Joe Frogge

Digitally signed by Joe Frogge
DN: CN=Joe Frogge, OU=Development, OU=LS Users, DC=COLS, DC=LOC
Reason: release for construction
Date: 2021.11.29 14:14:59-06'00'

RELEASED FOR CONSTRUCTION
As Noted on Plans Review
Development Services Department
Lee's Summit, Missouri
11/29/2021

STATE OF MISSOURI
SAMUEL K. BECKMAN
NUMBER A-2011012130
ARCHITECT

07/20/2021

Samuel K. Beckman - Architect
License - Missouri #A-2011012130

Saint Luke's East Hospital

Saint Luke's ED CT
80 NE Saint Luke's Blvd
Lee's Summit, MO 64086

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PROJECT TEAM

ARCHITECT
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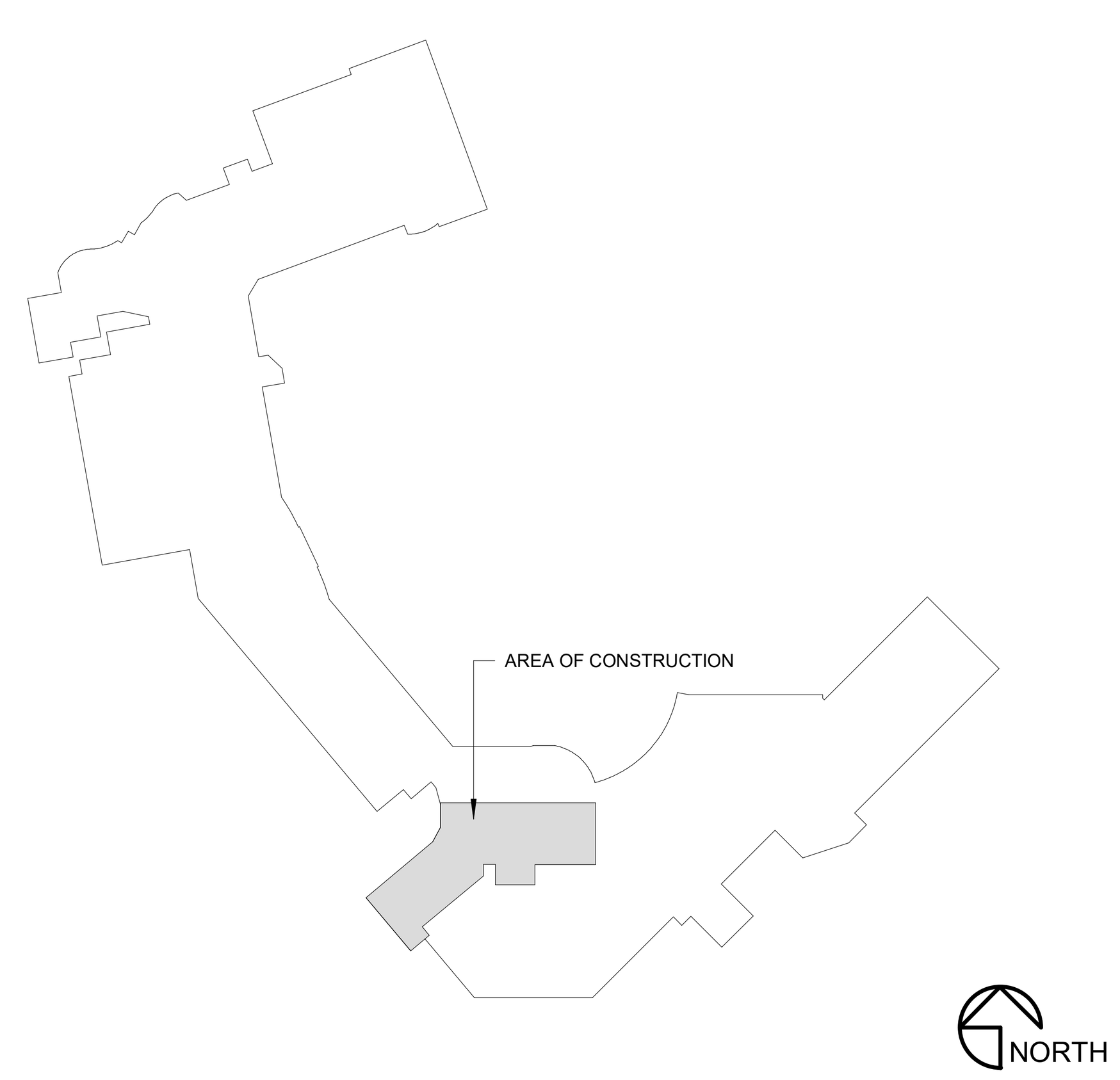
ABBREVIATIONS

AC.	ACOUSTIC/ACOUSTICAL
ADD.	ADDENDUM
ADD'N.	ADDITION
ABC	AGGREGATE BASE COURSE
AFF	ABOVE FINISH FLOOR
AGG.	AGGREGATE
A/C	AIR CONDITIONING
AL.	ALUMINUM
ALT.	ALTERNATE
A.B.	ANCHOR BOLT
&	AND
ARCH.	ARCHITECT
ASP.	ASPHALT
@	AT
ACT	ACOUSTIC CEILING TILE/PANEL
∡	ANGLE
BLKG.	BLOCKING
BSMT.	BASEMENT
BM.	BEAM
B.M.	BENCHMARK
BD.	BOARD
B.O.	BOTTOM OF
BLDG.	BUILDING
CAB'T.	CABINET
C.I.P.	CAST IN PLACE
C.B.	CATCH BASIN
CLG.	CEILING
CEM.	CEMENT/CEMENTITIOUS
CG.	CENTIGRAM
CM	CENTIMETER
CL.	CENTER LINE
CER.	CERAMIC
C.T.	CERAMIC TILE
CHAN.	CHANNEL
⊏	CHANNEL
CLR.	CLEAR
C.O.	CLEAN OUT
CLOS.	CLOSET
COL.	COLUMN
CONC.	CONCRETE
CONN.	CONNECTION
CONST.	CONSTRUCTION
C.J.	CONTROL JOINT CONSTRUCTION JOINT
CONT.	CONTINUOUS
CONTR.	CONTRACTOR
COR'G.	CORRUGATED
CTR.	COUNTER
CTSK.	COUNTERSUNK
C.M.U.	CONCRETE MASONRY UNIT
D.P.	DAMP PROOFING
DB.	DECIBEL
DIAG.	DIAGONAL
DIAM.	DIAMETER
DIM.	DIMENSION
DISP.	DISPENSER
DWL.	DOWEL
DN.	DOWN
D.S.	DOWNSPOUT
DWG.	DRAWING
EA.	EACH
ELEC	ELECTRIC
E.W.C.	ELECTRIC WATER COOLER
EL.	ELEVATION
ELEV.	ELEVATOR
EQ.	EQUAL
EQUIP.	EQUIPMENT
EXH.	EXHAUST
EXPAN.	EXPANSION
E.J.	EXPANSION JOINT
EXIST.	EXISTING
EXT.	EXTERIOR
FT.	FEET / FOOT
FIN.	FINISH
FIXT.	FIXTURE
FL.	FLASHING
FLR.	FLOOR
F.D.	FLOOR DRAIN

FLOR.	FLUORESCENT
FTG.	FOOTING
FND.	FOUNDATION
FR.	FRAME
F.H.C.	FIRE HOSE CAB.
FV.	FIELD VERIFY
GA.	GAUGE
GL.	GLASS / GLAZING
GD.	GRADE
G.	GRAM
GRL.	GRILLE
GRD.	GRID
GND.	GROUND
G.S.	GALVANIZED STEEL
GYP.	GYPSUM
GWB/G.B.	GYPSUM BOARD
H.R.	HAND RAIL
HDN.	HARDENER
HDW.	HARDWARE
HDWD.	HARDWOOD
HTR.	HEATER
HT.	HEIGHT
H.P.	HIGH POINT
H.M.	HOLLOW METAL
HORIZ.	HORIZONTAL
H.B.	HOSE BIB
H.W.	HOT WATER
IN.	INCH / INCHES
I.D.	INSIDE DIAMETER
INSUL.	INSULATION
INT.	INTERIOR
INV.	INVERT
JAN.	JANITOR
JT.	JOINT
JST.	JOIST
K.P.	KICK PLATE
LAM.	LAMINATED
LB.	POUND
LDG.	LANDING
LTH.	LATH
LAV.	LAVATORY
LG.	LENGTH
LOC.	LOCATION
LT.	LIGHT
L.W.C.	LIGHT WEIGHT CONCRETE
LVR.	LOUVER
LOC.	LOCATION
M.O.	MASONRY OPENING
MAT'L..	MATERIAL
MFR.	MANUFACTURER
MB.	MARKER BOARD
MAX.	MAXIMUM
MECH.	MECHANICAL
MTL.	METAL
M.L.	METAL LATH
M.	METER
MIN.	MINIMUM
MLDG.	MOLDING
MULL.	MULLION
N.G.	NATURAL GRADE
NOM.	NOMINAL
N.I.C.	NOT IN CONTRACT
N.T.S.	NOT TO SCALE
NO. / #	NUMBER
OBS.	OBSCURE
O.C.	ON CENTER
OPN'G.	OPENING
O.A.	OVERALL
O.D.	OUTSIDE DIAMETER
O.F.S.	OVERFLOW SCUPPER
O.F.D.	OVERFLOW DRAIN
O.H.D.	OVERHEAD DOOR

PTD.	PAINTED
PG.	PAGE
PLAM.	PLASTIC LAMINATE
PR.	PAIR
PNL.	PANEL
PTN.	PARTITION
d	PENNY
PL	PLATE
PLBG.	PLUMBING
PLYWD.	PLYWOOD
PT.	POINT
P.S.I.	POUNDS PER SQ. IN.
P.S.F.	POUNDS PER SQ. FT.
P.C.	PRECAST
P.L.	PROPERTY LINE
R.	RISER, RISERS
RAD.	RADIUS
R.D.	ROOF DRAIN
RB.	RESILIENT BASE
RE.	REFER TO
REG.	REGISTER
REQ'D.	REQUIRED
REV.	REVISION
RF'G.	ROOFING
RGH.	ROUGH
RM.	ROOM
RND.	ROUND
R.O.	ROUGH OPENING
SCHED.	SCHEDULE
S.C.	SEALED CONCRETE
SCR.	SCREW
SECT.	SECTION
SEL.	SELECT
SHG.	SHEATHING
SHT.	SHEET
SDG.	SIDING
SIM.	SIMILAR
SLDG.	SLIDING
SM.	SMOOTH
SPEC.	SPECIFICATION
SQ.	SQUARE
ST.	STAINED
STD.	STANDARD
S.S. / ST.STL.	STAINLESS STEEL
STRUC.	STRUCTURE
SUSP.	SUSPENDED
SW.BD.	SWITCHBOARD
SYS.	SYSTEM
T.	TREAD
T.C.	TOP OF CURB
T.G.	TEMPERED GLASS
T.O.	TOP OF
T.S.D.	TOP OF STEEL DECK
T.W.	TEACHERS WARDROBE
TYP.	TYPICAL
U.O.N.	UNLESS OTHERWISE NOTED
V.	VENT
VERT.	VERTICAL
V.G.	VERTICAL GRAIN
VEST.	VESTIBULE
V.C.T.	VINYL COMPOSITION TILE
VCP	VITREOUS CLAY PIPE
W.W.M.	WELDED WIRE MESH
W.C.	WATER CLOSET
W.H.	WATER HEATER
W.F.	WIDE FLANGE
W/	WITH
W/O	WITHOUT
WD.	WOOD
WDW.	WINDOW
W.W.	WINDOW WALL

LOCATION PLAN



GENERAL NOTES

1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH A.D.A. REQUIREMENTS AND ALL APPLICABLE LOCAL, STATE, AND FEDERAL BUILDING CODES AND REGULATIONS.
2. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY BUILDING PERMITS.
3. THE GENERAL CONTRACTOR AND SUBCONTRACTORS SHALL FIELD VERIFY EXISTING CONDITIONS AND NOTIFY THE ARCHITECT OF ANY INCONSISTENCIES OR DISCREPANCIES WTH THE PROJECT DOCUMENTS. ACCESS TO THE SITE AND/OR SPACE UNDER CONSTRUCTION DURING BIDDING AND CONSTRUCTION SHALL BE COORDINATED WITH THE OWNER.
4. DO NOT SCALE DRAWINGS.
5. THE WORD "ALIGN" AS USED IN THESE DOCUMENTS SHALL SUPERSEDE ANY DIMENSIONAL INFORMATION GIVEN.
6. TYPICAL DIMENSIONS ARE TO FACE OF CONCRETE, DRYWALL, CURTAIN WALL, ETC., OR TO COLUMN CENTERLINE. DIMENSIONS AT WINDOWS ARE TYPICALLY TO FACE OF FRAME. REFER TO PLAN DETAILS FOR ADDITIONAL INFORMATION.
7. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR EXAMINING AND CONFIRMING ALL SUBSTRATE CONDITIONS WHERE NEW MATERIALS ARE APPLIED. THE SUBSTRATE SHALL BE SMOOTH AND FREE OF DEFECTS AND SHALL CONFORM TO THE REQUIREMENTS OF THE FINISHED MATERIAL MANUFACTURERS RECOMMENDATIONS.
8. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR CLEAN-UP.
9. CONTRACTOR TO PROVIDE ALL REQUIRED LABOR, MATERIAL, AND EQUIPMENT NECESSARY TO MEET AND COMPLETE THE REQUIREMENTS OF THE NEW CONSTRUCTION.

9\. IF MATERIAL SUSPECTED OF CONTAINING HAZARDOUS MATERIALS ARE ENCOUNTERED, DO NOT DISTURB. IMMEDIATELY NOTIFY ARCHITECT AND OWNER. OWNER SHALL COORDINATE WITH CONTRACTOR ON THE REMOVAL OF SUCH ITEMS. WORK MAY PROCEED AFTER HAZARDOUS MATERIAL HAS BEEN REMOVED.

9\. UPON VERIFICATION OF THE EXISTING CONDITIONS, THE CONTRACTOR SHALL DETERMINE AND RECOMMEND THE BEST ACTION TO MINIMIZE THE EXTENT OF REMOVAL WORK FOR INSTALLATION OF NEW WORK.

SHEET INDEX - CT

Saint Luke's East Hospital
Saint Luke's ED Finish Upgrades
80 NE Saint Luke's Blvd
Lee's Summit, MO 64086

Date	11/12/21
Job Number	3-21024
Drawn By	BRD
Checked By	SB

Revision

Number	Date	Description
3	11/12/21	ASI #3

A0.1.1

COVER SHEET

Samuel K. Beckman - Architect
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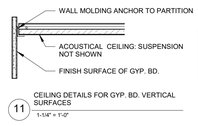
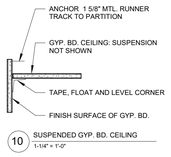
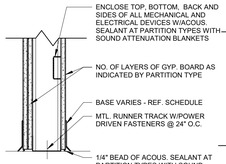
Kansas #E-34



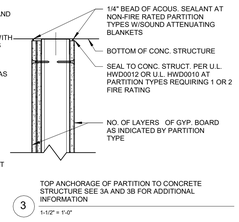
11 CEILING DETAILS FOR GYP. BD. VERTICAL SURFACES
1-1/4" = 1'-0"



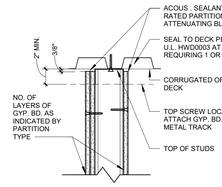
10 SUSPENDED GYP. BD. CEILING
1-1/4" = 1'-0"



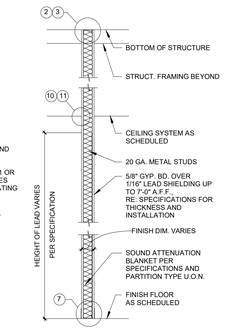
7 FLOOR ANCHORAGE OF PARTITION
1-1/2" = 1'-0"



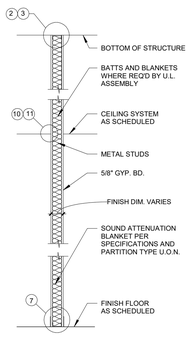
3 TOP ANCHORAGE OF PARTITION TO CONCRETE STRUCTURE SEE 3A AND 3B FOR ADDITIONAL INFORMATION
1-1/2" = 1'-0"



2 TOP ANCHORAGE OF PARTITION TO METAL DECK
1-1/2" = 1'-0"



N LEAD SHIELDING PARTITION
1/2" = 1'-0"



A GYPSUM BOARD BOTH SIDES
NON-RATED - TYPICAL
1/2" = 1'-0"

U.L. DESIGNATIONS AT RATED WALLS AS INDICATED ON LIFE SAFETY PLAN

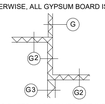
1 HOUR FIRE SEPARATION
U.L. U465 FOR 3 5/8" STUDS
U.L. U442 AT TILED WALLS
U.L. U451 FOR 2 1/2" STUDS

PARTITION GENERAL NOTES

1. UNLESS NOTED OTHERWISE, ALL INTERIOR METAL STUDS ARE 3 5/8" THICK. REFER TO SUFFIX SCHEDULE BELOW FOR LOCATIONS OF METAL STUDS OTHER THAN 3-5/8" THICK. NOTE: STUD THICKNESS (GAUGE) MUST CONFORM TO MANUFACTURER'S RECOMMENDATIONS FOR SPAN (HEIGHT OF STUD)
2. WHERE THE PARTITION TYPE INDICATION IS SHOWN WITH A NUMERICAL SUFFIX, THE METAL STUD THICKNESS SHALL BE AS SCHEDULED BELOW:

SUFFIX	MTL. STUD THICKNESS
1	1-5/8" MTL. STUDS
2	2-1/2" MTL. STUDS
3	6" MTL. STUDS

3. UNLESS NOTED OTHERWISE, ALL INTERIOR DRYWALL PARTITIONS INDICATED ON THE FLOOR PLAN DRAWING ARE TYPE 'A' PARTITIONS. WHERE OCCURS, RATINGS ARE AS INDICATED ON THE LIFE SAFETY PLANS.
4. UNLESS NOTED OTHERWISE, ALL INTERIOR MASONRY PARTITIONS INDICATED ON THE FLOOR PLAN DRAWING ARE TYPE 'B' PARTITIONS. WHERE OCCURS, RATINGS ARE AS INDICATED ON THE LIFE SAFETY PLANS.
5. ALL STUDS ARE CONTINUOUS FROM FLOOR STRUCTURE TO CEILING STRUCTURE UNLESS NOTED OTHERWISE.
6. METAL STUDS ARE SPACED @ 16" O.C. MAX., UNLESS NOTED OTHERWISE.
7. UNLESS NOTED OTHERWISE, ALL GYPSUM BOARD IS TO BE 5/8" THICK "FIRECODE".
8. THE LOCATION OF A CHANGE IN THE PARTITION TYPE IS INDICATED BY A WALL TAG.



9. THE CORRESPONDING RATED ASSEMBLIES ARE INDICATED BELOW THE PARTITION TYPES.
10. PARTITION TYPE DESIGNATIONS ARE INDICATED ON THE FLOOR PLAN DRAWINGS.
11. PARTITION TYPES DO NOT INCLUDE APPLIED FINISHES CALLED FOR IN THE ROOM FINISH SCHEDULE.
12. AT PARTITION TYPES WHERE MTL. STUDS ARE EXPOSED ON ONE OR BOTH SIDES, CUT STUD 1/4" SHORT AND SCREW BOTH SIDES TO MTL. RUNNER TRACK.

CODE SUMMARY

Project Construction Purpose: Interior ED/CT addition

Project Address:
Saint Luke's Lee's Summit
100 NW Saint Luke's Blvd
Lee's Summit, MO 64063

Code Information
2018 International Building Code
2018 International Plumbing Code
2018 International Mechanical Code
2018 International Fuel Gas Code
2018 International Fire Code
2017 National Electrical Code
2009 ICC/ANSI A117.1 as amended and adopted by the City of Lee's Summit

State of Missouri Dept. of Health & Environment references the following codes:
2012 NFPA 101 Life Safety Code (LSC)
2014 FGI Guidelines for Design & Construction of Hospitals & Outpatient Facilities

Owner Information
Saint Luke's Lee's Summit
100 NW Saint Luke's Blvd
Lee's Summit, MO 64063

Designer Information
ACI Boland Architects
1710 Wyandotte St.
Kansas City, MO 64108
Phone: (816) 763-9600
Fax: (816) 763-9757

Local Authority
Responding Fire Service: Lee's Summit Fire Department
Local Building Inspection:Lee's Summit, MO -Codes Administration Department

Type of Construction:	Type 1-A -Section 602.2 (Type 1 - 332 Sprinklered - Section 18.1.6.1)
Area of Renovation:	750+/- SF
Occupancy Group:	I-2 - Section 308.3
Occupant Load:	
Institutional Outpatient	100 gross Table 1004.5
Total Square Footage:	750 SF / 100 = 8 occupants total

Required Fire Resistance Ratings (in hours)
Per NFPA 101 A.8.2.1.2:

Exterior Bearing Walls	3 HR
Interior Bearing Walls	3 HR
Primary Structural Frame	3 HR
Floor Construction	2 HR
Roof Construction	1 1/2 HR
Interior non-bearing walls	0 HR

Active Fire Safety Features:
- Fire Alarm System - The fire alarm system is specified as an addressable type system. The device type and locations are per the applicable codes as well as ADA requirements.

- Smoke Control System - All ductwork penetrating smoke rated walls will have a smoke or combination fire/smoke damper as indicated on construction documents. These dampers will close upon detection of smoke by the area smoke detectors or duct smoke detectors in the air handling units.

- Fire Sprinkler System - Specified to be per NFPA 13. The sprinkler heads are specified to be quick response type.

- Emergency Lighting and Power - Emergency lighting, life safety and critical loads will receive power from a backup generator located outside the main electrical room.

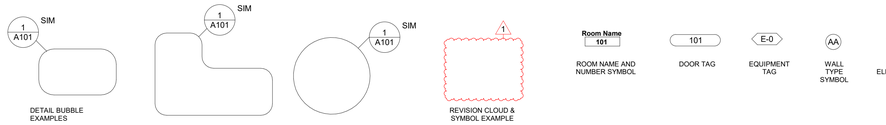
- Illuminated Exit Signs

Passive Fire Safety Features:

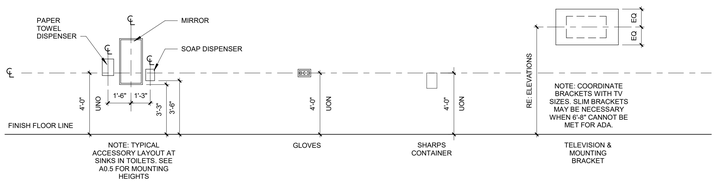
- Smoke Compartments no greater than 22,500 SF

LIFE SAFETY LEGEND

- EXIT
- OCCUPANT LOAD
- EXIT WIDTH PROVIDED
- EXIT WIDTH REQUIRED
- FEC — EXISTING FIRE EXTINGUISHER CABINET
- AREA NOT IN SCOPE OF CONSTRUCTION
- SUITE BOUNDARY
- 0 HR SMOKE PARTITION (SMOKE RESISTIVE)
- 1 HR SMOKE BARRIER
- 1 HR FIRE BARRIER
- 2 HR FIRE BARRIER
- 2 HR FIRE SMOKE BARRIER
- 3 HR FIRE BARRIER



SYMBOLS
1/4" = 1'-0"



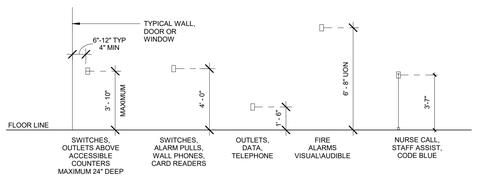
GENERAL NOTES:

1. ANY OBJECTS PROJECTING MORE THAN 4 INCHES FROM THE FINISHED FACE OF WALL INTO A CIRCULATION PATH SHALL NOT HAVE A HEAD CLEARANCE OF LESS THAN 80" (6'-8").
2. GENERAL CONTRACTOR TO INSTALL FIRE RETARDANT WOOD BLOCKING FOR ALL EQUIPMENT OVER 50LBS AND FIRE RETARDANT PLYWOOD FOR EQUIPMENT UNDER 50 LBS, AS REQUIRED FOR THE MOUNTING OF ALL EQUIPMENT.

BLOCKING NOTES:

B1 - STANDARD PLYWOOD BACKING, FIRE RETARDANT
B2 - 2X BLOCKING, FIRE RETARDANT

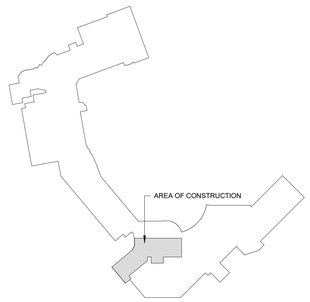
EQUIPMENT MOUNTING HEIGHTS CT
1/4" = 1'-0"



ELECTRICAL DEVICE MOUNTING HEIGHTS CT
1/4" = 1'-0"

FIRST FLOOR LIFE SAFETY PLAN
1/16" = 1'-0"

NORTH



**THIS DRAWING IS INTENDED TO BE PRINTED IN COLOR. USE BLACK AND WHITE COPIES AT YOUR OWN RISK.*

Saint Luke's East Hospital
Saint Luke's ED Finish Upgrades
100 NE Saint Luke's Blvd
Lee's Summit, MO 64086

Date	11/12/21
Job Number	3-21024
Drawn By	BRD
Checked By	SB

Revision

Number	Date	Description
3	11/12/21	ASI #3

A0.2.1

LIFE SAFETY PLAN

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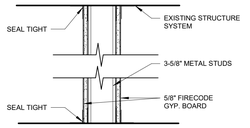


WHERE DUST PARTITIONS ARE TO REMAIN THROUGH CONSTRUCTION, THEY SHALL BE CONSTRUCTED OF 3-5/8" METAL STUDS WITH CONTINUOUS TOP AND BOTTOM RUNNERS. PARTITIONS SHALL EXTEND TIGHT FROM FLOOR TO THE EXISTING CEILING OR STRUCTURE ABOVE, AND COPED AROUND DUCTS, PIPES, ETC., THAT PENETRATE THE PARTITION. THE ENTIRE PARTITION SHALL BE COVERED WITH 5/8" FIRE RATED GYP. BOARD SCREWED TO STUDS, ALL JOINTS BETWEEN SHEATHING, AT WALLS, AT FLOORS, CEILINGS, AROUND PIPES, ETC., TAPED AND SEALED TIGHT TO ENSURE DUST-PROOFING.

THE CONTRACTOR SHALL COVER AND SEAL IN A DUST-TIGHT MANNER ALL EXISTING OPENINGS, GRILLES, JOINTS AROUND DOORS AND FRAMES, ETC., WITH FIRE RETARDANT SHEET AND/OR TAPE AS APPROPRIATE WHERE SUCH OPENINGS, ETC., OCCUR IN EXISTING PARTITIONS SEPARATING EXISTING AREAS FROM CONSTRUCTION AREAS. THE CONTRACTOR SHALL MAINTAIN AND REPAIR ANY DUST BARRIERS AS DETERMINED BY, AND TO THE SATISFACTION OF, THE OWNER.

DP SMOKE TIGHT NON-COMBUSTIBLE CONSTRUCTION PARTITION
1 1/2" = 1'-0"

DEMOLITION LEGEND

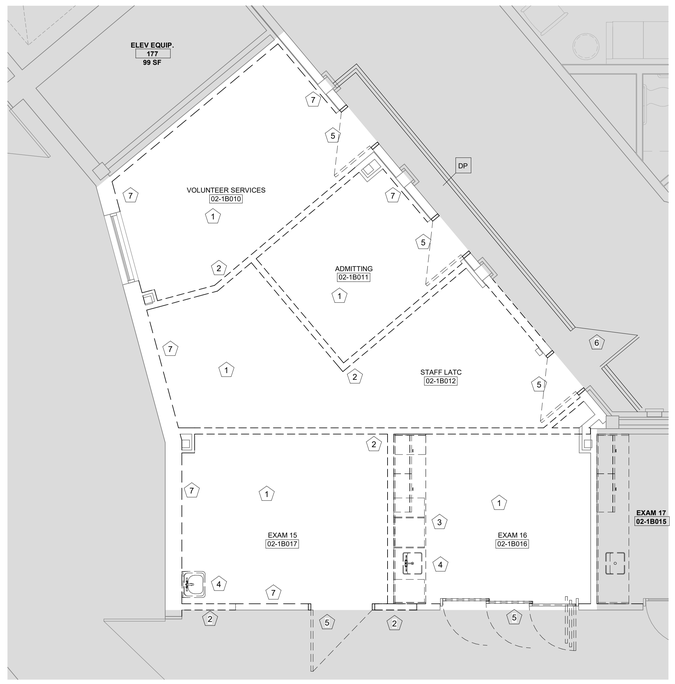
#	DEMO KEYNOTE
	NOT IN SCOPE
	EXISTING WALL, DOOR, FRAME AND HARDWARE TO REMAIN
	WALLS, DOORS, DOOR/WINDOW FRAMES, EQUIPMENT, FIXTURES, ETC. INDICATED BY DASHED LINES WITHIN THE AREA OF CONSTRUCTION SHALL BE REMOVED. REFER TO THIS SHEET FOR ARCHITECTURAL DEMOLITION NOTES.
DP	DUST PARTITIONS - THE CONTRACTOR SHALL MAKE EVERY EFFORT TO ENSURE THE EXISTING BUILDING TO BE COMPLETELY PROTECTED AGAINST INFILTRATION OF DUST AND MOISTURE DURING THE COURSE OF DEMOLITION/ CONSTRUCTION WITH DUST PARTITIONS ACROSS CORRIDORS AND OPENINGS THRU EXISTING WALLS. ALL CONSTRUCTION WORK CREATING ANY TYPE OF DUST THROUGHOUT THE BUILDING SHALL BE SHIELDED BY DUST PROTECTION. PROVIDE DOOR OPENING AS REQUIRED FOR EMERGENCY EGRESS.

KEYNOTES - DEMO PLAN - CT

NUMBER	COMMENTS
1	REMOVE EXISTING FLOOR, BASE, CEILING, AND LIGHTS TO COORDINATE WITH NEW CONSTRUCTION.
2	REMOVE PORTION OF EXISTING WALL TO COORDINATE WITH NEW CONSTRUCTION
3	REMOVE EXISTING CABINETS AND WORKSTATIONS
4	DEMO EXISTING FAUCETS AND SINK, CAP PLUMBING, RE: PLUMBING PLANS
5	REMOVE EXISTING DOOR AND FRAME, VERIFY WITH OWNER IF DOOR OR HARDWARE NEEDS TO BE SALVAGED
6	TEMP. CONST. ENTRANCE. COORDINATE WITH OWNER
7	REMOVE OUTER LAYER OF GYP. BOARD, PREP FOR NEW LEAD SHIELDING CONST.

GENERAL DEMOLITION NOTES

1. PLANS REPRESENTS DEMOLITION INTENT. ITEMS MAY BE CONCEALED WITHIN WALL(S) THAT ARE NOT IDENTIFIED ON PLAN.
2. PRIOR TO DEMOLITION, REMOVAL OF EXISTING EQUIPMENT AND FURNISHING TO BE COORDINATED WITH OWNER ON WHICH ITEMS TO BE SALVAGED.
3. GENERAL CONTRACTOR AND SUB-CONTRACTORS SHALL TAKE CARE TO MINIMIZE THE DAMAGE TO EXISTING FINISHES, SURFACES, AND FURNISHINGS WHICH REMAIN. IF ANY DAMAGE WHICH OCCURS TO ADJACENT SURFACE OR MATERIALS AS A RESULT OF DEMOLITION OR CONSTRUCTION ACTIVITIES SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO REPAIR AT THEIR COST.
4. GENERAL CONTRACTOR AND SUB-CONTRACTORS TO VERIFY THE EXISTING CONDITIONS AND DETERMINE THE BEST ACTION TO MINIMIZE THE EXTENT OF REMOVAL WORK FOR INSTALLATION OF NEW WORK.
5. DO NOT CLOSE OR OBSTRUCT WALKWAYS, EXITS, OR OTHER FACILITIES USED BY OCCUPANTS OF BUILDINGS WITHOUT WRITTEN PERMISSION FROM AUTHORITIES HAVING JURISDICTION
6. INSTALL TEMPORARY DUST PARTITION AND/OR BARRIERS AND OTHER METHODS AS MAY BE REQUIRED/NECESSARY AS INDICATED ON THE PLAN AND AS NECESSARY TO CONTAIN DEMOLITION/ CONSTRUCTION DUST AND DEBRIS WITHIN THE AREA OF CONSTRUCTION. REFER TO DUST PARTITION "DP" ON THIS SHEET AND THE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
7. IT IS THE INTENT OF THIS DEMOLITION TO REMOVE ALL EXISTING CONSTRUCTION WHICH CONFLICTS WITH THE INTENT OF THE NEW CONSTRUCTION. EVERY DEMOLITION DETAIL MAY NOT NECESSARILY BE COVERED ON THESE DRAWINGS. FIELD VERIFY THE EXTENT OF ALL DEMOLITION.
8. THE CONTRACTOR SHALL USE EXTREME CARE IN THE PROTECTION OF ALL ADJACENT AREAS FOR IT IS IMPERATIVE TO PROVIDE CONTINUOUS OPERATION OF ALL OCCUPIED AREAS DURING THE DEMOLITION, CONSTRUCTION AND RENOVATION.
9. ALL DEMOLITION DESCRIBED IN THESE DOCUMENTS SHALL BE COORDINATED WITH PHASING WORK REQUIRED TO COMPLETE THE WORK.
10. THE CONTRACTOR SHALL COORDINATE ALL DEMOLITION WORK WITHIN OCCUPIED SPACES ABOVE, BELOW AND ADJACENT TO THE WORK. THE CONTRACTOR SHALL NOTIFY THE OWNER AND THE MANAGEMENT OF THE OCCUPIED SPACES ABOVE, BELOW, AND ADJACENT TO THE WORK, TWO WEEKS PRIOR TO COMMENCING WORK. SUCH SPACES ARE TO REMAIN OCCUPIED DURING DEMOLITION AND ALL WORK SHALL BE PERFORMED IN SUCH A MANNER TO MINIMIZE DISRUPTION TO OCCUPIED SPACES. EXISTING FLOOR, WALL AND CEILING FINISHES TO REMAIN SHALL BE PROTECTED AND ANY DAMAGE DONE AS A RESULT OF DEMOLITION WORK SHALL BE REPAIRED.
11. IN AREAS SCHEDULED FOR DEMOLITION, THE CONTRACTOR SHALL REMOVE ALL ACCESSORIES, GRAB BARS, MIRRORS, SOAP AND PAPER TOWEL DISPENSERS, SHELVES, BULLETIN BOARDS, ETC., SHALL BE TURNED OVER TO THE OWNER, EXCEPT FOR RELOCATED ITEMS.
12. WHERE NEW FINISHES ARE CALLED FOR, REMOVE AND DISCARD EXISTING FLOORING, CEILINGS AND WALL COVERING THROUGH-OUT AREA DESIGNATED FOR NEW CONSTRUCTION AND PREP EXISTING FLOOR AND WALL SUBSTRATE TO RECEIVE THE INSTALLATION OF NEW FINISH AS SCHEDULED.
13. SEE NEW WORK PLAN FOR REPAIR AND PREPARATION OF ADJACENT SURFACES.
14. WHERE CEILING IS TO REMAIN, REMOVE ALL DAMAGED CEILING PANELS/ TILES AND REPLACE WITH NEW TO MATCH EXISTING.
15. REMOVE AND RETURN TO THE OWNER ALL EXISTING PLUMBING FIXTURES. CAP ALL SUPPLY AND WASTE LINES AS REQUIRED. REFER TO PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION.
16. THE CONTRACTOR SHALL PATCH TO MATCH ADJACENT SURFACES OF EXISTING WALLS, FLOOR, AND CEILINGS IN ALL AREAS THAT REQUIRE THE REMOVAL OF GENERAL, MECHANICAL, ELECTRICAL, PLUMBING, AND FIRE PROTECTION WORK AND OF EQUIPMENT AND FIXTURES.
17. THE CONTRACTOR SHALL PROVIDE FOR ALL NECESSARY TEMPORARY RELOCATION AND MAINTENANCE OF ALL EXISTING UTILITIES WHICH ARE CURRENTLY IN USE AND WHICH MUST BE TEMPORARILY RELOCATED DURING CONSTRUCTION OF NEW AREAS AND RENOVATION OF EXISTING AREAS.
18. REFER TO MECHANICAL, ELECTRICAL, PLUMBING, AND FIRE PROTECTION DRAWINGS FOR WORK REQUIRED FOR NEW CONSTRUCTION..
19. WHERE REMOVAL OF EXISTING PARTITIONS, EQUIPMENT, ETC. DISTURBS EXISTING MECHANICAL, PLUMBING OR ELECTRICAL SERVICES, THE CONTRACTOR SHALL MAKE PERMANENT REVISIONS/PROVISIONS AS REQUIRED T MAINTAIN SERVICES AND IF NECESSARY, PROVIDE TEMPORARY SERVICES TO AREAS NOT SCHEDULED FOR DEMOLITION, RENOVATION, AND/OR NEW CONSTRUCTION.
20. WHERE EXISTING WALLS, CEILINGS, OR FLOORS ARE DAMAGED BY THE CONTRACTOR FOR ACCESS TO SERVICES AND NEW CONSTRUCTION WHICH MAY NOT BE INDICATED IN THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL BE RESPONSIBLE TO PATCH TO MATCH MATERIAL AND FINISHES TO ORIGINAL CONDITIONS. IF EXISTING FINISHES CANNOT BE MATCHED, THE ENTIRE WALL, CEILING, OR FLOOR SHALL BE REFINISHED TO THE NEAREST CORNER OR POSITIVE BREAKING POINT.
21. WHEN DEMOLITION CAUSES DAMAGE TO FLOOR SLAB, WALL, OR CEILING SURFACES WHICH WILL REMAIN EXPOSED IN THE FINISHED WORK, SUCH CONDITIONS SHALL BE REPAIRED AND LEVELED AS REQUIRED TO RECEIVE NEW FINISHES.
22. WHEN DEMOLITION EXPOSES DAMAGE TO FLOOR SLAB, WALL, OR CEILING SURFACES WHICH WILL REMAIN EXPOSED IN THE FINISHED WORK, SUCH CONDITIONS SHALL BE REPORTED TO THE ARCHITECT AND OWNER WITH A RECOMMENDATION FOR RESOLUTION OF THE CONDITIONS.
23. CLEAN AIR GRILLES AND LIGHT FIXTURES THROUGHOUT PROJECT AREA UPON COMPLETION OF WORK.
24. EXISTING PARTITION(S) TO REMAIN SHALL BE PATCHED AND REPAIRED AS REQUIRED.
25. ALL WALL PROTECTION ACCESSORIES (IE: CORNER GUARDS, CRASH RAILS, ETC.) BEING REMOVED TO BE TURNED OVER TO OWNER UNLESS NOTED OTHERWISE.



A5 ENLARGED DEMO - CT SUITE
1/4" = 1'-0"

A3 OVERALL FIRST FLOOR DEMO PLAN
1/16" = 1'-0"

RELEASED FOR CONSTRUCTION
As Noted On This Review
Development Services Department
Saint Luke's Summit, Missouri
07/28/2021

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Date	11/12/21
Job Number	3-21024
Drawn By	BRD
Checked By	SB

Revision

Number	Date	Description
3	11/12/21	ASI #3

3 AD2.1.1

CT DEMO

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DOOR SCHEDULE - CT

DOOR #	ROOM NAME	DOOR INFORMATION WIDTH	HEIGHT	NO. OF LEAVES	UNEQUAL LEAF WIDTH	ELEV.	MATL.	FRAME INFORMATION ELEV.	MATL.	LABEL (MIN)	HARDWARE SET	OPENING DETAIL HEAD	JAMB	REMARKS	REVISION #
02-1B016	C.T.	4'-0"	7'-0"	2	2'-0"	F / F	WD	2	HM	--	1	C5	C5	1/16" LEAD LINED DOOR AND FRAME	
02-1B017	RAD SUPERVISOR	3'-0"	7'-0"	1		F	WD	1	HM	--	2	C5	C5	OFFICE DOOR	
02-1B018	C.T.	4'-0"	7'-0"	2	1'-0"	F / F	WD	2	HM	--	1	C5	C5	1/16" LEAD LINED DOOR AND FRAME	

DOOR AND HARDWARE NOTES

1. DOOR OPENING DEVICES SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, TIGHT PINCHING, OR TWISTING OF THE WRIST. DOOR KNOBS ARE PROHIBITED.
2. ALL MEANS OF EGRESS DOORS SHALL BE READILY OPENABLE FROM THE SIDE FROM WHICH EGRESS IS TO BE MADE WITHOUT THE USE OF SPECIAL TOOLS, A KEY, SPECIAL KNOWLEDGE OR EFFORT. DOUBLE KEYED DEAD BOLTS ARE PROHIBITED.
3. PROVIDE HARDWARE INCLUDING, BUT NOT LIMITED TO THAT SHOWN IN THE HARDWARE GROUPS FOR THE NORMAL OPERATION AND USE OF EACH DOOR, MAKE RECOMMENDATIONS FOR ADDITIONAL ITEMS IN HARDWARE SUBMITTAL AS REQUIRED.
4. ALL HARDWARE SHALL BE IN COMPLIANCE WITH ADA GUIDELINES AND NATIONAL BUILDERS HARDWARE ASSOCIATION STANDARDS.
5. HARDWARE TO BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.
6. HARDWARE: FINISH TO BE BUILDING STANDARD UNLESS NOTED OTHERWISE. COORDINATE AND VERIFY WITH HOSPITAL FACILITIES REPRESENTATIVE ON ALL HARDWARE PRIOR TO ORDERING.
7. CONTRACTOR TO SUBMIT DOOR AND HARDWARE SHOP DRAWINGS TO BJC FACILITES FOR REVIEW PRIOR TO WORK BEING PERFORMED. FAILURE TO SUBMIT DRAWINGS RESULTS IN THE CONTRACTOR ASSUMING ALL RESPONSIBILITY AT THEIR OWN EXPENSE.

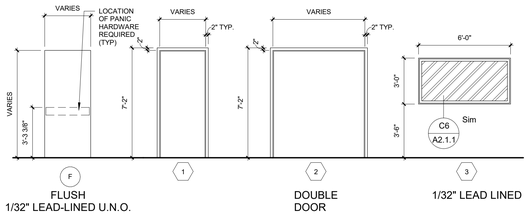
HARDWARE SCHEDULE:
HARDWARE SET #1: DOORS 02-1B016 & 02-1B018
EACH TO HAVE:

QTY	DESCRIPTION	CATALOG NUMBER	FINISH	MFR
2 EA	CONTIN. HINGE	FM83SLF-	628	BOM
1 EA	PASSAGE SET	L9010-06-XL11		SCH
1 EA	OH STOP	904S		GLY
1 EA	ASTRAGAL	LEAD-LINED		
2 EA	ARMOR PLATE	8400 42"x2" LDW	630	IVE
2 EA	EDGE GUARD	302 42" (HINGE SIDE)	630	ROC
1 EA	EDGE GUARD	302B 42" (STRIKE SIDE)	630	ROC
2 EA	WALL STOP	WS407CCV	630	IVE
1 EA	CL FLUSHBOLT	FB51T	626	IVE
1 EA	GASKETING	8144SBK PSA	BK	ZER

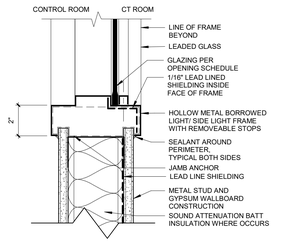
NOTE: 302B EDGE GUARD TO BE INSTALLED ON STRIKE SIDE OF 2'-0" DOOR LEAF.

