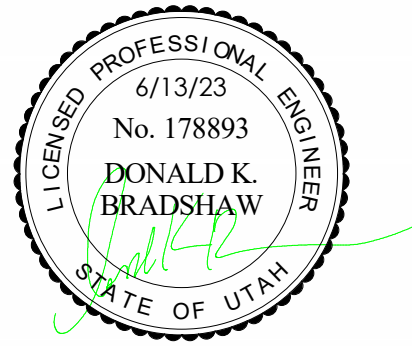


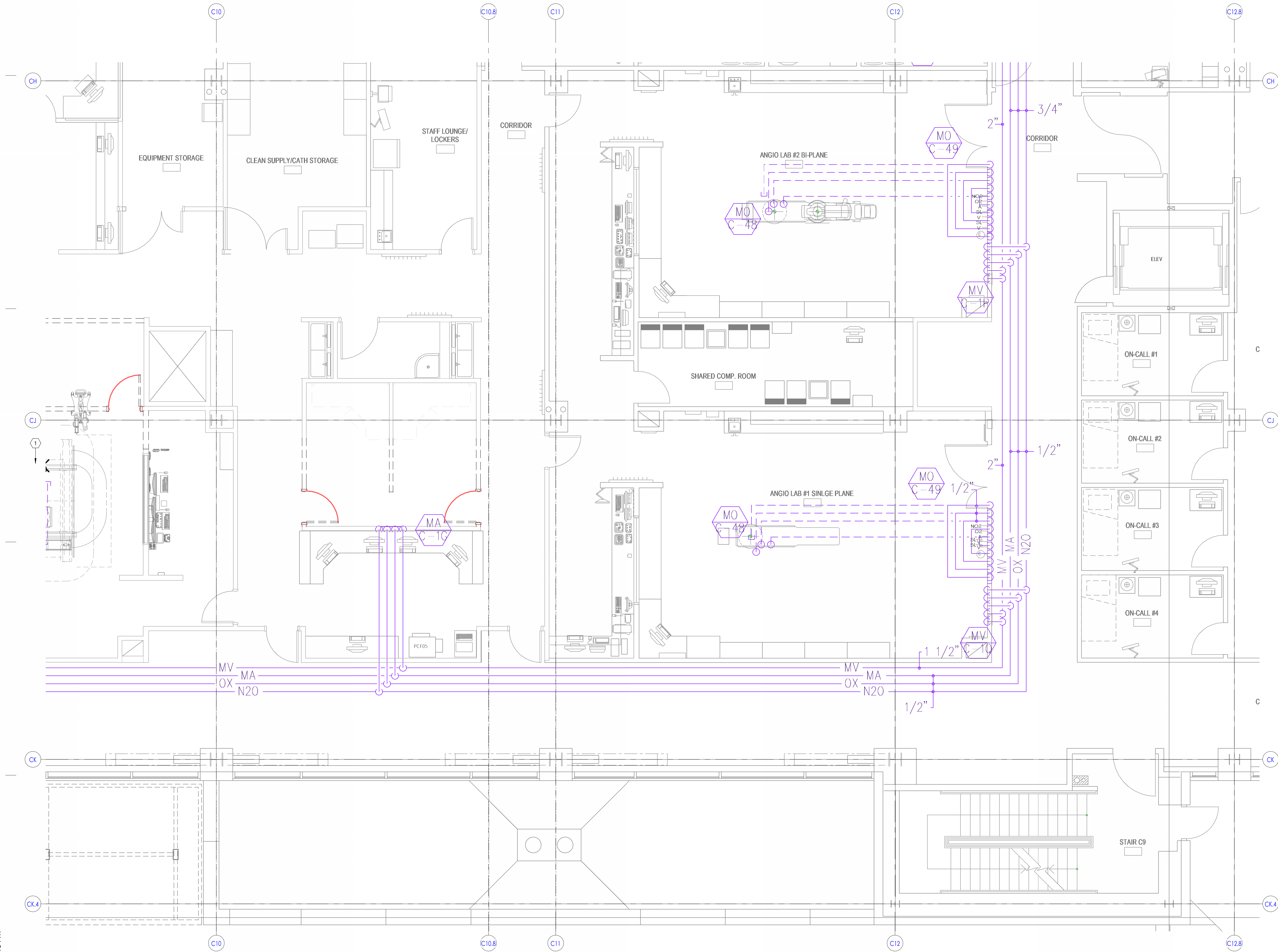
KEYNOTES



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VBFA Project #: 23038



KEY PLAN

Intermountain Health  
Intermountain Medical Center  
Angio Lab #3 Remodel Project

5121 South Cottonwood Street  
Murray, UT 84107

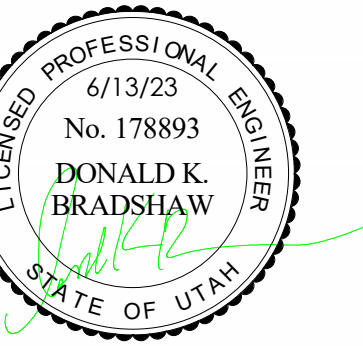
NJRA Project # 22247.00  
Construction Documents June 13, 2023

LEVEL 1  
MEDICAL GAS  
DEMOLITION  
PLAN - AREA B

MGD101B

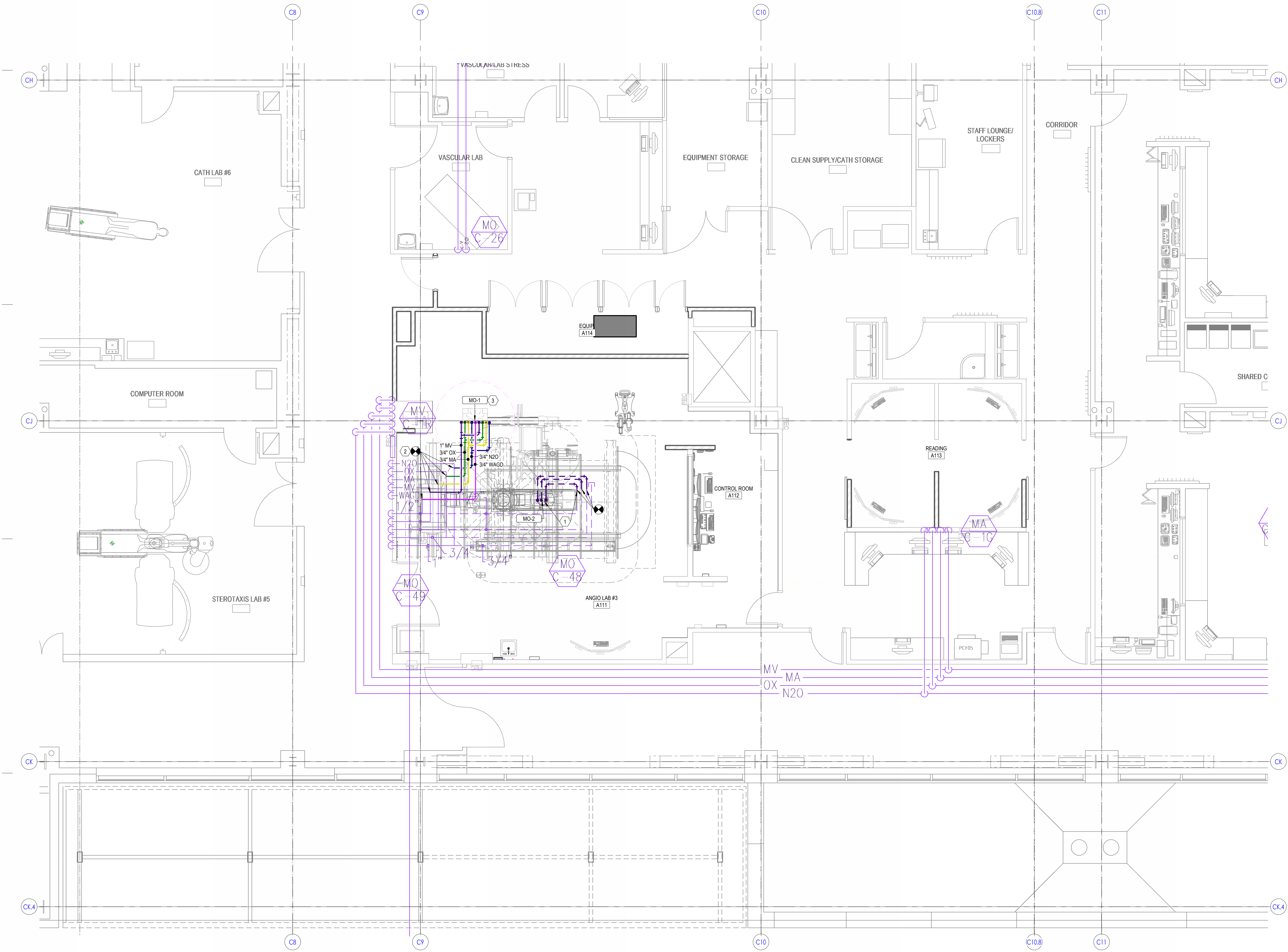
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1 LEVEL 2 PLUMBING DEMOLITION PLAN  
MSD101B 1/4" = 1'-0"



**KEYNOTES**

- 1 IN CEILING SPACE OF LEVEL BELOW, CONNECT TO EXISTING AND EXTEND NEW PIPING TO NEW EQUIPMENT PEDESTAL. COORDINATE PEDESTAL CONNECTIONS WITH MANUFACTURER'S RECOMMENDATIONS.
- 2 NEW MED GAS PIPE CONNECTIONS TO EXISTING MED GAS SYSTEM.
- 3 COORDINATE MED GAS CONNECTIONS TO CEILING ROOM WITH MANUFACTURER'S RECOMMENDATIONS.



**KEY PLAN**

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Intermountain Medical Center  
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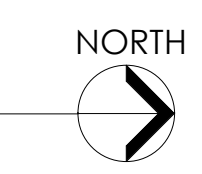
NJRA Project # 22247.00  
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LEVEL 1  
MEDICAL GAS  
PLAN - AREA A

**MG101A**

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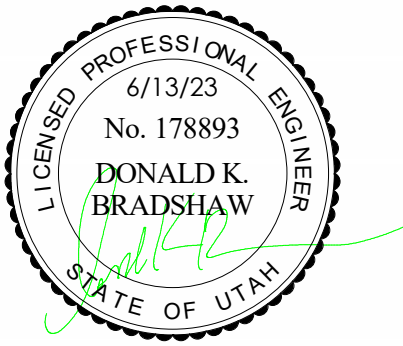
1 LEVEL 2 PLUMBING PLAN  
MG101A 1/4" = 1'-0"



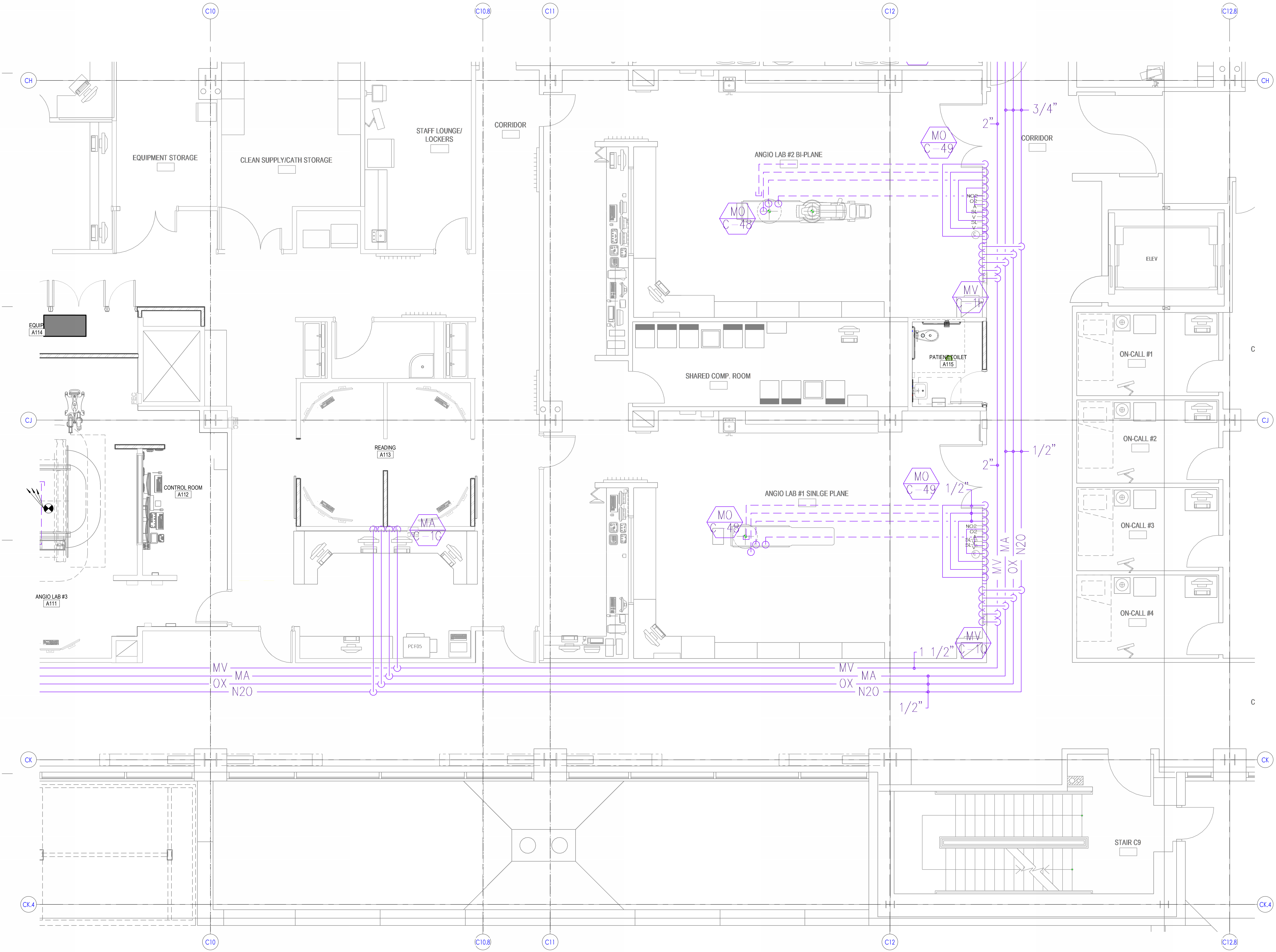
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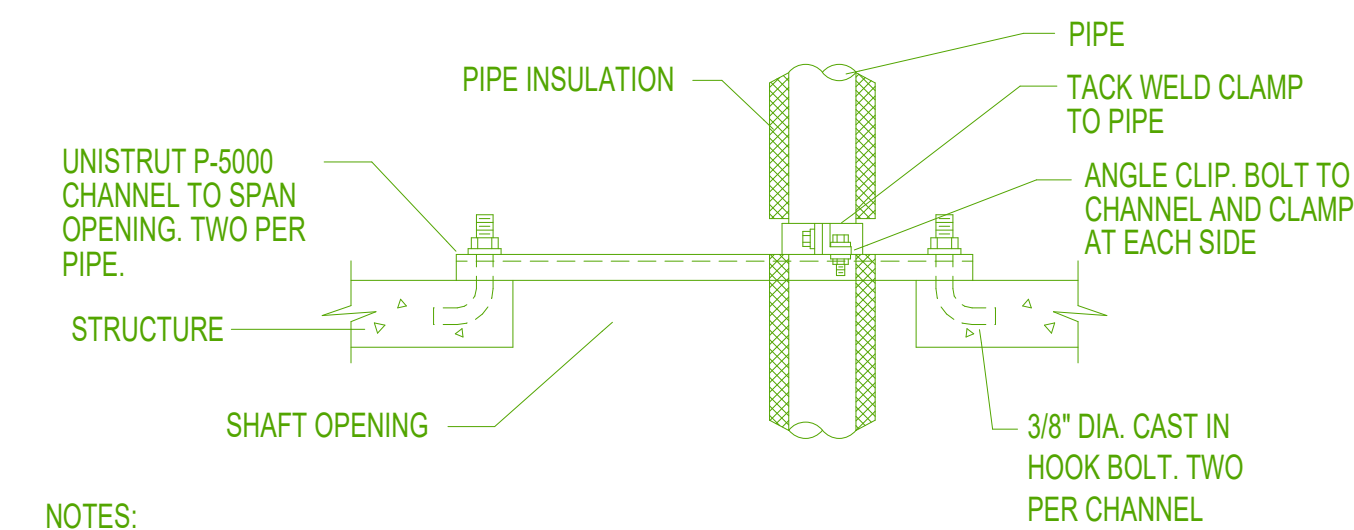
LEVEL 1  
MEDICAL GAS  
PLAN - AREA B

MG101B

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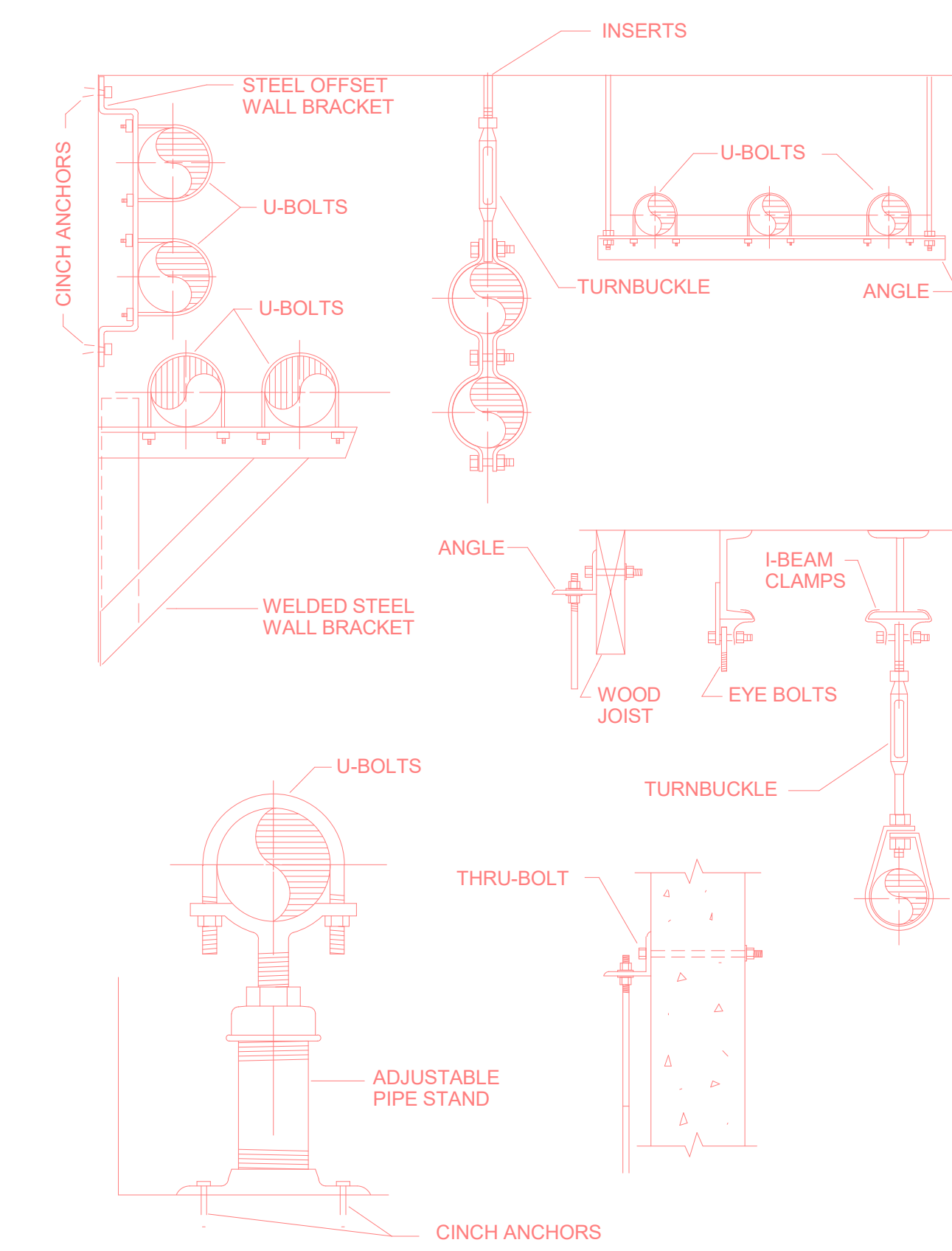
1 LEVEL 2 PLUMBING PLAN  
MG101B 1/4" = 1'-0"

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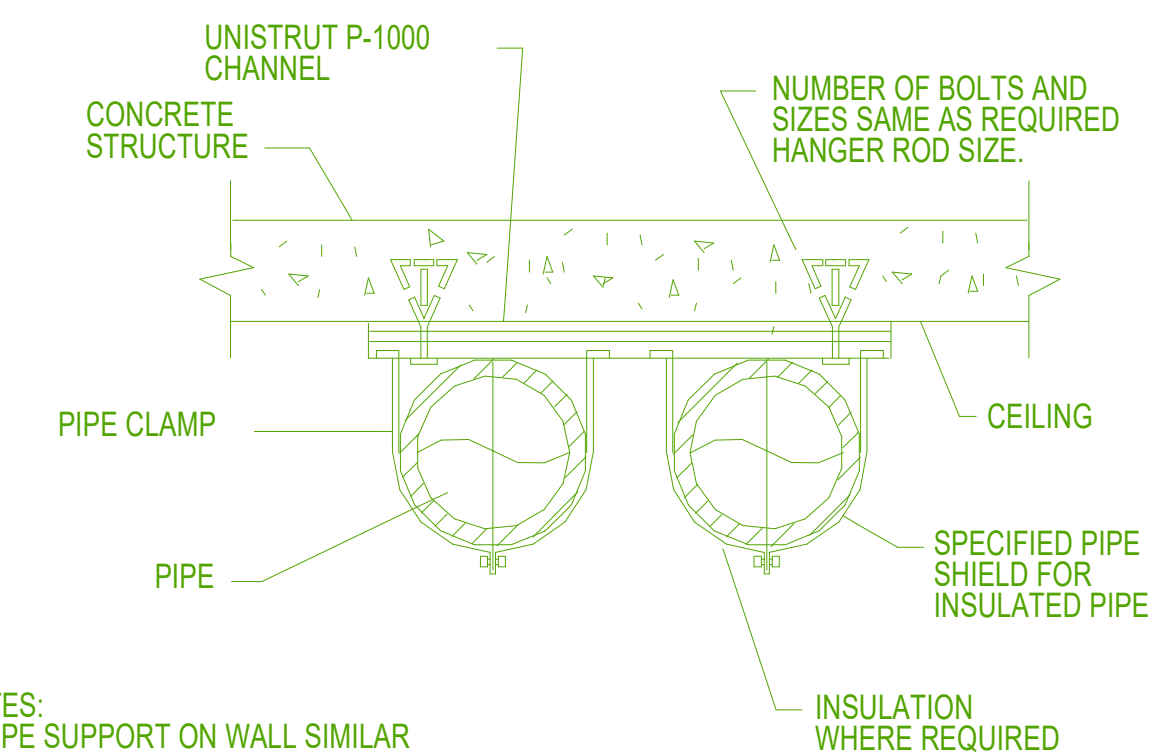


- NOTES:
1. TYPICAL SUPPORT AT EACH FLOOR.
  2. FOR MULTIPLE PIPES INSTALL CHANNELS IN PARALLEL AND PROVIDE ADDITIONAL FRAMING. SIZES OF FRAMING MEMBERS AS REQUIRED TO SUPPORT TOTAL WEIGHT OF PIPE.
  3. INSULATE CLAMP AT CHILLED WATER PIPE ONLY.

**5 PIPE RISER SUPPORT DETAIL**  
P501 NO SCALE

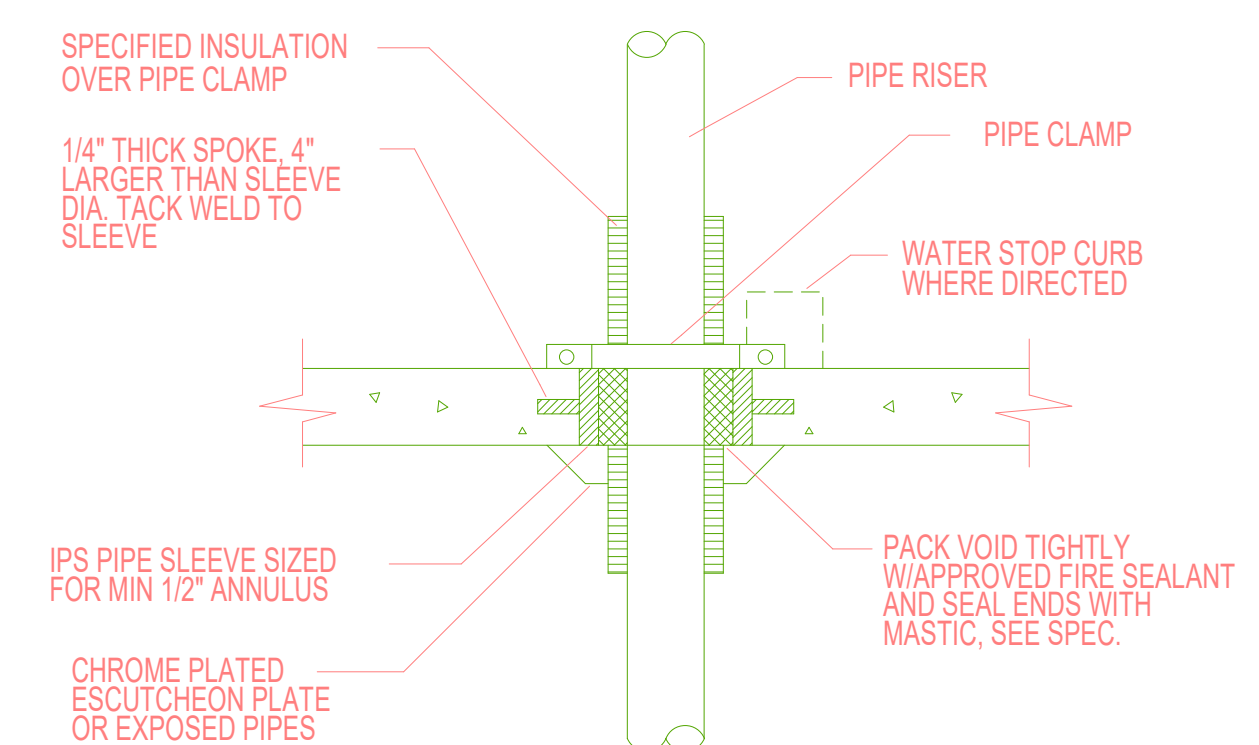


**1 TYPICAL PIPE SUPPORT DETAIL**  
P501 NO SCALE

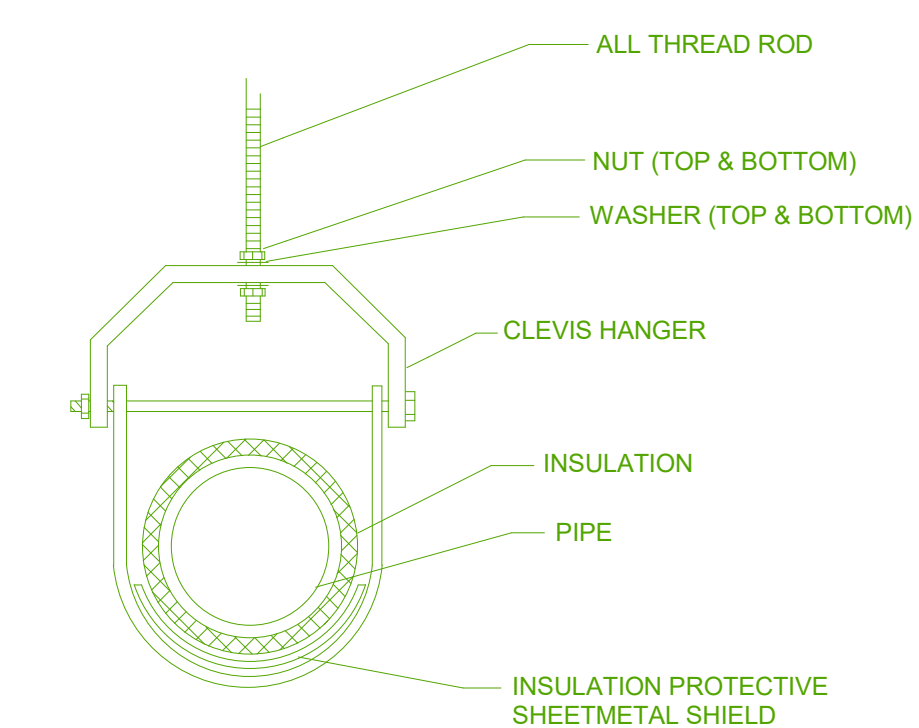


- NOTES:
1. PIPE SUPPORT ON WALL SIMILAR

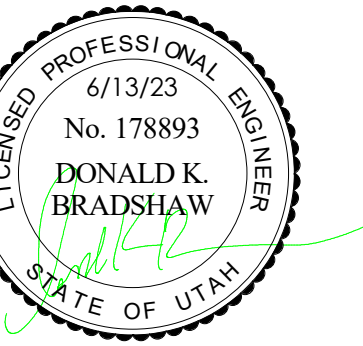
**2 PIPE SUPPORT ON CEILING**  
P501 NO SCALE

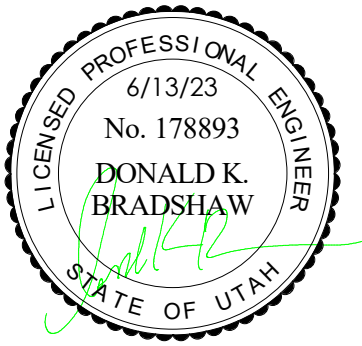


**3 PIPE THROUGH FLOOR SLAB DETAIL**  
P501 NO SCALE



**4 TYPICAL CLEVIS HANGER DETAIL**  
P501 NO SCALE





**PLUMBING FIXTURE SCHEDULE**

ID	FIXTURE	CW (IN)	HW (IN)	W (IN)	V (IN)	NOTES	SPECIFICATION
WC-1	WATER CLOSET	1	--	4	2	FLOOR MOUNTED, MANUAL DUAL FLUSH VALVE, ADA	WATER CLOSET: KOHLER K-4988 HIGHCLIFF VITREOUS CHINA, FLOOR MOUNTED, ELONGATED BOWL, 1-1/2" TOP SPUD, ADA TOILET WITH K-4670-C LUSTRA OPEN-FRONT SEAT, SLOAN WES-111 MANUAL DUAL FLUSH, 1.6 GPF FLUSH VALVE; PROVIDE "DIRT GRABBER" FLUSH VALVE FILTER, COORDINATE SIZE WITH FLUSH VALVE; INSTALL ACTUATOR ON WIDE SIDE OF FIXTURE.
L-1	LAVATORY	1/2	1/2	1 1/2	1 1/2	WALL HUNG, GOOSENECK FAUCET WITH WRISTBLADES	LAVATORY: KOHLER K2038 GREENWICH, 20" X 16" VITREOUS CHINA, WITH FRONT OVERFLOW, 4" CENTERS, CHICAGO 786-GN8FCW&CP FACET, WITH WRIST BLADE HANDLES, 8NS RIGID/SWING GOOSENECK SPOUT WITH 0.5 GPM LAMINAR FLOW CONTROL IN SPOUT INLET, WATTS LFUSG-B-M2 THERMOSTATIC MIXING VALVE WITH WATTS # 7 DUAL CHECK VALVES ON HOT AND COLD LINES INSTALLED IN CEILING, FLEXIBLE STAINLESS STEEL, SUPPLIES WITH WITH LOOSE KEY ANGLE STOPS, CHICAGO 327-XCP OPEN-GRID STRAINER AND CAST BRASS P-TRAP WITH CLEAN OUT PLUG, SMITH 0700-Z CONCEALED ARM CHAIR CARRIER WITH FOOT SUPPORT, PROVIDE ADA COMPLIANT UNDER COUNTER PIPING WRAP BY TRUE-BRO, COLOR TO BE WHITE.
FD-1	FLOOR DRAIN	--	--	2	1 1/2	GENERAL USE FLOOR DRAIN	FLOOR DRAIN: SMITH FIGURE 2005Y-P050 FLOOR DRAIN WITH CAST IRON BODY AND FLASHING COLLAR WITH 6-INCH ROUND NICKEL BRONZE ADJUSTABLE STRAINER HEAD WITH SECURED GRATE, PROVIDE DEEP SEAL TRAP AND TRAP GUARD TYPE TRAP SEAL DEVICE.
S-1	SINK	1/2	1/2	1 1/2	1 1/2	BASIN INTEGRAL TO COUNTERTOP, GOOSENECK FAUCET WITH WRISTBLADES	INTEGRAL SINK SPECIFIED BY THE ARCHITECT, CHICAGO 608-GN8FC&CP REMOTE FACET, WITH CHICAGO 6254-PSL D&CP FOOT CONTROL VALVE, 8NSFC 8" RIGID/SWING, GOOSENECK SPOUT WITH 1.5 GPM LAMINAR FLOW CONTROL IN SPOUT, FLEXIBLE STAINLESS STEEL SUPPLIES WITH WITH LOOSE KEY ANGLE STOPS, FLEXIBLE STAINLESS STEEL SUPPLIES WITH WITH LOOSE KEY ANGLE STOPS, CHICAGO 327-XCP OPEN-GRID STRAINER AND CAST BRASS P-TRAP WITH CLEAN OUT PLUG, PROVIDE ADA COMPLIANT UNDER COUNTER PIPING WRAP BY TRUE-BRO, COLOR TO BE WHITE.

