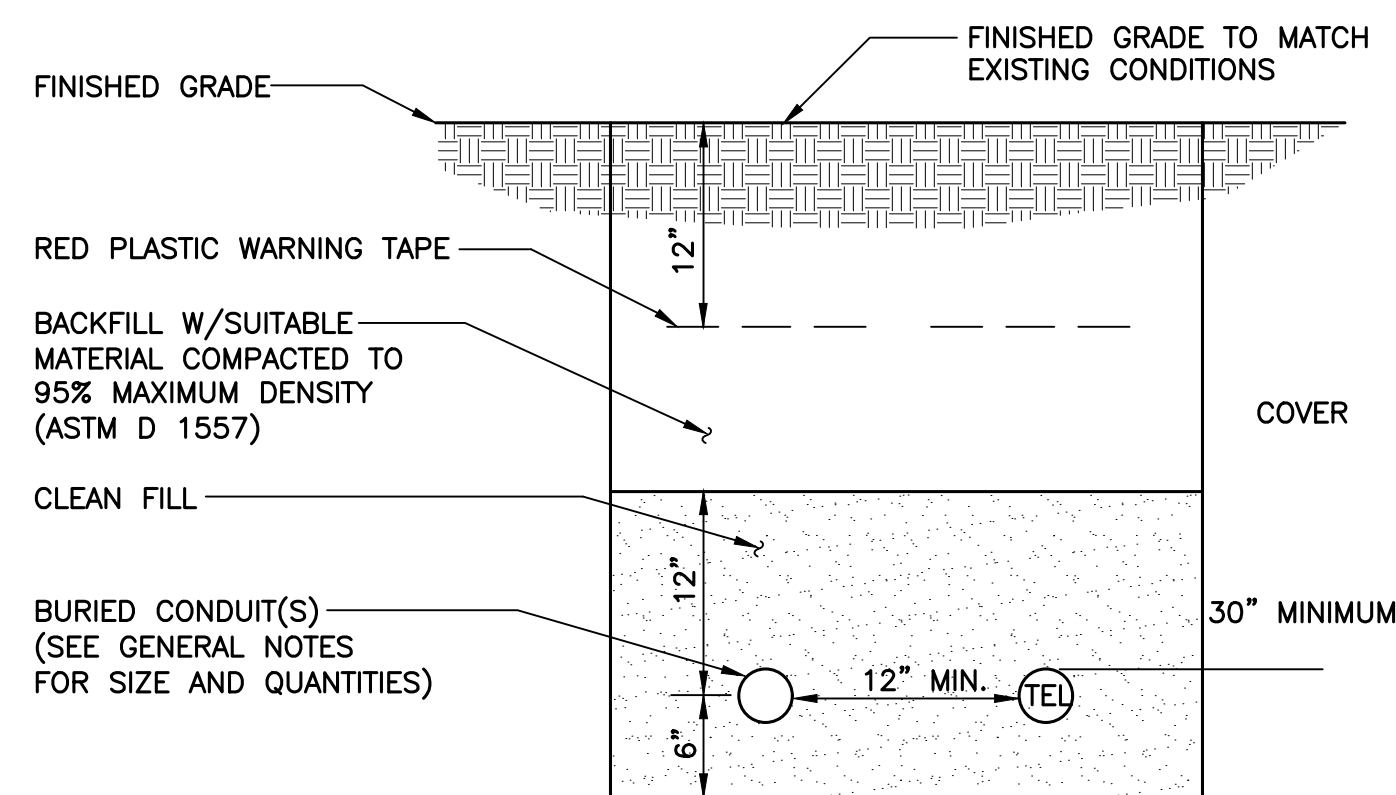
**2 NFPA 704 DIAMOND SIGNAGE DETAIL**  
SCALE: NOT TO SCALE



BACKUP POWER GENERATOR						
EQUIPMENT	POWER GENERATED	FUEL	MODEL NUMBER	FUEL TANK SIZE (GAL)	DIMENSIONS	WEIGHT
MAKE: GENERAC MODEL: RD025	25 KW, AC	DIESEL	7192-0	240	103.4"L x 35.0"W x 91.7"H	2123 LBS.

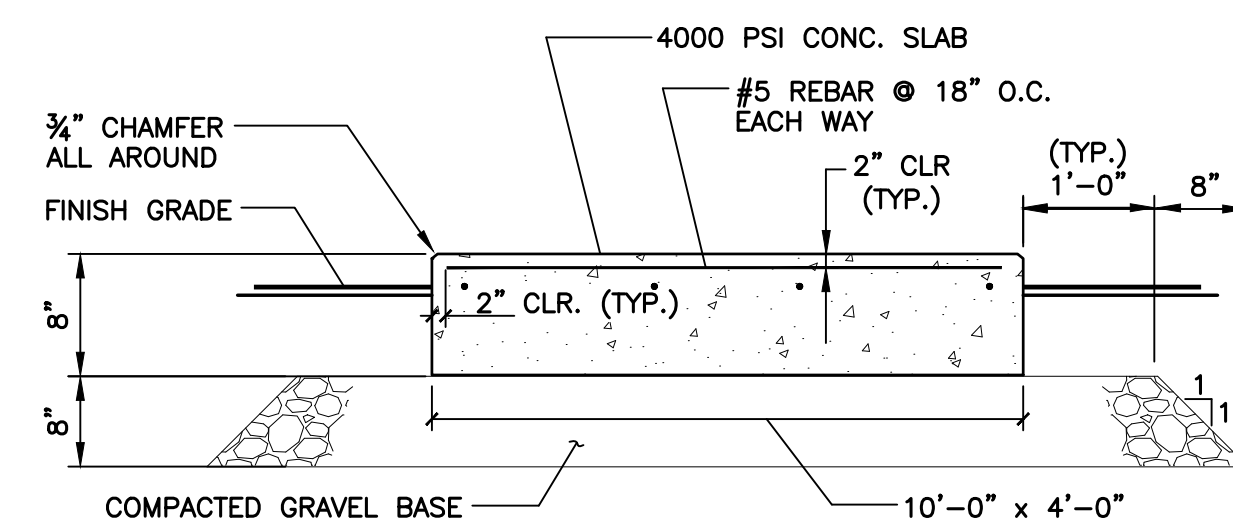
NOTES:  
 1. FUEL LEVEL/SECONDARY CONTAINMENT SHALL BE ALARMED AND IN COMMUNICATION WITH T-MOBILE'S NOC.  
 2. CONTRACTOR TO COORDINATE FINAL EQUIPMENT MODEL SELECTION AND ALL OPTIONAL FEATURES WITH T-MOBILE'S CONSTRUCTION MANAGER PRIOR TO ORDERING.

**3 PROPOSED GENERATOR DETAIL**  
SCALE: NOT TO SCALE



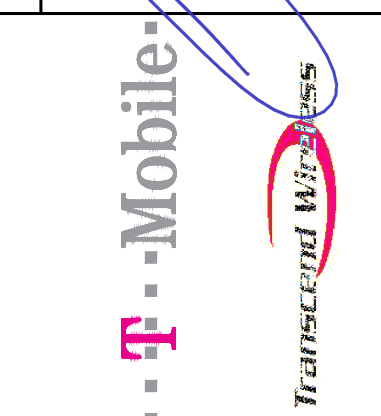
- NOTES:  
 1. THE CLEAN FILL SHALL PASS THROUGH A 3/8" MESH SCREEN AND SHALL NOT CONTAIN SHARP STONES. OTHER BACKFILL SHALL NOT CONTAIN ASHES, CINDERS, SHELLS, FROZEN MATERIAL, LOOSE DEBRIS OR STONES LARGER THAN 2" IN MAXIMUM DIMENSION.  
 2. WHERE EXISTING UTILITIES ARE LIKELY TO BE ENCOUNTERED, CONTRACTOR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

