1248

AK SPECIALTY VEHICLES

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GENERAL ELECTRIC MEDICAL SYSTEMS

SIGNA HORIZON 1.0 & 1.5 TESLA MRI SYSTEMS

SITE PLANNING GUIDE

MODEL NUMBER: MLT1050-0-480-GEM

DOCUMENT NUMBER: 10133-D02 REV:08

DATE PREPARED: APRIL 6, 1998

INTRODUCTION

THE PURPOSE OF THIS TECHNICAL DESCRIPTION IS TO PROVIDE THE GENERAL SITE PLANNING INFORMATION FOR THE GENERAL ELECTRIC SIGNA HORIZON 1.0 & 1.5 TESLA MRI SYSTEM VAN. FOR SPECIFIC INFORMATION NOT CONTAINED WITHIN THIS DESCRIPTION CONTACT THE AK. SPECIALTY VEHICLES SALES OR ENGINEERING DEPARTMENT.

NOTE

A LOCAL LICENSED ARCHITECT OR ENGINEER SHOULD DETERMINE ACTUAL SITE DESIGN. SITE DESIGN IS THE RESPONSIBILTY OF THE PURCHASER OR END USERS.

IN ACCORDANCE WITH AK SPECIALTY VEHICLES, PROGRAM OF PRODUCT IMPROVEMENT, AK SPECIALTY VEHICLES, RESERVES THE RIGHTS TO MAKE CHANGES IN DESIGN, MATERIAL, AND EQUIPMENT.

DOCUMENT RELEASE DATE & REVISIONS

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MAY 15, 2000-CORRECTED CONTENT, REVISION 06
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JULY 24, 2001-CORRECTED CONTENT, REVISION 08

MOBILE MODEL NUMBER

MTL1050-0-480-GEM

MOBILE DIMENSIONS

*THE EXTERNAL MOBILE DIMENSIONS MEETS FEDERAL SIZE LIMITS FOR THE FIFTY STATES AND CANADA **(EXCLUDING PROJECTIONS FOR CLEARING LIGHTS, DOOR HANDLES, RADIO ANTENNAS, ETC.)*

OVERALL LENGTH:	*51' - 3" (48'-0" VAN PLUS 39" FOR GENERATOR AND HVAC.)***
OVERALL WIDTH:	*8' - 6" (102")***

OVERALL HEIGHT: *13' - 6" (162")***

MOBILE LOCATION

THE MOBILE GENERAL ELECTRIC SIGNA HORIZON 1.0 & 1.5 TESLA MRI SYSTEM IS HOUSED IN A 8'-6" WIDE BY 13' 6" HIGH BY 50'-10" LONG MOBILE WHICH REQUIRES SUFFICIENT ROOM TO BE MANEUVERED AND POSITIONED FOR SET-UP. THE MOBILE HAS MANY STORAGE COMPARTMENTS AND SERVICE DOORS WHICH REQUIRE ACCESS DURING THE SET UP, OPERATION AND TAKE DOWN OF THE MOBILE UNIT. THE PATIENT ELEVATOR SYSTEM AND CLIP-ON STAIR ASSEMBLY WILL ALSO REQUIRE ADDITIONAL SPACE ON THE CURBSIDE OF UNIT. THE MOBILE UNIT MAY NOT BE LOCATED INSIDE AN ENCLOSED AREA .

RECOMMENDED SUPPORT PAD

PROPER AND SAFE OPERATION OF THE GENERAL ELECTRIC SIGNA HORIZON 1.5 TESLA MRI SYSTEM CAN ONLY BE ASSURED WHEN THE MOBILE IS LOCATED ON A LEVEL FIRM PAD. FIXED STABILIZING STANDS ARE PROVIDED TO ASSIST IN THE LEVELING AND TO STABILIZE THE UNIT ONCE SET IN PLACE. THE RECOMMENDED MOBILE PAD REQUIRES A CONCRETE PAD 12' WIDE BY 52' LONG AS A MINIMUM.

MINIMUM SUPPORT PAD

THE MINIMUM SUPPORT PAD SHOULD INCLUDE TWO SEPARATE PADS. THE FIRST PAD AT THE REAR OF UNIT MUST COVER BOTH REAR AXLES AND FIXED STANDS. THE SECOND PAD AT THE FRONT OF TRAILER TO SET LANDING LEGS ON.

VIBRATION

VIBRATION CAN DRASTICALLY IMPACT SYSTEM PREFORMANCE THE SUPPORT PAD SHOULD BE DESIGNED TO ELIMINATE VIBRIBATION.

