

# HITACHI

## MEDICAL SYSTEMS, INC.

### AIRIS MRI SUITE

#### GENERAL NOTES

- ALL SPECIFICATIONS AND SPACE REQUIREMENTS ARE SHOWN GENERICALLY. CONTACT GAMMA TECH, INC. FOR SPECIFIC REQUIREMENTS PERTAINING TO OPTIONAL EQUIPMENT COMPONENTS AND ADDITIONAL ROOM PREPARATION SPECIFICATIONS.
- RECOMMENDED FINISHED CEILING HEIGHT IS 8'-0". MINIMUM FINISHED CEILING HEIGHT IS 7'-6".
- AMBIENT ROOM TEMPERATURE: 68° TO 82° F. RELATIVE HUMIDITY: 45% TO 80% (NON-CONDENSING). ALLOWABLE TEMPERATURE CHANGE: 3°F PER HOUR
- MAIN INCOMING POWER SUPPLY: DEDICATED: 200-240 VAC ±10%, 60Hz ±1%, 60Hz (±1%); SINGLE PHASE; 8KVA (40 AMP)

#### © PLANNING DIVISION

FILE NAME:  
HITACHI AIRIS

REVISION DATE:  
07.16.2008

#### NOTES

- 5 GAUSS FIELD TO BE TOTALLY CONTAINED WITHIN SUITE
- PROXIMITY TO BUILDING EXTERIORS FOR EASE OF SYSTEM DELIVERY.
- SUFFICIENT AREA FOR SERVICE ACCESS TO ALL EQUIPMENT.
- CONVENIENCE OUTLETS LOCATED THROUGHOUT SUITE
- TRANSFORMER, UPS UNIT AND LASER IMAGER CAN ALL BE PLACED AT REMOTE LOCATIONS.
- CLOSE PROXIMITY TO LARGE MOVING FERROMAGNETIC OBJECTS (SUCH AS ELEVATORS, TRUCKS, TRAINS, ETC.) OR ELECTRICAL SERVICE MAY ADVERSELY AFFECT IMAGE QUALITY.

## EQUIPMENT SCHEDULE

### EQUIPMENT IDENTIFICATION NUMBER

ID	BTU / HOUR	DESCRIPTION	WEIGHT (LBS.)					
			DIMENSIONS (IN.)					
			W	x	D	x	H	
1	1706	HITACHI AIRIS M.R.I. GANTRY	108.00	71.00	77.00			34615
2	120	HITACHI AIRIS M.R.I. PATIENT TABLE	33.00	93.00	36.00			882
3	3254	HITACHI AIRIS M.R.I. OPERATOR'S CONSOLE	44.00	34.00	53.00			662
4	3770	HITACHI AIRIS M.R.I. ELECTRONICS CABINET	36.00	22.00	69.00			926
5	N/A	HITACHI AIRIS M.R.I. FILTER BOX #1	27.00	6-20.00	45.00			133

#### MAGNET PLACEMENT

THE INTERSECTION OF THE MAGNET'S STRAY FIELD WITH THE SURROUNDING AREAS IS OF PRIME CONCERN WHEN SELECTING AN MR SITE. CONSIDERATION SHOULD BE GIVEN TO THE FOLLOWING WHEN SELECTING A SITE:

- USE OF THE SURROUNDING AREA; SPACE ABOVE, BELOW AND AROUND THE MAGNET.
- TYPE OF CONSTRUCTION MATERIALS USED IN EXISTING STRUCTURES, PARTICULARLY I-BEAMS, JOISTS, REINFORCEMENT STEEL, AND CAST IRON PIPES.
- LOCATION OF MECHANICAL EQUIPMENT AND OTHER MEDICAL EQUIPMENT.
- LOCATION OF ELEVATORS AND ELECTRICAL CLOSETS.

