

Drawing Index

These sheets are a document set and should not be separated. Electrical information and references are contained on all sheets.

| | |
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These equipment IS drawings indicate the placement and interconnection of the listed equipment components. These drawings are not construction or site preparation drawings. Customer remains ultimately responsible for preparing the site to accommodate the IS and operation of such equipment in compliance with GE Healthcare's written specifications and all applicable federal, state, and/or local requirements.

* REQUIRED REFERENCE *

Signa 1.5T HDe
Pre Installation Manual
5143464

A mandatory component of this drawing set is the GE Healthcare Pre Installation manual. Failure to reference the preIS manual will result in incomplete documentation required for site design and preparation.

Pre Installation documents for GE Healthcare products can be accessed on the web at:

www.gehealthcare.com/siteplanning

GE Healthcare



MRi Site Planning



imagination at work

Customer Site Readiness Requirements

- 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. Capability for image analysis, 4. Restrooms.
- Provide for refuse removal and disposal (e.g. crates, cartons, packing)
- 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 preinstallation manual for the vibration specification.

GE Equipment Delivery Requirements

The items on the GE Healthcare Site Readiness Checklist are REQUIRED to facilitate equipment delivery to the IS site. Equipment will not be delivered if these requirements are not satisfied.

| GE Healthcare Site Readiness Checklist | | | | | | | |
|--|---|----------------------------|------------------------|---------------------|---|---|---|
| GEHC Global Order # : _____ | | | Customer: _____ | | | | |
| GEHC On-site Representative : _____ | | | MI Supplier: _____ | | | | |
| Name of customer reviewed with : _____ | | | Lead Installer: _____ | | | | |
| GEHC PMI : _____ | | | Phone Number: _____ | | | | |
| Target Site Prep Completion Date: _____ | | | Helper: _____ | | | | |
| The customer is responsible for proper site preparation regardless of any GEHC measurements/inspections/assessments. | | | | | | | |
| <small>For MR Magnet Delivery: Ensure cryogen vents, power for the cooling system and exhaust fan system are installed and operational (0.7T, 1.5T & 3T) and chilled water supply is available 24x7 that meets system cooling equipment requirements. Broadband/phon</small> | | | | | | | |
| Item # | GEHC Minimum Requirements | Storage: Is item ready? | Packing (P in case) | | Verify (Delivery): Is item ready? | Validate (Mech Install): Is item ready? | Comments if "N", please enter in comments or action plan |
| | | | Is this item ready? | Will item be ready? | | | |
| 1 | Equipment installation drawings must match actual room size, equipment placement and must meet clearance requirements. Deviations that meet installation requirements may be red-lined, if allowed by local code. Seismic requirements identified on construct. | | | | | | |
| 2 | Delivery route to installation or storage area meets requirements and has been discussed and scheduled with the customer. Ensure floor protection is discussed, requirements identified, and will be available at time of delivery and installation. | | | | | | |
| 3 | Rooms that will contain equipment, including storage areas, not in scan suite, are dust free. Provisions taken to maintain a dust free room. Room security to prevent unauthorized access and theft has been discussed with customer. The customer is aware of | | | | | | |
| 4 | In room HVAC ductwork and units (in room) must be mechanically installed and dust free. Installation rooms appear to meet environmental conditions (see Further Definitions) and observed issues have been communicated to the customer. If being stored, sto | | | | | | |
| 5 | Ceiling grid is installed. Permanent lighting is installed and operational. Unistrut (or equivalent) location and spacing was measured and is consistent with the requirements of the installation drawings. | | | | | | |
| 6 | Floor is clean and prepared for final floor covering. For MR, CT & Nuc scan rooms, floor levelness was measured and does not exceed tolerances specified in GEHC's applicable PM, and no visible floor surface defects were observed. | | | | | | |
| 7 | Access to a working phone at the facility for emergency use, including MR magnet delivery. | | | | | | |
| 8 | All walls primed (final coat not needed on Day 1). | | | | | | |
| 9 | Mechanical supplier has been provided with a set of equipment installation drawings for reference. For California, permitted construction drawings or PM-specified installation drawings are required. | | | | | | |
| # | Conduit/electrical cable ducting/dividers/ access flooring installed, with the exception of surface-mounted floor ducting. Wiring to the main disconnect panel is installed and compliant with equipment installation drawings or pre-installation manual. | | | | | | |

SHEET TITLE: **SITE READINESS**

MODALITY TYPE: **SIGNA 1.5T HDe - TYPE B**

GE Healthcare

IS Services Design Center

Milwaukee, Wisconsin

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MODALITY TYPE: **SIGNA 1.5T HDe - TYPE B**

GE Healthcare

IS Services Design Center

Milwaukee, Wisconsin

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PROJECT TITLE: **8-202F**

TYPICAL LAYOUT

| PROJECT | REVISION |
|-------------|-----------|
| 8-202F | 03 |
| DATE: | 06.JAN.12 |
| DRAWN BY: | PMM |
| CHECKED BY: | TMS |

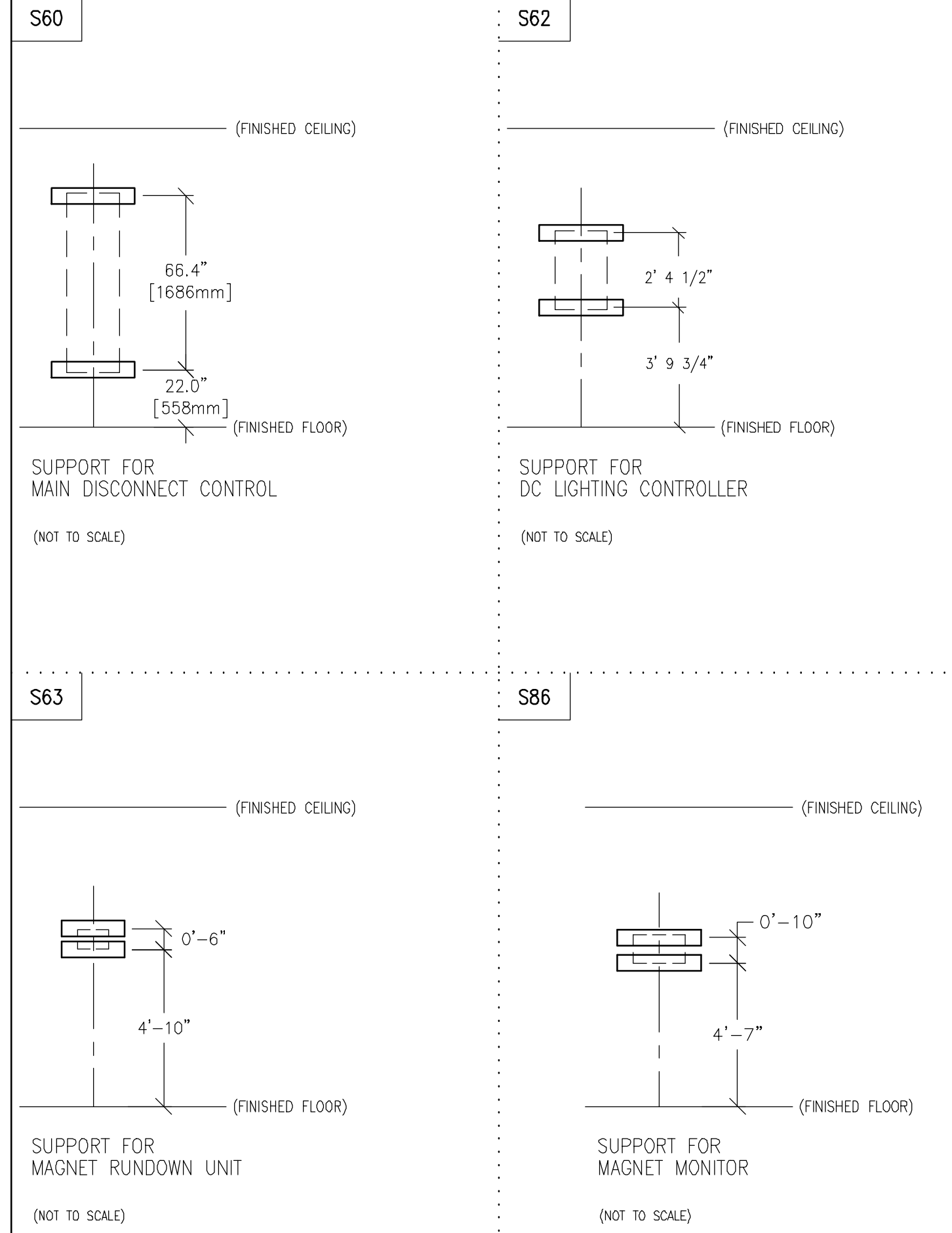
REVISION HISTORY:

SHEET

C1

PIM R7

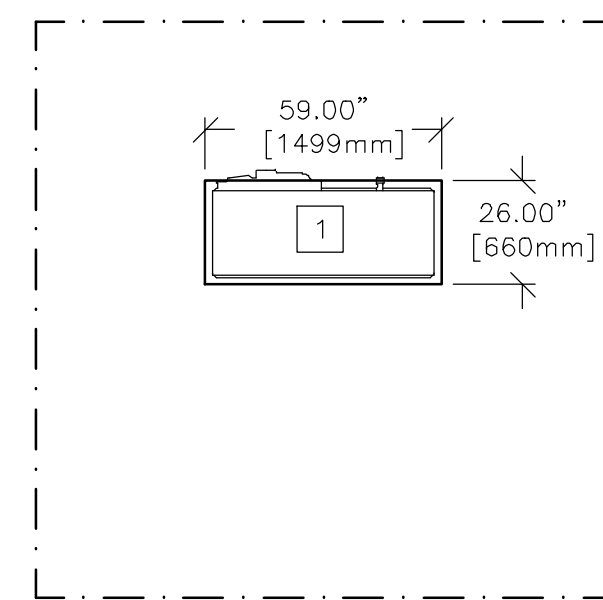
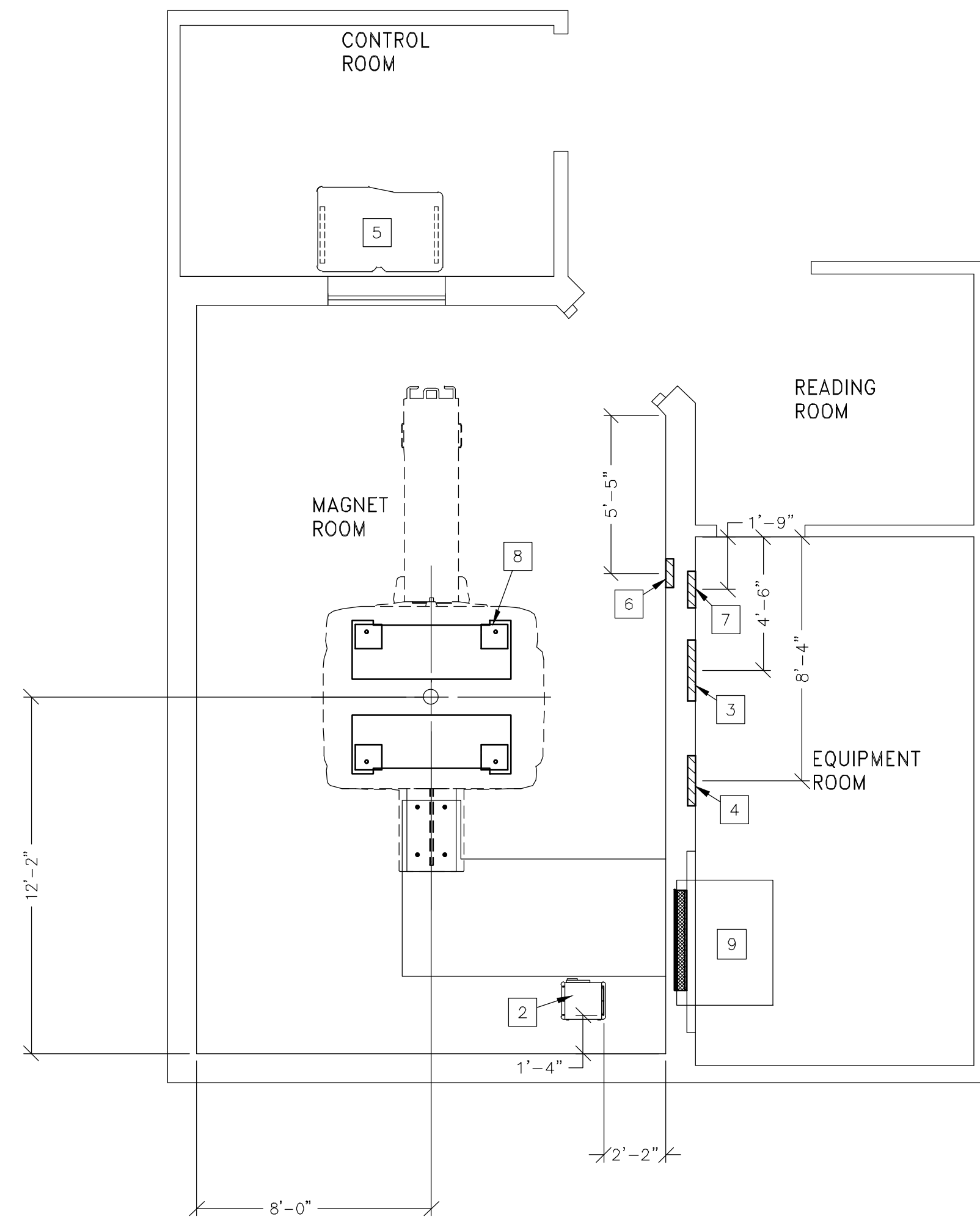
TYPICAL WALL SUPPORT ELEVATIONS



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

STRUCTURAL LAYOUT

RECOMMENDED CEILING HEIGHT = 8'-9"



STRUCTURAL SUPPORT METHODS

CUSTOMER/CONTRACTOR SUPPLIED AND INSTALLED ITEMS

| ITEM NO. | ITEM DESCRIPTION (* INDICATES EXISTING) |
|----------|---|
| 1 | 26 IN. (660 MM) X 59 IN. (1500 MM) CONCRETE PAD WITH A MINIMUM 4 IN. (100 MM) DEPTH AND 2500 PSI IS REQUIRED FOR GROUND LEVEL INSTALLATION. ADDITIONAL CONCRETE DEPTH MAY BE REQUIRED BY LOCAL CODES. THE UNIT MAY ALSO BE ROOF MOUNTED. UNIT MUST BE MOUNTED ON A LEVEL AREA WITH A MAXIMUM DEVIATION IN THE LEVELNESS OF 3/8" OVER 10 FEET (10MM OVER 3050MM). FOR BOLT MOUNTING LOCATIONS SEE DETAIL M30-88T |
| 2 | FLOOR MOUNTING AREA FOR BLOWER BOX. SEE DETAIL M58-1S ON SHEET S2. |
| 3 | SUPPORT BACKING, LOCATE AS SHOWN. REFER TO ELEVATION DETAIL S60, FOR MAIN DISCONNECT CONTROL. |
| 4 | SUPPORT BACKING, LOCATE AS SHOWN. REFER TO ELEVATION DETAIL S62, FOR DC LIGHTING CONTROL. |
| 5 | SEE DETAIL M05-1SF ON SHEET S2 FOR FLOOR MOUNTING OF OPERATOR WORKSPACE. |
| 6 | SUPPORT BACKING, LOCATE AS SHOWN. REFER TO ELEVATION DETAIL S63, FOR MAGNET RUN-DOWN UNIT. |
| 7 | SUPPORT BACKING, LOCATE AS SHOWN. REFER TO ELEVATION DETAIL S86, FOR MAGNET MONITOR. |
| 8 | MAGNET FLOOR MOUNTING, SEE DETAIL M6615A2 ON SHEET S2 FOR MORE INFORMATION. |
| 9 | AREA OF FLOOR LEVELNESS FOR SYSTEMS CABINET FLOOR SLOPE $\le 1/100$ DEG FLOOR SURFACE +/ - 5MM FLOOR AREA MUST BE HARD. |

STRUCTURAL NOTES

- 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 AND DETAIL SHEETS FOR SUGGESTED LOCATIONS AND MOUNTING HOLE LOCATIONS.
- DIMENSIONS ARE TO FINISHED SURFACES OF ROOM.
- CERTAIN MR PROCEDURES REQUIRE AN EXTREMELY STABLE ENVIRONMENT TO ACHIEVE HIGH RESOLUTION IMAGE QUALITY. VIBRATION IS KNOWN TO INTRODUCE FIELD INSTABILITIES INTO THE IMAGING SYSTEM. THE VIBRATION EFFECTS ON IMAGE QUALITY CAN BE MINIMIZED DURING THE INITIAL SITE PLANNING OF THE MR SUITE BY MINIMIZING THE VIBRATION ENVIRONMENT. SEE MOUNTING DETAIL ON SHEET S2 FOR ADDITIONAL INFORMATION.
- STANDARD STEEL STUDS, NAILS, SCREWS, CONDUIT, PIPING, DRAINS AND OTHER HARDWARE ARE ACCEPTABLE IF PROPERLY SECURED. ANY LOOSE STEEL OBJECTS CAN BE VIOLENTLY ACCELERATED INTO THE BORE OF THE MAGNET. CAREFUL THOUGHT SHOULD BE GIVEN TO THE SELECTION OF LIGHT FIXTURES, CABINETS, WALL DECORATIONS, ETC. TO MINIMIZE THIS POTENTIAL HAZARD. FOR SAFETY, ALL REMOVABLE ITEMS WITHIN THE MAGNET ROOM SUCH AS FAUCET HANDLES, DRAIN COVERS, SWITCH BOX COVER PLATES, LIGHT FIXTURE COMPONENTS, MOUNTING SCREWS, ETC. MUST BE NON-MAGNETIC. IF YOU HAVE A SPECIFIC QUESTION ABOUT MATERIAL, BRING IT TO THE ATTENTION OF YOUR GE PROJECT MANAGER OF INSTALLATIONS.
- FLOOR LEVELNESS IN THE MAGNET ROOM SHOULD NOT EXCEED 0.125 in. (3.1 mm) WHEN MEASURING BETWEEN DEPRESSIONS AND HIGH SPOTS OVER ANY 120 in. (3048 mm) DISTANCE WITHIN THE 87.5 in. (2178 mm) BY 139.3 in. (3539 mm) AREA OF THE MAGNET ENCLOSURE AND THE AREA IN FRONT OF THE ENCLOSURE. THIS FLOOR LEVELNESS REQUIREMENT IS IMPORATANT FOR ACCURATE PATIENT TABLE DOCKING.
- NON-MOVABLE STEEL SUCH AS WALL STUDS OR HVAC COMPONENTS WILL PRODUCE NEGLIGIBLE EFFECT ON THE ACTIVE SHIELD MAGNET.
- 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.
- CUSTOMERS CONTRACTOR TO PROVIDE AND INSTALL APPROPRIATE SUPPORTS FOR THE STORAGE OF EXCESS CABLES.

GE Healthcare
IS Services Design Center
Milwaukee, Wisconsin

SHEET TITLE: STRUCTURAL LAYOUT
MODALITY TYPE: SIGMA 1.5T Hde - TYPE B
w/ EQUIPMENT ROOM COOLING
THIS PLAN IS SUBMITTED TO SUGGEST LOCATION OF GE HEALTHCARE EQUIPMENT AND ASSOCIATED APPARATUS, ELECTRICAL WIRING DETAILS AND ROOM ARRANGEMENTS. THE CUSTOMER OR HIS CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION OF ALL EXISTING AND NEW UTILITIES AND FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS PRIOR TO ACTUAL CONSTRUCTION. GE HEALTHCARE ACCEPTS NO LIABILITY FOR ANY DAMAGES RESULTING THEREFROM.

PROJECT TITLE:
8-202F
TYPICAL LAYOUT

| PROJECT | REVISION |
|---------|----------|
| 8-202F | 03 |

DATE: 06.JAN.12
DRAWN BY: PMM
CHECKED BY: TMS

REVISION HISTORY:

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SHEET
S1

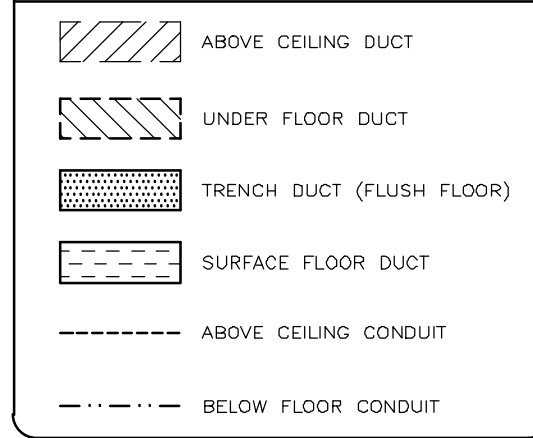
SCALE: 1/4" = 1'-0"

ELECTRICAL PLAN

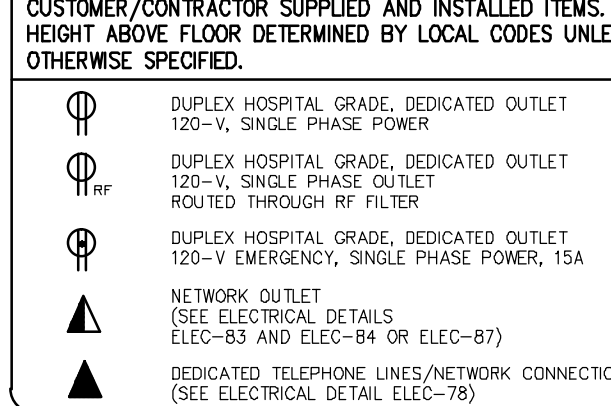
RECOMMENDED CEILING HEIGHT = 8'-9"

JUNCTION POINT DESCRIPTIONS

DUCT HATCHING LEGEND



ELECTRICAL OUTLET LEGEND



FEEDER TABLE - SIGNA HDE (w/EQUIPMENT ROOM + MRCC)

* CALCULATIONS BASED UPON NOMINAL VOLTAGE, WIRE SIZE IN AWG.
 * RECOMMENDED FEEDER SIZES FROM DIST. TRANS. TO WDR. ALL CALCULATIONS BASED UPON A 20 FT. [6.1m] RUN FROM MDP TO PD USING NO.2 AWG [38.50 mm].
 * THE GROUNDING CONDUCTOR () SHALL BE COPPER AND WILL RUN IN THE SAME CONDUIT AS THE FEEDERS FROM EQUIPMENT BACK TO THE ROOM POWER SOURCE GROUNDING POINT.
 * IF THE GENERAL ELECTRIC EQUIPMENT IS BEING FED BY A DELTA SECONDARY, IT IS RECOMMENDED THAT THE B PHASE ON THE SECONDARY BE CONNECTED TO GROUND TO PREVENT DAMAGE TO THE SYSTEM.
 * NEUTRAL MUST BE TERMINATED PRIOR TO OR INSIDE THE MAIN DISCONNECT PANEL AND NOT BROUGHT INTO THE POWER DISTRIBUTION UNIT.
 * FOR A FULL SYSTEM UPS REFER TO ELECTRICAL DETAILS FOR UPS FEEDER WIRES.
 * THE MAXIMUM POWER DEMAND FOR THE OUTDOOR MRCC WAS USED FOR THESE CALCULATIONS. IF SO DESIRED, THE CUSTOMER'S CONTRACTOR CAN DETERMINE EXACT SIZES BASED UPON MAXIMUM DEMAND FOR THE COOLING SYSTEM TO BE INSTALLED FROM THE TABLE IN POWER SPECIFICATIONS.

| RUN LENGTH IN FEET | POWER SUPPLY VOLTAGE | | | | | | | |
|--------------------|----------------------|--------|----------------|--------|----------------|--------|----------------|--------|
| | 342-418 380 | | 380-440 400 | | 374-456 415 | | 432-528 480 | |
| | FEEDER | GROUND | FEEDER | GROUND | FEEDER | GROUND | FEEDER | GROUND |
| 100 | 1/0 | 6 | 1/0 | 6 | 1/0 | 6 | 1/0 | 6 |
| 150 | 1/0 | 6 | 1/0 | 6 | 1/0 | 6 | 1/0 | 6 |
| 200 | 1/0 | 6 | 1/0 | 6 | 1/0 | 6 | 1/0 | 6 |
| 250 | 1/0 | 6 | 1/0 | 6 | 1/0 | 6 | 1/0 | 6 |
| 300 | 1/0 | 6 | 1/0 | 6 | 1/0 | 6 | 1/0 | 6 |
| 350 | 2/0 | 4 | 1/0 | 6 | 1/0 | 6 | 1/0 | 6 |
| 400 | 3/0 | 4 | 2/0 | 4 | 2/0 | 4 | 1/0 | 6 |
| 450 | 3/0 | 4 | 2/0 | 4 | 2/0 | 4 | 1/0 | 6 |