STEADY STATE VIBRATION (PER G.E. SPECIFICATION)

*THE MAXIMUM STEADY STATE VIBRATION TRANSMITTED THROUGH THE PAD SHOULD NOT EXCEES THE FOLLOWING MAXIMUM SINGLE FREQUENCY COMPMONENTS **ABOVE AMBIENT BASELINE**.*

- ***10^{-4} m/s² RMS 0-15Hz***
- ***5 X10^{-4} m/s² RMS 15-20Hz***
- ***10^{-4} m/s² RMS 20-35Hz***

- ***2 X 10^{-4} m/s^2 RMS 35-45Hz***

TRANSIENT VIBRATION (PER G.E. SPECIFICATION)

THE BEHAVIORAL CHARACTERISTICS MUST BE SUCH THAT ANY MEASURABLE TRANSIENT DESTURBANCE MUST ALSO BE MINIMIZED TO LESS THAN ***0.005 m/s^2, ZERO TO PEAK.***

SUPPORT PAD THICKNESS

PAD THICKNESS IS TO BE DETERMINED AT THE LOCAL LEVEL BASED ON SOIL CONDITIONS.

SUPPORT PAD LEVELNESS

MUST NOT EXCEED .25" IN 10' 0".

SUPPORT PAD ACCESS

THE OVERALL LENGTH OF THE MOBILE GENERAL ELECTRIC SIGNA HORIZON 1.0 & 1.5 TESLA MRI SYSTEM IS 50'-10" AND WEIGHT IS APPROXIMATELY 60,000 LBS. THIS SHOULD BE TAKEN INTO CONSIDERATION WHEN PLANNING DROP OFF APPROACH AND PICK-UP.

MAGNETIC FIELD

DRIVERS SIDE - 3 GAUSS, 6" OUTSIDE WALL.

DRIVERS SIDE - 1 GAUSS, 36" OUTSIDE WALL

DRIVERS SIDE - .5 GAUSS, 8' OUTSIDE WALL

PASSENGERS SIDE - 3 GAUSS, 6" OUTSIDE WALL.

PASSENGERS SIDE - 1 GAUSS, 36" OUTSIDE WALL

PASSENGERS SIDE - .5 GAUSS, 8' OUTSIDE WALL

REAR WALL - 5 GAUSS, 6" OUTSIDE WALL.

ROOF - <1 GAUSS, 36" ABOVE ROOF.

HOMOGENEITY REQUIREMENTS

STATIONARY OR MOVING FERREOUS OBJECTS WITHIN THE STATIC MAGNET FIELD OF THE MAGNET HAVE A DEFINITE IMPACT ON THE HOMOGENEITY OR UNIFORMITY OF THE FIELD. FOR EXAMPLE TRUCK TRAFFIC, HELICOPTER LANDING PADS, AMBULANCE ENTRANCES, ECT. SPECIAL EFFORT SHOULD BE TAKEN TO AVOID THIS ISSUE. THIS AREA EXTEND OUTSIDE THA VAN WALL 9 FEET.

ELECTRICAL POWER REQUIREMENTS

480 VOLT AC, 3 PHASE WYE WITH NEUTRAL AND GROUND
A 40' POWER CORD IS PROVIDED WITH EACH TRAILER
REFER TO THE FOLLOWING PAGE FOR GROUNDING INFORMATION

FREQUENCY

60 HZ ± 0.5 HZ

VOLTAGE REGULATION

± 8% FROM NOMINAL

POWER REGULATION

± 2% MAXIMUM, NO-LOAD TO FULL-LOAD AT 125 KVA MAXIMUM POWER DEMANDS.

PHASEBALANCE

± 2% MAXIMUM FROM PHASE TO PHASE LINE VOLTAGE.

MALE RECEPTACLE (LOCATED ON MOBILE UNIT)

RUSSELLSTOLL 200 AMP MALE PLUG #DS2504MP. SEE RUSSELLSTOLL RECEPTICALE CHART.

FEMALE RECEPTACLE (LOCATED AT MEDICAL FACILITY)

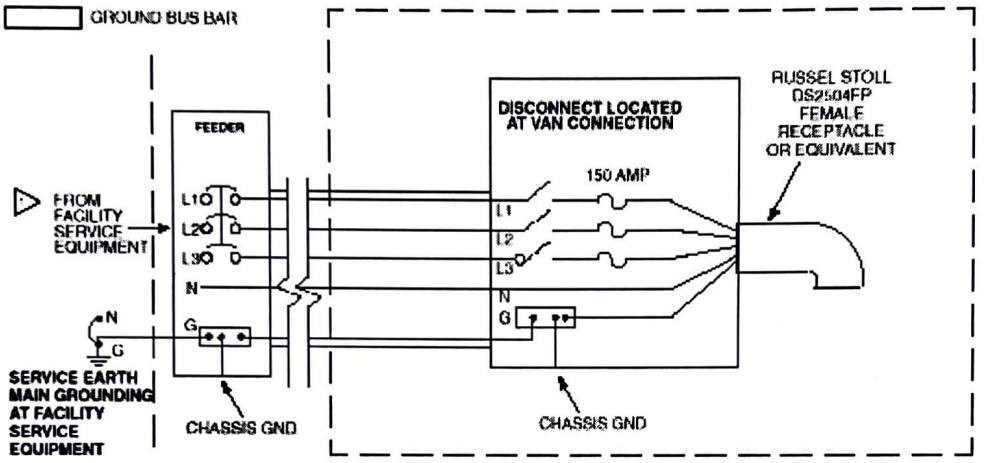
RUSSELLSTOLL 200 AMP FEMALE RECEPTACLE #DF2504FRAB. SEE RUSSELLSTOLL RECEPTICALE FACILITY DIGRAM. AK SPECIALTY VEHICLES, DO NOT PROVIDE

MOBILE GROUNDING REQUIREMENTS

NOTE:

- **ALL WORK TO BE DONE IN ACCORDANCE WITH NATIONAL AND LOCAL ELECTRICAL CODES. INFORMATION SHOWN HERE IS ONLY A RECOMMENDATION, MUST BE VERIFIED FOR SITE NATIONAL AND LOCAL CODES.**
- GROUND WIRES INSIDE ENCLOSURES TO BE TAPED GREEN FOR ENTIRE VISUAL LENGTH FOR IDENTIFICATION.