#### MAGNET SHIMMING

ONCE THE MR SYSTEM IS INSTALLED, THE MAGNETIC FIELD IS SHIMMED TO COUNTERACT THE EFFECTS OF FERROMAGNETIC OBJECTS AROUND THE MAGNET. STEEL EQUIPMENT, STEEL OFFICE FURNITURE OR OTHER LARGE FERROUS OBJECTS LOCATED NEAR THE MR SUITE SHOULD NOT BE MOVED ONCE THE MAGNET IS SHIMMED. INTRODUCING FERROMAGNETIC OBJECTS INTO THE MAGNETIC FIELD AFTER THE SYSTEM IS SHIMMED WILL CAUSE FIELD INHOMOGENEITY.

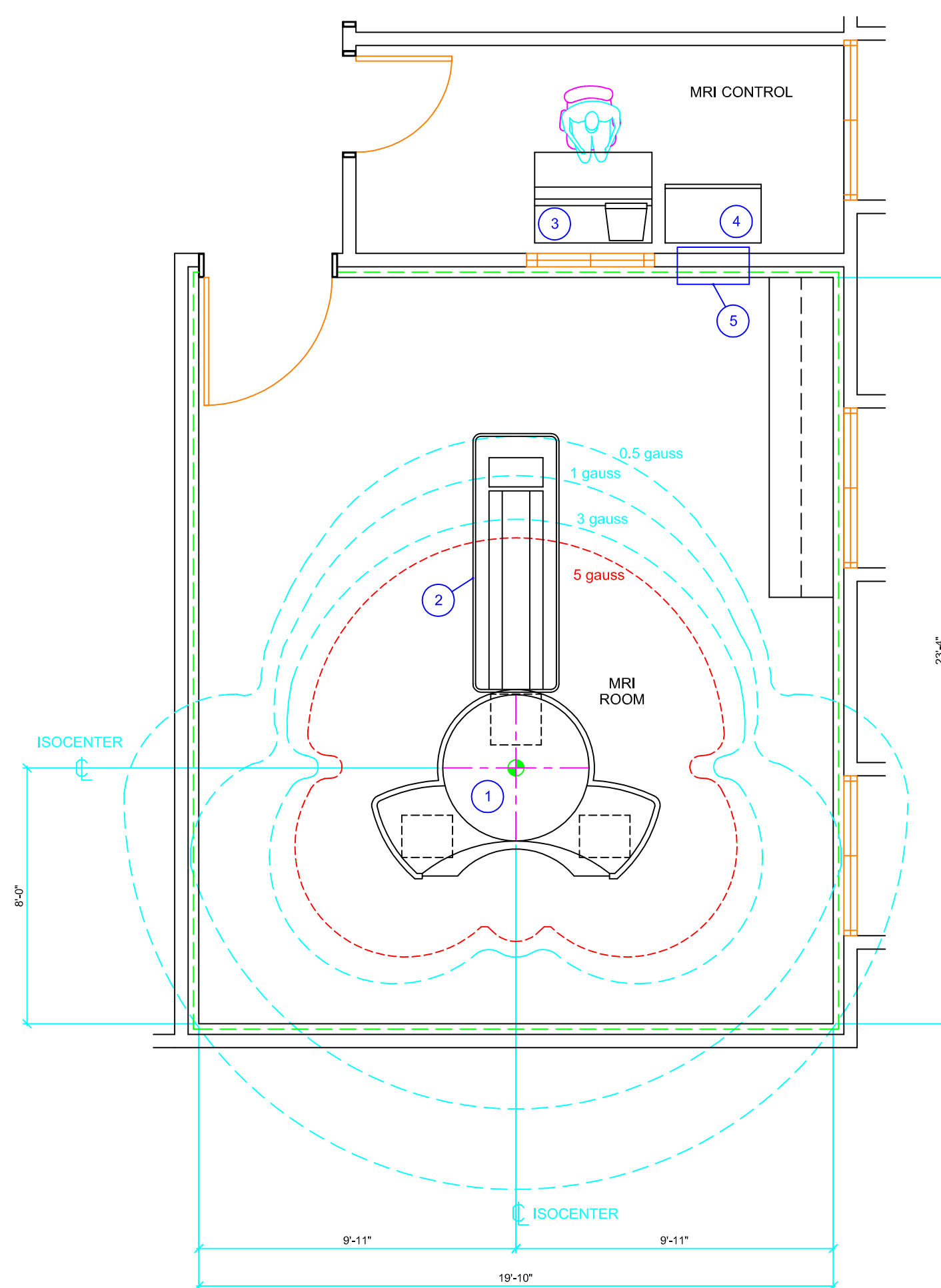
#### EFFECTS OF THE FIELD ON LOOSE OBJECTS