**4 TYPICAL ELECTRICAL/TEL TRENCH DETAIL**  
SCALE: NOT TO SCALE



**5 TYPICAL CONCRETE PAD DETAIL**  
SCALE: NOT TO SCALE

REV.	DATE	BY	CHK'D BY	DESCRIPTION
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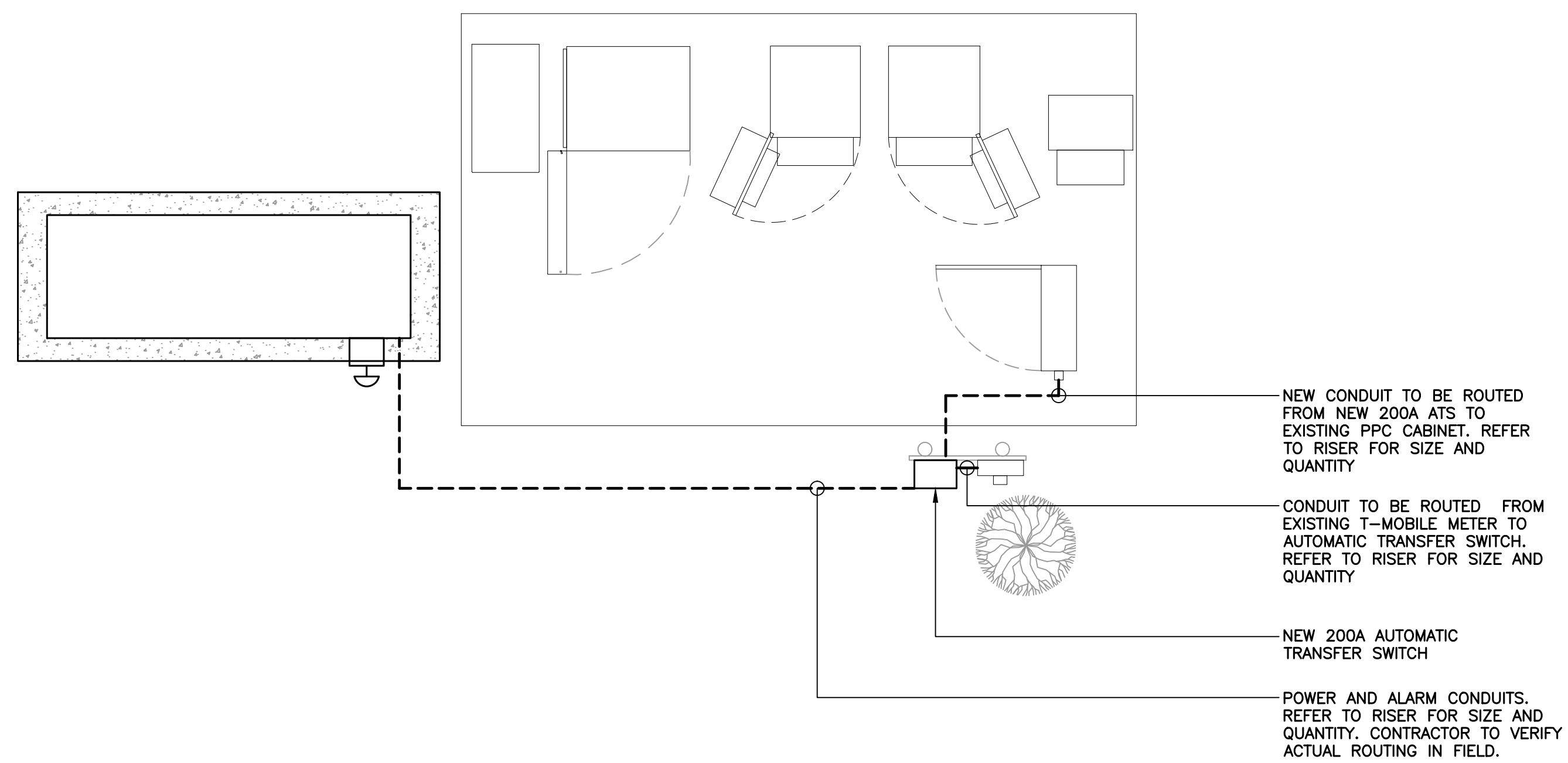
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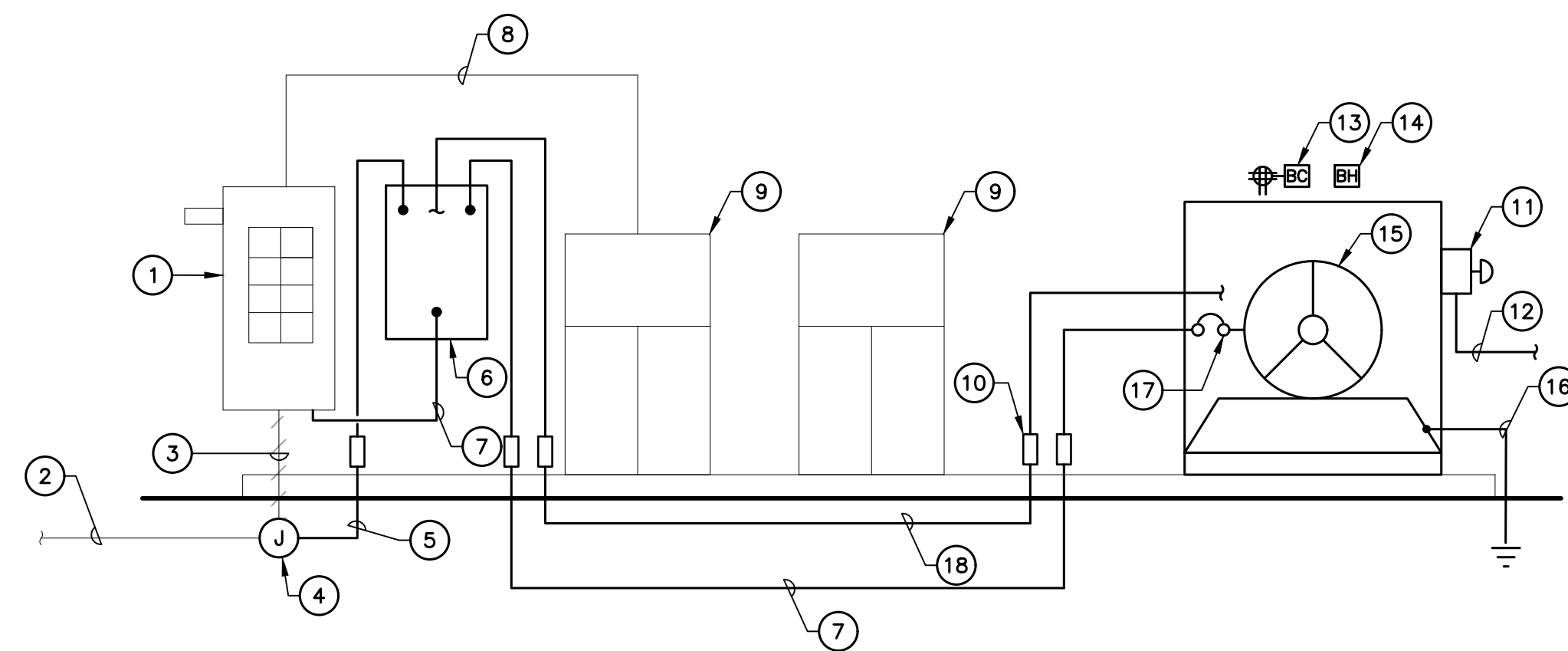
TYPICAL EQUIPMENT DETAILS

**C-2**  
 Sheet No. 4 of 6



**1 ELECTRICAL CONDUIT ROUTING PLAN**  
E-1 SCALE: 1/4" = 1'

RISER DIAGRAM NOTES	RISER DIAGRAM NOTES
<ul style="list-style-type: none"> <li>① EXISTING PPC CABINET TO REMAIN.</li> <li>② EXISTING POWER CONDUIT AND CONDUCTORS PREVIOUSLY SERVING EXISTING PPC.</li> <li>③ SECTION OF CONDUIT AND CONDUCTORS TO BE REMOVED.</li> <li>④ JUNCTION BOX SIZED PER NEC.</li> <li>⑤ EXTEND EXISTING CONDUITS AND CONDUCTORS TO NEW ATS.</li> <li>⑥ NEW 200A, 2 SOURCE AUTOMATIC TRANSFER SWITCH.</li> <li>⑦ (3) #3/0 AWG, (1) #6 AWG GROUND, 2-1/2" CONDUIT.</li> <li>⑧ EXISTING CONDUITS AND CONDUCTORS TO REMAIN</li> <li>⑨ EXISTING EQUIPMENT CABINETS TO REMAIN.</li> <li>⑩ EXPANSION COUPLING TYPICAL.</li> </ul>	<ul style="list-style-type: none"> <li>⑪ REMOTE GENERATOR SHUT OFF SWITCH IN BREAK GLASS ENCLOSURE MOUNTED TO EXTERIOR OF GENERATOR ENCLOSURE PER 2019 NFPA 110 5.6.5.6.1.</li> <li>⑫ 3/4" CONDUIT AND CONDUCTORS REQUIRED FOR PROPER OPERATION OF EMERGENCY GENERATOR SHUT OFF SWITCH.</li> <li>⑬ GENERATOR BATTERY CHARGER AND CONVENIENCE GFCI OUTLET WIRED TO EXISTING PANEL. OUTLET TO BE MOUNTED IN WEATHERPROOF ENCLOSURE.</li> <li>⑭ GENERATOR BLOCK HEATER WIRED TO EXISTING PANEL SERVING T-MOBILE EQUIPMENT.</li> <li>⑮ EMERGENCY BACK UP GENERATOR.</li> <li>⑯ GENERATOR GROUNDING PER NEC AND MANUFACTURER'S REQUIREMENTS. BOND TO EXISTING GROUNDING SYSTEM. (MINIMUM OF (1) #2 AWG GROUND)</li> <li>⑰ GENERATOR OUTPUT CIRCUIT BREAKER.</li> <li>⑱ 1" CONDUIT FOR GENERATOR CONTROL AND SIGNAL WIRING.</li> </ul>



