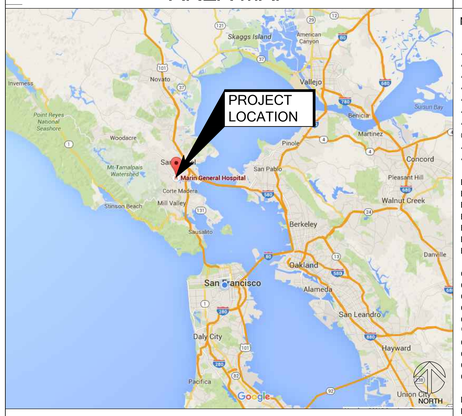
Marinhealth Medical Center

HOSPITAL REPLACEMENT BUILDING

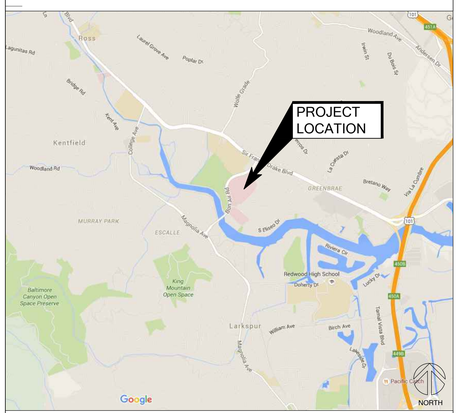
250 BON AIR ROAD
GREENBRAE, CA 94904

NUCLEAR MEDICINE SUITE RELOCATION

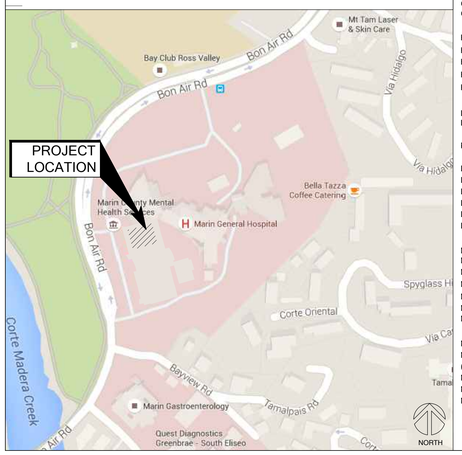
AREA MAP



VICINITY MAP



SITE MAP



ABBREVIATIONS

NOT ALL ABBREVIATIONS ARE USED

ABV	ABOVE
ACT	ACOUSTICAL CEILING TILE
ADJ	ADJUSTABLE
ADDL	ADDITIONAL
AFF	ABOVE FINISHED FLOOR
ALUM	ALUMINUM
ALT	ALTERNATE
@	AT
ARCH	ARCHITECTURAL
APPROX	APPROXIMATE
BKNG	BACKING
BD	BOARD
BET	BETWEEN
BLDG	BUILDING
BM	BEAM
BOTT	BOTTOM
BSMT	BASEMENT
CO	CLEAN OUT
CONC	CONCRETE
CAB	CABINET
CG	CORNER GUARD
CLO	CLOSET
℄	CENTERLINE
CLG	CEILING
CLR	CLEAR
CONT	CONTINUOUS/CONTINUATION
CPU	COMPUTER PROCESSING UNIT
DEG	DEGREE
DEMO	DEMOLITION
DEPT	DEPARTMENT
DF	DRINKING FOUNTAIN
DIA / Ø	DIAMETER
DIM	DIMENSION
DISP	DISPENSER
DN	DOWN
DWG	DRAWING
DTL	DETAIL
(E)	EXISTING
EA	EACH
EQPT	EQUIPMENT
EL	ELEVATION
ELEC	ELECTRICAL
ELEV	ELEVATOR
EMBD	EMBEDMENT
EMT	ELECTRICAL METALLIC TUBING
EQ	EQUAL
EWC	ELECTRIC WATER COOLER
EXH	EXHAUST
EXT	EXTERIOR
EXP	EXPANSION
FHWS	FLATHEAD WOOD SCREW
FOS	FACE OF STUD
FOF	FACE OF FINISH
FURR	FURRING
FD	FLOOR DRAIN
FEC	FIRE EXTINGUISHER CABINET
FHC	FIRE HOSE CABINET
FIN	FINISH
FLR	FLOOR
FOC	FACE OF CONCRETE
FS	FLOOR SINK
FSD	FIRE AND SMOKE DAMPER
FTG	FOOTING
FT	FEET
GA	GAUGE
GALV	GALVANIZED
GL	GLASS
GWB	GYPSUM WALL BOARD
HR	HOUR
HDW	HARDWARE
HT	HEIGHT
HM	HOLLOW METAL
HSS	HOLLOW STRUCTURAL SECTION
IN	INCH(ES)
INSUL	INSULATION
KIT	KITCHEN
LAB	LABORATORY
LAM	LAMINATE, LAMINATION
LAV	LAVATORY
LOC	LOCATION
LT	LIGHT
LWC	LIGHTWEIGHT CONCRETE
MA	MEDICAL AIR
MECH	MECHANICAL
MTL	METAL
MIN	MINIMUM
MISC	MISCELLANEOUS
MAX	MAXIMUM
MTD	MOUNTED
N2	NITROGEN
NIC	NOT IN CONTRACT
(N)	NEW
NO	NUMBER
NTS	NOT TO SCALE
NWC	NORMAL WEIGHT CONCRETE
OC	ON CENTER
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
OFVI	OWNER FURNISHED VENDOR INSTALLED
OVHD	OVERHEAD
O2	OXYGEN
PL/ ₹	PLATE
PLYWD	PLYWOOD
PSI	POUNDS PER SQUARE INCH
PT	PRESSURE TREATED
PTD	PAPER TOWEL DISPENSER
(R)	RELOCATE
R	RADIUS / RISER
RM	ROOM
REFR	REFRIGERATOR
REINF	REINFORCED
REQD	REQUIRED
RO	ROUGH OPENING
SECT	SECTION
SHT	SHEET
SIM	SIMILAR
SMS	SHEET METAL SCREW
SPEC	SPECIFICATION
SQ	SQUARE
SF	SQUARE FEET
SST	STAINLESS STEEL
STD	STANDARD
STL	STEEL
STO	STORAGE
STRUCT	STRUCTURAL
STS	SELF-TAPPING SCREW
SUSP	SUSPENDED, SUSPENSION
SYS	SYSTEM
T	TREAD
TEL	TELEPHONE
THK	THICK
TS	TUBE STEEL
TYP	TYPICAL
T & B	TOP AND BOTTOM
UON	UNLESS OTHERWISE NOTED
UTIL	UTILITY
VAC	VACUUM
VCT	VINYL COMPOSITION TILE
VERT	VERTICAL
VIF	VERIFY IN FIELD
W/	WITH
W/O	WITHOUT
WAGD	WASTE ANESTHETIC GAS DISPOSAL
WD	WOOD
WO	WHEREVER OCCURS
WP	WALL PROTECTION
WR	WATER RESISTANT
WT	WEIGHT

GENERAL NOTES

1. ALL WORK SHALL CONFORM TO THE CODES LISTED IN THESE CONTRACT DOCUMENTS AND ALL OTHER APPLICABLE CODES. GOVERNING AUTHORITIES AND CODES TAKE PRECEDENCE OVER DRAWINGS AND SPECIFICATIONS. REPORT DISCREPANCIES TO THE ARCHITECT PRIOR TO PERFORMANCE OF WORK.
2. VERIFY DIMENSIONS, EXISTING TO REMAIN UTILITIES AND CRITICAL ELEMENTS, SUCH AS STRUCTURE AND STRUCTURAL SUPPORTS, BEFORE COMMENCING WORK AFFECTED BY THEM. THE CONTRACTOR SHALL REPORT ANY DISCREPANCIES TO THE ARCHITECT PRIOR TO PERFORMANCE OF WORK.
3. DIMENSIONS:
   IN GENERAL, DIMENSIONS ARE TO THE FINISHED FACE OF A PARTITION, FURRING, OR TO THE FINISHED FACE OF A MANUFACTURE PRODUCT. DIMENSIONS TO CENTERLINES WILL BE INDICATED AS SUCH BY NOTE. DIMENSIONS TAKE PRECEDENCE OVER ANY GRAPHICAL REPRESENTATION SHOWN ON THE DRAWINGS. DRAWINGS ARE NOT TO BE SCALED, AND QUANTITIES CANNOT BE INFERRED BY SCALING THE DRAWINGS. IF QUANTITIES ARE NOT SHOWN BY NUMERICAL REPRESENTATION OR DIMENSIONING ON THE CONTRACT DOCUMENTS,CLARIFICATION MUST BE OBTAINED FROM THE ARCHITECT.
4. CONTRACTOR SHALL THOROUGHLY REVIEW CONTRACT DOCUMENTS AND EXISTING SITE CONDITIONS AND NOTIFY ARCHITECT OF ANY DISCREPANCIES, ERRORS OR OMISSIONS BETWEEN CONTRACT DOCUMENTS AND THE EXISTING CONDITION PRIOR TO THE PERFORMANCE OF WORK OR CONSTRUCTION.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PERFORMING ALL WORK REQUIRED FOR A COMPLETELY FINISHED PROJECT.
6. INSTALL ALL MATERIALS AND PRODUCTS IN STRICT ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND APPLICABLE ICC-ES REPORTS.
7. THE CONSTRUCTION DOCUMENTS SHOW PRINCIPAL AREAS WHERE WORK MUST BE ACCOMPLISHED UNDER THIS CONTRACT. INCIDENTAL WORK MAY ALSO BE NECESSARY IN AREAS NOT SHOWN ON THE DRAWINGS DUE TO CHANGES AFFECTING EXISTING MECHANICAL, ELECTRICAL, PLUMBING OR OTHER SYSTEMS. SUCH INCIDENTAL WORK IS ALSO PART OF THIS PROJECT.
8. PREPARE, SUBMIT AND RECEIVE APPROVAL OF SLEEVE AND OPENING DRAWINGS BEFORE LOCATING SLEEVES AND OPENINGS IN FIRE-RATED CONSTRUCTION AND BEFORE CUTTING FIRE-RATED CONSTRUCTION.
9. WHERE "MATCH EXISTING" IS INDICATED, NEW CONSTRUCTION AND/OR NEW FINISHES SHALL MATCH EXISTING CONSTRUCTION AND FINISHES TO THE SATISFACTION OF THE ARCHITECT.
10. THE CONTRACTOR SHALL COORDINATE THE REMOVAL AND TEMPORARY STORAGE OF ALL EQUIPMENT WITH THE CLIENT PRIOR TO THE START OF DEMOLITION OR NEW CONSTRUCTION. EXISTING EQUIPMENT SHALL BE RELOCATED OR REINSTALLED PER APPROVED DRAWING. CONTRACTOR MUST INFORM THE CLIENT AND ARCHITECT PRIOR TO CONSTRUCTION IF ANY EQUIPMENT MAY BE IMPACTED BY CONSTRUCTION. 1
11. ALL SLOPES SHALL BE MEASURED USING A 2' SMART LEVEL TO ENSURE CODE COMPLIANCE.
12. "WHERE PROVIDED, THROUGH PENETRATION FIRESTOP SYSTEM AND MEMBRANE PENETRATIONS DETAILS ARE REFERENCE ONLY. THROUGH PENETRATIONS AND MEMBRANE PENETRATIONS SHALL BE PROTECTED BY AN APPROVED PENETRATION FIRESTOP SYSTEM OR MEMBRANE PENETRATION FIRESTOP SYSTEM INSTALLED AS TESTED IN ACCORDANCE WITH ASTM E814 OR UL 1479, WITH A MINIMUM POSITIVE PRESSURE DIFFERENTIAL OF 0.01 INCH (2.49 PA) OF WATER OR OTHERWISE PERMITTED BY CBC SECTION 714. LISTED THROUGH PENETRATION FIRESTOP SYSTEMS AND MEMBRANE PENETRATIONS SHALL BE INSTALLED IN ACCORDANCE WITH THE INSTALLATION DETAILS FOR THE LISTED SYSTEMS. LISTED THROUGH-PENETRATION FIRESTOP SYSTEMS, MEMBRANE PENETRATION PROTECTION AND OTHER PERMITTED MEANS AND METHODS OF PENETRATION PROTECTION SHALL BE SUBMITTED FOR OSHPD FDD REVIEW AND APPROVAL PRIOR TO INSTALLATION. 2019 CALIFORNIA BUILDING CODE (CBC) SECTION107.2.1"
13. PRIOR TO CONSTRUCTION STARTING OSHPD FIELD FIRE MARSHAL AND LOCAL FIRE AUTHORITY SHALL REVIEW AND APPROVE THE MEANS OF EGRESS AND HOW IT WILL BE MAINTAINED DURING CONSTRUCTION OF THE MEANS OF EGRESS, INCLUDING TO THE PUBLIC WAY. PER 2019 C.F.C. SECTION 3311.2 AND CAN 9-3301

EQUIPMENT ANCHORAGE

1. EQUIPMENT ANCHORAGE:
   A) SUPPORTS AND ATTACHMENTS OF ALL EQUIPMENT TO BE INSTALLED AS A PART OF THIS PROJECT SHALL BE DETAILED ON CONSTRUCTION DOCUMENTS, EXCEPT THOSE EXEMPT BY THE 2019 CBC SECTION 1617A.1.18.

   B) EQUIPMENT SUPPORTS AND ATTACHMENTS SHALL BE APPROVED BY THE APPROPRIATE DESIGN PROFESSIONAL OF RECORD (DPOR) AND HCAI AS PART OF THE FIELD REVIEWS/OBSERVATIONS. THE INSPECTOR OF RECORD (IOR) SHALL ASSURE THAT THE ABOVE REQUIREMENTS ARE ENFORCED.

APPLICABLE CODE INFORMATION

THE GENERAL CONTRACTOR IS RESPONSIBLE FOR COMPLETING THE CONSTRUCTION OF THIS PROJECT IN ACCORDANCE WITH THE FOLLOWING FEDERAL, STATE, AND LOCAL CODES INCLUDING THEIR MOST RECENT AMENDMENTS AND REVISIONS:

CALIFORNIA CODE OF REGULATIONS TITLE 8
CALIFORNIA CODE OF REGULATIONS TITLE 19
CALIFORNIA CODE OF REGULATIONS TITLE 22
CALIFORNIA CODE OF REGULATIONS TITLE 23
CALIFORNIA CODE OF REGULATIONS TITLE 24

2019 CALIFORNIA ADMINISTRATIVE CODE (CAC)
PART 1, TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR)
2019 CALIFORNIA BUILDING CODE (CBC)
PART 2, TITLE 24, CCR (BASED ON THE 2018 INTERNATIONAL BUILDING CODE (IBC))
2019 CALIFORNIA ELECTRICAL CODE (CEC)
PART 3, TITLE 24, CCR (BASED ON THE 2017 NATIONAL ELECTRICAL CODE (NEC))
2019 CALIFORNIA EXISTING BUILDING CODE (CEBC)
PART 10, TITLE 24, CCR (BASED ON 2018 INTERNATIONAL BUILDING CODE)
2019 CALIFORNIA MECHANICAL CODE (CMC)
PART 4, TITLE 24, CCR (BASED ON THE 2018 UNIFORM MECHANICAL CODE (UMC))
2019 CALIFORNIA PLUMBING CODE (CPC)
PART 5, TITLE 24, CCR (BASED ON THE 2018 UNIFORM PLUMBING CODE (UPC))
2019 CALIFORNIA FIRE CODE (CFC)
PART 9, TITLE 24, CCR (BASED ON THE 2015 INTERNATIONAL FIRE CODE (IFC))
2019 CALIFORNIA GREEN BUILDING STANDARD CODE
2010 ADA STANDARDS FOR ACCESSIBILITY DESIGN

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) STANDARDS

UNLESS OTHERWISE STATED, IT IS INTENDED THAT THE ABOVE CODES AND REGULATIONS REFER TO THE LATEST EDITION OR REVISION IN EFFECT ON THE DATE OF THE CONTRACT. NOTHING ON THE DRAWINGS IS TO BE CONSTRUED AS REQUIRING OR PERMITTING WORK THAT IS CONTRARY TO THE ABOVE LISTED CODES AND REGULATIONS, OR OTHER LOCAL, STATE OR FEDERAL CODES OR REGULATIONS WHICH MAY BE APPLICABLE.

PROJECT TEAM

PROJECT TEAM CONTACT:

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E-MAIL: laura.burkman@jci.com

PROJECT DESCRIPTION

THE SCOPE OF WORK INCLUDES CONVERTING EXISTING SHELL AND STORAGE SPACE INTO A NEW NUCLEAR MEDICINE SUITE, WHICH INCLUDES THE CAMERA ROOM, CONTROL ROOM, HOT LAB, SOILED HOLDING/CLEAN-UP, PATIENT TOILET/DRESSING ROOM, DOSAGE, AND A PATIENT HOLDING AREA.

INTENT OF DRAWINGS

THE INTENT OF THE CONSTRUCTION DOCUMENTS IS TO RECONSTRUCT WITH IN THE HOSPITAL BUILDING IN ACCORDANCE WITH THE 2019 CBSC. SHOULD ANY CONDITION DEVELOP NOT COVERED BY THE APPROVED CONSTRUCTION DOCUMENTS, WHEREIN THE FINISHED WORK WILL NOT COMPLY WITH THE 2019 CBSC, AMENDED CONSTRUCTION DOCUMENTS (ACDS) DETAILING AND SPECIFYING THE REQUIRED WORK SHALL BE SUBMITTED TO AND APPROVED BY HCAI BEFORE PROCEEDING WITH THE WORK.

(REFERENCE: 2019 CAC SECTION 7-109 AND 2019 CBC SECTIONS 107 AND 116)

BUILDING INFORMATION

HCAI FACILITY NO.:	10273
HCAI BUILDING NO.:	BLD-06250-HOSPITAL REPLACEMENT BUILDING - BLDG 14
CONSTRUCTION YEAR:	2021 - (UNDER 2013 CBC)
OCCUPANCY:	GROUP I-2 (NO CHANGE)
TOTAL LICENSED BED:	327 (NO CHANGE)
CONSTRUCTION TYPE:	TYPE 1-A
NUMBER OF STORIES:	4 STORIES WITH 1 BASEMENT
PROJECT AREA:	1400 SF
FIRE PROTECTION:	FULLY SPRINKLERED
FIRE ALARM:	FULL COVERAGE
SPC CLASSIFICATION:	5S
NPC CLASSIFICATION:	4S

SYMBOLS

- COLUMN GRIDS REFERENCE (X / X)
- NORTH ARROW INDICATOR (NORTH)
- KEY NOTE DESIGNATION (60) — RE: KEY NOTE LEGEND
- CEILING HEIGHT AT DESIGNATED LOCATIONS / AREAS (X'-X")
- EQUIPMENT OR FURNITURE TYPE SYMBOL (E1)
- ROOM NAME DESIGNATION (NAME) / ROOM NUMBER DESIGNATION (###) / CEILING HEIGHT AT DESIGNATED LOCATIONS / AREAS (X'-X")
- DOOR TYPE SYMBOL (101) — SEE DOOR SCHEDULE
- ALIGN FACE OF FINISH WITH ADJACENT FACE OF FINISH (ALIGN)
- REVISION NUMBER SYMBOL (2) / REVISION CLOUD SYMBOL
- LARGE SCALE PLAN OR ENLARGED SECTIONAL DETAIL: (X" / A.X.X) — DETAIL NUMBER TO BE REFERENCED / SHEET NUMBER TO BE REFERENCED
- MATCH LINE, DARK SIDE IS THE AREA CONSIDERED
- DETAIL DRAWING REFERENCE SYMBOL: (X" / A.X.X) — DETAIL NUMBER TO BE REFERENCED / SHEET NUMBER TO BE REFERENCED
- INTERIOR ELEVATION SYMBOL: (1 / 4 A.X.X 2 / 3) — SHEET NUMBER TO BE REF. / ELEV NUMBER
- PARTITION TYPE DESIGNATION (X) — ACOUSTICAL INSULATION
- DOOR MARK SEE SCHEDULE: (101) — DOOR TYPE SYMBOL
- ROOM NAME DESIGNATION (NAME) / OCCUPANCY CLASSIFICATION (CLASS) / FUNCTION OF SPACE PER CBC 2019 TABLE 1004.5 (FUNCTION) / LOAD FACTOR PER CBC 2019 TABLE 1004.5 (###) / AREA (###) / OCCUPANT LOAD (###)

SHEET INDEX

ARCHITECTURAL

A0.0	COVER SHEET, GENERAL NOTES, ABBREV. & PROJECT INFORMATION
A0.1	HCAI SITE PLAN & FACILITY INFORMATION
A0.2	ACCESSIBILITY DETAILS
A0.5	FIRE LIFE SAFETY PLAN - LOBBY LEVEL
A0.6	ACCESSIBILITY PLAN - LOBBY LEVEL
A2.1	DEMO FLOOR AND REFLECTED CEILING PLAN
A2.2	NEW FLOOR AND REFLECTED CEILING PLAN
A2.3	BASEMENT LEVEL REFLECTED CEILING PLAN
A2.4	SIGNAGE & FINISH PLANS
A2.5	EQUIPMENT PLAN
A2.6	FLOOR PLANS - DUCTWORK TO ROOF LEVEL 2
A5.0	INTERIOR ELEVATIONS
A5.1	INTERIOR ELEVATIONS
A5.2	INTERIOR ELEVATIONS
A6.0	DOOR SCHEDULE, WINDOW SCHEDULE & DETAILS
A7.0	WALL TYPES
A7.1	GENERAL NOTES & STUD FRAMING AND CONNECTIONS DETAILS
A7.1A	GENERAL NOTES & STUD FRAMING AND CONNECTIONS DETAILS 1
A7.2	PARTITION WALL SECTIONS, ELEVATIONS & FRAMING DETAILS
A7.3	PARTITION WALL BRACING, BRIDGING & BACKING DETAILS
A7.4	PARTIAL HEIGHT PARTITION WALL TOP TRACK CONNECTION DETAILS
A7.5	FULL HEIGHT PARTITION WALL TOP TRACK CONNECTION DETAILS
A7.6	BOTTOM TRACK CONNECTION DETAILS & SUSPENDED SOFFIT DETAILS
A7.7	MISC WALL FRAMING DETAILS 2
A8.1	GENERAL NOTES & SUSPENDED CEILING COMPONENTS DETAILS
A8.2	SUSPENDED CEILING BRACING ASSEMBLY DETAILS & STRUT DETAILS
A8.3	HANGER & BRACING WIRE CONNECTION DETAILS
A8.4	STRUT CONNECTION DETAILS & SPECIAL DETAILS
A8.5	GYPSUM BOARD CEILING DETAILS
A9.1	CASEWORK DETAILS
A10.1	UL DETAILS
A10.2	UL DETAILS
A10.3	UL DETAILS

STRUCTURAL

S1.0	GENERAL NOTES
S2.0	PARTIAL LOBBY LEVEL PLAN
S3.0	SIEMENS EQUIPMENT DETAILS
S3.1	EQUIPMENT DETAILS
S3.2	MISCELLANEOUS DETAILS
S3.3	MECHANICAL EQUIPMENT DETAILS 2

MECHANICAL

M0.1	GENERAL NOTES, SYMBOLS AND ABBREVIATIONS
M0.2	SCHEDULES - MECHANICAL
M2.1	PARTIAL LOBBY LEVEL PLAN - DEMOLITION WORK - MECHANICAL
M2.2	PARTIAL LOBBY LEVEL PLAN - NEW WORK - MECHANICAL
M2.3	PARTIAL LEVEL 2, LEVEL 3, LEVEL 4 AND ROOF PLAN - NEW WORK - MECHANICAL
M2.4	PARTIAL LOBBY LEVEL EXHAUST FAN DET-8, TEST, ADJUST & BALANCE PLAN 2
M8.1	DETAILS
M8.2	DETAILS

PLUMBING

P0.1	GENERAL NOTES, SYMBOLS AND ABBREVIATIONS
P2.1	PARTIAL GROUND LEVEL FLOOR PLANS - DEMOLITION AND NEW WORK - PLUMBING
P2.2	PARTIAL BASEMENT FLOOR PLANS - DEMOLITION AND NEW WORK - PLUMBING
P8.1	DETAILS
P8.2	DETAILS

ELECTRICAL

E0.1	GENERAL NOTES, SYMBOLS, ONE LINE DIAGRAMS AND ABBREVIATIONS
E0.2	PANEL SCHEDULES AND DETAIL
E2.0	LOCATION PLANS
E2.1	PARTIAL GROUND FLOOR PLANS - LIGHTING
E2.2	PARTIAL GROUND FLOOR PLANS - POWER & SIGNAL
E2.3	PARTIAL ROOF PLAN - POWER 2
E3.1	SPECT & CT ROOM FLOOR PLANS - ABOVE & BELOW FLOOR
E3.2	SPECT & CT ROOM SCHEDULES
E4.1	DETAILS
E4.2	DETAILS

FIRE ALARM

FA-001	COVER SHEET
FA-101	DEVICE PLACEMENT PLAN, LOBBY LEVEL, NORTH
FA-102	FSD MAP & MATRIX, LOBBY LEVEL
FA-201	RISER DIAGRAM, LOBBY LEVEL, NORTH
FA-601	CALCULATIONS AND SCHEDULES, 7T1M2
FA-602	CALCULATIONS AND SCHEDULES, 7T1M4
FA-603	CALCULATIONS AND SCHEDULES, 7A2 & AMPS
FA-701	WIRING TYPICALS

FIRE SPRINKLER

FP-1	NUCLEAR MED RELOCATION PIPING PLAN

PHYSICISTS REPORT

PR-1	PHYSICISTS REPORT

DEFERRED SUBMITTALS

1. CAC 4-229 & 7-126 DEFERRED APPROVALS/DEFERRED SUBMITTALS: THE FOLLOWING PORTIONS OF THE DESIGN CANNOT BE FULLY DETAILED IN THE APPROVED CONSTRUCTION DOCUMENTS BECAUSE OF VARIATIONS IN PRODUCT DESIGN AND MANUFACTURE. ALL REFERENCES TO DEFERRED SUBMITTAL ITEMS, FOR EXAMPLE FIRE ALARMS, FIRE SPRINKLER SYSTEMS, UNDERGROUND FIRE SERVICE MAINS, STANDPIPE SYSTEMS, SPECIAL FIRE SUPPRESSION SYSTEMS, ETC., ON THESE DRAWINGS SHALL BE USED FOR BIDDING PURPOSES ONLY AND SHALL NOT BE USED FOR CONSTRUCTION.
   A. DEFERRED SUBMITTAL SCHEDULE. AFTER THE CONSTRUCTION DOCUMENTS ARE APPROVED AND WITHIN 30 CALENDAR DAYS AFTER COMMENCEMENT OF CONSTRUCTION, CONTRACTOR TO SUBMIT A SCHEDULE TO THE ARCHITECT INDICATING WHEN THE DEFERRED SUBMITTALS WILL BE SUBMITTED FOR REVIEW. ARCHITECT TO SUBMIT SCHEDULE TO THE AHJ.
   B. SUBMITTAL PROCESS AND NOTATION. SUBMITTAL DOCUMENTS FOR DEFERRED SUBMITTAL ITEMS SHALL BE SUBMITTED TO THE ARCHITECT FOR REVIEW PRIOR TO SUBMITTAL TO THE AHJ. THE ARCHITECT SHALL REVIEW AND FORWARD SUBMITTAL DOCUMENTS FOR DEFERRED SUBMITTAL ITEMS TO THE AHJ WITH A NOTATION INDICATING THAT THE DEFERRED SUBMITTAL DOCUMENTS HAVE BEEN REVIEWED AND THAT THEY HAVE BEEN FOUND TO BE IN GENERAL CONFORMANCE WITH THE DESIGN OF THE PROJECT.
   C. STAMPING AND SIGNING. ENGINEERS LICENSED IN THE APPROPRIATE BRANCH OF ENGINEERING, SHALL BE RESPONSIBLE FOR THE PREPARATION OF DEFERRED SUBMITTALS AS PERMITTED BY THEIR LICENSE. ENGINEERS SHALL SIGN AND AFFIX THEIR PROFESSIONAL STAMP TO ALL CONSTRUCTION DOCUMENTS OR REPORTS THAT ARE PREPARED UNDER THEIR CHARGE. ALL CONSTRUCTION DOCUMENTS SHALL BE SIGNED AND STAMPED PRIOR TO SUBMITTAL TO THE AHJ.
   D. FABRICATION AND INSTALLATION. THE DEFERRED SUBMITTAL ITEMS SHALL NOT BE FABRICATED OR INSTALLED UNTIL THEIR DESIGN AND SUBMITTAL DOCUMENTS HAVE BEEN APPROVED BY THE AHJ.
   E. LIMITATIONS. THE AHJ SHALL HAVE SOLE DISCRETION AS TO THE PORTIONS OF THE DESIGN THAT MAY BE DEFERRED.
2. DEFERRED SUBMITTAL SCHEDULE
   A. SEISMIC BRACING OF OVERHEAD MEP DISTRIBUTION LINES

Architect

SKA — SMITH-KARNG ARCHITECTURE
800 Haight Street
San Francisco, CA 94117
Office: 415.552.3600

Owner

marin health Medical Center
250 BON AIR ROAD,
GREENBRAE, CA 94904

Consultant

SKA Project Number
2136

HCAI Number
S221296-21-00

HCAI seal/signature

REVIEWED IN ACCORDANCE WITH THE REQUIREMENTS OF 7-24, CCR
APPROVED
Department of Health Care Access & Information
Office of Statewide Hospital Planning & Development
2/13/2023, 11:24:21 PM
S221296-21-00
Pedar Remme

Seal/Signature

REGISTERED ARCHITECT — CHRISTOPHER J. MCCLELLAN — C37097 EXP. 9/30/2023 — STATE OF CALIFORNIA

Issued for

HCAI SUBMITTAL

1	BACKCHECK #1	12/09/2022
2	DESIGN CHANGE	12/09/2022

Drawn by JS
Checked by CL

Project Name
HOSPITAL REPLACEMENT BUILDING-
NUCLEAR MEDICINE SUITE RELOCATION

Sheet Title
COVER SHEET, GENERAL NOTES, ABBREV. & PROJECT INFORMATION

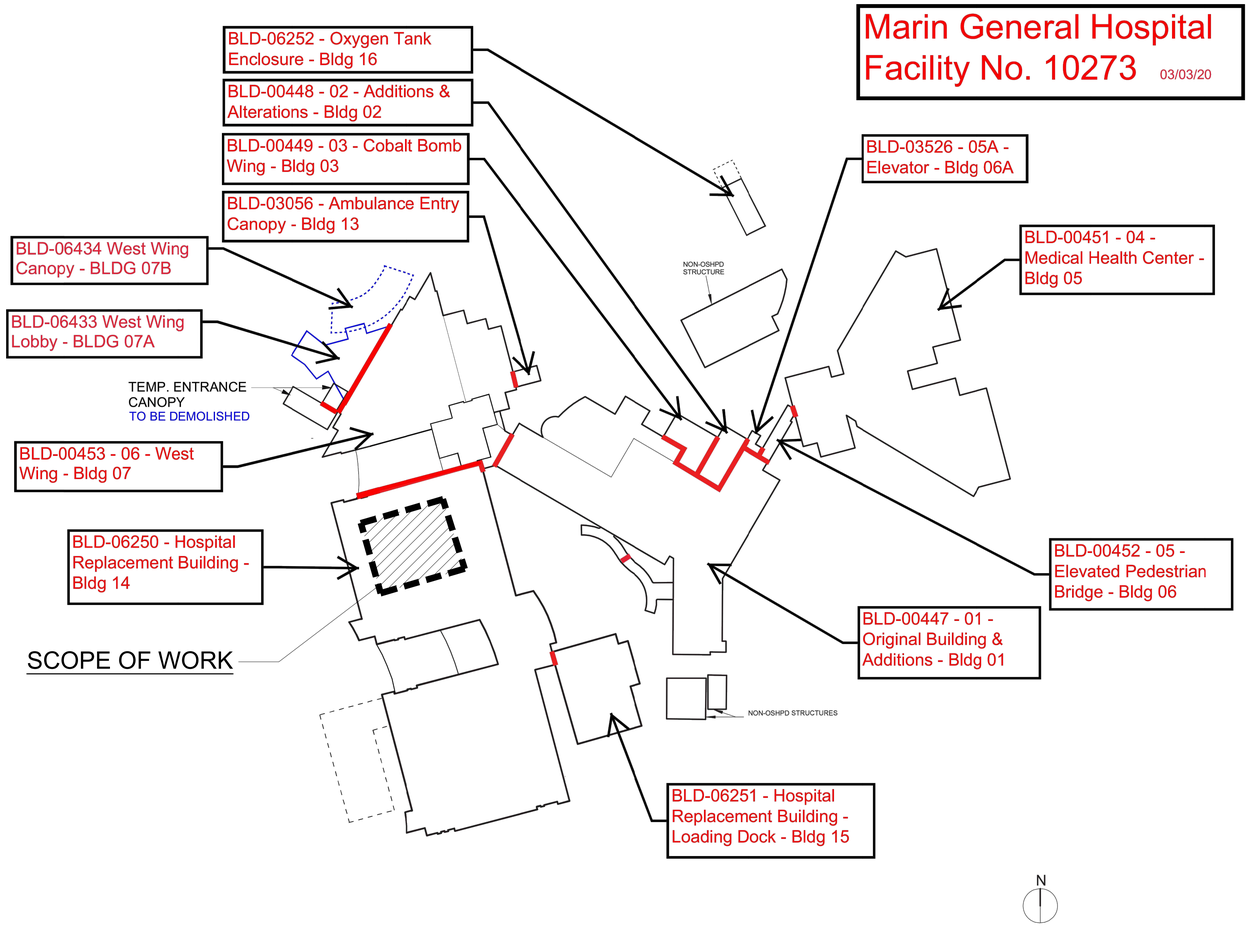
Date 08/05/2022
Scale AS NOTED
Sheet Number A0.0

30 X 42

10273 Marinhealth Medical Center

Bldg Num	Bldg Name	Classification & Status	RACs Date	CO/CF Received	NPC Extension Date	Building Code	Year Built	Stories	Height in Feet	Hazus Score	Instrumented	Construction Type	Sprinklered	
BLD-00447	01 - Original Building & Additions	OSHPD 1, In Service	1/1/2030		Overdue	1949 Uniform Building Code (UBC)	1951	4	59	2007 HAZUS SCORE = 1.60 2010 HAZUS SCORE = 1	No			SPC: 2 NPC: 1
BLD-00448	02 - Additions & Alterations	OSHPD 1, In Service	1/1/2030		Overdue	1970 Uniform Building Code (UBC)	1975	2	Unknown		No			SPC: 2 NPC: 1
BLD-00449	03 - Cobalt Bomb Wing	OSHPD 1, In Service	1/1/2030		Overdue	1961 Uniform Building Code (UBC)	1962	2	24.5	2007 HAZUS SCORE = 0.20	No			SPC: 2 NPC: 1
BLD-00451	04 - Medical Health Center (Mental Health Center)	OSHPD 1, In Service	AB2190 Extension 5/31/2022 Replace		Overdue	1967 Uniform Building Code (UBC)	1968	2	22.5	2010 HAZUS SCORE = 2.5	No			SPC: 1 NPC: 1
BLD-00452	05 - Elevated Pedestrian Bridge	OSHPD 1, In Service	AB2190 Extension 5/31/2022 Replace		Overdue	1967 Uniform Building Code (UBC)	1968	2	22.5	2010 HAZUS SCORE = 14.4	No			SPC: 1 NPC: 1
BLD-00455	06 - West Wing	OSHPD 1, In Service			Overdue	1979 California Building Code (CBC)	2000	4	Unknown		Yes			SPC: 3 NPC: 1
BLD-00454	Data Center / Service Building	Local, Non Acute Care Building				1949 Uniform Building Code (UBC)	1951	1	Unknown		No			SPC: NA NPC:
BLD-03056	Ambulance Entry Canopy	OSHPD 1, In Service			Overdue	1989 California Building Code (CBC)	1996	1	Unknown		No			SPC: 3 NPC: 1
BLD-03526	05A - Elevator	OSHPD 1, In Service	AB2190 Extension 5/31/2022 Replace		Overdue	1967 Uniform Building Code (UBC)	1968	2	22.5	2010 HAZUS SCORE = 4.90	No			SPC: 1 NPC: 1
BLD-06250	Hospital Replacement Building	OSHPD 1, Under Construction				2013 California Building Code (CBC)		UNKNOWN	Unknown		No			SPC: 5s NPC: 4s
BLD-06251	Hospital Replacement Building - Loading Dock	OSHPD 1, Under Construction				2013 California Building Code (CBC)		UNKNOWN	Unknown		No			SPC: 5s NPC: 4s
BLD-06252	Oxygen Tank Enclosure	OSHPD 1, Equipment Yard			1/1/2030	1998 California Building Code (CBC)	2003	UNKNOWN	Unknown		No			SPC: N/A NPC: 2
BLD-06433	West Wing Lobby	OSHPD 1, Proposed				2016 California Building Code (CBC)		1	Unknown		No			SPC: 5s NPC: 4s
BLD-06437	West Wing Canopy	OSHPD 1, Proposed				2016 California Building Code (CBC)		1	Unknown		No			SPC: 5s NPC: 4s

17 HCAI FACILITY INFORMATION
SCALE: NTS



9 HCAI SITE PLAN
SCALE: NTS

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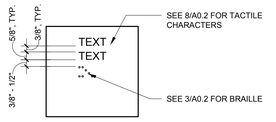
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Project Name
HOSPITAL REPLACEMENT BUILDING-
NUCLEAR MEDICINE SUITE RELOCATION

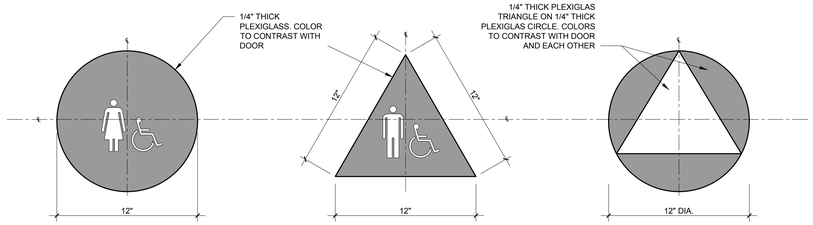
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Date 08/05/2022
Scale AS NOTED
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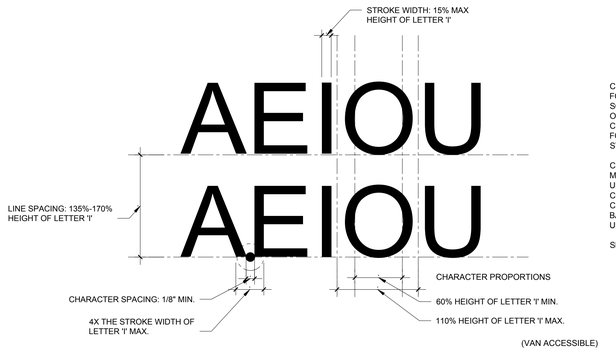
30 X 42



20 TYPICAL TACTILE SIGN
SCALE: NTS



16 TYPICAL ACCESSIBILITY TOILET ROOM SIGNAGE ON DOOR
SCALE: NTS



CHARACTERS TO BE SELECTED FROM FONTS THAT ARE NOT ITALIC, OBLIQUE, SCRIPT, HIGHLY DECORATIVE OR OF OTHER UNUSUAL FORMS. CHARACTERS TO BE SELECTED FROM FONTS THAT COMPLY WITH THE STANDARDS IN THE DETAIL ABOVE.

CHARACTERS SHALL BE RAISED 1/32 INCH MINIMUM AND SHALL BE SANS SERIF UPPERCASE LETTERS ACCOMPANIED BY CONTRACTED BRAILLE. CHARACTER HEIGHT TO BE 5/8" MINIMUM BASED ON THE HEIGHT OF THE UPPERCASE LETTER 'I'. (CBC 1117B.5.5)

SEE 3/A0.2 FOR BRAILLE INFORMATION.

8 TACTILE SIGNAGE CHARACTERS
SCALE: NTS

SIGNAGE NOTES

RAISED CHARASTERS: SHALL COMPLY WITH SEC. 11B-703.2 AND BE DUPLICATED IN BAILLE COMPLYING WITH SEC. 11B-703.3.

RAISED CHARACTERS SHALL BE INSTALLED IN ACCORDANCE WITH SEC. 11B-703.4.

11B-703.2.1 DEPTH: 1/32" INCH MINIMUM ABOVE THE BACKGROUND

11B-703.2.2 CASE: SHALL BE UPPERCASE

11B-703.2.3 STYLE: SHALL BE SANS SERIF; NOT ITALIC, OBLIQUE, SCRIPT, DECORATIVE

11B-703.2.4 CHARACTER PROPORTIONS: SHALL BE FONTS WHERE THE WIDTH OF THE UPPERCASE LETTER 'O' IS 60 PERCENT MINIMUM AND 110 PERCENT MAXIMUM OF THE HEIGHT OF THE UPPERCASE LETTER 'I'.

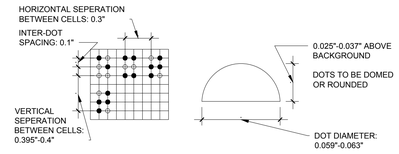
11B-703.2.5 CHARACTER HEIGHT: MEASURED FROM VERTICALLY FROM THE BASELINE OF THE CHARACTER SHALL BE 5/8 INCH MINIMUM AND 2 INCHES MAXIMUM BASED ON THE HEIGHT OF THE UPPERCASE LETTER 'I'.

11B-703.2.6 STROKE THICKNESS: OF THE UPPERCASE LETTER 'I' SHALL BE 15 PERCENT MAXIMUM OF THE HEIGHT OF THE LETTER.

11B-703.2.7 CHARACTER SPACING: SHALL BE MEASURED BETWEEN THE TWO CLOSEST POINTS OF THE ADJACENT RAISED CHARACTERS WITHIN A MESSAGE, EXCLUDING WORD SPACES WHERE CHARACTERS HAVE RECTANGULAR CROSS SECTIONS, SPACING BETWEEN INDIVIDUAL RAISED CHARACTERS SHALL BE 1/8 INCH MIN. AND 4 TIMES THE CHARACTER STROKE WIDTH MAXIMUM. WHERE CHARACTERS HAVE OTHER CROSS SECTIONS, SPACING BETWEEN INDIVIDUAL CHARACTERS SHALL BE 1/16 INCH MIN. AND 4 TIMES THE CHARACTER STROKE WIDTH MAXIMUM AT THE BASE OF THE CROSS SECTIONS, AND 1/8 INCH MIN. AND 4X THE STROKE WIDTH MAXIMUM AT THE TOP OF THE CROSS SECTIONS. CHARACTERS SHALL BE SEPERATED FROM RAISED BORDERS AND DECORATIVE ELEMENTS 3/8 INCH MINIMUM.

11B-703.2.8 LINE SPACING: BETWEEN THE BASELINES OF SEPERATE LINES OF RAISED CHARACTERS SHALL BE 135 PERCENT MINIMUM AND 170 PERCENT MAXIMUM OF THE CHARACTER HEIGHT.

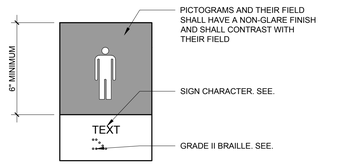
BRAILLE: SHALL BE CONTRACTED [GRADE 2] AND SHALL COMPLY WITH SECTIONS 11B-703.3 AND 11B-703.4.



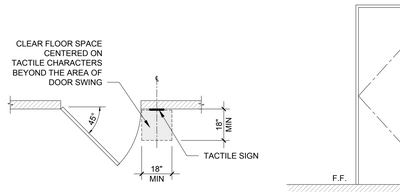
BRAILLE TO BE CONTRACTED GRADE 2 (PER CBC FIGURE 1117B.5.6)

THE INDICATION OF AN UPPERCASE LETTER OR LETTERS SHALL ONLY BE USED BEFORE THE FIRST WORD OF SENTENCES, PROPER NOUNS AND NAMES, INDIVIDUAL LETTERS OF THE ALPHABET, INITIALS AND ACRONYMS.

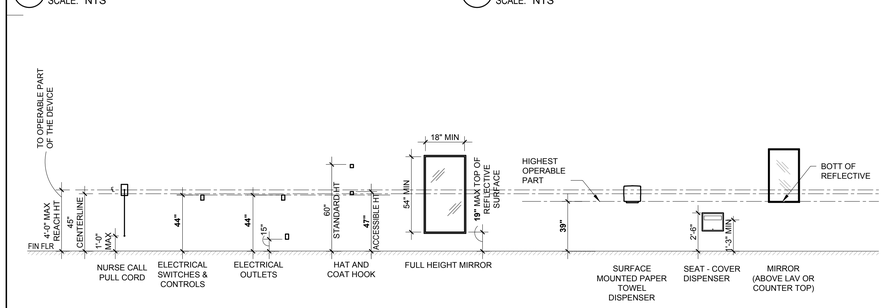
3 TACTILE SIGNAGE BRAILLE
SCALE: NTS



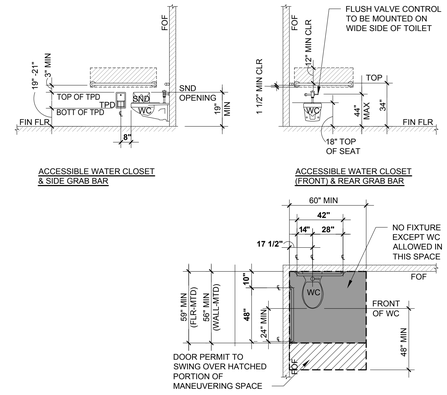
19 PICTOGRAM
SCALE: NTS



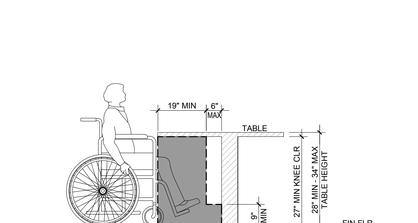
15 SIGNANGE MOUNTING
SCALE: NTS



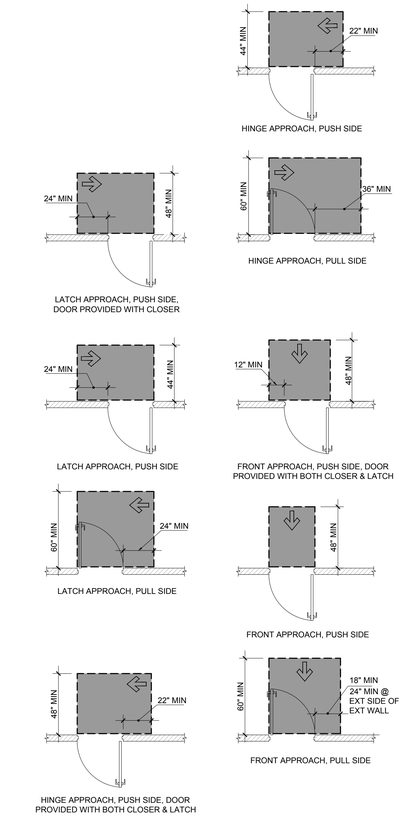
18 TYPICAL MOUNTING HEIGHTS
SCALE: NTS



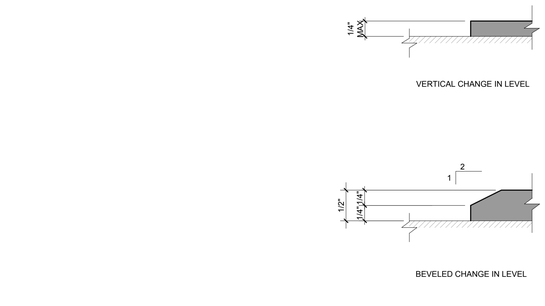
10 ACCESSIBLE WATER CLOSET
SCALE: NTS



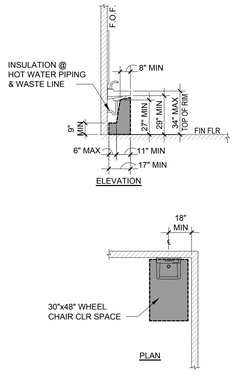
6 KNEE SPACE AT WORK SURFACE OR TABLE
SCALE: NTS



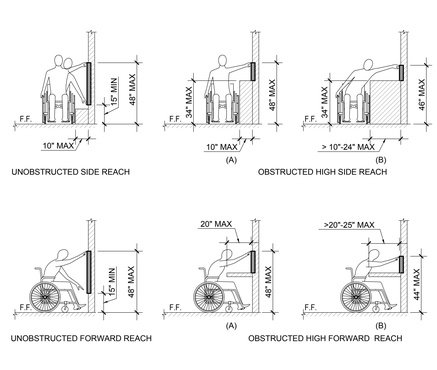
1 MANEUVERING CLEARANCE @ DOORS AND GATES
SCALE: NTS



13 CHANGE IN LEVEL
SCALE: NTS



9 ACCESSIBLE LAVATORY
SCALE: NTS



5 ACCESSIBLE REACH RANGES
SCALE: NTS

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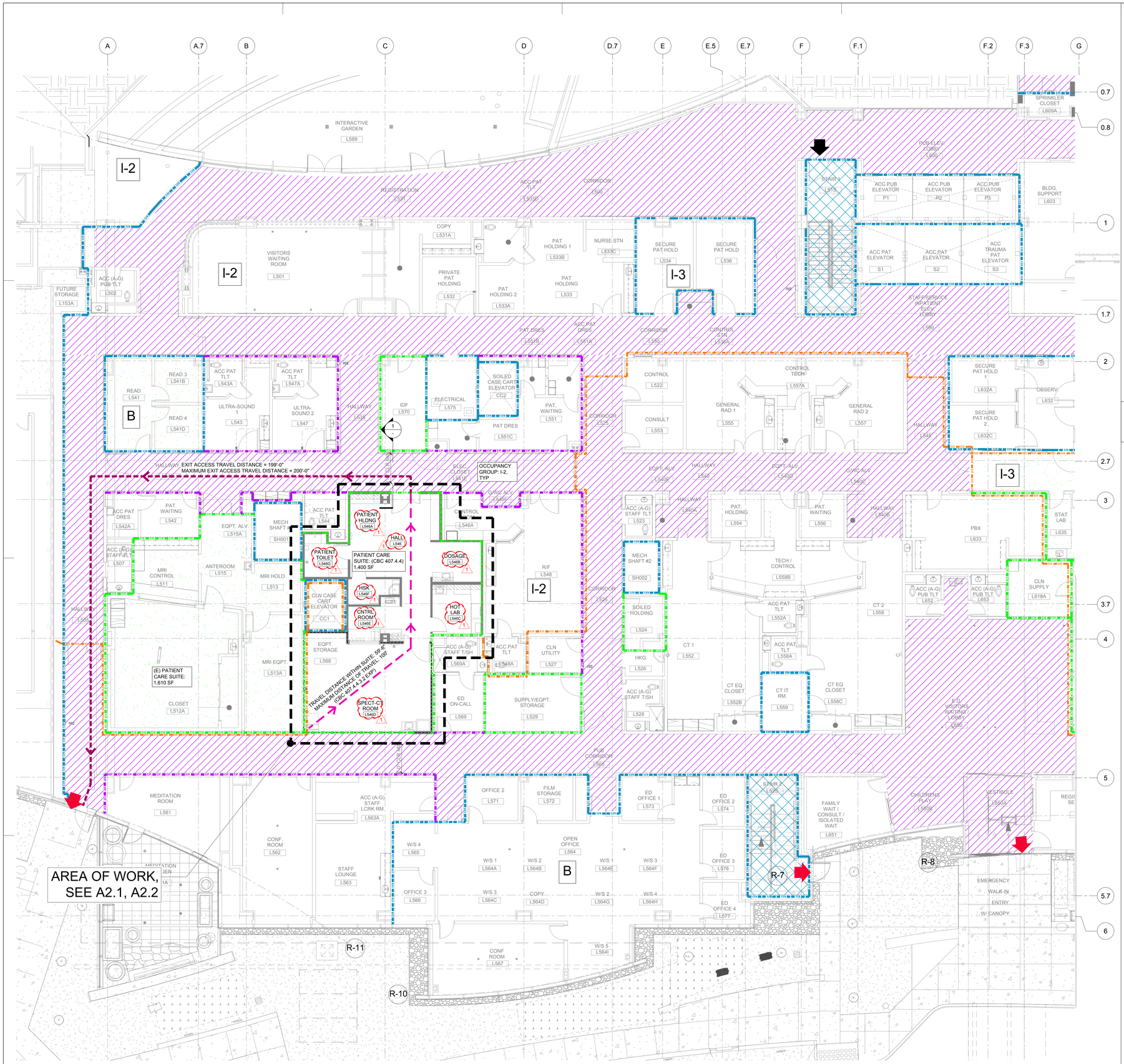
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Project Name
HOSPITAL REPLACEMENT BUILDING-
NUCLEAR MEDICINE SUITE RELOCATION

Sheet Title
ACCESSIBILITY DETAILS

Date 08/05/2022
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Sheet Number A0.2

30 X 42



18 FIRE AND LIFE SAFETY PLAN- LOBBY LEVEL
SCALE: 1/8" = 1'-0"

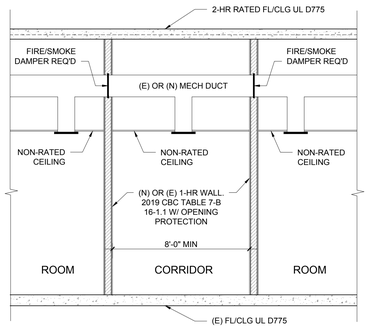
NORTH

LEGEND

- (E) 1-HR. SMOKE BARRIER PER CBC 709.3
- (N) 1-HR. SMOKE BARRIER PER CBC 709.3
- (E) 1-HR FIRE BARRIER PER CBC 707
- (N) 1-HR FIRE BARRIER PER CBC 707
- (E) 2-HR FIRE BARRIER PER CBC 707
- (N) 2-HR FIRE BARRIER PER CBC 707
- (E) 2-HR FIRE BARRIER (BUILDING/OCCUPANCY SEPARATION) PER CBC 707.3.9
- (E) 1-HR FIRE RATED PARTITION PER CBC 708
- (N) 1-HR FIRE RATED PARTITION PER CBC 708
- (E) INTERIOR EXIT STAIRWAY OR SHAFT ENCLOSURE WITH 2-HR FIRE BARRIER PER CBC 707.3.1, 707.3.2, 713, 1023.2 AND 1024.3
- (E) CORRIDOR WITH 1-HR FIRE PARTITION PER CBC 708
- SUITE PER CBC 407
- (E) EXIT @ GRADE
- (E) EXIT
- EXIT ACCESS TRAVEL DISTANCE PER CBC TABLE 1017.2
  B OCCUPANCY MAX ALLOWED: 300'
  I-2 OCCUPANCY MAX ALLOWED: 200'
- COMMON PATH OF TRAVEL
- EGRESS PATH OF TRAVEL

FIRE SAFETY DURING CONSTRUCTION, ALTERATIONS AND DEMOLITION

1. SMOKING IS PROHIBITED. "NO SMOKING" SIGNS SHALL BE POSTED. CFC-2019: SEC.3304.1
2. COMBUSTIBLE DEBRIS SHALL NOT ACCUMULATE WITHIN BUILDINGS. CFC-2019: SEC. 3304.2
3. CUTTING AND WELDING OPERATIONS SHALL BE IN ACCORDANCE WITH CFC-2019: CHAPTER 26 & SEC. 3304.6
4. WHEN REQUIRED BY THE FIRE CODE OFFICIAL FOR BUILDING DEMOLITION THAT IS HAZARDOUS IN NATURE, QUALIFIED PERSONNEL SHALL BE PROVIDED TO SERVE AS AN ON-SITE FIRE WATCH. CFC-2019: SEC. 3304.5
5. THE STORAGE, USE AND HANDLING OF FLAMMABLE LIQUIDS SHALL BE IN ACCORDANCE WITH CFC-2019, CHAPTER 57. STORAGE, USE AND HANDLING OF OTHER HAZARDOUS MATERIALS SHALL BE IN ACCORDANCE WITH CFC-2019: SEC. 3305
6. THE OWNER SHALL DESIGNATE A PERSON TO BE THE FIRE PREVENTION PROGRAM SUPERINTENDENT WHO SHALL BE RESPNSIBLE FOR THE FIRE PREVENTION PROGRAM AND ENSURE THAT IT IS CARRIED OUT THROUGH COMPLETION OF THE PROJECT. CFC-2019: SEC. 3308.1
7. WHERE A REQUIRED FIRE PROTECTION SYSTEM IS OUT OF SERVICE, THE FIRE DEPARTMENT AND THE FIRE CODE OFFICIAL SHALL BE NOTIFIED IMMEDIATELY AND, WHERE REQUIRED BY THE FIRE CODE OFFICIAL, THE BUILDING SHALL EITHER BE EVACUATED OR AN APPROVED FIRE WATCH SHALL BE PROVIDED FOR ALL OCCUPANTS LEFT UNPROTECTED BY THE SHUTDOWN UNTIL THE FIRE PROTECTION SYSTEM HAS BEEN RETURNED TO SERVICE. CFC-2019: SEC 901.7
8. COVERINGS PLACED ON OR OVER FIRE PROTECTION DEVICES TO PROTECT THEM FROM DAMAGE DURING CONSTRUCTION PROCESSES SHALL BE IMMEDIATELY REMOVED UPON THE COMPLETION OF THE CONSTRUCTION PROCESSES IN THE ROOM OR AREA IN WHICH THE DEVICES ARE INSTALLED. CFC-2019: SEC. 3308.7
9. READILY ACCESSIBLE EMERGENCY TELEPHONE FACILITIES SHALL BE PROVIDED IN AN APPROVED LOCATION AT THE CONSTRUCTION SITE. CFC-2019: SEC. 3309.1
10. FIRE DEPARTMENT ACCESS ROADS SHALL BE ESTABLISHED AND MAINTAINED AT ALL TIMES. CFC-2019: SEC. 3310
11. REQUIRED MEANS OF EGRESS SHALL BE MAINTAINED DURING CONSTRUCTION AND DEMOLITION, REMODELING OR ALTERATIONS AND ADDITIONS TO ANY BUILDING. CFC-2019: SEC. 3311.2. ALL TEMPORARY EXITS AND EXIT MODIFICATIONS SHALL BE APPROVED BY THE FIELD FIRE AND LIFE SAFETY OFFICER.
12. FIRE DEPARTMENT WATER MAINS AND FIRE HYDRANTS SHALL BE OPERATIONAL AT ALL TIMES AND SHALL BE IN ACCORDANCE WITH CFC-2019: SEC. 507 & SEC. 3312.1
13. IN BUILDINGS REQUIRED TO HAVE STANDPIPES BY CFC-2019: SEC. 905.3, NOT LESS THAN ONE STANDPIPE SHALL BE PROVIDED FOR USE DURING CONSTRUCTION, CFC-2019: SEC. 3313.1
14. FIRE PROTECTION SYSTEMS SHALL BE MAINTAINED OPERATIONAL AT ALL TIMES. CFC-2019: SEC. 3314
15. IN BUILDINGS WHERE AN AUTOMATIC SPRINKLER SYSTEM IS REQUIRED BY THIS CODE, IT SHALL BE UNLAWFUL TO OCCUPY ANY PORTION OF A BUILDING OR STRUCTURE UNTIL THE AUTOMATIC SPRINKLER SYSTEM INSTALLATION HAS BEEN TESTED AND APPROVED. CBC-2019: SEC. 3312.1 & CFC-2019: SEC. 3314.1
16. FIRE EXTINGUISHERS SHALL BE PROVIDED FOR BUILDINGS UNDER CONSTRUCTION. THE NUMBER AND TYPE OF EXTINGUISHERS SHALL BE AS REQUIRED BY THE OSHPD FIRE MARSHAL OR LOCAL FIRE DEPARTMENT. CFC-2019: SEC. 906 & 3315.1
17. SMOKE DETECTORS SHALL BE COVERED DURING ALTERATIONS. CFC-2019: SEC3388.7.1; NFPA 72-2019, SEC. 17.7.1.11
18. PEDESTRIANS SHALL BE PROTECTED DURING CONSTRUCTION, REMODELING AND DEMOLITION ACTIVITIES AS REQUIRED BY THE CBC-2019: CHAPTER 33 & TABLE 3306.1. SIGNS SHALL BE PROVIDED TO DIRECT PEDESTRIAN TRAFFIC.
19. CONSTRUCTION MATERIALS AND EQUIPMENT SHALL NOT BE PLACED OR STORED SO AS TO OBSTRUCT ACCESS TO FIRE HYDRANTS, STANDPIPES, FIRE OR POLICE ALARM BOXES, CATCH BASINS OR MANHOLES. CBC-2019: SEC. 3308.1.1
20. WHERE PROVIDED, THROUGH PENETRATION FIRESTOP AND MEMBRANE PENETRATIONS DETAILS ARE REFERENCE ONLY. THROUGH PENETRATION AND MEMBRANE PENETRATIONS SHALL BE PROTECTED BY AN APPROVED PENETRATION FIRESTOP SYSTEM OR MEMBRANE PENETRATION FIRESTOP SYSTEM INSTALLED AS TESTED IN ACCORDANCE WITH ASTM E814 OR UL 1479, WITH A MINIMUM POSITIVE PRESSURE DIFFERENTIAL OF 0.01 INCH (2.49 PA) OF WATER OR OTHERWISE PERMITTED BY CBC SECTION 714. LISTED THROUGH-PENETRATION FIRESTOP SYSTEMS, MEMBRANE PENETRATION PROTECTION AND OTHER PERMITTED MEANS AND METHODS OF PENETRATION PROTECTION SHALL BE SUBMITTED FOR OSHPD FDD REVIEW AND APPROVAL PRIOR TO INSTALLATION. 2019 CALIFORNIA BUILDING CODE (CBC) SECTION 107.2.1.
20. WHERE A FIRE WATCH IS REQUIRED DURING CONSTRUCTION, THE OWNER SHALL OBSERVE THE REQUIREMENT PER OSHPD PIN 14
21. THE USE OF ALCOHOL BASED HAND RUBS CLASSIFIED AS CLASS 1 OR 2 LIQUIDS SHALL BE IN ACCORDANCE WITH CFC 2019: SEC 5705.5.
22. WALL MOUNTED DISPENSERS CONTAINING ALCOHOL-BASED HAND RUBS INSTALLED IN CORRIDOR OR ROOMS AND AREAS OPEN TO THE CORRIDOR SHALL BE IN ACCORDANCE WITH CFC 2019: SEC 5705.5.1



1 TYP CORRIDOR SECTION
SCALE: NTS

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C-37097
EXP. 9/30/2023
STATE OF CALIFORNIA

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1 BACKCHECK #1	12/09/2022

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Project Name
HOSPITAL REPLACEMENT BUILDING-
NUCLEAR MEDICINE SUITE RELOCATION

Sheet Title
FIRE & LIFE SAFETY PLAN- LOBBY LEVEL

Date 08/05/2022
Scale AS NOTED

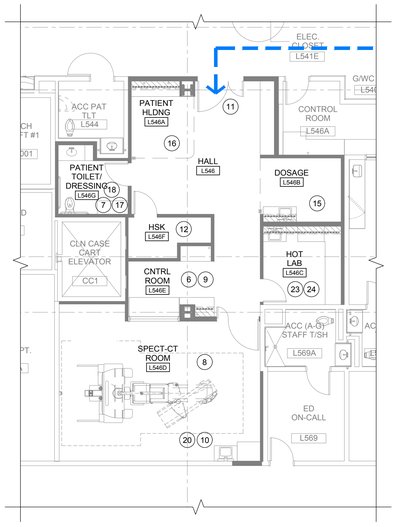
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MarinHealth Medical Center Nuclear Medicine Suite Remodel

Section	Sub-Section	Reference	Required Space	Required Area	Provided Room Name	Provided Room Number	Provided Area	Notes
1224.18	Radiological/Diagnostic Imaging Service Space							
1224.18.1	Minimum requirements							
(1)	1		Fluroscopy Room					Existing; L548
	2		Image processing					Not required.
(2)	3		Common Patient Toilet					Existing; L544
(3)	4		Viewing Room					Existing; L541
(4)	5		Storage					Existing; L529
	6		Handwashing Station					Provided
(5)	7		Dressing Room					Existing; L551
1224.18.3	Computerized Tomography (CT) Scanning							
1224.18.3.1	Space required							
(6)	1		Control Room		Control Room	L546E		
(7)	2		Patient Toilet		Patient Toilet / Dressing	L546G		
1224.34	Nuclear Medicine							
1224.34.1.2.3	Single-Photon Emission Computed Tomography (SPECT) Facilities							
(8)	1		Scanner Room		SPECT-CT Room	L546D		
(9)	2		Control Room		Control Room	L546E		
	3		Computer Equipment Room		Control Room	L546E		Included in the Control Room
(10)	4		Handwashing Station		Hanwashing Station	L546D		
1224.34.2	Support Areas when Operated Separately							
1224.34.2.1 (11)			Entrance					Existing
1224.34.2.2 (12)			Cleanup		Soiled Holding / Cleanup	L546E		
1224.34.2.3 (13)			Consultation					Existing; L553
1224.34.2.4 (14)			Waiting					Existing; L551
1224.34.2.5 (15)			Dose Administration Area		Dosage	L546B		
1224.34.2.6 (16)			Pre-procedure/Holding Area		Patient Holding	L546A		
1224.34.2.7 (17)			Patient Dressing Rooms		Patient Toilet / Dressing	L546G		
1224.34.2.8 (18)			Patient Toilet Room		Patient Toilet / Dressing	L546G		
1224.34.2.9 (19)			Staff Toilet Rooms		Staff Toilet			Existing; L523
1224.34.2.10 (20)			Handwashing Station		Hanwashing Station	L546D		
1224.34.2.11 (21)			Control Desk and Reception		Registration / Security			Existing; L657
1224.34.2.12 (22)			Storage Area for Clean Linen		Clean Utility			Existing; L527
1224.34.2.13 (23)			Soiled and Contaminated Material		Soiled Holding Hot Lab	- L546C		Soiled Holding, Existing; L524 Contaiminated Material, Hot Lab
1224.34.2.14 (24)			Hot Lab		Hot Lab	L546C		

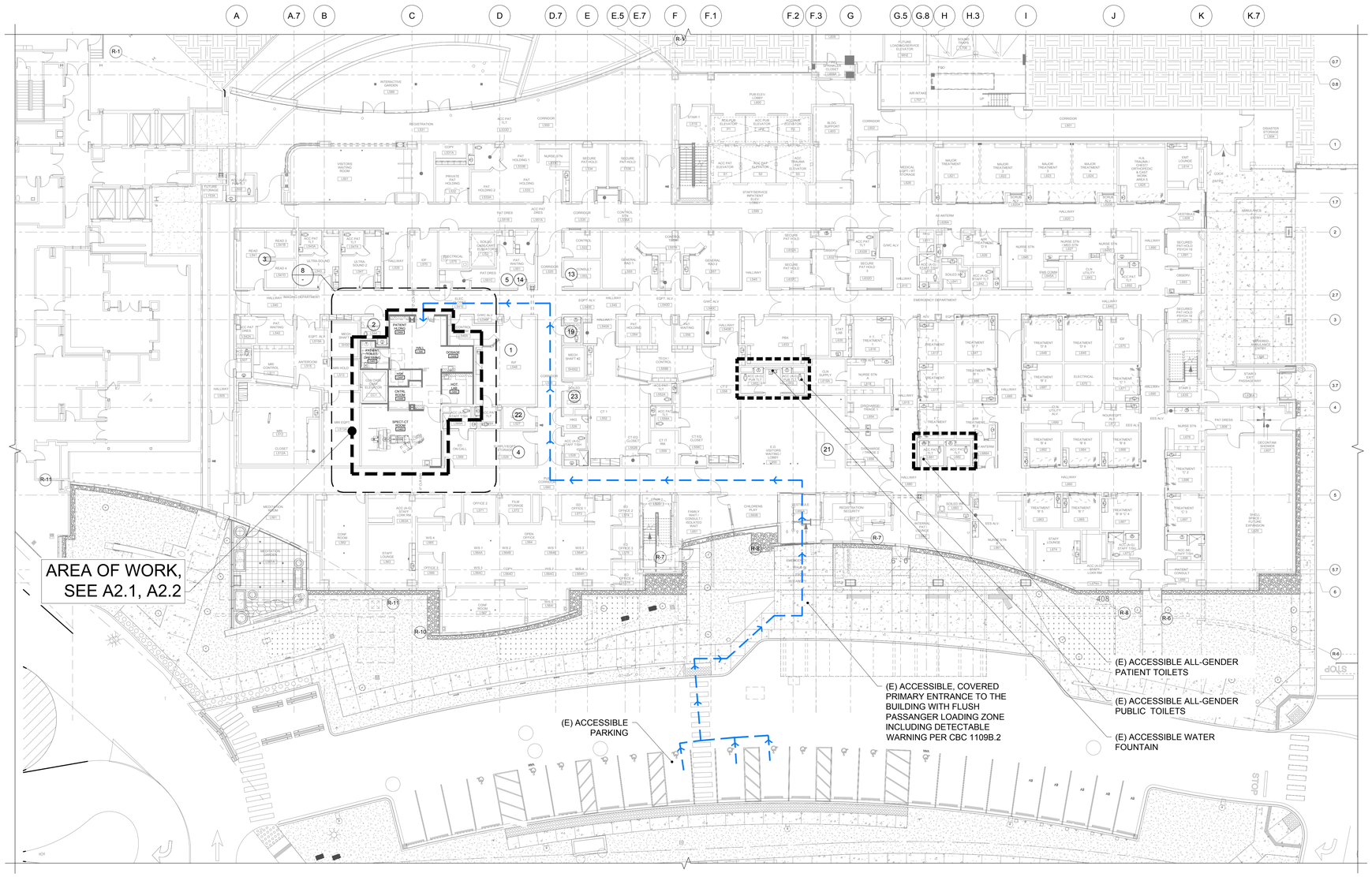
16 FUNCTIONAL PROGRAM ANALYSIS
SCALE: 1/8" = 1'-0"



8 SPACE PROGRAMMING PLAN
SCALE: 1/8" = 1'-0"

LEGEND

- (E) 1-HR. SMOKE BARRIER PER CBC 709.3
- (N) 1-HR. SMOKE BARRIER PER CBC 709.3
- (E) 1-HR FIRE BARRIER PER CBC 707
- (N) 1-HR FIRE BARRIER PER CBC 707
- (E) 2-HR FIRE BARRIER PER CBC 707
- (N) 2-HR FIRE BARRIER PER CBC 707
- (E) 2-HR FIRE BARRIER (BUILDING/OCCUPANCY SEPARATION) PER CBC 707.3.9
- (E) 1-HR FIRE RATED PARTITION PER CBC 708
- (N) 1-HR FIRE RATED PARTITION PER CBC 708
- (E) INTERIOR EXIT STAIRWAY OR SHAFT ENCLOSURE WITH 2-HR FIRE BARRIER PER CBC 707.3.1, 707.3.2, 713, 1023.2 AND 1024.3
- (E) CORRIDOR WITH 1-HR FIRE PARTITION PER CBC 708
- SUITE PER CBC 407
- (E) EXIT @ GRADE
- (E) EXIT
- EXIT ACCESS TRAVEL DISTANCE PER CBC TABLE 1017.2
  B OCCUPANCY MAX ALLOWED: 300'
  I-2 OCCUPANCY MAX ALLOWED: 200'
- COMMON PATH OF TRAVEL
- EGRESS PATH OF TRAVEL



17 ACCESSIBILITY PLAN & SPACE PROGRAMMING- LOBBY LEVEL
SCALE: 1/16" = 1'-0"

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HCAI Number
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HCAI seal/signature

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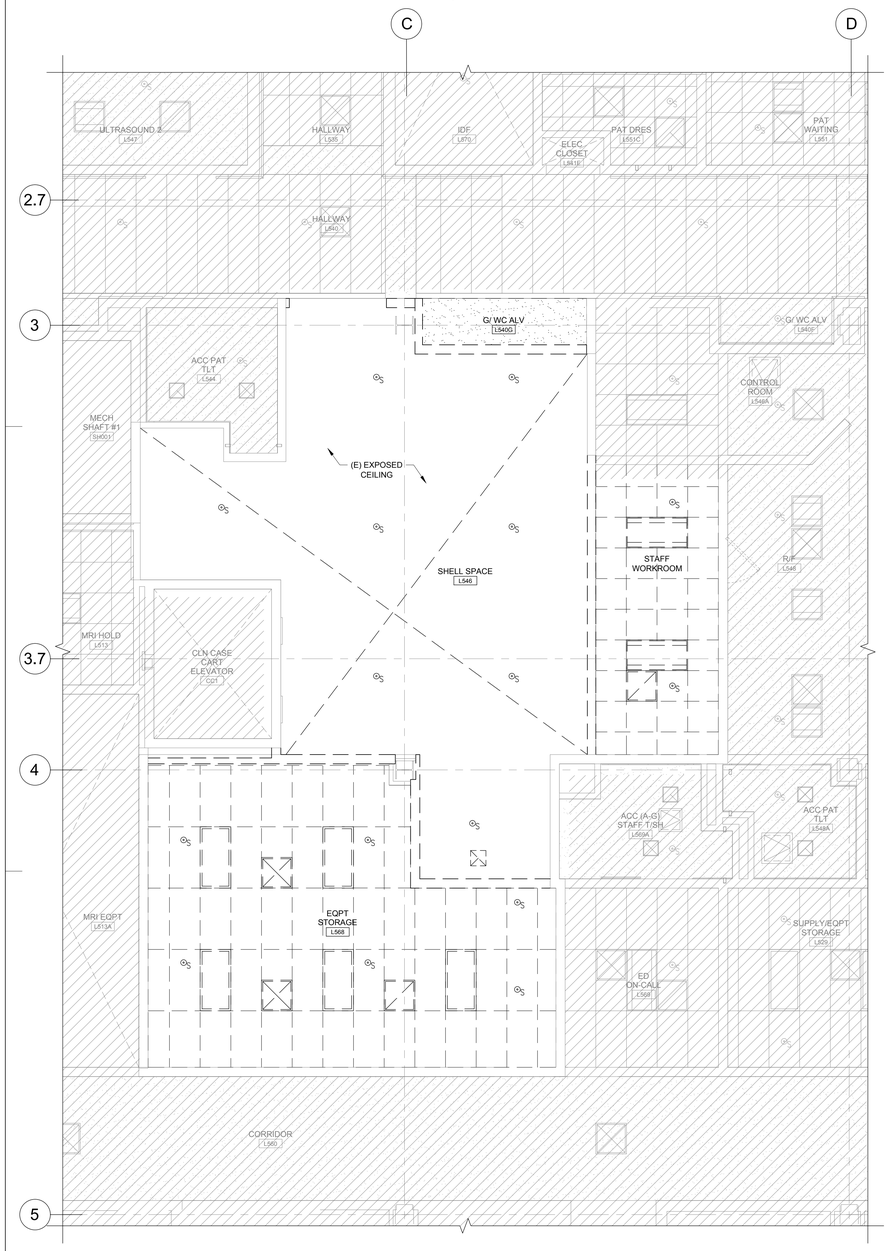
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Project Name
HOSPITAL REPLACEMENT BUILDING-
NUCLEAR MEDICINE SUITE RELOCATION

Sheet Title
ACCESSIBILITY PLAN-
LOBBY LEVEL

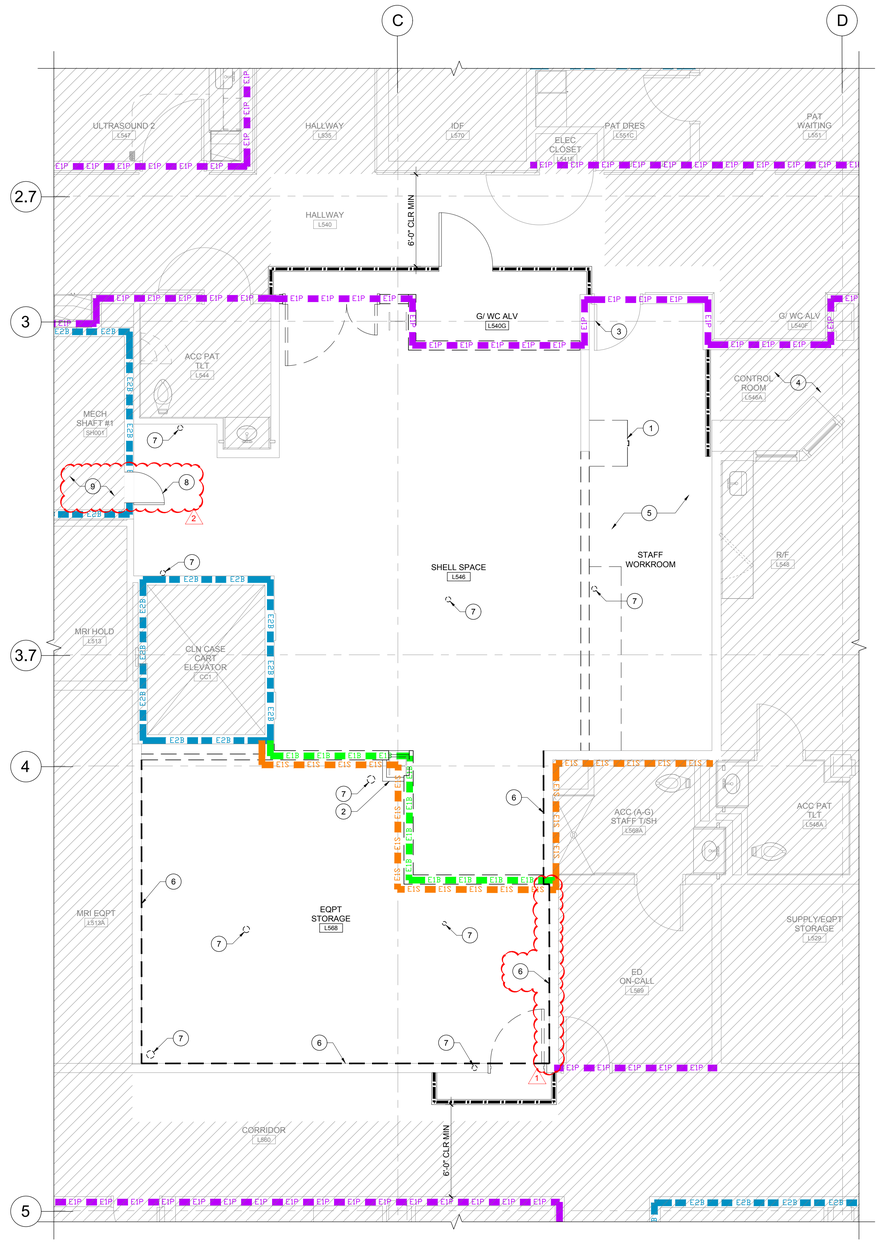
Date 08/05/2022
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Sheet Number
A0.6

30 X 42



18 DEMO REFLECTED CEILING PLAN
SCALE: 1/4" = 1'-0"

NORTH



10 DEMO FLOOR PLAN
SCALE: 1/4" = 1'-0"

NORTH

GENERAL NOTES:

1. SCHEDULE THE WORK SO AS NOT TO INTERFERE WITH THE HOSPITAL'S NORMAL BUSINESS OPERATIONS. COORDINATE THE SCHEDULE WITH OWNER.

2. KEEP AREAS ADJACENT TO DEMOLITION NOTES CLEAN AND FREE OF DEBRIS. PROTECT EXISTING MATERIALS AND FINISHES THAT ARE TO REMAIN FROM DAMAGE.

3. RESTORE ORIGINAL CONDITION OF EXISTING SURFACES WHICH HAVE BEEN DISTURBED BY DEMOLITION AND ARE INDICATED TO REMAIN. PATCH DAMAGED SURFACES TO MATCH ADJACENT FINISHES.

4. REMOVE PIPING, DUCTWORK AND CAP UTILITIES WHERE FIXTURES (SINKS, ELECTRICAL OUTLETS, SWITCHES, ETC.) OR PARTITIONS HAVE BEEN REMOVED. CAP UTILITIES BEHIND NEW FINISH SURFACES. DO NOT REMOVE UTILITY LINES SERVING OTHER PARTS OF THE BUILDING UNTIL NEW REPLACEMENT LINES ARE INSTALLED.

5. ANY PIPE PENETRATION WORK THAT IS NOT ENCLOSED BY FIRE RATED CONSTRUCTION BARRICADES AND THAT OPENS AN EXISTING RATED WALL OR SLAB MUST BE COMPLETED IN LESS THAN A SINGLE 8-HR SEGMENT. THIS WORK MUST BE PERFORMED DURING OFF-HOURS, COVERED AND CLOSED BEFORE THE END OF THE CONTRACTOR'S 8-HR PERIOD. DO NOT EVER LEAVE WALL AND SLAB OPEN, SEAL THE PENETRATIONS IMMEDIATELY WITH THE UL DETAILS INDICATED AS THE PIPES ARE REMOVED AND INSTALLED. REMOVE DEBRIS AND CLEAN THE WORK AREA BEFORE LEAVING THE JOB SITE.

SHEET NOTES:

1. UON, DEMOLISH PARTITIONS, DOORS, FRAMES, CASEWORK, FIXTURES, EQUIPMENT AND ITEMS AS REQ'D FOR (N) WORK WITHIN PROJECT AREA.

2. UON, DEMOLISH FINISH FLOOR AND WALL BASE TO (E) SLAB BELOW WITHIN PROJECT AREA. PREPARE (E) FLOOR SLAB TO RECEIVE (N) FLOORING.

3. UON, DEMOLISH CEILINGS, CEILING FRAMING, SUSPENSION SYSTEMS, LIGHT FIXTURES, CEILING MOUNTED DEVICES WITHIN PROJECT AREA.

4. VERIFY LOCATIONS OF EXISTING ELECTRICAL, PLUMBING AND MECHANICAL UTILITIES. LOCATE AND PROTECT UTILITIES TO REMAIN. DISCONNECT, REMOVE AND CAP DESIGNATED UTILITIES WITHIN THE DEMO AREA. REFER TO THE ELECTRICAL, PLUMBING AND MECHANICAL DEMOLITION DRAWINGS FOR ADDITIONAL INFORMATION.

5. PROVIDE REROUTING OF UTILITIES SERVING ADJACENT AREAS TO MAINTAIN UNINTERRUPTED SERVICE.

6. UON, WALLS AROUND PERIMETER OF PROJECT AREA SHALL REMAIN AND BE PROTECTED FROM DAMAGE. DO NOT DISTURB AREAS OUTSIDE OF PROJECT AREA.

LEGEND

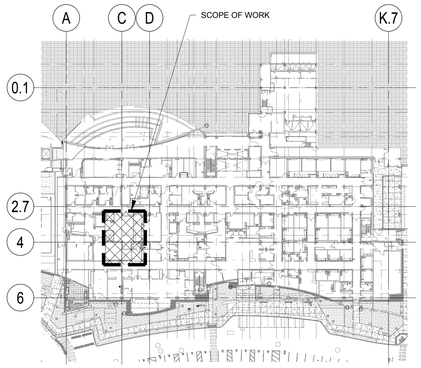
- (E) NON-RATED PARTITION TO REMAIN
- E1S — (E) 1-HR. SMOKE BARRIER PER CBC 709.3
- D1S — DEMOLISH (E) 1-HR. SMOKE BARRIER
- E1B — (E) 1-HR FIRE BARRIER PER CBC 707
- D1B — DEMOLISH (E) 1-HR FIRE BARRIER
- E2B — (E) 2-HR FIRE BARRIER PER CBC 707
- D1P — DEMOLISH (E) 1-HR FIRE RATED PARTITION
- E1P — (E) 1-HR FIRE RATED PARTITION PER CBC 708
- DEMOLISH (E) PARTITION
- LEAD-SHIELDED WALL
- DEMOLISH (E) DOOR
- CEILING ORIGIN POINT
- (E) OUT OF SCOPE
- LINEAR COVE LIGHT
- TEMP CONSTRUCTION BARRIER

(E) TO BE REMOVED	(E) TO REMAIN	(N)	
			ACOUSTICAL LAY-IN CEILING PANELS
			GYPSUM BOARD CEILING
			2'x2' LIGHT FIXTURE
			2'x4' LIGHT FIXTURE
		SUPPLY	2' x2' HVAC CEILING MOUNTED AIR REGISTER
		RETURN	
		EXHAUST	

FIRE SPRINKLER HEAD

KEYNOTES:

1. REMOVE (E) PYXIS MACHINE AND BASE CABINET. RELOCATE AND REINSTALL PYXIS MACHINE PER (N) WORK.
2. REMOVE (E) COLUMN FURRING. DO NOT DAMAGE (E) FIRE PROOFING.
3. DOOR TO BE LOCKED DURING CONSTRUCTION.
4. ACCESS TO CONTROL AREA VIA (E) DOOR TO L548. SEE A8/A0.5
5. (E) WALL HUNG DEVICES, CLOCK, DISPENSERS IN WORKSOOM. REMOVE AND RETURN TO THE OWNER. PATCH WALLS AS NEEDED.
6. REMOVE (E) GYP BD AND REPLACE WITH LEAD LINED GYP BD
7. APPROX LOCATION OF SLAB CORING TO BELOW; SED, SPD FOR ACTUAL CORING LOCATIONS
8. 24"W x 48"H 90 MIN FIRE RATED ACCESS PANEL (ACUDOR, FB-5060, OR APPROVED EQ) INSTALLED ON SHAFT WALL; SEE A2.6, A7.7
9. SEE M2.3 FOR MECH WORK IN SHAFT



1 LOBBY LEVEL KEY PLAN
SCALE: NTS

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Consultant

SKA Project Number
2136

HCAI Number
S221296-21-00

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REGISTERED ARCHITECT CHRISTOPHER L. MOY C37097 EXP. 9/30/2023 STATE OF CALIFORNIA

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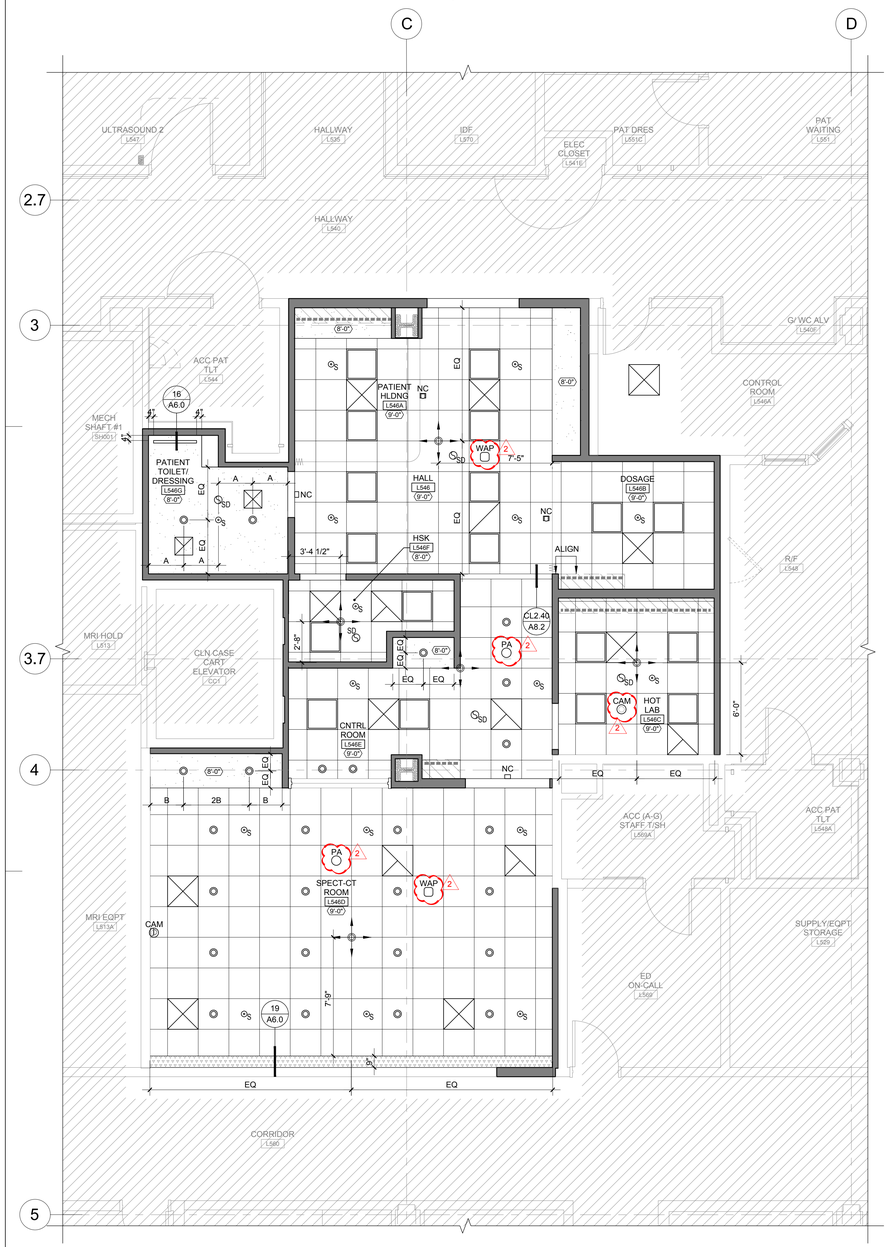
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Project Name
HOSPITAL REPLACEMENT BUILDING-
NUCLEAR MEDICINE SUITE RELOCATION

Sheet Title
DEMO FLOOR AND REFLECTED CEILING PLAN

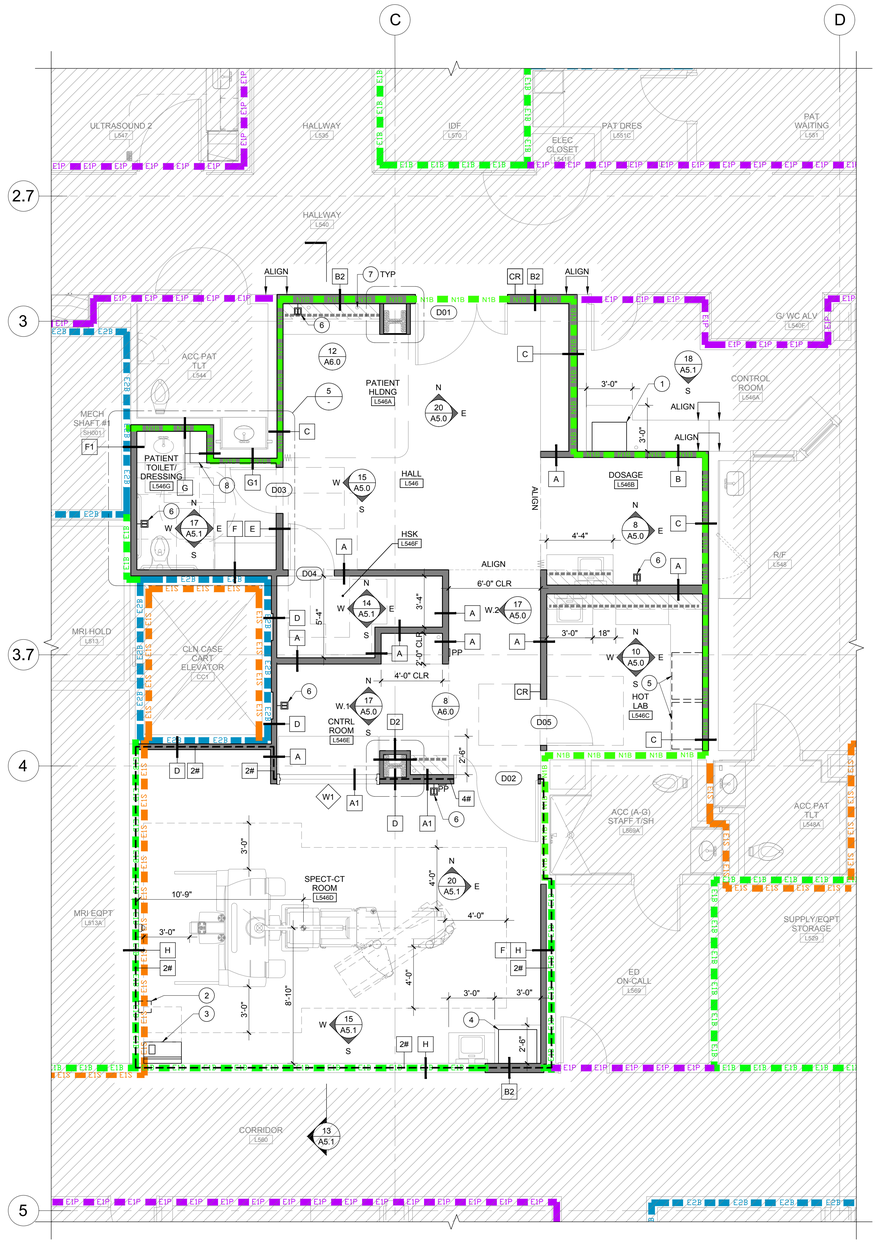
Date 08/05/2022
Scale AS NOTED
Sheet Number A2.1

30 X 42



18 NEW REFLECTED CEILING PLAN
SCALE: 1/4" = 1'-0"

NORTH

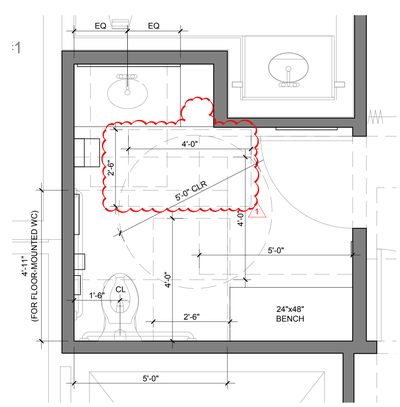


10 NEW FLOOR PLAN
SCALE: 1/4" = 1'-0"

NORTH

ENLARGED PLAN NOTES:

1. SEE SHEET A0.2 FOR PLACEMENT AND MOUNTING HEIGHTS OF FIXTURES AND ACCESSORIES
2. SEE 10/A2.5 FOR ACCESSORY DESIGNATION



5 PATIENT TLT/DRESSING RM ENLARGED PLAN
SCALE: 1/8" = 1'-0"

LEGEND

- (E) NON-RATED PARTITION TO REMAIN
- E1S (E) 1-HR. SMOKE BARRIER PER CBC 709.3
- E1B (E) 1-HR FIRE BARRIER PER CBC 707
- N1B (N) 1-HR FIRE BARRIER PER CBC 707
- E2B (E) 2-HR FIRE BARRIER PER CBC 707
- N1P (N) 1-HR FIRE RATED PARTITION PER CBC 708
- E1P (E) 1-HR FIRE RATED PARTITION PER CBC 708
- (N) PARTITION
- LEAD LINED WALL / DOOR
- # LEAD THICKNESS
- (N) DOOR
- CEILING ORIGIN POINT
- (E) OUT OF SCOPE
- LINEAR COVE LIGHT

(E) TO BE REMOVED	(E) TO REMAIN	(N)	
			ACOUSTICAL LAY-IN CEILING PANELS
			GYPSUM BOARD CEILING
			2'x2' LIGHT FIXTURE
			2'x4' LIGHT FIXTURE
SUPPLY		SUPPLY	2' x2' HVAC CEILING MOUNTED AIR REGISTER
RETURN		RETURN	
EXHAUST		EXHAUST	

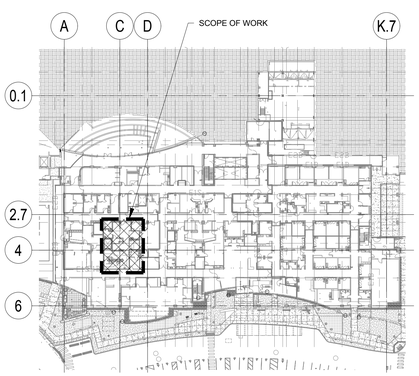
- SD FIRE SPRINKLER HEAD
- WAP WIRELESS ACCESS POINT
- PA PA SPEAKER
- CAM CCTV CAMERA
- NC (WALL) / NC (CLG) WALL/CLG MTD NURSE CALL DOME LIGHT
- CR CARD READER

SHEET NOTES:

1. MARK WALL AND DOOR LOCATIONS FOR ARCHITECT'S REVIEW AND APPROVAL PRIOR TO TRACK INSTALLATION.
2. MARK LOCATIONS OF TOILET ACCESSORIES FOR ARCHITECT'S REVIEW AND APPROVAL PRIOR TO FRAMING.
3. MARK ALL WALL MOUNTED DEVICES FOR ARCHITECT'S REVIEW AND APPROVAL PRIOR TO INSTALLING BACKING PLATES.
4. MARK LOCATIONS OF FIXED EQUIPMENT FOR ARCHITECT'S REVIEW AND APPROVAL PRIOR TO INSTALLATION.
5. VERIFY LEVELNESS PER MANUFACTURER REQUIREMENTS. NOTIFY THE ARCHITECT IF EXISTING FLOOR DOES NOT MEET REQUIREMENTS.

