# Intermountain Healthcare LDS Hospital Fluoro Room 2 Remodel 8th Ave., C Street Salt Lake City, UT 84143

**Bid Set** 

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NOTES ON VENDOR EQUIPMENT INSTALLATION:

GE DRAWINGS FOR THE X-RAY UNIT INSTALLATION HAVE BEEN INCLUDED AS PART OF CONSTRUCTION DOCUMENTS FOR COORDINATION PURPOSES. OWNER, INTERMOUNTAIN HEALTHCARE, SHALL DIRECTLY PAY GE FOR THEIR CONSTRUCTION WORK. GENERAL CONTRACTOR AND THE SUB-CONTRACTORS SHALL COORDINATE WITH GE INSTALLATION DRAWINGS, AND PROVIDE REQUIRED WORK SCHEDULING DURING CONSTRUCTION, ITEMS MENTIONED AS "PROVIDED BY OTHERS" IN THE GE DRAWINGS SHALL BE PROVIDED BY GENERAL CONTRACTOR AND THEIR SUB-CONTRACTORS. IF THERE IS ANY CLARIFICATION REQUIRED, CONTRACTORS SHALL CHECK WITH THE A/E DESIGN TEAM DURING THE BIDDING PHASE.

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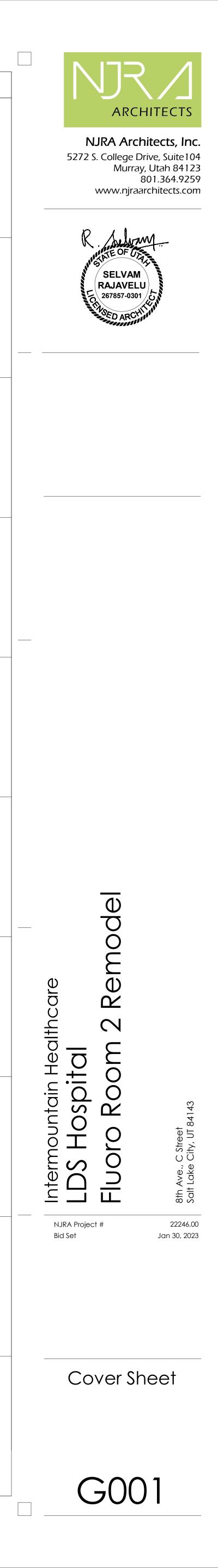
### ARCHITECT NJRA Architects, Inc. 5272 South College Drive, Suite 104 Murray, Utah 84123 Phone: 801.364.9259

**DESIGN TEAM** 

Contacts:

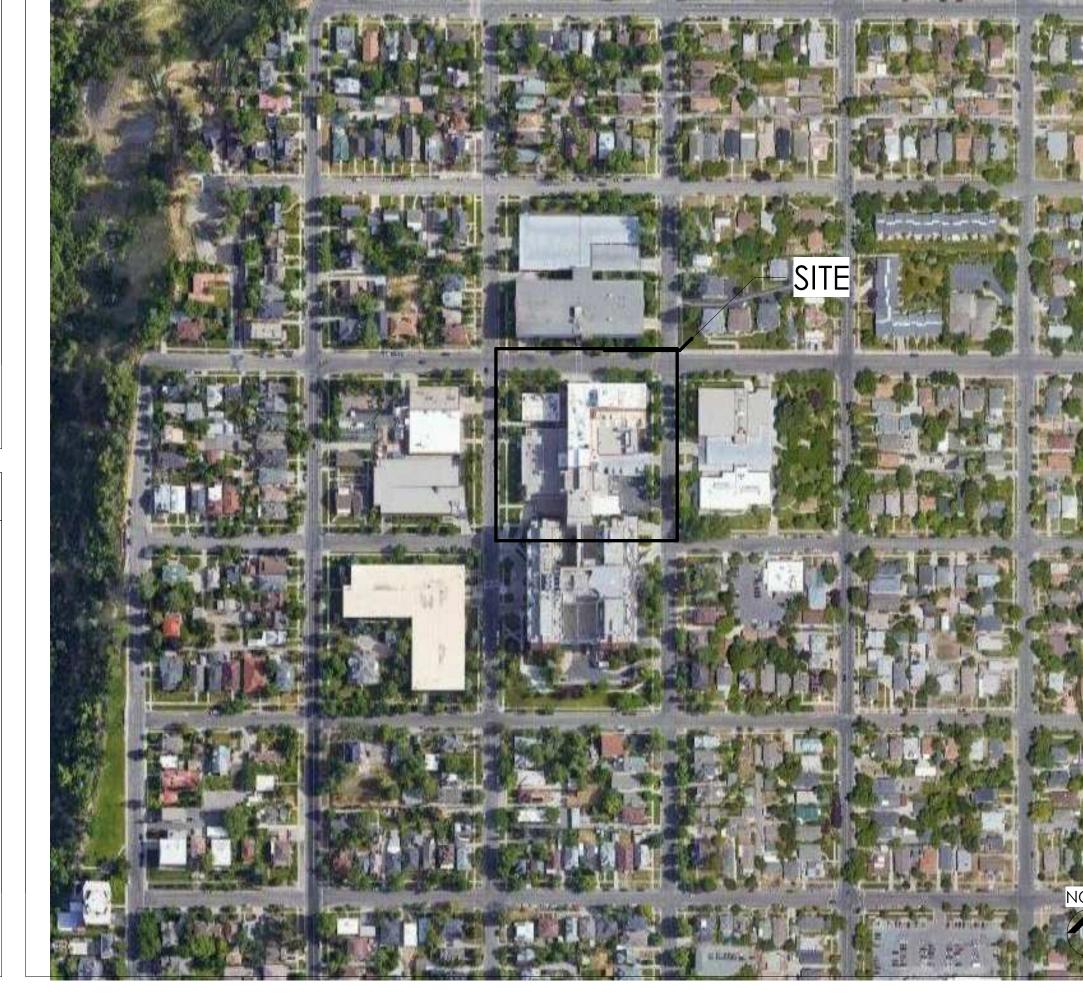
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MECHANICAL ENGINEER VBFA 181 E 5600 S Suite 200, Murray, UT 84123 Phone: 801-530-3148 Contacts: Project Manager: Jared Smith Email: jsmith@vbfa.com ELECTRICAL ENGINEER Spectrum 324 S State St Suite 400, Salt Lake City, UT 84111 Phone: 801-328-5151 Contacts: Project Manager: Peter Johansen Email: Peter.Johansen@speceng.com STRUCTURAL ENGINEER Reaveley 515 E 100 S #1200, Salt Lake City, UT 84102 Phone: 801-486-3883 Contacts: Project Manager: Cameron Lusvardi Email: clusvardi@reaveley.com



INTERIM LIFE SAFETY MEASURES	PROJECT DESCRIPTION	
MPLEMENTATION OF INTERIM LIFE SAFETY MEASURES (ILSM) IS REQUIRED IN OR ADJACENT TO ALL CONSTRUCTION AREAS AND THROUGHOUT BUILDINGS WITH EXISTING LSC DEFICIENCIES. ILSM APPLY TO ALL PERSONNEL, INCLUDING CONSTRUCTION WORKERS, MUST BE IMPLEMENTED UPON PROJECT DEVELOPMENT, AND CONTINUOUSLY ENFORCED THROUGH PROJECT COMPLETION. ILSM ARE NTENDED TO PROVIDE A LEVEL OF LIFE SAFETY COMPARABLE TO THAT DESCRIBED IN CHAPTERS 1 THROUGH 7, 31 AND THE APPLICABLE OCCUPANCY CHAPTERS OF THE LSC. EACH ILSM ACTION MUST BE DOCUMENTED THROUGH WRITTEN POLICIES AND PROCEDURES. EXCEPT AS STATED BELOW, FREQUENCIES FOR INSPECTION, TESTING, TRAINING, AND ILSM CONSIST OF THE FOLLOWING ACTIONS:	PROJECT DESCRIPTION:         THIS PROJECT INCLUDES THE REMODEL OF THE FLUORO ROOT         TO PREPARE FOR THE INSTALLATION (BY OTHERS) OF A NEW         PROJECT SCOPE OF WORK:         THE ARCHITECTURAL, STURCTURAL, MECHANICAL AND ELECT         DEFINED IN THE CONTRACT DOCUMENTS.	X-RAY UNIT.
ENSURING EXITS PROVIDE FREE AND UNOBSTRUCTED EGRESS. PERSONNEL SHALL RECEIVE TRAINING IF ALTERNATIVE EXITS MUST BE DESIGNATED. BUILDINGS OR AREAS UNDER CONSTRUCTION MUST MAINTAIN ESCAPE FACILITIES FOR CONSTRUCTION WORKERS AT ALL TIMES. MEANS OF EGRESS IN CONSTRUCTION AREAS MUST BE INSPECTED DAILY.		
ENSURING FREE AND UNOBSTRUCTED ACCESS TO EMERGENCY DEPARTMENTS/ SERVICES AND FOR EMERGENCY FORCES.		
ENSURE FIRE ALARM, DETECTION, AND SUPPRESSION SYSTEMS ARE NOT IMPAIRED. A TEMPORARY, BUT EQUIVALENT, SYSTEM SHALL BE PROVIDED WHEN ANY FIRE SYSTEM IS		
IMPAIRED. TEMPORARY SYSTEMS MUST BE INSPECTED AND TESTED MONTHLY. ENSURING TEMPORARY CONSTRUCTION PARTITIONS ARE SMOKE TIGHT AND BUILT OF		
NONCOM OR LIMITED COMBUSTIBLE MATERIALS THAT WILL NOT CONTRIBUTE TO THE DEVELOPMENT OR SPREAD OF FIRE. PROVIDING ADDITIONAL FIRE-FIGHTING EQUIPMENT AND USE TRAINING OF		
PROVIDING ADDITIONAL TIKE-FIGHTING EQUIPMENT AND USE TRAINING OF PERSONNEL. PROHIBITING SMOKING IN ACCORDANCE WITH MA.1.3.15 AND IN OR ADJACENT TO	APPROVALS	
ALL CONSTRUCTION AREAS. DEVELOPING AND ENFORCING STORAGE, HOUSEKEEPING, AND DEBRIS REMOVAL		
PRACTICES THAT REDUCE THE FLAMMABLE AND COMBUSTIBLE FIRE LOAD OF THE BUILDING TO THE LOWEST LEVEL NECESSARY FOR DAILY OPERATIONS.	Approvers Name, Title	Date
CONDUCTING A MINIMUM OF TWO FIRE DRILLS PER SHIFT PER QUARTER. INCREASING HAZARD SURVEILLANCE OF BUILDINGS, GROUNDS, AND EQUIPMENT WITH SPECIAL ATTENTION TO EXCAVATIONS, CONSTRUCTION AREAS CONSTRUCTION STORAGE, AND FIELD OFFICES.		
TRAINING PERSONNEL WHEN STRUCTURAL OR COMPARTMENT FEATURES OF FIRE SAFETY ARE COMPROMISED. CONDUCTING ORGANIZATION WIDE SAFETY EDUCATION PROGRAMS TO ENSURE	Approvers Name, Title	Date
AWARENESS OF ANY LSC DEFICIENCIES, CONSTRUCTION HAZARDS, AND THESE ILSM.	Approvers Name, Title	Date
	Approvers Name, Title	Date
INFECTION CONTROL RISK ASSESSMENT	ABBREVIATIONS	
DNSTRUCTION ACTIVITY TYPE De D: Major demolition or construction that creates major disruption, i.e. noise, dust,	AND DW @ AT DS	DOWN
<ul> <li>ion, odor, or mechanical systems</li> <li>includes, but not limited to:</li> <li>heavy demolition or removal of a complete cabling system</li> </ul>	Ø     DIAMETER     D.S.       Ø     DIAMETER     D.W       (E), EXIST.     EXISTING     DW       (N)     NEW	V.V. DRAINAGE W
new construction or buildout of shelled space  CTION CONTROL RISK GROUP nest:	d PENNY <b>E</b> # POUND OR NUMBER EA.	
Pharmacy STRUCTION CLASS truction Addition	AC ACOUSTIC ELE	ELEC. ELECTRIC V. ELEVATION
struction Activity Type: sk Group <b>Type A Type B Type C Type D</b> est Class I Class II Class III	A/C AIR CONDITIONING EQU ALT. ALTERNATE EXH	JIP. EQUIPMENT I. EXHAUST
iumClass IClass IIClass IVClass IClass IIClass IVClass IVestClass IIClass IVClass IVClass IV	ALALOMINOMEXISA.B.ANCHOR BOLTE.J.ARCHARCHITECT(URAL)EXT.ASP.ASPHALT	<b>EXPANSION J</b>
• CTION CONTROL PROTOCOLS ng Construction (Class IV): • Perform work using methods to minimize raising dust or tracking dust into	B FT. BSMT. BASEMENT FV/	FEET F.V. FIELD VERIFY
<ul> <li>other areas.</li> <li>Immediately replace ceiling tile upon completion of inspection.</li> <li>Use active dust control measures.</li> </ul>	B.M. BENCHMARK FIN. BLKG. BLOCKING F.E.	FINISH(ED) FIRE EXTINGU
<ul> <li>Use water mist to control dust while cutting.</li> <li>Seal doors, ducts, vents and HVAC units.</li> <li>Place dust control mats at entries to work area; keep them clean and effective.</li> </ul>	B.O. BOTTOM OF FIXT BLDG. BUILDING FL.	
<ul> <li>Remove debris only in tightly covered containers.</li> <li>Construct barriers to prevent dust and other contaminant migration prior to beginning work.</li> </ul>	C G CAB'T CABINET GA C.I.P. CAST IN PLACE	
<ul> <li>Maintain negative air pressure in work space using HEPA filtration units.</li> <li>Seal all pipes, conduits and penetrations.</li> <li>Construct and use anteroom for all entry to work area; HEPA vacuum all</li> </ul>	C.B. CATCH BASIN G.C CLG. CEILING G.S	C. GENERAL CC .N. GENERAL STR
<ul> <li>personnel, or have them change clothing before they leave the work area.</li> <li>All personnel wear shoe covers while in the work area and remove then before entering the hospital.</li> </ul>	C.T. CERAMIC TILE GD CH CHANNEL GRI	. GRADE
<ul> <li>on Completion (Class IV):</li> <li>Clean work area.</li> <li>Wipe all horizontal surfaces with disinfectant.</li> </ul>	C.O. CLEAN OUT GRI CLR. CLEAR GYI CL. CLOSET	
<ul> <li>Remove final debris only in tightly covered containers.</li> <li>Vacuum using HEPA filtered vacuum; mop with disinfectant as appropriate.</li> <li>Remove all seals from doors, ducts, vents and HVAC units.</li> </ul>	COL.COLUMNHCONC.CONCRETEHDVCMUCONCRETE MASONRY UNITHDV	
<ul> <li>Remove construction barriers in a manner that minimizes the spread of dust and debris.</li> </ul>	COND.CONDITIONHTRCONN.CONNECTIONHT.CONST.CONSTRUCTIONH.P.	. HEATER HEIGHT
	CONT CONTINUOUS H.M. CJ CONTROL JOINT HO	1. HOLLOW ME RIZ. HORIZONTAL
	DH.B.D.P.DAMP PROOFINGD.B.DECK BEARING	/. HOT WATER
	DIAG.DIAGONALIDIA.DIAMETERIN.DIM.DIMENSIONI.D.	inch Inside diame
	DISP. DISPENSER INSI	
THIS BUILDING WAS REVIEWED AND PERMITTED IN ITS ENTIRETY AT ITS ORIGINAL	<b>DEFERRED SUBMITTALS</b> THE CONTRACTOR SHALL SUBMIT THE FOLLOWING TO THE BUIL REVIEW WITH AN ACCOMPANYING LETTER FROM THE ARCHITE	ECT STATING THAT TH
CONSTRUCTION. THIS PROJECT ONLY INVOLVES CEILING AND FLOOR REPLACEMENT AND WALL DEMOLITION AND DOES NOT CHANGE OCCUPANT TYPES OR LOADS, GROSS AREA, OR ANY MEANS OF EGRESS.	CONTENTS OF THE SUBMITTAL ARE IN CONFORMANCE WITH TH RELATED TO THE DEFERRED SUBMITTAL IS NOT TO COMMENCE OFFICIAL HAS APPROVED THE SUBMITTAL.	he design. Work
CODE CYCLE: 2018 I.B.C. LOCATION: LDS HOSPITAL OCCUPANCY: LEVEL 1 IS MIXED 'I-2' AND 'B' OCCUPANCY. THE	1. DETAILS AND ENGINEERING CALCULATIONS FOR ALL NONS COMPONENTS THAT ARE PERMANENTLY ATTACHED TO STRUCT SUPPORTS AND ATTACHMENTS. THESE SHALL BE DESIGNED AND THE EFFECTS OF EARTHQUAKE MOTIONS IN ACCORDANCE WIT IBC SECTION 1613.1. THIS INCLUDES:	iures and their d constructed to
FLUORO ROOM 2 IS AN 'I-2' OCCUPANCY TYPE OF CONSTRUCTION: TYPE 1-A	- ELECTRICAL SYSTEMS - MECHANICAL SYSTEMS - PLUMBING SYSTEMS - DECORATIVE ARCHITECTURAL COMPONENTS.	
LEVEL 1 AREA: NO CHANGE LEVEL 1 AREA OF REMODEL: NO CHANGE OCCUPANCY LOAD: NO CHANGE	2. DETAILS AND ENGINEERING CALCULATIONS FOR THE FIRE S DETECTION SYSTEMS, WHICH ARE TO BE DESIGN-BUILD BY THE COMPLY WITH NFPA 13 AND SHALL INCLUDE: - FIRE ALARM PLANS (INCLUDING CO DETECTOR LOCATION - AUTOMATIC FIRE SPRINKLER PLANS	CONTRACTOR TO
	- HOOD FIRE SUPPRESSION - CLASS 'K' FIRE EXTINGUISHER LOCATION(S)	

### VICINITY MAP



AGE WASTE VENT ING WATER COOLER ION **N**ENT ١G **ISION JOINT** OR VERIFY (ED) **(TINGUISHER** (TINGUISHER CABINET NG ANIZED

RAL CONTRACTOR RAL STRUCTURAL NOTES IND

WARE NOOD POINT ow Metal ONTAL BIB /ATER

DIAMETER

ATION

L FOR THAT THE ORK ILDING TED TO RESIST REFERENCE

AWINGS).

INT. INTERIOR INV. INVERT J JAN. JANITOR JT. JOINT JST. JOIST L LAM. LAMINATED LDG. LANDING LAVATORY LAV. LIGHT LT. L.W.C. LIGHT WEIGHT CONCRETE LVR. LOUVER Μ M.B. MACHINE BOLT MANUFACTURER MFR. M.O. MASONRY OPENING MAT'L MATERIAL MAX. MAXIMUM MECH. MECHANICAL MTL. METAL MIN. MINIMUM MLDG. MOLDING MULL. MULLION Ν N.G. NATURAL GRADE NOM. NOMINAL N/A NOT APPLICABLE N.I.C. NOT IN CONTRACT N.T.S. NOT TO SCALE Ο O.C. ON CENTER O.D. OUTSIDE DIAMETER O.R.D. OVERFLOW ROOF DRAIN O.F.S. OVERFLOW SCUPPER O.F.C.I. OWNER FURNISHED, CONTRACTOR INSTALLED O.F.O.I. OWNER FURNISHED, OWNER INSTALLED Ρ PT. PAINT PTD. PAINTED PR. PAIR PNL. PANEL PENNY d P.L. PLASTIC LAMINATE PL. PLATE PLBG. PLUMBING P.S.I. POUND PER SQUARE INCH

P.S.F.	POUNDS PER SQUARE FOOT	V.C	.P.	VITREOUS CLAY PIPE
R		w		
RAD.	RADIUS	W.C		WATER CLOSET
REC.	RECOMMENDATION	W.H		WATER HEATER
REG.	REGISTER	W.R		WATER RESISTANT
REQ'D	REQUIRED	W.P		WATERPROOF
R.A.	RETURN AIR	W.W	/.F.	WELDED WIRE FABRIC
REV.	REVISION	W.F.		WIDE FLANGE
R.D.	ROOF DRAIN	WDY	W.	WINDOW
RFG.	ROOFING	W/		WITH
RM.	ROOM	W/C	)	WITHOUT
RGH.	ROUGH	WD.		WOOD
RND.	ROUND			
S				
SCR.	SCREW			
SECT.	SECTION			
SEL.	SELECT			
SHT.	SHEET			
SIM.	SIMILAR			
SLDG.	SLIDING			
SM.	SMOOTH			
SPEC.	Specification			
SPL.	SPLASH			
SQ.	SQUARE			
S.S.	STAINLESS STEEL			
STD.	STANDARD			
STRUC.	STRUCTURE			
S.A.	SUPPLY AIR			
SUSP.	SUSPENDED			
SW.BD.	SWITCHBOARD			
-				
T				
TELCO				
T.G.	TEMPERED GLASS			
T&G T&B	TONGUE & GROOVE TOP & BOTTOM			
тав Т.О.	TOP OF			
т.О. т.О.С.	TOP OF CURB			
1.O.C. T.O.D.	TOP OF DECK			
т.О.D. Т.О.Р.	TOP OF PARAPET			
TYP.	TYPICAL			
U				
U.N.O.	UNLESS NOTED OTHERWISE			
0.14.0.				
v				
V.	VENT			
v. V.T.R.	VENT THROUGH ROOF			
VERT.	VERTICAL			
V.G.	VERTICAL GRAIN			
VEST.	VESTIBULE			
V.C.T.	VINYL COMPOSITION TILE			
		c		
	DEFINITION	3		

# **SPECIAL INSPECTIONS**

# SEE STRUCTURAL DRAWINGS FOR SPECIAL INSPECTIONS REQUIRED. CONTRACT. SAME MEANING AS "DIRECTED." OPERATIONS AT PROJECT SITE.

### . GENERAL: BASIC CONTRACT DEFINITIONS ARE INCLUDED IN THE CONDITIONS OF THE 2. "APPROVED": WHEN USED TO CONVEY ARCHITECT'S ACTION ON CONTRACTOR'S SUBMITTALS, APPLICATIONS, AND REQUESTS, "APPROVED" IS LIMITED TO ARCHITECT'S DUTIES AND RESPONSIBILITIES AS STATED IN THE CONDITIONS OF THE CONTRACT. B. "DIRECTED": A COMMAND OR INSTRUCTION BY ARCHITECT. OTHER TERMS INCLUDING "REQUESTED," "AUTHORIZED," "SELECTED," "REQUIRED," AND "PERMITTED" HAVE THE 4. "INDICATED": REQUIREMENTS EXPRESSED BY GRAPHIC REPRESENTATIONS OR IN WRITTEN FORM ON DRAWINGS, IN SPECIFICATIONS, AND IN OTHER CONTRACT DOCUMENTS. OTHER TERMS INCLUDING "SHOWN," "NOTED," "SCHEDULED," AND "SPECIFIED" HAVE THE SAME MEANING AS "INDICATED." 5. "REGULATIONS": LAWS, ORDINANCES, STATUTES, AND LAWFUL ORDERS ISSUED BY AUTHORITIES HAVING JURISDICTION, AND RULES, CONVENTIONS, AND AGREEMENTS WITHIN THE CONSTRUCTION INDUSTRY THAT CONTROL PERFORMANCE OF THE WORK. 6. "FURNISH": SUPPLY AND DELIVER TO PROJECT SITE, READY FOR UNLOADING, UNPACKING, ASSEMBLY, INSTALLATION, AND SIMILAR OPERATIONS.

7. "INSTALL": UNLOAD, TEMPORARILY STORE, UNPACK, ASSEMBLE, ERECT, PLACE, ANCHOR, APPLY, WORK TO DIMENSION, FINISH, CURE, PROTECT, CLEAN, AND SIMILAR

8. "PROVIDE": FURNISH AND INSTALL, COMPLETE AND READY FOR THE INTENDED USE. 9. "PROJECT SITE": SPACE AVAILABLE FOR PERFORMING CONSTRUCTION ACTIVITIES. THE EXTENT OF PROJECT SITE IS SHOWN ON DRAWINGS AND MAY OR MAY NOT BE IDENTICAL WITH THE DESCRIPTION OF THE LAND ON WHICH PROJECT IS TO BE BUILT.

### DRAWING INDEX

GENERAL	
G001	Cover Sheet
G002	General Information
G003	General Information
G004	American National Standard Institute Requirements
G005	General Legend & Notes
ARCHITECTU	JRAL
A111	Demolition Floor Plan Level 1
A112	Floor Plan Lower Level
A113	Floor Plan Level 1
A116	Reflected Ceiling Plan Level 1
A503A	Ceiling Details
ELECTRICAL	
EE001	Sheet Index, Abbreviations, and General Notes
EE002	Telecom Schedules and Notes
EE501	Electrical Details
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EP101	Level 1 Power Plan
EP501	GE Drawings
EP502	GE Drawings

Telecom Conduit Riser Diagram ET601 EQUIPMENT

One Line Diagram

GE Equipment Drawing

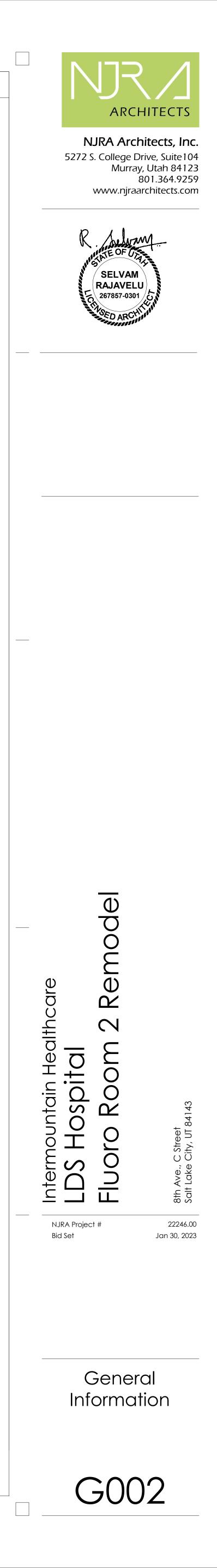
Telecom Equipment Rack Elevations

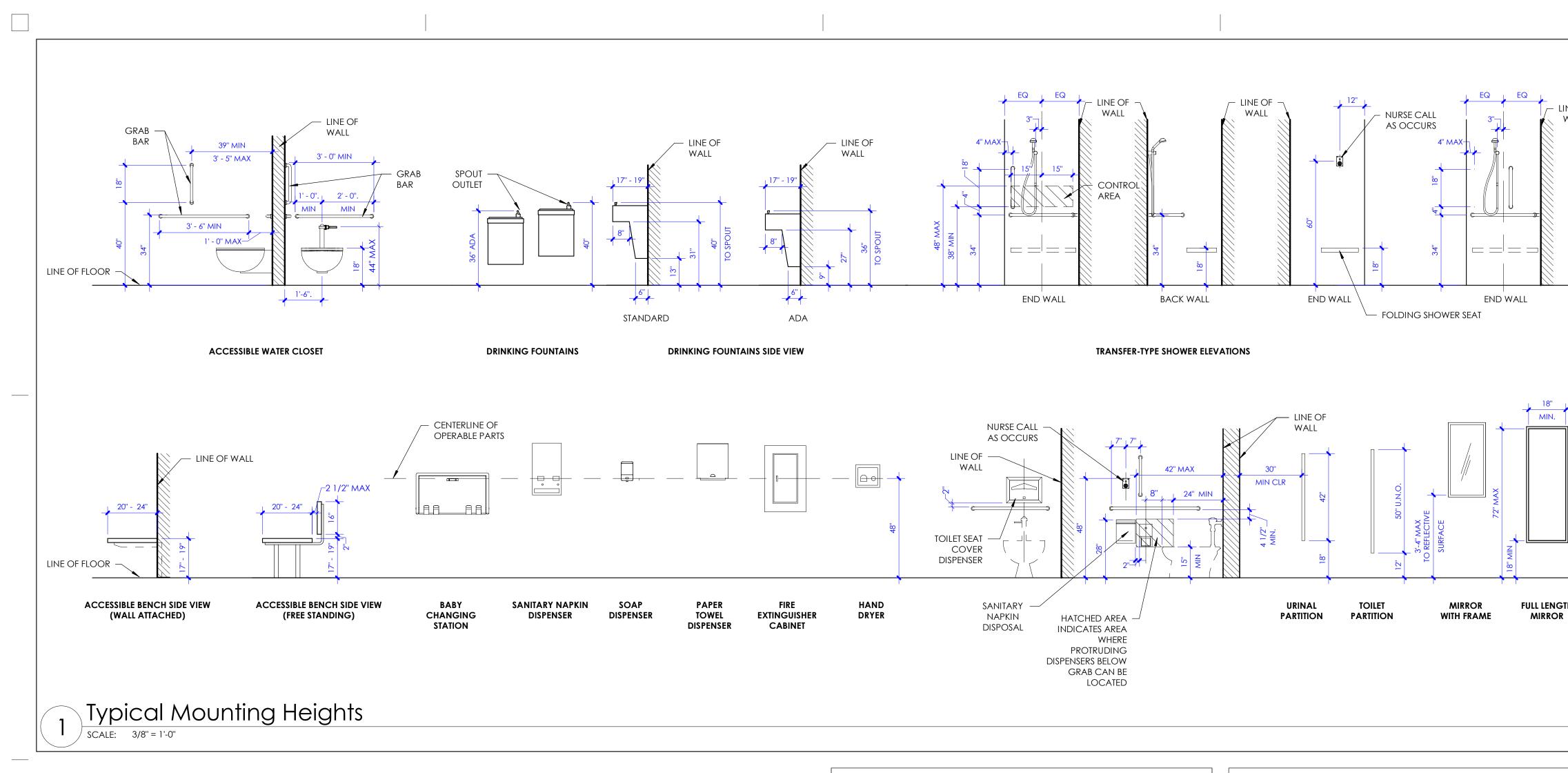
Q101	
Q102	

EP601 ET501

Q102	GE Equipment Drawing
Q103	GE Equipment Drawing
Q104	GE Equipment Drawing
Q105	GE Equipment Drawing
Q106	GE Equipment Drawing
Q107	GE Equipment Drawing
Q108	GE Equipment Drawing
Q109	GE Equipment Drawing
Q110	GE Equipment Drawing
Q111	GE Equipment Drawing
Q112	GE Equipment Drawing
Q113	GE Equipment Drawing
Q114	GE Equipment Drawing
Q115	GE Equipment Drawing
Q116	GE Equipment Drawing

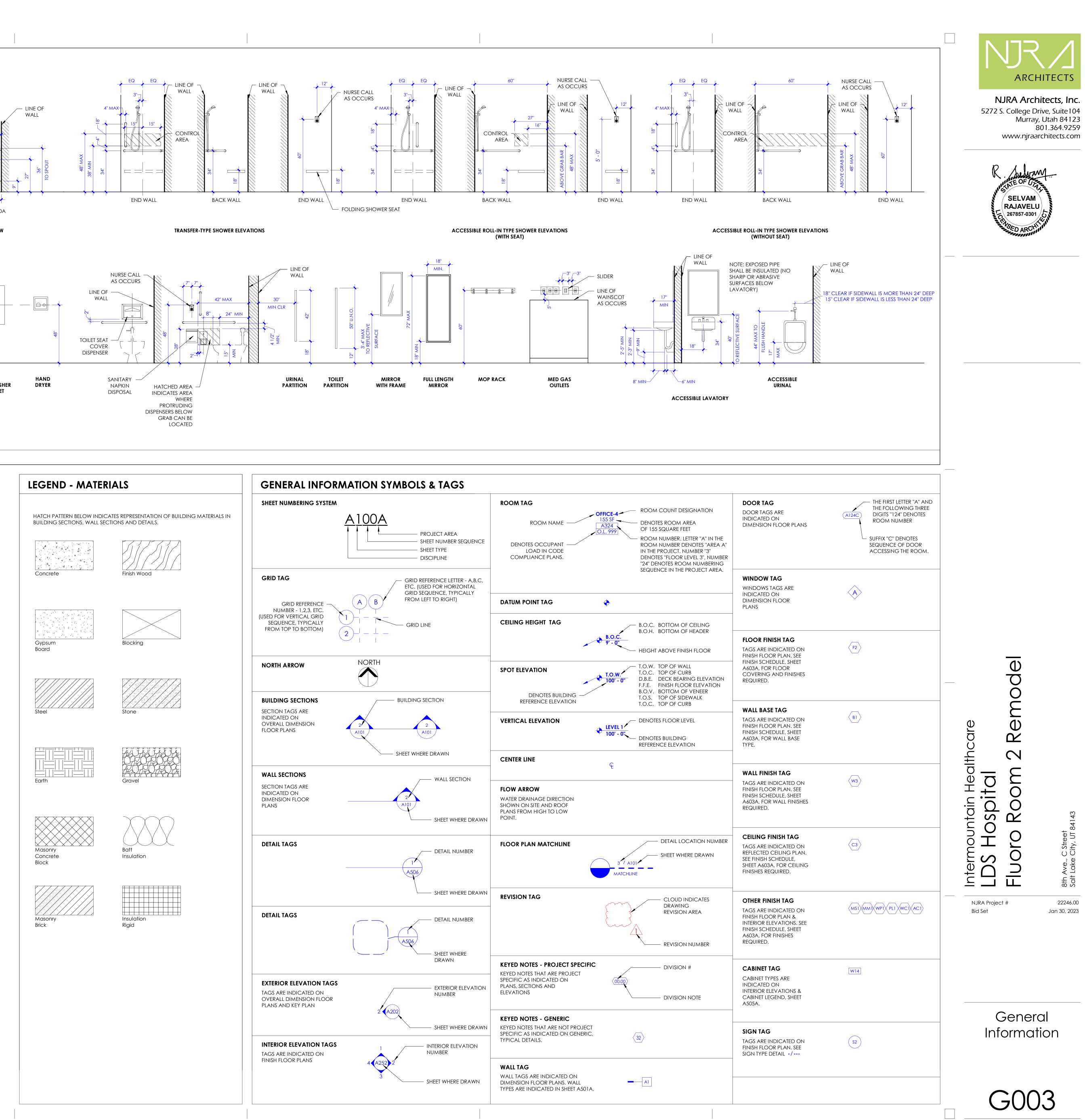


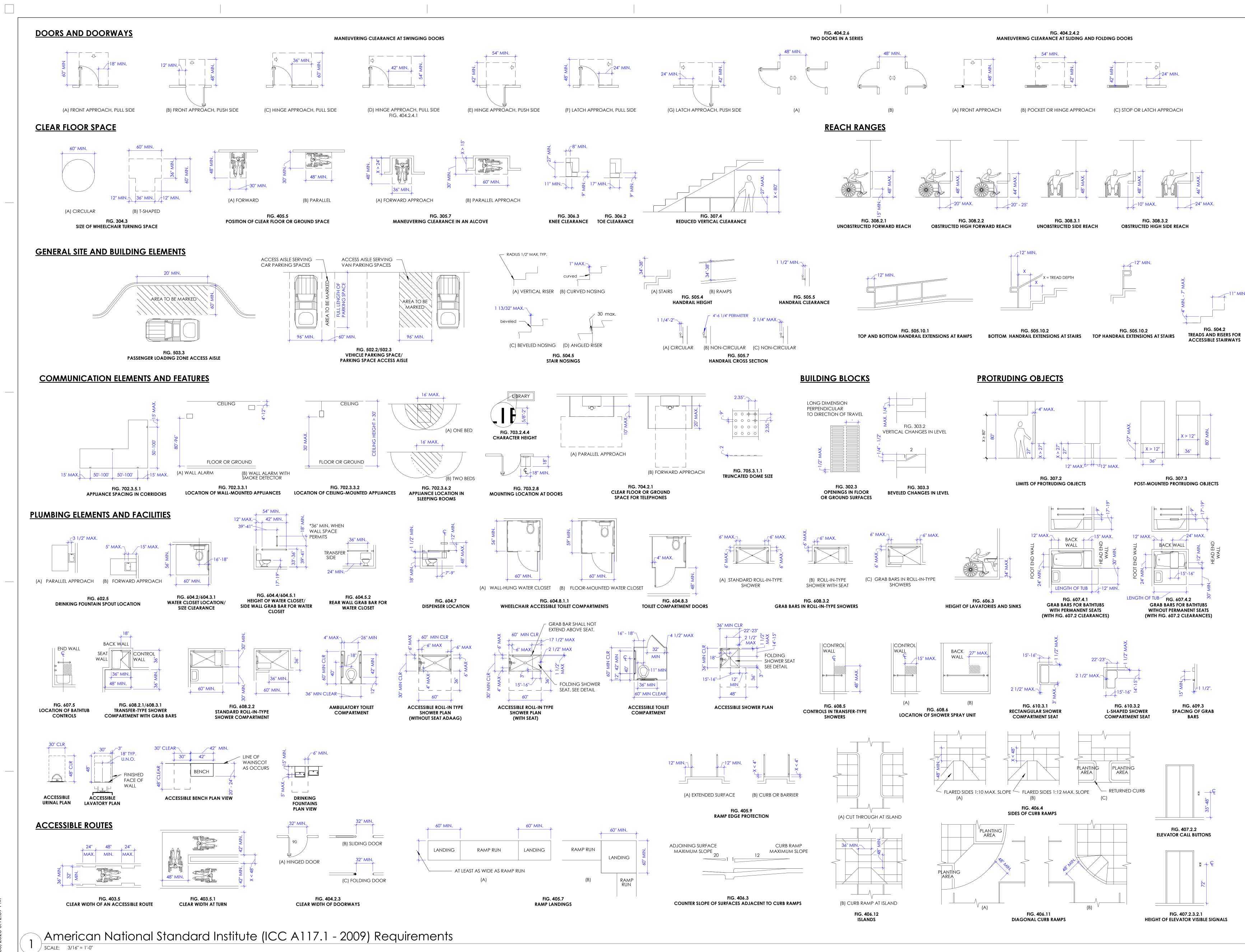




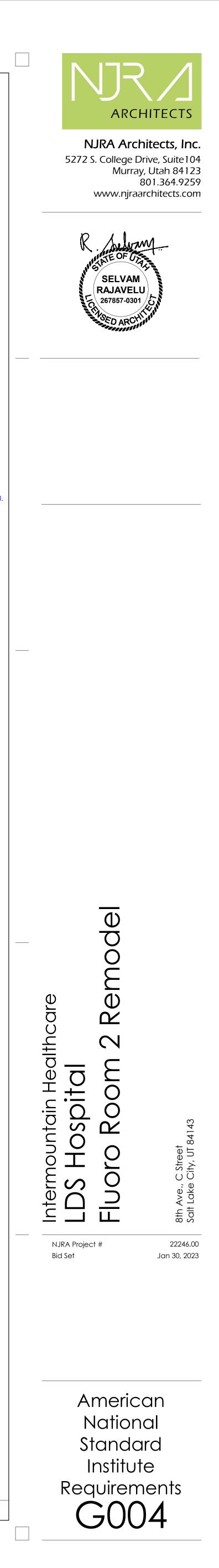
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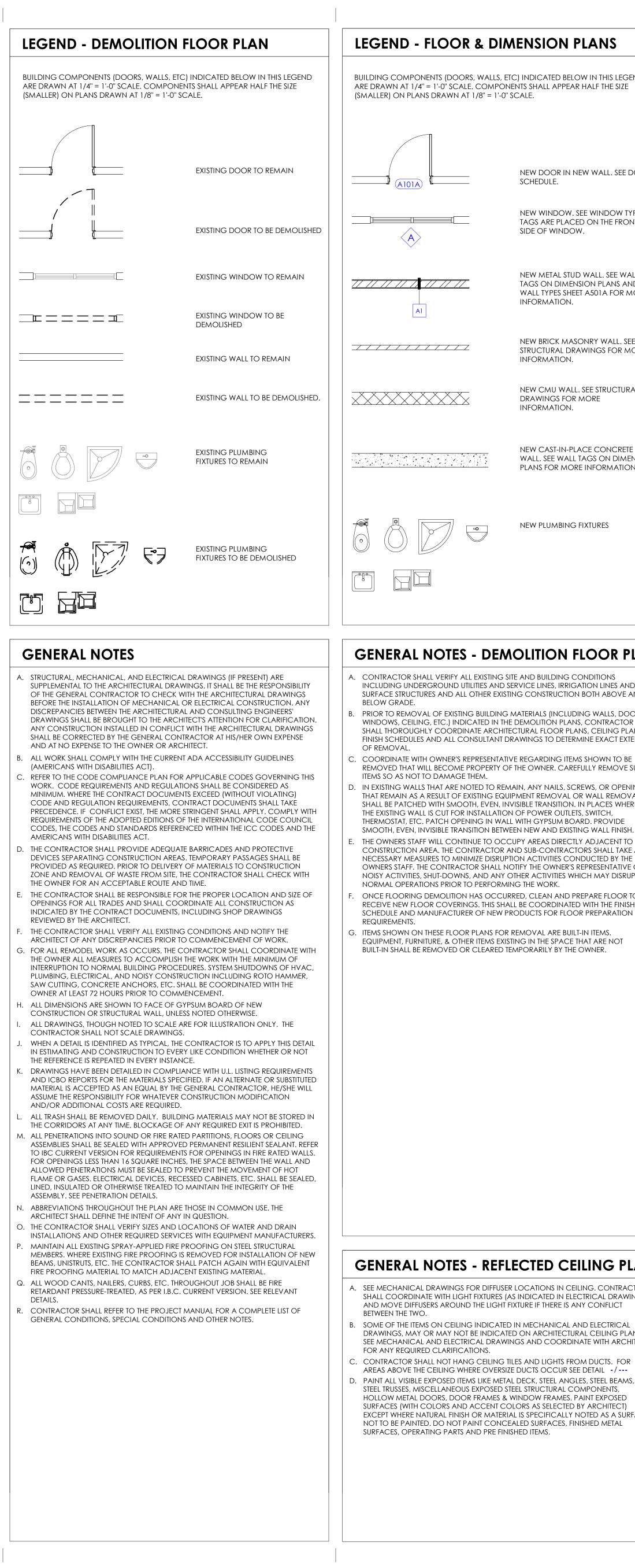