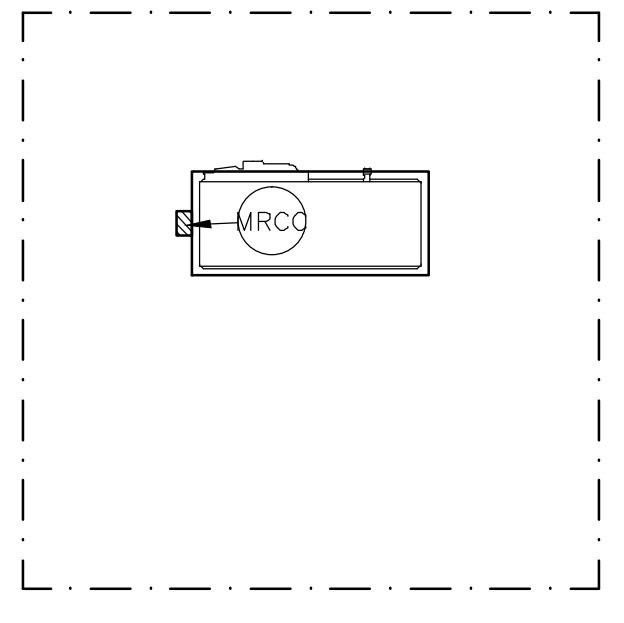
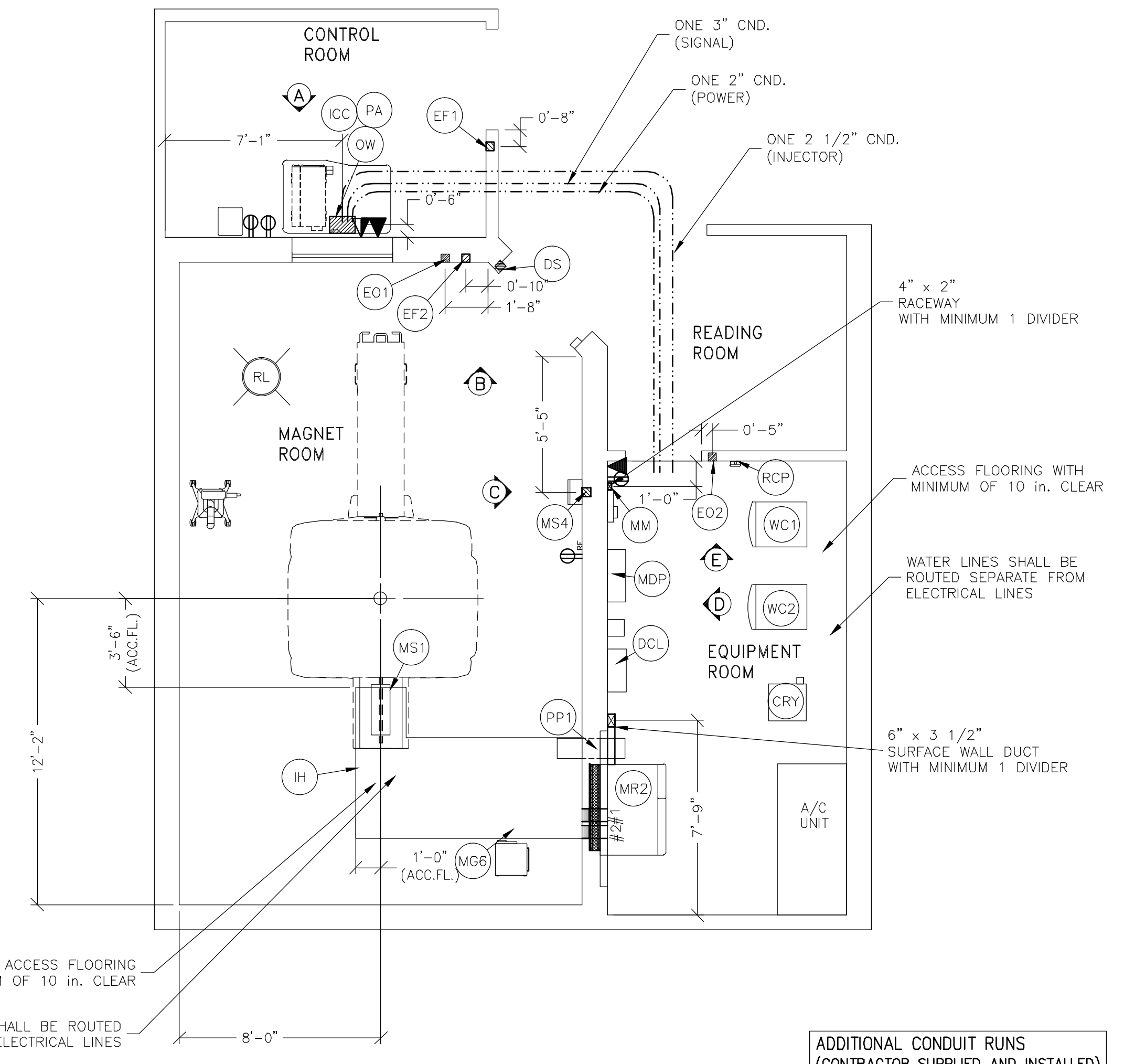
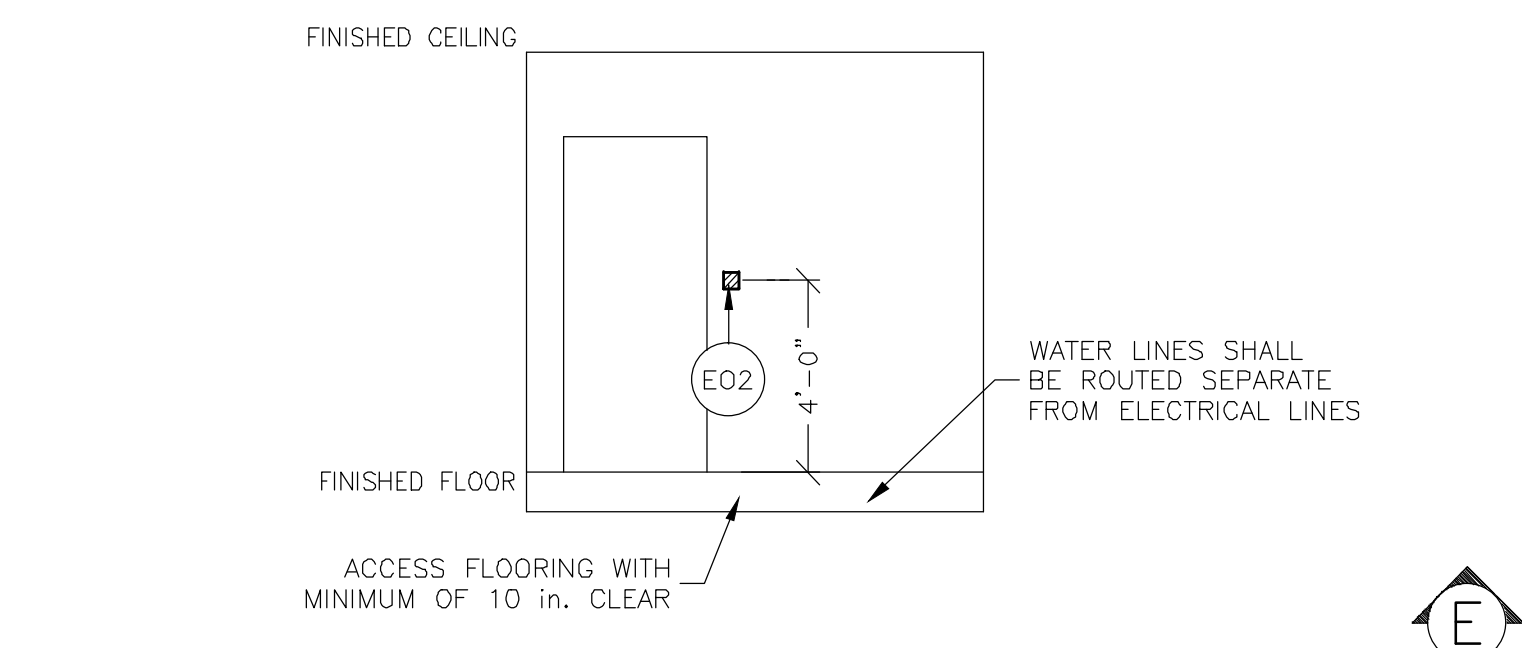
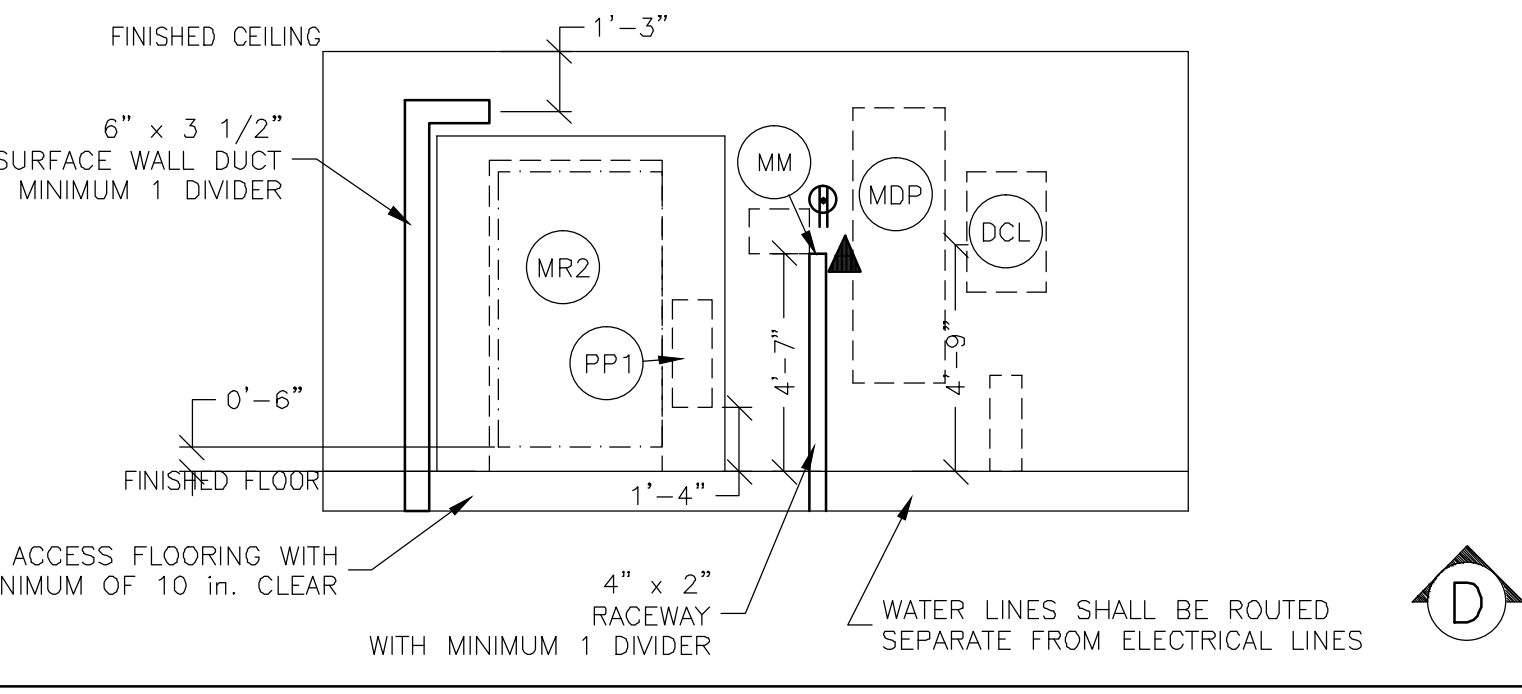
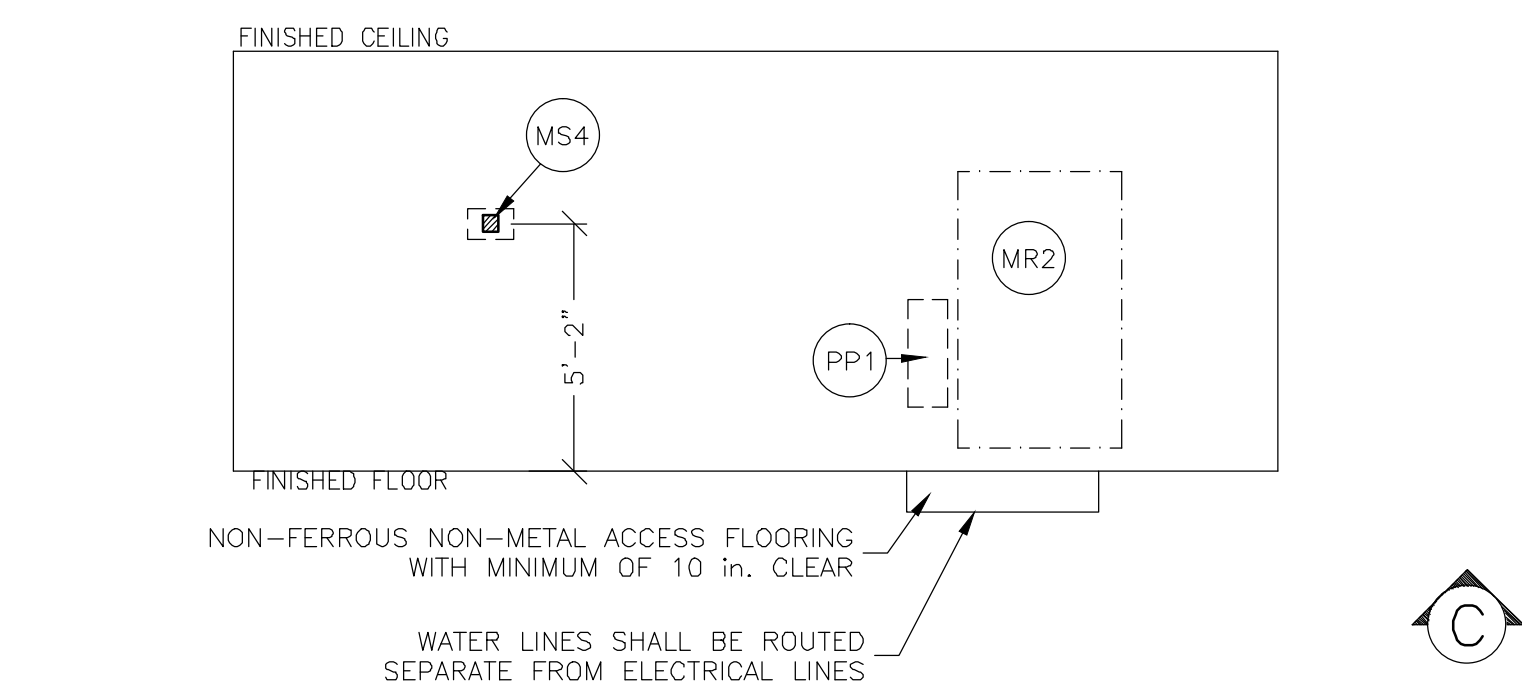
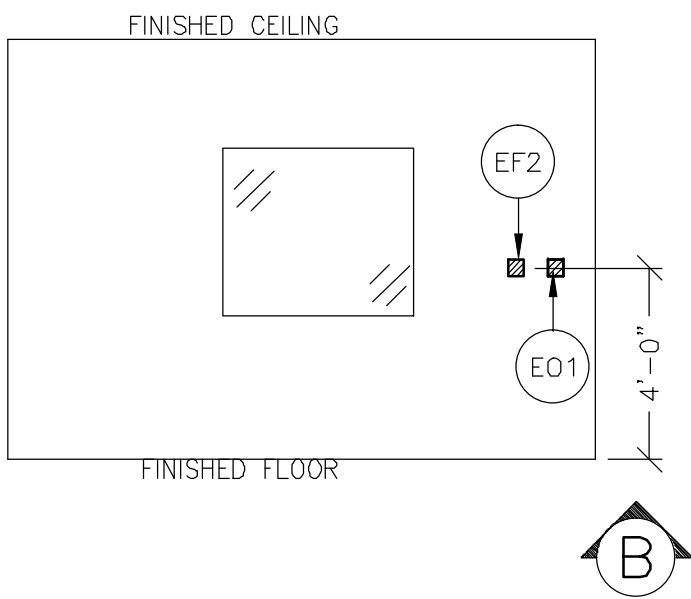
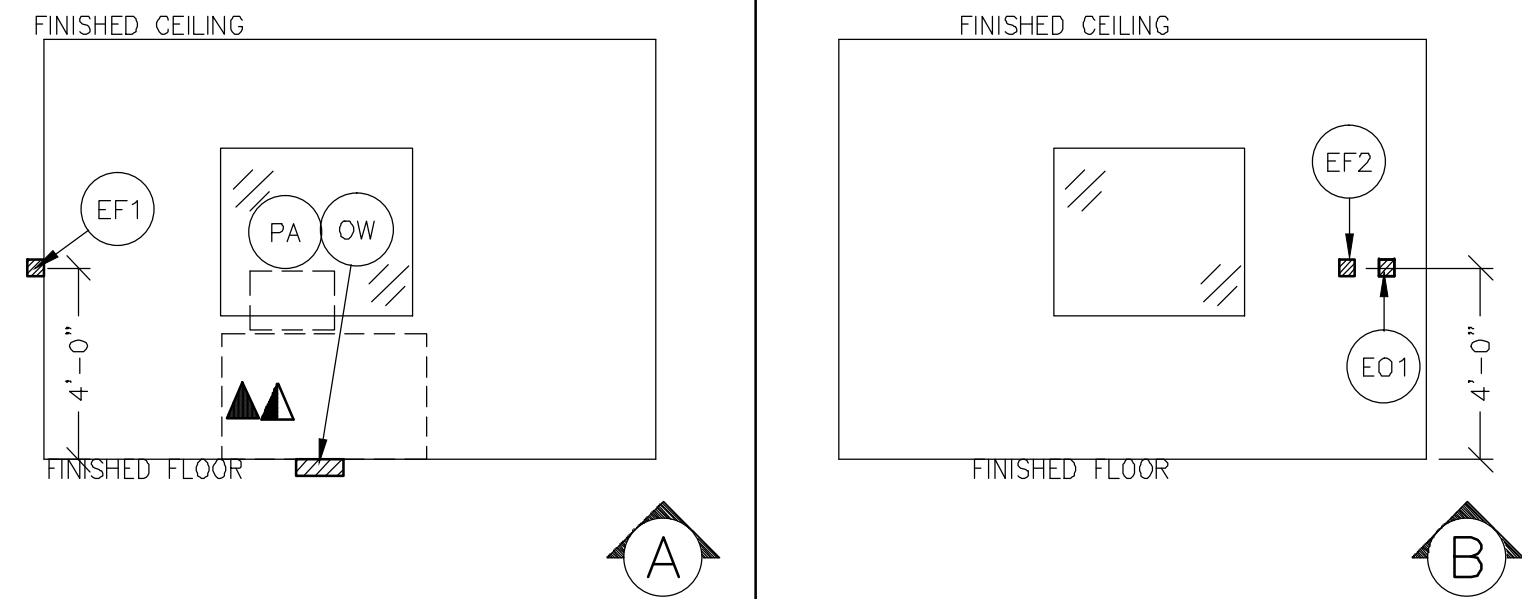
REV. DATE: 09/24/08

JUNCTION POINT NOTES

- ALL JUNCTION BOXES, CONDUIT, DUCT, DUCT DIVIDERS, SWITCHES, CIRCUIT BREAKERS, ETC., ARE TO BE SUPPLIED AND INSTALLED BY CUSTOMER'S ELECTRICAL CONTRACTOR.
- CONDUIT AND DUCT RUNS SHALL HAVE 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:
 - DUCTWORK SHALL BE METAL WITH DIVIDERS AND HAVE REMOVABLE, ACCESSIBLE COVERS.
 - DUCTWORK SHALL BE CERTIFIED/RATED FOR ELECTRICAL POWER PURPOSES.
 - DUCTWORK SHALL BE ELECTRICALLY AND MECHANICALLY BONDED TOGETHER IN AN APPROVED MANNER.
 - PVC AS A SUBSTITUTE MUST BE USED IN ACCORDANCE WITH ALL LOCAL AND NATIONAL CODES.
- ALL OPENINGS IN ACCESS FLOORING ARE TO BE CUT OUT AND FINISHED OFF WITH GROMMET MATERIAL BY THE CUSTOMER'S CONTRACTOR.
- GENERAL CONTRACTOR TO INSERT PULL CORDS FOR ALL CABLE RUN CONDUITS BETWEEN THE EQUIPMENT ROOM AND THE OPERATORS CONTROL ROOM.
- 10 FOOT PIGTAILS AT ALL JUNCTION POINTS.
- ALL WIRING MUST BE THHN OR TFFN STRANDED COPPER THERMOPLASTIC 600 VOLT OR EQUIVALENT INSULATION. ALUMINUM OR SOLID WIRES ARE NOT ALLOWED.
- GROUNDING IS CRITICAL TO EQUIPMENT FUNCTION AND PATIENT SAFETY. SITE MUST CONFORM TO WIRING SPECIFICATIONS SHOWN ON THIS PLAN.

| POINT | DESCRIPTION | QTY. | HARDWARE | DETAIL NO., SHT. E3 |
|-------|-----------------------------------|------|---|---------------------------------|
| DCL | DC LIGHTING | 1 | SEE DETAILS | ELEC-54 |
| DS | RF DOOR SWITCH | 1 | AVAILABLE FROM GEMSG. CALL 800-558-5102 OR LOCAL GE INSTALLATION PROJECT MGR. | |
| EF1 | RF EXHAUST FAN SWITCH | 1 | SINGLE GANG BOX | ELEC-55 |
| EF2 | RF EXHAUST FAN SWITCH | 1 | RF DOOR SWITCH RATED FOR 24 VOLTS AND 750 MILLIAMPERES, NORMALLY OPEN (OFF) WHEN DOOR IS OPEN | ELEC-55 |
| ED1 | EMERGENCY OFF BUTTON | 1 | SINGLE GANG BOX | ELEC-16 |
| ED2 | EMERGENCY OFF BUTTON | 1 | SINGLE GANG BOX | ELEC-16 |
| ICC | INJECTOR DISPLAY | 1 | SAME ROUTING AS DW | |
| IH | INJECTOR HEAD | 1 | 12 IN. OF GROMMET MATERIAL FOR A 3 X 3 IN. OPENING IN ACCESS FLOOR OR DUCT | ELEC-10 |
| MDP | MAIN DISCONNECT | 1 | 12 IN. GROMMET MATERIAL FOR OPENING IN DUCT OR ACCESS FLOOR | ELEC-10 ELEC-17B ELEC-154 |
| MG6 | BLOWER BOX | 1 | 40 IN. OF GROMMET MATERIAL FOR A 12 X 8 IN. OPENING IN ACCESS FLR | ELEC-10 |
| MM | MAGNET MONITOR | 1 | FITTINGS AS REQUIRED | ELEC-78 |
| MR2 | SYSTEM CONTRL CABINET | 1 | 32 IN. OF GROMMET MATERIAL FOR AN 8 X 8 IN. OPENING IN DUCT COVER | ELEC-5 |
| MRCC | COOLING SYSTEM | 1 | COVERPLATE 1 6 X 6 X 4 IN. BOX 1 10 FT LENGTH OF 3/4 IN. DIA. FLEXIBLE METAL CONDUIT 3 3/4 IN. DIA. BUSHING & LOCKNUT 1 SAFETY SWITCH (IF REQUIRED) | ELEC-8 |
| MS1 | MAGNET | 1 | 66 IN. OF GROMMET MATERIAL FOR A 24 X 9 IN. OPENING IN ACCESS FLR. | ELEC-10 |
| MS4 | MAGNET RUNDOWN UNIT | 1 | COVERPLATE WITH 1 IN. KNOCKOUT 1 4 X 4 IN. BOX | ELEC-8 |
| MS5 | SHIELD COOLER CABINET | 1 | 32 IN. OF GROMMET MATERIAL FOR AN 8 X 8 IN. OPENING IN ACCESS FLOOR | ELEC-6 |
| DW | OPERATOR WORKSPACE | 1 | SPLIT COVERPLATE 1 3 1/2 IN. DIA. CHASE NIPPLE 1 12 IN. X 8 IN. X 6 IN. BOX | ELEC-13 |
| PA | PATIENT ALERT CONTROL BOX | 1 | SAME ROUTING AS DW | |
| PP1 | PENETRATION PANEL | 1 | GROMMET MATERIAL PROVIDED CONNECTION | |
| RCP | REMOTE CONTROL FOR CHILLER SYSTEM | 1 | CONNECT TO CONDUIT USING PROVIDED CONNECTION | |
| RL | MAGNET ROOM LIGHTS | 1 | LOCKNUT 1 BOX AS REQUIRED 1 INCANDESCENT LIGHT FIXTURE | |
| WC1 | WATER CHILLER | 1 | 12 IN. OF GROMMET MATERIAL FOR A 3 X 3 IN. OPENING IN ACCESS FLOOR | ELEC-10 |
| WC2 | COOLING UNIT | 1 | 12 IN. OF GROMMET MATERIAL FOR A 3 X 3 IN. OPENING IN ACCESS FLOOR | ELEC-10 |

NOTE: REFER TO CONDUIT LEGEND FOR ALL ADDITIONAL CONDUITS NOT SHOWN ON DRAWING.



ADDITIONAL CONDUIT RUNS (CONTRACTOR SUPPLIED AND INSTALLED)

| CONDUITS REQUIRED FOR BASE SYSTEM | REVISION DATE: 01/01/08 |
|---------------------------------------|-------------------------|
| MDP TO FEEDER | ONE CND. AS REQ'D |
| MDP TO PD | ONE CND. AS REQ'D |
| MDP TO EO2 | ONE 1/2\" |
| MDP TO MR2 | ONE 3/4\" |
| MDP TO A/C | ONE 1/2\" |
| DS TO MR2 | ONE 3/4\" |
| EO1 TO MR2 | ONE 3/4\" |
| MS4 TO MR2 | ONE 1\" |
| MS4 TO RF FILTER | ONE CND. AS REQ'D |
| RF FILTER TO 120-V 10 POWER | CONDUIT AS REQ'D |
| RL TO RF FILTER | ONE CND. AS REQ'D |
| RF FILTER TO FACILITY EMERGENCY POWER | CONDUIT AS REQ'D |

| CONDUITS REQUIRED FOR MRCC OPTION | REVISION DATE: 01/01/08 |
|-----------------------------------|-------------------------|
| MRCC TO RCP | ONE 3/4\" |
| MRCC TO MDP | CONDUIT AS REQUIRED |

NOTE: SEE E2 PAGE FOR MAXIMUM RUN LENGTHS

CONTRACTOR SUPPLIED AND INSTALLED WIRING (ELECTRICAL CONTRACTOR SHALL RING OUT AND TAG ALL WIRES AT BOTH ENDS.)

| WIRE RUN, FROM - TO | QUANTITY, WIRE SIZE/COLOR |
|-------------------------|---|
| MDP > MRCC | 3-NO. 10 BLACK, 1-NO. 10 GREEN |
| MDP > PD | 3-NO. 2 BLACK, 1-NO. 1/0 GREEN (MAX. 20 FT. [6095MM]) |
| MDP > A/C UNIT | 1-NO. 12 BLACK, 1-NO. 12 WHITE, 1-NO. 12 GREEN |
| MDP > ED2 | 1-BLACK, 1-RED, 1-GREEN - (SIZE AS REQUIRED) |
| 480-V > MDP | 3-BLACK, 1-WHITE, 1-GREEN - REFER TO FEEDER TABLE |
| RF FAN > EF1 | 1-BLACK, 1-WHITE - (SIZE AS REQUIRED) |
| EF1 > EF2 | 1-BLACK, 1-WHITE - (SIZE AS REQUIRED) |
| RF FILTER > MS4 | 1-BLACK, 1-WHITE, 1-GREEN - (SIZE AS REQUIRED) |
| 120-V > RF FILTER | 1-BLACK, 1-WHITE, 1-GREEN - (SIZE AS REQUIRED) |
| RF FILTER > RL | 1-BLACK, 1-WHITE, 1-GREEN - (SIZE AS REQUIRED) |
| CONVERTER > RF FILTER | 1-BLACK, 1-WHITE, 1-GREEN - (SIZE AS REQUIRED) |
| EMERG PWR > CONVERTER | 1-BLACK, 1-WHITE, 1-GREEN - (SIZE AS REQUIRED) |
| RF GND STUD > RF FILTER | 1-GREEN (SIZE AS REQUIRED FOR EACH FILTER) |

SHEET TITLE: ELECTRICAL LAYOUT
MODALITY TYPE: SIGNA 1.5T Hde - TYPE B w/ EQUIPMENT ROOM COOLING

THIS PLAN IS SUBMITTED TO SUGGEST LOCATION OF GE HEALTHCARE EQUIPMENT AND ASSOCIATED APPARATUS, ELECTRICAL WIRING DETAILS AND ROOM ARRANGEMENTS. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL NEW AND EXISTING UTILITIES TO ACTUAL EQUIPMENT PURPOSES. HOWEVER, THE COMPANY CANNOT ACCEPT RESPONSIBILITY FOR ANY DAMAGES RESULTING THEREFROM.

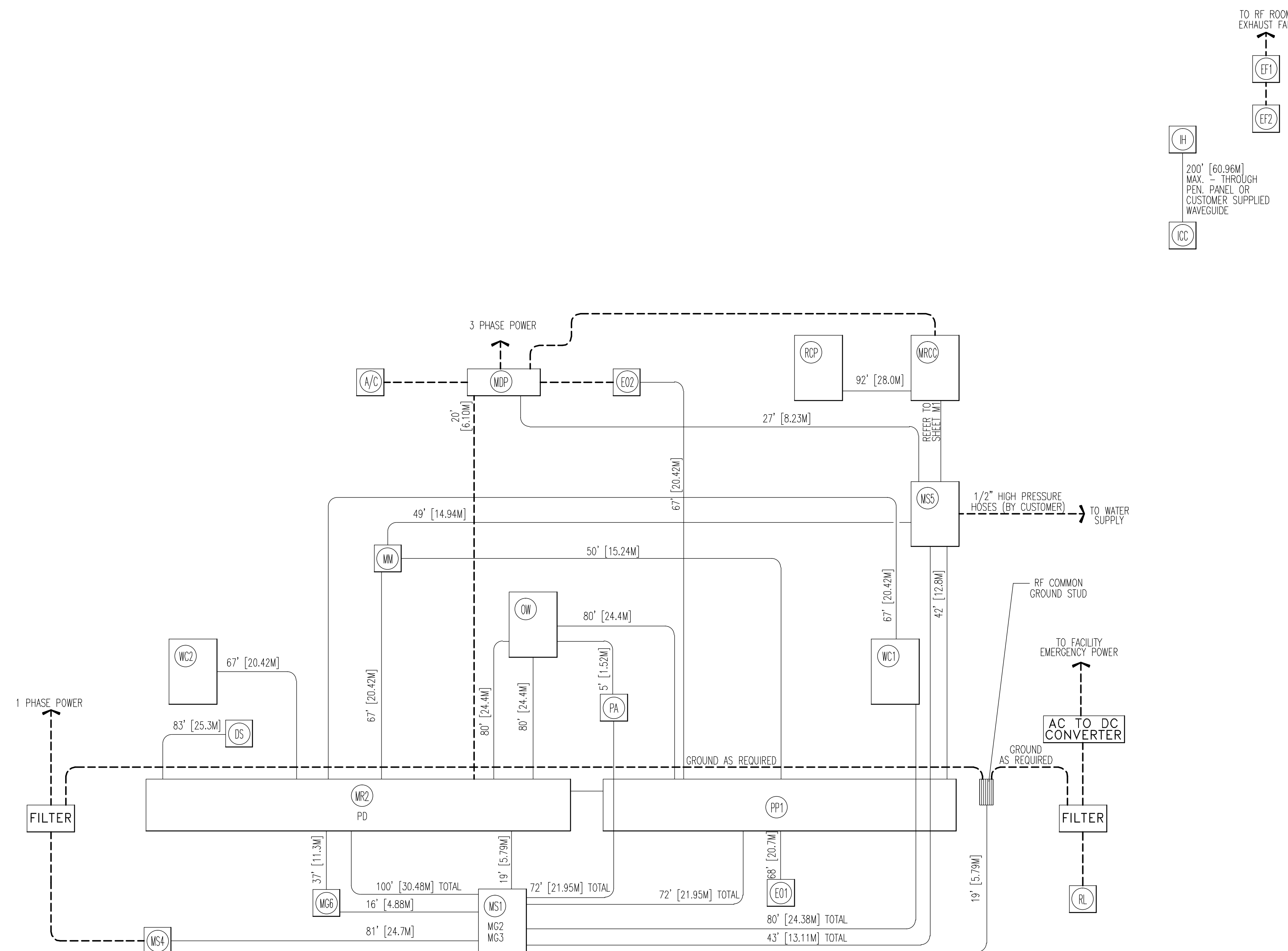
PROJECT TITLE: 8-202F
TYPICAL LAYOUT

PROJECT: 8-202F
REVISION: 03
DATE: 06.JAN.12
DRAWN BY: PMM
CHECKED BY: TMS

REVISION HISTORY:

SHEET E1

INTERCONNECT DIAGRAM



MINIMUM BENDING RADIUS EXISTS FOR CERTAIN CABLE GROUPS. PLEASE REFER TO THE PREINSTALLATION MANUAL FOR SPECIFICATIONS FOR ALL CABLES.

A PARTIAL LIST INCLUDES:
 10" BETWEEN THE MR1 AND PP1
 10" BETWEEN PP1 AND MS1
 8" BETWEEN THE MS5 AND MS1
 7" BETWEEN SYSTEM COOLING CABINET AND MS1.

TO RF ROOM EXHAUST FAN
 EF1
 EF2
 H
 200' [60.96M] MAX. - THROUGH PEN. PANEL OR CUSTOMER SUPPLIED WAVEGUIDE
 ICC

POWER SPECIFICATIONS

SIGNA HDE (WITH EQUIPMENT ROOM w/MRCC)
 (REV. DATE 04/02/08)

VOLTAGE
 PRIMARY SOURCE IS REQUIRED FOR ALL INSTALLATIONS. RANGE OF LINE VOLTAGES: NOMINAL LINE VOLTAGE OF 380 TO 480, 3 PHASE, 50 OR 60 HZ.
 RECOMMENDED POWER SUPPLY: WYE-CONNECTED OR DELTA-CONNECTED (GROUNDED DELTA).