NEW FLOOR PLAN KEYNOTES:

1. RELOCATED PYXIS MACHINE
2. TRANSFORMER (INSTALLED ABOVE CEILING); SEE EQUIP SCHEDULE
3. LINE CONNECTION BOX; SEE EQUIP SCHEDULE
4. WARMING CABINET; SEE EQUIP SCHEDULE
5. BIODEX LEAD-LINED CABINET; SEE EQUIP SCHEDULE
6. NURSE CALL
7. GROMMET HOLE IN COUNTERTOP
8. ADA LOCKERS W/ KEY PAD LOCK



1 LOBBY LEVEL KEY PLAN
SCALE: NTS

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HCAI Number
S221296-21-00

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APPROVED
Department of Health Care Access & Information
Office of Statewide Hospital Planning & Development
2/13/2023, 11:24:21 PM
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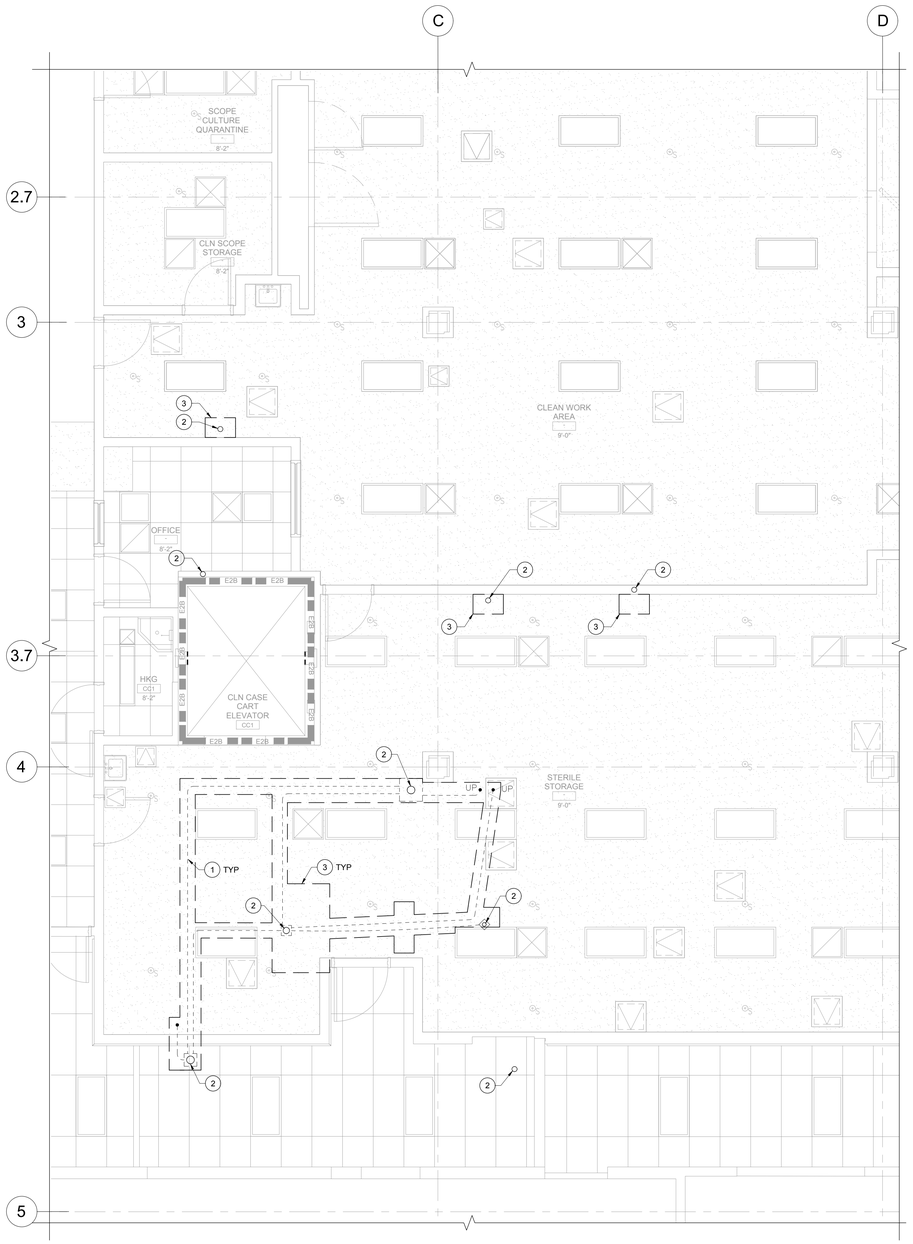
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Project Name
HOSPITAL REPLACEMENT BUILDING-
NUCLEAR MEDICINE SUITE RELOCATION

Sheet Title
NEW FLOOR AND REFLECTED CEILING PLAN

Date 08/05/2022
Scale AS NOTED
Sheet Number A2.2

30 X 42



10 BASEMENT LEVEL REFLECTED CEILING PLAN
SCALE: 1/4" = 1'-0"

LEGEND

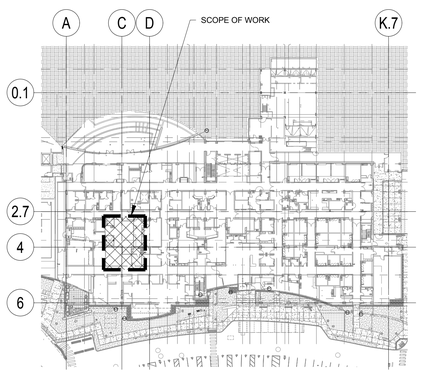
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- D1B — DEMOLISH (E) 1-HR FIRE BARRIER
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- D1P — DEMOLISH (E) 1-HR FIRE RATED PARTITION
- E1P — (E) 1-HR FIRE RATED PARTITION PER CBC 708
- DEMOLISH (E) PARTITION
- LEAD-SHIELDED WALL
- DEMOLISH (E) DOOR
- CEILING ORIGIN POINT
- (E) OUT OF SCOPE
- LINEAR COVE LIGHT
- TEMP CONSTRUCTION BARRIER

(E) TO BE REMOVED	(E) TO REMAIN	(N)	
			ACOUSTICAL LAY-IN CEILING PANELS
			GYPSUM BOARD CEILING
			2'x2' LIGHT FIXTURE
			2'x4' LIGHT FIXTURE
SUPPLY		SUPPLY	2' x2' HVAC CEILING MOUNTED AIR REGISTER
RETURN		RETURN	
EXHAUST		EXHAUST	

FIRE SPRINKLER HEAD

KEYNOTES:

1. ELEC WORK ABOVE CEILING
2. APPROX CORING LOCATIONS; SED, SPD
3. DEMO (E) CEILING IN THIS AREA TO ALLOW CONTRACTOR ACCESS FOR STRUCTURAL AND MEP SCOPE. PATCH AND PAINT TO MATCH EXISTING.



1 LOBBY LEVEL KEY PLAN
SCALE: NTS

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Sheet Title
BASEMENT LEVEL REFLECTED CEILING PLAN

Date 08/05/2022
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ROOM FINISH SCHEDULE

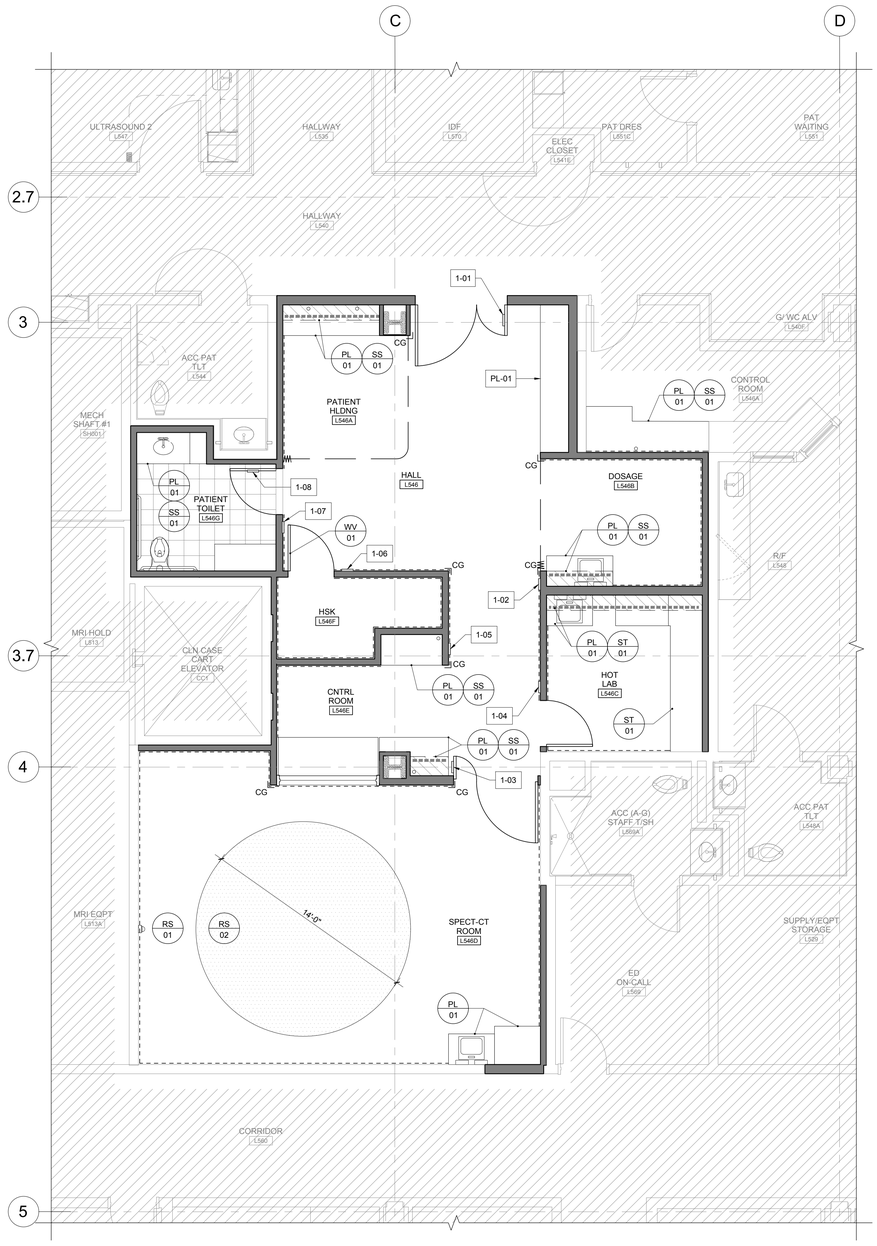
ROOM NO.	ROOM NAME	FLOOR	BASE		WALL				CEILING	REMARKS
			MATERIAL	DETAIL	NORTH	EAST	SOUTH	WEST		
L546	HALL	RS01	IB01		PT01	PT01	PT01	PT01	CP01	
L546A	PATIENT HOLDING	RS01	IB01		PT01	PT01	PT01	PT01	CP01	
L546B	DOSAGE	RS01	IB01		PT01	PT01	PT01	PT01	CP01	
L546C	HOT LAB	RS01	IB01		PT01	PT01	PT01	PT01	CP01	
L546D	SPECT-CT ROOM	RS01	IB01		PT01	PT01	PT01	PT01	CP01	
L546E	CONTROL ROOM	RS01	IB01		PT01	PT01	PT01	PT01	CP01	
L546F	HOUSEKEEPING	RS01	IB01		PT01	PT01	PT01	PT01	CP01	
L546G	PATIENT TOILET / DRESSING	CT01	TB01		WT01	WT01	WT01	WT01	GP01	

SIGNAGE SCHEDULE

LOCATION	ROOM NUMBER	ROOM NAME	SIGN TYPE DESC / INSTALLATION NOTES
1-01	L546	NUCLEAR MEDICINE	ROOM IDENTIFICATION
1-02	L546B	DOSAGE	ROOM IDENTIFICATION
1-03	L546D	SPECT-CT ROOM	ROOM IDENTIFICATION
1-04	L546C	HOT LAB	ROOM IDENTIFICATION
1-05	L546E	CONTROL ROOM	ROOM IDENTIFICATION
1-06	L546F	HOUSEKEEPING	ROOM IDENTIFICATION

FINISH LEGEND

ID	DESCRIPTION	MANUFACTURER	PRODUCT NAME	ITEM NUMBER	COLOR	COLOR CODE	FINISH	SIZE / THICKNESS	RATING	LOCATION	REMARKS
FLOOR FINISHES											
RS01	RESILIENT FLOORING - SHEET	JOHNSONITE HOMOGENEOUS ROLLED SHEET GOODS	MELODIA 3.0		QUARTZ	0969			CLASS A		
RS02	RESILIENT FLOORING - SHEET (ACCENT)	JOHNSONITE HOMOGENEOUS ROLLED SHEET GOODS	MELODIA 3.0		DARK CLAY GRAY	0720			CLASS A		
CT01	CERAMIC TILE FLOORING	STONE SOURCE	TRANQUILITY PORCELAIN TILE		ASH GRAY		MATTE	12X12	CLASS A		3/16 GROUT JOINT; GT01
GT01	GROUT	CUSTOM BUILDING PRODUCTS	CEG-IG EPOXY GROUT		DRIFTWOOD	#543					
GT02	GROUT	CUSTOM BUILDING PRODUCTS	CEG-IG EPOXY GROUT		SNOW WHITE	#11					
IB01	INTEGRAL WALL BASE								CLASS A		INTEGRAL COVE BASE
TB01	TILE WALL BASE	STONE SOURCE	TRANQUILITY PROCELAIN TILE					4X12X2	CLASS A		COVE "B" TRIM
TH01	THRESHOLD	STONE SOURCE	CELADOR 2.0		BASIC	#2009			CLASS A		
WALL FINISHES											
PT01	PAINT	SHERWIN WILLIAMS	FRAZEE		WHITE	001	SEMI-GLOSS				LEVEL 4 FINISH
PT02	PAINT (ACCENT)										LEVEL 4 FINISH
PT03	PAINT (TOILET)	SHERWIN WILLIAMS	FRAZEE		WHITE	001	SEMI-GLOSS				LEVEL 5 FINISH
PT04	PAINT (CEILING)	SHERWIN WILLIAMS	FRAZEE		WHITE	001	SEMI-GLOSS				
WP01	WALL PROTECTION	INPRO BIOPRISM	48" WAINSCOT		BRIGHT WHITE	#P9011		1/4"			
WT01	WALL TILE	ARIZONA TILE	THEMAR SERIES		THMAR BIANCO LASA		MATTE	3X12			STACK HORIZONTAL WITH BUTT JOINT. TOP OF WAINSCOT AND VERTICAL CORNERS TO USE STNDARD 3X12 TILE, NO BULLNOSE. GT02
WT02	WALL TILE (ACCENT)										
CEILING FINISHES											
CP01	ACOUSTICAL CEILING PANEL	ARMSTRONG	CALLA	2824	WHITE			2X2	CLASS A		WITH CG01
CG01	ACOUSTICAL CEILING GRID	ARMSTRONG									
GP01	GYPSUM BOARD CEILING				PT-04						
CASEWORK FINISHES											
PL01	PLASTIC LAMINATE FINISH	FORMICA	COLORCORE2	#927C-58	FOLKSTONE		MATTE		CLASS A		
PL02	PLASTIC LAMINATE FINISH (DOOR)	PANOLAM INDUSTRIES	CUSTOM SKU#L150006-N		LOUNGE WALNUT	#01828-0413			CLASS A		RUN WOOD GRAIN PATTERN VERTICALLY.
SS01	SOLID SURFACE	AVONITE			IVORY	#8106			CLASS A		
ST01	STAINLESS STEEL										



10 SIGNAGE & FINISH FLOOR PLAN
SCALE: 1/4" = 1'-0"

NORTH

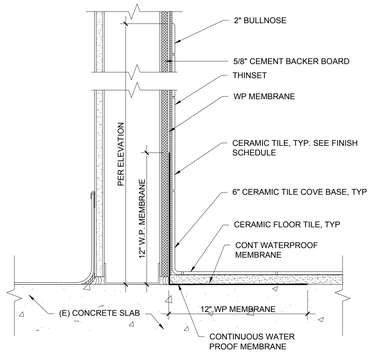
LEGEND

- (E) NON-RATED PARTITION TO REMAIN
- E1S — (E) 1-HR. SMOKE BARRIER PER CBC 709.3
- E1B — (E) 1-HR FIRE BARRIER PER CBC 707
- N1B — (N) 1-HR FIRE BARRIER PER CBC 707
- E2B — (E) 2-HR FIRE BARRIER PER CBC 707
- N1P — (N) 1-HR FIRE RATED PARTITION PER CBC 708
- E1P — (E) 1-HR FIRE RATED PARTITION PER CBC 708
- (N) PARTITION
- WALL PROTECTION "WP01" WHERE OCCURS
- (N) DOOR
- CEILING ORIGIN POINT
- (E) OUT OF SCOPE
- TEMP CONSTRUCTION BARRIER
- CG — CORNER GUARD:

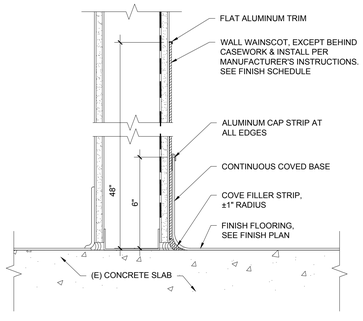
CS ACROVYN
CO SERIES STAINLESS
STEEL CORNER GUARD
#CO-8
3" WIDTH; FULL HEIGHT
#407 POWDER COAT

INTERIOR FINISH NOTES:

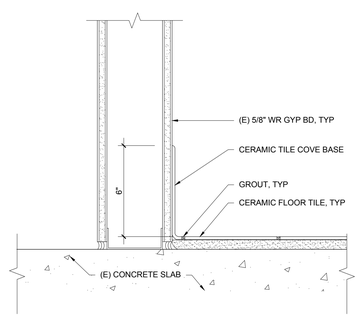
1. FLOOR COVERING MATERIALS IN EXIT ENCLOSURES, EXIT PASSAGEWAYS AND CORRIDORS SHALL BE CLASS I OR CLASS II IN A SPRINKLERED BUILDING, AS DETERMINED BY NFPA 253 AND CBC 804.1, AS FOLLOWS:
   CLASS I: 0.45 WATTS/CM² OR GREATER
   CLASS II: 0.22 WATTS/CM² OR GREATER
2. FLOOR COVERING MATERIALS SHALL COMPLY WITH ASTM STANDARD E648, AND HAVING A SPECIFIC OPTICAL DENSITY SMOKE RATING NOT TO EXCEED 450 PER ASTM E 662.
3. INTERIOR WALL AND CEILING FINISH MATERIALS SHALL BE CLASSIFIED IN ACCORDANCE WITH ASTM E 84 OR UL 723, AND COMPLY WITH CBC 803.1. SUCH INTERIOR FINISH MATERIALS SHALL BE GROUPED IN THE FOLLOWING CLASSES IN ACCORDANCE WITH THEIR FLAME SPREAD AND SMOKE-DEVELOPED INDEXES, PER CBC TABLE 803.11.
   CLASS A: FLAME SPREAD INDEX 0-25; SMOKE-DEVELOPED INDEX 0-450.
   CLASS B: FLAME SPREAD INDEX 26-75; SMOKE-DEVELOPED INDEX 0-450.
   CLASS C: FLAME SPREAD INDEX 76-200; SMOKE-DEVELOPED INDEX 0-450.
4. INTERIOR WALL AND CEILING FINISH MATERIALS IN CORRIDORS MUST HAVE A FLAME SPREAD RATING PER CBC TABLE 803.11 - "INTERIOR WALL AND CEILING FINISH REQUIREMENTS BY OCCUPANCY".
5. INTERIOR WALL AND CEILING FINISH MATERIALS IN ROOMS & ENCLOSED SPACES MUST HAVE A FLAME SPREAD RATING PER CBC TABLE 803.11.
6. PATCH AND REPAIR EXISTING FLOORING AND CEILING AS REQ'D.
7. PAINT TO BE EGGSHELL SHEEN, UON.
8. DOOR FRAMES TO BE SEMI-GLOSS, UON.
9. PAINT DOOR FRAMES THE SAME COLOR AS ADJACENT WALL UON.
10. FURNISHINGS BY OWNER, UON.
11. WALL BASES IN KITCHENS, OPERATING ROOMS, DELIVERY ROOMS, EMERGENCY OPERATING ROOMS, CAST ROOMS, SPECIAL PROCEDURE ROOMS AND OTHER AREAS WHICH ARE SUBJECT TO WET CLEANING METHODS, SHALL BE MADE INTEGRAL AND COVED WITH THE FLOOR, AND CONSTRUCTED WITHOUT VOIDS AT THE INTERSECTION OF FLOOR AND WALL SURFACES. (CBC 1224.4.11.2.2)
12. PAINTED SURFACE IN AIRBORNE INFECTION ISOLATION OR PROTECTIVE ENVIRONMENT ROOMS SHALL BE A CONTINUOUS SURFACE EQUAL IN SMOOTHNESS TO ENAMEL PLASTER.



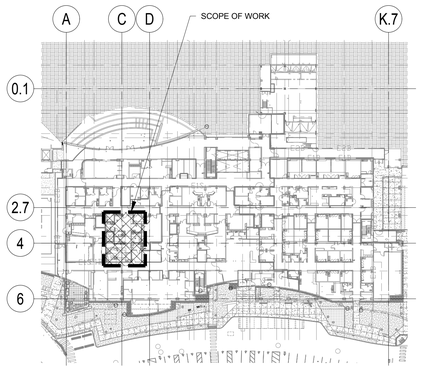
13 CERAMIC TILE COVE BASE W/ TILE WAINSCOT
SCALE: 3" = 1'- 0"



9 CONTINUOUS COVED BASE W/ WAINSCOT
SCALE: 3" = 1'- 0"



5 CERAMIC TILE COVE BASE
SCALE: 3" = 1'- 0"



1 LEVEL 3 KEY PLAN
SCALE: NTS

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2136

HCAI Number
S221296-21-00

HCAI seal/signature
REVIEWED IN ACCORDANCE WITH THE REQUIREMENTS OF 7 CA. CCR
APPROVED
Department of Health Care Access & Information
Office of Statewide Hospital Planning & Development
2/13/2023, 11:24:21 PM
S221296-21-00
Pedar Pomme

Seal/Signature
REGISTERED ARCHITECT
C37097
EXP.: 9/30/2023
STATE OF CALIFORNIA

Issued for
HCAI SUBMITTAL

Drawn by JS
Checked by CL

Project Name
HOSPITAL REPLACEMENT BUILDING-
NUCLEAR MEDICINE SUITE RELOCATION

Sheet Title
SIGNAGE AND FINISH FLOOR PLAN

Date 08/05/2022
Scale AS NOTED
Sheet Number A2.4

30 X 42

TOILET / SHOWER ACCESSORY SCHEDULE

ID	DESCRIPTION	MANUFACTURER	MODEL NAME	MODEL NO	MOUNTING	FINISH	REMARK
TOWEL, WASTE UNITS							
TA01	PAPER TOWEL DISPENSER (TOILET)	BOBRICK	CLASSICSERIES	B-2620	SURFACE	SS	
TA02	PAPER TOWEL DISPENSER (SINK)	BOBRICK	CLASSICSERIES	B-2620	SURFACE	SS	
TA03	TRASH BIN						OWNER FURNISHED
SOAP DISPENSERS							
TA11	SOAP DISPENSER (LAVATORY)	BOBRICK		B-826.18	LAVATORY		
TA12	SOAP DISPENSER (SINK)	BOBRICK	CONTURASERIES	818615	SURFACE	SS	
TOILET ACCESSORIES							
TA21	TOILET SEAT COVER DISPENSER	BOBRICK	CLASSSERIES	B-221	SURFACE	SS	
TA22	TOILET PAPER DISPENSER	BOBRICK	CONTURASERIES	B-4288	SURFACE	SS	
TA23	SANITARY NAPKIN DISPOSAL	BOBRICK	CONTURASERIES	B-270	SURFACE	SS	
GRAB BARS							
TA31	GRAB BAR (42")	BOBRICK		B-5806X42	SURFACE	SS	
TA32	GRAB BAR (48")	BOBRICK		B-5846X48	SURFACE	SS	
MISCELLLAEOUS							
TA51	MIRROR (LAVATORY)						SHEET MIRROR; 5/8" ALUM MIRROR EDGE TRIM
TA52	COAT HOOK	BOBRICK		B-7671	SURFACE	SS	
TA53	MIRROR (FULL HEIGHT)	BOBRICK		B-290 2460	SURFACE	SS	

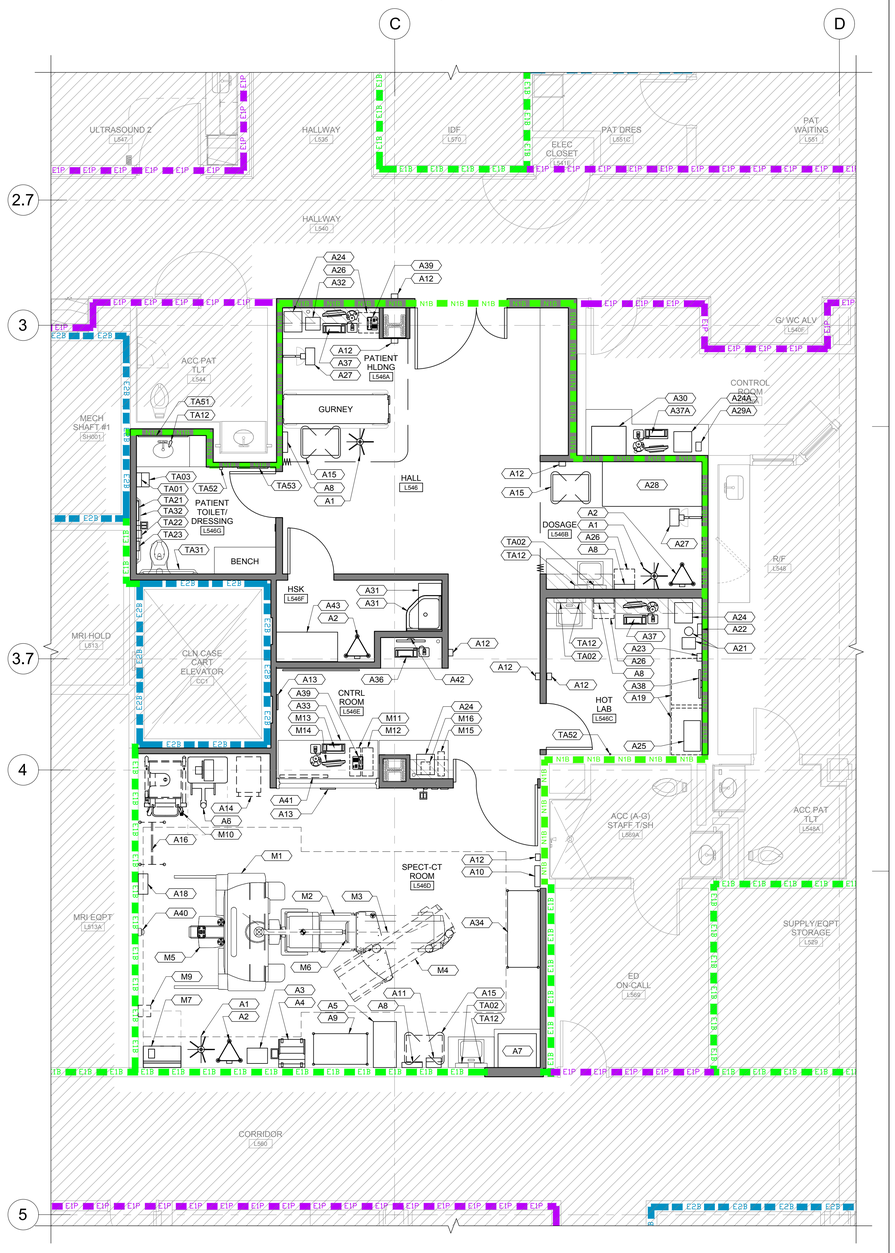
MEDICAL EQUIPMENT SCHEDULE

ID	VENDOR ID REF	DESCRIPTION	WIDTH	HEIGHT	DEPTH	OPERAT WEIGHT	CENTER OF MASS	MOUNTING	ESSENTIAL	COUNTER-TOP	TEMP / INTRIM	STRUCTURAL DETAIL	FURNISH / INSTALL	EXISTING / RELOCATE	REMARKS
M1	1	SYMBIA INTEVO EXCEL GANTRY W/COLLIMATORS	92"	53 13/16"	90 1/2"	8,095	39.65" AFF	FIXED - FLOOR	-	-	-	2/S3.0	O / V	-	6,485 BTU ON STANDBY. WORST CASE WEIGHT 8,645 LBS. WITH (2) HIGH ENERGY COLLIMATORS AT 275 LBS. EACH
M2	2	FRONT PHS WITH INTEGRATED COLLIMATOR CHANGER-AUTOMATIC COLLIMATOR EXCHANGER AND AQC	32 1/4"	23 3/16"	97 1/2"	2,666	21.65" AFF	FIXED - FLOOR	-	-	-	6/S3.0	O / V	-	MAX HEIGHT 41"
M3	3	UNDER THE FLOOR PHS CABLE STANDARD	-	-	-	-	-	-	-	-	-		O / V	-	UNDER FLOOR
M4	4	PHS EXTENDED PIVOT	-	-	-	-	-	-	-	-	-		O / V	-	EXTENDED PIVOT - 45%
M5	5	REAR PHS WITH SNAC	24 1/2"	41 13/16"	30 1/2"	385	17.7" AFF	FIXED - FLOOR	-	-	-	4/S3.0	O / V	-	
M6	6	PATIENT BOOM SWING ARM	-	-	-	-	-	-	-	-	-		O / V	-	ON M1
M7	7	LINE CONNECTION BOX	29 1/2"	14"	31 1/2"	245	17.7" AFF	FIXED - FLOOR	-	-	-	8/S3.0	O / V	-	
M9	9	TRANSFORMER	10.4"	16"	9.9"	126	10'-6" AFF MAX	FIXED - WALL	-	-	-	18/S3.1	C / C	-	INSTALLED ABOVE CEILING
M10	10	COLLIMATOR CART (EMPTY)	47 1/2"	32 5/8"	39 7/8"	400		MOBILE	-	-	-		O / V	-	WORST CASE 1330 LBS. WITH 1 SET HE AND 1 SET ME
M11	11	IMAGE CONSTRUCTION SYSTEM FOR SYNGO MI (ACQUISITION) WORKPLACE - INTEVO EXCEL	8 1/2"	20 1/2"	17 1/2"	50	18" MAX AFF	FIXED - FLOOR	-	-	-	20/S3.0	O / V	-	
M12	12	IMAGE RECONSTRUCTION SYSTEM FOR SYNGO MI (ACQUISITION) WORKPLACE	8 1/2"	20 1/2"	17 1/2"	47	18" MAX AFF	FIXED - FLOOR	-	-	-	20/S3.0	O / V	-	*BTU'S INCL. WITH ICS
M13	13	CONTROL AND KEYBOARD	-	-	-	-	-	-	-	YES	-		O / V	-	ON COUNTER
M14	14	18" MONITOR	16 1/2"	3 13/16"	17 1/2"	20	-	-	-	YES	-		O / V	-	ON COUNTER
M15	15	SYNGO MI (ACQUISITION) WORKPLACE UPS FOR IMS STANDARD COMPONENT	5	19	17 1/4"	71	18" MAX AFF	FIXED - FLOOR	-	-	-	20/S3.0	O / V	-	
M16	16	UPS FOR E.SOFT/C.CAM	6 13/16"	13 1/4"	10 3/16"	45	18" MAX AFF	FIXED - FLOOR	-	-	-	20/S3.0	O / V	-	

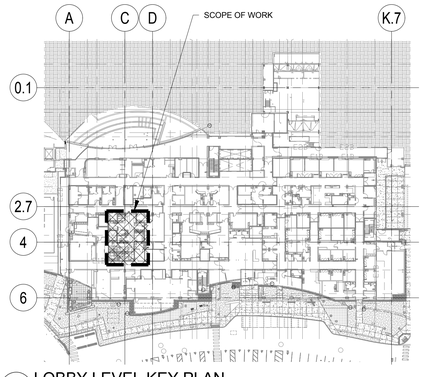
ANCILLARY EQUIPMENT SCHEDULE

ID	ABBREV.	DESCRIPTION	MANUFACTURER	MODEL	WIDTH	DEPTH	HEIGHT	OPERAT WEIGHT (LBS)	CENTER OF MASS	MOUNTING	COUNTER -TOP	STRUCTURAL DETAIL	FURNISH / INSTALL	EXISTING / RELOCATE	REMARKS
A1	IVS	IV STAND			21"	21"	84"	29		MOBILE	-		O / O	-	
A2	SLH	LINEN HAMPER			30.5"	29.5"	35.5"	37		MOBILE	-		O / O	-	
A3	STL	STEP STOOL WITH HANDRAIL			16"	12"	39"			MOBILE	-		O / O	-	
A4	BDX-1	BIODEX XENON SYSTEM			20.5"	22"	48.5"	375		MOBILE	-		O / O	-	
A5	SCT-1	SUPPLY CART			36"	18"	69"	68		MOBILE	-		O / O	-	
A6	BDX-2	BIODEX ATOMLAB THYROID UPTAKE SYSTEM			31"	61"	60"	280		MOBILE	-		O / O	-	
A7	BW	BLANKET WARMER			30"	26.5	24.25"	142	48" MAX AFF	COUNTERTOP	YES	15/S3.1	O / C	-	
A8	GLD	GLOVE DISPENSER (TRIPLE-BOX)			16"	4"	10.25"	1	48" AFF	FIXED - WALL	-	ST5.01/A7.3	O / C	-	
A9	SCT-2	SUPPLY CART			24"	42"	69"	166		MOBILE	-		O / O	-	
A10	DISP	PPE DISPENSER WALL MOUNT			16.5"	4.25"	25.25"	6	48" AFF	FIXED - WALL	-	ST5.01/A7.3	O / C	-	
A11	SHR	SHARPS DISPOSAL			11.75"	7.5"	10"	48	48" AFF	FIXED - WALL	-	ST5.00/A7.3	O / C	-	
A12	SAN	SANITIZER DISPENSER							42" AFF	FIXED - WALL	-	ST5.01/A7.3	O / C	-	
A13	CLK	WALL CLOCK							96" AFF	FIXED - WALL	-	ST5.01/A7.3	O / C	-	
A14	UTC	UTILITY CART			19"	31"	33.75"			MOBILE	-		O / O	-	
A15	GPC	GENERAL PROCEDURE CART			34.25"	25.25"	39.5"	150		MOBILE	-		O / O	-	
A16	MLS	MOBILE LEAD SHIELD			33"	21"	73.62"	103		MOBILE	-		O / O	-	
A17	PTB-1	PATIENT TRANSFER BOARD			22"	72"	.25"	9	-	-	-		O / O	-	ON A18
A18	PTB-2	PATIENT TRANSFER BOARD WALL BRACKET			16"	7.5"	9.5"	10	-	FIXED - WALL	-	ST5.01/A7.3	O / C	-	
A19	BDX-3	BIODEX LEAD-LINED CABINET			36.5"	24"	36.5"	1063	18.5" AFF	FIXED - FLOOR	-	16/S3.1	C / C	-	
A20	BDX-4	BIODEX TABLE TOP LEAD SHIELD			12.75"	12.75"	19.5"	79	-	MOVABLE			O / O	-	
A21	DOS	CAPINTEC DOSE CALIBRATOR			9"	10.5"	9.5"	53	43" AFF	COUNTERTOP	YES		O / O	-	
A22	MTR	SURVEY METER			3.5"	8.5"	6.5"	5	60" AFF	COUNTERTOP	YES		O / O	-	
A23	WPH	PHONE (WALL)							55" AFF	FIXED - WALL	-	ST5.01/A7.3	O / C	-	
A24	PRB	PRINTER							48" AFF	COUNTERTOP	YES		O / O	-	
A24A	PRB	PRINTER							43" AFF	COUNTERTOP	YES		O / O	RELOCATED	EXISTING / RELOCATED
A25	MW	MICROWAVE OVEN			24"	13"	12.25"	29	44" AFF	COUNTERTOP	YES		O / O	-	
A26	TRA	WASTE CAN (STEP-ON)			16.25"	15.75"	23.75"	10	-	-	-		O / O	-	
A27	PBM	PHYSIOLOGIC BEDSIDE MONITOR	PHILIPS	INTELLEVUE MX500	10.75"	7"	11.5"	11	48" AFF	FIXED - WALL	-	7/S3.0	O / C	-	ON GCX 19" SEISMIC CHANNEL (OPM-0165-13) (C/C)
A28	CHR	INJECTION CHAIR			35"	78"	49"	116	-	-	-		O / O	-	
A29	LPR	LABEL PRINTER							38" AFF	COUNTERTOP	YES		O / O	-	
A29A	LPR	LABEL PRINTER							38" AFF	COUNTERTOP	YES		O / O	RELOCATED	EXISTING / RELOCATED
A30	PYX	EXISTING PYXIS MACHINE			22.8"	27"	27.8"	400	48" AFF	COUNTERTOP	YES	15/S3.1	O / O	RELOCATED	EXISTING / RELOCATED
A31	SSS	STAINLESS STEEL SHELF			36"	18"	74"	96	56" AFF	FIXED - WALL	-	13/S3.1	C / C	-	
A32	SCN	DOCUMENT SCANNER							38" AFF	COUNTERTOP	YES		O / O	-	
A33	TAB	HEIGHT ADJUSTABLE TABLE			72"	30"	25"-50"	139	VARIES	-	-		C / C	-	
A34	ESC	ENCLOSED SUPPLY CART			24"	60"	69"			MOBILE	-		O / O	-	
A35	LLC	MIRION LEAD-LINED UNIT DOSE CABINET			30.5"	24"	36.5"	2328		MOBILE	-		O / O	-	
A36	WPC	HOSPITAL PC (WALL-MOUNTED)						150 MAX	VARIES	FIXED - WALL	-	7/S3.0	O / C	-	ON GCX 19" SEISMIC CHANNEL (OPM-0165-13) (C/C)
A37	DPC	HOSPITAL PC (DESKTOP)							45" AFF	COUNTERTOP	YES		O / O	-	
A37A	DPC	HOSPITAL PC (DESKTOP)							45" AFF	COUNTERTOP	YES		O / O	RELOCATED	EXISTING / RELOCATED
A38	DIS	DISPLAY MONITOR						150 MAX	66" AFF	FIXED - WALL	-	5/S3.2	C / C	-	ON PEERLESS SF640 (OPM-0211-13) (C/C)
A39	DPH	PHONE (DESKTOP)							-	-	-		O / O	-	
A40	CCTV	CCTV CAMERA						<20	-	FIXED - WALL	-	ST5.01/A7.3	O / C	-	ON WALL BRACKET X'-X" x X'-X"; WALL-MOUNTED CCTV CAMERA IN IMAGING ROOM
A41	MON	WALL-MOUNTED CCTV MONITOR						25 MAX	96" AFF	FIXED - WALL	-	6/S3.2	O / C	-	ON PEERLESS PP730 (OPM-0214-13) (C/C)
A42	MNT	FLUSH MONITOR MOUNT	GCX MOUNTING SOLUTIONS		4"	5"	19"	1.5	48" AFF	FIXED - WALL	-	7/S3.1	O / C	-	ON PEERLESS PP730 (OPM-0214-13) (C/C)
A43	HSK	HOUSEKEEPING CART			23"	48"	42.5"	104		MOBILE	-		O / O	-	

17 EQUIPMENT SCHEDULE
SCALE: 1/4" = 1'-0"



10 EQUIPMENT PLAN
SCALE: 1/4" = 1'-0"



1 LOBBY LEVEL KEY PLAN
SCALE: NTS

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Seal/Signature
REGISTERED ARCHITECT C37097 EXP. 9/30/2023 STATE OF CALIFORNIA

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HCAI SUBMITTAL

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2	DESIGN CHANGE	12/09/2022

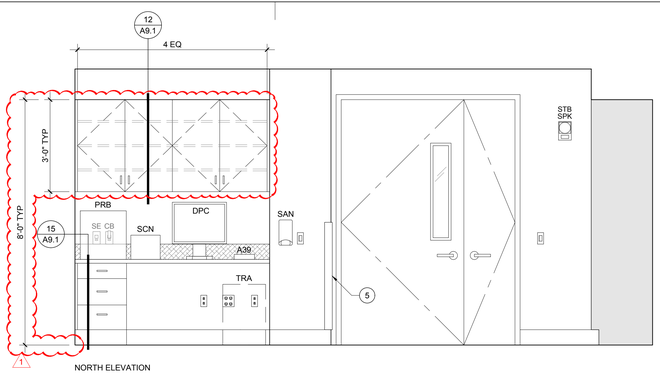
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Project Name
HOSPITAL REPLACEMENT BUILDING-
NUCLEAR MEDICINE SUITE RELOCATION

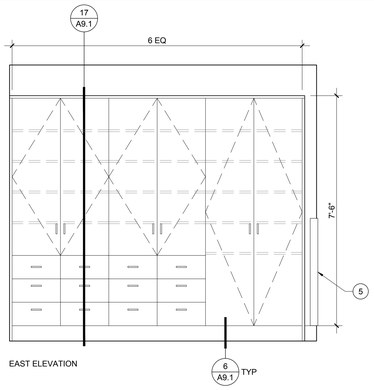
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Date 08/05/2022
Scale AS NOTED
Sheet Number A2.5

30 X 42



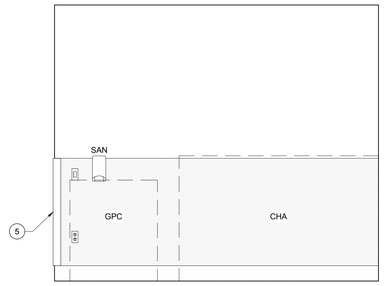
NORTH ELEVATION



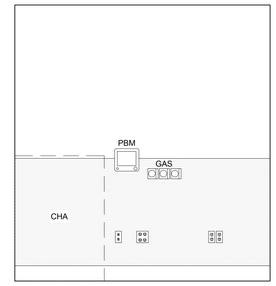
EAST ELEVATION

20 PATIENT HOLDING ROOM INTERIOR ELEVATIONS

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



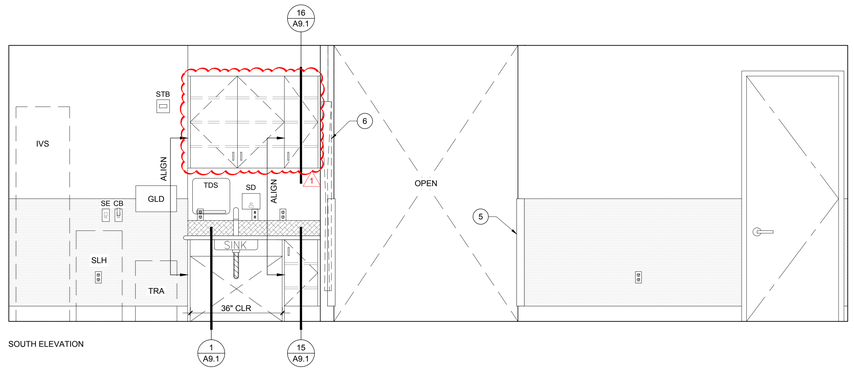
NORTH ELEVATION



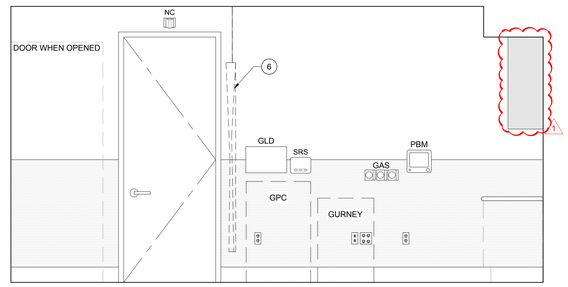
EAST ELEVATION

8 DOSAGE ROOM INTERIOR ELEVATIONS

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



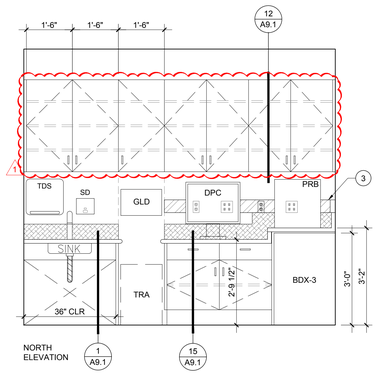
SOUTH ELEVATION



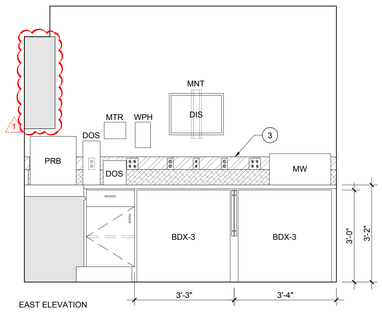
WEST ELEVATION

15 DOSAGE ROOM / PATIENT HOLDING ROOM INTERIOR ELEVATIONS

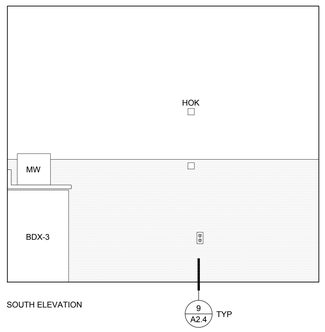
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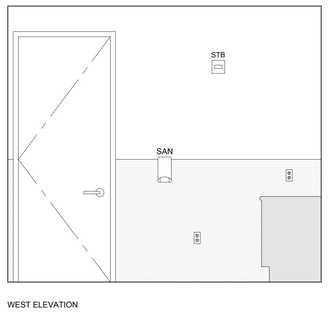
NORTH ELEVATION



EAST ELEVATION



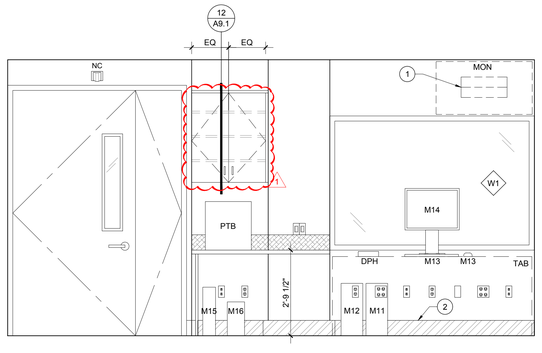
SOUTH ELEVATION



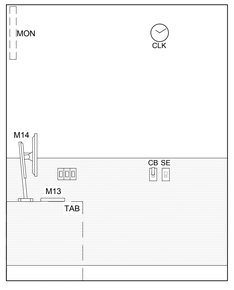
WEST ELEVATION

10 HOT LAB INTERIOR ELEVATIONS

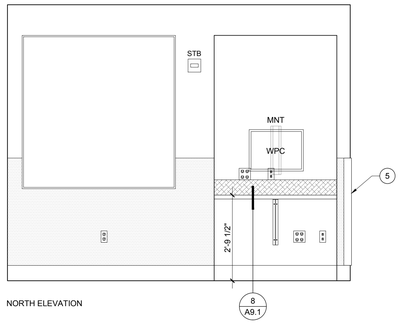
SCALE: 1/2" = 1'-0"



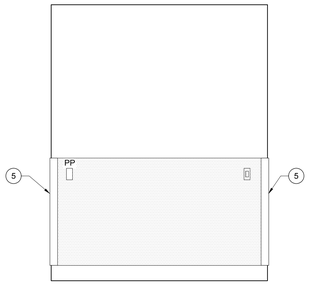
SOUTH ELEVATION



WEST ELEVATION W.1



NORTH ELEVATION



WEST ELEVATION W.2

17 CONTROL ROOM INTERIOR ELEVATIONS

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

INTERIOR ELEVATION KEYNOTES:

1. PROVIDE TRACK BACKING FOR FUTURE CCTV MONITOR. (2) ROWS. SEE 18/A7.0
2. SURFACE WALL DUCT
3. CABLE RACEWAY
4. J-BOX AND WALL-MOUNTED CCTV CAMERA
5. CORNER GUARD; SEE 18/A6.0
6. PRIVACY CURTAIN ON OVHD TRACK

Architect

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Owner

marin health Medical Center
250 BON AIR ROAD,
GREENBRAE, CA 94904

Consultant

SKA Project Number

2136

HCAI Number

S221296-21-00

HCAI seal/signature

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Seal/Signature

REGISTERED ARCHITECT
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C37097
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Project Name

HOSPITAL REPLACEMENT BUILDING-
NUCLEAR MEDICINE SUITE RELOCATION

Sheet Title

INTERIOR ELEVATIONS

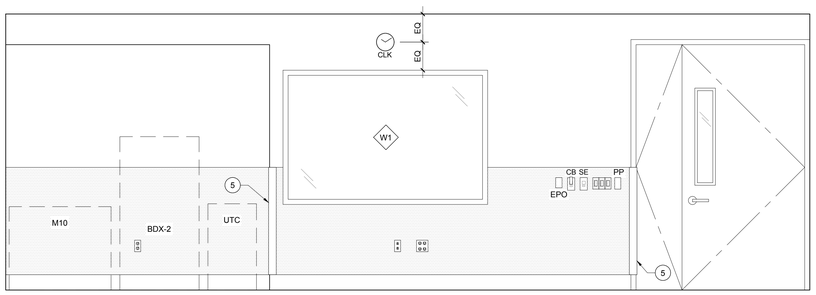
Date 08/05/2022

Scale AS NOTED

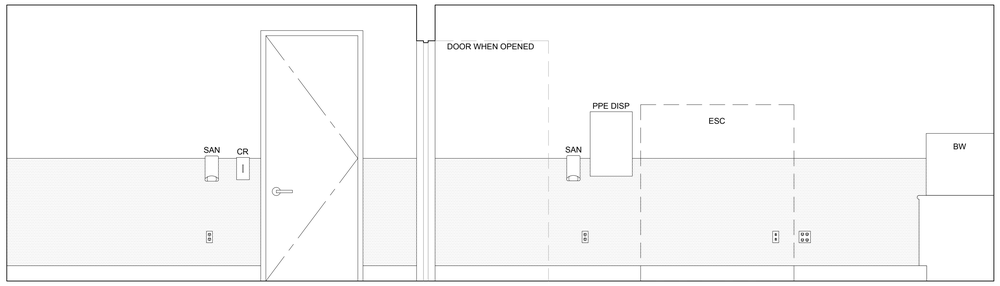
Sheet Number

A5.0

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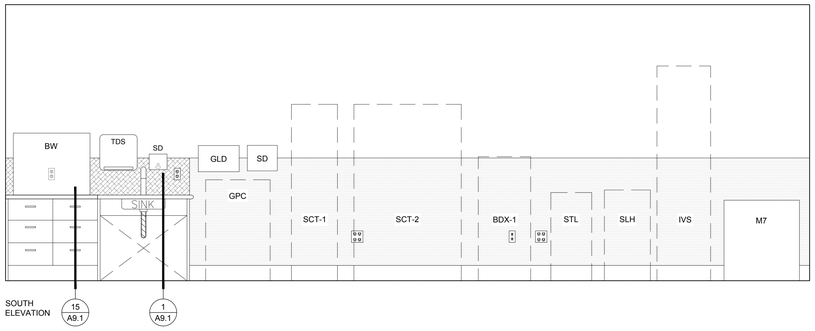
NORTH ELEVATION

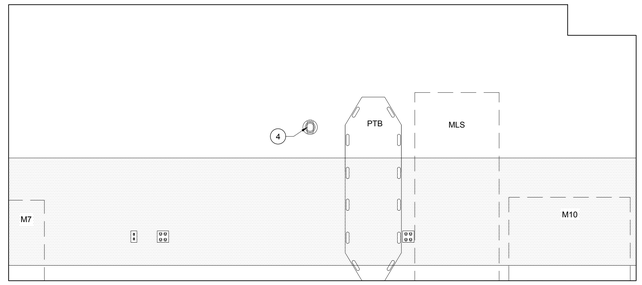


EAST ELEVATION

20 SPECT-CT ROOM INTERIOR ELEVATIONS

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

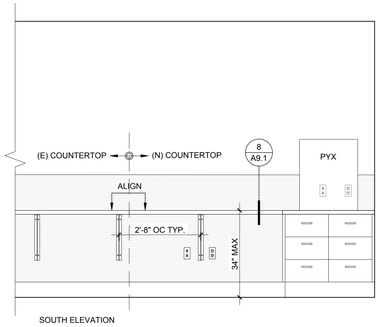




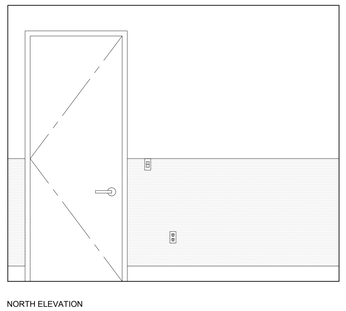
WEST ELEVATION

15 SPECT-CT ROOM INTERIOR ELEVATIONS

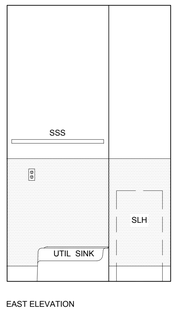
SCALE: 1/2" = 1'-0"



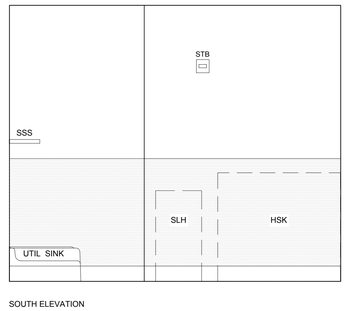
SOUTH ELEVATION



NORTH ELEVATION

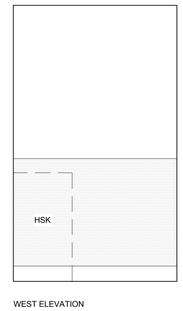


EAST ELEVATION



SOUTH ELEVATION

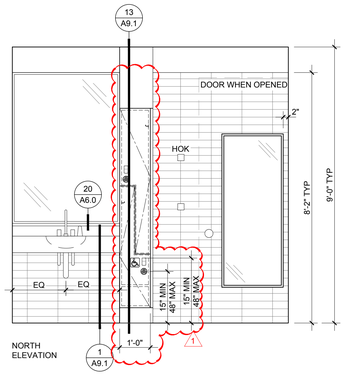
UTIL SINK



WEST ELEVATION

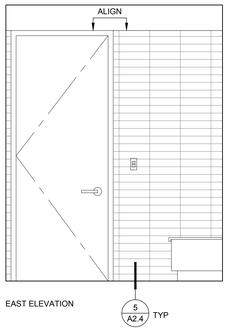
18 L546A INTERIOR ELEVATION

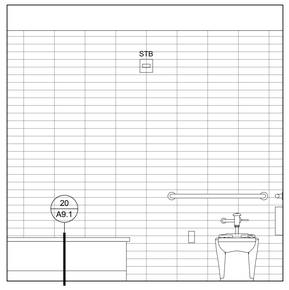
SCALE: 1/2" = 1'-0"



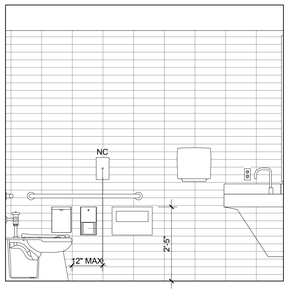
14 HOUSEKEEPING ROOM INTERIOR ELEVATIONS

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





SOUTH ELEVATION



WEST ELEVATION

INTERIOR ELEVATION KEYNOTES:

1. PROVIDE TRACK BACKING FOR FUTURE CCTV MONITOR. (2) ROWS. SEE 18/A7.0
2. SURFACE WALL DUCT
3. CABLE RACEWAY
4. J-BOX AND WALL-MOUNTED CCTV CAMERA
5. CORNER GUARD; SEE 18/A6.0
6. PRIVACY CURTAIN ON OVHD TRACK

17 PATIENT TOILET INTERIOR ELEVATIONS

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

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NUCLEAR MEDICINE SUITE RELOCATION

Sheet Title

INTERIOR ELEVATIONS

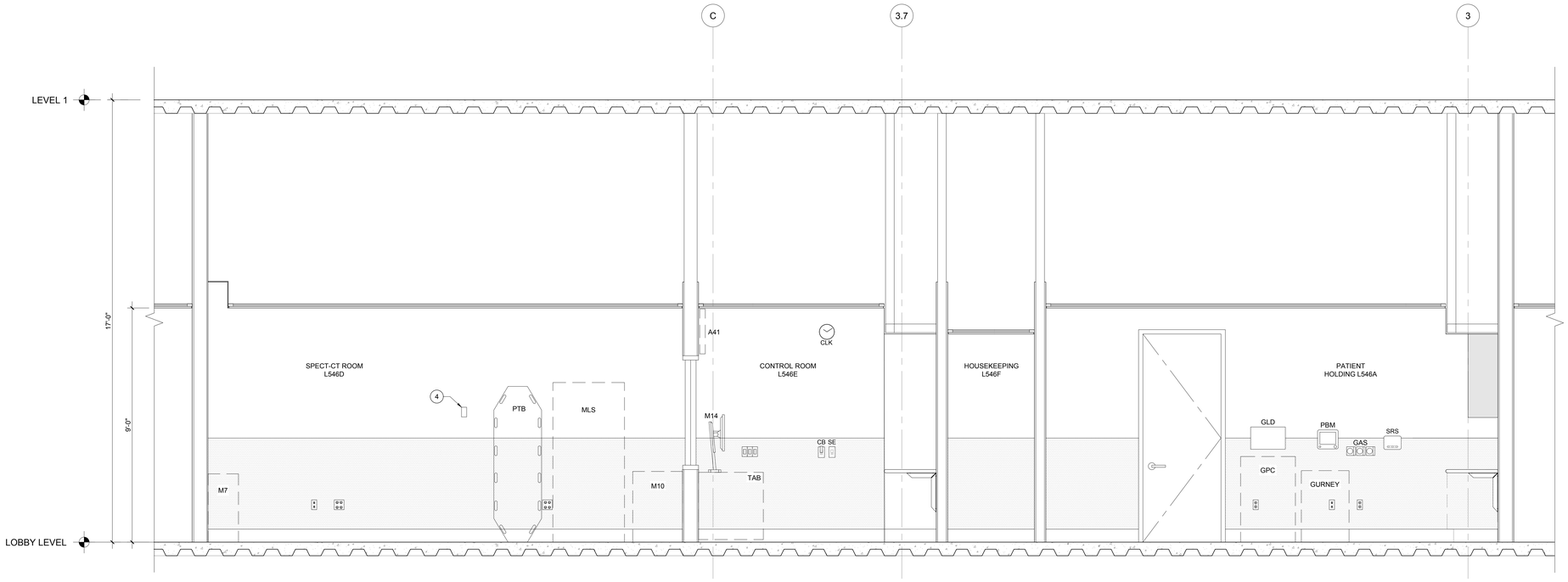
Date 08/05/2022

Scale AS NOTED

Sheet Number

A5.1

30 X 42



13 ROOM SECTION
SCALE: 1/2" = 1'-0"

Architect

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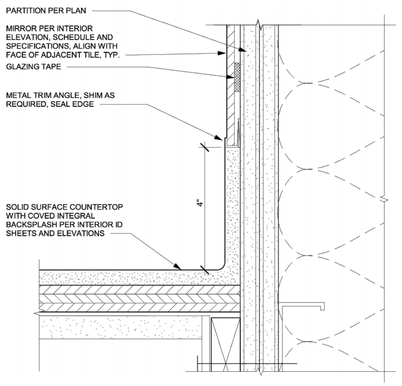
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Project Name
HOSPITAL REPLACEMENT BUILDING-
NUCLEAR MEDICINE SUITE RELOCATION

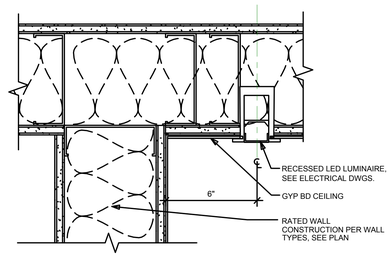
Sheet Title
INTERIOR ELEVATIONS

Date 08/05/2022
Scale AS NOTED
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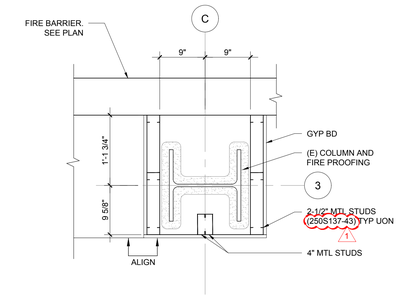
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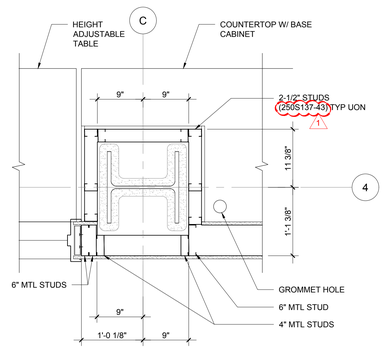
20 MIRROR @ BACKSPLASH
SCALE: 6" = 1'- 0"



16 RECESSED LED STRIP LIGHT
SCALE: 3" = 1'- 0"



12 FURRING AT COLUMN C-3
SCALE: 1" = 1'- 0"



8 FURRING AT COLUMN C-4
SCALE: 1" = 1'- 0"

TYPICAL DOOR/ HARDWARE NOTES:

1. DIMENSION FOR WIDTH IS CLEAR DIMENSION OF OPENING. PROVIDE DOOR OF APPROPRIATE WIDTH FOR SCHEDULED OPENING.
2. RATED DOORS TO PROVIDE POSITIVE LATCHING. 20-MINUTE ASSEMBLIES SHALL BE PROVIDED WITH APPROVED GASKETING MATERIAL INSTALLED TO PROVIDE A SEAL WHERE THE DOOR MEETS THE STOP ON BOTH SIDES AND THE TOP (CBC 716). MANUFACTURERS' INSTALLATION INSTRUCTIONS SHALL BE AVAILABLE ON THE JOB SIDE FOR ALL RATED DOOR ASSEMBLIES.
3. INSTALLATION INSTRUCTIONS MUST BE PROVIDED AT JOB SITE.
4. INSTALLATION INSTRUCTIONS SHALL CONTAIN INFORMATION REGARDING THE USE OF APPROVED COMPONENTS IN THE OPENING.
5. MAXIMUM EFFORT TO OPERATE DOORS SHALL NOT EXCEED 5 POUNDS FOR EXTERIOR DOORS AND 5 POUNDS FOR INTERIOR DOORS, SUCH PULL OR PUSH EFFORT BEING APPLIED AT RIGHT ANGLES TO HINGED DOORS AND AT THE CENTER PLANE OF SLIDING DOOR OR FOLDING DOOR. FOR REQUIRED FIRE DOORS, THE MINIMUM OPENING FORCE ALLOWABLE BY THE APPROPRIATE ADMINISTRATIVE AUTHORITY, NOT TO EXCEED 15 POUNDS. (CBC 11B-404.2.9)
6. IF A DOOR HAS A CLOSER, THEN THE SWEEP PERIOD OF THE CLOSER SHALL BE ADJUSTED SO THAT FROM AN OPEN POSITION OF 90 DEGREES, THE TIME REQUIRED TO MOVE THE DOOR TO A POSITION OF 12 DEGREES FROM THE LATCH IS 5 SECONDS MINIMUM. IF A DOOR HAS SPRING HINGES, IT SHALL BE ADJUSTED SO THAT FROM THE OPEN POSITION OF 70 DEGREES, THE DOOR SHALL MOVE TO THE CLOSED POSITION IN 1.5 SECONDS MINIMUM. (CBC 11B-404.2.8)
7. FIRE DOOR ASSEMBLIES SHALL BE INSTALLED IN ACCORDANCE WITH THE PROVISIONS OF THE 2019 CBC, SECTION 716 AND NFPA 80.
8. BACKSET TO BE SCHLAGE PRIMUS CYLINDER LOCK STANDARDS. CONTRACTOR TO COORDINATE EXACT TYPE WITH FACILITY ENGINEERING.
9. PROVIDE 3/8" UNDERCUT AT DOOR, UON
10. LEVERS TO BE AT 38" AFF

DOOR CONSTRUCTION TYPE LEGEND
HM = HOLLOW METAL
WD = WOOD
SC = SOLID CORE WOOD DOOR
HC = HOLLOW CORE WOOD DOOR
SS = STAINLESS STEEL CLEAN ROOM DOOR

FINISH LEGEND
PT = PAINTED
PL = PLASTIC LAMINATED
WV = WOOD VENEERED
SS = STAINLESS STEEL

GLASS TYPE LEGEND
S = SAFETY GLAZING
T = TEMPERED, 1/4" THICK SET IN STEEL FRAME
CW90 = DOOR VISION PANEL WITH FIRE RATED — GLAZING MARKING D-H-90
CW45 = DOOR VISION PANEL WITH FIRE RATED — GLAZING MARKING D-H-NT-45
CW20 = DOOR VISION PANEL WITH FIRE RATED — GLAZING MARKING D-20

FPG45G = FIRE-RATED LAMINATED GLASS, PIKLINGTON PYROSTOP WITH SMARTGUARD BY TGP

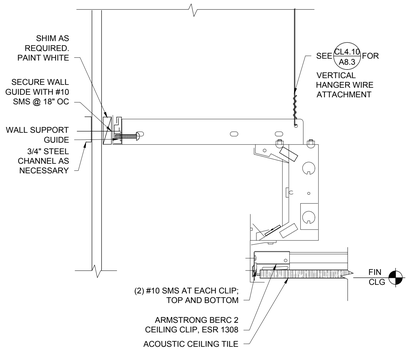
CR = CARD READER
KEY = KEYED
PV = PRIVACY

WINDOW FRAME CONSTRUCTION TYPE LEGEND

HM = HOLLOW METAL
SS = STAINLESS STEEL

FINISH LEGEND

PT = PAINTED



19 LED LINEAR LIGHT DETAIL
SCALE: 3" = 1'- 0"

DOOR SCHEDULE

ID	ROOM NAME	ROOM NUMBER	DOOR						FRAME			DETAILS			STC RATING	FIRE RATING	GLAZING	HDWE GROUP	REMARKS
			WIDTH	HEIGHT	THICK	TYPE	MATERIAL	FINISH	TYPE	MATERIAL	FINISH	HEAD	JAMB	THRESH					
D01	NUCLEAR MEDICINE SUITE	L546	6'-0"	8'-0"	1 3/4"	3	SC	PL-2	1	HM	PT-5	10/-	6/-	-	35	45	FPG45S	4	1, 2, 5
D02	SPEC/CT	L546D	5'-6"	8'-0"	1 3/4"	3	SC	PL-2	1	HM	PT-5	-	-	-	-	-	S	5	1, 3, 4, 6, 7
D03	PATIENT TOILET/DRESSING	L546G	3'-0"	8'-0"	1 3/4"	1	SC	PL-2	1	HM	PT-5	10/-	6/-	14/-	-	-	-	1	7, 8
D04	HOUSEKEEPING	L546F	3'-0"	8'-0"	1 3/4"	1	SC	PL-2	1	HM	PT-5	10/-	6/-	-	-	-	-	2	7
D05	HOT LAB	L546C	3'-0"	8'-0"	1 3/4"	2	SC	PL-2	1	HM	PT-5				-	-	S	3	2, 7
D06	CORRIDOR	-	3'-0"	7'-0"	1 3/4"	1	SC	PT01	1	HM	PT01	10/-	6/-	-	-	90	-	4A	

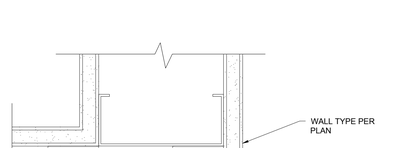
1. PROVIDE AUTOMATIC DOOR OPERATOR, INTEGRATED WITH CARD READER. CARD READER TO ACTUATE DOOR OPERATOR ON CORRIDOR SIDE.
2. PROVIDE CARD READER
3. 4LB LEAD LINED DOOR WITH LEAD GLASS VISION LITE.
4. PROVIDE AUTOMATIC DOOR OPERATOR.
5. 2'-0" INACTIVE LEAF
6. 1'-0" INACTIVE LEAF
7. PROVIDE 3/4" UNDERCUT
8. PROVIDE EMERGENCY RESCUE HARDWARE

2

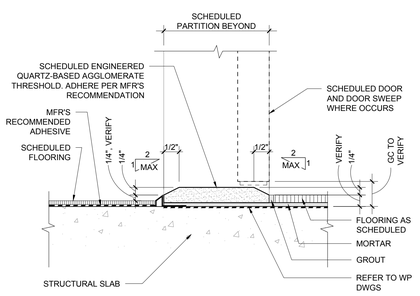
WINDOW SCHEDULE

ID	WIDTH	HEIGHT	FRAME			RATING	GLAZING	DETAIL			REMARKS
			TYPE	MATERIAL	FINISH			HEAD	JAMB	SILL	
W1	6'-4"	4'-0"	1	HM	PT-5	-	S	1/A6.0	1/A6.0	2/A6.0	1. LEAD LINED WINDOW AND FRAME (4LB/SF EQUIVALENT). 2. VERIFY WIDTH IN FIELD 3. SILL HEIGHT 35-1/2"

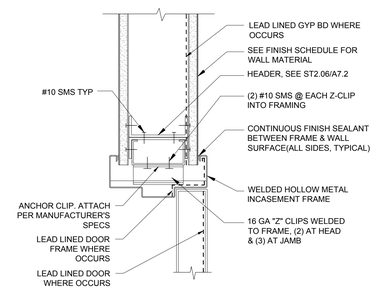
11 DOOR AND WINDOW SCHEDULES
SCALE: NTS



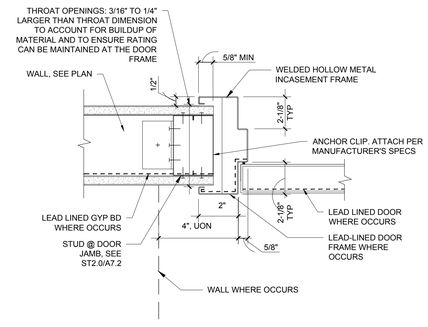
18 CORNER GUARD DETAIL (ACROVYN CO-8)
SCALE: 6" = 1'- 0"



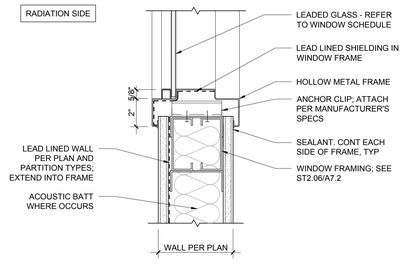
14 THRESHOLD AT TOILET
SCALE: 3" = 1'- 0"



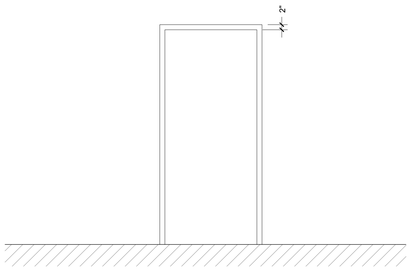
10 INTERIOR DOOR HEAD
SCALE: 3" = 1'- 0"



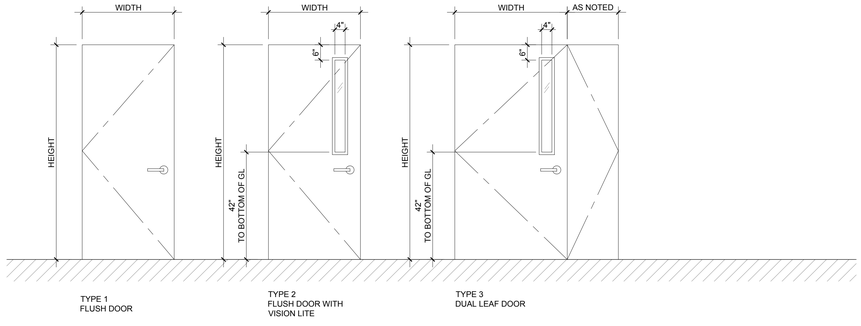
6 INTERIOR DOOR JAMB
SCALE: 3" = 1'- 0"



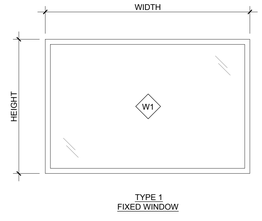
2 HW MTL WINDOW SILL - LEAD LINED
SCALE: 3" = 1'- 0"



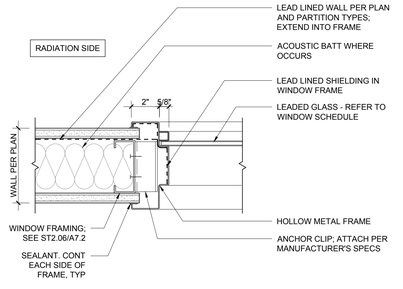
17 DOOR FRAME TYPES
SCALE: 3" = 1'- 0"



13 DOOR TYPES
SCALE: 3" = 1'- 0"



5 WINDOW TYPES
SCALE: 3" = 1'- 0"



1 HW MTL WINDOW JAMB (HEAD SIM) - LEAD LINED
SCALE: 3" = 1'- 0"

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REVIEWED IN ACCORDANCE WITH THE REQUIREMENTS OF 7 CCR
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LICENSED ARCHITECT CHRISTIN MCCLEARY C37097 EXP. 9/30/2023 STATE OF CALIFORNIA

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1	BACKCHECK #1	12/09/2022
2	DESIGN CHANGE	12/09/2022

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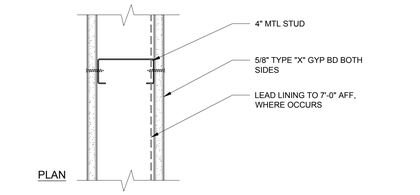
Project Name
HOSPITAL REPLACEMENT BUILDING-
NUCLEAR MEDICINE SUITE RELOCATION

Sheet Title
DOOR SCHEDULE, WINDOW SCHEDULE & DETAILS

Date 08/05/2022
Scale AS NOTED

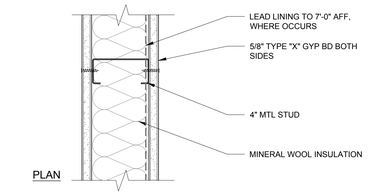
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30 X 42



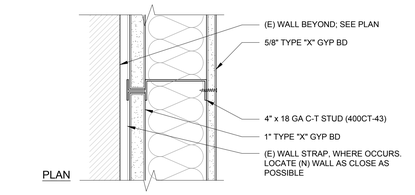
WALL TYPE DEFINITION	
A1	6" MTL STUDS

A NON-RATED INTERIOR PARTITION
SCALE: 3" = 1'-0"

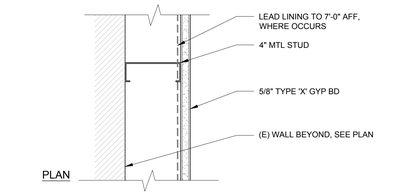


WALL TYPE DEFINITION	
B1	3 5/8" MTL STUDS
B2	6" MTL STUDS. STC 35

B 1-HR FIRE RATED PARTITION UL U419
SCALE: 3" = 1'-0"

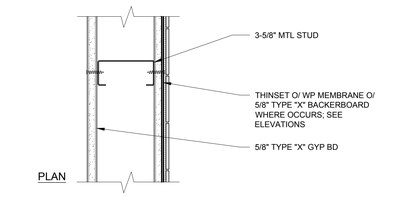


C 1-HR RATED SHAFT WALL UL UL U415
SCALE: 3" = 1'-0"

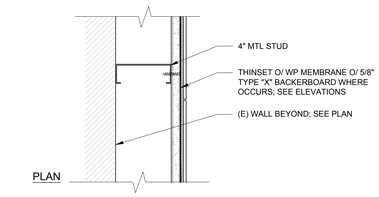


WALL TYPE DEFINITION	
D1	16 GA MTL STUD. STUD THICKNESS AS REQUIRED
D2	2-1/2" MTL STUDS

D NON-RATED FURRING PARTITION
SCALE: 3" = 1'-0"

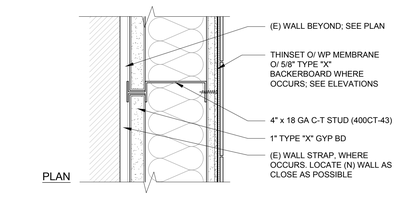


E NON-RATED INTERIOR PARTITION
SCALE: 3" = 1'-0"



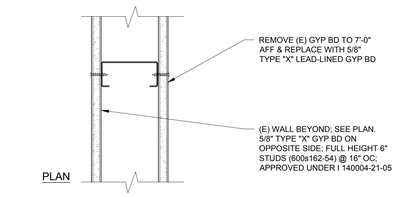
WALL TYPE DEFINITION	
F1	3-5/8" MTL STUD

F NON-RATED FURRING PARTITION
SCALE: 3" = 1'-0"

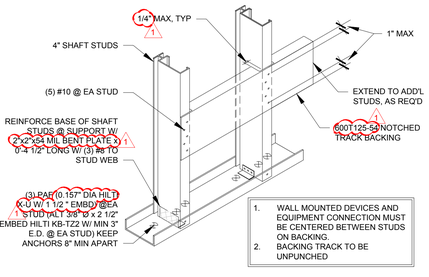


WALL TYPE DEFINITION	
G1	2-1/2" x 18 GA C-T STUD (250CT-43)

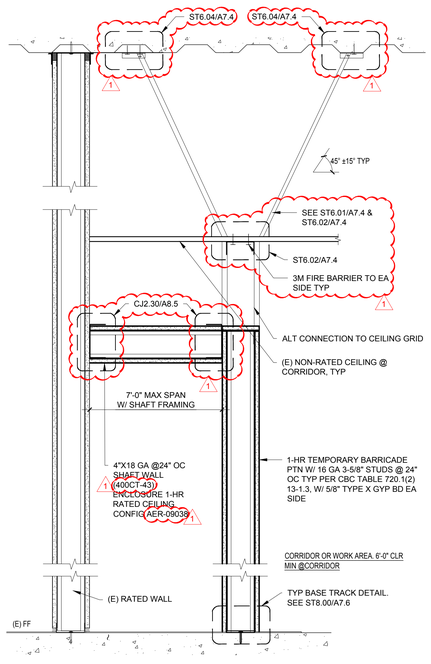
G 1-HR FIRE RATED SHAFT WALL UL U415
SCALE: 3" = 1'-0"



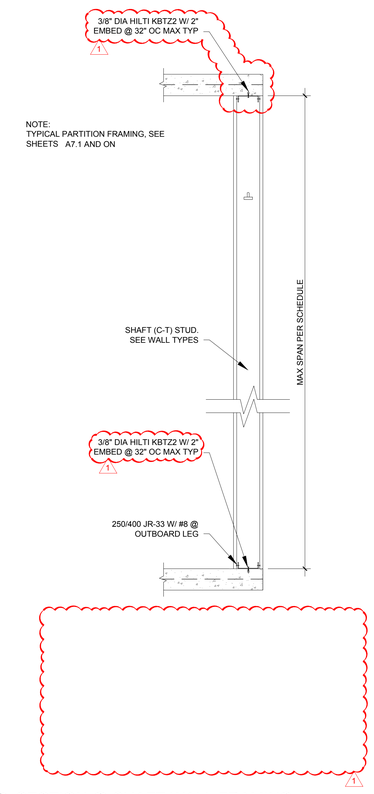
H NON-RATED INTERIOR PARTITION
SCALE: 3" = 1'-0"



18 BACKING PLATE @ SHAFT WALL
SCALE: 1 1/2" = 1'-0"



T 1-HR FIRE RATED TEMP CONSTRUCTION BARRIER
SCALE: 1 1/2" = 1'-0"



5 SECTION @ SHAFT WALL FRAMING
SCALE: 1 1/2" = 1'-0"

PARTITION GENERAL NOTES:

1. REFER TO PARTITION TYPES ON FLOOR PLANS FOR SYMBOLS USED TO IDENTIFY PARTITION TYPES ON THE DRAWINGS. PARTITIONS NOT DESIGNATED BY PARTITION SYMBOLS SHALL BE PARTITION TYPE AS INDICATED ON A7 SERIES SHEETS. NOT ALL PARTITION TYPES MAY BE USED FOR THIS PROJECT.
2. REFER TO "PARTITION TYPES" FOR PARTITION TYPE MODIFIERS USED TO IDENTIFY ADDITIONAL REQUIREMENTS OR MODIFICATIONS TO BASIC PARTITION TYPES
3. FIRE RESISTIVE RATED PARTITIONS SHALL EXTEND UP TO AND CLOSE TIGHT WITH THE BOTTOM OF THE STRUCTURAL FLOOR ABOVE. PARTITIONS IN OR ADJOINING SPACES WITHOUT CEILING FINISHES SHALL EXTEND UP TO AND CLOSE TIGHT WITH THE BOTTOM SURFACES OF THE STRUCTURAL FLOOR OR ROOF ABOVE UNLESS OTHERWISE NOTED.
4. PARTITIONS IN OR ADJOINING SPACES WITH CEILING FINISHES AND WITHOUT SPECIAL REQUIREMENTS SHALL HAVE GYPSUM BOARD EXTENDING 6" MIN. ABOVE HIGHEST ADJACENT CEILING U.O.N. BRACE PARTITION TO STRUCTURE ABOVE BY EXTENDING EVERY STUD TO UNDERSIDE OF STRUCTURE ABOVE.
5. TYPICAL FLOOR PLAN DIMENSIONS ARE TAKEN FROM FACE OF STUD TO FACE OF STUD. UNLESS OTHERWISE INDICATED.
6. WHERE A CLEAR, MIN., OR MAX. DIMENSION OR OPENING IS REQUIRED OR NOTED THE DIMENSION SHALL BE MEASURED TO THE FACE OF FINISH.
7. WHERE PARTITIONS AND/OR FURRING MEET, MAINTAIN A FLUSH SURFACE ON THE SIDE WHERE PARTITIONS ARE STRAIGHT OR CONTINUOUS, UON.
8. PENETRATIONS IN ACOUSTICALLY RATED AND FIRE RESISTIVE RATED PARTITIONS FOR OUTLET BOXES, ELEVATOR RECALL BOXES, FLOOR INDICATOR BOXES, FIRE EXTINGUISHERS, ETC., AND CONNECTIONS OF THE PARTITIONS TO OTHER PARTITIONS, SURFACES OR THE STRUCTURE ITSELF, SHALL BE IN ACCORDANCE WITH THE DRAWINGS, APPLICABLE CODE AND LISTING REQUIREMENTS FOR THEIR FIRE TEST RATINGS. ALL PENETRATIONS SHALL BE SEALED TO COMPLY WITH THROUGH PENETRATION FIRE STOP REQUIREMENTS OF THE CODE WITH SPECIAL ATTENTION TO COMPLIANCE WITH "F" & "T" RATING REQUIREMENTS.
9. WHERE A FIRE RESISTIVE RATED PARTITION IS INDICATED AND THE PROXIMITY OF CEILING PIPING OR DUCTWORK WILL NOT PERMIT THE INSTALLATION OF GYPSUM WALL BOARD, CONSTRUCT THE PARTITION PRIOR TO THE INSTALLATION OF DUCTWORK OR PLUMBING AND/OR SUBSTITUTE SHAFT WALL CONSTRUCTION OF THE SAME REQUIRED RATING WITH 5/8" GYPSUM BOARD APPLIED TO THE CORE BOARD SIDE OF THE SHAFT WALL BELOW THE LINE OF THE FINISH CEILING. COORDINATE THICKNESS AND CONSTRUCTION WITH ADJOINING CONSTRUCTION AND ITEMS INSTALLED IN OR ON PARTITION
10. FIRE RESISTIVE ASSEMBLIES AND SMOKE BARRIERS SHALL HAVE ALL PENETRATIONS SEALED AT THEIR PERIMETER
11. IT IS ANTICIPATED THAT THE UNDERSIDE OF EXISTING STRUCTURAL SLABS ARE IRREGULAR IN PLACES. FRAMING IS TO BE INSTALLED WITHOUT CUTTING OR DEFORMATION OF MEMBERS. WHERE IRREGULAR SURFACE IS ENCOUNTERED PROVIDE AND INSTALL PLATES AND SHEET METAL SCREWS.
12. SEE TYPICAL BACKING PLATE NOTES FOR ALL ITEMS NOT INDICATED BY DETAIL IN THE DRAWINGS OR SPECIFICATIONS. PROVIDE AND COORDINATE ALL BACKING WITH MILLWORK, SIGNAGE, LIGHTING, GRAB BARS & OTHER WALL FIXTURES AND APPLIANCES.
13. FIRE WALLS, FIRE BARRIERS, FIRE PARTITIONS, SMOKE BARRIERS AND SMOKE PARTITIONS OR ANY OTHER WALL REQUIRED TO HAVE PROTECTED OPENINGS OR PENETRATIONS SHALL BE EFFECTIVELY AND PERMANENTLY IDENTIFIED WITH SIGNS OR STENCILING. SUCH IDENTIFICATION SHALL:
    - 13.1. BE LOCATED IN ACCESSIBLE CONCEALED FLOOR, FLOOR-CEILING OR ATTIC SPACES.
    - 13.2. BE LOCATED WITHIN 15 FEET OF THE END OF EACH WALL AND AT INTERVALS NOT EXCEEDING 30 FEET MEASURED HORIZONTALLY ALONG THE WALL OR PARTITION.
    - 13.3. INCLUDE LETTERING NOT LESS THAN 3" IN HEIGHT WITH A MINIMUM ⅜" STROKE IN CONTRASTING COLOR INCORPORATING THE SUGGESTED WORDING. "FIRE AND/OR SMOKE BARRIER - PROTECT ALL OPENINGS" OR OTHER WORDING. TO IDENTIFY THE WALL TYPE AND ITS FIRE RESISTANCE RATING, AS APPLICABLE.
14. FOR FINISHES SEE FINISH SCHEDULE.
15. GYP BD JOINTS SHALL BE ORIENTED VERTICALLY OR HORIZONTALLY AND STAGGERED PER UL ASSEMBLIES
16. USE TYPE 'X' GYP BD AT ALL LOCATIONS EXCEPT WHERE MOISTURE RESISTANT GYP BD IS PROVIDED. WHERE 1/4" OR 3/8" DRYWALL IS NEEDED FOR FURRING OR RADIUS WALLS TYPE "X" NOT REQUIRED
17. ITEMS PENETRATING THROUGH EITHER SIDE OF PROTECTIVE MEMBRANE OF SMOKE/FIRE-RATED PARTITION SHALL BE PROVIDED WITH THROUGH PENETRATION FIRE STOPS WITH EQUIVALENT TIME RATING AS PARTITION RATING. FIRE STOP SHALL BE "T" RATED TO BE EQUAL OR GREATER THAN PARTITION FIRE RATING. MEMBRANE FIRESTOP PROTECTION IS NOT REQUIRED FOR STEEL AND ELECTRICAL BOXES THAT DO NOT EXCEED 16 SQ. INCHES IN AREA, PROVIDED THAT AREA DOES NOT EXCEED 100 SQ. INCHES IN A 100 SQ. FEET.
18. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE THE LOCATION OF ELECTRICAL AND MECHANICAL ELEMENTS SUCH AS DUCTS, PIPES, CONDUITS & EQUIPMENT SO AS TO MINIMIZE THE IMPACT ON PARTITION FRAMING. WHERE COORDINATION OF ELECTRICAL AND MECHANICAL WORK WITH PARTITION FRAMING REQUIRES MODIFICATION OF PARTITION FRAMING, THE CONTRACTOR SHALL PROVIDE SUCH MODIFICATION AS APPROVED BY THE ARCHITECT
19. GYP BOARD ON WALLS TO RUN FULL HEIGHT UNLESS NOTED OTHERWISE
20. LEAD LINED PARTITIONS @ IMAGING ROOMS SHALL BE PROVIDED WITH ONE LAYER OF LEAD LINED GYP BD TO BE LOCATED LEAD FACE AGAINST STUD ON INTERIOR SIDE OF THE ROOM. ALL LEAD LINED GYP BD SHALL EXTEND TO 7'-0" AFF.
21. ALL TOILET ROOM PARTITIONS SHALL HAVE 5/8" GLASS MAT BACKER BOARD" IN LIEU OF 5/8" GYP BD WHERE CERAMIC TILE IS TO BE INSTALLED.
22. ALL FRAMING MATERIAL SHALL BE 16 GAUGE (54 MIL) AND HEAVIER. SEE SPECIFICATION SECTION 05 40 00 FOR ADDITIONAL INFORMATION.
23. SEE WALL TYPES FOR WALL FRAMING TOP AND BOTTOM TRACK CONNECTIONS

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Project Name
HOSPITAL REPLACEMENT BUILDING-
NUCLEAR MEDICINE SUITE RELOCATION

Sheet Title
PARTITION TYPE DETAILS

Date 08/05/2022
Scale AS NOTED
Sheet Number
A7.0

30 X 42

PLOT DATE: Mar 06, 2017

GENERAL NOTES

1. CONSTRUCTION, WORKMANSHIP AND MATERIALS SHALL CONFORM TO THE 2013 CALIFORNIA BUILDING STANDARDS CODE (2013 CBSC).
2. THE CONTRACTOR SHALL NOTIFY OSHPD AND THE REGISTERED DESIGN PROFESSIONAL (RDP) IN RESPONSIBLE CHARGE WHERE A CONFLICT OR DISCREPANCY OCCURS BETWEEN THE OSHPD PRE-APPROVED DETAILS (OPD) AND ANY OTHER PORTION OF THE CONSTRUCTION DOCUMENTS, FIELD CONDITIONS OR WHERE ANY CONDITIONS ARISE NOT COVERED BY THESE DOCUMENTS WHEREIN WORK WILL NOT COMPLY WITH THE REQUIREMENTS OF THE 2013 CBSC.
3. THE INTENT OF THE OPD IS TO CONSTRUCT THE HOSPITAL BUILDING IN ACCORDANCE WITH THE 2013 CBSC. SHOULD ANY CONDITION DEVELOP NOT COVERED BY THE APPROVED PLANS AND SPECIFICATIONS WHEREIN THE WORK WILL NOT COMPLY WITH THE 2013 CBSC, A CHANGE ORDER DETAILING AND SPECIFYING THE REQUIRED WORK SHALL BE SUBMITTED TO AND APPROVED BY OSHPD BEFORE PROCEEDING WITH THE WORK.
4. GALVANIZED METAL STUDS, TRACKS AND SHEET STEEL SHALL CONFORM TO ASTM A653-09a MATERIAL, OR OTHER EQUIVALENT ASTM LISTED MATERIALS IN SECTION A2.1 OF THE AISI S100-07/S2-10: NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS, WITH SUPPLEMENT 2, DATED 2010, WITH A MINIMUM YIELD STRENGTH OF 33 KSI FOR 43 MIL (18 GAGE) AND LIGHTER AND MINIMUM YIELD STRENGTH OF 50 KSI FOR HEAVIER GAGES.
5. METAL STUDS AND TRACKS SHALL BE OF SIZE, THICKNESS AND SECTION PROPERTIES SHOWN ON TABLES 1.1.2 AND 1.3 OF THE AISI MANUAL, COLD-FORMED STEEL DESIGN, 2008 EDITION. THE RDP IN RESPONSIBLE CHARGE SHALL OBTAIN OSHPD APPROVAL FOR ANY SUBSTITUTIONS.
6. THESE OPD REFER TO FASTENER TYPE AND SIZE BUT DO NOT SPECIFY OR ENDORSE A SPECIFIC MANUFACTURER. THE RDP IN RESPONSIBLE CHARGE SHALL SELECT A MANUFACTURER, AND SELECTED FASTENER CAPACITIES SHALL MEET OR EXCEED THE ALLOWABLE STRENGTHS LISTED HEREIN. THE FOLLOWING REQUIREMENTS SHALL ALSO BE MET:
   A. SHEET METAL SCREWS SHALL COMPLY WITH ASTM C 1513-10, ASME B18.6.4-98 (R2005) AND ICC-ES AC 118 AND ALLOWABLE STRENGTH SHALL BE BASED ON INFORMATION PROVIDED IN ST1.07 AND ST1.08. PENETRATION OF SCREWS THROUGH JOINED MATERIAL SHALL NOT BE LESS THAN THREE EXPOSED THREADS.
   B. WELDING SHALL BE IN ACCORDANCE WITH AWS D1.3 USING E60XX SERIES ELECTRODES. ALL FIELD WELDING SHALL HAVE SPECIAL INSPECTION IN ACCORDANCE WITH 2013 CBC 1705A.2.

SECTION TITLE: STANDARD PARTITION WALL DETAILS
SHEET TITLE: GENERAL NOTES - PAGE 1 OF 3 — OPD NO.: ST0.00

PLOT DATE: Mar 06, 2017

C. POST-INSTALLED ANCHORS (E.G. EXPANSION ANCHORS, SCREW ANCHORS, AND POWER-ACTUATED FASTENERS) SHALL HAVE SPECIAL INSPECTION AND TESTING IN ACCORDANCE WITH THE 2013 CBC SECTIONS 1705A.3 & 1913A.7. FOR QUALIFICATION, DESIGN AND USE OF POST-INSTALLED ANCHORS IN CONCRETE, SEE THE 2013 CBC SECTIONS 1616A.1.19 AND 1908A.1.1 LISTING OF CURRENT ICC-ES EVALUATION REPORTS (OR REPORTS FROM OTHER TESTING AGENCIES ACCEPTABLE TO OSHPD) SHALL BE REQUIRED FOR FASTENERS USED.

D. POWER-ACTUATED FASTENERS (PAF), POWDER DRIVEN FASTENERS (PDF), POWER DRIVEN PINS (PDP) AND SHOT PINS ALL REPRESENT THE SAME DEVICE AND WILL HEREAFTER BE REFERRED TO AS POWER ACTUATED FASTENERS (PAF). PAF SHALL SATISFY THE CURRENT ACTO ACCEPTANCE CRITERIA FOR FASTENERS POWER-DRIVEN INTO CONCRETE, STEEL AND MASONRY ELEMENTS AND THE 2013 CBC SECTION 1908A.1.1. LISTING OF CURRENT ICC-ES EVALUATION REPORTS (OR REPORTS FROM OTHER TESTING AGENCIES ACCEPTABLE TO OSHPD) SHALL BE REQUIRED FOR FASTENERS USED.

E. FOR PAF INSTALLED IN STEEL THE FASTENER PENETRATION SHALL HAVE THE ENTIRE POINTED END OF THE FASTENER DRIVEN THROUGH THE STEEL MEMBER. EXCEPT AS NOTED IN CURRENT REPORTS FROM TESTING AGENCIES ACCEPTABLE TO OSHPD.

7. DESIGN CRITERIA
   A. CODE: 2013 CALIFORNIA BUILDING STANDARDS CODE (2013 CBC), ASCE 7-10 WITH SUPPLEMENT #1, AISI S100-07/S2-10, AISI S211-07 WALL STUD DESIGN AND AISI S212-07 FOR HEADER DESIGN.
   B. LOAD COMBINATIONS: ALLOWABLE STRESS DESIGN IN ACCORDANCE WITH 2013 CBC SECTION 1605A.3.1.
   C. SYSTEM WEIGHTS:

      PARTITION WALLS = 7.5 PSF (INCLUDES METAL STUDS, TWO LAYERS OF GYP BOARD, TWO LAYERS ON ONE SIDE OR ONE LAYER ON BOTH SIDES, AND 3.5 PSF FOR INSULATION AND FINISHES)

      SOFFITS = 10 PSF (INCLUDES METAL STUDS, TWO LAYERS OF GYP BOARD, TWO LAYERS ON ONE SIDE OR ONE LAYER ON BOTH SIDES, AND 3.5 PSF FOR INSULATION, FINISHES AND MINOR FIXTURES)

      DOORS AND WINDOWS = 10 PSF

      CABINETS = 38 PCF (INCLUDES CONTENTS AT 33 PCF PER 2013 CBC TABLE 1607A.1 AND CABINET SELF WEIGHT OF 5 PCF)

      EQUIPMENT = 38 PCF (EQUIPMENT LOAD IS ASSUMED TO BE THE SAME AS CABINET LOAD)

SECTION TITLE: STANDARD PARTITION WALL DETAILS
SHEET TITLE: GENERAL NOTES - PAGE 2 OF 3 — OPD NO.: ST0.01

PLOT DATE: Mar 06, 2017

D. SEISMIC COEFFICIENTS:

a_p = 1.0 (ASCE 7-10, TABLE 13.5-1, CEILINGS, PARTITIONS, CABINETS, ETC.)

R_p = 2.5 (ASCE 7-10, TABLE 13.5-1, CEILINGS, PARTITIONS, CABINETS, ETC.)

Ω_o = 2.5 (ASCE 7-10, TABLE 13.5-1, CEILINGS, PARTITIONS, CABINETS, ETC.)

I_P = 1.5 (ASCE 7-10, SECTION 13.1.3)

z/h = 1.0 (ALLOWS FOR INSTALLATION AT ANY FLOOR OR ROOF LEVEL OF THE BUILDING)

F_p = LARGER OF 5 PSF IN ACCORDANCE WITH 2013 CBC SECTION 1607A.14 OR SEISMIC DESIGN FORCE IN ACCORDANCE WITH ASCE 7-10 SECTION 13.3.1

$F_p = 0.25 S_{DS} D$ (ASCE 7-10, SECTION 13.3.1), APPLIED CONCURRENTLY WITH F_I

ρ = 1.0 (ASCE 7-10, SECTION 13.3.1)

S_{DS} - WHERE LIMITING S_{DS} VALUES ARE NOT EXPLICITLY NOTED IN THE OPD, FRAMING SYSTEM OR COMPONENT SHOWN IN THE OPD HAS BEEN DESIGNED TO ACCOMMODATE ALL S_{DS} VALUES UP TO 1.95g. PROJECT SPECIFIC DESIGN IS REQUIRED FOR S_{DS} HIGHER THAN 1.95g.

E. DEFLECTION LIMIT = L/120 (2013 CBC TABLE 1604.3, INTERIOR PARTITION WALLS WITH FLEXIBLE FINISHES). NOT PERMITTED FOR INTERIOR PARTITION WALLS WITH BRITTLE FINISHES.

F. FASTENER ALLOWABLE STRENGTH TABLES WERE DEVELOPED BASED ON ICC REPORTS BY MULTIPLE MANUFACTURERS.

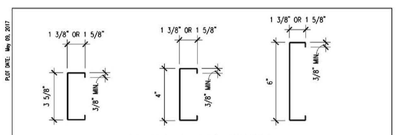
G. THE OPD DESIGN ASSUMES THAT STRUCTURAL ELEMENTS AND SUPPORTS TO WHICH THE COMPONENTS ARE ANCHORED HAVE SUFFICIENT CAPACITY TO CARRY THE LOADS IMPOSED BY THE COMPONENTS IN COMBINATION WITH ALL OTHER LOADS. EVALUATION OF THE CAPACITY OF THESE SUPPORTING STRUCTURAL ELEMENTS IS BEYOND THE SCOPE OF THE OPD.

H. LG BEAMER 8.10 SOFTWARE WAS USED FOR STUD CAPACITY CHECK. THIS SOFTWARE USES AISI S100-07/S2-10 AS THE BASIS FOR SECTION PROPERTY CALCULATIONS AND INTERACTION CHECKS.

8. THE RDP IN RESPONSIBLE CHARGE SHALL VERIFY FIRE RESISTIVE AND ACOUSTICAL RATINGS FOR ALL PARTITION WALL ASSEMBLIES.
9. INDIVIDUAL DETAILS WITHIN THIS OPD TYPICALLY RELY UPON OTHER DETAILS FOR INFORMATION ESSENTIAL TO THEIR APPLICATION. OPD ARE TO BE USED IN CONJUNCTION WITH ALL RELATED, APPLICABLE DETAILS WITHIN THIS OPD PACKAGE INCLUDING THE GENERAL NOTES.
10. OPD PROVIDE OPTIONS FOR COMPONENTS SUCH AS STUD SIZES, BRACES SIZES, FASTENERS, ETC. THE RDP IN RESPONSIBLE CHARGE SHALL CLEARLY IDENTIFY ALL COMPONENTS SELECTED FOR USE IN THE PROJECT-SPECIFIC CONDITIONS.

SECTION TITLE: STANDARD PARTITION WALL DETAILS
SHEET TITLE: GENERAL NOTES - PAGE 3 OF 3 — OPD NO.: ST0.02

PLOT DATE: Mar 06, 2017



STRUCTURAL STUD ('S'-SECTIONS)



STRUCTURAL TRACK ('T'-SECTIONS)

* - DEEP LEG TRACK (WHERE OCCURS AS NOTED IN DETAILS)

DESIGNATION THICKNESS (MILS)	REFERENCE ONLY GAUGE NO.
18	25
27	22
33	20
43	18
54	16
68	14
97	12
118	10

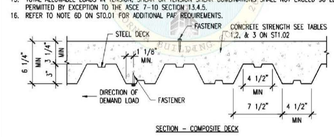
NOTES:
1. SEE WALL STUD FRAMING SECTIONS FOR THICKNESS OF STUDS & TRACKS.
2. F_y = 50KSI FOR 54 MIL (16GA) & THICKER SECTIONS, AND F_y = 33KSI FOR SECTIONS UP TO & INCLUDING 43 MIL (18GA).
3. SIZES AND THICKNESS ARE CONSIDERED MINIMUMS.
4. STRUCTURAL STUDS MAY BE PUNCHED UNLESS NOTED OTHERWISE. STRUCTURAL TRACK SHALL BE UNPUNCHED UNLESS NOTED OTHERWISE.