▷ MAIN BONDING JUMPER BETWEEN GROUNDED (NEUTRAL) CONDUCTOR AND EQUIPMENT GROUNDING CONDUCTOR TO BE PROVIDED IN FACILITY SERVICE EQUIPMENT AND DOWNSTREAM AT SEPARATELY DERIVED SYSTEM TRANSFORMER SECONDARY AS SHOWN.



GROUNDING

The ground for our system shall originate at the system power source, i.e., transformer or first access point of power into a facility, and be continuous to our system power disconnect in the room. This ground can be spliced with "High Compression Fittings" and should be terminated at each distribution panel it passes through. When it is broken for a connection to a panel, it shall be connected into an approved grounding block with the incoming and outgoing ground in this same grounding block, which is then connected to the steel panel never using the steel panel never using the steel or other material of the panel as the block.

The connection at the power source shall be at the grounding point of the "Neutral – Ground" if a "Wye" transformer is used. or typical grounding points of a separately derived system. In the case of an external facility, it shall be bonded to the facility ground point at the service entrance.

GROUND WIRE

The ground wire shall be copper wire with a minimum of AWG 1/0 or the same size as the power feeders whichever is larger. This means that if there is a primary feeder to a distribution panel of 500 MCM with a secondary feeder to our system of AWG 1/0 wire, the ground to the distribution panel shall be 500 MCM with an AWG 1/0 to our system. The ground wire impedance from our system disconnect, including the ground rod, shall not have an impedance greater than 2 ohms to earth as measured by one of the applicable techniques described in Section 4 of ANSI/IEEE Standard 142 – 1982.

Harry E Rauworth
Debra C Balis
April 22, 1999

WATER SUPPLY

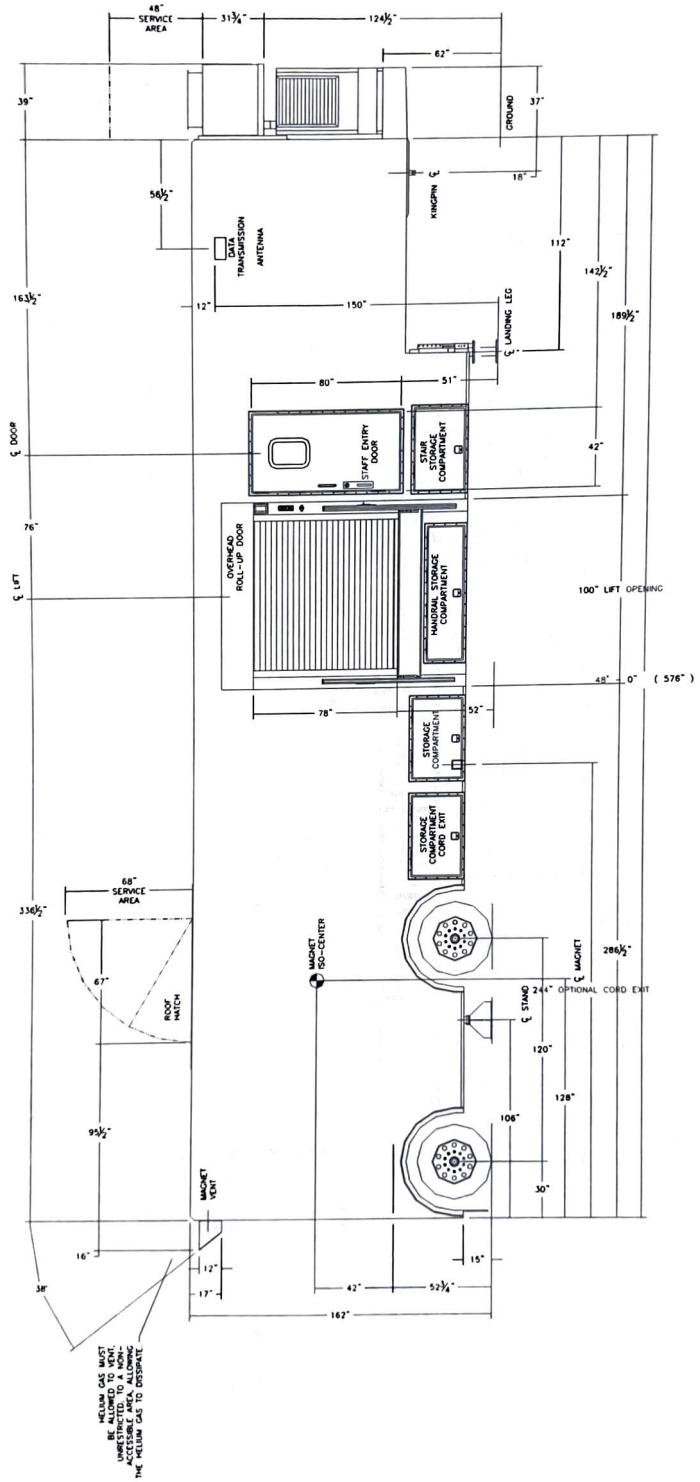
ONE 3/4" MALE GARDEN HOSE TYPE CONNECTOR FOR HUMIDIFIER WATER SUPPLY HOSE LOCATED ON DRIVERSIDE FRONT NEAR FIFTHWHEEL. (AN