ATTRACTION OF LOOSE FERROMAGNETIC OBJECTS IS OF CONCERN CLOSE TO THE MAGNET. IN THE MAGNET ROOM, THE MAGNET'S FIELD STRENGTH IS CAPABLE OF ACCELERATING UNRESTRAINED FERROMAGNETIC OBJECTS. THE GREATER THE MASS OF THE OBJECT, AND THE CLOSER IT IS TO THE MAGNET, THE STRONGER THE ATTRACTION. NEAR THE MAGNET HUMAN STRENGTH MAY BE INSUFFICIENT TO RESTRAIN LARGE FERROMAGNETIC OBJECTS SUCH AS OXYGEN CYLINDERS AND CRASH CARTS. IF LOOSE, SUCH OBJECTS WILL BE DRAWN INTO (OR ONTO) THE MAGNET, CAUSING INJURY TO PERSONS AND DAMAGE TO THE MAGNET. SUCH OBJECTS MUST NOT BE ALLOWED INTO THE MAGNET ROOM.

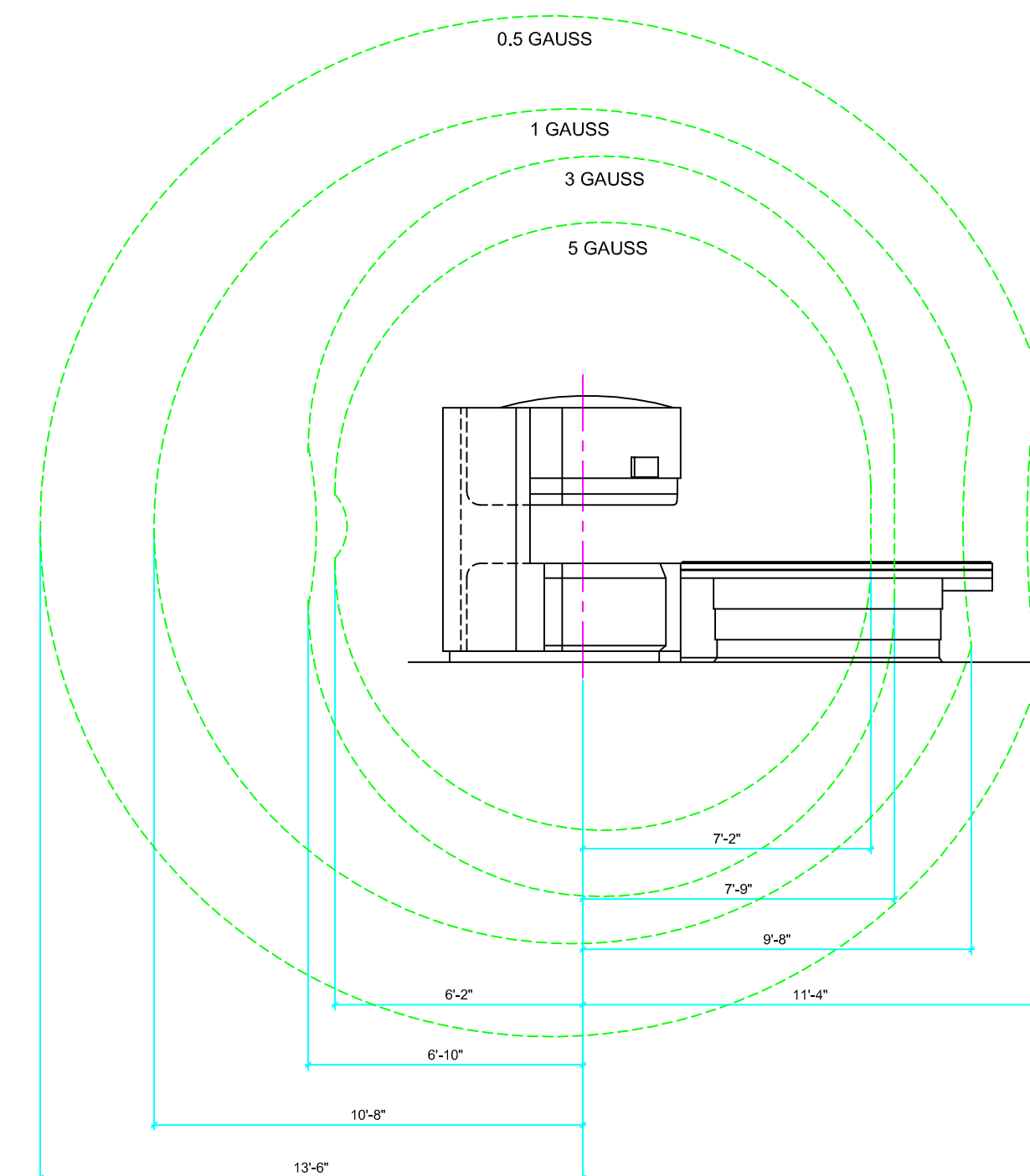
#### EFFECTS OF MRI SYSTEM ON SURROUNDINGS

