INTERMOUNTAIN MEDICAL CENTER

CATH LAB #3- BUILDING 4 LEVEL 1

CONSTRUCTION DOCUMENTS

Project No. 20230.00
Project Address: 5121 S Cottonwood Street,
Murray, Utah 84107

Date: December 15, 2021

PROJECT IS LOCATED AT LEVEL 1 OF BUILDING 4.

INTERMOUNTAIN MEDICAL CENTER- AERIAL VIEW

OWNER	**INTERMOUNTAIN HEALTHCARE** 36 SOUTH STATE STREET 23RD FLOOR SALT LAKE CITY, UT 84111
ARCHITECT	**NJRA ARCHITECTS, INC.** 5272 SOUTH COLLEGE DRIVE SUITE 104 MURRAY, UT 84123
MECHANICAL/ PLUMBING ENGINEER	**VAN BOERUM & FRANK ASSOCIATES, INC.** 330 SOUTH 300 EAST SALT LAKE CITY, UT 84111
ELECTRICAL ENGINEER	**SPECTRUM ENGINEERS** 324 SOUTH STATE STREET, SUITE 400 SALT LAKE CITY, UT 84111
STRUCTURAL ENGINEER	**REAVELEY ENGINEERS** 675 EAST 500 SOUTH, SUITE 400 SALT LAKE CITY, UT 84102

ABBREVIATIONS

A/C	AIR CONDITIONING
ACOUS	ACOUSTICAL
AD	AREA DRAIN
AFF	ABOVE FINISH FLOOR
AVE	AVENUE
B/M	BENCH MARK
BC	BOTTOM OF CURB
BLDG	BUILDING
BLKG	BLOCKING
BOT	BOTTOM
BRG	BEARING
BS	BOTH SIDES
BSMT	BASEMENT
C&G	CURB AND GUTTER
CG	CORNER GUARD
CJ	CONTROL OR CONSTRUCTION JOINT
CMU	CONCRETE MASONRY UNIT
CO	CLEAN OUT
CONC	CONCRETE
CONT	CONTINUOUS
DEMO	DEMOLITION
DF	DRINKING FOUNTAIN
DIAG	DIAGONAL
DIAM	DIAMETER
DIFF	DIFFUSER
DIM	DIMENSION
DS	DOWNSPOUT
E	EAST
EA	EACH
EJ	EXPANSION JOINT
ELEC	ELECTRIC(AL)
ENCL	ENCLOSURE
EP	EDGE OF PAVEMENT
EQ	EQUAL
EQPT	EQUIPMENT
ES	EACH SIDE
EWC	ELECTRICAL WATER COOLER
EXT	EXTERIOR
FA	FIRE ALARM
FCO	FLOOR CLEAN OUT
FD	FLOOR DRAIN
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FF	FINISH FLOOR
FG	FINISH GRADE
FH	FIRE HYDRANT
FHC	FIRE HOSE CABINET
FL	FLOOR
FOC	FACE OF CONCRETE
FOF	FACE OF FINISH
FOM	FACE OF MASONRY
FOS	FACE OF STUD
FPRF	FIREPROOFING
FS	FLOOR SINK
FSP	FIRE SPRINKLER
FWC	FABRIC WALL COVERING
GA	GAUGE
GALV	GALVANIZED
GB	GRAB BAR
GC	GENERAL CONTRACTOR
GFRC	GLASS FIBER REINFORCED CONCRETE
GLU LAM	GLUE LAMINATED BEAM
GYP	GYPSUM
HB	HOSE BIB
HDCP	HANDICAP (PED)
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HP	HIGH POINT OR HORSEPOWER
HT	HEIGHT
HVAC	HEATING, VENTILATING, AIR CONDITIONING
ID	INSIDE DIMENSION/ DIAMETER
IE	INVERT ELEVATION
IN	INCH
INT	INTERIOR
JT	JOINT
KBD	ARTICULATED KEYBOARD TRAY
KO	KNOCKOUT
KOP	KNOCK OUT PANEL
LAB	LABORATORY
LAM	LAMINATED
LAV	LAVATORY
LB	POUND
LH	LEFT HAND
LIN	LINEAR
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LONG	LONGITUDINAL
LP	LOW POINT
MAX	MAXIMUM
MC	MEDICINE CABINET
MDL	MEDIUM DENSITY LAMINATE
MECH	MECHANICAL
MEZZ	MEZZANINE
MH	MANHOLE
MM	MILLIMETER
MIN	MINIMUM
MIR	MIRROR
MISC	MISCELLANEOUS
MLDG	MOLDING
MO	MASONRY OPENING
MON	MONUMENT
MTL	METAL
N	NORTH
NC	NURSE CALL
NEG	NEGATIVE
NIC	NOT IN CONTRACT
NOM	NOMINAL
NTS	NOT TO SCALE
O/O	OUT TO OUT
O/	OVER
OA	OVERALL
OC	ON CENTER
OD	OUTSIDE DIMENSION/ DIAMETER
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED OWNER INSTALLED
ORD	OVERFLOW ROOF DRAIN
ORIG.	ORIGINAL
OZ	OUNCE
PL	PLATE
PL	PROPERTY LINE
PLAM	PLASTIC LAMINATE
POS	POSITIVE
PR	PAIR
PREFAB	PREFABRICATED
PREFIN	PREFINISHED
PTD	PAPER TOWEL DISPENSER
PTR	PAPER TOWEL RECEPTACLE
PTS	PNEUMATIC TUBE STATION
RAD	RADIUS
RD	ROOF DRAIN
REF	REFERENCE
REINF	REINFORCE (MENT)
REQD	REQUIRED
REV	REVISION
RFG	ROOFING
RH	RIGHT HAND
RM	ROOM
RO	ROUGH OPENING
ROW	RIGHT OF WAY
RV	ROOF VENT
S	SOUTH/SINK
SCHED	SCHEDULE
SD	STORM DRAIN OR SOAP DISPENSER/DISH
SIM	SIMILAR
SM	SHEET METAL
SMS	SHEET METAL SCREW
SPEC	SPECIFICATIONS
SQ YD	SQUARE YARD
SQ FT	SQUARE FOOT
SQ IN	SQUARE INCH
SS	STAINLESS STEEL
ST	STREET
STD	STANDARD
STOR	STORAGE
STRUC	STRUCTURAL
SUSP	SUSPENDED
SYM	SYMMETRICAL
T&B	TOP AND BOTTOM
T&G	TONGUE AND GROOVE
TC	TOP OF CURB
TOC	TOP OF CONCRETE/CURB
TOF	TOP OF FOOTING
TOJ	TOP OF JOIST
TOL	TOLERANCE
TOPO	TOPOGRAPHIC
TOS	TOP OF STEEL/SLAB
TOW	TOP OF WALL
TP	TOP OF PAVEMENT
TRANS	TRANSFORMER
TRTD	TREATED
TS	TUBE STEEL
TV	TELEVISION
TYP	TYPICAL
U/S	UNDER SIDE
U/C	UNDER CABINET
UL	UNDERWRITERS LABORATORIES
UNFIN	UNFINISHED
UNO	UNLESS NOTED OTHERWISE
VCT	VINYL COMPOSITION TILE
VEST	VESTIBULE
VWC	VINYL WALL COVERING
W/O	WITHOUT
W/	WITH
W	WEST/WASTE/WATER
WB	WALLBOARD
WD	WOOD
WG	WIRE GLASS
WT	WEIGHT
WWF	WELDED WIRE FABRIC
YB	YARD BOX
YD	YARD DRAIN
@	AT
℄	PLATE OR PROPERTY LINE
℄	CENTERLINE
&	AND
∠	ANGLE
⌀	DIAMETER

GENERAL NOTES

1. MECHANICAL AND ELECTRICAL DRAWINGS ARE SUPPLEMENTAL TO THE ARCHITECTURAL DRAWINGS. IT SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO CHECK WITH THE ARCHITECTURAL DRAWINGS BEFORE THE INSTALLATION OF MECHANICAL OR ELECTRICAL CONSTRUCTION. ANY DISCREPANCIES BETWEEN THE ARCHITECTURAL AND CONSULTING ENGINEERS' DRAWINGS SHALL BE BROUGHT TO THE ARCHITECT'S ATTENTION FOR CLARIFICATION. ANY CONSTRUCTION INSTALLED IN CONFLICT WITH THE ARCHITECTURAL DRAWINGS SHALL BE CORRECTED BY THE GENERAL CONTRACTOR AT HIS OWN EXPENSE AND AT NO EXPENSE TO THE OWNER OR ARCHITECT.

2. ALL WORK SHALL COMPLY WITH THE 2010 ADA ACCESSIBILITY GUIDELINES (AMERICANS WITH DISABILITIES ACT).

3. CODES GOVERNING THIS WORK INCLUDE, BUT ARE NOT LIMITED TO THE FOLLOWING: 2018 INTERNATIONAL BUILDING CODE, APPLICABLE OSHA REGULATIONS. REQUIREMENTS OF CODES AND REGULATIONS SHALL BE CONSIDERED AS MINIMUM. WHERE THE CONTRACT DOCUMENTS EXCEED (WITHOUT VIOLATING) CODE AND REGULATION REQUIREMENTS, CONTRACT DOCUMENTS SHALL TAKE PRECEDENCE. WHERE CODES CONFLICT, THE MORE STRINGENT SHALL APPLY.

4. THE CONTRACTOR SHALL PROVIDE ADEQUATE BARRICADES AND PROTECTIVE DEVICES SEPARATING CONSTRUCTION AREAS. TEMPORARY PASSAGES SHALL BE PROVIDED AS REQUIRED. THE CORRIDORS AND OTHER AREAS SHALL BE SEPARATED FROM THE CONSTRUCTION ZONE BY A NON-COMBUSTIBLE BARRIER FASTENED SECURELY TOP AND BOTTOM AND AT EACH END. PRIOR TO DELIVERY OF MATERIALS TO CONSTRUCTION ZONE AND REMOVAL OF WASTE FROM SITE THE CONTRACTOR SHALL CHECK WITH THE OWNER FOR AN ACCEPTABLE ROUTE AND TIME. ALL DOORS IN THE TEMPORARY PASSAGES SHALL HAVE A 44" CLEAR WIDTH AND BE FUNCTIONAL AT ALL TIMES TO SERVE AS THE REQUIRED EXIT FROM THE RATED CORRIDOR.

5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER LOCATION AND SIZE OF OPENINGS FOR ALL TRADES AND SHALL COORDINATE ALL CONSTRUCTION AS INDICATED BY THE CONTRACT DOCUMENTS, INCLUDING SHOP DRAWINGS REVIEWED BY THE ARCHITECT.

6. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND NOTIFY THE ARCHITECT OF ANY DISCREPANCIES PRIOR TO COMMENCEMENT OF WORK.

7. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER ALL MEASURES TO ACCOMPLISH THE WORK WITH THE MINIMUM OF INTERRUPTION TO NORMAL BUILDING PROCEDURES. SYSTEM SHUTDOWNS OF HVAC, PLUMBING, ELECTRICAL, AND NOISY CONSTRUCTION INCLUDING ROTO HAMMER, SAW CUTTING, CONCRETE ANCHORS, ETC. SHALL BE COORDINATED WITH THE OWNER AT LEAST 72 HOURS PRIOR TO COMMENCEMENT.

8. ALL DIMENSIONS ARE SHOWN TO FACE OF FINISH OF NEW CONSTRUCTION AND FACE OF FINISH OF EXISTING CONSTRUCTION, UNLESS NOTED OTHERWISE.

9. ALL DRAWINGS, THOUGH NOTED TO SCALE ARE FOR ILLUSTRATION ONLY. THE CONTRACTOR SHALL NOT SCALE DRAWINGS.

10. WHEN A DETAIL IS IDENTIFIED AS TYPICAL, THE CONTRACTOR IS TO APPLY THIS DETAIL IN ESTIMATING AND CONSTRUCTION TO EVERY LIKE CONDITION WHETHER OR NOT THE REFERENCE IS REPEATED IN EVERY INSTANCE.

11. ALL PENETRATIONS INTO SOUND OR FIRE RATED PARTITIONS, FLOORS OR CEILING ASSEMBLIES SHALL BE SEALED WITH APPROVED PERMANENT RESILIENT SEALANT. REFER TO IBC 2018 FOR REQUIREMENTS FOR OPENINGS IN FIRE RATED WALLS. FOR OPENINGS LESS THAN 16 SQUARE INCHES, THE SPACE BETWEEN THE WALL AND ALLOWED PENETRATIONS MUST BE SEALED TO PREVENT THE MOVEMENT OF HOT FLAME OR GASES. ELECTRICAL DEVICES, RECESSED CABINETS, ETC. SHALL BE SEALED, LINED, INSULATED OR OTHERWISE TREATED TO MAINTAIN THE INTEGRITY OF THE ASSEMBLY. SEE PENETRATION DETAILS.

12. DRAWINGS HAVE BEEN DETAILED IN COMPLIANCE WITH U.L. LISTING REQUIREMENTS AND ICBO REPORTS FOR THE MATERIALS SPECIFIED. IF AN ALTERNATE OR SUBSTITUTED MATERIAL IS ACCEPTED AS AN EQUAL BY THE GENERAL CONTRACTOR, HE/SHE WILL ASSUME THE RESPONSIBILITY FOR WHATEVER CONSTRUCTION MODIFICATION AND/OR ADDITIONAL COSTS ARE REQUIRED

13. ALL TRASH SHALL BE REMOVED DAILY. BUILDING MATERIALS MAY NOT BE STORED IN THE CORRIDORS AT ANY TIME. BLOCKAGE OF ANY REQUIRED EXIT IS PROHIBITED.

14. THE CONTRACTOR SHALL VERIFY SIZES AND LOCATIONS OF WATER AND DRAIN INSTALLATIONS AND OTHER REQUIRED SERVICES WITH EQUIPMENT MANUFACTURERS.

15. ABBREVIATIONS THROUGHOUT THE PLAN ARE THOSE IN COMMON USE. THE ARCHITECT SHALL DEFINE THE INTENT OF ANY IN QUESTION.

16. INTERIOR FINISHES SHALL CONFORM TO THE REQUIREMENTS OF 2018 I.B.C.

17. CONTRACTOR SHALL REFER TO THE PROJECT MANUAL FOR A COMPLETE LIST OF GENERAL CONDITIONS, SPECIAL CONDITIONS AND OTHER NOTES.

18. INSTALL METAL CORNER BEADS AT ALL EXPOSED WALLBOARD EDGES. INSTALL CASING BEADS WHEREVER WALLBOARD, PLASTER, ETC ABUTS A DISSIMILAR FINISH MATERIAL. ALL DOOR SIZES SHOWN ON DOOR SYMBOLS ARE OPENING SIZES. ALLOWANCE FOR THRESHOLDS, ETC. SHOULD BE CONSIDERED. ALL DOORS AND FRAMES SHALL BE REINFORCED WHERE REQUIRED FOR CLOSERS, STOPS AND HARDWARE.

19. ALL WOOD TRIMS, SPACER, FILLER, ETC. THROUGHOUT JOB SHALL BE FIRE RETARDANT PRESSURE-TREATED, AS PER 2018 I.B.C. CONTRACTOR SHALL LOCATE BACKING PLATES BEHIND ALL WALL MOUNTED EQUIPMENT, CASEWORK, WALL MOUNTED DOOR STOPS AND ACCESSORIES TO ENSURE POSITIVE ATTACHMENT TO THE STRUCTURE. SEE RELEVANT DETAILS.

20. ELEVATIONS ARE WITH RESPECT TO FINISH FLOOR ELEVATION. VERIFY FINISH FLOOR HEIGHT.

GENERAL SYMBOL LEGEND

- RIGID INSULATION
- WOOD FRAMING - CONTINUOUS
- WOOD FRAMING - NON-CONTINUOUS
- GYPSUM BOARD
- STEEL (SECTION OR STUD PARTITION)
- GRAVEL
- CONCRETE (SECTION)
- STUCCO OR CONCRETE (ELEVATION)
- PLYWOOD
- FINISH WOOD
- BRICK
- CONCRETE MASONRY UNIT
- EARTH
- ALUMINUM
- BATT INSULATION
- CORNER GUARD
- ACOUSTICAL CEILING TILE
- ASPHALT PAVING
- STONE
- GRID LINE (A)
- KEYED NOTE (1)
- DETAIL REFERENCE (A1 / A4.0)
- BUILDING / WALL SECTION (A1 / A4.0)
- DIRECTION NORTH
- WINDOW TAG (1)
- DOOR TAG (101A)
- ROOM NAME AND NUMBER (NAME 101)
- WALL TYPES (1)

INTERIM LIFE SAFETY MEASURES

Implementation of ILSM is required in or adjacent to all construction areas and throughout buildings with existing LSC deficiencies. ILSM apply to all personnel, including construction workers, must be implemented upon project development, and continuously enforced through project completion. ILSM are intended to provide a level of life safety comparable to that described in chapters 1 through 7, 31 and the applicable occupancy chapters of the LSC. Each ILSM action must be documented through written policies and procedures. Except as stated below, frequencies for inspection, testing, training, and ILSM consist of the following actions:

a. Ensuring exits provide free and unobstructed egress. Personnel shall receive training if alternative exits must be designated. Buildings or areas under construction must maintain escape facilities for construction workers at all times. Means of egress in construction areas must be inspected daily.

b. Ensuring free and unobstructed access to emergency departments/ services and for emergency forces.

c. Ensure fire alarm, detection, and suppression systems are not impaired. A temporary, but equivalent, system shall be provided when any fire system is impaired. Temporary systems must be inspected and tested monthly.

d. Ensuring temporary construction partitions are smoke tight and built of noncombustible or limited combustible materials that will not contribute to the development or spread of fire.

e. Providing additional fire-fighting equipment and use training of personnel.

f. Prohibiting smoking in accordance with MA.1.3.15 and in or adjacent to all construction areas.

g. Developing and enforcing storage, housekeeping, and debris removal practices that reduce the flammable and combustible fire load of the building to the lowest level necessary for daily operations.

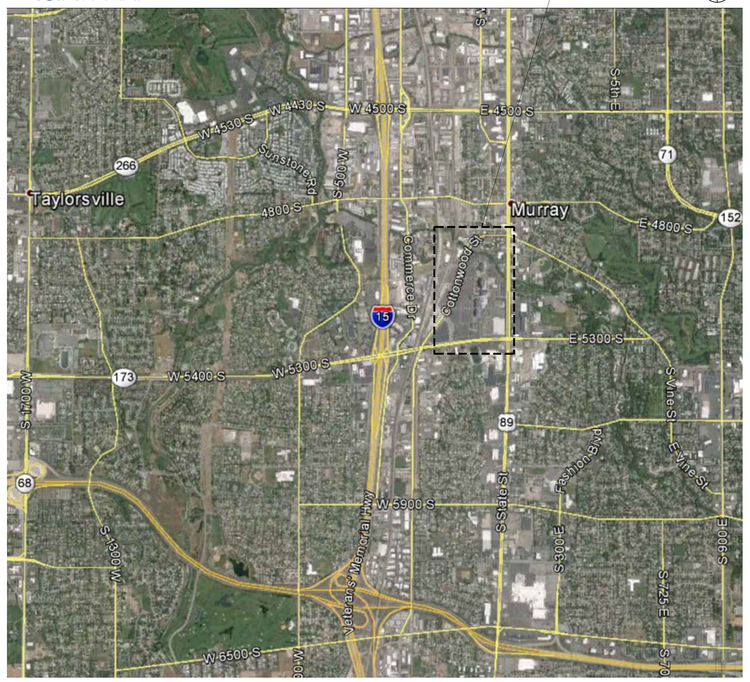
h. Conducting a minimum of two fire drills per shift per quarter.

i. Increasing hazard surveillance of buildings, grounds, and equipment with special attention to excavations, construction areas construction storage, and field offices.

j. Training personnel when structural or compartment features of fire safety are compromised.

k. Conducting organization wide safety education programs to ensure awareness of any LSC deficiencies, construction hazards, and these ILSM.

VICINITY MAP



DRAWING INDEX

NJRA ARCHITECTS
NJRA Architects, Inc.
5272 S. College Drive, Suite104
Murray, Utah 84123
801.364.9259
www.njraarchitects.com

STATE OF UTAH · SELWELL PAUL · 267867 · LICENSED ARCHITECT

Intermountain Healthcare
IMC- Cath Lab 3 Remodel Project
5121 South Cottonwood Street
Murray, UT 84107

NJRA Project # 20230
Construction Documents December 15, 2021

General Information

G002

2018 - I B C REVIEW

Main Hospital

Actual Stories: 15 (New Cath Lab at Level 1 of Building 4)

Project Square feet (BGSF): 974

Occupancy: I-2

Construction Type: 1A

Fireproofing: Yes

Highrise: Yes

Automatically Sprinkled: Yes

Structure: Unbonded Brace Frame

Allowable Area
For I-2 Occupancy & Type I-A Const.: Unlimited sq. ft. per floor (Table 503)
Area increase due to frontage: N/A
Total allowable area per floor: Unlimited sq. ft. (Table 503)

Project Remodel Area: 974 sq. ft.

Allowable Stories
For I-2 Occupancy & Type I-A Const.: Unlimited Stories (Table 503)
Actual Stories: 13 above grade and 2 below grade

Common path of egress travel in exit access areas
For I-2 Occupancy - 75 feet (1014.3)

Exit access travel distance
For I-2 Occupancy - 200 feet (with sprinkler system) (Table 1016.1)

Corridor Width
For 1-2 Occupancy - 96 inches in areas where required for bed movement (1018.2)

Construction Type : Type I-A

Fire resistance rating requirements for building elements (Table 601)
Structural frame - 3 Hours
Exterior Bearing walls - 3 Hours
Interior Non-Bearing walls- 0 Hours
Floor Construction - 2 Hours
Roof Construction - 1-$\frac{1}{2}$ Hours

Sprinkler System
Entire Building is fully equipped with automatic sprinkler system.

Incidental use areas
Waste & linen collection rooms located in I-2 occupancy - 1 hour (IBC Table 509)
Storage rooms larger than 100 sq.ft. and storing combustible material- 1 hour (NFPA 18.3.2.1)
Storage rooms larger than 50 sq.ft and not exceeding 100 sq.ft- provide door closer. (NFPA 18.3.6.3.11)

Occupant Load (Table 1004.1.1)
Inpatient Treatment areas- 240 sq.ft. per person
Total Occupant Load = 5 occupants

Egress width calculation:
Required egress width per IBC sec. 1005.1 = occupant load x 0.3
5 x 0.3= 1.5 inches
Egress width provided = 36 inches

APPLICABLE CODES

International Building Code (IBC)	2018
International Fire Code	2018
International Mechanical Code (IMC)	2018
International Plumbing Code	2018
National Electric Code	2017
NFPA 101 Life Safety Code	2018
ANSI 117.1	2009

LEGEND

- 0-HR SMOKE PARTITION WALL
- 1-HR FIRE RATED SMOKE BARRIER WALL SEPARATING SMOKE ZONES
- 1-HR FIRE RATED WALL
- 2-HR FIRE RATED WALL
- DENOTES PATH OF TRAVEL TO EXIT.
- FEC — FIRE EXTINGUISHER CABINET
- EXIT SIGN
- 2 — OCCUPANT LOAD

NJRA ARCHITECTS
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Murray, Utah 84123
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www.njraarchitects.com

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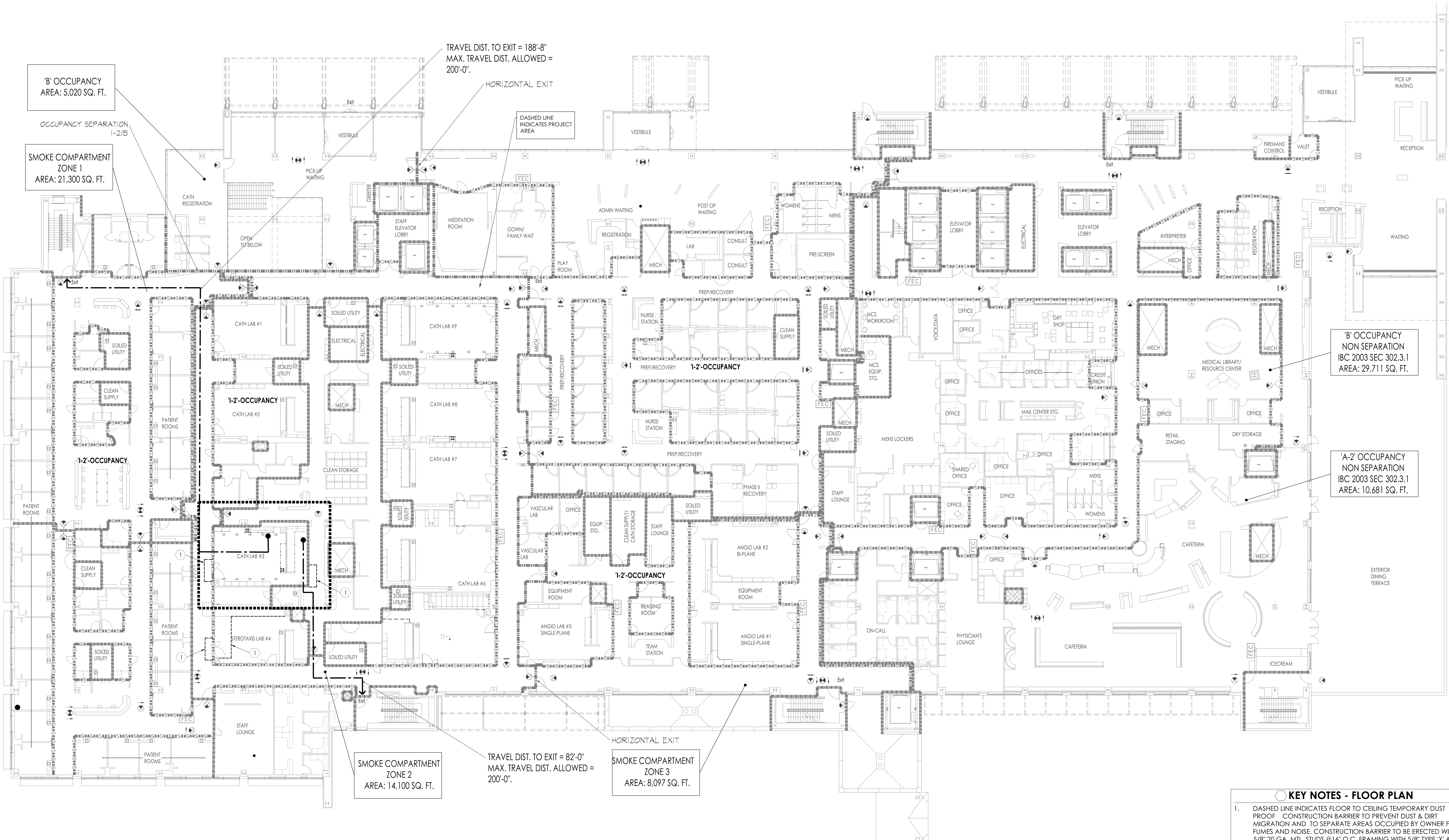

A1 Code Compliance Plan - Building 4 & 5, Level 1
1/16" = 1'-0"

NORTH

KEY NOTES - FLOOR PLAN

1. DASHED LINE INDICATES FLOOR TO CEILING TEMPORARY DUST PROOF CONSTRUCTION BARRIER TO PREVENT DUST & DIRT MIGRATION AND TO SEPARATE AREAS OCCUPIED BY OWNER FROM FUMES AND NOISE. CONSTRUCTION BARRIER TO BE ERECTED WITH 1 5/8" 20 GA. MTL. STUDS @16" O.C. FRAMING WITH 5/8" TYPE 'X' ABUSE RESISTANT GYPSUM BOARD ON BOTH SIDES. TAPE AND SEAL ALL JOINTS AND OPENINGS. SEAL JOINTS AT PERIMETER. PARTITION TO BE EQUIPPED WITH 4'-0" LOCKABLE MAN DOOR WITH STICKY MATS ON BOTH SIDES OF DOOR. COORDINATE WITH OWNER AND FIELD VERIFY FOR EXACT LOCATION OF CONSTRUCTION BARRIER.

Intermountain Healthcare
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Code Compliance Plan

G003

1. Design Criteria

1.1. Governing Building Code ..... 2018 International Building Code (IBC)
A. Risk Category IV

1.2. Earthquake
A. Seismic Design Category ..... D
B. Spectral Response Accelerations
S_S = 1.55 g S_{DS} = 1.035 g
S_1 = 0.529 g S_{D1} = 0.529 g
C. Soil Site Class ..... D
F_a = 1.0 F_v = 1.5
D. Importance Factor, I_e 1.5

2. Structural Steel

2.1. Material:
A. W-Shapes: ASTM A992, (F_y = 50 ksi), except as noted otherwise
B. All Other Shapes and Plates: ASTM A36 (Fy = 36 ksi), except as noted otherwise
C. Round HSS: ASTM A500, Grade C (Fy = 46 ksi)

2.2. Fabrication and construction shall comply with the following Codes and Standards:
A. American Institute of Steel Construction (AISC) 360-16, "Specification for Structural Steel Buildings"
B. AISC 303-16, "Code of Standard Practice for Steel Buildings and Bridges" excluding the following: Section 3.3 (last two sentences of first paragraph), Section 4.4, Section 4.4.1, Section 4.4.2, Section 4.5, and Section 7.13.3
1. The architectural drawings are the prime contract drawings. Consultants' drawings by other disciplines are supplementary to the architectural drawings. The structural drawings shall be used in conjunction with the architectural drawings. Detailing and shop drawing production for structural elements will require information (including dimensions) contained in architectural, structural, and/or other consultants' drawings. Refer to the Special Instructions section of the general notes, below.
C. American Welding Society (AWS) D1.1:2015, "Structural Welding Code – Steel" (specific items do not apply when they conflict with the AISC requirements)

2.3. Structural shapes and plates shall be fabricated from newly rolled (milled) one-piece sections without splices, unless specifically noted otherwise on the structural drawings. Connections for structural steel shall comply with the structural drawings, unless written approval is given by the Structural Engineer.

2.4. Welding:
A. It is recommended the steel erection contractor and steel fabricator contact the Quality Assurance Agency prior to beginning any welds. A program of joint preparation and welding procedures should be worked out between the two parties before the welding is started so that correct welds will be made from the beginning.
B. Certification of Welders: All shop and field welding shall be executed by AWS certified welders who have been specifically certified for the process of welding being performed. The welder's certification will be considered as being current unless the welder is not engaged in the process of welding being performed for a period exceeding six months or there is a specific reason to question a welder's ability as required by AWS. Certification and records must comply with AWS Standards. Certification and appropriate records must be provided to the Architect prior to beginning work.
C. Electrodes: E-70 XX or as noted otherwise. E60 XX may be used for welding steel floor and roof decks.
D. Minimum Welds: All intersecting steel shapes that are not bolted shall be connected by a fillet weld all around, unless noted otherwise. Fillet weld sizes that are not shown shall be 1/16" less than the thinnest of the connected parts for thicknesses 1/4" and larger. Fillet welds on plates less than 1/4" shall be of the same size as the thinnest of the connected parts.

3. Miscellaneous

3.1. Post-Installed Anchors in Concrete
A. Anchorage to hardened concrete shall include all mechanical and adhesive anchors and epoxy doweled reinforcing bars of size, quantity, spacing, and embedment as shown on the drawings. Additional anchors shall not be used without approval from the Engineer prior to installation.
B. Special inspection is required during the installation of all post-installed anchors. Refer to applicable code evaluation reports and the Quality Assurance and Statement of Special Inspections sections of the General Structural Notes.
C. Anchorage to Concrete:
1. All post-installed anchors into hardened concrete shall be selected from the following pre-approved products, unless noted otherwise:

Steel Screw Anchor	Evaluation Report
Hilti Kwik HUS-EZ	ICC ESR-3027
DeWalt Screw-Bolt+	ICC ESR-3889
Simpson Titen HD	ICC ESR-2713

Steel Expansion/Wedge Anchor	Evaluation Report
Hilti Kwik Bolt TZ2	ICC ESR-4266
DeWalt Power-Stud+ SD2	ICC ESR-2502
Simpson Strong-Bolt 2	ICC ESR-3037

Adhesive Anchor System	Evaluation Report
Hilti HIT-HY 200	ICC ESR-3187
Hilti HIT-RE 500 V3	ICC ESR-3814
DeWalt AC200+	ICC ESR-4027
DeWalt Pure 110+	ICC ESR-3298
Simpson SET-3G	ICC ESR-4057

2. Adhesive anchors shall be installed into concrete having a minimum age of 21 days. For installations sooner than 21 days, consult the adhesive manufacturer.
D. Alternate anchors or adhesives are permitted with approval of the Engineer. The Contractor shall submit the proposed anchor product data and code evaluation report demonstrating the anchor is equivalent to or exceeds the capacity of the specified anchor.
E. Installation of adhesive anchors horizontally or upwardly inclined to support sustained tension loads shall be performed by personnel certified by an applicable certification program. Certification shall include written and performance tests in accordance with the ACI/CRSI Adhesive Anchor Installer Certification program, or equivalent. Proof of current certification shall be submitted to the Engineer for approval prior to commencement of installation.
F. Anchors shall be installed according to the Manufacturer's Printed Installation Instructions and applicable code evaluation reports including:
1. Hole diameter, depth, and cleaning procedure
2. Adhesive mixing, preparation, and placement
3. Installation torque
G. Locate all existing reinforcement and embedded items prior to drilling into concrete elements. Do not damage rebar or embeds while drilling or installing anchors.
H. Grout all defective or abandoned holes with non-shrink grout or an injectable epoxy adhesive matching the surrounding concrete compressive strength. Consult the Architect for additional requirements at architecturally exposed concrete.
I. Carbon steel anchors are limited to use in dry, interior locations.
J. Holes for post-installed anchors may not be core drilled unless specifically allowed by the manufacturer's installation instructions and the code evaluation report.

3.2. Existing conditions
A. Existing conditions:
1. The contract structural drawings represent the reconfigured structure and do not indicate the method or means of construction. The Contractor shall supervise and direct the work and shall be solely responsible for all construction means, methods, procedures, techniques, and sequence.
2. The Contractor is responsible for being knowledgeable on information presented in available new or existing drawings and shall field verify all relevant information. Information available in existing drawings may be incomplete. Contractor shall familiarize themselves with information available in the existing and new drawings, and shall field verify all pertinent information.
3. Contractor shall field verify all existing conditions prior to performing any work, including but not limited to: bidding and estimating, shoring, detailing, fabricating, manufacturing, erecting, or installing any given structural element indicated in the contract drawings.
4. Information on existing conditions provided in the contract drawings are based on information gathered from existing drawings and during limited site observations. If conditions shown do not match existing conditions, contact architect/engineer prior to performing any work. Do not proceed until instructions in writing are provided by the architect/engineer.
5. Dimensional information provided in the contract drawings on existing conditions are for general information and reference purposes only,and shall not be used for detailing and construction.
6. Contractor shall provide dust, odor, and noise protection, and safety measures as necessary to protect the existing structure, vehicles, building interior, building patrons and other persons for the duration of demolition and construction operations.
7. Contractor shall safely shore existing construction to allow the installation of new work, see shoring and stabilization section for additional information. Selected demolition sequencing and shoring methods used shall be the responsibility of the Contractor and their engineer.
8. Contractor shall refer to existing drawings of the existing facility to verify:
a. Structural member sizes and locations, slab thickness
b. Location of previous additions, alterations, or repairs performed at the facility
c. Location of expansion joint systems
d. Location of interior architectural items
9. Demolition, cutting, drilling, etc. work shall be performed as to not damage existing structure that is to remain and shall not jeopardize the structural integrity of the existing building. If any architectural, structural, or MEP members not designated for removal interfere with the new work, the Owner, Architect, and Engineer shall be notified immediately and approval obtained prior to their removal.
10. Contractor shall repair all damage caused during construction or demolition. All damage shall be repaired and restored with similar materials and workmanship to levels acceptable to the Owner.

4. Special Instructions

4.1. The project specifications are not superseded by the General Structural Notes but are intended to be complementary to them. Consult the specifications for additional requirements in each section. Notes and specific details on the drawings shall take precedence over General Structural Notes and typical details.

4.2. The architectural drawings are the prime contract drawings. Consultant drawings by other disciplines are supplementary to the architectural drawings. All omissions or conflicts, including dimensions, between the various elements of the consultants' drawings and/or specifications shall be brought to the attention of the Architect before proceeding with any work involved. In case of conflict, follow the most stringent requirement as directed by the Architect without additional cost to the Owner. Any work done by the Contractor after discovery of such discrepancy shall be done at the Contractor's risk.

4.3. The structural drawings shall be used in conjunction with the architectural drawings. Primary structural elements and overall structural layout are indicated within the structural plans and details. Some secondary elements, architectural layouts, alcoves, elevations, slopes, depressions, curbs, mechanical equipment and electrical equipment, are not indicated within the structural drawings. Detailing and shop drawing production for structural elements will require information (including dimensions) contained in the architectural, structural and/or other consultants' drawings.

4.4. All expansion joints (E.J.) shown in the structural drawings shall be considered seismic separation joints, unless noted otherwise. The width dimensioned shall be provided with a tolerance of (+1"/-0") regardless of the tolerances stated in material reference standards.

4.5. Submittals: A copy of all shop drawings that have been submitted for review must be kept at the construction site for reference. These drawings must bear the appropriate review stamps. The shop drawing review shall not relieve the Contractor of the responsibility of completing the project according to the contract documents. The General Contractor shall review and mark all shop drawings prior to submitting them to the Architect for review. Shop Drawings made from reproductions of (these) contract drawings will be rejected.

4.6. Project Coordination: It shall be the responsibility of the General Contractor to coordinate with all trades any and all items that are to be integrated into the structural system. Openings or penetrations through, or attachments to the structural system that are not indicated on these drawings shall be the responsibility of the General Contractor and shall be coordinated with the Architect/Engineers. The order of construction is the responsibility of the General Contractor. It is the Contractor's obligation to provide all items necessary for the chosen procedure.

4.7. Contractor shall field verify all dimensions, and conditions. If the contract drawings do not represent actual conditions, Contractor shall notify Architect/Engineer prior to fabrication or construction within that area.

4.8. Notice of Copyright: The structural drawings, plans, schedules, notes and details are hereby copyrighted by Reaveley Engineers. Submission or distribution of documents to meet official regulatory requirements or for similar purposes in connection with the project is not to be construed as publication in derogation of Reaveley Engineers' reserved rights. The documents defining the structure are instruments of service prepared by Reaveley Engineers for one use only. Furthermore, these documents shall not be reproduced, or copied, in whole or in part by the Contractor or subcontractors for preparation of shop drawings or other submittals.

5. Quality Assurance

5.1. Quality Assurance Agency Requirements:
A. The Owner shall engage a qualified Quality Assurance Agency (QAA) to provide all special inspection and quality assurance testing for the project. The QAA shall provide all information necessary for the building official to determine that the agency meets the applicable requirements.
1. The QAA shall be objective, competent and independent from the Contractor responsible for the work being inspected. The agency shall disclose to the building official and the registered design professional in responsible charge possible conflicts of interest so that objectivity can be confirmed.
2. The QAA shall have adequate equipment to perform required tests. The equipment shall be periodically calibrated.
3. The QAA shall employ experienced personnel educated in conducting, supervising and evaluating tests and special inspections. Experience or training shall be considered relevant where the documented experience or training is related in complexity to the same type of special inspection or testing activities for projects of similar complexity and material qualities.
4. The QAA shall send copies of all inspection and testing reports to the building official, Owner, Architect, Engineer and Contractor. Reports shall indicate that the work inspected was or was not completed in conformance to the approved construction documents. Discrepancies shall be brought to the immediate attention of the Contractor for correction. If they are not corrected, the discrepancies shall be brought to the attention of the, Architect and Engineer.
5. The QAA shall submit a final report documenting required special inspections and tests, and correction of any discrepancies noted in the inspections or tests. The final report shall be distributed to the building official, Owner, Architect and Engineer in a timely manner prior to the completion of the project.

5.2. Contractor Responsibilities:
A. The Contractor shall submit a written statement of responsibility to the building official and the Owner or the owner's authorized agent prior to the commencement of work on the systems or components listed in the statement of special inspections. The Contractor's statement of responsibility shall contain acknowledgement or awareness of the special requirements contained in the statement of special inspections.
B. Notification of QAA: The Contractor shall notify the QAA in a timely manner so that inspection and testing may be performed as outlined in the statement of special inspections.

5.3. Structural Observations by the Engineer of Record.
A. The Engineer of Record will perform structural observations at critical phases of the project. Observations will be made on a periodic basis throughout the construction of the structural system. Copies of the Engineer's report will be distributed to the Architect, Contractor, Owner, and building official.
B. Observation visits to the site by the Engineer's field representatives shall not be construed as inspection or approval of construction.

6. Statement of Special Inspections

6.1. The following materials, systems and components require special inspection or testing per Chapter 17 of the International Building Code (IBC).

6.2. For items requiring continuous inspection, a special inspector must be present onsite during the performance of that task. In most cases, periodic inspections/tests shall be performed prior to commencing the task, intermittently during the task, and at the completion of the task. For tasks labeled as "Observe," the inspector shall observe these items on a random basis. Tasks labeled as "Perform" shall be performed for each member, joint or connection.

Structural Steel per IBC Section 1705.2.1, 1705.12.1 & 1705.13.1

Item	Frequency	Detailed Instructions
Prior to Welding (Table N5.4-1, AISC 360-16):		
Welder qualification records	Observe	Verify welder qualification records and continuity records
Verify welding procedures (WPS) and consumable certificates	Perform	
Material identification	Observe	Verify type and grade of material.
Welder identification	Observe	Confirm a system is in place by which a welder who has welded a joint or member can be identified.
Access holes	Observe	Verify configuration and finish.
Fit-up of fillet welds	Observe	Verify dimensions, cleanliness and tacking.
During Welding (Table N5.4-2, AISC 360-16):		
Use of qualified welders	Observe	Verify that welders are appropriately qualified.
Control and handling of welding consumables	Observe	Verify packaging and exposure control.
Cracked tack welds	Observe	Verify that welding does not occur over cracked tack welds.
Environmental conditions	Observe	Verify wind speed is within limits as well as precipitation and temperature.
WPS followed	Observe	Verify items such as settings on welding equipment, travel speed, welding materials, shielding gas type/flow rate, preheat applied, interpass temperature maintained, and proper position.
Welding techniques	Observe	Verify interpass and final cleaning, each pass is within profile limitations, and quality of each pass.
After Welding (Table N5.4-3, AISC 360-16):		
Welds cleaned	Observe	Verify that welds have been properly cleaned.
Size, length, and location of welds	Perform	Verify the size, length and location of welds.
Welds meet visual acceptance criteria	Perform	Verify that welds meet crack prohibition, base metal fusion, profile, size, undercut, and porosity provisions.
Arc strikes	Perform	Verify that arc strikes do not exist outside the permanent weld areas.
k-area	Perform	When welding of doubler plates, continuity plates or stiffeners has been performed in the k-area, visually inspect the web k-area for cracks.
Backing & weld tabs removed	Perform	If required on the approved construction documents, verify that back and weld tabs are removed.
Repair activities	Perform	Verify that repair activities are performed in accordance with AISC 360 and AWS D1.1.
Documentation	Perform	Document the acceptance or rejection of the welded joint or member.
Prohibited welds	Observe	Verify no prohibited welds have been added without approval of the EOR.

Concrete Construction per IBC Sections 1705.3 & 1705.12

Item	Frequency	Detailed Instructions
Post-installed adhesive anchors installed in horizontally or upwardly inclined orientations to resist sustained tension loads	Continuous	All post-installed anchors/dowels shall be specially inspected as required by the approved ICC-ES report. Horizontally or upwardly inclined anchors that resist sustained tension loads require continuous inspection and approved installers.
Post-installed mechanical anchors and adhesive anchors not defined above	Periodic	

NJRA Architects, Inc.
5272 S. College Drive, Suite104
Murray, Utah 84123
801.364.9259
www.njraarchitects.com

PROFESSIONAL STRUCTURAL ENGINEER No. 324725 KDAMS STATE OF UTAH

December 13, 2021

REAVELEY Engineers
675 East 500 South, Suite 400
Salt Lake City, UT 84102
P 801 486 3883
F 801 485 0911
www.reaveley.com

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STRUCTURAL GENERAL NOTES

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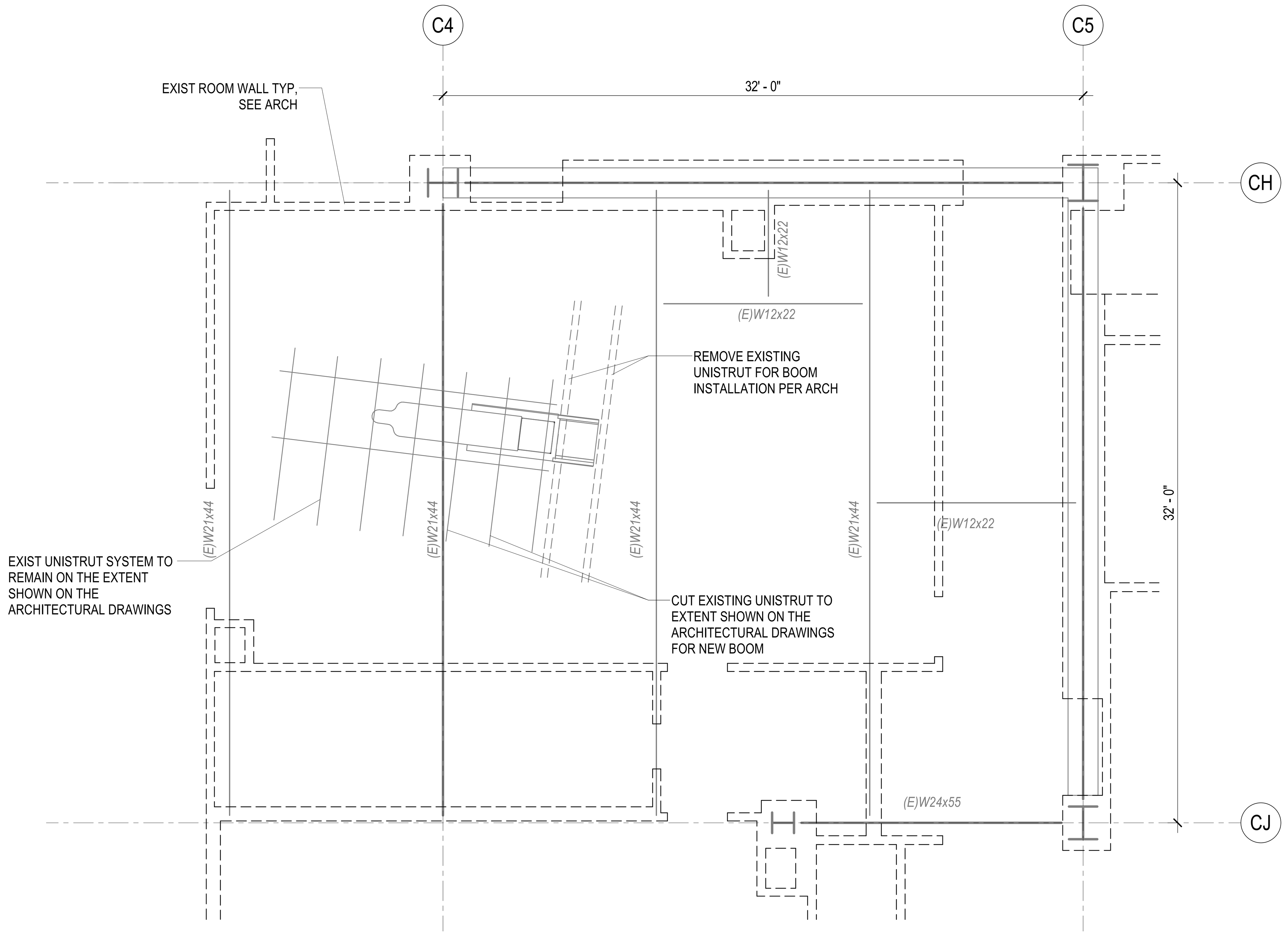
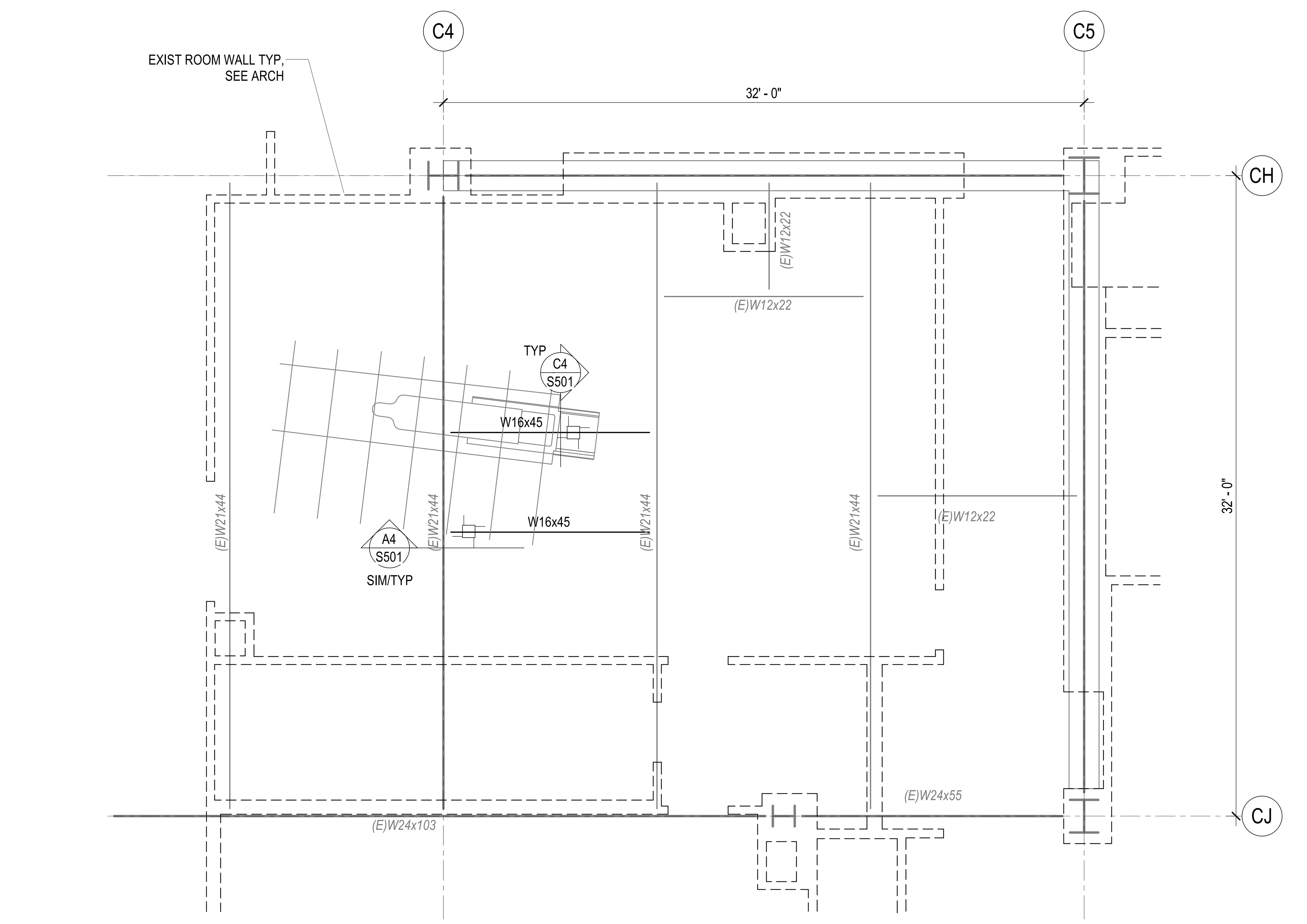


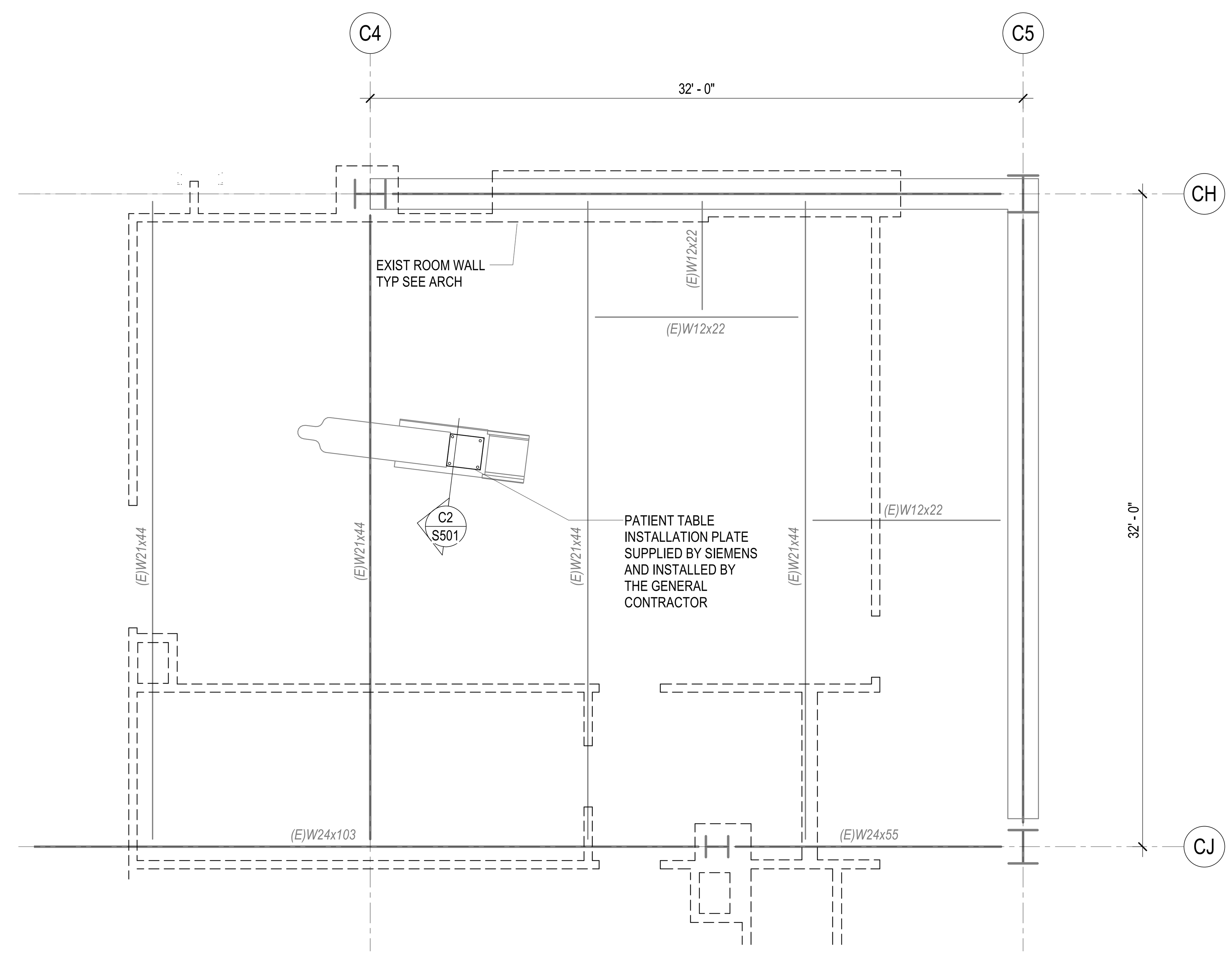
C1 / S101 PARTIAL MEDICAL UNISTRUT AND FRAMING PLAN - LEVEL 2 - DEMOLITION

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



A1 / S101 PARTIAL MEDICAL EQUIPMENT AND FRAMING PLAN - LEVEL 2 - NEW WORK

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



A3 / S101 LEVEL 1 MEDICAL EQUIPMENT AND FRAMING PLAN

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

PLAN NOTES

1. ONCE THE CEILING IS PARTIALLY REMOVED TO INSTALL THE NEW MEDICAL BOOM, CONTACT ENGINEER WITH 72 HOURS NOTICE TO EXAMINE EXISTING UNISTRUT SYSTEM AND CONDITIONS.

2. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO DETAILING, FABRICATING, ERECTING OR INSTALLING ANY STRUCTURAL ELEMENT. ALL DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGN TEAM IN A TIMELY MANNER SUCH THAT WORK WILL NOT BE DELAYED.

3. VERIFY EQUIPMENT SUPPORT DIMENSIONS WITH MEICAL EQUIPMENT VENDORS, EXISTING BOOM SUPPORTS AND ARCHITECTURAL PRIOR TO FABRICATION.

PLAN LEGEND

- EXISTING STEEL COLUMN - WIDE FLANGE
- STEEL BEAM OR GIRDER
- STEEL JOIST OR PURLIN
- EXISTING STEEL BEAM OR GIRDER
- EXISTING STEEL JOIST OR PURLIN

MEDICAL EQUIPMENT LEGEND

- EQUIPMENT SUPPORT

NJRA ARCHITECTS
NJRA Architects, Inc.
5272 S. College Drive, Suite104
Murray, Utah 84123
801.364.9259
www.njraarchitects.com

PROFESSIONAL STRUCTURAL ENGINEER ... ADAMS, STATE OF UTAH

December 13, 2021

REAVELEY Engineers
675 East 500 South, Suite 400
Salt Lake City, UT 84102
P 801.486.3883
F 801.485.0911
www.reaveley.com

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MEDICAL EQUIPMENT SUPPORT FRAMING PLANS

S101

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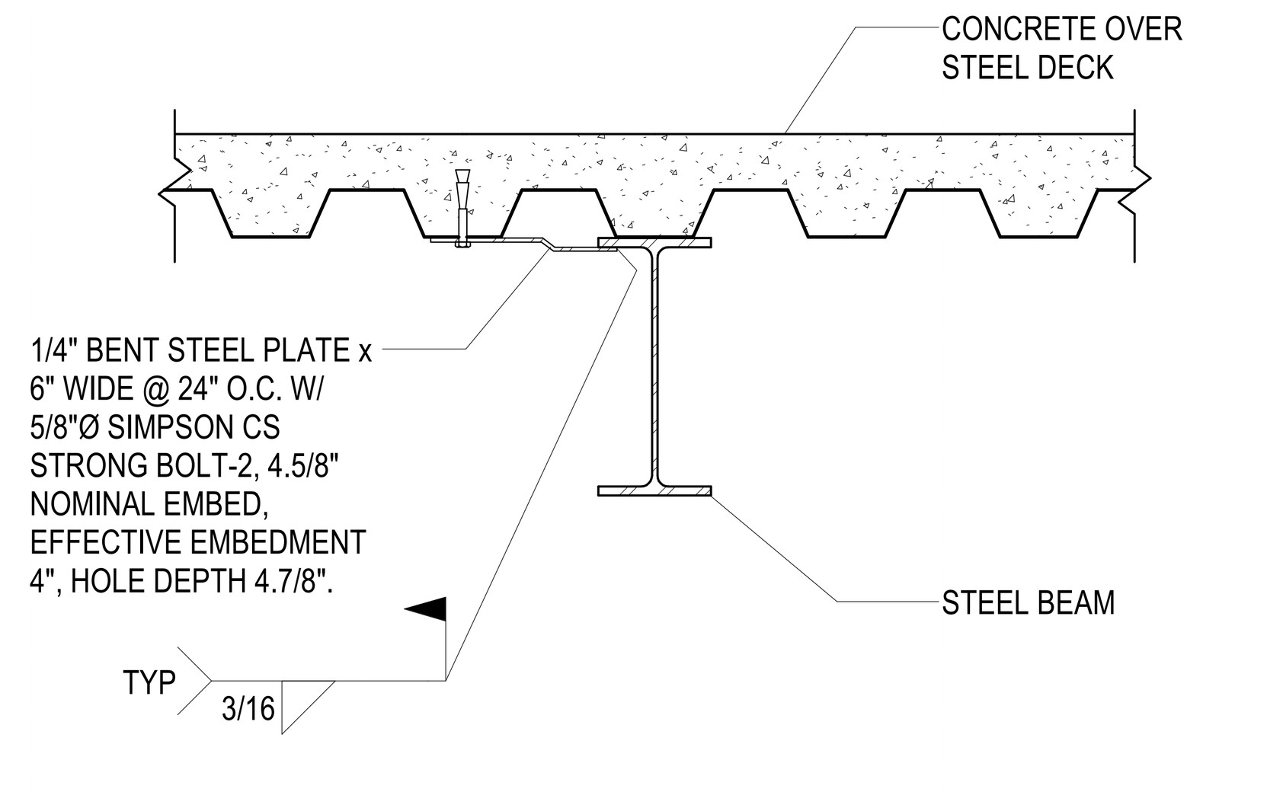
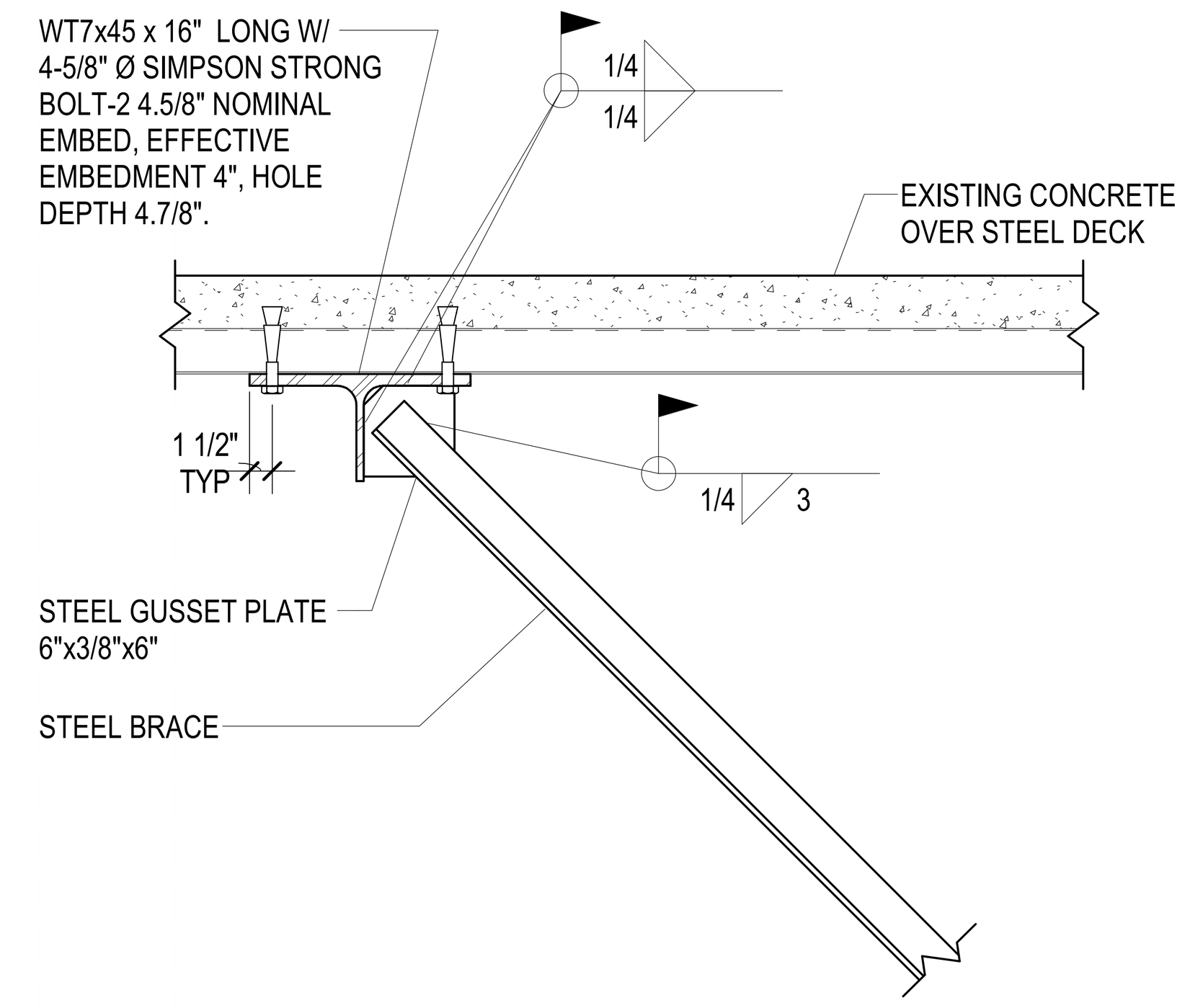


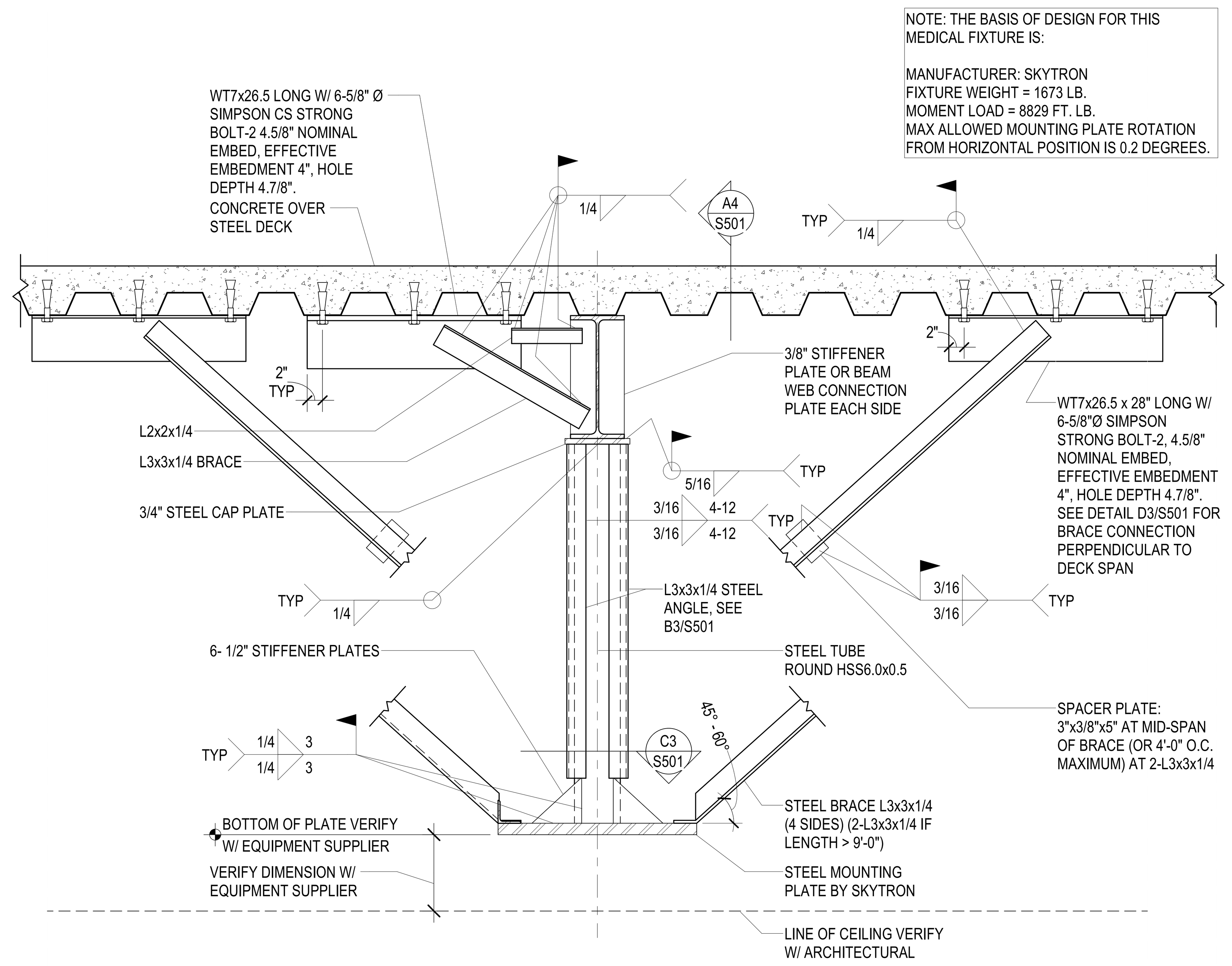
D2 / S501 — TYPICAL EQUIPMENT SUPPORT BEAM CONNECTION TO FLOOR DECK