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5, LIGHT FIXTURES, ETC) INDICATED BELOW IN = 1'-0" SCALE. COMPONENTS SHALL APPEAR S DRAWN AT 1/8" = 1'-0" SCALE.		F DRAINS, HATCH, ETC.) ARE DRAWN AT 1/4" = 1' - 0 0" SCALE, COMPONENTS SHALL APPEAR HALF THIS
2' X 4' LAY-IN ACOUSTICAL PANEL CEILING. SEE DETAILS 1/A503A , 4/A503A , 7/A503A , 10/A503A		Tapered insulation cricket with 1/8" pei foot slope, minimum, along valley and 1/4" per foot slope, minimum, across cricket.
2' X 2' LAY-IN ACOUSTICAL PANEL CEILING. SEE DETAILS 1/A503A , 4/A503A , 7/A503A , 10/A503A		ROOF DRAIN. SEE DETAIL -/
SUSPENDED GYPSUM BOARD CEILING OR SOFFIT SEE DETAILS -/ , -/ , -/ , -/		ROOF HATCH SEE DETAIL -/
new supply air grille - see mechanical Drawings	>	SLOPE DOWN DIRECTION FOR WATER FLOW TOWARD ROOF DRAINS.
new return air grille - see mechanical Drawings		AS ROOF STRUCTURE IS LEVEL (FLAT WITH NG SLOPE) IN THIS AREA, USE TAPERED INSULATI (1/4" PER FOOT SLOPE) FOR DRAINAGE. PROVIDE CRICKETS AS REQUIRED ON THE TO
new exhaust fan - see mechanical Drawings		OF TAPERED INSULATION.
CEILING HEIGHT ABOVE FINISHED FLOOR		
new 2' x 4' light fixture - see electrical Drawings		
ELEVATIONS FOR VENEER TYPES. SEE FINISH SCHEDULE RED, SEALED, PAINTED, ETC. MBING, AND MECHANICAL DRAWINGS FOR FLOOR ENINGS IN FLOOR SLABS AND ROOFS FOR DULE FOR THE REQUIRED DOOR AND WINDOW CTURAL DRAWINGS AND PROVIDE RECESS IN QUIRED TO ACCOMMODATE FLOOR FINISHES. ON GRADE, SHALL BE RECESSED AS REQUIRED, FOR MIC TILE FINISH. SLOPE SHALL BE AT 1/8" PER FOOT ONCRETE FLOOR SLAB, THAT IS NOT ON GRADE, CH LOCATION, USE THIN SET MORTAR FOR CERAMIC	GENERAL NOTES	6 - INTERIOR ELEVATIONS
DUITS, JOISTS, ETC.) THROUGH FIRE RATED BARRIER LETELY WITH FIRE RATED SEALANTS. FILL GAP BETWEEN D METAL TRACK TOP RUNNER WITH FIRE RATED ID PIPES, CONDUITS, DUCTS, ETC. THAT PENETRATES	A505A AND IF INDICATED ON I B. IN ROOMS WHERE CABINETS A OPERABLE WITH SINGLE KEY.	RE REQUIRED TO BE LOCKED, PROVIDE LOCKS
PENETRATIONS TO MAINTAIN THE INTEGRITY OF THE RAWINGS FOR FIRE AND SMOKE DAMPERS. OF 1'-3" UNLESS NOTED OTHERWISE. LOCATED INSIDE THE BUILDING SHALL BE TOOLED	NOTED OTHERWISE IN INTERIOF INDICATED. D. CONTRACTOR SHALL VERIFY W INSTALLED ITEMS AND PROVIDI	HTS, SEE SHEET G003. FOLLOW THE HEIGHT UNLESS R ELEVATIONS. VERIFY WITH ARCHITECT FOR ITEMS N /ITH OWNER FOR OWNER FURNISHED CONTRACTOR E BACKING IN WALL AS REQUIRED FOR INSTALLATION
INDICATED IN BUILDING EXTERIOR ELEVATIONS. TS FOR ANGLES, PIVOT POINT AND DIMENSIONS	SIMILAR ELEVATIONS OF ROOM F. CONTRACTOR SHALL PROVIDE 5/8" PARTICLE BOARD) WHERE	ANN ROOMS ARE NOT DRAWN AND ARE NOTED AS AS THAT ARE INDICATED IN THE DRAWINGS. E FILLER PANELS (PLASTIC LAMINATE WRAPPED OVER VER GAP OCCURS BETWEEN CABINETS AND WALL. FINISH SCHEDULE A603A FOR WALL, CABINET AND
E LARGE BUILDING FOOTPRINT SIZE, FLOOR PLANS ARE D EACH AREA IS INDICATED ON SEPARATE SHEETS. JNDARIES OF EACH AREA. WHEN CONTRACTORS ARE CT, COST SHALL INCLUDE ONLY THE BUILDING DNSTRUCTION WORK CALLED OUT WITH KEYED NOTES SHEET. KEYED NOTES INDICATED OUTSIDE THE MATCH AS SHALL NOT BE COUNTED FOR THAT AREA. THIS	OTHERWISE, ALL THE CABINETS SAME FINISH (PL1, PL2, SS1, ETC EACH ROOM. WHERE MULTIPLE IN THE ROOM, EACH FINISH IS I REQUIRED CLARIFICATIONS. I. COUNTERTOPS ARE TYPICALLY WHERE COUNTERTOP SPAN EX INDICATED IN DETAILS -/	LEGEND (TYPES B1, W1, T1, ETC.). UNLESS NOTED AND COUNTERTOPS IN EACH ROOM SHALL BE OF TI C.) AS INDICATED ON THE INTERIOR ELEVATION OF E FINISHES ARE REQUIRED FOR CABINETS, WALLS, ETC NDICATED SEPARATELY. CONTACT ARCHITECT FOR SUPPORTED BY WALLS AND BASE CABINETS. IN PLAC CEEDS 4' - 0", STEEL SUPPORTS SHALL BE PROVIDED / AND -/ EVATIONS, WALL CABINETS AT CERTAIN LOCATIONS A SLOPED FASCIA PANEL.
- DOOR SCHEDULE	ELEVATIONS FOR ROOMS THAT ARE INDICATED ON THE A400 S FLOOR PLANS ARE NOT SHOW	AS BEEN INCLUDED ALONG WITH INTERIOR ARE COMPLEX IN DESIGN. SUCH COMPLEX ROOMS SERIES SHEETS (STARTING WITH SHEET A401). ENLARGE N FOR ROOMS THAT ARE SIMPLE IN DESIGN. INTERIO ROOMS ARE INDICATED ON THE A250 SERIES SHEETS
	L. FOR ALL CABINETS PROVIDE B	ACKING IN WALL AS PER DETAIL 3/A505B.
OR HARDWARE SCHEDULE. TION 'ALUMINUM ENTRANCES AND STOREFRONT', HARDWARE FOR ALL ALUMINUM DOORS. SEE DOOR ORS AND THE REQUIRED HARDWARE. TION 'DOOR HARDWARE', SHALL PROVIDE ALL THE		
TION 'ALUMINUM ENTRANCES AND STOREFRONT', HARDWARE FOR ALL ALUMINUM DOORS. SEE DOOR		
	SEE DETAILS 1/A503A, 4/A503A, 7/A503A, 10/A503A 2' X 2' LAY-IN ACOUSTICAL PANEL CEILING. SEE DETAILS 1/A503A, 4/A503A, 7/A503A, 10/A503A SUSPENDED GYPSUM BOARD CEILING OR SOFFIT SEE DETAILS -/ , -/ , -/ , -/ NEW SUPPLY AIR GRILLE - SEE MECHANICAL DRAWINGS NEW RETURN AIR GRILLE - SEE MECHANICAL DRAWINGS NEW EXHAUST FAN - SEE MECHANICAL DRAWINGS CEILING HEIGHT ABOVE FINISHED FLOOR NEW 2' X 4' LIGHT FIXTURE - SEE ELECTRICAL	STOTANS 1/ ASDA , 4/ ASDA , 7/ ASDA     TO ASDA      SUPPLIED CYSIUM BOARD CELING OR     SOFTISED DEVAILS (ALL ANEL OFFICIAL     TO ASDA     TO ASDA     TO ASDA      T





1 Demolition Floor Plan Level 1 SCALE: 1/4" = 1'-0"

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### **KEYED NOTES**

02.51	X-RAY UNIT FLOOR PLATE. EXISTING TO BE REMOVED. PATCH ANCHOR BOLT HOLES WITH HIGH PRESSURE GROUT.
02.67	PROVIDE VACUUM MACHINE WITH DOUBLE HEPA FILTER FILTRATION SYSTEM TO MAINTAIN NEGATIVE PRESSURE IN THE CONSTRUCTION ZONE. DURING CONSTRUCTION PHASE, MOUNT TEMPORARY PRESSURE MONITORS (WITH ALARM CAPABILITIES) ON THE WALL TO MAINTAIN REQUIRED NEGATIVE PRESSURE 24 HOURS A DAY AND 7 DAYS IN THE WEEK. CONTRACTOR SHALL PROVIDE CONTINUOUS AIR FLOW MONITORING TO ENSURE THE DIFFERENTIAL PRESSURE OF01 MIN. IS MAINTAINED BETWEEN CONTAINMENT AREAS AND CORRIDORS (02 IS PREFERRED).
02.68	EXHAUST FILTERED AIR HERE TO CORRIDOR OR TO EXTERIOR.
02.82	COVER AND TIGHTLY SEAL EXISTING TOILET AND SINK DRAINS AND FLOOR DRAIN IF PRESENT WITH PLASTIC.
02.85	DUST PARTITION (FROM FLOOR TO CEILING) WITH DOORS AS REQUIRED TO ACCESS CONSTRUCTION ZONE. LOCATE AND ALIGN PARTITION WITH CEILING GRID (AND/OR GYPSUM BOARD CEILING WHERE OCCURS) ABOVE AS MUCH AS POSSIBLE FOR A TIGHT SEAL. IF THERE IS A CONFLICT, WHERE PARTITION

ABUTS CEILING, MOVE ITEMS MOUNTED ON CEILING SUCH AS EXIT SIGN, FIRE/SMOKE ALARM, LIGHT FIXTURE, DIFFUSER, RETURN AIR GRILLE, SENSOR, ETC. TEMPORARILY AWAY FROM THE LOCATION. PROVIDE ANTE ROOM AS

REQUIRED PORTABLE VACUUM MACHINE (OR EXHAUST FANS), WITH HEPA FILTERS, TEMPORARY FLEXIBLE HOSE TYPE DUCTS TO EXHAUST FILTERED AIR AS

PARTITION PER MANUFACTURER'S RECOMMENDATIONS. PARTITION MANUFACTURER SHALL BE "EDGE-GUARD" OR EQUIVALENT. MOVE ACCESS DOOR TO THE CONSTRUCTION ZONE AS REQUIRED DURING THE

CONSTRUCTION PHASE. SEE "ICRA" (INFECTION CONTROL RISK ASSESSMENT) REQUIREMENTS AND ICRA WORK PERMIT FORM IN THE PROJECT MANUAL FOR

INDICATED. DUST PARTITION SHALL BE FIRE RATED, POLYCARBONATE, TRANSLUCENT, PLASTIC PANELS WITH METAL FRAMES ON ALL SIDES. INSTALL

ADDITIONAL REQUIREMENTS.

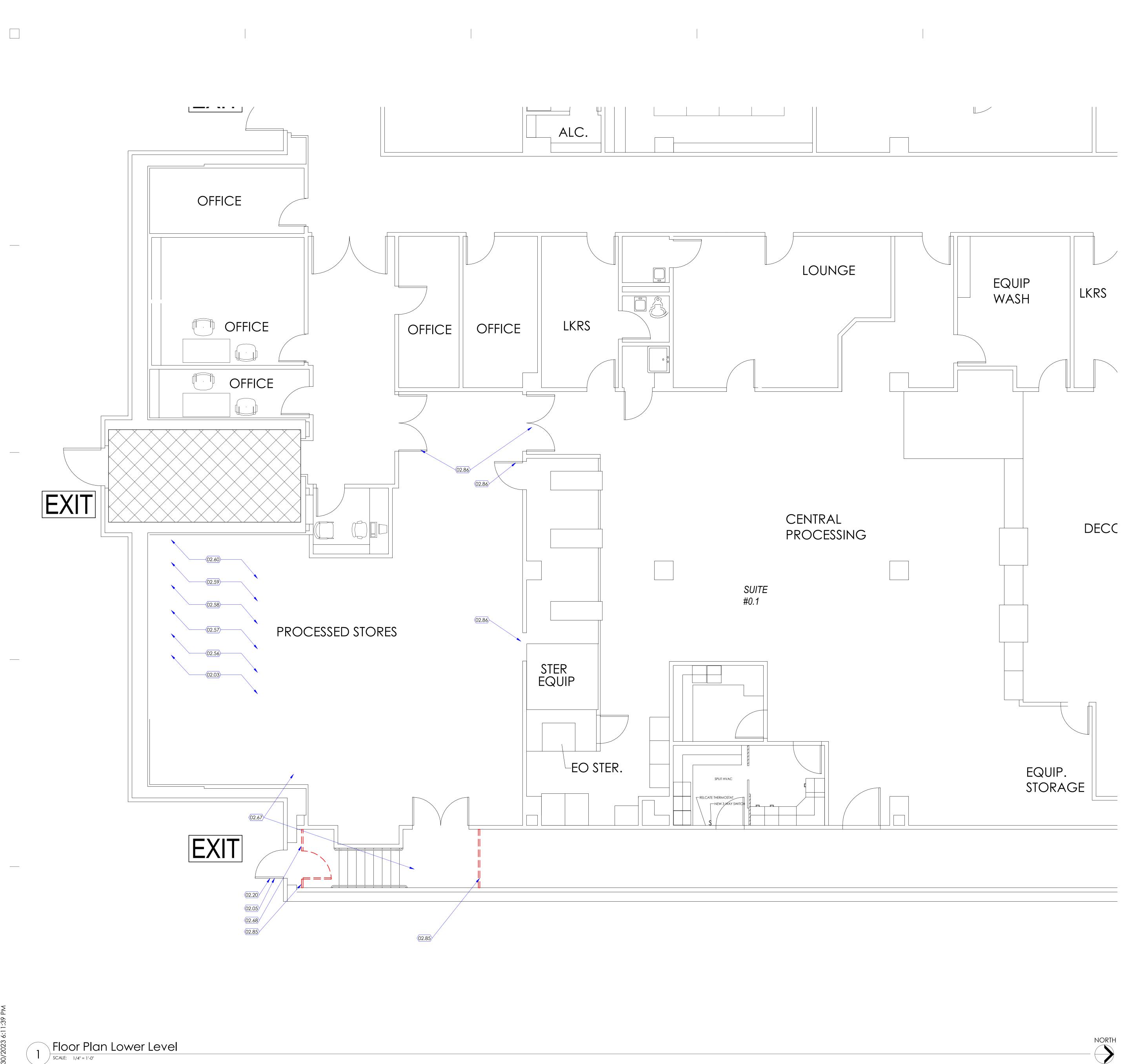
INDICATED. MAINTAIN NEGATIVE PRESSURE IN THE CONSTRUCTION ZONE WITH

# GENERAL NOTES

A. SEE SHEET G003 AND G005 FOR SYMBOLS, GENERAL NOTES AND LEGEND.







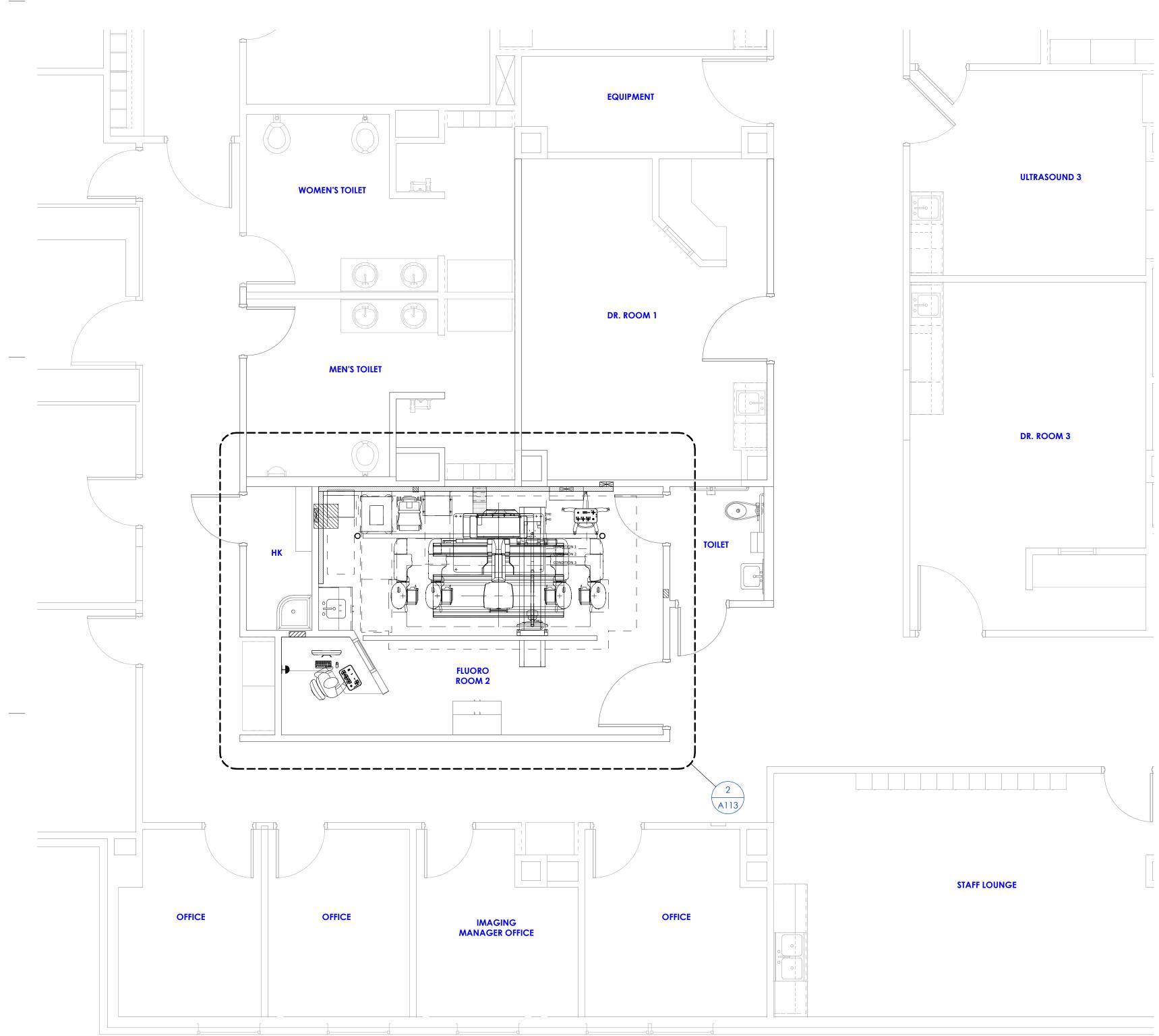
### **KEYED NOTES**

- 02.03 WALL AND FLOOR FINISHES (FLOORING, WALL BASE, WALL COVERING, WALL PROTECTION SHEETS, WAINSCOT, CORNER GUARDS, ACOUSTICAL PANELS, ETC.). EXISTING TO REMAIN. PROTECT FINISHES FROM DAMAGE DURING CONSTRUCTION. IF DAMAGED AS A RESULT OF CONSTRUCTION OR CONSTRUCTION RELATED ACTIVITIES, REPAIR OR REPLACE FINISH TO MATCH
- ADJACENT FINISHES. 02.05 DOOR AND FRAME. EXISTING TO REMAIN. PROTECT DOOR AND FRAME FROM DAMAGE DURING CONSTRUCTION. IF DAMAGED AS A RESULT OF CONSTRUCTION OR CONSTRUCTION RELATED ACTIVITIES, REPAIR OR REPLACE.
- 02.20 EXISTING DOOR TO REMAIN CLOSED AND LOCKED OUTSIDE OF CONSTRUCTION HOURS. COORDINATE AND NOTIFY BUILDING SECURITY OF SCHEDULED CONSTRUCTION HOURS.
- 02.56 ALL ABOVE CEILING WORK REQUIRED TO INSTALL THROUGH BOLTS FOR NEW X-RAY UNIT MOUNTING PLATE IN THIS AREA TO BE PERFORMED STARTING NOT EARLIER THAN FRIDAY 4:00PM AND NOT LATER THAN 11:59PM SUNDAY. COORDINATE EXACT DATES WITH OWNER.
- 02.57 IN PREPARATION FOR THE WORK BY THE CONTRACTOR REQUIRED TO INSTALL THROUGH BOLTS FOR X-RAY UNIT MOUNTING PLATE ABOVE, THE OWNER SHALL REMOVE THE EXISTING CEILING TILES AND INSTALL NEW CEILING TILES AT THE EXISTING CEILING GRID SIMULTANEOUSLY WITH THE WORK BEING PERFORMED BY THE CONTRACTOR IN THIS AREA. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER THE EXTENTS OF THE CEILING AREA REQUIRED TO PERFORM THE ABOVE CEILING WORK. REMOVE EXISTING CEILING GRID AS REQUIRED TO PERFORM THE WORK. REPAIR AND REPLACE CEILING GRID AS REQUIRED AFTER THE ABOVE CEILING WORK IS COMPLETE. AS PART OF PRIOR COORDINATION BY THE CONTRACTOR WITH THE OWNER, THE OWNER WILL PROVIDE SUFFICIENT NUMBER OF NEW CEILING TILES FOR THE CONTRACTOR TO REPLACE ONCE THE WORK ABOVE CEILING IS COMPLETE AND ANY
- NECESSARY REPAIRS ARE MADE TO THE CEILING GRID.
   02.58 REMOVE AND REINSTALL ANY DUCTS, MECHANICAL PIPING, FIRE SPRINKLER LINES, AND CONDUIT ABOVE CEILING AS REQUIRED TO INSTALL THROUGH BOLTS FOR NEW X-RAY UNIT MOUNTING. COORDINATE ANY SHUTDOWNS WITH OWNER IN ACCORDANCE WITH OWNER'S GENERAL CONDITIONS.
   02.59 EXISTING DOORS TO REMAIN CLOSED DURING CONSTRUCTION. COVER
- DOORS OR OPENING WITH PLASTIC SHEET AND SEAL CONTINUOUSLY AROUND EDGES TO WALLS WITH TAPE.
  02.60 TIGHTLY SEAL EXISTING TRANSFER AND SUPPLY AIR GRILLES WITH PLASTIC. SEAL TIGHTLY AROUND EDGES CONTINUOUSLY WITH ADHESIVE TAPE.
  02.67 PROVIDE VACUUM MACHINE WITH DOUBLE HEPA FILTER FILTRATION SYSTEM
- TO MAINTAIN NEGATIVE PRESSURE IN THE CONSTRUCTION ZONE. DURING CONSTRUCTION PHASE, MOUNT TEMPORARY PRESSURE MONITORS (WITH ALARM CAPABILITIES) ON THE WALL TO MAINTAIN REQUIRED NEGATIVE PRESSURE 24 HOURS A DAY AND 7 DAYS IN THE WEEK. CONTRACTOR SHALL PROVIDE CONTINUOUS AIR FLOW MONITORING TO ENSURE THE DIFFERENTIAL PRESSURE OF -.01 MIN. IS MAINTAINED BETWEEN CONTAINMENT AREAS AND CORRIDORS (-.02 IS PREFERRED).
- 02.68 EXHAUST FILTERED AIR HERE TO CORRIDOR OR TO EXTERIOR. 02.85 DUST PARTITION (FROM FLOOR TO CEILING) WITH DOORS AS REQUIRED TO ACCESS CONSTRUCTION ZONE. LOCATE AND ALIGN PARTITION WITH CEILING GRID (AND/OR GYPSUM BOARD CEILING WHERE OCCURS) ABOVE AS MUCH AS POSSIBLE FOR A TIGHT SEAL. IF THERE IS A CONFLICT, WHERE PARTITION ABUTS CEILING, MOVE ITEMS MOUNTED ON CEILING SUCH AS EXIT SIGN, FIRE/SMOKE ALARM, LIGHT FIXTURE, DIFFUSER, RETURN AIR GRILLE, SENSOR, ETC. TEMPORARILY AWAY FROM THE LOCATION. PROVIDE ANTE ROOM AS INDICATED. MAINTAIN NEGATIVE PRESSURE IN THE CONSTRUCTION ZONE WITH REQUIRED PORTABLE VACUUM MACHINE (OR EXHAUST FANS), WITH HEPA FILTERS, TEMPORARY FLEXIBLE HOSE TYPE DUCTS TO EXHAUST FILTERED AIR AS INDICATED. DUST PARTITION SHALL BE FIRE RATED, POLYCARBONATE, TRANSLUCENT, PLASTIC PANELS WITH METAL FRAMES ON ALL SIDES. INSTALL PARTITION PER MANUFACTURER'S RECOMMENDATIONS. PARTITION MANUFACTURER SHALL BE "EDGE-GUARD" OR EQUIVALENT. MOVE ACCESS DOOR TO THE CONSTRUCTION ZONE AS REQUIRED DURING THE CONSTRUCTION PHASE. SEE "ICRA" (INFECTION CONTROL RISK ASSESSMENT) REQUIREMENTS AND ICRA WORK PERMIT FORM IN THE PROJECT MANUAL FOR ADDITIONAL REQUIREMENTS.
- 02.86 TIGHTLY SEAL WITH ADHESIVE TAPE BETWEEN DOOR AND DOOR FRAME AND DOOR AND FLOOR BELOW. THIS SEAL SHALL BE AIR TIGHT TO MAINTAIN THE NEGATIVE PRESSURE IN THE CONSTRUCTION ZONE.

### GENERAL NOTES

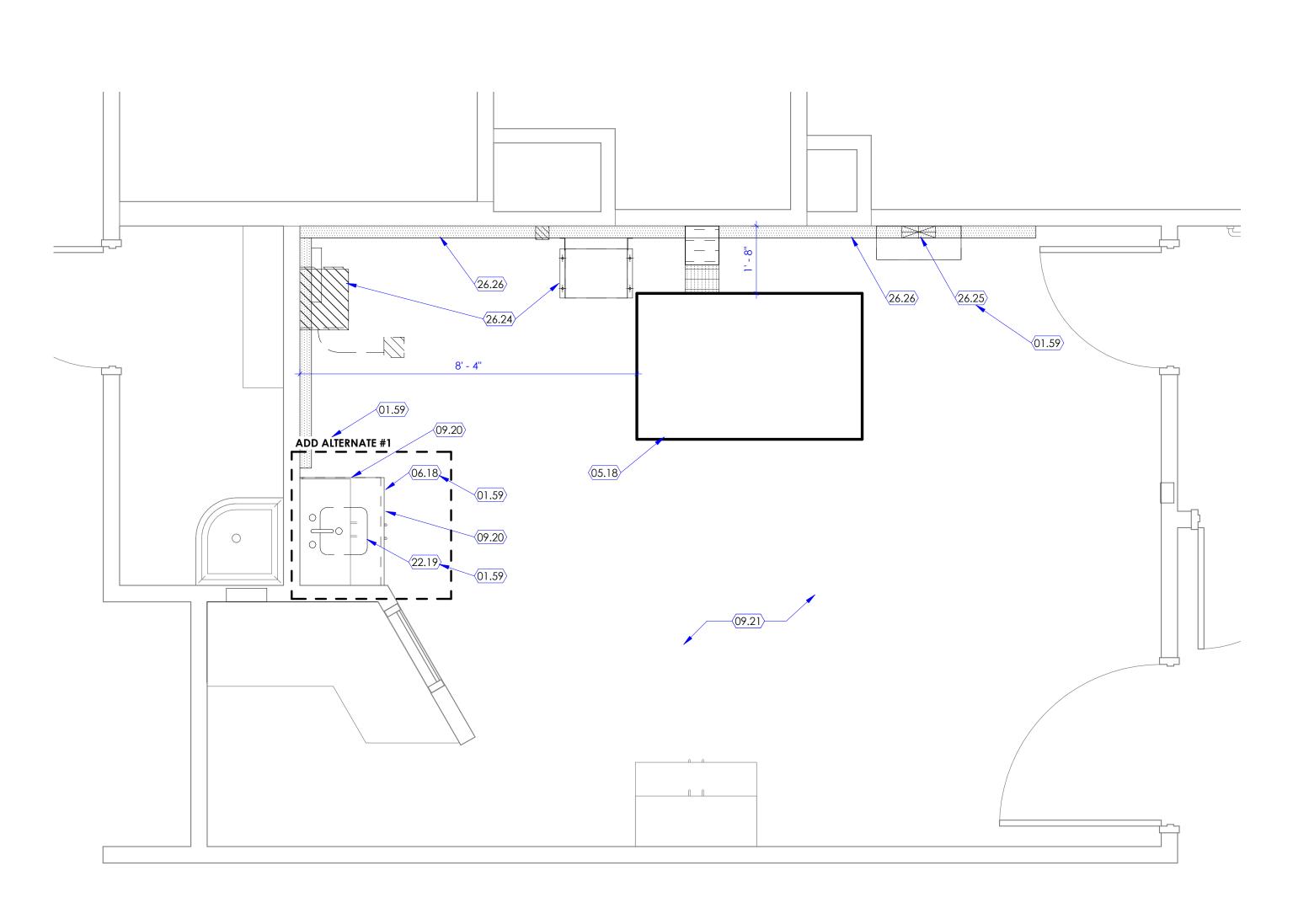
A. SEE SHEET G003 AND G005 FOR SYMBOLS, GENERAL NOTES AND LEGEND.

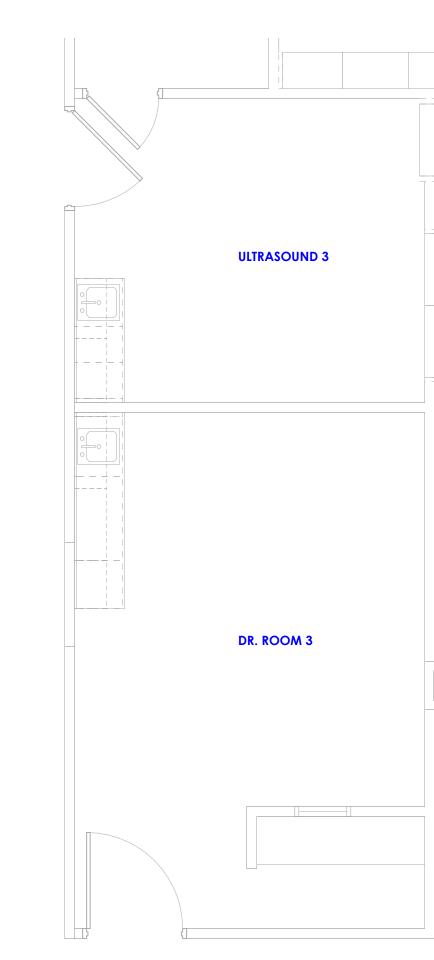




1 Floor Plan Level 1 SCALE: 1/4" = 1'-0" 1/3

KE	YED NOTES
01.59	AS PART OF THE BASE BID INCLUDE NEW CIRCUITRY FOR THE NEW ELECTRICAL DISCONNECT. AS PART OF ADD ALTERNATE #2, DEMO EXISTING CONDUIT RUN TO ELECTRICAL CLOSET AND INCLUDE NEW CONDUIT TO ACCOMMODATE NEW CIRCUITRY (CIRCUITRY INCLUDED IN BASE BID). CONDUIT REPLACEMENT MUST BE PERFORMED USING CONTAINMENT CART PROVIDED BY OWNER AND IN ACCORDANCE WITH OWNER'S INFECTION CONTROL GUIDELINES. CONDUIT REPLACEMENT AS PART OF ADD ALTERNATE #1 MUST BE PERFORMED ON WEEKENDS. COORDINATE AND SCHEDULE WEEKEND WORK HOURS WITH OWNER'S FACILITY MANAGER. SEE ELECTRICAL DRAWINGS.
05.18	X-RAY UNIT MOUNTING PLATE. O.F.C.I. SEE VENDOR (G.E.) DRAWINGS FOR INSTALLATION REQUIREMENTS, SEE 11/A503A, 12/A503A FOR THROUGH BOLT ATTACHMENT DETAIL. IF ANCHOR OCCURS AT STRUCTURE BELOW CHIP OUT CONCRETE SUFFICIENT ENOUGH TO WELD ANCHOR DIRECTLY TO STRUCTURE. PATCH RESULTANT HOLE WITH HIGH PRESSURE GROUT.
06.18	ADD ALT. #1: CABINET AND COUNTERTOP WITH SINK. O.F.C.I.
09.20	FLOOR COVERING. O.F.C.I. PATCH FLOOR COVERING AT SINK. COVE BASE AT SINK TO MATCH EXISTING.
09.21	FLOOR COVERING. O.F.C.I. PATCH FLOOR COVERING AS REQUIRED. COVE BASE AT WALLS TO MATCH EXISTING AS REQUIRED.
22.19	ADD ALT. #1: LAVATORY (SINK). O.F.C.I. CONNECT LAVATORY TO EXISTING PLUMBING SUPPLY AND DRAIN.
26.24	X-RAY UNIT TRANSFORMER OR GENERATOR. O.F.O.I. CONTRACTOR TO MAKE FINAL ELECTRICAL CONNECTIONS. COORDINATE WITH OWNER AND OWNER'S EQUIPMENT VENDOR (G.E.) SEE VENDOR (G.E.) DRAWINGS FOR FINAL CONNECTION DETAILS. SEE ELECTRICAL DRAWINGS.









