

SCALE: 1/4" = 1'-0"

EQUIPMENT LAYOUT

RECOMMENDED CEILING HEIGHT = 8'-9"

GE EQUIPMENT LISTING

ITEM NO.	QUANTITY ORDERED	REFER TO SHEET "D"	ITEM DESCRIPTION (* = EXISTING/REINSTALL)	WEIGHT	HEAT OUTPUT (PER HOUR)	DETAIL NO.	STRUC PLAN	ELEC PLAN	CROSS REFERENCE CHART
1			SHIELD COOLER CABINET	275 lbs		M1615B		MSS	C
2			WATER CHILLER FOR 3RM BODY COIL	293 lbs	13993 btu	M6015B		WCL	S
3			RFS CABINET	899 lbs	27788 btu	M5015F		MR2	S
4			HFD/PDU CABINET	1805 lbs	34129 btu	M5015D		MR3	S
5			BLOWER BOX	46 lbs	3412 btu	M5715	M5B	MG6	S
6			RF PENETRATION PANEL	88 lbs	324 btu	M5613		PPL	S
7			PENETRATION PANEL COVERS			M5513			S
8			OPERATOR WORKSPACE W/COLOR LCD MONITOR	176 lbs	4948 btu	M0515J	M05	OW	C
9			OPERATOR'S CHAIR						C
10			OPERATOR WORKSPACE CABINET	198 lbs		M0615D			C
11			PATIENT ALERT CONTROL BOX			M4815		PA	C
12			MAGNET RUNDOWN UNIT	8 lbs		M1715A		MS4	C
13			MAGNET MONITOR	22 lbs	204 btu	M1615C		MM	C
14			SPT PHANTOM CABINET	350 lbs		M6115			C
15			1.5 TESLA LCC ACTIVE SHIELD MAGNET	12608 lbs	8191 btu	M6313	M6	MS1	C
16			PATIENT TRANSPORT TABLE (DOES NOT INCLUDE PATIENT)	279 lbs		M2315			S
17			INJECTOR HEAD ON PEDESTAL	59 lbs		E8804S1		IH	C
18			CONTROL ROOM UNIT	15 lbs		E8804S		ICC	C
19			BATTERY CHARGING UNIT	4 lbs		E8804S			C
20			MR MUSIC SYSTEM INCLUDING SPEAKERS, REMOTE CONTROL AND TRANSDUCER	33 lbs		E8822J		MU	C