NO SCALE



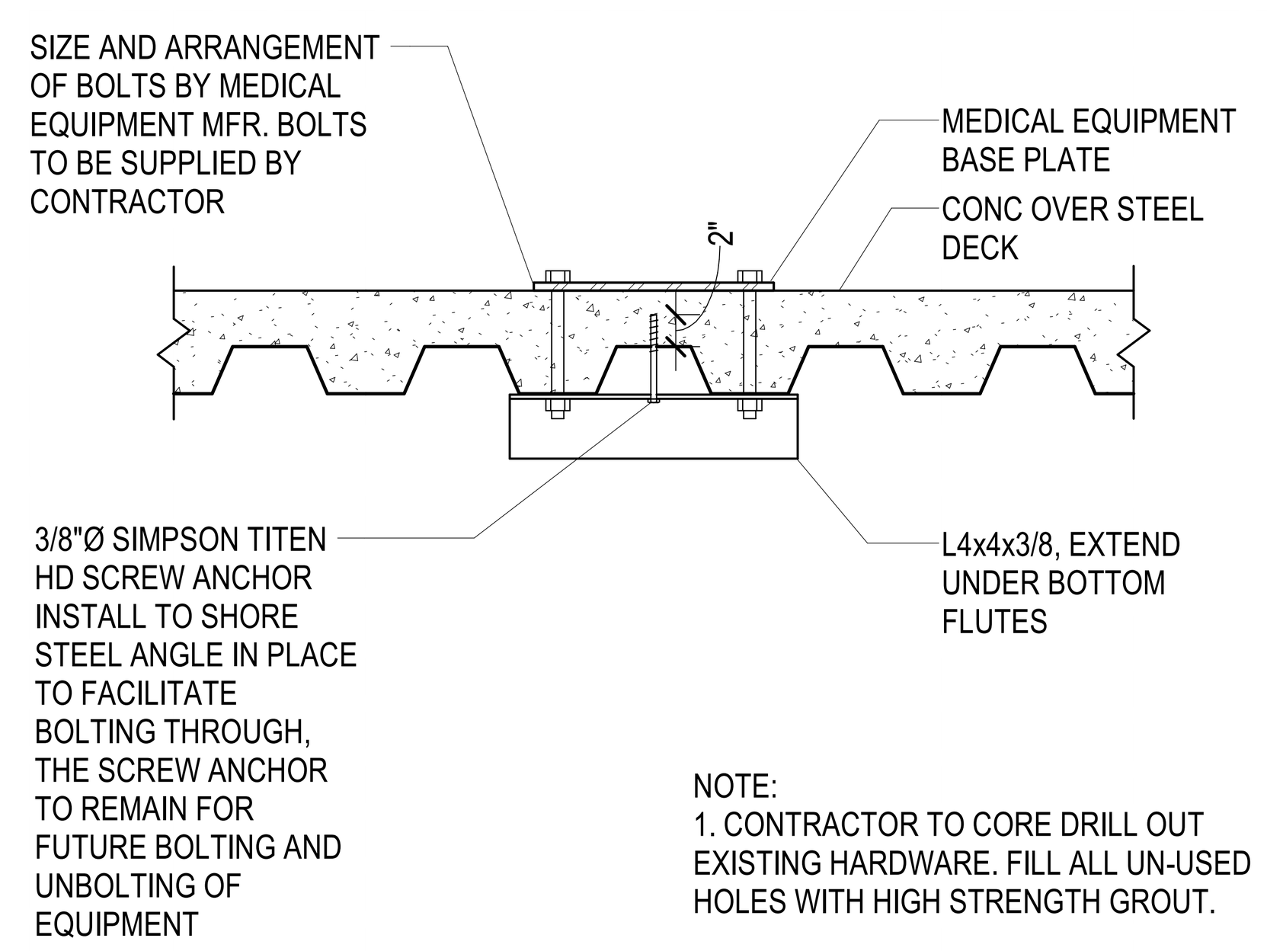
D3 / S501 — BRACE CONNECTION TO WT (PERPENDICULAR)

NO SCALE



C4 / S501 — SKYTRON MEDICAL EQUIPMENT MOUNT SUPPORT DETAIL

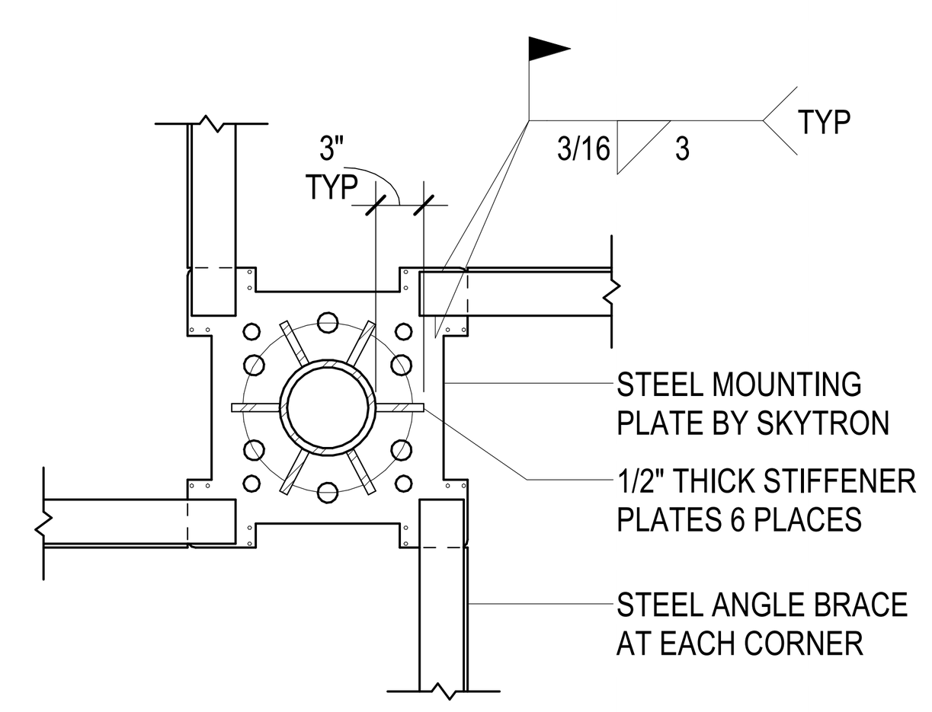
NO SCALE



NOTE:
1. CONTRACTOR TO CORE DRILL OUT EXISTING HARDWARE. FILL ALL UN-USED HOLES WITH HIGH STRENGTH GROUT.
2. ADD EPOXY TO OVER-SIZED HOLES AS NEEDED FOR A TIGHT FIT

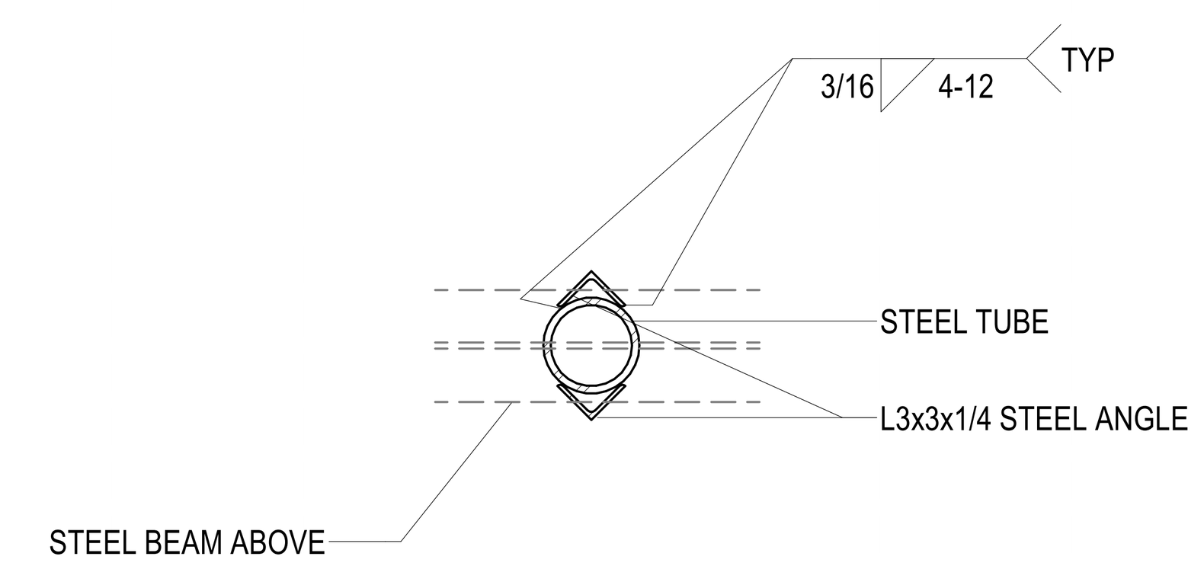
C2 / S501 — MEDICAL EQUIPMENT ANCHORAGE TO CONCRETE OVER STEEL DECK

NO SCALE



C3 / S501 — SKYTRON BOOM MOUNTING PLATE

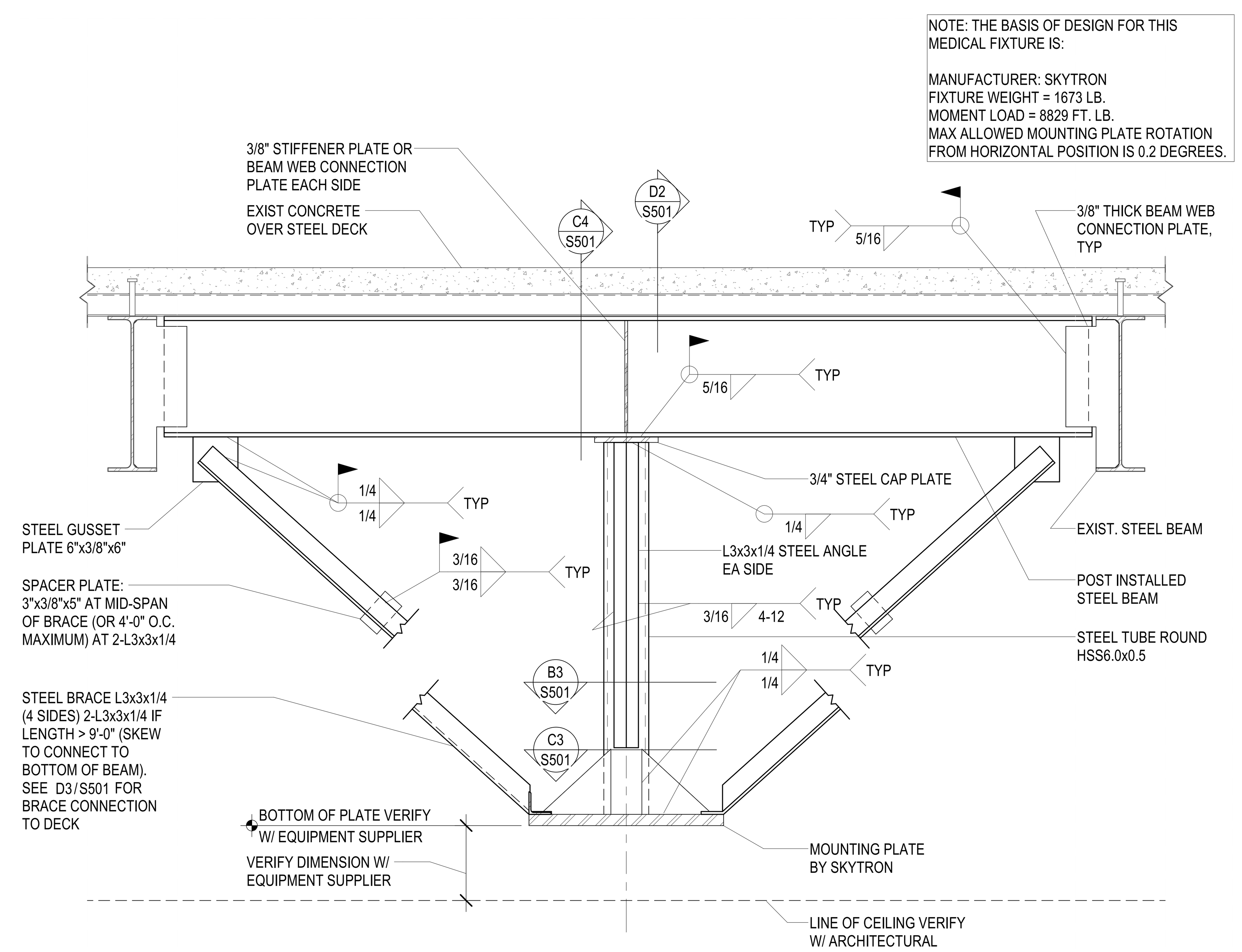
NO SCALE



NOTE: STEEL ANGLES NOT REQUIRED FOR X-RAY SHIELD BOOM

B3 / S501 — TUBE HANGER COLUMN DETAIL

NO SCALE



NOTE: REPAIR FIREPROOFING WHERE DAMAGED DURING CONSTRUCTION

A4 / S501 — SKYTRON MEDICAL EQUIPMENT MOUNT SUPPORT DETAIL

NO SCALE

NOTE: ALL FLOOR POST INSTALLED ANCHORS ARE PROVIDED AND INSTALLED BY THE CONTRACTOR

NJRA ARCHITECTS
NJRA Architects, Inc.
5272 S. College Drive, Suite104
Murray, Utah 84123
801.364.9259
www.njraarchitects.com

December 21, 2021

REAVELEY Engineers
675 East 500 South, Suite 400
Salt Lake City, UT 84102
P 801 486 3883
F 801 485 0911
www.reaveley.com

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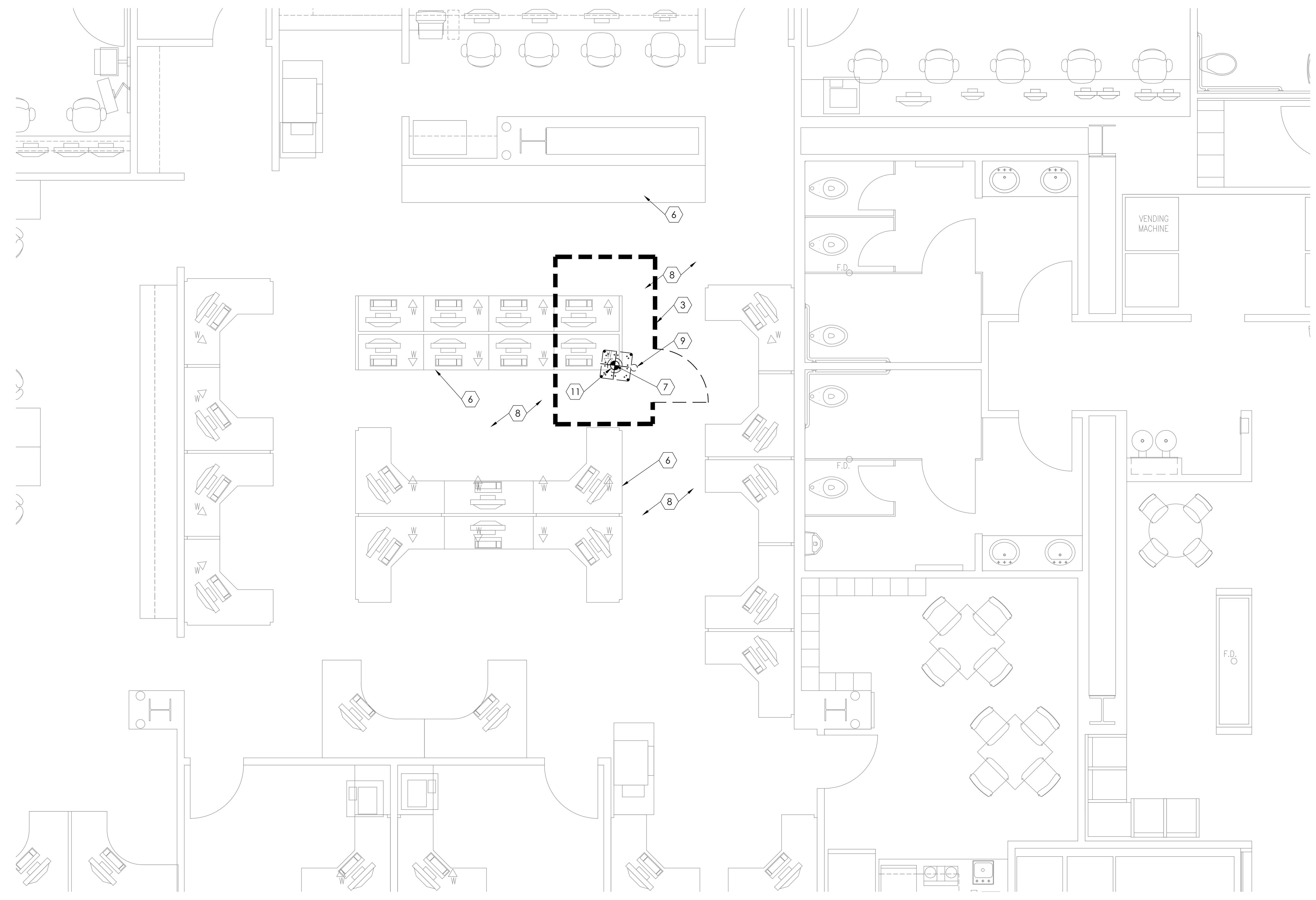
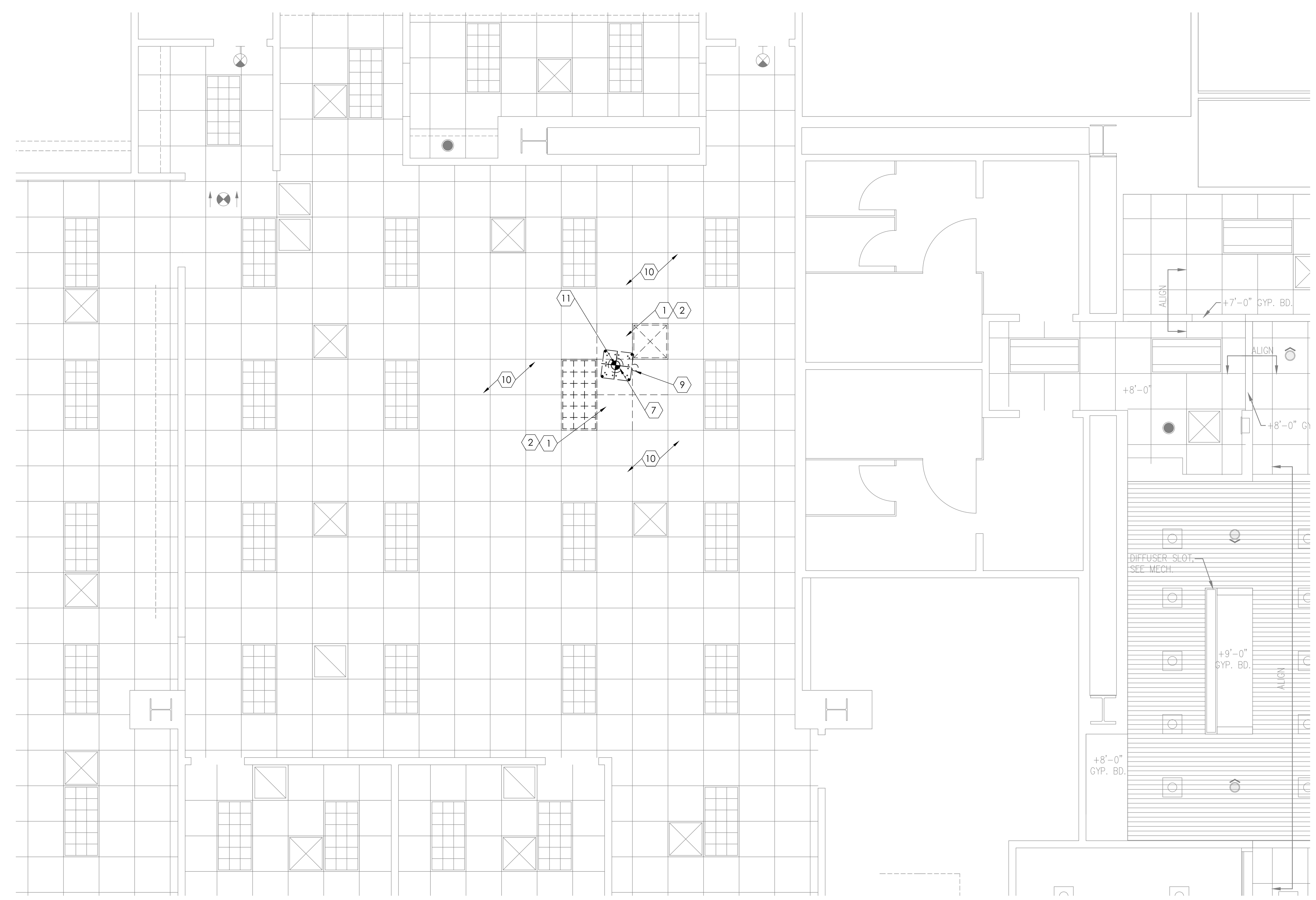
MEDICAL EQUIPMENT SUPPORT DETAILS

S501



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

NORTH



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

NORTH

KEY NOTES - FLOOR PLAN

1. DASHED LINE INDICATES REMOVAL OF PORTIONS OF EXISTING GYPSUM BOARD CEILING, LAY IN CEILING, GRID SYSTEM, LIGHTING, DIFFUSERS ETC. FOR INSTALLATION OF THE NEW STRUCTURAL SUPPORT AT THE BOTTOM OF THE FLOOR DECK ABOVE FOR THE NEW CATH LAB EQUIPMENT AS REQUIRED. GENERAL CONTRACTOR SHALL COORDINATE WORK WITH SIEMENS TO DETERMINE THE EXTENT OF CEILING REMOVAL. SEE STRUCTURAL MECHANICAL, ELECTRICAL DRAWINGS FORE MORE INFORMATION.
2. RE-INSTALL REMOVED LAY IN CEILING TO ORIGINAL CONDITION AFTER WORK IS COMPLETED ABOVE CEILING. PATCH, REPAIR, REFINISH AND REPAINT TO MATCH WITH ADJACENT EXISTING. REMOVE AND REINSTALL ELECTRICAL AND MECHANICAL ITEMS ALSO AS REQUIRED IN ORDER TO COMPLETE WORK IN THIS AREA TO ORIGINAL CONDITION.
3. DASHED LINE INDICATES FLOOR TO CEILING TEMPORARY DUST PROOF CONSTRUCTION BARRIER TO PREVENT DUST & DIRT MIGRATION AND TO SEPARATE AREAS OCCUPIED BY OWNER FROM FUMES AND NOISE. CONSTRUCTION BARRIER TO BE ERECTED WITH 3 5/8" 20 GA. MTL. STUDS @16" O.C. FRAMING WITH 5/8" TYPE 'X' ABUSE RESISTANT GYPSUM BOARD ON BOTH SIDES. TAPE AND SEAL ALL JOINTS AND OPENINGS. SEAL JOINTS AT PERIMETER. PARTITION TO BE EQUIPPED WITH 4'-0" LOCKABLE MAN DOOR WITH STICKY MATS ON BOTH SIDES OF DOOR. COORDINATE WITH OWNER AND FIELD VERIFY FOR EXACT LOCATION OF CONSTRUCTION BARRIER.EXISTING GYPSUM BOARD CEILING ALONG WITH EXISTING CEILING LIGHTS, MECHANICAL DIFFUSERS ETC. IN THIS AREA TO REMAIN. PROTECT DURING CONSTRUCTION. SEE ELECTRICAL AND MECHANICAL DRAWINGS FOR MORE INFORMATION.
4. EXISTING DOORS TO REMAIN. PROTECT DURING CONSTRUCTION.
5. NOT USED.
6. EXISTING CABINET, COUNTERTOP, PLUMBING FIXTURE, ETC. TO REMAIN. PROTECT DURING CONSTRUCTION.
7. EXISTING 4" DIA. HOLE ON FLOOR TO REMAIN AND RE-USED FOR THE NEW CATH LAB EQUIPMENT BY SIEMENS. THIS IS IDENTIFIED AS THE ORIENTATION POINT FOR THE PATIENT TABLE. FIELD VERIFY TO ESTABLISH ACTUAL LOCATION AND EXISTING CONDITIONS. SEE STRUCTURAL DRAWINGS FOR DETAILS ON ANCHORAGE. ALL EXPOSED STEEL TO BE SPRAY APPLIED FIRE PROOFED TO RETAIN FIRE RATINGS OF THE ADJACENT EXISTING AFTER ALL WORK IS COMPLETED.
8. EXISTING FLOORING TO REMAIN. PROTECT DURING CONSTRUCTION.
9. EXISTING 4" DIA. HOLE & CONDUIT TO REMAIN AND CONTINUE TO FUNCTION WITH THE NEW EQUIPMENT REPLACED BY SIEMENS, IDENTIFIED AS "B10" ON SIEMENS PLANS. FIELD VERIFY EXACT LOCATION.
10. EXISTING CEILING, LIGHTING, MECHANICAL DIFFUSER ETC TO REMAIN. PROTECT DURING CONSTRUCTION.
11. DASHED LINES INDICATE CATH LAB EQUIPMENT ANCHOR PLATES TO BE INSTALLED UNDER THE FLOOR DECK ABOVE THE CEILING. FIELD VERIFY EXISTING CONDITIONS BEFORE PROCEEDING WITH THE WORK. RELOCATE AND OR RE-ROUTE EXISTING HVAC DUCT DIFFUSER, PLUMBING PIPING, ELECTRICAL ETC. AS REQUIRED TO COMPLETE THE WORK. NOTE THAT REMOVAL OF THE EXISTING ANCHOR THROUGH BOLT AND INSTALLATION OF NEW ANCHORS THROUGH BOLT IS RESPONSIBILITY OF THE GENERAL CONTRACTOR. COORDINATE WITH OWNERS VENDOR SIEMENS FOR MORE INFORMATION.

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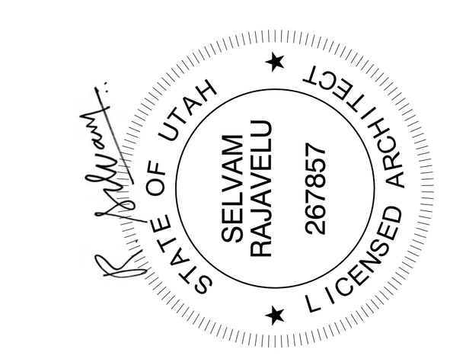
NJRA Architects, Inc.
5272 S. College Drive, Suite104
Murray, Utah 84123
801.364.9259
www.njraarchitects.com



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Murray, UT 84107

NJRA Project # 20230
Construction Documents December 15, 2021

Demolition Plan- Lower Level 1

A100

32. REMOVE EXISTING PLASTIC LAMINATE DOUBLE TALL CABINETS HERE AND MODIFY SALVAGE FOR RE-INSTALLATION. SEE NEW FLOOR PLAN FOR NEW LOCATION OF SINGLE TALL CABINET. ALSO SEE NEW FLOOR PLAN FOR ISOLATION PANEL AND WALL FRAMING REQUIRED AT OLD CABINET LOCATION.

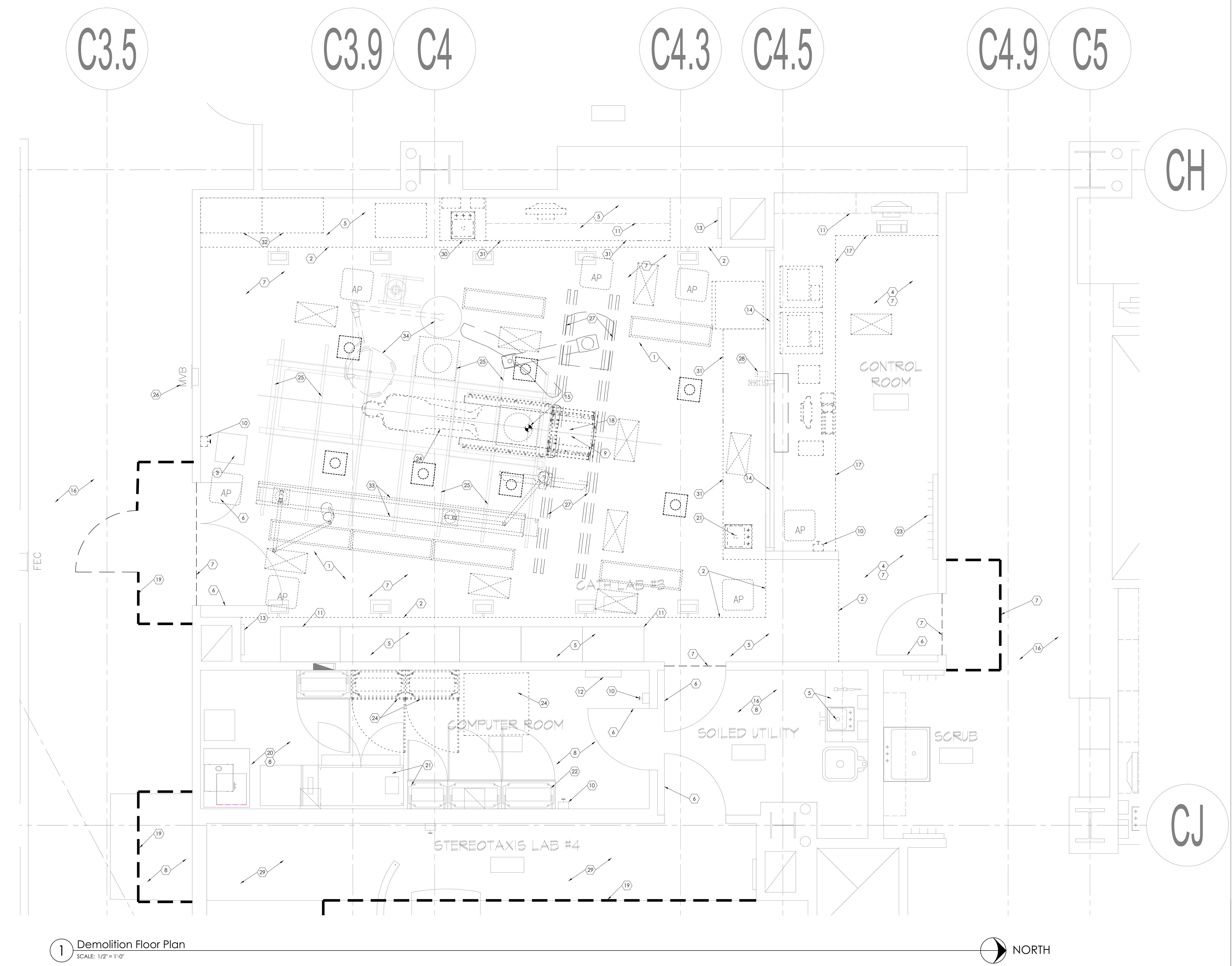
33. REMOVE CEILING RAIL TRACK SYSTEM ATTACHED TO THE UNISTRUT SYSTEM ALONG WITH THE SURGICAL LIGHT BOOM, RF SHIELDING, MONITOR BOOM AND BRACKETS ETC. SHOWN DASHED. ALSO REMOVE THE ELECTRICAL AND DATA CONNECTIONS AND STRUCTURAL SUPPORT AND ANCHORAGE TO THESE EQUIPMENT. COORDINATE WITH THE OWNER BEFORE PROCEEDING AND PREPARE THE AREA FOR THE NEW BOOMS CALLED OUT IN THE DRAWINGS.

34. EXISTING CEILING MOUNTED SURGICAL LIGHT AND BOOM TO REMAIN, PROTECT DURING CONSTRUCTION. REMOVE & RE-INSTALL IF NEEDED TO COMPLETE WORK AROUND IT.

29. REMOVE EXISTING GYPSUM BOARD CEILING IN THIS AREA ON STEREOTAXIS LAB #4 SIDE TO ACCESS CEILING SPACE ABOVE TO INSTALL NEW MECHANICAL DUCT AND VAV ETC REQUIRED. SEE MECHANICAL DRAWINGS FOR MORE INFORMATION AND EXTENT OF REMOVAL REQUIRED. OWNER HAS REQUIRED THAT THIS PART OF THE MECHANICAL AND CEILING REMOVAL AND REPAIR WORK BE COMPLETED FIRST BEFORE CATH LAB #3 IS SHUTDOWN FOR CONSTRUCTION. PLAN TO PROVIDE REQUIRED DUST BARRIER ON LAB #4 SIDE AS WELL TO ACCOMPLISH CONSTRUCTION WORK.

30. REMOVE EXISTING SINK, ASSOCIATED PLUMBING PIPING AND SINK PLASTIC LAMINATE BASE CABINET HERE. SEE PLUMBING DRAWINGS FOR MORE INFORMATION.

31. REMOVE EXISTING PLASTIC LAMINATE COUNTERTOP AND REPLACE WITH NEW SOLID SURFACE COUNTERTOP. SEE NEW FLOOR PLAN. PROTECT AND REUSE PLASTIC LAMINATE BASE CABINET, U.N.O.



1 Demolition Floor Plan
SCALE: 1/2" = 1'-0"

KEY NOTES - FLOOR PLAN

1. REMOVE EXISTING GYPSUM BOARD CEILING. CAREFULLY REMOVE AND STORE HVAC DIFFUSERS AND LIGHTS SHOWN DASHED FOR REINSTALLATION. SEE NEW FLOOR PLANS, STRUCTURAL MECHANICAL, ELECTRICAL DRAWINGS FOR MORE INFORMATION.

2. DASHED LINE INDICATES EXTENT OF DEMOLITION OF THE EXISTING GYPSUM BOARD CEILING . SEE REFLECTED CEILING PLAN A131 FOR NEW CEILING TO BE INSTALLED AFTER STRUCTURAL, MECHANICAL AND ELECTRICAL WORK IS COMPLETED ABOVE CEILING.

3. EXISTING MEDGAS COLUMN TO REMAIN ALONG WITH ASSOCIATED STRUCTURAL SUPPORTS ABOVE. SEE MECHANICAL AND PLUMBING DRAWINGS FOR EXISTING GAS.

4. PATCH, REPAIR AND PAINT CEILING FOR ABOVE CEILING WORK IN THIS AREA AFTER ALL WORK IS COMPLETE. REMOVE AND REINSTALL MECHANICAL DIFFUSERS AND LIGHTS IF REQUIRED. SEE ELECTRICAL AND MECHANICAL DRAWINGS FOR MORE INFORMATION.

5. EXISTING GYPSUM BOARD SOFFIT AND WALL SCONCES AT SOFFIT TO REMAIN. PROTECT DURING CONSTRUCTION. REPLACE TO MATCH EXISTING IF DAMAGED DURING CONSTRUCTION. REPAINT ENTIRE SOFFIT. SEE ELECTRICAL DRAWINGS FOR MORE INFORMATION.

6. EXISTING LEAD LINED DOORS & HARDWARE TO REMAIN. PROTECT DURING CONSTRUCTION.

7. REMOVE EXISTING SHEET VINYL FLOORING & COVED BASE. DASHED LINE INDICATES EXTENT OF REMOVAL. SEE FINISH FLOOR PLAN A151 FOR MORE INFORMATION ON NEW FINISHES.

8. REMOVE EXISTING ACOUSTICAL CEILING TILES, GRID SYSTEM, LIGHTS, DIFFUSERS ETC. AS REQUIRED FOR ALL ABOVE CEILING M/E/P WORK. SEE ELECTRICAL AND MECHANICAL DRAWINGS FOR MORE INFORMATION. CLEAN AND RE-INSTALL CEILING TILES, LIGHTS & DIFFUSERS BACK AFTER WORK IS COMPLETED. SEE REFLECTED CEILING PLAN ON SHEET A131 AND ELECTRICAL DRAWINGS.

9. CAREFULLY REMOVE EXISTING MED GAS PEDESTAL FOR RE-INSTALLATION. CLEAN INTERIORS AND RE-INSTALL AFTER ALL FLOORING WORK IS COMPLETE. SEE ELECTRICAL AND MECHANICAL DRAWINGS FOR MORE INFORMATION.

10. EPO (EMERGENCY POWER OFF) SWITCH. SEE ELECTRICAL DRAWINGS FOR MORE INFO.

11. EXISTING CABINET, COUNTERTOP, PLUMBING FIXTURE, ETC. TO REMAIN. PROTECT DURING CONSTRUCTION.

12. ELECTRICAL PANELS. SEE ELECTRICAL DRAWINGS FOR MORE INFORMATION.

13. EXISTING WALL MOUNTED MECHANICAL GRILL TO REMAIN. PROTECT DURING CONSTRUCTION.

14. EXISTING LEAD SHIELDED GLASS TO REMAIN. PROTECT DURING CONSTRUCTION.

15. EXISTING 4" DIA. HOLE ON FLOOR TO REMAIN AND RE-USED FOR THE NEW CATH LAB EQUIPMENT BY SIEMENS. THIS IS IDENTIFIED AS THE ORIENTATION POINT FOR THE PATIENT TABLE. FIELD VERIFY TO ESTABLISH ACTUAL LOCATION AND EXISTING CONDITIONS. EXISTING TABLE BASE PLATE TO BE REMOVED TO INSTALL NEW FLOORING. NEW PLATE TO BE THROUGH-BOLTED THROUGH CONCRETE FLOOR. SEE SHEET A100 FOR LOWER LEVEL CONDITION AND ALSO SEE STRUCTURAL DRAWINGS FOR THROUGH BOLTING. REMOVE EXISTING BOLTS FROM THE FLOOR.

16. EXISTING SHEET VINYL FLOORING AND COVED BASE TO REMAIN. PROTECT DURING CONSTRUCTION. SEE FINISH FLOOR PLAN.

17. REMOVE EXISTING PLASTIC LAMINATE COUNTERTOP. REPLACE WITH NEW COUNTERTOP AS INDICATED IN THE NEW FLOOR PLAN. SUPPORTS AND BRACKETS SHALL BE RE-USED. PROVIDE TWO ADDITIONAL METAL SUPPORT LEGS UNDER THE COUNTERTOP. BASIS OF DESIGN: COUNTER 34- BRUSHED STEEL SET-NO-CUT.

18. EXISTING 4" DIA. HOLE AND CONDUIT ON FLOOR TO REMAIN AND RE-USED FOR THE NEW CATH LAB EQUIPMENT. THIS IS IDENTIFIED AS HOLE "B10" ON SIEMENS PLANS. FIELD VERIFY TO ESTABLISH ACTUAL LOCATION AND EXISTING CONDITIONS.

19. DASHED LINE INDICATES FLOOR TO CEILING TEMPORARY DUST PROOF CONSTRUCTION BARRIER TO PREVENT DUST & DIRT MIGRATION AND TO SEPARATE AREAS OCCUPIED BY OWNER FROM FUMES AND NOISE. CONSTRUCTION BARRIER TO BE ERECTED WITH 1 5/8" 20 GA. MTL. STUDS @16" O.C. FRAMING WITH 5/8" TYPE 'X' ABUSE RESISTANT GYPSUM BOARD ON BOTH SIDES. TAPE AND SEAL ALL JOINTS AND OPENINGS. SEAL JOINTS AT PERIMETER. PARTITION TO BE EQUIPPED WITH 4'-0" LOCKABLE MAN DOOR WITH STICKY MATS ON BOTH SIDES OF DOOR. COORDINATE WITH OWNER AND FIELD VERIFY FOR EXACT LOCATION OF CONSTRUCTION BARRIER.

20. EXISTING VCT FLOORING AND WALL BASE TO REMAIN. PROTECT DURING CONSTRUCTION. PATCH AND REPAIR FLOORING AS REQUIRED IN ORDER TO ACCOMPLISH THE WORK OUTLINED IN THE CONSTRUCTION DOCUMENTS.

21. REMOVE EXISTING SINK AND REPLACE WITH NEW SOLID SURFACE INTEGRAL SINK. RE-USE ALL PLUMBING CONNECTIONS. SEE PLUMBING DRAWINGS AND FLOOR PLAN.

22. EXISTING SIEMENS EQUIPMENT & CABINET FOR ADJACENT STEREOTAXIS LAB #4 SHALL REMAIN, PROTECT DURING CONSTRUCTION.

23. REMOVE UPPER APRON RACK AS REQUIRED AND PREP WALL FOR NEW LOCATION OF SKYTRON LIGHTING CONTROL PANEL. PATCH AND REPAIR LEAD SHIELDED WALL TO MAINTAIN SHIELDING.

24. EXISTING SIEMENS CATH LAB EQUIPMENT AND PATIENT TABLE TO BE REMOVED BY OWNERS VENDOR SIEMENS. SCHEDULE WORK WITH OWNER'S VENDOR SIEMENS.

25. EXISTING CEILING MOUNTED UNISTUTS TO REMAIN. PROTECT DURING CONSTRUCTION. NOTIFY STRUCTURAL ENGINEER FOR EXAMINATION AFTER REMOVAL OF GYP. BD. CEILING BEFORE PROCEEDING WITH NEW WORK.

26. EXISTING MED GAS SHUT OFF VALVE TO REMAIN. SEE MECHANICAL DRAWINGS FOR MORE INFO.

27. REMOVE UNISTRUTS SHOWN DASHED AND ASSOCIATED STRUCTURAL SUPPORT FROM CEILING. MAINTAIN STRUCTURAL INTEGRITY OF THE UNISTRUT PORTION THAT IS STAYING. CONTACT STRUCTURAL ENGINEER FOR EVALUATION BEFORE PROCEEDING WITH THE WORK. REPLACE REPAIR GYPSUM CEILING AS REQUIRED TO MATCH ADJACENT AFTER DEMOLITION WORK IS COMPLETED.

28. CAREFULLY REMOVE EXISTING CEILING MOUNTED CAMERA FOR REINSTALLATION AT THE SAME LOCATION AFTER ALL CEILING WORK IS COMPLETE.

NJRA ARCHITECTS
NJRA Architects, Inc.
5272 S. College Drive, Suite104
Murray, Utah 84123
801.364.9259
www.njraarchitects.com

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Intermountain Healthcare
IMC- Cath Lab 3 Remodel Project

5121 South Cottonwood Street
Murray, UT 84107

NJRA Project # 20230
Construction Documents December 15, 2021

Demolition Floor and Ceiling Plan - Level 1

A101

GENERAL NOTES

1. COORDINATE WITH SIEMENS REPRESENTATIVE TO ENSURE REQUIRED CEILING HEIGHT OF 8' -11" IS ACHIEVED FROM FINISHED FLOOR TO THE FACE OF THE UNISTRUT INSTALLED AT THE CEILING. SEE SIEMENS EQUIPMENT DRAWINGS FOR ACCEPTABLE FLOOR SLOPE TOLERANCES AND FOR MORE INFORMATION. FIELD VERIFY AND COORDINATE WORK BEFORE PROCEEDING.

2. ALL EXPOSED STEEL IN THE WALLS, ABOVE CEILING ETC. ARE REQUIRED TO BE SPRAY APPLIED FIRE PROOFED. SEE CODE COMPLIANCE PLANS FOR FIRE RATINGS THAT IS REQUIRED TO BE MAINTAINED THROUGHOUT THE PROJECT. ANY DAMAGE TO THE EXISTING FIRE PROOFING IS REQUIRED TO BE PATCHED AND REPAIRED WITH COMPATIBLE FIRE PROOFING PRODUCT.

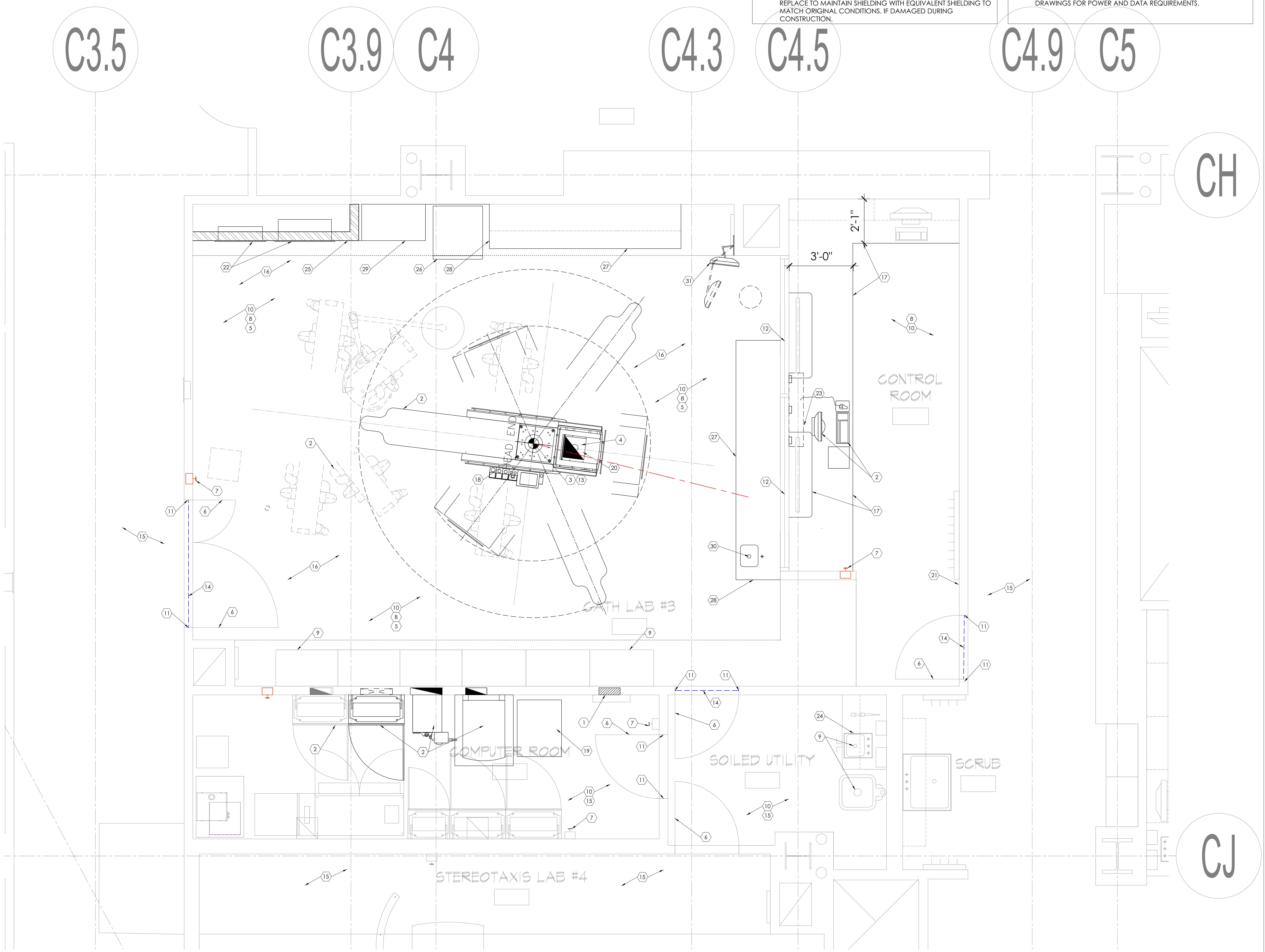
3. ALL EXISTING MAGNETIC AND LEAD SHIELDING IN THE EXISTING WALLS, FLOOR AND ROOF DECK IS REQUIRED TO BE RETAINED. REPLACE TO MAINTAIN SHIELDING WITH EQUIVALENT SHIELDING TO MATCH ORIGINAL CONDITIONS. IF DAMAGED DURING CONSTRUCTION.

28. PROVIDE MATCHING PLASTIC LAMINATE FINISH END PANEL HERE AFTER REMOVAL OF A PORTION OF THE BASE CABINET HERE. FIELD VERIFY TO MATCH WITH ADJACENT EXISTING.

29. RELOCATED TALL CABINET TO BE INSTALLED HERE. MODIFY TALL CABINET AFTER REMOVAL WITH FINISHED END PANELS, CLOSURE PANELS AND TOP MOLDING TO MATCH ADJACENT EXISTING BEFORE INSTALLATION.

30. REPLACE EXISTING STAINLESS STEEL SINK WITH NEW SOLID SURFACE INTEGRAL, STARON A1181 SINK. RECONNECT EXISTING PLUMBING LINES TO NEW SINK. SEE PLUMBING DRAWINGS FOR MORE INFORMATION.

31. COMPUTER AND MONITOR ON WALL MOUNTED ERGOTRON SYSTEM, OWNER FURNISHED CONTRACTOR INSTALLED. PROVIDE WALL BACKING OR ATTACHED DIRECTLY TO EXISTING WALL STUD FRAMING IN THE LEAD SHIELDED WALL. PATCH, REPAIR, PAINT AND RE-FINISH WALL TO ORIGINAL CONDITION. SEE ELECTRICAL DRAWINGS FOR POWER AND DATA REQUIREMENTS.



1 Floor Plan- Level 1
SCALE: 1/2" = 1'-0"

KEY NOTES - FLOOR PLAN

1. ELECTRICAL PANEL. SEE ELECTRICAL DRAWINGS FOR MORE INFORMATION.

2. NEW CATHLAB EQUIPMENT & PATIENT TABLE, PROVIDED & INSTALLED BY OWNERS VENDOR SIEMENS. SEE VENDOR DRAWINGS FOR MORE INFORMATION.

3. ISO-CENTER LOCATION OF THE CATH-LAB EQUIPMENT. FIELD VERIFY AND COORDINATE WITH OWNER'S VENDOR (SIEMENS) FOR MORE INFORMATION.

4. CAREFULLY REMOVE EXISTING STAINLESS STEEL MED GAS PEDESTAL FOR REINSTALLATION AFTER FLOORING IS COMPLETE. SEE ELECTRICAL AND MECHANICAL DRAWINGS FOR MORE INFORMATION.

5. REPLACE ALL EXISTING DUPLEX EMERGENCY POWER OUTLETS TO FOUR PLEX ON THE WALLS. SEE ELECTRICAL DRAWINGS FOR MORE INFORMATION. NOTE THAT ALL EXISTING WALLS HAVE 4 LB LEAD SHIELDING UP TO 7'-0" HIGH. INTEGRATION OF ALL SHIELDING SHALL NEED TO BE RETAINED AND REPAIRED TO ORIGINAL CONDITION AFTER ALL WORK IS COMPLETED, TYPICAL THROUGHOUT THE PROJECT.

6. EXISTING LEAD LINED DOORS, FRAME & HARDWARE TO REMAIN. PROTECT DURING CONSTRUCTION.

7. EMERGENCY POWER OFF SWITCH. SEE ELECTRICAL DRAWINGS FOR MORE INFORMATION.

8. NEW SHEET VINYL FLOORING WITH 4" COVED BASE. COORDINATE WITH OWNERS VENDOR SIEMENS REGARDING ACCEPTABLE SLOPE TOLERANCES ON THE FLOOR BEFORE PROCEEDING WITH THE WORK. SEE FINISH FLOOR PLANS AND SIEMENS DRAWINGS FOR MORE INFORMATION. COVED BASE SHALL FULLY ADHERE TO WALL.

9. EXISTING CABINETS, COUNTERTOP, PLUMING FIXTURES, ETC. TO REMAIN. PROTECT DURING CONSTRUCTION.

10. REFINISH AND PAINT EXISTING GYPSUM BOARD WALL. SEE FINISH FLOOR PLAN FOR MORE INFORMATION.

11. REPAINT EXISTING H.M. DOOR FRAME, TYP. SEE FINISH FLOOR PLAN.

12. EXISTING LEAD SHIELDED WINDOW & GLAZING TO REMAIN. PROTECT DURING CONSTRUCTION.

13. ORIENTATION POINT OF THE PATIENT TABLE SHALL ALIGN WITH THE EXISTING 4" DIA. HOLE ON THE FLOOR AT THIS LOCATION. FIELD VERIFY EXACT LOCATION AND COORDINATE WITH OWNER'S VENDOR (SIEMENS) FOR MORE INFORMATION.

14. DASHED LINE SHOWS EXTENT OF NEW FLOORING. SEE FINISH FLOOR PLAN FOR MORE INFORMATION.

15. EXISTING FLOOR FINISH TO REMAIN AT THIS LOCATION. PROTECT DURING CONSTRUCTION.

16. VERIFY FLOOR LEVELNESS. FLOOR SHOULD BE ±1/8" IN 10'-0" THROUGH THE ROOM. IF FLOOR IS UNEVEN, POUR SELF LEVELING EPOXY COMPOUND (ARDEX OR EQUAL) TO ACHIEVE THE REQUIRED FLOOR LEVELNESS. UNISTRUTS FOR SIEMENS EQUIPMENT RAILS SHALL BE INSTALLED AFTER FLOOR IS LEVELED. MEASURE HEIGHT TO THE BOTTOM OF THE UNISTRUTS ABOVE FINISHED FLOOR PER SIEMENS DRAWINGS. PREP FLOOR FOR NEW FINISHES. SEE SIEMENS DRAWINGS FOR ACCEPTABLE TOLERENCE LEVEL.

17. NEW PLASTIC LAMINATE COUNTERTOP WITH BULL-NOSED EDGE. SEE DETAIL A6/A-501 AND FINISH FLOOR PLAN FOR LAMINATE COLOR REQUIRED TO MATCH ADJACENT EXISTING & MORE INFORMATION. HEIGHT OF COUNTERTOP SHALL MATCH WITH THE ADJACENT EXISTING. PROVIDE 4'-0" W X 1'-1" D OPENING IN COUNTERTOP FOR INSTALLATION OF LARGE DISPLAY MONITOR BY OWNER. PROVIDE 2" RADIUS AT ALL INSIDE CORNERS. EXISTING SUPPORTS AND METAL BRACKETS MAY BE RE-USED. THE MONITOR OPENINGS ON THE COUNTERTOP MAY REQUIRE EXISTING BRACKETS TO BE MOVED OR ADJUSTED. PROVIDE BACKING IN THE WALL FOR INSTALLATION OF THE OWNER PROVIDED MONITOR. FIELD VERIFY EXISTING CONDITIONS BEFORE PROCEEDING WITH THE WORK.INSTALL TWO ADJUSTABLE HEIGHT STEEL LEGS FOR SUPPORT OF DEEP COUNTERTOP. DO NOT ANCHOR TO FLOOR. BASIS OF DESIGN: COUNTER 34- BRUSHED STEEL SET-NO-CUT.

18. SIEMENS EQUIPMENT BASE PLATES TO BE ANCHORED TO THE EXISTING CONCRETE FLOOR. SEE SHEET A100 FOR REMOVAL OF CEILING AT LOWER LEVEL FOR INSTALLATION OF THE METAL PLATES. SEE STRUCTURAL & SIEMENS DRAWINGS FOR MORE INFORMATION.

19. NEW DATA RACK PROVIDED AND INSTALLED BY OWNERS VENDOR. PROVIDE REQUIRED ELECTRICAL & DATA CONNECTION AS SHOWN IN THE ELECTRICAL DRAWINGS. COORDINATE WORK & EXACT LOCATION WITH THE OWNER AND ALL VENDORS INVOLVED BEFORE PROCEEDING.

20. RE-USE EXISTING 4" DIA. HOLE AND CONDUIT AS REQUIRED. THIS IS IDENTIFIED AS HOLE "B10" IN SIEMENS DRAWINGS.

21. SKYTRON LIGHTING CONTROL PANEL. SEE DRAWINGS FROM SKYTRON AND ALSO SEE ELECTRICAL DRAWINGS. CONTROL PANEL TO BE WRAPPED IN LEAD TO MAINTAIN INTEGRITY OF SHIELDING.

22. NEW ISOLATION PANEL INSTALLED IN THE BOXED STUD FRAMED WALL. SEE ELECTRICAL DRAWINGS FOR MORE INFORMATION.

23. SIEMENS CATH LAB EQUIPMENT INSTALLED UNDER COUNTER. ADJUST LOCATION OF THE COUNTERTOP BRACKET AS REQUIRED TO MAKE ROOM FOR THE EQUIPMENT. COORDINATE WORK WITH LARGE DISPLAY PROVIDED BY OWNER.

24. EXISTING PLUMBING FIXTURE, SINK TO REMAIN. PROTECT DURING CONSTRUCTION. PROVIDE LOCK AT THE CABINETS UNDER THE SINK.

25. $3\frac{5}{8}$" THICK METAL STUD FRAMED WALL WITH $\frac{5}{8}$" THICK TYPE-X PAINTED GYPSUM SHEATHING ON ONE SIDE FROM FLOOR TO CEILING ABOVE TO HOUSE NEW ISOLATION PANELS. COORDINATE DEPTH OF BOXED WALL WITH PANELS. PAINT AND FINISH WALL TO MATCH WITH ADJACENT EXISTING.

26. NEW ACCUSODE EQUIPMENT, OWNER FURNISHED AND INSTALLED. SEE ELECTRICAL DRAWINGS FOR MORE INFORMATION.

27. REPLACE EXISTING PLASTIC LAMINATED COUNTERTOP WITH NEW SOLID SURFACE COUNTERTOP. PROTECT EXISTING PLASTIC LAMINATE BASE CABINET UNLESS NOTED OTHERWISE. SEE DETAILS ON SHEET A501 & A502. FIELD VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS.

NJRA ARCHITECTS

NJRA Architects, Inc.
5272 S. College Drive, Suite104
Murray, Utah 84123
801.364.9259
www.njraarchitects.com

Intermountain Healthcare

IMC- Cath Lab 3 Remodel Project

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Murray, UT 84107

NJRA Project # 20230

Construction Documents December 15, 2021

New Floor Plan- Level 1

A111

1 Reflected Ceiling Plan

SCALE: 1/2" = 1'-0"

NORTH

KEY NOTES - FLOOR PLAN

1. LOCATION OF THE CATH LAB EQUIPMENT ISO-CENTER. COORDINATE WITH THE OWNER'S VENDOR SIEMENS FOR MORE INFORMATION.
2. EXISTING MEDAS COLUMN AND GAS, POWER CONNECTIONS ETC. AT THIS LOCATION TO REMAIN. PROTECT DURING CONSTRUCTION.
3. NEW SKYTRON BOOM FOR RADIATION SHIELD. SEE STRUCTURAL & ELECTRICAL DRAWINGS FOR ALL REQUIREMENTS.
4. NOT USED.
5. NEW SKYTRON DISPLAY MONITOR AND EQUIPMENT TANDEM BOOM. SEE STRUCTURAL, ELECTRICAL AND SKYTRON DRAWINGS FOR ALL REQUIREMENTS. COORDINATE WITH SKYTRON FOR MORE INFORMATION.
6. EXISTING UNISTRUT SUPPORT FOR SIEMENS CATHLAB EQUIPMENT AT THE CEILING ANCHORED TO THE STRUCTURE ABOVE TO REMAIN U.N.O, TYP. REMOVE PORTION OF UNISTRUT WHERE INDICATED ON DEMOLITION PLAN A101. SEE SIEMENS DRAWINGS & STRUCTURAL DRAWINGS FOR DETAILS AND REQUIREMENTS. ALSO REFER TO DETAIL **C5/A-501**.
7. NEW PAINTED GYPSUM BOARD CEILING. INSTALL AFTER ALL STRUCTURAL, MECHANICAL, ELECTRICAL, SKYTRON BOOMS AND SIEMENS EQUIPMENT WORK IS COMPLETE. SEE FINISH FLOOR PLAN FOR PAINT COLOR. ALSO REFER TO CEILING DETAIL **E3/A-501**. CEILING HEIGHT FROM FLOOR TO THE FACE OF THE CEILING MOUNTED UNISTRUT SUPPORT IS REQUIRED TO BE 8'-11". FIELD VERIFY EXISTING AND SEE SIEMENS DRAWINGS FOR ACCEPTABLE TOLERANCES.
8. NEW OR RE-USED MECHANICAL DIFFUSER. SEE MECHANICAL DRAWINGS FOR MORE INFORMATION, TYPICAL.
9. NEW OR RE-USED CEILING LIGHTS. SEE ELECTRICAL DRAWINGS FOR MORE INFORMATION, TYPICAL.
10. REMOVE & RE-INSTALL EXISTING ACOUSTICAL PANEL CEILING, GRID SYSTEM, CEILING DIFFUSER & LIGHTS AS REQUIRED FOR ANY ABOVE CEILING M/E/P WORK. SEE ELECTRICAL, MECHANICAL AND PLUMBING DRAWINGS FOR MORE INFORMATION.
11. PATCH/REPAIR EXISTING GYPSUM BOARD CEILING AFTER ALL ABOVE CEILING WORK IS COMPLETE. CLEAN AND RE-INSTALL LIGHTS AND DIFFUSERS. RE-PAINT ENTIRE CEILING. SEE FINISH FLOOR PLANS.
12. EXISTING GYPSUM BOARD SOFFIT TO REMAIN. PROTECT DURING CONSTRUCTION. REMOVE & REINSTALL LIGHT, DIFFUSER ETC. AS REQUIRED. REPAINT SOFFIT AND CEILING AFTER WORK IS COMPLETED. SEE FINISH FLOOR PLANS.
13. 18" x 18" GASKETTED CEILING MOUNTED FINISHED & PAINTED GFRG ACCESS PANELS TO MATCH HOSPITAL STANDARD. COORDINATE WITH VENDORS, MECHANICAL DRAWINGS FOR EXACT LOCATION & QUANTITY AS REQUIRED BEFORE INSTALLATION. ACCESS PANEL TO SIT FLUSH WITH THE ADJACENT CEILING.
14. NOT USED.
15. EXISTING SURGICAL LIGHT AND BOOM TO REMAIN. PROTECT DURING CONSTRUCTION. REMOVE AND RE-INSTALL IF REQUIRED TO ACCOMPLISH CEILING AND OTHER WORK ABOVE. COORDINATE AND FIELD VERIFY EXACT LOCATION.
16. REMOVE & REINSTALL EXISTING SKYTRON SURGICAL LIGHTS AS REQUIRED. SEE ELECTRICAL DRAWINGS AND MANUFACTURERS MANUAL FOR MORE INFORMATION.
17. EXISTING WALL SCONCE TO REMAIN. PROTECT DURING CONSTRUCTION.
18. CABLE OUTLET FOR C-ARM AND ASSOCIATED STRUCTURE ABOVE TO REMAIN. PROTECT DURING CONSTRUCTION. COORDINATE WITH SIEMENS.

GENERAL NOTES

1. COORDINATE WITH SIEMENS REPRESENTATIVE TO ENSURE REQUIRED CEILING HEIGHT OF 8' -11" IS ACHIEVED FROM FINISHED FLOOR TO THE FACE OF THE UNISTRUT INSTALLED AT THE CEILING. SEE SIEMENS EQUIPMENT DRAWINGS FOR ACCEPTABLE FLOOR SLOPE TOLERANCES AND FOR MORE INFORMATION. FIELD VERIFY AND COORDINATE WORK BEFORE PROCEEDING.
2. ALL EXPOSED STEEL IN THE WALLS, ABOVE CEILING ETC. ARE REQUIRED TO BE SPRAY APPLIED FIRE PROOFED. SEE CODE COMPLIANCE PLANS FOR FIRE RATINGS THAT IS REQUIRED TO BE MAINTAINED THROUGHOUT THE PROJECT. ANY DAMAGE TO THE EXISTING FIRE PROOFING IS REQUIRED TO BE PATCHED AND REPAIRED WITH COMPATIBLE FIRE PROOFING PRODUCT.
3. ALL EXISTING MAGNETIC AND LEAD SHIELDING IN THE EXISTING WALLS, FLOOR AND ROOF DECK IS REQUIRED TO BE RETAINED. REPLACE TO MAINTAIN SHIELDING WITH EQUIVALENT SHIELDING TO MATCH ORIGINAL CONDITIONS. IF DAMAGED DURING CONSTRUCTION.

NJRA ARCHITECTS

STATE OF UTAH
SELVAM RAJAVELU
267857
LICENSED ARCHITECT

Intermountain Healthcare

IMC- Cath Lab 3 Remodel Project

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Murray, UT 84107

20230

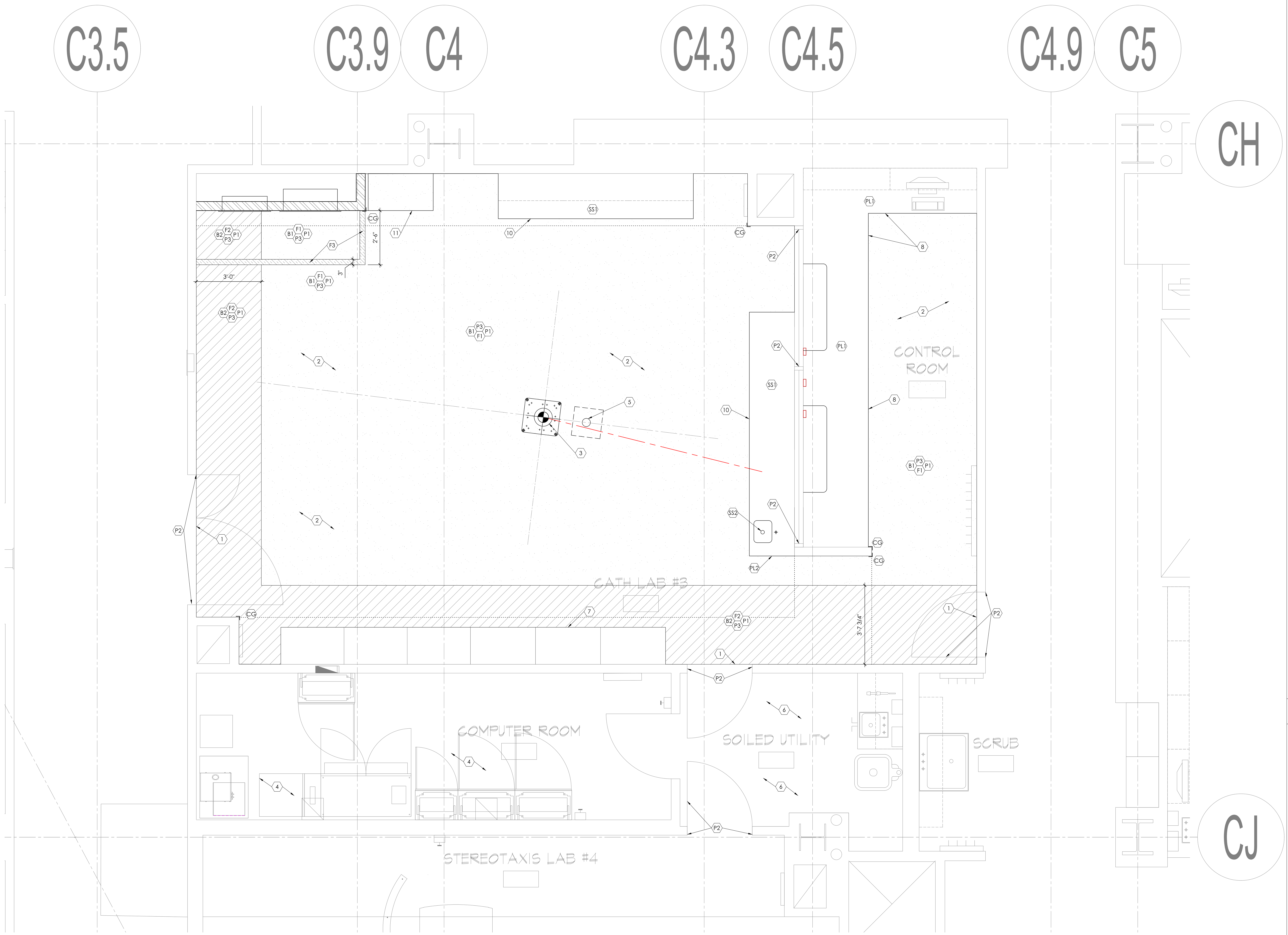
Construction Documents December 15, 2021

Reflected Ceiling Plan- Level 1

A131

FINISH LEGEND

LEGEND	DESCRIPTION	MANUFACTURER	STYLE	MODEL #	COLOR	REMARKS
F1 - FLOOR FINISH	SHEET VINYL - FIELD	MANNINGTON	BIOSPEC MD	15361	FLAX	
F2 - FLOOR FINISH	SHEET VINYL - ACCENT BORDER	MANNINGTON	BIOSPEC MD	15369	BEDROCK	
F3 - FLOOR FINISH	SHEET VINYL - RED LINE	MANNINGTON	BIOSPEC MD	15392	HOT SAUCE	
B1 - WALL BASE	SHEET VINYL- COVED BASE	MANNINGTON	BIOSPEC MD	15361	FLAX	PROVIDE ALUMINUM TOP TRIM
B2 - WALL BASE	SHEET VINYL- COVED BASE	MANNINGTON	BIOSPEC MD	15369	BEDROCK	PROVIDE ALUMINUM TOP TRIM
P1 - PAINT	WALL PAINT	SHERWIN WILLIAMS	EGGSHELL	SW 7043	WORLDLY GRAY	
P2 - PAINT	DOOR FRAME PAINT	SHERWIN WILLIAMS	SEMI-GLOSS	SW 6115	TOTALLY TAN	TYPICAL AT ALL HM DOOR, FRAMES & WINDOWS- FIELD VERIFY TO MATCH EXISTING
P3 - PAINT	GYPSUM CEILING PAINT	SHERWIN WILLIAMS	EGGSHELL	SW 7005	PURE WHITE	
CG - CORNER GUARD	CORNER GUARD 2' X 2" X 4'-0"H	C/S ACROVYN	4000	SSM-20AN	262 DRIFTWOOD	WITH CONTINUOUS ALUMINUM RETAINER
WP- WALL PROTECTION	4'-0" FV TO MATCH EXISTING	C/S ACROVYN	4000	SSM-20AN	FIELD VERIFY TO MATCH	MATCH WITH ADJACENT EXISTING AT THE HALLWAY.
PL1 - PLASTIC LAMINATE	PLASTIC LAMINATE COUNTERTOP	FORMICA	MATTE FINISH	303-58	ANTIQUE WHITE OXIDE	FIELD VERIFY LAMINATE STYLE AND COLOR - MATCH ADJACENT EXISTING
PL2 - PLASTIC LAMINATE	PLASTIC LAMINATE - VERTICAL FACE	FORMICA	FIELD VERIFY TO MATCH		FIELD VERIFY TO MATCH	FIELD VERIFY LAMINATE STYLE AND COLOR - MATCH ADJACENT EXISTING
SS1 - SOLID SURFACE	SOLID SURFACE COUNTERTOP	CORIAN			WHITE JASMINE	
SS2 - SOLID SURFACE	SOLID SURFACE INTEGRAL SINK	STARON			BRIGHT WHITE BW010	



1 Finish Floor Plan - Level 1
SCALE: 1/2" = 1'-0"

NORTH

KEY NOTES - FLOOR PLAN

1. LINE OF TRANSITION BETWEEN NEW AND EXISTING FLOOR FINISHES.
2. EXISTING SHEET VINYL FLOORING TO BE REPLACED WITH NEW SHEET VINYL FLOORING. SEE NEW FLOOR PLAN, DEMOLITION PLAN AND FINISH LEGEND FOR MORE INFORMATION. EXISTING MAGNETIC SHIELDING IF ANY ON THE FLOOR IS REQUIRED TO BE PROTECTED DURING INSTALLATION. SEE FLOOR PLANS AND SIEMENS DRAWINGS FOR ACCEPTABLE FLOOR SLOPE TOLERANCES. FLOOR MAY NEED TO BE PREPARED TO MEET THE REQUIREMENTS OF THE NEW CATH LAB EQUIPMENT. FIELD VERIFY EXISTING CONDITIONS.
3. NEW CATH LAB EQUIPMENT BASE PLATE THROUGH BOLTED THROUGH EXISTING CONCRETE FLOOR. SEE SIEMENS AND STRUCTURAL DRAWINGS FOR MORE INFORMATION. INSTALL PLATE AFTER ALL FLOORING UNDER PLATE IS COMPLETE.
4. EXISTING VCT FLOORING & RESILIENT WALL BASE TO REMAIN IN THIS AREA. PROTECT DURING CONSTRUCTION.
5. CAREFULLY REMOVE AND CLEAN EXISTING MEDGAS PEDESTAL. RE-INSTALL IN THE SAME LOCATION AFTER ALL FLOORING WORK IS COMPLETE. FLOORING TO BE TUCKED INSIDE THE MED GAS PEDESTAL.
6. EXISTING SHEET VINYL FLOORING AND COVED WALL BASE TO REMAIN. PROTECT DURING CONSTRUCTION.
7. EXISTING CABINET COUNTERTOP MILLWORK & PLASTIC LAMINATE FINISHES TO REMAIN. PROTECT DURING CONSTRUCTION.
8. NEW PLASTIC LAMINATE COUNTERTOP TO REPLACE EXISTING IN THIS AREA. SEE FINISH LEGEND FOR THE PLASTIC LAMINATE AT THE COUNTERTOP TO MATCH ADJACENT EXISTING.
9. NOT USED.
10. PROVIDE NEW SOLID SURFACE COUNTERTOP ON EXISTING BASE CABINET. FIELD VERIFY EXISTING CONDITIONS. SEE DETAILS ON SHEET A501 & A502 AND REFER TO DEMOLITION FLOOR PLAN NOTES.
11. RELOCATED PLASTIC LAMINATE TALL CABINET AT THIS LOCATION. MODIFY CABINET AND PROVIDE FINISHED END PANELS AND TOP MOLDING AS REQUIRED TO MATCH ADJACENT EXISTING. ANCHOR CABINET TO LEAD SHIELDED WALL AS PER DETAILS ON SHEET A501 & A502.