**2 ELECTRICAL RISER DIAGRAM**  
E-1 NOT TO SCALE

			<p><b>T-MOBILE NORTHEAST LLC</b> AT&amp;T WETHERSFIELD MONOPOLE SITE ID: CTHA506A 75 WELLS ROAD WETHERSFIELD, CT 06109</p>	<p>DATE: 09/12/21 SCALE: AS NOTED JOB NO. 21003.30 ELECTRICAL CONDUIT ROUTING AND RISER DIAGRAM <b>E-1</b></p>	<p>REV. 0 DATE 10/06/21 DRAWN BY: RTS CHK'D BY: TJR CONSTRUCTION DRAWINGS - ISSUED FOR CONSTRUCTION DESCRIPTION</p>
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ELECTRICAL SPECIFICATIONS

SECTION 16010

1.02. GENERAL REQUIREMENTS

- A. THE ENTIRE ELECTRICAL INSTALLATION SHALL BE MADE IN STRICT ACCORDANCE WITH ALL LOCAL, STATE AND NATIONAL CODES AND REGULATIONS WHICH MAY APPLY AND NOTHING IN THE DRAWINGS OR SPECIFICATIONS SHALL BE INTERPRETED AS AN INFRINGEMENT OF SUCH CODES OR REGULATIONS.
B. THE ELECTRICAL CONTRACTOR IS TO BE RESPONSIBLE FOR THE COMPLETE INSTALLATION AND COORDINATION OF THE ENTIRE ELECTRICAL SERVICE. ALL ACTIVITIES TO BE COORDINATED THROUGH OWNERS REPRESENTATIVE, DESIGN ENGINEER AND OTHER AUTHORITIES HAVING JURISDICTION OF TRADES.
C. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND PAY ALL FEES THAT MAY BE REQUIRED FOR THE ELECTRICAL WORK AND FOR THE SCHEDULING OF ALL INSPECTIONS THAT MAY BE REQUIRED BY THE LOCAL AUTHORITY.
D. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION WITH THE BUILDING OWNER FOR NEW AND/OR DEMOLITION WORK INVOLVED.
E. NO MATERIAL OTHER THAN THAT CONTAINED IN THE "LATEST LIST OF ELECTRICAL FITTINGS" APPROVED BY THE UNDERWRITERS' LABORATORIES, SHALL BE USED IN ANY PART OF THE WORK. ALL MATERIAL FOR WHICH LABEL SERVICE HAS BEEN ESTABLISHED SHALL BEAR THE U.L. LABEL.
F. THE CONTRACTOR SHALL GUARANTEE ALL NEW WORK FOR A PERIOD OF ONE YEAR FROM THE ACCEPTANCE DATE BY THE OWNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING WARRANTIES FROM ALL EQUIPMENT MANUFACTURERS FOR SUBMISSION TO THE OWNER.
G. DRAWINGS INDICATE GENERAL ARRANGEMENT OF WORK INCLUDED IN CONTRACT. CONTRACTOR SHALL, WITHOUT EXTRA CHARGE, MAKE MODIFICATIONS TO THE LAYOUT OF THE WORK TO PREVENT CONFLICT WITH WORK OF OTHER TRADES AND FOR THE PROPER INSTALLATION OF WORK. CHECK ALL DRAWINGS AND VISIT JOB SITE TO VERIFY SPACE AND TYPE OF EXISTING CONDITIONS IN WHICH WORK WILL BE DONE, PRIOR TO SUBMITTAL OF BID.
H. THE ELECTRICAL CONTRACTOR SHALL SUPPLY THREE (3) COMPLETE SETS OF APPROVED DRAWINGS, ENGINEERING DATA SHEETS, MAINTENANCE AND OPERATING INSTRUCTION MANUALS FOR ALL SYSTEMS AND THEIR RESPECTIVE EQUIPMENT. THESE MANUALS SHALL BE INSERTED IN VINYL COVERED 3-RING BINDERS AND TURNED OVER TO OWNER'S REPRESENTATIVE ONE (1) WEEK PRIOR TO FINAL PUNCH LIST.
I. ALL WORK SHALL BE INSTALLED IN A NEAT AND WORKMAN LIKE MANNER AND WILL BE SUBJECT TO THE APPROVAL OF THE OWNER'S REPRESENTATIVE.
J. ALL EQUIPMENT AND MATERIALS TO BE INSTALLED SHALL BE NEW, UNLESS OTHERWISE NOTED.
K. BEFORE FINAL PAYMENT, THE CONTRACTOR SHALL PROVIDE A COMPLETE SET OF PRINTS (AS-BUILTS), LEGIBLY MARKED IN RED PENCIL TO SHOW ALL CHANGES FROM THE ORIGINAL PLANS.
L. PROVIDE TEMPORARY POWER AND LIGHTING IN WORK AREAS AS REQUIRED.
M. SHOP DRAWINGS:
1. CONTRACTOR SHALL SUBMIT SIX (6) COPIES OF SHOP DRAWINGS ON ALL EQUIPMENT AND MATERIALS PROPOSED FOR USE ON THIS PROJECT, GIVING ALL DETAILS, WHICH INCLUDE DIMENSIONS, CAPACITIES, ETC.
2. CONTRACTOR SHALL SUBMIT SIX (6) COPIES OF ALL TEST REPORTS CALLED FOR IN THE SPECIFICATIONS AND DRAWINGS.
N. ENTIRE ELECTRICAL INSTALLATION SHALL BE IN ACCORDANCE WITH OWNER'S SPECIFICATIONS, AND REQUIREMENTS OF ALL LOCAL AUTHORITIES HAVING JURISDICTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE WITH APPROPRIATE INDIVIDUALS TO OBTAIN ALL SUCH SPECIFICATIONS AND REQUIREMENTS. NOTHING CONTAINED IN, OR OMITTED FROM, THESE DOCUMENTS SHALL RELIEVE CONTRACTOR FROM THIS OBLIGATION.

SECTION 16111

1.01. CONDUIT

- A. MINIMUM CONDUIT SIZE FOR BRANCH CIRCUITS, LOW VOLTAGE CONTROL AND ALARM CIRCUITS SHALL BE 3/4". CONDUITS SHALL BE PROPERLY FASTENED AS REQUIRED BY THE N.E.C.
B. THE INTERIOR OF RACEWAYS/ENCLOSURES INSTALLED UNDERGROUND SHALL BE CONSIDERED TO BE WET LOCATION, INSULATED CONDUCTORS SHALL BE LISTED FOR USE IN WET LOCATIONS. PROVIDE WEATHERPROOF CONSTRUCTION IN WET LOCATIONS.
C. CONDUIT INSTALLED UNDERGROUND SHALL BE INSTALLED TO MEET MINIMUM COVER REQUIREMENTS OF TABLE 300.5.
D. PROVIDE RIGID GALVANIZED STEEL CONDUIT (RMC) FOR THE FIRST 10 FOOT SECTION WHEN LEAVING A BUILDING OR SECTIONS PASSING THROUGH FLOOR SLABS
E. ONLY LISTED PVC CONDUIT AND FITTINGS ARE PERMITTED FOR THE INSTALLATION OF ELECTRICAL CONDUCTORS, SUITABLE FOR UNDERGROUND APPLICATIONS.

Table with 4 columns: CONDUIT TYPE, NEC REFERENCE, APPLICATION, MIN. BURIAL DEPTH (PER NEC TABLE 300.5) 3. Rows include EMT, RMC, RIGID GALV. STEEL, PVC, SCHEDULE 40, PVC, SCHEDULE 80, LIQUID TIGHT FLEX. METAL, FLEX. METAL.

1 PHYSICAL DAMAGE IS SUBJECT TO THE AUTHORITY HAVING JURISDICTION.
2 UNDERGROUND CONDUIT INSTALLED UNDER ROADS, HIGHWAYS, DRIVEWAYS, PARKING LOTS SHALL HAVE MINIMUM DEPTH OF 24".
3 WHERE SOLID ROCK PREVENTS COMPLIANCE WITH MINIMUM COVER DEPTHS, WIRING SHALL BE INSTALLED IN PERMITTED RACEWAY FOR DIRECT BURIAL. THE RACEWAY SHALL BE COVERED BY A MINIMUM OF 2" OF CONCRETE EXTENDING DOWN TO ROCK.