MAXIMUM DAILY VOLTAGE VARIATION MUST FALL WITHIN ONE OF THE RANGES IN TABLE A.

| NOMINAL VOLTAGE | ABSOLUTE RANGE | CURRENT (AMPS) | |
|-----------------|----------------|----------------|------------|
| | | MAX MOMENTARY | CONTINUOUS |
| 380 | 342-418 | 91 | 83 |
| 400 | 360-440 | 86 | 79 |
| 415 | 374-456 | 83 | 76 |
| 480 | 432-528 | 72 | 66 |

** OVERCURRENT PROTECTION SIZED FOR 125% CONTINUOUS CURRENT. (CALCULATIONS BASED UPON NOMINAL VOLTAGE).

PHASE-BALANCE. PHASE-TO-PHASE VOLTAGES MUST BE WITHIN 2 PERCENT OF THE LOWEST PHASE-TO-PHASE VOLTAGE. MAXIMUM ALLOWABLE TRANSIENT VOLTAGE EXCURSIONS ARE 1.8 PERCENT OF RATED LINE VOLTAGE AT A MAXIMUM DURATION OF 1 CYCLE AND FREQUENCY OF 10 TIMES PER HOUR.

VOLTAGE TRANSIENT OR IMPULSE ON THE INCOMING POWER MUST BE HELD TO A MINIMUM. TRANSIENTS CAUSED BY LIGHTNING, SURGES, LOAD SWITCHING, STATIC ELECTRICITY ETC. CAN CAUSE SCAN ABORTS OR, IN EXTREME INSTANCES, COMPONENT FAILURE IN THE COMPUTER SUBSYSTEM.

POWER DEMAND
 MAXIMUM POWER DEMAND = 59.7 KVA.
 59.7 KVA CONSISTING OF 40 KVA FOR PDU + 9 KVA (CONTINUOUS OPERATION) FOR SHIELD/CRYO COOLER CABINET. + 4.5 KVA FOR MAGNET MONITOR + 6.2 KVA (CONTINUOUS OPERATION) FOR MRCC

| DEMAND | SIGNA SYSTEM |
|-----------------|--------------|
| kVA* | 59.7 |
| POWER FACTOR AT | 0.9 |

* DEMAND INCLUDES POWER FOR ENTIRE MR SYSTEM. LINE VOLTAGE REGULATION AT MAXIMUM POWER DEMAND MUST BE LESS THAN OR EQUAL TO 2 PERCENT OR 4 PERCENT FROM POWER SOURCE.

DISTRIBUTION TRANSFORMER FOR A SINGLE UNIT INSTALLATION, THE MINIMUM TRANSFORMER SIZE IS 112.5 KVA. REGULATED TRANSFORMER IS NOT REQUIRED UNLESS VOLTAGE CHANGES EXCEED ±10% OVER A PERIOD OF 1 HOUR OR LONGER.

REFER TO DIRECTION LISTED ON C1 FOR ADDITIONAL INFORMATION.

ELECTRICAL NOTES

- NOTE 1: ALL WIRES SPECIFIED SHALL BE COPPER STRANDED, FLEXIBLE, THERMO-PLASTIC, COLOR CODED, CUT 10 FOOT LONG AT OUTLET BOXES, DUCT TERMINATION POINTS OR STUBBED CONDUIT ENDS. ALL CONDUCTORS, POWER, SIGNAL AND GROUND, MUST BE RUN IN A CONDUIT OR DUCT SYSTEM. ELECTRICAL CONTRACTOR SHALL RING OUT AND TAG ALL WIRES AT BOTH ENDS. WIRE RUNS MUST BE CONTINUOUS COPPER STRANDED AND FREE FROM SPLICES. ALUMINUM OR SOLID WIRES ARE NOT ALLOWED.
- NOTE 2: WIRE SIZES GIVEN ARE FOR USE OF EQUIPMENT. LARGER SIZES MAY BE REQUIRED BY LOCAL CODES.
- NOTE 3: IT IS RECOMMENDED THAT ALL WIRES BE COLOR CODED, AS REQUIRED IN ACCORDANCE WITH NATIONAL AND LOCAL ELECTRICAL CODES.
- NOTE 4: CONDUIT SIZES SHALL BE VERIFIED BY THE ARCHITECT, ELECTRICAL ENGINEER OR CONTRACTOR, IN ACCORDANCE WITH LOCAL OR NATIONAL CODES.
- NOTE 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.
- NOTE 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.
- NOTE 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).
- NOTE 8: CONDUIT TURNS TO HAVE LARGE, SWEEPING BENDS WITH MINIMUM RADIUS IN ACCORDANCE WITH NATIONAL AND LOCAL ELECTRICAL CODES.
- NOTE 9: 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.
- NOTE 10: THE MAXIMUM POINT TO POINT DISTANCES ILLUSTRATED ON THIS DRAWING MUST NOT BE EXCEEDED.
- NOTE 11: PHYSICAL CONNECTION OF PRIMARY POWER TO GE EQUIPMENT IS TO BE MADE BY CUSTOMERS ELECTRICAL CONTRACTOR WITH THE SUPERVISION OF A GE REPRESENTATIVE. THE GE REPRESENTATIVE WOULD BE REQUIRED TO IDENTIFY THE PHYSICAL CONNECTION LOCATION, AND INSURE PROPER HANDLING OF GE EQUIPMENT.

DIAGRAM KEY

| | |
|-----------|--|
| --- | CUSTOMER/CONTRACTOR SUPPLIED WIRING. ROUTE IN ADEQUATE CONDUIT OR RACEWAY. |
| — | GE FURNISHED CABLE RUNS. ROUTE IN EMPTY CONDUIT OR RACEWAY. |
| 59' [18M] | MAXIMUM RUN LENGTH BETWEEN JUNCTION POINTS. Feet [Meters] |

THIS SHEET IS PART OF THE DOCUMENT SET LISTED ON SHEET C1 AND SHOULD NOT BE SEPARATED

GE Healthcare
 IS Services Design Center
 Milwaukee, Wisconsin

SHEET TITLE: ELECTRICAL SPECIFICATIONS
 MODALITY TYPE: SIGNA 1.5T Hde - TYPE B w/ EQUIPMENT ROOM COOLING

THIS PLAN IS SUBMITTED TO SUGGEST LOCATION OF GE HEALTHCARE EQUIPMENT AND ASSOCIATED APPARATUS, ELECTRICAL WIRING DETAILS AND ROOM ARRANGEMENTS. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EQUIPMENT AND WIRING PRIOR TO ACTUAL CONSTRUCTION. THE COMPANY ACCEPTS NO LIABILITY FOR ANY DAMAGES RESULTING THEREFROM.

PROJECT TITLE:
 8-202F
 TYPICAL LAYOUT

| PROJECT | REVISION |
|---------|----------|
| 8-202F | 03 |

DATE: 06.JAN.12
 DRAWN BY: PMM
 CHECKED BY: TMS

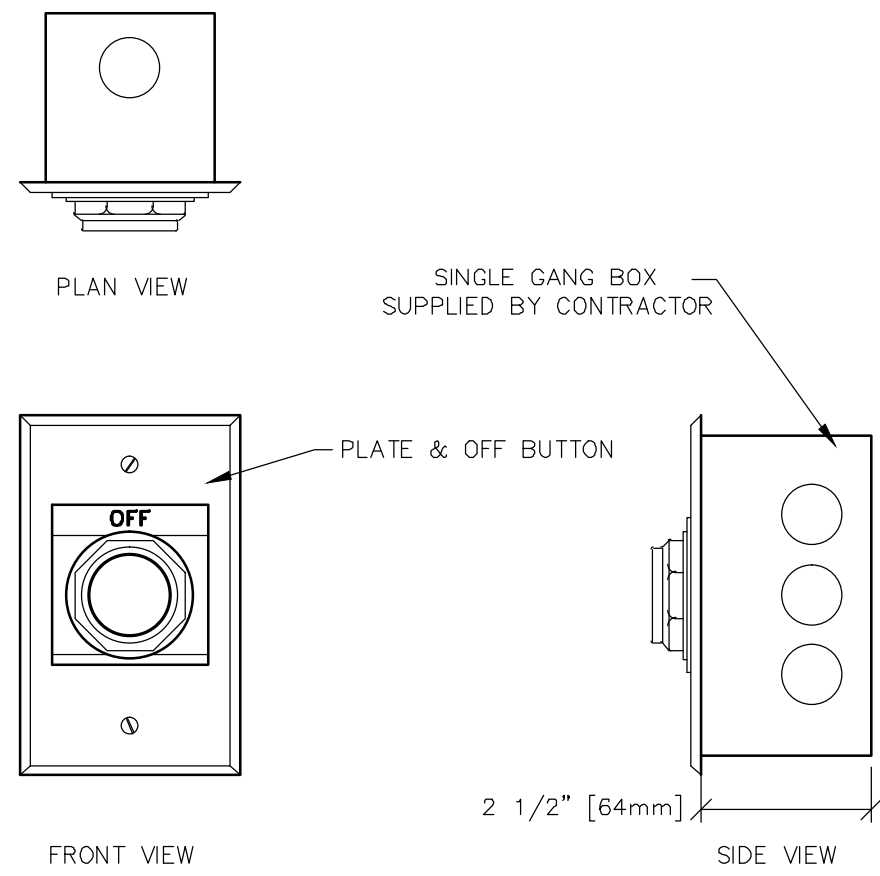
REVISION HISTORY:

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SHEET
 E2

ELECTRICAL DETAIL
EMERGENCY OFF BUTTON

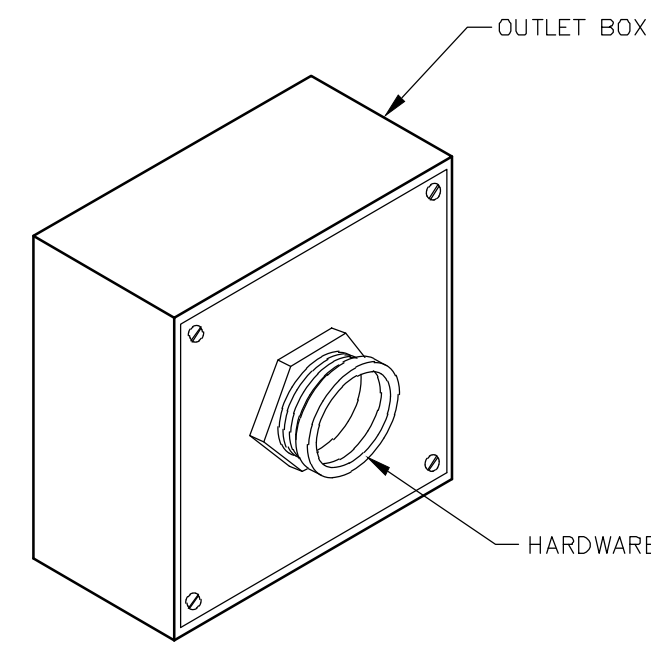
ELEC-16
REV. DATE: 05/14/09



DETAIL NOT TO SCALE

ELECTRICAL DETAIL
BOX WITH COVERPLATE (TYPICAL)

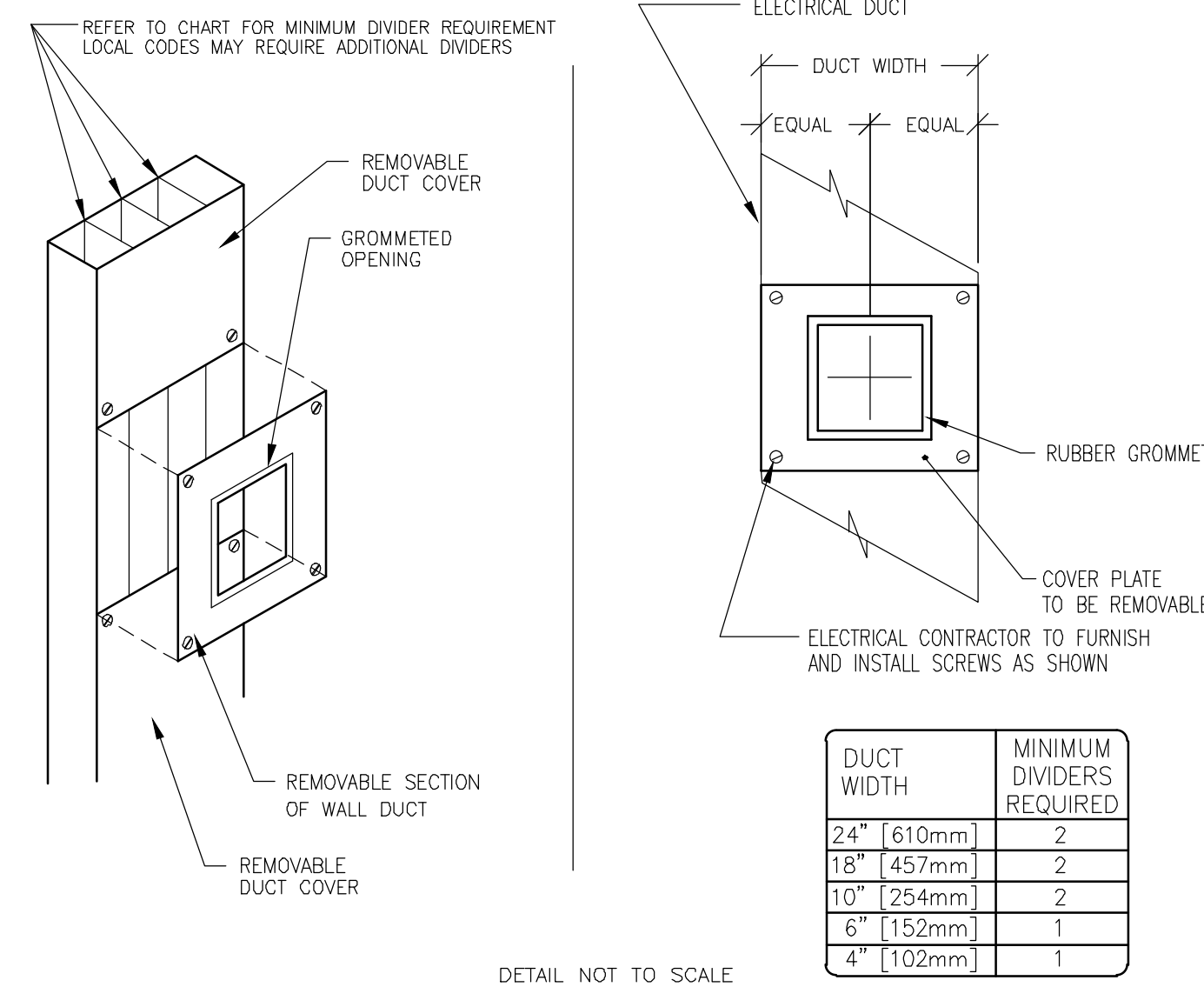
ELEC-8
REV. DATE: 09/30/94



DETAIL NOT TO SCALE

ELECTRICAL DETAIL
VERTICAL WALL DUCT (TYPICAL)

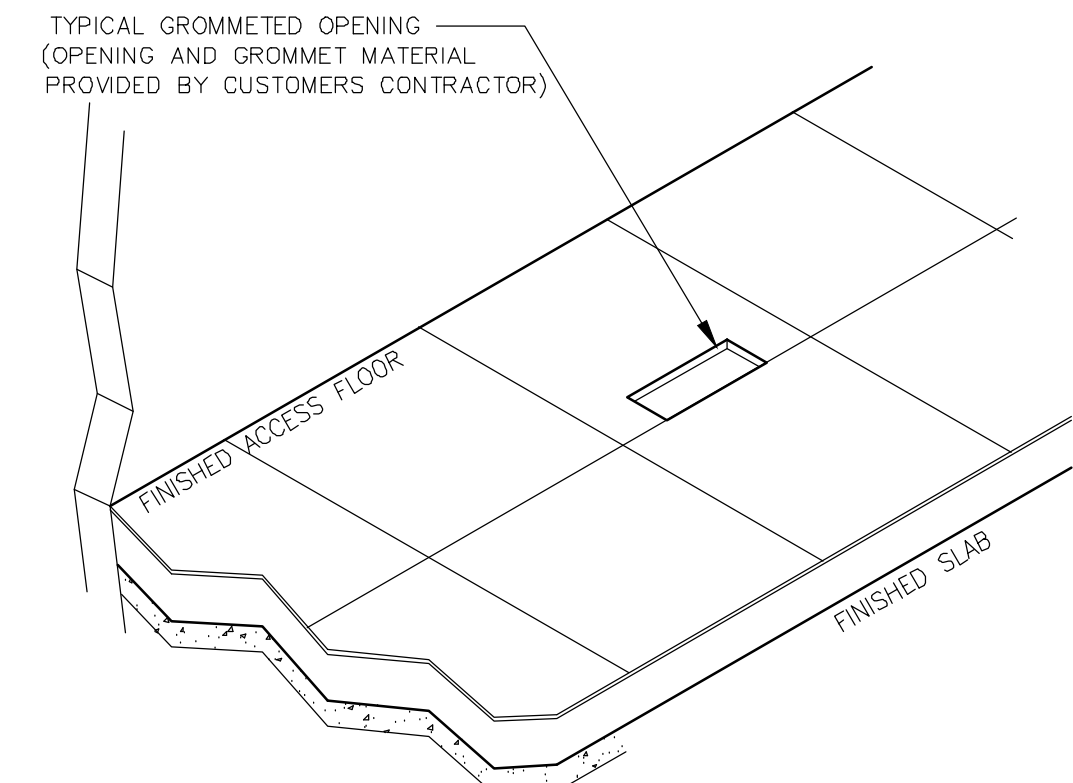
ELEC-6
REV. DATE: 03/19/04



DETAIL NOT TO SCALE

ELECTRICAL DETAIL
GROMMETED OPENING - ACCESS FLOORING (TYPICAL)

ELEC-10
REV. DATE: 04/21/05

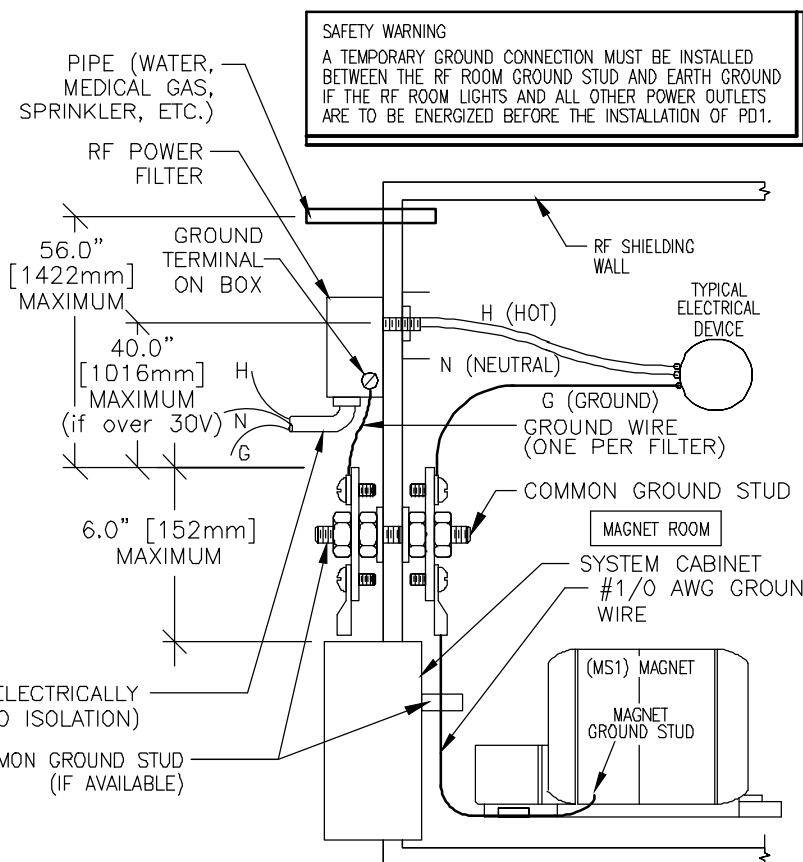


DETAIL NOT TO SCALE

ELECTRICAL DETAIL
TYPICAL MAGNET ROOM GROUNDING

ELEC-178
REV. DATE: 15/NOV/11

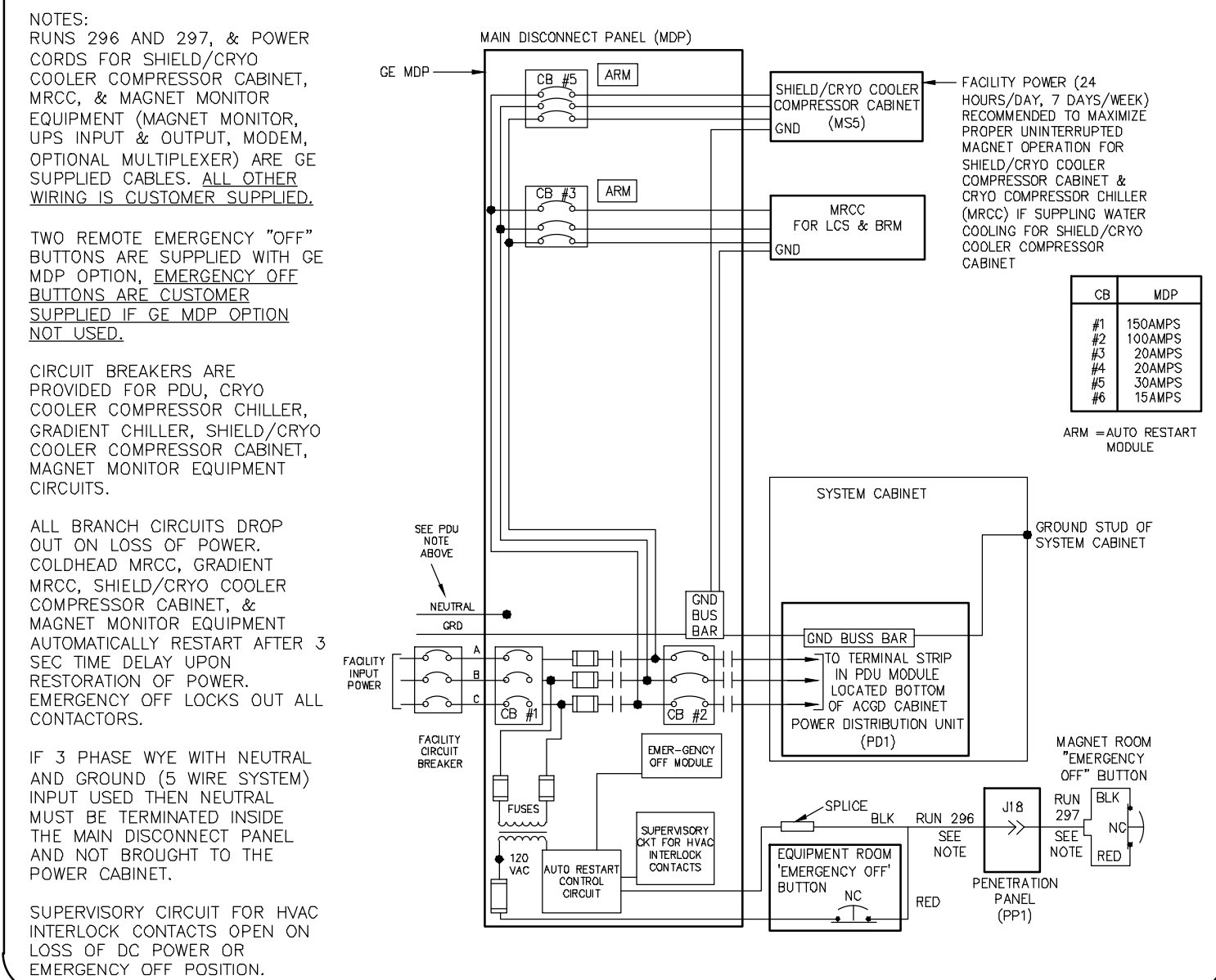
- ALL ITEMS SHOWN ARE CUSTOMER SUPPLIED EXCEPT SYSTEM CABINET, MAGNET, AND #1/0 AWG GROUND WIRE BETWEEN SYSTEM CABINET GROUND STUD AND MAGNET GROUND STUD.
- RESISTANCE BETWEEN ANY TWO GROUNDED DEVICES MUST NOT EXCEED 0.1 ohm TO ENSURE EQUAL GROUND SYSTEM WITHIN THE MAGNET ROOM.
- RF POWER FILTERS OVER 30 VOLTS MUST BE LOCATED WITHIN 40 IN. (1016mm) OF THE RF COMMON GROUND STUD.
- RF POWER FILTERS OF 30 VOLTS OR LESS MAY BE LOCATED ANYWHERE ON THE RF SHIELD.
- ALL METALLIC PIPES (INCLUDING WATER, MEDICAL GAS, SPRINKLERS, ETC.) ENTERING THE RF SHIELD, EXCLUDING THE CRYOGENIC VENT AND FLOOR DRAINS, MUST BE LOCATED WITHIN 56 IN. (1422mm) OF THE RF COMMON GROUND STUD.
- ALL ELECTRICAL DEVICES (E.G., OUTLETS, LIGHT FIXTURES, ETC.) MUST HAVE A GROUND WIRE FROM DEVICE POWER SOURCE AND BE GROUNDED TO THE RF SHIELD AT THE RF COMMON GROUND STUD.
- ONE #1/0 AWG GROUND WIRE TO BE CONNECTED TO ONLY ONE GROUND STUD ON MAGNET FOOT OR CRYOSTAT.
- DO NOT GROUND NON-MR EQUIPMENT TO THE MR GROUND SYSTEM.
- THE ILLUSTRATION SHOWS A TYPICAL GROUND LAYOUT.



DETAIL NOT TO SCALE

ELECTRICAL DETAIL
PROTECTIVE DISCONNECT SETUP

ELEC-154
REV. DATE: 04/02/09



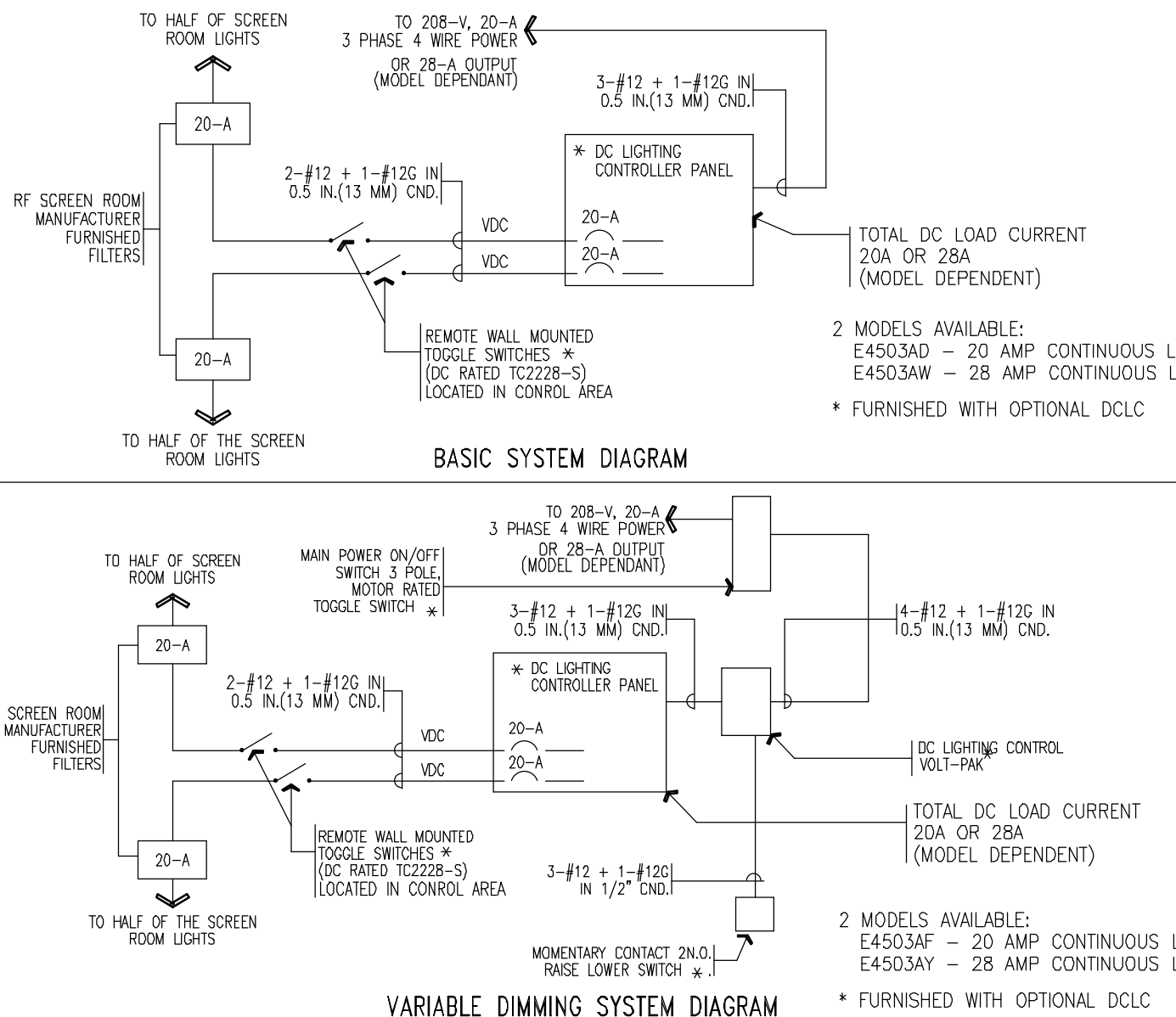
SAFETY WARNING
A TEMPORARY GROUND CONNECTION MUST BE INSTALLED BETWEEN THE RF ROOM GROUND STUD AND BRUN GROUND IF THE RF ROOM LIGHTS AND ALL OTHER POWER OUTLETS ARE TO BE ENERGIZED BEFORE THE INSTALLATION OF PDI.

SUPERVISORY CIRCUIT FOR HVAC INTERLOCK CONTACTS OPEN ON LOSS OF DC POWER OR EMERGENCY OFF POSITION.