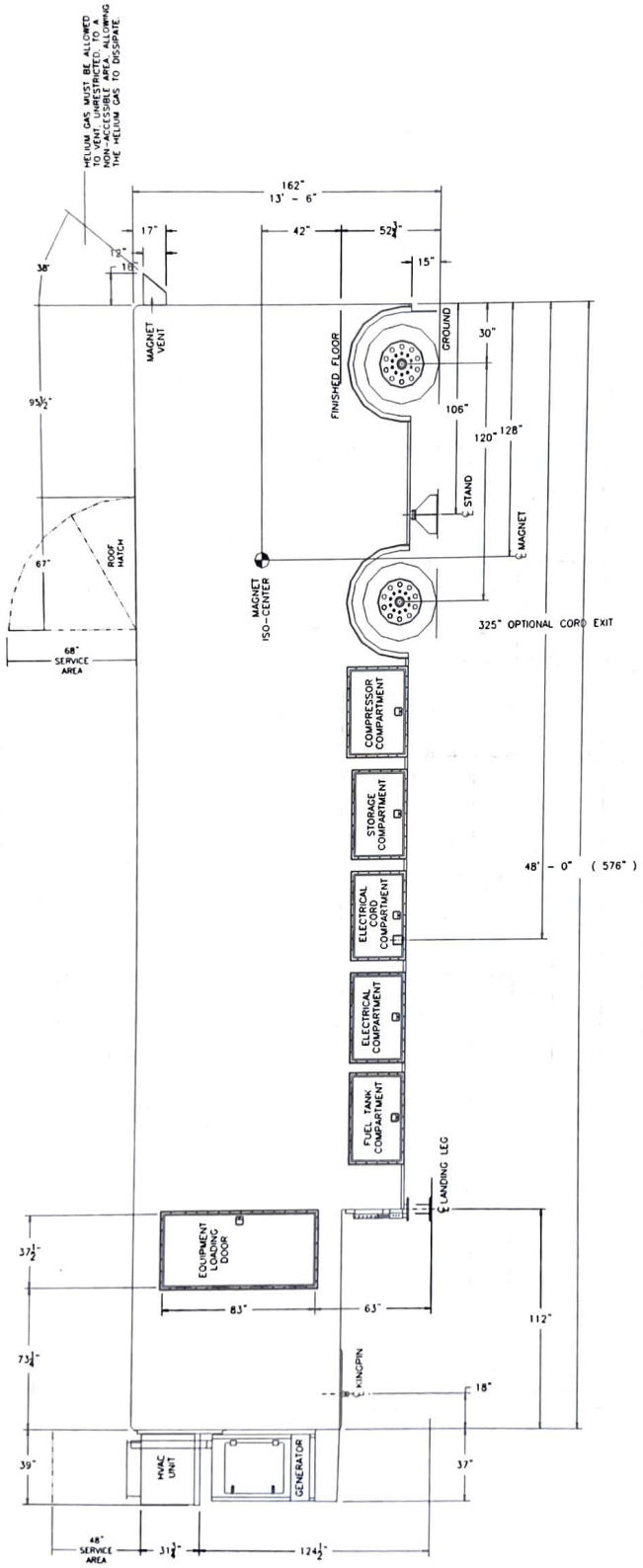
OPTIONAL INLINE WATER HEATER PROVIDES INSTANTANEOUS HOT WATER INSIDE MOBILE FOR UNITS WITH OPTIONAL SINK.)