SECTION 16123

1.01. CONDUCTORS

- A. ALL CONDUCTORS SHALL BE TYPE THWN (INT. APPLICATION) AND XHHW (EXT. APPLICATION), 75 DEGREE C, 600 VOLT INSULATION, SOFT ANNEALED STRANDED COPPER. #10 AWG AND SMALLER SHALL BE SPLICED USING ACCEPTABLE SOLDERLESS PRESSURE CONNECTORS. #8 AWG AND LARGER SHALL BE SPLICED USING COMPRESSION SPLIT-BOLT TYPE CONNECTORS. #12 AWG SHALL BE THE MINIMUM SIZE CONDUCTOR FOR LINE VOLTAGE BRANCH CIRCUITS. REFER TO PANEL SCHEDULE FOR BRANCH CIRCUIT CONDUCTOR SIZE(S). CONDUCTORS SHALL BE COLOR CODED FOR CONSISTENT PHASE IDENTIFICATION:
120/208/240V 277/480V
LINE COLOR COLOR
A BLACK BROWN
B BROWN ORANGE
C BLUE YELLOW
N CONTINUOUS WHITE GREY
G CONTINUOUS GREEN GREEN WITH YELLOW STRIPE
B. MINIMUM BENDING RADIUS FOR CONDUCTORS SHALL BE 12 TIMES THE LARGEST DIAMETER OF BRANCH CIRCUIT CONDUCTOR.

SECTION 16130

1.01. BOXES

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

SECTION 16140

1.01. WIRING DEVICES

- A. THE FOLLOWING LIST IS PROVIDED TO CONVEY THE QUALITY AND RATING OF WIRING DEVICES WHICH ARE TO BE INSTALLED. A COMPLETE LIST OF ALL DEVICES MUST BE SUBMITTED BEFORE INSTALLATION FOR APPROVAL.
1. 15 MINUTE TIMER SWITCH - INTERMATIC #FF15M (INTERIOR LIGHTS)
2. DUPLEX RECEPTACLE - P&S #2095 (GFCI) SPECIFICATION GRADE
3. SINGLE POLE SWITCH - P&S #CSB20AC2 (20A-120V HARD USE) SPECIFICATION GRADE
4. DUPLEX RECEPTACLE - P&S #5362 (20A-120V HARD USE) SPECIFICATION GRADE
B. PLATES - ALL PLATES USED SHALL BE CORROSION RESISTANT TYPE 304 STAINLESS STEEL. PLATES SHALL BE FROM SAME MANUFACTURER AS SWITCHES AND RECEPTACLES. PROVIDE WEATHERPROOF HOUSING FOR DEVICES LOCATED IN WET LOCATIONS.
C. OTHER MANUFACTURERS OF THE SWITCHES, RECEPTACLES AND PLATES MAY BE SUBMITTED FOR APPROVAL BY THE ENGINEER.

SECTION 16170

1.01. DISCONNECT SWITCHES

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

SECTION 16190

1.01. SEISMIC RESTRAINT

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

SECTION 16195

1.01. LABELING AND IDENTIFICATION NOMENCLATURE FOR ELECTRICAL EQUIPMENT

- A. CONTRACTOR SHALL FURNISH AND INSTALL NON-METALLIC ENGRAVED BACK-LIT NAMEPLATES ON ALL PANELS AND MAJOR ITEMS OF ELECTRICAL EQUIPMENT.
B. LETTERS TO BE WHITE ON BLACK BACKGROUND WITH LETTERS 1-1/2 INCH HIGH WITH 1/4 INCH MARGIN.
C. IDENTIFICATION NOMENCLATURE SHALL BE IN ACCORDANCE WITH OWNER'S STANDARDS.

SECTION 16450

1.01. GROUNDING

- A. ALL NON-CURRENT CARRYING PARTS OF THE ELECTRICAL AND TELEPHONE CONDUIT SYSTEMS SHALL BE MECHANICALLY AND ELECTRICALLY CONNECTED TO PROVIDE AN INDEPENDENT RETURN PATH TO THE EQUIPMENT GROUNDING SOURCES.
B. GROUNDING SYSTEM WILL BE IN ACCORDANCE WITH THE LATEST ACCEPTABLE EDITION OF THE NATIONAL ELECTRICAL CODE AND REQUIREMENTS PER LOCAL INSPECTOR HAVING JURISDICTION.
C. GROUNDING OF PANELBOARDS:
1. PANELBOARD SHALL BE GROUNDED BY TERMINATING THE PANELBOARD FEEDER'S EQUIPMENT GROUND CONDUCTOR TO THE EQUIPMENT GROUND BAR KIT(S) LUGGED TO THE CABINET. ENSURE THAT THE SURFACE BETWEEN THE KIT AND CABINET ARE BARE METAL TO BARE METAL. PRIME AND PAINT OVER TO PREVENT CORROSION.
2. CONDUIT(S) TERMINATING INTO THE PANELBOARD SHALL HAVE GROUNDING TYPE BUSHINGS. THE BUSHINGS SHALL BE BONDED TOGETHER WITH BARE #10 AWG COPPER CONDUCTOR WHICH IN TURN IS TERMINATED INTO THE PANELBOARD'S EQUIPMENT GROUND BAR KIT(S).
D. EQUIPMENT GROUNDING CONDUCTOR:
1. EACH EQUIPMENT GROUND CONDUCTOR SHALL BE SIZED IN ACCORDANCE WITH THE N.E.C. ARTICLE 250-122.
2. THE MINIMUM SIZE OF EQUIPMENT GROUND CONDUCTOR SHALL BE #12 AWG COPPER.
3. EACH FEEDER OR BRANCH CIRCUIT SHALL HAVE EQUIPMENT GROUND CONDUCTOR(S) INSTALLED IN THE SAME RACEWAY(S).
E. CELLULAR GROUNDING SYSTEM:
CONTRACTOR SHALL PROVIDE A CELLULAR GROUNDING SYSTEM WITH THE MAXIMUM AC RESISTANCE TO GROUND OF 10 OHM BETWEEN ANY POINT ON THE GROUNDING SYSTEM AS MEASURED BY 3-POINT GROUNDING TEST. (REFER TO SECTION 16960).
PROVIDE THE CELLULAR GROUNDING SYSTEM AS SPECIFIED ON DRAWINGS, INCLUDING, BUT NOT LIMITED TO:
1. GROUND BARS
2. EXTERIOR GROUNDING (WHERE REQUIRED DUE TO MEASURED AC RESISTANCE GREATER THAN SPECIFIED).
3. ANTENNA GROUND CONNECTIONS AND PLATES.
F. CONTRACTOR, AFTER COMPLETION OF THE COMPLETE GROUNDING SYSTEM BUT PRIOR TO CONCEALMENT/BURIAL OF SAME, SHALL NOTIFY OWNER'S PROJECT ENGINEER WHO WILL HAVE A DESIGN ENGINEER VISIT SITE AND MAKE A VISUAL INSPECTION OF THE GROUNDING GRID AND CONNECTIONS OF THE SYSTEM.
G. ALL EQUIPMENT SHALL BE BONDED TO GROUND AS REQUIRED BY N.E.C., MFG. SPECIFICATIONS, AND OWNER'S SPECIFICATIONS.

SECTION 16470

1.01. DISTRIBUTION EQUIPMENT

- A. REFER TO CONTRACT DRAWINGS FOR DETAILS AND SCHEDULES.

SECTION 16477

1.01. FUSES

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

SECTION 16960

1.01. TESTS BY INDEPENDENT ELECTRICAL TESTING FIRM

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

SECTION 16961

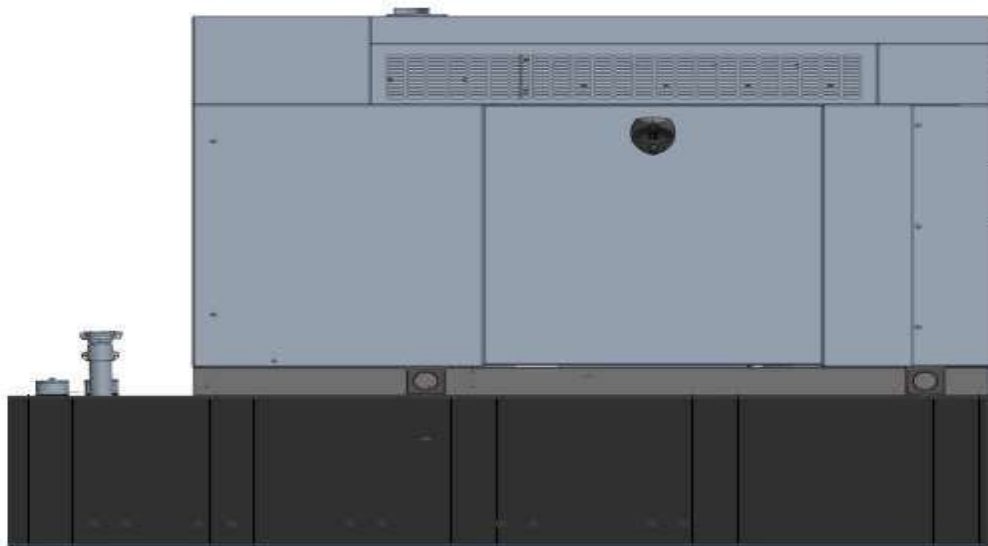
1.01. TESTS BY CONTRACTOR

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

Professional Engineer Seal, T-Mobile logo, CENTEX engineering logo, T-MOBILE NORTHEAST LLC, AT&T WETHERSFIELD MONOPOLE, SITE ID: CTHA506A, 75 WELLS ROAD, WETHERSFIELD, CT 06109, DATE: 09/12/21, SCALE: AS NOTED, JOB NO. 21003.30, ELECTRICAL SPECIFICATIONS, E-2, Sheet No. 6 of 6.