NORTH

			G	ENERAL NOTE
ECTRICAL DNDUIT D). VT CART CTION LITERNATE DULE ECTRICAL GS FOR IGH BOLT THIP OUT RUCTURE.	26.25 26.26	ELECTRICAL DISCONNECT PANEL. SEE VENDOR (G.E.) DRAWINGS. SEE ELECTRICAL DRAWINGS. ELECTRICAL RACEWAYS. O.F.C.I. SEE VENDOR (G.E.) DRAWINGS FOR LAYOUT. PROVIDE KNOCKOUTS PER VENDOR DRAWINGS. SEE ELECTRICAL DRAWINGS.	А.	see sheet goo3 and goos
VE BASE AT D. COVE				
KISTING				



005 FOR SYMBOLS, GENERAL NOTES AND LEGEND.







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Floor Plan Level 1

A113



1 Reflected Ceiling Plan Level 1 SCALE: 1/4" = 1'-0"

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### **KEYED NOTES**

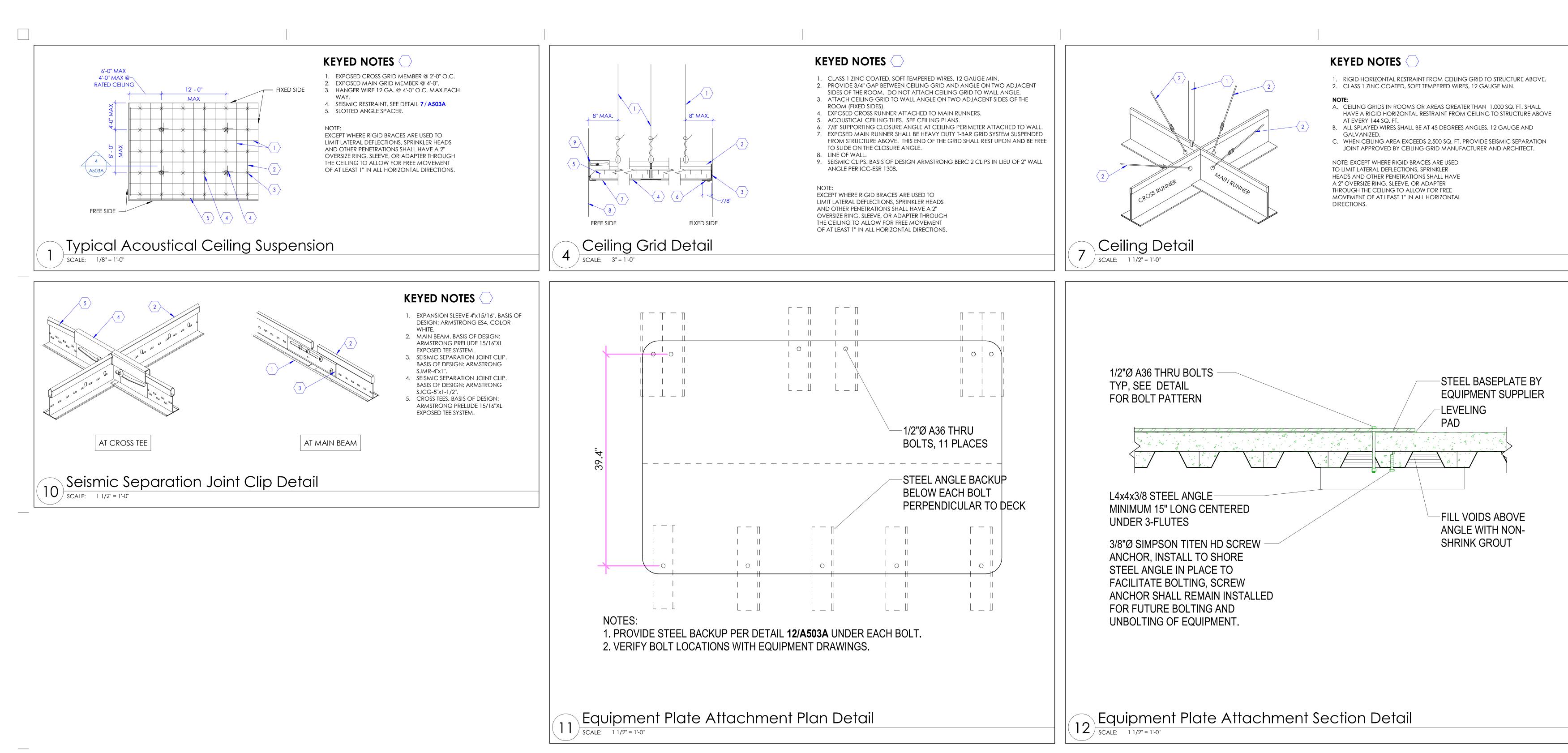
05.32 EXISTING UNISTRUT. AFTER X-RAY UNIT INSTALLATION (BY OTHERS) PROVIDE UNISTRUT CAP COVER AT ALL EMPTY VOIDS OF UNISTRUT.
09.34 PROVIDE UNISTRUT CAPS AT EXISTING UNISTRUTS TO FILL EMPTY VOIDS AFTER X-RAY UNIT INSTALLATION (X-RAY UNIT INSTALLATION BY OTHERS).
23.13 SUPPLY AIR DIFFUSER OR RETURN GRILLE. BALANCE AS NECESSARY. SEE RECOMMENDATION LETTER FROM MECHANICAL ENGINEER.
26.13 LIGHT FIXTURE. EXISTING.

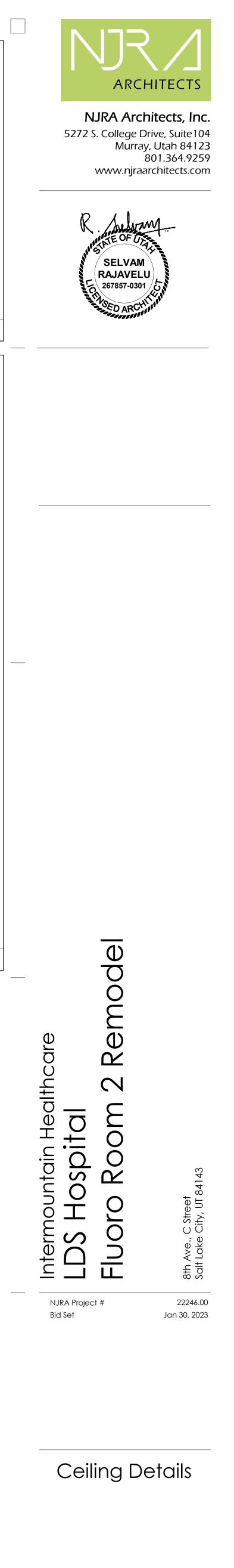
### **GENERAL NOTES**

A. SEE SHEET G003 AND G005 FOR SYMBOLS, GENERAL NOTES AND LEGEND.









A503A

SYMBOLS LEGEND

SYMBOL	DESCRIPTION
REFERENC	E AND LINE SYMBOLS
A5 E-501	DETAIL INDICATOR: A5 INDICATES DETAIL NUMBER, E-501 INDICATES DRAWING SHEET WHERE DETAIL IS SHOWN.
A5 E-201	ELEVATION OR SECTION INDICATOR, EXTERIOR: A5 INDICATES ELEVATION OR SECTION NUMBER, E-201 INDICATES DRAWING SHEET WHERE ELEVATION OR SECTION IS SHOWN.
A5 E-201	ELEVATION OR SECTION INDICATOR, INTERIOR: A5 INDICATES ELEVATION OR SECTION NUMBER, E-201 INDICATES DRAWING SHEET WHERE ELEVATION OR SECTION IS SHOWN.
ROOM NAME	ROOM IDENTIFIER WITH ROOM NAME AND NUMBER.
	KEYNOTE INDICATOR.
	REVISION INDICATOR.
CU-1	EQUIPMENT INDICATOR.
X-X XMDP	MECHANICAL EQUIPMENT INDICATOR. "X-X" INDICATES EQUIPMENT MARK SHOWN ON EQUIPMENT SCHEDULE. "XMDP" IDENTIFIES PANEL EQUIPMENT IS CIRCUITED TO. REFER TO EQUIPMENT SCHEDULE FOR ADDITIONAL INFORMATION.
	NEW LINE: MEDIUM LINE.
	HIDDEN FEATURES LINE: HIDDEN, THIN LINE
	EXISTING TO REMAIN LINE: THIN LINE.
	DEMOLITION LINE: DASHED, MEDIUM LINE
XXX EF-X	ELECTRICAL EQUIPMENT INDICATOR. "XXX" INDICATES TYPE OF EQUIPMENT OR EQUIPMENT ID. "EF-X" IDENTIFIES MECHANICAL EQUIPMENT BEING SERVED. REFER TO EQUIPMENT SCHEDULE FOR ADDITIONAL INFORMATION.
<u>X-X</u> 1LA-3	EQUIPMENT INDICATOR. "X-X" INDICATES EQUIPMENT MARK SHOWN ON EQUIPMENT SCHEDULE. "1LA-3" IDENTIFIES PANEL EQUIPMENT IS CIRCUITED TO. REFER TO EQUIPMENT SCHEDUL FOR ADDITIONAL INFORMATION.
FIRE ALARI	M
FAA	FIRE ALARM ANNUNCIATOR PANEL.
FACP	FIRE ALARM CONTROL PANEL, SEMI-RECESSED.
С	AUTOMATIC DOOR CLOSERS: DOOR CLOSERS SHALL BE FURNISHED WITH DOOR HARDWARE AND CONNECTED BY FIRE ALARM INSTALLER.
СМ	CONTROL MODULE.
ММ	MONITOR MODULE.
F	FIRE ALARM MANUAL PULL STATION.
R	SHUT DOWN RELAY: INSTALL RELAY IN CONTROL CIRCUIT OF EQUIPMENT TO BE CONTROLLED IN THE EVENT OF A FIRE.
FS	WATER FLOW SWITCH. FLOW SWITCHES SHALL BE PROVIDED AND INSTALLED BY FIRE SPRINKLER CONTRACTOR AND SHALL BE CONNECTED TO LOCATIONS SHOWN ON THE FIRE SPRINKLER SHOP DRAWINGS.
VS	VALVE SUPERVISORY SWITCH, TAMPER SWITCH. TAMPER SWITCHES SHALL BE PROVIDED AND INSTALLED BY FIRE SPRINKLER CONTRACTOR AND SHALL BE CONNECTED TO LOCATIONS SHOWN ON THE FIRE SPRINKLER SHOP DRAWINGS.
PS	PRESSURE SUPERVISORY SWITCH. PRESSURE SWITCHES SHAL BE PROVIDED AND INSTALLED BY FIRE SPRINKLER CONTRACTOR AND SHALL BE CONNECTED TO LOCATIONS SHOWN ON THE FIRE SPRINKLER SHOP DRAWINGS
<u>5</u>	MAGNETIC DOOR HOLDER.
2	DETECTOR, SMOKE.
	DETECTOR, SMOKE, DUCT WITH HOUSING AND SAMPLING TUBE.
	SMOKE DAMPER. 120V POWER FROM ELECTRICAL SYSTEM.
e FSD	COMBINATION FIRE/SMOKE DAMPER. 120V POWER FROM ELECTRICAL SYSTEM.
	DETECTOR, HEAT.
co	DETECTOR, CARBON MONOXIDE.
X	STROBE, WALL MOUNTED.
75	STROBE, WALL MOUNTED. SUBSCRIPT INDICATES CANDELA RATING.
$\boxtimes \Box$	ALARM, HORN/STROBE, WALL MOUNTED, ONE ASSEMBLY.
75	ALARM, HORN/STROBE, WALL MOUNTED, ONE ASSEMBLY. SUBSCRIPT INDICATES CANDELA RATING.
⊠⊲c	ALARM, CHIME/STROBE, WALL MOUNTED, ONE ASSEMBLY.
মি	SPEAKER, WALL MOUNTED, EVACUATION, COMBINATION STROB

	SYMBOLS LEGEND
SYMBOL	DESCRIPTION
WIRING DE	VICES
6	RECEPTACLE, DUPLEX: NEMA 5-20R.
₿ A	RECEPTACLE, DUPLEX, ABOVE COUNTER: NEMA 5-20R.
₿c	RECEPTACLE, DUPLEX, CEILING: NEMA 5-20R.
∯ DF	RECEPTACLE, DUPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER, DRINKING FOUNTAIN: CONCEAL WATER COOLER RECEPTACLE BEHIND WATER COOLER. SEE
⊕ DF	MECHANICAL/PLUMBING SHOP DRAWINGS FOR INSTALLATION REQUIREMENTS.
₿s	RECEPTACLE, DUPLEX, SWITCHED: NEMA 5-20R.
•	RECEPTACLE, DUPLEX, HOSPITAL GRADE: NEMA 5-20R.
Ŏ	RECEPTACLE, DUPLEX ON EMERGENCY POWER: NEMA 5-20R.
	RECEPTACLE, DUPLEX, HOSPITAL GRADE ON EMERGENCY POWER: NEMA 5-20R.
	RECEPTACLE, DUPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER: NEMA 5-20R.
	RECEPTACLE, DUPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER, HOSPITAL GRADE: NEMA 5-20R.
₩	RECEPTACLE, DUPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER, HOSPITAL GRADE ON EMERGENCY POWER: NEMA 5-20R.
₩P	RECEPTACLE, DUPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER, WEATHERPROOF: NEMA 5-20R.
	RECEPTACLE, QUADRAPLEX: NEMA 5-20R.
- <b>b</b>	RECEPTACLE, QUADRAPLEX ON EMERGENCY POWER: NEMA 5-20R.
#	RECEPTACLE, QUADRAPLEX, HOSPITAL GRADE: NEMA 5-20R.
+	RECEPTACLE, QUADRAPLEX, HOSPITAL GRADE ON EMERGENCY POWER: NEMA 5-20R.
#	RECEPTACLE, QUADRAPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER: NEMA 5-20R.
6	RECEPTACLE, SPECIAL PURPOSE. PROVIDE RECEPTACLE TO MATCH EQUIPMENT PLUG.
0	MULTI-OUTLET ASSEMBLY: NEMA 5-20R.
FB#	FLUSH FLOOR BOX. "#" SHOWN ON DRAWINGS. REFER TO WIRING DEVICE SCHEDULE IN THE ELECTRICAL SPECIFICATIONS FOR CONFIGURATION AND DEVICES.
PT#	FLUSH FIRE RATED POKE THRU. "#" SHOWN ON DRAWINGS. REFER TO WIRING DEVICE SCHEDULE IN THE ELECTRICAL SPECIFICATIONS FOR CONFIGURATION AND DEVICES.
Ф	SWITCH, DIMMER.
× \$	SWITCH, SINGLE POLE ("x" INDICATES FIXTURES CONTROLLED).
X \$2	SWITCH, DOUBLE POLE ("x" INDICATES FIXTURES CONTROLLED).
X \$3	SWITCH, THREE-WAY ("x" INDICATES FIXTURES CONTROLLED).
	RECEPTACLE, QUADRAPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER, HOSPITAL GRADE: NEMA 5-20R.
#	RECEPTACLE, QUADRAPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER, HOSPITAL GRADE ON EMERGENCY POWER: NEMA 5-20R.
₿.	RECEPTACLE, SINGLE PLEX, WITH USB OUTLET
ŧ	RECEPTACLE, DULEX, RECESSED, NEMA 5-20R, AUTOMATICALLY CONTROLLED THROUGH TIME OR OCCUPANCY BASED CONTROLS (REFER TO PLANS FOR CONTROL METHOD)
<b>#</b>	RECEPTACLE, QUADRAPLEX, RECESSED, NEMA 5-20R, AUTOMATICALLY CONTROLLED THROUGH TIME OR OCCUPANCY BASED CONTROLS (REFER TO PLANS FOR CONTROL METHOD)
WIRING ME	THODS
A-1	SINGLE BRANCH CIRCUIT HOME RUN TO PANELBOARD WITH DEDICATED NEUTRAL CONDUCTOR. LETTER AND NUMBER NOTATION IDENTIFY PANEL AND CIRCUIT NUMBER.
A-1,3,5	BRANCH CIRCUIT HOME RUN TO PANELBOARD: NUMBER OF ARROWS INDICATES NUMBER OF CIRCUITS. LETTER AND NUMBER NOTATIONS IDENTIFY PANEL AND CIRCUIT NUMBERS.
1 A-1,3,5	BRANCH CIRCUIT HOME RUN TO PANELBOARD: NUMBER OF ARROWS INDICATES NUMBER OF CIRCUITS. LETTER AND NUMBER NOTATIONS IDENTIFY PANEL AND CIRCUIT NUMBERS. NUMBER IN BOX REFERS TO THE CONDUCTOR AND CONDUIT SCHEDULE.
<b>♦</b>	CONDUIT STUB. DIMENSION RECORD DRAWINGS AND MARK. CONDUCTOR & CONDUIT ("CC") SCHEDULE INDICATOR. REFER
(HC)	TO ONE-LINE DIAGRAM. ADA ACCESS PUSH PLATE
•	JUNCTION BOX.
Φ <sub>c</sub>	JUNCTION BOX, CEILING.
PB	PULL BOX.
	LADDER RACK.
JJ	CABLE J-HOOKS ABOVE ACCESSIBLE CEILING.
•	MECHANICAL EQUIPMENT CONNECTION. REFER TO EQUIPMENT SCHEDULE FOR REQUIREMENTS.

SYMBOLS	L	EG	END

		SYMBOLS LEGEND
	SYMBOL	DESCRIPTION
	ELECTRICA	AL POWER AND DISTRIBUTION
		FUSE WITH RATING (ONE-LINE DIAGRAM).
		DISCONNECT, FUSED (ONE-LINE DIAGRAM).
		DISCONNECT, NONFUSED (ONE-LINE DIAGRAM).
_		CIRCUIT BREAKER, MOLDED CASE (ONE-LINE DIAGRAM).
_	↓(` ↓ 1	CIRCUIT BREAKER, MOLDED CASE WITH SHUNT TRIP (ONE-LINE DIAGRAM).
	( MCP	CIRCUIT BREAKER, MOTOR CIRCUIT PROTECTION (ONE-LINE DIAGRAM).
	( #AF #AT	CIRCUIT BREAKER, ADJUSTABLE TRIP. "225AF" REPRESENTS THE RATING AND "150AT" REPRESENTS THE TRIP SETTING. (ONE-LINE DIAGRAM).
		CIRCUIT BREAKER, SOLID STATE (ONE-LINE DIAGRAM).
		CIRCUIT BREAKER, SOLID STATE WITH GROUND FAULT PROTECTION (ONE-LINE DIAGRAM).
	m	TRANSFORMER (ONE-LINE DIAGRAM).
		TRANSFORMER, CURRENT (ONE-LINE DIAGRAM).
	<u>+ -</u>	BATTERY (ONE-LINE DIAGRAM).
	)[	CAPACITOR (ONE-LINE DIAGRAM).
_	"1DPHA"	DISTRIBUTION PANELBOARD, MOTOR CONTROL CENTER, PLUG-IN BUSWAY, MEDIUM VOLTAGE SWITCHBOARD (ONE-LINE DIAGRAM).
_	"1H"	PANELBOARD (ONE-LINE DIAGRAM).
	225/3 "1H"	PANELBOARD WITH MAIN LUGS ONLY. BUS SIZE AND PHASE AS SHOWN (ONE-LINE DIAGRAM).
_	225/3 "1H"	PANELBOARD WITH MAIN CIRCUIT BREAKER. SIZE AND PHASE AS SHOWN (ONE-LINE DIAGRAM).
	•)225/3 "1H"	PANELBOARD WITH MAIN AND SUB FEED CIRCUIT BREAKER (ONE-LINE DIAGRAM).
_	NURSE CAI	 _L
	0	JUNCTION BOX.
	$\square$	CORRIDOR LIGHT.
	 	BATHROOM PULL CORD STATION.
		DUTY STATION.
		EMERGENCY ASSISTANCE CALL STATION.
		EMERGENCY ASSISTANCE CODE BLUE CALL STATION.
	E CB	PATIENT STATION.
		STAFF STATION.
		NURSE CALL AREA CONTROL UNIT & POWER SUPPLIES.
	SECURITY	
		SECURITY CABLE. SEE EQUIPMENT SCHEDULE FOR CABLE
_	ACC	TYPE. ACCESS CONTROL HEADEND EQUIPMENT.
	CTR	SECURITY CONTROL PANEL.
	#1	CARD ACCESS DOOR TYPE #1 OR AS NOTED. SEE SCHEDULE.
	CR	CARD READER.
		KEYPAD/CARD READER COMBINATION.
$\neg$	(P)	PANIC DURESS SWITCH.
		ANNUNCIATOR PANEL.
		MASTER STATION, INTERCOM.

	SYMBOLS LEGEND
SYMBOL	
	AL POWER AND DISTRIBUTION
225/3	
"1H" 	PANELBOARD WITH MAIN LUGS ONLY AND SURGE PROTECTION WITH CIRCUIT BREAKER (ONE-LINE DIAGRAM).
225/3 "1H" "1H"	
	PANELBOARD WITH SUB FEED LUGS (ONE-LINE DIAGRAM).
"1H" "1H"	PANELBOARD WITH CIRCUIT BREAKER AND SUB FEED LUGS (ONE-LINE DIAGRAM).
┍╶─┟──┐	
	CT CABINET PER UTILITY'S REQUIREMENTS (ONE-LINE DIAGRAM).
l	
	CT CABINET PER UTILITY'S REQUIREMENTS (ONE-LINE DIAGRAM).
·	
	TRANSFER SWITCH (ONE-LINE DIAGRAM).
	DIGITAL MULTIMETER (ONE-LINE DIAGRAM).
$\perp$	EARTH GROUND (ONE-LINE DIAGRAM).
<del>_</del> •⊉⊣⊮	SERVICE ENTRANCE SURGE PROTECTION (ONE-LINE DIAGRAM).
₩ "" _ <b>↑</b>	
EPO	PUSH BUTTON, REMOTE EMERGENCY STOP.
G	GENERATOR, POWER (ONE-LINE DIAGRAM).
(M)	METER.
	VARIABLE FREQUENCY MOTOR CONTROLLER (ONE-LINE
VFC VFD	DIAGRAM).
	DISCONNECT SWITCH, FUSED.
	DISCONNECT SWITCH, UNFUSED.
•	PUSHBUTTON.
•	PUSHBUTTONS, MOTOR CONTROL.
77.	PANELBOARD CABINET, FLUSH MOUNTED.
	PANELBOARD CABINET, SURFACE MOUNTED, 1 SECTION.
	PANELBOARD CABINET, SURFACE MOUNTED, 2 SECTION.
	DISTRIBUTION PANEL OR SWITCHBOARD.
DP#	
	LIGHTING RELAY, CONTACTOR PANEL, OR DIMMING ENCLOSURE.
LP \$ST	SWITCH, TOGGLE MOTOR STARTER WITH OVERLOAD
	SWITCH, TOGGLE MOTOR STARTER WITH OVERLOAD PROTECTION.
\$ST	SWITCH, TOGGLE MOTOR STARTER WITH OVERLOAD PROTECTION. TRANSFORMER (SEE ONE-LINE FOR SIZE)
	SWITCH, TOGGLE MOTOR STARTER WITH OVERLOAD PROTECTION.
\$ST	SWITCH, TOGGLE MOTOR STARTER WITH OVERLOAD PROTECTION. TRANSFORMER (SEE ONE-LINE FOR SIZE) BUSWAY.
\$ST	SWITCH, TOGGLE MOTOR STARTER WITH OVERLOAD PROTECTION. TRANSFORMER (SEE ONE-LINE FOR SIZE)
\$ST	SWITCH, TOGGLE MOTOR STARTER WITH OVERLOAD PROTECTION. TRANSFORMER (SEE ONE-LINE FOR SIZE) BUSWAY.
\$ST	SWITCH, TOGGLE MOTOR STARTER WITH OVERLOAD PROTECTION. TRANSFORMER (SEE ONE-LINE FOR SIZE) BUSWAY. SPECIALIZED TRANSFER SWITCH (ONE-LINE DIAGRAM).
\$ST	SWITCH, TOGGLE MOTOR STARTER WITH OVERLOAD PROTECTION. TRANSFORMER (SEE ONE-LINE FOR SIZE) BUSWAY.
\$ST	SWITCH, TOGGLE MOTOR STARTER WITH OVERLOAD PROTECTION. TRANSFORMER (SEE ONE-LINE FOR SIZE) BUSWAY. SPECIALIZED TRANSFER SWITCH (ONE-LINE DIAGRAM).
\$ST	SWITCH, TOGGLE MOTOR STARTER WITH OVERLOAD PROTECTION. TRANSFORMER (SEE ONE-LINE FOR SIZE) BUSWAY. SPECIALIZED TRANSFER SWITCH (ONE-LINE DIAGRAM).
\$ST	SWITCH, TOGGLE MOTOR STARTER WITH OVERLOAD PROTECTION. TRANSFORMER (SEE ONE-LINE FOR SIZE) BUSWAY. SPECIALIZED TRANSFER SWITCH (ONE-LINE DIAGRAM). CIRCUIT BREAKER, DRAW OUT (ONE-LINE DIAGRAM).
	SWITCH, TOGGLE MOTOR STARTER WITH OVERLOAD PROTECTION. TRANSFORMER (SEE ONE-LINE FOR SIZE) BUSWAY. SPECIALIZED TRANSFER SWITCH (ONE-LINE DIAGRAM).
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\$ST B B C C C C C C C C C C C C C	SWITCH, TOGGLE MOTOR STARTER WITH OVERLOAD PROTECTION. TRANSFORMER (SEE ONE-LINE FOR SIZE) BUSWAY. SPECIALIZED TRANSFER SWITCH (ONE-LINE DIAGRAM). CIRCUIT BREAKER, DRAW OUT (ONE-LINE DIAGRAM). CIRCUIT BREAKER, DRAW OUT (ONE-LINE DIAGRAM).
\$ST B B C C C C C C C C C C C C C	SWITCH, TOGGLE MOTOR STARTER WITH OVERLOAD PROTECTION. TRANSFORMER (SEE ONE-LINE FOR SIZE) BUSWAY. SPECIALIZED TRANSFER SWITCH (ONE-LINE DIAGRAM). CIRCUIT BREAKER, DRAW OUT (ONE-LINE DIAGRAM). FIXTURE IDENTIFICATION: (W-3) INDICATES FIXTURE TYPE AS SCHEDULED. FIXTURE IDENTIFICATION: EMERGENCY LIGHTING FIXTURE WITH BATTERY PACK AND/ OR GENERATOR AND/ OR
\$ST B B C C C C C C C C C C C C C	SWITCH, TOGGLE MOTOR STARTER WITH OVERLOAD PROTECTION. TRANSFORMER (SEE ONE-LINE FOR SIZE) BUSWAY. SPECIALIZED TRANSFER SWITCH (ONE-LINE DIAGRAM). CIRCUIT BREAKER, DRAW OUT (ONE-LINE DIAGRAM). FIXTURE IDENTIFICATION: (W-3) INDICATES FIXTURE TYPE AS SCHEDULED. FIXTURE IDENTIFICATION: EMERGENCY LIGHTING FIXTURE WITH BATTERY PACK AND/ OR GENERATOR AND/ OR CENTRALIZED INVERTER AND/ OR CENTRALIZED UPS CONNECTION AS INDICATED IN PLANS. (W-3E) INDICATES
\$ST B B C C C C C C C C C C C C C	SWITCH, TOGGLE MOTOR STARTER WITH OVERLOAD PROTECTION. TRANSFORMER (SEE ONE-LINE FOR SIZE) BUSWAY. SPECIALIZED TRANSFER SWITCH (ONE-LINE DIAGRAM). CIRCUIT BREAKER, DRAW OUT (ONE-LINE DIAGRAM). CIRCUIT BREAKER, DRAW OUT (ONE-LINE DIAGRAM).
\$ST B B C C C C C C C C C C C C C	SWITCH, TOGGLE MOTOR STARTER WITH OVERLOAD PROTECTION. TRANSFORMER (SEE ONE-LINE FOR SIZE) BUSWAY. SPECIALIZED TRANSFER SWITCH (ONE-LINE DIAGRAM). CIRCUIT BREAKER, DRAW OUT (ONE-LINE DIAGRAM). CIRCUIT BREAKER, DRAW OUT (ONE-LINE DIAGRAM).
\$ST B B C C C C C C C C C C C C C	SWITCH, TOGGLE MOTOR STARTER WITH OVERLOAD PROTECTION. TRANSFORMER (SEE ONE-LINE FOR SIZE) BUSWAY. SPECIALIZED TRANSFER SWITCH (ONE-LINE DIAGRAM). CIRCUIT BREAKER, DRAW OUT (ONE-LINE DIAGRAM). CIRCUIT BREAKER, DRAW OUT (ONE-LINE DIAGRAM).
\$ST □ □ □ □ □ □ □ □ □ □ □ □ □	SWITCH, TOGGLE MOTOR STARTER WITH OVERLOAD PROTECTION. TRANSFORMER (SEE ONE-LINE FOR SIZE) BUSWAY. SPECIALIZED TRANSFER SWITCH (ONE-LINE DIAGRAM). CIRCUIT BREAKER, DRAW OUT (ONE-LINE DIAGRAM). CIRCUIT BREAKER, DRAW OUT (ONE-LINE DIAGRAM). FIXTURE IDENTIFICATION: (W-3) INDICATES FIXTURE TYPE AS SCHEDULED. FIXTURE IDENTIFICATION: EMERGENCY LIGHTING FIXTURE WITH BATTERY PACK AND/ OR GENERATOR AND/ OR CENTRALIZED INVERTER AND/ OR CENTRALIZED UPS CONNECTION AS INDICATED IN PLANS. (W-3E) INDICATES FIXTURE TYPE AS SCHEDULED. EMERGENCY. NIGHT LIGHT: DO NOT SWITCH.
\$ST B B C B B C C C C C C C C C C C C C	SWITCH, TOGGLE MOTOR STARTER WITH OVERLOAD PROTECTION. TRANSFORMER (SEE ONE-LINE FOR SIZE) BUSWAY. SPECIALIZED TRANSFER SWITCH (ONE-LINE DIAGRAM). CIRCUIT BREAKER, DRAW OUT (ONE-LINE DIAGRAM). CIRCUIT BREAKER, DRAW OUT (ONE-LINE DIAGRAM). FIXTURE IDENTIFICATION: (W-3) INDICATES FIXTURE TYPE AS SCHEDULED. FIXTURE IDENTIFICATION: EMERGENCY LIGHTING FIXTURE WITH BATTERY PACK AND/ OR GENERATOR AND/ OR CENTRALIZED INVERTER AND/ OR GENERATOR AND/ OR CENTRALIZED UNVERTER AND/ OR GENERATOR AND/ OR SCHEDULED. EMERGENCY. NIGHT LIGHT: DO NOT SWITCH. EGRESS DIRECTION ARROW (EXIT SIGNS). EXIT SIGN: SINGLE FACE; CEILING MOUNTED
\$ST □ □ □ □ □ □ □ □ □ □ □ □ □	SWITCH, TOGGLE MOTOR STARTER WITH OVERLOAD PROTECTION. TRANSFORMER (SEE ONE-LINE FOR SIZE) BUSWAY. SPECIALIZED TRANSFER SWITCH (ONE-LINE DIAGRAM). CIRCUIT BREAKER, DRAW OUT (ONE-LINE DIAGRAM). CIRCUIT BREAKER, DRAW OUT (ONE-LINE DIAGRAM). FIXTURE IDENTIFICATION: (W-3) INDICATES FIXTURE TYPE AS SCHEDULED. FIXTURE IDENTIFICATION: EMERGENCY LIGHTING FIXTURE WITH BATTERY PACK AND/ OR GENERATOR AND/ OR CENTRALIZED INVERTER AND/ OR CENTRALIZED UPS CONNECTION AS INDICATED IN PLANS. (W-3E) INDICATES FIXTURE TYPE AS SCHEDULED. EMERGENCY. NIGHT LIGHT: DO NOT SWITCH. EGRESS DIRECTION ARROW (EXIT SIGNS).
\$ST □ □ □ □ □ □ □ □ □ □ □ □ □	SWITCH, TOGGLE MOTOR STARTER WITH OVERLOAD PROTECTION. TRANSFORMER (SEE ONE-LINE FOR SIZE) BUSWAY. SPECIALIZED TRANSFER SWITCH (ONE-LINE DIAGRAM). CIRCUIT BREAKER, DRAW OUT (ONE-LINE DIAGRAM). CIRCUIT BREAKER, DRAW OUT (ONE-LINE DIAGRAM). FIXTURE IDENTIFICATION: (W-3) INDICATES FIXTURE TYPE AS SCHEDULED. FIXTURE IDENTIFICATION: EMERGENCY LIGHTING FIXTURE WITH BATTERY PACK AND/ OR GENERATOR AND/ OR CENTRALIZED INVERTER AND/ OR GENERATOR AND/ OR CENTRALIZED UNVERTER AND/ OR GENERATOR AND/ OR SCHEDULED. EMERGENCY. NIGHT LIGHT: DO NOT SWITCH. EGRESS DIRECTION ARROW (EXIT SIGNS). EXIT SIGN: SINGLE FACE; CEILING MOUNTED
\$ST □ □ □ □ □ □ □ □ □ □ □ □ □	SWITCH, TOGGLE MOTOR STARTER WITH OVERLOAD PROTECTION. TRANSFORMER (SEE ONE-LINE FOR SIZE) BUSWAY. SPECIALIZED TRANSFER SWITCH (ONE-LINE DIAGRAM). CIRCUIT BREAKER, DRAW OUT (ONE-LINE DIAGRAM). CIRCUIT BREAKER, DRAW OUT (ONE-LINE DIAGRAM). CIRCUIT BREAKER, DRAW OUT (ONE-LINE DIAGRAM). FIXTURE IDENTIFICATION: (W-3) INDICATES FIXTURE TYPE AS SCHEDULED. FIXTURE IDENTIFICATION: EMERGENCY LIGHTING FIXTURE WITH BATTERY PACK AND/ OR GENERATOR AND/ OR CENTRALIZED INVERTER AND/ OR CENTRALIZED UPS CONNECTION AS INDICATED IN PLANS. (W-3E) INDICATES FIXTURE TYPE AS SCHEDULED. EMERGENCY. NIGHT LIGHT: DO NOT SWITCH. EGRESS DIRECTION ARROW (EXIT SIGNS). EXIT SIGN: SINGLE FACE; CEILING MOUNTED EXIT SIGN: SINGLE FACE; WALL MOUNTED
\$ST □ □ □ □ □ □ □ □ □ □ □ □ □	SWITCH, TOGGLE MOTOR STARTER WITH OVERLOAD PROTECTION. TRANSFORMER (SEE ONE-LINE FOR SIZE) BUSWAY. SPECIALIZED TRANSFER SWITCH (ONE-LINE DIAGRAM). CIRCUIT BREAKER, DRAW OUT (ONE-LINE DIAGRAM). CIRCUIT BREAKER, DRAW OUT (ONE-LINE DIAGRAM). FIXTURE IDENTIFICATION: (W-3) INDICATES FIXTURE TYPE AS SCHEDULED. FIXTURE IDENTIFICATION: EMERGENCY LIGHTING FIXTURE WITH BATTERY PACK AND/ OR GENERATOR AND/ OR CENTRALIZED INVERTER AND/ OR GENERATOR AND/ OR CENTRALIZED INVERTER AND/ OR GENERATOR AND/ OR SCHEDULED. EMERGENCY. NIGHT LIGHT: DO NOT SWITCH. EGRESS DIRECTION ARROW (EXIT SIGNS). EXIT SIGN: SINGLE FACE; CEILING MOUNTED EXIT SIGN: SINGLE FACE; WALL MOUNTED EXIT SIGN: DOUBLE FACE; WALL MOUNTED
\$ST B B B B C C C C C C C C C C C C C C C C C C C	SWITCH, TOGGLE MOTOR STARTER WITH OVERLOAD PROTECTION. TRANSFORMER (SEE ONE-LINE FOR SIZE) BUSWAY. SPECIALIZED TRANSFER SWITCH (ONE-LINE DIAGRAM). CIRCUIT BREAKER, DRAW OUT (ONE-LINE DIAGRAM). CIRCUIT BREAKER, DRAW OUT (ONE-LINE DIAGRAM). CIRCUIT BREAKER, DRAW OUT (ONE-LINE DIAGRAM). FIXTURE IDENTIFICATION: (W-3) INDICATES FIXTURE TYPE AS SCHEDULED. FIXTURE IDENTIFICATION: EMERGENCY LIGHTING FIXTURE WITH BATTERY PACK AND/ OR GENERATOR AND/ OR CENTRALIZED INVERTER AND/ OR CENTRALIZED UPS CONNECTION AS INDICATED IN PLANS. (W-3E) INDICATES FIXTURE TYPE AS SCHEDULED. EMERGENCY. NIGHT LIGHT: DO NOT SWITCH. EGRESS DIRECTION ARROW (EXIT SIGNS). EXIT SIGN: SINGLE FACE; CEILING MOUNTED EXIT SIGN: SINGLE FACE; CEILING MOUNTED EXIT SIGN: DOUBLE FACE; WALL MOUNTED
\$ST □ □ □ □ □ □ □ □ □ □ □ □ □	SWITCH, TOGGLE MOTOR STARTER WITH OVERLOAD PROTECTION. TRANSFORMER (SEE ONE-LINE FOR SIZE) BUSWAY. SPECIALIZED TRANSFER SWITCH (ONE-LINE DIAGRAM). CIRCUIT BREAKER, DRAW OUT (ONE-LINE DIAGRAM). CIRCUIT BREAKER, DRAW OUT (ONE-LINE DIAGRAM). FIXTURE IDENTIFICATION: (W-3) INDICATES FIXTURE TYPE AS SCHEDULED. FIXTURE IDENTIFICATION: EMERGENCY LIGHTING FIXTURE WITH BATTERY PACK AND/ OR GENERATOR AND/ OR CENTRALIZED INVERTER AND/ OR CENTRALIZED UPS CONNECTION AS INDICATED IN PLANS. (W-3E) INDICATES FIXTURE TYPE AS SCHEDULED. EMERGENCY. NIGHT LIGHT: DO NOT SWITCH. EGRESS DIRECTION ARROW (EXIT SIGNS). EXIT SIGN: SINGLE FACE; CEILING MOUNTED EXIT SIGN: SINGLE FACE; CEILING MOUNTED EXIT SIGN: DOUBLE FACE; WALL MOUNTED EXIT SIGN: DOUBLE FACE; WALL MOUNTED
\$ST B B B B C C C C C C C C C C C C C C C C C C C	SWITCH, TOGGLE MOTOR STARTER WITH OVERLOAD PROTECTION. TRANSFORMER (SEE ONE-LINE FOR SIZE) BUSWAY. SPECIALIZED TRANSFER SWITCH (ONE-LINE DIAGRAM). CIRCUIT BREAKER, DRAW OUT (ONE-LINE DIAGRAM). CIRCUIT BREAKER, DRAW OUT (ONE-LINE DIAGRAM). CIRCUIT BREAKER, DRAW OUT (ONE-LINE DIAGRAM). FIXTURE IDENTIFICATION: (W-3) INDICATES FIXTURE TYPE AS SCHEDULED. FIXTURE IDENTIFICATION: EMERGENCY LIGHTING FIXTURE WITH BATTERY PACK AND/ OR GENERATOR AND/ OR CENTRALIZED INVERTER AND/ OR CENTRALIZED UPS CONNECTION AS INDICATED IN PLANS. (W-3E) INDICATES FIXTURE TYPE AS SCHEDULED. EMERGENCY. NIGHT LIGHT: DO NOT SWITCH. EGRESS DIRECTION ARROW (EXIT SIGNS). EXIT SIGN: SINGLE FACE; CEILING MOUNTED EXIT SIGN: SINGLE FACE; CEILING MOUNTED EXIT SIGN: DOUBLE FACE; WALL MOUNTED
\$ST □ □ □ □ □ □ □ □ □ □ □ □ □	SWITCH, TOGGLE MOTOR STARTER WITH OVERLOAD PROTECTION. TRANSFORMER (SEE ONE-LINE FOR SIZE) BUSWAY. SPECIALIZED TRANSFER SWITCH (ONE-LINE DIAGRAM). CIRCUIT BREAKER, DRAW OUT (ONE-LINE DIAGRAM). CIRCUIT BREAKER, DRAW OUT (ONE-LINE DIAGRAM). FIXTURE IDENTIFICATION: (W-3) INDICATES FIXTURE TYPE AS SCHEDULED. FIXTURE IDENTIFICATION: EMERGENCY LIGHTING FIXTURE WITH BATTERY PACK AND/ OR GENERATOR AND/ OR CENTRALIZED INVERTER AND/ OR GENERATOR AND/ OR CENTRALIZED INVERTER AND/ OR GENERATOR AND/ OR CENTRALIZED INVERTER AND/ OR CENTRALIZED UPS CONNECTION AS INDICATED IN PLANS. (W-3E) INDICATES FIXTURE TYPE AS SCHEDULED. EMERGENCY. NIGHT LIGHT: DO NOT SWITCH. EGRESS DIRECTION ARROW (EXIT SIGNS). EXIT SIGN: SINGLE FACE; CEILING MOUNTED EXIT SIGN: SINGLE FACE; CEILING MOUNTED EXIT SIGN: DOUBLE FACE; WALL MOUNTED EXIT SIGN: DOUBLE FACE; WALL MOUNTED EXIT SIGN: DOUBLE FACE; WALL MOUNTED CONTROL
\$ST B B B B C C C C C C C C C C C C C	SWITCH, TOGGLE MOTOR STARTER WITH OVERLOAD PROTECTION. TRANSFORMER (SEE ONE-LINE FOR SIZE) BUSWAY. SPECIALIZED TRANSFER SWITCH (ONE-LINE DIAGRAM). CIRCUIT BREAKER, DRAW OUT (ONE-LINE DIAGRAM). CIRCUIT BREAKER, DRAW OUT (ONE-LINE DIAGRAM). FIXTURE IDENTIFICATION: (W-3) INDICATES FIXTURE TYPE AS SCHEDULED. FIXTURE IDENTIFICATION: EMERGENCY LIGHTING FIXTURE WITH BATTERY PACK AND/ OR GENERATOR AND/ OR CENTRALIZED INVERTER AND/ OR CENTRALIZED UPS CONNECTION AS INDICATED IN PLANS. (W-3E) INDICATES FIXTURE TYPE AS SCHEDULED. EMERGENCY. NIGHT LIGHT: DO NOT SWITCH. EGRESS DIRECTION ARROW (EXIT SIGNS). EXIT SIGN: SINGLE FACE; CEILING MOUNTED EXIT SIGN: SINGLE FACE; CEILING MOUNTED EXIT SIGN: DOUBLE FACE; WALL MOUNTED EXIT SIGN: DOUBLE FACE; WALL MOUNTED EXIT SIGN: DOUBLE FACE; WALL MOUNTED CONTROL OCCUPANCY SENSOR, DUAL TECHNOLOGY, WALL. OCCUPANCY SENSOR, DUAL TECHNOLOGY, WALL.
\$ST □ □ □ □ □ □ □ □ □ □ □ □ □	SWITCH, TOGGLE MOTOR STARTER WITH OVERLOAD PROTECTION. TRANSFORMER (SEE ONE-LINE FOR SIZE) BUSWAY. SPECIALIZED TRANSFER SWITCH (ONE-LINE DIAGRAM). CIRCUIT BREAKER, DRAW OUT (ONE-LINE DIAGRAM). CIRCUIT BREAKER, DRAW OUT (ONE-LINE DIAGRAM). FIXTURE IDENTIFICATION: (W-3) INDICATES FIXTURE TYPE AS SCHEDULED. FIXTURE IDENTIFICATION: EMERGENCY LIGHTING FIXTURE WITH BATTERY PACK AND/ OR GENERATOR AND/ OR CENTRALIZED INVERTER AND/ OR CENTRALIZED UPS CONNECTION AS INDICATED IN PLANS. (W-3E) INDICATES FIXTURE TYPE AS SCHEDULED. EMERGENCY. NIGHT LIGHT: DO NOT SWITCH. EGRESS DIRECTION ARROW (EXIT SIGNS). EXIT SIGN: SINGLE FACE; CEILING MOUNTED EXIT SIGN: SINGLE FACE; CEILING MOUNTED EXIT SIGN: DOUBLE FACE; WALL MOUNTED EXIT SIGN: DOUBLE FACE; WALL MOUNTED EXIT SIGN: DOUBLE FACE; WALL MOUNTED CONTROL OCCUPANCY SENSOR, DUAL TECHNOLOGY, ORECTIONAL. PHOTOCELL.
\$ST B B B B C C C C C C C C C C C C C	SWITCH, TOGGLE MOTOR STARTER WITH OVERLOAD PROTECTION. TRANSFORMER (SEE ONE-LINE FOR SIZE) BUSWAY. SPECIALIZED TRANSFER SWITCH (ONE-LINE DIAGRAM). CIRCUIT BREAKER, DRAW OUT (ONE-LINE DIAGRAM). CIRCUIT BREAKER, DRAW OUT (ONE-LINE DIAGRAM). FIXTURE IDENTIFICATION: (W-3) INDICATES FIXTURE TYPE AS SCHEDULED. FIXTURE IDENTIFICATION: EMERGENCY LIGHTING FIXTURE WITH BATTERY PACK AND/ OR GENERATOR AND/ OR CENTRALIZED INVERTER AND/ OR CENTRALIZED UPS CONNECTION AS INDICATED IN PLANS. (W-3E) INDICATES FIXTURE TYPE AS SCHEDULED. EMERGENCY. NIGHT LIGHT: DO NOT SWITCH. EGRESS DIRECTION ARROW (EXIT SIGNS). EXIT SIGN: SINGLE FACE; CEILING MOUNTED EXIT SIGN: SINGLE FACE; CEILING MOUNTED EXIT SIGN: DOUBLE FACE; WALL MOUNTED EXIT SIGN: DOUBLE FACE; WALL MOUNTED EXIT SIGN: DOUBLE FACE; WALL MOUNTED CONTROL OCCUPANCY SENSOR, DUAL TECHNOLOGY, WALL. OCCUPANCY SENSOR, DUAL TECHNOLOGY, WALL.
\$ST □ □ □ □ □ □ □ □ □ □ □ □ □	SWITCH, TOGGLE MOTOR STARTER WITH OVERLOAD PROTECTION. TRANSFORMER (SEE ONE-LINE FOR SIZE) BUSWAY. SPECIALIZED TRANSFER SWITCH (ONE-LINE DIAGRAM). CIRCUIT BREAKER, DRAW OUT (ONE-LINE DIAGRAM). CIRCUIT BREAKER, DRAW OUT (ONE-LINE DIAGRAM). FIXTURE IDENTIFICATION: (W-3) INDICATES FIXTURE TYPE AS SCHEDULED. FIXTURE IDENTIFICATION: EMERGENCY LIGHTING FIXTURE WITH BATTERY PACK AND/ OR GENERATOR AND/ OR CENTRALIZED INVERTER AND/ OR CENTRALIZED UPS CONNECTION AS INDICATED IN PLANS. (W-3E) INDICATES FIXTURE TYPE AS SCHEDULED. EMERGENCY. NIGHT LIGHT: DO NOT SWITCH. EGRESS DIRECTION ARROW (EXIT SIGNS). EXIT SIGN: SINGLE FACE; CEILING MOUNTED EXIT SIGN: SINGLE FACE; CEILING MOUNTED EXIT SIGN: DOUBLE FACE; WALL MOUNTED EXIT SIGN: DOUBLE FACE; WALL MOUNTED EXIT SIGN: DOUBLE FACE; WALL MOUNTED CONTROL OCCUPANCY SENSOR, DUAL TECHNOLOGY, ORECTIONAL. PHOTOCELL.
\$ST □ □ □ □ □ □ □ □ □ □ □ □ □	SWITCH, TOGGLE MOTOR STARTER WITH OVERLOAD PROTECTION. TRANSFORMER (SEE ONE-LINE FOR SIZE) BUSWAY. SPECIALIZED TRANSFER SWITCH (ONE-LINE DIAGRAM). CIRCUIT BREAKER, DRAW OUT (ONE-LINE DIAGRAM). CIRCUIT BREAKER, DRAW OUT (ONE-LINE DIAGRAM). FIXTURE IDENTIFICATION: (W-3) INDICATES FIXTURE TYPE AS SCHEDULED. FIXTURE IDENTIFICATION: (W-3) INDICATES FIXTURE TYPE AS SCHEDULED. FIXTURE IDENTIFICATION: EMERGENCY LIGHTING FIXTURE WITH BATTERY PACK AND/ OR GENERATOR AND/ OR CENTRALIZED INVERTER AND/ OR CENTRALIZED UPS CONNECTION AS INDICATED IN PLANS. (W-3E) INDICATES FIXTURE TYPE AS SCHEDULED. EMERGENCY. NIGHT LIGHT: DO NOT SWITCH. EGRESS DIRECTION ARROW (EXIT SIGNS). EXIT SIGN: SINGLE FACE; CEILING MOUNTED EXIT SIGN: DOUBLE FACE; CEILING MOUNTED EXIT SIGN: DOUBLE FACE; CEILING MOUNTED EXIT SIGN: DOUBLE FACE; WALL MOUNTED EXIT SIGN: DOUBLE FACE; CEILING MOUNTED EXIT SIGN: DOUBLE FACE; WALL MOUNTED
\$ST □ □ □ □ □ □ □ □ □ □ □ □ □	SWITCH, TOGGLE MOTOR STARTER WITH OVERLOAD PROTECTION. TRANSFORMER (SEE ONE-LINE FOR SIZE) BUSWAY. SPECIALIZED TRANSFER SWITCH (ONE-LINE DIAGRAM). CIRCUIT BREAKER, DRAW OUT (ONE-LINE DIAGRAM). CIRCUIT BREAKER, DRAW OUT (ONE-LINE DIAGRAM). FIXTURE IDENTIFICATION: (W-3) INDICATES FIXTURE TYPE AS SCHEDULED. FIXTURE IDENTIFICATION: EMERGENCY LIGHTING FIXTURE WITH BATTERY PACK AND/ OR GENERATOR AND/ OR CENTRALIZED INVERTER AND/ OR CENTRALIZED UPS CONNECTION AS INDICATED IN PLANS. (W-3E) INDICATES FIXTURE TYPE AS SCHEDULED. EMERGENCY. NIGHT LIGHT: DO NOT SWITCH. EGRESS DIRECTION ARROW (EXIT SIGNS). EXIT SIGN: SINGLE FACE; CEILING MOUNTED EXIT SIGN: DOUBLE FACE; CEILING MOUNTED EXIT SIGN: DOUBLE FACE; CEILING MOUNTED EXIT SIGN: DOUBLE FACE; WALL MOUNTED EXIT SIGN: DOUBLE FACE; WALL MOUNTED CONTROL OCCUPANCY SENSOR, DUAL TECHNOLOGY, WALL. OCCUPANCY SENSOR, DUAL TECHNOLOGY, WALL. PHOTOCELL. PHOTOCELL.
\$ST □ □ □ □ □ □ □ □ □ □ □ □ □	SWITCH, TOGGLE MOTOR STARTER WITH OVERLOAD PROTECTION. TRANSFORMER (SEE ONE-LINE FOR SIZE) BUSWAY. SPECIALIZED TRANSFER SWITCH (ONE-LINE DIAGRAM). CIRCUIT BREAKER, DRAW OUT (ONE-LINE DIAGRAM). CIRCUIT BREAKER, DRAW OUT (ONE-LINE DIAGRAM). FIXTURE IDENTIFICATION: (W-3) INDICATES FIXTURE TYPE AS SCHEDULED. FIXTURE IDENTIFICATION: EMERGENCY LIGHTING FIXTURE WITH BATTERY PACK AND/ OR GENERATOR AND/ OR CENTRALIZED INVERTER AND/ OR GENERATOR AND/ OR CENTROL ONOT SWITCH. EGRESS DIRECTION ARROW (EXIT SIGNS). EXIT SIGN: SINGLE FACE; CEILING MOUNTED EXIT SIGN: SINGLE FACE; CEILING MOUNTED EXIT SIGN: DOUBLE FACE; CEILING MOUNTED EXIT SIGN: DOUBLE FACE; WALL MOUNTED CONTROL OCCUPANCY SENSOR, DUAL TECHNOLOGY, WALL. OCCUPANCY SENSOR, DUAL TECHNOLOGY, WALL. OCCUPANCY SENSOR, DUAL TECHNOLOGY, OIRECTIONAL. PHOTOCELL. PHOTOCELL. PHOTOCELL. LOW VOLTAGE DIGITAL LIGHTING CONTROL SWITCH: LETTER *Ab" INDICATES ZONING WHERE SHOWN (REFER TO PLANS, *ADE SONICCH SENSOR, DUAL TECHNOLOGY, WALL.
\$ST □ □ □ □ □ □ □ □ □ □ □ □ □	SWITCH, TOGGLE MOTOR STARTER WITH OVERLOAD PROTECTION. TRANSFORMER (SEE ONE-LINE FOR SIZE) BUSWAY. SPECIALIZED TRANSFER SWITCH (ONE-LINE DIAGRAM). CIRCUIT BREAKER, DRAW OUT (ONE-LINE DIAGRAM). CIRCUIT BREAKER, DRAW OUT (ONE-LINE DIAGRAM). FIXTURE IDENTIFICATION: (W-3) INDICATES FIXTURE TYPE AS SCHEDULED. FIXTURE IDENTIFICATION: EMERGENCY LIGHTING FIXTURE WITH BATTERY PACK AND/ OR GENERATOR AND/ OR CENTRALIZED INVERTER AND/ OR GENERATOR AND/ OR CENTRALIZED INVERTER AND/ OR GENERATOR AND/ OR CENTRALIZED INVERTER AND/ OR CENTRALIZED UPS CONNECTION AS INDICATED IN PLANS. (W-3E) INDICATES FIXTURE TYPE AS SCHEDULED. EMERGENCY. NIGHT LIGHT: DO NOT SWITCH. EGRESS DIRECTION ARROW (EXIT SIGNS). EXIT SIGN: SINGLE FACE; CEILING MOUNTED EXIT SIGN: DOUBLE FACE
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### ABBREVIATIONS NOTE: ALL ABBREVIATIONS MAY NOT BE USED.