SECTION TITLE: STANDARD PARTITION WALL DETAILS
SHEET TITLE: METAL STUD PROFILES — OPD NO.: ST1.00

PLOT DATE: Mar 06, 2017

POWER ACTUATED FASTENER (PAF) GENERAL NOTES (INSTALLED IN CONCRETE FILLED METAL DECK OR CONC SLAB)

1. POWER ACTUATED FASTENER (PAF), POWDER DRIVEN FASTENERS (PDF), POWER DRIVEN PINS (PDP), SHOT PINS ALL REPRESENT THE SAME FASTENER AND WILL HEREAFTER BE REFERRED TO AS POWER ACTUATED FASTENERS (PAF).
2. ALLOWABLE STRENGTHS SHALL BE COMPARED TO ALLOWABLE STRESS DESIGN (ASD) LEVEL DEMAND IN ACCORDANCE WITH THE 2013 CBC SECTION 1605A.3.1.
3. ALLOWABLE STRENGTHS ARE FOR A SINGLE FASTENER WHICH MEET REQUIREMENTS PER SECTION BELOW AND TABLES ON ST1.02. THE ALLOWABLE STRENGTHS ARE BASED UPON THE LEAST OF THE ALLOWABLE STRENGTHS LISTED IN THE ICC ESRS 1799, 2024, 2138, & 2269.
4. MINIMUM CONCRETE STRENGTH f'c= 2000 PSI FOR NORMAL WEIGHT CONCRETE AND f'c= 3000 PSI FOR ALL LIGHT WEIGHT CONCRETE UNLESS NOTED OTHERWISE.
5. POWER ACTUATED FASTENER INSTALLED THROUGH LOW FLUTES OF THE METAL DECK SHALL MEET THE REQUIREMENTS OF THE INSTALLATION CRITERIA AND SECTION BELOW.
6. MINIMUM EDGE DISTANCE OF 1 1/8" FROM THE EDGE OF METAL DECK WEB AND 4" FROM THE EDGE OF THE DECK.
7. STEEL DECK TO BE A MINIMUM OF 22GA.
8. CONCRETE FILL DEPTH ABOVE THE TOP OF METAL DECK MUST BE A MINIMUM OF 3 1/4" AT LIGHT WEIGHT CONCRETE COMPOSITE METAL DECK.
9. PAF SHALL NOT BE USED TO RESIST SEISMIC SHEAR FORCES EXCEPT AT INTERIOR NON-LOAD BEARING, NON-SHEAR WALL PARTITION WALLS (AS PERMITTED BY 2013 CBC SECTION 1908A.1.1) AND COMPONENTS EXEMPT FROM CONSTRUCTION DOCUMENT REVIEW BY 2013 CBC SECTION 1616A.1.18 (NOT PERMITTED TO TAKE SEISMIC SHEAR BY ICC-ES ACTO FOR ANY OTHER CONDITIONS). PAF SHALL NOT BE USED TO CARRY SEISMIC TENSION LOADS (EXCEPT FOR VERTICAL SEISMIC LOAD PRODUCED BY SELF WEIGHT OF THE COMPONENTS) OR IN CRACKED CONCRETE UNLESS APPROVED FOR SUCH LOADING BY OSHPD.
10. PAF SHALL NOT BE USED IN PRE-STRESSED CONCRETE UNLESS NON-DESTRUCTIVE TESTING METHODS ARE USED TO LOCATE STRAND AND REINFORCEMENT PRIOR TO FASTENER INSTALLATION.
11. PAF INSTALLATION SHALL NOT NICK OR DAMAGE EXISTING CONCRETE REINFORCEMENT. SHOULD THIS OCCUR THE RDP IN RESPONSIBLE CHARGE SHALL BE NOTIFIED IMMEDIATELY. PAF SHALL BE INSTALLED 1" CLEAR OF EXISTING REINFORCEMENT. THIS MAY REQUIRE NON-DESTRUCTIVE TESTING.
12. PAF SHALL BE INSTALLED PER CURRENT ICC-ES EVALUATION REPORTS (OR REPORTS FROM OTHER TESTING AGENCIES ACCEPTABLE TO OSHPD).
13. TESTING OF PAF SHALL BE PER 2013 CBC SECTION 1913A.7. MINIMUM CONCRETE SUBSTRATE THICKNESS IS THREE TIMES THE PAF PENETRATION INTO THE CONCRETE SUBSTRATE.
14. TESTING IS NOT REQUIRED OF PAF USED TO ATTACHED TRACKS OF INTERIOR NON-SHEAR WALL PARTITIONS FOR SHEAR ONLY WHERE THERE ARE AT LEAST THREE FASTENERS.
15. TOTAL ALLOWABLE LOADS IN TENSION, SHEAR OR TENSION SHEAR COMBINATIONS SHALL NOT EXCEED 4 TIMES THE ALLOWABLE LOADS IN TENSION, SHEAR OR TENSION SHEAR AS PERMITTED BY EXCEPTION TO THE ASCE 7-10 SECTION 13.4.5.
16. REFER TO NOTE 6A ON ST0.03 FOR ADDITIONAL PAF REQUIREMENTS.



SECTION – COMPOSITE DECK

SECTION TITLE: STANDARD PARTITION WALL DETAILS
SHEET TITLE: POWER ACTUATED FASTENER (PAF) GENERAL NOTES (INSTALLED IN CONCRETE FILLED METAL DECK OR CONC SLAB) — OPD NO.: ST1.01

PLOT DATE: Mar 06, 2017

POWER ACTUATED FASTENER (PAF) ALLOWABLE STRENGTHS (INSTALLED IN CONCRETE FILLED METAL DECK OR CONC SLAB)

TABLE 1
POWER ACTUATED FASTENER INSTALLED IN SAND-LIGHTWEIGHT CONCRETE FILLED METAL DECK (f'c MIN=3000 PSI)

NOMINAL SHANK DIAMETER (IN)	MIN. EMBED (IN)	MIN. SPACING (IN)	MIN. EDGE DISTANCE (IN)	TENSION (LB) (SEE NOTE 15)	SHEAR (LB) (SEE NOTE 15)
0.145 MIN	1 1/4	5.1	4	90	90

TABLE 2
POWER ACTUATED FASTENER INSTALLED INTO STRUCTURAL SAND-LIGHTWEIGHT CONCRETE (f'c MIN=3000 PSI)

NOMINAL SHANK DIAMETER (IN)	MIN. EMBED (IN)	MIN. SPACING (IN)	MIN. EDGE DISTANCE (IN)	TENSION (LB) (SEE NOTE 15)	SHEAR (LB) (SEE NOTE 15)
0.145 MIN	1 1/4	5.1	4	90	90

TABLE 3
POWER ACTUATED FASTENER INSTALLED INTO NORMAL-WEIGHT CONCRETE (f'c MIN=2000 PSI)

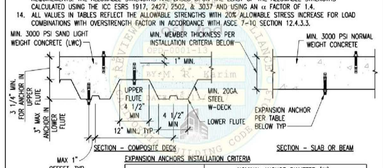
NOMINAL SHANK DIAMETER (IN)	MIN. EMBED (IN)	MIN. SPACING (IN)	MIN. EDGE DISTANCE (IN)	TENSION (LB) (SEE NOTE 15)	SHEAR (LB) (SEE NOTE 15)
0.145 MIN	1 1/4	5.1	4	90	90

SECTION TITLE: STANDARD PARTITION WALL DETAILS
SHEET TITLE: POWER ACTUATED FASTENER (PAF) ALLOWABLE STRENGTHS (INSTALLED IN CONC FILLED METAL DECK OR CONC SLAB) — OPD NO.: ST1.02

PLOT DATE: Mar 06, 2017

EXPANSION ANCHOR GENERAL NOTES

1. ALLOWABLE STRENGTHS SHALL BE COMPARED TO ALLOWABLE STRESS DESIGN (ASD) LEVEL DEMAND IN ACCORDANCE WITH THE 2013 CBC SECTION 1605A.3.1.
2. ALLOWABLE STRENGTHS ARE FOR SINGLE ANCHORS WHICH MEET MIN. REQUIREMENTS PER TABLE & SECTION BELOW.
3. MINIMUM CONCRETE STRENGTH f'c= 3000 PSI.
4. EXPANSION ANCHORS INSTALLED THROUGH UPPER OR LOWER FLUTES OF METAL DECK SHALL MEET THE REQUIREMENTS OF THE INSTALLATION CRITERIA AND SECTION BELOW.
5. STEEL DECK TO BE MIN. 20 GA. W-DECK.
6. MINIMUM CONCRETE FILL DEPTH ABOVE THE TOP OF METAL DECK PER SECTION AND INSTALLATION CRITERIA BELOW.
7. EXPANSION ANCHORS SHALL NOT BE USED IN PRE-STRESSED CONCRETE UNLESS NON-DESTRUCTIVE TESTING METHODS ARE USED TO LOCATE STRAND & REINFORCING PRIOR TO ANCHOR INSTALLATION.
8. EXPANSION ANCHOR INSTALLATION SHALL NOT NICK OR DAMAGE EXISTING REINFORCEMENT. SHOULD THIS OCCUR THE RDP IN RESPONSIBLE CHARGE SHALL BE NOTIFIED IMMEDIATELY. EXPANSION ANCHORS SHALL BE INSTALLED 1" CLEAR OF EXISTING REINFORCEMENT.
9. EXPANSION ANCHORS SHALL BE INSTALLED PER CURRENT ICC-ES EVALUATION REPORT OR REPORT FROM OTHER TESTING AGENCY ACCEPTABLE TO OSHPD.
10. TESTING OF EXPANSION ANCHORS SHALL BE PER 2013 CBC SECTION 1913A.7.
11. EXPANSION ANCHORS SHALL BE INSTALLED TO COMPLY W/ THE MINIMUM SLAB THICKNESS REQUIREMENTS ESTABLISHED BY THE ICC-ESR FOR THE SPECIFIED ANCHOR.
12. REFER TO NOTE 6C ON ST0.01 FOR ADDITIONAL EXPANSION ANCHOR REQUIREMENTS.
13. ALL VALUES IN TABLES ARE FOR CRACKED CONCRETE & INCLUDE REDUCTION BASED ON ACI 318-11 D3.3.4 REQUIREMENTS. THE ALLOWABLE STRENGTHS ARE BASED UPON THE LEAST OF THE ALLOWABLE STRENGTHS CALCULATED USING THE ICC ESRS 1917, 2427, 2502, & 3037 AND USING AN α_N FACTOR OF 1.4.
14. ALL VALUES IN TABLES REFLECT THE ALLOWABLE STRENGTHS WITH 20% ALLOWABLE STRESS INCREASE FOR LOAD COMBINATIONS WITH OVERSTRENGTH FACTOR IN ACCORDANCE WITH ASCE 7-10 SECTION 12.4.3.3.



EXPANSION ANCHORS INSTALLATION CRITERIA

	NOMINAL ANCHOR DIAMETER (IN)				
	3/8	1/2		5/8	
EFFECTIVE MIN. EMBEDMENT (IN)	2	2 1/4	3 1/4	3 1/8	4
MIN. MEMBER THICKNESS NWC SLAB OR BEAM ONLY (IN)	4.5	4.5	6	6	7 1/4
MIN. ANCHOR SPACING (3 x EMBED) (IN)	6 3/4	6 3/4	9 3/4	9 3/8	12
MIN. EDGE DISTANCE (IN)	6	7	7 1/2	6 1/2	8 3/4

SECTION TITLE: STANDARD PARTITION WALL DETAILS
SHEET TITLE: EXPANSION ANCHOR GENERAL NOTES — OPD NO.: ST1.03

PLOT DATE: Mar 06, 2017

EXPANSION ANCHOR ALLOWABLE STRENGTHS

TABLE 1
EXPANSION ANCHORS INSTALLED IN TO THE UNDERSIDE OF STRUCTURAL SAND-LIGHTWEIGHT CONCRETE (f'c MIN=3000 PSI) OVER METAL DECK

ANCHOR DIA. (IN)	EMBED (IN)	SHEAR (LB)	TENSION (LB)
3/8	2	747	604
1/2	2 1/4	1029	610
1/2	3 1/4	1173	1086
5/8	3 1/4	1353	836
5/8	4 1/4	2477	1941

TABLE 2
EXPANSION ANCHORS INSTALLED IN TO THE TOP OF STRUCTURAL SAND-LIGHTWEIGHT CONCRETE (f'c MIN=3000 PSI) OVER METAL DECK

ANCHOR DIA. (IN)	EMBED (IN)	SHEAR (LB)	TENSION (LB)
3/8	2	806	624
1/2	2 1/4	945	660

TABLE 3
EXPANSION ANCHORS INSTALLED IN NORMAL WEIGHT CONCRETE (f'c MIN=3000 PSI)

ANCHOR DIA. (IN)	EMBED (IN)	SHEAR (LB)	TENSION (LB)
3/8	2	1020	961
1/2	2 1/4	1560	1101
1/2	3 1/4	2591	2003
5/8	3 1/4	2579	2150
5/8	4 1/4	3772	3113

SECTION TITLE: STANDARD PARTITION WALL DETAILS
SHEET TITLE: EXPANSION ANCHOR ALLOWABLE STRENGTHS — OPD NO.: ST1.04

PLOT DATE: Mar 06, 2017

POWER ACTUATED FASTENER (PAF) GENERAL NOTES (INSTALLED IN STEEL)

1. MINIMUM STEEL TENSILE STRENGTH Fu=58 KSI.
2. MINIMUM SPACING 1 INCH.
3. MINIMUM EDGE DISTANCE 1/2 INCH.
4. USE KICI ESRS 1799, 2024, 2138 & 2269.
5. POWER ACTUATED FASTENERS (PAF) SHALL BE INSTALLED PER CURRENT ICC-ES EVALUATION REPORTS OR REPORTS FROM OTHER TESTING AGENCIES ACCEPTABLE TO OSHPD.
6. SEE GENERAL NOTE 6D & E ON ST0.01 FOR PAF REQUIREMENTS & ATTACHMENT TO STEEL.
7. POWER DRIVEN ACTUATED FASTENER (PAF), POWDER DRIVEN FASTENERS (PDF), POWER DRIVEN PINS (PDP), SHOT PINS, ARE COMMON NOMENCLATURES THAT ALL REPRESENT THE SAME FASTENER.
8. ALLOWABLE STRENGTHS SHALL BE COMPARED TO ALLOWABLE STRESS DESIGN (ASD) LEVEL DEMAND IN ACCORDANCE WITH THE 2013 CBC SECTION 1605A.3.1.
9. ALLOWABLE STRENGTHS ARE FOR SINGLE FASTENER, WHICH MEETS THE REQUIREMENTS PER NOTES ABOVE. THE ALLOWABLE STRENGTHS ARE BASED UPON THE LEAST OF THE ALLOWABLE STRENGTHS LISTED IN THE ICC ESRS 1799, 2024, 2138 & 2269.
10. TOTAL ALLOWABLE TENSION, SHEAR OR TENSION SHEAR COMBINATION SHALL NOT EXCEED 250 LB AS REQUIRED BY THE EXCEPTION TO ASCE 7-10 SECTION 13.4.5.
11. LIMIT USE TO INTERIOR NON-BEARING, NON-SHEAR WALL PARTITIONS AND COMPONENTS EXEMPT FROM CONSTRUCTION DOCUMENTS REVIEW BY THE 2013 CBC SECTION 1616A.1.18 (NOT PERMITTED TO TAKE SEISMIC SHEAR BY ICC-ES AC 70 FOR ANY OTHER CONDITIONS).

POWER ACTUATED FASTENER (PAF) ALLOWABLE STRENGTHS (INSTALLED IN STEEL)

NOMINAL SHANK DIAMETER (IN)	STEEL THICKNESS (IN)							
	3/16		1/4		3/8		1/2	
	TENSION (LB)	SHEAR (LB)	TENSION (LB)	SHEAR (LB)	TENSION (LB)	SHEAR (LB)	TENSION (LB)	SHEAR (LB)
0.145 MIN	155	250	230	250	250	250	190	220

SECTION TITLE: STANDARD PARTITION WALL DETAILS
SHEET TITLE: POWER ACTUATED FASTENER GENERAL NOTES AND ALLOWABLE STRENGTHS (INSTALLED IN STEEL) — OPD NO.: ST1.05

PLOT DATE: Mar 06, 2017

SHEET METAL SCREW (SMS) GENERAL NOTES

1. THE ALLOWABLE STRENGTHS ARE BASED UPON THE AISI S100-07/S2-10 AND ARE LIMITED BY ACTUAL TESTED STRENGTH OF THE SCREWS IN TENSION AND SHEAR.
2. THE ALLOWABLE STRENGTHS ARE BASED UPON THE LEAST OF THE AVERAGE TESTED TENSILE AND SHEAR STRENGTHS TABULATED FROM ICC ESR'S 1976, 2196, 1730, 1408, AND THE STEEL STUD MANUFACTURERS ASSOCIATION (SSMA). FASTENER TYPES AND SIZES APPLY TO NON-PROPRIETARY FASTENER TYPES AND SIZES, AND DOES NOT ENDORSE A SPECIFIC MANUFACTURER. WHERE PROPRIETARY FASTENERS ARE SPECIFIED, NO EXCEPTIONS ARE TAKEN TO THE USE OF MANUFACTURER SPECIFIC VALUES THAT ARE BASED UPON THE AISI S100-07/S2-10, SECTION E4. ALL SCREW FASTENERS SHALL SATISFY ICC-ES AC118 ACCEPTANCE CRITERIA FOR SELF TAPPING SCREW FASTENERS.
3. TABLE 1 REPRESENTS ALLOWABLE TENSION AND SHEAR STRENGTHS FOR NON-PROPRIETARY SHEET METAL SCREWS FOR STEEL TO STEEL CONNECTIONS.
4. TABLE 2 AND 3 REPRESENT ALLOWABLE TENSION AND SHEAR STRENGTHS THAT INCORPORATE THE EFFECTS OF EITHER ONE OR TWO LAYERS OF 5/8" GYPSUM BOARD BETWEEN FASTENER HEAD AND CONNECTING STEEL MATERIAL.
5. IN ORDER TO USE THE VALUES IN TABLES 1, 2, AND 3, THE ATTACHMENTS SHALL BE DETAILED IN SUCH A WAY AS TO AVOID PRYING AND THE STUDS MUST BE STABILIZED WITH FULL-DEPTH BLOCKING WITH CONTINUOUS STRAPS ALONG THE FLANGES OR WITH BACKING BARS.
6. PENETRATION OF SCREWS THROUGH JOINED MATERIAL SHOULD NOT BE LESS THAN 3 EXPOSED THREADS.
7. STEEL THICKNESSES JOINED ARE ASSUMED TO BE THE SAME. IF DISSIMILAR THICKNESSES ARE BEING CONNECTED, THE VALUE FOR THE THINNER PART JOINED SHALL BE USED.
8. THE MINIMUM SPACING BETWEEN CENTERS OF FASTENERS SHALL NOT BE LESS THAN 3 X FASTENER DIAMETER. THE MINIMUM EDGE DISTANCE FROM THE CENTER OF A FASTENER TO THE EDGE OF ANY PART SHALL NOT BE LESS THAN 1.5 X FASTENER DIAMETER. WHERE THE END DISTANCE IS PARALLEL TO THE FORCE ON THE FASTENER, THE NOMINAL SHEAR STRENGTH SHALL BE LIMITED BY SECTION E4.3.2 OF THE AISI S100-07/S2-10.
9. GALVANIZED METAL STUDS, TRACKS AND SHEET STEEL SHALL CONFORM TO ASTM A653-09a MATERIAL (OR OTHER EQUIVALENT ASTM LISTED MATERIALS IN THE AISI S100-07/S2-10, SECTION A2.1) WITH A MINIMUM YIELD STRENGTH OF 33 KSI FOR 43 MIL (18 GA) AND LIGHTER, AND MINIMUM YIELD STRENGTH OF 50 KSI FOR 54 MIL (16 GA) & HEAVIER.
10. WHERE VALUES ARE NOT GIVEN, SUCH COMBINATIONS OF SCREW SIZES & MATERIAL THICKNESS ARE NOT RECOMMENDED.
11. IF THE ATTACHMENT DETAILS RESULT IN PRYING WITH A MOMENT ARM NOT TO EXCEED 1 5/8", THE VALUES IN TABLE 4 MAY BE USED. IF THE ATTACHMENT DETAILS RESULT IN PRYING WITH A MOMENT ARM THAT EXCEEDS 1 5/8", THE REREGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE OF THE PROJECT SHALL DETERMINE THE ALLOWABLE VALUES AND SUBMIT SUBSTANTIATION FOR THEM TO OSHPD FOR REVIEW.
12. INTERACTION OF SHEAR AND TENSION SHALL BE BASED ON $T/T_{all} + V/V_{all} \leq 1.0$.
13. REFER TO NOTE 6A ON ST0.03 FOR ADDITIONAL SHEET METAL SCREW REQUIREMENTS.

SECTION TITLE: STANDARD PARTITION WALL DETAILS
SHEET TITLE: SHEET METAL SCREW GENERAL NOTES — OPD NO.: ST1.06

PLOT DATE: Mar 06, 2017

SHEET METAL SCREW (SMS) ALLOWABLE STRENGTHS

TABLE 1
SHEET METAL SCREW ALLOWABLE STRENGTHS FOR STEEL TO STEEL CONNECTIONS.

F_y (KSI)	MIL (STEEL GA)	FASTENER SIZE									
		NO. 14 0.250 IN		NO. 12 0.216 IN		NO. 10 0.190 IN		NO. 8 0.164 IN		NO. 6 0.138 IN	
		SHEAR (LB)	TENSION (LB)	SHEAR (LB)	TENSION (LB)	SHEAR (LB)	TENSION (LB)	SHEAR (LB)	TENSION (LB)	S

PLOT DATE: May 05, 2017

TYPICAL PARTITION WALL CONDITIONS

CONDITION 'A' – PARTITION WALL WITHOUT ATTACHMENTS. SEE DETAIL ST2.02

CONDITION 'B' – PARTITION WALL SUPPORTING CABINETS OR EQUIPMENT ON ONE SIDE OR BOTH SIDES OF THE WALL DISTRIBUTING UP TO 50 LB TOTAL VERTICAL LOAD PER STUD (37 PLF). REFER TO GENERAL NOTE 7C ON ST0.01, CENTER OF GRAVITY LESS THAN 6" FROM THE FACE OF THE STUD. SEE DETAIL ST2.03.

CONDITION 'C' – PARTITION WALL SUPPORTING OVERHEAD AND/OR BASE CABINETS OR EQUIPMENT ON ONE SIDE OR BOTH SIDES OF THE WALL, DISTRIBUTING UP TO 152 LB TOTAL VERTICAL LOAD PER STUD (114 PLF). REFER TO GENERAL NOTE 7C ON ST0.01, CENTER OF GRAVITY WITHIN 6" OF FACE OF THE STUD. SEE DETAIL ST2.04.

CONDITION 'D' – PARTITION WALL SUPPORTING FULL HEIGHT CABINETS OR EQUIPMENT ON ONE SIDE OR BOTH SIDES OF THE WALL, DISTRIBUTING UP TO 380 LB TOTAL VERTICAL LOAD PER STUD (285 PLF). REFER TO GENERAL NOTE 7C ON ST0.01, CENTER OF GRAVITY WITHIN 6" OF FACE OF THE STUD. SEE DETAIL ST2.04.

SECTION TITLE: STANDARD PARTITION WALL DETAILS
SHEET TITLE: TYPICAL PARTITION WALL CONDITIONS — DPD NO.: ST2.00

PLOT DATE: May 05, 2017

PARTITION WALL SCHEDULES

SCHEDULE 1: MINIMUM PARTITION WALL STUD SIZE (PARTITION CONDITION 'A')

Sds	WALL HEIGHT 9' FT	12' FT	16' FT
0.25–0.99	3625137–33	3625137–33	3625137–43 / 4005137–43 / 6005137–33
1.00–1.25	3625137–33	3625137–33	3625137–43 / 4005137–43 / 6005137–33
1.26–1.45	3625137–33	3625137–33	3625137–43 / 4005137–43 / 6005137–33
1.46–1.95	3625137–33	3625137–33	3625137–54 / 4005137–54 / 6005137–43

SCHEDULE 2: MINIMUM PARTITION WALL STUD SIZE (PARTITION CONDITION 'B')

Sds	WALL HEIGHT 9' FT	12' FT	16' FT
0.25–0.99	3625137–33	3625137–43 / 4005137–43	3625137–54 / 4005137–43 / 6005137–43
1.00–1.25	3625137–33	3625137–43 / 4005137–43	NA / 4005137–54 / 6005137–43
1.26–1.45	3625137–33	3625137–43 / 4005137–43	NA / 4005137–54 / 6005137–43
1.46–1.95	3625137–33	3625137–54 / 4005137–43	NA / 4005137–54 / 6005137–43

SCHEDULE 3: MINIMUM PARTITION WALL STUD SIZE (PARTITION CONDITION 'C')

Sds	WALL HEIGHT 9' FT	12' FT	16' FT
0.25–0.99	3625137–43 / 4005137–54	3625137–54 / 4005137–43	6005137–43 / 4005137–43 / 6005137–43
1.00–1.25	3625137–43 / 4005137–54	3625137–54 / 4005137–54	6005137–43 / 4005137–43 / 6005137–54
1.26–1.45	3625137–43 / 4005137–54	NA / 4005137–54	6005137–54 / 4005137–54 / 6005137–54
1.46–1.95	3625137–54 / 4005137–54	NA / NA	6005137–54 / 6005137–54 / 6005137–54

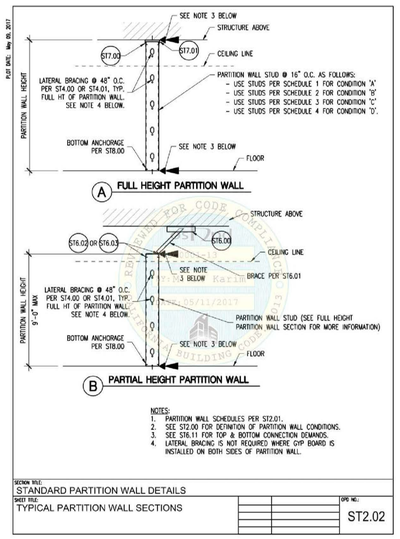
SCHEDULE 4: MINIMUM PARTITION WALL STUD SIZE (PARTITION CONDITION 'D')

Sds	WALL HEIGHT 9' FT	12' FT	16' FT
0.25–0.99	3625137–33 / 4005137–43 / 6005137–43	3625137–43 / 4005137–43 / 6005137–43	6005137–43 / 4005137–43 / 6005137–43
1.00–1.25	3625137–43 / 4005137–43 / 6005137–43	NA / 4005137–54 / 6005137–43	6005137–43 / 6005137–43 / 6005137–54
1.26–1.45	3625137–43 / 4005137–43 / 6005137–43	NA / 4005137–54 / 6005137–43	6005137–43 / 6005137–43 / 6005137–54
1.46–1.95	NA / 4005137–54 / 6005137–54	NA / NA	6005137–54 / 6005137–54 / 6005137–54

NOTES:
1. PARTITION WALL STUDS ARE SPACED @ 16" O.C. TYPICAL UNLESS NOTED OTHERWISE.
2. SEE ST2.06 FOR PARTITION WALL ELEVATION & ADDITIONAL INFORMATION.
3. SEE ST2.00 FOR DEFINITION OF PARTITION WALL CONDITIONS.
4. SEE ST1.00 FOR METAL STUD PROFILES.
5. 3625137–33 IS A 3 5/8" WIDE SSMA STUD WITH 1 3/8" WIDE FLANGE THAT IS 33 MIL THICK.
6. STUDS SHOWN IN THE TABLES ABOVE CAN BE REPLACED BY EQUIVALENT STUDS WITH EQUAL OR HIGHER AREA (A), SECTION MODULUS (S_x, S_y) AND MOMENT OF INERTIA (I_x, I_y) PROVIDED MATERIALS CONFORM TO THE SAME ASTM STANDARD WITH EQUAL OR HIGHER YIELD STRENGTH (f_y) AND ULTIMATE STRENGTH (f_u) WHEN APPROVED.
7. PARTITION WALLS TO HAVE LATERAL BRACING @ 48" O.C. PER ST4.00 OR ST4.01, FOR FULL HT OF PARTITION WALL. LATERAL BRACING IS NOT REQUIRED WHERE GYP. BOARD IS INSTALLED ON BOTH SIDES OF PARTITION WALL.

SECTION TITLE: STANDARD PARTITION WALL DETAILS
SHEET TITLE: PARTITION WALL SCHEDULES — DPD NO.: ST2.01

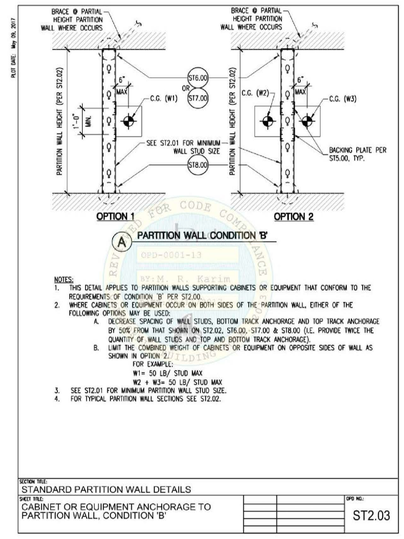
PLOT DATE: May 05, 2017



NOTES:
1. PARTITION WALL SCHEDULES PER ST2.01.
2. SEE ST2.00 FOR DEFINITION OF PARTITION WALL CONDITIONS.
3. SEE ST6.11 FOR TOP & BOTTOM CONNECTION DEMANDS.
4. LATERAL BRACING IS NOT REQUIRED WHERE GYP. BOARD IS INSTALLED ON BOTH SIDES OF PARTITION WALL.

SECTION TITLE: STANDARD PARTITION WALL DETAILS
SHEET TITLE: TYPICAL PARTITION WALL SECTIONS — DPD NO.: ST2.02

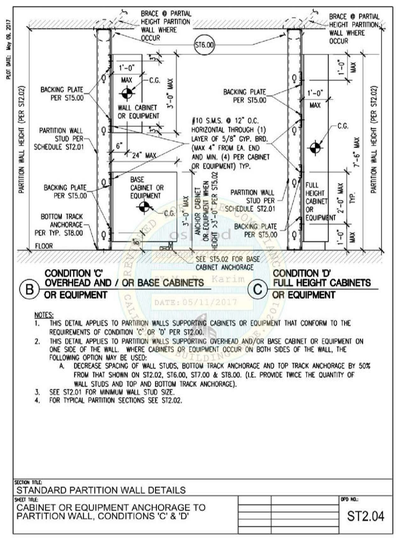
PLOT DATE: May 05, 2017



NOTES:
1. THIS DETAIL APPLIES TO PARTITION WALLS SUPPORTING CABINETS OR EQUIPMENT THAT CONFORM TO THE REQUIREMENTS OF CONDITION 'B' PER ST2.00.
2. WHERE CABINETS OR EQUIPMENT OCCUR ON BOTH SIDES OF THE PARTITION WALL, EITHER OF THE FOLLOWING OPTIONS MAY BE USED:
   A. DECREASE SPACING OF WALL STUDS, BOTTOM TRACK ANCHORAGE AND TOP TRACK ANCHORAGE BY 50% FROM THAT SHOWN ON ST2.02, ST6.00, ST7.00 & ST8.00 (I.E. PROVIDE TWICE THE QUANTITY OF WALL STUDS AND TOP AND BOTTOM TRACK ANCHORAGE).
   B. LIMIT THE COMBINED WEIGHT OF CABINETS OR EQUIPMENT ON OPPOSITE SIDES OF WALL AS SHOWN IN OPTION 2.
   FOR EXAMPLE:
   W1+ 50 LB/ STUD MAX
   W2 + W3= 50 LB/ STUD MAX
3. SEE ST2.01 FOR MINIMUM PARTITION WALL STUD SIZE.
4. FOR TYPICAL PARTITION WALL SECTIONS SEE ST2.02.

SECTION TITLE: STANDARD PARTITION WALL DETAILS
SHEET TITLE: CABINET OR EQUIPMENT ANCHORAGE TO PARTITION WALL, CONDITION 'B' — DPD NO.: ST2.03

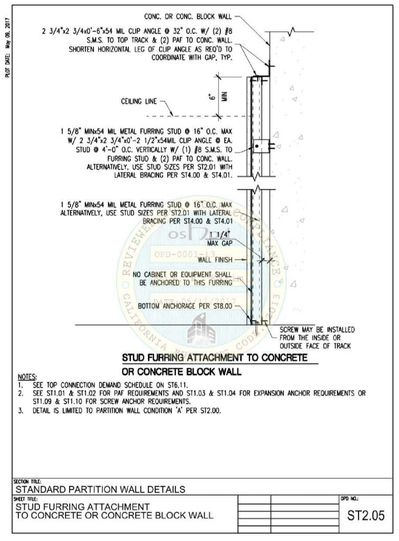
PLOT DATE: May 05, 2017



NOTES:
1. THIS DETAIL APPLIES TO PARTITION WALLS SUPPORTING CABINETS OR EQUIPMENT THAT CONFORM TO THE REQUIREMENTS OF CONDITION 'C' OR 'D' PER ST2.00.
2. THIS DETAIL APPLIES TO PARTITION WALLS SUPPORTING OVERHEAD AND/OR BASE CABINET OR EQUIPMENT ON ONE SIDE OF THE WALL, WHERE CABINETS OR EQUIPMENT OCCUR ON BOTH SIDES OF THE WALL, THE FOLLOWING OPTION MAY BE USED:
   A. DECREASE SPACING OF WALL STUDS, BOTTOM TRACK ANCHORAGE AND TOP TRACK ANCHORAGE BY 50% FROM THAT SHOWN ON ST2.02, ST6.00, ST7.00 & ST8.00. (I.E. PROVIDE TWICE THE QUANTITY OF WALL STUDS AND TOP AND BOTTOM TRACK ANCHORAGE).
3. SEE ST2.01 FOR MINIMUM PARTITION WALL STUD SIZE.
4. FOR TYPICAL PARTITION SECTIONS SEE ST2.02.

SECTION TITLE: STANDARD PARTITION WALL DETAILS
SHEET TITLE: CABINET OR EQUIPMENT ANCHORAGE TO PARTITION WALL, CONDITIONS 'C' & 'D' — DPD NO.: ST2.04

PLOT DATE: May 05, 2017

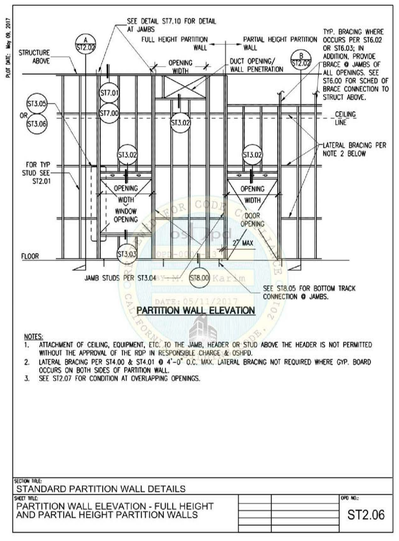


STUD FURRING ATTACHMENT TO CONCRETE OR CONCRETE BLOCK WALL

NOTES:
1. SEE TOP CONNECTION DEMAND SCHEDULE ON ST6.11.
2. SEE ST1.01 & ST1.02 FOR PAF REQUIREMENTS AND ST1.03 & ST1.04 FOR EXPANSION ANCHOR REQUIREMENTS OR ST1.09 & ST1.10 FOR SCREW ANCHOR REQUIREMENTS.
3. DETAIL IS LIMITED TO PARTITION WALL CONDITION 'A' PER ST2.00.

SECTION TITLE: STANDARD PARTITION WALL DETAILS
SHEET TITLE: STUD FURRING ATTACHMENT TO CONCRETE OR CONCRETE BLOCK WALL — DPD NO.: ST2.05

PLOT DATE: May 05, 2017

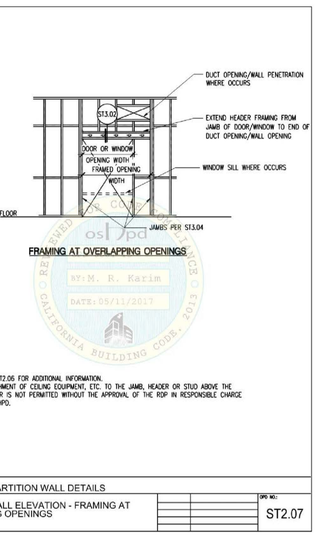


PARTITION WALL ELEVATION

NOTES:
1. ATTACHMENT OF CEILING, EQUIPMENT, ETC. TO THE JAMB, HEADER OR STUD ABOVE THE HEADER IS NOT PERMITTED WITHOUT THE APPROVAL OF THE RDP IN RESPONSIBLE CHARGE & OSHPD.
2. LATERAL BRACING PER ST4.00 & ST4.01 @ 4'-0" O.C. MAX. LATERAL BRACING NOT REQUIRED WHERE GYP. BOARD OCCURS ON BOTH SIDES OF PARTITION WALL.
3. SEE ST2.07 FOR CONDITION AT OVERLAPPING OPENINGS.

SECTION TITLE: STANDARD PARTITION WALL DETAILS
SHEET TITLE: PARTITION WALL ELEVATION - FULL HEIGHT AND PARTIAL HEIGHT PARTITION WALLS — DPD NO.: ST2.06

PLOT DATE: May 05, 2017



FRAMING AT OVERLAPPING OPENINGS

NOTES:
1. SEE ST2.06 FOR ADDITIONAL INFORMATION.
2. ATTACHMENT OF CEILING EQUIPMENT, ETC. TO THE JAMB, HEADER OR STUD ABOVE THE HEADER IS NOT PERMITTED WITHOUT THE APPROVAL OF THE RDP IN RESPONSIBLE CHARGE & OSHPD.

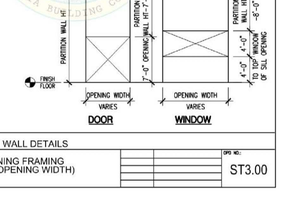
SECTION TITLE: STANDARD PARTITION WALL DETAILS
SHEET TITLE: PARTITION WALL ELEVATION - FRAMING AT OVERLAPPING OPENINGS — DPD NO.: ST2.07

PLOT DATE: May 05, 2017

PARTITION WALL OPENING FRAMING SCHEDULE

OPENING WIDTH	Sds	PARTITION WALL HT UP TO:	CONN. DETAIL	JAMBS (# OF STUD)–MIL 3 5/8" MIL	4" MIL	6" MIL	HEADER FRAMING	HEADER FIGURE	HEADER MIL	SILL (SEE NOTE 3) FRAMING	SILL FIGURE	SILL MIL
≤ 4'-0"	0.25–0.99	9'-0"	ST3.05–A OR ST3.05–B	(1)–33	(1)–33	(1)–33	(1)TRACK & (1) STUD	SAME MIL AS WALL	54	(1)TRACK		33 MIN.
		12'-0"		(2)–33	(1)–54 OR (2)–33	(1)–54 OR (2)–33						
		16'-0"		(2)–33	(2)–33	(2)–33						
	1.00–1.25	9'-0"	ST3.05–A OR ST3.05–B	(1)–33	(1)–33	(1)–33	(1)TRACK & (1) STUD	SAME MIL AS WALL	54	(1)TRACK		33 MIN.
		12'-0"		(2)–33	(2)–33	(1)–54 OR (2)–33						
		16'-0"		(2)–43	(2)–33	(2)–33						
	1.26–1.45	9'-0"	ST3.05–A OR ST3.05–B	(1)–33	(1)–33	(1)–33	(1)TRACK & (1) STUD	SAME MIL AS WALL	54	(1)TRACK		33 MIN.
		12'-0"		(2)–33	(2)–33	(1)–54 OR (2)–33						
		16'-0"		(2)–43	(3)–43	(2)–43						
	1.45–1.95	9'-0"	ST3.05–A OR ST3.05–B	(1)–43 OR (2)–33	(1)–43 OR (2)–33	(1)–33 OR (2)–33	(1)TRACK & (1) STUD	SAME MIL AS WALL	54	(1)TRACK		33 MIN.
		12'-0"		(2)–33	(2)–33	(1)–54 OR (2)–33						
		16'-0"		(2)–54	(2)–54	(2)–43						
				SEE DETAIL: ST3.04			SEE DETAIL: ST3.02			SEE DETAIL: ST3.03		

NOTES:
1. SEE GENERAL NOTES ON ST0.00, ST0.01, & ST0.02 FOR LIGHT GAUGE STEEL REQUIREMENTS AND DETAIL ST1.00 FOR SECTION PROFILES.
2. STUDS SHALL MATCH WALL SIZES, I.E. 3625 FOR 3 5/8" WALL, 4005 FOR 4" WALL & 6005 FOR 6" WALL.
3. SCHEDULE FOR SILL BASED ON 4'-0" MAX HT. FOR SILLS TALLER THAN 4'-0" USE HEADER FRAMING.
4. JAMB, HEADER & SILL DESIGN BASED ON PARTITION WALL CONDITION 'A' ON ST2.00 & THE FOLLOWING DESIGN ASSUMPTIONS:



SECTION TITLE: STANDARD PARTITION WALL DETAILS
SHEET TITLE: PARTITION WALL OPENING FRAMING SCHEDULE (4'-0" MAX OPENING WIDTH) — DPD NO.: ST3.00

PLOT DATE: May 05, 2017

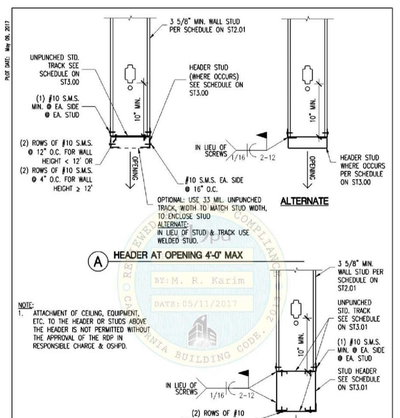
PARTITION WALL OPENING FRAMING SCHEDULE

OPENING WIDTH	Sds	PARTITION WALL HT UP TO:	CONN. DETAIL	JAMBS (# OF STUD)–MIL 3 5/8" MIL	4" MIL	6" MIL	HEADER FRAMING	HEADER FIGURE	HEADER MIL	SILL (SEE NOTE 3) FRAMING	SILL FIGURE	SILL MIL
>4'-0" TO ≤10'-0"	0.25–0.99	9'-0"	ST3.06–C OR ST3.06–D	(1)–54 OR (2)–33	(1)–54 OR (2)–33	(1)–43 OR (2)–33	(1)TRACK & (2) STUD		54	(1)TRACK & (1)STUD		43 MIN.
		12'-0"		(2)–54	(2)–54	(2)–43						
		16'-0"		(3)–54	(3)–54	(2)–43						
	1.00–1.25	9'-0"	ST3.06–C OR ST3.06–D	(1)–54 OR (2)–33	(1)–54 OR (2)–33	(1)–43 OR (2)–33	(2)TRACK & (2) STUD		54	(1)TRACK & (1)STUD		43 MIN.
		12'-0"		(3)–54	(3)–54	(2)–43						
		16'-0"		(3)–54	(3)–54	(3)–43						
	1.26–1.45	9'-0"	ST3.06–C OR ST3.06–D	(2)–43 OR (3)–33	(2)–43 OR (3)–33	(2)–33 OR (3)–33	(2)TRACK & (2) STUD		54	(1)TRACK & (1)STUD		43 MIN.
		12'-0"		(3)–54	(3)–54	(2)–43						
		16'-0"		(3)–54	(3)–54	(3)–43						
	1.45–1.95	9'-0"	ST3.06–C OR ST3.06–D	(2)–43 OR (3)–33	(2)–43 OR (3)–33	(2)–33 OR (3)–33	(2)TRACK & (2) STUD		54	(1)TRACK & (1)STUD		43 MIN.
		12'-0"		(3)–54	(3)–54	(2)–43						
		16'-0"		(3)–54	(3)–54	(3)–43						
				SEE DETAIL: ST3.04			SEE DETAIL: ST3.02			SEE DETAIL: ST3.03		

NOTES:
1. SEE GENERAL NOTES ON ST0.00, ST0.01 & ST0.02 FOR LIGHT GAUGE STEEL REQUIREMENTS AND DETAIL ST1.00 FOR SECTION PROFILES.
2. STUDS SHALL MATCH WALL SIZES, I.E. 3625 FOR 3 5/8" WALL, 4005 FOR 4" WALL & 6005 FOR 6" WALL.
3. SCHEDULE FOR SILL BASED ON 4'-0" MAX HT. FOR SILLS TALLER THAN 4'-0" USE HEADER FRAMING.
4. SEE ST3.00 FOR DESIGN ASSUMPTIONS.

SECTION TITLE: STANDARD PARTITION WALL DETAILS
SHEET TITLE: WALL OPENING FRAMING SCHEDULE (OPENING WIDTH 4'-0" TO 10'-0" MAX) — DPD NO.: ST3.01

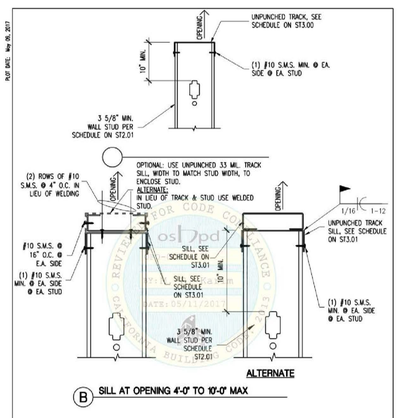
PLOT DATE: May 05, 2017



NOTE:
1. ATTACHMENT OF CEILING, EQUIPMENT, ETC. TO THE HEADER OR STUDS ABOVE THE HEADER IS NOT PERMITTED WITHOUT THE APPROVAL OF THE RDP IN RESPONSIBLE CHARGE & OSHPD.

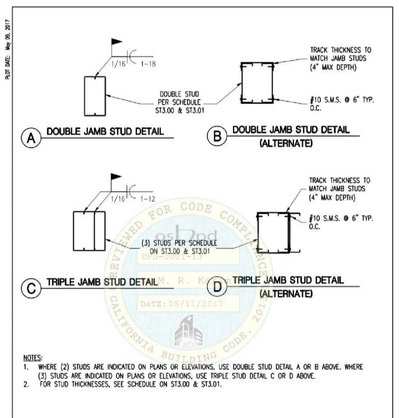
SECTION TITLE: STANDARD PARTITION WALL DETAILS
SHEET TITLE: HEADER SECTION — DPD NO.: ST3.02

PLOT DATE: May 05, 2017



SECTION TITLE: STANDARD PARTITION WALL DETAILS
SHEET TITLE: SILL SECTION — DPD NO.: ST3.03

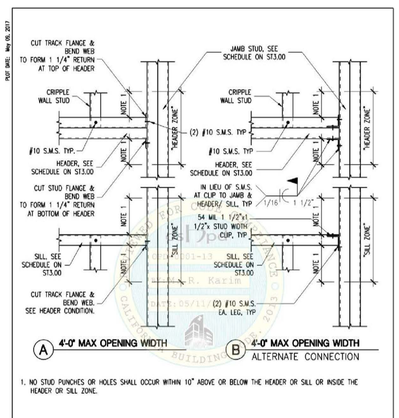
PLOT DATE: May 05, 2017



NOTES:
1. WHERE (2) STUDS ARE INDICATED ON PLANS OR ELEVATIONS, USE DOUBLE STUD DETAIL A OR B ABOVE. WHERE (3) STUDS ARE INDICATED ON PLANS OR ELEVATIONS, USE TRIPLE STUD DETAIL C OR D ABOVE.
2. FOR STUD THICKNESSES, SEE SCHEDULE ON ST3.00 & ST3.01.

SECTION TITLE: STANDARD PARTITION WALL DETAILS
SHEET TITLE: JAMB STUD DETAILS — DPD NO.: ST3.04

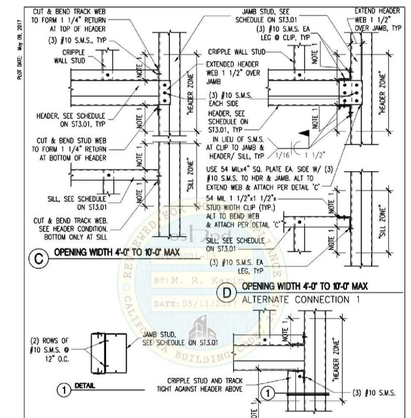
PLOT DATE: May 05, 2017



1. NO STUD PUNCHES OR HOLES SHALL OCCUR WITHIN 10" ABOVE OR BELOW THE HEADER OR SILL OR INSIDE THE HEADER OR SILL ZONE.

SECTION TITLE: STANDARD PARTITION WALL DETAILS
SHEET TITLE: HEADER & SILL CONNECTION TO JAMB STUDS (4'-0" MAX OPENING WIDTH) — DPD NO.: ST3.05

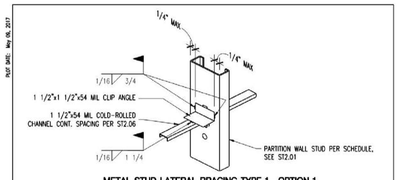
PLOT DATE: May 05, 2017



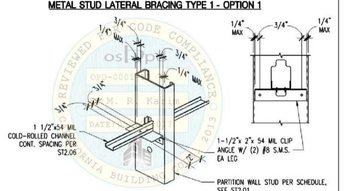
1. NO STUD PUNCHES OR HOLES SHALL OCCUR WITHIN 10" ABOVE OR BELOW THE HEADER OR SILL ZONE.

SECTION TITLE: STANDARD PARTITION WALL DETAILS
SHEET TITLE: HEADER & SILL CONNECTION TO JAMB STUDS (OPENING WIDTH 4'-0" TO 10'-0" MAX) — DPD NO.: ST3.06

PDF DATE: May 05, 2017



METAL STUD LATERAL BRACING TYPE 1 - OPTION 1

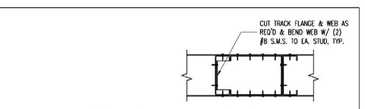


METAL STUD LATERAL BRACING TYPE 1 - OPTION 2

NOTES:
1. LATERAL BRACING IS NOT REQUIRED WHERE GYP. BOARD IS INSTALLED ON BOTH SIDES OF PARTITION WALL.
2. NOTCHING OR CUTTING OF COLD-ROLLED CHANNEL IS NOT PERMITTED FOR ANY CONDITION.

SECTION TITLE: STANDARD PARTITION WALL DETAILS
SHEET TITLE: METAL STUD LATERAL BRACING TYPE 1 — DPD NO.: ST4.00

PDF DATE: May 05, 2017

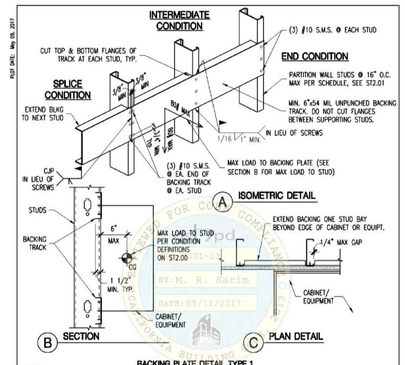


METAL STUD LATERAL BRACING TYPE 2

NOTES:
1. LATERAL BRACING IS NOT REQUIRED WHERE GYP. BOARD IS INSTALLED ON BOTH SIDES OF PARTITION WALL.
2. NOTCHING OF BLOCKING OR STRAP IS NOT PERMITTED FOR ANY CONDITION.

SECTION TITLE: STANDARD PARTITION WALL DETAILS
SHEET TITLE: METAL STUD LATERAL BRACING TYPE 2 — DPD NO.: ST4.01

PDF DATE: May 05, 2017

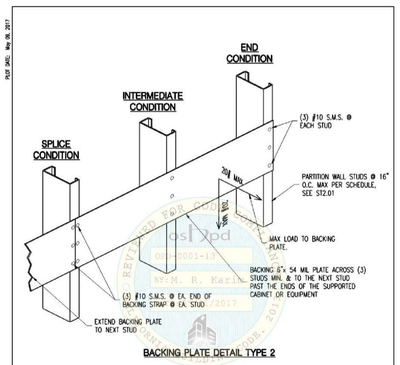


BACKING PLATE DETAIL TYPE 1

NOTES:
1. BACKING, CONNECTION TO STUD, AND STUDS FOR CABINETS OR EQUIPMENT EXCEEDING THIS LIMIT SHALL BE DESIGNED AND DETAILED BY ROP IN RESPONSIBLE CHARGE.
2. ST5.01 MAY BE USED FOR ATTACHMENT OF CABINETS OR EQUIPMENT DISTRIBUTING LESS THAN 20# PER STUD (CENTER OF GRAVITY LESS THAN 6" FROM FACE OF STUD).
3. NOTCHING OR CUTTING OF BACKING PLATE IS NOT PERMITTED EXCEPT AS SHOWN.

SECTION TITLE: STANDARD PARTITION WALL DETAILS
SHEET TITLE: BACKING PLATE DETAIL TYPE 1 — DPD NO.: ST5.00

PDF DATE: May 05, 2017

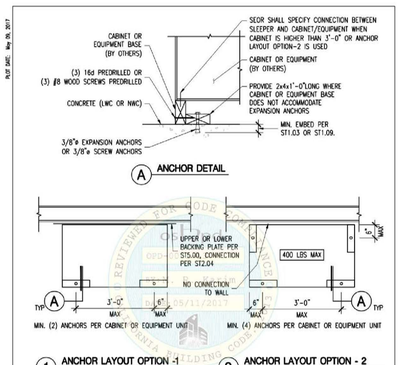


BACKING PLATE DETAIL TYPE 2

NOTES:
1. THIS DETAIL MAY BE USED FOR ATTACHMENT OF CABINETS OR EQUIPMENT DISTRIBUTING LESS THAN 20# PER STUD (CENTER OF GRAVITY LESS THAN 6" FROM FACE OF STUD).
2. SEE ST5.00 FOR ALTERNATE WELDING OPTION.
3. NOTCHING OR CUTTING OF BACKING PLATE IS NOT PERMITTED.

SECTION TITLE: STANDARD PARTITION WALL DETAILS
SHEET TITLE: BACKING PLATE DETAIL TYPE 2 — DPD NO.: ST5.01

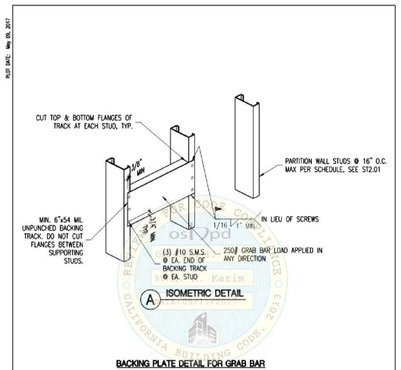
PDF DATE: May 05, 2017



NOTE:
1. SEE ST1.03 & ST1.04 FOR EXPANSION ANCHOR REQUIREMENTS, AND SEE ST1.09 & ST1.10 FOR SCREW ANCHOR REQUIREMENTS.

SECTION TITLE: STANDARD PARTITION WALL DETAILS
SHEET TITLE: BASE CABINET OR EQUIPMENT ANCHORAGE — DPD NO.: ST5.02

PDF DATE: May 05, 2017



BACKING PLATE DETAIL FOR GRAB BAR

NOTES:
1. NOTCHING OR CUTTING OF BACKING PLATE IS NOT PERMITTED EXCEPT AS SHOWN.

SECTION TITLE: STANDARD PARTITION WALL DETAILS
SHEET TITLE: BACKING PLATE DETAIL FOR GRAB BAR — DPD NO.: ST5.03

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Owner

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Consultant

SKA Project Number
2136

HCAI Number
S221296-21-00

HCAI seal/signature

REVIEWED IN ACCORDANCE WITH THE REQUIREMENTS OF 7 CA. CCR
APPROVED
Department of Health Care Access & Information
Office of Statewide Hospital Planning & Development
2/13/2023, 11:24:21 PM
S221296-21-00
Pedar Pomme

Seal/Signature

LICENSED ARCHITECT
C37097
EXP. 8/30/2023
STATE OF CALIFORNIA

Issued for
HCAI SUBMITTAL

Drawn by JS
Checked by CL

Project Name
HOSPITAL REPLACEMENT BUILDING-
NUCLEAR MEDICINE SUITE RELOCATION

Sheet Title
PARTITION WALL BRACING, BRIDGING & BACKING DETAILS

Date 08/05/2022
Scale AS NOTED
Sheet Number
A7.3

30 X 42

STRUCTURE ABOVE TOP TRACK	PARTIAL HEIGHT PARTITION WALL-BRACE TO STRUCTURE CONNECTION
LIGHT WEIGHT (MIN. 3000 PSI) CONCRETE FILLED METAL DECK	ST6.04
NORMAL WEIGHT (MIN. 3000 PSI) CONCRETE SLAB OR BEAM SOFFIT	ST6.05
CONCRETE PAN JOIST OR WAFFLE SLAB SYSTEM	ST6.06
METAL ROOF DECK WITHOUT CONCRETE FILL	ST6.07
STEEL BEAM	ST6.08 & ST6.09
WOOD FRAMING	ST6.10

NOTES:
1. SEE ST6.02 & ST6.03 FOR TYPICAL DETAILS OF CEILING HEIGHT PARTITION WALLS WITH A TOP TRACK CONNECTION BRACED TO THE STRUCTURE ABOVE. SEE ST6.01 FOR BRACE SPACING, SIZE AND CONNECTION SCHEDULE.
2. SEE ST7.00 FOR FULL HEIGHT PARTITION WALLS.
3. FOR TOP & BOTTOM CONNECTION DEMAND SCHEDULE SEE ST6.11.

SECTION TITLE: STANDARD PARTITION WALL DETAILS
SHEET TITLE: TOP CONNECTION CONDITIONS - PARTIAL HEIGHT PARTITION WALL
OPD NO.: ST6.00

PARTIAL HEIGHT PARTITION WALL BRACE SPACING, SIZE AND CONNECTION SCHEDULES

PARTITION WALL CONDITION 'A'
DETAIL ST6.02

S_{DS}	MAX BRACE SPACING (FT)	BRACE SIZE AND WL: SINGLE STUD BRACE 3 5/8"	4"	BACK TO BACK BRACE: 3 5/8"	4"	S.M.S. CONNECTIONS AT BRACE ENDS: BOTTOM OF BRACE (TO TOP TRACK)	TOP OF BRACE (AT CONNECTION TO STRUCTURE)
0.25-0.99	10	362S162-43	400S162-43	600S162-43	800S162-43	(4) #10 S.M.S.	(4) #10 S.M.S.
1.00-1.25	9.33	362S162-43	400S162-43	600S162-43	800S162-43	(4) #10 S.M.S. OR (5) #10 S.M.S.	(4) #10 S.M.S.
1.26-1.45	8.75	362S162-43	400S162-43	600S162-43	800S162-43	(5) #10 S.M.S.	(4) #10 S.M.S.
1.46-1.95	7	362S162-43	400S162-43	600S162-43	800S162-43	(5) #10 S.M.S.	(4) #10 S.M.S.

PARTITION WALL CONDITION 'B'
DETAIL ST6.02

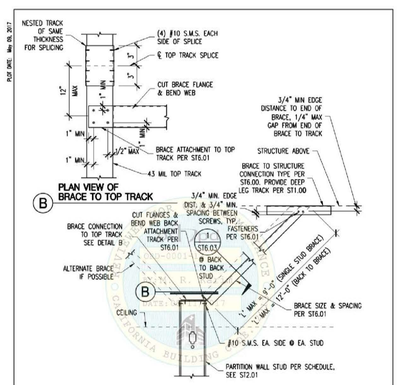
S_{DS}	MAX BRACE SPACING (FT)	BRACE SIZE AND WL: SINGLE STUD BRACE 3 5/8"	4"	BACK TO BACK BRACE: 3 5/8"	4"	S.M.S. CONNECTIONS AT BRACE ENDS: BOTTOM OF BRACE (TO TOP TRACK)	TOP OF BRACE (AT CONNECTION TO STRUCTURE)
0.25-0.99	9	362S162-43	400S162-43	600S162-43	800S162-43	(5) #10 S.M.S.	(4) #10 S.M.S.
1.00-1.25	7	362S162-43	400S162-43	600S162-43	800S162-43	(6) #10 S.M.S. OR (5) #10 S.M.S.	(4) #10 S.M.S.
1.26-1.45	6.5	362S162-43	400S162-43	600S162-43	800S162-43	(6) #10 S.M.S. OR (5) #10 S.M.S.	(4) #10 S.M.S.
1.46-1.95	5.33	362S162-43	400S162-43	600S162-43	800S162-43	(6) #10 S.M.S.	(4) #10 S.M.S.

PARTITION WALL CONDITION 'C' AND 'D'
DETAIL ST6.03

S_{DS}	MAX BRACE SPACING (FT)	BRACE SIZE AND WL: BACK TO BACK BRACE 3 5/8"	4"	NUMBER OF S.M.S. AT TOP AND BOTTOM OF BRACE
0.25-0.99	6.67	212S125-43	237S125-43	(6) #10 S.M.S.
1.00-1.25	6	212S125-43	237S125-43	(8) #10 S.M.S.
1.26-1.45	5.5	212S125-43	237S125-43	(8) #10 S.M.S.
1.46-1.95	3.33	212S125-43	237S125-43	(8) #10 S.M.S.

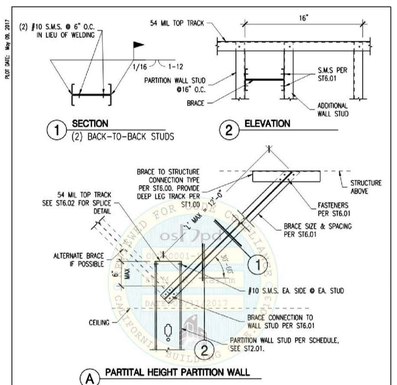
NOTES:
1. THESE TABLES ARE BASED ON THE FOLLOWING DESIGN CRITERIA:
   A. DEMAND LOADS PER ST6.11.
   B. 9 FT MAX PARTITION WALL HEIGHT.
   C. MAX BRACE LENGTH PER ST6.02 OR ST6.03.
   D. LIMIT OF KL/r TO 200 WHERE:
      K=1.0, EFFECTIVE LENGTH FACTOR
      L=LENGTH OF BRACE PER ST6.02 AND ST6.03 (INCHES)
      r=MINIMUM RADIUS OF GYRATION OF STUD (INCHES)
2. RDP IN RESPONSIBLE CHARGE SHALL DESIGN FOR OTHER CONDITIONS.

SECTION TITLE: STANDARD PARTITION WALL DETAILS
SHEET TITLE: PARTIAL HEIGHT PARTITION WALL BRACE SPACING, SIZE AND CONNECTION SCHEDULES
OPD NO.: ST6.01



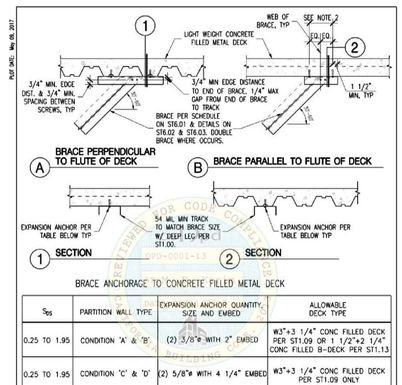
NOTES:
1. SEE TOP & BOTTOM CONNECTION DEMAND SCHEDULE ON ST6.11.
2. SEE ST2.00 FOR DEFINITION OF PARTITION WALL CONDITIONS.
3. DETAIL APPLIES TO PARTITION WALL CONDITIONS 'A' & 'B', ALL S_{DS} CATEGORIES.

SECTION TITLE: STANDARD PARTITION WALL DETAILS
SHEET TITLE: PARTIAL HEIGHT PARTITION WALL TOP BRACING - PARTITION WALL CONDITIONS 'A' & 'B'
OPD NO.: ST6.02



NOTES:
1. SEE TOP & BOTTOM CONNECTION SCHEDULE ON ST6.11.
2. SEE ST2.00 FOR DEFINITION OF PARTITION WALL CONDITIONS.
3. DETAIL APPLIES TO PARTITION WALL CONDITIONS 'C' & 'D', ALL S_{DS} CATEGORIES.

SECTION TITLE: STANDARD PARTITION WALL DETAILS
SHEET TITLE: PARTIAL HEIGHT PARTITION WALL TOP BRACING - PARTITION WALL CONDITIONS 'C' & 'D'
OPD NO.: ST6.03



BRACE ANCHORAGE TO CONCRETE FILLED METAL DECK

S_{DS}	PARTITION WALL TYPE	EXPANSION ANCHOR QUANTITY, SIZE AND EMBED	ALLOWABLE DECK TYPE
0.25 TO 1.95	CONDITION 'A' & 'B'	(2) 3/8"ø WITH 2" EMBED	W3"+3 1/4" CONC FILLED DECK PER ST1.09 OR 1 1/2"+2 1/4" CONC FILLED B-DECK PER ST1.13
0.25 TO 1.95	CONDITION 'C' & 'D'	(2) 5/8"ø WITH 4 1/4" EMBED	W3"+3 1/4" CONC FILLED DECK PER ST1.09 ONLY

NOTES:
1. SEE TOP & BOTTOM CONNECTION DEMAND SCHEDULE ON ST6.11.
2. SEE ST1.03 & ST1.04 FOR EXPANSION ANCHOR REQUIREMENTS.
3. DETAIL APPLIES TO ALL PARTITION WALL CONDITIONS & ALL S_{DS} CATEGORIES.

SECTION TITLE: STANDARD PARTITION WALL DETAILS
SHEET TITLE: BRACE CONNECTION TO CONCRETE FILLED METAL DECK - ALL PARTITION WALL CONDITIONS
OPD NO.: ST6.04

BRACE ANCHORAGE TO CONCRETE SLAB OR BEAM SOFFIT

S_{DS}	PARTITION WALL TYPE	EXPANSION ANCHOR QUANTITY, SIZE AND EMBED
0.25 TO 1.95	CONDITION 'A' & 'B'	(2) 3/8"ø WITH 2" EMBED
0.25 TO 1.95	CONDITION 'C' & 'D'	(2) 5/8"ø WITH 4 1/4" EMBED

NOTES:
1. SEE TOP & BOTTOM CONNECTION DEMAND SCHEDULE ON ST6.11.
2. SEE ST1.03 & ST1.04 FOR EXPANSION ANCHOR REQUIREMENTS.
3. DETAIL APPLIES TO ALL PARTITION WALL CONDITIONS & ALL S_{DS} CATEGORIES.

SECTION TITLE: STANDARD PARTITION WALL DETAILS
SHEET TITLE: BRACE CONNECTION TO CONCRETE SLAB OR BEAM SOFFIT - ALL PARTITION WALL CONDITIONS
OPD NO.: ST6.05

NOTES:
1. SEE TOP CONNECTION DEMAND SCHEDULE ON ST6.11.
2. SEE ST1.03 & ST1.04 FOR EXPANSION ANCHOR REQUIREMENTS.
3. ROP IN RESPONSIBLE CHARGE SHALL VERIFY LOADS IMPOSED ON JOISTS.
4. PRIOR TO ANCHOR INSTALLATION , REINFORCING/ PRESTRESSING BAR LOCATIONS SHALL BE DETERMINED BY NON-DESTRUCTIVE TESTING.
5. DETAIL APPLIES TO ALL PARTITION WALL CONDITIONS & ALL S_{DS} CATEGORIES.

SECTION TITLE: STANDARD PARTITION WALL DETAILS
SHEET TITLE: BRACE CONNECTION TO CONCRETE PAN JOIST OR WAFFLE SLAB SYSTEM - ALL PARTITION WALL CONDITIONS
OPD NO.: ST6.06

NOTES:
1. ROP IN RESPONSIBLE CHARGE TO PROVIDE CALCULATION FOR OSHPD REVIEW JUSTIFYING THE ABILITY OF METAL DECK TO SUPPORT THE REACTIONS FROM BRACE. SEE TOP CONNECTION DEMAND SCHEDULE ON ST6.11 FOR BRACE REACTIONS.
2. THIS DETAIL IS APPLICABLE ONLY FOR PARTITION WALL CONDITIONS 'A' & 'B', ALL S_{DS} CATEGORIES.
3. ROP IN RESPONSIBLE CHARGE TO EVALUATE PARTITION WALL BRACING FOR CONDITIONS 'C' & 'D', ALL S_{DS} CATEGORIES.

SECTION TITLE: STANDARD PARTITION WALL DETAILS
SHEET TITLE: BRACE CONNECTION TO METAL ROOF DECK WITHOUT STRUCTURAL CONCRETE FILL - PARTITION WALL CONDITIONS 'A' & 'B'
OPD NO.: ST6.07

NOTES:
1. SEE TOP CONNECTION DEMAND SCHEDULE ON ST6.11.
2. SEE ST1.05 FOR PAF REQUIREMENTS.
3. THIS DETAIL IS APPLICABLE ONLY FOR PARTITION WALL CONDITIONS 'A' & 'B', ALL S_{DS} CATEGORIES.
4. STEEL BEAM FLANGE & WEB MINIMUM THICKNESS = 3/16".
5. ROP IN RESPONSIBLE CHARGE, IOR AND CONTRACTOR TO VERIFY THAT NO PDF IS INSTALLED IN THE PROTECTED ZONE OF ANY STEEL MEMBER, SEE ANSI/AISC 341-10.

SECTION TITLE: STANDARD PARTITION WALL DETAILS
SHEET TITLE: BRACE CONNECTION TO STEEL BEAM - PARTITION WALL CONDITIONS 'A' & 'B'
OPD NO.: ST6.08

NOTES:
1. SEE TOP CONNECTION DEMAND SCHEDULE ON ST6.11.
2. THIS DETAIL IS APPLICABLE FOR PARTITION WALL CONDITIONS 'C' & 'D', ALL S_{DS} CATEGORIES. AS AN ALTERNATE TO ST6.08, THIS DETAIL CAN BE USED FOR ALL PARTITION WALL CONDITIONS.
3. STEEL BEAM FLANGE & WEB MINIMUM THICKNESS = 3/16".
4. ROP IN RESPONSIBLE CHARGE, IOR AND CONTRACTOR TO VERIFY THAT NO WELD IS INSTALLED IN THE PROTECTED ZONE OF ANY STEEL MEMBER, SEE ANSI/AISC 341-10.

SECTION TITLE: STANDARD PARTITION WALL DETAILS
SHEET TITLE: BRACE CONNECTION TO STEEL BEAM - PARTITION WALL CONDITIONS 'C' & 'D'
OPD NO.: ST6.09

NOTES:
1. SEE TOP CONNECTION DEMAND SCHEDULE ON ST6.11.
2. DETAIL APPLIES TO ALL PARTITION WALL CONDITIONS & ALL S_{DS} CATEGORIES.

SECTION TITLE: STANDARD PARTITION WALL DETAILS
SHEET TITLE: BRACE CONNECTION TO WOOD FRAMING - ALL PARTITION WALL CONDITIONS
OPD NO.: ST6.10

TOP AND BOTTOM CONNECTION DEMAND SCHEDULES

TOP AND BOTTOM CONNECTION DEMANDS (PARTITION WALL CONDITION 'A')

S_{DS}	SEISMIC REACTION AT THE TOP & BOTTOM CONNECTION FOR DIFFERENT WALL HEIGHT (LBS/FT) 9 FT	12 FT	16 FT
0.25-0.99	17	23	31
1.00-1.25	22	29	38
1.26-1.45	26	34	45
1.46-1.95	34	45	60

TOP AND BOTTOM CONNECTION DEMANDS (PARTITION WALL CONDITION 'B')

S_{DS}	SEISMIC REACTION AT THE TOP & BOTTOM CONNECTION FOR DIFFERENT WALL HEIGHT (LBS/FT) 9 FT		12 FT		16 FT	
	BOTTOM	TOP	BOTTOM	TOP	BOTTOM	TOP
0.25-0.99	25	29	33	32	43	38
1.00-1.25	32	36	42	40	54	47
1.26-1.45	37	42	50	47	64	54
1.46-1.95	50	56	67	61	86	72

TOP AND BOTTOM CONNECTION DEMANDS (PARTITION WALL CONDITION 'C')

S_{DS}	SEISMIC REACTION AT THE TOP & BOTTOM CONNECTION FOR DIFFERENT WALL HEIGHT (LBS/FT) 9 FT		12 FT		16 FT	
	BOTTOM	TOP	BOTTOM	TOP	BOTTOM	TOP
0.25-0.99	127	83	169	72	260	68
1.00-1.25	161	102	188	89	213	84
1.26-1.45	188	118	250	104	249	97
1.46-1.95	254	156	209	137	334	129

TOP AND BOTTOM CONNECTION DEMANDS (PARTITION WALL CONDITION 'D')

S_{DS}	SEISMIC REACTION AT THE TOP & BOTTOM CONNECTION FOR DIFFERENT WALL HEIGHT (LBS/FT) 9 FT		12 FT		16 FT	
	BOTTOM	TOP	BOTTOM	TOP	BOTTOM	TOP
0.25-0.99	101	77	122	68	141	65
1.00-1.25	128	98	155	86	179	81
1.26-1.45	149	114	180	101	208	95
1.46-1.95	200	152	241	134	278	127

NOTES:
1. CONNECTION DEMANDS ARE PROVIDED TO ALLOW ROP IN RESPONSIBLE CHARGE TO VERIFY NON PRE-APPROVED COMPONENTS OF THE FRAMING SYSTEM AND THE SUPPORTING STRUCTURE.
2. SEE ST2.02 FOR TYPICAL PARTITION WALL SECTIONS.
3. LOADS GIVEN IN PLF MULTIPLY BY APPROPRIATE BRACE SPACING FOR REACTIONS.
4. LOADS GIVEN DO NOT INCLUDE Ω0 FOR CONCRETE ATTACHMENTS ASCE 7-10 W/ SUPPLEMENT #1 TABLE 13.5-1.

SECTION TITLE: STANDARD PARTITION WALL DETAILS
SHEET TITLE: TOP & BOTTOM CONNECTION DEMAND SCHEDULES
OPD NO.: ST6.11

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Office of Statewide Hospital Planning & Development
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EXP. 8/30/2023
STATE OF CALIFORNIA

Issued for
HCAI SUBMITTAL

Drawn by JS
Checked by CL

Project Name
HOSPITAL REPLACEMENT BUILDING-
NUCLEAR MEDICINE SUITE RELOCATION

Sheet Title
PARTIAL HEIGHT PARTITION WALL TOP TRACK CONNECTION DETAILS

Date 08/05/2022
Scale AS NOTED

Sheet Number
A7.4

30 X 42

PLOT DATE: Mon 05, 2017

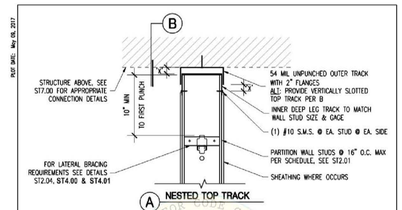
STRUCTURE ABOVE TOP TRACK	FULL HEIGHT PARTITION WALL-TOP TRACK TO STRUCTURE CONNECTION
LIGHT WEIGHT (MIN. 3000 PSI) CONCRETE FILLED METAL DECK	ST7.02 & ST7.03
NORMAL WEIGHT (MIN. 3000 PSI) CONCRETE SLAB OR BEAM SOFFIT	ST7.02 & ST7.03
CONCRETE PAN JOIST OR WAFFLE SLAB SYSTEM	ST7.03, ST7.05 & ST7.06
METAL ROOF DECK WITHOUT STRUCTURAL CONCRETE FILL	ST7.07
STEEL BEAM	ST7.08
WOOD FRAMING	ST7.09

NOTES:
1. SEE ST7.01 THROUGH ST7.10 FOR TYPICAL DETAILS OF FULL HEIGHT PARTITION WALLS WITH A TOP TRACK CONNECTION DIRECTLY TO THE STRUCTURE ABOVE.
2. SEE ST6.00 FOR PARTIAL HEIGHT PARTITION WALLS.
3. FOR TOP & BOTTOM CONNECTION DEMAND SCHEDULE, SEE ST6.11.

OPD-0001-13
BY: M. R. Karim
DATE: 05/11/2017

SECTION TITLE: STANDARD PARTITION WALL DETAILS
SHEET TITLE: TOP CONNECTION CONDITIONS - FULL HEIGHT PARTITION WALL
OPD NO.: ST7.00

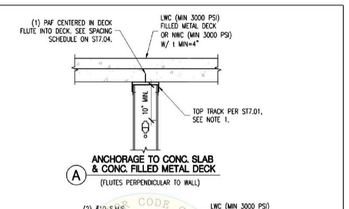
PLOT DATE: Mon 05, 2017



NOTES:
1. DO NOT CONNECT OUTER TRACK TO INNER TRACK OR STUDS (DETAIL A ONLY).
2. DO NOT CONNECT WALL FINISH TO OUTER TRACK (DETAILS A & B).
3. CAP "X" - BY RDP IN RESPONSIBLE CHARGE, 1/2" MIN. TO 3/4" MAX.
4. RDP IN RESPONSIBLE CHARGE TO VERIFY "UL" RATING FOR HEAD OF WALL ASSEMBLY, APPROVED FIRE RESISTANT ASSEMBLY REQUIRED.
5. DETAIL B TO BE USED WHERE ONLY VERTICAL SLIP REQUIRED. WHERE HORIZONTAL, IN-PLANE SLIP IS REQUIRED, USE DETAIL A. DO NOT USE DETAIL B. DO NOT USE DETAIL B FOR ST7.05.
6. SEE TOP CONNECTION DEMAND SCHEDULE ON ST6.11.
7. LATERAL BRACING ONLY REQUIRED IF GYP BOARD IS NOT FULL HEIGHT ON BOTH SIDES OF PARTITION WALL SEE ST2.05, ST4.00 & ST4.01.
8. DETAIL APPLIES TO ALL PARTITION WALL CONDITIONS & ALL S_{DS} CATEGORIES.

SECTION TITLE: STANDARD PARTITION WALL DETAILS
SHEET TITLE: TYPICAL TOP TRACK ANCHORAGE - ALL PARTITION WALL CONDITIONS
OPD NO.: ST7.01

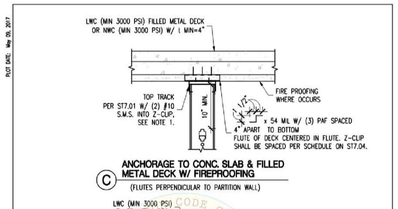
PLOT DATE: Mon 05, 2017



NOTES:
1. SEE TOP CONNECTION DEMAND SCHEDULE ON ST6.11.
2. SEE ST1.01 & ST1.02 FOR PAF REQUIREMENTS.
3. SEE ST7.10 FOR CONNECTION AT JAMB LOCATION.
4. SEE ST2.01 FOR PARTITION WALL STUD SCHEDULE.
5. DETAIL APPLIES TO ALL PARTITION WALL CONDITIONS & ALL S_{DS} CATEGORIES.

SECTION TITLE: STANDARD PARTITION WALL DETAILS
SHEET TITLE: TOP TRACK CONNECTION TO LWC FILLED METAL DECK & NWC SLAB - ALL PARTITION WALL CONDITIONS
OPD NO.: ST7.02

PLOT DATE: Mon 05, 2017



NOTES:
1. SEE TOP CONNECTION DEMAND SCHEDULE ON ST6.11.
2. SEE ST1.01 & ST1.02 FOR PAF REQUIREMENTS.
3. SEE ST7.10 FOR CONNECTION AT JAMB LOCATION.
4. SEE ST2.01 FOR PARTITION WALL PARTITION STUD SCHEDULE.
5. DETAIL APPLIES TO ALL PARTITION WALL CONDITIONS & ALL S_{DS} CATEGORIES.

SECTION TITLE: STANDARD PARTITION WALL DETAILS
SHEET TITLE: TOP TRACK CONNECTION TO LWC FILLED METAL DECK & NWC SLAB W/ FIREPROOFING-ALL PARTITION WALL CONDITIONS
OPD NO.: ST7.03

PLOT DATE: Mon 05, 2017

TOP TRACK CONNECTION TO LWC FILLED METAL DECK & NWC SLAB (MIN 3000 PSI) FASTENER SPACING SCHEDULES

PARTITION WALL CONDITION 'A'

WALL HEIGHT	PAF SPACING (INCHES O.C.) PER ST7.02 DETAIL A		
	9 FT	12 FT	16 FT
0.25-0.99	30	24	18
1.00-1.25	24	18	12
1.26-1.45	24	18	12
1.46-1.95	18	12	6

FOR DETAIL B THROUGH D (STRAP OR Z-CLIP) DOUBLE THE SPACING INDICATED UP TO 48" OC.

PARTITION WALL CONDITION 'B'

WALL HEIGHT	PAF SPACING (INCHES O.C.) PER ST7.02 DETAIL A		
	9 FT	12 FT	16 FT
0.25-0.99	18	18	12
1.00-1.25	12	12	6
1.26-1.45	12	12	6
1.46-1.95	6	6	6

FOR DETAIL B THROUGH D (STRAP OR Z-CLIP) DOUBLE THE SPACING INDICATED UP TO 48" OC.

PARTITION WALL CONDITION 'C'

WALL HEIGHT	PAF SPACING (INCHES O.C.) PER ST7.02 DETAIL A		
	9 FT	12 FT	16 FT
0.25-0.99	6	6	6
1.00-1.25	6	6	6
1.26-1.45	6	6	6
1.46-1.95	6	6	6

FOR DETAIL B THROUGH D (STRAP OR Z-CLIP) DOUBLE THE SPACING INDICATED UP TO 48" OC.

PARTITION WALL CONDITION 'D'

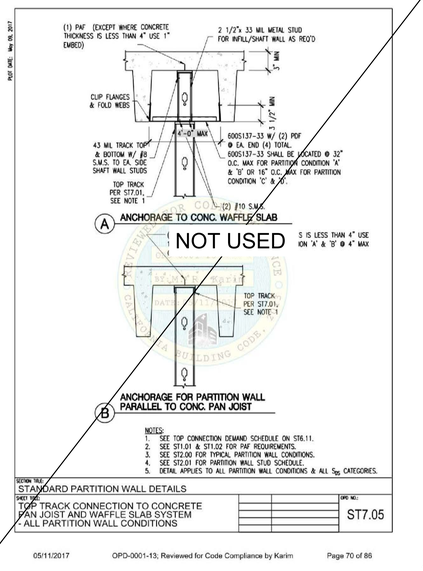
WALL HEIGHT	PAF SPACING (INCHES O.C.) PER ST7.02 DETAIL A		
	9 FT	12 FT	16 FT
0.25-0.99	6	6	6
1.00-1.25	6	6	6
1.26-1.45	6	6	6
1.46-1.95	6	6	6

FOR DETAIL B THROUGH D (STRAP OR Z-CLIP) DOUBLE THE SPACING INDICATED UP TO 48" OC.

NOTES:
1. SEE ST7.02 & ST7.03 FOR DETAILS A, B, C, & D.
2. VALUES IN TABLES ABOVE REPRESENT MAXIMUM SPACING. DECREASE SPACING AS REQ'D TO COORDINATE W/ METAL DECK FLUTE SPACING. WHERE PAF SPACING IS LESS THAN 12" OC, OK TO PROVIDE MULTIPLE PAF AT LOW FLUTE AS REQUIRED. MAINTAIN EDGE DISTANCE AND SPACING REQUIREMENTS PER ST1.01 & ST1.02.
3. SPACING LISTED INCLUDES Ω, PER ASCE 7-10 W/ SUPPLMENT #1 TABLE 13.5-1.

SECTION TITLE: STANDARD PARTITION WALL DETAILS
SHEET TITLE: TOP TRACK CONNECTION TO LWC FILLED METAL DECK & NWC SLAB FASTENER SPACING SCHEDULES
OPD NO.: ST7.04

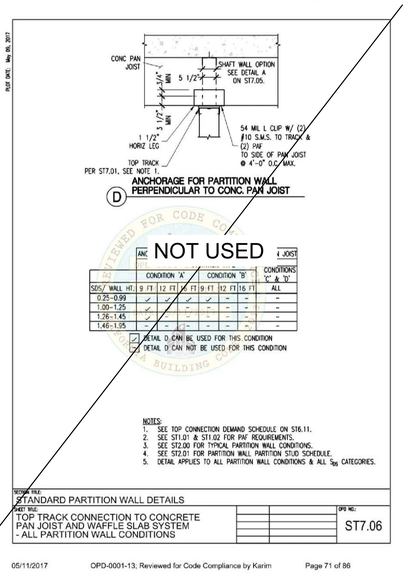
PLOT DATE: Mon 05, 2017



NOTES:
1. SEE TOP CONNECTION DEMAND SCHEDULE ON ST6.11.
2. SEE ST1.01 & ST1.02 FOR PAF REQUIREMENTS.
3. SEE ST2.00 FOR TYPICAL PARTITION WALL CONDITIONS.
4. SEE ST2.01 FOR PARTITION WALL STUD SCHEDULE.
5. DETAIL APPLIES TO ALL PARTITION WALL CONDITIONS & ALL S_{DS} CATEGORIES.

SECTION TITLE: STANDARD PARTITION WALL DETAILS
SHEET TITLE: TOP TRACK CONNECTION TO CONCRETE PAN JOIST AND WAFFLE SLAB SYSTEM - ALL PARTITION WALL CONDITIONS
OPD NO.: ST7.05

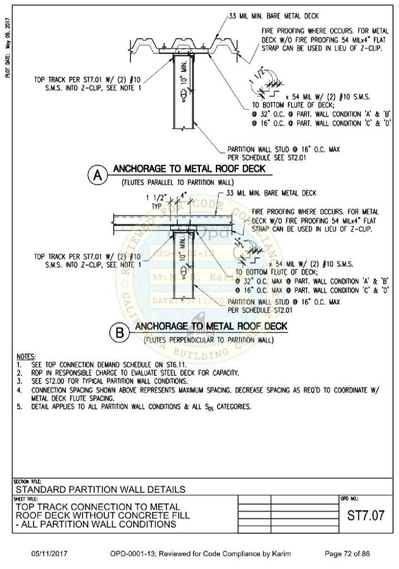
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NOTES:
1. SEE TOP CONNECTION DEMAND SCHEDULE ON ST6.11.
2. SEE ST1.01 & ST1.02 FOR PAF REQUIREMENTS.
3. SEE ST2.00 FOR TYPICAL PARTITION WALL CONDITIONS.
4. SEE ST2.01 FOR PARTITION WALL PARTITION STUD SCHEDULE.
5. DETAIL APPLIES TO ALL PARTITION WALL CONDITIONS & ALL S_{DS} CATEGORIES.

SECTION TITLE: STANDARD PARTITION WALL DETAILS
SHEET TITLE: TOP TRACK CONNECTION TO CONCRETE PAN JOIST AND WAFFLE SLAB SYSTEM - ALL PARTITION WALL CONDITIONS
OPD NO.: ST7.06

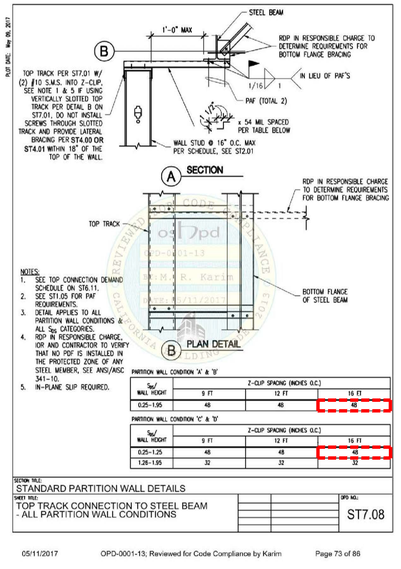
PLOT DATE: Mon 05, 2017



NOTES:
1. SEE TOP CONNECTION DEMAND SCHEDULE ON ST6.11.
2. RDP IN RESPONSIBLE CHARGE TO EVALUATE STEEL DECK FOR CAPACITY.
3. SEE ST2.00 FOR TYPICAL PARTITION WALL CONDITIONS.
4. CONNECTION SPACING SHOWN ABOVE REPRESENTS MAXIMUM SPACING. DECREASE SPACING AS REQ'D TO COORDINATE W/ METAL DECK FLUTE SPACING.
5. DETAIL APPLIES TO ALL PARTITION WALL CONDITIONS & ALL S_{DS} CATEGORIES.

SECTION TITLE: STANDARD PARTITION WALL DETAILS
SHEET TITLE: TOP TRACK CONNECTION TO METAL ROOF DECK WITHOUT CONCRETE FILL - ALL PARTITION WALL CONDITIONS
OPD NO.: ST7.07

PLOT DATE: Mon 05, 2017



NOTES:
1. SEE TOP CONNECTION DEMAND SCHEDULE ON ST6.11.
2. SEE ST1.05 FOR PAF REQUIREMENTS.
3. DETAIL APPLIES TO ALL PARTITION WALL CONDITIONS & ALL S_{DS} CATEGORIES.
4. RDP IN RESPONSIBLE CHARGE, IOR AND CONTRACTOR TO VERIFY THAT NO PDF IS INSTALLED IN THE PROTECTED ZONE OF ANY STEEL MEMBER, SEE ANSI/AISC 341-10.
5. IN-PLANE SLIP REQUIRED.

PARTITION WALL CONDITION 'A' & 'B'

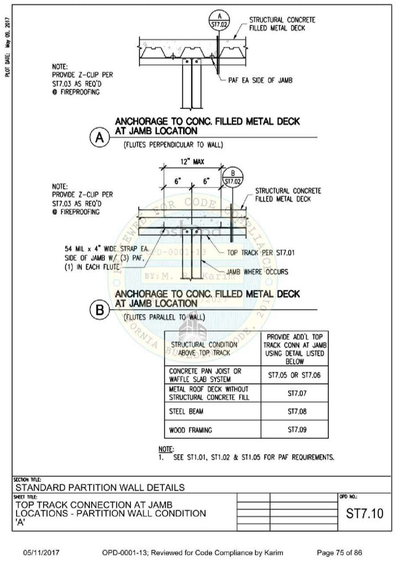
WALL HEIGHT	Z-CLIP SPACING (INCHES O.C.)		
	9 FT	12 FT	16 FT
0.25-1.95	48	48	48

PARTITION WALL CONDITION 'C' & 'D'

WALL HEIGHT	Z-CLIP SPACING (INCHES O.C.)		
	9 FT	12 FT	16 FT
0.25-1.25	48	48	48
1.26-1.95	32	32	32

SECTION TITLE: STANDARD PARTITION WALL DETAILS
SHEET TITLE: TOP TRACK CONNECTION TO STEEL BEAM - ALL PARTITION WALL CONDITIONS
OPD NO.: ST7.08

PLOT DATE: Mon 05, 2017



STRUCTURAL CONDITION ABOVE TOP TRACK	PROVIDE ADD'L TOP TRACK CONN AT JAMB USING DETAIL LISTED BELOW
CONCRETE PAN JOIST OR WAFFLE SLAB SYSTEM	ST7.05 OR ST7.06
METAL ROOF DECK WITHOUT STRUCTURAL CONCRETE FILL	ST7.07
STEEL BEAM	ST7.08
WOOD FRAMING	ST7.09

NOTE:
1. SEE ST1.01, ST1.02 & ST1.05 FOR PAF REQUIREMENTS.

SECTION TITLE: STANDARD PARTITION WALL DETAILS
SHEET TITLE: TOP TRACK CONNECTION AT JAMB LOCATIONS - PARTITION WALL CONDITION 'A'
OPD NO.: ST7.10

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HCAI Number
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Department of Health Care Access & Information
Office of Statewide Hospital Planning & Development
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C37097
EXP. 8/30/2023
STATE OF CALIFORNIA

Issued for
HCAI SUBMITTAL

Drawn by JS
Checked by CL

Project Name
HOSPITAL REPLACEMENT BUILDING-
NUCLEAR MEDICINE SUITE RELOCATION

Sheet Title
FULL HEIGHT PARTITION WALL TOP TRACK CONNECTION DETAILS

Date 08/05/2022
Scale AS NOTED
Sheet Number A7.5

30 X 42

PLOT DATE: Mar 09, 2017

BOTTOM CONNECTION SCHEDULE

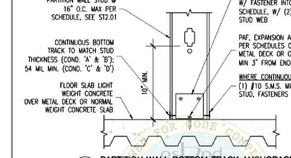
STRUCTURAL CONDITION BELOW BOTTOM TRACK	BOTTOM TRACK CONNECTION
	PARTITION WALL CONDITIONS 'A', 'B', 'C', & 'D'
LWC FILLED METAL DECK OR NWC SLAB	ST8.01
WOOD FRAMING	ST8.04

NOTES:
1. FOR PARTITION WALL CONDITION DESCRIPTION SEE ST2.00
2. FOR BOTTOM CONNECTION DEMAND SCHEDULE SEE ST6.11.

REVIEWED FOR CODE COMPLIANCE
OSHPD
OPD-0001-13
BY: M. R. Karim
DATE: 05/11/2017
CALIFORNIA BUILDING CODE: 2013

SECTION TITLE: STANDARD PARTITION WALL DETAILS
SHEET TITLE: BOTTOM CONNECTION SCHEDULE — OPD NO.: ST8.00

PLOT DATE: Mar 09, 2017



A PARTITION WALL BOTTOM TRACK ANCHORAGE
LIGHT WEIGHT CONCRETE OVER METAL DECK OR NORMAL WEIGHT CONCRETE SLAB

NOTES:
1. SEE ST1.01 & ST1.02 FOR PAF REQUIREMENT AND ST1.03 & ST1.04 FOR EXPANSION ANCHOR REQUIREMENTS AND ST1.09 & ST1.10 FOR SCREW ANCHOR REQUIREMENTS.
2. SEE ST8.05 FOR ANCHORAGE @ JAMBS.
3. FOR LIGHT WEIGHT CONCRETE OVER METAL DECK, SEE ST8.02 FOR FASTENER TO SLAB SCHEDULE.
4. FOR NORMAL WEIGHT CONCRETE SLAB, SEE ST8.03 FOR FASTENER TO SLAB SCHEDULE.
5. SEE ST2.01 FOR PARTITION WALL STUD SCHEDULE.

SECTION TITLE: STANDARD PARTITION WALL DETAILS
SHEET TITLE: BOTTOM TRACK CONNECTION TO LWC ON METAL DECK OR NWC SLAB - ALL PARTITION WALL CONDITIONS — OPD NO.: ST8.01

PLOT DATE: Mar 09, 2017

BOTTOM TRACK CONNECTION TO LWC ON METAL DECK FASTENER MAX SPACING SCHEDULE

BOTTOM CONNECTION DEMANDS (PARTITION WALL CONDITION 'A')

MAX PARTITION WALL HEIGHT	S_{DS}	MAXIMUM FASTENER SPACING IN INCHES AT BOTTOM CONNECTION				
		PAF	3/8"ø EXP ANCHOR W/ 2" EMBED	1/2"ø EXP ANCHOR W/ 2 1/4" EMBED	3/8"ø SCREW ANCHOR W/ 2 1/2" EMBED	1/2"ø SCREW ANCHOR W/ 2 1/2" EMBED
9 FT	0.25-0.99	32	32	32	32	32
	1.00-1.25	24	32	32	32	32
	1.26-1.45	16	32	32	32	32
	1.46-1.95	16	32	32	32	32
12 FT	0.25-0.99	24	32	32	32	32
	1.00-1.25	16	32	32	32	32
	1.26-1.45	16	32	32	32	32
	1.46-1.95	8	32	32	32	32
16 FT	0.25-0.99	16	32	32	32	32
	1.00-1.25	8	32	32	32	32
	1.26-1.45	8	32	32	32	32
	1.46-1.95	8	32	32	32	32

BOTTOM CONNECTION DEMANDS (PARTITION WALL CONDITION 'B')

MAX PARTITION WALL HEIGHT	S_{DS}	MAXIMUM FASTENER SPACING IN INCHES AT BOTTOM CONNECTION				
		PAF	3/8"ø EXP ANCHOR W/ 2" EMBED	1/2"ø EXP ANCHOR W/ 2 1/4" EMBED	3/8"ø SCREW ANCHOR W/ 2 1/2" EMBED	1/2"ø SCREW ANCHOR W/ 2 1/2" EMBED
9 FT	0.25-0.99	16	32	32	32	32
	1.00-1.25	16	32	32	32	32
	1.26-1.45	8	32	32	32	32
	1.46-1.95	8	32	32	32	32
12 FT	0.25-0.99	16	32	32	32	32
	1.00-1.25	8	32	32	32	32
	1.26-1.45	8	32	32	32	32
	1.46-1.95	8	32	32	32	32
16 FT	0.25-0.99	8	32	32	32	32
	1.00-1.25	8	32	32	32	32
	1.26-1.45	-	32	32	32	32
	1.46-1.95	-	32	32	32	32

BOTTOM CONNECTION DEMANDS (PARTITION WALL CONDITIONS 'C' & 'D')

MAX PARTITION WALL HEIGHT	S_{DS}	MAXIMUM FASTENER SPACING IN INCHES AT BOTTOM CONNECTION				
		PAF	3/8"ø EXP ANCHOR W/ 2" EMBED	1/2"ø EXP ANCHOR W/ 2 1/4" EMBED	3/8"ø SCREW ANCHOR W/ 2 1/2" EMBED	1/2"ø SCREW ANCHOR W/ 2 1/2" EMBED
9 FT	0.25-0.99	-	32	32	32	32
	1.00-1.25	-	32	32	24	32
	1.26-1.45	-	32	32	24	24
	1.46-1.95	-	24	32	16	16
12 FT	0.25-0.99	-	32	32	32	32
	1.00-1.25	-	32	32	24	24
	1.26-1.45	-	24	32	16	16
	1.46-1.95	-	16	24	16	16
16 FT	0.25-0.99	-	32	32	24	24
	1.00-1.25	-	24	32	16	16
	1.26-1.45	-	16	24	16	16
	1.46-1.95	-	16	24	16	16

NOTES:
1. SEE ST1.01 & ST1.02 FOR PAF REQUIREMENTS.
2. SEE ST1.03 & ST1.04 FOR EXPANSION ANCHOR REQUIREMENTS.
3. SEE ST1.09 & ST1.10 FOR SCREW ANCHOR REQUIREMENTS.

