



## DISCLAIMER

### GENERAL SPECIFICATIONS

- GE is not responsible for the installation of developers and associated equipment, lighting, cassette trays and protective screens or derivatives not mentioned in the order.
- The final study contains recommendations for the location of GE equipment and associated devices, electrical wiring and room arrangements. When preparing the study, every effort has been made to consider every aspect of the actual equipment expected to be installed.
- The layout of the equipment offered by GE, the dimensions given for the premises, the details provided for the pre-installation work and electrical power supply are given according to the information noted during on-site study and the wishes expressed by the customer.
- The room dimensions used to create the equipment layout may originate from a previous layout and may not be accurate as they may not have been verified on site. GE cannot take any responsibility for errors due to lack of information.
- Dimensions apply to finished surfaces of the room.
- Actual configuration may differ from options presented in some typical views or tables.
- If this set of final drawings has been approved by the customer, any subsequent modification of the site must be subject to further investigation by GE about the feasibility of installing the equipment. Any reservations must be noted.
- The equipment layout indicates the placement and interconnection of the indicated equipment components. There may be local requirements that could impact the placement of these components. It remains the customer's responsibility to ensure that the site and final equipment placement complies with all applicable local requirements.
- All work required to install GE equipment must be carried out in compliance with the building regulations and the safety standards of legal force in the country concerned.
- These drawings are not to be used for actual construction purposes. The company cannot take responsibility for any damage resulting therefrom.

### CUSTOMER RESPONSIBILITIES

- It is the responsibility of the customer to prepare the site in accordance with the specifications stated in the final study. A detailed site readiness checklist is provided by GE. It is the responsibility of the customer to ensure all requirements are fulfilled and that the site conforms to all specifications defined in the checklist and final study. The GE Project Manager of Installation (PMI) will work in cooperation with the customer to follow up and ensure that actions in the checklist are complete, and if necessary, will aid in the rescheduling of the delivery and installation date.
- Prior to installation, a structural engineer of record must ensure that the floor and ceiling is designed in such a way that the loads of the installed system can be securely borne and transferred. The layout of additional structural elements, dimensioning and the selection of appropriate installation methods are the sole responsibility of the structural engineer. Execution of load bearing structures supporting equipment on the ceiling, floor or walls are the customer's responsibility.

### RADIO-PROTECTION

- Suitable radiological protection must be determined by a qualified radiological physicist in conformation with local regulations. GE does not take responsibility for the specification or provision of radio-protection.

<b>THE UNDERSIGNED, HEREBY CERTIFIES THAT I HAVE READ AND APPROVED THE PLANS IN THIS DOCUMENT.</b>		
<b>DATE</b>	<b>NAME</b>	<b>SIGNATURE</b>

## CUSTOMER SITE READINESS REQUIREMENTS

### REQUIRED MANUALS FOR SYSTEM PRE-INSTALLATION

Description	Document Number*
Product specific Pre-installation Manual	Refer to cover page
<small>*documents can be accessed in multiple languages at <a href="https://www.gehealthcare.com/support/manuals">https://www.gehealthcare.com/support/manuals</a></small>	

- A mandatory component of this drawing set is the GE HealthCare Pre-installation manual. Failure to reference the Pre-installation manual will result in incomplete documentation required for site design and preparation.
- The items on the GE HealthCare Site Readiness Checklists listed below are REQUIRED to facilitate equipment delivery to the site. Equipment will not be delivered if these requirements are not satisfied.

### REQUIRED SITE-READINESS CHECKLISTS FOR SYSTEM PRE-INSTALLATION

Modality	Document Number*
Computerized Tomography	DOC2949059
Radiology, Radiology and Fluoroscopy, Mammography, Bone Mass Densitometry	DOC2949063
All modality Customer/Contractor Worksheet	DOC2949068
<small>*documents can be accessed in multiple languages at <a href="https://www.gehealthcare.com/support/manuals">https://www.gehealthcare.com/support/manuals</a></small>	

- Any deviation from these drawings must be communicated in writing to and reviewed by your local GE HealthCare installation project manager prior to making changes.
- Make arrangements for any rigging, special handling, or facility modifications that must be made to deliver the equipment to the installation site. If desired, your local GE HealthCare installation project manager can supply a reference list of rigging contractors.
- New construction requires the following;
  1. Secure area for equipment,
  2. Power for drills and other test equipment,
  3. Restrooms.
- Provide for refuse removal and disposal (e.g. crates, cartons, packing)
- For CT systems it is required to minimize vibrations within the scan room. It is the customer's responsibility to contract a vibration consultant/engineer to implement site design modifications to meet the GE vibration specification. Refer to the system Pre-installation manual for vibration specifications.

## ENVIRONMENTAL SPECIFICATIONS

### MAGNETIC INTERFERENCE

In order to avoid interference on the system, static field limits from the surrounding environment must be less than <1 Gauss around the unit.

### LIGHT REQUIREMENTS

For the electronic ballast of fluorescent lamp in exam room, the operating frequency should be above 42 kHz.  
Recommended lamp for patient exposure: LED 75-800 lux/15-150W or Fluorescent 75-800 lux/30-300W  
Recommended lamp for GE service: LED 300-800 lux/50-150W or Fluorescent 300-800 lux/80-300W

### ACOUSTIC OUTPUT

Measured 1 m [3.28 ft] from any point in system.

In-use: less than 65 dBA

Stand-by: less than 60 dBA

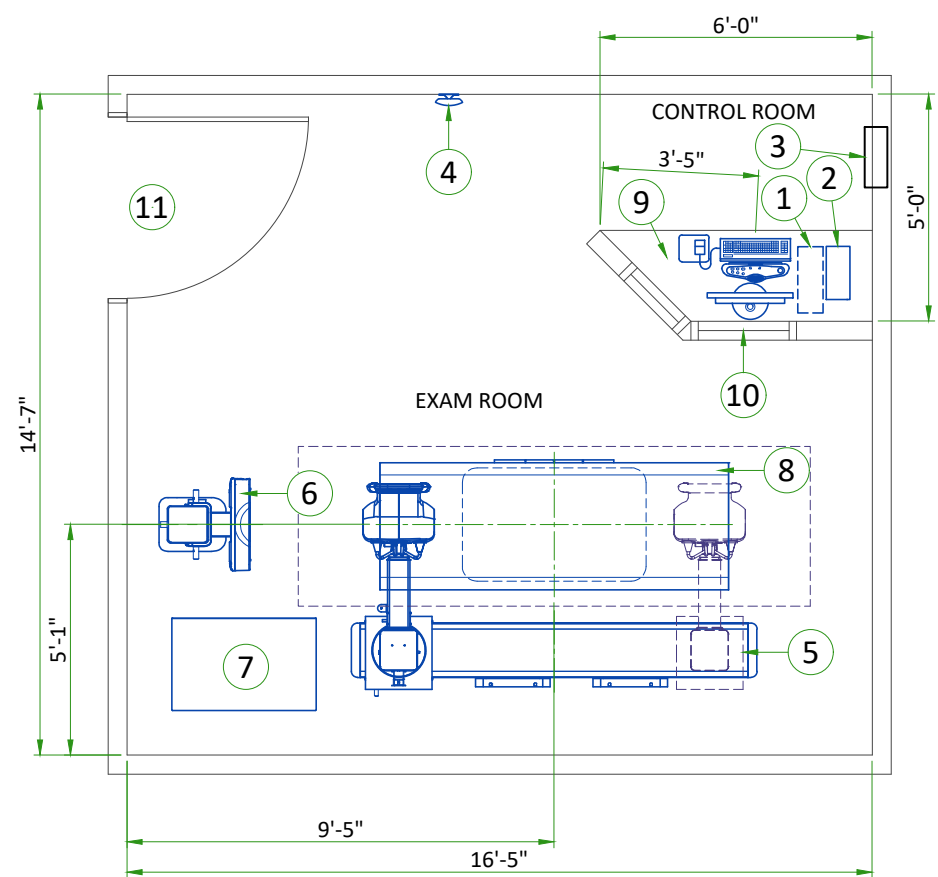
### ALTITUDE AND ATMOSPHERIC PRESSURE

Maximum height above sea level: 3000m [9843 ft]

