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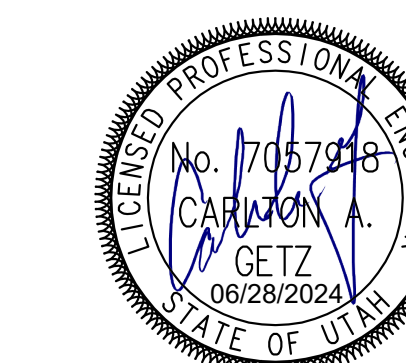
Project Manager BEN HICKMAN
Project Health Planner ANNETTE HEMELICK
Project Architect BEN HICKMAN
Landscape Architect N/A
Civil Engineer N/A
Structural Engineer REAVELLY
Mechanical Engineer VAN BOERUM & FRANK
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Wayfinding N/A

Sheet Reviewer

NOR

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Project Number 10394230
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Sheet Name

GE HEALTHCARE
EQUIPMENT
DOCUMENTS

Sheet Number

EP804

Project Status
100% CONSTRUCTION DOCUMENTS

POWER REQUIREMENTS

POWER SUPPLY	3 PHASES+G 380V/400V/420V/440V/460V/480V ±10%
FREQUENCIES	50/60Hz ± 3Hz
MAXIMUM POWER DEMAND	100 kVA
AVERAGE POWER	30 kVA
POWER FACTOR	0.85

- 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, equal to 3.4% max. of regulation for feeder size.
- 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.
- TNC neutral point connection must not be used.

SUPPLY CHARACTERISTICS

- Power input must be separate 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 GE system components must be powered separately.
- Phase imbalance 2% maximum.
- Maximum voltage variation at full load 6% (Including line impedance).
- Transients must be less than 1500V peak. (on a 380V line)
- A record of power input disturbances over a continuous two-weeks period (prior to delivery) enables determination of the frequency and degree of these disturbances and can be used to ascertain the need to provide line conditioning equipment.

GROUND SYSTEM

- System of equipotential grounding.
- 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 GE cableways and to additional equipotential connections linking up all the conducting units in the rooms where GE system units are located.
- The impedance of the earth bar should be less than or equal to 2 Ω (ohm).

CABLES

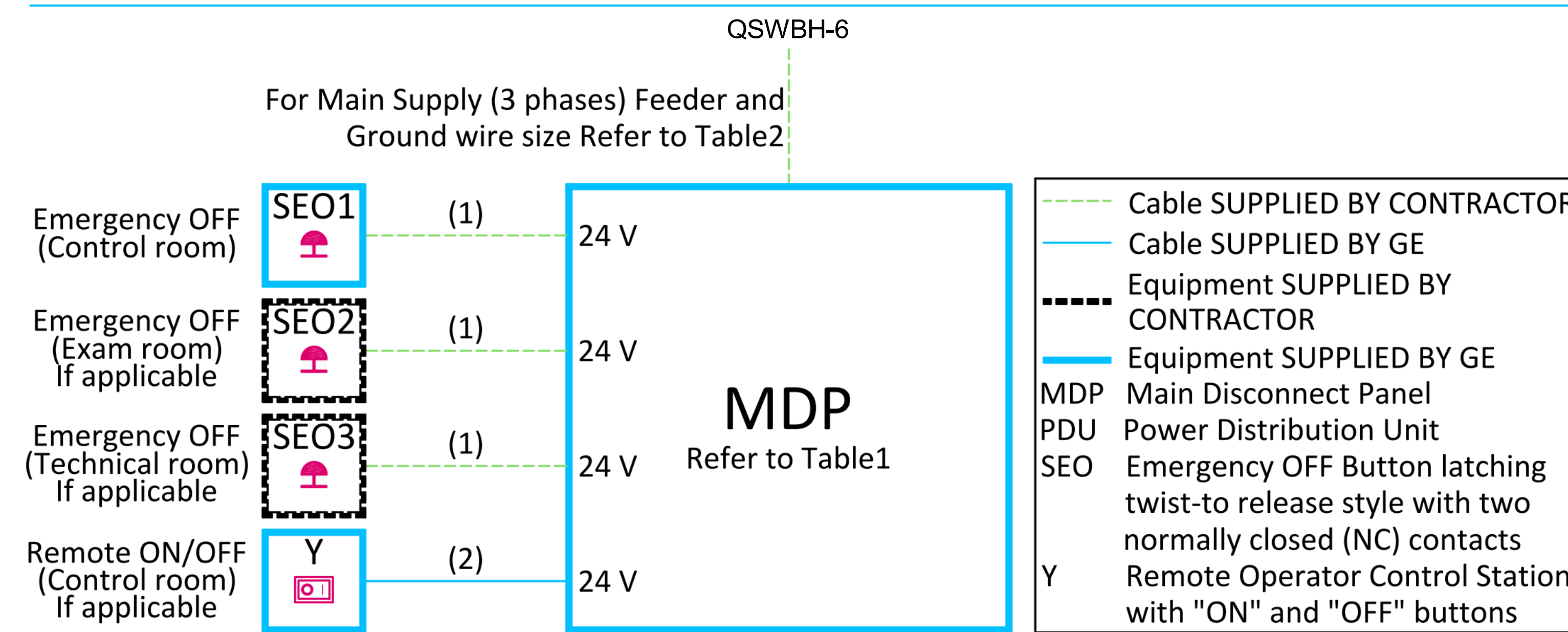
- Power and cable installation must comply with the distribution diagram.
- All cables must be isolated and flexible of HO7RNF type, cable color codes must comply with standards for electrical installation.
- The cables from signaling and remote control (Y,SEO,L...) will go to A1 Main Disconnect with a pigtail length of 1.5m, 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



- Cable SUPPLIED BY CONTRACTOR
- Cable SUPPLIED BY GE
- Equipment SUPPLIED BY CONTRACTOR
- Equipment SUPPLIED BY GE
- MDP Main Disconnect Panel
- PDU Power Distribution Unit
- SEO Emergency OFF Button latching twist-to release style with two normally closed (NC) contacts
- Y Remote Operator Control Station with "ON" and "OFF" buttons

