

**AGENDA
PLANNING COMMISSION
CITY OF ROELAND PARK, KANSAS
ROELAND PARK
4600 W 51ST STREET
FEBRUARY 20, 2024 6:00 PM**

I. Roll Call

II. Approval of Minutes

1. Planning Commission Minutes Jan 23, 2024

III. Public Hearing

IV. Action Items

1. Review T-Mobile cell tower generator installation

V. Discussion Items

VI. Other Matters Before the Planning Commission

VII. Adjournment

Scheduled Meeting Dates

Item Number: Approval of Minutes- II.-1.
Committee 2/20/2024
Meeting Date:



City of Roeland Park
Action Item Summary

Date: 2/20/2024
Submitted By: Jennifer Jones-Lacy, Assistant City Administrator/Finance Director
Committee/Department: Admin
Title: **Planning Commission Minutes Jan 23, 2024**
Item Type: Other

Recommendation:

Approve the minutes from Jan. 23, 2024. See attached.

Details:

Financial Impact

Amount of Request:	
Budgeted Item?	Budgeted Amount:
Line Item Code/Description:	

Additional Information

How does item relate to Strategic Plan?

How does item benefit Community for all Ages?

ATTACHMENTS:

Description	Type
<input type="checkbox"/> 2.23.24 Planning Minutes	Cover Memo

PLANNING COMMISSION MINUTES
CITY OF ROELAND PARK, KANSAS
4600 W 51st Street, Roeland Park, KS 66205
January 23, 2024, 6:00 P.M.

The Roeland Park Planning Commission met on January 23, 2024.

Commissioners Present: Lisa Brunner, Vice Chair (online)
Josey Shaw
Macrina Abdouch
Joe Kmetz
Haile Sims (online)

Commissioners Absent: Darren Nielsen, Chair
Mark Kohles

Staff: Jennifer Jones-Lacy - Assistant City Manager/Finance Director
Wade Holtkamp - Building Inspector
Alex Felzien - City Attorney

I. ROLL CALL

Ms. Jones-Lacy called the meeting to order. Commissioners Nielsen and Kohles were absent. Commissioner Brunner later joined the meeting online. In addition to Ms. Jones-Lacy, staff present were Building Inspector Wade Holtkamp and City Attorney Alex Felzien.

II. Approval of Minutes

1. Approve Minutes from November 21, 2023, Planning Commission meeting

MOTION: COMMISSIONER ABDOUCH MOVED AND COMMISSIONER SHAW SECONDED TO APPROVE THE PLANNING COMMISSION MEETING MINUTES OF NOVEMBER 21, 2023, AS PRESENTED. (THE MOTION CARRIED 4-0.)

III. Public Hearing

1. Review Request for Special Use Permit for 5015 Buena Vista

Ms. Jones-Lacy opened the public hearing. Mr. Holtkamp highlighted several points from the staff report. Brandy Poiry, the applicant, was also present to answer questions.

Mr. Holtkamp said the subject site is the former Southridge Presbyterian Church and the request is for a special use permit to use as a daycare. Currently the property is zoned Residential. Mr. Holtkamp also noted the stipulations made by staff. The daycare will be operated on the first floor and will be the area of concentration for remodeling. Photos were shown outlining the proposed modifications. The daycare staff will be fully licensed and receive approval from the Fire Marshal to operate. They will also need to go through

the building permit process and obtain permits for approved plans for plumbing and electrical needs, which will be subject to inspection before obtaining a certificate of occupancy. The daycare will also need a city business license.

Mr. Holtkamp said they did receive notice of concerns from a few neighbors regarding where the parking is located. Ms. Poiry commented that there will be a designated parking area where parents or an authorized person will drop the children off and there will be a parking attendant. Mr. Holtkamp said the special use permit will be a one-time approval, but that the Planning Commission always has authority to call up the permit should there be any nuisance or health violations. Ms. Jones-Lacy added that should they desire to expand to the second floor, then the SUP can be amended.

Mr. Holtkamp reviewed the playground and play areas, the one existing and the one proposed as well as fencing and parking.

Ms. Jones-Lacy said some of the issues in the SUP will be discussed when they review the zoning code as the code currently does not have anything to allow for a commercial daycare.

Commissioner Abdouch asked if the daycare is only on the first floor, who would be maintaining the second floor. Mr. Holtkamp said the second floor would be for storage or additional office space but will not be a location where the children would be.

Commissioner Sims asked about the wall next to the existing play area and whether it currently exists. Ms. Jones-Lacy replied the fence is already in place.

Commissioner Kmetz asked if the site was previously a daycare and the zoning changed. Ms. Jones-Lacy said the site has always been Residential as churches can exist in any zoning district. The site was primarily used as a church with a secondary use as a daycare. He asked if there is the possibility of a conflict with the operation of the daycare and the Roesland schedule and Ms. Jones-Lacy said there should not be, and one is not anticipated.

Ms. Poiry, the applicant, said she currently has a daycare for ten children in less than a 1,000 square foot house. She said she has a background in K-12 education and her sister has the administration knowledge and knows all the ins and outs. She said they fell in love with the building and could truly see its potential. She said that it is across the street from Roesland feels right and they are excited about the opportunity to be able to do this.

Commissioner Abdouch asked about the name of the school, Gioiosa, and its meaning. She said it is Italian for "joy" and after Maria Montessori who developed the Montessori method, it seemed appropriate.

Ms. Jones-Lacy opened the public comment portion of the meeting.

Roger Thompson (5009 Clark) Mr. Thompson expressed his concerns about traffic and parking noting that parents are blocking Clark when picking up children from Roesland. He felt the daycare may cause extra commotion and said he would like to see restricted or no parking on Clark.

Mary Brunner (5306 Rosewood) Ms. Brunner said her son lives in a home adjacent to the parking lot. She said there are a lot of children, and the area is very congested. She asked that the Commissioners consider the traffic on Clark. She said that her children are excited about a daycare coming to this location.

George Reichman (5215 Clark) Mr. Reichman expressed concerns with the traffic as well but expressed his overall support for the proposal.

Jim Constant (5039 Buena Vista) Mr. Constant said the proposed daycare parking lot is already full of children leaving Roesland and said they will need to get a handle on that. He also hoped the daycare would do some outside maintenance and cleaning of the property.

After public comments were made, Ms. Jones-Lacy closed the public hearing.

Commissioner Abdouch asked if the main entrance would be the door facing the parking lot. Ms. Poiry said that it would be.

Ms. Jones-Lacy said if the Planning Commission approves the SUP, it will go before the Governing Body for final approval.

- MOTION:** HAILE SIMS MOVED AND LISA BRUNNER SECONDED TO APPROVE THE SPECIAL USE PERMIT (SUP) FOR THE 5015 BUENA VISTA STREET, THE FORMER SOUTHRIDGE PRESBYTERIAN CHURCH, FOR USE AS A DAYCARE WITH THE FOLLOWING CONTINGENCIES:
- FACILITY ONLY OPERATES ON THE FIRST FLOOR OF THE FACILITY.
 - FACILITY RECEIVES FULL LICENSURE TO OPERATE A DAYCARE FACILITY FROM THE STATE OF KANSAS.
 - FACILITY RECEIVES APPROVAL FROM THE STATE FIRE MARSHALL TO OPERATE A DAYCARE IN THE FACILITY.
 - THE FACILITY IS ABLE TO GET A CERTIFICATE OF OCCUPANCY THROUGH THE BUILDING PERMITTING PROCESS; AND
 - THE FACILITY RECEIVES A BUSINESS LICENSE FROM THE CITY TO OPERATE.
 - DAYCARE CHILDREN ARE REQUIRED TO BE WALKED INTO THE FACILITY BY A PARENT OR THEIR DESIGNEE. (THE MOTION CARRIED 5-0.)

IV. Action Items

1. Elect a Chair and Vice Chair of the Planning Commission

MOTION: LISA BRUNNER MOVED AND HAILE SIMS MOVED SECONDED TO APPROVE THE REAPPOINTMENT OF DARREN NIELSEN AS PLANNING COMMISSION CHAIR. (THE MOTION CARRIED 5-0.)

MOTION: MACRINA ABDOUCH MOVED AND JOE KMETZ SECONDED TO APPROVE THE REAPPOINTMENT OF LISA BRUNNER AS PLANNING COMMISSION VICE CHAIR. (THE MOTION CARRIED 5-0.)

V. Discussion Items

No Discussion Items were presented.

VI. Other Matters Before the Planning Commission

Ms. Jones-Lacy said work continues updating the zoning code process. They have gone through a draft review with Chris Shires. Mr. Shires is also creating a table for permissible uses in zoning categories and tidying up definitions. It will be brought before the Planning Commission in pieces to review due to its size. They hope to bring that draft to the Planning Commission for their review.

Also, the Planning Commission is expected to review the Comprehensive Plan on an annual basis to ensure that it still makes sense, and nothing has changed in Roeland Park that should be included or removed from the document. That review will also be coming before the Planning Commission in the future.

VII. Adjournment

MOTION: COMMISSIONER KMETZ MOVED AND COMMISSIONER ABDOUCH SECONDED TO ADJOURN. (THE MOTION CARRIED 5-0.)

(Roeland Park Planning Commission Meeting Adjourned at 6:46 p.m.)

Item Number: Action Items- IV.-1.
Committee 2/20/2024
Meeting Date:



City of Roeland Park

Action Item Summary

Date: 2/13/2024
Submitted By: Wade Holtkamp
Committee/Department: Admin
Title: **Review T-Mobile cell tower generator installation**
Item Type: Discussion

Recommendation:

Staff recommends to approve a request from T-Mobile to allow them to apply for a building permit for installation of a 80kW diesel backup generator at the currently leased cell tower land located near the Community Center, 4850 Rosewood Dr.

Details:

T-Mobile would like to apply for a building permit to install an emergency back-up generator near the Community Center to support their cell tower. Proposed is a diesel 80 kW Generac model SD080 with an added sound dampening enclosure. The generator runs a brief 5 minute weekly test cycle. It runs continuous in the event of a total power loss event. No fuel tanks will be installed underground. The rated decibel level at 23 feet away is 74.8 db. For comparison, this is equivalent to the sound of a vacuum cleaner at 23 feet (<https://ehs.yale.edu/sites/default/files/files/decibel-level-chart.pdf>). Mature trees surround the cell town grounds further helping reduce noise levels. Nearby neighbor distances are residential apartments north, 200 ft. Residential homes west, 275 ft. Residential homes south, 385 ft.

As the cell tower is located in a residential neighborhood, we're asking the Planning Commission to review and approve the expansion. The installation of a backup generator will provide more consistent cell service for those who use T-Mobile's network in the event of a power outage. However, it would also generate consistent noise during an outage at a low volume. In addition, two mature trees would need to be removed prior to the installation. City administration will negotiate a new lease with T-Mobile and that will go to Council for final approval. For the actual expansion and installation, staff would like your input and approval before proceeding.

Financial Impact

Amount of Request:	
Budgeted Item?	Budgeted Amount:
Line Item Code/Description:	

Additional Information

How does item relate to Strategic Plan?

How does item benefit Community for all Ages?

ATTACHMENTS:

Description	Type
<input type="checkbox"/> T-Mobile generator plan sheet	Exhibit
<input type="checkbox"/> Generac SD080 data sheet	Exhibit
<input type="checkbox"/> Aerial view, 4850 Rosewood Dr	Exhibit

GENERAL NOTES

1. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. SUBCONTRACTORS SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK.

2. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.

3. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.

4. THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.

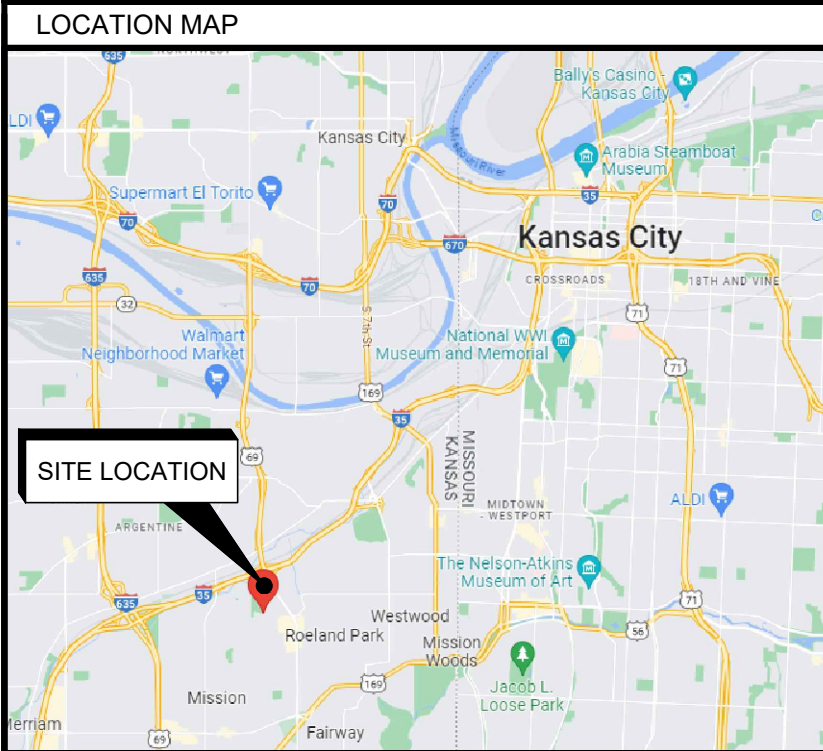
5. IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE SUBCONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION SPACE FOR APPROVAL BY THE CONTRACTOR.

6. THE SUBCONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.

7. THE SUBCONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION.

8. SUBCONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THE DRAWING MUST BE VERIFIED. SUBCONTRACTOR SHALL NOTIFY THE CONTRACTOR OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.

9. ALL SAFETY PRECAUTIONS MUCH BE TAKEN WHEN WORKING AROUND HIGH LEVELS OF ELECTROMAGNETIC RADIATION. EQUIPMENT SHOULD BE SHUTDOWN PRIOR TO PERFORMING ANY WORK THAT COULD EXPOSE THE WORKERS TO DANGER. PERSONAL RF EXPOSURE MONITORS ARE ADVISED TO BE WORN TO ALERT OF ANY DANGEROUS EXPOSURE LEVELS.



DIRECTIONS

DIRECTIONS FROM KANSAS CITY, KANSAS: GET ON I-70 W, TAKE US-69 S TO 18TH ST EXPY/ROE BLVD, CONTINUE ON ROE BLVD TO YOUR DESTINATION IN ROELAND PARK, ROELAND PARK, KANSAS.