Minimum depth below sea level: -30m [-98 ft]

Maximum atmospheric pressure: 106 kPa

Minimum atmospheric pressure: 70 kPa



**LEGEND**

A	GE SUPPLIED	D	AVAILABLE FROM GE
B	GE SUPPLIED/CONTRACTOR INSTALLED	E	EQUIPMENT EXISTING IN ROOM
C	CUSTOMER/CONTRACTOR SUPPLIED AND INSTALLED	*	ITEM TO BE REINSTALLED FROM ANOTHER SITE

BY	ITEM	DESCRIPTION	MAX HEAT OUTPUT (BTU/h)*	WEIGHT (lbs)	MAX HEAT OUTPUT (W)*	WEIGHT (kg)
A	1	OPERATOR CONSOLE	819	39	240	17.5
A	2	PARTIAL UPS	-	25	-	11.5
D	3	MAIN DISCONNECT PANEL (MDP)	-	-	-	-
A	4	ACCESS POINT	58	1	17	0.6
A	5	TUBE STAND	-	1019	-	462
A	6	WALL STAND	-	441	-	200
A	7	SYSTEM CABINET	-	454	-	206
A	8	PATIENT TABLE	1017	849	298	385
C	9	COUNTER TOP FOR EQUIPMENT- PROVIDE GROMMETED OPENINGS AS REQUIRED TO ROUTE CABLES				
C	10	CONTROL WALL, 7 FT. HIGH WITH LEAD GLASS VIEWING WINDOW				
C	11	MINIMUM OPENING FOR EQUIPMENT DELIVERY IS 1010 mm x 2100 mm [40 in x 80 in], CONTINGENT ON A 2500 mm [98.5 in] CORRIDOR WIDTH				

\*REFER TO HEAT DISSIPATION DETAIL ON PAGE M1 FOR SYSTEM HEAT LOAD INFORMATION

**THE FOLLOWING SHOTS ARE NOT AVAILABLE IN THIS LAYOUT**

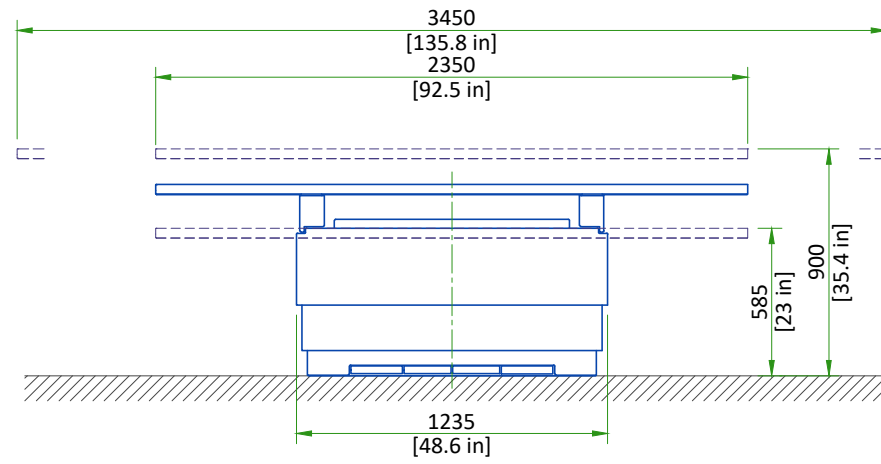
180° OFF-TABLE IMAGING

**EXAM ROOM HEIGHT**

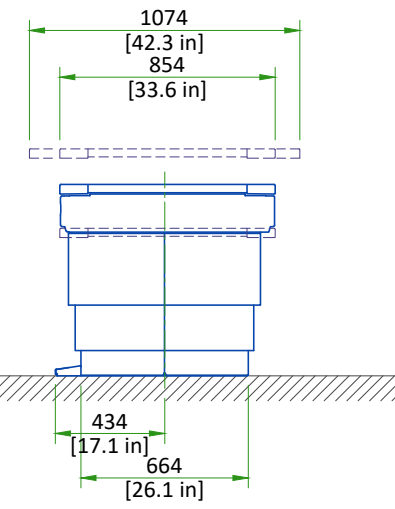
FINISHED FLOOR TO SLAB HEIGHT	TBD
FALSE CEILING HEIGHT	rec. 9'-6"