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1P	SINGLE POLE	kVA		
1PH 1WAY	SINGLE-PHASE ONE-WAY	kVAR kW	KILOVOLT AMPERE REACTIVE KILOWATT	
2/C	TWO-CONDUCTOR	kWh	KILOWATT HOUR	
2WAY 3/C	TWO-WAY THREE-CONDUCTOR	LED LFMC	LIGHT EMITTING DIODE LIQUID TIGHT FLEXIBLE METAL	
3WAY	THREE-WAY		CONDUIT	
40UT	QUADRUPLE RECEPTACLE OUTLET	LFNC	LIQUID TIGHT FLEXIBLE NONMETALLIC CONDUIT	
4PDT	FOUR-POLE DOUBLE THROW	LPS	LOW PRESSURE SODIUM	
4PST	FOUR-POLE SINGLE THROW	LRA LTG	LOCKED ROTOR AMPS LIGHTING	
4W 4WAY	FOUR-WIRE FOUR-WAY	LV	LOW VOLTAGE	
A	ABOVE COUNTER	MATV	MASTER ANTENNA TELEVISION SYSTEM	
AC ADA	ARMORED CABLE AMERICANS WITH DISABILITIES	МАХ	MAXIMUM	
	ACT	MC MCA	METAL CLAD MINIMUM CIRCUIT AMPS	
ADJ AFF	ADJACENT ABOVE FINISHED FLOOR	MCA	MAIN CIRCUIT BREAKER	
AFG	ABOVE FINISHED GRADE	MCC	MOTOR CONTROL CENTER	
AIC	AMPERE INTERRUPTING CAPACITY	MCP MDP	MOTOR CIRCUIT PROTECTION MAIN DISTRIBUTION PANEL	
ALUM	ALUMINUM	MG	MOTOR GENERATOR	
AMP ANN	AMPERE ANNUNCIATOR	MH MIN	MANHOLE MINIMUM	
AP	ACCESS POINT (WIRELESS	MLO	MAIN LUGS ONLY	
AR	DATA) AS REQUIRED	MOCP	MAXIMUM OVERCURRENT PROTECTION	
ASC	AMPS SHORT CIRCUIT	MTS	MANUAL TRANSFER SWITCH	
ATS	AUTOMATIC TRANSFER SWITCH	NA NC	NOT APPLICABLE NORMALLY CLOSED	
AV	AUDIO VISUAL	NEC	NATIONAL ELECTRICAL CODE	
AWG BB	AMERICAN WIRE GAGE BUCK-BOOST TRANSFORMER	NEMA	NATIONAL ELECTRICAL MANUFACTURERS	
XFMR			ASSOCIATION	
BFF BFG	BELOW FINISHED FLOOR BELOW FINISHED GRADE	NFC NFPA	NATIONAL FIRE CODE NATIONAL FIRE PROTECTION	
C	CEILING MOUNTED		ASSOCIATION	
CAT CATV	CATEGORY COMMUNITY ANTENNA	NIC NL	NOT IN CONTRACT NIGHT LIGHT	
CATV	TELEVISION	NO	NORMALLY OPEN	
CB CCBA	CIRCUIT BREAKER CUSTOM COLOR AS SELECTED	NTS OC	NOT TO SCALE ON CENTER	
COBA	BY ARCHITECT	OCP	OVER CURRENT PROTECTION	
CCTV CF/CI	CLOSED CIRCUIT TELEVISION CONTRACTOR FURNISHED/	OE OF/CI	OWNER ELECTRONICS	
	CONTRACTOR INSTALLED	OF/CI	OWNER FURNISHED/ CONTRACTOR INSTALLED	
CF/OI	CONTRACTOR FURNISHED/ OWNER INSTALLED	OF/OI	OWNER FURNISHED/ OWNER INSTALLED	
CFBA	CUSTOM FINISH AS SELECTED	OFP	OBTAIN FROM PLANS	
скт	BY ARCHITECT CIRCUIT	OH DR OL	OVERHEAD (COILING) DOOR OVERLOAD	
СМ	CONSTRUCTION MANAGER	PAIR	PR	
CND CO	CONDUIT CONVENIENCE OUTLET	PB	PUSHBUTTON	
COR	CONTRACTING OFFICER'S	PF PH	POWER FACTOR PHASE	
СР	REPRESENTATIVE CONTROL PANEL	PNL	PANEL	
СТ	CURRENT TRANSFORMER	PNM PS	PLENUM POWER SUPPLY	
CTV CU	CABLE TELEVISION COPPER	PT	POTENTIAL TRANSFORMER	
dBA	UNIT OF SOUND LEVEL	PTZ QTY	PAN/TILT/ZOOM QUANTITY	
DPDT	DOUBLE POLE, DOUBLE THROW	R	REMOVE	
DS	DISCONNECT SWITCH	RCP RMC	REFLECTED CEILING PLAN RIGID METAL CONDUIT	
E EA	ENHANCED EACH	RNC	RIGID NONMETAL CONDUIT	
EM	EMERGENCY	RPM	REVOLUTIONS PER MINUTE RISER PATCH PANEI	
EMT ENT	ELECTRICAL METALLIC TUBING ELECTRIC NONMETALLIC	RPP RR	RISER PATCH PANEL REMOVE AND RELOCATE	
	TUBING	S/S	START/STOP	
EPO EQUIP	EMERGENCY POWER OFF EQUIPMENT	SCA SCBA	SHORT CIRCUIT AMPS STANDARD COLOR AS	
ER	EQUIPMENT ROOM		SELECTED BY ARCHITECT	
EX		SF SFBA	SQUARE FOOT (FEET) STANDARD FINISH AS	
F FA	FURNITURE MOUNTED FIRE ALARM		SELECTED BY ARCHITECT	
FCP	FIRE ALARM CONTROL PANEL	SPD SPDT	SURGE PROTECTIVE DEVICE SINGLE POLE, DOUBLE THROW	
FLA FMC	FULL LOAD AMPS FLEXIBLE METAL CONDUIT	SPEC	SPECIFICATION	
FOB	FREIGHT ON BOARD	SPP SPST	STATION PATCH PANEL SINGLE POLE, SINGLE THROW	
FPP FVNR	FIBER PATCH PANEL FULL VOLTAGE	ST	SINGLE THROW	
	NON-REVERSING	SWBD SWGR	SWITCHBOARD SWITCHGEAR	
FVR GEN	FULL VOLTAGE REVERSING GENERATOR	TL	TWIST LOCK	
GFCI	GROUND FAULT INTERRUPTER	TP TP	TELEPHONE POLE TWISTED PAIR	
GFP GIG	GROUND FAULT PROTECTION GIGA HERTZ	TR	TELECOMMUNICATIONS ROOM	
GND	GROUND	TTB TV	TELEPHONE TERMINAL BOARD TELEVISION	
HD HID	HEAVY DUTY HIGH INTENSITY DISCHARGE	TVSS	TRANSIENT VOLTAGE SURGE	
HOA	HIGH INTENSITY DISCHARGE HAND-OFF-AUTOMATIC	TYP	SUPPRESSER TYPICAL	
HP HPF	HORSE POWER HIGH POWER FACTOR	UF	UNDERFLOOR	
HPF HPS	HIGH POWER FACTOR HIGH PRESSURE SODIUM			
ΗV	HIGH VOLTAGE	UPS	UNINTERRUPTIBLE POWER SUPPLY	
HWM	HORIZONTAL WIRE MANAGEMENT	V		
HZ	HERTZ	VA VFC/VF	VOLT AMPERE VARIABLE FREQUENCY MOTOR	
I/O IG	INPUT/ OUTPUT ISOLATED GROUND	D	CONTROLLER	
IMC	INTERMEDIATE METAL	VWM W/	VERTICAL WIRE MANAGEMENT WITH	
IN/IS	CONDUIT INSULATED/ ISOLATED	W/O	WITHOUT	
IR	INFRARED	WP WPP	WEATHERPROOF WIRELESS PATCH PANEL	
J-BOX kV	JUNCTION BOX KILOVOLT	XFMR	TRANSFORMER	
L		1		

### DEFINITIONS NOTE: ALL DEFINITIONS MAY NOT BE USED.

INDICATED: THE TERM "INDICATED" REFERS TO GRAPHIC REPRESENTATIONS, NOTES, OR SCHEDULES ON THE DRAWINGS, OTHER PARAGRAPHS OR SCHEDULES IN THE SPECIFICATIONS, AND SIMILAR REQUIREMENTS IN THE CONTRACT DOCUMENTS. WHERE TERMS SUCH AS "SHOWN", "NOTED", "SCHEDULED", AND "SPECIFIED" ARE USED, IT IS TO HELP THE READER LOCATE THE REFERENCE, NO LIMITATION ON LOCATION IS INTENDED.

DIRECTED: TERMS SUCH AS "DIRECTED", "REQUESTED", AUTHORIZED", "SELECTED", "APPROVED", "REQUIRED", AND "PERMITTED" MEAN "DIRECTED BY THE ENGINEER", "REQUESTED BY THE ENGINEER", AND SIMILAR PHRASES.

APPROVED: THE TERM "APPROVED", WHERE USED IN CONJUNCTION WITH THE ENGINEER'S ACTION ON THE CONTRACTOR'S SUBMITTALS, APPLICATIONS, AND REQUESTS, IS LIMITED TO THE ENGINEER'S DUTIES AND RESPONSIBILITIES AS STATED IN GENERAL AND SUPPLEMENTARY CONDITIONS.

FURNISH: THE TERM "FURNISH" IS USED TO MEAN "SUPPLY AND DELIVER TO THE PROJECT SITE, READY FOR UNLOADING, UNPACKING, ASSEMBLY, INSTALLATION, AND SIMILAR OPERATIONS."

INSTALL: THE TERM "INSTALL" IS USED TO DESCRIBE OPERATIONS AT PROJECT SITE INCLUDING THE ACTUAL "UNLOADING, UNPACKING, ASSEMBLY, ERECTION, PLACING, ANCHORING, APPLYING, WORKING TO DIMENSION, FINISHING, CURING, PROTECTING, CLEANING, AND SIMILAR OPERATIONS."

PROVIDE: THE TERM "PROVIDE" MEANS "TO FURNISH AND INSTALL, COMPLETE AND READY FOR THE INTENDED USE." INSTALLER: AN "INSTALLER" IS THE CONTRACTOR OR AN ENTITY ENGAGED BY THE CONTRACTOR, EITHER AS AN EMPLOYEE, SUBCONTRACTOR, OR SUB-

SUBCONTRACTOR, FOR PERFORMANCE OF A PARTICULAR CONSTRUCTION ACTIVITY, INCLUDING INSTALLATION, ERECTION, APPLICATION, AND SIMILAR OPERATIONS. INSTALLERS ARE REQUIRED TO BE EXPERIENCED IN THE OPERATIONS THEY ARE ENGAGED TO PERFORM.

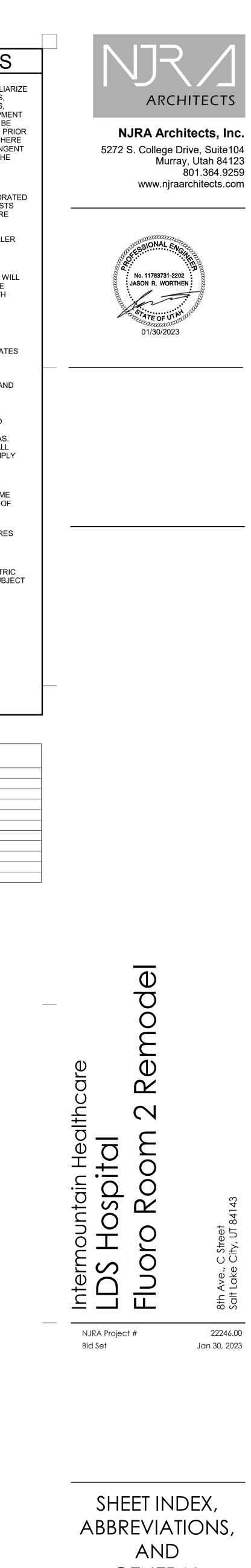
TECHNOLOGY SYSTEMS: THE TERM "TECHNOLOGY SYSTEMS" IS USED TO DESCRIBE ALL LOW VOLTAGE SYSTEMS GENERALLY REFERRED TO AS "SPECIAL SYSTEMS". THESE SYSTEMS INCLUDE BUT ARE NOT NECESSARILY LIMITED TO ALL SYSTEMS WHICH UTILIZE VOLTAGES OF LESS THAN 71 VOLTS SUCH AS SOUND SYSTEMS, VIDEO SYSTEMS, TV SYSTEMS, SECURITY SYSTEMS, VOICE AND DATA CABLING SYSTEMS, ETC...

### GENERAL ELECTRICAL NOTES

- CLARIFICATION METHODS: AT THE TIME OF BIDDING, BIDDERS SHALL FAMILIARIZE THEMSELVES WITH THE DRAWINGS AND SPECIFICATIONS. ANY QUESTIONS, MISUNDERSTANDINGS, CONFLICTS, DELETIONS, DISCONTINUED PRODUCTS, CATALOG NUMBER DISCREPANCIES, DISCREPANCIES BETWEEN THE EQUIPMENT SUPPLIED AND THE INTENT OR FUNCTION OF THE EQUIPMENT, ETC, SHALL BE SUBMITTED TO THE ARCHITECT/ENGINEER IN WRITING FOR CLARIFICATION PRIOR TO ISSUANCE OF THE FINAL ADDENDUM AND BIDDING OF THE PROJECT. WHERE DISCREPANCIES OR MULTIPLE INTERPRETATIONS OCCUR. THE MOST STRINGENT (WHICH IS GENERALLY RECOGNIZED AS THE MOST COSTLY) THAT MEETS THE INTENT OF THE DOCUMENTS SHALL BE ENFORCED.
- OWNER FURNISHED ITEMS: THE OWNER WILL FURNISH MATERIAL AND EQUIPMENT AS INDICATED IN THE CONTRACT DOCUMENTS TO BE INCORPORATED INTO THE WORK. THESE ITEMS ARE ASSIGNED TO THE INSTALLER AND COSTS FOR RECEIVING, HANDLING, STORAGE, IF REQUIRED, AND INSTALLATION ARE INCLUDED IN THE CONTRACT SUM.
- A. THE INSTALLER'S RESPONSIBILITIES ARE THE SAME AS IF THE INSTALLER FURNISHED THE MATERIALS OR EQUIPMENT.
- B. THE OWNER WILL ARRANGE AND PAY FOR DELIVERY OF OWNER FURNISHED ITEMS FREIGHT ON BOARD JOB SITE AND THE INSTALLER WILL INSPECT DELIVERIES FOR DAMAGE. IF OWNER FURNISHED ITEMS ARE DAMAGED, DEFECTIVE OR MISSING, DOCUMENT DAMAGED ITEMS WITH THE TRANSPORT COMPANY AND THE OWNER WILL ARRANGE FOR REPLACEMENT. THE OWNER WILL ALSO ARRANGE FOR MANUFACTURER'S FIELD SERVICES, AND THE DELIVERY OF MANUFACTURER'S WARRANTIES AND BONDS TO THE INSTALLER.
- C. THE INSTALLER IS RESPONSIBLE FOR DESIGNATING THE DELIVERY DATES OF OWNER FURNISHED ITEMS AND FOR RECEIVING, UNLOADING AND HANDLING OWNER FURNISHED ITEMS AT THE SITE. THE INSTALLER IS RESPONSIBLE FOR PROTECTING OWNER FURNISHED ITEMS FROM DAMAGE, INCLUDING DAMAGE FROM EXPOSURE TO THE ELEMENTS, AND TO REPAIR OR REPLACE ITEMS DAMAGED AS A RESULT OF HIS OPERATIONS.
- EXPOSED STRUCTURE AREAS (EXCLUDING MECHANICAL, ELECTRICAL, AND COMMUNICATION SPACES): INSTALL RACEWAYS BETWEEN DECK AND STRUCTURE WHEREVER POSSIBLE IN EXPOSED STRUCTURE CEILING AREAS. ROUTE RACEWAYS IN CONCEALED AREAS WHEREVER POSSIBLE. REFER ALL CONDITIONS WHERE RACEWAYS MUST BE INSTALLED WHICH CANNOT COMPLY WITH THESE REQUIREMENTS TO THE ARCHITECT.
- SUBMITTALS: PROVIDE ORIGINAL ELECTRONIC PDF FORMAT, BOUND, BOOKMARKED (EACH SECTION AND PRODUCT), AND HIGHLIGHTED. JOB NAME AND SUBCONTRACTOR SHALL BE ON THE FRONT COVER. PREPARE INDEX OF EQUIPMENT SUBMITTED IN EACH TAB.
- REFLECTED CEILING PLANS: COORDINATE THE LOCATION OF LIGHT FIXTURES WITH THE ARCHITECTURAL REFLECTED CEILING PLANS. REFER ALL DISCREPANCIES TO THE ARCHITECT AND ENGINEER.
- ALL WORK SHALL BE DONE ACCORDING TO THE CURRENT NATIONAL ELECTRIC CODE (NEC), IBC, NFPA, AND IFC. COMPLIANCE AND FINAL APPROVAL IS SUBJECT TO THE ON SITE FIELD INSPECTION OF THE AHJ.

### ELECTRICAL SHEET INDEX

EE001	SHEET INDEX, ABBREVIATIONS, AND GENERAL NOTES
EE002	TELECOM SCHEDULES AND NOTES
EE501	ELECTRICAL DETAILS
EE701	TYPICAL MOUNTING HEIGHT DETAILS
EP100	LEVEL 1 OVERALL POWER PLAN
EP101	LEVEL 1 POWER PLAN
EP501	GE DRAWINGS
EP502	GE DRAWINGS
EP601	ONE-LINE DIAGRAM
ET501	TELECOM EQUIPMENT RACK ELEVATIONS
ET601	TELECOM CONDUIT RISER DIAGRAM



GENERAL NOTES EEOO

	CABLE/OUTLET COL	OR SCHEDULE		
COLOR	TYPE			
BLUE	DATA			
BLUE	IP SECURITY CAMERAS		F	LEN
YELLOW	WIRELESS			

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### STATION PATCH CORD SCHEDULE (CATEGORY 6A F/UTP CABLES W/RJ-45 CONNECTORS)

(CATEGORT OAT/OTT CADEES W/R3-43 CONNECTORS)				
LENGTH (FEET)	COLOR	QUANTITY	UNIT COST (EACH)	
7'	BLUE	40% OF TOTAL PORTS IN TDR'S		
10'	BLUE	40% OF TOTAL PORTS IN TDR'S		
15'	BLUE	20% OF TOTAL PORTS IN TDR'S		

# WIRELESS PATCH CORD PATCH CORD SCHEDULE

(CATEGORY 6A F/UTP W RJ/45 CONNECTORS			
LENGTH (METER)	COLOR	QUANTITY	UNIT COST (EACH)
7'	YELLOW	100% OF TOTAL PORTS IN TDR'S	

ABLING IN ROVIDE A ESCRIPTI	INDICATED BELOW SHALL NOT BE CONSTRUED AS A "BILL OF MATERIALS". THIS LIST IDENTIFIES I ISTALLATION. WHERE THE ITEMS INDICATED ARE ONE PORTION OF AN ASSEMBLY, THE ENTIRE AS LL MISCELLANEOUS HARDWARE AND SUPPORTS WHICH MAY NOT BE LISTED HERE, FOR A COMPLI ONS AND NOTIFY ENGINEER OF DISCREPANCIES PRIOR TO BID. IF CATALOG NUMBERS DO NOT MA OMPLETE SUBMITTAL FOR APPROVAL PRIOR TO PURCHASING ANY EQUIPMENT OR CABLE. REFER	SEMBLY SHALL BE PROVIDED UNLESS SPECIFIED OTHERWISE. ETE INSTALLATION. COMPARE CATALOG NUMBERS WITH ATCH DESCRIPTIONS, THE DESCRIPTIONS TAKE PRECEDENCE.
YMBOL	ITEM DESCRIPTION	ACCEPTABLE TYPES
	STATION CABLE, DATA - CATEGORY 6A FUTP RISER, DATA, BLUE	SIEMON 9A6R4-A5-06-R1A
	STATION CABLE, DATA - CATEGORY 6A FUTP PLENUM, WIRELESS, YELLOW	SIEMON 9A6P4-A5-05-R1A
	STATION CABLE, DATA - CATEGORY 6A FUTP PLENUM, SECURITY, BLUE	SIEMON 9A6P4-A5-06-R1A
	STATION CABLE, DATA - CATEGORY 5E RISER, GREEN VENDOR NETWORK	SIEMON 9C5R4-E2-07-R1A
	DATA OUTLET, SINGLE GANG FACEPLATE, WHITE, 4 POSITION	SIEMON 10GMX-FPS04-02
$\bigtriangledown$	CATEGORY 6A JACK - DATA, BLUE	SIEMON Z6A-S06
	BLANK INSERT, WHITE	SIEMON MX-BL-02
A V V	DATA OUTLET, SINGLE GANG FACEPLATE, WHITE, 4 POSITION ("A" = ABOVE COUNTER)	SIEMON 10GMX-FPS04-02
VV	CATEGORY 6A JACK - DATA, BLUE	SIEMON Z6A-S06
-	DATA OUTLET, SINGLE GANG FACEPLATE, WHITE, 3 POSITION	SIEMON 10GMX-FPS04-02
▼	CATEGORY 6A JACK - DATA, BLUE	SIEMON Z6A-S06
<b>4</b> ▼	DATA OUTLET, SINGLE GANG FACEPLATE, WHITE, 4 POSITION	SIEMON 10GMX-FPS04-02
•	CATEGORY 6A JACK - DATA, BLUE	SIEMON Z6A-S06
С	DATA OUTLET, SURFACE MOUNT BOX, WHITE, 2 POSITION	SIEMON MX-SMZ2-02
$\mathbf{V}$	CATEGORY 6A JACK - DATA, BLUE	SIEMON Z6A-S06
C ▼	DATA OUTLET, SURFACE MOUNT BOX, WHITE, 3 POSITION	SIEMON MX-SMZ2-02
V	CATEGORY 6A JACK - DATA, BLUE	SIEMON Z6A-S06
$\left(\left((\bullet)\right)\right)$	DATA OUTLET, SURFACE MOUNT BOX, WHITE, 2 POSITION	SIEMON MX-SMZ2-02
(((•))) ▲C	CATEGORY 6A JACK - WIRELESS, YELLOW	SIEMON Z6A-S05
	DATA OUTLET, SURFACE MOUNT BOX, WHITE, 1 POSITION	SIEMON MX-SMZ1-02
ترا	CATEGORY 6A JACK - SECURITY, BLUE	SIEMON Z6A-S06
SPP1	48 PORT, 1RU ANGLE PATCH PANEL WITH OUTLETS	SIEMON Z6AS-PA-48
HWM	HORIZONTAL WIRE MANAGERS, 4RU	PANDUIT NCMHAEF4
VWM	VERTICAL WIRE MANAGERS, DOUBLE SIDED, BLACK, 10" WIDE x 8'-0" HIGH	CHATSWORTH 40096-715
	EQUIPMENT RACK 19" WIDE x 8'-0" HIGH, 52RU, BLACK	CHATSWORTH 55053-715
	CABLE RUNWAY - 24", BLACK WITH ALL REQUIRED MOUNTING ACCESSORIES	CHATSWORTH 10250-724
	BUTT SPLICE KIT, BLACK	CHATSWORTH 11301-701
	JUNCTION SPLICE KIT, BLACK	CHATSWORTH 11302-701
	FOOT KIT, BLACK	CHATSWORTH 11309-701
	6" CHANNEL RACK TO RUNWAY, BLACK	CHATSWORTH 12409-724
	TRIANGLE BRACKETS, BLACK	CHATSWORTH 11746-724
	END CLOSING KIT, CABLE RUNWAY, BLACK	CHATSWORTH 11700-724
	WALL ANGLE SUPPORT KIT, CABLE RUNWAY, BLACK	CHATSWORTH 11421-724
	CABLE RUNWAY ELEVATION KIT, 6"	CHATSWORTH 10506-706
	CABLE RUNWAY RADIUS DROP	CHATSWORTH 12100-712
	PLYWOOD BACKBOARD, 4' X 8', GRADE AC, FIRE TREATED & PAINTED	
<u> </u>	TELECOMMUNICATIONS MAIN GROUNDING BUS BAR	-

NOTE: ALL RACKS, LADDER, PATCH PANELS AND ACCESSORIES SHALL BE BLACK IN COLOR.

