



10 INDUSTRIAL AVE,  
SUITE 3  
MAHWAH NJ 07430

PHONE: 201.684.0055  
FAX: 201.684.0066

June 21, 2022

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

RE: Notice of Exempt Modification  
50 Maple Street, Branford, CT 06405  
Latitude: 41.2742440000  
Longitude: -72.8136560000  
T-Mobile Site#: CT11328F – Hardening

Dear Ms. Bachman:

T-Mobile currently maintains nine (9) antennas at the 96-foot level of the existing 100-foot smokestack at 50 Maple Street, CT. The 100-foot smokestack and property are owned by Marine Systems Incorporated. T-Mobile now intends to add a 25kw natural gas backup generator at the ground level.

**Planned Modifications:**

**Ground:**

Install New:

- (1) Generac RG25 25kw Natural Gas generator

The original approval of this facility was by the Town of Branford Planning and Zoning Commission. The Commission approved the facility on January 7, 2010. A copy of this approval is enclosed. T-Mobile was subsequently approved for tower-sharing by the Connecticut Siting Council on March 3, 2017.

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 First Selectman -James Cosgrove, Elected Official, and Harry Smith, Town Planner, 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: James Cosgrove – First Selectman – Town of Branford

Harry Smith– Town Planner – Town of Branford

Marine Systems Inc – Owner

## Kyle Richers

---

**From:** UPS <pkginfo@ups.com>  
**Sent:** Wednesday, June 22, 2022 10:46 AM  
**To:** KRICHERS@TRANSCENDWIRELESS.COM  
**Subject:** UPS Delivery Notification, Tracking Number 1ZV257424299298674



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

**Delivery Date:** Wednesday, 06/22/2022

**Delivery Time:** 10:43 AM

**Signed by:** TRISTA

### TRANSCEND WIRELESS

<b>Tracking Number:</b>	<a href="#">1ZV257424299298674</a>
<b>Ship To:</b>	TOWN OF BRANFORD 1019 MAIN STREET BRANFORD, CT 06405 US
<b>Number of Packages:</b>	1
<b>UPS Service:</b>	UPS Ground
<b>Package Weight:</b>	1.0 LBS
<b>Reference Number:</b>	CT11328F CSC ZO

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## Kyle Richers

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**From:** UPS <pkginfo@ups.com>  
**Sent:** Wednesday, June 22, 2022 10:46 AM  
**To:** KRICHERS@TRANSCENDWIRELESS.COM  
**Subject:** UPS Delivery Notification, Tracking Number 1ZV257424292123249



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

**Delivery Date:** Wednesday, 06/22/2022

**Delivery Time:** 10:44 AM

**Signed by:** MILICI

### TRANSCEND WIRELESS

<b>Tracking Number:</b>	<a href="#">1ZV257424292123249</a>
<b>Ship To:</b>	TOWN OF BRANFORD 1019 MAIN STREET BRANFORD, CT 06405 US
<b>Number of Packages:</b>	1
<b>UPS Service:</b>	UPS Ground
<b>Package Weight:</b>	1.0 LBS
<b>Reference Number:</b>	CT11328F CSC EO

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# Kyle Richers

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**From:** UPS <pkginfo@ups.com>  
**Sent:** Thursday, June 23, 2022 3:32 PM  
**To:** KRICHERS@TRANSCENDWIRELESS.COM  
**Subject:** UPS Delivery Notification, Tracking Number 1ZV257424296668681



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

**Delivery Date:** Thursday, 06/23/2022

**Delivery Time:** 3:29 PM

**Signed by:** MARINE



[Set Delivery Instructions](#)

[Manage Preferences](#)

[View My Packages](#)

## TRANSCEND WIRELESS

**Tracking Number:** [1ZV257424296668681](#)

**Ship To:** MARINE SYSTEMS INC  
50 MAPLE STREET  
BRANFORD, CT 06405  
US

**Number of Packages:** 1

**UPS Service:** UPS Ground

**Package Weight:** 1.0 LBS

**Reference Number:** CT11328F CSC OWNER



[Download the UPS mobile app](#)

# 50 MAPLE ST

**Location** 50 MAPLE ST

**Mblu** D08/000 012/ 00003/ /

**Acct#** 000592

**Owner** MARINE SYSTEMS  
INCORPORATED

**Assessment** \$964,500

**Appraisal** \$1,378,100

**PID** 801

**Building Count** 1

## Current Value

Appraisal			
Valuation Year	Improvements	Land	Total
2021	\$412,300	\$965,800	\$1,378,100

Assessment			
Valuation Year	Improvements	Land	Total
2021	\$288,400	\$676,100	\$964,500

## Owner of Record

**Owner** MARINE SYSTEMS INCORPORATED

**Sale Price** \$0

**Co-Owner**

**Certificate**

**Address** PO BOX 447  
BRANFORD, CT 06405

**Book & Page** 0555/1008

**Sale Date** 09/07/1993

## Ownership History

Ownership History				
Owner	Sale Price	Certificate	Book & Page	Sale Date
MARINE SYSTEMS INCORPORATED	\$0		0555/1008	09/07/1993

## Building Information

### Building 1 : Section 1

**Year Built:** 1900  
**Living Area:** 82,765  
**Replacement Cost:** \$3,139,276  
**Building Percent Good:** 3  
**Replacement Cost**  
**Less Depreciation:** \$94,200

**Building Attributes**

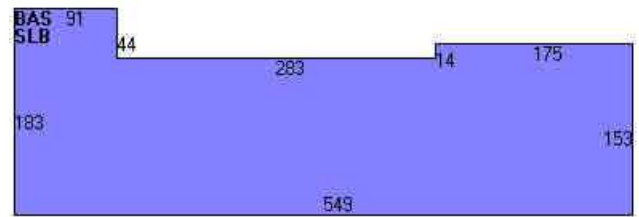
Field	Description
Style:	Warehouse
Model	Ind/Comm
Grade	C
Stories:	1
Occupancy	3.00
Exterior Wall 1	Brick
Exterior Wall 2	Concr/Cinder
Roof Structure	Flat
Roof Cover	T&G/Rubber
Interior Wall 1	Minim/Masonry
Interior Wall 2	
Interior Floor 1	Concr-Finished
Interior Floor 2	
Heating Fuel	None/Coal/Wd
Heating Type	None
AC Type	None
Struct Class	
Bldg Use	BOATYARD MDL96
Total Rooms	
Total Bedrms	00
Total Baths	0
1st Floor Use:	384I
Heat/AC	NONE
Frame Type	MASONRY
Baths/Plumbing	LIGHT
Ceiling/Wall	NONE
Rooms/Prtns	AVERAGE
Wall Height	22.00
% Comn Wall	

### Building Photo



(<https://images.vgsi.com/photos/BranfordCTPhotos//00\01\54\82.jpg>)

### Building Layout



([https://images.vgsi.com/photos/BranfordCTPhotos//Sketches/801\\_801.jpg](https://images.vgsi.com/photos/BranfordCTPhotos//Sketches/801_801.jpg))

Building Sub-Areas (sq ft)			Legend
Code	Description	Gross Area	Living Area
BAS	First Floor	82,765	82,765
SLB	Slab	82,765	0
		165,530	82,765

### Extra Features

Extra Features				Legend
Code	Description	Size	Value	Bldg #
MEZ1	MEZZANINE-UNF	784.00 S.F.	\$200	1
GIR3	GIRDERS 19"-24	80.00 L.F.	\$200	1
HT2	ELECTRIC	1248.00 S.F.	\$200	1
HT3	FORCED AIR	840.00 S.F.	\$200	1
A/C	AIR CONDITION	0.00 S.F.	\$0	1

**Land****Land Use**

**Use Code** 3150  
**Description** BOATYARD MDL96  
**Zone** IG-1  
**Neighborhood** 350  
**Alt Land Appr** No  
**Category**

**Land Line Valuation**

**Size (Acres)** 4.59  
**Frontage**  
**Depth**  
**Assessed Value** \$676,100  
**Appraised Value** \$965,800

**Outbuildings**

Outbuildings						Legend
Code	Description	Sub Code	Sub Description	Size	Value	Bldg #
PAV1	PAVING-ASPHALT			36978.00 S.F.	\$18,300	1
PAV2	PAVING-CONC			3204.00 S.F.	\$3,200	1
LT1	LIGHTS-IN W/PL			1.00 UNITS	\$200	1
LT1	LIGHTS-IN W/PL			1.00 UNITS	\$200	1
LT2	W/DOUBLE LIGHT			2.00 UNITS	\$700	1
FN3	FENCE-6' CHAIN			510.00 L.F.	\$1,500	1
WDK	WOOD DECK			230.00 S.F.	\$700	1
DCK3	FLOATING			4507.00 S.F.	\$114,900	1
DCK3	FLOATING			2804.00 S.F.	\$71,500	1
STK1	CHIMNEY STK BR			100.00 UNITS	\$20,000	1
SHD5	SHED COM WOOD			160.00 S.F.	\$1,400	1

**Valuation History**

Appraisal			
Valuation Year	Improvements	Land	Total
2021	\$412,300	\$965,800	\$1,378,100
2019	\$412,300	\$965,800	\$1,378,100
2018	\$401,900	\$937,400	\$1,339,300

Assessment			
Valuation Year	Improvements	Land	Total
2021	\$288,400	\$676,100	\$964,500
2019	\$288,400	\$676,100	\$964,500
2018	\$281,300	\$656,200	\$937,500

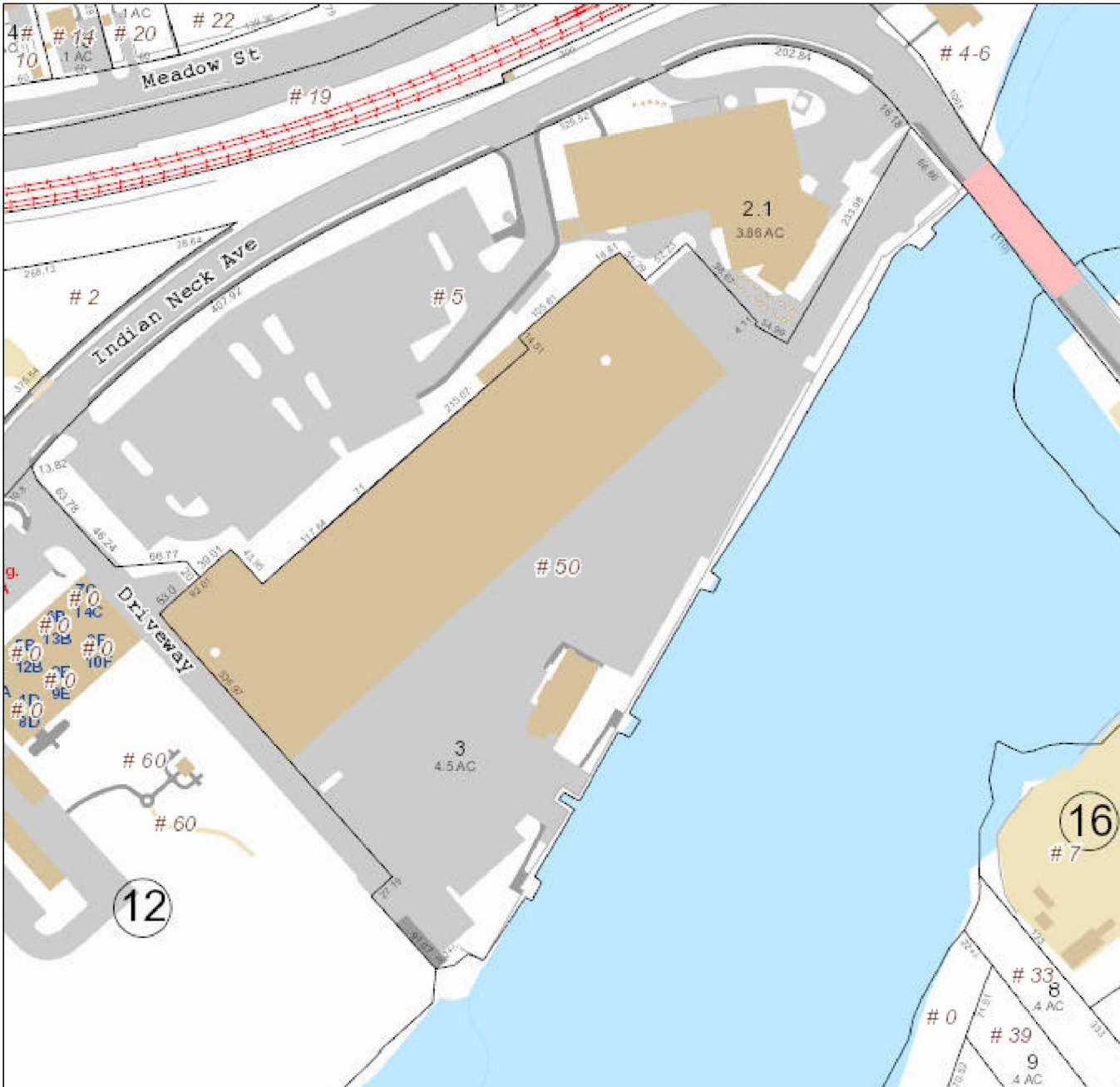


# Town of Branford

Geographic Information System (GIS)

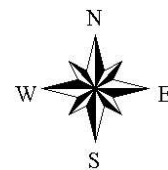


Date Printed: 4/16/2021



**MAP DISCLAIMER - NOTICE OF LIABILITY**

This map is for assessment purposes only. It is not for legal description or conveyances. All information is subject to verification by any user. The Town of Branford and its mapping contractors assume no legal responsibility for the information contained herein.



PLANNING AND ZONING COMMISSION  
TOWN OF BRANFORD TOWN HALL DRIVE P.O. BOX 150  
Branford, Connecticut 06405  
Telephone: (203) 488-1255 Fax: (203) 315-2188

## NOTICE OF DECISION

January 11, 2010

Clearwire by Maxton Technology  
Attention: Thomas F. Flynn III  
1296 Blue Hills Avenue  
Bloomfield, Connecticut 06002

SUBJECT: Site Plan

APPLICATION: #09-12.4 ADDRESS: 50 Maple Street

APPLICANT: Clearwire Wireless LLC d/b/a Clearwire

OWNER OF RECORD: Marine Systems, Inc.

Dear. Sir:

At a meeting of the Branford Planning & Zoning Commission held on Thursday, January 7, 2010 the Commission voted to:

Approve your above subject application.

Very truly yours,



Shirley Rasmussen  
Town Planner

NOTE: Site Plan shall become null and void in the event the applicant fails to obtain a building permit within one (1) year of date of approval.  
(Per Section 31.7 of the Branford Zoning Regulations)

PLANNING AND ZONING COMMISSION  
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# T-Mobile

## MARINE SYS. SMOKE STACK

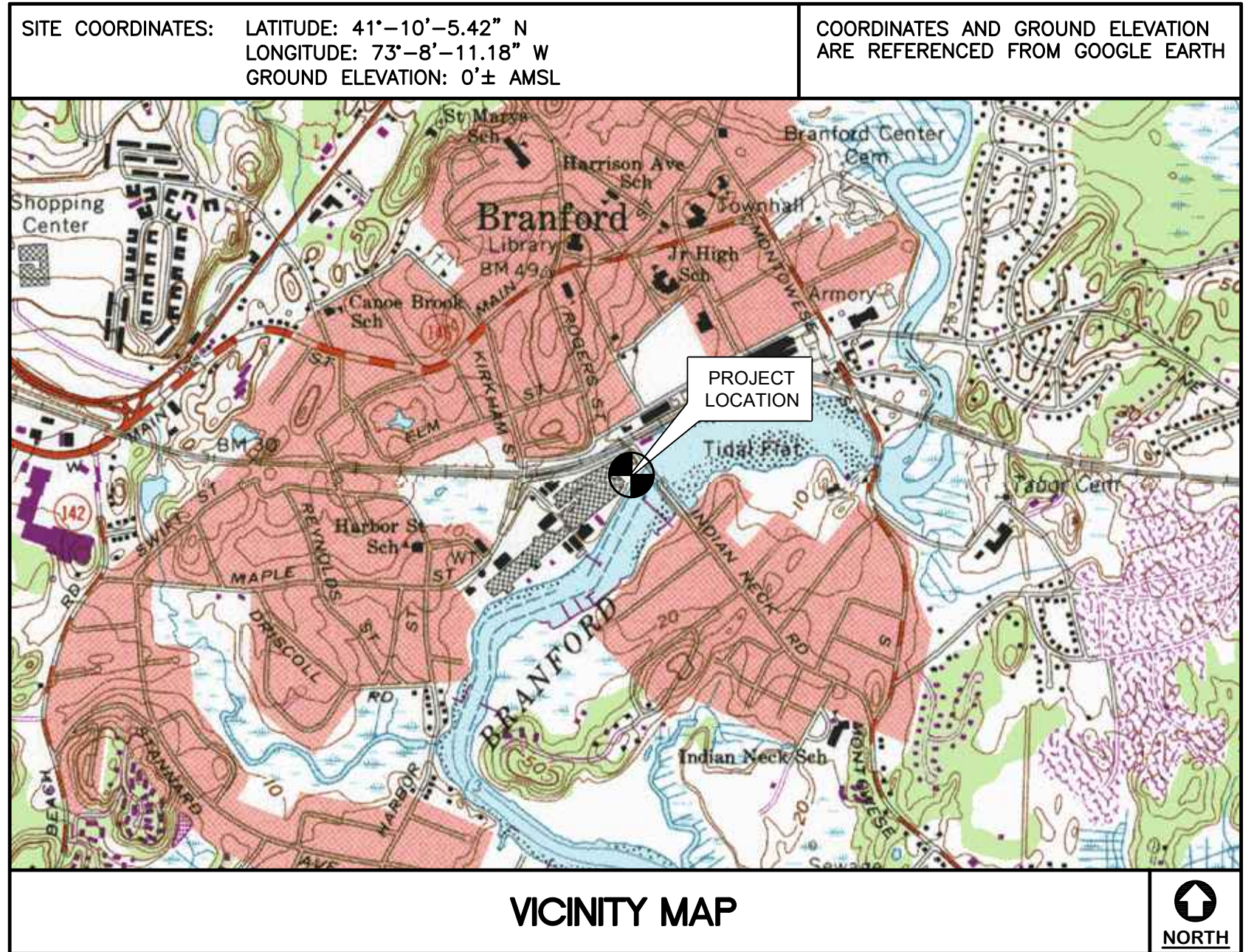
### SITE ID: CT11328F

### 50 MAPLE ST

### BRANFORD, CT 06405

GENERAL NOTES	
1. ALL WORK SHALL BE IN ACCORDANCE WITH THE 2015 INTERNATIONAL BUILDING CODE AS MODIFIED BY THE 2018 CONNECTICUT SUPPLEMENT, INCLUDING THE IA/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> 50 MAPLE STREET BRANFORD, CT 06405
1. HEAD NORTH ON GRIFFIN ROAD S. TOWARD HARTMAN RD.	0.30 MI.
2. TAKE THE 2ND RIGHT ONTO DAY HILL RD.	3.64 MI.
3. MERGE ONTO I-91 S TOWARD HARTFORD	14.42 MI.
4. TAKE CT-99 EXIT, EXIT 24 TOWARD WETHERSFIELD/ROCKY HILL	0.28 MI.
5. TURN LEFT ONTO SILAS DEANE HWY/CT-99	0.00 MI.
6. MERGE ONTO I-91 S via THE RAMP ON THE LEFT TOWARD NEW HAVEN	31.32 MI.
7. MERGE ONTO I-95 N via THE EXIT ON THE LEFT TOWARD NEW LONDON	4.55 MI.
8. TAKE THE US-1 EXIT, EXIT 53, TOWARD SHORT BEACH/CT-142/CT-146	0.43 MI.
9. MERGE ONTO BRANFORD CONN.	0.62 MI.
10. TAKE THE 1ST RIGHT ONTO W MAIN ST/US-1 S	0.10 MI.
11. TAKE THE 1ST LEFT ONTO SHORT BEACH RD/CT-142	0.22 MI.
12. TURN LEFT ONTO MAPLE ST	0.72 MI.
13. TURN RIGHT ONTO INDIAN NECK AVE.	0.17 MI.
14. 50 MAPLE ST BRANFORD, CT 06405-3511, 50 MAPLE ST	



PROJECT SUMMARY
THE PROPOSED SCOPE OF WORK CONSISTS OF A MODIFICATION TO THE EXISTING UNMANNED TELECOMMUNICATIONS FACILITY INCLUDING THE FOLLOWING:
1. INSTALL (1) NEW 25 KW NATURAL GAS BACK-UP GENERATOR ON A PROPOSED ELEVATED STEEL PLATFORM AT GRADE.
2. INSTALL (1) 200A AUTOMATIC TRANSFER SWITCH ON PROPOSED UNISTRUT FRAME AT EQUIPMENT ON ROOF
3. INSTALL BOLLARDS AROUND PROPOSED GAS METER AND PLATFORM
4. NEW GAS METER TO BE INSTALLED
PROJECT SUMMARY (STRUCTURAL)
FOR REQUIRED STRUCTURAL MODIFICATIONS, SEE SHEET(S) S-1 FOR ADDITIONAL DETAILS. ELEVATED STEEL EQUIPMENT PLATFORM TO BE INSTALLED

PROJECT INFORMATION	
SITE NAME:	MARINE SYS. SMOKE STACK
SITE ID:	CT11328F
SITE ADDRESS:	50 MAPLE STREET BRANFORD, CT 06405
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
PROJECT COORDINATES:	CARLO F. CENTORE, PE (203) 488-0580 EXT. 122
	LATITUDE: 41°-16'-27.57" N LONGITUDE: 72°-48'-49.06" W GROUND ELEVATION: 13'± AMSL
	SITE COORDINATES AND GROUND ELEVATION REFERENCED FROM GOOGLE EARTH.