## TABLE

### FRONT VIEW

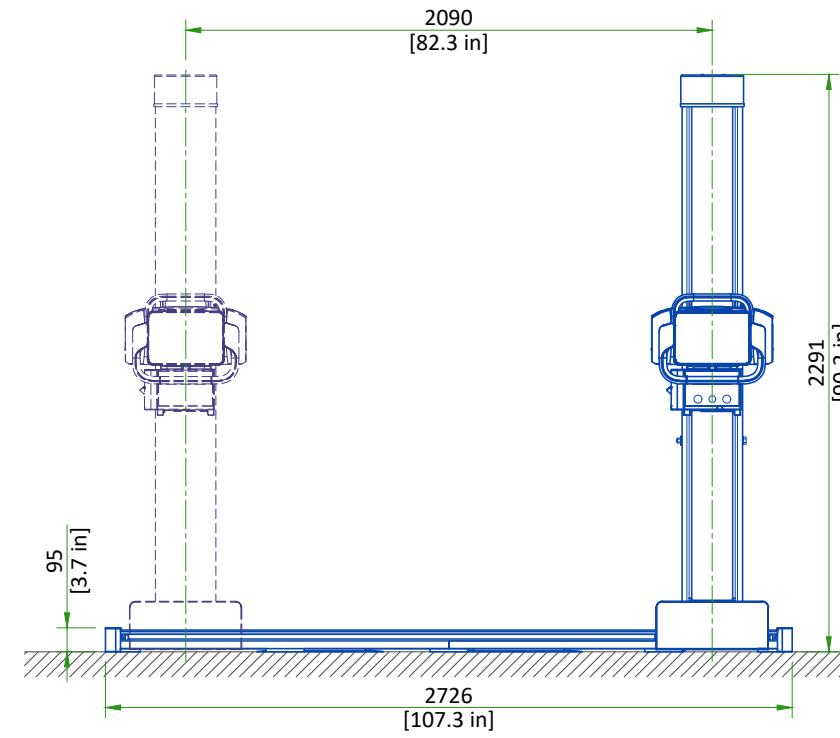


### SIDE VIEW (FOOT END)

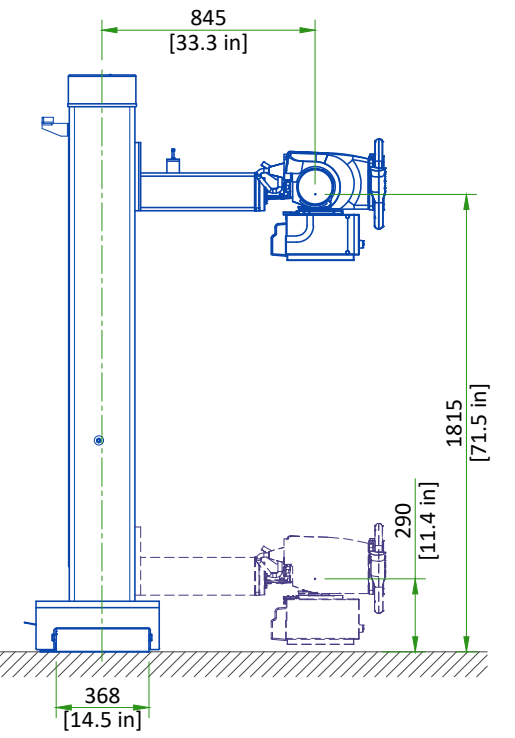


## TUBE STAND

### FRONT VIEW

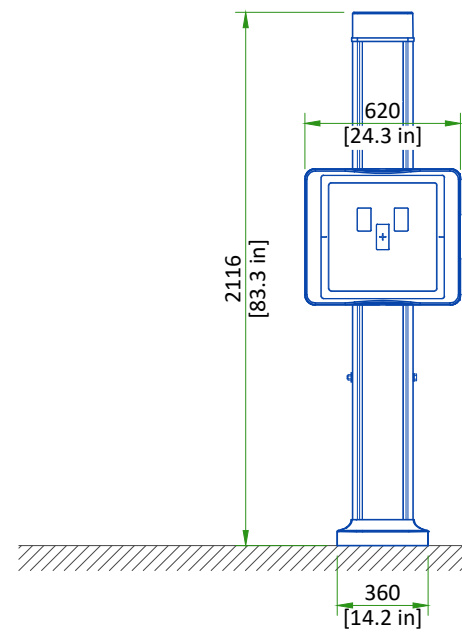


### SIDE VIEW

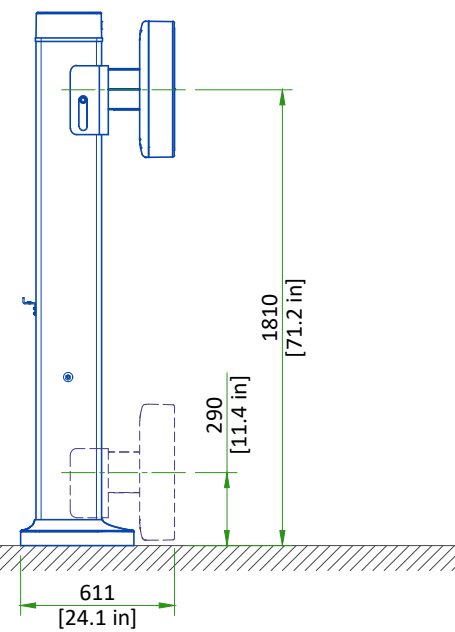


## WALLSTAND

### FRONT VIEW



### SIDE VIEW



## DELIVERY

### THE CUSTOMER/CONTRACTOR SHOULD:

- Provide an area adjacent to the installation site for delivery and unloading of the GEHC equipment.
- Ensure that the dimensions of all doors, corridors, ceiling heights are sufficient to accommodate the movement of GEHC equipment from the delivery area into the definitive installation room.
- Ensure that access routes for equipment will accommodate the weights of the equipment and any transportation, lifting and rigging equipment.
- Ensure that all necessary arrangements for stopping and unloading on public or private property not belonging to the customer have been made.

DIMENSIONS		
EQUIPMENT	DIMENSIONS LxWxH mm (in)	WEIGHT kg (lb)
CABINET IN PACKAGE	1165x860x1150 (45.9x33.9x45.3)	257 kg (567 lbs)
CABINET IN TRANSIT	970x620x932 (38.2x24.4x36.7)	206 kg (454 lbs)
WALLSTAND	2355x995x1000 (92.7x39.2x39.4)	402 kg (886 lbs)
TABLE BASE	1460x1000x1240 (57.5x39.4x48.8)	436 kg (961 lbs)
TABLE TOP	2440x950x250 (96.1x37.4x9.8)	95 kg (209 lbs)
TUBE STAND	2530x995x1535 (99.6x39.2x60.4)	500 kg (1102 lbs)
TUBE STAND RAIL	2950x615x560 (116.1x24.2x22.1)	186 kg (410 lbs)

# TEMPERATURE AND HUMIDITY SPECIFICATIONS

## IN-USE CONDITIONS

	EXAM ROOM		CONTROL ROOM	
	Min	Max	Min	Max
Temperature	15 °C [59 °F]	32 °C [89.6 °F]	15 °C [59 °F]	32 °C [89.6 °F]
Relative humidity (1)	30% to 75%		30% to 75%	

System heat dissipation	Standby	In-Use
	0.77 kW	TBD
	2627 BTU/hr	TBD

## STORAGE CONDITIONS

Temperature	-20 °C [-4 °F] to 60 °C [140 °F]
Relative humidity (1)	20% to 85%

STORAGE values only refer to equipment that is still in shipping containers. If the equipment is partially or completely installed, refer to IN-USE values.

Material should not be stored for more than 90 days.

(1) non-condensing

## AIR RENEWAL

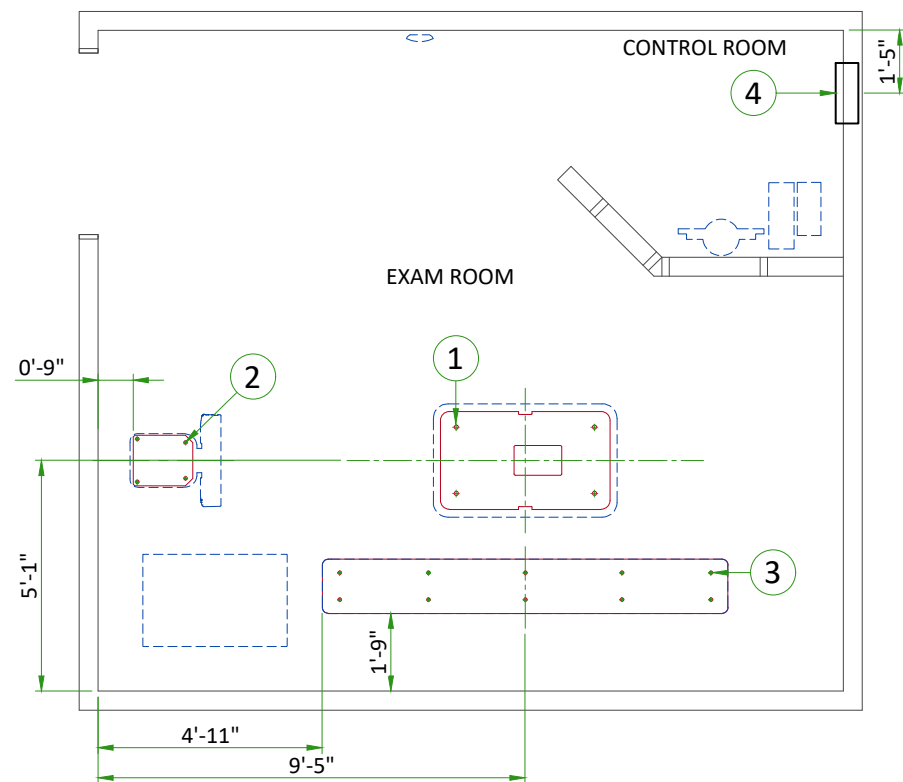
According to local standards.

### NOTE

In case of using air conditioning systems that have a risk of water leakage it is recommended not to install it above electric equipment or to take measures to protect the equipment from dropping water.