T-Mobile

GENERATOR ADD

T-MOBILE SITE ID

A5D0006A

T-MOBILE SITE NAME

ROELAND PARK COMMUNITY CE

AT&T SITE NAME: ROSEWOOD & 49TH
AT& SITE NUMBER: 10075996

SITE ADDRESS
4848 ROSEWOOD
ROELAND PARK, KS 66205

SITE SUMMARY

SITE TYPE: GENERATOR ADD
GENERATOR TYPE: GENERAC SD80
FUEL TYPE: DIESEL

SITE ADDRESS: 4848 ROSEWOOD
ROELAND PARK, KS 66205

SITE LATITUDE: 39.041339° (N 39° 02' 28.82")
SITE LONGITUDE: -94.646606° (W 94° 38' 47.78")

JURISDICTION: CITY OF ROELAND PARK 2015 - KS

POWER COMPANY: NOT PROVIDED
TELEPHONE COMPANY: NOT PROVIDED

TOWER OWNER/MANAGER: CROWN CASTLE

WIRELESS CARRIER: T-MOBILE
1110 MONTLIMAR DRIVE, SUITE 900
MOBILE, AL 36609
CONTACT: NOT PROVIDED
PHONE: NOT PROVIDED

ENGINEER: SMW ENGINEERING
730 E PARK BLVD SUITE 204
PLANO, TX 75074
CONTACT: JUDSON CAIN SOMMERVILLE, PE
PHONE: (469) 409-1138

APPROVALS		
DEPARTMENT	NAME/SIGNATURE	DATE
DEVELOPMENT MANAGER		
PROPERTY/TOWER OWNER		
SITE ACQUISITION MANAGER		
CONSTRUCTION MANAGER		
RF ENGINEER		
OPERATIONS MANAGER		
SHEET INDEX		
T-1	TITLE SHEET	
C-1	OVERALL SITE PLAN	
C-2	EXISTING EQUIPMENT PLAN	
C-2.1	PROPOSED EQUIPMENT PLAN	
C-3	GENERATOR DETAILS	
C-3.1	GENERATOR DETAILS	
C-4	ATS DETAILS	
C-5	PAD & ANCHORING DETAILS	
C-6	SIGNAGE DETAILS	
E-1	ELECTRICAL NOTES	
E-2	GROUNDING NOTES	
E-3	PROPOSED ELECTRICAL PLAN	
E-4	ONE-LINE DIAGRAM	
E-5	GROUNDING PLAN & DETAILS	
E-6	GROUNDING DETAILS	

BUILDING CODES

ALL CONSTRUCTION SHALL COMPLY WITH THE LATEST EDITION OF THE (AS ADOPTED BY LOCAL JURISDICTION):

- INDUSTRIAL CODE (ANSI)
- OCCUPATIONAL SAFETY AND HEALTH STANDARDS (OSHA)
- NATIONAL ELECTRICAL CODE
- INTERNATIONAL BUILDING CODE
- UNIFORM MECHANICAL CODE
- INTERNATIONAL ENERGY CONSERVATION CODE

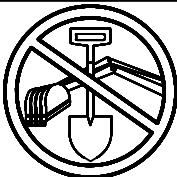
HANDICAP REQUIREMENTS

FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. HANDICAP ACCESS IS NOT REQUIRED.

PLUMBING REQUIREMENTS

FACILITY HAS NO SANITARY OR POTABLE WATER

ONE CALL

 KANSAS ONE-CALL
STATE WIDE CALL: 811
CALL BEFORE YOU DIG

T-Mobile

Branch COMMUNICATIONS
1516 SOUTH BOSTON SUITE 215
TULSA, OK 74119

SMW ENGINEERING GROUP, INC.
TOGETHER PLANNING A BETTER TOMORROW

CA#: KS E-1634
JUDSON C. SOMMERVILLE
LICENSED PROFESSIONAL ENGINEER
27796
KANSAS
02/08/2024

SITE INFORMATION:
A5D0006A
4848 ROSEWOOD
ROELAND PARK, KS 66205

#	DATE	DESCRIPTION:
0	06/02/23	LAYOUT FOR APPROVAL
1	08/07/23	2ND LAYOUT FOR APPROVAL
2	11/16/23	REVISED GENERATOR PAD AREA
3	11/22/23	REVISED PROPOSED FENCE
4	02/08/24	REVISED TREES LOCATION

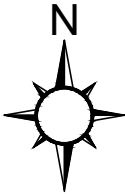
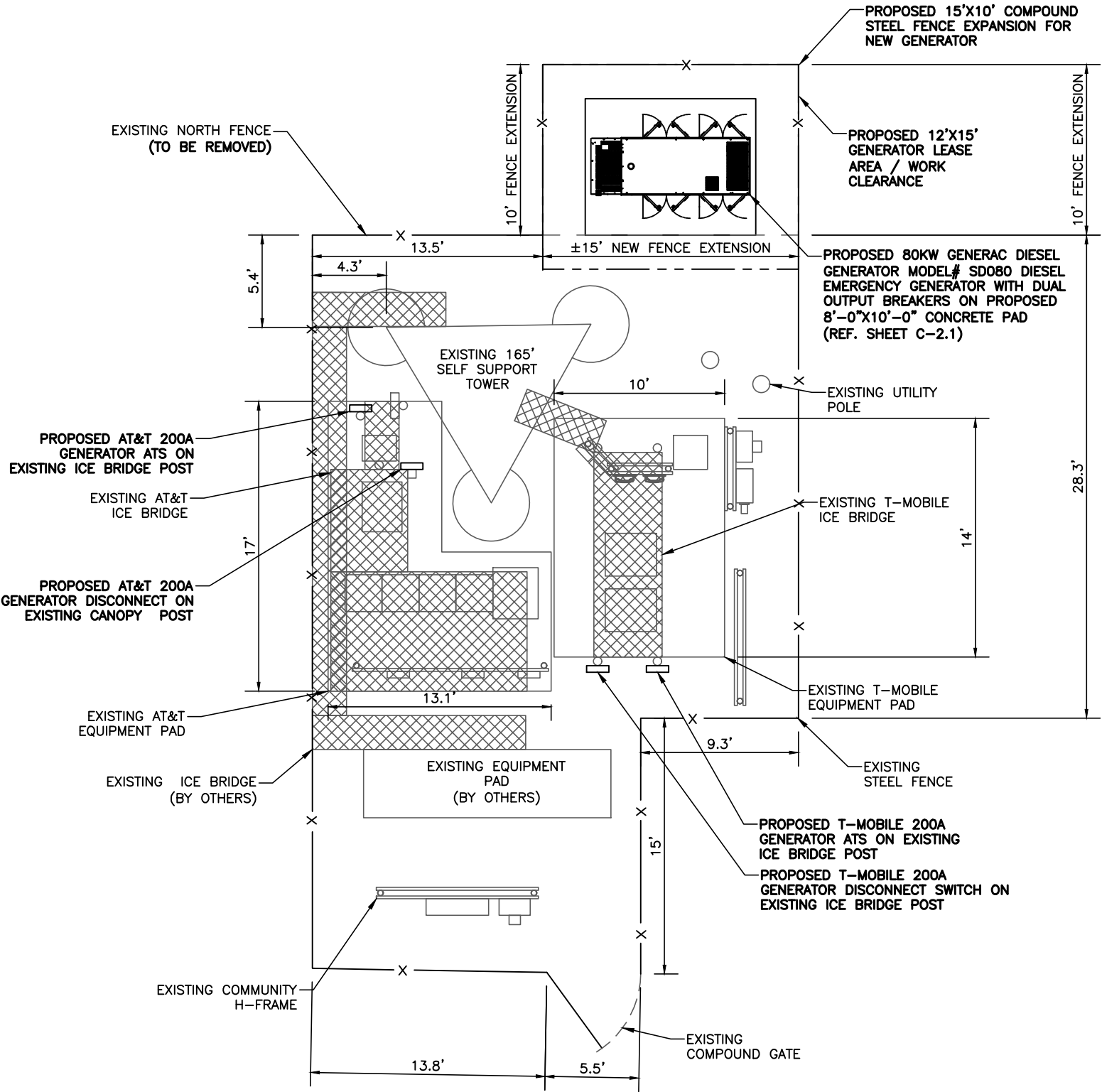
SHEET NAME:
TITLE SHEET

SMW #: 23-10304	SHEET NUMBER: T-1
DESIGNER: JO	
CHECKED BY: JE	
ENGINEER: JCS	

- SITE NOTES:**
- DIGGING AND/OR TRENCHING INSIDE COMPOUND, MUST BE DONE BY HAND.
 - EXISTING SITE INFORMATION AND LAYOUT SHOWN REPRESENT INFORMATION OBTAINED FROM SBA & T-MOBILE.
 - IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO FIELD VERIFY THE EXACT LOCATIONS OF EXISTING UTILITIES WHICH MAY CONFLICT WITH PROPOSED IMPROVEMENTS.
 - LOCATION OF UNDERGROUND UTILITIES WAS NOT PERFORMED.
 - THE ADEQUACY OF EXISTING SITE UTILITIES TO ACCOMMODATE NEW CO-LOCATION LOAD(S) WAS NOT VERIFIED.
 - ALL EXISTING VEGETATION AND IMPROVEMENTS SHOWN ARE TO REMAIN UNLESS OTHERWISE SHOWN IN THESE DRAWINGS.

SITE LAYOUT NOTE:
EXISTING SITE AND EQUIPMENT LAYOUT OBTAINED FROM SITE WALK BY SMW ENGINEERING, DATED 05/28/2023.

FLOOD MAP NOTE:
SUBJECT PROPERTY IS LOCATED IN PANEL #20091C0009G, DATED 08/03/2009, AND IS IN BASE FLOOD ZONE "X" WHICH IS NOT A SPECIAL FLOOD ZONE AREA PER FEMA.



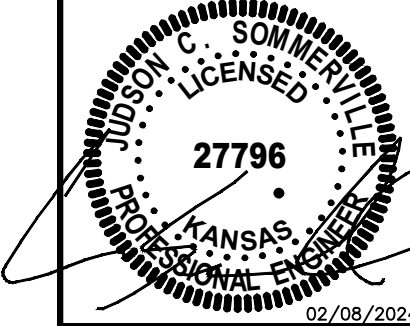
1 OVERALL SITE PLAN
C-1 SCALE: 1" = 8'

T-Mobile

Branch
COMMUNICATIONS
1516 SOUTH BOSTON SUITE 215
TULSA, OK 74119

SMW
ENGINEERING GROUP, INC.
TOGETHER PLANNING A BETTER TOMORROW

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SHEET NAME:

**OVERALL
SITE PLAN**

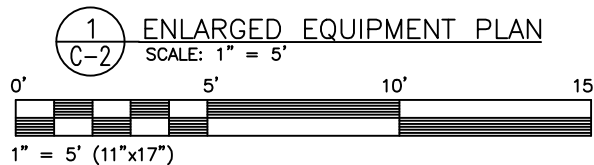
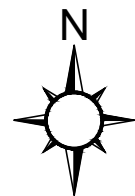
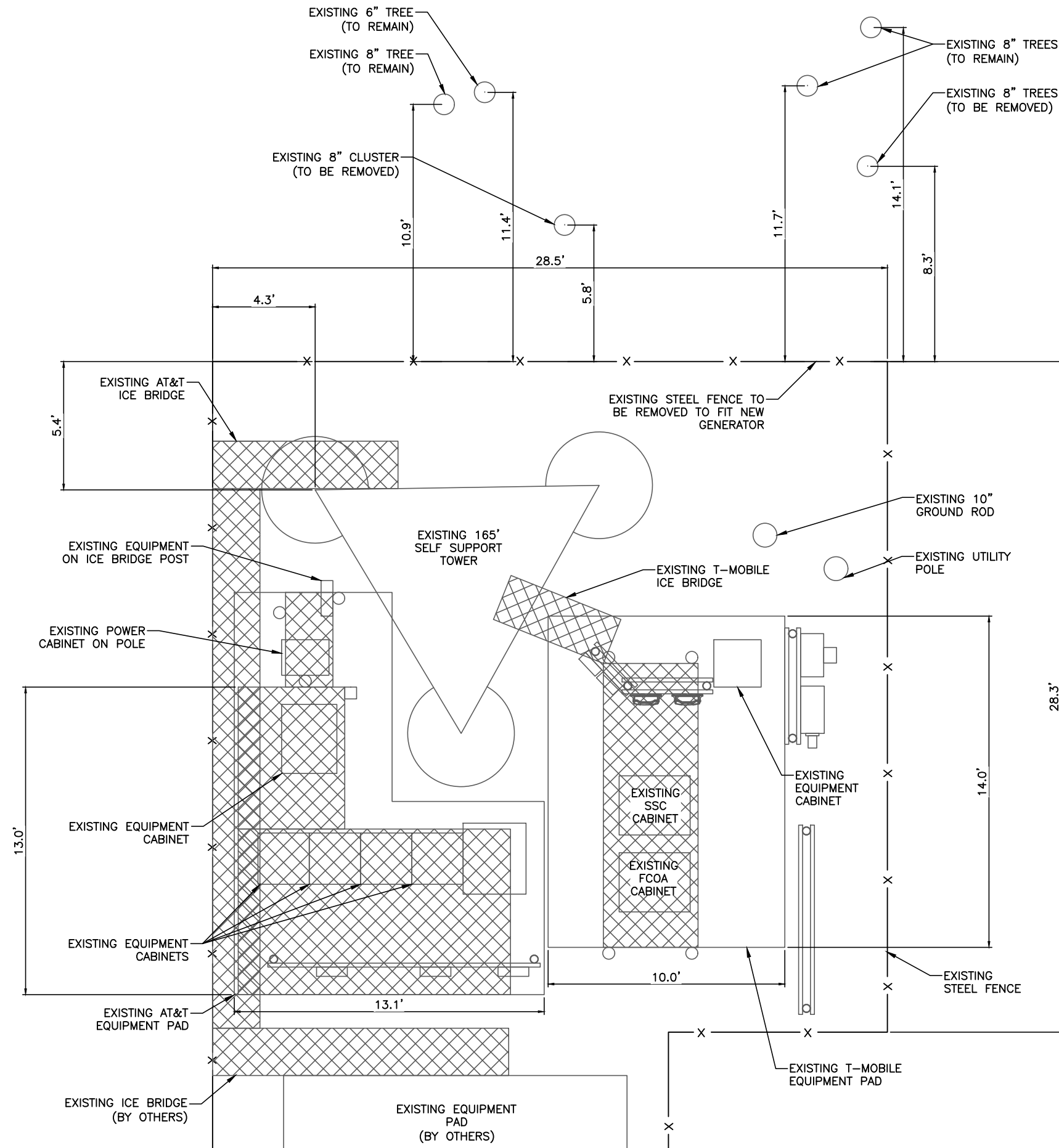
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23-10304
DESIGNER: JO
CHECKED BY: JE
ENGINEER: JCS

SHEET NUMBER:

C-1

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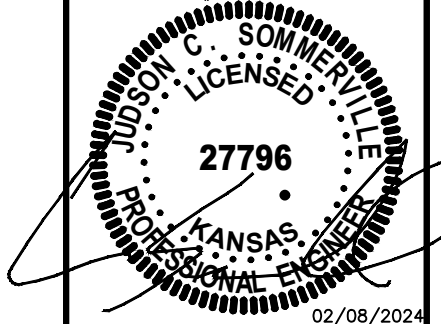


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SHEET NAME:

ENLARGED
EQUIPMENT PLAN

SMW #:
23-10304

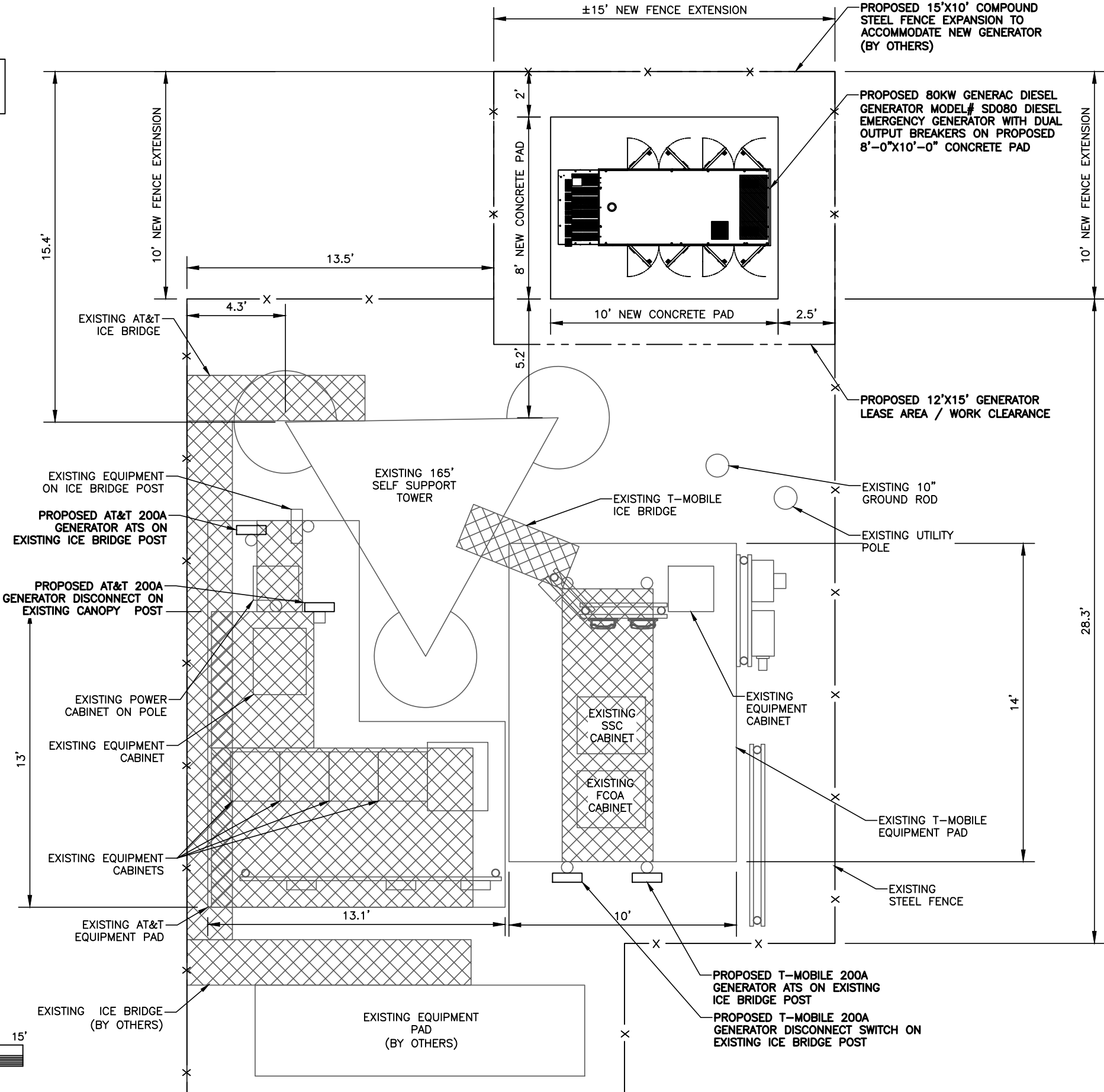
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CHECKED BY: JE
ENGINEER: JCS

SHEET NUMBER:

C-2

SITE LAYOUT NOTE:
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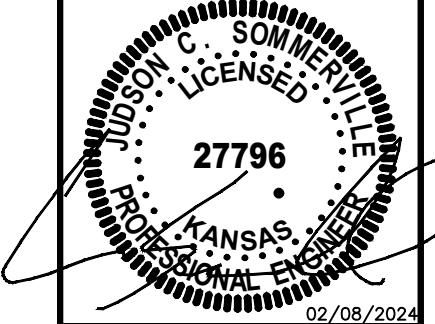


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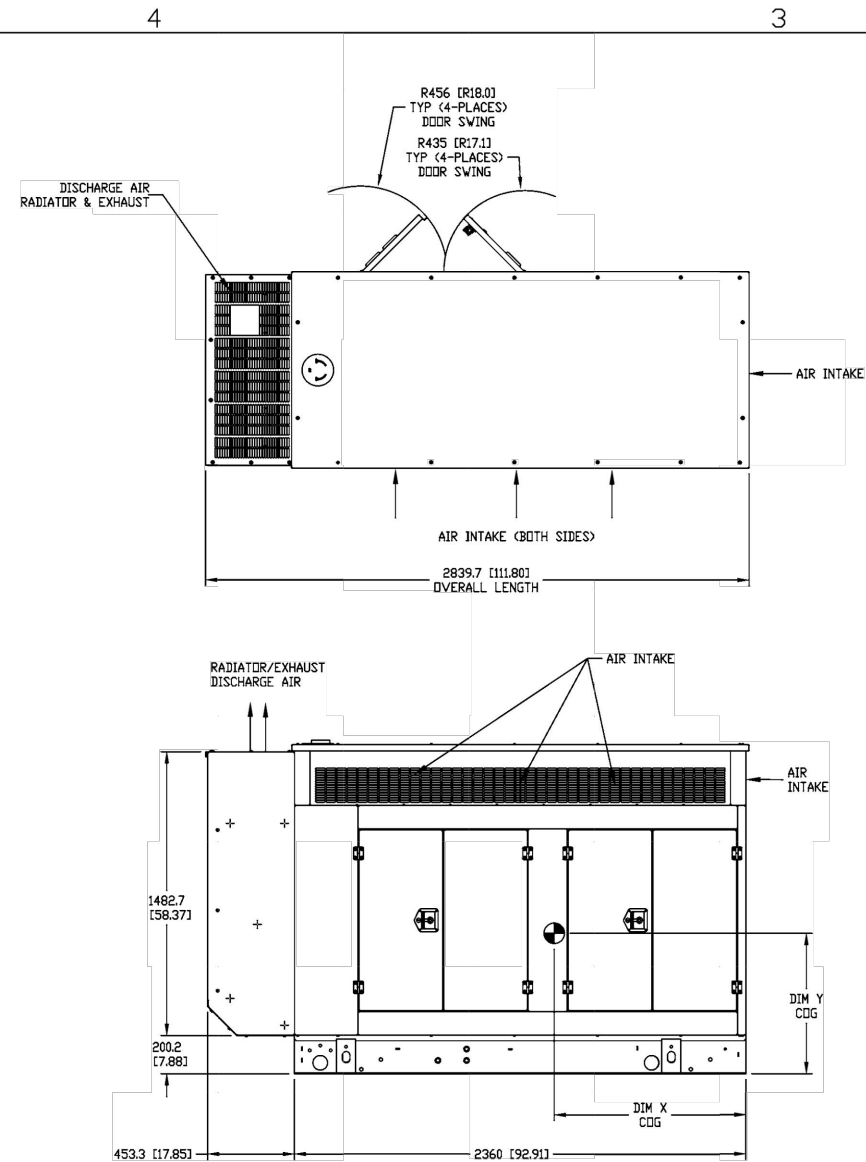
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EQUIPMENT PLAN

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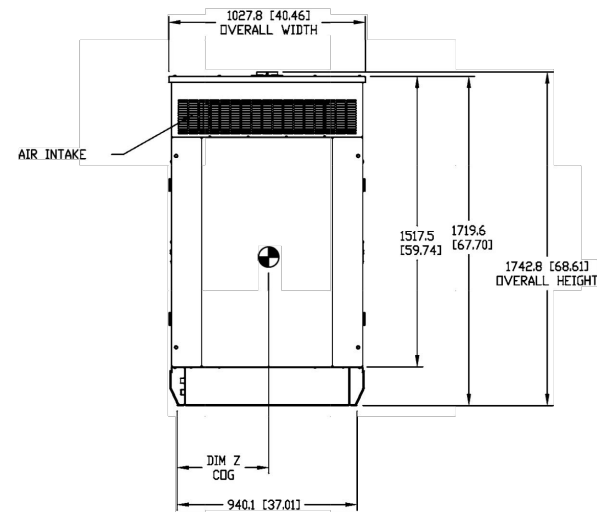
DESIGNER: JO
CHECKED BY: JE
ENGINEER: JCS

SHEET NUMBER:

C-2.1



FOR ALL STUB-UP, WEIGHT, AND COG DETAILS, SEE
CORRESPONDING OPEN SET DRAWING PER UNIT CONFIGURATION.



DIMENSIONS ARE IN MILLIMETERS (INCHES)

DRAWING CREATED FROM PRO/ENGINEER
3D FILE. ECO MODIFICATION TO BE
APPLIED TO SOLID MODEL ONLY.

INSTALLATION DRAWING

GENERAC POWER SYSTEMS OWNS THE COPYRIGHT OF THIS DRAWING
WHICH IS SUPPLIED IN CONFIDENCE AND MUST NOT BE USED FOR
ANY PURPOSE OTHER THAN FOR WHICH IT IS SUPPLIED WITHOUT
THE EXPRESS WRITTEN CONSENT OF GENERAC POWER SYSTEMS.
© GENERAC POWER SYSTEMS, 2012

ELECTRONICALLY APPROVED
INSIDE WINDCHILL

GENERAC

TITLE
L2A ENCLOSURE
D4.5L, 60HZ: SD080, PD072
SD060, PD054

ISSUE DATE: 6/2/14
SIZE B CAGE NO N/A DWG NO 0J4189C REV D
SCALE 0.035 WT-KG SHEET 1 of 1

DETAILS BY OTHERS NOTE:
DETAILS SHOWN ON THIS PAGE WERE
PROVIDED BY OTHERS AND ARE NOT
CARRIED UNDER THE SIGNATURE AND
SEAL OF SMW AND/OR IT'S ENGINEERS.

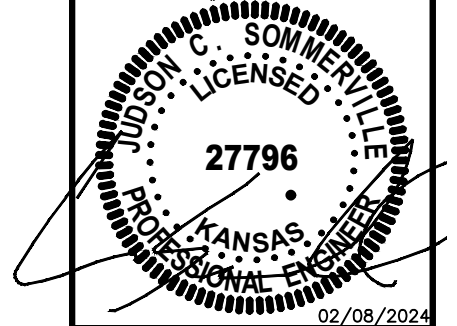
T-Mobile

Branch
COMMUNICATIONS

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SMW
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CA#: KS E-1634

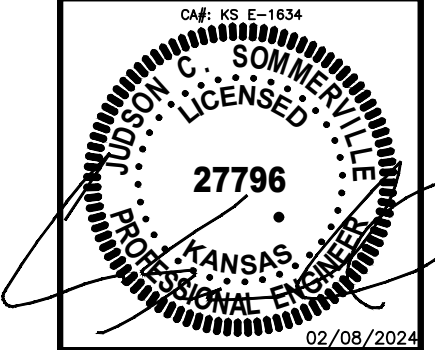


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GENERATOR DETAILS

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CHECKED BY: JE
ENGINEER: JCS
SHEET NUMBER:
C-3

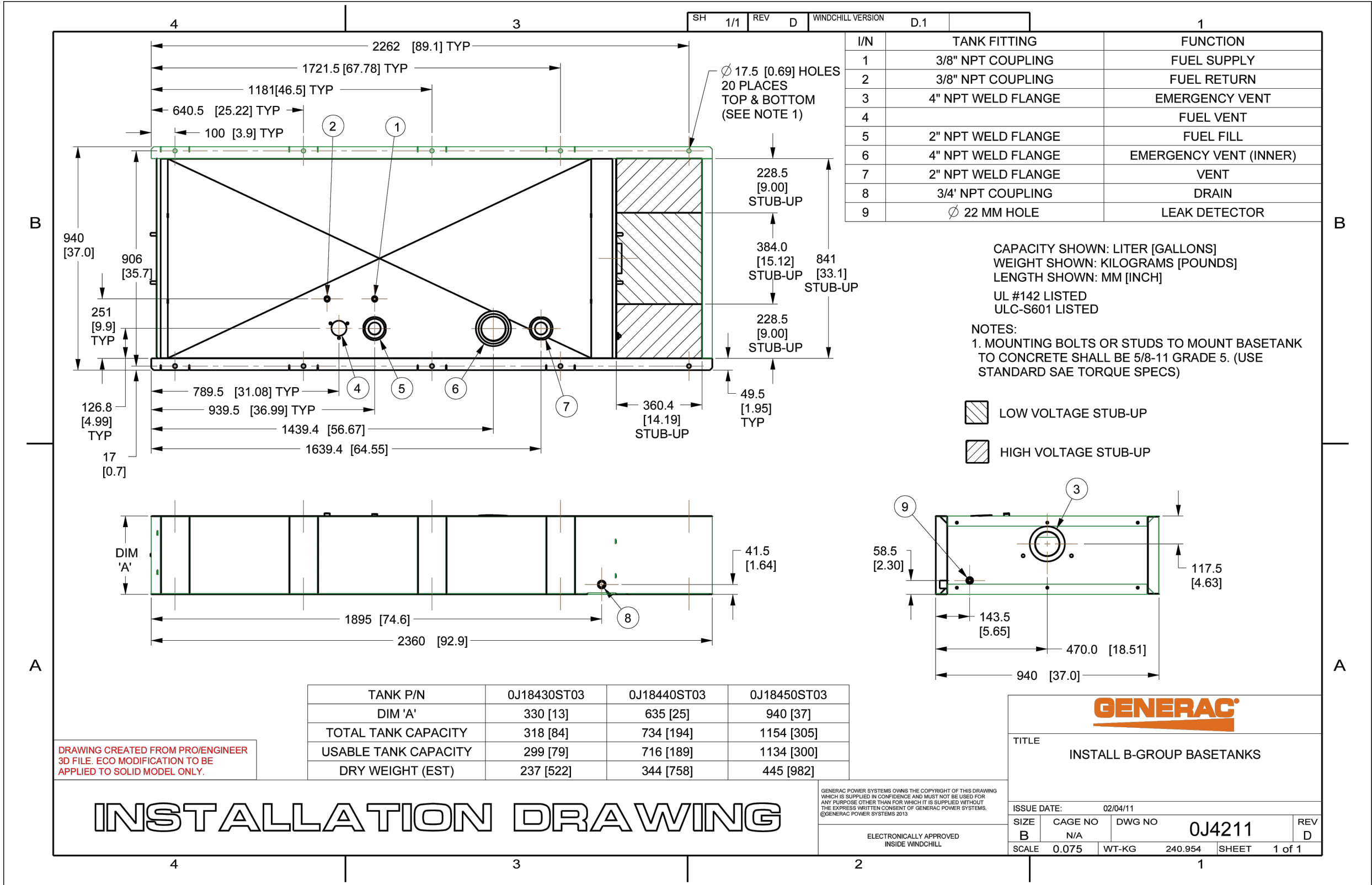


SITE INFORMATION:
A5D0006A
4848 ROSEWOOD
ROELAND PARK, KS 66205

#	DATE	DESCRIPTION:
0	06/02/23	LAYOUT FOR APPROVAL
1	08/07/23	2ND LAYOUT FOR APPROVAL
2	11/16/23	REVISED GENERATOR PAD AREA
3	11/22/23	REVISED PROPOSED FENCE
4	02/08/24	REVISED TREES LOCATION