1. ALL UNDER GROUND WASTE AND VENT SHALL BE 2" OR GREATER PER DRAWINGS.

**MEDICAL GAS OUTLETS SCHEDULE**

SYMBOL	ROOM TYPE	# OF...						PIPE...						REMARKS
		OX	MA	MV	WAGD	N20	N20	OX	MA	MV	WAGD	N20		
MO-1	ANGIO LAB #3	2	2	2	1	2	1/2	1/2	3/4	3/4	1/2	1.2		
MO-2	ANGIO LAB #3	1	1	2	--	--	1/2	1/2	3/4	--	--	1.3		

1. PIPE SIZES ARE FOR ONE SET OF OUTLETS.  
2. BOOM MOUNTED OUTLETS.  
3. PEDESTAL MOUNTED OUTLETS

SYMBOLS LEGEND	
SYMBOL	DESCRIPTION
<b>REFERENCE AND LINE SYMBOLS</b>	
	DETAIL INDICATOR. A5 INDICATES DETAIL NUMBER, E-501 INDICATES DRAWING SHEET WHERE DETAIL IS SHOWN.
	ELEVATION OR SECTION INDICATOR, EXTERIOR. A5 INDICATES ELEVATION OR SECTION NUMBER, E-201 INDICATES DRAWING SHEET WHERE ELEVATION OR SECTION IS SHOWN.
	ELEVATION OR SECTION INDICATOR, INTERIOR. A5 INDICATES ELEVATION OR SECTION NUMBER, E-201 INDICATES DRAWING SHEET WHERE ELEVATION OR SECTION IS SHOWN.
	ROOM IDENTIFIER WITH ROOM NAME AND NUMBER.
	KEYNOTE INDICATOR.
	REVISION INDICATOR.
	EQUIPMENT INDICATOR.
	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.
	DEMOLITION LINE: DASHED, MEDIUM LINE
<b>WIRING METHODS</b>	
	SINGLE BRANCH CIRCUIT HOME RUN TO PANELBOARD WITH DEDICATED NEUTRAL CONDUCTOR. LETTER AND NUMBER NOTATION IDENTIFY PANEL AND CIRCUIT NUMBER.
	BRANCH CIRCUIT HOME RUN TO PANELBOARD: NUMBER OF ARROWS INDICATES NUMBER OF CIRCUITS. LETTER AND NUMBER NOTATIONS IDENTIFY PANEL AND CIRCUIT NUMBERS.
	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.
	CONDUIT STUB. DIMENSION RECORD DRAWINGS AND MARK.
	CONDUCTOR & CONDUIT ("CC") SCHEDULE INDICATOR. REFER TO ONE-LINE DIAGRAM.
	ADA ACCESS PUSH PLATE
	JUNCTION BOX.
	JUNCTION BOX, CEILING.
	JUNCTION BOX, SYSTEMS FURNITURE COMMUNICATION CONNECTION.
	JUNCTION BOX, SYSTEMS FURNITURE POWER CONNECTION.
	PULL BOX.
	CABLE TRAY ABOVE ACCESSIBLE CEILING. "A" DENOTES CABLE TRAY WIDTH, "B" DENOTES CABLETRAY DEPTH. "+C-D" DENOTES CABLE TRAY ELEVATION ABOVE OR BELOW FINISHED SURFACE.
	LADDER RACK.
	CABLE J-HOOKS ABOVE ACCESSIBLE CEILING.
	MECHANICAL EQUIPMENT CONNECTION. REFER TO EQUIPMENT SCHEDULE FOR REQUIREMENTS.
	GROUND BUSBAR. REFER TO GROUNDING RISER DIAGRAM FOR ADDITIONAL INFORMATION.
<b>LIGHTING</b>	
	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
	EXIT SIGN: DOUBLE FACE; CEILING MOUNTED
	EXIT SIGN: DOUBLE FACE; WALL MOUNTED
<b>LIGHTING CONTROL</b>	
	OCCUPANCY SENSOR, DUAL TECHNOLOGY, OMNI-DIRECTIONAL, CEILING.
	OCCUPANCY SENSOR, DUAL TECHNOLOGY, WALL.
	OCCUPANCY SENSOR, DUAL TECHNOLOGY, DIRECTIONAL.
	VACANCY SENSOR, DUAL TECHNOLOGY, OMNI-DIRECTIONAL, CEILING.
	VACANCY SENSOR, DUAL TECHNOLOGY, WALL.
	LOW VOLTAGE DIGITAL LIGHTING CONTROL SWITCH. LETTER "a,b" INDICATES ZONING WHERE SHOWN (REFER TO PLANS, SCHEDULES, AND DETAILS FOR EXACT BUTTON CONFIGURATION AND PROGRAMMING REQUIREMENTS)
	DIGITAL LIGHTING ROOM CONTROLLER
	DIGITAL LIGHTING DIMMING CONTROLLER
	LIGHTING SPACE CONTROL TYPE. X INDICATES TYPE. SEE SCHEDULE / DIAGRAM.

SYMBOLS LEGEND	
SYMBOL	DESCRIPTION
<b>WIRING DEVICES</b>	
	RECEPTACLE, DUPLEX, NEMA 5-20R.
	RECEPTACLE, DUPLEX, ABOVE COUNTER: NEMA 5-20R.
	RECEPTACLE, DUPLEX, CEILING: NEMA 5-20R.
	RECEPTACLE, DUPLEX, DEDICATED CIRCUIT: NEMA 5-20R.
	RECEPTACLE, DUPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER, DRINKING FOUNTAIN, CONCEAL WATER COOLER RECEPTACLE BEHIND WATER COOLER. SEE MECHANICAL/PLUMBING SHOP DRAWINGS FOR INSTALLATION REQUIREMENTS.
	RECEPTACLE, DUPLEX, ISOLATED GROUND: NEMA 5-20R.
	RECEPTACLE, DUPLEX, SWITCHED: NEMA 5-20R.
	RECEPTACLE, DUPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER, WET LABEL, "WEATHERPROOF IN USE": NEMA 5-20R.
	RECEPTACLE, DUPLEX, HOSPITAL GRADE: NEMA 5-20R.
	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.
	RECEPTACLE, QUADRAPLEX: NEMA 5-20R.
	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.
	RECEPTACLE, SPECIAL PURPOSE. PROVIDE RECEPTACLE TO MATCH EQUIPMENT PLUG.
	RECEPTACLE, SPECIAL PURPOSE ON EMERGENCY POWER. PROVIDE RECEPTACLE TO MATCH EQUIPMENT PLUG.
	MULTI-OUTLET ASSEMBLY: NEMA 5-20R.
	DROP CORD. SEE DETAIL.
	FLUSH FLOOR BOX. "F" SHOWN ON DRAWINGS. REFER TO WIRING DEVICE SCHEDULE IN THE ELECTRICAL SPECIFICATIONS FOR CONFIGURATION AND DEVICES.
	POWER POLE. "P" SHOWN ON DRAWINGS. REFER TO WIRING DEVICE SCHEDULE IN THE ELECTRICAL SPECIFICATIONS FOR CONFIGURATION AND DEVICES.
	FLUSH RATER POKED THRU. "F" SHOWN ON DRAWINGS. REFER TO WIRING DEVICE SCHEDULE IN THE ELECTRICAL SPECIFICATIONS FOR CONFIGURATION AND DEVICES.
	SWITCH, DIMMER.
	SWITCH, SINGLE POLE ("X" INDICATES FIXTURES CONTROLLED).
	SWITCH, DOUBLE POLE ("X" INDICATES FIXTURES CONTROLLED).
	SWITCH, THREE-WAY ("X" INDICATES FIXTURES CONTROLLED).
	SWITCH, FOUR-WAY ("X" INDICATES FIXTURES CONTROLLED).
	SWITCH, DOOR.
	SWITCH, WEATHERPROOF.
	RECEPTACLE, DUPLEX, TAMPER RESISTANT: NEMA 5-20R.
	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
	RECEPTACLE, DUPLEX, RECESSED, NEMA 5-20R, AUTOMATICALLY CONTROLLED THROUGH TIME OR OCCUPANCY BASED CONTROLS (REFER TO PLANS FOR CONTROL METHOD)
	RECEPTACLE, QUADRAPLEX, RECESSED, NEMA 5-20R, AUTOMATICALLY CONTROLLED THROUGH TIME OR OCCUPANCY BASED CONTROLS (REFER TO PLANS FOR CONTROL METHOD)
	INDICATES A RECEPTACLE IS AUTOMATICALLY CONTROLLED THROUGH TIME OR OCCUPANCY BASED CONTROLS (REFER TO PLANS FOR CONTROL METHOD)
<b>NURSE CALL</b>	
	JUNCTION BOX.
	CORRIDOR LIGHT.
	BATHROOM PULL CORD STATION.
	DUTY STATION.
	EMERGENCY ASSISTANCE CALL STATION.
	EMERGENCY ASSISTANCE CODE BLUE CALL STATION.
	PATIENT STATION.
	STAFF STATION.
	TOUCH SCREEN NURSE CALL MASTER STATION.
	ZONE LIGHT CONTROLLER.
	NURSE CALL AREA CONTROL UNIT & POWER SUPPLIES.

SYMBOLS LEGEND	
SYMBOL	DESCRIPTION
<b>ELECTRICAL POWER AND DISTRIBUTION</b>	
	FUSE WITH RATING (ONE-LINE DIAGRAM).
	DISCONNECT, FUSED (ONE-LINE DIAGRAM).
	OVERLOAD RELAY (ONE-LINE DIAGRAM).
	STARTER (ONE-LINE DIAGRAM).
	CIRCUIT BREAKER, MOLDED CASE (ONE-LINE DIAGRAM).
	CIRCUIT BREAKER, MOLDED CASE WITH SHUNT TRIP (ONE-LINE DIAGRAM).
	CIRCUIT BREAKER, MOTOR CIRCUIT PROTECTION (ONE-LINE DIAGRAM).
	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).
	TRANSFORMER (ONE-LINE DIAGRAM).
	DISTRIBUTION PANELBOARD, MOTOR CONTROL CENTER, PLUG-IN BUSWAY, MEDIUM VOLTAGE SWITCHBOARD (ONE-LINE DIAGRAM).
	PANELBOARD WITH MAIN LUGS ONLY. BUS SIZE AND PHASE AS SHOWN (ONE-LINE DIAGRAM).
	PANELBOARD WITH MAIN CIRCUIT BREAKER. SIZE AND PHASE AS SHOWN (ONE-LINE DIAGRAM).
	PANELBOARD WITH MAIN AND SUB FEED CIRCUIT BREAKER (ONE-LINE DIAGRAM).
	PANELBOARD WITH MAIN LUGS ONLY AND SURGE PROTECTION WITH CIRCUIT BREAKER (ONE-LINE DIAGRAM).
	PANELBOARD WITH SUB FEED LUGS (ONE-LINE DIAGRAM).
	PANELBOARD WITH CIRCUIT BREAKER AND SUB FEED LUGS (ONE-LINE DIAGRAM).
	TRANSFER SWITCH (ONE-LINE DIAGRAM).
	DIGITAL MULTIMETER (ONE-LINE DIAGRAM).
	EARTH GROUND (ONE-LINE DIAGRAM).
	SERVICE ENTRANCE SURGE PROTECTION (ONE-LINE DIAGRAM).
	METER.
	BROAD BAND FILTER (ONE-LINE DIAGRAM).
	VARIABLE FREQUENCY MOTOR CONTROLLER (ONE-LINE DIAGRAM).
	DIODE (ONE-LINE DIAGRAM).
	DISCONNECT SWITCH, FUSED.
	STARTER, COMBINATION WITH DISCONNECT SWITCH.
	STARTER OR MOTOR CONTROLLER.
	PUSHBUTTON.
	PUSHBUTTONS, MOTOR CONTROL.
	PANELBOARD CABINET, FLUSH MOUNTED.
	PANELBOARD CABINET, SURFACE MOUNTED, 1 SECTION.
	PANELBOARD CABINET, SURFACE MOUNTED, 2 SECTION.
	DISTRIBUTION PANEL OR SWITCHBOARD.
	LIGHTING RELAY, CONTACTOR PANEL, OR DIMMING ENCLOSURE.
	TRANSFORMER (SEE ONE-LINE FOR SIZE)
	BUSWAY.

SYMBOLS LEGEND	
SYMBOL	DESCRIPTION
<b>FIRE ALARM</b>	
	FIRE ALARM ANNUNCIATOR PANEL.
	FIRE ALARM CONTROL PANEL, SEMI-RECESSED.
	FIRE ALARM TERMINAL CABINET: NAC, SLC, SPEAKER CIRCUITS, AMPLIFIERS, BATTERIES
	CONTROL PANEL FOR HVAC: SMOKE CONTROL, STAIR PRESSURIZATION.
	VOICE EVACUATION PANEL.
	ARMORED CABLE.
	REMOTE VOICE EVACUATION MICROPHONE.
	AUTOMATIC DOOR CLOSERS: DOOR CLOSERS SHALL BE FURNISHED WITH DOOR HARDWARE AND CONNECTED BY FIRE ALARM INSTALLER.
	CONTROL MODULE.
	MONITOR MODULE.
	FIRE ALARM MANUAL PULL STATION.
	SHUT DOWN RELAY. INSTALL RELAY IN CONTROL CIRCUIT OF EQUIPMENT TO BE CONTROLLED IN THE EVENT OF A FIRE.
	MAGNETIC DOOR HOLDER.
	DETECTOR, SMOKE.
	DETECTOR, SMOKE WITH AUXILIARY CONTACT.
	DETECTOR, SMOKE, BEAM RECEIVER.
	DETECTOR, SMOKE, BEAM TRANSMITTER.
	DETECTOR, SMOKE, ELEVATOR RECALL DESIGNATION.
	DETECTOR, SMOKE WITH GUARD.
	DETECTOR, SMOKE WITH STROBE.
	DETECTOR, SMOKE, AIR SAMPLING SYSTEM PORT LOCATION.
	DETECTOR, SMOKE, DUCT WITH HOUSING AND SAMPLING TUBE.
	SMOKE DAMPER, 120V POWER FROM ELECTRICAL SYSTEM.
	COMBINATION FIRE/SMOKE DAMPER, 120V POWER FROM ELECTRICAL SYSTEM.
	REMOTE ALARM INDICATING AND TEST SWITCH.
	DETECTOR, CARBON MONOXIDE.
	STROBE, WALL MOUNTED. SUBSCRIPT INDICATES CANDELA RATING.
	ALARM, HORN/STROBE, WALL MOUNTED, ONE ASSEMBLY.
	ALARM, HORN/STROBE, ONE ASSEMBLY, CEILING MOUNTED. SUBSCRIPT INDICATES CANDELA RATING.
	ALARM, HORN, CEILING MOUNTED. SUBSCRIPT INDICATES CANDELA RATING.
	SPEAKER/STROBE, CEILING MOUNTED. SUBSCRIPT INDICATES CANDELA RATING.
	SPEAKER, CEILING MOUNTED.
	ALARM, STROBE, CEILING MOUNTED. SUBSCRIPT INDICATES CANDELA RATING.
<b>CCTV</b>	
	CCTV CABLE, POWER.
	CCTV CABLE, VIDEO SIGNAL.
	CCTV HEADEND EQUIPMENT.
	CCTV MONITOR.
	CCTV CAMERA/ENCLOSURE WITH LENS, TYPICAL. SEE SCHEDULE.
	CCTV CAMERA WITH PAN, TILT AND ZOOM.
	PANNING CAMERA TRANSVERSE ANGLE.
<b>SECURITY</b>	
	SECURITY CABLE. SEE EQUIPMENT SCHEDULE FOR CABLE TYPE.
	ACCESS CONTROL HEADEND EQUIPMENT.
	SECURITY CONTROL PANEL.
	INTRUSION DETECTION HEADEND EQUIPMENT.
	CARD ACCESS DOOR TYPE #1 OR AS NOTED. SEE SCHEDULE.
	KEYPAD/CARD READER COMBINATION.
	DOOR SWITCH, BALANCED MAGNETIC CONTROL.
	EXIT REQUEST.
	REMOTE DOOR RELEASE BUTTON.
	BELL.
	BUZZER.
	BUZZER, COMBINATION BELL.
	CONTROLLED ACCESS POINT.
	INTERCOM STATION.
	PANIC DURESS SWITCH.
	ANNUNCIATOR PANEL.
	MASTER STATION, INTERCOM.

ABBREVIATIONS	
NOTE: ALL ABBREVIATIONS MAY NOT BE USED.	
1P	SINGLE POLE
1PH	SINGLE-PHASE
1WAY	ONE-WAY
2/C	TWO-CONDUCTOR
2WAY	TWO-WAY
3/C	THREE-CONDUCTOR
3WAY	THREE-WAY
4OUT	QUADRUPLX RECEPTACLE OUTLET
4PDT	FOUR-POLE DOUBLE THROW
4PST	FOUR-POLE SINGLE THROW
4W	FOUR-WIRE
4WAY	FOUR-WAY
A	ABOVE COUNTER
AC	ARMORED CABLE
ADA	AMERICANS WITH DISABILITIES ACT
ADJ	ADJACENT
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AIC	AMPERE INTERRUPTING CAPACITY
ALUM	ALUMINUM
AMP	AMPERE
ANN	ANNUNCIATOR
AP	ACCESS POINT (WIRELESS DATA)
AR	AS REQUIRED
ASC	AMPS SHORT CIRCUIT
ATS	AUTOMATIC TRANSFER SWITCH
AV	AUDIO VISUAL
AWG	AMERICAN WIRE GAGE
BB	BUCK-BOOST TRANSFORMER
BF	BELOW FINISHED FLOOR
BFG	BELOW FINISHED GRADE
C	CATEGORY
CAT	CEILING
CATV	COMMUNITY ANTENNA TELEVISION
CB	CIRCUIT BREAKER
CCBA	CUSTOM COLOR AS SELECTED BY ARCHITECT
CCTV	CLOSED CIRCUIT TELEVISION
CFCI	CONTRACTOR FURNISHED/ CONTRACTOR INSTALLED
CFOI	CONTRACTOR FURNISHED/ OWNER INSTALLED
CFBA	CUSTOM FINISH AS SELECTED BY ARCHITECT
CKT	CIRCUIT
CM	CONSTRUCTION MANAGER
CND	CONDUIT
CO	CONVENIENCE OUTLET
COR	CONTRACTING OFFICER'S REPRESENTATIVE
CP	CONTROL PANEL
CT	CURRENT TRANSFORMER
CTV	CABLE TELEVISION
CU	COPPER
DU	UNIT OF SOUND LEVEL
DDPT	DOUBLE POLE, DOUBLE THROW
DS	DISCONNECT SWITCH
E	ENHANCED
EA	EACH
EM	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
ENT	ELECTRIC NONMETALLIC TUBING
EPO	EMERGENCY POWER OFF EQUIPMENT
EQUIP	EQUIPMENT ROOM
EX	EXISTING
EX	EXISTING
F	FURNITURE MOUNTED
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FLA	FULL LOAD AMPS
FMC	FLEXIBLE METAL CONDUIT
FOB	FREIGHT ON BOARD
FPP	FIBER PATCH PANEL
FVNR	FULL VOLTAGE NON-REVERSING
FVR	FULL VOLTAGE REVERSING GENERATOR
GFCI	GROUND FAULT INTERRUPTER
GFP	GROUND FAULT PROTECTION
GIG	GIGA HERTZ
GND	GROUND
HV	HEAVY DUTY
HID	HIGH INTENSITY DISCHARGE
HDA	HAND-OFF-AUTOMATIC HORSE POWER
HP	TYPICAL
HPS	HIGH POWER FACTOR
HPS	HIGH PRESSURE SODIUM
HV	HIGH VOLTAGE
HWM	HORIZONTAL WIRE MANAGEMENT
HZ	HERTZ
IO	INPUT/OUTPUT
IG	ISOLATED GROUND
IMC	INTERMEDIATE METAL CONDUIT
INIS	INSULATED/ISOLATED
IR	INFRARED
J-BOX	JUNCTION BOX
KV	KILOVOLT
KVA	KILOVOLT AMPERE
KVAR	KILOVOLT AMPERE REACTIVE
KW	KILOWATT
KWh	KILOWATT HOUR
LED	LIGHT EMITTING DIODE
LFMC	LIQUID TIGHT FLEXIBLE METAL CONDUIT
LFNC	LIQUID TIGHT FLEXIBLE NONMETALLIC CONDUIT
LPS	LOW PRESSURE SODIUM
LRA	LOOKED ROTOR AMPS
LTG	LIGHTING
LV	LOW VOLTAGE
LW	MASTER ANTENNA TELEVISION SYSTEM
MAX	MAXIMUM
MC	METAL CLAD
MCA	MINIMUM CIRCUIT AMPS
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MCP	MOTOR CIRCUIT PROTECTION
MDP	MAIN DISTRIBUTION PANEL
MG	MOTOR GENERATOR
MH	MANHOLE
MM	MINIMUM
MLO	MAIN LUGS ONLY
MOP	MAXIMUM OVERCURRENT PROTECTION
MPS	MANUAL TRANSFER SWITCH
NA	NOT APPLICABLE
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NFC	NATIONAL FIRE CODE
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OC	ON CENTER
OCP	OVERCURRENT PROTECTION
OE	OWNER ELECTRONICS
OFICI	OWNER FURNISHED/ CONTRACTOR INSTALLED
OFIOI	OWNER FURNISHED/ OWNER INSTALLED
OPP	OBTAIN FROM PLANS
CH DR	CHANGING (COLING) DOOR
OL	OVERLOAD
PAIR	PAIR
PB	PUSHBUTTON
PF	POWER FACTOR
PH	PHASE
PNL	PANEL
PNM	PLENUM
PS	POWER SUPPLY



**CLINIC/HOSPITAL - 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.
- LABEL ALL CABLE INSTALLED UNDER THIS CONTRACT REGARDLESS OF LENGTH.
- 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.
- IF OUTLET IS TERMINATED IN CEILING SPACE, LABEL THE T-BAR GRID WITH THE OUTLET NUMBER FOR EASY LOCATION AND IDENTIFICATION.
- GROUND ALL EQUIPMENT RACKS INSTALLED UNDER THIS CONTRACT IN COMPLIANCE WITH THE CONTRACT DOCUMENTS.
- 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.
- PROVIDE THE QUANTITY OF PATCH PANELS REQUIRED +20% FOR THE TOTAL DATA OUTLETS SHOWN ON FLOOR PLANS FOR THE PARTICULAR LEVEL.
- 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.
- COORDINATE WITH ALL SUBS TO ENSURE THAT ALL CABLES ARE PROTECTED FROM ANY DIRECT PAINT, OR INCIDENTAL OVERSPRAY.

**ABBREVIATIONS**

NOTE: ALL ABBREVIATIONS MAY NOT BE USED.

A	AUGMENTED
CAT	CATEGORY
E	ENHANCED
EA	EACH
ER	EQUIPMENT ROOM
FPP	FIBER PATCH PANEL
GIG	GIGA HERTZ
HWM	HORIZONTAL WIRE
NIC	MANAGEMENT
OE	NOT IN CONTRACT
PNM	OWNER ELECTRONICS
PR	PLENUM
PS	PAIR
RPP	POWER SUPPLY
SPP	RISER PATCH PANEL
TDR	STATION PATCH PANEL
TYP	TELECOMMUNICATIONS ROOM
VWM	TYPICAL VERTICAL WIRE MANAGEMENT

**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. .

**CLINIC/HOSPITAL - EQUIPMENT/CABLE LIST**

THE ITEMS INDICATED BELOW SHALL NOT BE CONSTRUED AS A "BILL OF MATERIALS". THIS LIST IDENTIFIES ITEMS OF SIGNIFICANCE USED DURING THE DESIGN OF THE CABLING INSTALLATION. WHERE THE ITEMS INDICATED ARE ONE PORTION OF AN ASSEMBLY, THE ENTIRE ASSEMBLY SHALL BE PROVIDED UNLESS SPECIFIED OTHERWISE. PROVIDE ALL MISCELLANEOUS HARDWARE AND SUPPORTS WHICH MAY NOT BE LISTED HERE. FOR A COMPLETE INSTALLATION, COMPARE CATALOG NUMBERS WITH DESCRIPTIONS AND NOTIFY ENGINEER OF DISCREPANCIES PRIOR TO BID. IF CATALOG NUMBERS DO NOT MATCH DESCRIPTIONS, THE DESCRIPTIONS TAKE PRECEDENCE. PROVIDE COMPLETE SUBMITTAL FOR APPROVAL PRIOR TO PURCHASING ANY EQUIPMENT OR CABLE. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