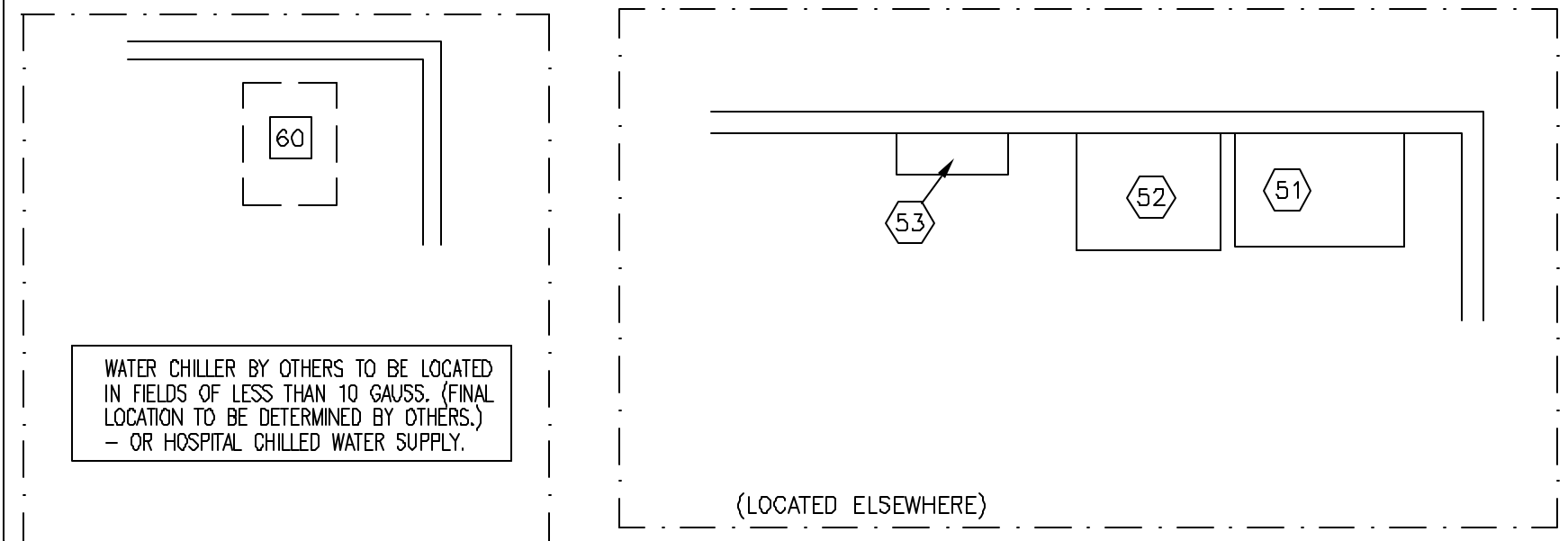
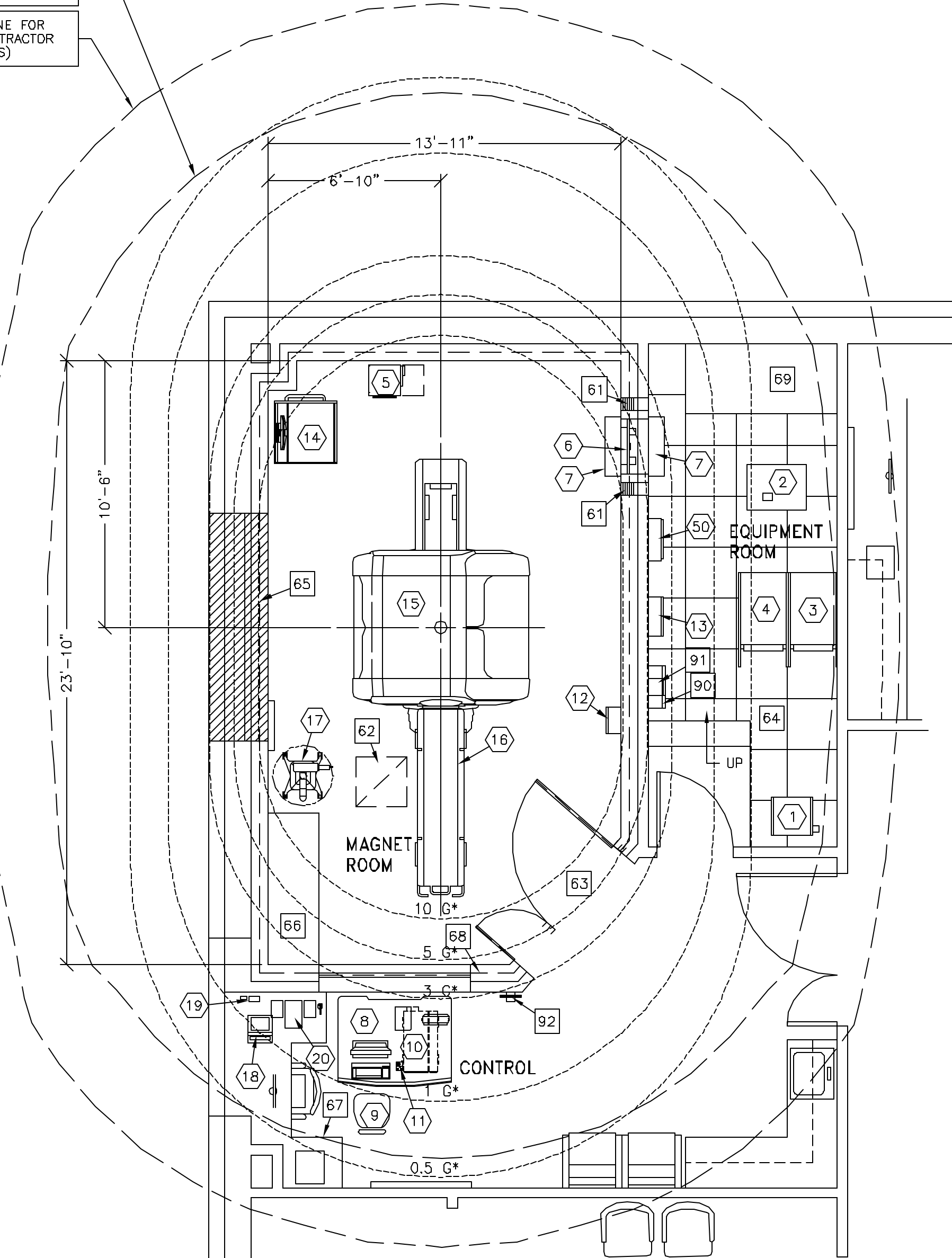
THE FOLLOWING ITEMS, WHICH HAVE BEEN ORDERED FROM GE HEALTHCARE, ARE TO BE INSTALLED BY THE CUSTOMER OR HIS CONTRACTOR.