LEGEND - FLOOR PATTERN

(F1) - SHEET VINYL - FIELD COLOR

(F2) - SHEET VINYL - ACCENT BORDER

(F3) - SHEET VINYL - RED LINE

NJRA Architects, Inc.
5272 S. College Drive, Suite104
Murray, Utah 84123
801.364.9259
www.njraarchitects.com

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SELVAM RAJAVELU
267857

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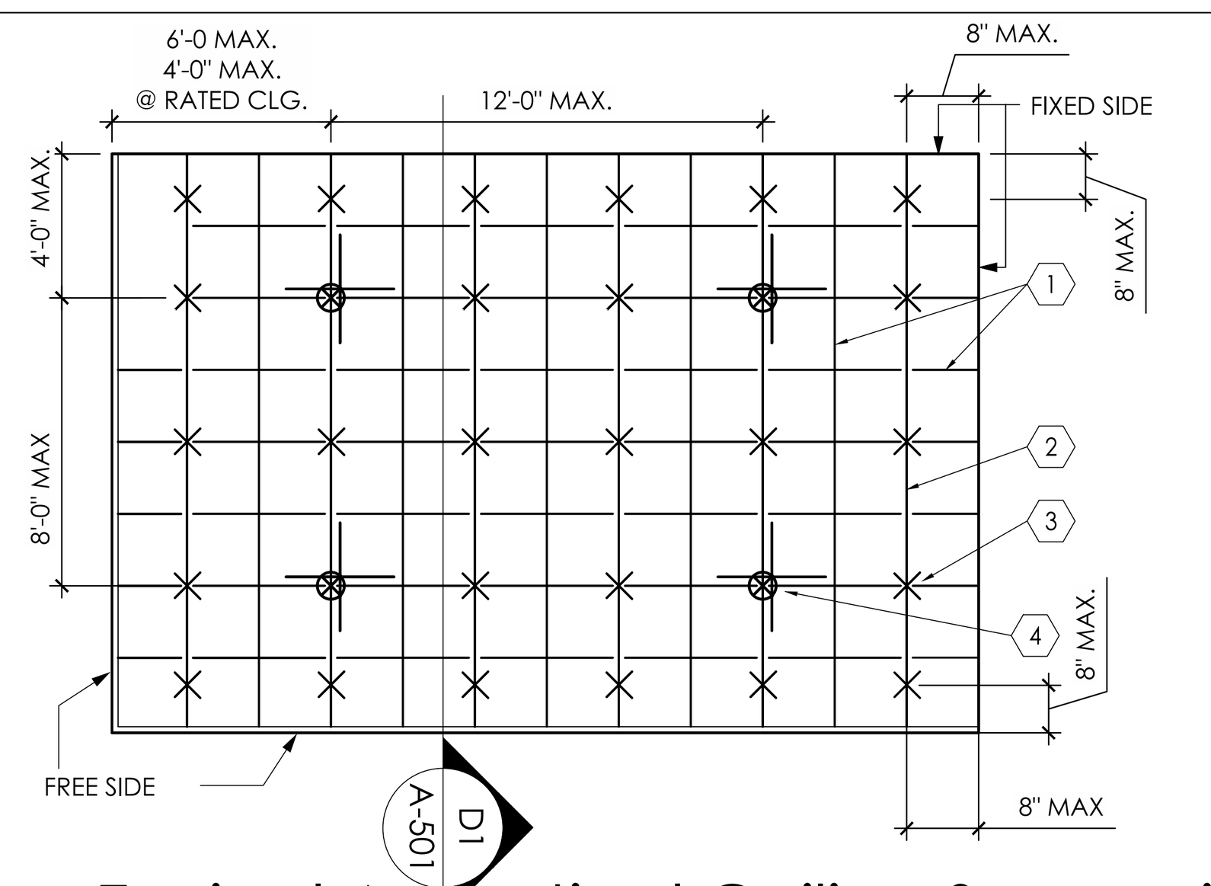
NJRA Project # 20230
Construction Documents December 15, 2021

Finish Floor Plan- Level 1

A151

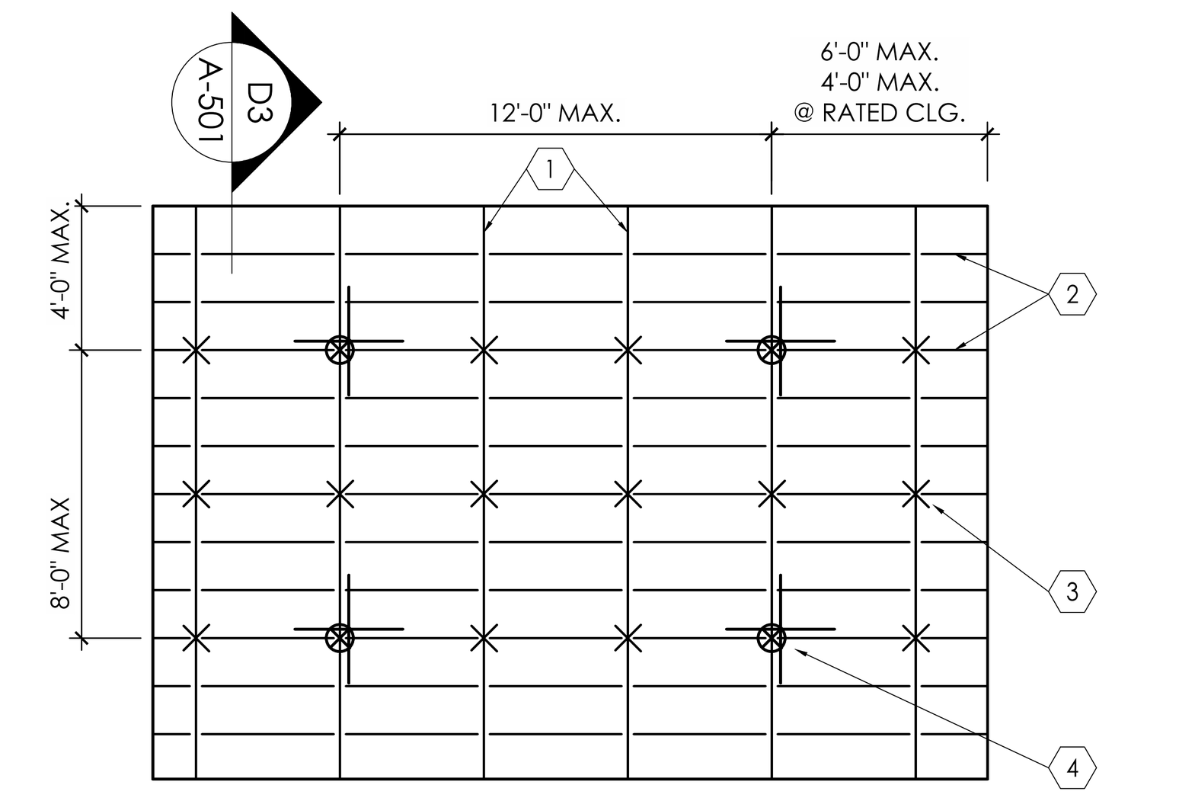
12/21/2021 4:00:46 PM - Z:\200 IHC\20230.00 IHC - IMC CATH LAB #3\02 BIM - REVIT & AUTOCAD\02 AUTOCAD DWGS\A151 FINISH FLOOR PLAN- LEVEL 1.DWG



KEYED NOTES

1. EXPOSED CROSS GRID MEMBER @ 2'-0" O.C.
2. EXPOSED MAIN GRID MEMBER @ 4'-0".
3. HANGER WIRE 12GA MIN. @ 4'-0" O.C. MAX EACH WAY.
4. SEISMIC RESTRAINT. SEE DETAIL C1/A-501.

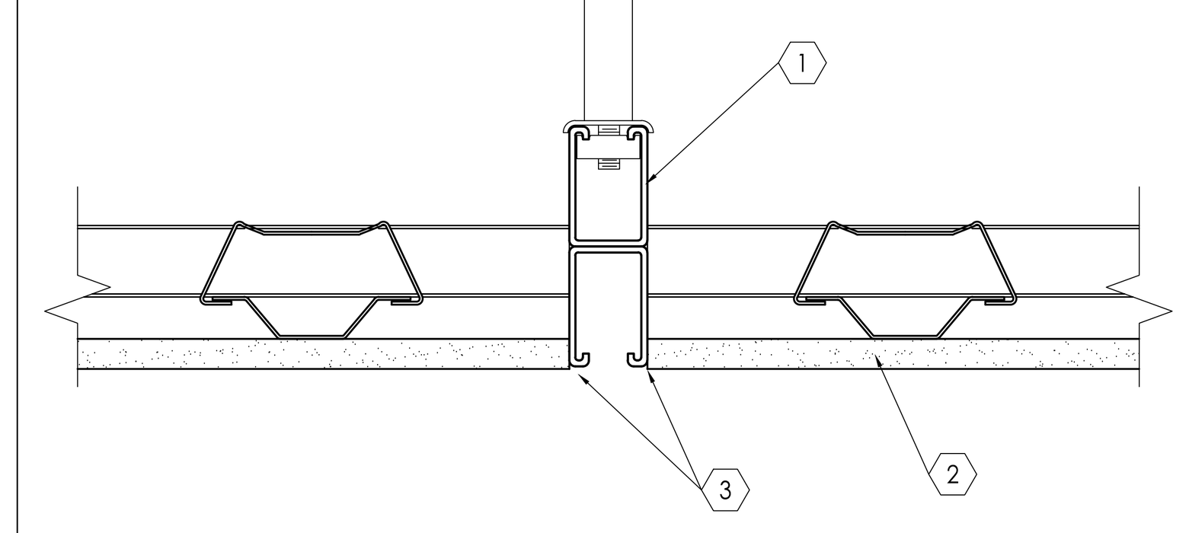
E1 Typical Acoustical Ceiling Suspension
N.T.S.



KEYED NOTES

1. MAIN RUNNER 1-1/2" @ 4'-0" O.C.
2. FURRING CHANNEL @ 1'-4" O.C.
3. HANGER WIRE 8GA MIN. @ 4'-0" O.C. EACH WAY.
4. SEISMIC RESTRAINT. SEE DETAIL C3/A-501.

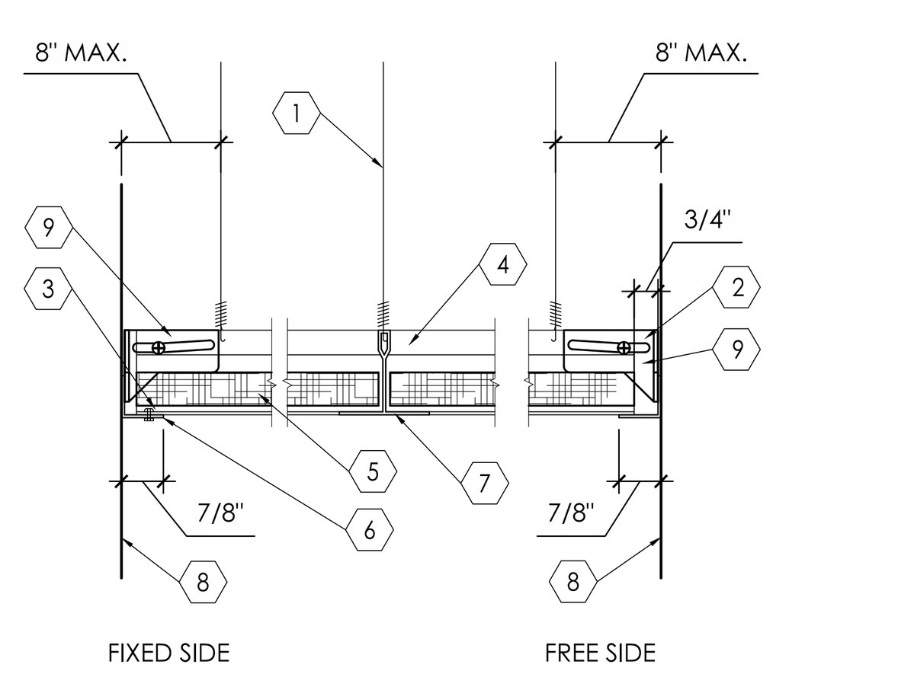
E3 Typical Gypsum Board Ceiling Suspension
N.T.S.



KEYED NOTES

1. CEILING MOUNTED UNISTRUT SYSTEM. SEE STRUCTURAL DRAWINGS.
2. GYPSUM BOARD CEILING AS SCHEDULED. SEE DETAIL E3/A501.
3. FINISH GYPSUM BOARD ON EITHER SIDE OF THE EQUIPMENT RAIL. BOTTOM OF GYPSUM BOARD TO ALIGN WITH BOTTOM OF RAIL, TYPICAL.

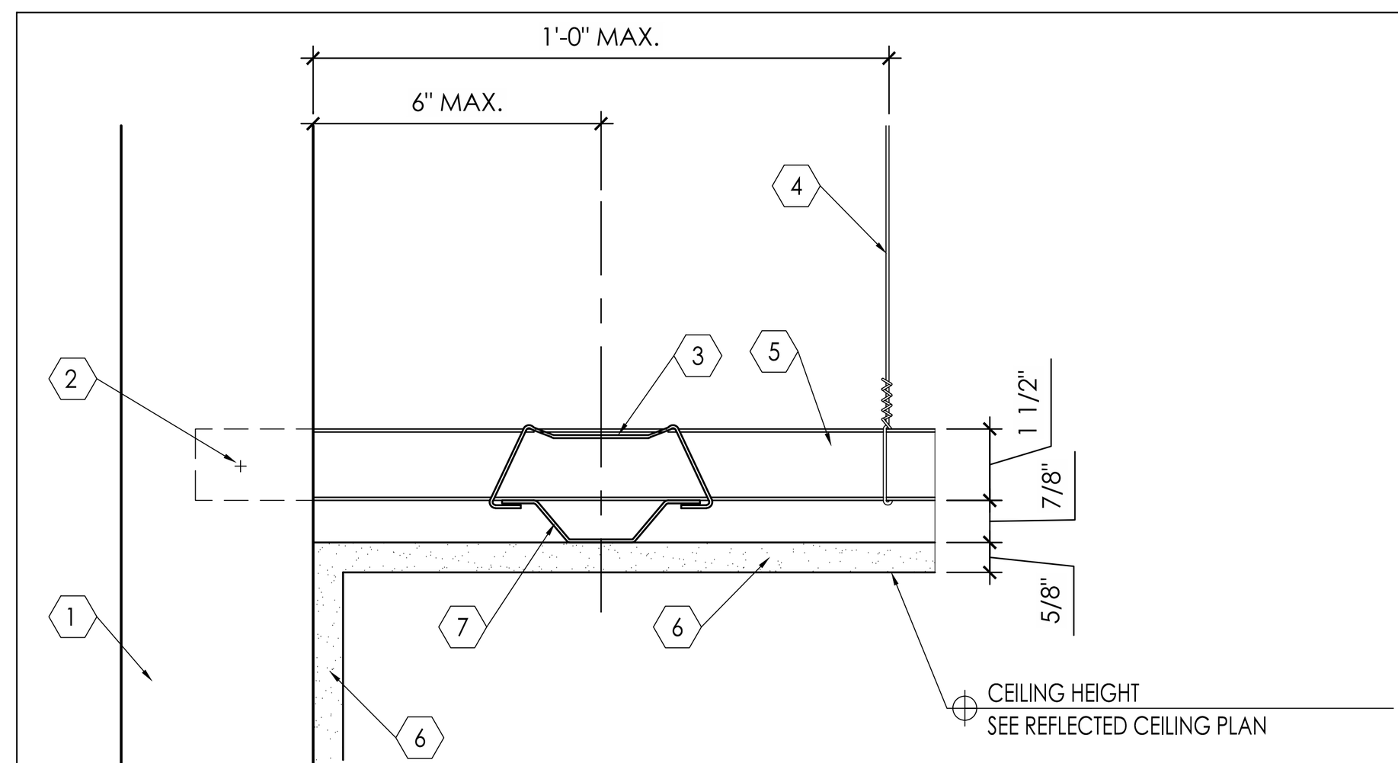
E5 Gypsum Board Unistrut Suspension Detail
Scale: 3" = 1'-0"



KEYED NOTES

1. CLASS 1 ZINC COATED, SOFT TEMPERED WIRES, 12 GAUGE MIN.
2. PROVIDE 3/4" GAP BETWEEN CEILING GRID AND ANGLE ON TWO ADJACENT SIDES OF THE ROOM (FREE SIDES). DO NOT ATTACH CEILING GRID TO WALL ANGLE.
3. ATTACH CEILING GRID TO WALL ANGLE ON TWO ADJACENT SIDES OF THE ROOM (FIXED SIDES).
4. EXPOSED CROSS RUNNER ATTACHED TO MAIN RUNNERS.
5. ACOUSTICAL CEILING TILES. SEE CEILING PLANS.
6. 7/8" SUPPORTING CLOSURE ANGLE AT CEILING PERIMETER ATTACHED TO WALL.
7. EXPOSED MAIN RUNNER SHALL BE HEAVY DUTY T-BAR GRID SYSTEM SUSPENDED FROM STRUCTURE ABOVE. THIS END OF THE GRID SHALL REST UPON AND BE FREE TO SLIDE ON THE CLOSURE ANGLE.
8. LINE OF WALL.
9. SEISMIC CLIPS. BASIS OF DESIGN ARMSTRONG BERC 2 CLIPS.

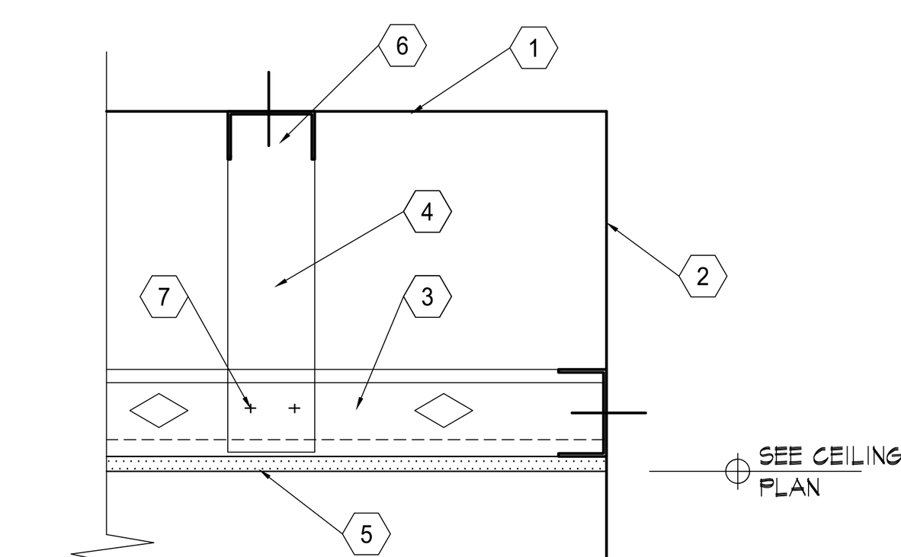
D1 Ceiling Grid Detail
Scale: 3" = 1'-0"



KEYED NOTES

1. METAL STUD WALL AS OCCURS. SEE PARTITION SCHEDULE.
2. SHEET METAL SCREW.
3. WIRE CLIP OR TIE.
4. HANGER WIRE, 8 GAUGE, @ 4'-0" O.C. EACH WAY MAXIMUM AND WITHIN 12" OF THE WALL TYPICAL.
5. METAL RUNNER CHANNELS, 1 1/2" THICK X 18 GA, @ 48" O.C.
6. GYPSUM BOARD, 5/8" THICK, ATTACHED TO METAL FURRING CHANNEL.
7. FURRING CHANNEL, 7/8" THICK X 18 GA, @ 1'-4" O.C. MAXIMUM

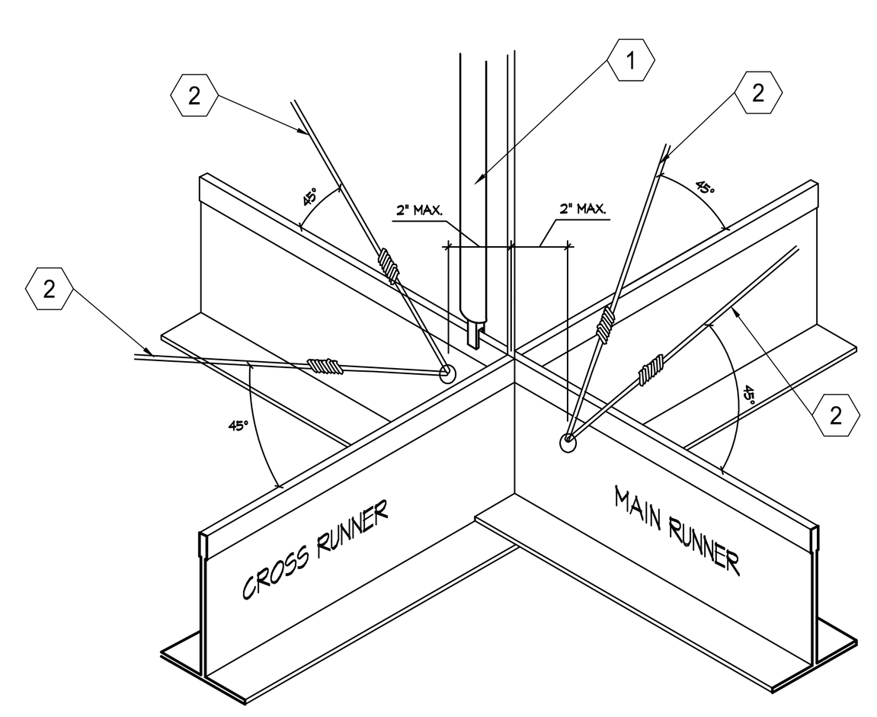
D3 Gypsum Board Ceiling Detail
Scale: 3" = 1'-0"



KEYED NOTES

1. LINE OF STRUCTURE ABOVE.
2. LINE OF WALL.
3. METAL STUD FRAMING (6" THICK, 18 GAUGE, METAL STUDS AT 16" O.C.- HORIZONTAL).
4. METAL STUD FRAMING (6" THICK, 18 GAUGE, METAL STUDS AT 32" O.C.- VERTICAL- BOTH WAYS- PERPENDICULAR AND PARALLEL TO HORIZONTAL FRAMING) . CROSS BRACE FRAMING AS REQUIRED FOR STRUCTURAL RIGIDITY.
5. 5/8" THICK TYPE 'X' GYP. BD. ATTACH TO METAL STUD FRAMING.
6. SEE DETAIL C3/A-501 FOR ATTACHMENT TO STRUCTURE ABOVE.
7. SHEET METAL SCREWS (2) # 10 AT EA. STUD.

D5 Gypsum Board Ceiling Suspension Detail
Scale: 1-1/2" = 1'-0"



KEYED NOTES

1. RIGID HORIZONTAL RESTRAINT/ COMPRESSION POST FROM CEILING GRID TO STRUCTURE ABOVE.
2. CLASS 1 ZINC COATED, SOFT TEMPERED WIRES, 12 GAUGE MIN.WIRES ARRANGED AT 90° FROM EACH OTHER AT AN ANGLE NOT EXCEEDING 45° FROM THE PLANE OF THE CEILING.

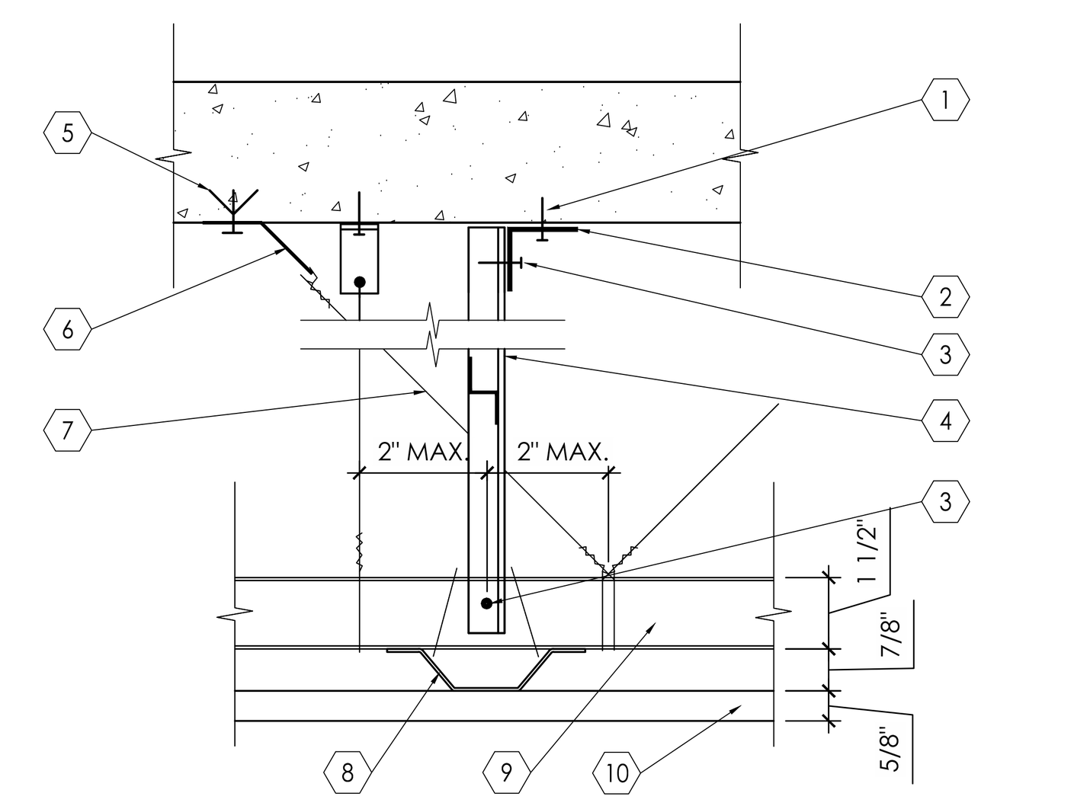
NOTE:

A. CEILING GRIDS IN ROOMS OR AREAS GREATER THAN 1,000 SQ. FT. SHALL HAVE A RIGID HORIZONTAL RESTRAINT FROM CEILING TO STRUCTURE ABOVE AT EVERY 96 SQ. FT.

B. ALL SPLAYED WIRES SHALL BE AT MAXIMUM ANGLE OF 45°, 12 GAUGE AND GALVANIZED.

C. WHEN CEILING AREA EXCEEDS 2,500 SQ. FT. PROVIDE SEISMIC SEPARATION JOINT APPROVED BY CEILING GRID MANUFACTURER AND ARCHITECT.

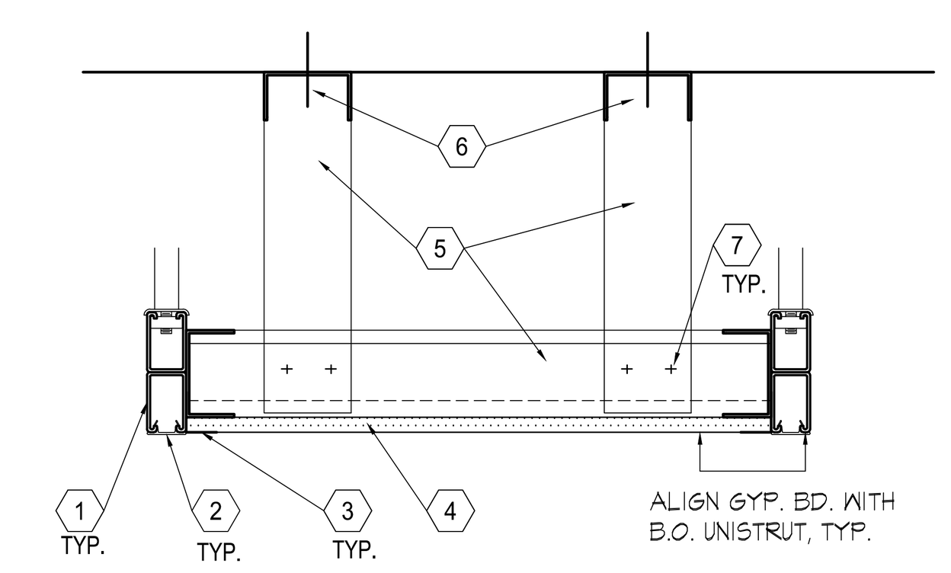
C1 Acoustical Grid Seismic Detail
Not To Scale



KEYED NOTES

1. EXP BOLT 3/16" MIN.
2. METAL CLIP 12 GA MIN x 3/4"W
3. MACHINE BOLT 1/2" DIA. MIN.
4. ANGLE STRUT OR CHANNEL.
5. EXP. BOLT 5/16" MIN.
6. METAL CLIP 1"W X 2" X 12 GA MIN.
7. DIAGONAL HANGER WIRES 12GA MIN.- 4 SIDES
8. FURRING CHANNEL, 7/8" THICK, @ 1'-4" O.C. MAXIMUM.
9. METAL RUNNER CHANNELS, 1 1/2" THICK, @ 48" O.C.
10. GYPSUM BOARD, 5/8" THICK, ATTACHED TO METAL FURRING CHANNEL.

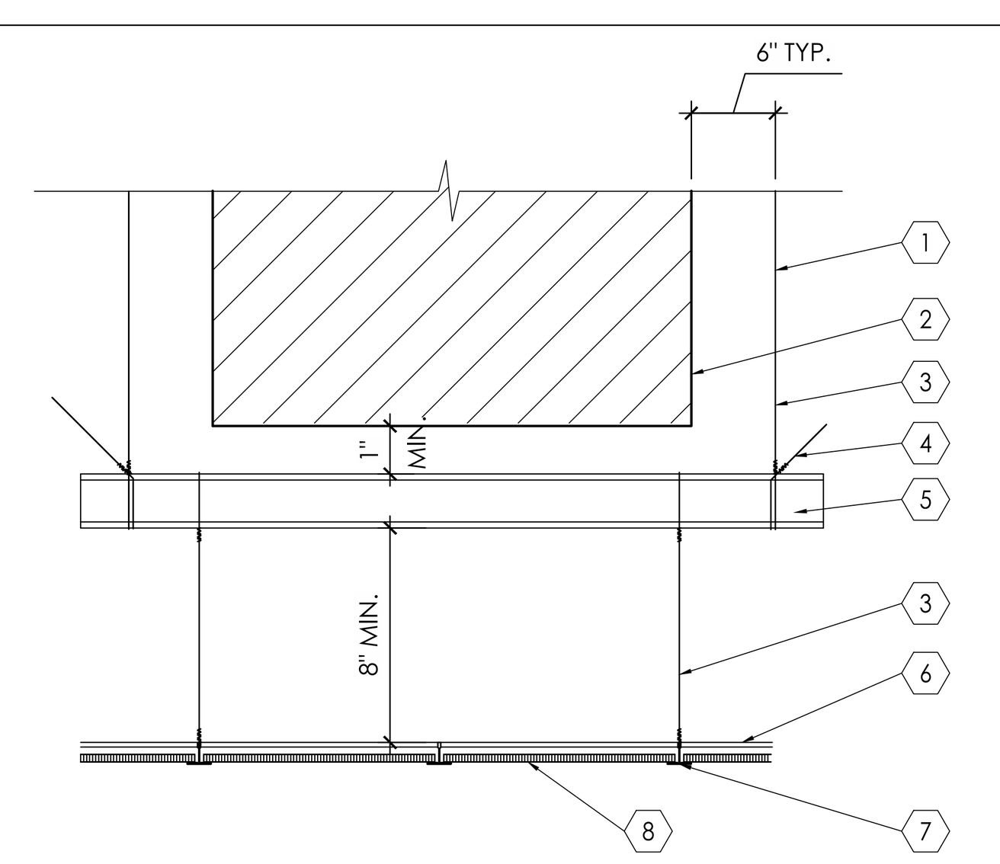
C3 Gypsum Board Ceiling Seismic Restraint Detail
Scale: 3" = 1'-0"



KEYED NOTES

1. P5501 UNISTRUT GRID. SEE STRUCTURAL DRAWINGS.
2. P1184P WHITE PVC UNISTRUT CAP. INSTALL AT EXPOSED TO VIEW UNISTRUTS AFTER SIEMENS EQUIPMENT RAILS INSTALLATION.
3. *'L' TRIM LOULDING. BASIS OF DESIGN FRY REGLET DRML-625. MUD OVER L-MOULDING TO PRIDE A SMOOTH FINISH.*
4. ATTACH 5/8" THICK, TYPE 'X' GYPSUM BOARD TO METAL STUD FRAMING.
5. METAL STUD FRAMING (6" THICK, 18 GAUGE, METAL STUDS AT 16" O.C.- HORIZONTALLY AND VERTICALLY). CROSS BRACE FRAMING AS REQUIRED FOR STRUCTURAL RIGIDITY.
6. SEE DETAIL C3/A-501 FOR ATTACHMENT TO STRUCTURE ABOVE.
7. SHEET METAL SCREWS (2) # 10 AT EA. STUD.

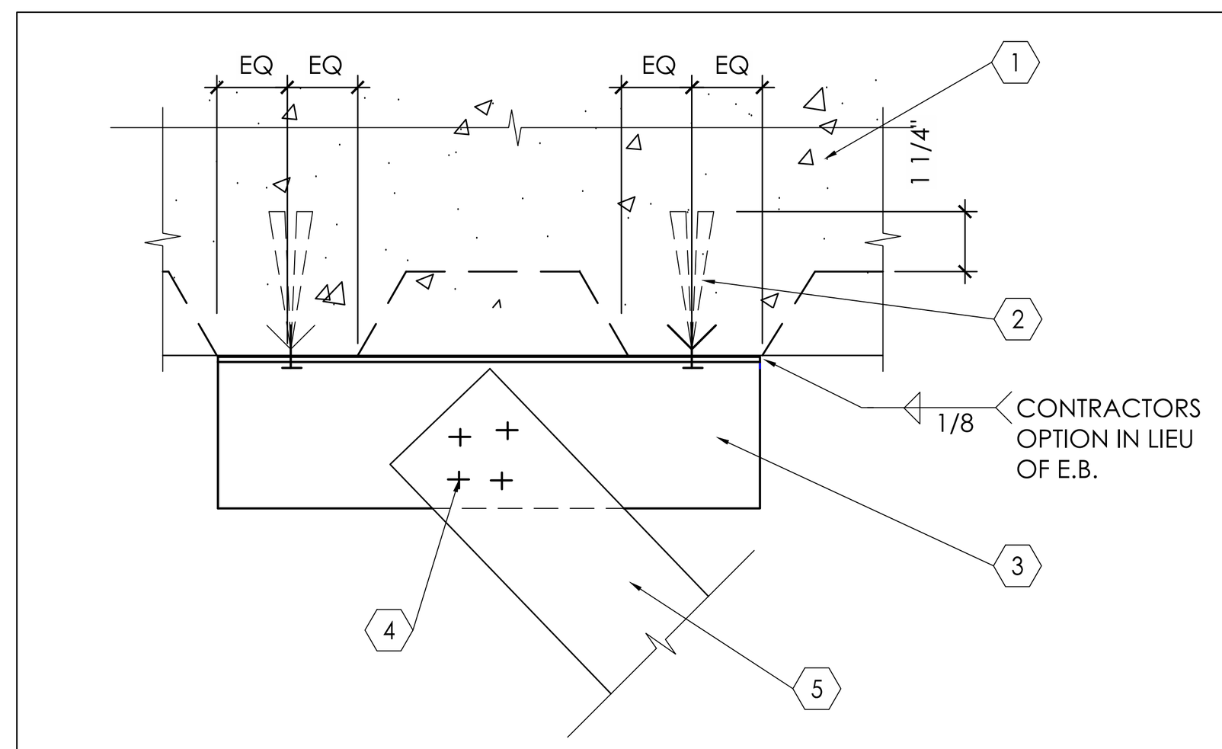
C5 Gypsum Board Ceiling Suspension Detail at Unistruts
Scale: 1-1/2" = 1'-0"



KEYED NOTES

1. SEE DETAIL C1 FOR HANGER WIRE ATTACHMENT.
2. DUCT OR OTHER OBSTRUCTION.
3. HANGER WIRE 8 GA MIN.
4. DIAGONAL HANGER WIRE 12 GA MIN..
5. METAL CHANNELS AT 4'-0" O.C.
4'-0" SPAN= 1-1/2" x 16GA
6'-0" SPAN= 2-1/2" x 16GA
8'-0" SPAN= 4" x 16GA
12'-0" SPAN= 6" x 16GA
6. CROSS RUNNER BEYOND
7. MAIN RUNNER
8. ACOUSTICAL CEILING PANEL. SEE DRAWINGS AND SPECS FOR DETAILS

B1 Acoustical Trapeze Detail
N.T.S.



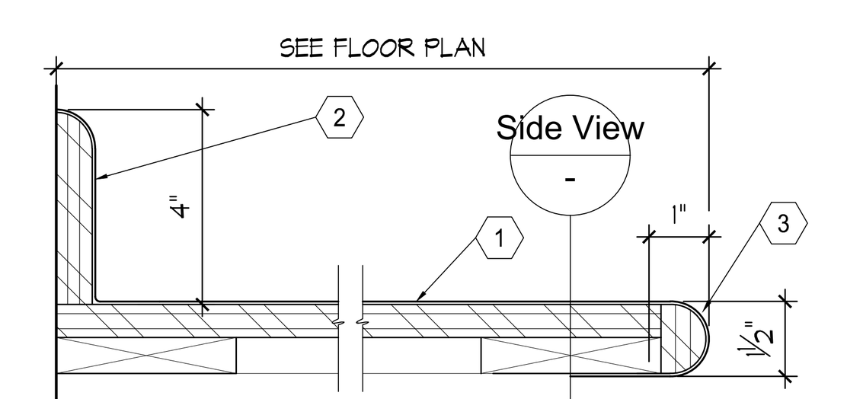
KEYED NOTES

1. EXISTING CONCRETE OVER METAL DECK.
2. 1/4" Ø EXP. BOLTS, TYP.
3. METAL CLIP 12 GA, 3" x 3" x 1'-6" LONG MIN.
4. 4 # 10 SHEET METAL SCREWS.
5. METAL STUD, 18 GA MIN, 3-5/8" @ 4'-0" O.C.

B3 Gypsum Board Bracing Suspension Detail
3"= 1'-0"

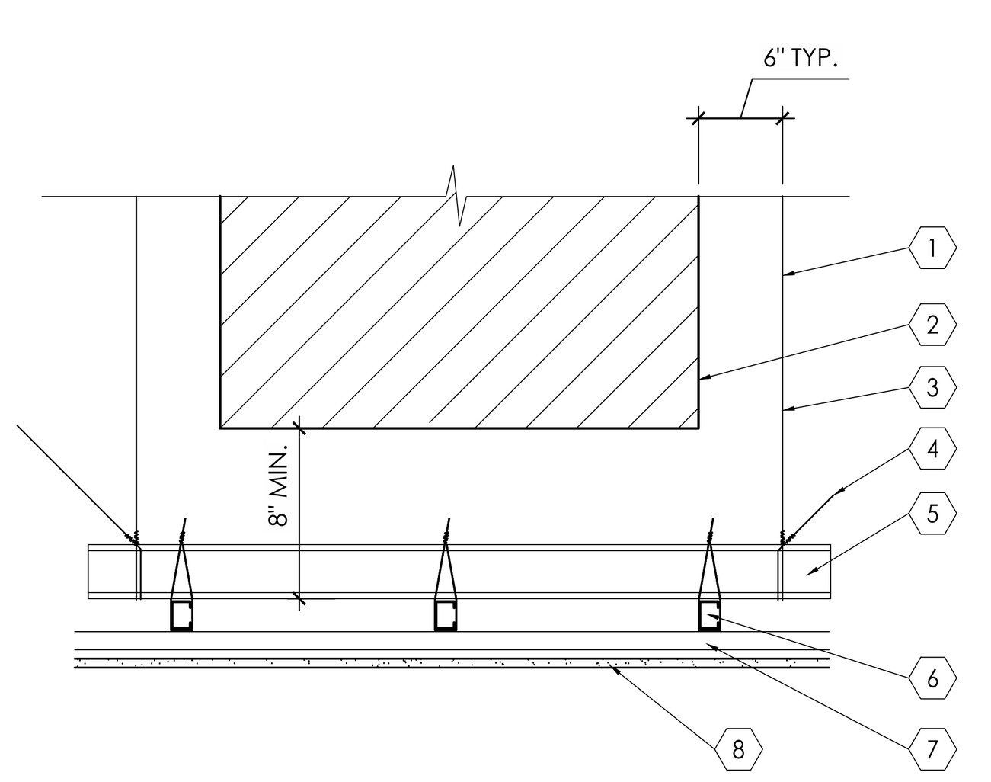
KEYED NOTES

1. PLASTIC LAMINATE OVER PREMIUM GRADE MULTICORE, WITH RADIUS AS SHOWN. SEE SPECIFICATIONS. PROVIDE MARINE GRADE PLYWOOD WHERE SINK OCCURS AT COUNTERTOP.
2. LAMINATE SHALL RUN CONTINUOUSLY FROM COUNTERTOP TO BACKSPLASH. BACKSPLASH TO HAVE A $\frac{3}{4}$" RADIUS EDGE.
3. PLASTIC LAMINATE BULLNOSE. FIELD VERIFY TO MATCH WITH ADJACENT EXISTING.



Plastic Laminate Countertop

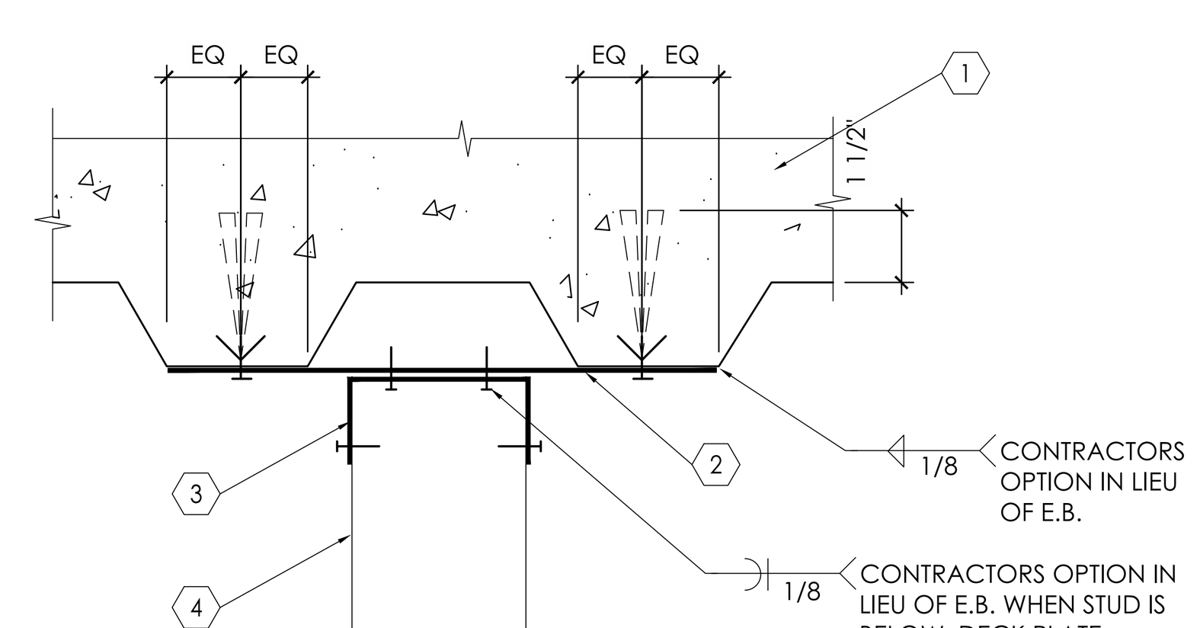
B5 Countertop Detail
Scale: 3" = 1'-0"



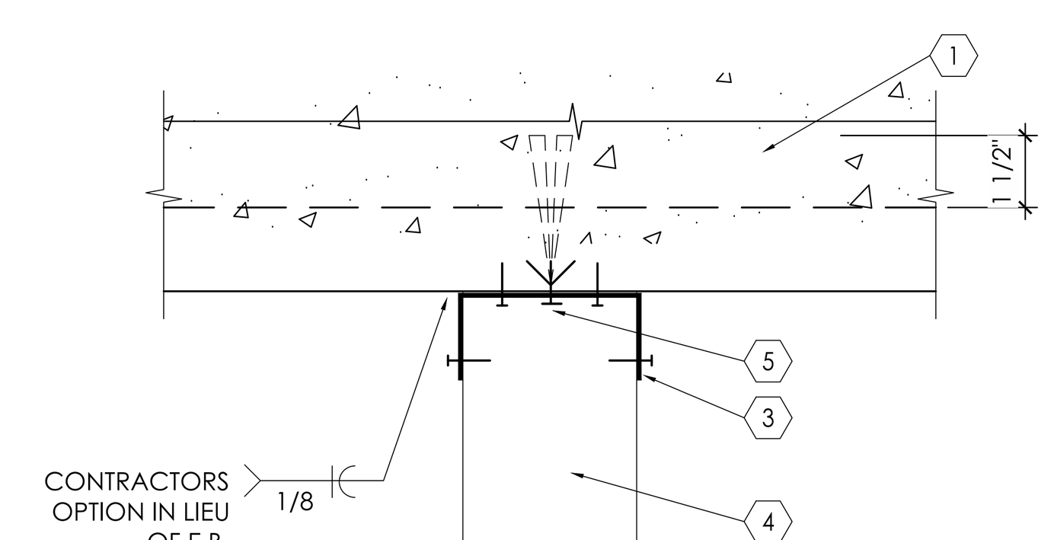
KEYED NOTES

1. SEE DETAIL C1 FOR HANGER WIRE ATTACHMENT.
2. DUCT OR OTHER OBSTRUCTION.
3. HANGER WIRE 8 GA MIN.
4. DIAGONAL HANGER WIRE 12 GA MIN..
5. METAL CHANNELS AT 4'-0" O.C.
4'-0" SPAN= 1-1/2" x 16GA
6'-0" SPAN= 2-1/2" x 16GA
8'-0" SPAN= 4" x 16GA
12'-0" SPAN= 6" x 16GA
6. METAL RUNNER CHANNELS, 1 1/2" THICK.
7. GYPSUM BOARD, 5/8" THICK, ATTACHED TO METAL FURRING CHANNEL.
8. FURRING CHANNEL, 7/8" THICK, @ 1'-4" O.C. MAXIMUM

A1 Gypsum Board Trapeze Detail
N.T.S.



PARALLEL TO DECK



PERPENDICULAR TO DECK

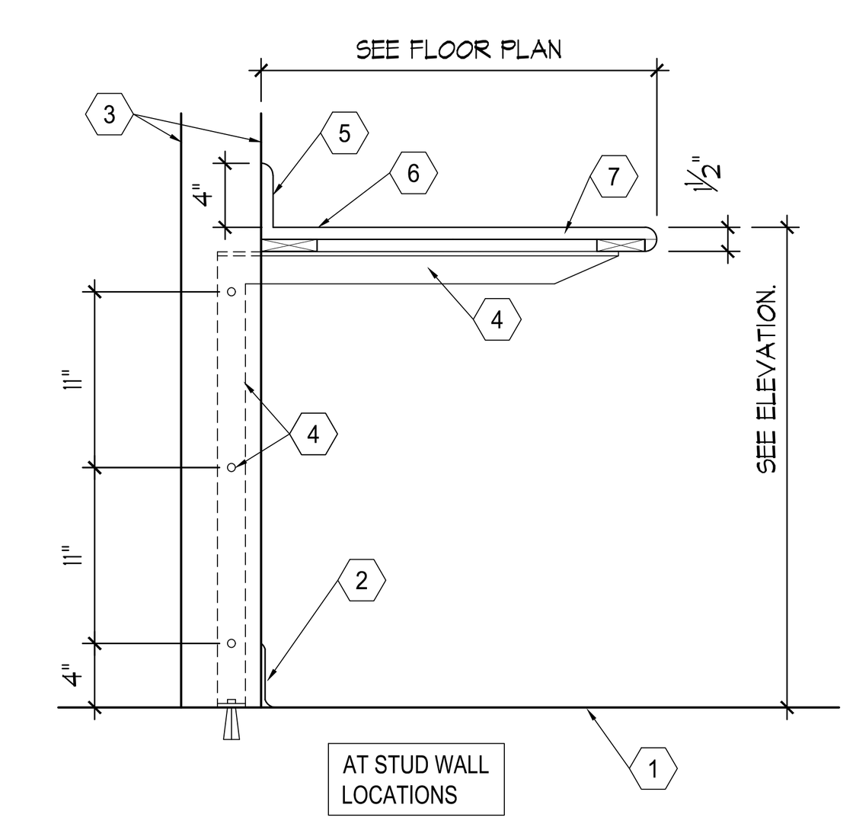
KEYED NOTES

1. EXISTING CONCRETE OVER METAL DECK.
2. CONTINUOUS METAL PLATE, 10 GA x 1'-4" WIDE WITH TWO 1/4" EXP. BOLTS
3. LONG LEG TRACK 16 GA WITH 2 # 10 S.M.S. @ 16" O.C.
4. METAL STUD, 18 GA MIN, 3-5/8" @ 4'-0" O.C.
5. PL WASHER 1/8" x 3" x3"

A3 Typical Suspended Stud Attachment
3"= 1'-0"

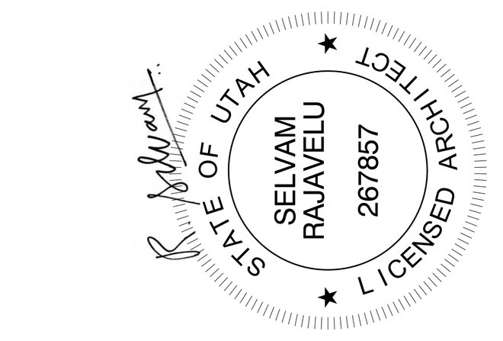
KEYED NOTES

1. LINE OF FLOOR.
2. WALL BASE. SEE FINISH SCHEDULE.
3. EXISTING METAL STUD FRAMED LEAD SHIELDED PARTITION WALL.
4. COUNTERTOP SUPPORT, PAINTED. SUPPORT SHALL BE STEEL ANGLE, 2" X 2" X 1/4", PIECES MITERED AND WELDED @ 90° ANGLE AS INDICATED. CHAMFER EXPOSED EDGE (BELOW COUNTERTOP EDGE) AND GRIND ALL EXPOSED EDGES SMOOTH. ATTACH SUPPORT TO METAL STUDS INSIDE WALL WITH 1/4" BOLTS, AS SHOWN. AT FLOOR, PROVIDE 3" WIDE X 6" LONG X 1/4" THICK, BASE STEEL PLATE WELDED TO VERTICAL STEEL ANGLE. ATTACH BASE PLATE TO FLOOR WITH TWO 1/2" DIAMETER ANCHOR BOLTS (ON EITHER SIDE OF VERTICAL ANGLE) WITH 3" MINIMUM EMBED IN CONCRETE FLOOR. CONTRACTOR SHALL REVIEW INTERIOR ELEVATIONS AND LOCATE SUPPORTS DURING WALL CONSTRUCTION. SUPPORT SPACING SHALL NOT EXCEED 2'-8" O.C. MAXIMUM. (RE-USE OF EXISTING SUPPORT AND BRACKET IS ACCEPTABLE IF FEASIBLE, COORDINATE WITH THE OWNER).
5. BACKSPLASH WITH 3/4" RADIUS EDGE.
6. PROVIDE OPENING AT THE COUNTERTOP AS SHOWN IN THE FLOOR PLAN. PROVIDE GROMMETS AS REQUIRED FOR THE EQUIPMENT CONNECTIONS.
7. PLASTIC LAMINATE FACED COUNTERTOP WITH BULLNOSE EDGE. SEE DETAIL B5/A-501 AND FIELD VERIFY TO MATCH WITH ADJACENT EXISTING. SEE FINISH FLOOR PLAN FOR PLASTIC LAMINATE COLOR.



A6 Countertop / Kneespace
SCALE: FULL SCALE

NJRA ARCHITECTS
NJRA Architects, Inc.
5272 S. College Drive, Suite104
Murray, Utah 84123
801.364.9259
www.njraarchitects.com



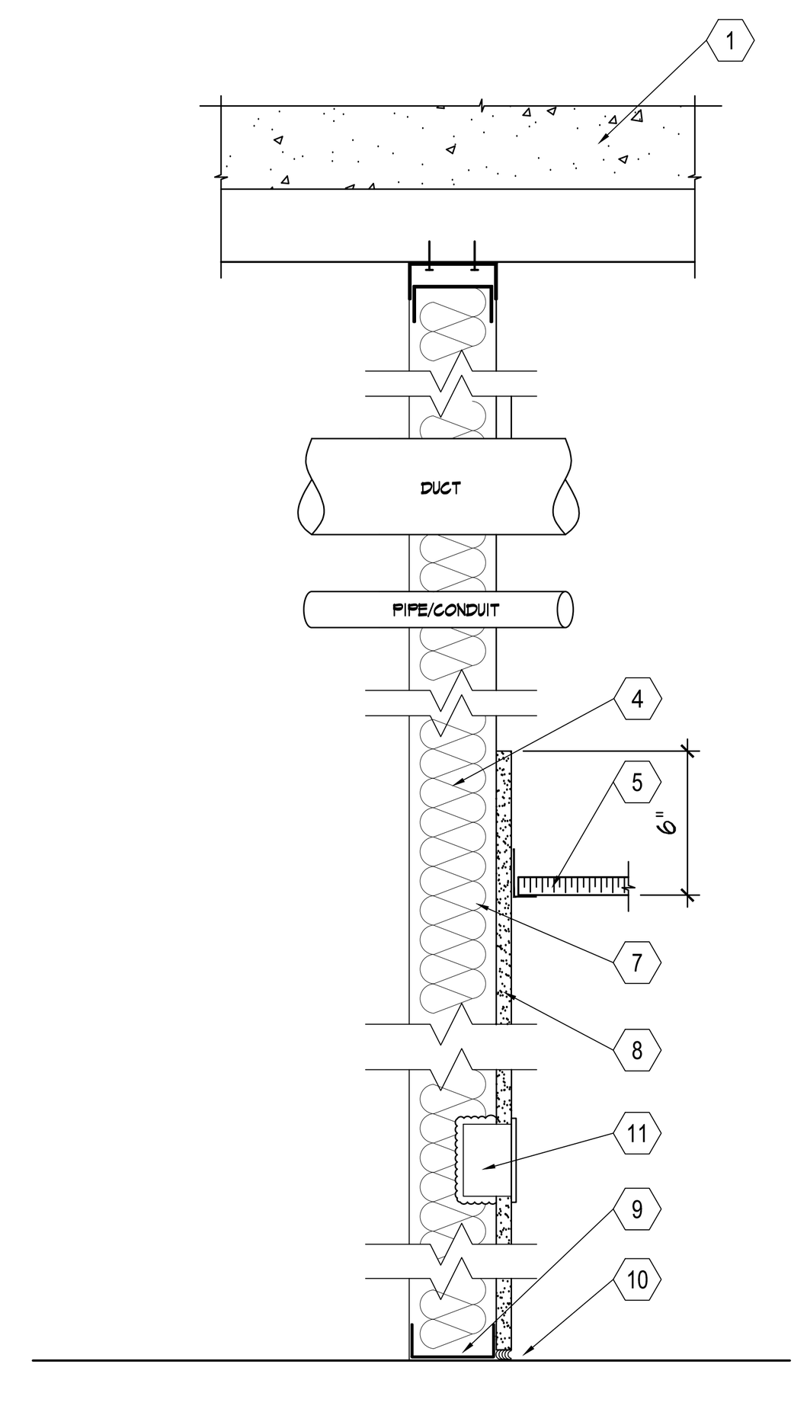
Intermountain Healthcare
IMC- Cath Lab 3 Remodel Project
5121 South Cottonwood Street
Murray, UT 84107

NJRA Project # 20230
Construction Documents December 15, 2021

Details

A501

D2 — Wall Types



FURRING WALL TYPE 'A'

KEYED NOTES

1. EXISTING CONCRETE SLAB OVER EXISTING METAL DECK.

2. NOT USED

3. NOT USED

4. METAL STUDS AS SCHEDULED. UNLESS OTHERWISE NOTED, PROVIDE 20 GA GALVANIZED METAL STUDS AT 1'-4" O.C. THROUGHOUT. STUD DESIGNATION TO BE 362S 162-33 (33 MIL. MIN.)

5. ACOUSTICAL TILE CEILING WHERE OCCURS. SEE REFLECTED CEILING PLAN.

6. GYPSUM BOARD CEILING WHERE OCCURS. SEE REFLECTED CEILING PLAN.

7. PROVIDE 3 1/2" BATT INSULATION (R-13 MIN) THROUGHOUT UNLESS OTHERWISE NOTED.

8. GYPSUM BOARD, 5/8" THICK, TYPE 'X' TYPICAL, U.N.O, ATTACHED TO METAL STUD FRAMING. SEE GENERAL NOTE # 'B' BELOW.

9. ANCHOR BASE TRACK TO CONCRETE FLOOR BELOW. SEE DETAIL B3/A502.

10. STOP GYPSUM BOARD 1/4" ABOVE THE FLOOR TYP. PROVIDE ACOUSTIC SEALANT AT SOUND WALLS.

11. ISOLATION BOX AS OCCURS. PROVIDE FIRE MOLDABLE PUTTY PADS AND FIRESTOP SEALANT AROUND ELECTRICAL BOXES AT ALL RATED WALLS, TYP.

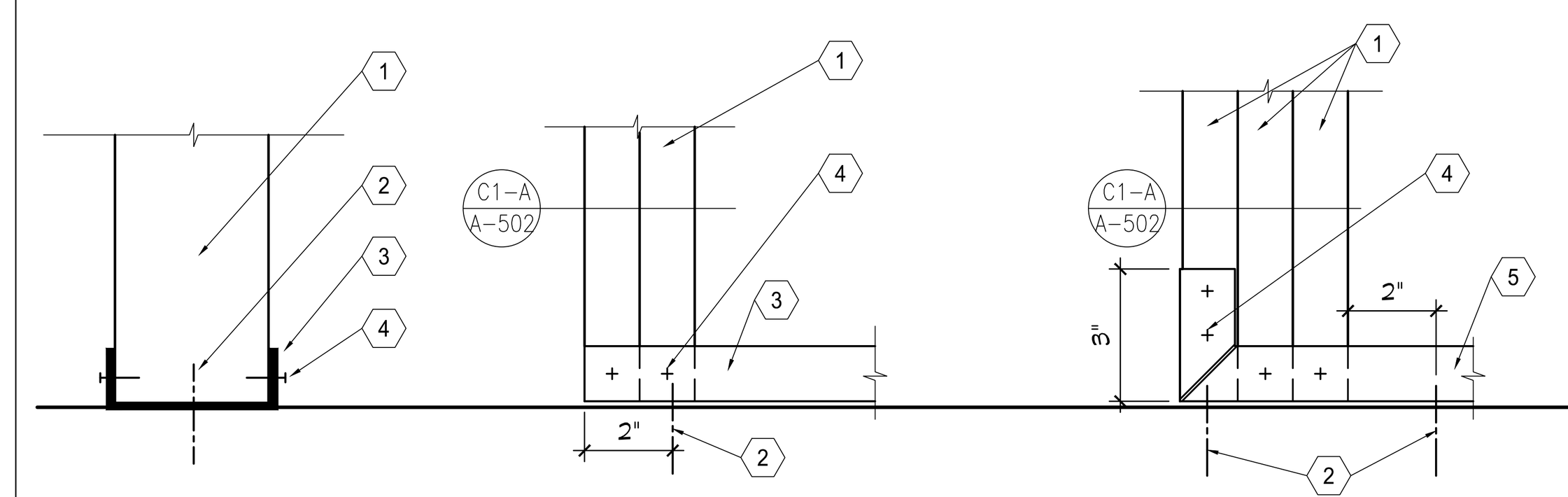
GENERAL NOTES

A. PARTITION TYPE / FURRED WALLS ARE TYPE 'A' THROUGHOUT UNLESS NOTED OTHERWISE.

B. CONTRACTOR SHALL VERIFY ITEMS LIKE SEMI OR FULLY RECESSED MISCELLANEOUS BOXES, PANELS, PLUMBING LINES, CONDUITS, PIPES, ETC. THAT ARE CONCEALED IN THE WALL. IF 3-5/8" METAL STUD ARE INADEQUATE, CONTRACTOR SHALL NOTIFY THE ARCHITECT AND USE 6" STUDS. COORDINATE WITH ALL THE CONSULTANT DRAWINGS PRIOR TO WALL CONSTRUCTION AND USE 6" OR 8", 20 GAUGE, METAL STUDS FOR FRAMING IN LIEU OF 3-5/8" METAL STUDS.

D2 Wall Types
Scale: 1-1/2" = 1'-0"

E4 — Base Track



BASE AT SPANS < 8'-0"   BASE @ SPANS > 8'-0"

KEYED NOTES

1. METAL STUDS.

2. 0.14" DIA. POWDER DRIVEN PINS W/ 1-$\frac{1}{4}$" MIN. EMBED @ 2" FROM THE ENDS.

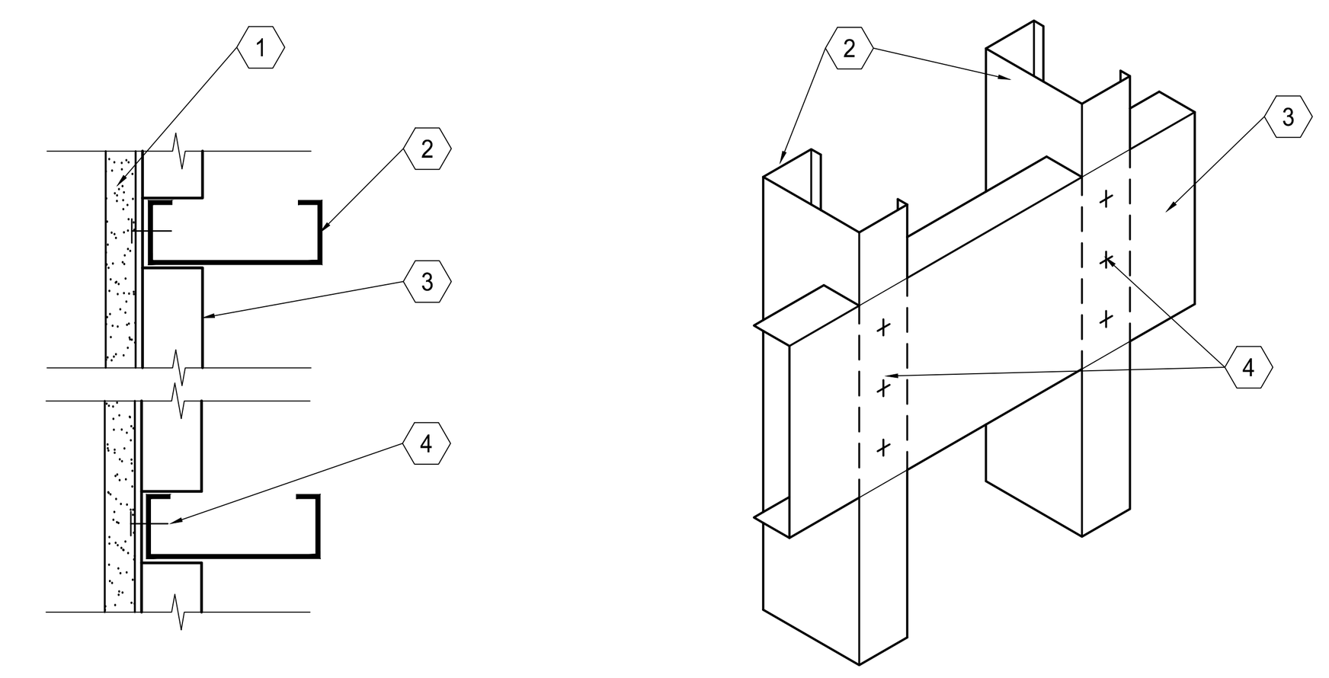
3. MTL. TRACK- 18 GA MIN.

4. # 10 SHEET METAL SCREWS EA. SIDE.

5. BENT TRACK- 18 GA MIN.

E4 Base Track
Scale: 3" = 1'-0"

D4 — Metal Stud Blocking Detail



KEYED NOTES

1. $\frac{5}{8}$" TYPE 'X' GYPSUM BOARD.

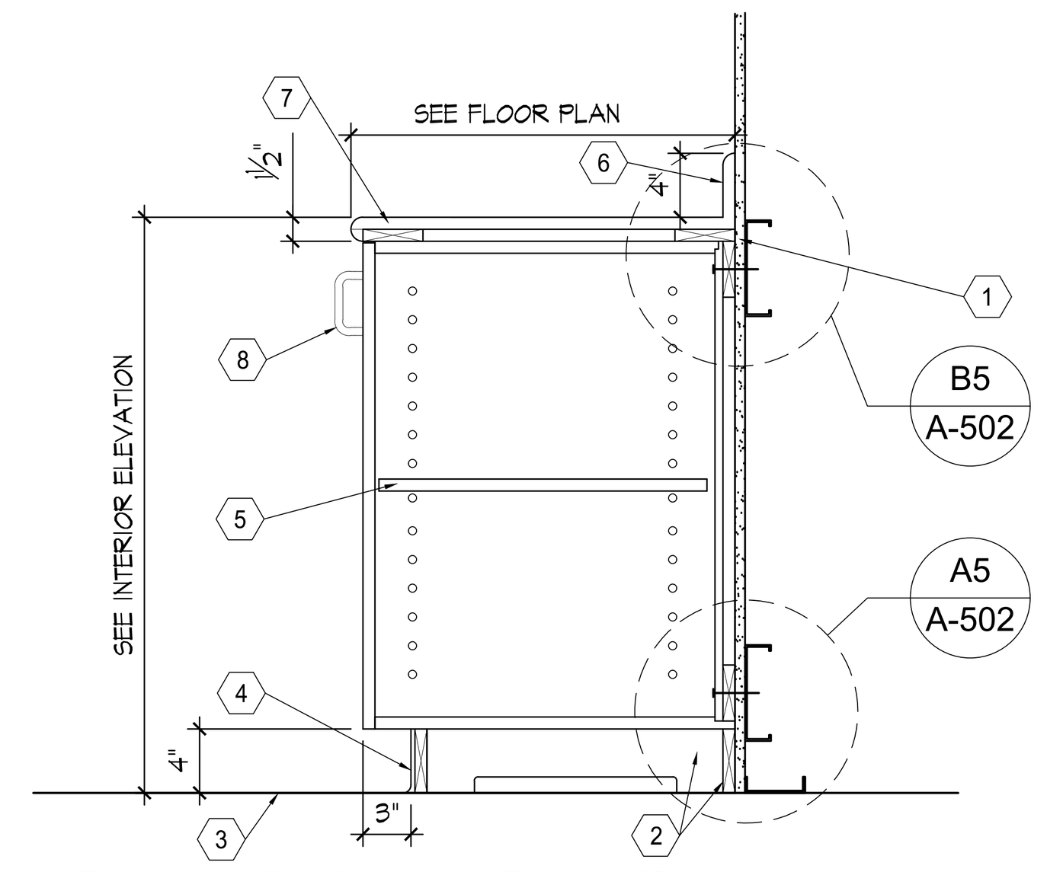
2. EXISTING OR NEW 3 $\frac{5}{8}$" METAL STUDS @ 16" O.C.

3. 6" X 16 GA METAL STUD BLOCKING. EXTEND BLOCKING TO NEXT STUD BEYOND EQUIPMENT - TYPICAL BOTH SIDES

4. 3 # 10 SHEET METAL SCREWS AT EA. STUD.

D4 Metal Stud Blocking Detail
Scale: 3" = 1'-0"

C2 — Base Cabinet Detail



KEYED NOTES

1. 5/8" THK PAINTED GYPSUM BOARD SHEATHING ON 3-5/8" MTL STUD FRAMING, WHERE OCCURS.