SHEET NAME:
GENERATOR DETAILS

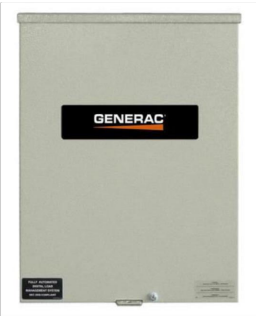
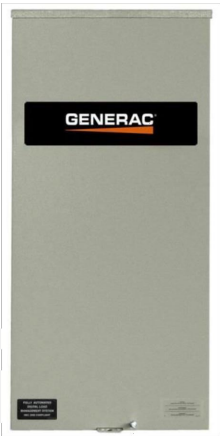
SMW #: 23-10304	SHEET NUMBER: C-3.1
DESIGNER: JO	
CHECKED BY: JE	
ENGINEER: JCS	



Automatic Transfer Switches

GENERAC®
Service and non-Service rated Automatic Smart Transfer Switches

100 - 400 Amps, Single Phase



*CUL only applies to non-service rated switches

Description

Generac Automatic Transfer Switches are designed for use with single phase generators that utilize an Evolution™ or Nexus™ Controller. The 100, 200, and 400 amp open transition switches are available in single phase in both service equipment rated and non-service equipment rated configurations. The 150 and 300 amp open transition switches are only available in a service rated equipment configuration.

Standard Features

Service rated (RXSW) Generac Automatic Transfer Switches are housed in an aluminum NEMA/UL Type 3R enclosure*, with electrostatically applied and baked powder paint. The Heavy Duty Generac Contactor is a UL recognized device, designed for years of service. The controller at the generator handles all the timing, sensing, exercising functions, and transfer commands. All switches are covered by a 5 year limited warranty.

* Non-service rated (RXSC) switches are housed in a steel enclosure.

DPM Technology

Through the use of digital power technology (DPM), these switches have the capability to manage up to 4 individual HVAC (24 VAC controlled) loads with no additional hardware. When used in tandem with Smart Management Modules, up to 8 more loads can be managed as well, providing the most installation efficient power management options available.



100-400 Amps, Single Phase

Automatic Smart Transfer Switches

Functions

All timing and sensing functions originate in the generator controller

Utility voltage drop-out.....	<65%
Timer to generator start	10 second factory set, adjustable between 2-1500 seconds by a qualified dealer*
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 minutes adjustable weekly/Bi-weekly/Monthly**

The transfer switch can be operated manually without power applied.

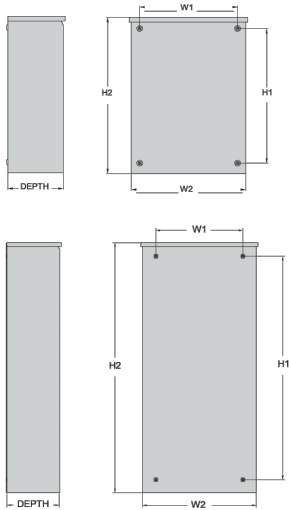
*When used in conjunction with units utilizing Evolution™ controls **Adjustable via the controller

Specifications

Model	RXSC100A3	RXSC200A3
Amps	100	200
Voltage	120/240, 1Ø	120/240, 1Ø
Load Transition Type (Automatic)	Open Transition	Open Transition
Enclosure Type	NEMA/UL3R	NEMA/UL3R
UL Rating	UL/CUL	UL/CUL
Withstand Rating (Amps)	10,000	10,000
Lug Range	1/0 - #14	250 MCM - #6

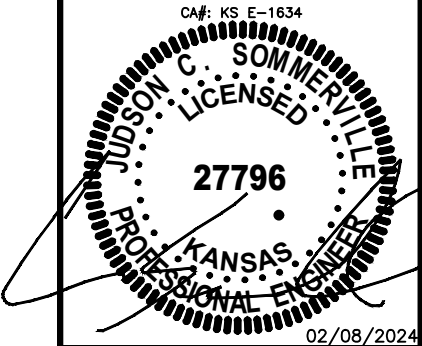
Dimensions

Model	RXSC100A3	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	20/9.07



GeneracPowerSystems, Inc. • S45 W29290 HWY. 59, Waukesha, WI 53189 • generac.com
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Mobile

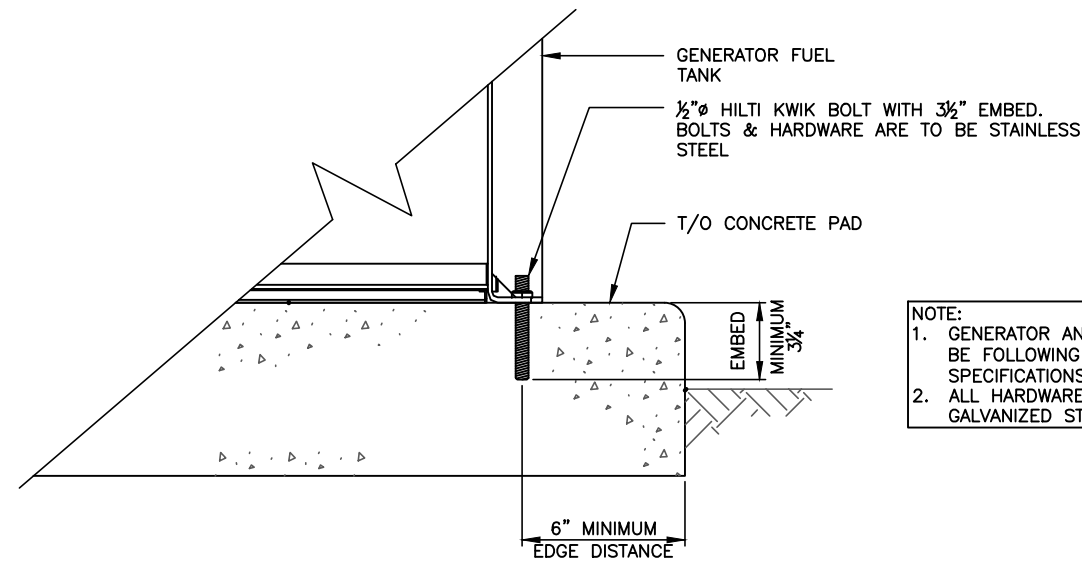


SITE INFORMATION:
A5D0006A
4848 ROSEWOOD
ROELAND PARK, KS 66205

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0	08/02/23	LAYOUT FOR APPROVAL
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3	11/22/23	REVISED PROPOSED FENCE
4	02/08/24	REVISED TREES LOCATION

SHEET NAME:
ATS DETAILS

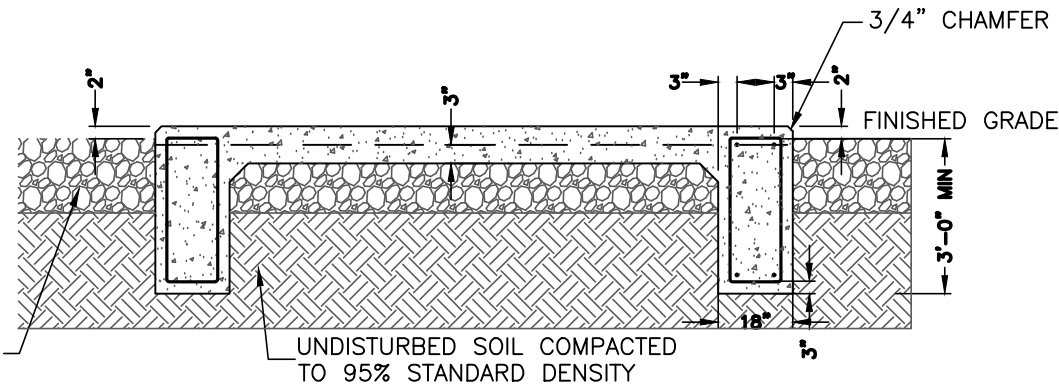
SMW #: 23-10304	SHEET NUMBER: C-4
DESIGNER: JO	
CHECKED BY: JE	
ENGINEER: JCS	



NOTE:
1. GENERATOR ANCHORING SHALL BE FOLLOWING MANUFACTURER'S SPECIFICATIONS
2. ALL HARDWARE SHALL BE GALVANIZED STAINLESS STEEL

GENERATOR ANCHORING DETAIL

NOT TO SCALE 1



NOTES:
1. ALL CONCRETE TO HAVE A COMPRESSIVE STRENGTH OF $f_c' = 3000$ PSI WITH COMMERCIAL GRADE FIBER MESH REINFORCEMENT 1.5# PER CU. YARD
2. CONCRETE PAD IS DESIGNED TO BEAR ON 2000 PSF SOIL BEARING CAPACITY TO BE VERIFIED AT TIME OF EXCAVATION BY A SOILS ENGINEER REGISTERED IN THE STATE OF FLORIDA

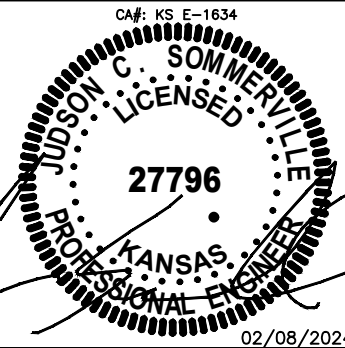
SECTION A-A
NOT TO SCALE

- NOTES:
1. SLAB TO BE LEVEL $\pm 1/4$ ".
 2. FOOTING TO EXTEND A MINIMUM OF 24" BELOW UNDISTURBED SOIL OR 6" BELOW FROST LINE.
 3. FINAL SITE DESIGN IS THE RESPONSIBILITY OF THE SITE CONTRACTOR.
 4. CONTRACTOR SHALL VERIFY DESIGN WITH ACTUAL SITE CONDITIONS. CONTRACTOR TO NOTIFY ENGINEER OF ANY DISCREPANCIES.
 5. SLAB FOUNDATION DESIGNED ASSUMING ALLOWABLE SOIL BEARING PRESSURE OF 2000 PSF.
 6. SLAB FOUNDATION DESIGNED ASSUMING MAXIMUM SOIL PLASTICITY INDEX OF 27.
 7. CONCRETE STRENGTH SHALL BE A MINIMUM OF 3000 PSI.
 8. CONTRACTOR SHALL VERIFY DIMENSIONS AND BOLT LAYOUT WITH SELECTED SHELTER.

NOTE:
CHOICE OF FIBERCRETE OR CONCRETE PAD TO BE MADE IN THE FIELD BY T-MOBILE CONSTRUCTION MANAGER PRIOR TO CONSTRUCTION.

GENERATOR PAD FOUNDATION DETAIL

NOT TO SCALE 2



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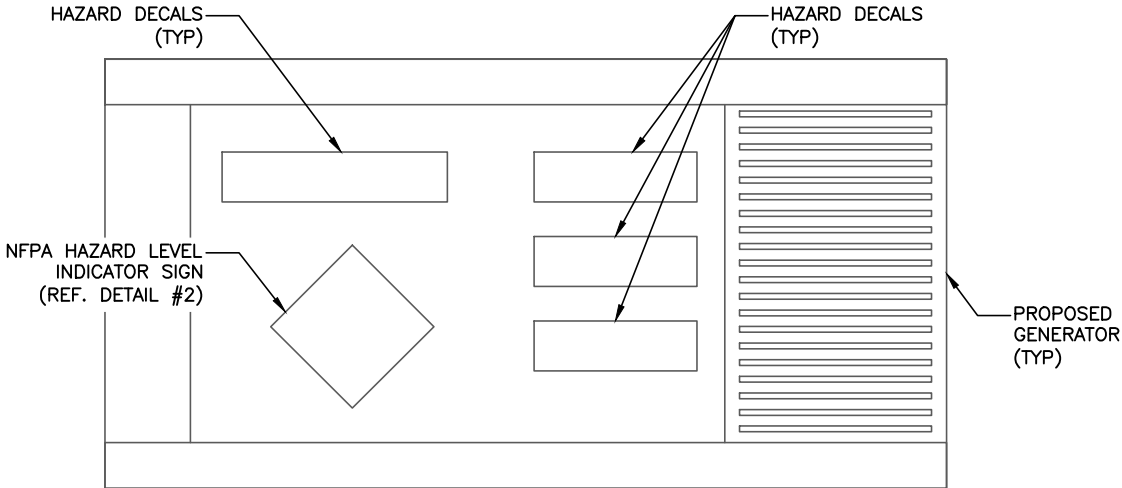
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SHEET NAME:
PAD & ANCHOR DETAILS

SMW #: 23-10304	SHEET NUMBER: C-5
DESIGNER: JO	
CHECKED BY: JE	
ENGINEER: JCS	

GROUND LUG	1" BLACK LETTERS ON WHITE BACKGROUD
NO SMOKING	3" LETTERS ON WHITE BACKGROUND (INSTALL ON ONE VISIBLE SIDE)
COMBUSTIBLE	3" LETTERS ON WHITE BACKGROUND (INSTALL ON ONE VISIBLE SIDE)
DIESEL FUEL	3" LETTERS ON WHITE BACKGROUND (INSTALL ON ONE VISIBLE SIDE)