A MAGNETIC FIELD TEST MUST BE PERFORMED AT ALL SITES TO CHECK FOR OUTSIDE INTERFERENCE. A SITE CANNOT BE FULLY APPROVED WITHOUT THIS TEST.

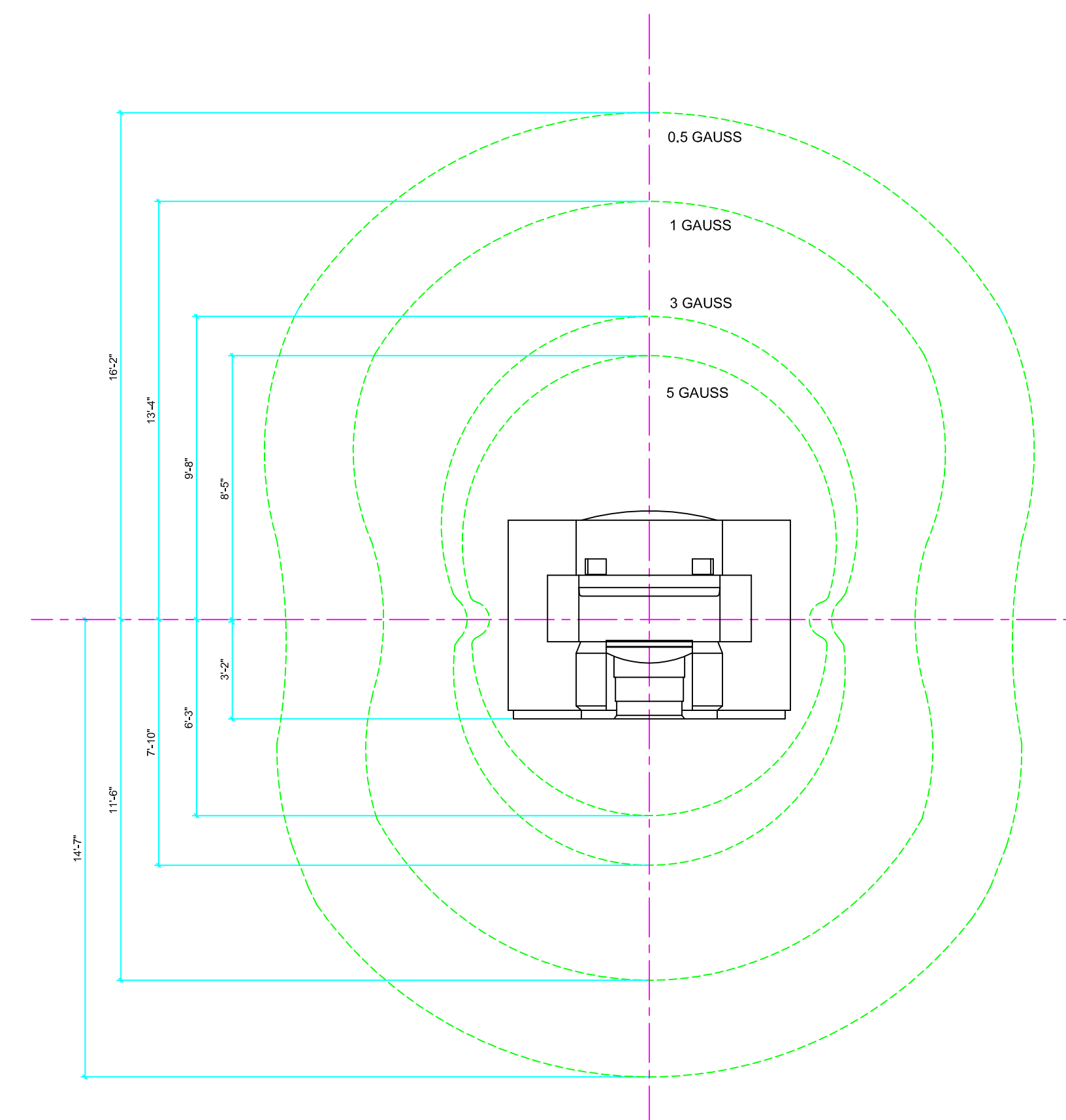
NOTE: FDA REQUIREMENTS STRICTLY PROHIBIT PUBLIC ACCESS WITHIN THE 5 GAUSS FIELD.



