

Intermountain Healthcare
IMC- Cath Lab 2 Remodel Project

5121 South Cottonwood Street
 Murray, UT 84107

NJRA Project # 19205.00
Construction Documents July 15, 2020

Siemens
Equipment-
Electrical

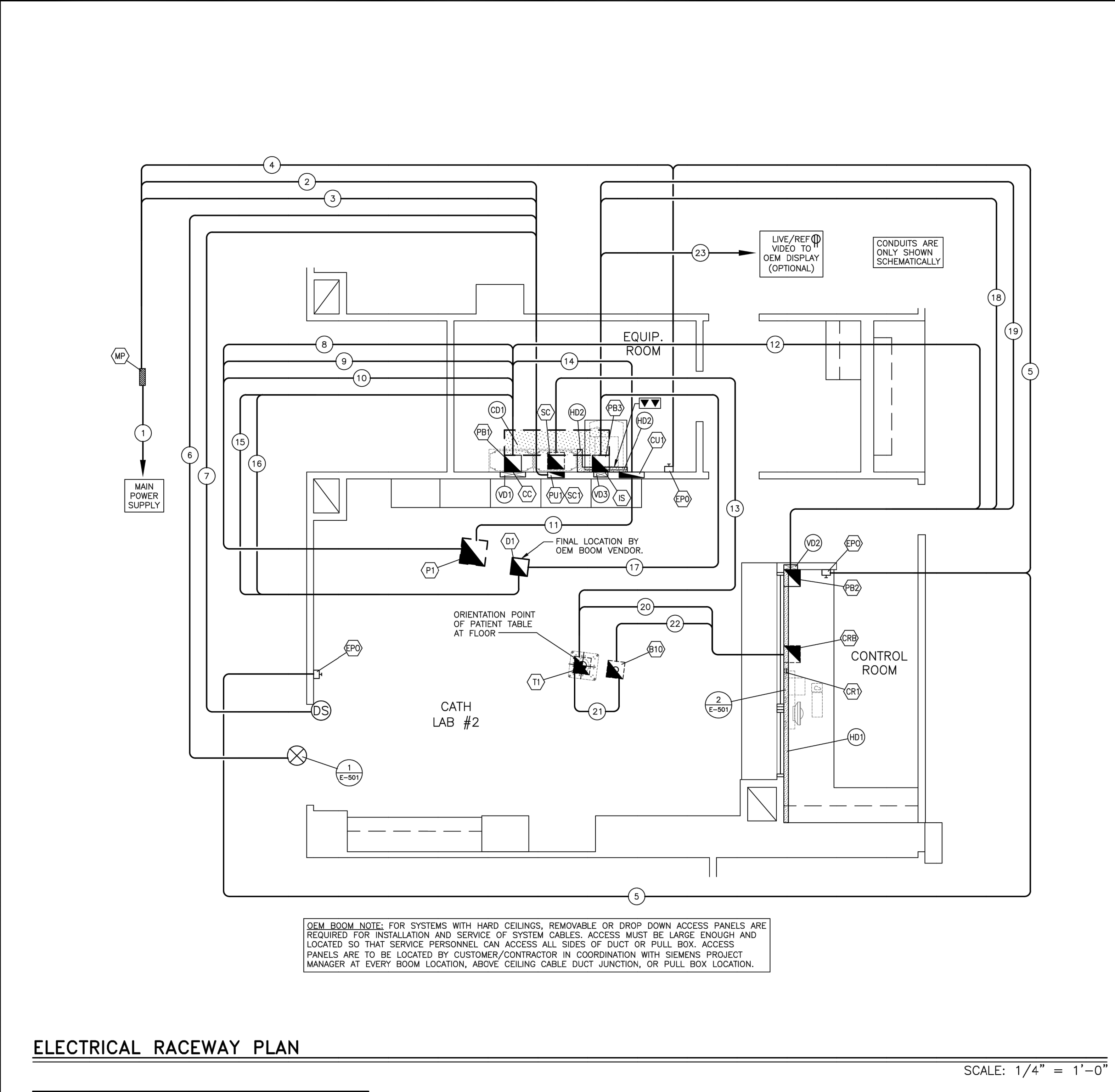
EQ 105

REFERENCE DOCUMENT - NOT FOR CONSTRUCTION

ELECTRICAL NOTES	
1)	COMPLIANCE: ELECTRICAL WORK SHALL BE IN COMPLIANCE WITH THE NATIONAL ELECTRICAL CODE (NFPA-70), O.S.H.A. REGULATIONS, AS WELL AS APPLICABLE REGULATIONS OF CITY, COUNTY, STATE AND FEDERAL AGENCIES. PROVIDE MATERIALS AND EQUIPMENT THAT COMPLY WITH ANSI, IEEE AND NEMA STANDARDS AND ARE UL LISTED AND LABELED. THE CUSTOMER'S/CONTRACTOR'S WORK AND ALL EQUIPMENT INSTALLED SHALL COMPLY WITH THE CURRENT EDITION OF THE NATIONAL ELECTRICAL CODE ADOPTED/ENFORCED BY THE AUTHORITY HAVING JURISDICTION.
2)	QUALITY ASSURANCE: THE CONTRACTOR SHALL VERIFY EXISTING CONDITIONS IN THE FIELD TO INSURE THAT THE NEW WORK WILL FIT INTO THE EXISTING STRUCTURE AS SHOWN ON THE DRAWINGS. SHOULD ANY CONDITIONS EXIST OR BE DISCOVERED THAT PREVENT THE INSTALLATION OF WORK AS SHOWN, THE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE PRIOR TO FABRICATION OF EQUIPMENT OR THE PERFORMANCE OF ANY WORK THAT MAY BE AFFECTED. DO NOT ALTER DRAWINGS, DIMENSIONS, OR SPECIFICATIONS IN ANY WAY WITHOUT CONTACTING AND RECEIVING WRITTEN CONFIRMATION FROM SIEMENS PROJECT MANAGER. ALL DIMENSIONS ARE FROM FINISHED SURFACES. CONDUIT AND PULL BOXES TO BE INSTALLED BY THE CUSTOMER/CONTRACTOR WITH LOCATIONS BEING FIELD VERIFIED BY THE SIEMENS PROJECT MANAGER.
3)	POWER SUPPLY SOURCE: POWER SUPPLIES FOR SIEMENS HEALTHCARE EQUIPMENT SHALL BE FROM A MEDICAL IMAGING PANEL OR BUILDING SERVICE EQUIPMENT THAT IS A GROUNDING 3 OR 4-WIRE "WYE" SOURCE PER THE SPECIFIC EQUIPMENT OPERATOR REQUIREMENTS. A DEDICATED CIRCUIT SHALL BE PROVIDED THAT IS KEPT ENTIRELY FREE AND INDEPENDENT OF ALL OTHER BUILDING WIRING, NO ELEVATORS, GENERATORS, PUMPS, HVAC OR SIMILAR EQUIPMENT SHALL BE CONNECTED TO THE SAME CIRCUIT OR MEDICAL IMAGING PANEL THAT SERVES THE SIEMENS HEALTHCARE EQUIPMENT. IF THE POWER SUPPLY SOURCE DOES NOT MEET THE SPECIFIC SIEMENS EQUIPMENT POWER REQUIREMENTS, THE CONTRACTOR SHALL PROVIDE THE NECESSARY EQUIPMENT REQUIRED TO ESTABLISH THE POWER SUPPLY IN ACCORDANCE WITH THE REQUIRED POWER SUPPLY PARAMETERS OF THE SIEMENS EQUIPMENT. THE CONTRACTOR SHALL COORDINATE THIS WORK WITH THE CUSTOMER AND/OR UTILITY COMPANY FIELD REPRESENTATIVE.
4)	WORK FURNISHED BY CUSTOMER/CONTRACTOR: WORK NOT PROVIDED BY SIEMENS HEALTHCARE BUT SHOWN ON DRAWINGS TO BE FURNISHED AND INSTALLED BY CUSTOMER/CONTRACTOR INCLUDES, BUT IS NOT LIMITED TO, THE FOLLOWING: LINES NOTED OTHERWISE, ELECTRICAL RACEWAYS AND DUCTS, WIRING TROUGHS, PULL BOXES, CONDUITS, CIRCUIT BREAKERS, ACCESS PANELS, EMERGENCY OFF BUTTONS, DOOR SWITCHES, WARNING LIGHTS, WIRING DEVICES, CONNECTORS, LIGHTING EQUIPMENT AND GROUNDING.
5)	RACEWAY AND CONDUIT NOTES: ALL CONDUITS SHALL BE INSTALLED IN COMPLIANCE WITH THE CURRENT ENFORCED EDITION OF THE NATIONAL ELECTRICAL CODE. CONDUIT BODIES SHALL NOT BE USED, WHERE A CONDUIT ENTERS A BOX, FITTING, OR OTHER ENCLOSURE, AN INSULATED THROAT CONNECTOR SHALL BE PROVIDED TO PROTECT THE WIRE FROM ABRASION. ALL CONNECTORS FOR EMT SHALL BE COMPRESSION OR DOUBLE SET SCREW TYPE. KEEP RACEWAYS AT LEAST 6 INCHES AWAY FROM PARALLEL RUNS OF FLUES OR STEAM AND HOT WATER PIPES. INSTALL RACEWAY RUNS ABOVE WATER AND STEAM PIPES PROVIDED THAT CABLE RUN DISTANCES ARE MAINTAINED. USE TEMPORARY CLOSURES TO PREVENT POWER MATTER FROM ENTERING RACEWAY.