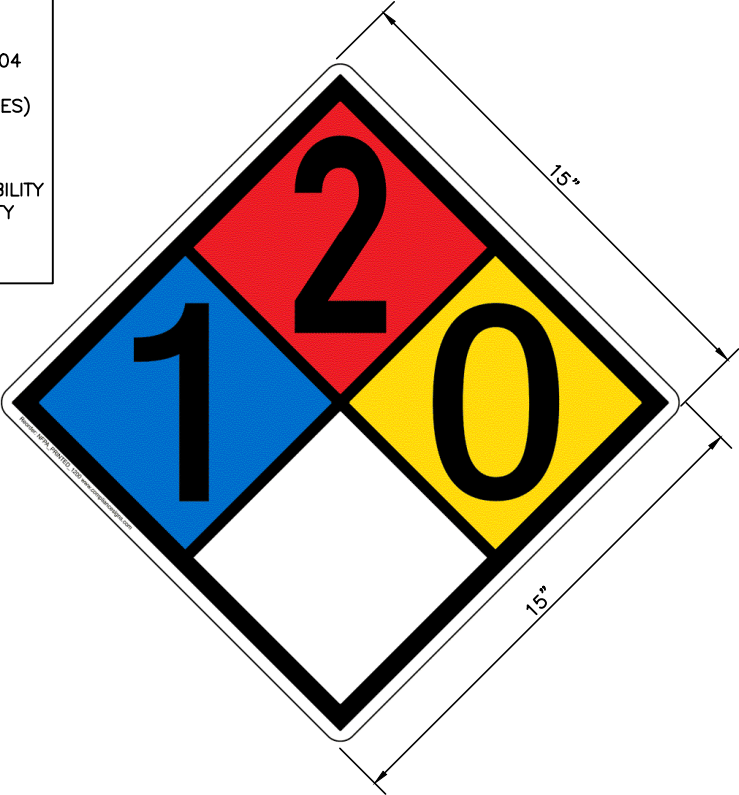
NOTE FOR CONTRACTOR:
SIGNS MUST BE OF DURABLE MATERIAL. SIGNS SHALL NOT BE OBSCURED OR REMOVED AND SHALL BE IN ENGLISH AS A PRIMARY LANGUAGE. COMBUSTIBLE SIGN MAY ALSO BE WHITE LETTERS ON A RED BACKGROUND



HAZARD SIGN NOTE:
STAMPED ALUMINUM HAZARD SIGNAL SYSTEM PER NFPA 704 CHAPTER 6, 15" DIAMOND (INSTALL ON ALL VISIBLE SIDES)

HAZARD RATINGS:
TWELVE O'CLOCK – FLAMMABILITY
THREE O'CLOCK – INSTABILITY
SIX O'CLOCK – SPECIAL
NINE O'CLOCK –HEALTH

REFERENCES:
NFPA 704
UFC 7001.9
IFC 27035

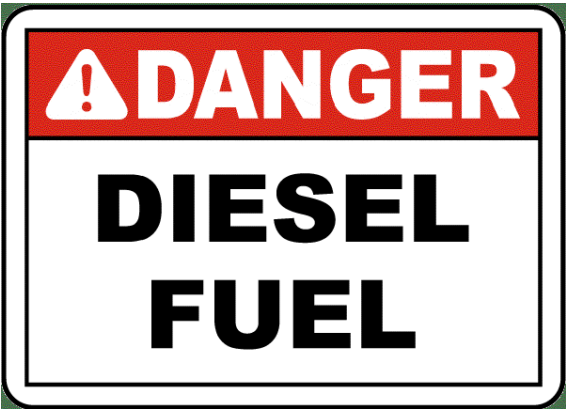


GENERATOR LABELING REQUIREMENTS

NOT TO SCALE 1

NFPA HAZARD SIGNAGE EXAMPLE

NOT TO SCALE 2

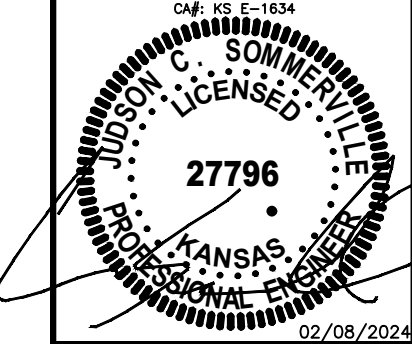


DIESEL FUEL – DANGER SIGN EXAMPLE

3



DIESEL FUEL DANGER / NO SMOKING – SIGN EXAMPLE



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4848 ROSEWOOD
ROELAND PARK, KS 66205

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SHEET NAME:
SIGNAGE DETAILS

SMW #: 23-10304	SHEET NUMBER: C-6
DESIGNER: JO	
CHECKED BY: JE	
ENGINEER: JCS	

4

A – GENERAL

- A1. ALL ELECTRICAL WORK SHALL CONFORM TO THE NATIONAL ELECTRICAL CODE (EDITION ADOPTED BY LOCAL JURISDICTION) AND APPLICABLE LOCAL CODES.
- A2. GROUNDING SHALL COMPLY WITH ARTICLE 250 OF THE NATIONAL ELECTRIC CODE.
- A3. ALL ELECTRICAL EQUIPMENT AND ACCESSORIES SHALL BE U.L. APPROVED OR LISTED.
- A4. ALL POWER WIRING SHALL BE STRANDED COPPER, TYPE THHN/THHW, AND 90 DEGREES C RATED.
- A5. GROUNDING ELECTRODE CONDUCTORS SHALL BE BARE, TIN COATED COPPER AND EQUIPMENT GROUND CONDUCTORS SHALL BE GREEN INSULATED, UNLESS OTHERWISE NOTED.
- A6. ALL POWER WIRING SHALL BE INSTALLED IN GALVANIZED RIGID STEEL CONDUIT, PVC, OR FLEXIBLE LIQUIDTIGHT CONDUIT, AS INDICATED.
- A7. CONTRACTOR SHALL OBTAIN ALL PERMITS, PAY PERMIT FEES, AND SCHEDULE INSPECTIONS.
- A8. CONTRACTOR SHALL APPLY FOR ELECTRICAL SERVICE AS SOON AS POSSIBLE AND COORDINATE REQUIREMENTS, SERVICE ROUTING, AND METER SOCKET TYPE WITH LOCAL POWER COMPANY.
- A9. CONTRACTOR SHALL APPLY FOR TELEPHONE SERVICE AS SOON AS POSSIBLE AND COORDINATE REQUIREMENTS AND SERVICE ROUTING WITH TELEPHONE COMPANY.
- A10. PROVIDE ALL LABOR AND MATERIAL DESCRIBED ON THIS DRAWING, AND ALL ITEMS INCIDENTAL TO COMPLETING AND PRESENTING THIS PROJECT AS FULLY OPERATIONAL.
- A11. WHERE LONG POWER CABLE RUNS PREVAIL, CONTRACTOR SHALL CALCULATE THE VOLTAGE DROP AND SIZE WIRES AND CONDUIT ACCORDINGLY.
- A12. WHERE TRANSFORMER IS REQUIRED FOR ELECTRICAL SERVICE, TRANSFORMER SECONDARY SHALL BE GROUNDED PER N.E.C., ARTICLE 250–26.
- A13. REFER TO SITE SPECIFIC DWGS FOR ELEVATIONS.
- A14. ALL ELECTRICAL DEVICES EXPOSED TO WEATHER SHALL BE OF RAINPROOF CONSTRUCTION AND SHALL REQUIRE WATER TIGHT CONDUIT HUBS. NEMA 3R TYPICAL
- A15. CONTRACTOR SHALL COIL CABLES AT HANDHOLE WITH LENGTHS AS REQUIRED BY ELECTRICAL UTILITY FOR CONNECTION BY UTILITY.
- A16. ALL UNDERGROUND SERVICE ENTRANCE POWER CABLES SHALL BE TYPE FOR SUCH USE. CONTRACTOR SHALL CALCULATE VOLTAGE DROP AND RE–SIZE CABLES PER NEC REQUIREMENTS FOR CABLE RUNS EXCEEDING 250 FEET.

B – POWER CABLE AND SERVICE

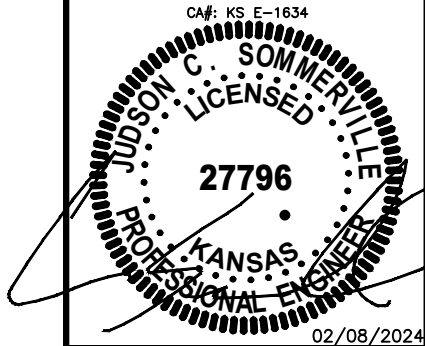
- B1. CONTRACTOR SHALL PROVIDE CONDUIT AND WIRING TO BTS AND VERIFY EXACT CONDUIT ROUTING. RACEWAY SYSTEM MATERIALS AND DEVICES FURNISHED SHALL BE IN ACCORDANCE WITH APPLICABLE STANDARDS OF ANSI, NEMA, AND UL. RACEWAY SYSTEM COMPONENTS SHALL BE INSTALLED IN ACCORDANCE WITH APPLICABLE REQUIREMENTS OF THE N.E.C.
- B2. CONTRACTOR SHALL SEAL AROUND ALL CONDUIT PENETRATIONS THROUGH WALLS, FLOORS AND ROOFS TO PREVENT MOISTURE PENETRATION OR VERMIN INFESTATION.
- B3. CONDUCTORS RUNNING ALONG HORIZONTAL SURFACES (ROOF TOP OR SLAB) SHALL BE INSTALLED IN RIGID CONDUIT SUPPORTED ON ELECTRICAL CONDUIT SUPPORT.
- B4. ALL VERTICAL RUNS OF POWER CABLE EXCEEDING 80 FEET IN LENGTH SHALL BE SUPPORTED PER N.E.C. ARTICLE 300 USING KELLEMS GRIPS OR ACCEPTABLE EQUAL CABLE SUPPORT SYSTEM.
- B5. WHERE A SEPARATE ELECTRICAL SERVICE DROP IS ADDED, CONTRACTOR SHALL INSTALL PERMANENT SERVICE DISCONNECT OR GROUPING THEREOF, DENOTING ALL OTHER SERVICE ENTRANCES, LOCATION OF EACH AND THE AREAS SERVED BY EACH.
- B6. WHERE ELECTRICAL POWER IS TO BE SUB–FED FROM AN EXISTING DISTRIBUTION SYSTEM, THE FOLLOWING SHALL APPLY:
- A) CONTRACTOR SHALL PERFORM LOAD TESTING TO DETERMINE MAXIMUM FEEDER DEMAND PER N.E.C. ARTICLE 220–35.
- B) CONTRACTOR SHALL VERIFY WHETHER EXISTING FEEDER CAPACITY EXCEEDS VALUE CALCULATED PER N.E.C. ARTICLE 220–35
- C) EACH BRANCH CIRCUIT PROTECTIVE DEVICE SHALL HAVE SAME INTERRUPTING RATING AS EQUIPMENT SUPPLYING IT.
- D) PREFERRED MEANS OF SUPPLY SHALL BE A BRANCH CIRCUIT PROTECTIVE DEVICE LOCATED IN EXISTING PANEL.
- E) IF A BRANCH CIRCUIT PROTECTIVE DEVICE CANNOT BE OBTAINED OR SPACE IS NOT AVAILABLE, A BRANCH CIRCUIT MAY BE TAPPED FROM EXISTING FEEDER CONDUCTORS USING AN INSTALLED 2–POLE FUSED DISCONNECT AND METER BASE PER N.E.C. ARTICLE 240–21 WITH TEN FOOT (10) MAXIMUM TAP CONDUCTORS. FUSED DISCONNECT SHALL BE LISTED SAME OR BETTER INTERRUPTING RATING AS EXISTING SOURCE OF SUPPLY.

C – RF (COAX) AND LOW VOLTAGE CABLE

- C1. RF CABLES AND LOW VOLTAGE CABLING BETWEEN BTS, LNA OR TMA AND ANTENNA SHALL BE SUPPORTED USING ANDREW "SNAP–IN" HANGERS OR ACCEPTABLE EQUAL.
- C2. RF CABLES AND LOW VOLTAGE CABLING BETWEEN BTS, LNA OR TMA AND ANTENNA SHALL BE ROUTED AS FOLLOWS:
- A) RUNNING ALONG HORIZONTAL SURFACES: USE WAVEGUIDE SUPPORTS OR BRIDGE KIT MOUNTED ON CONCRETE SLEEPERS.
- B) RUNNING ALONG VERTICAL TOWER FACE: WAVEGUIDE LADDER W/HANGERS OR KELLEMS GRIPS.
- C) RUNNING ALONG OR ADJACENT TO BTS PLATFORM: USE 12 X 3 OPEN OR COVERED ELECTRICAL LADDER TRAY.

D – IDENTIFICATION

- D1. LOCATE NAMEPLATE, MARKING, OR OTHER IDENTIFICATION MEANS ON OUTSIDE EQUIPMENT OR BOX FRONT COVERS.
- D2. PROVIDE NAMEPLATE ENGRAVED WITH EQUIPMENT DESIGNATION FOR EACH SAFETY SWITCH AND ALL OTHER ELECTRICAL CABINETS, ETC.
- D3. DURING TRENCH BACK–FILLING FOR EACH UNDERGROUND ELECTRICAL, TELEPHONE, SIGNAL AND COMMUNICATIONS LINE, PROVIDE A CONTINUOUS UNDERGROUND WARNING TAPE TWELVE INCHES BELOW FINISHED GRADE.