2. CABINET BASE. COORDINATE WITH ELECTRICAL DRAWINGS TO RUN POWER, DATA THROUGH THE BACK WALL.

3. LINE OF FLOOR.

4. WALL BASE. SEE FLOOR PLAN.

5. MULTI-CORE, 1" THICK, PREMIUM GRADE - PANEL CORE PRODUCT USED FOR LAMINATED CASEWORK. SEE ELEVATIONS FOR NUMBER OF ADJUSTABLE SHELVES REQUIRED. NOTCH SHELF 1/8" AT SUPPORTS TO PREVENT SLIDE OUT.

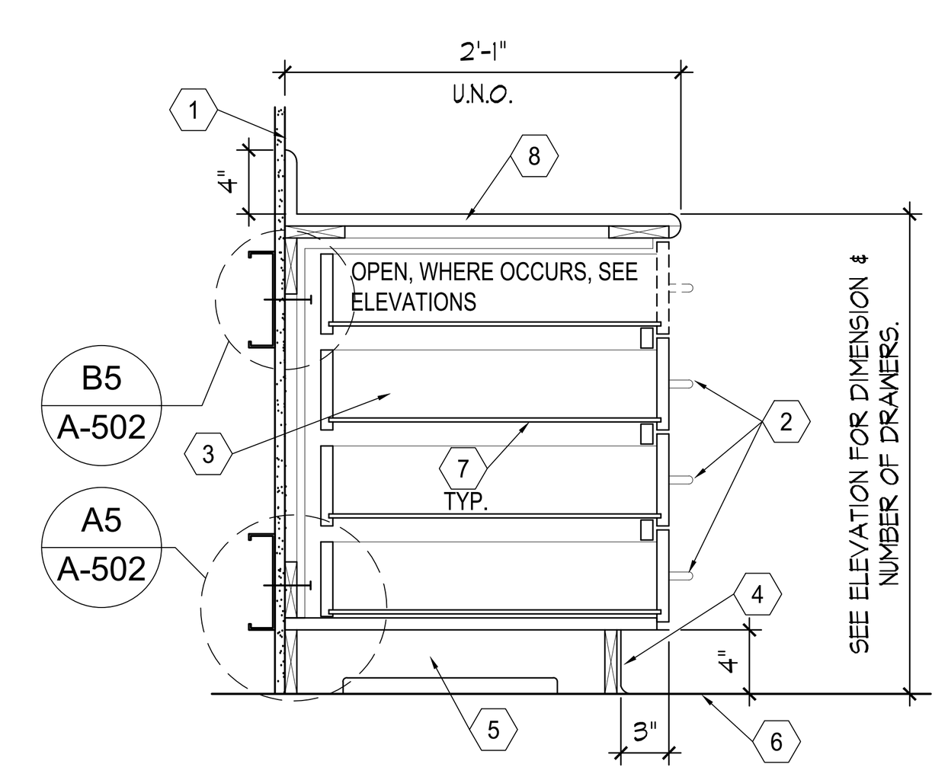
6. BACKSPLASH WITH 3/4" RADIUS EDGE.

7. PLASTIC LAMINATE FACED COUNTERTOP WITH BULLNOSE EDGE. PROVIDE SOLID SURFACE END CAP AT ALL EXPOSED ENDS. SEE B5/A-502. FIELD VERIFY PLASTIC LAMINATE TO MATCH EXISTING.

8. DOOR PULL. 4" WIRE PULL. BRUSHED NICKEL FINISH. SEE SPECIFICATIONS IN PROJECT MANUAL.

C2 Base Cabinet Detail
Scale: 1" = 1'-0"

C4 — Base Cabinet with Drawers



KEYED NOTES

1. EXISTING WALL TO REMAIN. PATCH AND REPAIR AFTER INSTALLATION OF WALL BACKING AS REQUIRED.

2. DOOR OR DRAWER PULL. 4" WIRE PULL. BRUSHED NICKEL FINISH. SEE SPECIFICATIONS IN PROJECT MANUAL.

3. DRAWER. SEE SPECIFICATIONS IN PROJECT MANUAL FOR TYPICAL DRAWER CONSTRUCTION.

4. WALL BASE. SEE FINISH SCHEDULE.

5. CABINET BASE. COORDINATE WITH ELECTRICAL DRAWINGS FOR POWER, DATA OUTLETS THAT ARE LOCATED HERE.

6. LINE OF FLOOR.

7. DRAWER BOTTOM PANEL. SEE SPECIFICATIONS IN PROJECT MANUAL FOR TYPICAL DRAWER CONSTRUCTION.

8. PLASTIC LAMINATE FACED COUNTERTOP WITH BULLNOSE EDGE. PROVIDE SOLID SURFACE END CAP AT ALL EXPOSED ENDS. SEE B5/A-502. FIELD VERIFY PLASTIC LAMINATE TO MATCH EXISTING.

C4 Base Cabinet with Drawers
Scale: 1" = 1'-0"

A3 — Wall Cabinet

KEYED NOTES

1. $\frac{5}{8}$" GYP. BD. SEE DETAIL A1/A-501 FOR WALL TYPES.

2. DOOR PULL. 4" WIRE PULL. BRUSHED NICKEL FINISH. SEE SPECIFICATIONS IN PROJECT MANUAL.

3. PLASTIC LAMINATE CABINET DOOR, WITH $\frac{1}{4}$ GLAZING.

4. ADJUSTABLE SHELF. SECURE WITH CLIPS.

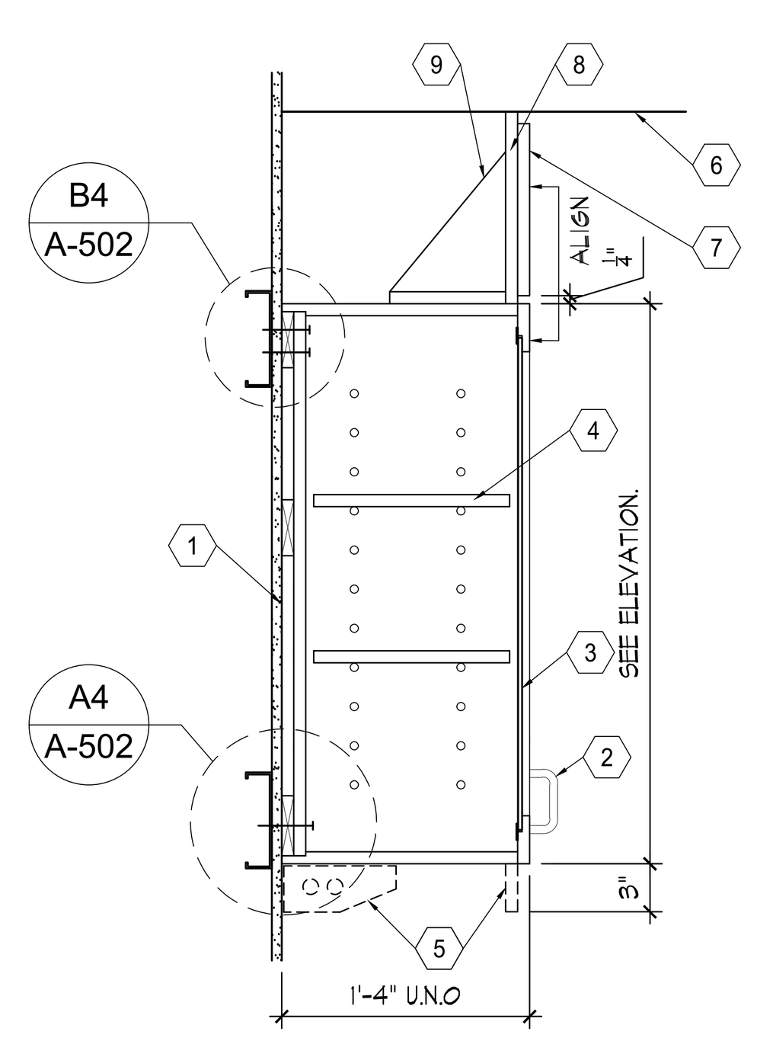
5. PROVIDE PLASTIC LAMINATE FASCIA PANEL IN PLACES WHERE UNDER CABINET LIGHT OCCURS. SEE ELECTRICAL DRAWINGS FOR UNDER CABINET LIGHT FIXTURE LOCATIONS.

6. LINE OF CEILING. SEE REFLECTED CEILING PLAN.

7. CLOSURE PANEL. PROVIDE A $\frac{1}{2}$" REVEAL ALL AROUND WHERE CLOSURE PNL. MEETS CEILING. PROVIDE $\frac{1}{4}$" REVEAL ONLY ON THE FRONT FACE WHERE CLOSURE PNL. MEETS CABINET DOOR.

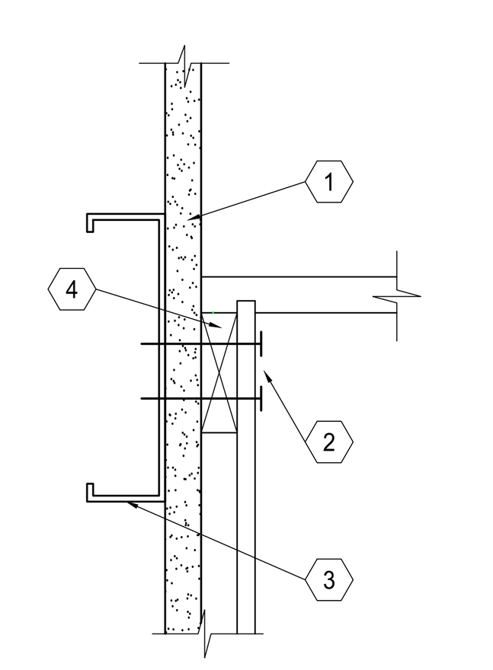
8. CONTINIOUS SCRIBE STRIP.

9. PANEL SUPPORT AS REQUIRED.



A3 Wall Cabinet
Scale: 1" = 1'-0"

B4 — Wall Cabinet Anchorage -Top



KEYED NOTES

1. FACE OF WALL ASSEMBLY.

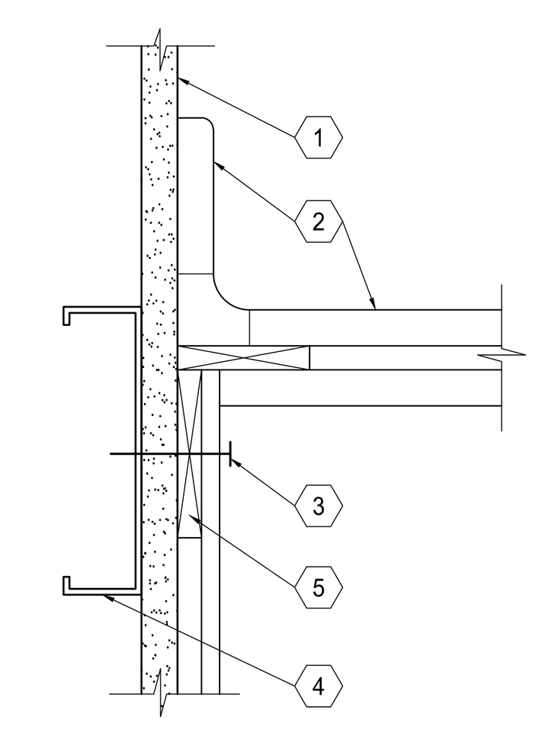
2. 2 # 12 S.M.S. @ 16" O.C. MIN. AND 3" FROM EACH END.

3. METAL STUD BLOCKING. SEE DETAIL D4/A-502.

4. SOLID BLOCKING, TYP.

B4 Wall Cabinet Anchorage -Top
Scale: 3" = 1'-0"

B5 — Base Cabinet Anchorage



KEYED NOTES

1. FACE OF WALL ASSEMBLY.

2. COUNTERTOP AND BACKSPLASH. SEE DETAIL A4/A-504

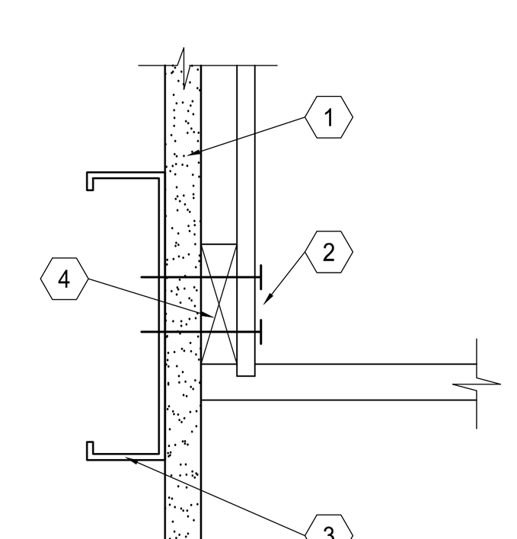
3. # 12 S.M.S. @ 16" O.C. MIN. AND 3" FROM EACH END.

4. METAL STUD BLOCKING. SEE DETAIL D4/A-502.

5. SOLID BLOCKING, TYP.

B5 Base Cabinet Anchorage
Scale: 3" = 1'-0"

A4 — Wall Cab. Anchorage - Bottom



KEYED NOTES

1. FACE OF WALL ASSEMBLY.

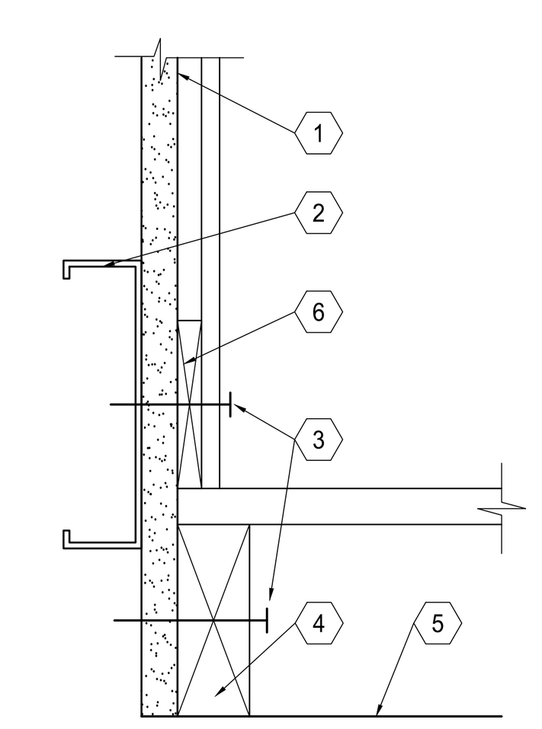
2. 2 # 12 S.M.S. @ 16" O.C. MIN. AND 3" FROM EACH END.

3. METAL STUD BLOCKING. SEE DETAIL D4/A-502.

4. SOLID BLOCKING, TYP.

A4 Wall Cab. Anchorage - Bottom
Scale: 3" = 1'-0"

A5 — Base Cabinet Anchorage



KEYED NOTES

1. FACE OF WALL ASSEMBLY.

2. METAL STUD BLOCKING. SEE DETAIL D4/A-502.

3. # 12 S.M.S. @ 16" O.C. MIN. AND 3" FROM EACH END.

4. PRESSURE TREATED CABINET BASE SUPPORT.

5. LINE OF FLOOR.

6. SOLID BLOCKING, TYP.

A5 Base Cabinet Anchorage
Scale: 3" = 1'-0"

KEY NOTES - ELEVATION

1. EXISTING LEAD LINED DOORS, FRAME & HARDWARE TO REMAIN. PROTECT DURING CONSTRUCTION.
2. EXISTING BASE CABINET AND UPPER WALL CABINET. TO REMAIN. PROTECT DURING CONSTRUCTION.
3. REPAINT EXISTING H.M. DOOR FRAME, TYP. SEE FINISH FLOOR PLAN.
4. LINE OF EXISTING SOFFIT, FIELD VERIFY.
5. NEW PLASTIC LAMINATE COUNTERTOP AND BACKSPLASH. SEE DETAIL B5/A501 AND FINISH FLOOR PLAN FOR LAMINATE COLOR REQUIRED TO MATCH ADJACENT EXISTING & MORE INFORMATION. HEIGHT OF COUNTERTOP SHALL MATCH WITH THE ADJACENT EXISTING.
6. NEW PLASIC LAMINATE WALL MOUNTED CABINET. SEE DETAIL A3/A502 FOR MORE INFORMATION. FIELD VERIFY TO MATCH FINISH AND SIZE OF ADJACENT EXISTING.
7. NEW PLASIC LAMINATE BASE CABINET WITH DOOR AND SHELVING. SEE DETAIL C2/A502 FOR MORE INFORMATION. FIELD VERIFY TO MATCH EXISTING.
8. NEW PLASIC LAMINATE BASE CABINET WITH DRAWERS. SEE DETAIL C4/A502 FOR MORE INFORMATION. FIELD VERIFY TO MATCH EXISTING.
9. PROVIDE FINISHED PLASTIC LAMINATE END PANEL AFTER REMOVAL OF EXISTING SINK AND CABINET AT THIS LOCATION. FIELD VERIFY TO MATCH EXISTING FINISH.
10. PATCH, REPAIR AND REFINISH GYPSUM WALL AFTER REMOVAL OF CABINET HERE.
11. PROVIDE PLASTIC LAMINATE CLOSER PANEL.
12. LINE OF CEILING ABOVE.

GENERAL NOTES

1. COORDINATE WITH SIEMENS REPRESENTATIVE TO ENSURE REQUIRED CEILING HEIGHT OF 8' -11" IS ACHIEVED FROM FINISHED FLOOR TO THE FACE OF THE UNISTRUT INSTALLED AT THE CEILING. SEE SIEMENS EQUIPMENT DRAWINGS FOR ACCEPTABLE FLOOR SLOPE TOLERANCES AND FOR MORE INFORMATION. FIELD VERIFY AND COORDINATE WORK BEFORE PROCEEDING.
2. ALL EXPOSED STEEL IN THE WALLS, ABOVE CEILING ETC. ARE REQUIRED TO BE SPRAY APPLIED FIRE PROOFED. SEE CODE COMPLIANCE PLANS FOR FIRE RATINGS THAT IS REQUIRED TO BE MAINTAINED THROUGHOUT THE PROJECT. ANY DAMAGE TO THE EXISTING FIRE PROOFING IS REQUIRED TO BE PATCHED AND REPAIRED WITH COMPATIBLE FIRE PROOFING PRODUCT.
3. ALL EXISTING MAGNETIC AND LEAD SHIELDING IN THE EXISTING WALLS, FLOOR AND ROOF DECK IS REQUIRED TO BE RETAINED. REPLACE TO MAINTAIN SHIELDING WITH EQUIVALENT SHIELDING TO MATCH ORIGINAL CONDITIONS. IF DAMAGED DURING CONSTRUCTION.

NJRA ARCHITECTS
NJRA Architects, Inc.
5272 S. College Drive, Suite104
Murray, Utah 84123
801.364.9259
www.njraarchitects.com

STATE OF UTAH LICENSED ARCHITECT
SELVAM RAJAVELU
267857

Intermountain Healthcare
IMC- Cath Lab 3 Remodel Project
5121 South Cottonwood Street
Murray, UT 84107

NJRA Project # 20230
Construction Documents December 15, 2021

Interior Elevations and Cabinet Details

A502

LEGEND OF MECHANICAL SYMBOLS AND ABBREVIATIONS

SINGLE LINE	DOUBLE LINE	
		POSITIVE PRESSURE DUCT – RISE
		POSITIVE PRESSURE DUCT – DROP
		NEGATIVE PRESSURE DUCT – RISE
		NEGATIVE PRESSURE DUCT – DROP
		ROUND DUCT – RISE
		ROUND DUCT – DROP
		UNDER FLOOR DUCT
		TURNING VANES
		FRESH AIR LOUVER
		RELIEF AIR OR EXHAUST AIR LOUVER
	12X12 200	CEILING SUPPLY DIFFUSER
	20X20 200	CEILING RETURN REGISTER
	12X12 200	CEILING EXHAUST REGISTER, (BALANCE TO MATCH SUPPLY IF RETURN CFM IS NOT SHOWN)
	24X10 200	SIDEWALL SUPPLY REGISTER
	24X10 200	SIDEWALL EXHAUST OR RETURN REGISTER
	12X12 200	CEILING SUPPLY DIFFUSER WITH FLEXIBLE DUCT
	24/24	CEILING RETURN AIR GRILE W/ SOUND BOOT
	3-1" SLOTS @ 48" 400	LINEAR DIFFUSER WITH PLENUM AND FLEXIBLE DUCT CONNECTION. NO. OF SLOTS ON TOP, ACTIVE LENGTH AND CFM ON BOTTOM
		FLEXIBLE DUCT CONNECTION
		FLEXIBLE DUCT
		FAN
12/8 FO	12/8 FO	FLAT OVAL DUCT WITH NET INSIDE DIMENSIONS SHOWN IN INCHES.
12/8	12/8	RECTANGULAR DUCT WITH NET INSIDE DIMENSIONS SHOWN IN INCHES.
12"ø	12"ø	ROUND DUCT WITH NET INSIDE DIMENSIONS SHOWN IN INCHES.
UP	UP	INCLINED RISE
DN	DN	INCLINED DROP
	W R	R/W=1. ROUND DUCT SIMILAR TO RECTANGULAR
12/12 8/8	12/12 8/8	RECTANGULAR TO RECTANGULAR OR ROUND TO ROUND DUCT TRANSFORMATION MAXIMUM 15° INCLUDED ANGLE EXCEPT WHERE SHOWN OTHERWISE.
9/9 9"ø	9/9 9"ø	RECTANGULAR TO ROUND DUCT TRANSFORMATION
	R W	BRANCH DUCT SPLIT WITH 6" WIDTH AND MIN. R=WIDTH OF BRANCH DUCT DOWNSTREAM. ELBOW TURNING VANE OPTIONAL.
RECT. TO ø: RECT. ROUND ALL	L90 L90 45° D D	TAP ENTRY AREA EQUALS 150% OF BRANCH AREA
		HIGH EFFICIENCY FITTING
		MANUAL VOLUME DAMPER
FD	FD	FIRE DAMPER IN DUCT, W/ ACCESS PANEL REQD.
FSD	FSD	COMBINATION FIRE/SMOKE DAMPER W/ ACCESS PANEL
SD	SD	SMOKE DAMPER W/ ACCESS PANEL
OR ATC	ATC OR	ATC DAMPER
AD	AD	ACCESS PANEL IN DUCT OR PLENUM
		HEATING OR COOLING COIL IN DUCT
		SINGLE DUCT AIR TERMINAL BOX VARIABLE OR CONSTANT VOLUME. MIN. 1-1/2 TERMINAL INLET SIZE STRAIGHT DUCT AT TERMINAL INLET.

TOP FIGURES INDICATE NECK SIZE. BOTTOM FIGURE INDICATES CFM.

WITH RESPECT TO AIR FLOW 15° NOMINAL INCLINE WITH RADIUS TURNS=DEPTH OF DUCT.

	4-WAY BLOW PATTERN
	3-WAY BLOW PATTERN
	2-WAY BLOW PATTERN
	2-WAY BLOW PATTERN
	1-WAY BLOW PATTERN
LPC	LOW PRESSURE CONDENSATE
MPC	MEDIUM PRESSURE CONDENSATE
HPC	HIGH PRESSURE CONDENSATE
LPS	LOW PRESSURE STEAM
MPS	MEDIUM PRESSURE STEAM
HPS	HIGH PRESSURE STEAM
BBD	BOILER BLOW DOWN
BF	BOILER FEED WATER
V	VACUUM
	PUMPED CONDENSATE
MUW	MAKE UP WATER
G	NATURAL GAS
(E)name	EXISTING PIPING
CHWS	CHILLED WATER SUPPLY
CHWR	CHILLED WATER RETURN
CS	CONDENSER WATER SUPPLY
CR	CONDENSER WATER RETURN
HWS	HEATING HOT WATER SUPPLY
HWR	HEATING HOT WATER RETURN
GHR	GLYCOL HEAT RECOVERY PIPING
G(NAME)	GLYCOL PIPING SOLUTION
LPG	LIQUIFIED PETROLEUM GAS
(NAME)	EXISTING PIPING TO BE REMOVED
RL	REFRIGERANT LIQUID
RS	REFRIGERANT SUCTION
HG	HOT GAS
FOS	FUEL OIL SUPPLY
FOR	FUEL OIL RETURN
HFS	HELICOPTER FUEL SUPPLY
HFR	HELICOPTER FUEL RETURN
CF	CHEMICAL FEED
	SOLENOID VALVE
	EXPANSION JOINT
	ALIGNMENT GUIDE
	DEMOLITION
	AHCHOR
	PRESSURE GAUGE WITH SHUT-OFF COCK
	PRESSURE GAUGE WITH PIGTAIL
	FLANGE

	UNION
GPM LB/HR.	FLOW METER ORIFICE
	AIR VENT–MANUAL
A	AIR VENT–AUTO
	FLOW SWITCH
	TEMPERATURE AND PRESSURE TEST PORT
PS	PRESSURE SWITCH
RPBP	REDUCED PRESSURE BACKFLOW PREVENTOR W/ DRAIN PAN
	PRESSURE REDUCING, SELF CONTAINED VALVE
	PRESSURE REDUCING, EXTERNAL PRESSURE VALVE
	BALL VALVE (PIPE SIZES 2" AND SMALLER) BUTTERFLY VALVE (PIPE SIZES 2-1/2" AND LARGER)
	CHECK VALVE
	MOTOR OPERATED BUTTERFLY VALVE
	GAS COCK
	RELIEF VALVE
	GATE VALVE
	ATC VALVE – 2 WAY
C	ATC VALVE – 3 WAY
	GLOBE VALVE
GPM	FLOW CONTROL VALVE
	CALIBRATED BALANCING VALVE
	SHUT-OFF COCK FOR USE WITH PRESSURE GAUGE
	PUMP
	FLEXIBLE CONNECTION
	FLOW METER
	90° ELBOW
	45° ELBOW
	REDUCER
	CONCENTRIC REDUCER
	ECCENTRIC REDUCER
	LATERAL STRAINER WITH BLOW-OFF VALVE, PROVIDE HOSE END WITH CAP WHERE DISCHARGE IS NOT PIPED TO DRAIN
	THERMOMETER 0-100°F
T	THERMOSTAT
TN	NIGHT THERMOSTAT
S	SENSOR
F&T	STEAM TRAP, F&T=FLOAT & THERMOSTATIC B=BUCKET, T=THERMOSTATIC
SD	DUCT SMOKE DETECTOR
	ARROW INDICATES DIRECTION OF FLOW IN PIPE
DN	LEADER INDICATES DOWNWARD SLOPE
	PIPE INTO PLANE
	PIPE OUT OF PLANE
	PIPE BRANCH – IN TO PLANE
	PIPE BRANCH – OUT OF PLANE
	PIPE BRANCH – IN PLANE

	NRS GATE VALVE WITH SUPERVISION
	FLOW SWITCH
	HOSE VALVE
RD	ROOF DRAIN
RDO	ROOF DRAIN OVERFLOW
	CLEAN–OUT
	FLOOR CLEAN–OUT OR CLEAN–OUT TO GRADE
VTR	VENT THRU ROOF
	DOMESTIC COLD WATER (DCW)
	DOMESTIC HOT WATER (DHW)
	DOMESTIC HOT WATER RETURN (DHWR)
	SEWER (BELOW GRADE)
	SEWER (ABOVE GRADE)
	VENT (SEWER)
P-1	PLUMBING FIXTURES
	POINT OF CONNECTION
A M1-1	SECTION TAG – TOP FIGURE IS SECTION NO. BOTTOM FIGURE IS SHEET NO.
1 M1-1	DETAIL TAG – TOP FIGURE IS DETAIL NO. BOTTOM FIGURE IS SHEET NO.
EF 1	EQUIPMENT IDENTIFICATION
1	KEYED NOTE IDENTIFICATION
SW	SOFT DOMESTIC WATER (SW)
AW	ACID WASTE
AV	ACID VENT
HP(NAME)	HIGH PRESSURE DOMESTIC WATER
RO	REVERSE OSMOSIS WATER SUPPLY
ROR	REVERSE OSMOSIS WATER RETURN
OX	MEDICAL OXYGEN
OX 120	MEDICAL OXYGEN AT PRESSURE INDICATED
MA	MEDICAL AIR
MA 120	MEDICAL AIR AT PRESSURE INDICATED
MV	MEDICAL VACUUM
N	NITROGEN
N20	NITROUS OXIDE
CO2	CARBON DIOXIDE
IA	INSTRUMENT AIR
IA 120	INSTRUMENT AIR AT PRESSURE INDICATED
CA	COMPRESSED AIR
LA	LAB AIR
LV	LAB VACUUM
B	BRINE
S	FIXTURE FROM LEVEL ABOVE

NJRA ARCHITECTS
NJRA Architects, Inc.
5272 S. College Drive, Suite104
Murray, Utah 84123
801.364.9259
www.njraarchitects.com

LICENSED PROFESSIONAL ENGINEER
No. 178893
DONALD K. BRADSHAW
STATE OF UTAH

VBFA
181 East 5600 South
Murray, Utah 84107
O: (801) 530-3148
F: (801) 530-3150
www.vbfa.com
vbfa project #: 21139

Intermountain Healthcare
IMC- Cath Lab 3 Remodel Project
5121 South Cottonwood Street
Murray, UT 84107

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MECHANICAL SYMBOLS AND LEGEND

M000

MEDICAL GAS GENERAL NOTES

1. MEDICAL GAS PIPING IS TO BE RUN ABOVE THE CEILING, UNLESS NOTED OTHERWISE. COORDINATE PIPING ROUTING WITH ALL OTHER POSSIBLE CONFLICTS SUCH AS DUCTWORK, DIFFUSERS, OTHER PIPING, LIGHTS, CONDUIT, STRUCTURE, ETC.

2. ALL PIPE AND DUCT SIZES SHALL REMAIN THE SAME SIZE SHOWN, IN THE DIRECTION OF FLOW, UNTIL SHOWN OTHERWISE.

3. SLEEVE PIPING THRU WALLS/FOUNDATIONS WHERE REQUIRED.

4. MEDICAL GAS PIPING IS SCHEMATIC IN NATURE. FIELD VERIFY EXACT PIPE ROUTING AND COORDINATE WITH ALL OTHER TRADES.

5. NO PIPING TO RUN OVER ELECTRICAL PANELS, VFD'S OR MCC'S. PROTECT EQUIPMENT WITH A 42" DEEP ZONE IN FRONT OF PANELS, VFD'S, AND MCC'S.

6. MOUNT ALL SERVICE VALVES NEAR CEILING HEIGHT FOR ACCESSIBILITY.

7. PIPING BEING DISCONNECTED AND REMOVED SHALL BE REMOVED BACK TO AN ACTIVE MAIN. NO DEAD LEGS SHALL BE ALLOWED.

FIRE PROTECTION GENERAL NOTES

1. CONTRACTOR SHALL REMOVE AND REROUTE ALL FIRE SUPPRESSION PIPING AS NECESSARY TO ACCOMODATE ROUTING OF MECHANICAL DUCTWORK AND PIPE, PLUMBING LINES, ESPECIALLY WASTE AND VENT PIPING, AND OTHER DISCIPLINES AS NECESSARY TO COMPLETE THE PROJECT.

2. NO FIRE PROTECTION LINE SHALL BE DESIGNED OR INSTALLED PRIOR TO CLOSE COORDINATION WITH ALL OTHER DISCIPLINES. DUCTWORK, MECHANICAL PIPING AND PLUMBING TAKE SPACE PRECEDENCE OVER FIRE PROTECTION PIPING. FAILURE TO COMPLY WILL RESULT IN THE FIRE PROTECTION REMOVAL AND REINSTALLATION AT THE FIRE PROTECTION CONTRACTORS EXPENSE.

3. ALL WORK DONE SHALL BE PERFORMED WITH WATER CONTROL IN MIND. CONTAINMENT OF WATER IS NECESSARY TO PREVENT WATER FROM DAMAGING SURROUNDING AREA.

4. COORDINATE EXACT LOCATION OF PIPING WITH STRUCTURAL MEMBERS, LIGHTS, REFLECTED CEILING PLANS, CABLE TRAY, ELECTRICAL CONDUITS, DUCTWORK, MECHANICAL AND PLUMBING PIPING, AND ALL OTHER TRADES AND ALL EXISTING CONDITIONS.

5. ALL NEW SPRINKLERS ARE TO BE QUICK RESPONSE, FLAT PLATE CONCEALED WITH A WHITE COVER PLATE. CLEAN ROOM SPRINKLERS ARE TO BE LISTED FOR USE IN CLEAN ROOMS.

PLUMBING GENERAL NOTES

1. UNLESS OTHERWISE NOTED, SLOPE PIPE AS FOLLOWS: WASTE BRANCHES: 1/4" PER FOOT; WASTE MAINS: 1/4" PER FOOT; ROOF DRAIN/ROOF DRAIN OVERFLOW: 1/8" PER FOOT.

2. ALL WORK DONE SHALL BE PERFORMED WITH WATER CONTROL IN MIND. CONTAINMENT OF WATER IS NECESSARY TO PREVENT WATER FROM DAMAGING AREAS ON FLOORS BELOW.

3. PLUMBING DRAWINGS ARE SCHEMATIC IN NATURE. FIELD VERIFY EXACT PIPE ROUTING AND COORDINATE WITH ALL OTHER TRADES.

4. ALL PIPING IN PLUMBING CHASES SHALL BE ARRANGED TO ALLOW MAINTENANCE ACCESS.

5. NO PIPING TO RUN OVER ELECTRICAL PANELS, VFD'S OR MCC'S. PROTECT EQUIPMENT WITH A 42" DEEP ZONE IN FRONT OF PANELS, VFD'S, AND MCC'S.

6. COORDINATE FAN ROOM FLOOR DRAIN AND FLOOR SINK LOCATIONS WITH COOLING COIL, EVAPORATIVE SECTION, AND HEATING COIL LOCATIONS.

7. CONTRACTOR TO PROVIDE VALVE IDENTIFICATION AND LOCATION ON ALL CEILING TILES WHERE VALVES ARE LOCATED.

8. PIPING AND ROUTING SHOWN, INCLUDING ALL BELOW FLOOR DECK PIPING, IS APPROXIMATE. IT IS UP TO THE CONTRACTOR TO FIELD VERIFY THE EXACT LOCATION AND SIZE OF ALL PIPING.

9. REFER TO ARCHITECTURAL DRAWINGS FOR FIXTURE MOUNTING HEIGHTS, DIMENSIONS, AND OTHER REQUIREMENTS.

10. CONTRACTOR TO VERIFY CONNECTION SIDE OF ADA FIXTURES AND ADJUST ACCORDINGLY. INSTALL FLUSH VALVES HANDLES ON WIDE SIDE OF ALL FIXTURES.

11. LOCATE ALL VENTS MINIMUM 25' AWAY FROM AIR INTAKES.

12. INSTALL ALL DOMESTIC WATER LINES BELOW DUCTWORK.

13. INSTALL A 24" X 24" ACCESS DOOR BELOW ALL ISOLATION VALVES, BALANCING VALVES AND WATER HAMMER ARRESTORS WHERE MOUNTED ABOVE HARD CEILINGS.

14. MOUNT ALL ISOLATION VALVES, CONTROL VALVES, BALANCING VALVES, ETC. NEAR CEILING HEIGHT FOR ACCESSIBILITY.

15. INSTALL ALL EQUIPMENT WITH SUFFICIENT CLEARANCE FOR MAINTENANCE PER MANUFACTURERS RECOMMENDATION.

16. COORDINATE ALL FLOOR PENETRATIONS WITH STRUCTURAL AND PROVIDE SLEEVES AS NECESSARY.

17. COORDINATE EXACT LOCATION OF PLUMBING WITH STRUCTURAL MEMBERS, LIGHTS, REFLECTED CEILING, CABLE TRAY, DUCTWORK, MECHANICAL PIPING, MEDICAL GASES, FIRE PROTECTION AND OTHER TRADES, TYPICAL.

18. COORDINATE THE LOCATION OF THE FLOOR DRAIN, SHOWER DRAIN, OR FLOOR SINK WITH ARCHITECTURAL AND STRUCTURAL, TYPICAL.

19. ACCESS DOORS SHALL BE PROVIDED TO ALL WATER HAMMER ARRESTORS IN WALLS OR ABOVE CEILINGS.

20. SEE PLUMBING FIXTURE SCHEDULE FOR PIPE SIZES OF WASTE, VENT AND DOMESTIC WATER TO/FROM SINGLE FIXTURE.

21. HOSE BIBBS SHOWN AT LAVATORIES ARE TO BE MOUNTED AT AN ACCESSIBLE LOCATION UNDER THE LAVATORY.

22. COORDINATE EXACT LOCATION OF PLUMBING PIPING WITH STRUCTURAL MEMBERS, LIGHTS, REFLECTED CEILING PLANS, CABLE TRAY, ELECTRICAL CONDUITS, DUCTWORK, MECHANICAL AND FIRE PROTECTION PIPING, AND ALL OTHER TRADES AND ALL EXISTING CONDITIONS.

23. LOCATE CIRCUIT SETTERS, VALVES, WATER HAMMER ARRESTORS, ETC. IN ACCESSIBLE LOCATIONS. PROVIDE 24"X24" ACCESS PANEL WHERE ITEM IS LOCATED ABOVE A HARD CEILING.

24. ALL PIPE AND DUCT SIZES SHALL REMAIN THE SAME SIZE SHOWN, IN THE DIRECTION OF FLOW, UNTIL SHOWN OTHERWISE.

25. INSTALL CLEANOUTS IN DRAIN PIPING AS INDICATED, AND WHERE NOT INDICATED, ACCORDING TO THE FOLLOWING.

a) SIZE SAME AS DRAINAGE PIPING UP TO 4" NPS. USE 4" NPS FOR LARGER. DRAINAGE PIPING UNLESS LARGER CLEANOUT IS INDICATED.

b) LOCATE AT MINIMUM INTERVALS OF 50 FT FOR PIPING 4" NPS AND SMALLER AND 100 FT FOR LARGER PIPING.

c) LOCATE AT THE BASE OF EACH VERTICAL STACK.

26. PIPING BEING DISCONNECTED AND REMOVED SHALL BE REMOVED BACK TO AN ACTIVE MAIN. NO DEAD LEGS SHALL BE ALLOWED.

MECHANICAL PIPING GENERAL NOTES

1. PROVIDE ALL MATERIALS AND EQUIPMENT AND PERFORM ALL LABOR REQUIRED TO INSTALL COMPLETE AND OPERABLE PIPING SYSTEMS AS INDICATED ON THE DRAWINGS, AS SPECIFIED AND AS REQUIRED BY CODE.

2. UNLESS OTHERWISE NOTED: ALL MECHANICAL PIPING IS OVERHEAD TO RUN ABOVE DUCTWORK AND TIGHT TO UNDERSIDE OF STRUCTURE.

3. WHERE VALVING OR EQUIPMENT IS LOCATED ABOVE HARD CEILINGS PROVIDE AN ACCESS DOOR IN CEILING. MINIMUM ACCESS DOOR SIZE OF 24"X24".

4. NO PIPING TO RUN OVER ELECTRICAL PANELS, VFD'S OR MCC'S. PROTECT EQUIPMENT WITH A 42" DEEP ZONE IN FRONT OF PANELS, VFD'S, AND MCC'S.

5. SLEEVE PIPING THRU WALLS/FOUNDATIONS WHERE REQUIRED.

6. INSTALL PIPING SO THAT ALL VALVES, STRAINERS, UNIONS, TRAPS, FLANGES, AND OTHER APPURTENANCES REQUIRING ACCESS ARE ACCESSIBLE.

7. ALL VALVES SHALL BE INSTALLED SO THAT VALVE REMAINS IN SERVICE WHEN EQUIPMENT OR PIPING ON EQUIPMENT SIDE OF VALVE IS REMOVED.

8. PROVIDE AN AIR VENT AT THE HIGH POINT OF EACH DROP IN THE HEATING AND CHILLED WATER PIPING SYSTEM.

9. INSTALL ALL PIPING WITHOUT FORCING OR SPRINGING.

10. ALL VALVES SHALL BE ADJUSTED FOR SMOOTH AND EASY OPERATION.

11. PROVIDE ISOLATION VALVES AT EACH EXIT/ENTRANCE INTO SHAFT WHETHER OR NOT SHOWN.

12. ALL PIPE AND DUCT SIZES SHALL REMAIN THE SAME SIZE SHOWN, IN THE DIRECTION OF FLOW, UNTIL SHOWN OTHERWISE.

13. COORDINATE LOCATION OF THERMOSTAT WITH ARCHITECTURAL FURNISHING PLANS. MOUNT THERMOSTAT AT HEIGHT AS SPECIFIED ON ARCHITECTURAL.

14. CONTRACTOR TO PROVIDE VALVE IDENTIFICATION AND LOCATION ON ALL CEILING TILES WHERE VALVES ARE LOCATED.

15. PIPING BEING DISCONNECTED AND REMOVED SHALL BE REMOVED BACK TO AN ACTIVE MAIN. NO DEAD LEGS SHALL BE ALLOWED.

MECHANICAL GENERAL NOTES

1. COORDINATE EXACT PLACEMENT OF DIFFUSERS, GRILLES, AND REGISTERS WITH ARCHITECTURAL REFLECTED CEILING PLAN, TYPICAL.

2. SEE DETAIL FOR DIFFUSER CONNECTIONS TO DUCTWORK, TYPICAL.

3. BRANCH DUCTWORK SHALL BE SIZED TO MATCH THE NECK INLET SIZE OF THE DIFFUSERS, REGISTER OR GRILLE IT SERVES UNLESS NOTED OTHERWISE, TYPICAL.

4. COORDINATE EXACT MOUNTING LOCATION OF ALL THERMOSTATS WITH LATEST REVISION OF ARCHITECTURAL ELEVATION AND FURNISHINGS PLANS, TYPICAL.

5. THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR CAULKING AND SEALING ALL PENETRATIONS IN FIRE AND SMOKE RATED PARTITIONS TO MAINTAIN RATINGS. SEE SPECIFICATION, TYPICAL.

6. THE MECHANICAL CONTRACTOR SHALL PROVIDE FIRE, SMOKE OR COMBINATION FIRE/SMOKE DAMPERS AT ALL LOCATIONS SHOWN ON THE CONTRACT DOCUMENTS AND AS REQUIRED TO MEET THE INTEGRITY OF ALL SMOKE AND FIRE PARTITIONS. THE CONTRACTOR SHALL REFER TO THE LATEST ARCHITECTURAL LIFE SAFETY PLANS FOR ALL FIRE AND SMOKE PARTITION LOCATIONS. DAMPERS ARE TO BE PROVIDED WITH SHUTOFF/TEST SWITCH AT EACH LOCATION.

7. PROVIDE AND INSTALL TURNING VANES IN ALL SQUARE LOW PRESSURE DUCTWORK AT ELBOWS OR TEES, TYPICAL.

8. INSTALL ALL TERMINAL BOXES IN EASILY ACCESSIBLE AND SERVICEABLE LOCATIONS, MEETING ALL MANUFACTURERS REQUIRED CLEARANCES ON EACH SIDE, SEE DETAILS, TYPICAL.

9. CONTRACTOR SHALL OFF-SET, TRANSITION AND PROVIDE CHANGES AS REQUIRED FOR COORDINATION WITH OTHER TRADES, TYPICAL.

10. DUCTWORK SIZES SHOWN ARE INSIDE CLEAR DIMENSIONS. REFER TO MECHANICAL SPECIFICATIONS FOR EXTENT OF DUCT INSULATION AND LINER.

11. PROVIDE AND INSTALL REMOTE DAMPER OPERATORS FOR ALL DAMPERS INSTALLED ABOVE INACCESSIBLE CEILINGS, SEE MECHANICAL SPECIFICATIONS FOR EQUIPMENT REQUIREMENTS, TYPICAL.

12. PROVIDE AND INSTALL HIGH EFFICIENCY TAKE-OFF FITTINGS AND BALANCING DAMPER AT ALL BRANCH CONNECTIONS TO LOW PRESSURE DUCTWORK.

13. PROVIDE AND INSTALL HIGH EFFICIENCY OR CONICAL TAKE-OFFS AT ALL BRANCH CONNECTIONS TO MEDIUM PRESSURE DUCTWORK.

14. WHERE DUCTWORK CROSSES, SUPPLY DUCTWORK IS USUALLY BELOW RETURN AND EXHAUST DUCT. RETURN DUCTWORK IS USUALLY BELOW EXHAUST DUCTS.

15. AT LOCATIONS WHERE DIFFUSERS OR GRILLES ARE UNDER DUCTWORK, CONTRACTOR TO FABRICATE TRANSITION BOOT FROM FLEX CONNECTION TO DIFFUSER OR GRILLE WITH BALANCING DAMPER, TYPICAL.

16. THE MECHANICAL CONTRACTOR SHALL PROVIDE CEILING MOUNTED ACCESS DOORS FOR ALL FIRE, SMOKE AND COMBINATION FIRE/SMOKE DAMPERS INSTALLED ABOVE INACCESSIBLE CEILING. FIELD VERIFY EXACT INSTALLATION LOCATIONS PRIOR TO COMMENCING WORK AND COORDINATE INSTALLATIONS WITH LATEST ARCHITECTURAL REFLECTED CEILING PLANS.

17. MECHANICAL CONTRACTOR SHALL ENSURE THAT ALL EQUIPMENT IS PROVIDED AND INSTALLED WITH CLEARANCES PER MANUFACTURERS RECOMMENDATIONS. THE CONTRACTOR SHALL MAINTAIN PROPER SERVICE SPACE FOR COIL PULLS, BAS DEVICES, MAINTENANCE ACCESS, ETC.

18. ALL VAV BOXES TO HAVE REHEAT COILS, EXCEPT AS NOTED. PROVIDE A MINIMUM OF TWO DUCT DIAMETERS OF STRAIGHT ROUND DUCT TO INLET OF VAV BOX. BOX SHALL BE HARD CONNECTED (CONICAL) TO MEDIUM PRESSURE DUCT, TYPICAL.

19. PROVIDE ACCESS DOORS TO ACCESS VAV BOX CONTROLS ABOVE HARD CEILINGS. PROVIDE MIN. 24" X 24".

20. ALL PIPE AND DUCT SIZES SHALL REMAIN THE SAME SIZE SHOWN, IN THE DIRECTION OF FLOW, UNTIL SHOWN OTHERWISE.

21. ALL DUCTWORK ABOVE HARD CEILINGS SHALL BE EXTENDED ALL THE WAY TO THE SUPPLY DIFFUSERS, RETURN GRILLS OR EXHAUST GRILLS WHETHER OR NOT HARD DUCT OR FLEX DUCT IS SHOWN ON PLANS. FLEX DUCT WILL NOT BE ALLOWED TO DIFFUSERS OR GRILLS ABOVE HARD CEILINGS. FLEX DUCT WILL BE REQUIRED IN AREAS ABOVE T-BAR CEILINGS.

22. NEW DUCTWORK, PIPING AND EQUIPMENT SHALL BE COORDINATED WITH STRUCTURE, LIGHTS, REFLECTED CEILING PLANS, CABLE TRAY, ELECTRICAL CONDUIT, PLUMBING, MECHANICAL AND FIRE PROTECTION PIPING, MEDICAL GASES, ALL OTHER TRADES AND ALL OTHER EXISTING CONDITIONS.

23. THE CONTRACTOR SHALL INFORM THE DESIGNER OF ANY PROPOSED DEVIATIONS FROM THE CONTRACT DOCUMENTS.

24. PROVIDE ACCESS TO ALL TEMPERATURE CONTROLS ABOVE CEILING. LOCATE IN ACCESSIBLE LOCATION. WHERE THERE ARE HARD CEILINGS THE CONTRACTOR SHALL PROVIDE 24"X24" ACCESS DOOR.

25. UNLESS NOTED OTHERWISE, SUPPLY DIFFUSERS SHALL BE OF THE CD-1 TYPE, RETURN GRILLS SHALL BE OF THE RG-1 TYPE AND EXHAUST GRILLS SHALL BE OF THE EG-1 TYPE. REFER TO DIFFUSER SCHEDULE.

NJRA ARCHITECTS
NJRA Architects, Inc.
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Murray, Utah 84123
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LICENSED PROFESSIONAL ENGINEER
No. 178893
DONALD K. BRADSHAW
STATE OF UTAH

VBFA
181 East 5600 South
Murray, Utah 84107
O: (801) 530-3148
F: (801) 530-3150
www.vbfa.com
vbfa project #: 21139

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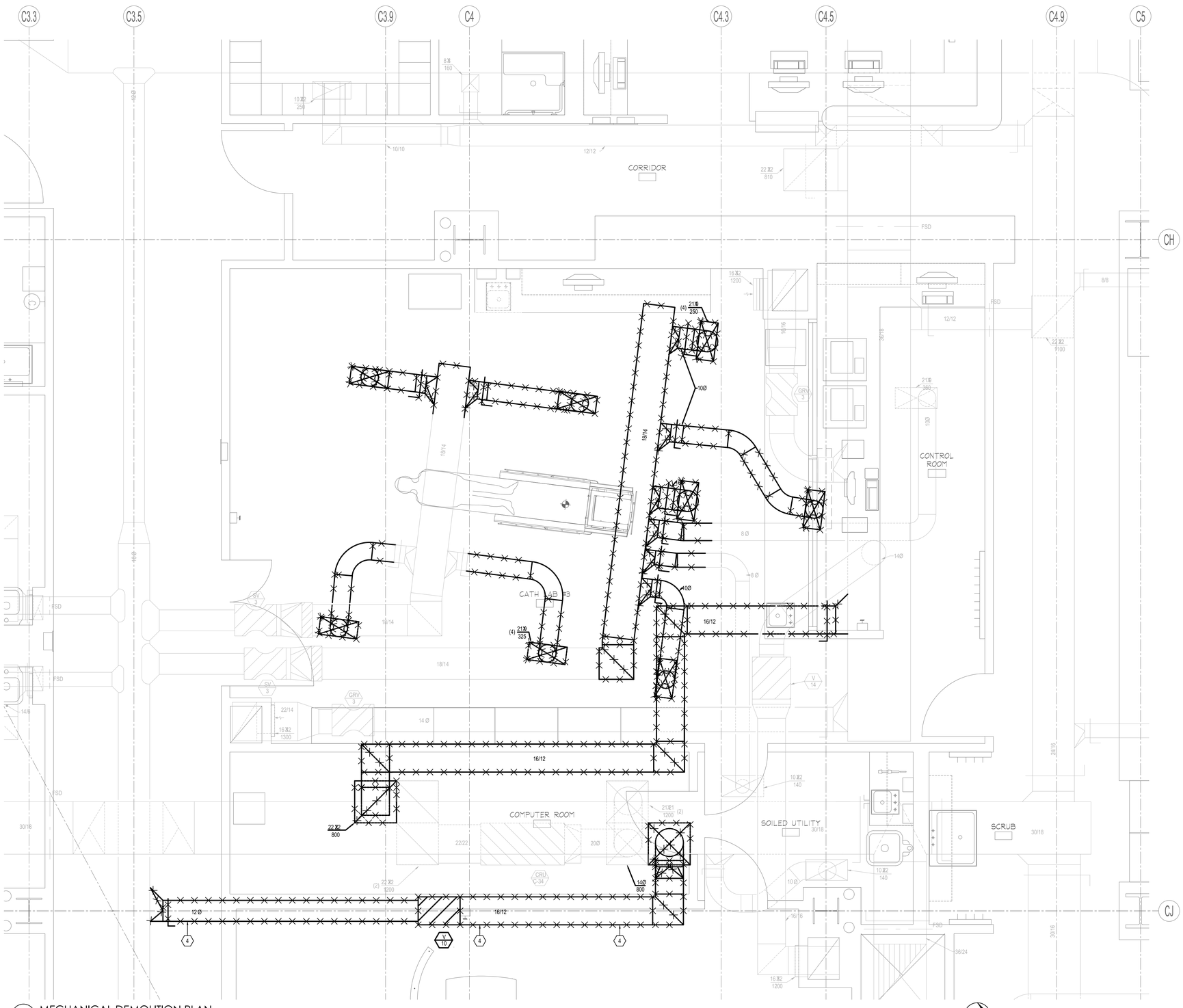
MECHANICAL GENERAL NOTES

M001



1 MECHANICAL DEMOLITION PLAN
SCALE: 1/2" = 1'-0"

NORTH

KEYED NOTES

1. EXISTING SHOWN LIGHT TO REMAIN. ITEMS CROSSED OUT TO BE REMOVED. CAP ALL UNUSED DUCTWORK. FIELD VERIFY EXISTING CONDITIONS. TYPICAL.
2. EXISTING VAV BOX TO REMAIN. CLEAN PRESSURE DIFFERENTIAL/AIR FLOW SENSORS AND CHECK BOX FUNCTIONALITY. FIELD VERIFY EXISTING CONDITIONS.
3. REMOVE EXISTING DIFFUSERS. CLEAN. KEEP FOR REINSTALLATION IN NEW CEILING. TYPICAL.
4. DO WORK IN THE ADJOINING STEREOTAXIS RM #4 BEFORE COMMENCING WITH WORK ON CATH LAB #3.

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NO. 178893
DONALD K. BRADSHAW
STATE OF UTAH

VBFA
181 East 5600 South
Murray, Utah 84107
O: (801) 530-3148
F: (801) 530-3150
www.vbfa.com
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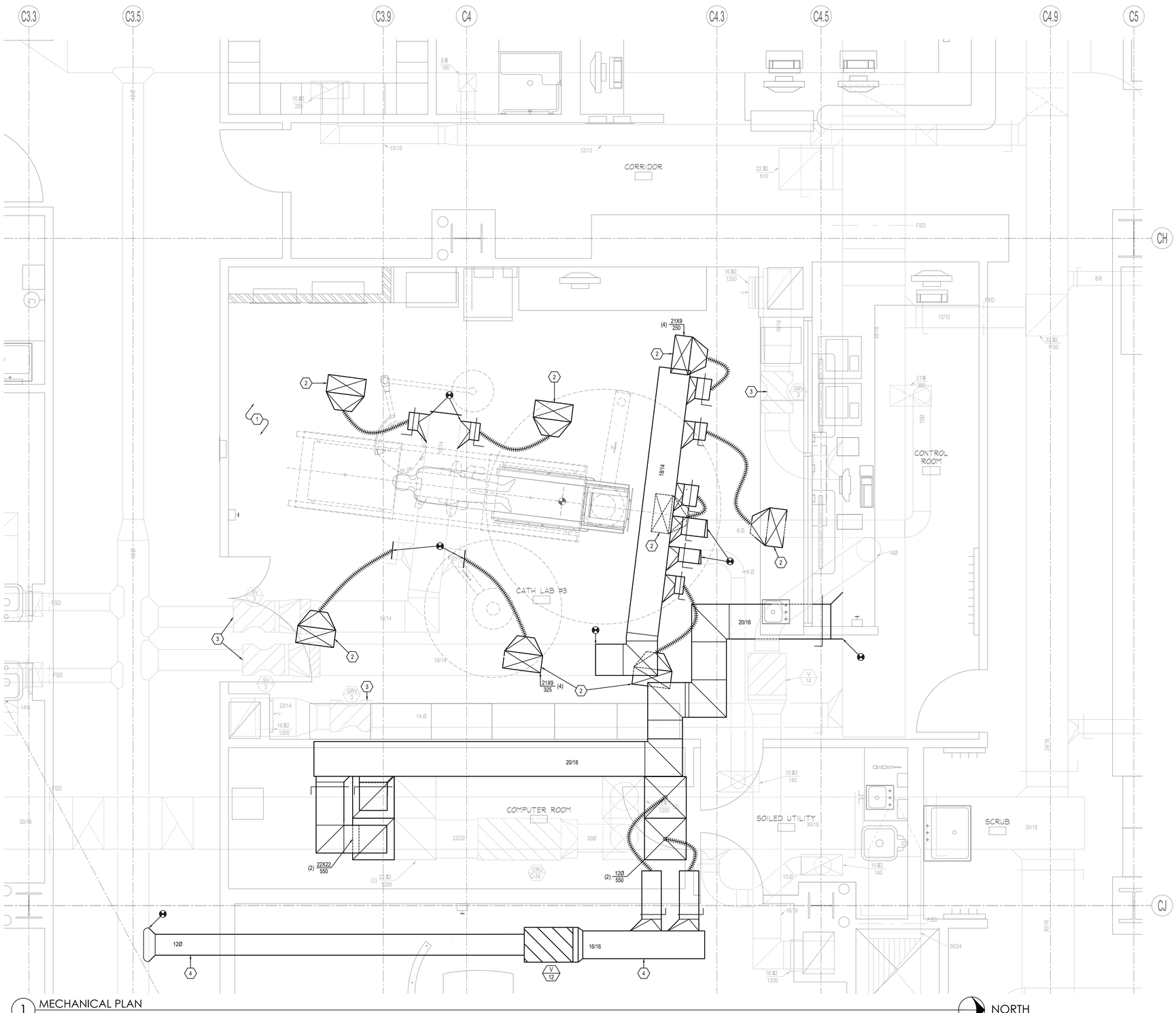
MECHANICAL DEMOLITION PLAN

M101

KEYED NOTES

1. EXISTING SHOWN LIGHT TO REMAIN. NEW WORK SHOWN DARK. FIELD VERIFY EXISTING CONDITIONS. TYPICAL.
2. INSTALL 10"Ø FLEXIBLE DUCT FROM MAIN LOW PRESSURE SUPPLY DUCT. ROUTE AS NECESSARY TO ACCOMMODATE AT LEAST 7 FT OF FLEXIBLE DUCT TO EACH DIFFUSER FOR NOISE REDUCTION. PROVIDE ROUND TO RECTANGULAR TRANSITION TO 21/9 DUCT. INSTALL 90 DEGREE TRANSITION AND DROP INTO DIFFUSER. CLEAN AND REINSTALL EXISTING DIFFUSERS. BALANCE TO CFM SHOWN.
3. EXISTING VAV BOX TO REMAIN. CLEAN PRESSURE DIFFERENTIAL/AIR FLOW SENSORS AND CHECK BOX FUNCTIONALITY. FIELD VERIFY EXISTING CONDITIONS.
4. DO WORK IN THE ADJOINING STEREOTAXIS RM #4 BEFORE COMMENCING WITH WORK ON CATH LAB #3.



1 MECHANICAL PLAN
SCALE: 1/2" = 1'-0"

NJRA ARCHITECTS
NJRA Architects, Inc.
5272 S. College Drive, Suite104
Murray, Utah 84123
801.364.9259
www.njraarchitects.com

LICENSED PROFESSIONAL ENGINEER
No. 178893
DONALD K. BRADSHAW
STATE OF UTAH

VBFA
181 East 5600 South
Murray, Utah 84107
O: (801) 530-3148
F: (801) 530-3150
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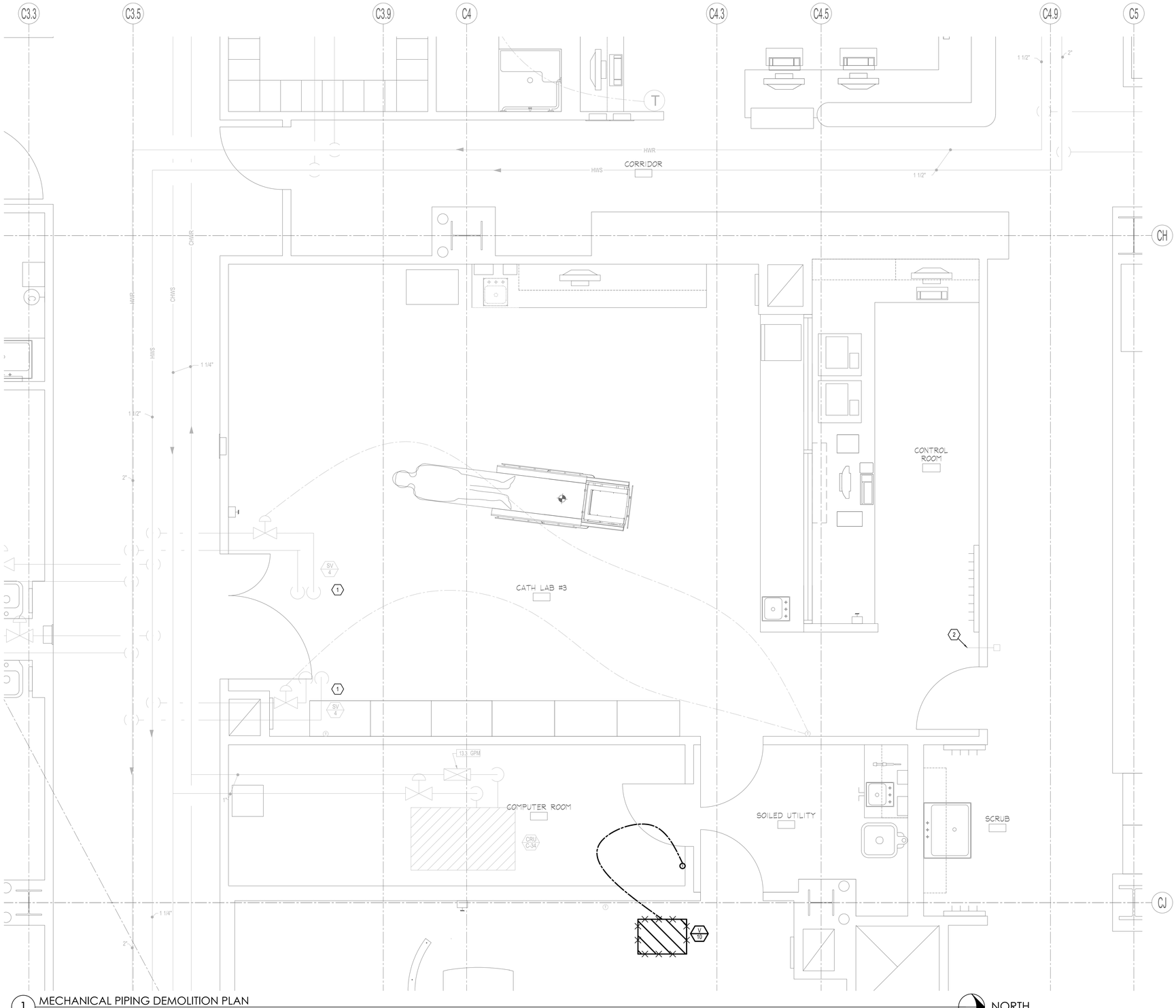
MECHANICAL PLAN

M111



1 MECHANICAL PIPING DEMOLITION PLAN
SCALE: 1/2" = 1'-0"

NORTH

KEYED NOTES

1. EXISTING VAV BOX TO REMAIN. CLEAN PRESSURE DIFFERENTIAL/AIR FLOW SENSORS AND CHECK BOX FUNCTIONALITY. FIELD VERIFY EXISTING CONDITIONS.
2. EXISTING AIR PRESSURE MONITOR TO BE REUSED. VERIFY PROPER WORKING ORDER.

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NJRA Architects, Inc.
5272 S. College Drive, Suite104
Murray, Utah 84123
801.364.9259
www.njraarchitects.com

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DONALD K. BRADSHAW
STATE OF UTAH

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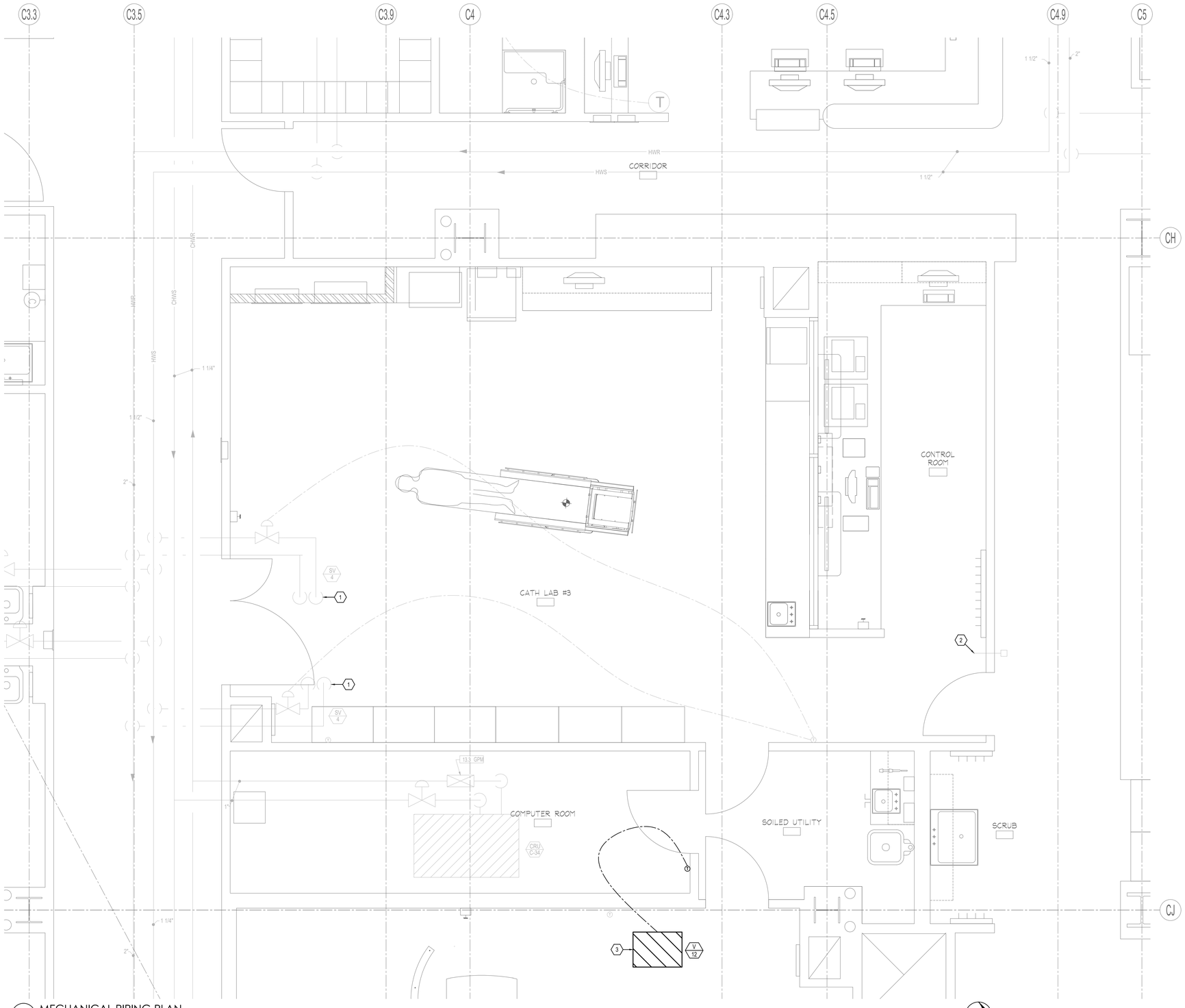
MECHANICAL
PIPING
DEMOLITION PLAN

M201



1 MECHANICAL PIPING PLAN
SCALE: 1/2" = 1'-0"

KEYED NOTES

1. EXISTING VAV BOX TO REMAIN. CLEAN PRESSURE DIFFERENTIAL/AIR FLOW SENSORS AND CHECK BOX FUNCTIONALITY. FIELD VERIFY EXISTING CONDITIONS..
2. EXISTING AIR PRESSURE MONITOR TO BE REUSED. VERIFY PROPER WORKING ORDER.
3. NEW VAV BOX TO BE COOLING ONLY.

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NJRA Architects, Inc.
5272 S. College Drive, Suite104
Murray, Utah 84123
801.364.9259
www.njraarchitects.com

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NO. 178893
DONALD K. BRADSHAW
STATE OF UTAH

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Murray, Utah 84107
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F: (801) 530-3150
www.vbfa.com
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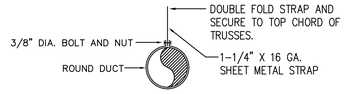
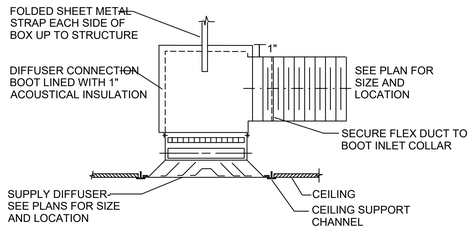
MECHANICAL PIPING PLAN

M211

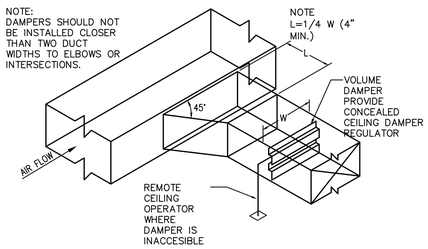


NOTE:
USE SPECIFIED SPACING AND NOT LESS THAN ONE SUPPORT PER BRANCH.

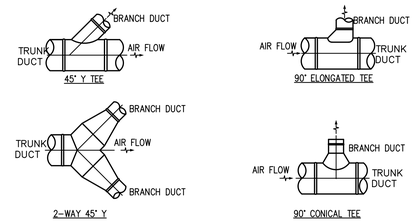
6 M501 ROUND DUCT SUPPORT DETAIL
NO SCALE



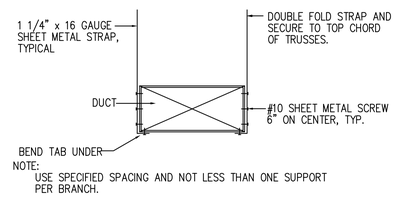
7 M501 SUPPLY DIFFUSER W/ FLEX DUCT DETAIL
NO SCALE



1 M501 BRANCH DUCT TAKE-OFF & DAMPER DETAIL
NO SCALE

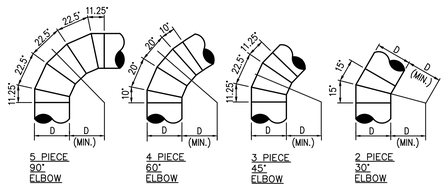


2 M501 ROUND DUCT BRANCH TAKE-OFF DETAILS
NO SCALE

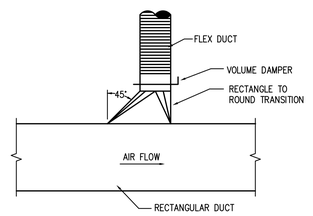


NOTE:
USE SPECIFIED SPACING AND NOT LESS THAN ONE SUPPORT PER BRANCH.