6)	CONDUIT RUNS ARE SHOWN SCHEMATICALLY. INSTALL CONDUIT WITH A MINIMUM OF BENDS IN THE SHORTEST PRACTICAL DISTANCE CONSIDERING THE BUILDING CONSTRUCTION AND OBSTRUCTIONS, EXCEPT AS OTHERWISE INDICATED. THE CONTRACTOR SHALL MAKE CERTAIN THAT ANY CONDUIT/RACEWAY RUNS CONTAINING SIEMENS HEALTHCARE CABLES DO NOT EXCEED THE SPECIFIED MAXIMUM DISTANCES AS SHOWN ON THE ELECTRICAL DETAILS. LISTED CONDUIT SIZES FOR SIEMENS-SUPPLIED CABLES MUST BE MAINTAINED IN ORDER TO ENABLE THE TOTAL CABLE BUNDLE INCLUDING CONNECTORS TO BE PULLED THROUGH WITHOUT DAMAGE.
7)	PROVIDE ENCLOSED METAL WIRE DUCT RACEWAY SYSTEM WHERE SHOWN ON DRAWINGS WITH DIVIDERS TO SEPARATE THE DUCT INTO (3) SECTIONS. SEPARATE COMPARTMENTS AS SHOWN ON THE SIEMENS PLANS (FOR POWER AND SIEMENS HEALTHCARE CABLES), DIVIDERS AND CROSSING PIECES TO BE PROVIDED AS NECESSARY. THE CABLE TO CABLE AS WELL AS THE CIRCUIT TO CIRCUIT SEPARATION REQUIREMENT WAS ELABORATED DURING THE UL SYSTEM CERTIFICATION OF THE EQUIPMENT. ADDITIONAL SEPARATION OF THE SYSTEM CABLE ASSEMBLIES INTO SEPARATE OR PARTITIONED RACEWAYS, UNLESS OTHERWISE NOTED, IS NOT NECESSARY TO INSURE SEPARATION OF CIRCUITS.
8)	PROVIDE WIRE DUCT/RACEWAY WITH ACCESSIBLE REMOVABLE COVERS. LOCATIONS OF BUILDING MATERIAL OPENINGS (I.E. ACCESS PANELS) TO BE CUT IN FIELD ARE TO BE COORDINATED WITH THE DRAWING REQUIREMENTS AND BUILDING STRUCTURE. THOSE THAT ARE NOT INDICATED OR INTERFERE WITH BUILDING ELEMENTS SHALL BE COORDINATED WITH SIEMENS PROJECT MANAGER. ELECTRICAL PULL BOXES AND RACEWAY COVERS SHALL BE INSTALLED IN A MANNER TO ALLOW ACCESSIBILITY FOR INSTALLATION AND MAINTENANCE. CONTRACTORS MUST PROVIDE PULL STRINGS FOR ALL CONDUIT AND WIRE DUCT/RACEWAY. IN-FLOOR TRENCH DUCT AND FLUSH FLOOR BOXES SHALL BE PROVIDED WITH FULLY GASKETED REMOVABLE COVERS.
9)	WHEN JUNCTION BOXES AND WIRE DUCT/RACEWAY ARE MOUNTED HIGHER THAN 14 FEET ABOVE FINISHED FLOOR, THE ELECTRICAL CONTRACTOR SHALL PROVIDE TWO ELECTRICIANS TO HELP THE SIEMENS INSTALLERS PULL SIEMENS SUPPLIED CABLES AT CUSTOMER'S EXPENSE. WHEN JUNCTION BOXES AND WIRE DUCT/RACEWAY ARE MOUNTED LOWER THAN 14 FEET ABOVE FINISHED FLOOR, THE ELECTRICAL CONTRACTOR SHALL PROVIDE TWO ELECTRICIANS TO HELP THE SIEMENS INSTALLERS PULL SIEMENS SUPPLIED CABLES AT CUSTOMER'S EXPENSE.
10)	WIRING: ALL WIRING INSTALLED SHALL BE 600 VOLT CLASS, STRANDED TYPE THHN/THWN-2, SINGLE CONDUCTOR ANNEALED COPPER FOR A MAXIMUM OPERATING TEMPERATURE OF 90° C (194° F) AND AS INDICATED, INSTALLED IN METAL RACEWAYS. THE CUSTOMER/CONTRACTOR SHALL LEAVE A MINIMUM 10 FEET OF WIRE TAILS AT ALL OUTLET POINTS WITH WIRE IDENTIFICATION TAGGED AT BOTH ENDS FOR FINAL CONNECTION BY THE CUSTOMER/ELECTRICAL CONTRACTOR.
11)	SHORT CIRCUIT REQUIREMENTS: ALL CIRCUIT BREAKERS SUPPLIED FOR THE SIEMENS EQUIPMENT REQUIREMENTS SHALL BE RATED HIGHER THAN THE SHORT CIRCUIT AVAILABLE AT THE TERMINALS OF THE ELECTRICAL EQUIPMENT AS DETERMINED BY THE ENGINEER OF RECORD, BUT NOT LESS THAN 35,000 RMS SYMMETRICAL AT 480V, 3-PHASE, 60 HERTZ. THE CONTRACTOR SHALL OBTAIN THE CORRECT SHORT CIRCUIT CURRENT RATING OF ALL THE NEW EQUIPMENT FOR INSTALLATION FROM THE ENGINEER OF RECORD.