SYMBOL	ITEM DESCRIPTION	ACCEPTABLE TYPES
	STATION CABLE, DATA - CATEGORY 6A FUTP RISER, BLUE, DATA	SIEMON 9A6R4-AS-06-R1A
	FIBER OPTIC CABLE, SINGLEMODE, 4 STRAND, 2 COND., 14 AWG, INDOOR/OUTDOOR CABLE, BLACK	SIEMON 9A6R4-AS-05-R1A
	STATION CABLE, DATA - CATEGORY 6A FUTP RISER, YELLOW, WIRELESS DATA	SIEMON 9A6R4-AS-09-R1A
	STATION CABLE, DATA - CATEGORY 6A FUTP RISER, ORANGE, CLINICAL ENGINEERING	SIEMON 9C2R4-E2-09-R0A
	STATION CABLE, DATA - CATEGORY 6A FUTP RISER, ORANGE, NURSE CALL	SIEMON 9C2R4-E2-07-R1A
	STATION CABLE, DATA - CATEGORY 5E RISER, GREEN, VENDOR NETWORK	GENERAL CABLE 2133161.99 OR EQUAL
	50 PAIR CATEGORY 3 RISER CABLE, GRAY	GENERAL CABLE 2133033.99 OR EQUAL
	25 PAIR CATEGORY 3 RISER CABLE, GRAY	BELDEN 88723
	FORESSEER CABLE, 2 PAIR	SIEMON 9B8CR012G-T312A
	FIBER OPTIC CABLE, MULTIMODE, OM3, 12 STRAND, ARMORED, RISER CABLE, AQUA	CORNING 9042R-21X01M20
	FIBER OPTIC CABLE, SINGLEMODE, 4 STRAND, 2 COND., 14 AWG, INDOOR/OUTDOOR CABLE, BLACK	SIEMON 9B8CR00RQD-E201A
	FIBER OPTIC CABLE, SINGLEMODE, 6 STRAND, ARMORED, INDOOR/OUTDOOR CABLE, BLACK	SIEMON 9B8CR012L-E205A
	FIBER OPTIC CABLE, SINGLEMODE, 12 STRAND, ARMORED, RISER CABLE, YELLOW	SIEMON 9B8CR024L-E205A
	FIBER OPTIC CABLE, SINGLEMODE, 24 STRAND, ARMORED, RISER CABLE, YELLOW	SIEMON MX-WP-26AS-SS
	VOICE OUTLET, SINGLE GANG FACEPLATE, WHITE W/WALL HUNG PHONE MOUNTING STUDS, ONE POSITION W/CATEGORY 6A INSERT	VIKING ELECTRONICS E-1600-02A
	VOICE OUTLET, TWO GANG BOX MOUNTED	SIEMON Z6A-S06
	CATEGORY 6A JACK - DATA, BLUE	SIEMON 10GMX-FPS04-02
	DATA OUTLET, SINGLE GANG FACEPLATE, WHITE, 4 POSITION	SIEMON Z6A-S09
	CATEGORY 6A JACK - DATA, ORANGE	SIEMON MX-BL-02
	BLANK INSERT, WHITE	SIEMON 10GMX-FPS04-02
	DATA OUTLET, SINGLE GANG FACEPLATE, WHITE, 4 POSITION	SIEMON Z6A-S09
	CATEGORY 6A JACK - DATA, ORANGE	SIEMON 10GMX-FPS04-02
	BLANK INSERT, WHITE	SIEMON Z6A-S09
	DATA OUTLET, SINGLE GANG FACEPLATE, WHITE, 4 POSITION	SIEMON MX-BL-02
	CATEGORY 6A JACK - DATA, BLUE	SIEMON 10GMX-FPS04-02
	BLANK INSERT, WHITE	SIEMON Z6A-S06
	DATA OUTLET, SINGLE GANG FACEPLATE, WHITE, 4 POSITION	SIEMON MX-BL-02
	CATEGORY 6A JACK - DATA, ORANGE	SIEMON 10GMX-FPS04-02
	BLANK INSERT, WHITE	SIEMON Z6A-S06
	DATA OUTLET, SINGLE GANG FACEPLATE, WHITE, 4 POSITION	SIEMON MX-UMA-01
	CATEGORY 6A JACK - DATA, BLUE	SIEMON Z6A-S06
	BLANK MODULE, BLACK	SIEMON MX-BL-01
	DATA OUTLET, SINGLE GANG FACEPLATE, WHITE, 4 POSITION	SIEMON 10GMX-FPS04-02
	CATEGORY 6A JACK - DATA, BLUE	SIEMON Z6A-S06
	BLANK INSERT, WHITE	SIEMON MX-BL-02
	DATA OUTLET, SINGLE GANG FACEPLATE, WHITE, 4 POSITION	SIEMON 10GMX-FPS04-02
	CATEGORY 6A JACK - DATA, BLUE	SIEMON Z6A-S06
	BLANK INSERT, WHITE	SIEMON MX-BL-02
	DATA OUTLET, SINGLE GANG FACEPLATE, WHITE, 4 POSITION	SIEMON 10GMX-FPS04-02
	CATEGORY 6A JACK - DATA, ORANGE	SIEMON Z6A-S09
	BLANK INSERT, WHITE	SIEMON MX-BL-02
	DATA OUTLET, SINGLE GANG FACEPLATE, WHITE, 4 POSITION	SIEMON 10GMX-FPS04-02
	CATEGORY 6A JACK - DATA, ORANGE	SIEMON Z6A-S09
	BLANK INSERT, WHITE	SIEMON MX-BL-02
	DATA OUTLET, SURFACE MOUNT BOX, WHITE, 1 POSITION	SIEMON MX-SMZ1-02
	CATEGORY 6A JACK - TOTGUARD DATA, ORANGE	SIEMON Z6A-S09
	DATA OUTLET, SURFACE MOUNT BOX, WHITE, 1 POSITION	SIEMON MX-SMZ1-02
	CATEGORY 6A JACK - TOTGUARD DATA, ORANGE	SIEMON Z6A-S09
	DATA OUTLET, SURFACE MOUNT BOX, WHITE, 1 POSITION	SIEMON MX-SMZ1-02
	CATEGORY 6A JACK - TOTGUARD DATA, ORANGE	SIEMON Z6A-S09
	DATA OUTLET, SURFACE MOUNT BOX, WHITE, 1 POSITION	SIEMON MX-SMZ1-02
	CATEGORY 6A JACK - TOTGUARD DATA, ORANGE	SIEMON Z6A-S09
	DATA OUTLET, SURFACE MOUNT BOX, WHITE, 1 POSITION	SIEMON MX-SMZ1-02
	CATEGORY 6A JACK - TOTGUARD DATA, ORANGE	SIEMON Z6A-S09
	DATA OUTLET, SURFACE MOUNT BOX, WHITE, 2 POSITION	SIEMON MX-SMZ2-02
	CATEGORY 6A JACK - DATA, BLUE	SIEMON MX-F-L-CU-02C
	FIBER INSERT, DUPLEX LC, SINGLEMODE	CORNING L1AM-D600-SPK-WH
	DUPLEX PHOENIX POWER CONNECTOR	TRANSITION NETWORKS SHES-111D-LRT
	MEDIA CONVERTER, UNMANAGED, HARDENED, POE+ INJECTOR/CONVERTER	TRANSITION NETWORKS TN-GLC-ZX-SM-RGD
	MEDIA CONVERTER, SFP, SINGLEMODE, 1550 NM W/CONNECTORS	SIEMON Z6A-S06
	DATA OUTLET, SURFACE MOUNT BOX, WHITE, 2 POSITION	SIEMON MX-SMZ2-02
	CATEGORY 6A JACK - DATA, BLUE	SIEMON Z6A-S06
	BLANK INSERT, WHITE	SIEMON MX-SMZ1-02
	DATA OUTLET, SURFACE MOUNT BOX, WHITE, 1 POSITION	SIEMON Z6A-S06
	CATEGORY 6A JACK - DATA, BLUE	SIEMON Z6AS-PA-48
	48 PORT, 1RU ANGLE PATCH PANEL WITH OUTLETS	SIEMON HD5-48A
	48 PORT, 2RU ANGLE PATCH PANEL, 110 STYLE	SIEMON Z6AS-PNL-U48K
	48 PORT, 1RU FLAT PATCH PANEL WITH OUTLETS	SIEMON Z6AS-PNL-U24K
	24 PORT, 1RU FLAT PATCH PANEL WITH OUTLETS	SIEMON HD5-24
	24 PORT, 1RU ANGLE PATCH PANEL WITH OUTLETS	SIEMON Z6AS-PA-48
	48 PORT, 2RU ANGLE PATCH PANEL WITH OUTLETS	SIEMON HD5-48A
	48 PORT, 1RU ANGLE PATCH PANEL WITH OUTLETS	SIEMON Z6AS-PA-48
	24 PORT, 1RU ANGLE PATCH PANEL, 110 STYLE	SIEMON HD5-24A
	FIBER PATCH PANEL, EXPANDED UNIT FOR FIBER SPLICE TRAY CAPACITY, 3RU	SIEMON RIC3-E-48-01
	SIX POSITION, 12 STRAND, FIBER SPLICE MODULE, LC	SIEMON FSM2-12-LCSM-01
	FIBER SPLICE TRAY	SIEMON TRAY-3
	BLANK ADAPTER PLATE, BLACK	SIEMON RIC-F-BLNK-01
	FSP ADAPTER PANEL, 12 PORT DUPLEX LC, SINGLEMODE	HUBBELL FSPR-C056
	FIBER OPTIC BRACKET	HUBBELL REKFP
	FIBER PATCH PANEL, 3RU	SIEMON RIC3-48-01
	SIX POSITION FIBER ADAPTER PANEL, SC	SIEMON RIC-F-SC12-01
	BLANK ADAPTER PLATE, BLACK	SIEMON RIC-F-BLNK-01
	FIBER PATCH PANEL, WALL MOUNT	SIEMON SWIG3G-CC-01
	SIX POSITION FIBER ADAPTER PANEL, ST	SIEMON RIC-F-LCU12-01C
	BLANK ADAPTER PLATE, BLACK	SIEMON RIC-F-BLNK-01
	SC CONNECTOR, APC, SIMPLEX, SINGLEMODE	SIEMON FC1-LB-SCA-9GR
	ST CONNECTOR, SIMPLEX, MULTIMODE, OM3	SIEMON FC1-SA-MM-8B0
	HORIZONTAL WIRE MANAGERS, 4RU	PANDUIT NCMHAEF4
	HORIZONTAL WIRE MANAGERS, FRONT ONLY, 2RU, BLACK	PANDUIT NCMHAEF2
	VERTICAL WIRE MANAGERS, 10" WIDTH, DOUBLE SIDED, BLACK, 8"	CHATS WORTH 40296-715
	POWER SUPPLY UNIT, 12 PORT, 1RU	CORNING PSL8-1U
	MODULAR POWER SUPPLY, 57 VDC	CORNING PSM-1
	EQUIPMENT RACK 19" x 8", 52 RU, BLACK	CHATS WORTH 55053-715
	DATA CENTER CABINETS 23.6" x 47.3" x 7", 45RU x 600mm x 1200mm, BLACK, WITH 2 SIDES	DCE E456212122001S
	DATA CENTER CABINET, 45RU x 600mm x 1200mm, BLACK, WITH 1 SIDE	DCE E4562122122001S
	DATA CENTER CABINET, 45RU x 600mm x 1200mm, BLACK	DCE E4562120122001S
	DATA CENTER CABINETS 27.6" x 47.3" x 7", 45RU x 700mm x 1200mm, BLACK, WITH 2 SIDES	DCE E457212122001S
	DATA CENTER CABINET, 45RU x 700mm x 1200mm, BLACK, WITH 1 SIDE	DCE E4572122122001S
	DATA CENTER CABINET, 45RU x 700mm x 1200mm, BLACK	DCE E4572120122001S
	WALL MOUNTED CABINET, 48"(H) x 24"(D), 26RU, BLACK, SOLID METAL DOOR	CHATS WORTH 11840-748
	WALL MOUNTED RACK, 63.8" H x 17" D, 26RU, BLACK	CHATS WORTH 11807-718
	HEAVY DUTY SWING GATE KIT	CHATS WORTH 12795-701
	CABLE RUNWAY - 24", BLACK WITH ALL REQUIRED MOUNTING ACCESSORIES	CHATS WORTH 10250-724
	CABLE RUNWAY - 18", BLACK WITH ALL REQUIRED MOUNTING ACCESSORIES	CHATS WORTH 10250-718
	BUTT SPLICE KIT, BLACK	CHATS WORTH 11301-701
	JUNCTION SPLICE KIT, BLACK	CHATS WORTH 11302-701
	FOOT KIT, BLACK	CHATS WORTH 11306-701
	8" CHANNEL, RACK TO RUNWAY, BLACK	CHATS WORTH 12409-724
	TRIANGLE BRACKETS, BLACK	CHATS WORTH 11748-724
	END CLOSING KIT, CABLE RUNWAY, BLACK	CHATS WORTH 11700-724
	WALL ANGLE SUPPORT KIT, CABLE RUNWAY, BLACK	CHATS WORTH 11421-724
	CABLE RUNWAY ELEVATION KIT, 6"	CHATS WORTH 10506-706
	CABLE RUNWAY RADIUS DROP	CHATS WORTH 12100-712
	PLYWOOD BACKBOARD, 4" x 8", GRADE AC, FIRE TREATED & PAINTED	-
	TELECOMMUNICATIONS MAIN GROUNDING BUS BAR	-
	TELECOMMUNICATIONS GROUNDING BUS BAR	-

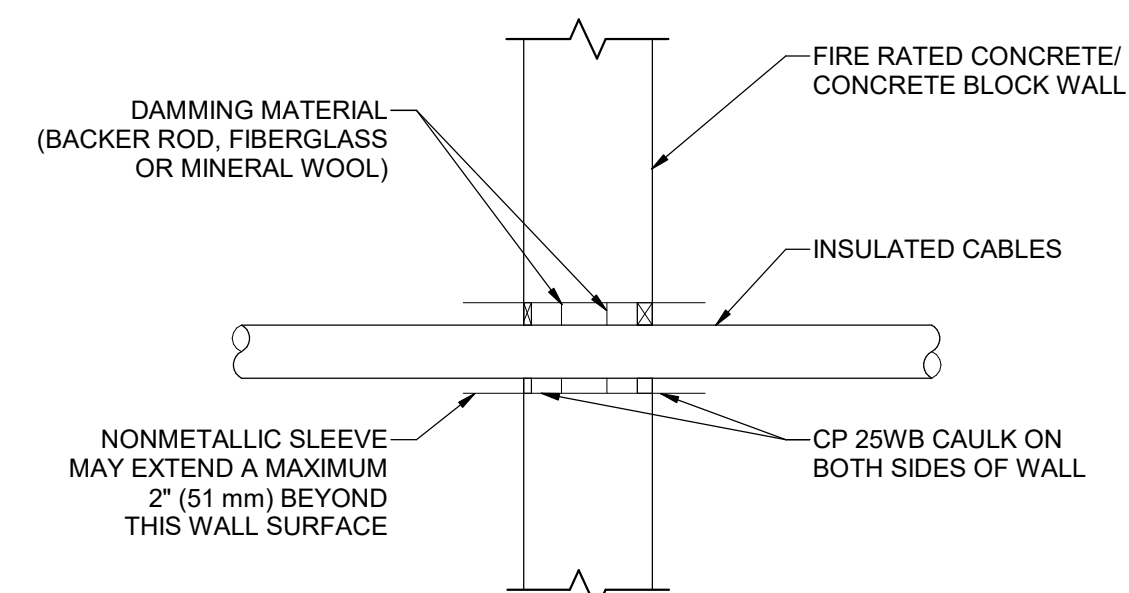
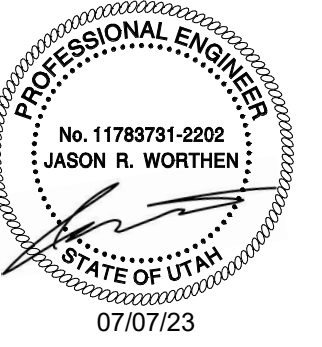
NOTE: ALL RACKS, LADDER, PATCH PANELS AND ACCESSORIES SHALL BE BLACK IN COLOR.

**CLINIC/HOSPITAL - CABLE/OUTLET COLOR SCHEDULE**

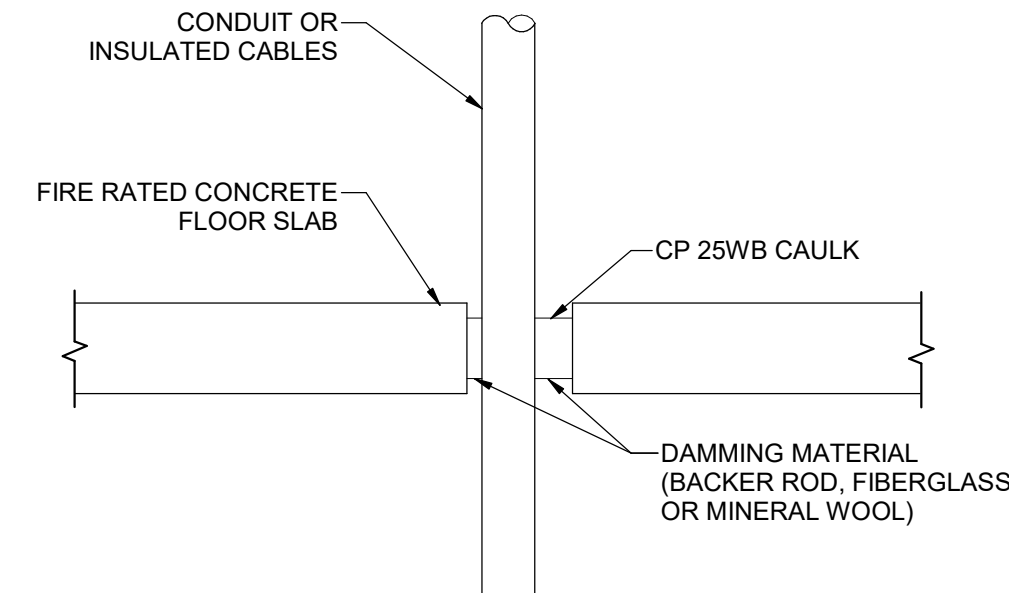
COLOR	TYPE
BLACK	TV COAX
BLUE	ANALOG PHONE
BLUE	DATA
BLUE	IP SECURITY CAMERAS
GREY	SECURITY CARD READERS
ORANGE	CLINICAL ENGINEERING / NURSE CALL
RED	FIRE SYSTEMS
RED	FORESSEER
WHITE	PUBLIC ADDRESS
YELLOW	WIRELESS
GREEN	VENDOR NETWORK

**COPPER PATCH CORD SCHEDULE**  
(CATEGORY 6A FUTP CABLES W/RJ-45 CONNECTORS)

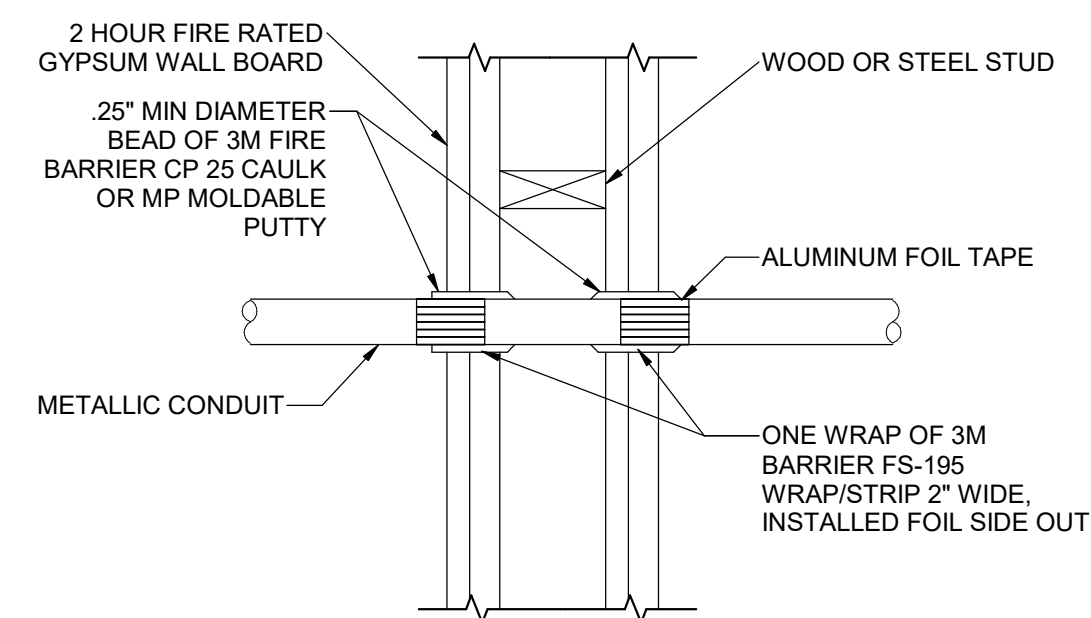
LENGTH (FEET)	COLOR	QUANTITY	UNIT COST (EACH)
5'	BLUE	20% OF TOTAL PORTS IN TDR'S	
7'	BLUE	60% OF TOTAL PORTS IN TDR'S	
10'	BLUE	20% OF TOTAL PORTS IN TDR'S	



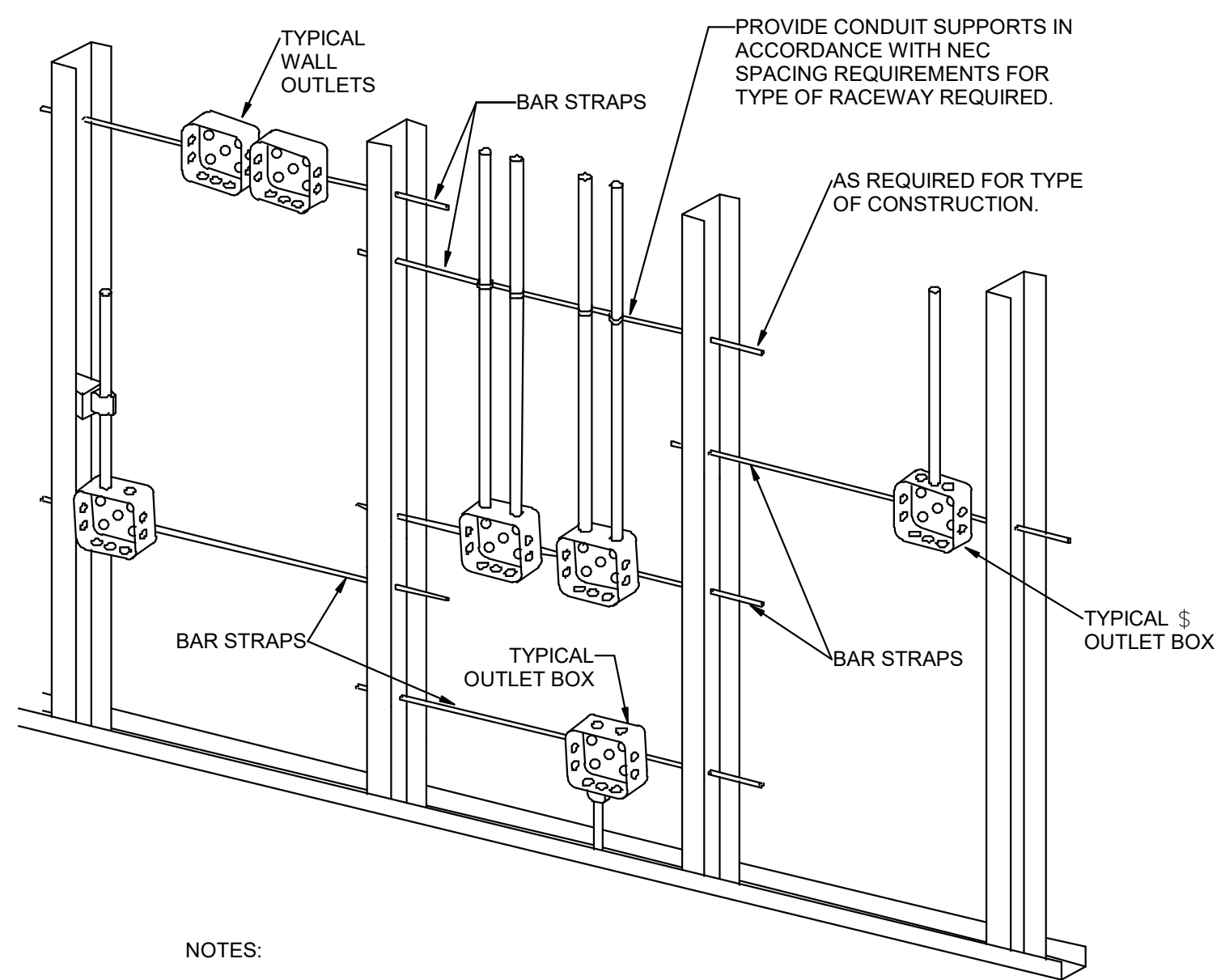
**5** TYPICAL FIRE STOP FOR CABLES/CONDUIT THROUGH CONCRETE WALLS1  
SCALE: NTS



**6** TYPICAL FIRE STOP FOR CABLES/CONDUIT THROUGH CONCRETE FLOORING1  
SCALE: NTS

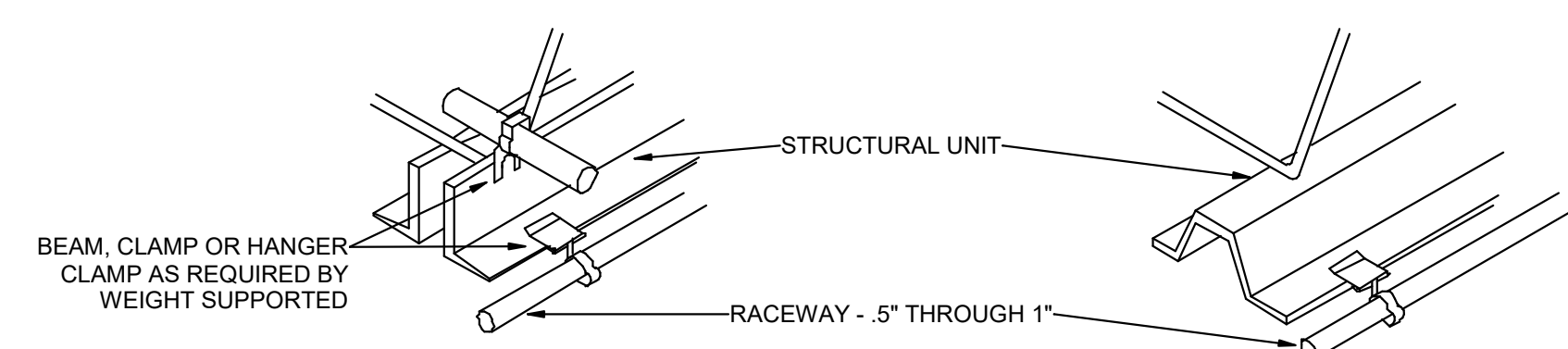
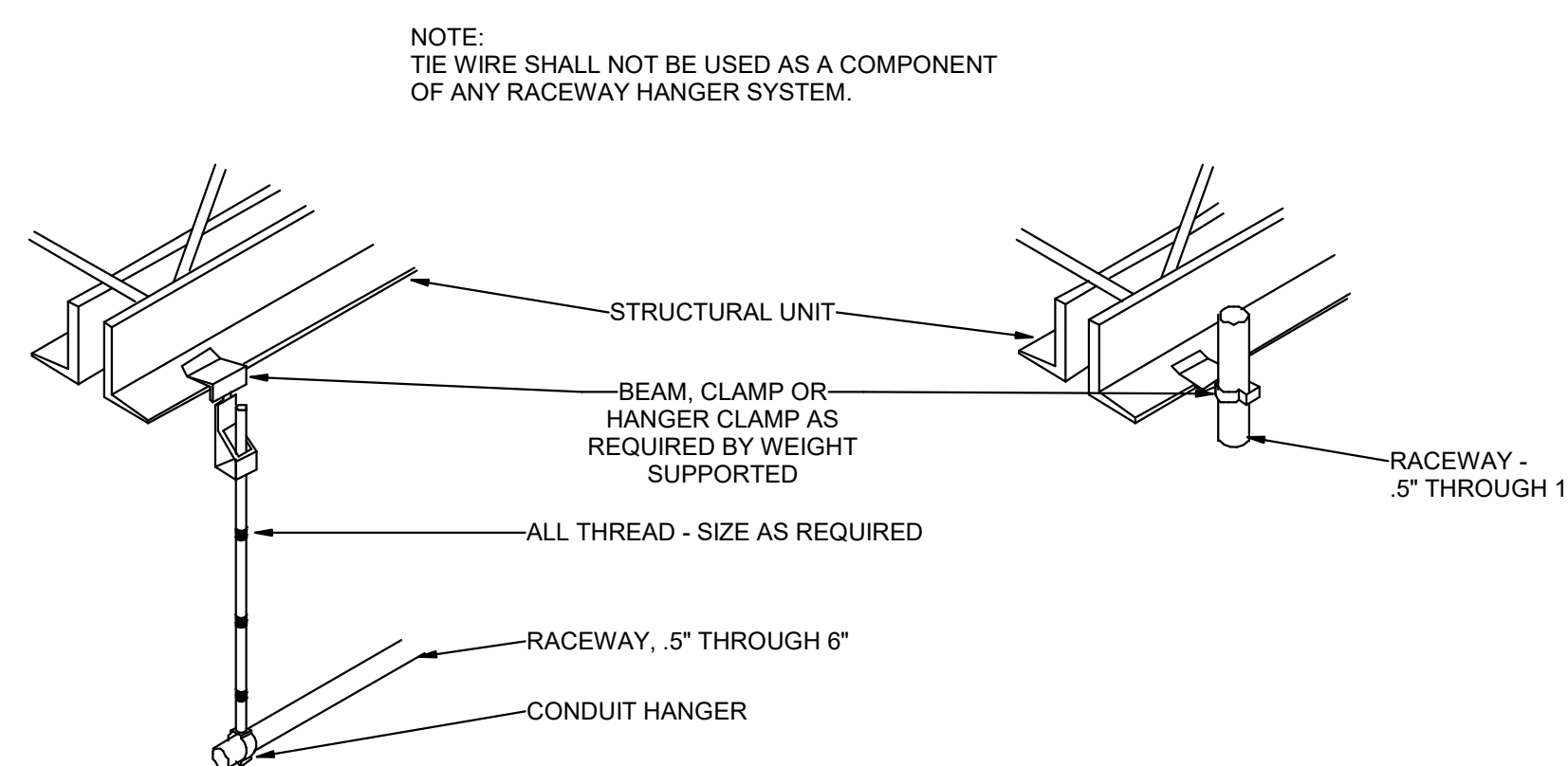


**7** FIRE STOP FOR METAL CONDUIT THROUGH GYPSUM WALL BOARD1  
SCALE: NTS

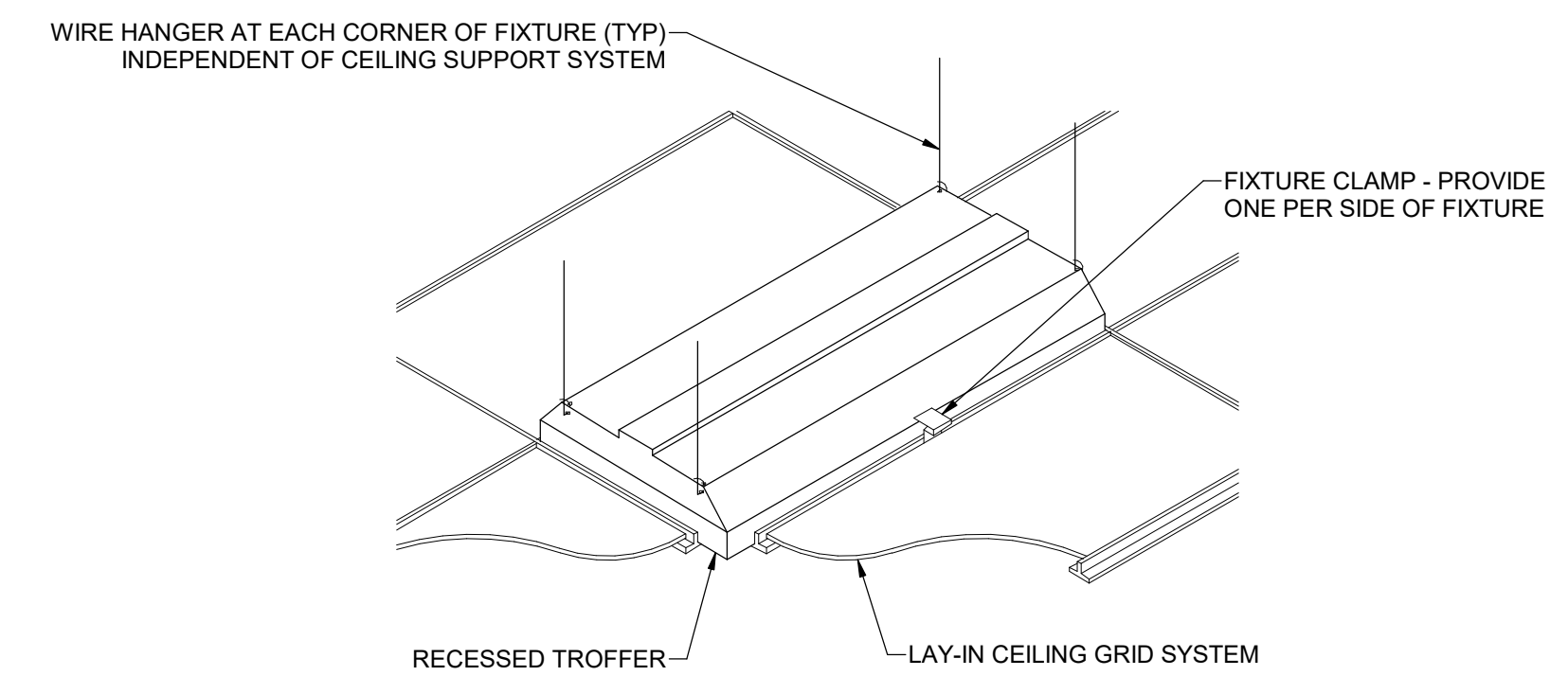


- NOTES:
1. TYPICAL FOR WOOD AND METAL STUD ROUGH-IN.
  2. PLASTER RINGS NOT SHOWN.
  3. LOCATE ALL OUTLET BOXES IN ACCORDANCE WITH ARCHITECTURAL AND MECHANICAL DRAWINGS AND WITH ALL APPLICABLE SHOP DRAWINGS.
  4. IN ACCORDANCE WITH IBC 714.3.2 EXCEPTION 1, OUTLETS ON OPPOSITE SIDES OF WALLS OR PARTITIONS 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.
  5. IN NON-RATED WALLS, OUTLETS ON OPPOSITE SIDES OF WALLS OR PARTITIONS MUST BE SEPARATED BY 16" FOR SOUND ATTENUATION.