HARDWARE SET #2: DOORS 02-1B017
EACH TO HAVE:

QTY	DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3 EA	HINGE	5BB1HW	652	IVE
1 EA	ENTRANCE LOCK	ND53LD RHO	626	SCH
1 EA	CYLINDER BY OWNER		626	SCH
1 EA	WALL STOP	WS406/407CCV	630	IVE
1 EA	GASKETING	8144SBK PSA	BK	ZER

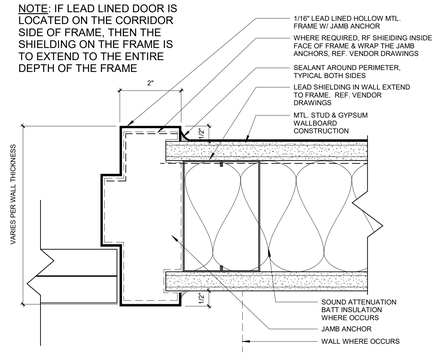


DOOR AND FRAME ELEVATIONS:



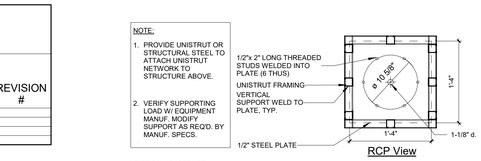
C6 SILL/JAMB - HOLLOW MTL. WINDOW FRAME
3" = 1'-0"

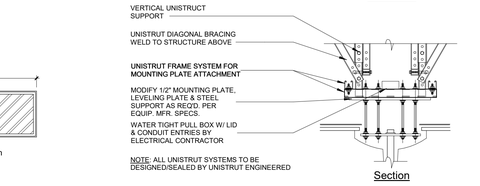
NOTE: IF LEAD LINED DOOR IS LOCATED ON THE CORRIDOR SIDE OF FRAME, THEN THE SHIELDING ON THE FRAME IS TO EXTEND TO THE ENTIRE DEPTH OF THE FRAME



C5 H.M. DOOR FRAME JAMB/HEAD
6" = 1'-0"

NOTE:
1. PROVIDE UNISTRUT OR STRUCTURAL STEEL TO ATTACH UNISTRUT NETWORK TO STRUCTURE ABOVE.
2. VERIFY SUPPORTING LOAD W/ EQUIPMENT MANUF. MODIFY SUPPORT AS REQ'D. BY MANUF. SPECS.





C4 CEILING EQUIPMENT SUPPORT DETAIL
1" = 1'-0"

GENERAL NOTES

1. EXISTING MEPFP DEVICES SHOWN ARE BASED ON EXISTING DRAWINGS AND/OR FIELD OBSERVATIONS. THE OWNER/ARCHITECT DOES NOT GUARANTEE THE ACCURACY/LOCATION OR QUANTITY OF EXISTING DEVICES.
2. CONTRACTOR TO PROVIDE ALL REQUIRED LABOR, MATERIAL, AND EQUIPMENT NECESSARY TO MEET AND COMPLETE THE REQUIREMENTS OF THE NEW CONSTRUCTION.
3. ALL EXISTING CONSTRUCTION TO REMAIN SHALL BE PATCHED, REPAIRED, AND PREP AS REQUIRED FOR NEW FINISH APPLICATION.
4. SEE FINISH SCHEDULE FOR FINISH LOCATION AND SPECIFICATIONS.
5. PAINT THE UNDERSIDE OF ALL GYPSUM BOARD CEILINGS, BULKHEADS AND SOFFITS AS NOTED IN THE FINISH SCHEDULE.
6. THIS PLAN SHALL BE USED TO COORDINATE THE CEILING LAYOUT WITH MECHANICAL AND ELECTRICAL WORK. VERIFY THE EXACT QUANTITY REQUIRED.
7. CONTRACTOR TO REFER TO THE ELECTRICAL PLANS FOR ACTUAL LIGHTING SIZES AND FIXTURE TYPES.
8. ALL CEILINGS SHALL BE 9'-0" AFF UNLESS OTHERWISE NOTED.

CEILING LEGEND

- RECESSED LED CAN LIGHT FIXTURE RE: ELECT
- 2X4 RECESSED/SURFACE LED LIGHT FIXTURE RE: ELECT
- 2X2/2x4 LAY-IN ACOUSTICAL CEILING
- SUPPLY AIR GRILLE RE: MECH
- RETURN AIR OR EXHAUST GRILLE RE: MECH

KEYNOTES - RCP - CT

NUMBER	COMMENTS
1	CENTER POINT OF TABLE
2	CENTER POINT OF CEILING MOUNTED INJECTOR ARM SUPPORTED WITH NEW UNI-STRUT STRUCTURE ABOVE CEILING, HORIZ. CONTROL ARM NOT BE BE LOWER THEN 7' A.F.F. RE: C4/A2.1.1.
3	CENTER POINT OF CEILING MOUNTED MEDGAS HOSE REEL. (1) MED AIR (1) WADG (1) VAC (1) O2 (2) ELECT, RE: MEP. SUPPORTED WITH NEW UNI-STRUT STRUCTURE ABOVE CEILING. RE C4/A2.1.1
5	NEW CEILING, LIGHTS AND DIFFUSERS. RE: MEP FOR LIGHT AND DIFFURSES SCHEDULE
6	ADJUST EXISTING SPRINKLER HEADS TO MATCH NEW CEILING HEIGHT

GENERAL PLAN NOTES

1. REFER TO GENERAL NOTES, LEGENDS & SYMBOLS SHEET FOR ADDITIONAL GENERAL NOTES AS APPLICABLE.
2. DO NOT SCALE DRAWINGS
3. THE WORD "ALIGN" AS USED IN THESE DOCUMENTS SHALL SUPERSEDE ANY DIMENSIONAL INFORMATION GIVEN.
4. TYPICAL DIMENSIONS ARE TO FACE OF CONCRETE, DRYWALL, CURTAIN WALL, ETC., OR TO COLUMN CENTERLINE. DIMENSIONS AT WINDOWS ARE TYPICALLY TO FACE OF FRAME. REFER TO PLAN DETAILS FOR ADDITIONAL INFORMATION.
5. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH A.D.A. REQUIREMENTS AND ALL APPLICABLE LOCAL, STATE, AND FEDERAL BUILDING CODES AND REGULATIONS.
6. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY BUILDING PERMITS.
7. THE GENERAL CONTRACTOR AND SUBCONTRACTORS SHALL FIELD VERIFY EXISTING CONDITIONS AND NOTIFY THE ARCHITECT OF ANY INCONSISTENCIES OR DISCREPANCIES WITH THE PROJECT DOCUMENTS. ACCESS TO THE SITE AND/OR SPACE UNDER CONSTRUCTION DURING BIDDING AND CONSTRUCTION SHALL BE COORDINATED WITH THE OWNER.
8. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR EXAMINING AND CONFIRMING ALL SUBSTRATE CONDITIONS WHERE NEW MATERIALS ARE APPLIED. THE SUBSTRATE SHALL BE SMOOTH AND FREE OF DEFECTS AND SHALL CONFORM TO THE REQUIREMENTS OF THE FINISHED MATERIAL MANUFACTURERS RECOMMENDATIONS.
9. CONTRACTOR TO PROVIDE ALL REQUIRED LABOR, MATERIAL, AND EQUIPMENT NECESSARY TO MEET AND COMPLETE THE REQUIREMENTS OF THE NEW CONSTRUCTION.
10. ALL EXISTING CONSTRUCTION TO REMAIN SHALL BE PATCHED, REPAIRED, AND PREP AS REQUIRED FOR NEW FINISH APPLICATION.
11. DO NOT CLOSE OR OBSTRUCT WALKWAYS, EXITS, OR OTHER FACILITIES USED BY OCCUPANTS OF BUILDINGS WITHOUT WRITTEN PERMISSION FROM AUTHORITIES HAVING JURISDICTION
12. CONDUCT ALL OPERATIONS IN A SAFE WORKING MANNER TO PREVENT DAMAGE OR INJURY TO ADJACENT SPACES, BUILDING, STRUCTURE, OTHER FACILITIES, AND PERSONS.
13. IF MATERIAL SUSPECTED OF CONTAINING HAZARDOUS MATERIALS ARE ENCOUNTERED, DO NOT DISTURB, IMMEDIATELY NOTIFY ARCHITECT AND OWNER. OWNER SHALL COORDINATE WITH CONTRACTOR ON THE REMOVAL OF SUCH ITEMS. WORK MAY PROCEED AFTER HAZARDOUS MATERIAL HAS BEEN REMOVED.
14. CONTRACTOR SHALL FURNISH AND INSTALL CONCEALED FIRE-TREATED WOOD BLOCKING BEHIND ALL CABINETS, TOILET ACCESSORIES, PLUMBING FIXTURES, AND OTHER WALL MOUNTED ITEMS AS REQUIRED FOR ADEQUATE SUPPORT.
15. UPON VERIFICATION OF THE EXISTING CONDITIONS, THE CONTRACTOR SHALL DETERMINE AND RECOMMEND THE BEST ACTION TO MINIMIZE THE EXTENT OF REMOVAL WORK FOR INSTALLATION OF NEW WORK.
16. SEE FINISH SCHEDULE FOR FINISH LOCATION AND SPECIFICATIONS.
17. SEE DOOR SCHEDULE FOR DOOR SPECIFICATIONS.
18. CONFIRM FINAL MOUNTING LOCATION OF ALL OFCI EQUIPMENT.
19. SLAB MUST BE THICK ENOUGH TO EMBED GE PROVIDED ANCHORS TO 3.6". IF THIS THICKNESS ISN'T POSSIBLE, CONTRACTOR MUST PROVIDE ANCHORING SOLUTION.
20. VERIFY FLOOR LEVELNESS NOT TO EXCEED .24" OVER 118.1"
21. CONTRACTOR MUST VERIFY THAT THERE ARE NO ANCHORING CONFLICTS PRIOR TO INSTALL BEGINNING OF CT EQUIPMENT
22. REF. GE VENDOR DRAWINGS FOR LEAD SHIELDING REQUIREMENTS
23. ALL EXISTING CONSTRUCTION TO REMAIN SHALL BE PATCHED, REPAIRED, AND PREPPED AS REQUIRED FOR NEW FINISH APPLICATION.

FLOOR PLAN LEGEND

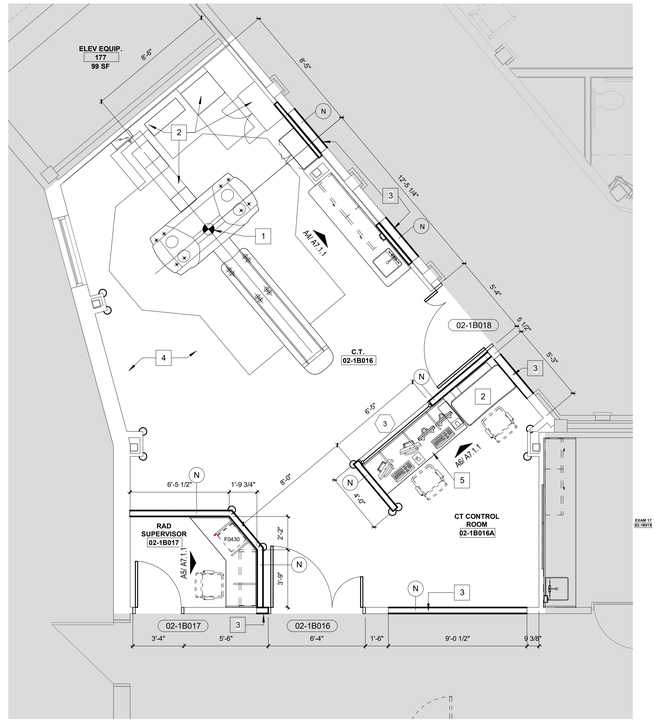
- NOT IN SCOPE
- NOT IN ARCHITECTURAL SCOPE
- NEW WALL
- EXISTING WALL
- DOOR No. 100
- NEW DOOR
- EXISTING DOOR

KEYNOTES - FLOOR PLAN - CT

NUMBER	COMMENTS
1	CENTER POINT OF CT TABLE. RE: VENDOR PLANS
2	NEW CT EQUIPMENT. RE: VENDOR PLANS
3	INFILL EXISTING OPENING WITH NEW CONSTRUCTION TO MATCH ADJACENT DEPTH AND FINISH
4	MODIFY EXISTING WALL TO MEET WALL TYPE "N" CONSTRUCTION WHERE REQUIRED
5	NEW SOLID SURFACE TECH DESK, VERIFY WITH OWNER GROMMET LOCATION

A4 CT RCP
1/4" = 1'-0"

NORTH



A2 FIRST FLOOR PLAN -CT 2
1/4" = 1'-0"

NORTH

RELEASED FOR CONSTRUCTION
As Noted On Plans Review
Development Services Department
City of Lee's Summit, Missouri
12/28/2021

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Saint Luke's East Hospital

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Lee's Summit, MO 64086

Date	11/12/21
Job Number	3-21024
Drawn By	BRD
Checked By	SB

Revision

Number	Date	Description
3	11/12/21	ASI #3

3 A2.1.1

CT PLANS

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ROOM FINISH SCHEDULE CT

ROOM NUMBER	ROOM NAME	FLOOR FINISH	BASE FINISH	WALLS				CASEWORK				CEILING	NOTES	REVISION #
				NORTH	EAST	SOUTH	WEST	BASE CABINETS	UPPER CABINETS	COUNTER TOPS	SINK			
02-1B016	C.T.	RSF-1	IB-1	WP-2 / PT-1	WP-2 / PT-1	WP-2 / PT-1	WP-2 / PT-1	PLAM-1	PLAM-1	SSF-1	IS-1	ACT-2		
02-1B016A	CT CONTROL ROOM	RSF-1	IB-1	PT-1	PT-1	PT-1	PT-1	-	-	SSF-1	-	ACT-2		
02-1B017	RAD SUPERVISOR	LVT-1	RB-1	PT-1	PT-8	PT-1	PT-1	-	PLAM-1	SSF-1	-	ACT-1		

INTERIOR FINISH LEGEND - CT

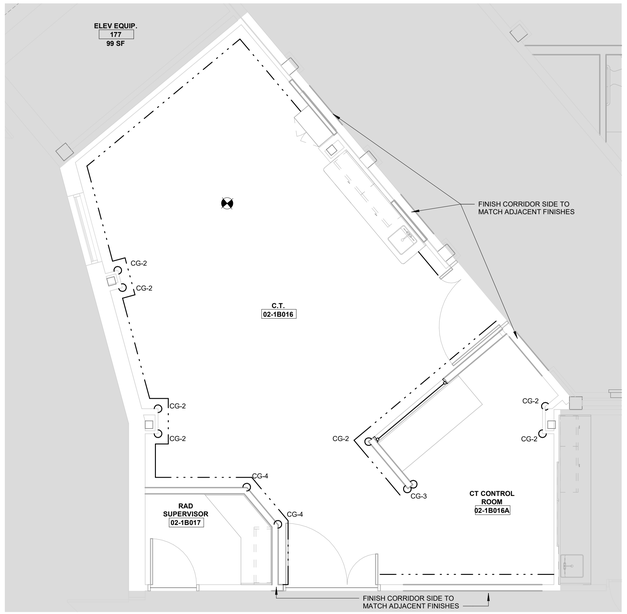
MARK	ITEM	MANUFACTURER	MODEL/PATTERN	COLOR	SIZE	REMARKS	REVISION #
FLOOR							
LVT-2	LUXURY VINYL TILE	MANNINGTON	AMTICO STONE	AROW8200 REGENCY WALNUT	4-1/2" X 36"	STRAIGHT EDGE ONLY. RANDOM INSTALL	
RSF-1	RESOLIENT SHEET FLOORING	ARMSTRONG	MEDINTONE, DIAMOND 10	#H5311 - NATURAL WHITE	6'-0" ROLL	WELD ROD WS129. HOMOGENEOUS FLOORING	
BASE							
IB-1	INTEGRAL BASE	ARMSTRONG	MEDINTONE, DIAMOND 10	#H5311 - NATURAL WHITE	6" COVE	J' MOLD SCHLUTER STRIP AT THE TOP; TO BE USED WITH RSF-1	
RB-1	RESILIENT BASE	ROPPE	PINNACLE PLUS, PROFILE #65	#129 DOLPHIN	4-5/8"	ALL CAMPUSES - PUBLIC SPACES	
WALL							
CG-1	CORNER GUARD	C/S ACROVYN	SM-20AN-ACROVYN-4000	#858 PUMICE	3"	90 DEGREE. ABOVE BASE TO CEILING/INCLUDE ALL TRIM AND ACCESSORIES PIECES	
CG-3	CORNER GUARD	C/S ACROVYN	SSM-25AN-ACROVYN-4000	#858 PUMICE	2"	END WALL. ABOVE BASE TO CEILING/ INCLUDE ALL TRIM AND ACCESSORIES PIECES	
CG-4	CORNER GUARD	C/S ACROVYN	SSM-20MN-ACROVYN-4000	#858 PUMICE	3"x3	SURFACE, 135 DEGREE/ ABOVE BASE TO CEILING/ INCLUDE ALL TRIM AND ACCESSORIES PIECES	
PT-1 / PT-1A	PAINT / EPOXY PAINT	SHERWIN WILLIAMS	SW7008	ALABASTER	-	FIELD PAINT, EGGSHELL FINISH / EPOXY FINISH	
PT-8 / PT-8A	PAINT / EPOXY PAINT	SHERWIN WILLIAMS	SW7621	SILVERMIST	-	ACCENT PAINT, EGGSHELL FINISH / EPOXY FINISH	
WP-2	WALL PROTECTION	C/S ACROVYN	ACROVYN 4000	#933 MISSION WHITE	4' X 10' SHEETS; .040" THICK	WALL PROTECTION AT 48" AFF, INCLUDE ALL ACCESSORIES AND TRIM PIECES	
CASEWORK							
EB-1	EDGE BANDING	DOELLKEN	8707E5	WALNUT HEIGHTS	-	3MM	
IS-1	INTERGRAL SINK	CORIAN	REFER TO SPEC	BONE	30" 144": 36" X 144" SHEET	-	
PLAM-1	PLASTIC LAMINATE	WILSONART	#7965K-12	WALNUT HEIGHTS	-	CUSTOM 3MM PVC DOELLKEN WALNUT HEIGHTS 8707E5. RUN VERTICALLY	
SSF-1	SOLID SURFACE	CORIAN	-	CLAM SHELL	1/2": 30" X 144" SHEET:36: X 144: SHEET	-	
CEILING							
ACT-1	ACOUSTIC CEILING TILE	USG	RADAR CLIMA PLUS #2210	WHITE	2' X 2'	SQUARE EDGE, DONN DX TEE 15/16" GRID SYSTEM	
ACT-2	ACOUSTIC CEILING TILE	USG	CLEAN ROOM CLIMA PLUS CLASS 100 #56099 (UNPERFIRATED)	WHITE	2' X 2'	VINYL FACED W/ SQUARE EDGE, DONN DX 15/16" TEE GRID SYSTEM	
MISC.							
ETR	EXISTING TO REMAIN	-	-	-	-	-	
PTM	PATCH TO MATCH	-	-	-	-	-	

GENERAL ROOM FINISH SCHEDULE NOTES

A	REFER TO FINISH PLAN AND INTERIOR ELEVATIONS FOR WALL FINISHES, WALL PROTECTION, CORNER GUARDS, WINDOW TREATMENTS, FLOOR FINISH APPLICATION AND LOCATIONS
B	ALL SOLID WOOD, WOOD VENEER, AND PLASTIC LAMINATE GRAIN SHALL BE VERTICALLY ORIENTED UNLESS OTHERWISE NOTED
C	DOOR FRAMES, HOLLOW METAL WINDOW FRAMES TO BE PT-4 UNLESS OTHERWISE NOTED
D	ALL FACES AND UNDERSIDES OF SOFFITS AND HEADERS TO BE PT-1 UNLESS OTHERWISE NOTED
E	WALL EXPANSION JOINTS TO BE PT-1 UNLESS OTHERWISE NOTED
F	ALL ELECTRICAL PANELS AND METAL GRILLES SHALL BE PTD TO MATCH ADJACENT WALL SURFACE UNLESS OTHERWISE NOTED
G	ALL COLUMN SURROUND FINISHES TO MATCH ADJACENT WALL SURFACE UNLESS OTHERWISE NOTED
H	WHERE A WALL IS INDICATED TO HAVE PARTIAL OR FULL HT WALL PROTECTION, THE ENTIRE WALL IS TO BE PTD PRIOR TO WALL PROTECTION INSTALLATION
I	EXTEND ALL FINISHES BENEATH, BEHIND, AROUND ALL CASEWORK, EQUIPMENT, SIGNAGE, ETC
J	ALL WINDOW SILLS TO BE SSF-2
K	REFER TO DETAIL OF TYPICAL ELEVATION OF WALL PROTECTION/CORNER GUARD MOUNTING HEIGHTS SHOWN ON A7.2.

GENERAL CASEWORK NOTES

1. GENERAL CASEWORK NOTES APPLY TO ALL INTERIOR ELEVATIONS.
2. PROVIDE 3 MM PVC EDGE BANDING ON COUNTERTOP EDGE AND (.018 MIN.) VINYL EDGING ON DRAWER, AND DOOR EDGES UNLESS NOTED OTHERWISE. EDGE BANDING TO MATCH ADJACENT P. LAM. SURFACE.
3. ALL EXPOSED FACES AND SHELVES TO BE WRAPPED WITH P. LAM. UNLESS NOTED OTHERWISE.
4. ALL INTERIOR SURFACES TO BE WHITE MELAMINE U.N.O.
5. PROVIDE WOOD BLOCKING OR 12" HIGH X 16 GA. CONTINUOUS SHEET METAL BRIDGING IN WALL AS REQUIRED FOR ADEQUATE SUPPORT OF ALL CASEWORK..
6. WALL BASE TO BE INSTALLED ON ALL CASEWORK UNLESS NOTED OTHERWISE. REFER TO FINISH SCHEDULE FOR TYPE.
7. "F" INDICATES FILLER PANEL, 1-1/2" MIN.
8. PROVIDE FINISHED ENDS AT ALL EXPOSED ENDS OF CASEWORK.
9. ALL ELECTRICAL, MECHANICAL, AND PLUMBING ITEMS SHOWN IN ELEVATION ARE FOR REFERENCE AND LOCATION ONLY. REFER TO MEP DRAWINGS FOR SIZES, TYPES AND QUANTITIES.
10. ALL SOFFITS ABOVE CASEWORK TO BE P. LAM. UNLESS NOTES OTHERWISE.

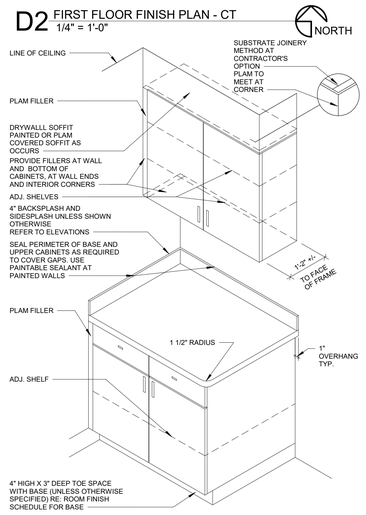


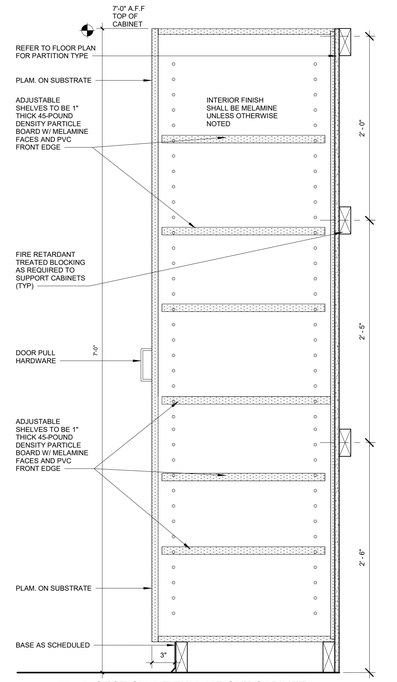
FINISH FLOOR PLAN LEGEND

- WALL TREATMENT
- FLOOR TRANSITION
- CORNER GUARD (CG-1), UNLESS OTHERWISE NOTED

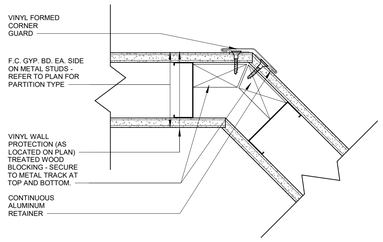
FOR ALL FLOORING TRANSITIONS, REFER TO TYPICAL TRANSITION DETAILS ON SHEET A7.2, UNLESS NOTED OTHERWISE ON THIS PLAN.

D2 FIRST FLOOR FINISH PLAN - CT
1/4" = 1'-0"

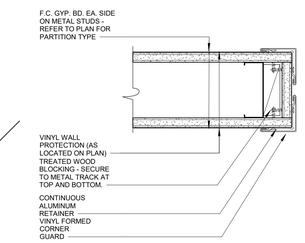




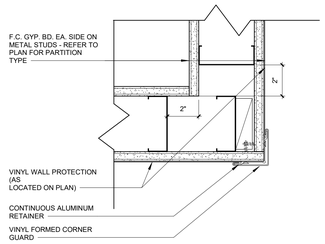
D1 SECTION A T FULL HEIGHT CABINET
1 1/2" = 1'-0"



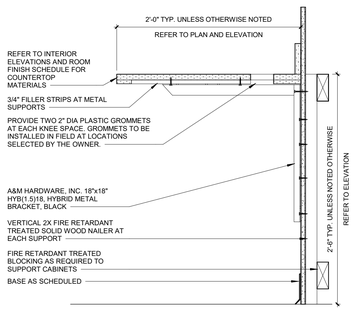
C6 TYPICAL ANGLED VINYL CORNER GUARD
3" = 1'-0"



C5 TYPICAL DOUBLE VINYL CORNER GUARD
3" = 1'-0"



C4 TYPICAL SINGLE VINYL CORNER GUARD
3" = 1'-0"

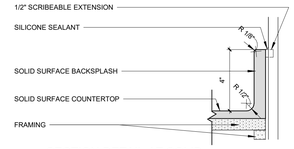


C3 SECTION DETAIL AT SUPPORT BRACKET / KNEE SPACE
1 1/2" = 1'-0"

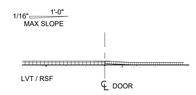
TYP. CABINET NOTES:

1. PROVIDE PLAM FILLER WHERE CABINETS BUTT UP TO WALLS.
2. ALL COUNTERTOPS HAVE A 4" BACKSPLASH (MATERIAL TO MATCH COUNTERTOP) AND OUTSIDE CORNERS HAVE 1 1/2" RADIUS EXCEPT WHERE NOTED OTHERWISE.
3. CASEWORK MFR. TO SUPPLY (2) - 2" [GROMMETS PER KNEESPACE. GROMMETS TO BE INSTALLED IN FIELD AS DIRECTED BY OWNER. COLOR TO BE SELECTED BY ARCHITECT.
4. PLASTIC LAMINATE COUNTERTOP EDGES SHALL BE 3 MM PLASTIC. COLOR AS SELECTED BY ARCHITECT)

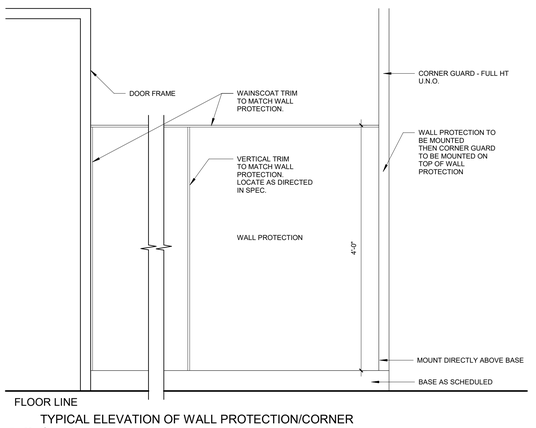
C2 CASEWORK ISOMETRIC
1 1/2" = 1'-0"



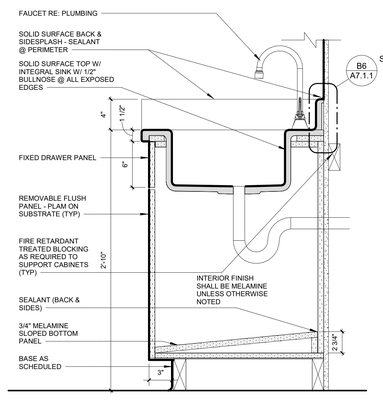
B6 SECTION DETAIL AT SOLID SURFACE BACKSPLASH
3" = 1'-0"



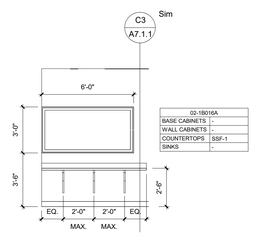
B4 TRANSITION STRIP DETAILS
6" = 1'-0"



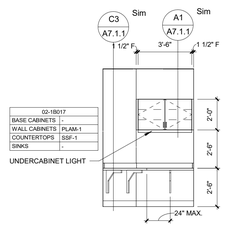
A3 TYPICAL ELEVATION OF WALL PROTECTION/CORNER GUARD
1" = 1'-0"



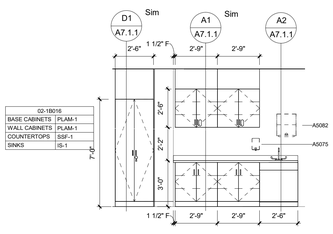
A2 SINK BASE CABINET SECTION
1 1/2" = 1'-0"



A6 02-1B016A CONTROL ROOM
1/4" = 1'-0"



A5 02-1B017 RAD SUPERVISOR
1/4" = 1'-0"



A4 02-1B016 CT ROOM
1/4" = 1'-0"

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RELEASED FOR CONSTRUCTION
As Noted On Plans Review
Development Services Department
Lee's Summit, Missouri
12/28/2021

SAMUEL K. BECKMAN NUMBER A-2011012130 ARCHITECT
07/20/2021

Saint Luke's East Hospital
Saint Luke's ED Finish Upgrades
100 NE Saint Luke's Blvd
Lee's Summit, MO 64086

Date	11/12/21
Job Number	3-21024
Drawn By	BRD
Checked By	SN

Revision

Number	Date	Description
3	11/12/21	ASI #3

3
A7.1.1

INTERIOR ELEVATIONS/DETAILS - CT

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VIEW KEY

NAME → LEVEL NAME
10'-0" → HEIGHT ABOVE PROJECT 0'-0"

(1) INDICATES NOTE USED TO DESCRIBE ADDITIONAL INFORMATION ABOUT WORK REQUIRED, SPECIFIC TO THE SHEET AND/OR DETAIL

INDICATES DIRECTION OF TRUE NORTH
PLAN OR DETAIL NUMBER
PLAN OR DETAIL NAME
NORTH — 1 — **VIEW NAME**
1/8" = 1'-0"
PLAN OR DETAIL SCALE

SIM — INDICATES SIMILAR DETAIL REFERENCED IN MULTIPLE LOCATIONS — SIM
1 — DETAIL REFERRED TO BY SECTION CUT — 1 2 3 4
M101 — SHEET DETAIL IS LOCATED ON — T101

LINE TYPE AND TAG KEY:

NEW WORK BY THIS CONTRACTOR (WIDE LINE)
- NEW
- EXISTING TO BE REMOVED (SHORT DASHED PATTERN)
- NEW UNDERFLOOR OR UNDERGROUND (LONG DASHED PATTERN)

EXISTING TO REMAIN OR WORK BY OTHERS (NARROW LINE)
- EXISTING
- EXISTING TO BE REMOVED BY OTHERS (SHORT DASHED PATTERN)
- EXISTING UNDERFLOOR OR UNDERGROUND (LONG DASHED PATTERN)

HALFTONING DOES NOT MODIFY SCOPE.

'TAG'-E — TAGS WITH DASH 'E' INDICATES THE REFERENCED OBJECT IS EXISTING

TAG-1 — UNDERLINED TAG INDICATES OBJECT IS IN-SCOPE. IF NEW, ADDITIONAL INFORMATION IS AVAILABLE IN A SCHEDULE, MATERIAL LIST, OR SYMBOL LIST

INDICATES AN EXISTING SYSTEM'S POINT OF CONNECTION/REMOVAL

CONTRACTOR ABBREVIATION KEY

ABBR:	DESCRIPTION:
A.C.	ASBESTOS ABATEMENT CONTRACTOR
A.V.C.	AUDIO/VISUAL CONTRACTOR
C.C.	CIVIL CONTRACTOR
C.M.	CONSTRUCTION MANAGER
E.C.	ELECTRICAL CONTRACTOR
F.P.C.	FIRE PROTECTION CONTRACTOR
F.S.C.	FOOD SERVICE CONTRACTOR
G.C.	GENERAL CONTRACTOR
H.C.	HEATING CONTRACTOR
M.C.	MECHANICAL CONTRACTOR
N.C.C.	NURSE CALL CONTRACTOR
P.C.	PLUMBING CONTRACTOR
S.C.	SECURITY CONTRACTOR
T.C.	TECHNOLOGY CONTRACTOR
T.C.C.	TEMPERATURE CONTROLS CONTRACTOR
V.C.	VENTILATION CONTRACTOR

PLUMBING SYMBOL LIST

NOT ALL SYMBOLS MAY APPLY.

SYMBOL:	DESCRIPTION:
AV	ACID VENT
AW	ACID WASTE
CA	COMPRESSED AIR
CO2	CARBON DIOXIDE
CW	COLD WATER - POTABLE
D	DRAIN
DI	DEIONIZED WATER
DMG	DRAIN - MEDICAL GAS
DT	DRAIN TILE
EA	MEDICAL EQUIPMENT AIR
G	NATURAL GAS
GRV	GAS REGULATOR VENT
GSAN	SANITARY DRAINAGE (GREASE SANITARY DRAINAGE)
GV	GREASE VENT
HW	HOT WATER - POTABLE
HWC	HOT WATER CIRCULATING - POTABLE
HW140	HOT WATER - POTABLE NUMBER INDICATES TEMP
HWC140	HOT WATER CIRC. - POTABLE NUMBER INDICATES TEMP
IA	INSTRUMENT AIR
MA	MEDICAL AIR
MPG	MEDIUM PRESSURE GAS
MV	MEDICAL VACUUM
N	NITROGEN
NCW	NON-POTABLE COLD WATER
NHW	NON-POTABLE HOT WATER
NO	NITROUS OXIDE
OR	OIL RETURN
OS	OIL SUPPLY
O	OXYGEN
P	PROPANE GAS
PD	PUMPED DISCHARGE
PW	PURE WATER
RO	REVERSE OSMOSIS WATER
SAN	SANITARY DRAINAGE
SCW	SOFT COLD WATER
SHW	SOFT HOT WATER
ST(1,000)	STORM DRAINAGE (ROOF SQUARE FOOTAGE)
STS	STORM DRAINAGE (SECONDARY)
STW	SOFT TEMPERED WATER
TW	TEMPERED WATER
V	VENT
VAC	LAB VACUUM
W	SERVICE WATER - POTABLE
WAGD	WASTE ANETHESIA GAS DISPOSAL
	PIPE CONTINUATION
	PIPE CAP
	PIPE DOWN
	PIPE UP OR UP/DOWN
FD	PIPE SERVING FIXTURE ON FLOOR ABOVE (EXAMPLE: FD = FLOOR DRAIN)
	PITCH PIPE IN DIRECTION
	DIRECTION OF FLOW IN PIPE
	ROUTE TO DRAIN
RD-1 6"(1000)	ROOF DRAIN PROPERTIES SYMBOL / SIZE (ROOF SQ. FT.)
	DIELECTRIC CONNECTION
	UNION/FLANGE
	SHUTOFF VALVE NORMALLY OPEN
	SHUTOFF VALVE NORMALLY CLOSED
GPM	BALANCING VALVE (NUMBER INDICATES GPM)
	CHECK VALVE
	BACKFLOW PREVENTER
	SOLENOID VALVE
	"WYE" - STRAINER
	"WYE" - STRAINER W/SHUTOFF VALVE AND HOSE CONNECTION WITH CAP
	FLEXIBLE CONNECTION
	MANUAL AIR VENT
	DRAIN VALVE WITH HOSE CONNECTION AND CAP
	SAFETY/RELIEF VALVE
	VACUUM BREAKER
P	PRESSURE GAUGE (FURNISHED WITH BALL VALVE)
P	PRESSURE SENSOR (FURNISHED WITH BALL VALVE)
T	TEMPERATURE SENSOR WITH WELL
T	THERMOMETER WITH WELL (DIAL TYPE)
	THERMOMETER WITH WELL (FILLED TYPE)
	REDUCER - REFERENCE SPECIFICATION FOR CONCENTRIC/ECCENTRIC AND FOT/FOB
	PRESSURE REDUCING VALVE (LIQUID/GAS)
	PUMP
M	METER
	ALIGNMENT GUIDE
	PIPE ANCHOR
	EXPANSION JOINT
	VALVE BOX
	MEDICAL GAS OUTLET (MGO)
	ALARM PANEL
	HEADWALL
A	SINGLE GAS OUTLET (AIR)
O	SINGLE GAS OUTLET (OXYGEN)
V	SINGLE GAS OUTLET (VACUUM)
	NITROGEN PRESSURE CONTROL CABINET
	PRESSURE TRANSDUCER WITH ALARM WIRING

PLUMBING ABBREVIATION KEY

ABBR:	DESCRIPTION:
AD	ACCESS DOOR
AFF	ABOVE FINISHED FLOOR
BFP	BACKFLOW PREVENTER
BT	BATHTUB
CB	CATCH BASIN
CI	CAST IRON
CO	CLEANOUT
CS	CLINICAL SINK
DB	DIALYSIS BOX
DF	DRINKING FOUNTAIN
DI	DUCTILE IRON
E	EXISTING
EE	EMERGENCY EYEWASH
ES	EMERGENCY SHOWER
ESE	EMERGENCY SHOWER/EYEWASH
EWC	ELECTRIC WATER COOLER
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
FM	FLOW METER
FS	FLOOR SINK
GD	GARBAGE DISPOSER
GI	GREASE INTERCEPTOR
HB	HOSE BIBB
I.E.	INVERT ELEVATION (FOR REFERENCE ONLY)
LAV	LAVATORY
MB	MOP BASIN
MH	MANHOLE
MV	MIXING VALVE
N.C.	NORMALLY CLOSED
NIC	NOT IN CONTRACT
N.O.	NORMALLY OPEN
NT	NEUTRALIZATION TANK
OS	OIL SEPARATOR
RD	ROOF DRAIN
SCCR	SHORT CIRCUIT CURRENT RATING
SH	SHOWER
SK	SINK
SS	SERVICE SINK
TD	TRENCH DRAIN
TP	TRAP PRIMER
TYP	TYPICAL
UR	URINAL
VTR	VENT THROUGH ROOF
WC	WATER CLOSET
WCO	WALL CLEANOUT
WF	WASH FOUNTAIN
WH	WATER HEATER
WMF	WASHING MACHINE FIXTURE
WM	WATER METER
WS	WATER SOFTENER
UB	UTILITY BOX
UON	UNLESS OTHERWISE NOTES
YCO	YARD CLEANOUT

MECHANICAL RENOVATION NOTES:

THESE NOTES APPLY TO ALL MECHANICAL SHEETS AND TRADES, INCLUDING BUT NOT LIMITED TO, FIRE PROTECTION, PLUMBING, MEDICAL GAS, VENTILATION, PIPING AND TEMPERATURE CONTROL.

1. EXISTING CONDITIONS ARE SHOWN BASED ON INFORMATION OBTAINED FROM FIELD SURVEYS, EXISTING BUILDING DOCUMENTS, AND STAFF. VERIFY EXISTING CONDITIONS AND REPORT ANY CONFLICTS BEFORE PROCEEDING.
2. NOT ALL EXISTING DUCTWORK AND PIPING IS SHOWN. VERIFY EXISTING CONDITIONS BEFORE STARTING WORK. NOTIFY ENGINEER OF ANY CONFLICTS WITH NEW WORK.
3. FIELD VERIFY THE AVAILABLE CLEARANCES FOR DUCTWORK AND PIPING BEFORE FABRICATION. RISES AND DROPS MAY BE NECESSARY BECAUSE OF EXISTING FIELD CONDITIONS.
4. EACH CONTRACTOR SHALL FIELD VERIFY ACCESSIBILITY TO THE AREA OF HIS/HER WORK AND SHALL NOTIFY THE **GENERAL CONTRACTOR** PRIOR TO BIDDING IF OTHER UTILITIES ARE REQUIRED TO BE REMOVED OR RELOCATED TO ALLOW ACCESS TO HIS/HER AREA OF WORK.
5. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR CUTTING, REMOVAL AND PATCHING OF ROOFS, WALLS, AND FLOORS ASSOCIATED WITH WORK BY ALL CONTRACTORS. CONTRACTORS SHALL NOTIFY THE GC OF AFFECTED AREAS PRIOR TO BIDDING.
6. THE **GENERAL CONTRACTOR** IS RESPONSIBLE FOR REMOVAL AND REPLACEMENT OF CEILINGS, CEILING TILES, AND CEILING GRIDS ASSOCIATED WITH AREAS OF WORK BY ALL CONTRACTORS. NOTIFY THE **GENERAL CONTRACTOR** OF AFFECTED AREAS PRIOR TO BIDDING.
7. WHERE EXISTING MECHANICAL SYSTEMS ARE LOCATED IN AREAS THAT CONFLICT WITH NEW EQUIPMENT, PIPING, OR DUCTWORK TO BE INSTALLED, EACH CONTRACTOR SHALL EITHER ARRANGE NEW EQUIPMENT, PIPING, OR DUCTWORK IN SUCH A FASHION THAT IT DOES NOT CONFLICT WITH EXISTING SYSTEMS, OR REWORK EXISTING MECHANICAL SYSTEMS TO ALLOW FOR INSTALLATION OF NEW EQUIPMENT, PIPING, OR DUCTWORK.
8. PROVIDE TEMPORARY CONNECTIONS TO MAINTAIN EXISTING SYSTEMS IN SERVICE DURING CONSTRUCTION. MAINTAIN ACCESS TO EXISTING MECHANICAL INSTALLATIONS THAT REMAIN ACTIVE.
9. OBTAIN PERMISSION FROM OWNER BEFORE SHUTTING DOWN ANY SYSTEM FOR ANY REASON. MAINTAIN SERVICE TO ALL COMPONENTS THAT ARE TO REMAIN UNTIL NEW SYSTEMS ARE INSTALLED.
10. MAINTAIN EXISTING SYSTEM IN SERVICE UNTIL NEW SYSTEM IS COMPLETE AND READY FOR TIE IN AND SWITCHOVER. DRAIN SYSTEM ONLY TO MAKE SWITCHOVERS AND CONNECTIONS. OBTAIN PERMISSION FROM OWNER BEFORE PARTIALLY OR COMPLETELY DRAINING SYSTEM. MAKE CHANGEOVER TO NEW SYSTEMS WITH MINIMUM OUTAGE.

MECHANICAL PHASING NOTES:

THESE NOTES APPLY TO ALL MECHANICAL SHEETS AND TRADES, INCLUDING BUT NOT LIMITED TO, FIRE PROTECTION, PLUMBING, MEDICAL GAS, VENTILATION, PIPING AND TEMPERATURE CONTROL.

1. REFER TO DRAWINGS FOR GENERAL DESCRIPTION OF PHASES. REFER TO **GENERAL CONTRACTOR'S** INSTRUCTIONS FOR MORE DETAILS AND PHASING SCHEDULES AND FOR CONCURRENT WORK. MECHANICAL, ELECTRICAL AND TECHNOLOGY DRAWINGS DEPICT THE INTENT OF THE FINAL DESIGN. THE MECHANICAL, ELECTRICAL, AND TECHNOLOGY DRAWINGS DO NOT DEPICT THE MEANS AND METHODS TO MEET THE REQUIREMENTS OF THE PHASING CRITERIA.
2. REVIEW PROJECT PHASING PLANS TO COORDINATE DEMOLITION WORK, OUTAGES, ETC. WITH AFFECTED ADJACENT AREAS.
3. PROVIDE TEMPORARY DUCTWORK, PIPING, SHUTOFF VALVES, ZONE VALVES, ZONE ALARMS, ETC. AS NEEDED TO MAINTAIN SERVICE TO ALL AREAS DURING ALL PHASES OF PROJECT.
4. INSTALL TEMPORARY DUCTWORK, PIPING, SHUTOFF VALVES, ETC. AS NECESSARY TO KEEP ALL OCCUPIED SPACES OPERATIONAL THROUGHOUT ALL PHASES OF THE PROJECT
5. PHASE DEMOLITION WORK TO MINIMIZE DOWNTIME.