SITE INFORMATION:

A5D0006A

4848 ROSEWOOD

ROELAND PARK, KS 66205

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SHEET NAME:

ELECTRICAL NOTES

SMW #:	SHEET NUMBER:
23–10304	E-1
DESIGNER:	JO
CHECKED BY:	JE
ENGINEER:	JCS

- A – GENERAL
- A1. INSTALLATION OF GROUNDING ELECTRODE SYSTEM SHALL COMPLY WITH ARTICLE 250 OF THE NATIONAL ELECTRIC CODE AND WITH ALL BUILDING CODES OF AUTHORITIES HAVING JURISDICTION.
- A2. GROUNDING CONDUCTORS SHALL BE #2 AWG TINNED SOLID BARE COPPER BELOW AND ABOVE GRADE, UNLESS OTHERWISE NOTED AND SHALL BE ROUTED IN A DOWNWARD PATH TOWARDS GROUND BARS.
- A3. GROUNDING CONDUCTORS SHALL BE KEPT AS SHORT AND DIRECT AS POSSIBLE WITH MINIMUM BEND RADIUS OF 12 INCHES.
- A4. ALL BELOW GRADE CONNECTIONS SHALL BE CADWELD TYPE CONNECTIONS AND ALL CONNECTIONS TO EQUIPMENT AND GROUND BARS SHALL BE 2-HOLE BRONZE COMPRESSION CONNECTORS UNLESS OTHERWISE NOTED.
- A5. CONTRACTOR SHALL INSTALL NEW PCS GROUNDING SYSTEM PER SPECIFICATIONS AND INTERCONNECT NEW SYSTEMS TO ANY EXISTING GROUNDING SYSTEMS AS REQUIRED BY NFPA 70 AND 780 (THIS APPLIES TO ELECTRICAL POWER DISTRIBUTION GROUNDING SYSTEM, LIGHTNING PROTECTION GROUNDING SYSTEM, COAX CABLE GROUNDING SYSTEM AND ANY OTHER EXISTING GROUNDING SYSTEMS).
- A6. GROUNDING CONDUCTORS SHALL BE BONDED TO CABLE SUPPORTS, ANTENNA FRAMES, AND ANY SUPPORT FRAMES OR RACKS USING CADWELD OR MECHANICAL CONNECTIONS.
- A7. CONTRACTOR SHALL PROVIDE LOCK WASHERS FOR ALL MECHANICAL CONNECTIONS FOR GROUND CONDUCTORS, STAINLESS STEEL HARDWARE SHALL BE USED THROUGHOUT.
- A8. GROUNDING CONDUCTORS EMBEDDED IN CONCRETE OR PENETRATING WALLS AND FLOORS SHALL BE ENCASED IN PVC CONDUIT. NO METALLIC CONDUIT SHALL BE USED FOR GROUNDING CONDUCTORS UNLESS REQUIRED BY LOCAL CODES OR OTHERWISE INDICATED ON DRAWINGS. CONTRACTOR SHALL SEAL AROUND ALL CONDUIT PENETRATIONS TO PREVENT MOISTURE PENETRATION AND VERMIN INFESTATION.
- A9. CONTRACTOR SHALL BOND PCS GROUNDING SYSTEM VIA THE MASTER GROUND BAR TO ALL METAL OBJECTS WITHIN 12 FEET OF EQUIPMENT, CONDUIT AND CABLES.
- A10. BONDING OF GROUNDED CONDUCTOR (NEUTRAL) AND GROUNDING CONDUCTOR SHALL BE AT SERVICE DISCONNECTING MEANS. BONDING JUMPER SHALL BE INSTALLED PER N.E.C. ARTICLE 250-28.
- A11. CONTRACTOR SHALL VERIFY EXACT CONDUIT ROUTING FOR GROUNDING CONDUCTORS WHERE APPLICABLE.
- A12. A GROUND LEAD IS REQUIRED ONLY FOR BTS SUPPORTED ON STEEL FRAME. AN ADDITIONAL GROUND LEAD IS REQUIRED IF CABLE TRAY IS USED.
- A13. CONNECTIONS TO CGB SHALL BE ARRANGED IN THE FOLLOWING THREE GROUPS:
- * SURGE PRODUCERS (COAXIAL CABLE GROUND KITS, TELCO CABINET AND POWER PEDESTAL GROUND).
 - * SURGE ABSORBERS (GROUNDING ELECTRODE RING OR BUILDING STEEL).
 - * NON-SURGING OBJECTS (EGB GROUND IN BTS).
- A14. DOUBLING OR STACKING OF ANY GROUNDING CONNECTIONS IS NOT ACCEPTABLE.
- A15. ALL GROUND BARS SHALL BE INSTALLED WITH STAND OFF INSULATORS.
- B – PREPARATION
- B1. SURFACES: ALL CONNECTIONS SHALL BE MADE TO BARE METAL. ALL PAINTED SURFACES SHALL BE FIELD INSPECTED TO ENSURE PROPER CONTACT. ALL GALVANIZED SURFACES ON WHICH GALVANIZING HAS BEEN REMOVED BY CUTTING, DRILLING, OR ANY OTHER OPERATION SHALL BE RE-GALVANIZED IN ACCORDANCE WITH ASTM A780 USING "ZINC RICH" COATING AS MANUFACTURED BY ZRC CHEMICAL PRODUCTS COMPANY (LOCATED IN QUINCY, MASSACHUSETTS), OR ACCEPTABLE EQUAL. NO WASHERS ARE ALLOWED BETWEEN ITEMS BEING GROUNDED. ALL CONNECTIONS ARE TO HAVE A NON-OXIDIZING AGENT ("COPPER SHIELD") APPLIED PRIOR TO INSTALLATION.
- B2. GROUND BAR: ALL COPPER GROUND BARS SHALL BE CLEANED, POLISHED AND A NON-OXIDIZING AGENT ("COPPER SHIELD") APPLIED. NO FINGER PRINTS OR DISCOLORED COPPER SHALL BE PERMITTED.
- C – BUILDINGS
- C1. ELECTRICAL CONTRACTOR SHALL PERFORM REQUIRED TESTING ON GROUNDING SYSTEM ONCE GROUNDING SYSTEM IS COMPLETELY CONSTRUCTED AND BEFORE SERVICE POWER AND GROUND IS CONNECTED (SEE NOTE T1 FOR TEST DESCRIPTION).
- C2. A #4/0 AWG COPPER CONDUCTOR SHALL BE ROUTED FROM MASTER GROUND BAR AT BTS SITE TO MAIN METAL COLD WATER PIPE AND BONDED TO PIPE WITH BRONZE 2-HOLE PIPE CLAMP. CLAMP SHALL BE CONNECTED TO WATER PIPE WITHIN 5 FEET OF ENTRY OF PIPE INTO BUILDING WITH NO DEVICES BETWEEN ENTRY POINT AND CONNECTION AND SHALL COME IN CONTACT WITH PIPE FOR A MINIMUM DISTANCE OF 4 INCHES.
- C3. METAL RACEWAYS, ENCLOSURES, FRAMES AND OTHER NON-CURRENT CARRYING PARTS OF ELECTRICAL EQUIPMENT SHALL BE KEPT AT LEAST 6 FEET AWAY FROM LIGHTNING ROD CONDUCTORS OR THEY MUST BE BONDED TO LIGHTING ROD CONDUCTORS AT THE LOCATION WHERE SEPARATION DISTANCE IS LESS THAN 6 FEET.
- C4. A MASTER GROUND BAR (MGB) SHALL BE INSTALLED NEAR BTS WITH BUILDING PRINCIPAL GROUND BAR (BPG) INSTALLED NEAR ENTRANCE OF MAIN METAL COLD WATER PIPE INTO BUILDING. A #4/0 AWG STRANDED COPPER DOWN CONDUCTOR (VERTICAL GROUND RISER) SHALL BE USED TO INTERCONNECT GROUND BARS.
- C5. VERTICAL RISER SHALL CONSIST OF A #4/0 AWG (THWN) STRANDED COPPER CONDUCTOR INSIDE ¾" CONDUIT.
- C6. CONTRACTOR SHALL BOND BUILDING PRINCIPAL GROUND BAR (BPG) NEAR MAIN METAL COLD WATER PIPE TO EXISTING BUILDING GROUND RING AS WELL AS TO MAIN METAL COLD WATER PIPE WITH #4/0 AWG (THWN) STRANDED COPPER CONDUCTOR.
- C7. ANTENNA GROUND BARS (AGB) SHALL BE INSTALLED NEAR ANTENNAS AND SHALL BE BONDED TO MASTER GROUND BAR (MGB) WITH #2 AWG TINNED SOLID BARE COPPER CONDUCTOR.
- C8. IF CODES REQUIRE VERTICAL RISER TO BE ISOLATED IN CONDUIT, PVC CONDUIT IS PREFERRED. IF METALLIC CONDUIT IS USED, GROUNDING BUSHINGS SHALL BE INSTALLED ON EACH END OF THE CONDUIT AND BONDED TO GROUND BARS USING #2 AWG (THWN) STRANDED COPPER CONDUCTORS WITH GREEN INSULATION.

GROUNDING NOTES

1

D – LAND BUILDS AND CO-LOCATES

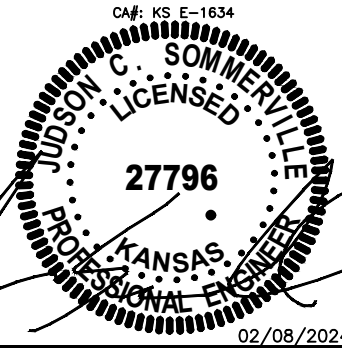
- D1. THE GROUND ELECTRODE SYSTEM SHALL CONSIST OF DRIVEN GROUND RODS UNIFORMLY SPACED AROUND THE EQUIPMENT FOUNDATION AND AROUND THE PERIMETER OF THE TOWER FOUNDATION. THE GROUND RODS SHALL BE ¾" X 10'-0" COPPER CLAD STEEL INTERCONNECTED WITH #2 SOLID TINNED BARE COPPER GROUND CONDUCTOR TO FORM A GROUND RING AT A DEPTH OF 30 INCHES BELOW THE SURFACE OF THE SOIL. A MINIMUM OF 1 FOOT AND A MAXIMUM OF 3 FEET CLEARANCES SHALL BE MAINTAINED FROM FOUNDATIONS. TOWER AND EQUIPMENT GROUND RINGS SHALL BE INTERCONNECTED WITH TWO GROUNDING CONDUCTORS OF EQUAL LENGTH AND MATERIALS.
- D2. GROUND RODS SHALL BE BONDED TO GROUND RINGS AND INTERCONNECTING CONDUCTORS AT EQUAL INTERVALS OF APPROXIMATELY 10 FEET.
- D3. WAVEGUIDE BRIDGE SHALL BE BONDED TO GROUND RINGS OR INTERCONNECTING CONDUCTORS WITH GROUNDING CONDUCTORS BONDED TO DIAGONALLY OPPOSED SUPPORT POSTS.
- D4. GROUND BARS SHALL BE BONDED TO GROUND RING WITH SINGLE GROUNDING CONDUCTOR.
- D5. BONDS TO ANTENNA MASTS, FENCE POSTS, WAVEGUIDE BRIDGE, TOWER STEEL (UNLESS PROHIBITED BY TOWER MANUFACTURER) AND THOSE BELOW GRADE SHALL BE EXOTHERMIC TYPE (CADWELD). ALL OTHER BONDS SHALL BE BRONZE 2-HOLE COMPRESSION FITTINGS UNLESS OTHERWISE NOTED.
- D6. GROUNDING CONDUCTORS MAKING A TRANSITION FROM ABOVE TO BELOW GRADE SHALL BE INSULATED FROM EARTH CONTACT BY PASSING THROUGH PVC CONDUIT. THE CONDUIT SHALL EXTEND AT LEAST 6 INCHES ABOVE AND 12 INCHES BELOW GRADE LEVEL.

E – LIGHTNING PROTECTION

- E1. IF EXISTING BUILDING HAS AN NFPA 780 AIR TERMINAL SYSTEM, EXISTING SYSTEM SHALL BE BONDED TO A GROUND BAR TO BOND THE EXISTING SYSTEM TO THE NEW SYSTEM. SHOULD THE EXISTING SYSTEM COME WITHIN 8 FEET OF ANTENNA STRUCTURES, EXISTING SYSTEM SHALL ALSO BE BONDED TO COAX GROUND BARS.
- E2. IF SITE IS IN A HIGH RISK AREA AND ANTENNAS DO NOT FALL WITHIN EXISTING CONE OF PROTECTION FOR BUILDING, AIR TERMINALS SHALL BE INSTALLED AT ANTENNAS. A SINGLE AIR TERMINAL MAY BE USED WHEN TWO ANTENNAS ARE MOUNTED ON SAME STRUCTURE AND IT HAS BEEN DETERMINED THAT BOTH ANTENNAS WILL FALL WITHIN LIGHTNING CONE OF PROTECTION FOR SINGLE AIR TERMINAL.

T – GROUNDING REQUIREMENTS

- T1. CONTRACTOR SHALL INSPECT AND TEST ANY NEW OR EXISTING T-MOBILE GROUNDING SYSTEM WITH A BIDDLE-MEGGER TESTER UTILIZING THE FALL OF POTENTIAL METHOD AND CONTACT CONSTRUCTION MANAGER IF RESISTANCE EXCEEDS 5 OHMS AND SHALL FIELD MODIFY GROUNDING SYSTEM AS NECESSARY TO ACHIEVE COMPLIANCE. TEST RESULTS AND CONCLUSIONS SHALL BE RECORDED FOR PROJECT CLOSE-OUT DOCUMENTATION.
- T2. COAX CABLE OUTER CONDUCTORS (SHIELDS) SHALL BE GROUNDED USING COAX GROUNDING KITS AT A MINIMUM OF TWO POINTS, INCLUDING AT ANTENNA AND AT MASTER GROUND BAR. THE COAXIAL CABLE SHALL NOT EXCEED 100 FEET BETWEEN GROUNDING KITS.
- T3. GROUNDING CONDUCTOR CONSISTING OF 2-#2 AWG TINNED SOLID BARE COPPER WIRE SHALL BE BONDED TO WAVEGUIDE ENTRY GROUND BAR USING CADWELD CONNECTIONS.
- T4. COAX CABLE ENTERING A BUILDING SHALL BE GROUNDED WITH COAX GROUNDING KITS TO AN INSULATED COAX GROUND BAR WHICH SHALL BE INSTALLED ON THE OUTSIDE FACE OF THE BUILDING, BELOW THE CABLE ENTRY PORTS.
- T5. WHEN COAX CABLES ENTER A BUILDING FROM A TOWER, THE COAX GROUND BAR AT THE BUILDING SHALL BE CONNECTED TO THE EXTERNAL GROUND RING USING 2-#2 AWG BARE TINNED SOLID COPPER ISOLATED IN PVC CONDUIT.
- T6. WHEN COAX CABLES ENTER A BUILDING FROM A ROOF TOP, THE COAX GROUND BAR AT THE BUILDING SHALL BE CONNECTED TO THE MASTER GROUND BAR NEAR THE BTS USING #2 AWG STRANDED INSULATED COPPER CONDUCTOR (SEE BUILDINGS NOTES ON THIS DRAWING FOR CONNECTION TO PRINCIPLE GROUND BAR AND BUILDING GROUND).