SECTION TITLE: STANDARD PARTITION WALL DETAILS
SHEET TITLE: BOTTOM TRACK CONNECTION TO LWC ON METAL DECK FASTENER MAX SPACING SCHEDULE — OPD NO.: ST8.02

PLOT DATE: Mar 09, 2017

BOTTOM TRACK CONNECTION TO NWC SLAB FASTENER MAX SPACING SCHEDULE

BOTTOM CONNECTION DEMANDS (PARTITION WALL CONDITION 'A')

MAX PARTITION WALL HEIGHT	S_{DS}	MAXIMUM FASTENER SPACING IN INCHES AT BOTTOM CONNECTION				
		PAF	3/8"ø EXP ANCHOR W/ 2" EMBED	1/2"ø EXP ANCHOR W/ 2 1/4" EMBED	3/8"ø SCREW ANCHOR W/ 2 1/2" EMBED	1/2"ø SCREW ANCHOR W/ 2 1/2" EMBED
9 FT	0.25-0.99	32	32	32	32	32
	1.00-1.25	24	32	32	32	32
	1.26-1.45	16	32	32	32	32
	1.46-1.95	16	32	32	32	32
12 FT	0.25-0.99	24	32	32	32	32
	1.00-1.25	16	32	32	32	32
	1.26-1.45	16	32	32	32	32
	1.46-1.95	8	32	32	32	32
16 FT	0.25-0.99	16	32	32	32	32
	1.00-1.25	8	32	32	32	32
	1.26-1.45	8	32	32	32	32
	1.46-1.95	8	32	32	32	32

BOTTOM CONNECTION DEMANDS (PARTITION WALL CONDITION 'B')

MAX PARTITION WALL HEIGHT	S_{DS}	MAXIMUM FASTENER SPACING IN INCHES AT BOTTOM CONNECTION				
		PAF	3/8"ø EXP ANCHOR W/ 2" EMBED	1/2"ø EXP ANCHOR W/ 2 1/4" EMBED	3/8"ø SCREW ANCHOR W/ 2 1/2" EMBED	1/2"ø SCREW ANCHOR W/ 2 1/2" EMBED
9 FT	0.25-0.99	16	32	32	32	32
	1.00-1.25	16	32	32	32	32
	1.26-1.45	8	32	32	32	32
	1.46-1.95	8	32	32	32	32
12 FT	0.25-0.99	16	32	32	32	32
	1.00-1.25	8	32	32	32	32
	1.26-1.45	8	32	32	32	32
	1.46-1.95	8	32	32	32	32
16 FT	0.25-0.99	8	32	32	32	32
	1.00-1.25	8	32	32	32	32
	1.26-1.45	-	32	32	32	32
	1.46-1.95	-	32	32	32	32

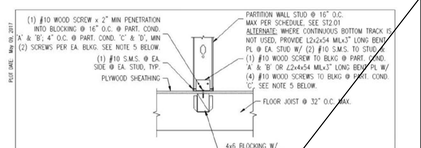
BOTTOM CONNECTION DEMANDS (PARTITION WALL CONDITIONS 'C' & 'D')

MAX PARTITION WALL HEIGHT	S_{DS}	MAXIMUM FASTENER SPACING IN INCHES AT BOTTOM CONNECTION				
		PAF	3/8"ø EXP ANCHOR W/ 2" EMBED	1/2"ø EXP ANCHOR W/ 2 1/4" EMBED	3/8"ø SCREW ANCHOR W/ 2 1/2" EMBED	1/2"ø SCREW ANCHOR W/ 2 1/2" EMBED
9 FT	0.25-0.99	-	32	32	32	32
	1.00-1.25	-	32	32	32	32
	1.26-1.45	-	32	32	32	32
	1.46-1.95	-	24	32	24	24
12 FT	0.25-0.99	-	32	32	32	32
	1.00-1.25	-	32	32	32	32
	1.26-1.45	-	32	32	24	24
	1.46-1.95	-	24	32	24	24
16 FT	0.25-0.99	-	32	32	32	32
	1.00-1.25	-	32	32	32	32
	1.26-1.45	-	32	32	32	32
	1.46-1.95	-	24	32	24	24

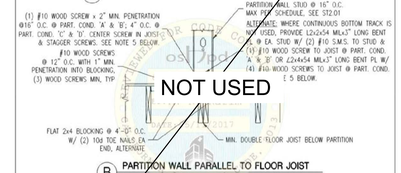
NOTES:
1. SEE ST1.01 & ST1.02 FOR PAF REQUIREMENTS.
2. SEE ST1.03 & ST1.04 FOR EXPANSION ANCHOR REQUIREMENTS.
3. SEE ST1.09 & ST1.10 FOR SCREW ANCHOR REQUIREMENTS.

SECTION TITLE: STANDARD PARTITION WALL DETAILS
SHEET TITLE: BOTTOM TRACK CONNECTION TO NWC SLAB FASTENER MAX SPACING SCHEDULE — OPD NO.: ST8.03

PLOT DATE: Mar 09, 2017



A PARTITION WALL PERPENDICULAR TO FLOOR JOIST

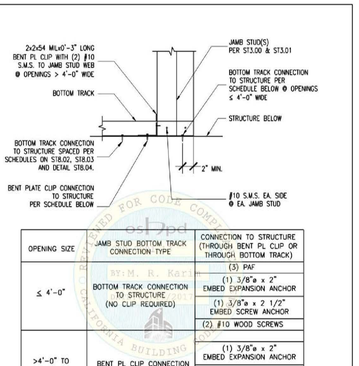


B PARTITION WALL PARALLEL TO FLOOR JOIST

NOTES:
1. SEE ST8.01 FOR BALANCE OF INFORMATION.
2. SEE ST8.05 FOR BOTTOM CONNECTION @ JAMBS.
3. RDP IN RESPONSIBLE CHARGE SHALL VERIFY ADEQUACY OF FRAMING.
4. SEE ST2.01 FOR PARTITION WALL STUD SCHEDULE.
5. VERIFY SCREWS ARE INSTALLED 1/2" MIN FROM THE END OF BLKG.

SECTION TITLE: STANDARD PARTITION WALL DETAILS
SHEET TITLE: BOTTOM TRACK CONNECTION TO WOOD FRAMING - ALL PARTITION WALL CONDITIONS — OPD NO.: ST8.04

PLOT DATE: Mar 09, 2017



OPENING SIZE	JAMB STUD BOTTOM TRACK CONNECTION TYPE	CONNECTION TO STRUCTURE (THROUGH BENT PL CLIP OR THROUGH BOTTOM TRACK)
≤ 4'-0"	BOTTOM TRACK CONNECTION TO STRUCTURE (NO CLIP REQUIRED)	(3) PAF
		(1) 3/8"ø x 2" EMBED EXPANSION ANCHOR
		(1) 3/8"ø x 2 1/2" EMBED SCREW ANCHOR
		(2) #10 WOOD SCREWS
>4'-0" TO ≤ 10'-0"	BENT PL CLIP CONNECTION TO STRUCTURE	(1) 3/8"ø x 2" EMBED EXPANSION ANCHOR
		(1) 3/8"ø x 2 1/2" EMBED SCREW ANCHOR
		(3) #10 WOOD SCREWS

NOTE:
1. BOTTOM CONNECTION @ JAMBS AT PARTITION WALL CONDITION 'A', ALL S_{DS} CATEGORIES.

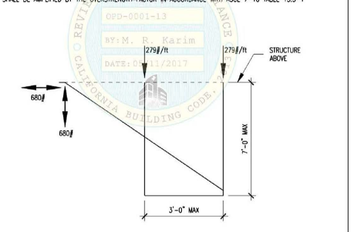
SECTION TITLE: STANDARD PARTITION WALL DETAILS
SHEET TITLE: BOTTOM TRACK CONNECTION @ JAMBS - PARTITION WALL CONDITION 'A' — OPD NO.: ST8.05

PLOT DATE: Mar 09, 2017

SUSPENDED SOFFIT CONNECTION SCHEDULE

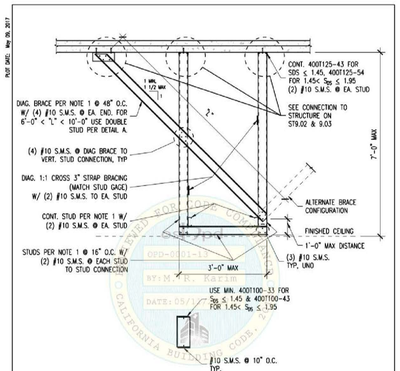
STRUCTURE ABOVE SUSPENDED SOFFIT	DETAIL
CONCRETE SLAB, BEAM OR LWC FILLED METAL DECK	ST9.02
CONNECTION TO STEEL BEAM	ST9.03
CONCRETE PAN JOIST OR WAFFLE SYSTEM SLAB SYSTEM	NOT AVAILABLE
METAL ROOF DECK WITHOUT CONCRETE FILL SYSTEM	NOT AVAILABLE
WOOD FRAMING	NOT AVAILABLE

NOTES:
1. SEE ST9.01 FOR SUSPENDED SOFFIT DETAIL.
2. SEE SOFFIT LOADING DIAGRAM BELOW. RDP IN RESPONSIBLE CHARGE TO DESIGN CONNECTION AND CHECK SUPPORTING FRAMING FOR ALL CONDITIONS NOT COVERED IN THESE DETAILS. LOADS SHOWN AT ALLOWABLE STRESS LEVEL.
3. THE DEMANDS LISTED DO NOT INCLUDE OVERSTRENGTH FACTOR IN ACCORDANCE WITH ASCE 7-10 SUPPLEMENT 1 TABLE 13.5-1 FOR ANCHORAGE TO CONCRETE. FOR CONNECTION TO CONCRETE DEMAND SHALL BE AMPLIFIED BY THE OVERSTRENGTH FACTOR IN ACCORDANCE WITH ASCE 7-10 TABLE 13.5-1



SECTION TITLE: STANDARD PARTITION WALL DETAILS
SHEET TITLE: SUSPENDED SOFFIT CONNECTION SCHEDULE — OPD NO.: ST9.00

PLOT DATE: Mar 09, 2017

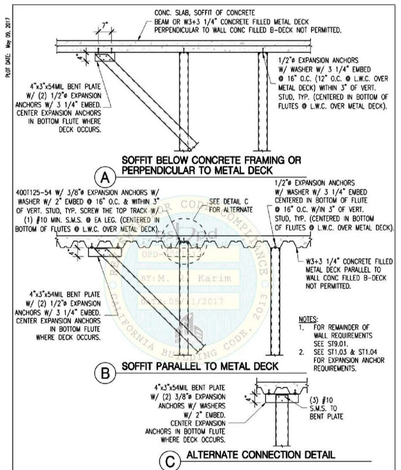


A DOUBLE STUD BRACE

NOTES:
1. USE MIN 4" x 33 MIL STUDS (400S137-33) FOR S_{DS} ≤ 1.45 & 4" x 43 MIL (400S137-43) FOR 1.45 < S_{DS} ≤ 1.95
2. SUSPENDED SOFFITS ARE NOT DESIGNED TO SUPPORT ADJACENT HANGING OR FRAMED CEILINGS, EQUIPMENT OR CABINETS.
3. SEE ST1.03 & ST1.04 FOR EXPANSION ANCHOR REQUIREMENTS.

SECTION TITLE: STANDARD PARTITION WALL DETAILS
SHEET TITLE: SUSPENDED SOFFIT DETAIL — OPD NO.: ST9.01

PLOT DATE: Mar 09, 2017



A SOFFIT BELOW CONCRETE FRAMING OR PERPENDICULAR TO METAL DECK

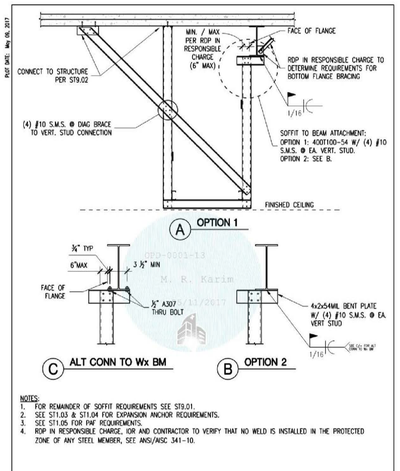
NOTES:
1. FOR REMAINDER OF WALL REQUIREMENTS SEE ST9.01.
2. SEE ST1.03 & ST1.04 FOR EXPANSION ANCHOR REQUIREMENTS.

B SOFFIT PARALLEL TO METAL DECK

C ALTERNATE CONNECTION DETAIL

SECTION TITLE: STANDARD PARTITION WALL DETAILS
SHEET TITLE: SUSPENDED SOFFIT CONNECTION TO CONC. SLAB, CONC. BEAM OR LWC FILLED METAL DECK — OPD NO.: ST9.02

PLOT DATE: Mar 09, 2017



A OPTION 1

C ALT CONN TO Wx BM

B OPTION 2

NOTES:
1. FOR REMAINDER OF SOFFIT REQUIREMENTS SEE ST9.01.
2. SEE ST1.03 & ST1.04 FOR EXPANSION ANCHOR REQUIREMENTS.
3. SEE ST1.05 FOR PAF REQUIREMENTS.
4. RDP IN RESPONSIBLE CHARGE, DR AND CONTRACTOR TO VERIFY THAT NO WELD IS INSTALLED IN THE PROTECTED ZONE OF ANY STEEL MEMBER, SEE ANSI/AISC 341-10.

SECTION TITLE: STANDARD PARTITION WALL DETAILS
SHEET TITLE: SUSPENDED SOFFIT CONNECTION TO STEEL BEAM — OPD NO.: ST9.03

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S221296-21-00

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REVIEWED IN ACCORDANCE WITH THE REQUIREMENTS OF 7-24, CCR
APPROVED
Department of Health Care Access & Information
Office of Statewide Hospital Planning & Development
2/13/2023, 11:24:21 PM
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Seal/Signature
LICENSED ARCHITECT C37097 EXP. 8/30/2023 STATE OF CALIFORNIA

Issued for
HCAI SUBMITTAL

Drawn by JS
Checked by CL

Project Name
HOSPITAL REPLACEMENT BUILDING-
NUCLEAR MEDICINE SUITE RELOCATION

Sheet Title
BOTTOM TRACK CONNECTION DETAILS & SUSPENDED SOFFIT DETAILS

Date 08/05/2022
Scale AS NOTED
Sheet Number
A7.6

30 X 42

GENERAL NOTES

1. CONSTRUCTION, WORKMANSHIP AND MATERIAL SHALL CONFORM TO THE 2013 CALIFORNIA BUILDING STANDARDS CODE (CBSC 2013).
2. THE CONTRACTOR SHALL NOTIFY OSHPD AND THE REGISTERED DESIGN PROFESSIONAL (RDP) IN RESPONSIBLE CHARGE WHERE A CONFLICT OR DISCREPANCY OCCURS BETWEEN THE CONSTRUCTION DRAWINGS AND ANY OTHER PORTION OF THE CONSTRUCTION DOCUMENTS, FIELD CONDITIONS, OR WHERE ANY CONDITIONS ARISE NOT COVERED BY THESE DOCUMENTS WHEREIN WORK WILL NOT COMPLY WITH CODE REQUIREMENTS.
3. THE INTENT OF THE DRAWINGS AND SPECIFICATIONS IS TO CONSTRUCT THE HOSPITAL BUILDING IN ACCORDANCE WITH THE CALIFORNIA BUILDING STANDARD CODE, 2013 (CBSC 2013). SHOULD ANY CONDITION DEVELOP NOT COVERED BY THE APPROVED CONSTRUCTION DOCUMENTS WHEREIN THE WORK WILL NOT COMPLY WITH CBSC 2013, A CHANGE ORDER DETAILING AND SPECIFYING THE REQUIRED WORK SHALL BE SUBMITTED TO AND APPROVED BY OSHPD BEFORE PROCEEDING WITH THE WORK.
4. GALVANIZED METAL STUDS, TRACKS AND SHEET STEEL SHALL CONFORM TO ASTM A653-11 MATERIAL, OR OTHER EQUIVALENT ASTM LISTED MATERIALS IN SECTION 04.2 OF THE AISI S100-07/S2-10, NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS WITH SUPPLEMENT 2, DATED 2010, WITH A MINIMUM YIELD STRENGTH OF 33 KSI FOR 43 MIL (18 GAGE) AND LIGHTER AND MINIMUM YIELD STRENGTH OF 50 KSI FOR HEAVIER GAGES.

   METAL STUDS AND TRACKS SHALL BE OF SIZE, THICKNESS AND SECTION PROPERTIES SHOWN ON TABLES 1-1, 1-2 AND 1-3 OF THE AISI MANUAL, COLD-FORMED STEEL DESIGN, 2008 EDITION. THE RDP IN RESPONSIBLE CHARGE SHALL OBTAIN OSHPD APPROVAL FOR ANY SUBSTITUTIONS.
5. ELECTRICAL METALLIC TUBE (EMT) SHALL BE ANSI C80.3/UL 797 CARBON STEEL WITH G90 GALVANIZING. EMT SHALL HAVE MINIMUM YIELD STRENGTH OF (Fy) = 36 KSI AND MINIMUM ULTIMATE STRENGTH OF (Fu =) 46 KSI.
6. THESE OPD REFER TO FASTENER TYPE AND SIZE BUT DO NOT SPECIFY OR ENDORSE A SPECIFIC MANUFACTURER. THE RDP IN RESPONSIBLE CHARGE SHALL SELECT A MANUFACTURER AND SELECTED FASTENER CAPACITIES SHALL MATCH OR EXCEED THE STRENGTHS LISTED HEREIN. THE FOLLOWING REQUIREMENTS SHALL ALSO BE MET:
   a. SHEET METAL SCREWS SHALL COMPLY WITH ASTM C 1513-10, ASME B18.6.4/ SR (R2005) AND ICC-ES AC 118 AND ALLOWABLE STRENGTH SHALL BE BASED ON TESTING PROVIDED IN CL11.31 AND CL13.2. PENETRATION OF SCREWS THROUGH JOINED MATERIAL SHALL NOT BE LESS THAN THREE EXPOSED THREADS.
   b. WELDING SHALL BE IN ACCORDANCE WITH AWS D1.3 USING SCREW ANCHORS ELECTRODES. FIELD WELDING SHALL HAVE SPECIAL INSPECTION IN ACCORDANCE WITH 2013 CBC SECTION 1705A.2.
   c. POST- INSTALLED ANCHORS (E.G. EXPANSION ANCHORS, SCREW ANCHORS) AND POWER ACTUATED FASTENERS) SHALL HAVE SPECIAL INSPECTION AND TESTING IN ACCORDANCE WITH THE 2013 CBC SECTIONS 1705A.3 & 1913A.7, FOR QUALIFICATION, DESIGN AND USE OF POST-INSTALLED ANCHORS IN CONCRETE SEE THE 2013 CBC SECTIONS 1913A.1,19 AND 1908A.1.1. LISTING OF CURRENT ICC-ES EVALUATION REPORTS (OR REPORTS FROM OTHER TESTING AGENCIES ACCEPTABLE TO OSHPD) SHALL BE REQUIRED FOR FASTENER USED.
   d. POWER-ACTUATED FASTENERS (PAF), POWDER DRIVEN FASTENERS (PDF), POWER DRIVEN PINS (PDP) AND SHOT PINS ALL REFRESENT THE SAME FASTENER AND WILL HEREAFTER BE REFERRED TO AS POWER ACTUATED FASTENERS (PAF). PAFS SHALL SATISFY THE CURRENT ACTO-ACCEPTANCE CRITERIA FOR FASTENERS POWER-DRIVEN INTO CONCRETE, STEEL, AND MASONRY ELEMENTS AND THE 2013 CBC SECTION 1908A.1.1. LISTING OF CURRENT ICC ESS EVALUATION REPORTS(OR REPORTS FROM OTHER TESTING AGENCIES ACCEPTABLE TO OSHPD) SHALL BE REQUIRED FOR FASTENERS USED.
   e. FOR PAF INSTALLED IN STEEL THE FASTENER PENETRATION SHALL HAVE THE ENTIRE POINTED END OF THE FASTENER DRIVEN THROUGH THE STEEL MEMBER, EXCEPT AS NOTED IN CURRENT REPORTS FROM TESTING AGENCIES ACCEPTABLE TO OSHPD.

Section Title : OSHPD STANDARD SUSPENDED CEILING DETAILS — OPD No:
Sheet Title : GENERAL NOTES - PAGE 1 OF 4 — CL0.00

7. DESIGN CRITERIA
   a. BUILDING CODE: 2013 CALIFORNIA BUILDING CODE (2013 CBC), ASCE 7-10, AISI S100-07/S2-10, ASTM E580-14, C635-13a, AND C636-13. FOR LOAD COMBINATIONS, ALLOWABLE STRESS DESIGN SHALL BE IN ACCORDANCE WITH 2013 CBC SECTION 1605A.3.1.
   b. FASTENER CAPACITIES TABLES WERE DEVELOPED BASED ON ICC REPORTS BY SEVERAL MANUFACTURERS.
   c. THE DESIGN ASSUMES THAT BUILDING ELEMENTS AND SUPPORTS, TO WHICH THE COMPONENTS ADDRESSED IN THIS DOCUMENT ARE ANCHORED, HAVE SUFFICIENT CAPACITY TO CARRY THE LOADS IMPOSED BY THE COMPONENTS IN COMBINATION WITH ALL OTHER LOADS, INVALIDATION OF THE CAPACITY OF THESE SUPPORTING BUILDING ELEMENTS IS BEYOND THE SCOPE OF THE OPD.
   d. THIS OPD IS LIMITED TO CEILING ASSEMBLIES HAVING MAXIMUM DEAD WEIGHT OF 4 PSF, INCLUDING LIGHTING FIXTURES (LUMINAIRES) AND MECHANICAL SERVICES, EACH WEIGHING LESS THAN 56 LBS AND ATTACHED TO CEILING FRAMING SYSTEM. HEAVIER SYSTEM AND THOSE SUPPORTING LATERAL FORCES FROM PARTITION WALLS ARE OUTSIDE THE SCOPE OF THIS OPD AND WILL REQUIRE PROJECT SPECIFIC DESIGN.
8. THE RDP IN RESPONSIBLE CHARGE SHALL VERIFY THE FIRE RESISTENCE AND ACOUSTICAL RATINGS FOR ALL CEILING ASSEMBLIES.
9. "CEILING WIRE" SHALL CONFORM WITH GALVANIZED SOFT ANNEALED MILD STEEL WIRE AS DEFINED IN ASTM A641 CLASS 1 COATING WITH 70 KSI MINIMUM TENSILE STRENGTH.
   a. FOUR (4) TWISTS OF WIRE WITHIN 1.5" DEVELOPS THE ALLOWABLE LOAD FOR THE WIRE.
   b. THREE (3) TWISTS WITHIN 3" MAY BE USED TO DEVELOP THE MAXIMUM 50% OF ALLOWABLE LOAD.
10. SUSPENSION SYSTEM COMPONENTS SHALL COMPLY WITH ASTM C635 AND ES ER0 SECTION 5.1:
    a. THE CEILING GRID SYSTEM SHALL BE RATED HEAVY DUTY AS DEFINED BY ASTM C635.
    b. HANGER AND BRACING WIRES SHALL BE #12 GAGE (0.080" DIAMETER), SOFT ANNEALED, AND GALVANIZED STEEL WIRES WITH CLASS 1 COATING. THEY MAY BE USED FOR UP TO AND INCLUDING 4'-0"x 4'-0" GRID SPACING AND SHALL BE ATTACHED TO MAIN RUNNERS. SPLICES ARE NOT PERMITTED IN ANY HANGER WIRE.
    c. MAIN RUNNERS AND CROSS RUNNERS ALONG WITH THEIR SPLICES, INTERSECTION CONNECTORS, AND EXPANSION JOINTS SHALL BE DESIGNED AND CONSTRUCTED TO CONFORM A MEAN ULTIMATE TEST LOAD OF NOT LESS THAN 180 LBS. IN COMPRESSION & TENSION, IN ACCORDANCE WITH ASTM E90 SECTION 5.1.2.
11. SUSPENSION SYSTEM INSTALLATION, SHALL COMPLY WITH ASTM C636 AND ES ER0 SECTION 5.2:
    a. PROVIDE #12 GAGE HANGER WIRES AT THE ENDS OF ALL MAIN AND CROSS RUNNERS WITHIN EIGHT (8) INCHES OF THE SUPPORT OR WITHIN ONE-FOURTH (1/4) OF THE LENGTH OF THE END TEE, WHICHEVER IS LESS. FOR PERIMETER SUPPORT OF THE CEILING AREA, PERIMETER WIRES ARE NOT REQUIRED WHEN THE LENGTH OF THE END TEE IS EIGHT (8) INCHES OR LESS.
    b. CEILING GRID MEMBERS SHALL BE ATTACHED TO TWO (2) ADJACENT WALLS. IN ACCORDANCE WITH ASTM E580 SECTION 5.2.3, CEILING GRID MEMBERS SHALL BE AT LEAST 3/4" FROM CLOSURE OF OTHER WALLS. IF WALLS RUN DIAGONAL TO THE CEILING GRID SYSTEM RUNNERS, ONE END OF MAIN AND CROSS RUNNERS SHOULD BE FREE, AND A MINIMUM OF 3/4 INCH CLEAR OF WALL.
    c. THE WIDTH OF THE PERIMETER SUPPORTING CLOSURE ANGLE SHALL BE NOT LESS THAN TWO (2) INCHES. USE OF ANGLES WITH SMALLER WIDTHS IN CONJUNCTION WITH PERIMETER CLIPS SHALL REQUIRE AN ALTERNATE METHOD OF COMPLIANCE WITH ADEQUATE JUSTIFICATION AND ARE OUTSIDE THE SCOPE OF THIS OPD.
    d. AT THE PERIMETER OF THE CEILING AREA WHERE MAIN OR CROSS RUNNERS ARE NOT CONNECTED TO THE ADJACENT WALL, PROVIDE INTERCONNECTION BETWEEN THE RUNNERS AT THE FREE END TO PREVENT LATERAL SPREADING. A METAL STRUT OR A #16 GAGE WIRE WITH A POSITIVE MECHANICAL CONNECTION TO RUNNER MAY BE USED. WHERE THE PERPENDICULAR DISTANCE FROM THE WALL TO THE FIRST PARALLEL RUNNER IS EIGHT (8) INCHES OR LESS, THIS INTERCONNECTION IS NOT REQUIRED.

Section Title : OSHPD STANDARD SUSPENDED CEILING DETAILS — OPD No:
Sheet Title : GENERAL NOTES - PAGE 1 OF 4 — CL0.01

12. EXPANSION JOINTS, SEISMIC SEPARATIONS, AND PENETRATIONS:
    a. EXPANSION JOINTS SHALL BE PROVIDED IN THE CEILING AT INTERSECTIONS OF CORRIDORS AND AT JUNCTIONS OF CORRIDORS WITH LOBBIES OR OTHER SIMILAR AREAS.
    b. FOR CEILING AREAS EXCEEDING 2500 SQUARE FEET, A SEISMIC SEPARATION JOINT SHALL BE PROVIDED TO DIVIDE THE CEILING INTO AREAS NOT EXCEEDING 2500 SQ. FT.
    c. PENETRATIONS THROUGH THE CEILING FOR SPRINKLER HEADS AND OTHER SIMILAR DEVICES THAT ARE NOT INTEGRALLY TIED TO THE CEILING SYSTEM IN THE LATERAL DIRECTION SHALL HAVE A TWO (2) INCH OVERSIZED RING, SLEEVE OR ESCUTCHEON THAT IS LARGER THAN THE CEILING TILE TO ALLOW FREE MOVEMENT OF ONE (1) INCH IN ALL HORIZONTAL DIRECTIONS. A FLEXIBLE SPRINKLER HOSE FITTING THAT CAN ACCOMMODATE ONE (1) INCH OF CEILING MOVEMENT SHALL BE PERMITTED TO BE USED IN LIEU OF THE OVERSIZED RING, SLEEVE OR ADAPTER. SUCH FLEXIBLE SPRINKLER HOSE SHALL BE ADEQUATELY SUPPORTED FROM SOFFIT SO AS NOT TO EXCEED THE MAXIMUM TRIBUTARY WEIGHT OF THE CEILING.
13. LATERAL FORCE BRACING:
    LATERAL FORCE BRACING IS REQUIRED IN ACCORDANCE WITH THIS SECTION FOR ALL CEILING AREAS, UON.

    EXCEPTION: LATERAL FORCE BRACING MAY BE OMITTED FOR SUSPENDED ACOUSTICAL CEILING SYSTEMS WITH A CEILING AREA OF 144 SQ. FT. OR LESS WHEN PERIMETER SUPPORT IS PROVIDED IN ACCORDANCE WITH ASTM E580 AND PROVIDED AND PERIMETER WALLS ARE DESIGNED TO CARRY THE CEILING LATERAL FORCES.
    a. PROVIDE LATERAL-FORCE BRACING ASSEMBLIES CONSISTING OF A STRUT AND FOUR (4) #12 GAGE BRACING WIRES ORIENTED IN 90 DEGREES TO THE EACH OTHER.
    b. LATERAL-FORCE BRACING ASSEMBLIES SHALL BE SPACED IN ACCORDANCE WITH CL2.20 THROUGH CL2.22 AND CL2.30 FROM EACH WALL AND AT THE EDGES OF ANY CHANGE OF ELEVATION OF THE CEILING.
    c. THE SLOPE OF BRACING WIRES MAY BE FROM 10 TO 45 DEGREES BUT MAY NOT EXCEED 45 DEGREES FROM THE PLANE OF THE CEILING AND IT'S SUPPORT.
    d. STRUTS SHALL BE ADEQUATE TO RESIST THE VERTICAL COMPONENT INDUCED BY THE BRACING WIRES, AND SHALL NOT BE MORE THAN 1 (HORIZONTAL) IN 6 (VERTICAL) OUT OF PLUMB.
14. ATTACHMENT OF HANGER AND BRACING WIRES:
    a. FASTEN #12 HANGER WIRES WITH NOT LESS THAN THREE (3) TIGHT TURNS IN 6 INCHES. HANGER WIRE LOOPS SHALL BE TIGHTLY WRAPPED AND SHARPLY BENT TO PREVENT ANY VERTICAL MOVEMENT OR ROTATION OF THE MEMBER WITHIN THE LOOPS.
    b. FASTEN #12 BRACING WIRES WITH FOUR (4) TIGHT TURNS. MAKE ALL TIGHT TURNS WITHIN A DISTANCE OF 1 1/2" OR LESS.
    c. HANGER OR BRACING WIRE ANCHORED TO THE STRUCTURE SHOULD BE INSTALLED IN SUCH A MANNER THAT THE DIRECTION OF THE ANCHOR ALIGNS AS CLOSELY AS POSSIBLE WITH THE DIRECTION OF THE WIRE.
    d. SPLICES OF MAIN HANGER AND BRACING WIRES AT LEAST SIX (6) INCHES FROM ALL UNBRACED DUCTS, PIPES CONDUITS, ETC.
    e. HANGER WIRES SHALL NOT BE ATTACHED TO OR BEND AROUND INTERFERING MATERIAL OR EQUIPMENT. PROVIDE TRAPEZE OR OTHER SUITABLE SUPPORT MEMBERS AT OBSTRUCTIONS REQUIRING OFFSETTING. PROVIDE ADDITIONAL HANGERS, STRUTS OR BRACES AS REQUIRED AT ALL CEILING BREAKS, SOFFITS, OR DISCONTINUOUS AREAS.
    f. HANGER WIRES THAT ARE MORE THAN 1 (HORIZONTAL) IN 6 (VERTICAL) OUT OF PLUMB SHALL REQUIRE PROJECT SPECIFIC DESIGN.
    g. TESTING REQUIREMENTS:
    HANGER WIRE ANCHORS: WHEN POST-INSTALLED ANCHORS OR PAF ARE USED AS HANGER WIRE ANCHORS IN REINFORCED CONCRETE, 10% OF ANCHORS SHALL BE TENSION TESTED FOR 200 LBS.
    BRACING WIRE ANCHORS: PAF USED AS BRACING WIRE ANCHORS TO CONCRETE ARE NOT PERMITTED. WHEN POST-INSTALLED ANCHORS ARE USED AS BRACING WIRE ANCHORS IN REINFORCED CONCRETE, 50% OF ANCHORS SHALL BE TENSION TESTED FOR 440 LBS. ALTERNATELY, WIREANCHOR ASSEMBLIES MAY BE TENSION TESTED IN THE DIRECTION OF THE WIRE FOR 440 LBS.
    EXCEPTION: TORQUE CONTROLLED POST-INSTALLED ANCHORS MAY BE TORQUE TESTED TO MANUFACTURER'S SPECIFICATIONS OR AS SHOWN ON THE APPROVED CONSTRUCTION DOCUMENTS.

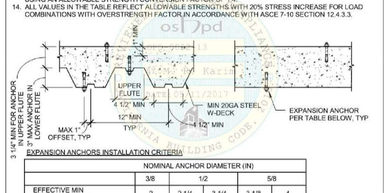
Section Title : OSHPD STANDARD SUSPENDED CEILING DETAILS — OPD No:
Sheet Title : GENERAL NOTES - PAGE 3 OF 4 — CL0.02
Rev: 03/30/2022

15. **CEILING FIXTURES, TERMINALS, AND DEVICES:**
    a. CEILING PANELS SHALL NOT SUPPORT ANY LIGHT FIXTURES. AR TERMINALS/GRILLS, OR OTHER DEVICES (REFERRED TO ALL BY COMMON TERM FIXTURES HERE AFTER).
    b. ALL FIXTURES SHALL BE MOUNTED IN A MANNER THAT WILL NOT COMPROMISE CEILING PERFORMANCE.
    c. ALL FIXTURES SHALL BE ATTACHED TO THE SUSPENDED CEILING SYSTEM BY MECHANICAL MEANS, UNLESS INDEPENDENTLY SUPPORTED. THE ATTACHMENT DEVICE SHALL HAVE THE CAPACITY OF 100% OF FIXTURE WEIGHT ACTING IN ANY DIRECTION. A MINIMUM OF TWO ATTACHMENT DEVICES ARE REQUIRED FOR EACH FIXTURE.
    d. SURFACE MOUNTED FIXTURES SHALL BE ATTACHED TO THE MAIN RUNNER WITH POSITIVE CLAMPING DEVICES MADE OF MATERIAL WITH A MINIMUM 14 GAGE. A NO.12 GAUGE SAFETY WIRES SHALL BE ATTACHED BETWEEN THE CLAMPING DEVICE AND TO THE STRUCTURE ABOVE. IN NO CASE SHALL THE FIXTURES EXCEED THE DESIGN CAPACITY OF THE SUPPORTING MEMBERS.
    e. ALL LIGHT FIXTURES WEIGHING LESS THAN OR EQUAL TO 10 LB. SHALL HAVE ONE NO. 12 GAUGE SAFETY WIRE CONNECTED FROM FIXURE HOUSING TO STRUCTURE ABOVE. IT IS NOT NECESSARY FOR THESE SAFETY WIRES TO BE TAUT.
    f. ALL FIXTURES WEIGHING GREATER THAN 10 LB BUT LESS THAN OR EQUAL TO 56 LB. SHALL HAVE TWO NO. 12 GAUGE SAFETY WIRE CONNECTED FROM FIXURE HOUSING TO STRUCTURE ABOVE. IT IS NOT NECESSARY FOR THESE SAFETY WIRES TO BE TAUT.
    g. ALL FIXTURES WEIGHING GREATER THAN 56 LB. SHALL BE SUPPORTED DIRECTLY FROM STRUCTURE ABOVE BY APPROVED HANGERS.
    h. PENDENT-HUNG FIXTURES SHALL BE SUPPORTED DIRECTLY FROM THE STRUCTURE ABOVE USING NO LESS THAN NO. 9 GAUGE WIRE OR AN APPROVED ALTERNATE SUPPORT . THE CEILING SUSPENSION SYSTEM SHALL NOT PROVIDE ANY DIRECT SUPPORT.
    i. ALL RECESSED OR DROP IN FIXTURES SHALL BE SUPPORTED DIRECTLY FROM FIXTURE HOUSING TO THE STRUCTURE ABOVE WITH A MINIMUM OF TWO NO. 12 GAUGE WIRES LOCATED AT DIAGONALLY OPPOSITE CORNERS. LENGTH, LEVELLING OR POSITIONING OF FIXTURES MAY BE PROVIDED BY CEILING MAIN RUNNER SUPPORT WIRES MAY BE SLIGHTLY LOOSE TO ALLOW THE FIXTURE TO SEAT IN THE GRID SYSTEM. FIXTURES SHALL NOT BE SUPPORTED FROM MAIN RUNNERS OR CROSS RUNNING IF THE WEIGHT OF THE FIXTURES CAUSES TOTAL DEAD LOAD TO EXCEED THE DEFLECTION CAPABILITY OF THE CEILING SUSPENSION SYSTEM.
16. **ADDITIONAL REQUIREMENTS:**
    a. CEILINGS THAT ARE PART OF A FIRE RATED ASSEMBLY PROVIDE A DETAIL AND DESIGN NUMBER FROM A CURRENT CEILING ASSEMBLIES LISTING AN APPROVED TESTING AGENCY. THE COMPONENTS AND INSTALLATION DETAILS CONFORM IN EVERY RESPECT WITH THE LISTED DETAIL AND NUMBER. DETAILS SHALL CLEARLY DEPICT ALL COMPONENTS , INCLUDING INSULATION MATERIALS, FRAMING AND ATTACHMENT OF THE DESIGN SO THAT THE ASSEMBLY CAN BE CONSTRUCTED AND INSPECTED ACCORDINGLY. POP RIVETS, SCREWS, OR OTHER ATTACHMENTS ARE NOT ACCEPTABLE UNLESS SPECIFICALLY DETAILED ON THE DRAWINGS AND APPROVED BY APPROVED TESTING AGENCY.
    b. METAL AND OTHER PANELS: METAL PANELS AND PANELS WEIGHING MORE THAN 1/2 PSF, OTHER THAN MINERAL FIBER ACOUSTICAL TILE, ARE TO BE POSITIVELY ATTACHED TO THE CEILING SUSPENSION RUNNERS.
    c. BUILDING EXIT WAYS: CEILINGS IN EXIT WAYS SHALL BE INSTALLED IN ACCORDANCE WITH SECTION 13.5.6.2.2(1) OF NFPA 7 10-AS AMENDED BY 2013 CBC SECTION 1016A.1.20. SPLICES OR INTERSECTION OF RUNNERS SHALL BE ATTACHED WITH THROUGH CONNECTORS SUCH AS POP RIVETS, SCREWS, PINS, PLATES WITH END TABS OR OTHER APPROVED CONNECTORS.

Section Title : OSHPD STANDARD SUSPENDED CEILING DETAILS — OPD No:
Sheet Title : GENERAL NOTES - PAGE 4 OF 4 — CL0.03

POWER ACTUATED FASTENER (PAF) GENERAL NOTES (INSTALLED IN CONCRETE OVER METAL DECK OR CONC SLAB)

1. POWER ACTUATED FASTENER (PAF), POWDER DRIVEN FASTENERS (PDF), POWER DRIVEN PINS (PDP), SHOT PINS ALL REPRESENT THE SAME FASTENER AND WILL HEREAFTER BE REFERRED TO AS POWER ACTUATED FASTENERS (PAF).
2. ALLOWABLE STRENGTHS SHALL BE COMPARED TO ALLOWABLE STRESS DESIGN (ASD) LEVEL DEMAND IN ACCORDANCE WITH THE 2013 CBC SECTION 1605A.3.1.
3. ALLOWABLE STRENGTHS ARE FOR A SINGLE FASTENER WHICH MEET REQUIREMENTS PER SECTION BELOW AND TABLES ON CL1.14 . THE ALLOWABLE STRENGTHS ARE BASED UPON THE LEAST OF THE ALLOWABLE STRENGTHS LISTED IN ICC ESRS 2024, 2138, & 2269.
4. EXPANSION ANCHORS SHALL NOT BE USED IN PRE-STRESSED CONCRETE UNLESS NON-DESTRUCTIVE TESTING METHODS ARE USED TO LOCATE STRAND & REINFORCING PRIOR TO ANCHOR INSTALLATION.
5. POWER ACTUATED FASTENER INSTALLED THROUGH LOW FLUTES OF THE METAL DECK SHALL MEET THE REQUIREMENTS OF THE INSTALLATION CRITERIA AND SECTION BELOW.
6. MINIMUM EDGE DISTANCE OF 1 1/8" FROM THE EDGE OF METAL DECK WEB AND 4" FROM THE EDGE OF THE DECK.
7. STEEL DECK TO BE A MINIMUM OF 20GA.
8. CONCRETE FILL DEPTH ABOVE THE TOP OF METAL DECK SHALL BE A MINIMUM OF 3 1/4" LIGHT WEIGHT CONCRETE.
9. PAF SHALL NOT BE USED TO RESIST SEISMIC SHEAR FORCES EXCEPT AT INTERIOR NON-LOAD BEARING, NON-SHEAR WALL PARTITION WALLS (AS PERMITTED BY 2013 CBC SECTION 1604.A.1.1) AND COMPONENTS EXEMPT FROM CONSTRUCTION DOCUMENT REVIEW BY 2013 CBC SECTION 1616A.1.18 (NOT PERMITTED TO TAKE SEISMIC SHEAR BY ICC-ES AC70 FOR ANY OTHER CONDITIONS). PAF SHALL NOT BE USED TO CARRY SEISMIC TENSION LOADS (EXCEPT FOR VERTICAL SEISMIC LOAD PRODUCED BY SELF WEIGHT OF THE COMPONENTS) OR IN CRACKED CONCRETE UNLESS APPROVED FOR SUCH LOADING BY OSHPD.
10. PAF SHALL NOT BE USED IN PRE-STRESSED CONCRETE UNLESS NON-DESTRUCTIVE TESTING METHODS ARE USED TO LOCATE STRAND & REINFORCING PRIOR TO FASTENER INSTALLATION.
11. PAF INSTALLATION SHALL NOT NICK OR DAMAGE EXISTING CONCRETE REINFORCEMENT. SHOULD THIS OCCUR THE RDP IN RESPONSIBLE CHARGE SHALL BE NOTIFIED IMMEDIATELY. PAF SHALL BE INSTALLED 1" CLEAR OF EXISTING REINFORCEMENT. THIS MAY REQUIRE NON-DESTRUCTIVE TESTING.
12. PAF SHALL BE INSTALLED PER CURRENT ICC-ES EVALUATION REPORTS (OR REPORTS FROM OTHER TESTING AGENCIES ACCEPTABLE TO OSHPD).
13. TESTING OF EXPANSION ANCHORS SHALL BE IN ACCORDANCE WITH 2013 CBC SECTION 1913A.7.
14. EXPANSION ANCHORS SHALL BE INSTALLED TO COMPLY WITH THE MINIMUM SLAB THICKNESS REQUIREMENTS ESTABLISHED BY THE ICC-ESR FOR THE SPECIFIED ANCHOR.
15. REFER TO NOTE 6c ON CL0.00 FOR ADDITIONAL EXPANSION ANCHOR REQUIREMENTS.
16. ALL VALUES IN TABLES ARE FOR CRACKED CONCRETE & INCLUDE REDUCTION BASED ON ACI 318-11 SECTION D.3.3.4.4 REQUIREMENTS. THE ALLOWABLE STRENGTHS ARE BASED UPON THE LEAST OF THE ALLOWABLE STRENGTHS CALCULATED USING THE ICC ESRS 1917, 2427, 2502 & 3037 AND USING AN ALLOWABLE STRENGTH CONVERSION FACTOR OF 1.4.
17. ALL VALUES IN THE TABLE REFLECT ALLOWABLE STRENGTHS WITH 20% STRESS INCREASE FOR LOAD COMBINATIONS WITH OVERSTRENGTH FACTOR IN ACCORDANCE WITH ASCE 7-10 SECTION 12.4.3.3.



SECTION - COMPOSITE B-DECK

	ANCHOR DIAMETER	EFFECTIVE EMBEDMENT	MIN EDGE DISTANCE	MIN SPACING
UNDERSIDE INSTALLATION **	3/8"	2"	6"	6 3/4"
	1/2"	2"	7"	6 3/4"

** UNDERSIDE APPLICATION ONLY.

Section Title : OSHPD STANDARD SUSPENDED CEILING DETAILS — OPD No:
Sheet Title : POWER ACTUATED FASTENER (PAF) IN CONCRETE OVER METAL DECK OR CONCRETE SLAB - PAGE 2 OF 2 — CL1.11

POWER ACTUATED FASTENER (PAF) ALLOWABLE STRENGTHS INSTALLED IN CONCRETE OVER METAL DECK OR CONC SLAB

TABLE 1
POWER ACTUATED FASTENER INSTALLED IN SAND-LIGHTWEIGHT CONCRETE THROUGH METAL DECK (f'_c MIN=3000 PSI)

NOMINAL SHANK DIAMETER (IN)	MIN EMBED (IN)	MIN SPACING (IN)	MIN EDGE DISTANCE (IN)	TENSION (LB) (SEE NOTE 15)	SHEAR (LB) (SEE NOTE 15)
0.145 MIN	1 1/4	4	4	90	90

TABLE 2
POWER ACTUATED FASTENERS INSTALLED INTO STRUCTURAL SAND-LIGHTWEIGHT CONCRETE (f'_c MIN=3000 PSI)

NOMINAL SHANK DIAMETER (IN)	MIN EMBED (IN)	MIN SPACING (IN)	MIN EDGE DISTANCE (IN)	TENSION (LB) (SEE NOTE 15)	SHEAR (LB) (SEE NOTE 15)
0.145 MIN	1 1/4	4	4	90	90

TABLE 3
POWER ACTUATED FASTENER INSTALLED INTO NORMAL-WEIGHT CONCRETE (f'_c MIN=2000 PSI)

NOMINAL SHANK DIAMETER (IN)	MIN EMBED (IN)	MIN SPACING (IN)	MIN EDGE DISTANCE (IN)	TENSION (LB) (SEE NOTE 15)	SHEAR (LB) (SEE NOTE 15)
0.145 MIN	1 1/4	5.1	4	90	90

Section Title : OSHPD STANDARD SUSPENDED CEILING DETAILS — OPD No:
Sheet Title : POWER ACTUATED FASTENER (PAF) IN STEEL — CL1.12

POWER ACTUATED FASTENER (PAF) GENERAL NOTES (INSTALLED IN STEEL)

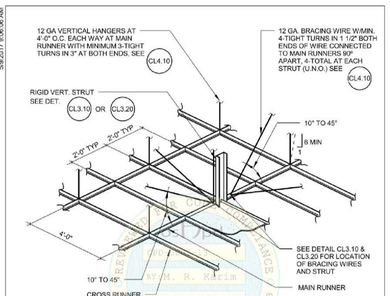
1. MINIMUM STEEL TENSILE STRENGTH F_u =58KSI
2. MINIMUM SPACING 1 INCH.
3. MINIMUM EDGE DISTANCE 1/2 INCH.
4. USE KNURLED SHANK.
5. POWER ACTUATED FASTENERS (PAF) SHALL BE INSTALLED PER CURRENT ICC-ES EVALUATION EVALUATION REPORTS OR REPORTS FROM OTHER TESTING AGENCIES ACCEPTABLE TO OSHPD.
6. SEE GENERAL NOTE 6c & 6e ON CL0.00 FOR PAF REQUIREMENTS & ATTACHMENT TO STEEL.
7. POWER ACTUATED FASTENER (PAF), POWEDER DRIVEN FASTENERS (PDF), POWER DRIVEN PINS (PDP), SHOT PINS, ARE COMMON NOMINCLATURES THAT ALL REPRESENT THE SAME FASTENER DESCRIBED HERE IN.
8. ALLOWABLE STRENGTHS SHALL BE COMPARED TO ALLOWABLE STRESS DESIGN (ASD) LEVEL DEMAND IN ACCORDANCE WITH THE 2013 CBC SECTION 1605A.3.1.
9. ALLOWABLE STRENGTHS ARE FOR SINGLE FASTENERS, WHICH MEET THE REQUIREMENTS PER NOTES ABOVE. THE ALLOWABLE STRENGTHS ARE BASED UPON THE LEAST OF THE ALLOWABLE STRENGTHS LISTED IN THE ESRS 1799, 2024, 2138 & 2269.
10. TOTAL ALLOWABLE TENSION, SHEAR OR TENSION SHEAR COMBINATION SHALL NOT EXCEED 250 LBS. AS PERMITTED BY THE EXCEPTION TO ASCE 7-10 SECTION 13.4.5.

NOMINAL SHANK DIAMETER (IN)	STEEL THICKNESS (IN)							
	3/16		1/4		3/8		1/2	
	TENSION (LB)	SHEAR (LB)	TENSION (LB)	SHEAR (LB)	TENSION (LB)	SHEAR (LB)	TENSION (LB)	SHEAR (LB)
0.145 MIN	155	250	230	250	250	250	190	220

Section Title : OSHPD STANDARD SUSPENDED CEILING DETAILS — OPD No:
Sheet Title : POWER ACTUATED FASTENER (PAF) GENERAL NOTES (INSTALLED IN CONCRETE FILLED METAL B DECK) — CL1.13

POWER ACTUATED FASTENER (PAF) GENERAL NOTES (INSTALLED IN CONCRETE FILLED METAL B-DECK)

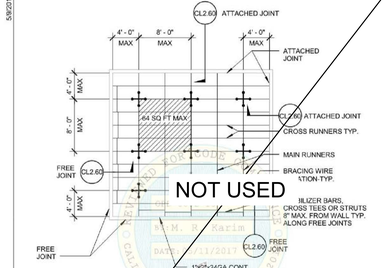
1. POWER ACTUATED FASTENER (PAF), POWER DRIVEN FASTENERS (PDF), POWER DRIVEN PINS (PDP), SHOT PINS ALL REPRESENT THE SAME FASTENER AND WILL HEREAFTER BE REFERRED TO AS POWER ACTUATED FASTENERS (PAF).
2. ALLOWABLE STRENGTHS SHALL BE COMPARED TO ALLOWABLE STRESS DESIGN (ASD) LEVEL DEMAND IN ACCORDANCE WITH THE 2013 CBC SECTION 1605A.3.1.
3. ALLOWABLE STRENGTHS ARE FOR A SINGLE FASTENER WHICH MEET REQUIREMENTS PER SECTION BELOW AND TABLES ON CL1.14 .THE ALLOWABLE STRENGTHS ARE BASED UPON THE LEAST OF THE ALLOWABLE STRENGTHS LISTED IN ICC ESRS 2024, 2138, & 2269.
4. EXPANSION ANCHORS STRENGTH f'c = 3000 PSI FOR NORMAL WEIGHT CONCRETE AND f'c = 3000 PSI FOR ALL LIGHT WEIGHT CONCRETE UNLESS NOTED OTHERWISE.
5. POWER ACTUATED FASTENER INSTALLED THROUGH LOW FLUTES OF THE METAL DECK SHALL MEET THE REQUIREMENTS OF THE INSTALLATION CRITERIA AND SECTION BELOW.
6. MINIMUM EDGE DISTANCE OF 7/8" FROM THE EDGE OF METAL DECK WEB AND 4" FROM THE EDGE OF THE DECK.
7. STEEL DECK TO BE A MINIMUM OF 20 GA. B-DECK.
8. CONCRETE FILL DEPTH ABOVE THE TOP OF METAL DECK MUST BE A MINIMUM OF 2 1/2" AT NORMAL WEIGHT OR 3" LIGHT WEIGHT CONCRETE COMPOSITE METAL DECK.
9. PAF SHALL NOT BE USED TO R



NOTES:

1. SEE SUSPENDED CEILING NOTES #13 & #14 ON CL0.02
2. STRUTS SHALL NOT REPLACE HANGER WIRES.
3. FOR CONDITIONS AT CORRIDOR SEE DRAWING NO. CL2.30

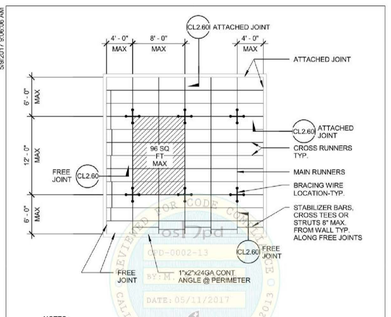
Section Title: OSHPD STANDARD SUSPENDED CEILING DETAILS	OPD No:
Sheet Title: SUSPENDED CEILING BRACING ASSEMBLY	CL2.10



NOTES:

1. BRACING WIRES AND COMP. STRUT SHALL OCCUR AT EVERY 64 SQ. FT. MAX. IN ROOMS OVER 64 SQ. FT.
2. RDP MAY ELECT TO SPECIFY TIGHTER SPACING BETWEEN BRACING WIRES AND COMP. STRUTS TO ALLOW SMALLER ANCHORS PER SCHEDULES ON SHEETS CL4.31 & CL6.60.

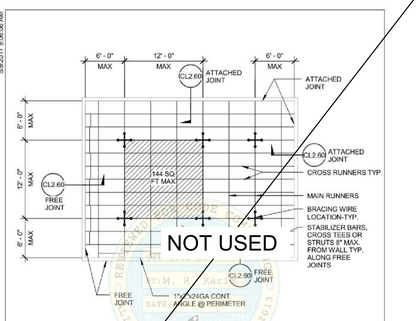
Section Title: OSHPD STANDARD SUSPENDED CEILING DETAILS	OPD No:
Sheet Title: TYPICAL CEILING PLAN FOR 1.73 < S_{DS} ≤ 2.50 AND z/h <= 1.0	CL2.20



NOTES:

1. BRACING WIRES AND COMP. STRUT SHALL OCCUR AT EVERY 96 SQ. FT. MAX. IN ROOMS OVER 96 SQ. FT.
2. RDP MAY ELECT TO SPECIFY TIGHTER SPACING AND COMP. STRUTS TO ALLOW SMALLER ANCHORS PER SCHEDULES ON SHEETS CL4.31 & CL6.60.

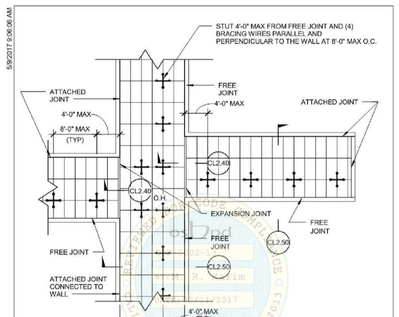
Section Title: OSHPD STANDARD SUSPENDED CEILING DETAILS	OPD No:
Sheet Title: TYPICAL CEILING PLAN FOR 1.15 < S_{DS} ≤ 1.73 AND z/h <= 1.0	CL2.21



NOTES:

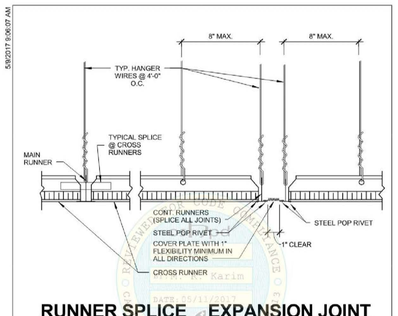
1. BRACING WIRES AND COMP. STRUT SHALL OCCUR AT EVERY 144 SQ. FT. MAX. IN ROOMS OVER 144 SQ. FT.
2. RDP MAY ELECT TO SPECIFY TIGHTER SPACING AND COMP. STRUTS TO ALLOW SMALLER ANCHORS PER SCHEDULES ON SHEETS CL4.31 & CL6.60.

Section Title: OSHPD STANDARD SUSPENDED CEILING DETAILS	OPD No:
Sheet Title: TYPICAL CEILING PLAN FOR S_{DS} ≤ 1.15 AND z/h <= 1.0	CL2.22



LOCATION OF EXPANSION/SLIP JOINTS IN CORRIDORS

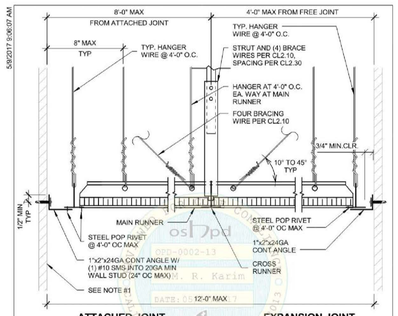
Section Title: OSHPD STANDARD SUSPENDED CEILING DETAILS	OPD No:
Sheet Title: SUSPENDED ACOUSTICAL CEILING- CORRIDOR CEILING PLAN	CL2.30



RUNNER SPLICE EXPANSION JOINT

EXPANSION JOINT AT INTERSECTION OF CORRIDORS, JUNCTIONS OF CORRIDORS AND LOBBIES, SIMILAR AREAS AND CEILING OVER 2500 SFT

Section Title: OSHPD STANDARD SUSPENDED CEILING DETAILS	OPD No:
Sheet Title: SUSPENDED ACOUSTICAL CEILING - EXPANSION JOINT AT INTERSECTIONS	CL2.40



ATTACHED JOINT **EXPANSION JOINT**

ACCEPTABLE EXITWAY DETAILS

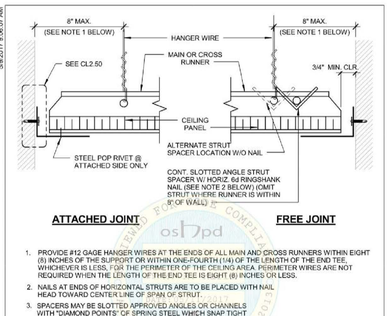
NOTES:

1. PERIMETER WALLS SHALL BE DESIGNED TO CARRY TRIBUTARY LATERAL FORCES PER TABLE BELOW. RDP TO VERIFY. RDP TO SPECIFY CONNECTION OF BACKING TO STUDS

S_{DS}	Fp
S_{DS} ≤ 1.15	9.3 plf
1.15 < S_{DS} ≤ 1.73	14.0 plf
1.73 < S_{DS} ≤ 2.50	20.9 plf

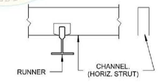
2. SEISMIC BRACING WIRES AND STRUTS IN ACCORDANCE WITH PAGES CL2.20, CL2.21, AND CL2.22 SHALL BE PERMITTED IN LIEU OF DESIGNING PERIMETER WALLS FOR SEISMIC FORCES AND BRACING SYSTEM SHOWN ON PAGE CL2.30 AND THIS PAGE.
3. STEEL POP RIVET SHALL HAVE MINIMUM ALLOWABLE SHEAR STRENGTH OF 120# AND ULTIMATE SHEAR STRENGTH OF 300#.

Section Title: OSHPD STANDARD SUSPENDED CEILING DETAILS	OPD No:
Sheet Title: TYPICAL CEILING SECTION AT EXITWAY CORRIDORS	CL2.50



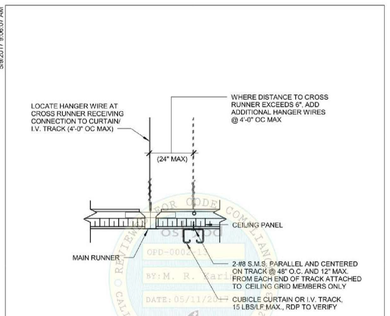
ATTACHED JOINT **FREE JOINT**

1. PROVIDE #12 GAGE HANGER WIRES AT THE ENDS OF ALL MAIN AND CROSS RUNNERS WITHIN EIGHT (8) INCHES OF THE SUPPORT OR WITHIN ONE-FOURTH (1/4) OF THE LENGTH OF THE END TEE, WHICHEVER IS LESS, FOR THE PERIMETER OF THE CEILING AREA. PERIMETER WIRES ARE NOT REQUIRED WHEN THE LENGTH OF THE END TEE IS EIGHT (8) INCHES OR LESS.
2. NAILS AT ENDS OF HORIZONTAL STRUTS ARE TO BE PLACED WITH NAIL HEAD TOWARD CENTER LINE OF SPAN OF STRUT.
3. SPACERS MAY BE SLOTTED APPROVED ANGLES OR CHANNELS WITH "DIAMOND POINTS" OF SPRING STEEL WHICH SNAP TIGHT TO PREVENT MOVEMENT OF STRUT.
4. STEEL POP RIVETS SHALL HAVE MINIMUM ALLOWABLE SHEAR STRENGTH OF 120# AND ULTIMATE SHEAR STRENGTH OF 300#.

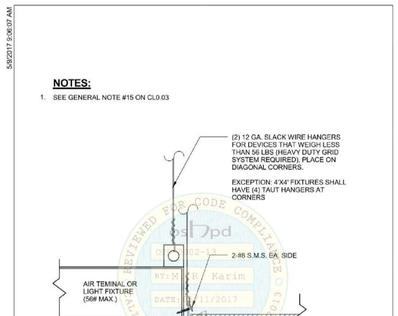


APPROVED SPACER

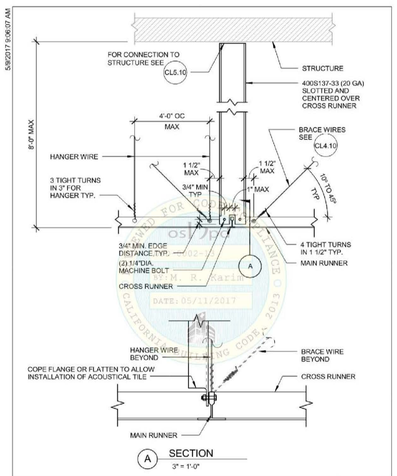
Section Title: OSHPD STANDARD SUSPENDED CEILING DETAILS	OPD No:
Sheet Title: CEILING PERIMETER INCLUDING NON-EXITWAY CORRIDORS	CL2.60



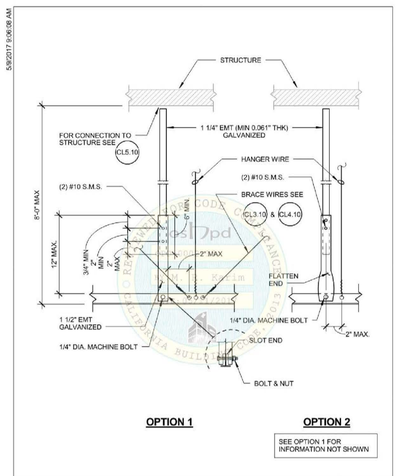
Section Title: OSHPD STANDARD SUSPENDED CEILING DETAILS	OPD No:
Sheet Title: SUSPENDED ACOUSTICAL CEILING - CUBICLE CURTAIN I.V. TRACK	CL2.70



Section Title: OSHPD STANDARD SUSPENDED CEILING DETAILS	OPD No:
Sheet Title: SUSPENDED ACOUSTICAL CEILING - LIGHT FIXTURES/ AIR TERMINAL SUPPORT DETAIL	CL2.80



Section Title: OSHPD STANDARD SUSPENDED CEILING DETAILS	OPD No:
Sheet Title: SUSPENDED ACOUSTICAL CEILING - CHANNEL TYPE STRUT	CL3.10



OPTION 1 **OPTION 2**

SEE OPTION 1 FOR INFORMATION NOT SHOWN

Section Title: OSHPD STANDARD SUSPENDED CEILING DETAILS	OPD No:
Sheet Title: SUSPENDED ACOUSTICAL CEILING - TUBE TYPE STRUT	CL3.20

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SKA Project Number
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HCAI Number
S221296-21-00

HCAI seal/signature

REVIEWED IN ACCORDANCE WITH THE REQUIREMENTS OF 7 CCR
APPROVED
Department of Health Care Access & Information
Office of Statewide Hospital Planning & Development
2/13/2023, 11:24:21 PM
S221296-21-00
Pedar Pomme

Seal/Signature

LICENSED ARCHITECT C37097 EXP. 8/30/2023 STATE OF CALIFORNIA

Issued for
HCAI SUBMITTAL

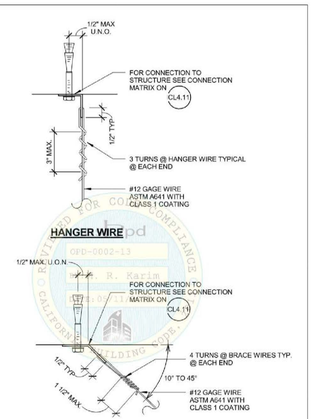
Drawn by JS
Checked by CL

Project Name
HOSPITAL REPLACEMENT BUILDING-
NUCLEAR MEDICINE SUITE RELOCATION

Sheet Title
SUSPENDED CEILING BRACING ASSEMBLY DETAILS & STRUT DETAILS

Date 08/05/2022
Scale AS NOTED
Sheet Number A8.2

30 X 42



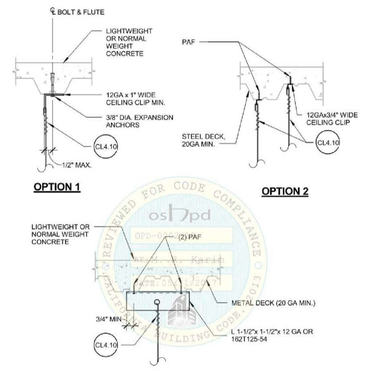
Section Title: OSHPD STANDARD SUSPENDED CEILING DETAILS — OPD No:

Sheet Title: HANGER AND BRACING WIRE CONNECTION - TYPICAL WIRE TURNS — CL4.10

STRUCTURAL CONDITION OF FLOOR/ ROOF ABOVE SUSPENDED CEILING	APPLICABLE HANGER WIRE DETAIL	APPLICABLE BRACING WIRE DETAIL
CONCRETE OVER METAL DECK	CL4.21	CL4.31
CONCRETE SLAB, BEAM, OR JOIST	CL4.22	CL4.32
STRUCTURAL STEEL	CL4.23	CL4.33
SAWN TIMBER	CL4.24	CL4.34
METAL STUD WALL	CL4.25	CL4.35

Section Title: OSHPD STANDARD SUSPENDED CEILING DETAILS — OPD No:

Sheet Title: HANGER AND BRACING WIRE CONNECTION MATRIX — CL4.11

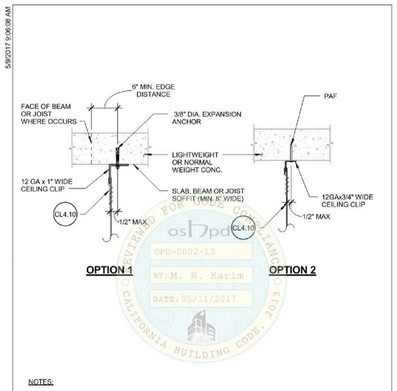


NOTES:

1. LOAD TEST IN ACCORDANCE WITH GENERAL NOTE 14(g), PAGE CL0.02 SHALL BE REQUIRED
2. REFER TO CL4.10 FOR ADDITIONAL DETAILS

Section Title: OSHPD STANDARD SUSPENDED CEILING DETAILS — OPD No:

Sheet Title: HANGER WIRE CONNECTION TO CONCRETE OVER METAL DECK — CL4.21

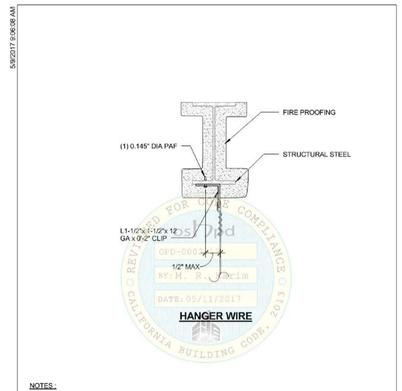


NOTES:

1. LOAD TEST IN ACCORDANCE WITH GENERAL NOTE 14(g), PAGE CL0.02 SHALL BE REQUIRED
2. PRIOR TO INSTALLATION, REINFORCING/PRESTRESSING BAR LOCATIONS SHALL BE DETERMINED BY NON-DESTRUCTIVE TESTING
3. REFER TO CL4.10 FOR ADDITIONAL DETAILS

Section Title: OSHPD STANDARD SUSPENDED CEILING DETAILS — OPD No:

Sheet Title: HANGER WIRE CONNECTION TO CONCRETE SLAB, BEAM, OR JOIST — CL4.22

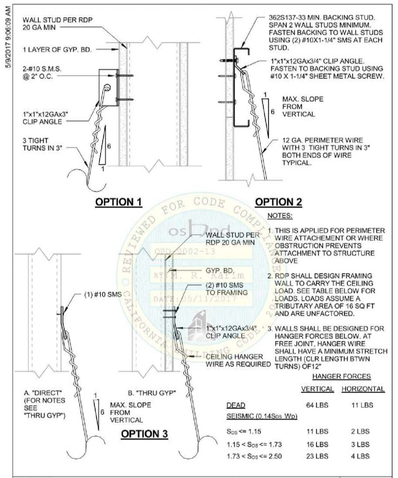


NOTES:

1. BEAM FLANGE THICKNESS SHALL NOT BE LESS THAN 3/16" OR MORE THAN 3/8"
2. FRAMING MEMBERS SHALL BE DESIGNED TO CARRY THE CEILING LOADS, RDP TO VERIFY
3. RDP IN RESPONSIBLE CHARGE, I.O.R. AND CONTRACTOR SHALL VERIFY THAT NO PAF IS INSTALLED IN THE PROTECTED ZONE OF ANY STEEL MEMBER, SEE ANSI/AISC 341-10.

Section Title: OSHPD STANDARD SUSPENDED CEILING DETAILS — OPD No:

Sheet Title: HANGER WIRE CONNECTION TO STRUCTURAL STEEL — CL4.23



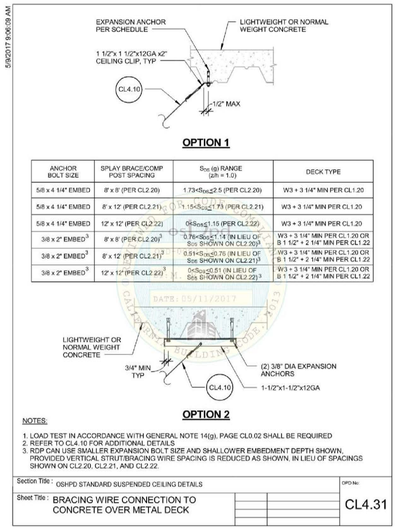
NOTES:

1. THIS IS APPLIED FOR PERIMETER WIRE ATTACHMENT OR WHERE OBSTRUCTION PREVENTS ATTACHMENT TO STRUCTURE ABOVE.
2. RDP SHALL DESIGN FRAMING WALL TO CARRY THE CEILING LOAD. SEE TABLE BELOW FOR LOADS. LOADS ASSUME A TRIBUTARY AREA OF 16 SQ FT AND ARE UNFACTORED.
3. WALLS SHALL BE DESIGNED FOR HANGER FORCES BELOW. AT FREE JOINT, HANGER WIRE SHALL HAVE A MINIMUM STRETCH LENGTH (CLR LENGTH BTWN TURNS) OF 12"

	HANGER FORCES VERTICAL	HORIZONTAL
DEAD	64 LBS	11 LBS
(SEISMIC (0.14S_{DS} W_P))		
S_{DS} <= 1.15	11 LBS	2 LBS
1.15 < S_{DS} <= 1.73	16 LBS	3 LBS
1.73 < S_{DS} <= 2.50	23 LBS	4 LBS

Section Title: OSHPD STANDARD SUSPENDED CEILING DETAILS — OPD No:

Sheet Title: HANGER WIRE CONNECTION TO METAL STUD WALL — CL4.25



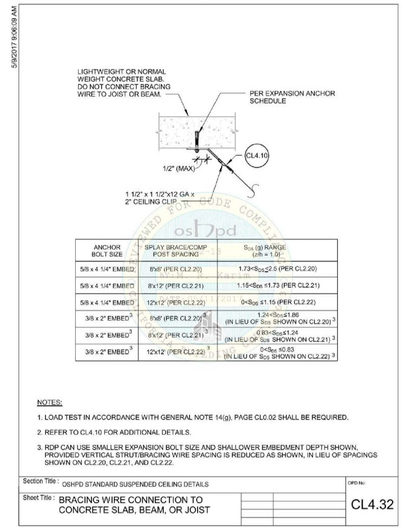
ANCHOR BOLT SIZE	SPLAY BRACE/COMP POST SPACING	S_{DS} (g) RANGE (ch = 1.0)	DECK TYPE
5/8 x 4 1/4" EMBED	8' x 8' (PER CL2.20)	1.73<S_{DS}≤2.5 (PER CL2.20)	W3 + 3 1/4" MIN PER CL1.20
5/8 x 4 1/4" EMBED	8' x 12' (PER CL2.21)	1.15<S_{DS}≤1.73 (PER CL2.21)	W3 + 3 1/4" MIN PER CL1.20
5/8 x 4 1/4" EMBED	12' x 12' (PER CL2.22)	0<S_{DS}≤1.15 (PER CL2.22)	W3 + 3 1/4" MIN PER CL1.20
3/8 x 2" EMBED[3]	8' x 8' (PER CL2.20)[3]	0.76<S_{DS}≤1.14 (IN LIEU OF S_{DS} SHOWN ON CL2.20)[3]	W3 + 3 1/4" MIN PER CL1.20 OR B 1 1/2" + 2 1/4" MIN PER CL1.22
3/8 x 2" EMBED[3]	8' x 12' (PER CL2.21)[3]	0.51<S_{DS}≤0.76 (IN LIEU OF S_{DS} SHOWN ON CL2.21)[3]	W3 + 3 1/4" MIN PER CL1.20 OR B 1 1/2" + 2 1/4" MIN PER CL1.22
3/8 x 2" EMBED[3]	12' x 12' (PER CL2.22)[3]	0<S_{DS}≤0.51 (IN LIEU OF S_{DS} SHOWN ON CL2.22)[3]	W3 + 3 1/4" MIN PER CL1.20 OR B 1 1/2" + 2 1/4" MIN PER CL1.22

NOTES:

1. LOAD TEST IN ACCORDANCE WITH GENERAL NOTE 14(g), PAGE CL0.02 SHALL BE REQUIRED
2. REFER TO CL4.10 FOR ADDITIONAL DETAILS
3. RDP CAN USE SMALLER EXPANSION BOLT SIZE AND SHALLOWER EMBEDMENT DEPTH SHOWN, PROVIDED VERTICAL STRUT/BRACING WIRE SPACING IS REDUCED AS SHOWN, IN LIEU OF SPACINGS SHOWN ON CL2.20, CL2.21, AND CL2.22.

Section Title: OSHPD STANDARD SUSPENDED CEILING DETAILS — OPD No:

Sheet Title: BRACING WIRE CONNECTION TO CONCRETE OVER METAL DECK — CL4.31



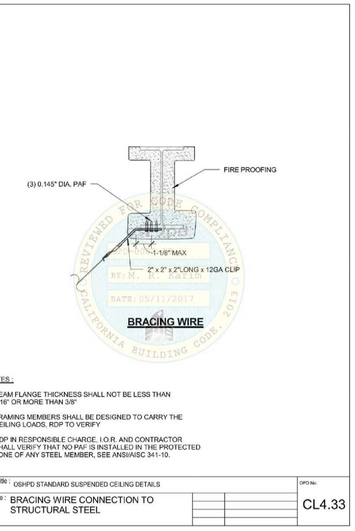
ANCHOR BOLT SIZE	SPLAY BRACE/COMP POST SPACING	S_{DS} (g) RANGE (ch = 1.0)
5/8 x 4 1/4" EMBED	8'x8' (PER CL2.20)	1.73<S_{DS}≤2.5 (PER CL2.20)
5/8 x 4 1/4" EMBED	8'x12' (PER CL2.21)	1.15<S_{DS} ≤1.73 (PER CL2.21)
5/8 x 4 1/4" EMBED	12'x12' (PER CL2.22)	0<S_{DS} ≤1.15 (PER CL2.22)
3/8 x 2" EMBED[3]	8'x8' (PER CL2.20)[3]	1.24<S_{DS}≤1.86 (IN LIEU OF S_{DS} SHOWN ON CL2.20)[3]
3/8 x 2" EMBED[3]	8'x12' (PER CL2.21)[3]	0.83<S_{DS}≤1.24 (IN LIEU OF S_{DS} SHOWN ON CL2.21)[3]
3/8 x 2" EMBED[3]	12'x12' (PER CL2.22)[3]	0<S_{DS} ≤0.83 (IN LIEU OF S_{DS} SHOWN ON CL2.22)[3]

NOTES:

1. LOAD TEST IN ACCORDANCE WITH GENERAL NOTE 14(g), PAGE CL0.02 SHALL BE REQUIRED.
2. REFER TO CL4.10 FOR ADDITIONAL DETAILS.
3. RDP CAN USE SMALLER EXPANSION BOLT SIZE AND SHALLOWER EMBEDMENT DEPTH SHOWN; PROVIDED VERTICAL STRUT/BRACING WIRE SPACING IS REDUCED AS SHOWN, IN LIEU OF SPACINGS SHOWN ON CL2.20, CL2.21, AND CL2.22.

Section Title: OSHPD STANDARD SUSPENDED CEILING DETAILS — OPD No:

Sheet Title: BRACING WIRE CONNECTION TO CONCRETE SLAB, BEAM, OR JOIST — CL4.32

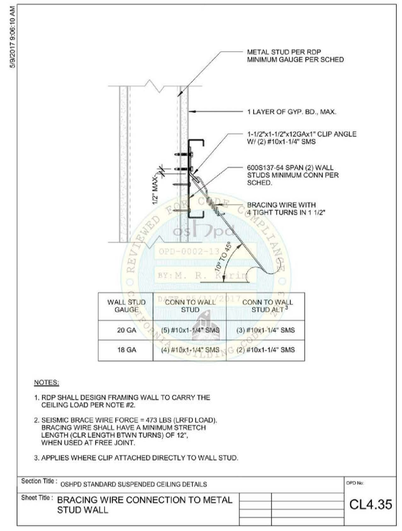


NOTES:

1. BEAM FLANGE THICKNESS SHALL NOT BE LESS THAN 3/16" OR MORE THAN 3/8"
2. FRAMING MEMBERS SHALL BE DESIGNED TO CARRY THE CEILING LOADS, RDP TO VERIFY
3. RDP IN RESPONSIBLE CHARGE, I.O.R. AND CONTRACTOR SHALL VERIFY THAT NO PAF IS INSTALLED IN THE PROTECTED ZONE OF ANY STEEL MEMBER, SEE ANSI/AISC 341-10.

Section Title: OSHPD STANDARD SUSPENDED CEILING DETAILS — OPD No:

Sheet Title: BRACING WIRE CONNECTION TO STRUCTURAL STEEL — CL4.33



WALL STUD GAUGE	CONN TO WALL STUD	CONN TO WALL STUD at T
20 GA	(5) #10x1-1/4" SMS	(3) #10x1-1/4" SMS
18 GA	(4) #10x1-1/4" SMS	(2) #10x1-1/4" SMS

NOTES:

1. RDP SHALL DESIGN FRAMING WALL TO CARRY THE CEILING LOAD PER NOTE #2.
2. SEISMIC BRACE WIRE FORCE = 473 LBS (LRFD LOAD). BRACING WIRE SHALL HAVE A MINIMUM STRETCH LENGTH (CLR LENGTH BTWN TURNS) OF 12", WHEN USED AT FREE JOINT.
3. APPLIES WHERE CLIP ATTACHED DIRECTLY TO WALL STUD.

Section Title: OSHPD STANDARD SUSPENDED CEILING DETAILS — OPD No:

Sheet Title: BRACING WIRE CONNECTION TO METAL STUD WALL — CL4.35

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HCAI Number
S221296-21-00

HCAI seal/signature

REVIEWED IN ACCORDANCE WITH THE REQUIREMENTS OF 7 CA CCR
APPROVED
Department of Health Care Access & Information
Office of Statewide Hospital Planning & Development
2/13/2023, 11:24:21 PM
S221296-21-00
Pedar Pomme

Seal/Signature

LICENSED ARCHITECT C37097 EXP. 8/30/2023 STATE OF CALIFORNIA

Issued for
HCAI SUBMITTAL

Drawn by JS
Checked by CL

Project Name
HOSPITAL REPLACEMENT BUILDING-
NUCLEAR MEDICINE SUITE RELOCATION

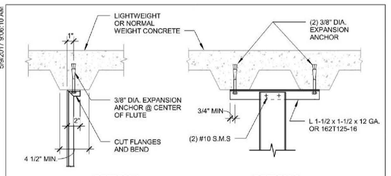
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HANGER & BRACING WIRE CONNECTION DETAILS

Date 08/05/2022
Scale AS NOTED
Sheet Number
A8.3

30 X 42

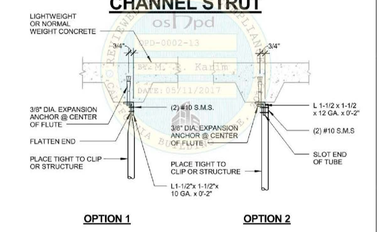
STRUCTURAL CONDITION OF FLOOR / ROOF ABOVE STRUT	APPLICABLE DETAIL
CONCRETE OVER METAL DECK	CL5.20
CONCRETE SLAB, BEAM, OR JOIST	CL5.30
STRUCTURAL STEEL	CL5.40
SAWN TIMBER WITH GYPSUM BOARD	CL5.50
SAWN TIMBER WITHOUT GYPSUM BOARD	CL5.60

Section Title: OSHPD STANDARD SUSPENDED CEILING DETAILS — OPD No:
Sheet Title: STRUT CONNECTION - CONNECTION MATRIX — CL5.10



OPTION 1 **OPTION 2**

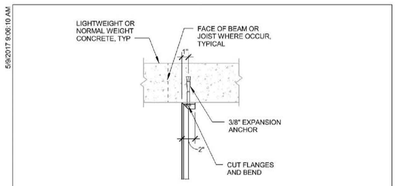
CHANNEL STRUT



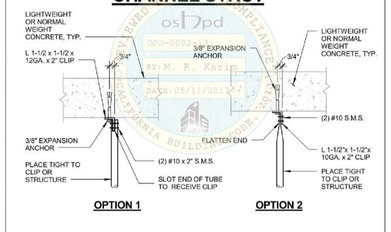
OPTION 1 **OPTION 2**

TUBE STRUT

Section Title: OSHPD STANDARD SUSPENDED CEILING DETAILS — OPD No:
Sheet Title: STRUT CONNECTION TO CONCRETE OVER METAL DECK — CL5.20



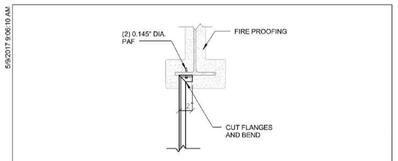
CHANNEL STRUT



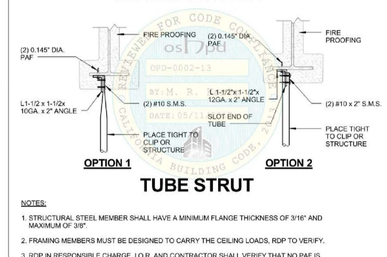
OPTION 1 **OPTION 2**

TUBE STRUT

Section Title: OSHPD STANDARD SUSPENDED CEILING DETAILS — OPD No:
Sheet Title: STRUT CONNECTION TO CONCRETE SLAB, BEAM, JOIST SOFFIT — CL5.30



CHANNEL STRUT



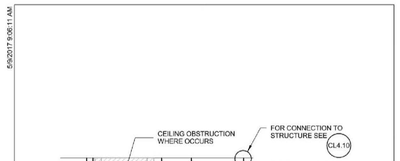
OPTION 1 **OPTION 2**

TUBE STRUT

NOTES:

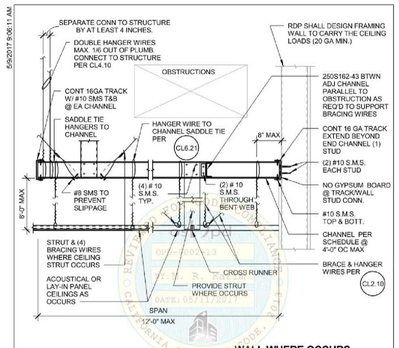
1. STRUCTURAL STEEL MEMBER SHALL HAVE A MINIMUM FLANGE THICKNESS OF 3/16" AND MAXIMUM OF 3/8".
2. FRAMING MEMBERS MUST BE DESIGNED TO CARRY THE CEILING LOADS. RDP TO VERIFY.
3. RDP IN RESPONSIBLE CHARGE, I.O.R. AND CONTRACTOR SHALL VERIFY THAT NO PAF IS INSTALLED IN THE PROTECTED ZONE OF ANY STEEL MEMBER, SEE ANSI/AISC 341-10.
4. SEE PAGES CL5.20 & CL5.30 FOR ADDITIONAL INFORMATION.

Section Title: OSHPD STANDARD SUSPENDED CEILING DETAILS — OPD No:
Sheet Title: STRUT CONNECTION TO STRUCTURAL STEEL — CL5.40

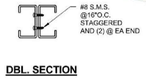


TRAPEZE SUPPORT

Section Title: OSHPD STANDARD SUSPENDED CEILING DETAILS — OPD No:
Sheet Title: OBSTRUCTION - TRAPEZE CONDITION — CL6.10



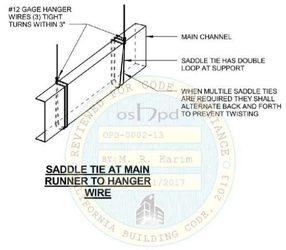
WALL WHERE OCCURS



DBL. SECTION

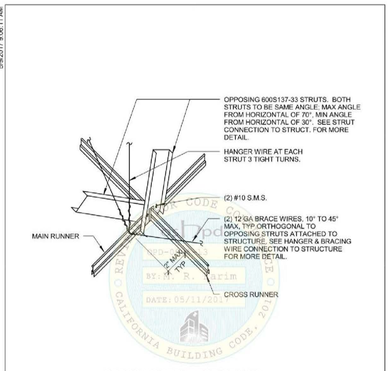
SPAN	SECTION
4'-0"	250S162-43
8'-0"	400S162-54
12'-0"	(2) 400S162-54

Section Title: OSHPD STANDARD SUSPENDED CEILING DETAILS — OPD No:
Sheet Title: OBSTRUCTION-BRIDGE AT LARGE OFFSET CONDITION — CL6.20



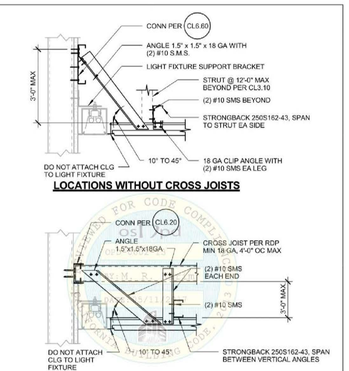
SADDLE TIE AT MAIN RUNNER TO HANGER WIRE

Section Title: OSHPD STANDARD SUSPENDED CEILING DETAILS — OPD No:
Sheet Title: SADDLE TIE DETAIL — CL6.21



OPPOSING STRUT FOR CEILING

Section Title: OSHPD STANDARD SUSPENDED CEILING DETAILS — OPD No:
Sheet Title: OBSTRUCTION-COUNTER SLOPING STRUTS — CL6.30



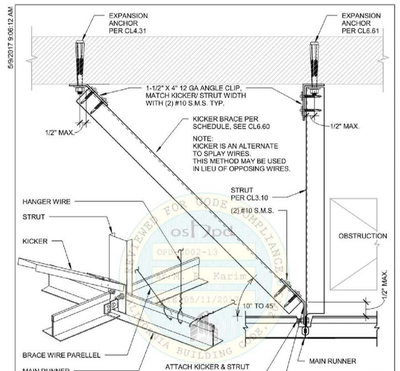
LOCATIONS WITHOUT CROSS JOISTS

LOCATIONS WITH CROSS JOISTS

NOTES:

1. RDP SHALL VERIFY CROSS JOIST, STRONGBACK, STRUT, BRACE, AND SUPPORTING WALL.
2. DETAILS IN THIS PAGE ARE ONLY PERMITTED AT THE ATTACHED END OF THE CEILING AND ARE NOT PERMITTED AT THE FREE JOINT.
3. ALL BRACING AND HANGER WIRES PER CL3.10 REQUIRED.

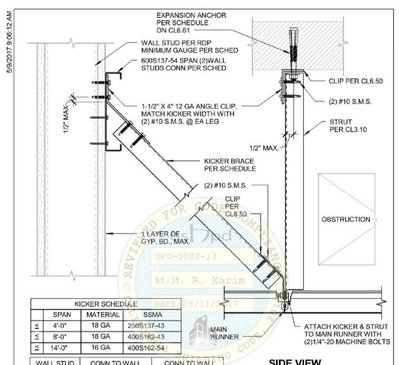
Section Title: OSHPD STANDARD SUSPENDED CEILING DETAILS — OPD No:
Sheet Title: OBSTRUCTION-RECESSED LIGHT AT PERIMETER — CL6.40



ISOMETRIC VIEW **SIDE VIEW**

T-BAR CEILING - WIRE OBSTRUCTION DETAIL W/ STUD KICKER, LESS BRACING WIRES, TO DECK.

Section Title: OSHPD STANDARD SUSPENDED CEILING DETAILS — OPD No:
Sheet Title: OBSTRUCTION-STUD KICKER TO OVERHEAD — CL6.50



KICKER SCHEDULE			
	SPAN	MATERIAL	SSMA
≤	4'-0"	18 GA	250S137-43
≤	8'-0"	18 GA	400S162-43
≤	14'-0"	16 GA	400S162-54

WALL STUD GAUGE	CONN TO WALL STUD	CONN TO WALL STUD ALT.[3]
20 GA	(5) #10x1-1/4" SMS	(3) #10x1-1/4" SMS
18 GA	(4) #10x1-1/4" SMS	(2) #10x1-1/4" SMS

SIDE VIEW

NOTE:
1. KICKER BRACING IS AN ALTERNATE TO BRACING WIRES. THIS METHOD MAY BE USED IN LIEU OF OPPOSING WIRES AT ATTACHED JOINT ONLY. NOT PERMITTED AT FREE JOINT.
2. RDP SHALL DESIGN FRAMED WALLS TO CARRY THE CEILING LOADS
3. APPLIES WHERE CLIP ATTACHED DIRECTLY TO WALL STUD.

T-BAR CEILING - WIRE OBSTRUCTION DETAIL W/ STUD KICKER, LESS BRACING WIRES, TO WALL

Section Title: OSHPD STANDARD SUSPENDED CEILING DETAILS — OPD No:
Sheet Title: OBSTRUCTION-STUD KICKER TO WALL - PAGE 1 OF 2 — CL6.60

ANCHOR BOLT SIZE	SPLAY BRACE/COMP POST SPACING	SDS (g) RANGE (ch = 1.0)	DECK TYPE
5/8 x 4 1/4" EMBED	8' x 8' (PER CL2.20)	$1.73 \cdot S_{DS} \geq 2.5$ (PER CL2.20)	W3 + 3 1/4" MIN PER CL1.20
5/8 x 4 1/4" EMBED	8' x 12' (PER CL2.21)	$1.15 \cdot S_{DS} \geq 1.73$ (PER CL2.21)	W3 + 3 1/4" MIN PER CL1.20
5/8 x 4 1/4" EMBED	12' x 12' (PER CL2.22)	$0 \cdot S_{DS} \leq 1.15$ (PER CL2.22)	W3 + 3 1/4" MIN PER CL1.20
3/8 x 2" EMBED[1]	8' x 8' (PER CL2.20)	$0.90 \cdot S_{DS} \leq 1.35$ (IN LIEU OF S_{DS} SHOWN ON CL2.20)[1]	W3 + 3 1/4" MIN PER CL1.20 OR B 1 1/2" + 2 1/4" MIN PER CL1.22
3/8 x 2" EMBED[1]	8' x 12' (PER CL2.21)[1]	$0.60 \cdot S_{DS} \leq 0.90$ (IN LIEU OF S_{DS} SHOWN ON CL2.21)[1]	W3 + 3 1/4" MIN PER CL1.20 OR B 1 1/2" + 2 1/4" MIN PER CL1.22
3/8 x 2" EMBED[1]	12' x 12' (PER CL2.22)[1]	$0 \cdot S_{DS} \leq 0.60$ (IN LIEU OF S_{DS} SHOWN ON CL2.22)[1]	W3 + 3 1/4" MIN PER CL1.20 OR B 1 1/2" + 2 1/4" MIN PER CL1.22

NOTE:
1. RDP CAN USE SMALLER EXPANSION BOLT SIZE AND SHALLOWER EMBEDMENT DEPTH SHOWN, PROVIDED VERTICAL STRUT/BRACING WIRE SPACING IS REDUCED AS SHOWN, IN LIEU OF SPACINGS SHOWN ON CL2.20, CL2.21, AND CL2.22.

Section Title: OSHPD STANDARD SUSPENDED CEILING DETAILS — OPD No:
Sheet Title: OBSTRUCTION-STUD KICKER TO WALL - PAGE 2 OF 2 — CL6.61

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HCAI Number
S221296-21-00

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APPROVED
Department of Health Care Access & Information
Office of Statewide Hospital Planning & Development
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S221296-21-00
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LICENSED ARCHITECT C37097 EXP. 8/30/2023 STATE OF CALIFORNIA

Issued for
HCAI SUBMITTAL

Drawn by JS
Checked by CL

Project Name
HOSPITAL REPLACEMENT BUILDING-
NUCLEAR MEDICINE SUITE RELOCATION

Sheet Title
STRUT CONNECTION DETAILS & SPECIAL DETAILS

Date 08/05/2022
Scale AS NOTED

Sheet Number
A8.4

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SUSPENDED GYP BOARD CEILING
GENERAL NOTES

1. CONSTRUCTION, WORKMANSHIP AND MATERIAL SHALL CONFORM TO THE 2013 CALIFORNIA BUILDING STANDARDS CODE (CBSC 2013).
2. THE CONTRACTOR SHALL NOTIFY OSHPD AND THE REGISTERED DESIGN PROFESSIONAL (RDP) IN RESPONSIBLE CHARGE WHERE A CONFLICT OR DISCREPANCY OCCURS BETWEEN THE CONSTRUCTION DRAWINGS AND ANY OTHER PORTION OF THE CONSTRUCTION DOCUMENTS, FIELD CONDITIONS, OR WHERE ANY CONDITIONS ARISE NOT COVERED BY THESE DOCUMENTS WHEREIN WORK WILL NOT COMPLY WITH CODE REQUIREMENTS.
3. THE INTENT OF THE DRAWINGS AND SPECIFICATIONS IS TO CONSTRUCT THE HOSPITAL BUILDING IN ACCORDANCE WITH THE CALIFORNIA BUILDING STANDARDS CODE, 2013 (CBSC 2013). SHOULD ANY CONDITION DEVELOP NOT COVERED BY THE APPROVED CONSTRUCTION DOCUMENTS WHEREIN THE WORK WILL NOT COMPLY WITH CBSC 2013, A CHANGE ORDER DETAILING AND SPECIFYING THE REQUIRED WORK SHALL BE SUBMITTED TO AND APPROVED BY OSHPD BEFORE PROCEEDING WITH THE WORK.
4. GALVANIZED METAL STUDS, TRACKS AND SHEET STEEL SHALL CONFORM TO ASTM A653-11 MATERIAL OR OTHER EQUIVALENT ASTM LISTED MATERIALS IN SECTION A2.1 OF THE AISI S200-07/S2-10 NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS WITH SUPPLEMENT 2, DATED 2010, WITH A MINIMUM YIELD STRENGTH OF 33 KSI FOR 43 MIL (18 GAGE) AND LIGHTER AND MINIMUM YIELD STRENGTH OF 50 KSI FOR HEAVIER GAGES.

   METAL STUDS AND TRACKS SHALL BE OF SIZE, THICKNESS AND SECTION PROPERTIES SHOWN ON TABLES 1-1, 1-2 AND 1-3 OF THE AISI MANUAL, COLD-FORMED STEEL DESIGN, 2008 EDITION. THE RDP IN RESPONSIBLE CHARGE SHALL OBTAIN OSHPD APPROVAL FOR ANY SUBSTITUTIONS.
5. THESE OPD REFER TO FASTENER TYPE AND SIZE BUT DO NOT SPECIFY OR ENDORSE A SPECIFIC MANUFACTURER. THE RDP IN RESPONSIBLE CHARGE SHALL SELECT A MANUFACTURER AND SELECTED FASTENER CAPACITIES SHALL MATCH OR EXCEED THE STRENGTHS LISTED HEREIN. THE FOLLOWING REQUIREMENTS SHALL ALSO BE MET:

   SHEET METAL SCREWS SHALL COMPLY WITH ASTM C 1513 AND ANSI B18.6.4/B (R2000) AND ICC-ES AC 118 AND ALLOWABLE STRENGTH SHALL BE BASED ON INFORMATION PROVIDED IN GX1.31 AND GX1.32. PENETRATION OF SCREWS THROUGH JOINED MATERIAL SHALL NOT BE LESS THAN THREE EXPOSED THREADS.

Section Title :	OSHPD STANDARD GYPSUM BOARD CEILING DETAILS	OPD No:
Sheet Title :	JOISTED GYP BOARD CEILING GENERAL NOTES	CJ0.00

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6. DESIGN CRITERIA
   a. BUILDING CODE: 2013 CALIFORNIA BUILDING CODE (2013 CBC), ASCE 7-10, AND AISI S100-07/S2-10, FOR LOAD COMBINATIONS, ALLOWABLE STRESS DESIGN SHALL BE IN ACCORDANCE WITH 2013 CBC SECTION 1605A.3.1
   b. FASTENER CAPACITIES TABLES WERE DEVELOPED BASED ON ICC REPORTS BY SEVERAL MANUFACTURERS.
   c. THE DESIGN ASSUMES THAT BUILDING ELEMENTS AND SUPPORTS, TO WHICH THE COMPONENTS ADDRESSED IN THIS DOCUMENT ARE ATTACHED, HAVE SUFFICIENT CAPACITY TO CARRY THE LOADS IMPOSED BY THE COMPONENTS IN COMBINATION WITH ALL OTHER LOADS. EVALUATION OF THE CAPACITY OF THESE SUPPORTING BUILDING ELEMENTS IS BEYOND THE SCOPE OF THE OPD. RDP SHALL DESIGN THE WALLS SUPPORTING JOISTED CEILING FOR GRAVITY AND SEISMIC FORCES FROM THE CEILING IN ADDITION TO OTHER WALL EISGN LOADS.
   d. THIS OPD IS LIMITED TO CEILING ASSEMBLIES HAVING MAXIMUM DEAD WEIGHT OF 4 PSF, INCLUDING LIGHTING FIXTURES (LUMINERES) AND MECHANICAL SERVICES. EACH WEIGHING LESS THAN 56 LBS AND ATTACHED TO CEILING FRAMING SYSTEM. HEAVIER SYSTEM AND THOSE SUPPORTING LATERAL FORCES FROM PARTITION WALLS ARE OUTSIDE THE SCOPE OF THIS OPD AND WILL REQUIRE PROJECT SPECIFIC DESIGN.
7. THE RDP IN RESPONSIBLE CHARGE SHALL VERIFY THE FIRE RESISTENCE AND ACOUSTICAL RATINGS FOR ALL CEILING ASSEMBLIES.
8. CEILING FIXTURES, TERMINALS, AND DEVICES:
   a. ALL LIGHT FIXTURES, AIR TERMINALS/GRILLS, OR OTHER DEVICES (REFERRED TO ALL BY COMMON TERM FIXTURES HEREAFTER) SHALL BE MOUNTED IN A MANNER THAT WILL NOT COMPROMISE CEILING PERFORMANCE.
   b. ALL LIGHT FIXTURES SHALL BE SUPPORTED DIRECTLY BY JOIST FRAMING OR BY SUPPLEMENTAL FRAMING WHICH IS SUPPORTED BY JOIST FRAMING AND POSITIVELY ATTACHED WITH SCREWS OR OTHER APPROVED CONNECTORS.
   c. SURFACE MOUNTED FIXTURES SHALL BE ATTACHED TO JOIST FRAMING WITH A POSITIVE CLAMPING DEVICE MADE OF MATERIAL WITH A MINIMUM OF 14 GAGE. ROTATIONAL SPRING CLAMPS DO NOT COMPLY.
   d. ACCESS PANELS: ACCESS TO THE SPACE BETWEEN THE CEILING AND THE FLOOR OR ROOF ABOVE SHALL NOT BE ALLOWED. SMALL ACCESS PANELS FOR THE INSPECTION, ADJUSTMENT, OR REPAIR OF UTILITY SWITCHES, VALVES, SENSORS, ETC. MAY BE ALLOWED IF THE PANEL IS LESS THAN 300 SQUARE INCHES. SUCH PANELS SHALL ALSO HAVE A PERMANENT WARNING LABEL AS FOLLOWS:

      WARNING: 1. DO NOT CLIMB, WALK, OR CRAWL ON THE GYPSUM BOARD CEILING.
      2. DO NOT STORE OR STOW ANYTHING ON THE GYPSUM BOARD CEILING.
   e. ALL LIGHT FIXTURES WEIGHING LESS THAN OR EQUAL TO 10 LB. SHALL HAVE ONE NO. 12 GAUGE SAFETY WIRE CONNECTED FROM FIXTURE HOUSING TO STRUCTURE ABOVE. IT IS NOT NECESSARY FOR THESE SAFETY WIRES TO BE TAUT.
   f. ALL LIGHT FIXTURES WEIGHING GREATER THAN 10 LB BUT LESS THAN 56 LB. SHALL HAVE TWO NO. 12 GAUGE WIRE CONNECTED FROM FIXTURE HOUSING TO STRUCTURE ABOVE. IT IS NOT NECESSARY FOR THESE SAFETY SAFETY WIRES TO BE TAUT.
   g. ALL LIGHT FIXTURES WEIGHING GREATER THAN 56 LB. SHALL BE SUPPORTED DIRECTLY FROM STRUCTURE ABOVE BY APPROVED HANGERS.
   h. PENDENT-HUNG FIXTURES SHALL BE SUPPORTED DIRECTLY FROM THE STRUCTURE ABOVE USING NO LESS THAN NO. 8-GAUGE WIRE OR AN APPROVED ALTERNATE SUPPORT. THE CEILING SUSPENSION SYSTEM SHALL NOT PROVIDE ANY DIRECT SUPPORT.
   i. ALL RECESSED OR DROP-IN FIXTURES SHALL BE SUPPORTED DIRECTLY FROM FIXTURE HOUSING TO THE STRUCTURE ABOVE WITH A MINIMUM OF TWO NO. 12 GAUGE WIRES LOCATED AT DIAGONALLY OPPOSITE CORNERS. LEVELLING OR POSITIONING OF FIXURES MAY BE PROVIDED BY JOIST FRAMING. FIXTURE SUPPORT WIRES MAY BE SLIGHTLY LOOSE TO ALLOW THE FIXTURE TO SEAT IN THE JOIST FRAMING. FIXTURES SHALL NOT BE SUPPORTED FROM JOIST FRAMING IF THE WEIGHT OF THE FIXTURES CAUSES TOTAL DEAD LOAD TO EXCEED THE DEFLECTION CAPABILITY OF THE CEILING SUSPENSION SYSTEM.