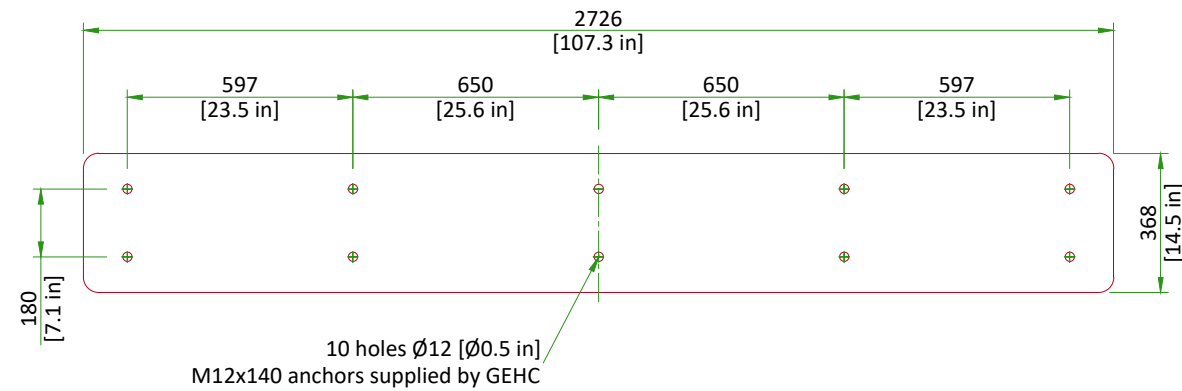
## STRUCTURAL NOTES

- Methods of support for the steelwork that will permit attachment to structural steel or through bolts in concrete construction should be favored. Do not use concrete or masonry anchors in direct tension.
- All units that are wall mounted or wall supported are to be provided with supports where necessary. Wall supports are to be supplied and installed by the customer or his contractors. See plan for suggested locations.
- Control walls shall be constructed to minimum 2130mm (7'-0") high.
- Dimensions are to finished surfaces of room.
- Customers contractor must provide all penetrations in post tension floors.
- Customers contractor must provide and install any non-standard anchoring. Documents for standard anchoring methods are included with GE equipment drawings for geographic areas that require such documentation.
- Customers contractor must provide and install hardware for "through the floor" anchoring and/or any bracing under access floors. This contractor must also provide floor drilling that cannot be completed because of an obstruction encountered while drilling by the GE installer such as rebar etc.
- It is the customer's responsibility to perform any floor or wall penetrations that may be required. The customer is also responsible for ensuring that no subsurface utilities (e.g., electrical or any other form of wiring, conduits, piping, duct work or structural supports (i.e. post tension cables or rebar) will interfere or come in contact with subsurface penetration operations (e.g. drilling and installation of anchors/screws) performed during the installation process. To ensure worker safety, GE installers will perform surface penetration operations only after the customer's validation and completion of the "GE surface penetration permit".
- Different anchor types are used to install the components of the system. Refer to Structural Requirements Section(s) of the Pre-Installation Manual for each anchor requirement.
- Refer to the Structural Requirements Section for the required minimum embedment.
- The ground surface must be flat and leveled, maximum tolerance for leveling is  $\pm 1.5$  mm per 1 m (0.2 in per 10 ft). If the tolerances are not met by using the spacers provided, a grout pad shipped with the system is to be used by the contractor to meet this specification. The maximum pad thickness is 6.3 mm (0.25 in).



ITEM	DESCRIPTION
(GE SUPPLIED / CONTRACTOR INSTALLED)	
1	Table Anchoring
2	Wall Stand Floor Anchoring
3	Tube Stand Anchoring
(CONTRACTOR SUPPLIED & INSTALLED)	
4	Support backing, locate as shown.

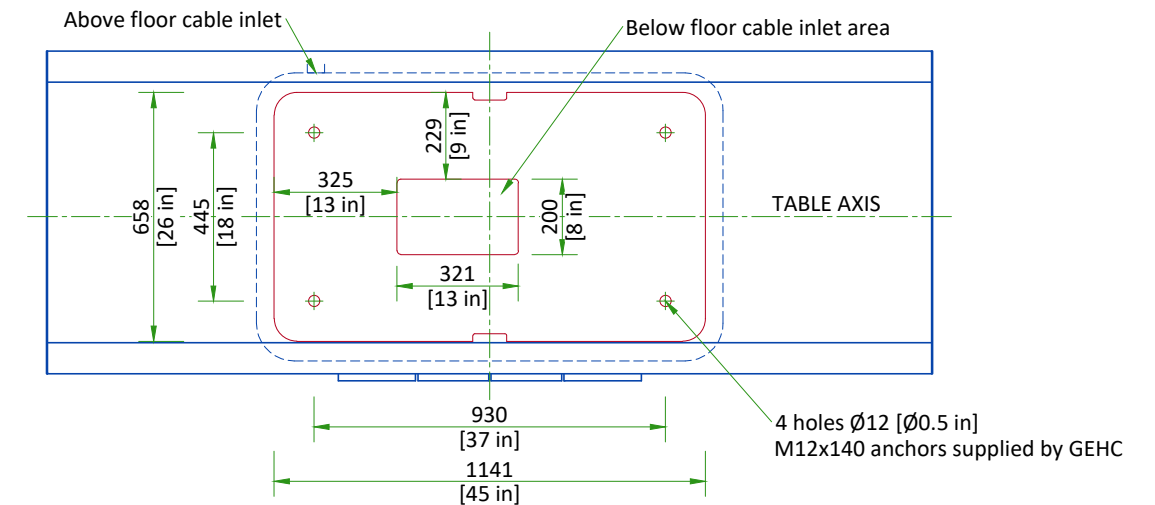
## TUBE STAND RAIL ANCHORING



- The supplied anchors require a minimum embedment of 70 mm [2.75 in] into the concrete. If the floor thickness is less than 90 mm [3.5 in], it is recommended that the unit be secured using a through-bolt method with a reinforcement plate on the back side. The ground surface must be flat and leveled.
- Recommended concrete strength is C30 or equivalent.

SCALE 1:20

## TABLE ANCHORING



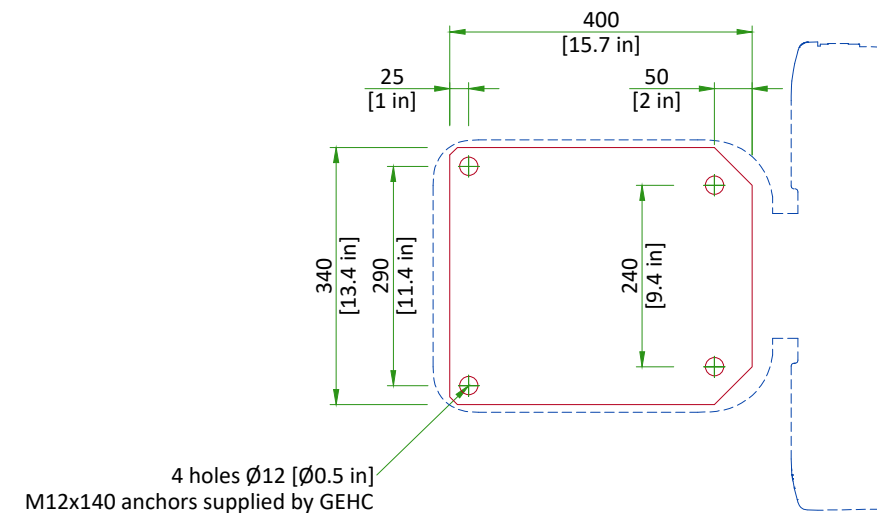
The floor bearing the system is recommended to be concrete and the thickness to be determined by a Structural Engineer to properly support the equipment loads. The supplied anchors require a minimum embedment of 70 mm [2.75 in] into the concrete. If the floor thickness is less than 95 mm [3.74 in], it is recommended that the unit be secured using a through-bolt method with a reinforcement plate on the back side.

### FLOOR LEVELNESS

3mm [1/8 in] maximum variance over 3048mm [10 ft]

SCALE 1:20

## WALL STAND ANCHORING



- The supplied anchors require a minimum embedment of 70 mm [2.75 in] into the concrete. If the floor thickness is less than 95 mm [3.75 in], it is recommended that the unit be secured using a through-bolt method with a reinforcement plate on the back side. The ground surface must be flat and leveled.

SCALE 1:10

## CONNECTIVITY REQUIREMENTS

Your new GE Healthcare imaging modality will require local and remote connectivity to enable our full range of digital support:

- Local connectivity - This allows your system to connect to local devices such as PACS and modality worklist. We will require network information to configure the system(s), and a live ethernet port(s) prior to the delivery of the system(s).
- Remote connectivity - Your GE Healthcare service warranty includes InSite™ (applicable to InSite capable products), a powerful broadband-based service which enables digital tools that can help guard your hospital against equipment downtime and revenue loss by quickly connecting you to a GE Healthcare expert.