CONDUIT LENGTH CALCULATIONS	
IF SITE-SPECIFIC CONDITIONS EXCEED THE FOLLOWING ASSUMED VALUES, THEN ADDITIONAL LENGTH MUST BE SUBTRACTED BY THE ELECTRICAL CONTRACTOR FROM THE MAXIMUM CONDUIT LENGTHS LISTED.	
IF DUCT LOCATIONS ARE ALTERED FROM THE SHOWN LAYOUT, IT IS THE ELECTRICAL CONTRACTOR'S RESPONSIBILITY TO RECALCULATE THE MAXIMUM CONDUIT LENGTHS.	
ASSUMED VALUES USED IN CALCULATING STATED MAXIMUM CONDUIT LENGTHS:	
VERTICAL DUCTS - 12'-0"	
FLOOR PENETRATIONS - 3'-0"	

ELECTRICAL LEGEND			
SYM	SIZE	DESCRIPTION	REMARKS
18	AS REQUIRED	(EXISTING) PULL BOX MOUNTED BELOW FINISHED FLOOR WITH REMOVABLE BOTTOM COVER. PROVIDE 4" CONDUIT FROM BOX TO FLUSH WITH FINISHED FLOOR. PROVIDE STAINLESS STEEL WATERPROOF PLATE ON TOP OF CORED OPENING IN FLOOR.	TABLE ACCESSORIES
19	18" X 8"	(EXISTING) BUSHED OPENING IN VERTICAL DUCT "D01" COVER AT FLOOR LINE.	CABLE INLET
20	3"	(EXISTING) BUSHED OPENING IN TOP OF HORIZONTAL DUCT "H01".	CONTROL ROOM DISTRIBUTOR
21	AS REQUIRED	(VERIFY EXISTING) PULL BOX MOUNTED BELOW FINISHED FLOOR WITH REMOVABLE BOTTOM COVER. FOR A SINGLE CONDUIT CONNECTION TO THIS BOX, PROVIDE A 3" CONDUIT THRU FLOOR. FOR MULTIPLE CONDUIT CONNECTIONS, PROVIDE (2) 4" CONDUITS THRU FLOOR. E.C. TO DESIGN TRANSITION TO SURFACE FLOOR DUCT AS REQUIRED.	CONTROL ROOM UNDER-FLOOR BOX
22	AS REQUIRED	(VERIFY EXISTING) PULL BOX MOUNTED FLUSH IN FINISHED WALL AT 48" AFF. PROVIDE BOX WITH REMOVABLE FRONT COVER AND (1) 4" BUSHING IN CENTER OF REMOVABLE COVER FOR CABLE EXIT. SEE PLAN FOR LOCATION.	COOLING UNIT
23	AS REQUIRED	(NEW) PULL BOX MOUNTED ABOVE FINISHED CEILING WITH REMOVABLE BOTTOM COVER WITH 3" BUSHED OPENING. NOTE: IF LOCAL CODES REQUIRE COMPLETE CABLE CONTAINMENT IN RACEWAY, THIS BOX MUST BE SIZED SUCH THAT A 8" X 6" X 3" SIEMENS POWER DISTRIBUTION BOX CAN BE INSTALLED INSIDE THIS PULL BOX.	BOOM DVI 2x8WD-19D (live+ref)
24	---	EMERGENCY OFF BUTTONS FOR CIRCUIT BREAKERS. EPO'S MUST PREVENT RESETTING OF CIRCUIT BREAKERS WHEN IN OFF POSITION. EPO'S MUST BE RECESSED OR SHIELDED. FINAL LOCATION DETERMINED BY CUSTOMER.	EMERGENCY POWER OFF
25	4"	(VERIFY EXISTING) BUSHED OPENING IN VERTICAL DUCT "D0" COVER AT FLOOR LINE.	IMAGE SYSTEM
26	---	MAIN PANEL WITH MAIN BREAKER. LOCATION DETERMINED BY CUSTOMER/CONTRACTOR. SEE "POWER SCHEDULE"	BREAKER PANEL
27, 28	AS REQUIRED	(VERIFY EXISTING) ABOVE FINISHED CEILING PULL BOXES FOR CONDUIT TERMINATION INTO VERTICAL DUCT. SEE PLAN FOR LOCATION.	PULL BOXES
29	12" TALL	(EXISTING) PULL BOX MOUNTED FLUSH IN FINISHED CEILING WITH REMOVABLE BOTTOM COVER WITH 6" BUSHED OPENING.	C-ARM
30	AS REQUIRED	(VERIFY EXISTING) PULL BOX MOUNTED FLUSH IN FINISHED WALL AT FLOOR LINE. PROVIDE BOX WITH REMOVABLE FRONT COVER WITH 4" BUSHED OPENING AT BOTTOM OF COVER.	GENERATOR
31	AS REQUIRED	(VERIFY EXISTING) PULL BOX MOUNTED FLUSH IN FINISHED WALL AT FLOOR LINE. PROVIDE BOX WITH REMOVABLE FRONT COVER WITH 4" BUSHED OPENING AT BOTTOM OF COVER.	SYSTEM CABINET
32	AS REQUIRED	(VERIFY EXISTING) PULL BOX MOUNTED BELOW FINISHED FLOOR WITH REMOVABLE BOTTOM COVER. PROVIDE 6" CONDUIT FROM BOX TO FLUSH WITH FINISHED FLOOR WITH BUSHING AT FLOOR LINE.	SYSTEM CABINET
33	AS REQUIRED	(EXISTING) PULL BOX MOUNTED BELOW FINISHED FLOOR WITH REMOVABLE BOTTOM COVER. PROVIDE 4" CONDUIT FROM BOX TO FLUSH WITH FINISHED FLOOR WITH BUSHING AT FLOOR LINE.	TABLE
34	3 1/2" X 18"	CEILING DUCT MOUNTED ABOVE FINISHED CEILING. PROVIDE DUCT WITH REMOVABLE TOP COVER AND OPENINGS AS SPECIFIED. IF REQUIRED BY LOCAL CODE, DIVIDE DUCT INTO (3) SECTIONS WITH METAL DIVIDERS. CONNECT TO "PB1" AND "PB3" AS SHOWN. THIS CEILING DUCT WILL BE USED FOR EXTRA CABLE STORAGE.	CEILING DUCT
35	3 1/2" X 10"	(EXISTING) HORIZONTAL DUCT MOUNTED ON FINISHED WALL AT FLOOR LINE. PROVIDE DUCT WITH REMOVABLE FRONT COVER. IF REQUIRED BY LOCAL CODE, DIVIDE DUCT INTO (3) SECTIONS WITH METAL DIVIDERS. CONNECT TO VERTICAL DUCT "D03" AS SHOWN.	HORIZONTAL WALL DUCT
36	3 1/2" X 10"	HORIZONTAL DUCT MOUNTED ON FINISHED WALL AT FLOOR LINE. PROVIDE DUCT WITH REMOVABLE FRONT COVER. IF REQUIRED BY LOCAL CODE, DIVIDE DUCT INTO (3) SECTIONS WITH METAL DIVIDERS. CONNECT TO VERTICAL DUCT "D02" AS SHOWN.	HORIZONTAL WALL DUCT
37	3 1/2" X 18"	(VERIFY EXISTING) VERTICAL DUCT MOUNTED FLUSH IN FINISHED WALL. BEGIN DUCT AT FLOOR LINE AND EXTEND UP WALL ABOVE FINISHED CEILING. PROVIDE JUNCTION BOX "PB1" (SIZED BY E.C.) AT TOP OF DUCT FOR CONDUIT TRANSITIONS. IF REQUIRED BY LOCAL CODE, DIVIDE DUCT INTO (3) SECTIONS WITH METAL DIVIDERS.	VERTICAL DUCT
38	3 1/2" X 10"	(VERIFY EXISTING) VERTICAL DUCT MOUNTED FLUSH IN FINISHED WALL. BEGIN DUCT AT FLOOR LINE AND EXTEND UP WALL ABOVE FINISHED CEILING. PROVIDE JUNCTION BOX "PB2" (SIZED BY E.C.) AT TOP OF DUCT FOR CONDUIT TRANSITIONS. IF REQUIRED BY LOCAL CODE, DIVIDE DUCT INTO (3) SECTIONS WITH METAL DIVIDERS.	VERTICAL DUCT
39	3 1/2" X 10"	(VERIFY EXISTING) VERTICAL DUCT MOUNTED FLUSH IN FINISHED WALL. BEGIN DUCT AT FLOOR LINE AND EXTEND UP WALL ABOVE FINISHED CEILING. PROVIDE JUNCTION BOX "PB3" (SIZED BY E.C.) AT TOP OF DUCT FOR CONDUIT TRANSITIONS. IF REQUIRED BY LOCAL CODE, DIVIDE DUCT INTO (3) SECTIONS WITH METAL DIVIDERS.	VERTICAL DUCT
1	EC TO SIZE	CONDUIT FROM PANEL TO "MP"	SEE "POWER SCHEDULE"
2	EC TO SIZE	CONDUIT FROM "MP" TO "PU1"	SEE "POWER SCHEDULE"
3	EC TO SIZE	CONDUIT FROM "MP" TO "SC1"	SEE "POWER SCHEDULE"
4	EC TO SIZE	CONDUIT FROM "MP" TO "EP0"	SEE "POWER SCHEDULE"
5	EC TO SIZE	CONDUIT FROM "EP0" TO "EP0"	
6	EC TO SIZE	CONDUIT FROM "SC1" TO "D5"	
7	EC TO SIZE	CONDUIT FROM "SC1" TO "D5"	
8	2"	(EXISTING) CONDUIT FROM "PB1" TO "PB1" (PU1)	MAX. CONDUIT LENGTH 25'
9	(2) 3"	(EXISTING) CONDUITS FROM "PB1" TO "PB1" (PU1)	MAX. CONDUIT LENGTH 25'
10	3"	(EXISTING) CONDUIT FROM "PB1" TO "PB1" (SC1)	MAX. CONDUIT LENGTH 22'
11	2 1/2"	(EXISTING) CONDUIT FROM "PB1" TO "CUI" FOR LIQUID COOLING HOSES	MAX. CONDUIT LENGTH 67'
12	(2) 3"	(EXISTING) CONDUITS FROM "PB1" (SC1) TO "PB2" (CR1) UNDER FLOOR	MAX. CONDUIT LENGTH 32'
13	3"	(EXISTING) CONDUIT FROM "SC" (SC1) TO "T1" UNDER FLOOR	MAX. CONDUIT LENGTH 35'
14	2"	(EXISTING) CONDUIT FROM "PB1" (SC1) TO "D1"	MAX. CONDUIT LENGTH 78'
15	1"	(NEW) CONDUIT FROM "PB1" (SC1) TO "D1"	MAX. CONDUIT LENGTH 78'
16	2 1/2"	(NEW) CONDUIT FROM "PB1" (SC1) TO "D1"	MAX. CONDUIT LENGTH 42'
17	2"	(NEW) CONDUIT FROM "PB3" (IS) TO "D1"	MAX. CONDUIT LENGTH 55'
18	3"	(EXISTING) CONDUIT FROM "PB3" (IS) TO "PB2" (CR1)	MAX. CONDUIT LENGTH 33'
19	2"	(EXISTING) CONDUIT FROM "PB3" (IS) TO "PB2" (CR1)	MAX. CONDUIT LENGTH 33'
20	3"	(NEW) CONDUIT FROM "CRB" TO "T1" UNDER FLOOR (VOLCANO S51 CABLE SET)	MAX. CONDUIT LENGTH 68'
21	3"	(EXISTING) CONDUIT FROM "T1" TO "B10" UNDER FLOOR	
22	3"	(EXISTING) CONDUIT FROM "CRB" TO "B10" UNDER FLOOR (CUSTOMER PATIENT MONITORING)	
23	2"	(NEW) CONDUIT FROM "PB3" (IS) TO "CUSTOMER MONITOR" (LIVE+REF VIDEO TO OEM OPTION)	MAX. CONDUIT LENGTH 86'



ELECTRICAL RACEWAY PLAN

SYMBOLS	
ALL MAY NOT APPLY	
	CIRCUIT BREAKER BY CUSTOMER/CONTRACTOR
	OPENING IN RACEWAY OR TRENCH/DUCT
	PULLBOX IN (FLOOR/WALL/CEILING)
	OPENING IN ACCESS FLOORING
	WARNING LIGHT (X-RAY ON)
	DOOR SAFETY SWITCH
	(EPO) EMERGENCY POWER OFF BUTTON
	TRENCH/DUCT
	CEILING DUCT
	UNDER FLOOR DUCT
	SURFACE DUCT
	VERTICAL DUCT
	ETHERNET CONNECTION TO CUSTOMER'S INFORMATION SYSTEMS NETWORK (VERIFY WITH SPS PROJECT MANAGER).
	110 VOLT, 20 AMP, HOSPITAL GRADE DUPLEX OUTLET
	110 VOLT, 20 AMP, HOSPITAL GRADE QUAD OUTLET

ATTENTION:

THIS DRAWING IS DESIGNED TO CONFORM TO FEATURES AND EQUIPMENT REQUIREMENTS PRESENTED AT THE TIME OF THEIR PREPARATION. SINCE BOTH THESE FACTORS ARE SUBJECT TO DESIGN MODIFICATION, THEY ARE NOT TO BE USED FOR CONSTRUCTION PURPOSES.

THIS SET OF PLANS REPRESENTS A COMPLETE SET OF DETAILS AND SHOULD NOT BE SEPARATED.

IT IS RECOMMENDED THAT THE SIEMENS DRAWINGS BE INCORPORATED WITH THE CONSTRUCTION DOCUMENTS FOR REFERENCE.

ALL DIMENSIONS SHOWN ON THIS DRAWING ARE FROM FINISHED SURFACES.

THIS DRAWING DOES NOT PROVIDE RADIATION SHIELDING REQUIREMENTS FOR X-RAY AND ASSOCIATED EQUIPMENT. THE CUSTOMER IS RESPONSIBLE FOR CONSULTING WITH A REGISTERED RADIATION PHYSICIST TO SPECIFY RADIATION PROTECTION.