Table1:

GE Supplied Main Disconnect Panel (MDP)		
Region	CAT number	Amps
Global except EMEA(440~480 V)	E4502BB	90
Global except EMEA(380~420 V)	E4502BC	110
EMEA(380~420 V)	E45021BC (3)	160

Table2:

Feeder Table						
The information below assumes the use of copper wire, rated 75 C and run in steel conduit. All ampacity is determined in accordance with the National Electrical Code (NFPA 70), Table 310-16 (2002). The ampacity of the circuit protection device listed above determines the minimum feeder size, except where total source regulation limits require a larger size. If the wire size does not match the above lists, please select the nearest wire size as per to local standards.						
Feeder length from Power Substation to MDP - ft (m)	Minimum Wire Size, AWG or MCM (mm ²)/VAC					
	380 VAC	400 VAC	420 VAC	440 VAC	460 VAC	480 VAC
50 (15)	2 (35)	2 (35)	3 (30)	3 (30)	3 (30)	3 (30)
100 (30)	2 (35)	2 (35)	3 (30)	3 (30)	3 (30)	3 (30)
150 (46)	2 (35)	2 (35)	3 (30)	3 (30)	3 (30)	3 (30)
200 (61)	2 (35)	2 (35)	3 (30)	3 (30)	3 (30)	3 (30)
250 (76)	1 (45)	1 (45)	2 (35)	2 (35)	2 (35)	3 (30)
300 (91)	1/0 (55)	1/0 (55)	1 (45)	1 (45)	2 (35)	2 (35)
350 (107)	2/0 (70)	1/0 (55)	1/0 (55)	1 (45)	1 (45)	1 (45)
400 (122)	2/0 (70)	2/0 (70)	1/0 (55)	1/0 (55)	1/0 (55)	1 (45)
Sub-Feeder length from MDP to PDU - ft (m)						
32 (9.7536)	2 (35)	2 (35)	3 (30)	3 (30)	3 (30)	3 (30)
Grounding						
Run a dedicated 1/0 [50 mm ²] or larger insulated copper ground wire from the power source to the MDP and from MDP to the PDU. Run the ground wire in the same raceway with the three-phase wires.						

Notes :

- Wire size: 4x2mm² [14AWG] and 1x2mm² [14AWG] GND
- Power cable: 3 Meter/10', multi-conductor, 24V DC
- GE supplied MDP option E45021BC includes a 10 meter long power cable (H07RN-F) with wire size 4x50mm² and a 50 meter long control cable with wire size 2x1.5mm²

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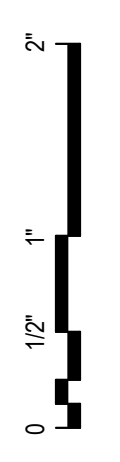
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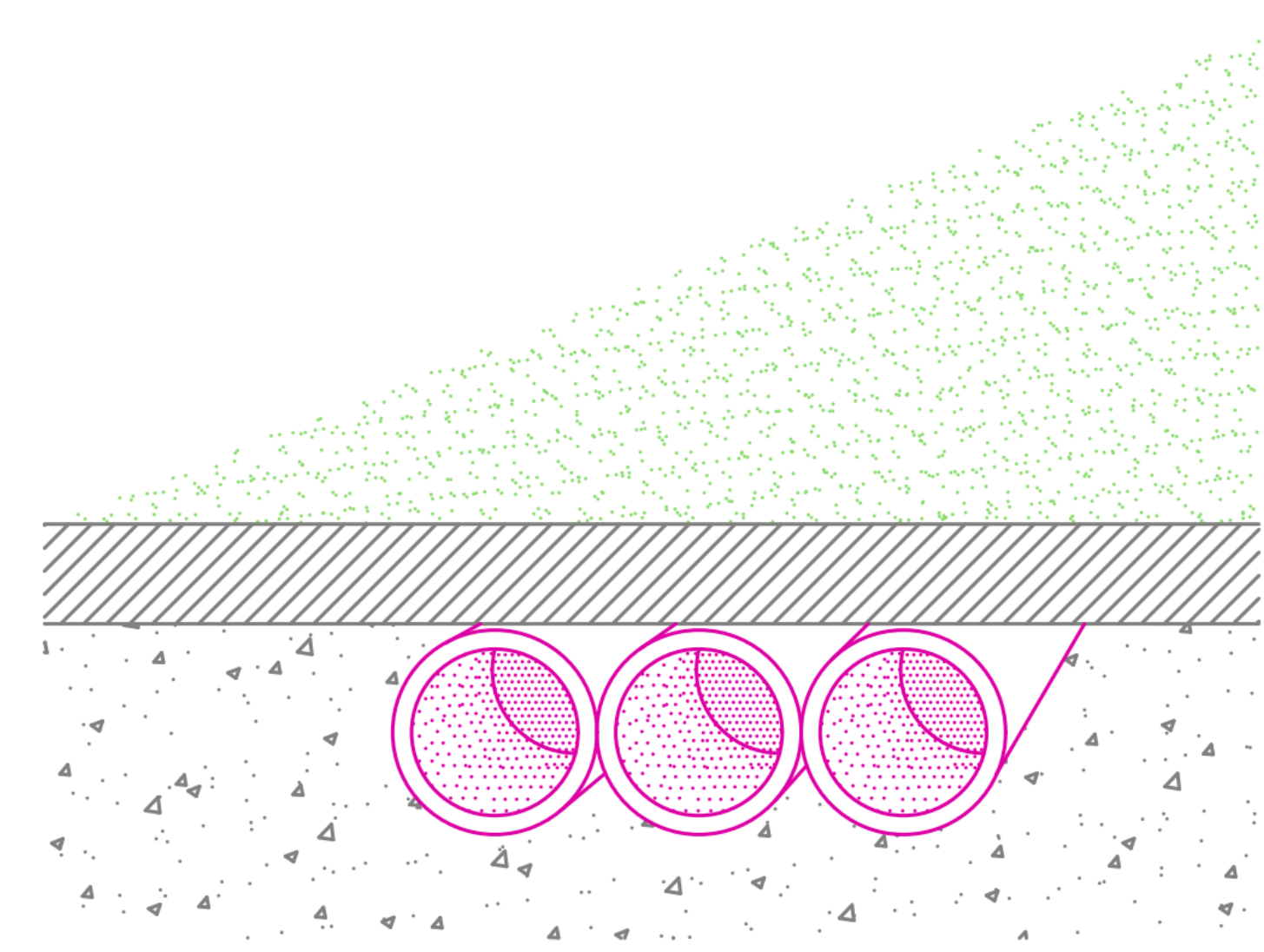
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GE HEALTHCARE EQUIPMENT DOCUMENTS