SITE INFORMATION:

A5D0006A

4848 ROSEWOOD

ROELAND PARK, KS 66205

#	DATE	DESCRIPTION:
0	08/02/23	LAYOUT FOR APPROVAL
1	08/07/23	2ND LAYOUT FOR APPROVAL
2	11/16/23	REVISED GENERATOR PAD AREA
3	11/22/23	REVISED PROPOSED FENCE
4	02/08/24	REVISED TREES LOCATION

SHEET NAME:

GROUNDING NOTES

SMW #:	SHEET NUMBER:
23-10304	E-2
DESIGNER:	JO
CHECKED BY:	JE
ENGINEER:	JCS

ELECTRICAL KEY NOTES:

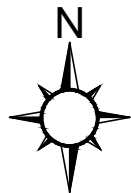
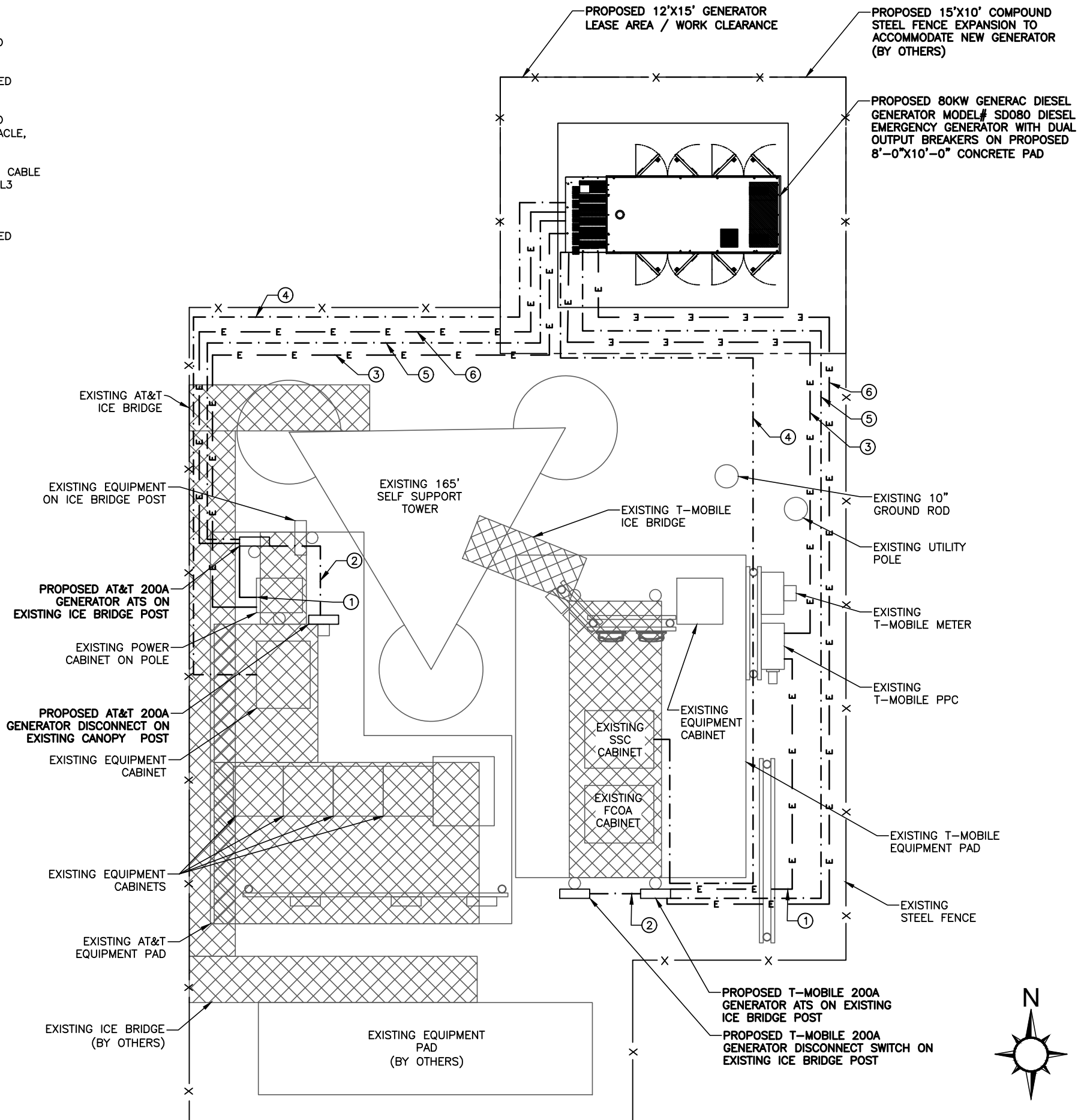
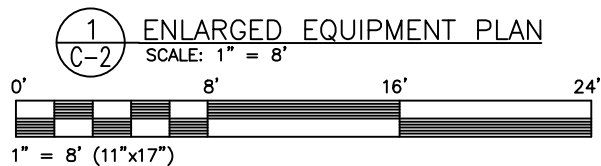
- PROPOSED (1) 2"Ø PVC SCH.40 CONDUIT FROM EXISTING PPC TO PROPOSED GENERATOR ATS. (±2' FOR TMO) (LENGTH TBD' FOR AT&T)
- PROPOSED (1) 2"Ø PVC SCH.40 CONDUIT FROM PROPOSED ATS TO PROPOSED GENERATOR DISCONNECT. (±5' FOR TMO) (±10' FOR AT&T)
- PROPOSED (1) 1"Ø PVC SCH.40 CONDUIT FROM EXISTING PPC TO PROPOSED GENERATOR FOR POWERING BLOCK HEATER, BATTERY CHARGER/GFCI RECEPTACLE, REMOTE START W/ DELAY. (±45' FOR TMO) (±35' FOR AT&T)
- PROPOSED (1) 1"Ø PVC SCH.40 CONDUIT FOR ALARM W/18 GAUGE TYPE TC CABLE FROM PROPOSED GENERATOR TO EXISTING ALARM BLOCK IN FSEE, FSEB, HPL3 CABINET (ALARM BLOCK MAY BE LOCATED IN A DIFFERENT CABINET) (±60' FOR TMO) (±50' FOR AT&T)
- PROPOSED (1) 1"Ø PVC SCH.40 CONDUIT FROM PROPOSED ATS TO PROPOSED GENERATOR FOR REMOTE START RELAY. (±50' FOR TMO) (±40' FOR AT&T)
- PROPOSED (1) 2"Ø PVC SCH.80 FROM PROPOSED ATS TO PROPOSED 200A DISCONNECT FOR POWER. (±55' FOR TMO) (±40' FOR AT&T)

NOTE FOR CONSTRUCTION:
NO CONDUITS CAN BE RUN ACROSS THE PLATFORM. CONDUITS MAY BE RUN UNDER THE PLATFORM IF NEEDED/APPLICABLE.

NOTE FOR CONSTRUCTION:
• ALL UNDERGROUND CONDUITS ARE TO BE PVC. CONDUITS ABOVE GROUND ARE TO BE RIGID. NO FLEX CONDUITS.
• GC TO USE SEAL TIGHT TO COVER ALL CONNECTIONS.
• NO MORE THAN 6' OF SEAL TIGHT PER CONDUIT RUN.

ELECTRICAL NOTES:

- FIND THE FSEE/FSEB/HPL3 ALARM BLOCK AND LAND LABELED LOPC AND GENERATOR ALARMS TO THAT LOCATION, AS IT MAY OR MAY NOT BE MOUNTED IN THE SITE SUPPORT CABINET
- NO CAT 5/6 TO BE USED FOR ALARM WIRE – ONLY USE 18 GAUGE, 600 VOLT, TYPE TC TRAY CABLE
- ENSURE ALL ALARM WIRES ARE LABELED ON BOTH ENDS
- POWER CONDUIT ABOVE GRADE MUST BE STEELIC SEAL TIGHT WITH METAL (BRIDGEPORT STYLE) CONNECTORS (UL APPROVED) OR RIGID GALVANIZED
- MINIMIZE ANY ACROSS THE PAD CONDUIT RUNS IF POSSIBLE. ANY CONDUIT THAT DOES CROSS THE PAD WILL BE MARKED WITH HIGH VIS TAPE/PAINT TO SHOW TRIP HAZARD.
- ALL CONDUITS ABOVE GROUND TO BE RMC GALVANIZED CONDUIT
- THE CONDUIT ROUTING ARE DIAGRAMMATICALLY SHOWN ON THE PLANS AND ARE ONLY AN APPROXIMATION. THE EXACT LOCATION AND ROUTING SHALL BE FIELD DETERMINED.
- ALL DISCONNECTS AND CONTROLLING DEVICES SHALL BE PROVIDED WITH ENGRAVED LAMICOID NAMEPLATES INDICATING THE CIRCUIT'S ORIGINATION AND ALL EQUIPMENT TERMINATIONS.
- CONTRACTOR SHALL RELOCATE UTILITY POWER TO PROPOSED AUTOMATIC TRANSFER SWITCH (ATS)

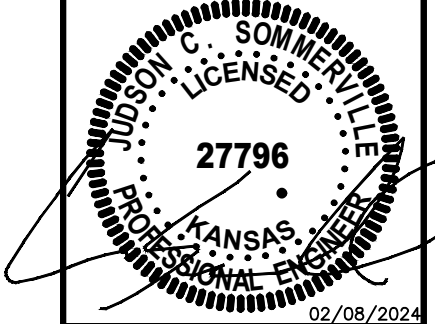


T-Mobile

Branch
COMMUNICATIONS
1516 SOUTH BOSTON SUITE 215
TULSA, OK 74119

SMW
ENGINEERING GROUP, INC.
TOGETHER PLANNING A BETTER TOMORROW

CA#: KS E-1634



SITE INFORMATION:

A5D0006A

4848 ROSEWOOD
ROELAND PARK, KS 66205

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SHEET NAME:

PROPOSED ELECTRICAL
PLAN

SMW #:
23-10304
DESIGNER: JO
CHECKED BY: JE
ENGINEER: JCS

SHEET NUMBER:
E-3

GROUNDING KEY NOTES:

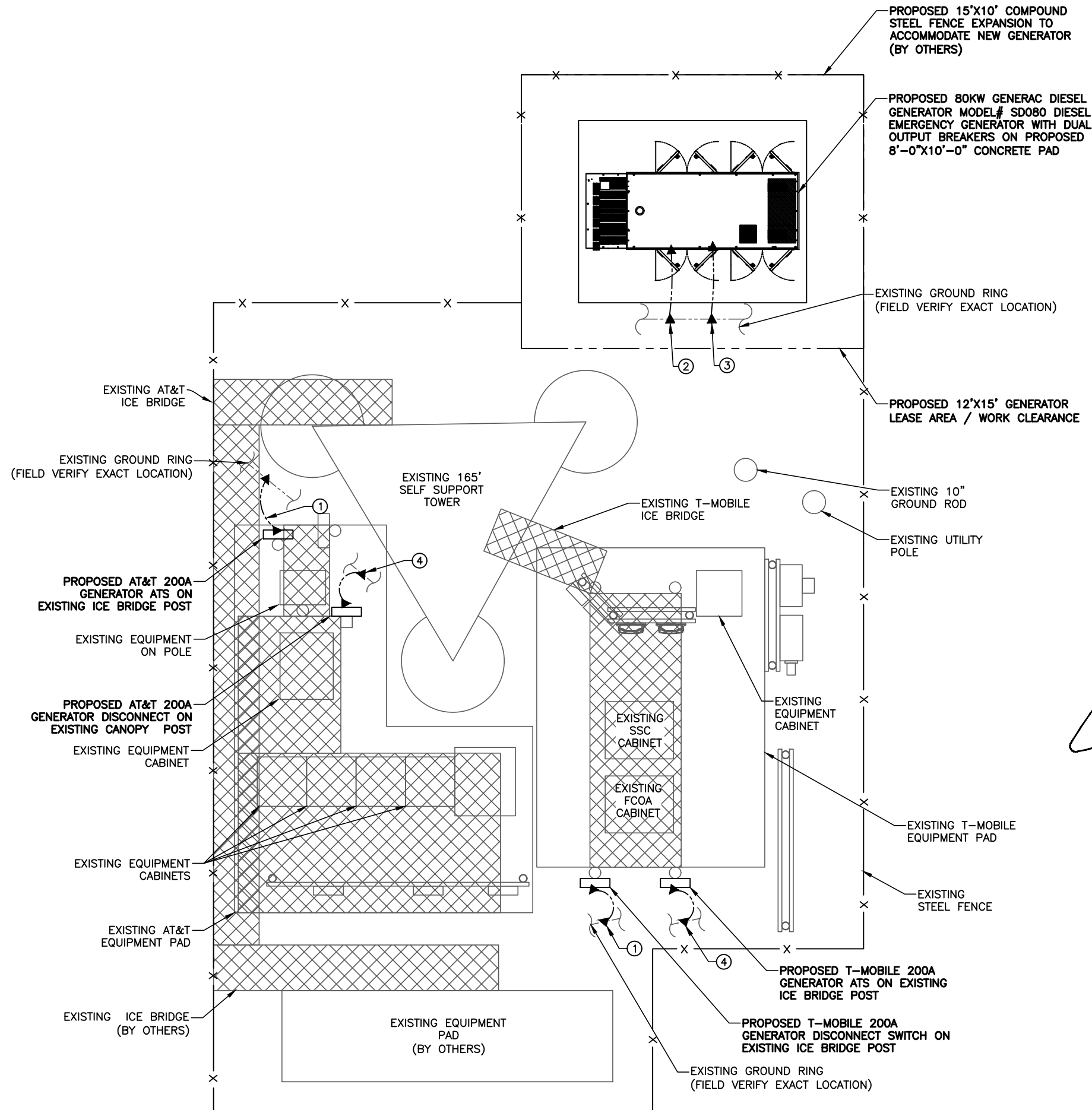
- ① #2 AWG ATS CASE BOND TO EXISTING T-MOBILE COPPER GROUND RING USING MECHANICAL TWO HOLE LUG.
- ② #2 AWG GENERATOR BELLY TANK BOND TO EXISTING T-MOBILE COPPER GROUND RING USING MECHANICAL TWO HOLE LUG.
- ③ #2 AWG GENERATOR BASE FRAME BOND TO EXISTING T-MOBILE COPPER GROUND RING USING MECHANICAL TWO HOLE LUG.
- ④ #2 AWG DISCONNECT BOND TO EXISTING T-MOBILE COPPER GROUND RING USING MECHANICAL TWO HOLE LUG.

KEY

▼ BOND

SITE LAYOUT NOTE:
EXISTING SITE AND EQUIPMENT LAYOUT OBTAINED FROM SITE WALK BY SMW ENGINEERING, DATED 05/27/2023.

FLOOD MAP NOTE:
SUBJECT PROPERTY IS LOCATED IN PANEL #20133C0075D, DATED 01/20/2010, AND IS IN BASE FLOOD ZONE "X" WHICH IS NOT A SPECIAL FLOOD ZONE AREA PER FEMA.