DETAIL NOT TO SCALE

ELECTRICAL DETAIL
DC LIGHTING CONTROLLER SYSTEM DIAGRAM

ELEC-54
REV. DATE: 08/22/05



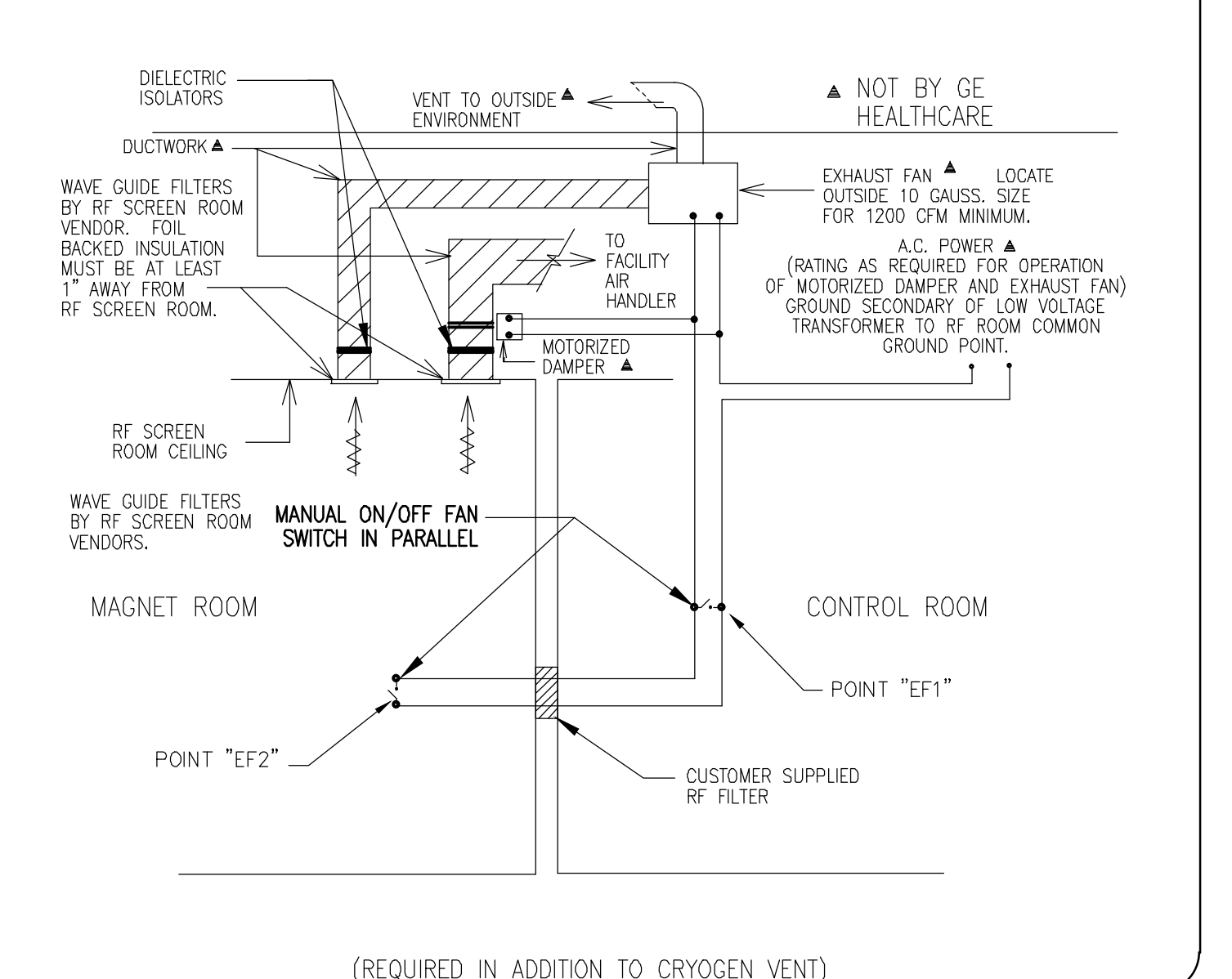
BASIC SYSTEM DIAGRAM

VARIABLE DIMMING SYSTEM DIAGRAM

DETAIL NOT TO SCALE

ELECTRICAL DETAIL
TYPICAL RF SCREEN ROOM EXHAUST FAN SET-UP

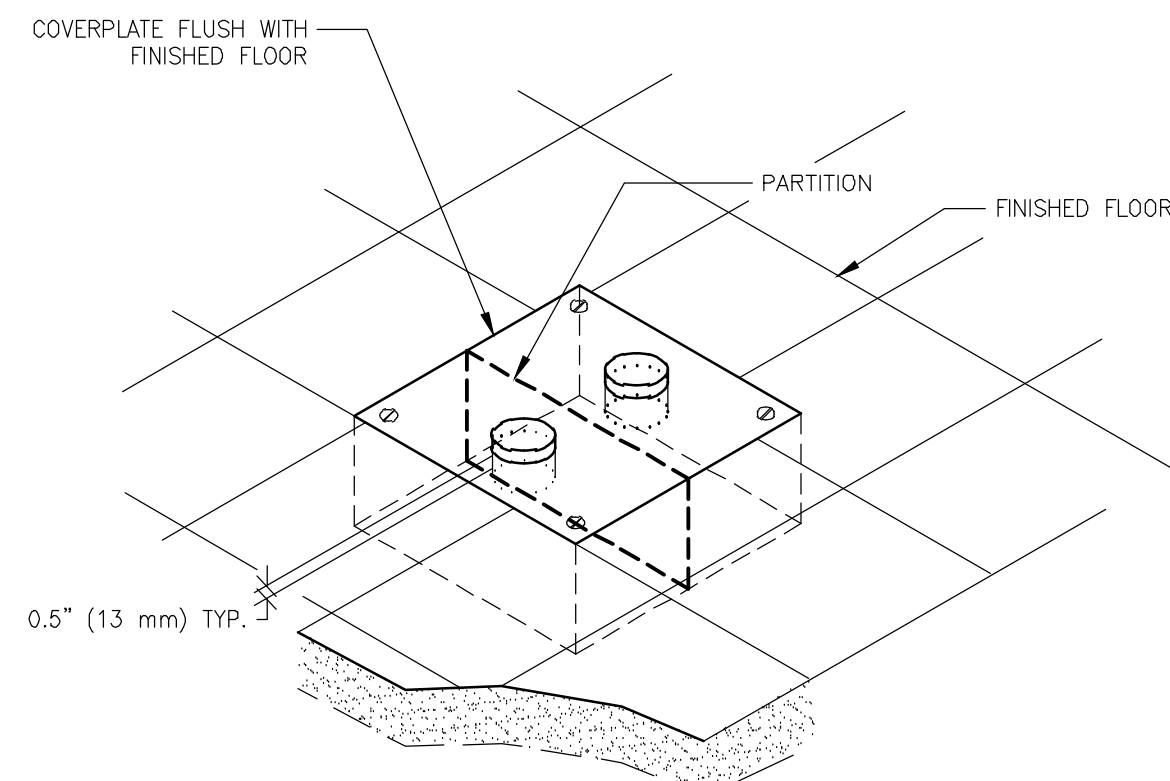
ELEC-55
REV. DATE: 03/18/05



(REQUIRED IN ADDITION TO CRYOGEN VENT)

ELECTRICAL DETAIL
FLOOR BOX WITH NIPPLES (TYPICAL)

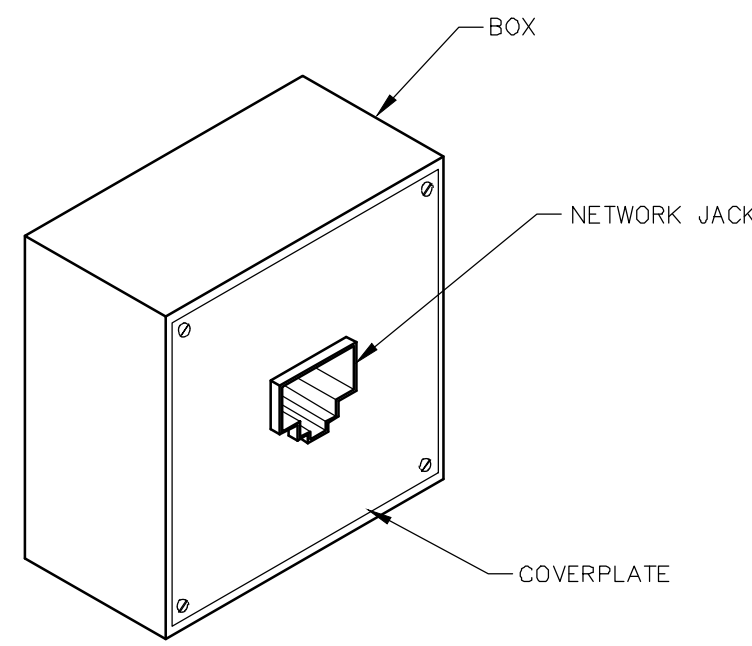
ELEC-13
REV. DATE: 09/30/94



DETAIL NOT TO SCALE

ELECTRICAL DETAIL
BOX WITH COVERPLATE AND NETWORK JACK

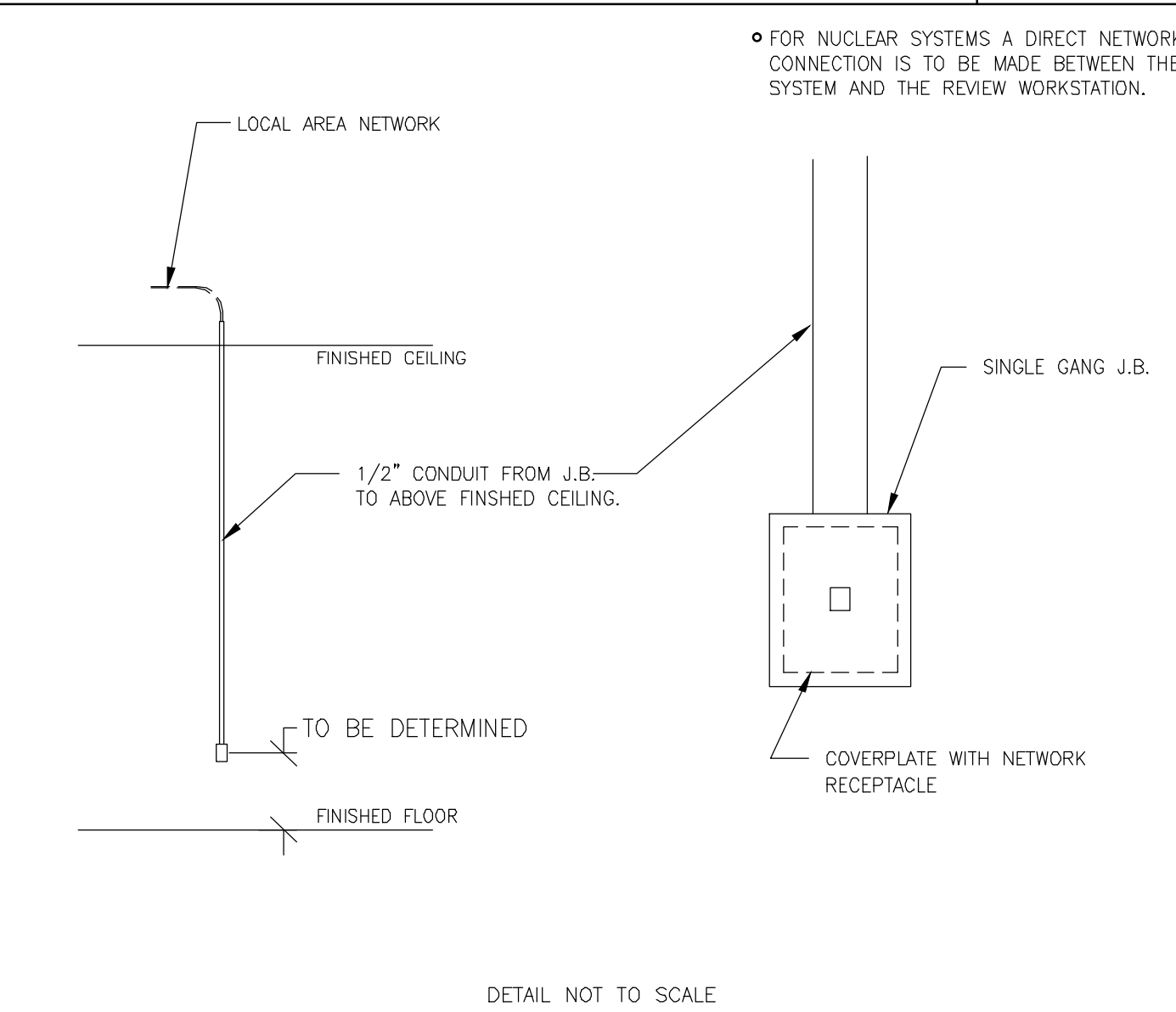
ELEC-83
REV. DATE: 10/06/98



DETAIL NOT TO SCALE

ELECTRICAL DETAIL
NETWORK CONNECTION (TYPICAL)

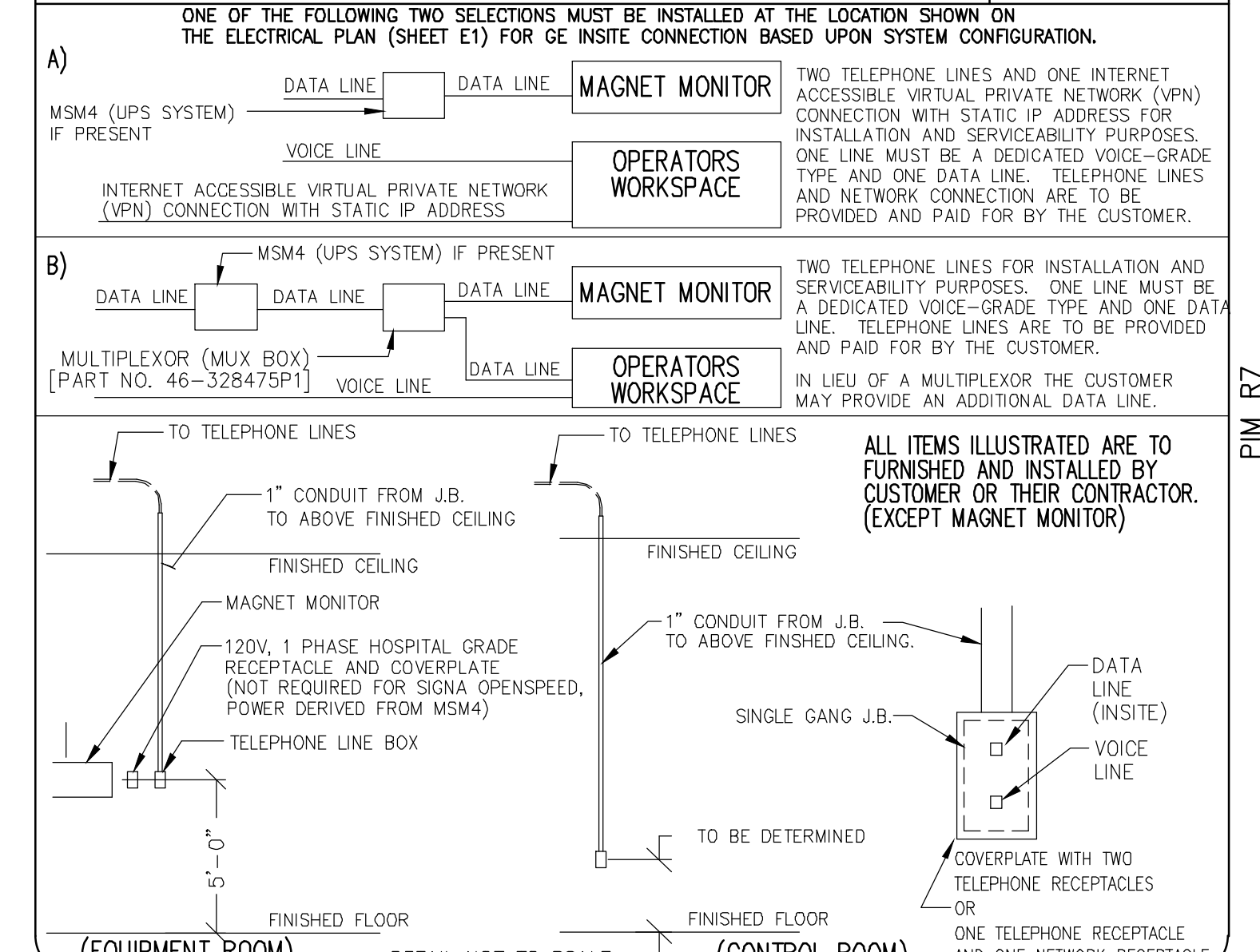
ELEC-84
REV. DATE: 03/06/04



DETAIL NOT TO SCALE

ELECTRICAL DETAIL
MAGNET MONITOR/INSITE CONNECTION

ELEC-78
REV. DATE: 04/24/01



THIS SHEET IS PART OF THE DOCUMENT SET LISTED ON SHEET C1 AND SHOULD NOT BE SEPARATED

SHEET TITLE: ELECTRICAL DETAILS
MODALITY TYPE: SIGNA 1.5T Hde - TYPE B
w/ EQUIPMENT ROOM COOLING

PROJECT TITLE:
8-202F
TYPICAL LAYOUT

PROJECT REVISION
8-202F 03
DATE: 06.JAN.12
DRAWN BY: PMM
CHECKED BY: TMS

REVISION HISTORY:

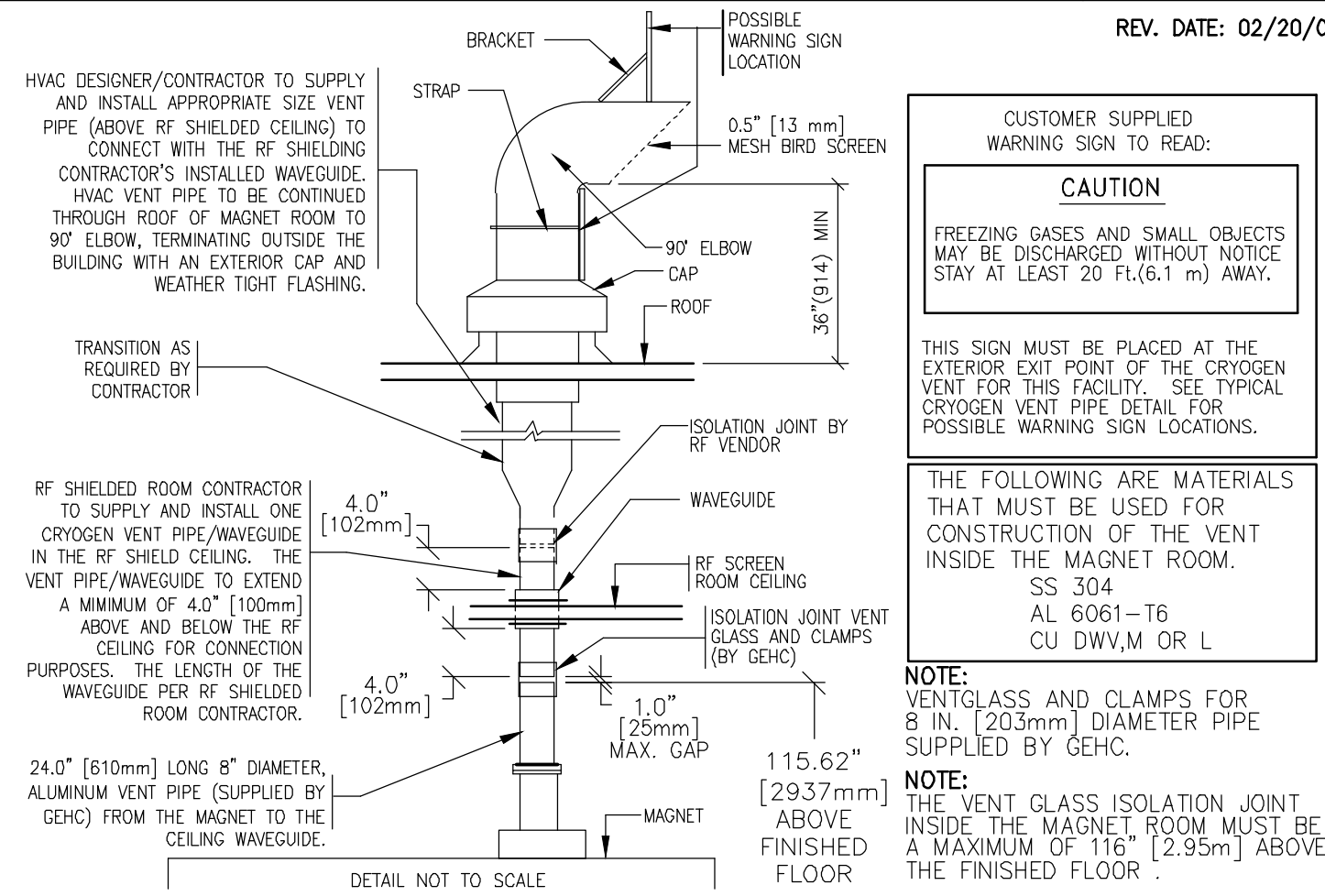
SHEET
E3

GE Healthcare
IS Services Design Center
Milwaukee, Wisconsin

TYPICAL CRYOGEN VENT PIPE DETAIL

MECH-01

REV. DATE: 02/20/09



CUSTOMER SUPPLIED WARNING SIGN TO READ:

CAUTION

FREEZING GASES AND SMALL OBJECTS MAY BE DISCHARGED WITHOUT NOTICE STAY AT LEAST 20 FT.(6.1 m) AWAY.

THIS SIGN MUST BE PLACED AT THE EXTERIOR EXIT POINT OF THE CRYOGEN VENT FOR THIS FACILITY. SEE TYPICAL CRYOGEN VENT PIPE DETAIL FOR POSSIBLE WARNING SIGN LOCATIONS.

THE FOLLOWING ARE MATERIALS THAT MUST BE USED FOR CONSTRUCTION OF THE VENT INSIDE THE MAGNET ROOM.

SS 304
AL 6061-T6
CU DWV.M OR L

NOTE:
VENT GLASS AND CLAMPS FOR 8 IN. (203mm) DIAMETER PIPE SUPPLIED BY GEHC.

NOTE:
THE VENT GLASS ISOLATION JOINT INSIDE THE MAGNET ROOM MUST BE A MAXIMUM OF 116" (2.95m) ABOVE THE FINISHED FLOOR.

CRYOGENIC VENT SYSTEM PRESSURE DROP MATRIX (A)

MECH-04

REV. DATE: 10/04/02

(THIS TABLE MUST BE USED FOR CRYOGENIC VENT SYSTEM DESIGN)

| INSIDE DIAMETER OF VENT PIPE (in./mm) | DISTANCE OF VENT SYSTEM COMPONENT FROM MAGNET (ft./m) | PRESSURE DROP STRAIGHT VENT PIPE WITH SMOOTH INSIDE SURFACE (psi/ft. (kPa/m)) | PRESSURE DROP PER ELBOW USED ANYWHERE WITHIN 20 FT. VENT SEGMENT | | | |
|---------------------------------------|---|---|--|----------------------------------|------------------------------|------------------------------|
| | | | STANDARD SWEEP ELBOW (psi) (kPa) | STANDARD SWEEP ELBOW (psi) (kPa) | LONG SWEEP ELBOW (psi) (kPa) | LONG SWEEP ELBOW (psi) (kPa) |
| 8(203) | 0-20 (0-6.1) | 0.10 (2.26) | 1.10 (7.58) | 2.06 (14.20) | 0.55 (3.79) | 1.03 (7.10) |
| | 20-40 (6.1-12.2) | 0.21 (4.73) | 2.10 (14.58) | 3.70 (26.51) | 1.10 (7.72) | 1.85 (13.26) |
| | 40-60 (12.2-18.3) | 0.30 (6.79) | 2.88 (19.86) | 5.21 (35.92) | 1.44 (9.93) | 2.60 (17.92) |
| | 60-80 (18.3-24.4) | 0.36 (8.60) | 3.70 (26.51) | 6.71 (46.27) | 1.85 (13.26) | 3.16 (21.77) |
| | 80-100 (24.4-30.5) | 0.47 (10.63) | 4.52 (31.17) | 8.22 (56.68) | 2.26 (15.58) | 4.11 (28.34) |
| 10(254) | 0-20 (0-6.1) | 0.03 (0.88) | 0.55 (3.79) | 0.82 (5.56) | 0.27 (1.88) | 0.41 (2.83) |
| | 20-40 (6.1-12.2) | 0.07 (1.58) | 0.82 (5.56) | 1.51 (10.41) | 0.41 (2.83) | 0.76 (5.17) |
| | 40-60 (12.2-18.3) | 0.10 (2.26) | 1.23 (8.48) | 2.19 (15.10) | 0.62 (4.27) | 1.10 (7.58) |
| | 60-80 (18.3-24.4) | 0.12 (2.71) | 1.51 (10.41) | 2.74 (18.89) | 0.75 (5.17) | 1.37 (9.45) |
| | 80-100 (24.4-30.5) | 0.16 (3.62) | 1.92 (13.26) | 3.43 (23.65) | 0.96 (6.66) | 1.71 (11.79) |
| 12(305) | 0-20 (0-6.1) | 0.013 (0.29) | 0.27 (1.86) | 0.41 (2.83) | 0.14 (0.97) | 0.21 (1.45) |
| | 20-40 (6.1-12.2) | 0.027 (0.61) | 0.41 (2.83) | 0.82 (5.56) | 0.21 (1.45) | 0.41 (2.83) |
| | 40-60 (12.2-18.3) | 0.041 (0.93) | 0.55 (3.79) | 1.10 (7.58) | 0.27 (1.88) | 0.55 (3.79) |
| | 60-80 (18.3-24.4) | 0.054 (1.22) | 0.69 (4.76) | 1.37 (9.45) | 0.34 (2.34) | 0.69 (4.76) |
| | 80-100 (24.4-30.5) | 0.069 (1.56) | 0.96 (6.66) | 1.81 (12.41) | 0.48 (3.31) | 0.76 (5.17) |

NOTE 1: ELBOWS WITH ANGLES GREATER THAN 90° MUST NOT BE USED.

NOTE 2: THE TABLE DATA IS BASED ON THE FOLLOWING:
A. INITIAL FLOW CONDITIONS AT MAGNET INTERFACE.
B. GAS TEMPERATURE STARTING AT 4.5 KELVIN (-452° F OR -268° C).
C. HELIUM GAS FLOW RATE OF 2337 CUBIC FEET (77.5 CUBIC METERS) PER MINUTE.
D. 45° STANDARD SWEEP ELBOW K = 15 F_t.
E. 90° STANDARD SWEEP ELBOW K = 30 F_t.
F. 45° LONG SWEEP ELBOW K = 7.5 F_t.
G. 90° LONG SWEEP ELBOW K = 15 F_t.

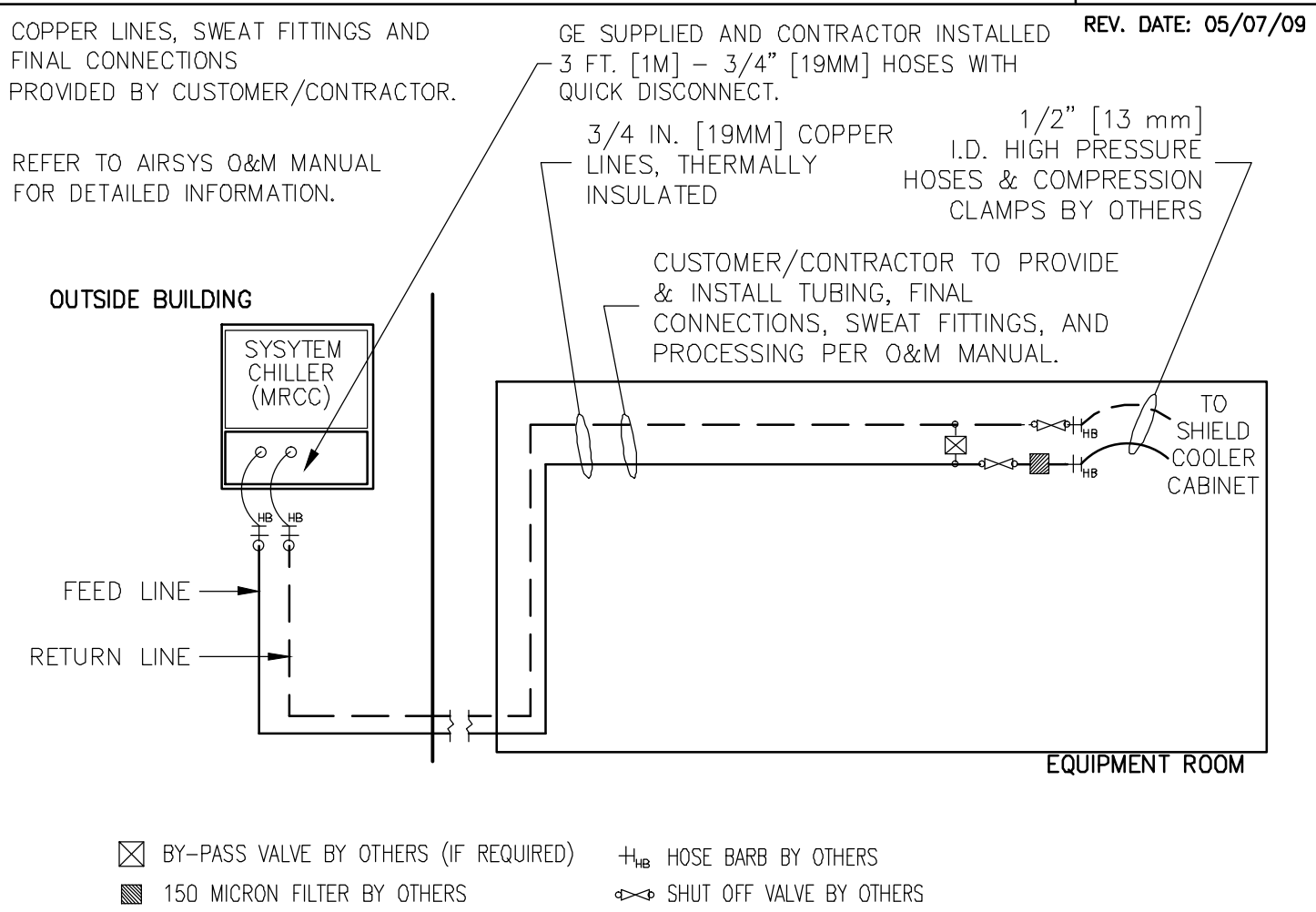
NOTE 3: THE TOTAL PRESSURE DROP OF THE ENTIRE CRYOGENIC VENT SYSTEM MUST BE LESS THAN 17 PSI (117.2 KPa). THE CALCULATION STARTS AT THE MAGNET VENT INTERFACE AND ENDS AT THE TERMINATION POINT OUTSIDE THE BUILDING.