SHEET INDEX		
SHT. NO.	DESCRIPTION	REV.
T-1	TITLE SHEET	1
N-1	GENERAL NOTES AND SPECIFICATIONS	1
C-1	COMPOUND AND EQUIPMENT PLANS	1
C-2	TYPICAL EQUIPMENT DETAILS	1
S-1	GENERATOR FRAMING SUPPORT	1
M-1	MECHANICAL COMPOUND PLAN, ROOF PLAN AND ELEVATION	1
E-1	ELECTRICAL GROUNDING, CONDUIT AND RISER DIAGRAM	1
E-2	ELECTRICAL SPECIFICATIONS	1

			<b>T-MOBILE NORTHEAST LLC</b> WIRELESS COMMUNICATIONS FACILITY <b>MARINE SYS SMOKE STACK</b> <b>SITE ID: CT11328F</b> <b>50 MAPLE ST</b> <b>BRANFORD, CT 06405</b>	DATE: 04/20/21 SCALE: AS NOTED JOB NO. 21003.09 <b>TITLE SHEET</b> <div style="font-size: 2em; font-weight: bold; text-align: center;">T-1</div>	CONSTRUCTION DRAWINGS - REVISED PER NEW GENERATOR LOCATION CONSTRUCTION DRAWINGS - ISSUED FOR CONSTRUCTION DATE: 01/14/22 REV. 0 DRAWN BY: JLD CHECKED BY: RTS
--	--	--	---	--	---

Sheet No. 1 of 8

**NOTES AND SPECIFICATIONS**

**DESIGN BASIS:**

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

- DESIGN CRITERIA:
  - RISK CATEGORY II (BASED ON IBC TABLE 1604.5)
  - ULTIMATE DESIGN SPEED (OTHER STRUCTURE): 130 MPH (V<sub>wsd</sub>) (EXPOSURE B/ IMPORTANCE FACTOR 1.0 BASED ON ASCE 7-10).

**SITE NOTES**

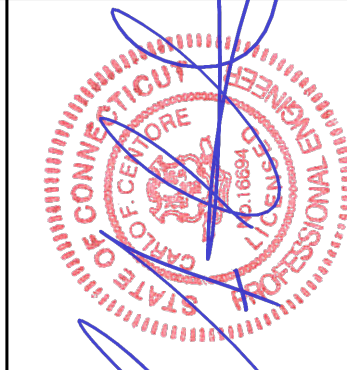


- THE CONTRACTOR SHALL CALL UTILITIES PRIOR TO THE START OF CONSTRUCTION.
- ACTIVE EXISTING UTILITIES, WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES. THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY, PRIOR TO PROCEEDING, SHOULD ANY UNCOVERED EXISTING UTILITY PRECLUDE COMPLETION OF THE WORK 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 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.
- 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 '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.
- 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.

**STRUCTURAL STEEL**

- ALL STRUCTURAL STEEL IS DESIGNED BY ALLOWABLE STRESS DESIGN (ASD)
  - STRUCTURAL STEEL (W SHAPES)---ASTM A992 (FY = 50 KSI)
  - STRUCTURAL STEEL (OTHER SHAPES)---ASTM A36 (FY = 36 KSI)
  - STRUCTURAL HSS (RECTANGULAR SHAPES)---ASTM A500 GRADE B, (FY = 46 KSI)
  - STRUCTURAL HSS (ROUND SHAPES)---ASTM A500 GRADE B, (FY = 42 KSI)
  - PIPE---ASTM A53 (FY = 35 KSI)
  - U-BOLTS---ASTM A325-N
  - U-BOLTS---ASTM A36
  - ANCHOR RODS---ASTM F 1554
  - WELDING ELECTRODE---ASTM E 70XX
- CONTRACTOR TO REVIEW ALL SHOP DRAWINGS AND SUBMIT COPY TO ENGINEER FOR APPROVAL. DRAWINGS MUST BEAR THE CHECKER'S INITIALS BEFORE SUBMITTING TO THE ENGINEER FOR REVIEW. SHOP DRAWINGS SHALL INCLUDE THE FOLLOWING: SECTION PROFILES, SIZES, CONNECTION ATTACHMENTS, REINFORCING, ANCHORAGE, SIZE AND TYPE OF FASTENERS AND ACCESSORIES. INCLUDE ERECTION DRAWINGS, ELEVATIONS AND DETAILS.
- STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST PROVISIONS OF AISC MANUAL OF STEEL CONSTRUCTION.
- PROVIDE ALL PLATES, CLIP ANGLES, CLOSURE PIECES, STRAP ANCHORS, MISCELLANEOUS PIECES AND HOLES REQUIRED TO COMPLETE THE STRUCTURE.
- FIT AND SHOP ASSEMBLE FABRICATIONS IN THE LARGEST PRACTICAL SECTIONS FOR DELIVERY TO SITE.
- INSTALL FABRICATIONS PLUMB AND LEVEL, ACCURATELY FITTED, AND FREE FROM DISTORTIONS OR DEFECTS.
- AFTER ERECTION OF STRUCTURES, TOUCHUP ALL WELDS, ABRASIONS AND NON-GALVANIZED SURFACES WITH A 95% ORGANIC ZINC RICH PAINT IN ACCORDANCE WITH ASTM 780.
- ALL STEEL MATERIAL (EXPOSED TO WEATHER) SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123 "ZINC (HOT DIPPED GALVANIZED) COATINGS" ON IRONS AND STEEL PRODUCTS.
- ALL BOLTS, ANCHORS AND MISCELLANEOUS HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 "ZINC COATING (HOT-DIP) ON IRON AND STEEL HARDWARE".
- THE ENGINEER SHALL BE NOTIFIED OF ANY INCORRECTLY FABRICATED, DAMAGED OR OTHERWISE MISFITTING OR NON CONFORMING MATERIALS OR CONDITIONS TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH ACTION SHALL REQUIRE ENGINEER REVIEW.
- CONNECTION ANGLES SHALL HAVE A MINIMUM THICKNESS OF 1/4 INCHES.
- STRUCTURAL CONNECTION BOLTS SHALL CONFORM TO ASTM A325. ALL BOLTS SHALL BE 3/4" DIAMETER MINIMUM AND SHALL HAVE A MINIMUM OF TWO BOLTS, UNLESS OTHERWISE ON THE DRAWINGS.
- LOCK WASHER ARE NOT PERMITTED FOR A325 STEEL ASSEMBLIES.
- SHOP CONNECTIONS SHALL BE WELDED OR HIGH STRENGTH BOLTED.
- MILL BEARING ENDS OF COLUMNS, STIFFENERS, AND OTHER BEARING SURFACES TO TRANSFER LOAD OVER ENTIRE CROSS SECTION.
- FABRICATE BEAMS WITH MILL CAMBER UP.
- LEVEL AND PLUMB INDIVIDUAL MEMBERS OF THE STRUCTURE TO AN ACCURACY OF 1:500, BUT NOT TO EXCEED 1/4" IN THE FULL HEIGHT OF THE COLUMN.
- COMMENCEMENT OF STRUCTURAL STEEL WORK WITHOUT NOTIFYING THE ENGINEER OF ANY DISCREPANCIES WILL BE CONSIDERED ACCEPTANCE OF PRECEDING WORK.
- INSPECTION AND TESTING OF ALL WELDING AND HIGH STRENGTH BOLTING SHALL BE PERFORMED BY AN INDEPENDENT TESTING LABORATORY.
- FOUR COPIES OF ALL INSPECTION TEST REPORTS SHALL BE SUBMITTED TO THE ENGINEER WITHIN TEN (10) WORKING DAYS OF THE DATE OF INSPECTION.

PROFESSIONAL ENGINEER SEAL		01/14/22	JLD	TJR	CONSTRUCTION DRAWINGS - REVISED PER NEW GENERATOR LOCATION
		09/15/21	RTS	TJR	CONSTRUCTION DRAWINGS - ISSUED FOR CONSTRUCTION
		DATE	DATE	DATE	DESCRIPTION
		REV.	REV.	REV.	REV.
T-MOBILE NORTHEAST LLC WIRELESS COMMUNICATIONS FACILITY MARINE SYS SMOKE STACK SITE ID: CT11328F 50 MAPLE ST BRANFORD, CT 06405					
(203) 488-0380 (203) 488-8587 Fax 63-2 North Branford Road Branford, CT 06405 www.CentekEng.com					
DATE: 04/20/21 SCALE: AS NOTED JOB NO. 21003.09					
GENERAL NOTES AND SPECIFICATIONS					
N-1					
Sheet No. 2 of 8					

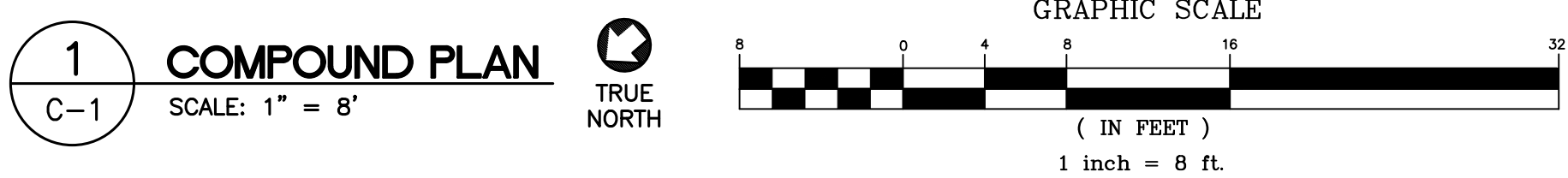
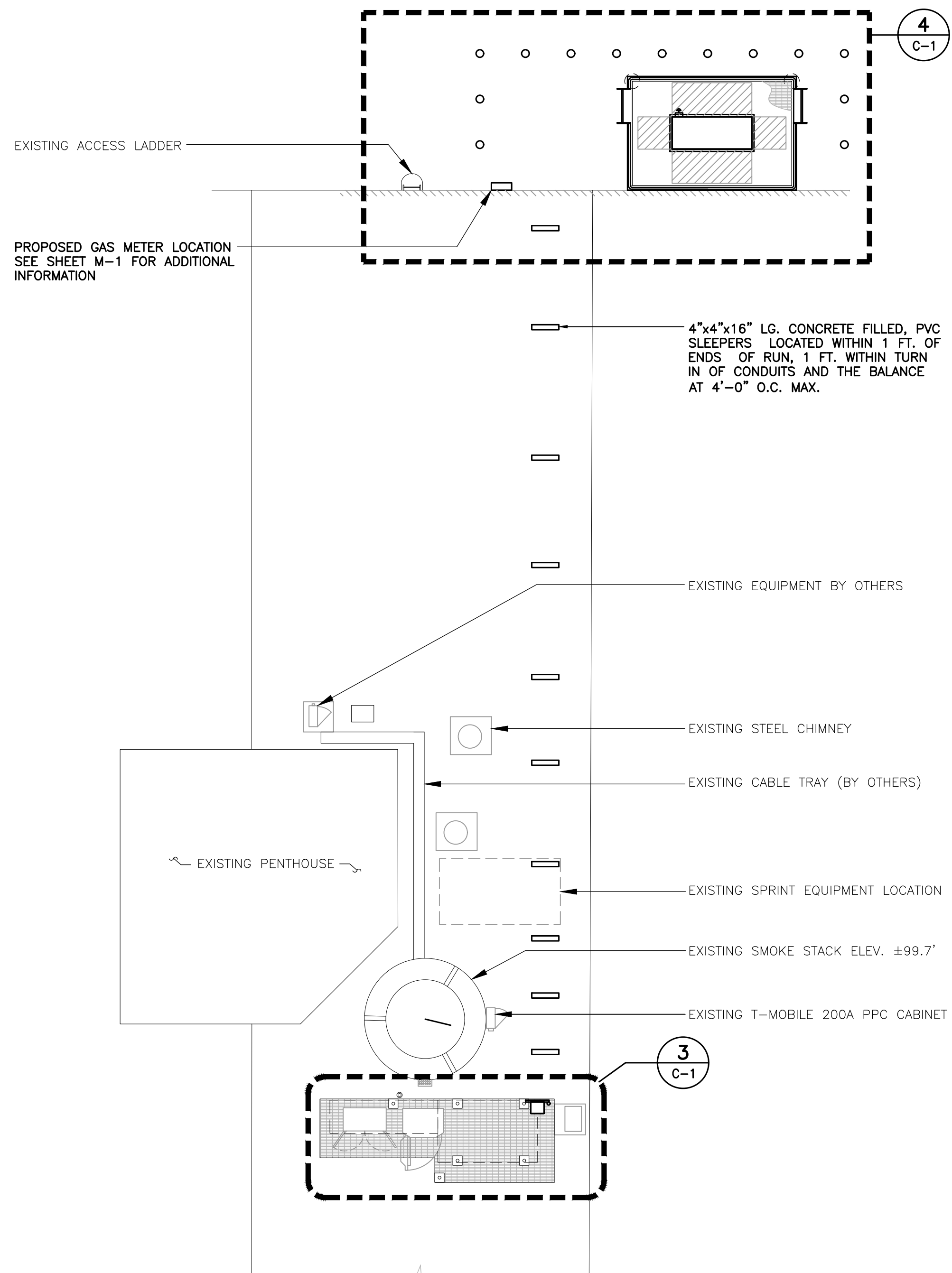
**STRUCTURAL COMPLIANCE**

**EQUIPMENT PLATFORM**

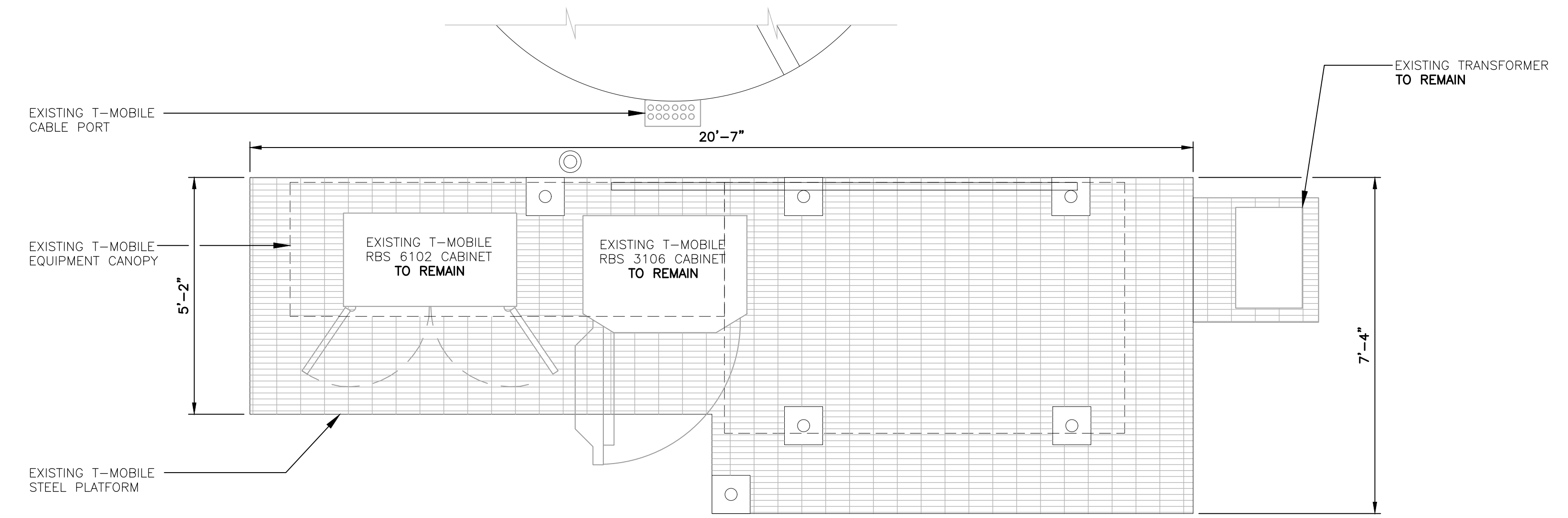
A STRUCTURAL ANALYSIS OF THE EQUIPMENT PLATFORM WAS PERFORMED FOR THE PROPOSED EQUIPMENT INSTALLATION AND WAS FOUND TO BE STRUCTURALLY SUFFICIENT TO ACCOMMODATE THE PROPOSED LOADING..