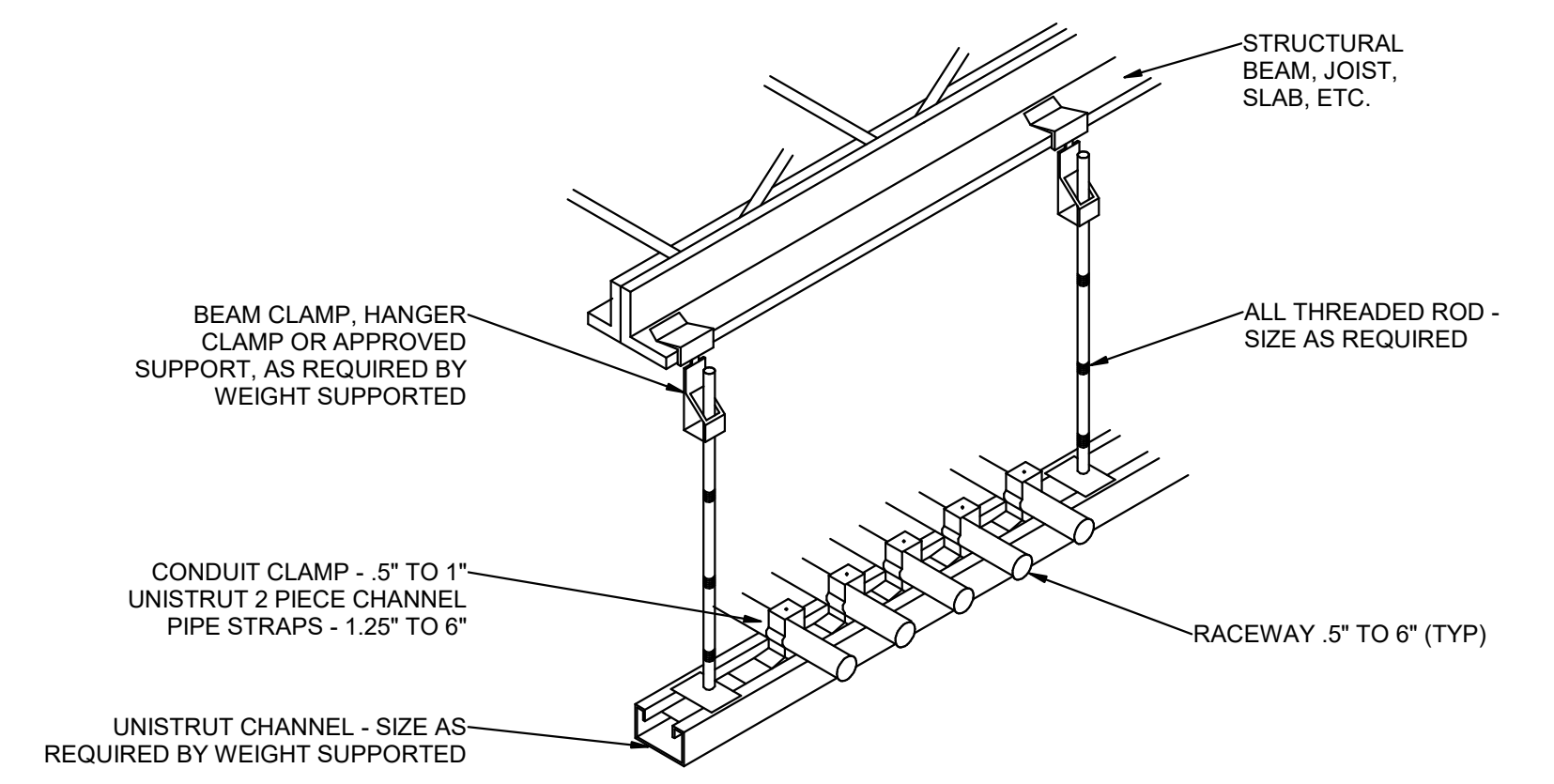
**1** TYPICAL ROUGH-IN REQUIREMENTS DETAIL1  
SCALE: NTS



**2** TYPICAL RACEWAY SUPPORT METHODS DETAIL1  
SCALE: NTS

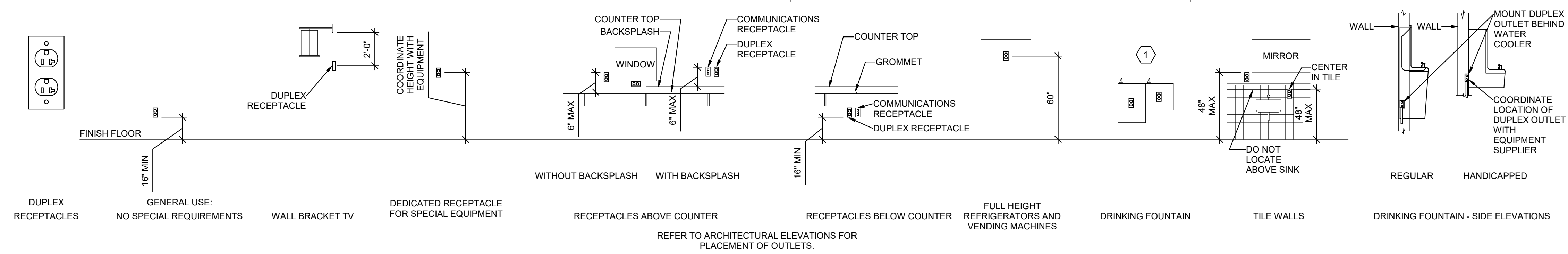


**4** RECESSED FIXTURE MOUNTING DETAIL1  
SCALE: NTS

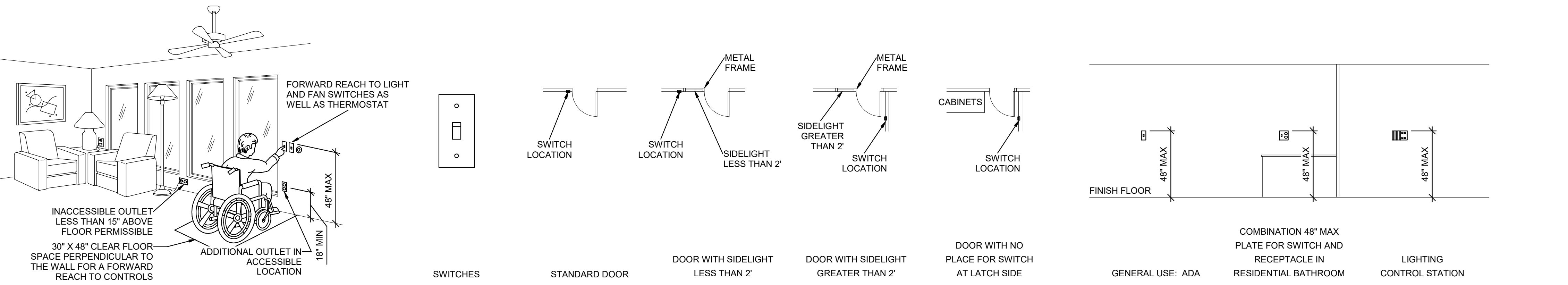


**3** TYPICAL CONDUIT RACK DETAIL1  
SCALE: NTS



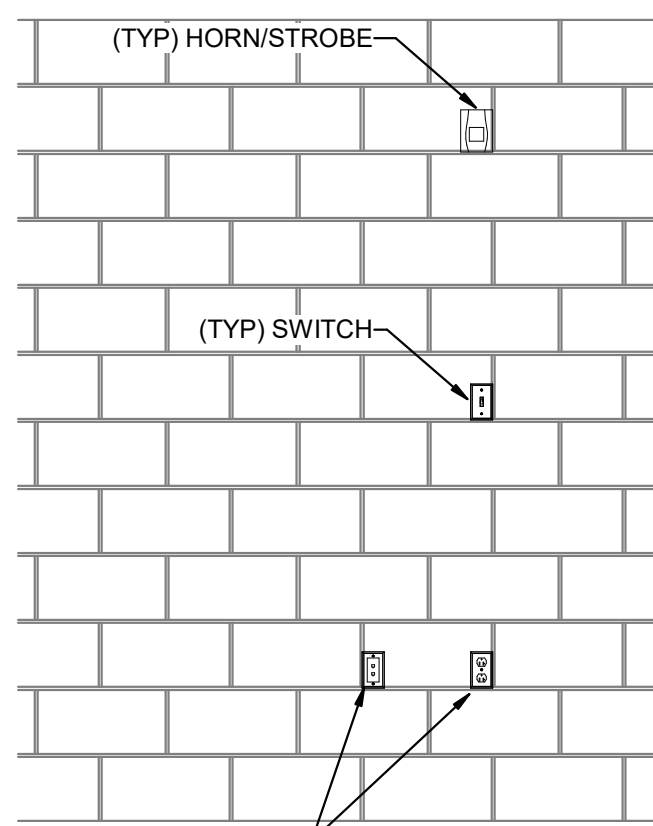


**E2 RECEPTACLE MOUNTING DETAILS**  
SCALE: NTS



**D2 ADA DETAIL**  
SCALE: NTS

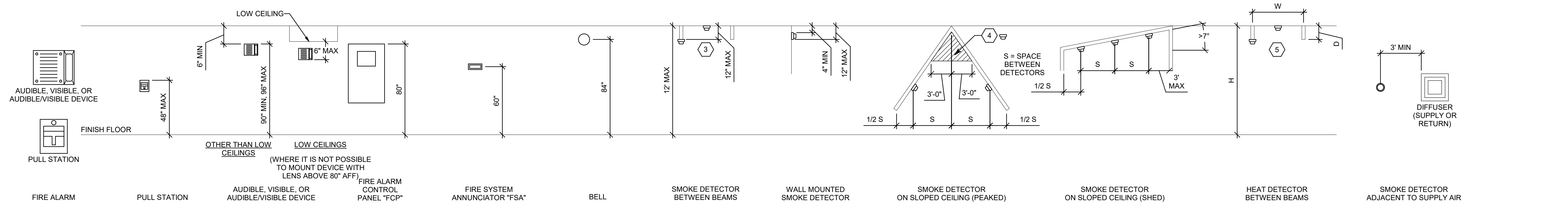
**D3 SWITCH MOUNTING DETAILS**  
SCALE: NTS



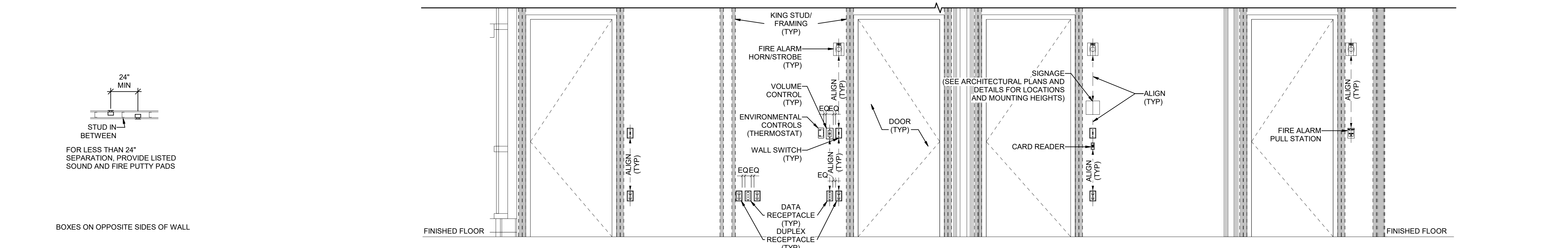
**C1 CMU DEVICE MOUNTING ALIGNMENT DETAIL**  
SCALE: NTS

**C2 LIGHTING MOUNTING DETAILS**  
SCALE: NTS

**C3 COMMUNICATIONS MOUNTING DETAILS**  
SCALE: NTS



**B1 FIRE ALARM MOUNTING DETAILS**  
SCALE: NTS



**A1 BOX MOUNTING DETAILS**  
SCALE: NTS

**A2 TYPICAL WALL MOUNTED DEVICES ALIGNMENT DETAIL**  
SCALE: NTS

**GENERAL SHEET NOTES**

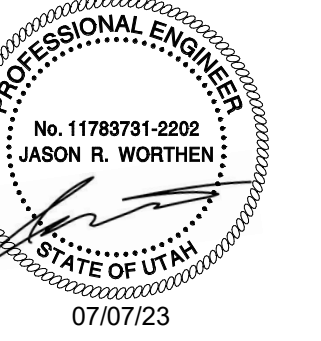
1. DETERMINE MOUNTING HEIGHTS OF ELECTRICAL AND ELECTRONIC EQUIPMENT IN THE FOLLOWING ORDER OF PRIORITY:
  - 1 - ELEVATIONS (ARCHITECTURAL, ELECTRICAL, MECHANICAL, ETC.)
  - 2 - EQUIPMENT SHOP DRAWINGS.
  - 3 - FIELD INSTRUCTIONS.
2. LOCATE RECEPTACLES SERVING THE SAME TYPE OF USE AT A UNIFORM HEIGHT UNLESS DIRECTED OTHERWISE.
3. MECHANICAL, ELECTRICAL, AND COMMUNICATION ROOMS: COORDINATE LOCATION OF LIGHTING AND POWER RECEPTACLES WITH EQUIPMENT, PIPING, AND DUCTWORK. DO NOT INSTALL RECEPTACLES BEHIND EQUIPMENT OR WHERE OTHERWISE INACCESSIBLE. POSITION LIGHTING REGARDLESS OF WHERE SHOWN ON DRAWING TO PROVIDE PROPER ILLUMINATION.
4. MOUNT RECEPTACLE BOXES FOR SWITCHES AND RECEPTACLES WITH LONG AXIS OF THE DEVICE VERTICAL UNLESS OTHERWISE INDICATED.
5. SET BOXES WITH PLASTER RINGS FLUSH WITH FINISHED SURFACE.
6. LOCATE BOX COVERS OR DEVICE PLATES SO THEY WILL NOT SPAN DIFFERENT TYPES OF BUILDING FINISHES EITHER VERTICALLY OR HORIZONTALLY.
7. VERIFY ALL DOOR CONDITIONS ON ARCHITECTURAL DRAWINGS PRIOR TO INSTALLING SWITCHES.
8. LOCATE WIRING DEVICES WHICH ARE ADJACENT AND ARE COMPATIBLE VOLTAGES IN ONE PLATE.
9. WHERE DEVICES ARE LOCATED IN CLOSE PROXIMITY OF THE SAME VERTICAL PLANE, ALIGN DEVICES VERTICALLY PER THE TYPICAL WALL MOUNTED DEVICES ALIGNMENT DETAIL, UNLESS OTHERWISE INDICATED.

**SHEET KEYNOTES**

1. LOCATE RECEPTACLES BEHIND DRINKING FOUNTAINS.
2. REFER TO ARCHITECTURAL ELEVATIONS FOR PLACEMENT OF OUTLETS.
3. LOCATE AT BOTTOM OF BEAMS (OR JOISTS) OR AT CEILING. (REDUCE SPACING BY 5 PERPENDICULAR TO BEAM OR JOIST DIRECTION.) FOR OTHER CONDITIONS, REFER TO NFPA 72.
4. LOCATE DETECTOR ANYWHERE IN SHADED AREA BUT NOT IN TOP 4' OF PEAK.
5. LOCATE AT BOTTOM OF BEAMS IF  $D/H < 1$  OR  $W/H < 4$ ; OTHERWISE, LOCATE IN BEAM POCKET. FOR  $D > 4$  REDUCE SPACING .33 PERPENDICULAR TO BEAMS.



**NJRA Architects, Inc.**  
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Murray, Utah 84123  
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www.njraarchitects.com



**SPECTRUM ENGINEERS**  
324 S. State St., Suite 400  
Salt Lake City, UT 84111  
800-678-7077  
801-328-5151  
fax: 801-328-5155  
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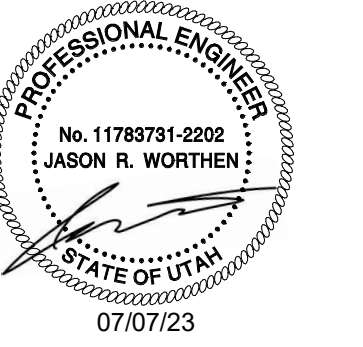
5121 South Cottonwood Street  
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Construction Documents July 7, 2023

TYPICAL  
MOUNTING  
HEIGHT  
DETAILS

**EE701**

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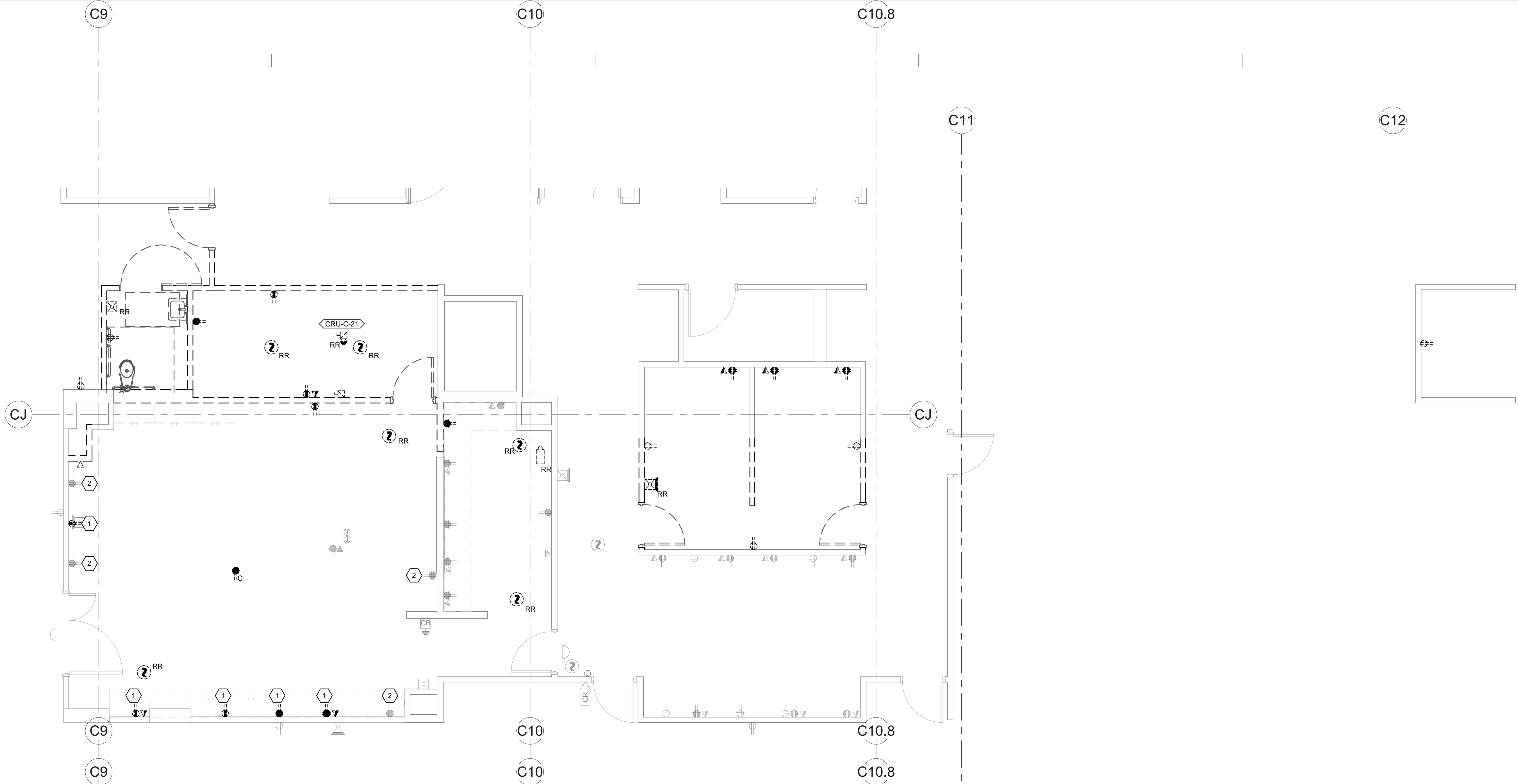


**GENERAL SHEET NOTES**

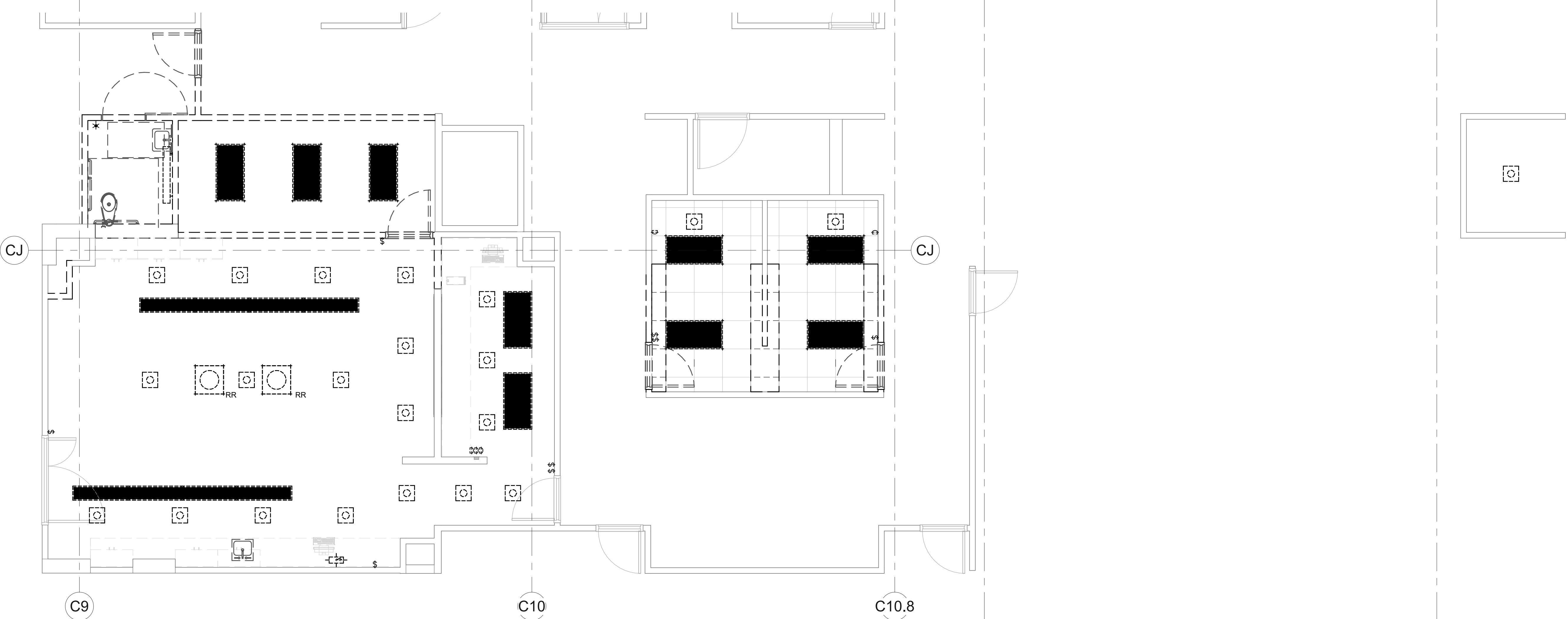
- 1 UNLESS NOTED OTHERWISE REMOVE ALL LIGHTING FIXTURES DEVICES AND EQUIPMENT SHOWN DASHED. REMOVE CONDUIT AND WIRING BACK TO PANELBOARD OF ORIGIN OR TO FIRST ACTIVE DEVICE THAT REMAINS.
- 2 SALVAGE ALL LIGHT FIXTURES, TWIST-LOCK RECEPTACLES AND WALLPLATES, CEILING SPEAKERS AND SECURITY AND FIRE ALARM DEVICES TO OWNER. PROTECT SALVAGED EQUIPMENT FROM DAMAGE.
- 3 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.
- 4 PRIOR TO REMOVAL OF ANY ELECTRICAL EQUIPMENT OR WIRING, FIELD VERIFY THAT THE EQUIPMENT OR WIRING IS INACTIVE OR NO LONGER IN USE.
- 5 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.
- 6 REMOVE ALL FIRE ALARM DEVICES WHERE EXISTING WALLS AND CEILINGS ARE BEING REMOVED WITH ASSOCIATED CONDUIT AND WIRING. EXISTING FIRE ALARM DEVICES AND SYSTEM NOT INDICATED FOR REMOVAL SHALL REMAIN ACTIVE THROUGHOUT DEMOLITION AND CONSTRUCTION UNTIL THE NEW SYSTEM IS TESTED AND OPERATIONAL. MAINTAIN ALL CLASS A FIRE ALARM INITIATING AND INDICATING LOOPS WHERE EXISTING DEVICES ARE REMOVED.
- 7 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.
- 8 DEVICES MARKED "RR" ARE TO BE REMOVED AND RELOCATED PER NEW PLANS. EXTEND CIRCUITING AS REQUIRED FOR RELOCATION.
- 9 REFER TO ARCHITECTURAL DRAWINGS FOR REMOVAL OF MOTORS, CONDUIT, CONDUCTOR AND CONTROL WIRING ASSOCIATED WITH EXISTING MOTORIZED DOORS, PARTITIONS AND LIGHTING.
- 10 REMOVE FEEDERS FOR ALL DEMOLISHED PANELS, DISCONNECTS, ETC. BACK TO SOURCE
- 11 ALL ITEMS INDICATED TO REMAIN SHALL BE PROTECTED DURING ALL PHASES OF CONSTRUCTION.
- 12 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.
- 13 ALL HVAC UNITS TO BE REMOVED BY MECHANICAL CONTRACTOR UNLESS NOTED OTHERWISE. REMOVE ALL ASSOCIATED RACEWAYS AND CONDUCTORS BACK TO SOURCE.

**SHEET KEYNOTES**

- 1 EXISTING DUPLEX RECEPTACLE TO BE REPLACED WITH A NEW FOUR-PLEX RECEPTACLE AND RE-CIRCUITED TO NEW ISOLATION PANEL.
- 2 EXISTING RECEPTACLE TO BE RE-CIRCUITED TO NEW ISOLATION PANEL.



**1 LEVEL 1 ELECTRICAL DEMOLITION PLAN**  
SCALE: 1/4" = 1'-0"



**2 LEVEL 1 CEILING DEMOLITION PLAN**  
SCALE: 1/4" = 1'-0"

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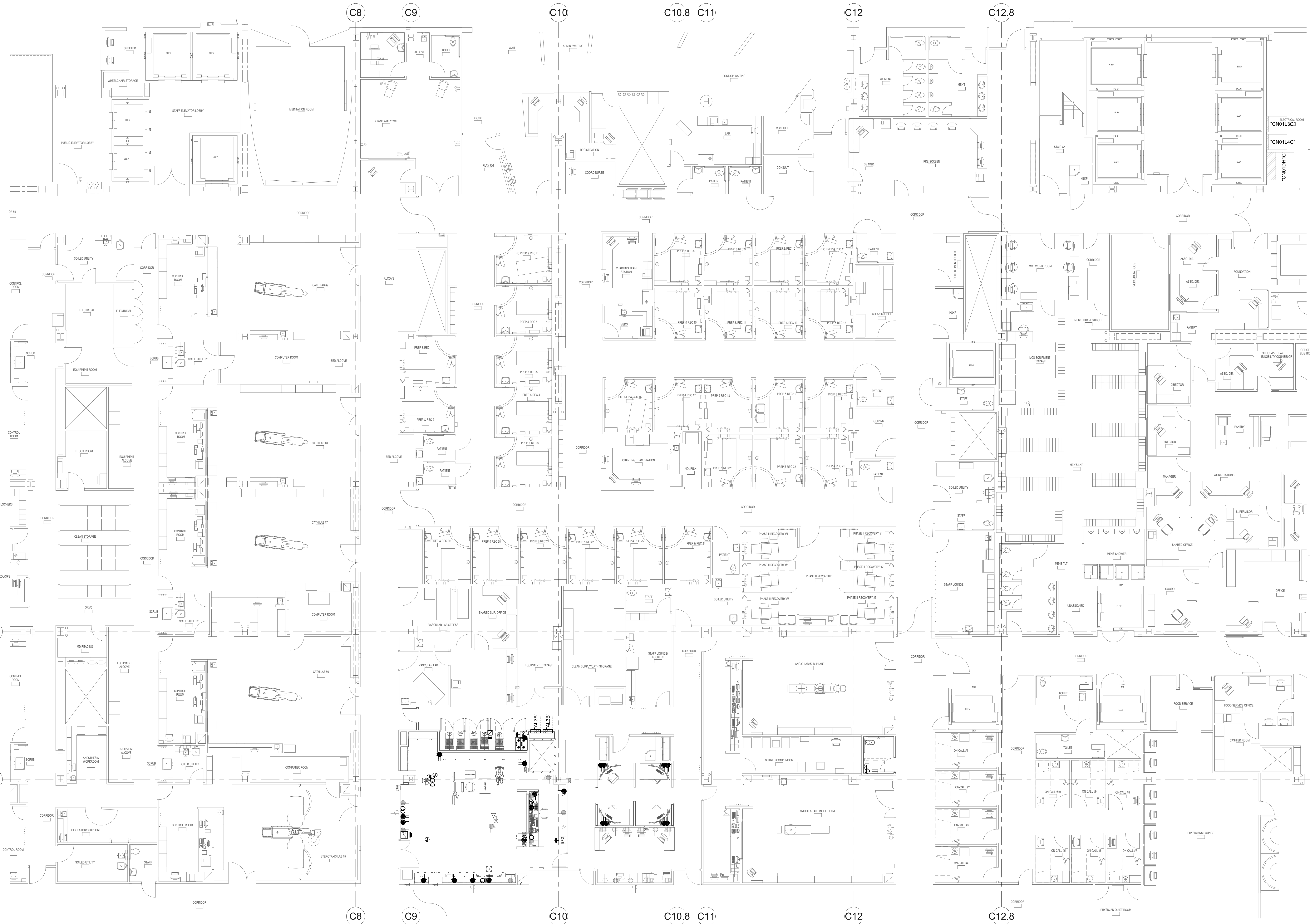
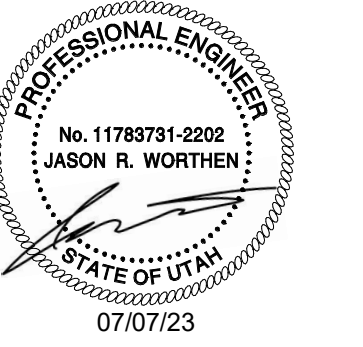
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**LEVEL 1  
ELECTRICAL  
DEMOLITION  
PLAN**

**ED101**

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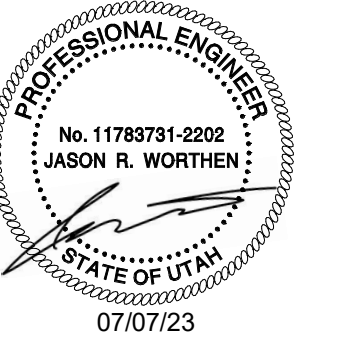
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**LEVEL 1  
OVERALL  
POWER PLAN**

**EP100**

**1 LEVEL 1 OVERALL POWER PLAN**  
SCALE: 1/8" = 1'-0"

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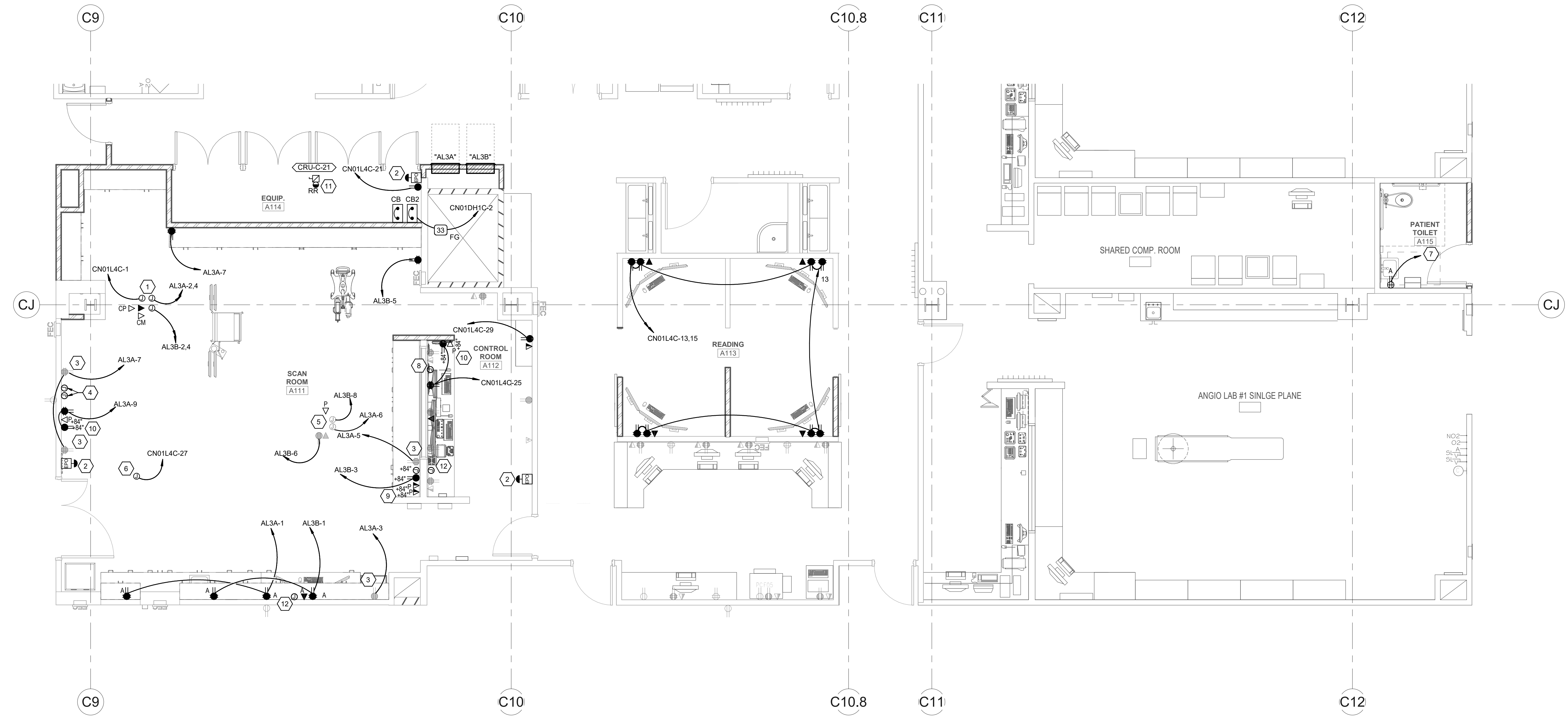


**GENERAL SHEET NOTES**

- 1 PROVIDE DEDICATED NEUTRALS FOR ALL BRANCH CIRCUITS.
- 2 ALL WIRING IN PATIENT CARE AREAS SHALL MEET THE REQUIREMENTS OF NEC 517.13.
- 3 CONTRACTOR TO REFER TO PHILLIPS & SKYTRON DRAWINGS FOR ADDITIONAL CONTRACTOR RESPONSIBILITIES.