21			MAIN DISCONNECT CONTROL CAT NO. E4509AT	94 lbs	901 btu	M2715C		MDP	S
22			100 KVA UPS SYSTEM	1931 lbs	22478 btu	E4502FB		UPS	S
23			UPS BATTERY CABINET	3068 lbs		E4502F1		UPS	S
24			MAINTENANCE BYPASS PANEL	350 lbs		E4504CC		MBP	S

MOVING METAL SENSITIVITY LINE FOR CARS, MINIVANS, PICKUP TRUCKS, AND AMBULANCES.

NOTE: FERRROUS OBJECTS MUST NOT MOVE INTO OR INSIDE OF THE MOVING METAL SENSITIVITY LINE DURING SCANS.

MOVING METAL SENSITIVITY LINE FOR BUSES AND TRUCKS (DUMP, TRACTOR TRAILER, UTILITY, FIRE TRUCKS)



MRI SITE PLANNING REMINDERS

- PLEASE REFER TO PRE-INSTALLATION CHECKLIST IN PRE-INSTALLATION MANUAL LISTED ON SHEET C1 FOR ITEMS CRITICAL TO IMAGE QUALITY.
- THE LAYOUT SHOULD BE ARRANGED SO THAT THE 5G LINE IS CONTAINED TO THE MAGNET ROOM. IF NOT POSSIBLE, A BARRIER IS RECOMMENDED TO PREVENT ENTRY TO THE 5G FIELD AREA.
 - THE SPACES AROUND, ABOVE, AND BELOW THE MAGNET MUST BE REVIEWED FOR EFFECTS OF THE 5G, 3G, 1G, AND .5G FIELDS. REFER TO THE PROXIMITY LIMIT CHART IN THE MR PRE-INSTALLATION MANUAL REFERENCED ON C1.
 - FOR MOVING METAL, THE RESTRICTION LINES TYPICALLY EXTEND OUTSIDE OF THE MRI SPACE. PLEASE CONFIRM THERE ARE NO MOVING METAL CONCERNS WITHIN THESE AREAS. AN EM STUDY IS RECOMMENDED IF THE RESTRICTION LINES ARE VIOLATED.
 - FOR VIBRATION, PLEASE CONFIRM THAT A VIBRATION STUDY HAS BEEN RECOMMENDED AND/OR SUCCESSFULLY COMPLETED.
 - FOR EMI, REVIEW THE SITE FOR THE LOCATION OF THE MAIN ELECTRICAL FEEDERS, AC DEVICES, OR DISTRIBUTION SYSTEMS. AN EMI STUDY IS RECOMMENDED IF LARGE AC SYSTEMS ARE NEARBY.
 - DETAILS OF THE FLOOR BELOW THE MAGNET MUST BE REVIEWED. THE STRUCTURAL ENGINEER MUST VERIFY THAT THE QUANTITY OF STEEL IN THE VOLUME 10FT [3.1M] X 10FT [3.1M] X 1FT [300] DEEP (BELOW THE MAGNET) DOES NOT EXCEED THE ALLOWABLE STEEL CONTENT AS GIVEN IN THE MR PRE-INSTALLATION MANUAL REFERENCED ON SHEET C1.
- RESPONSIBILITY FOR THE COORDINATION, DESIGN, ENGINEERING, AND SITE PREPARATION RESIDES WITH THE CUSTOMER AND THEIR PROJECT ARCHITECTS AND CONTRACTORS. GE DOES NOT, BY PROVIDING REVIEWS AND FURNISHING COMMENTS AND ASSISTANCE, ACCEPT ANY RESPONSIBILITY BEYOND ITS OBLIGATIONS AS DEFINED IN THE MR SYSTEM, SALE/PURCHASE AGREEMENT.