CEILING HEIGHT REQUIREMENT
8 FT. - 11 IN.

PROJECT MANAGER: CHRISTOPHER THOMAS
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SIEMENS

INTERMOUNTAIN MEDICAL CENTER
5121 COTTONWOOD STREET, MURRAY, UT. 84107
CATH LAB #2 - ARTIS Q.ZEN CEILING

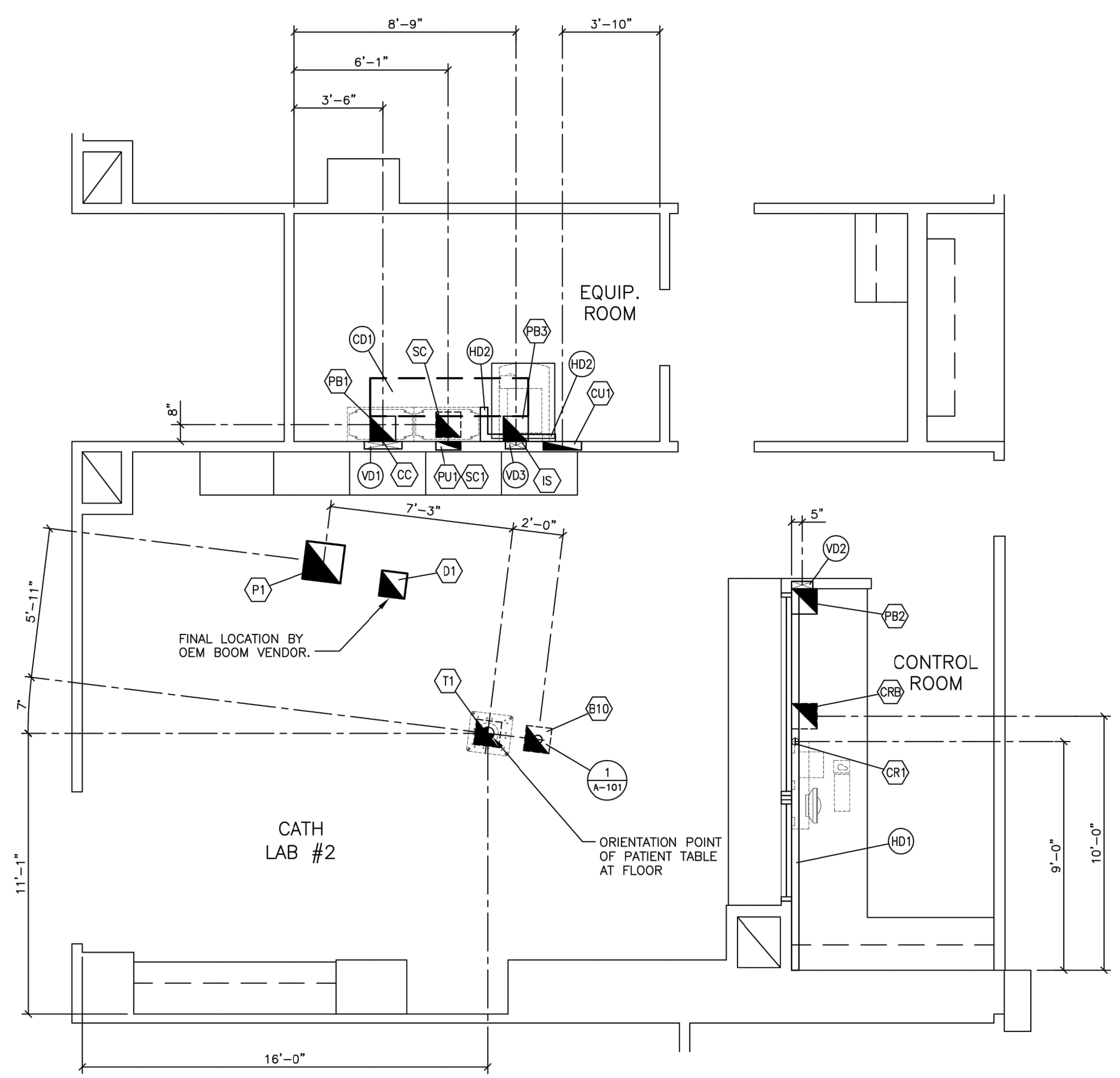
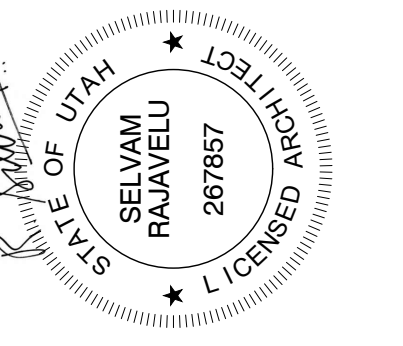
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PROJECT #: **2000965** SHEET: **E-101**
SHEET 5 OF 7
DRAWN BY: M. GONZALEZ
DATE: 03/08/20

SYMBOLS: -ISSUE BLOCK-

SCALE: AS NOTED REF: CP-133078

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ELECTRICAL DIMENSION PLAN

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

CEILING HEIGHT REQUIREMENT
8 FT. - 11 IN.

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PROJECT MANAGER: CHRISTOPHER THOMAS TEL: (801) 209-6582 EXT: FAX: EMAIL: christopher.thomas@siemens-healthineers.com		SIEMENS	
INTERMOUNTAIN MEDICAL CENTER 5121 COTTONWOOD STREET, MURRAY, UT. 84107 CATH LAB #2 - ARTIS Q.ZEN CEILING		PROJECT #: 2000965	
THE USE OR REPRODUCTION OF THIS TITLE BLOCK WITHOUT SIEMENS AUTHORIZATION WILL RESULT IN PROSECUTION UNDER FULL EXTENT OF THE LAW. ALL RIGHTS ARE RESERVED.		SHEET: E-102	
SYW	DATE	DESCRIPTION	SCALE
	03/08/20	R-1018(A) VERSION DATED 02/28/20 APPROVED BY CUSTOMER FOR FINALS	AS NOTED
—ISSUE BLOCK—		REF. # CP-1-133078	DATE: 03/08/20