# GENERAL PROJECT NOTES

- UNLESS OTHERWISE NOTED, INSTALL ALL CABLE INSIDE RACEWAY SYSTEMS. WHERE RACEWAY SYSTEMS HAVE NOT BEEN PROVIDED OR SPECIFIED, INSTALL CABLE THROUGH THE SPECIFIED "CADDY" CLIPS AT THE MINIMUM INTERVALS IDENTIFIED IN THE SPECIFICATIONS. SUPPORT "CADDY" CLIPS DIRECTLY FROM THE BUILDING STRUCTURE, NOT FROM OTHER BUILDING SYSTEM SUPPORT WIRES OR CABLE.
- PROVIDE PLENUM RATED CABLE IN ALL AIR PLENUMS. IF A PLENUM RATED CABLE IS NOT SPECIFIED, PROVIDE THE PLENUM RATED EQUIVALENT TO THE SPECIFIED CABLE.
- 3. LABEL ALL CABLE INSTALLED UNDER THIS CONTRACT REGARDLESS OF LENGTH.
- 4. THE EQUIPMENT LABELING IDENTIFIED ON DETAILS IN THESE DRAWINGS ARE EXAMPLES ONLY OF THE ACTUAL LABELING WHICH IS REQUIRED AS PART OF THIS CONTRACT. PRIOR TO FABRICATION, SUBMIT THE NOMENCLATURE FOR ALL LABELS TO THE OWNER FOR REVIEW. THIS REQUIREMENT INCLUDES BUT IS NOT LIMITED TO ALL CABLE LABELING, AND ALL EQUIPMENT LABELING.
- 5. IF OUTLET IS TERMINATED IN CEILING SPACE, LABEL THE T-BAR GRID WITH THE OUTLET NUMBER FOR EASY LOCATION AND IDENTIFICATION.
- 6. GROUND ALL EQUIPMENT RACKS INSTALLED UNDER THIS CONTRACT IN COMPLIANCE WITH THE CONTRACT DOCUMENTS.
- 7. FOR EVERY CABLE PULL SPECIFIED, COIL 15' OF EXCESS CABLE AT THE STATION END FOR FUTURE USE. NEATLY COIL 15' ABOVE THE CEILING OR BELOW FLOOR WHERE APPLICABLE.
- 8. PROVIDE THE QUANTITY OF PATCH PANELS REQUIRED +20% FOR THE TOTAL DATA OUTLETS SHOWN ON FLOOR PLANS FOR THE PARTICULAR LEVEL.
- 9. RACK SPACE ALLOCATION SHOULD BE FOLLOWED PER DRAWINGS. IF YOU HAVE A SYSTEM THAT HAS NOT RACK ALLOCATION PLEASE CALL BOE SAUSEDO AT 801-707-3805.
- 10. ALL DATA LOCATIONS ARE NOT SHOWN IN ET SHEETS. REFER TO ENLARGED POWER PLANS FOR DATA LOCATIONS IF NOT SHOWN ON ET SHEETS.

## ABBREVIATIONS

NOTE: ALL ABBREVIATIONS MAY NOT BE USED.

AUGMENTED CATEGORY ENHANCED EACH

A CAT

E EA ER

FPP GIG HWM

NIC OE

SPP TC

EQUIPMENT ROOM FIBER PATCH PANEL

- GIGA HERTZ HORIZONTAL WIRE MANAGEMENT
- NOT IN CONTRACT OWNER ELECTRONICS PNM PR PS RPP PLENUM
  - PAIR POWER SUPPLY RISER PATCH PANEL
  - STATION PATCH PANEL TELECOMMUNICATIONS ROOM
- TYP TYPICAL VWM VERTICAL WIRE MANANGEMENT

# DEFINITIONS

NOTE: ALL DEFINITIONS MAY NOT BE USED.

INDICATED: THE TERM "INDICATED" REFERS TO GRAPHIC REPRESENTATIONS, NOTES, OR SCHEDULES ON THE DRAWINGS, OTHER PARAGRAPHS OR SCHEDULES IN THE SPECIFICATIONS, AND SIMILAR REQUIREMENTS IN THE CONTRACT DOCUMENTS. WHERE TERMS SUCH AS "SHOWN", "NOTED", "SCHEDULED", AND "SPECIFIED" ARE USED, IT IS TO HELP THE READER LOCATE THE REFERENCE, NO LIMITATION ON LOCATION IS INTENDED.

DIRECTED: TERMS SUCH AS "DIRECTED", "REQUESTED", AUTHORIZED", "SELECTED", "APPROVED", "REQUIRED", AND "PERMITTED" MEAN "DIRECTED BY THE ENGINEER", "REQUESTED BY THE ENGINEER", AND SIMILAR PHRASES.

APPROVE: THE TERM "APPROVED", WHERE USED IN CONJUNCTION WITH THE ENGINEER'S ACTION ON THE CONTRACTOR'S SUBMITTALS, APPLICATIONS, AND REQUESTS, IS LIMITED TO THE ENGINEER'S DUTIES AND RESPONSIBILITIES AS STATED IN GENERAL AND SUPPLEMENTARY CONDITIONS.

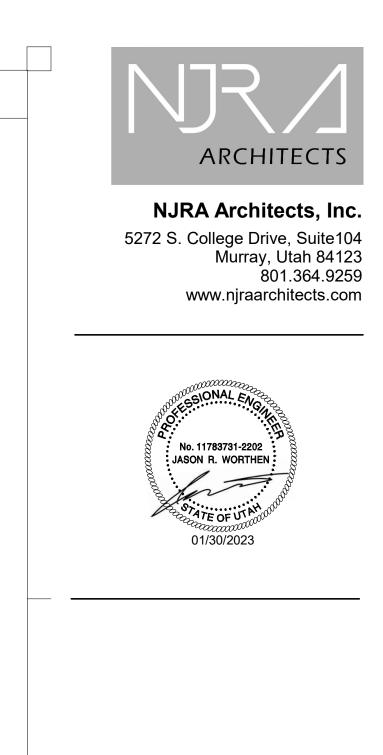
FURNISH: THE TERM "FURNISH" IS USED TO MEAN "SUPPLY AND DELIVER TO THE PROJECT SITE, READY FOR UNLOADING, UNPACKING, ASSEMBLY, INSTALLATION, AND SIMILAR OPERATIONS."

INSTALL: THE TERM "INSTALL" IS USED TO DESCRIBE OPERATIONS AT PROJECT SITE INCLUDING THE ACTUAL "UNLOADING, UNPACKING, ASSEMBLY, ERECTION, PLACING, ANCHORING, APPLYING, WORKING TO DIMENSION, FINISHING, CURING, PROTECTING, CLEANING, AND SIMILAR OPERATIONS."

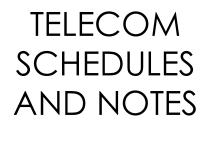
PROVIDE: THE TERM "PROVIDE" MEANS "TO FURNISH AND INSTALL, COMPLETE AND READY FOR THE INTENDED USE."

INSTALLER: AN "INSTALLER" IS THE CONTRACTOR OR AN ENTITY ENGAGED BY THE CONTRACTOR, EITHER AS AN EMPLOYEE, SUBCONTRACTOR, OR SUB-SUBCONTRACTOR, FOR PERFORMANCE OF A PARTICULAR CONSTRUCTION ACTIVITY, INCLUDING INSTALLATION, ERECTION, APPLICATION, AND SIMILAR OPERATIONS. INSTALLERS ARE REQUIRED TO BE EXPERIENCED IN THE OPERATIONS THEY ARE ENGAGED TO PERFORM.

ELECTRONIC SYSTEMS: THE TERM "ELECTRONIC SYSTEMS" IS USED TO DESCRIBE ALL LOW VOLTAGE SYSTEMS GENERALLY REFERRED TO AS "SPECIAL SYSTEMS". THESE SYSTEMS INCLUDE BUT ARE NOT NECESSARILY LIMITED TO ALL SYSTEMS WHICH UTILIZE VOLTAGES OF LESS THAN 71 VOLTS SUCH AS SOUND SYSTEMS, VIDEO SYSTEMS, TV SYSTEMS, SECURITY SYSTEMS, VOICE AND DATA CABLING SYSTEMS, ETC...



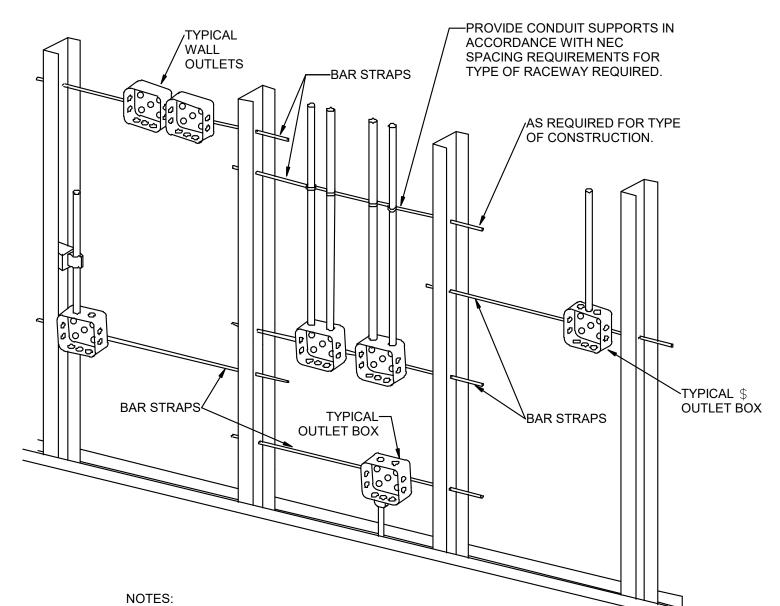


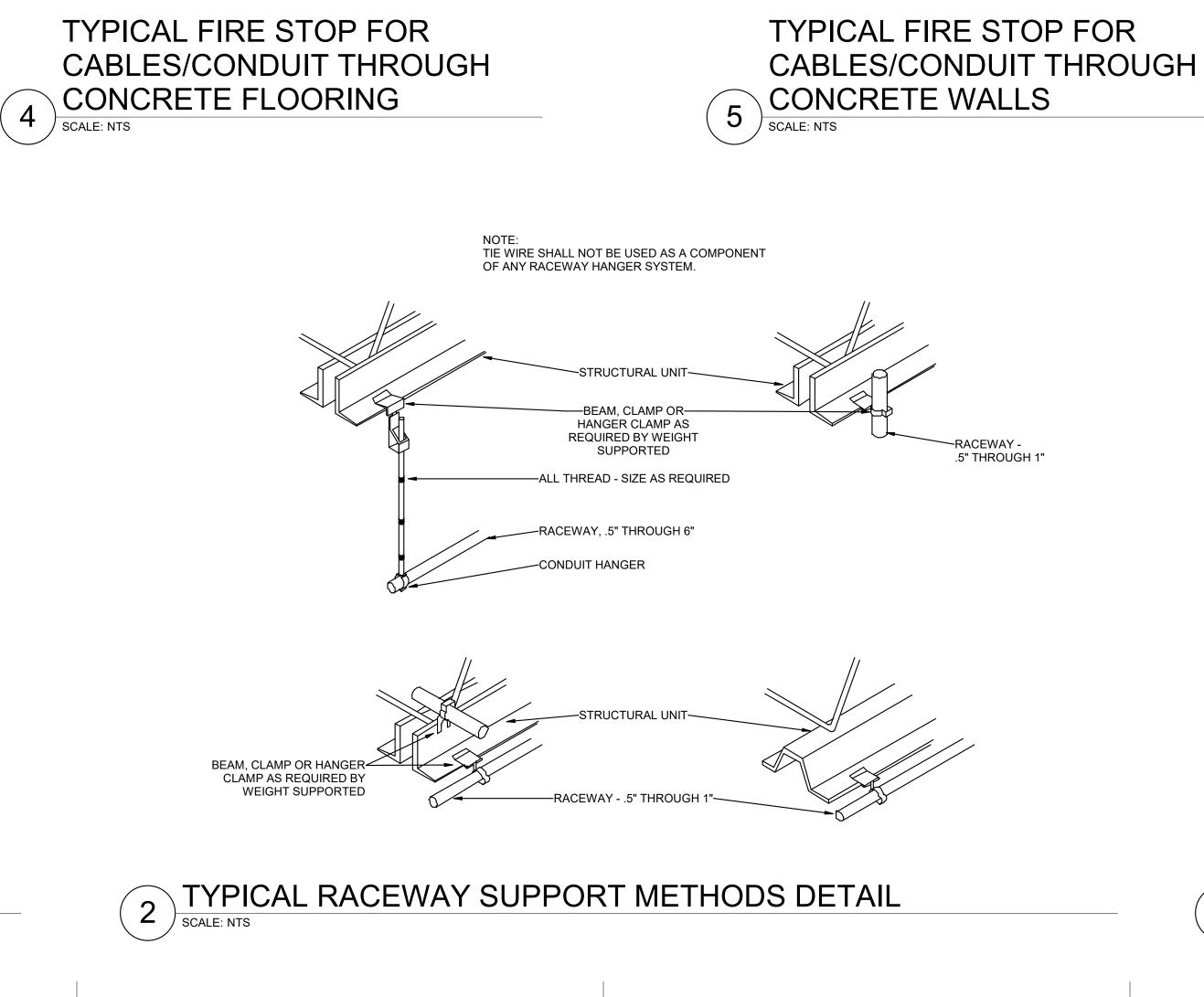


EE002

# 1 TYPICAL ROUGH-IN REQUIREMENTS DETAIL

- 5. IN NON-RATED WALLS, OUTLETS ON OPPOSITE SIDES OF WALLS OR PARTITIONS MUST BE SEPARATED BY 16" FOR SOUND ATTENUATION.
- 4. IN ACCORDANCE WITH IBC 714.3.2 EXCEPTION 1, OUTLETS ON OPPOSITE SIDES OF WALLS OR PARTITIONS IN THE SAME STUD SPACE IN A RATED FIRE SEPARATION WALL MUST BE SEPARATED BY A MINIMUM OF 24" HORIZONTAL DISTANCE OR LISTED, SOUND AND FIRE RATED PUTTY PADS SHALL BE USED ON THE OUTLET BOXES.
- 3. LOCATE ALL OUTLET BOXES IN ACCORDANCE WITH ARCHITECTURAL AND MECHANICAL DRAWINGS AND WITH ALL APPLICABLE SHOP DRAWINGS.
- 2. PLASTER RINGS NOT SHOWN.
- 1. TYPICAL FOR WOOD AND METAL STUD ROUGH-IN.





-CP 25WB CAULK OR APPROVED EQUAL

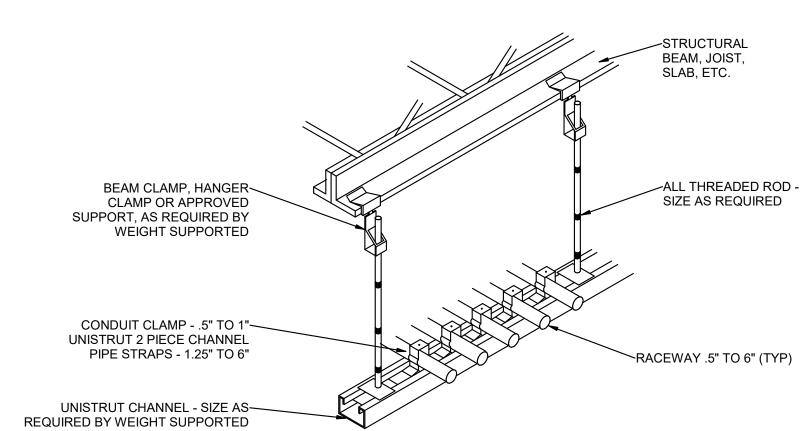
—DAMMING MATERIAL (BACKER ROD, FIBERGLASS

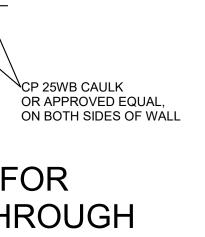
OR MINERAL WOOL)

CONDUIT OR INSULATED CABLES

FIRE RATED CONCRETE FLOOR SLAB







FIRE RATED CONCRETE/ CONCRETE BLOCK WALL

/INSULATED CABLES

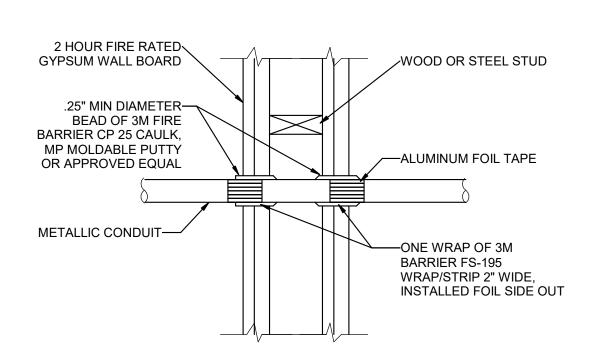
DAMMING MATERIAL

OR MINERAL WOOL)

(BACKER ROD, FIBERGLASS

NONMETALLIC SLEEVE MAY EXTEND A MAXIMUM 2" (51 mm) BEYOND THIS WALL SURFACE

## FIRE STOP FOR METAL CONDUIT THROUGH GYPSUM WALL BOARD SCALE: NTS







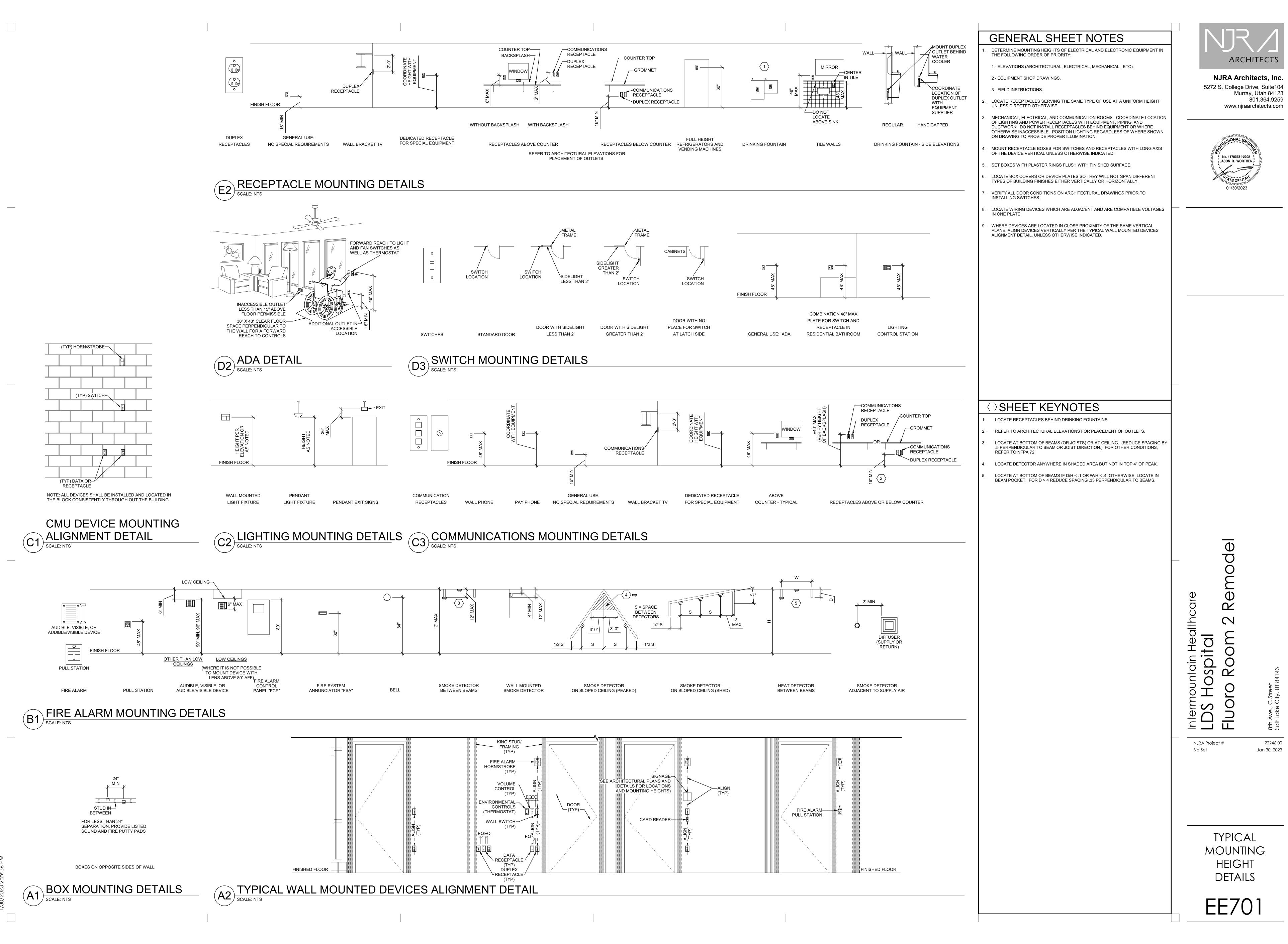


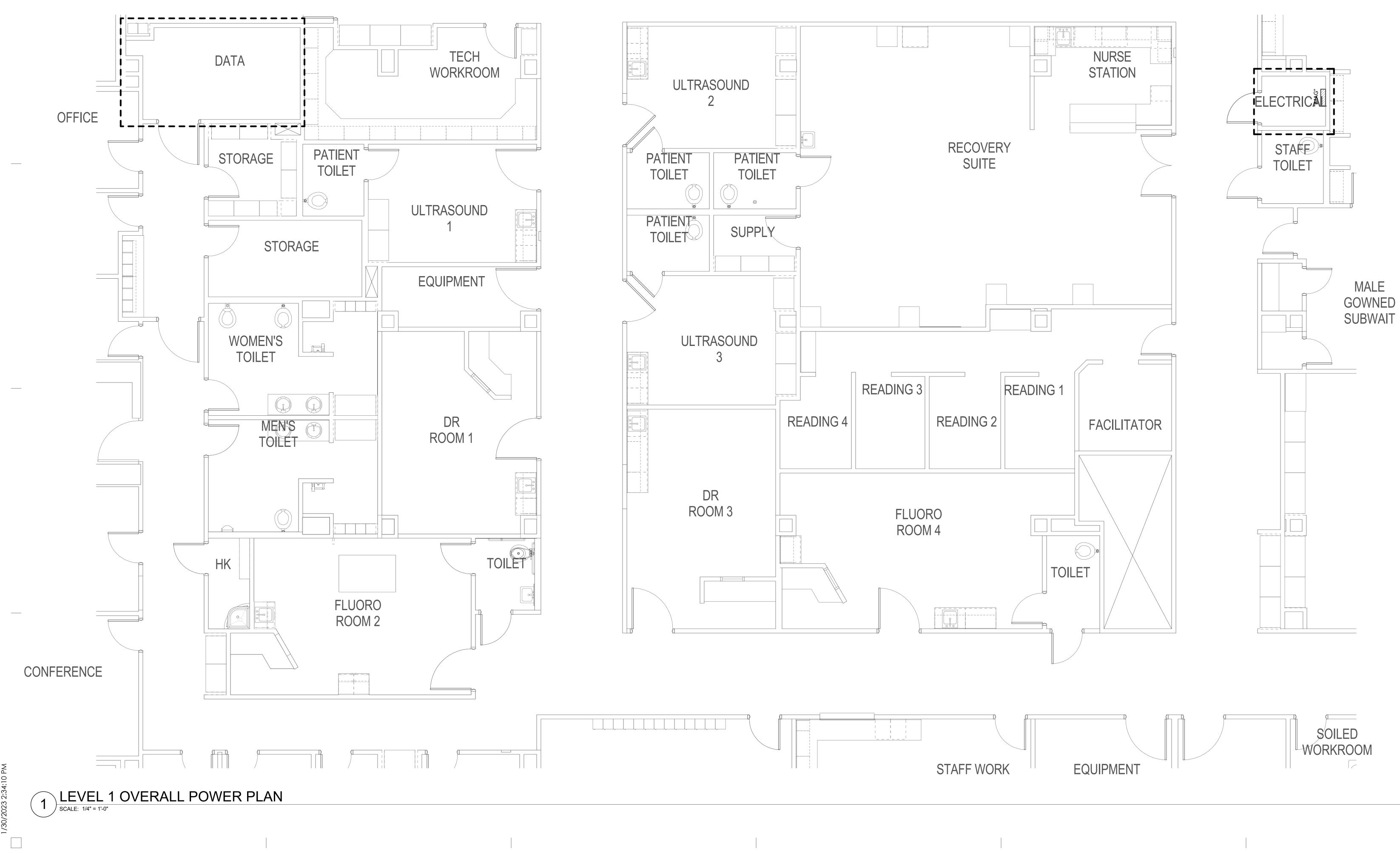
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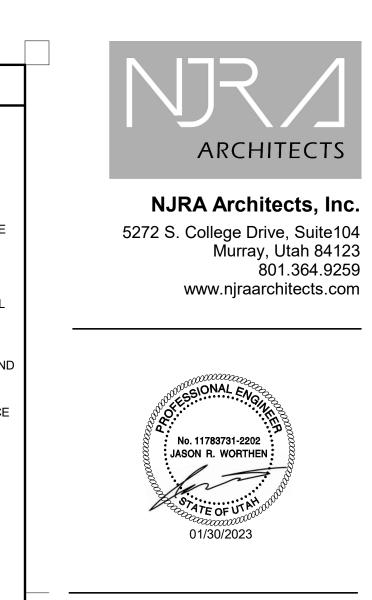
ELECTRICAL

DETAILS





○SHEET KEYNOTES	GENERAL SHEET NOTES
	1 PRIOR TO SUBMITTING BID, VISIT THE SITE AND FIELD VERIFY THE EXTENT OF ELECTRICAL DEMOLITION WORK TO MEET THE INTENT OF THE BID DOCUMENTS AND INCLUDE ALL COSTS IN BID.
	2 PRIOR TO REMOVAL OF ANY ELECTRICAL EQUIPMENT OR WIRING, FIELD VERIFY THAT THE EQUIPMENT OR WIRING IS INACTIVE OR NO LONGER IN USE.
	3 REMOVE ALL DEVICES, RACEWAYS AND WIRING FROM WALLS TO BE REMOVED. WHERE ACTIVE RACEWAYS OCCUR IN WALLS TO BE REMOVED, RE-ROUTE THE RACEWAY WITH ASSOCIATED WIRING TO KEEP THE CIRCUIT OPERATIONAL.
	4 REMOVE ALL ABANDONED RACEWAY, CONDUIT, WIRING AND CABLING WHETHER ABANDONED PREVIOUS TO THIS PROJECT OR AS A RESULT OF THIS PROJECT. NOT ALL ABANDONED ITEMS ARE SHOWN ON THESE PLANS AND FIELD VERIFICATION OF DEMOLITION SCOPE EXTENT IS REQUIRED.
	5 DEVICES MARKED "RR" ARE TO BE REMOVED AND RELOCATED PER NEW PLANS. EXTENI CIRCUITING AS REQUIRED FOR RELOCATION.
	6 REMOVE FEEDERS FOR ALL DEMOLISHED PANELS, DISCONNETS, ETC. BACK TO SOURCE
	7 ALL ITEMS INDICATED TO REMAIN SHALL BE PROTECTED DURING ALL PHASES OF CONSTRUCTION.
	8 CONTRACTOR TO TRACE AND LABEL ALL EXISTING LOADS TO REMAIN, THAT ARE CURRENTLY FED FROM PANELS THAT ARE BEING DEMOLISHED IN THIS PHASE. THESE LOADS TO BE RE-FED FROM NEW PANELS IN NEXT PHASE.
	9 PROVIDE DEDICATED NUETRALS FOR ALL BRANCH CIRCUITS.
	10 ALL RECEPTACLES WITHIN 6' OF THE EDGE OF A SINK SHALL BE GFCI PROTECTED.
	11 ALL WIRING IN PATIENT CARE AREAS SHALL MEET THE REQUIREMENTS OF NEC 517.13.
	12 CONTRACTOR TO REFER TO IMAGING VENDOR DRAWINGS FOR ADDITIONAL RESPONSIBILITIES.





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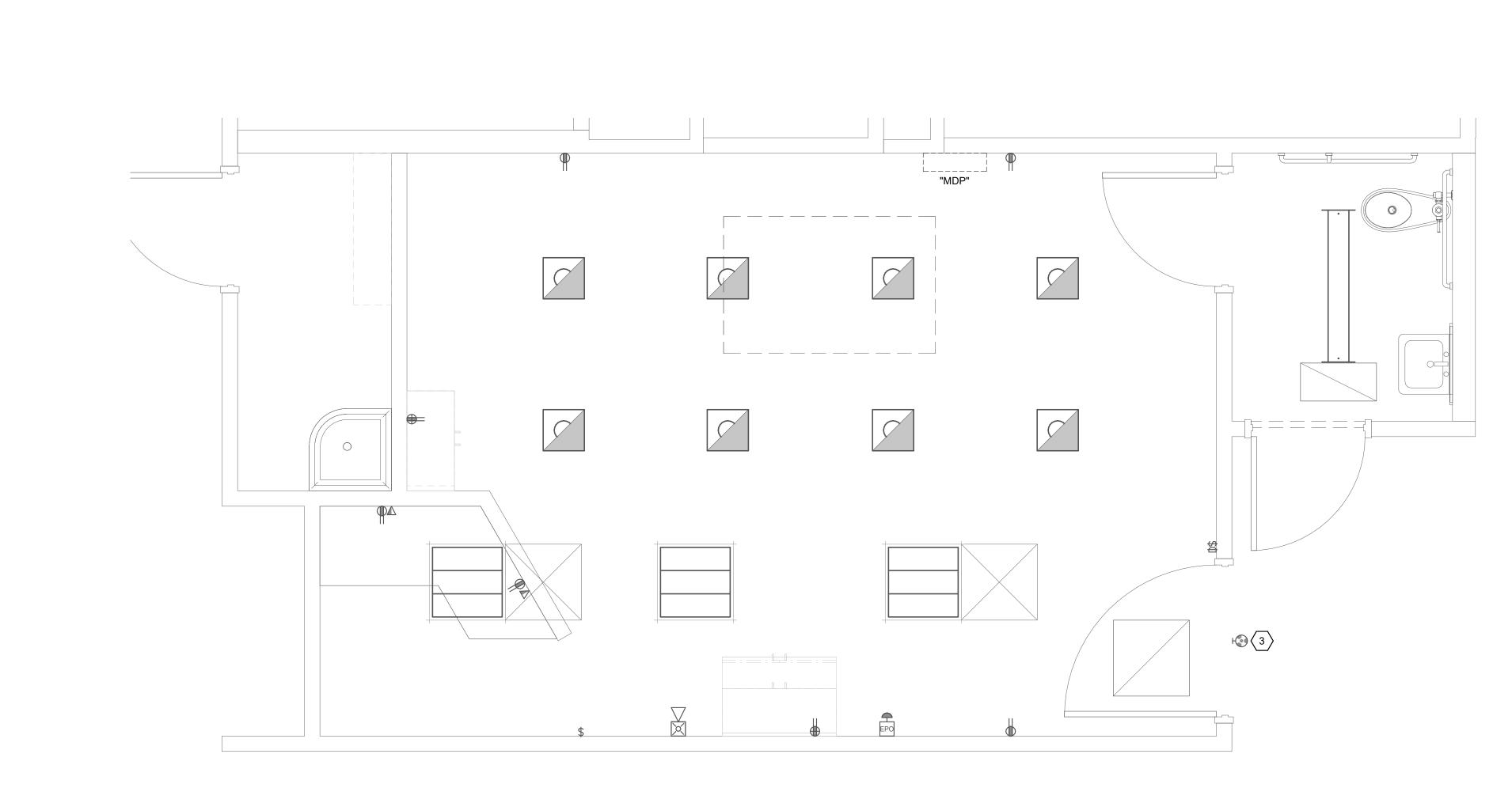
NJRA Project # Bid Set