Section Title :	OSHPD STANDARD GYPSUM BOARD CEILING DETAILS	OPD No:
Sheet Title :	JOISTED GYP BOARD CEILING GENERAL NOTES	CJ0.01

5/9/2017 9:07:27 AM

9. CEILINGS THAT ARE PART OF A FIRE RATED ASSEMBLY: PROVIDE A DETAIL AND DESIGN NUMBER FOR RATED CEILING ASSEMBLIES FROM AN APPROVED TESTING AGENCY. THE COMPONENTS AND INSTALLATION DETAILS CONFORM IN EVERY RESPECT WITH THE LISTED DETAIL AND NUMBER. DETAILS SHALL CLEARLY DEPICT ALL COMPONENTS, INCLUDING INSULATION MATERIALS. FRAMING AND ATTACHMENT OF THE DESIGN SO THAT THE ASSEMBLY CAN BE CONSTRUCTED AND INSPECTED ACCORDINGLY. POP RIVETS, SCREWS, OR OTHER ATTACHMENTS ARE NOT ACCEPTABLE UNLESS SPECIFICALLY DETAILED ON THE DRAWINGS AND APPROVED BY APPROVED TESTING AGENCY.

METAL STUDS

1. COLD-FORMED STEEL LIGHT-FRAME CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE 2013 CBC SECTIONS 2210A AND 2211A.
2. ALL LIGHTGAGE METAL FRAMING SHALL CONFORM WITH THE FOLLOWING: (SEE GENERAL NOTE #4 FOR ADDITIONAL REQUIREMENTS)

GALVANIZED STUDS & TRACKS: 12 (97), 14 (68) OR 16 (54) GAGE (MILS)	ASTM A653-11, GR50 (Fy = 50,000 psi)
GALVANIZED STUDS & TRACKS: 18 (43) GAGE (MILS) AND LIGHTER SECTIONS	ASTM A653-11, GR 33 (Fy = 33,000 psi)
GALVANIZED BACKING PLATES:	ASTM A653-11, GR50 (Fy = 50,000 psi)
GALVANIZED END CLOSURES, BRIDGING AND ACCESSORIES:	ASTM A653-11, GR 33 (Fy = 33,000 psi)

MINIMUM STUD PROPERTIES SHALL BE PER GX1.40, TYP.

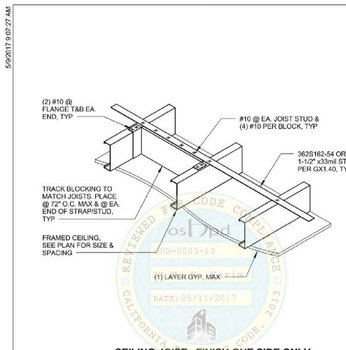
GYPSUM BOARD INSTALLATION

GYPSUM BOARD INSTALLATION SHALL COMPLY WITH ASTM C840-11:

1. GYPSUM BOARD SHALL CONSIST OF SINGLE-PLY ½" OR 5/8" THICK IN ACCORDANCE WITH ASTM C11-10a.
2. GYPSUM BOARD SHALL BE INSTALLED PERPENDICULAR TO FURRING WITH SCREWS AT 12" ON CENTER MAXIMUM, IN ACCORDANCE WITH ASTM C840-11.
3. GYPSUM BOARD SHALL BE ATTACHED TO FURRING/FRAMING WITH ASTM C1002-07 TYPE S (ASTM A568-11b GRADES 1018 TO 1022) SCREWS (NOT LESS THAN NO. 6, WITH MAJOR DIAMETER NOT LESS THAN 0.136 IN).

Section Title :	OSHPD STANDARD GYPSUM BOARD CEILING DETAILS	OPD No:
Sheet Title :	JOISTED GYP BOARD CEILING GENERAL NOTES	CJ0.02

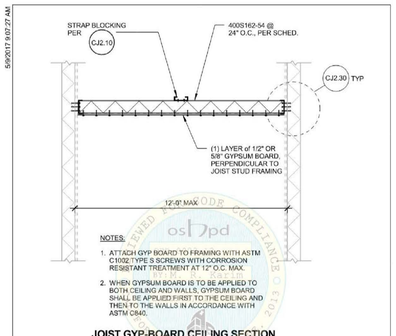
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CEILING JOIST - FINISH ONE SIDE ONLY

Section Title :	OSHPD STANDARD GYPSUM BOARD CEILING DETAILS	OPD No:
Sheet Title :	JOISTED GYP BOARD CEILING BLOCKING DETAIL	CJ2.10

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NOTES:

1. ATTACH GYP BOARD TO FRAMING WITH ASTM C1002 TYPE S SCREWS WITH CORROSION RESISTANT TREATMENT AT 12" O.C. MAX.
2. WHEN GYPSUM BOARD IS TO BE APPLIED TO BOTH CEILING AND WALLS, GYPSUM BOARD SHALL BE APPLIED FIRST TO THE CEILING AND THEN TO THE WALLS IN ACCORDANCE WITH ASTM C840.

JOIST GYP-BOARD CEILING SECTION

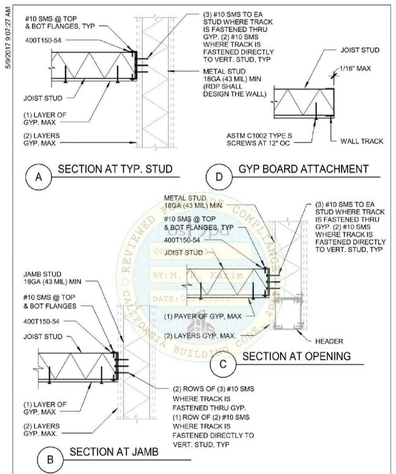
JOIST SPAN SCHEDULES

JOIST STUD SIZE	S_{DS} (g)	BRIDGING LOCATION	F_P ALLOWABLE FOR WALL DESIGN
SCHEDULE A - JOIST CONNECTION FASTENS THROUGH (2) LAYERS OF GYPSUM BOARD MAX			
400S162-54	$S_{DS} \leq 1.15$	MIDPOINT	6.6 plf
	$1.15 < S_{DS} \leq 1.73$	MIDPOINT	9.9 plf
	$1.73 < S_{DS} \leq 2.59$	MIDPOINT	14.9 plf

1. SEE CJ2.31 FOR TYPICAL 4'-1" x 2'-1" MAX OPENING IN JOISTED CEILING.

Section Title :	OSHPD STANDARD GYPSUM BOARD CEILING DETAILS	OPD No:
Sheet Title :	JOISTED GYP BOARD CEILING MAXIMUM SPANS	CJ2.20

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A SECTION AT TYP. STUD

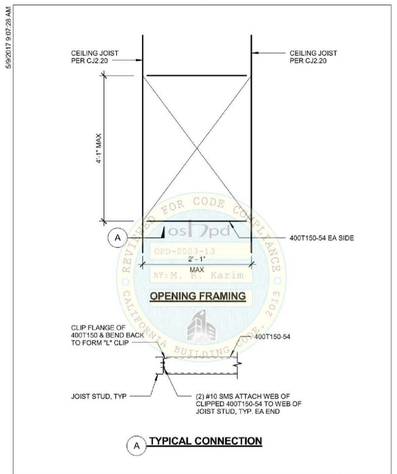
D GYP BOARD ATTACHMENT

C SECTION AT OPENING

B SECTION AT JAMB

Section Title :	OSHPD STANDARD GYPSUM BOARD CEILING DETAILS	OPD No:
Sheet Title :	JOISTED GYP BOARD CEILING CONNECTIONS	CJ2.30

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A TYPICAL CONNECTION

Section Title :	OSHPD STANDARD GYPSUM BOARD CEILING DETAILS	OPD No:
Sheet Title :	JOISTED GYP BOARD CEILING AT OPENINGS	CJ2.31

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HCAI Number
S221296-21-00

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Department of Health Care Access & Information
Office of Statewide Hospital Planning & Development
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REGISTERED ARCHITECT C37097 EXP. 8/30/2023 STATE OF CALIFORNIA

Issued for
HCAI SUBMITTAL

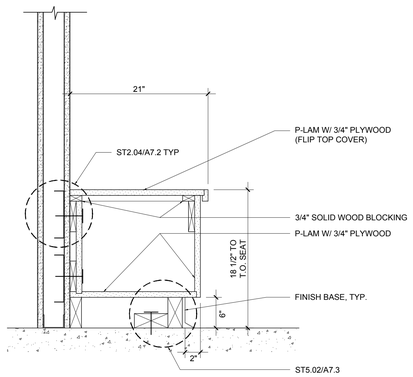
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Project Name
HOSPITAL REPLACEMENT BUILDING-
NUCLEAR MEDICINE SUITE RELOCATION

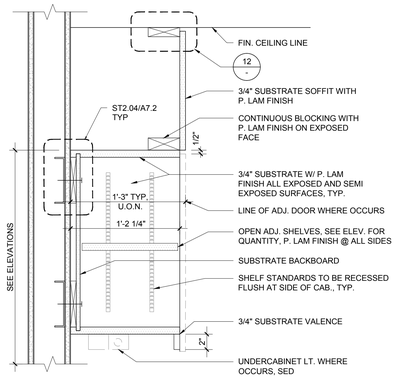
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GYPSUM BOARD CEILING DETAILS

Date 08/05/2022
Scale AS NOTED
Sheet Number
A8.5

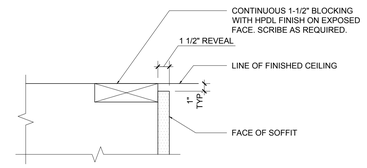
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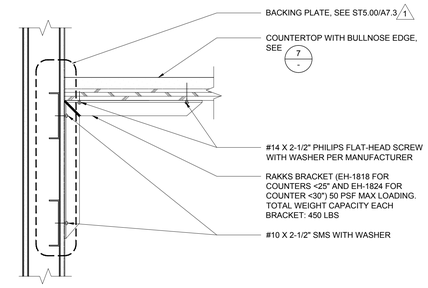
20 ACCESSIBLE BENCH SECTION
SCALE: 1-1/2" = 1'- 0"



16 UPPER CABINET
SCALE: 1-1/2" = 1'- 0"



12 UPPER CABINET AT CEILING
SCALE: 3" = 1'- 0"



8 COUNTERTOP WITH BRACKET
SCALE: 1-1/2" = 1'- 0"

TYPICAL CASEWORK NOTES

A. THE FOLLOWING TYPICAL NOTES APPLY TO ALL CASEWORK UNLESS OTHERWISE NOTED. DETAILS OF CONSTRUCTION SHALL BE AS SPECIFIED IN ACCORDANCE WITH THE REQUIREMENTS OF THE ARCHITECTURAL WOODWORK INSTITUTE, ARCHITECTURAL WOODWORK STANDARDS (AWS) 2009 EDITION UNLESS OTHERWISE NOTED. ALL CASEWORK TO BE CONSTRUCTED USING A METHOD OF CONSTRUCTION APPROVED AND TESTED BY THE AWS THAT MEETS THE SEISMIC FORCES REQUIREMENTS FOR TITLE 24.

DO NOT SCALE CASEWORK TYPE DRAWINGS.

B. FASCIAS, VALANCES AND CLOSURE PANELS:
FASCIAS, VALANCES AND CLOSURE PANELS TO BE CONSTRUCTED OF 3/4" CORE MATERIAL AS SPECIFIED.

C. SHELVES:
SHALL BE 3/4" CORE MATERIAL AS SPECIFIED; EXCEPT ADJUSTABLE SHELVES W/ UNSUPPORTED SPANS OVER 30" IN LENGTH AND FIXED SHELVES OVER 30" IN LENGTH SHALL BE 1" CORE MATERIAL. PROVIDE A MINIMUM OF ONE SHELF PER CABINET WHERE ADJUSTABLE SHELVES ARE INDICATED; PROVIDE ADDITIONAL SHELVES AS INDICATED ON ELEVATIONS WITH DASHED LINES.

D. SHELF SUPPORTING TYPE:

1. TYPICAL (UNLESS OPTIONAL DESIGNATION IS GIVEN): METAL SHELF RESTS TO BE SUPPORTED BY METAL SHELF STANDARD, RECESSED INTO SIDE OF CASEWORK AND FLUSH W/ VERTICAL SURFACE.
2. HOLE-SUPPORT (ONLY WHEN OPTION "HL" IS GIVEN): METAL SHELF SUPPORT TO BE INSERTED INTO CLEARLY BORED HOLES, SPACED AT 2" OC

E. END PANELS:
PROVIDE END PANELS AT ALL BASE CABINET RETURNS WHICH WILL BE EXPOSED TO VIEW OR APPROACH WHEN INSTALLED.

F. BACKING PLATES:
PROVIDE BACKING PLATES AT ALL MOUNTING LOCATIONS. COORDINATE HEIGHT AND LOCATION OF BACKING PLATES FOR CASEWORK WITH STUD FRAMING CONTRACTOR. SEE ST2.04/A7.2, ST5.01/A7.3

G. BACK SPLASHES AT COUNTERTOPS:
PROVIDE BACK SPLASHES AT COUNTERTOPS AS INDICATED.

H. SIDE SPLASHES AT COUNTERTOPS:
PROVIDE SIDE SPLASHES AT ALL LOCATIONS WHERE COUNTERTOPS WITH BACK SPLASHES MEET ADJACENT PARTITIONS.

I. PULLS:
PROVIDE PULLS AT ALL DRAWERS AND ALL CABINET DOORS EXCEPT PENCIL DRAWERS; SEE ELEVATIONS FOR DIRECTIONS OF DOOR SWINGS. DOORS AT WALL-HUNG CABINETS, BASE CABINETS, AND TALL CABINETS SHALL HAVE PULLS MOUNTED VERTICALLY UON. DRAWERS SHALL HAVE PULL MOUNTED HORIZONTALLY UON PULLS SHALL BE HAFELE 116.39.268 (4") CHROME PLATED POLISHED FINISH OR EQUAL.

J. LOCKS:
PROVIDE LOCKS ON ALL DOORS & DRAWERS. LOCKS SHALL BE HAFELE TIMBERLOCK (CYLINDER MODULE SYSTEM) NO. 210.04.062 & DEADBOLT LOCKS 232.18.304 (LEFT/RIGHT), 232.18.313 (DRAWER), 232.18.360 (OFFSET), 232.35.300 (DOUBLE DOOR), 239.61.319 (ANGLE STRIKEPLATE), AND 239.08.705 (STRIKEPLATE) OR EQUAL.

K. GROMMETS: 1
PROVIDE GROMMETS AS SPECIFIED & NOTED AT ALL COUNTERTOPS WITH KNEE SPACE BELOW. PROVIDE A MIN. OF ONE GROMMET FOR EACH 24" LENGTH OF KNEE SPACE IF NOT SHOWN ON DWGS. GROMMETS SHALL BE HAFELE 429.99.726 OR EQUAL. EXACT LOCATIONS OF GROMMET TO BE DETERMINED BY ARCHITECT IN FIELD AFTER CASEWORK IS INSTALLED.

L. HINGES:
SHALL BE BLUM HINGES CLIP TOP 100° SC-FO, OR EQUAL, UNLESS OTHERWISE NOTED.

M. DIVIDERS:
N/A.

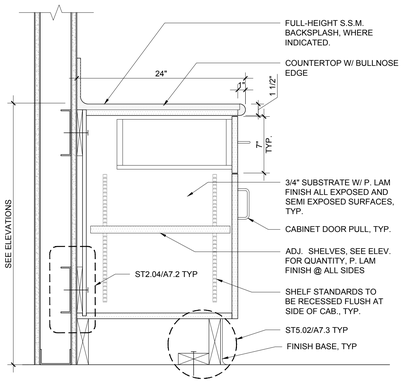
N. DRAWERS & SLIDES:
SHALL BE 1/2" SUBSTRATE @ ALL SIDES W/ 3/4" SUBSTRATE FRONT. SLIDES FOR PULL OUT TRAYS: ACCURIDE 3640 OVER TRAVEL HEAVY DUTY SLIDES, OR EQ.

O. EXPOSED CORNERS OF COUNTERTOPS/BASE CABINETS:
RADIUS ALL COUNTERTOP CORNERS WHERE BOTH SIDES OF THE CORNER ARE EXPOSED TO UNINTERRUPTED APPROACH. SEE COUNTERTOP CORNER DETAIL 11

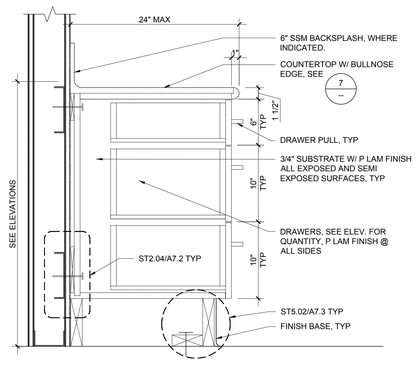
P. ACCESS PANELS:
PROVIDE REMOVABLE BACK PANEL (SIZE OF ENTIRE CABINET BACK) AT CABINETS CONTAINING SINK OR OTHER PLUMBING, MEDICAL GASES, DATA/COMMUNICATION LINES, OTHER ELECTRICAL WIRING OR EQUIPMENT WIRING OR AS INDICATED ON DETAILS.

Q. BASES:
BASES ON CASEWORK ARE TO BE 6" TYP. U.O.N.; PROVIDE SAME BASE FINISH AND MATERIAL AS ON ADJACENT WALLS - SEE FINISH SCHEDULE. EXTEND BASE TO WALL AT ALL CABINET RETURNS AND END PANELS. SEE TYPICAL BASE CABINET @ FLOOR (FRONT): 6

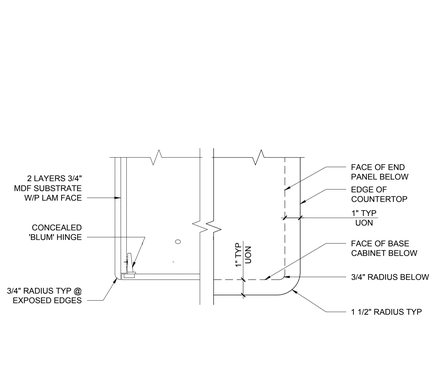
R. INSTALLATIONS BETWEEN WALLS:
IN CASES OF CABINET INSTALLATIONS BETWEEN WALLS, VERIFY DIMENSIONS IN FIELD AND PROVIDE FILLER PANEL STRIPS AT ENDS OR REDUCE WIDTH OF END CABINETS AS REQUIRED TO FIT SPACE AS SHOWN - SEE TYPICAL CABINET SIDE @ ADJACENT PARTITION (SCRIBE STRIP) U.O.N. ON ELEVATIONS; THESE MODIFICATIONS SHALL BE REFLECTED IN THE SHOP DRAWINGS FOR THE ARCHITECT'S REVIEW AND APPROVAL. 5



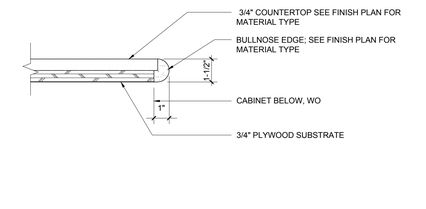
19 BASE CABINET W/ DRAWER & SHELF
SCALE: 1-1/2" = 1'- 0"



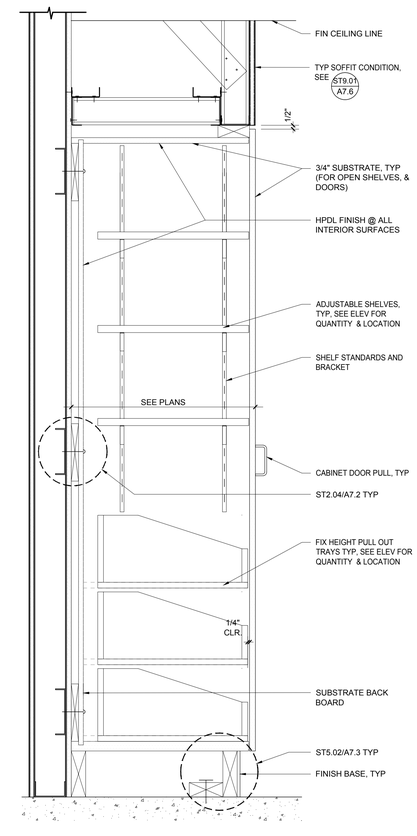
15 BASE CABINET W/ DRAWERS
SCALE: NTS



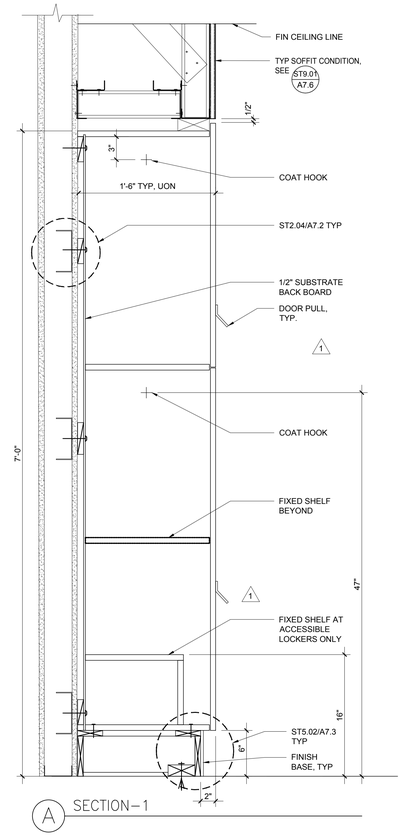
11 PLAN OF COUNTERTOP CORNER
SCALE: NTS



7 BULLNOSE EDGE @ COUNTERTOP
SCALE: NTS

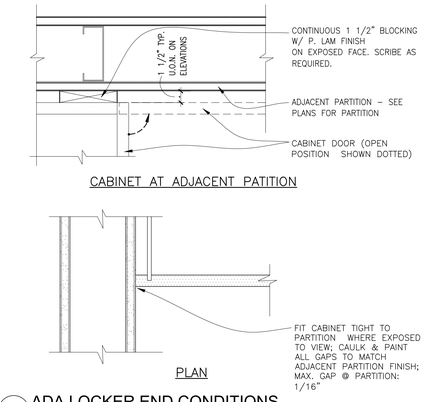


17 FULL HEIGHT CABINET
SCALE: NTS



A SECTION–1

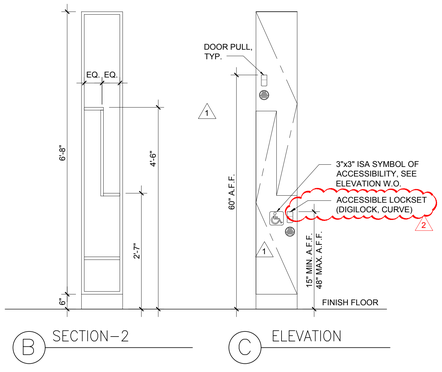
13 ADA-COMPLIANT LOCKERS IN PATIENT TOILET
SCALE: NTS



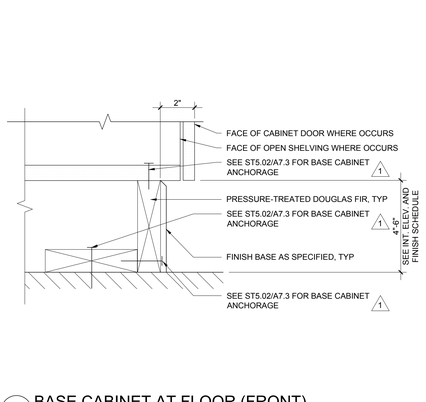
CABINET AT ADJACENT PATITION

PLAN

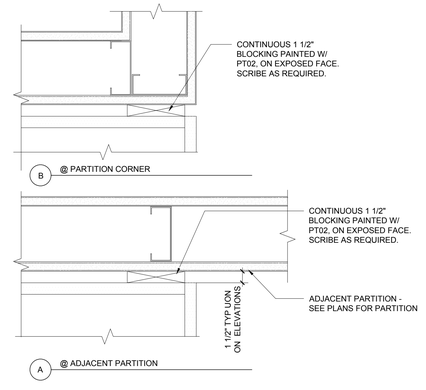
10 ADA LOCKER END CONDITIONS
SCALE: NTS



B SECTION–2 C ELEVATION



6 BASE CABINET AT FLOOR (FRONT)
SCALE: NTS



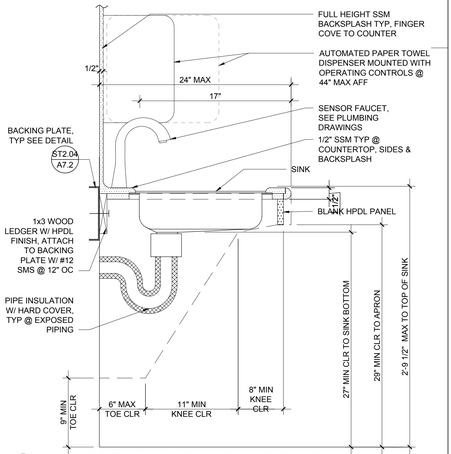
5 CABINET AT PARTITION PLAN VIEW
SCALE: NTS

CASEWORK DEFINITIONS

A. EXPOSED PORTIONS:
1. ALL SURFACES VISIBLE WHEN DOORS AND DRAWERS ARE CLOSED.
2. UNDERSIDE OF BOTTOMS OF CABINETS OVER 4'-0" ABOVE FINISHED FLOOR.
3. CABINET TOPS UNDER 6'-0" ABOVE FINISHED FLOOR OR IF OVER 6'-0" AND VISIBLE FROM AN UPPER BUILDING LEVEL OR FLOOR.
4. VISIBLE FRONT EDGES OF WEB FRAMES, ENDS, DIVISIONS, TOPS, SHELVES, AND HANGING STILES.
5. SLOPING TOPS OF CABINETS THAT ARE VISIBLE.
6. VISIBLE PORTIONS OF BOTTOMS, TOPS, AND ENDS IN FRONT OF SLIDING DOORS.

B. SEMI-EXPOSED PORTIONS:
1. ALL SURFACES OF SHELVES UNLESS OTHERWISE NOTED.
2. INTERIOR FACE OF DOORS, ENDS, BACKS, AND BOTTOMS.
3. DRAWER SIDES, SUBFRONTS, BACKS, AND BOTTOMS.
4. THE UNDERSIDE OF BOTTOMS OF CABINETS BETWEEN 2'-6" & 6'-0" ABOVE THE FINISHED FLOOR.
5. IN STORAGES, CLOSETS, JANITOR'S ROOMS AND UTILITY ROOMS, ALL VISIBLE SURFACES IN OPEN CABINETS AND SHELVES.

C. CONCEALED PORTIONS:
1. TOE SPACE UNLESS OTHERWISE SPECIFIED
2. SLEEPERS
3. WEB FRAMES, STRETCHERS, AND SOLID SUB-TOPS
4. SECURITY PANELS
5. UNDERSIDE OF BOTTOMS OF CABINETS LESS THAN 2'-6" ABOVE THE FINISHED FLOOR.
6. FLAT TOPS OF CABINETS 6'-0" OR MORE ABOVE THE FINISHED FLOOR, EXCEPT IF VISIBLE FROM AN UPPER BUILDING LEVEL.
7. THE THREE NON-VISIBLE EDGES OF ADJUSTABLE SHELVES.
8. THE UNDERSIDE OF COUNTERTOPS, KNEE SPACES, AND DRAWER APRONS.
9. THE FACES OF CABINET ENDS OF ADJOINING UNITS THAT BUTT TOGETHER.



1 ACCESSIBLE HAND WASHING SINK
SCALE: NTS

Architect
SKA SMITH-KARNG ARCHITECTURE
800 Haight Street
San Francisco, CA 94117
Office: 415.552.3600

Owner
marin health Medical Center
250 BON AIR ROAD,
GREENBRAE, CA 94904

Consultant

SKA Project Number
2136

HCAI Number
S221296-21-00

HCAI seal/signature
REVIEWED IN ACCORDANCE WITH THE REQUIREMENTS OF 7 CA. CCR
APPROVED
Department of Health Care Access & Information
Office of Statewide Hospital Planning & Development
2/13/2023, 11:24:21 PM
S221296-21-00
Pedar Pomme

Seal/Signature
REGISTERED ARCHITECT C37097 EXP. 9/30/2023 STATE OF CALIFORNIA

Issued for
HCAI SUBMITTAL

1	BACKCHECK #1	12/09/2022
2	BACKCHECK #2	01/25/2023

Drawn by JS
Checked by CL

Project Name
HOSPITAL REPLACEMENT BUILDING-
NUCLEAR MEDICINE SUITE RELOCATION

Sheet Title
CASEWORK DETAILS

Date 08/05/2022
Scale AS NOTED
Sheet Number A9.1

30 X 42

UL Product iQ®

XHBN.HW-D-0644 - Joint Systems

Design/System/Construction/Assembly Usage Disclaimer

- Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Certified products, equipment, system, devices, and materials.
- Authorities Having Jurisdiction should be consulted before construction.
- Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field.
- When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction.
- Only products which bear UL's Mark are considered Certified.

XHBN - Joint Systems
XHBN7 - Joint Systems Certified for Canada

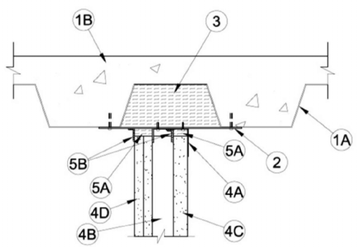
See General Information for Joint Systems

See General Information for Joint Systems Certified for Canada

System No. HW-D-0644

June 16, 2017

ANSI/UL2079	CAN/ULC S115
Assembly Ratings — 1 and 2 Hr (See Items 1 and 4C)	F Ratings — 1 and 2 Hr (See Items 1 and 4C)
Nominal Joint Width - 3/4 or 1-1/2 In. (See Item 5).	FT Ratings — 1 and 2 Hr (See Items 1 and 4C)
Class II Movement Capabilities — 25, 50% or 100% Compression or Extension (See Item 5)	FH Ratings — 1 and 2 Hr (See Items 1 and 4C)
L Rating At Ambient — Less Than 1 CFM/Lin ft	FTH Ratings — 1 and 2 Hr (See Items 1 and 4C)
L Rating At 400 F — Less Than 1 CFM/Lin Ft	Nominal Joint Width - 19 mm or 38 mm (See Item 5).
	Class II Movement Capabilities — 25, 50% or 100% Compression or Extension (See Item 5)
	L Rating At Ambient — Less Than 1.55 L/s/m
	L Rating At 400 F — Less Than 1.55 L/s/m



1. **Floor Assembly —** The fire-rated fluted steel floor unit/concrete floor assembly shall be constructed of the materials and in the manner described in the individual Floor-Ceiling Design in the Fire Resistance Directory and shall include the following construction features:

A. **Steel Floor and Form Units* —** Max 3 in. (76 mm) deep galv steel fluted floor units.

B. **Concrete —** Min 2-1/2 in. (64 mm) thick reinforced concrete, as measured from the top plane of the floor units.

1A. **Roof Assembly —** (Not Shown) - As an alternate to the floor assembly (Item 1), a fire rated fluted steel deck roof assembly may be used. The roof assembly shall be constructed of the materials and in the manner described in the individual P900 Series Roof-Ceiling Design in the UL Fire Resistance Directory. The hourly fire rating of the roof assembly shall be equal to or greater than the hourly fire rating of the wall assembly. The roof assembly shall include the following construction features:

A. **Steel Roof Deck —** Max 3 in. (76 mm) deep galv steel fluted roof deck.

B. **Roof Insulation —** Min 2-1/4 in. (57 mm) thick poured insulating concrete, as measured from the top plane of the steel roof deck.

2. **Steel Straps —** Min 2 in. (51 mm) wide 16 MSG (0.059 in. or 1.5 mm thick) galv steel straps cut to a length to span the flute and to overlap min 1-1/2 in. (38 mm) on the adjacent valleys of fluted floor units. Straps spaced max 24 in. (610 mm) OC and fastened to floor assembly with 1/4 in. (6 mm) diam by 1-1/2 in. (38 mm) long steel concrete anchors.

3. **Forming Material* —** Mineral wool batt insulation, nom 4 pcf (64 kg/m^3), cut to the shape of the fluted floor units, friction fit to completely fill the flutes above the steel straps. Adjacent lengths of batts to be tightly butted with butted seams spaced min 24 in. (610 mm) apart along the length of the plugs.
INDUSTRIAL INSULATION GROUP L L C — MinWool-1200 Safing

JOHNS MANVILLE — Safing

ROCK WOOL MANUFACTURING CO — Delta Board

ROCKWOOL MALAYSIA SDN BHD — SAFE

ROCKWOOL — SAFE

THERMAFIBER INC — Type SAF

A. **Forming Material*** — As an option to Item 3, preformed mineral wool plugs, formed to the shape of the fluted floor units, friction fit to completely fill the flutes above the steel straps. Adjacent lengths of batts to be tightly butted with butted seams spaced min 24 in. (610 mm) apart along the length of the plugs.
THERMAFIBER INC — TopStop mineral wool deck plugs Type SAF batts

4. **Shaft Wall Assembly —** The 1 or 2 hr fire rated shaft wall assembly shall be constructed of the materials and in the manner described in the individual U400 or V400-Series Wall and Partition Design in the UL Fire Resistance Directory. The wall shall be installed parallel with the direction of the steel deck, directly beneath steel straps (Item 2), and shall include the following construction features:

A. **Floor, Wall and Ceiling Runners —** "J"-shaped runner, min 2-1/2 in. (64 mm) wide with unequal legs of 1 in. (25 mm) and 2 in. (51 mm) for max 3/4 in. joints and min 2-1/2 in. (64 mm) wide with unequal legs of 2 in. (64 mm) and 2-1/2 in. (64 mm), fabricated from min 24 MSG galv steel. Runners positioned with short leg toward finished side of wall. Runners attached to walls and floor with steel fasteners spaced max 24 in. (610 mm) OC. Ceiling runner attached to each steel strap (Item 2) with two steel screws. As an alternate to the "J"-shaped floor runner, a min 2-1/2 in. (64 mm) wide by 1 or 1-1/4 in. (25 or 32 mm) deep channel formed from min 24 MSG galv steel may be used for the floor runner.

A1. **Light Gauge Framing* - Slotted Ceiling Track —** (Not Shown) - As an alternate to the ceiling runner in Item 2A, slotted ceiling track shall consist of galv steel channels with slotted flanges. Slotted ceiling track sized to accommodate steel "C-H" studs (Item 4B). Attached to each steel strap (Item 2) with two steel screws
BRADY CONSTRUCTION INNOVATIONS INC, DBA SLIPTRACK SYSTEMS — SLP-TRK

CALIFORNIA EXPANDED METAL PRODUCTS CO — CST

CLARKDIETRICH BUILDING SYSTEMS — Type SLT, SLT-H

RAM SALES L L C — RAM Slotted Track

SCAFCO STEEL STUD MANUFACTURING CO

STEELER INC — Steeler Slotted Ceiling Runner

TELLING INDUSTRIES L L C — True-Action Deflection Track

THE STEEL NETWORK INC — VertiTrack VT, series,250VT, 362VT, 400VT, 600VT and 800VT

MARINO/WARE, DIV OF WARE INDUSTRIES INC — Type SLT slotted track

B. **Steel Studs —** "C-H"-shaped steel studs to be min 2-1/2 in. (64 mm) wide and formed of min 24 MSG galv steel. Studs cut 1/2 to 3/4 in. (13 to 19 mm) less in length than assembly height with bottom nesting in and resting on floor runner and with top nesting in ceiling runner for max 3/4 in. joints. Studs cut 1-1/2 to 1-3/4 in. (38 to 44 mm) less in length than assembly height with bottom nesting in and resting on floor runner and with top nesting in ceiling runner for max 1-1/2 in. joints. Studs spaced 24 in. (610 mm) OC. After installation of gypsum board liner panels (Item 4C), studs secured to flange of floor runner on finished side of wall only with No. 6 by 1/2 in. (13 mm) long self-drilling, self-tapping steel screws. Studs secured to flange of slotted ceiling track on finished side of wall only with No. 8 by 1/2 in. (13 mm) long self-drilling, self-tapping wafer head steel screws at slot midheight.

C. **Gypsum Board* —** 1 in. (25 mm) thick by 24 in. (610 mm) wide gypsum board liner panels as specified in the individual U400 or V400-Series Wall and Partition Design. Panels cut 1 in. (25 mm) less in length than floor to ceiling height for max 3/4 in. joints. Gypsum cut 1-1/2 to 1-3/4 in. (38 to 44 mm) less in length than floor to ceiling height for max 1-1/2 in. joints. Vertical edges inserted in "H"-shaped section of "C-H" studs. Free edge of end panels attached to long leg of "J" runner (Item 4AA) with 1-5/8 in. (41 mm) long Type S steel screws spaced max 12 in. (305 mm) OC.

D. **Gypsum Board* —** Gypsum board sheets, 1/2 or 5/8 in. (13 or 16 mm) thick, applied vertically or horizontally in one or two layers on finished side of wall as specified in the individual U400 or V400-Series Wall and Partition Design. A max 1 in. (25 mm) gap shall be maintained between the top of the gypsum board and the bottom surface of the concrete floor, for max 3/4 in. joints. A max 1-1/2 in. (38 mm) gap shall be maintained between the top of the gypsum board and the bottom surface of the concrete floor for max 1-1/2 in. joints. The screws attaching the gypsum board layers to the C-H studs shall be located 1 in. (25 mm) below the bottom of the ceiling runner. No gypsum board attachment screws are to penetrate the ceiling runner.

5. **Joint System —** Max separation between bottom of floor and top of gypsum board (Item 4D) is 3/4 in. (19 mm). The joint system is designed to accommodate from its erected compression or extension from its installed width. **When Item 5A1 is used in lieu of the strips of mineral wool described in Item 5A, the movement capabilities are 100% compression or extension. When Item 5C & 5D are used in lieu of the strips of mineral wool described in Item 5A, the movement capabilities are 25% compression or extension.** The joint system consists of a forming material and a fill material between the top of the gypsum board and the bottom of the floor, as follows:

A. **Forming Material* —** Min 4 pcf (64 kg/m^3) density mineral wool batt insulation cut into strips to fill the gap between the top of gypsum liner panel and bottom of the ceiling runner or track (Item 4 or 4A). The width of the strips shall be equal to the total thickness of the gypsum board liner panel. The strips of mineral wool are compressed 50 percent. Strips of mineral wool batt insulation cut to width of gypsum board layers (Item 4D) and compressed 50 percent in thickness and firmly packed into the gap between the top of the gypsum board and the bottom of the mineral wool batt sections (Item 3) or steel floor or roof units (Item 1A or 1AA). Strips installed above gypsum board layers on finished side of wall assembly flush with the wall surface.
INDUSTRIAL INSULATION GROUP L L C — MinWool-1200 Safing

JOHNS MANVILLE — Safing

ROCK WOOL MANUFACTURING CO — Delta Board

ROCKWOOL MALAYSIA SDN BHD — SAFE

ROCKWOOL — SAFE

THERMAFIBER INC — Type SAF

A1. **Forming Material* —** (not shown) Nom 3/16 in. (4.8 mm) thick by 4 in. (102 mm) high joint forming material profile installed on both sides of the wall assembly. Profile installed on the shaft side of the wall by first marking a line across the top of the wall 3 in. (76 mm) below the bottom plane of the bottom of the "J" or ceiling runner on the interior surface of the gypsum liner. Joint profile material on shaft side positioned with its top edge against both the underside of the ceiling runner with its bottom edge on the line scribed on the shaft liner. Profile installed on the finished side of the wall by first marking a line across the top of the wall 3 in. (76 mm) below the bottom plane of the mineral wool batt sections (Item 3) or steel floor or roof units (Item 1A or 1AA). Joint profile material on finished side positioned with its top edge against both the underside of the mineral wool (Item 3) or steel floor or roof units (Item 1A) with its bottom edge on the line scribed on the finished side of the wall assembly. Bottom of the joint profile attached to gypsum board with nom 1/2 in. (13 mm) long steel staples spaced not greater than 8 in. (203 mm) OC. Adjoining lengths of profile to overlap approx 3/4 in. (19 mm) at shiplapped ends.
SPECIFIED TECHNOLOGIES INC — SpecSeal Speed Flex Joint Profile

B. **Fill, Void or Cavity Material* - Sealant —** Min 1/8 in. (3.2 mm) wet thickness (min 1/16 in. or 1.6 mm dry thickness) applied to cover forming material (Item 5A or 5A1) with a min 1/2 in. (13 mm) overlap onto the gypsum board, steel strapping and steel deck on both sides of wall. Spray applied to cover mineral wool batt insulation on finished side of wall.
SPECIFIED TECHNOLOGIES INC — SpecSeal AS200 Elastomeric Spray

C. **Bond Breaker Tape (Optional, Not Shown) —** When Item 5D is used, polyethylene tape supplied in rolls. Tape applied to flanges of slotted ceiling track (Item 2D) to prevent bonding of the sealant at points other than the top and bottom of the linear gap.

D. **Fill, Void or Cavity Material* - Sealant (Optional, Not Shown) —** As an alternate to Item 5A or 5A1. min 1 in. (25 mm) depth of sealant to be installed to fill linear gap between top of gypsum board liner panel (Item 4C) and top inside surface of slotted ceiling runner or track (Item 4A or 4A1) prior to installation of gypsum board sheets on finished side of wall.
SPECIFIED TECHNOLOGIES INC — SpecSeal ES Elastomeric Sealant. **When sealant is used, the movement capability of the joint is limited to 25 percent in compression or extension.**

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**

Last Updated on 2017-06-16

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UL Product iQ®

XHBN.HW-D-0548 - Joint Systems

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XHBN - Joint Systems
XHBN7 - Joint Systems Certified for Canada

See General Information for Joint Systems

See General Information for Joint Systems Certified for Canada

System No. HW-D-0548

March 16, 2020

ANSI/UL2079	CAN/ULC S115
Assembly Ratings — 1 and 2 Hr (See Item 2)	F Ratings — 1 and 2 Hr (See Item 2)
Maximum Joint Width — 3/4, 1 or 1-1/2 In. (See Item 3)	FT Ratings — 1 and 2 Hr (See Item 2)
Class II Movement Capabilities — 50 or 100 %Compression or Extension (See Item 3)	FH Ratings — 1 and 2 Hr (See Item 2)
L Rating At Ambient — Less Than 1 CFM/sq ft	FTH Ratings — 1 and 2 Hr (See Item 2)
L Rating At 400 F — Less Than 1 CFM/sq ft	Maximum Joint Width — 19, 25 or 38 mm (See Item 3)
	Class II Movement Capabilities — 50 or 100 % Compression or Extension (See Item 3)
	L Rating At Ambient — Less Than 1 CFM/sq ft
	L Rating At 400 F — Less Than 1 CFM/sq ft

attached to walls and floor with steel fasteners spaced max 24 in. (610 mm) OC. As an alternate to the "J"-shaped runner, a min 2-1/2 in. (64 mm) wide by 1 in. or 1 1/4 in. (25 or 32 mm) deep channel formed from min 24 MSG galv steel may be used for the floor runner. Ceiling runner installed parallel with or perpendicular to direction of fluted steel deck and secured to steel deck valley withy steel fasteners or welds spaced max 24 in. (610 mm) OC.

A1. **Floor And Ceiling Runners —** As an alternate to Item 2A, floor and ceiling runners of wall assembly shall consist of galv steel channels sized to accommodate steel "C-H" studs. Flange height of ceiling runner shall be min 1/2 in. (13 mm) greater than nom joint width. Ceiling runner installed parallel with or perpendicular to direction of fluted steel deck and secured with steel masonry anchors or welds spaced max 24 in. (610 mm) OC.

A2. **Light Gauge Framing* - Slotted Ceiling Track — (for use in Configuration A Only)** As an alternate to Item 2A, slotted ceiling track shall consist of galv steel channels with slotted flanges. Slotted ceiling track sized to accommodate steel "C-H" studs (Item 2C). Attached to concrete at ceiling with steel fasteners spaced max 12 in. OC (305 mm).
BRADY CONSTRUCTION INNOVATIONS INC, DBA SLIPTRACK SYSTEMS — SLP-TRK, SLPTRK125

CALIFORNIA EXPANDED METAL PRODUCTS CO — ST, CST325

CLARKDIETRICH BUILDING SYSTEMS — Type SLT, SLT-H

MARINO/WARE, DIV OF WARE INDUSTRIES INC — Type SLT

RAM SALES L L C — RAM Slotted Track

SCAFCO STEEL STUD MANUFACTURING CO

TELLING INDUSTRIES L L C — True-Action Deflection Track

A3. **Light Gauge Framing* - Slotted Ceiling Runner —** As an alternate to the ceiling runner in Items 2A through 2A3, slotted ceiling runner to consist of galv steel channel with 3-1/4 in. (83 mm) high slotted flanges sized to accommodate steel studs (Item 2B). Ceiling runner installed parallel or perpendicular with direction of fluted steel deck and secured to steel deck valley with steel fasteners or welds spaced max 24 in. (610 mm) OC.
BRADY CONSTRUCTION INNOVATIONS INC, DBA SLIPTRACK SYSTEMS — SLPTRK325

B. **Steel Studs —** "C-H"-shaped steel studs to be min 2-1/2 in. (64 mm) wide and formed of min 24 MSG galv steel. For configuration A studs cut 1/2 to 1-1/4 in. (13 to 32 mm) less in length than assembly height or for configuration B studs cut 1 to 1-1/2 in. (25 to 38 mm) less in length than assembly height with bottom nesting in and resting on floor runner and with top nesting in ceiling runner or slotted ceiling track. Studs spaced 24 in. (610 mm) OC. After installation of gypsum board liner panels (Item 2D), studs secured to flange of floor runner on finished side of wall with No. 6 by 1/2 in. (13 mm) long self-drilling, self-tapping steel screws. Studs secured to flange of slotted ceiling track on finished side of wall only with No. 8 by 1/2 in. (13 mm) long self-drilling, self-tapping wafer head steel screws at slot midheight.

C. **Gypsum Board* —** 1 in. (25 mm) thick by 24 in. (610 mm) wide gypsum board liner panels. Panels cut 1 in. (25 mm) less in length than floor to ceiling height. Vertical edges inserted in "H"-shaped section of "C-H" studs. Free edge of end panels attached to long leg of "J" runner (Item 2A) with 1-5/8 in. (41 mm) long Type S steel screws spaced max 12 in. (305 mm) OC.

D. **Gypsum Board* —** Gypsum board sheets, 1/2 or 5/8 in. (13 or 16 mm) thick, applied vertically or horizontally in one or two layers on finished side of wall as specified in the individual U400 or V400-Series Wall and Partition Design. A max 1 in. (25 mm) gap shall be maintained between the top of the gypsum board and the bottom surface of the concrete floor. The screws attaching the gypsum board layers to the C-H studs shall be located 1 in. (25 mm) below the bottom of the ceiling runner. No gypsum board attachment screws are to penetrate the slotted ceiling track (Item 2C). No gypsum board attachment screws are to penetrate the slotted ceiling track.

The hourly fire rating of the joint system is equal to the hourly fire rating of the wall.

Configuration A

3. **Joint System — Max separation between bottom of floor and top of liner panel (Item 2C) and between bottom of floor and top of gypsum board sheets (Item 2D) at time of installation of joint system 1-1/2 in. (38 mm). The joint system is designed to accommodate a maximum 50 percent compression or extension from its installed width.** The joint system consists of forming material and sealant, as follows:

A. **Forming Material* —** In floor or roof assembly constructed with steel fluted floor units, compression-fit a minimum 1 in. (25 mm) depth of nom 4 pcf (64 kg/m^3) mineral wool batt insulation into far recess of flute valley as a permanent form. Strips of mineral wool batt insulation cut to width of gypsum liner panel (Item 2C) and compressed 50 percent in thickness. Strip installed between top of gypsum liner panel and bottom of steel ceiling runner.
INDUSTRIAL INSULATION GROUP L L C — MinWool 1200 Safing

JOHNS MANVILLE — Safing

ROCK WOOL MANUFACTURING CO — Delta Board

ROCKWOOL MALAYSIA SDN BHD — SAFE

ROCKWOOL — SAFE

THERMAFIBER INC — SAF

B. **Fill, Void or Cavity Material* - Sealant —** Min 1/8 in. (3.2 mm) wet thickness (min 1/16 in. or 1.5 mm dry thickness) of spray applied to cover mineral wool batt insulation within joint cavity (when present: Item 3A) and mineral wool batt installed above gypsum liner panel (Item 2C). Maintain min 1/2 in. (13 mm) overlaps onto surrounding substrates.
SPECIFIED TECHNOLOGIES INC — SpecSeal AS200 Elastomeric Spray

C. **Forming Material* —** Sections of min 4 pcf (64kg/m^3) density mineral wool batt insulation cut to fill flute area (when present) flush with interior surface of wall after installation of spray (Item 3B). Strips of mineral wool batt insulation cut to width of gypsum board layers (Item 2D) and compressed 50 percent in thickness. Strips installed above gypsum board layers on finished side of wall assembly flush with the wall surface.
INDUSTRIAL INSULATION GROUP L L C — MinWool 1200 Safing

JOHNS MANVILLE — Safing

ROCK WOOL MANUFACTURING CO — Delta Board

ROCKWOOL MALAYSIA SDN BHD — SAFE

ROCKWOOL — SAFE

THERMAFIBER INC — SAF

D. **Fill, Void or Cavity Material* - Sealant —** Min 1/8 in. (3.2 mm) wet thickness (min 1/16 in. or 1.5 mm dry thickness) of spray applied to cover mineral wool batt insulation on finished side of wall. Maintain min 1/2 in. (13 mm) overlaps onto surrounding substrates.
SPECIFIED TECHNOLOGIES INC — SpecSeal AS200 Elastomeric Spray

Configuration C

3. **Joint System — Max separation between bottom of floor and top of liner panel (Item 2C) and between bottom of floor and top of gypsum board sheets (Item 2D) at time of installation of joint system is 3/4 or 1 in. (19 or 25 mm). The joint system is designed to accommodate a maximum 100 percent compression or extension for 3/4 in. (19 mm) wide joints and a maximum 100 percent compression only for 1 in. (25 mm) wide joints, from its installed width.** The joint system consists of the following:

A. **Forming Material* —** Nom 3/16 in. (4.8 mm) thick by 4 in. (102 mm) high joint forming material profile installed on both sides of the wall assembly. Profile installed on the shaft side of the wall by first marking a line across the top of the wall 3 in. (76 mm) below the bottom plane of the bottom of the "J" or ceiling runner on the interior surface of the gypsum liner. Joint profile material on shaft side positioned with its top edge against both the underside of the ceiling runner with its bottom edge on the line scribed on the shaft liner. Profile installed on the finished side of the wall by first marking a line across the top of the wall 3 in. (76 mm) below the bottom plane of the steel floor or roof deck valleys. Joint profile material on finished side positioned with its top edge against both the underside of the floor or steel deck with its bottom edge on the line scribed on the finished side of the wall assembly. Bottom of the joint profile attached to gypsum board with nom 1/2 in. (13 mm) long steel staples spaced not greater than 8 in. (203 mm) OC. Adjoining lengths of profile to overlap approx 3/4 in. (19 mm) at shiplapped ends.
SPECIFIED TECHNOLOGIES INC — SpecSeal Speed Flex Joint Profile

B. **Fill, Void or Cavity Material* - Sealant —** Min 1/8 in. (3.2 mm) wet thickness (min 1/16 in. or1.5 mm dry thickness) of spray applied to cover forming material within joint cavity (Item 3A) and forming material installed above gypsum liner panel (Item 2D). Maintain min 1/2 in. (13 mm) overlaps onto surrounding substrates.
SPECIFIED TECHNOLOGIES INC — SpecSeal AS200 Elastomeric Spray

C. **Forming Material* —** Sections of min 4 pcf (64kg/m^3) density mineral wool batt insulation cut to fill flute area (when present) flush with interior surface of wall after installation of spray (Item 3B). Strips of mineral wool batt insulation cut to width of gypsum board layers (Item 2D) and compressed 50 percent in thickness. Strip installed between top of gypsum liner panel and bottom of steel ceiling runner.
INDUSTRIAL INSULATION GROUP L L C — MinWool 1200 Safing

JOHNS MANVILLE — Safing

ROCK WOOL MANUFACTURING CO — Delta Board

ROCKWOOL MALAYSIA SDN BHD — SAFE

ROCKWOOL — SAFE

THERMAFIBER INC — SAF

D. **Fill, Void or Cavity Material* - Sealant —** Min 1/8 in. (3.2 mm) wet thickness (min 1/16 in. or 1.5 mm dry thickness) of spray applied to cover mineral wool batt insulation on finished side of wall. Maintain min 1/2 in. (13 mm) overlaps onto surrounding substrates.
SPECIFIED TECHNOLOGIES INC — SpecSeal AS200 Elastomeric Spray

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**

Last Updated on 2020-03-16

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ROCKWOOL MALAYSIA SDN BHD — SAFE

ROCKWOOL — SAFE

THERMAFIBER INC — Type SAF

A. **Forming Material*** — As an option to Item 3, preformed mineral wool plugs, formed to the shape of the fluted floor units, friction fit to completely fill the flutes above the steel straps. Adjacent lengths of batts to be tightly butted with butted seams spaced min 24 in. (610 mm) apart along the length of the plugs.
THERMAFIBER INC — TopStop mineral wool deck plugs Type SAF batts

4. **Shaft Wall Assembly —** The 1 or 2 hr fire rated shaft wall assembly shall be constructed of the materials and in the manner described in the individual U400 or V400-Series Wall and Partition Design in the UL Fire Resistance Directory. The wall shall be installed parallel with the direction of the steel deck, directly beneath steel straps (Item 2), and shall include the following construction features:

A. **Floor, Wall and Ceiling Runners —** "J"-shaped runner, min 2-1/2 in. (64 mm) wide with unequal legs of 1 in. (25 mm) and 2 in. (51 mm) for max 3/4 in. joints and min 2-1/2 in. (64 mm) wide with unequal legs of 2 in. (64 mm) and 2-1/2 in. (64 mm), fabricated from min 24 MSG galv steel. Runners positioned with short leg toward finished side of wall. Runners attached to walls and floor with steel fasteners spaced max 24 in. (610 mm) OC. Ceiling runner attached to each steel strap (Item 2) with two steel screws. As an alternate to the "J"-shaped floor runner, a min 2-1/2 in. (64 mm) wide by 1 or 1-1/4 in. (25 or 32 mm) deep channel formed from min 24 MSG galv steel may be used for the floor runner.

A1. **Light Gauge Framing* - Slotted Ceiling Track —** (Not Shown) - As an alternate to the ceiling runner in Item 2A, slotted ceiling track shall consist of galv steel channels with slotted flanges. Slotted ceiling track sized to accommodate steel "C-H" studs (Item 4B). Attached to each steel strap (Item 2) with two steel screws
BRADY CONSTRUCTION INNOVATIONS INC, DBA SLIPTRACK SYSTEMS — SLP-TRK

CALIFORNIA EXPANDED METAL PRODUCTS CO — CST

CLARKDIETRICH BUILDING SYSTEMS — Type SLT, SLT-H

RAM SALES L L C — RAM Slotted Track

SCAFCO STEEL STUD MANUFACTURING CO

STEELER INC — Steeler Slotted Ceiling Runner

TELLING INDUSTRIES L L C — True-Action Deflection Track

THE STEEL NETWORK INC — VertiTrack VT, series,250VT, 362VT, 400VT, 600VT and 800VT

MARINO/WARE, DIV OF WARE INDUSTRIES INC — Type SLT slotted track

B. **Steel Studs —** "C-H"-shaped steel studs to be min 2-1/2 in. (64 mm) wide and formed of min 24 MSG galv steel. Studs cut 1/2 to 3/4 in. (13 to 19 mm) less in length than assembly height with bottom nesting in and resting on floor runner and with top nesting in ceiling runner for max 3/4 in. joints. Studs cut 1-1/2 to 1-3/4 in. (38 to 44 mm) less in length than assembly height with bottom nesting in and resting on floor runner and with top nesting in ceiling runner for max 1-1/2 in. joints. Studs spaced 24 in. (610 mm) OC. After installation of gypsum board liner panels (Item 4C), studs secured to flange of floor runner on finished side of wall only with No. 6 by 1/2 in. (13 mm) long self-drilling, self-tapping steel screws. Studs secured to flange of slotted ceiling track on finished side of wall only with No. 8 by 1/2 in. (13 mm) long self-drilling, self-tapping wafer head steel screws at slot midheight.

C. **Gypsum Board* —** 1 in. (25 mm) thick by 24 in. (610 mm) wide gypsum board liner panels as specified in the individual U400 or V400-Series Wall and Partition Design. Panels cut 1 in. (25 mm) less in length than floor to ceiling height for max 3/4 in. joints. Gypsum cut 1-1/2 to 1-3/4 in. (38 to 44 mm) less in length than floor to ceiling height for max 1-1/2 in. joints. Vertical edges inserted in "H"-shaped section of "C-H" studs. Free edge of end panels attached to long leg of "J" runner (Item 4AA) with 1-5/8 in. (41 mm) long Type S steel screws spaced max 12 in. (305 mm) OC.

D. **Gypsum Board* —** Gypsum board sheets, 1/2 or 5/8 in. (13 or 16 mm) thick, applied vertically or horizontally in one or two layers on finished side of wall as specified in the individual U400 or V400-Series Wall and Partition Design. A max 1 in. (25 mm) gap shall be maintained between the top of the gypsum board and the bottom surface of the concrete floor for max 3/4 in. joints. A max 1-1/2 in. (38 mm) gap shall be maintained between the top of the gypsum board and the bottom surface of the concrete floor for max 1-1/2 in. joints. The screws attaching the gypsum board layers to the C-H studs shall be located 1 in. (25 mm) below the bottom of the ceiling runner. No gypsum board attachment screws are to penetrate the ceiling runner.

5. **Joint System —** Max separation between bottom of floor and top of gypsum board (Item 4D) is 3/4 in. (19 mm). The joint system is designed to accommodate from its installed width. **When Item 5A1 is used in lieu of the strips of mineral wool described in Item 5A, the movement capabilities are 100% compression or extension. When Item 5C & 5D are used in lieu of the strips of mineral wool described in Item 5A, the movement capabilities are 25% compression or extension.** The joint system consists of a forming material and a fill material between the top of the gypsum board and the bottom of the floor, as follows:

A. **Forming Material* —** Min 4 pcf (64 kg/m^3) density mineral wool batt insulation cut into strips to fill the gap between the top of gypsum liner panel and bottom of the ceiling runner or track (Item 4 or 4A). The width of the strips shall be equal to the total thickness of the gypsum board liner panel. The strips of mineral wool are compressed 50 percent. Strips of mineral wool batt insulation cut to width of gypsum board layers (Item 4D) and compressed 50 percent in thickness and firmly packed into the gap between the top of the gypsum board and the bottom of the mineral wool batt sections (Item 3) or steel floor or roof units (Item 1A or 1AA). Strips installed above gypsum board layers on finished side of wall assembly flush with the wall surface.
INDUSTRIAL INSULATION GROUP L L C — MinWool-1200 Safing

JOHNS MANVILLE — Safing

ROCK WOOL MANUFACTURING CO — Delta Board

ROCKWOOL MALAYSIA SDN BHD — SAFE

ROCKWOOL — SAFE

THERMAFIBER INC — Type SAF

A1. **Forming Material* —** (not shown) Nom 3/16 in. (4.8 mm) thick by 4 in. (102 mm) high joint forming material profile installed on both sides of the wall assembly. Profile installed on the shaft side of the wall by first marking a line across the top of the wall 3 in. (76 mm) below the bottom plane of the bottom of the "J" or ceiling runner on the interior surface of the gypsum liner. Joint profile material on shaft side positioned with its top edge against both the underside of the ceiling runner with its bottom edge on the line scribed on the shaft liner. Profile installed on the finished side of the wall by first marking a line across the top of the wall 3 in. (76 mm) below the bottom plane of the mineral wool batt sections (Item 3) or steel floor or roof units (Item 1A or 1AA). Joint profile material on finished side positioned with its top edge against both the underside of the mineral wool (Item 3) or steel floor or roof units (Item 1A) with its bottom edge on the line scribed on the finished side of the wall assembly. Bottom of the joint profile attached to gypsum board with nom 1/2 in. (13 mm) long steel staples spaced not greater than 8 in. (203 mm) OC. Adjoining lengths of profile to overlap approx 3/4 in. (19 mm) at shiplapped ends.
SPECIFIED TECHNOLOGIES INC — SpecSeal Speed Flex Joint Profile

B. **Fill, Void or Cavity Material* - Sealant —** Min 1/8 in. (3.2 mm) wet thickness (min 1/16 in. or 1.6 mm dry thickness) applied to cover forming material (Item 5A or 5A1) with a min 1/2 in. (13 mm) overlap onto the gypsum board, steel strapping and steel deck on both sides of wall. Spray applied to cover mineral wool batt insulation on finished side of wall.
SPECIFIED TECHNOLOGIES INC — SpecSeal AS200 Elastomeric Spray

C. **Bond Breaker Tape (Optional, Not Shown) —** When Item 5D is used, polyethylene tape supplied in rolls. Tape applied to flanges of slotted ceiling track (Item 2D) to prevent bonding of the sealant at points other than the top and bottom of the linear gap.

D. **Fill, Void or Cavity Material* - Sealant (Optional, Not Shown) —** As an alternate to Item 5A or 5A1. min 1 in. (25 mm) depth of sealant to be installed to fill linear gap between top of gypsum board liner panel (Item 4C) and top inside surface of slotted ceiling runner or track (Item 4A or 4A1) prior to installation of gypsum board sheets on finished side of wall.
SPECIFIED TECHNOLOGIES INC — SpecSeal ES Elastomeric Sealant. **When sealant is used, the movement capability of the joint is limited to 25 percent in compression or extension.**

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XHBN.HW-D-0456 - Joint Systems

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- Authorities Having Jurisdiction should be consulted before construction.
- Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field.
- When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction.
- Only products which bear UL's Mark are considered Certified.

XHBN - Joint Systems
XHBN7 - Joint Systems Certified for Canada

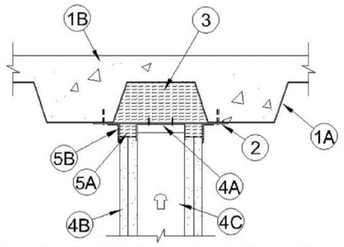
See General Information for Joint Systems

See General Information for Joint Systems Certified for Canada

System No. HW-D-0456

March 16, 2020

ANSI/UL2079	CAN/ULC S115
Assembly Ratings — 1 and 2 Hr (See Items 1 and 4C)	F Ratings — 1 and 2 Hr (See Items 1 and 4C)
Nominal Joint Width - 3/4 or 1-1/2 In. (See Item 5).	FT Ratings — 1 and 2 Hr (See Items 1 and 4C)
Class II Movement Capabilities — 50% or 100% Compression or Extension (See Item 5)	FH Ratings — 1 and 2 Hr (See Items 1 and 4C)
L Rating At Ambient — Less Than 1 CFM/sq ft	FTH Ratings — 1 and 2 Hr (See Items 1 and 4C)
L Rating At 400 F — Less Than 1 CFM/sq ft	Nominal Joint Width - 3/4 or 1-1/2 In. (See Item 5).
	Class II Movement Capabilities — 50% or 100% Compression or Extension (See Item 5)
	L Rating At Ambient — Less Than 1 CFM/sq ft
	L Rating At 400 F — Less Than 1 CFM/sq ft



1. **Floor Assembly —** The fire-rated fluted steel floor unit/concrete floor assembly shall be constructed of the materials and in the manner described in the individual D900 Series Floor-Ceiling Design in the Fire Resistance Directory and shall include the following construction features:

A. **Steel Floor and Form Units* —** Max 3 in. (76 mm) deep galv steel fluted floor units.

B. **Concrete —** Min 2-1/2 in. (64 mm) thick reinforced concrete, as measured from the top plane of the floor units.

1A. **Roof Assembly —** (Not Shown) — As an alternate to the floor assembly (Item 1), a fire rated fluted steel deck roof assembly may be used. The roof assembly shall be constructed of the materials and in the manner described in the individual P900 Series Roof-Ceiling Design in the UL Fire Resistance Directory. The hourly fire rating of the roof assembly shall be equal to or greater than the hourly fire rating of the wall assembly. The roof assembly shall include the following construction features:

A. **Steel Roof Deck —** Max 3 in. (76 mm) deep galv steel fluted roof deck.

B. **Roof Insulation —** Min 2-1/4 in. (57 mm) thick poured insulating concrete, as measured from the top plane of the steel roof deck.

C. **Roof Covering* —** Hot mopped or cold-application materials compatible with insulating concrete.

2. **Steel Straps —** Min 2 in. (51 mm) wide 16 MSG (0.059 in. or 1.5 mm thick) galv steel straps cut to a length to span the flute and to overlap min 1-1/2 in. (38 mm) on the adjacent valleys of fluted floor units. Straps spaced max 24 in. (610 mm) OC and fastened to floor assembly with min 1/4 in. (6 mm) diam by 1-1/2 in. (38 mm) long steel concrete anchors or min 0.145 in. (3.7 mm) diam by 1-1/4 in. (32 mm) long powder actuated fasteners.

3. **Forming Material* —** Mineral wool batt insulation, nom 4 pcf (64 kg/m^3), cut to the shape of the fluted floor units, friction fit to completely fill the flutes above the steel straps. Adjacent lengths of batts to be tightly butted with butted seams spaced min 24 in. (610 mm) apart along the length of the plugs.
INDUSTRIAL INSULATION GROUP L L C — MinWool-1200 Safing

JOHNS MANVILLE — Safing

ROCK WOOL MANUFACTURING CO — Delta Board

ROCKWOOL MALAYSIA SDN BHD — Safe

ROCKWOOL — Safe

THERMAFIBER INC — Type SAF

A. **Forming Material* —** As an option to Item 3, preformed mineral wool plugs, formed to the shape of the fluted floor units, friction fit to completely fill the flutes above the steel straps. Adjacent lengths of batts to be tightly butted with butted seams spaced min 24 in. (610 mm) apart along the length of the plugs.
THERMAFIBER INC — TopStop mineral wool deck plugs Type SAF batts

4. **Wall Assembly —** The 1 or 2 h fire rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U400, V400 or W400 Series Wall and Partition Design in the UL Fire Resistance Directory and shall include the following construction features:

A. **Steel Floor and Ceiling Runners —** Floor and ceiling runners of wall assembly shall consist of galv steel channels sized to accommodate steel studs. Ceiling runner to be provided with min 1-1/4 in. (32 mm) to max 3 in. (76 mm) flanges. Flange height of ceiling runner shall be min 1/4 in. (6 mm) greater than max extended joint width. Ceiling runner installed parallel to direction of fluted steel floor units, directly beneath steel straps, and secured to straps with two No. 8 self-drilling, self-tapping steel screws per strap.

A1. **Light Gauge Framing* — Slotted Ceiling Runner —** As an alternate to the ceiling runner in Item 4A, slotted ceiling runner consisting of galv steel channel with slotted flanges sized to accommodate steel studs (Item 4B). Ceiling runner installed parallel to direction of fluted steel floor units, directly beneath steel straps, and secured to straps with two No. 8 self-drilling, self-tapping steel screws per strap.
BRADY CONSTRUCTION INNOVATIONS INC, DBA SLIPTRACK SYSTEMS — SLP-TRK, SLPTRK32S

CALIFORNIA EXPANDED METAL PRODUCTS CO — CST, CST32S

CLARKDIETRICH BUILDING SYSTEMS — Type SLT, SLT-H

MARINO/WARE, DIV OF WARE INDUSTRIES INC — Type SLT

METAL-LITE INC — The System

RAM SALES L L C — RAM Slotted Track

STEELER INC — Steeler Slotted Ceiling Runner

B. **Studs —** Steel studs to be min 2-1/2 in. (64 mm) wide. Studs cut 1/2 in. to 1-1/4 in. (13 to 32 mm) less in length than assembly height with bottom nesting in and resting on the floor runner and with top nesting in ceiling runner without attachment. When slotted ceiling runner (Item 4A1) is used, steel studs secured to slotted ceiling runner with No. 8 by 1/2 in. (13 mm) long wafer head steel screws at midheight of slot on each side of wall. Stud spacing not to exceed 24 in. (610 mm) OC.

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**

Last Updated on 2020-03-16

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UL Product iQ®

XHBN.HW-D-0365 - Joint Systems

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- Authorities Having Jurisdiction should be consulted before construction.
- Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field.
- When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction.
- Only products which bear UL's Mark are considered Certified.

XHBN - Joint Systems
XHBN7 - Joint Systems Certified for Canada

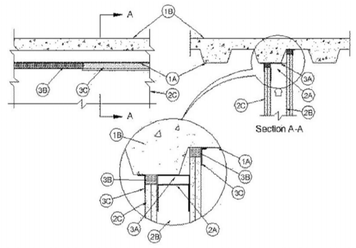
See General Information for Joint Systems

See General Information for Joint Systems Certified for Canada

System No. HW-D-0365

September 02, 2016

ANSI/UL2079	CAN/ULC S115
Assembly Ratings - 1 and 2 Hrs (See Item 2)	F Ratings - 1 and 2 Hrs (See Item 2)
Nominal Joint Widths - 3/4, 1-1/2 and 2-1/2 In. (See Item 3)	FT Ratings - 1 and 2 Hrs (See Item 2)
Class II Movement Capabilities - 40, 50 or 100% Compression or Extension (See Item 3)	FH Ratings - 1 and 2 Hrs (See Item 2)
L Rating At Ambient - Less Than 1 CFM/Lin Ft	FTH Ratings - 1 and 2 Hrs (See Item 2)
L Rating At 400 F - Less Than 1 CFM/Lin Ft	Nominal Joint Widths - 3/4, 1-1/2 and 2-1/2 In. (See Item 3)
	Class II Movement Capabilities - 40, 50 or 100% Compression or Extension (See Item 3)
	L Rating At Ambient - Less Than 1 CFM/Lin Ft
	L Rating At 400 F - Less Than 1 CFM/Lin Ft



1. **Floor Assembly —** The fire-rated fluted steel deck/concrete floor assembly shall be constructed of the materials and in the manner described in the individual Floor-Ceiling Design in the UL Fire Resistance Directory and shall include the following construction features:

A. **Steel Floor and Form Units* —** Max 3 in. (76 mm) deep galv steel fluted floor units having a min valley width of 4-3/4 in. (121 mm).

B. **Concrete —** Min 2-1/2 in. (64 mm) thick reinforced concrete, as measured from the top plane of the floor units.

1A. **Roof Assembly —** (Not Shown) — As an alternate to the floor assembly (Item 1), a fire rated fluted steel deck roof assembly may be used. The roof assembly shall be constructed of the materials and in the manner described in the individual P900 Series Roof-Ceiling Design in the UL Fire Resistance Directory. The hourly fire rating of the roof assembly shall be equal to or greater than the hourly fire rating of the wall assembly. The roof assembly shall include the following construction features:

A. **Steel Roof Deck —** Max 3 in. (76 mm) deep galv steel fluted roof deck having a min valley width of 4-3/4 in. (121 mm).

B. **Roof Insulation —** Min 2-1/4 in. (57 mm) thick poured insulating concrete, as measured from the top plane of the steel roof deck.

C. **Roof Covering* —** Hot mopped or cold-application materials compatible with insulating concrete.

2. **Wall Assembly —** The 1 or 2 hr fire-rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner described in the individual U400, V400 or W400 Series Wall and Partition Design in the UL Fire Resistance Directory and shall include the following construction features:

A. **Steel Floor and Ceiling Runners —** Floor and ceiling runners of wall assembly shall consist of galv steel channels sized to accommodate steel studs . Ceiling runner to be provided with min 1-1/4 in. (32 mm) to max 3 in. (76 mm) flanges. When deflection channel (Item 3A) is used, flange height of ceiling runner is to be equal to or greater than flange height of deflection channel and the ceiling runner is to nest within the deflection channel with a 1/2 to 1 in. (13 to 25 mm) gap maintained between the top of the ceiling runner and the top of the deflection channel. When

deflection channel is not used, ceiling runner installed parallel with direction of fluted steel floor units or roof deck and secured to valley with steel fasteners or welds spaced max 24 in. (610 mm) OC. Ceiling runner not to cantilever more than 1-1/2 in. (38 mm) beyond edge of valley.

A1. **Light Gauge Framing* — Slotted Ceiling Runner —** As an alternate to the ceiling runner in Item 2A, slotted ceiling runner consisting of galv steel channel with slotted flanges sized to accommodate steel studs (Item 2B). Ceiling runner installed parallel with direction of fluted steel floor or roof deck and secured to valley with steel fasteners or welds spaced max 24 in. OC. Slotted ceiling runner not to cantilever more than 1-1/2 in. beyond edge of valley. When slotted ceiling runner is used, deflection channel (Item 3A) shall not be used.
BRADY CONSTRUCTION INNOVATIONS INC, DBA SLIPTRACK SYSTEMS — SLP-TRK

CALIFORNIA EXPANDED METAL PRODUCTS CO — CST

CLARKDIETRICH BUILDING SYSTEMS — Type SLT, SLT-H

MARINO/WARE, DIV OF WARE INDUSTRIES INC — Type SLT

METAL-LITE INC — The System

RAM SALES L L C — RAM Slotted Track

A2. **Light Gauge Framing* — Clipped Ceiling Runner —** As an alternate to the ceiling runner in Items 2A and 2A1, clipped runner to consist of galv steel channel with clips preformed in track flanges which positively engage the inside flange of the steel studs (Item 2B). Track sized to accommodate steel studs (Item 2B). Track flanges to be min 3-1/4 in. (83 mm). Clipped ceiling runner installed parallel with direction of fluted steel floor units or roof deck and secured to valley with steel fasteners spaced max 24 in. (610 mm) OC. Clipped ceiling runner not to cantilever more than 1-1/2 in. (38 mm) beyond edge of valley. When clipped ceiling runner is used, deflection channel (Item 3A) shall not be used.
TOTAL STEEL SOLUTIONS L L C — Snap Trak

A3. **Light Gauge Framing* - Vertical Deflection Ceiling Runner —** As an alternate to the ceiling runner in Items 2A, 2A1 and 2A2, vertical deflection ceiling runner consisting of galv steel channel with slotted vertical deflection clips mechanically fastened within runner. Slotted clips, provided with step bushings, for permanent fastening of steel studs. Vertical deflection ceiling runner installed parallel with direction of fluted steel floor or roof deck and secured to valley with steel fasteners or welds spaced max 24 in. (610 mm) OC. Vertical deflection ceiling runner not to cantilever more than 1-1/2 in. (38 mm) beyond edge of valley. When vertical deflection ceiling runner is used, deflection channel (Item 3A) shall not be used.
THE STEEL NETWORK INC — VertiTrack VTD362, VTD400, VTD600 and VTD800

B. **Studs —** Steel studs to be min 3-5/8 in. (92 mm) wide. Studs cut 1/2 to 3/4 in. (13 to 19 mm) less in length than assembly height with bottom nesting in and secured to floor runner. When deflection channel (Item 3A) is used, steel studs attached to ceiling runner (Item 2A) with sheet metal screws located 3/4 in. (19 mm) below the bottom to the deflection channel. When deflection channel is not used, studs to nest in ceiling runner without attachment. When slotted ceiling runner (Item 2A1) is used, steel studs secured to slotted ceiling runner with No. 8 by 1/2 in. (13 mm) long wafer head steel screws at midheight of slot on each side of wall. When vertical deflection ceiling runner (Item 2A3) is used, steel studs secured to slotted vertical deflection clips, through bushings, with steel screws at midheight of each slot. Stud spacing not to exceed 24 in. (610 mm) OC.

C. **Gypsum Board* —** Gypsum board sheets installed to a min total 5/8 or 1-1/4 in. (16 or 32 mm) thickness on each side of wall for 1 and 2 hr rated assemblies, respectively. Wall to be constructed as specified in the individual U400,

V400 or W400 Series Design in the UL Fire Resistance Directory, except that a max 2-1/2 in. (25 mm) gap shall be maintained between the top of the gypsum board and the underside of the steel floor or roof deck . The screws attaching the gypsum board to the studs along the top of the wall shall be located 1 in. (25 mm) below the bottom of the ceiling runner. No gypsum board attachment screws shall be driven into the ceiling runner or into the optional deflection channel.
The hourly fire rating of the joint system is equal to the hourly fire rating of the wall.

3. **Joint System — Max separation between floor or roof deck and top of gypsum board (at time of installation of joint system) is 3/4,1-1/2 or 2-1/2 in. (19, 38 or 64 mm). The joint system is designed to accommodate a max 50 percent compression or extension from its installed width for max 1-1/2 in. (38 mm) wide joints and a max 40 percent compression or extension from its installed width for max 2-1/2 in. (64 mm) wide joints. When Item 3B1 is used in lieu of the mineral wool strips described in Item 3B, the maximum joint width is 3/4 in. (19 mm) and the movement capabilities are 100% compression or extension.** The joint system shall consist of forming and fill materials, with or without a deflection channel (Item 3A), as follows:

A. **Deflection Channel —** Max 3 in. (76 mm) deep min 24 gauge galv steel channel sized to accommodate ceiling runner (Item 2A). Deflection channel installed parallel with direction of fluted steel floor units or roof deck and secured to valley with steel fasteners or welds spaced max 24 in. (610 mm) OC. Deflection channel not to cantilever more than 1-1/2 in. (38 mm) beyond edge of valley. The ceiling runner (Item 2A) is installed within the deflection channel to maintain a 1/2 to 1 in. (13 to 25 mm) gap between the top of the ceiling runner and the top of the deflection channel. The ceiling runner nests inside the deflection channel without attachment.

B. **Forming Material* —** Min 5/8 or 1-1/4 in. (16 or 32 mm) wide strips of nom 4 pcf (64 kg/m^3) density mineral wool batt insulation for 1 or 2 hr rated assemblies, respectively. Strips of mineral wool compressed 50 percent in thickness and installed cut edge first to fill the gap between the top of the gypsum board and the underside of the steel floor or roof deck. The forming material shall be installed flush with both surfaces of wall.
INDUSTRIAL INSULATION GROUP L L C — MinWool-1200 Safing

JOHNS MANVILLE — Safing

ROCK WOOL MANUFACTURING CO — Delta Board

ROCKWOOL MALAYSIA SDN BHD — Safe

ROCKWOOL — Safe

THERMAFIBER INC — Type SAF

B1. **Forming Material* —** (Not Shown) - As an option to Item 3B, nom 3/16 in. (4.8 mm) thick by 4 in. (102 mm) high joint forming material profile installed on both sides of the wall assembly. Profile installed by first marking a line across the top of the wall 3 in. (76 mm) below the bottom plane of the steel floor or roof deck valleys. Joint profile material positioned with its top edge against the underside of the steel deck and with its bottom edge on the line scribed on the wall assembly. Bottom of the joint profile attached to gypsum board with nom 1/2 in. (13 mm) long steel staples spaced not greater than 8 in. (203 mm) OC. Adjoining lengths of profile to overlap approx 3/4 in. (19 mm) at shiplapped ends.
SPECIFIED TECHNOLOGIES INC — SpecSeal Speed Flex Joint Profile

C. **Fill, Void or Cavity Material* — Sealant —** Min 1/8 in. (3.2 mm) wet thickness (min 1/16 in. or 1.6 mm dry thickness) of fill material spray applied on each side of the wall between the top of the wall and the bottom of the steel floor or roof deck, overlapping min 1/2 in. (13 mm) onto both the gypsum board and steel floor or roof deck on both sides of wall.
SPECIFIED TECHNOLOGIES INC — SpecSeal AS 200 Elastomeric Spray

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Last Updated on 2016-09-02

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Owner
marin health
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250 BON AIR ROAD,
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Consultant

SKA Project Number
2136

HCAI Number
S221296-21-00

HCAI seal/signature

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Issued for
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Drawn by JS

Checked by CL

Project Name
HOSPITAL REPLACEMENT BUILDING-
NUCLEAR MEDICINE SUITE RELOCATION

Sheet Title
UL DETAILS

Date 08/05/2022

Scale AS NOTED

Sheet Number
A10.2

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UL Product iQ®

XHBN.HW-D-0363 - Joint Systems

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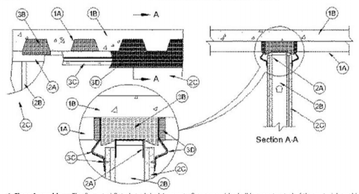
XHBN - Joint Systems

See General Information for Joint Systems

System No. HW-D-0363

September 26, 2019

Assembly Ratings — 1 and 2 Hr (See Item 2)
Nominal Joint Width — 1/2 and 3/4 in. (See Items 2A1 and 3)
L Rating At Ambient — Less Than 1 CFM/Lin Ft
L Rating At 400°F — Less Than 1 CFM/Lin Ft
Class II and III Movement Capabilities — 100% Compression or Extension



1. **Floor Assembly —** The fire-rated fluted steel deck/concrete floor assembly shall be constructed of the materials and in the manner described in the individual D900 Series Floor-Ceiling Design in the UL Fire Resistance Directory and shall include the following construction features:

A. **Steel Floor and Form Units* —** Max 3 in. (76 mm) deep galv steel fluted floor units.

B. **Concrete —** Min 2-1/2 in. (64 mm) thick reinforced concrete, as measured from the top plane of the floor units.

1A. **Roof Assembly —** (Not Shown) - As an alternate to the floor assembly (Item 1), a fire rated fluted steel deck roof assembly may be used. The roof assembly shall be constructed of the materials and in the manner described in the individual P900 Series Roof-Ceiling Design in the UL Fire Resistance Directory. The hourly fire rating of the roof assembly shall be equal to or greater than the hourly fire rating of the wall assembly. The roof assembly shall include the following construction features:

A. **Steel Roof Deck —** Max 3 in. (76 mm) deep galv steel fluted roof deck.

B. **Roof Insulation —** Min 2-1/4 in. (57 mm) thick poured insulating concrete, as measured from the top plane of the steel roof deck.

2. **Wall Assembly —** The 1 or 2 hr fire-rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner described in the individual U400 or V400 Series Wall or Partition Design in the UL Fire Resistance Directory and shall include the following construction features:

A. **Steel Floor and Ceiling Runners —** Floor and ceiling runners of wall assembly shall consist of galv steel channels sized to accommodate steel studs. When deflection channel (Item 3A) is used, flange height of ceiling runner is to be equal to or greater than flange height of deflection channel and the ceiling runner is to nest within the deflection channel with a min 3/4 in. (19 mm) gap maintained between the top of the ceiling runner and the top of the deflection channel. When deflection channel is not used, flange height of ceiling runner shall be min 1 in. (25 mm) greater than nom joint width. Ceiling runner secured to valleys of steel floor or roof deck, perpendicular to steel deck direction, with steel fasteners or welds spaced max 24 in. (610 mm) OC.

A1. **Light Gauge Framing* - Slotted Ceiling Runner —** As an alternate to the ceiling runner in Item 2A, slotted ceiling runner to consist of galv steel channel with slotted flanges sized to accommodate steel studs (Item 2B). Ceiling runner installed perpendicular to direction of fluted steel floor or roof deck and secured to valleys with steel fasteners spaced max 24 in. (610 mm) OC. When slotted ceiling runner is used, deflection channel (Item 3A) shall not be used. Nominal joint size is 1/2 in. when slotted ceiling runner is used.
CALIFORNIA EXPANDED METAL PRODUCTS CO — CST

BRADY CONSTRUCTION INNOVATIONS INC, DBA SLIPTRACK SYSTEMS — SLP-TRK

MARINO/WARE, DIV OF WARE INDUSTRIES INC — Type SLT

A2. **Light Gauge Framing* - Vertical Deflection Ceiling Runner —** As an alternate to the ceiling runner in Items 2A and 2A1, vertical deflection ceiling runner to consist of galv steel channel with slotted vertical deflection clips mechanically fastened within runner. Slotted clips, provided with step bushings, for permanent fastening of steel studs. Vertical deflection ceiling runner installed perpendicular to direction of fluted steel floor or roof deck and secured to valleys with steel fasteners spaced max 24 in. (610 mm) OC. When slotted ceiling runner is used, deflection channel (Item 3A) shall not be used.

A3. **Light Gauge Framing* - Slotted Ceiling Runner —** As an alternate to the ceiling runner in Items 2A, 2A1, 2A2 and 2A3, slotted ceiling runner to consist of galv steel channel with 3-1/4 in. (83 mm) high slotted flanges sized to accommodate steel studs (Item 2B). Ceiling runner installed perpendicular to direction of fluted steel floor or roof deck and secured to valleys with steel fasteners spaced max 24 in. (610 mm) OC. When slotted ceiling runner is used, deflection channel (Item 3A) shall not be used.
BRADY CONSTRUCTION INNOVATIONS INC, DBA SLIPTRACK SYSTEMS — SLPTRK325

B. **Studs —** Steel studs to be min 3-1/2 in. (89 mm) wide. Studs cut min 3/4 in. (19 mm) less in length than assembly height with bottom nesting in and secured to floor runner. When deflection channel (Item 3A) is used, steel studs attached to ceiling runner with sheet metal screws located 1 in. (25 mm) below the bottom of the deflection channel. When deflection channel is not used, studs to nest in ceiling runner without attachment. When slotted ceiling runner (Item 2A1) is used, steel studs secured to slotted ceiling runner with No. 8 by 1/2 in. (13 mm) long wafer head steel screws at midheight of slot on each side of wall. When vertical deflection ceiling runner (Item 2A2) is used, steel studs secured to slotted vertical deflection clips, through the bushings, with steel screws at midheight of each slot. Stud spacing not to exceed 24 in. (610 mm) OC.

C. **Gypsum Board* —** Gypsum board sheets installed to a min total thickness of 5/8 in. (16 mm) or 1-1/4 in. (32 mm) on each side of wall for 1 and 2 hr fire rated assemblies, respectively. Wall to be constructed in the individual U400 or V400 Series Design in the UL Fire Resistance Directory, except that a max 3/4 in. (19 mm) gap shall be maintained between the top of the gypsum board and the bottom surface of the steel floor or roof deck. The screws attaching the gypsum board to the studs along the top of the wall shall be located 1 in. (25 mm) below the bottom of the ceiling runner. No gypsum board attachment screws shall be driven into the ceiling runner or into the optional deflection channel.
The hourly fire rating of the joint system is equal to the hourly fire rating of the wall.

3. **Joint System — Max separation between bottom of floor or roof deck and top of gypsum board (at time of installation of joint system) is 3/4 in. (19 mm) or 1/2 in. (13 mm) when Item 2A1 is used. The joint system is designed to accommodate a max 100 percent compression or extension from it's installed width.** The joint system shall consist of forming and fill materials, with or without a deflection channel (Item 3A), as follows:

A. **Deflection Channel —** (Optional, Not Shown) - Max 2 in. (51 mm) deep min 25 gauge galv steel channel sized to accommodate ceiling runner (Item 2A). Deflection channel secured to valleys of steel floor or roof deck, perpendicular to steel deck direction, with steel fasteners or welds spaced max 24 in. (610 mm) OC. The ceiling runner is installed within the deflection channel to maintain a min 3/4 in. (19 mm) gap between the top of the ceiling runner and the top of the deflection channel. The ceiling runner nests inside the deflection channel without attachment.

B. **Forming Material* —** Nom 4 pcf (64 kg/m3) mineral wool batt cut to the shape of the steel deck flute with a height 1 in. (25 mm) greater than height of flutes and with a length 3/4 to 1 in. (19 to 25 mm) greater than the overall thickness of the wall assembly. Mineral wool batt compressed and installed into each flute above the ceiling runner with its ends projecting 3/8 to 1/2 in. (10 to 13 mm) beyond the wall surfaces.
ROCK WOOL MANUFACTURING CO — Delta Board

ROCKWOOL MALAYSIA SDN BHD — Safe

ROCKWOOL — Safe

THERMAFIBER INC — SAF

C. **Forming Material* —** Nom 3/16 in. (4.8 mm) thick by 4 in. (102 mm) high joint forming material profile installed on both sides of the wall assembly. Profile installed by first marking a line across the top of the wall 3 in. (76 mm) below the bottom plane of the steel floor or roof deck valleys. Joint profile material positioned with its top edge against both the underside of the steel deck and the end of the mineral wool batt plugs (Item 3B) and with its bottom edge on the line scribed on the wall assembly. Bottom of the joint profile attached to gypsum board with nom 1/2 in. (13 mm) long steel staples spaced not greater than 8 in. (203 mm) OC. Adjoining lengths of profile to overlap approx 3/4 in. (19 mm) at shiplapped ends.
SPECIFIED TECHNOLOGIES INC — SpecSeal Speed Flex Joint Profile

D. **Fill, Void or Cavity Material* - Sealant —** Min 1/8 in. (3.2 mm) wet thickness (min 1/16 in. or 1.6 mm dry thickness) of fill material spray applied to completely cover forming materials on each side of the wall with a min 1/2 in. (13 mm) overlap onto gypsum board and steel deck on both sides of the wall.
SPECIFIED TECHNOLOGIES INC — SpecSeal AS200 Elastomeric Spray

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Last Updated on 2019-09-26

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UL Product iQ®

XHBN.BW-S-0020 - Joint Systems

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- Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field.
- When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction.
- Only products which bear UL's Mark are considered Certified.

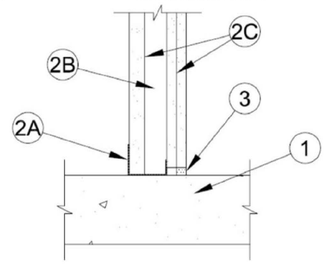
XHBN - Joint Systems

See General Information for Joint Systems

System No. BW-S-0020

October 28, 2009

Assembly Ratings — 1 and 2 Hr (See Item 2)
Joint Width — 1/2 In. Max
L Rating At Ambient - Less Than 1 CFM/Lin Ft
L Rating At 400 F - Less Than 1 CFM/Lin Ft



1. **Floor Assembly —** Min 4-1/2 in. (114 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m³) structural concrete. Floor may also be constructed of any min 6 in. (152 mm) thick UL Classified hollow-core **Precast Concrete Units*.**

See **Precast Concrete Units** (CFTV) category in the Fire Resistance Directory for names of manufactures.

2. **Wall Assembly —** The 1 or 2 hr fire rated gypsum board/steel stud shaft wall assembly shall be constructed of the materials and in the manner specified in the individual U400 or V400 Series Wall and Partition Design in the UL Fire Resistance Directory. In addition, the wall may incorporate a head-of-wall joint system constructed as specified in the HW Series Joint Systems in the UL Fire Resistance Directory. The wall shall include the following construction features:

A. **Steel Floor Runner —** "J"-shaped runners, min 2-1/2 in. (64 mm) deep, with unequal legs of 1 in. (25 mm) and 2 in. (51 mm), fabricated from min 24 MSG galv steel. Runners positioned with short leg toward finished side of wall. Runners attached to structural supports with steel fasteners located not greater than 2 in. (51 mm) from ends and not greater than 24 in. (610 mm) OC.

B. **Studs —** "C-HT, "E" (back-to-back) or "C-T"-shaped studs, min 2-1/2 in. (64 mm) deep, fabricated from min 25 MSG galv steel. Cut to lengths 3/8 to 1/2 in. (10 to 13 mm) less than floor-to-ceiling height and spaced 24 in. (610 mm) OC.

C. **Gypsum Board* —** 1 in. (25 mm) thick gypsum liner panels and 1/2 in., 5/8 in. or 3/4 in. (13, 16 or 19 mm) thick gypsum panels installed as specified in the individual U400 or V400 Series shaft wall designs in the UL Fire Resistance Directory.

The hourly fire rating of the joint system is equal to the hourly fire rating of the wall.

3. **Fill, Void or Cavity Material* - Sealant —** Max separation between top of floor and bottom of gypsum board on the finish side of wall is 1/2 in. (13 mm). Min 1/2 in. (13 mm) thickness of fill material installed on finish side of the wall between the bottom of the gypsum board and the top of the concrete floor, flush with surface of the finish side of wall.
SPECIFIED TECHNOLOGIES INC — SpecSeal ES Sealant, SpecSeal LCI Sealant, SpecSeal LC150 Sealant, Pensil 300 Sealant or SpecSeal Series SIL300 Silicone Firestop Sealant

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**

Last Updated on 2009-10-28

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UL Product iQ®

XHBN.BW-S-0003 - Joint Systems

Design/System/Construction/Assembly Usage Disclaimer

- Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Certified products, equipment, system, devices, and materials.
- Authorities Having Jurisdiction should be consulted before construction.
- Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field.
- When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction.
- Only products which bear UL's Mark are considered Certified.

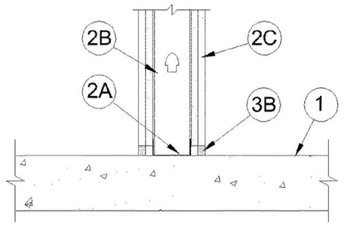
XHBN - Joint Systems

See General Information for Joint Systems

System No. BW-S-0003

November 18, 2008

Assembly Ratings — 1 and 2 Hr (See Item 2)
L Rating At Ambient — Less Than 1 CFM/Lin Ft (See Item 3B)
L Rating At 400°F — Less Than 1 CFM/Lin Ft (See Item 3B)
Joint Width — 3/4 In. Max



1. **Floor Assembly —** Min 4-1/2 in. (114 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m³) structural concrete. Floor may also be constructed of any 6 in. (152 mm) thick UL Classified hollow-core **Precast Concrete Units*.**

See **Precast Concrete Units** category in the Fire Resistance Directory for names of manufactures.

2. **Wall Assembly —** The 1 or 2 h fire-rated gypsum board/steel stud wall assembly shall be constructed of the materials and in the manner specified in the individual U400 or V400 Series Wall or Partition Design in the UL Fire Resistance Directory. In addition, the wall may incorporate a head-of-wall joint system constructed as specified in the HW Series Joint Systems in the UL Fire Resistance Directory. The wall shall include the following construction features:

A. **Steel Floor Runner —** Floor runners of wall assembly shall consist of min No. 25 gauge galv steel channels sized to accommodate steel studs (Item 2B). Floor runners to be provided with min 1-1/4 in. (32 mm) flanges. Runners secured with steel fasteners spaced 12 in. (305 mm) OC.

B. **Studs —** Steel studs to be min 3-1/2 in. (89 mm) wide. Studs cut 1/2 to 3/4 in. (13 to 19 mm) less in length than assembly height with bottom nesting in, resting on and fastened to floor runner with sheet metal screws. Stud spacing not to exceed 24 in. (610 mm) OC.

C. **Gypsum Board* —** Gypsum board installed to a min total thickness of 5/8 in. (16 mm) or 1-1/4 in. (32 mm) on each side of wall for a 1 or 2 hr fire rated wall, respectively. Wall to be constructed as specified in the individual U400 or V400 Series Design in the UL Fire Resistance Directory except that a max 3/4 in. (19 mm) gap shall be maintained between the bottom of the gypsum board and the top of the concrete floor.
The hourly fire rating of the joint system is equal to the hourly fire rating of the wall.

3. **Joint System — Max separation between top of floor and bottom of gypsum board is 3/4 in. (19 mm).** The joint system consists of a packing material and a fill material, as follows:

A. **Packing Material —** (Optional, Not Shown) - Mineral wool batt insulation, polyethylene backer rod or glass fiber insulation firmly packed into the gap between the bottom of the gypsum board and the top of the concrete floor and recessed from each surface of the wall to accommodate the required thickness of fill material.

B. **Fill, Void or Cavity Material*-Sealant —** Min 1/2 in. (13 mm) thickness of fill material installed on each side of the wall between the bottom of the gypsum board and the top of the concrete floor, flush with each surface of the wall.

When mineral wool batt insulation is used as a packing material, min thickness of fill material on each side of the wall is 1/4 in. (6 mm).
SPECIFIED TECHNOLOGIES INC — SpecSeal ES Sealant, SpecSeal LCI Sealant, SpecSeal LC150 Sealant, Pensil 300 Sealant or SpecSeal Series SIL300.

Note: L Ratings apply when SpecSeal ES Sealant is used.

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**

Last Updated on 2008-11-18

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S221296-21-00

HCAI seal/signature

REVIEWED IN ACCORDANCE WITH THE REQUIREMENTS OF 7 CCR
APPROVED
Department of Health Care Access & Information
Office of Statewide Hospital Planning & Development
2/13/2023, 11:24:21 PM
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Seal/Signature

LICENSED ARCHITECT
C37097
EXP. 8/30/2023
STATE OF CALIFORNIA

Issued for
HCAI SUBMITTAL

Drawn by JS
Checked by CL

Project Name
HOSPITAL REPLACEMENT BUILDING-
NUCLEAR MEDICINE SUITE RELOCATION

Sheet Title
UL DETAILS

Date 08/05/2022
Scale AS NOTED
Sheet Number
A10.3

30 X 42

GENERAL NOTES

I. GENERAL

1. MATERIALS AND WORKMANSHIP SHALL CONFORM WITH THE 2019 CALIFORNIA BUILDING CODE (PART 2, TITLE 24 CCR), ASSOCIATED REFERENCE STANDARDS AND THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.
2. DRAWINGS INDICATE GENERAL AND TYPICAL DETAILS OF CONSTRUCTION. WHERE CONDITIONS ARE NOT SPECIFICALLY INDICATED BUT ARE OF SIMILAR CHARACTER TO DETAILS SHOWN, USE SIMILAR DETAILS OF CONSTRUCTION, SUBJECT TO REVIEW BY THE OWNER'S REPRESENTATIVE.
3. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE WORK OF ALL TRADES AND FOR CHECKING DIMENSIONS. NOTIFY THE OWNER'S REPRESENTATIVE OF ANY DISCREPANCIES AND RESOLVE BEFORE PROCEEDING WITH THE WORK.
4. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR PROVIDING MEASURES NECESSARY TO PROTECT THE STRUCTURE DURING CONSTRUCTION. SUCH MEASURES INCLUDE, BUT MAY NOT BE LIMITED TO, BRACING AND SHORING FOR LOADS DURING CONSTRUCTION.
5. INFORMATION SHOWN ON THE DRAWINGS RELATED TO EXISTING CONDITIONS REPRESENTS THE PRESENT KNOWLEDGE, BUT WITHOUT GUARANTEE OF ACCURACY. REPORT CONDITIONS THAT CONFLICT WITH THE CONTRACT DOCUMENTS TO THE OWNER'S REPRESENTATIVE. DO NOT DEVIATE FROM THE CONTRACT DOCUMENTS WITHOUT WRITTEN DIRECTION FROM THE OWNER'S REPRESENTATIVE.
6. ANCHORAGE AND SUPPORTS OF ALL EQUIPMENT TO BE INSTALLED AS PART OF THIS PROJECT SHALL BE DETAILED ON CONSTRUCTION DOCUMENTS, EXCEPT THOSE EXEMPT BY 2019 CBC SECTION 1617A.1.18. EQUIPMENT SUPPORTS AND ANCHORAGE SHALL BE APPROVED BY THE APPROPRIATE DESIGN PROFESSIONAL OF RECORD AND HCAI AS A PART OF FIELD REVIEWS/OBSERVATIONS. THE INSPECTOR OF RECORD (IOR) SHALL ASSURE THAT THE ABOVE REQUIREMENTS ARE ENFORCED.
7. WHERE EQUIPMENT IS SHOWN ON THE STRUCTURAL PLANS, THE LOCATIONS ARE SHOWN FOR REFERENCE ONLY. COORDINATE LOCATIONS OF EQUIPMENT WITH ARCHITECTURAL, M/E/P, AND VENDOR DRAWINGS.
8. DO NOT SCALE THE DRAWINGS TO DETERMINE DIMENSIONS. USE WRITTEN DIMENSIONS. WHERE WRITTEN DIMENSIONS ARE NOT PROVIDED, SEE ARCHITECTURAL OR OTHER PROJECT DRAWINGS OR CONSULT WITH THE ARCHITECT FOR CLARIFICATION BEFORE PROCEEDING WITH THE WORK.