PLUMBING GENERAL NOTES:

1. THE SYMBOLS AND THE MATERIAL LIST ARE FOR THE CONVENIENCE OF THE CONTRACTOR. CONTRACTOR SHALL VERIFY QUANTITIES AND FURNISH ALL MATERIALS REQUIRED FOR FULLY OPERATIONAL SYSTEMS, WHETHER SPECIFIED OR NOT.
2. CATALOG NUMBERS SHALL NOT BE CONSIDERED COMPLETE, BUT ARE GIVEN AS AN AID TO THE CONTRACTOR AND TO INDICATE THE QUALITY REQUIRED. CONTRACTOR IS RESPONSIBLE FOR A COMPLETE DESCRIPTION OF MATERIAL ON THESE DRAWINGS AND IN THE SPECIFICATIONS BEFORE ORDERING. THE DESCRIPTION OF THE MATERIAL TAKES PRECEDENCE OVER THE CATALOG NUMBER. THE FIRST MANUFACTURER LISTED IS THE BASIS OF DESIGN.
3. CONTRACTOR SHALL VERIFY THAT FIXTURES SUPPLIED ARE APPROVED PER ALL APPLICABLE STATE, LOCAL AND GOVERNING AUTHORITIES.
4. ALL FIXTURES SHALL CONFORM TO FEDERAL ACT S.3874
5. INVERT ELEVATIONS ARE FROM EXISTING DRAWINGS AND MAY NOT BE ACCURATE. VERIFY ALL ELEVATIONS BEFORE BEGINNING WORK.
6. VERIFY UNDERGROUND PIPE SIZES, INVERT ELEVATIONS, AND LOCATIONS PRIOR TO BEGINNING ANY WORK.
7. REFER TO THE PLUMBING ROUGH-IN SCHEDULE FOR THE SIZES OF BRANCH PIPES TO PLUMBING FIXTURES.
8. FOR CLARITY, NOT ALL VALVES HAVE BEEN SHOWN. PROVIDE SHUTOFF VALVES IN DOMESTIC WATER PIPING SERVING EACH ROOM WITH FIXTURES. ANGLE STOPS SHALL NOT BE CONSIDERED SHUTOFF VALVES.
9. EXISTING CONDITIONS ON DEMOLITION PLANS ARE PROVIDED TO INDICATE THE GENERAL SCOPE OF ITEMS TO BE REMOVED. REFER TO SPECIFICATION SECTION 22 05 05 FOR ADDITIONAL DEMOLITION INFORMATION.
10. P.C. SHALL CUT AND PATCH EXISTING AS REQUIRED FOR NEW OR DEMOLITION WORK UNLESS NOTED OTHERWISE. REFER TO SPECIFICATION SECTION 22 05 05 FOR ADDITIONAL INFORMATION.

MEDICAL GAS GENERAL NOTES:

1. THE SYMBOLS AND THE MATERIAL LIST ARE FOR THE CONVENIENCE OF THE CONTRACTOR. CONTRACTOR SHALL VERIFY QUANTITIES AND FURNISH ALL MATERIALS REQUIRED FOR FULLY OPERATIONAL SYSTEMS, WHETHER SPECIFIED OR NOT.
2. CATALOG NUMBERS SHALL NOT BE CONSIDERED COMPLETE, BUT ARE GIVEN AS AN AID TO THE CONTRACTOR AND TO INDICATE THE QUALITY REQUIRED. CONTRACTOR IS RESPONSIBLE FOR A COMPLETE DESCRIPTION OF MATERIAL ON THESE DRAWINGS AND IN THE SPECIFICATIONS BEFORE ORDERING. THE DESCRIPTION OF THE MATERIAL TAKES PRECEDENCE OVER THE CATALOG NUMBER. THE FIRST MANUFACTURER IS THE BASIS OF DESIGN.
3. INSTALL WALL MOUNTED OUTLETS **60"** AFF UNLESS NOTED OTHERWISE. COORDINATE ELEVATIONS WITH ARCHITECTURAL DRAWINGS.
4. REFER TO MEDICAL GAS MATERIAL LIST FOR PIPE SIZES TO INDIVIDUAL OUTLETS.

MECHANICAL GENERAL NOTES:

THESE NOTES APPLY TO ALL MECHANICAL SHEETS AND TRADES, INCLUDING BUT NOT LIMITED TO, FIRE PROTECTION, PLUMBING, MEDICAL GAS, VENTILATION, PIPING AND TEMPERATURE CONTROL.

1. DRAWINGS SHOWING LOCATIONS OF EQUIPMENT, DUCTWORK, PIPING, ETC. ARE DIAGRAMMATIC AND MAY NOT ALWAYS REFLECT EXACT INSTALLATION CONDITIONS. DRAWINGS SHOW THE GENERAL ARRANGEMENT OF DUCTWORK, PIPING, EQUIPMENT, ETC., AND MAY NOT INCLUDE ALL OFFSETS AND FITTINGS REQUIRED FOR COMPLETE INSTALLATION. THE DRAWINGS SHALL BE FOLLOWED AS CLOSELY AS ACTUAL BUILDING CONSTRUCTION AND THE WORK OF OTHERS WILL PERMIT.
2. DO NOT SCALE DRAWINGS. VERIFY ALL DIMENSIONS AND CLEARANCES FROM ARCHITECTURAL, STRUCTURAL, SUBMITTALS, AND OTHER APPROPRIATE DRAWINGS OR PHYSICALLY AT SITE. REVIEW ALL DRAWINGS, INCLUDING THOSE OF OTHER TRADES.
3. COORDINATE ALL WORK WITH ALL OTHER TRADES PRIOR TO INSTALLATION TO PROVIDE CLEARANCES REQUIRED FOR OPERATION, MAINTENANCE, CODE COMPLIANCE, AND TO VERIFY NON-INTERFERENCE WITH OTHER WORK. DO NOT FABRICATE PRIOR TO VERIFICATION OF NECESSARY CLEARANCES FOR ALL TRADES. BRING ANY INTERFERENCES OR CONFLICTS TO THE ATTENTION OF THE ARCHITECT/ENGINEER BEFORE PROCEEDING WITH FABRICATION OR EQUIPMENT ORDERS.
4. REVIEW SPACE REQUIREMENTS OF EQUIPMENT SPECIFIED OR SUBSTITUTED AND MAKE REASONABLE ACCOMMODATIONS IN LAYOUT AND POSITIONING TO PROVIDE PROPER ACCESS.
5. ANY CHANGES REQUIRED TO ELIMINATE CONFLICTS OR THAT RESULT FROM A FAILURE TO COORDINATE SHALL BE MADE BY THE CONTRACTOR WITHOUT ADDITIONAL COST OR EXPENSE TO OTHERS.
6. EACH CONTRACTOR IS RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH ELECTRICAL CHANGES REQUIRED FOR EQUIPMENT PROPOSED THAT DIFFERS FROM THE BASIS OF DESIGN.
7. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN, ELECTRICAL, TECHNOLOGY AUDIO/VISUAL, AND OTHER MECHANICAL PLANS FOR EXACT LOCATIONS OF ALL CEILING MOUNTED DEVICES, OTHER THAN SPRINKLERS.
8. EACH CONTRACTOR IS RESPONSIBLE FOR DAMAGE CAUSED BY THEIR ACTIONS TO WALLS, FLOORS, CEILINGS, AND ROOFS. THE CONTRACTOR WHOSE WORK CAUSES DAMAGE IS RESPONSIBLE FOR PATCHING TO MATCH ORIGINAL CONSTRUCTION, FIRE RATING, AND FINISH.
9. IN AREAS WITH DRYWALL CEILINGS COORDINATE LOCATIONS OF ACCESS PANELS WITH THE GC FOR ACCESS TO VALVES, DUCTWORK ACCESSORIES, DAMPERS, ETC. COORDINATE PANEL TYPE AND COLOR WITH ARCHITECT. NOTIFY THE GC OF THE REQUIRED ACCESS PANELS PRIOR TO BIDDING.
10. SEAL ALL FLOOR AND WALL PENETRATIONS AIRTIGHT WHERE CONDUITS, PIPING, AND DUCTS PENETRATE.
11. CAULK ALL PIPE AND DUCT PENETRATIONS OF FULL HEIGHT NON-FIRE RATED WALL, PARTITION, FLOOR, AND ROOF ASSEMBLIES. THIS IS ESSENTIAL TO PREVENT NOISE TRANSMISSION FROM ONE ROOM TO ANOTHER AND TO PROVIDE THE DESIRED NC LEVELS WITHIN ROOMS.
12. WHERE PIPES AND DUCTS ARE SHOWN TO PENETRATE FLOORS, PROVIDE SLEEVED OPENINGS WITH THE TOP EDGE RAISED ABOVE FLOOR SURFACE IN ACCORDANCE WITH ALL RELEVANT SPEC SECTIONS. SEAL SLEEVE PERIMETER TO BE WATERTIGHT.
13. EQUIPMENT SIZES AND SERVICE CLEARANCE REQUIREMENTS VARY AMONG DIFFERENT MANUFACTURERS. CONSULT APPROVED SHOP DRAWINGS FOR EQUIPMENT SIZES AND REQUIRED SERVICE CLEARANCES. COORDINATE WITH LAYOUT OF EQUIPMENT PADS, PIPING, DUCTWORK, ETC.
14. DO NOT BLOCK TUBE PULL OR EQUIPMENT SERVICE CLEARANCES.
15. MAINTAIN MINIMUM 3'-6" CLEARANCE IN FRONT OF ALL ELECTRICAL PANELS, MOTOR STARTERS, SWITCHES, AND DISCONNECTS.
16. PROVIDE CONCRETE EQUIPMENT PAD FOR ALL FLOOR MOUNTED EQUIPMENT. PAD SHALL EXTEND MINIMUM 6" BEYOND ALL SIDES OF EQUIPMENT.
17. DO NOT SUPPORT EQUIPMENT, PIPING, OR DUCTWORK FROM METAL DECKING OR OTHER NON-STRUCTURAL BUILDING ELEMENTS. ANCHORS EMBEDDED IN CONCRETE SHALL BE CRACKED CONCRETE APPROVED IN ACCORDANCE WITH SPECIFICATIONS.

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STATE OF MISSOURI
BRUCE ELDON HART
NUMBER E-22817
PROFESSIONAL ENGINEER

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Missouri #E-22817
11/12/21

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Drawn By	Author
Checked By	Checker

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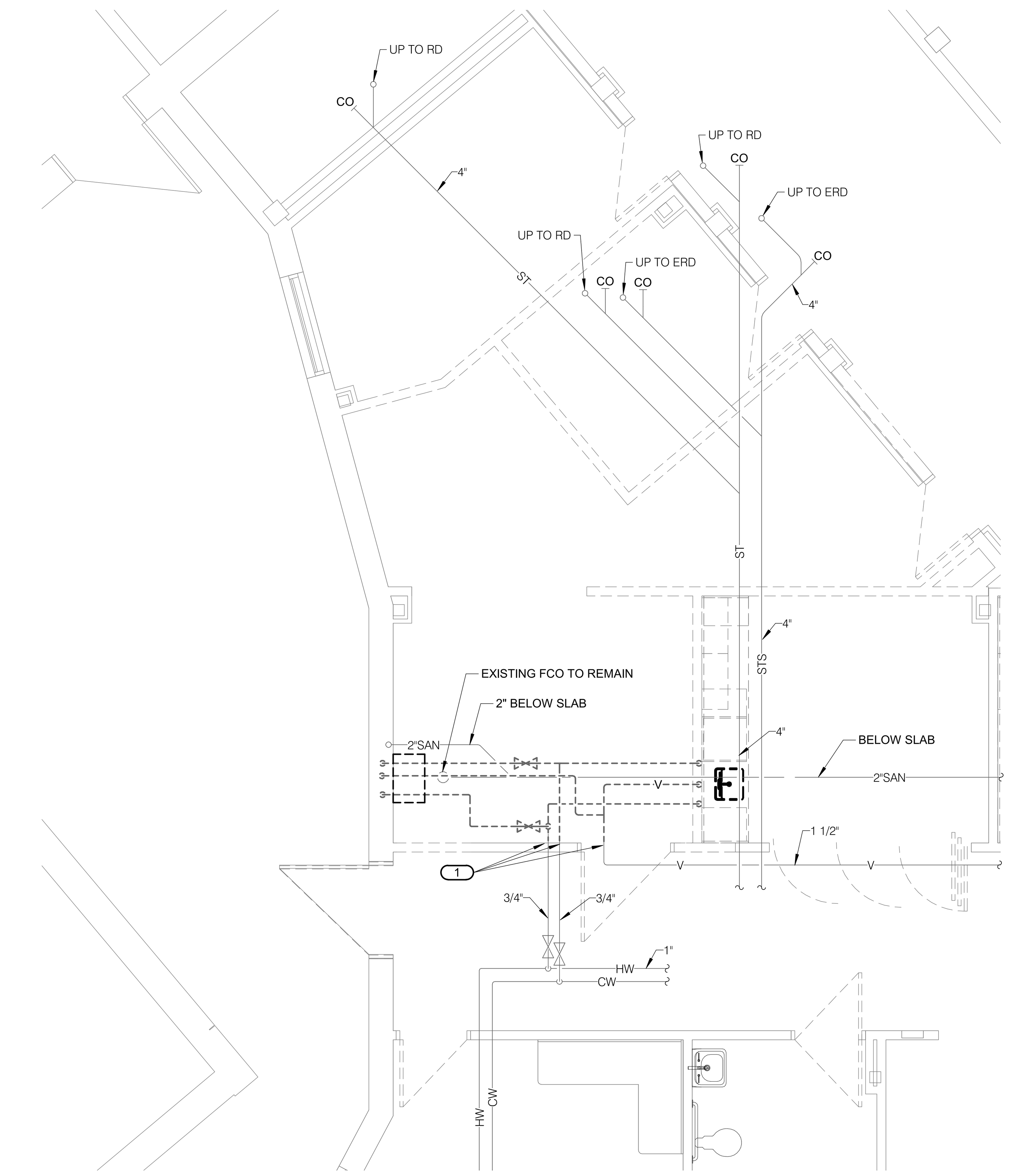
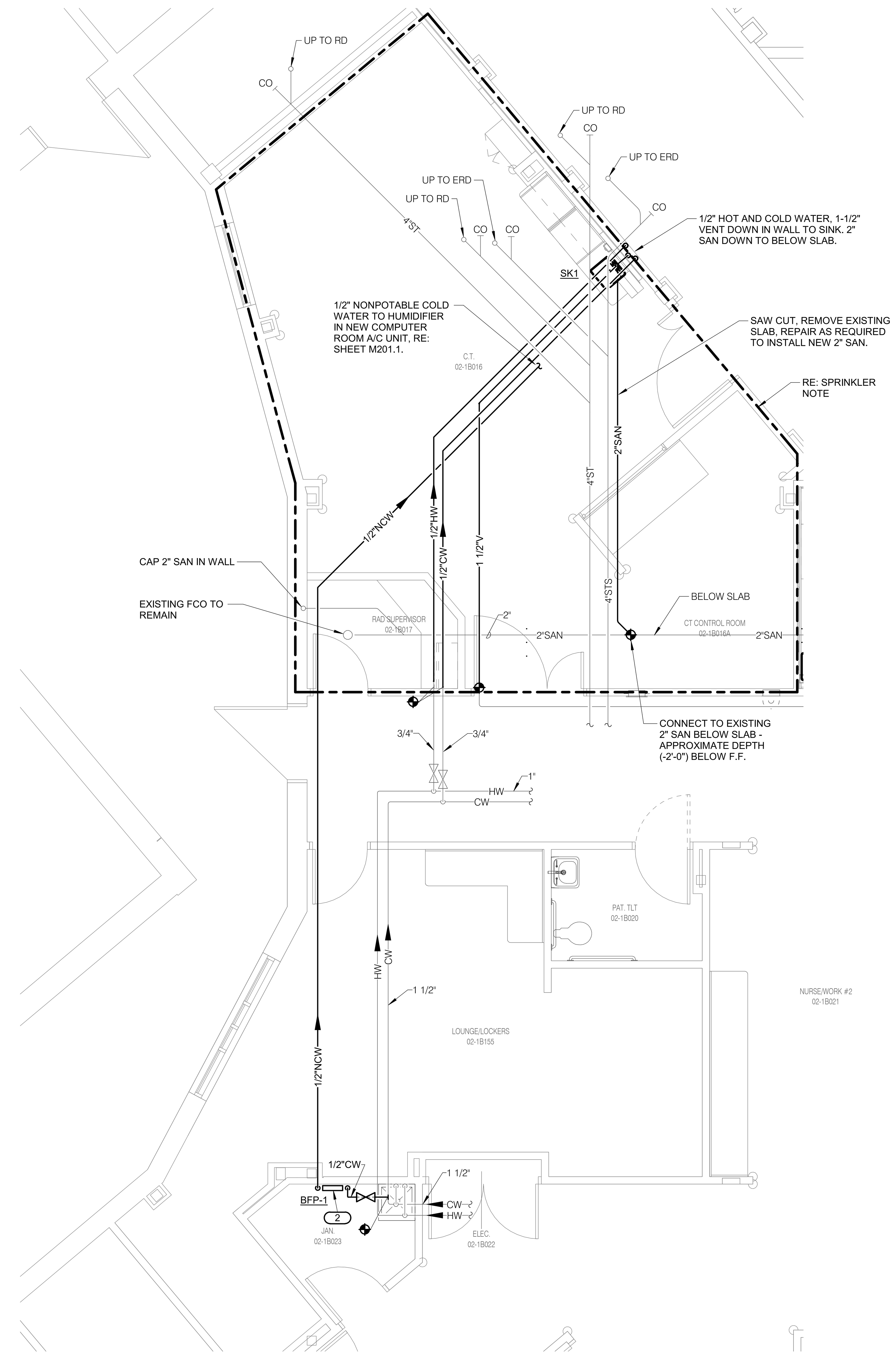
P000.1

PLUMBING + MEDICAL GAS COVERSHEET



FIRST FLOOR DEMOLITION - PLUMBING - CT

1/4" = 1'-0"



FIRST FLOOR - PLUMBING - CT

1/4" = 1'-0"

PLUMBING ROUGH-IN SCHEDULE

NOTES: (APPLIES TO ALL PLUMBING FIXTURES LISTED BELOW)
1) SIZES SHOWN ARE MINIMUMS. LARGER SIZES SHOWN ON THE DRAWING SHALL DICTATE THE ROUGH-IN SIZE. 2) SANITARY RISERS UP IN WALL TO FIXTURES SHALL BE A MINUMUM OF 2". 3) DOMESTIC WATER BRANCH PIPING OUTSIDE OF THE WALL/CHASE SHALL BE A MINIMUM OF 3/4" UNLESS NOTED OTHERWISE. ONLY THE FINAL RISE-DROP SHALL BE SMALLER.

TAG NAME	DESCRIPTION	COLD WATER	HOT WATER	SANITARY	VENT
SK1	CRITICAL AREA SINK	1/2"	1/2"	1-1/2"	1-1/4"

PLUMBING MATERIAL LIST

TAG NAME	DESCRIPTION	MANUFACTURER AND MODEL
BFP-1	BACK FLOW PREVENTER - REDUCED PRESSURE ZONE, LEAD FREE BRONZE CONSTRUCTION, SIZE SAME AS PIPE [1/2" to 2"], NON-CORROSIVE INTERNAL PARTS, STAINLESS STEEL SPRINGS, DIFFERENTIAL PRESSURE RELIEF VALVE BETWEEN SPRING-LOADED CHECK VALVES, BALL STYLE SHUT-OFF VALVES ON INLET AND OUTLET OF UNIT, AIR GAP DRAIN FITTING, TEST PORTS WITH SHUT-OFF VALVES, RATED FOR 175 PSI AT 33°F TO 140°F, 15 PSI (MAXIMUM) PRESSURE DROP AT 10 FPS, FACTORY TESTED, ALL PARTS TO BE SERVICEABLE WITHOUT REMOVING UNIT FROM LINE, APPROVED BY USC FCCC & HR, AWWA C511-92, ASSE 1013, IAPMO AND SBCCI LISTED. MOUNT WITHIN 60" OF FINISHED FLOOR. ROUTE DRAIN PIPE FROM AIR GAP FITTING TO FLOOR DRAIN. PROVIDE AND INSTALL BRONZE OR EPOXY COATED STRAINER UPSTREAM OF EACH UNIT AND ADDITIONAL VALVE UPSTREAM OF EACH STRAINER. FLOW PRESSURE DROP CURVES SHALL BE SUBMITTED.	APOLLO (RPLF4A), WATTS (LF919), WILKINS (975XL2)
SK1	SINK - INTEGRAL WITH COUNTERTOP. PROVIDE PERFORATED TYPE 304 STAINLESS STEEL GRID STRAINER. SINK TRIM - TWO HANDLE MIXING FAUCET, BRASS CONSTRUCTION, CHROME-PLATED FINISH, RIGID/SWING GOOSENECK SPOUT WITH 5-3/8" REACH, 1.5 GPM LAMINAR FLOW CONTROL IN SPOUT INLET, 4" WRISTBLADE HANDLES AT 4" CENTERS, 1/4-TURN OPERATION CERAMIC DISC CARTRIDGES, PLAIN (UNTHREADED) OUTLET. ACCESSORIES - 1-1/2" 17 GAUGE CHROME-PLATED BRASS TAILPIECE AND P-TRAP, QUARTER-TURN BALL VALVE TYPE 3/8" CHROME-PLATED BRASS ANGLE SUPPLIES WITH LOOSE KEY STOPS, CHROME-PLATED SOFT COPPER SUPPLY LINES.	SINK - INTEGRAL WITH COUNTERTOP SINK TRIM - CHICAGO FAUCET (895-317GN2FCXKABCP)

SHEET NOTES:

1. REFER TO GENERAL NOTES ON SHEET P000.1.

KEYNOTES: (#)

1. CUT 3/4" C, 3/4" H AND 1-1/2" V AND REMOVE PIPING AND FIXTURES SHOWN DARK AND DASHED. CAP ASSOCIATED WASTE PIPING IN WALL OR BELOW SLAB AS REQUIRED AND PATCH WALL/SLAB TO MATCH EXISTING. PROTECT REMAINING PIPING FOR NEW CONNECTIONS.
2. COORDINATE EXACT LOCATION OF NEW BACKFLOW PREVENTER WITH EXISTING CONDITIONS AND WITH OWNER (FACILITIES MANAGER) PRIOR TO INSTALLATION. EXTEND DRAIN PIPING (NOT SHOWN) AND TURN DOWN OVER JANITOR SINK.

SPRINKLER NOTE:

SPRINKLER CONTRACTOR SHALL DISCONNECT, RELOCATE AND/OR REMOVE ANY AND/OR ALL SPRINKLER PIPING AND SPRINKLER HEADS AS REQUIRED BY MECHANICAL, ELECTRICAL, AND GENERAL CONTRACTORS. REMOVE ALL SPRINKLER HEADS THAT ARE NOT CONCEALED TYPE. AFTER ALL LARGER DUCTWORK AND PIPING HAVE BEEN INSTALLED, SPRINKLER CONTRACTOR SHALL REINSTALL SPRINKLER HEADS AND/OR PIPING REQUIRED TO SPRINKLER REMODELED SPACE. SPRINKLER CONTRACTOR SHALL ALSO INSTALL NEW HEADS AND/OR PIPING AS REQUIRED BY REMODEL OF SPACE. ALL SPRINKLER HEADS SHALL BE CONCEALED TYPE.

RELEASED FOR CONSTRUCTION
As Noted on Plans Review
Development Services Department
Lee's Summit, Missouri
11/30/2021

Bruce E. Hart
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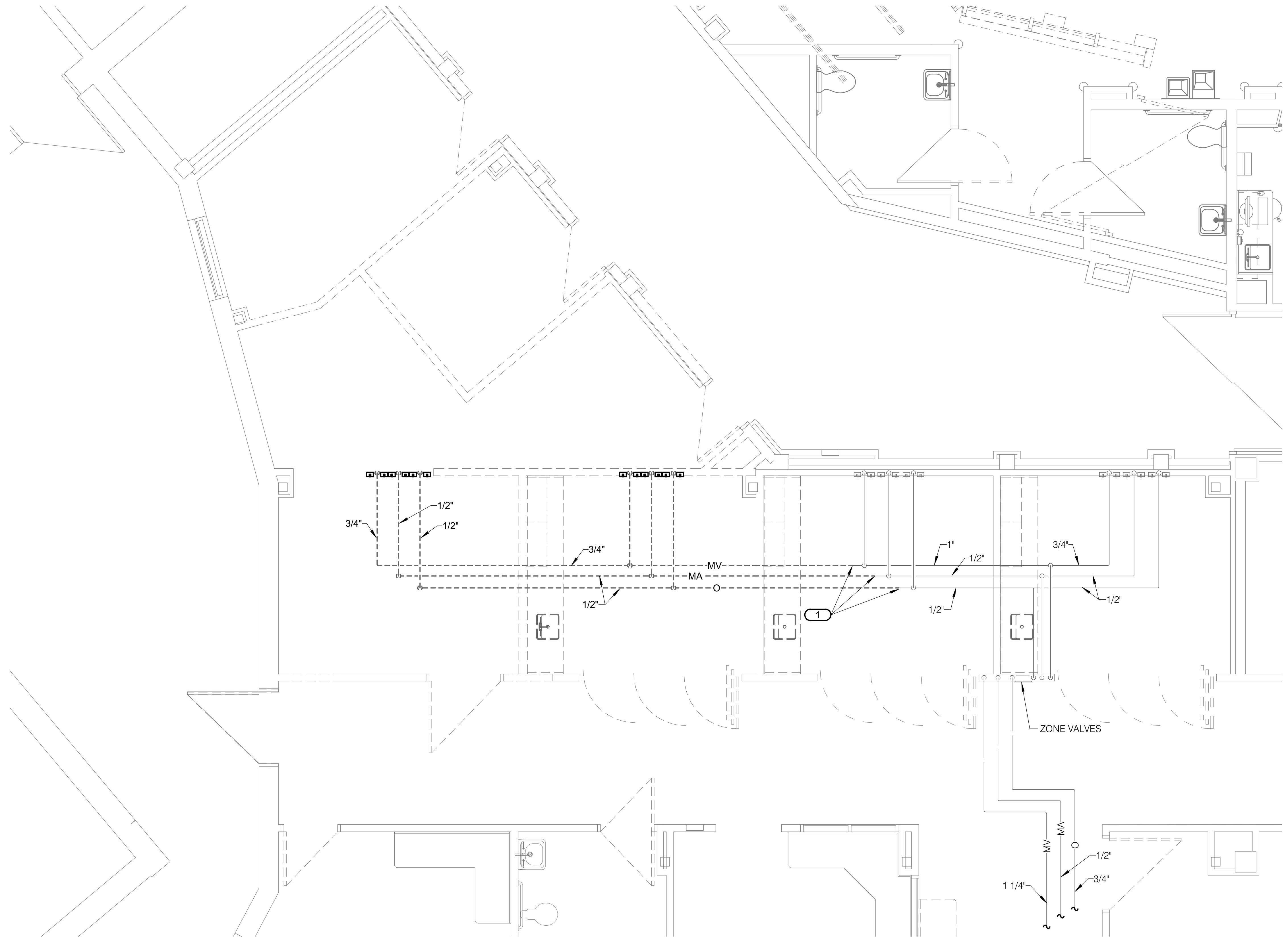
REFERENCE SCALE IN INCHES

P201.1

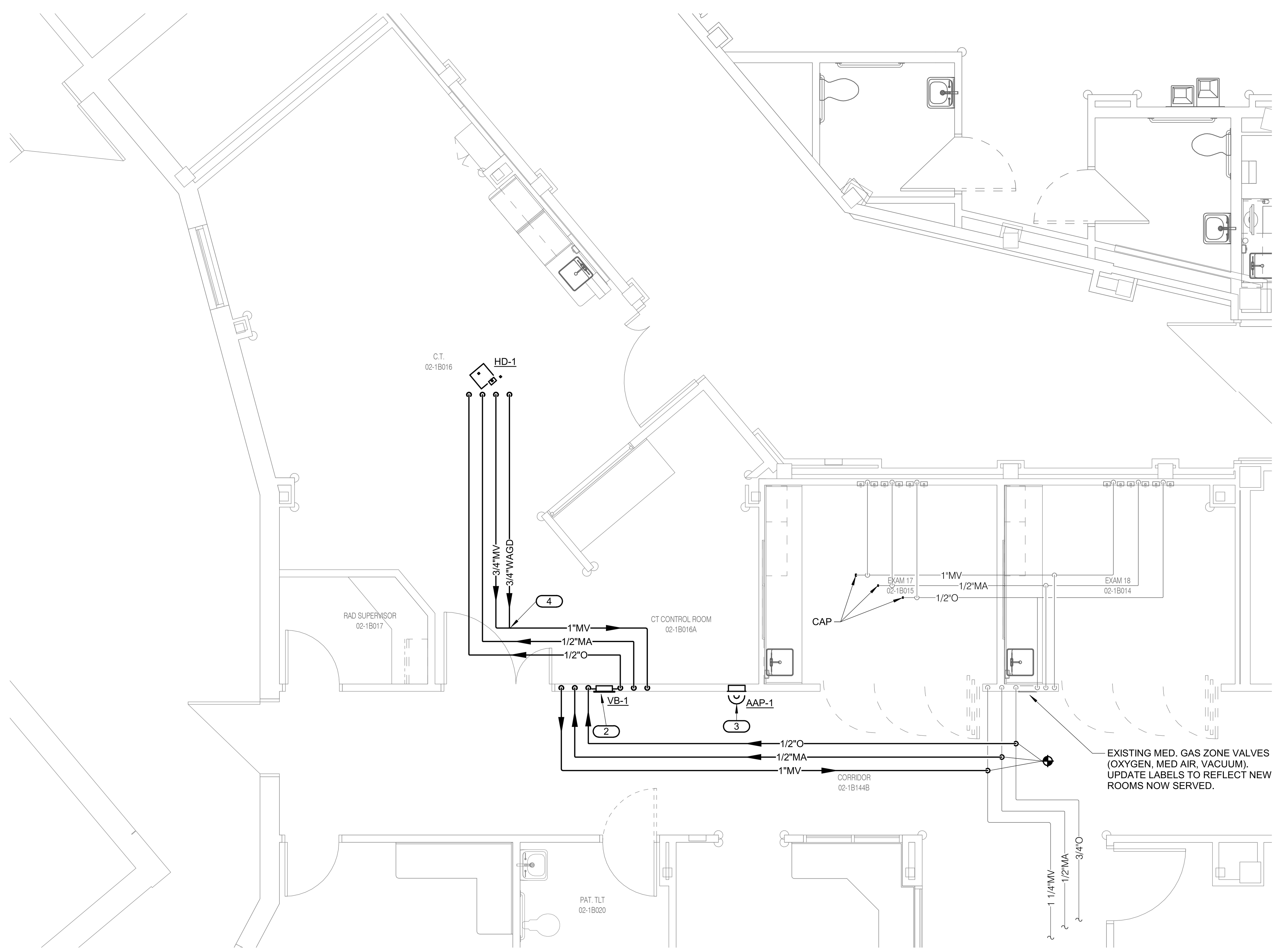
FIRST FLOOR - PLUMBING

MEDICAL GAS MATERIAL LIST - CT

TAG NAME	DESCRIPTION	MANF. & MODEL
AAP-1	AREA ALARM PANEL - MODULAR IN DESIGN, DIGITAL TYPE, USED WITH REMOTE OR LOCAL SELF CONTAINED LINE PRESSURE AND LINE VACUUM SENSORS. THE MEDICAL GAS LINES TO BE MONITORED SHALL INCLUDE THE FOLLOWING: OXYGEN MEDICAL AIR MEDICAL VACUUM THE MODULE FOR MONITORING EACH GAS OR VACUUM LINE SHALL INCLUDE THE FOLLOWING: AN AUDIBLE WARNING DEVICE THAT WILL SOUND IF THE PRESSURE IN A MEDICAL GAS LINE IS 20% ABOVE OR BELOW ITS NORMALSETTING AND AN "ABNORMAL" RED LIGHT THAT WILL COME ON. A SWITCH SHALL BE PROVIDED TO SILENCE THE AUDIBLE WARNING DEVICE. "ABNORMAL" RED LIGHT WILL REMAIN LIT UNTIL CONDITION HAS BEEN CORRECTED. A BUILT-IN LCD (LIQUID CRYSTAL DISPLAY) WILL CONTINUOUSLY INDICATE THE PRESSURE OR VACUUM AT ALL TIMES. A TEST SWITCH SHALL BE SUPPLIED TO TEST INTERNAL CIRCUITS, LIGHTS ANDWARNING DEVICES. ALL POWER WIRING TO THE ALARM PANEL AND SENSORS TO BE WIRED BY THE ELECTRICAL CONTRACTOR. ALL ALARM WIRING TO THE PANEL IS THIS CONTRACTORS RESPONSIBILITY. ALL WIRING TO COMPLY WITH THE RECOMMENDATION OF THE ALARM PANEL MANUFACTURER AND SHALL BE RUN IN CONDUIT. ALL WIRING SHALL COMPLY WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE. THIS CONTRACTOR SHALL PROVIDE WIRING DIAGRAMS AND REQUIREMENTS TO THE ELECTRICAL CONTRACTOR.	BEACONMEDAES
HD-1	HOSE DROP ASSEMBLY WITH RETRACTORS. OUTLETS AND HOSES SHALL BE COLOR CODED FOR PROPER GAS SERVICE. HOSES FOR MEDICAL VACUUM SHALL HAVE MININUM I.D. OF 5/16". CONTRACTOR SHALL VERIFY CEILING HEIGHT AND SELECT HOSES SUCH THAT BOTTOM OF HOSE ASSEMBLY TERMINATES 6'-4" A.F.F. IN RETRACTED POSITION. ADD 20" OF LENGTH TO EACH HOSE AND COIL TO ALLOW FOR EXTENSION. THIS ASSEMBLY CONTAINS THE FOLLOWING MEDICAL GAS OUTLETS: [1] OXYGEN (O) OUTLET [1] MEDICAL AIR (MA) OUTLET [1] MEDICAL VACUUM (MV) INLET [1] WASTE ANESTHESIA GAS DISPOSAL (WAGD) INLET ALL CEILING-MOUNTED OUTLETS SHALL BE DISS CONNECTION STYLE. REFER TO 'OUTLETS' FOR ADDITIONAL INFORMATION. HOSE END VALVE FITTING SHALL BE PURITAN BENNET GEOMETIC STYLE (CONTRACTOR SHALL VERIFY THE HOSE OUTLET CONNECTION STYLE IS COMPATIBLE WITH EQUIPMENT USED IN THE FACILITY, PRIOR TO ORDERING).	BEACONMEDAES
OUTLETS	MEDICAL GAS SERVICE OUTLET - RECESSED DISS TYPE OUTLET. ROUGHING IN ASSEMBLY AND FINISH ASSEMBLY, MOUNTING FLANGES, PLASTER STRIKE, SECONDARY CHECK, 3/8" O.D. TYPE K COPPER INLET TUBE, LABEL IDENTIFYING SPECIFIC GAS BY NAME AND COLOR, BRUSHED STAINLESS STEEL FINISHING PLATE. SYMBOLS FOR OUTLETS ARE AS FOLLOWS: O OXYGEN MA MEDICAL AIR MV MEDICAL VACUUM WAGD WASTE ANESTHESIA GAS DISPOSAL PROVIDE ONE VACUUM SLIDE ASSEMBLY WITH EACH VACUUM SERVICE.	BEACONMEDAES
VB-1	VALVE BOX - PAINTED GALVANIZED STEEL WITH PLASTER FRAME, TEMPORARY PLASTER GUARD, IDENTIFICATION COVER AND SHIELD. THE FINISH FRAME SHALL MOUNT TO BOX WITH CONCEALED MOUNTING SCREWS. PLACEMENT OF VALVE HANDLE WITHIN THE BOX SHALL BE SUCH THAT THE EMERGENCY PLASTIC PULL-OUT WINDOW CANNOT BE REPLACED WITH THE VALVE HANDLE IN THE "OFF" POSITION. FACTORY INSTALLED TUBING SHALL EXTEND AT LEAST 3" BEYOND THE BOX, AND THE VALVE BODY SHALL BE SWUNG OUT OF LINE OF HEAT TRANSFER, PERMITTING JOINT TO BE BRAZED WITHOUT OBSTRUCTION OR HEAT DAMAGE TO VALVE. OPEN ENDS OF TUBING SHALL BE CAPPED TO AVOID PREINSTALLATION CONTAMINATION. A 1-1/2" DIAMETER LINE PRESSURE/VACUUM GAUGE SHALL BE SUPPLIED AND INSTALLED DOWNSTREAM OF SHUTOFF VALVE. ALL VALVES SHALL BE PREPARED FOR OXYGEN SERVICE AND SHALL CONFORM TO NFPA #99. ALL VALVES SHALL BE OF BALL-TYPE, WITH DOUBLE O-RING STEM SEAL AND TEFLON BALL SEATING, MINIMUM WORKING PRESSURE OF 400 PSIG, ACTUATED FROM FULL "ON" TO FULL "OFF" BY 90 DEGREE TURN OF VALVE HANDLE. IDENTIFY SERVICE ON EACH VALVE HANDLE. VALVES SHALL BE THE SAME SIZE AS THE PIPING ENTERING THE VALVE. VALVE BOX SHALL CONTAIN THE FOLLOWING VALVES: OXYGEN, MEDICAL AIR, VACUUM	BEACONMEDAES



1 FIRST FLOOR DEMOLITION - MED GAS - CT
1/4" = 1'-0"



2 FIRST FLOOR - MED GAS - CT
1/4" = 1'-0"

SHEET NOTES:

1. REFER TO GENERAL NOTES ON SHEET P000.1.
2. COORDINATE EXACT LOCATION OF MEDICAL GAS OUTLETS WITH ARCHITECTURAL DRAWINGS.

KEYNOTES: (#)

1. CUT AND CAP 1/2" O, 1/2" MA AND 1" V AND REMOVE PIPING AND OUTLETS/INLETS SHOWN DARK AND DASHED.
2. INSTALL NEW ZONE VALVE BOX IMMEDIATELY OUTSIDE C.T. EXAM ROOM. VALVES SHALL FACE CORRIDOR. CUT AND PATCH WALL AS REQUIRED.
3. INSTALL NEW ALARM PANEL WHERE IT IS VIEWABLE FROM NEAREST NURSE STATION. COORDINATE EXACT LOCATION WITH ARCHITECT. CUT AND PATCH WALL AS REQUIRED.
4. CONNECT 3/4" WAGD PIPING INTO 1" MV PIPING. THE TEE CONNECTION SHALL BE GREATER THAT 5' AWAY FROM THE MEDGAS INLETS.

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P221.1

FIRST FLOOR - MED GAS

VIEW KEY

NAME — LEVEL NAME
10'-0" — HEIGHT ABOVE PROJECT 0'-0"

(1) — INDICATES NOTE USED TO DESCRIBE ADDITIONAL INFORMATION ABOUT WORK REQUIRED, SPECIFIC TO THE SHEET AND/OR DETAIL

1 VIEW NAME
1/8" = 1'-0"
NORTH

- INDICATES DIRECTION OF TRUE NORTH
- PLAN OR DETAIL NUMBER
- PLAN OR DETAIL NAME
- PLAN OR DETAIL SCALE

SIM — INDICATES SIMILAR DETAIL REFERENCED IN MULTIPLE LOCATIONS
1 — DETAIL REFERRED TO BY SECTION CUT
M101 — SHEET DETAIL IS LOCATED ON — T101

LINE TYPE AND TAG KEY:

NEW WORK BY THIS CONTRACTOR (WIDE LINE)
- NEW
- EXISTING TO BE REMOVED (SHORT DASHED PATTERN)
- NEW UNDERFLOOR OR UNDERGROUND (LONG DASHED PATTERN)

EXISTING TO REMAIN OR WORK BY OTHERS (NARROW LINE)
- EXISTING
- EXISTING TO BE REMOVED BY OTHERS (SHORT DASHED PATTERN)
- EXISTING UNDERFLOOR OR UNDERGROUND (LONG DASHED PATTERN)

HALFTONING DOES NOT MODIFY SCOPE.

'TAG'-E	TAGS WITH DASH 'E' INDICATES THE REFERENCED OBJECT IS EXISTING
TAG-1	UNDERLINED TAG INDICATES OBJECT IS IN-SCOPE. IF NEW, ADDITIONAL INFORMATION IS AVAILABLE IN A SCHEDULE, MATERIAL LIST, OR SYMBOL LIST
⊕	INDICATES AN EXISTING SYSTEM'S POINT OF CONNECTION/REMOVAL

CONTRACTOR ABBREVIATION KEY

ABBR:	DESCRIPTION:
A.C.	ASBESTOS ABATEMENT CONTRACTOR
A.V.C.	AUDIO/VISUAL CONTRACTOR
C.C.	CIVIL CONTRACTOR
C.M.	CONSTRUCTION MANAGER
E.C.	ELECTRICAL CONTRACTOR
F.P.C.	FIRE PROTECTION CONTRACTOR
F.S.C.	FOOD SERVICE CONTRACTOR
G.C.	GENERAL CONTRACTOR
H.C.	HEATING CONTRACTOR
M.C.	MECHANICAL CONTRACTOR
N.C.C.	NURSE CALL CONTRACTOR
P.C.	PLUMBING CONTRACTOR
S.C.	SECURITY CONTRACTOR
T.C.	TECHNOLOGY CONTRACTOR
T.C.C.	TEMPERATURE CONTROLS CONTRACTOR
V.C.	VENTILATION CONTRACTOR

MECHANICAL SYMBOL LIST

NOT ALL SYMBOLS MAY APPLY.

SYMBOL:	DESCRIPTION:
—BD—	BOILER BLOW DOWN
—BF—	BOILER FEED WATER
—CA—	COMPRESSED AIR
—CBR—	CHILLED BEAM RETURN
—CBS—	CHILLED BEAM SUPPLY
—CR—	CONDENSER WATER RETURN
—CS—	CONDENSER WATER SUPPLY
—CS15—	CLEAN STEAM - NUMBER INDICATES PRESSURE IN PSIG.
—CWR—	CHILLED WATER RETURN
—CWS—	CHILLED WATER SUPPLY
—DPP—	DRAIN
—G—	NATURAL GAS
—GV—	GAS REGULATOR VENT
—GWR—	GLYCOL WATER RETURN
—GWS—	GLYCOL WATER SUPPLY
—HCR—	HEATING/CHILLED WATER RETURN
—HCS—	HEATING/CHILLED WATER SUPPLY
—HG—	REFRIGERANT HOT GAS
—HPC—	HIGH PRESSURE CONDENSATE
—HPS—	HIGH PRESSURE STEAM
—HWR—	HEATING WATER RETURN
—HWS—	HEATING WATER SUPPLY
—LCS—	LOW PRESSURE CLEAN STEAM
—LIQ—	REFRIGERANT LIQUID
—LPC—	LOW PRESSURE CONDENSATE
—LPS—	LOW PRESSURE STEAM
—LWR—	LOOP WATER RETURN
—LWS—	LOOP WATER SUPPLY
—MV—	MEDICAL VACUUM
—OR—	OIL RETURN
—OS—	OIL SUPPLY
—PC—	PUMPED CONDENSATE
—PD—	PUMPED DISCHARGE
—RCR—	RADIANT COOLING RETURN
—RCS—	RADIANT COOLING SUPPLY
—RWR—	REHEAT WATER RETURN
—RWS—	REHEAT WATER SUPPLY
—SUC—	REFRIGERANT SUCTION
—SV—	SAFETY RELIEF VENT
—VAC—	LAB VACUUM
	PIPE CAP
	PIPE DOWN
	PIPE UP OR UP/DOWN
	PITCH PIPE IN DIRECTION
	DIRECTION OF FLOW IN PIPE
	DIELECTRIC CONNECTION
	UNION/FLANGE
	SHUTOFF VALVE NORMALLY OPEN
	SHUTOFF VALVE NORMALLY CLOSED
	THROTTLING VALVE
	BALANCING VALVE (NUMBER INDICATES GPM)
	AUTOMATIC BALANCING VALVE
	MIXING VALVE
	CONTROL VALVE (THREE-WAY)
	CONTROL VALVE (TWO-WAY)
	SOLENOID VALVE
	CHECK VALVE
	BACKFLOW PREVENTER
	SAFETY/RELIEF VALVE
	PRESSURE REDUCING VALVE (LIQUID/GAS)
	PRESSURE REDUCING VALVE (STEAM)
	TRIPLE DUTY VALVE (ANGLE TYPE)
	TRIPLE DUTY VALVE (IN-LINE TYPE)
	PUMP
	VACUUM BREAKER
	"WYE" - STRAINER
	"WYE" - STRAINER W/SHUTOFF VALVE AND HOSE CONNECTION WITH CAP
	BASKET STRAINER
	FLEXIBLE CONNECTION
	PRESSURE/TEMPERATURE TEST PLUG
	REDUCER - REFERENCE SPECIFICATION FOR CONCENTRIC/ECCENTRIC AND FOT/FOB
	SUCTION DIFFUSER WITH SUPPORT FOOT
	AUTOMATIC AIR VENT
	MANUAL AIR VENT
	DRAIN VALVE WITH HOSE CONNECTION AND CAP
	PRESSURE SENSOR (FURNISHED WITH BALL VALVE)
	PRESSURE GAUGE (FURNISHED WITH BALL VALVE)
	DIFFERENTIAL PRESSURE SENSOR
SP	STATIC SWITCH
FM	FLOW METER
F	FLOW SWITCH
FS	FLOW SENSOR
T-*	STEAM TRAP (REFER TO SCHEDULE)
T-*	F&T STEAM TRAP (REFER TO SCHEDULE)
	INVERTED BUCKET STEAM TRAP (REFER TO SCHEDULE)
	ALIGNMENT GUIDE
	PIPE ANCHOR
EJ-# (#.#")	EXPANSION JOINT #.#" IS THE EXPANSION TRAVEL INCHES
M	METER

MECHANICAL SYMBOL LIST

NOT ALL SYMBOLS MAY APPLY.