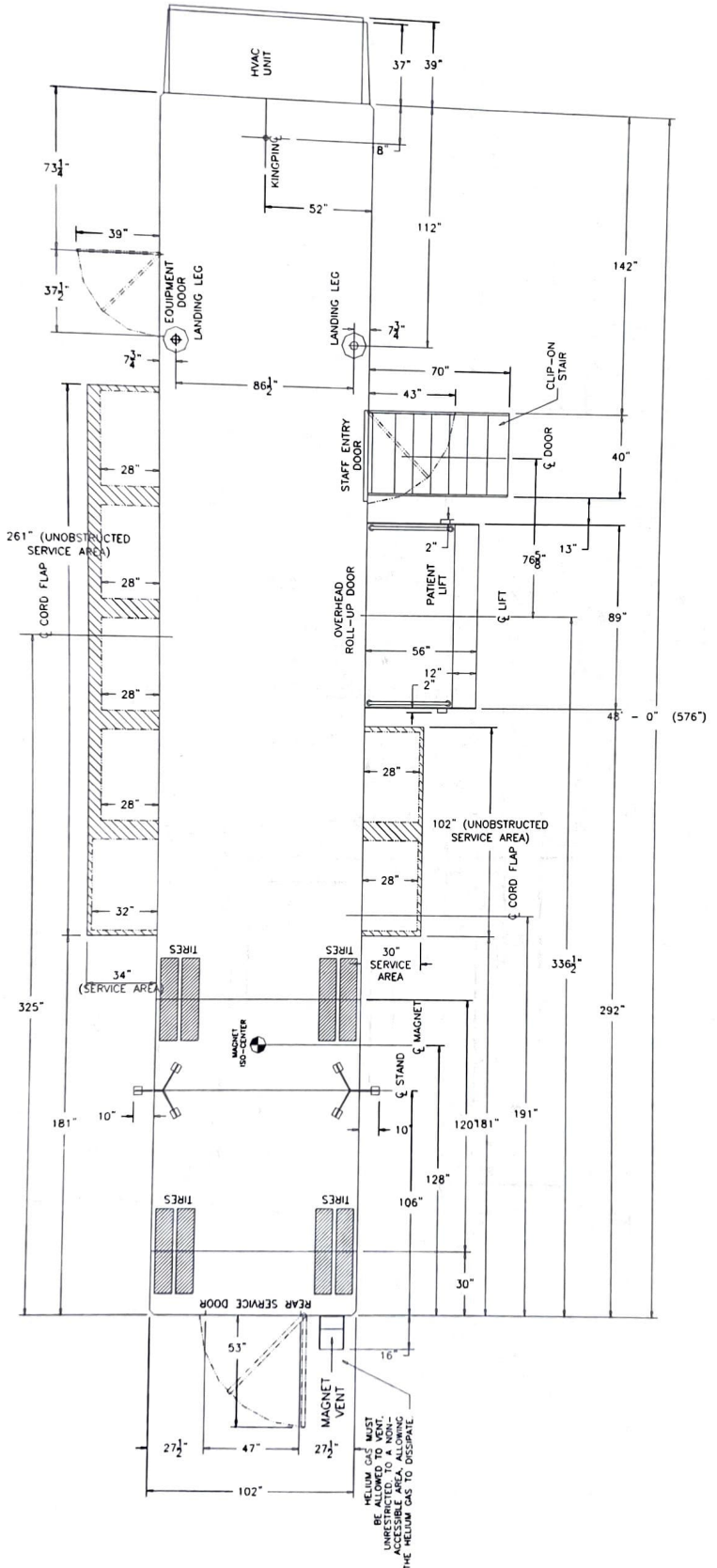
PHONE LINES

THERE ARE THREE 40 FT. HUBBELL MARINE TYPE TELEPHONE LINES ON BOARD THE MOBILE UNIT. THE PHONES CONNECTIONS ARE LOCATED IN THE UNDERBODY STORAGE COMPARTMENTS ON THE DRIVERS SIDE. THREE PHONE CORDS ARE PROVIDED TO TIE INTO THE FACILITY. THE FACILITY RECEIVING SERVICE IS RESPONSIBLE FOR PROVIDING HUBBELL NO. PH6597.