**SHEET KEYNOTES**

- 1 PROVIDE (5) 120V CIRCUITS FOR BOOM, TWO FROM EACH ISOLATION PANEL FOR RECEPTACLES AND ONE FROM CRITICAL BRANCH FOR MOTOR/BRAKES, THREE NETWORK DATA DROPS TO BOOM, ONE PHILLIPS MONITORING DATA DROP AND ONE POINT TO POINT DROP TO THE MAIN MONITOR. STRUCTURED CABLING INSTALLER TO MAKE ALL TERMINATIONS IN BOOM.
- 2 PROVIDE EMERGENCY POWER OFF SWITCH CONNECTED TO CATH LAB MAIN SHUNT TRIP BREAKER (MP).
- 3 RE-CIRCUIT EXISTING RECEPTACLES TO NEW ISOLATION PANEL.
- 4 PROVIDE A REMOTE ANNUNCIATOR (DRA-1V) FOR EACH ISOLATION PANEL IN THE CATH LAB.
- 5 RE-CIRCUIT THE EXISTING RECEPTACLES IN THE MEDGAS FLOOR PEDESTAL TO THE NEW ISOLATION PANELS. PROVIDE ONE CIRCUIT FROM EACH PANEL. PROVIDE ONE POINT TO POINT DATA DROP BACK TO MAIN MONITOR.
- 6 CONTRACTOR TO PROVIDE 120V CIRCUIT TO PHILLIPS EQUIPMENT ITEM M3.
- 7 CONNECT TO EXISTING RECEPTACLE CIRCUIT THAT PREVIOUSLY FED RECEPTACLE IN THIS ALCOVE.
- 8 PROVIDE (1) 2" CONDUIT FROM BELOW CONTROL ROOM DESK TO FLOOR PEDESTAL. THESE ARE IN ADDITION TO CONDUITS REQUIRED FOR PHILLIPS EQUIPMENT.
- 9 PROVIDE FIVE POINT TO POINT DATA DROPS WITH ONE DROP GOING TO EACH OF THE FOLLOWING LOCATIONS: CONTROL ROOM FLOOR PEDESTAL, SOUTH WALL, EAST WALL, BOOM. ALSO PROVIDE (1) 2" CONDUIT FROM MONITOR TO THE EQUIPMENT CLOSET. THESE ARE IN ADDITION TO THE CONDUITS REQUIRED FOR PHILLIPS EQUIPMENT.
- 10 PROVIDE POINT TO POINT DATA CONNECTION BACK TO THE MAIN MONITOR.
- 11 EXISTING HVAC UNIT TO BE RELOCATED. REFER TO MECHANICAL PLANS. EXTEND CIRCUITING AS NECESSARY. EXISTING CIRCUIT IS A 277V 40A CIRCUIT, #8 AWG WIRE SIZE.
- 12 PROVIDE (1) 2" CONDUIT FROM BELOW CONTROL ROOM DESK TO REMOTE WORKSTATION. THESE ARE IN ADDITION TO CONDUITS REQUIRED FOR PHILLIPS EQUIPMENT.



**1 LEVEL 1 POWER PLAN**  
SCALE: 1/4" = 1'-0"

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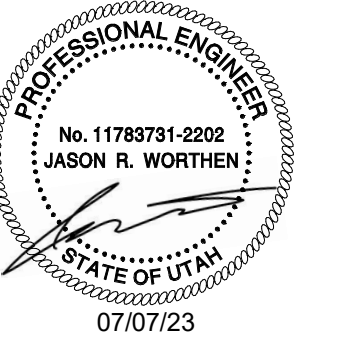
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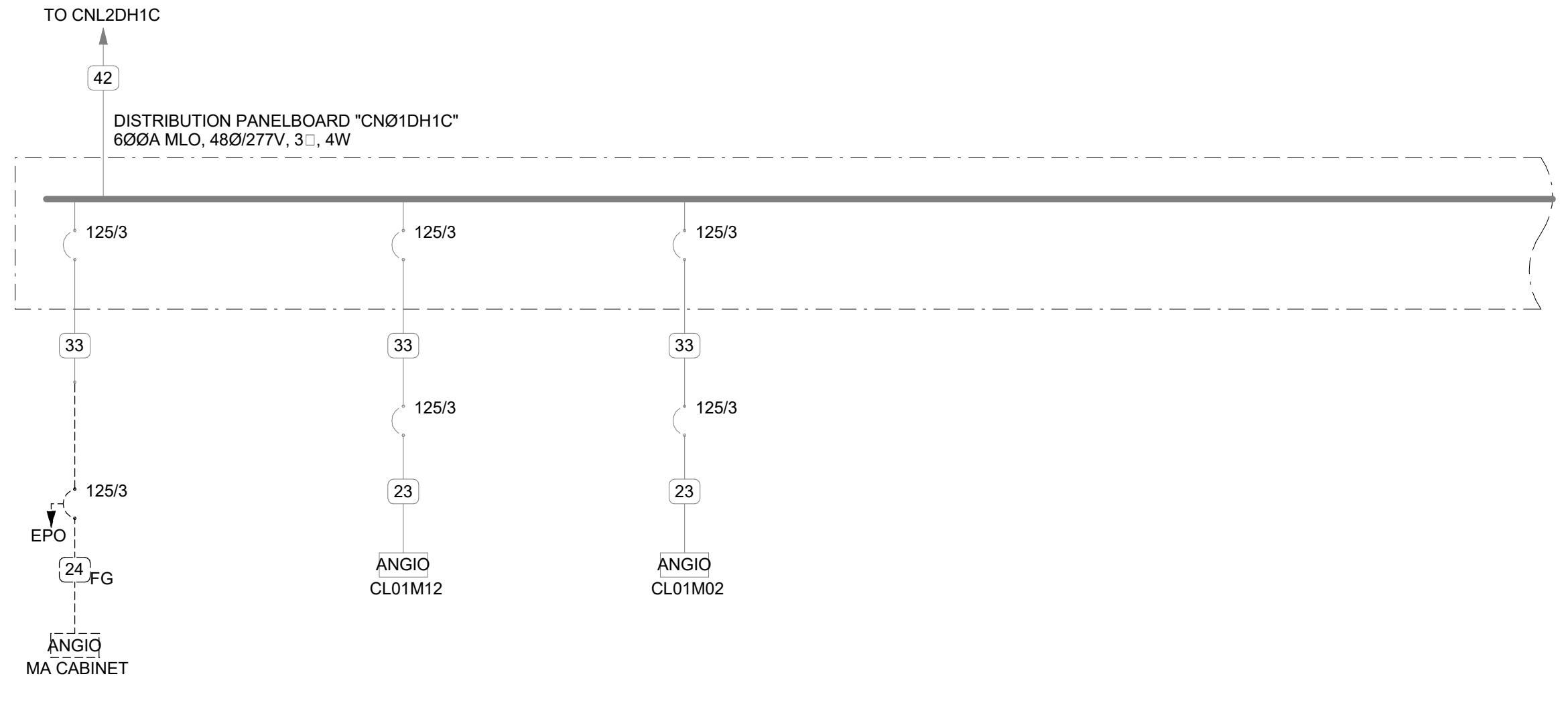
**LEVEL 1  
POWER PLAN**

**EP101**

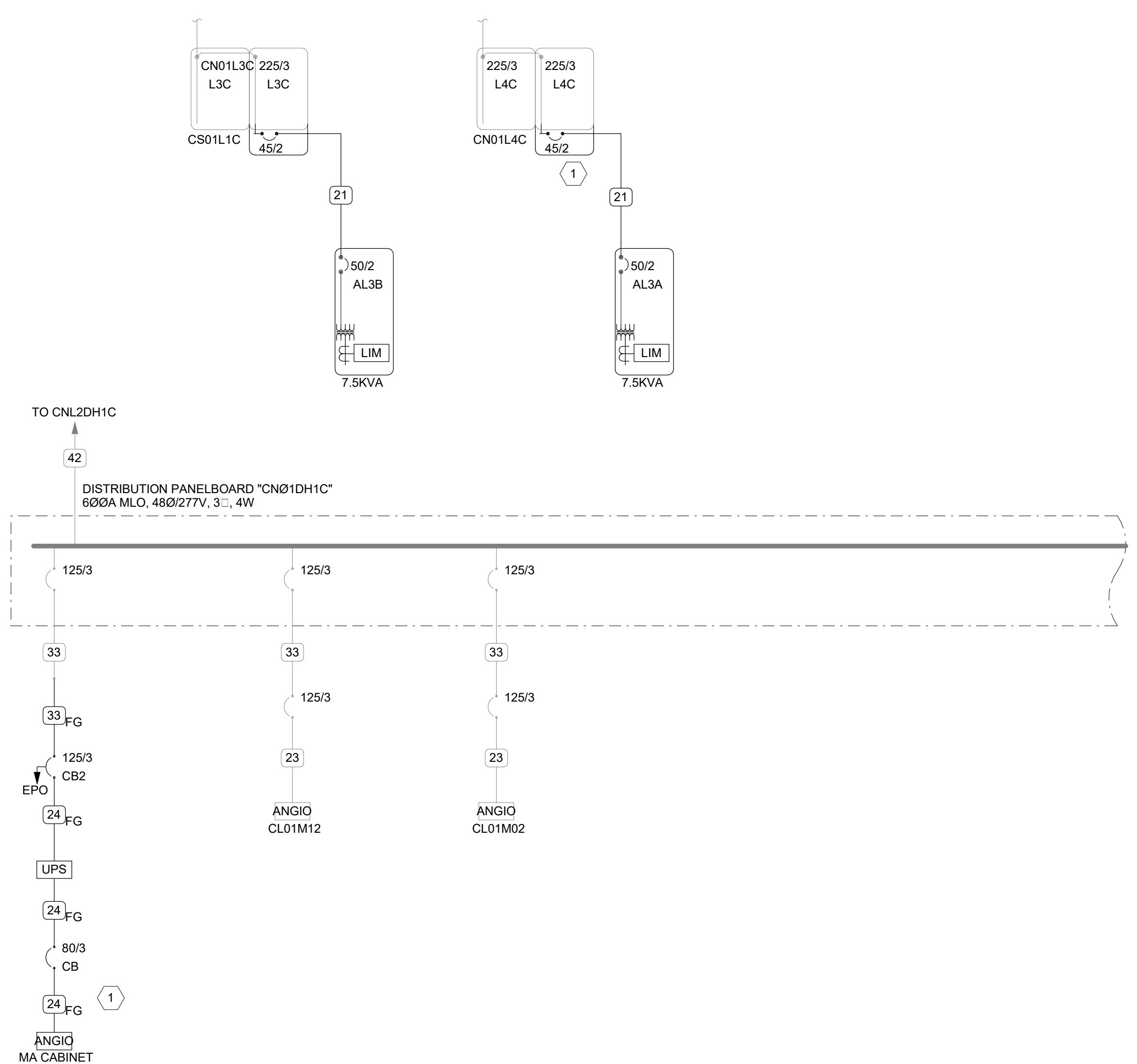
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CLIENT: INTERMOUNTAIN HEALTH										ABBIO LAB #3										5/23/2023										CIRCUITS: 32									
PANEL ID: AL3A										MOUNT: FLUSH										TYPE: BOLT-ON										120 VOLT 1 PHASE 3 WIRE ISOLATION PANEL									
50 AMPERE MAIN BREAKER										LOCATION:										PANEL SIZE: 72"Hx32"Wx12"D																			
ACCESSORIES: PANEL DIRECTORY, IDENTIFICATION, GROUNDING BAR, LINE ISOLATION MONITORS, 7.5 KVA, 208-120 VOLT TRANSFORMERS, INDICATOR ALARMS, INDICATOR LIGHTS, STAINLESS STEEL COVER (BOTH PANEL SECTIONS UNDER COMMON COVER)																																							
CRITICAL BRANCH A SECTION																				SECTION 1																			
CIR #	O/C PROT	OUTLETS			LCL		LOAD	LCL KVA	DESCRIPTION			OUTLETS			O/C PROT	CIR #																							
#	AMP	POLE	LTG	CO'S	PWR							LTG	CO'S	PWR	AMP	POLE	#																						
1	20	2		1			0.8	1.2	0.4		EAST CO				20	2	2																						
3	20	2		1			0.2	0.4	0.2		BOOM CO		1		20	2	4																						
5	20	2		1			0.2	0.6	0.4		NORTH CO		2		20	2	6																						
7	20	2		2			0.4	0.4	0		WEST CO				20	2	8																						
9	20	2		2			0.4	0.4	0		SOUTH SO				20	2	10																						
11	20	2					0	0	0		SPARE				20	2	12																						
13	20	2					0	0	0		SPARE				20	2	14																						
15	20	2					0	0	0		SPARE				20	2	16																						
TOTALS:										KVA										TOTAL KVA										3									
										AMPS										AVERAGE AMPS										13									
PANEL ID: AL3B										MOUNT: FLUSH										TYPE: BOLT-ON										120 VOLT 1 PHASE 3 WIRE ISOLATION PANEL									
50 AMPERE MAIN BREAKER										LOCATION:										PANEL SIZE: 72"Hx32"Wx12"D																			
ACCESSORIES: PANEL DIRECTORY, IDENTIFICATION, GROUNDING BAR, LINE ISOLATION MONITORS, 7.5 KVA, 208-120/208 VOLT TRANSFORMERS, INDICATOR ALARMS, INDICATOR LIGHTS, STAINLESS STEEL COVER (BOTH PANEL SECTIONS UNDER COMMON COVER)																																							
CRITICAL BRANCH B SECTION																				SECTION 2																			
CIR #	O/C PROT	OUTLETS			LCL		LOAD	LCL KVA	DESCRIPTION			OUTLETS			O/C PROT	CIR #																							
#	AMP	POLE	LTG	CO'S	PWR							LTG	CO'S	PWR	AMP	POLE	#																						
1	20	2		1			0.8	1.2	0.4		EAST CO				20	2	2																						
3	20	2		2			0.4	0.6	0.2		NORTH CO		1		20	2	4																						
5	20	2		2			0.4	0.6	0.2		NORTH CO		1		20	2	6																						
7	20	2		4			0.8	1.2	0.4		SOUTH CO		2		20	2	8																						
9	20	2					0	0	0		SPARE				20	2	10																						
11	20	2					0	0	0		SPARE				20	2	12																						
13	20	2					0	0	0		SPARE				20	2	14																						
15	20	2					0	0	0		SPARE				20	2	16																						
TOTALS:										KVA										TOTAL KVA										3.6									
										AMPS										AVERAGE AMPS										15									
WIRING:																																							
NOTE:																																							



**1 DEMOLITION PLAN**  
SCALE: NTS



**2 NEW ONE LINE DIAGRAM**  
SCALE: NTS

**SHEET KEYNOTES**

- PROVIDE NEW BREAKER IN EXISTING GE PANEL.
- CONDUIT TO ROUTE THROUGH WR2 RACEWAY. REFER TO PHILLIPS DRAWINGS.

**CONDUCTOR AND CONDUIT SCHEDULE**

SCHEDULE NUMBER (E.G.) 5 IG

SUBSCRIPT (NOTE 5)

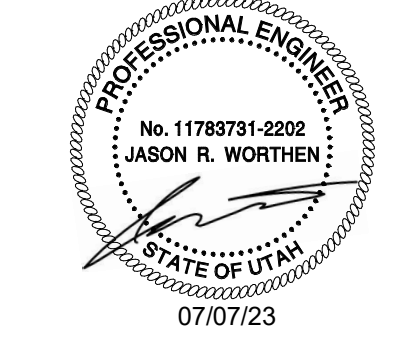
SYM	AMP	CONDUIT SIZE	CONDUCTOR(NOTE 1)	IG	SE	NOTES
1	20	75	2 12 12 12 8 2			
2	20	75	3 12 12 12 8 2.3			
3	20	75	4 12 12 12 8 2.3			
4	30	75	2 10 10 10 8 2			
5	30	75	3 10 10 10 8 2			
6	30	75	4 10 10 10 8 2			
7	40	1	2 8 10 8 6 2			
8	40	1	3 8 10 8 6 2			
9	40	1	4 8 10 8 6 2			
10	55	1	2 6 10 8 4 2			
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	230	2.50	3 4/0 4 2 2/0 2			
30	230	2.50	4 4/0 4 2 2/0 2			
31	255	2.50	3 250 4 1 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 3/0 4/0 3/0 4			
51	1240	4 EA 3	3 350 3/0 4/0 3/0 4			
52	1240	4 EA 3	4 350 3/0 4/0 3/0 4			
53	1675	5 EA 4	4 400 4/0 4/0 4/0 4			
54	2010	6 EA 4	4 400 250 250 250 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		5 EA 4				6
59		5				6
60		10 EA 4				6

**CONDUCTOR AND CONDUIT SCHEDULE NOTES**

- CONDUCTORS SHOWN ARE SHOWN FOR EACH CONDUIT WITH MODIFICATIONS AS NOTED IN NOTE 4. ALL CONDUCTORS SHOWN ARE THWN UNLESS OTHERWISE NOTED.
- PROVIDE EQUIPMENT GROUND CONDUCTORS PER TABLE 250-122 WHEN CIRCUIT BREAKERS ARE SIZED GREATER THAN AMPERE RATING SHOWN IN TABLE.
- PROVIDE #10 NEUTRALS FOR MULTIWIRE BRANCH CIRCUITS SERVING COMPUTERS.
- SYMBOL SUBSCRIPTS:
  - "2N": INCLUDE TWO NEUTRAL CONDUCTORS, SIZED AS SCHEDULED FOR PHASED AND NEUTRAL CONDUCTORS.
  - "FG": FULL SIZE GROUND, SIZE EQUIPMENT GROUNDING CONDUCTOR TO BE THE SAME SIZE AS THE PHASE CONDUCTORS.
  - "NH": 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.
  - "SE": SUBSTITUTE "SE" CONDUCTOR FOR "G" CONDUCTOR SHOWN, WHICH IS SIZED FOR THE GROUNDING OF THE SECONDARY OF THE SEPARATELY DERIVED SYSTEM.

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**Emergency Power**

Philips does not require equipment to be on emergency power. If the customer deems it necessary for the equipment to be supplied with emergency power, the following specifications must be applied:

The Mains 40E cabinet feeding an Azurion system will have an absolute peak current of <math>\approx 300A</math> @ 480V. Maximum momentary current <math>\approx 80A</math> per phase when averaged over a 5-second window. Note that during acquisition, the current harmonics (including sub- and inter-harmonics) up to 1 kHz can be substantial. Account for 30% for the mains frequency <math>\pm</math> the frame speed, up to 20% for the 5th harmonics, up to 10% for the 7th harmonics.

Maximum differential mode induced disturbance voltage on these wires shall be <math>\le 3V</math> peak at all frequencies. Maximum common mode current on these wires shall be less than 3 micro-amp at frequencies between 30-1000MHz to meet EMC regulations.

For systems delivered to site before Jan 2016 or with SIB (system interface box) 4522163320783. When this interface is used a Sub-D capacitive filter adapter with 5 Ohm between pins and chassis shall be placed on X14 of the SIB input in the MA-cabinet (e.g. Amphenol FCE1782AD295).

(22.0)

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**Electrical Requirement Notes for Systems with Mains 40E Cabinet**

Electrical power distribution at the facility shall comply with:

Utilization voltages per ANSI C84.1 - 2006 range A.

Voltage to be supplied is 3 phase, Wye or symmetric Delta 3-line +PE.

Phase conductors to be sized for instantaneous voltage drop per NEC 517.73 and Philips recommendations.

All Philips equipment is grounded via the equipment insulated ground wire. Metal raceway bonding shall be used as a secondary ground fault path for the supply mains to the equipment. The raceway system ground and isolated equipment ground shall be bonded together in the ERB terminal jumpers.

The Philips system has a private ground domain per clause 200.96B of the NEC. The raceway from the X-ray breaker (CB) to the Mains 40E Cabinet shall be supplemented by an internal insulated equipment grounding conductor installed in accordance with clause 200.46(D) of the NEC. The Azurion equipment ground domain and the branch circuit ground domain are bonded together in the ERB via a ground bonding jumper.

ANSI / NFPA 70 - National Electrical Code  
Article 250 - Grounding  
Article 517 - Healthcare Facilities  
ANSI / NFPA 99 - Healthcare Facilities

**Power Quality Guidelines**

- Power supplied to medical imaging equipment must be separate from power feeds to air conditioning, elevators, outdoor lighting, and other frequently switched or motorized loads. Such loads can cause waveform distortion and voltage fluctuations that can hinder high quality imaging.
- Equipment that utilizes the facility power system to transmit control signals (especially clock systems) may interfere with medical imaging equipment, thus requiring special filtering.
- The following devices provide a high impedance, nonlinear voltage source, which may affect image quality: Static UPS systems, Series filters, Power conditioners, and Voltage regulators.
- Do not install such devices in the supply mains branch circuit of the Azurion system without consulting Philips installation or service personnel.
- Line impedance is the combined resistance and inductive reactance of the electrical system and includes the impedance of the power source, the facility distribution system, and all phase conductors between the source and the imaging equipment. The minimum conductor size is based on the total line impedance and NEC requirements. Impedance calculations are to be performed by an electrical engineer.

(22.0)

**General Electrical Information**

- General**  
The customer shall be solely responsible, at its expense, for preparation of the site, including any required electrical alterations. The site preparation shall be in accordance with this plan and specifications, the architectural/construction drawings and in compliance with all safety and electrical codes. The customer shall be solely responsible for obtaining all electrical permits from jurisdictional authority.
- Materials and Labor**  
The customer shall be solely responsible, at its expense, to provide and install all electrical ducts, boxes, raceways (conduits, wireways, auxiliary gutters etc.), fittings, bushings, etc. As separately specified herein.
- Electrical Ducts and Boxes**  
Electrical ducts and boxes shall be accessible and have removable covers. Floor ducts and boxes shall have watertight covers. Ducts shall be divided into as many as four separate channels by metal dividers, separately specified herein, to separate wiring and/or cables into groups as follows: Group A: Branch circuit equipment supply mains; power wires together with the branch circuit isolated equipment bonding wire; Group B: Equipment Secondary Circuit AC supply and associated isolated ground cable/wire harnesses; Group C: Equipment signal wires and cable harnesses plus equipment low-voltage DC supply cable/wire harnesses; Group D: X-Ray high-voltage cables, the use of 60 deg. elbows is not acceptable. On ceiling duct and wall duct use 45 deg. bends at all corners. All intersecting points in duct to have cross over tunnels supplied and installed by contractor to maintain separation of cables based on 725.136 for low voltage signaling cables and conductors and 517.80 for communications and signaling cables in health care applications. Secondary circuits of transformer powered communications and signaling systems are not required to be enclosed in raceways unless otherwise specified by Chapter 7 or Chapter 8. All wire harnesses of the Azurion system are required to be run in a raceway (wireway) dedicated to Azurion wire harnesses. No foreign wiring shall be run in the same wireway together with the Azurion wire harnesses. Separation between Group A and other groups is mandatory along the full run of group A wires. Separation between groups B, C, and D is recommended for the first 3 meters behind the equipment cabinets and for the locations where wire-harness over-length is suspended.
- Raceways (Conduit)**  
Raceway (Conduit) point-to-point runs shall be as direct as possible. Empty conduit runs used for cables may require pull boxes located along the run. Consult with Philips. A pull wire or cord shall be installed in each conduit run. Best practice to name the physical conduit. All conduits which enter duct prior to their termination point must maintain separation from other cables via use of dividers, cross over tunnels, or conduit supplied and installed by contractor from entrance into duct to exit from duct. Do not use flex conduit unless approved by Philips Service.
- Conductors**  
All conductors, separately specified, shall be 90°C stranded copper, rung out and marked.
- Disconnecting Means**  
A disconnecting means shall be provided as separately specified.
- Warning Lights and Door Switches**  
"X-ray" or warning lights and x-ray termination door switches should be provided at all entrances to x-ray rooms as required by code.
- Dimmer Switches**  
X-ray room lights should be provided with dimmer switches.

(19.0)

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**Electrical Notes**

- The contractor will supply & install all breakers, shunt trip and incoming power to the breakers. The exact location of the breakers and shunt trips will be determined by the architect or contractor.
- The contractor shall supply & install all pull boxes, raceway runs, stainless steel covers, etc. Conduits/raceways must be free from burrs and sharp edges over its entire length. A Greenlee pull string/measuring tape (part no. 435, or equivalent) must be provided with raceway runs to validate runs as well as length restrictions.
- All pre-terminated, cut to length cables, will be supplied and installed by Philips. All cables and conductors to the equipment supply mains branch circuit breaker shall be supplied and installed by the contractor, subject to local arrangements.
- Provide and install 50mm diameter chase nipples between adjacent wall boxes.
- Electrical raceway ducts shall be installed with removable covers. The raceway should be accessible for the entire length. In case of non-accessible floors, walls and ceilings, an adequate number of access hatches should be supplied to enable installation of cabling. Approved raceways may be substituted. All raceways will be designed in a manner that will not allow cables to fall out of the raceway when the covers are removed. In most cases, this will require above-ceiling raceway to be installed with the covers removable from the top. Raceway systems as illustrated on this drawing are based upon length of furnished cables. Any changes in routing of raceway systems could exceed maximum allowable length of furnished cables. Conduits or raceways installed above ceilings must be kept as near as practicable to finished ceilings and still permit accessibility.
- Raceway sizes shall be verified by the architect, electrical engineer or contractor, in accordance with local or National Electrical Code, whichever govern.
- Convenience outlets are not shown on the plans. Their number and location are to be specified by the customer/architect.
- Electrical contractor shall install grounding and bonding conductors at raceway openings within wall boxes as required by national and local electrical codes. Ground bond wires and lugs shall be installed in such a way to prevent the inadvertent contact with the installed Philips equipment to maintain Philips isolated ground scheme and maintain patient safety.
- Install an insulated stranded ground wire per feeder/conductor size from the Main Disconnect (CB) to the ERB (minimum size 4 AWG) and from the ERB to the Mains 40E Cabinet (minimum size 4 AWG).
- Philips equipment must be electrically isolated from conduits, raceways, ducts, seismic anchoring, floor anchoring, etc.

(18.0)

**PHILIPS**

Project: Azurion 7 B2012, B2015 - Swivel - Catalyst Intermountain Medical Center Salt Lake City, UT (Room: Lab 3)

Philips Contacts:  
Project Manager: Ray Ivone  
Project Number: 081144-0281  
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Email: ray.ivone@philips.com  
Drawn By: Isabelle Barro  
Date: 6/20/2022

Project Details:  
Drawing Number: N-WES210091 E  
Date Drawn: 4/29/23  
Date: 12/21/2022 Rev: 18  
Order: 600255748\_010000

EN

05.27.2022

**Electrical Legend**

Item Number	Description	Detail Sheet
WA	Local building steel (i.e. structural steel, ground rod) (Not shown on plan)	ED2
ERB	Equip-Potential Reference Bar mounted in a 12" (305mm) W x 12" (305mm) H x 4" (105mm) D pull box with hinged cover, surface mounted to the bottom of "WR2" when possible.	ED3
ME	Customer/Contractor provided 19" (490mm) W x 67" (1705mm) H x 4" (105mm) including rubber isolation strips D flanged-edge terminal back box, surface mounted 82" (2085mm) A.F.F. to top of box. Weight is approximately 125 lbs (56.7 kg) per box. Please see ED3 for ordering instructions for back boxes.	ED3
GR	Grommet opening on "WR3" Approximate location shown is recommended and may be changed - verify relocation with local Philips Service.	ED3
WR	4" (105mm) W x 4" (105mm) H x 4" (105mm) D pull box with removable screw-type cover plate, flush mounted. Exact height to be determined. Verify location with local Philips Service.	ED3
WR2	10" (255mm) W x 4" (105mm) D wall raceway, surface mounted with removable screw-type cover plate. "WR1" is as 5" (130mm) A.F.F. to bottom of raceway. "WR2" is at 82" (2085mm) A.F.F. to bottom of raceway.	ED3
WR3	10" (255mm) W x 4" (105mm) D wall raceway, surface mounted with removable screw-type cover plate. "WR3" is at finished floor. "WR3" may need to be cut at the location of the "CY" connection box.	ED3
PH	Stub up point for physiological monitoring cables. Run conduit to customer's physiological console location. Contact manufacturer for power requirements, etc. Not shown.	ED4
ATY	Auxiliary Box - 6" (155mm) W x 6" (155mm) H x 4" (105mm) D wall box, flush mounted with removable screw-type cover plate. Location shown is recommended and may be changed - verify height and relocation with local Philips Service.	ED4
VL	Warning Light - Provide a surface or flush mounted light fixture above door to indicate when X-ray is on, if required by local code or physicist of record. (Not shown on plan)	ED4
DS	Door Switch - 120V/5A switch limited to open when door is open. Mount in upper corner on strike side of main entry door(s) (Cooper no. 1665 or equivalent), if required by local code or physicist of record. See Sheet "ED5" diagram for connection details. (Not shown on plan)	ED4
FW	Approximate location shown for Firewall is recommended and may be changed - verify relocation with local Philips Service. Firewall must be installed maximum of 6'-8-3/4" from the CY.	ED4

See E1 - E4 sheets for conduit and raceway requirements.

**Electrical Legend**

Item Number	Description	Detail Sheet
CB	480V, 3 phase, Type D 80 A circuit breaker with long time delay (e.g. Square D HDL36080 or equivalent). Run power from breaker to "MA", leaving an 8" (204mm) tail at "MA". See Sheet "ED1" for power quality requirements. Location per local code or owner requirements. (Not shown on plan)	ED1
ST	Shunt Trip (emergency off) - Large mushroom-headed button on remote control station with contacts to operate feature of "CB" (if required by local code or owner, and mandatory for VA and D.O.D installations). If UPS is utilized, EPO switch will run 2 sets of communication wires to input breaker to UPS and to UPS itself (Not shown on plan)	ED4
CB2	UPS input breaker. 125A, 3-pole circuit breaker with shunt trip. (Not shown on plan).	ED4
UPS	UPS - 75 kVA.	ED4
SOB	Signaling Box Option (wall mounted in the control area). Exact height to be determined. Location shown is recommended and may be changed - verify relocation with customer/contractor.	ED4

See E1 - E4 sheets for conduit and raceway requirements.