II. CONCRETE

1. NON-SHRINK GROUT SHALL BE SIKAGROUT 328 BY SIKA, MASTERFLOW 928 BY BASF, OR FX-228 BY SIMPSON STRONG-TIE. FOLLOW MANUFACTURER'S INSTRUCTION FOR INSTALLATION. MINIMUM 1-DAY COMPRESSIVE STRENGTH: 3,500 PSI.

III. STRUCTURAL STEEL AND MISCELLANEOUS METAL

1. FABRICATE AND ERECT STRUCTURAL STEEL AND MISCELLANEOUS METAL IN ACCORDANCE WITH AISC "SPECIFICATIONS FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS" LATEST EDITION AND THE "CODE FOR STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES" LATEST EDITION.
2. MATERIALS:

W SHAPES	ASTM A992
PLATES, CHANNELS, ANGLES	ASTM A36
TUBE	ASTM A500 GRADE C
PIPE	A53, TYPE E OR S, GRADE B
BOLTS	ASTM A307 OR F1554 GRADE 36
HIGH STRENGTH BOLTS	ASTM F3125 GRADE A325
WELDING	E70XX ELECTRODES
THREADED ROD	ASTM F1554, GRADE 36

3. WELDING SHALL CONFORM TO AWS D1 STANDARDS LATEST EDITION. ALL WELDING SHALL BE PERFORMED BY CERTIFIED WELDERS. SUBMIT WELDING PROCEDURE SPECIFICATIONS (WPS) FOR ALL WELDING PROCEDURES, AND WELDING PROCEDURE QUALIFICATION RECORDS (WPQR) FOR NON-QUALIFIED WELDING PROCEDURES SIGNED BY THE AUTHORIZED REPRESENTATIVE OF THE MANUFACTURER, FABRICATOR OR CONTRACTOR, WHICH WILL BE REVIEWED BY THE SPECIAL INSPECTOR. THE WPS/WPQR SHALL BE REVIEWED AND ACCEPTED BY A REGISTERED DESIGN PROFESSIONAL.
4. BOLT HOLES IN STEEL SHALL BE 1/16" LARGER IN DIAMETER THAN NOMINAL SIZE OF BOLT OR THREADED ROD DIAMETERS USED, UNLESS OTHERWISE NOTED.
5. BLIND FASTENERS IN HOLLOW STRUCTURAL STEEL SHALL BE HOLLO-BOLTS BY LINDAPTER (ICC-ES REPORT NO. ESR-3330). INSTALL ANCHORS IN STRICT ACCORDANCE WITH ESR AND MANUFACTURER'S REQUIREMENTS.
6. HOT DIP GALVANIZE STRUCTURAL STEEL AND FASTENERS THAT ARE PERMANENTLY EXPOSED TO THE WEATHER IN ACCORDANCE WITH ASTM A123 AND ASTM A153. REPAIR GALVANIZING AFTER WELDING IN ACCORDANCE WITH ASTM A780.
7. ALL STEEL EXPOSED TO VIEW, NOT GALVANIZED OR STAINLESS, SHALL BE PRIMED AND PAINTED PER THE PROJECT SPECIFIC PAINTING SPECIFICATIONS. ALL OTHER STEEL SHALL BE PRIMED.
8. IF ANY SPRAY APPLIED FIRE PROTECTION IS REMOVED OR DAMAGED DURING CONSTRUCTION, A COPY OF A LISTED SYSTEM THAT WILL BE USED TO RESTORE THE SPRAYED-ON FIRE PROOFING SHALL BE PROVIDED TO THE HCAI FIELD FIRE MARSHALL DEMONSTRATING THAT THE REQUIRED HOURLY RATING IS BEING MAINTAINED AND THAT THE SYSTEM IS COMPATIBLE WITH THE EXISTING FIRE PROOFING MATERIAL PER 2019 CBC SECTION 1705A.14 AND 704.13.
9. SUBMIT DETAILED AND DIMENSIONED SHOP DRAWINGS SHOWING LAYOUT OF STEEL FRAMING, CONNECTIONS, ACCESSORIES AND ATTACHMENTS TO OTHER WORK. DO NOT PROCEED WITH FABRICATION OR INSTALLATION UNTIL SHOP DRAWING REVIEW IS COMPLETE.
10. SHEET METAL SCREWS SHALL BE TEK SCREWS BY ITW BUILDEX (ICC REPORT NO. ESR-3223), OR HILTI SELF DRILLING SCREWS (ICC REPORT NO. ESR-2196).

IV. STRUT SYSTEM

1. ALL STRUT SYSTEM COMPONENTS SHALL BE UNISTRUT (OPM-0295-13) OR B-LINE BY EATON (OPM-0053-13). PART NUMBERS CALLED OUT ON DRAWINGS REFERENCE UNISTRUT COMPONENTS, U.O.N.
2. COMPONENTS EXPOSED TO WEATHER SHALL BE HOT-DIPPED GALVANIZED. TREAT CUT ENDS WITH GALVAGUARD OR SIMILAR. ALL OTHER COMPONENTS SHALL BE ELECTRO-GALVANIZED, U.O.N.
3. STRUT MEMBERS SHALL NOT HAVE SLOTTED HOLES UNLESS SPECIFICALLY CALLED FOR ON THE DRAWINGS.
4. THREADED ROD SHALL BE A36. USE STAINLESS STEEL WHERE NOTED ON THE DRAWINGS.
5. ROD COUPLERS MUST CONFORM TO ASTM A563 STEEL WITH A MINIMUM OF 58 KSI TENSILE STRENGTH. MINIMUM ENGAGEMENT INTO ROD COUPLER MUST BE EQUAL TO THE THREADED ROD DIAMETER.
6. INSTALLER SHALL EXAMINE WORK AREA PRIOR TO INSTALLATION. IF CONDITIONS ARE NOT AS SHOWN ON THE DRAWINGS, NOTIFY THE OWNER'S REPRESENTATIVE AND AWAIT DIRECTION BEFORE PROCEEDING WITH INSTALLATION.
7. INSTALL STRUT SYSTEM AS SHOWN ON THE DRAWINGS. TIGHTEN ALL CONNECTIONS TO THE FOLLOWING TORQUES:

DIAMETER (INCHES)	TORQUE (FT-LBS)
3/8	19
1/2	50

8. WHERE STRUT FRAMING IS LOCATED WITHIN OCCUPIED SPACES, PROVIDE END CAPS.
9. SUBMIT DETAILED AND DIMENSIONED SHOP DRAWINGS SHOWING LAYOUT OF STRUT FRAMING, CONNECTIONS, ACCESSORIES AND ATTACHMENTS TO OTHER WORK. DO NOT PROCEED WITH FABRICATION OR INSTALLATION UNTIL SHOP DRAWING REVIEW IS COMPLETE.

VI. POST-INSTALLED CONCRETE ANCHORS

1. WHEN INSTALLING DRILLED-IN ANCHORS AND/OR POWDER DRIVEN PINS IN EXISTING NON-PRESTRESSED REINFORCED CONCRETE, USE CARE AND CAUTION TO AVOID CUTTING OR DAMAGING THE EXISTING REINFORCING BARS. MAINTAIN A MINIMUM CLEARANCE OF ONE INCH BETWEEN THE REINFORCEMENT AND THE DRILLED-IN ANCHOR AND/OR PIN. IF REINFORCING STEEL IS CUT OR DAMAGED DURING INSTALLATION, NOTIFY THE OWNER'S REPRESENTATIVE.
2. REQUIRED ANCHOR EMBEDMENT MUST BE IN THE CONCRETE ELEMENT, EXCLUSIVE OF THE THICKNESS OF ANY MORTAR BED, FLOOR FINISH, OR OTHER TOPPING THAT MAY BE PRESENT.
3. EXISTING ANCHORS MAY NOT BE REUSED UNLESS EXPLICITLY INDICATED ON THE DRAWINGS.
4. POWDER DRIVEN FASTENERS (PDFS): HILTI LOW-VELOCITY X-U UNIVERSAL POWDER DRIVEN FASTENERS (ICC REPORT NO. ESR-2269).PDFS IN CONCRETE OR STEEL SHALL NOT BE USED FOR SUSTAINED TENSION LOADS OR FOR BRACE APPLICATIONS UNLESS APPROVED FOR SEISMIC LOADING.
5. EXPANSION ANCHORS
   - 5.1 EXPANSION ANCHORS SHALL BE DEWALT POWER-STUD+ (ICC REPORT NO. ESR-2502) OR HILTI KWIK BOLT TZ2 (ICC REPORT NO. ESR-4266). INSTALL ANCHORS IN STRICT ACCORDANCE WITH ESR AND MANUFACTURER'S REQUIREMENTS.
   - 5.2 ANCHOR EMBEDMENT SPECIFIED ON THE DRAWINGS REFERS TO "EFFECTIVE MINIMUM EMBEDMENT" IN ACCORDANCE WITH THE MANUFACTURER'S ESR. REFER TO ESR FOR REQUIRED HOLE DEPTH.
   - 5.3 PROVIDE CARBON STEEL, UNLESS OTHERWISE NOTED. PROVIDE STAINLESS STEEL ANCHORS FOR ALL EXPOSED EXTERIOR CONDITIONS.
   - 5.4 TORQUE TEST EXPANSION ANCHORS PER THE "DRILLED-IN MECHANICAL ANCHORS TESTING REQUIREMENTS" BELOW.
   - 5.5 HOLES DRILLED FOR ANCHORS THAT DO NOT SET PROPERLY OR FAIL A TORQUE TEST MAY NOT BE REUSED, AND SHALL BE FILLED WITH NON-SHRINK GROUT. A RELOCATED ANCHOR SHALL BE INSTALLED NOT CLOSER THAN 3 ANCHOR DIAMETERS FROM THE ABANDONED HOLE.
6. ADHESIVE ANCHORS
   - 6.1 USE HILTI HIT-HY 200 (ICC REPORT NO. ESR-3187). INSTALL IN ACCORDANCE WITH ESR AND MANUFACTURER'S REQUIREMENTS.
   - 6.2 STEEL REINFORCING BARS: ASTM A615 GRADE 60.
   - 6.3 TENSION TEST ADHESIVE ANCHORS PER THE "DRILLED-IN MECHANICAL ANCHORS TESTING REQUIREMENTS" BELOW.
   - 6.4 HOLES DRILLED FOR ANCHORS THAT DO NOT SET PROPERLY OR FAIL A TENSION TEST MAY NOT BE REUSED, AND SHALL BE FILLED WITH NON-SHRINK GROUT. A RELOCATED ANCHOR SHALL BE INSTALLED NOT CLOSER THAN 3 ANCHOR DIAMETERS FROM THE ABANDONED HOLE.

VII. DRILLED-IN MECHANICAL ANCHORS TESTING REQUIREMENTS

1. AN INDEPENDENT TESTING AGENCY AND SPECIAL INSPECTORS WILL BE RETAINED BY THE OWNER TO PERFORM THE FOLLOWING TESTS AND INSPECTION. PROVIDE ACCESS AND FURNISH SAMPLES TO THE AGENCY AS REQUIRED BY THE CONTRACT DOCUMENTS.
2. TEST EQUIPMENT SHALL BE CALIBRATED BY AN APPROVED TESTING LABORATORY IN ACCORDANCE WITH STANDARD RECOGNIZED PROCEDURES.
3. HOLES DRILLED FOR ANCHORS THAT DO NOT SET PROPERLY OR FAIL PROOF TESTING MAY NOT BE REUSED, AND SHALL BE FILLED WITH NON-SHRINK GROUT.
4. IF ANY ANCHOR FAILS TESTING, TEST ALL ANCHORS OF THE SAME TYPE, INSTALLED BY THE SAME TRADE, NOT PREVIOUSLY TESTED UNTIL TWENTY (20) CONSECUTIVE ANCHORS PASS, THEN RESUME THE INITIAL TEST FREQUENCY.
5. POWDER DRIVEN FASTENERS (PDFS): TESTING NOT REQUIRED, UNLESS OTHERWISE NOTED.
6. EXPANSION ANCHOR TESTING
   - 6.1 EXPANSION ANCHORS SHALL BE PROOF-TESTED BY THE OWNER'S TESTING AND INSPECTION AGENCY.
   - 6.2 TEST 50% OF EXPANSION ANCHORS TO TORQUE LISTED BELOW, UNLESS OTHERWISE NOTED, ACCEPTANCE OF THE INSTALLED ANCHOR REQUIRES THAT THE APPLICABLE TEST TORQUE IS REACHED WITHIN ONE-HALF TURN OF THE NUT. EXCEPTION: ONE-QUARTER TURN OF THE NUT FOR 3/8" ANCHORS.

ANCHOR DIA. (INCHES)	HILTI KBTZ2 CARBON STEEL TORQUE (FT-LBS)	HILTI KBTZ2 STAINLESS STEEL TORQUE (FT-LBS)	DEWALT POWER-STUD + SD2 (CS) TORQUE (FT-LBS)	DEWALT POWER-STUD + SD4/SD6 (SS) TORQUE (FT-LBS)
3/8	30	30	20	25
1/2	50	40	40	40
5/8	40	60	60	60
3/4	110	125	110	110

7. ADHESIVE ANCHOR TESTING
   - 7.1 ADHESIVE ANCHORS SHALL BE PULL-TESTED BY THE OWNER'S TESTING AND INSPECTION AGENCY 24 HOURS MINIMUM AFTER INSTALLATION OF THE ANCHORS. THE TEST LOAD SHALL BE SUSTAINED FOR A MINIMUM OF 15 SECONDS.
   - 7.2 TEST 50% OF ADHESIVE ANCHORS TO THE TENSION SHOWN ON APPLICABLE DETAILS, UNLESS OTHERWISE NOTED. ACCEPTANCE OF THE INSTALLED ANCHOR REQUIRES THAT THE ANCHOR EXHIBITS NO DISCERNABLE MOVEMENT.

VIII. SEISMIC RESTRAINT PRODUCTS

1. SEISMIC STRAPS SHALL BE SAFE-T-PROOF STRAPS (ICC REPORT NO. ESR-4167). INSTALL STRAPS IN STRICT ACCORDANCE WITH ESR AND MANUFACTURER'S REQUIREMENTS.
2. PROVIDE SPECIAL INSPECTION OF STRAPS IN ACCORDANCE WITH ESR AND 2019 CBC SECTIONS 1704A AND 1705A.

IX. SUPPORT AND SEISMIC BRACING OF SUSPENDED DISTRIBUTION SYSTEMS

1. SUPPORT AND SEISMIC BRACING OF SUSPENDED UTILITIES SHALL BE IN ACCORDANCE WITH AN HCAI SUPPORT AND SEISMIC BRACING OF SUSPENDED UTILITIES SHALL BE IN ACCORDANCE WITH AN HCAI PRE-APPROVED SYSTEM AND THE SEISMIC DESIGN CRITERIA ON THESE GENERAL NOTES. LAYOUT DRAWINGS FOR THE SUPPORT, ATTACHMENTS, AND BRACING SYSTEMS IN ACCORDANCE WITH THE PRE-APPROVAL SHALL BE SUBMITTED TO THE REGISTERED DESIGN PROFESSIONAL (RDP) IN RESPONSIBLE CHARGE OF THE PROJECT FOR REVIEW TO VERIFY THAT THE DETAILS ARE IN CONFORMANCE WITH THE CODE REQUIREMENTS. THE LAYOUT DRAWINGS SHALL AS A MINIMUM SATISFY THE REQUIREMENTS OF ASCE 7 SECTION 13.6 AS MODIFIED BY CBC 2019 SECTION 1617A.
2. SEISMIC BRACING IS REQUIRED FOR THE FOLLOWING ELECTRICAL INSTALLATIONS:
   - 2.1 TRAPEZE ASSEMBLIES SUPPORTING CONDUIT 2.5" DIAMETER (TRADE SIZE) OR GREATER WHERE AT LEAST ONE OF THE FOLLOWING CONDITIONS APPLIES:
     - A. TRAPEZE SUPPORTS MORE THAN 10 LBS/FT OR OVER 100 LBS OF CONDUIT PER TRAPEZE, OR
     - B. TRAPEZE HANGER RODS ARE GREATER THAN 1/2" DIAMETER OR MORE THAN 12" IN LENGTH.
   - 2.2 INDIVIDUALLY SUPPORTED CONDUIT 2.5" DIAMETER (TRADE SIZE) OR GREATER WHERE AT LEAST ONE OF THE FOLLOWING CONDITIONS APPLIES:
     - A. CONDUIT WEIGHT IS MORE THAN 5 LBS/FT OR INDIVIDUAL HANGER SUPPORTS MORE THAN 50 LBS OF CONDUIT, OR
     - B. HANGER ROD IS GREATER THAN 1/2" DIAMETER OR MORE THAN 12" IN LENGTH.

   NOTE: ON THIS PROJECT THERE IS NO KNOWN CONDUIT THAT REQUIRES SEISMIC BRACING.
3. SEISMIC BRACING IS REQUIRED FOR THE FOLLOWING DUCT INSTALLATIONS:
   - 3.1 ALL DUCTS WITH HAZARDOUS MATERIALS.
   - 3.2 TRAPEZE ASSEMBLIES SUPPORTING DUCT(S) HAVING A CROSS-SECTIONAL AREA OF 6 SQ. FEET OR MORE, OR DUCT(S) WEIGHING MORE THAN 20 LBS/FT WHERE AT LEAST ONE OF THE FOLLOWING CONDITIONS APPLIES:
     - A. TRAPEZE SUPPORTS 10 LBS/FT OR MORE OF DUCTWORK OR MORE THAN 100 LBS OF DUCTWORK PER TRAPEZE, OR
     - B. TRAPEZE HANGER RODS ARE GREATER THAN 1/2" DIAMETER OR MORE THAN 12" IN LENGTH.
   - 3.3 INDIVIDUALLY SUPPORTED DUCTS HAVING A CROSS-SECTIONAL AREA OF 6 SQ. FEET OR MORE, OR DUCTS WEIGHING MORE THAN 20 LBS/FT WHERE AT LEAST ONE OF THE FOLLOWING CONDITIONS APPLIES:
     - A. INDIVIDUAL HANGER SUPPORTS MORE THAN 50 LBS OF DUCT, OR
     - B. HANGER ROD IS GREATER THAN 1/2" DIAMETER OR MORE THAN 12" IN LENGTH.

   NOTE: ON THIS PROJECT THERE IS NO KNOWN DUCTWORK THAT REQUIRES SEISMIC BRACING.
4. SEISMIC BRACING IS REQUIRED FOR THE FOLLOWING PIPING INSTALLATIONS:
   - 4.1 ALL PIPING WITH HAZARDOUS MATERIALS.
   - 4.2 ALL PIPING MADE OF LOW DEFORMABILITY MATERIALS, SUCH AS CAST IRON, GLASS, NON-DUCTILE PLASTIC (R_P < 4.5).
   - 4.3 TRAPEZE ASSEMBLIES WHERE AT LEAST ONE OF THE FOLLOWING CONDITIONS APPLIES:
     - A. TRAPEZE SUPPORTS PIPE(S) GREATER THAN 2" DIAMETER, OR
     - B. TRAPEZE SUPPORTS MORE THAN 10 LBS/FT OR OVER 100 LBS OF PIPING PER TRAPEZE, OR
     - C. TRAPEZE HANGER RODS ARE GREATER THAN 1/2" DIAMETER OR MORE THAN 12" IN LENGTH.
   - 4.4 INDIVIDUALLY SUPPORTED PIPING OVER 1" DIAMETER (NOMINAL) OR INDIVIDUALLY SUPPORTED PIPING WHERE HANGER ROD SUPPORTS MORE THAN 50 LBS TOTAL PER HANGER.
6. REQUIREMENTS FOR SUSPENDED DISTRIBUTION SYSTEMS EXEMPT FROM SEISMIC BRACING:
   - 5.1 NEW DISTRIBUTION SYSTEMS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE AND PROVIDED WITH FLEXIBLE CONNECTIONS AT SEISMIC SEPARATION JOINTS AND CONNECTIONS TO COMPONENTS.
   - 5.2 WHERE PROXIMITY OF A NEW COMPONENT TO AN ADJACENT COMPONENT MAY CAUSE CONSEQUENTIAL DAMAGE TO EITHER COMPONENT UNDER SEISMIC LOADING, INSTALL SWAY BRACING TO LIMIT DISPLACEMENT OF THE COMPONENT AND REDUCE THE LIKELIHOOD OF IMPACT. SWAY BRACING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND FIELD REVIEWED BY THE IOR. SWAY BRACING DOES NOT NEED TO BE INCLUDED AS PART OF THE SEISMIC BRACING SUBMITTAL.
7. ACCEPTABLE PRE-APPROVED SYSTEMS FOR SUPPORT AND BRACING OF PIPES AND CONDUIT ARE:
   - 6.1 OPM-0043 – MASON INDUSTRIES "SEISMIC RESTRAINT COMPONENTS FOR SUSPENDED UTILITIES"
   - 6.2 OPM-0052 – B-LINE/TOLCO "SEISMIC BRACING AND SUPPORT SYSTEMS"
   - 6.3 OPM-0295 – UNISTRUT "UNISTRUT SEISMIC BRACING/STRUT & FITTINGS"
   - 6.4 OPM-0403 – ISAT "ISAT SEISMIC RESTRAINT SYSTEMS GUIDELINES"
8. THE LAYOUT DRAWINGS OF THE SUPPORTS, ATTACHMENTS, AND BRACING SYSTEMS IN ACCORDANCE WITH THE PRE-APPROVAL SHALL BE STAMPED AND SIGNED BY A CALIFORNIA REGISTERED STRUCTURAL ENGINEER AND SHALL BE SUBMITTED TO HCAI FOR REVIEW. THE LAYOUT DRAWINGS SHALL AS A MINIMUM INCLUDE:
   - 7.1 CALCULATION OF SEISMIC DESIGN FORCES IN ACCORDANCE WITH PROJECT SPECIFIC SEISMIC DESIGN PARAMETERS ON THESE GENERAL NOTES
   - 7.2 PLANS SHOWING UTILITY SIZE, TYPE OF PIPE (COPPER, STEEL, CAST IRON, ETC), ROUTING AND BRACE LOCATIONS
   - 7.3 DETAILS AND CALCULATIONS FOR UTILITY SUPPORT AND BRACING, INCLUDING:
     1. SIZE OF DISTRIBUTION SYSTEM COMPONENTS
     2. MAXIMUM SUPPORT AND BRACING SPACING
     3. SUPPORT AND BRACE CONNECTIONS TO THE STRUCTURE
9. THE REVIEWED DRAWINGS (WITH THE SHOP DRAWING REVIEW STAMP OF THE SEOR) SHALL BE KEPT ON THE JOBSITE AND CAN THEN BE USED FOR INSTALLATION OF THE SUPPORT AND BRACING. HCAI FIELD STAFF WILL REVIEW THE INSTALLED SYSTEM.
10. COMPONENTS OF TWO OR MORE PRE-APPROVED BRACING SYSTEMS SHALL NOT BE MIXED. ONLY ONE PRE-APPROVED BRACING SYSTEM MAY BE USED FOR A RUN OF PIPE, DUCT, OR CONDUIT. ANY SUBSTITUTION OF COMPONENT OF AN OPM SYSTEM SHALL REQUIRE RDP REVIEW AND APPROVAL.
11. A COPY OF THE CHOSEN BRACING SYSTEM(S) INSTALLATION GUIDE/MANUAL SHALL BE ON THE JOBSITE PRIOR TO STARTING THE INSTALLATION OF HANGERS AND/OR BRACES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN COPIES OF PRE-APPROVALS AND FURNISH THE IOR WITH ONE COPY OF EACH.
12. RE-USE OF EXISTING HANGERS IS NOT PERMITTED.

A. CORE DRILLING FOR NEW PENETRATIONS

1. PROVIDE TESTING LABORATORY TO LOCATE WITH PACHOMETER OR OTHER SUITABLE, NON-DESTRUCTIVE TESTING METHODS, ALL EXISTING REINFORCING, EMBEDDED CONDUIT, PIPES, UTILITY CHASES AND RELATED ELEMENTS FOR ALL EXISTING CONCRETE SLABS, WALLS, BEAMS OR COLUMNS WHERE CORE PENETRATIONS ARE PROPOSED. PROVIDE TEMPORARY MARKINGS SHOWING LOCATIONS OF EMBEDDED ITEMS IN THE VICINITY OF THE PROPOSED CORE, IN AN AREA EXTENDING NOT LESS THAN 3" IN ALL DIRECTIONS FROM THE PROPOSED CORE OR TO THE NEAREST ADJACENT CONCRETE EDGE. NOTIFY THE OWNER'S REPRESENTATIVE WHEN THE PROPOSED PENETRATION LOCATIONS AND EMBEDDED ITEMS ARE MARKED. DO NOT PROCEED WITH CORING UNTIL THE PROPOSED LOCATIONS HAVE BEEN APPROVED BY THE OWNER'S REPRESENTATIVE.
2. PROCEED WITH CORING AFTER APPROVAL FROM THE OWNER'S REPRESENTATIVE. IF DURING CORING, BARS ARE CUT THAT WERE NOT INDICATED ON THE ORIGINAL SCAN, OBTAIN THE SERVICES OF A STRUCTURAL ENGINEER TO ANALYZE THE STRUCTURAL DAMAGE AND TO PROPOSE APPROPRIATE STRUCTURAL MODIFICATIONS TO COMPENSATE FOR ANY WEAKENING OF THE STRUCTURE. THE OWNER'S REPRESENTATIVE WILL REVIEW PROPOSED CORRECTIVE MEASURES FOR ACCEPTABILITY AND PROVIDE DIRECTION ON HOW TO PROCEED.
3. SHOULD EMBEDDED CONDUIT, PIPES, WIRING CHASES AND RELATED ITEMS BE CUT OR DAMAGED, PROVIDE ALL WORK AND MATERIALS TO REPAIR DAMAGES TO RENDER A SYSTEM EQUAL TO EXISTING CONDITIONS OR NEW CODE STANDARDS AS APPLICABLE. SPLICING OF SEVERED CONDUCTORS IS NOT PERMITTED. LOCATE NEAREST EXISTING ELECTRICAL EQUIPMENT BOXES AND PROVIDE ALL WORK AND MATERIALS TO REWIRE SYSTEM TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE.

XI. DESIGN CRITERIA

1. DESCRIPTION OF WORK: INSTALLATION OF NUCLEAR MEDICINE EQUIPMENT AT OAK PAVILION
2. GOVERNING CODE: 2019 CALIFORNIA BUILDING CODE AND ASCE 7-16

   RISK CATEGORY: IV
3. SEISMIC DEMAND PARAMETERS PER ASCE 7-16 CHAPTER 11:

   SEISMIC DESIGN CATEGORY: D

   SITE CLASS: D (DEFAULT)

   SITE SPECIFIC GROUND MOTION PARAMETERS:

   S_S = 1.5g

   S_1 = 0.6g

   S_{DS} = 1.2g
4. SEISMIC DEMANDS ON NONSTRUCTURAL COMPONENTS PER ASCE 7-16 CHAPTER 13:

   $F_P = \frac{0.4a_S S_{DS} W_P (1 + 2z/h)}{(R_P/I_P)}$

   $F_{P,MIN} = 0.3 S_{DS} I_P W_P$

   $E_V = 0.2 S_{DS} W_P$ WHERE:

   I_P = 1.5

   z/h= 0.0 LOBBY LEVEL

   z/h= 0.24 LEVEL 1

   a_P = VARIES SEE ASCE 7 CHAPTER 13

   R_P = VARIES SEE ASCE 7 CHAPTER 13

   Ω_0 = VARIES SEE ASCE 7 CHAPTER 13
5. WIND DEMANDS ON NONSTRUCTURAL COMPONENTS PER ASCE 7-16 CHAPTER 26, 27, 28, 29, OR 30:

   BASIC WIND SPEED: V = 102 MPH
   EXPOSURE: B
   COMPONENT HEIGHT: 70'
   DIRECTIONALITY FACTOR: K_D= 0.85
   TOPOGRAPHIC FACTOR: K_{ZT} = 1.0
   VELOCITY PRESSURE EXPOSURE COEFFICIENT: K_Z = 0.89
   VELOCITY PRESSURE: q_z = 20.1 psf

   DESIGN WIND PRESSURE (STRENGTH LEVEL):

   F_{HORIZ} = 38.3 psf

   F_{VERT} = 30.2 psf

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HCAI Number
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LICENSED ARCHITECT Susan McCarthy C37097 EXP. 9/30/2023 STATE OF CALIFORNIA

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4	DESIGN CHANGE	01/25/23

Drawn by SJ
Checked by DBH
Project Name
HOSPITAL REPLACEMENT BUILDING-
NUCLEAR MEDICINE SUITE RELOCATION

Sheet Title
GENERAL NOTES

Date 08/05/2022
Scale AS NOTED
Sheet Number
S1.0

30 X 42



1 PARTIAL LOBBY LEVEL PLAN
1/2"=1'-0"

North

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Seal/Signature

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REGISTERED ARCHITECT EVELYN MCCOY C-37097 EXP. 9/30/2023 STATE OF CALIFORNIA

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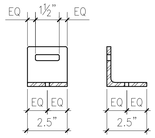
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Checked by DBH

Project Name
HOSPITAL REPLACEMENT BUILDING-
NUCLEAR MEDICINE SUITE RELOCATION

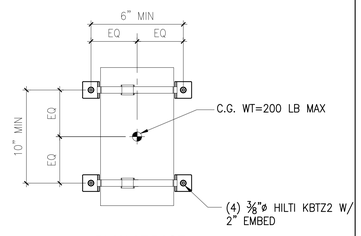
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PARTIAL LOBBY LEVEL PLAN

Date 08/05/2022
Scale AS NOTED
Sheet Number
S2.0

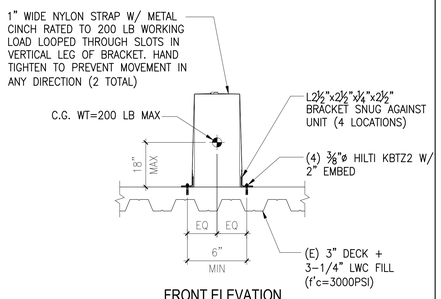
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ANGLE DETAIL

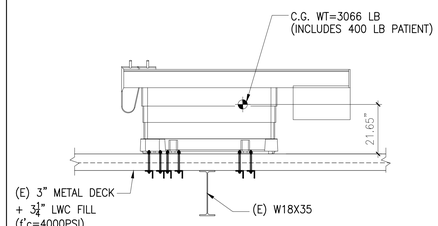


PLAN AT BASE

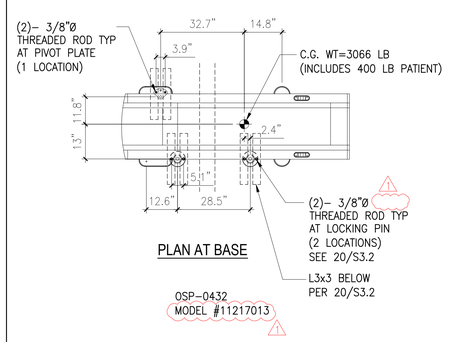


FRONT ELEVATION

20 SIEMENS FLOOR MOUNTED EQUIPMENT≤200 LBS
N.T.S.

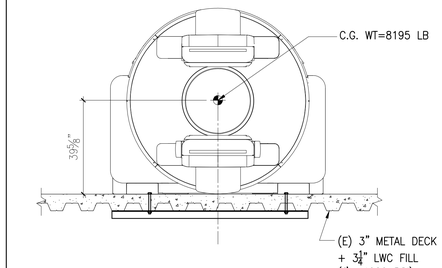


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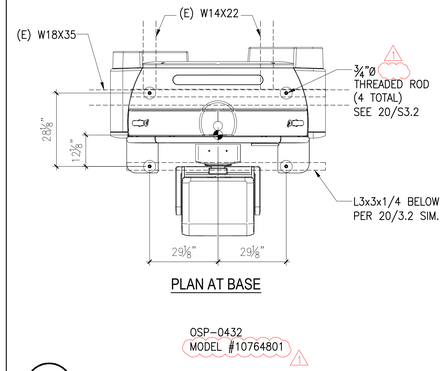


PLAN AT BASE

6 SYMBIA INTEVO FRONT PHS
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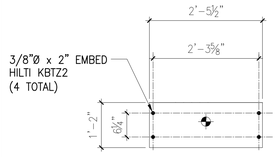


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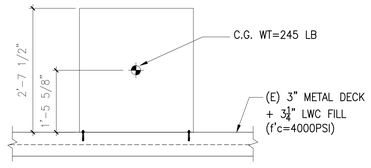


PLAN AT BASE

2 SYMBIA INTEVO GANTRY
N.T.S.



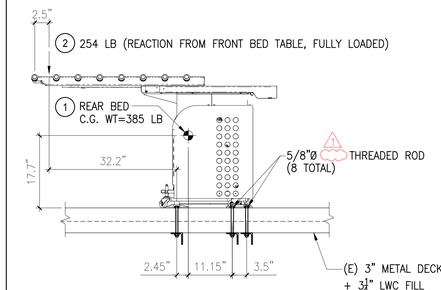
TOP VIEW



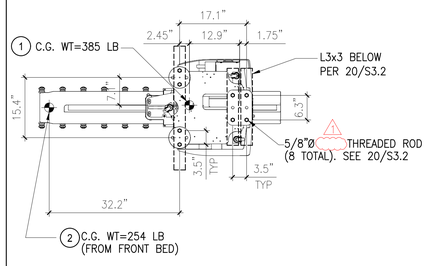
FRONT VIEW

OSP-0432
MODEL #10165884

8 LINE CONNECTION BOX
N.T.S.



FRONT ELEVATION



PLAN AT BASE

OSP-0432
MODEL #11106014

4 SYMBIA INTEVO REAR PHS
N.T.S.

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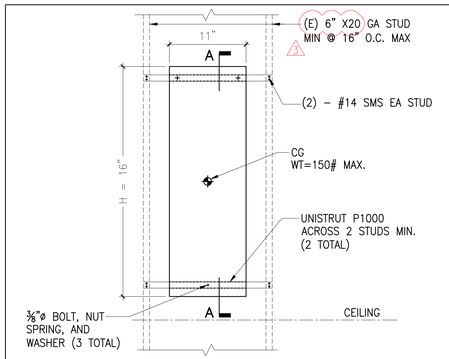
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Project Name
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NUCLEAR MEDICINE SUITE RELOCATION

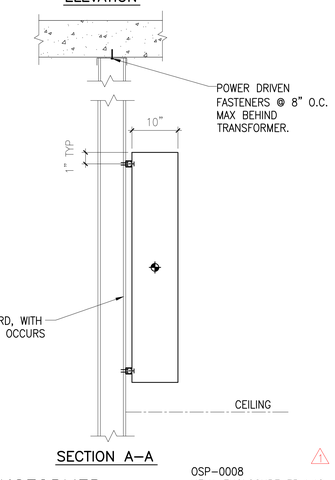
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SIEMENS EQUIPMENT DETAILS

Date 08/05/2022
Scale AS NOTED
Sheet Number S3.0

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ELEVATION

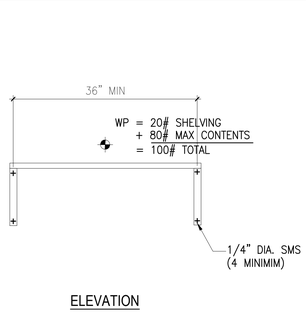


SECTION A–A

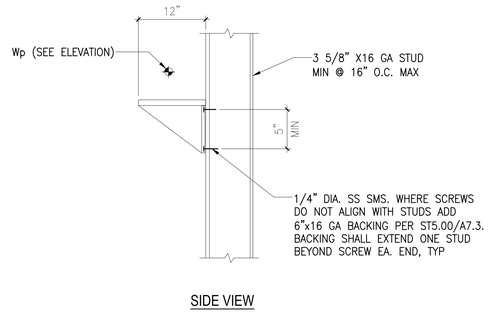
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OSP–0008
NEMA ENCLOSURE 3R,4,12

18 TRANSFORMER
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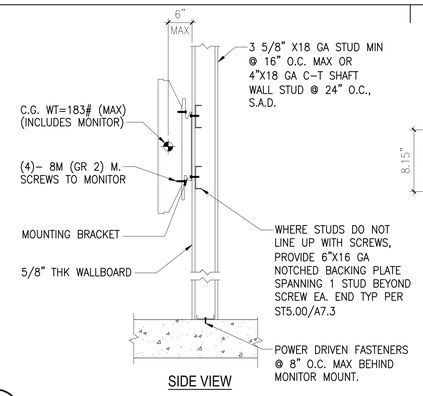


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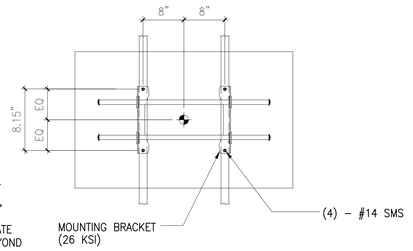


SIDE VIEW

13 STAINLESS STEEL SHELVING
N.T.S.

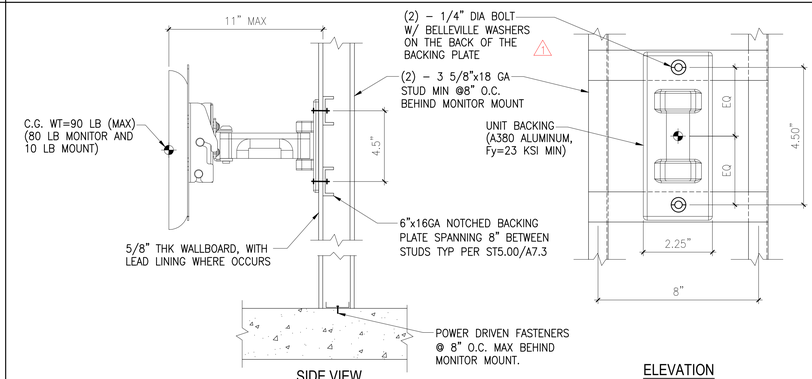


SIDE VIEW



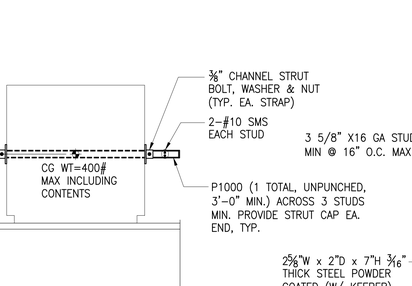
ELEVATION

5 MONITOR FLAT MOUNT
N.T.S.

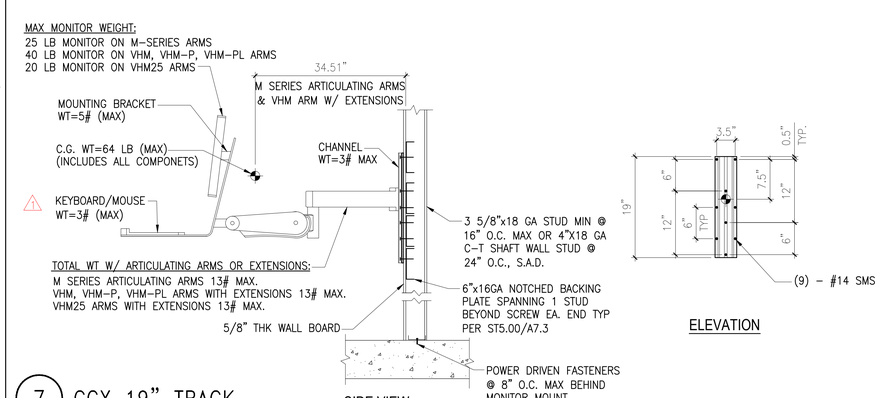


SIDE VIEW ELEVATION

6 MONITOR PIVOT MOUNT
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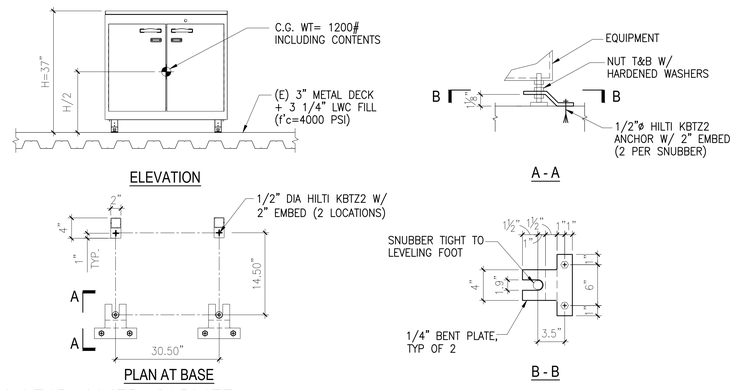


15 PYXIS UNIT (WARMING CABINET SIM.)
N.T.S.



SIDE VIEW ELEVATION

7 GCX 19" TRACK
N.T.S.



16 BIODEX LEAD–LINED CABINET
N.T.S.

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LICENSED ARCHITECT Kevin McCarthy C37097 EXP. 9/30/2023 STATE OF CALIFORNIA

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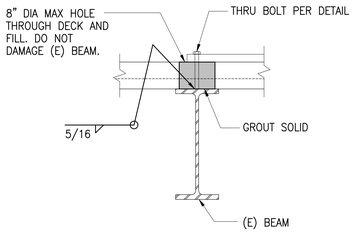
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Project Name
HOSPITAL REPLACEMENT BUILDING-
NUCLEAR MEDICINE SUITE RELOCATION

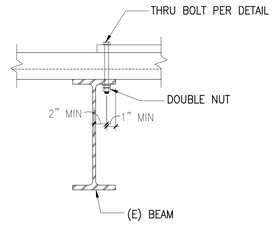
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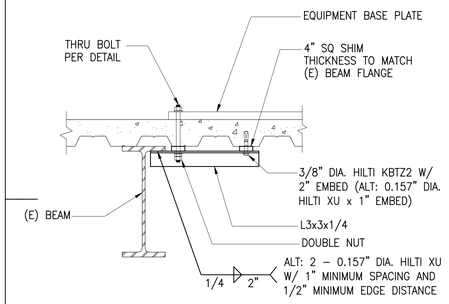
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DETAIL D - ANCHOR LOCATED AT BEAM FLANGE (ALTERNATE)

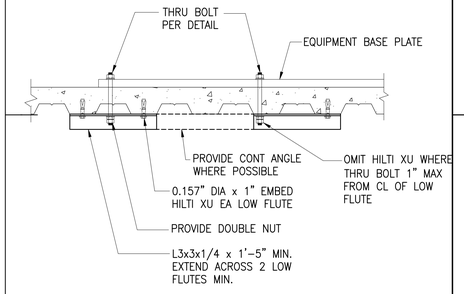


DETAIL C - ANCHOR LOCATED AT BEAM FLANGE



USE ONLY WHERE THERE IS NOT A FULL LOW FLUTE BETWEEN THE THRU BOLT AND THE NEAREST ADJACENT BEAM.

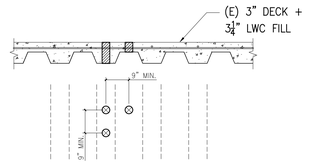
DETAIL B - ANCHOR LOCATED NEAR BEAM PARALLEL TO DECK



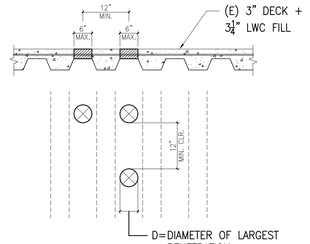
DETAIL A - TYPICAL

NOTE:
WHERE EXISTING FIREPROOFING IS DISTURBED DURING CONSTRUCTION, RESTORE FIRE RATING TO PREEXISTING CONDITION.

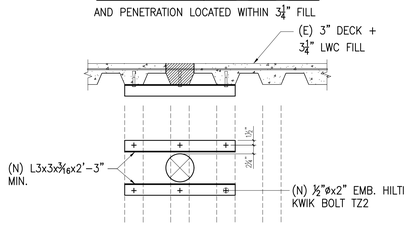
20 THRU BOLT DETAIL
N.T.S.



CASE 1 : D < 2 1/2"



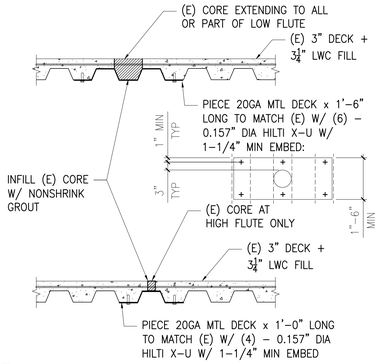
CASE 2 : 2 1/2" ≤ D ≤6"
AND PENETRATION LOCATED WITHIN 3¼" FILL



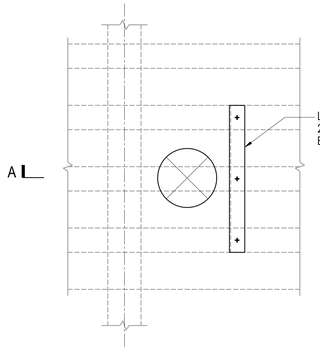
NOTE: WHEN PENETRATION IS LOCATED NEAR (E) BEAM, SEE 7&8/–.

CASE 3 : 2 1/2" ≤ D ≤6"
AND PENETRATION LOCATED WITHIN 6¾" FILL

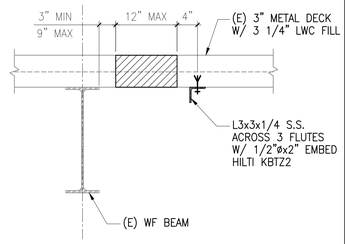
14 (N) CORES IN (E) DECK + FILL
N.T.S.



15 INFILL (E) CORE IN DECK + FILL
N.T.S.

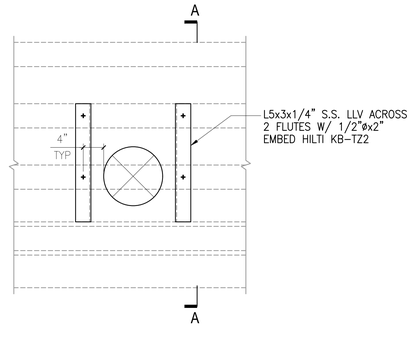


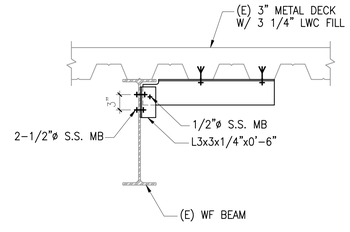
NOTE:
IF EDGE OF PENETRATION IS MORE THAN 9" FROM EDGE OF (E) BEAM FLANGE, ADD ANGLE EA. SIDE OF PENETRATION.



SECTION A-A

7 (N) CORES NEAR (E) BEAM (DECK PERPENDICULAR TO BEAM)
N.T.S.





8 (N) CORES NEAR (E) BEAM (DECK PARELLEL TO BEAM)
N.T.S.

SHEET NOTES:
1. AREAS TO BE CUT SHALL BE MARKED IN FIELD AN SHOWN TO THE IOR AND HCAI DISTRICT STRUCTURAL ENGINEER PRIOR TO PROCEEDING WITH WORK.
2. PROVIDE CORROSION PROTECTION, SUCH AS EPOXY COATING, FOR CUT AND EXPOSED REBAR.

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REVIEWED IN ACCORDANCE WITH THE REQUIREMENTS OF 7 CA. CCR
APPROVED
Department of Health Care Access & Information
Office of Statewide Hospital Planning & Development
2/13/2023, 11:24:21 PM
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Seal/Signature

REGISTERED PROFESSIONAL ENGINEER — DIANA T. PHAM — No. 2995 EXP. 6/30/24 — STRUCTURAL — STATE OF CALIFORNIA

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Issued for
HCAI PLAN REVIEW

1 BACKCHECK #1	12/09/22
2 DESIGN CHANGE	12/09/22

Drawn by SJ
Checked by DBH
Project Name
HOSPITAL REPLACEMENT BUILDING-
NUCLEAR MEDICINE SUITE RELOCATION

Sheet Title
MISCELLANEOUS DETAILS

Date 08/05/2022
Scale AS NOTED
Sheet Number
S3.2

30 X 42

SPECIAL DESIGNATION

- POINT OF CONNECTION OF EXISTING TO NEW
- THERMOSTAT WITH HEATING COIL CONTROLLED
- EQUIPMENT TYPE / EQUIPMENT NUMBER — EQUIPMENT TAG
- SECTION NUMBER / SHEET NUMBER WHERE SHOWN — SECTION TAG
- DETAIL REFERENCE (TOP=DETAIL NO., BOTTOM=DRAWING NO.)
- 3/M8.1 — DETAIL REFERENCE (FIRST= DETAIL NO., SECOND=SHEET NO.)
- REVISION REFERENCE
- SHEET NOTE TAG
- MATCHLINE

DIFFUSER NOTATION

- CEILING EXHAUST GRILLE
- CEILING SUPPLY DIFFUSER
- CEILING SUPPLY DIFFUSER
- CEILING EXHAUST GRILLE

TOP FIGURE INDICATES CFM. BOTTOM FIGURES INDICATE DUCT CONNECTION SIZE IN INCHES, NUMBER OF THROWS ON SUPPLY DIFFUSER AND DIFFUSER MARK. SEE AIR DISTRIBUTION SCHEDULE FOR DIFFUSER DETAILS ON M0.2.

PLAN

DIFFUSER DROP (BOX CONNECTION). PLAN AND ELEVATION
D = NECK SIZE, 12" MINIMUM
MINIMUM DROP = NECK SIZE

ELEVATION
DOUBLE LINE-HARD CONNECTION

- CEILING RETURN GRILLE

DIFFUSER, REGISTER AND GRILLE SCHEDULE

SUPPLY DIFFUSER NECK SIZE	ROUND DUCT CONNECTION	RETURN/ EXHAUST GRILLE SIZE
6X6	6" DIA	8X8
9X9	8" DIA	10X10
12X12	10" DIA	12X12
15X15	12" DIA	14X14
18X18	14" DIA	18X18

NOTES:

1. PLANS SHOW SQUARE NECK SIZES. USE THIS TABLE TO PROVIDE ROUND DUCT CONNECTION WHERE SPACE ALLOWS A 90° RADIUS ELBOW INTO DIFFUSER PER DETAIL 1/M8.1.

PIPING LEGEND

- NEW PIPE (SHOWN BOLD)
- EXISTING PIPE (SHOWN LIGHT)
- EXISTING PIPING TO BE DEMOLISHED (SHOWN BOLD)
- EXISTING PIPING RISER TO BE DEMOLISHED (SHOWN BOLD)
- ARROW INDICATES DIRECTION OF FLOW IN PIPE. LEADER INDICATES DOWNWARD SLOPE
- PIPE SIZE CHANGE, REDUCER
- PIPE DOWN
- PIPE UP
- PIPE CAP
- PIPE DIRECTION CHANGE
- PIPE BRANCH OR TEE – UP OUT OF PLANE
- PIPE BRANCH OR TEE – DOWN OUT OF PLANE
- HWR — HEATED WATER RETURN
- HWS — HEATED WATER SUPPLY
- D — EQUIPMENT DRAIN
- 3/4" BALL VALVE AND CAPPED HOSE CONNECTION
- MANUAL AIR VENT
- CIRCUIT BALANCING VALVE
- BALL VALVE
- SHUTOFF VALVE
- TWO-WAY MODULATING CONTROL VALVE
- TWO-WAY MODULATING CONTROL VALVE
- TEST PORT
- UNION
- FLEXIBLE PIPE CONNECTION
- THERMOMETER WITH WELL. MOUNT IN OVERSIZED ELBOW
- BLIND FLANGE
- FLANGE
- METAL FLEXIBLE CONNECTION
- CHECK VALVE
- DRAIN WITH BALL VALVE AND CAPPED HOSE CONNECTION.
- Y-STRAINER WITHOUT BLOWDOWN VALVE
- Y-STRAINER WITH BLOW DOWN BALL VALVE AND 3/4" CAPPED HOSE CONNECTION

DUCTWORK

- SUPPLY / RETURN — RECTANGULAR DUCT SECTION
- ROUND DUCT SECTION
- DOUBLE
- EXISTING DUCT TO REMAIN (SHOWN LIGHT)
- EXISTING DUCT TO BE DEMOLISHED
- 24x6 — NEW DUCT (SHOWN BOLD) DIMENSIONS ARE NET INSIDE
- FLOW DIRECTION DESIGNATION
- OR — LINE CONTINUATION BREAK (RECTANGULAR, ROUND)
- SUPPLY AIR (SA) OR OUTDOOR AIR (OA) DUCT (SOLID LINE WITH HATCH TYPICAL FOR SUPPLY AND OUTDOOR AIR UP, BROKEN LINE DOWN)
- EXHAUST AIR (EA) DUCT (SOLID LINE WITH HATCH TYPICAL FOR RETURN AIR UP, BROKEN LINE DOWN)
- RETURN AIR (RA) DUCT (SOLID LINE WITH HATCH TYPICAL FOR EXHAUST AIR UP, BROKEN LINE DOWN)
- DUCT RISE/DROP W/90° RADIUS ELBOWS (SUPPLY RECTANGULAR DUCT SHOWN)
- DUCT RISE/DROP W/90° RADIUS ELBOWS (ROUND DUCTS)
- UP — INCLINED RISE
- DN — INCLINED DROP

WITH RESPECT TO AIRFLOW. MAXIMUM 15° INCLINE. IF INCLINE IS GREATER THAN 15°, USE RADIUS OFFSETS (SEE BELOW)

- W, R=W — RADIUS ELBOW
- SQUARE ELBOW — SYMBOL INDICATES SQUARE ELBOW (REFER TO SPEC. SECTION 238500 PART 3 FOR ADDITIONAL REQUIREMENTS INCLUDING TURNING VANES)
- OR — RECTANGULAR/ROUND BRANCH TAKE-OFF (SA) OR ROUND/ROUND BRANCH TAKE-OFF (SA)
- ROUND/ROUND BRANCH TAKE OFF (SA, RA, OR EA)
- 45° LATERAL BRANCH
- 15° MAX. FOR DIVERGING, 45° MAX FOR CONVERGING TRANSITION – ECCENTRIC
- 15° MAX. FOR DIVERGING, 45° MAX FOR CONVERGING TRANSITION – CONCENTRIC
- R+, 6 — BRANCH DUCT SPLIT WITH 6" WIDTH AND MINIMUM R = WIDTH OF BRANCH DUCT DOWNSTREAM.
- 1.5W, 1.5D, 0.5W, W, D — SIDE TAP CONNECTION = 1.5W x 0.5W FOR RECTANGULAR DUCTS; 1.5D X 0.5D FOR ROUND DUCTS
- ECCENTRIC RECTANGULAR-TO-ROUND

DAMPERS AND ACCESS PANEL

- SINGLE BLADE OR MULTIBLADE VOLUME DAMPER
- FSD — FIRE SMOKE DAMPER IN DUCT. ACCESS PANEL REQUIRED. INSTALL ACTUATOR AT INDICATED LOCATION UNLESS AN ALTERNATE LOCATION PROVIDES SUPERIOR ACCESS. COORDINATE PRIOR TO INSTALLATION.
- AP — ACCESS PANEL

GENERAL NOTES AND REQUIREMENTS

1. TAGGED NOTES ON INDIVIDUAL SHEETS ARE DESIGNATED WITH A SQUARE SURROUNDING THE NOTE NUMBER. WHERE SHEET NOTES ARE APPENDED BY THE TERM 'TYP.', IT MEANS THAT THE SHEET NOTE REFERS TO ALL SIMILAR CONDITIONS.
2. UNLESS OTHERWISE NOTED ON THE DRAWINGS, EXISTING WORK IS SHOWN WITH LIGHTER LINEWEIGHTS, AND NEW WORK IS SHOWN WITH HEAVIER LINEWEIGHTS.
3. SUPPLY AND EXHAUST AIR SYSTEMS SHALL BE MAINTAINED IN OCCUPIED AREAS DURING CONSTRUCTION, EXCEPT FOR OFF-HOUR SHUTDOWNS FOR CUTTING, CAPPING, AND NEW CONNECTIONS. COMPLY WITH DEMOLITION REQUIREMENTS IN SECTION 230000–3.2 AND SHUTDOWN REQUIREMENTS IN SECTION 230000–1.10.
4. WORK OUTSIDE OF CONSTRUCTION BARRIERS SHALL BE PERFORMED AT TIMES DICTATED BY THE OWNER. COMPLY WITH SCHEDULING REQUIREMENTS SPECIFIED IN DIVISION 1 AND SECTION 230000–1.13. COMPLY WITH PROTECTION AND CLEANING REQUIREMENTS SPECIFIED IN DIVISION 1 AND SECTION 230000–3.11.
5. ALL CONCRETE ANCHORS FOR DUCT AND PIPE SUPPORTS SHALL BE DRILLED AT TIMES APPROVED BY THE OWNER. CONSTRUCTION NOISE AND VIBRATION SHALL BE KEPT TO AN ABSOLUTE MINIMUM WHILE ADJACENT AREAS ARE IN USE. ROTO-HAMMERS ARE NOT PERMITTED.
6. COORDINATE ALL DUCTWORK AND PIPING WORK FOR CLEARANCES AND FAIR DIVISION OF SPACE PRIOR TO INSTALLATION. COMPLY WITH COORDINATION REQUIREMENTS IN SECTIONS 230000–1.8 AND 1.9.
7. MODIFY EXISTING CONDITIONS AS REQUIRED TO ACCOMMODATE NEW WORK. COMPLY WITH REQUIREMENTS OF DIVISION 1 AND SECTION 230000–1.8.
8. SEE ARCHITECTURAL DRAWINGS FOR FIRE RATED SEPARATIONS. PROTECT ALL NEW AND EXISTING OPENINGS IN RATED SEPARATIONS AS REQUIRED BY CODE.

CONCRETE ANCHORS

SEE REQUIREMENTS ON STRUCTURAL SHEET S1.0 FOR CONCRETE ANCHOR TESTING AND EMBEDMENT. THESE REQUIREMENTS APPLY TO ALL CONCRETE ANCHORS INSTALLED UNDER MECHANICAL WORK.

ABBREVIATIONS

ACH	– AIR CHANGE PER HOUR	MPR	– MEDIUM PRESSURE CONDENSATE RETURN
ADJ	– ADJUSTABLE	MPS	– MEDIUM PRESSURE STEAM
AFF	– ABOVE FINISHED FLOOR		
AHU	– AIR HANDLING UNIT	N/A	– NOT AVAILABLE
AOR	– ARCHITECT OF RECORD	NC	– NORMALLY CLOSED
AP	– ACCESS PANEL	NIC	– NOT IN CONTRACT
APD	– AIR PRESSURE DROP	NO	– NORMALLY OPEN, NUMBER
APPROX	– APPROXIMATE	NTS	– NOT TO SCALE
ARCH	– ARCHITECT	NWC	– NORMAL WEIGHT CONCRETE SLAB
BHP	– BRAKE HORSEPOWER	OA	– OUTSIDE AIR
BMS	– BUILDING MANAGEMENT SYSTEM	O.C.	– ON CENTER
BTUH	– BRITISH THERMAL UNITS PER HOUR	OP	– OPERATING
		OSA	– OUTSIDE AIR
CAV	– CONSTANT AIR VOLUME UNIT		
CC	– COOLING COIL	PCF	– POUNDS PER CUBIC FOOT
CFM	– CUBIC FEET PER MINUTE	PD	– PRESSURE DROP
CG	– CENTER OF GRAVITY	PF	– PRE-FILTER
CLG	– CEILING	PH	– PHASE
COND	– CONDENSATE/CONDENSER	PL	– PLENUM
CONN	– CONNECTION	PSI	– POUNDS PER SQUARE INCH
		PSIG	– POUNDS PER SQUARE INCH GAUGE
D	– DEPTH, DIAMETER, DROP, DRAIN, DISTANCE		
DB	– DRY BULB, DECIBEL	QTY	– QUANTITY
DIV	– DIVISION		
DPS	– DIFFERENTIAL PRESSURE SENSOR/TRANSMITTER	R	– RADIUS, RISE
		RA	– RETURN AIR
EA	– EXHAUST AIR, EACH	REQ'D	– REQUIRED
EADB	– ENTERING AIR DRY BULB	RH	– RELATIVE HUMIDITY
EAT	– ENTERING AIR TEMPERATURE	RHC	– REHEAT COIL
ED	– EXTRACTION DAMPER	RM	– ROOM
EDB	– ENTERING DRY BULB	RPM	– REVOLUTIONS PER MINUTE
EF	– EXHAUST FAN		
EFF	– EFFICIENCY	SA	– SUPPLY AIR
ELEC	– ELECTRICAL	S.A.D.	– SEE ARCHITECTURAL DRAWINGS
E POWER	– EMERGENCY POWER	SCH	– SCHEDULE
EOR	– ENGINEER OF RECORD	SF	– SQUARE FEET, SUPPLY FAN
EQ	– EQUAL	SM	– SHEET METAL
EWB	– ENTERING WET BULB	SP	– STATIC PRESSURE
EWT	– ENTERING WATER TEMPERATURE	SPL	– SOUND PRESSURE LEVEL
EXH	– EXHAUST	SQ FT	– SQUARE FOOT
		S.S.	– STAINLESS STEEL
F	– FILTER	S.S.D	– SEE STRUCTURAL DRAWINGS
FA	– FIRE ALARM	ST	– SOUND TRAP
f'c	– COMPRESSIVE STRENGTH OF CONCRETE		
FCU	– FAN COIL UNIT	T	– THERMOSTAT
FD	– FIRE DAMPER	TCP	– TEMPERATURE CONTROL PANEL
FF	– FINAL FILTER	TEMP	– TEMPERATURE
FRP	– FIBERGLASS REINFORCED PLASTIC	THK	– THICK
FLR	– FLOOR	THRU	– THROUGH
FPI	– FINS PER INCH	TSP	– TOTAL STATIC PRESSURE
FPM	– FEET PER MINUTE	TYP	– TYPICAL
FPS	– FEET PER SECOND		
FSD	– FIRE/SMOKE DAMPER	UON	– UNLESS OTHERWISE NOTED
FT	– FEET	UV	– ULTRAVIOLET LAMPS
GA	– GAUGE	V	– VOLTS
GALV	– GALVANIZED	VEL	– VELOCITY
GPM	– GALLONS PER MINUTE	VFD	– VARIABLE FREQUENCY DRIVE
		VIF	– VERIFY IN FIELD
H	– HEIGHT		
HC	– HEATING COIL	W	– WIDTH
HORIZ	– HORIZONTAL	W/	– WITH
HP	– HORSEPOWER	WB	– WET BULB
HT	– HEIGHT	WC	– WATER COLUMN
HR	– HOUR	WG	– WATER GAUGE
HU	– HUMIDIFIER	WPD	– WATER PRESSURE DROP
HZ	– HERTZ	WT	– WEIGHT
IN	– INCHES	(E)	– EXISTING
		(N)	– NEW
KW	– KILOWATT	°	– DEGREES
		"	– INCHES
L	– LENGTH	%	– PERCENTAGE
LAT	– LEAVING AIR TEMPERATURE	ø	– PHASE, DIAMETER
LADB	– LEAVING AIR DRY BULB	#	– POUNDS, NUMBER
LBS	– POUNDS	2W	– TWO-WAY
LDB	– LEAVING DRY BULB	3W	– THREE-WAY
LWB	– LEAVING WET BULB		
LWT	– LEAVING WATER TEMPERATURE		
MAX	– MAXIMUM		
MANUF.	– MANUFACTURER		
M.B.	– MACHINE BOLT		
MBH	– MILLION BRITISH THERMAL UNIT PER HOUR		
MIN	– MINIMUM		

2019 CMC CODE COMPLIANCE

NEW INSTALLATIONS MEET OR EXCEED PERTINENT REQUIREMENTS IN 2019 CMC CHAPTERS 3 AND 4 AS FOLLOWS:

320.1.2: HEATING SYSTEMS ARE DESIGNED BASED ON THE "HEATING DB 99.6% COLUMN OF THE CLIMATIC DESIGN DATA IN ASHRAE HANDBOOK–FUNDAMENTALS. THE SYSTEMS ARE THERMOSTATICALLY CONTROLLED WITH APPROPRIATE ZONING TO ACHIEVE THE ABOVE CONDITIONS.

320.1.3: AIR CONDITIONING SYSTEMS ARE DESIGNED BASED ON THE 0.4% COLUMNS OF THE FOUR ANNUAL DESIGN CONDITIONS TITLED COOLING, EVAPORATION, DEHUMIDIFICATION, AND ENTHALPY SHOWN BY THE CLIMATE DESIGN DATA IN ASHRAE HANDBOOK–FUNDAMENTALS. THE SYSTEMS ARE THERMOSTATICALLY CONTROLLED WITH APPROPRIATE ZONING TO ACHIEVE THE ABOVE CONDITIONS.

407.1.1: NEW AND EXISTING SUPPLY AND EXHAUST AIR SYSTEMS SERVING PROJECT AREAS OPERATE CONTINUOUSLY.

407.1.2: EXISTING AND NEW EXHAUST FANS ARE AT THE DISCHARGE END OF THE SYSTEM. 2

407.3.1: VENTILATION RATES AND AIR BALANCE RELATIONSHIPS IN PROJECT ROOMS ARE IN ACCORDANCE WITH TABLE 4–A.

407.4.1: VENTILATION AND AIR MOVEMENT FROM CLEAN TO LESS CLEAN AREAS HAS BEEN PROVIDED.

407.4.1.3: CORRIDORS ARE NOT USED TO CONVEY SUPPLY OR EXHAUST AIR TO AND FROM ANY ROOM EXCEPT AS REQUIRED FOR PRESSURE DIFFERENTIALS.

408.1 EXISTING AIR HANDLING UNITS HAVE 30% EFFICIENCY PRE–FILTERS UPSTREAM OF AIR–CONDITIONING EQUIPMENT, 90% EFFICIENCY FINAL FILTERS LOCATED DOWNSTREAM OF SUPPLY FAN. EXISTING FILTERS HAVE MAGNEHELIC GAUGES TO INDICATE CHANGE–OUT PRESSURE DROP.

CAN 2–102.6: WHERE MODIFICATIONS ARE MADE TO EXISTING AIR SYSTEMS STILL IN OPERATION AND SERVING OCCUPIED SPACES, PRE–DEMOLITION AIR MEASUREMENTS WILL BE TAKEN AND INTERMEDIATE BALANCING WILL BE PERFORMED TO ENSURE NO IMPACT TO ADJACENT SPACES. TEST & BALANCE REPORTS SHALL BE SUBMITTED FOR REVIEW AFTER PRE–DEMOLITION MEASUREMENTS AND AT THE COMPLETION OF EACH PHASE OR MILESTONE.

PER NARRATIVE 15.E., PRESSURE INDEPENDENT SYSTEMS THAT HAVE PRESSURE INDEPENDENT SUPPLY AIR TERMINAL UNITS WITH VARIABLE FREQUENCY DRIVE ARE NOT REQUIRED TO MEASURE AIRFLOWS IN SPACES OUTSIDE THE PROJECT BOUNDARIES. THE SUPPLY AND RETURN AIR TERMINAL UNITS ARE PRESSURE INDEPENDENT SERVED BY EXISTING AIR HANDLING UNIT AHU–16–SA, WHICH HAS VARIABLE FREQUENCY DRIVE CONTROLLERS AT THE SUPPLY AND RETURN FANS. THE SUPPLY AND RETURN AIR SYSTEM IS NEWER AND MEETS THE REQUIREMENTS FOR CAN 2–102.6 NARRATIVE 15.E. 2

DEMOLITION GENERAL NOTES

1. COMPLY WITH DEMOLITION REQUIREMENTS IN SECTION 230000–3.02.
2. THERE IS PIPING AND DUCTWORK IN THE PROJECT AREA NOT SHOWN ON DEMOLITION DRAWINGS. REMOVE ALL EXISTING MECHANICAL WORK IN THE PROJECT AREA THAT IS ABANDONED OR WILL NO LONGER BE IN USE.
3. TURN OVER EQUIPMENT, VALVES, AND THERMOSTATS NOTED TO BE REMOVED THAT ARE NEW OR HAVE SIGNIFICANT REMAINING LIFE EXPECTANCY TO THE OWNER, OR REMOVE FROM SITE AS DIRECTED. PERFORM A SURVEY OF MECHANICAL EQUIPMENT AND VALVES PRIOR TO DEMOLITION. CLEAN AND DRY ANY MATERIAL TO BE TURNED OVER TO THE OWNER.
4. MAINTAIN SUPPLY AND EXHAUST AIR SYSTEMS SERVING OCCUPIED AREAS ALL DURING CONSTRUCTION, EXCEPT FOR OFF–HOUR SHUTDOWNS FOR CUTTING, CAPPING, AND NEW CONNECTIONS. COMPLY WITH SHUTDOWN REQUIREMENTS IN SECTION 230000.
5. CDPH SHALL BE NOTIFIED OF ANY REQUIRED EQUIPMENT OR POWER SHUTDOWNS AND THEIR EFFECT ON PATIENT CARE. CDPH SHALL BE NOTIFIED AT LEAST TWO WEEKS PRIOR TO A SCHEDULED SHUTDOWN. 1

THROUGH PENETRATION FIRESTOP SYSTEM NOTES

1. THROUGH PENETRATION FIRESTOP SYSTEM DETAILS ON UL DRAWING SERIES ARE FOR REFERENCE ONLY. PENETRATIONS THROUGH FIRE–RATED FLOORS AND WALLS SHALL BE INSTALLED IN ACCORDANCE WITH CBC SECTION 714. SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS AND APPROVED LISTING. MANUFACTURER'S INSTALLATION INSTRUCTIONS AND APPROVED LISTING SHALL PROVIDED FOR REVIEW BY THE INSPECTION AUTHORITIES.
2. SUBSTITUTIONS OF APPROVED SYSTEMS SHALL BE SUBMITTED FOR REVIEW AND APPROVAL. LISTED DESIGNS SHALL NOT BE MODIFIED EXCEPT BY THE LISTING AUTHORITY, IN WRITING, VERIFYING THAT THE RATED PROTECTION IS PROVIDED.
3. FOR OTHER CONDITIONS, SUCH AS DIFFERENT WALL TYPES, MULTIPLE PENETRATIONS, OR F AND T RATINGS NOT SHOWN HEREIN, SUBMIT DETAILS OF PROPOSED FIRESTOP SYSTEM ALONG WITH UL SYSTEM NUMBERS. UL THROUGH PENETRATION FIRESTOP SYSTEMS SHALL BE APPROVED BY THE CALIFORNIA STATE FIRE MARSHAL.

DUCTWORK SPECIALTIES

- VENTURI VALVE TERMINAL UNIT – SUPPLY
- RHC — DUCT HEATING COIL

NOTES: SYMBOLS SHOWN ARE NOT ALL NECESSARILY USED FOR THIS PROJECT.

REVIEWED IN ACCORDANCE WITH THE REQUIREMENTS OF 7 CFR, CCR
APPROVED
Department of Health Care Access & Information
Office of Statewide Hospital Planning & Development
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HCAI seal/signature

Seal/Signature
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REGISTERED PROFESSIONAL ENGINEER — DEREK CROWTHER — No. M54902 — Exp. 6/30/24 — Mechanical — STATE OF CALIFORNIA

Issued for
HCAI SUBMITTAL

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2	DESIGN CHANGE	12/09/2022

Drawn by KC
Checked by KC

Project Name
HOSPITAL REPLACEMENT BUILDING-
NUCLEAR MEDICINE SUITE RELOCATION

Sheet Title
GENERAL NOTES, SYMBOLS AND ABBREVIATIONS

Date 08/05/2022
Scale AS NOTED
Sheet Number M0.1

30 X 42

2019 CMC VENTILATION COMPLIANCE TABLE 4-A

ROOM NO.	ROOM NAME	2019 CMC TABLE 4-A DESIGNATION	AIR HANDLING UNIT	EXHAUST FAN	RENOVATED /NEW (YES/NO)	AREA (SF)	CEILING HEIGHT (FT)	100%OA (YES/NO)	DESIGN OUTSIDE AIR (CFM)	DESIGN SUPPLY AIR (CFM)	DESIGN RETURN AIR (CFM)	DESIGN EXHAUST AIR (CFM)	DESIGN TRANSFER AIR (CFM)	AIR CHANGES (NOT 100% OUTSIDE AIR)				CODE REQUIRED AIR BALANCE RELATIONSHIP TO ADJACENT AREAS	ALL AIR EXHAUSTED DIRECTLY TO OUTDOORS	NOTES
														CODE REQUIRED MIN OSA (ACH)	DESIGN MIN OSA (ACH)	CODE REQUIRED TOTAL (ACH)	DESIGN TOTAL (ACH)			
L546D	SPECT-GAMMA ROOM	NUCLEAR MEDICINE (GAMMA, PET, SPECT)	AHU-16	GEF-6	YES	500	9	NO	170	1500	0	-1600	100	2	2.3	6	21.3	N	YES	(1)
L546E	CONTROL ROOM	NUCLEAR MEDICINE (GAMMA, PET, SPECT)	AHU-16	GEF-6	YES	165	9	NO	60	330	0	-380	50	2	2.4	6	15.4	N	YES	(1)
L546C	HOT LAB	NUCLEAR MEDICINE HOT LAB	AHU-16	GEF-6	YES	105	9	NO	0	100	0	-180	80	–	–	6	11.4	N	YES	(1)
L546A, L546B, L546	PATIENT HOLDING, DOSAGE & HALL	PATIENT HOLDING PREPARATION	AHU-16	–	YES	394	9	NO	140	490	-140 1	0	-350	2	2.4	6	8.3 1	NR	–	(2)
L546F	SOILED HOLDING	SOILED WORKROOM OR SOILED HOLDING, UTILITY ROOM	AHU-16	GEF-6	YES	46	8	NO	20	40	0	-90	50	2	3.3	10	14.7	N	YES	(1)
L546G	PATIENT TOILET	TOILET ROOM	AHU-16	GEF-6	YES	71	8	NO	0	50	0	-120	70	–	–	10	12.7	N	YES	(1)

NOTES:
(1) ROOM IS 100% EXHAUSTED TO THE OUTSIDE AND AIR CHANGE RATES ARE BASED ON THE EXHAUST AIRFLOW RATE.
(2) PATIENT HOLDING, DOSEAGE AND HALL PART OF ONE CONTINUOUS ROOM AND HAVE BEEN COMBINED INTO ONE LINE ITEM IN THIS TABLE. ONE SINGLE RETURN AIR GRILLE SERVES CONTINUOUS ROOM. AIR IS TRANSFERRED TO SPECT GAMMA, PATIENT TOILET ROOM, HOT LAB AND SOILED HOLDING THROUGH DOOR UNDERCUTS.

AIR DISTRIBUTION SCHEDULE

MARK	TYPE OF SERVICE	MANUFACTUER	MODEL NUMBER	CEILING/BORDER TYPE	NOTES
A1	CEILING SUPPLY	TITUS	TDC	LAY-IN / TYPE 3	(1), (2)
A2	CEILING SUPPLY	TITUS	TDC	SURFACE MOUNT / TYPE 1	(1), (2)
B1	CEILING RETURN/EXHAUST	TITUS	3FL	LAY-IN / TYPE 3	(1), (2)
B2	CEILING EXHAUST	TITUS	3FL	SURFACE MOUNT / TYPE 1	(1), (2)

NOTES:
(1) REFER TO SPECIFICATION SECTION 238600 FOR ADDITIONAL INFORMATION.
(2) SEE DRAWINGS FOR NECK SIZES.

SUPPLY TERMINAL UNITS WITH HOT WATER COIL

MARK	SYSTEM	VALVE TYPE (VAV/CAV)	LOCATION	MANUFACTURER	INLET DUCT SIZE (INCHES)	MAX. STATIC PRESSURE LOSS ACROSS TERMINAL UNIT AT MAXIMUM CFM (IN WG)	COOLING		HEATING COIL						NOTES
							OCCUPIED		MAXIMUM HEATING (CFM)	CAPACITY (MBH)	GPM	EAT (°F)	LAT (°F)	NUMBER OF ROWS	
							MAXIMUM (CFM)	MINIMUM (CFM)							
(E) G-16-32	AHU-16-SA	CAV	HALLWAY L540	PHOENIX AIR VALVE	12	0.5	490	490	490	18.5	1.2	55	85	2	(1), (2), (3)
G-16-30	AHU-16-SA	CAV	SPECT-CT ROOM L546D	PHOENIX AIR VALVE	14	0.5	1500	1500	1500	56.7	3.8 1	55	85	2	(1), (2)
G-16-56	AHU-16-SA	CAV	HALL L546	PHOENIX AIR VALVE	8	0.5	470	470	470	17.8	1.2	55	85	2	(1), (2)

NOTES:
(1) HEATING COIL SELECTION BASED ON 2 ROW SELECTION WITH 140°F EWT, 105°F LWT.
(2) SUPPLY VALVE TERMINAL UNIT AND REHEAT COIL WEIGHT LESS THAN 75 LBS.
(3) REUSE EXISTING SUPPLY TERMINAL VALVE.

RETURN TERMINAL UNITS

MARK	SYSTEM	VALVE TYPE (VAV/CAV)	LOCATION	MANUFACTURER	INLET DUCT SIZE (INCHES)	MAX. STATIC PRESSURE LOSS ACROSS TERMINAL UNIT AT MAXIMUM CFM (IN WG)	COOLING		NOTES
							OCCUPIED		
							MAXIMUM (CFM)	MINIMUM (CFM)	
(E) G-16-32	AHU-16-RA	CAV	HALL L546	PHOENIX AIR VALVE	12	0.5	140	140 1	(1), (2)

NOTES:
(1) REUSE EXISTING RETURN TERMINAL VALVE.
(2) RETURN AIR TERMINAL UNIT WEIGHS LESS THAN 75 LBS.

EXHAUST FAN

MARK	LOCATION	SERVICE	GREENHECK MODEL NUMBER	CFM	EXTERNAL STATIC PRESSURE (IN. WG.)	RPM	FAN TYPE	MOTOR				MAX SONES (OUTLET)	EMERG. POWER (Y/N)	VAR. SPEED (Y/N)	OPERATING WEIGHT (LBS)	NOTES
							DRIVE	BHP	HP	VOLTAGE	PHASE					
EF-1	ROOF	SPECT CT SUITE	USF-16-3-B1	3,000	2.50	1084	DIRECT	–	3	460	3	30	Y	Y	252	1, 2, 3, 4

NOTES:
1 PROVIDE EXHAUST FAN WITH SPECIAL SEISMIC CERTIFICATION IN ACCORDANCE WITH 2019 CBC SECTION 1705A.12. FANS AND ALL ACCESSORIES SHALL BE COVERED BY MANUFACTURER'S OSHPD SPECIAL SEISMIC CERTIFICATION PRE-APPROVAL NUMBER (OSP-0503-10). REFER TO STRUCTURAL DETAIL ON SHEET 6/S3.3.
2 PROVIDE WITH VFD MODEL NUMBER ACH580-PCR-04A8-4+B058. VFD SHALL BE COVERED BY MANUFACTURER'S HCAI SPECIAL SEISMIC CERTIFICATION PRE-APPROVAL NUMBER (OSP-0575). REFER TO STRUCTURAL DETAIL ON SHEET 18/S3.3.
3 LISTINGS OF MAJOR SUB-ASSEMBLIES AND SUBCOMPONENTS FOUND ON EXHAUST FAN OSP-0503-10 ARE AS FOLLOWS:
TABLE 4, MODEL LINE: BALDOR, MODEL: 182T, DESCRIPTION: 1-5HP, 115-600V, FAN SIZES 9-40.
TABLE 5, MODEL LINE: BACKWARD INCLINED, MODEL BI-16.5, WEIGHT: 36 LBS.
TABLE 6, NOT APPLICABLE.
TABLE 7, NOT APPLICABLE.
4 PROVIDE MAIN INPUT CIRCUIT BREAKER DISCONNECT SWITCH.

2

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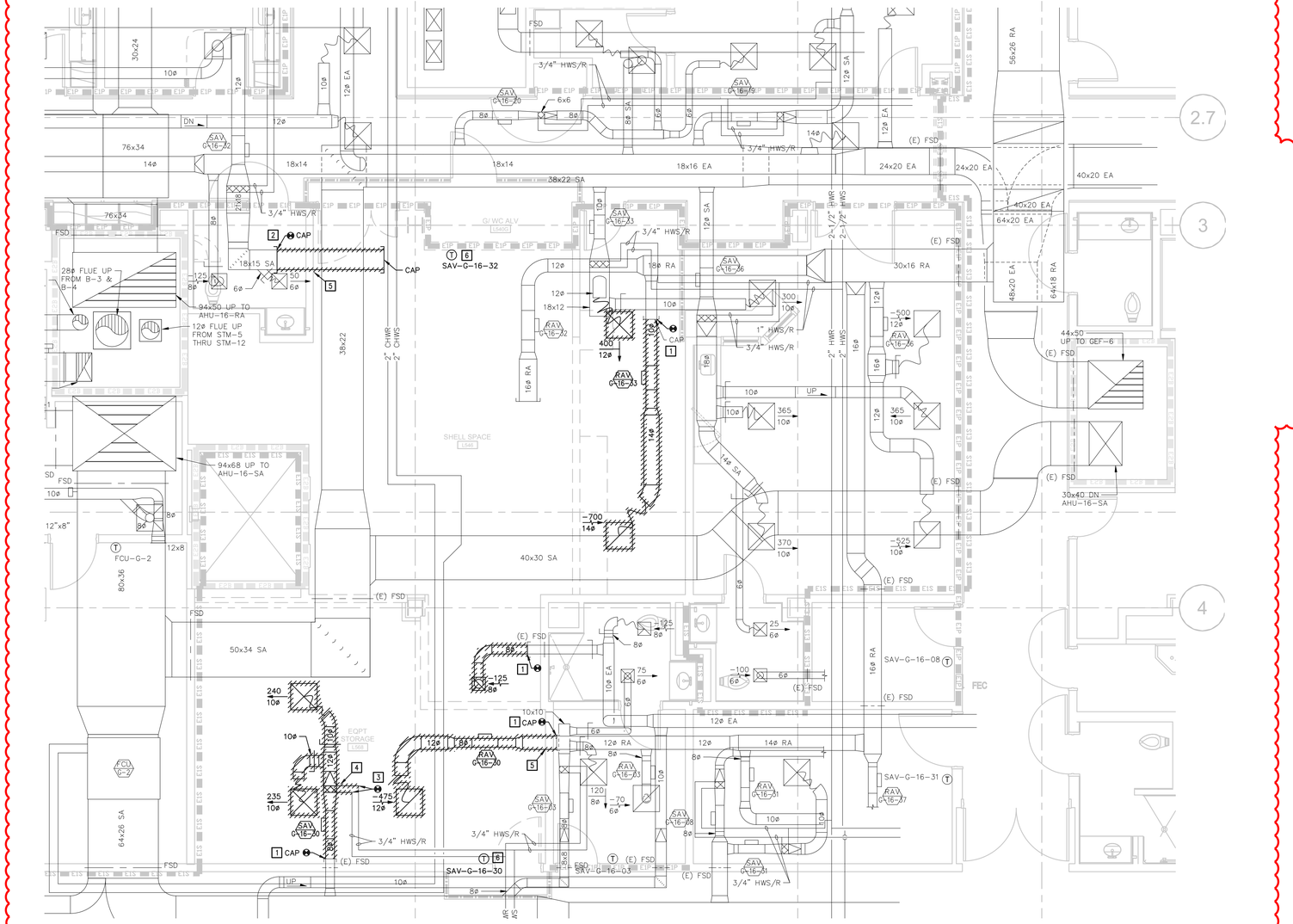
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Project Name
HOSPITAL REPLACEMENT BUILDING-
NUCLEAR MEDICINE SUITE RELOCATION

Sheet Title
SCHEDULES - MECHANICAL

Date 08/05/2022
Scale AS NOTED
Sheet Number
M0.2

30 X 42



1 PARTIAL LOBBY PLAN – DEMOLITION – MECHANICAL

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

NORTH

GENERAL NOTES

A. COMPLY WITH DEMOLITION REQUIREMENTS SPECIFIED IN SECTION 230000–3.02.

B. REMOVE EXISTING MECHANICAL WORK IN THE PROJECT AREA UP TO POINTS OF DISCONNECTION SHOWN. REMOVE DUCTWORK, DAMPERS, TERMINAL UNITS, PIPING, SUPPORTS, AND ACCESSORIES THAT ARE ABANDONED OR WILL NO LONGER BE IN USE.

C. AIRFLOWS SHOWN ADJACENT TO AIR INLETS AND OUTLETS IN LIGHTER COLOR ARE EXISTING AND TAKEN FROM APPROVED RECORD DRAWINGS DATED 08/20/2020.

SHEET NOTES

1. PERMANENTLY CAP AND SEAL (E) DUCT. PROVIDE A MINIMUM 20 GAUGE SHEET METAL CAP WITH AT LEAST A 1" OVERLAP WITH MAIN DUCT ALL AROUND. FASTEN CAP WITH NO. 10 SHEET METAL SCREWS AT EACH CORNER AND MAXIMUM 3" ON CENTER ALL AROUND. SEAL AIRTIGHT WITH SPECIFIED SEALANT.
2. TEMPORARILY CAP AND SEAL OPENINGS IN ACTIVE DUCTWORK THAT WILL BE EXTENDED DURING THE NEW CONSTRUCTION PHASE OF WORK.
3. TEMPORARILY CAP AND SEAL PIPE WORK THAT WILL BE EXTENDED DURING THE NEW CONSTRUCTION PHASE OF WORK; HEATING HOT WATER PIPE.
4. REMOVE HEATING COIL, ASSOCIATED PIPE WORK AND SUPPORTS THAT WILL NO LONGER BE OF USE.
5. PATCH AND SEAL OPENING IN WALL.
6. DEMOLISH EXISTING THERMOSTAT AND SAVE FOR REUSE WITH AIR TERMINAL UNIT. SEE M2.2 FOR NEW THERMOSTAT LOCATION.

2

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HOSPITAL REPLACEMENT BUILDING-
NUCLEAR MEDICINE SUITE RELOCATION

Sheet Title

PARTIAL LOBBY LEVEL PLAN - DEMOLITION WORK - MECHANICAL

Date 08/05/2022

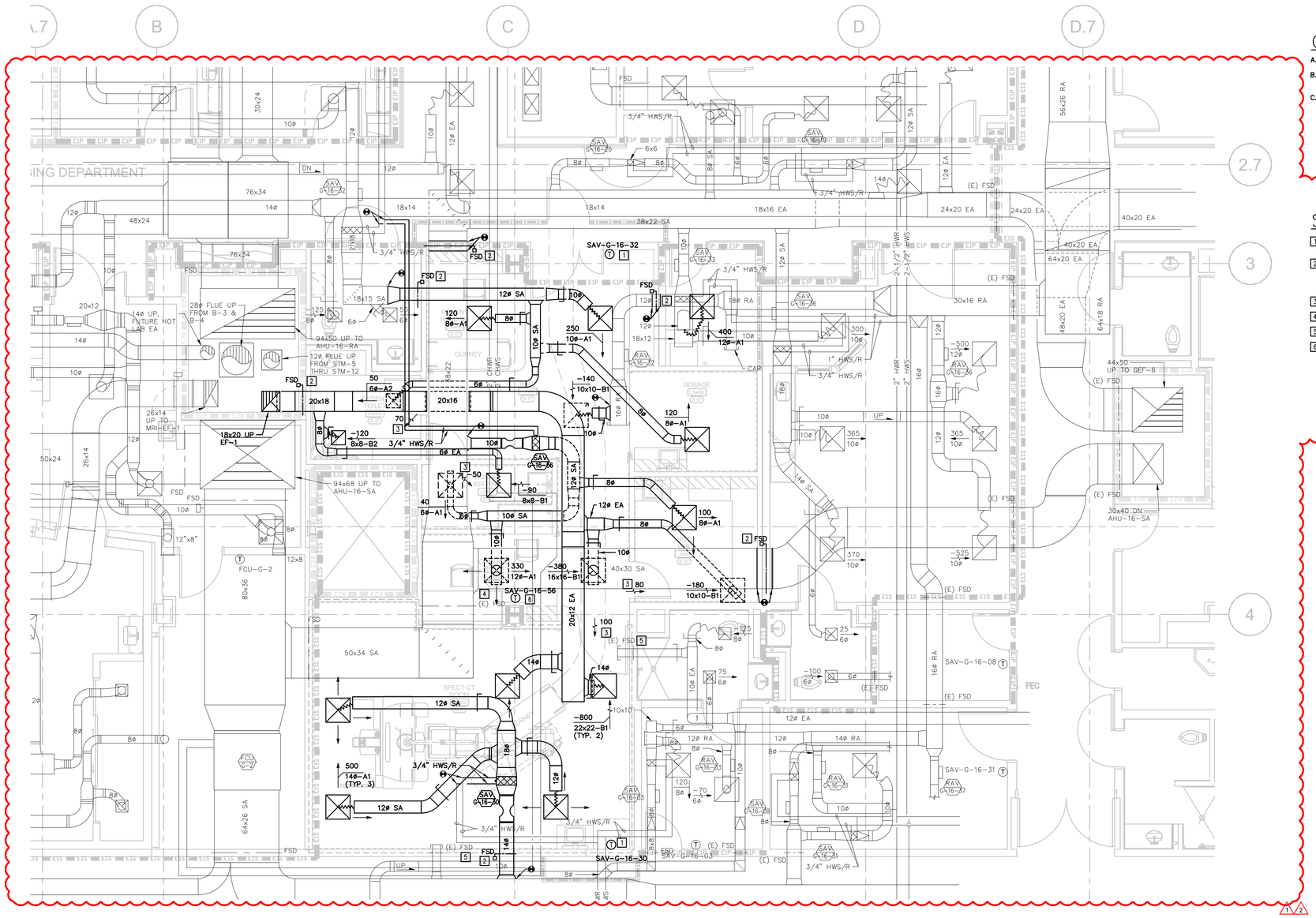
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M2.1

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GENERAL NOTES

A. COMPLY WITH INSTALLATION REQUIREMENTS IN SECTION 230000-3.01.

B. UPON COMPLETION OF THE PROJECT, BALANCE NEW GRILLES TO NEW DESIGN AIRFLOWS. SUBMIT FINAL BALANCE REPORT FOR REVIEW.

C. AIRFLOWS SHOWN ADJACENT TO AIR INLETS AND OUTLETS IN LIGHTER COLOR ARE EXISTING AND TAKEN FROM APPROVED RECORD DRAWINGS DATED 08/20/2020.

SHEET NOTES

1. EXISTING THERMOSTAT RELOCATED. CONNECT THERMOSTAT TO AIR TERMINAL UNIT. INSTALL THERMOSTAT 48" ABOVE FINISHED FLOOR.
2. PROVIDE NEW FSD'S IN EXISTING RATED WALL. SEE DETAIL 7/M8.1 FOR INSTALLATION AND 1/M8.2 FOR FIRE STOP. PROVIDE PERMANENT LABEL IN LETTERS NOT LESS THAN 1/2 INCH IN HEIGHT THAT STATES "FIRE SMOKE DAMPER" ON CEILING GRID.
3. PROVIDE 3/4" UNDERCUT AT DOOR FOR AIR TRANSFER.
4. FIX (E) FSD IN THE 100% OPEN POSITION.
5. FIX (E) FSD IN THE CLOSED POSITION.
6. PROVIDE NEW THERMOSTAT 48" ABOVE FINISHED FLOOR AND CONNECT TO ASSOCIATED AIR TERMINAL UNIT.

1 PARTIAL LOBBY LEVEL PLAN – NEW WORK – MECHANICAL

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

NORTH

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2	DESIGN CHANGE	12/09/2022

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HOSPITAL REPLACEMENT BUILDING-
NUCLEAR MEDICINE SUITE RELOCATION

Sheet Title

PARTIAL LOBBY LEVEL PLAN - NEW WORK - MECHANICAL

Date 08/05/2022

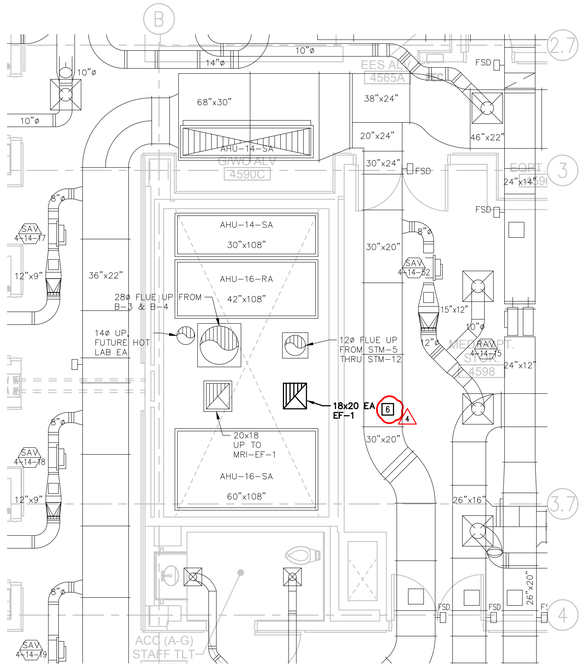
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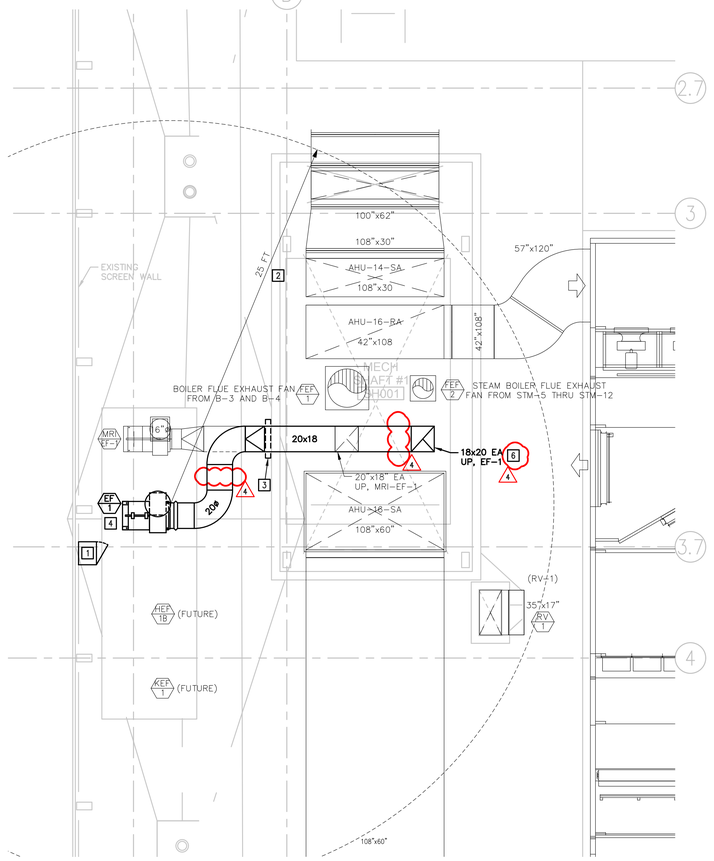
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30 X 42

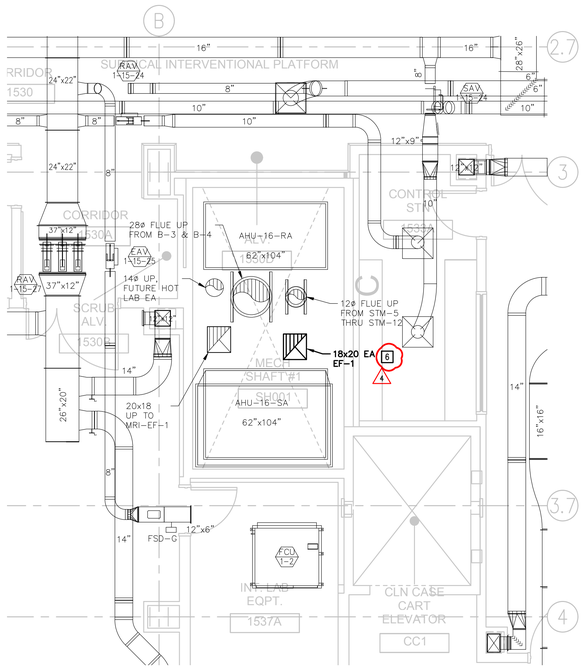
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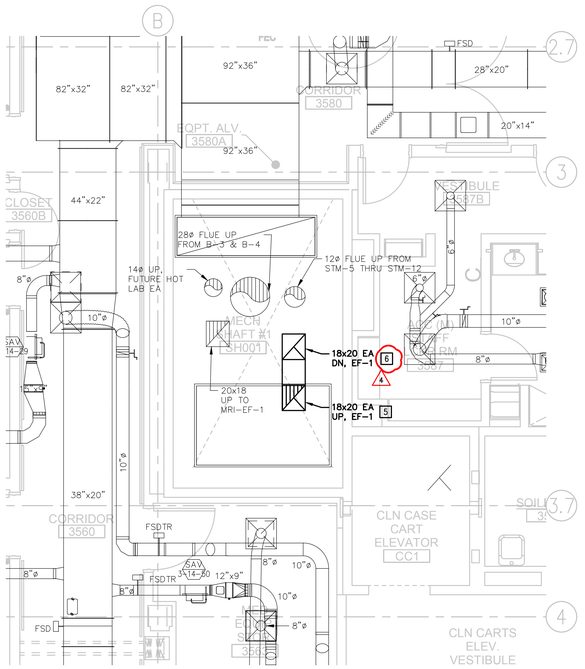
1 PARTIAL LEVEL 4 PLAN – NEW WORK – MECHANICAL
SCALE: 1/4" = 1'-0"



1 PARTIAL ROOF PLAN – NEW WORK – MECHANICAL
SCALE: 1/4" = 1'-0"



1 PARTIAL LEVEL 1 PLAN – NEW WORK – MECHANICAL
SCALE: 1/4" = 1'-0"



1 PARTIAL LEVEL 3 PLAN – NEW WORK – MECHANICAL
SCALE: 1/4" = 1'-0"

GENERAL NOTES

A. COMPLY WITH INSTALLATION REQUIREMENTS IN SECTION 230000–3.01.

SHEET NOTES

1. PROVIDE EXHAUST FAN VFD IN NEMA 3R ENCLOSURE 18"x34"x14" (WxHxD). APPROXIMATE WEIGHT IS 35 LBS. SEE STRUCTURAL DRAWING 8/S3.3 FOR MOUNTING DETAILS.
2. EXHAUST OUTLETS FROM VENTILATING SYSTEMS SHALL BE LOCATED AT LEAST 25 FEET FROM OUTDOOR INTAKES.
3. SEE STRUCTURAL DRAWING 8/S3.3 FOR DUCT SUPPORT DETAILS.
4. SEE MECHANICAL DRAWING 3/M8.2 FOR EXHAUST FAN DETAILS.
5. OFFSET DUCT IN SHAFT TO AVOID EXISTING DUCT.
6. SEE STRUCTURAL DRAWING 20/S3.3 FOR DUCT RISER SUPPORT DETAILS. 4

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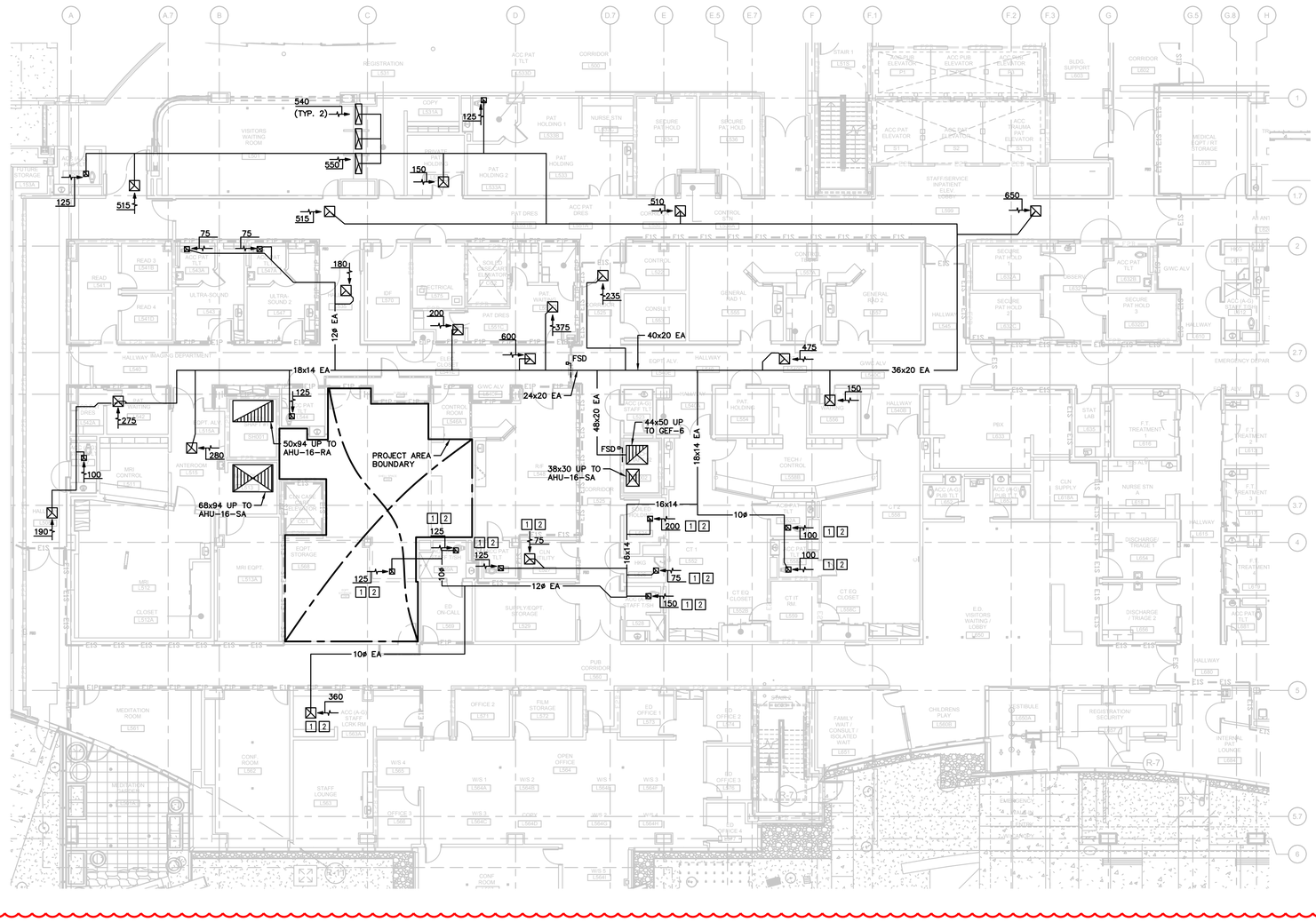
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Project Name
HOSPITAL REPLACEMENT BUILDING-
NUCLEAR MEDICINE SUITE RELOCATION

Sheet Title
PARTIAL LEVEL1, LEVEL 3, LEVEL 4 AND ROOF PLAN - NEW WORK - MECHANICAL

Date 08/05/2022
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Sheet Number
M2.3
2
30 X 42

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GENERAL NOTES AND BALANCING INSTRUCTIONS:

A. SEE M2.3 FOR GENERAL NOTES AND BALANCING INSTRUCTIONS.

B. REFER TO M2.2 FOR BALANCING SCOPE WITHIN THE PROJECT AREA.

C. DURING CONSTRUCTION EXISTING SUPPLY, RETURN, AND EXHAUST DUCTWORK OPENINGS WITHIN THE PROJECT AREA SHALL BE CAPPED AND SEALED.