REFER TO THE STRUCTURAL ANALYSIS REPORT PREPARED BY CENTEK ENGINEERING (PROJECT # 21003.09) DATED 01/26/22 FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

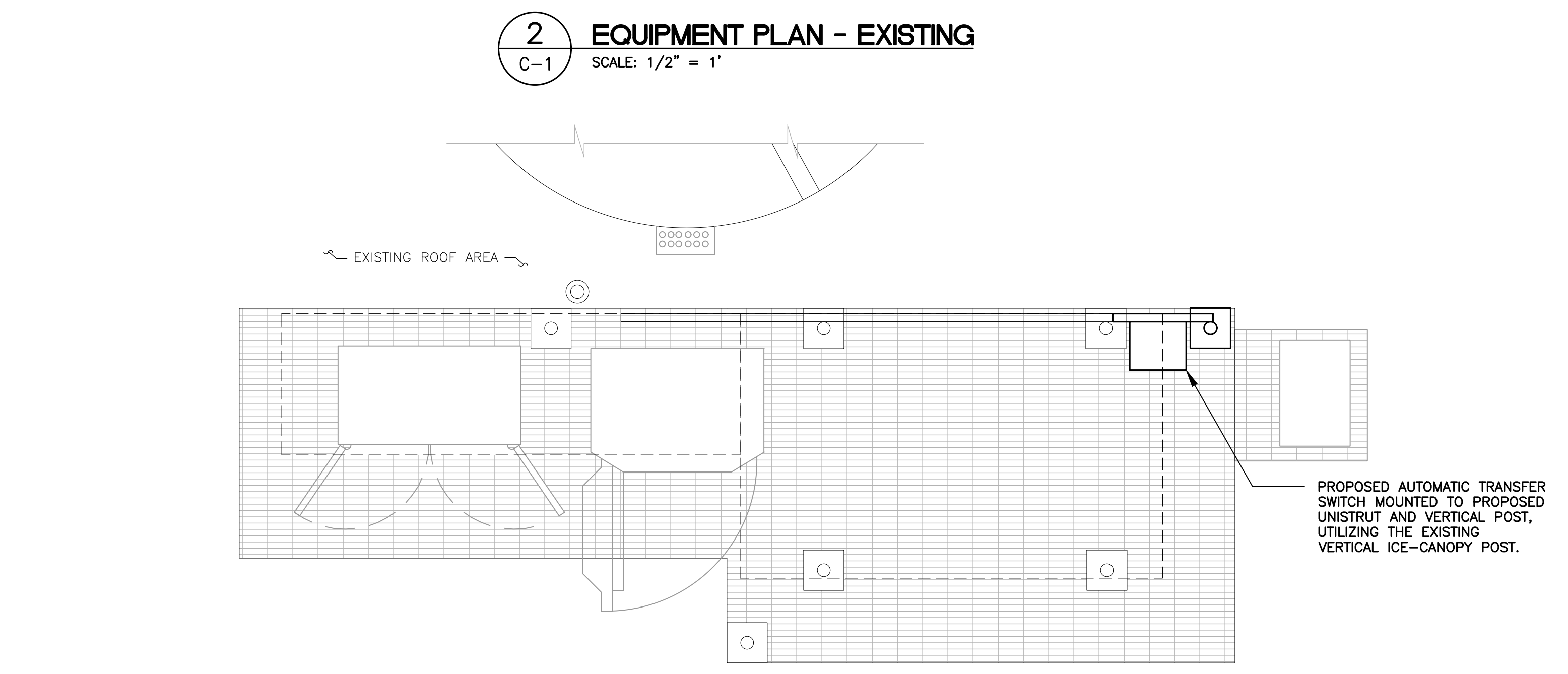
**NOTE:** NO EQUIPMENT SHALL BE INSTALLED ON THE HOSTING STRUCTURE WITHOUT A PASSING STRUCTURAL ANALYSIS REPORT AND CONTRACTOR PRIOR CONFIRMATION THAT ANY AND ALL REQUISITE MODIFICATIONS HAVE BEEN COMPLETED.



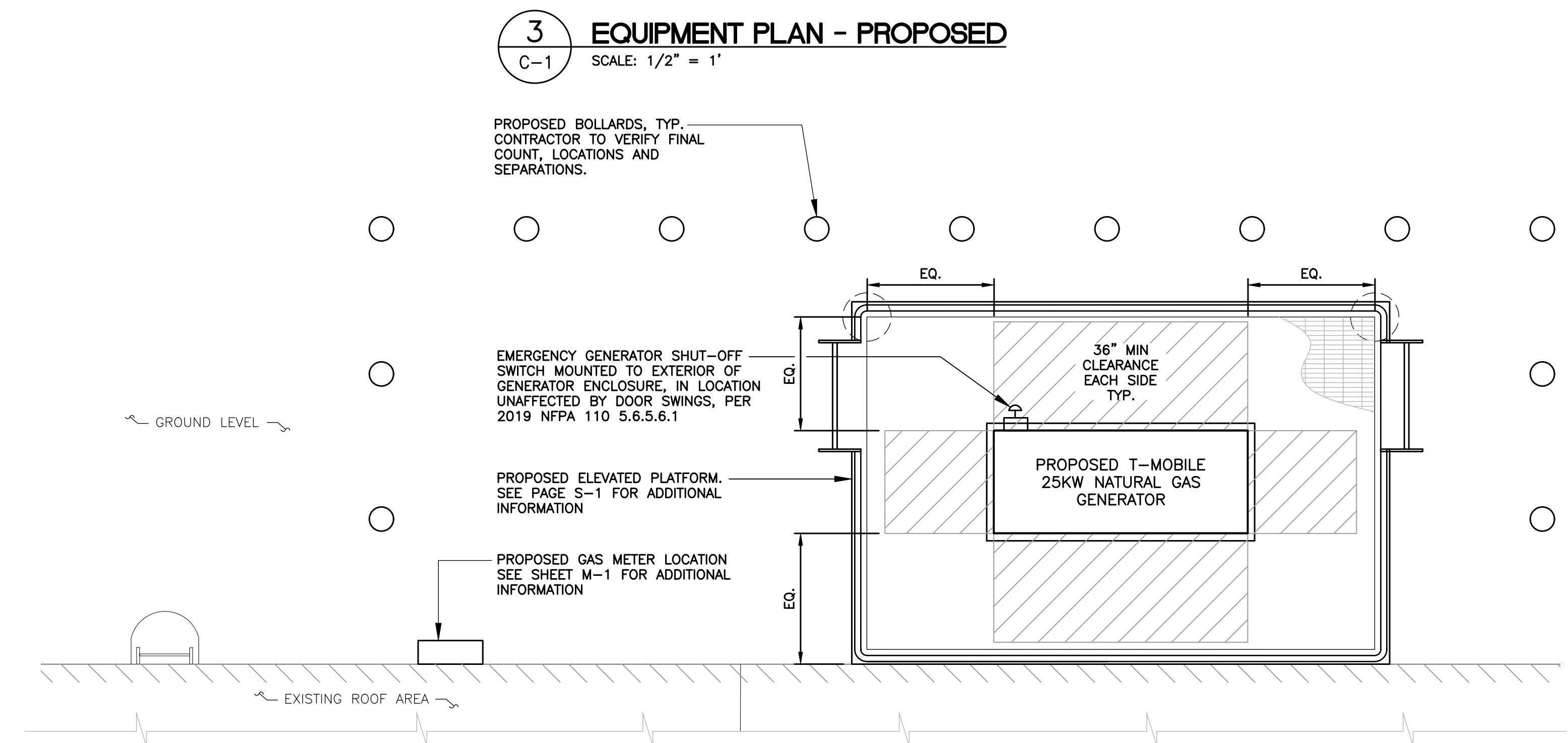
**1 COMPOUND PLAN**  
C-1 SCALE: 1" = 8'



**2 EQUIPMENT PLAN - EXISTING**  
C-1 SCALE: 1/2" = 1'



**3 EQUIPMENT PLAN - PROPOSED**  
C-1 SCALE: 1/2" = 1'



**4 GENERATOR LOCATION PLAN - PROPOSED**  
C-1 SCALE: 3/8" = 1'

<b>T-MOBILE NORTHEAST LLC</b> WIRELESS COMMUNICATIONS FACILITY <b>MARINE SYS SMOKE STACK</b> <b>SITE ID: CT11328F</b> 50 MAPLE ST BRANFORD, CT 06405	(203) 488-0380 (203) 488-8387 Fax 63-2 North Branford Road Branford, CT 06405 www.CentekEng.com
DATE: 04/20/21 SCALE: AS NOTED JOB NO. 21003.09	CONSTRUCTION DRAWINGS - REVISED PER NEW GENERATOR LOCATION CONSTRUCTION DRAWINGS - ISSUED FOR CONSTRUCTION DATE: 01/14/22 0 08/15/21 REV. DATE DRAWN BY/CHECK'D BY DESCRIPTION JLD RJS TJR
<b>C-1</b>	
Sheet No. 3 of 8	



BACKUP POWER GENERATOR					
EQUIPMENT	POWER GENERATED	FUEL	ENCLOSURE	FUEL TANK SIZE (GAL)	DIMENSIONS
MAKE: GENERAC MODEL: RG25	25 KW, AC	GAS	LEVEL 2 SOUND ATTENUMENT	-	84.2"L x 35.0"W x 53.5"H

**NOTES:**

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

**1 BACK-UP GENERATOR DETAIL**  
C-2 SCALE: NOT TO SCALE



**NFPA 704 HAZARD ID LEGEND:**  
 RED: FLAMMABILITY  
 BLUE: HEALTH  
 YELLOW: REACTIVITY  
 WHITE: BLANK

**SIGN NAME:** REGULATORY, NFPA 704 HAZARD ID  
**DESCRIPTION:** MOUNT ON GENERATOR ACCESS DOOR. CONSULT WITH GENERATOR MANUFACTURER MSDS SHEET FOR BLUE AND RES POSITIONS  
**NOTES:**

- SIGNS EXPOSED TO WEATHER SHOULD BE CHECKED ANNUALLY FOR READABILITY.
- SIGNS MUST BE UPDATED IF CHEMICAL STORAGE OR HAZARD INFORMATION FOR THE LOCATION CHANGES.
- THE GC MUST REVIEW WITH LOCAL JURISDICTION WHEN FILLING 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**  
C-2 SCALE: NOT TO SCALE

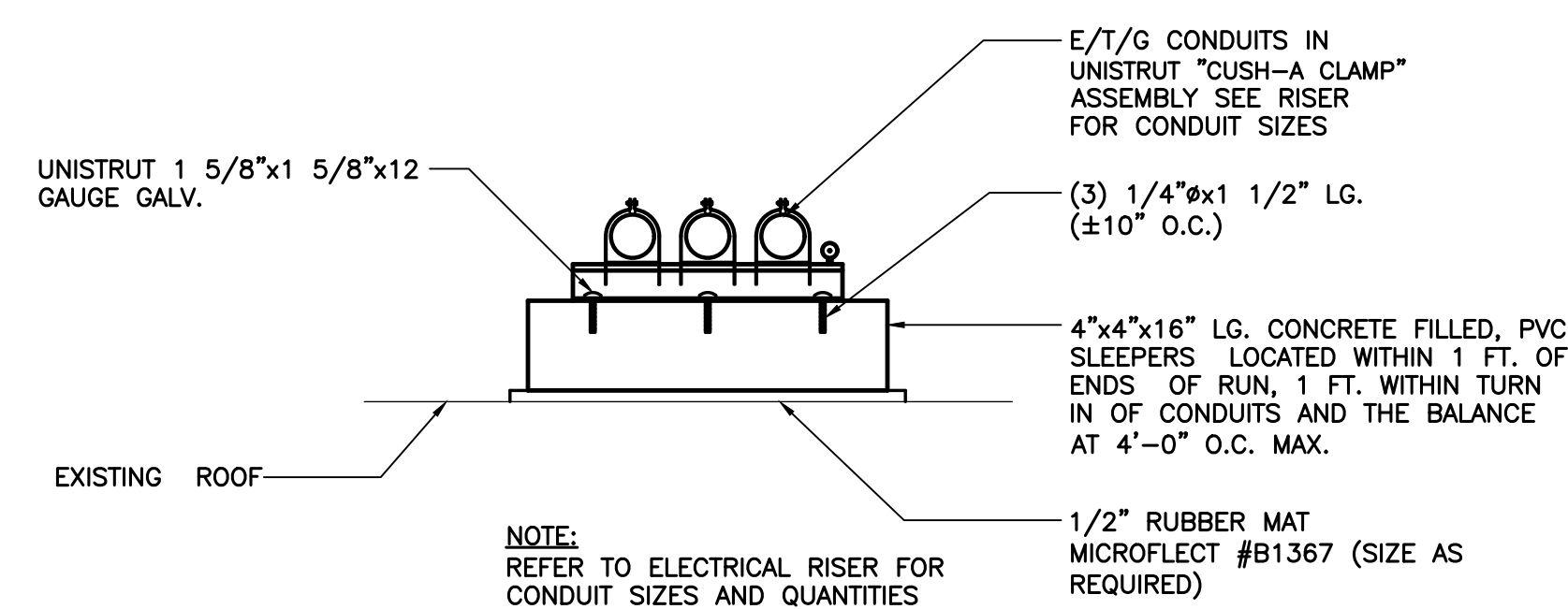


AUTOMATIC TRANSFER SWITCH					
EQUIPMENT	PHASE	VOLTAGE	ENCLOSURE	AMP	DIMENSIONS
MAKE: GENERAC MODEL: RXSC200A3	1-PHASE	120/240	NEMA-3R	200	17.3"L x 12.5"W

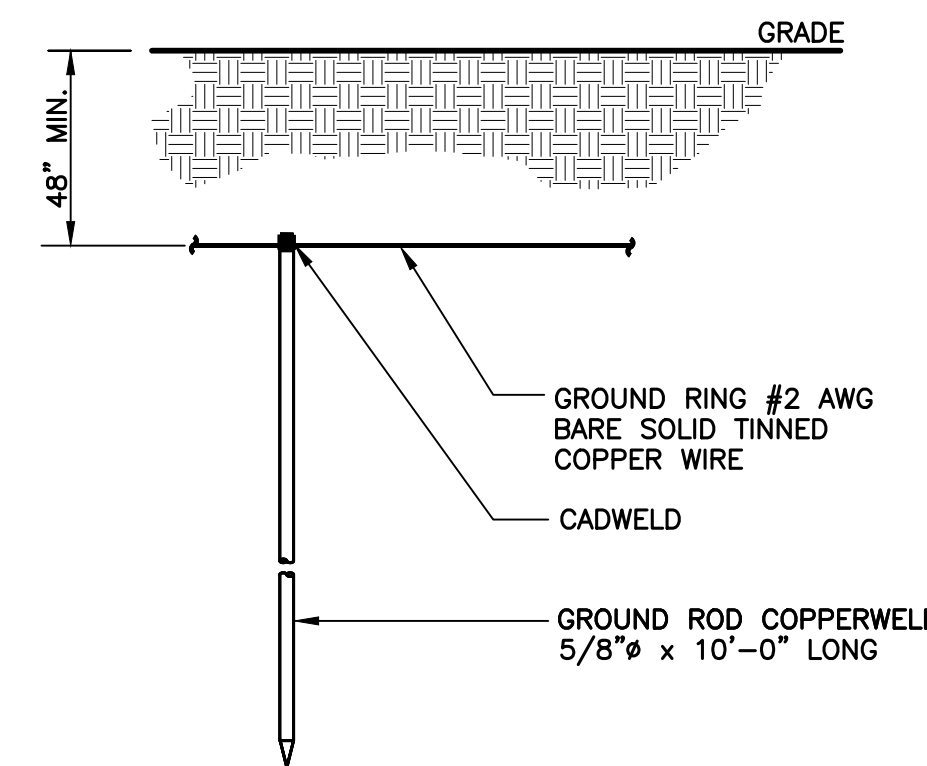
**NOTES:**

- CONTRACTOR TO COORDINATE FINAL LOCATION AND MOUNTING CONFIGURATION OF THE AUTOMATIC TRANSFER SWITCH INSTALLATION.

**3 AUTOMATIC TRANSFER SWITCH DETAIL**  
C-2 SCALE: NOT TO SCALE



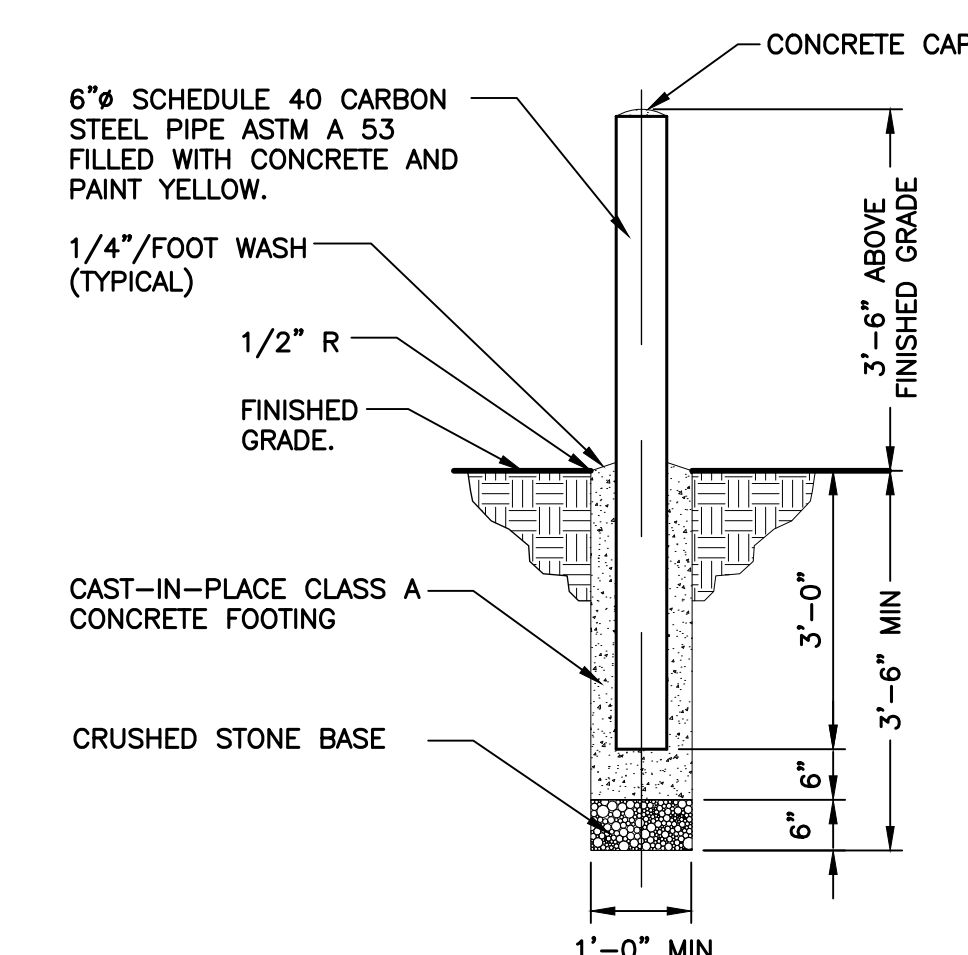
**4 ROOF - MOUNTED CONDUIT DETAIL**  
C-2 NOT TO SCALE



**NOTES:**

- USE GROUND PLATE DETAIL IF 10 FT. GROUND ROD DEPTH CANNOT BE ACHIEVED DUE TO LEDGE CONDITION OR IF EXISTING BUILDING FOUNDATION IS ENCOUNTERED.