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EP805

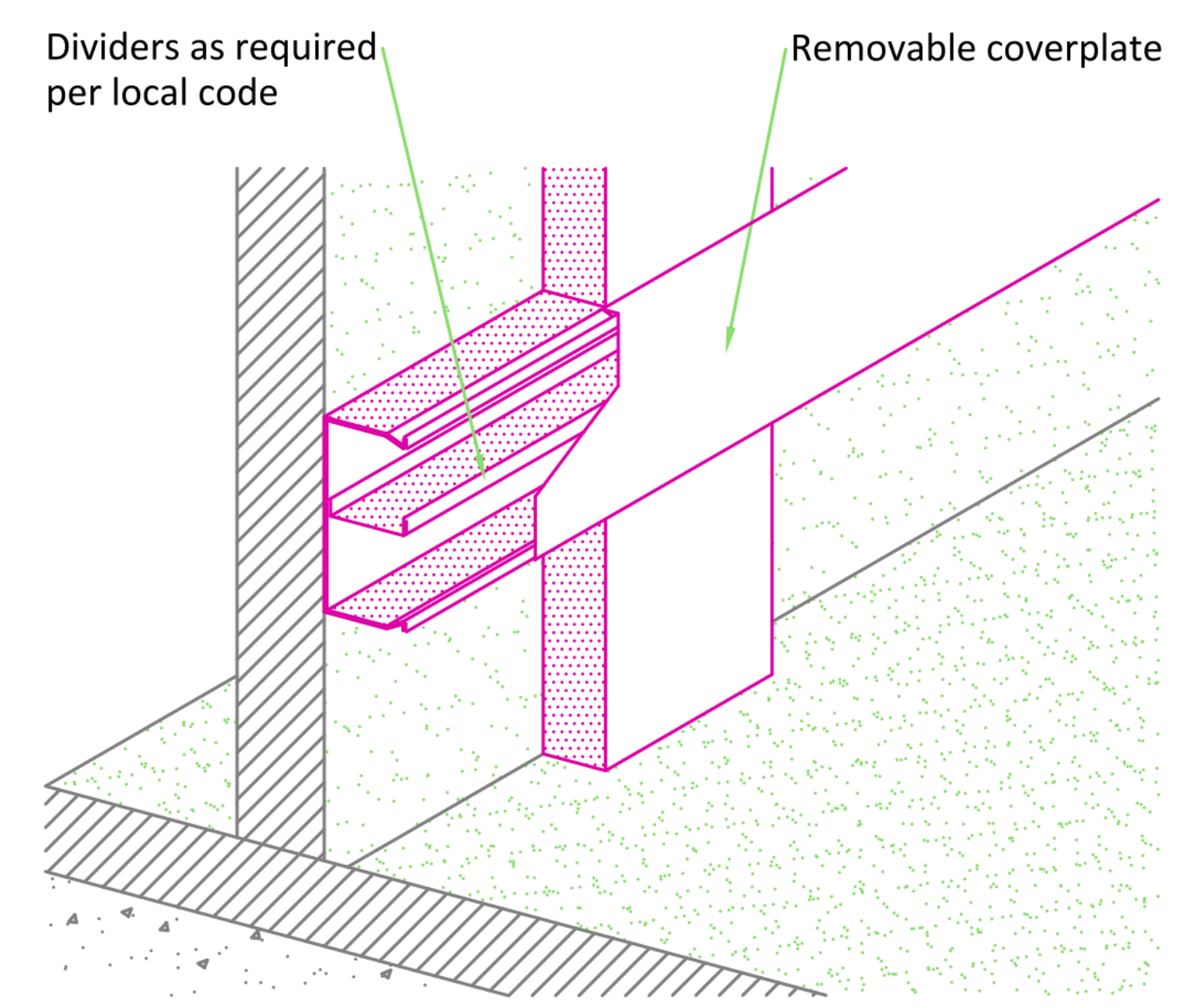


TYPICAL CABLE MANAGEMENT

CONDUIT IN THE FLOOR

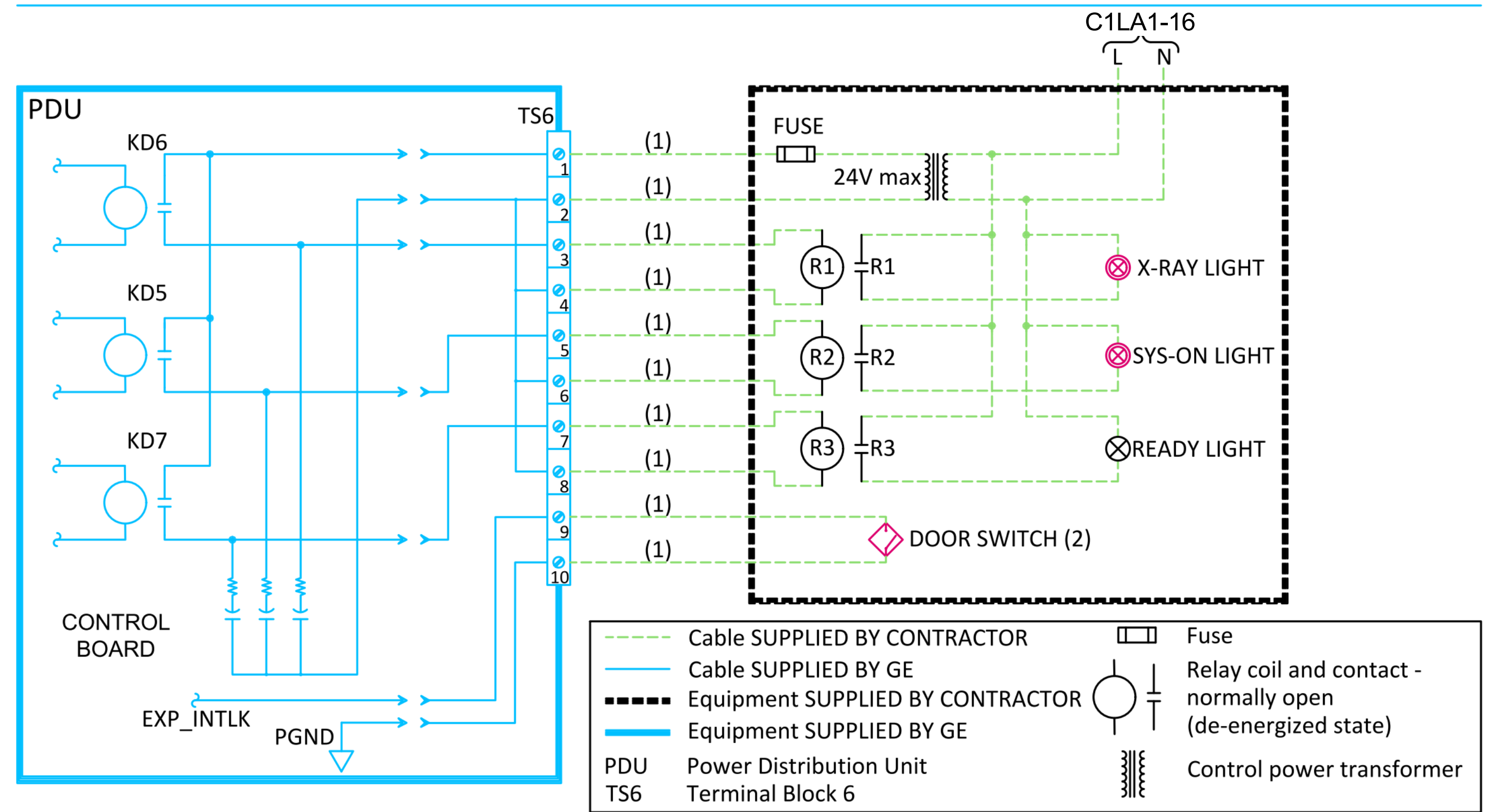


WALL DUCT



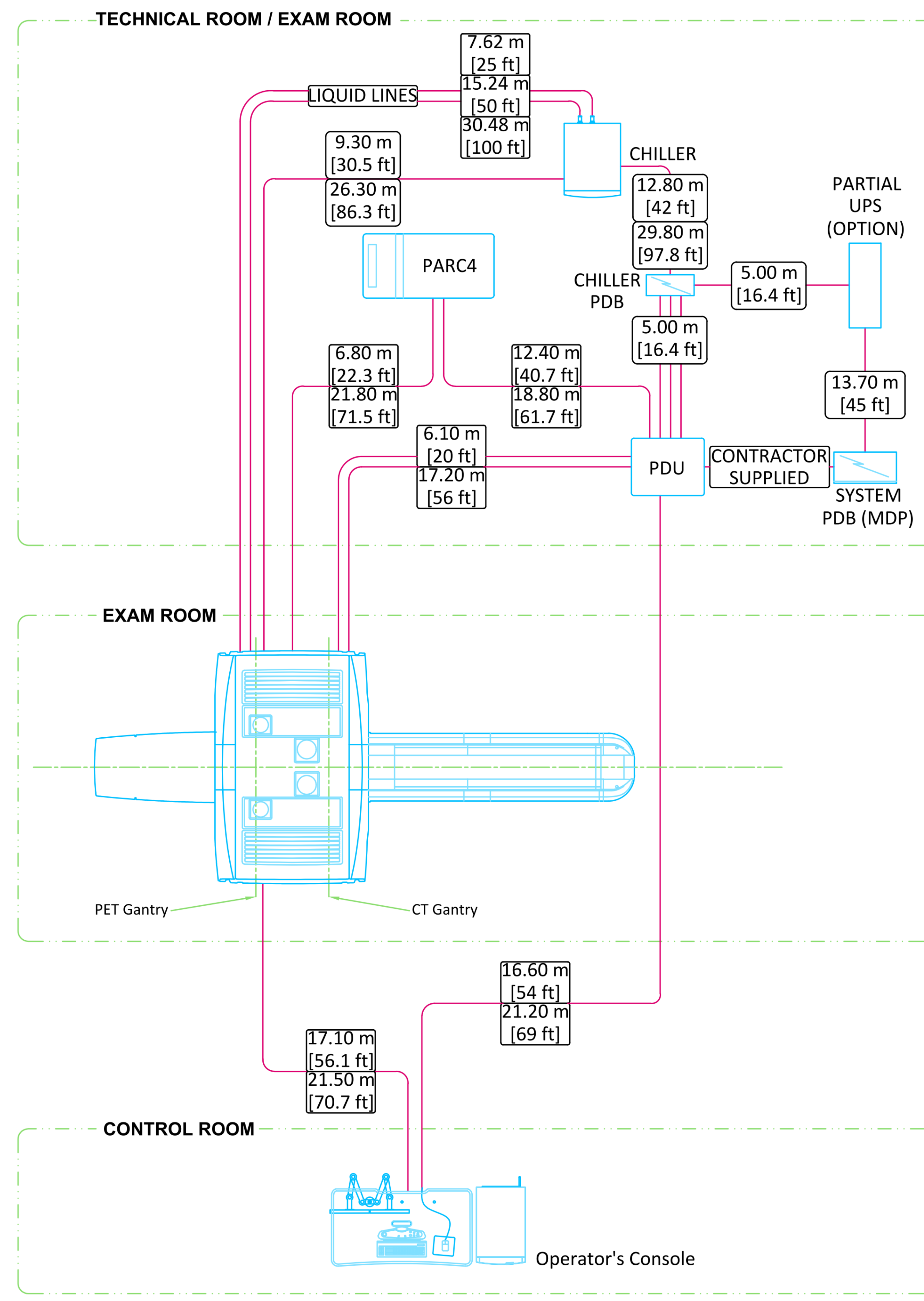
NOT TO SCALE

SCAN ROOM WARNING LIGHT AND DOOR INTERLOCK



- Notes :**
- (1) Wire size: 2mm² [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.
- Cable SUPPLIED BY CONTRACTOR
 --- Cable SUPPLIED BY GE
 --- Equipment SUPPLIED BY CONTRACTOR
 --- Equipment SUPPLIED BY GE
 PDU Power Distribution Unit
 TS6 Terminal Block 6
 Fuse
 Relay coil and contact - normally open (de-energized state)
 Control power transformer