Depending on product family and software version, imaging systems can be connected in one of the following methods:

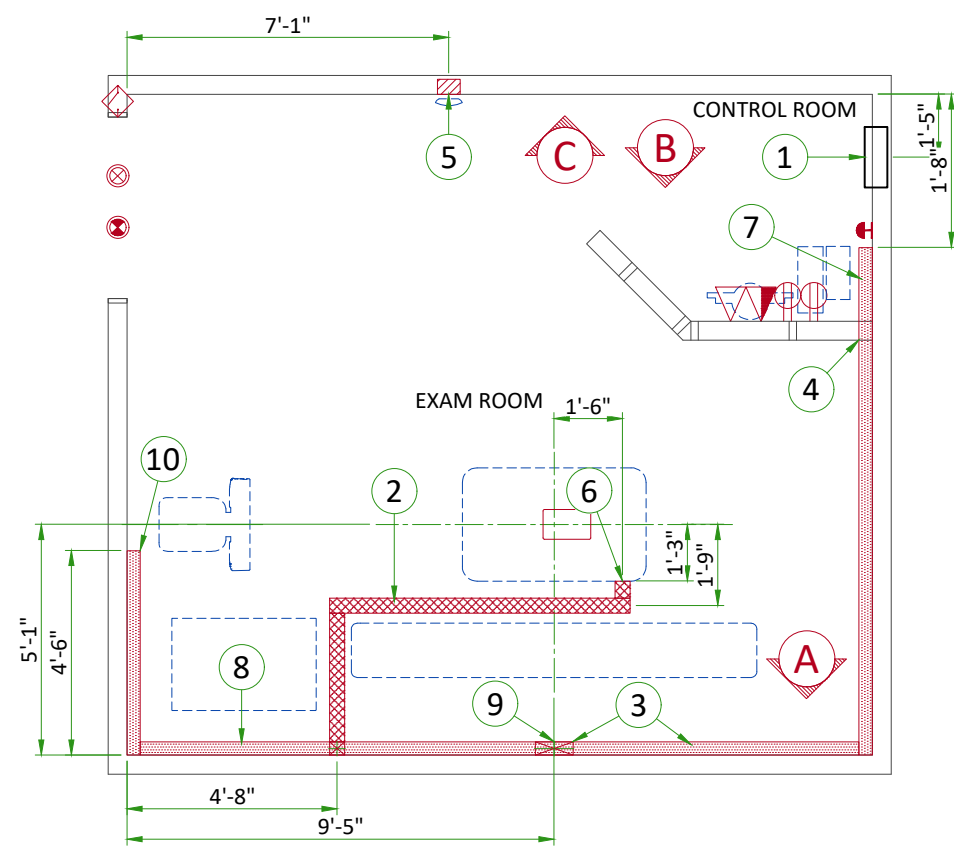
1. TLS over TCP Port 443 (Preferred method for new products) via:
  - a. DNS resolution
  - b. Customer-provided Proxy or
  - c. GE Proxy (Available in some regions)
2. Site-to-Site IPsec VPN tunnel

Please provide the GE project manager with the contact information for the resource that can provide information required to set up these connections. GEHC will send out communication to these contacts, which will include the project's Connectivity requirements, and a Connectivity form. This form will need to be completed and returned to GEHC prior to delivery of the system to ensure the system is tested and connectivity is enabled prior to the completion of the installation.

## ELECTRICAL NOTES

1. Aluminum or solid wires are not allowed.
2. Wire sizes given are for use of equipment. Larger sizes may be required by local codes.
3. It is recommended that all wires be color coded, as required in accordance with national and local electrical codes.
4. Conduit sizes shall be verified by the architect, electrical engineer or contractor, in accordance with local or national codes.
5. Convenience outlets are not illustrated. Their number and location are to be specified by others. Locate at least one convenience outlet close to the system control, the power distribution unit and one on each wall of the procedure room. Use hospital approved outlet or equivalent.
6. General room illumination is not illustrated. Caution should be taken to avoid excessive heat from overhead spotlights. Damage can occur to ceiling mounting components and wiring if high wattage bulbs are used. Recommend low wattage bulbs no higher than 75 watts and use dimmer controls (except MR). Do not mount lights directly above areas where ceiling mounted accessories will be parked.
7. Routing of cable ductwork, conduits, etc., must run direct as possible otherwise may result in the need for greater than standard cable lengths (refer to the interconnection diagram for maximum usable lengths point to point).
8. Conduit turns to have large, sweeping bends with minimum radius in accordance with national and local electrical codes.
9. In some cases GEHC will specify ground wires to be sized larger than code. In these situations, the GEHC specification must be followed.
10. A special grounding system is required in all procedure rooms by some national and local codes. It is recommended in areas where patients might be examined or treated under present, future, or emergency conditions. Consult the governing electrical code and confer with appropriate customer administrative personnel to determine the areas requiring this type of grounding system.
11. The maximum point to point distances illustrated on this drawing must not be exceeded.
12. Physical connection of primary power to GEHC equipment is to be made by customers electrical contractor with the supervision of a GEHC representative. The GEHC representative would be required to identify the physical connection location, and insure proper handling of GEHC equipment.
13. GEHC conducts power audits to verify quality of power being delivered to the system. The customer's electrical contractor is required to be available to support this activity.
14. Every installation is unique. The electrical contractor will be required to support the installation of the GEHC equipment by providing knockouts, grommeted openings, bushings, etc. as required. All power connections to be performed by the electrician.

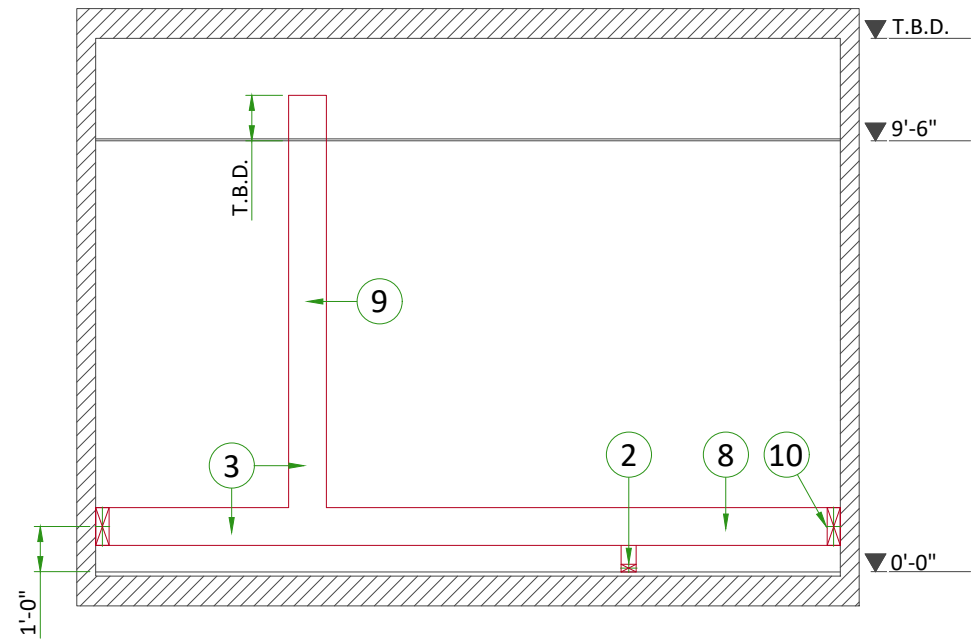
- All junction boxes, conduit, duct, duct dividers, switches, circuit breakers, cable tray, etc., are to be supplied and installed by customers electrical contractor. All junction boxes shall be provided with covers.
- Conduit and duct runs shall have gradual sweep radius bends.
- Conduits and duct above ceiling or below finished floor must be installed as near to ceiling or floor as possible to reduce run length.
- Ceiling mounted junction boxes illustrated on this plan must be installed flush with finished ceiling.
- All ductwork must meet the following requirements:
  1. Ductwork shall be metal with dividers and have removable, accessible covers.
  2. Ductwork shall be certified/rated for electrical power purposes.
  3. Ductwork shall be electrically and mechanically bonded together in an approved manner.
  4. PVC as a substitute must be used in accordance with all local and national codes.
- All openings in raceway and access flooring are to be cut out and finished off with grommet material by the customers contractor.
- Electrical contractor to provide measured pull strings in all conduit and raceway runs.
- Provide 10 foot pigtailed at all junction points.
- Grounding is critical to equipment function and patient safety. Site must conform to wiring specifications shown on this plan.