**5 GROUND ROD DETAIL**  
C-2 NOT TO SCALE



**6 BOLLARD DETAIL**  
C-2 NOT TO SCALE

PROFESSIONAL ENGINEER SEAL

**T-Mobile**

**CENTER engineering**  
Centered on Solutions  
(203) 488-0380  
(203) 488-8387 Fax  
63-2 North Branford Road  
Branford, CT 06405  
www.CenterEng.com

**T-MOBILE NORTHEAST LLC**  
WIRELESS COMMUNICATIONS FACILITY  
**MARINE SYS SMOKE STACK**  
SITE ID: CT11328F  
50 MAPLE ST  
BRANFORD, CT 06405

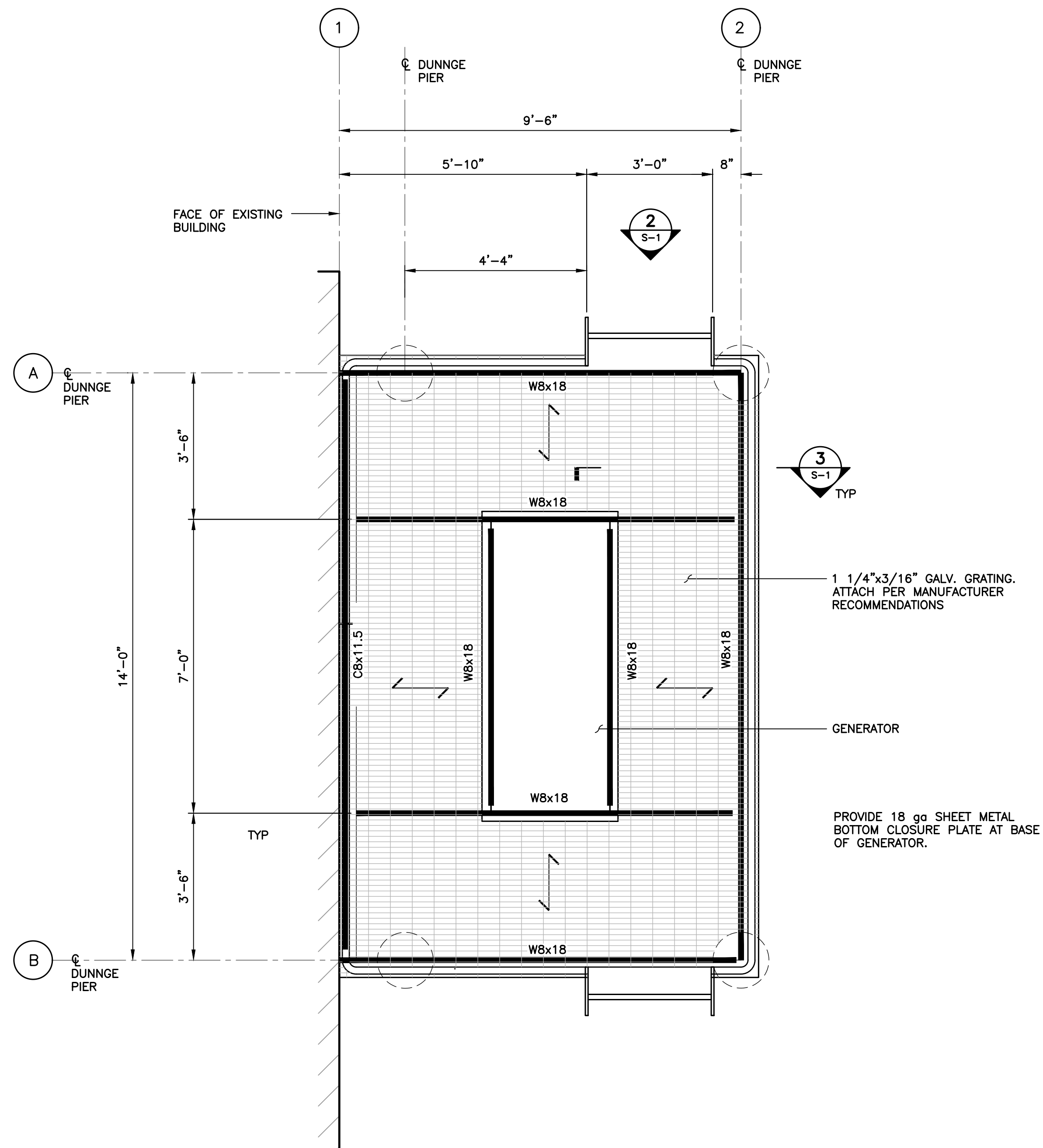
DATE: 04/20/21  
SCALE: AS NOTED  
JOB NO. 21003.09

TYPICAL EQUIPMENT DETAILS

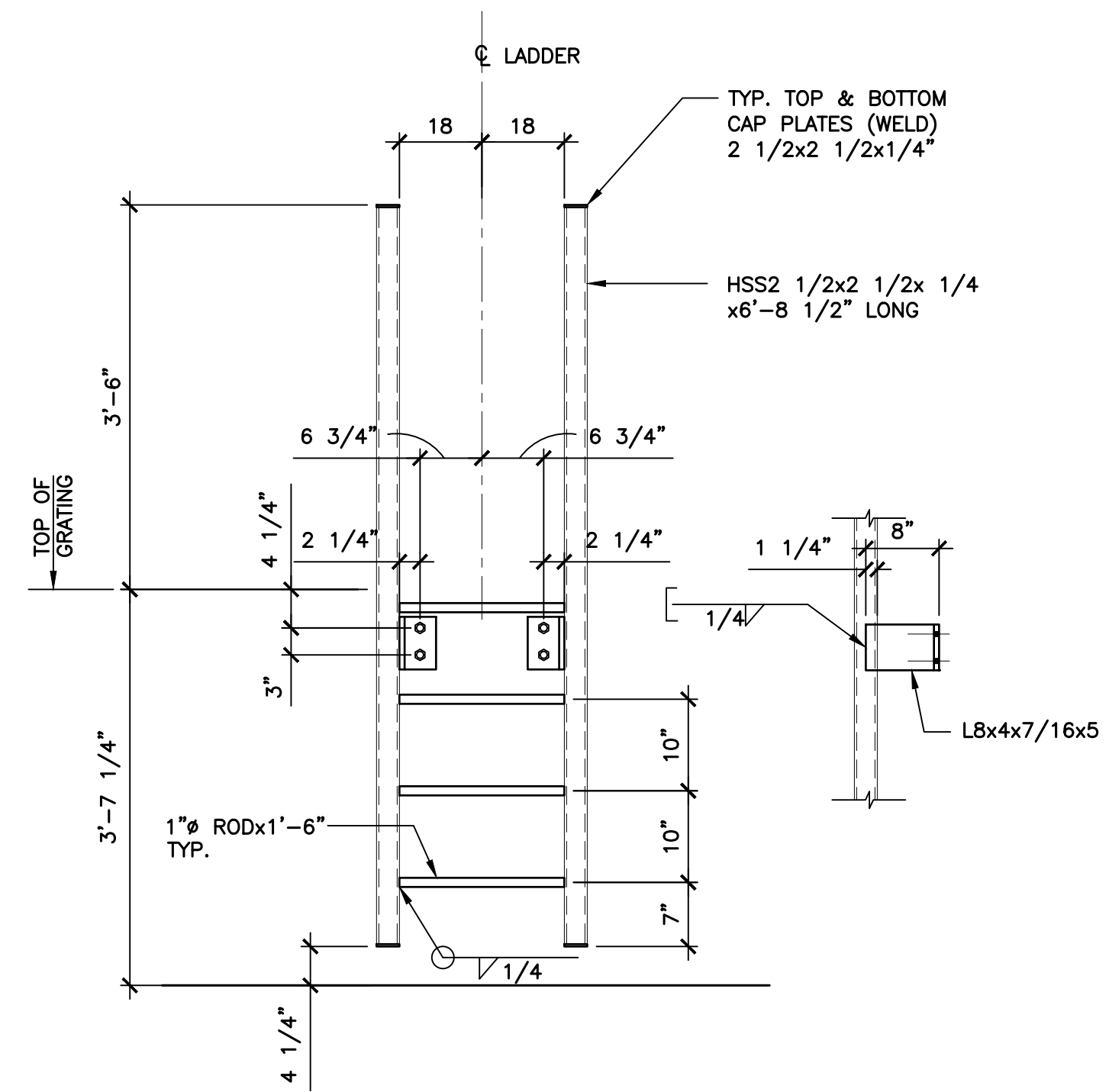
**C-2**  
Sheet No. 4 of 8

01/14/22 JLD  
09/15/21 RTS  
DATE DRAWN BY/CHK'D BY  
REV. DESCRIPTION

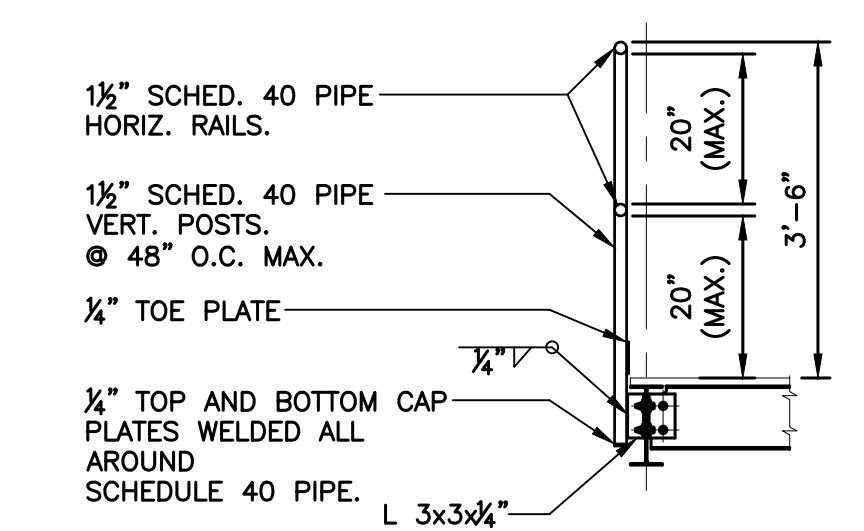
CONSTRUCTION DRAWINGS - REVISED PER NEW GENERATOR LOCATION  
CONSTRUCTION DRAWINGS - ISSUED FOR CONSTRUCTION



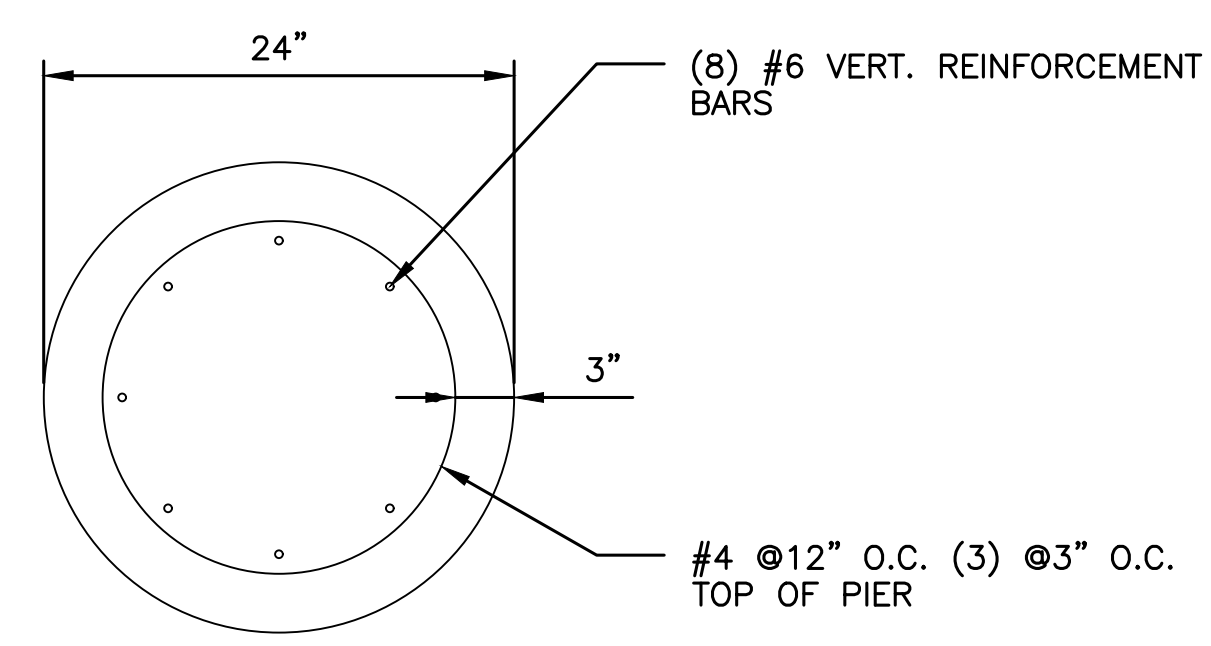
**1 GENERATOR PLATFORM FRAMING PLATFORM**  
 S-1 SCALE: 1/2" = 1'-0"



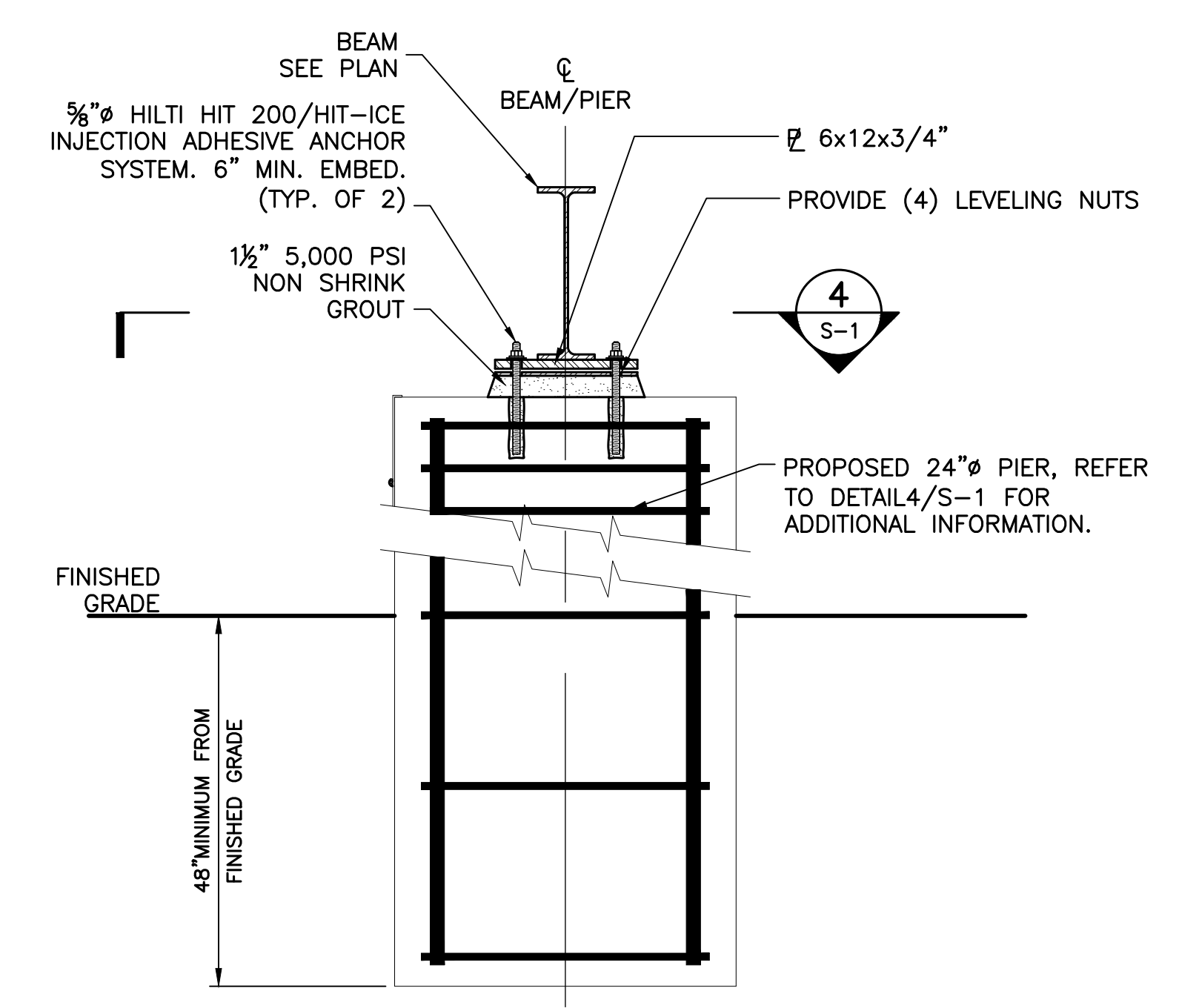
**2 LADDER ELEVATION**  
 S-1 NOT TO SCALE



**3 RAILING SECTION**  
 S-1 NOT TO SCALE



**4 PIER REINFORCING DETAIL**  
 S-1 NOT TO SCALE



**5 FOOTING SECTION DETAIL**  
 S-1 NOT TO SCALE

<b>T-MOBILE NORTHEAST LLC</b> WIRELESS COMMUNICATIONS FACILITY <b>MARINE SYS SMOKE STACK</b> <b>SITE ID: CT11328F</b> 50 MAPLE ST BRANFORD, CT 06405		PROFESSIONAL ENGINEER SEAL 	CONSTRUCTION DRAWINGS - REVISED PER NEW GENERATOR LOCATION CONSTRUCTION DRAWINGS - ISSUED FOR CONSTRUCTION
DATE: 04/20/21 SCALE: AS NOTED JOB NO. 21003.09	DATE: 01/14/22 09/15/21 REV. 0	JLD RTS TJR	DRAWN BY/TJRD CHECK'D BY
<b>GENERATOR FRAMING SUPPORT</b>		<b>S-1</b> Sheet No. 5 of 8	