INTERCONNECTIONS



GENERAL SHEET NOTES

- 1 PROVIDE LABELS ON ALL NEW DEVICES PER PROJECT SPECIFICATIONS CONFORMING WITH DIVISION 26 SPECIFICATIONS FOR IDENTIFICATION OF ELECTRICAL EQUIPMENT AND INTERMOUNTAIN'S DIVISION 27 SPECIFICATIONS PRIOR TO SUBSTANTIAL COMPLETION.
- 2 EXISTING CABLING, CONDUIT, ETC., SERVING SPACES NOT DIRECTLY IMPACTED BY THE SCOPE OF WORK MAY BE IMPROPERLY SUPPORTED OR UNSUPPORTED. PROVIDE AN HOURLY TIME AND MATERIALS RATE FOR PROPERLY SUPPORTING ANY EXISTING TO REMAIN CABLING, CONDUIT, ETC., FOUND TO BE IMPROPERLY SUPPORTED OR UNSUPPORTED TO CONFORM WITH THE SUPPORT REQUIREMENTS IN THE PROJECT SPECIFICATIONS. CONTRACTOR SHALL DOCUMENT AND REPORT ALL INSTANCES OF IMPROPERLY SUPPORTED OR UNSUPPORTED CABLING, CONDUIT, ETC., TO OWNER AND ARCHITECT. RESUPPORT ANY EXISTING CABLING AND/OR CONDUIT AS NECESSARY TO ELIMINATE CONTACT WITH EXISTING FIRE PROTECTION PIPING AND AVOID CONTACT WITH NEW FIRE PROTECTION LINES.

SHEET KEYNOTES

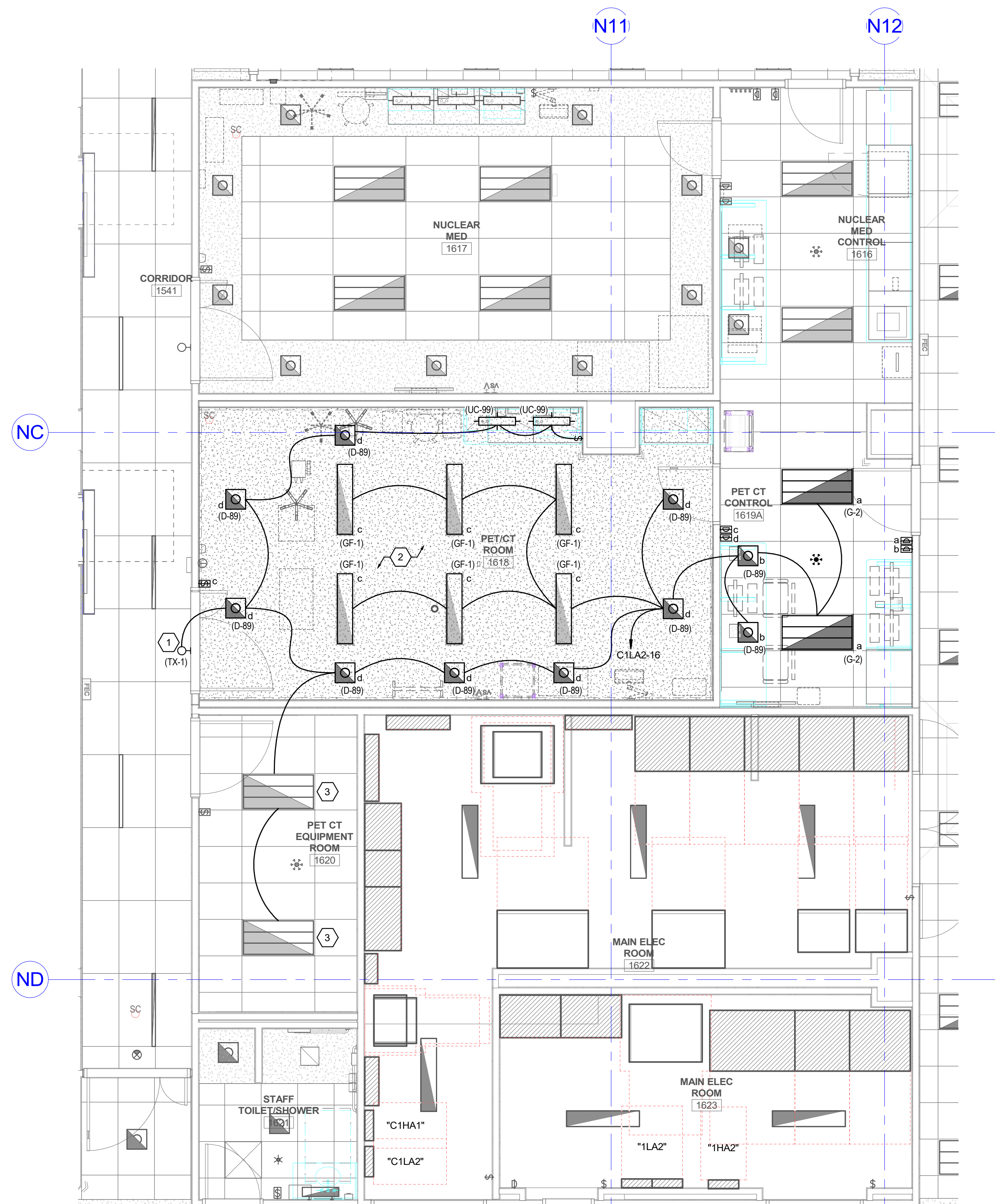
- 1 PROVIDE CIRCUITING TO "IN USE" FIXTURE THROUGH PET/CT VENDOR PROVIDED RELAY CONTROLS PER VENDOR DOCUMENTATION.
- 2 ALL LIGHTING FIXTURES INSTALLED IN THE CEILING AND ALL LIGHTING DEVICES WITHIN SPACE ARE TO BE INSTALLED WITH LEAD SHIELDING IN ACCORDANCE WITH SPECIFICATION SECTION 134900.
- 3 CIRCUIT EXISTING LIGHTING MAINTAINED DURING DEMOLITION TO NEW CRITICAL LIGHTING BRANCH CIRCUIT AS SHOWN ON PLAN.