SYMBOL:	DESCRIPTION:
	DIRECTION OF AIR FLOW
	FLEXIBLE DUCT
	MANUAL VOLUME DAMPER
R	RISE IN DIRECTION OF AIR FLOW
D	DROP IN DIRECTION OF AIR FLOW
	DUCT CAP
	DUCT DOWN
	DUCT UP
	SUPPLY/OUTSIDE AIR DUCT SECTION
	RETURN AIR DUCT SECTION
	EXHAUST/RELIEF AIR DUCT SECTION
	4-WAY DIFFUSER WITH BLOWBACK IN ONE DIRECTION
SD-1 6/115	AIR TERMINAL PROPERTIES SYMBOL / NECK SIZE/CFM
###	TERMINAL AIR BOX (REFER TO SCHEDULE)
###	TERMINAL AIR BOX w/REHEAT COIL (REFER TO SCHEDULE)
	FAN POWERED TERMINAL AIR BOX w/REHEAT COIL (REFER TO SCHEDULE)
H	HUMIDIFIER
	OPPOSED BLADE DAMPER (REFER TO SCHEDULE)
	PARALLEL BLADE DAMPER (REFER TO SCHEDULE)
	DIFFERENTIAL PRESSURE SENSOR
H	HUMIDSTAT SENSOR
H	HUMIDISTAT / SENSOR
C	CARBON MONOXIDE SENSOR
C 2	CARBON DIOXIDE SENSOR
O	OCCUPANCY SENSOR
P	PRESSURE SENSOR/MONITOR
P	PRESSURE SENSOR (DUCT MOUNTED)
T	THERMOSTAT/SENSOR
T	TEMPERATURE SENSOR
T	THERMOSTAT/SENSOR WITH HEAVY DUTY ENCLOSURE
T	TEMPERATURE SENSOR WITH WELL
T	THERMOMETER WITH WELL (DIAL TYPE)
	THERMOMETER WITH WELL (FILLED TYPE)
XX-Y	AIRFLOW MEASUREMENT SYMBOL XX - AHU SYMBOL Y - SEQUENTIAL NUMBER

MECHANICAL ABBREVIATION KEY

ABBR:	DESCRIPTION:
AD	ACCESS DOOR
AFF	ABOVE FINISHED FLOOR
C	COMMON
CO	CLEANOUT
CFSD	CONTROL/FIRE/SMOKE DAMPER
DPG (0-2")	DIFFERENTIAL PRESSURE GAUGE (RANGE)
DPS	DIFFERENTIAL PRESSURE SWITCH
EA	EXHAUST/RELIEF AIR
ECFSD	EXISTING CONTROL FIRE SMOKE DAMPER
EFD	EXISTING FIRE DAMPER
EFSD	EXISTING FIRE SMOKE DAMPER
EP	ELECTRICAL TO PNEUMATIC VALVE
ESD	EXISTING SMOKE DAMPER
FD	FIRE DAMPER
FOB	FLAT ON BOTTOM
FOT	FLAT ON TOP
FSD	FIRE/SMOKE DAMPER
MA	MIXED AIR
MV	MIXING VALVE
N.C.	NORMALLY CLOSED
NIC	NOT IN CONTRACT
N.O.	NORMALLY OPEN
OA	OUTSIDE AIR
PS	PRESSURE SWITCH
RA	RETURN AIR
SA	SUPPLY AIR
SCCR	SHORT CIRCUIT CURRENT RATING
SD	SMOKE DAMPER
TAB	TERMINAL AIR BOX
TD	TRANSFER DUCT
TYP	TYPICAL
UC-1	DOOR UNDERCUT BY OTHERS (1" TYPICAL)
UON	UNLESS OTHERWISE NOTES

MECHANICAL RENOVATION NOTES:

THESE NOTES APPLY TO ALL MECHANICAL SHEETS AND TRADES, INCLUDING BUT NOT LIMITED TO, FIRE PROTECTION, PLUMBING, MEDICAL GAS, VENTILATION, PIPING AND TEMPERATURE CONTROL.

1. EXISTING CONDITIONS ARE SHOWN BASED ON INFORMATION OBTAINED FROM FIELD SURVEYS, EXISTING BUILDING DOCUMENTS, AND STAFF. VERIFY EXISTING CONDITIONS AND REPORT ANY CONFLICTS BEFORE PROCEEDING.
2. NOT ALL EXISTING DUCTWORK AND PIPING IS SHOWN. VERIFY EXISTING CONDITIONS BEFORE STARTING WORK. NOTIFY ENGINEER OF ANY CONFLICTS WITH NEW WORK.
3. FIELD VERIFY THE AVAILABLE CLEARANCES FOR DUCTWORK AND PIPING BEFORE FABRICATION. RISES AND DROPS MAY BE NECESSARY BECAUSE OF EXISTING FIELD CONDITIONS.
4. EACH CONTRACTOR SHALL FIELD VERIFY ACCESSIBILITY TO THE AREA OF HIS/HER WORK AND SHALL NOTIFY THE **GENERAL CONTRACTOR** PRIOR TO BIDDING IF OTHER UTILITIES ARE REQUIRED TO BE REMOVED OR RELOCATED TO ALLOW ACCESS TO HIS/HER AREA OF WORK.
5. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR CUTTING, REMOVAL AND PATCHING OF ROOFS, WALLS, AND FLOORS ASSOCIATED WITH WORK BY ALL CONTRACTORS. CONTRACTORS SHALL NOTIFY THE GC OF AFFECTED AREAS PRIOR TO BIDDING.
6. THE **GENERAL CONTRACTOR** IS RESPONSIBLE FOR REMOVAL AND REPLACEMENT OF CEILINGS, CEILING TILES, AND CEILING GRIDS ASSOCIATED WITH AREAS OF WORK BY ALL CONTRACTORS. NOTIFY THE **GENERAL CONTRACTOR** OF AFFECTED AREAS PRIOR TO BIDDING.
7. WHERE EXISTING MECHANICAL SYSTEMS ARE LOCATED IN AREAS THAT CONFLICT WITH NEW EQUIPMENT, PIPING, OR DUCTWORK TO BE INSTALLED, EACH CONTRACTOR SHALL EITHER ARRANGE NEW EQUIPMENT, PIPING, OR DUCTWORK IN SUCH A FASHION THAT IT DOES NOT CONFLICT WITH EXISTING SYSTEMS, OR REWORK EXISTING MECHANICAL SYSTEMS TO ALLOW FOR INSTALLATION OF NEW EQUIPMENT, PIPING, OR DUCTWORK.
8. PROVIDE TEMPORARY CONNECTIONS TO MAINTAIN EXISTING SYSTEMS IN SERVICE DURING CONSTRUCTION. MAINTAIN ACCESS TO EXISTING MECHANICAL INSTALLATIONS THAT REMAIN ACTIVE.
9. OBTAIN PERMISSION FROM OWNER BEFORE SHUTTING DOWN ANY SYSTEM FOR ANY REASON. MAINTAIN SERVICE TO ALL COMPONENTS THAT ARE TO REMAIN UNTIL NEW SYSTEMS ARE INSTALLED.
10. MAINTAIN EXISTING SYSTEM IN SERVICE UNTIL NEW SYSTEM IS COMPLETE AND READY FOR TIE IN AND SWITCHOVER. DRAIN SYSTEM ONLY TO MAKE SWITCHOVERS AND CONNECTIONS. OBTAIN PERMISSION FROM OWNER BEFORE PARTIALLY OR COMPLETELY DRAINING SYSTEM. MAKE CHANGEOVER TO NEW SYSTEMS WITH MINIMUM OUTAGE.

MECHANICAL PHASING NOTES:

THESE NOTES APPLY TO ALL MECHANICAL SHEETS AND TRADES, INCLUDING BUT NOT LIMITED TO, FIRE PROTECTION, PLUMBING, MEDICAL GAS, VENTILATION, PIPING AND TEMPERATURE CONTROL.

1. REFER TO DRAWINGS FOR GENERAL DESCRIPTION OF PHASES. REFER TO **GENERAL CONTRACTOR'S** INSTRUCTIONS FOR MORE DETAILS AND PHASING SCHEDULES AND FOR CONCURRENT WORK. MECHANICAL, ELECTRICAL AND TECHNOLOGY DRAWINGS DEPICT THE INTENT OF THE FINAL DESIGN. THE MECHANICAL, ELECTRICAL, AND TECHNOLOGY DRAWINGS DO NOT DEPICT THE MEANS AND METHODS TO MEET THE REQUIREMENTS OF THE PHASING CRITERIA.
2. REVIEW PROJECT PHASING PLANS TO COORDINATE DEMOLITION WORK, OUTAGES, ETC. WITH AFFECTED ADJACENT AREAS.
3. PROVIDE TEMPORARY DUCTWORK, PIPING, SHUTOFF VALVES, ZONE VALVES, ZONE ALARMS, ETC. AS NEEDED TO MAINTAIN SERVICE TO ALL AREAS DURING ALL PHASES OF PROJECT.
4. INSTALL TEMPORARY DUCTWORK, PIPING, SHUTOFF VALVES, ETC. AS NECESSARY TO KEEP ALL OCCUPIED SPACES OPERATIONAL THROUGHOUT ALL PHASES OF THE PROJECT
5. PHASE DEMOLITION WORK TO MINIMIZE DOWNTIME.

TAB PRE-DEMOLITION NOTES:

1. BEFORE ANY DEMOLITION WORK IS BEGUN A COMPLETE AIR BALANCE TEST SHALL BE PERFORMED BY THE TESTING, ADJUSTING AND BALANCING (TAB) CONTRACTOR ON EXISTING AIR HANDLERS AND EXHAUST FANS SERVING THE AREAS AFFECTED BY CONSTRUCTION. EQUIPMENT TO BE DEMOLISHED DOES NOT REQUIRE TESTING. PROVIDE AIR BALANCE TESTING ONLY ON EQUIPMENT THAT WILL CONTINUE TO BE USED TO SERVE RENOVATED AREAS AFTER THE CONSTRUCTION PHASE IS COMPLETED.
2. PROVIDE DUCT TRAVERSE READINGS AT LOCATIONS DESIGNATED ON THE DRAWINGS BY THE "AIRFLOW MEASUREMENT SYMBOL". THOSE MEASUREMENTS SHALL BE INCLUDED IN THE PRE DEMOLITION REPORT AND SHALL BE DESIGNATED WITH THE IDENTIFIER AS MARKED ON THE DRAWINGS. READINGS SHALL BE DESIGNATED WITH THE ROOM NAME AND NUMBER AS MARKED ON THE DRAWINGS. IF FLOOR PLANS DO NOT HAVE UNIQUE ROOM NAMES AND NUMBERS, TAB CONTRACTOR SHALL INCLUDE FLOOR PLAN WITH UNIQUE NUMBER DESIGNATIONS ASSIGNED TO READINGS THAT MATCH THOSE USED IN THE FINAL PRE-DEMOLITION REPORT. DRAWINGS THAT ARE HAND-MARKED WITH RED INK ARE ACCEPTABLE, PROVIDED THEY ARE LEGIBLE.
3. IN THE EVENT A DUCT TRAVERSE LOCATION AS MARKED ON THIS PLAN IS INACCESSIBLE FOR MEASUREMENT, THE TAB CONTRACTOR SHALL PERFORM THE TRAVERSE AT AN ALTERNATE LOCATION OR SHALL TAKE MULTIPLE DUCT TRAVERSES AND/OR READINGS AS REQUIRED TO DETERMINE THE AIRFLOW READING WHERE THE DUCT TRAVERSE SYMBOL IS SHOWN. IN THE EVENT TRAVERSES ARE TAKEN AT ALTERNATE LOCATION(S), TAB CONTRACTOR SHALL INCLUDE A DRAWING THAT SHOWS THE LOCATIONS WHERE THE ACTUAL MEASUREMENTS WERE TAKEN.
4. TAKE A DUCT STATIC PRESSURE READING AT EACH LOCATION WHERE A DUCT TRAVERSE READING IS TAKEN AND INCLUDE IN THE FINAL PRE-DEMOLITION TAB REPORT.
5. TAB CONTRACTOR SHALL COMPILE AND SUBMIT FOUR COPIES OF THE FINAL PRE-DEMOLITION REPORT WITHIN 10 WORKING DAYS AFTER THE FIELD MEASUREMENTS ARE COMPLETED. FINAL TAB REPORT SHALL BE SUBMITTED FOR REVIEW TO THE ARCHITECT/ENGINEER. TESTING SHALL INCLUDE ALL ITEMS REQUIRED IN THE SPECIFICATIONS.

TAB POST-CONSTRUCTION NOTES:

1. AFTER CONSTRUCTION ACTIVITIES ARE COMPLETE, TESTING, ADJUSTING (TAB) AND BALANCING CONTRACTOR SHALL REBALANCE AIR HANDLING UNITS AND EXHAUST FANS AS REQUIRED TO ACHIEVE THE NEW AIRFLOW VALUES SHOWN ON THE CONSTRUCTION DRAWINGS.
2. AREAS SERVED BY THIS EQUIPMENT WHICH WERE NOT RENOVATED SHALL BE RE-BALANCED TO THE AIRFLOW RATES MEASURED BEFORE THE RENOVATION OCCURRED (REFER TO THE FINAL PRE- DEMOLITION REPORT).
3. IF DUCT TRAVERSE LOCATION AS MARKED ON THE DRAWINGS IS INACCESSIBLE FOR MEASUREMENT, THE TAB CONTRACTOR SHALL PERFORM THE TRAVERSE AT AN ALTERNATE LOCATION OR SHALL TAKE MULTIPLE DUCT TRAVERSES AND/OR GRILLE READINGS AS REQUIRED TO DETERMINE THE FLOW RATE. IN THE EVENT TRAVERSES ARE TAKEN AT AN ALTERNATE LOCATION(S), TAB CONTRACTOR SHALL INCLUDE A DRAWING THAT SHOWS THE LOCATIONS WHERE THE ACTUAL MEASUREMENTS WERE TAKEN.
4. A DUCT STATIC PRESSURE READING SHALL BE TAKEN AT EACH LOCATION WHERE A DUCT TRAVERSE READING IS TAKEN AND SHALL BE INCLUDED IN THE FINAL POST-CONSTRUCTION TAB REPORT.
5. TAB CONTRACTOR SHALL COMPILE AND SUBMIT COPIES OF THE FINAL POST-CONSTRUCTION TAB REPORT AS REQUIRED BY SECTION 23 05 93.
6. THE FINAL POST CONSTRUCTION REPORT SHALL INCLUDE ALL ITEMS REQUIRED IN THE SPECIFICATIONS.

PIPING GENERAL NOTES:

1. THE SIZE OF BRANCH PIPING TO TERMINAL HEATING DEVICES AND COILS SHALL BE 3/4" UNLESS NOTED OTHERWISE.
2. PIPE DRAIN LINES FROM EQUIPMENT TO NEAREST FLOOR DRAIN.
3. INSTALL ALL REFRIGERANT LIQUID AND SUCTION PIPING SIZED PER EQUIPMENT MANUFACTURER RECOMMENDATIONS.

VENTILATION GENERAL NOTES:

1. UNLESS NOTED OTHERWISE, THE SIZE OF EACH BRANCH DUCT TO A TERMINAL AIR BOX (TAB) SHALL MATCH THE INLET SIZE UNLESS THE BRANCH IS GREATER THAN 6FEET IN LENGTH, IN WHICH CASE THE BRANCH DUCT SHALL BE SIZED AT A PRESSURE DROP OF 0.07"W.C. PER 100' OF DUCTWORK.
2. UNLESS NOTED OTHERWISE, THE SIZE OF EACH BRANCH DUCT TO AN AIR TERMINAL SHALL MATCH THE INLET SIZE.
3. ALIGN TEMPERATURE SENSORS WITH LIGHT SWITCHES AND WHEN IN CLOSE PROXIMITY TO EACH OTHER.
4. PROVIDE ACCESS DOORS AT ALL DUCT MOUNTED EQUIPMENT.
5. EXISTING AIR INLET AND OUTLET CFM SHOWN ON DRAWINGS ARE FROM EXISTING DRAWINGS, AND ARE FOR REFERENCE ONLY. CONTRACTOR SHALL USE PRE-BALANCE VALUES, AND NOT EXISTING CFM SHOWN ON DRAWINGS.
6. CONTRACTOR MAY REUSE PORTIONS OF EXISTING DUCT PROVIDED SIZES AND PRESSURE CLASSES ARE CORRECT, DUCT IS THOROUGHLY CLEANED AND FREE OF DEFECTS, AND ALL TRANSVERSE JOINTS, LONGITUDINAL SEAMS, AND DUCT WALL PENETRATIONS ARE SEALED AS SPECIFIED FOR NEW DUCTWORK.

MECHANICAL GENERAL NOTES:

THESE NOTES APPLY TO ALL MECHANICAL SHEETS AND TRADES, INCLUDING BUT NOT LIMITED TO, FIRE PROTECTION, PLUMBING, MEDICAL GAS, VENTILATION, PIPING AND TEMPERATURE CONTROL.

1. DRAWINGS SHOWING LOCATIONS OF EQUIPMENT, DUCTWORK, PIPING, ETC. ARE DIAGRAMMATIC AND MAY NOT ALWAYS REFLECT EXACT INSTALLATION CONDITIONS. DRAWINGS SHOW THE GENERAL ARRANGEMENT OF DUCTWORK, PIPING, EQUIPMENT, ETC., AND MAY NOT INCLUDE ALL OFFSETS AND FITTINGS REQUIRED FOR COMPLETE INSTALLATION. THE DRAWINGS SHALL BE FOLLOWED AS CLOSELY AS ACTUAL BUILDING CONSTRUCTION AND THE WORK OF OTHERS WILL PERMIT.
2. DO NOT SCALE DRAWINGS. VERIFY ALL DIMENSIONS AND CLEARANCES FROM ARCHITECTURAL, STRUCTURAL, SUBMITTALS, AND OTHER APPROPRIATE DRAWINGS OR PHYSICALLY AT SITE. REVIEW ALL DRAWINGS, INCLUDING THOSE OF OTHER TRADES.
3. COORDINATE ALL WORK WITH ALL OTHER TRADES PRIOR TO INSTALLATION TO PROVIDE CLEARANCES REQUIRED FOR OPERATION, MAINTENANCE, CODE COMPLIANCE, AND TO VERIFY NON-INTERFERENCE WITH OTHER WORK. DO NOT FABRICATE PRIOR TO VERIFICATION OF NECESSARY CLEARANCES FOR ALL TRADES. BRING ANY INTERFERENCES OR CONFLICTS TO THE ATTENTION OF THE ARCHITECT/ENGINEER BEFORE PROCEEDING WITH FABRICATION OR EQUIPMENT ORDERS.
4. REVIEW SPACE REQUIREMENTS OF EQUIPMENT SPECIFIED OR SUBSTITUTED AND MAKE REASONABLE ACCOMMODATIONS IN LAYOUT AND POSITIONING TO PROVIDE PROPER ACCESS.
5. ANY CHANGES REQUIRED TO ELIMINATE CONFLICTS OR THAT RESULT FROM A FAILURE TO COORDINATE SHALL BE MADE BY THE CONTRACTOR WITHOUT ADDITIONAL COST OR EXPENSE TO OTHERS.
6. EACH CONTRACTOR IS RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH ELECTRICAL CHANGES REQUIRED FOR EQUIPMENT PROPOSED THAT DIFFERS FROM THE BASIS OF DESIGN.
7. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN, ELECTRICAL, TECHNOLOGY AUDIO/VISUAL, AND OTHER MECHANICAL PLANS FOR EXACT LOCATIONS OF ALL CEILING MOUNTED DEVICES, OTHER THAN SPRINKLERS.
8. EACH CONTRACTOR IS RESPONSIBLE FOR DAMAGE CAUSED BY THEIR ACTIONS TO WALLS, FLOORS, CEILINGS, AND ROOFS. THE CONTRACTOR WHOSE WORK CAUSES DAMAGE IS RESPONSIBLE FOR PATCHING TO MATCH ORIGINAL CONSTRUCTION, FIRE RATING, AND FINISH.
9. IN AREAS WITH DRYWALL CEILINGS COORDINATE LOCATIONS OF ACCESS PANELS WITH THE GC FOR ACCESS TO VALVES, DUCTWORK ACCESSORIES, DAMPERS, ETC. COORDINATE PANEL TYPE AND COLOR WITH ARCHITECT. NOTIFY THE GC OF THE REQUIRED ACCESS PANELS PRIOR TO BIDDING.
10. SEAL ALL FLOOR AND WALL PENETRATIONS AIRTIGHT WHERE CONDUITS, PIPING, AND DUCTS PENETRATE.
11. CAULK ALL PIPE AND DUCT PENETRATIONS OF FULL HEIGHT NON-FIRE RATED WALL, PARTITION, FLOOR, AND ROOF ASSEMBLIES. THIS IS ESSENTIAL TO PREVENT NOISE TRANSMISSION FROM ONE ROOM TO ANOTHER AND TO PROVIDE THE DESIRED NC LEVELS WITHIN ROOMS.
12. WHERE PIPES AND DUCTS ARE SHOWN TO PENETRATE FLOORS, PROVIDE SLEEVED OPENINGS WITH THE TOP EDGE RAISED ABOVE FLOOR SURFACE IN ACCORDANCE WITH ALL RELEVANT SPEC SECTIONS. SEAL SLEEVE PERIMETER TO BE WATERTIGHT.
13. EQUIPMENT SIZES AND SERVICE CLEARANCE REQUIREMENTS VARY AMONG DIFFERENT MANUFACTURERS. CONSULT APPROVED SHOP DRAWINGS FOR EQUIPMENT SIZES AND REQUIRED SERVICE CLEARANCES. COORDINATE WITH LAYOUT OF EQUIPMENT PADS, PIPING, DUCTWORK, ETC.
14. DO NOT BLOCK TUBE PULL OR EQUIPMENT SERVICE CLEARANCES.
15. MAINTAIN MINIMUM 3'-6" CLEARANCE IN FRONT OF ALL ELECTRICAL PANELS, MOTOR STARTERS, SWITCHES, AND DISCONNECTS.
16. PROVIDE CONCRETE EQUIPMENT PAD FOR ALL FLOOR MOUNTED EQUIPMENT. PAD SHALL EXTEND MINIMUM 6" BEYOND ALL SIDES OF EQUIPMENT.
17. DO NOT SUPPORT EQUIPMENT, PIPING, OR DUCTWORK FROM METAL DECKING OR OTHER NON-STRUCTURAL BUILDING ELEMENTS. ANCHORS EMBEDDED IN CONCRETE SHALL BE CRACKED CONCRETE APPROVED IN ACCORDANCE WITH SPECIFICATIONS.

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Missouri State Certificate of Authority E-2017008530

REFERENCE SCALE IN INCHES
0 1 2 3

RELEASED FOR CONSTRUCTION
As Noted on Plans Review
Development Services Department
Lee's Summit, Missouri
11/29/2021

STATE OF MISSOURI
BRUCE ELDON HART
NUMBER E-22817
PROFESSIONAL ENGINEER

Bruce E. Hart
Missouri #E-22817
11/12/21

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Saint Luke's ED Finish Upgrades
100 NE Saint Luke's Blvd
Lee's Summit, MO 64086

Date	11/12/21
Job Number	3-21024
Drawn By	MJL
Checked By	BEH

Revision

Number	Date	Description

M000.1

MECHANICAL COVERSHEET

11/10/2021 4:22:34 PM

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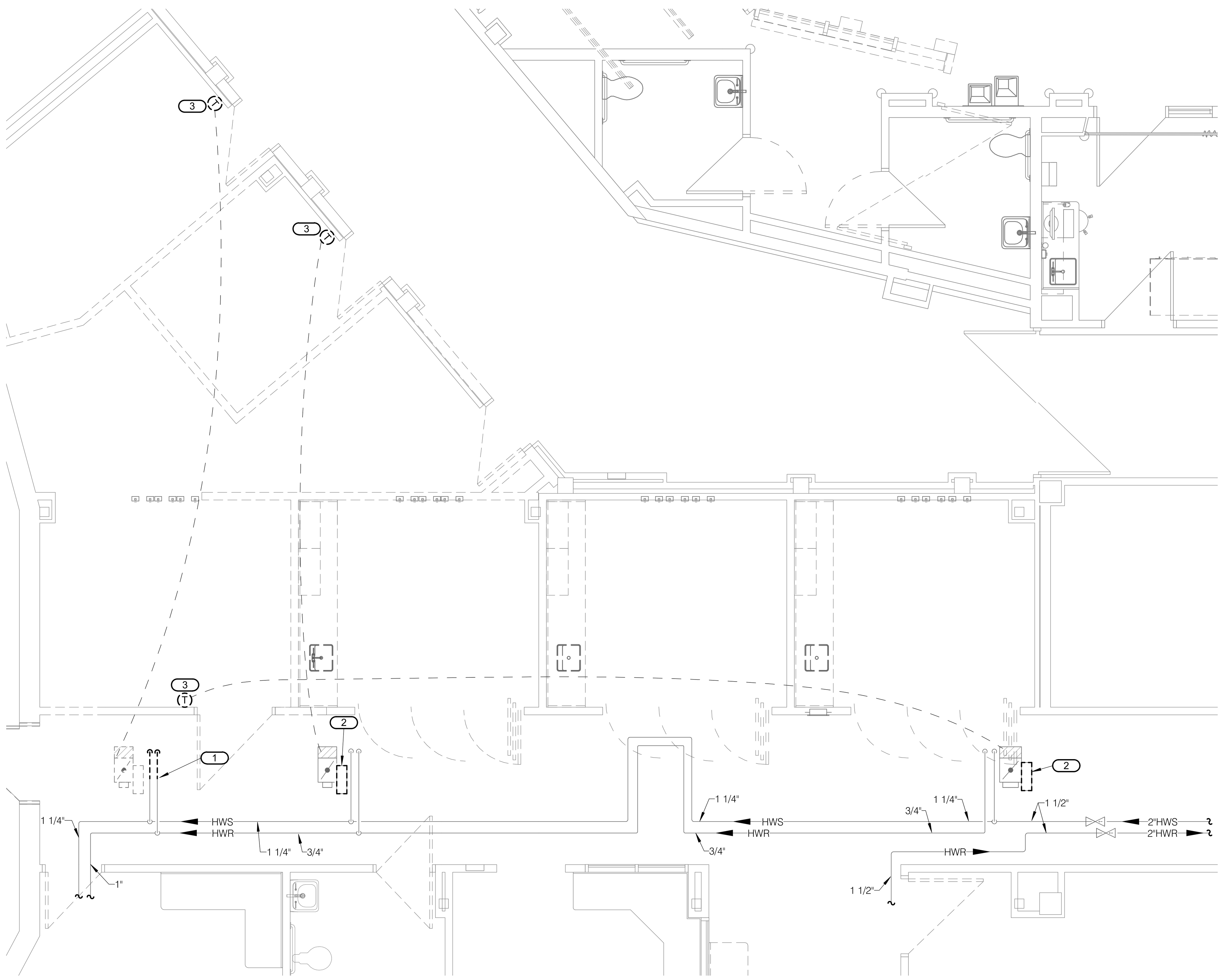
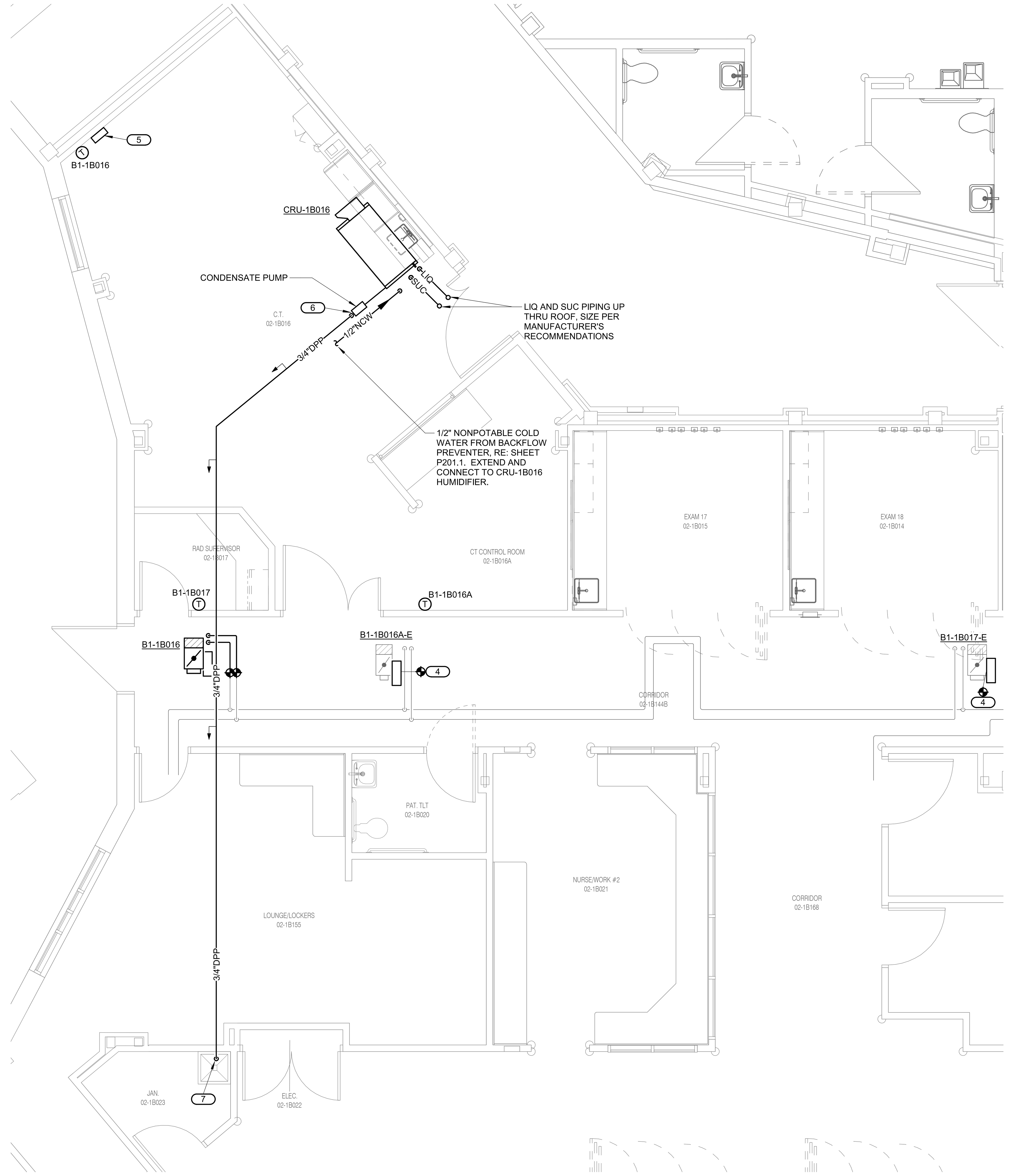


1 FIRST FLOOR DEMOLITION - PIPING AND CONTROLS - CT

1/4" = 1'-0"

NORTH



2 FIRST FLOOR - PIPING AND CONTROLS - CT

1/4" = 1'-0"

NORTH

SHEET NOTES:

1. REFER TO GENERAL NOTES ON SHEET M000.1.
2. PRIOR TO PERFORMING DEMOLITION, TAKE HEATING HOT WATER FLOW READINGS (IN FULL HEATING MODE, AT MAXIMUM FLOW RATE) AT ALL TERMINAL AIR BOX REHEAT COILS WHERE THE CONTROLS ARE BEING UPGRADED UNDER THIS PROJECT AND REPORT RESULTS IN WRITING.
3. TERMINAL AIR BOX (TAB) TAGS ARE BASED ON ROOM NUMBERS SERVED AND MAY NOT MATCH THE BOX TAGS IN THE FACILITY MANAGEMENT AND CONTROL SYSTEM (FMCS).
4. EXISTING FACILITY MANAGEMENT AND CONTROL SYSTEM (FMCS) IS A JOHNSON CONTROLS METASYS SYSTEM. IF A NEW FMCS NETWORK CONTROLLER OR ANY OTHER CENTRALIZED HARDWARE IS REQUIRED TO ALLOW FOR THE CONTROLS UPGRADES, OR IF NEW COMMUNICATIONS WIRING IS REQUIRED, OR IF FMCS SOFTWARE UPDATES ARE REQUIRED, THEN ANY/ALL THOSE SHALL BE INCLUDED IN THE SCOPE OF WORK.
5. EACH DDC UNITARY CONTROLLER SHALL BE POWERED BY EXISTING 24V POWER THAT SERVED THE OLD CONTROLLER. IF NEW 120V OR 24V POWER IS REQUIRED FOR ANY NEW NETWORK HARDWARE OR ANY OTHER REASON, THEN ELECTRICAL PROVISIONS SHALL BE INCLUDED IN THE SCOPE OF WORK.

KEYNOTES: (#)

1. CUT 3/4" HWS AND HWR AND REMOVE PIPING TO TERMINAL AIR BOX THAT IS BEING REMOVED, INCLUDING ACCESSORIES. PROTECT REMAINING PIPING FOR NEW CONNECTIONS.
2. DISCONNECT AND REMOVE DDC TERMINAL AIR BOX CONTROLLER INCLUDED ASSOCIATED 2-WAY HEATING HOT WATER CONTROL VALVE AND MANUAL BALANCING VALVE (NOT SHOWN), AND ANY ASSOCIATED AUXILIARY SENSORS, CONTROL DEVICES, AND/OR CONTROL WIRING THAT CANNOT BE RE-USED. PROTECT TERMINAL AIR BOX AND REMAINING PIPING FOR NEW CONNECTIONS.
3. DISCONNECT AND REMOVE THERMOSTAT ASSOCIATED WITH TERMINAL AIR BOX (OR BOX CONTROLS) BEING REMOVED. REMOVE ANY CONTROL WIRING THAT CANNOT BE RE-USED.
4. PROVIDE AND INSTALL NEW DDC UNITARY CONTROLLER AND NEW PRESSURE-INDEPENDENT CONTROL (PIC) VALVE (NOT SHOWN) ON EXISTING TERMINAL AIR BOX. SIZE THE NEW PIC VALVE FOR DESIGN FLOW RATE (GPM) INDICATED. REFER TO CONTROL DIAGRAM ON SHEET M610.1.
5. TOUCHSCREEN DISPLAY CONTROL INTERFACE (WITH TEMPERATURE AND HUMIDITY SENSORS) FOR COMPUTER ROOM UNIT CRU-1B016. COORDINATE EXACT LOCATION WITH CT EQUIPMENT VENDOR AND ENGINEER. AVOID PLACING NEAR ANY EQUIPMENT THAT REJECTS HEAT.
6. CONDENSATE PUMP FURNISHED WITH CRU-1B016. IF THE COMPUTER ROOM UNIT CAN BE INSTALLED HIGH ENOUGH THAT IT CAN DRAIN ENTIRELY BY GRAVITY, THIS PUMP SHALL NOT BE INSTALLED. OTHERWISE, INSTALL PUMP ACCORDING TO MANUFACTURERS WRITTEN INSTRUCTIONS (PUMP SHALL BE POWERED FROM TERMINAL BLOCK IN CRU-1B016). EXTEND DISCHARGE PIPING UP AS HIGH AS POSSIBLE, THEN PITCH ALL DOWNSTREAM PIPING TO DRAIN BY GRAVITY. COORDINATE ROUTING WITH EXISTING CONDITIONS AND PROVIDE TEE WITH CLEANOUT PLUG AT EACH CHANGE IN DIRECTION.
7. TURN DRAIN PIPING DOWN ON FACE OF WALL AND TERMINATE OVER JANITOR SINK. PROVIDE A SIGN THAT READS, "CONDENSATE DRAIN PIPING FROM C.T. ROOM 1B016."

RELEASED FOR CONSTRUCTION
Development Services Department
Lee's Summit, Missouri

STATE OF MISSOURI
BRUCE ELDON HART
NUMBER E-22817
PROFESSIONAL ENGINEER

Bruce E. Hart
Missouri #E-22817
11/12/21

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Date	11/12/21
Job Number	3-21024
Drawn By	Author
Checked By	Checker

Revision

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PROJECT # 21003531.00
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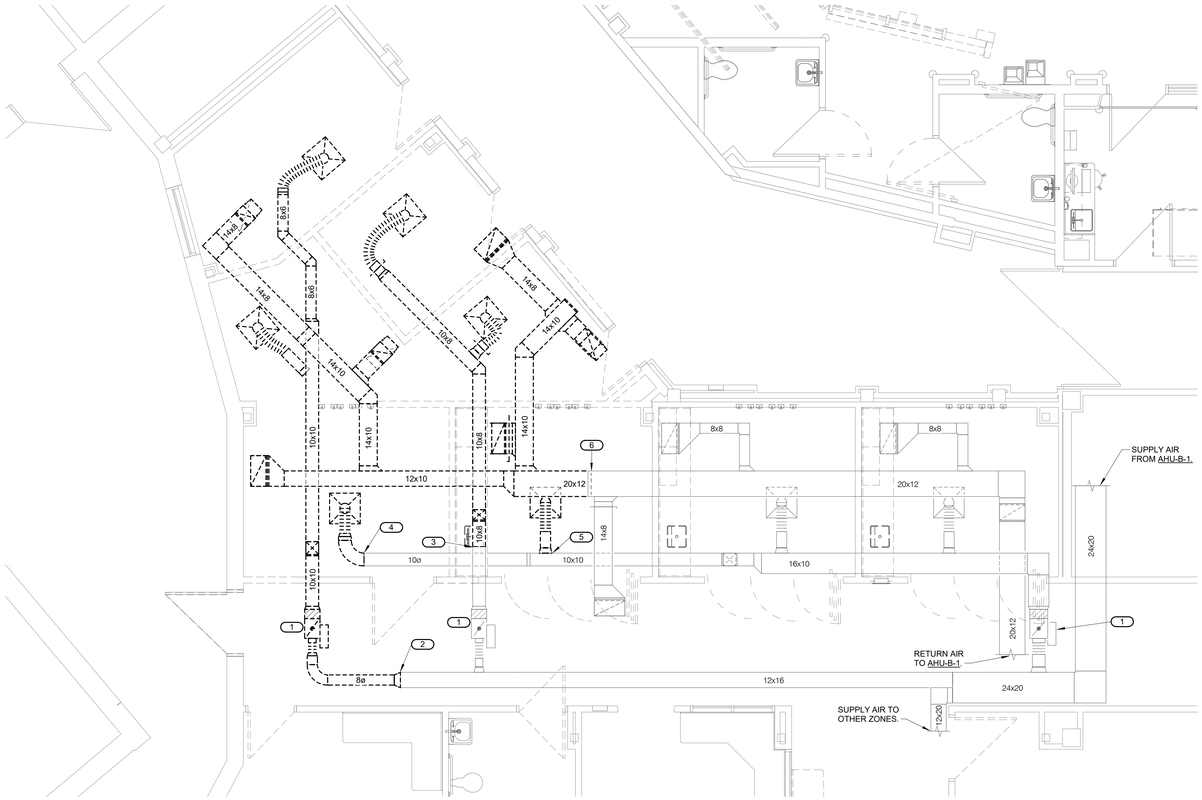
REFERENCE SCALE IN INCHES

M201.1

FIRST FLOOR - PIPING AND CONTROLS



1 FIRST FLOOR DEMOLITION - VENTILATION - CT

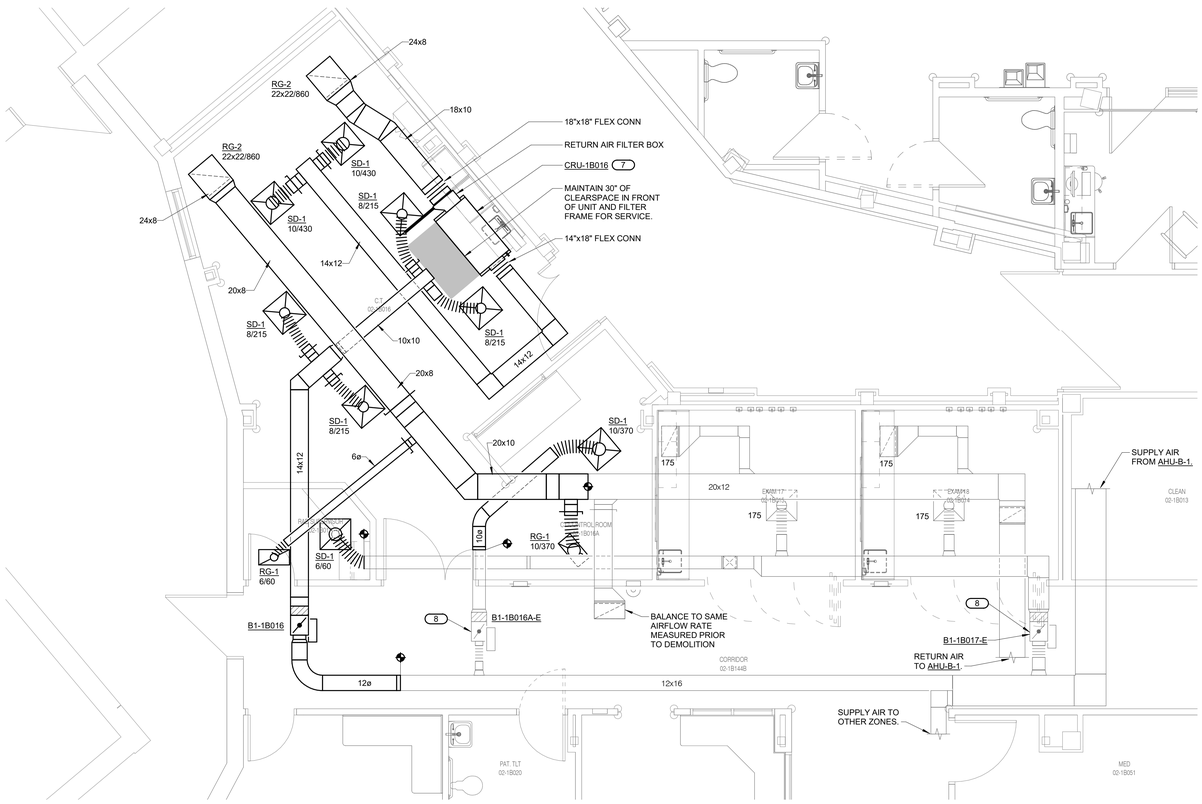
1/4" = 1'-0"

SHEET NOTES:

1. REFER TO GENERAL NOTES ON SHEET M000.1.
2. PRIOR TO ERECTING CONSTRUCTION BARRIERS OR PERFORMING DEMOLITION, TAKE AIRFLOW READINGS AT EXISTING AHU-B-1 (FAN SOURCE READINGS AT SUPPLY AND RETURN FANS, STATIC PRESSURE PROFILE, OUTSIDE AIR READINGS, ETC.) AND AT EXISTING TERMINAL AIR BOXES SERVING THE PROJECT AREAS, ALONG WITH ALL ASSOCIATED SUPPLY AND RETURN AIR TERMINALS ASSOCIATED WITH THOSE TABS AND/OR WITHIN THE PROJECT AREA. REPORT RESULTS IN WRITING.
3. TERMINAL AIR BOX (TAB) TAGS ARE BASED ON ROOM NUMBERS SERVED AND MAY NOT MATCH THE BOX TAGS IN THE FACILITY MANAGEMENT AND CONTROL SYSTEM (FMCS).