# Generac RD025 Design Document

Diesel, AC, 25kW External Fill Tank Model#7192-0 SKU#33651



The following are responsible for this project document:

Kevin Smith

SR. Engineer (770) 256-3594

Project Design Spec Revision	1.0	Last Date:08/23/2018	5/14/2018
Final doc URL (~Dnnnnn):			
Location	Use the InfoRouter Search (Advanced) putting the Document ID (nnnnn without the D) to find the location of the master document.		
Template URL:	<a href="http://docs.eng.t-mobile.com/InfoRouter/docs/~D423750">http://docs.eng.t-mobile.com/InfoRouter/docs/~D423750</a>	Slightly updated 1/2011	



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# 1 Introduction / Project Summary

## 1.1 Purpose of Project

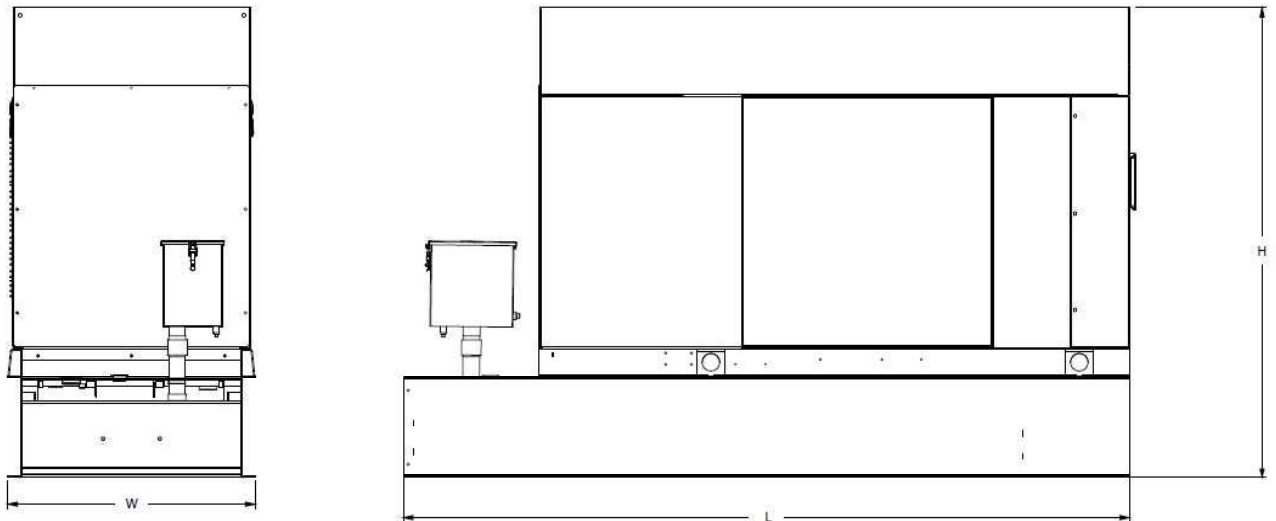
T-Mobile’s nationwide cell site hardening plan is providing a refuellable backup power system capable of powering a site for a minimum of 48 hours before refueling is required. The purpose of this project is to give T-Mobile customers reliable service during power outages and provide a sufficient layer of coverage. This design document is for Generac’s RD025 model#7192-0, which is a Diesel AC generator with a capacity of 25kW.

## 1.2 Feature Description

The Generac RD025 is a 25kW AC, diesel generator is one of the generators selected as part of the T-Mobile RFP in support of the nationwide cell site hardening plan. The RD025 has a Level 2 acoustic enclosure, 3 phase sensing, and +/-0.25% digital voltage regulation. It is equipped with RS232, RS485 and canbus remote ports and Evolution control panel. It is also equipped with a automatic transfer switch, the RXSC200A3 (Automatic Transfer Switch) Controls the process of transferring commercial AC power and generator power. The RXSC200A3 is a 200Amp, switch that is programmed to perform engine test runs and also has adjustable engine run time capabilities. For RXSC200A3 Owners Manual and full feature descriptions [LINK](#)

## 1.3 Dimensions

The dimensions of a level 2 Acoustic Enclosure L x W x H in inches 103.4 x 35 x 91.7. T-Mobile requires a 36-inch radius around the generator that will cover the 18” door swing on the generator.

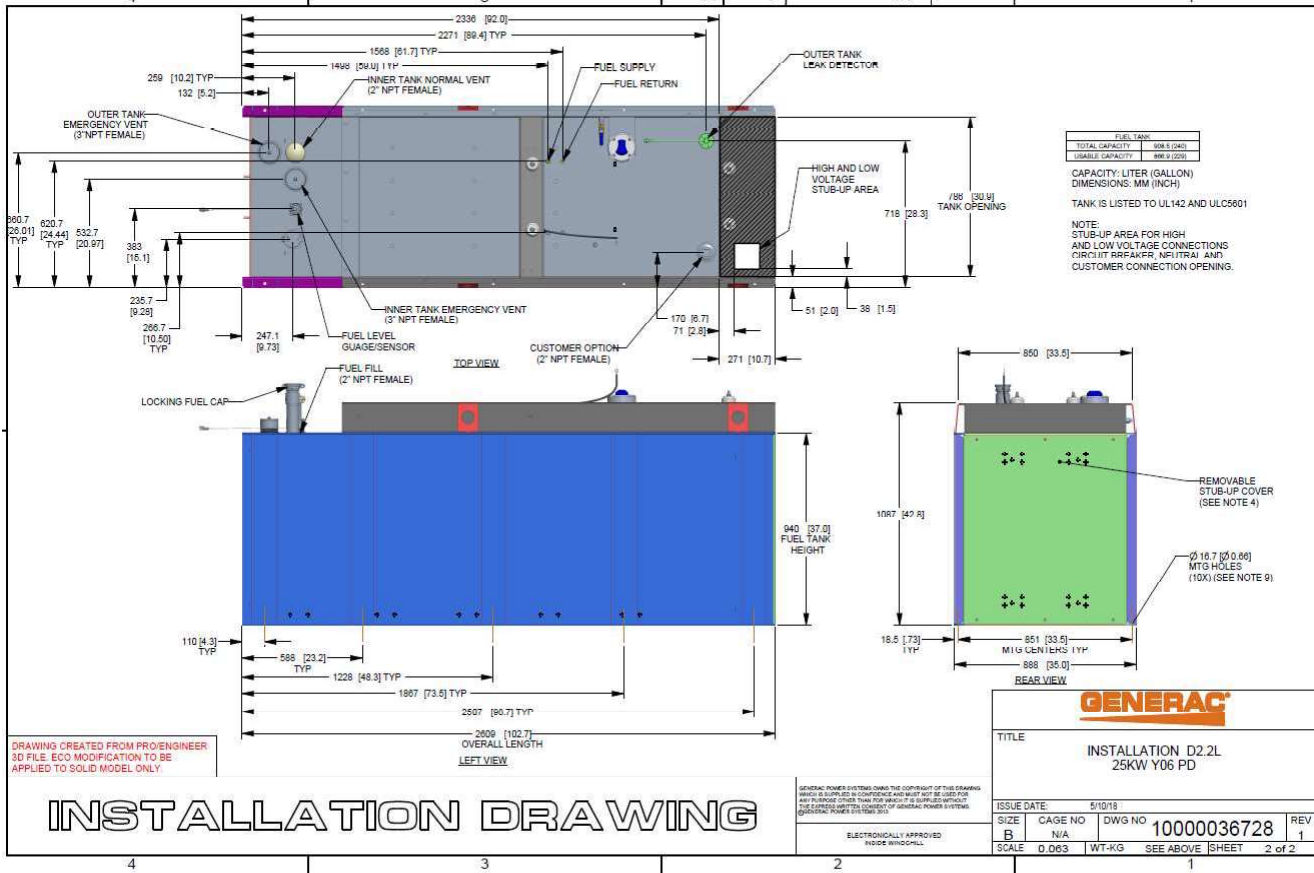


Weights and Dimensions

Unit Weight - lbs	Unit Weight with Skid - lbs	Dimensions (L x W x H) - in
2,123	2,161	103.4 x 35.0 x 73.8

## 2 Fuel Tanks

The RD025 has a 102.7" 240 Gallon Double-Wall UL142 Base tank to provide 98 hours of backup power at full load deployed on site. Below is the Install drawing for the 240-gallon tank for the RD025kW.