REV. 23

Intermountain Healthcare
IMC- Cath Lab 2 Remodel Project

5121 South Cottonwood Street
Murray, UT 84107

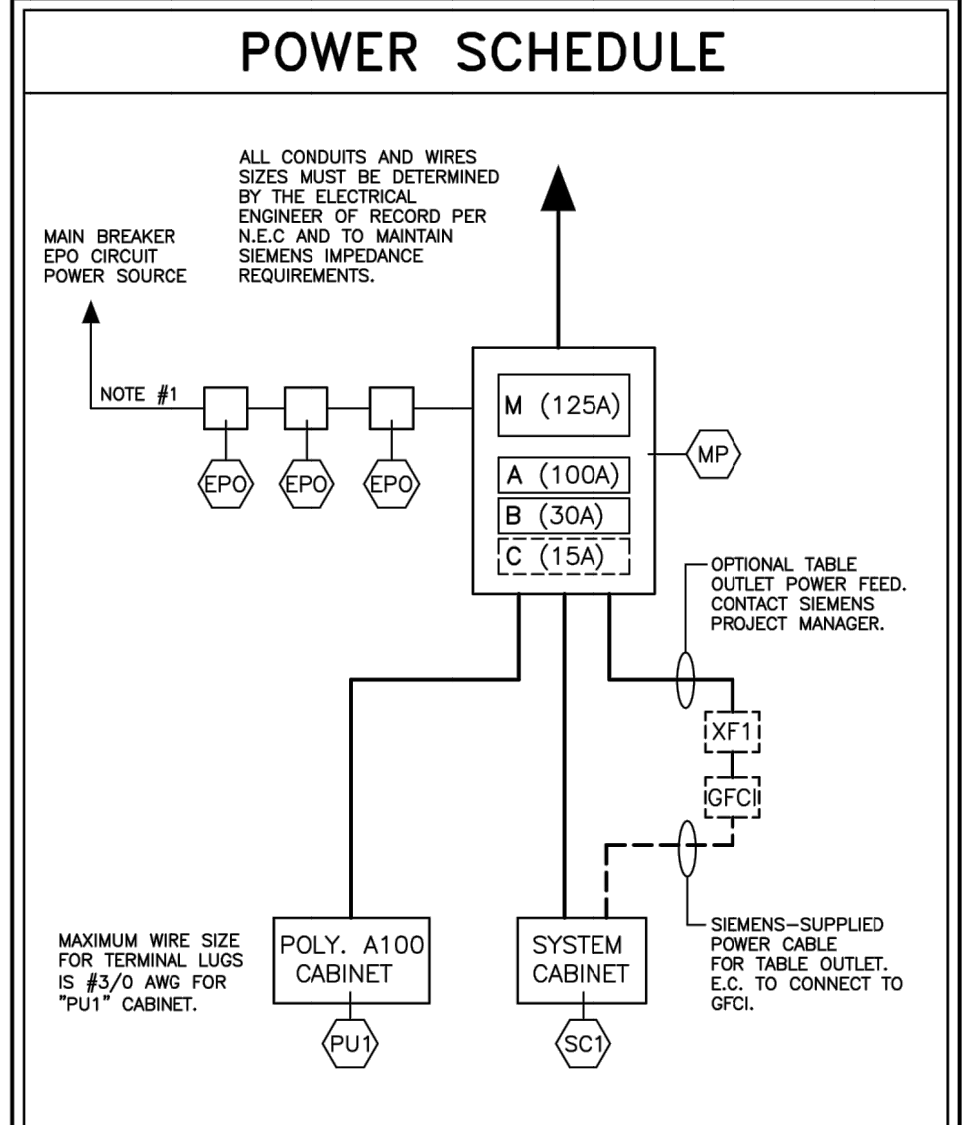
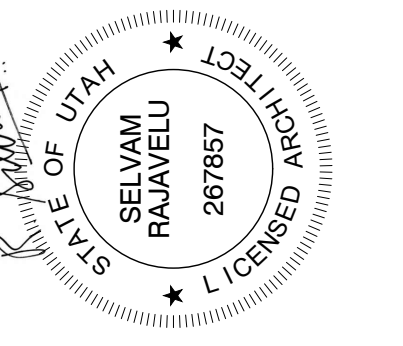
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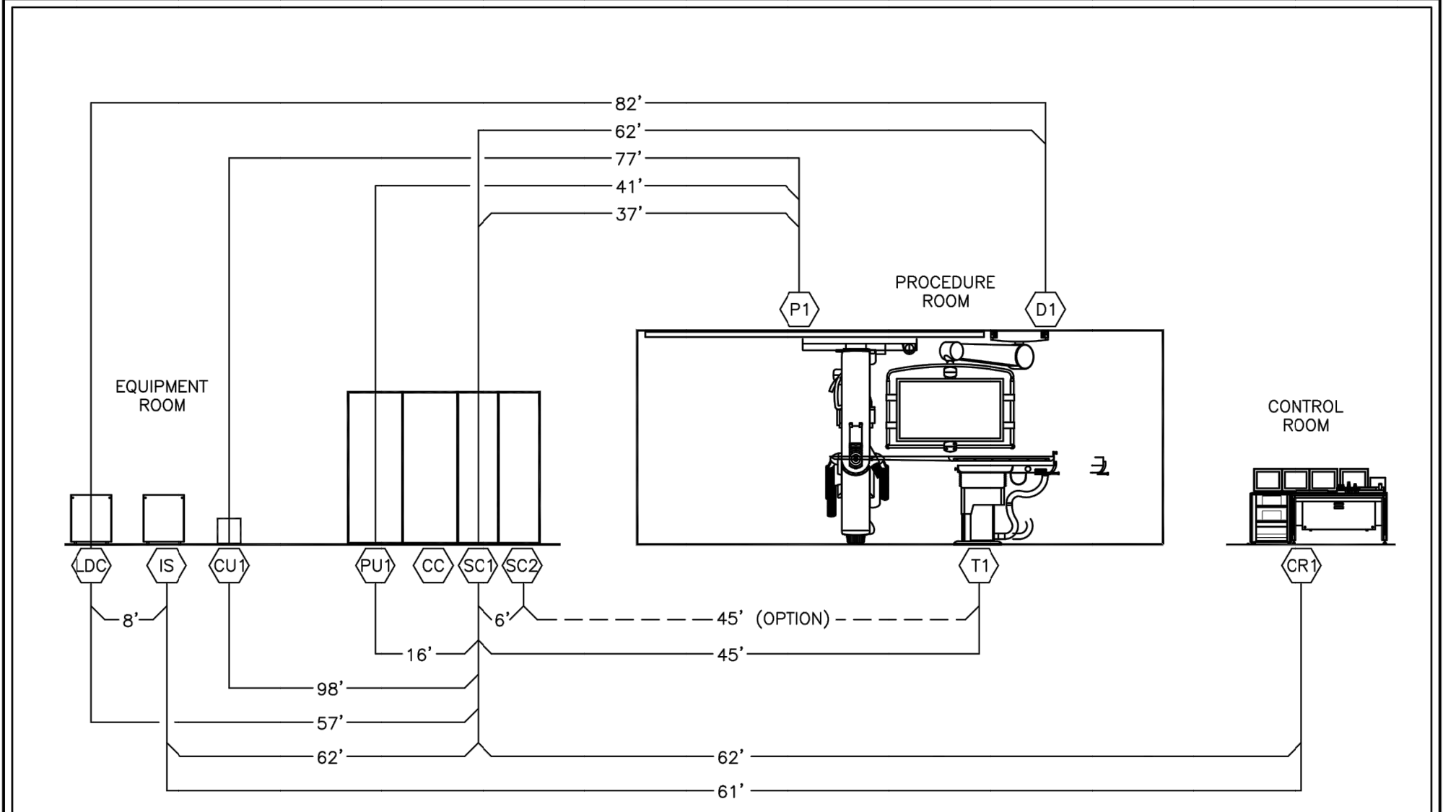
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REFERENCE DOCUMENT - NOT FOR CONSTRUCTION

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ITEM	QTY	DESCRIPTION
MP	1	MAIN PANEL WITH CIRCUIT BREAKERS FLUSH OR SURFACE MOUNTED.
M	1	MAIN BREAKER MUST HAVE TRIPPING DEVICE SO WHEN ANY EPO IS PRESSED, THE MAIN BREAKER TRIPS.
		MAIN BREAKER AMP: 125
		VOLTS PHASES NEUTRAL GROUND TOTAL WIRES
		480/277V 3 1 1 5 (NOTE 1)
A	1	BREAKER AMP: 100 (FOR PU1)
		VOLTS PHASES NEUTRAL GROUND TOTAL WIRES
		480Y 3 0 1 4 (NOTE 1)
B	1	BREAKER AMP: 30 (FOR SC1)
		VOLTS PHASES NEUTRAL GROUND TOTAL WIRES
		480/277V 3 1 1 5 (NOTE 1)
C	1	BREAKER AMP: 15 (FOR STEP-DOWN XFMR "XF1")
		VOLTS PHASES NEUTRAL GROUND TOTAL WIRES
		480 1 (L1,L2) 0 1 3
XF1	1	750VA, 480V PRIMARY, 120V GROUNDING SECONDARY STEP-DOWN SINGLE-PHASE TRANSFORMER WITH PRIMARY AND SECONDARY FUSE PROTECTION FOR TABLE OUTLET POWER CONNECTED TO AN ADJACENT FLUSH WALL-MOUNTED 15A 125VAC UL 943 GFCI WITH BLANK FACE (NO CONTACT OPENINGS OR NEMA CONFIGURATION) WITH LED INDICATION, PUSH-TO-TEST AND PUSH-TO-RESET BUTTONS, AND A CLEAR LEAN HINGED COVER TO AVOID INADVERTENT MANUAL TRIP.
EPO	VARIES	1) PHASE AND NEUTRAL TO BE THE SAME SIZE. GROUND SIZED PER NEC. NOTE: UNLESS OTHERWISE NOTED, ALL BREAKERS WILL BE 80% RATED. NOTE 1 - EPO CIRCUIT #1 MAIN CIRCUIT BREAKER EMERGENCY POWER OFF BUTTON WITH PROTECTIVE COVER THAT PREVENTS ACCIDENTAL ACTIVATION. THE EPO MUST BE OF FAIL-SAFE DESIGN. ALL EPO'S TO HAVE MECHANICAL LATCHING MECHANISM. EPO MUST BE RESET BEFORE MAIN BREAKER CAN RESUME OPERATION. CONTACTS AND WIRING CONFIGURATION TO BE DESIGNED BY ELECTRICAL ENGINEER OF RECORD. THE EPOs MUST BE INSTALLED BY A QUALIFIED ELECTRICAL CONTRACTOR ACCORDING TO NATIONAL ELECTRICAL CODE, STATE AND LOCAL REGULATIONS. MEASURES SHOULD BE TAKEN TO DESIGN THE CIRCUIT IN SUCH A WAY THAT IT WILL ALWAYS WORK WHEN THE MEDICAL EQUIPMENT IS POWERED. THE CUSTOMER IS SOLELY RESPONSIBLE FOR THE IMPLEMENTATION OF THE EPOs AND THEIR ASSOCIATED CIRCUITS AND MUST MAKE THE FINAL DETERMINATION CONSIDERING ALL SITE CONDITIONS AND REGULATORY FACTORS. ALL ITEMS LISTED IN THIS SCHEDULE SHALL BE SUPPLIED AND INSTALLED BY CUSTOMER/CONTRACTOR.



ARTIS Q/Q.ZEN/ZEE CEILING MAXIMUM CABLE LENGTHS (TYPICAL EQUIPMENT)

POWER REQUIREMENTS

WIRING SYSTEM: 480Y/277V, 3 PHASE, 5-WIRE, 60 HZ.

MINIMUM POWER SUPPLY:

IF AN ON-SITE TRANSFORMER IS REQUIRED TO OBTAIN OPERATING VOLTAGE, IT MUST BE OF SUFFICIENT CAPACITY AND CHARACTERISTICS TO MAINTAIN SUPPLY VOLTAGE AND IMPEDANCE REQUIREMENTS (TRANSFORMER AND CONDUCTORS).