**PHILIPS**

Project: Azurion 7 B2012, B2015 - Swivel - Catalyst Intermountain Medical Center Salt Lake City, UT (Room: Lab 3)

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Drawing Number: N-WES210091 E  
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EL1

05.27.2022

**Electrical Legend**

Item Number	Description	Detail Sheet
MSA	10" (255mm) W x 10" (255mm) L x 6" (155mm) D floor box, under the floor with a 5" (130mm) core drill up to the underside of AD7 sawfl floor plate cable opening. Contractor to provide protection around core drill hole so that there are no sharp edges for protection of cables. Consult with local Philips Service.	ED3
SP	12" (305mm) W x 12" (305mm) L x 4" (105mm) D floor box, under the floor with a 8" (205mm) core drill up to the underside of Clea floor plate. See "Detail - Clea Floor Plate Cable Entrance" on Sheet "ED3" for cable routing methods. Contractor to provide protection around core drill hole so that there are no sharp edges for protection of cables. Consult with local Philips Service.	ED3
RE	18" (460mm) W x 18" (460mm) L x 6" (155mm) D ceiling box, flush mounted with removable screw-type cover plate. Provide one 3" (80mm) diameter knockout.	N1
TV	18" (460mm) W x 18" (460mm) L x 6" (155mm) D ceiling box, flush mounted with removable screw-type cover plate. Provide a 2 1/2" (65mm) round outlet (Two 2 1/2" (65mm) round outlets are required for systems with two monitor carriages - verify with local Philips Service). "VBS" and "VBS" to be mounted on back of TV.	N1
MS	4" (105 mm) W x 4" (105 mm) L x 2 1/2" (65 mm) D ceiling box, flush mounted with removable screw-type cover plate. Recommended location is near or above the cable spooler. Hardware 120 - 240 VAC, 50 - 60 Hz hospital power to "MD".	N1

**Electrical Legend**

Item Number	Description	Detail Sheet
DS	120V/20A dedicated duplex outlet for service in the equipment room. (Not shown on plan)	
DS	120V/20A dedicated duplex outlet.	
DS	250V/30A dedicated duplex outlet for optional third party equipment (e.g. Spectracines Laser - Not shown on plan)	
DS	120VAC with 1Amp power draw SBO (Signaling Box Option)	
NC	R45 type Ethernet 10/100/1000 Mbit network connector with access to customer's network. Locate within 10' (3050mm) of network card. Network fiber optic and Ethernet cabling, connectors, wall boxes, patch panels, etc. are the responsibility of the purchaser. Philips assumes no responsibility for procurement, installation, or maintenance of these components.	
NC	R45 type Ethernet 10/100/1000 Mbit network connector. Access to customer's network via their remote access server is needed for Remote Service Network (RSN) connectivity.	
NC	R45 type Ethernet 10/100/1000 Mbit network connector with access to customer's network. Required for Collaboration Live to access from the network of the healthcare facility to the internet for outbound connections.	

See E1 - E4 sheets for conduit and raceway requirements.

**PHILIPS**

Project: Azurion 7 B2012, B2015 - Swivel - Catalyst Intermountain Medical Center Salt Lake City, UT (Room: Lab 3)

Philips Contacts:  
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Contact Number: (801) 446-0281  
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Drawn By: Isabelle Barro  
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Project Details:  
Drawing Number: N-WES210091 E  
Date Drawn: 4/29/23  
Date: 12/21/2022 Rev: 18  
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EL2

05.27.2022

**Electrical Layout**

Required Unistrut Height:  $9 \frac{5}{8} + \frac{1}{8} = 10$  (2980mm, +4mm / -0)  
Unistrut Height measured from top of Clea floor plate to bottom of Unistrut.

**Planning Issues and Considerations**

- Contractor/Structural Engineer to verify location of underfloor beams does not interfere with mounting of floor boxes. Refer to S1 sheet for floor support details.

**General Notes for Testing and Service Purpose:** (22.0)

- The conduit must meet these 3 criteria:
  - Accessible for the FSE during install & annual FM Electrical Safety testing.
  - Max Length of the ground wire stays below 60'-0"
  - All ground to be used.
- The calculated ground resistance to the actual wire would need to be subtracted from the measured ground bonding between the ERB and accessible part.
- Conduit is added to bypass long hallways during testing purposes. Conduit must be alone. Verify with field and customer requirement.
- Exam room placement of conduit termination should be on shared wall with equipment room, if possible. If not, exam room wall closest to the equipment room.

Refer to Electrical Legend - Sheet EL1-EL2 and Raceway/Conduit - Sheet ED-E4

**PHILIPS**

Project: Azurion 7 B2012, B2015 - Swivel - Catalyst Intermountain Medical Center Salt Lake City, UT (Room: Lab 3)

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Project Manager: Ray Ivone  
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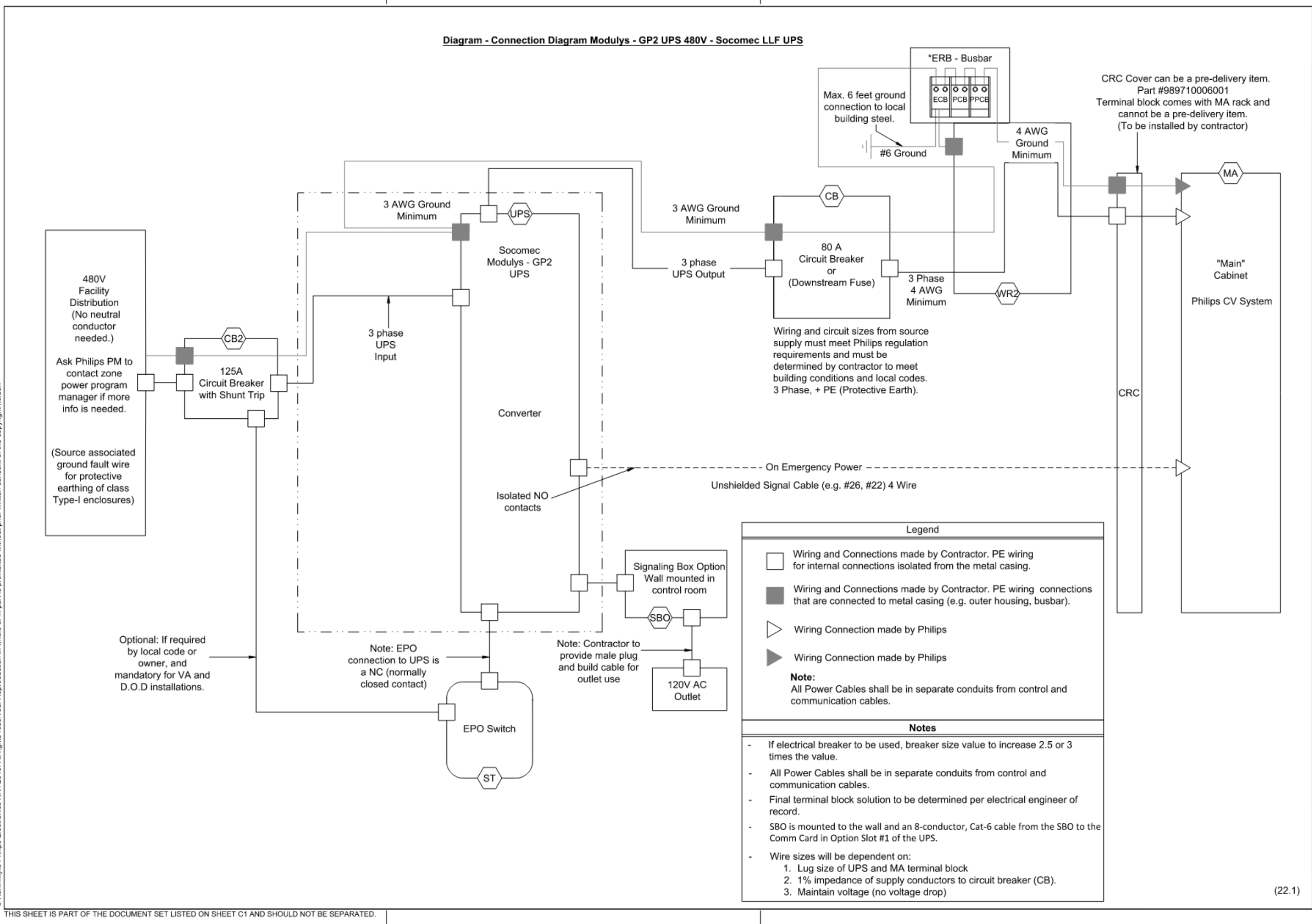
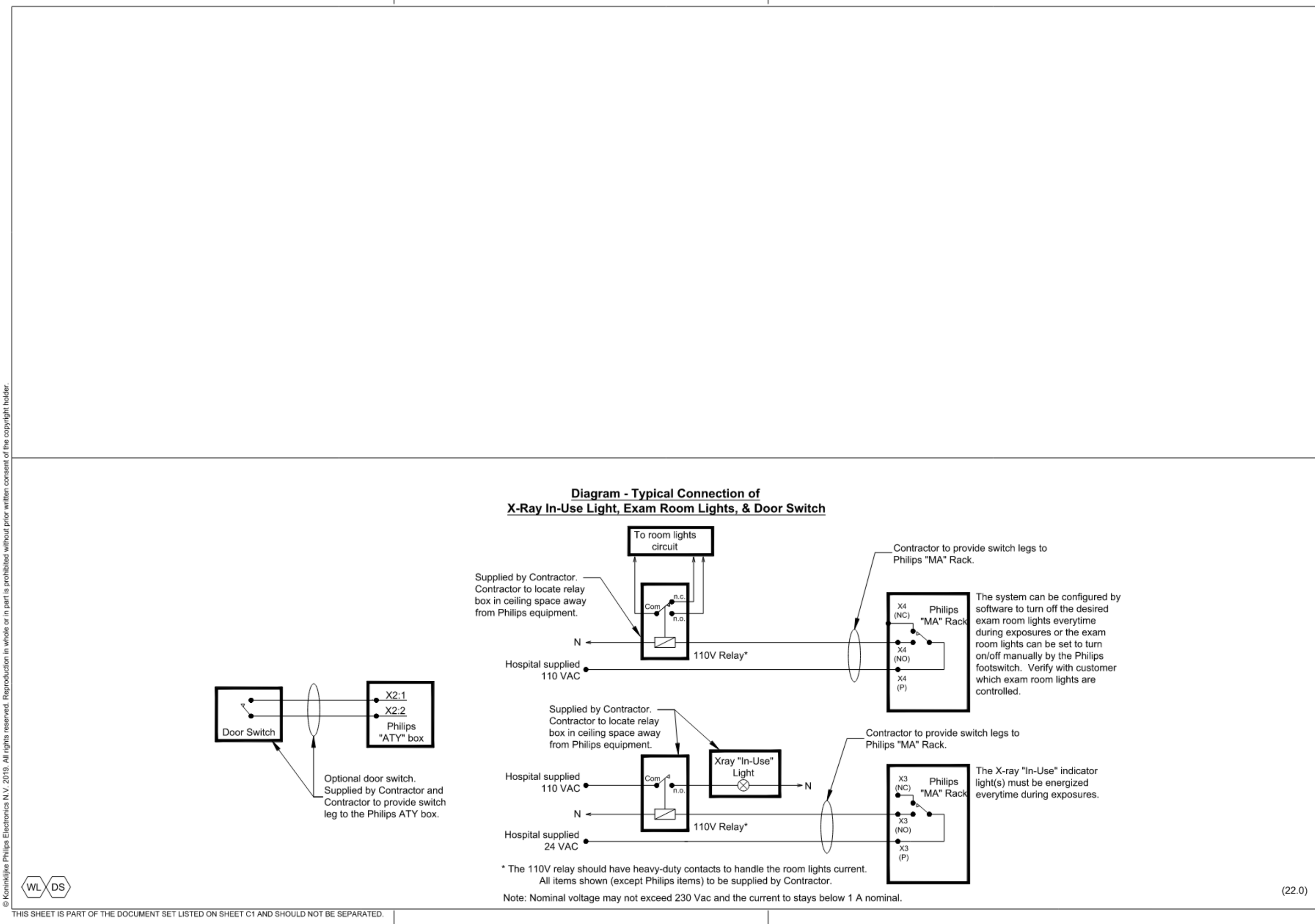
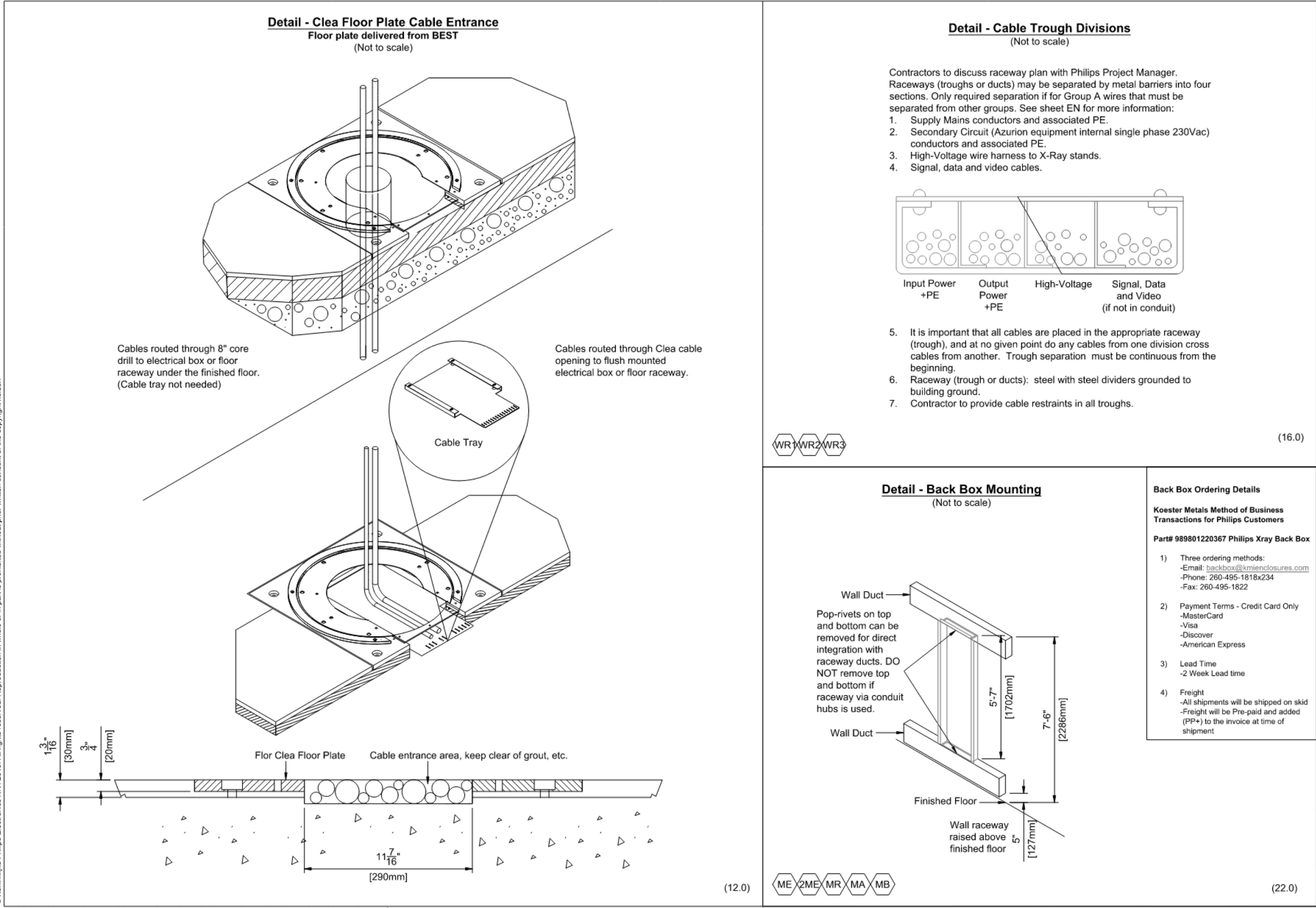
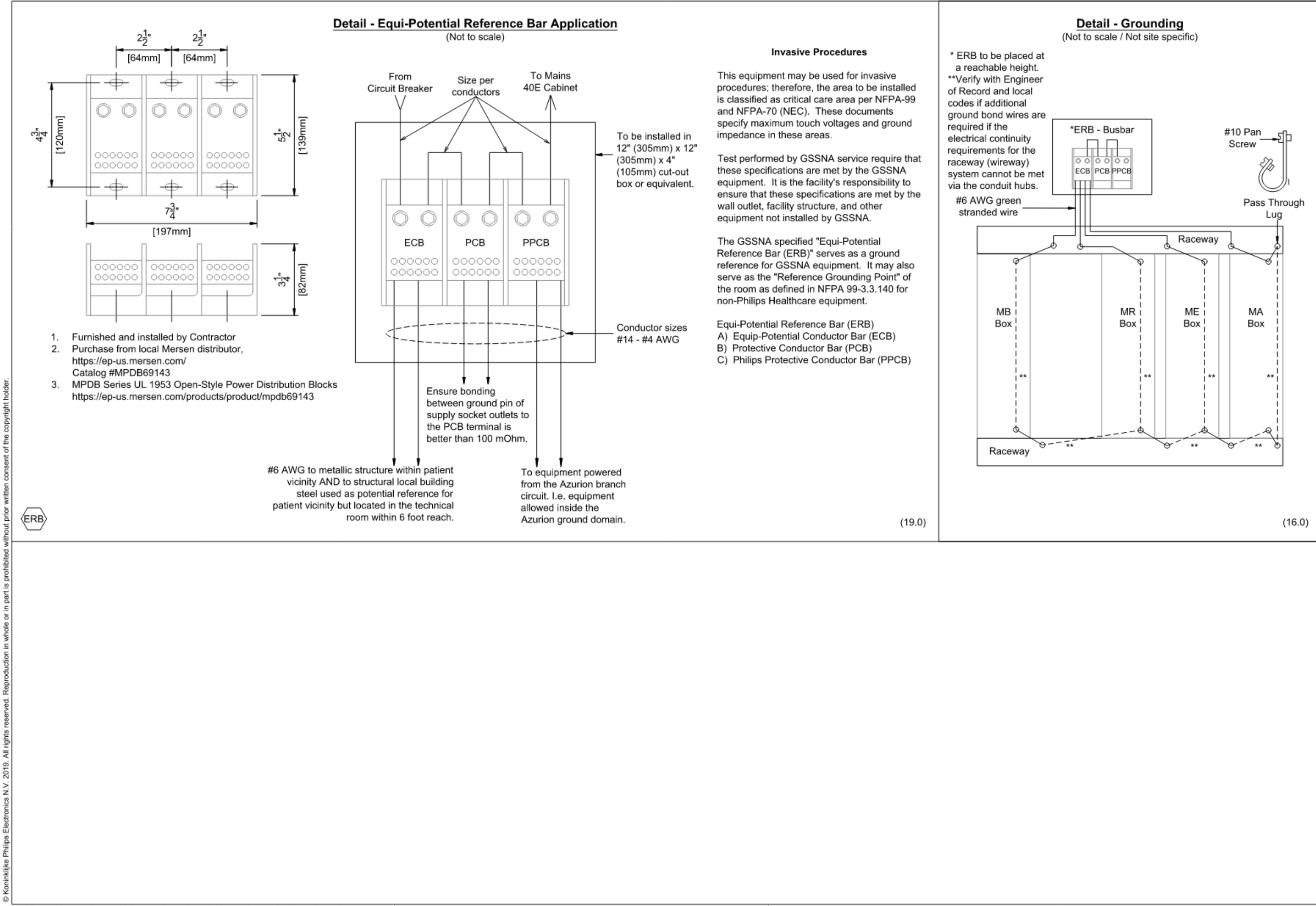
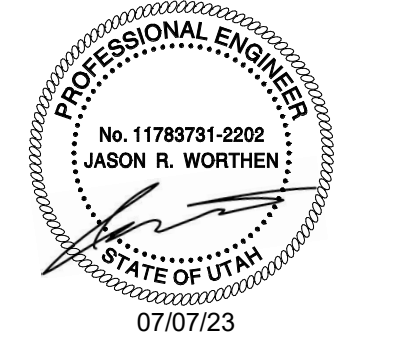
EL1

05.27.2022

Intermountain Health  
Intermountain Medical Center  
Angio Lab #3 Remodel Project

5121 South Cottonwood Street  
Murray, UT 84107





Intermountain Health  
Intermountain Medical Center  
Angio Lab #3 Remodel Project  
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## Philips Collaboration Live

### 1. Collaboration Live Server - powered by Reacts

The Collaboration Live server is a cloud-hosted enterprise solution that provides contact management, secure connectivity and streaming services for Collaboration Live text, audio and video features. This server is accessed from a separate PC installed in the Azipion control room and remote client end-points over the internet using an industry standard TLS method of connectivity. The server is hosted by IT (Innovative Imaging Technologies, Montreal, Canada).

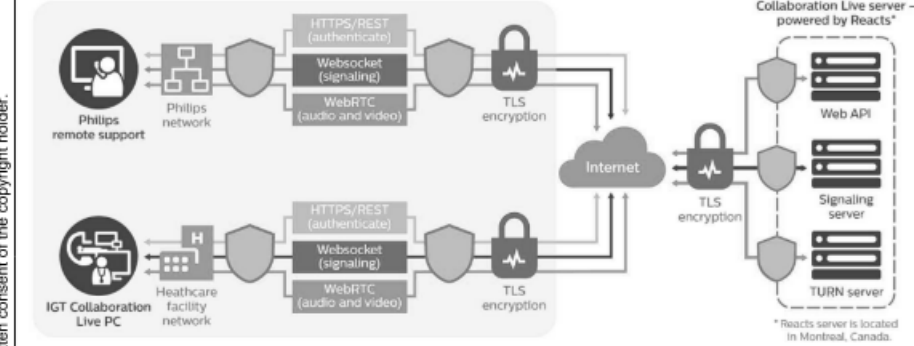
### 2. Connectivity

In order to connect to the Collaboration Live server, the system will need access from within the healthcare facility network to the internet for outbound connections over port 443, and UDP and TCP protocol must be allowed. We recommend whitelisting the following domains:

- \*reacts.com

The minimum bandwidth of 0.5 Mbit/s upload and 0.5 Mbit/s download is required for connectivity. The recommended bandwidth for optimal performance is 1.5 Mbit/s upload and 1.5 Mbit/s download.

#### Collaboration Live network diagram



The privacy policy of IT Reacts is available online:  
<https://reacts.com/en/legality/privacy>

The security overview of IT Reacts is available online from the Security and Privacy Page:  
<https://reacts.com/security-overview/>

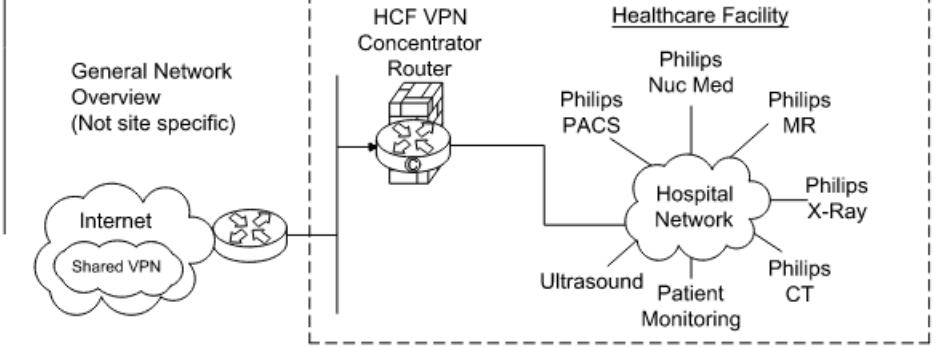
## Philips Healthcare Remote Services Network (RSN)

Secure broadband connection required for Philips remote technical support, diagnostics, and applications assistance

### Broadband Site-to-Site Connectivity (Preferred)

This connectivity method is designed for customers who prefer a connection from the RSN Data Center to the Health Care Facility (HCF) utilizing their existing VPN equipment.

- Connectivity Details:**
- A Site-to-Site connection from the RSN data center's Cisco router will be established to the HCF's VPN concentrator.
  - The VPN Tunnel will be an IPSEC, 3DES encrypted Tunnel using IKE as standard, but alternative standards are also available, such as AES, MD5, SHA, Security Association lifetime and Encryption Mode.
  - Every system that we will be servicing remotely will have a static NAT IP that we configure on the RSN Data center side.

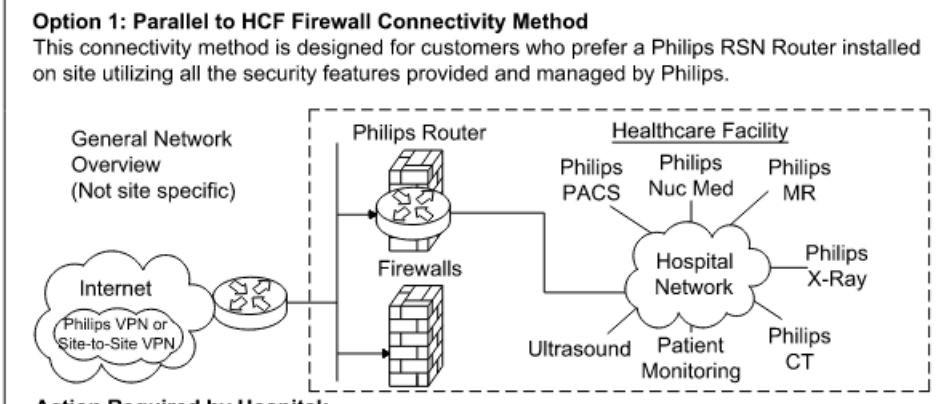


- Action Required by Hospital:**
- Review and approve connection details.
  - Complete appropriate Site Checklist.
  - Configure and allow Site-to-Site access prior to setting up connectivity depending on the access criteria that the HCF decides to implement (ex. Source IP filtering, destination IP filtering, NAT assignment, etc.).
  - Route traffic from within the hospital network with destination addresses 192.68.48.0/22 to the designed IP provided by Philips.

### Broadband Router Installed at Health Care Facility

This connectivity method is designed for customers who have a dedicated high speed connection for Philips equipment.

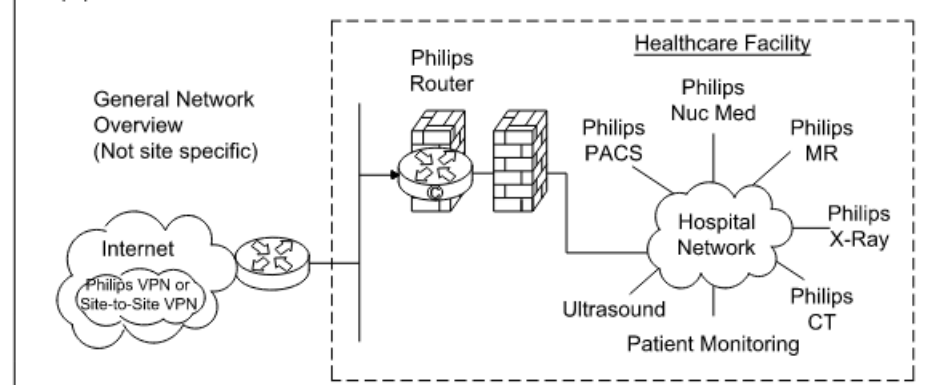
- Connectivity Details:**
- An RSN Cisco 3711 or 1712 router will be preconfigured and installed at the HCF by Philips in conjunction with the HCF IT representative.
  - The VPN Tunnel will be an IPSEC, 3DES encrypted Tunnel using IKE and will be established from the RSN DC and terminated at the RSN Router on-site.
  - One to One NAT is used to limit access to Philips equipment only.
  - Router Config and IP auditing is enabled for Customer IT to view via website 24/7.
  - Dedicated DSL connections are also supported.



- Action Required by Hospital:**
- Assign a fixed public IP Address from the ISP to be configured on the Philips router. This is the DOTTED link on the picture connected to the firewall.
  - Assign a Back end IP for the Philips router on the Hospital Network.
  - Complete appropriate Site Checklist.
  - Route traffic from within the hospital network with destination addresses 192.68.48.0/22 to internal Philips router Ethernet interface. This is the DASHED line connected to the firewall.

### Option 2: Back End Connected to the HCF Firewall Connectivity Method

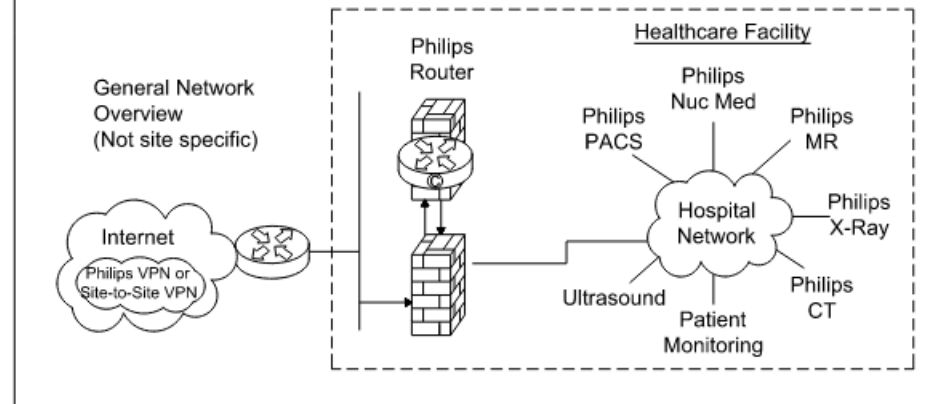
This connectivity method is designed for customers who prefer a Philips RSN Router installed on site by setting up an IP-Based policy allowing access thru existing HCF Firewall to Philips equipment.



- Action Required by Hospital:**
- Assign a fixed public IP Address from the ISP to be configured on the Philips router. This is the DOTTED link on the picture connected to the firewall.
  - Assign a Back end IP for the Philips router on the Hospital Network.
  - Complete appropriate Site Checklist.
  - Route traffic from within the hospital network with destination addresses 192.68.48.0/22 to internal Philips router Ethernet interface. This is the DASHED line connected to the firewall.
  - Configure and allow on the firewall on the DASHED line interface access between the IP address allocated by the hospital to the Philips internal Ethernet router interface and the target modality IP address.

### Option 3: Router Installed Inside the HCF's DMZ

This connectivity method is designed for customers who prefer the RSN Router installed inside an existing, or new DMZ, allowing access to Philips equipment.



- Action Required by Hospital:**
- Assign a fixed public IP Address from the ISP to be configured on the Philips router. This is the DOTTED link on the picture connected to the firewall.
  - Assign a Back end IP for the Philips router on the Hospital Network.
  - Complete appropriate Site Checklist.
  - Route traffic from within the hospital network with destination addresses 192.68.48.0/22 to internal Philips router Ethernet interface. This is the DASHED line connected to the firewall.
  - Configure and allow on the firewall on the DASHED line interface IPSEC protocol communication by opening protocol 500, 51, 47 and port 21 + TACACS. Traffic should be between external IP Address located on the Philips router and the RSN Data center IP address 192.68.48/24 and IP address ACSN TACAS.
  - Configure and allow on the firewall on the DASHED line interface access between the IP address allocated by the hospital to the Philips internal Ethernet router interface and the target modality IP address.