3 M501 RECTANGULAR DUCT SUPPORT
NO SCALE



4 M501 ROUND DUCT ELBOW DETAILS
NO SCALE



5 M501 HIGH EFFICIENCY TAKE-OFF DETAIL
NO SCALE

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NJRA Architects, Inc.
5272 S. College Drive, Suite104
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801.364.9259
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NO. 178893
DONALD K. BRADSHAW
STATE OF UTAH

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MECHANICAL DETAILS

M501

VAV BOX SCHEDULE

ID	MANUFACTURER AND MODEL NUMBER	INLET SIZE (IN)	AIR							FLUID (2)					COIL			REMARKS
			COOLING MAXIMUM AIR (5) (CFM)	HEATING MAXIMUM AIR (CFM)	MINIMUM AIR (3) (CFM)	ENTERING AIR TEMP. DB (DEG. F)	LEAVING AIR TEMP. DB (DEG. F)	S.P. LOSS AT MAX CFM (4) (IN H20)	NC AT 1" H2O (1) S.P.	HEAT LOAD (MB)	TOTAL FLUID FLOW (GPM)	ENT. FLUID TEMP (DEG. F)	WORKING FLUID	MAX. FLUID PRESSURE DROP (FT)	MIN. COIL ROWS	PIPE SIZE (IN)	BALANCING VALVE SIZE (IN)	
V-12	TITUS-ESV-3	12	1600	-.-	325	55	55	0.65	26	-.-	-.-	-.-	-.-	-.-	-.-	-.-	-.-	1,2,3,4,5,6

1. MAXIMUM DISCHARGE NC AT BOX DIFFENTIAL PRESSURE BASED ON ARI STANDARD 880-89
2. COOLING ONLY VAV
3. MINIMUM CFM IS LOWEST CONTROLLABLE CFM SETTING (BASED ON 400 FPM INLET VELOCITY).
4. MAXIMUM STATIC PRSSURE DROP PERMISSABLE ACROSS BOX AND COIL AT MAXIMUM COOLING CFM.
5. BOX COOLING MAXIMUM IS THE SUM OF DIFFUSERS CFM VALUES AS SHOWN IN THE DRAWINGS. BOX MINIMUM CFM TO BE SET AT 30% OF THIS MAXIMUM.
6. PRESSURE INDEPENDENT TYPE BOX.

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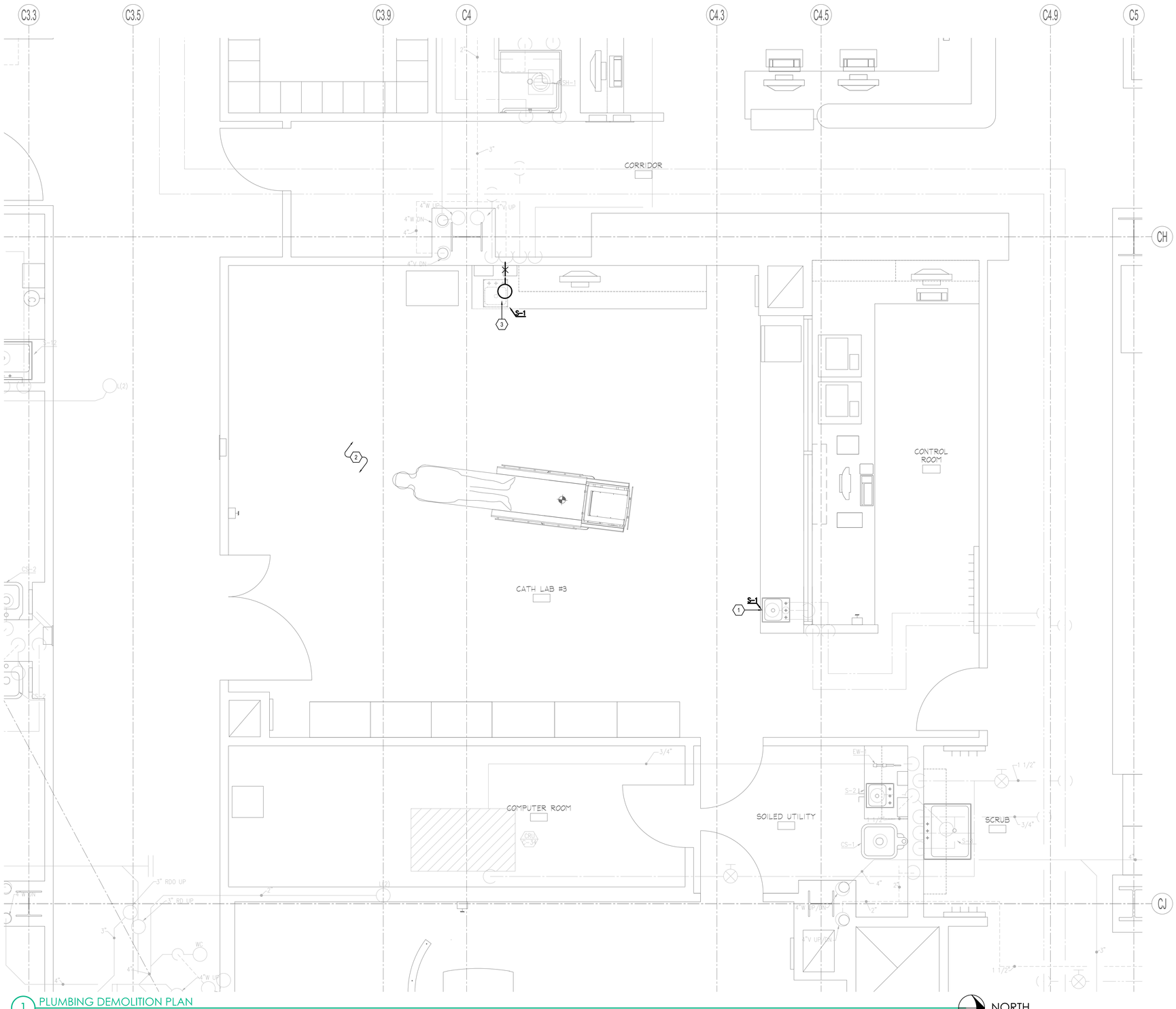
MECHANICAL SCHEDULES

M601

KEYED NOTES

1. REMOVE EXISTING SINK, FAUCET AND FOOT CONTROLS. PRESERVE PIPING FOR INSTALLATION OF NEW SINK.
2. REPLACE EXISTING SPRINKLER HEADS WITH SPACING PER NFPA 13 STANDARDS. REMOVE AND REROUTE SPRINKLER PIPING AS NECESSARY TO ACCOMMODATE OTHER DISCIPLINES.
3. REMOVE WATER LINES IN WALL AND CAP AT NEAREST ACTIVE BRANCH. CAP WASTE AT THE WALL AND LEAVE THE WASTE AND VENT IN THE WALL.



1 PLUMBING DEMOLITION PLAN
SCALE: 1/2" = 1'-0"

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NJRA Architects, Inc.
5272 S. College Drive, Suite104
Murray, Utah 84123
801.364.9259
www.njraarchitects.com

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No. 178893
DONALD K. BRADSHAW
STATE OF UTAH

VBFA
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Murray, Utah 84107
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F: (801) 530-3150
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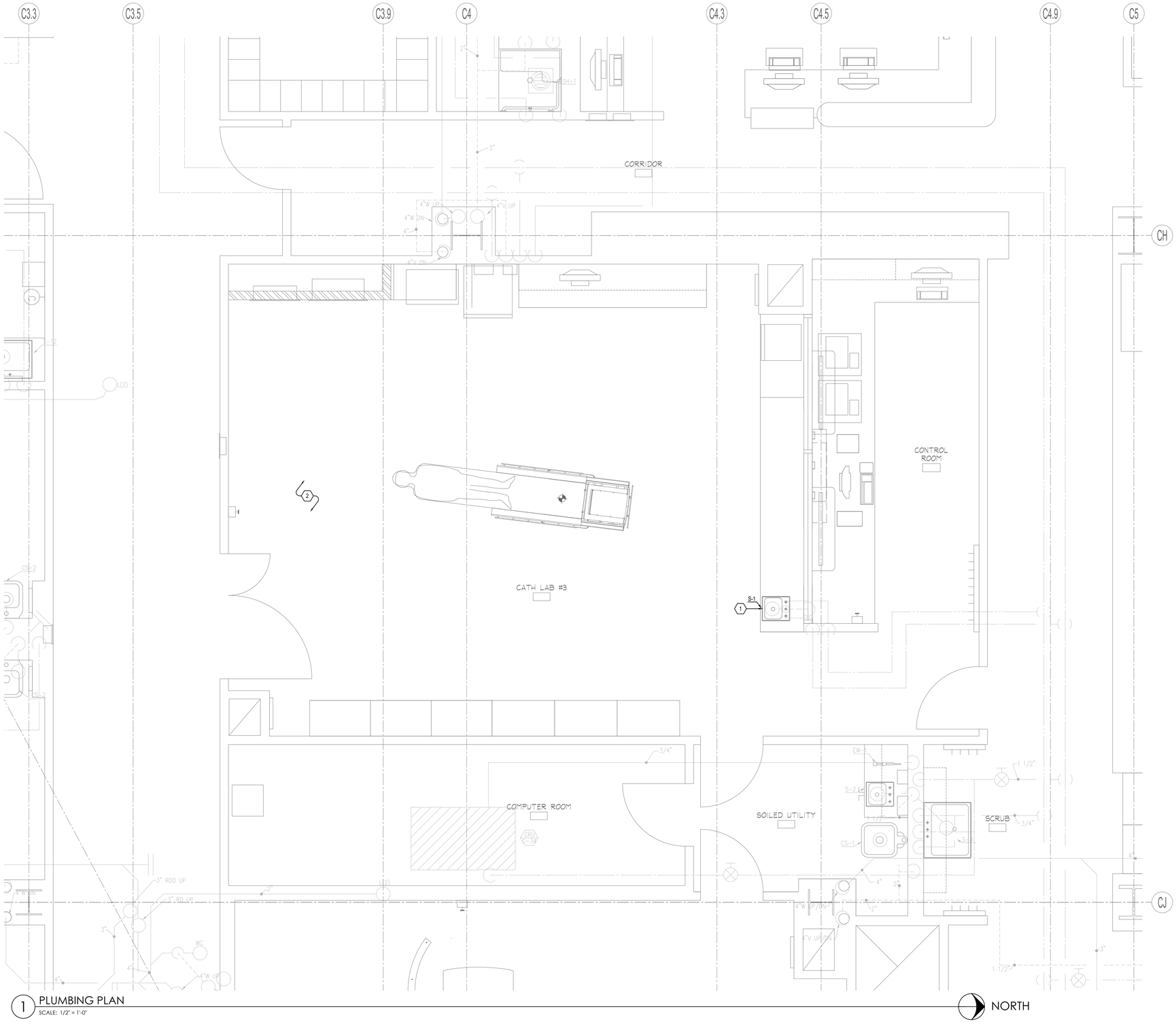
PLUMBING DEMOLITION PLAN

P101



KEYED NOTES

1. INSTALL NEW FAUCET AND FOOT CONTROLS. SEE PLUMBING SCHEDULES FOR DETAILS.
2. REPLACE EXISTING SPRINKLER HEADS WITH SPACING PER NFPA 13 STANDARDS. REMOVE AND REROUTE SPRINKLER PIPING AS NECESSARY TO ACCOMMODATE OTHER DISCIPLINES.

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Murray, Utah 84123
801.364.9259
www.njraarchitects.com

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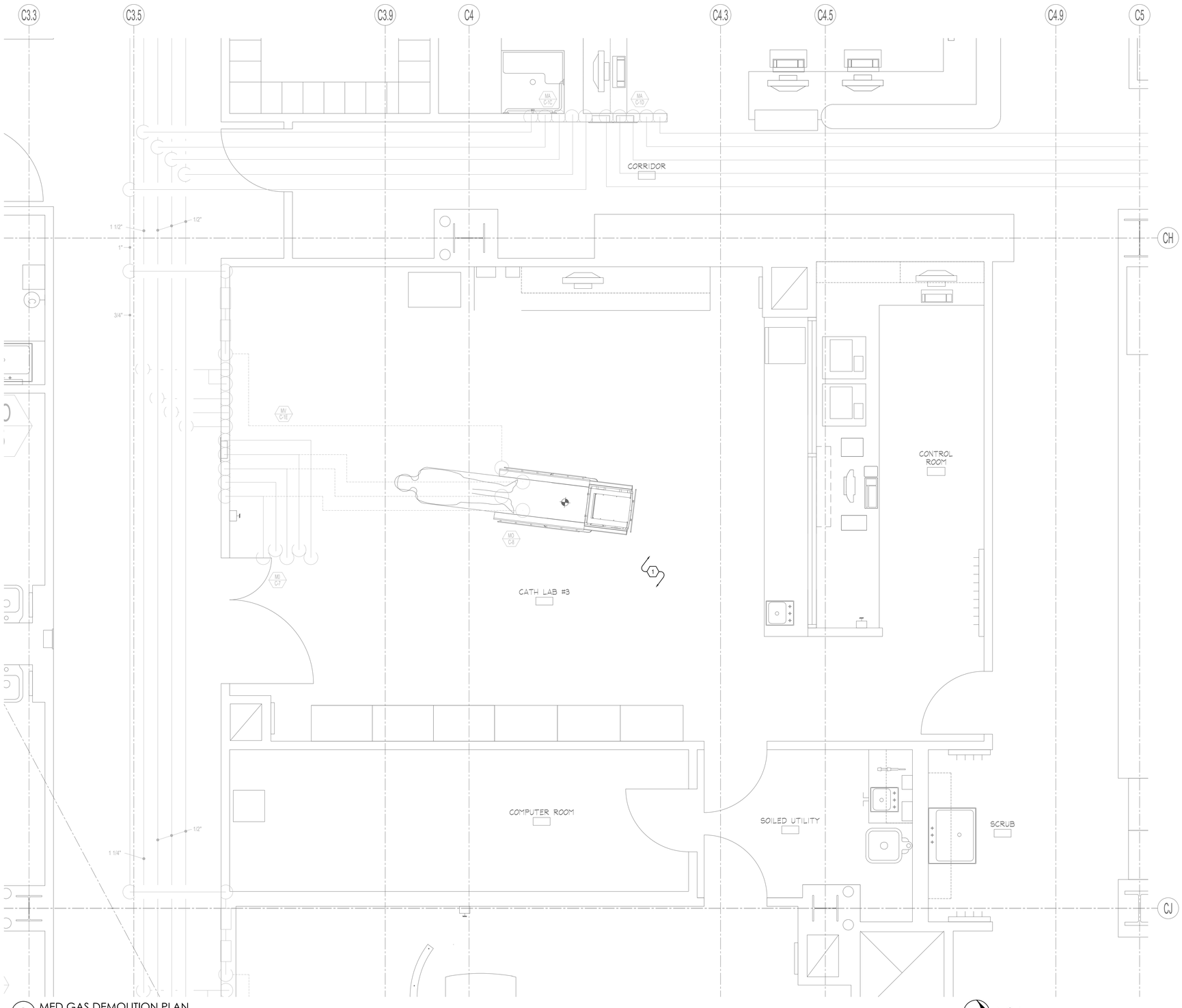
PLUMBING PLAN

P111



1 MED GAS DEMOLITION PLAN
SCALE: 1/2" = 1'-0"

NORTH

KEYED NOTES

1. NO NEW MED GAS WORK

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NJRA Architects, Inc.
5272 S. College Drive, Suite104
Murray, Utah 84123
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STATE OF UTAH

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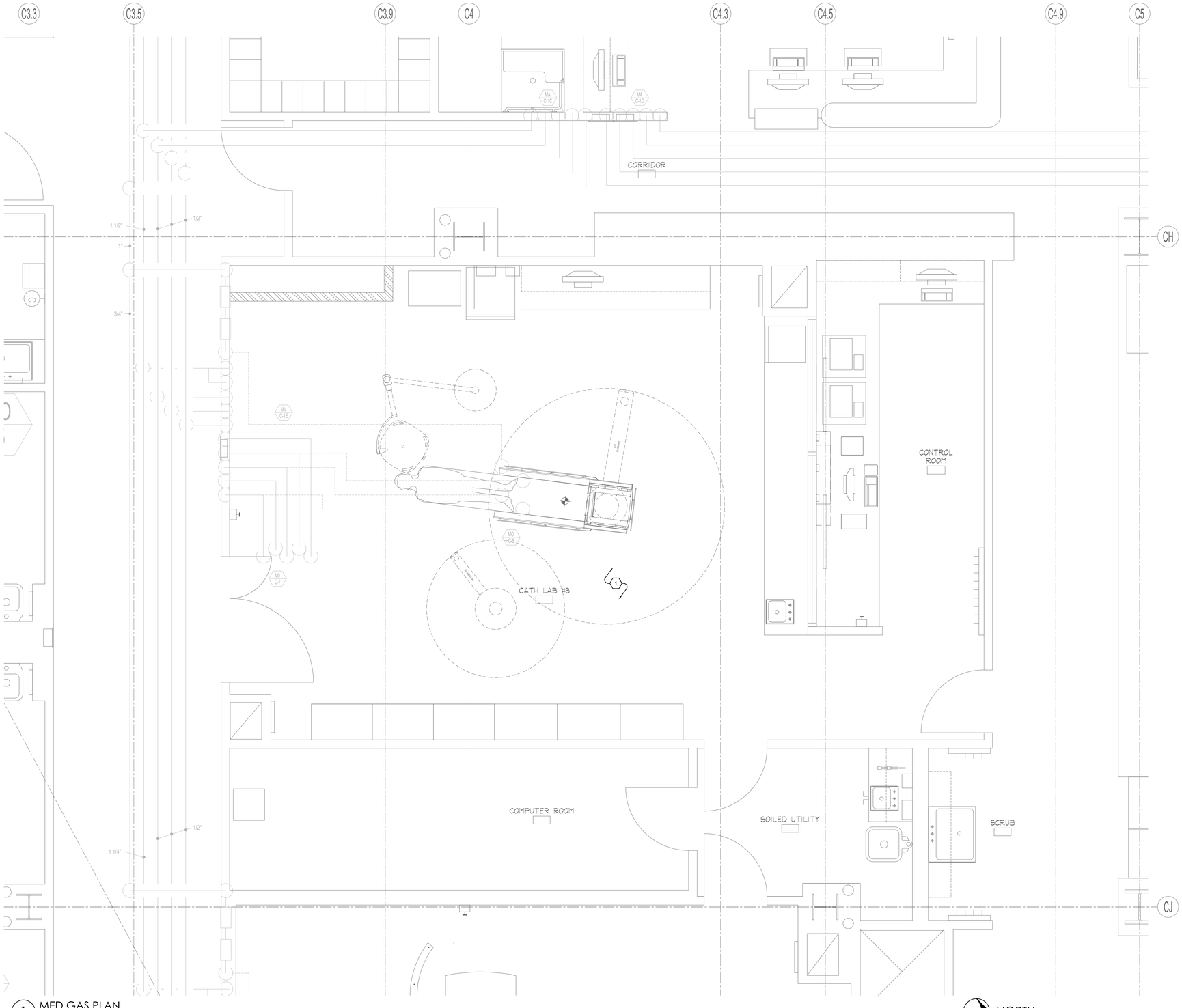
MED GAS DEMOLITION PLAN

P201



1 MED GAS PLAN
SCALE: 1/2" = 1'-0"

KEYED NOTES

1. NO NEW MED GAS WORK

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NJRA Architects, Inc.
5272 S. College Drive, Suite104
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MED GAS PLAN

P211

PLUMBING FIXTURE SCHEDULE

ID	FIXTURE	CW (IN)	HW (IN)	W (IN)	V (IN)	NOTES	SPECIFICATION
S-1	SINK	1/2	1/2	1 1/2	1 1/2	SOLID SURFACE INTEGRAL	SINK: BASIN INTEGRAL TO SOLID SURFACE COUNTERTOP PROVIDED BY OTHERS. CHICAGO 626-GN8FCABCP DECK-MOUNTED REMOTE SPOUT WITH 1.5 GPM LAMINAR FLOW CONTROL INSERT IN SPOUT INLET. CHICAGO 625-LPSLO PEDAL VALVES WITH ADJUSTABLE SLO CLOSING CARTRIDGES, ADJUST TO CLOSE VALVE BETWEEN 1 AND 2 SECONDS OF FOOT PEDAL RELEASE. FLEXIBLE STAINLESS-STEEL SUPPLIES WITH LOOSE KEY ANGLE STOPS. CHICAGO 327-XCP DRAIN GRID STRAINER WASTE WITH TAILPIECE, PROVIDE WITH CAST BRASS P-TRAP WITH CLEAN-OUT PLUG.

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

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PLUMBING SCHEDULES

P501

SYMBOLS LEGEND

SYMBOL	DESCRIPTION
00	REFERENCE AND LINE SYMBOLS
01 A5 E-501	DETAIL INDICATOR: A5 INDICATES DETAIL NUMBER, E-501 INDICATES DRAWING SHEET WHERE DETAIL IS SHOWN.
02 A5 E-201	ELEVATION OR SECTION INDICATOR, EXTERIOR: A5 INDICATES ELEVATION OR SECTION NUMBER, E-201 INDICATES DRAWING SHEET WHERE ELEVATION OR SECTION IS SHOWN.
03 A5 E-201	ELEVATION OR SECTION INDICATOR, INTERIOR: A5 INDICATES ELEVATION OR SECTION NUMBER, E-201 INDICATES DRAWING SHEET WHERE ELEVATION OR SECTION IS SHOWN.
ROOM NAME 04 100	ROOM IDENTIFIER WITH ROOM NAME AND NUMBER.
05 1	KEYNOTE INDICATOR.
06 1	REVISION INDICATOR.
09	BREAK, STRAIGHT: TO BREAK PARTS OF DRAWING
10	BREAK, ROUND
12	NEW LINE: MEDIUM LINE.
13	HIDDEN FEATURES LINE: HIDDEN, THIN LINE
14	EXISTING TO REMAIN LINE: THIN LINE.
15	DEMOLITION LINE: DASHED, MEDIUM LINE
00	WIRING METHODS
01	WIRING.
04 A-1,3,5	BRANCH CIRCUIT HOME RUN TO PANELBOARD: NUMBER OF ARROWS INDICATES NUMBER OF CIRCUITS. LETTER AND NUMBER NOTATIONS IDENTIFY PANEL AND CIRCUIT NUMBERS. USE #12 CONDUCTORS, EXCEPT #10 CONDUCTORS SHALL BE INSTALLED IF DISTANCES EXCEED THOSE SPECIFIED IN THE ELECTRICAL SPECIFICATIONS.
05 1 A-1,3,5	BRANCH CIRCUIT HOME RUN TO PANELBOARD: NUMBER OF ARROWS INDICATES NUMBER OF CIRCUITS. LETTER AND NUMBER NOTATIONS IDENTIFY PANEL AND CIRCUIT NUMBERS. NUMBER IN BOX REFERS TO THE CONDUCTOR AND CONDUIT SCHEDULE. FOR BRANCH WIRING USE #12 CONDUCTORS, EXCEPT #10 CONDUCTORS SHALL BE INSTALLED IF DISTANCES EXCEED THOSE SPECIFIED IN THE ELECTRICAL SPECIFICATIONS.
07	FLEXIBLE WIRING.
08 — X —	WIRING AND/OR RACEWAY: THIN LINE. WHERE "X" = : CATV = CABLE TELEVISION CCTV = CLOSED CIRCUIT TELEVISION FA = FIRE ALARM FO = FIBER OPTICS I = INTERCOM NC = NURSE CALL P = POWER RC = RIGID CONDUIT S = SOUND T = TELEPHONE TV = TELEVISION OTHERS AS NOTED IN OTHER SCHEDULES. RACEWAYS AND WIRING SHALL BE SIZED AS SHOWN AND/OR SPECIFIED.
09	LOW VOLTAGE WIRING: DIVIDE, MEDIUM LINE.
10	CONDUIT STUB. DIMENSION RECORD DRAWINGS AND MARK.
11 1	CONDUCTOR & CONDUIT ("CC") SCHEDULE INDICATOR. REFER TO ONE-LINE DIAGRAM.
12 HC	ADA ACCESS PUSH PLATE
13 J	JUNCTION BOX.
19 C C	CABLE TRAY ABOVE ACCESSIBLE CEILING.
21	EARTH GROUND (ONE-LINE DIAGRAM).
22 J C	JUNCTION BOX, CEILING.
23	LADDER RACK.
25	MECHANICAL EQUIPMENT CONNECTION. REFER TO EQUIPMENT SCHEDULE FOR REQUIREMENTS.
00	LIGHTING (REFER TO FIXTURE SCHEDULE FOR SYMBOLS)
01 (W-3)	FIXTURE IDENTIFICATION: (W-3) INDICATES FIXTURE TYPE AS SCHEDULED.
02 (W-3)	FIXTURE IDENTIFICATION, EMERGENCY WITH BATTERY PACK, CONNECTED TO GENERATOR AS INDICATED: (W-3) INDICATES FIXTURE TYPE AS SCHEDULED.
03 EM	EMERGENCY.
04 NL	NIGHT LIGHT: DO NOT SWITCH.
05 ↑	EGRESS DIRECTION ARROW (EXIT SIGNS).
07	EXIT SIGN: SINGLE FACE; CEILING MOUNTED
08	EXIT SIGN: SINGLE FACE; WALL MOUNTED
09	EXIT SIGN: DOUBLE FACE; CEILING MOUNTED
10	EXIT SIGN: DOUBLE FACE; WALL MOUNTED
00	LIGHTING CONTROL
01	OCCUPANCY SENSOR, DUAL TECHNOLOGY, OMNI-DIRECTIONAL, CEILING.
02	OCCUPANCY SENSOR, DUAL TECHNOLOGY, WALL.
03	OCCUPANCY SENSOR, DUAL TECHNOLOGY, DIRECTIONAL.
05 R	OCCUPANCY SENSOR CONTROL RELAY.
06	VACANCY SENSOR, DUAL TECHNOLOGY, OMNI-DIRECTIONAL, CEILING.
07	VACANCY SENSOR, DUAL TECHNOLOGY, WALL.
08 P	PHOTOCELL.
18 a,b $	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)
19 DC	DIGITAL LIGHTING DIMMING CONTROLLER
20 LC	DIGITAL PLUG LOAD CONTROLLER
21 LS	LIGHTING NETWORK SWITCH.
22 NR	LIGHTING NETWORK ROUTER.
23 RC	DIGITAL LIGHTING ROOM CONTROLLER
25 SM	LIGHTING NETWORK SEGMENT MANAGER
26 L X	LIGHTING SPACE CONTROL TYPE. X INDICATES TYPE. SEE SCHEDULE / DIAGRAM.

SYMBOLS LEGEND

SYMBOL	DESCRIPTION
00	WIRING DEVICES
02	RECEPTACLE, DUPLEX: NEMA 5-20R.
03 A	RECEPTACLE, DUPLEX, ABOVE COUNTER: NEMA 5-20R.
05 D	RECEPTACLE, DUPLEX, DEDICATED CIRCUIT: NEMA 5-20R.
06 DF	RECEPTACLE, DUPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER, DRINKING FOUNTAIN: CONCEAL WATER COOLER RECEPTACLE BEHIND WATER COOLER. SEE MECHANICAL/PLUMBING SHOP DRAWINGS FOR INSTALLATION REQUIREMENTS.
12	RECEPTACLE, DUPLEX, HOSPITAL GRADE: NEMA 5-20R.
13	RECEPTACLE, DUPLEX ON EMERGENCY POWER: NEMA 5-20R.
14	RECEPTACLE, DUPLEX, HOSPITAL GRADE ON EMERGENCY POWER: NEMA 5-20R.
16	RECEPTACLE, DUPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER: NEMA 5-20R.
17	RECEPTACLE, DUPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER, HOSPITAL GRADE: NEMA 5-20R.
18	RECEPTACLE, DUPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER, HOSPITAL GRADE ON EMERGENCY POWER: NEMA 5-20R.
19 WP	RECEPTACLE, DUPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER, WEATHERPROOF: NEMA 5-20R.
22	RECEPTACLE, QUADRAPLEX: NEMA 5-20R.
23	RECEPTACLE, QUADRAPLEX ON EMERGENCY POWER: NEMA 5-20R.
24	RECEPTACLE, QUADRAPLEX, HOSPITAL GRADE: NEMA 5-20R.
25	RECEPTACLE, QUADRAPLEX, HOSPITAL GRADE ON EMERGENCY POWER: NEMA 5-20R.
27	RECEPTACLE, QUADRAPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER: NEMA 5-20R.
28	RECEPTACLE, SPECIAL PURPOSE. PROVIDE RECEPTACLE TO MATCH EQUIPMENT PLUG.
29	RECEPTACLE, SPECIAL PURPOSE ON EMERGENCY POWER. PROVIDE RECEPTACLE TO MATCH EQUIPMENT PLUG.
33	MULTI-OUTLET ASSEMBLY: NEMA 5-20R.
34 D	DROP CORD. SEE DETAIL.
36 FB#	FLUSH FLOOR BOX. "#" SHOWN ON DRAWINGS. REFER TO WIRING DEVICE SCHEDULE IN THE ELECTRICAL SPECIFICATIONS FOR CONFIGURATION AND DEVICES.
37 PP#	POWER POLE. "#" SHOWN ON DRAWINGS. REFER TO WIRING DEVICE SCHEDULE IN THE ELECTRICAL SPECIFICATIONS FOR CONFIGURATION AND DEVICES.
38 PT#	FLUSH FIRE RATED POKE THRU. "#" SHOWN ON DRAWINGS. REFER TO WIRING DEVICE SCHEDULE IN THE ELECTRICAL SPECIFICATIONS FOR CONFIGURATION AND DEVICES.
39	SWITCH, DIMMER.
40 X $	SWITCH, SINGLE POLE ("x" INDICATES FIXTURES CONTROLLED).
41 X $2	SWITCH, DOUBLE POLE ("x" INDICATES FIXTURES CONTROLLED).
42 X $3	SWITCH, THREE-WAY ("x" INDICATES FIXTURES CONTROLLED).
43 X $4	SWITCH, FOUR-WAY ("x" INDICATES FIXTURES CONTROLLED).
44 $DS	SWITCH, DOOR.
47 $M	SWITCH, MOMENTARY.
53	RECEPTACLE, QUADRAPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER, HOSPITAL GRADE: NEMA 5-20R.
54	RECEPTACLE, QUADRAPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER, HOSPITAL GRADE ON EMERGENCY POWER: NEMA 5-20R.
56	RECEPTACLE, SINGLE PLEX, WITH USB OUTLET
00	STRUCTURED CABLING IHC
01 ▽	IHC COMMUNICATIONS DEVICE (1 DATA).
02	IHC COMMUNICATIONS DEVICE (1 DATA / 1 ANALOG).
03	IHC COMMUNICATIONS DEVICE (1 DATA WALL PHONE).
04	IHC COMMUNICATIONS DEVICE (2 DATA).
05 ▼3	IHC COMMUNICATIONS DEVICE (3 DATA).
06 ▼4	IHC COMMUNICATIONS DEVICE (4 DATA).
07 ▼6	IHC COMMUNICATIONS DEVICE (6 DATA).
08 ▽M	IHC COMMUNICATIONS DEVICE PHYSIOLOGICAL MONITOR (1 DATA).
09 ▼WAP	IHC COMMUNICATIONS DEVICE WIRELESS ACCESS POINT (2 DATA).
00	TECHNOLOGY SYSTEMS
01 X	TECHNOLOGY SYSTEM CABLE. SEE SPECIFIC JOB EQUIPMENT LIST FOR APPLICABLE DESIGNATIONS. EXAMPLES: C = CONTROL CABLE G = GROUND CABLE, 10 AWG, 1 CONDUCTOR, GREEN INSULATED M = MICROPHONE CABLE S = SPEAKER CABLE, 70 VOLT SYSTEM Z = SPEAKER CABLE, 8 OHM SYSTEM
02 S #	SPEAKER, CEILING MOUNTED.
21	EQUIPMENT CABINET.
40 CP#	CONNECTION PANEL.
00	NURSE CALL
01 J	JUNCTION BOX.
02	CORRIDOR LIGHT.
03 B	BATHROOM PULL CORD STATION.
04 D	DUTY STATION.
05 E	EMERGENCY ASSISTANCE CALL STATION.
06 E CB	EMERGENCY ASSISTANCE CODE BLUE CALL STATION.
07 P	PATIENT STATION.
08 S	STAFF STATION.
09 NCM	TOUCH SCREEN NURSE CALL MASTER STATION.
10 ZLC	ZONE LIGHT CONTROLLER.
11 CU	NURSE CALL AREA CONTROL UNIT & POWER SUPPLIES.

SYMBOLS LEGEND

SYMBOL	DESCRIPTION
00	ELECTRICAL POWER AND DISTRIBUTION
01	FUSE WITH RATING (ONE-LINE DIAGRAM).
02	DISCONNECT, FUSED (ONE-LINE DIAGRAM).
03	DISCONNECT, NONFUSED (ONE-LINE DIAGRAM).
04	DISCONNECT WITH FUSE AND MOTOR STARTER COMBINATION (ONE-LINE DIAGRAM).
05	OVERLOAD RELAY (ONE-LINE DIAGRAM).
06	STARTER (ONE-LINE DIAGRAM).
07	CIRCUIT BREAKER, MOLDED CASE (ONE-LINE DIAGRAM).
08	CIRCUIT BREAKER, MOLDED CASE WITH SHUNT TRIP (ONE-LINE DIAGRAM).
10	CIRCUIT BREAKER, SOLID STATE (ONE-LINE DIAGRAM).
11 GFP	CIRCUIT BREAKER, SOLID STATE WITH GROUND FAULT PROTECTION (ONE-LINE DIAGRAM).
12	MOTOR.
16	TRANSFORMER (ONE-LINE DIAGRAM).
20	DELTA CONNECTION (ONE-LINE DIAGRAM).
21	WYE CONNECTION (ONE-LINE DIAGRAM).
23 225/3 "1H"	PANELBOARD WITH MAIN LUGS ONLY. BUS SIZE AND PHASE AS SHOWN (ONE-LINE DIAGRAM).
24 225/3 "1H"	PANELBOARD WITH MAIN CIRCUIT BREAKER. SIZE AND PHASE AS SHOWN (ONE-LINE DIAGRAM).
25 225/3 "1H" 60/3	PANELBOARD WITH MAIN AND SUB FEED CIRCUIT BREAKER (ONE-LINE DIAGRAM).
27 225/3 "1H" 225/3 "1H"	PANELBOARD WITH SUB FEED LUGS (ONE-LINE DIAGRAM).
29	CT CABINET PER UTILITY'S REQUIREMENTS (ONE-LINE DIAGRAM).
31	TRANSFER SWITCH (ONE-LINE DIAGRAM).
32 DMM	DIGITAL MULTIMETER (ONE-LINE DIAGRAM).
33	SERVICE ENTRANCE SURGE PROTECTION (ONE-LINE DIAGRAM).
35 G	GENERATOR, POWER (ONE-LINE DIAGRAM).
36 M	METER.
38 VFC VFD	VARIABLE FREQUENCY MOTOR CONTROLLER (ONE-LINE DIAGRAM).
41	DISCONNECT SWITCH, FUSED.
42	DISCONNECT SWITCH, UNFUSED.
43	STARTER, COMBINATION WITH DISCONNECT SWITCH.
44	STARTER OR MOTOR CONTROLLER.
45	PUSHBUTTON.
46	PUSHBUTTONS, MOTOR CONTROL.
47	PANELBOARD CABINET, FLUSH MOUNTED.
48	PANELBOARD CABINET, SURFACE MOUNTED, 1 SECTION.
49	PANELBOARD CABINET, SURFACE MOUNTED, 2 SECTION.
50 DP#__	DISTRIBUTION PANEL OR SWITCHBOARD.
51 LP	LIGHTING RELAY, CONTACTOR PANEL, OR DIMMING ENCLOSURE.
52	LIGHTING CONTROL STATION.
55 $ST	SWITCH, TOGGLE MOTOR STARTER WITH OVERLOAD PROTECTION.
56 75	TRANSFORMER: NUMBER INDICATES kVA.

SYMBOLS LEGEND

SYMBOL	DESCRIPTION
00	FIRE ALARM
01 FSA	FIRE SYSTEM ANNUNCIATOR.
02 FCP	FIRE ALARM CONTROL PANEL, SEMI-RECESSED.
03 FPS	FIRE ALARM NOTIFICATION POWER SUPPLY.
04 FTR	FIRE ALARM TRANSPONDER OR TRANSMITTER.
05 HVA	SMOKE CONTROL PANEL.
06 C	AUTOMATIC DOOR CLOSERS: DOOR CLOSERS SHALL BE FURNISHED WITH DOOR HARDWARE AND CONNECTED TO BY FIRE ALARM INSTALLERS.
07 CM	CONTROL MODULE.
08 MM	MONITOR MODULE.
09 P	FIRE ALARM MANUAL PULL STATION.
10 R	SHUT DOWN RELAY: INSTALL RELAY IN CONTROL CIRCUIT OF EQUIPMENT TO BE CONTROLLED IN THE EVENT OF A FIRE.
11	MAGNETIC DOOR HOLDER.
12 A	FIRE SERVICE OR EMERGENCY TELEPHONE STATION, ACCESSIBLE.
13 H	FIRE SERVICE OR EMERGENCY TELEPHONE STATION, HANDSET.
14 J	FIRE SERVICE OR EMERGENCY TELEPHONE STATION, JACK.
15	DETECTOR, SMOKE.
22	DETECTOR, SMOKE, DUCT WITH HOUSING AND SAMPLING TUBE.
23	DETECTOR, HEAT.
24	INDICATOR LAMP.
25	STROBE.
27 WP	ALARM, HORN/SPEAKER, WEATHERPROOF.
28	ALARM, HORN/STROBE, ONE ASSEMBLY.
35	DETECTOR, FLOW SWITCH: FLOW SWITCHES SHALL BE PROVIDED AND INSTALLED WITH FIRE SPRINKLER SYSTEM AND SHALL BE CONNECTED TO LOCATIONS SHOWN ON THE FIRE SPRINKLER SHOP DRAWINGS.
36	DETECTOR, TAMPER SWITCH WITH VALVE: TAMPER SWITCHES SHALL BE PROVIDED AND INSTALLED WITH FIRE SPRINKLER SYSTEM AND SHALL BE CONNECTED TO LOCATIONS SHOWN ON THE FIRE SPRINKLER SHOP DRAWINGS.
37 SD	SMOKE DAMPER.
38 FSD	FIRE AND SMOKE DAMPER.
39	BELL (GONG).
40 CO	DETECTOR, CARBON MONOXIDE.
41	DETECTOR, SMOKE/STROBE, RESIDENTIAL.
42 75	ALARM, HORN/STROBE, ONE ASSEMBLY, CEILING MOUNTED. SUBSCRIPT INDICATES CANDELA RATING.
43 75	ALARM, HORN, CEILING MOUNTED. SUBSCRIPT INDICATES CANDELA RATING.
44 75	ALARM, STROBE, CEILING MOUNTED. SUBSCRIPT INDICATES CANDELA RATING.
00	CCTV
01 P	CCTV CABLE, POWER.
02 V	CCTV CABLE, VIDEO SIGNAL.
03 CCTV	CCTV HEADEND EQUIPMENT.
04 M	CCTV MONITOR.
05	CCTV CAMERA/ENCLOSURE WITH LENS, TYPICAL. SEE SCHEDULE.
06 PTZ	CCTV CAMERA WITH PAN, TILT AND ZOOM.
07 360°	PANNING CAMERA TRANSVERSE ANGLE.
00	SECURITY
01 X	SECURITY CABLE. SEE EQUIPMENT SCHEDULE FOR CABLE TYPE.
02 ACC	ACCESS CONTROL HEADEND EQUIPMENT.
03 CTR	SECURITY CONTROL PANEL.
04 SEC	INTRUSION DETECTION HEADEND EQUIPMENT.
05 #1	CARD ACCESS DOOR TYPE #1 OR AS NOTED. SEE SCHEDULE.
06 CR	CARD READER.
07 KCR	KEYPAD/CARD READER COMBINATION.
08	DOOR SWITCH, BALANCED MAGNETIC CONTROL.
09 ER	EXIT REQUEST.
10 RL	REMOTE DOOR RELEASE BUTTON.
11	BELL.
12	BUZZER.
13	BUZZER, COMBINATION BELL.
14	SENSOR, BURIED VEHICULAR.
15	SENSOR, GLASS BREAK.
16	SENSOR, VOLUMETRIC.
17 CA	CONTROLLED ACCESS POINT.
21 P	PANIC DURESS SWITCH.

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	QUADRUPLE 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 XFMR	BUCK-BOOST TRANSFORMER
C	CEILING MOUNTED
CATV	COMMUNITY ANTENNA TELEVISION
CB	CIRCUIT BREAKER
CCBA	CUSTOM COLOR AS SELECTED BY ARCHITECT
CCTV	CLOSED CIRCUIT TELEVISION
CF/CI	CONTRACTOR FURNISHED/ CONTRACTOR INSTALLED
CF/OI	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
dBA	UNIT OF SOUND LEVEL
DPDT	DOUBLE POLE, DOUBLE THROW
DS	DISCONNECT SWITCH
EA	EACH
EM	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
ENT	ELECTRIC NONMETALLIC TUBING
EPO	EMERGENCY POWER OFF
EQUIP	EQUIPMENT
EX	EXISTING
F	FURNITURE MOUNTED
FA	FIRE ALARM
FCP	FIRE ALARM CONTROL PANEL
FLA	FULL LOAD AMPS
FMC	FLEXIBLE METAL CONDUIT
FOB	FREIGHT ON BOARD
FVNR	FULL VOLTAGE NON-REVERSING
FVR	FULL VOLTAGE REVERSING
GEN	GENERATOR
GFCI	GROUND FAULT INTERRUPTER
GFP	GROUND FAULT PROTECTION
GND	GROUND
HD	HEAVY DUTY
HID	HIGH INTENSITY DISCHARGE
HOA	HAND-OFF-AUTOMATIC
HP	HORSE POWER
HPF	HIGH POWER FACTOR
HPS	HIGH PRESSURE SODIUM
HV	HIGH VOLTAGE
HZ	HERTZ
I/O	INPUT/ OUTPUT
IG	ISOLATED GROUND
IMC	INTERMEDIATE METAL CONDUIT
IN/IS	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	LOCKED ROTOR AMPS
LTG	LIGHTING
LV	LOW VOLTAGE
MATV	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
MIN	MINIMUM
MLO	MAIN LUGS ONLY
MOCP	MAXIMUM OVERCURRENT PROTECTION
MTS	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	OVER CURRENT PROTECTION
OF/CI	OWNER FURNISHED/ CONTRACTOR INSTALLED
OF/OI	OWNER FURNISHED/ OWNER INSTALLED
OFP	OBTAIN FROM PLANS
OH DR	OVERHEAD (COILING) DOOR
OL	OVERLOAD
PB	PUSHBUTTON
PF	POWER FACTOR
PH	PHASE
PNL	PANEL
PT	POTENTIAL TRANSFORMER
PTZ	PAN/TILT/ZOOM
QTY	QUANTITY
R	REMOVE
RCP	REFLECTED CEILING PLAN
RMC	RIGID METAL CONDUIT
RNC	RIGID NONMETAL CONDUIT
RPM	REVOLUTIONS PER MINUTE
RR	REMOVE AND RELOCATE
S/S	START/STOP
SCA	SHORT CIRCUIT AMPS
SCBA	STANDARD COLOR AS SELECTED BY ARCHITECT
SF	SQUARE FOOT (FEET)
SFBA	STANDARD FINISH AS SELECTED BY ARCHITECT
SPD	SURGE PROTECTIVE DEVICE
SPDT	SINGLE POLE, DOUBLE THROW
SPEC	SPECIFICATION
SPST	SINGLE POLE, SINGLE THROW
ST	SINGLE THROW
SWBD	SWITCHBOARD
SWGR	SWITCHGEAR
TL	TWIST LOCK
TP	TELEPHONE POLE
TP	TWISTED PAIR
TTB	TELEPHONE TERMINAL BOARD
TV	TELEVISION
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSER
TYP	TYPICAL
UF	UNDERFLOOR
UGND	UNDERGROUND
UPS	UNINTERRUPTIBLE POWER SUPPLY
V	VOLTS
VA	VOLT AMPERE
VFC/VFD	VARIABLE FREQUENCY MOTOR CONTROLLER
W/	WITH
W/O	WITHOUT
WP	WEATHERPROOF
XFMR	TRANSFORMER

GENERAL ELECTRICAL NOTES

1. CLARIFICATION METHODS: AT THE TIME OF BIDDING, BIDDERS SHALL FAMILIARIZE THEMSELVES WITH THE DRAWINGS AND SPECIFICATIONS. ANY QUESTIONS, MISUNDERSTANDINGS, CONFLICTS, DELETIONS, DISCONTINUED PRODUCTS, CATALOG NUMBER DISCREPANCIES, DISCREPANCIES BETWEEN THE EQUIPMENT SUPPLIED AND THE INTENT OR FUNCTION OF THE EQUIPMENT, ETC, SHALL BE SUBMITTED TO THE ARCHITECT/ENGINEER IN WRITING FOR CLARIFICATION PRIOR TO ISSUANCE OF THE FINAL ADDENDUM AND BIDDING OF THE PROJECT. WHERE DISCREPANCIES OR MULTIPLE INTERPRETATIONS OCCUR, THE MOST STRINGENT (WHICH IS GENERALLY RECOGNIZED AS THE MOST COSTLY) THAT MEETS THE INTENT OF THE DOCUMENTS SHALL BE ENFORCED.

2. OWNER FURNISHED ITEMS: THE OWNER WILL FURNISH MATERIAL AND EQUIPMENT AS INDICATED IN THE CONTRACT DOCUMENTS TO BE INCORPORATED INTO THE WORK. THESE ITEMS ARE ASSIGNED TO THE INSTALLER AND COSTS FOR RECEIVING, HANDLING, STORAGE, IF REQUIRED, AND INSTALLATION ARE INCLUDED IN THE CONTRACT SUM.

   A. THE INSTALLER'S RESPONSIBILITIES ARE THE SAME AS IF THE INSTALLER FURNISHED THE MATERIALS OR EQUIPMENT.

   B. THE OWNER WILL ARRANGE AND PAY FOR DELIVERY OF OWNER FURNISHED ITEMS FREIGHT ON BOARD JOB SITE AND THE INSTALLER WILL INSPECT DELIVERIES FOR DAMAGE. IF OWNER FURNISHED ITEMS ARE DAMAGED, DEFECTIVE OR MISSING, DOCUMENT DAMAGED ITEMS WITH THE TRANSPORT COMPANY AND THE OWNER WILL ARRANGE FOR REPLACEMENT. THE OWNER WILL ALSO ARRANGE FOR MANUFACTURER'S FIELD SERVICES, AND THE DELIVERY OF MANUFACTURER'S WARRANTIES AND BONDS TO THE INSTALLER.

   C. THE INSTALLER IS RESPONSIBLE FOR DESIGNATING THE DELIVERY DATES OF OWNER FURNISHED ITEMS AND FOR RECEIVING, UNLOADING AND HANDLING OWNER FURNISHED ITEMS AT THE SITE.THE INSTALLER IS RESPONSIBLE FOR PROTECTING OWNER FURNISHED ITEMS FROM DAMAGE, INCLUDING DAMAGE FROM EXPOSURE TO THE ELEMENTS, AND TO REPAIR OR REPLACE ITEMS DAMAGED AS A RESULT OF HIS OPERATIONS.

3. EXPOSED STRUCTURE AREAS (EXCLUDING MECHANICAL, ELECTRICAL, AND COMMUNICATION SPACES): INSTALL RACEWAYS BETWEEN DECK AND STRUCTURE WHEREVER POSSIBLE IN EXPOSED STRUCTURE CEILING AREAS. ROUTE RACEWAYS IN CONCEALED AREAS WHEREVER POSSIBLE. REFER ALL CONDITIONS WHERE RACEWAYS MUST BE INSTALLED WHICH CANNOT COMPLY WITH THESE REQUIREMENTS TO THE ARCHITECT.

4. SUBMITTALS: PROVIDE ORIGINAL ELECTRONIC PDF FORMAT, BOUND, BOOKMARKED (EACH SECTION AND PRODUCT), AND HIGHLIGHTED. JOB NAME AND SUBCONTRACTOR SHALL BE ON THE FRONT COVER. PREPARE INDEX OF EQUIPMENT SUBMITTED IN EACH TAB.

5. REFLECTED CEILING PLANS: COORDINATE THE LOCATION OF LIGHT FIXTURES WITH THE ARCHITECTURAL REFLECTED CEILING PLANS. REFER ALL DISCREPANCIES TO THE ARCHITECT AND ENGINEER.

6. ALL WORK SHALL BE DONE ACCORDING TO THE CURRENT NATIONAL ELECTRIC CODE (NEC), IBC, NFPA, AND IFC. COMPLIANCE AND FINAL APPROVAL IS SUBJECT TO THE ON SITE FIELD INSPECTION OF THE AHJ.

DEFINITIONS

NOTE: ALL DEFINITIONS MAY NOT BE USED.

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

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

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

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

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

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

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

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

ELECTRICAL SHEET INDEX

EE001	SHEET INDEX, ABBREVIATIONS, AND GENERAL NOTES
EE501	ELECTRICAL DETAILS
EE701	TYPICAL MOUNTING HEIGHT DETAILS
EP100	OVERALL POWER PLAN
EP101	ELECTRICAL PLANS
EP601	ONE-LINE DIAGRAM
EP701	SKYTRON DRAWINGS
EP702	SIEMENS DRAWINGS
EP703	SIEMENS DRAWINGS
EP704	SIEMENS DRAWINGS
ET601	TELECOM CONDUIT RISER DIAGRAM

NJRA ARCHITECTS

NJRA Architects, Inc.
5272 S. College Drive, Suite104
Murray, Utah 84123
801.364.9259
www.njraarchitects.com

PROFESSIONAL ENGINEER
No. 11783731-2202
JASON R. WORTHEN
STATE OF UTAH
12/20/2021

SPECTRUM ENGINEERS
324 S. State St., Suite 400
Salt Lake City, UT 84111
800-678-7077
801-328-5151
fax: 801-328-5155
www.spectrum-engineers.com

Intermountain Healthcare

IMC - Cath Lab 3 Remodel Project

5121 South Cottonwood Street
Murray, UT 84107

NJRA Project # 20205
Review Set November 18, 2021

SHEET INDEX,
ABBREVIATIONS,
AND
GENERAL
NOTES

EE001

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NJRA ARCHITECTS

NJRA Architects, Inc.
5272 S. College Drive, Suite104
Murray, Utah 84123
801.364.9259
www.njraarchitects.com

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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 DETAIL
SCALE: 1/8" = 1'-0"

2 TYPICAL RACEWAY SUPPORT METHODS DETAIL
SCALE: 1/8" = 1'-0"

4 RECESSED FIXTURE MOUNTING DETAIL
SCALE: 1/8" = 1'-0"

3 TYPICAL CONDUIT RACK DETAIL
SCALE: 1/8" = 1'-0"

ELECTRICAL DETAILS

EE501

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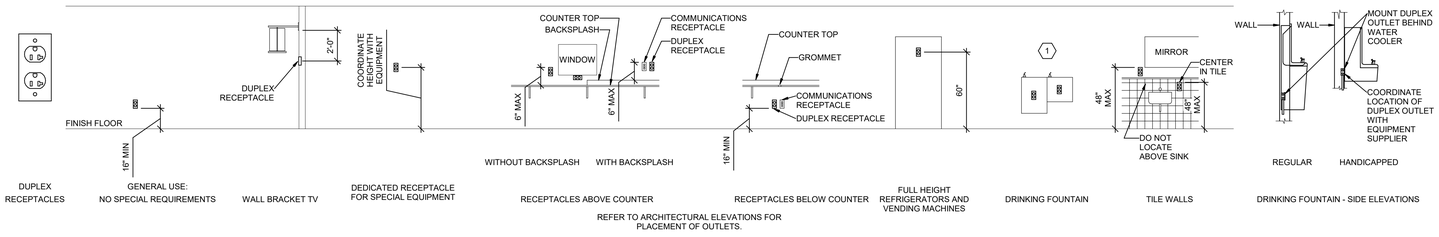
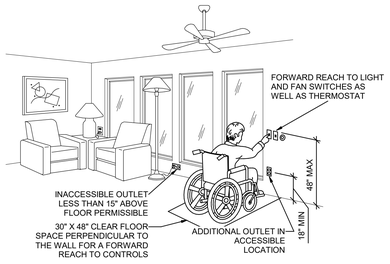


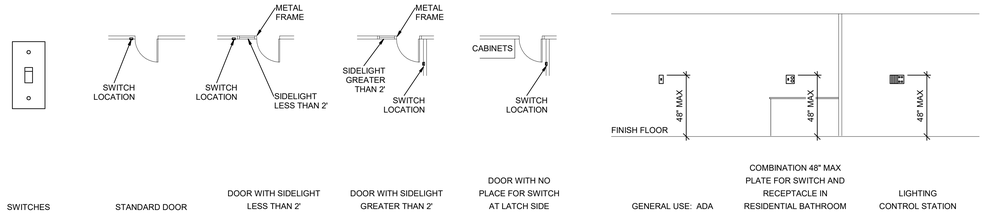
DUPLEX RECEPTACLES | GENERAL USE: NO SPECIAL REQUIREMENTS | WALL BRACKET TV | DEDICATED RECEPTACLE FOR SPECIAL EQUIPMENT | RECEPTACLES ABOVE COUNTER (WITHOUT BACKSPLASH / WITH BACKSPLASH) | RECEPTACLES BELOW COUNTER | FULL HEIGHT REFRIGERATORS AND VENDING MACHINES | DRINKING FOUNTAIN | TILE WALLS | DRINKING FOUNTAIN - SIDE ELEVATIONS

REFER TO ARCHITECTURAL ELEVATIONS FOR PLACEMENT OF OUTLETS.

E2 RECEPTACLE MOUNTING DETAILS

SCALE: NTS





SWITCHES | STANDARD DOOR | DOOR WITH SIDELIGHT LESS THAN 2' | DOOR WITH SIDELIGHT GREATER THAN 2' | DOOR WITH NO PLACE FOR SWITCH AT LATCH SIDE | GENERAL USE: ADA | COMBINATION 48" MAX PLATE FOR SWITCH AND RECEPTACLE IN RESIDENTIAL BATHROOM | LIGHTING CONTROL STATION

D2 ADA DETAIL

SCALE: NTS

NOTE: ALL DEVICES SHALL BE INSTALLED AND LOCATED IN THE BLOCK CONSISENTLY THROUGH OUT THE BUILDING.

D3 SWITCH MOUNTING DETAILS

SCALE: NTS

WALL MOUNTED LIGHT FIXTURE | PENDANT LIGHT FIXTURE | PENDANT EXIT SIGNS | COMMUNICATION RECEPTACLES | WALL PHONE | PAY PHONE | GENERAL USE: NO SPECIAL REQUIREMENTS | WALL BRACKET TV | DEDICATED RECEPTACLE FOR SPECIAL EQUIPMENT | ABOVE COUNTER - TYPICAL | RECEPTACLES ABOVE OR BELOW COUNTER

C1 CMU DEVICE MOUNTING ALIGNMENT DETAIL

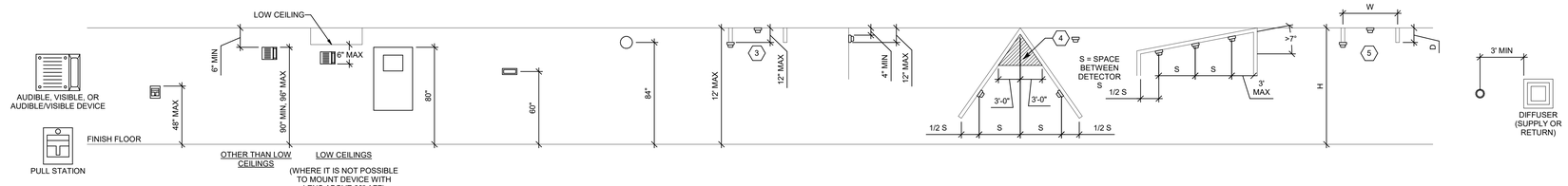
SCALE: NTS

FOR LESS THAN 24" SEPERATION, PROVIDE LISTED SOUND AND FIRE PUTTY PADS

BOXES ON OPPOSITE SIDES OF WALL

C2 LIGHTING MOUNTING DETAILS

SCALE: NTS



FIRE ALARM | PULL STATION | AUDIBLE, VISIBLE, OR AUDIBLE/VISIBLE DEVICE | FIRE ALARM CONTROL PANEL "FCP" | FIRE SYSTEM ANNUNCIATOR "FSA" | BELL | SMOKE DETECTOR BETWEEN BEAMS | WALL MOUNTED SMOKE DETECTOR | SMOKE DETECTOR ON SLOPED CEILING (PEAKED) | SMOKE DETECTOR ON SLOPED CEILING (SHED) | HEAT DETECTOR BETWEEN BEAMS | SMOKE DETECTOR ADJACENT TO SUPPLY AIR

B1 FIRE ALARM MOUNTING DETAILS

SCALE: NTS

A1 BOX MOUNTING DETAILS

SCALE: NTS

A2 TYPICAL WALL MOUNTED DEVICES ALIGNMENT DETAIL

SCALE: NTS

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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 WIREING 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

NJRA Architects, Inc.
5272 S. College Drive, Suite104
Murray, Utah 84123
801.364.9259
www.njraarchitects.com

PROFESSIONAL ENGINEER
No. 11783731-2202
JASON R. WORTHEN
STATE OF UTAH
12/20/2021

SPECTRUM ENGINEERS
324 S. State St., Suite 400
Salt Lake City, UT 84111
800-678-7077
801-328-5151
fax: 801-328-5155
www.spectrum-engineers.com

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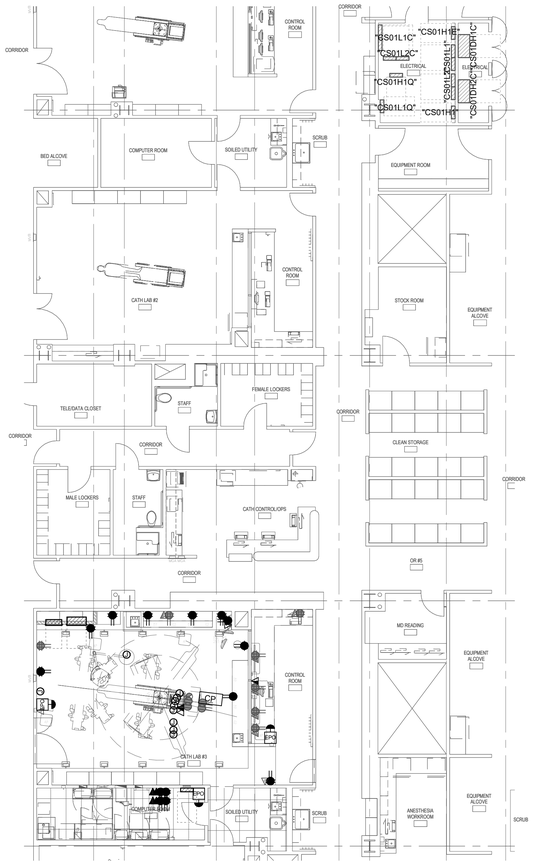
TYPICAL MOUNTING HEIGHT DETAILS

EE701



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

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 ALL ITEMS INDICATED TO REMAIN SHALL BE PROTECTED DURING ALL PHASES OF CONSTRUCTION.

10 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.

11 PROVIDE DEDICATED NEUTRAL FOR ALL BRANCH CIRCUITS.

12 ALL RECEPTACLES INSTALLED WITH IN 6' OF THE EDGE OF A SINK SHALL BE GFCI PROTECTED.

13 PROVIDE NEW TYPED PANEL SCHEDULES FOR ALL PANELS AFFECTED BY CONTSTRUCTION

14 REFER TO SIEMENS AND SKYTRON DRAWINGS ON EP700 SERIES SHEETS FOR ADDITIONAL CONTRACTOR RESPONSIBILITIES.

SHEET KEYNOTES

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NJRA Architects, Inc.
5272 S. College Drive, Suite104
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OVERALL POWER PLAN

EP100

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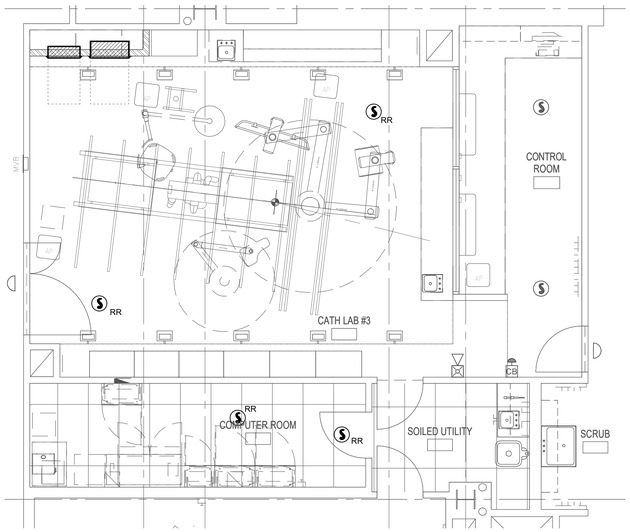
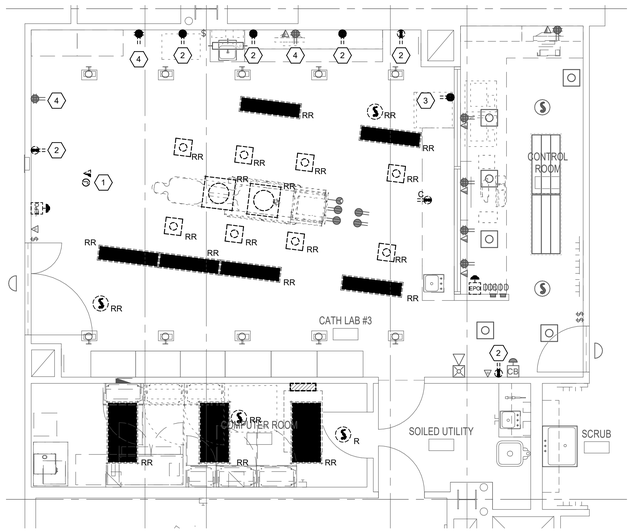
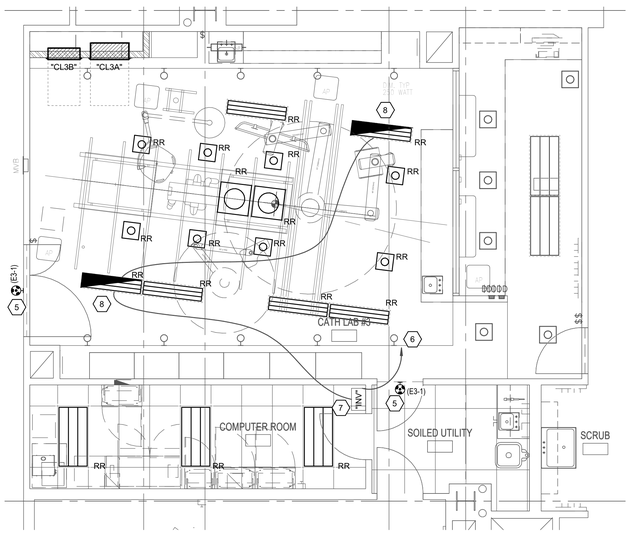


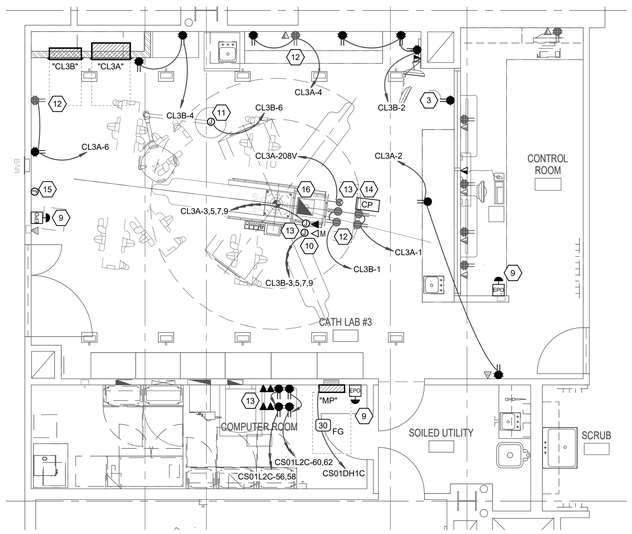
3 AUXILIARY PLAN
SCALE: 1/4" = 1'-0"



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



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



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

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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.

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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.

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9 ALL ITEMS INDICATED TO REMAIN SHALL BE PROTECTED DURING ALL PHASES OF CONSTRUCTION.

10 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.

11 PROVIDE DEDICATED NEUTRAL FOR ALL BRANCH CIRCUITS.

12 ALL RECEPTACLES INSTALLED WITH IN 6' OF THE EDGE OF A SINK SHALL BE GFCI PROTECTED.

13 PROVIDE NEW TYPED PANEL SCHEDULES FOR ALL PANELS AFFECTED BY CONTSTRUCTION

14 REFER TO SIEMENS AND SKYTRON DRAWINGS ON EP700 SERIES SHEETS FOR ADDITIONAL CONTRACTOR RESPONSIBILITIES.

SHEET KEYNOTES

1 DEMOLISH EXISTING ELECTRICAL AND DATA TO MED GAS COLUMN.

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

3 REMOVE EXISTING RECEPTACLE AND REPLACE WITH A NEW GFCI RECEPTACLE.

4 EXISTING RECEPTACLE TO BE RE-CIRCUITED TO NEW ISOLATION PANEL.

5 CONNECT TO EXISTING LIGHTING CIRUCIT IN THE ROOM. DO NOT CONNECT TO ANY ROOM LIGHTING SWITCH LEGS. REFER TO SIEMENS DETAIL.

6 CIRCUIT LIGHTING INVERTER TO THE EXISTING CRITICAL BRANCH LIGHTING CIRCUIT FEEDING THE OTHER LIGHT FIXTURES IN THE CATH LAB.

7 PROVIDE EVENLITE PUREWAVE PW-25-LC-V2-RT LIGHTING INVERTER (OR EQUIVALENT) WITH REMOTE TEST SWITCH IN THE CATH LAB EQUIPMENT ROOM. COORDINATE EXACT LOCATIONS FOR THE INVERTER AND REMOTE TEST SWITCH WITH THE OWNER. CONNECT THE SWITCHED INPUT FOR THE INVERTER TO THE LOAD SIDE OF TEH SWITCH FEEDING THE 1X4 FIXTURES IN THE LAB AND USE THE INVERTER SWITCHED OUTPUT TO CONNECT TO THE LIGHT FIXTURES.

8 CONNECT LIGHT FIXTURE TO NEW LIGHITNG INVERTER LOCATED IN THE EQUIPMENT ROOM.

9 PROVIDE EMERGNECY POWER OFF SWITCH CONNECTED TO CATH LAB MAIN SHUNT TRIP BREAKER (MP).

10 PROVIDE (8) 120V 20A CIRCUIT TO SKYTRON BOOM FOR RECEPTACLES, FOUR FROM EACH ISOLATION PANEL. PROVIDE THREE STANDARD DATA DROPS AND ONE PATIENT MONITORING DATA DROP. STRUCTURED CABLING INSTALLER TO MAKE ALL TERMINATIONS IN BOOM.

11 PROVIDE 120V CIRCUIT TO THE SKYTRON BOOM FOR THE LIGHT.

12 RE-CIRCUIT EXISTING RECEPTACLES TO NEW ISOLATION PANEL.

13 PROVIDE (1) 3" CONDUIT AND (3) 2" CONDUITS STUBBED TO ABOVE THE NEW NETWORK RACK TO THE FOLLOWING LOCATIONS: (1) 2" CONDUIT TO MONITOR BOOM ON PATIENT LEFT, (1) 2" CONDUIT TO THE MED GAS EQUIPMENT BOOM, (1) 2" CONDUIT TO UNDER THE CONTROL ROOM DESK VIA THE CHASE ON THE WEST END OF THE DESK, AND (1) 3" CONDUIT TO THE TABLE BASE FOR SEIMENS CABLING.

14 PROVIDE (1) 2" CONDUIT FROM NEW NETWORK RACK LOCATION TO THE MED GAS PEDASTAL. RUN CONDUIT DOWN TO THE CEILING SPACE OF THE FLOOR BELOW AND BACK UP TO THE PEDASTAL.

15 PROVIDE 1.25" CONDUIT WITH CAT6A SHEILDED CABLE FROM THE VIDEO SWITCH LOCATION IN THE PROCEDURE ROOM TO THE DATA RACK LOCATED IN THE EQUIPMENT ROOM. COORDINATE EXACT LOCATION WITH OWNER.

16 PROVIDE A NEW 2.5" CONDUIT FOR THE VIDEO INTEGRATION SYSTEM, FROM VIDEO INTEGRATION RACK IN THE EQUIPMENT TO THE B10 BOX SHOWN IN THE SIEMENS DRAWINGS.