LIGHTING FIXTURE SCHEDULE

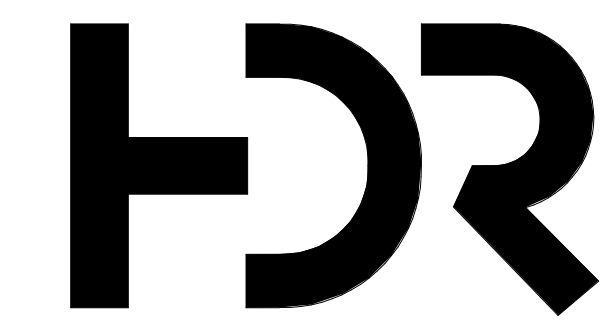
NOTE TO BIDDERS: COMPLY WITH THE SPECIFICATIONS. REFER TO SPECIFICATIONS FOR IMPORTANT TECHNICAL REQUIREMENTS FOR LIGHTING FIXTURES, BALLASTS, AND LAMPS. THE CATALOG NUMBERS LISTED BELOW HAVE BEEN CAREFULLY PREPARED TO ASSIST BIDDERS IN SELECTING PRODUCTS TO ACHIEVE THE DESIGN CONCEPT, HOWEVER, PRIOR TO BIDDING, EACH MANUFACTURER SHALL COMPARE THE CATALOG NUMBERS SHOWN WITH THE DESCRIPTION AND REQUIREMENTS ON THE DRAWINGS, AND SHALL NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES. SPECIFICALLY INCLUDED IN THIS EVALUATION SHALL BE THE VERIFYING OF PROPER MOUNTING KITS OR ACCESSORIES TO FACILITATE INSTALLATION AS SHOWN AT EACH LOCATION ON THE DRAWINGS. NO ALLOWANCE OR REDRESS WILL BE ALLOWED FOR DISCREPANCIES THAT WERE NOT REPORTED TO THE ARCHITECT/ENGINEER IN TIME FOR CORRECTION OR CLARIFICATION BEFORE THE BID. THE REPORTING OF ANY AMBIGUITY IS THE RESPONSIBILITY OF THE BIDDER. PROVIDE UNIT PRICES AND FIXTURE BRAND SELECTED FOR ADD/DELETE CHANGES FOR EACH FIXTURE TYPES SHOWN WITHIN 48 BUSINESS HOURS OF THE BID DATE. FAILURE TO COMPLY WITH THIS REQUIREMENT MAY DISQUALIFY THE PRODUCTS AND EMPLOYER THE ENGINEER TO DETERMINE FAIR VALUE FOR FIXTURE AND INSTALLATION CHANGES, WITHOUT FURTHER INPUT FROM THE CONTRACTOR OR INSTALLER. SUBMITTAL PACKAGE SHALL INCLUDE LAMP MANUFACTURER AND CATALOG NUMBER ON EACH FIXTURE SHEET. ON ALL PENDANT MOUNTED FIXTURES, PROVIDE A SECOND SET OF PENDANTS, OF A DIFFERENT LENGTH, AS DIRECTED BY THE ARCHITECT/ENGINEER, PROVIDED AND INSTALLED AT NO ADDITIONAL CHARGE. ALL FIXTURES SHALL BE APPROVED BY UL OR ANOTHER ACCEPTABLE TESTING LAB FOR THE PURPOSE INTENDED AND WITH THE LAMP AND BALLAST PROPOSED. CONTRACTOR ALLOWANCE PRICES ARE ACCURATE WHEN THIS JOB WAS SPECIFIED. CONTRACTOR AND ELECTRICAL DISTRIBUTOR SHALL VERIFY THIS ALLOWANCE AND REPORT ANY PROBLEMS TO THE ENGINEER BEFORE THE BID. ALLOWANCE PRICE MAY OR MAY NOT INCLUDE LAMP(S) OR FREIGHT AS NOTED, AND DO NOT INCLUDE ANY TAXES. UNIVERSAL VOLTAGE (120/277) BALLASTS REQUIRED UNLESS NOTED OTHERWISE. DIMENSION SEQUENCE = (LENGTH X WIDTH X DEPTH) IN INCHES.