## 3 RXSC200A3 ATS/ Controller

### 3.1 Hardware

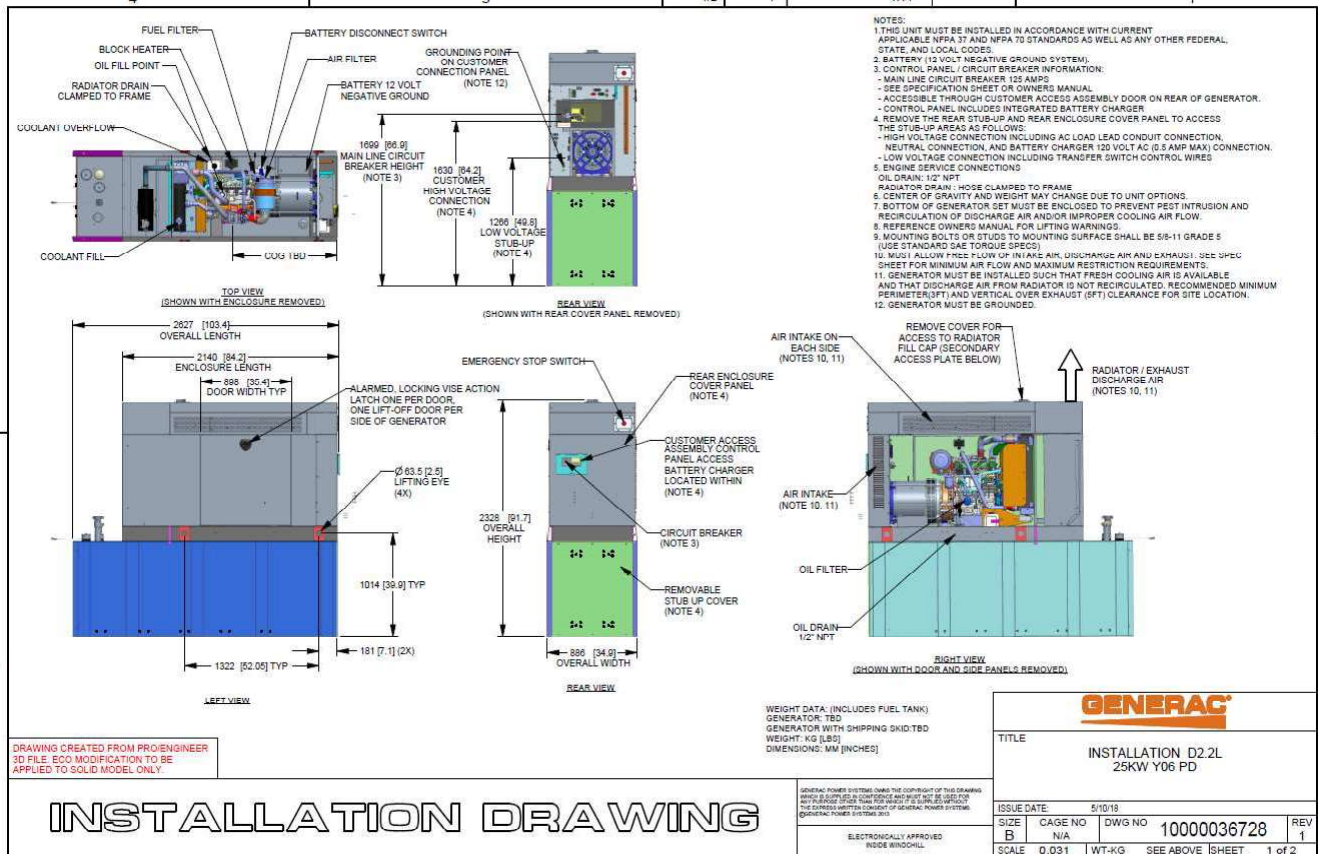
The RD025 will come with a RXSC200A3 and an Evollution controller. The sites considered for the RD025 should not have a DC power consumption above 20kW

RXSC200A3 [Link](#)

RXSC200A3 install drawing [Link](#)

Evolution controller spec sheet [Link](#)

RD025 installation drawings and supporting documentation [Link](#)

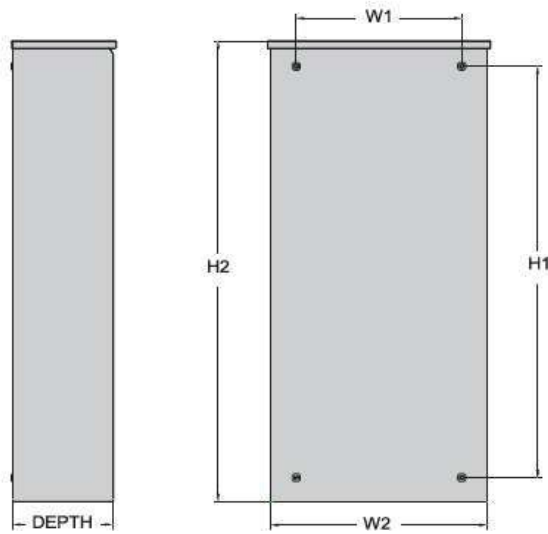


### 3.2 RXSC200A3 Automatic Transfer Switch

The RXSC200A3 (Automatic Transfer Switch) is equipped with the following functions. Utility voltage drop-out <65%. Timer to Generator start: 10 second factory set, adjustable between 2-1500 seconds. Engine Warm up delay: 5 seconds. Standby Voltage Sensor: 65% for 5 seconds. Utility Voltage Pickup >80%. Re-Transfer Time Delay: 15 seconds. Engine Cool-Down Timer: 60 seconds. Exerciser: 5 or 12 minute adjustable weekly/by-weekly/monthly. The transfer switch can also be operated manually without power applied

**RXSC200A3 Dimensions**

Model		RXSC200A3
Height (in./mm)	H1	17.24/437.9
	H2	20/508
Width (in./mm)	W1	12.5/317.5
	W2	14.6/370.8
Depth (in./mm)		7.09/180.1
Weight (lbs./kilos)		20/9.07



## 4 Architecture/Alarms

### 4.1 Interfaces and Alarming

The generator will be monitored by external alarms, conduit and cat five cables have to be installed from the Evolution Controllers Low Voltage Box located in the Generac generator to the appropriate cell site equipment. Nokia FSEB or FSEE and in Ericsson the SAU.

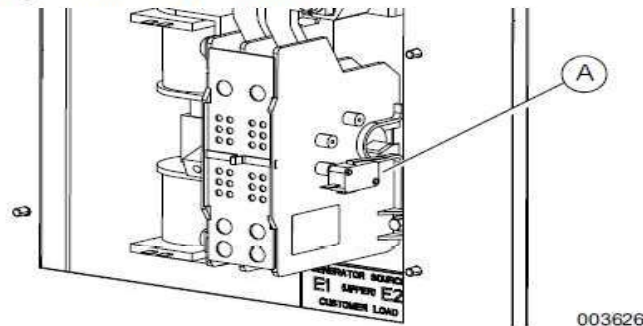
At a Nokia site, this connection is at the FSEB or an FSEE module. For the wiring diagram and instructions for the FSEB click the [Link](#) (The FSEE is the Nokia module that will be replacing the FSEB. For details on the FSEE contact: HQNokiaCellsiteDesigns@T-Mobile.com)

Ericsson sites will connect to the SAU module via OVP Expansion Kit for 8 External Alarms. Product number: UTOVP-ALM8EXP. For the wiring diagram and instructions for this click the [link](#)

The RXSC200A3 has auxiliary contacts that will facilitate the *ATS in Emergency position* alarm and will be a Normally Closed contact. Below is the wiring schematic for this contact and it can be found in the RXSC200A3 owners manual.

#### Auxiliary Contact

See [Figure 3-4](#). If desired, there is one normally-closed Auxiliary Contact (A) on the transfer switch to operate customer accessories, remote advisory lights, or remote annunciator devices. A suitable power source must be connected to the common terminal. If needed, an extra auxiliary contact can be added.



**Figure 3-4. Auxiliary Contact**

The auxiliary contact is normally closed when the transfer switch is in utility mode. The contacts will open when the transfer switch is in the standby power mode.