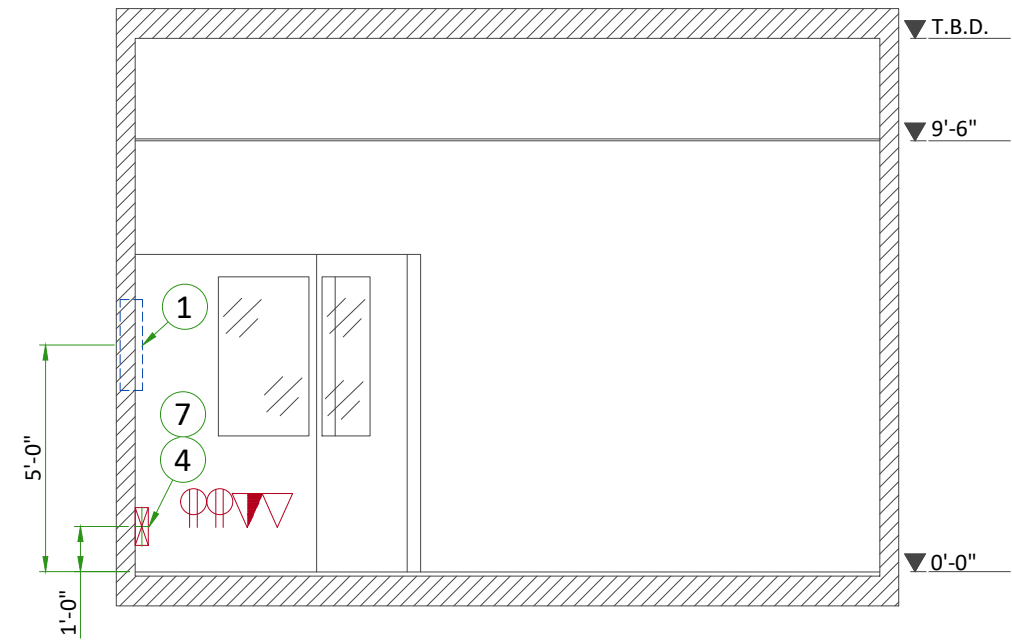
Item	Electrical Layout Item List
1	Main disconnect panel (MDP)
2	4" x 2" [100 x 50] surface floor duct with minimum 1 divider
3	10" x 3 1/2" [250 x 100] surface wall duct with minimum 2 dividers
4	10" x 3 1/2" [250 x 100] surface wall duct thru wall with minimum 2 dividers
5	Flush box, size per local code (Access Point)
6	Grommeted opening (Table)
7	Grommeted opening (Operators Console)
8	Grommeted opening (Generator)
9	Grommeted opening (Tube stand)
10	Grommeted opening (Wall stand)

ITEM	Electrical Outlet Legend
	Customer/contractor supplied and installed items unless otherwise specified. Height above floor determined by local codes unless otherwise specified.
⚡	System emergency off (SEO), (recommended height 1.2m [48"] above floor)
⊗	X-Ray room warning light control panel
⊙	X-Ray ON lamp (L1) - 24V
⬠	Door interlock switch (needed only if required by state/local codes)
⚡	Duplex hospital grade, dedicated wall outlet 120-v, single phase power
⚡	Network outlet

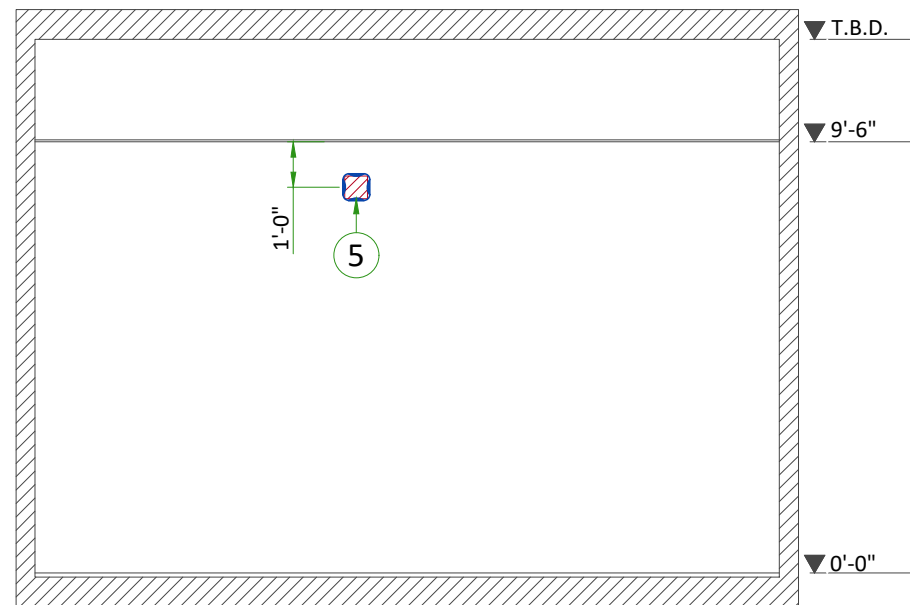
Additional Conduit Runs (Contractor Supplied and Installed)					
From (Bubble # / Item)	To (Bubble # / Item)	Qty	Size		
			In.	mm	
3 Phase Power	1 Main Disconnect	1	As req'd	As req'd	
1 Main Disconnect	Emergency Off	1	1/2	13	
	8 Systems Cabinet	1	As req'd	As req'd	
Warning Light	Warning Light Control	1	1/2	13	
1 Phase Power		1	As req'd	As req'd	
		1	1/2	13	
8 System Cabinet	Door Switch	1	1/2	16	
	5 Access Point	1	2	53	
7 Operators Console	5 Access Point	1	2	53	