CRITICAL ITEMS FOR MAGNET DELIVERY

- 24/7 CHILLED WATER AND 480V POWER FOR SHIELD/CRYO COOLER
- 24/7 120V POWER FOR THE MAGNET MONITOR
- PHONE LINES FOR MAGNET MONITORING AND EMERGENCY USE
- MAGNET ROOM EXHAUST FAN
- CRYOGEN VENTING (IF ROOF HATCH, COMPLETED WITHIN 24 HRS)
- MAGNET ANCHORS INSTALLED AND TESTED

THIS IS ONLY A PARTIAL LIST OF ITEMS REQUIRED FOR DELIVERY OF THE MAGNET. FOR A COMPLETE CHECKLIST REFER TO THE PRE-INSTALLATION MANUAL REFERENCED ON SHEET C1.

* THE ISOGAUSS CONTOUR PLOTS DEPICTED ON THIS DRAWING REPRESENT MAGNETIC FRINGE FIELDS RESULTING FROM THE NORMAL OPERATION OF THE MAGNET PROVIDED WITH THE MR SYSTEM. THE ACTUAL MAGNETIC FIELD INTENSITY AT ANY POINT IN THE VICINITY OF THE MAGNET WHEN INSTALLED MAY VARY FROM THE CONTOUR PLOTS DUE TO FACTORS SUCH AS THE CONCENTRATING EFFECTS OF NEARBY FERRROUS OBJECTS, AMBIENT MAGNETIC FIELDS, INCLUDING THE EARTH'S MAGNETIC FIELD. THEREFORE, THE CONTOURS SHOWN ARE ONLY APPROXIMATIONS OF ACTUAL FIELD INTENSITIES FOUND AT A CORRESPONDING DISTANCE FROM THE MAGNET'S ISOCENTER.

ANCILLARY ITEMS

CUSTOMER/CONTRACTOR SUPPLIED AND INSTALLED ITEMS

ITEM NO.	ITEM DESCRIPTION (* INDICATES EXISTING)
60	WATER CHILLER
61	RF FILTERS - LOCATE WITHIN 24 IN. (610 MM) OF THE PENETRATION PANEL.
62	MAGNET ROOM EXHAUST FAN
63	MINIMUM DOOR OPENING FOR EQUIPMENT DELIVERY IS 43 IN. W X 88 IN. H (1092MM X 2238MM), CONTINGENT ON A 96 IN. (2438MM) CORRIDOR WIDTH
64	ACCESS FLOORING
65	MINIMUM 9 FT.-0 IN. (2743 MM) X 9 FT.-0 IN. (2743 MM) REMOVABLE WALL SECTION FOR MAGNET DELIVERY/REMOVAL.
66	RF SCREEN, INCLUSIVE OF WALLS, FLOOR, DOOR, ETC. GROUND IMPEDANCE GREATER THAN 100 OHMS ATTENUATION 100dB AT 10-100MHz PLANE WAVE.
67	COUNTERTOP WITH DRAWERS FOR MISCELLANEOUS ITEMS.
68	BASE CABINET FOR STORAGE OF SURFACE COILS, PATIENT POSITIONING PADS, PHANTOMS, ETC.
69	AIR CONDITIONING. <VIBRATION ISOLATION IS RECOMMENDED AT SUPPORTS OF EACH UNIT TO BE INSTALLED.>

THE FOLLOWING ITEMS ARE AVAILABLE FROM GE HEALTHCARE TECHNOLOGIES. CONTACT YOUR LOCAL GE HEALTHCARE SERVICE REPRESENTATIVE FOR PRICING AND AVAILABILITY.