22246.00 Jan 30, 2023

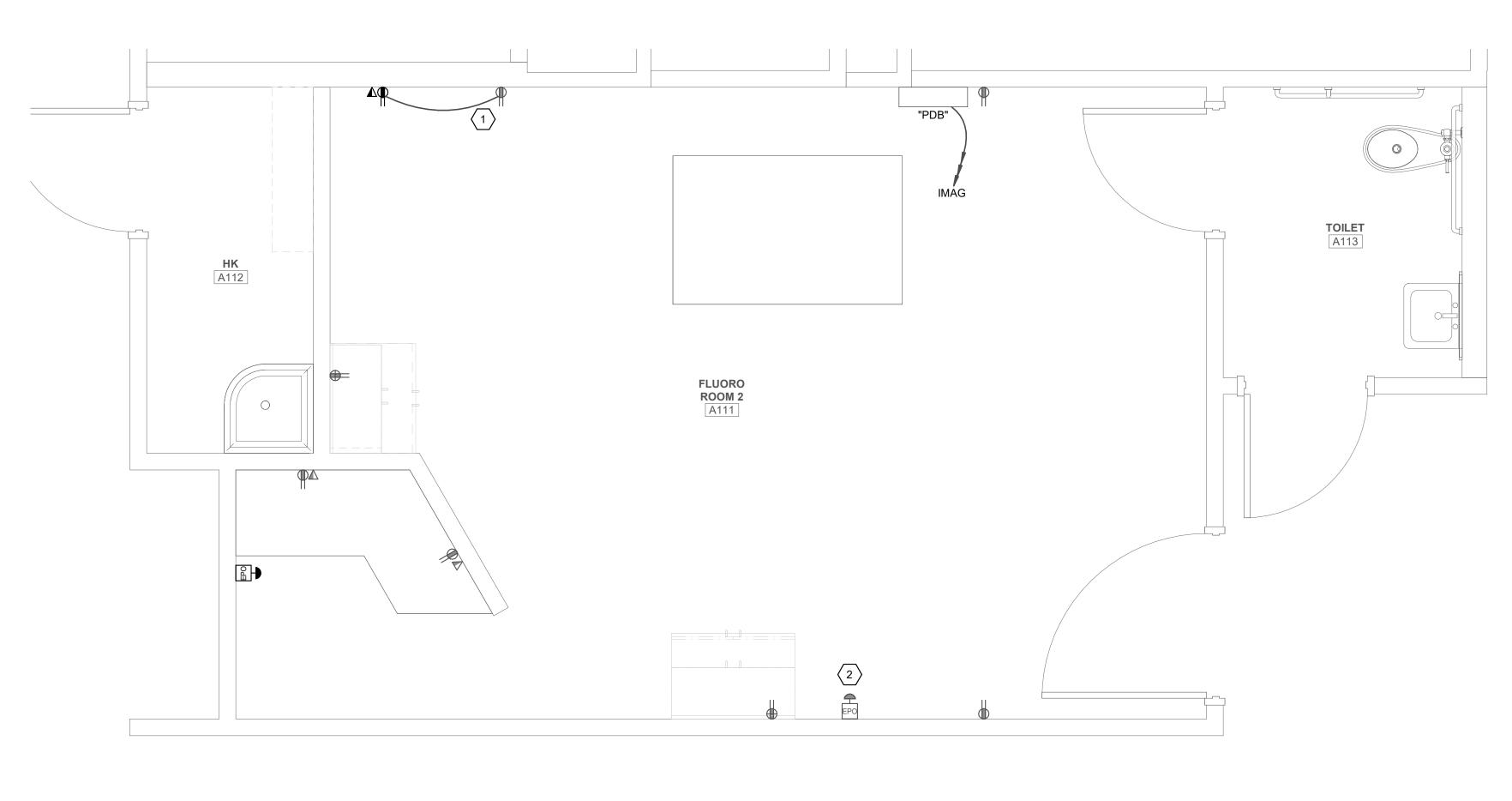


LEVEL 1

OVERALL



# 2 LEVEL 1 ELECTRICAL DEMOLITION PLAN SCALE: 1/2" = 1'-0"





### 1 LEVEL 1 POWER PLAN SCALE: 1/2" = 1'-0"

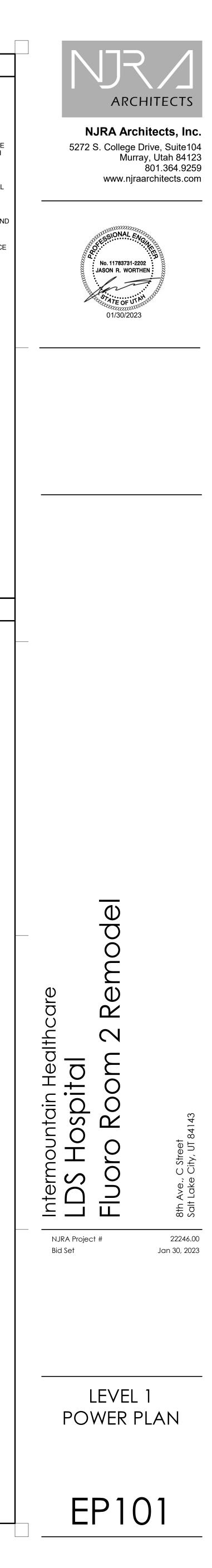


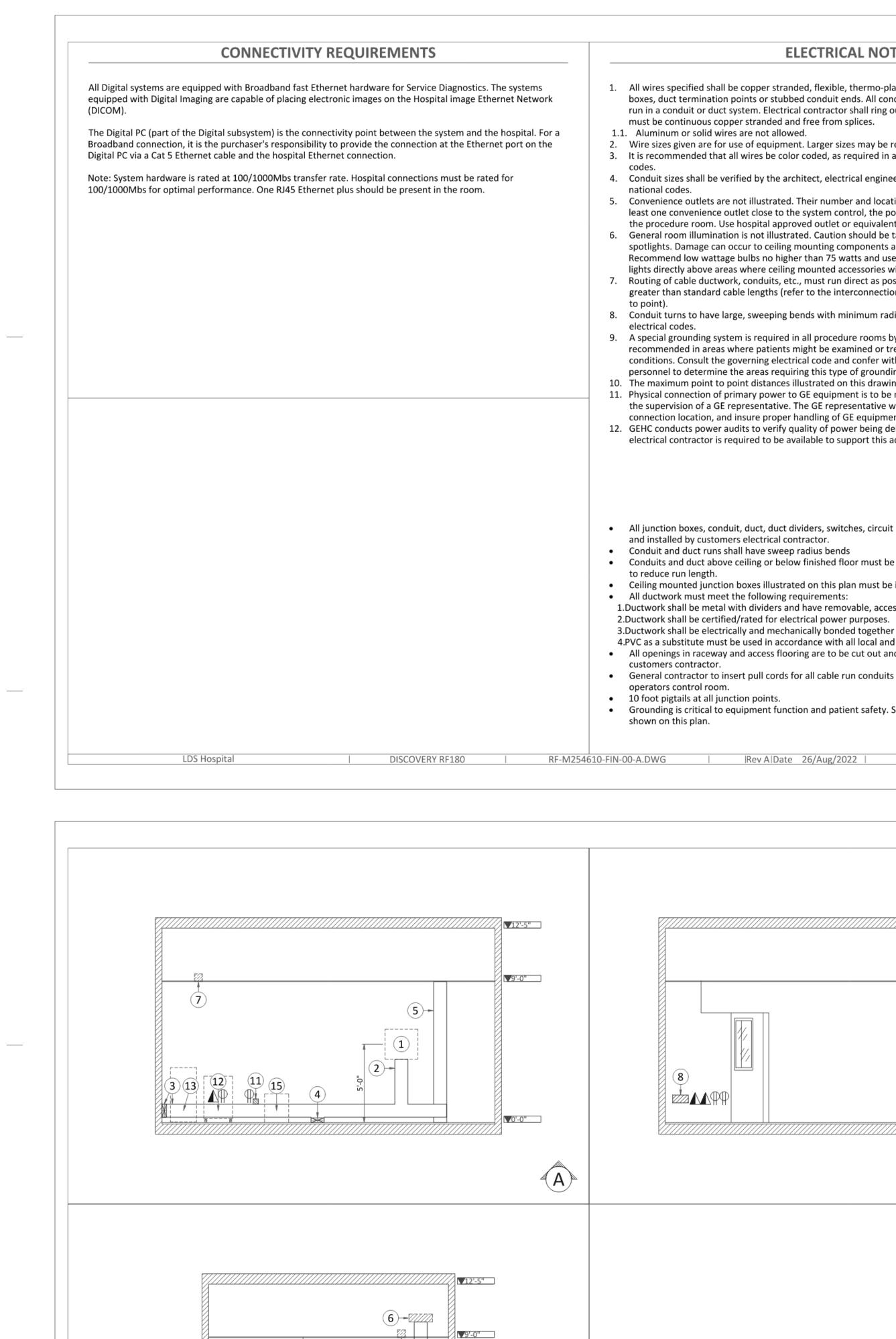
### GENERAL SHEET NOTES

- PRIOR TO SUBMITTING BID, VISIT THE SITE AND FIELD VERIFY THE EXTENT OF ELECTRICAL DEMOLITION WORK TO MEET THE INTENT OF THE BID DOCUMENTS AND INCLUDE ALL COSTS IN BID.
- PRIOR TO REMOVAL OF ANY ELECTRICAL EQUIPMENT OR WIRING, FIELD VERIFY THAT THE EQUIPMENT OR WIRING IS INACTIVE OR NO LONGER IN USE.
- 3 REMOVE ALL DEVICES, RACEWAYS AND WIRING FROM WALLS TO BE REMOVED. WHERE ACTIVE RACEWAYS OCCUR IN WALLS TO BE REMOVED, RE-ROUTE THE RACEWAY WITH ASSOCIATED WIRING TO KEEP THE CIRCUIT OPERATIONAL.
- 4 REMOVE ALL ABANDONED RACEWAY, CONDUIT, WIRING AND CABLING WHETHER ABANDONED PREVIOUS TO THIS PROJECT OR AS A RESULT OF THIS PROJECT. NOT ALL ABANDONED ITEMS ARE SHOWN ON THESE PLANS AND FIELD VERIFICATION OF DEMOLITION SCOPE EXTENT IS REQUIRED.
- 5 DEVICES MARKED "RR" ARE TO BE REMOVED AND RELOCATED PER NEW PLANS. EXTEND CIRCUITING AS REQUIRED FOR RELOCATION.
- 6 REMOVE FEEDERS FOR ALL DEMOLISHED PANELS, DISCONNETS, ETC. BACK TO SOURCE
- 7 ALL ITEMS INDICATED TO REMAIN SHALL BE PROTECTED DURING ALL PHASES OF CONSTRUCTION.
- 3 CONTRACTOR TO TRACE AND LABEL ALL EXISTING LOADS TO REMAIN, THAT ARE CURRENTLY FED FROM PANELS THAT ARE BEING DEMOLISHED IN THIS PHASE. THESE LOADS TO BE RE-FED FROM NEW PANELS IN NEXT PHASE.
- 9 PROVIDE DEDICATED NUETRALS FOR ALL BRANCH CIRCUITS.
- 10 ALL RECEPTACLES WITHIN 6' OF THE EDGE OF A SINK SHALL BE GFCI PROTECTED.
- 11 ALL WIRING IN PATIENT CARE AREAS SHALL MEET THE REQUIREMENTS OF NEC 517.13.
- 12 CONTRACTOR TO REFER TO IMAGING VENDOR DRAWINGS FOR ADDITIONAL RESPONSIBILITIES.

### ⇒SHEET KEYNOTES

- 1 CONNECT TO THE EXISTING CIRCUIT FEEDING THE RECEPTACLES IN THIS SPACE.
- 2 CONNECT THE EXISTING SHUTOFF TO THE NEW IMAGING EQUIPMENT.
- 3 CONNECT THE EXISTING IN-USE LIGHT TO THE NEW IMAGING EQUIPMENT.





DISCOVERY RF180

LDS Hospital

7'-0"

RF-M254610-FIN-00-A.DWG

### ELECTRICAL NOTES

. 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.

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

4. Conduit sizes shall be verified by the architect, electrical engineer or contractor, in accordance with local or 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 distritbution 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 8. Conduit turns to have large, sweeping bends with minimum radius in accordance with national and local

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. 10. The maximum point to point distances illustrated on this drawing must not be exceeded.

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.

12. 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.

 All junction boxes, conduit, duct, duct dividers, switches, circuit breakers, cable tray, etc., are to be supplied and installed by customers electrical contractor.

Conduits and duct above ceiling or below finished floor must be installed as near to ceiling or floor as possible

Ceiling mounted junction boxes illustrated on this plan must be installed flush with finished ceiling.

1.Ductwork shall be metal with dividers and have removable, accessible covers.

3.Ductwork shall be electrically and mechanically bonded together in an approved manner.

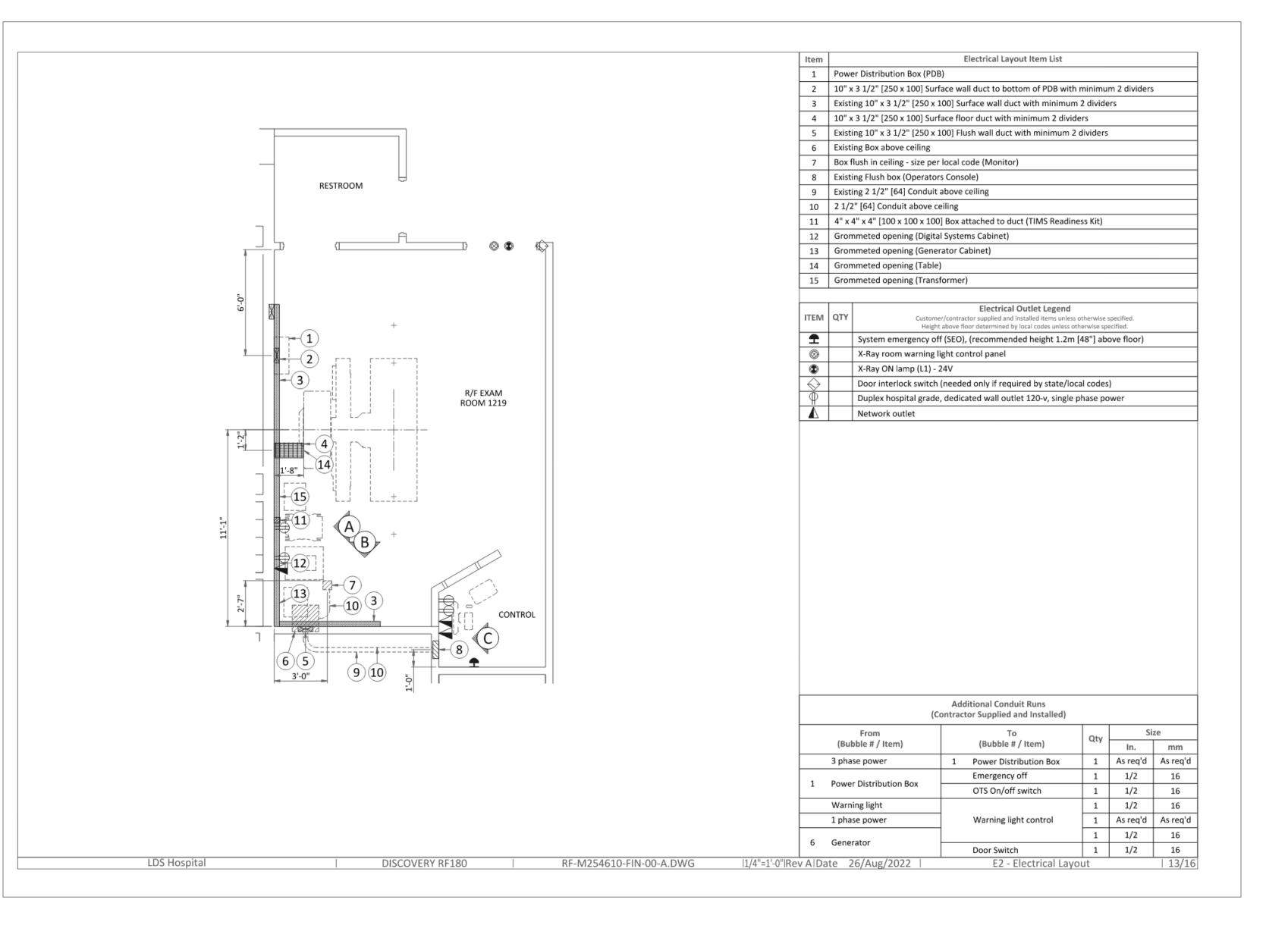
4.PVC as a substitute must be used in accordance with all local and national codes. All openings in raceway and access flooring are to be cut out and finished off with grommet material by the

General contractor to insert pull cords for all cable run conduits between the equipment room and the

• Grounding is critical to equipment function and patient safety. Site must conform to wiring specifications

Rev AlDate 26/Aug/2022 E1 - Electrical Notes | 12/16

4/*=1'-0"Rev AlDate _ 26/Aug/2022				<b>V</b> 0'-0"
/4"=11-0"Rev AlDate 26/Aug/2022 1 53 - Electrical Elevations 1 14/15				C
/4"=1'-Ω"/Rev AlDate 26/Aug/2022 1 53 - Electrical Elevations 14/15				
/4"=1'-0" Rev AlDate 26/Aug/2022   53 - Electrical Elevations   14/16				
/4"=1'-0" Rev A Date 26/Aug/2022   F3 - Electrical Elevations   14/16				
/4"=1'-0" Rev A Date 26/Aug/2022   E3 - Electrical Elevations   14/16				
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	/4"=1'-0" Rev A  Date	26/Διισ/2022 I	F3 - Electrical Elevations	1//16





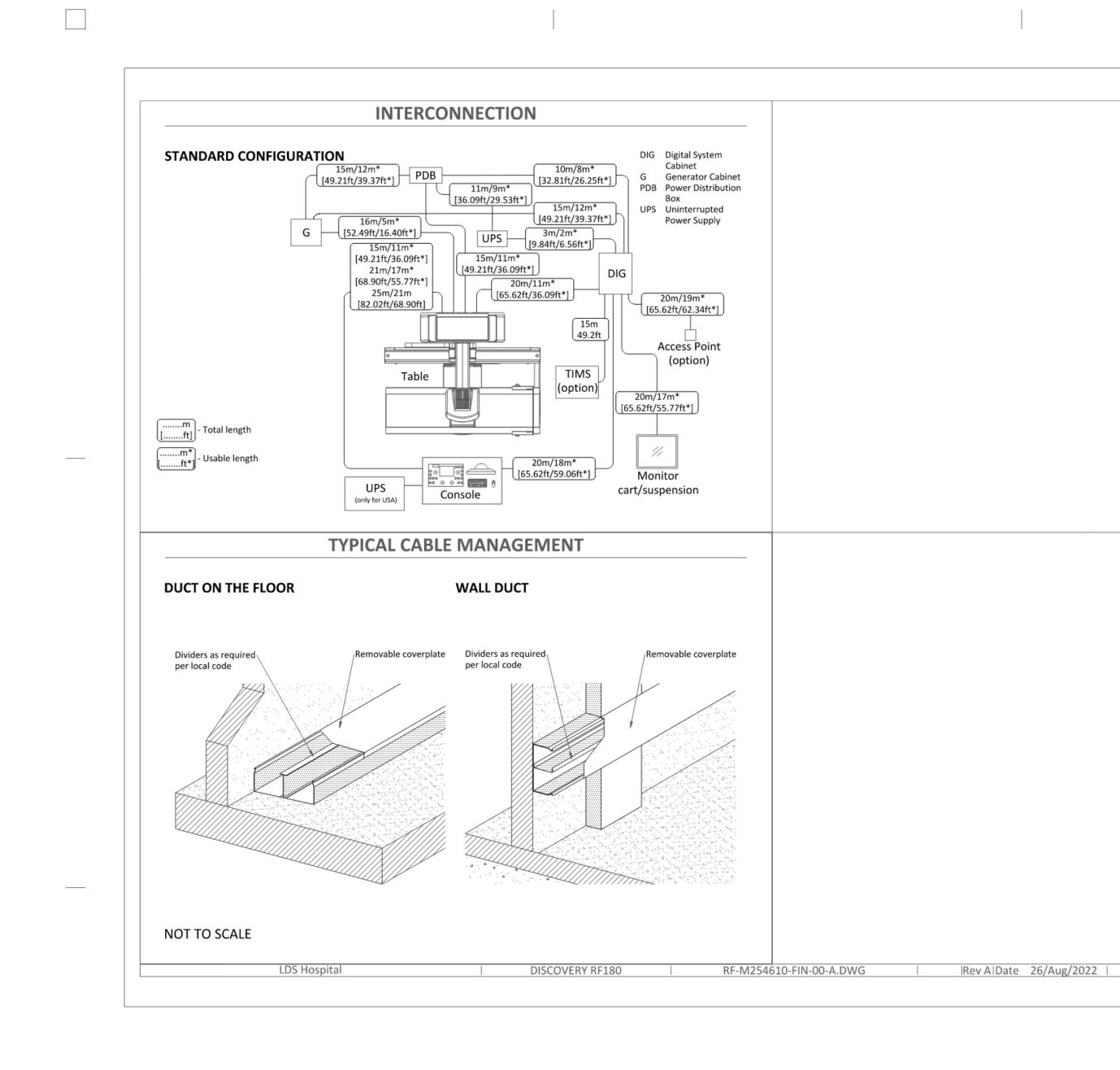








EP501



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### POWER REQUIREMEN

GENERATOR TYPE	65 kW
POWER SUPPLY	3 PHAS
MAINS FREQUENCY	50
LINE INPUT REACTIVE POWER (PEAK)	95 kVA
LINE INPUT ACTIVE POWER	65 kW

• Line supply should come into a power distribution box (PDB) contain

- PDB does not require a neutral line. The section of the supply cable should be calculated in accordance w
- permissible voltage drops. • There must be discrimination between supply cable protective devic (main low-voltage transformer side) and the protective devices in th

SUPPLY CHARACTERISTICS

 Power input must be separated from any others which may generated radiology rooms equipped with high speed film changers...)
All equipment (lighting, power outlets, etc...) installed with GE separately.

GROUND SYSTEM

• Equipotential: the equipotential link will be by means of an equipot connected to the protective earth conductors in the ducts of t equipotential connections linking up all the conducting units in the

CABLES

- Power and cable installation must comply with the distribution diagr • All cables must be isolated and flexible, cable color codes m
- installation. Case PDB furnished by GE: The cables for signals and remote contr length of 1.5m, and will be connected during installation. Each cond connector).

CABLEWAYS

E4 - Details-Interconnections

| 15/16

### The general rules for laying cableways should meet the conditions laid d

- with regard to: Protecting cables against water (cableways should be waterproof) Protecting cables against abnormal temperatures (proximity to heat
- Protecting cables against temperature shocks Replacing cables (cableways should be large enough for cables to be Metal cableways should be grounded.

LDS Hospital

Image: Sole WW         ASES-FG 480V 110%         50/60 Hz 2 2%         Image: Sole WW         ASES-FG 480V 10%         Sole WW         BolkW         Image: Sole WW         BolkW         Image: Sole WW         BolkW         Image: Sole WW         BolkW         Image: Sole WW         Image: Sole WW         BolkW         Image: Sole WW         Image
ASES-6 480V 110% 50/60 Hz 27% 119 kVA 80 kW hing the protective units and controls. The with its length and the maximum ce at the beginning of the installation he PDB. rate transients (elevators, air conditioning, E system components must be powered ential bar. This equipotential bar should be the non GE cableways and to additional rooms where GE units are located. TAB Patient Table SEO 14 Black 14 Black 14 Black 14 Black 14 White 14 Black 14 White 14 Black 14 White 14 Black 14 White 14 Black 14 White 14 White 14 Black 14 White 14 White 14 Black 14 White 14 White 14 White 14 Black 14 White 14 Whit
119 kVA         90 kW         ning the protective units and controls. The with its length and the maximum         ce at the beginning of the installation re PDB.         rate transients (elevators, air conditioning, E system components must be powered         11 phase       14 Black.         14 White.       14 Black.         14 black.      (1)         14 black.
80 kW         ning the protective units and controls. The with its length and the maximum         ce at the beginning of the installation ne PDB.         rate transients (elevators, air conditioning, E system components must be powered the non GE cableways and to additional rooms where GE units are located.         I phase       14 Black.         DIG       Digital system cabinet         DIS       Overhead Tube Suspension (Option)         PDWere Distribution Box       00 (V, SEO, L) will go to PDB with a pigtail luctor will be identified and isolated (screw         VIL       Varing Light         VIL       Warning Light         VIL       Varing Light         VIL       Dry contact: "X-Ray ON", released by the system. Max. voitage = 30 V         (2)       HoroRN-F cable with 6.56 ft (2m) extra length on the floor behind the
Junction       Junctic Supervised         Ining the protective units and controls. The with its length and the maximum       Image: Supervised Supervised       Junctic Supervised         Ining the protective units and controls. The with its length and the maximum       Image: Supervised Supervised       Image: Supervised Supervised Supervised       Power distribution box (PDB)         Image: Supervised Su
hing the protective units and controls. The with its length and the maximum ce at the beginning of the installation he PDB. rate transients (elevators, air conditioning, E system components must be powered the power difference of the installation rooms where GE units are located. rate below. ust comply with standards for electrical of (Y, SEO, L) will go to PDB with a pigtail huctor will be identified and isolated (screw the installation of (SEO, L) will go to PDB with a pigtail huctor will be identified and isolated (screw the identified and isolated (screw th
<pre>ing the protective units and controls. The with its length and the maximum se at the beginning of the installation e PDB. ate transients (elevators, air conditioning, system components must be powered ential bar. This equipotential bar should be he non GE cableways and to additional coms where GE units are located. If the suspension (Option) DIG Digital system cabinet DLK1 Door Interlock Switch GEN Generator cabinet DLK1 Boow light dimmer switch SEO Emergency OFF button, located 4 ft [1.22m] above floor TAB Patient Table SDT Step-down Transformer, 15kVA UPS Uninterruptible Power Supply WLC Warning Light Controller WL Warning Light Scale SUPPLIED BY CLES (2) HO7RN-F cable with 6.56 ft (2m) extra length on the floor behind the</pre>
with its length and the maximum ce at the beginning of the installation he PDB. rate transients (elevators, air conditioning, E system components must be powered the non GE cableways and to additional rooms where GE units are located. rram below. ust comply with standards for electrical of (Y, SEO, L) will go to PDB with a pigtial fuctor will be identified and isolated (screw Will C (Y, SEO, L) will go to PDB with a pigtial fuctor will be identified and isolated (screw Will C (Y, SEO, L) will go to PDB with a pigtial fuctor will be identified and isolated (screw Will C (Y, SEO, L) will go to PDB with a pigtial fuctor will be identified and isolated (screw Will C (Y, SEO, L) will go to PDB with a pigtial fuctor will be identified and isolated (screw Will C (Y, SEO, L) will go to PDB with a pigtial fuctor will be identified and isolated (screw Will C (Y, SEO, L) will go to PDB with a pigtial fuctor will be identified and isolated (screw Will C (Will Stand (Option)) Notes : (1) Dry contact: "X-Ray ON", released by the system. Max. voltage = 30 V (2) HIORNER Cable with 6.56 ft (2m) extra length on the floor behind the
ce at the beginning of the installation he PDB.       In plack       (2)         rate transients (elevators, air conditioning,       14 Black       WLIC       14 Black      (1)         I phase       14 Mite       14 White       14 White       GEN       UPS       TAB         I phase       14 Black       WLC       14 White       GEN       UPS       TAB       OTS         i phase       14 Black       WLC       14 White       GEN       UPS       TAB       OTS         i phase       14 Black       WLC       14 Black       GEN       UPS       TAB       OTS         i phase       14 Black       WLC       14 Black       GEN       UPS       TAB       OTS         i phase       14 Black       WLC       14 Black       GEN       UPS       TAB       OTS         i phase       14 Black       Distal system cabinet       Distal System cabinet       Ots
1 phase       1 white       WLC       14 White       GEN       UPS       TAB       (option)         1 phase       14 Write       000       14 Green       GEN       UPS       TAB       (option)         1 phase       14 Write       000       14 Green       GEN       UPS       TAB       (option)         1 phase       14 Write       000       14 Green       GEN       UPS       TAB       (option)         1 phase       14 Write       000       14 Green       GEN       UPS       TAB       (option)         1 phase       14 Write       000       14 Green       GEN       UPS       TAB       (option)         1 phase       14 Write       000       14 Black       0000       000 </td
PDIG Digital system cabinet DLK1 Door Interlock Switch GEN Generator cabinet OTS Overhead Tube Suspension (Option) PDB Power Distribution Box RML1 Room light dimmer switch SEO Emergency OFF button, located 4 ft [1.22m] above floor TAB Patient Table SDT Step-down Transformer, 15kVA UPS Uninterruptible Power Supply WLC Warning Light Controller WL Warning Light WS Wall Stand (Option) Notes : (1) Dry contact: "X-Ray ON", released by the system. Max. voltage = 30 V (2) H07RN-F cable with 6.56 ft (2m) extra length on the floor behind the
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Tram below. The standards for electrical with standards for electrical rol (Y, SEO, L) will go to PDB with a pigtail ductor will be identified and isolated (screw UPS Uninterruptible Power Supply WLC Warning Light Controller WL Warning Light WS Wall Stand (Option) Notes: (1) Dry contact: "X-Ray ON", released by the system. Max. voltage = 30 V (2) H07RN-F cable with 6.56 ft (2m) extra length on the floor behind the
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<ul> <li>(1) Dry contact: "X-Ray ON", released by the system. Max. voltage = 30 V</li> <li>(2) H07RN-F cable with 6.56 ft (2m) extra length on the floor behind the</li> </ul>
down in current standards and regulations,back of generator cabinet (only if required per local requirements)(3)Max lug size 8 AWG(4)Fourth wire only needed with UPS option for USA
ting pipes or ducts)
MINIMUM FEEDER WIRE SIZE IN mm <sup>2</sup> AND (AWG)
replaced) MINIMUM FEEDER WIRE LENGTH
INPUT VOLTAGE 15m (50') 30m (100') 46m (150') 61m (200') 77m (250') 92m (300') 107m (350') 122
480 VAC *35 (3) *35 (3) *35 (3) *35 (3) 35 (2) 50 (1) 70 (1/0) 7
* MINIMUM WIRE SIZE FOR CIRCUIT BREAKER, BASED ON RECOMMENDED OVERCURRENT PROTECTION
GENERAL NOTES
In all cases qualified personnel must verify that the feeder (at the point of take-off) and the run to the Radiology system meet al requirements stated in the PIM.
For a single unit installation, the minimum transformer size is 112.5kva, synthesized power feed is not acceptable. Maximum allow transient voltage excursions are 2.5% of rated line voltage at a maximum duration of 5 cycles and frequency of 10 times per ho
Ground wire will be same size as power cable. Ground will run from the equipment back to the power source/main grounding point always travel in the same conduit with the feeders and neutral. Neutral must be terminated inside the main disconnect panel and no GE cabinet.
DISCOVERY RF180   RF-M254610-FIN-00-A.DWG    Rev A Date 26/Aug/2022   E5 - Power Requirements



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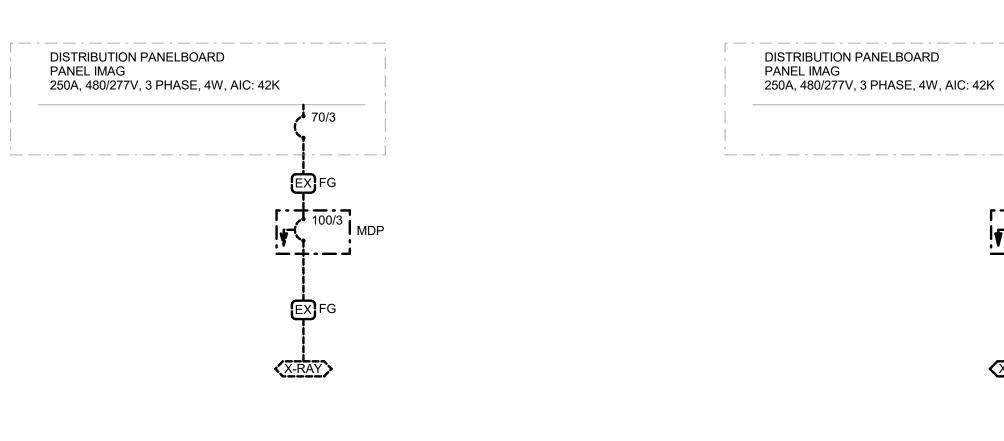




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DISTRIBUTION PANELBOARD PANEL IMAG 250A, 480/277V, 3 PHASE, 4W, AIC: 42K



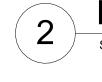


DEMOLITION ONE-LINE DIAGRAM SCALE: NTS









100/3

22 FG (1)

100/3 PDG

22 FG (1)

X-RAY

\_\_\_\_

GENERAL SHEET NOTES	○ SHEET KEYNOTES
	1. PULL THE NEW CABLING IN EXISTING CONDUIT. REFER TO THE BID-ALTERNATE FOR CONDUIT REQUIREMENTS IF THE CONDUIT IS SMALLER THAN 1.5".