NJRA ARCHITECTS
NJRA Architects, Inc.
5272 S. College Drive, Suite104
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No. 11783731-2202
JASON R. WORTHEN
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fax: 801-328-5155
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NJRA Project # 20205
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ELECTRICAL PLANS

EP101

BRANCH CIRCUIT CONDUCTOR AND CONDUIT SIZING TABLE

CIRCUIT AMPACITY/VOLTAGE	CIRCUIT LENGTH	CONDUCTOR SIZE (PHASE, NEUTRAL AND GR)	CONDUIT SIZE
20A/120V	0' - 60'	#12 AWG	0.75" Ø
20A/120V	60' - 95'	#10 AWG	0.75" Ø
20A/120V	95' - 150'	#8 AWG	1" Ø
20A/120V	150' - 240'	#6 AWG	1.25" Ø
20A/277V	0' - 140'	#12 AWG	0.75" Ø
20A/277V	140' - 220'	#10 AWG	0.75" Ø
20A/277V	220' - 350'	#8 AWG	1" Ø
20A/277V	350' - 550'	#6 AWG	1.25" Ø

NOTES:

1. WIRE SIZING IS BASED ON COPPER CONDUCTORS SUPPLYING A 20A, 120V CIRCUIT AT THE INDICATED VOLTAGE, ASSUMED TO BE 80% LOADED (16A), WITH MAXIMUM VOLTAGE DROP OF 3% AT THE LOAD.
2. DOWN-SIZED WIRE AT DEVICE/LOAD AS REQUIRED AND TERMINATE CONDUCTORS IN A SAFE AND CODE COMPLIANT MANNER.
3. CONDUIT SIZE IS BASED ON A MAXIMUM OF 3 CIRCUITS PER CONDUIT, EACH WITH A SEPARATE NEUTRAL CONDUCTOR.

CLIENT: | JOB: | 11/16/2021 | CIRCUITS: 32

PANEL ID: CL3A | MOUNT: FLUSH | TYPE: BOLT-ON BOLT-ON | 120 VOLT 1 PHASE 3 WIRE ISOLATION PANEL

80 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 A SECTION — SECTION 1

CIR #	O/C PROT AMP	O/C PROT POLE	OUTLETS LTG	OUTLETS CO'S	OUTLETS PWR	DESCRIPTION	LCL	LOAD	LCL KVA	DESCRIPTION	OUTLETS LTG	OUTLETS CO'S	OUTLETS PWR	O/C PROT AMP	O/C PROT POLE	CIR #
1	20	2		2		FLOOR PEDASTAL CO	0.4	1	0.6	CEILING AND EAST CO		3		20	2	2
3	20	2		2		BOOM CO	0.4	1.2	0.8	WEST CO		4		20	2	4
5	20	2		3		BOOM CO	0.6	1.4	0.8	SOUTH CO		4		20	2	6
7	20	2		3		BOOM CO	0.6	1.4	0.8	SPARE		4		20	2	8
9	20	2		3		BOOM CO	0.6	0.6	0	SPARE				20	2	10
11	20	2				SPARE	0	0	0	SPARE				20	2	12
13	20	2				SPARE	0	0	0	SPARE				20	2	14
15	20	2				SPARE	0	0	0	SPARE				20	2	16
TOTALS:			KVA					5.6	TOTAL KVA						5.6	
			AMPS					47	AVERAGE AMPS						23	

PANEL ID:CL9A-208V | MOUNT: FLUSH | TYPE: BOLT-ON BOLT-ON | 208 VOLT 1 PHASE 3 WIRE ISOLATION PANEL

50 CL3A-208V 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 AMP	O/C PROT POLE	OUTLETS LTG	OUTLETS CO'S	OUTLETS PWR	DESCRIPTION	LCLLOAD KVA		LCL KVA	DESCRIPTION	OUTLETS LTG		OUTLETS PWR	O/C PROT AMP	O/C PROT POLE	CIR #
1	30	2		2		LASER	0.4	0.4	0	SPACE				20	2	2
3	20	2		2		SPACE	0.4	0.4	0	SPACE				20	2	4
5	20	2		2		SPACE	0.4	0.4	0	SPACE				20	2	6
7	20	2		2		SPACE	0.4	0.4	0	SPACE				20	2	8
9	20	2		3		SPACE	0.6	0.6	0	SPACE				20	2	10
11	20	2				SPACE	0	0	0	SPACE				20	2	12
TOTALS:			KVA					2.2	TOTAL KVA						2.2	
			AMPS					18	AVERAGE AMPS						9	

WIRING:

NOTE: PANEL SCHEDULE IS TYPICAL FOR OR ROOMS #1, #2, #3, #4, #5 , #6 & #7

CLIENT: | JOB: | 11/16/2021 | CIRCUITS: 32

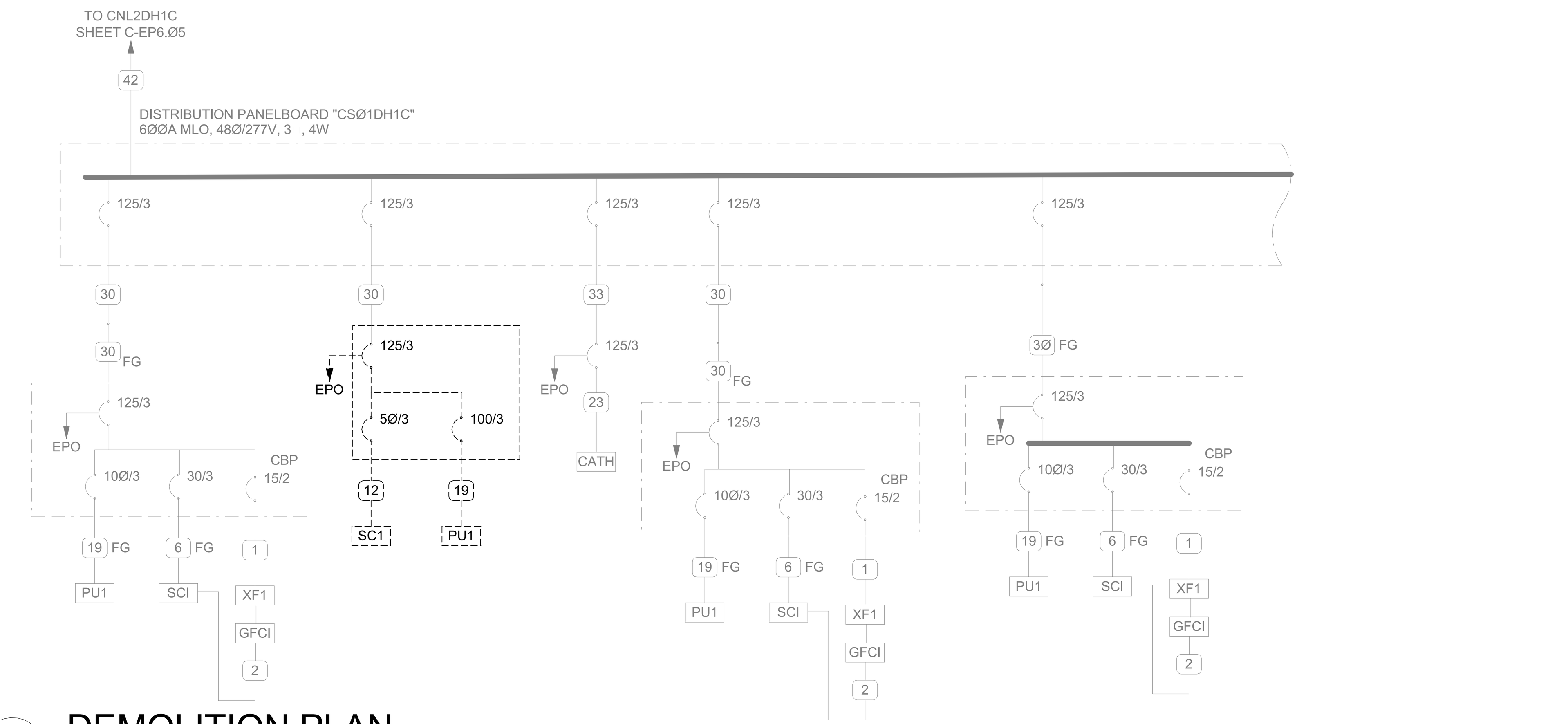
PANEL ID: CL3B | MOUNT: FLUSH | TYPE: BOLT-ON BOLT-ON | 120 VOLT 1 PHASE 3 WIRE ISOLATION PANEL

50 AMPERE MAIN BREAKER | LOCATION: | PANEL SIZE: 72"Hx32"Wx12"D

ACCESSORIES: PANEL DIRECTORY, IDENTIFICATION, GROUNDING BAR, LINE ISOLATION MONITOR, 7.5 KVA, 208-120 VOLT TRANSFORMER, INDICATOR ALARMS, INDICATOR LIGHTS, STAINLESS STEEL COVER (BOTH PANEL SECTIONS UNDER COMMON COVER)

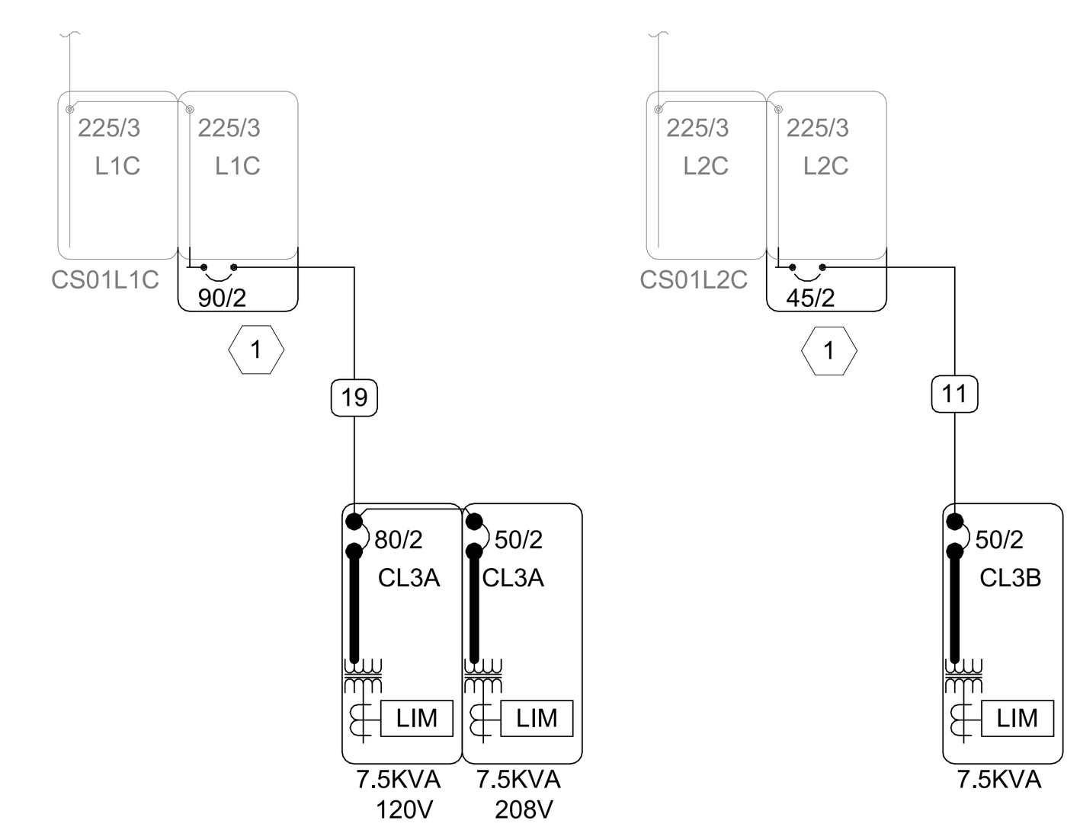
CRITICAL BRANCH B — SECTION 1

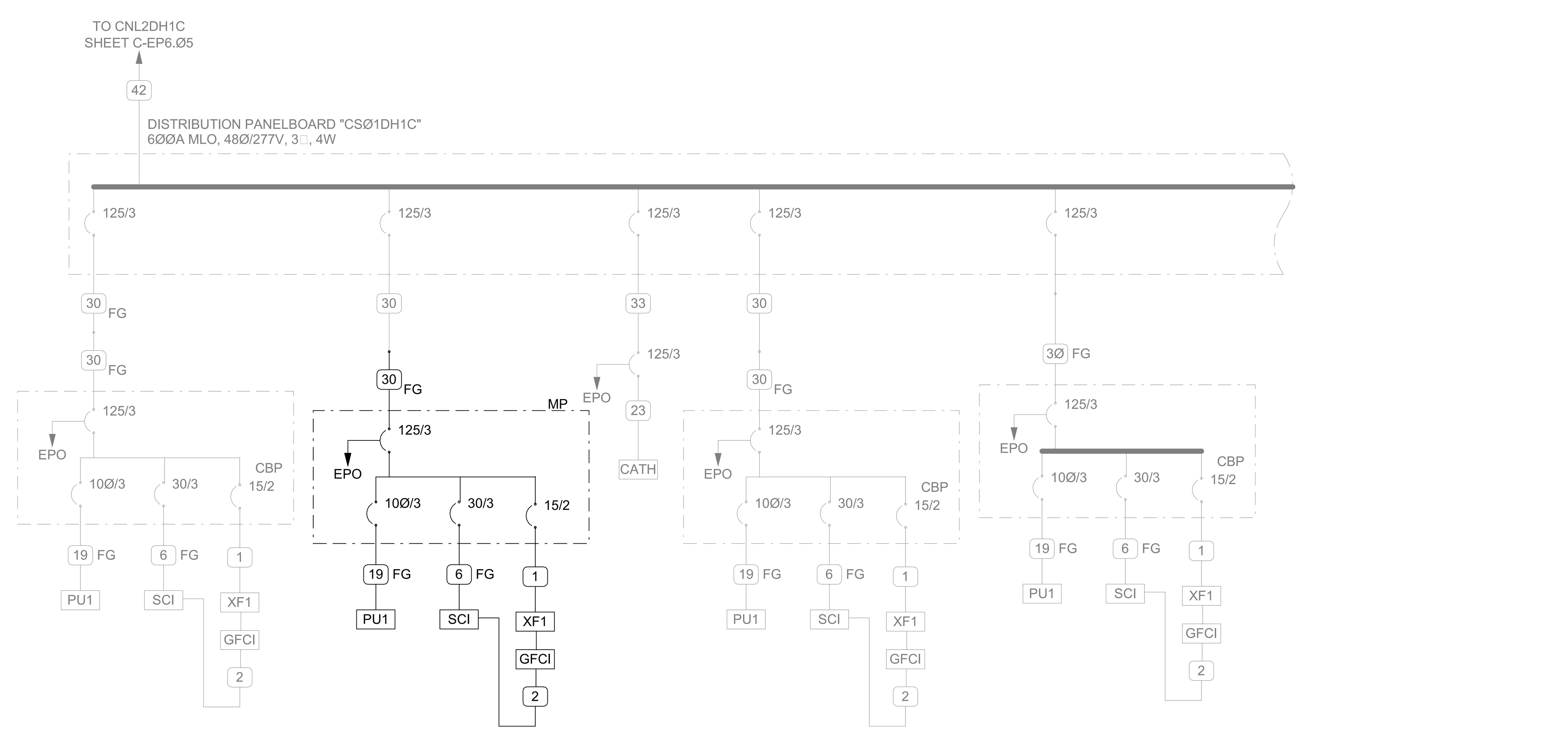
CIR #	O/C PROT AMP	O/C PROT POLE	OUTLETS LTG	OUTLETS CO'S	OUTLETS PWR	DESCRIPTION	LCL	LOAD	LCL KVA	DESCRIPTION	OUTLETS LTG	OUTLETS CO'S	OUTLETS PWR	O/C PROT AMP	O/C PROT POLE	CIR #
1	20	2		2		FLOOR PEDASTAL CO	0.4	1.6	1.2	WEST CO		6		20	2	2
3	20	2		4		BOOM CO	0.8	1.6	0.8	WEST CO		4		20	2	4
5	20	2		4		BOOM CO	0.8	1.8	1	LIGHT BOOM	1			20	2	6
7	20	2		4		BOOM CO	0.8	0.8	0					20	2	8
9	20	2		4		BOOM CO	0.8	0.8	0	SPARE				20	2	10
11	20	2				SPARE	0	0	0	SPARE				20	2	12
13	20	2				SPARE	0	0	0	SPARE				20	2	14
15	20	2				SPARE	0	0	0	SPARE				20	2	16
TOTALS:			KVA					6.6	TOTAL KVA						6.6	
			AMPS					55	AVERAGE AMPS						28	



1 DEMOLITION PLAN

SCALE: NTS





2 NEW ONE LINE DIAGRAM

SCALE: NTS

SHEET KEYNOTES

1. PROVIDE NEW BREAKER IN EXISTING GE PANEL.

CONDUCTOR AND CONDUIT SCHEDULE

** SCHEDULE NUMBER
* SUBSCRIPT (NOTE 5)
(E.G.) 5 IG

SYM	AMP	CONDUIT SIZE	CONDUCTOR (NOTE 1) QTY	SIZE	GR	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

1. CONDUCTORS SHOWN ARE SHOWN FOR EACH CONDUIT WITH MODIFICATIONS AS NOTED IN NOTE 4. ALL CONDUCTORS SHOWN ARE THWN UNLESS OTHERWISE NOTED.
2. PROVIDE EQUIPMENT GROUND CONDUCTORS PER TABLE 250-122 WHEN CIRCUIT BREAKERS ARE SIZED GREATER THAN AMPERE RATING SHOWN IN TABLE.
3. PROVIDE #10 NEUTRALS FOR MULTIWIRE BRANCH CIRCUITS SERVING COMPUTERS.
4. 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.

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

   "IG": INCLUDE IG (INSULATED/ISOLATED GROUND CONDUCTOR) SCHEDULED ALONG WITH GROUND OF EQUIPMENT GROUND CONDUCTOR.

   "SE": SUBSTITUTE "SE" CONDUCTOR FOR "G" CONDUCTOR SHOWN, WHICH IS SIZED FOR THE GROUNDING OF THE SECONDARY OF THE SEPARATELY DERIVED SYSTEM.

NJRA ARCHITECTS

NJRA Architects, Inc.
5272 S. College Drive, Suite104
Murray, Utah 84123
801.364.9259
www.njraarchitects.com

PROFESSIONAL ENGINEER
No. 11783731-2202
JASON R. WORTHEN
STATE OF UTAH
12/20/2021

SPECTRUM ENGINEERS
324 S. State St., Suite 400
Salt Lake City, UT 84111
800-678-7077
801-328-5151
fax: 801-328-5155
www.spectrum-engineers.com

Intermountain Healthcare

IMC - Cath Lab 3 Remodel Project

5121 South Cottonwood Street
Murray, UT 84107

NJRA Project # 20205
Review Set November 18, 2021

ONE-LINE DIAGRAM

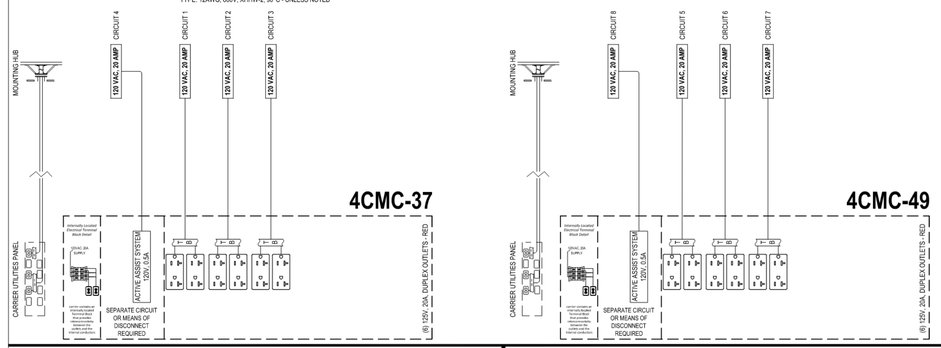
EP601

12/20/2021 10:31:15 AM

SKYTRON®

SITE SPECIFIC WIRING DETAILS

INTERNAL FIXTURE WIRING TYPICAL, EXTRA FLEX STEEL CONDUIT
TYPE: 12AWG, 600V, XHHW-2, 90°C - UNLESS NOTED

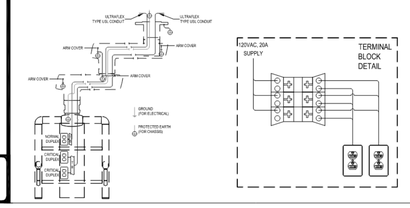


ELECTRICAL REQUIREMENTS - Electrical Engineer

Each boom fixture is fabricated in accordance to the specifications required by the customer. The Configuration drawings supplied by SKYTRON will indicate the type and quantity of circuits required. SKYTRON provides all wiring and electrical materials for connection from fixture to junction box or pump enclosure (if applicable). SKYTRON supplies an electrical junction box (8-5/8" x 4-5/8" x 1-3/4") to facilitate field wiring for up to six circuits that is mounted on the mounting plate in the correct position and if applicable, a hydraulic pump enclosure/junction box (8"L x 6"W x 4"H) that is to be remote mounted within 24" of the mounting structure (by contractor). The pump enclosure can be shipped with the installation kit upon request. Typical wire type is 12AWG, 600V, XHHW-2. Each circuit requires a separate, properly circuit protected, 120VAC, 60Hz power supply line enclosed in rigid metal conduit. All electrical materials for connection to SKYTRON supplied junction box or pump enclosure and installation labor for such materials to be provided by customer. All wiring and materials to be in accordance with federal, state and local codes. It is the customer's responsibility to meet conformity to NFPA and NEC standards with respect to the color, type and number of receptacles provided in a patient care area. (e.g. Color - red/white, Amperage - 15 or 20, dedicated circuits, tamper resistant, LED, GFCI)

Specific conductor colors and/or wiring for isolated applications are available upon request.

GENERIC BOOM ELECTRICAL WIRING DIAGRAM FOR FIXED ARMS



INITIAL:_____ DATE:_____	REQUIRED FOR FABRICATION VERIFY AND INITIAL POWER TYPE	ISOLATED POWER BROWN W/YELLOW STRIPE, ORANGE W/BLUE STRIPE, GREEN W/YELLOW STRIPE INITIAL: _____	NON-ISOLATED POWER BLACK, WHITE, GREEN INITIAL: _____

PROJECT #: 21-078
SUBMITTAL
PLOT DATE: 4/21/2021

INTERMOUNTAIN MEDICAL CENTER LAB #3

MDL: F340 SERIES
QTY.: 1
REV. #: 0
DESCRIPTION: ELECTRICAL WIRING DETAILS

SHEET
C4

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NJRA Architects, Inc.
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Intermountain Healthcare

IMC - Cath Lab 3 Remodel Project

5121 South Cottonwood Street
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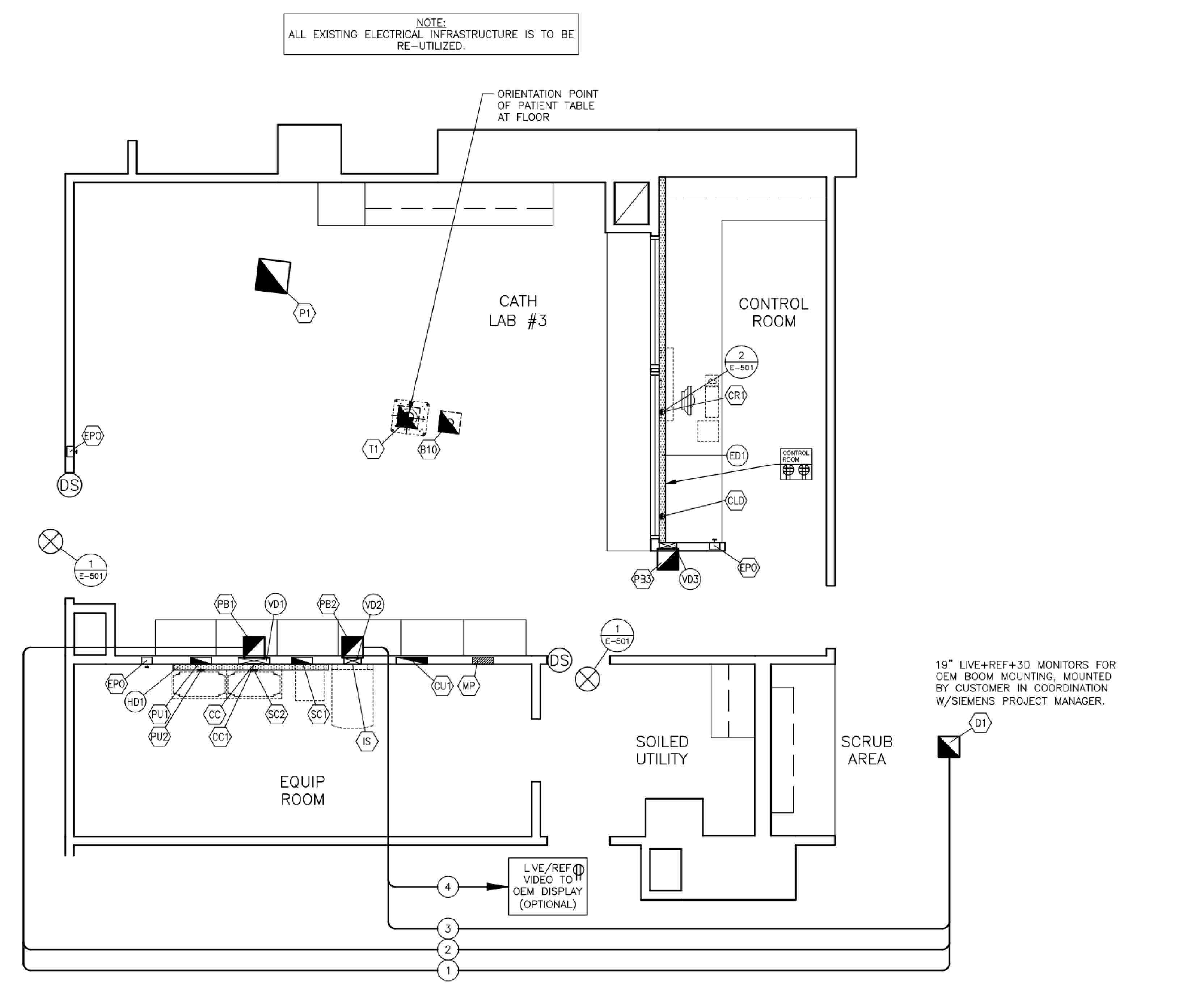
NJRA Project # 20205
Review Set November 18, 2021

SKYTRON DRAWINGS

EP701

12/20/2021 10:31:21 AM

NOTE:
ALL EXISTING ELECTRICAL INFRASTRUCTURE IS TO BE RE-UTILIZED.



ELECTRICAL RACEWAY PLAN

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

ELECTRICAL LEGEND

SYM	SIZE	DESCRIPTION SUPPLIED AND INSTALLED BY CUSTOMER/CONTRACTOR	REMARKS
B10	EXISTING	PULL BOX MOUNTED BELOW FINISHED FLOOR WITH REMOVABLE BOTTOM COVER; WITH 4"ø CONDUIT FROM BOX TO FLUSH WITH FINISHED FLOOR.	TABLE ACCESSORIES
CC	EXISTING	BUSHED OPENING IN VERTICAL DUCT "VD1" COVER AT FLOOR LINE.	CABLE CABINET
CC1	18" X 8"	BUSHED OPENING IN HORIZONTAL DUCT "HD1" BACK (AT FLOOR LINE), OPEN TO VERTICAL DUCT "VD1".	CABLE CABINET
CLD	EXISTING	BUSHED OPENING IN TOP OF HORIZONTAL DUCT "ED1".	C-ROOM DISPLAY INPUTS
CR1	EXISTING	BUSHED OPENING IN TOP OF HORIZONTAL DUCT "ED1".	CONTROL ROOM DISTRIBUTOR
CU1	EXISTING	PULL BOX MOUNTED FLUSH IN FINISHED WALL; WITH REMOVABLE FRONT COVER AND (1) 4"ø BUSHING IN CENTER OF REMOVABLE COVER FOR CABLE EXIT.	COOLING UNIT
D1	AS REQUIRED	PULL BOX MOUNTED ABOVE FINISHED CEILING WITH REMOVABLE BOTTOM COVER WITH 3"ø 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 2xBWD-19D (live+ref)
EPO	---	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
IS	EXISTING	BUSHED OPENING IN VERTICAL DUCT "VD2" COVER AT FLOOR LINE.	IMAGE SYSTEM
MP	EXISTING	MAIN PANEL WITH MAIN BREAKER. LOCATION TO BE CONFIRMED BY CUSTOMER/CONTRACTOR. SEE "POWER SCHEDULE"	BREAKER PANEL
PB1	EXISTING	PULL BOX MOUNTED ABOVE AND CONNECTING TO VERTICAL DUCT "VD1".	PULL BOX
PB2	EXISTING	PULL BOX MOUNTED ABOVE AND CONNECTING TO VERTICAL DUCT "VD2".	PULL BOX
PB3	EXISTING	PULL BOX MOUNTED ABOVE AND CONNECTING TO VERTICAL DUCT "VD3".	PULL BOX
P1	EXISTING	PULL BOX MOUNTED FLUSH IN FINISHED CEILING WITH REMOVABLE BOTTOM COVER WITH 6"ø BUSHED OPENING.	C-ARM
PU1	EXISTING	PULL BOX MOUNTED FLUSH IN FINISHED WALL AT FLOOR LINE; WITH REMOVABLE FRONT COVER WITH 4"ø BUSHED OPENING AT BOTTOM OF COVER.	GENERATOR
PU2	AS REQUIRED	BUSHED OPENING IN HORIZONTAL DUCT "HD1" AT FLOOR LINE, BACK OPEN TO "PU1" AND FRONT OPEN TO BOTTOM OF CABINET.	GENERATOR
SC1	EXISTING	PULL BOX MOUNTED FLUSH IN FINISHED WALL AT FLOOR LINE; WITH REMOVABLE FRONT COVER WITH 4"ø BUSHED OPENING AT BOTTOM OF COVER AND BACK OF HORIZONTAL DUCT OPEN TO PULL BOX.	SYSTEM CABINET
SC2	AS REQUIRED	BUSHED OPENING IN HORIZONTAL DUCT "HD1" AT FLOOR LINE, FRONT OPEN TO BOTTOM OF CABINET.	SYSTEM CABINET
T1	EXISTING	PULL BOX MOUNTED BELOW FINISHED FLOOR WITH REMOVABLE BOTTOM COVER AND 4"ø CONDUIT FROM BOX TO FLUSH WITH FINISHED FLOOR WITH BUSHING AT FLOOR LINE.	TABLE
ED1	EXISTING	HORIZONTAL ELECTRICAL DUCT THAT IS CUSTOMER'S EXISTING IN THE ROOM, WHICH THEY WISH TO REUSE.	RACEWAY
HD1	3 1/2" X 18"	HORIZONTAL DUCT MOUNTED ON FINISHED WALL AT FLOOR LINE. PROVIDE DUCT WITH REMOVABLE FRONT COVER. CONNECT TO VERTICAL DUCT "VD1" AS SHOWN.	HORIZONTAL WALL DUCT
VD1 VD2 VD3	EXISTING	VERTICAL DUCT MOUNTED FLUSH IN FINISHED WALL. BEGIN DUCT AT FLOOR LINE AND EXTEND UP WALL ABOVE FINISHED CEILING. PROVIDE JUNCTION BOX (SIZED BY E.C.) AT TOP OF DUCT FOR CONDUIT TRANSITIONS.	VERTICAL DUCT
1	2"ø	CONDUIT FROM "PB1" (SC1) TO "D1"	MAX. CONDUIT LENGTH 47'
2	1"ø	CONDUIT FROM "PB1" (SC1) TO "D1"	MAX. CONDUIT LENGTH 98'
3	2"ø	CONDUIT FROM "PB2" (IS) TO "D1" (NOT WITH DCS LD)	MAX. CONDUIT LENGTH 59'
4	2"ø	CONDUIT FROM "PB2" (IS) TO "CUSTOMER MONITOR" (LIVE+REF VIDEO TO OEM OPTION)	MAX. CONDUIT LENGTH 80'

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 U.L. 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 GROUNDED 3 OR 4-WIRE 'WYE' SOURCE PER THE SPECIFIC EQUIPMENT OPERATION 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, UNLESS NOTED OTHERWISE: ELECTRICAL RACEWAYS AND DUCTS, WIRING TROUGHS, PULL BOXES, CONDUITS, CIRCUIT BREAKERS, ACCESS PANELS, EMERGENCY OFF BUTTONS, DOOR SWITCHES, WARNING LIGHTS, WIRING, 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 FOREIGN MATTER FROM ENTERING RACEWAY.

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.

PROVIDE ENCLOSED METAL WIRE DUCT RACEWAY SYSTEM WHERE SHOWN ON DRAWINGS WITH DIVIDERS TO SEPARATE THE DUCT INTO TWO OR THREE SEPARATE COMPARTMENTS AS SHOWN ON THE SIEMENS PLANS (FOR POWER AND SIEMENS HEALTHCARE CABLING). DIVIDERS AND CROSSOVER PIECES TO BE PROVIDED AS NECESSARY. THE CABLE TO CABLE AS WELL AS THE CIRCUIT TO CIRCUIT SEPARATION REQUIREMENT WAS EVALUATED 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.

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 REQUIRMENTS AND BUILDING STRCTURE. THOSE THAT ARE NOT INDICATED OR INTERFER 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.

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 ABOVE A HARD CEILING (I.E. SHEET ROCK), A 24" x 24" ACCESS PANEL IS REQUIRED AT EACH JUNCTION BOX AND WITHIN 2 FEET OF EACH RACEWAY TRANSITION (SUCH AS A 90 DEGREE ELBOW OR TEE) IN DUCT/RACEWAY. THERE MUST BE FREE AND CLEAR ACCESS TO JUNCTION BOXES AND WIRE DUCT/RACEWAY. WHEN ACCESS PANELS ARE LOCATED MORE THAN 3 FEET FROM JUNCTION BOXES AND WIRE DUCT/RACEWAY THE ELECTRICAL CONTRACTOR SHALL PROVIDE TWO ELECTRICIANS TO HELP SIEMENS INSTALLERS PULL SIEMENS SUPPLIED CABLES AT CUSTOMER'S EXPENSE.

6) 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), SIZED 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.

7) 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 35,000A 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"

ARTIS Q/Q.ZEN/ZEE CEILING
REV. 27

SYMBOLS

ALL MAY NOT APPLY

Symbol	Description
(hatched rectangle)	CIRCUIT BREAKER BY CUSTOMER/CONTRACTOR
(half-filled circle)	OPENING IN RACEWAY OR TRENCHDUCT
(half-filled square)	PULLBOX IN (FLOOR/WALL/CEILING)
(half-filled square)	OPENING IN ACCESS FLOORING
⊗	WARNING LIGHT (X-RAY ON)
DS	DOOR SAFETY SWITCH
(EPO symbol)	(EPO) EMERGENCY POWER OFF BUTTON
(hatched bar)	TRENCH DUCT
(dotted bar)	CEILING DUCT
(dashed bar)	UNDER FLOOR DUCT
(shaded bar)	SURFACE DUCT
⊠	VERTICAL DUCT
▶	ETHERNET CONNECTION TO CUSTOMER'S INFORMATION SYSTEMS NETWORK (VERIFY WITH SMS PROJECT MANAGER).
(duplex outlet symbol)	110 VOLT, 20 AMP, HOSPITAL GRADE DUPLEX OUTLET
(quad outlet symbol)	110 VOLT, 20 AMP, HOSPITAL GRADE QUAD OUTLET

CEILING HEIGHT REQUIREMENT
8 FT. – 11 IN.

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.

SYM	DATE	DESCRIPTION
1	11/22/21	REMOVING CABLE CABINET & ADDING "HD1" BEHIND CABINETS
0	03/26/21	R-101R(B) VERSION DATED 03/12/21 APPROVED BY CUSTOMER FOR FINALS

—ISSUE BLOCK—

PROJECT MANAGER: CHRISTOPHER THOMAS
TEL: (801) 209-6582
VMAIL: EXT:
FAX:
EMAIL: christopher.thomas@siemens-healthineers.com

SIEMENS

INTERMOUNTAIN MEDICAL CENTER

5121 COTTONWOOD ST, MURRAY, UT 84107
CATH LAB #3 / ARTIS Q.ZEN CEILING

PROJECT #: 2100318
SHEET 5 OF 8
DRAWN BY: O. CARRILLO
SCALE: AS NOTED
REF. #: 30253395
DATE: 11/22/21
SHEET: E-101

REFERENCE DOCUMENT - NOT FOR CONSTRUCTION

NJRA ARCHITECTS
NJRA Architects, Inc.
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800-678-7077
801-328-5151
fax: 801-328-5155
www.spectrum-engineers.com

Intermountain Healthcare

IMC - Cath Lab 3 Remodel Project

5121 South Cottonwood Street
Murray, UT 84107

NJRA Project # 20205
Review Set November 18, 2021

SIEMENS DRAWINGS

EP702

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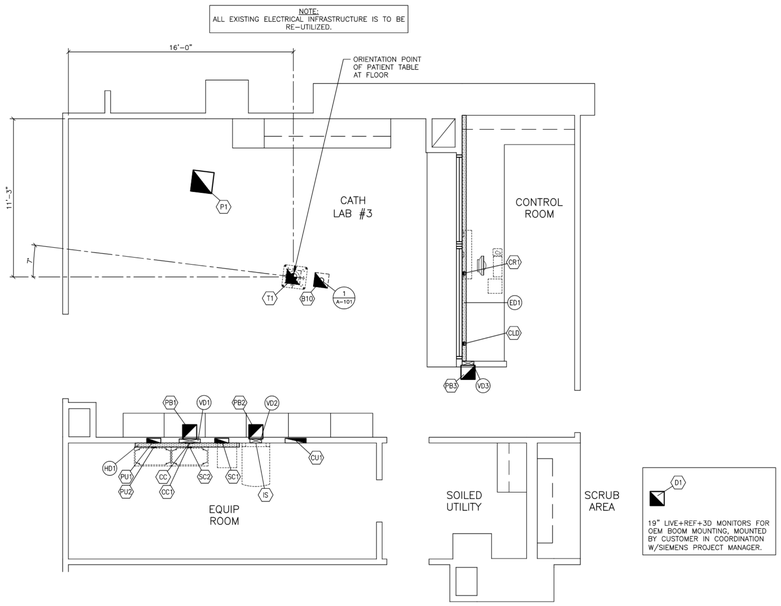

ELECTRICAL DIMENSION PLAN

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

CEILING HEIGHT REQUIREMENT

8 FT. – 11 IN.

ARTIS Q/ZEN/ZEE CEILING REV. 27

ATTENTION:

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- 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.

SYM	DATE	DESCRIPTION
1	11/22/21	REMOVING CABLE CABINET & ADDING "HOT" BEHIND CABINETS
2	03/26/21	R-10(R3) VERSION DATED 03/12/21 APPROVED BY CUSTOMER FOR FINALS

—ISSUE BLOCK—

PROJECT MANAGER: CHRISTOPHER THOMAS
TEL: (801) 209-6582 EXT:
VMAIL:
FAX:
EMAIL: christopher.thomas@siemens-healthineers.com

SIEMENS

INTERMOUNTAIN MEDICAL CENTER
5121 COTTONWOOD ST, MURRAY, UT 84107
CATH LAB #3 / ARTIS Q.ZEN CEILING

SCALE: AS NOTED REF. #: 30253395

PROJECT #: 2100318

SHEET: 6 OF 8

DRAWN BY: O. CARRILLO

DATE: 11/22/21

SHEET: E-102

REFERENCE DOCUMENT - NOT FOR CONSTRUCTION

NJRA ARCHITECTS
NJRA Architects, Inc.
5272 S. College Drive, Suite104
Murray, Utah 84123
801.364.9259
www.njraarchitects.com

PROFESSIONAL ENGINEER
No. 11783731-2202
JASON R. WORTHEN
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12/20/2021

SPECTRUM ENGINEERS
324 S. State St., Suite 400
Salt Lake City, UT 84111
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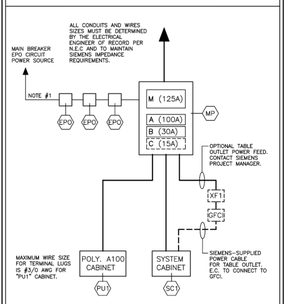
NJRA Project # 20205
Review Set November 18, 2021

SIEMENS DRAWINGS

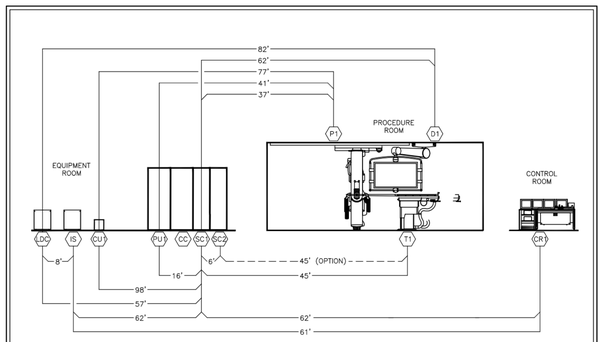
EP703

12/20/2021 10:31:34 AM

POWER SCHEDULE



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 AMPS: 125				
		VOLTS	PHASES	NEUTRAL	GROUND	TOTAL WIRES
		480/277Y	3	1	1	5 (NOTE 1)
A	1	BREAKER AMPS: 100 (FOR PU1)				
		VOLTS	PHASES	NEUTRAL	GROUND	TOTAL WIRES
		480Y	3	0	1	4 (NOTE 1)
B	1	BREAKER AMPS: 30 (FOR SC1)				
		VOLTS	PHASES	NEUTRAL	GROUND	TOTAL WIRES
		480/277Y	3	1	1	5 (NOTE 1)
C	1	BREAKER AMPS: 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 GROUNDED 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 LEXAN HINGED COVER TO AVOID INADVERTENT MANUAL TRIP.				
1) PHASE AND NEUTRAL TO BE THE SAME SIZE. GROUND SIZED PER NEC. NOTE: UNLESS OTHERWISE NOTED, ALL BREAKERS WILL BE 80% RATED						
EPO	VARIES	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.

GROUNDING NOTES

EQUIPMENT GROUNDING CONDUCTOR TO COMPLY WITH THE FOLLOWING:

1) SIZE GROUNDING WIRE TO SIEMENS EQUIPMENT PER POWER SCHEDULE REQUIREMENTS.
2) DERIVED FROM THE ELECTRICAL SERVICE, TRANSFORMER OR MAIN DISTRIBUTION PANEL FEEDING THE SIEMENS EQUIPMENT.
3) RUN IN THE SAME CONDUIT, TROUGH OR RACEWAY AS THE PHASE CONDUCTORS.
4) CONTINUOUS, WITH NO BREAKS OR USE OF CONDUIT, CHASSIS OR EARTH AS THE SOLE GROUNDING PATH.
5) BONDED TO CHASSIS AND/OR CONDUIT IN ACCORDANCE WITH THE NEC REQUIREMENTS.
6) MINIMIZE CONNECTIONS OR TERMINALS TO ENSURE CONTINUITY OVER THE LIFE OF THE INSTALLATION.
7) AS A NORM, THERE SHOULD NOT BE ANY CURRENT PRESENCE ON THE GROUND CONDUCTOR, BUT IT IS ACCEPTABLE TO HAVE <500mA DURING OPERATION OF THE IMAGING EQUIPMENT.

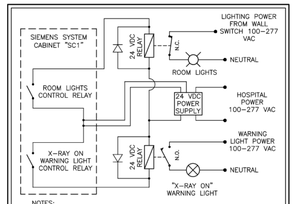
POWER QUALITY

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 COMPLIES WITH THE SIEMENS SPECIFICATIONS.

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.



NOTES:

1. 24 VDC RELAYS MUST INCLUDE A FREE-WHEELING DIODE (P/N 1N4002 OR EQUIVALENT).
2. ALL ITEMS PROVIDED BY CUSTOMER ELECTRICAL CONTRACTOR EXCEPT CONTACTS INSIDE SIEMENS "SC1" CABINET (ITEMS INSIDE DOTTED LINES).
3. ALL WIRING THAT CONNECTS TO SIEMENS "SC1" CABINET MUST BE 14-18 AWG STRANDED WIRE.
4. ONLY 3 WIRES LABELED "24 VDC", "ROOM LIGHTS" AND "X-RAY ON" SHOULD BE SENT TO SIEMENS "SC1" CABINET.
5. 24 VDC RELAYS ARE TO BE SELECTED BY ELECTRICAL CONTRACTOR TO HANDLE THE VOLTAGE AND AMPERAGE OF LIGHTING CURCUIT.
6. IF NEEDED, A SWITCH TO BLOCK RADIATION CAN BE INSTALLED IN SERIES WITH THE DOOR CONTACT.
   - THE SWITCH (24 VDC / 20 MA) MUST BE PROVIDED ON SITE.
   - CONTROL USING +24 V FROM THE SYSTEM CONTROL CABINET
   - PLAN THE SWITCH SO THAT UNINTENTIONAL OPERATION IS NOT POSSIBLE.
   - THE SWITCH MUST BE PROVIDED WITH AN APPROPRIATE SYMBOL (OR DESIGNATION) FROM WHICH THE FUNCTION CAN BE RECOGNIZED.

WARNING LIGHT/ROOM LIGHT SCHEMATIC

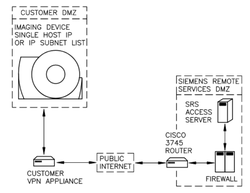
1 LIGHTING DETAIL — SCALE: NONE

SIEMENS SMART REMOTE SERVICE

TO ENSURE THE UPTIME OF YOUR SYSTEM DURING THE WARRANTY PERIOD (AND BEYOND WITH A SERVICE AGREEMENT), SIEMENS REMOTE SERVICES (SRS) REQUIRES REMOTE LOCAL AREA NETWORK ACCESS TO SIEMENS SYSTEMS.

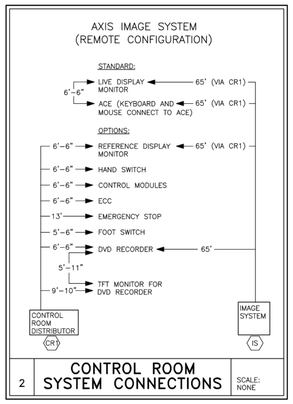
THE PREFERRED CONNECTION METHOD IS (VPN) VIRTUAL PRIVATE NETWORK (WHERE THE CUSTOMER HAS AVAILABLE A VPN CAPABLE FIREWALL OR OTHER VPN APPLIANCE). THIS METHOD PROVIDES THE POSSIBILITY FOR REMOTE SYSTEM DIAGNOSTICS WITHOUT ADDITIONAL HARDWARE. PLEASE CONTACT SIEMENS SMART REMOTE SERVICES TO DETERMINE BEST IMPLEMENTATION FOR YOUR SITE. CONTACT:

IMCPTSCSRS.DL@SIEMENS-HEALTHINEERS.COM.



NETWORK REQUIREMENT

A GIGABIT 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.



2 CONTROL ROOM SYSTEM CONNECTIONS — SCALE: NONE

CONTRACTOR SUPPLIED CABLES

FROM	VIA	TO	DESCRIPTION	REMARKS
PANEL	EXISTING	MP	ELECTRICAL CONTRACTOR TO SIZE PLUS GROUND	SEE "POWER SCHEDULE"
MP	EXISTING, HD1	PU1	3#2, 1#2 GROUND AND CONNECT	SEE "POWER SCHEDULE"
MP	EXISTING, HD1	SC1	3#6, 1#6 NEUTRAL, 1#6 GROUND AND CONNECT	SEE "POWER SCHEDULE"
MP	EXISTING	EPO	2#12, PLUS GROUND	SEE "POWER SCHEDULE"
EPO	EXISTING	EPO	2#12, PLUS GROUND	EMERGENCY POWER
SC1	EXISTING	WL	2#14-18 AWG	SEE "LIGHTING DETAIL" SHEET E-501
SC1	EXISTING	DS	24V SIGNAL, 2#14-18 AWG	DOOR SWITCH
WL	EXISTING	WL	3#12, PLUS GROUND	WARNING LIGHT
DS	EXISTING	DS	24V SIGNAL, 2#14-18 AWG	DOOR SWITCH

SIEMENS SUPPLIED CABLES

FROM	VIA	TO	DESCRIPTION	REMARKS
P1	EXISTING, HD1	PU1	P1 LEFT SIDE	MAXIMUM LENGTH 41'
P1	EXISTING, HD1	PU1	(2) HIGH VOLTAGE CABLES P1 LEFT SIDE	MAXIMUM LENGTH 41'
P1	EXISTING, HD1	SC1	P1 LEFT SIDE	MAXIMUM LENGTH 37'
P1	EXISTING	CU1	FOR LIQUID COOLING HOSES (P1 LEFT SIDE)	MAXIMUM LENGTH 77'
SC1	HD1, EXISTING	CR1	FOR CONTROL ROOM OPTIONS (CONTROL MODULES, FOOT SWITCH, DISPLAY, ECC)	MAXIMUM LENGTH 62'
SC1	EXISTING	T1	NOT WITH OR TABLE	MAXIMUM LENGTH 45'
SC1	HD1, EXISTING	CU1		MAXIMUM LENGTH 98'
SC1	BETWEEN CABINETS	PU1		MAXIMUM LENGTH 16'
SC1	HD1, EXISTING	IS	62' CABLES SELECTABLE ON FACTORY CHECKLIST	MAXIMUM LENGTH 28'
SC1	HD1, VD1, PB1, 1	D1	OEM DISPLAY CONNECTION	MAXIMUM LENGTH 62'
SC1	HD1, VD1, PB1, 2	D1	OEM DISPLAY CONNECTION	MAXIMUM LENGTH 98'
IS	VD2, PB2, 3	D1	OEM DISPLAY CONNECTION	MAXIMUM LENGTH 75'
IS	EXISTING	CR1		MAXIMUM LENGTH 61'
IS	EXISTING	CR1		MAXIMUM LENGTH 61'
T1	EXISTING	B10		
ED1	EXISTING	B10	CUSTOMER PATIENT MONITORING, ETC.	
IS	VD2, PB2, 4	CUSTOMER MONITOR	LIVE+REF VIDEO INTERFACE TO OEM (OPTION)	MAXIMUM LENGTH 110'

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SYM	DATE	DESCRIPTION
2	11/22/21	REMOVING CABLE CABINET & ADDING "HD1" BEHIND CABINETS
1	03/26/21	R-1018(B) VERSION DATED 03/12/21 APPROVED BY CUSTOMER FOR FINALS

-ISSUE BLOCK-

ARTIS Q/ZEE/ZEE CEILING REV. 27

PROJECT MANAGER: CHRISTOPHER THOMAS
TEL: (801) 209-6582 EXT:
VMAIL:
FAX:
EMAIL: christopher.thomas@siemens-healthineers.com

SIEMENS

INTERMOUNTAIN MEDICAL CENTER
5121 COTTONWOOD ST. MURRAY, UT 84107
CATH LAB #3 / ARTIS Q.ZEN CEILING

PROJECT #: 2100318
SHEET: E-501
SHEET 7 OF 8
DRAWN BY: O. CARRILLO
SCALE: AS NOTED
REF #: 30253395
DATE: 11/22/21

REFERENCE DOCUMENT - NOT FOR CONSTRUCTION

NJRA Architects, Inc.
5272 S. College Drive, Suite104
Murray, Utah 84123
801.364.9259
www.njraarchitects.com

PROFESSIONAL ENGINEER No. 11783731-2202 JASON R. WORTHEN STATE OF UTAH
12/20/2021

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324 S. State St., Suite 400
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NJRA Project # 20205
Review Set November 18, 2021

SIEMENS DRAWINGS

EP704

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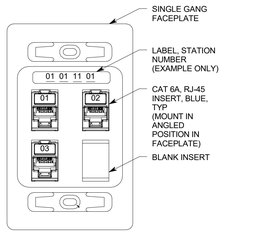
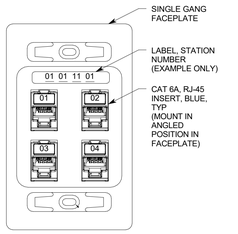


8 TYPICAL 3-PORT DATA OUTLET

NO SCALE



9 TYPICAL 4-PORT DATA OUTLET

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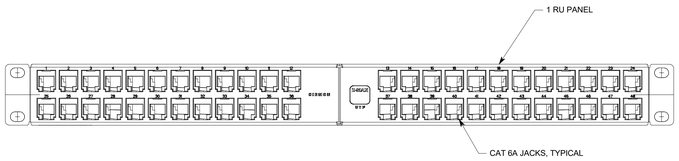
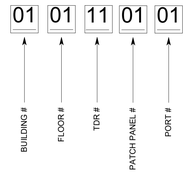


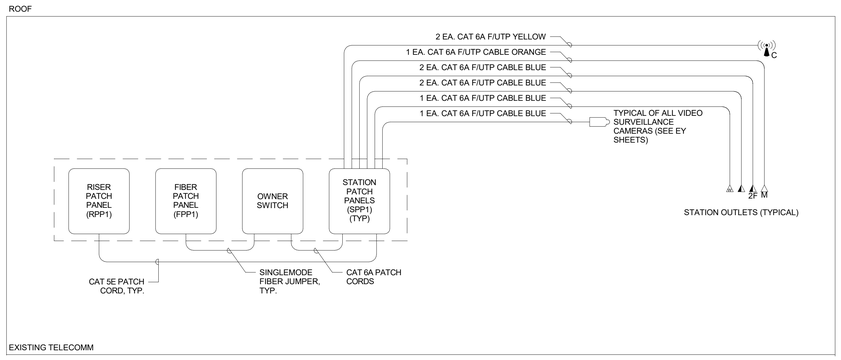
6 STATION PATCH PANEL, (SPP1), TDR

NO SCALE



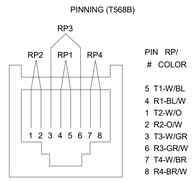
7 CABLE ID EXAMPLE DETAIL

NO SCALE



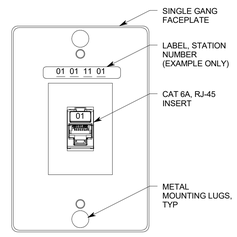
1 TELECOM CABLE RISER DIAGRAM

NO SCALE



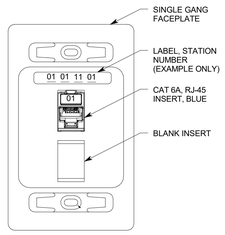
4 TYPICAL VOICE-DATA OUTLET PINNING DETAIL

NO SCALE



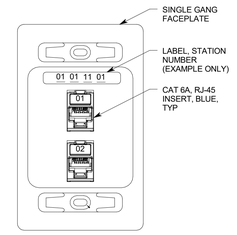
5 TYPICAL WALL PHONE OUTLET

NO SCALE



2 TYPICAL 1-PORT DATA OUTLET

NO SCALE



3 TYPICAL 2-PORT DATA OUTLET

NO SCALE

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5272 S. College Drive, Suite104
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801.364.9259
www.njraarchitects.com

PROFESSIONAL ENGINEER
No. 11783731-2202
JASON R. WORTHEN
STATE OF UTAH
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TELECOM CONDUIT RISER DIAGRAM

ET601

NJRA ARCHITECTS
NJRA Architects, Inc.
5272 S. College Drive, Suite104
Murray, Utah 84123
801.364.9259
www.njraarchitects.com

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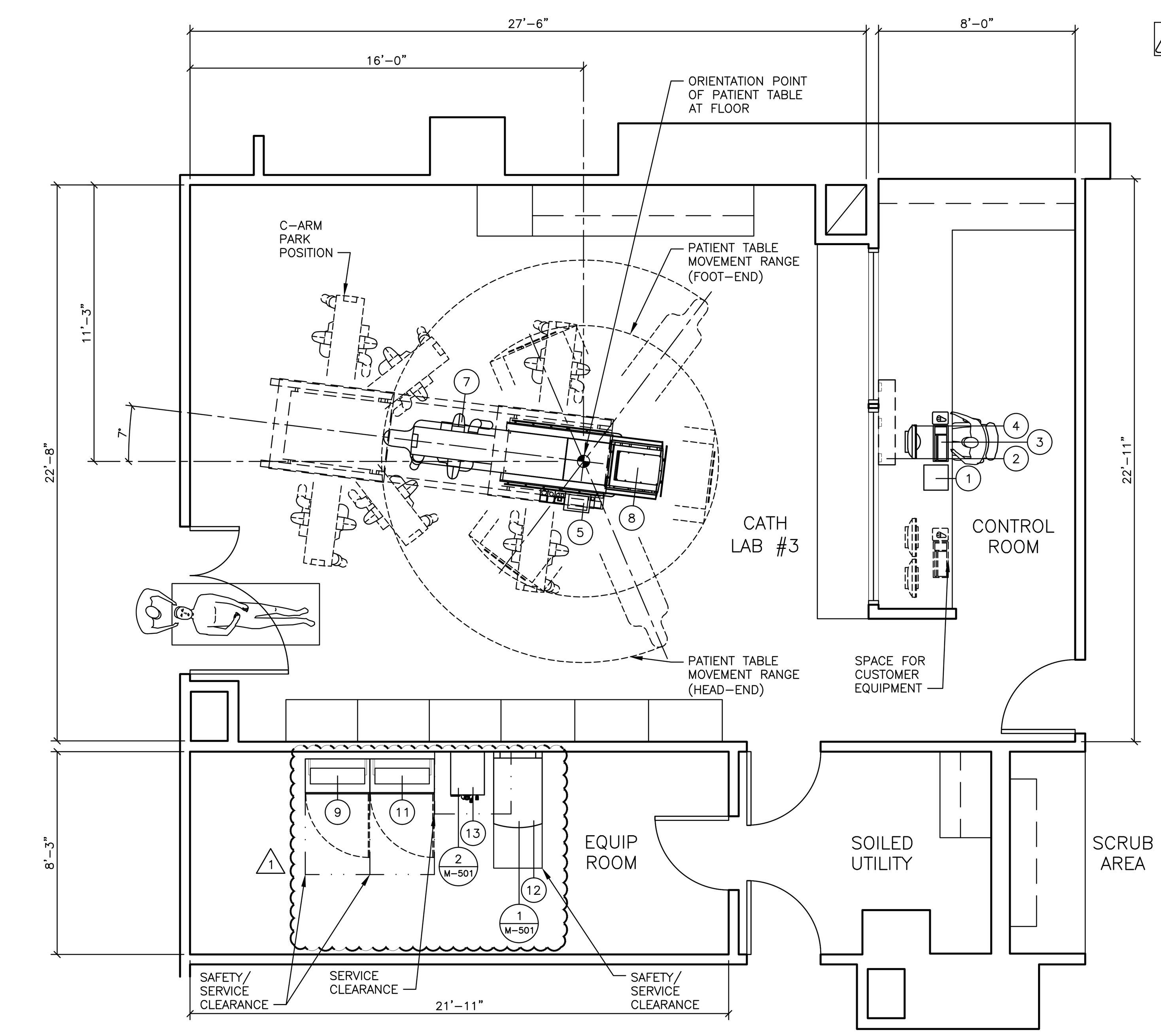
NJRA Project # 20230
Construction Documents December 15, 2021

REFERENCE DOCUMENT - NOT FOR CONSTRUCTION



NOTE: COOLING UNIT MAY BE POSITIONED ON SHELF ABOVE IMAGER. TO BE CONFIRMED BY SIEMENS PROJECT MANAGER.

STRETCHER SIZE (6'-5" X 2'-7") SHOWN IS FOR REFERENCE ONLY. VERIFICATION AND COORDINATION BY CUSTOMER IS REQUIRED TO ENSURE PROPER TRANSPORT AND WORKFLOW ACCESS.

SINKS, COUNTERTOPS AND ALL CASEWORK SHOWN IS SUGGESTED AND MUST BE DESIGNED SUPPLIED AND INSTALLED BY CUSTOMER/CONTRACTOR.

NON-SIEMENS (OEM) DISPLAY BOOMS CONTAINING SIEMENS MONITORS:

IMPORTANT SAFETY CRITERIA: FAILURE TO MEET THE FOLLOWING REQUIREMENTS MAY RESULT IN RISK OF INJURY TO PATIENTS, PERSONNEL OR DAMAGE TO THE EQUIPMENT!

1) IT MUST BE POSSIBLE TO MANUALLY MOVE THE BOOM VERTICALLY WITH A FORCE LESS THAN 85 N (19 LBS) WHEN POSITIONING THE DISPLAY BOOM OVER THE PATIENT.

2) TO AVOID THE RISK OF CRUSHING PERSONS OR DAMAGING EQUIPMENT IN THE EVENT THAT THE ANGIOGRAPHY SYSTEM COMES INTO CONTACT WITH THE DISPLAY BOOM, IT MUST BE POSSIBLE TO PUSH THE BOOM AWAY IN A HORIZONTAL DIRECTION WITH A FORCE LESS THAN 50 N (11 LBS).

3) MOTORIZED, HEIGHT-ADJUSTABLE DISPLAY BOOMS WHICH CANNOT MANUALLY BE PUSHED AWAY MAY NOT BE USED.

DELIVERY AND INSTALLATION:
IT IS RECOMMENDED THAT INSTALLATION OF 3RD PARTY DISPLAY BOOMS BE COORDINATED WITH THE INSTALLATION OF THE SIEMENS SYSTEM. IN ORDER TO ENSURE THE SIMULTANEOUS INSTALLATION OF THE SYSTEM AND THE DISPLAY BOOM, THE CUSTOMER SHOULD TAKE STEPS EARLY IN THE PLANNING PROCESS TO ENSURE THAT THE BOOM MANUFACTURER'S LEAD TIME CAN BE COORDINATED WITH THE DELIVERY OF THE SIEMENS EQUIPMENT. THE THIRD-PARTY MANUFACTURER IS RESPONSIBLE FOR THE INSTALLATION, MAINTENANCE, AND SERVICE OF THE DISPLAY BOOM(S). THE THIRD-PARTY MANUFACTURER IS RESPONSIBLE FOR INSTALLING THE SIEMENS COMPONENTS IN THE DISPLAY BOOM IN ACCORDANCE WITH SIEMENS SPECIFICATIONS. SIEMENS ASSUMES NO RESPONSIBILITY FOR ANY DAMAGE TO SIEMENS COMPONENTS WHICH ARE NOT INSTALLED IN ACCORDANCE WITH SIEMENS SPECIFICATIONS. SIEMENS TECHNICIANS MUST BE GIVEN INSTRUCTIONS AND/OR TRAINING AS APPROPRIATE BY THE 3RD PARTY MANUFACTURER FOR MAINTENANCE/SERVICE OF THE SIEMENS COMPONENTS (I.E. DISPLAY, CABLES), OR A TECHNICIAN FROM THE THIRD-PARTY MANUFACTURER MUST BE PRESENT WHENEVER ANY SERVICE WORK IS PERFORMED.

19" LIVE+REF+3D MONITORS FOR OEM BOOM MOUNTING, MOUNTED BY CUSTOMER IN COORDINATION W/SIEMENS PROJECT MANAGER. (6)

THIS SET OF FINAL DRAWINGS IS REFLECTIVE OF THE LATEST SALES CONFIGURATION. ANY CHANGES TO THIS SALES CONFIGURATION MAY REQUIRE A REVISION TO THIS PROJECT PLAN. IF REQUESTED, SIEMENS WILL PRODUCE A REVISED SET OF FINAL DRAWINGS TO REFLECT THE CHANGES, HOWEVER SIEMENS IS NOT RESPONSIBLE FOR ANY CONSTRUCTION COSTS ASSOCIATED WITH THE CHANGES THAT OCCUR FROM THIS PLAN MODIFICATION.

ARCHITECTURAL EQUIPMENT PLAN

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

EQUIPMENT LEGEND

NO	DESCRIPTION	SMS SYM	WEIGHT (LBS)	BTU/HR TO AIR	DIMENSIONS (INCHES) W	D	H	REMARKS
1	ACE (ARCHIVE CONTROL EXTENSION)	–	13	N/A	12 1/4	11 3/4	4	ON COUNTER
2	CONTROL ROOM DISTRIBUTOR	CR1	64	342	41 1/2	8 1/4	16 1/8	WALL MOUNTED
3	KEYBOARD	–	2.2	342	17 1/2	6 1/8	2 1/8	ON COUNTER
4	19" LIVE DISPLAY	–	15	256	16 1/2	8 1/4	13 1/2	ON COUNTER
5	TABLE CONTROL MODULES	–	13.8	---	16 1/2	8 3/4	3 1/2	ON TABLE
6	BOOM 1 KIT 19" (2) DISPLAYS LIVE+REF (OPTION)	D1	25	512	33	8 1/4	13 1/2	OEM BOOM MOUNTED
7	ARTIS Q.ZEN CEILING C-ARM STAND	P1	1,994	682	---	---	---	C-ARM CEILING SUSPENDED
8	PATIENT TABLE (BASIC, STANDARD TABLE)	T1	997	683	---	---	---	FLOOR MOUNTED
9	POLYDOROS A100 GENERATOR CABINET	PU1	723	4,094	31 1/2	17 1/8	87	FLOOR MOUNTED
~~10~~	~~CABLE CABINET~~	~~CC~~	~~265~~		~~31 1/2~~	~~17 1/8~~	~~87~~	~~FLOOR MOUNTED~~
11	SYSTEM CONTROL CABINET	SC1	655	5,460	31 1/2	17 1/8	87	FLOOR MOUNTED
12	AXIS IMAGE SYSTEM	IS	331	4,347	23 3/4	37 1/4	28	ON CASTERS
13	TUBE COOLING UNIT	CU1	80	15,355	16 1/2	28 1/4	19 1/4	FLOOR MOUNTED

ARCHITECTURAL NOTES

1) ALL PRELIMINARY EQUIPMENT LAYOUTS SUBMITTED BY SIEMENS HEALTHCARE ARE BASED ON THE RECOMMENDED SPACE NECESSARY FOR THE OPERATION AND SERVICEABILITY OF THE EQUIPMENT BEING PROPOSED. SIEMENS WILL NOT SUBMIT AN EQUIPMENT LAYOUT THAT IS NOT IN THE BEST INTEREST OF BOTH THE CUSTOMER AND SIEMENS. ALL EQUIPMENT LAYOUTS ARE BASED EITHER ON AN ACTUAL SITE SURVEY OR ARCHITECTURAL DRAWINGS SUPPLIED TO SIEMENS. SIEMENS WILL NOT BE RESPONSIBLE FOR ANY ALTERATIONS THAT ENCROACH WITHIN DESIGNATED SAFETY AND SERVICE CLEARANCE ZONES AS INDICATED ON DRAWINGS (I.E.. PIPE CHASES, VENTILATION DUCTS, CASEWORK, AND SOFFITS, ETC.) MADE BY THE CUSTOMER OR REQUIRED BY A CUSTOMER'S ARCHITECTURAL FIRM ONCE PRELIMINARY DRAWINGS HAVE BEEN SUBMITTED AND APPROVED. DO NOT ALTER ANY SPECIFICATIONS AND/OR DIMENSIONS WITHOUT CONTACTING AND RECEIVING WRITTEN CONFIRMATION FROM SIEMENS PROJECT MANAGER.
2) SIEMENS HEALTHCARE IS NOT AN ARCHITECTURAL OR ENGINEERING FIRM. DRAWINGS SUPPLIED BY SIEMENS ARE NOT CONSTRUCTION DRAWINGS. THEREFORE, THESE DRAWINGS ARE TO BE USED ONLY FOR INFORMATION TO COMPLEMENT ACTUAL CONSTRUCTION DRAWINGS AVAILABLE FROM A CUSTOMER APPOINTED ARCHITECTURAL REPRESENTATIVE OR A CUSTOMER'S ENGINEERING DESIGN GROUP. THE CUSTOMER'S ARCHITECT AND GENERAL CONTRACTOR SHALL BE ULTIMATELY RESPONSIBLE FOR COMPLIANCE WITH ALL APPLICABLE CODES AND PROFESSIONAL DESIGN REQUIREMENTS INCLUDING OSHA/NEC SAFETY CLEARANCE REQUIREMENTS IN ADDITION TO SIEMENS-REQUIRED SAFETY/SERVICE CLEARANCES SHOWN.
3) THE CUSTOMER IS RESPONSIBLE FOR ALL ROOM AND AREA PREPARATION COSTS, PROFESSIONAL FEES, PERMITS, REPORTS, AND INSPECTION FEES.
4) EQUIPMENT WARRANTIES, EXPRESSED OR IMPLIED ON THE PART OF SIEMENS SHALL BE CONTINGENT UPON STRICT COMPLIANCE WITH THE ARCHITECTURAL, STRUCTURAL, ELECTRICAL, MECHANICAL AND RECOMMENDATIONS AND REQUIREMENTS CONTAINED IN THESE DRAWINGS, UNLESS SPECIFIED OTHERWISE.
5) ALL DIMENSIONS SHOWN ARE FROM FINISHED SURFACES UNLESS SPECIFIED OTHERWISE.
6) 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. ACTUAL PROTECTION REQUIREMENTS SHALL BE SPECIFIED BY A REGISTERED RADIATION PHYSICIST AT CUSTOMER'S ENGAGEMENT AND EXPENSE. RESPONSIBILITY FOR ALL INFORMATION AS TO THE ROOM LOCATION, USE, AND NUMBER OF ANTICIPATED EXAMINATIONS TO BE PERFORMED PER TIME PERIOD SHALL BE PROVIDED TO THE PHYSICIST BY THE CUSTOMER. THE CUSTOMER SHALL FURTHER TAKE ALL RESPONSIBILITY IN THE COMMUNICATION AND COORDINATION OF ACTIVITIES OF THE RADIATION PHYSICIST AND THE ARCHITECTURAL REPRESENTATIVE.
7) SIEMENS HEALTHCARE SHALL BE RESPONSIBLE FOR SIEMENS EQUIPMENT INSTALLATION, CALIBRATION, CONNECTION AND INSTALLATION OF SIEMENS PROVIDED CABLES. THE CUSTOMER/ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR TERMINATIONS OF CUSTOMER/ELECTRICAL CONTRACTOR-SUPPLIED CABLES TO SIEMENS EQUIPMENT. IN THE EVENT THAT SPECIFIC TRADE RULES OR LICENSE REQUIREMENTS PROHIBIT THIS, THE CUSTOMER SHALL INITIATE THE SERVICES OF APPROVED OTHER CONTRACTORS AND PAY FOR SELECTED, APPROVED PARTIES TO PERFORM THIS WORK WITH SUPERVISION PROVIDED BY SIEMENS. CALIBRATION WHEN ACCOMPLISHED OUTSIDE OF NORMAL INSTALLATION SEQUENCES DUE TO CONTRACTOR OR TRADE RULE ACTIONS OR REQUIREMENTS SHALL BE SUPPORTED BY, CHARGED TO, AND ACCEPTED BY THE CUSTOMER AS AN ADDITIONAL INSTALLATION EXPENSE.
8) THE CUSTOMER SHALL COORDINATE WITH SIEMENS PROJECT MANAGER THE LOCATIONS AND TRAVEL OF ALL ANCILLARY EQUIPMENT TO BE CEILING OR WALL MOUNTED (I.E.: O.R. LIGHTS, MEDICAL GAS COLUMNS, PHYSIOLOGICAL MONITORING INJECTORS, CRT PLATFORMS, SPRINKLER HEADS, SMOKE DETECTORS, ELECTRICAL OUTLETS, HVAC GRILLES, SPEAKERS, AND GENERAL ROOM LIGHTING, ETC.).
9) THE GENERAL CONTRACTOR/CUSTOMER SHALL BE RESPONSIBLE FOR ALL FINAL PAINT, TOUCH-UP AND ANY COSMETIC OR TRIM WORK WHICH NEEDS TO BE OR IS REQUIRED TO BE COMPLETED AFTER THE INSTALLATION OF THE SIEMENS EQUIPMENT AND ANY ASSOCIATED SUPPORT APPARATUS.
10) CUSTOMER/CONTRACTOR MUST ASSIST SIEMENS INSTALLERS WITH INSTALLATION OF EQUIPMENT ABOVE 14'-0". REFER TO THE ELECTRICAL NOTES ON SIEMENS SHEET E-101 FOR MORE DETAILS.