A

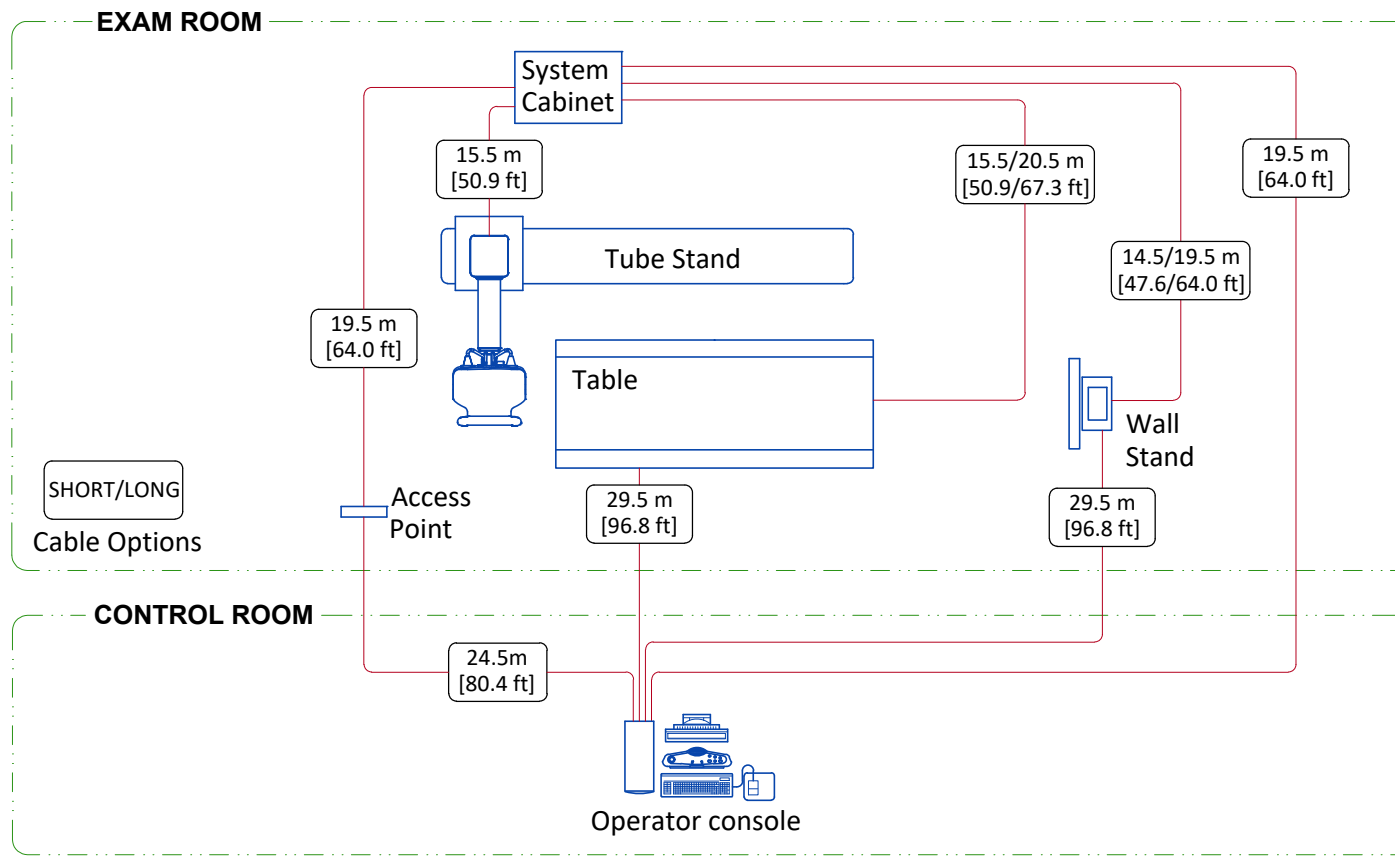


B



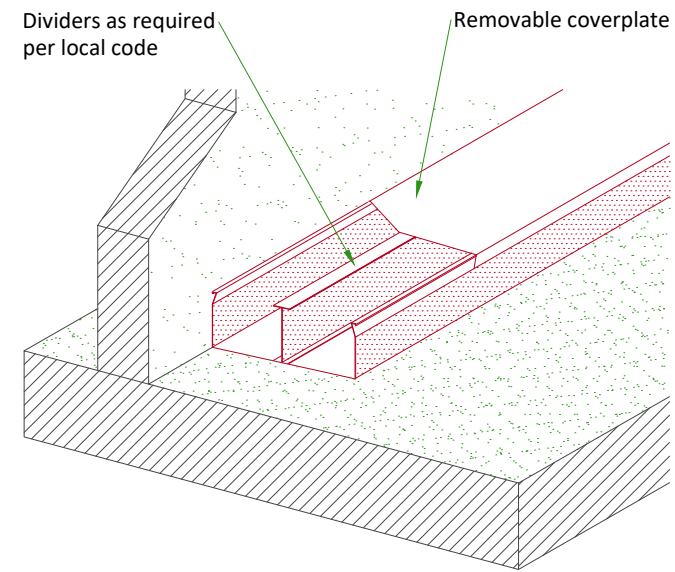
C

## INTERCONNECTIONS

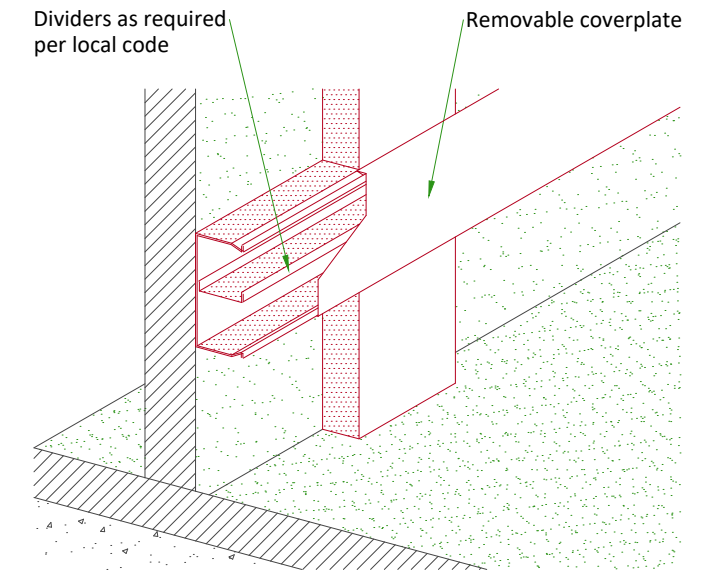


## TYPICAL CABLE MANAGEMENT

### DUCT ON THE FLOOR

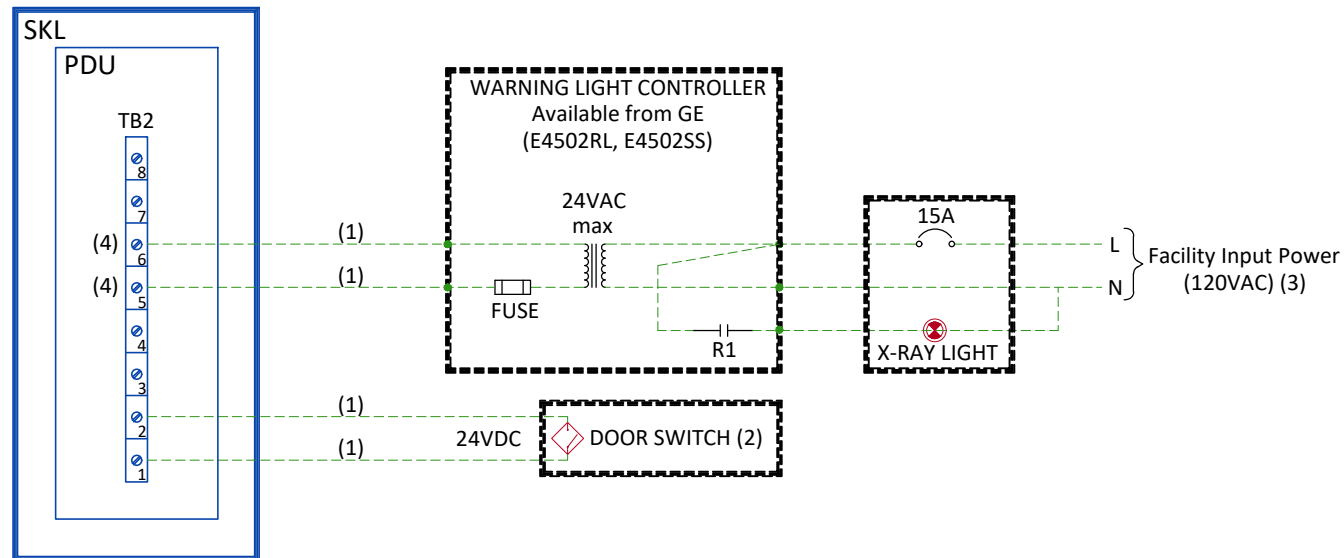


### WALL DUCT



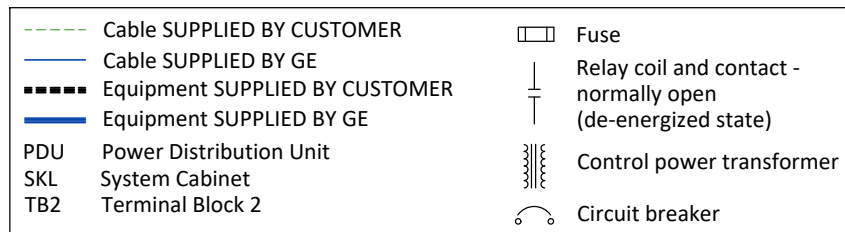
NOT TO SCALE

## EXAM ROOM WARNING LIGHT AND DOOR INTERLOCK



### Notes :

- (1) Wire size: 2mm<sup>2</sup> [14 AWG] at 24V
- (2) Door Interlock circuit is jumpered out if a door switch is not provided.
- (3) Grounding not shown on the detail, but must comply with local codes.
- (4) Normally open relay contact in cabinet



## POWER REQUIREMENTS

POWER SUPPLY	380/400/420/440/460/480VAC Wye THREE-PHASE + G ±10%
FREQUENCIES	50/60Hz ± 3Hz
POWER DEMAND	110kVA
MAXIMUM LINE RESISTANCE PER 2 PHASES (Ohm)	380V : 0.029 / 400V : 0.032 / 420V : 0.035 440V : 0.039 / 460 V : 0.042 / 480V : 0.046

- Power supply should come into a Main Disconnect Panel (MDP) containing the protective units and controls.
- Governing electrical codes may require a neutral wire. If present, neutral must be terminated in MDP.
- The section of the supply cable should be calculated in accordance with its length and the maximum permissible voltage drops.
- There must be discrimination between supply cable protective material at the beginning of the installation (main low-voltage transformer side) and the protective devices in the MDP.