X-RAY GENERATOR (PU1) MOMENTARY RATING (RADIOGRAPHIC EXPOSURE) 162 KVA
X-RAY GENERATOR (PU1) LONG-TIME RATING (FLUOROSCOPY) 14 KVA
SYSTEM CABINET (SC1) LONG-TIME RATING: 8.5 KVA

LINE IMPEDANCE ≤ 120 (mΩ)

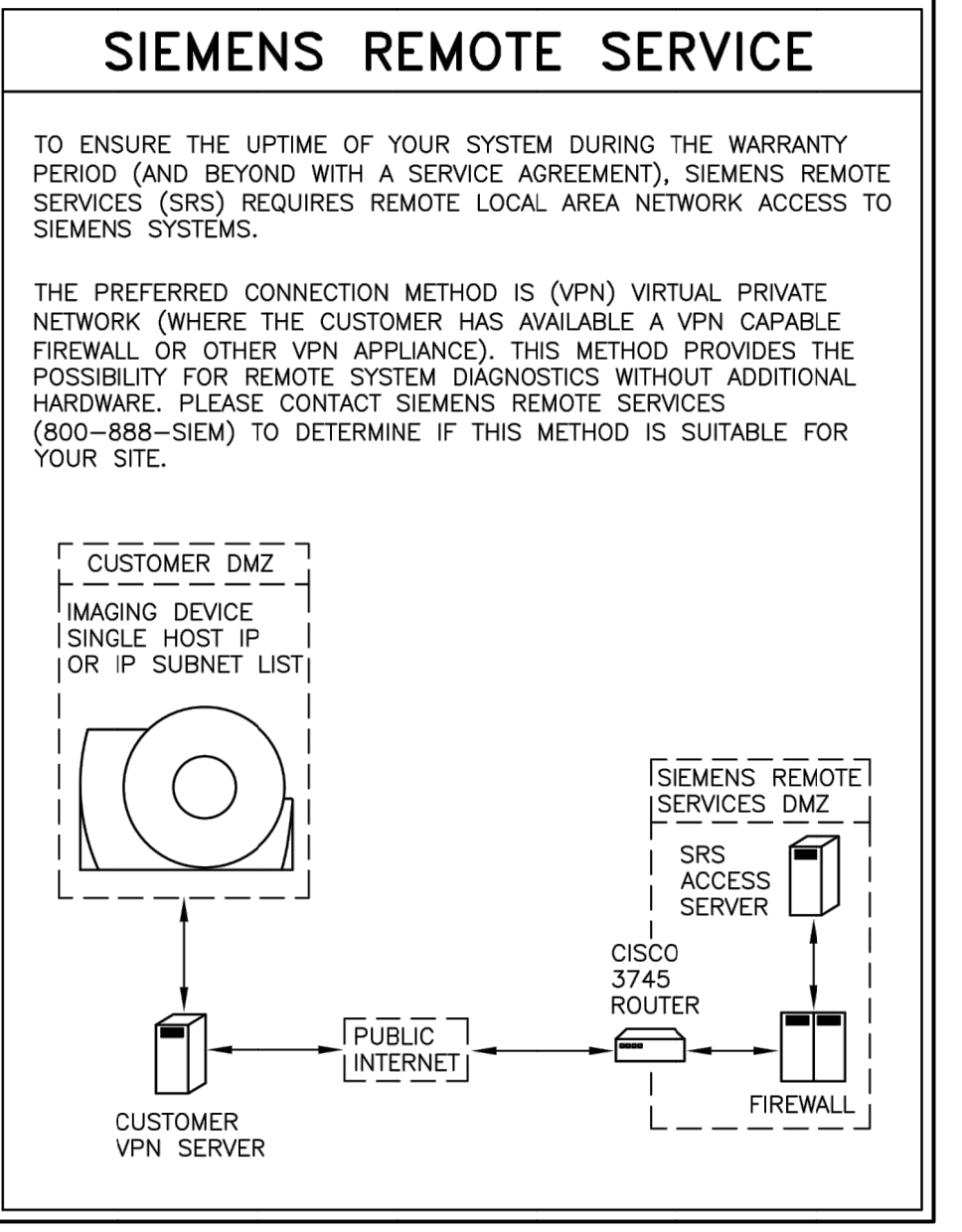
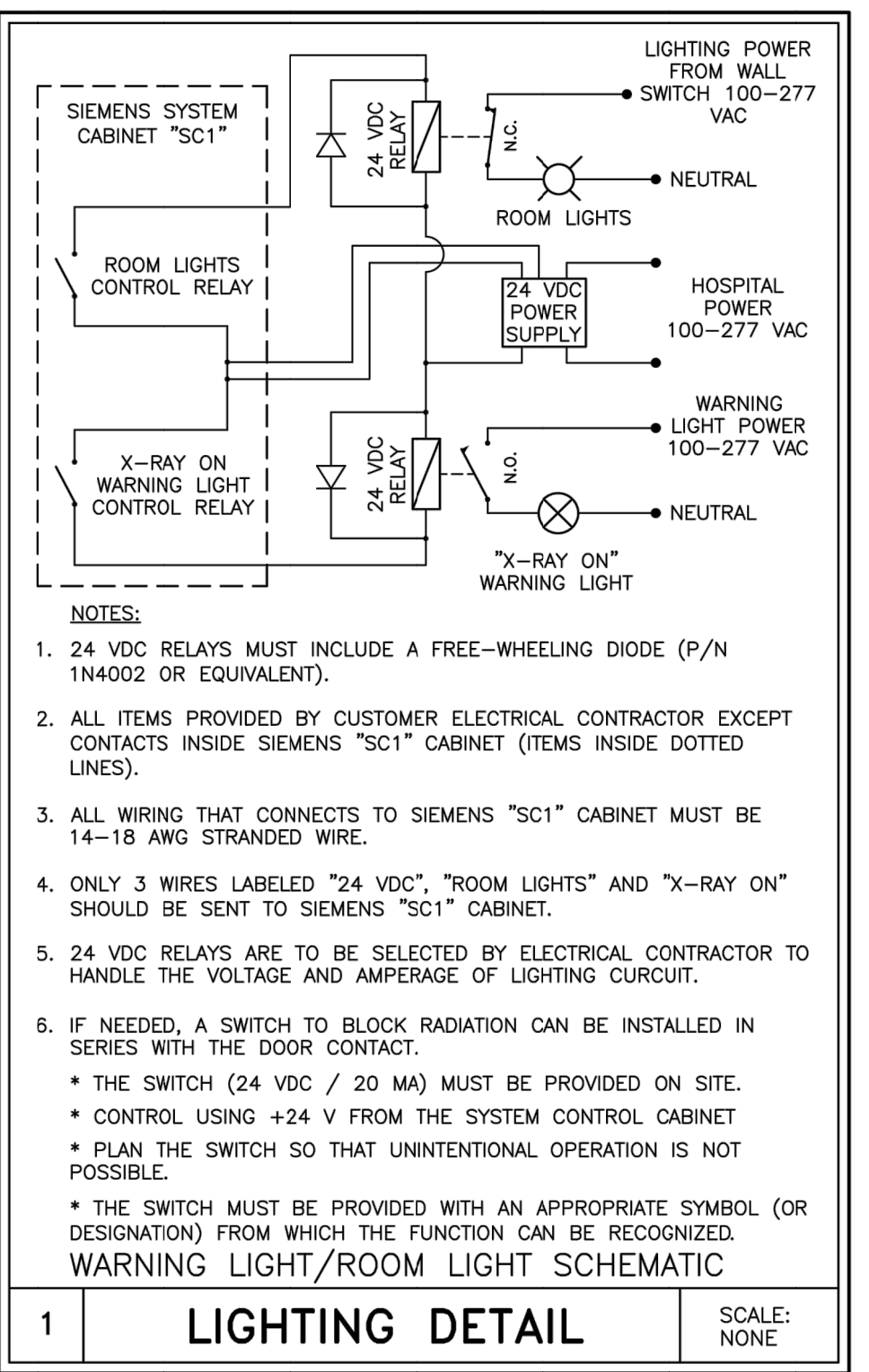
POWER QUALITY PARAMETERS

MAXIMUM LINE VOLTAGE VARIATION ±10% OF SYSTEM VOLTAGE
PHASE IMBALANCE: 2%
FREQUENCY VARIATION: ±1 HZ

POWER SUPPLY NOTES:
1. INCOMING POWER SUPPLIES FOR SIEMENS EQUIPMENT SHOULD BE DEDICATED (BACK TO SOURCE), ISOLATED AND INSULATED FROM ANY OTHER EQUIPMENT SUCH AS ELEVATORS, GENERATORS, HVAC SYSTEMS, ETC.
2. SIEMENS HEALTHCARE REQUIRES THAT THE INCOMING POWER MEETS THE POWER QUALITY REQUIREMENTS.