KEYNOTES: (#)

1. TAKE PRE-DEMOLITION AIRFLOW READINGS AT EXISTING TERMINAL AIR BOX AND AT ALL AIR TERMINALS SERVED BY THE BOX, INCLUDING THOSE OUTSIDE OF THE PROJECT AREA.
2. CUT SUPPLY AIR DUCT AND REMOVE DOWNSTREAM DUCTWORK, 6" TERMINAL AIR BOX AND AIR TERMINALS. PROTECT REMAINING MEDIUM-PRESSURE SUPPLY AIR DUCT FOR NEW CONNECTION.
3. CUT SUPPLY AIR DUCT AND REMOVE DOWNSTREAM DUCTWORK AND AIR TERMINALS. PROTECT REMAINING LOW-PRESSURE SUPPLY AIR DUCT FOR NEW CONNECTION.
4. DISCONNECT AND REMOVE FLEXIBLE DUCT AND AIR TERMINAL. PROTECT REMAINING LOW-PRESSURE SUPPLY AIR DUCT FOR NEW CONNECTION.
5. DISCONNECT AND REMOVE FLEXIBLE DUCT AND AIR TERMINAL AND CAP REMAINING DUCTWORK.
6. CUT RETURN AIR DUCT AND REMOVE UPSTREAM DUCTWORK AND AIR TERMINALS. PROTECT REMAINING RETURN DUCT FOR NEW CONNECTION.
7. INSTALL COMPUTER ROOM STYLE AIR-CONDITIONER SYSTEM INDOOR UNIT ABOVE CEILING BUT NOT DIRECTLY ABOVE MEDICAL EQUIPMENT. CAREFULLY COORDINATE EXACT LOCATION AND ORIENTATION WITH EXISTING WORK, WITH OTHER TRADES, AND WITH OWNER (FACILITIES MANAGER) AND PROVIDE CLEAR SPACE IN FRONT OF UNIT AS INDICATED AND/OR AS RECOMMENDED BY MANUFACTURER FOR COMPONENT ACCESS AND REMOVAL. ENSURE THAT LIGHT FIXTURES AND/OR CEILING TILES IN THIS AREA ARE EASILY MOVEABLE. SUPPORT USING SPRING VIBRATION ISOLATORS.
8. ADJUST AIRFLOW SETTING FOR EXISTING TERMINAL AIR BOX TEST, ADJUST, AND BALANCE ALL AIR TERMINALS ASSOCIATED WITH THIS ZONE (INCLUDING RETURN AIR TERMINALS) TO THE NEW AIRFLOW RATES (CFM) INDICATED.



2 FIRST FLOOR - VENTILATION - CT

1/4" = 1'-0"

RELEASED FOR CONSTRUCTION
Not Released for Bidding Purposes
Development Services Department
City of Lee's Summit, Missouri
11/30/2021

STATE OF MISSOURI
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REFERENCE SCALE IN INCHES
0 1 2 3

M211.1

FIRST FLOOR - VENTILATION

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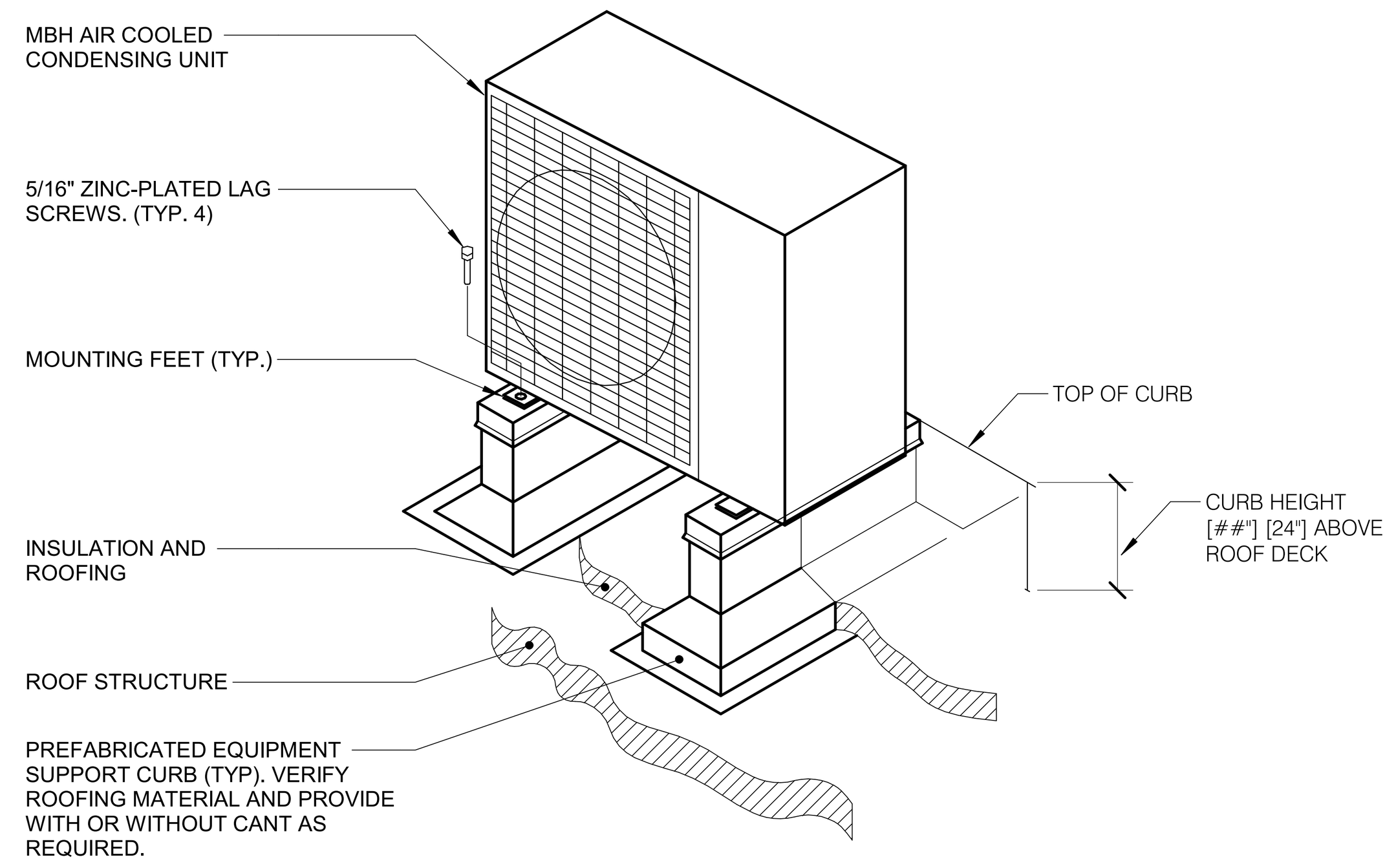
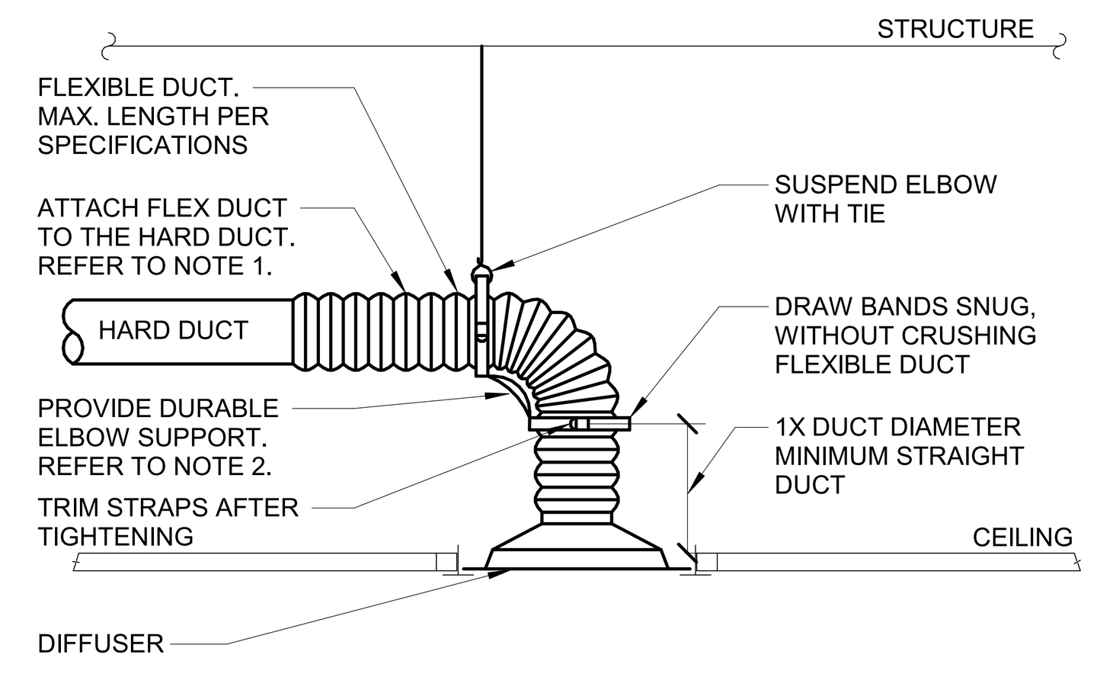


1 ROOF SUPPORT - EQUIPMENT RAIL

NO SCALE

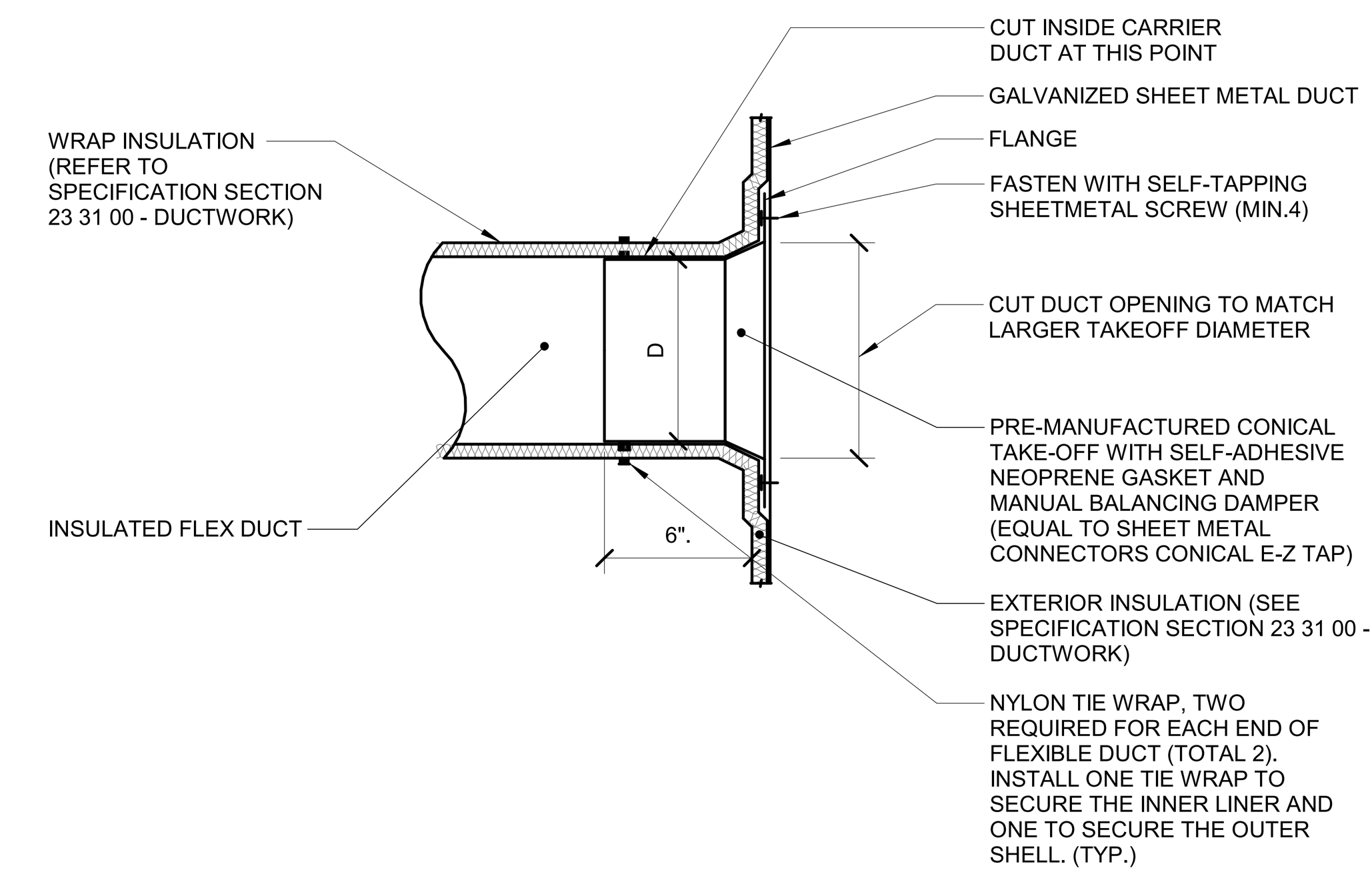


NOTES:

1. TO ATTACH FLEX DUCT TO THE HARD DUCT, TAPE THE INNER LINER TO THE HARD DUCT THEN ATTACH WITH TWO NYLON TIE WRAPS; ONE FOR THE INNER LINER AND ONE FOR THE OUTER SHELL. FOLD THE OUTER SHELL INSIDE ITSELF SO IT HAS NEAT EDGES PRIOR TO TIE WRAPPING.
2. DURABLE ELBOW SUPPORT ACCEPTABLE MANUFACTURER AND MODEL: HART AND COOLEY - SMARTFLOW, THERMAFLEX - FLEXFLOW, TITUS - FLEXRIGHT, OR APPROVED EQUAL.

2 DIFFUSER CONNECTION DETAIL (W/ RADIUS FORMING ELBOW)

NO SCALE

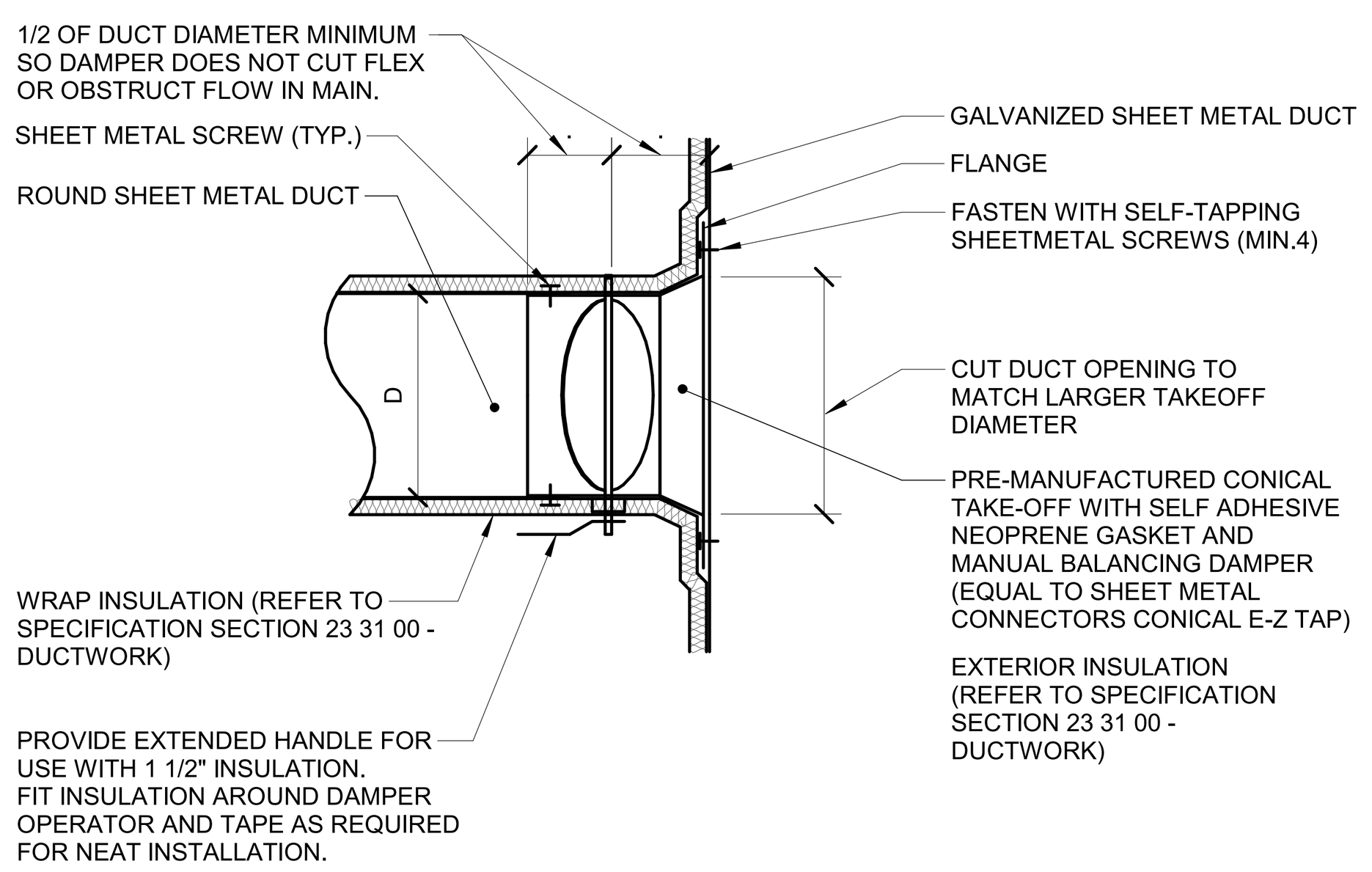


NOTES:

1. THIS DETAIL APPLIES ONLY TO TAPS OFF UNLINED DUCTS.
2. TAP DOES NOT NEED TO BE CONICAL IF THE TAP IS NOT LOCATED BETWEEN FANS AND TERMINAL AIR BOXES, DUCT IS NOT OVER 2" PRESSURE CLASS, AND ROUND DUCT IS NOT OVER 12" DIAMETER.

3 FLEX DUCT CONNECTION (CONICAL/WRAPPED)

NO SCALE

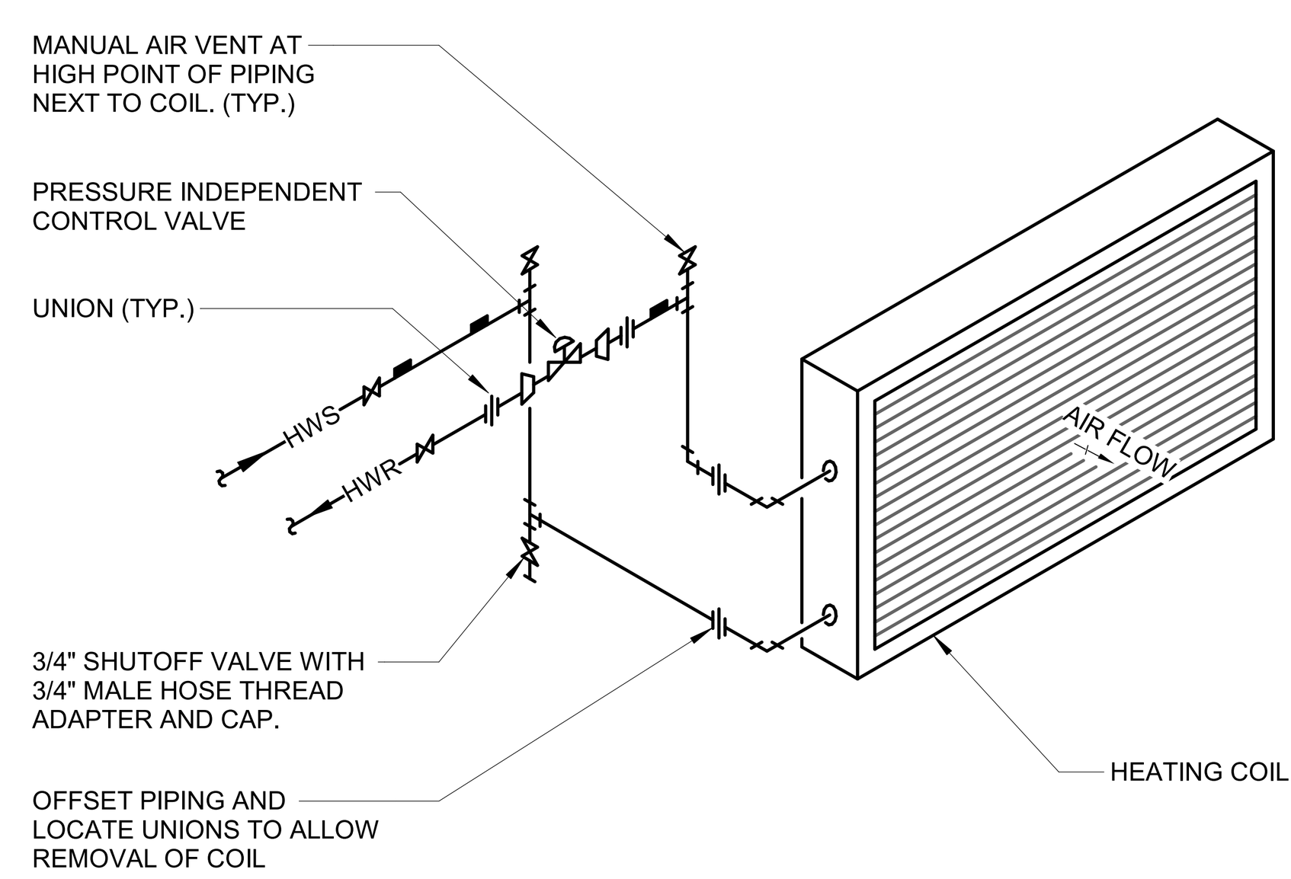


4 ROUND DUCT TAP CONNECTION (CONICAL/WRAPPED)

NO SCALE

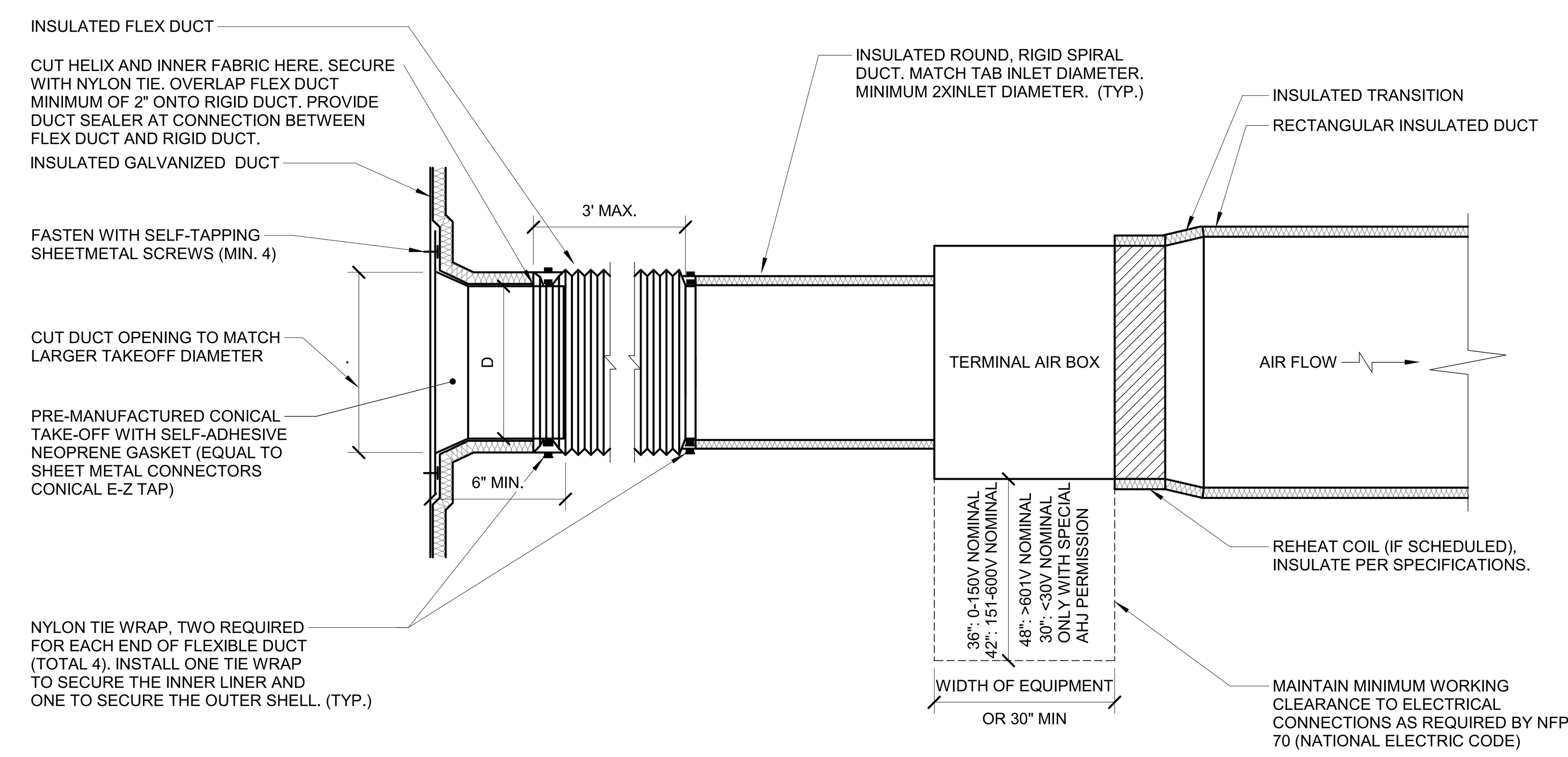
NOTES:

1. THIS DETAIL APPLIES ONLY TO TAPS OFF UNLINED DUCTS.
2. TAP DOES NOT NEED TO BE CONICAL IF THE TAP IS NOT LOCATED BETWEEN FANS AND TERMINAL AIR BOXES, DUCT IS NOT OVER 2" PRESSURE CLASS, AND ROUND DUCT IS NOT OVER 12" DIAMETER.
3. MANUFACTURED TAP/DAMPER COMBINATIONS WITH LESS THAN 1/2 DUCT DIAMETER SPACING BETWEEN THE MAIN DUCT AND THE DAMPER SHAFT ARE ACCEPTABLE ONLY IF THE DAMPER SHAFT IS INSTALLED PARALLEL TO THE AIR FLOW IN THE MAIN DUCT.



5 HOT WATER COIL PIPING

NO SCALE

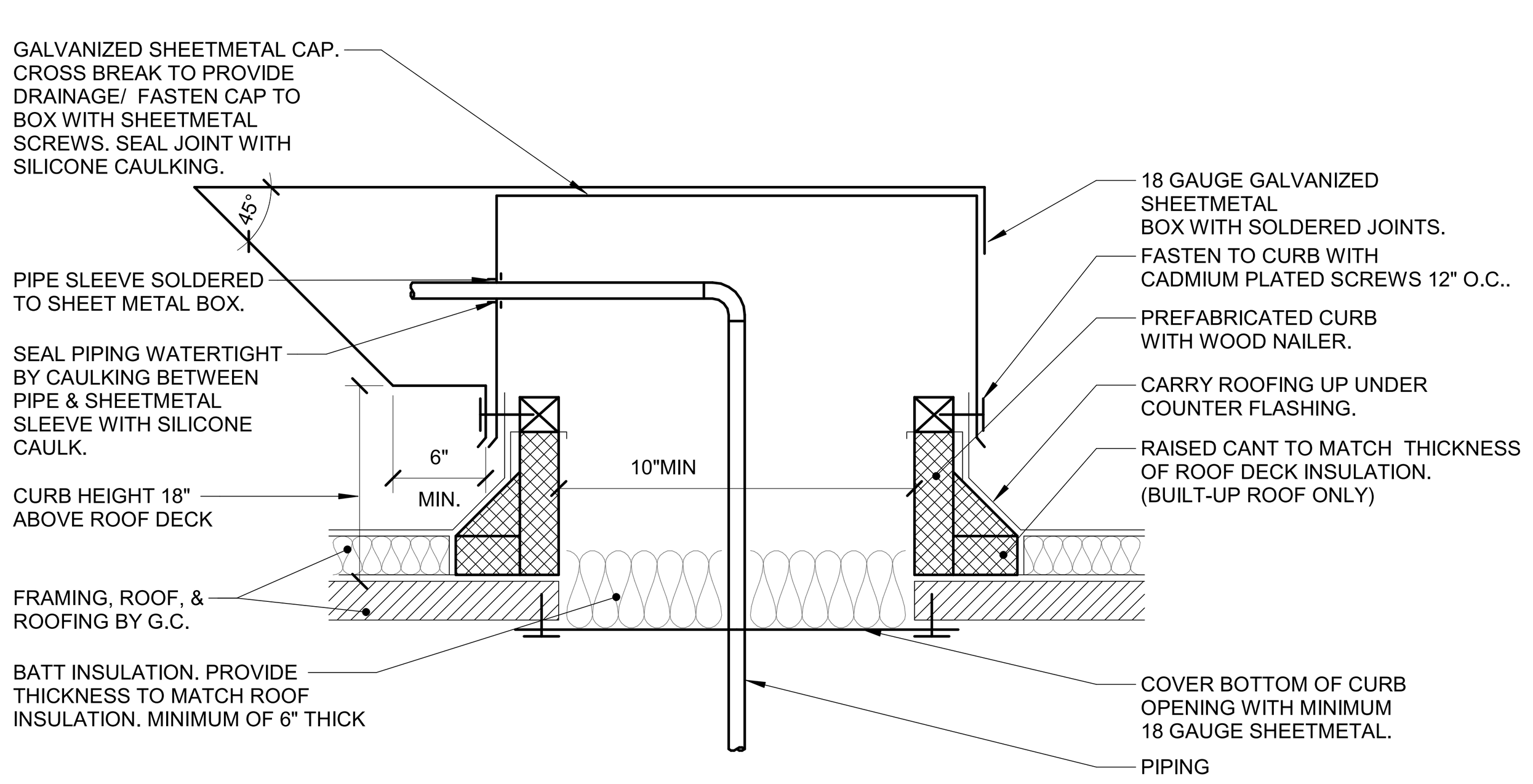


NOTES:

1. THIS DETAIL APPLIES ONLY TO TAPS OFF WRAPPED DUCTS.
2. THIS DETAIL APPLIES TO TERMINAL AIR BOXES WITH ROUND INLETS AND RECTANGULAR OUTLETS.
3. DUCT LEADING TO TAB INLET MUST BE STRAIGHT FOR 1.5 DIAMETER UPSTREAM.
4. MAINTAIN VAPOR BARRIER FROM MAIN TO BRANCH DUCT.

6 TERMINAL AIR BOX DETAIL (WRAPPED MAIN)

NO SCALE



7 ROOF PENETRATION - INSULATED PIPE HOUSING - BUILT UP ROOF

NO SCALE

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RELEASED FOR CONSTRUCTION
As Noted on Plans Review
Development Services Department
Lee's Summit, Missouri
11/30/2021

STATE OF MISSOURI
BRUCE ELDON HART
NUMBER E-22817
PROFESSIONAL ENGINEER

Bruce E. Hart
Missouri #E-22817

11/12/21

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Saint Luke's ED Finish Upgrades
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Date	11/12/21
Job Number	3-21024
Drawn By	MJL
Checked By	DWD

Revision

Number	Date	Description

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PROJECT # 21003531.00
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0 1 2 3

M410.1

VENTILATION AND PIPING DETAILS

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CONTROL SYMBOL LIST

NOT ALL SYMBOLS MAY APPLY.

SYMBOL:	DESCRIPTION:
CR	CONDENSER WATER RETURN
CS	CONDENSER WATER SUPPLY
CS15	CLEAN STEAM - NUMBER INDICATES PRESSURE IN PSIG.
CWR	CHILLED WATER RETURN
CWS	CHILLED WATER SUPPLY
GWR	GLYCOL WATER RETURN
GWS	GLYCOL WATER SUPPLY
HCR	HEATING/CHILLED WATER RETURN
HCS	HEATING/CHILLED WATER SUPPLY
HPC	HIGH PRESSURE CONDENSATE
HPS	HIGH PRESSURE STEAM
HWR	HEATING WATER RETURN
HWS	HEATING WATER SUPPLY
LPC	LOW PRESSURE CONDENSATE
LPS	LOW PRESSURE STEAM
LWR	LOOP WATER RETURN
LWS	LOOP WATER SUPPLY
PC	PUMPED CONDENSATE
RWR	REHEAT WATER RETURN
RWS	REHEAT WATER SUPPLY
VAC	LAB VACUUM
	CONTROL VALVE (THREE-WAY)
	CONTROL VALVE (TWO-WAY)
	SOLENOID VALVE
	CHECK VALVE
	THERMOSTAT
	THERMOSTAT/SENSOR WITH HEAVY DUTY ENCLOSURE
	TEMPERATURE SENSOR (DUCT MOUNTED)
	TEMPERATURE SENSOR WITH WELL
	THERMOMETER WITH WELL (DIAL TYPE)
	THERMOMETER WITH WELL (FILLED TYPE)
	AVERAGING TEMPERATURE SENSOR
	LOW LIMIT TEMPERATURE SWITCH
	PROBE TEMPERATURE SENSOR
	PRESSURE SENSOR (FURNISHED WITH BALL VALVE)
	PRESSURE GAUGE (FURNISHED WITH BALL VALVE)
	DIFFERENTIAL PRESSURE SENSOR
	PRESSURE SENSOR (DUCT MOUNTED)
	STATIC SWITCH
	ANALOG INPUT
	ANALOG OUTPUT
	FLOW METER
	FLOW SWITCH
	FLOW SENSOR
	AIR FLOW SWITCH
	DUCT FLOW METER
	HUMIDIFIER
	DUCT SMOKE DETECTOR
	HEATING/ COOLING COIL
	AIR BLENDER
	MANUAL MOTOR STARTER W/THERMAL OVERLOAD
	FAN
	MOTOR
	CONTACTOR
	PUMP
	HUMIDISTAT SENSOR
	HUMIDISTAT / SENSOR
	HUMIDITY SENSOR (DUCT MOUNTED)
	CARBON MONOXIDE SENSOR
	CARBON DIOXIDE SENSOR
	CARBON MONOXIDE SENSOR (DUCT MOUNTED)
	CARBON DIOXIDE SENSOR (DUCT MOUNTED)
	FILTER
	TERMINAL AIR BOX
	TERMINAL AIR BOX W/ REHEAT
	OCCUPANCY SENSOR
	SENSOR
	ACTUATOR
	DOOR SWITCH
	DIFFERENTIAL PRESSURE SWITCH
	CURRENT SWITCH
	VIBRATION SWITCH
	NORMALL CLOSED CONTACT
	NORMALLY OPEN CONTACT
	OPPOSED BLADE DAMPER
	PARALLEL BLADE DAMPER

TEMPERATURE CONTROLS ABBREVIATION KEY

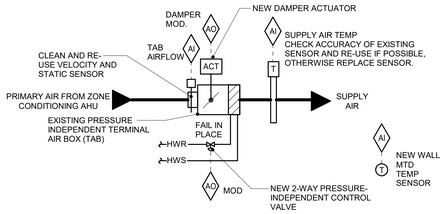
ABBR:	DESCRIPTION:
EA	EXHAUST/RELIEF AIR
MA	MIXED AIR
MV	MIXING VALVE
N.C.	NORMALLY CLOSED
NIC	NOT IN CONTRACT
N.O.	NORMALLY OPEN
OA	OUTSIDE AIR
TYP	TYPICAL
RA	RETURN AIR
SA	SUPPLY AIR
UON	UNLESS OTHERWISE NOTES

SEQUENCE OF OPERATION

COMPUTER ROOM UNIT (CRU) SYSTEM INCLUDES FACTORY-MOUNTED CONTROLS WITH BACNET COMMUNICATIONS CAPABILITY. PROVIDE A BACNET CONNECTION TO THE FACILITY MANAGEMENT AND CONTROL SYSTEM (FMCS), AND COORDINATE WITH THE OWNER THE POINTS TO MAP TO THE FMCS, AND PROVIDE GRAPHICS ON FMCS OPERATOR INTERFACE AS REQUIRED.

1 COMPUTER ROOM UNIT SYSTEM CONTROL DIAGRAM

NO SCALE



SEQUENCE OF OPERATION:

- FMCS TAB CONTROLLER SHALL MODULATE THE TAB DAMPER AND TAB HEATING WATER REHEAT COIL TO MAINTAIN SPACE SETPOINT BASED ON A SIGNAL FROM A WALL MOUNTED TEMPERATURE SENSOR.
- AT FULL COOLING, THE TAB SHALL BE OPEN TO MAXIMUM CFM POSITION. THE REHEAT COIL CONTROL VALVE SHALL BE CLOSED.
- UPON A FALL IN SPACE TEMPERATURE, THE TAB SHALL MODULATE CLOSED UNTIL SPACE SETPOINT IS MAINTAINED, OR UNTIL IT REACHES ITS MINIMUM SCHEDULED CFM POSITION THE REHEAT COIL CONTROL VALVE SHALL BE CLOSED.
- UPON A FURTHER FALL IN SPACE TEMPERATURE, THE REHEAT COIL CONTROL VALVE SHALL MODULATE OPEN TO MAINTAIN SPACE SETPOINT UNTIL THE SUPPLY AIR TEMPERATURE IS 20°F ABOVE ROOM TEMPERATURE SETPOINT.
- UPON A FURTHER FALL IN SPACE TEMPERATURE, TAB SHALL OPEN TO MAINTAIN SETPOINT UNTIL TAB AIRFLOW REACHES ITS MAXIMUM HEATING SETTING. THE REHEAT CONTROL VALVE SHALL CONTINUE TO MODULATE OPEN TO MAINTAIN MAXIMUM DELTA T LISTED ABOVE.
- THE FMCS OPERATOR SHALL HAVE THE ABILITY TO ADJUST, OVERRIDE, AND DISPLAY TEMPERATURES AND SET POINTS FROM THE EXISTING FMCS WORKSTATION.

ALARMS, INTERLOCKS & SAFETIES:

SEND AN ALARM TO THE FMCS OPERATOR INTERFACE IF THE SPACE TEMPERATURE IS MORE THAN 10°F (ADJ.) ABOVE OR BELOW SETPOINT.

2 TAB CONTROL W/ HOT WATER REHEAT

NO SCALE

TEMPERATURE CONTROL GENERAL NOTES:

1. REFER TO EQUIPMENT SCHEDULES TO CROSS REFERENCE WHICH CONTROL DIAGRAMS APPLY TO WHICH ITEMS OF EQUIPMENT. REFER TO TERMINAL AIR BOX (TAB) SCHEDULES FOR TEMP SENSOR REQUIREMENTS FOR EACH TAB.
2. EACH D.I., D.O., A.I. AND A.O. POINT SHOWN FOR ALL CONTROL DIAGRAMS SHALL BE DISCRETE FROM ALL OTHER POINTS EXCEPT AS SPECIFICALLY NOTED.
3. ALL WIRING, CONTROL COMPONENTS, DEVICES AND PROGRAMMING SHOWN ON THESE CONTROL DRAWINGS SHALL BE PROVIDED BY THE TCC UNLESS SPECIFICALLY NOTED OTHERWISE.
4. TEMPERATURE CONTROL CABLING, CONDUIT, BOXES, IDENTIFICATION: REFER TO THE SPECIFICATIONS FOR A COMPLETE LIST OF REQUIREMENTS.
5. ALL ACTUATORS SHALL BE OF THE ELECTRICAL TYPE FOR THIS PROJECT UNLESS AN ACTUATOR IS SPECIFICALLY INDICATED ON THE DRAWINGS OR SPECIFICATIONS TO BE PNEUMATIC.
6. MODULATING SIGNALS SHALL BE DISPLAYED AS % OPEN (SIGNALS DISPLAYED AS % CLOSED ARE NOT ACCEPTABLE).
7. ALL CONTROL COMPONENTS SUCH AS RELAYS, SWITCHES, DDC CONTROLLERS, ETC. SHALL BE MOUNTED IN STEEL ENCLOSURES WITH STEEL MOUNTING BACKPLATES PER SPECIFICATION 23 09 00.
8. EACH CONTROL PANEL SHALL HAVE A LAMINATED COPY OF THE APPLICABLE SEQUENCE OF OPERATION AND CONTROL DIAGRAM INDICATING THE POINTS, COMPONENTS AND OPERATION OF EQUIPMENT ASSOCIATED WITH EACH PANEL. REFER TO SECTION 23 09 00 FOR ADDITIONAL REQUIREMENTS.
9. TCC SHALL WIRE THE CONTROL SIGNAL FROM THE ASSOCIATED AIR HANDLING UNIT CONTROL PANEL TO CONTROL THE OPERATION OF SMOKE DAMPERS IN ACCORDANCE WITH SEQUENCE OF OPERATION. TCC SHALL PROVIDE ALL WIRING, CONDUIT, TRANSFORMERS, FUSING AND ALL OTHER ELECTRICAL COMPONENTS REQUIRED FOR COMPLETE INSTALLATION.
10. TCC SHALL EXTEND CONTROL SIGNAL FROM ADDRESSABLE RELAY DEVICE SERVING EACH AIR HANDLING UNIT. REFER TO ELECTRICAL DRAWINGS FOR LOCATIONS. TCC SHALL EXTEND AND TERMINATE WIRING AS REQUIRED FOR EQUIPMENT SHUTDOWN.
11. TCC SHALL PROVIDE LOW VOLTAGE WIRING FROM POWER SUPPLIES TO ALL CONTROLLERS, MONITORS, COMPONENTS AND DEVICES REQUIRING 24 VAC POWER. ADDITIONAL POWER SUPPLIES NOT SHOWN AND REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM SHALL BE PROVIDED BY THE TEMPERATURE CONTROL CONTRACTOR. THE TEMPERATURE CONTROL CONTRACTOR SHALL PROVIDE FINANCIAL PROVISIONS WITHIN THEIR BID FOR THE ELECTRICAL CONTRACTOR TO PROVIDE BRANCH POWER TO THE ADDITIONAL POWER SUPPLIES. COORDINATE THE LOCATION OF ADDITIONAL POWER SUPPLY CABINET WITH THE ELECTRICAL CONTRACTOR.
12. TCC SHALL PROVIDE THERMOSTATS FOR AUTOMATIC CONTROL OF EQUIPMENT AS REQUIRED BY THESE CONTROL DRAWINGS. THERMOSTAT CONTACT AMP RATING SHALL BE MINIMUM 125% OF THE MAX. CURRENT DRAW FOR THE EQUIPMENT BEING SERVED. WHERE THERMOSTATS CONTROL THE STARTING OF MOTORS (I.E. FANS), THERMOSTATS SHALL BE RATED FOR MOTOR STARTING APPLICATIONS.
13. CONTROL DIAGRAMS ARE SCHEMATIC IN NATURE AND DO NOT SHOW ALL REQUIRED CONTROL DEVICES AND COMPONENTS. REFER TO FLOOR PLANS, FLOW DIAGRAMS AND DETAILS FOR ADDITIONAL CONTROL DEVICES, COMPONENTS AND REQUIREMENTS NOT SHOWN ON THESE CONTROL DRAWINGS.
14. TCC SHALL PROVIDE ALL CONTROL COMPONENTS AND ACCESSORIES AS REQUIRED FOR EQUIPMENT TO BE CONTROLLED AS DESCRIBED IN THE SEQUENCE OF OPERATION REGARDLESS OF WHETHER ALL CONTROL COMPONENTS OR POINTS ARE SHOWN IN THE ASSOCIATED CONTROL DIAGRAM.