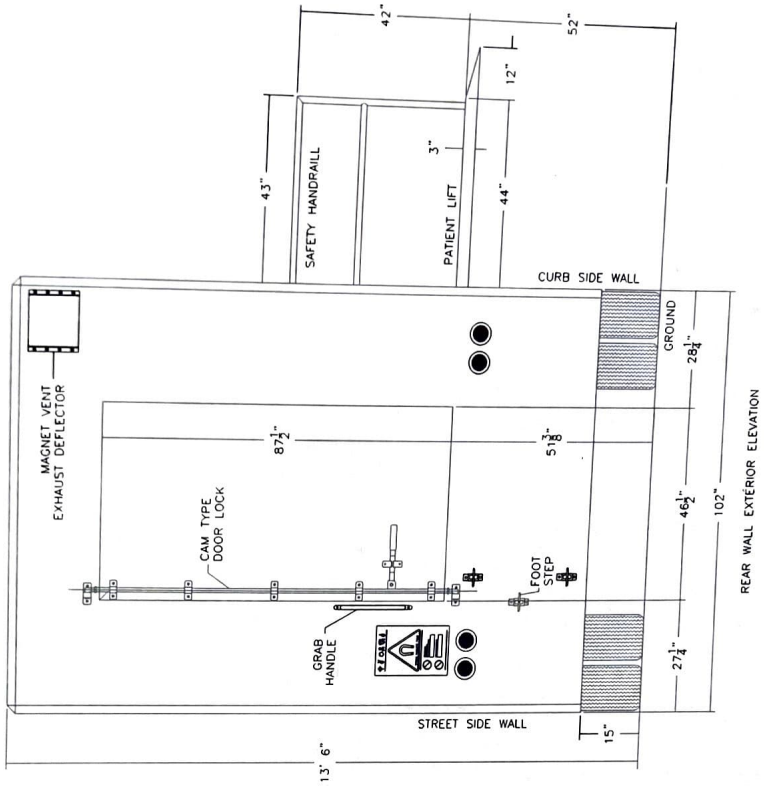
GENERAL ELECTRIC MEDICAL SYSTEMS SIGNA HORIZON 1.0 & 1.5T MRI SYSTEMS

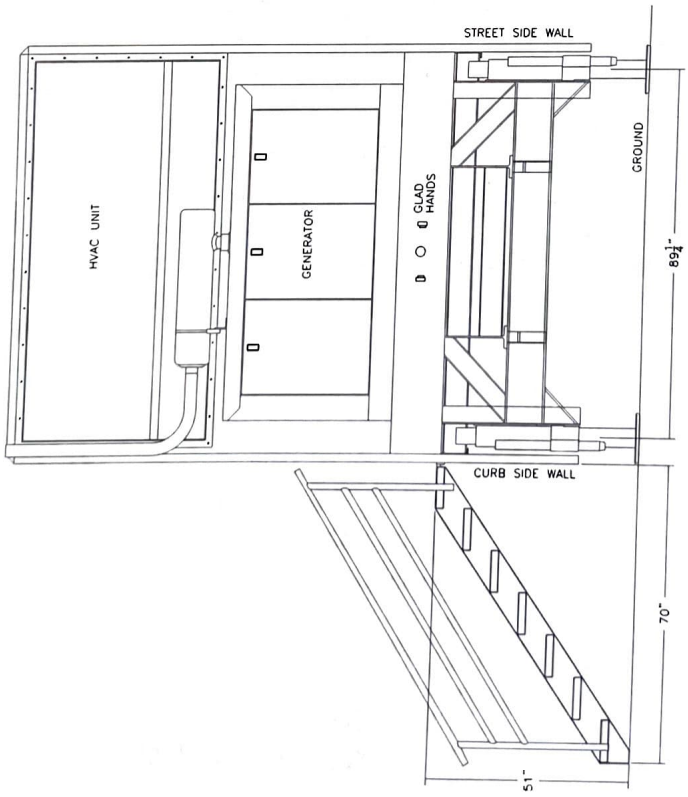


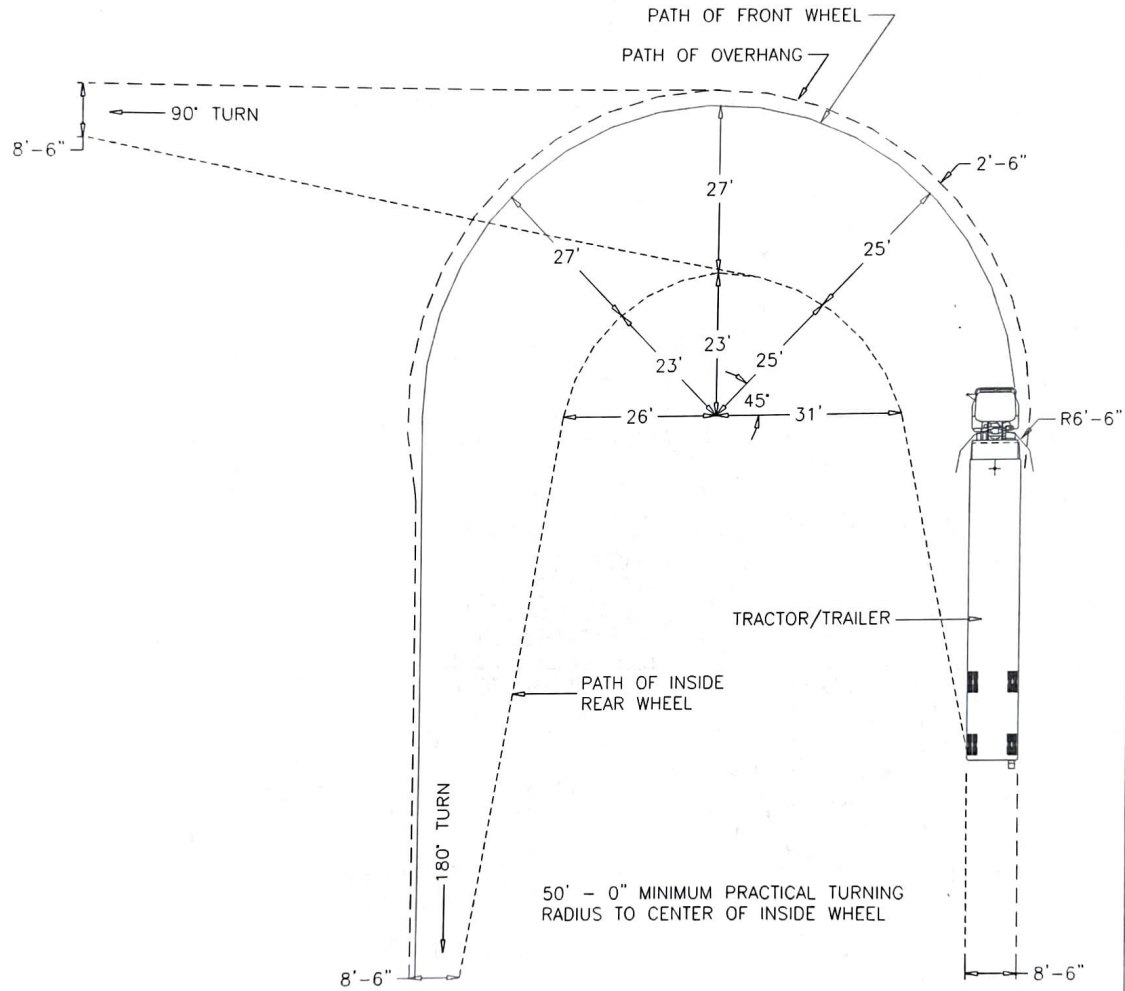

HELIUM GAS MUST BE ALLOWED TO VENT UNRESTRICTED TO A NON-ACCESSIBLE AREA ALLOWING THE HELIUM GAS TO DISSIPATE
162"
13' - 6"
17"
42"
52½"
15"
38"
MAGNET VENT
FINISHED FLOOR
GROUND
30"
106"
120"-128"
STAND
MAGNET
95½"
67"
ROOF HATCH
MAGNET ISO-CENTER
325" OPTIONAL CORD EXIT
68" SERVICE AREA
COMPRESSOR COMPARTMENT
STORAGE COMPARTMENT
ELECTRICAL CORD COMPARTMENT
ELECTRICAL COMPARTMENT
FUEL TANK COMPARTMENT
48' - 0" (576")
LANDING LEG
EQUIPMENT LOADING DOOR
37½"
83"
63"
112"
73¼"
KINGPIN
18"
39"
HVAC UNIT
GENERATOR
37"
48" SERVICE AREA
31¾"
124½"


HVAC UNIT
37"
39"
8"
KINGPIN
52"
112"
142"
73¼"
39"
37½"
EQUIPMENT DOOR
LANDING LEG
LANDING LEG
7¼"
7¼"
70"
43"
CLIP-ON STAIR
86½"
STAFF ENTRY DOOR
DOOR
40"