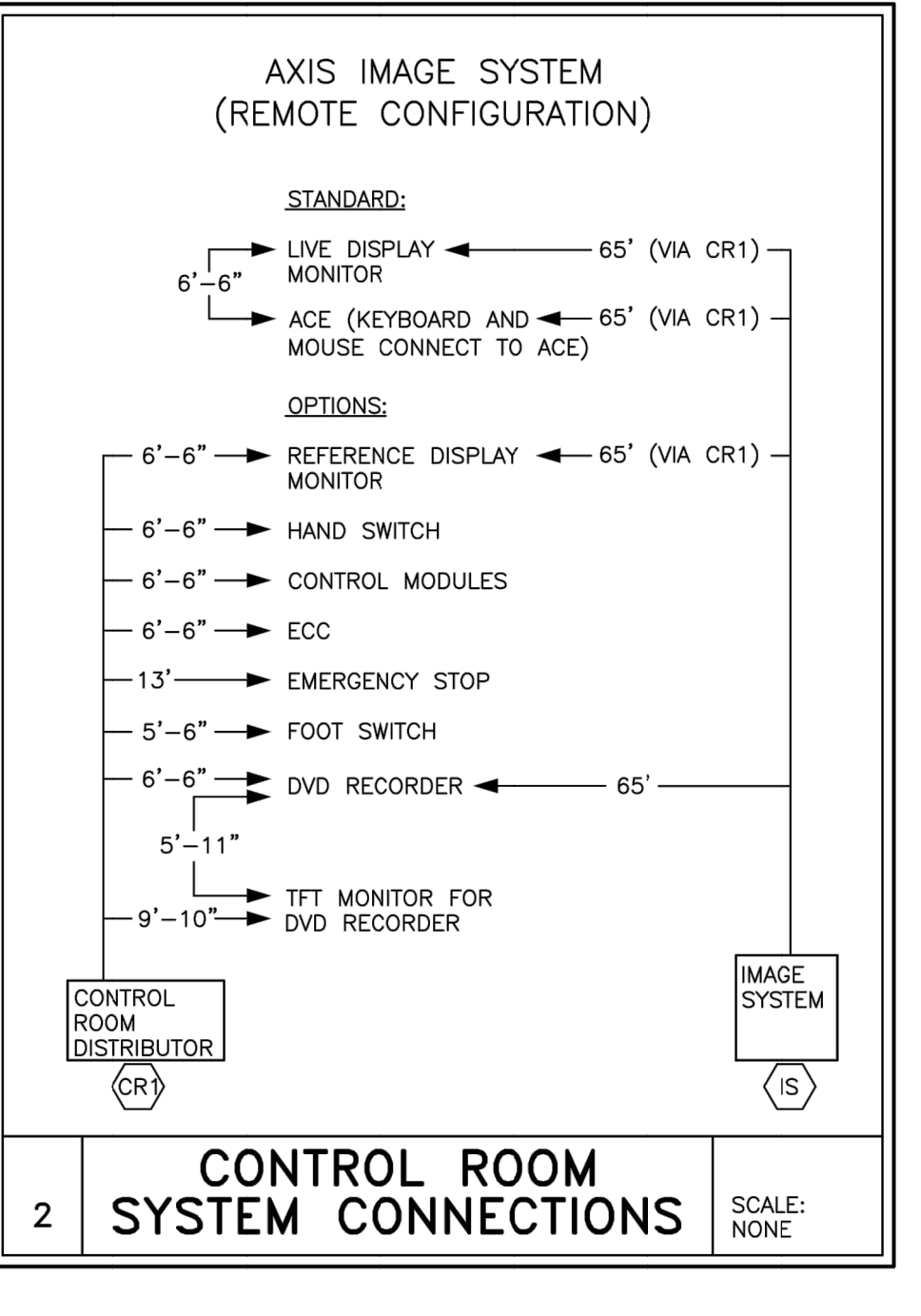
TABLE POWER OUTLET SAFETY

NOTE: LIFE-SUSTAINING EQUIPMENT MUST NOT BE CONNECTED TO THE TABLE POWER OUTLET (IF INSTALLED) IN THE SIEMENS PATIENT TABLE. POWER WILL BE DISCONNECTED IF EPO BUTTON IS PRESSED. TABLE OUTLET IS 120V, FUSED AT 5A.



NETWORK REQUIREMENT

A DIGIT NETWORK IS REQUIRED FOR ADEQUATE IMAGE DATA TRANSFER SPEED BETWEEN THE IMAGER AND 3D RECONSTRUCTION WORKSTATION. WORKFLOW AND CLINICAL NEEDS DEMAND 3D IMAGES BE AVAILABLE FOR REVIEW BY CLINICAL STAFF IMMEDIATELY UPON ACQUISITION.



POWER QUALITY

POOR POWER WILL ALTER EQUIPMENT PERFORMANCE.

IT IS IN THE CUSTOMER'S INTEREST THAT THE ELECTRICAL CONTRACTOR BE RESPONSIBLE FOR TESTING AND VERIFYING THAT THE EQUIPMENT POWER SUPPLY COMPLES WITH THE SIEMENS SPECIFICATIONS.

CONTRACTOR SUPPLIED CABLES

FROM	VIA	TO	DESCRIPTION	REMARKS
PANEL	1	MP	ELECTRICAL CONTRACTOR TO SIZE PLUS GROUND	SEE "POWER SCHEDULE"
MP	2	PU1	3#2, 1#2 GROUND AND CONNECT	SEE "POWER SCHEDULE"
MP	3	SC1	3#6, 1#6 NEUTRAL, 1#6 GROUND AND CONNECT	SEE "POWER SCHEDULE"
MP	4	EPO	2#12, PLUS GROUND	SEE "POWER SCHEDULE"
EPO	5	EPO	2#12, PLUS GROUND	EMERGENCY POWER
SC1	6	WL	2#14-18 AWG	SEE "LIGHTING DETAIL" SHEET E-501
SC1	7	DS	24V SIGNAL, 2#14-18 AWG	DOOR SWITCH

SIEMENS SUPPLIED CABLES

FROM	VIA	TO	DESCRIPTION	REMARKS
P1	8, PB1, VD1	PU1	P1 LEFT SIDE	MAXIMUM LENGTH 41'
P1	9, PB1, VD1	PU1	(2) HIGH VOLTAGE CABLES P1 LEFT SIDE	MAXIMUM LENGTH 41'
P1	10, PB1, VD1	SC1	P1 LEFT SIDE	MAXIMUM LENGTH 37'
P1	11	CU1	FOR LIQUID COOLING HOSES (P1 LEFT SIDE)	MAXIMUM LENGTH 77'
SC1	VD1, PB1, 12, PB2, VD2, HD1	CR1	FOR CONTROL ROOM OPTIONS (CONTROL MODULES, FOOT SWITCH, DISPLAY, ECC)	MAXIMUM LENGTH 62'
SC1	SC, 13	T1	NOT WITH OR TABLE	MAXIMUM LENGTH 45'
SC1	VD1, PB1, 14	CU1		MAXIMUM LENGTH 98'
SC1	BETWEEN CABINETS	PU1		MAXIMUM LENGTH 16'
SC1	HD2	IS	62" CABLES SELECTABLE ON FACTORY CHECKLIST	MAXIMUM LENGTH 28'
SC1	VD1, PB1, 15	D1	OEM DISPLAY CONNECTION	MAXIMUM LENGTH 98'
SC1	VD1, PB1, 16	D1	OEM DISPLAY CONNECTION	MAXIMUM LENGTH 62'
IS	HD2, VD3, PB3, 17	D1	OEM DISPLAY CONNECTION	MAXIMUM LENGTH 75'
IS	HD2, VD3, PB3, 18, PB2, VD2, HD1	CR1		MAXIMUM LENGTH 61'
CRB	20	T1	VOLCANO MUS (VOLCANO S51 CABLE SET)	MAXIMUM LENGTH 98'
T1	21	B10		
CRB	22	B10	CUSTOMER PATIENT MONITORING, ETC.	
IS	HD2, VD3, PB3, 23	CUSTOMER MONITOR	LIVE-REF VIDEO INTERFACE TO OEM (OPTION)	MAXIMUM LENGTH 110'

ATTENTION:

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ALL DIMENSIONS SHOWN ON THIS DRAWING ARE FROM FINISHED SURFACES.

THIS DRAWING DOES NOT PROVIDE RADIATION SHIELDING REQUIREMENTS FOR X-RAY AND ASSOCIATED EQUIPMENT. THE CUSTOMER IS RESPONSIBLE FOR CONSULTING WITH A REGISTERED RADIATION PHYSICIST TO SPECIFY RADIATION PROTECTION.

PROJECT MANAGER: CHRISTOPHER THOMAS
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FAX:
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SIEMENS

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CATH LAB #2 - ARTIS Q.ZEN CEILING

PROJECT #:
2000965

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SHEET 7 OF 8
DRAWN BY: M. GONZALEZ
DATE: 03/08/20

E-501

SCALE: AS NOTED REF: CP-133078

REFERENCE DOCUMENT - NOT FOR CONSTRUCTION

Intermountain Healthcare
IMC- Cath Lab 2 Remodel Project

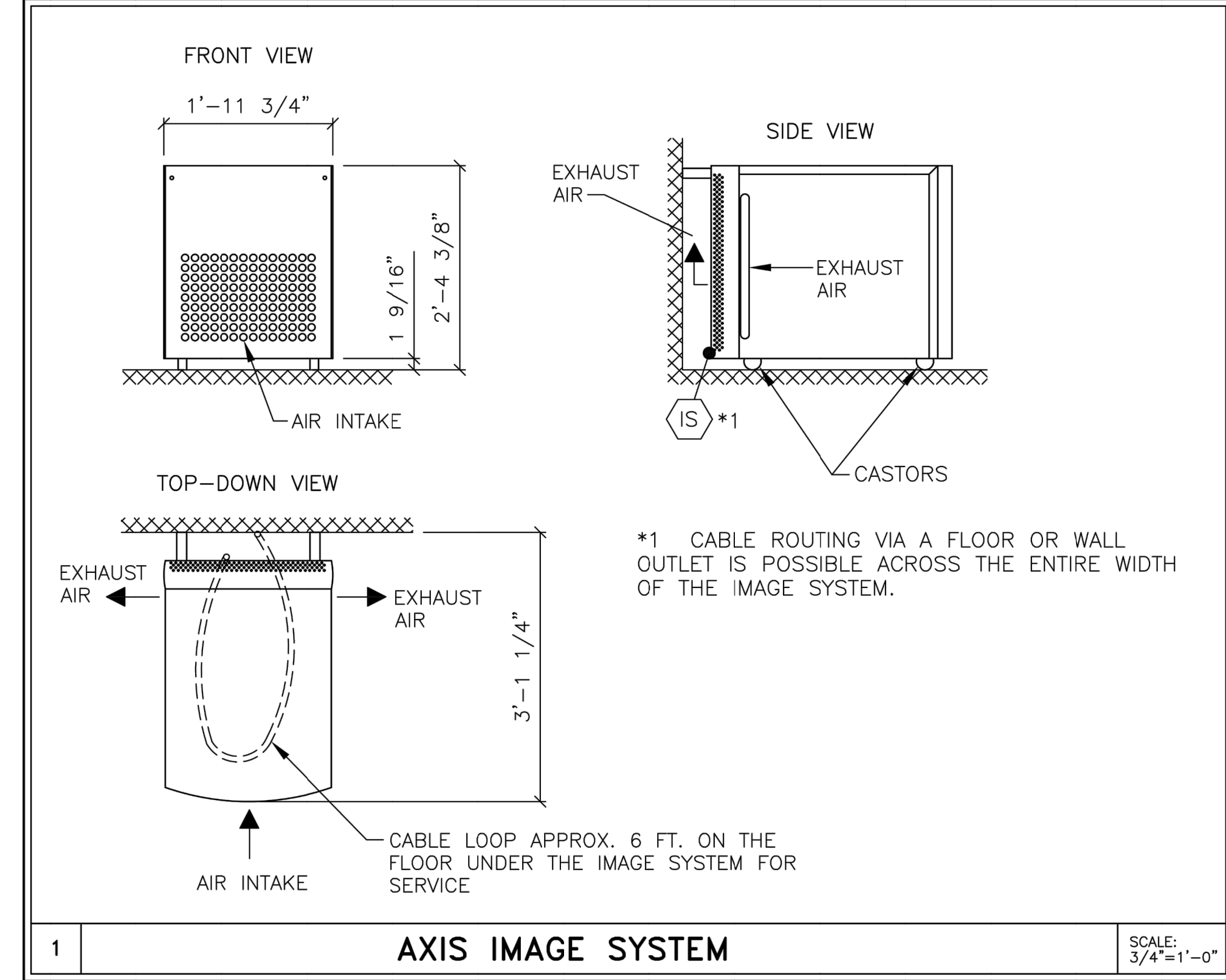
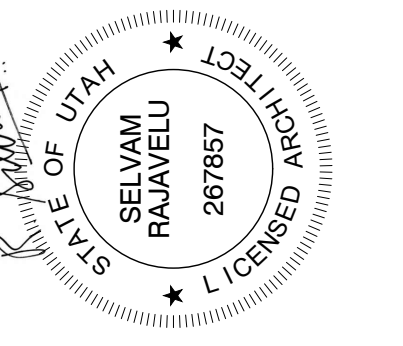
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Murray, UT 84107