D. PERFORM PRE-DEMOLITION, INTERMEDIATE, AND FINAL BALANCING FOR ROOMS OUTSIDE THE PROJECT AREA AFTER HOURS OR ON WEEKENDS WHEN THE ROOMS ARE UNOCCUPIED. COORDINATE SCHEDULE WITH OWNER'S REPRESENTATIVE.

E. AIRFLOWS SHOWN ON THIS PLAN ARE TAKEN FROM APPROVED RECORD DRAWINGS DATED 08/20/2020. PROVIDE EXISTING AIRFLOW READINGS PRIOR TO ANY DEMOLITION WORK, AT INTERMEDIATE PHASES AND FINAL AIR BALANCE IN ACCORDANCE WITH 239900 TESTING AND BALANCING SPECIFICATIONS.

F. SEE SPECIFICATION 239900 TESTING AND BALANCING FOR ADDITIONAL INSTRUCTIONS.

SHEET NOTES

1. EXHAUST AIRFLOW TEST AND BALANCING SCOPE (GEF-6):

   PRIOR TO ANY WORK BEING DONE, MEASURE PRE-DEMOLITION AIRFLOWS AT ALL EXHAUST AIR GRILLES ON LOBBY LEVEL SERVED BY GEF-6 INDICATED WITH SHEET NOTE 1. OBSERVE IF BALANCING DAMPERS EXIST FOR EACH GRILLE AND RECORD THE PERCENT OPEN. SUBMIT PRE-DEMOLITION BALANCE REPORT TO OWNER'S REPRESENTATIVE.

2. AFTER DEMOLITION WORK HAS OCCURRED WITHIN THE PROJECT AREA PER M2.1, VERIFY ALL INLETS LABELED WITH SHEET NOTE 1 OUTSIDE THE PROJECT AREA ARE WITHIN ±10% OF PRE-DEMO AIRFLOW MEASUREMENTS. PER CAN 2-102.6 NARRATIVE 15, ONLY GRILLES UPSTREAM IN THE DUCT SYSTEM NEED MEASURING UNTIL WHERE THE RATIO BETWEEN PROJECT AIR AND TOTAL AIR IS REDUCED SO THAT AIR BALANCING TOLERANCES EXCEED THE QUANTITY OF PROJECT AIR.

1 LOBBY LEVEL – TEST, ADJUST AND BALANCE PLAN

SCALE: 3/32" = 1'-0"

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HOSPITAL REPLACEMENT BUILDING-
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Sheet Title

PARTIAL LOBBY LEVEL EXHAUST FAN GEF-6, TEST, ADJUST AND BALANCE PLAN

Date 08/05/2022

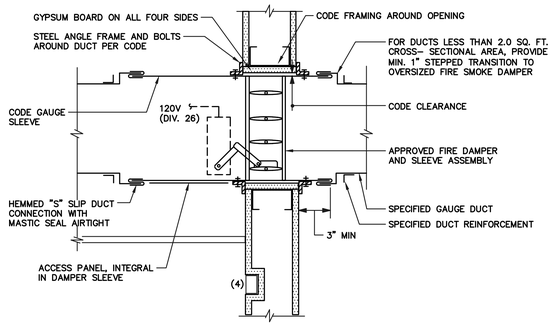
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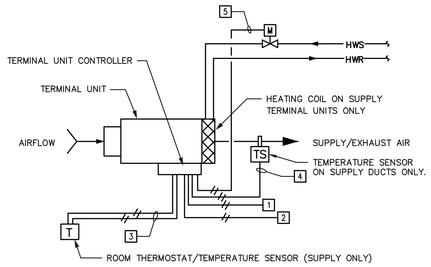


NOTES:

1. FIRE SMOKE DAMPER DETAIL IS FOR REFERENCE ONLY. FIRE SMOKE DAMPERS SHALL BE LABELED BY AN APPROVED AGENCY, UL 555, UL 555C AND UL 555S LISTED AND INSTALLED STRICTLY PER MANUFACTURER'S PRINTED INSTRUCTIONS. MANUFACTURER'S INSTALLATION INSTRUCTIONS SHALL BE MADE AVAILABLE TO THE INSPECTING AUTHORITIES.
2. PROVIDE COMBINATION FIRE/SMOKE DAMPERS WITH ELECTRIC OPERATOR. FROM A 120 VOLT ELECTRICAL SIGNAL TIED INTO THE BUILDING LIFE-SAFETY SYSTEM, ENERGIZE OPERATOR TO KEEP DAMPER OPEN. DAMPER CLOSES WHEN HEAT ACTUATED DEVICE TRIGGERS OR SMOKE DETECTOR CAUSES ELECTRICAL POWER TO THE ACTUATOR TO BE CUT OFF. PROVIDE SP100 END SWITCH FOR POSITIVE VERIFICATION OF DAMPER OPEN AND CLOSED POSITIONS.
3. PROVIDE RUSKIN MODEL FSD60, CSFM LISTING NOS. 3225-245:102 & 3230-245:110. MANUFACTURES ARE RUSKIN, AIR BALANCE, OR EQUAL.
4. PROVIDE RUSKIN MCP2 REMOTE INDICATING AND TEST PANEL KEYED TO MATCH OTHER HOSPITAL FIRE SMOKE DAMPER INSTALLATIONS. MOUNT 6" BELOW CEILING AND WIRE TO FSD. SEE ELECTRICAL DRAWINGS.

7 FIRE AND SMOKE DAMPER IN DUCT THRU WALL DETAIL

SCALE: NONE



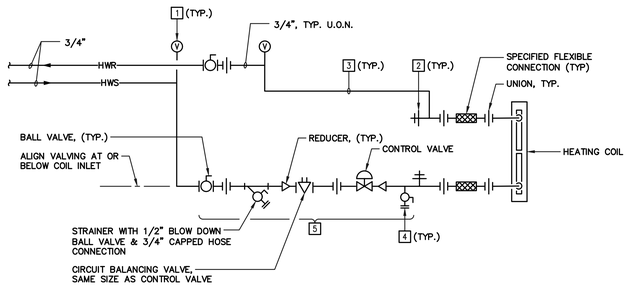
CONTROL POINTS AND NOTES:

CONTROL DIAGRAMS ARE GENERAL IN NATURE AND DO NOT SHOW ALL DEVICES AND CONNECTIONS REQUIRED TO PRODUCE THE SEQUENCE OF OPERATIONS LISTED. CONTROL VOLTAGES AND QUANTITIES OF DEVICES ARE NOT INDICATED. FURNISH ALL CONTROL LOOPS, RELAYS, SENSORS, WIRING, AND OTHER CONTROL DEVICES NECESSARY TO MEET THE INTENT OF THE SEQUENCE OF OPERATION.

1. 24 VOLT POWER CONNECTION FROM CONTROL SYSTEM TRANSFORMER.
2. COMMUNICATION LINK TO BMS, INCLUDING AIRFLOW, SUPPLY AIR TEMPERATURE, THERMOSTAT SETPOINT, ROOM TEMPERATURE, AND HEATING COIL VALVE POSITION SIGNALS TO DDC PANEL.
3. COMMUNICATION LINK TO WALL MOUNTED "SMART SENSOR", WITH ROOM TEMPERATURE AND TEMPERATURE SETPOINT SIGNALS.
4. SUPPLY AIR TEMPERATURE SIGNAL TO DDC PANEL.
5. HEATING COIL CONTROL VALVE POSITION SIGNAL TO CONTROL VALVE ACTUATOR.

8 SINGLE DUCT CONSTANT VOLUME TERMINAL UNIT CONTROL DIAGRAM

NO SCALE

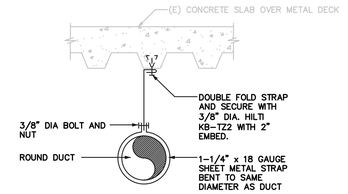


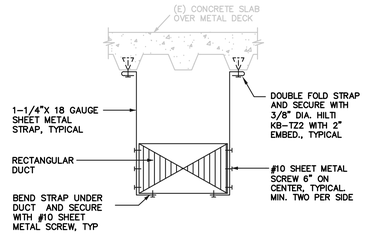
NOTES:

1. MANUAL AIR VENT, TYP. WHEREVER NECESSARY TO ALLOW VENTING OF ALL PIPING BETWEEN SHUT-OFF VALVES BEFORE RECONNECTING COIL PIPING TO SYSTEM, SEE DETAIL 6/M8.1
2. TEST PORT, PETE'S PLUG, TYPICAL. ELBOW MOUNT IN HORIZONTAL TEE FITTING NEAR COIL SO THAT TEMPERATURE PROBE CAN BE INSERTED FULL LENGTH AND GAUGES ARE EASILY READABLE.
3. SLOPE BRANCH LINES CONTINUOUSLY UP TOWARD MANUAL AIR VENT.
4. 1/2" DRAIN VALVE WITH 3/4" HOSE CONNECTION, AT OR BELOW BOTTOM COIL CONNECTION.
5. ARRANGE BALANCING VALVE, STRAINER, CONTROL VALVE, VENT AND DRAIN VALVES FOR EASY ACCESS ABOVE CEILING.

6 PIPING AT CEILING HEATING WATER COILS DETAIL

SCALE: NONE



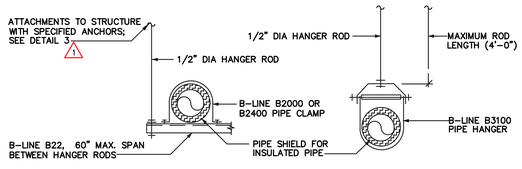


NOTES:

1. SEE SPECIFICATIONS FOR SPACING. MINIMUM ONE SUPPORT PER DUCT BRANCH.
2. PROVIDE TRAPEZE HANGERS AS SPECIFIED FOR DUCTS OVER 48" IN SIZE
3. SINGLE HANGER LOAD LIMIT SHALL NOT EXCEED 50 POUNDS. TRAPEZE HANGER LOAD LIMIT SHALL NOT EXCEED 10 POUNDS PER LINEAR FOOT UP TO 100 POUNDS.
4. DUCT SIZES ON PROJECT HAVE A CROSS-SECTIONAL AREA LESS THAN 6 SQUARE FEET, BELOW THE REQUIREMENT FOR SEISMIC BRACING.
5. DETAIL FOR GRAVITY SUPPORT ONLY, SEISMIC BRACING IS DEFERRED SUBMITTAL PER A0.0 AS REQUIRED.
6. PER STRUCTURAL GENERAL NOTES ON S1.0 SECTION IX, SEISMIC BRACING IS NOT REQUIRED WHEN THE STRAP LENGTH IS 12" OR LESS. 1 3

4 DUCT SUPPORT

SCALE: NONE

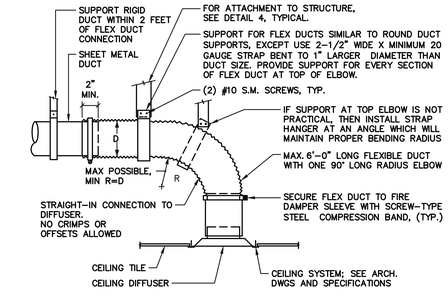


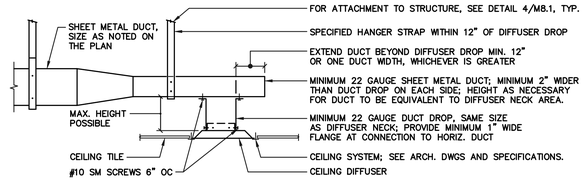
NOTES:

1. SUPPORT PIPES AT SPECIFIED INTERVALS, WITHIN 24" OF EACH CHANGE OF DIRECTION, AND ON EACH BRANCH 3'-0" OR LONGER.
2. MULTIPLE PIPES MAY BE SUPPORTED ON A COMMON TRAPEZE. ROD SIZE AND SPACING, TRAPEZE SIZE, AND SUPPORT SPACING SHALL BE GOVERNED BY CUMULATIVE WEIGHT OF SUPPORTED PIPING.
3. SUPPORT PIPING IN ACCORDANCE WITH SECTION 230200 – SUPPORTS, ANCHORS, AND SEISMIC RESTRAINTS.
4. SINGLE HANGER LOAD LIMIT SHALL NOT EXCEED 50 POUNDS. TRAPEZE HANGER LOAD LIMIT SHALL NOT EXCEED 10 POUNDS PER LINEAR FOOT UP TO 100 POUNDS.
5. DETAILS FOR GRAVITY SUPPORT ONLY, SEISMIC BRACING IS DEFERRED SUBMITTAL PER A0.0 AS REQUIRED. 1
6. PER STRUCTURAL GENERAL NOTES ON S1.0 SECTION IX, SEISMIC BRACING IS NOT REQUIRED WHEN THE ROD LENGTH IS 12" OR LESS. 3

5 PIPE SUPPORT

SCALE: NONE



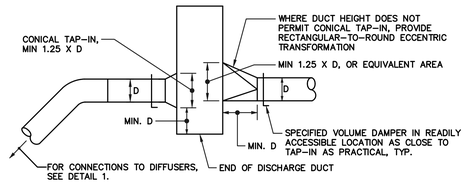


NOTES:

1. DRAWINGS SHOW RIGID ROUND AND SQUARE DUCT CONNECTIONS TO CEILING SUPPLY DIFFUSERS AND EXHAUST GRILLES. CONTRACTOR MAY OPTIONALLY PROVIDE ROUND FLEXIBLE DUCT IN LIEU OF RIGID DUCT AT DIFFUSER AND GRILLE CONNECTIONS, USING THE FOLLOWING CRITERIA:
   - WHERE ROUND DUCT CONNECTIONS ARE SHOWN ON THE PLANS, FLEXIBLE DUCT IS ALLOWED ONLY IF A LONG RADIUS ELBOW AND STRAIGHT-IN CONNECTION IS POSSIBLE PER THE UPPER DETAIL. OTHERWISE, THE LOWER DETAIL SHALL BE USED.
   - WHERE SQUARE DUCT CONNECTIONS ARE SHOWN ON THE PLANS, FLEXIBLE DUCT IS ALLOWED ONLY IF THE NEXT LARGER SIZE ROUND DUCT IS SELECTED, APPROPRIATE ROUND NECK DIFFUSERS OR GRILLES ARE SELECTED. (FOR EXAMPLE: 8"ø FLEX WOULD BE USED IN LIEU OF 6x6 DIFFUSER OR GRILLE; 10"ø WOULD BE USED IN LIEU OF 8x8 OR 9x9 DIFFUSER OR GRILLE; ETC.) APPROPRIATE SQUARE-TO-ROUND TRANSFORMATION SHALL BE PROVIDED.
   - USE LOWER DETAIL WHEREVER CONDITIONS DO NOT PERMIT A FULL RADIUS FLEXIBLE DUCT ELBOW ABOVE DIFFUSER, REGARDLESS OF WHETHER THE DRAWINGS SHOW A SQUARE OR ROUND DUCT CONNECTION.
2. SHOW ALL PROPOSED FLEXIBLE DUCT CONNECTIONS ON COORDINATED SHOP DRAWINGS.
3. DETAIL ALSO APPLIES TO CEILING EXHAUST REGISTERS.

1 DUCT CONNECTIONS TO CEILING DIFFUSERS DETAIL

SCALE: NONE

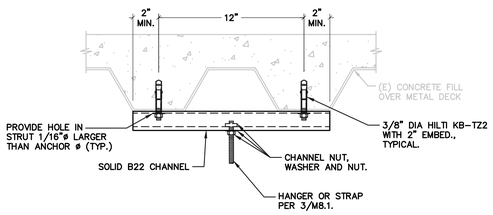


NOTES:

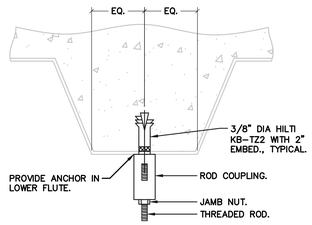
1. USE ONE OF THE TWO INDICATED TAP-IN DETAILS FOR ALL DIFFUSER BRANCH DUCTS, UNLESS SPECIFICALLY NOTED OR SHOWN OTHERWISE ON THE PLANS.
2. WHERE DUCTWORK IS CONGESTED, INSTALL ACCESS PANELS ON THE BOTTOM OF THE DUCTWORK.

2 DIFFUSER BRANCH TAP-INS DETAIL

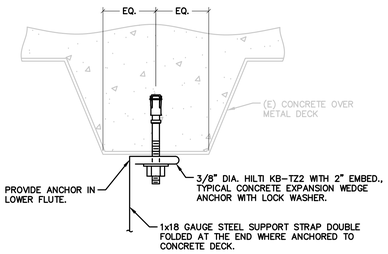
SCALE: NONE



ATTACHMENT WHEN ROD/STRAP DOES NOT LAND ON LOWER FLUTE EXACLTY



RODS



SHEET METAL STRAP SUPPORT

NOTES:

1. REUSE OF EXISTING ANCHORS IS NOT PERMITTED.
2. PROVIDE NEW ANCHORS IN LOWER FLUTES. INSTALLATION OF NEW ANCHORS IN UPPER FLUTES IS ALSO NOT PERMITTED.

3 ATTACHMENTS TO CONCRETE STRUCTURE

SCALE: NONE

1

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SKA Project Number
2136

OSHPD Number
HCAI# S221296-21-00

HCAI seal/signature

REVIEWED IN ACCORDANCE WITH THE REQUIREMENTS OF 7 CA. CCR
APPROVED
Department of Health Care Access & Information
Office of Statewide Hospital Planning & Development
2/13/2023, 11:24:21 PM
S221296-21-00
Pedar Remme

Seal/Signature

REGISTERED ARCHITECT KEVIN MCCLAIN C37097 EXP. 9/30/2023 STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER KEVIN CROMPTON No. M34802 Exp. 6/30/24 Mechanical STATE OF CALIFORNIA

Issued for

HCAI SUBMITTAL

1	BACKCHECK 1	12/09/2022
3	BACKCHECK 2	01/25/2023

Drawn by KC
Checked by KC
Project Name

HOSPITAL REPLACEMENT BUILDING-
NUCLEAR MEDICINE SUITE RELOCATION

Sheet Title

DETAILS

Date 08/05/2022
Scale AS NOTED
Sheet Number

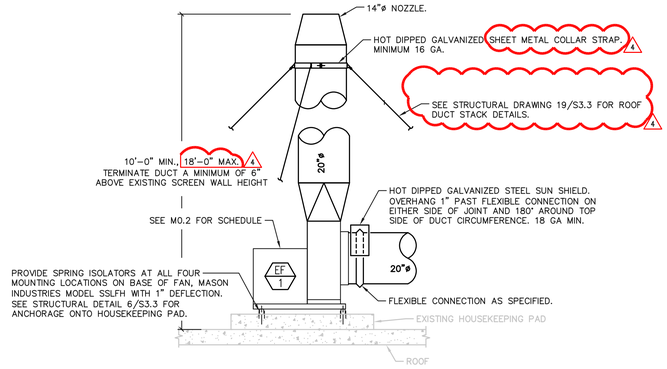
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30 X 42

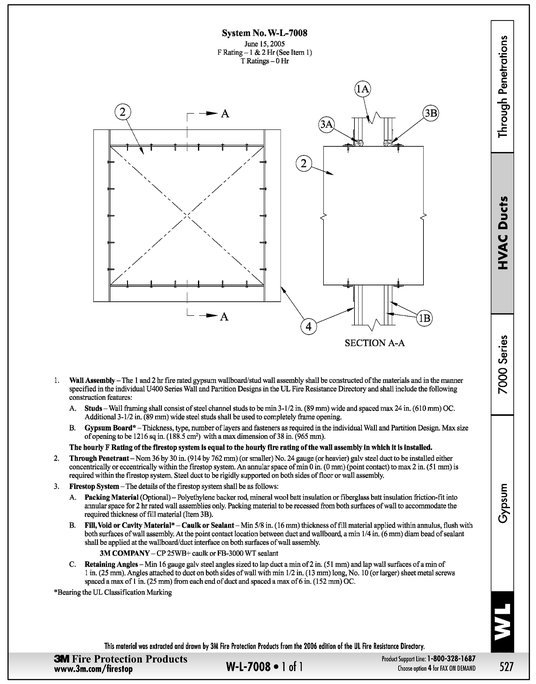
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GENERAL NOTE – THROUGH PENETRATIONS

WHERE PROVIDED, THROUGH-PENETRATION FIRESTOP SYSTEM AND MEMBRANE PENETRATION DETAILS ARE FOR REFERENCE ONLY. THROUGH-PENETRATIONS AND MEMBRANE PENETRATIONS SHALL BE PROTECTED BY AN APPROVED PENETRATION FIRESTOP SYSTEM OR MEMBRANE PENETRATION FIRESTOP SYSTEM INSTALLED AS TESTED IN ACCORDANCE WITH ASTM E 814 OR UL 1479, WITH A MINIMUM POSITIVE PRESSURE DIFFERENTIAL OF 0.01 INCH (2.49 PA) OF WATER COLUMN OR AS OTHERWISE PERMITTED BY CBC, SECTION 714. LISTED THROUGH-PENETRATION FIRESTOP SYSTEMS AND MEMBRANE PENETRATIONS SHALL BE INSTALLED IN ACCORDANCE WITH THE INSTALLATION DETAILS FOR LISTED SYSTEMS. LISTED THROUGH-PENETRATION FIRESTOP SYSTEMS, MEMBRANE PENETRATION PROTECTION AND OTHER PERMITTED MEANS AND METHODS OF PENETRATION PROTECTION SHALL BE SUBMITTED FOR OSHPD FDD REVIEW AND APPROVAL PRIOR TO INSTALLATION.



3 EXHAUST FAN DETAIL
SCALE: NONE



System No. W-L-7008
June 15, 2005
F Rating – 1 & 2 Hr (See Item 1)
T Ratings – 0 Hr

SECTION A-A

1. **Wall Assembly** – The 1 and 2 hr fire rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:
   A. **Studs** – Wall framing shall consist of steel channel studs to be min 3-1/2 in. (89 mm) wide and spaced max 24 in. (610 mm) OC. Additional 3-1/2 in. (89 mm) wide steel studs shall be used to completely frame opening.
   B. **Gypsum Board*** – Thickness, type, number of layers and fasteners as required in the individual Wall and Partition Design. Max size of opening to be 1216 sq in. (188.5 cm²) with a max dimension of 38 in. (965 mm).

   The hourly F Rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.
2. **Through Penetrant** – Nom 36 by 30 in. (914 by 762 mm) (or smaller) No. 24 gauge (or heavier) galv steel duct to be installed either concentrically or eccentrically within the firestop system. An annular space of min 0 in. (0 mm) (point contact) to max 2 in. (51 mm) is required within the firestop system. Sized duct to be rigidly supported on both sides of floor or wall assembly.
3. **Firestop System** – The details of the firestop system shall be as follows:
   A. **Packing Material** (Optional) – Polyethylene backer rod, mineral wool batt insulation or fiberglass batt insulation friction-fit into annular space for 2 hr rated wall assemblies only. Packing material to be recessed from both surfaces of wall to accommodate the required thickness of fill material (Item 3B).
   B. **Fill, Void or Cavity Material*** – **Caulk or Sealant** – Min 5/8 in. (16 mm) thickness of fill material applied within annulus, flush with both surfaces of wall assembly. At the point contact location between duct and wallboard, a min 1/4 in. (6 mm) diam bead of sealant shall be applied at the wallboard/duct interface on both surfaces of wall assembly.

      3M COMPANY – CP 25WB+ caulk or FB-3000 WT sealant
   C. **Retaining Angles** – Min 16 gauge galv steel angles sized to lap duct a min of 2 in. (51 mm) and lap wall surfaces of a min of 1 in. (25 mm). Angles attached to duct on both sides of wall with min 1/2 in. (13 mm) long, No. 10 (or larger) sheet metal screws spaced a max of 1 in. (25 mm) from each end of duct and spaced a max of 6 in. (152 mm) OC.

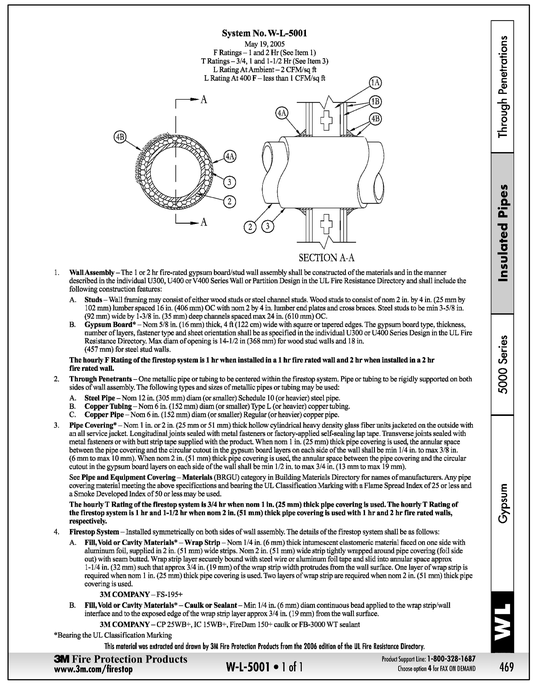
*Bearing the UL Classification Marking

This material was extracted and drawn by 3M Fire Protection Products from the 2006 edition of the UL Fire Resistance Directory.

3M Fire Protection Products www.3m.com/firestop — **W-L-7008 • 1 of 1** — Product Support Line: 1-800-328-1687 Choose option 4 for FAX ON DEMAND — 527

Through Penetrations | HVAC Ducts | 7000 Series | Gypsum | WL

RECTANGULAR DUCT THROUGH GYPSUM WALL
1
SCALE: NONE



System No. W-L-5001
May 19, 2005
F Ratings – 1 and 2 Hr (See Item 1)
T Ratings – 3/4, 1 and 1-1/2 Hr (See Item 3)
L Rating At Ambient – 2 CFM/sq ft
L Rating At 400 F – less than 1 CFM/sq ft

SECTION A-A

1. **Wall Assembly** – The 1 or 2 hr fire-rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300, U400 or V400 Series Wall or Partition Design in the UL Fire Resistance Directory and shall include the following construction features:
   A. **Studs** – Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 in. by 4 in. (25 mm by 102 mm) lumber spaced 16 in. (406 mm) OC with nom 2 by 4 in. lumber end plates and cross braces. Steel studs to be min 3-5/8 in. (92 mm) wide by 1-3/8 in. (35 mm) deep channels spaced max 24 in. (610 mm) OC.
   B. **Gypsum Board*** – Nom 5/8 in. (16 mm) thick, 4 ft (122 cm) wide with square or tapered edges. The gypsum board type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300 or U400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 14-1/2 in (368 mm) for wood stud walls and 18 in. (457 mm) for steel stud walls.

   The hourly F Rating of the firestop system is 1 hr when installed in a 1 hr fire rated wall and 2 hr when installed in a 2 hr fire rated wall.
2. **Through Penetrants** – One metallic pipe or tubing to be centered within the firestop system. Pipe or tubing to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes or tubing may be used:
   A. **Steel Pipe** – Nom 12 in. (305 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.
   B. **Copper Tubing** – Nom 6 in. (152 mm) diam (or smaller) Type L (or heavier) copper tubing.
   C. **Copper Pipe** – Nom 6 in. (152 mm) diam (or smaller) Regular (or heavier) copper pipe.
3. **Pipe Covering*** – Nom 1 in. or 2 in. (25 mm or 51 mm) thick hollow cylindrical heavy density glass fiber units jacketed on the outside with an all service jacket. Longitudinal joints sealed with metal fasteners or factory-applied self-sealing lap tape. Transverse joints sealed with metal fasteners or with butt strip tape supplied with the product. When nom 1 in. (25 mm) thick pipe covering is used, the annular space between the pipe covering and the circular cutout in the gypsum board layers on each side of the wall shall be min 1/4 in. to max 3/8 in. (6 mm to max 10 mm). When nom 2 in. (51 mm) thick pipe covering is used, the annular space between the pipe covering and the circular cutout in the gypsum board layers on each side of the wall shall be min 1/2 in. to max 3/4 in. (13 mm to max 19 mm).

   See **Pipe and Equipment Covering – Materials** (BRGU) category in Building Materials Directory for names of manufacturers. Any pipe covering material meeting the above specifications and bearing the UL Classification Marking with a Flame Spread Index of 25 or less and a Smoke Developed Index of 50 or less may be used.

   The hourly T Rating of the firestop system is 3/4 hr when nom 1 in. (25 mm) thick pipe covering is used. The hourly T Rating of the firestop system is 1 hr and 1-1/2 hr when nom 2 in. (51 mm) thick pipe covering is used with 1 hr and 2 hr fire rated walls, respectively.
4. **Firestop System** – Installed symmetrically on both sides of wall assembly. The details of the firestop system shall be as follows:
   A. **Fill, Void or Cavity Materials* – Wrap Strip** – Nom 1/4 in. (6 mm) thick intumescent elastomeric materisl faced on one side with aluminum foil, supplied in 2 in. (51 mm) wide strips. Nom 2 in. (51 mm) wide strip tightly wrapped around pipe covering (foil side out) with seam butted. Wrap strip layer securely bound with steel wire or aluminum foil tape and slid into annular space approx 1-1/4 in. (32 mm) such that approx 3/4 in. (19 mm) of the wrap strip width protrudes from the wall surface. One layer of wrap strip is required when nom 1 in. (25 mm) thick pipe covering is used. Two layers of wrap strip are required when nom 2 in. (51 mm) thick pipe covering is used.

      3M COMPANY – FS-195+
   B. **Fill, Void or Cavity Materials* – Caulk or Sealant** – Min 1/4 in. (6 mm) diam continuous bead applied to the wrap strip/wall interface and to the exposed edge of the wrap strip layer approx 3/4 in. (19 mm) from the wall surface.

      3M COMPANY – CP 25WB+, IC 15WB+, FireDam 150+ caulk or FB-3000 WT sealant

*Bearing the UL Classification Marking

This material was extracted and drawn by 3M Fire Protection Products from the 2006 edition of the UL Fire Resistance Directory.

3M Fire Protection Products www.3m.com/firestop — **W-L-5001 • 1 of 1** — Product Support Line: 1-800-328-1687 Choose option 4 for FAX ON DEMAND — 469

Through Penetrations | Insulated Pipes | 5000 Series | Gypsum | WL

INSULATED PIPE THROUGH GYPSUM BOARD WALL
2
SCALE: NONE

Architect
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Office: 415.552.3600

Owner
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T: 415.863.5740 | www.cammisawipf.com

SKA Project Number
2136

OSHPD Number
HCAI# S221296-21-00

HCAI seal/signature
REVIEWED IN ACCORDANCE WITH THE REQUIREMENTS OF 7-24, CCR
APPROVED
Department of Health Care Access & Information
Office of Statewide Hospital Planning & Development
2/13/2023, 11:24:21 PM
S221296-21-00
Pedar Remme

Seal/Signature
REGISTERED ARCHITECT KEVIN MCCLAIN C37097 EXP. 9/30/2023 STATE OF CALIFORNIA
REGISTERED PROFESSIONAL ENGINEER DEREK CROMPTON No. M34802 Exp. 6/30/24 Mechanical STATE OF CALIFORNIA

Issued for
HCAI SUBMITTAL

2	DESIGN CHANGE	12/09/2022
4	DESIGN CHANGE	01/25/2023

Drawn by KC
Checked by KC

Project Name
HOSPITAL REPLACEMENT BUILDING-
NUCLEAR MEDICINE SUITE RELOCATION

Sheet Title
DETAILS

Date 08/05/2022
Scale AS NOTED
Sheet Number
M8.2

30 X 42

NAME: G:\21039 MGH HRB Nuclear Medicine Suite\CAD-Revit\Mechanical_M8.64.dwg DATE: AUG 05, 2021 TIME: 1:32 PM SCALE: 1=1 SIZE: 42"X30" BY:KV

PLUMBING FIXTURE SCHEDULE

MARK [1]	FIXTURE TYPE	CPC TABLE 4-2 SERVICE CLASSIFICATION	NOMINAL W x L x H SIZE (INCHES) [2]	NOMINAL WEIGHT (LBS) [3]	MOUNTING [4] [5]				CONNECTIONS (INCHES NOMINAL PIPE SIZE) [6]					REMARKS [8]
					WALL	FLOOR	COUNTER	BARRIER FREE	WASTE	VENT	TRAP [7]	COLD WATER	HOT WATER	
HSK-1	BARRIER-FREE HAND WASHING SINK	NUC MED HAND WASHING	18-1/2 x 18-1/2 x 4-1/2	15			X	X	2	1-1/2	1-1/4	1/2	1/2	RECEPTOR: SOLID SURFACE BASIN INTEGRAL TO COUNTERTOP. FAUCET: CHICAGO FAUCETS 116.203.AB.1, LITHIUM BATTERY-POWERED ELECTRONIC SENSOR OPERATED, ADJUSTABLE CONCEALED INTERNAL TEMPERTURE MIXER, GOOSENECK SPOUT W/ 0.5 GPM NON-AERATING SPRAY OUTLET. DRAIN: ELKAY LK18B TYPE 304 STAINLESS STEEL PERFORATED FLAT GRID STRAINER.
SSK-1	SERVICE (MOP) SINK	NUC MED CLEANUP (CBC 1224.34.2.2)	28 x 28 x 13	65		X			3	2	2	3/4	3/4	RECEPTOR: KOHLER "WHITBY" K-6710 ENAMELED CAST IRON FAUCET: CHICAGO FAUCETS 911-IS369CP MANUAL, RIGID SPOUT W/ FULL FLOW NON-AERATING OUTLET, ELEVATED VACUUM BREAKER, LEVER HANDLES, TEARDROP WALL ESCUTCHEONS. DRAIN: KOHLER K-9146 SERVICE SINK STRAINER.
LAV-1	BARRIER-FREE LAVATORY	PATIENT TOILET ROOM HAND WASHING	20-1/2 x 18-1/4 x 8-1/8	35	X			X	2	1-1/2	1-1/4	1/2	1/2	RECEPTOR: SOLID SURFACE BASIN INTEGRAL TO COUNTERTOP. FAUCET: CHICAGO FAUCETS 116.223.AB.1, LITHIUM BATTERY-POWERED ELECTRONIC SENSOR OPERATED, ADJUSTABLE CONCEALED INTERNAL TEMPERTURE MIXER, TRADITIONAL SPOUT W/ 0.5 GPM NON-AERATING SPRAY OUTLET LOCATED NO LESS THAN 5-1/2" ABOVE FIXTURE RIM. DRAIN: MCGUIRE 155WC OFFSET PERFORATED FLAT GRID STRAINER.
WC-1	BARRIER-FREE TOILET	PATIENT TOILET ROOM TOILET	14 x 26 x 13-1/8	75		X		X	4	2	INTEGRAL	1-1/4		BOWL: AMERICAN STANDARD MADERA 3043.001, VITREOUS CHINA, TOP SPUD, BOTTOM OUTLET. FLUSH VALVE: SLOAN 111-1.28 MANUAL FLUSHOMETER, 1.28 GPF. SEAT: BEMIS 1955C HEAVY DUTY CONTOURED OPEN FRONT COVERLESS PLASTIC. DRAIN INSERT: STRYKER SAGE "TRAPTEX" TOILET GUARDS.

NOTES:

1. SCHEDULED MANUFACTURERS AND MODEL NUMBERS ARE BASIS OF DESIGN. ADDITIONAL MANUFACTURERS ARE LISTED IN SECTION 221900.
2. SEE ARCHITECTURAL DRAWINGS FOR SINK ORIENTATIONS. COORDINATE SCHEDULED "D" AND "W" DIMENSIONS WITH MANUFACTURER'S LISTED "L" AND "W" DIMENSIONS. SCHEDULED "W" DIMENSIONS CORRESPOND TO NOMINAL FIXTURE LENGTHS RUNNING ALONG ADJACENT WALL BEHIND FIXTURES. SCHEDULED "D" DIMENSIONS CORRESPOND TO NOMINAL FIXTURE LENGTHS RUNNING AWAY FROM ADJACENT WALL BEHIND FIXTURES.
3. APPROXIMATE TOTAL NORMAL FIXTURE OPERATING WEIGHT.
4. "X" DENOTES MOUNTING TYPE TO PROVIDE.
5. PROVIDE PROTECTIVE INSULATED COVERINGS AT BARRIER-FREE SINKS. OMIT COVERINGS AT SINKS INSTALLED WITH UNDER SINK ENCLOSURES. SEE ELEVATIONS ON ARCHITECTURAL DRAWINGS.
6. PROVIDE CONTINUOUS BRANCH SIZE FROM FIXTURE CONNECTIONS TO CONNECTIONS AT ACTIVE MAINS. PROVIDE TRANSITION FITTINGS NECESSARY TO PROPERLY MAKE FINAL CONNECTIONS. FOR NEW FIXTURES CONNECTING TO EXISTING STUB-OUTS AT WALL, SCHEDULED CONNECTIONS SHALL BE MINIMUM REQUIRED. REPLACE EXISTING STUB-OUTS THAT DO NOT COMPLY.
7. INSTALL TRAPS CLOSE TO WALL AND OFFSET SINK DRAINS FOR BARRIER-FREE CLEARANCE AT BARRIER-FREE SINKS.
8. ADJUST OUTLET TEMPERATURES TO USER REQUIREMENTS AT ALL ELECTRONIC FAUCETS INSTALLED WITH CONCEALED INTERNAL THERMAL MIXING CONTROLS.

MEDICAL AND MEDICAL SUPPORT GAS OUTLET SCHEDULE

MARK	MEDICAL GAS SERVICE AND OUTLET QUANTITIES							SERVICE	CBC TABLE 1224.4.6.1 SERVICE AREA CLASSIFICATION	OUTLET TYPE	CONNECTOR TYPE	REMARKS
	MA	MV	O2	N2	N2O	CO2	WAGD					
MGO-1	(1)	(1)	(1)					NUC MED	N/A	WALL	OHMEDA PIN KEY	[1] [2] [3]

NOTES:

1. SEE ARCHITECTURAL DRAWINGS FOR EXACT OUTLET LOCATIONS, ARRANGEMENTS, AND MOUNTING HEIGHTS.
2. SEE 223300 SPECIFICATIONS FOR MANUFACTURES AND MODEL NUMBERS.
3. PROVIDE MEDICAL VACUUM BOTTLE SLIDES ADJACENT TO MEDICAL VACUUM OUTLETS OR AS OTHERWISE SHOWN ON ARCHITECTURAL DRAWINGS.

MEDICAL AND MEDICAL SUPPORT GAS ZONE VALVE BOX SCHEDULE

MARK	MEDICAL GAS SERVICE							SERVICE AREA	NFPA 99 FIGURE A5.1.4 SERVICE AREA CLASSIFICATION	VALVE ORIENTATION	REMARKS
	MA	MV	O2	N2	N2O	CO2	WAGD				
MGZVB-1	x	x	x					NUC MED	NONCRITICAL AREAS	HORIZONTAL	[1] [2] [3]

NOTES:

1. SEE ARCHITECTURAL DRAWINGS FOR EXACT VALVE BOX LOCATIONS AND MOUNTING HEIGHTS. ZONE VALVE ASSEMBLIES WITH VALVES IN SIZES UP TO 2" SHALL BE INSTALLED IN 4" WALLS.
2. PROVIDE FLUSH WALL MOUNT VALVE BOX ASSEMBLIES W/ NFPA 99 COMPLIANT FULL PORT, 3-PIECE BALL VALVES AND PRESSURE/VACUUM GAUGES ON OUTLET SIDE OF VALVES. SEE 223300 SPECIFICATIONS FOR MANUFACTURERS AND MODEL NUMBERS.
3. "X" DENOTES VALVE SERVICE TYPES TO PROVIDE PER VALVE BOX ASSEMBLY.

PLUMBING SYSTEMS

NEW	EXISTING	
DCW	DCW	DOMESTIC COLD WATER
DHW	DHW	DOMESTIC HOT WATER
DHR	DHR	DOMESTIC HOT WATER RETURN
W	W	SANITARY WASTE DRAIN (MINIMUM 2% SLOPE TOWARDS POINT OF DISPOSAL)
V	V	SANITARY WASTE VENT
MA	MA	MEDICAL AIR
MV	MV	MEDICAL VACUUM
O2	O2	OXYGEN
N2	N2	NITROGEN
N2O	N2O	NITROUS OXIDE
CO2	CO2	CARBON DIOXIDE
WAGD	WAGD	WASTE ANESTHESIA GAS DISPOSAL

FITTINGS, VALVES, AND SPECIALTIES

- CAP
- END OF LINE CLEANOUT
- ISOLATION SHUTOFF VALVE (SEE SPECIFICATIONS FOR TYPE)
- BALANCING VALVE
- PRESSURE REGULATING/REDUCING VALVE
- BFP-x — BACKFLOW PREVENTER (TAG INDICATES TYPE, SEE SPECIFICATIONS)
- HB-1 — WALL OUTLET (TAG AND/OR SYSTEM CONNECTED TO INDICATES TYPE)

SPECIAL DESIGNATIONS

- CONCEALED OR BURIED PIPING/ITEM
- CONCEALED OR BURIED WASTE/ STORM DRAIN PIPING
- EXISTING INSTALLATION DEMOLITION — DENOTES END OF REMOVAL
- CONNECTION TO EXISTING SYSTEM
- BREAK (FOR CLARITY OR CONTINUATION)
- CHANGE OF DIRECTION AWAY FROM POINT OF VIEW
- CHANGE OF DIRECTION TOWARDS POINT OF VIEW
- UNCONNECTED PIPES CROSSING (BREAK IS FOR CLARITY ONLY)
- LONGITUDINAL SEISMIC BRACE
- TRANSVERSE SEISMIC BRACE
- LONGITUDINAL AND TRANSVERSE SEISMIC BRACE
- POINT OF DISCONNECTION OR NEW CONNECTION
- [#] SHEET NOTE NUMBER
- [#] REVISION NUMBER
- XX-X NEW FIXTURE TAG
- XX EXISTING FIXTURE TAG

ABBREVIATIONS

AFF	–	ABOVE FINISH FLOOR	MAX	–	MAXIMUM
APPROX	–	APPROXIMATE	MFR	–	MANUFACTURER
ARCH	–	ARCHITECTURAL	MIN	–	MINIMUM/MINUTE
			MISC	–	MISCELLANEOUS
COMP	–	COMPRESSION	MPT	–	MALE PIPE THREAD
			MTL	–	METAL
DCW	–	DOMESTIC COLD WATER			
DET	–	DETAIL	(N)	–	NEW
DHW	–	DOMESTIC HOT WATER	NC	–	NORMALLY CLOSED
DHR	–	DOMESTIC HOT WATER RETURN	NO	–	NUMBER/NORMALLY OPEN
			NPT	–	NATIONAL PIPE THREAD
DIA	–	DIAMETER	NTS	–	NOT TO SCALE
DN	–	DOWN			
DWG	–	DRAWING	OC	–	ON CENTER
			PLBG	–	PLUMBING
(E)	–	EXISITNG	PSI	–	POUNDS PER SQUARE INCH
EA	–	EACH			
ELEC	–	ELECTRICAL	SK	–	SINK
ELEV	–	ELEVATION	SHT	–	SHEET
			S.A.D	–	SEE ARCHITECTURAL DRAWINGS
FIP	–	FEMALE IRON PIPE	S.E.D	–	SEE ELECTRICAL DRAWINGS
FLR	–	FLOOR	S.M.D	–	SEE MECHANICAL DRAWINGS
FPT	–	FEMALE PIPE THREAD	S.S.D	–	SEE STRUCTURAL DRAWINGS
FT	–	FEET	S/S	–	STAINLESS STEEL
			STRUCT	–	STRUCTURAL/STRUCTURE
GALV	–	GALVANIZED			
GPM	–	GALLONS PER MINUTE	TYP	–	TYPICAL
HSK	–	HANDWASHING SINK	UL	–	UNDERWRITER'S LABORATORY
			UON	–	UNLESS OTHERWISE NOTED
IN	–	INCHES			
IPS	–	INNER PIPE SIZE	W/	–	WITH
			W/O	–	WITHOUT
L	–	LENGTH			
LBS	–	POUNDS			

NOTES: SYMBOLS SHOWN ARE NOT ALL NECESSARILY USED FOR THIS PROJECT.

GENERAL NOTES AND REQUIREMENTS

1. TAGGED NOTES ON INDIVIDUAL SHEETS ARE DESIGNATED WITH A SQUARE SURROUNDING THE NOTE NUMBER. WHERE SHEET NOTES ARE APPENDED BY THE TERM 'TYP.', IT MEANS THAT THE SHEET NOTE REFERS TO ALL SIMILAR CONDITIONS.
2. UNLESS OTHERWISE NOTED ON THE DRAWINGS, EXISTING WORK IS SHOWN WITH LIGHTER LINEWEIGHTS, AND NEW WORK IS SHOWN WITH HEAVIER LINEWEIGHTS.
3. COORDINATE ALL WORK FOR CLEARANCES AND FAIR DIVISION OF SPACE PRIOR TO INSTALLATION.
3. EXISTING SYSTEMS SHALL BE MAINTAINED IN OCCUPIED AREAS OF THE HOSPITAL ALL DURING CONSTRUCTION, EXCEPT FOR SHUTDOWNS SCHEDULED IN ADVANCE WITH THE OWNER FOR CUTTING, CAPPING, AND MAKING NEW CONNECTIONS.
4. ALL CONCRETE ANCHORS SHALL BE DRILLED AT TIMES APPROVED BY THE OWNER'S REPRESENTATIVE. CONSTRUCTION NOISE AND VIBRATION SHALL BE KEPT TO AN ABSOLUTE MINIMUM WHILE ADJACENT AREAS ARE IN USE. ROTO-HAMMERS ARE PERMITTED UNLESS OWNER HAS REQUESTED RESTRICTED USE TO AVOID DISRUPTION AND TRANSMISSION OF NOISE TO SURROUNDING PROCEDURE ROOMS.
5. NOT ALL EXISTING CONDITIONS ARE SHOWN ON THE DRAWINGS. EXISTING CONDITIONS ARE NOT NECESSARILY SHOWN IN EXACT LOCATIONS. VERIFY ACTUAL CONDITIONS IN THE FIELD. PROVIDE OFFSETS IN NEW PIPING AS NECESSARY TO ALLOW INSTALLATION OF THE WORK, WHETHER OR NOT SHOWN AND AT NO ADDITIONAL COST TO OWNER. IF DISCOVERED CONDITIONS DIFFER SIGNIFICANTLY FROM CONDITIONS SHOWN SUCH THAT THE EXTENT OF NEW WORK IS NOT CLEAR, THEN INFORM OWNER'S REPRESENTATIVE OF SUCH CONDITIONS BEFORE PROCEEDING.
6. SHUTDOWNS OF EXISTING EQUIPMENT SHALL BE PERFORMED BY THE OWNER. PROVIDE SPECIFIED WRITTEN NOTICE FOR ALL REQUIRED SHUTDOWNS TO THE OWNER'S REPRESENTATIVE AND WORK ACCORDINGLY WITH THE OWNER'S SCHEDULE. ALL WORK SHALL BE PROVIDED TO THE MAXIMUM EXTENT POSSIBLE, TESTED, AND READY FOR FINAL CONNECTION TO KEEP SHUTDOWN DURATIONS TO AN ABSOLUTE MINIMUM.
7. PROVIDE DEMOLITION WORK AS SHOWN ON DRAWINGS AND AS NECESSARY TO ALLOW INSTALLATION OF NEW WORK. INTENT OF DRAWINGS IS TO REMOVE ALL EXISTING WORK IN THE PROJECT AREA THAT WILL NO LONGER BE IN USE. IF DISCOVERED CONDITIONS DIFFER SIGNIFICANTLY FROM CONDITIONS SHOWN SUCH THAT THE EXTENT OF DEMOLITION IS NOT CLEAR, THEN INFORM THE OWNER'S REPRESENTATIVE OF SUCH CONDITIONS BEFORE PROCEEDING.

SUPPORT, ANCHORS, AND SEISMIC BRACING

SEE SPECIFICATION SECTION 230200 FOR ALL SUPPORT, ANCHORS, AND SEISMIC BRACING REQUIREMENTS FOR PLUMBING PIPING SYSTEMS.

REQUIREMENTS FOR SEISMIC BRACING ALL NEW PLUMBING PIPING SYSTEMS AND FOR ALL SIMILAR EXISTING PLUMBING PIPING SYSTEMS WITHIN PROJECT AREAS THAT DO NOT MEET BRACING REQUIREMENTS WILL BE PROVIDED UNDER DEFERRED SUBMITTAL. SEE NOTES FOR DEFERRED SUBMITTALS ON DRAWING A0.0.

PROVIDE ALL CONCRETE ANCHORS USED FOR PLUMBING WORK PER POST-INSTALLED CONCRETE ANCHOR REQUIREMENTS SHOWN ON S1.0.

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SKA Project Number

2136

OSHPD Number

HCAI# S221296-21-00

HCAI seal/signature

REVIEWED IN ACCORDANCE WITH THE REQUIREMENTS OF 7 CA. CCR
APPROVED
Department of Health Care Access & Information
Office of Statewide Hospital Planning & Development
2/13/2023, 11:24:21 PM
S221296-21-00
Pedar Pomme

Seal/Signature

LICENSED ARCHITECT — C37097 — EXP. 9/30/2023 — STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — DEREK CROMPTON — No. M34802 — Exp. 6/30/24 — Mechanical — STATE OF CALIFORNIA

Issued for

HCAI SUBMITTAL

Drawn by MV

Checked by AD

Project Name

HOSPITAL REPLACEMENT BUILDING-
NUCLEAR MEDICINE SUITE RELOCATION

Sheet Title

GENERAL NOTES, SYMBOLS AND ABBREVATIONS

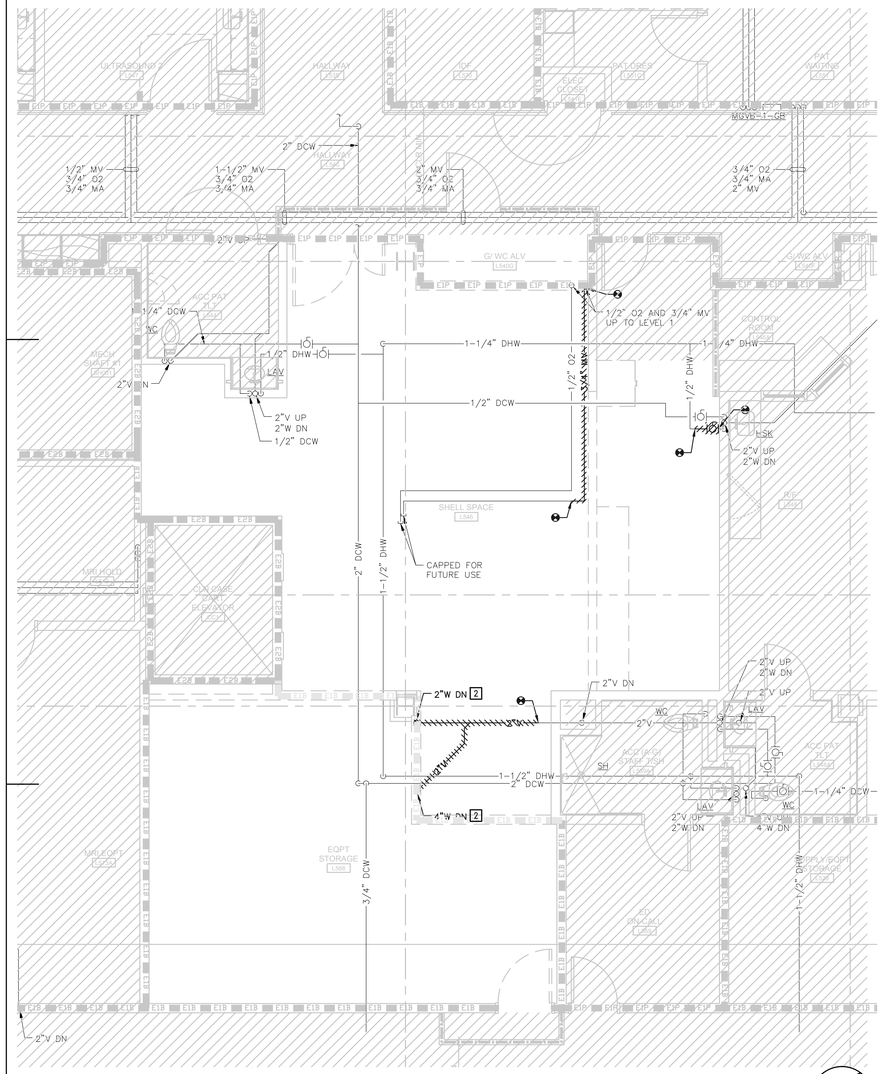
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Sheet Number

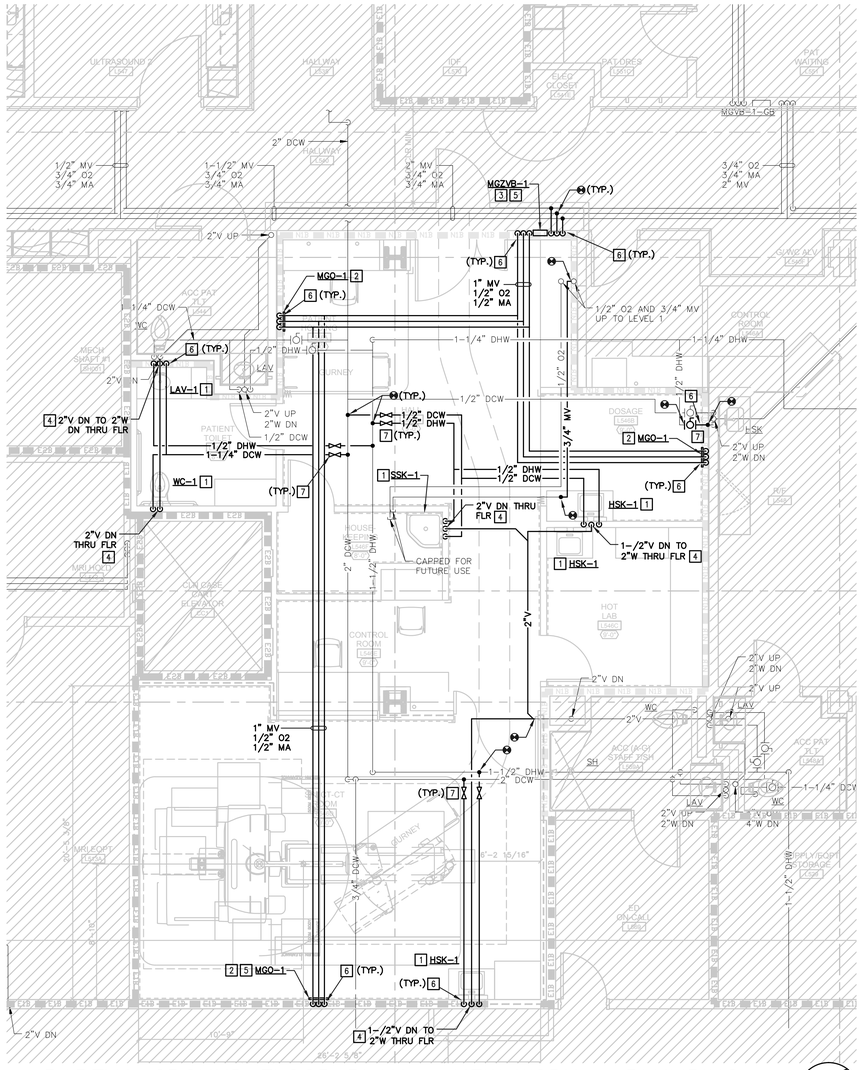
P0.1

30 X 42



1 PARTIAL GROUND FLOOR PLAN – DEMOLITION – PLUMBING

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



2 PARTIAL GROUND FLOOR PLAN – NEW WORK – PLUMBING

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

SHEET NOTES

1. SEE PLUMBING FIXTURE SCHEDULE ON DRAWING P0.01 FOR REQUIRED WATER, DRAIN, AND WASTE VENT BRANCH LINE SIZES SERVING FIXTURES.
2. SEE MED GAS OUTLET SCHEDULE ON DRAWING P0.01 FOR OUTLET REQUIREMENTS.
3. SEE MED GAS ZONE VALVE BOX SCHEDULE ON DRAWING P0.01 FOR ZONE VALVE REQUIREMENTS.
4. LOCATE HOLES FOR NEW FLOOR PENETRATIONS INSIDE WALL CAVITIES AND BETWEEN EXISTING REINFORCING BARS IN FLOOR SLAB, PROVIDING NO LESS THAN 1" CONCRETE COVER AROUND BARS PER STRUCTURAL DETAIL __. PROVIDE DRAIN PIPING OFFSETS IN WALLS ABOVE FLOOR TO ALIGN DRAIN PIPING WITH FIXTURE DRAIN CONNECTIONS. WHERE EXISTING REBARS MUST BE CUT, SUBMIT LAYOUT OF BARS OVERLAYED WITH LOCATIONS OF NEW HOLES TO OWNER'S REPRESENTATIVE FOR REVIEW AND PROCEED WITH DIRECTIONS PROVIDED. FLOORS ARE RATED. SEAL PENETRATIONS IN ACCORDANCE TO THE REQUIREMENTS SHOWN ON THE ARCHITECTURAL DRAWINGS.
5. SEAL MEMBRANE PENETRATIONS AT RATED WALLS BY NEW MED GAS OUTLETS, AND MED GAS ZONE VALVE BOX ASSEMBLIES IN ACCORDANCE TO THE REQUIREMENTS SHOWN ON THE ARCHITECTURAL DRAWINGS.
6. SEAL ALL PIPING PENETRATIONS THROUGH RATED WALLS IN ACCORDANCE TO THE REQUIREMENTS SHOWN ON THE ARCHITECTURAL DRAWINGS.
7. LOCATE NEW BRANCH ISOLATION SHUTOFF VALVES IN CLEAR AND ACCESSIBLE LOCATION DIRECTLY ABOVE REMOVABLE CEILING TILES. PROVIDE VALVES AND CEILING TILES WITH SPECIFIED TAGS AND LABELS.

Architect

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OSHPD Number

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HCAI seal/signature

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REGISTERED PROFESSIONAL ENGINEER — DEREK CROMPTON — No. M54902 — Exp. 6/30/24 — Mechanical — STATE OF CALIFORNIA

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Drawn by MV

Checked by AD

Project Name

HOSPITAL REPLACEMENT BUILDING-
NUCLEAR MEDICINE SUITE RELOCATION

Sheet Title

PARTIAL GROUND LEVEL FLOOR PLANS - DEMOLITION AND NEW WORK - PLUMBING

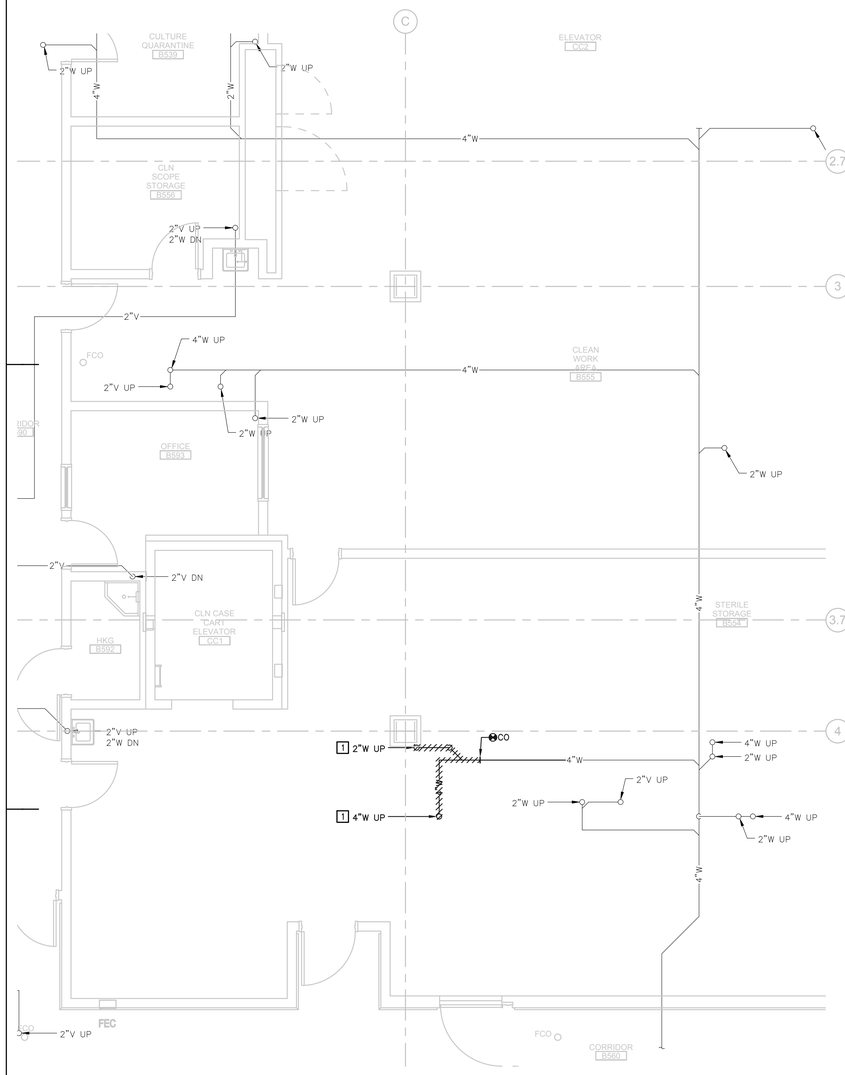
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Sheet Number P2.1

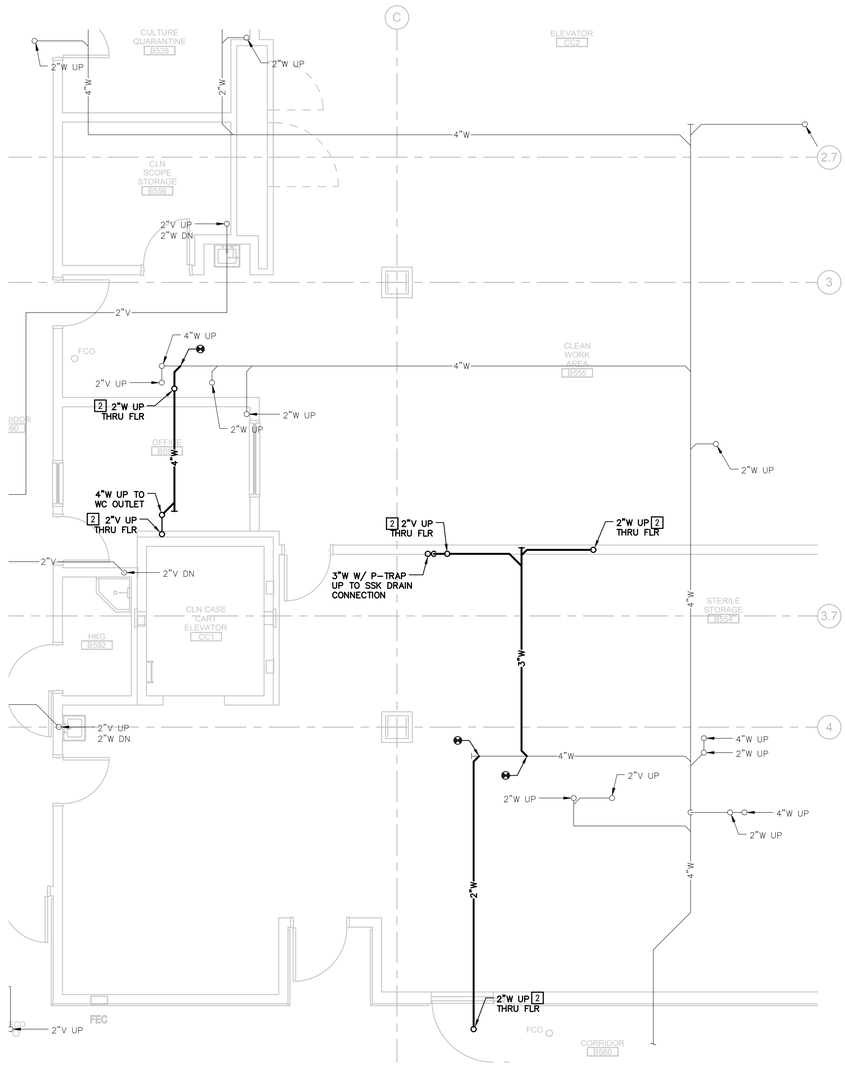
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1 PARTIAL BASEMENT PLAN – DEMOLITION – PLUMBING

SCALE: 1/4" = 1'–0"



2 PARTIAL BASEMENT PLAN – NEW WORK – PLUMBING

SCALE: 1/4" = 1'–0"

GENERAL NOTES

A. CENTRAL STERILE PROCESSING DEPARTMENT IS A SENSATIVE AREA. NEW NO-HUB CAST IRON SANITARY WASTE PIPING SHALL BE INSTALLED ONLY WITH SPECIFIED FM-1680 COUPLINGS TO COMPLY WITH HCAI SPECIAL PRECAUTIONS REQUIREMENT FOR SENSITIVE AREAS.

SHEET NOTES

1 INFILL HOLES AT ABANDONED FLOOR PENETRATIONS TO FULL DEPTH OF CONCRETE FLOOR SLAB THICKNESS PER STRUCTURAL DETAIL _. FINISH INFILLS TOP FLAT.

2 LOCATE HOLES FOR NEW FLOOR PENETRATIONS INSIDE WALL CAVITIES ON FLOOR ABOVE AND BETWEEN EXISTING REINFORCING BARS IN FLOOR SLAB, PROVIDING NO LESS THAN 1" CONCRETE COVER AROUND BARS PER STRUCTURAL DETAIL _, WHERE EXISTING BARS MUST BE CUT, SUBMIT LAYOUT OF BARS WITH LOCATION OF NEW HOLES OVERLAYED TO OWNER'S REPRESENTATIVE FOR REVIEW AND PROCEED WITH DIRECTIONS PROVIDED. FLOOR IS RATED. SEAL PENETRATIONS IN ACCORDANCE TO THE REQUIREMENTS SHOWN ON THE ARCHITECTURAL DRAWINGS.

Architect

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SKA Project Number

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OSHPD Number

HCAI# S221296-21-00

HCAI seal/signature

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Department of Health Care Access & Information
Office of Statewide Hospital Planning & Development
2/13/2023, 11:24:21 PM
S221296-21-00
Pedar Pomme

Seal/Signature

LICENSED ARCHITECT C-37097 EXP. 9/30/2023 STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER DEREK CROMPTON No. M34802 Exp. 6/30/24 Mechanical STATE OF CALIFORNIA

Issued for

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Drawn by MV

Checked by AD

Project Name

HOSPITAL REPLACEMENT BUILDING-
NUCLEAR MEDICINE SUITE RELOCATION

Sheet Title

PARTIAL BASEMENT FLOOR PLANS - DEMOLITION AND NEW WORK - PLUMBING

Date 08/05/2022

Scale AS NOTED

Sheet Number P2.2

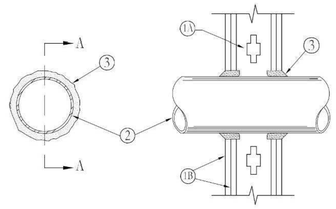
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System No. W-L-1001

June 15, 2005

F Ratings – 1, 2, 3 and 4 Hr (See Items 2 and 3)
T Ratings – 0, 1, 2, 3, and 4 Hr (See Item 3)
L Rating At Ambient – less than 1 CFM/sq ft
L Rating At 400 F – less than 1 CFM/sq ft



SECTION A-A

1. **WALL ASSEMBLY** – THE 1, 2, 3 OR 4 HR FIRE-RATED GYPSUM WALLBOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER DESCRIBED IN THE INDIVIDUAL U300 OR U400 SERIES WALL OR PARTITION DESIGNS IN THE UL FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES:
   - A. **STUDS** – WALL FRAMING MAY CONSIST OF EITHER WOOD STUDS (MAX 2 HR FIRE RATED ASSEMBLIES) OR STEEL CHANNEL STUDS. WOOD STUDS TO CONSIST OF NOM 2 BY 4 IN. (51 BY 102 MM) LUMBER SPACED 16 IN. (406 MM) OC WITH NOM 2 BY 4 IN. (51 BY 102 MM) LUMBER END PLATES AND CROSS BRACES. STEEL STUDS TO BE MIN 3-5/8 IN. (92 MM) WIDE BY 1-3/8 IN. (35 MM) DEEP CHANNELS SPACED MAX 24 IN. (610 MM) OC.
   - B. **GYPSUM BOARD*** – NOM 1/2 OR 5/8 IN. (13 OR 16 MM) THICK, 4 FT. (122 CM) WIDE WITH SQUARE OR TAPERED EDGES. THE GYPSUM WALLBOARD TYPE, THICKNESS, NUMBER OF LAYERS, FASTENER TYPE AND SHEET ORIENTATION SHALL BE AS SPECIFIED IN THE INDIVIDUAL U300 OR U400 SERIES DESIGN IN THE UL FIRE RESISTANCE DIRECTORY. MAX DIAM OF OPENING IS 26 IN. (660 MM).
2. **THROUGH PENETRANT** – ONE METALLIC PIPE, CONDUIT OR TUBING INSTALLED EITHER CONCENTRICALLY OR ECCENTRICALLY WITHIN THE FIRESTOP SYSTEM. THE ANNULAR SPACE BETWEEN PIPE, CONDUIT OR TUBING AND PERIPHERY OF OPENING SHALL BE MIN OF 0 IN. (0 MM) (POINT CONTACT) TO MAX 2 IN. (51 MM). PIPE, CONDUIT OR TUBING TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF WALL ASSEMBLY. THE FOLLOWING TYPES AND SIZES OF METALLIC PIPES, CONDUITS OR TUBING MAY BE USED:
   - A. **STEEL PIPE** – NOM 24 IN. (610 MM) DIAM (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL PIPE.
   - B. **IRON PIPE** – NOM 24 IN. (610 MM) DIAM (OR SMALLER) SERVICE WEIGHT (OR HEAVIER) CAST IRON SOIL PIPE, NOM 12 IN. (305 MM) DIAM (OR SMALLER) OR CLASS 50 (OR HEAVIER) DUCTILE IRON PRESSURE PIPE.
   - C. **CONDUIT** – NOM 6 IN. (152 MM) DIAM (OR SMALLER) STEEL CONDUIT OR NOM 4 IN. (102 MM) DIAM (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING
   - D. **COPPER TUBING** – NOM 6 IN. (152 MM) DIAM (OR SMALLER) TYPE L (OR HEAVIER) COPPER TUBING
   - E. **COPPER PIPE** – NOM 6 IN. (152 MM) DIAM (OR SMALLER) REGULAR (OR HEAVIER) COPPER PIPE.
   - F. **THROUGH PENETRATING PRODUCT*** – **FLEXIBLE METAL PIPING** – THE FOLLOWING TYPES OF STEEL FLEXIBLE METAL GAS PIPING MAY BE USED:
     1. NOM 2 IN. (51 MM) DIAM (OR SMALLER) STEEL FLEXIBLE METAL GAS PIPING. PLASTIC COVERING ON PIPING MAY OR MAY NOT BE REMOVED ON BOTH SIDES OF FLOOR OR WALL ASSEMBLY.
        OMEGA FLEX INC
     2. NOM 1 IN. (25 MM) DIAM (OR SMALLER) STEEL FLEXIBLE METAL GAS PIPING. PLASTIC COVERING ON PIPING MAY OR MAY NOT BE REMOVED ON BOTH SIDES OF FLOOR OR WALL ASSEMBLY.
        TITEFLEX CORP A BUNDY CO
     3. NOM 1 IN. (25 MM) DIAM (OR SMALLER) STEEL FLEXIBLE METAL GAS PIPING. PLASTIC COVERING ON PIPING MAY OR MAY NOT BE REMOVED ON BOTH SIDES OF FLOOR OR WALL ASSEMBLY.
        WARD MFG INC
3. **FILL, VOID OR CAVITY MATERIAL*** – **CAULK OR SEALANT** – MIN 5/8. 1-1/4 1-7/8 AND 2-1/2 IN. (16, 32, 48 AND 64 MM) THICKNESS OF CAULK FOR 1, 2, 3 AND 4 HR RATED ASSEMBLIES, RESPECTIVELY, APPLIED WITHIN ANNULUS, FLUSH WITH BOTH SURFACES OF WALL. MIN 1/4 IN. (6 MM) DIAM BEAD OF CAULK APPLIED TO GYPSUM BOARD/PENETRANT INTERFACE AT POINT CONTACT LOCATION ON BOTH SIDES OF WALL. THE HOURLY F RATING OF THE FIRESTOP SYSTEM IS DEPENDENT UPON THE HOURLY FIRE RATING OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED, AS SHOWN IN THE FOLLOWING TABLE. THE HOURLY T RATING OF THE FIRESTOP SYSTEM IS DEPENDENT UPON THE TYPE OR SIZE OF THE PIPE OR CONDUIT AND THE HOURLY FIRE RATING OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED, AS TABULATED BELOW:

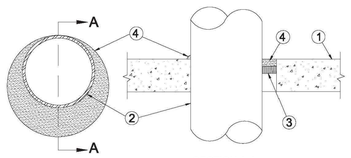
MAX PIPE OR CONDUIT DIAM (IN.)	F RATING HR	T RATING HR
1	1 or 2	0+, 1 or 2
1	3 or 4	3 or 4
4	1 or 2	0
6	3 or 4	0
12	1 or 2	0

+WHEN COPPER PIPE IS USED, T RATING IS 0 HR.
3M COMPANY – CP 25WB+ CAULK OR FB-3000 WT SEALANT,
*BEARING THE UL CLASSIFICATION MARKING

BARE METAL PIPE PENETRATIONS THRU RATED FRAMED WALLS

System No. C-AJ-1001

March 05, 2007
F Rating – 3 Hr
T Rating – 0 Hr
W Rating – Class 1 (See Item 4)



SECTION A-A

1. **Floor or Wall Assembly** – Min 4-1/2 in. (114 mm) thick lightweight or normal weight (100-150 pcf or 1600-2400 kg/m³) concrete. Wall may also be constructed of any UL Classified **Concrete Blocks*** Max diam of circular through opening is 32-1/2 in. (826 mm). See **Concrete Blocks** (CAZT) category in the Fire Resistance Directory for names of manufacturers.
1A. **Steel Sleeve** (Optional, not shown) – Nom 12 in. (305 mm) diam (or smaller) Schedule 40 (or heavier) steel pipe sleeve cast into concrete floor or wall. Sleeve to be flush with or project max 2 in. (51 mm) from top surface of floor or from both surfaces of wall. As an alternate, nom 12 in. (305 mm) diam (or smaller) sleeve fabricated from nom 0.019 in. (0.48 mm) thick galv steel cast or grouted into floor or wall assembly flush with floor or wall surfaces.
2. **Through Penetrant** – One metallic pipe, conduit or tubing installed either concentrically or eccentrically within the firestop system. The annular space between pipe, conduit or tubing and periphery of opening shall be min of 0 in. (0 mm, point contact) to max 1-5/8 in. (35 mm). Pipe, conduit or tubing to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes, conduits or tubing may be used:
   - A. **Steel Pipe** – Nom 30 in. (762 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.
   - A1. **Iron Pipe** – Nom 30 in. (762 mm) diam (or smaller) cast or ductile iron pipe.
   - B. **Conduit** – Nom 6 in. (152 mm) diam (or smaller) rigid steel conduit.
   - C. **Conduit** – Nom 4 in. (102 mm) diam (or smaller) steel electrical metallic tubing.
3. **Packing Material** – Polyethylene backer rod or nom 1 in. (25 mm) thickness of tightly-packed ceramic (alumina silica) fiber blanket, mineral wool batt or glass fiber insulation material used as a permanent form. Packing material to be recessed from top surface of floor or from both surfaces of solid concrete or concrete block wall as required to accommodate the required thickness of caulk fill material (Item 4). As an alternate when max pipe size is 10 in. (254 mm) diam and when max annular space is 1 in. (25 mm), a min 1 in. (25 mm) thickness of tightly-packed ceramic fiber blanket or mineral wool batt packing material may be recessed min 1/2 in. (13 mm) from bottom surface of floor or from either side of solid concrete wall.
4. **Fill, Void or Cavity Materials*** – **Caulk or Sealant** – Applied to fill the annular space to the min thickness shown in the following table:

Max Pipe Diam In. (mm)	Max Annular Space In. (mm)	Packing Mtl Type (a)	Min Caulk Thkns In. (mm)
10 (254)	1 (25)	BR, CF, GF or MW	1/2 (13) (b)
10 (254)	1 (25)	CF or MW	1/2 (13) (c)
30 (762)	2-1/2 (64)	BR, CF, GF or MW	1 (25) (b)

(a) BR = Polyethylene backer rod.
CF = Ceramic fiber blanket.
GF = Glass Fiber insulation.
MW = Mineral-wool batt.
(b) Caulk installed flush with top surface of floor or both surfaces of wall.
(c) Caulk installed flush with bottom surface of floor or one surface of solid (non-concrete block) wall.
3M COMPANY – CP 25WB+ or FB-3000 WT
(Note: W Rating applies only when FB-3000 WT is used on top surface of floor and when it laps onto concrete for sleeved opening.)

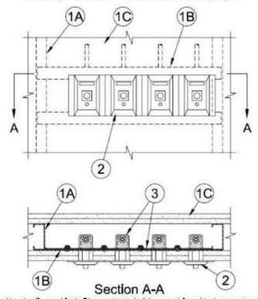
*Bearing the UL Classification Marking

BARE METAL PIPE PENETRATIONS THRU RATED CONCRETE FLOOR SLABS INSIDE WALL CAVITIES

System No. W-L-1463

December 13, 2010

F Ratings — 1 and 2 Hr (See Item 1)
T Ratings — 1 and 2 Hr (See Item 1)
L Rating At Ambient — Less Than 1 CFM/sq ft
L Rating At 400 F — Less Than 1 CFM/sq ft



Section A-A

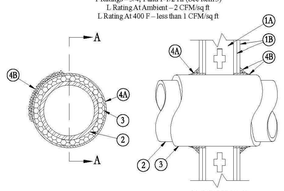
1. **Wall Assembly —** The 1 or 2 hr fire rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U400 or V400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:
   A. **Studs —** Channel-shaped steel studs to be min 3-1/2 in. (89 mm) wide and spaced max 24 in. (610 mm) OC.
   B. **Steel Straps —** Min 1-1/2 in. (38 mm) wide, No. 16 ga (or heavier) galv steel straps secured to studs with two steel screws at each end. Straps to be located across top and bottom of the openings, 4-1/2 in. (114 mm) apart.
   C. **Gypsum Board* —** The gypsum board type, thickness, number of layers and orientation shall be as specified in the individual Wall and Partition Design. Individual openings to be 2-1/8 in. (54 mm) wide by 3 11/16 in. (94 mm) high.
   D. **Batts and Blankets* —** (Not shown) - Min R19 glass fiber or mineral wool insulation installed to completely fill stud cavity containing station outlet.
   The hourly F and T Ratings of the firestop system are equal to the hourly fire rating of the wall assembly in which it is installed.
2. **Station Outlets+ —** Max four station outlets for use in medical gas systems distributing oxygen, nitrous oxide, vacuum, evacuation, air and nitrogen in hospitals in rigid piping systems at pressures not exceeding 100 psig. Station outlet provided with a rough-in assembly, latch valve assembly and die-cast trim plate. The rough-in assembly is screw attached to the steel straps, (Item 1B). The installation within the wall assembly shall be in accordance with the manufacturer's installation instructions.
BEACON MEDICAL PRODUCTS L L C, DBA BEACON MEDAES — Series 8
3. **Fill, Void or Cavity Material* — Putty Pad —** Min 3/16 in. (4.8 mm) thick moldable putty pads to be installed to completely cover the back side of the station outlet rough-in plate and extend to cover steel straps to which the rough-in plate is connected. Putty pads to overlap each other a min of 1/4 in. (6 mm). Additional amount of putty pad to completely cover horizontal section of pipe fitting at exterior of box and extend approximately 1 in. (25 mm) up the vertical section of piping.
SPECIFIED TECHNOLOGIES INC — SpecSeal Putty Pads

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**

MEMBRANE PENETRATIONS THRU RATED WALLS AT MED GAS OUTLETS

System No. W-L-5001

May 19, 2005
F Ratings – 1 and 2 Hr (See Item 1)
T Ratings – 3/4, 1 and 1-1/2 Hr (See Item 3)
L Rating At Ambient – 2 CFM/Sq ft
L Rating At 400 F – less than 1 CFM/sq ft



SECTION A-A

1. **Wall Assembly** – The 1 or 2 hr fire-rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300, U400 or V400 Series Wall or Partition Design in the UL Fire Resistance Directory and shall include the following construction features:
   - A. **Studs** – Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 in. by 4 in. (25 mm by 102 mm) lumber spaced 16 in. (406 mm) OC with nom 2 by 4 in. lumber end plates and cross braces. Steel studs to be min 3-5/8 in. (92 mm) wide by 1-3/8 in. (35 mm) deep channels spaced max 24 in. (610 mm) OC.
   - B. **Gypsum Board*** – Nom 5/8 in. (16 mm) thick, 4 ft (122 cm) wide with square or tapered edges. The gypsum board type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300 or U400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 14-1/2 in (368 mm) for wood stud walls and 18 in. (457 mm) for steel stud walls.

   The hourly F Rating of the firestop system is 1 hr when installed in a 1 hr fire rated wall and 2 hr when installed in a 2 hr fire rated wall.
2. **Through Penetrants** – One metallic pipe or tubing to be centered within the firestop system. Pipe or tubing to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes or tubing may be used:
   - A. **Steel Pipe** – Nom 12 in. (305 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.
   - B. **Copper Tubing** – Nom 6 in. (152 mm) diam (or smaller) Type L (or heavier) copper tubing.
   - C. **Copper Pipe** – Nom 6 in. (152 mm) diam (or smaller) Regular (or heavier) copper pipe.
3. **Pipe Covering*** – Nom 1 in. or 2 in. (25 mm or 51 mm) thick hollow cylindrical heavy density glass fiber units jacketed on the outside with an all service jacket. Longitudinal joints sealed with metal fasteners or factory-applied self-sealing lap tape. Transverse joints sealed with metal fasteners or with butt strip tape supplied with the product. When nom 1 in. (25 mm) thick pipe covering is used, the annular space between the pipe covering and the circular cutout in the gypsum board layers on each side of the wall shall be min 1/4 in. to max 3/8 in. (6 mm to max 10 mm). When nom 2 in. (51 mm) thick pipe covering is used, the annular space between the pipe covering and the circular cutout in the gypsum board layers on each side of the wall shall be min 1/2 in. to max 3/4 in. (13 mm to max 19 mm).
   See **Pipe and Equipment Covering — Materials** (BRGU) category in Building Materials Directory for names of manufacturers. Any pipe covering material meeting the above specifications and bearing the UL Classification Marking with a Flame Spread Index of 25 or less and a Smoke Developed Index of 50 or less may be used.

   The hourly T Rating of the firestop system is 3/4 hr when nom 1 in. (25 mm) thick pipe covering is used. The hourly T Rating of the firestop system is 1 hr and 1-1/2 hr when nom 2 in. (51 mm) thick pipe covering is used with 1 hr and 2 hr fire rated walls, respectively.
4. **Firestop System** – Installed symmetrically on both sides of wall assembly. The details of the firestop system shall be as follows:
   - A. **Fill, Void or Cavity Materials* – Wrap Strip** – Nom 1/4 in. (6 mm) thick intumescent elastomeric material faced on one side with aluminum foil, supplied in 2 in. (51 mm) wide strips. Nom 2 in. (51 mm) wide strip tightly wrapped around pipe covering (foil side out) with seam butted. Wrap strip layer securely bound with steel wire or aluminum foil tape and tied into annular space approx 1-1/4 in. (32 mm) such that approx 3/4 in. (19 mm) of the wrap strip width protrudes from the wall surface. One layer of wrap strip is required when nom 1 in. (25 mm) thick pipe covering is used. Two layers of wrap strip are required when nom 2 in. (51 mm) thick pipe covering is used.
     3M COMPANY – FS-195+
   - B. **Fill, Void or Cavity Materials* – Caulk or Sealant** – Min 1/4 in. (6 mm) diam continuous bead applied to the wrap strip/wall interface and to the exposed edge of the wrap strip layer approx 3/4 in. (19 mm) from the wall surface.
     3M COMPANY – CP 25WB+, IC 15WB+, FireDam 150+ caulk or FB-3000 WT sealant

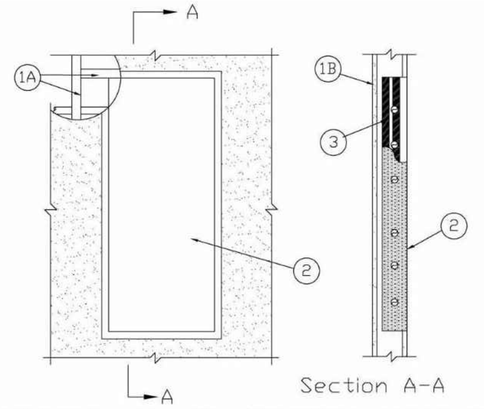
*Bearing the UL Classification Marking

INSULATED METAL PIPE PENETRATIONS THRU RATED FRAMED WALLS

System No. W-L-7293

June 13, 2019

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Ratings — 1 and 2 Hr (See Item 1)	F Ratings — 1 and 2 Hr (See Item 1)
T Ratings — 1 and 2 Hr (See Item 1)	FT Ratings — 1 and 2 Hr (See Item 1)
	FH Ratings — 1 and 2 Hr (See Item 1)
	FTH Ratings — 1 and 2 Hr (See Item 1)



Section A-A

1. **Wall Assembly —** The 1 or 2 hr fire rated framed gypsum board wall assembly shall be constructed of the materials and in the manner specified in the individual U400, V400 or W400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:
   A. **Studs —** Wall framing shall consist of steel channel studs. Steel studs to be min 3-1/2 in. (89 mm) wide and spaced max 24 in. (610 mm) OC. Additional studs installed horizontally above and below the steel box (Item 2) for attachment of the steel box.
   B. **Gypsum Board* —** The gypsum board type, thickness, number of layers and orientation shall be as specified in the individual Wall and Partition Design. Size of cutout made to accommodate steel box (Item 2) is to be centered within the stud cavity and is to be max 1/2 in. (13 mm) wider and 1/2 in. (13 mm) higher than the width and height of the steel box such that the annular space between box and cut edge of gypsum is max 1/4 in. (13 mm) at sides and top and bottom of opening.
   The hourly Ratings are equal to the hourly rating of the wall assembly.
2. **Steel Box —** Min 18 gauge steel, Max 15 in. (381 mm) wide by max 36 in. (914 mm) high by max 3-1/2 in. (89 mm) deep medical gas valve box with a steel door and mounting flange. Box is to be installed flush with one side of wall and provided with min 1 in. (25 mm) by 18 gauge steel mounting flange (trim) overlapping gypsum board around periphery of opening. Steel box secured to horizontal framing members above and below the box with steel fasteners after application of FILL Void or Cavity material (Item 3) on exterior surfaces of steel box. Each vertical side of steel box to be penetrated by min six of any combination max 1 in. (51 mm) diam steel pipe, iron pipe, copper pipe or tube, steel conduit or EMT conduit.
3. **Fill, Void or Cavity Materials* - Joint Strip —** Nom. 1/16 in. (1.5 mm) thick strip of intumescent material faced on one side with an adhesive backing. For 15 in. wide boxes, adhere three 4 in. (102 mm) wide pieces of intumescent material evenly spaced on the outer back surface of the box cut to the length of the box. For boxes less than 15 in. wide, the intumescent material should be evenly spaced and cover at least 80% of the width of the box and shall be cut to the length of the box. An additional two 1 in. wide pieces of intumescent material shall be adhered to the vertical sides of the box evenly spaced and running the entire length of the box. These two pieces shall be completely covered with FSK tape, and circular openings can be made to accommodate each penetrant. FSK Tape shall overlap the back side of the box a min. 1/2 in. (13 mm).
RECTORSEAL — Metacaulk Firestop Joint Strip
4. **Fill, Void or Cavity Material* — Sealant or Putty —** (Not Shown) - Min 1/2 in. (13 mm) depth of sealant or putty shall be applied within the open ends of the conduits which terminate within the box.
RECTORSEAL — Metacaulk 150+, Metacaulk 350i, Metacaulk 1000, Metacaulk Fire Rated Putty
5. **Insulation* —** Not Shown) - The entire wall stud cavity with the steel box (Item 2) and the immediately adjacent stud cavity to each side shall be fully insulated with min R13 glass fiber batt insulation or mineral wool insulation. Additional pieces of insulation shall be installed as needed to completely fill the voids around the steel box and any penetrants to the full depth of the stud cavity. Any glass fiber or mineral wool batt material bearing the UL Classification Marking as to Fire Resistance may be used.
See **Batts and Blankets*** (BZJZ) Category or Forming Materials* (XHKU) Category for names of Classified companies.

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**

MEMBRANE PENETRATIONS THRU RATED WALLS AT MED GAS ZONE VALVE BOXES

GENERAL NOTES FOR PENETRATION FIRESTOP SYSTEMS:

1. THROUGH PENETRATION FIRESTOP SYSTEM DETAILS ARE FOR REFERENCE ONLY. PENETRATIONS THROUGH FIRE-RATED FLOORS AND WALLS SHALL BE INSTALLED IN ACCORDANCE WITH CBC SECTION 714. SYSTEMS SHALL BE INSTALLED STRICTLY IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS AND APPROVED LISTING. MANUFACTURER'S INSTALLATION INSTRUCTIONS AND APPROVED LISTING SHALL PROVIDED FOR REVIEW BY THE INSPECTION AUTHORITIES. SUBSTITUTIONS OF APPROVED SYSTEMS SHALL BE SUBMITTED FOR REVIEW AND APPROVAL. LISTED DESIGNS SHALL NOT BE MODIFIED EXCEPT BY THE LISTING AUTHORITY, IN WRITING, VERIFYING THAT THE RATED PROTECTION IS PROVIDED.
2. PIPE PENETRATIONS CONTAINED AND LOCATED WITHIN WALL CAVITIES ABOVE OR BELOW RATED FLOORS DO NOT REQUIRE A 'T' RATING IN ACCORDANCE WITH CBC SECTION 714.5.1.2, EXCEPTION 1.
3. FOR OTHER CONDITIONS, SUCH AS MANUFACTURER'S ALTERNATE TO THOSE LISTED IN DETAILS AND DIFFERENT WALL TYPES, MULTIPLE PENETRATIONS, OR F AND T RATINGS NOT SHOWN HEREIN, SUBMIT DETAILS OF PROPOSED FIRESTOP SYSTEM ALONG WITH UL SYSTEM NUMBERS. UL THROUGH PENETRATION FIRESTOP SYSTEMS SHALL BE APPROVED BY THE CALIFORNIA STATE FIRE MARSHAL.

1 PENETRATIONS THROUGH RATED INTERIOR WALLS AND FLOORS

SCALE: NO SCALE

Architect
SKA
SMITH-KARNG ARCHITECTURE
800 Haight Street
San Francisco, CA 94117
Office: 415.552.3600

Owner
marin health Medical Center
250 BON AIR ROAD,
GREENBRAE, CA 94904

Consultant
CAMMISA + WIPF
CONSULTING ENGINEERS
333 BRYANT STREET, SUITE 220
SAN FRANCISCO, CA 94107
T: 415.863.5740 | www.cammisawipf.com

SKA Project Number
2136

OSHPD Number
HCAI# S221296-21-00

HCAI seal/signature

REVIEWED IN ACCORDANCE WITH THE REQUIREMENTS OF 7-24, CCR
APPROVED
Department of Health Care Access & Information
Office of Statewide Hospital Planning & Development
2/13/2023, 11:24:21 PM
S221296-21-00
Pedar Pomme

Seal/Signature

LICENSED ARCHITECT C37097 EXP. 9/30/2023 STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER No. M54012 Exp. 6/30/24 Mechanical STATE OF CALIFORNIA

Issued for
HCAI SUBMITTAL

Drawn by MV
Checked by AD

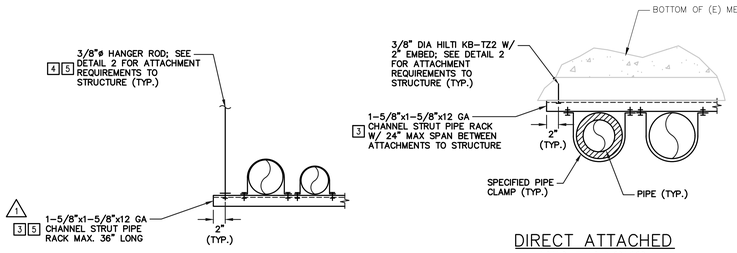
Project Name
HOSPITAL REPLACEMENT BUILDING-
NUCLEAR MEDICINE SUITE RELOCATION

Sheet Title
DETAILS

Date 08/05/2022
Scale AS NOTED
Sheet Number P8.1

30 X 42

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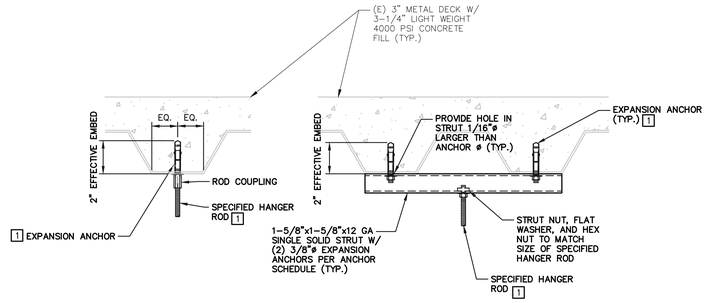
TRAPEZE HANGERS | DIRECT ATTACHED PIPE RACKS | SINGLE PIPE HANGER

NOTES:

1. SUPPORT PIPING PER REQUIREMENTS OF STRUCTURAL GENERAL NOTES SECTION IX ON DRAWING S1.0. AS PER THESE NOTES, SEISMIC BRACING WILL BE REQUIRED WHEN HANGER ROD LENGTHS ARE GREATER THAN 12" AS MEASURED FROM THE TOP OF THE PIPE HANGER OR TRAPEZE BEAM TO THE BOTTOM OF THE CONCRETE FILLED METAL DECK SOFFIT. 3
2. SPACE SUPPORTS AND BRACING AT INTERVALS SPECIFIED IN SECTION 230200 – SUPPORTS, ANCHORS, AND SEISMIC RESTRAINTS.
3. MULTIPLE PIPES MAY BE SUPPORTED ON A COMMON PIPE RACK. RACK SIZES SHALL BE GOVERNED BY CUMULATIVE WEIGHT OF SUPPORTED PIPING. PROVIDE DOUBLE CHANNEL STRUTS WHEN REQUIRED. SPACING BETWEEN RACKS SHALL BE BASED ON PIPING ATTACHED TO RACKS WITH THE MOST STRINGENT SPECIFIED HANGER INTERVAL REQUIREMENT. ADDITIONAL RACKS, CONFIGURED ONLY FOR MORE STRINGENT PIPING, MAY BE PROVIDED TO SATISFY THIS NEED.
4. REUSE OF EXISTING HANGERS IS NOT PERMITTED. 1
5. GRAVITY LOAD LIMITS FOR SINGLE PIPE HANGERS SHALL BE NO MORE THAN 50 LBS AND 10 LBS/FT UP TO 100 LBS TOTAL FOR TRAPEZE HANGERS. TRAPEZE HANGERS WITH LOADS MORE THAN 10 LBS/FT SHALL BE SEISMICALLY BRACED.