**NOTE:** Auxiliary Contact is rated 10 amps at 125 or 250 volts AC, and 0.6 amps at 125 volts DC.

**CAUTION**

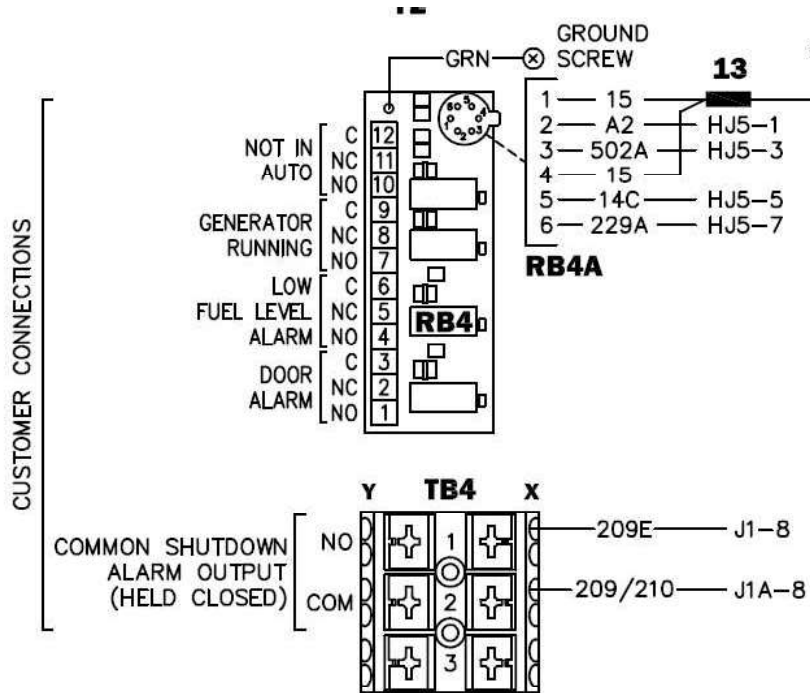
Equipment damage. Exceeding rated voltage and current will damage the auxiliary contacts. Verify that voltage and current are within specification before energizing this equipment.

(000134a)



T-Mobile has four relays available from the Generac controller that are user-defined. T-Mobile can have four-alarm categories and a limitless number of subcategories. T-Mobile will utilize Normally Closed (NC) dry contacts for alarms in Low Voltage Connection box in the spare outputs section. Ericsson cabinets need to be equipped with the alarm expansion kit (UTOVP-ALM8EXP) to handle external alarms.

Customer Connections Inside the RD025



Ericsson UTOVP-ALM8EXP



UTOVP-ALM8EXP	OVP Expansion Kit for 8 External Alarms	Qty
Product no	Denomination	
UTOVP-ALM8EXP	OVP Expansion Kit for 8 External Alarms	1
NFD30234/08	OVERVOLTAGE ARRESTER/OVP-ALM 8	1
RPM777143/01200	CABLE WITH CONNECTOR/SIGNAL CABLE	2

Evolution Controller Customer Connections	Nokia FSEB Alarm Connections 13-24	T-Mobile Standard Alarms
NC#8-Gen Running	NC 4110 grd 4111 pin 13	Generator Running
NC#11-Not In Auto	NC 4110 grd 4111 pin 14	Generator Alarm Critical
NC#2-Door Alarm	NC 4110 grd 4111 pin 15	Generator Alarm NSI
NC#5-Low Fuel	NC 4110 grd 4111 pin 16	Low Fuel
RXSC200A3-Auxiliary Contacts	NC 4110 grd 4111 pin 17	ATS in Emergency Position

Evolution Controller Customer Connections	Ericsson Alarm 8expConnections	T-Mobile Standard Alarms
NC#8- Gen. Running	NC - A5	Generator Running
NC#11-Not In Auto	NC - A6	Generator Alarm Critical
NC#2-Door Alarm	NC - A7	Generator Alarm NSI
NC#5-Low Fuel	NC - A8	Low Fuel
RXSC200A3-Auxiliary Contacts	NC - A9	ATS in Emergency Position

## 5 Regulatory Requirements

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Level 2 Acoustic Enclosure provides a noise level of 67.5dBA. It is EPA certified and meets NFPA 99 and 110 requirements(NFPA National Fire Protection Association). The RD025 generator engines is a tier 4 engine and meets the EPA final standards.

## 6 Configuration/Diagrams

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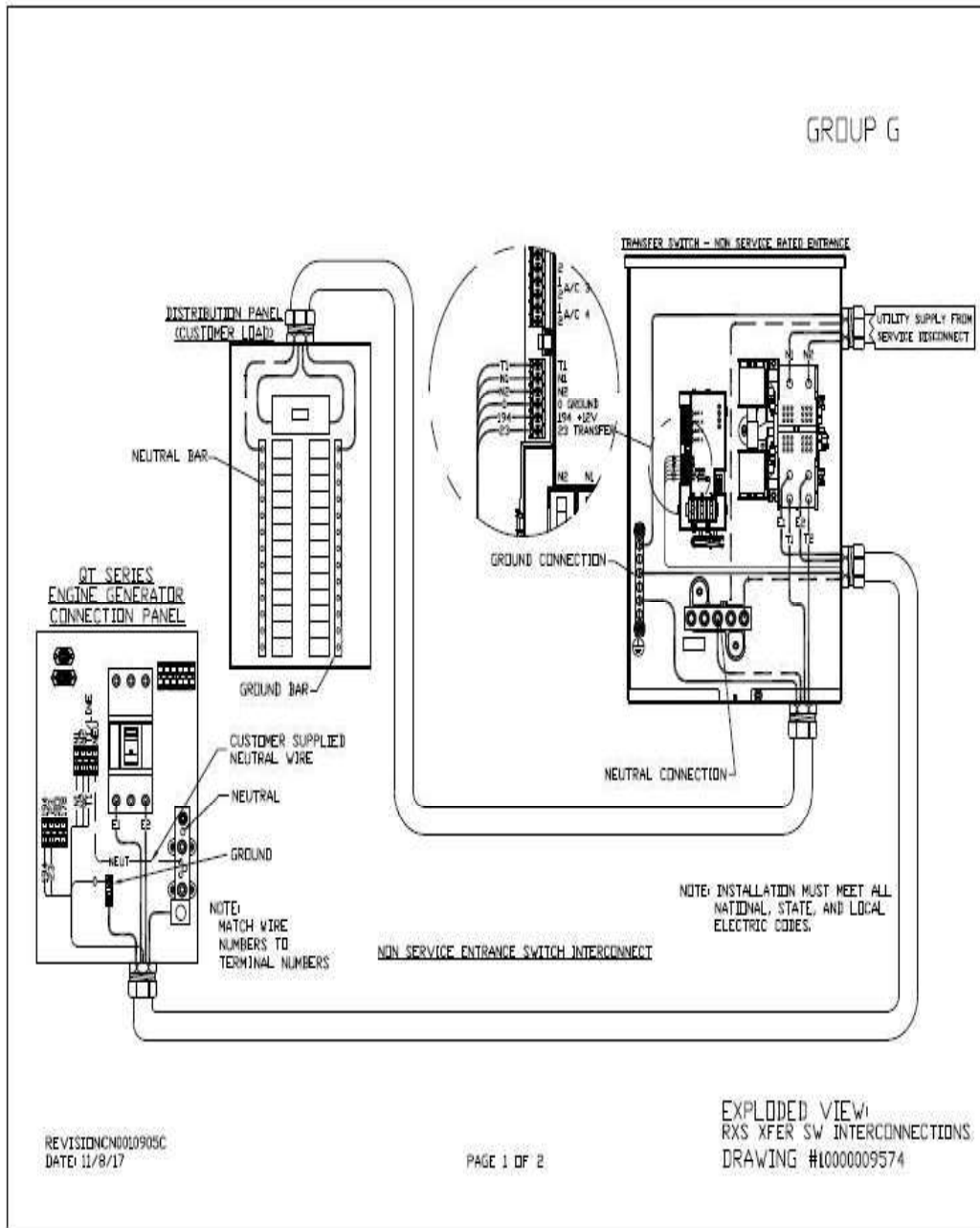
The physical configuration of the Generator and the RXSC200A3 is, ATS before the PPC to ensure overcurrent protection when commercial power is restored. The RD025 and the RXSC200A3 has to be wired to Commercial AC power.