80	DC LIGHTING CONTROL PANEL 150 lbs (68 kg) 1024 BTU/HR (CAT. NO. E4509AD/AV - BASIC SYSTEM)
81	DC LIGHTING AUTO TRANSFORMER 60 lbs (27 kg) (PART OF VARIABLE DIMMER SYSTEM) (CAT. NO. E4509AA/AY - INCLUDES BASIC SYSTEM)
82	METAL DETECTOR (HAND HELD)

GENERAL SPECIFICATIONS

- THE REQUIRED CEILING HEIGHT INDICATED ON THESE PLANS IS TO ENSURE EQUIPMENT FUNCTION IS NOT INHIBITED. CONSULT WITH YOUR LOCAL GEHC INSTALLATION SPECIALIST REGARDING ACCEPTABILITY OF OTHER CEILING HEIGHTS.
- CHECK ALL DOOR OPENINGS AND HALLWAYS FROM DELIVERY LOCATION TO WHERE EQUIPMENT IS TO BE INSTALLED TO ENSURE THE ROUTE PHYSICALLY AND STRUCTURALLY WILL ACCOMMODATE THE EQUIPMENT AS SHIPPED.
- RADIATION PROTECTION REQUIREMENTS ARE NOT INDICATED ON THIS PLAN. WHERE NEEDED PER NATIONAL OR LOCAL CODE THEY SHALL BE SPECIFIED BY A QUALIFIED RADIOLOGICAL PHYSICIST.
- THE DEVELOPMENT OF THE EQUIPMENT LAYOUT, ROOM DIMENSIONS, MECHANICAL AND ELECTRICAL SUGGESTIONS IS PREDICATED UPON THE BEST INFORMATION OBTAINABLE FROM THE SITE, COUPLED WITH THE CUSTOMER'S KNOWN DESIRES. ARCHITECTURAL OR ELECTRICAL CHANGES INCLUDING RELOCATION OF EQUIPMENT ILLUSTRATED ON THIS DRAWING IS ALLOWED ONLY WITH NOTIFICATION, IN WRITING, AND REVIEW BY GEHC SERVICE DEPARTMENT. EQUIPMENT OPERATION, SERVICEABILITY, AND RESTRICTING CABLE LENGTHS, ETC., MAKE THIS ESSENTIAL FOR A PROPER INSTALLATION. GEHC RESERVES THE RIGHT TO MAKE ON THE JOB CHANGES BECAUSE OF CUSTOMER REQUIREMENTS AND/OR OBSTACLES IN CONSTRUCTION, ETC..
- ALL WORK TO BE IN COMPLIANCE WITH NATIONAL AND LOCAL BUILDING SAFETY CODES.
- DIMENSIONS ARE TO FINISHED SURFACES OF ROOM.

SITE ENVIRONMENT SPECIFICATIONS

- AMBIENT OPERATING TEMPERATURE: 59-89.6 DEG (F) [15-32 (C)] FOR THE CONTROL AND EQUIPMENT AREAS, [59-69.8 DEG (F) [15-24 (C)] FOR THE MAGNET ROOM]. MAXIMUM ALLOWABLE TEMPERATURE CHANGE OF 5 DEG (F)/HR [3 (C)/HR]. MAXIMUM ROOM TEMPERATURE GRADIENT 5 DEG (F) [3 (C)].
- HUMIDITY: 30 TO 75 (30-80 FOR THE MAGNET ROOM) PERCENT NON-CONDENSING. MAXIMUM ALLOWABLE CHANGE OF 5 PERCENT/HOUR.
- ALTITUDE: 100 FT [30.5M] BELOW SEA LEVEL TO 11,808 FT [3600M] ABOVE SEA LEVEL.
- ENVIRONMENTAL RESTRICTIONS ABOVE MUST NOT BE EXCEEDED FOR THE ELECTRONICS.
- DO NOT RESTRICT THE AIR INTAKE OR AIR EXHAUST OF THE SYSTEM COMPONENTS.
- ENVIRONMENTAL CONDITIONS LISTED ABOVE MUST BE MAINTAINED AT ALL TIMES INCLUDING FOR EXAMPLE OVERNIGHT, WEEKENDS, AND HOLIDAYS.
- THE SHIELD COOLER COMPRESSOR CABINET REQUIRES WATER COOLING TO DISSIPATE THE HEAT OUTPUT. HEAT DISSIPATION TO AIR IS NEGLIGIBLE. 24 HOUR POWER AND WATER COOLING MUST BE AVAILABLE UPON MAGNET DELIVERY.
- CRYOGEN VENTING AND MAGNET ROOM EXHAUST FAN SYSTEMS MUST BE COMPLETED IN THE MAGNET ROOM PRIOR TO DELIVERY.
- FLUORESCENT LIGHTING IS NOT ALLOWED IN THE MAGNET ROOM DUE TO RF NOISE.