**PHILIPS**

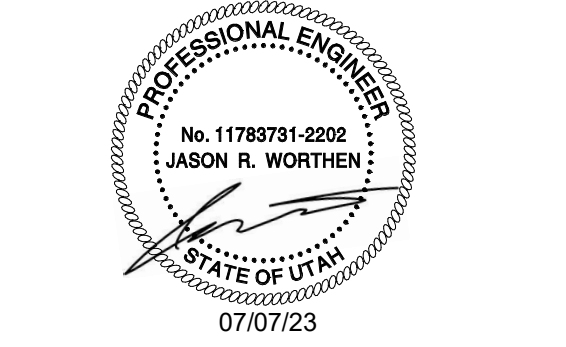
**Project Name:** Intermountain Medical Center  
**Location:** Salt Lake City, UT  
**Room:** Intermountain Lab 3

**Project Details:**  
**Project Number:** N-WES210091 E  
**Date Drawn:** 4/5/2023  
**Drawn By:** [Name]  
**Checked By:** [Name]

**N1**  
 05.27.2022



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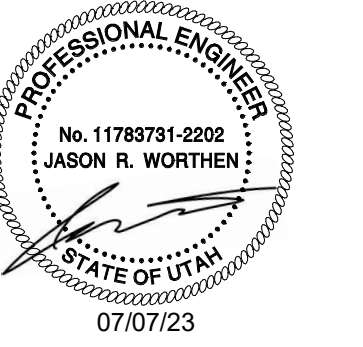
**SPECTRUM ENGINEERS**  
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 801-328-5151  
 Fax: 801-328-5155  
[www.spectrum-engineers.com](http://www.spectrum-engineers.com)

**Intermountain Health**  
**Intermountain Medical Center**  
**Angio Lab #3 Remodel Project**  
 5121 South Cottonwood Street  
 Murray, UT 84107

NJRA Project # 22247.00  
 Construction Documents July 7, 2023

PHILLIPS DRAWINGS

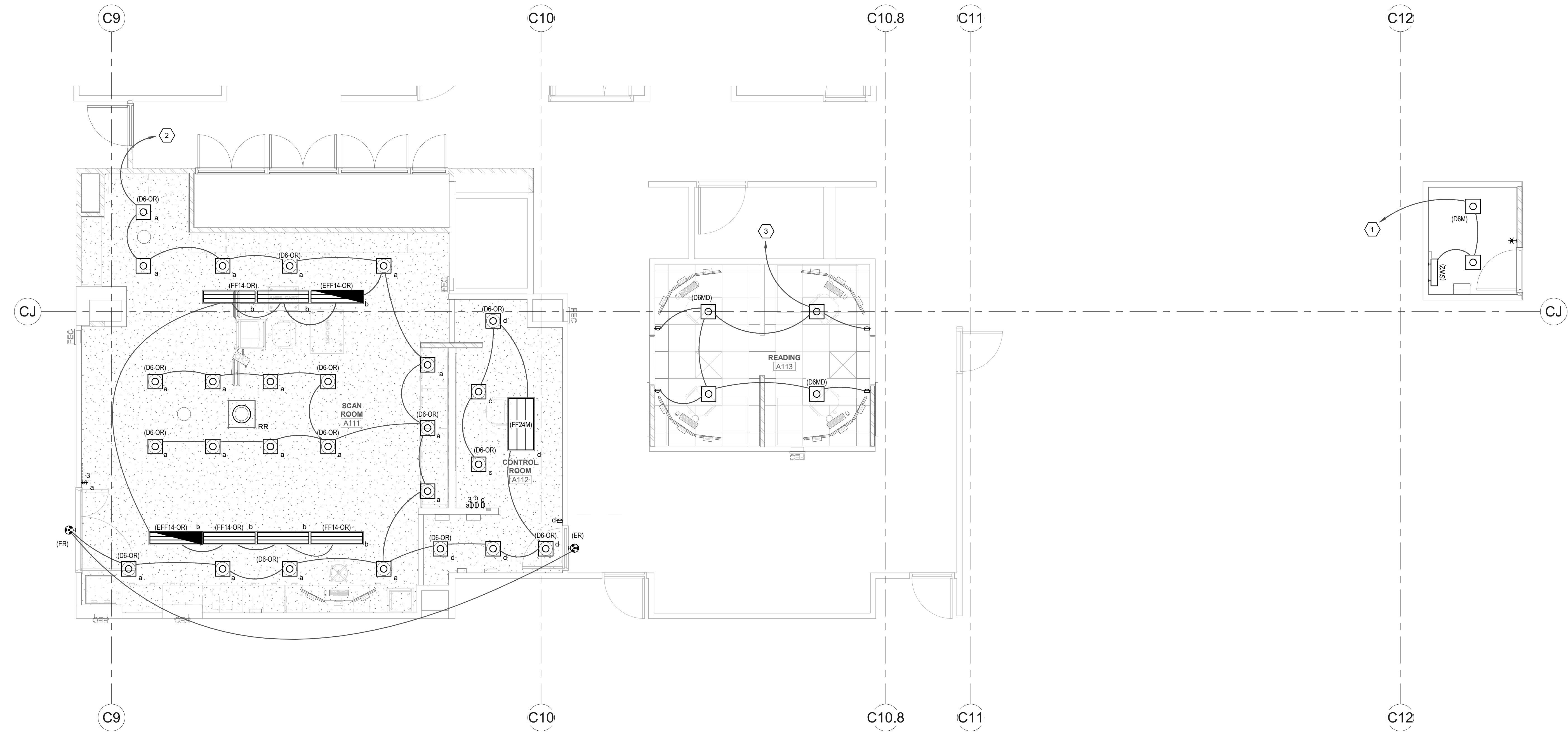
EP704



**GENERAL SHEET NOTES**

**SHEET KEYNOTES**

- 1 CONNECT TO EXISTING LIGHTING CIRCUIT IN ADJACENT EQUIPMENT ROOM.
- 2 CIRCUIT TO THE EXISTING CRITICAL BRANCH LIGHTING CIRCUIT THAT PREVIOUSLY FED THE LIGHTING IN THE ANGIO LAB.
- 3 CONNECT TO EXISTING LIGHTING CIRCUIT THAT PREVIOUSLY FED THE READING ROOM.



**1 LEVEL 1 LIGHTING PLAN**  
SCALE: 1/4" = 1'-0"

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NJRA Project # 22247.00  
Construction Documents July 7, 2023

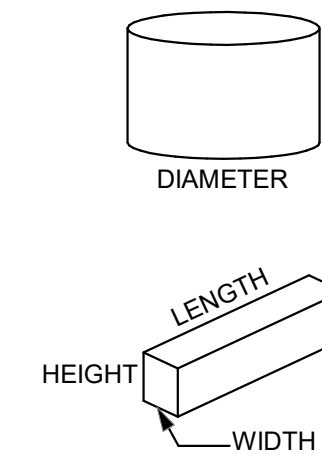
**LEVEL 1  
LIGHTING  
PLAN**

**EL101**

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## INTERIOR LIGHTING FIXTURE SCHEDULE

### GENERAL NOTES

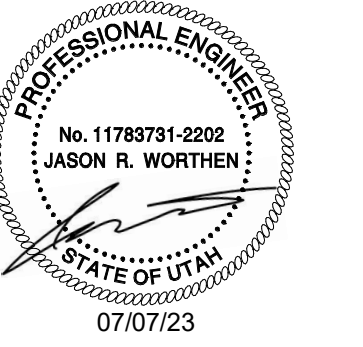


1. SUBSTITUTIONS AND/OR EQUAL FIXTURES MUST RECEIVE APPROVAL PRIOR TO BIDDING, THEY MUST BE SUBMITTED TO THE ENGINEER NO LESS THAN 2 WEEKS PRIOR TO BID OPENING.
2. SAMPLES MUST BE PROVIDED FOR ANY AND ALL FIXTURES UPON A/E REQUEST PRIOR TO RELEASING FIXTURES.
3. ALL FIXTURES SHALL BE LISTED AND APPROVED FOR THEIR INTENDED USE AND LOCATION.
4. VERIFY THE PROPER MOUNTING KITS OR ACCESSORIES TO FACILITATE INSTALLATION AS SHOWN AT EACH LOCATION ON THE DRAWINGS.
5. COMPLY WITH THE "INTERIOR LIGHTING" SECTION OF THE SPECIFICATIONS.
6. ALL LIGHT FIXTURES TO BE EITHER "DLC" OR "LIGHTING FACTS" LISTED OR TO BE APPROVED BY ARCHITECT/ENGINEER AND OWNER.
7. CONTRACTOR ALLOWANCE PRICES ARE ACCURATE WHEN THIS JOB WAS SPECIFIED, CONTRACTOR AND ELECTRICAL DISTRIBUTOR SHALL VERIFY THIS ALLOWANCE AND REPORT ANY PROBLEMS TO THE ENGINEER BEFORE THE BID. ALLOWANCE PRICE MAY OR MAY NOT INCLUDE LAMP(S) OR FREIGHT AS NOTED, AND DO NOT INCLUDE ANY TAXES.

ID	DESCRIPTION	SIZE (NOMINAL)	LUMINAIRE			DRIVER				MANUFACTURER (CATALOG SERIES)
			LUMENS	COLOR TEMP	CRI	TYPE	VOLTAGE	WATTS		
(D6-OR)	DESCRIPTION: 6" ROUND, RECESSED LED DOWNLIGHT, SEMI-SPECULAR REFLECTOR LENSED, SEALED, WET LOCATION MOUNTING: CEILING, RECESSED FINISH: WHITE TRIM FINISH OPTICS: - EM: -	LENGTH: - WIDTH: - DEPTH: - DIAMETER: 6" - 6"	3,000	3500K	90	0-10V DIMMING (1%)	120/277	19		GOTHAM (EVO-3530-6WR-WD-MVOLT-EZ10) INTENSE (S5G4GR-L2-358-ED10V01-CR35-C-SFW) FAILSAFE (FLD6B20D010 FEU6B128035 - F6LBM2H MB26)
(D6M)	DESCRIPTION: 6" ROUND, RECESSED LED DOWNLIGHT, SEMI-SPECULAR REFLECTOR MOUNTING: CEILING, RECESSED FINISH: WHITE TRIM FINISH OPTICS: - EM: -	LENGTH: - WIDTH: - DEPTH: - DIAMETER: 6" - 6"	2,000	3500K	80	0-10V DIMMING (1%)	120/277	23		GOTHAM (EVO 35/15 AR LSS MWD MVOLT GZ1 TRW) HALO (HC615D010HM612835 61MDHWF) LIGHTOLIER (6RNP6RDL15835CC210U)
(D6MD)	DESCRIPTION: 6" ROUND, RECESSED LED DOWNLIGHT, SEMI-SPECULAR REFLECTOR MOUNTING: CEILING, RECESSED FINISH: WHITE TRIM FINISH OPTICS: - EM: -	LENGTH: - WIDTH: - DEPTH: - DIAMETER: 6" - 6"	2,000	3500K	80	0-10V DIMMING (DIMZDARK)	120/277	23		GOTHAM (EVO 35/15 AR LSS MWD MVOLT GZ1 TRW) HALO (HC615D010HM612835 61MDHWF) LIGHTOLIER (6RNP6RDL15835CC210U)
(EFF14-OR)	DESCRIPTION: 1' X 4' SURGICAL TROFFER, FLANGE MOUNT MOUNTING: CEILING, RECESSED FINISH: SCBA OPTICS: - EM: BATTERY PACK	LENGTH: 4' - 0" WIDTH: 1' - 0" DEPTH: -	7,800	3500	90	0-10V DIMMING (1%)	120/277	50		DAYBRITE (2FP243L8354DSUNVDM) LITHONIA (EPANL) TRULY GREEN SOLUTIONS (882450-40-S-F/8824-FMK)
(ER)	DESCRIPTION: X-RAY IN USE LIGHT MOUNTING: WALL FINISH: SCBA OPTICS: - EM: -	LENGTH: - WIDTH: - DEPTH: -				NO DIMMING	120/277	3		KENALL (METMSU MW R X-RAY IN USE DT) LITHONIA (LOM P W 1 R 120-277 SW16 X-RAY IN USE) CHLORIDE (AMS GW XRAY IN USE RFR) EMERGENSEE (SEEXEL-1-G-C-A-CUST 0M-XRAY IN USE)
(FF14-OR)	DESCRIPTION: 1' X 4' SURGICAL TROFFER, FLANGE MOUNT MOUNTING: CEILING, RECESSED FINISH: SCBA OPTICS: - EM: -	LENGTH: 4' - 0" WIDTH: 1' - 0" DEPTH: -	7,800	3500K	90	0-10V DIMMING (1%)	120/277	50		KENALL (MASEDI 14 76L 35K9 DCC 277 PAF PAH SYM)
(FF24M)	DESCRIPTION: 2' X 4' LED FLAT PANEL, PROVIDE FLANGE KIT MOUNTING: CEILING, RECESSED FINISH: SCBA OPTICS: - EM: -	LENGTH: 4' - 0" WIDTH: 2' - 0" DEPTH: -	4,300	3500K	80	0-10V DIMMING (1%)	120/277	50		DAYBRITE (2FP243L8354DSUNVDM) LITHONIA (EPANL) TRULY GREEN SOLUTIONS (882450-40-S-F/8824-FMK)
(SW2)	DESCRIPTION: 2' LED VANITY LIGHT, SATIN CHROME FINISH, 2.25" WIDE MOUNTING: SURFACE, WALL FINISH: SCBA OPTICS: - EM: -	LENGTH: 2' - 0" WIDTH: 2' - 0" DEPTH: 2.25"	2,000	3500K	80	NO DIMMING	120/277	19		EDGE LIGHT (TW12-S11-1RE-36" 35K-CH) EUREKA (3541-35-LED-17-40-120/277-SC-WH) LBL (LW496-OP-XX-LED-277) WAC (WS-77353) BIRCHWOOD (NOL-LED-225)



**NJRA Architects, Inc.**  
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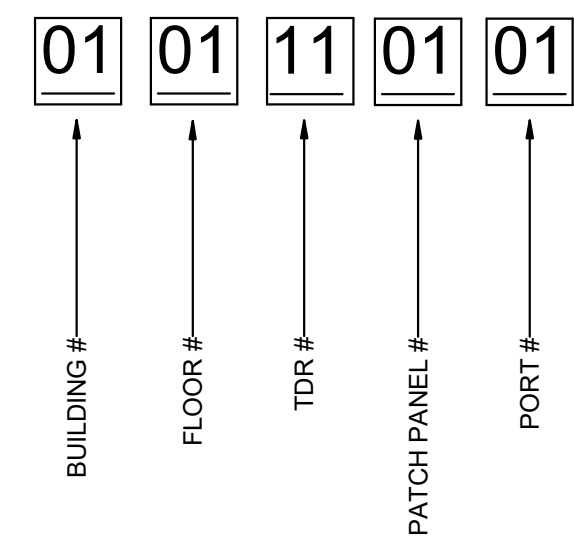
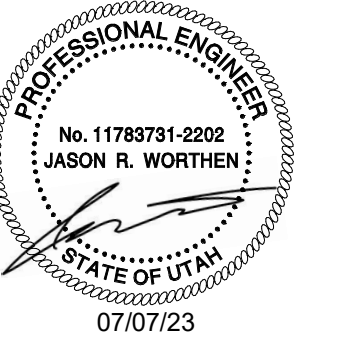


Intermountain Health  
**Intermountain Medical Center**  
**Angio Lab #3 Remodel Project**

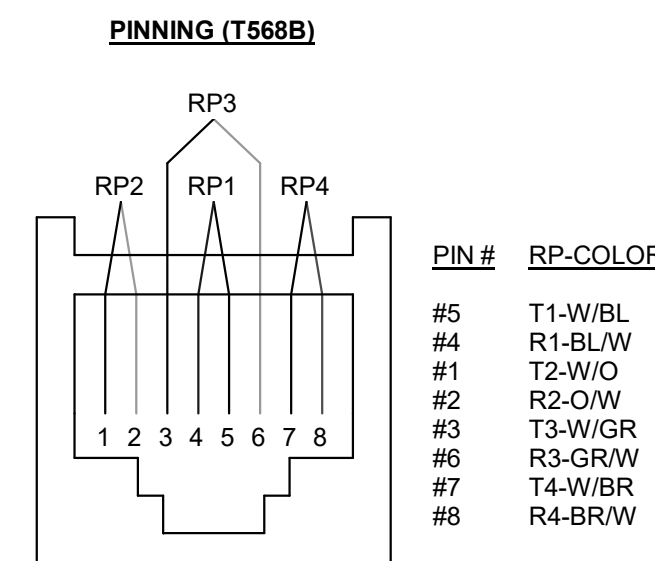
5121 South Cottonwood Street  
 Murray, UT 84107

NJRA Project # 22247-00  
Construction Documents July 7, 2023

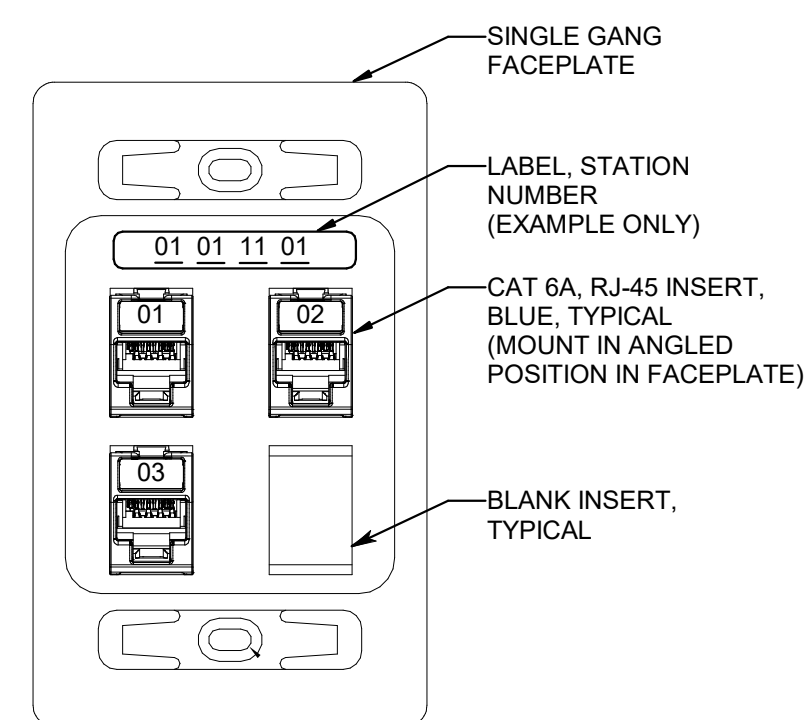
INTERIOR  
 LIGHTING  
 FIXTURE  
 SCHEDULE  
**EL601**



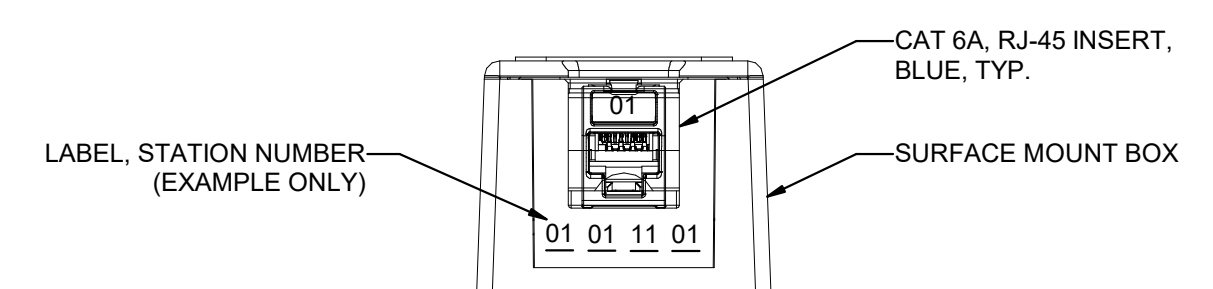
**7** TYPICAL CABLE ID EXAMPLE DETAIL  
SCALE: 1/8" = 1'-0"



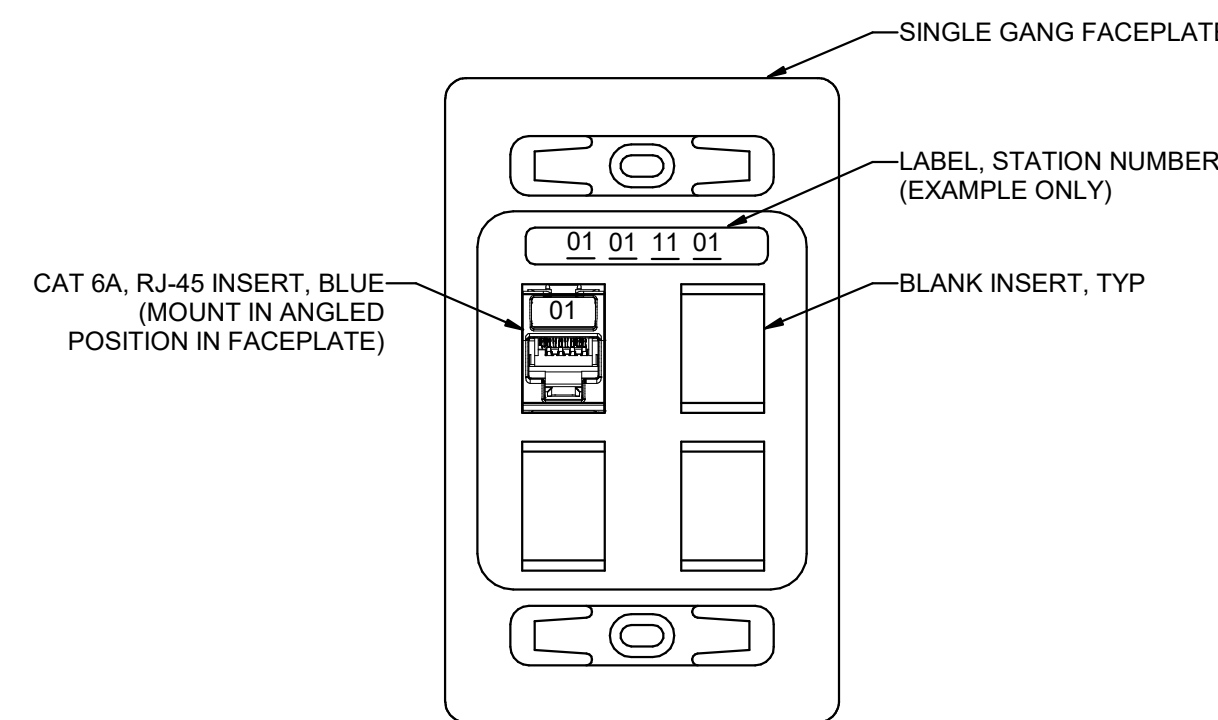
**8** TYPICAL VOICE/DATA OUTLET PINNING DETAIL  
SCALE: 1/8" = 1'-0"



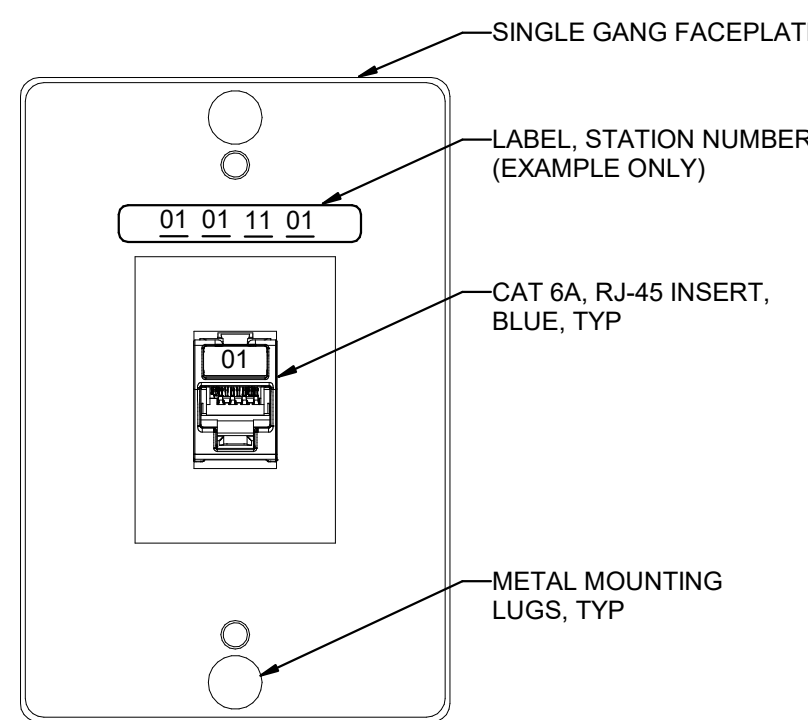
**4** TYPICAL 3-PORT WALL DATA OUTLET  
SCALE: 1/8" = 1'-0"



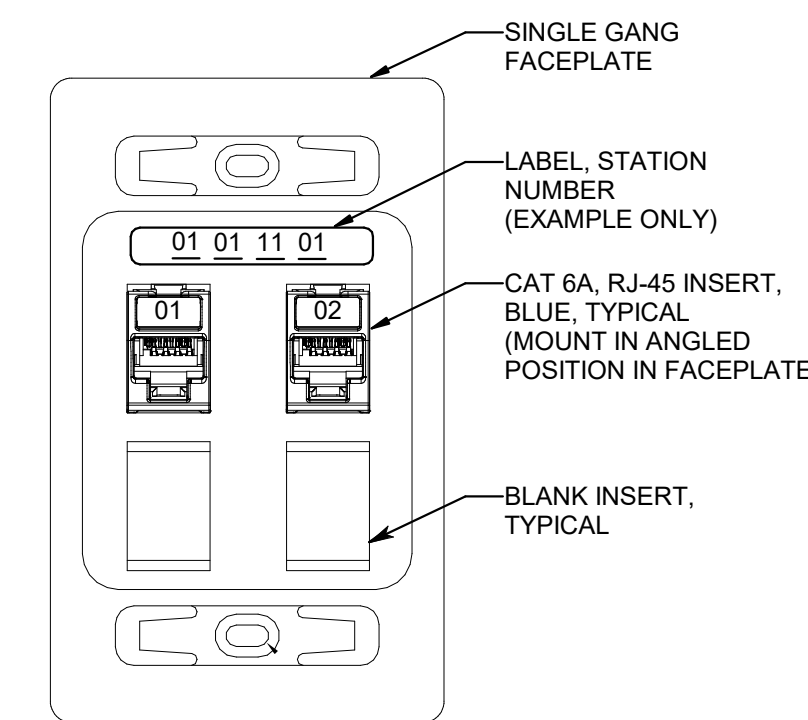
**1** TYPICAL 1-PORT POE & CAMERA DATA OUTLET  
SCALE: 1/8" = 1'-0"



**2** TYPICAL 1-PORT WALL DATA OUTLET  
SCALE: 1/8" = 1'-0"

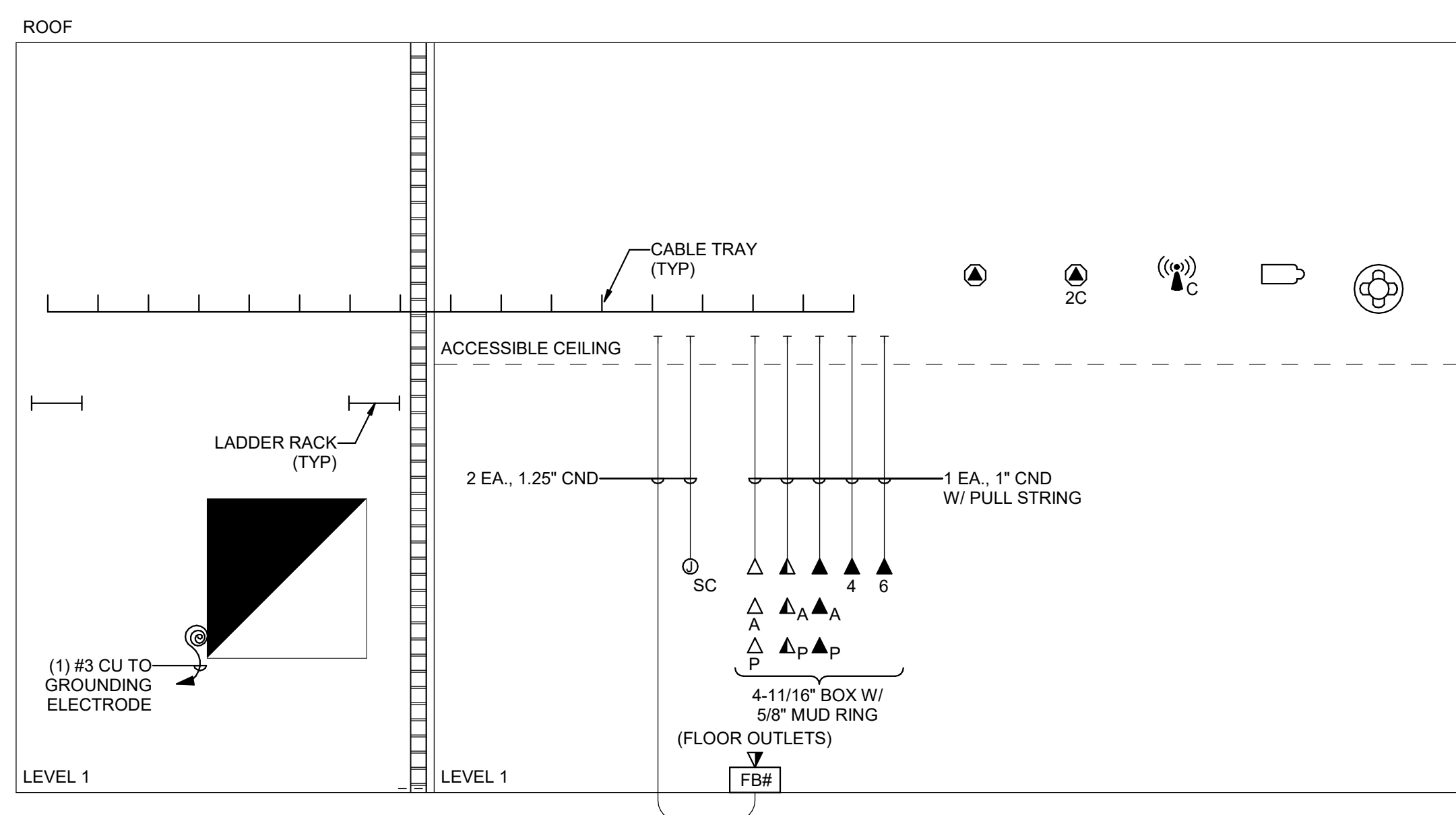


**3** TYPICAL 1-PORT WALL PHONE OUTLET  
SCALE: 1/8" = 1'-0"

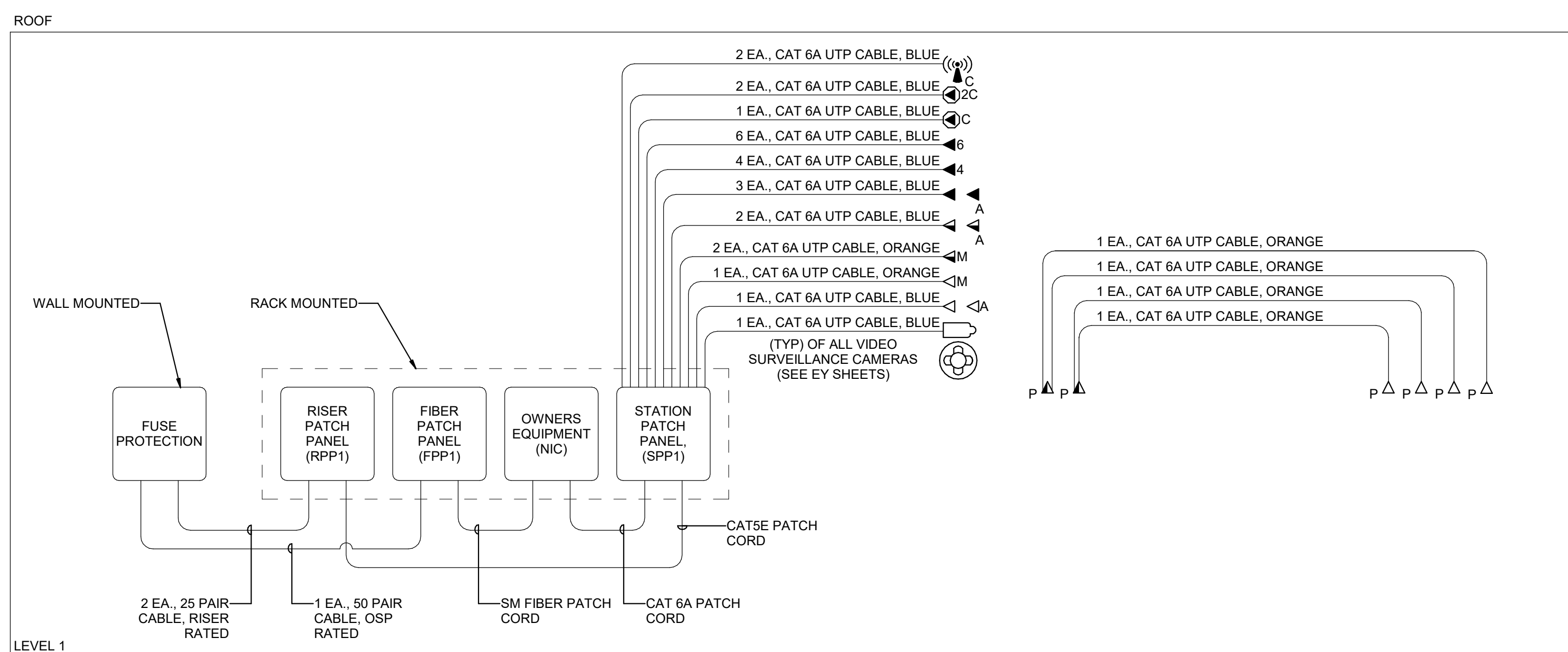


**5** TYPICAL 2-PORT WALL DATA OUTLET  
SCALE: 1/8" = 1'-0"

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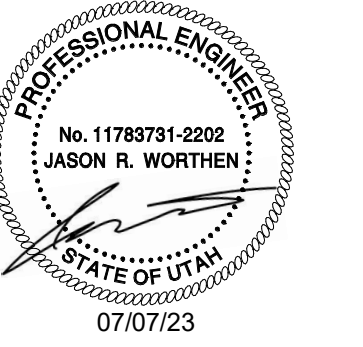
**1 TELECOM CONDUIT RISER DIAGRAM**  
SCALE: 1/8" = 1'-0"