SYMBOL	MARK	FIXTURE CHARACTERISTICS	NOTES
D		RECESSED LED: SOLID STATE LED LIGHT ENGINE, CLASS P THERMALLY PROTECTED 0-10V SOLID STATE DIMMING DRIVER; MINIMUM SYSTEM RATED LIFE 50,000 HOURS AT 70% OUTPUT; UL LISTED FOR THROUGH-BRANCH WIRING AND DAMP LOCATION; LIGHT ENGINE, DRIVER, AND JUNCTION BOX ACCESSIBLE FROM ABOVE OR BELOW CEILING; SELF-FLANGING TRIM.	
D-89		6" APERTURE: COMFORT CLEAR DIFFUSER; 4000 K COLOR TEMP. LED; ~1500 LUMENS; 20 INPUT WATTS; 120V/277V; 0-10V 1% SOLID STATE DIMMING DRIVER; LENS; WHITE FLANGE.	
G		DECORATIVE LENSED TROFFERS: RECESSED; ACRYLIC PRISMATIC LENS; EARTHQUAKE CLIPS, LED DRIVER 0-10 VOLT DIMMING DRIVER WHERE INDICATED IN PRODUCT NUMBER.	
G-2		RECESSED LED FIXTURE, 2X4, ACRYLIC DIFFUSER, ~4800 LUMENS, MULTI VOLT, 4000K, GRID MOUNTED, ANTIMICROBIAL FINISH, MINIMUM MINIMUM 82 CRI (~7" WIDE LENS)	1
GF		DIRECT TROFFERS: RECESSED FOR GYPSUM BOARD CEILING; HINGED FLUSH STEEL DOOR WITH LATCH; EARTHQUAKE CLIPS, SOLID STATE LED LIGHT ENGINE; CLASS P THERMALLY PROTECTED 0-10V 1% SOLID STATE DIMMING DRIVER; MINIMUM SYSTEM RATED LIFE 50,000 HOURS AT 70% OUTPUT; LISTED FOR THROUGH-BRANCH WIRING AND DAMP LOCATION; DRIVER DISCONNECT PER NEC 410.130 (G).	
GF-1		RECESSED LED FIXTURE, 1X4, ACRYLIC DIFFUSER, ~3000 LUMENS, MULTI VOLT, 4000K, GYP MOUNTED, ANTIMICROBIAL FINISH, MINIMUM MINIMUM 82 CRI	1
TX		SPECIAL FIXTURES AS INDICATED. MEET ALL REQUIREMENTS OF SPECIFICATIONS AND FIXTURE SCHEDULE. VISUAL AND FINISH APPROVAL REQUIRED.	
TX-1		SINGLE FACE X-RAY IN USE WARNING LIGHT	
UC		LED UNDERCABINET LIGHT: LOW PROFILE 1" HIGH X 1-3/4" DEEP X LENGTH AS NOTED; EXTRUDED ALUMINUM BODY; EXTRUDED CLEAR, POLYCARBONATE LENS; INTERNAL LED DRIVER; EFFICACY GREATER THAN 40 LUMENS PER WATT; 50,000 HOUR RATED LAMP LIFE: 2700 - 3000 DEG KELVIN COLOR TEMPERATURE, WIRING COMPARTMENT; FLUSH END. CONNECTORS FOR ROW INSTALLATION (CONNECTORS ARE NOT INCLUDED IN THE FIXTURE SCHEDULE CATALOG NUMBERS - CONNECTOR CONFIGURATION TO BE FIELD DETERMINED BY CONTRACTOR PRIOR TO PURCHASE).	
UC-89		SURFACE MOUNTED UNDERCABINET LIGHT FIXTURE; LED; 18" NOMINAL LENGTH, WHITE ANTIMICROBIAL FINISH, UNIVERSAL VOLTAGE, ~400 LUMENS, PROVIDE INTERCONNECT CORDS BETWEEN FIXTURES FOR SERIES MOUNTED INSTALLATIONS	

NOTE 1: PROVIDE ONLY INDICATED FIXTURES. ALTERNATES WILL NOT BE ACCEPTED.



A3 LEVEL 1 PET/CT LIGHTING PLAN
SCALE: 1/4" = 1'-0"



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Interior Designer	RUBY THORP
Equipment Planner	STEVE HOOPER
Wayfinding	N/A

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Sheet Name
LEVEL 1 LIGHTING PLAN

Sheet Number
EL101

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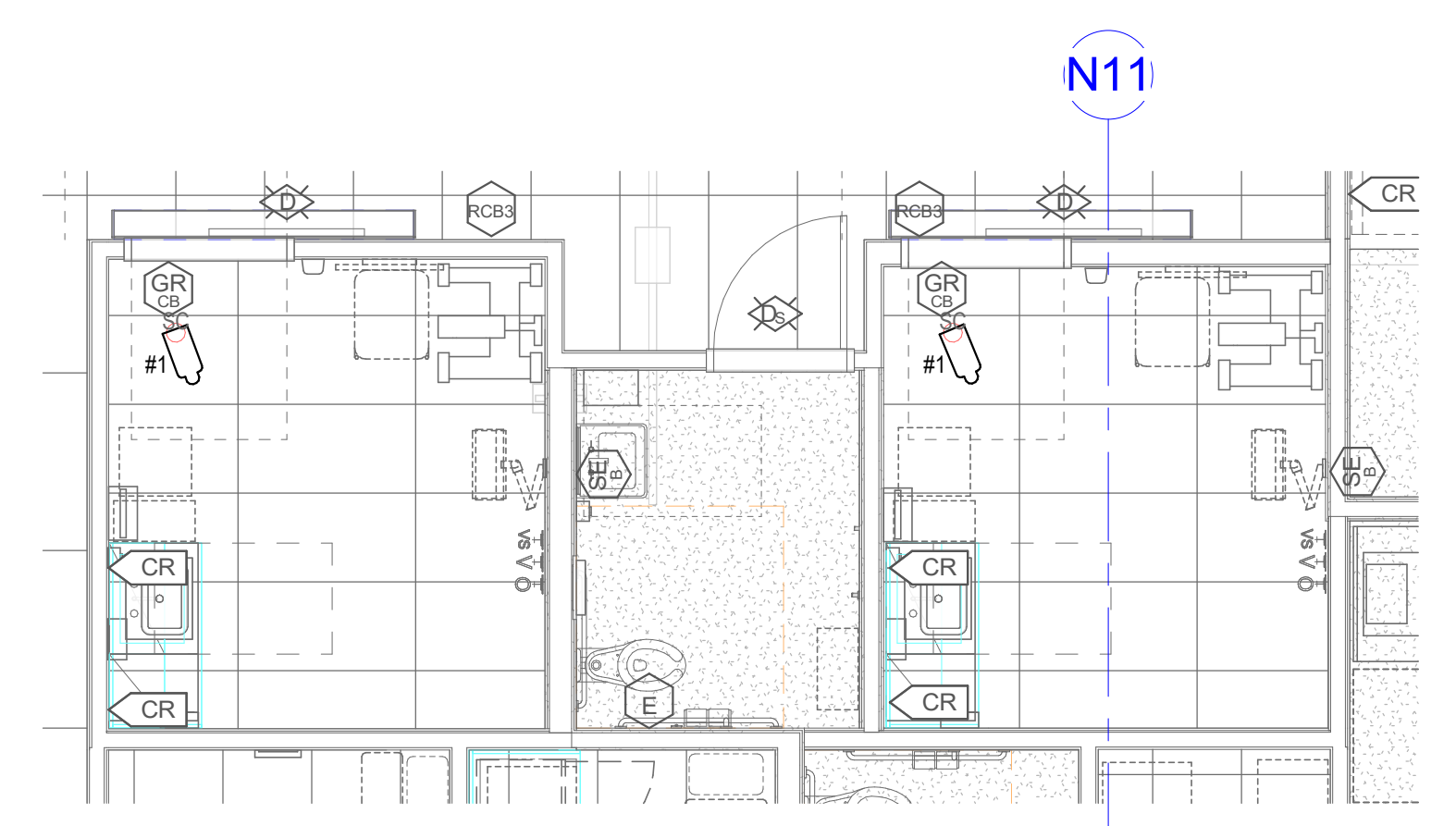
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GENERAL SHEET NOTES