MAGNETIC INTERFERENCE SPECIFICATIONS

- THE CUSTOMER MUST ESTABLISH PROTOCOLS TO PREVENT PERSONS WITH CARDIAC PACEMAKERS, NEUROSTIMULATORS, AND BIOSTIMULATION DEVICES FROM ENTERING MAGNETIC FIELDS OF GREATER THAN 5 GAUSS (EXCLUSION ZONE).
- MAIN POWER TRANSFORMERS MUST REMAIN OUTSIDE THE 3 GAUSS FIELD.
- POTENTIAL EXISTS UNDER FAULT CONDITIONS THAT THE 5 GAUSS LINE MAY EXPAND RADIALLY TO 16.4 FT. (5.0 M) AND AXIALLY TO 22.96 FT. (7.0 M) FOR 2 SECONDS OR LESS. IT SHOULD BE NOTED THAT NORMAL RAMPDOWNS OR MRU (MAGNET RUNDOWN UNIT) INITIATED QUENCHES WILL NOT CAUSE THE MAGNETIC FIELD TO EXPAND.
- IT IS RECOMMENDED EVERY SITE CONSIDER THE EVENT OF A QUENCH AND PLAN ACCORDINGLY (SUCH AS PLACING 5 GAUSS WARNING SIGNS AT EXPANDED LOCATIONS).
- THE FERRROUS METAL OBJECTS LISTED BELOW MUST NOT MOVE INTO OR INSIDE OF THE MOVING METAL SENSITIVITY LINE DURING SCANS.

TYPICAL MOVING MAGNETIC MASS	DISTANCE RADIALLY	DISTANCE AXIALLY
CARTS, GURNEYS 100-400 lbs [45-182 kg]	3 GAUSS LINE	3 GAUSS LINE
FORKLIFTS, SMALL ELEVATOR, CARS, MINIVANS, VANS, PICKUP TRUCKS, AMBULANCES (OBJECTS GREATER THAN 400 lbs [182 kg])	15.5 ft. [4.72 m]	21.0 ft. [6.4 m]
BUSES AND TRUCKS (DUMP, TRACTOR TRAILER, UTILITY, FIRE TRUCKS)	18.1 ft. [5.52 m]	24.5 ft. [7.47 m]

Drawn by: Paul Merchen Octel no.: 3204579
GE Installation
Project Manager: JIM DOMBROSKI
Telephone no.: 603-934-3739

GE Healthcare Technologies
Installation Services Design Center
Milwaukee, Wisconsin

SHEET TITLE: EQUIPMENT LAYOUT
MODALITY TYPE: 1.5T SIGNA HDX

THIS PLAN IS SUBMITTED TO SUGGEST LOCATION OF GE HEALTHCARE EQUIPMENT AND ASSOCIATED APPARATUS. ELECTRICAL WIRING DETAILS AND ROOM ARRANGEMENTS IN PREPARING THIS PLAN, EVERY EFFORT HAS BEEN MADE TO CONFORM TO THE ACTUAL CONSTRUCTION PURPOSES. HOWEVER, AND THE COMPANY CAN NOT ACCEPT RESPONSIBILITY FOR ANY DAMAGES RESULTING THEREFROM.

PROJECT TITLE:
**MERCY HOSPITAL
FORE RIVER
PORTLAND, MAINE**

PROJECT: 065904
REVISION: 00

DATE: 10/4/06
DRAWN BY: PMM
CHECKED BY: PMM
QUOTE NO: KX1CB7
QT. DATE: 9/25/06

REVISION HISTORY:

SHEET
A1