**2 TELECOM CABLE RISER DIAGRAM**  
SCALE: 1/8" = 1'-0"



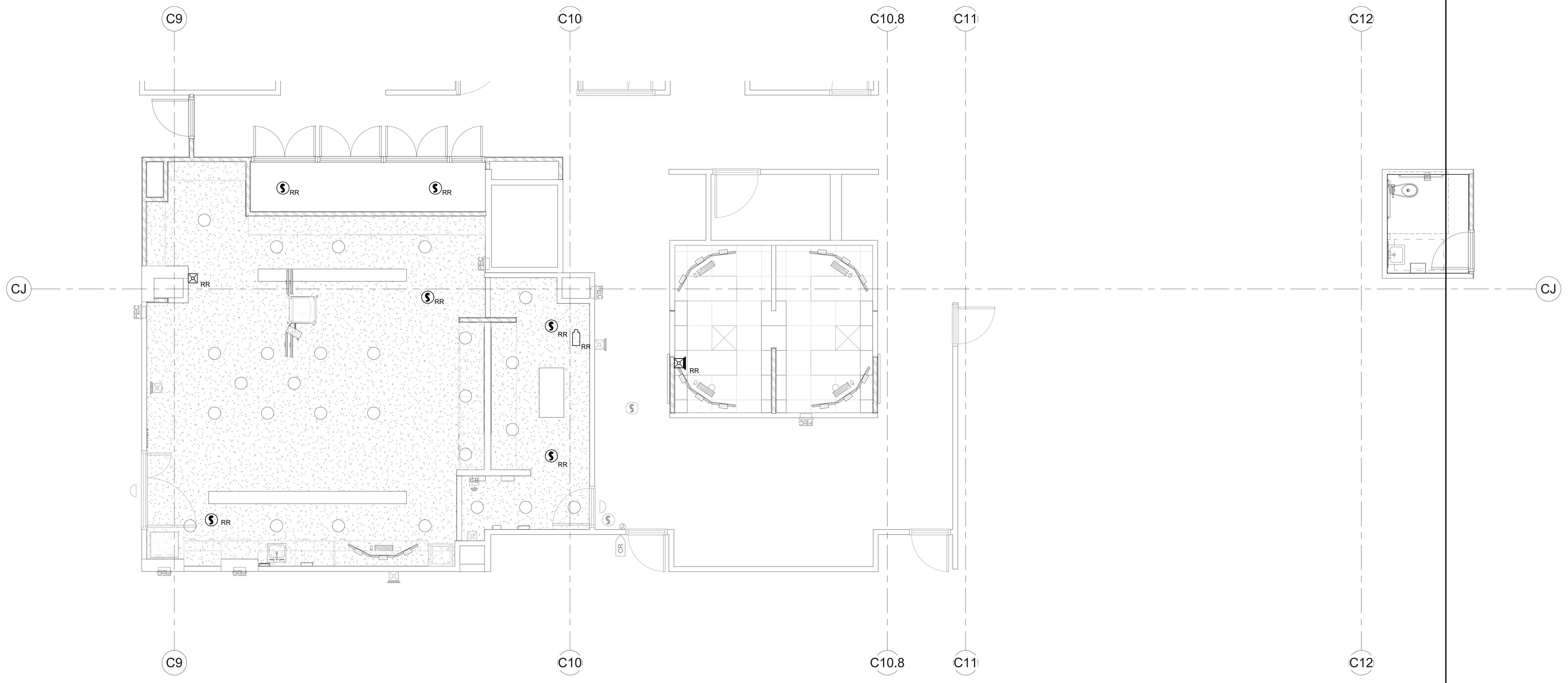
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**GENERAL SHEET NOTES**

**SHEET KEYNOTES**



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**1 LEVEL 1 AUXILIARY PLAN**  
 SCALE: 1/4" = 1'-0"

Intermountain Health  
 Intermountain Medical Center  
 Angio Lab #3 Remodel Project

5121 South Cottonwood Street  
 Murray, UT 84107

NJRA Project # 22247.00  
 Construction Documents July 7, 2023

**LEVEL 1  
 AUXILIARY  
 PLAN**

**EY101**

## Final Site Preparation Support Document

The equipment components shown in this drawing package are based on the current proposed purchase and are subject to change if modifications are made to the configuration.



\*Photo shown is not site specific.

Project: **Angio Lab #3 Remodel**  
 Catalog: **Intermountain Medical Center**  
 Room: **Room: Lab 3**

Philips Contacts:  
 Project Manager: Ray Kneve  
 Contact Number: (801) 440-0281  
 Email: ray.kneve@philips.com  
 Date: 1/27/2023  
 Order: 6600558748-010000  
 Date: 1/27/2023  
 Order: 6600558748-010000

Project Details:  
 Drawing Number: **N-WES210091 E**  
 Date Drawn: **4/20/23**  
 Order: **1/27/2023 Rev: 18**  
 Order: **6600558748-010000**

**C1**  
 05.27.2022

### Revision History

Note for Architects and/or Contractors: If revisions are listed, these drawings must be thoroughly reviewed so that all changes can be incorporated into your project.

Rev.	Date	Revision Descriptions	By
-	3/4/2021	Created Preliminary Site Preparation Document per Reference No.: N_WES070208 and Quote No.: 1-2ACAJ Rev. 1.	ACH
A	4/6/2022	Request Cancelled.	VS
B	2/16/2022	Updated architectural background and revised drawings per Quote #: 1-2FM4561 Rev. 18.	VS
C	3/15/2023	Drawing updated per Order #: 6600558748-010000. System shifted 1' towards the west to match "X" axis isocenter of 10' / Extension rails cut. MED/CL added. Changes of this revision clouded in red.	IB
D	3/29/2023	Created Final Site Preparation Support Document with Order #: 6600558748-010000 / CO1 / CO2. Extension Rails removed. VBs location updated.	IB
E	4/5/2023	Drawing modified per updated background file 230331-22247-00 IH - IMED Bi-Plane Angio Lab #3_Sheet - A113A - Floor Plan Level 1 - Area A. Existing electrical and unistrut must be verified on field since the background has change and is not matching existing conditions of Project N-WES07208. Planning everything as new. Control Room updated per new background. Changes of this revision clouded in red.	IB

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### General Conditions

- Planning, Design, and Implementation Process**  
The multidisciplinary project team should be assembled as early as possible in the design process. The multidisciplinary team should include administrators, clinicians, infection preventionists, architects and other design professionals, facility managers, safety officers, security managers, users of equipment, and support staff relevant to the areas affected by the project as well as those with knowledge of the organization's functional goal for the project. Inclusion of patient/consumers, A/E consultants, and construction specialists should be considered. FGI 2018 APPENDIX A1.2-1.2
- Responsibility**  
The customer shall be solely responsible, at their expense for preparation of site. Philips required specifications and any required MEP, construction and structural alterations shall be incorporated into customer's design and construction documents. Compliance with all safety, electrical, and building design codes relevant to the build out of the clinical area for Philips equipment and its installation is the customer's responsibility. Sufficiency of such plans and specifications, specifically including, but not limited to the accuracy of the dimensions described therein, shall be the sole responsibility of the customer. The customer shall advise Philips of conditions at or near the site, which could adversely affect the function of the equipment and/or carrying out of the delivery and installation work. This shall ensure that such conditions are corrected and that the site is fully prepared and available to Philips before the installation work is due to begin.
- Permits**  
Customer shall obtain all permits and licenses required by federal, state/provincial or local authorities in connection with the construction, installation and operation of the products and shall bear any expense in obtaining same or in complying with any related rules, regulations, ordinances and statutes.
- Radiation Protection**  
The customer or their contractor, at their own expense, shall obtain the service of a licensed radiation physicist to specify radiation protection and testing.
- Asbestos and Other Toxic Substances**  
Philips assumes that there is no hazardous material contained in project site. The customer is responsible for the removal of any materials, including but not limited to asbestos, deemed hazardous by local authorities, the EPA, OSHA, or any other authority having jurisdiction over the work. If such materials are discovered at any time that the work is proceeding, the work will immediately cease, the owner will be notified, and the work will again proceed after the owner has removed all of the hazardous material from the job site.
- Labor**  
In the event local labor conditions make it impossible or undesirable to use Philips' regular employees for such installation and connection, such work shall be performed by laborers supplied by the customer, or by an independent contractor chosen by the customer at the customer's expense, and in such case, Philips agrees to furnish adequate engineering supervision for proper completion of the installation.
- Schedule**  
The customer or general contractor shall provide Philips with a project/construction schedule with milestones to assist in the coordination of delivery of Philips supplied products and primary equipment.
- Extended Installation or Turnkey Work by Philips**  
Any room preparation requirements for Philips equipment indicated on these drawings is the responsibility of the customer. If an extended installation or turnkey contract exists between Philips and the customer for room preparation, then additional work required for the equipment will not be represented on these drawings. Some of the responsibilities of the customer as depicted in these drawings may be assumed by Philips. In the event of a conflict between the work described in the turnkey contract work scope and these drawings, the turnkey contract work scope shall govern.
- Infection Control and Interim Life Safety Measure**  
Compliance with all Infection Control and Interim Life Safety Measures shall be the sole responsibility of the customer. The customer shall provide all means and methods necessary for compliance with Infection Control (IC) and Interim Life Safety Measures (ILSM) in connection with the construction and installation/operation of the products shown herein and shall bear any expense related to same.

### Minimum Site Preparation Requirements

- A smooth efficient installation is vital to Philips and their customers. Understanding what the minimum site preparation requirements are will help achieve this goal. The following list clearly defines the requirements which must be fulfilled by the customer before the delivery and installation of equipment can begin.
- Walls to be painted or covered, baseboards installed, floors to be tiled and/or covered, ceiling shall have grid tiles and luminaires installed and operational.
  - Doors and windows, especially radiation protection barriers, installed and finished with locksets operational.
  - All electrical convenience outlets, raceways, wireways, auxiliary fittings, knockouts, cable connectors, terminal and power distribution blocks, cable openings, chase nipples, junction boxes and pull boxes installed and operational.
  - A private supply mains branch circuit with overcurrent protective circuit breaker and manual operable circuit disconnect means shall be present and operational. Definition of "Private supply" means an end-use of the hospital distribution system after the last overcurrent protective disconnect means from which all equipment included in the Azurion ground domain is powered. Note that only equipment included in the Azurion certification and equipment with which the Azurion has a compatibility statement are allowed to be inside the Azurion ground domain. All other electrical equipment is not allowed to have a functional connection to the Azurion system and shall have no direct galvanic connection to prevent ground loops. 3rd party equipment that does not have a functional connection with the Azurion system, but that is intended to be used inside the same patient area as the Azurion System shall be grounded to the PCB inside the ERB with a ground bonding of <= 200 mohm for plugable equipment.
  - Philips does not allow 3rd party equipment inside our cabinets.
  - 120V convenience outlets operational.
  - All support structure correctly installed. All channels, pipes, beams and/or other supporting devices should be level, parallel, and free of lateral or longitudinal movements.
  - All contractor supplied cables pulled and terminated.
  - A dust-free environment in and around the procedure room.
  - All HVAC (heating, ventilating and air conditioning) installed and operational as per specifications.
  - Architectural features such as computer floor, wood floor, casework, bulkheads, installed and finished. When technical cabinets are installed in a closet with doors, it is suggested that the customer install a temperature alarm in the event of an air conditioning failure.
  - All plumbing installed and finished.
  - Philips does not install or connect developing tanks, automatic processors or associated equipment, built in illuminators, cassette pass boxes, loading benches and cabinets, lead protective screens, panels or lead glass window and frame. This is to be done by the customer/contractor.
  - Clear door openings for moving equipment into the building must be 42" (1067mm) W x 82" (2083mm) H min. 48" (1219mm) W x 82" (2083mm) H rec. Or larger contingent on an 8'-0" (2438mm) corridor width.
  - Countertop is 30" (762mm) for seated height and 36" (915mm) for standing height.
- Remote Service Diagnostics  
 Medical imaging equipment to be installed by Philips Medical is equipped with a service diagnostic feature which allows for remote and on site service diagnostics. To establish this feature, a RJ45 type ethernet 10/100/1000 Mbps network connector must be installed as shown on plan. Access to customer's network via their remote access server is needed for Remote Service Network (RSN) connectivity. All cost with this feature are the responsibility of the customer.

### HVAC Requirement for General Equipment Locations

Operation	
Temperature	59°F (15°C) to 86°F (30°C)
Temperature gradient	Max. 1°F / Minute (0.5°C / Minute)
Humidity (non-condensing)	20% to 80%
Humidity shall be stable within	10%
Exam Room	*6142 BTU/hr
Equipment Room	*22179 BTU/hr
Control Room	*1945 BTU/hr

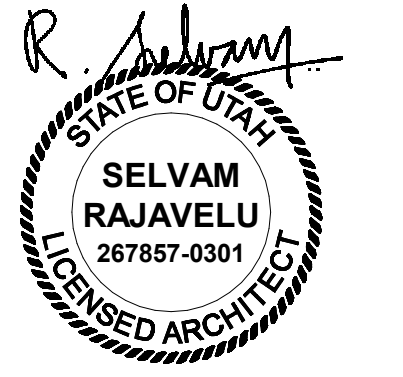
- \*Average heat emission during clinical use**  
 Data applicable for basic system:  
 Large monitor + 4 x small monitor in Monitor Ceiling Suspension  
 1 workstation + 2 x small monitor in Control Room  
 Add 1194 BTU/hr for additional large monitor  
 Add 273 BTU/hr for additional small monitor  
 Add 1024 BTU/hr for additional workstation  
 See AL sheet for additional heat load in case of UPS  
 Equipment's designed airflow is from frontside to back. Please design the air handling in the rack cabinet equipment area accordingly.
- Heating, ventilation, and air conditioning requirements must maintain temperature at 59°F (15°C) to 86°F (30°C) as well as a non-condensing relative humidity at 20-80% with 10% maximum variation. These temperature and humidity levels must be maintained in all (3) rooms (equipment, examination and control rooms).
- (22.0)
- ### Electrical Requirements
- #### Mains 40E Cabinet
- Maximum Rated Power: 100kW  
 Supply Configuration: 3 phase, equally sized insulated power conductors and an insulated equipment grounding conductor. Insulated grounding conductor shall have the same or larger size than line conductors. Line wires shall be no smaller than 6 AWG, 90°C or higher temperature rating. The conductor size is dependent on the upstream circuit breaker rating:  
 Minimum 4 AWG for 80A circuit breaker rating.
- Nominal Line Voltage: 480 VAC, 60 Hz  
 Branch Power Requirement: 100 kVA (System only; verify UPS power requirements)  
 Circuit Breaker: 3 phase, Type D 80A with long-time delay
- (20.1)
- ### Remote Control of Room Lighting
- The control of customer lighting must incorporate an electrical lighting system such as demonstrated on Sheet ED3. Lighting scheme is the responsibility of the customer.
- (12.0)

Project: **Angio Lab #3 Remodel**  
 Catalog: **Intermountain Medical Center**  
 Room: **Room: Lab 3**

Philips Contacts:  
 Project Manager: Ray Kneve  
 Contact Number: (801) 440-0281  
 Email: ray.kneve@philips.com  
 Date: 1/27/2023  
 Order: 6600558748-010000  
 Date: 1/27/2023  
 Order: 6600558748-010000

Project Details:  
 Drawing Number: **N-WES210091 E**  
 Date Drawn: **4/20/23**  
 Order: **1/27/2023 Rev: 18**  
 Order: **6600558748-010000**

**AN**  
 05.27.2022



Project: **Angio Lab #3 Remodel**  
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 Room: **Room: Lab 3**

Philips Contacts:  
 Project Manager: Ray Kneve  
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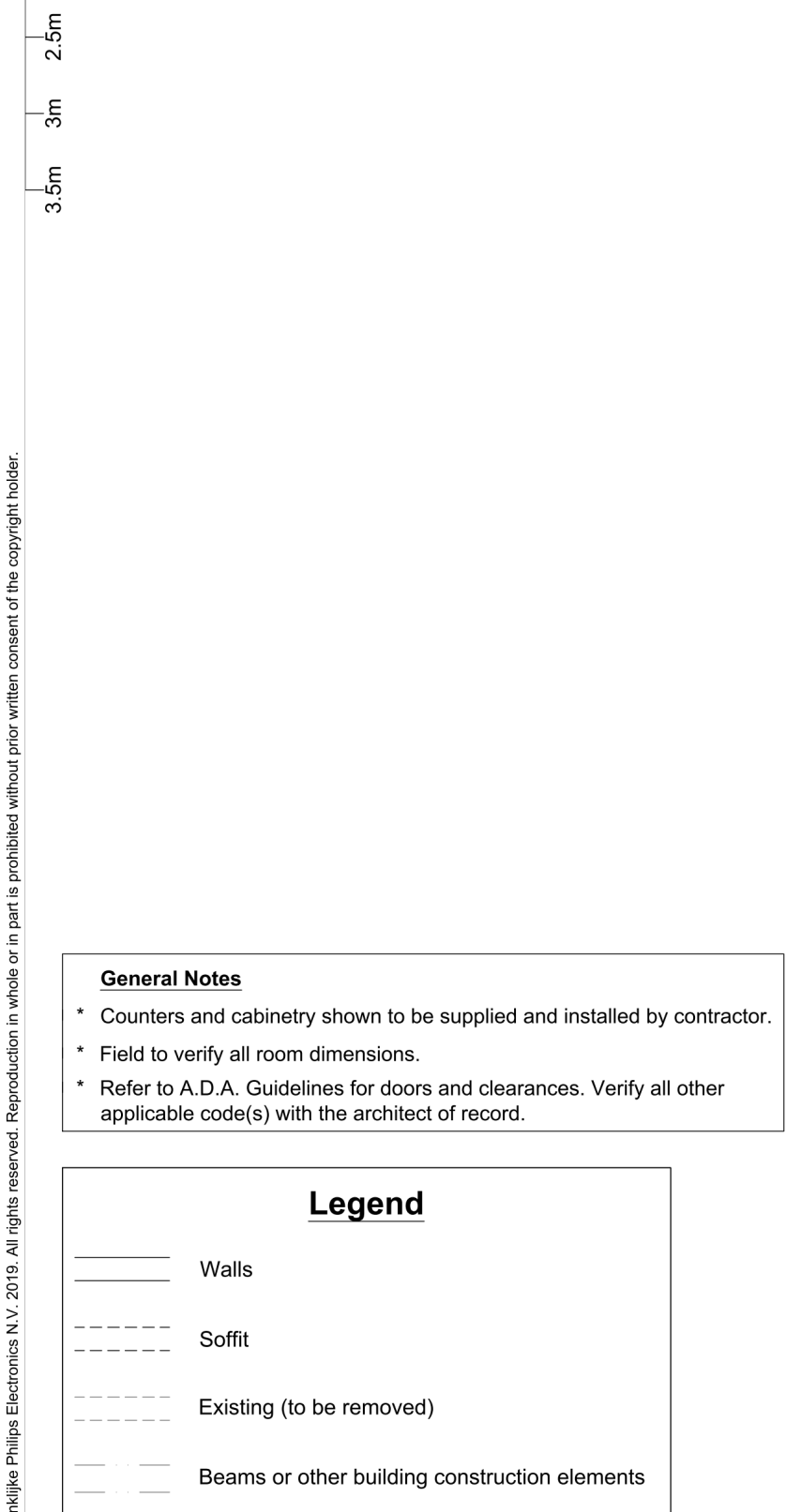
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 Date Drawn: **4/20/23**  
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**AL**  
 05.27.2022

Equipment Legend		
A. Furnished and installed by Philips B. Furnished by customer/contractor and installed by customer/contractor C. Installed by customer/contractor D. Furnished by Philips and installed by contractor E. Existing F. Future G. Optional H. Furnished by Philips and installed by Third Party		
Equipment Designation	Description	Detail Sheet
		Weight (lbs) Heat Load (BTU/hr)
A SP	Floor Clea	2513 1706 AD3
A PBT	Larc N Neuro	1877 854 AD3
A MSA	Angio Diagnost 7 w Swivel and Tilt	1249 205 AD3
A ME	Certery IX Generator Cabinet	320 2971 AD4
A ZME	Certery IX Generator Cabinet	320 2971 AD4
A MR	Peripheral 40E Cabinet with CRC + Extension	386 2049 AD4
A MA	Mains 40E Cabinet	826 5464 AD4
A CY	Control Room Connection Box	115 567 AD7
A AFS	Additional FlexSpot	- - -
A DB	Documentation Box - Mounted on Wheels (Final location to be coordinated with customer and/or local Philips Service)	176 0 AD5
A ATY	Exam Room Auxiliary Box	7 1.7 AD5
A FW	Firewall	4 205 AD6
A MB	Image 40E Cabinet	441 1977 AD4
A TV	58" + (2) 27" LCD Monitor Suspension	596 1020 AD5
A VBT	Video Connection Box	2.2 - AD5
A VBB	Video Connection Box	2.2 - AD5
A IH	Interventional Hardware (Integrated with FlexSpot - Not shown)	73 1024 -
A MAV	Mavig 4m Ceiling Track w/ Rad Shield and Y LED 1F light	205 350 AD6
D UPS	Socomec Compact Full UPS	2614 8750 AD4
D SBO	Signaling Box Option (for Socomec UPS)	6.7 - AD4
A CL	Collaboration Live PC	11 171 AD7
Items not on Philips Quote/Order		
A MED	Medrad Arterion Injector on Pedestal	185 4095 AD6

### Site Layout

Required Unistrut Height: 9' 9 3/4" + 2 3/8" / -0 (2980mm, +4mm / -0)  
 Unistrut Height measured from top of Clea floor plate to bottom of Unistrut.



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 Drawing Number: **N-WES210091 E**  
 Date Drawn: **4/20/23**  
 Order: **1/27/2023 Rev: 18**  
 Order: **6600558748-010000**

**A1**  
 05.27.2022

### Equipment Layout

1/4" = 1'-0"

Required Unistrut Height: 9' - 9 3/8" ± (2980mm, +4mm / -0)

Unistrut Height measured from top of Clea floor plate to bottom of Unistrut.

**Planning Issues and Considerations**

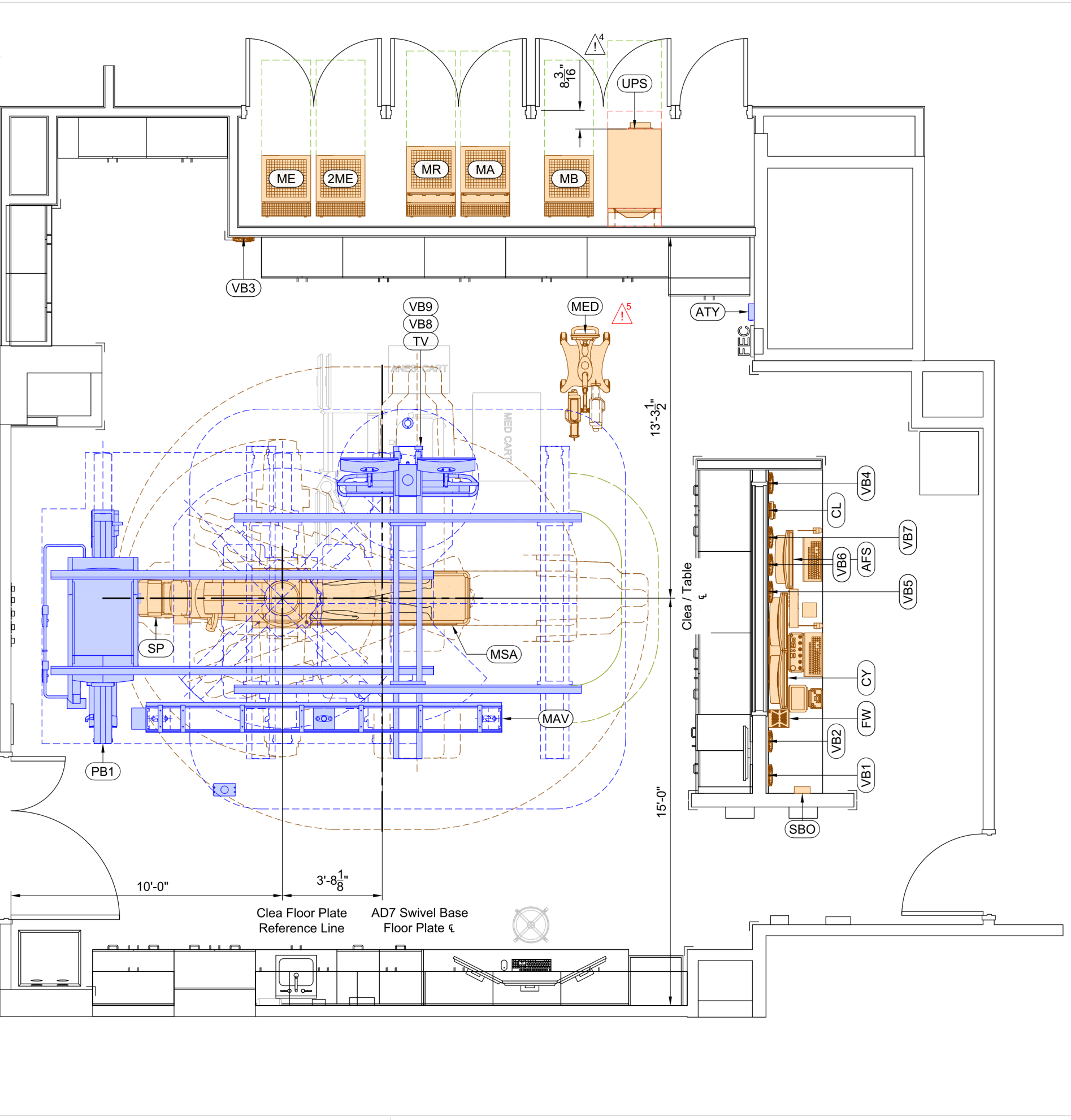
- At the preliminary stage, Philips Project Managers are to verify the room dimensions and system requirements (ie isocenter, Unistrut, soffit, built-ins etc). Match drawing # N-WES210091 E displaying proper as built conditions.
- Verify exact location and configuration of existing electricals with local Philips service for reuse.
- Verify quantity and designation of Live/Reference slaving monitors with local Philips Service.
- Minimum clearance for "UPS" ventilation is 7 1/2" (200mm) in front of "UPS".
- Exact equipment configuration to be verified. Extension Rails are listed on order, but not shown due to PM request.
- Exact equipment configuration to be verified. Medrad Injector Pedestal is not listed on order, but is shown due to PM request.

**General Notes**

- Architect to coordinate with end users/technicians to determine final placement of control desk components prior to installation in order to avoid rework. Architect to coordinate with Philips Project Manager to reflect final placement on Philips drawings.
- The customer shall advise Philips of existing and/or new conditions at or near the site, which could adversely affect the function of the equipment and/or carrying out of the delivery and installation work. Refer to sheet - AN-100-02 of General Conditions for additional information.

Source	Location	Displayed
VB1	TBD	Control FlexVision
VB2	TBD	Control FlexVision
VB3	TBD	Exam FlexVision
VB4	CL	Control FlexVision
VB5	TBD	Control FlexVision
VB6	TBD	Control FlexVision
VB7	TBD	Exam FlexVision
VB8	TBD	Exam FlexVision
VB9	TBD	Exam FlexVision

Exact location to be coordinated by Customer and local Philips service.



**PHILIPS**

Project: **Aurion 7 B2012, B2015 - Swivel - Catalyst Intermountain Medical Center Salt Lake City, UT Room Lab 3**

Philips Contacts:  
Project Manager: Anne  
Contact Number: (801) 440-0381  
Email: anne.kinn@philips.com  
Drawn By: Isabelle Buro

Project Details:  
Project Number: **N-WES210091 E**  
Date Drawn: 4/5/2023  
Client: Intermountain Medical Center  
Order: 600058748.01000

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

05.27.2022

### Detail - Clea Floor Transport Details

	Crate	Pallet	Klick Wheel Wide	Castors
Height	79.53" (2020mm)	78.54" (1995mm)	69.65" (1769mm)	72.40" (1835mm)
Weight	3285 lbs (1490 kg)	3064 lbs (1390 kg)	3241 lbs (1470 kg)	2954 lbs (1340 kg)

Minimum Elevator Size	
Length	96.50" (2300mm)
Width	51.18" (1300mm)
Height	85.03" (2160mm)

Note: This size can be reached by means of C-Carc and junction rotation.

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**NJRA ARCHITECTS**

NJRA Architects, Inc.  
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STATE OF UTAH  
SELVAM RAJAVELU  
267857-0301  
LICENSED ARCHITECT

### Detail - Lateral Arc N (C-ARC) Transport Details

	Crate Wide	Klick Wheels Wide	Klick Wheels Small	Castors
Height	85.45" (2145mm)	74.80" (1900mm)	74.80" (1900mm)	74.80" (1900mm)
Weight	1565 lbs (710 kg)	1587 lbs (720 kg)	1587 lbs (720 kg)	1312 lbs (595 kg)
Corridor X Measured	66.73" (1695mm)	66.73" (1695mm)	66.73" (1695mm)	66.73" (1695mm)
Corridor Y Must Be	86.02" (2185mm)	111.57" (2834mm)	73.80" (1874mm)	52.83" (1342mm)

Corridor X values, a tolerance of 3.93" (100mm) is added for wall obstructions.  
Minimum length of C-Arc is 2480mm. This can be reached by means of C-Arc and junction rotation by connecting delivered power cable between SLB-X31 in control unit and wall socket.

### Detail - Lateral Arc FD (Assembled) Transport Details

	Including Crate	Without Crate
Length	114.17" (2900mm)	107.40" (2720mm)
Width	45.28" (1150mm)	31.50" (800mm)
Height	81.69" (2075mm)	74.80" (1900mm)
Weight	2094 lbs (950 kg)	2094 lbs (950 kg)

### Detail - Lateral Arc N (U-ARC) Transport Details

	Crate Wide	Klick Wheels Wide	Klick Wheels Small	Castors
Height	84.45" (2145mm)	77.56" (1970mm)	77.56" (1970mm)	77.56" (1970mm)
Weight	1761 lbs (799 kg)	1748 lbs (793 kg)	1748 lbs (793 kg)	1510 lbs (685 kg)
Corridor X Measured	64.96" (1650mm)	64.96" (1650mm)	64.96" (1650mm)	64.96" (1650mm)
Corridor Y Must Be	86.02" (2185mm)	101.85" (2587mm)	66.14" (1680mm)	49.33" (1253mm)

Corridor X values, a tolerance of 3.93" (100mm) is added for wall obstructions.

**PHILIPS**

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AD7 with Swivel Base. Maximum range of movement 102.4" (2601mm) Rad.

Indicates equipment movement

Max permissible difference between isocenters of Clea and Larc N is 1/2" (10mm).

Tilt table (not shown) is option. This allows the tabletop to tilt ±17°.

SP	Weight	Heat Dissipation	PB1	Weight	Heat Dissipation	MSA	Weight	Heat Dissipation
	2513 lbs	1706 BTU/hr		1877 lbs	654 BTU/hr		1249 lbs	205 BTU/hr

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Intermountain Health  
Intermountain Medical Center  
Angio Lab #3 Remodel Project

121 South Cottonwood Street  
Murray, UT 84107

NJRA Project # 22247.00  
Construction Documents June 30, 2023