NOTE 4: FOR 14 IN. (356mm) AND 16 IN. (406mm) VENT PIPE DIAMETERS REFER TO PRE-INSTALLATION MANUAL REFERENCED ON SHEET C1.

SYSTEM CHILLER PIPING

MECH-39

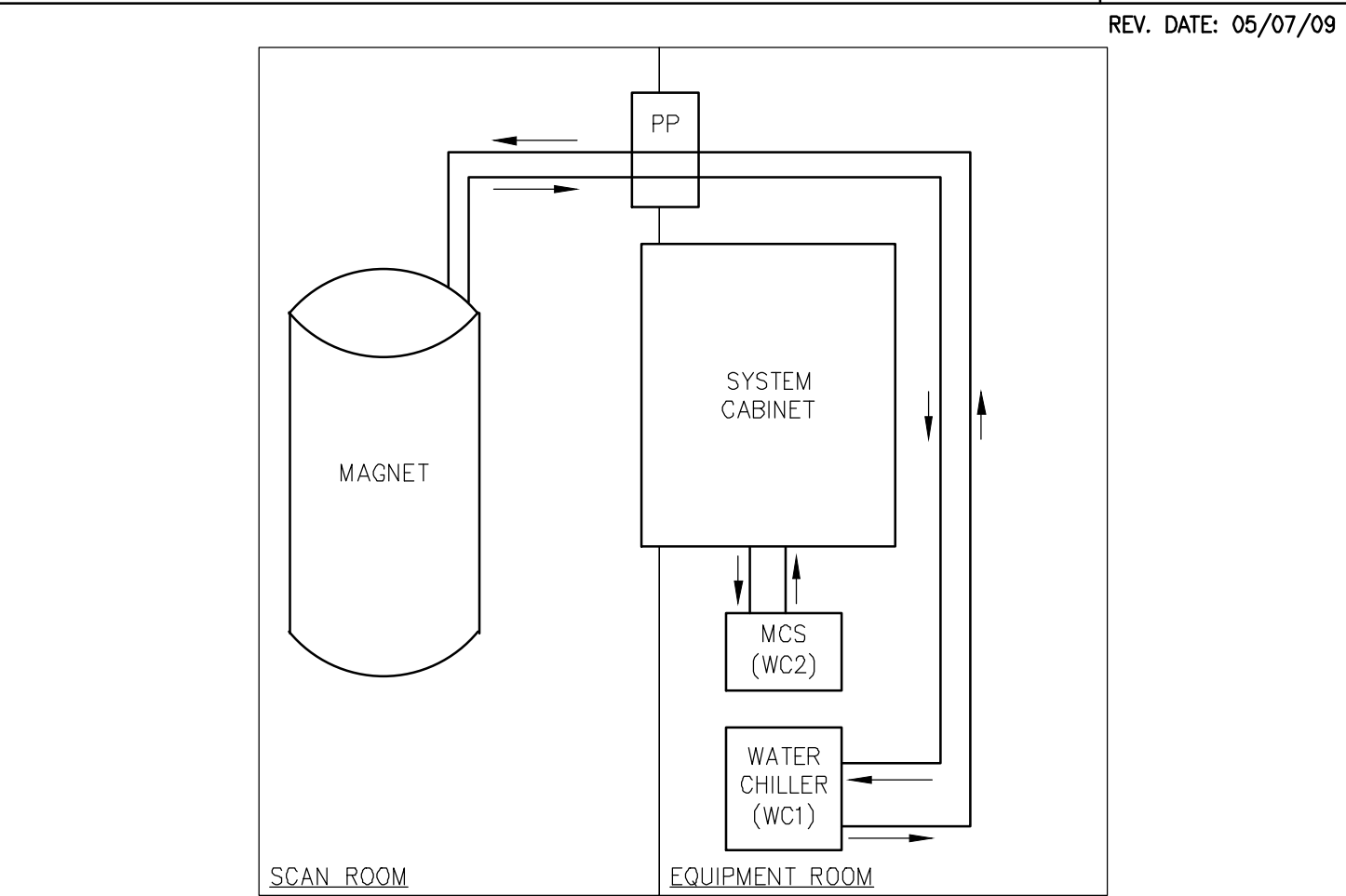
REV. DATE: 05/07/09



SYSTEM CHILLER PIPING

MECH-45

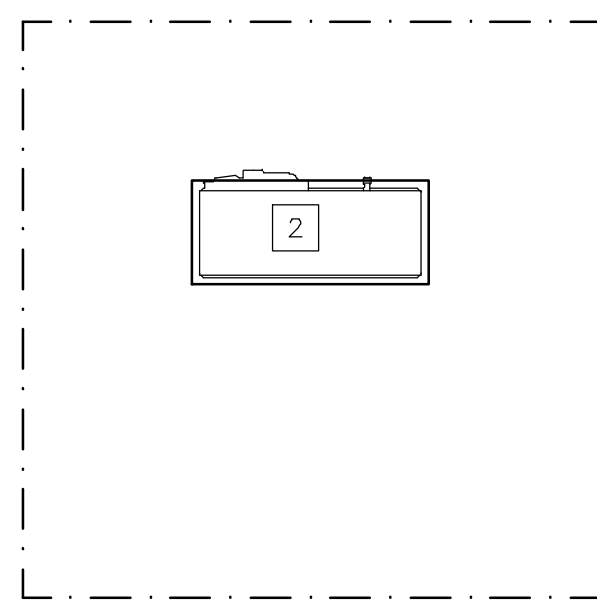
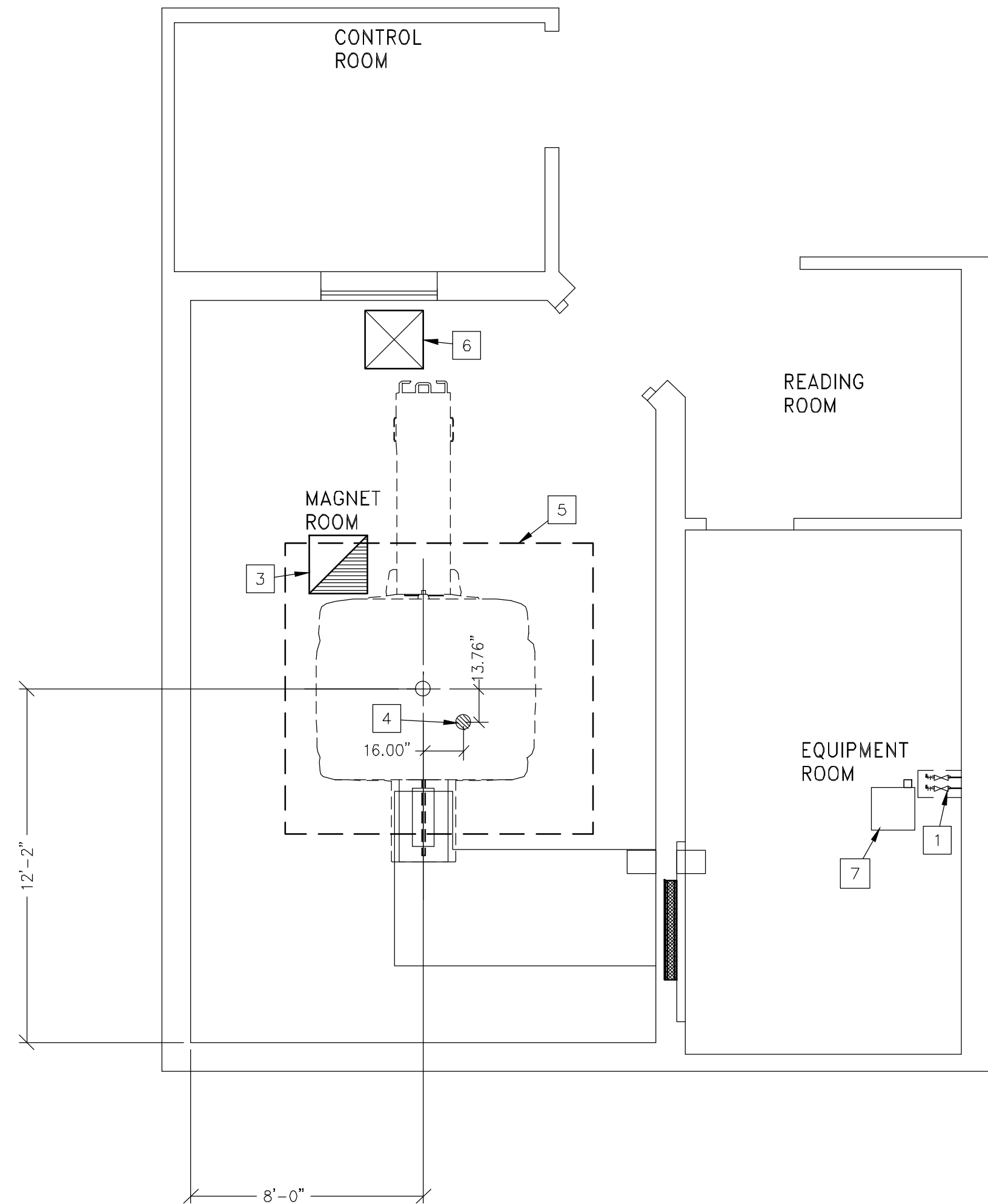
REV. DATE: 05/07/09



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

MECHANICAL/PLUMBING LAYOUT

RECOMMENDED CEILING HEIGHT = 8'-9"



MECHANICAL/PLUMBING ITEMS

CUSTOMER/CONTRACTOR SUPPLIED AND INSTALLED ITEMS

- | ITEM NO. | ITEM DESCRIPTION
(* INDICATES EXISTING) |
|----------|---|
| 1 | TWO (2) 3/4 IN. (19MM) COPPER LINES (INSULATED). FOUR (4) 3/4 IN. (19MM) HOSE BARBS. TWO (2) 1/2 IN. (13MM) HOSE BARBS. FOUR (4) 3/4 IN. (19MM) BALL VALVES. TWO (2) 3/4 IN. (19MM) TO 1/2 IN. (13MM) REDUCERS. ONE (1) 150 MICRON FILTER TWO (2) SHUT OFF VALVES ONE (1) BY-PASS VALVE REFER TO DETAIL MECH-40. |
| 2 | PLEASE REFER TO THE PRE-INSTALLATION MANUAL FOR COMPLETE FACILITY WATER REQUIREMENTS. CUSTOMER/CONTRACTOR RESPONSIBLE FOR RIGGING AND INSTALLATION OF SYSTEM COOLING CABINET. THERE IS A MAXIMUM OF 100 FEET (30.5 M) VERTICAL DIFFERENCE ABOVE OR 10 FEET (3.0 M) BELOW BETWEEN THE OUTDOOR CHILLER CABINET (MRCC) AND THE CRYO COMPRESSOR. A TOTAL MAXIMUM DISTANCE OF 200 FEET (61 M) EXISTS BETWEEN THE OUTDOOR CHILLER CABINET (MRCC) AND CRYO COMPRESSOR OR THE MAGNET. PLEASE REFER TO THE PRE-INSTALLATION MANUAL FOR COMPLETE SITE PREPARATION REQUIREMENTS. |
| 3 | EXHAUST FAN AND AIR INLET MUST BE SIZED FOR A MINIMUM OF 1800 CFM (34 M ³ /MINUTE) AND A MINIMUM OF 18 AIR EXCHANGES PER HOUR. SEE DETAIL ELEC-55 ON THE ELECTRICAL DETAIL SHEET(S). MAGNET ROOM EXHAUST FAN INTAKE VENT MUST BE LOCATED AT THE HIGHEST CEILING PLANE NEAR THE MAGNET CRYOGEN VENT. |
| 4 | REFER TO PRE-INSTALLATION MANUAL LISTED ON SHEET C1 FOR CRYOGEN VENT REQUIREMENTS. SEE SHEET S-2 FOR CRYOGEN VENT LOCATION. 8" (203 mm) CRYOGEN VENT - TOLERANCE FOR VENT LOCATION ±0.25" (6 mm). SEE DETAILS MECH-04 AND MECH-01. THE CUSTOMER'S DESIGNER IS RESPONSIBLE FOR SELECTING VENT MATERIALS AND HARDWARE CAPABLE OF SAFELY HANDLING THE PRESSURES AND COLD TEMPERATURE GENERATED WITHIN THE VENT AT EACH MRI SITE. THE CUSTOMER'S CONTRACTOR IS RESPONSIBLE FOR PROVIDING AND INSTALLING THE CRYOGEN VENT FROM THE MAGNET VENT ADAPTER TO THE BUILDING'S EXTERIOR. FOR NON-STANDARD VENT CONFIGURATIONS (I.E. OFFSET CEILING EXITS, WALL EXITS, AND GEODESIC DUMES) THE CUSTOMER'S CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND INSTALLATION OF THE CRYOGENIC VENT SYSTEM AND VENT SUPPORTS WITHIN THE MAGNET ROOM. |
| 5 | MINIMUM CEILING HEIGHT REQUIREMENT AREA. REFER TO MAGNET EQUIPMENT DETAILS FOR MORE INFORMATION. |
| 6 | MINIMUM 2 FT. x 2 FT. (0.61m x 0.61m) PRESSURE EQUALIZING WAVEGUIDE VENT IN THE MAGNET ROOM CEILING. |
| 7 | SEE PRE-INSTALLATION MANUAL FOR RECOMMENDED BACK-UP WATER SPECIFICATIONS. |

MECHANICAL/PLUMBING NOTES

- ALL PIPING, FITTINGS, SUPPORTS, HOSES, CLAMPS, VENTILATION SYSTEMS, ETC. ARE TO BE SUPPLIED AND INSTALLED BY THE CUSTOMER OR HIS CONTRACTORS.
- FOR COMPLETE DESIGN AND IS REQUIREMENTS, SPECIFICATIONS AND GUIDELINES REFER TO THE PRE-IS MANUAL REFERENCED ON SHEET C1 FOR:
MR SYSTEMS - SYSTEM COOLING, CRYOGEN VENTING, WAVEGUIDES AND EXHAUST VENTING.
CYCLOTRON SYSTEMS - CHEMISTRY LINES, GAS LINES, AND SYSTEM COOLING.

GE Healthcare
IS Services Design Center
Milwaukee, Wisconsin

SHEET TITLE: MECHANICAL LAYOUT
MODALITY TYPE: SIGMA 1.5T Hde - TYPE B
w/ EQUIPMENT ROOM COOLING

THIS PLAN IS SUBMITTED TO SUGGEST LOCATION OF GE HEALTHCARE EQUIPMENT AND ASSOCIATED APPARATUS, ELECTRICAL WIRING DETAILS AND ROOM ARRANGEMENTS. THE CUSTOMER'S CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND INSTALLATION OF THE CRYOGENIC VENT SYSTEM AND VENT SUPPORTS WITHIN THE MAGNET ROOM. THE CUSTOMER'S CONTRACTOR IS RESPONSIBLE FOR PROVIDING AND INSTALLING THE CRYOGEN VENT FROM THE MAGNET VENT ADAPTER TO THE BUILDING'S EXTERIOR. THE CUSTOMER'S CONTRACTOR IS RESPONSIBLE FOR SELECTING VENT MATERIALS AND HARDWARE CAPABLE OF SAFELY HANDLING THE PRESSURES AND COLD TEMPERATURE GENERATED WITHIN THE VENT AT EACH MRI SITE.

PROJECT TITLE:
8-202F
TYPICAL LAYOUT

PROJECT: 8-202F
REVISION: 03
DATE: 06.JAN.12
DRAWN BY: PMM
CHECKED BY: TMS

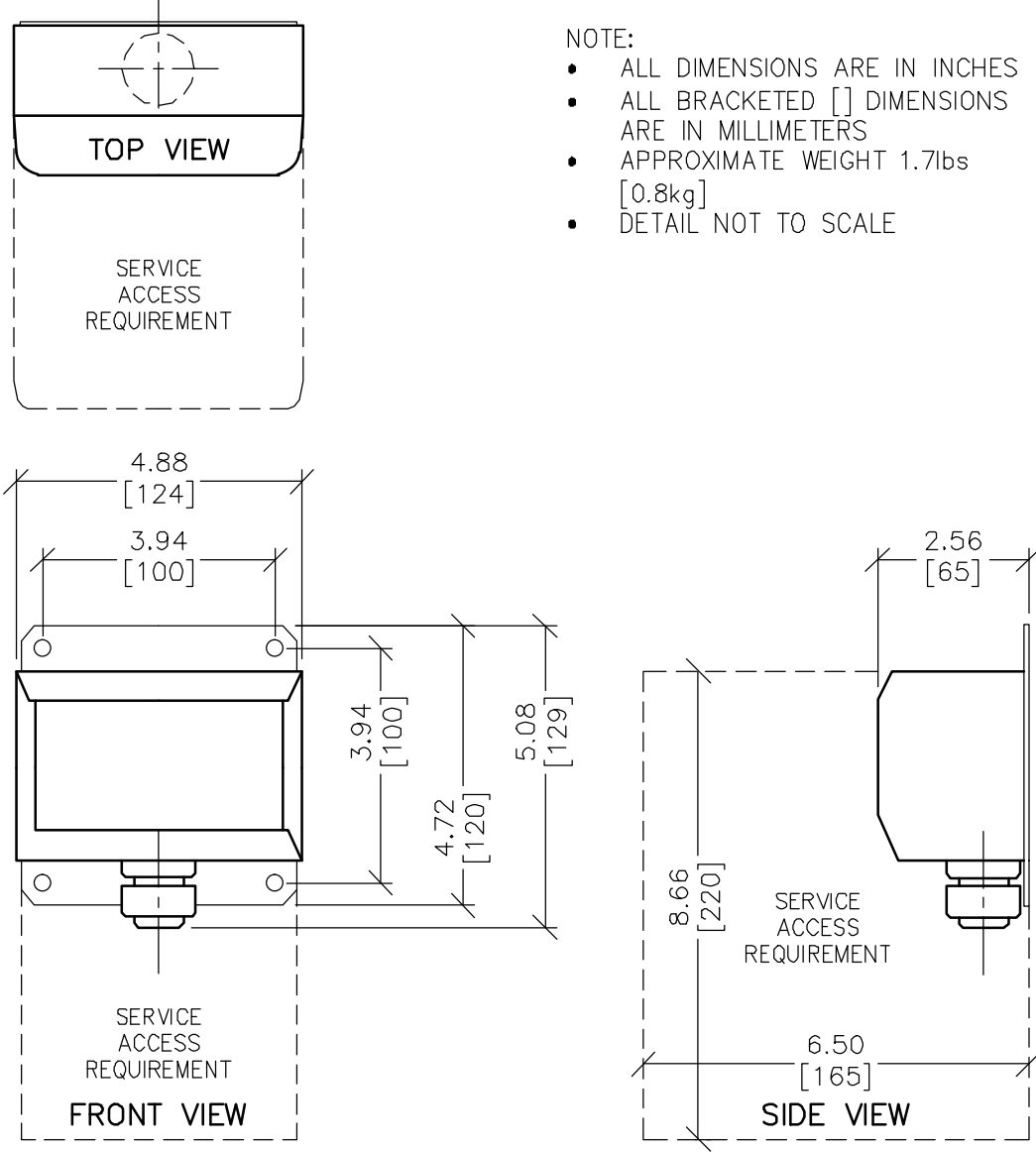
REVISION HISTORY:

SHEET
M1

EQUIPMENT DETAIL
REMOTE CONTROL PANEL FOR CHILLER

M30-88R

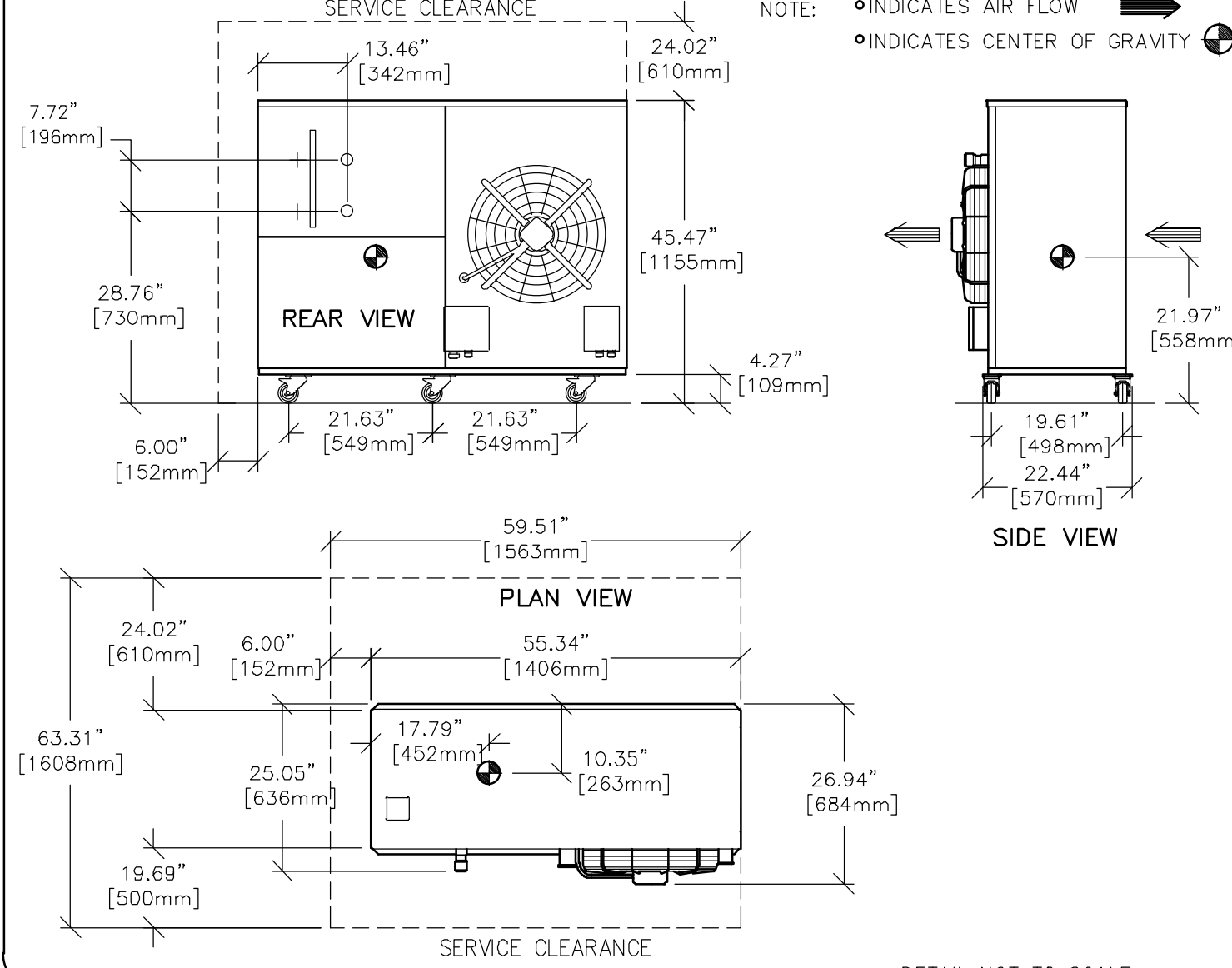
REV. DATE: 03/09/09



EQUIPMENT DETAIL
WATER CHILLER CABINET

M30-88TL

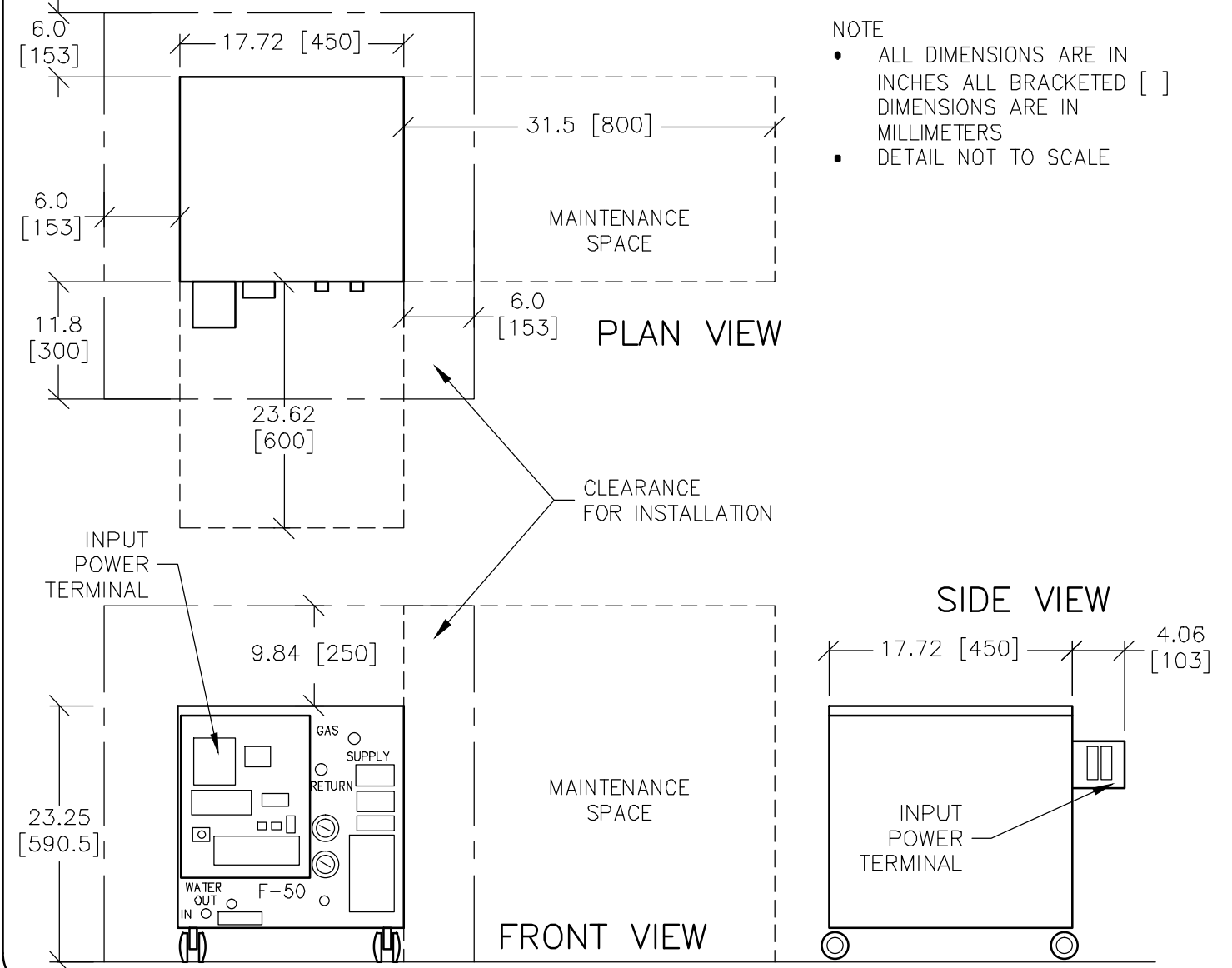
REV. DATE: 03/09/09



EQUIPMENT DETAIL
CRYOCOOLER COMPRESSOR F50

M33004

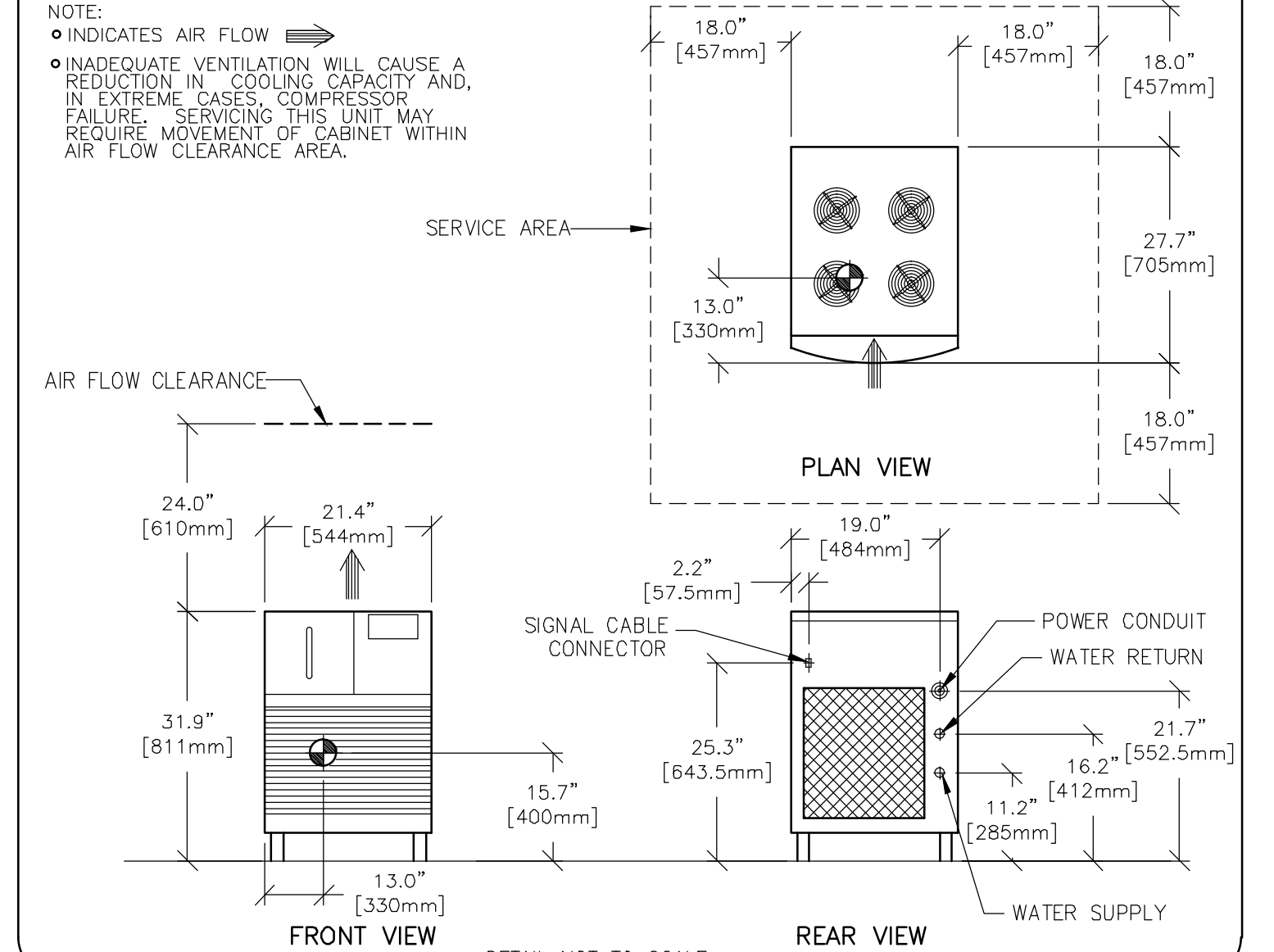
REV. DATE: 06/03/08



EQUIPMENT DETAIL
COOLING UNIT FOR SYSTEM CABINET

M60-15C

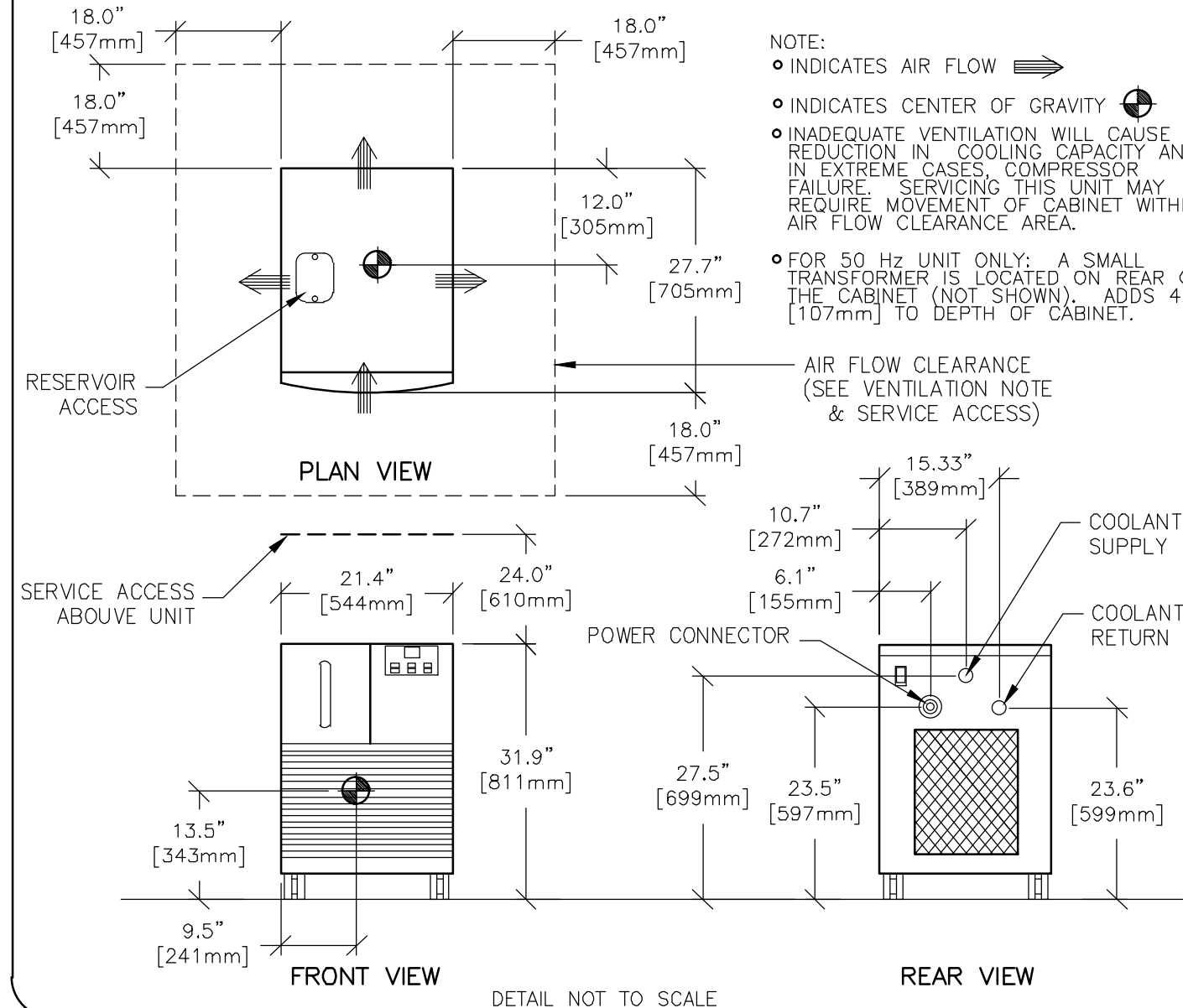
REV. DATE: 05/06/09



EQUIPMENT DETAIL
WATER CHILLER FOR BODY COIL

M60-15B

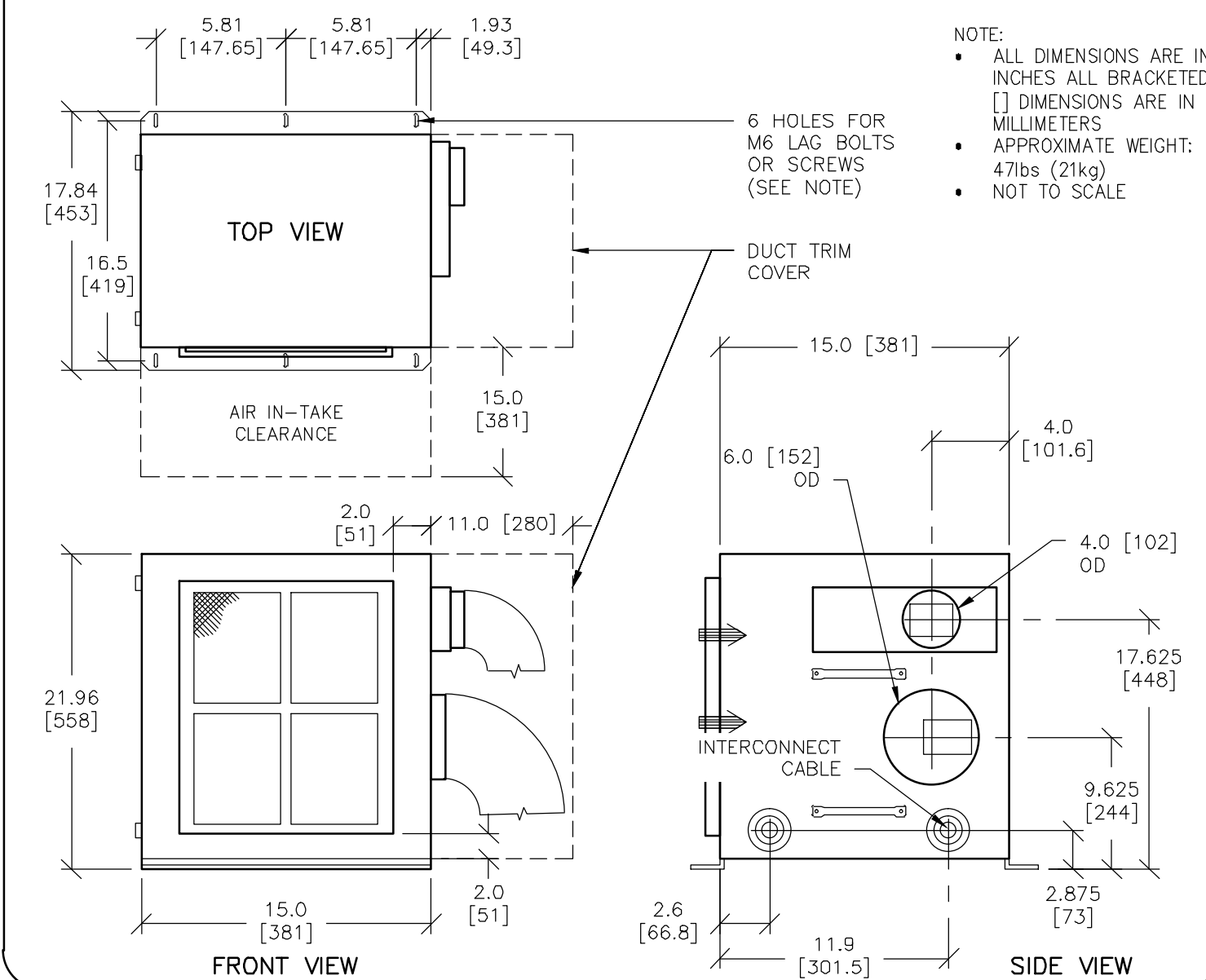
REV. DATE: 08/22/05



EQUIPMENT DETAIL
BLOWER BOX

M57-15

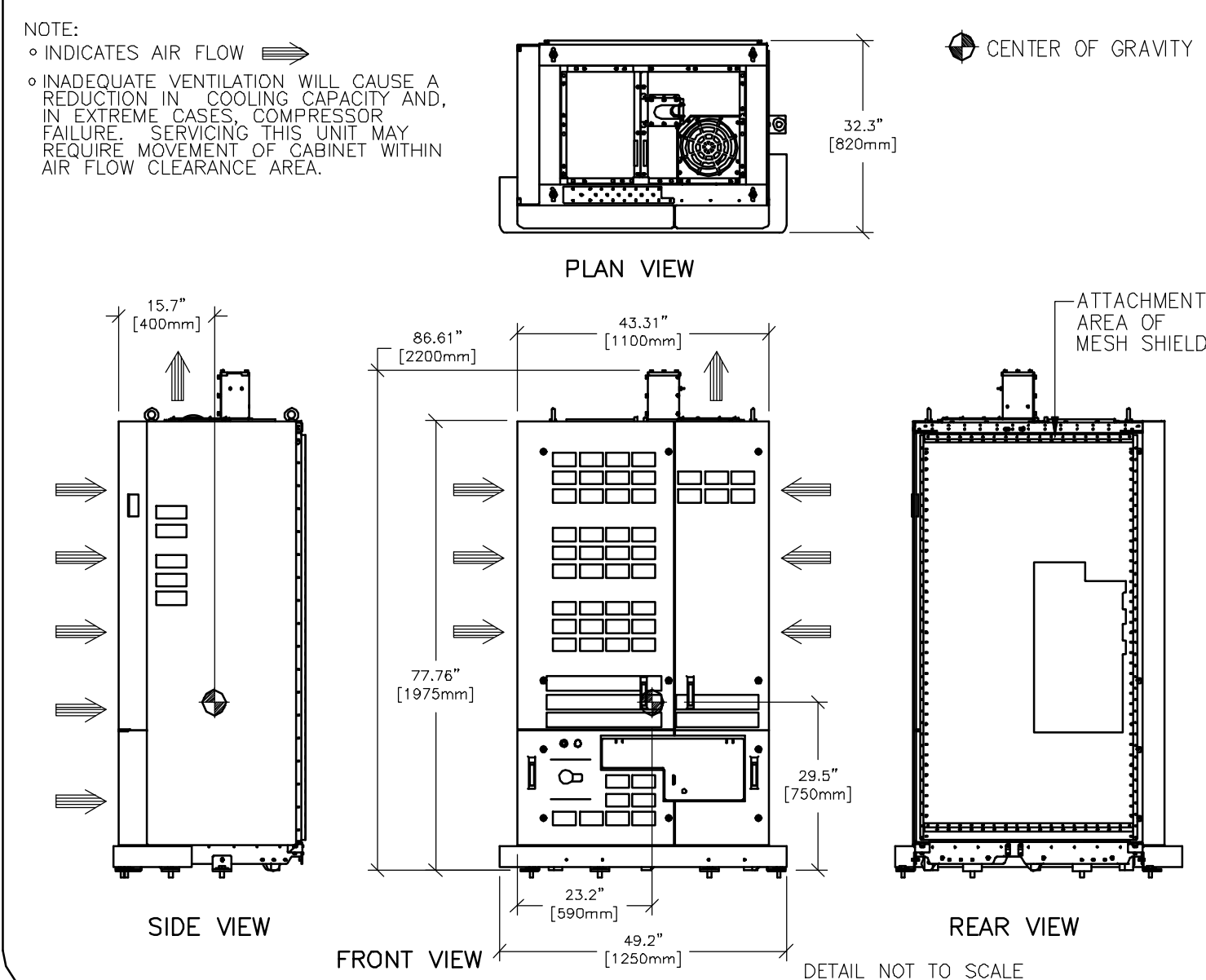
REV. DATE: 04/06/09



EQUIPMENT DETAIL
SYSTEMS CABINET

M08-15K

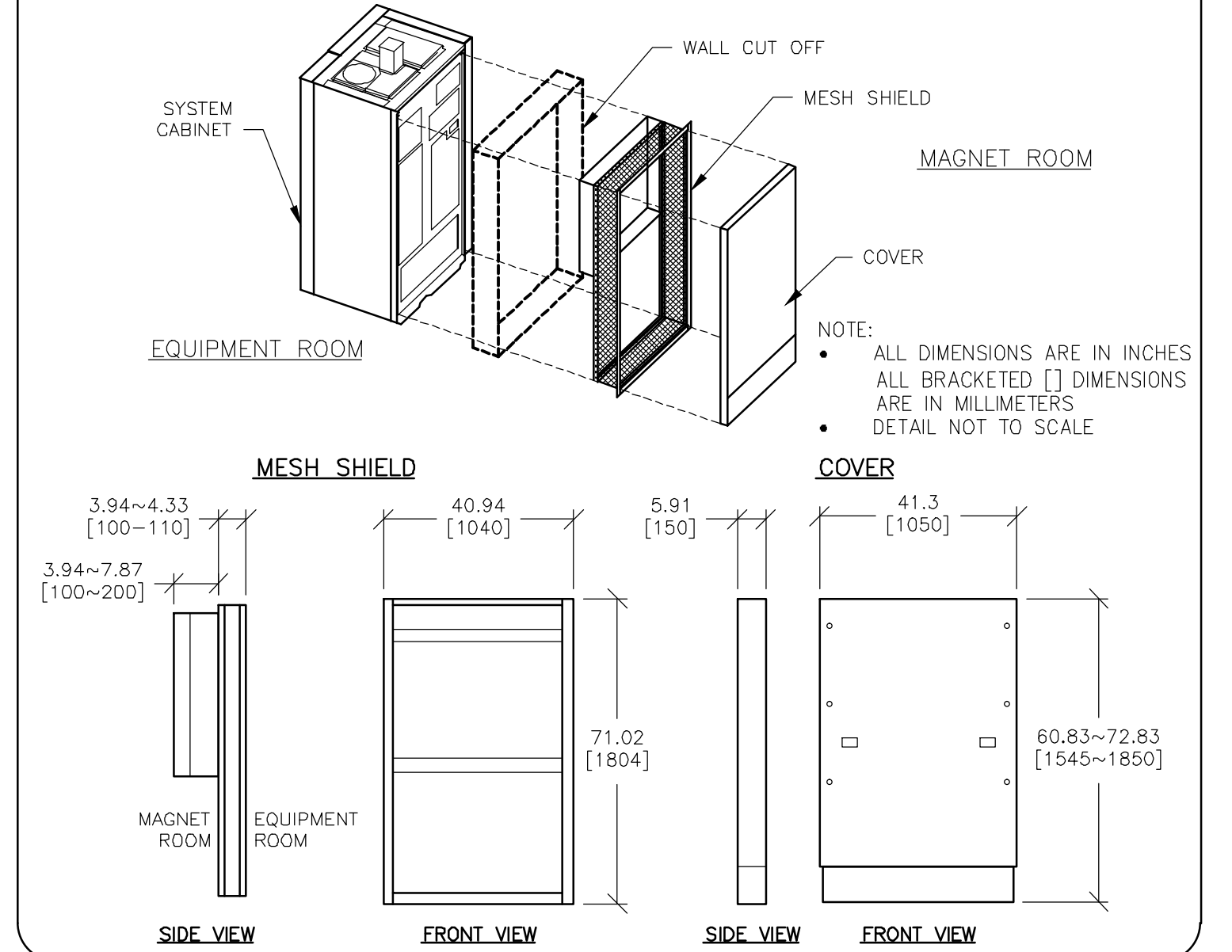
REV. DATE: 04/06/09



EQUIPMENT DETAIL
MESH SHIELD AND R/F SHIELD OPENING

M08-15L

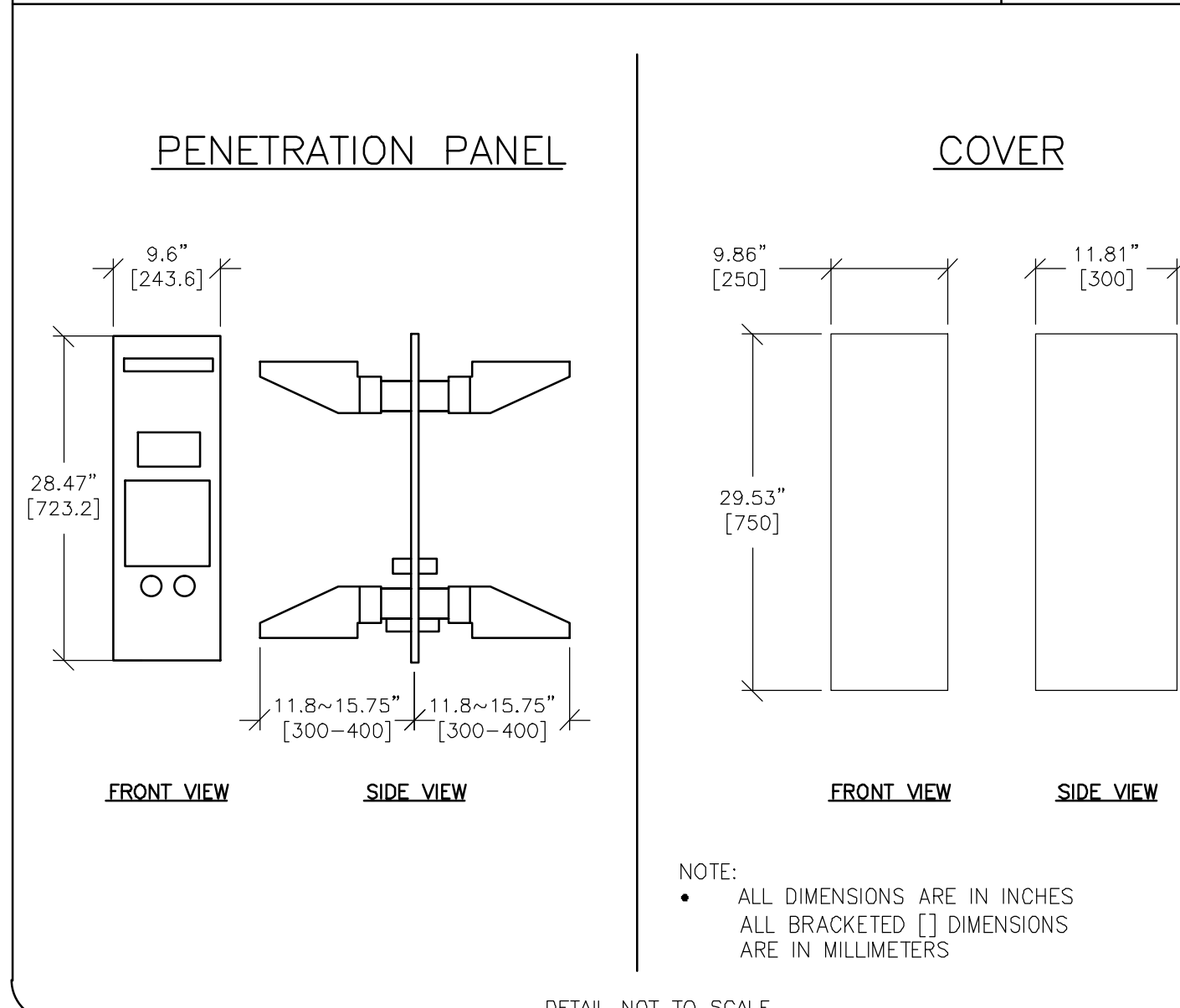
REV. DATE: 17.NOV.11



EQUIPMENT DETAIL
PENETRATION PANEL (MAGNET ROOM SIDE)