TRANSPORT/STORAGE FLAT PANEL DETECTOR

IN SYSTEMS WITH FLAT PANEL DETECTORS, THE DETECTOR IS REMOVED FROM THE STAND FOR TRANSPORT TO THE CUSTOMER. THE LIMITED TRANSPORT AND STORAGE CONDITIONS APPLY FOR THE DETECTOR.

FLAT PANEL DETECTOR:

TEMPERATURE RANGE: 14° F TO 131° F
RELATIVE HUMIDITY: 20% TO 95% NON CONDENSING
AIR PRESSURE: 700 hPa TO 1060 hPa

TRANSPORTING REQUIREMENTS

LARGEST CRATE WITH PACKING:
103.6"(L) x 46.5"(D) x 81.5"(H), 2,590 LBS.

LARGEST INDIVIDUAL PIECE WITH CARRIAGE (MIN. DOOR OPENING):
97 1/4"(L) x 39 1/2"(W) x 75"(H), 2,006 LBS.

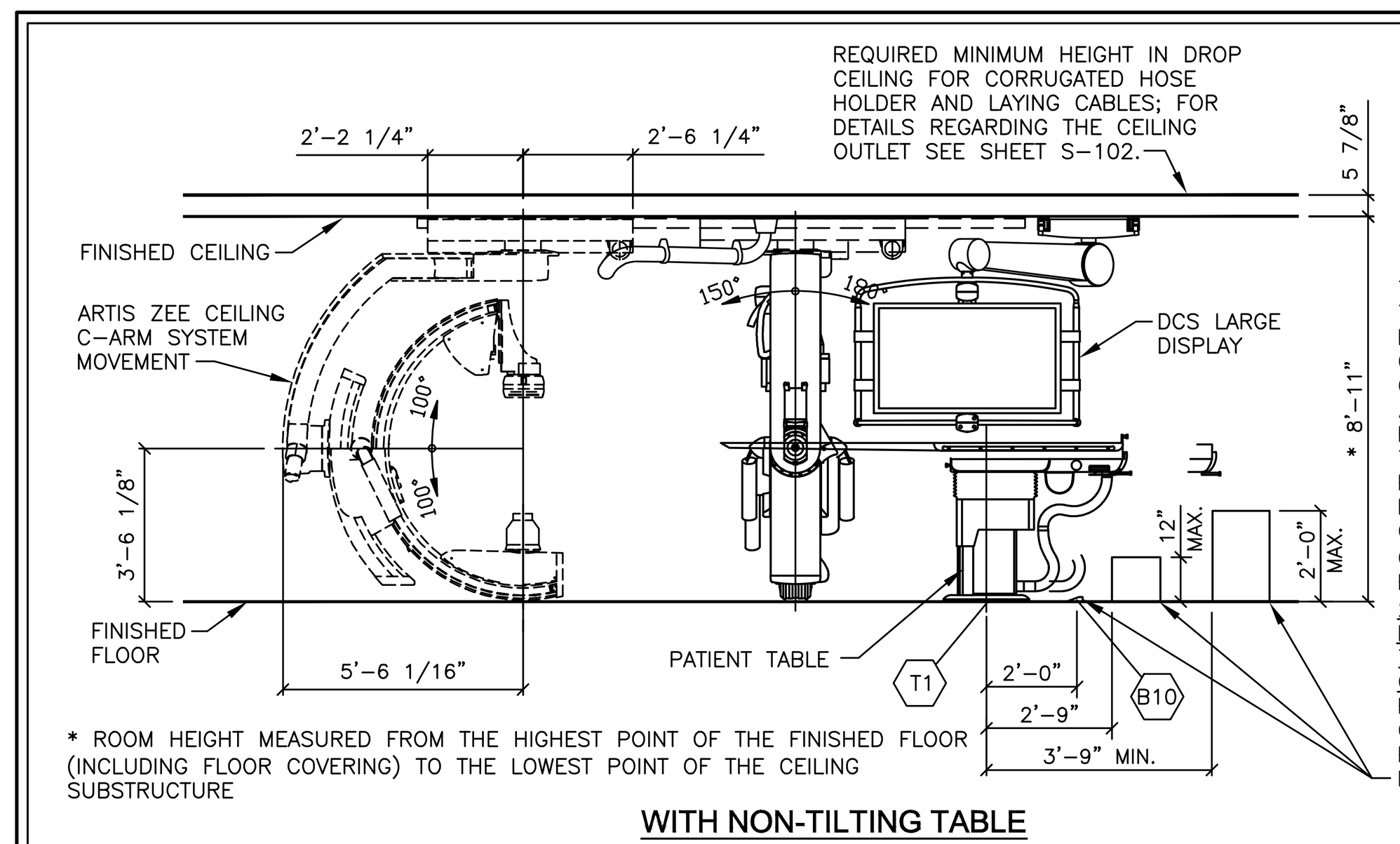
CEILING RAILS ARE 14 FT.(L) x 3"(W) x 3"(H)

MIN. CORRIDOR WIDTH: 82.7"

RESOURCE LIST (SMS USE ONLY)

DESIGNATION	PG NUMBER	DATE
ARTIS Q / Q.ZEN CEILING	AXAQ-060.891.01.01.02	04.13

ARTIS Q/Q.ZEN/ZEE CEILING REV. 27



THE "B10" FIXPOINT IS A THRU-FLOOR PENETRATION PROVIDED AS A MEANS OF CONNECTING A TABLE INJECTOR OR OTHER NON-SIEMENS ACCESSORIES AT THE TABLE FOR WHICH CABLE ROUTING THROUGH THE SIEMENS TABLE BASE WOULD BE PROHIBITED. THIS OPENING CAN BE ELIMINATED AS REQUIRED, OR IT CAN BE COMBINED INTO A CUSTOMER-SUPPLIED GAS/UTILITY BOX ON THE FLOOR. NOTE: THE 2'-0" DISTANCE FROM TABLE ISOCENTER SHOWN HERE APPLIES TO A CABLE PENETRATION POINT ONLY. SEE DIAGRAM FOR POSSIBLE BOX PLACEMENT AND HEIGHT OPTIONS. VALIDATE EXACT PLACEMENT WITH SIEMENS PROJECT MANAGER.

* ROOM HEIGHT MEASURED FROM THE HIGHEST POINT OF THE FINISHED FLOOR (INCLUDING FLOOR COVERING) TO THE LOWEST POINT OF THE CEILING SUBSTRUCTURE

WITH NON-TILTING TABLE

1 ARTIS Q/Q.ZEN/ZEE CEILING TYPICAL ELEVATION — SCALE: NONE

STATE AGENCY REVIEW

PRIOR TO SIEMENS EQUIPMENT INSTALLATION, APPROVAL OF CONSTRUCTION OR STRUCTURAL MODIFICATIONS UTILIZING X-RAY FOR DIAGNOSTIC OR THERAPEUTIC PURPOSES, MUST BE OBTAINED BY THE CUSTOMER FROM THE APPROPRIATE STATE AGENCY, IF APPLICABLE.

MAGNETIC FIELD PRECAUTIONS

THE PRESENCE OF MAGNETIC FIELDS IN THE VICINITY OF EQUIPMENT MAY HAVE AN ADVERSE EFFECT. IT IS THE CUSTOMER'S RESPONSIBILITY TO VERIFY THAT THE FOLLOWING VALUES ARE NOT EXCEEDED.

MAXIMUM ALLOWABLE MAGNETIC FIELD	DEVICES
1.0mT (10 GAUSS)	COMPUTERS, MAGNETIC DISK DRIVES, OSCILLOSCOPES, PROCESSORS
0.5mT (5 GAUSS)	X-RAY TUBES, B/W MONITORS, MAGNETIC DATA CARRIERS, DATA STORAGE DRIVES
0.2mT (2 GAUSS)	SIEMENS CT SCANNERS
0.15mT (1.5 GAUSS)	COLOR MONITORS, SIEMENS LINEAR ACCELERATORS
0.05mT (0.5 GAUSS)	X-RAY IMAGE INTENSIFIERS, GAMMA CAMERAS, PET/CYCLOTRON, OTHER LINEAR ACCELERATORS

MAGNETIC FIELDS SHOULD BE MEASURED PRIOR TO DELIVERY

CEILING HEIGHT REQUIREMENT

8 FT. - 11 IN.

ATTENTION:

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- 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.

SYM	DATE	DESCRIPTION
1	11/22/21	REMOVING CABLE CABINET & ADDING "HD1" BEHIND CABINETS
0	03/26/21	R-101R(B) VERSION DATED 03/12/21 APPROVED BY CUSTOMER FOR FINALS

-ISSUE BLOCK-

PROJECT MANAGER: CHRISTOPHER THOMAS
TEL: (801) 209-6582
VMAIL: EXT:
FAX:
EMAIL: christopher.thomas@siemens-healthineers.com

SIEMENS

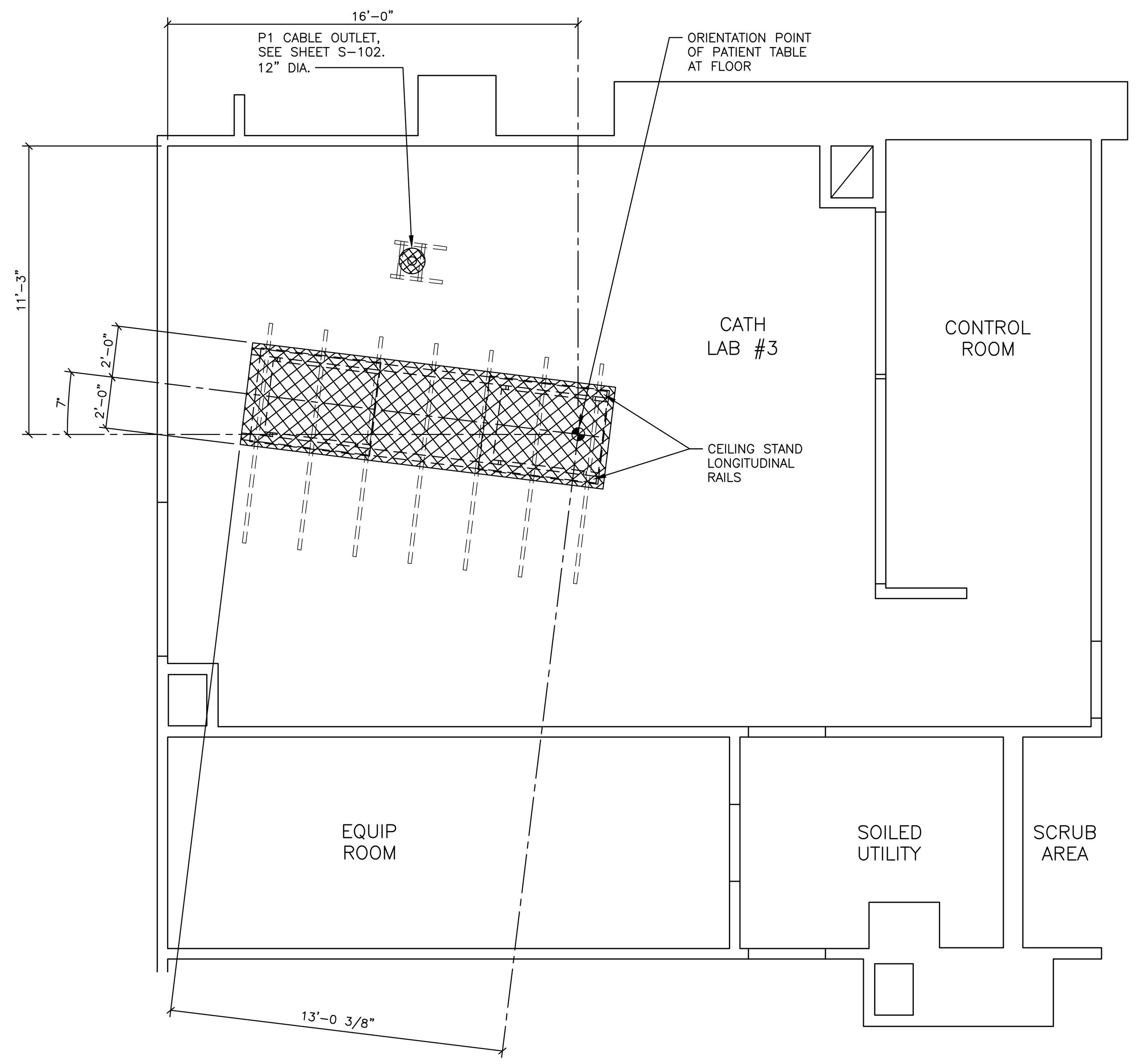
INTERMOUNTAIN MEDICAL CENTER

5121 COTTONWOOD ST, MURRAY, UT 84107
CATH LAB #3 / ARTIS Q.ZEN CEILING

PROJECT #: 2100318
SHEET 1 OF 8
DRAWN BY: O. CARRILLO
SCALE: AS NOTED
REF. #: 30253395
DATE: 11/22/21
SHEET: A-101

Siemens Equipment- Architectural

EQ 101



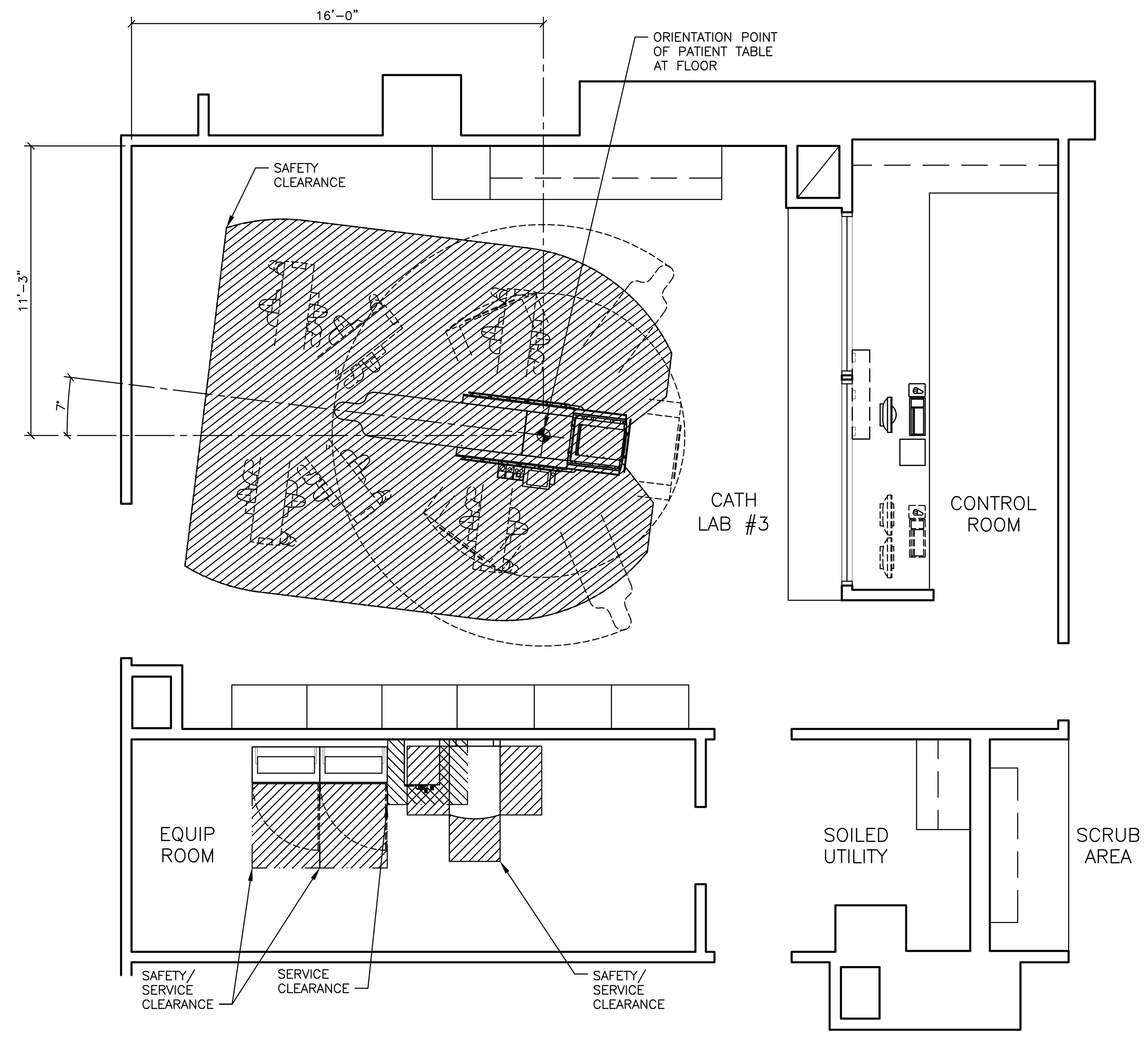
ATTENTION! LIGHTING AND HVAC DUCTS HAVING THE POTENTIAL TO HEAT OR COOL SIEMENS COMPONENTS MUST NOT BE LOCATED WITHIN SIEMENS CEILING RAIL SYSTEMS AS INDICATED BY THE SHADED AREAS ON THIS PLAN. SPRINKLER HEADS MUST NOT BE LOCATED WITHIN THE SHADED AREAS AS WELL. IF REQUIRED, LAMINAR AIRFLOW DIFFUSERS MAY BE LOCATED WITHIN SIEMENS CEILING RAIL SYSTEMS PROVIDED THEY DO NOT EXTEND BELOW THE FINISHED CEILING OR HEAT/COOL SIEMENS EQUIPMENT. IF PLACED WITHIN SIEMENS RAIL SYSTEMS, THE CUSTOMER MUST ACCEPT RESPONSIBILITY FOR THE FACT THAT, DEPENDING ON THE POSITION OF THE CARRIAGE WITHIN THE CEILING RAILS, THERE IS POTENTIAL FOR CERTAIN DIFFUSERS IN THIS AREA TO BE BLOCKED. THE CUSTOMER MUST ALSO ACCEPT RESPONSIBILITY FOR POTENTIAL DIFFICULTIES IN SERVICING THE CUSTOMER'S MECHANICAL EQUIPMENT IN THE CEILING, IF PLACED WITHIN THESE SHADED AREAS. PLEASE COORDINATE THE PLACEMENT OF THESE ITEMS WITH THE SIEMENS PROJECT MANAGER. SIEMENS SHALL BEAR NO RESPONSIBILITY FOR ANY EQUIPMENT DAMAGES RESULTING FROM THE INSTALLATION OF CUSTOMER-SUPPLIED INFRASTRUCTURE NOT ADHERING TO THE ABOVE STATED REQUIREMENTS.

NOTE:
FOR ALL WEIGHTS AND SIZES OF EQUIPMENT SHOWN ON THIS PLAN PLEASE REFER TO THE EQUIPMENT LEGEND ON SHEET A-101.

FOR UNISTRUT PLACEMENT SEE SHEET S-102.

REFLECTED CEILING PLAN

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



SAFETY/SERVICE CLEARANCE PLAN

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

CEILING NOTES

1) ALL CEILING MOUNTED LIGHT FIXTURES, MECHANICAL REGISTERS AND SPRINKLER HEADS SHALL BE FLUSH WITH FINISHED CEILING, SHALL BE OUTSIDE OF ALL HATCHED AREAS AND SHALL BE SPECIFIED BY THE ARCHITECT OF RECORD AND SUBSEQUENT CONSULTING ENGINEERS.

2) THE ACTUAL CEILING DESIGN AND COORDINATION OF LIGHTING AND MECHANICAL SYSTEMS SHALL BE THE RESPONSIBILITY OF THE ARCHITECT OF RECORD AND HIS SUBSEQUENT CONSULTING ENGINEERS.

3) THE CUSTOMER/CONTRACTOR SHALL BE RESPONSIBLE FOR FABRICATING, SUPPLYING AND INSTALLING ALL LIGHT, MECHANICAL AND STRUCTURAL SUPPORTING SYSTEMS. SIEMENS MEDICAL SOLUTIONS INC. IS ONLY RESPONSIBLE FOR THE SUPPLYING, INSTALLING AND CALIBRATION OF SMS EQUIPMENT AS SPECIFIED ON THE EQUIPMENT SCHEDULE AS SHOWN ON SHEET A-101.

4) ALL ELECTRICAL AND STRUCTURAL SYSTEMS SHOWN ON THE REFLECTED CEILING PLAN HAVE BEEN COORDINATED WITH THE EQUIPMENT LOCATIONS AS SHOWN ON THE 1/4" SCALE ARCHITECTURAL EQUIPMENT PLAN (SHEET A-101). ANY CHANGES TO THE SMS EQUIPMENT CONFIGURATION AS SHOWN, DUE TO PLACEMENT OF LIGHTING, STRUCTURAL, ELECTRICAL AND MECHANICAL SYSTEMS, MUST BE APPROVED IN WRITING BY THE SMS PROJECT MANAGER PRIOR TO THE COMPLETION OF CONSTRUCTION DOCUMENTS.

CEILING HEIGHT REQUIREMENT

8 FT. - 11 IN.

ARTIS Q/Q.ZEN/ZEE CEILING
REV. 27

ATTENTION:

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SIEMENS

INTERMOUNTAIN MEDICAL CENTER

5121 COTTONWOOD ST, MURRAY, UT 84107
CATH LAB #3 / ARTIS Q.ZEN CEILING

PROJECT #: 2100318

SHEET 2 OF 8

DRAWN BY: O. CARRILLO

SCALE: AS NOTED

REF. #: 30253395

DATE: 11/22/21

SHEET: A-102

REFERENCE DOCUMENT - NOT FOR CONSTRUCTION

NJRA ARCHITECTS
NJRA Architects, Inc.
5272 S. College Drive, Suite104
Murray, Utah 84123
801.364.9259
www.njraarchitects.com

STATE OF UTAH
SELVAM RAJAVELU
267857
LICENSED ARCHITECT

Intermountain Healthcare
IMC- Cath Lab 3 Remodel Project

5121 South Cottonwood Street
Murray, UT 84107

NJRA Project # 20230
Construction Documents December 15, 2021

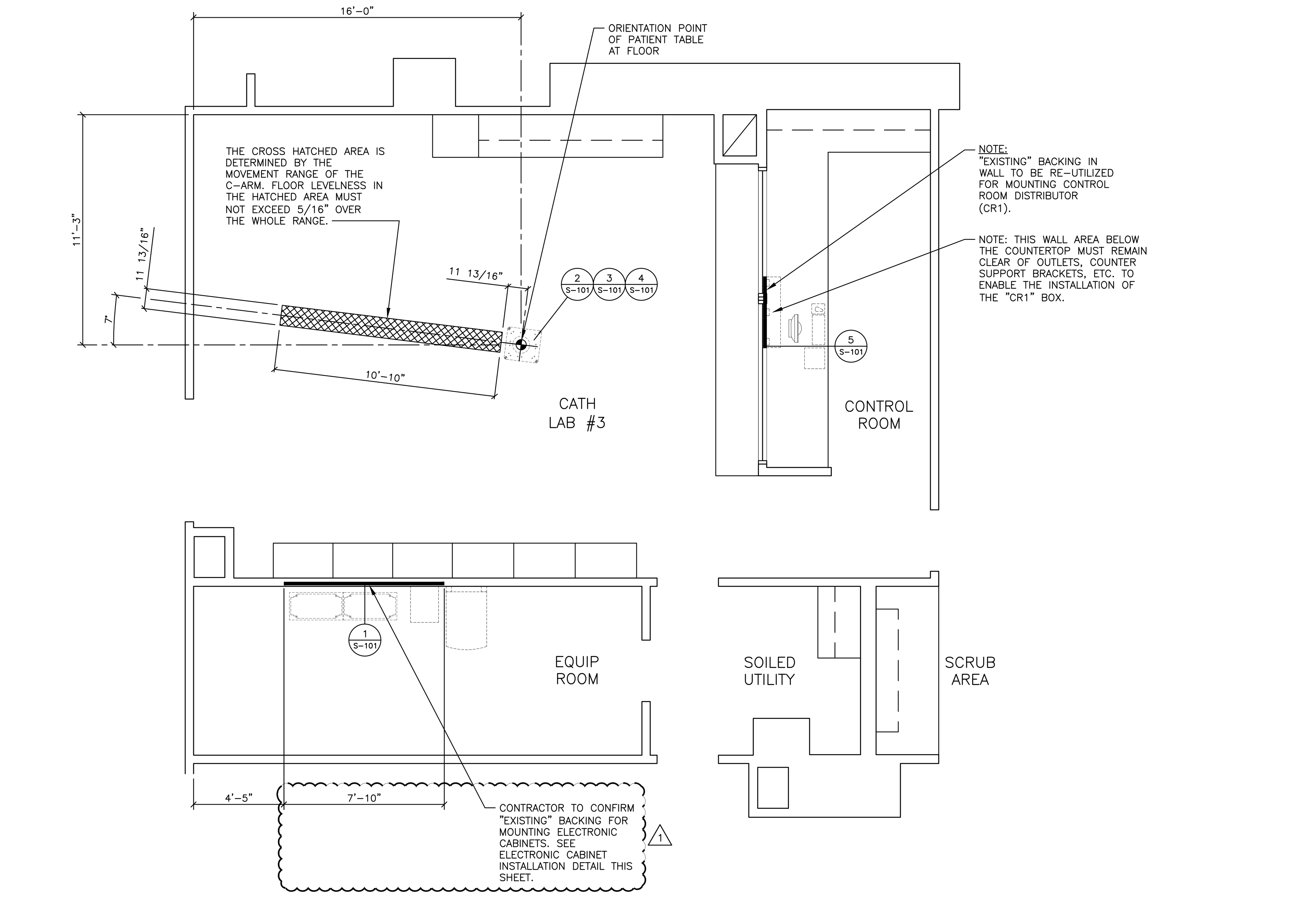
Siemens Equipment-Architectural

EQ 102

12/13/2021 3:32:42 PM - Z:\200 IHC\20230.00 IHC - IMC CATH LAB #3\02 BIM - REVIT & AUTOCAD\02 AUTOCAD DWGS\EQ 102 SIEMENS EQUIPMENT- ARCHITECTURAL.DWG

NJRA ARCHITECTS
NJRA Architects, Inc.
5272 S. College Drive, Suite104
Murray, Utah 84123
801.364.9259
www.njraarchitects.com

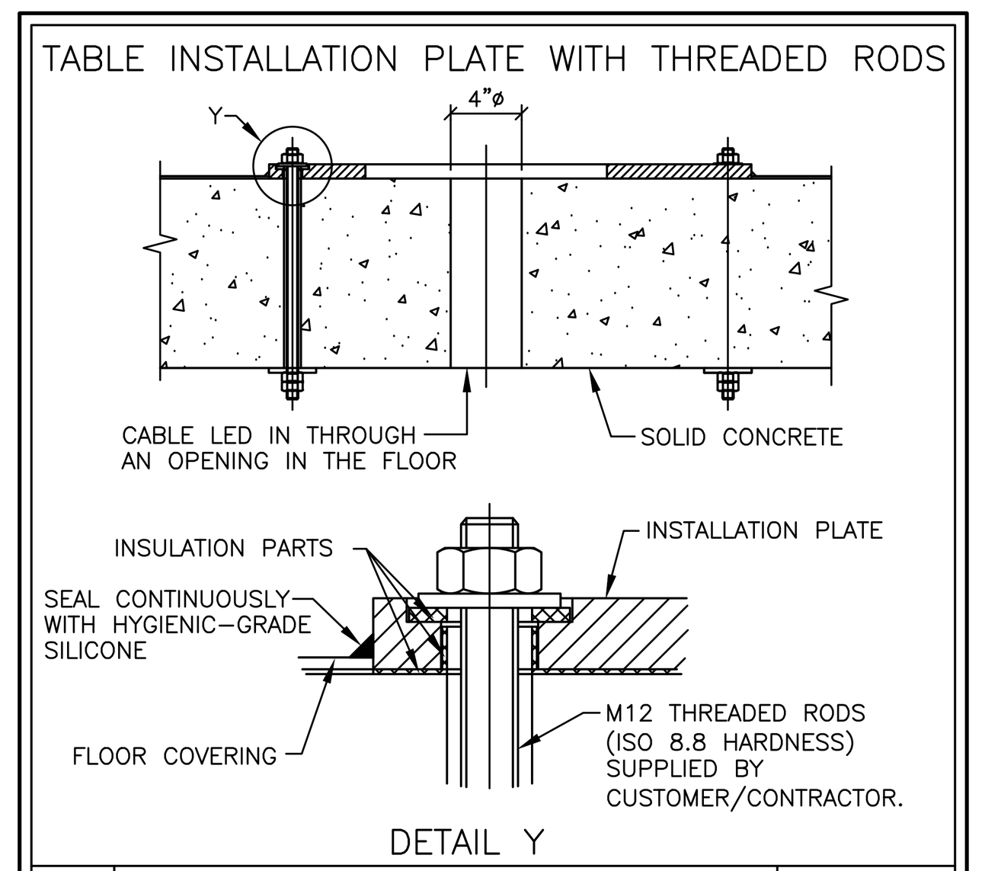
STRUCTURAL FLOOR PLAN



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

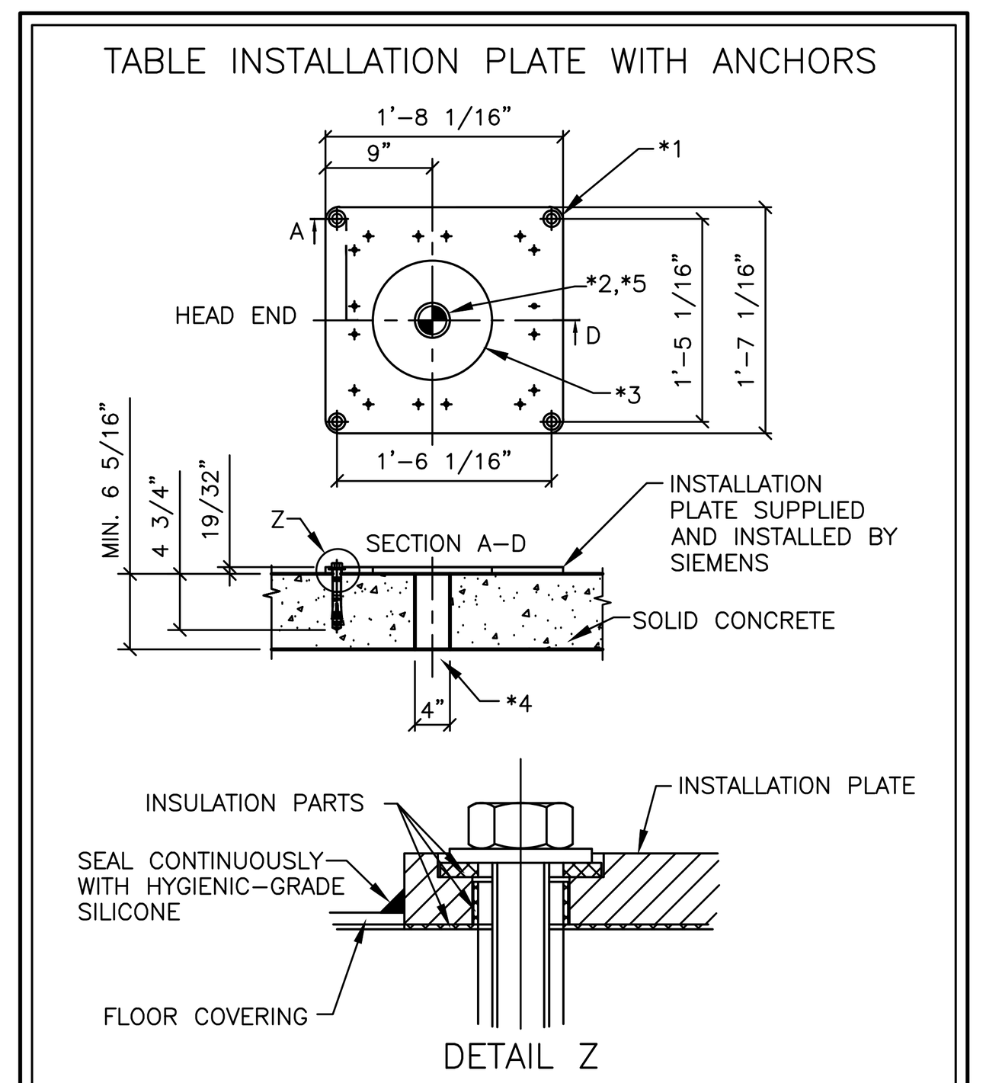
4 TABLE MOUNTING PLATE (SCALE: NONE)

TABLE INSTALLATION PLATE WITH THREADED RODS



3 TABLE MOUNTING PLATE (SCALE: NONE)

TABLE INSTALLATION PLATE WITH ANCHORS



*1 MOUNTING USING (4) HILTI HEAVY-DUTY EXPANSION ANCHORS, HSL-3 M12/25, SUPPLIED BY SIEMENS. MINIMUM CONCRETE QUALITY IS C20/25.

MAX. TENSILE FORCE PER MOUNTING POINT: 1,012 LBS.

*2 AREA FOR LEADING CABLES INTO TABLE BASE

*3 OPENING IN INSTALLATION PLATE

*4 CABLE LED IN THROUGH AN OPENING IN THE FLOOR

*5 PATIENT TABLE ORIENTATION POINT

STRUCTURAL NOTES

1) THE CUSTOMER/CONTRACTOR SHALL FURNISH AND INSTALL ALL STRUCTURAL SUPPORT MEMBERS AND NEEDED HARDWARE FOR THE INSTALLATION OF THE SIEMENS EQUIPMENT.

2) THE OVERHEAD STRUCTURAL SUPPORT SYSTEM SHALL BE FIXED, RIGID AND BRACED FOR SWAY.

3) ALL STRUCTURAL SUPPORT MEMBERS SHALL BE TRUE, SQUARE, LEVEL, PARALLEL AND COPLANAR WITH RESPECT TO EACH OTHER, WITH A HORIZONTAL STRUCTURAL SUPPORT MEMBER TO BE LOCATED AND SET WITH A TRANSIT.

4) ALL STRUCTURAL SUPPORT DETAILS SHOWN ARE SAMPLE DETAILS BASED UPON TYPICAL AND STANDARD BUILDING PRACTICES AND ARE NOT INTENDED AS ACTUAL CONSTRUCTION DETAILS. ALL CONSTRUCTION DETAILS AND SUPPORT CALCULATIONS SHALL BE PREPARED BY A PROFESSIONAL STRUCTURAL ENGINEER AT THE CUSTOMER'S EXPENSE. IN THE EVENT AN EXISTING SUPPORT SYSTEM IS TO BE USED, IT WILL BE THE CUSTOMER'S RESPONSIBILITY TO VERIFY THE INTEGRITY OF THAT SYSTEM.

5) MOUNTING PLATES, FRAMES, AND HARDWARE SUPPLIED BY SIEMENS AS DETAILED IN THIS DRAWING SET ARE INSTALLED BY SIEMENS UNLESS OTHERWISE REQUIRED. ANY DEVIATION FROM THE PROVIDED MATERIALS OR MOUNTING METHODS MUST BE DESIGNED AND DOCUMENTED BY THE STRUCTURAL ENGINEER OF RECORD. ALTERNATE MOUNTING MATERIALS (I.E. ANCHORS, THREADED ROD, BACKING PLATES, ETC.) MUST BE SUPPLIED BY THE CUSTOMER/CONTRACTOR. SIEMENS MAY REQUIRE ASSISTANCE FROM THE CUSTOMER/CONTRACTOR WITH INSTALLATION WHEN UTILIZING ALTERNATE MOUNTING MATERIALS.

6) ALL CEILING FIXTURES (I.E. AIR SUPPLY GRILLES, AIR RETURN GRILLES, EXHAUST GRILLES, SPRINKLER HEADS, INCANDESCENT AND FLUORESCENT LIGHT FIXTURES, INTERCOM SPEAKERS, MEDICAL GAS COLUMNS, ETC.) SHALL BE INSTALLED FLUSH MOUNTED WITH THE FINISHED CEILING TO PROVIDE FREE AND UNRESTRICTED TRAVEL OF THE SMS CEILING MOUNTED EQUIPMENT.

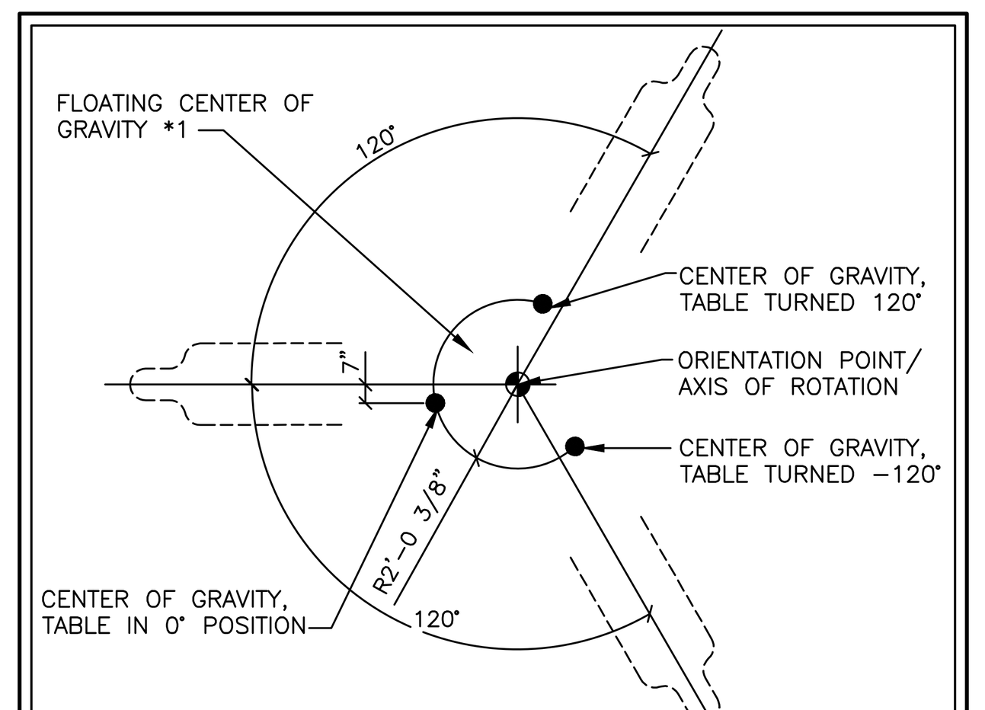
7) THE BOTTOM SIDE OF THE UNISTRUT CEILING GRID AND ANY CEILING MOUNTED SUPPORT PLATES ARE TO BE INSTALLED FLUSH WITH THE FINISHED CEILING. THE CUSTOMER/CONTRACTOR SHALL ALSO PROVIDE COVERSTRIPS FOR THE UNISTRUT.

8) THE STRUCTURAL PLANNING AS SHOWN ON THE 1/4" STRUCTURAL PLAN HAS BEEN COORDINATED WITH THE EQUIPMENT LOCATION AS SHOWN ON THE 1/4" EQUIPMENT LAYOUT PLAN. FOR THIS REASON, ANY DEVIATIONS FROM THE STRUCTURAL PLANNING AS SHOWN MUST BE APPROVED BY SMS PLANNING DEPARTMENT.

9) THE STRUCTURAL ENGINEER OF RECORD SHALL BE RESPONSIBLE FOR THE DESIGN AND DETAIL OF FLOOR, WALL, AND CEILING STRUCTURES IN ACCORDANCE WITH THE STRUCTURAL INFORMATION SHOWN, AND LOCAL GOVERNING BUILDING CODES.

10) ALL ANCHORS, SUPPORTS AND BRACES FOR SECURING THE SIEMENS EQUIPMENT ON THE UNDERSIDE OF THE CONCRETE SLAB (WHETHER SUPPLIED BY SIEMENS OR CONTRACTOR) SHALL BE SECURED IN A MANNER TO PREVENT THEM FROM FALLING DURING A DE-INSTALLATION. ALL WORK FOR SECURING THESE MOUNTS SHALL BE BY THE CONTRACTOR.

2 PATIENT TABLE CENTER OF GRAVITY (SCALE: NONE)

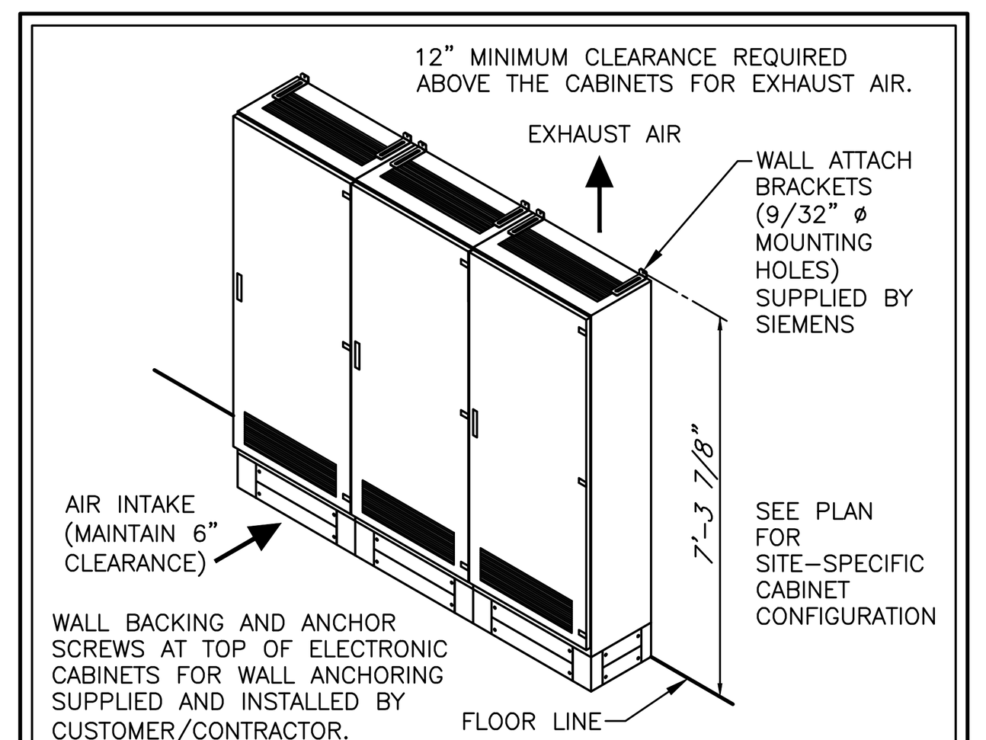


*1 IN THE CENTER OF GRAVITY, A POINT LOAD OF MAX. 1,798 LBS. IS EXERTED.

THE CENTER OF GRAVITY WHEN THE TABLE IS TURNED WAS DETERMINED UNDER THE FOLLOWING CONDITIONS:

- TABLETOP EXTENDED COMPLETELY IN THE HEAD POSITION.
- TABLETOP MOVED TRANSVERSELY TO THE STOP.
- TABLETOP NOT TILTED.
- TABLETOP LOADED WITH A PATIENT WEIGHT OF 441 LBS.
- TABLE ACCESSORIES (88 LBS.) INSTALLED ON THE ACCESSORY RAIL ON THE LEFT.

1 ELECTRONIC CABINET INSTALLATION (SCALE: NONE)



GENERAL PATIENT TABLE NOTES

THE PRE-INSTALLATION ITEMS ARE PART OF THE PRE-INSTALLATION SHIPMENT.

THE PRE-INSTALLATION KIT CONTAINS THE MOUNTING PLATE WITH INSTALLATION HARDWARE.

THE MOUNTING PLATE FOR THE PATIENT TABLE MUST BE INSTALLED ON A SOLID BASE THAT HAS SUFFICIENT LOAD CAPACITY. CUT AWAY THE FLOOR COVERING, IF NECESSARY, ANY MATERIAL IN THE LOCATION OF THE MOUNTING PLATES THAT DOES NOT HAVE THE REQUIRED LOAD CAPACITY MUST BE REPLACED WITH FILLED CONCRETE.

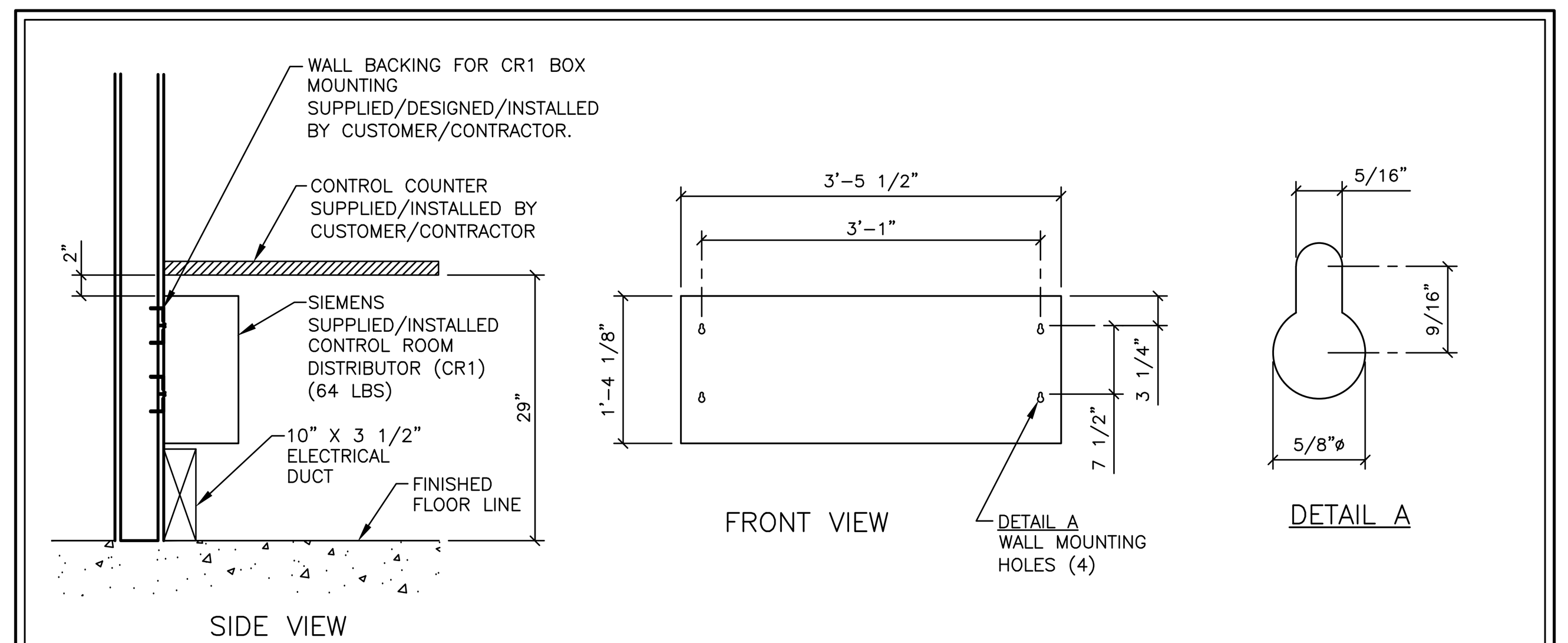
HILTI HEAVY DUTY EXPANSION ANCHORS ARE INCLUDED IN THE SHIPMENT FOR INSTALLING THE MOUNTING PLATE. IF NECESSARY, THE MOUNTING PLATES CAN ALSO BE INSTALLED USING M12 THREADED STUDS, MINIMUM HARDNESS RATED 8.8 PER THE ISO NORM, WHICH ARE INSERTED THROUGH THE CEILING OF THE ROOM BELOW (THREADED STUDS, ETC. MUST BE OBTAINED LOCALLY).

PATIENT TABLE TENSION LOADS

MOUNTING PLATE ON SOLID CONCRETE.

FOOT-END LOAD PER INSTALLATION PLATE MOUNTING POINT: MAXIMUM TENSILE FORCE 1,012 LBS.

5 CONTROL ROOM DISTRIBUTOR (CR1) (SCALE: NONE)



CEILING HEIGHT REQUIREMENT

8 FT. - 11 IN.

ARTIS Q/Q.ZEN/ZEE CEILING REV. 27

ATTENTION:

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- 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.

SYM	DATE	DESCRIPTION
1	11/22/21	REMOVING CABLE CABINET & ADDING "HD1" BEHIND CABINETS
0	03/26/21	R-101R(B) VERSION DATED 03/12/21 APPROVED BY CUSTOMER FOR FINALS

—ISSUE BLOCK—

PROJECT MANAGER: CHRISTOPHER THOMAS
TEL: (801) 209-6582
VMAIL: EXT:
FAX:
EMAIL: christopher.thomas@siemens-healthineers.com

SIEMENS

INTERMOUNTAIN MEDICAL CENTER
5121 COTTONWOOD ST, MURRAY, UT 84107
CATH LAB #3 / ARTIS Q.ZEN CEILING

PROJECT #: 2100318
SHEET 3 OF 8
DRAWN BY: O. CARRILLO
SCALE: AS NOTED
REF. #: 30253395
DATE: 11/22/21
SHEET: S-101

REFERENCE DOCUMENT - NOT FOR CONSTRUCTION

Intermountain Healthcare
IMC- Cath Lab 3 Remodel Project
5121 South Cottonwood Street
Murray, UT 84107

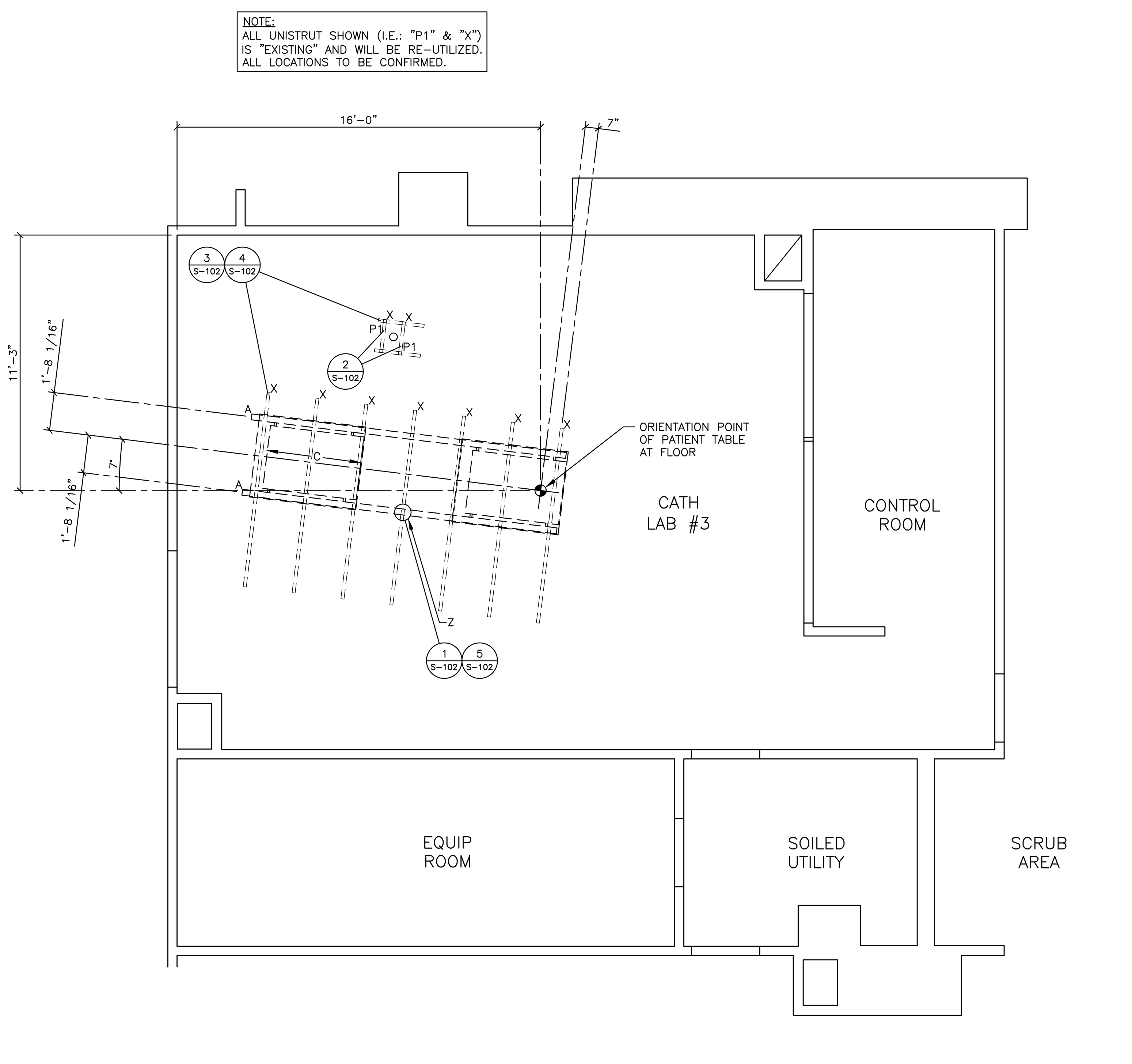
NJRA Project # 20230
Construction Documents December 15, 2021

Siemens Equipment-Structural

EQ 103

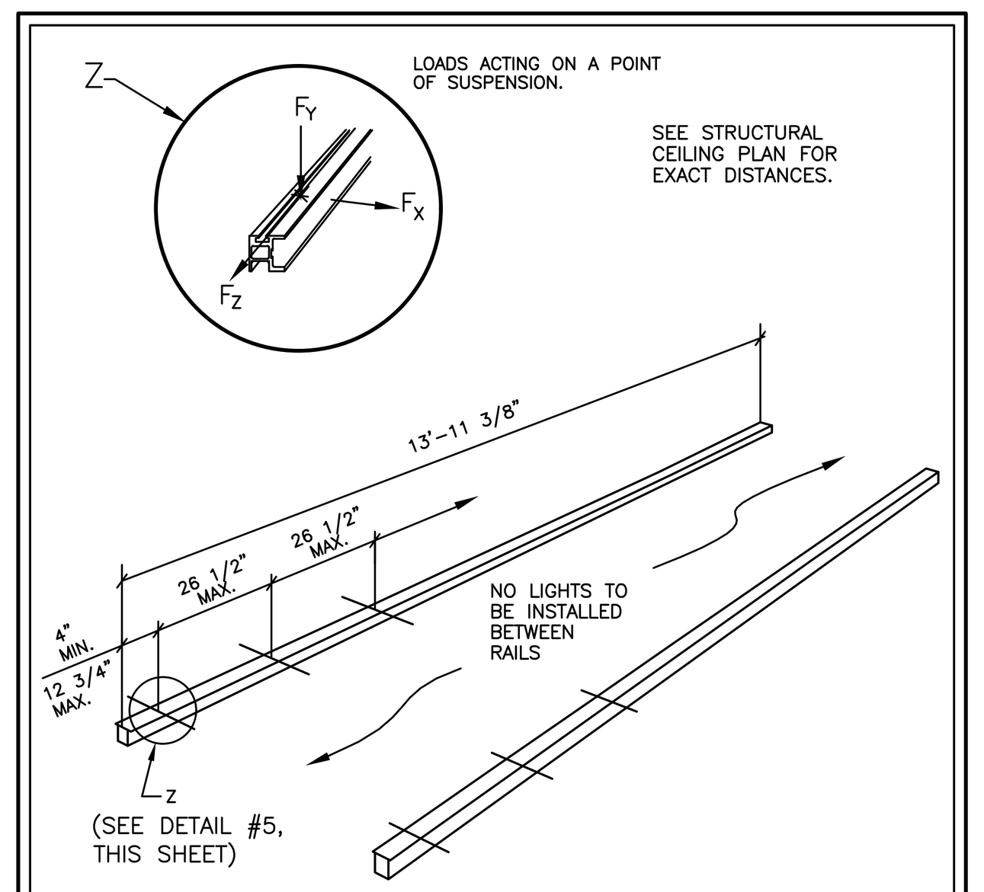
NJRA ARCHITECTS
NJRA Architects, Inc.
5272 S. College Drive, Suite104
Murray, Utah 84123
801.364.9259
www.njraarchitects.com

NOTE:
ALL UNISTRUT SHOWN (I.E.: "P1" & "X") IS "EXISTING" AND WILL BE RE-UTILIZED. ALL LOCATIONS TO BE CONFIRMED.



STRUCTURAL CEILING PLAN

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



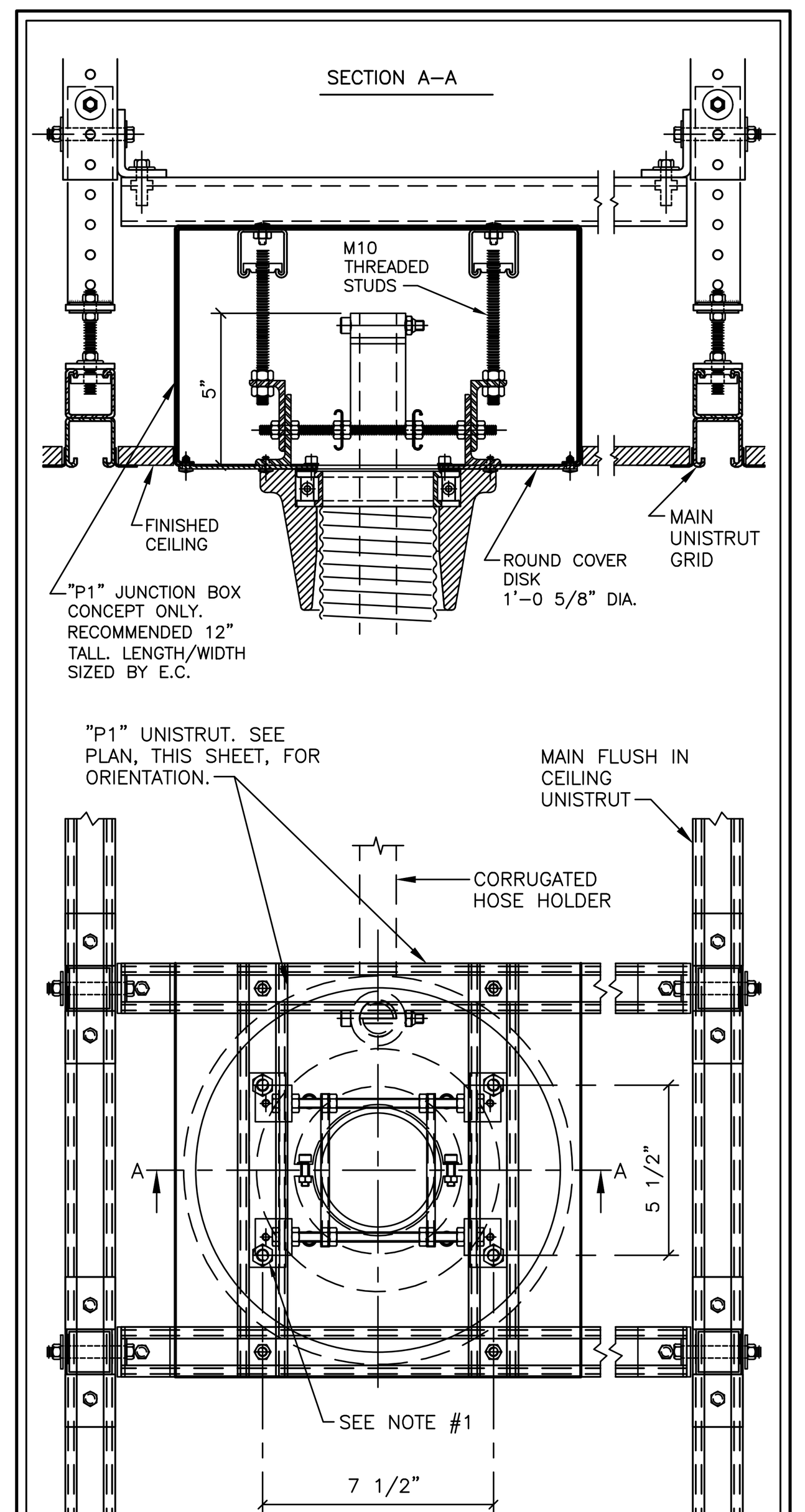
TYPICAL AT ALL INTERSECTIONS OF UNISTRUT AND C-ARM LONGITUDINAL RAILS "A"

MAXIMUM LOADS DURING OPERATION	F MAX. =
F_y = VERTICAL CEILING LOAD PER MOUNTING POINT (ONE MOUNTING POINT INCLUDES (2) SCREWS) LOAD ON THE INDIVIDUAL SCREWS VARIES (MAX LOAD 1,439 LBS). THE DYNAMIC LOAD IS EXERTED ON EACH MOUNTING POINT BECAUSE THIS IS A FLOATING SINGLE LOAD.	1,800 LBS.
F_x = MAXIMUM TRANSVERSE FORCE EXERTED ON THE RAIL.	450 LBS.
F_z = MAXIMUM LONGITUDINAL FORCE EXERTED ON THE RAIL.	900 LBS.

NOTES:
A STRUCTURAL CEILING (IE UNISTRUT) MUST BE INSTALLED BY THE CUSTOMER/CONTRACTOR AND MUST MEET THE FOLLOWING SPECIFICATIONS:

1) THE BOTTOM SURFACE MUST BE POSITIONED HORIZONTALLY. (MAXIMUM DEVIATION IS 0.5MM/M (1/64"/39").
2) THE UNISTRUT SUB CONSTRUCTION SHOULD BE DESIGNED SUCH THAT VIBRATION INDUCED BY THE LONGITUDINAL AND TRANSVERSE FORCES ARE LIMITED TO THE VIBRATION SPECIFICATION AS SPECIFIED ON THE ENVIRONMENTAL CONDITIONS TABLE LOCATED ON THE M-501 SHEET. IF NECESSARY, THE STRUCTURAL CEILING (IE UNISTRUT) MUST BE REINFORCED WITH LONGITUDINAL AND TRANSVERSE BRACING.
3) PROVIDE LONGITUDINAL AND DIAGONAL SUPPORT BEAMS.
4) WITH A HORIZONTAL EXERTED FORCE OF 135 LBS., THE STRUCTURAL CEILING (IE UNISTRUT) MOVEMENT MAY NOT EXCEED 0.3MM (1/64").
5) THE GREATEST SHIFTING SINGLE LOAD (CEILING STAND) EXERTS A FORCE OF 1800 LBS ON THE CEILING. THE MAXIMUM DEFLECTION ON THE INSTALLATION CEILING CAUSED BY THIS SINGLE LOAD MAY NOT BE GREATER THAN 3MM (7/64").

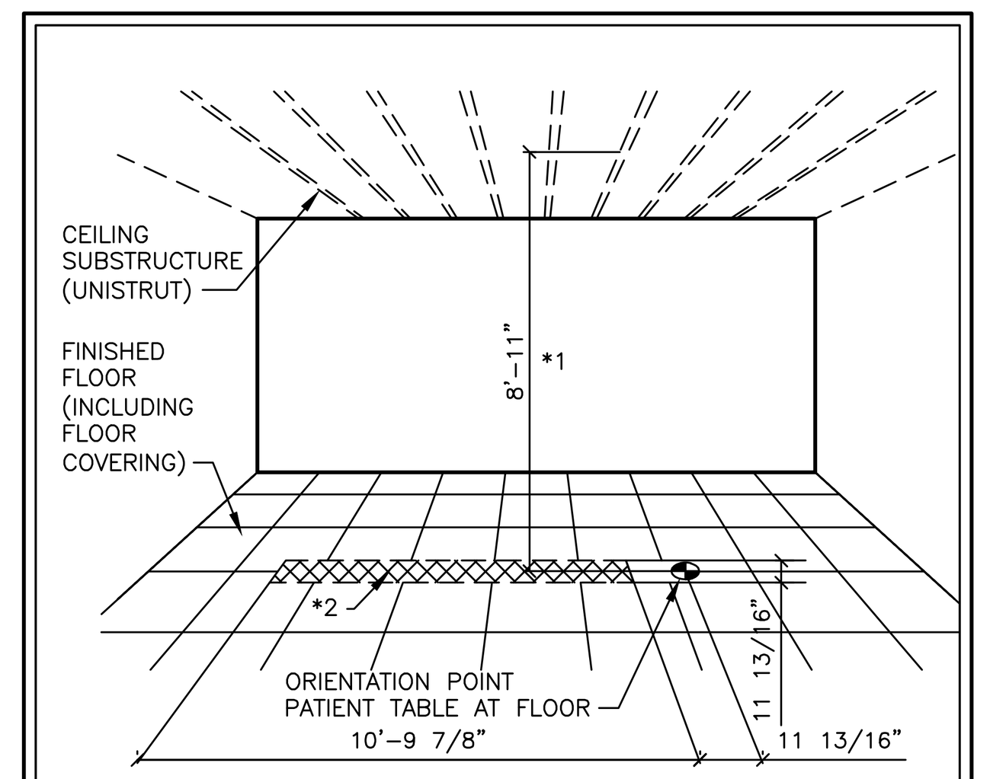
1 **CEILING LOADS** SCALE: NONE



NOTES:
1) CEILING ATTACHMENT WITH A PULLING FORCE ON EACH SCREW OF LESS THAN 338 LBS.
2) UNISTRUT PIECES AND UNISTRUT HARDWARE/ACCESSORIES SUPPLIED BY CUSTOMER/CONTRACTOR. ALL OTHER ATTACHMENT ITEMS SUPPLIED BY SIEMENS.

FLUSH P1 BOX DETAIL

2 **CEILING OUTLET DETAIL** SCALE: NTS



*1 ROOM HEIGHT MEASURED FROM THE HIGHEST POINT IN THE CROSSED HATCHED AREA ON THE FINISHED FLOOR (INCLUDING FLOOR COVERING) TO THE LOWEST POINT OF THE CEILING SUBSTRUCTURE (UNISTRUT). HERE, THE AREA OF THE CEILING SUBSTRUCTURE (UNISTRUT) IN WHICH THE LONGITUDINAL RAILS FOR THE CEILING STAND ARE INSTALLED IS THE DETERMINING FACTOR.

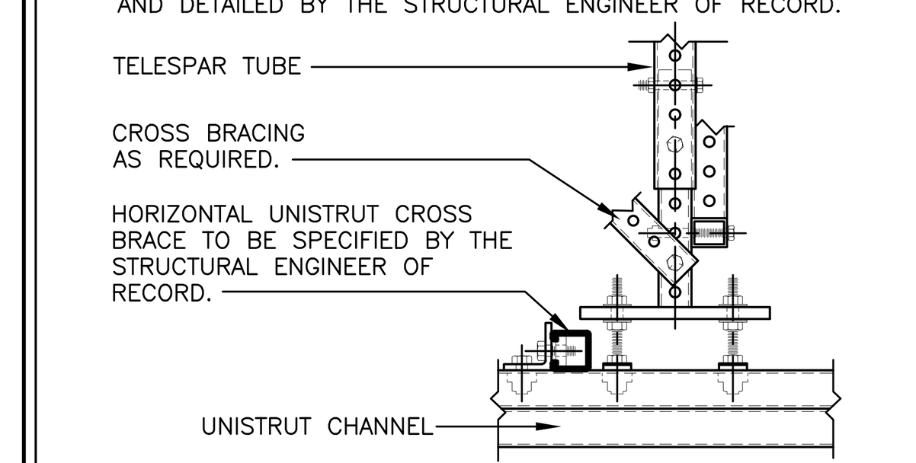
REQUIRED ROOM HEIGHT: 8'-11"

*2 THE CROSS-HATCHED AREA IS DETERMINED BY THE MOVEMENT RANGE OF THE CEILING STAND C-ARM.

MAXIMUM ADMISSIBLE FLOOR UNEVENNESS IN THE HATCHED AREA: 5/16".

3 **ADMISSIBLE ROOM HEIGHT** SCALE: 1/4"

ABOVE TELESPAR ANCHORING MUST BE DESIGNED, SPECIFIED AND DETAILED BY THE STRUCTURAL ENGINEER OF RECORD.



NOTE: UNISTRUT CHANNEL COVERS MUST BE SUPPLIED AND INSTALLED BY CONTRACTOR AFTER EQUIPMENT HAS BE MOUNTED TO THE CEILING.