28"
261" (UNOBSTRUCTED SERVICE AREA)
2"
13"
76⅝"
CORD FLAP
28"
OVERHEAD ROLL-UP DOOR
PATIENT LIFT
LIFT
89"
56"
12"
2"
28"
48' - 0" (576")
28"
28"
102" (UNOBSTRUCTED SERVICE AREA)
28"
CORD FLAP
32"
TIRES
TIRES
30" SERVICE AREA
34" (SERVICE AREA)
336½"
325"
292"
MAGNET ISO-CENTER
MAGNET
STAND
181"
10"
10"
120
181"
191"
128"
106"
TIRES
TIRES
30"
REAR SERVICE DOOR
53"
16"
MAGNET VENT
27½"
47"
27½"
102"
HELIUM GAS MUST BE ALLOWED TO VENT, UNRESTRICTED, TO A NON-ACCESSIBLE AREA ALLOWING THE HELIUM GAS TO DISSIPATE

GENERAL ELECTRIC MEDICAL SYSTEMS SIGNA HORIZON 1.0 & 1.5T MRI SYSTEMS







NOTE:
HOSPITAL IS RESPONSIBLE TO ENSURE THE ACCESS ROUTE IS CLEAR OF OBSTRUCTIONS WHEN TRAILER IS SCHEDULE TO ARRIVE OR DEPART.

NOTE:
THIS DRAWING IS A TYPICAL CONFIGURATION THE ACTUAL TURNING RADIUS WILL DEPEND ON TYPE OF TRACTOR, TRACTOR WHEEL BASE, FIFTH WHEEL PLACEMENT, ETC.

SCALE
0" 5' 10' 20' 30' 40' 50'