### MECHANICAL WORK NOTES

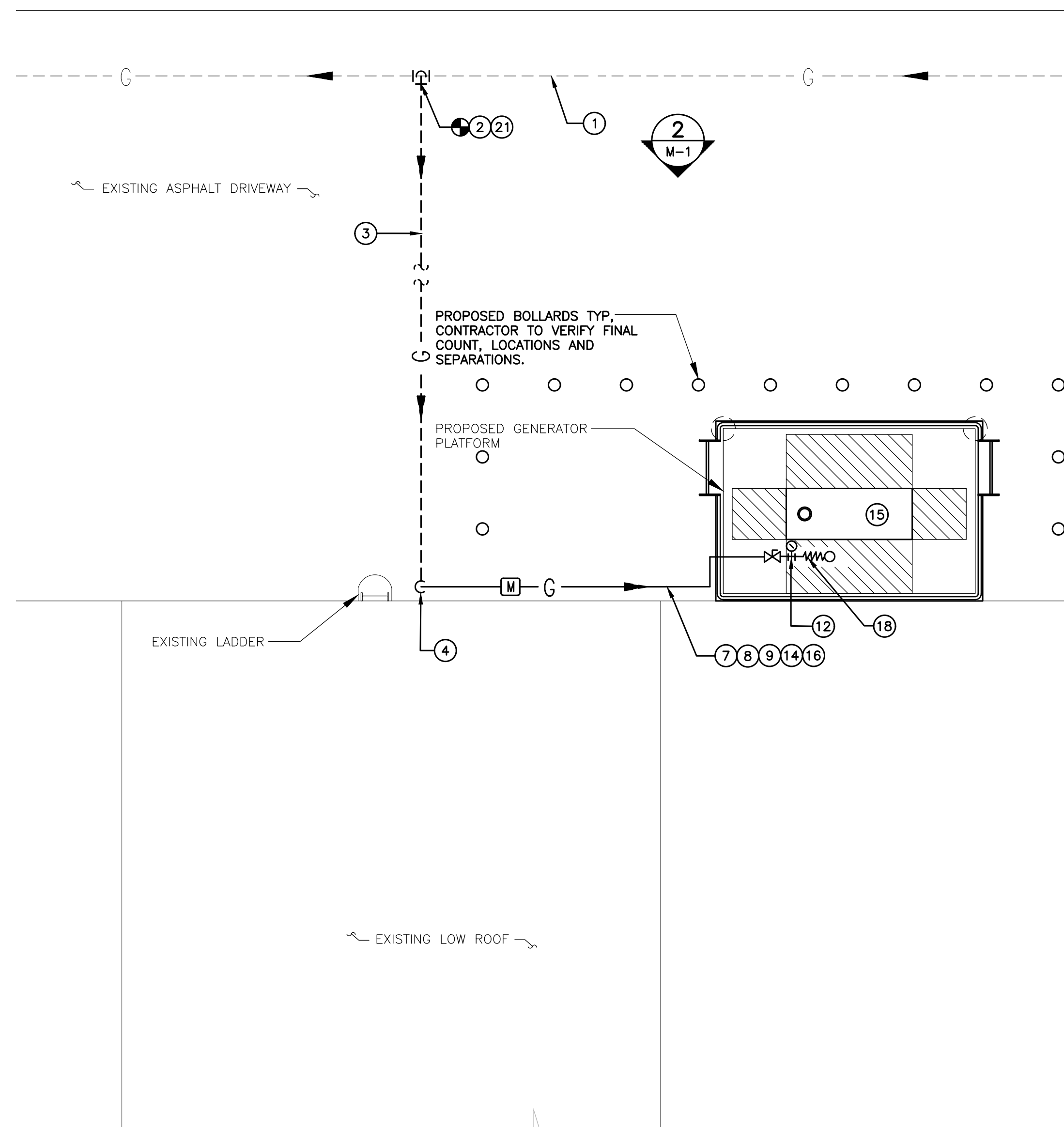
- ① APPROX. LOCATION OF EXISTING 2" PL HP GAS SERVICE (CONFIRM WITH LOCAL GAS CO.) LOCATED BELOW EXISTING ASPHALT DRIVEWAY. (VERIFY IN FIELD)
- ② APPROX. LOCATION OF NEW GAS PIPING CONNECTION TO EXISTING SERVICE BY LOCAL GAS CO (SCGC) (T-MOBILE GAS LOAD 879 CFH) COORDINATE EXACT LOCATION WITH GAS CO., BUILDING OWNER & CONSTRUCTION MANAGER PRIOR TO CONSTRUCTION.
- ③ NEW HP GAS SERVICE PER LOCAL GAS CO. (SCGC)
- ④ GAS PIPING UP TO GRADE. REFER TO 2/M-1 PARTIAL ELEVATION PLAN FOR CONTINUATION.
- ⑤ GAS SHUT-OFF VALVE (TYP.)
- ⑥ NEW GAS METER ASSEMBLY BY LOCAL GAS CO. (SCGC) COORDINATE EXACT LOCATION WITH BUILDING OWNER, GAS CO. & CONSTRUCTION MANAGER PRIOR TO INSTALLATION.
- ⑦ SCHEDULE 40 BLACK STEEL PIPING SHALL BE USED FOR ALL EXPOSED GAS PIPING.
- ⑧ GAS PIPE ROUTING SHALL BE APPROVED BY BUILDING OWNER PRIOR TO INSTALLATION.
- ⑨ CONSTRUCTION MANAGER SHALL PROVIDE EXTERIOR WALL MOUNTED PIPE SUPPORT FOR NEW PIPING.
- ⑩ GAS SHUT-OFF VALVE. LABEL "T-MOBILE GENERATOR SHUT-OFF"
- ⑪ GAS PRESSURE REGULATOR BY GAS CO.
- ⑫ EXTERIOR PRESSURE GAUGE.
- ⑬ GAS PIPING TO EMERGENCY GENERATOR. REFER TO 1/M-1 FOR CONTINUATION.
- ⑭ 1-1/2" GAS SUPPLY PIPING. CONSTRUCTION MANAGER SHALL CONFIRM GAS SIZE FROM NEW GAS METER TO EMERGENCY GENERATOR LOCATED ON PLATFORM BASED ON ACTUAL FIELD INSTALLATION. ROUTING MAY DIFFER. NOTIFY T-MOBILE CONSTRUCTION MANAGER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.
- ⑮ T-MOBILE 25KW NATURAL GAS EMERGENCY GENERATOR. GENERAC INDUSTRIAL POWER. (879 CFH @ 100% LOAD). OPERATING PRESSURE 8"-14" W.C.
- ⑯ PROPOSED GAS PIPE ROUTING FOR EMERGENCY GENERATOR TO RUN ALONG FACE OF BUILDING. PIPING SHALL BE SECURED & PAINTED TO MATCH BUILDING FACILITY REQUIREMENTS & RECOMMENDATIONS. ROUTING, LOCATION, PAINTING ETC. SHALL BE APPROVED BY BUILDING OWNER & T-MOBILE CONSTRUCTION MANAGER PRIOR TO ANY CONSTRUCTION.
- ⑰ CONSTRUCTION MANAGER SHALL BE RESPONSIBLE FOR ALL COSTS INVOLVING PROVIDING & INSTALLING ALL REQUIRED COMPONENTS FOR A COMPLETE & OPERATIONAL SYSTEM. CONSTRUCTION MANAGER SHALL COORDINATE ALL GAS METERING, & PIPING, PROVIDING NEW METER WITH THE LOCAL GAS CO (SCGC) PRIOR TO ANY CONSTRUCTION. NOTIFY T-MOBILE CONSTRUCTION MANAGER & BUILDING OWNER OF ANY ISSUES.
- ⑱ FLEXIBLE GAS PIPE CONNECTOR TO EMERGENCY GENERATOR.
- ⑲ CONSTRUCTION MANAGER IS RESPONSIBLE FOR ALL PIPING, VALVES, ETC AFTER NEW GAS METER INSTALLATION BY LOCAL GAS CO.
- ⑳ CONSTRUCTION MANAGER SHALL SUBMIT PRE-CONSTRUCTION AND POST-CONSTRUCTION PURGE METHOD OF PROCEDURE TO AUTHORITY HAVING JURISDICTION FOR APPROVAL. FORWARD METHODS OF PROCEDURE TO ENGINEER.
- ㉑ CONTRACTOR SHALL GIVE NOTICE TO BUILDING OWNER & T-MOBILE CONSTRUCTION MANAGER MINIMUM 72 HOURS ADVANCE NOTIFICATION OF SCHEDULING EXISTING GAS SHUT-OFF FOR PIPING WORK.

### MECHANICAL LEGEND

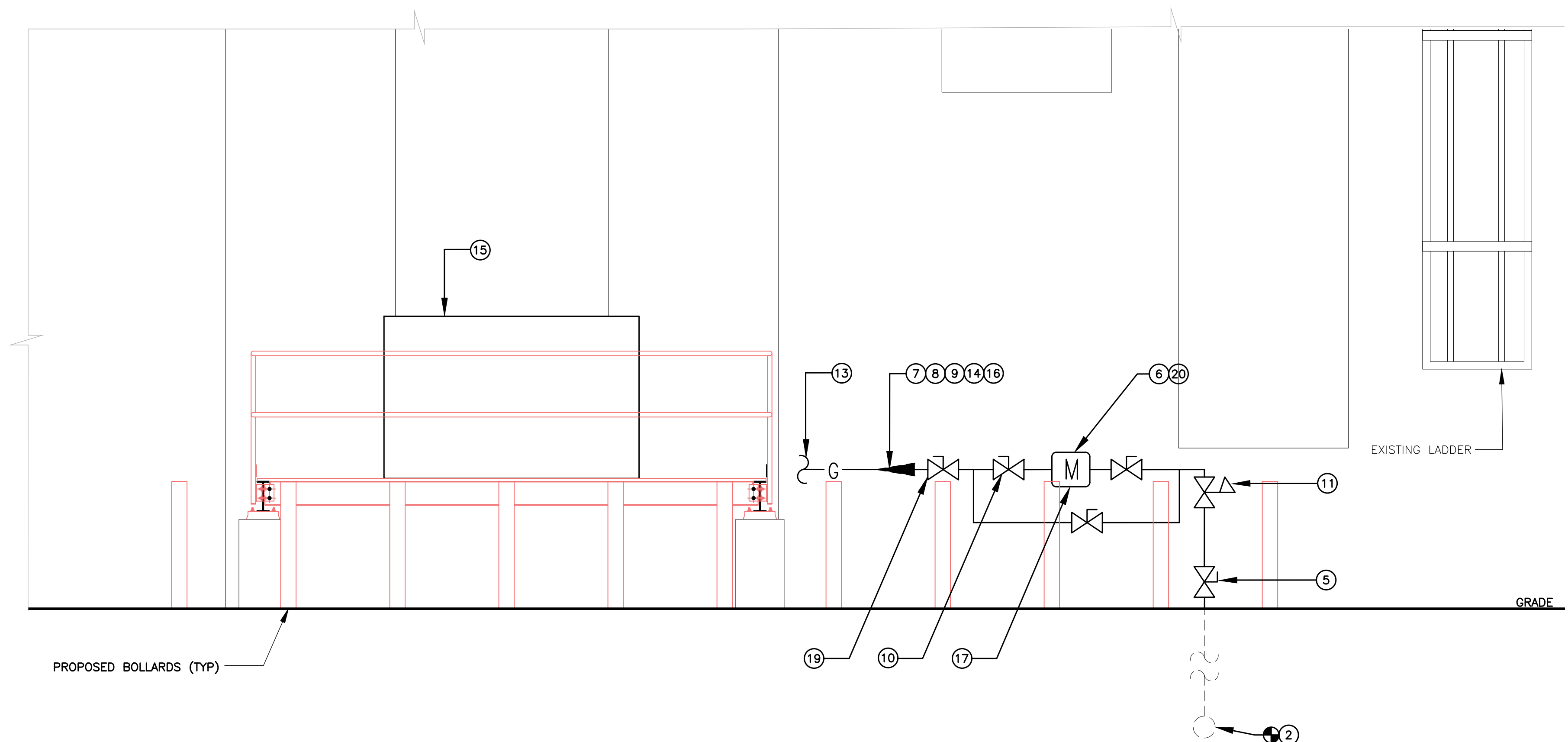
	PIPE RISER
	PIPE DROP
	EXISTING BURIED GAS PIPING
	EXISTING GAS PIPING
	NEW BURIED GAS PIPING
	GAS PIPING
	GAS SHUT-OFF VALVE
	PRESSURE REDUCING VALVE
	STRAINER
	PRESSURE GAUGE
	CONNECT NEW TO EXISTING

### ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR	MBH	BTU PER HOUR (THOUSAND)
HP	HORSEPOWER	TYP	TYPICAL
KW	KILOWATTS	CP	CONTROL PANEL
MIN.	MINIMUM	FC	FLEX CONNECTION
PH	PHASE	GALV.	GALVANIZED
FT.	FEET	N.T.S.	NOT TO SCALE
CFH	CUBIC FEET PER HOUR	MAX	MAXIMUM
O.C.	ON CENTER	HR	HOUR

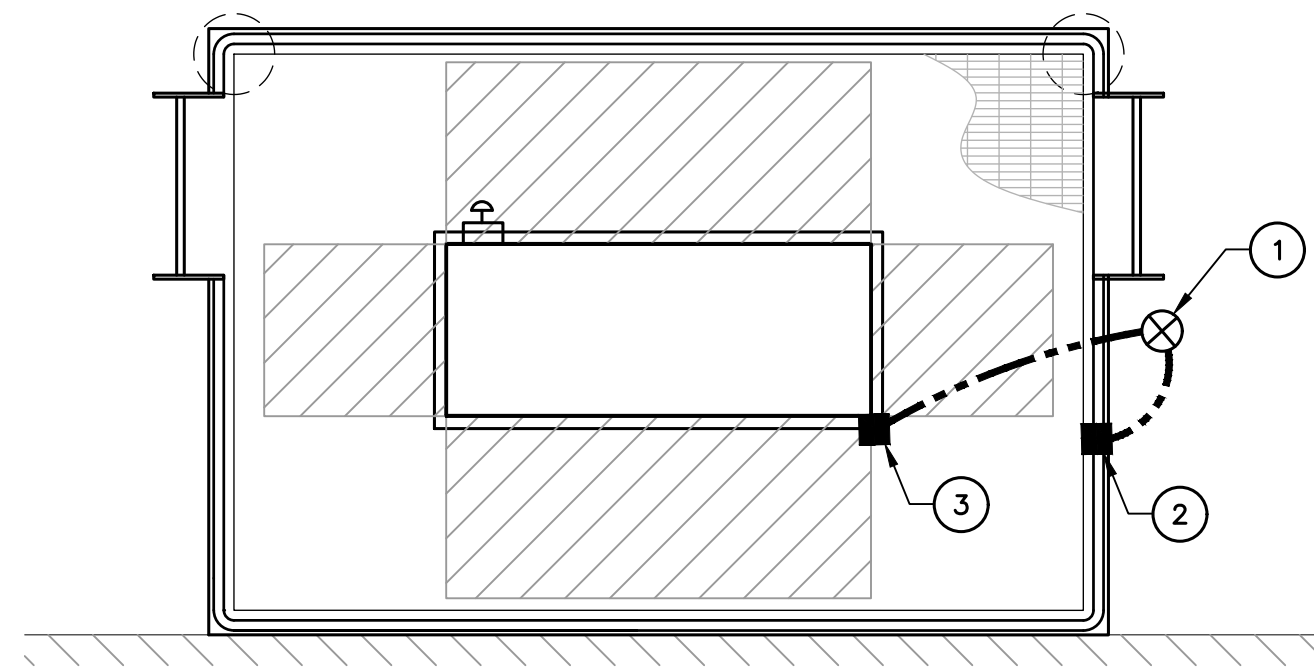


**1** PROPOSED GENERATOR LEASING SPACE - MECHANICAL  
M-1 SCALE: NOT TO SCALE



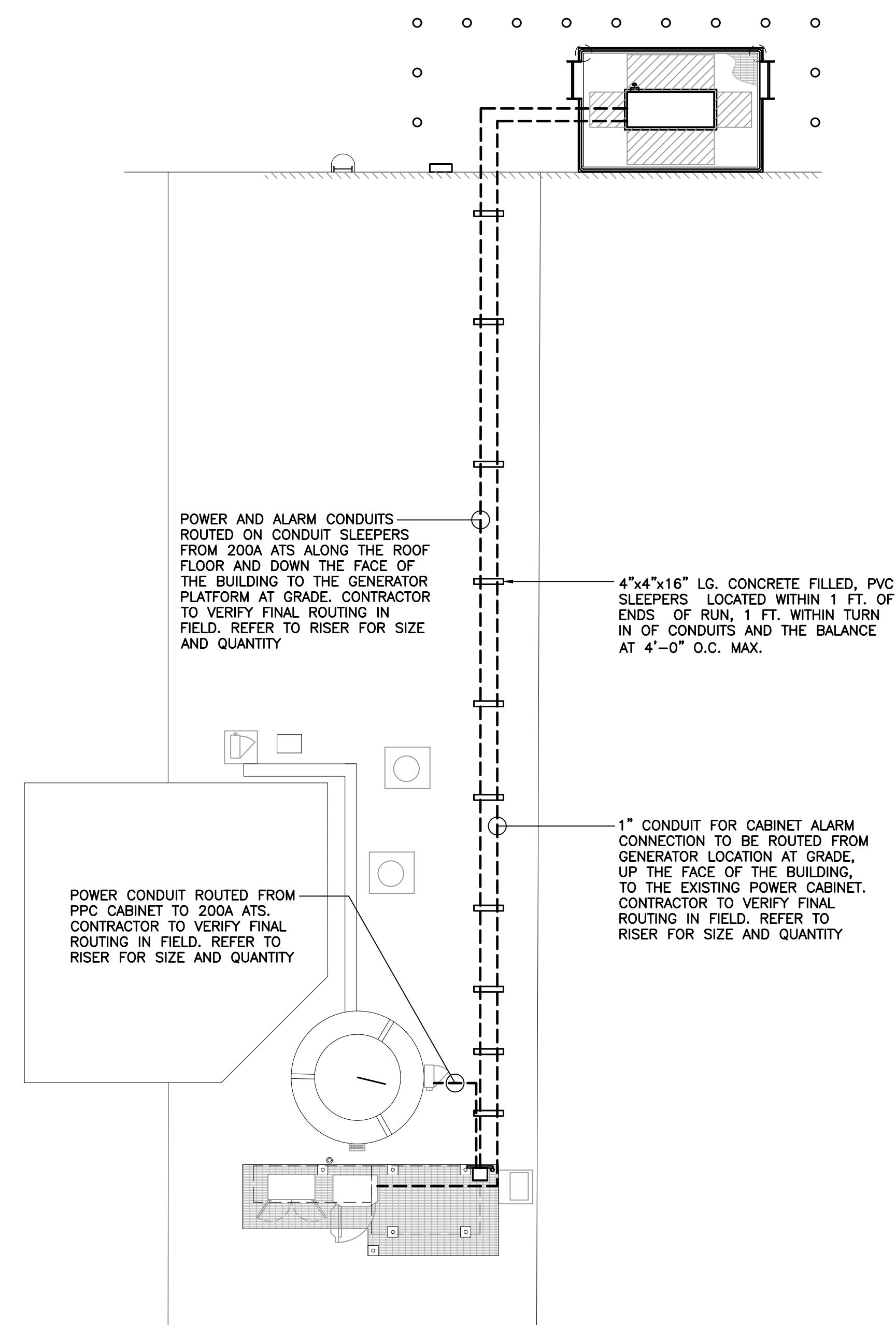
**2** PARTIAL ELEVATION PLAN - MECHANICAL  
M-1 NOT TO SCALE

CONSTRUCTION DRAWINGS - REVISED PER NEW GENERATOR LOCATION	CONSTRUCTION DRAWINGS - ISSUED FOR CONSTRUCTION	TJR	TJR	JLD	RTS	DATE	DRAWN BY/CHECK'D BY
0	0	01/14/22	08/15/21	07/14/22	08/15/21	DATE	DRAWN BY/CHECK'D BY
REV.	REV.	REV.	REV.	REV.	REV.	REV.	REV.
PROFESSIONAL ENGINEER SEAL							
T-Mobile							
CENTEK engineering							
WIRELESS COMMUNICATIONS FACILITY	(203) 488-0580 (203) 488-8587 Fax 63-2 North Branford Road Branford, CT 06405 www.CentekEng.com						
T-MOBILE NORTHEAST LLC	MARINE SYS SMOKE STACK SITE ID: CT11328F 50 MAPLE ST BRANFORD, CT 06405						
DATE:	04/20/21						
SCALE:	AS NOTED						
JOB NO.	21003.09						
MECHANICAL NOTES, PARTIAL COMPOUND & ELEVATION PLANS							
M-1							
Sheet No. 6 of 8							



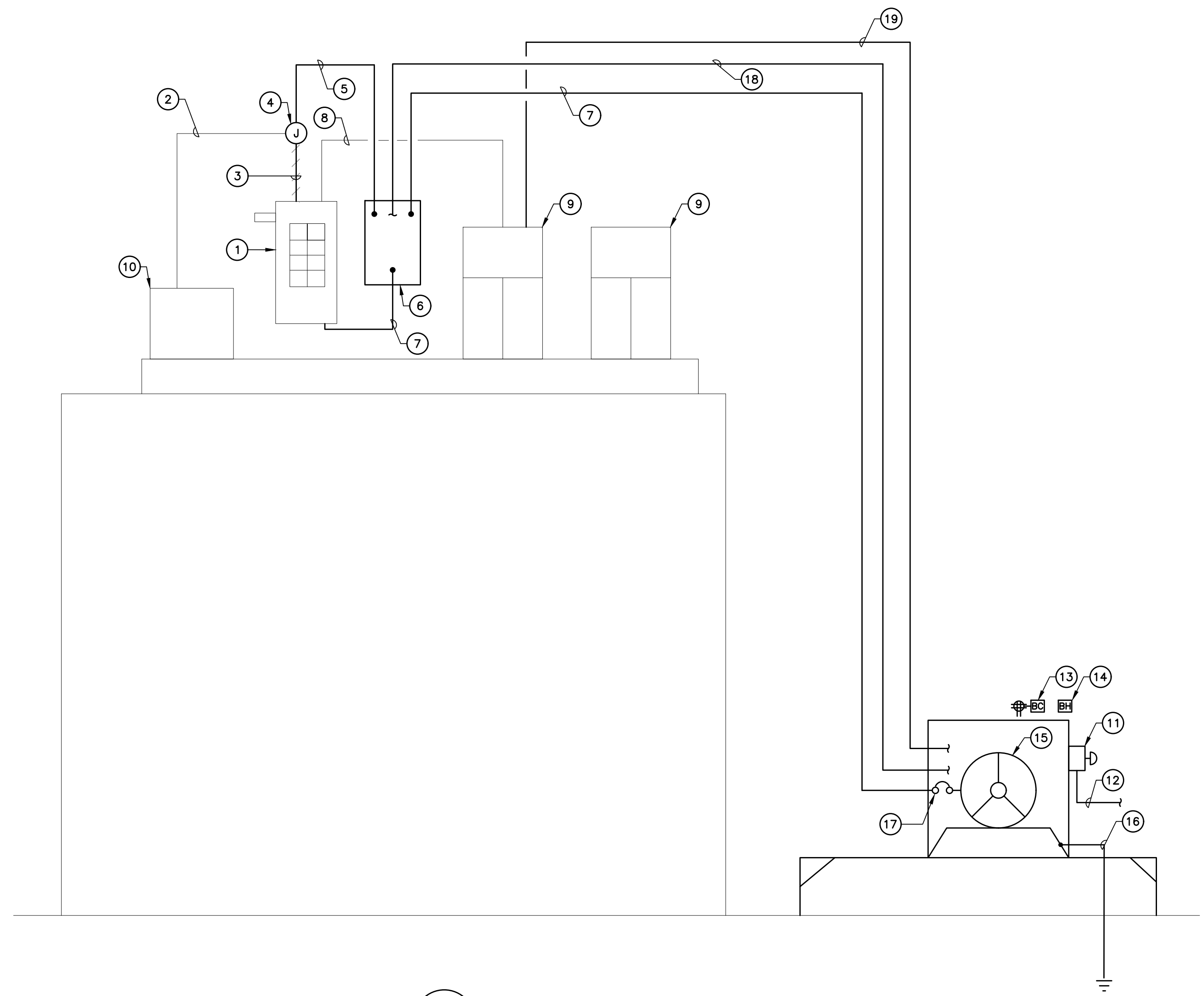
- GROUNDING NOTES**
- ① GROUNDING ROD.
  - ② BOND PLATFORM STEEL TO GROUND ROD WITH #2 AWG BCW
  - ③ BOND GENERATOR TO GROUND ROD PER NEC AND GENERATOR MANUFACTURER SPECIFICATIONS. MINIMUM OF #2 AWG BCW