M50-15G

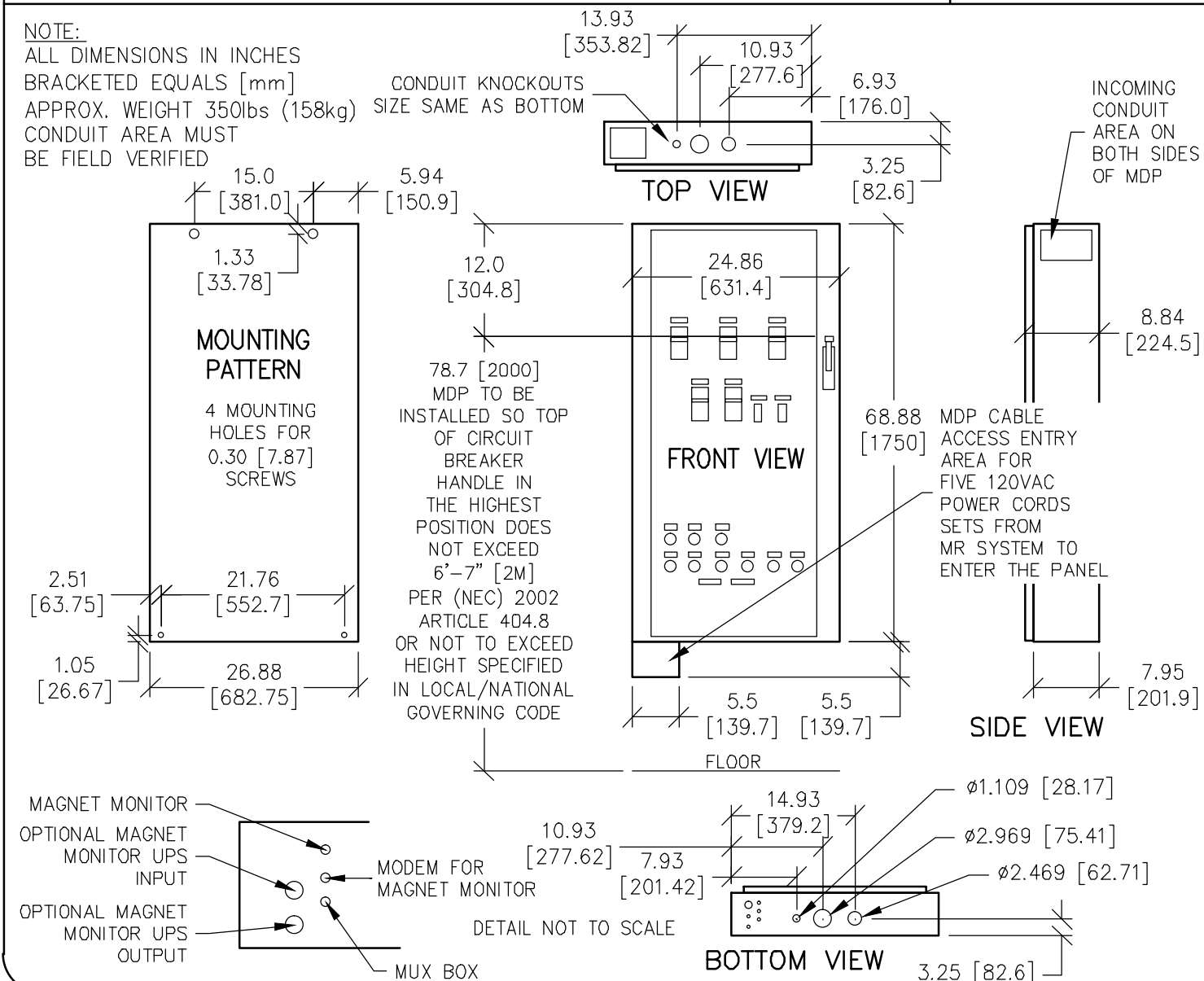
REV. DATE: 17.NOV.11



EQUIPMENT DETAIL
MAIN DISCONNECT PANEL

R45-03T

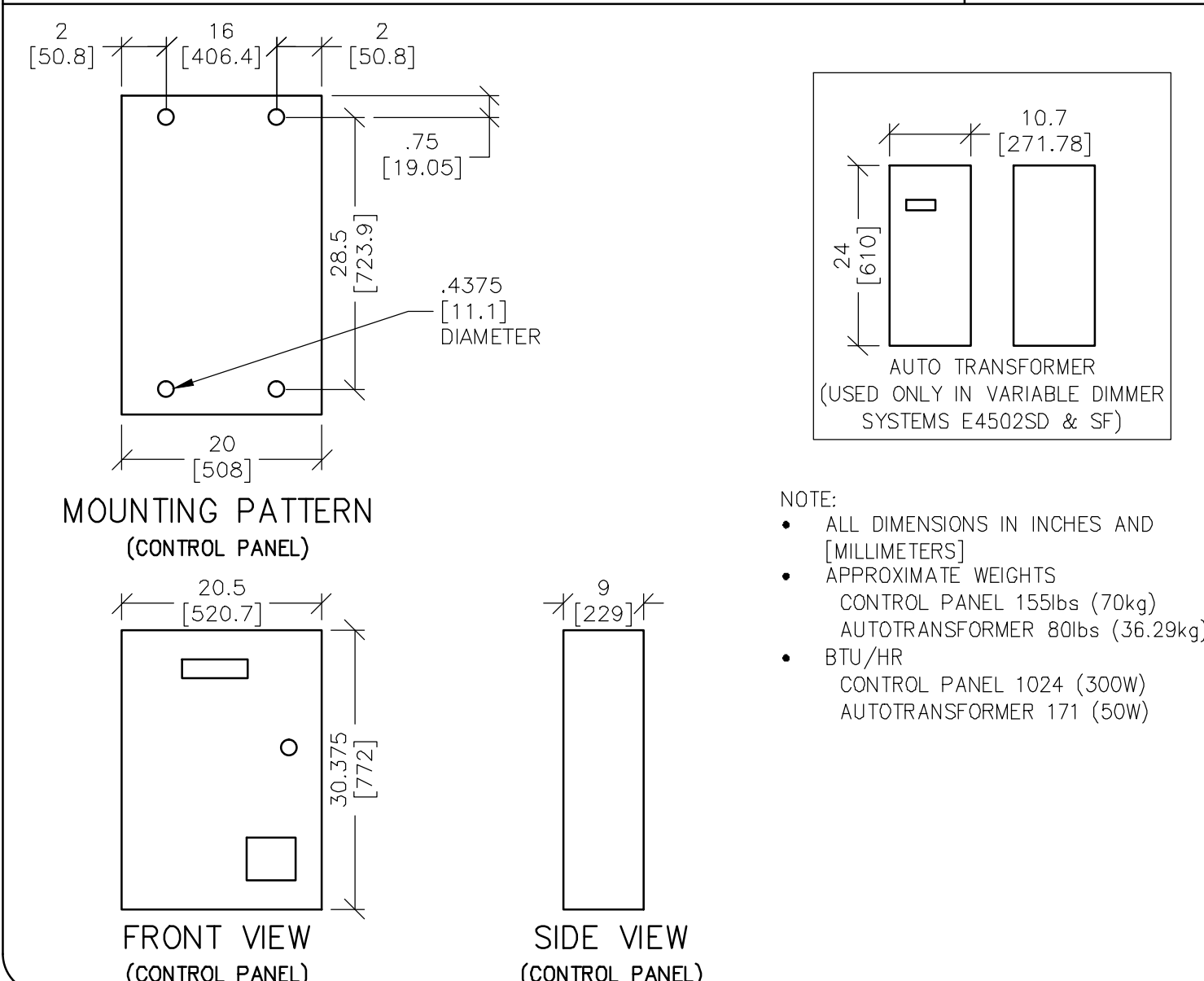
REV. DATE: 04/02/09



EQUIPMENT DETAIL
DC LIGHTING CONTROLLER

M20-15/ M20-15A

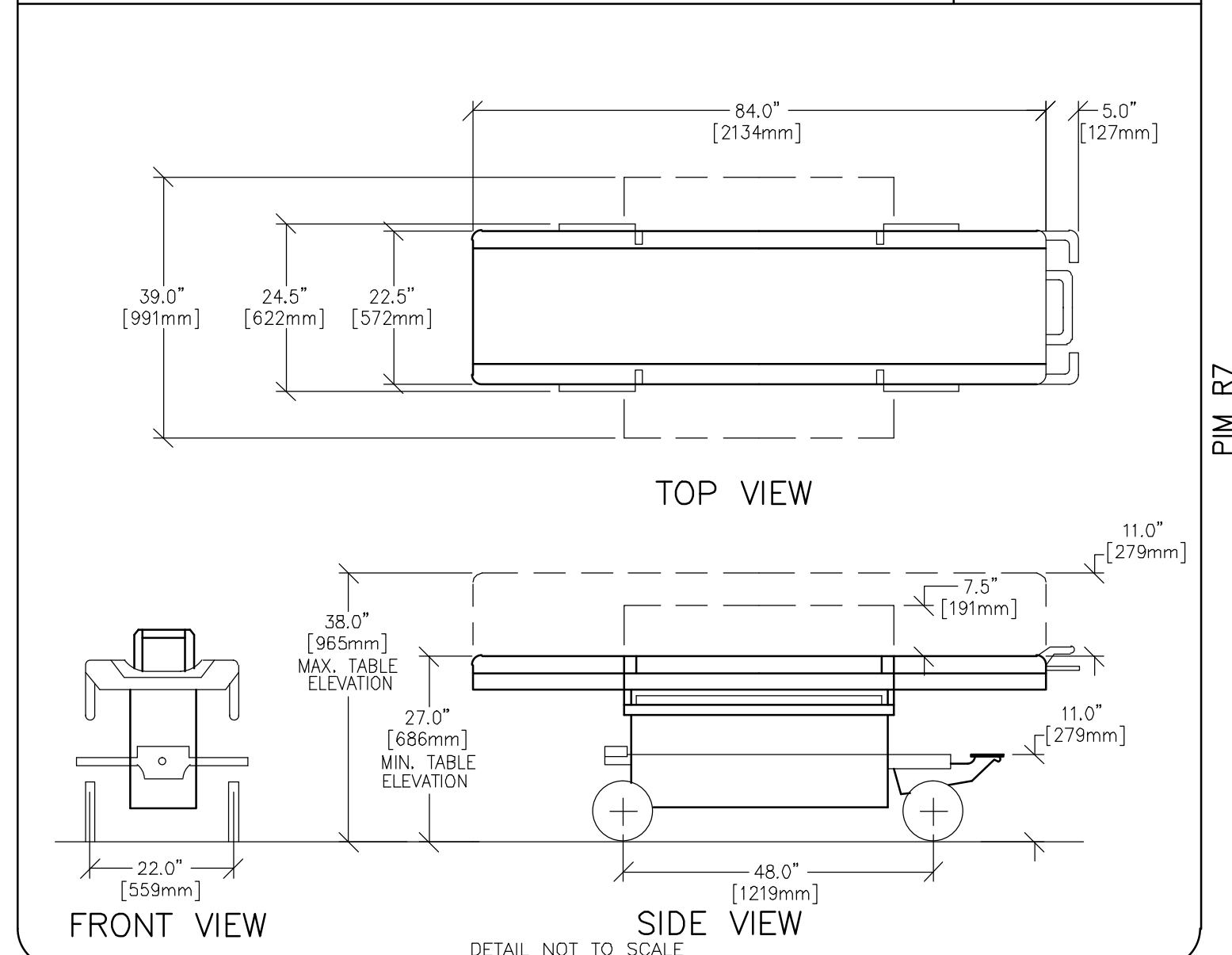
REV. DATE: 02/24/09

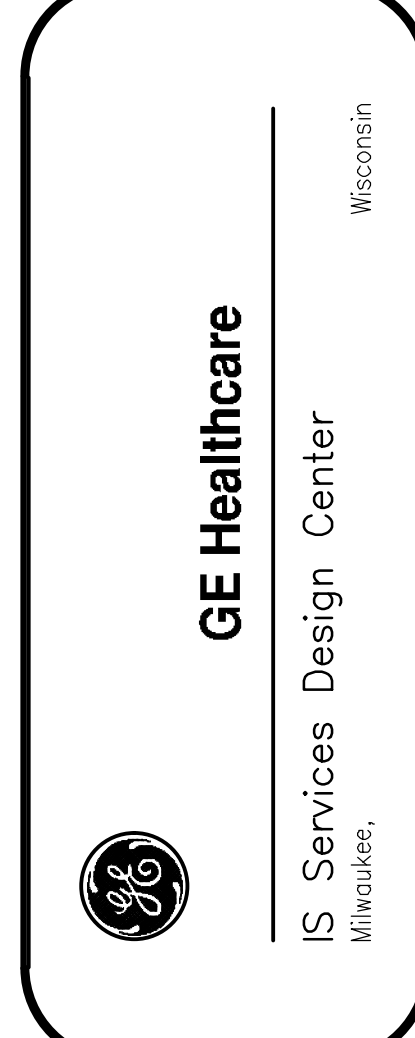
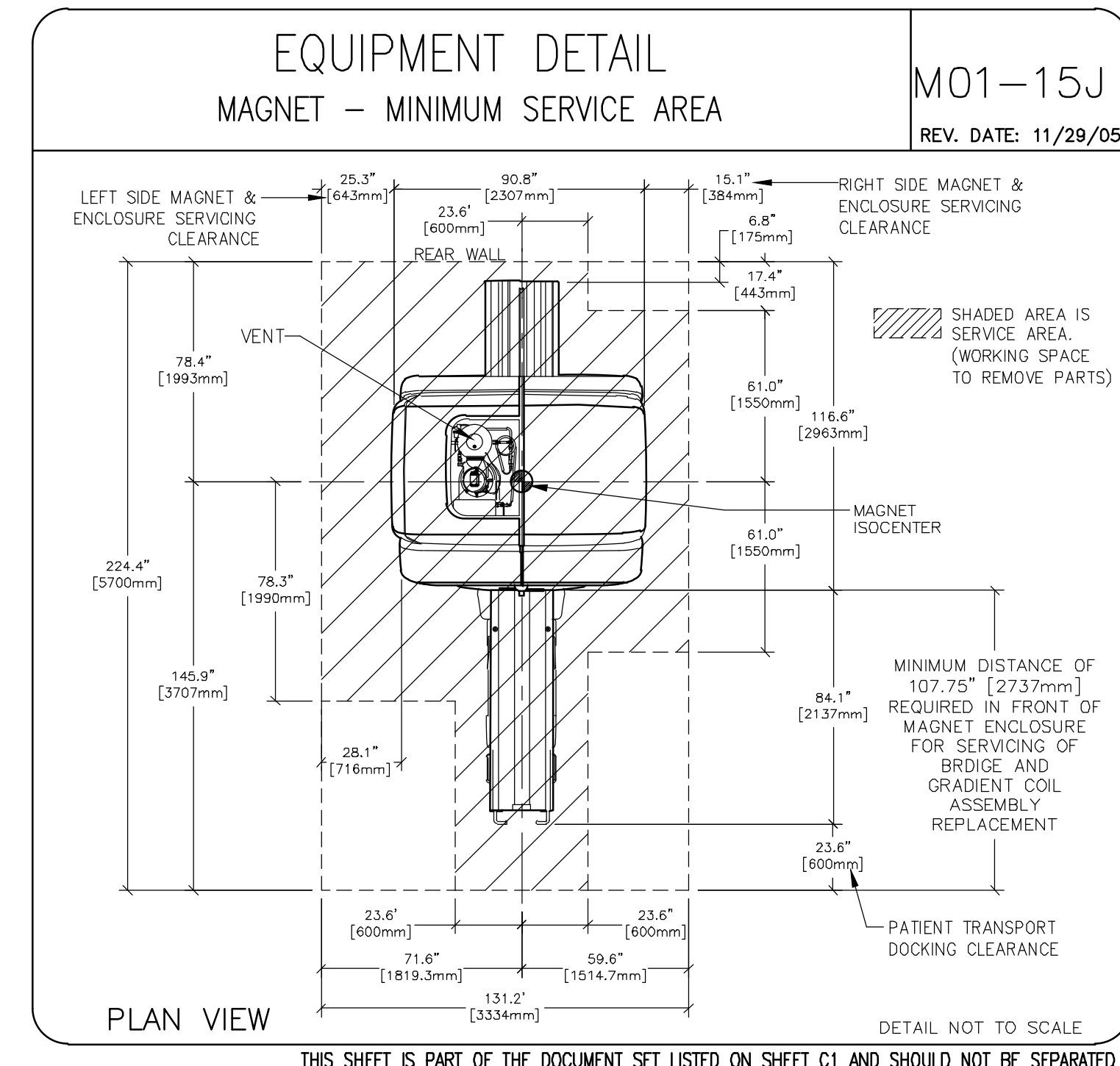
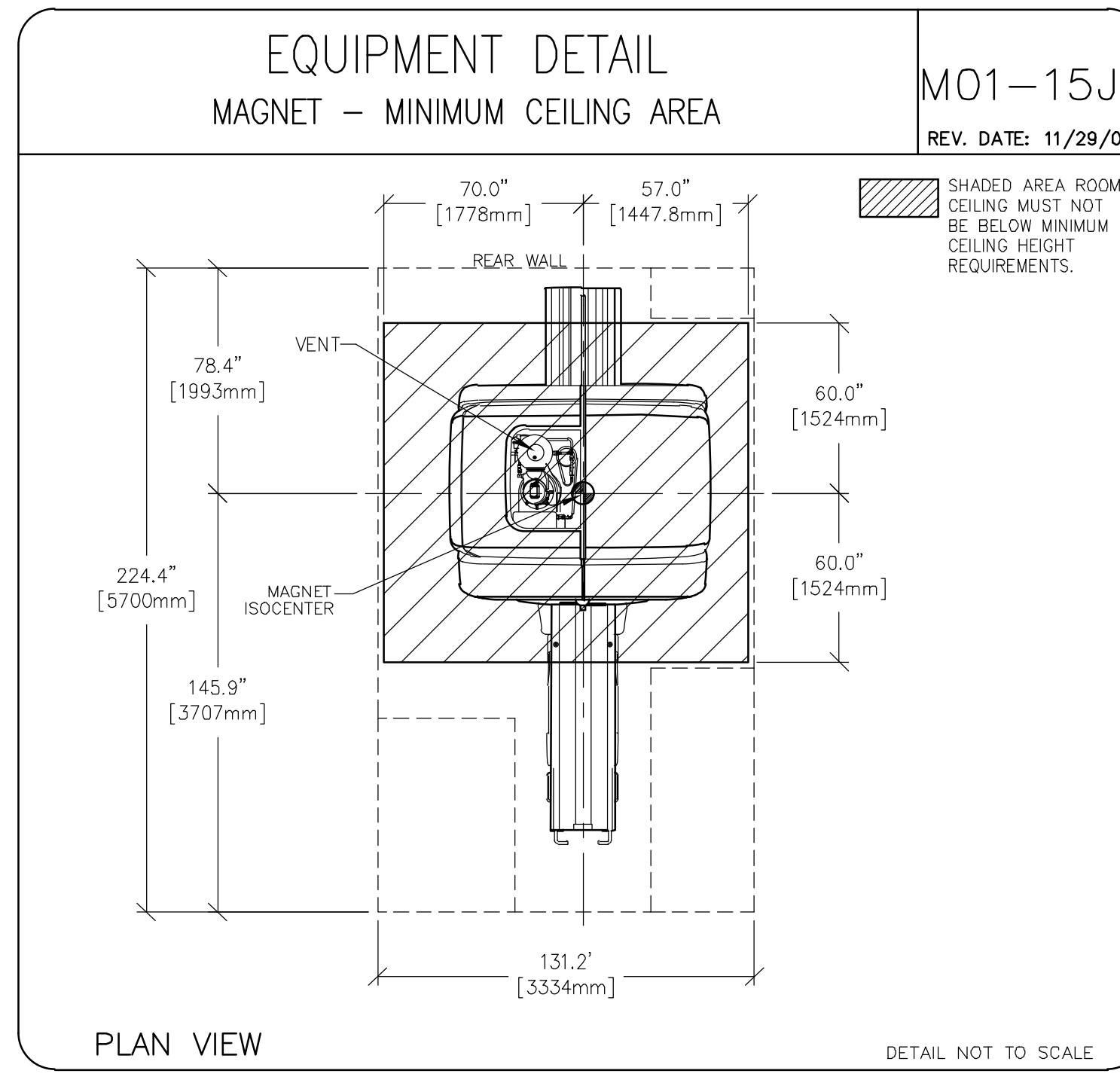
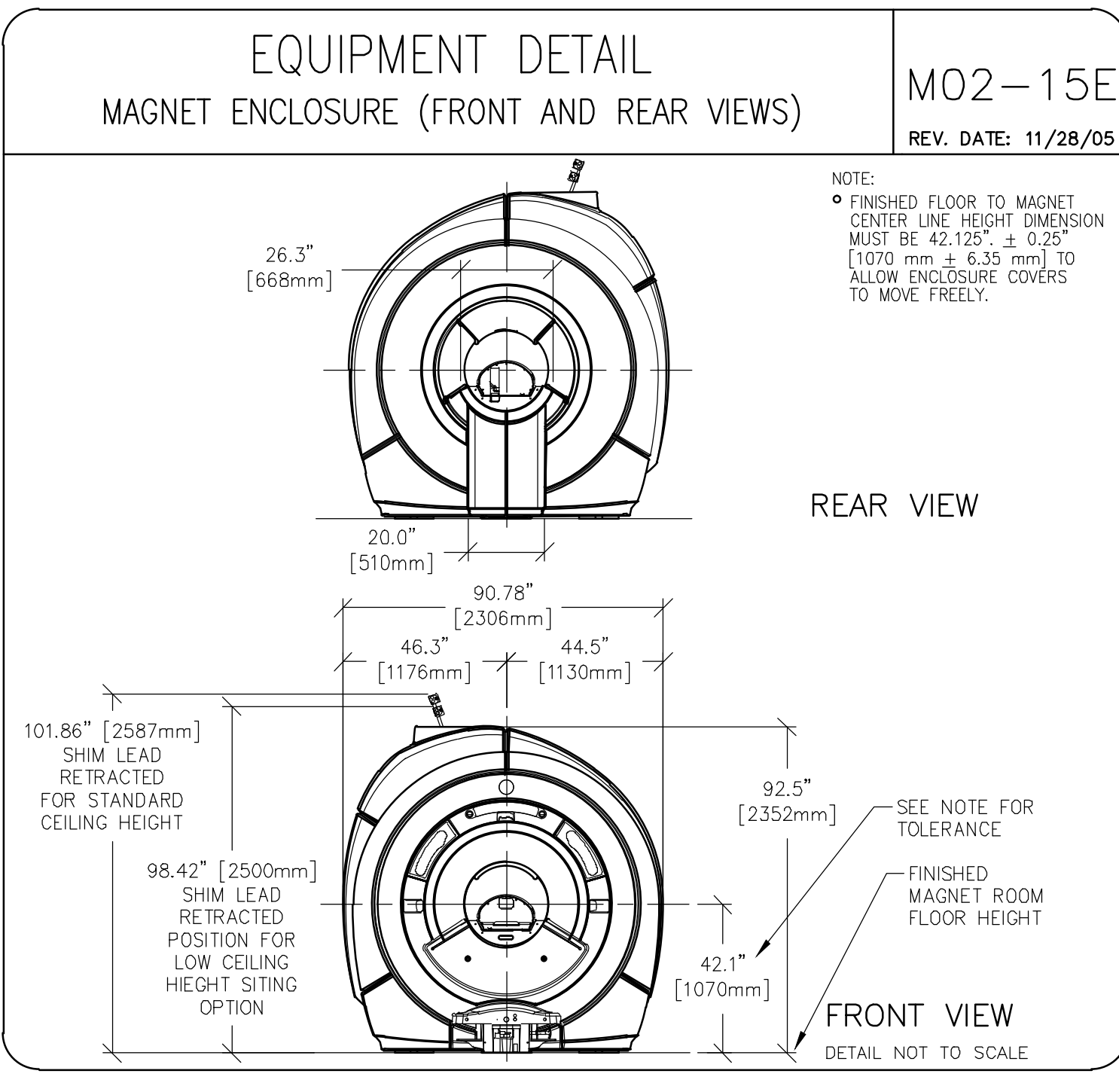
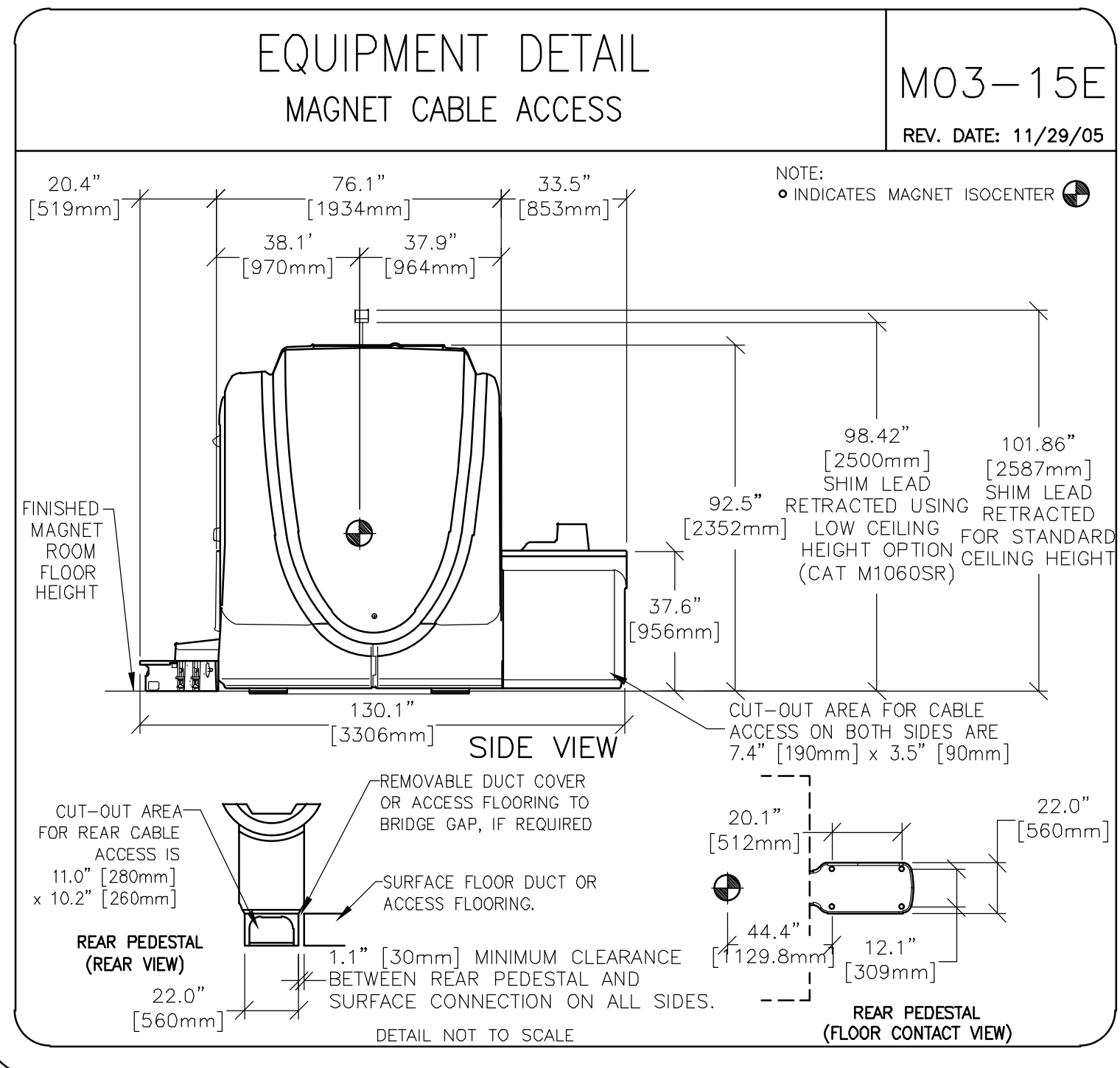
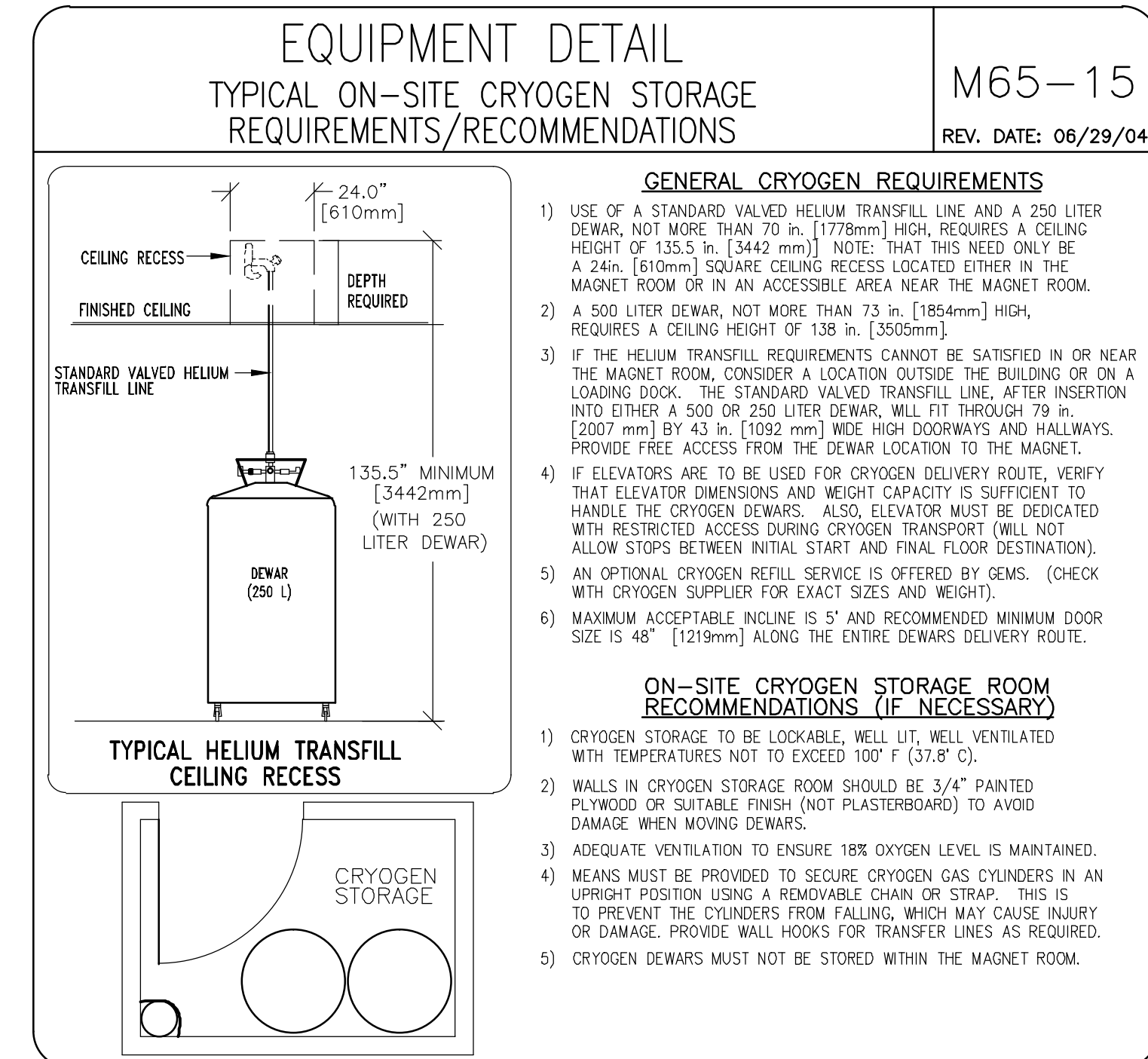
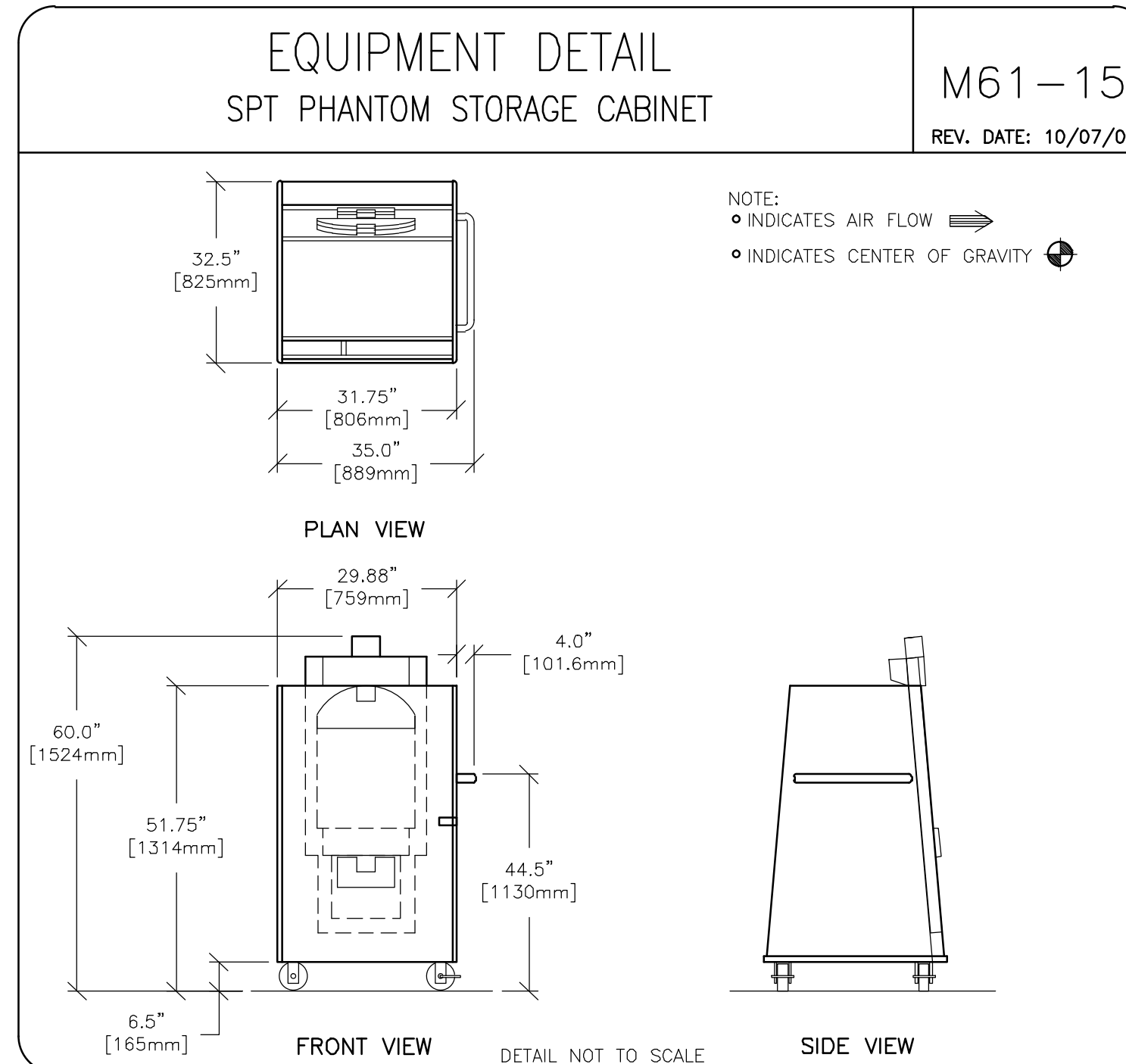
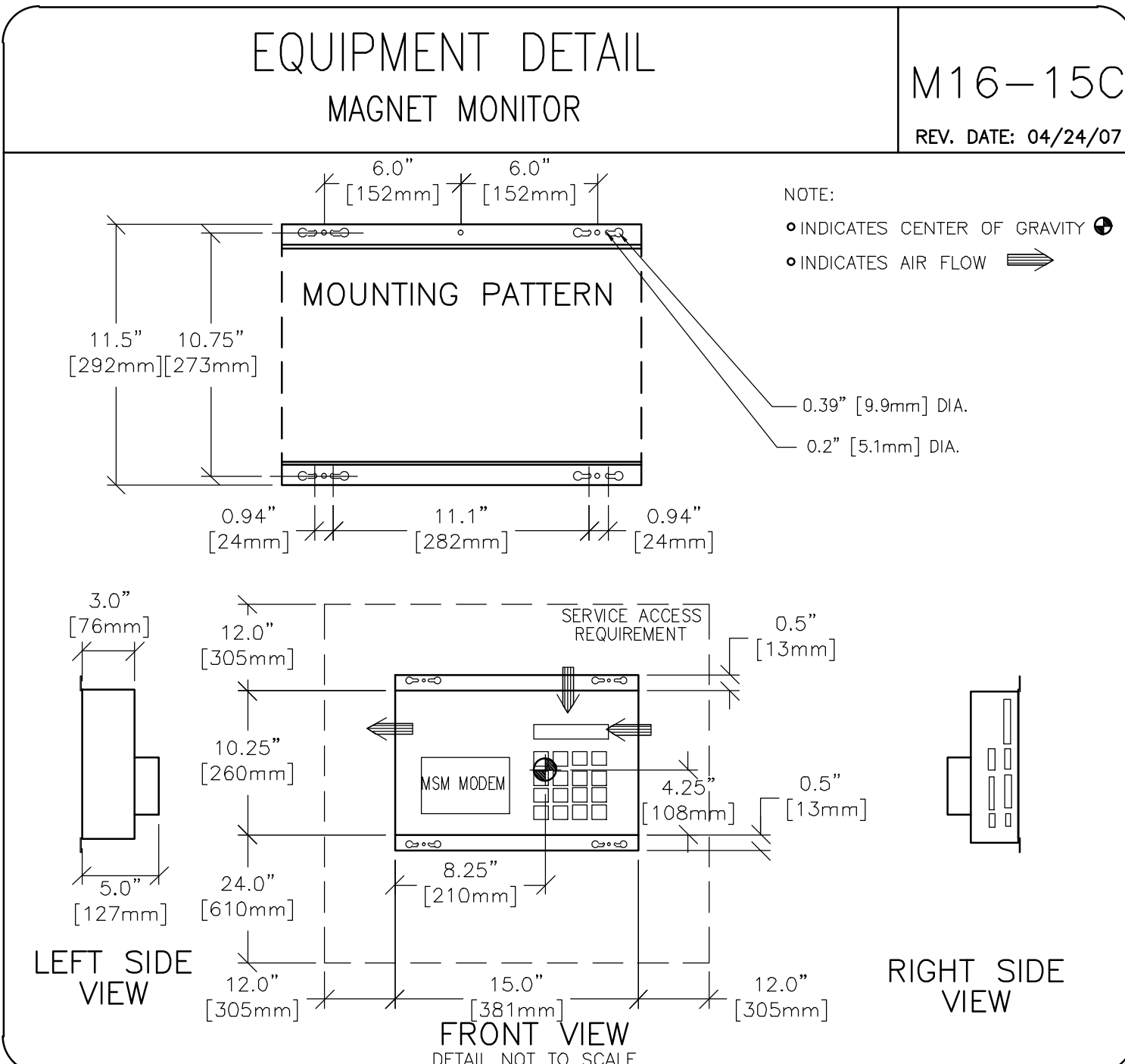
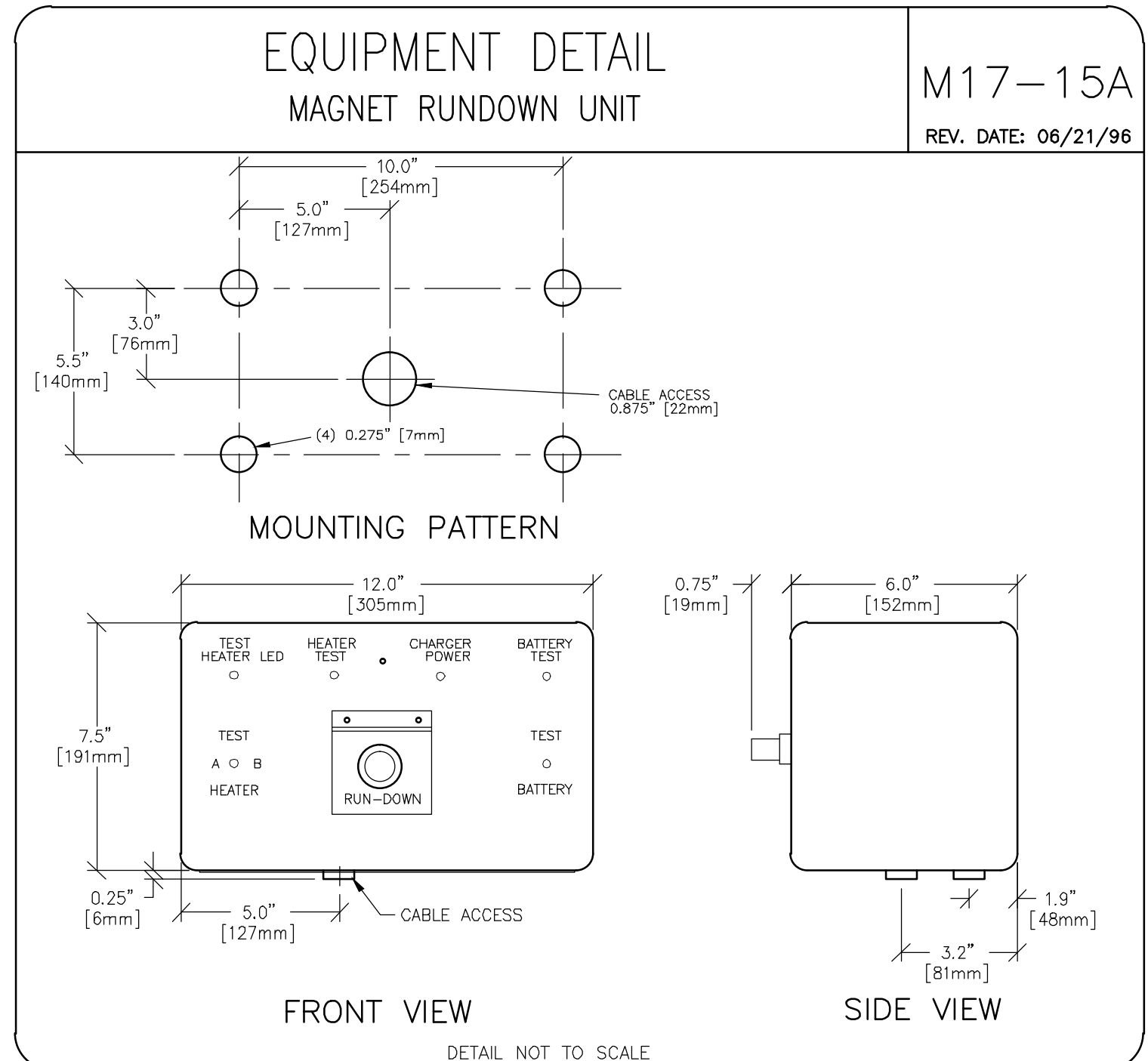
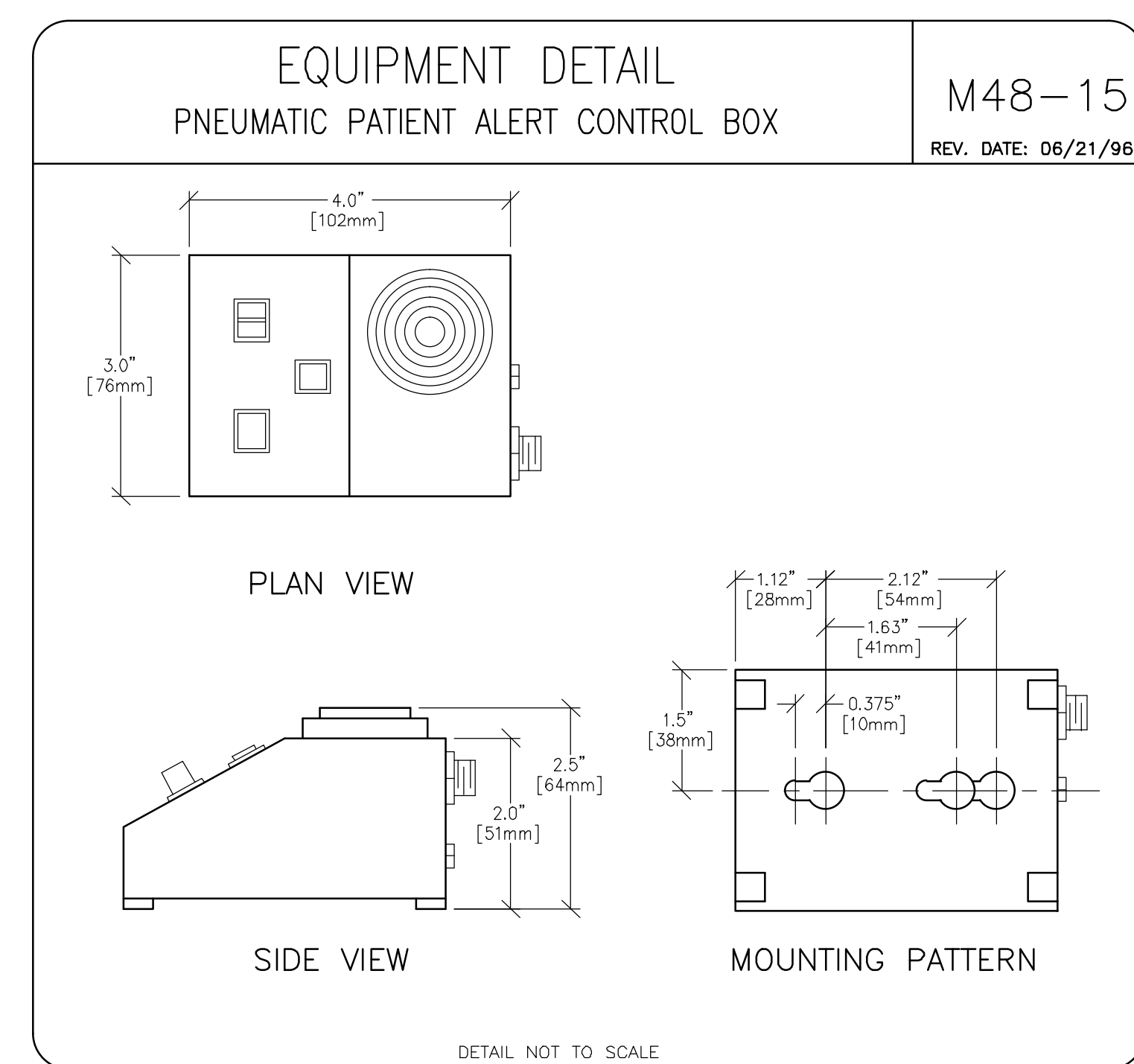
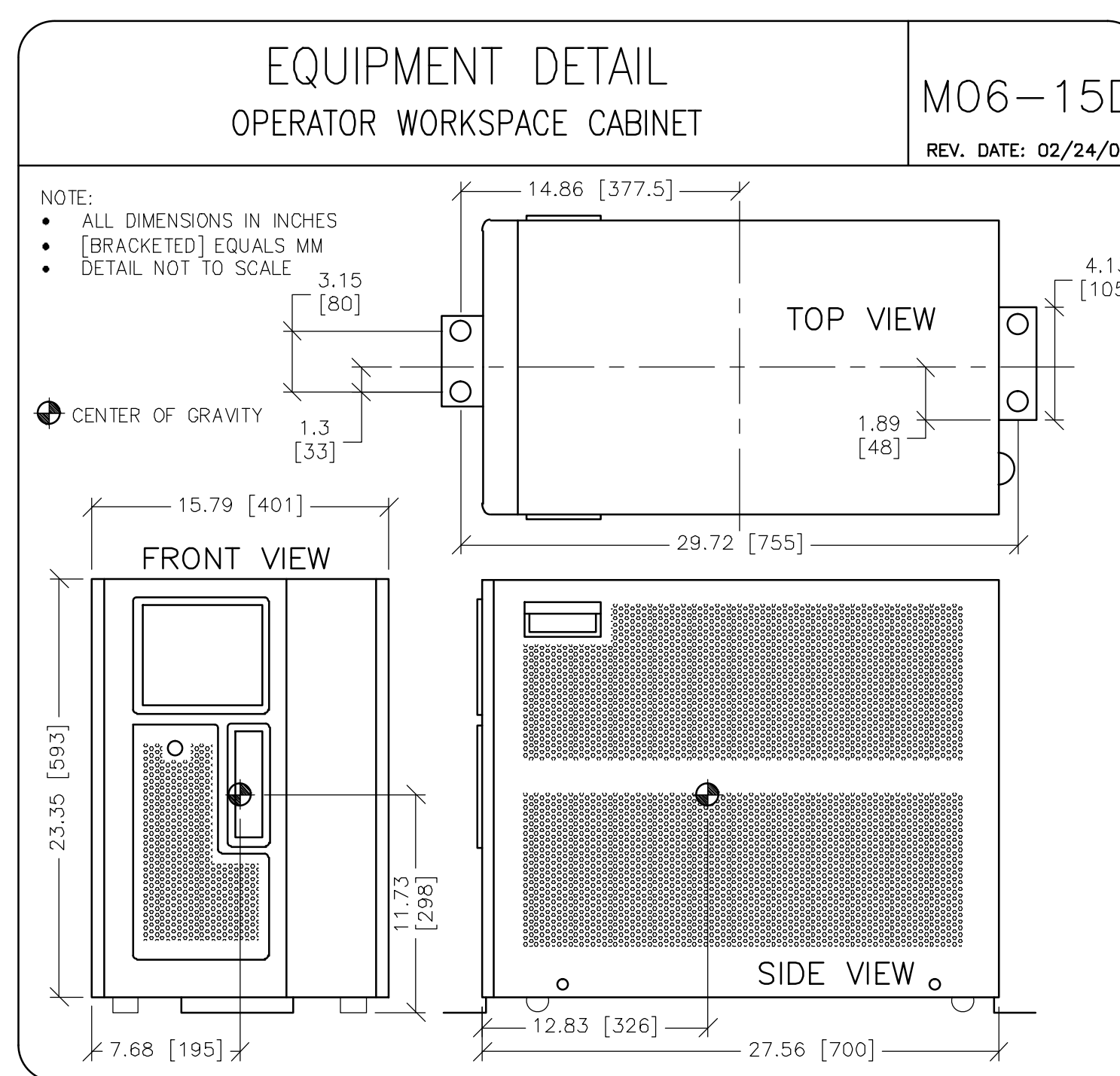
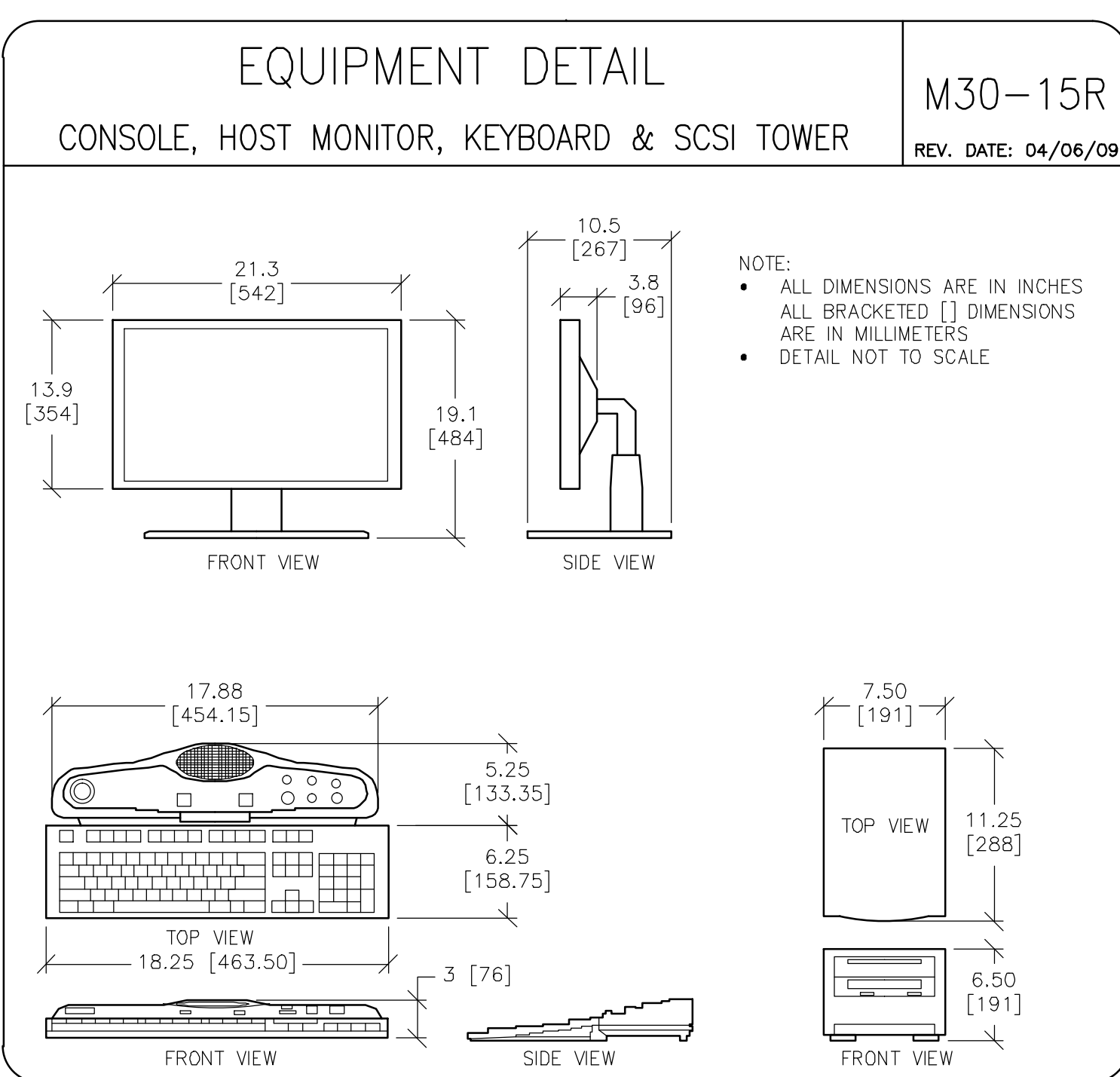
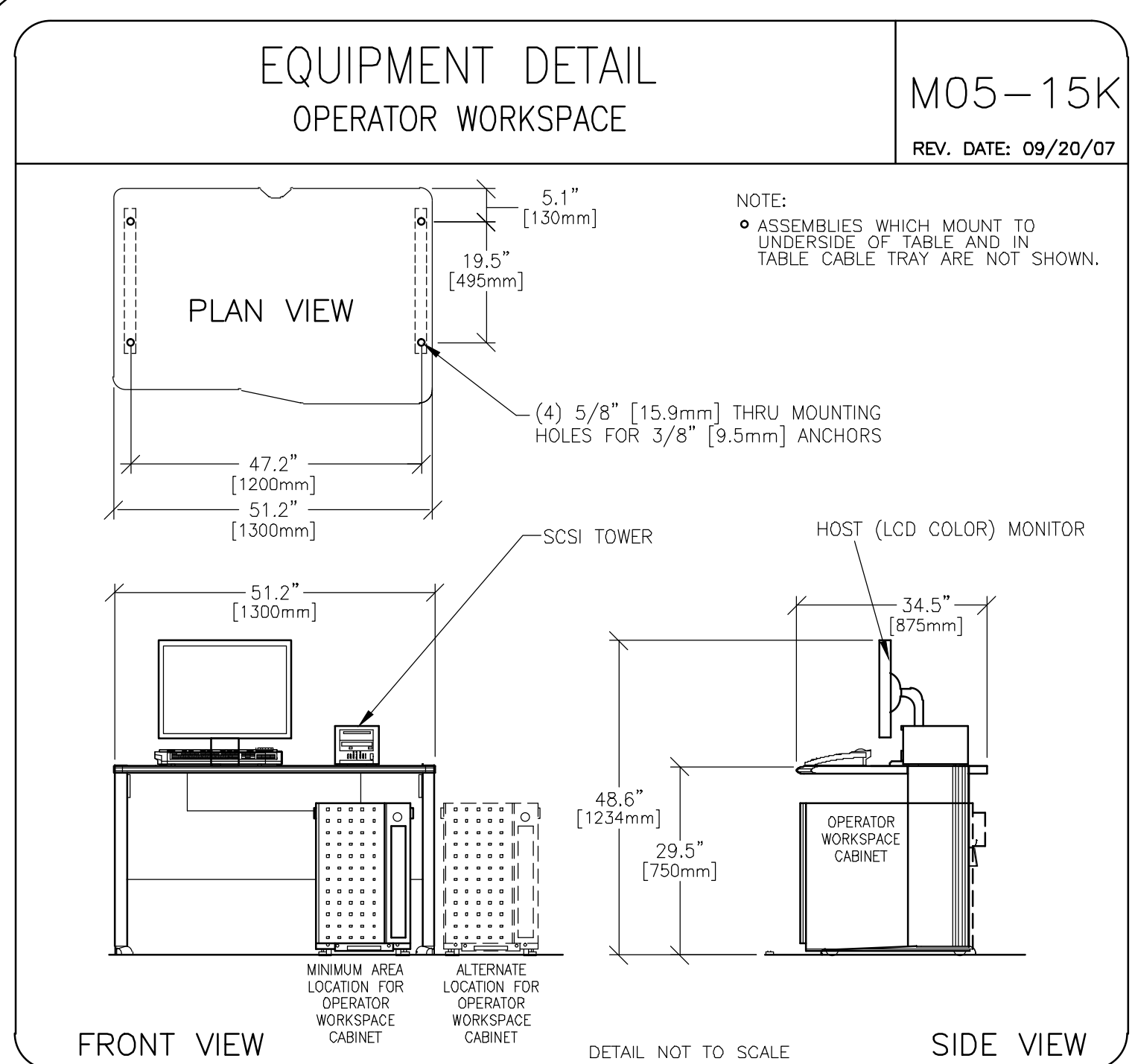