TYPICAL TURNING RADIUS FOR TRACTOR/TRAILER COMBINATION

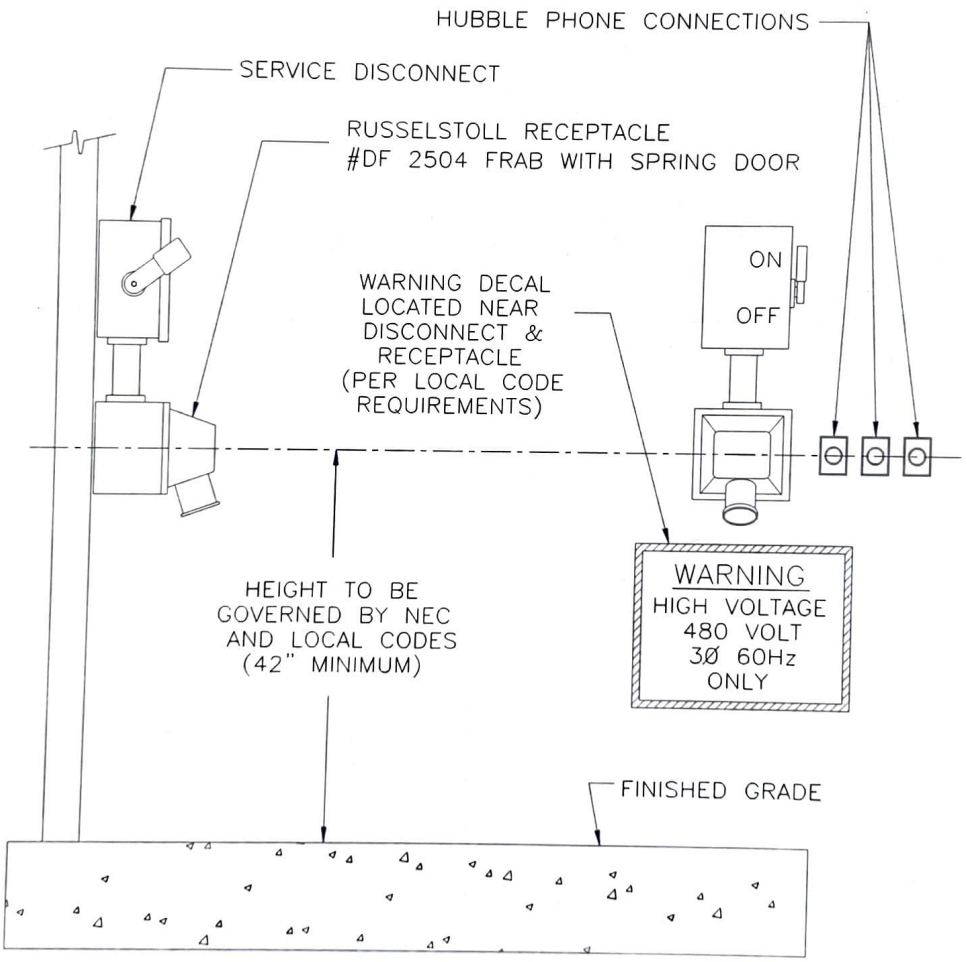
DRAWN BY: T.N.T.

DRAWING NUMBER: 10133-A25

REV: 00

PLUG / DISCONNECT DIAGRAM

480 VOLT AC – 3 PHASE WALL MOUNTED RECEPTACLE (SUPPLIED BY CUSTOMER)



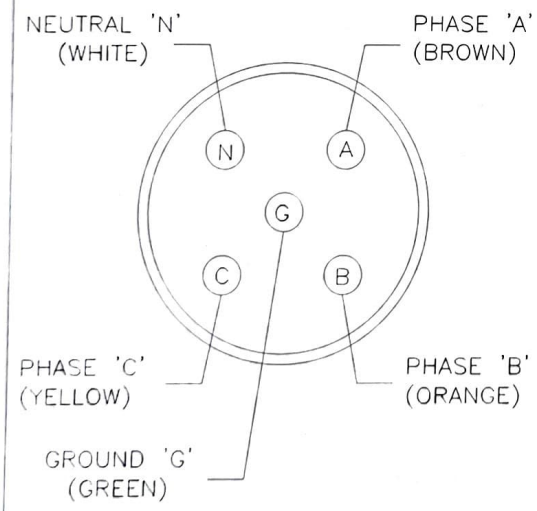
RECEPTACLE AND INSTALLATION PROVIDED BY CUSTOMER

DRAWN BY:	
T.N.T.	
DRAWING NUMBER: 10109-E05	REV 00

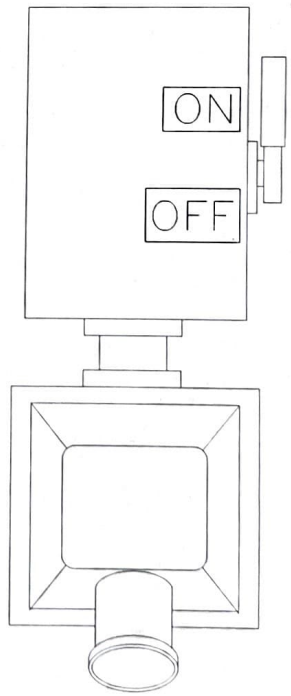
RUSSELLSTOLL RECEPTACLE CHART

AMP / WIRE	DESCRIPTION		RECEPTACLE
	WIRES	POLES	PART NUMBER
MAXIMUM WIRE SIZE FOR LUG # 1/0	5	5	480 VOLT (200 AMP) 5 WIRE RUSSELLSTOLL RECEPTACLE DF 2504 FRAB THIS RECEPTACLE MUST BE WATERPROOF
480 VOLT AC DEDICATED POWER LINE FROM MAIN TRANSFORMER STATION	3Ø	WYE CONNECTION 150 AMP TOTAL 3Ø NEUTRAL AND GROUND	

VIEWED FROM BACK SIDE OF RECEPTACLE



MAIN DISCONNECT
3/N/PE AC 480 VOLT
150 AMP FUSED DISCONNECT



RECEPTACLE AND INSTALLATION PROVIDED BY CUSTOMER

DRAWN BY:	
T.N.T.	
DRAWING NUMBER: 10133-E06	REV 00