NJRA Project # 19205.00
Construction Documents July 15, 2020

Siemens
Equipment-
Electrical

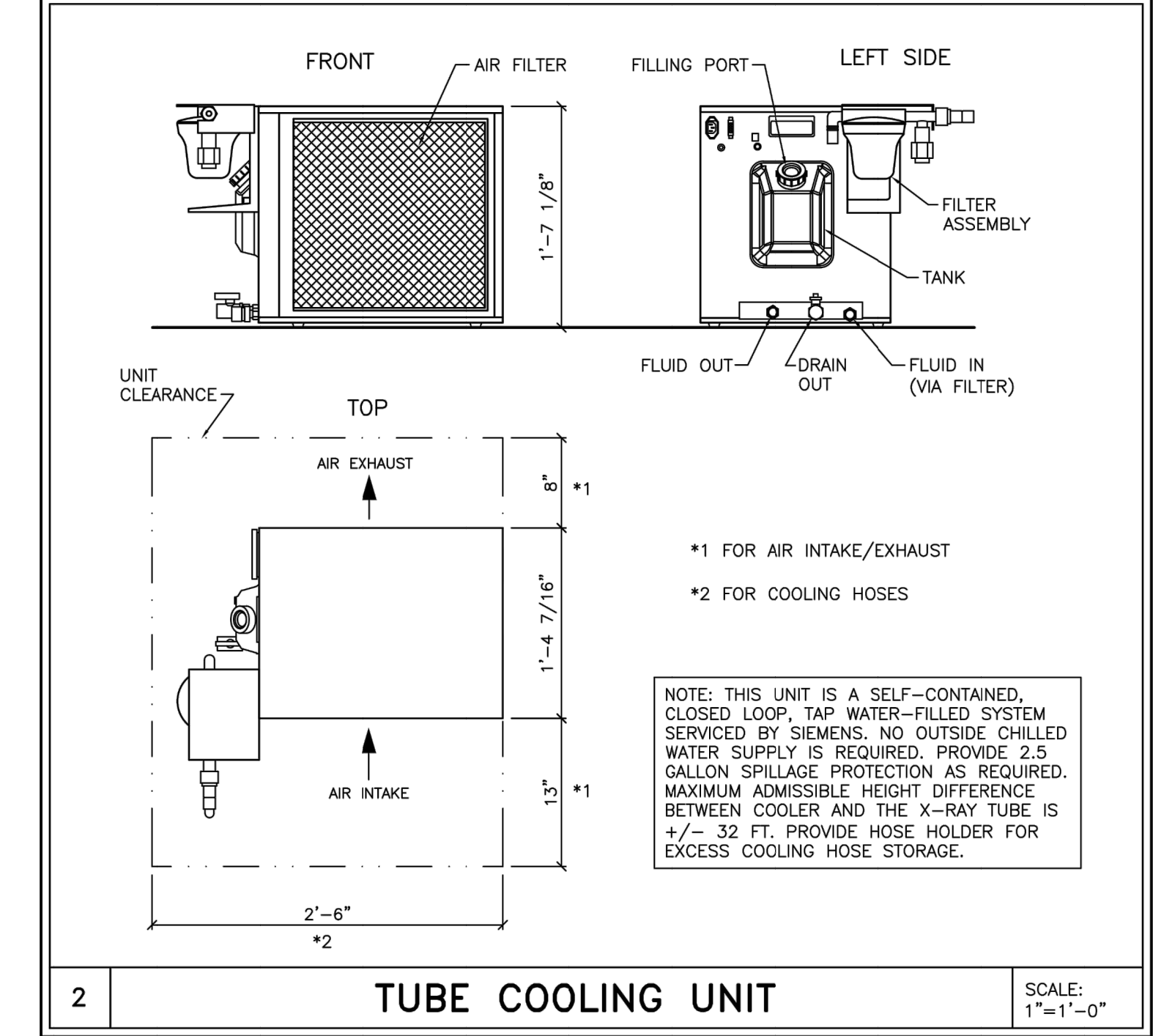
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7/2/2020 11:27:12 PM - Z:\3000\HCC\2020\04\HC - IMC CATH LAB #2\02 BIM - REVIT & AUTOCAD\02 AUTOCAD DWGS\EQ 107 SIEMENS EQUIPMENT-ELECTRICAL.DWG



HEAT LOADS
FOR BTU'S OF SIEMENS EQUIPMENT, REFER TO THE EQUIPMENT LEGEND, SHEET A-101.

ENVIRONMENTAL CONDITIONS	
EXAMINATION AND CONTROL ROOM	TEMPERATURE RANGE: 59°F-86°F (RECOMMENDED TEMPERATURE 70°F) FOR SYSTEM WITH FLAT PANEL DETECTOR RELATIVE HUMIDITY: 20% - 75% NON-CONDENSING
AXIS IMAGE SYSTEM	TEMPERATURE RANGE: 50°F-95°F (RECOMMENDED TEMPERATURE 70°F) RELATIVE HUMIDITY: 20%-75% NON CONDENSING MAX. TEMP. GRADIENT: 18° F/HR AIR FLOW VOLUME: 371 CFM MAX. NOISE GENERATION: 53 dB(A)
POLYDOROS A100 GENERATOR	TEMPERATURE RANGE: 50°F-95°F (RECOMMENDED TEMPERATURE 70°F) RELATIVE HUMIDITY: 20%-75% NON CONDENSING MAX. TEMP. GRADIENT: 9° F/HR AIR FLOW VOLUME: 94 CFM MAX. NOISE GENERATION: 55 dB(A)
SYSTEM CONTROL CABINET	TEMPERATURE RANGE: 50°F-95°F (RECOMMENDED TEMPERATURE 70°F) FOR SYSTEM WITH IMAGE INTENSIFIER 59°F-86°F (RECOMMENDED TEMPERATURE 70°F) FOR SYSTEM WITH FLAT PANEL DETECTOR RELATIVE HUMIDITY: 20% - 75% NON-CONDENSING MAX. TEMP. GRADIENT: 9° F/HR AIR FLOW VOLUME: 294 CFM MAX. NOISE GENERATION: 48 dB(A)
KLUVER/LYTRON COOLING UNIT	TEMPERATURE RANGE: 41°F-86°F (RECOMMENDED TEMPERATURE 70°F) RELATIVE HUMIDITY: FROST FREE AIR FLOW VOLUME: 647 CFM MAX. NOISE GENERATION: 55 dB(A) AT 50 HZ, 59 dB(A) AT 60 HZ
STAND WITH FLAT PANEL DETECTOR	MAXIMUM TEMPERATURE GRADIENT: 9° F/HR ATMOSPHERIC PRESSURE: 700hPa - 1040hPa SHOCKS: MAXIMUM 10G/16MS VIBRATIONS: MAXIMUM 0.1 G/10-200HZ



CEILING HEIGHT REQUIREMENT
8 FT. - 11 IN.

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— THIS SET OF PLANS REPRESENTS A COMPLETE SET OF DETAILS AND SHOULD NOT BE SEPARATED.
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INTERMOUNTAIN MEDICAL CENTER 5121 COTTONWOOD STREET, MURRAY, UT. 84107 CATH LAB #2 - ARTIS Q.ZEN CEILING			
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SYM	DATE	DESCRIPTION	SCALE AS NOTED
—	03/08/20	R-1018(A) VERSION DATED 02/28/20 APPROVED BY CUSTOMER FOR FINALS	REF # CP-133078
— ISSUE BLOCK —		DATE: 03/08/20	DRAWN BY: M. GONZALEZ

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Intermountain Healthcare
IMC- Cath Lab 2 Remodel Project

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Siemens
Equipment-
Mechanical

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