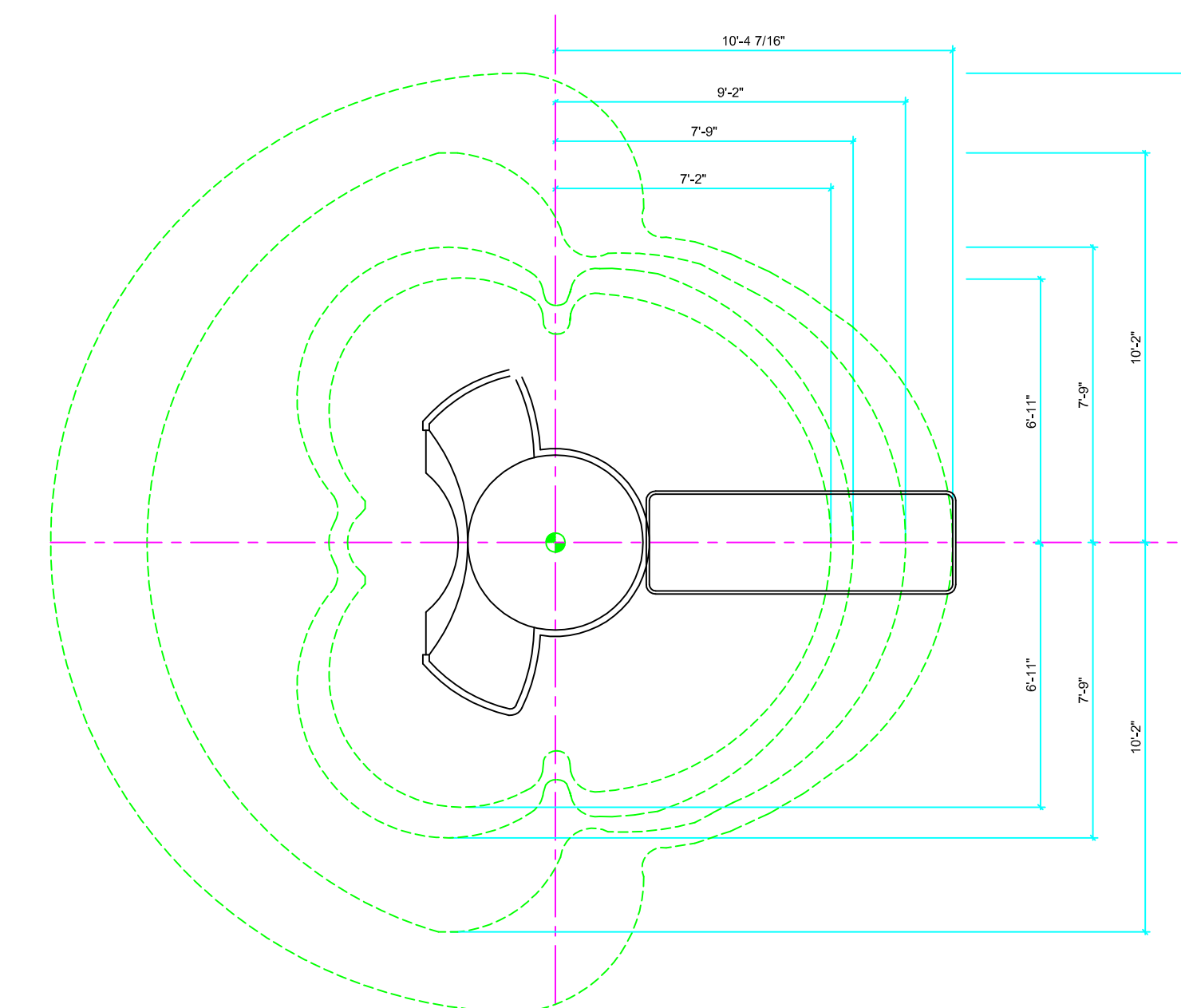
TYPICAL EQUIPMENT LAYOUT



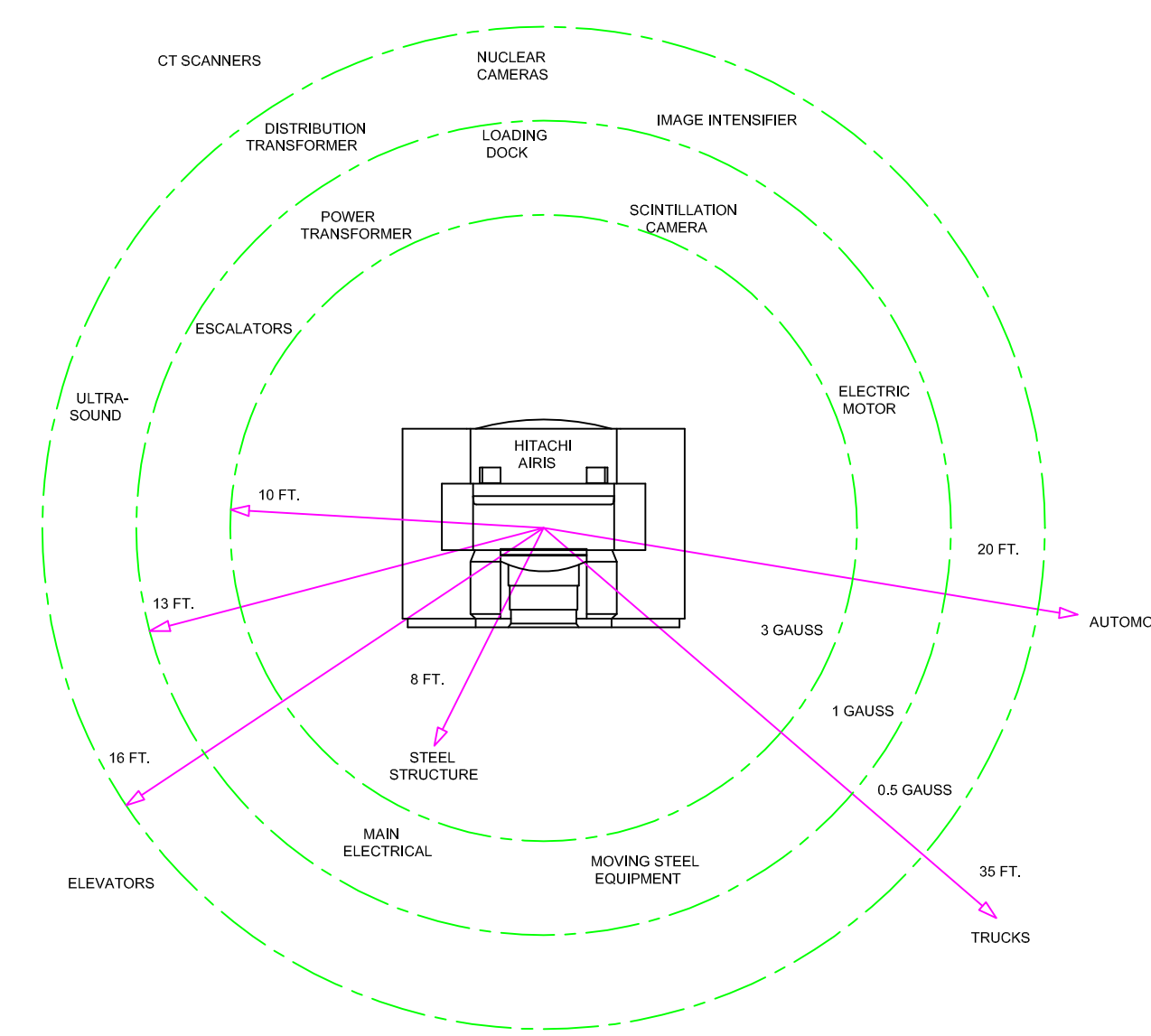
SIDE ELEVATION