**1 EQUIPMENT GROUNDING PLAN**  
E-1 SCALE: NOT TO SCALE



**2 ELECTRICAL CONDUIT ROUTING PLAN**  
E-1 SCALE: NOT TO SCALE

- | RISER DIAGRAM NOTES  | RISER DIAGRAM NOTES   |
|--|---|
| ① EXISTING PPC CABINET TO REMAIN.  | 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. |
| ② EXISTING POWER CONDUIT AND CONDUCTORS TO REMAIN.   | ⑫ 3/4" CONDUIT AND CONDUCTORS REQUIRED FOR PROPER OPERATION OF EMERGENCY GENERATOR SHUT OFF SWITCH.                                 |
| ③ SECTION OF CONDUIT AND CONDUCTORS TO BE REMOVED.   | ⑬ GENERATOR BATTERY CHARGER AND CONVENIENCE GFCI OUTLET WIRED TO EXISTING PANEL. OUTLET TO BE MOUNTED IN WEATHERPROOF ENCLOSURE.    |
| ④ JUNCTION BOX SIZED PER NEC.  | ⑭ GENERATOR BLOCK HEATER WIRED TO EXISTING PANEL SERVING.   |
| ⑤ EXTEND EXISTING CONDUITS AND CONDUCTORS TO NEW ATS.  | ⑮ EMERGENCY BACK UP GENERATOR.  |
| ⑥ NEW 200A, 2 SOURCE AUTOMATIC TRANSFER SWITCH.  | ⑯ GENERATOR GROUNDING PER NEC AND MANUFACTURER'S REQUIREMENTS. BOND TO EXISTING GROUNDING SYSTEM. (MINIMUM OF (1) #2 AWG GROUND)    |
| ⑦ (3) #3/0 AWG, (1) #6 AWG GROUND, 2-1/2" CONDUIT MAXIMUM CIRCUIT LENGTH 200'. CONDUCTOR TO BE TYPE XHHW-2 | ⑰ GENERATOR OUTPUT CIRCUIT BREAKER.   |
| ⑧ EXISTING CONDUITS AND CONDUCTORS TO REMAIN   | ⑱ 1" CONDUIT FOR CABINET ALARM CONNECTION.  |
| ⑨ EXISTING EQUIPMENT CABINETS TO REMAIN.   |   |
| ⑩ EXISTING 75KVA TRANSFORMER TO REMAIN   |   |



**3 ELECTRICAL RISER DIAGRAM**  
E-1 SCALE: NOT TO SCALE

**T-MOBILE NORTHEAST LLC**  
WIRELESS COMMUNICATIONS FACILITY  
**MARINE SYS SMOKE STACK**  
SITE ID: CT11328F  
50 MAPLE ST  
BRANFORD, CT 06405

DATE: 04/20/21  
SCALE: AS NOTED  
JOB NO. 21003.09  
ELECTRICAL GROUNDING, CONDUIT AND RISER DIAGRAM

Sheet No. 7 of 8

PROFESSIONAL ENGINEER SEAL  
STATE OF CONNECTICUT  
JULIUS J. JUD  
01/14/22  
06/15/21  
DATE  
REV.  
DRAWN BY: JCK/D BY

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Branford, CT 06405  
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CONSTRUCTION DRAWINGS - REVISED PER NEW GENERATOR LOCATION  
CONSTRUCTION DRAWINGS - ISSUED FOR CONSTRUCTION

**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. THE 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. CONDUITS

- 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.

<b>CONDUIT SCHEDULE SECTION 16111</b>			
CONDUIT TYPE	NEC REFERENCE	APPLICATION	MIN. BURIAL DEPTH (PER NEC TABLE 300.5) <sup>2,3</sup>
EMT	ARTICLE 358	INTERIOR CIRCUITING, EQUIPMENT ROOMS, SHELTERS	N/A
RMC, RIGID GALV. STEEL	ARTICLE 344, 300.5, 300.50	ALL INTERIOR/ EXTERIOR CIRCUITING, ALL UNDERGROUND INSTALLATIONS.	6 INCHES
PVC, SCHEDULE 40	ARTICLE 352, 300.5, 300.50	INTERIOR/ EXTERIOR CIRCUITING AND GROUNDING SYSTEMS, UNDERGROUND INSTALLATIONS, WHERE NOT SUBJECT TO PHYSICAL DAMAGE. <sup>1</sup>	18 INCHES
PVC, SCHEDULE 80	ARTICLE 352, 300.5, 300.50	INTERIOR/ EXTERIOR CIRCUITING AND GROUNDING SYSTEMS, UNDERGROUND INSTALLATIONS, WHERE SUBJECT TO PHYSICAL DAMAGE. <sup>1</sup>	18 INCHES
LIQUID TIGHT FLEX. METAL	ARTICLE 350	SHORT LENGTHS (MAX. 3FT.) WIRING TO VIBRATING EQUIPMENT IN WET LOCATIONS.	N/A
FLEX. METAL	ARTICLE 348	SHORT LENGTHS (MAX. 3FT.) WIRING TO VIBRATING EQUIPMENT IN WET LOCATIONS.	N/A

<sup>1</sup> PHYSICAL DAMAGE IS SUBJECT TO THE AUTHORITY HAVING JURISDICTION.  
<sup>2</sup> UNDERGROUND CONDUIT INSTALLED UNDER ROADS, HIGHWAYS, DRIVEWAYS, PARKING LOTS SHALL HAVE MINIMUM DEPTH OF 24".  
<sup>3</sup> 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:

LINE	120/208/240V	277/480V
A	BLACK	BROWN
B	RED	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 GROUND 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.

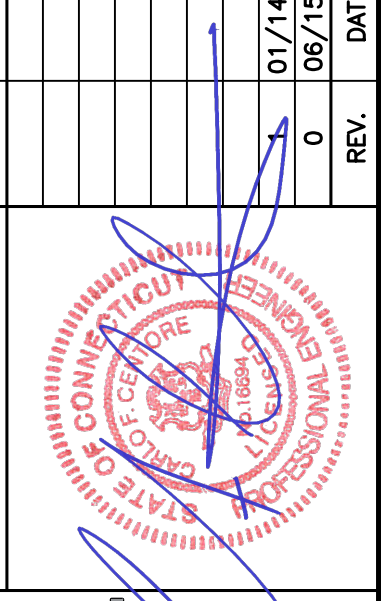
THE TESTING FIRM SHALL INCLUDE THE FOLLOWING INFORMATION WITH THE REPORT:

  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 CONNECTED TO THE PANELBOARDS SO 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		CONSTRUCTION DRAWINGS - REVISED PER NEW GENERATOR LOCATION			
		CONSTRUCTION DRAWINGS - ISSUED FOR CONSTRUCTION			
		TJR			
DATE	01/14/22	JLD	TJR	TJR	TJR
REV.	0	06/15/21	RTS		
T-MOBILE NORTHEAST LLC WIRELESS COMMUNICATIONS FACILITY		MARINE SYS SMOKE STACK		SITE ID: CT11328F 50 MAPLE ST BRANFORD, CT 06405	
CENTEK engineering Centered on Solutions (203) 489-0380 (203) 489-8387 Fax 63-2 North Branford Road Branford, CT 06405 www.CentekEng.com					
DATE:	04/20/21				
SCALE:	AS NOTED				
JOB NO.	21003.09				
ELECTRICAL SPECIFICATIONS					
<b>E-2</b>					
Sheet No. 8 of 8					

## Protector® Series

### PROTECTOR® SERIES Standby Generators Liquid-Cooled Gaseous Engine

#### INCLUDES:

- Two-Line LCD Multilingual Digital Evolution™ Controller (English/Spanish/French/Portuguese) with external viewing window for easy indication of generator status and breaker position.
- Capability to be installed with 18" (457mm) of a building\*
- True Power™ Electrical Technology
- Isochronous Electronic Governor
- Sound Attenuated Enclosure
- Closed Coolant Recovery System
- Smart Battery Charger
- UV/Ozone Resistant Hoses
- ±1% Voltage Regulation
- Natural Gas or LP Operation
- 5 Year Limited Warranty
- UL 2200 Listed

Note: 25-45 kW units are field convertible between natural gas or liquid propane. 60 kW units are built per fuel requirement and are not convertible.

\*Only if located away from doors, windows, and fresh air intakes, and unless otherwise directed by local codes. Applicable for 25kW and 30kW units only.

#### Standby Power Rating

Model RG025 (Aluminum - Bisque) - 25 kW 60 Hz  
Model RG030 (Aluminum - Bisque) - 30 kW 60 Hz  
Model RG036 (Aluminum - Bisque) - 36 kW 60 Hz  
Model RG045 (Aluminum - Bisque) - 45 kW 60 Hz  
Model RG060 (Aluminum - Bisque) - 60 kW 60 Hz



QUIET-TEST.

\*Assembled in the USA using domestic and foreign parts

Meets EPA Emission Regulations  
25, 30 & 45 kW CA/MA emissions compliant  
36 & 60 kW not for sale in CA / MA

## FEATURES

- **INNOVATIVE DESIGN & PROTOTYPE TESTING** are key components of GENERAC'S success in "IMPROVING POWER BY DESIGN." But it doesn't stop there. Total commitment to component testing, reliability testing, environmental testing, destruction and life testing, plus testing to applicable CSA, NEMA, EGSA, and other standards, allows you to choose GENERAC POWER SYSTEMS with the confidence that these systems will provide superior performance.
- **TEST CRITERIA:**
  - ✓ **PROTOTYPE TESTED**
  - ✓ **SYSTEM TORSIONAL TESTED**
  - ✓ **NEMA MG1-22 EVALUATION**
  - ✓ **MOTOR STARTING ABILITY**
- **SOLID-STATE, FREQUENCY COMPENSATED VOLTAGE REGULATION.** This state-of-the-art power maximizing regulation system is standard on all Generac models. It provides optimized FAST RESPONSE to changing load conditions and MAXIMUM MOTOR STARTING CAPABILITY by electronically torque-matching the surge loads to the engine. Digital voltage regulation at ±1%.
- **SINGLE SOURCE SERVICE RESPONSE** from Generac's extensive dealer network provides parts and service know-how for the entire unit, from the engine to the smallest electronic component.
- **GENERAC TRANSFER SWITCHES.** Long life and reliability are synonymous with GENERAC POWER SYSTEMS. One reason for this confidence is that the GENERAC product line includes its own transfer systems and controls for total system compatibility.

25 • 30 • 36 • 45 • 60 kW

application &amp; engineering data

**GENERATOR SPECIFICATIONS**

Type	Synchronous
Rotor Insulation Class	H
Stator Insulation Class	H
Telephone Interference Factor (TIF)	<50
Alternator Output Leads 1-Phase	4 wire
Alternator Output Leads 3-Phase	6 wire
Bearings	Sealed Ball
Coupling	Flexible Disc
Excitation System	Direct

**VOLTAGE REGULATION**

Type	Electronic
Sensing	Single Phase
Regulation	± 1%

**GOVERNOR SPECIFICATIONS**

Type	Electronic
Frequency Regulation	Isochronous
Steady State Regulation	± 0.25%

**ELECTRICAL SYSTEM**

Battery Charge Alternator	12 Volt 15 Amp - 25 & 30 kW 12 Volt 30 Amp - 36, 45 & 60 kW
Static Battery Charger	2 Amp
Recommended Battery (battery not included)	Group 26, 525CCA
System Voltage	12 Volts

**GENERATOR FEATURES**

<p>Revolving field heavy duty generator Directly connected to the engine Operating temperature rise 120 °C above a 40 °C ambient Class H insulation is NEMA rated All models fully prototyped tested</p>
--

**ENCLOSURE FEATURES**

Aluminum weather protective enclosure	Ensures protection against mother nature. Electrostatically applied textured epoxy paint for added durability.
Enclosed critical grade muffler	Quiet, critical grade muffler is mounted inside the unit to prevent injuries.
Small, compact, attractive	Makes for an easy, eye appealing installation.
SAE	Sound attenuated enclosure ensures quiet operation.

**ENGINE SPECIFICATIONS: 25 & 30 kW**

Make	Generac
Model	In-line
Cylinders	4
Displacement (Liters)	1.5
Bore (in/mm)	3.05/77.4
Stroke (in/mm)	3.13/79.5
Compression Ratio	11:1
Intake Air System	Naturally Aspirated
Lifter Type	Hydraulic

**ENGINE SPECIFICATIONS: 36, 45 & 60 kW**

Make	Generac
Model	In-line
Cylinders	4
Displacement (Liters)	2.4
Bore (in/mm)	3.41/86.5
Stroke (in/mm)	3.94/100
Compression Ratio	9.5:1
Intake Air System	Naturally Aspirated (36 & 45 kW) or Turbocharged/Aftercooled (60 kW)
Lifter Type	Hydraulic

**ENGINE LUBRICATION SYSTEM**

Oil Pump Type	Gear
Oil Filter Type	Full flow spin-on cartridge
Crankcase Capacity (qt/l)	4/3.8 - 25, 30, 36 & 45 kW 5.25/4.96 - 60 kW

**ENGINE COOLING SYSTEM**

Type	Closed
Water Pump	Belt driven
Fan Speed (rpm)	2484 - 25 & 30 kW 1865 - 36 & 45 kW 2100 - 60 kW
Fan Diameter (in/mm)	17.7/449.6 (25 & 30 kW) or 22/558.8 (36, 45 & 60 kW)
Fan Mode	Pusher (25 & 30 kW) or Puller (36, 45 & 60 kW)

**FUEL SYSTEM**

Fuel Type	Natural gas, propane vapor
Carburetor	Down Draft
Secondary Fuel Regulator	Standard
Fuel Shut Off Solenoid	Standard
Operating Fuel Pressure	5-14" water column/9-26 mm HG
LP Fuel Pressure	11 - 14" Water Column
NG Fuel Pressure	5 - 14" Water Column

(All ratings in accordance with BS5514, ISO3046, ISO8528, SAE J1349 and DIN6271)

25 • 30 • 36 • 45 • 60 kW

### GENERATOR OUTPUT VOLTAGE/kW - 60 Hz

		kW LPG	Amp LPG	kW Nat. Gas	Amp Nat. Gas	CB Size (Both)
RG025	120/240 V, 1Ø, 1.0 pf	25	104	25	104	125
	120/208 V, 3Ø, 0.8 pf	25	87	25	87	100
	120/240 V, 3Ø, 0.8 pf	25	75	25	75	90
RG030	120/240 V, 1Ø, 1.0 pf	30	125	30	125	150
	120/208 V, 3Ø, 0.8 pf	30	104	30	104	125
	120/240 V, 3Ø, 0.8 pf	30	90	30	90	100
RG036	120/240 V, 1Ø, 1.0 pf	36	150	36	150	175
	120/208 V, 3Ø, 0.8 pf	36	125	36	125	150
	120/240 V, 3Ø, 0.8 pf	36	108	36	108	125
	277/480 V, 3Ø, 0.8 pf	36	54	36	54	60
RG045	120/240 V, 1Ø, 1.0 pf	45	188	45	188	200
	120/208 V, 3Ø, 0.8 pf	45	156	45	156	175
	120/240 V, 3Ø, 0.8 pf	45	135	45	135	150
	277/480 V, 3Ø, 0.8 pf	45	68	45	68	80
RG060	120/240 V, 1Ø, 1.0 pf	60	250	60	250	300
	120/208 V, 3Ø, 0.8 pf	60	208	60	208	250
	120/240 V, 3Ø, 0.8 pf	60	180	60	180	200
	277/480 V, 3Ø, 0.8 pf	60	90	60	90	100

### SURGE CAPACITY IN AMPS

		Voltage Dip @ < .4 pf	
		15%	30%
RG025	120/240 V, 1Ø	65	170
	120/208 V, 3Ø	80	130
	120/240 V, 3Ø	69	112
RG030	120/240 V, 1Ø	75	180
	120/208 V, 3Ø	96	155
	120/240 V, 3Ø	83	134
RG036	120/240 V, 1Ø	105	240
	120/208 V, 3Ø	44	130
	120/240 V, 3Ø	38	115
	277/480 V, 3Ø	20	60
RG045	120/240 V, 1Ø	105	240
	120/208 V, 3Ø	44	130
	120/240 V, 3Ø	38	115
	277/480 V, 3Ø	20	60
RG060	120/240 V, 1Ø	140	320
	120/208 V, 3Ø	70	210
	120/240 V, 3Ø	61	182
	277/480 V, 3Ø	30	91

### ENGINE FUEL CONSUMPTION

		Natural Gas		Propane		
		(ft³/hr)	(m³/hr)	(gal/hr)	(l/hr)	(ft³/hr)
RG025	Exercise cycle	60	1.7	0.7	2.5	24
	25% of rated load	220	6.3	2.9	9.1	88
	50% of rated load	297	8.4	3.3	12.3	119
	75% of rated load	362	10.3	4	15	145
	100% of rated load	430	12.2	4.7	17.8	172
RG030	Exercise cycle	60	1.7	0.7	2.5	24
	25% of rated load	240	6.8	2.6	10	96
	50% of rated load	320	9.1	3.5	13.3	128
	75% of rated load	400	11.4	4.4	16.6	160
	100% of rated load	492	14	5.4	20.4	197
RG036	Exercise cycle	65	1.8	0.7	2.6	25
	25% of rated load	210	6	2.3	8.6	83
	50% of rated load	380	10.8	4.2	15.7	151
	75% of rated load	545	15.5	5.9	22.4	216
	100% of rated load	730	20.7	8	30.1	290
RG045	Exercise cycle	65	1.8	0.7	2.6	25
	25% of rated load	210	6	2.3	8.6	83
	50% of rated load	380	10.8	4.2	15.7	151
	75% of rated load	545	15.5	5.9	22.4	216
	100% of rated load	730	20.7	8	30.1	290
RG060	Exercise cycle	123	3.5	1.34	5.1	49.3
	25% of rated load	267	7.6	2.7	10.5	101
	50% of rated load	483	13.7	5	19	183
	75% of rated load	672	19.1	7	26.5	255
	100% of rated load	862	24.5	9	33.9	327

Note: **Fuel pipe must be sized for full load.**

For Btu content, multiply ft³/hr x 2520 (LP) or ft³/hr x 1000 (NG)

For megajoule content, multiply m³/hr x 93.15 (LP) or m³/hr x 37.26 (NG)

Refer to "Emissions Data Sheets" for maximum fuel flow for EPA and SCAQMD permitting purposes.