### SUPPLY CHARACTERISTICS

- Power input must be separated from any others which may generate transients (elevators, air conditioning, radiology rooms equipped with high speed film changers...)
- All equipment (lighting, power outlets, etc...) installed with GEHC system components must be powered separately.

### GROUND SYSTEM

- Equipotential : the equipotential link will be by means of an equipotential bar. This equipotential bar should be connected to the protective earth conductors in the ducts of the non GEHC cableways and to additional equipotential connections linking up all the conducting units in the rooms where GEHC units are located.

### CABLES

- Power and cable installation must comply with the distribution diagram below.
- All cables must be isolated and flexible.
- Cable color codes must comply with standards for electrical installation.
- Cables for signals and remote control (Y, SEO, L...) will go to MDP with a pigtail length of 1.5m [4.9 ft], and will be connected during installation. Each conductor will be identified and isolated (screw connector).

### CABLEWAYS

The general rules for laying cableways should meet the conditions laid down in current standards and regulations, with regard to:

- Protecting cables against water (cableways should be waterproof)
- Protecting cables against abnormal temperatures (proximity to heating pipes or ducts)
- Protecting cables against temperature shocks
- Replacing cables (cableways should be large enough for cables to be replaced) metal cableways should be grounded.

## POWER DISTRIBUTION

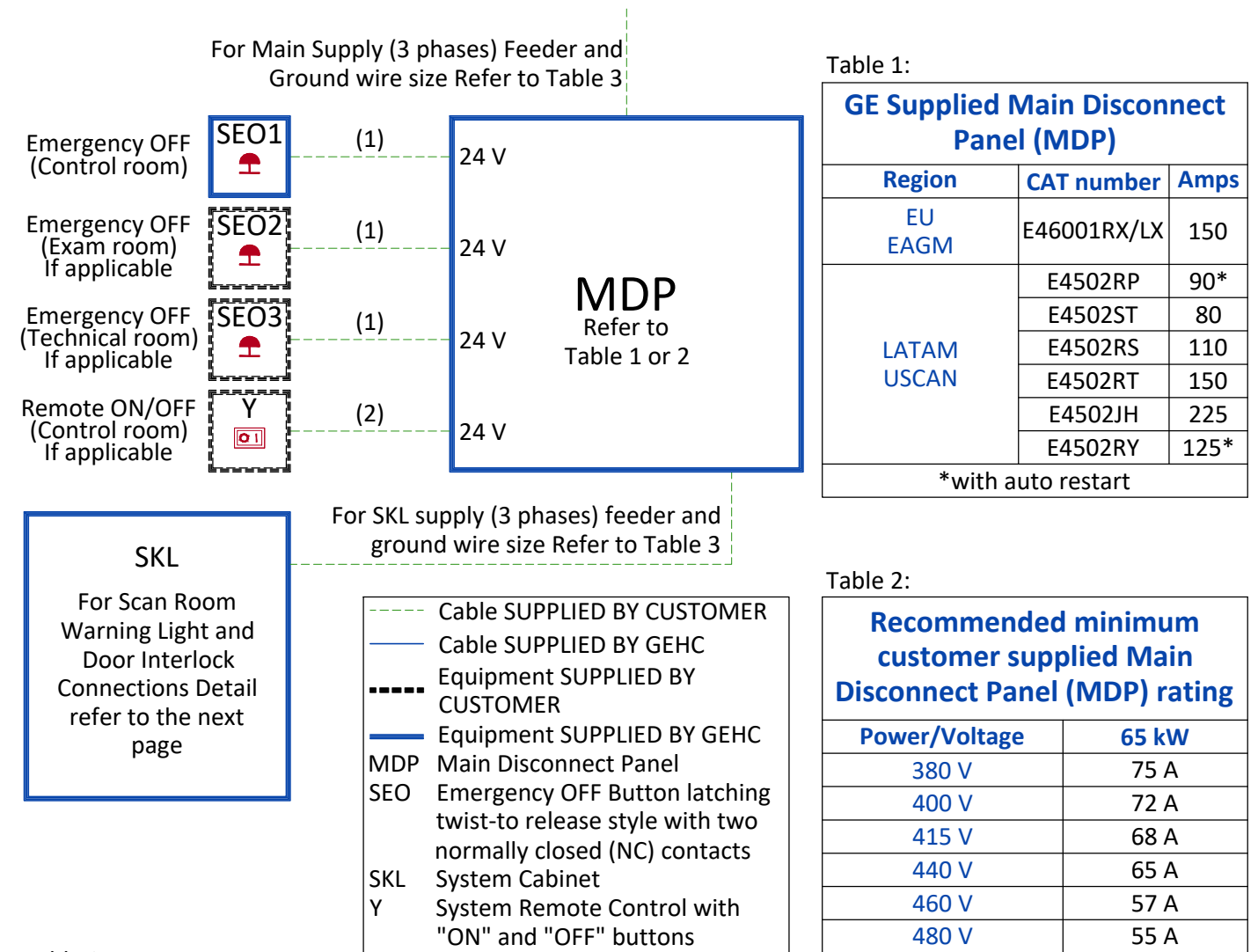


Table 3:

Feeder Table - 65kW Systems Cabinet						
<ul style="list-style-type: none"> <li>Calculations based on nominal voltage.</li> <li>Recommended feeder sizes from distribution transformer to the power cabinet.</li> <li>Neutral must be terminated inside the Main Disconnect Panel (MDP) and not at any GEHC cabinet</li> <li>If the wire size does not match the table below, please select the nearest wire size as per local standards.</li> </ul>						
Wire run length ft (m)	Minimum Wire Size, AWG or MCM (mm <sup>2</sup> )/VAC					
	380 VAC	400 VAC	420 VAC	440 VAC	460 VAC	480 VAC
50 (15)	7 (11)	8 (8.5)	9 (7)	9 (7)	9 (7)	10 (5.5)
100 (30)	4 (25)	5 (18)	5 (18)	6 (13.5)	6 (13.5)	7 (11)
150 (46)	2 (35)	3 (30)	3 (30)	3 (30)	4 (25)	4 (25)
200 (61)	1 (45)	1 (45)	2 (35)	3 (30)	3 (30)	3 (30)
250 (76)	1/0 (50)	1/0 (50)	1 (45)	1 (45)	2 (35)	2 (35)
300 (91)	2/0 (70)	1/0 (50)	1/0 (50)	1/0 (50)	1 (45)	1 (45)
350 (107)	3/0 (95)	2/0 (70)	1/0 (50)	1/0 (50)	1/0 (50)	1 (45)
400 (122)	3/0 (95)	2/0 (70)	2/0 (70)	2/0 (70)	1/0 (50)	1/0 (50)
450 (138)	3/0 (95)	3/0 (95)	3/0 (95)	3/0 (95)	2/0 (70)	1/0 (50)
Minimum wire size for circuit breaker, based on recommended overcurrent protection						
<b>Grounding</b>						
The grounding conductor will be of same size as the feeder. This ground will run from the equipment back to the facility power source/main grounding point and always travel in the same conduit with the feeders and neutral.						

### Notes :

- (1) Wire size: 2x1.5mm<sup>2</sup> [16AWG]
- (2) Wire size: 6x2mm<sup>2</sup> [14AWG] and 1x2mm<sup>2</sup> [14AWG] GND