THIS DETAIL SHOWS A UNIVERSAL TELESPAR DROP THAT IS TYPICAL OF THE STRUCTURAL SUPPORT SYSTEM USED FOR CEILING MOUNTED IMAGING EQUIPMENT. THE ACTUAL STRUCTURAL SUPPORT SYSTEM MUST BE DESIGNED, DETAILED AND SPECIFIED BY THE STRUCTURAL ENGINEER OF RECORD. UNLESS OTHERWISE SPECIFIED, THE CUSTOMER/CONTRACTOR SHALL SUPPLY AND INSTALL ALL SUPPORT MEMBERS AND NEEDED HARDWARE. IN THE EVENT AN EXISTING SUPPORT SYSTEM IS TO BE USED, IT WILL BE THE CUSTOMER'S RESPONSIBILITY TO VERIFY THE INTEGRITY OF THAT SYSTEM. SEE THE 1/4" SCALE PLAN FOR LOCATIONS AND SPACING OF UNISTRUT CHANNELS.

4 **UNISTRUT DETAIL** SCALE: NONE

CEILING PLAN LEGEND

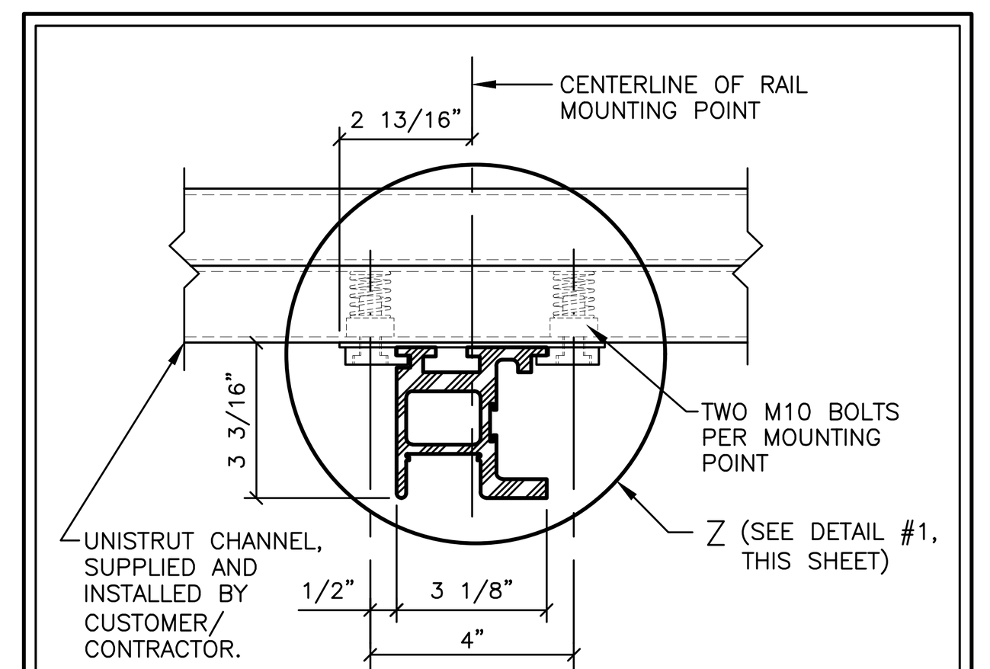
SUPPLIED/INSTALLED BY SIEMENS

SYM	DESCRIPTION	DET
A	LONGITUDINAL RAILS ATTACHED TO UNISTRUT	1,5
C	CEILING STAND MOVES ALONG LONGITUDINAL RAILS	1
D	DCS RAILS ATTACHED TO UNISTRUT	1,5
E	DCS CARRIAGE MOVES ALONG LONGITUDINAL RAILS	
F	RAD. SHIELD RAILS ATTACHED TO UNISTRUT	–
G	RADIATION SHIELD SUPPORT CARRIAGE MOVES ALONG RAILS	–
Z	LONGITUDINAL RAIL SUPPORT MOUNTING POINT BOLTED TO UNISTRUT FRAME	5

SUPPLIED/INSTALLED BY CUSTOMER/CONTRACTOR

SYM	DESCRIPTION	DET
X	UNISTRUT P-1001 (OR EQUIVALENT AS SPECIFIED BY STRUCTURAL ENGINEER OF RECORD) MOUNTED FLUSH WITH FINISHED CEILING. MUST BE LEVEL AS SPECIFIED BY SIEMENS ON STRUCTURAL NOTES AND DETAILS.	4
P1	CEILING OUTLET SUPPORTS	2

NOTE:
ALL STRUCTURAL SUPPORT DETAILS SHOWN ARE SAMPLE DETAILS BASED UPON TYPICAL AND STANDARD BUILDING PRACTICES AND ARE NOT INTENDED AS ACTUAL CONSTRUCTION DETAILS. ALL CONSTRUCTION DETAILS AND SUPPORT CALCULATIONS SHALL BE PREPARED BY A PROFESSIONAL STRUCTURAL ENGINEER AT THE CUSTOMER'S EXPENSE. IN THE EVENT AN EXISTING SUPPORT SYSTEM IS TO BE USED, IT WILL BE THE CUSTOMER'S RESPONSIBILITY TO VERIFY THE INTEGRITY OF THAT SYSTEM.



TYPICAL MOUNTING DETAIL

5 **CEILING RAILS** SCALE: NONE

CEILING HEIGHT REQUIREMENT

8 FT. – 11 IN.

ARTIS Q/Q.ZEN/ZEE CEILING REV. 27

PROJECT MANAGER: CHRISTOPHER THOMAS
TEL: (801) 209-6582
VMAIL: EXT:
FAX:
EMAIL: christopher.thomas@siemens-healthineers.com

SIEMENS

INTERMOUNTAIN MEDICAL CENTER

5121 COTTONWOOD ST, MURRAY, UT 84107
CATH LAB #3 / ARTIS Q.ZEN CEILING

SYM	DATE	DESCRIPTION
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—ISSUE BLOCK—

PROJECT #: 2100318
SHEET 4 OF 8
DRAWN BY: O. CARRILLO
SCALE: AS NOTED
REF. #: 30253395
DATE: 11/22/21
SHEET: S-102

ATTENTION:

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REFERENCE DOCUMENT - NOT FOR CONSTRUCTION

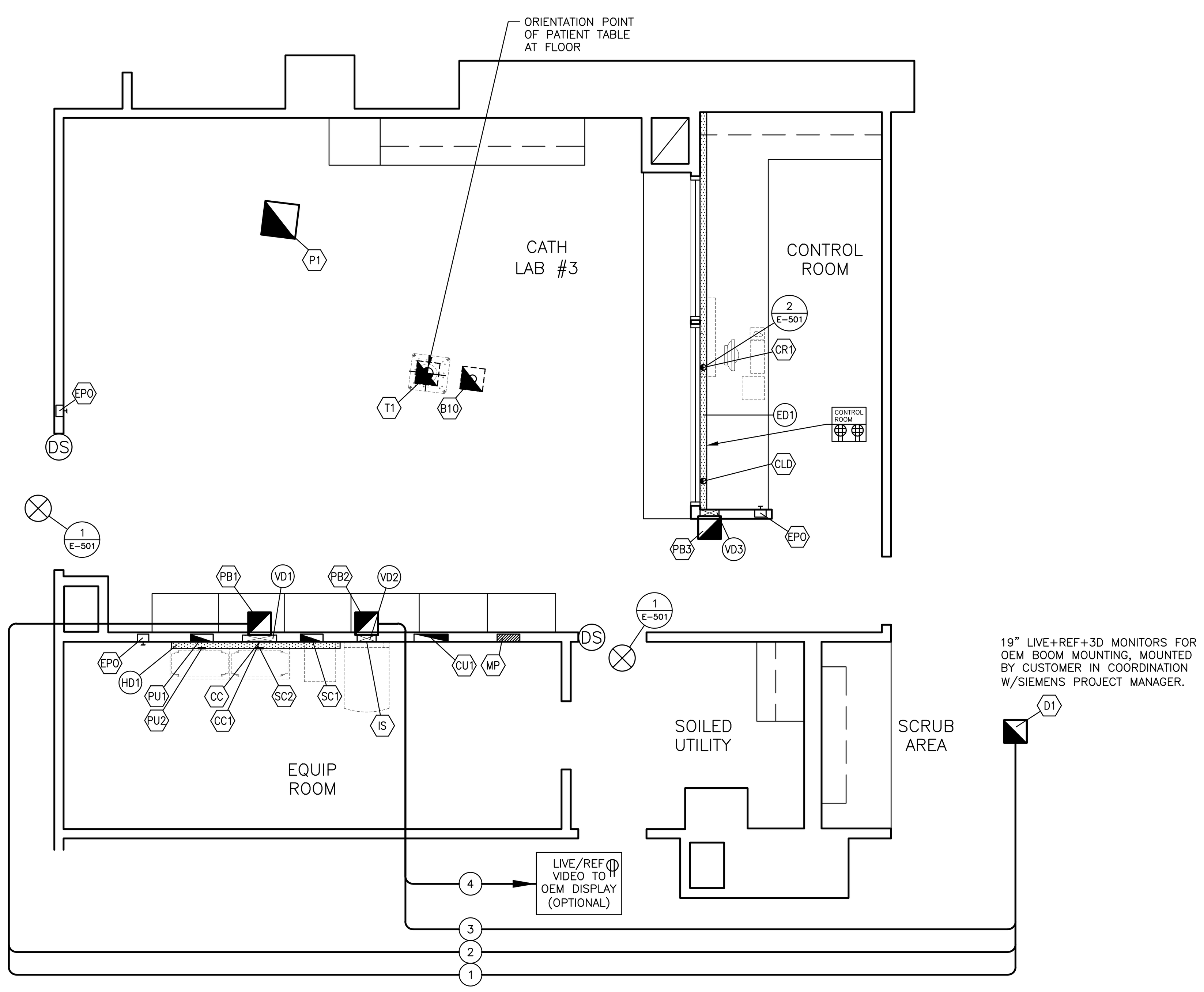
Intermountain Healthcare
IMC- Cath Lab 3 Remodel Project
5121 South Cottonwood Street
Murray, UT 84107

NJRA Project # 20230
Construction Documents December 15, 2021

Siemens Equipment- Structural

EQ 104

NOTE:
ALL EXISTING ELECTRICAL INFRASTRUCTURE IS TO BE RE-UTILIZED.



ELECTRICAL RACEWAY PLAN

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

ELECTRICAL LEGEND

SYM	SIZE	DESCRIPTION SUPPLIED AND INSTALLED BY CUSTOMER/CONTRACTOR	REMARKS
B10	EXISTING	PULL BOX MOUNTED BELOW FINISHED FLOOR WITH REMOVABLE BOTTOM COVER; WITH 4"ø CONDUIT FROM BOX TO FLUSH WITH FINISHED FLOOR.	TABLE ACCESSORIES
CC	EXISTING	BUSHED OPENING IN VERTICAL DUCT "VD1" COVER AT FLOOR LINE.	CABLE CABINET
CC1	18" X 8"	BUSHED OPENING IN HORIZONTAL DUCT "HD1" BACK (AT FLOOR LINE), OPEN TO VERTICAL DUCT "VD1".	CABLE CABINET
CLD	EXISTING	BUSHED OPENING IN TOP OF HORIZONTAL DUCT "ED1".	C-ROOM DISPLAY INPUTS
CR1	EXISTING	BUSHED OPENING IN TOP OF HORIZONTAL DUCT "ED1".	CONTROL ROOM DISTRIBUTOR
CU1	EXISTING	PULL BOX MOUNTED FLUSH IN FINISHED WALL; WITH REMOVABLE FRONT COVER AND (1) 4"ø BUSHING IN CENTER OF REMOVABLE COVER FOR CABLE EXIT.	COOLING UNIT
D1	AS REQUIRED	PULL BOX MOUNTED ABOVE FINISHED CEILING WITH REMOVABLE BOTTOM COVER WITH 3"ø 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 2xBWD-19D (live+ref)
EPO	---	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
IS	EXISTING	BUSHED OPENING IN VERTICAL DUCT "VD2" COVER AT FLOOR LINE.	IMAGE SYSTEM
MP	EXISTING	MAIN PANEL WITH MAIN BREAKER. LOCATION TO BE CONFIRMED BY CUSTOMER/CONTRACTOR. SEE "POWER SCHEDULE"	BREAKER PANEL
PB1	EXISTING	PULL BOX MOUNTED ABOVE AND CONNECTING TO VERTICAL DUCT "VD1".	PULL BOX
PB2	EXISTING	PULL BOX MOUNTED ABOVE AND CONNECTING TO VERTICAL DUCT "VD2".	PULL BOX
PB3	EXISTING	PULL BOX MOUNTED ABOVE AND CONNECTING TO VERTICAL DUCT "VD3".	PULL BOX
P1	EXISTING	PULL BOX MOUNTED FLUSH IN FINISHED CEILING WITH REMOVABLE BOTTOM COVER WITH 6"ø BUSHED OPENING.	C-ARM
PU1	EXISTING	PULL BOX MOUNTED FLUSH IN FINISHED WALL AT FLOOR LINE; WITH REMOVABLE FRONT COVER WITH 4"ø BUSHED OPENING AT BOTTOM OF COVER.	GENERATOR
PU2	AS REQUIRED	BUSHED OPENING IN HORIZONTAL DUCT "HD1" AT FLOOR LINE, BACK OPEN TO "PU1" AND FRONT OPEN TO BOTTOM OF CABINET.	GENERATOR
SC1	EXISTING	PULL BOX MOUNTED FLUSH IN FINISHED WALL AT FLOOR LINE; WITH REMOVABLE FRONT COVER WITH 4"ø BUSHED OPENING AT BOTTOM OF COVER AND BACK OF HORIZONTAL DUCT OPEN TO PULL BOX.	SYSTEM CABINET
SC2	AS REQUIRED	BUSHED OPENING IN HORIZONTAL DUCT "HD1" AT FLOOR LINE, FRONT OPEN TO BOTTOM OF CABINET.	SYSTEM CABINET
T1	EXISTING	PULL BOX MOUNTED BELOW FINISHED FLOOR WITH REMOVABLE BOTTOM COVER AND 4"ø CONDUIT FROM BOX TO FLUSH WITH FINISHED FLOOR WITH BUSHING AT FLOOR LINE.	TABLE
ED1	EXISTING	HORIZONTAL ELECTRICAL DUCT THAT IS CUSTOMER'S EXISTING IN THE ROOM, WHICH THEY WISH TO REUSE.	RACEWAY
HD1	3 1/2" X 18"	HORIZONTAL DUCT MOUNTED ON FINISHED WALL AT FLOOR LINE. PROVIDE DUCT WITH REMOVABLE FRONT COVER. CONNECT TO VERTICAL DUCT "VD1" AS SHOWN.	HORIZONTAL WALL DUCT
VD1 VD2 VD3	EXISTING	VERTICAL DUCT MOUNTED FLUSH IN FINISHED WALL. BEGIN DUCT AT FLOOR LINE AND EXTEND UP WALL ABOVE FINISHED CEILING. PROVIDE JUNCTION BOX (SIZED BY E.C.) AT TOP OF DUCT FOR CONDUIT TRANSITIONS.	VERTICAL DUCT
1	2"ø	CONDUIT FROM "PB1" (SC1) TO "D1"	MAX. CONDUIT LENGTH 47'
2	1"ø	CONDUIT FROM "PB1" (SC1) TO "D1"	MAX. CONDUIT LENGTH 98'
3	2"ø	CONDUIT FROM "PB2" (IS) TO "D1" (NOT WITH DCS LD)	MAX. CONDUIT LENGTH 59'
4	2"ø	CONDUIT FROM "PB2" (IS) TO "CUSTOMER MONITOR" (LIVE+REF VIDEO TO OEM OPTION)	MAX. CONDUIT LENGTH 80'

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 U.L. 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 GROUNDED 3 OR 4-WIRE 'WYE' SOURCE PER THE SPECIFIC EQUIPMENT OPERATION 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, UNLESS NOTED OTHERWISE: ELECTRICAL RACEWAYS AND DUCTS, WIRING TROUGHS, PULL BOXES, CONDUITS, CIRCUIT BREAKERS, ACCESS PANELS, EMERGENCY OFF BUTTONS, DOOR SWITCHES, WARNING LIGHTS, WIRING, 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 FOREIGN MATTER FROM ENTERING RACEWAY.

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.

PROVIDE ENCLOSED METAL WIRE DUCT RACEWAY SYSTEM WHERE SHOWN ON DRAWINGS WITH DIVIDERS TO SEPARATE THE DUCT INTO TWO OR THREE SEPARATE COMPARTMENTS AS SHOWN ON THE SIEMENS PLANS (FOR POWER AND SIEMENS HEALTHCARE CABLING). DIVIDERS AND CROSSOVER PIECES TO BE PROVIDED AS NECESSARY. THE CABLE TO CABLE AS WELL AS THE CIRCUIT TO CIRCUIT SEPARATION REQUIREMENT WAS EVALUATED 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.

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 REQUIRMENTS AND BUILDING STRCTURE. THOSE THAT ARE NOT INDICATED OR INTERFER 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.

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 ABOVE A HARD CEILING (I.E. SHEET ROCK), A 24" x 24" ACCESS PANEL IS REQUIRED AT EACH JUNCTION BOX AND WITHIN 2 FEET OF EACH RACEWAY TRANSITION (SUCH AS A 90 DEGREE ELBOW OR TEE) IN DUCT/RACEWAY. THERE MUST BE FREE AND CLEAR ACCESS TO JUNCTION BOXES AND WIRE DUCT/RACEWAY. WHEN ACCESS PANELS ARE LOCATED MORE THAN 3 FEET FROM JUNCTION BOXES AND WIRE DUCT/RACEWAY THE ELECTRICAL CONTRACTOR SHALL PROVIDE TWO ELECTRICIANS TO HELP SIEMENS INSTALLERS PULL SIEMENS SUPPLIED CABLES AT CUSTOMER'S EXPENSE.

6) 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), SIZED 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.

7) 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 35,000A 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"

ARTIS Q/Q.ZEN/ZEE CEILING
REV. 27

SYMBOLS

ALL MAY NOT APPLY

Symbol	Description
(hatched rectangle)	CIRCUIT BREAKER BY CUSTOMER/CONTRACTOR
(half-filled circle)	OPENING IN RACEWAY OR TRENCHDUCT
(half-filled square)	PULLBOX IN (FLOOR/WALL/CEILING)
(square with corner)	OPENING IN ACCESS FLOORING
(circle with X)	WARNING LIGHT (X-RAY ON)
DS	DOOR SAFETY SWITCH
(button)	(EPO) EMERGENCY POWER OFF BUTTON
(hatched bar)	TRENCH DUCT
(dashed bar)	CEILING DUCT
(dashed outline)	UNDER FLOOR DUCT
(dotted bar)	SURFACE DUCT
(box with X)	VERTICAL DUCT
(triangle)	ETHERNET CONNECTION TO CUSTOMER'S INFORMATION SYSTEMS NETWORK (VERIFY WITH SMS PROJECT MANAGER).
(outlet)	110 VOLT, 20 AMP, HOSPITAL GRADE DUPLEX OUTLET
(outlet)	110 VOLT, 20 AMP, HOSPITAL GRADE QUAD OUTLET

CEILING HEIGHT REQUIREMENT

8 FT. – 11 IN.

ATTENTION:

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SYM	DATE	DESCRIPTION
1	11/22/21	REMOVING CABLE CABINET & ADDING "HD1" BEHIND CABINETS
0	03/26/21	R-101R(B) VERSION DATED 03/12/21 APPROVED BY CUSTOMER FOR FINALS

–ISSUE BLOCK–

PROJECT MANAGER: CHRISTOPHER THOMAS
TEL: (801) 209-6582
VMAIL: EXT:
FAX:
EMAIL: christopher.thomas@siemens-healthineers.com

SIEMENS

INTERMOUNTAIN MEDICAL CENTER

5121 COTTONWOOD ST, MURRAY, UT 84107
CATH LAB #3 / ARTIS Q.ZEN CEILING

PROJECT #: 2100318
SHEET 5 OF 8
DRAWN BY: O. CARRILLO
SCALE: AS NOTED
REF. #: 30253395
DATE: 11/22/21
SHEET: E-101

REFERENCE DOCUMENT - NOT FOR CONSTRUCTION

NJRA ARCHITECTS
NJRA Architects, Inc.
5272 S. College Drive, Suite104
Murray, Utah 84123
801.364.9259
www.njraarchitects.com

STATE OF UTAH · SELVAM RAJAVELU · 267857 · LICENSED ARCHITECT

Intermountain Healthcare
IMC- Cath Lab 3 Remodel Project

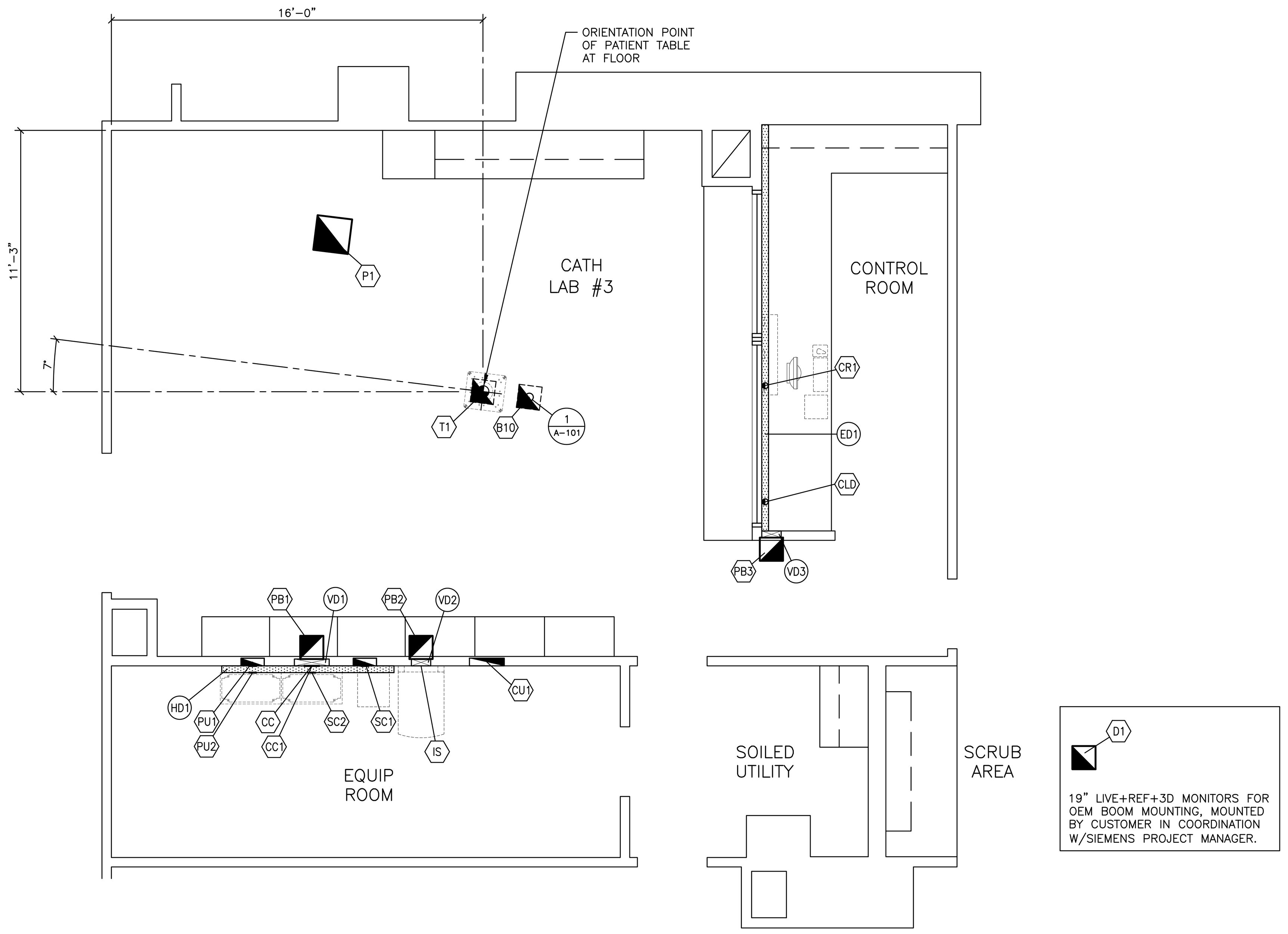
5121 South Cottonwood Street
Murray, UT 84107

NJRA Project # 20230
Construction Documents December 15, 2021

Siemens Equipment- Electrical

EQ 105

NOTE:
ALL EXISTING ELECTRICAL INFRASTRUCTURE IS TO BE RE-UTILIZED.



ELECTRICAL DIMENSION PLAN

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

CEILING HEIGHT REQUIREMENT

8 FT. – 11 IN.

ARTIS Q/Q.ZEN/ZEE CEILING
REV. 27

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5121 COTTONWOOD ST, MURRAY, UT 84107
CATH LAB #3 / ARTIS Q.ZEN CEILING

PROJECT #: **2100318**

SHEET 6 OF 8

DRAWN BY: O. CARRILLO

SCALE: AS NOTED

REF. #: 30253395

DATE: 11/22/21

SHEET: **E-102**

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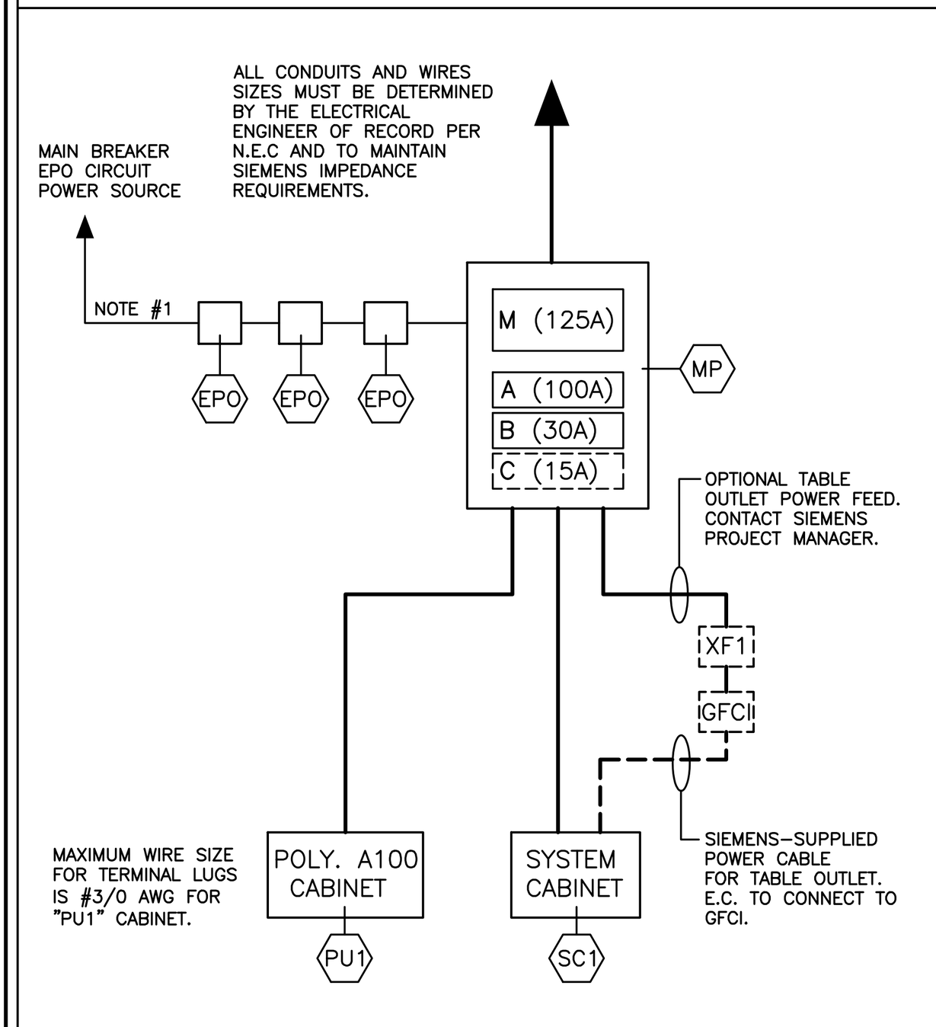
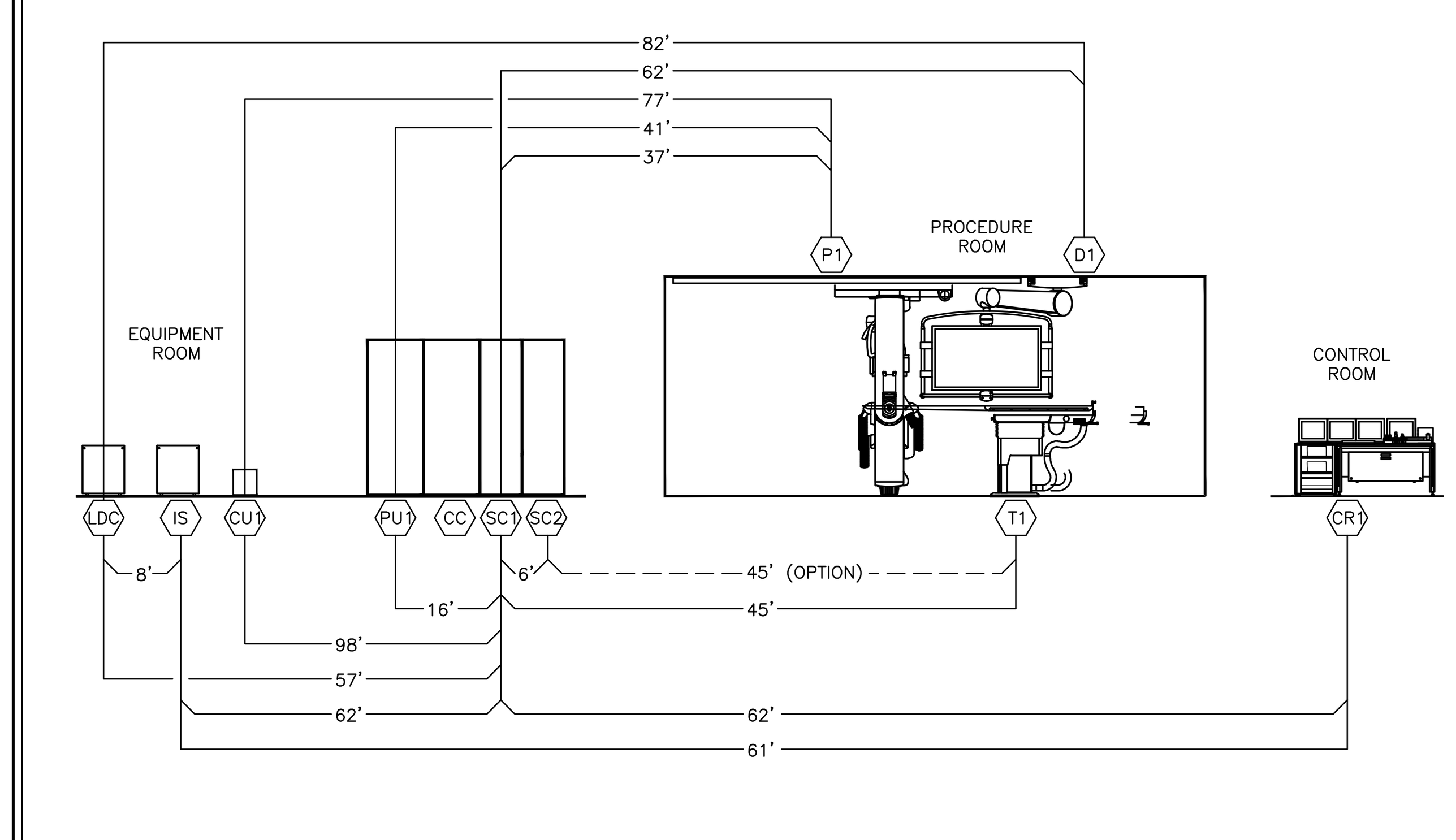
POWER SCHEDULE



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 AMPS: 125				
		VOLTS	PHASES	NEUTRAL	GROUND	TOTAL WIRES
		480/277Y	3	1	1	5 (NOTE 1)
A	1	BREAKER AMPS: 100 (FOR PU1)				
		VOLTS	PHASES	NEUTRAL	GROUND	TOTAL WIRES
		480Y	3	0	1	4 (NOTE 1)
B	1	BREAKER AMPS: 30 (FOR SC1)				
		VOLTS	PHASES	NEUTRAL	GROUND	TOTAL WIRES
		480/277Y	3	1	1	5 (NOTE 1)
C	1	BREAKER AMPS: 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 GROUNDED 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 LEXAN HINGED COVER TO AVOID INADVERTENT MANUAL TRIP.				
1) PHASE AND NEUTRAL TO BE THE SAME SIZE. GROUND SIZED PER NEC. NOTE: UNLESS OTHERWISE NOTED, ALL BREAKERS WILL BE 80% RATED						
EPO	VARIES	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.

GROUNDING NOTES

EQUIPMENT GROUNDING CONDUCTOR TO COMPLY WITH THE FOLLOWING:

1) SIZE GROUNDING WIRE TO SIEMENS EQUIPMENT PER POWER SCHEDULE REQUIREMENTS.
2) DERIVED FROM THE ELECTRICAL SERVICE, TRANSFORMER OR MAIN DISTRIBUTION PANEL FEEDING THE SIEMENS EQUIPMENT.
3) RUN IN THE SAME CONDUIT, TROUGH OR RACEWAY AS THE PHASE CONDUCTORS.
4) CONTINUOUS, WITH NO BREAKS OR USE OF CONDUIT, CHASSIS OR EARTH AS THE SOLE GROUNDING PATH.
5) BONDED TO CHASSIS AND/OR CONDUIT IN ACCORDANCE WITH THE NEC REQUIREMENTS.
6) MINIMIZE CONNECTIONS OR TERMINALS TO ENSURE CONTINUITY OVER THE LIFE OF THE INSTALLATION.
7) AS A NORM, THERE SHOULD NOT BE ANY CURRENT PRESENCE ON THE GROUND CONDUCTOR, BUT IT IS ACCEPTABLE TO HAVE <u><500mA</u> DURING OPERATION OF THE IMAGING EQUIPMENT.

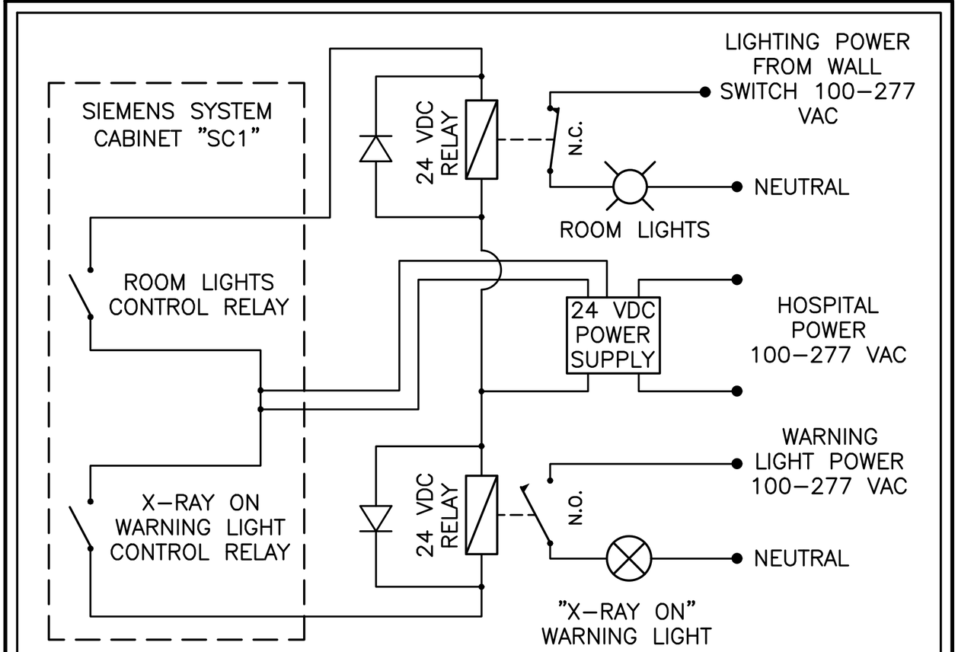
POWER QUALITY

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 COMPLIES WITH THE SIEMENS SPECIFICATIONS.

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.



NOTES:

1. 24 VDC RELAYS MUST INCLUDE A FREE-WHEELING DIODE (P/N 1N4002 OR EQUIVALENT).
2. ALL ITEMS PROVIDED BY CUSTOMER ELECTRICAL CONTRACTOR EXCEPT CONTACTS INSIDE SIEMENS "SC1" CABINET (ITEMS INSIDE DOTTED LINES).
3. ALL WIRING THAT CONNECTS TO SIEMENS "SC1" CABINET MUST BE 14-18 AWG STRANDED WIRE.
4. ONLY 3 WIRES LABELED "24 VDC", "ROOM LIGHTS" AND "X-RAY ON" SHOULD BE SENT TO SIEMENS "SC1" CABINET.
5. 24 VDC RELAYS ARE TO BE SELECTED BY ELECTRICAL CONTRACTOR TO HANDLE THE VOLTAGE AND AMPERAGE OF LIGHTING CURCUIT.
6. IF NEEDED, A SWITCH TO BLOCK RADIATION CAN BE INSTALLED IN SERIES WITH THE DOOR CONTACT.
   * THE SWITCH (24 VDC / 20 MA) MUST BE PROVIDED ON SITE.
   * CONTROL USING +24 V FROM THE SYSTEM CONTROL CABINET
   * PLAN THE SWITCH SO THAT UNINTENTIONAL OPERATION IS NOT POSSIBLE.
   * THE SWITCH MUST BE PROVIDED WITH AN APPROPRIATE SYMBOL (OR DESIGNATION) FROM WHICH THE FUNCTION CAN BE RECOGNIZED.

WARNING LIGHT/ROOM LIGHT SCHEMATIC

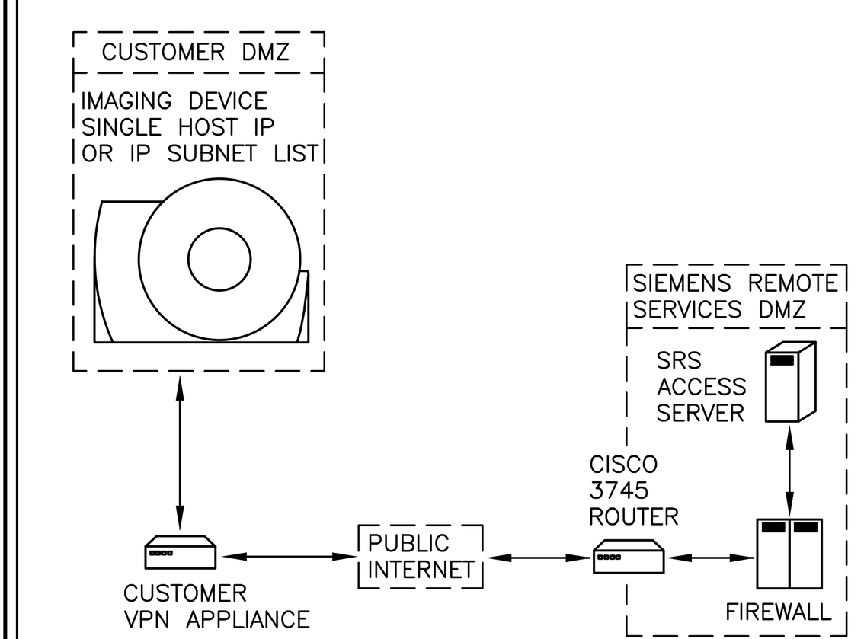
1 **LIGHTING DETAIL** SCALE: NONE

SIEMENS SMART REMOTE SERVICE

TO ENSURE THE UPTIME OF YOUR SYSTEM DURING THE WARRANTY PERIOD (AND BEYOND WITH A SERVICE AGREEMENT), SIEMENS REMOTE SERVICES (SRS) REQUIRES REMOTE LOCAL AREA NETWORK ACCESS TO SIEMENS SYSTEMS.

THE PREFERRED CONNECTION METHOD IS (VPN) VIRTUAL PRIVATE NETWORK (WHERE THE CUSTOMER HAS AVAILABLE A VPN CAPABLE FIREWALL OR OTHER VPN APPLIANCE). THIS METHOD PROVIDES THE POSSIBILITY FOR REMOTE SYSTEM DIAGNOSTICS WITHOUT ADDITIONAL HARDWARE. PLEASE CONTACT SIEMENS SMART REMOTE SERVICES TO DETERMINE BEST IMPLEMENTATION FOR YOUR SITE. CONTACT:

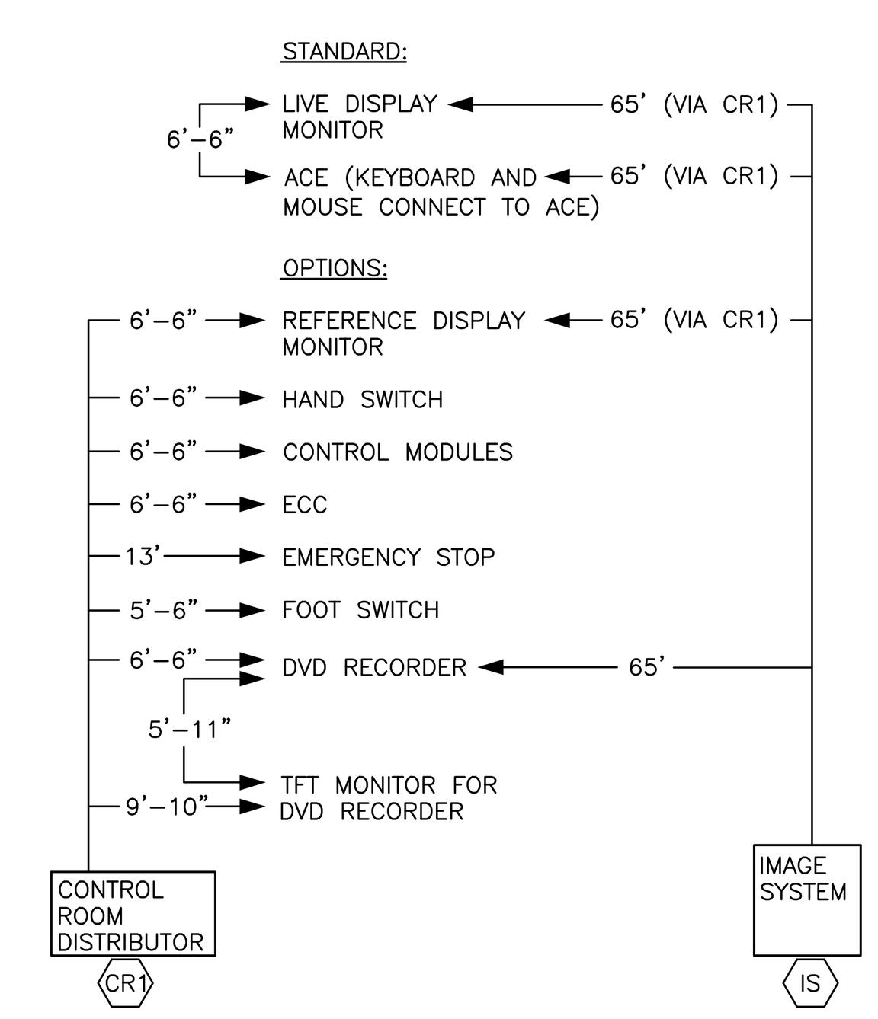
IMCPTSCSRS.DL@SIEMENS-HEALTHINEERS.COM.



NETWORK REQUIREMENT

A GIGABIT 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.

AXIS IMAGE SYSTEM
(REMOTE CONFIGURATION)



2 **CONTROL ROOM SYSTEM CONNECTIONS** SCALE: NONE

CONTRACTOR SUPPLIED CABLES

FROM	VIA	TO	DESCRIPTION	REMARKS
PANEL	EXISTING	MP	ELECTRICAL CONTRACTOR TO SIZE PLUS GROUND	SEE "POWER SCHEDULE"
MP	EXISTING, HD1	PU1	3#2, 1#2 GROUND AND CONNECT	SEE "POWER SCHEDULE"
MP	EXISTING, HD1	SC1	3#6, 1#6 NEUTRAL, 1#6 GROUND AND CONNECT	SEE "POWER SCHEDULE"
MP	EXISTING	EPO	2#12, PLUS GROUND	SEE "POWER SCHEDULE"
EPO	EXISTING	EPO	2#12, PLUS GROUND	EMERGENCY POWER
SC1	EXISTING	WL	2#14-18 AWG	SEE "LIGHTING DETAIL" SHEET E-501
SC1	EXISTING	DS	24V SIGNAL, 2#14-18 AWG	DOOR SWITCH
WL	EXISTING	WL	3#12, PLUS GROUND	WARNING LIGHT
DS	EXISTING	DS	24V SIGNAL, 2#14-18 AWG	DOOR SWITCH

SIEMENS SUPPLIED CABLES

FROM	VIA	TO	DESCRIPTION	REMARKS
P1	EXISTING, HD1	PU1	P1 LEFT SIDE	MAXIMUM LENGTH 41'
P1	EXISTING, HD1	PU1	(2) HIGH VOLTAGE CABLES P1 LEFT SIDE	MAXIMUM LENGTH 41'
P1	EXISTING, HD1	SC1	P1 LEFT SIDE	MAXIMUM LENGTH 37'
P1	EXISTING	CU1	FOR LIQUID COOLING HOSES (P1 LEFT SIDE)	MAXIMUM LENGTH 77'
SC1	HD1, EXISTING	CR1	FOR CONTROL ROOM OPTIONS (CONTROL MODULES, FOOT SWITCH, DISPLAY, ECC)	MAXIMUM LENGTH 62'
SC1	EXISTING	T1	NOT WITH OR TABLE	MAXIMUM LENGTH 45'
SC1	HD1, EXISTING	CU1		MAXIMUM LENGTH 98'
SC1	BETWEEN CABINETS	PU1		MAXIMUM LENGTH 16'
SC1	HD1, EXISTING	IS	62' CABLES SELECTABLE ON FACTORY CHECKLIST	MAXIMUM LENGTH 28'
SC1	HD1, VD1, PB1, 1	D1	OEM DISPLAY CONNECTION	MAXIMUM LENGTH 62'
SC1	HD1, VD1, PB1, 2	D1	OEM DISPLAY CONNECTION	MAXIMUM LENGTH 98'
IS	VD2, PB2, 3	D1	OEM DISPLAY CONNECTION	MAXIMUM LENGTH 75'
IS	EXISTING	CR1		MAXIMUM LENGTH 61'
IS	EXISTING	CR1		MAXIMUM LENGTH 61'
T1	EXISTING	B10		
ED1	EXISTING	B10	CUSTOMER PATIENT MONITORING, ETC.	
IS	VD2, PB2, 4	CUSTOMER MONITOR	LIVE+REF VIDEO INTERFACE TO OEM (OPTION)	MAXIMUM LENGTH 110'

ARTIS Q/Q.ZEN/ZEE CEILING
REV. 27

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—ISSUE BLOCK—

PROJECT #: 2100318
SHEET 7 OF 8
DRAWN BY: O. CARRILLO
SCALE: AS NOTED
REF. #: 30253395
DATE: 11/22/21
SHEET: E-501

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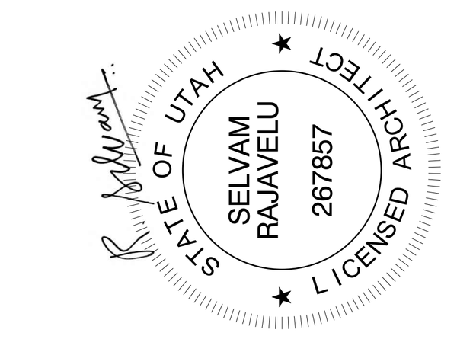

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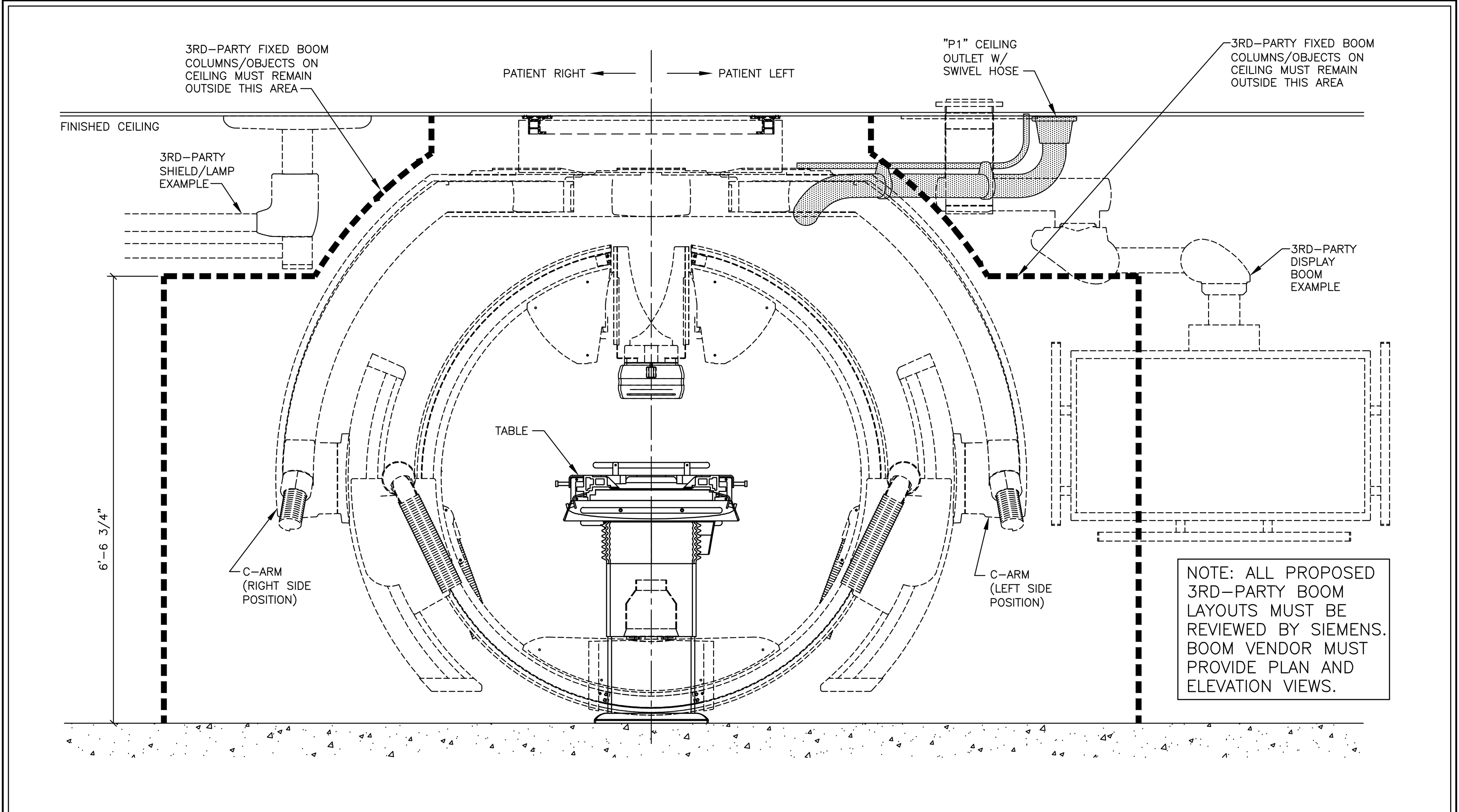
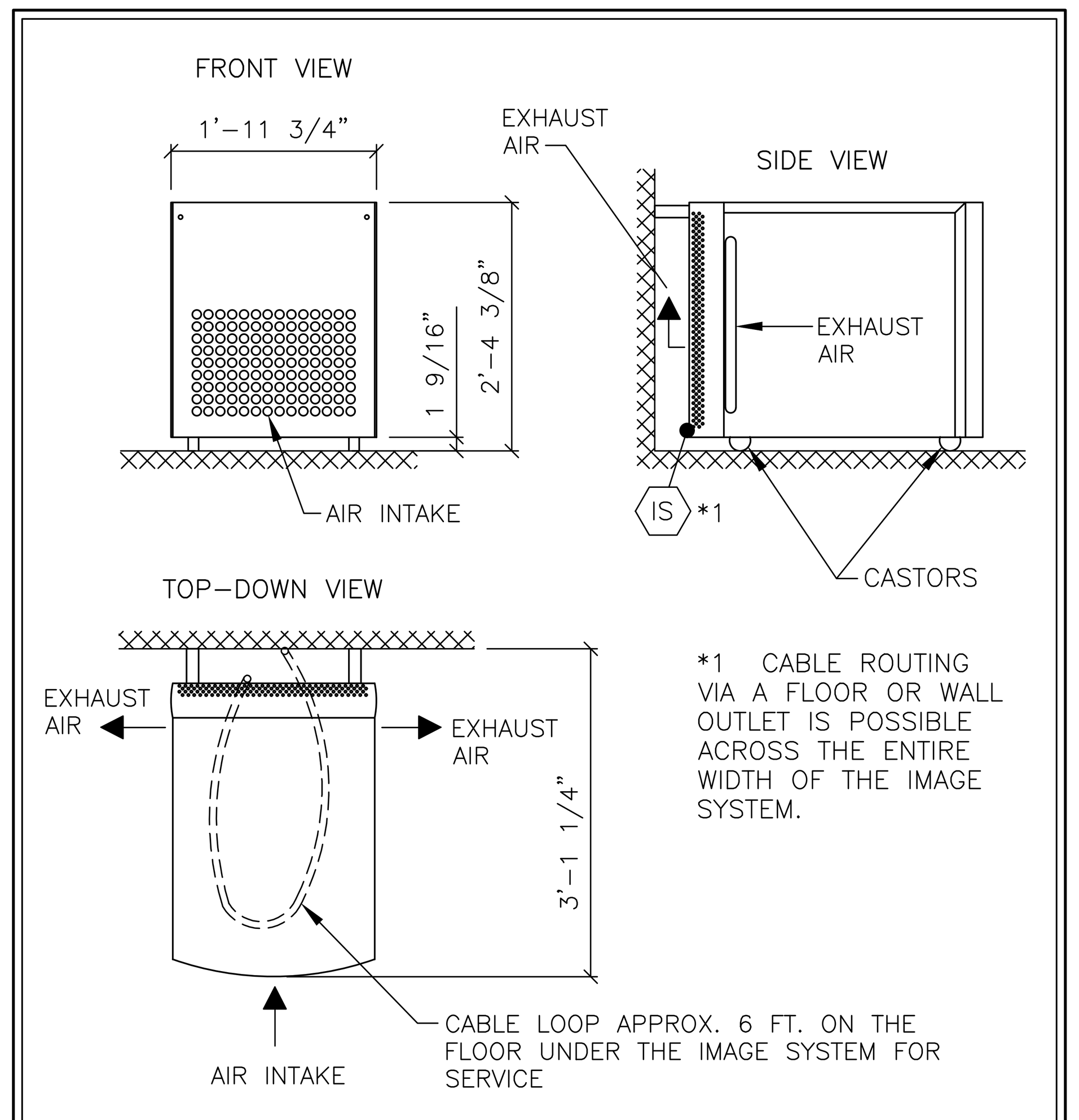
EQ 107



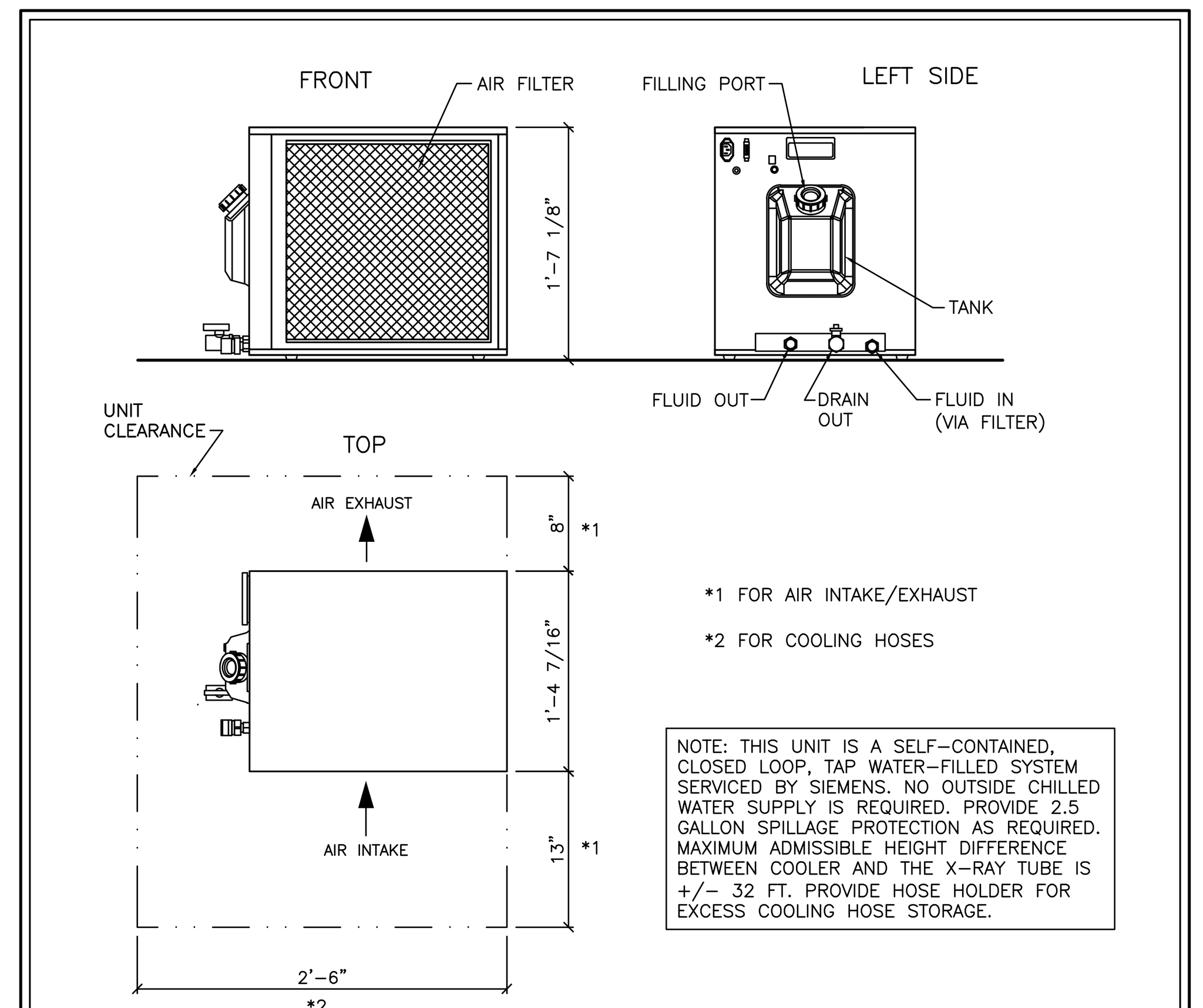
4 — 3RD-PARTY CEILING BOOM COORDINATION (FOOT-END ELEVATION) — SCALE: 3/4" = 1'-0"



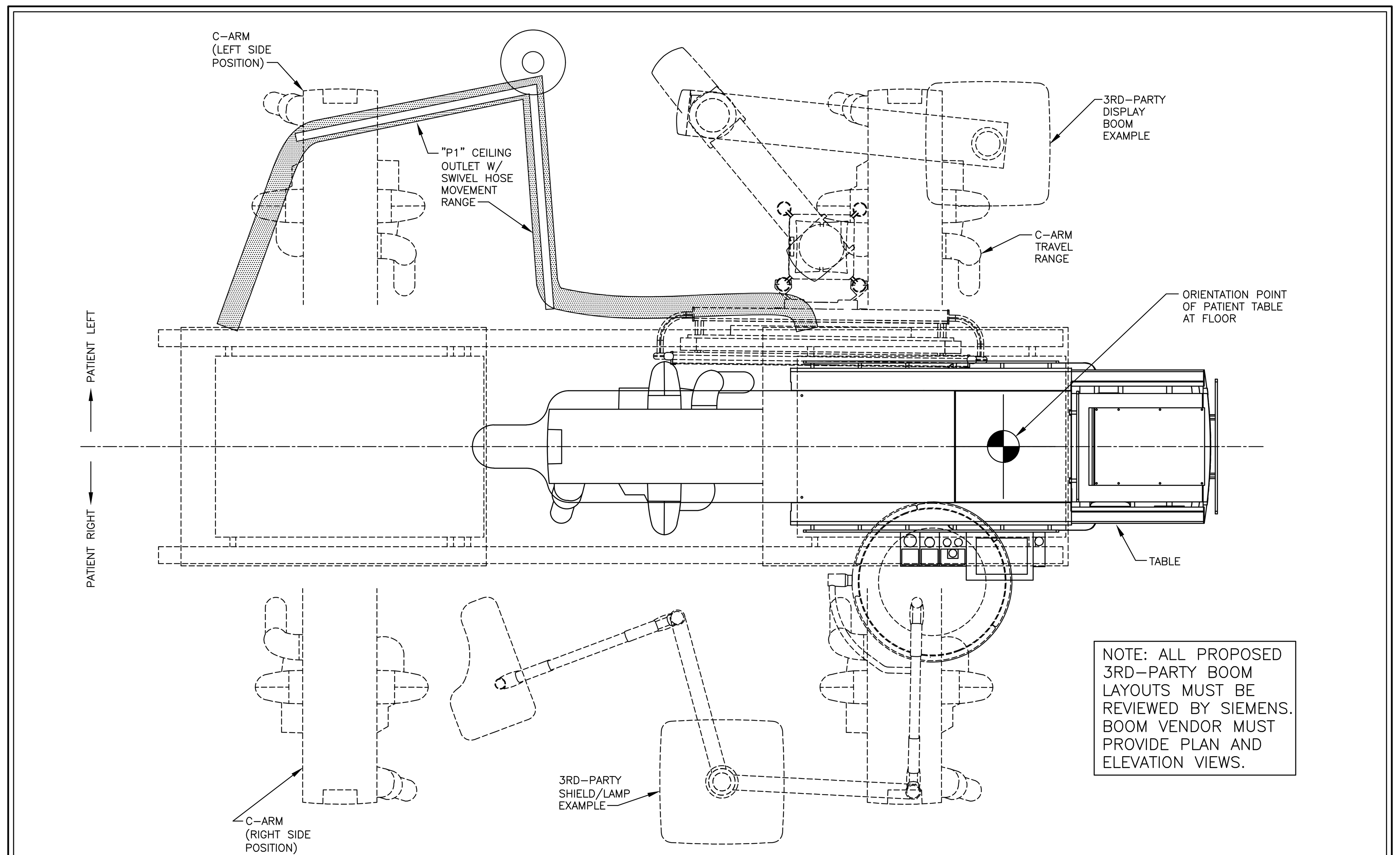
1 — AXIS IMAGE SYSTEM — SCALE: 3/4"=1'-0"

ENVIRONMENTAL CONDITIONS

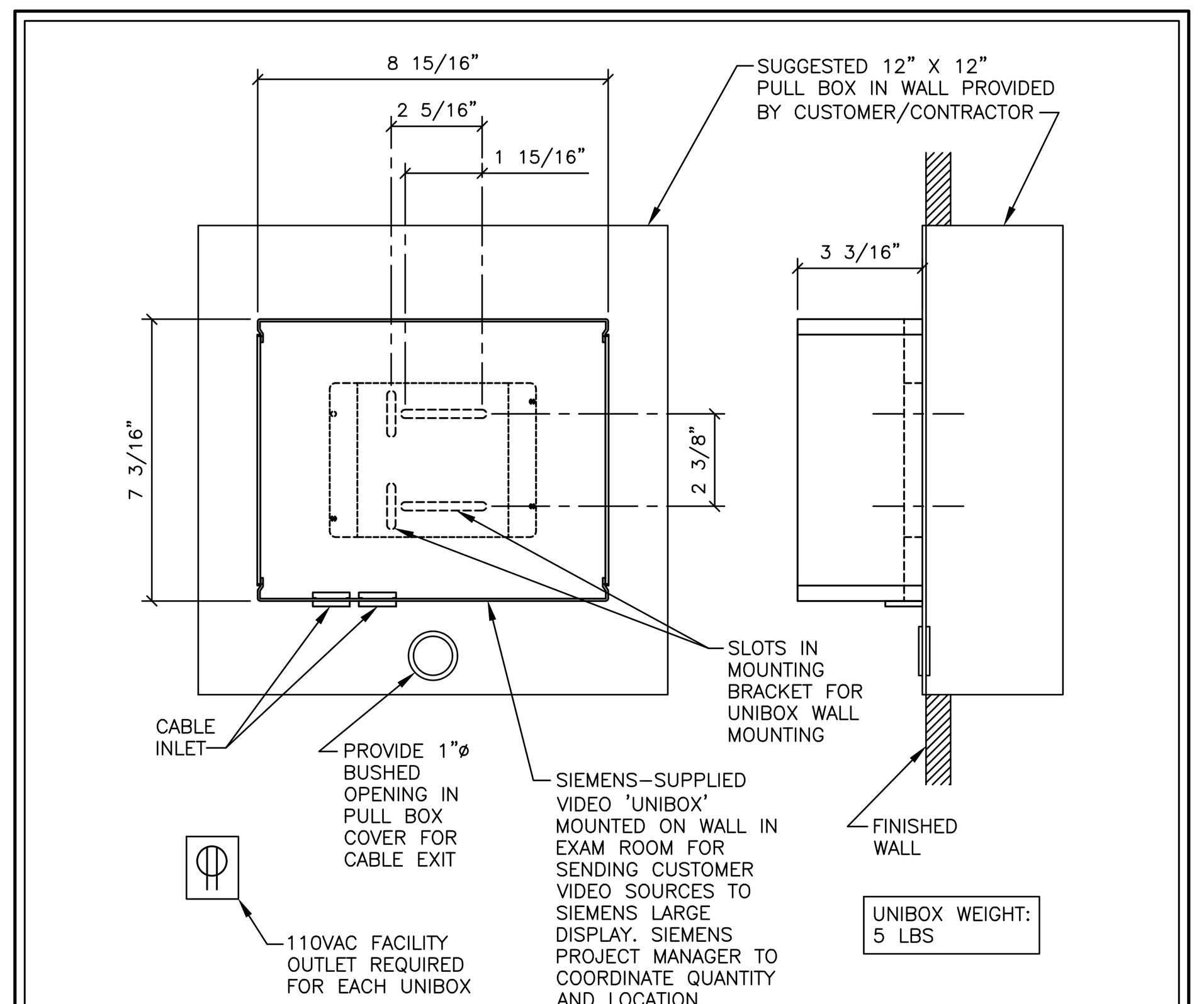
EXAM AND CONTROL ROOM	TEMPERATURE RANGE: RELATIVE HUMIDITY:	59°F-86°F (RECOMMENDED 70°F) 20% - 75% NON-CONDENSING
IMAGE SYSTEM (IS)	TEMPERATURE RANGE: RELATIVE HUMIDITY: MAX. TEMP. GRADIENT: AIR FLOW VOLUME: MAX. NOISE LEVEL:	50°F-95°F (RECOMMENDED 70°F) 20%-75% NON CONDENSING 18° F/HR 371 CFM 53 dB(A)
GENERATOR (PU1)	TEMPERATURE RANGE: RELATIVE HUMIDITY: MAX. TEMP. GRADIENT: AIR FLOW VOLUME: MAX. NOISE LEVEL:	50°F-95°F (RECOMMENDED 70°F) 20%-75% NON CONDENSING 9° F/HR 94 CFM 55 dB(A)
SYSTEM CABINET (SC1)	TEMPERATURE RANGE: RELATIVE HUMIDITY: MAX. TEMP. GRADIENT: AIR FLOW VOLUME: MAX. NOISE LEVEL:	59°F-86°F (RECOMMENDED 70°F) 20% - 75% NON-CONDENSING 9° F/HR 294 CFM 48 dB(A)
COOLING UNIT (CU1)	TEMPERATURE RANGE: RELATIVE HUMIDITY: AIR FLOW VOLUME: MAX. NOISE LEVEL:	41°F-86°F (RECOMMENDED 70°F) FROST FREE 647 CFM 55 dB(A)
STAND WITH FLAT DETECTOR	MAX. TEMPERATURE GRADIENT: ATMOSPHERIC PRESSURE: SHOCKS: VIBRATIONS:	9° F/HR 700hPa - 1040hPa MAX. 10G/16MS MAX. 0.1 G/10-200HZ



2 — TUBE COOLING UNIT — SCALE: 1"=1'-0"



5 — 3RD-PARTY CEILING BOOM COORDINATION (PLAN VIEW) — SCALE: 3/4" = 1'-0"



3 — WALL UNIBOX (VIDEO) — SCALE: NONE

HEAT LOADS

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

CEILING HEIGHT REQUIREMENT

8 FT. - 11 IN.

ARTIS Q/Q.ZEN/ZEE CEILING REV. 27

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-ISSUE BLOCK-

PROJECT MANAGER: CHRISTOPHER THOMAS
TEL: (801) 209-6582
VMAIL: EXT:
FAX:
EMAIL: christopher.thomas@siemens-healthineers.com

SIEMENS

INTERMOUNTAIN MEDICAL CENTER

5121 COTTONWOOD ST, MURRAY, UT 84107
CATH LAB #3 / ARTIS Q.ZEN CEILING

PROJECT #: 2100318
SHEET 8 OF 8
DRAWN BY: O. CARRILLO
SCALE: AS NOTED
REF. #: 30253395
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SHEET: M-501

NJRA ARCHITECTS
NJRA Architects, Inc.
5272 S. College Drive, Suite104
Murray, Utah 84123
801.364.9259
www.njraarchitects.com

STATE OF UTAH — SELVAM RAJAVELU — 267857 — LICENSED ARCHITECT

Intermountain Healthcare
IMC- Cath Lab 3 Remodel Project

5121 South Cottonwood Street
Murray, UT 84107

NJRA Project # 20230
Construction Documents December 15, 2021

Siemens Equipment-Mechanical

EQ 108

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