STANDBY RATING: Standby ratings apply to installations served by a reliable utility source. The standby rating is applicable to varying loads for the duration of a power outage. There is no overload capability for this rating. Ratings are in accordance with ISO-3046-1. Design and specifications are subject to change without notice.

## 25 • 30 • 36 • 45 • 60 kW

## operating data

### ENGINE COOLING

	25 kW	30 kW	36 kW	45 kW	60 kW
Air flow (inlet air including alternator and combustion air in cfm/cmm)	2490/70.5	2490/70.5	2725/77.2	2725/77.2	3280/92.9
System coolant capacity (gal/liters)	2/7.6	2/7.6	2.5/9.5	2.5/9.5	2.5/9.5
Heat rejection to coolant (BTU per hr/MJ per hr)	112,000/118.2	135,000/142.4	193,000/203.6	193,000/203.6	270,000/284.9
Maximum operation air temperature on radiator (°C/°F)	60/140				
Maximum ambient temperature (°C/°F)	50/122				

### COMBUSTION REQUIREMENTS

Flow at rated power (cfm/cmm)	62/1.8	72/2	144/4.1	144/4.1	180/5.1
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### SOUND EMISSIONS

Sound output in dB(A) at 23 ft (7 m) with generator in exercise mode*	59	59	61	61	65
Sound output in dB(A) at 23 ft (7 m) with generator operating at normal load*	72	73	70	73	72

\*Sound levels are taken from the front of the generator. Sound levels taken from other sides of the generator may be higher depending on installation parameters.

### EXHAUST

Exhaust flow at rated output (cfm/cmm)	203/5.7	237/6.7	300/8.5	420/11.9	494/14
Exhaust temperature at muffler outlet (°C/°F)	593/1100	610/1130	579/1075	593/1100	566/1050

### ENGINE PARAMETERS

Rated Synchronous rpm	3600
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### POWER ADJUSTMENT FOR AMBIENT CONDITIONS

Temperature Deration .....3% for every 10 °C above 25 °C or 1.65% for every 10 °F above 77 °F  
 Altitude Deration (25, 30, 36 & 45 kW) .....1% for every 100 m above 183 m or 3% for every 1000 ft above 600 ft  
 Altitude Deration (60 kW) .....1% for every 100 m above 915 m or 3% for every 1000 ft above 3000 ft

### CONTROLLER FEATURES

Two-Line Plain Text LCD Display .....Simple user interface for ease of operation.  
 Mode Switch: Auto .....Automatic Start on Utility failure. 7 day exerciser  
                   Off .....Stops unit. Power is removed. Control and charger still operate.  
                   Manual .....Start with starter control, unit stays on. If utility fails, transfer to load takes place.  
 Programmable start delay between 10-30 seconds .....10 sec Standard  
 Engine Start Sequence .....Cyclic cranking: 16 sec on, 7 rest (90 sec maximum duration)  
 Engine Warm-up .....5 sec  
 Engine Cool-Down .....1 min  
 Starter Lock-out .....Starter cannot re-engage until 5 sec after engine has stopped.  
 Smart Battery Charger .....Standard  
 Automatic Voltage Regulation with Over and Under Voltage Protection .....Standard  
 Automatic Low Oil Pressure Shutdown .....Standard  
 Overspeed Shutdown .....Standard, 72 Hz  
 High Temperature Shutdown .....Standard  
 Overcrank Protection .....Standard  
 Safety Fused .....Standard  
 Failure to Transfer Protection .....Standard  
 Low Battery Protection .....Standard  
 50 Event Run Log .....Standard  
 Future Set Capable Exerciser .....Standard  
 Incorrect Wiring Protection .....Standard  
 Internal Fault Protection .....Standard  
 Common External Fault Capability .....Standard  
 Governor Failure Protection .....Standard

Model #	Product	Description
G006463-4	Mobile Link™	Generac's Mobile Link allows you to check the status of your generator from anywhere that you have access to an Internet connection from a PC or with any smart device. You will even be notified when a change in the generator's status occurs via e-mail or text message. Note: Harness Adapter Kit required. Available in the U.S. only.
G006478-0	Harness Adapter Kit	The Harness Adapter Kit is required to make liquid-cooled units compatible with Mobile Link™.
G006175-0 - 25 & 30 kW G005630-1 - 36, 45 & 60 kW	Cold Weather Kit	If the temperature regularly falls below 32 °F (0 °C), install a cold weather kit to maintain optimal battery temperature. Kit consists of battery warmer with thermostat built into the wrap.
G006174-0 - 25 & 30 kW G005616-0 - 36, 45 & 60 kW	Extreme Cold Weather Kit	Recommended where the temperature regularly falls below 32 °F (0 °C) for extended periods of time. For liquid cooled units only.
G005651-0	Base Plug Kit	Add base plugs to the base of the generator to keep out debris.
G005703-0 - Bisque	Paint Kit	If the generator enclosure is scratched or damaged, it is important to touch-up the paint to protect from future corrosion. The paint kit includes the necessary paint to properly maintain or touch-up a generator enclosure.
G006176-0 - 25 & 30 kW G006172-0 - 36 & 45 kW G006171-0 - 60 kW	Scheduled Maintenance Kit	The Liquid-Cooled Scheduled Maintenance Kits offer all the hardware necessary to perform complete maintenance on Generac liquid-cooled generators.
G006664-0	Local Wireless Monitor	Completely wireless and battery powered, Generac's wireless remote monitor provides you with instant status information without ever going outside.
G006665-0	Wireless Remote Extension Harness	Recommended for use with the Wireless Remote on units up to 60 kW, required for use on units 70 kW or greater.
G006873-0	Smart Management Module (50 Amps)	Smart Management Modules are used in conjunction with the Automatic Transfer Switch to increase its power management capabilities. It provides additional power management flexibility not found in any other power management system.
G006510-0	E-Stop	E-stop allows for immediate fuel shutoff and generator shutdown in the event of an emergency.
G007005-0	Wi-Fi LP Fuel Level Monitor	The Wi-Fi enabled LP fuel level monitor provides constant monitoring of the connected LP fuel tank. Monitoring the LP tank's fuel level is an important step in making sure your generator is ready to run during an unexpected power failure. Status alerts are available through a free application to notify when your LP tank is in need of a refill.



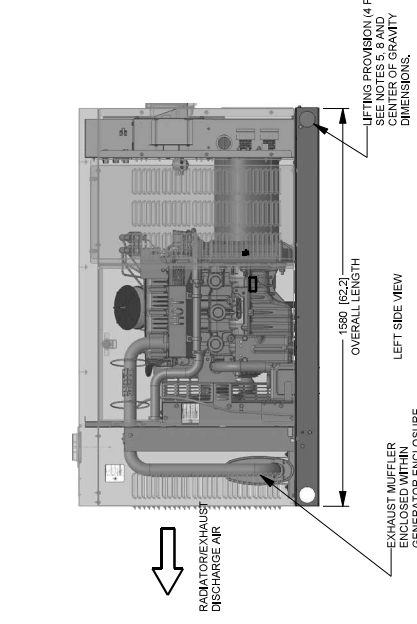
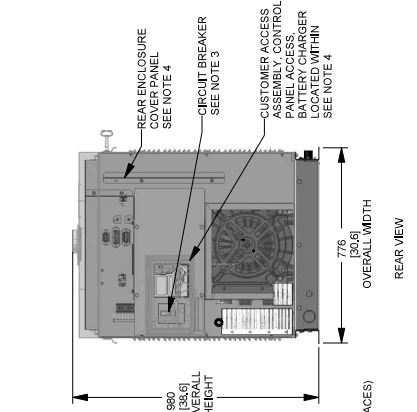
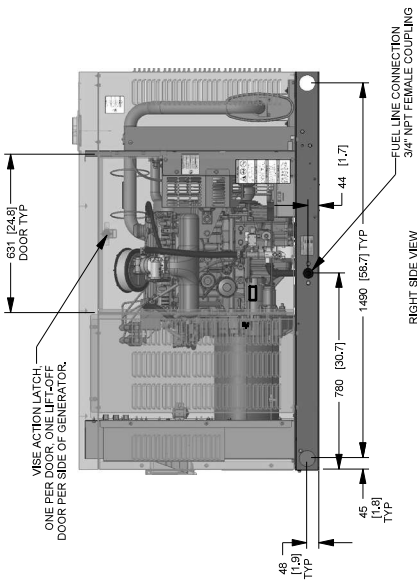
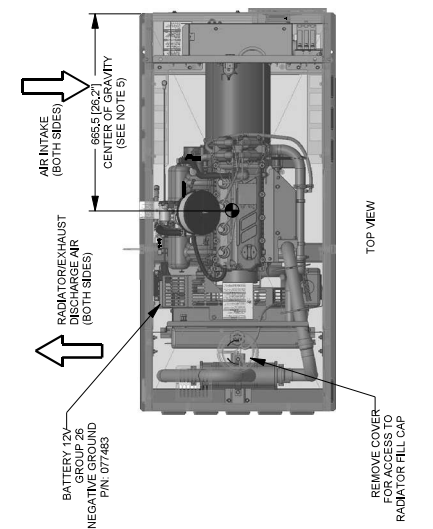
25 & 30 kW

Drawing #0K8420-B (1 of 2)

- NOTES:**
- MINIMUM RECOMMENDED CONCRETE PAD SIZE: 1052 (45") WIDE X 1887 (74.2") LONG. CONCRETE PAD MUST BE INSTALLED WITH 1/2" REINFORCING BARS AT 12" ON CENTER LINES.
  - ALLOW SUFFICIENT ROOM ON ALL SIDES OF THE GENERATOR FOR MAINTENANCE AND SERVICING. THIS UNIT MUST BE INSTALLED IN ACCORDANCE WITH CURRENT APPLICABLE NFPA 37 AND NFPA 70 STANDARDS AS WELL AS ANY OTHER FEDERAL, STATE, AND LOCAL REGULATIONS.
  - CONTROL PANEL, CIRCUIT BREAKER INFORMATION:
    - SEE SPECIFICATION SHEET FOR OWNERS MANUAL.
    - ACCESSIBLE THROUGH CUSTOMER ACCESS ASSEMBLY DOOR ON REAR OF GENERATOR.
    - REMOVE THE REAR ENCLOSURE COVER PANEL TO ACCESS
    - HIGH VOLTAGE CONNECTION INCLUDING AC LOAD LEAD CONDUIT CONNECTION
    - NEUTRAL CONNECTION, BATTERY CHARGER 120 VOLT AC (0.5 AMP MAX) CONNECTION.
    - LOW VOLTAGE CONNECTION INCLUDING TRANSFER SWITCH CONTROL WIRES.
    - CENTER OF GRAVITY AND WEIGHT MAY CHANGE DUE TO UNIT OPTIONS.
    - SEE OWNERS MANUAL FOR INFORMATION ON PROPER DISCHARGE PREVENTION AND RECIRCULATION OF DISCHARGE AIR AND/OR IMPROPER COOLING AIR FLOW.
    - EXHAUST SYSTEM MAXIMUM BACK PRESSURE: 24 INCHES H2O.
    - REFERENCE OWNERS MANUAL FOR LIFTING SURFACE SHALL BE 58-11 GRADE 5 MASTIFF STEEL.
    - MUST ALLOW FREE FLOW OF INTAKE AIR, DISCHARGE AIR AND EXHAUST. SEE SPEC SHEET FOR MINIMUM AIR FLOW AND MAXIMUM RESTRICTION REQUIREMENTS.
    - GENERATOR MUST BE INSTALLED SUCH THAT FRESH COOLING AIR IS AVAILABLE TO THE GENERATOR.
    - EXHAUST MUFFLER ENCLOSED WITHIN GENERATOR ENCLOSURE. REMOVE ENCLOSURE TO ACCESS EXHAUST MUFFLER.

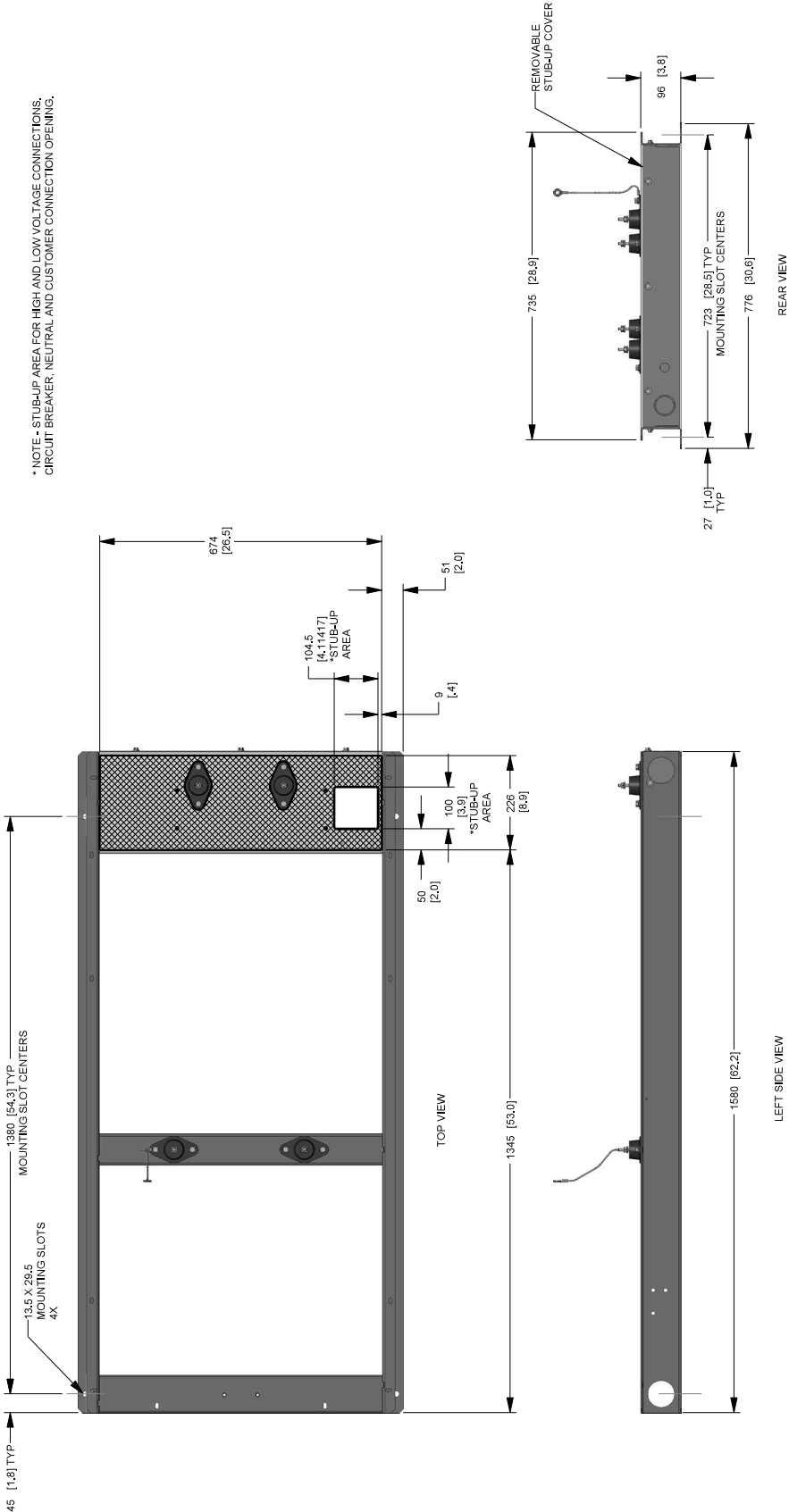
SERVICE ITEM	1.5L
OIL FILL CAP	EITHER DOOR
OIL DIP STICK	RIGHT DOOR
OIL FILTER	RIGHT DOOR
OIL DRAIN HOSE	RIGHT DOOR
RADIATOR DRAIN HOSE	RIGHT DOOR
AIR CLEANER ELEMENT	RIGHT DOOR
MUFFLER	SEE NOTE 12
FAN BELT	EITHER DOOR
BATTERY	RIGHT DOOR

REFERENCE OWNERS MANUAL FOR PERIODIC MAINTENANCE AND REPLACEMENT PART LISTINGS.

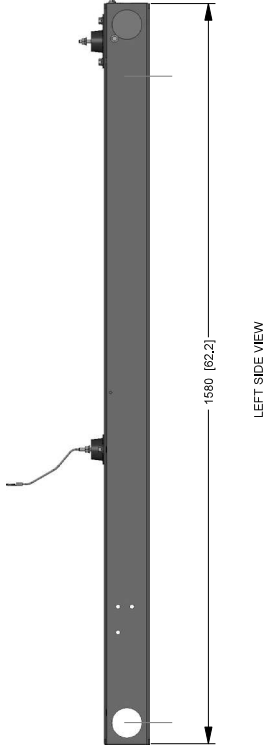
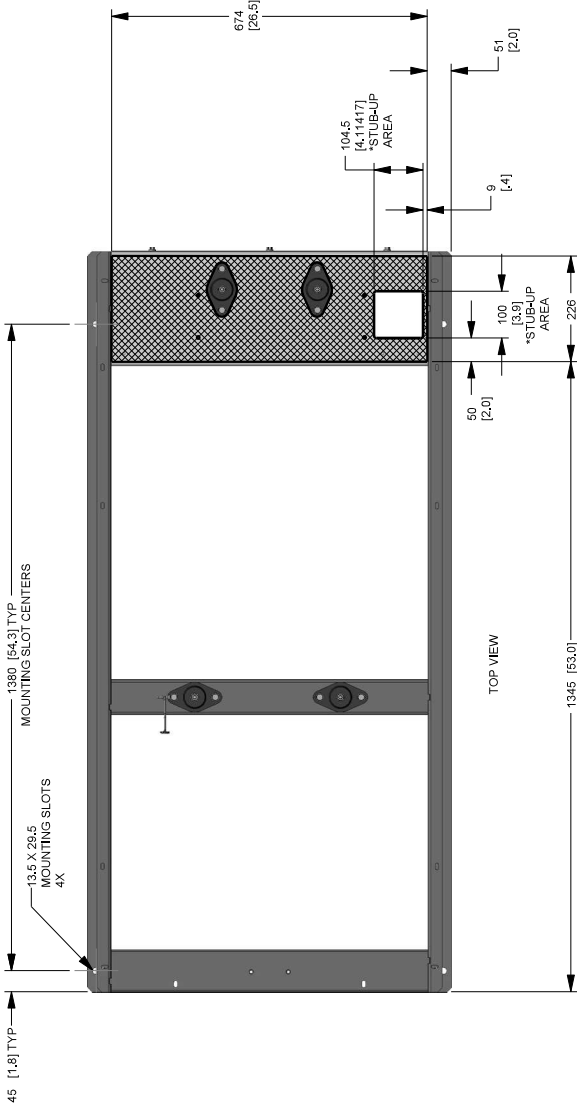
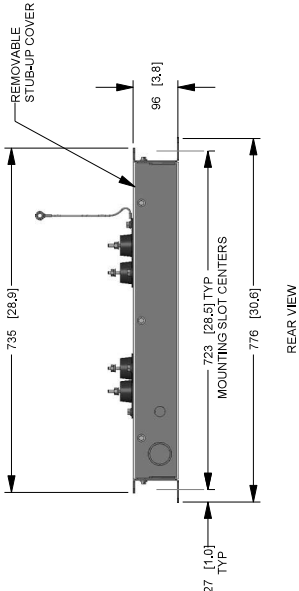