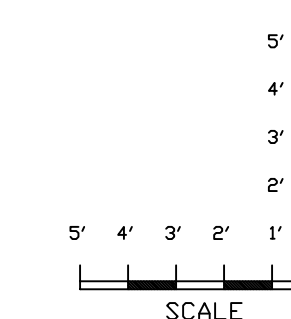
ELEVATION



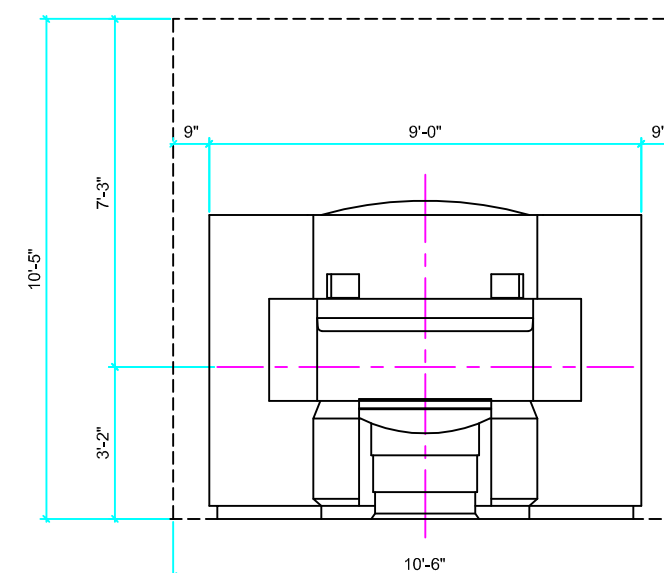
PLAN VIEW



(NOT TO SCALE)



LARGE FERROMAGNETIC COMPONENTS ARE PROHIBITED IN THE AREA DEPICTED BELOW.



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