EQUIPMENT DETAIL
PATIENT TRANSPORT TABLE

M23-15

REV. DATE: 06/21/96





SHEET TITLE: EQUIPMENT DETAILS
MODALITY TYPE: SIGNA 1.5T Hde - TYPE B w/ EQUIPMENT ROOM COOLING

THIS PLAN IS SUBMITTED TO SUGGEST LOCATION OF GE HEALTHCARE EQUIPMENT AND ASSOCIATED APPARATUS, ELECTRICAL WIRING DETAILS AND ROOM ARRANGEMENTS. THE USER SHALL VERIFY THE LOCATION AND DIMENSIONS OF ALL EQUIPMENT TO BE INSTALLED. GE HEALTHCARE SHALL NOT BE RESPONSIBLE FOR ANY DAMAGES RESULTING THEREFROM.

PROJECT TITLE:
8-202F
TYPICAL LAYOUT

PROJECT REVISION
8-202F 03

DATE: 06.JAN.12
DRAWN BY: PMM
CHECKED BY: TMS

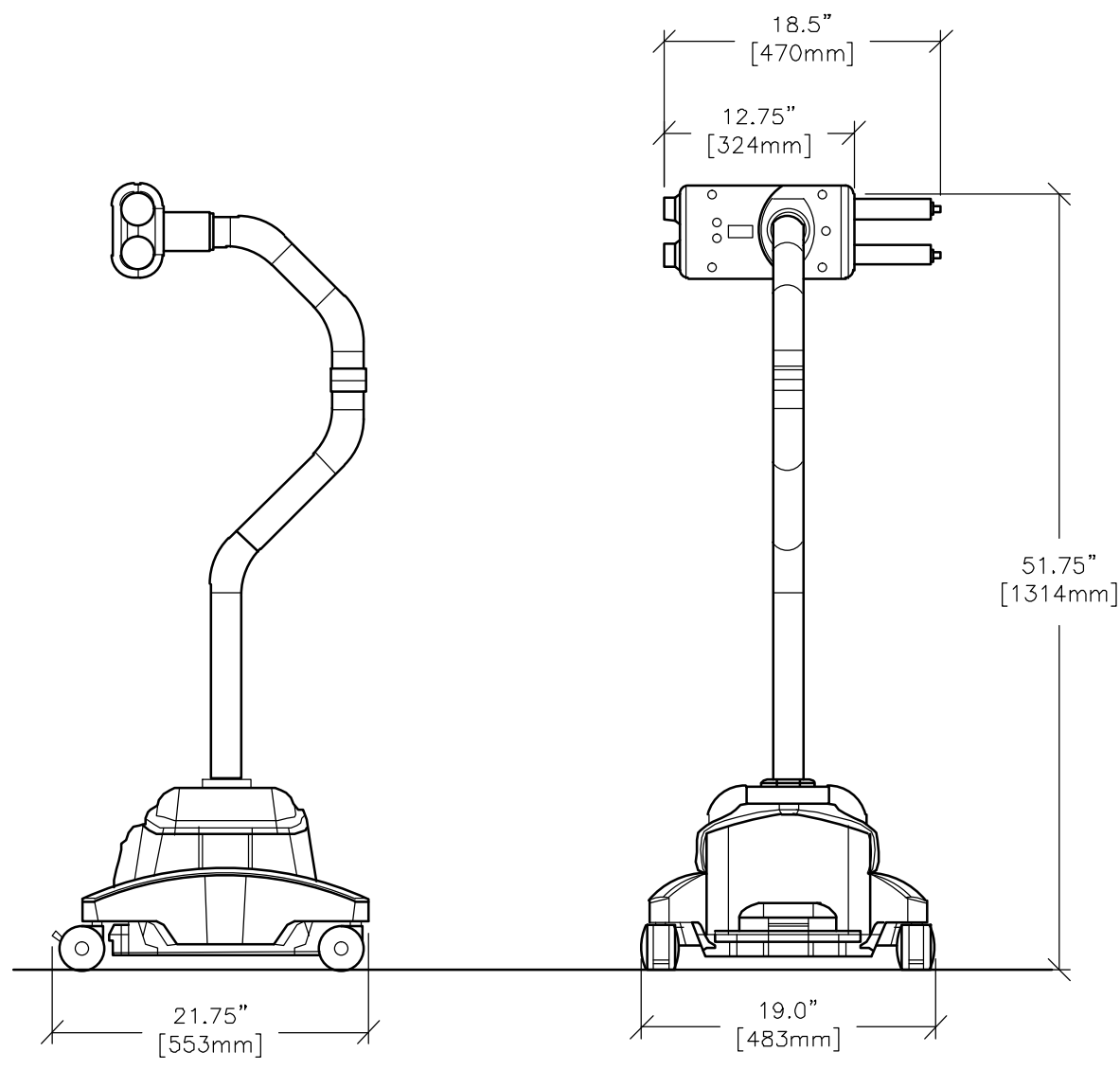
REVISION HISTORY:

SHEET
D2

THIS SHEET IS PART OF THE DOCUMENT SET LISTED ON SHEET C1 AND SHOULD NOT BE SEPARATED

EQUIPMENT DETAIL
SOLARIS INJECTOR ON PEDESTAL

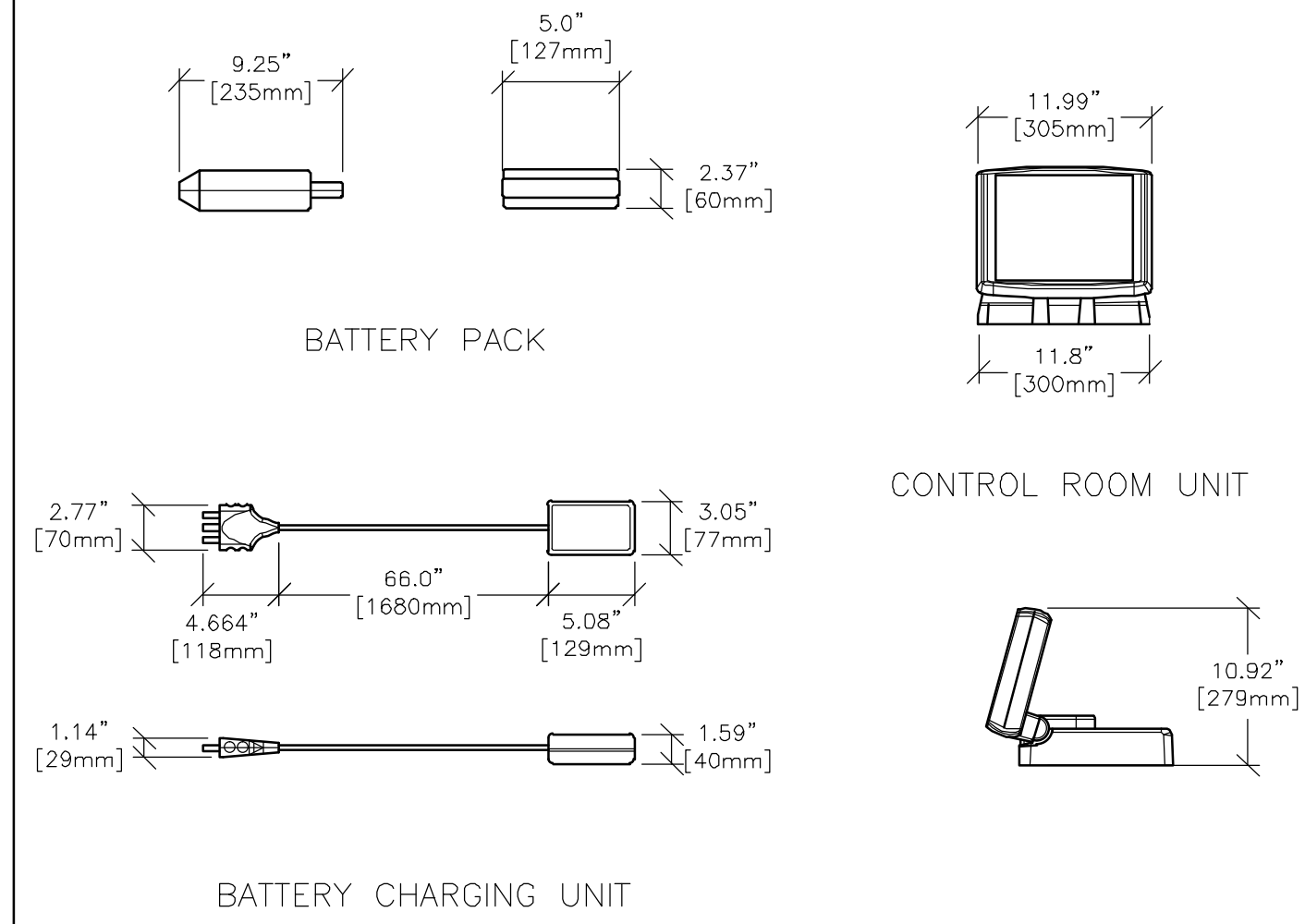
E88-04S1
REV. DATE: 04/18/03



DRAWING NOT TO SCALE

EQUIPMENT DETAIL
SOLARIS INJECTOR ELECTRONICS

E88-04S
REV. DATE: 04/18/03



DRAWING NOT TO SCALE

GE Healthcare
IS Services Design Center
Milwaukee, Wisconsin

SHEET TITLE: EQUIPMENT DETAILS
MODALITY TYPE: SIGMA 1.5T HDe - TYPE B
w/ EQUIPMENT ROOM COOLING

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PROJECT TITLE:
8-202F
TYPICAL LAYOUT

| PROJECT | REVISION |
|---------|----------|
| 8-202F | 03 |

DATE: 06.JAN.12
DRAWN BY: PMM
CHECKED BY: TMS

REVISION HISTORY:

SHEET
D3

PIM R7