EXISTING TERMINAL AIR BOX BALANCING SCHEDULE

TAG NAME	MIN. INLET SIZE (IN.) DIA.	COOLING MAX. CFM	COOLING MIN. CFM	HEATING MAX. CFM	REHEAT COIL GPM
B1-1B016A-E	6"	370	230	230	0.5
B1-1B017-E	10"	410	410	410	1.3

TERMINAL AIR BOX SCHEDULE - SINGLE DUCT

NOTES:
1.NEITHER RADIATED NOR DISCHARGE SOUND LEVELS SHALL EXCEED NC 35 AT 1.5" INLET STATIC PRESSURE WHEN TESTED PER AHRI STANDARD 885-2008 USING 5/8" 20-LB DENSITY MINERAL FIBER CEILING TILE.
2.TOTAL AIR PRESSURE DROP OF TAB AND REHEAT COIL SHALL NOT EXCEED 0.50" WC.
3.HEATING COIL IS BASED ON HEATING AIR FLOW. WATER PRESSURE DROP OF REHEAT COILS SHALL NOT EXCEED 5'. PROVIDE REHEAT COILS SEPARATE FROM BOXES IF REQUIRED TO MEET WATER PRESSURE DROP REQUIREMENTS. WHEN LAT °F, EWT °F, AND GPM VALUES ARE BLANK, HEATING COIL IS NOT REQUIRED FOR TAB.
4.HEATING COIL SELECTION SHALL BE BASED ON A FIXED LEAVING AIR TEMPERATURE AND VARIABLE FLOW (GPM). PROVIDE FINAL MAXIMUM FLOW RATE (GPM) TO TEST & BALANCE TERMPERATURE CONTROLS CONTRACTORS.

TAG NAME	CFM			HEATING COIL (NOTES 5, 6)				MIN. INLET SIZE (IN.) DIA.	MANUFACTURER	MODEL (NOTES 1, 2)	NOTES
	COOLING MAX.	HEATING MAX.	MIN.	EAT °F	LAT °F	EWT °F	MAX. GPM				
B1-1B016	860	860	860	55.0	100.0	180	2.8	10"	TITUS	DESV	NOTES 1, 2, 3, 4

COMPUTER ROOM UNIT & CONDENSING UNIT SCHEDULE

PLAN MARK	LOCATION/ AREA SERVED	TYPE	MANUF.	MODEL NUMBER	PRE-FILTERS		COOLING COIL				SUPPLY FAN				REHEAT		HUMIDIFIER			ELECTRICAL (INDOOR UNIT)			OUTDOOR UNIT							OPER. WT. LBS.	NOTES
					EFFICIENCY	QUANTITY & SIZE	TYPE	ENT. AIR DB/RH	TOTAL BTUH	SENSIBLE BTUH	TYPE	AIRFLOW CFM	E.S.P. IN. W.G.	MOTOR HP.	TYPE	CAPACITY BTUH	TYPE	CAPACITY LBS/HR	KW	VOLTS/PHASE/HZ	MCA	DISC. SW.	PLAN MARK	TYPE	LOW AMBIENT	HIGH AMBIENT	VOLTS/PHASE/HZ	MCA	DISC. SW.		
CRU-1B016	CT EXAM RM 1B016	ABOVE-CEILING	LIEBERT	MMD24ENPJ0D4 (INDOOR) PFH-027A-PHN (OUTDOOR)	MERV 8	1 - 20"x20"	EVAPORATOR	75°F/50%	20,900	17,900	DIRECT DRIVE CENTRIFUGAL	860	0.3	0.5	——	——	STEAM GENERATING CANISTER	4.3	1.5	208-230/1/60	9.2	BY ELEC	CU-1B016	OUTDOOR AIR-COOLED W/ SCROLL COMP.	-10°F	105°F	208-230/1/60	15.4	BY ELEC	250 (INDOOR) 250 (OUTDOOR)	1

NOTES

1. FURNISH INDOOR UNIT WITH FACTORY-MOUNTED CONTROLS, INCLUDING COMMUNICATIONS CARD TO ALLOW REMOTE ACCESS TO THE CONTROLS THROUGH A BACNET COMMUNICATIONS LINK. CONTROLS SHALL INCLUDE A FACTORY-MOUNTED FILTER CLOG SWITCH, A FACTORY-MOUNTED DRAIN PAN FLOAT SWITCH (WIRED TO SHUT OFF INDOOR UNIT TO PREVENT DRAIN PAN OVERFLOW), AND A COMMON ALARM CONTACT. FURNISH A TOUCH SCREEN CONTROL INTERFACE WITH TEMPERATURE & HUMIDITY SENSORS FOR REMOTE FIELD MOUNTING ON THE WALL. FURNISH A PRE-FILTER BOX FOR FIELD INSTALLATION WITH FILTER AS SCHEDULED. FURNISH AN ELECTRIC CONDESNATE PUMP FOR FIELD INSTALLATION. FURNISH AND CHARGE SYSTEM WITH REFRIGERANT R-407C AS REQUIRED.

AIR TERMINAL SCHEDULE

NOTES:
1.CONTRACTOR SHALL DETERMINE PROPER BORDER TYPE TO MATCH CEILING CONSTRUCTION.
2.REFER TO DRAWINGS FOR NECK SIZE. ALL BRANCH DUCTWORK TO AIR TERMINALS SHALL BE NECK SIZE UNLESS NOTED OTHERWISE.

TAG NAME	FACE SIZE (IN.) (NOTE 2)	TYPE	BORDER (NOTE 1)	MATERIAL	FINISH	VOLUME DAMPER REQUIRED	MANUFACTURER	MODEL	NOTES
RG-1	24x12	LOUVERED FACE GRILLE, 45 DEG. DEFLECTION	LAY-IN	STEEL	WHITE	NO	TITUS	23RL	OMIT SCREW HOLES
RG-2	24x24	LOUVERED FACE GRILLE, 45 DEG. DEFLECTION	LAY-IN	STEEL	WHITE	NO	TITUS	23RL	OMIT SCREW HOLES
SD-1	24x24	SQUARE PLAQUE DIFFUSER	LAY-IN	STEEL	WHITE	NO	TITUS	OMNI	

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0 1 2 3

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City of Lee's Summit, Missouri
11/09/2021

STATE OF MISSOURI
BRUCE ELDON HART
NUMBER E-22817
PROFESSIONAL ENGINEER
11/12/21

Bruce E. Hart
Missouri #E-22817

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Date	11/12/21
Job Number	3-21024
Drawn By	Author
Checked By	Checker

Revision

Number	Date	Description

M610.1

SCHEDULES AND CONTROL DIAGRAMS

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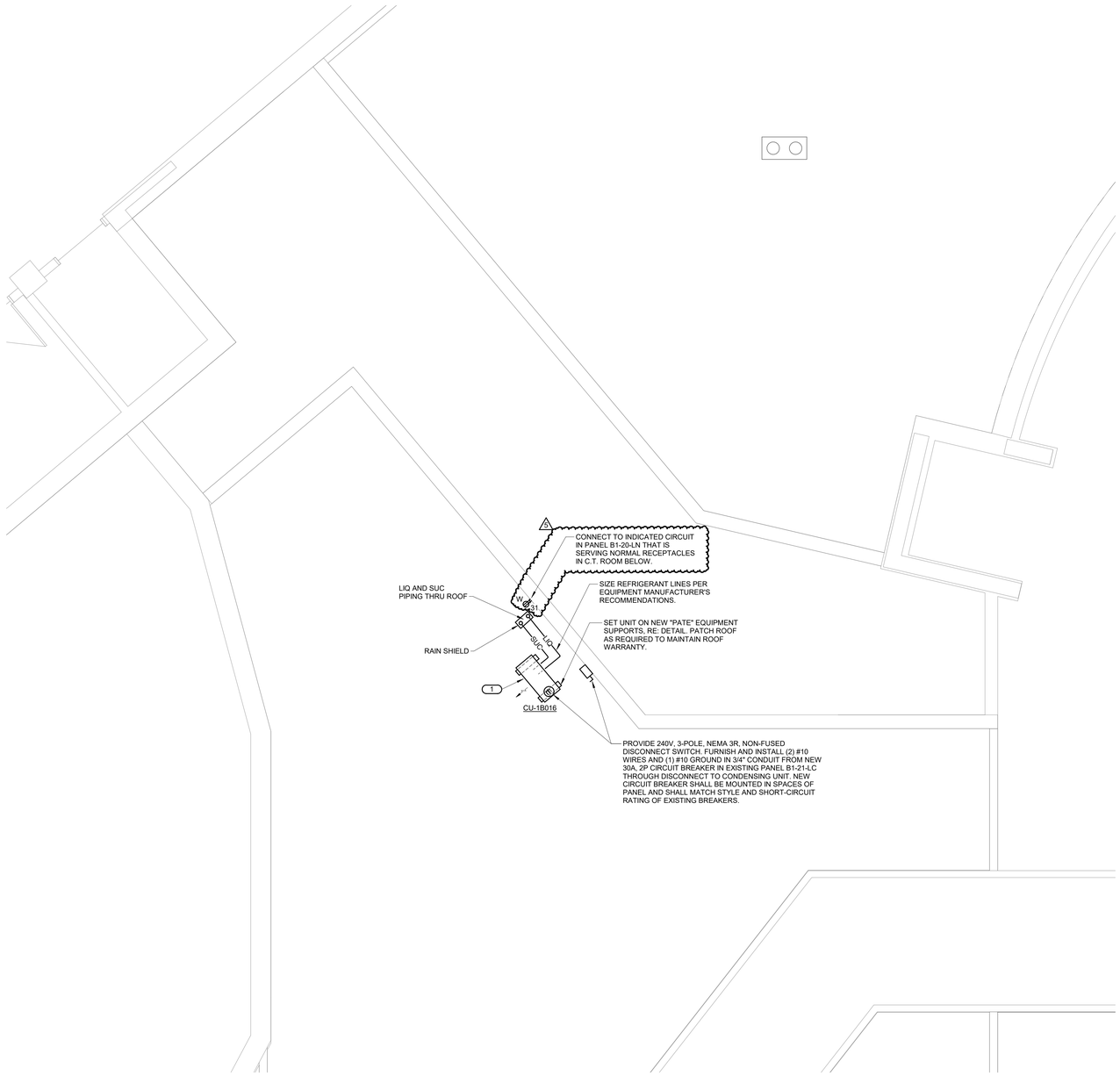
SHEET NOTES:

1. REFER TO GENERAL NOTES ON SHEET M000.1 AND E000.1.

KEYNOTES: (#)

1. COORDINATE EXACT LOCATION OF NEW CONDENSING UNIT WITH STRUCTURAL ENGINEER. MAINTAIN 3' OF SPACE AROUND OF SPACE ARROUND UNIT FOR SERVICE AND INSTALL NOT LESS THAN 10' FROM EDGE OF ROOF.



1 ROOF - PIPING/ELECTRICAL

1/4" = 1'-0"

RELEASED FOR CONSTRUCTION
As noted on plans review
Development Services Department
City of Lee's Summit, Missouri
11/24/2021

STATE OF MISSOURI
BRUCE ELDON HART
NUMBER E-22817
PROFESSIONAL ENGINEER

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Saint Luke's ED Finish Upgrades
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Lee's Summit, MO 64086

Date	11/12/21
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Drawn By	MJL/PLR
Checked By	BEH

Revision

Number	Date	Description
5	11-29-21	City Comments

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ROOF - PIPING/ELECTRICAL

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ELECTRICAL SYMBOL LIST

SYMBOL:	DESCRIPTION:
S	SWITCH - SINGLE POLE
S_{60}	SWITCH - LOCAL TIMER - SPRING WOUND
S_T	WATTSTOPPER DIGITAL TIME SWITCH: TS-400
S_J	SWITCH - DOOR JAMB
S_E	SWITCH - EMERGENCY
S_X	SWITCH - EXPLOSION PROOF
S_K	SWITCH - SINGLE POLE - KEY LOCK
S_L	SWITCH - LIGHTED HANDLE
S_M	SWITCH - MOMENTARY CONTACT
S_W	SWITCH - WEATHERPROOF
S_2	SWITCH - TWO POLE
S_{K2}	SWITCH - TWO POLE - KEY LOCK
S_3	SWITCH - THREE WAY
S_{3E}	SWITCH - THREE WAY - EMERGENCY
S_{K3}	SWITCH - THREE WAY - KEY LOCK
S_4	SWITCH - FOUR WAY
S_{4E}	SWITCH - FOUR WAY - EMERGENCY
S_{K4}	SWITCH - FOUR WAY - KEY LOCK
S_C	SWITCH - THREE POSITION-CENTER OFF
S	COMBINATION SWITCH AND RECEPTACLE
D_6	DIMMER - 600 WATT
$D3_6$	DIMMER - 600 WATT - 3 WAY
$D3_{10}$	DIMMER - 1000 WATT - 3 WAY
$D3_{15}$	DIMMER - 1500 WATT - 3 WAY
$D3_{20}$	DIMMER - 2000 WATT - 3 WAY
D_{D3}	DIMMER - LED - 3-WAY
D_O	WATTSTOPPER DUAL TECHNOLOGY DIMMING LINE VOLTAGE WALL OCCUPANCY SENSOR: DSW-311
(R) D#	WATTSTOPPER DIGITAL LIGHTING MANAGEMENT ROOM CONTROLLER. # - REFERS TO NUMBER OF RELAYS AND D REFERS TO 0-10V DIMMING CONTROLLER
(LS)	DAYLIGHT LEVEL SENSOR
(LS) 3	DAYLIGHT LEVEL SENSOR - 3 ZONE
(LS) D	DAYLIGHT LEVEL SENSOR - 1 ZONE DIMMING
(LS) 3D	DAYLIGHT LEVEL SENSOR - 3 ZONE DIMMING
(PC)	WATTSTOPPER DLM SYSTEM PHOTO CELL: LMLS-500
(OC) D	WATTSTOPPER DUAL TECHNOLOGY CEILING OCCUPANCY SENSOR WITH POWER PACK: LMDC-100
OC D	OCCUPANCY SENSOR - DUAL TECHNOLOGY - WALL MOUNTED
S_O	WATTSTOPPER DUAL TECHNOLOGY LINE VOLTAGE WALL OCCUPANCY SENSOR: DSW-301
S_{O2}	SWITCH - OCCUPANCY SENSOR AND DUAL SWITCH - DUAL TECHNOLOGY
(OC) P	OCCUPANCY SENSOR - PASSIVE INFRARED 360 DEGREE COVERAGE
(OC) P2	OCCUPANCY SENSOR - PASSIVE INFRARED 100 DEGREE COVERAGE
OC P	OCCUPANCY SENSOR - PASSIVE INFRARED - WALL MOUNTED
(OC) U	OCCUPANCY SENSOR - ULTRASONIC 360 DEGREE COVERAGE
(OC) U2	OCCUPANCY SENSOR - ULTRASONIC 35'X30' HAND MOTION COVERAGE
(OC) A	OCCUPANCY SENSOR - ULTRASONIC TWO SIDED CORRIDOR COVERAGE
OC U	OCCUPANCY SENSOR - ULTRASONIC - WALL MOUNTED
SW	WALL CONTROL STATION
TC	TIME SWITCH
#B ZZ	WATTSTOPPER DIGITAL LIGHTING MANAGEMENT CONTROL STATION KEYPAD WITH PROGRAMMABLE FUNCTION BUTTONS . # INDICATES NUMBER OF SWITCHES. ZZ INDICATES TYPE: SX: BUTTON PAD - X NUMBER OF BUTTONS. D1: ONE BUTTON DIMMING ROCKER SWITCH.
S_{LV}	CENTRAL CONTROL - STATION
	LIGHTING CONTROL PANEL
LCD	LIGHTING CONTROL LCD STATION
NLC	NURSE CALL LIGHTING CONTOLLER
ALCR	AUTOMATIC LOAD CONTROL RELAY - WATT STOPPER EMERGENCY LIGHTING CONTROL UNIT. UPON LOSS OF NORMAL POWER, EMERGENCY LIGHTING SHALL BE BROUGHT TO FULL BRIGHTNESS REGARDLESS OF SWITCH POSITION. PROVIDE ALL LOW VOLTAGE CABLING AS REQUIRED: ELCU-200
(R) BMS	WATTSTOPPER DIGITAL LIGHTING MANAGEMENT INPUT/OUTPUT INTERFACE FOR BMS CONTROL OF LIGHTING. PROVIDE ALL LOW VOLTAGE CABLING AS REQUIRED: IMP-101

ELECTRICAL SYMBOL LIST

SYMBOL:	DESCRIPTION:
▭	LINEAR LUMINAIRES
□	TROFFER
◠	WALL SCONCE LUMINAIRE
○	DOWNLIGHT LUMINAIRE
<○	AIMABLE OR WALL WASH LUMINAIRE
	INDUSTRIAL LUMINAIRE
	WALL BRACKET LUMINAIRE
	POLE MOUNTED LUMINAIRE
⊗	SINGLE FACE EXIT SIGN
⊗	DOUBLE FACE EXIT SIGN
⊗	WALL/CEILING EMERGENCY EXIT SIGN
	EMERGENCY UNIT

ELECTRICAL SYMBOL LIST

SYMBOL:	DESCRIPTION:
O	DUPLEX RECEPTACLE CONTROLLED BY OCCUPANCY
O	QUAD RECEPTACLE CONTROLLED BY OCCUPANCY
	DUPLEX RECEPTACLE, 125V
	DUPLEX GFI RECEPTACLE, 125V
G	GROUND FAULT DEVICE
W	DUPLEX GFI WEATHERPROOF AND WEATHER RESISTANT LABELED RECEPTACLE 125V
X	DUPLEX RECEPTACLE, EXPLOSION PROOF, 125V
	ISOLATED GROUND RECEPTACLE, 125V
S	ISOLATED GROUND RECEPTACLE WITH SURGE SUPPRESSION, 125V
S	ISOLATED GROUND QUAD RECEPTACLE WITH SURGE SUPPRESSION, 125V
U	DUPLEX RECEPTACLE, USB CHARGING
	ARC FAULT CIRCUIT INTERRUPTER RECEPT 125V
	SIMPLEX RECEPTACLE, 125V
	RECEPTACLE, 125V
	RECEPTACLE 125V, 50A, 125V
	RECEPTACLE, 6-20R, 250V
	RECEPTACLE, 6-30R, 250V
	RECEPTACLE, 6-50R, 250V
	RECEPTACLE, 7-20R, 277V
	RECEPTACLE, 7-30R, 277V
	RECEPTACLE, 7-50R, 277V
	RECEPTACLE, 14-20R, 125/250V
	RECEPTACLE, 14-30R, 125/250V
	RECEPTACLE, 14-50R, 125/250V
	RECEPTACLE, 14-60R, 125/250V
	RECEPTACLE, 15-20R, 250V, 3PH
	RECEPTACLE, 15-30R, 250V, 3PH
	RECEPTACLE, 15-50R, 250V, 3PH
	RECEPTACLE, 15-60R, 250V, 3PH
	RECEPTACLE, LOCKING TYPE, L5-20R, 125V
	RECEPTACLE, LOCKING TYPE, L5-30R, 125V
	RECEPTACLE, LOCKING L6-20R, 250V
	RECEPTACLE, LOCKING L6-30R, 250V
	RECEPTACLE, LOCKING L7-20R, 277V
	RECEPTACLE, LOCKING L7-30R, 277V
	RECEPTACLE, LOCKING L14-20R, 125/250V
	RECEPTACLE, LOCKING L14-30R, 125/250V
	RECEPTACLE, LOCKING L15-20R, 250V, 3PH
	RECEPTACLE, LOCKING L15-30R, 250V, 3PH
	RECEPTACLE, L16-20R, 480V, 3PH
	RECEPTACLE, L16-30R, 480V, 3PH
	RECEPTACLE, LOCKING L21-20R, 120/208V, 3PH
	RECEPTACLE, LOCKING L21-30R, 120/208V, 3PH
X	RECEPTACLE, EXPLOSION PROOF, 125V
	DUPLEX RECEPTACLE, TAMPER RESISTANT, 125V
	GFI DUPLEX RECEPTACLE, TAMPER RESISTANT, 125V
	QUAD RECEPTACLE, TAMPER RESISTANT, 125V
	QUAD RECEPTACLE, 125V
	QUAD GFI RECEPTACLE, 125V
U	QUAD RECEPTACLE, USB 125V
W	QUAD GFI WEATHER PROOF OR WEATHER RESISTANT LABELED RECEPTACLE, 125V
	RECEPTACLE - PEDESTAL STYLE
	RECEPTACLE - PEDESTAL STYLE
#	FLOOR BOX - POKE THRU, 125V
#	IEC PIN AND SLEEVE RECEPTACLE, 600V
	POWER POLE

TECHNOLOGY SYMBOL LIST

AV#	.	AV DEVICE IN FLOOR BOX/POKE THROUGH	.
	N/A	AV DEVICE IN FLOOR BOX/POKE THROUGH - EXISTING	.
AV#	.	AV FLOOR BOX/POKE THROUGH WITH AV	.
	N/A	AV FLOOR BOX/POKE THROUGH WITH AV - EXISTING	.
C#	.	TECHNOLOGY FLOOR BOX/POKE THROUGH WITH INFORMATION OUTLET	.
	N/A	TECHNOLOGY FLOOR BOX/POKE THROUGH WITH INFORMATION OUTLET - EXISTING	.
C# AV#	.	TECHNOLOGY FLOOR BOX/POKE THROUGH WITH INFORMATION OUTLET AND AV	.
	N/A	TECHNOLOGY FLOOR BOX/POKE THROUGH WITH INFORMATION OUTLET AND AV - EXISTING	.
C# AV#	.	INFORMATION OUTLET AND AV DEVICE IN FLOOR BOX/POKE THROUGH	.
	N/A	INFORMATION OUTLET AND AV DEVICE IN FLOOR BOX/POKE THROUGH - EXISTING	.
C# ▼	SC-IO-W	INFORMATION OUTLET (WALL)	.
▽	N/A	INFORMATION OUTLET (WALL) EXISTING	.
W ▼	.	INFORMATION OUTLET WALL PHONE (WALL)	.
▽	N/A	INFORMATION OUTLET WALL PHONE (WALL) EXISTING	.
C#	SC-IO-C	INFORMATION OUTLET (CEILING)	.
	N/A	INFORMATION OUTLET (CEILING) EXISTING	.
(WAP)	.	WIRELESS ACCESS POINT WITH ENCLOSURE (CEILING)	.
WAP	.	WIRELESS ACCESS WITH POINT ENCLOSURE (WALL)	.
FF	SC-FF-F	TECHNOLOGY POKE THROUGH FOR FURNITURE FEED (FLOOR)	.
	N/A	FLOOR BOX POKE THROUGH FOR FURNITURE FEED - EXISTING	.
(S1)	PA-S1-C	FACILITY PAGING SPEAKER (CEILING) TYPE 1	.
VC1	PA-VC1-W	FACILITY PAGING VOLUME CONTROL (WALL) TYPE 1	.
(CAM)	VS-CAM-C	CLOSED CIRCUIT TELEVISION (CCTV) CAMERA (CEILING)	.

ELECTRICAL SYMBOL LIST

SYMBOL:	DESCRIPTION:
GB	GROUND BUS
IBT	INTERSYSTEM BONDING TERMINATION
(E) E	ELECTRICAL CONNECTION
(J) J	JUNCTION BOX
	FLOOR BOX - DUPLEX RECEPTACLE
	FLOOR BOX - SEE NOTES BELOW
	FLOOR BOX - MULTI SERVICE
▼	TECHNOLOGY ROUGH-IN, FLOOR BOX
SV	FLOOR - SERVICE FITTING
RI ▼	TECHNOLOGY OUTLET ROUGH-IN. REFER TO SPECIFICATION FOR REQUIREMENTS
RI	TECHNOLOGY ROUGH-IN, CEILING
W/RI ▼	TECHNOLOGY ROUGH-IN, WALL PHONE
TV	TV ANTENNA OUTLET ROUGH-IN
	MULTI OUTLET SYSTEM
	ELECTRICAL WIREWAY w/ DEVICES SHOWN
DEM	ENERGY METER
DPM	DIGITAL POWER METER
ITDM	IMPULSE-TOTALIZING DEMAND
EEM	EXTERNAL ENERGY METER
PQM	POWER QUALITY METER
CPC	CONTROL POWER CABINET
ES	EMERGENCY STOP, N.C. CONTACT
EPO	EMERGENCY STOP, N.O. CONTACT
LA	LAMP ANNUNCIATOR
PB	MOMENTARY PUSHBUTTON OPERATOR
	PANELBOARD - RECESS MOUNT
▭	PANELBOARD - SURFACE MOUNT
▭ ⧄	MANUAL SWITCH / STARTER / COMBINATION STARTER/ CIRCUIT BREAKER. REFER TO DISC/STA SCHEDULE
RAS	REMOTE ANNUNCIATOR STATION
☒	INTEGRATED POWER CENTER
☒	TRANSFORMER. REFER TO TRANSFORMER SCHEDULE
☒	PACKAGED POWER CENTER
▭	CIRCUIT BREAKER - SURFACE MOUNTED. REFER TO DISC/STA SCHEDULE
	CIRCUIT BREAKER - FLUSH MOUNTED. REFER TO DISC/STA SCHEDULE
	DISCONNECT. REFER TO DISC/STA SCHEDULE
	MOBILE DIAGNOSTICS SERVICE DISCONNECT. REFER TO DISC/STA SCHEDULE

NURSE CALL SYMBOL LIST

NB	NC-NB-W	NURSE CALL BED INTERFACE (WALL)	.
NC	NC-NC-W	NURSE CALL CODE BLUE STATION (WALL)	.
D	NC-D-W	NURSE CALL DOME LIGHT (WALL)	.
N2	NC-N2-W	NURSE CALL DUAL PATIENT BED STATION (WALL)	.
DTY	NC-DTY-W	NURSE CALL DUTY STATION (WALL)	.
NE	NC-NE-W	NURSE CALL EMERGENCY CALL STATION (WALL)	.
MAS	NC-MAS-W	NURSE CALL MASTER STATION (WALL)	.
NL	NC-NL-W	NURSE CALL PRESENCE LOCATOR (WALL)	.
NT	NC-NT-W	NURSE CALL PULL CORD STATION - TOILET	.
N	NC-N-W	NURSE CALL SINGLE PATIENT BED STATION (WALL)	.
NA	NC-NA-W	NURSE CALL STAFF ASSIST STATION (WALL)	.
STF	NC-STF-W	NURSE CALL STAFF STATION (WALL)	.
(DZ)	NC-DZ-C	NURSE CALL ZONE DOME LIGHT (CEILING)	.
(D)	NC-D-C	NURSE CALL DOME LIGHT (CEILING)	.

SECURITY SYMBOL LIST

AA	.	INTRUSION DETECTION AUDIBLE ALARM (WALL)	.
DC	ID-DC-W	INTRUSION DETECTION DOOR CONTACT SWITCH (WALL)	.
(MD)	.	INTRUSION DETECTION MOTION DETECTOR (CEILING)	.
MD	.	INTRUSION DETECTION MOTION DETECTOR (WALL)	.
(ISD)	.	INTRUSION DETECTION SMOKE DETECTOR (CEILING)	.
(VSM)	ID-VSM-C	INTRUSION DETECTION VAULT ALARM SYSTEM MICROPHONE (CEILING)	.
(VSA)	ID-VSA-C	ID VAULT ALARM SYSTEM MICROPHONE CONTROLLER (CEILING)	.
LD		LOCKDOWN DEVICE - ELECTRIC STRIKE	
CR1	AC-CR1-W	SECURITY CREDENTIAL READER (WALL) TYPE 1	.
(DR)	AC-DR-S	SECURITY DURESS/PANIC BUTTON (SURFACE)	.
(EDR)	AC-EDR-UC	SECURITY ELECTRONIC DOOR RELEASE (UNDERCOUNTER)	.
ST	AC-ST-W	SECURITY STROBE INDICATOR (WALL)	.
WDR	AC-WDR-M	SECURITY WIRELESS DURESS FOB (MOBILE)	.
(GM)	ID-GM-C	SECURITY DURESS/PANIC BUTTON (SURFACE)	

ELECTRICAL SYMBOL LIST

SYMBOL:	DESCRIPTION:
COMMON AND SEQUENCE OF OPERATION SUBSCRIPTS	SUBSCRIPTS: TYPE / PROGRAMMING WG = WIRE GUARD IS REQUIRED WP = WEATHERPROOF A = ATRIUM CA = CLEAN AGENT SYSTEM CR = COMPUTER ROOM E = ELEVATOR RECALL D = HVAC CONTROL DH = DOOR HOLD RELEASE DIPS = DUAL INTERLOCK PREACTION SYS FD = FIRE DOOR RELEASE MP = MEDICAL PROCEDURE S = SLEEPING / PATIENT ROOM SW = STAIRWELL # = 15, 30, 75, 110, 177 CANDELA RATING CD = CANDELA RATING SELECTED BY NICET DESIGNER
S# S #	FIRE ALARM SMOKE DETECTOR, CEILING OR WALL MOUNT BLANK - PHOTOELECTRIC AT = ATTIC (LOCATED IN) BR = BEAM RECEIVER BT = BEAM TRANSMITTER CO = COMBINATION SMOKE / CARBON MONOXIDE COH = COMBINATION SMOKE / CARBON MONOXIDE / HEAT COS = COMBINATION SMOKE / CARBON MONOXIDE / STROBE H = COMBINATION SMOKE / HEAT DETECTOR ION = IONIZATION TYPE ID = IN DUCT DETECTOR SA = STAND ALONE WITH SOUNDER SB = SOUNDER BASE SV = STAND ALONE WITH SOUNDER AND 177 CANDELA STROBE
S	FIRE ALARM DUCT SMOKE DETECTOR # = EQUIP OR SYSTEM
S AS	FIRE ALARM AIR SAMPLING SMOKE DETECTION
# #	GAS DETECTION, CEILING OR WALL MOUNT CO = CARBON MONOXIDE
H# H #	FIRE ALARM HEAT DETECTOR BLANK = COMBINATION RATE OF RISE / FIXED TEMP AT = ATTIC (LOCATED IN) F = FIXED TEMP RC = RATE COMPENSATED X - EXPLOSION PROOF
H	HEAT DETECTOR - LINEAR WIRE TYPE
# #	FIRE ALARM FLAME DETECTOR, CEILING OR WALL MOUNT
F	FIRE ALARM MANUAL PULL STATION
FT	FIRE ALARM MANUAL PULL STATION W/ COVER
	FIRE ALARM VISUAL ALARM DEVICE, CEILING OR WALL MOUNT # = CANDELA RATING. CD = CANDELA RATING SELECTED BY NICET DESIGNER
F # F #	ELECTRIC BELL FOR SPRINKLER SYSTEM
F # F #	AUDIO HORN/CHIME ALARM DEVICE, CEILING OR WALL MOUNTED M = MINI-HORN S = SLEEPING / PATIENT ROOM COMBINATION AUDIO HORN/CHIME AND VISUAL ALARM DEVICE, CEILING OR WALL MOUNTED # = CANDELA RATING CD = CANDELA RATING SELECTED BY NICET DESIGNER
S # S #	AUDIO (SPEAKER) ALARM DEVICE, CEILING OR WALL MOUNTED COMBINATION AUDIO (VOICE) AND VISUAL ALARM DEVICE, CEILING OR WALL MOUNTED # = CANDELA RATING CD = CANDELA RATING SELECTED BY NICET DESIGNER
#M M #	EMERGENCY VISUAL ALARM DEVICE, CEILING OR WALL MOUNTED # = CANDELA RATING CD = CANDELA RATING SELECTED BY NICET DESIGNER
M # M #	EMERGENCY COMBINATION AUDIO (VOICE) AND VISUAL ALARM DEVICE, CEILING OR WALL MOUNTED # = CANDELA RATING CD = CANDELA RATING SELECTED BY NICET DESIGNER

ELECTRICAL ABBREVIATION KEY

ABBR:	DESCRIPTION:
AFF	ABOVE FINISHED FLOOR
C	CONDUIT
GFI	GROUND FAULT INTERRUPTER
N.C.	NORMALLY CLOSED
NIC	NOT IN CONTRACT
N.O.	NORMALLY OPEN
SV	SOLENOID VALVE
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTES

EMERGENCY SYMBOL KEY

SYMBOL:	DESCRIPTION:
▭ ○	NORMAL BRANCH LUMINAIRE
▨ ●	CRITICAL BRANCH LUMINAIRE
◪ ⊘	LIFE SAFETY BRANCH LUMINAIRE
	CRITICAL BRANCH RECEPTACLE
(E) E	CRITICAL BRANCH OR LIFE SAFETY BRANCH ELECTRICAL CONNECTION. WHERE PANELBOARD IS NOTED CONNECT TO CRITICAL BRANCH.

ELECTRICAL GENERAL NOTES:

1. **{L###}** INDICATES THE LIGHTING SEQUENCE OF OPERATION FOR THE SPACE. REFER TO THE LIGHTING SEQUENCE OF OPERATION MATRIX ON SHEET E201.1.
2. ALL CRITICAL BRANCH LUMINAIRES ARE SWITCHED/CONTROLLED DURING NORMAL OPERATION AND OPERATES FROM EMERGENCY CIRCUIT UPON LOSS OF POWER.
3. SHADED LUMINAIRE OR DEVICE INDICATES LUMINAIRE OR DEVICE IS CONNECTED TO AN EMERGENCY CIRCUIT.
4. { B#} PUSH BUTTON REFERS TO SCENE QUANTITY. CONTROL STATION SHALL BE CAPABLE OF RAISE/LOWER AND SWITCHING ON/OFF FOR MULTIPLE SCENES AS INDICATED ON SHEETS AND THE LIGHTING SEQUENCE OF OPERATIONS {L##}. COORDINATE QUANTITIES OF BUTTONS FOR CONTROL STATIONS WITH LIGHTING CONTROL MANUFACTURER. REFER TO SHEET E-5.1.
5. VACANCY/OCCUPANCY SENSOR LAYOUT: SENSORS ARE SHOWN ON THE PLANS FOR DESIGN INTENT AND MAY NOT REPRESENT EVERY DEVICE. PROVIDE MANUFACTURER SPECIFIC FLOOR PLAN LAYOUTS SHOWING LOCATION, ORIENTATION, AND COVERAGE AREA OF EACH CONTROL DEVICE, SENSOR, AND CONTROLLER/INTERFACE. AREAS REQUIRING MULTIPLE SENSOR DEVICES FOR APPROPRIATE COVERAGE, SUBMIT SPECIFIC MANUFACTURER-APPROVED SENSOR LAYOUT AS AN OVERLAY DIRECTLY ON THE PROJECT DRAWINGS, EITHER IN PRINT OR APPROVED ELECTRONIC FORM.

LUMINAIRE KEY:

LUMINAIRE
F1 = FIXTURE TAG
1 = CIRCUIT NUMBER
a = SWITCH DESIGNATION
NL = SUBSCRIPT (IF APPLICABLE)
Z = ZONE DESIGNATION

*IF LABEL IS ORIENTED HORIZONTALLY A SLASH WILL SEPARATE THIS INFORMATION. EX: F1 / 1 / a / NL

DEVICE KEY:

DEVICE
A = MOUNTING (IF APPLICABLE)
1 = CIRCUIT NUMBER

*IF LABEL IS ORIENTED HORIZONTALLY A SLASH WILL SEPARATE THIS INFORMATION. EX: A / 1

ELECTRICAL MOUNTING SUBSCRIPT KEY:

A	MOUNT AT +6" TO CENTERLINE ABOVE COUNTER OR BACKSPLASH
C	MOUNT AT CEILING
H	MOUNT ORIENTED HORIZONTALLY
L	MOUNT IN CASEWORK
M	MOUNT IN MODULAR FURNITURE
R	MOUNT IN SURFACE RACEWAY
EWC	ELECTRIC WATER COOLER

ELECTRICAL INSTALLATION NOTES:

1. THE COMPLETE INSTALLATION SHALL BE IN ACCORDANCE WITH THE ADA STANDARDS FOR ACCESSIBLE DESIGN. REFER TO THE ADA GUIDELINES FOR ALL CONFIGURATION DETAILS ON THIS PAGE FOR ADDITIONAL INFORMATION.
2. CIRCUIT NUMBERS ARE SHOWN FOR CIRCUIT IDENTIFICATION. CIRCUITING SHALL AGREE WITH NUMBERING ON THE PANEL PROVIDED. COMMON NEUTRALS MAY NOT BE USED FOR BRANCH CIRCUITS. BALANCE THE LOAD ON PANEL AS EVENLY AS POSSIBLE BETWEEN EACH PHASE.
3. LIFE SAFETY, CRITICAL, EQUIPMENT BRANCH WIRING FOR FEEDERS AND BRANCH CIRCUITS SHALL BE ROUTED IN SEPARATE RACEWAY, JUNCTION BOXES, PULL BOXES, AND CABINETS. WIRING FOR EACH BRANCH SHALL BE INDEPENDENT FROM OTHER BRANCHES, INCLUDING THE NORMAL BRANCH.
4. FLUSH MOUNT ALL LIGHTING CONTROL DEVICES AT +42" FROM FLOOR (CENTERLINE DIMENSION), EXCEPT WHERE OTHERWISE NOTED. DEVICES MAY BE SURFACE MOUNTED WHEN CONDUIT IS SPECIFIED EXPOSED.
5. FLUSH MOUNT ALL DUPLEX RECEPTACLES AND TECHNOLOGY OUTLETS AT +18" FROM FLOOR (CENTERLINE DIMENSION), EXCEPT WHERE OTHERWISE NOTED. RECEPTACLES AND OUTLETS MAY BE SURFACE MOUNTED WHEN CONDUIT IS SPECIFIED EXPOSED.
6. ALL MATERIALS USED TO SEAL PENETRATIONS OF FIRE RATED WALLS AND FLOORS SHALL BE TESTED AND CERTIFIED AS A SYSTEM PER ASTM E814 STANDARDS FOR FIRE TESTS OF THROUGH-PENETRATION FIRESTOPS.
7. CONNECTION FOR ELECTRIC WATER COOLERS (EWC) SHALL BE A JUNCTION BOX CONCEALED BEHIND WATER COOLER ACCESS PLATE OR BE A GFI RECEPTACLE LOCATED DIRECTLY BELOW AND CENTERED ON EWC. CONTRACTOR SHALL VERIFY TYPE OF EWC TO BE INSTALLED.
8. MOUNT ALL FIRE ALARM PULL STATIONS AT +42" FROM FLOOR (CENTERLINE DIMENSION) EXCEPT WHERE OTHERWISE NOTED.
9. INSTALL ALL WALL MOUNTED FIRE ALARM NOTIFICATION DEVICES AT 90" ABOVE FINISHED FLOOR OR 6" BELOW THE CEILING, WHICHEVER IS LOWER, EXCEPT WHERE OTHERWISE NOTED. HEIGHT SHALL BE MEASURED TO THE TOP OF THE DEVICE.
10. CONTRACTOR SHALL COORDINATE THE LOCATION OF ALL CEILING MOUNTED DEVICES AND EQUIPMENT WITH LUMINAIRES, SPRINKLER, AND CEILING DIFFUSERS. CENTER ALL DEVICES IN CEILING TILE PATTERN. SMOKE DETECTORS AND OCCUPANCY/VACANCY SENSORS SHALL BE LOCATED NO CLOSER THAN 3 FEET TO AN AIR SUPPLY DIFFUSER OR RETURN GRILLE.
11. CONTRACTOR SHALL VERIFY ALL FURNITURE, MODULAR FURNITURE, AND EQUIPMENT LOCATIONS WITH ARCHITECTURAL PLANS, ELEVATIONS, AND REVIEWED SHOP DRAWINGS. PRIOR TO MAKING THE ACTUAL ELECTRICAL INSTALLATION, THIS CONTRACTOR SHALL ADJUST RECEPTACLES, OUTLETS, OR CONNECTION LOCATIONS TO ACCOMMODATE FURNITURE AND/OR EQUIPMENT.
12. ELECTRICAL AND TECHNOLOGY EQUIPMENT SHALL BE MOUNTED TO AVOID IMPEDANCE OF, OPERATION OF, AND/OR ACCESS TO ELECTRICAL AND MECHANICAL EQUIPMENT. ALL MOUNTING OF ELECTRICAL AND TELECOMMUNICATIONS EQUIPMENT, ON EQUIPMENT SUPPLIED BY ANOTHER CONTRACTOR, SHALL BE APPROVED IN ADVANCE BY THE OTHER CONTRACTOR.
13. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL OPENINGS REQUIRED IN WALLS. ALL OPENINGS SHALL BE REPAIRED TO MATCH EXISTING BY A QUALIFIED CONTRACTOR AT THE EXPENSE OF THIS CONTRACTOR. ALL CONDUITS THROUGH WALLS SHALL BE GROUTED OR SEALED INTO OPENINGS.
14. ALL WELDING SHALL BE ACCORDING TO AMERICAN WELDING SOCIETY STANDARDS. CONTRACTOR SHALL FURNISH TO THE ARCHITECT/ENGINEER CERTIFICATES QUALIFYING EACH WELDER, PRIOR TO START OF WORK. THE ARCHITECT/ENGINEER RESERVES THE RIGHT TO REQUIRE QUALIFYING DEMONSTRATION, AT THE CONTRACTOR'S EXPENSE, OF ANY WELDERS ASSIGNED TO THE JOB.
15. EACH CONTRACTOR IS RESPONSIBLE FOR DAMAGE CAUSED BY THEIR ACTIONS TO THE WALLS, FLOORS, CEILINGS, AND ROOFS. THE CONTRACTOR WHOSE WORK CAUSES DAMAGE IS RESPONSIBLE FOR PATCHING TO MATCH ORIGINAL CONSTRUCTION, FIRE RATING, AND FINISH.
16. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN, ELECTRICAL, TECHNOLOGY AUDIO/VISUAL, AND OTHER ELECTRICAL PLANS FOR EXACT LOCATIONS OF ALL CEILING MOUNTED DEVICES, OTHER THAN SPRINKLERS.

ELECTRICAL LIGHTING DEMOLITION NOTES:

1. THE ELECTRICAL LIGHTING DRAWINGS INDICATE EXISTING ELECTRICAL ITEMS TO BE REMOVED. THE DRAWINGS ARE INTENDED TO INDICATE THE SCOPE OF WORK REQUIRED AND DO NOT INDICATE EVERY BOX, CONDUIT, OR WIRE THAT MUST BE REMOVED. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO SUBMITTING A BID AND VERIFY EXISTING CONDITIONS.
2. EQUIPMENT REMOVAL IN CERTAIN LOCATIONS MAY REQUIRE THE INSTALLATION OF A JUNCTION BOX TO RECONNECT CIRCUITS THAT REMAIN IN OPERATION. EXTEND CONDUIT AND WIRING AS REQUIRED TO MAINTAIN POWER TO REMAINING EQUIPMENT.
3. BALLASTS MANUFACTURED PRIOR TO 1980 CONTAIN PCBs AND SHALL BE DISPOSED OF BY A FEDERAL OR STATE E.P.A. APPROVED METHOD AND IN ACCORDANCE WITH SPECIFICATIONS.
4. HID AND FLUORESCENT LAMPS CONTAIN MERCURY AND SHALL BE DISPOSED OF BY A FEDERAL OR STATE E.P.A. APPROVED METHOD AND IN ACCORDANCE WITH SPECIFICATIONS.
5. REUSE EXISTING CONDUIT, CIRCUITS AND LIGHTING CONTROL WHERE POSSIBLE. PROVIDE NEW CONDUIT AND WIRE WHERE SHOWN, MISSING OR REQUIRED TO INSTALL THE NEW LIGHT FIXTURES.
6. VERIFY MANUFACTURERS INSTALLATION GUIDELINES WITH EXISTING FIELD CONDITIONS PRIOR TO BIDDING AND ORDERING NEW LIGHT FIXTURES AND INSTALLATION MATERIAL.
7. MATCH EXISTING PAINTED SURFACES. WHERE REPLACED LUMINAIRE DOES NOT FULLY COVER EXISTING JUNCTION BOX OR PAINTED SURFACE. PROVIDE CUSTOM BACK PLATE WHERE NECESSARY TO COVER ANY FIELD CONDITIONS THAT WOULD ALLOW INTRUSION OF WATER AND CAULK WHERE NECESSARY.