ENGINE KW	ENCLOSURE MATERIAL	WEIGHT DATA	
		WEIGHT GEN ONLY (LBS)	WEIGHT SHIPPING (LBS)
1.5L/25KW	ST	382 (865)	427 (931)
1.5L/30KW	ST	406 (895)	458 (961)
1.5L/25KW	AL	352 (777)	382 (843)
1.5L/30KW	AL	385 (807)	396 (873)

**25 & 30 kW**



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

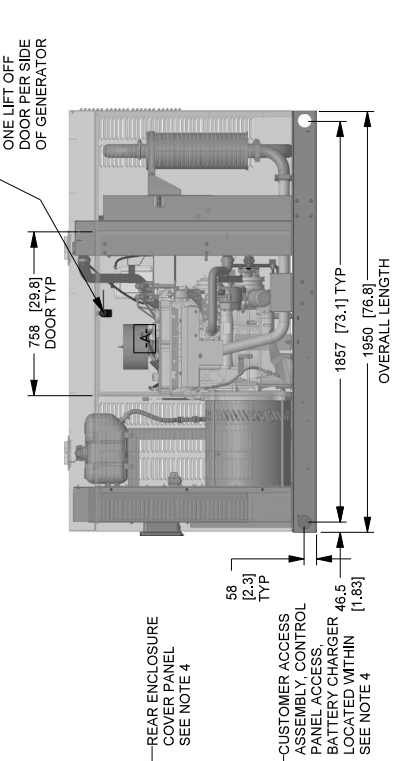
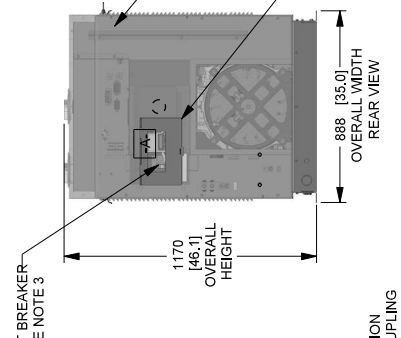
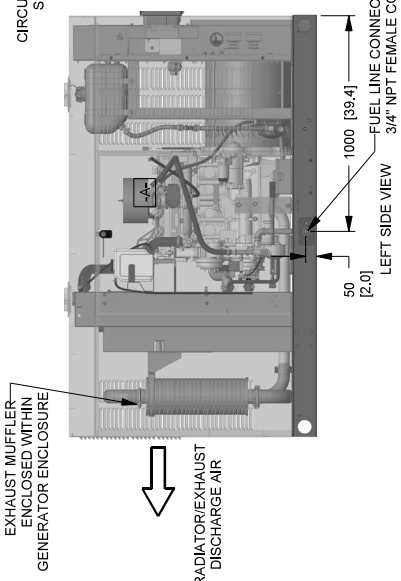
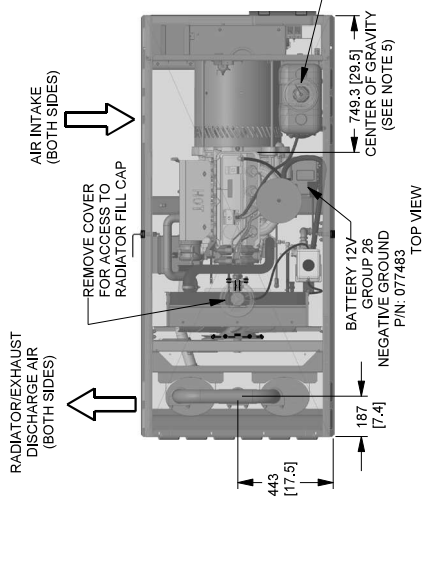


**36 & 45 kW**

Drawing #0K8636-B (1 of 2)

SERVICE ITEM	2.4L
OIL FILL CAP	ETHER SIDE
OIL DIP STICK	RIGHT SIDE
OIL FILTERS	RIGHT SIDE
OIL DRAIN HOSE	RIGHT SIDE
RADIATOR DRAIN HOSE	LEFT SIDE
COOLANT RECOVERY BOTTLE	LEFT SIDE
RADIATOR FILL CAP	ROOF TOP
AIR CLEANER ELEMENT	LEFT SIDE
SPARK PLUGS	LEFT SIDE
DRIVE BELT	SEE NOTE 11
FAN BELT	ETHER SIDE
BATTERY	LEFT SIDE
LUBE OIL MAINTAINER SUPPLY TANK FILL CAP	ROOF TOP

- NOTES:**
1. MINIMUM RECOMMENDED CONCRETE PAD SIZE: 1194MM (47") WIDE X 2256MM (88.8") LONG. REFERENCE INSTALLATION GUIDE SUPPLIED WITH UNIT FOR CONCRETE PAD GUIDELINES.
  2. ALLOW SUFFICIENT ROOM ON ALL SIDES OF THE GENERATOR FOR MAINTENANCE AND SERVICING. THIS UNIT MUST BE INSTALLED IN ACCORDANCE WITH CURRENT APPLICABLE NFPA 37 AND NFPA 70 STANDARDS AS WELL AS ANY OTHER FEDERAL, STATE, AND LOCAL CODES.
  3. CONTROL PANEL / CIRCUIT BREAKER INFORMATION:
    - SEE SPECIFICATION SHEET OR OWNERS MANUAL
    - ACCESSIBLE THROUGH CUSTOMER ACCESS ASSEMBLY DOOR ON REAR OF GENERATOR. THE STUB-UP AREAS AS FOLLOWS:
  4. REMOVE THE REAR ENCLOSURE COVER PANEL TO ACCESS:
    - HIGH VOLTAGE CONNECTION INCLUDING AC LOAD LEAD CONDUIT CONNECTION
    - NEUTRAL CONNECTION, BATTERY CHARGER 120 VOLT AC (0.5 AMP MAX) CONNECTION
    - LOW VOLTAGE CONNECTION INCLUDING TRANSFER SWITCH CONTROL WIRES.
  5. CENTER OF GRAVITY AND WEIGHT MAY CHANGE DUE TO UNIT OPTIONS.
  6. BOTTOM OF GENERATOR SET MUST BE ENCLOSED TO PREVENT PEST INTRUSION AND RECIRCULATION OF DISCHARGE AIR AND/OR IMPROPER COOLING AIR FLOW.
  7. REFERENCE OWNERS MANUAL FOR LIFTING WARNINGS.
  8. MOUNTING BOLTS OR STUDS TO MOUNTING SURFACE SHALL BE 5/8-11 GRADE 5 (USE STANDARD SAE TORQUE SPECS)
  9. MUST ALLOW FREE FLOW OF INTAKE AIR, DISCHARGE AIR AND EXHAUST. SEE SPEC SHEET FOR MINIMUM AIR FLOW AND MAXIMUM RESTRICTION REQUIREMENTS.
  10. GENERATOR MUST BE INSTALLED SUCH THAT FRESH COOLING AIR IS AVAILABLE AND THAT DISCHARGE AIR FROM RADIATOR IS NOT RECIRCULATED.
  11. EXHAUST MUFFLER AND FAN BELT ENCLOSED WITHIN GENERATOR ENCLOSURE. REMOVE FRONT PANEL TO ACCESS.

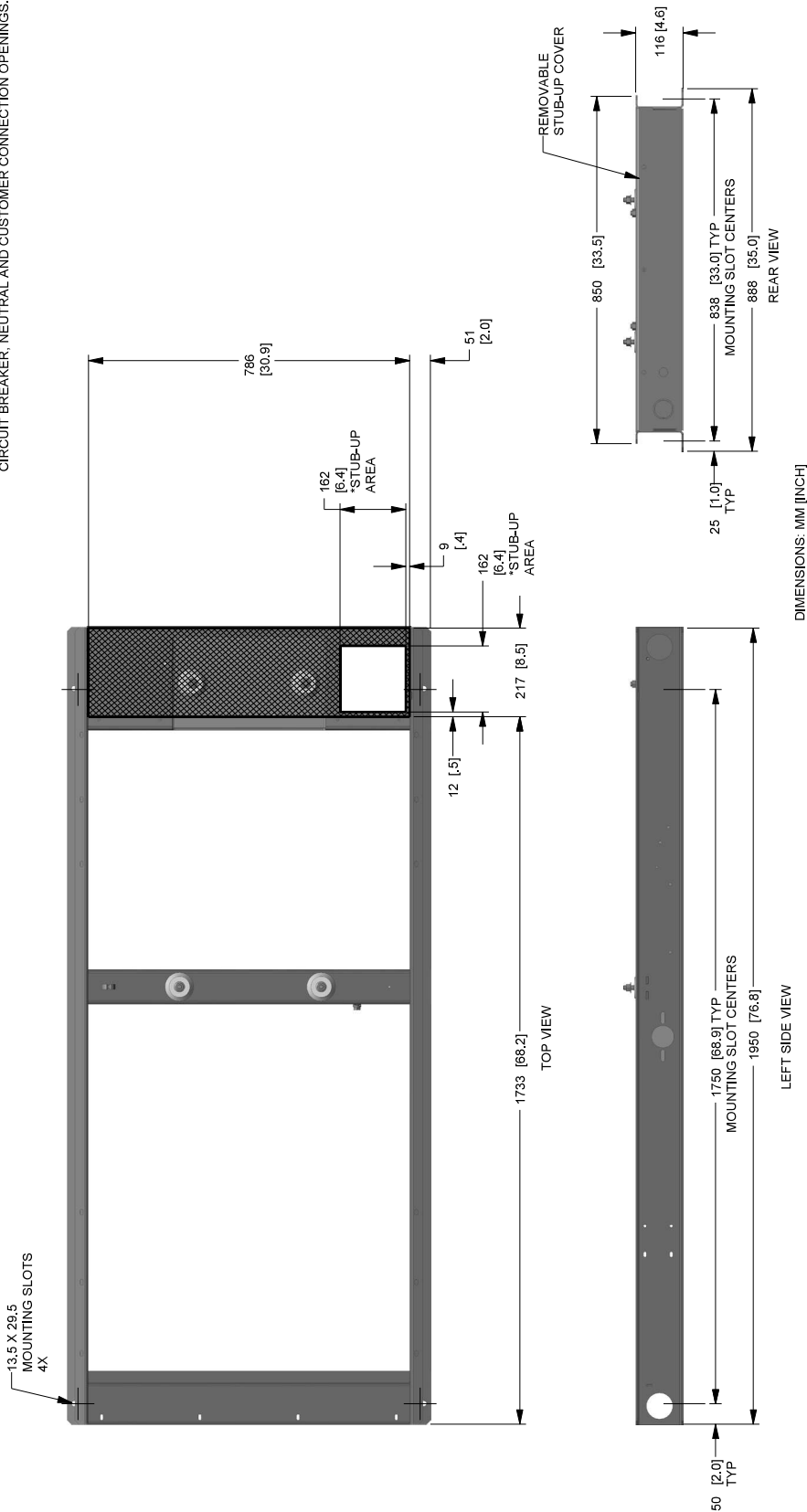


ENGINE/KW	ENCLOSURE MATERIAL	WEIGHT DATA		
		WEIGHT GENSET ONLY KG (LBS)	WEIGHT SHIPPING SKID KG (LBS)	WEIGHT SHIPPING WEIGHT KG (LBS)
2.4L 36KW	ST	569 [1256]	44 [99]	613 [1353]
2.4L 36KW	AL	545 [1202]	44 [99]	590 [1300]
2.4L 45KW	ST	596 [1313]	44 [99]	640 [1411]
2.4L 45KW	AL	572 [1260]	44 [99]	616 [1358]

DIMENSIONS: MM [INCH]

**36 & 45 kW**

\*NOTE - STUB-UP AREA FOR HIGH AND LOW VOLTAGE CONNECTIONS.  
CIRCUIT BREAKER, NEUTRAL AND CUSTOMER CONNECTION OPENINGS.



13.5 X 26.5  
MOUNTING SLOTS  
4X

REMOVABLE  
STUB-UP COVER

DIMENSIONS: MM [INCH]

LEFT SIDE VIEW

REAR VIEW

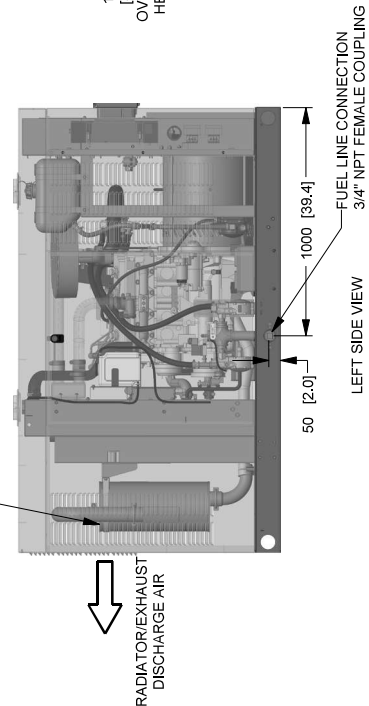
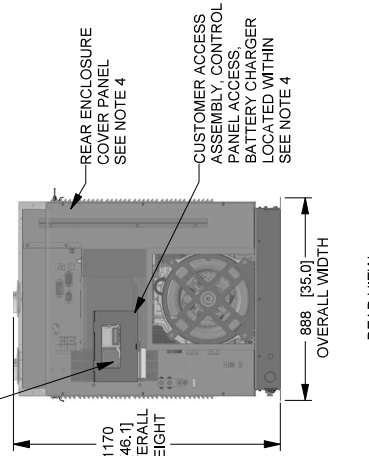
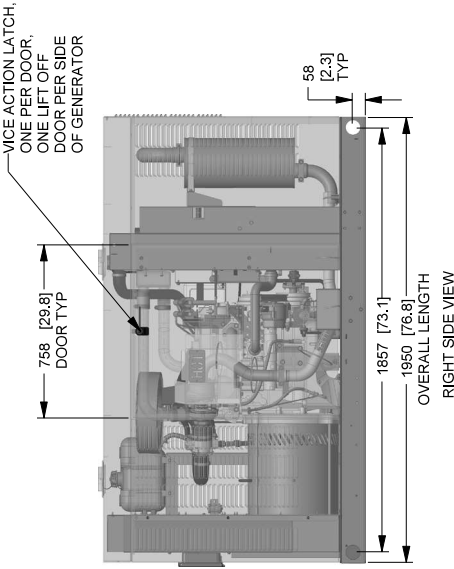
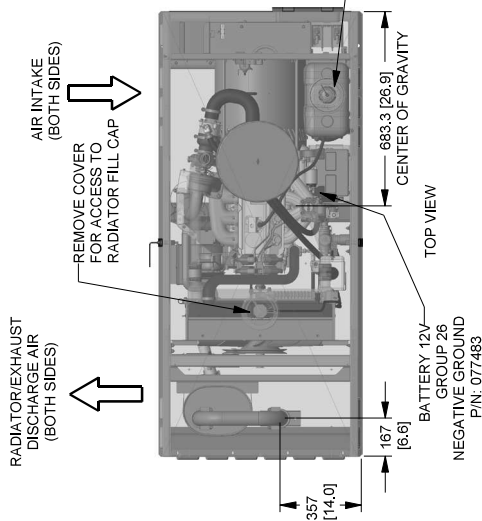
TOP VIEW

**60 kW**

Drawing #0L2090-B (1 of 2)

SERVICE ITEM	2.4L
OIL FILL CAP	EITHER SIDE
OIL DIP STICK	RIGHT SIDE
OIL FILTER	LEFT SIDE
OIL DRAIN HOSE	RIGHT SIDE
RADIATOR DRAIN HOSE	LEFT SIDE
COOLANT RECOVERY BOTTLE	LEFT SIDE
RADIATOR FILL CAP	ROOF TOP
AIR CLEANER ELEMENT	LEFT SIDE
SPARK PLUGS	SEE NOTE 11
MUFFLER	LEFT SIDE
DRIVE BELT	EITHER SIDE
FAN BELT	SEE NOTE 11
BATTERY	LEFT SIDE
LUBE OIL MAINTAINER SUPPLY TANK FILL CAP	ROOF TOP

REMOVE COVER FOR ACCESS TO LUBE OIL MAINTAINER SUPPLY TANK. REFERENCE OWNERS MANUAL FOR PERIODIC REPLACEMENT PART LISTINGS.



**NOTES:**

1. MINIMUM RECOMMENDED CONCRETE PAD SIZE: 1194MM (47") WIDE X 2256MM (88.8") LONG. REFERENCE INSTALLATION GUIDE SUPPLIED WITH UNIT FOR CONCRETE PAD GUIDELINES.
2. ALLOW SUFFICIENT ROOM ON ALL SIDES OF THE GENERATOR FOR MAINTENANCE AND SERVICING. THIS UNIT MUST BE INSTALLED IN ACCORDANCE WITH CURRENT APPLICABLE NFPA 37 AND NFPA 70 STANDARDS AS WELL AS ANY OTHER FEDERAL, STATE, AND LOCAL CODES.
3. CONTROL PANEL / CIRCUIT BREAKER INFORMATION:
  - SEE SPECIFICATION SHEET OR OWNERS MANUAL.
  - ACCESSIBLE THROUGH CUSTOMER ACCESS ASSEMBLY DOOR ON REAR OF GENERATOR.
4. REMOVE THE REAR ENCLOSURE COVER PANEL TO ACCESS
  - THE SUB-UP AREAS AS FOLLOWS:
    - HIGH VOLTAGE CONNECTION INCLUDING AC LOAD LEAD CONDUIT CONNECTION
    - NEUTRAL CONNECTION, BATTERY CHARGER 120 VOLT AC (0.5 AMP MAX) CONNECTION.
    - LOW VOLTAGE CONNECTION INCLUDING TRANSFER SWITCH CONTROL WIRES.
  - 5. CENTER OF GRAVITY AND WEIGHT MAY CHANGE DUE TO UNIT OPTIONS.
  - 6. BOTTOM OF GENERATOR SET MUST BE ENCLOSED TO PREVENT PEST INTRUSION AND RECIRCULATION OF DISCHARGE AIR AND/OR IMPROPER COOLING AIR FLOW.
  - 7. REFERENCE OWNERS MANUAL FOR LIFTING WARNINGS.
  - 8. MOUNTING BOLTS OR STUDS TO MOUNTING SURFACE SHALL BE 5/8-11 GRADE 5 (USE STANDARD SAE TORQUE SPECS)
  - 9. MUST ALLOW FREE FLOW OF INTAKE AIR, DISCHARGE AIR AND EXHAUST. SEE SPEC SHEET FOR MINIMUM AIR FLOW AND MAXIMUM RESTRICTION REQUIREMENTS.
  - 10. GENERATOR MUST BE INSTALLED SUCH THAT FRESH COOLING AIR IS AVAILABLE AND THAT DISCHARGE AIR FROM RADIATOR IS NOT RECIRCULATED.
  - 11. EXHAUST MUFFLER AND FAN BELT ENCLOSED WITHIN GENERATOR ENCLOSURE. REMOVE FRONT PANEL TO ACCESS.

DIMENSIONS: MM [INCH]

		WEIGHT DATA	
ENGINE/KW	ENCLOSURE MATERIAL	WEIGHT GENSET ONLY KG (LBS)	WEIGHT SHIPPING SKID KG (LBS)
2.4L 60KW	ST	552 [1233]	44 [98]
2.4L 60KW	AL	558 [1230]	44 [98]

		SHIPPING WEIGHT	
ENGINE/KW	ENCLOSURE MATERIAL	WEIGHT GENSET ONLY KG (LBS)	WEIGHT SHIPPING SKID KG (LBS)
2.4L 60KW	ST	626 [1381]	602 [1328]
2.4L 60KW	AL	626 [1381]	602 [1328]

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