CONDUCTOR AND	
CONDUIT SCHEDULE	

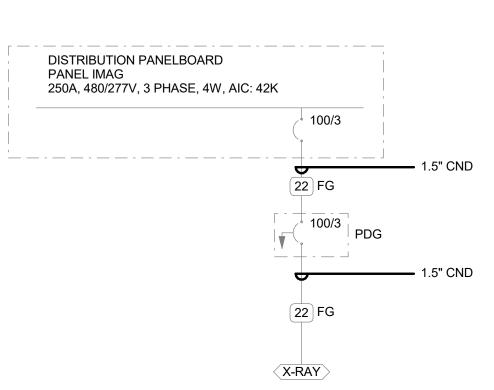
~~~			CONDU	JCTOR(N	NOTE 1)	10	05	NOTEO
SYM	AMP	CONDUIT SIZE	QTY	SIZE	G	IG	SE	NOTES
1	20	.75	2	12	12	12	8	2
2	20	.75	3	12	12	12	8	2,3
3	20	.75	4	12	12	12	8	2,3
<u>4</u>	30	.75	2	10	10	10	8	2
5	30	.75	3	10	10	10	8	2
6 7	30 40	.75	4	10 8	10 10	10 8	6	2
8	40	1	2	0 8	10	0 8	6	2
9	40	1	4	8	10	8	6	2
10	55	1	2	6	10	8	4	2
11	55	1	3	6	10	8	4	2
12	55	1.25	4	6	10	8	4	2
13	70	1	2	4	8	4	2	2
14	70	1.25	3	4	8	4	2	2
15	70	1.25	4	4	8	4	2	2
16	85	1.25	2	3	8	3	2	2
17	85	1.25	3	3	8	3	2	2
18	85	1.25	4	3	8	3	2	2
19	95	1.25	3	2	8	2	2	2
20	95	1.50	4	2	8	2	2	2
21	130	1.50	3	1	6	2	2	2
22	130	1.50	4	1	6	2	2	2
23	150	2	3	1/0	6	2	1/0	2
24	150	2	4	1/0	6	2	1/0	2
25	175	2	3	2/0	6	2	2/0	2
26	175	2	4	2/0	6	2	2/0	2
27	200	2	3	3/0	6	2	2/0	2
28	200	2.50	4	3/0	6	2	2/0	2
29 30	230 230	2.50	3	4/0 4/0	4	2	2/0	2
30 31	230	2.50 2.50	4	250	4	 1	2/0 2/0	2
32	255	2.50	4	250	4	1	2/0	2
33	310	3	3	350	3	1/0	3/0	2
34	310	3	4	350	3	1/0	3/0	2
35	380	3.50	3	500	3	3/0	3/0	2
36	380	4	4	500	3	3/0	3/0	2
37	400	2 EA 2	3	3/0	3	3/0	3/0	2
38	400	2 EA 2.50	4	3/0	3	3/0	3/0	2
39	510	2 EA 2.50	3	250	1	4/0	3/0	2
40	510	2 EA 3	4	250	1	4/0	3/0	2
41	620	2 EA 3	3	350	1/0	4/0	3/0	2,4
42	620	2 EA 3	4	350	1/0	4/0	3/0	2,4
43	760	2 EA 3.50	3	500	1/0	4/0	3/0	2,4
44	760	2 EA 4	4	500	1/0	4/0	3/0	2,4
45	855	3 EA 3	3	300	2/0	4/0	3/0	2,4
46	855	3 EA 3	4	300	2/0	4/0	3/0	2,4
47	1000	3 EA 3.50	3	400	2/0	4/0	3/0	4
48	1000	3 EA 3.50	4	400	2/0	4/0	3/0	4
49	1140	3 EA 4	3	500	3/0	4/0	3/0	4
50	1140	3 EA 4	4	500 350	3/0	4/0	3/0	4
51) 52	1240	4 EA 3	3	350	3/0	4/0	3/0	4
52 53	1240 1675	4 EA 3 5 EA 3.50	4	350 400	3/0 4/0	4/0 4/0	3/0 4/0	4
53 54	2010	5 EA 3.50 6 EA 3.50	4	400	4/0 250	250	250	4
55	2660	7 EA 4	4	500	350	350	350	4
56	3040	8 EA 4	4	500	500	500	500	4
57	4180	11 EA 4	4	500	500	500	500	4
58		7 EA 5	· ·					6
59		6						6
60		10 EA 4						6
<u> </u>								
. ( M	CONDUC MODIFIC JNLESS	CTOR AND CONE CTORS SHOWN A ATIONS AS NOT OTHERWISE NC	ARE SHO ED IN NO DTED.	OWN FOR OTE 5. A	R EACH ( ALL CON	DUCTO	RS SHO	WN ARE
( 7 3. F	CIRCUIT FABLE.	E EQUIPMENT GI BREAKERS ARE E #10 NEUTRALS ERS.	SIZED	GREATE	R THAN	AMPER	E RATIN	IG SHOW
4. C		) (G) CONDUCTO	OR MAY	BE DELE	ETED ON	SERVIO	CE ENTI	RANCE
5. 5		SUBSCRIPTS: 2N": INCLUDE TV		ITRAL CO		ORS SI	ZED AS	SCHEDI
		OR PHASED ANI					2LD 43	

"HH": NEUTRAL CURRENTS EXIST DUE TO HIGH HARMONIC "NONLINEAR" LOADS. CURRENT CARRYING CONDUCTORS DERATED ACCORDINGLY. PROVIDE THE IG/HH SIZE FOR THE EQUIPMENT GROUNDING CONDUCTOR. "IG": INCLUDE IG (INSULATED/ISOLATED GROUND CONDUCTOR)

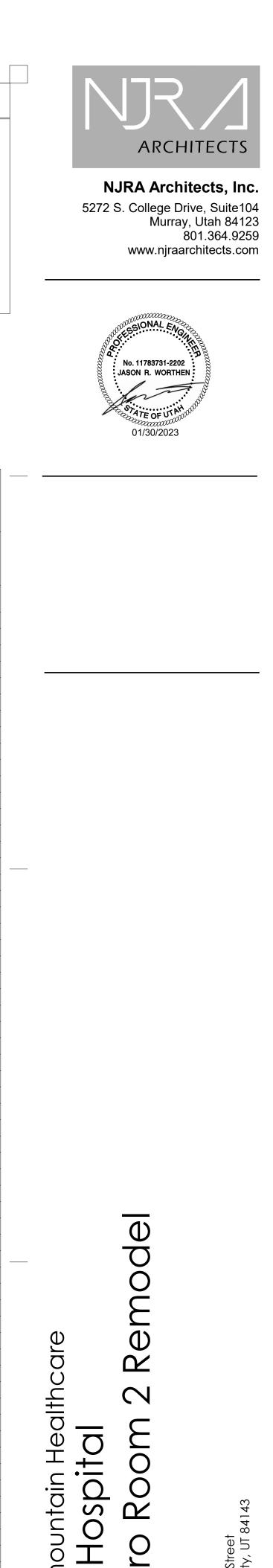
SCHEDULED ALONG WITH GROUND OF EQUIPMENT GROUND CONDUCTOR.

"SBJ": SUBSTITUTE "SBJ" CONDUCTOR FOR "G" CONDUCTOR SHOWN, WHICH IS SIZED FOR THE SYSTEM BONDING JUMPER OF THE SEPARATELY DERIVED SYSTEM.

RACEWAY ONLY. CONDUCTORS PROVIDED BY UTILITY. 6.



# 3 BID-ALTERNATE ONE-LINE DIAGRAM SCALE: NTS



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NJRA Project # Bid Set

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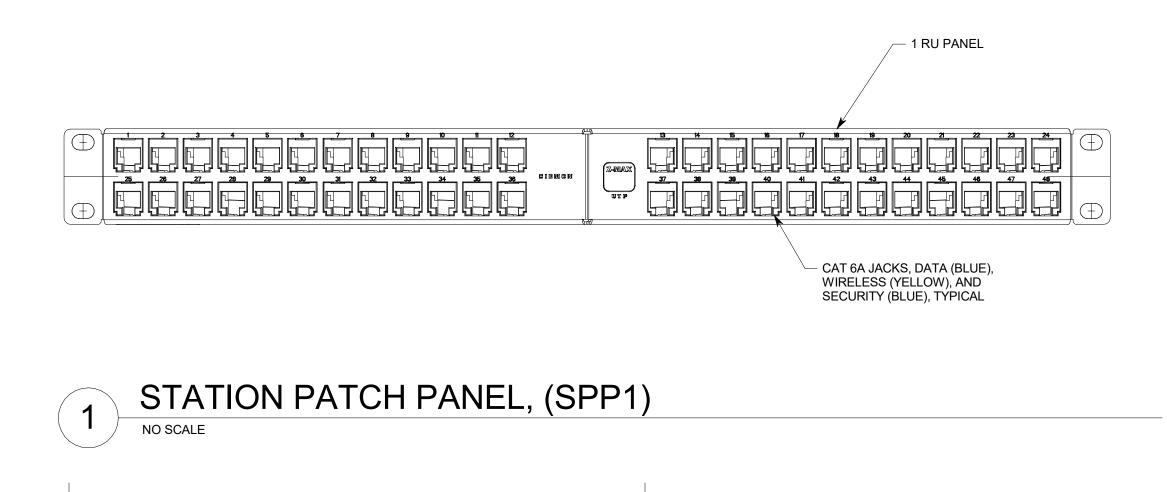
ONE-LINE DIAGRAM

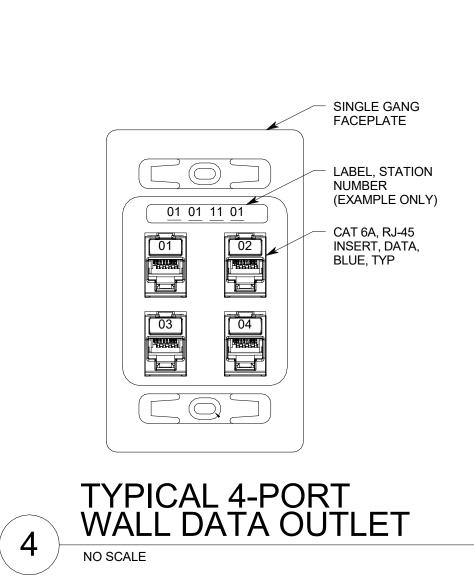
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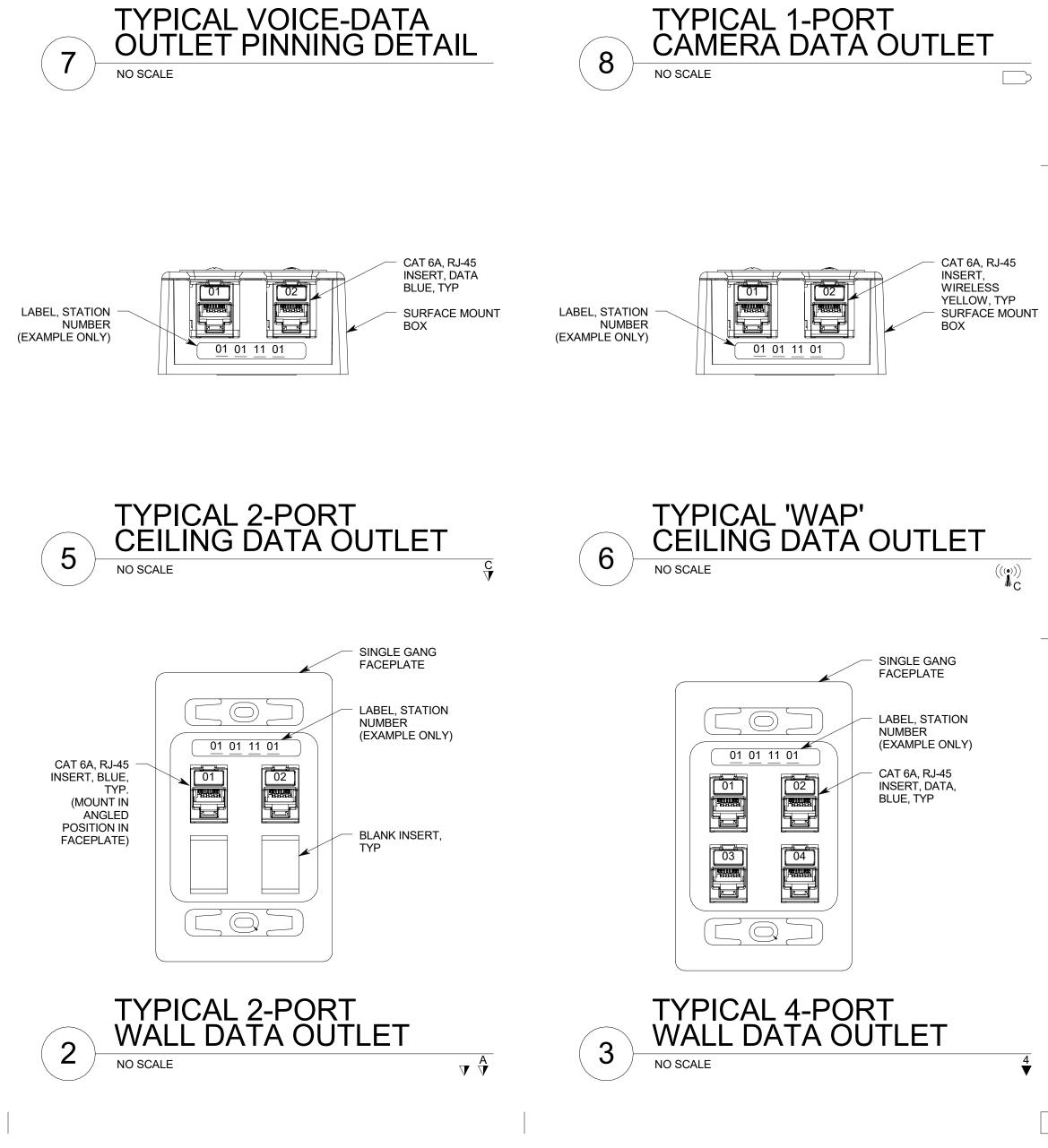
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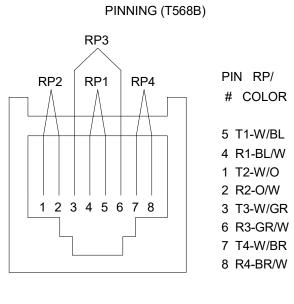
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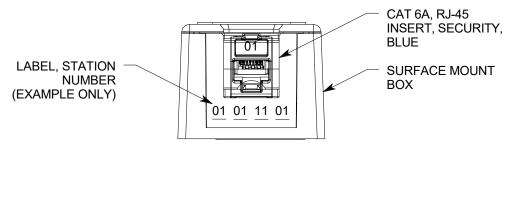


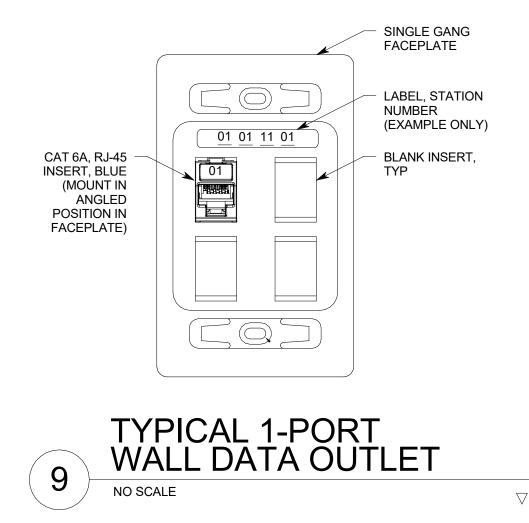


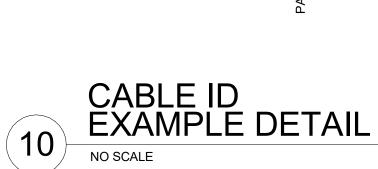


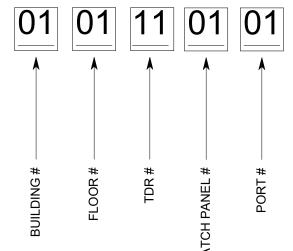






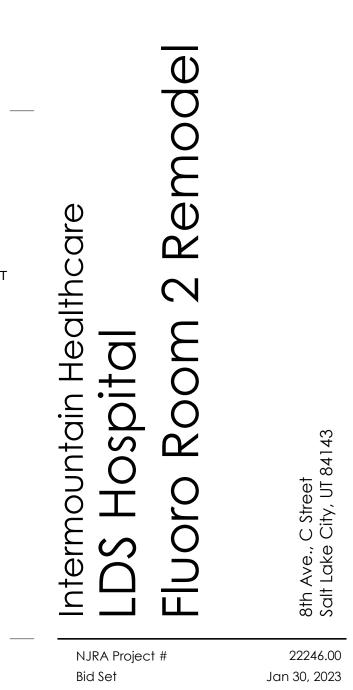












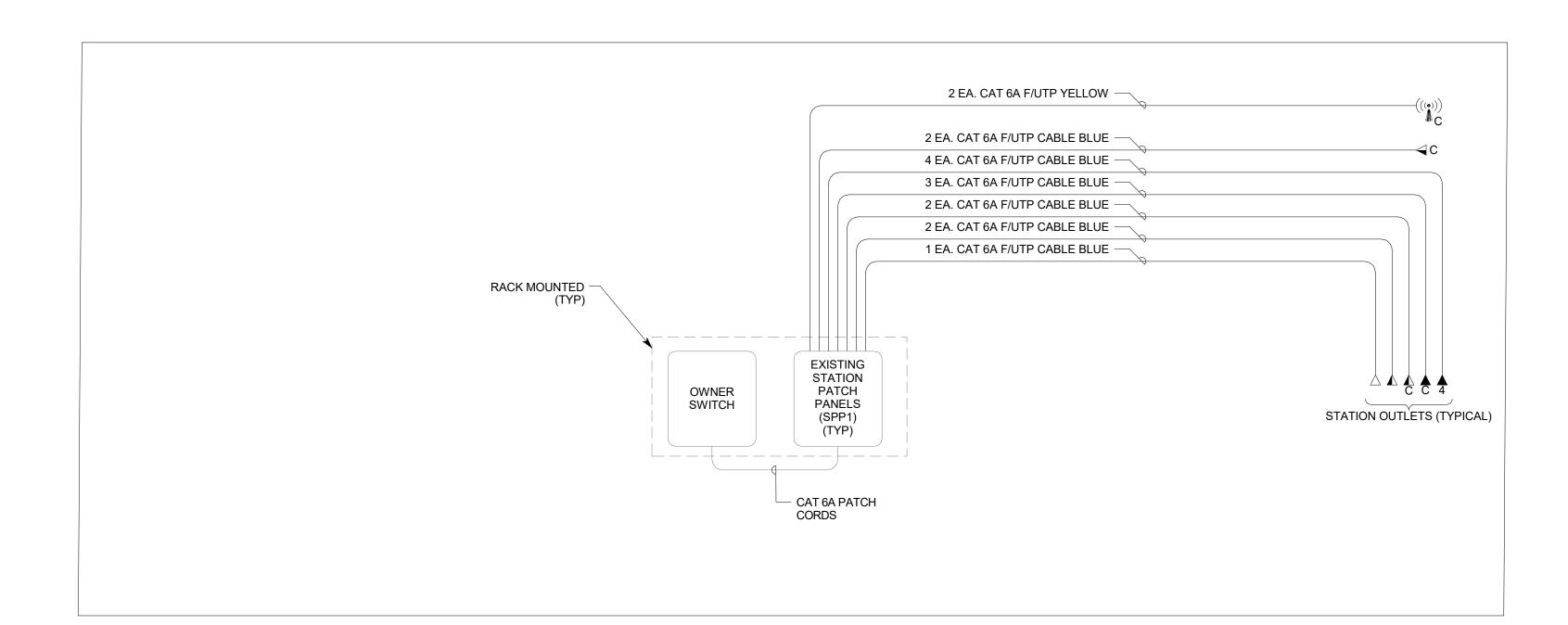
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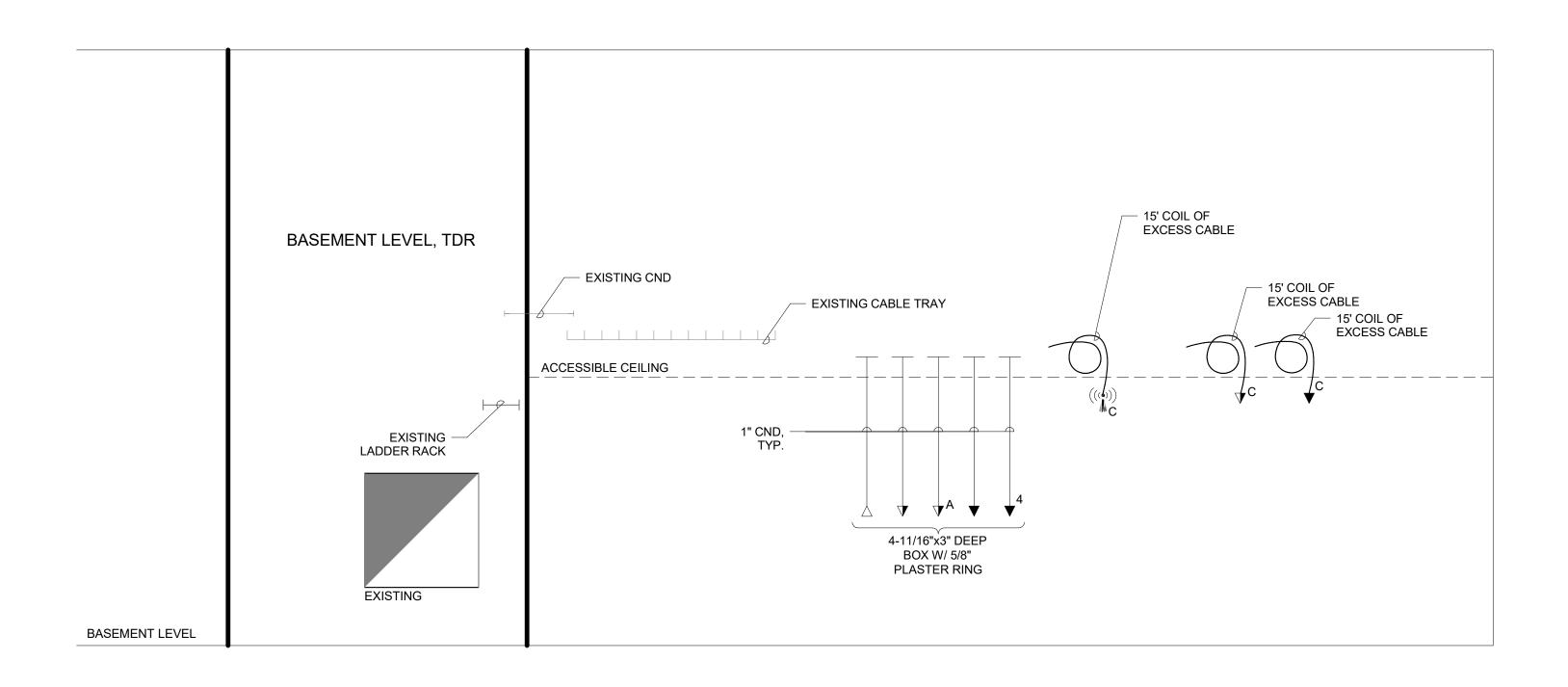
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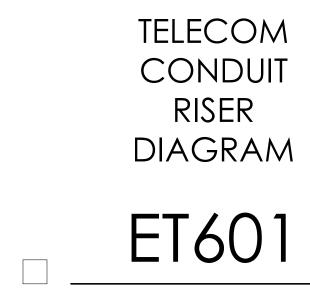
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Bid Set

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	26/Aug/2022		Final DC-352882					ity, Utah		
A	26/Aug/2022 DATE		Final DC-352882 MODIFICATIONS				Salt Lake Ci	ity, Utah		
01 - 02 - 03 - 04 - 05 -	DATE C1 - Cover Sheet C2 - Disclaimer - S A1 - General Note A2 - Equipment La A3 - Section View	Site Readiness es ayout s			G	EHealth	Salt Lake Ci USA	ity, Utah	Aichael Hatch 01-599-6221 el.hatch@ge.com	
01 - 02 - 03 - 04 - 05 - 06 - 07 - 08 -	DATE C1 - Cover Sheet C2 - Disclaimer - S A1 - General Note A2 - Equipment La A3 - Section View A4 - Equipment D	Site Readiness es ayout s etails etails & Delivery (2) tes	MODIFICATIONS 10 - S3 - Structural Details (1) 11 - M1 - HVAC 12 - E1 - Electrical Notes 13 - E2 - Electrical Layout		G	E Health	Salt Lake Ci USA	ity, Utah V 8 Micha Y RF180	01-599-6221	
01 - 02 - 03 - 04 - 05 - 06 - 07 - 08 - 09 -	DATE C1 - Cover Sheet C2 - Disclaimer - S A1 - General Note A2 - Equipment La A3 - Section View A4 - Equipment D A5 - Equipment D S1 - Structural No S2 - Structural Lay	Site Readiness es ayout s etails etails & Delivery (2) tes yout drawing set is the GE Healthcare Pre In incomplete documentation ref	MODIFICATIONS 10 - S3 - Structural Details (1) 11 - M1 - HVAC 12 - E1 - Electrical Notes 13 - E2 - Electrical Layout 14 - E3 - Electrical Elevations 15 - E4 - Details-Interconnections	Dra	wn by REK	E Health	Salt Lake Ci USA	ity, Utah V 8 Micha Y RF180	01-599-6221	Rev
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# DISCLAIMER

		DIJCLAINILIN
GE	ENERAL SPECIFICATIONS	
•	GE is not responsible for the installation protective screens or derivatives not men	가슴은 눈 바람이 있는 일부님은 이야지 못했다. 그 것이야지 말을 잘 들어야지 않아야 한다. 이야지 않아야 한다.
<b>1</b> 2	The final study contains recommendation	
	wiring and room arrangements. When p	양 전 김 팀입에서, 양성과 방송의 것은 동안에 관하 밖에서는 방법은 도둑한 방법은 것
	aspect of the actual equipment expected	
•	The layout of the equipment offered by	
	the pre-installation work and electrical	- USA
	on-site study and the wishes expressed by	
	The room dimensions used to create the be accurate as they may not have been	· · · · · · · · · · · · · · · · · · ·
	lack of information.	vermed on site. Of cann
•	Dimensions apply to finished surfaces of t	he room.
	Actual configuration may differ from opti-	ons presented in some ty
•	If this set of final drawings has been appr	이상 그 가슴 옷 아프 가지 않는 것이다. 친구는 아프 동네가 앉아 아프 가지 않는 것이 것을 해야 한다. 것이 하는 것을 했다.
	be subject to further investigation by GE	about the feasibility of
20	must be noted.	فاستحصحها أحميم طحرج وجري
S)	The equipment layout indicates the place There may be local requirements that of	그 이번 방법에서 집에 가지 않는 것이 많은 것이 같은 것이 집에 집에 집에 있는 것이 없는 것을 하는 것이 없다.
	customer's responsibility to ensure that	알았는 그 것 같아. 그 같아. 그 같아. 그 것 같아. 그 그 ㅋㅋㅋㅋㅋ
	local requirements.	the site and man equipm
•	All work required to install GE equipment	must be carried out in co
	the safety standards of legal force in the o	의 장애 수가 물건에 들는 물건이 많은 것이 가지는 물건이야지 않는 것을 많았다.
	These drawings are not to be used for ac for any damage resulting therefrom.	tual construction purpos
	for any dumage resulting thereiron.	
CU	JSTOMER RESPONSIBILITIES	
•	It is the responsibility of the customer to final study. A detailed site readiness che	- '방송' 이상 방송' 전 방송' 전 방송' - '''''''''''''''''''''''''''''''''
	ensure all requirements are fulfilled and t	, 19 2019 (19 2019) 19 20 20 20 20 20 20 20 20 20 20 20 20 20
	final study. The GE Project Manager of In	것 같은 것은 것 같은 것 같아요. 것 같아요. 이 것 같아요. 같은 것 같아요. 것 같아요. 같이 있는 것 같아요. 같이 같아요. 같이 없는 것 같아요. 같아요. 같아요. 같아요. 같아요. 같아요. 같아요. 같아요.
	up and ensure that actions in the checkli	st are complete, and if n
<b>.</b>	delivery and installation date.	of record must oncure th
	Prior to installation, a structural engineer way that the loads of the installed system	아니는 이 것 않아? 지난 아이에 가지 않아? 것 같아요. 아이에 집에 가지 않아? 이 가지 않아 아이에 가지 않아?
	structural elements, dimensioning and the	
	responsibility of the structural engineer. E	물건 가 것 않고? [방송] 강영 날 전 물론
	ceiling, floor or walls are the customer's r	esponsibility.
RA	ADIO-PROTECTION	
3	Suitable radiological protection must be o	determined by a qualifier
	local regulations. GE does not take respor	- 이상 방향 가 드는 것 같아요. 이번 문화 문화 방향 위험에서 드셨다.
	local regarditorio. De does not tane respoi	isionity for the specificati
	THE UNDERSIGNED, HEREBY CERTIFIES	THAT I HAVE READ AND APPRO
	DATE	NAME
	LDS Hospital	1

# **CUSTOMER SITE READINESS REQUIREMENTS**

		REQUIRED
ted equipment, lighting, cassette trays and		Description
		Product specific Pre-installati
quipment and associated devices, electrical y effort has been made to consider every	E	*documents can be accessed in r
for the premises, the details provided for according to the information noted during iginate from a previous layout and may not		A mandatory component of this the Pre-installation manual will
ot take any responsibility for errors due to	۲	The items on the GE Healthcare delivery to the site. Equipment
or of the indicated equipment components. In of the indicated equipment components. In of the indicated equipment components. It remains the ent placement complies with all applicable compliance with the building regulations and es. The company cannot take responsibility		<ul> <li>Any deviation from these of Healthcare installation produces of the equipment for an deliver the equipment to the manager can supply a reference of the equipment o</li></ul>
rdance with the specifications stated in the It is the responsibility of the customer to ill specifications defined in the checklist and in cooperation with the customer to follow ecessary, will aid in the rescheduling of the at the floor and ceiling is designed in such a id transferred. The layout of additional installation methods are the sole structures supporting equipment on the radiological physicist in conformation with on or provision of radio-protection.		<ul> <li>For CT systems it is require responsibility to contract a meet the GE vibration spec specifications.</li> </ul>
VED THE PLANS IN THIS DOCUMENT.		

SIGNATURE

DISCOVERY RF180

-

### **D MANUALS FOR SYSTEM PRE-INSTALLATION**

	Document Number*	
tion Manual	Refer to cover page	
multiple languages at https://cu	istomer-doc.cloud.gehealthcare.com/#/cdp/dashboard	

s drawing set is the GE Healthcare Pre-installation manual. Failure to reference I result in incomplete documentation required for site design and preparation.

e Site Readiness Checklist DOC1809666 are REQUIRED to facilitate equipment will not be delivered if these requirements are not satisfied.

drawings must be communicated in writing to and reviewed by your local GE oject manager prior to making changes.

ny rigging, special handling, or facility modifications that must be made to the installation site. If desired, your local GE Healthcare installation project erence list of rigging contractors.

s the following; quipment, nd other test equipment,

al and disposal (e.g. crates, cartons, packing)

ed to minimize vibrations within the scan room. It is the customer's a vibration consultant/engineer to implement site design modifications to ecification. Refer to the system Pre-installation manual for vibration

02/16









# **ENVIRONMENTAL SPECIFICATIONS**

### MAGNETIC INTERFERENCE

To guarantee specified imaging performance : X-ray tubes and control console equipment must be located in ambient static field of less than 10 gauss.

### ACOUSTIC OUTPUT

Measured 1 m from any point in system. less than 65 dBA In-use: Stand-by: less than 45 dBA

### ATMOSPHERIC PRESSURE

Operating atmospheric pressure: 800-1013 hPa Storage atmospheric pressure: 800-1013 hPa Refer to the Pre-installation Manual for detailed information about individual components.

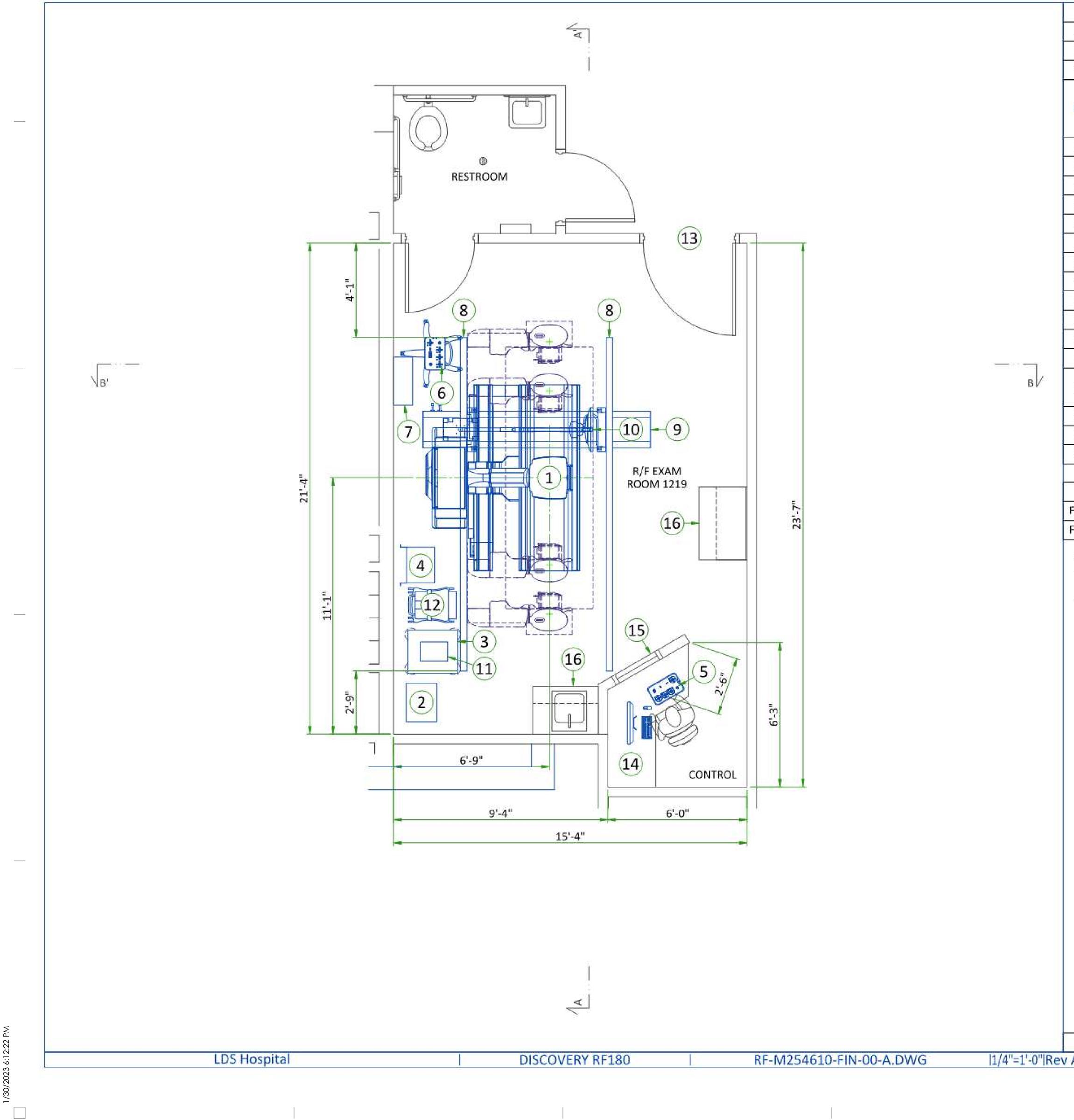
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0.035	1	LEGEN				-	
Α	GE SU	pplied	D	Availa	ble from GI		
В	GE SU	pplied/contractor installed	E	Equip	ment existir	ng in room	
С	Custo	mer/contractor supplied and installed	*	Item t	o be reinsta	illed from ar	nother site
BY	ITEM	DESCRIPTION	ou	( HEAT TPUT otu)	WEIGHT (lbs)	MAX HEAT OUTPUT (W)	WEIGHT (kg)
Α	1	Table (with over-floor plate)	2	388	3197	700	1450
А	2	Generator	3	500	200	1026	91
А	3	Digital Systems Cabinet	1	092	242	320	110
В	4	15 kVA Transformer		23	210	120	95
А	5	Operators Console		.49	17	57	8
А	6	Secondary Console		23	110	323	50
В	7	Power Distribution Box (PDB)		2	175		80
А	8	4410mm Kalos Rails		2) 	~		34
А	9	Monitor Suspension Bridge	54 	2	7 <u>1</u> 27	1 (A)	9  34
А	10	Single Monitor Suspension	2	222	202	65	92
Α	11	Partial UPS		÷.	77		35
А	12	TIMS 2000 on cart (TPC)		÷	200		25
Ε	13	Minimum opening for equipment delive contingent on a 2600 [102 in] corridor v		:00 w x 1	1890 h [47 ii	n. w x 74 in.	h],
Ε	14	Counter top for equipment- provide gro	mmete	ed openi	ngs as requ	ired to route	e cables
E	15	Control wall, 7 ft. high with lead glass vi	ewing v	window			
E	16	Casework					

Exam room height	
Finished floor to slab height	12'-5"
Finished ceiling height	9'-0"

Please note that your Discovery RF180 installation in the selected room does not meet the following minimal requirement:

- 530 mm required distance between the Tube Head and any stationary object.

Therefore we must apply a warning label on both Tube Head sides to remind the Operator about entrapment hazard during Gantry motions.

For Ac	cessory Sales: (866	) 281-7545 Options 1, 2, 1, 2 or mail to: gehcaccessorysales@	@ge.com
AlDate	26/Aug/2022	A2 - Equipment Layout	04/16



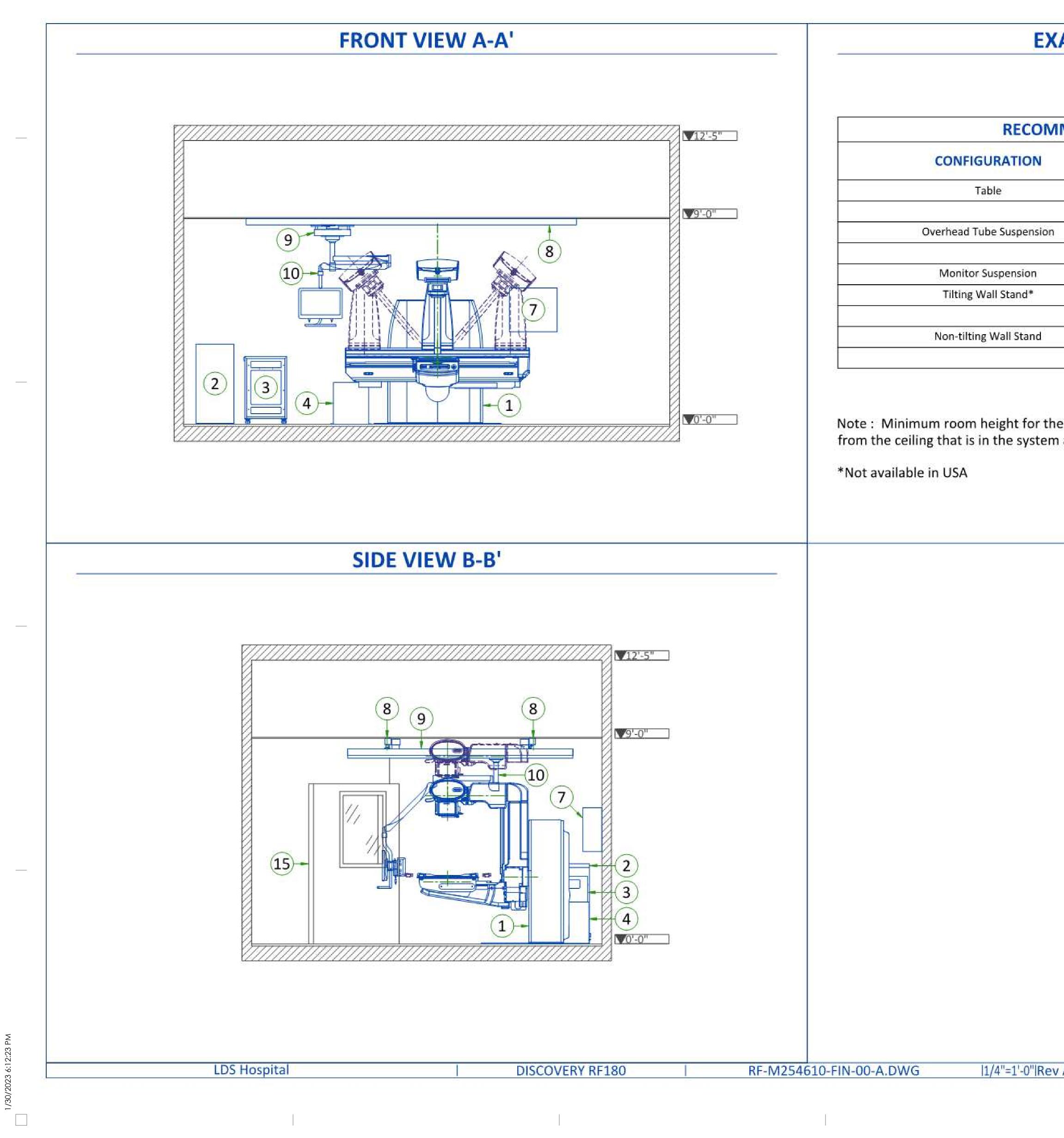
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Q104



# **EXAM ROOM CEILING HEIGHTS**

SPECIFICATION	CEILING HEIGHT		