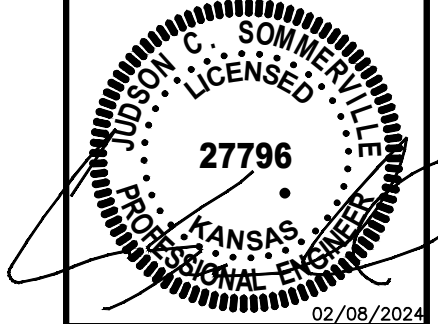


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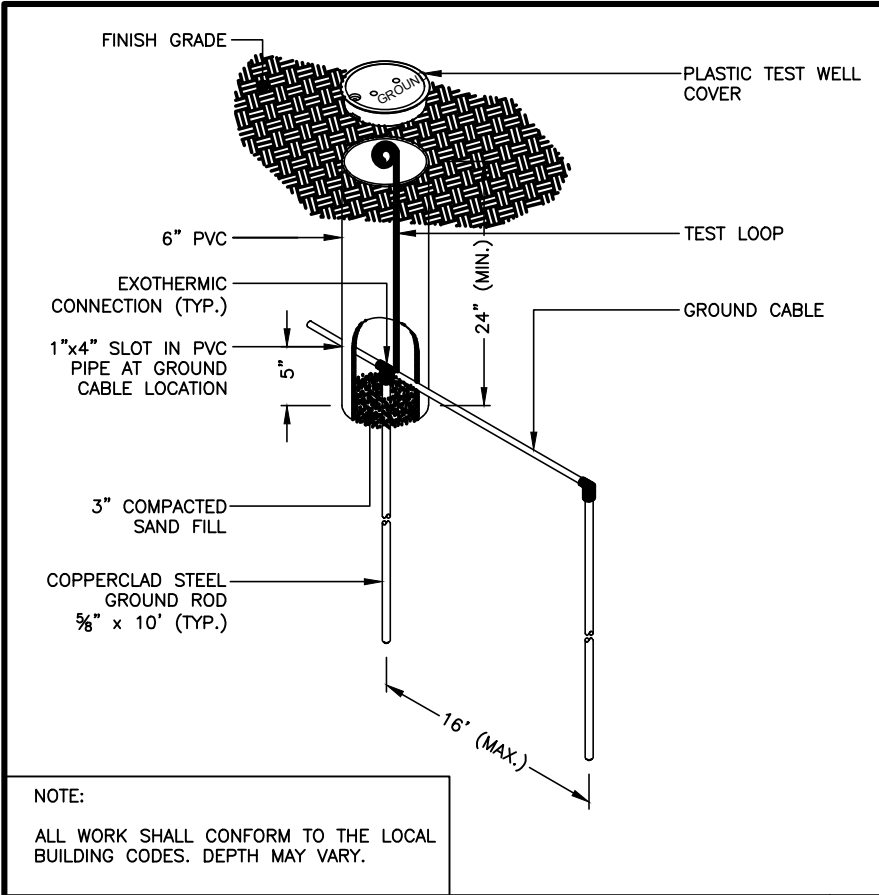
GROUNDING PLAN &
DETAILS

SMW #:
23-10304

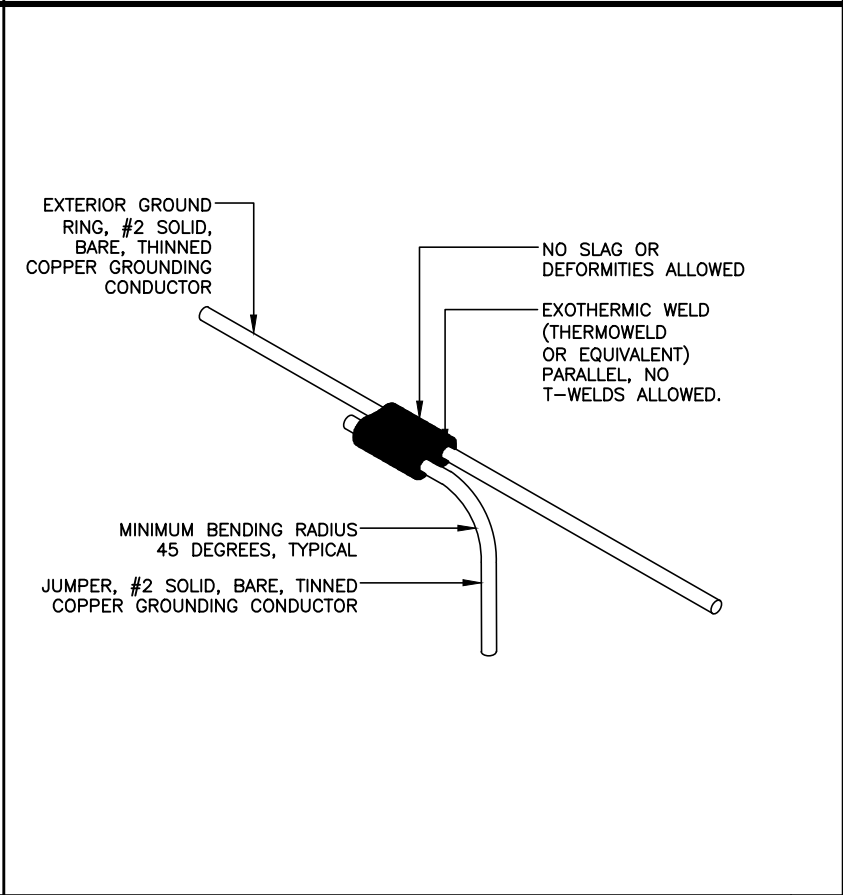
DESIGNER: JO
CHECKED BY: JE
ENGINEER: JCS

SHEET NUMBER:

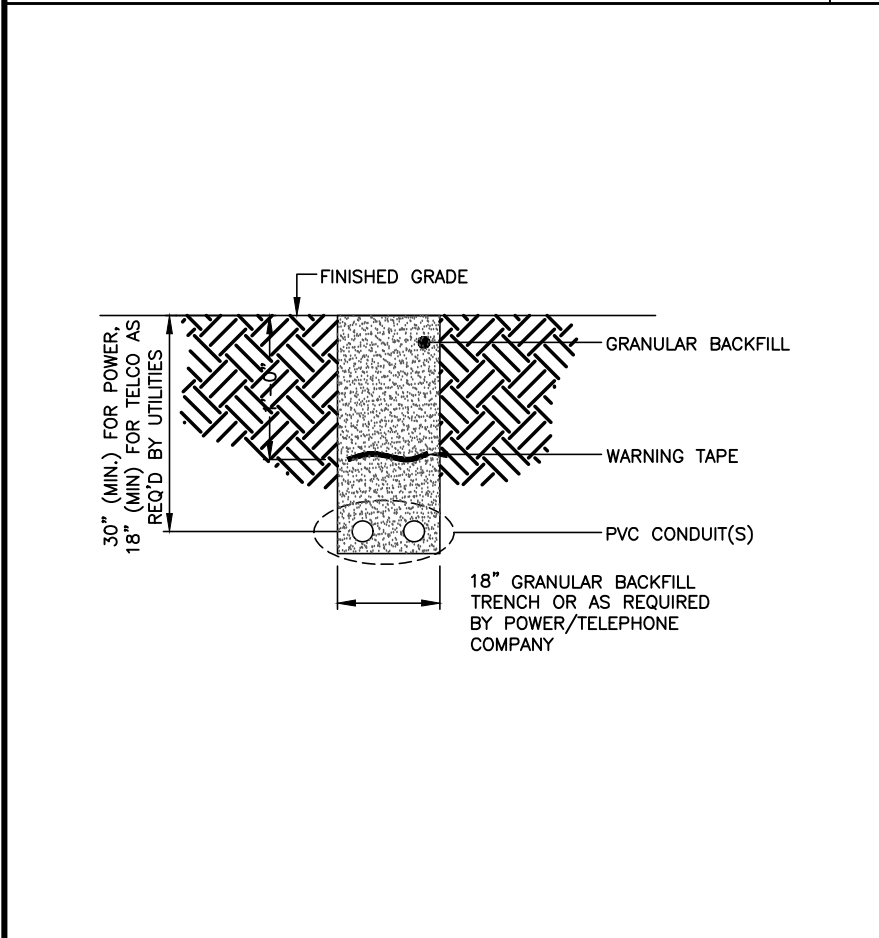
E-5



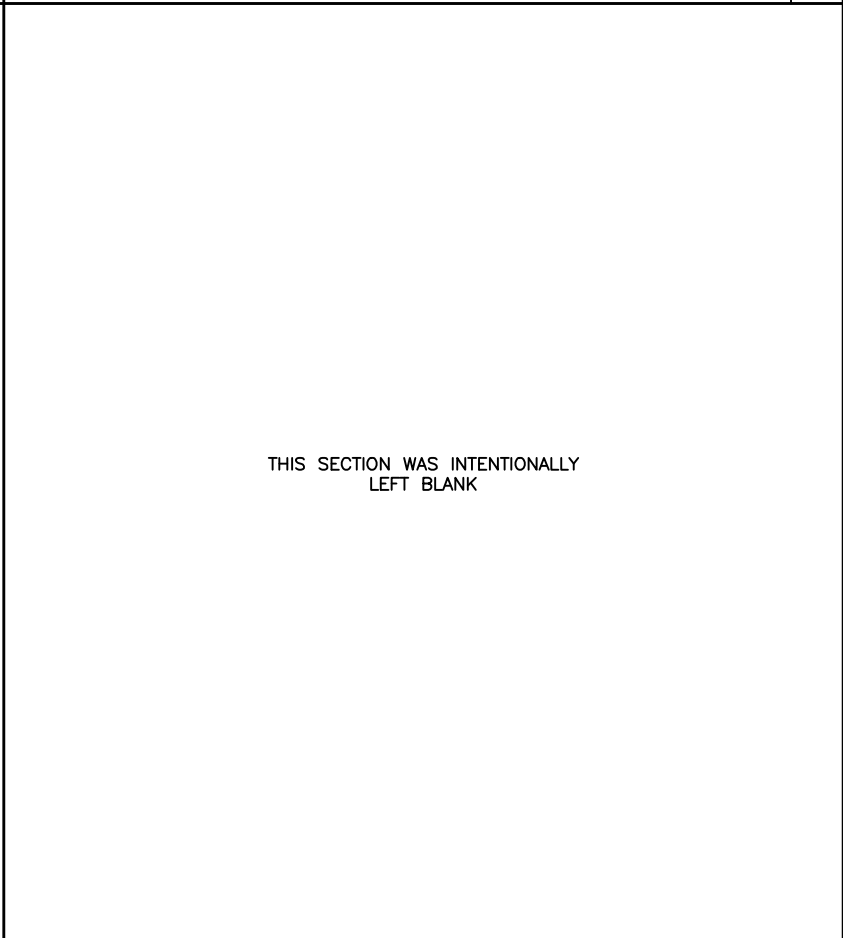
GROUND ROD INSPECTION WELL DETAIL NOT TO SCALE 1



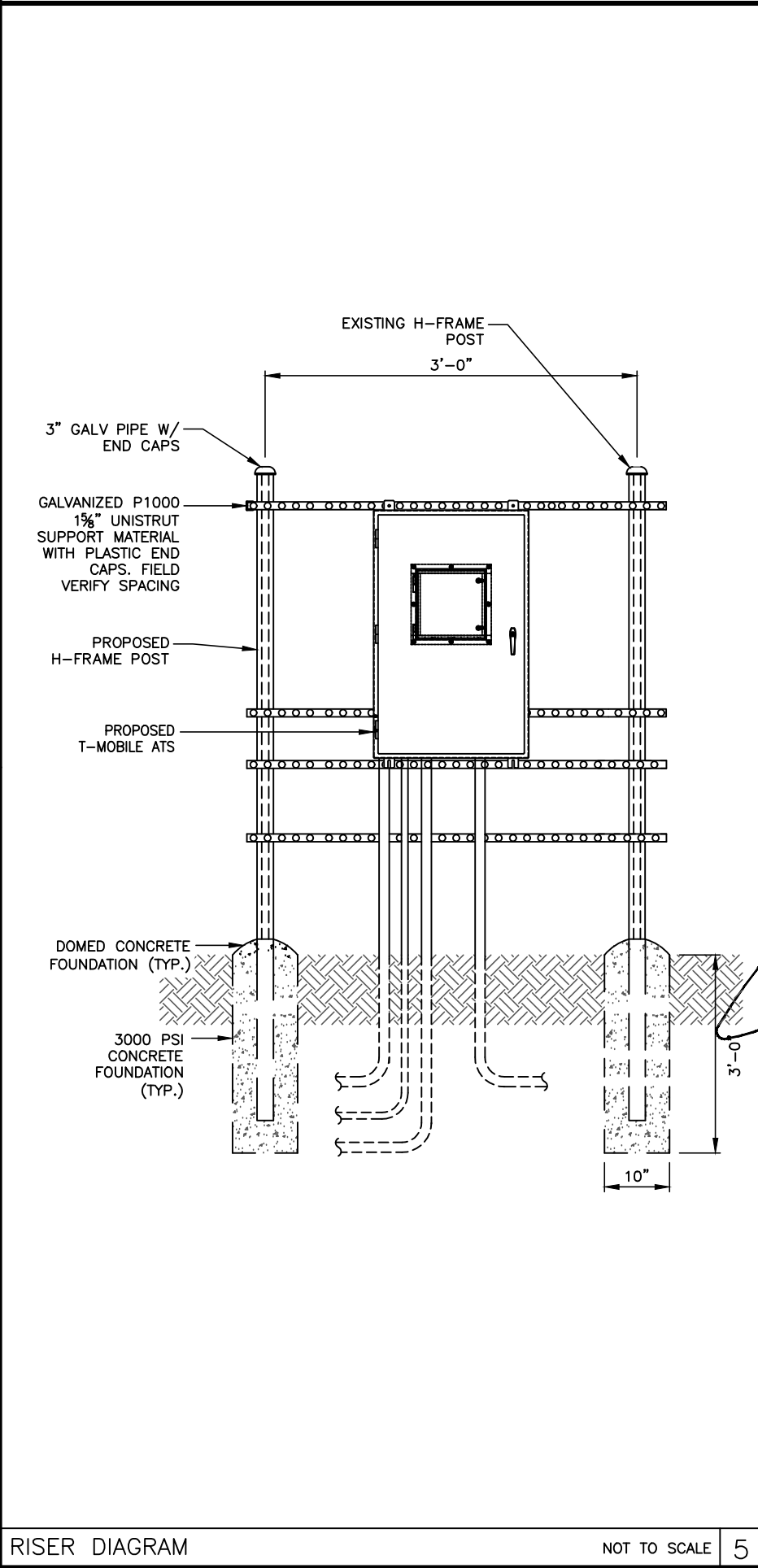
EXOTHERMIC WELD DETAIL NOT TO SCALE 2



UTILITY TRENCH DETAIL NOT TO SCALE 3



FENCE POST BONDING DETAIL NOT TO SCALE 4



RISER DIAGRAM NOT TO SCALE 5

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DESIGNER:
JO

CHECKED BY:
JE

ENGINEER:
JCS

SHEET NUMBER:
E-6