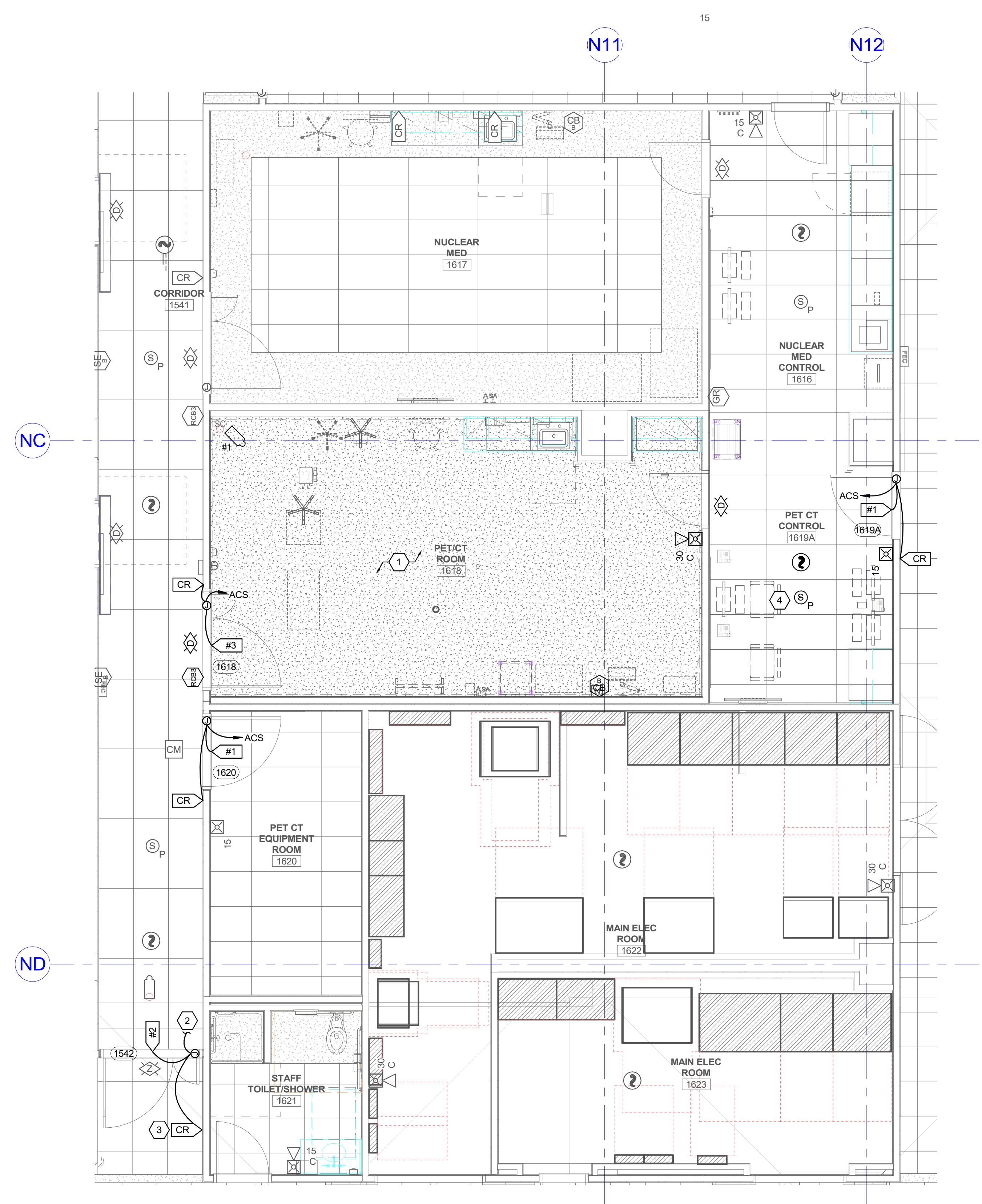
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SHEET KEYNOTES

- 1 ALL DEVICES WITHIN SPACE ARE TO BE INSTALLED WITH LEAD SHIELDING IN ACCORDANCE WITH SPECIFICATION SECTION 134900.
- 2 RECONNECT TO EXISTING ACS CABLING MAINTAINED DURING DEMOLITION.
- 3 INSTALL CARD READER SALVAGED DURING DEMOLITION.
- 4 CONNECT NEW PAGING SPEAKER TO PAGING ZONE SERVING ADJACENT SPEAKER IN NUCLEAR MED CONTROL 1616.



C3 LEVEL 1 PET/CT EXAM ROOMS AUXILIARY PLAN
SCALE: 1/4" = 1'-0"



A3 LEVEL 1 PET/CT AUXILIARY PLAN
SCALE: 1/4" = 1'-0"



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Interior Designer	RUBY THORP
Equipment Planner	STEVE HOOPER
Wayfinding	N/A

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Sheet Name: **LEVEL 1 AUXILIARY PLAN**

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