TYPICAL NEW CONSTRUCTION

1. FULLY SHADED FIXTURES INDICATE CRITICAL BRANCH LUMINAIRES THAT ARE TO BE CONNECTED VIA AN EMERGENCY TRANSFER DEVICE (ALCR) TO TURN LIGHTS ON UPON LOSS OF POWER. THE THIRD LEG OF THE ALCR IS CONNECTED TO THE EMERGENCY LIGHTING PANEL.
2. WHERE LUMINAIRE QUANTITIES OR LAYOUT DIFFER BETWEEN ELECTRICAL LIGHTING PLANS AND ARCHITECTURAL REFLECTED CEILING PLANS, HIGHER QUANTITY SHALL TAKE PRECEDENCE. CONTRACTOR SHALL CONFIRM QUANTITY AND LAYOUT WITH DESIGN TEAM.
3. #B PUSH BUTTON REFERS TO BUTTON QUANTITY. WHERE NOTED CONTROL SHALL BE CAPABLE OF DIMMING UP/DOWN AND SWITCHING ON/OFF.

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PROJECT # 21003531.00
Missouri State Certificate of Authority E-2017008530

RELEASED FOR CONSTRUCTION
As Noted on Plans Review
Development Services Department
Lee's Summit, Missouri
11/29/2021

BRUCE ELDON HART
NUMBER E-22817

Bruce E. Hart
Missouri #E-22817
11/12/21

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100 NE Saint Luke's Blvd
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Date	11/12/21
Job Number	3-21024
Drawn By	PLR
Checked By	PIP

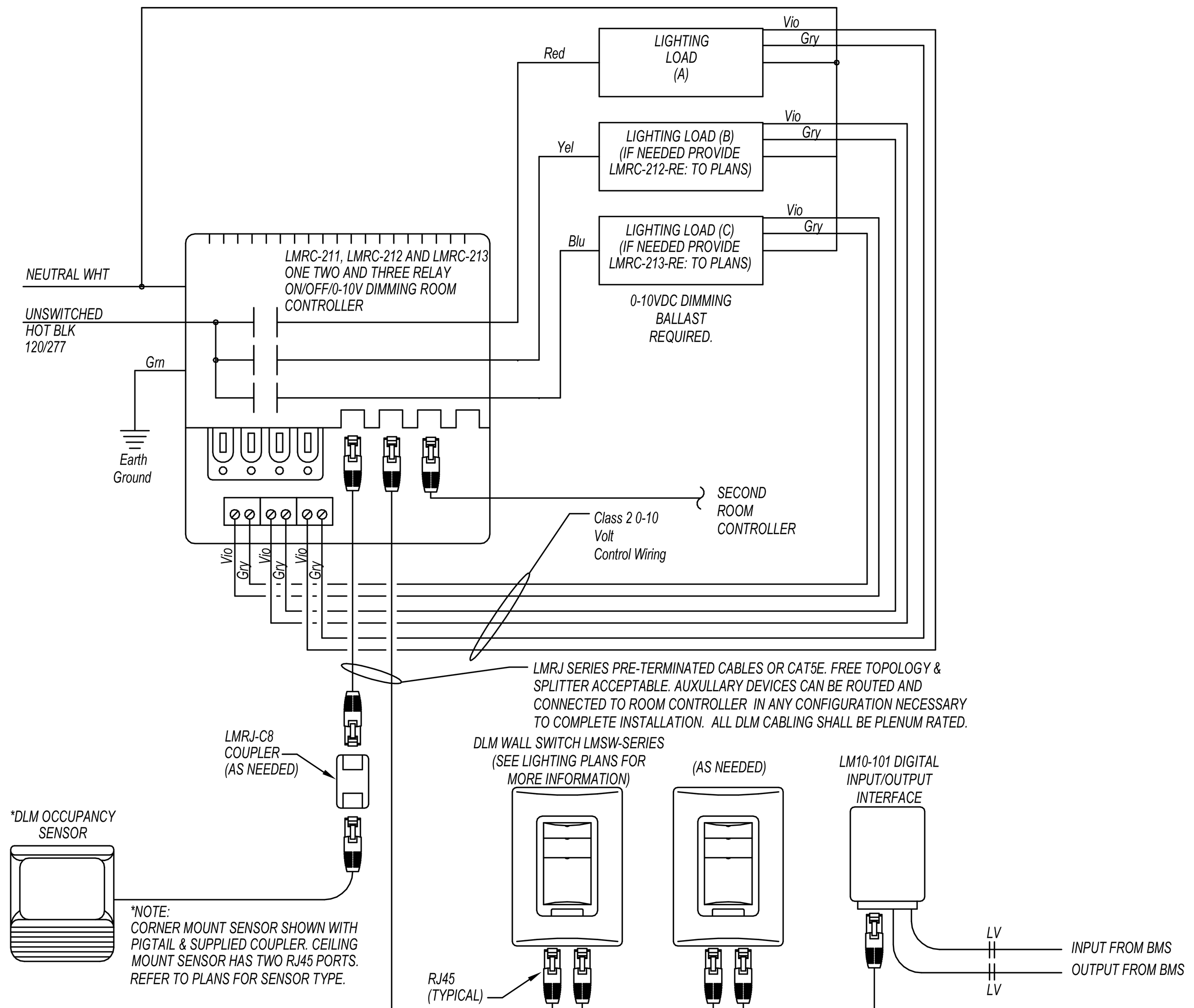
Revision

Number	Date	Description

E000.1

ELECTRICAL COVERSHEET

11/10/2021 4:22:27 PM



LMRC-211
SEQUENCE OF OPERATION: IN THIS CONFIGURATION THE LMRC-101 DEFAULTS TO MANUAL-ON/AUTOMATIC OFF.

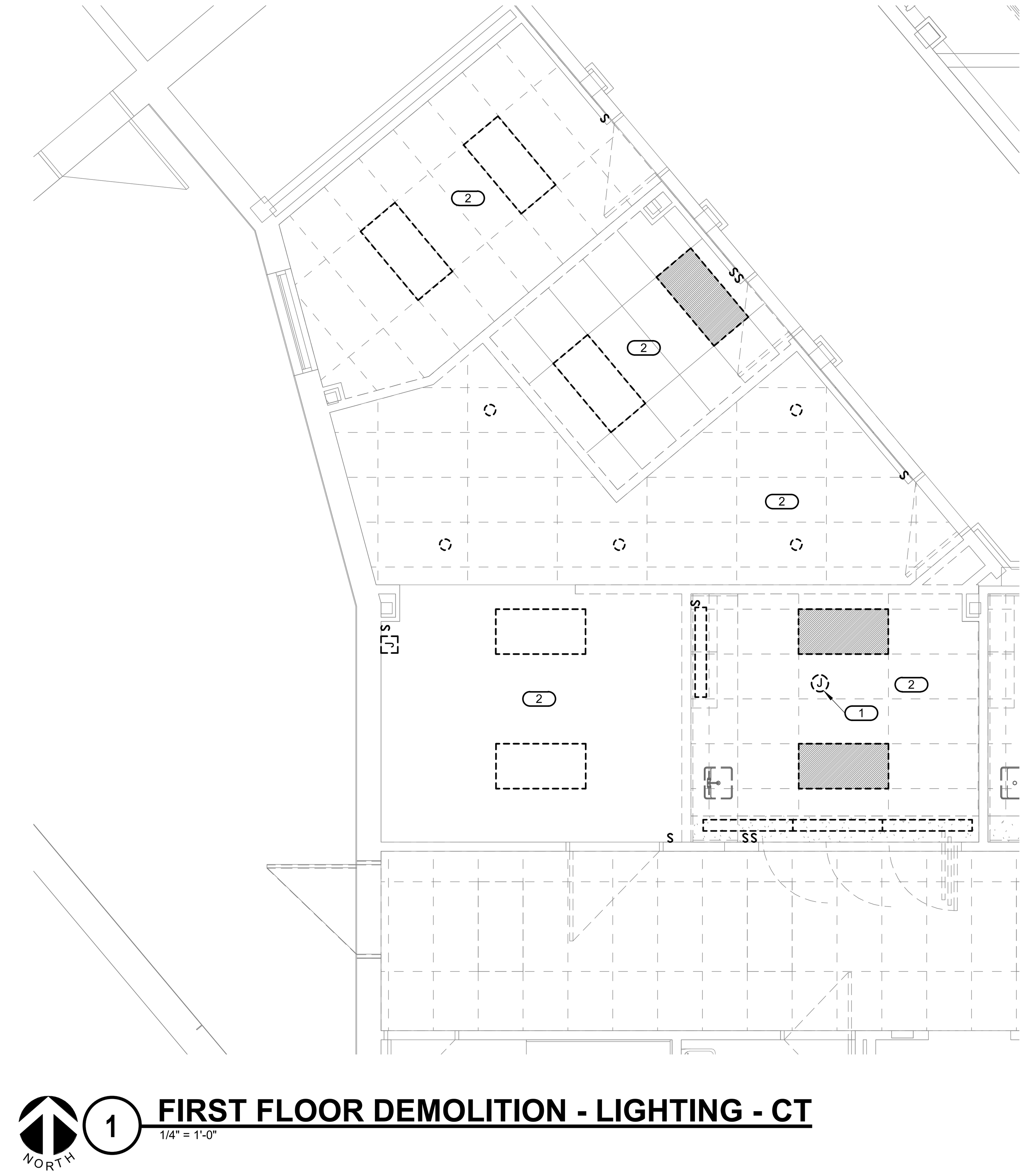
LMRC-212
SEQUENCE OF OPERATION: IN THIS CONFIGURATION THE LMRC-102 DEFAULTS TO MULTI-LEVEL AUTOMATIC-ON/AUTOMATIC OFF. LOAD (A) TURNS ON AUTOMATICALLY AND LOAD (B) DEFAULTS TO MANUAL-ON CONTROL; BOTH LOADS TURN AUTOMATICALLY OFF.

LMRC-213
IN THIS CONFIGURATION THE LMRC-213 SEQUENCE OF OPERATION: DEFAULTS TO MULTI-LEVEL AUTOMATIC-ON/AUTOMATIC-OFF OPERATION. LOAD (A) ON THE LMRC-213 TURNS ON AUTOMATICALLY, WHILE LOAD (B) AND (C) DEFAULTS ENHANCED ROOM TO MANUAL-ON CONTROL; ALL RELAYS TURN OFF AUTOMATICALLY.

NOTE:
-FURNISH WITH TWO (2) LMCT-100 DIGITAL WIRELESS CONFIGURATION TOOLS.
-PROVIDE COMMISSIONING AND TRAINING FOR ALL INSTALLATIONS.
-PROVIDE ENGRAVING FOR BUTTONS ON ALL INSTALLATIONS.
-ALL SHIELDING FOR OCCUPANCY SENSORS SHALL BE TURNED OVER TO OWNER.

3 DETAIL OF LMRC-211, LMRC-212 AND LMRC-213 ROOM CONTROLLER CABLING

NO SCALE



1 FIRST FLOOR DEMOLITION - LIGHTING - CT

1/4" = 1'-0"

SHEET NOTES:

1. REFER TO GENERAL NOTES ON SHEET E000.1.
2. UPDATE PANEL SCHEDULES OF ALL PANELS SERVING RENOVATION AREA TO REFLECT NEW LOADS AND LOADS THAT HAVE BEEN REMOVED.

KEYNOTES: (#)

1. DISCONNECT POWER CONNECTION AND ASSOCIATED CONDUIT AND WIRE FROM EXAM LIGHT. CIRCUITS SHALL REMAIN FOR EXAM LIGHTS IN OTHER ROOMS THAT ARE EXISTING TO REMAIN.
2. EXISTING CIRCUIT(S) SERVING EXISTING DEVICES TO BE DEMOED FROM THIS ROOM SHALL REMAIN FOR RE-USE AS INDICATED ON NEW WORK PLAN. ANY CIRCUIT NOT REQUIRED TO REMAIN SHALL BE REMOVED BACK TO PANEL AND ASSOCIATED CIRCUIT BREAKER SHALL BE LABELED AS SPARE.
3. NORMAL POWER LIGHT FIXTURES IN THIS ROOM, UNLESS NOTED OTHERWISE, SHALL BE CONNECTED TO EXISTING CIRCUIT FROM PANEL B1-18-HN THAT SERVED OLD LIGHT FIXTURES IN AREA. CIRCUIT TO BE USED IS INDICATED AT FIXTURES.
4. CRITICAL BRANCH LIGHT FIXTURES IN THIS ROOM SHALL BE CONNECTED TO EXISTING CIRCUIT FROM PANEL B1-14-HC THAT SERVED OLD LIGHT FIXTURES IN AREA. CIRCUIT TO BE USED IS INDICATED AT FIXTURES.
5. LIGHT FIXTURE SHALL BE CONNECTED TO 120V CIRCUIT FROM PANEL B1-20-LN SERVING RECEPTACLES IN SAME ROOM.
6. PROGRAM ROOM CONTROLLERS AND WALL CONTROL STATIONS SO 4-BUTTON STATIONS AT DOORS CONTROL TYPE 'A' LIGHT FIXTURES AND TYPE 'D' LIGHT FIXTURES INDICATED WITH 'b'; AND 2-BUTTON STATION IN CONTROL ROOM CONTROLS TYPE 'D' LIGHT FIXTURES INDICATED WITH 'c'.

LED LUMINAIRE SCHEDULE

(DESC) DOOR:
FA - FLAT ALUMINUM
FS - FLAT STEEL
RA - REGRESSED ALUMINUM
RS - REGRESSED STEEL
FINISH:
PAF - PAINT AFTER FABRICATION
CFSA - COLOR-FINISH SELECTION BY ARCHITECT

DISTRIBUTION:
II - ANSI/IES TYPE 2 DISTRIBUTION
III - ANSI/IES TYPE 3 DISTRIBUTION
IV - ANSI/IES TYPE 4 DISTRIBUTION
V - ANSI/IES TYPE 5 DISTRIBUTION

BEAMWIDTH:
NSP - VERY NARROW SPOT
SP - SPOT
MD - MEDIUM
WD - WIDE
VWD - VERY WIDE
WW - WALL WASH

(L/L) LENS/LOUVER:
A - .125" ACRYLIC
B - BAFFLE/LOUVER
C - CLEAR ALZAK
F - FROSTED ACRYLIC
G - TEMPERED GLASS
K - KSH12 .125" ACRYLIC
K19 - KSH19 .156" ACRYLIC
M - MATTE DIFFUSE CLEAR
N - NONE
P - POLYCARBONATE
R - HIGH IMPACT DR ACRYLIC
SS - SEMI-SPECULAR CLEAR
O - OTHER (SEE DESCRIPTION)
[DESIGN SPECIFIC BLANKS]

(MTG) MOUNTING:
CL - CEILING SURFACE
CV - COVE
FR - FLANGED RECESSED
P - PERIMETER
PL - POLE
RE - RECESSED
SP - SUSPENDED
SU - SURFACE
UC - UNDER CABINET
WL - WALL
O - OTHER (SEE DESCRIPTION)

(WATT) PER: FIX - FIXTURE, FT - FOOT, LAMP

(TYPE) LED
LED - LIGHT EMITTING DIODE
TLED - TUBULAR LED LAMP
OLED - ORGANIC LED
DLED - DYNAMIC TUNABLE LED
RGB - COLOR CHANGING LED
RGBW - COLOR CHANGING + WHITE
RGBA - COLOR CHANGING + AMBER
RLED - RETROFIT LED
WLED - WARM DIM LED

(TYPE) DRIVER:
0-10V - 0-10V DIMMING
DALI - DIGITAL ADDRESSABLE
DMX - DIGITAL MULTIPLEX
EB - ELECTRONIC
ELV - ELECTRONIC LOW VOLTAGE
EM - EMERGENCY BATTERY
HL - HIGH/LOW (100%/50%) STEP DIM
LINE - LINE VOLTAGE DIMMING
ML - MULTI-LEVEL SWITCHING
MV - MULTI-VOLTAGE ELECTRONIC
REM - REMOTE
O - OTHER (SEE DESCRIPTION)

CATALOG NUMBER SHALL NOT BE CONSIDERED COMPLETE AND MATERIAL SHALL NOT BE ORDERED BY MANUFACTURER AND CATALOG NUMBER ONLY. THE COMPLETE DESCRIPTION AND THE SPECIFICATION SHALL BE COORDINATED WITH THE CATALOG NUMBER TO DETERMINE THE EXACT MATERIAL AND ACCESSORIES TO BE ORDERED. THE FIRST MANUFACTURER LISTED IS THE BASIS OF DESIGN.

VERIFY AND COORDINATE ALL CEILING TYPES WITH LUMINAIRE MOUNTING AND TRIM REQUIREMENTS PRIOR TO THE RELEASE OF THE LUMINAIRE ORDER.
CONFIRM ALL COLORS AND FINISHES OF ALL LUMINAIRE COMPONENTS WITH ARCHITECT AND INTERIOR DESIGNER PRIOR TO THE RELEASE OF THE LUMINAIRE ORDER.
UNLESS INDICATED ON LIGHTING PLANS OR BELOW, REFER TO ARCHITECTURAL AND INTERIOR DESIGN ELEVATIONS, SECTIONS AND DETAILS FOR ALL SUSPENDED AND WALL MOUNTED LUMINAIRE MOUNTING HEIGHTS.

INTERIOR CORRELATED COLOR TEMPERATURE 3500K, COLOR RENDERING INDEX (CRI) AT OR ABOVE 80, UNLESS NOTED OTHERWISE.

				DIMENSIONS				WATT		LED			DRIVER		
ITEM	DESCRIPTION	L/L	MTG	L	W	H	DIA.	ANSI WATTS	PER	TYPE	QTY	DELIVERED LUMENS (MIN)	VOLTS	TYPE	APPROVED MANUFACTURER
A	2'x4' TROFFER FIXTURE FOR LED SOURCE. 0.125" PRISMATIC ACRYLIC LENS. SPRING LOADED CAM ACTION LATCHED. FIXTURE STEEL DOOR WITH MITERED CORNERS. ALL FIXTURE STEEL POST PAINTED BAKED WHITE ENAMEL. FURNISH WITH ALL HARDWARE AS REQUIRED FOR MOUNTING.	O	RE	4'-0"	2'-0"			48 W	FIX	LED	1		120-277V	0-10V	WILLIAMS 50 LED SERIES
D	6" APERATURE DOWNLIGHT FOR LED SOURCE. WIDE DISTRIBUTION. FURNISH WITH SATIN GLOW ACCENT CONE AND FLUSH LENS. FURNISH WITH ALL REQUIRED MOUNTING HARDWARE.	O	RE			9 1/2"	6"	37 W	FIX	LED	1	3000 LUMENS 3500K	120-277V	0-10V	WILLIAMS 6DR SEREIS
J	RECESSED INDIRECT/DIRECT, PERFORATED METAL LAMP SHIELD WITH ACRYLIC DIFFUSER.	O	RE	4'-0"	2'-0"	5 1/2"		49 W	FIX	LED	1	5800 LUMENS 3500K	120-277V	0-10V	WILLIAMS PT SERIES
M1	2' UNDERCABINET FIXTURE WITH SOLID FRONT AND BOTTOM ACRYLIC LENS DIFFUSER. INTEGRAL RACKER SWITCH.	O	SU	2'-0"	6"	1 1/2"		12 W	FIX	LED	1	1200 LUMENS 3500K	120 V	EB	WILLIAMS 1SF LED SERIES
WL	"X-RAY IN-USE" WARNING SIGN. WHITE THERMOPLASTIC HOUSING, RED LETTERING AND CUSTOM WORDING.	O	CL			1'-0"	6"	5 W	FIX	LED	1	L.E.D.	120-277V	EB	WILLIAMS EXIT SERIES

2 FIRST FLOOR - LIGHTING - CT

1/4" = 1'-0"

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PROJECT # 21003531.00
Missouri State Certificate of Authority E-2017008530

REFERENCE SCALE IN INCHES
0 1 2 3

STATE OF MISSOURI
BRUCE ELDON HART
NUMBER E-22817
PROFESSIONAL ENGINEER

Bruce E. Hart
Missouri #E-22817

11/12/21

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Saint Luke's ED Finish Upgrades
100 NE Saint Luke's Blvd
Lee's Summit, MO 64086

Date	11/12/21
Job Number	3-21024
Drawn By	PLR
Checked By	PIP

Revision

Number	Date	Description

E201.1

FIRST FLOOR - LIGHTING

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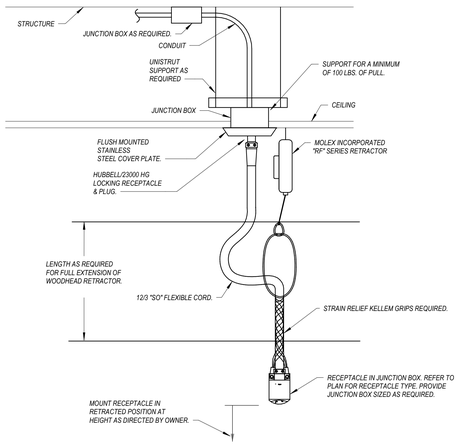

3 DETAIL OF CEILING MOUNTED RETRACTABLE RECEPTACLE

NO SCALE

NORTH

1 FIRST FLOOR DEMOLITION - POWER - CT

1/4" = 1'-0"

SHEET NOTES:

1. REFER TO GENERAL NOTES ON SHEET E000.1.
2. UPDATE PANEL SCHEDULES OF ALL PANELS SERVING RENOVATION AREA TO REFLECT NEW LOADS AND LOADS THAT HAVE BEEN REMOVED.

KEYNOTES: (#)

1. EXISTING CIRCUIT(S) SERVING EXISTING DEVICES TO BE DEMOED FROM THIS ROOM SHALL REMAIN FOR RE-USE AS INDICATED ON NEW WORK PLAN. ANY CIRCUIT NOT REQUIRED TO REMAIN SHALL BE REMOVED BACK TO PANEL AND ASSOCIATED CIRCUIT BREAKER SHALL BE LABELED AS SPARE.
2. REFER TO GE HEALTHCARE SITE SPECIFIC DRAWINGS TITLED "ST. LUKES HOSPITAL OF KANSAS CITY, KANSAS CITY, MO LIGHTSPEED VCT FINAL STUDY" AND DATED 10/27/21 FOR ADDITIONAL INFORMATION REGARDING ELECTRICAL ROUGH-IN WITHIN THIS ROOM FOR NEW CT EQUIPMENT. SIZES OF EQUIPMENT SHOWN, EQUIPMENT TAGS INDICATED AND REQUIRED EMPTY CONDUITS BETWEEN EQUIPMENT SHOWN IS DEFINED IN GE HEALTHCARE DRAWINGS.
3. MAIN DISCONNECT PANEL FURNISHED WITH CT MACHINE AND INSTALLED BY ELECTRICAL CONTRACTOR. FURNISH AND INSTALL NEW 200A, 3P FUSIBLE DISCONNECT SWITCH WITHIN EXISTING DISTRIBUTION PANEL DP-BP-32-HA, LOCATED IN PENTHOUSE ABOVE AND FUSE AT 125 AMPS. PROVIDE (3) #1/0 WIRES AND (1) #1/0 GROUND IN 2" CONDUIT FROM LINE SIDE OF MAIN DISCONNECT PANEL TO NEW SWITCH IN DP-BP-1-HA.
4. PULL BOX MOUNTED FLUSH IN WALL AT PDU, EXACT SIZE AND DIMENSIONED LOCATION PER SHEET 03/10 OF GE DRAWINGS. PROVIDE (3) # 1/0 WIRES AND (1) #1/0 GROUND IN 2" CONDUIT FROM LOAD SIDE OF MAIN DISCONNECT PANEL TO PULL BOX AND CONNECT TO PDU WITH USE OF FLEXIBLE CONDUIT.
5. PROVIDE EMERGENCY POWER OFF PUSHBUTTON WITH (2) NC CONTACTS. PROVIDE (5) #12 WIRES IN 1/2" CONDUIT BETWEEN EPO AND MAIN DISCONNECT PANEL.
6. PROVIDE DOOR INTERLOCK SWITCH AND PROVIDE (3) #12 WIRES IN 1/2" CONDUIT BETWEEN SWITCH AND PDU PULL BOX. LEAVE 5' OF SLACK WIRE AT PULL BOX FOR CONNECTION TO PDU.
7. PROVIDE WARNING LIGHT CONTROL PANEL - PANEL SHALL BE OBTAINED FROM GE HEALTHCARE. PROVIDE (3) #12 WIRES IN 1/2" CONDUIT BETWEEN CONTROL PANEL AND PDU PULL BOX. LEAVE 5' OF SLACK WIRE AT PULL BOX FOR CONNECTION TO PDU.
8. PROVIDE X-RAY WARNING LIGHT ABOVE DOOR INTO ROOM. REFER TO LIGHT FIXTURE SCHEDULE FOR SPECIFICATION. EXTEND 120V CIRCUIT SERVING EMERGENCY RECEPTACLES IN CT ROOM TO SIGN ROUTING THROUGH WARNING LIGHT CONTROL PANEL.
9. PULL BOX MOUNTED FLUSH IN WALL AT UPS, EXACT SIZE AND DIMENSIONED LOCATION PER SHEET 03/10 OF GE DRAWINGS. PROVIDE EMPTY 1-1/4" CONDUIT FROM PULL BOX TO MAIN DISCONNECT PANEL FOR CABLING BY OTHERS.
10. PULL BOX MOUNTED FLUSH IN WALL AT UPS, EXACT SIZE AND DIMENSIONED LOCATION PER SHEET 03/10 OF GE DRAWINGS. PROVIDE EMPTY 2" CONDUIT FROM PULL BOX TO BOX AT PDU FOR CABLING BY OTHERS.
11. PROVIDE 2-1/2" AND 3-1/2" CONDUITS BETWEEN PDU, CT TABLE AND CONTROL ROOM. REFER TO SHEET 03/10 OF GE DRAWINGS FOR QUANTITY, ROUTING AND EXACT LOCATIONS TO STUB UP CONDUITS. COORDINATE WITH GENERAL CONTRACTOR TO SAW CUT EXISTING FLOOR SLAB AND TRENCH GRADE BELOW SLAB TO INSTALL CONDUITS. CONDUITS SHALL BE SCHEDULE 40 PVC AND STUB UP 6" ABOVE FINISHED FLOOR. PROVIDE PULL WIRES IN CONDUITS FOR INSTALLATION OF CABLING BY OTHERS.
12. DUPLEX RECEPTACLE PENDANT-MOUNTED FROM CEILING WITH SO CORD AND RETRACTABLE REEL, EXACT LOCATION PER ARCHITECTURAL RCP. REFER TO DETAIL ON THIS SHEET FOR MORE INFORMATION.
13. NORMAL POWER RECEPTACLES IN THIS ROOM SHALL BE CONNECTED TO EXISTING CIRCUITS FROM PANEL B1-20-LN THAT HAVE BEEN MADE SPARE BY DEMOLITION IN AREA. CIRCUIT(S) TO BE RE-USED HAVE BEEN INDICATED AT DEVICES.
14. EMERGENCY POWER RECEPTACLES IN THIS ROOM SHALL BE CONNECTED TO EXISTING CIRCUITS FROM PANEL B1-21-LC THAT HAVE BEEN MADE SPARE BY DEMOLITION IN AREA. CIRCUIT(S) TO BE RE-USED HAVE BEEN INDICATED AT DEVICES.
15. PROVIDE 6"x6"x4" PULL BOX FLUSH MOUNT IN WALL WITH EMPTY 2" CONDUIT STUBBED UP INTO CEILING SPACE FOR INJECTOR CABLING FURNISHED AND INSTALLED BY OTHERS.
16. FURNISH AND INSTALL (2) #12 WIRES AND (1) #12 GROUND IN 3/4" CONDUIT FROM NEW 15A, 2P CIRCUIT BREAKER IN EXISTING PANEL B1-21-LC TO INTEGRAL DISCONNECT FURNISHED WITH INDOOR UNIT. NEW CIRCUIT BREAKER SHALL BE MOUNTED IN SPACES OF PANEL AND SHALL MATCH STYLE AND SHORT-CIRCUIT RATING OF EXISTING BREAKERS.
17. FURNISH AND INSTALL (2) #12 WIRES AND (1) # 12 GROUND IN 3/4" CONDUIT FROM SPARE 20A, 1P SPARE BREAKER IN EXISTING PANEL B1-17-LLS TO NEW MEDGAS ALARM PANEL.

NORTH

2 FIRST FLOOR - POWER - CT

1/4" = 1'-0"

STATE OF MISSOURI
BRUCE ELDON HART
NUMBER E-22817
PROFESSIONAL ENGINEER
11/12/21
Bruce E. Hart
Missouri #E-22817

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Saint Luke's ED Finish Upgrades
100 NE Saint Luke's Blvd
Lee's Summit, MO 64086

Date	11/12/21
Job Number	3-21024
Drawn By	PLR
Checked By	PJP

Revision

Number	Date	Description

IMEG
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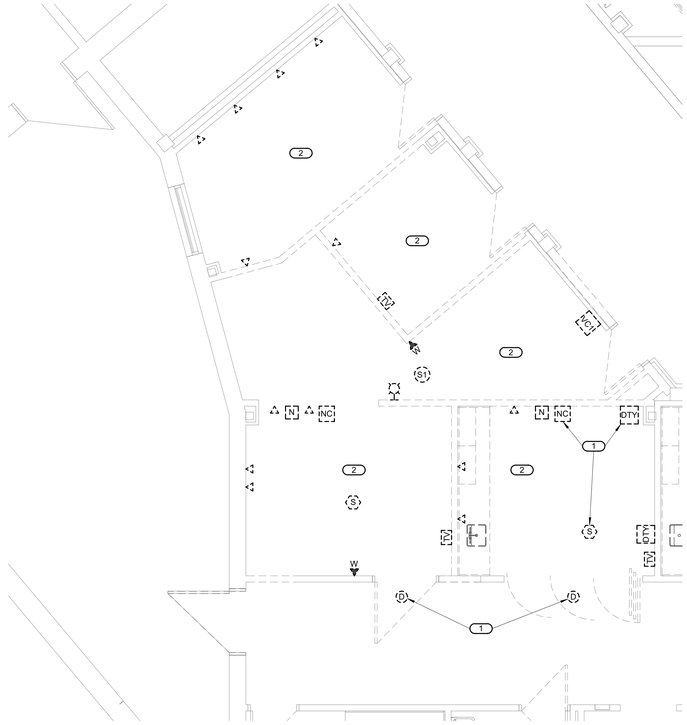
PROJECT # 21003531.00
Missouri State Certificate of Authority E-2017008530

REFERENCE SCALE IN INCHES
0 1 2 3

E211.1

FIRST FLOOR - POWER



1 FIRST FLOOR DEMOLITION - SYSTEMS - CT

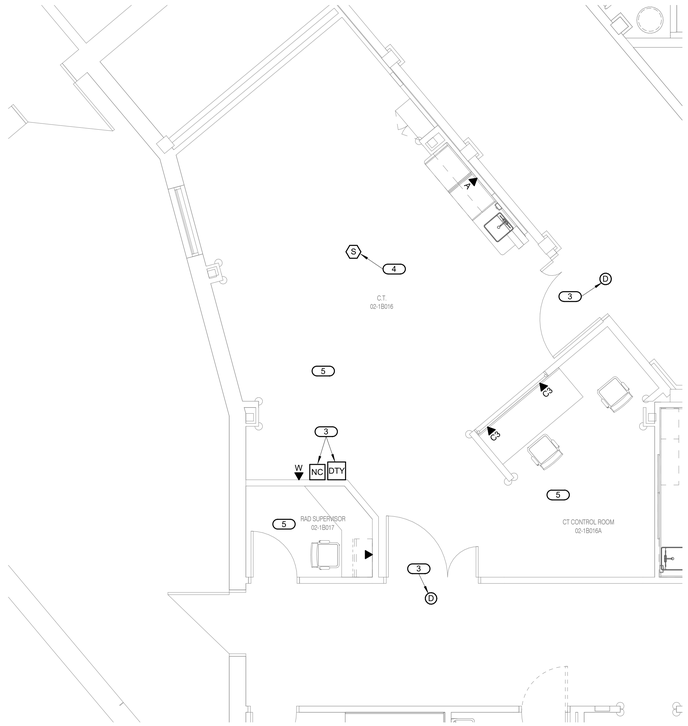
1/4" = 1'-0"

SHEET NOTES:

1. REFER TO GENERAL NOTES ON SHEET E000.1.

KEYNOTES: (#)

1. DEVICE TO BE RELOCATED. REFER TO NEW WORK PLAN FOR MORE INFORMATION.
2. EXISTING DATA CABLING SERVING OUTLETS IN THIS ROOM TO BE DEMOED SHALL BE RE-USED FOR NEW OUTLETS IF CABLING IS LONG ENOUGH. IF EXISTING CABLING IS NOT RE-USED, THEN IT SHALL BE REMOVED BACK TO I.T. ROOM. REFER TO NEW WORK PLAN FOR MORE INFORMATION.
3. RELOCATED NURSE CALL DEVICE TO BE RE-CONNECTED TO EXISTING NURSE CALL SYSTEM SERVING AREA.
4. RELOCATED SMOKE DETECTOR TO BE RE-CONNECTED TO EXISTING FIRE ALARM SYSTEM SERVING AREA.
5. NEW DATA OUTLET(S) SHOWN IN THIS ROOM SHALL RE-USE EXISTING CABLING AND JACKS THAT SERVED OLD OUTLETS IN AREA IF CABLING IS LONG ENOUGH. IF NEW CABLING IS REQUIRED DUE TO EXISTING CABLING LENGTHS, THEN PROVIDE JACKS AND CAT6 CABLING PER SAINT LUKE'S STANDARDS. ANY NEW CABLING SHALL EXTEND TO I.T. CLOSET SERVING OTHER OUTLETS IN AREA AND CONNECT TO EXISTING PATCH PANEL. INSTALLATION SHALL MATCH ALL SAINT LUKE'S STANDARDS.



2 FIRST FLOOR - SYSTEMS - CT

1/4" = 1'-0"

RELEASED FOR CONSTRUCTION
No Objections Noted
Development Services Department
City of Lee's Summit, Missouri
11/30/2021

STATE OF MISSOURI
BRUCE ELDON HART
NUMBER E-22817
PROFESSIONAL ENGINEER

11/12/21

Bruce E. Hart
Missouri #E-22817

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Saint Luke's ED Finish Upgrades
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Date	11/12/21
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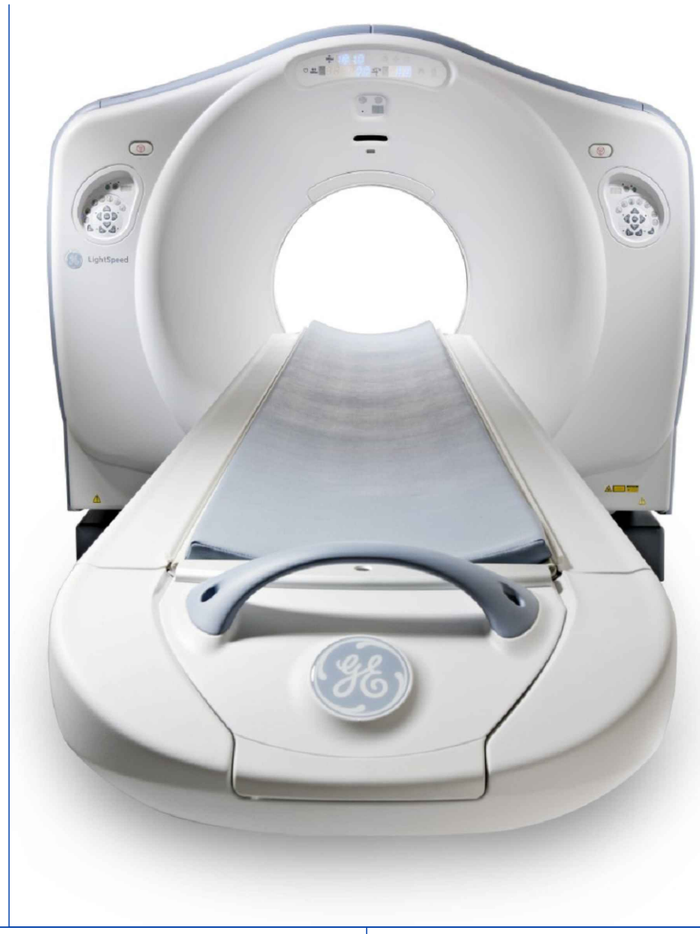
Drawn By	PLR
Checked By	PJP

Revision

Number	Date	Description

E221.1

FIRST FLOOR - SYSTEMS



REV	DATE	MODIFICATIONS
A	27/Oct/2021	Final (DC-318318)

St Lukes Hospital of Kansas City
Kansas City, Missouri
USA

01 - Cover Sheet
02 - Equipment Layout
03 - Structural_Electrical layout
04 - Floor structural details
05 - Radiation Protection Layout
06 - Power Requirements - Power Distribution
07 - HVAC - Delivery
08 - Environment - Interconnections
09 - Room and Equipment Dimensions

10 - Disclaimer - Site Readiness

A mandatory component of this drawing set is the GE Healthcare Pre Installation manual. Failure to reference the Pre Installation manual will result in incomplete documentation required for site design and preparation.
Pre Installation documents for GE Healthcare products can be accessed on the web at: www.gehealthcare.com/siteplanning

GE Healthcare

Cody Ayers
913-251-0235
Cody.ayers@ge.com

LIGHTSPEED VCT
FINAL STUDY

Drawn by	Verified by	Concession	S.O. (GON)	PIM Manual	Rev
JJL	JJL	-	Move	5116410-100	21

Format	Scale	File Name	Date	Sheet
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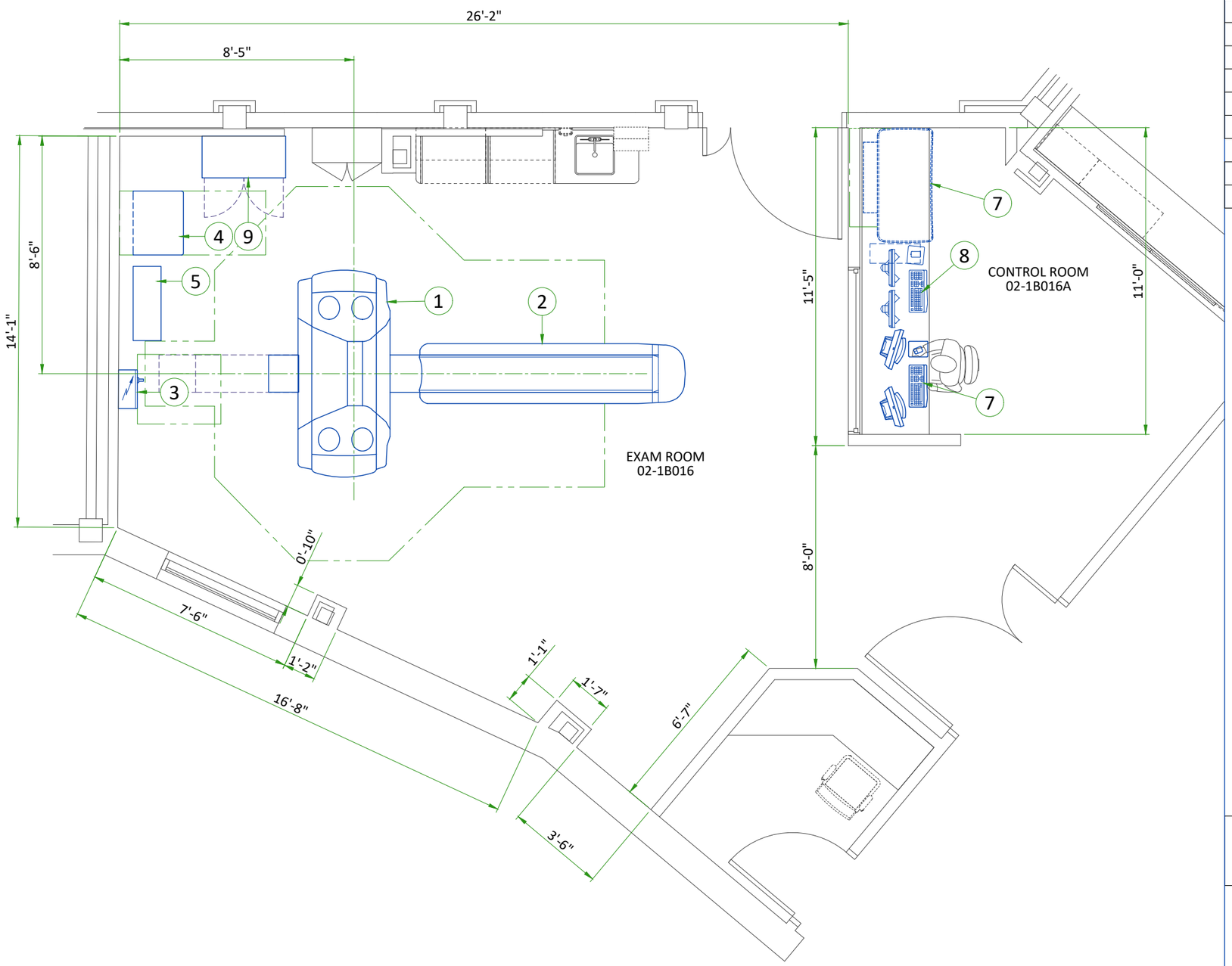


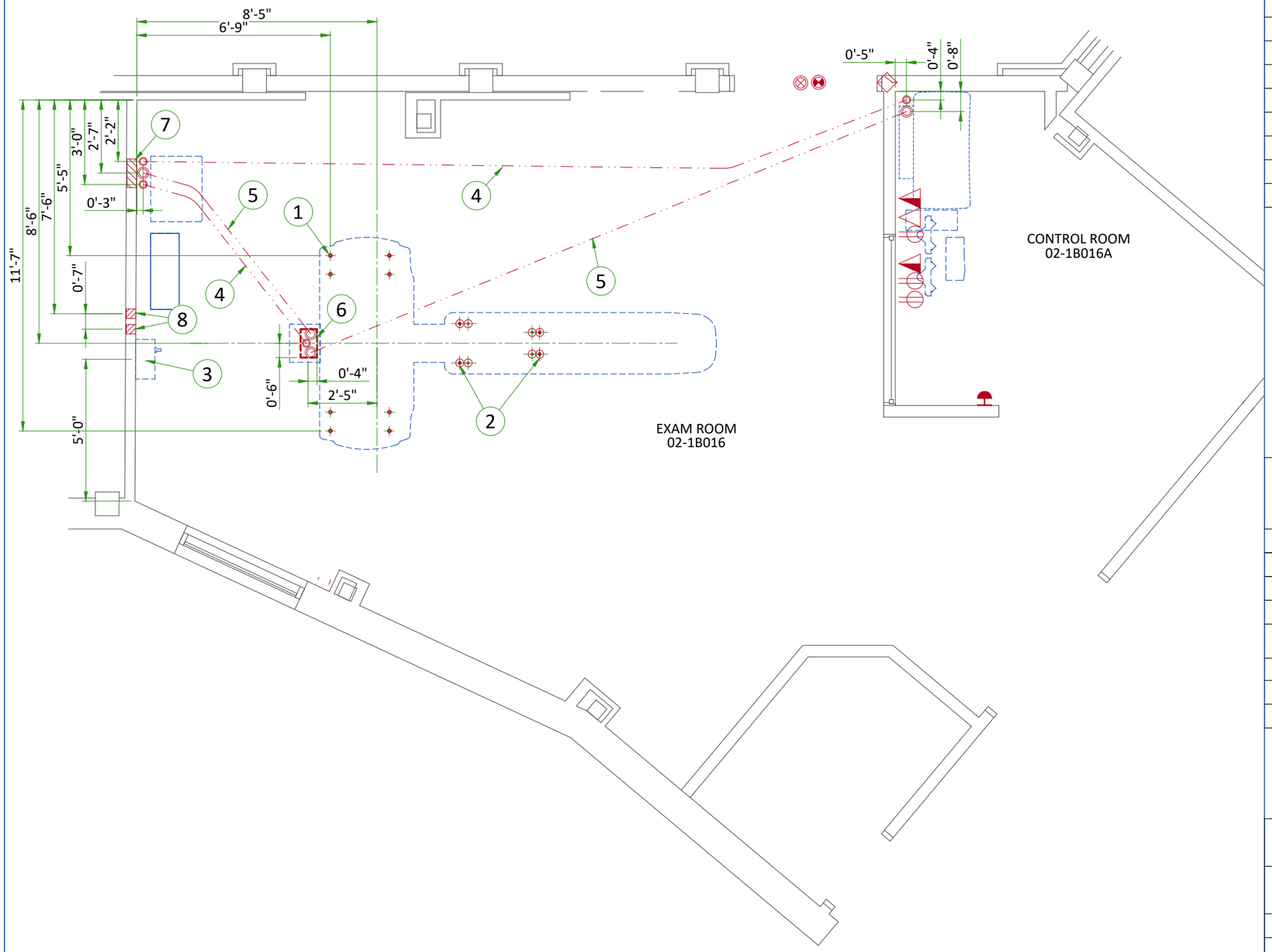
ITEM	DESCRIPTION	DIMENSIONS LxWxH (in)	WEIGHT (lb)
1	GANTRY	89.3x39.6x74.6	4110
2	PATIENT TABLE [2000]	25.6x114.5x41.3	1113
3	MAIN DISCONNECT PANEL (MDP)	23.6x11.8x31.5	93
4	POWER DISTRIBUTION UNIT (PDU)	28x22x41.8	816
5	PARTIAL UPS	12x32x49	620
6	STORAGE CABINET	18x36x42	90
7	OPERATOR CONSOLE [GOC6]	49x29x26.7	524
8	ADVANTAGE WORKSTATION	2019	22
9	SERVICE CABINET	-	-

EXAM ROOM HEIGHT	
FINISHED CEILING HEIGHT	9'-0"

Room Move Note:
Equipment shown on drawing is being relocated/ reinstalled from another location.
All equipment must be verified for accuracy by GE PMI or Field Engineer.