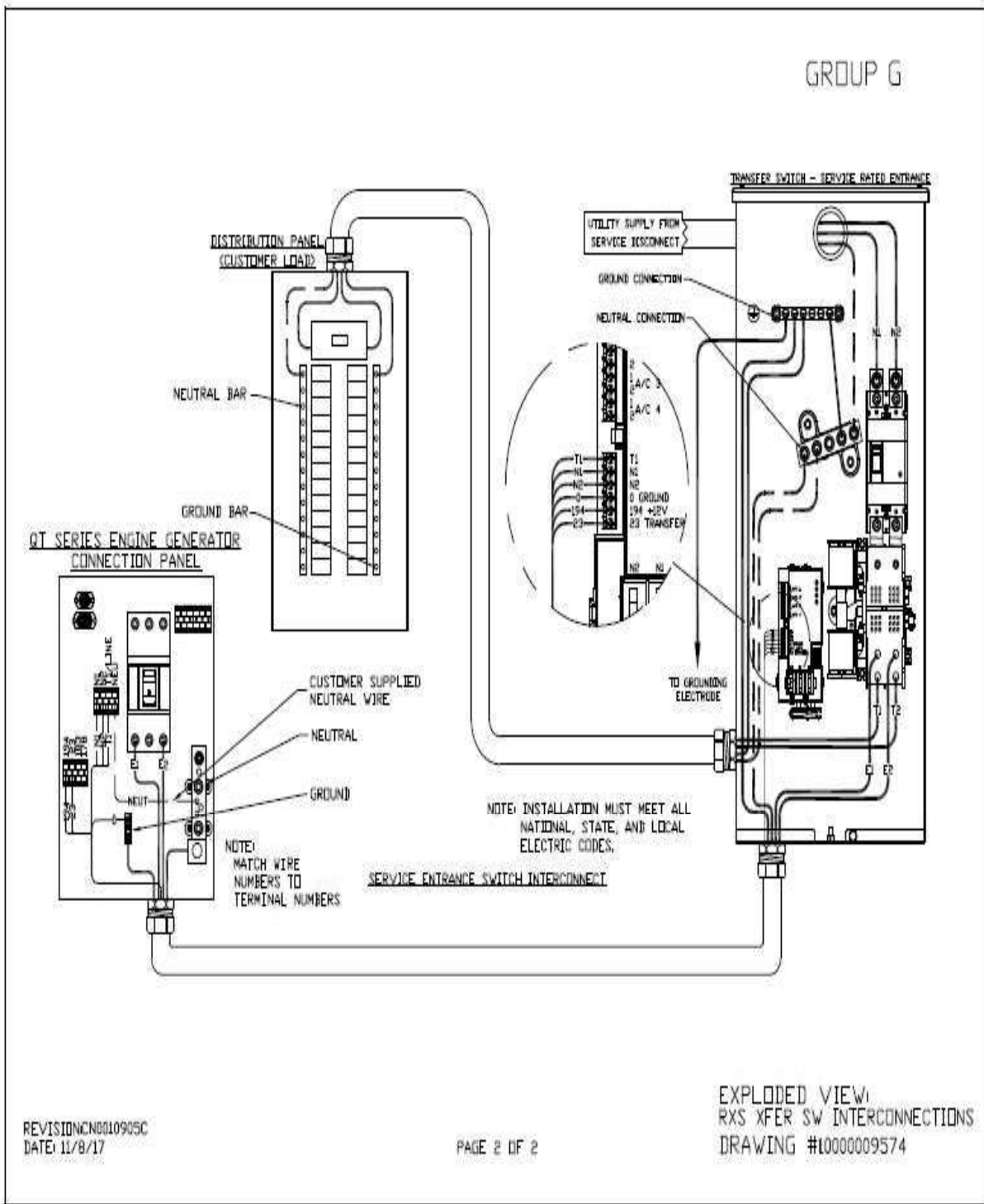
Commercial Power Connection Points  
On The RXSC200A3

Automatic Transfer Switch Owner's Manual

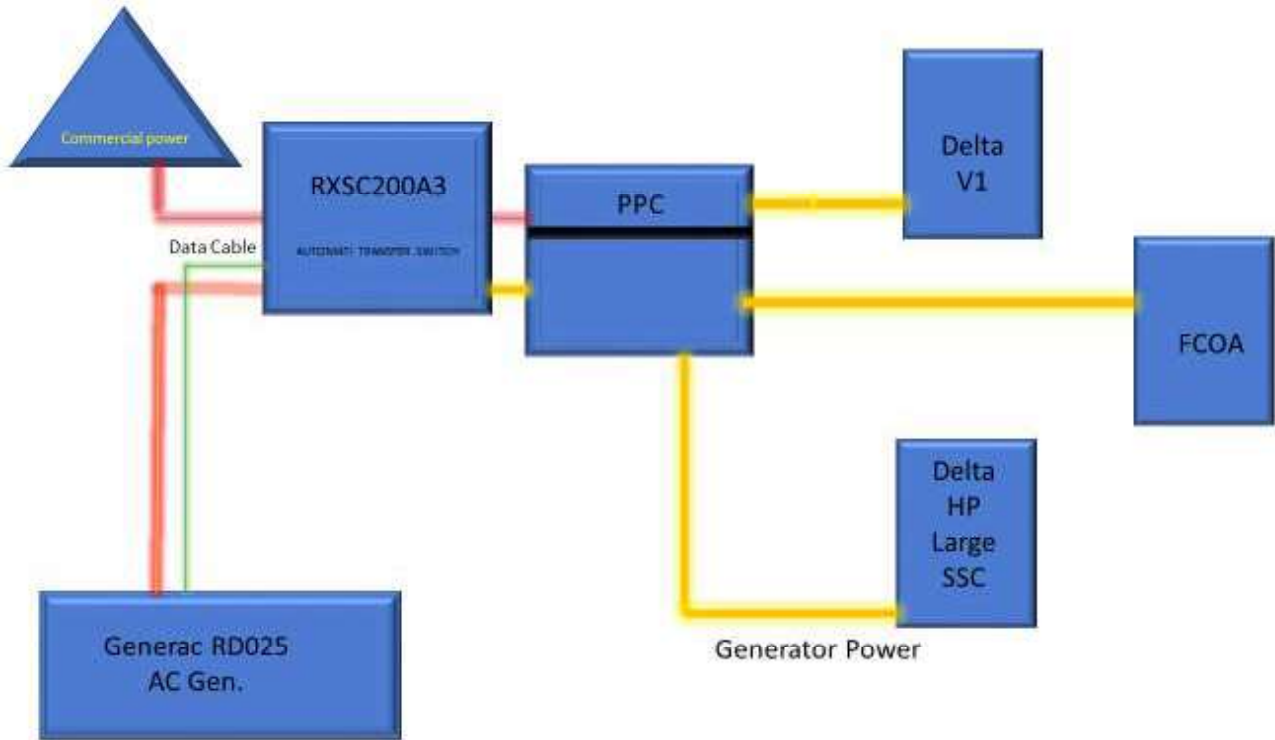
Interconnection Drawings  
 No. 10000009574 (Part 1 of 2)—Liquid-Cooled Generator



21



### Compound Diagram:



## 7 Maintenance

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T-Mobile is recommending preventive maintenance to be performed every 250 hours of run-time or every 12 months, whichever comes first.

T-Mobile requires this minimum service checklist for the generator engine:

- Check engine mounts and support. Tighten fasteners.
- Check all the engine hoses and clamps for proper fit, and any signs of cracking and fatigue from wear.
- Inspect all belts for signs of cracking and fatigue from wear and adjust for proper tension.
- Inspect the exhaust system for leaks, burns and wet stacking. Drain exhaust line and tighten any clamps and flange bolts.
- Inspect silencer and plumbing for leaks, cracks or any other signs of wear.
- Inspect the system for fuel, oil and coolant leaks and signs of corrosion.
- Replace water separator.
- Replace water filter/ conditioner.
- Check Anti-Freeze (Spector-Analysis).
- Check coolant level and add, if needed.
- Inspect radiator mounting for signs or wear and cracking.
- Inspect/ clean air filter and change per manufacturer specifications.
- Inspect air intakes and outlets and tighten clamps and brackets, if applicable.
- Replace fuel filter.
- Inspect the carburetor fuel injection system, fuel injection pump and choke, if equipped. Adjust to manufacturers specifications.
- Change engine oil, oil filter and record the date on the filter casing.
- Check engine heater operation, if equipped.
- Check and adjust the battery charger operations, and charge rate within the manufacturer's recommended operating specifications.

- Inspect the battery housing, hardware connections, and cables for corrosion and wear.
- Check the battery electrolyte levels and specific gravity levels.
- Load test generator battery.
- Check, adjust and record generator output voltage, as necessary.
- Check and record the alternator charge rate.
- During inspection run the generator for 30 minutes under load. During this time, and after the engine is at full operational speed and has reached engine operating temperature; determine and record the condition of all inspection points: oil pressure, water/ coolant temperature, Fuel pressure, generator gauge, indicator operations, generator battery.
- Check the engine timing and adjust to manufacturers specifications, if necessary.
- Inspect, adjust and record governor and frequency, if necessary.
- Verify that the low fuel alarm is operational and configured correctly to trigger when the fuel tank reaches 50% of fuel tank capacity.

Check fuel level and refuel the generator during the preventive/ corrective maintenance visit.