SPECIFICATION	mm	ft	
Minimum	2600	8'-6"	
Recommended	3000	9'-10"	
Minimum	2600	8'-6"	
Recommended	2920	9'-7"	
Minimum	2600	8'-6"	
Minimum	2600	8'-6"	
Recommended	2650	8'-8"	
Minimum	2400	7'-8"	
Recommended	2800	9'-2"	

Note : Minimum room height for the table must take into consideration the most protruding object from the ceiling that is in the system area (for example the rails for OTS).

|1/4"=1'-0"|Rev A|Date 26/Aug/2022 |

| 05/16

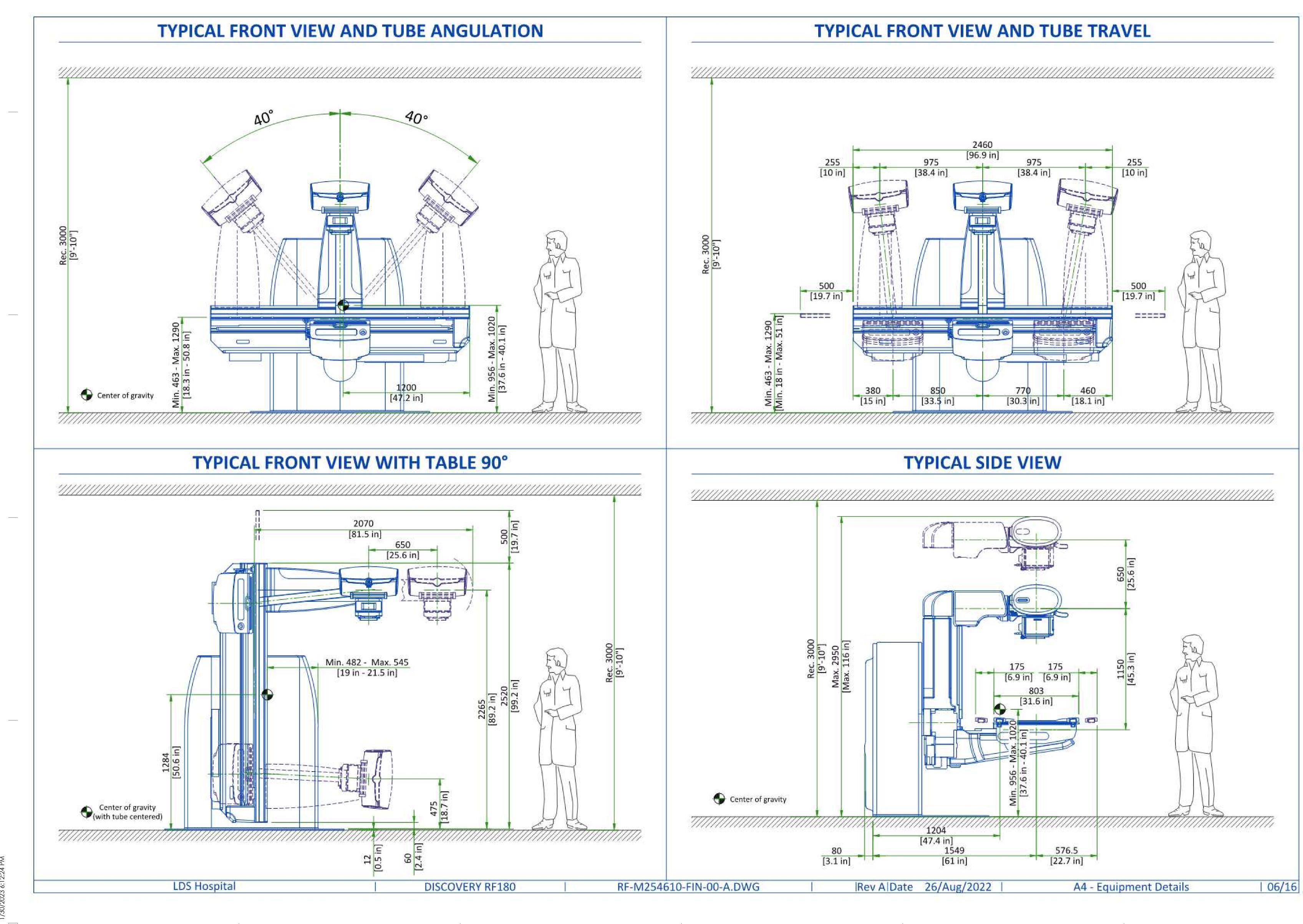


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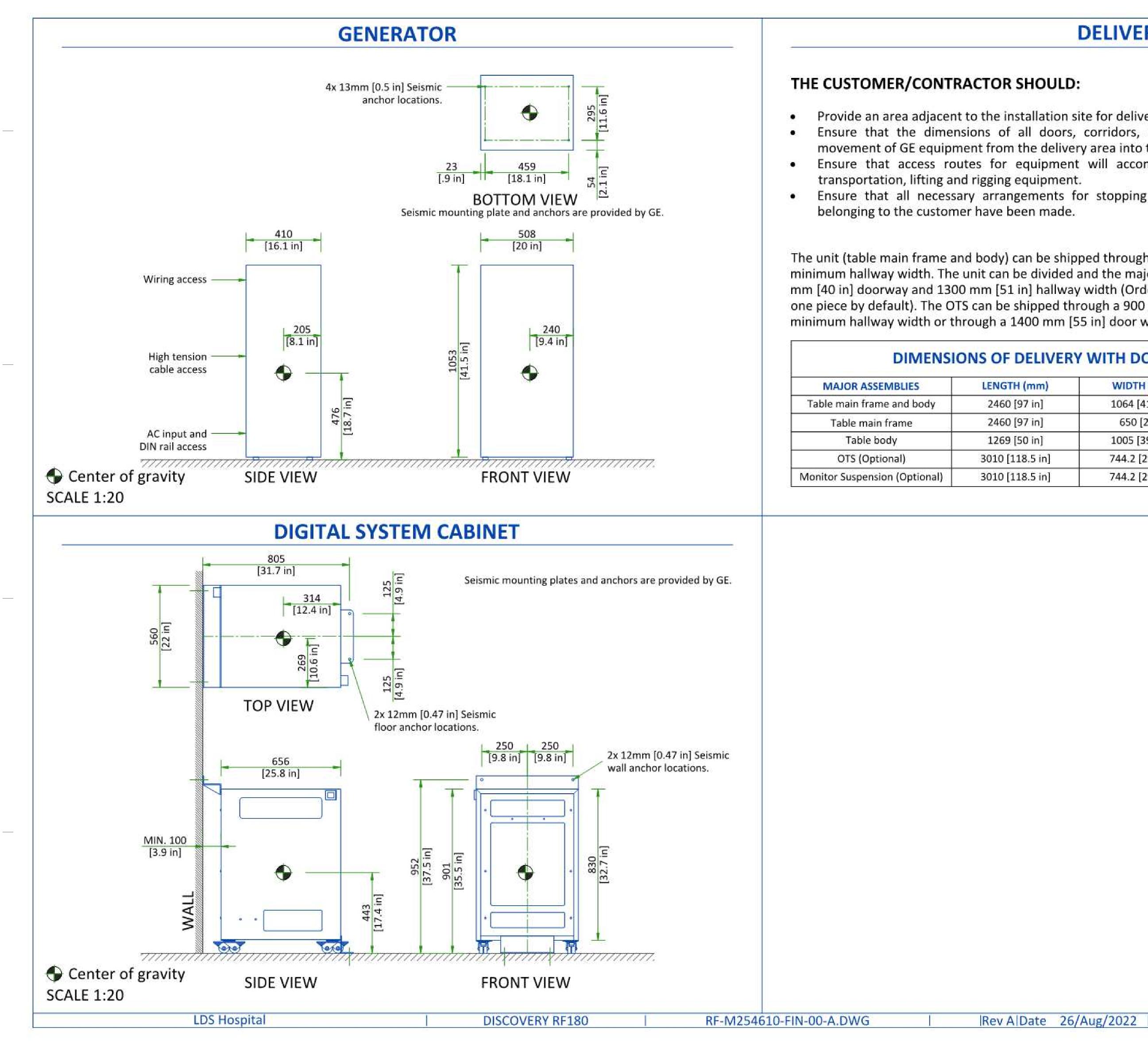








Q106



# DELIVERY

Provide an area adjacent to the installation site for delivery and unloading of the GE equipment.

Ensure that the dimensions of all doors, corridors, ceiling heights are sufficient to accommodate the movement of GE 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

Ensure that all necessary arrangements for stopping and unloading on public or private property not

The unit (table main frame and body) can be shipped through a 1200 mm [47 in] door width and 1200 mm [47 in] minimum hallway width. The unit can be divided and the major assemblies can be maneuvered through a 1020 mm [40 in] doorway and 1300 mm [51 in] hallway width (Order has to be placed accordingly, table is shipped in one piece by default). The OTS can be shipped through a 900 mm [35 in] door width and 2600 mm [102.4 in] minimum hallway width or through a 1400 mm [55 in] door width and 1800 mm [71 in] minimum hallway width.

### DIMENSIONS OF DELIVERY WITH DOLLY TRANSPORT EQUIPMENT LENGTH (mm) WIDTH (mm) WEIGHT (kg) HEIGHT (mm) 2460 [97 in] 1859 [73.2 in] 1064 [41.9 in] 2460 [97 in] 350 [772 lb] 650 [25.6] 1859 [73.2 in] 1269 [50 in] 1005 [39.6 in] 1633 [64.3 in] 620 [1367 lb] 744.2 [29.3 in] 3010 [118.5 in] 328 [723 lb] 100 744.2 [29.3 in] 328 [723 lb]

1990 - A









# **STRUCTURAL NOTES**

	Methods of support for the steelwork that will permit attachment concrete construction should be favored. Do not use concrete or r
٠	All units that are wall mounted or wall supported are to be provid supports are to be supplied and installed by the customer or his co
٠	Control walls shall be constructed to minimum 2130mm (7'-0") his
٠	Dimensions are to finished surfaces of room.
٠	Customers contractor must provide all penetrations in post tensio
•	Customers contractor must provide and install any non-standard a anchoring methods are included with GE equipment drawings for documentation.
٠	Customers contractor must provide and install hardware for "thro under access floors. This contractor must also provide floor drillin obstruction encountered while drilling by the GE installer such as a
	It is the customer's responsibility to perform any floor or wall pene customer is also responsible for ensuring that no subsurface utiliti wiring, conduits, piping, duct work or structural supports (i.e. post come in contact with subsurface penetration operations (e.g. drilli performed during the installation process. To ensure worker safety penetration operations only after the customer's validation and co
•	permit". Different anchor types are used to install the components of the subscription of the Product Product of the Product o
	Section(s) of the Pre-Installation Manual for each anchor requirem Refer to the Structural Requirements Section for the required min
•	The ground surface must be flat and leveled, maximum tolerance feet). A grout pad provided by the contractor is required to meet thickness is 6.3 mm (0.25 in).

t to structural steel or through bolts in masonry anchors in direct tension. led with supports where necessary. Wall ontractors. See plan for suggested locations. gh.

on floors.

anchoring. Documents for standard geographic areas that require such

ough the floor" anchoring and/or any bracing ng that cannot be completed because of an rebar etc.

netrations that may be required. The ies (e.g., electrical or any other form of t tension cables or rebar)) will interfere or ing and installation of anchors/screws) ty, GE installers will perform surface ompletion of the "GE surface penetration

system. Refer to Structural Requirements nent.

nimum embedment.

e for leveling is ±1.5 mm per 1 m (0.2 in per 10 this specification. The maximum pad

rails and the walls.

It is recommended that sprinkler heads not be placed between the stationary rails. All sprinkler heads should be mounted so they do not extend downward more than 6.35 mm from the ceiling while in the 'resting' position.

In addition, there should not be anything mounted in the ceiling (i.e. lights, A/C returns, etc) between the stationary rails. This is because the OTS longitudinal drive belt assembly is located on the movable bridge, approximately centered between the two stationary rails, and may come into contact with those ceiling-mounted items during normal use.

# **CEILING REQUIREMENTS**

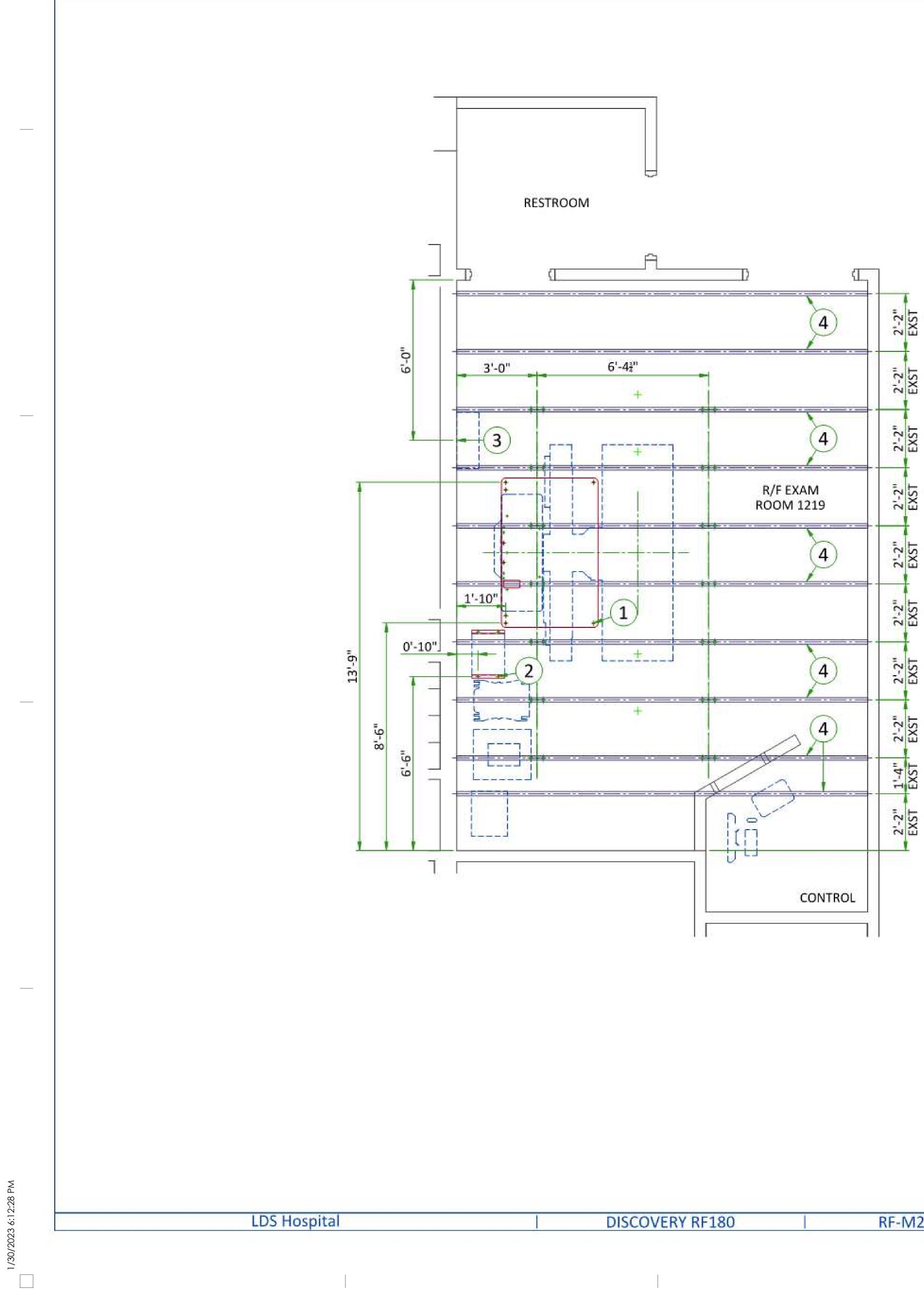
To allow installation of the stationary rail cross-members, clearance is required between the ends of the stationary











ITEM	DESCRIPTION
	(GE SUPPLIED / CONTRACTOR INSTALLED)
1	Area occupied by GE supplied table baseplate
2	Area occupied by GE supplied transformer
	(CONTRACTOR SUPPLIED & INSTALLED)
3	Support backing, locate as shown.
4	Existing, reuse if adequate. Structural support in ceiling for fastening ceiling supported equipment. Supports to run continuous with no fittings extending below face of channel, run wall to wall, be parallel, square, and in the same horizontal plane, flush with the finished ceiling. Rails are mounted to these supports every 26.0" (660mm) and require 452 lbs. (205 kg) per bolt load. Methods of support that permit attachment to structural steel or through bolts in concrete should be favored. Do not use screw anchors in direct tension.

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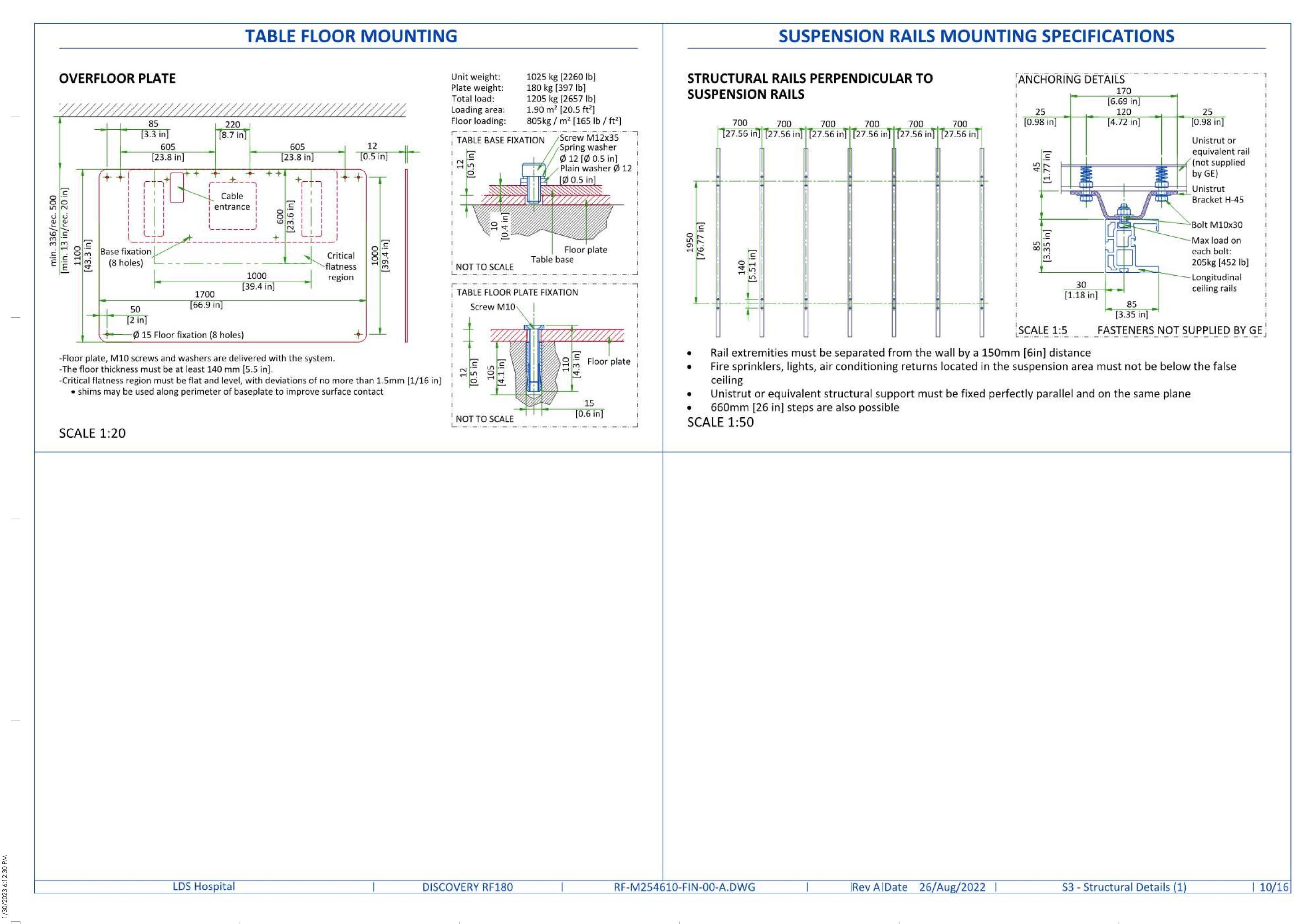








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# **TEMPERATURE AND HUMIDITY SPECIFICATIONS**

### IN-USE CONDITIONS

		EXAM ROOM		0	CONTROL ROOM	Л
	Min	Recommended	Max	Min	Recommended	Max
Temperature	15°C [59°F]	23°C [73°F]	35°C [95°F]	15°C [59°F]	23°C [73°F]	35°C [95°F]
Relative humidity (1)		75%			75%	
Heat dissipation	ma	x 2.5 kW [8490 BTL	J/hr]	0.	41 kW [1399 BTU/ł	ır]

### STORAGE CONDITIONS

Temperature	-10°C [14°F] to 50°C [122°F]
Relative humidity (1)	10% to 80%

Material should not be stored for more than 90 days. 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.

# **HEAT DISSIPATION DETAILS**

ROOM	DESCRIPTION	STANDBY (kW)	IN-USE (kW)	STANDBY (BTU/hr)	IN-USE (BTU/hr)
	Table	0.700	0.700	2388	2388
	Generator	0.022	1.026	75	3500
	Digital Systems Cabinet	0.320	0.320	1092	1092
Exam Room	Partial UPS	0.050	0.050	N/A	N/A
	Monitor (single)	0.057	0.057	149	149
	Advantech Monitor (single)	0.065	0.065	222	222
	OTS	0.350	0.350	1190	1190

LDS Hospital



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# **CONNECTIVITY REQUIREMENTS**

All Digital systems are equipped with Broadband fast Ethernet hardware for Service Diagnostics. The systems equipped with Digital Imaging are capable of placing electronic images on the Hospital image Ethernet Network (DICOM).

The Digital PC (part of the Digital subsystem) is the connectivity point between the system and the hospital. For a Broadband connection, it is the purchaser's responsibility to provide the connection at the Ethernet port on the Digital PC via a Cat 5 Ethernet cable and the hospital Ethernet connection.

Note: System hardware is rated at 100/1000Mbs transfer rate. Hospital connections must be rated for 100/1000Mbs for optimal performance. One RJ45 Ethernet plus should be present in the room.

- must be continuous copper stranded and free from splices.
- 1.1. Aluminum or solid wires are not allowed.
- codes.
- national codes.

- to point).
- electrical codes.
- 9.

The maximum point to point distances illustrated on this drawing must not be exceeded.

- and installed by customers electrical contractor.
- Conduit and duct runs shall have sweep radius bends
- to reduce run length.
- All ductwork must meet the following requirements:
- customers contractor.
- operators control room.
- 10 foot pigtails at all junction points.
- shown on this plan.

# ELECTRICAL NOTES

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

Wire sizes given are for use of equipment. Larger sizes may be required by local codes.

It is recommended that all wires be color coded, as required in accordance with national and local electrical

Conduit sizes shall be verified by the architect, electrical engineer or contractor, in accordance with local or

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 distritbution unit and one on each wall of the procedure room. Use hospital approved outlet or equivalent.

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.

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

8. Conduit turns to have large, sweeping bends with minimum radius in accordance with national and local

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. 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.

12. 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.

All junction boxes, conduit, duct, duct dividers, switches, circuit breakers, cable tray, etc., are to be supplied

Conduits and duct above ceiling or below finished floor must be installed as near to ceiling or floor as possible

Ceiling mounted junction boxes illustrated on this plan must be installed flush with finished ceiling.

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

General contractor to insert pull cords for all cable run conduits between the equipment room and the

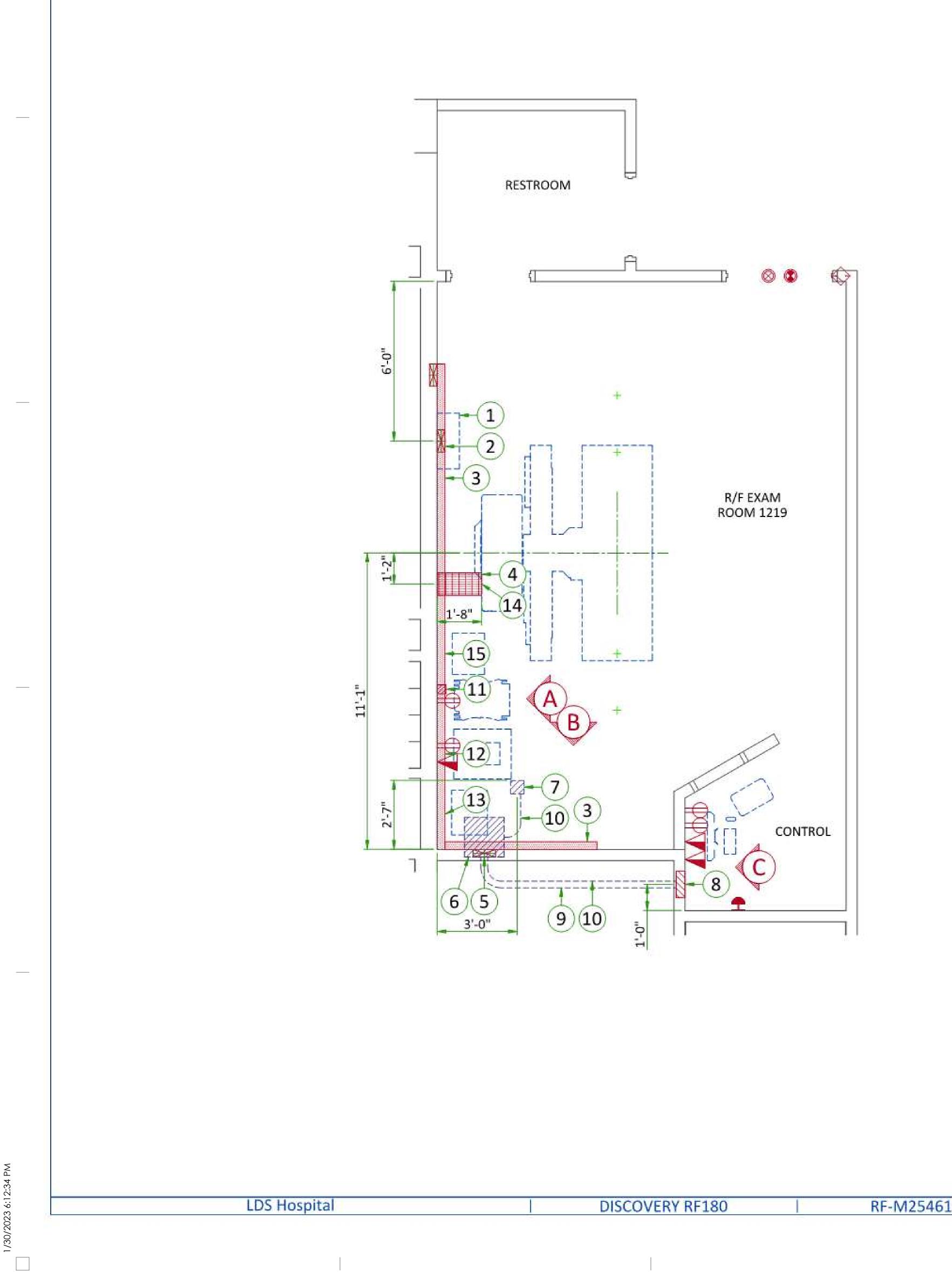
Grounding is critical to equipment function and patient safety. Site must conform to wiring specifications











1/4"=1'-0"|Rev

Item	Electrical Layout Item List
1	Power Distribution Box (PDB)
2	10" x 3 1/2" [250 x 100] Surface wall duct to bottom of PDB with minimum 2 dividers
3	Existing 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 floor duct with minimum 2 dividers
5	Existing 10" x 3 1/2" [250 x 100] Flush wall duct with minimum 2 dividers
6	Existing Box above ceiling
7	Box flush in ceiling - size per local code (Monitor)
8	Existing Flush box (Operators Console)
9	Existing 2 1/2" [64] Conduit above ceiling
10	2 1/2" [64] Conduit above ceiling
11	4" x 4" x 4" [100 x 100 x 100] Box attached to duct (TIMS Readiness Kit)
12	Grommeted opening (Digital Systems Cabinet)
13	Grommeted opening (Generator Cabinet)
14	Grommeted opening (Table)
15	Grommeted opening (Transformer)

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

	Additional Conduit Runs (Contractor Supplied and Installed)			
From	То	Qty	Si	ze
(Bubble # / Item)	(Bubble # / Item)	Quy	In.	mm
3 phase power	1 Power Distribution Box	1	As req'd	As req'd
	Emergency off	1	1/2	16
1 Power Distribution B	OTS On/off switch	1	1/2	16
Warning light		1	1/2	16
1 phase power	Warning light control	1	As req'd	As req'd
		1	1/2	16
6 Generator	Door Switch	1	1/2	16
A Date 26/Aug/2022	E2 - Electrical Lay	out		13/1



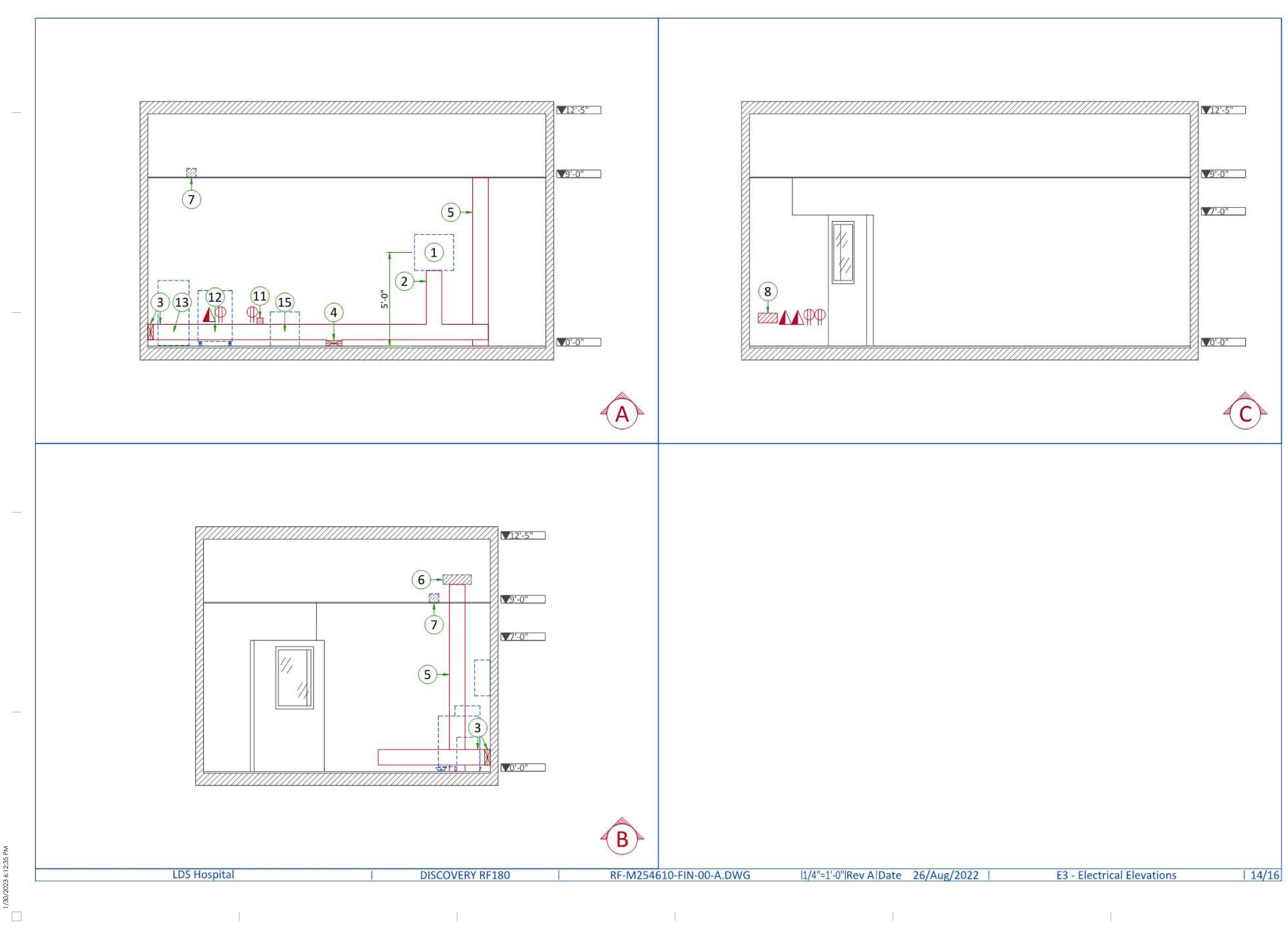
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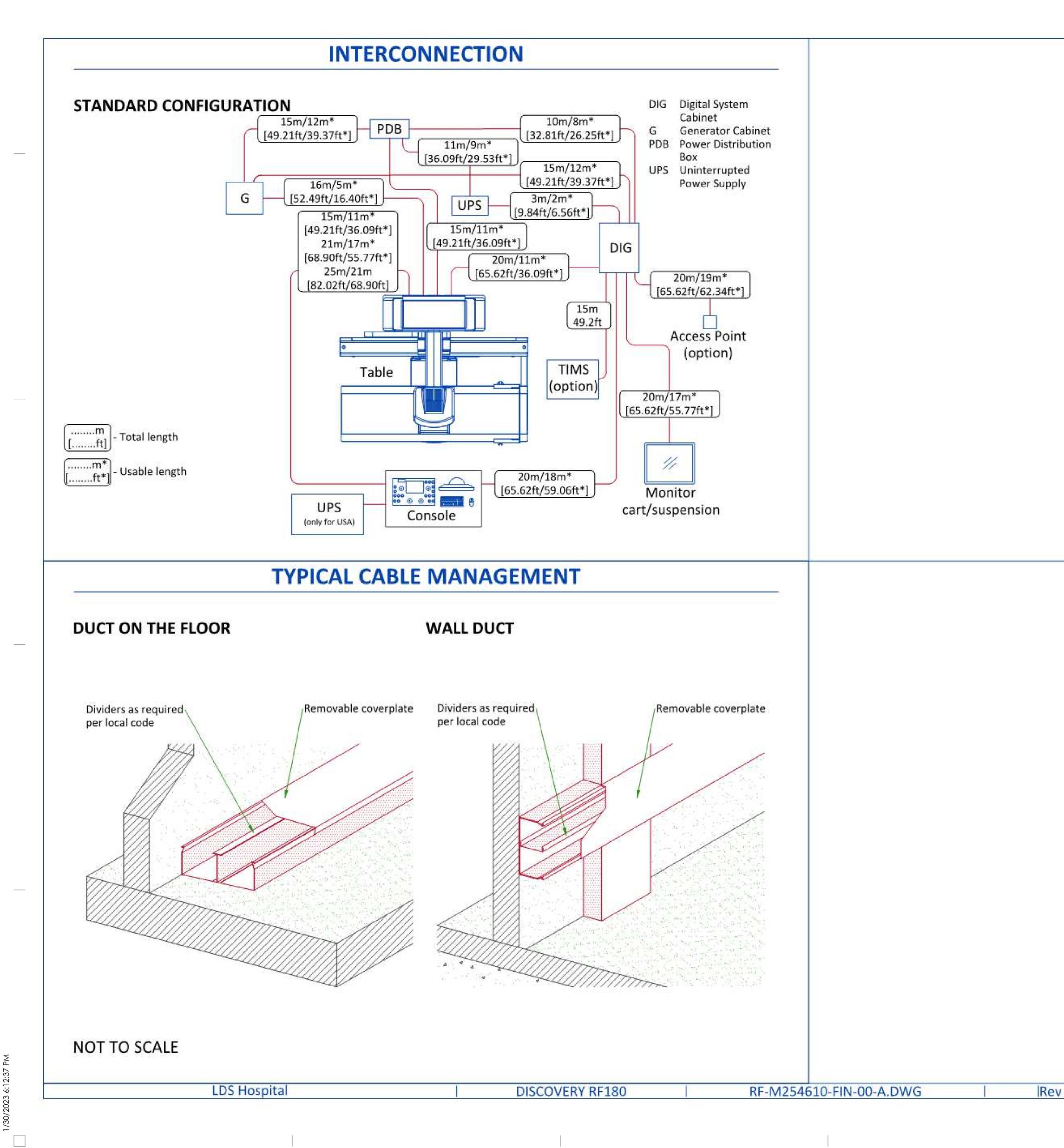








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# **POWER REQUIREMENTS**

GENERATOR TYPE	65 kW	80 kW
POWER SUPPLY		3 PHASES+G 480V ±10%
MAINS FREQUENCY		50/60 Hz ± 2%
LINE INPUT REACTIVE POWER (PEAK)	95 kVA	119 kVA
LINE INPUT ACTIVE POWER	65 kW	80 kW

- Line supply should come into a power distribution box (PDB) containing the protective units and controls. The • PDB does not require a neutral line.
- 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 device at the beginning of the installation • (main low-voltage transformer side) and the protective devices in the PDB.

### 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 GE 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 GE cableways and to additional equipotential connections linking up all the conducting units in the rooms where GE units are located.

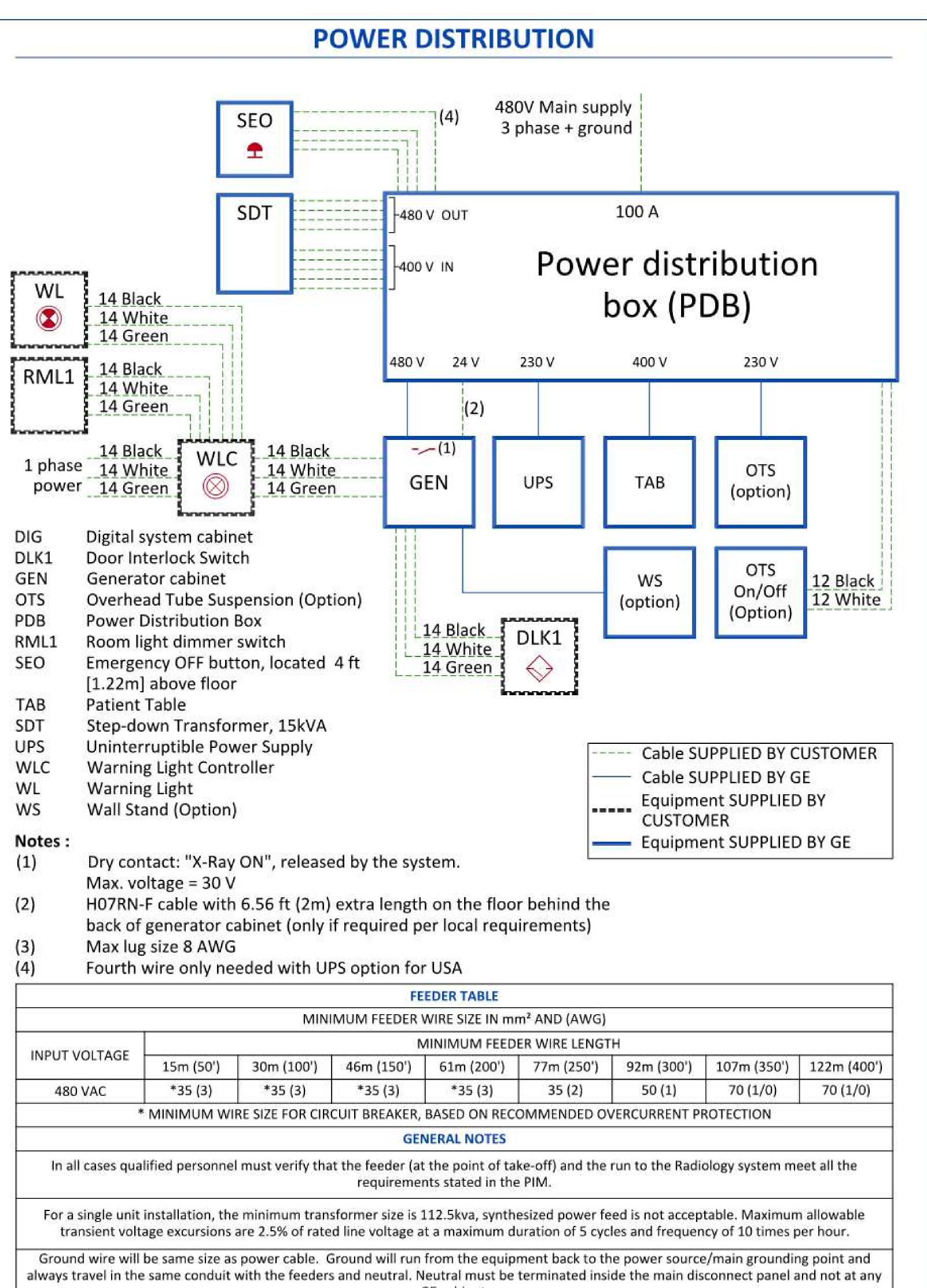
### CABLES

- Power and cable installation must comply with the distribution diagram below.
- cables must be isolated and flexible, cable color codes must comply with standards for electrical All ٠ installation.
- Case PDB furnished by GE: The cables for signals and remote control (Y, SEO, L...) will go to PDB 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) 1**0**11
- Metal cableways should be grounded. .



	FE	EDER TABLE				
MIN	IMUM FEEDER \	WIRE SIZE IN mr	n² AND (AWG)			
	N	INIMUM FEED	ER WIRE LENGT	H		
(100')	46m (150')	61m (200')	77m (250')	92m (300')	107m (350')	122m (400')
5 (3)	*35 (3)	*35 (3)	35 (2)	50 (1)	70 (1/0)	70 (1/0)
FOR CIR	CUIT BREAKER,	BASED ON REC	OMMENDED O	/ERCURRENT PI	ROTECTION	
	GEN	VERAL NOTES				
erify tha	at the feeder (at requiremen	the point of tal nts stated in the	아이님이 아이들은 것 같은 것이 많은 것이 같이 많이	run to the Radi	ology system m	eet all the
	sformer size is 1 ed line voltage a			the first frequencies in the first frequencies of the second second second second second second second second s	The first of the second state of the second st	and there is a first of the second second second second second

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**E5 - Power Requirements** 

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