For Accessory Sales: (866) 281-7545 Options 1, 2, 1, 2 or mail to: gehcaccessorysales@ge.com

STRUCTURAL-ELECTRICAL LAYOUT



ITEM	QTY	DESCRIPTION
		STRUCTURAL
1		GANTRY ANCHORING (SEE STRUCTURAL DETAILS)
2		TABLE ANCHORING (SEE STRUCTURAL DETAILS)
		ELECTRICAL
3		MAIN DISCONNECT PANEL @ 5'-0" ABOVE FINISH FLOOR
4		2.5" STUBBED CONDUIT RUNNING THRU-FLOOR
5		3.5" STUBBED CONDUIT RUNNING THRU-FLOOR
6		8" X 12" AREA FOR CONDUIT STUB UPS AT GANTRY
7		12" X 16" X 4" BOX FOR PDU @ 12" ABOVE FINISH FLOOR
8		4" X 4" X 4" BOX FOR UPS @ 16" ABOVE FINISH FLOOR

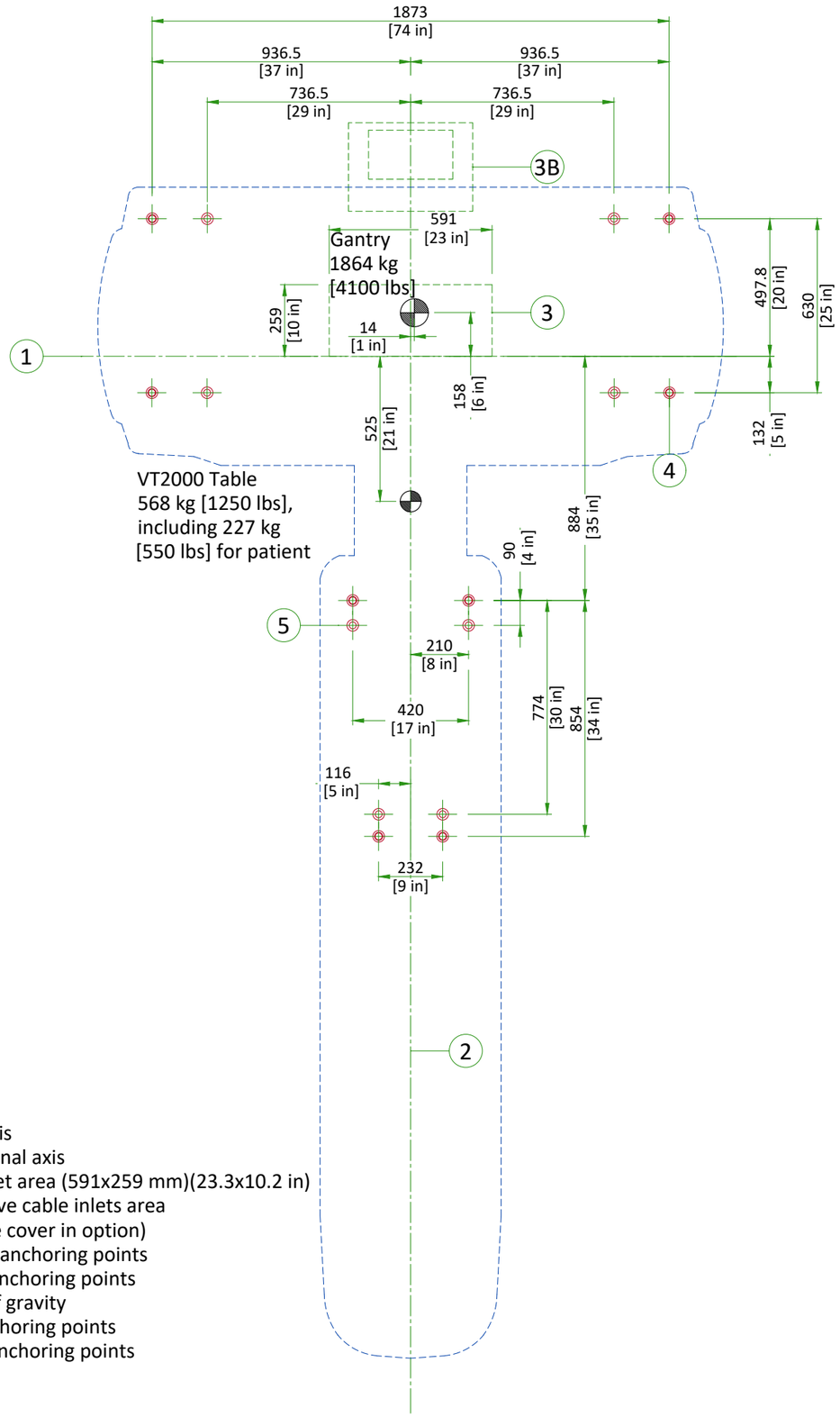
Room Move Cables Note:
Cable lengths listed may differ from what is included with reinstalled system. Contact the local field engineer for actual lengths to be delivered. Run all conduits straight as possible.

Basic system		
		RJ 45 network socket
		System emergency off (SEO), (recommended height 4'-0" above floor)
		X-Ray room warning light control panel - Available from GEHC, Call: 800-279-7925 or local GE Installation Project Manager
		X-Ray ON lamp (L1) - 24V
		Door interlock switch (needed only if required by state/local codes)
		120V Duplex hospital grade outlet

Additional Conduit Runs (Contractor Supplied and Installed)

From (Bubble # / Item)	To (Bubble # / Item)	Qty	Size In.	Size mm
3 Phase Power	3 Main Disconnect Panel	1	As req'd	As req'd
3 Main Disconnect Panel	Emergency Off	1	1/2	13
	7 Power Distribution Unit	1	As req'd	As req'd
7 Power Distribution Unit	Door Switch	1	1/2	13
	Warning Light Control	1	1/2	13
Warning Light		1	1/2	13
1 Phase Power		1	1/2	13
Options				
3 Main Disconnect Panel	8 Partial UPS	1	1 1/4	30
7 Power Distribution Unit		1	2	50

ANCHORING/LOADING DISTRIBUTION TO THE FLOOR

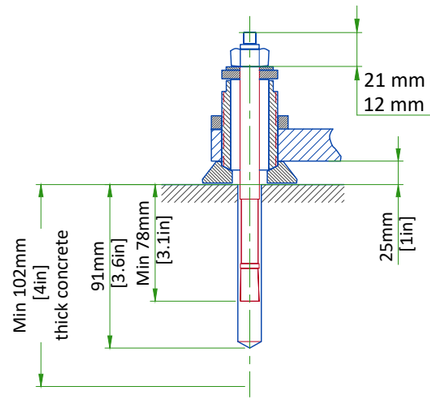


(1) Tilting axis
(2) Longitudinal axis
(3) Cable inlet area (591x259 mm)(23.3x10.2 in)
(3B) Alternative cable inlets area
(with rear cable cover in option)
(4) 8 Gantry anchoring points
(5) 8 Table anchoring points
Center of gravity
Main anchoring points
Backup anchoring points

SCALE 1:20

FLOOR REQUIREMENTS

GE SUPPLIED GANTRY ANCHORS



Notes:
1) Anchors must be embed at least 125 mm (4.92 in) from concrete floor edge or expansion joint
2) Torque anchor to 75 Nm

NOT TO SCALE

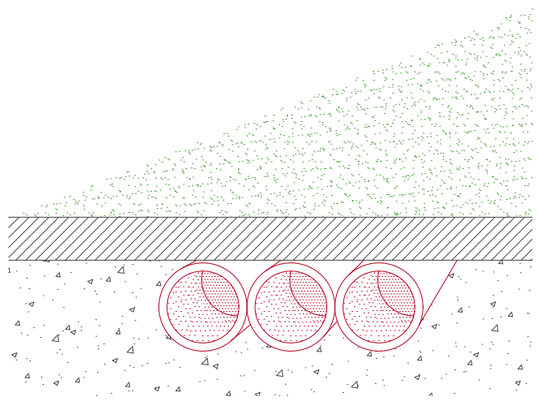
FINISHED FLOOR REQUIREMENTS

Installation requires a finished floor in the scan and control rooms :

- The floor surface in the scan room directly under the gantry and table must be level.
- The floor levelness tolerance of the floor surface that the gantry and table will rest on is 6 mm (0.24 in) over a 3000 mm (118.1 in) distance.
- Shims should not be used to compensate for a floor that does not meet this requirement.
- Eight or more floor covering openings that are 101.6 mm (4 in) in diameter are made to ensure the table and gantry rest on a solid surface.
- These floor penetrations can be sealed if required. These requirements apply to all installation types.

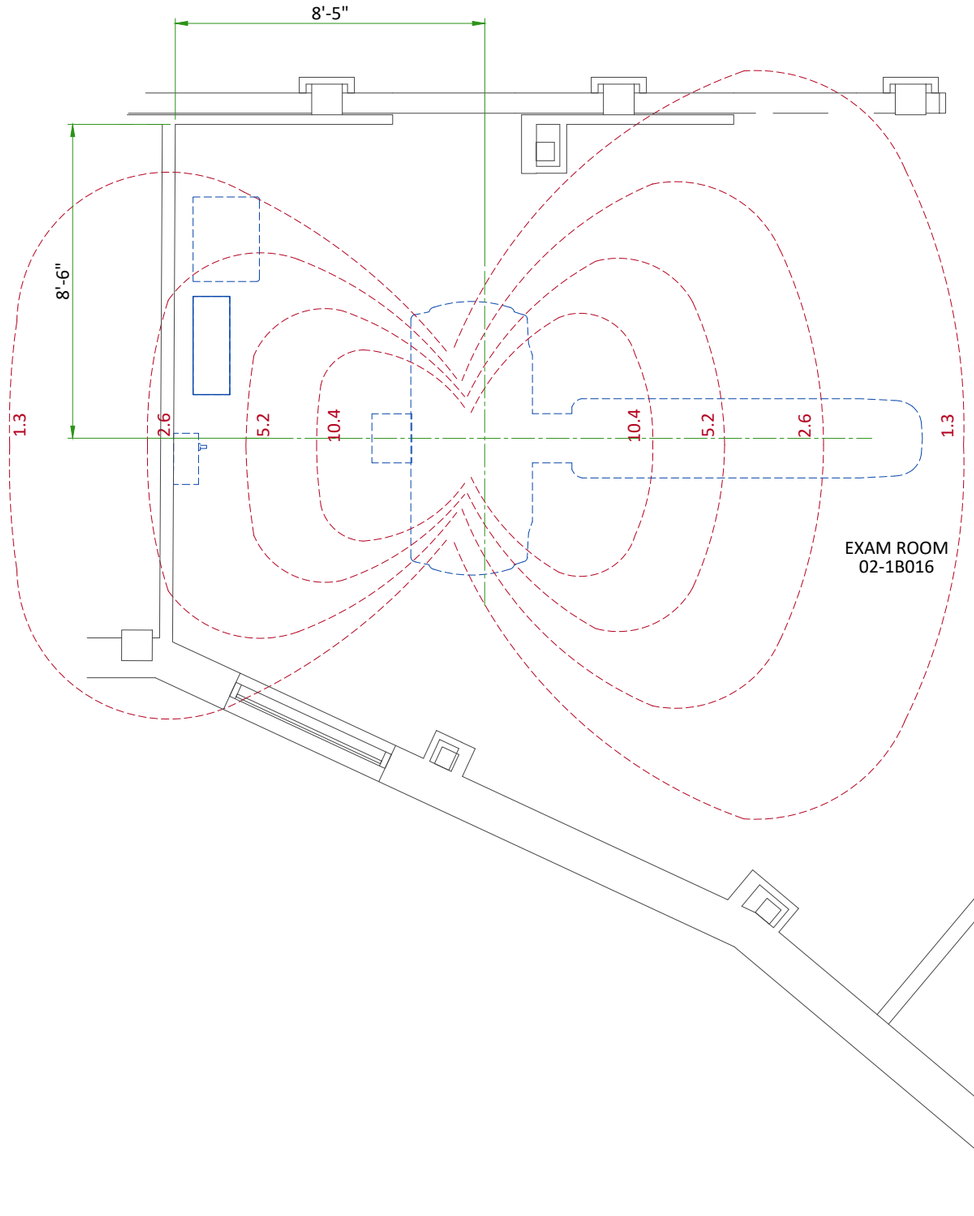
TYPICAL CABLE MANAGEMENT

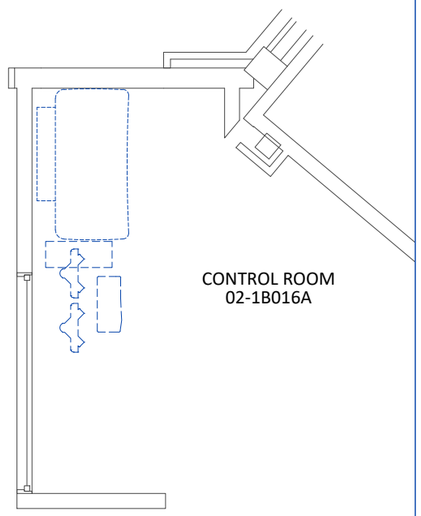
CONDUIT IN THE FLOOR



NOT TO SCALE

RADIATION PROTECTION LAYOUT





SHIELDING REQUIREMENTS SCALING	
CHANGED PARAMETER (mAs)	**MULTIPLICATION FACTOR (new mAs/100)**
80 kV	0.24
100 kV	0.45
120 kV	0.71
140 kV	1.00
1 mm aperture	0.20
3 mm aperture	0.22
5 mm aperture	0.27
10 mm aperture	0.38
15 mm aperture	0.48
20 mm aperture	0.59
30 mm aperture	0.79
40 mm aperture	1.00

SHIELDING REQUIREMENTS:

Engage a qualified radiological health physicist to review your scan room shielding requirements, taking into consideration:

- Scatter radiation levels within the scanning room
- Equipment placement.
- Weekly projected work-loads (number of patients/day technique (kvp*ma))
- Materials used for construction of walls, floors, ceiling, doors, and windows.
- Activities in surrounding scan room areas.
- Equipment in surrounding scan room areas (e.g., film developer, film storage)
- Room size and equipment placement within the room relative to room size.

The Illustrations on this page depict measured radiation levels within the scanning room, while scanning a 32 cm or 16 cm CTDI phantom with the technique shown. Use the mAs, kV and aperture scaling factors in the table shown here to adjust exposure levels to the scan technique used at the site.
Example: (using the Illustration) The exposure level for a 120 kV, 800mA, 1 sec. scan at 1270 mm (50 in) away from the scan place is 10.4 µGy x 0.71 x 800/100 = 59.2 µGy.

NOTE: Actual measurements can vary. Expected deviations equals ±15%, expect for the 5 mA and 1mm techniques, where variations may be greater (up to a factor of 2), due to the inherent deviation in small values. The maximum deviation anticipated for tube output equals ±40%.

POWER REQUIREMENTS

POWER SUPPLY	**3 PHASES+G 200/220/240/380/400/420/440/460/480 V ± 10%**
FREQUENCIES	**50/60Hz ± 3Hz**
MAXIMUM POWER DEMAND	**150 kVA**
AVERAGE (CONTINUOUS) POWER DEMAND	**11 kVA**
POWER FACTOR	**0.85**

- Power supply should come into a power distribution box (PDB) containing the protective units and controls.
- The section of the supply cable should be calculated in accordance with its length and the maximum permissible voltage drops.
- There must be discrimination between supply cable protective device at the beginning of the installation (main low-voltage transformer side) and the protective devices in the PDB.

SUPPLY CHARACTERISTICS

- Power input must be separate from any others which may generate transients (elevators, air conditioning, radiology rooms equipped with high speed film changers...).
- All equipment (lighting, power outlets, etc...) installed with GE system components must be powered separately.
- Phase imbalance 2% maximum.
- Transients must be less than 1500V peak. (on a 400V line)

GROUND SYSTEM

- System of equipotential grounding.
- Equipotential: The equipotential link will be by means of an equipotential bar. This equipotential bar should be connected to the protective earth conductors in the ducts of the non GE cableways and to additional equipotential connections linking up all the conducting units in the rooms where GE system units are located.

CABLES

- Power and cable installation must comply with the distribution diagram.
- All cables must be isolated and flexible, cable color codes must comply with standards for electrical installation.
- The cables from signaling and remote control (Y, SEO, L...) will go to PDB with a pigtail length of 1.5m, and will be connected during installation. Each conductor will be identified and isolated (screw connector).

CABLEWAYS

The general rules for laying cableways should meet the conditions laid down in current standards and regulations, with regard to:

- Protecting cables against water (cableways should be waterproof).
- Protecting cables against abnormal temperatures (proximity to heating pipes or ducts).
- Protecting cables against temperature shocks.
- Replacing cables (cableways should be large enough for cables to be replaced).
- Metal cableways should be grounded.

FEEDER TABLE

MIN. FEEDER WIRE SIZE, AWG OR MCM (sq. mm)/VAC	MINIMUM FEEDER WIRE LENGTH - ft (m)							
	50 (15)	100 (30)	150 (46)	200 (61)	250 (76)	300 (91)	350 (107)	400 (122)
480 VAC	1 (45)	1 (45)	1 (45)	1 (45)	1 (45)	1/0 (55)	1/0 (55)	2/0 (70)

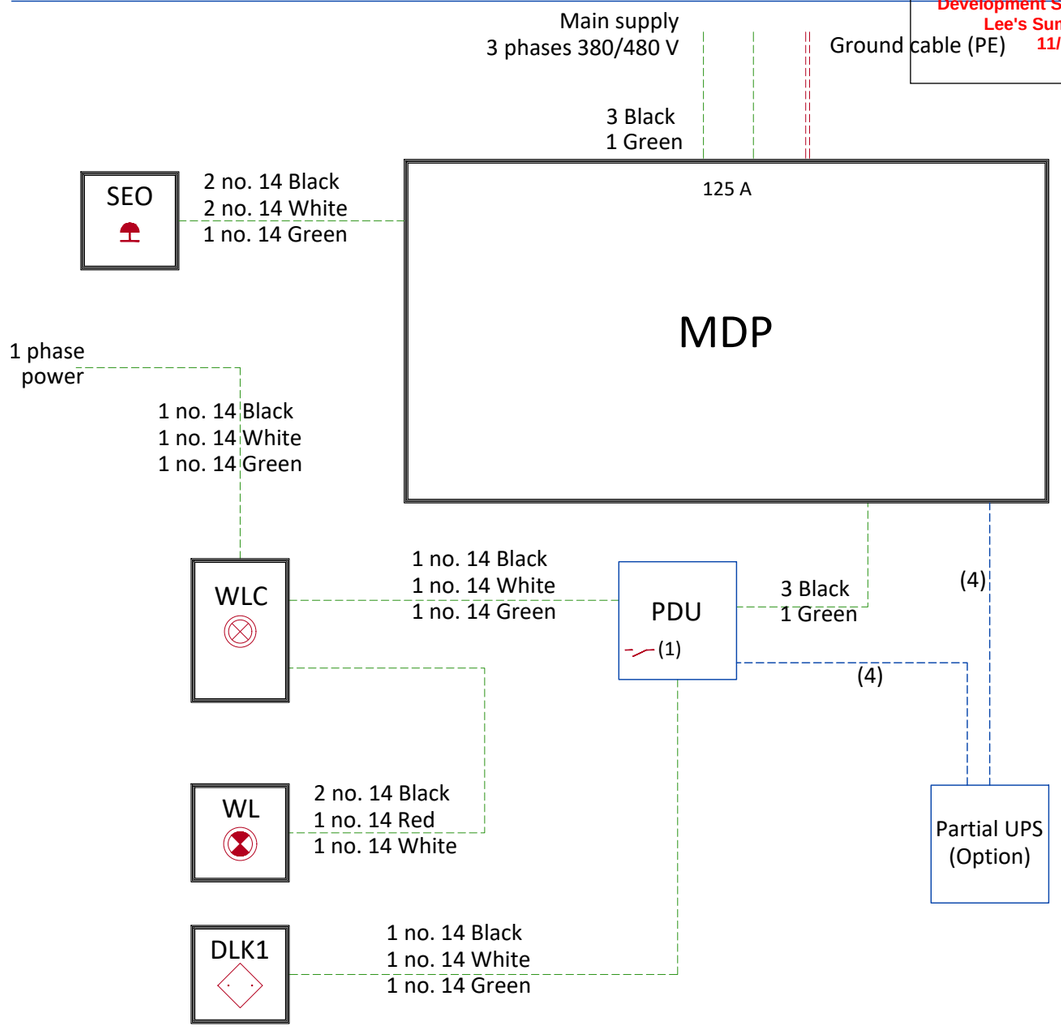
GENERAL NOTES

In all cases qualified personnel must verify that the feeder (at the point of take-off) and the run to the CT system meet all the requirements stated in the PIM

For a single unit installation, the minimum transformer size is 225KVa, with 2.4% rated regulation at unity power factor. Resultant maximum allowable feeder regulation is 3.4%

Grounding conductor will be a 1/0 minimum. this ground will run from the equipment back to the power source/main grounding point and always travel in the same conduit with the feeders

POWER DISTRIBUTION



MDP	Main Disconnect Panel
PDU	Power distribution unit
SEO	Emergency OFF button (Control Room), located 1.50m (4.9') above floor
WLC	Warning Light Control
WL	Warning Light
DLK1	Door Interlock Switch (needed only if required by state/local codes)

Cable SUPPLIED BY CUSTOMER
Cable SUPPLIED BY GE
Equipment SUPPLIED BY CUSTOMER
Equipment SUPPLIED BY GE

Notes :

(1) Two dry contacts: "System ON" and "X-Ray ON", both released by PDU.
Max. voltage = 30 V

(2) If length < 10 m (32.8')
Cable with 2m (6.6') extra length on the floor behind the back of PDU

(3) Cable with 2m (6.6') extra length on the floor behind the back of PDU

(4) Cable delivered with partial UPS installed by GE (Option)

TEMPERATURE AND HUMIDITY SPECIFICATIONS

IN-USE CONDITIONS

	EXAM ROOM			CONTROL ROOM		
Temperature	Min	Recommended	Max	Min	Recommended	Max
	18°C	22°C	26°C	18°C	22°C	26°C
	64°F	72°F	79°F	64°F	72°F	79°F
Temperature gradient	**≤ 3°C/h**			**≤ 3°C/h**		
	≤ 5°F/h			**≤ 5°F/h**		
Relative humidity (1)	30% to 60%			30% to 60%		
Humidity gradient	**≤ 5%/h**			**≤ 5%/h**		
System heat dissipation	Max			Max		
	10.25 kW			1.76 kW		

STORAGE CONDITIONS

Temperature	+0°C to +30°C
	30°F to 86°F
Temperature gradient	**≤ 3°C/h**
	≤ 5°F/h
Relative humidity (1)	30% to 70%
Humidity gradient	**≤ 5%/h**

Storage longer than 6 months is not recommended.
(1) Non-condensing

AIR RENEWAL

According to local standards.

NOTE
In case of using air conditioning systems that have a risk of water leakage it is recommended not to install it above electric equipment or to take measures to protect the equipment from dropping water.

DELIVERY

THE CUSTOMER/CONTRACTOR SHOULD:

- Provide an area adjacent to the installation site for delivery and unloading of the GE equipment.
- Ensure that the dimensions of all doors, corridors, ceiling heights are sufficient to accommodate the movement of GE equipment from the delivery area into the definitive installation room.
- Ensure that access routes for equipment will accommodate the weights of the equipment and any transportation, lifting and rigging equipment.
- Ensure that all necessary arrangements for stopping and unloading on public or private property not belonging to the customer have been made.

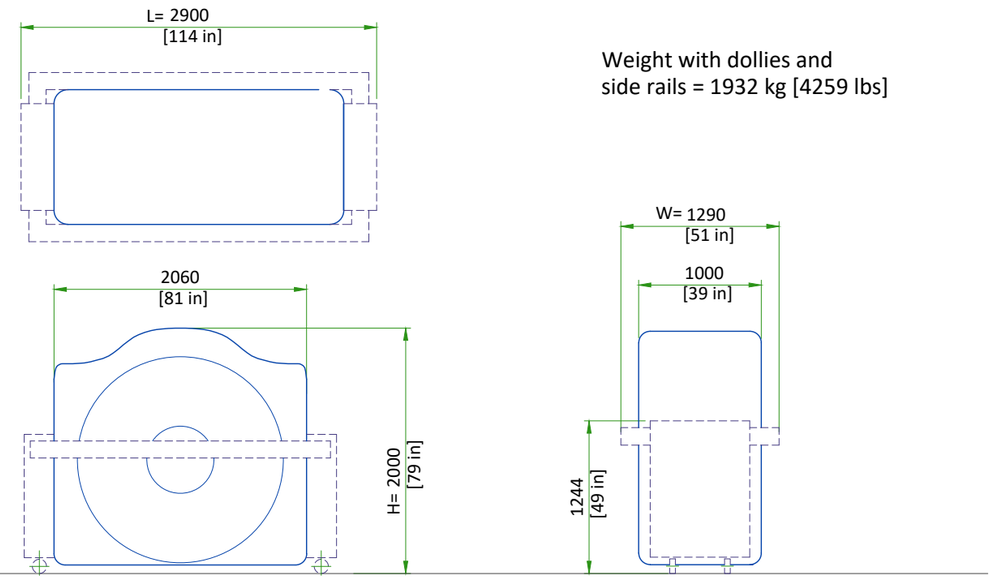
DIMENSIONS OF DELIVERY WITH DOLLY TRANSPORT EQUIPMENT

EQUIPMENT	DIMENSIONS		WEIGHT	
GANTRY	LENGTH	2900 mm [114 in]	1932 kg	4259 lbs
	WIDTH	1290 mm [51 in]		
	HEIGHT	2000 mm [79 in]		
VT2000 TABLE	LENGTH	2997 mm [118 in]	632 kg	1390 lbs
	WIDTH	762 mm [30 in]		
	HEIGHT	1143 mm [45 in]		

HEAT DISSIPATION DETAILS

ROOM	DESCRIPTION	Max (kW)	Max (BTU)
Exam Room	Gantry and Table	9.76	33292
	TOTAL	9.76	33292
Exam Room or Technical Room*	Power distribution unit (PDU)	0.5	1708
	TOTAL	0.50	1708
Control Room	Operator console with 1 IG, 2 monitors and SCSI Tower	1.76	6000
	LCD monitor (Total amount of 2 monitors)	0.1	341
	TOTAL	1.86	6341
*Technical Room is not mandatory, the placements of these elements are recommended in the Exam Room.			

GANTRY DELIVERY



- The gantry is shipped on a dolly equipped with elevating casters (normal shipping configuration).
- Dimensions and weight without dollies, side rails and covers : L = 2060mm, W = 860mm, H = 1850mm, Weight = 1864 kg

NOT TO SCALE

ENVIRONMENT

MAGNETIC FIELD SPECIFICATIONS

- Limit the magnetic interference to guarantee specified imaging performance.

GANTRY:
- Ambient static magnetic fields less than 1 Gauss.
- Ambient AC magnetic fields less than 0.01 Gauss peak.

OPERATOR CONSOLE:
- Ambient static magnetic fields less than 10 Gauss.
- Use static dissipative vinyl.

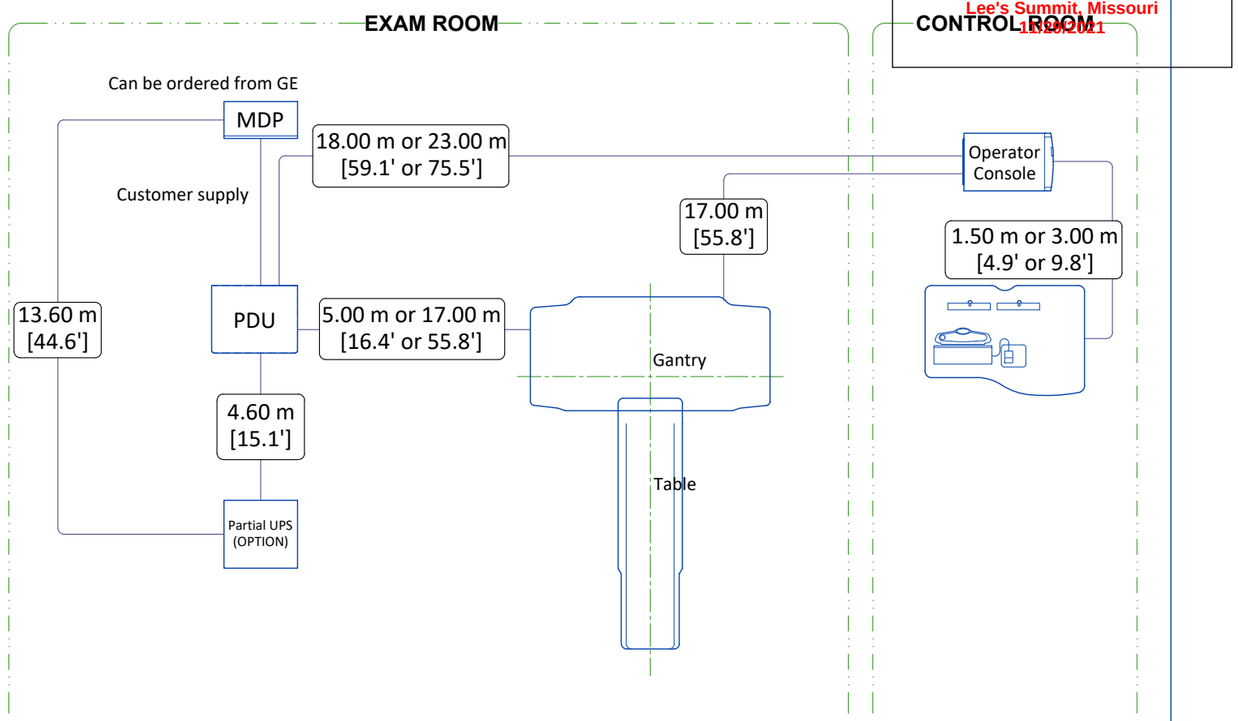
MAXIMUM GANTRY AUDIBLE NOISE LEVEL

- The maximum ambient noise level is produced by the gantry during a CT scan acquisition.
- It is less than 70 dBA when measured at a distance of one meter from the nearest gantry surface, in any direction.

MAXIMUM CONSOLE AUDIBLE NOISE LEVEL

- The maximum ambient noise level is less than or equal to 56 dBA when measured 1m up and 1m away from the console at an ambient temperature of 26 °C.

INTERCONNECTIONS



CONNECTIVITY REQUIREMENTS

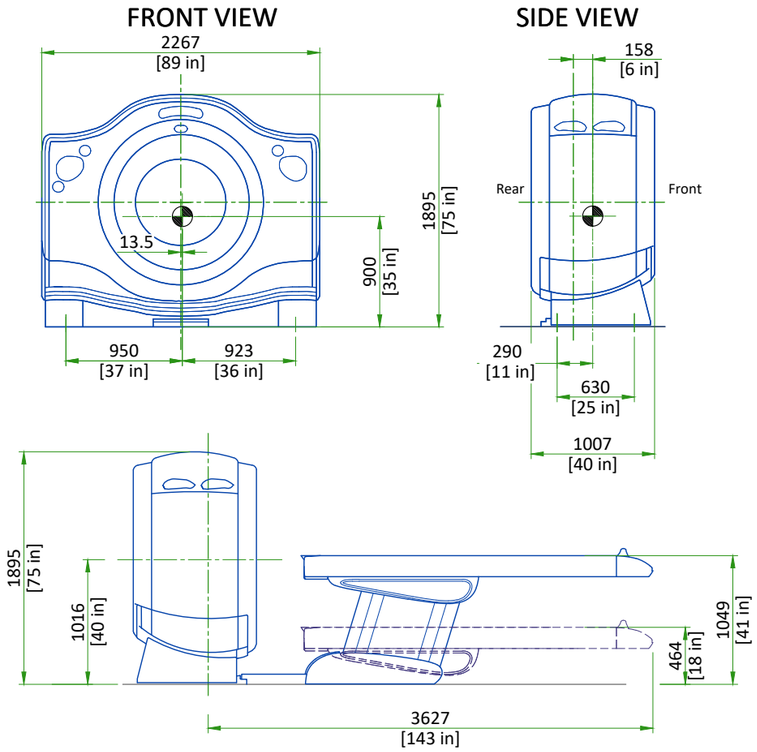
Broadband Connections are necessary during the installation process and going forward to ensure full support from the Engineering Teams for the customers system. Maximum performance and availability for the customers system is maintained and closely monitored during the lifetime of the system.

Proactive and reactive maintenance is available utilizing the wide range of digital tools using the connectivity solutions listed below:

- Site-to-Site VPN/GE Solution
- Site-to-Site VPN/Customer Solution
- Connection through Dedicated Service Network
- Internet Access - connectivity for InSite 2.0

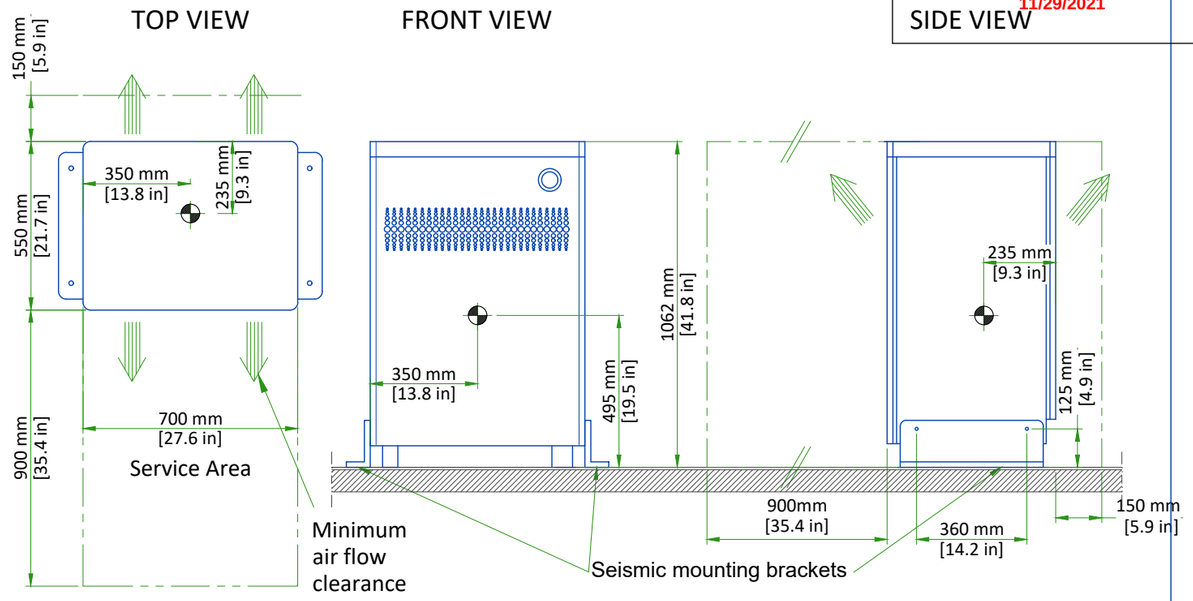
The requirements for these connectivity solutions are explained in the broadband solutions catalogue (separate document).

GANTRY WITH VT2000 TABLE



SCALE 1:50

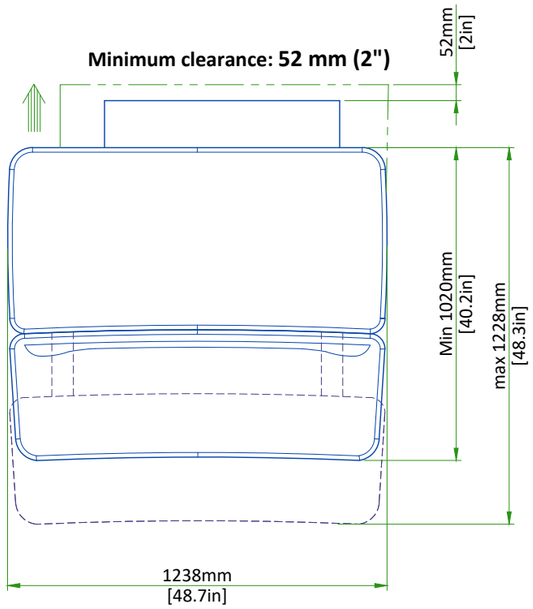
POWER DISTRIBUTION UNIT (PDU)



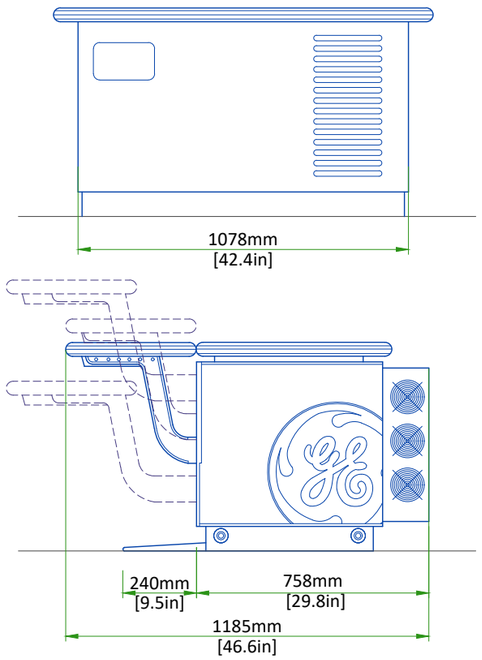
SCALE 1:20

OPERATOR CONSOLE

TOP VIEW



SIDE VIEW



SCALE 1:20

Weight: 195 kg (430 lb)

Indicates air flow (Convection)

DISCLAIMER

GENERAL SPECIFICATIONS

- GE is not responsible for the installation of developers and associated equipment, lighting, cassette trays and protective screens or derivatives not mentioned in the order.
- The final study contains recommendations for the location of GE equipment and associated devices, electrical wiring and room arrangements. When preparing the study, every effort has been made to consider every aspect of the actual equipment expected to be installed.
- The layout of the equipment offered by GE, the dimensions given for the premises, the details provided for the pre-installation work and electrical power supply are given according to the information noted during on-site study and the wishes expressed by the customer.
- The room dimensions used to create the equipment layout may originate from a previous layout and may not be accurate as they may not have been verified on site. GE cannot take any responsibility for errors due to lack of information.
- Dimensions apply to finished surfaces of the room.
- Actual configuration may differ from options presented in some typical views or tables.
- If this set of final drawings has been approved by the customer, any subsequent modification of the site must be subject to further investigation by GE about the feasibility of installing the equipment. Any reservations must be noted.
- The equipment layout indicates the placement and interconnection of the indicated equipment components. There may be local requirements that could impact the placement of these components. It remains the customer's responsibility to ensure that the site and final equipment placement complies with all applicable local requirements.
- All work required to install GE equipment must be carried out in compliance with the building regulations and the safety standards of legal force in the country concerned.
- These drawings are not to be used for actual construction purposes. The company cannot take responsibility for any damage resulting therefrom.

CUSTOMER RESPONSIBILITIES

- It is the responsibility of the customer to prepare the site in accordance with the specifications stated in the final study. A detailed site readiness checklist is provided by GE. It is the responsibility of the customer to ensure all requirements are fulfilled and that the site conforms to all specifications defined in the checklist and final study. The GE Project Manager of Installation (PMI) will work in cooperation with the customer to follow up and ensure that actions in the checklist are complete, and if necessary, will aid in the rescheduling of the delivery and installation date.
- Prior to installation, a structrual engineer of record must ensure that the floor and ceiling is designed in such a way that the loads of the installed system can be securely borne and transferred. The layout of additional structural elements, dimensioning and the selection of appropriate installation methods are the sole responsibility of the structural engineer. Execution of load bearing structures supporting equipment on the ceiling, floor or walls are the customer's responsibility.

RADIO-PROTECTION

- Suitable radiological protection must be determined by a qualified radiological physicist in conformation with local regulations. GE does not take responsibility for the specification or provision of radio-protection.

THE UNDERSIGNED, HEREBY CERTIFIES THAT I HAVE READ AND APPROVED THE PLANS IN THIS DOCUMENT.		
DATE	**NAME**	**SIGNATURE**

GLOBAL SITE READINESS CHECKLIST (DI)

DOC1809666 Rev. 7

Site Ready Checks at Installation
EHS Site Requirements
Overall access route to the scan room free from obstruction / high hazards.
Enough space to store tools, equipment, parts, install waste and the general area free from obstruction and trip hazards.
Enough necessary facilities for the GE employees available.
No 3rd parties working in the area that may affect the safety of the installation activity.
Area free from any chemical, gas, dust, welding fume exposure and has painting been completed and dry.
All emergency routes identified, signed and clear from obstruction.
Accessible single source lockable panel that LOTO can be applied to for GE equipment installation (MDP and/or PDU).
There are no other conditions or hazards that you have observed or have been made aware of by the customer or contractors on site.
Required for Mechanical Install start
Room dimensions, including ceiling height, for all Exam, Equipment/Technical & Control rooms meets GE specifications.
Ceiling support structure, if indicated on the GE drawing, is in the correct location and at the correct height according to the Original Equipment Manufacturer specifications.
Levelness and spacing has been measured, and is ready for the installation of any GE supplied components.
Overhead support Structure (unistrut) has been confirmed with customer/contractor to meet required GE provided criteria.
Finished ceiling is installed. If applicable ceiling tiles installed per PMI discretion.
Floor levelness/flatness is measured and within tolerance, and there are no visible defects per GEHC specifications.
Entry door threshold meets PIM requirement.
Rooms that will contain equipment, including staging areas if applicable, are construction debris free. Precautions must be taken to prevent debris from entering rooms containing equipment.
Cable ways (floor/wall/ceiling/Access Flooring) are available for installation of GE cables are of correct length and diameter.
Cable ways routes per GE Final drawings and cable access openings areas installed at a time determined by GEHC PM. Surface floor duct can be installed at time of system installation.
Adequate room illumination installed and working.
Customer supplied countertops where GE equipment will be installed are in place.
Required for Calibration Start
HVAC systems Installed, and the site meets minimum environmental operational system requirements.
System power & grounding (PDB/MDP) is available as per GE specifications.
System power & grounding (PDB/MDP) is installed at point of final connection and ready to use. Lock Out Tag Out is available.
PMI to confirm all feeder wires and breaker are size appropriately. EPO installed if needed.
PMI to confirm with electrician all power and signal cables are well terminated ensuring there are no loose connections.
Network outlets installed.
Computer network available and working.
Lead doors and windows complete or scheduled to be installed. If applicable, radiation protection (shielding) finished & radioprotection regulatory approval for installation obtained.

Note: The details shown here are only an extract from DOC1809666. For the complete document please contact your PMI.