1 PIPE HANGERS 1 2

SCALE: NONE



ATTACHMENT TO CONCRETE FLOOR DECKS

NOTES:

1. PROVIDE ANCHOR DIAMETERS TO MATCH SPECIFIED HANGER ROD DIAMETERS UNLESS OTHERWISE NOTED. REUSE OF EXISTING ANCHORS IS NOT PERMITTED. INSTALLATION OF NEW ANCHORS IN UPPER FLUTES IS ALSO NOT PERMITTED.

2 HANGER ATTACHMENTS TO STRUCTURE

SCALE: NONE

Architect
SKA
SMITH-KARNG ARCHITECTURE
800 Haight Street
San Francisco, CA 94117
Office: 415.552.3600

Owner
marin health Medical Center
250 BON AIR ROAD,
GREENBRAE, CA 94904

Consultant
CAMMISA + WIPF
CONSULTING ENGINEERS
333 BRYANT STREET, SUITE 220
SAN FRANCISCO, CA 94107
T: 415.863.5740 | www.cammisawipf.com

SKA Project Number
2136

OSHPD Number
HCAI# S221296-21-00

HCAI seal/signature
REVIEWED IN ACCORDANCE WITH THE REQUIREMENTS OF T24, CCR
APPROVED
Department of Health Care Access & Information
Office of Statewide Hospital Planning & Development
2/13/2023, 11:24:21 PM
S221296-21-00
Pedar Pamme

Seal/Signature
REGISTERED ARCHITECT KRISTIN MCCLAIN C37067 EXP. 9/30/2023 STATE OF CALIFORNIA
REGISTERED PROFESSIONAL ENGINEER DEREK CROMPTON No. M34802 Exp. 6/30/24 Mechanical STATE OF CALIFORNIA

Issued for
HCAI SUBMITTAL

1	BACKCHECK 1	12/09/2022
3	BACKCHECK 2	01/25/2023

Drawn by MV
Checked by AD

Project Name
HOSPITAL REPLACEMENT BUILDING-
NUCLEAR MEDICINE SUITE RELOCATION

Sheet Title
DETAILS

Date 08/05/2022
Scale AS NOTED
Sheet Number
P8.2

30 X 42

NAME: G:\21039 MGH HRB Nuclear Medicine Suite\CAD-Revit\Plumbing\ P82detail.dwg DATE: AUG 09, 2021 TIME: 1:26 PM SCALE: 1=1 SIZE: 42"X30" BY:MV

GENERAL NOTES:

1. DRAWINGS: THE ELECTRICAL SYSTEM LAYOUTS INDICATED ON THE DRAWINGS ARE GENERALLY DIAGRAMMATIC AND THE LOCATION OF OUTLETS AND EQUIPMENT IS APPROXIMATE. THE EXACT ROUTING OF CONDUIT AND THE LOCATION OF EQUIPMENT SHALL BE GOVERNED BY STRUCTURAL AND ARCHITECTURAL CONDITIONS. THE RIGHT IS RESERVED TO MAKE CHANGES IN RACEWAY OR EQUIPMENT LOCATIONS CAUSED BY THOSE CONDITIONS AT NO ADDITIONAL COST TO OWNER.
2. ALL OUTLET HEIGHTS ARE TO REFERRED TO ARCHITECTURAL SHEET A0.2 EXCEPT AS NOTED. ORIENT DEVICES VERTICALLY EXCEPT AS NOTED. OUTLET HEIGHTS ARE ABOVE FINISHED FLOOR OF PLAN ON WHICH SHOWN.
3. COORDINATE THE WORK WITH EXISTING WORK. REMOVAL, RELOCATION, RECONNECTION OR REPLACEMENT OF EXISTING EQUIPMENT SHALL BE DONE AT TIME DESIGNATED BY OWNER. EXISTING FACILITIES ARE IN CONTINUAL OPERATION. ALL WORK SHALL BE SCHEDULED WITH OWNER IN A MANNER NOT TO MAKE ANY UNAUTHORIZED SHUTDOWNS OR DISRUPTION OF NORMAL OPERATIONS. GENERALLY SHUTDOWNS OF ELECTRICAL RISER SYSTEMS AND PANELBOARDS WILL BE MADE AT NIGHT AND ON WEEKENDS. CONTRACTOR SHALL PROVIDE OWNER WITH WRITTEN SHUTDOWN REQUEST PER SPECIFICATION SECTION 00 22 13.
4. COORDINATE ROUTING OF CONDUITS WITH EXISTING WORK. GROUP CONDUITS IN A NEAT AND ORGANIZED MANNER. REVIEW PROPOSED METHOD OF WALL PENETRATIONS WITH ENGINEER AND ARRANGE AS DIRECTED.
5. VISIT JOB SITE AND REVIEW ALL EXISTING CONDITIONS IN EACH WORK AREA PRIOR TO COMMENCING WORK. ARRANGE NEW WORK TO INTEGRATE INTO THE EXISTING WORK IN A NEAT, WORKMANLIKE MANNER.
6. PROVIDE TEMPORARY WIRING FOR EQUIPMENT THAT MUST BE TEMPORARILY RELOCATED OR DISCONNECTED FOR CONSTRUCTION AND RECONNECT EQUIPMENT WITH PERMANENT WIRING WHEN NEW WORK IS COMPLETED.
7. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ELECTRICAL SERVICE TO ALL EXISTING EQUIPMENT.
8. REMOVED EQUIPMENT REMAINS PROPERTY OF OWNER AND SHALL BE TURNED OVER TO OWNER AND STORED ON SITE IN LOCATION AS DIRECTED BY OWNER. IF OWNER NO LONGER WANTS REMOVED EQUIPMENT, REMOVE FROM SITE AND DISPOSE OF IN A SUITABLE MANNER.
9. CIRCUIT NUMBERS INDICATED FOR EXISTING PANELS ARE FOR GENERAL REFERENCE ONLY. VERIFY ACTUAL CIRCUIT NUMBERS IN FIELD.
10. PROVIDE TEMPORARY DIRECTORY FOR ALL REVISIONS TO EXISTING PANELS AT THE END OF EACH WORKING DAY. AT COMPLETION OF PROJECT PROVIDE NEW TYPEWRITTEN CIRCUIT DIRECTORY FOR ALL NEW AND EXISTING PANELS ADDED/REVISED IN THIS WORK.
11. PROVIDE BARRIERS AND/OR FIRE RESISTIVE MATERIALS AROUND ELECTRICAL EQUIPMENT TO MAINTAIN THE RATING OF THE AREA OR SEPARATION. THIS INCLUDES BACKPLASTERING, ETC.
12. DO NOT INSTALL CONDUIT OR RACEWAY THROUGH BEAMS OR OTHER STRUCTURAL MEMBERS UNLESS SPECIFICALLY PERMITTED BY STRUCTURAL ENGINEER.
13. ALL EQUIPMENT AND CONDUCTORS, WHETHER NEW OR EXISTING, THAT ARE TO BE INSTALLED OR PERMANENTLY CONNECTED (HARD-WIRED) MUST BE LISTED, LABELED, OR CERTIFIED BY A NATIONALLY RECOGNIZED TESTING LABORATORY (NRTL).
14. PENETRATIONS OF CONDUITS THROUGH WALLS REQUIRING PROTECTED OPENINGS SHALL BE FIRESTOPPED PER ARCHITECTURAL UL FIRESTOP SYSTEM. FIRESTOP MATERIAL SHALL BE A TESTED ASSEMBLY APPROVED BY THE CALIFORNIA STATE FIRE MARSHAL.
15. DO NOT SUPPORT ANY CONDUIT (WIRING) FROM FIRE RATED CEILING SYSTEM, CEILING SUPPORT WIRES OR CEILING SUPPORT MEMBERS. ALL CONDUIT (WIRING) MUST BE SUPPORTED FROM STRUCTURAL FLOOR SLAB ABOVE IN AN APPROVED MANNER.
16. NOT ALL EXISTING CONDITIONS MAY BE SHOWN ON THESE DRAWINGS. THE CONDITIONS SHOWN ARE TAKEN FROM EXISTING DRAWINGS AND FIELD SURVEYS. VERIFY CONDITIONS IN FIELD PRIOR TO COMMENCING ANY WORK.
17. NO PIPING, DUCTS OR EQUIPMENT FOREIGN TO THE ELECTRICAL EQUIPMENT IS PERMITTED IN THE DEDICATED SPACE FOR SWITCHBOARDS, PANEL BOARDS AND/OR MOTOR CONTROL CENTERS. FOR ADDITIONAL REQUIREMENT, SEE CALIFORNIA ELECTRICAL CODE (CEC) 2019, SECTION 110.26(E)(1).

REMOVAL GENERAL NOTES:

1. PRIOR TO ANY REMOVAL TRACE ALL CONDUIT, WIRING & CABLING WITHIN THE AREA BACK TO EQUIPMENT FROM WHICH THEY ARE SERVED. IDENTIFY AND LABEL ALL ITEMS TO REMAIN AND ALL ITEMS TO BE REMOVED.
2. PRIOR TO BEGINNING, COORDINATE WITH OWNER ANY SHUTDOWNS REQUIRED FOR REMOVAL.
3. ANY ITEMS EXISTING BUT NOT SHOWN OR REFERENCED ON REMOVAL PLANS SHOULD BE BROUGHT TO THE ARCHITECT'S ATTENTION FOR THEIR DECISION PRIOR TO REMOVAL.
4. PROVIDE NEW SUPPORTS FOR CONDUIT/EQUIPMENT WHICH IS CURRENTLY SUPPORTED FROM WALLS OR CEILINGS WHICH ARE TO BE REMOVED, OR THOSE WHICH ARE NOT SUPPORTED PER CODE REQUIREMENTS. SEE GENERAL NOTE #15 ON SHEET E0.01.
5. PROVIDE NEW/ADDITIONAL BOXES, CONDUIT, WIRING, ETC. AS REQUIRED TO MAINTAIN SERVICE TO DOWNSTREAM DEVICES/ADJACENT OCCUPIED AREAS.
6. RELOCATE EXISTING BOXES/CONDUITS/SUPPORTS TO REMAIN WHEREVER THEY INTERFERE WITH NEW ELECTRICAL EQUIPMENT, MECHANICAL DUCTWORK, PIPING, ETC. SUPPORT PER ANCHORAGE DETAILS/NOTES SHOWN ON DRAWINGS.
7. WHEN AN ITEM(S) IS NOTED AS BEING REMOVED, THIS SHALL INCLUDE DEVICE/EQUIPMENT ITSELF AND COVERPLATE, WIRING, BACKBOX, CONDUIT, SUPPORTS, ETC. BACK TO EQUIPMENT FROM WHICH IT IS SERVED OR LAST ACTIVE DEVICE TO REMAIN, E.A.N.
8. WHERE CONDUIT(S) THRU SLAB(S) ARE TO BE REMOVED, OBTAIN DIRECTION FROM ARCHITECT/STRUCTURAL ENGINEER WHETHER CONDUITS SHOULD BE ABANDONED IN PLACE, FILLED WITH CONCRETE, OR REMOVED AND CONCRETE INFILLED. ONCE DIRECTED, PROVIDE ALL WORK REQUIRED TO ACCOMPLISH THE TASK.
9. PROVIDE ALLOWANCE FOR REMOVAL OF MISCELLANEOUS ITEMS THAT MAY NOT BE SHOWN AND REQUIRE REMOVAL.
10. COORDINATE ALL WORK WITH GENERAL REMOVAL WORK.
11. FOR BRANCH CIRCUITS THAT ARE COMPLETELY REMOVED, AFTER REMOVAL OF ALL CONDUCTORS, CONDUIT, BOXES, ETC., PLACE CIRCUIT BREAKER IN THE OFF POSITION AND INDICATE CIRCUIT AS SPARE ON PANEL DIRECTORY.
12. FOR BRANCH CIRCUITS THAT ARE PARTIALLY REMOVED, REVISE PANEL DIRECTORY TO ACCURATELY REFLECT AREAS SERVED BY ADDING/DELETING ROOM DESCRIPTORS ON PANEL DIRECTORY AS REQUIRED.

ONE LINE DIAGRAM

3 / 100 / HFD — No. OF POLES; TRIP RATING; FRAME TYPE — MOLDED CASE LOW VOLTAGE CIRCUIT BREAKER

TRANSFORMER, RATINGS AS SHOWN.

SPLICE OR CONNECTION

GROUND CONNECTION

ST — SHUNT–TRIP

1 — 1A — FUSE – RATING AND TYPE AS SHOWN

2 — 3 — MOTOR – NUMBER INDICATES HORSEPOWER RATING

SPD — SURGE PROTECTION DEVICE

VFD — VARIABLE FREQUENCY DRIVE CONTROLLER. PROVIDED BY ANOTHER DIVISION OF WORK. REFER TO MECHANICAL DIVISION FOR ADDITIONAL DETAILS AND REQUIREMENTS. PROVIDE LINE AND LOAD SIDE POWER CONNECTION IN ELECTRICAL WORK.

E, N, BP, BP — AUTOMATIC TRANSFER SWITCH WITH BY–PASS/ISOLATION

ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR
CB	CIRCUIT BREAKER
CKT	CIRCUIT
1 CPT	CONTROL POWER TRANSFORMER
DIST	DISTRIBUTION
(E)	EXISTING
(EA)	EACH
E.A.N.	EXCEPT AS NOTED
EQMT	EQUIPMENT
(ER)	EXISTING – REMOVE/RELOCATE/REINSTALL, E.A.N.
FSD	FIRE SMOKE DAMPER
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
IFS	INTEGRATED FACILITY SWITCHBOARD
MFR	MANUFACTURER
MIN	MINIMUM
NEMA	NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION
(R)	REMOVE
RM	ROOM
S.A.D.	SEE ARCHITECTURAL DRAWINGS
SMS	SHEET METAL SCREW
SS	STAINLESS STEEL
SWBD	SWITCHBOARD
TYP	TYPICAL
WP	WEATHERPROOF

SYMBOLS

NURSE CALL – STAFF EMERGENCY STATION AND CODE BLUE STATION. PROVIDE 4"SQ x 2⅛"D BACKBOX WITH ⅜" THICK 1–GANG RING. STEEL CITY #72171 & #72–C–14. PROVIDE ¾" CONDUIT STUBBED UP TO ACCESSIBLE CEILING WITH PULL STRING, E.A.N., +44" E.A.N.

PM — PHYSIOLOGICAL MONITOR SYSTEM OUTLET – 4" SQUARE x 2⅛" DEEP BOX WITH 1 GANG RING AND 1"C STUBBED INTO ACCESSIBLE CEILING AT NEAREST CABLE SUPPORT. +62" A.F.F., E.A.N.

FSD — FIRE–SMOKE DAMPER – FURNISH AND INSTALLED IN MECHANICAL SECTION OF WORK. PROVIDE POWER CONNECTION IN ELECTRICAL WORK. COORDINATE INSTALLATION WITH MECHANICAL AND FIRE ALARM WORK AND INCORPORATE CONTROL SCHEME INTO WIRING REQUIREMENTS. FOR WIRING DIAGRAM, SEE SHEET ___, DETAIL _.

(H) , (H)H — DESIGNATED EQUIPMENT TAG.

EQ / 1 — DESIGNATED EQUIPMENT TAG. FOR EQUIPMENT SCHEDULE REFER TO DETAIL ___.

1 — SHEET NOTE TAG – SEE SHEET NOTE #1.

1 — DETAIL TAG

BRANCH CIRCUIT WIRING, CONCEALED. CROSSLINES INDICATE NUMBER OF #12 AWG WIRES IN ADDITION TO 1#12 AWG GREEN INSULATED GROUND WIRE. NO CROSSLINES INDICATE 2#12 AND 1#12G (CROSSLINES DO NOT INCLUDE GROUND WIRE). PROVIDE SEPARATE DEDICATED NEUTRAL WIRE FOR EACH INDIVIDUAL BRANCH CIRCUIT.

BRANCH WIRING CIRCUIT WIRING ON FLOOR BELOW OR TO BE REMOVED, E.A.N.

CE — CRITICAL EMERGENCY BRANCH WIRING (SIMILAR TO BRANCH CIRCUIT WIRING).

EE — EQUIPMENT EMERGENCY BRANCH WIRING (SIMILAR TO BRANCH CIRCUIT WIRING).

LSE — LIFE SAFETY EMERGENCY BRANCH WIRING (SIMILAR TO BRANCH CIRCUIT WIRING).

CONTINUATION LINE.

R — REMOVE, RELOCATE, RE–INSTALL AND CONNECT COMPLETE

W — SURFACE RACEWAY WITH TWO CHANNEL ALUMINUM RACEWAY WITH DUPLEX RECEPTACLE ON TOP AND DATA OUTLETS BELOW. PROVIDE WITH ALL FITTINGS, BASE, COVER, DEVICE. COVER PLATE DEVICE MOUNTING AS REQUIRED FOR A COMPLETE SYSTEM. SIMILAR TO WIRELMOLD #AL5200.

2 — P — PAGING SYSTEM WIRING – ¾" WITH CABLING TO MATCH EXISTING.

RECESSED 1'X4' LUMINAIRE

RECESSED 2'X4' LUMINAIRE

RECESSED 2'X2' LUMINAIRE

WALL MOUNTED LINEAR LUMINAIRE. LENGTH AS SHOWN.

RECESSED DOWNLIGHT LUMINAIRE

EXIT LIGHT – CEILING OR WALL MOUNTED, AS INDICATED ON PLAN.

$ — DIMMER SWITCH

S3 — SINGLE POLE SWITCH – LETTER INDICATED LIGHT(S) CONTROLLED (TYPICAL TO ALL SWITCHES AND DIMMERS), +45" E.A.N. NUMBERS INDICATES SWITCH CONFIGURATION, I.E. 3 FOR THREE–WAY AND 4 FOR FOUR–WAY.

SMO1 — OCCUPANCY SENSOR, SINGLE RELAY DUAL RELAY SHOWN AS "MO2" – WALL MOUNTED, +44" E.A.N.

OS — CEILING MOUNTED OCCUPANCY SENSOR

A — LUMINAIRE TAG AND SCHEDULE ON SHEET E2.1

DISCONNECT SWITCH (FUSED WHERE SHOWN) OR ENCLOSED CIRCUIT BREAKER.

DUPLEX RECEPTACLE, +18" E.A.N.

TWO DUPLEX RECEPTACLES MOUNTED UNDER COMMON COVERPLATE, +18" E.A.N.

DUPLEX RECEPTACLE WITH GROUND FAULT CIRCUIT INTERRUPTER, +44" E.A.N.

DUPLEX RECEPTACLE MOUNTED IN SURFACE MOUNTED RACEWAY.

J , JH — JUNCTION BOX, CEILING OR WALL MOUNTED.

SH V — HOSPITAL–WIDE PAGING SYSTEM SPEAKER. SPEAKER WITH VOLUME CONTROL

AP — WIRELESS ACCESS POINT, CEILING MOUNTED

VOICE/DATA OUTLET, +18" E.A.N. 14

VOICE OUTLET, +18" E.A.N. 14

DATA OUTLET, +18" E.A.N. 14

2 CAM — CAMERA, CEILING MOUNTED

D , DH , D — DATA OUTLET WITH 4 DROPS. CEILING MOUNTED, RACEWAY MOUNTED OR IN A JUNCTION BOX WITH COVERPLATE MOUNTED ON LOWER SHELF TRACK.

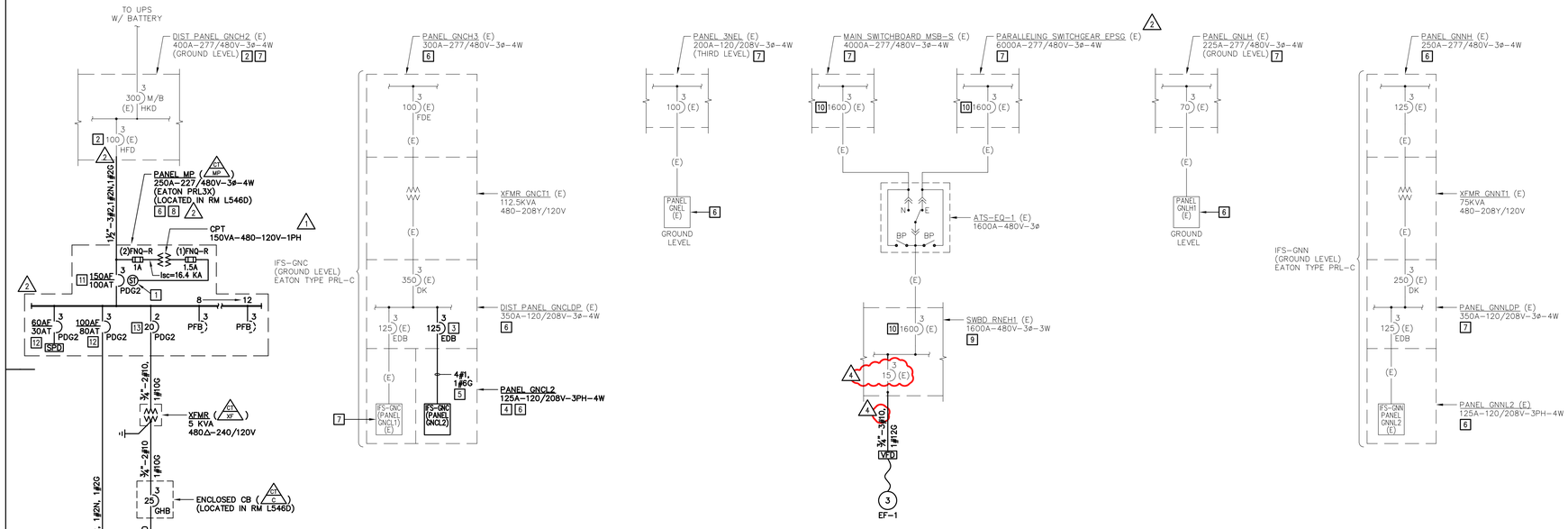
CRH — SECURITY SYSTEM – CARD READER: PROVIDE 4"SQ x 2⅛"D BOX WITH SINGLE GANG DEVICE RING AND ¾" CONDUIT TO ABOVE CEILING JUNCTION BOX IN ACCESSIBLE CEILING, +45" E.A.N.

DO — AUTOMATIC DOOR, DOOR OPERATOR – FURNISHED AND INSTALLED IN ANOTHER SECTION OF WORK. PROVIDE 120V CONNECTION IN ELECTRICAL WORK AND CONDUIT CONNECTION TO DOOR HARDWARE RELAY MODULE.

NH — NURSE CALL – TOILET/SHOWER CALL STATION PULLCORD TYPE. PROVIDE 4"SQ x 2⅛"D BACKBOX WITH ⅜" THICK 1–GANG RING. STEEL CITY #72171 & #72–C–14. PROVIDE ¾" CONDUIT STUBBED UP TO ACCESSIBLE CEILING SPACE WITH PULL STRING, E.A.N. +50" FOR NEW TOILET STATIONS.

4 , 4H — NURSE CALL – DOME LIGHT. PROVIDE 4"SQ x 2⅛"D BACKBOX WITH 1½" EXTENSION AND ¾" THICK 1–GANG RING. STEEL CITY #72171, #73151 & #72–C–14. PROVIDE ¾" CONDUIT STUBBED UP TO ACCESSIBLE CEILING SPACE WITH PULL STRING, E.A.N. CEILING OR WALL MOUNTED AND CENTERED ABOVE DOOR E.A.N.

12H — NURSE CALL – COMBINATION PATIENT CALL STATION, STAFF EMERGENCY STATION AND CODE BLUE STATION. PROVIDE 3–GANG BOX x 3¾"D WITH 3 GANG RING. STEEL CITY #13BD, #3–GC. DO NOT USE MASONARY BOX. DO NOT USE GANGABLE BOX. PROVIDE ¾" CONDUIT STUBBED UP TO ACCESSIBLE CEILING WITH PULL STRING, E.A.N., +44" E.A.N.



1 ONE LINE DIAGRAM
SCALE: NO SCALE

SHEET NOTES

1. PROVIDE 120V SHUNT TRIP CIRCUIT DERIVED FROM INCOMING 480V FEEDER OF PANEL MP. PROVIDE 480V–120V CONTROL POWER TRANSFORMER WITH PRIMARY AND SECONDARY FUSE BLOCKS AND LOCATE IN ENCLOSURE WITH HINGED DOOR AND FLUSH MOUNTED COVER BELOW THE PANEL. FOR EPO WIRING DIAGRAM, SEE DETAIL 4 ON SHEET E4.2.
2. 2 CONNECT TO EXISTING 100A–3P SPARE CIRCUIT BREAKER AT POLE 1/3/5. FOR PANEL LOAD SUMMARY, SEE SHEET E0.2.
3. PROVIDE NEW 125A–3P CIRCUIT BREAKER AT POLE 2. COMPLETE WITH BUS STRAPS, MOUNTING HARDWARE ETC., TO SUIT INSTALLATION. CIRCUIT BREAKER FRAME TO MATCH EXISTING. FOR PANEL SCHEDULE, SEE SHEET E0.2.
4. 1 PROVIDE NEW 120/208V–3PH–4W (42 CIRCUIT) EATON PRL–1X PANELBOARD WITH SURGE PROTECTION DEVICE INSERT INTO EXISTING IFS SWITCHBOARD. REMOVE BLANK BACKPAN AND PROVIDE NEW MOUNTING STRUCTURE, PANEL, AND HINGED DOOR. FOR PANEL ELEVATION SEE SHEET E0.2, DETAIL 1.
5. PROVIDE NEW FEEDER WIRING THROUGH REAR OF IFS, OR ALTERNATELY PROVIDE CONDUIT & WIRE ABOVE IFS.
6. FOR PANEL SCHEDULES, SEE SHEET E0.2.
7. THE LEVEL 2 PANEL, ITS FEEDER AND FEEDER OVERCURRENT PROTECTIVE DEVICE HAVE BEEN CHECKED AND SUFFICIENT LOAD CAPACITY EXISTS AT THIS POINT IN THE ELECTRICAL DISTRIBUTION SYSTEM.
8. 2 NOT USED.
9. 4 FOR PANEL LOAD SUMMARY, SEE SHEET E0.2.
10. EXISTING BREAKER IS 100% RATED.
11. PROVIDE WITH PXR20 ELECTRONIC TRIP UNIT.
12. PROVIDE WITH PXR10 ELECTRONIC TRIP UNIT.
13. PROVIDE WITH THERMAL MAGNETIC TRIP UNIT.
14. PROVIDE 4"SQ x 2⅛"D JUNCTION BOX MINIMUM WITH 1¼" MINIMUM CONDUIT STUB UP TO ACCESSIBLE CEILING AND NEAREST CABLE SUPPORT, E.A.N. COORDINATE CABLE SUPPORT LOCATIONS WITH OTHER TRADES.

ELECTRICAL DRAWING LIST

E0.1	GENERAL NOTES, SYMBOLS, ONE LINE DIAGRAM & ABBREVIATIONS	
E0.2	PANEL SCHEDULES AND DETAIL	
E2.0	LOCATION PLANS	
E2.1	PARTIAL GROUND FLOOR PLAN – LIGHTING	
E2.2	PARTIAL GROUND FLOOR PLAN – POWER AND SIGNAL	
2 E2.3	PARTIAL ROOF PLAN – POWER	
E3.1	SPECT & CT ROOM FLOOR PLANS – ABOVE AND BELOW FLOOR	
E3.2	SPECT & CT ROOM SCHEDULES	
E4.1	DETAILS	
E4.2	DETAILS	

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2136

OSHPD Number
HCAI# S221296-21-00

HCAI seal/signature
REVIEWED IN ACCORDANCE WITH THE REQUIREMENTS OF 7 CA CCR
APPROVED
Department of Health Care Access & Information
Office of Statewide Hospital Planning & Development
2/13/2023, 11:24:21 PM
S221296-21-00
Pedar Remme

Seal/Signature
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REGISTERED PROFESSIONAL ENGINEER PAUL J. O'CONNELL No. E15435 EXP. 8/31/2023 ELECTRICAL STATE OF CALIFORNIA

Issued for
HCAI SUBMITTAL

1	BACKCHECK 1	12/09/2022
2	DESIGN CHANGE	12/09/2022
4	DESIGN CHANGE	01/25/2023

Drawn by KT
Checked by PO

Project Name
HOSPITAL REPLACEMENT BUILDING-
NUCLEAR MEDICINE SUITE RELOCATION

Sheet Title
GENERAL NOTES, SYMBOLS, ONE LINE DIAGRAMS AND ABBREVATIONS

Date 08/05/2022
Scale AS NOTED
Sheet Number E0.1

30 X 42

NAME: G:\21039 MDH HRB Nuclear Medicine Suite\CAD–Revit\Electrical_E0Symb.dwg DATE: DEC 05, 2022 TIME: 11:45 AM SCALE: 1=1 SIZE: 42"x30" BY:KT

PANEL: GNCH3 (E) — SYSTEM: CRITICAL BRANCH

VOLTAGE: 277/480 | PHASE: 3 | WIRE: 4 | BUSSING: 400A | MOUNTING: SURFACE
TYPE: Eaton PRL-C | AIC RATING: 35,000 | LOCATION: ELECTRICAL RM L575
MAIN BREAKER OR LUGS: 300A | FEEDER: 3"-#4/0CKCM, 1#4G | FEEDER BREAKER: 300A

OKT NO.	LOAD	Load in Volt-Amperes per Phase A	B	C	Circuit Breaker Amp	Pole	PHASE A	B	C	Circuit Breaker Amp	Pole	Load in Volt-Amperes per Phase A	B	C	LOAD	OKT NO.
1	GNCT1 (E)	6297			175	3				20	1	**3094**			Gnd Lvl N Ltg - L507,23,27,44,48,52 (E), **L546**	**2"**
3			6297							20	1		640		Gnd Lvl N Ltg - L532,33C,330,652,53 (E)	4
5				6297						20	1			1500	Gnd Lvl N Ltg - L502,43,47,55,57,70 (E)	6
7	Space									20	1	190			Lighting - Elec Rm L705 (E)	8
9	Space									20	1		190		Lutron QSN Node Ltg Control (E)	10
11	Space														Space	12
13	Space														Space	14
15	Space														Space	16
17	Space														Space	18
19	Space														Space	20
21	Space														Space	22

CONNECTED LOAD (VA):	23221	CONNECTED LOAD PER PHASE (VA):	8297	7127	7797
DELETED LOAD (VA):	0	DELETED LOAD PER PHASE (VA):			
ADDED LOAD (VA):	1294	ADDED LOAD PER PHASE (VA):	**1294**		
TOTAL 3 PHASE CONNECTED LOAD (VA):	**24515**	TOTAL LOAD PER PHASE (VA):	9591	7127	7797
TOTAL 3 PHASE CONNECTED LOAD (AMPS):	**29.5**	TOTAL LOAD PER PHASE (AMPS):	34.6	25.7	28.1

REMARKS:
***ADDED/REVISED #21039 MGH HRB NUCLEAR MEDICINE SUITE**

SHEET:
JOB NAME:
JOB NUMBER: DATE: BY:

PANEL: GNCLDP (E) — SYSTEM: CRITICAL BRANCH

VOLTAGE: 120/208 | PHASE: 3 | WIRE: 4 | BUSSING: 400A | MOUNTING: SURFACE
TYPE: Eaton PRL-C | AIC RATING: | LOCATION: ELECTRICAL RM L575
MAIN BREAKER OR LUGS: 350A | FEEDER: See One-Line Diagram | FEEDER BREAKER: See One-Line Diagram

OKT NO.	LOAD	Load in Volt-Amperes per Phase A	B	C	Circuit Breaker Amp	Pole	PHASE A	B	C	Circuit Breaker Amp	Pole	Load in Volt-Amperes per Phase A	B	C	LOAD	OKT NO.
1	GNCL1 - Elec Rm L575 (E)	6590			125	3				**125**	3	**4080**			**GNCL2 - Elec Rm L575 (E)**	**2"**
3			5280										**2520**			**4"**
5				7000										**3000**		**6"**
7																8
9																10
11																12
13																14
15																16
17																18

CONNECTED LOAD (VA):	18870	CONNECTED LOAD PER PHASE (VA):	6590	5280	7000
DELETED LOAD (VA):	0	DELETED LOAD PER PHASE (VA):			
ADDED LOAD (VA):	9600	ADDED LOAD PER PHASE (VA):	**4080**	**2520**	**3000**
TOTAL 3 PHASE CONNECTED LOAD (VA):	**28470**	TOTAL LOAD PER PHASE (VA):	10670	7800	10000
TOTAL 3 PHASE CONNECTED LOAD (AMPS):	**79.0**	TOTAL LOAD PER PHASE (AMPS):	88.9	65.0	83.3

REMARKS:
***ADDED/REVISED #21039 MGH HRB NUCLEAR MEDICINE SUITE 08/05/2022 EG**

SHEET:
JOB NAME:
JOB NUMBER: DATE: BY:

PANEL: GNCL1 (E) — SYSTEM: CRITICAL BRANCH

VOLTAGE: 120/208 | PHASE: 3 | WIRE: 4 | BUSSING: 225 Amp | MOUNTING: SURFACE
TYPE: Eaton PRL1a | AIC RATING: | LOCATION: ELECTRICAL RM L575
MAIN BREAKER OR LUGS: MLO | FEEDER: See One-Line Diagram | FEEDER BREAKER: See One-Line Diagram

OKT NO.	LOAD	Load in Volt-Amperes per Phase A	B	C	Circuit Breaker Amp	Pole	PHASE A	B	C	Circuit Breaker Amp	Pole	Load in Volt-Amperes per Phase A	B	C	LOAD	OKT NO.
1	PTS Transfer Unit - L621 (E)	360			20	1				20	1	180			Gnd Priv Hold Hdwall - L621, 23 (E)	2
3	IDF L570 - QP3 Light/Manage Hub (E)		120		20	1				20	1		180		Gnd Philips Monitor Sys - L621 (E)	4
5	Ground Receptacle MRI L512 (E)			1200	20	1				20	1			180	Gnd Philips Monitor Sys - L623 (E)	6
7	Philips Rec MRI L511, L513A (E)	180			20	1				20	1	720			Gnd Nurse Station Rec - L625 (E)	8
9	Gnd Clean/Soiled Rec - L524 , L527 (E)		360		20	1				20	1		180		Gnd Secure Hold Hdwall - L610 (E)	10
11	IDF L570 - BMS NAE-GA (E)			1000	20	1				20	1			180	Gnd Secure Hold Hdwall - L626 (E)	12
13	IDF L570 - BMS Power Supply (E)	500			20	1				20	1	**720**			Gnd Receptacle Rm L548 (E), **L546**	**14'**
15	R/F Ground Receptacle R/F L548 (E)		1080		20	1				20	1		180		Gnd Elect Rm Rec - L575 (E)	16
17	R/F Ground Receptacle R/F L548 (E)			720	20	1				20	1			360	MRI Hold RM L513 Recep (E)	18
19	IDF L570 - BMS Mac2-CP (E)	960			20	1				20	1	1180			Rec Eq Col , CT Rm L552/L558 (E)	20
21	Spare				20	1				20	1		180		Pyxis CT Rm L552 (E)	22
23	BMS Panels Ground Fibcr - L627 (E)			1200	20	1				20	1			180	Pyxis CT Rm L558 (E)	24
25	Rec Pat Holding L533A (E)	540			20	1				20	1	180			Ground R/F Pyxis Machine - L546A (E)	26
27	Rec Ultra-Sound , L543, L547 (E)		360		20	1				20	1		1200		Anesthesia Machine MRI Rm L512 (E)	28
29	Rec Rm L554 (E)			180	20	1				20	1			360	Philips Rec Rm L548 (E)	30
31	Door Hardware L512 (E)	180			20	1				20	1	180			Compressor Rm L512 (E)	32
33	Warn Lgt Cit Pnl CT Rm L552/L558 (E)		360		20	1				20	1		360		Phil Remote Status Pnl Rm L511 (E)	34
35	Philips Equipment Rm L511 (E)			360	20	1				20	1			360	GE Equipment Rm L558B (E)	36
37	Philips Injector Rm L511 (E)	360			20	1				20	1	360			Gnd L555 & L557 Shunt Trip + Lts (E)	38
39	Philips Ambient Lgt Cab L513A (E)		310		20	1				20	1		420		Philips Injector Rm L513A (E)	40
41	Philips Equipment Rm L513A (E)			360	20	1				20	1			360	Monitor Rm L558B (E)	42

CONNECTED LOAD (VA):	18890	CONNECTED LOAD PER PHASE (VA):	6600	5290	7000
DELETED LOAD (VA):	360	DELETED LOAD PER PHASE (VA):	**360**		
ADDED LOAD (VA):	360	ADDED LOAD PER PHASE (VA):			
TOTAL 3 PHASE CONNECTED LOAD (VA):	**18890**	TOTAL LOAD PER PHASE (VA):	6600	5290	7000
TOTAL 3 PHASE CONNECTED LOAD (AMPS):	**52.4**	TOTAL LOAD PER PHASE (AMPS):	55.0	44.1	58.3

REMARKS:
***ADDED/REVISED #21039 MGH HRB NUCLEAR MEDICINE SUITE 08/05/2022 EG**

SHEET:
JOB NAME:
JOB NUMBER: DATE: BY:

PANEL: GNCL2 — SYSTEM: CRITICAL BRANCH

VOLTAGE: 120/208 | PHASE: 3 | WIRE: 4 | BUSSING: 225A | MOUNTING: SURFACE
TYPE: Eaton PRL-1a | AIC RATING: | LOCATION: ELECTRICAL RM L575
MAIN BREAKER OR LUGS: MLO | FEEDER: See One-Line Diagram | FEEDER BREAKER: See One-Line Diagram

OKT NO.	LOAD	Load in Volt-Amperes per Phase A	B	C	Circuit Breaker Amp	Pole	PHASE A	B	C	Circuit Breaker Amp	Pole	Load in Volt-Amperes per Phase A	B	C	LOAD	OKT NO.
1	Rec - Rm L546A	720			20	1				20	1	360			Rec - Rm L546B, L546C	2
3	Rec - Rm L546A, L546B		720		20	1				20	1		360		Rec - Rm L546C	4
5	Rec - Rm L546A & B Physio Monitor			360	20	1				20	1			540	Rec - Rm L546C	6
7	Rec - Rm L546E	720			20	1				20	1	1380			Rec - Rm L546C Microwave	8
9	Rec - Rm L546E Camera		360		20	1				20	1		360		Rec - Rm L546D	10
11	Rec - Rm L546E Adjustable Table			900	20	1				20	1			360	Rec - Rm L546D	12
13	Rec - Rm L546D	540			20	1				20	1	360			Rec - Rm L546D	14
15	Rec - Rm L546D		360		20	1				20	1		360		Rm L546D CT Warning Light	16
17	Rec - Rm L546D Warming Cabinet			840	20	1				20	1				Spare	18
19	Spare				20	1				20	1				Spare	20
21	Spare				20	1				20	1				Spare	22
23	Spare				20	1				20	1				Spare	24
25	Spare				20	1				20	1				Spare	26
27	Spare				20	1				20	1				Spare	28
29	Spare				20	1				20	1				Spare	30
31	Spare														Spare	32
33	Spare														Spare	34
35	Spare														Spare	36
37	Spare														Spare	38
39	Spare														Spare	40
41	Spare														Spare	42

TOTAL 3 PHASE CONNECTED LOAD (VA):	**9600**	CONNECTED LOAD PER PHASE (VA):	4080	2520	3000
TOTAL 3 PHASE CONNECTED LOAD (AMPS):	**26.6**	CONNECTED LOAD PER PHASE (AMPS):	34.0	21.0	25.0

*DEMAND LOAD CALCULATION (IF REQUIRED):

LIGHTING LOADS	1.25	x 0	=	0
CONTINUOUS LOADS (OTHER)	1.25	x 0	=	0
RECEPTACLES (FIRST 10000VA)	1.00	x 9600	=	9600
RECEPTACLES (OVER 10000VA)	0.50	x 0	=	0
NONCONTINUOUS LOADS (OTHER)	1.00	x 0	=	0
TOTAL N.E.C. DEMAND LOAD (VA):				**9600**
TOTAL N.E.C. DEMAND LOAD (AMP):				**26.6**

REMARKS:

SHEET:
JOB NAME: HRB Nuclear Medicine Suite Relocation
JOB NUMBER: 21039 DATE: Aug-22 BY: EG

PANEL: GNLH1 (E) — SYSTEM: LIFE SAFETY BRANCH

VOLTAGE: 277/480 | PHASE: 3 | WIRE: 4 | BUSSING: 100A | MOUNTING: SURFACE
TYPE: Eaton PRL3A | AIC RATING: 25,000 | LOCATION: ELECTRICAL RM L575
MAIN BREAKER OR LUGS: 70A | FEEDER: SEE SINGLE LINE DIAGRAM | FEEDER BREAKER: 70A

OKT NO.	LOAD	Load in Volt-Amperes per Phase A	B	C	Circuit Breaker Amp	Pole	PHASE A	B	C	Circuit Breaker Amp	Pole	Load in Volt-Amperes per Phase A	B	C	LOAD	OKT NO.
1	Ltg Gen Rm L701 (E)	1690			20	1				20	1	**1802**			Ltg - L500,01,05,15,25,30,1,35,40 (E), **L5**	**2"**
3	East Site Lighting (E)		690		20	1				20	1		1120		Ltg - L505,60,61A,64,L650,50A (E)	4
5	Spare									20	1			840	Ltg Elev - L500,L600,L609 (E)	6
7	Space									20	1				Spare	8
9	Space									20	1				Spare	10
11	Space													300	QSN Ltg Control Panel (E)	12
13	Space														Space	14
15	Space														Space	16
17	Space														Space	18
19	Space														Space	20
21	Space														Space	22
23	Space														Space	24
25	Space														Space	26
27	Space														Space	28
29	Space														Space	30
31	Space														Space	32
33	Space														Space	34
35	Space														Space	36
37	Space														Space	38
39	Space														Space	40
41	Space														Space	42

CONNECTED LOAD (VA):	6400	CONNECTED LOAD PER PHASE (VA):	3450	1810	1140
DELETED LOAD (VA):	0	DELETED LOAD PER PHASE (VA):			
ADDED LOAD (VA):	42	ADDED LOAD PER PHASE (VA):	**42**		
TOTAL 3 PHASE CONNECTED LOAD (VA):	**6442**	TOTAL LOAD PER PHASE (VA):	3492	1810	1140
TOTAL 3 PHASE CONNECTED LOAD (AMPS):	**7.7**	TOTAL LOAD PER PHASE (AMPS):	12.8	6.5	4.1

REMARKS:
***ADDED/REVISED #21039 MGH HRB NUCLEAR MEDICINE SUITE**

SHEET:
JOB NAME:
JOB NUMBER: DATE: BY:

PANEL: GNEL (E) — SYSTEM: EQUIPMENT BRANCH

VOLTAGE: 120/208 | PHASE: 3 | WIRE: 4 | BUSSING: 100 Amp | MOUNTING: Surface
TYPE: Eaton PRL1a | AIC RATING: | LOCATION: ELECTRICAL RM L575
MAIN BREAKER OR LUGS: MLO | FEEDER: See One-Line Diagram | FEEDER BREAKER: See One-Line Diagram

OKT NO.	LOAD	Load in Volt-Amperes per Phase A	B	C	Circuit Breaker Amp	Pole	PHASE A	B	C	Circuit Breaker Amp	Pole	Load in Volt-Amperes per Phase A	B	C	LOAD	OKT NO.
1	F-FCU 1-4 - IDF L570 (E)	1560			20	3				20	1	1100			Level 1 North FSD (E)	2
3			1560							20	1		700		Level 1 North FSD (E)	4
5				1560						20	1			600	Basement North FSD (E)	6
7	F-FCU G-1 - IDF L570 (E)	60			20	3				20	1	700			Basement North FSD (E)	8
9			60							20	1		1300		Level G North FSD (E)	10
11				60						20	1			950	Level G North FSD (E)	12
13	FCU G-2 - MRI L513A (E)	1320			20	3				20	1	**1700**			Level G North FSD (E)	**14'**
15			1320							20	1		180		Basement P3 Elev Rec (E)	16
17				1320						20	1			540	Lvl G P1, P3, P3 Elev Smoke Grd (E)	18
19	CC1 Elev Pit Rec/Lts	260			20	1				20	1	540			Lvl G P1, P3, P3 Elev Smoke Grd (E)	20
21	Bsmt CC1 , CC2 Smoke Guard		360		20	1				20	1		1440		Lvl 1 P1, P3, S1, S2, S3 Core Elev S/G	22
23	MH1 Core Pit Rec/Lts			260	20	1				20	1			1100	Level G North FSD - L560 (E)	24
25	Bsmt MH1 Elev Smoke Guard (E)	180			20	1				20	1	850			Level 1 North FSD (E)	26
27	Spare				20	1				20	1		540		Bsmt Door - B555 (E)	28
29	Bsmt Air Compressor - B511 (E)			370	20	2				20	1			360	Bsmt Door - B587 (E)	30
31		370								20	1	720			Bsmt Door - B581 (E)	32
33	S3 Core Pit/Lts - B603 (E)		220		20	1				20	1		470		Level G Door - L533 (E)	34
35	S1 Core Pit/Lts - B603 (E)			220	20	1				20	1			180	Bsmt P2 Elev Rec (E)	36
37	S2 Core Pit/Lts - B603 (E)	220			20	1				20	1	460			Bsmt P3 Rec Pt1, P2, P3 Elev Lts (E)	38
39	CC2 Elev Pit Rec/Lts		220		20	1				20	1				Spare	40
41	Spare				20	1									Space	42

CONNECTED LOAD (VA):	25630	CONNECTED LOAD PER PHASE (VA):	9740	8370	7520
DELETED LOAD (VA):	0	DELETED LOAD PER PHASE (VA):			
ADDED LOAD (VA):	300	ADDED LOAD PER PHASE (VA):	**300**		
TOTAL 3 PHASE CONNECTED LOAD (VA):	**25930**	TOTAL LOAD PER PHASE (VA):	10040	8370	7520
TOTAL 3 PHASE CONNECTED LOAD (AMPS):	**72.0**	TOTAL LOAD PER PHASE (AMPS):	83.7	69.8	62.7

REMARKS:
***ADDED/REVISED #21039 MGH HRB NUCLEAR MEDICINE SUITE 08/05/2022 EG**

SHEET:
JOB NAME:
JOB NUMBER: DATE: BY:

PANEL: GNNH (E) — SYSTEM: NORMAL BRANCH

VOLTAGE: 277/480 | PHASE: 3 | WIRE: 4 | BUSSING: 250A | MOUNTING: SURFACE
TYPE: Eaton | AIC RATING: 35,000 | LOCATION: ELECTRICAL RM L575
MAIN BREAKER OR LUGS: 250A | FEEDER: 3"-#MCMCM, 1#4G | FEEDER BREAKER: 250A

OKT NO.	LOAD	Load in Volt-Amperes per Phase A	B	C	Circuit Breaker Amp	Pole	PHASE A	B	C	Circuit Breaker Amp	Pole	Load in Volt-Amperes per Phase A	B	C	LOAD	OKT NO.
1	Ltg Coor - L505,30,30,1,35,40,45,99 (E)	1260			175	3				125	3	22840			GNNT1 (E)	**2"**
3	Ltg Elev Corr - L500,L600,02,09 (E)		1320										31310			4
5	Ltg N-L501,22,31,32,33,34,36,41,51,53,L633(E			2270										23980		6
7	Ltg IL511,12,13,15,21,24,26,28,29,40,42 (E), **L54**	**2154**								20	1	180			Rec Meditation Garden (E)	8
9	Ltg Pub Corr - L560,60B,L651 (E)		1220												Space	10
11	Ltg - L561,561A,562,563,563A,B,C,S (E)			2490											Space	12
13	Ltg Gen Room	530													Space	14
15	QSN Ltg Control Panel		540												Space	16
17	Space														Space	18
19	Space														Space	20
21	Space														Space	22
23	Space														Space	24
25	Space														Space	26
27	Space														Space	28
29	Space														Space	30
31	Space														Space	32
33	Space														Space	34
35	Space														Space	36
37	Space														Space	38
39	Space														Space	40
41	Space														Space	42

CONNECTED LOAD (VA):	90560	CONNECTED LOAD PER PHASE (VA):	27430	34390	28740
DELETED LOAD (VA):	526	DELETED LOAD PER PHASE (VA):	**526**		
ADDED LOAD (VA):	60	ADDED LOAD PER PHASE (VA):	**60**		
TOTAL 3 PHASE CONNECTED LOAD (VA):	**90094**	TOTAL LOAD PER PHASE (VA):	26964	34390	28740
TOTAL 3 PHASE CONNECTED LOAD (AMPS):	**108.4**	TOTAL LOAD PER PHASE (AMPS):	97.3	124.2	103.8

REMARKS:
***ADDED/REVISED #21039 MGH HRB NUCLEAR MEDICINE SUITE 08/05/2022 EG**

SHEET:
JOB NAME:
JOB NUMBER: DATE: BY:

PANEL: GNNL2 (E) — SYSTEM: NORMAL BRANCH

VOLTAGE: 120/208 | PHASE: 3 | WIRE: 4 | BUSSING: 225 Amp | MOUNTING: Surface
TYPE: Eaton PRL1a | AIC RATING: | LOCATION: ELECTRICAL RM L575
MAIN BREAKER OR LUGS: MLO | FEEDER: See One-Line Diagram | FEEDER BREAKER: See One-Line Diagram

OKT NO.	LOAD	Load in Volt-Amperes per Phase A	B	C	Circuit Breaker Amp	Pole	PHASE A	B	C	Circuit Breaker Amp	Pole	Load in Volt-Amperes per Phase A	B	C	LOAD	OKT NO.
1	Ground Corridor Rec - L505,40,45 (E)	900			20	1				20	1	1080			Ground Control Rec - L511(E)	2
3	Ground Corridor Rec - L507,15,42,42N(E)		900		20	1				20	1		1620		Ground MRI Rec - L512 (E)	4
5	Ground Control Room Rec - L511(E)			1560	20	1				20	1			720	Ground MRI Rec - L513,13A,44 (E)	6
7	Ground Control Room Rec - L511(E)	360			20	1				20	1	**360**			**Ground Rec - L546F, G**	**8"**
9	Ground Control Room Ingrdor - L511(E)		660		20	1				20	1		**720**		**Ground Rec - L546**	**10'**
11	Ground Control Room MRI Equip - L511(E)			180	20	1				20	1			**720**	**Ground Rec - L546**	**12'**
13	**Ground Rec - L546**	**360**			20	1				20	1	540			Ground IV Prep Rm Rec - L554,56 (E)	14
15	**Ground Rec - L546**		**900**		20	1				20	1		1080		Ground CT Rec - L552,52A,58,58A,59(E)	16
17	Ground R/F Receptacle - L546A,48 (E)			720	20	1				20	1			360	Ground CT Injector - L552 (E)	18
19	Ground Receptacle- L523,25,26,28,29(E)	1440			20	1				20	1	1080			Ground Tech/Control Rec - L558B (E)	20
21	Ground Warming Cabinet - L527(E)		1680		20	1				20	1		1080		Ground Tech/Control Rec - L558B (E)	22
23	Ground E2 Sleep Rec - L569 (E)			720	20	1				20	1			1260	Ground Tech/Control Rec - L558B (E)	24
25	Spare in Room L558B (E)				20	1				20	1	360			Gnd MRI Ambient Ltg Contr - L515 (E)	26
27	Cove Lighting L558B (E)		180		20	1				20	1		360		Rm L558B Receptacle (E)	28
29	Receptacle CT Equip Rm L552B & L558C			360	20	1				20	1			360	Rm L558B Receptacle (E)	30
31	Space														Space	32
33	Space														Space	34
35	Space														Space	36
37	Space														Space	38
39	Space														Space	40
41	Space														Space	42

CONNECTED LOAD (VA):	**23880**	CONNECTED LOAD PER PHASE (VA):	7200	9540	7140
DELETED LOAD (VA):	**4320**	DELETED LOAD PER PHASE (VA):	**1440**	**1980**	**900**
ADDED LOAD (VA):	**3060**	ADDED LOAD PER PHASE (VA):	**720**	**1620**	**720**
TOTAL 3 PHASE CONNECTED LOAD (VA):	**22620**	TOTAL LOAD PER PHASE (VA):	6480	9180	6960
TOTAL 3 PHASE CONNECTED LOAD (AMPS):	**62.8**	TOTAL LOAD PER PHASE (AMPS):	54.0	76.5	58.0

REMARKS:
***ADDED/REVISED #21039 MGH HRB NUCLEAR MEDICINE SUITE 08/05/2022 EG**

SHEET:
JOB NAME:
JOB NUMBER: DATE: BY:

PANEL: MP — SYSTEM: CRITICAL BRANCH

VOLTAGE: 277/480 | PHASE: 3 | WIRE: 4 | BUSSING: 250 | MOUNTING: FLUSH
TYPE: Eaton PRL3X | AIC RATING: 35,000 | LOCATION: SPECT/CT RM L546D
MAIN BREAKER OR LUGS: 100A | FEEDER: See One-Line Diagram | FEEDER BREAKER: See One-Line Diagram

OKT NO.	LOAD	Load in Volt-Amperes per Phase A	B	C	Circuit Breaker Amp	Pole	PHASE A	B	C	Circuit Breaker Amp	Pole	Load in Volt-Amperes per Phase A	B	C	LOAD	OKT NO.
2	1 Surge Protection Device	250			30	3				80	3	1167			Spect / CT Rm L546D	2
	3		250										1167			4
	5			250										1167		6
	7 Tranformer XF Rm L546D	2500			20	2										8
	9 Space		2500												Space	10
	11 Space														Space	12

TOTAL 3 PHASE CONNECTED LOAD (VA):	**9251**	CONNECTED LOAD PER PHASE (VA):	3917	3917	1417
TOTAL 3 PHASE CONNECTED LOAD (AMPS):	**11.1**	CONNECTED LOAD PER PHASE (AMPS):	14.1	14.1	5.1

*DEMAND LOAD CALCULATION (IF REQUIRED):

LIGHTING LOADS	1.25	x 0	=	0
CONTINUOUS LOADS (OTHER)	1.25	x 0	=	0
RECEPTACLES (FIRST 10000VA)	1.00	x 0	=	0
RECEPTACLES (OVER 10000VA)	0.50	x 0	=	0
NONCONTINUOUS LOADS (OTHER)	1.00	x 9251	=	9251
TOTAL N.E.C. DEMAND LOAD (VA):				**9251**
TOTAL N.E.C. DEMAND LOAD (AMP):				**11.1**

REMARKS:

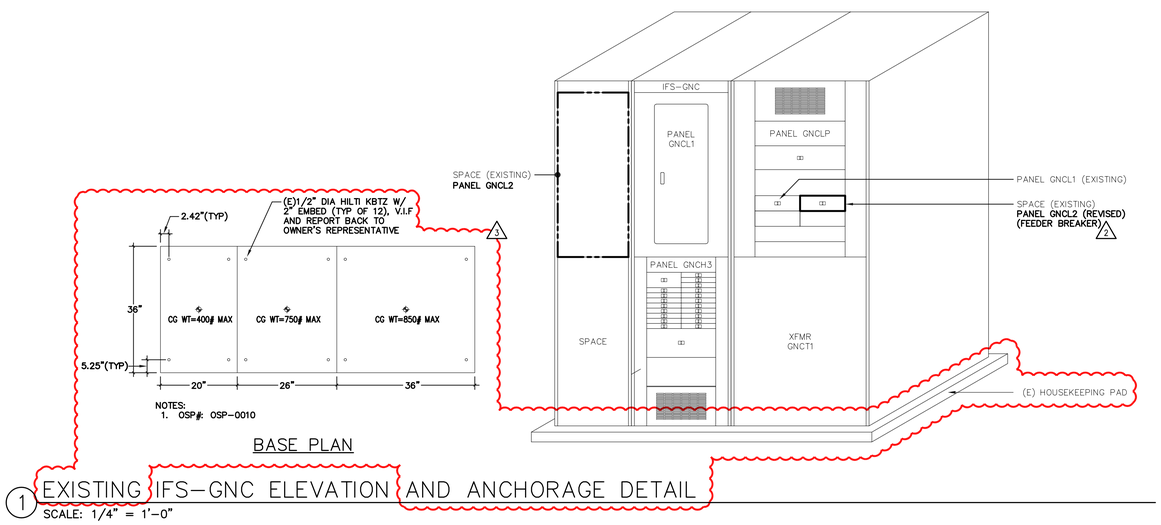
JOB NAME: HRB Nuclear Medicine Relocation
JOB NUMBER: 21039 DATE: BY: EG

LOAD SUMMARY (277/480V): (E) DIST PANEL GNCH2

PEAK 30-DAY AMMETER READING (x125%)*: 33.75 A
REMOVED LOAD: N/A
ADDED LOAD: 11.1 A
TOTAL LOAD: 44.85 A
EXISTING FEEDER: 3"-4#350KCM, 1#4G
EXISTING OVERCURRENT PROTECTION: 300A-3P
NO OVERLOAD CONDITION WILL EXIST ON DIST PANEL GNCH2.
*** RECORDED FROM 06/20/22 TO 07/21/22.**

LOAD SUMMARY (480V): (E) SWITCHBOARD RNEH1

EXISTING LOAD: 1504.6 A
REMOVED LOAD: N/A
ADDED LOAD: 4.8 A
TOTAL LOAD: 1509.4 A
EXISTING FEEDER: (5)3½"-3#400KCM, 1#4/0 G
EXISTING OVERCURRENT PROTECTION: 1600A-3P
NO OVERLOAD CONDITION WILL EXIST ON SWITCHBOARD RNEH1.

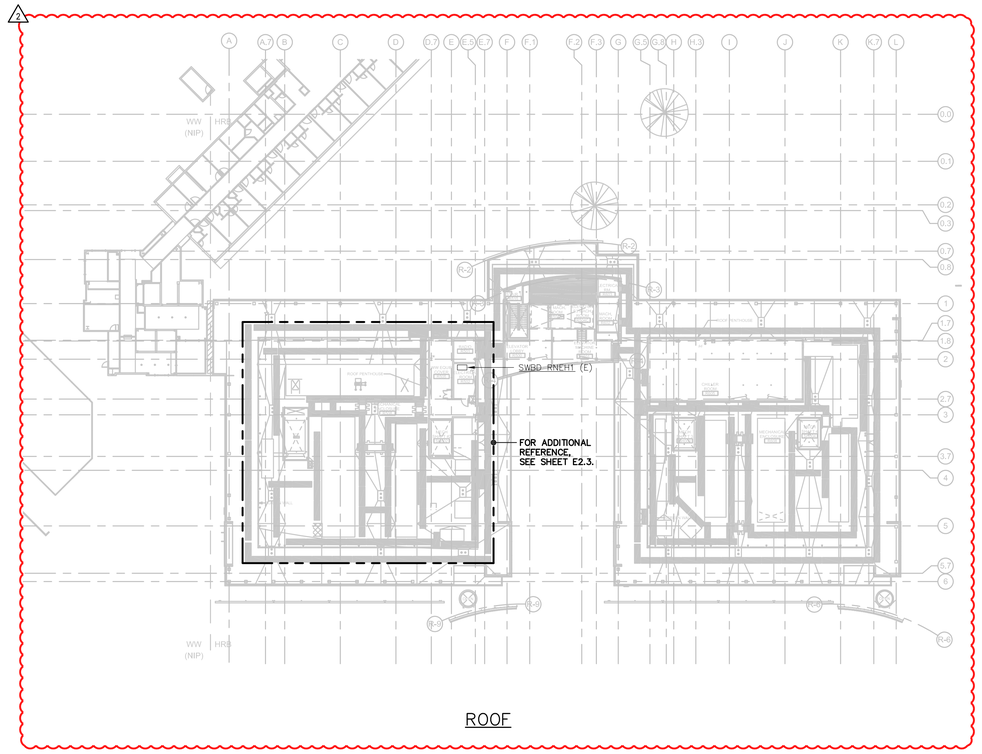


1 EXISTING IFS-GNC ELEVATION AND ANCHORAGE DETAIL
SCALE: 1/4" = 1'-0"

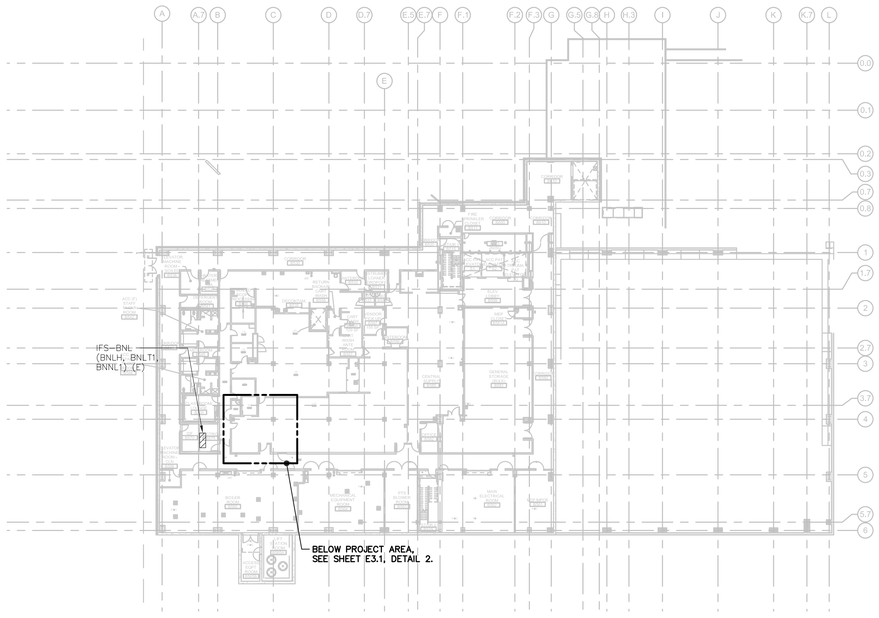
Architect
SK

SHEET NOTES

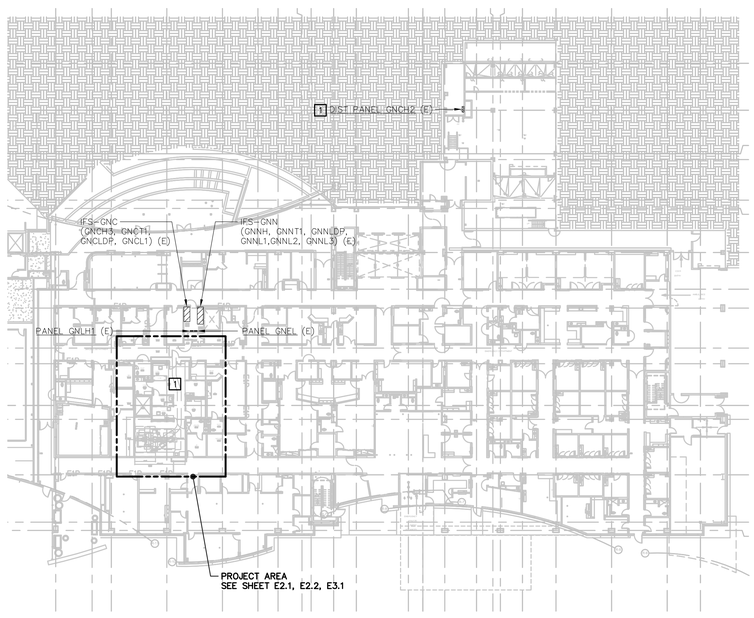
1 PER RECORD DRAWINGS, EXISTING 3½ INCH CONDUIT IS PROVIDED FROM SHELL SPACE TO DIST PANEL GNCH2 FOR FUTURE USE. FIELD VERIFY, EXTEND AND PROVIDE NEW AS REQUIRED.



ROOF



BASEMENT LEVEL



GROUND LEVEL

1 LOCATION PLANS

SCALE: 1/32" = 1'-0"

Architect

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800 Halght Street
San Francisco, CA 94117
Office: 415.552.3600

Owner

marin health Medical Center
250 BON AIR ROAD,
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Consultant

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SKA Project Number

2136

OSHPD Number

HCAI# S221296-21-00

HCAI seal/signature

REVIEWED IN ACCORDANCE WITH THE REQUIREMENTS OF 7-24, CCR
APPROVED
Department of Health Care Access & Information
Office of Statewide Hospital Planning & Development
2/13/2023, 11:24:21 PM
S221296-21-00
Pedar Pomme

Seal/Signature

REGISTERED ARCHITECT KEVIN MCCLAIN C37097 EXP. 9/30/2023 STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER PAUL L O'CONNELL No. E15435 EXP. 6/30/2023 ELECTRICAL STATE OF CALIFORNIA

Issued for

HCAI SUBMITTAL

2	DESIGN CHANGE	12/09/2022

Drawn by KT

Checked by PO

Project Name

HOSPITAL REPLACEMENT BUILDING-
NUCLEAR MEDICINE SUITE RELOCATION

Sheet Title

LOCATION PLANS

Date 08/05/2022

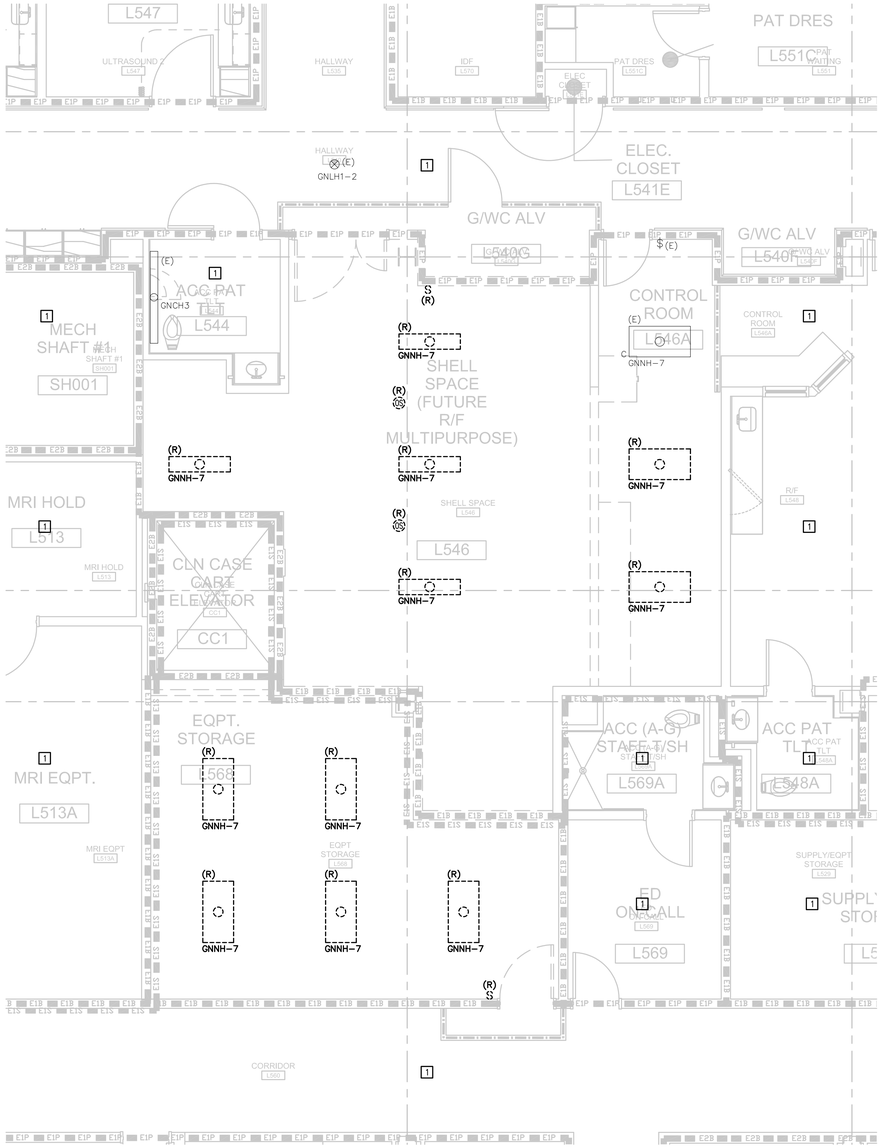
Scale AS NOTED

Sheet Number

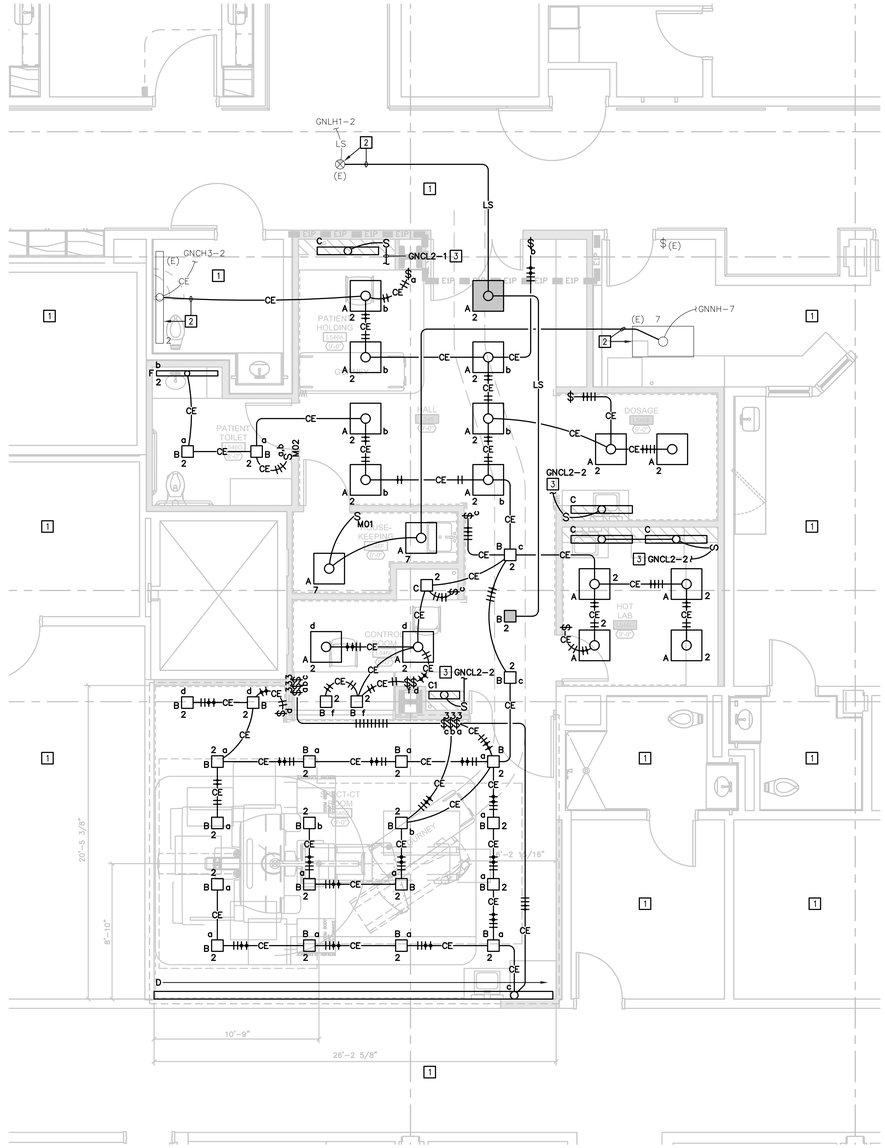
E2.0

30 X 42

NAME: G:\21039 MGH HRB Nuclear Medicine Suite\CAD-Revit\Electrical\ E20loca.dwg DATE: DEC 07, 2022 TIME: 2:03 PM SCALE: 1=1 SIZE: 42"X30" BY:NL



EXISTING/REMOVAL



REVISED/FINAL

1 PARTIAL GROUND FLOOR PLANS – LIGHTING

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

LUMINAIRE SCHEDULE DETAIL 2

TYPE	DESCRIPTION	LAMP & VOLTAGE	MANUFACTURER & CATALOG NO.
A	2'x2' RECESSED LED LUMINAIRE WITH EXTRUDED ALUMINUM FRAME, HIGH OPTICAL GRADE ACRYLIC LENSES. FOR GRID/LAY-IN CEILING MOUNTING. 0-10V, 10% DIMMING.	LED 3000 LUMENS 3500K UNV 30.4W	COPPER LIGHTING #22EN-LD1-30-UNV-L835-CD1
B	RECESSED 3.5" LED DOWNLIGHT PAINTED WHITE FLANGE TRIM, MEDIUM FLOOD 60 DEGREES, 0-10V, 10% DIMMING.	LED 1100 LUMENS 3500K 277 12W	FOCAL POINT #FLC3D-RO-1100L-277-LD1-LC3-RO-1100L-35K-DNT-FL-CD-WP
C	4' UNDER CABINET LED LUMINAIRE WITH EXTRUDED ALUMINUM HOUSING, FROST ACRYLIC LENS, AND END CAPS/COVERS.	LED 2003 LUMENS 3500K 120 22W	KENALL #MAUCLED-I-MW-20L35K-48-277
C1	SIMILAR TO TYPE "C" EXCEPT 24 INCHES.	LED 1317 LUMENS 3500K 120 15W	KENALL #MAUCLED-I-MW-11L35K-24-277
D	LED COVE LIGHT. WITH LOW COPPER CONTENT EXTRUDED ALUMINUM HOUSING.	LED 2045 LUMENS 3500K 277 19W	LUMENPULSE #LCS2 RO-277-*-35K-FR-WH-DIM *=PROVIDE LENGTH AS SHOWN ON PLAN
F	2.5" NOMINAL APERTURE RECESSED MOUNT LINEAR WARM WHITE LED FIXTURE WITH EXTRUDED ALUMINUM HOUSING, ACRYLIC LENS, 0-10V DIMMING.	LED 250 LUMEN/FT 3500K UNV 16W/FT	FOCAL POINT #FSM2L-FL-625LF-35K-10-UNV-LD1 XF2-WH-* *=PROVIDE LENGTH AS SHOWN ON ARCH PLAN

SHEET NOTES

1. MAINTAIN LIGHTING SERVICES OUTSIDE OF THE CONSTRUCTION AREA. PROVIDE SUPPLEMENTAL WIRING AS REQUIRED. VERIFY ALL EXISTING CONDITION IN FIELD.
2. INTERCEPT EXISTING LIGHT BRANCH CIRCUIT CURRENTLY SERVING THE AREA AND CONNECT COMPLETE TO NEW LIGHTING SHOWN. PROVIDE ALL NECESSARY WIRING ADDITIONS AND MODIFICATION AS REQUIRED.
3. CONNECT TO LOCAL RECEPTACLE CIRCUIT. SEE E2.2 FOR CONTINUATION.

Architect

SKA SMITH-KARNG ARCHITECTURE
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San Francisco, CA 94117
Office: 415.552.3600

Owner

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SKA Project Number

2136

OSHPD Number

HCAI# S221296-21-00

HCAI seal/signature

REVIEWED IN ACCORDANCE WITH THE REQUIREMENTS OF 7 CCR
APPROVED
Department of Health Care Access & Information
Office of Statewide Hospital Planning & Development
2/13/2023, 11:24:21 PM
S221296-21-00
Pedar Pamme

Seal/Signature

LICENSED ARCHITECT KRISTIN MCCLAIN C37097 EXP. 9/30/2023 STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER PAUL L O'CONNELL No. E15435 EXP. 8/31/2023 ELECTRICAL STATE OF CALIFORNIA

Issued for

HCAI SUBMITTAL

2	DESIGN CHANGE	12/09/2022

Drawn by KT

Checked by PO

Project Name

HOSPITAL REPLACEMENT BUILDING-
NUCLEAR MEDICINE SUITE RELOCATION

Sheet Title

PARTIAL GROUND FLOOR PLANS - LIGHTING

Date 08/05/2022

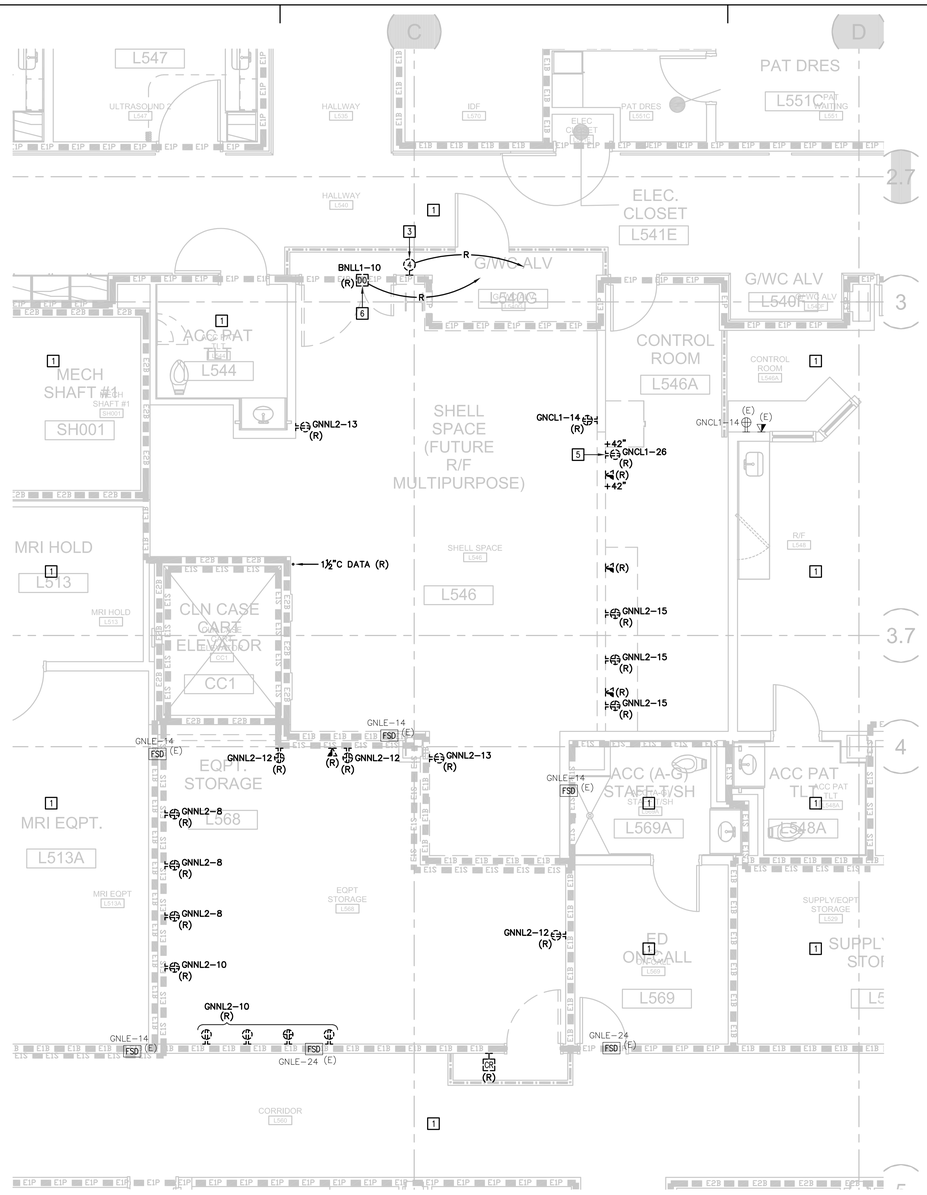
Scale AS NOTED

Sheet Number

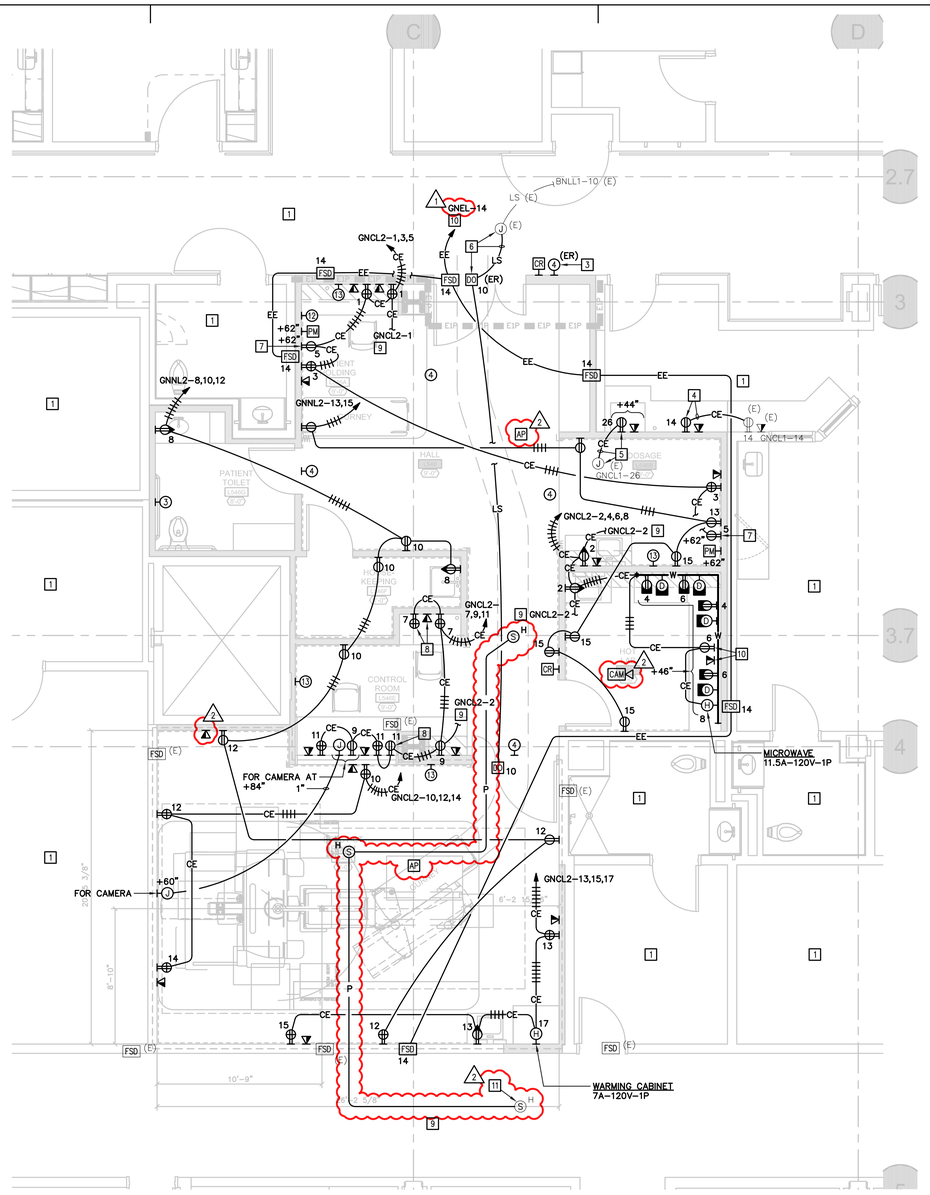
E2.1

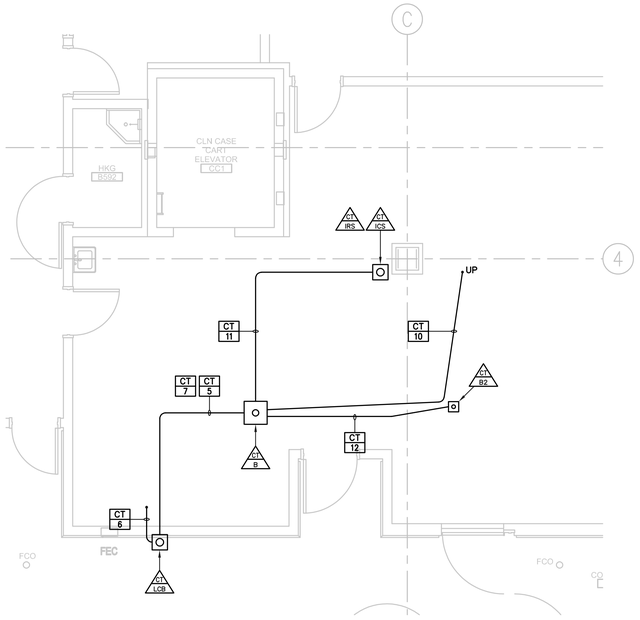
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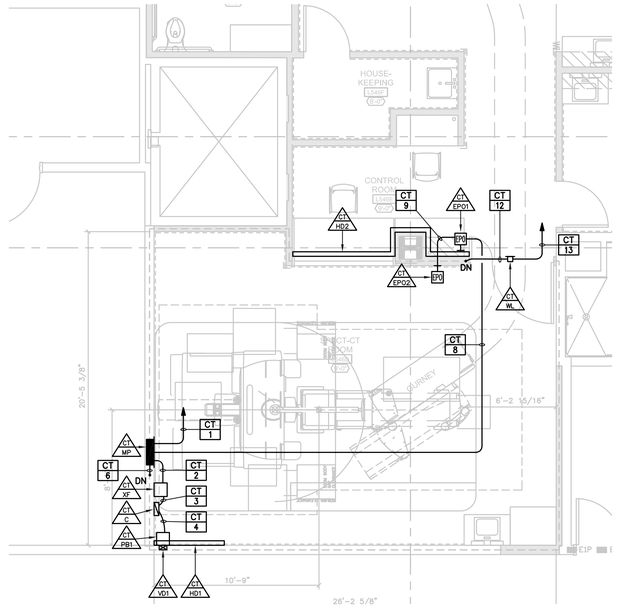
EXISTING/REMOVAL [2]





2 SPECT & CT ROOM FLOOR PLAN – BELOW FLOOR [1]

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



1 SPECT & CT ROOM FLOOR PLAN – ABOVE FLOOR [1]

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

SHEET NOTES

[1] PROVIDE DETAILED SHOP DRAWING SUBMITTAL OF ALL ITEMS IN CEILING SPACE INCLUDING ELECTRICAL LIGHTING/BOXES, CONDUITS, MECHANICAL DUCTWORK/PIPING AND STRUCTURAL SUPPORT SYSTEM. PROVIDE ADJUSTMENTS TO ITEMS AS REQUIRED TO PERMIT A COORDINATED INSTALLATION.

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OSHPD Number

HCAI# S221296-21-00

HCAI seal/signature

REVIEWED IN ACCORDANCE WITH THE REQUIREMENTS OF 7-24, CCR
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Department of Health Care Access & Information
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2/13/2023, 11:24:21 PM
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Seal/Signature

LICENSED ARCHITECT C37097 EXP. 9/30/2023 STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER PAUL J. O'CONNELL No. E15435 EXP. 6/30/2023 ELECTRICAL STATE OF CALIFORNIA

Issued for

HCAI SUBMITTAL

Drawn by KT

Checked by PO

Project Name

HOSPITAL REPLACEMENT BUILDING-
NUCLEAR MEDICINE SUITE RELOCATION

Sheet Title

SPECT & CT ROOM FLOOR PLANS - ABOVE AND BELOW FLOOR

Date 08/05/2022

Scale AS NOTED

Sheet Number

E3.1

30 X 42

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SPECT & CT CABLE SCHEDULE — DETAIL 3

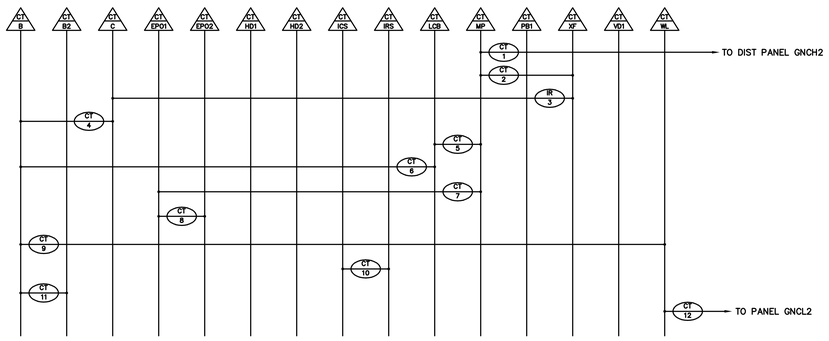
TAG	FROM	TO	VIA	WIRING
CT 1	DISTRIBUTION PANEL	CT MP	CT 1	SEE ONE LINE DIAGRAM ON SHEET E0.1
CT 2	CT MP	CT XF	CT 2	SEE ONE LINE DIAGRAM ON SHEET E0.1
CT 3	CT XF	CT C	CT 3	SEE ONE LINE DIAGRAM ON SHEET E0.1
CT 4	CT C	CT B	CT 4, CT PB1, CT VD1, CT HB1, CT LCB, CT 5	SEE ONE LINE DIAGRAM ON SHEET E0.1
CT 5	CT MP	CT LCB	CT 6, CT PB1, CT VD1, CT HD1	4#2, 1#8G
CT 6	CT LCB	CT B	CT 7	3#2, 1#2N, 1#2G
CT 7	CT MP	CT EPO1	CT 8	2#12, 1#12G
CT 8	CT EPO1	CT EPO2	CT 9	2#12, 1#12G
CT 9	CT B	CT WL	CT 10	2#12
CT 10	CT B	CT ICS	CT 11	WIRING PROVIDED BY SIEMENS
CT 11	CT B	CT B2	CT 12	WIRING PROVIDED BY SIEMENS
CT 12	CT WL	PANEL GNCH2	CT 13	2#12

SPECT & CT RACEWAY SCHEDULE — DETAIL 2

TAG	SIZE	DESTINATION	REMARKS
CT 1	1½"	FROM DISTRIBUTION PANEL TO CT MP.	
CT 2	¾"	FROM CT MP TO CT XF.	
CT 3		FROM CT XF TO CT C.	
CT 4		FROM CT C TO CT PB1.	
CT 5	½"	FROM CT LCB TO CT B.	
CT 6	1¼"	FROM CT MP TO CT PB1.	
CT 7	1¼"	FROM CT LCB TO CT B.	
CT 8	¾"	FROM CT MP TO CT EPO1.	
CT 9	¾"	FROM CT EPO1 TO CT EPO2.	
CT 10	½"	FROM CT B TO CT WL.	
CT 11	(2) 3"	FROM CT B TO CT ICS.	
CT 12	3"	FROM CT B TO CT B2.	
CT 13	¾"	FROM CT WL TO PANEL GNCH2.	

SPECT & CT EQUIPMENT SCHEDULE — DETAIL 1

TAG	MTG. HT.	DESCRIPTION
CT B	CEILING SPACE BELOW FLOOR	GANTRY CABLE ACCESS: PROVIDE 18"SQ.x8"D PULLBOX WITH REMOVABLE BOTTOM SCREW-IN COVER AND AT LEAST 12" CLEARANCE BELOW FOR BOX ACCESS. PROVIDE 5"ø RIGID CONDUIT FROM TOP OF BOX TO FLUSH WITH FINISH FLOOR ABOVE AND TERMINATE WITH BUSHING. CONDUIT SHOULD BE CENTERED IN BOTTOM OF GANTRY IN SPECT-CT ROOM.
CT B2	CEILING SPACE BELOW FLOOR	PHS CABLE ACCESS UNDER PHS: PROVIDE 8"SQ.x8"D PULLBOX WITH REMOVABLE BOTTOM SCREW-IN COVER AND AT LEAST 12" CLEARANCE BELOW FOR BOX ACCESS. PROVIDE 3"ø RIGID CONDUIT FROM TOP OF BOX TO FLUSH WITH FINISH FLOOR ABOVE AND TERMINATE WITH BUSHING.
CT C	+78" TO TOP	TRANSFORMER DISCONNECT: PROVIDE WITH NEMA 1 ENCLOSURE FLUSH MOUNT ON WALL.
CT EPO1, CT EPO2	60"AFF TO ℄	EMERGENCY POWER OFF: PROVIDE RED PUSHBUTTON WITH TWO FORM C CONTACTS, PROTECTIVE COVER/SHROUD, STAINLESS STEEL COVER PLATE AND LABEL WITH RED LETTERING WHICH INDICATE "EMERGENCY STOP". PROVIDE FLUSH MOUNTED 4"SQ. BACKBOX (DEPTH AS REQUIRED). TIE EPO TO THE SHUNT TRIP ACCESSORY OF THE MAIN CIRCUIT BREAKER OF PANELBOARD. FOR ADDITIONAL REQUIREMENTS, SEE DETAIL 1 SHEET E4.1.
CT HD1	ON FLOOR	HORIZONTAL WALL DUCT: PROVIDE 6"x3½"D HORIZONTAL DUCT SURFACE MOUNTED ON FINISHED WALL AT FLOOR LINE. PROVIDE DUCT WITH REMOVABLE FRONT SCREW-ON COVERS. TIE INTO VERTICAL DUCT CT VD1. PROVIDE GROMMETED OPENING BETWEEN HORIZONTAL DUCT AND VERTICAL DUCT. PROVIDE SEPARATION DIVIDER AND WIRE RETAINERS IN WALL DUCT. TOTAL LENGTH 4'-7" – COORDINATE REQUIREMENTS IN FIELD WITH THE SIEMENS FIELD REPRESENTATIVE.
CT HD2	ON FLOOR	HORIZONTAL WALL DUCT: PROVIDE 6"x3½"D HORIZONTAL DUCT SURFACE MOUNTED ON FINISHED WALL AT FLOOR LINE. PROVIDE DUCT WITH REMOVABLE FRONT SCREW-ON COVERS. TIE INTO VERTICAL DUCT CT ICS. PROVIDE GROMMETED OPENING BETWEEN HORIZONTAL DUCT AND VERTICAL DUCT. PROVIDE SEPARATION DIVIDER AND WIRE RETAINERS IN WALL DUCT. TOTAL LENGTH 14'-11" – COORDINATE REQUIREMENTS IN FIELD WITH THE SIEMENS FIELD REPRESENTATIVE.
CT ICS	CEILING SPACE BELOW FLOOR	IMAGE CONSTRUCTION SYS: PROVIDE 12"SQ.x8"D PULLBOX WITH REMOVABLE BOTTOM SCREW-IN COVER AND AT LEAST 12" CLEARANCE BELOW FOR BOX ACCESS. PROVIDE 6"ø RIGID CONDUIT FROM TOP OF BOX TO FLUSH WITH FINISH FLOOR ABOVE AND TERMINATE WITH BUSHING.
CT IRS	CEILING SPACE BELOW FLOOR	IMAGE CONSTRUCTION SYS: SAME BOX AND OPENING AS CT ICS.
CT LCB	CEILING SPACE BELOW FLOOR	LINE CONNECTION BOX: PROVIDE 12"SQ.x8"D PULLBOX WITH REMOVABLE BOTTOM SCREW-IN COVER AND AT LEAST 12" CLEARANCE BELOW FOR BOX ACCESS. PROVIDE 6"ø RIGID CONDUIT FROM TOP OF BOX TO FLUSH WITH FINISH FLOOR ABOVE AND TERMINATE WITH BUSHING.
CT MP	–	NEW PANELBOARD MP: PROVIDE NEW 100A-277/480V-3PH-4W PANELBOARD. FOR ADDITIONAL REQUIREMENTS, SEE ONE LINE DIAGRAM ON SHEET E0.1.
IR PB1	ABOVE ACCESSIBLE CEILING	PULLBOX #1: PROVIDE 10"SQ.x8"D PULLBOX MOUNTED ABOVE CEILING WITH SIDE REMOVABLE SCREW-IN COVERS. CONNECT TO FLUSH WALL VERTICAL DUCT FROM BELOW AND TO CONDUITS ABOVE CEILING.
CT XF	ABOVE ACCESSIBLE CEILING	STEP DOWN TRANSFORMER: STEP DOWN POWER FOR THE SPECT SYSTEM. COORDINATE LOCATION IN THE FIELD. REFER TO ON DIAGRAM ON SHEET E0.1 FOR OTHER REQUIREMENTS.
CT VD1	–	VERTICAL DUCT: PROVIDE 6"x3½"D VERTICAL DUCT FLUSH MOUNTED IN FINISHED WALL. BEGIN DUCT AT FLOOR LINE AND EXTEND UP WALL INTO CT PB1 AT CEILING SPACE. PROVIDE WITH REMOVABLE FRONT SCREW-ON COVERS. COORDINATE ACCESSIBLE OPENING LOCATIONS IN FIELD TO AVOID OBSTRUCTIONS. PROVIDE SEPARATION DIVIDER AND WIRE RETAINERS IN WALL DUCT – COORDINATE REQUIREMENTS IN FIELD WITH THE SIEMENS FIELD REPRESENTATIVE.
CT WL	CENTERED ABOVE ENTRY DOOR	WARNING LIGHT: PROVIDE 4"SQx2½"D FLUSH MOUNTED BOX WITH TWO GANG RING. WARNING LIGHT TO BE A CORRIDOR DOME STATION WITH STAINLESS STEEL FACEPLATE, SINGLE WHITE LAMP, 120V RATED, AND "XRAY IN USE" LENS. EDWARDS #7641-IN5/7641-A1 SERIES OR EQUAL.



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SKA Project Number
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HCAI seal/signature
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REGISTERED ARCHITECT — C37097 — EXP. 9/30/2023 — STATE OF CALIFORNIA
REGISTERED PROFESSIONAL ENGINEER — PAUL L. O'CONNELL — No. E15435 — EXP. 6/30/2023 — ELECTRICAL — STATE OF CALIFORNIA

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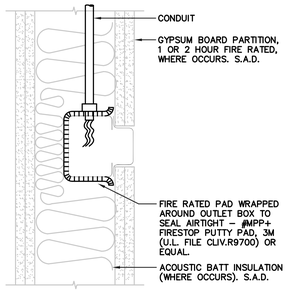
Project Name
HOSPITAL REPLACEMENT BUILDING-
NUCLEAR MEDICINE SUITE RELOCATION

Sheet Title
SPECT & CT ROOM SCHEDULES

Date 08/05/2022
Scale AS NOTED
Sheet Number E3.2

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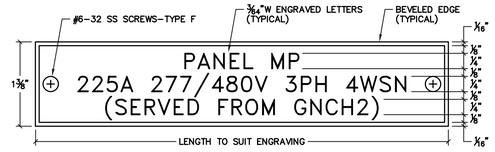
OUTLET BOX IN PARTITION WALL

NOTE: SEPARATE OUTLET BOXES ON OPPOSITE SIDES OF A NON-RATED/NON ACOUSTICAL WALL BY 24" MINIMUM. WHERE NOT POSSIBLE TO LOCATE 24" APART, PROVIDE FIRE RATED PAD AROUND BACK TO BACK BOXES.

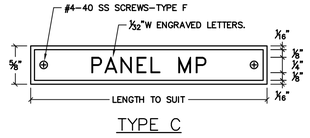
5 TREATMENT OF OUTLET BOX AT FIRE RATED WALL

SCALE: NONE

NAMEPLATE SCHEDULE (SEE NOTES #1, #2, #3)					
N/P No.	FIRST LINE	SECOND LINE	THIRD LINE	TYPE	REMARKS
1	PANEL MP	100A 277/480V 3PH 4W	SERVED FROM GNCH2	A	MOUNT ON PANEL
2	SPECT-CT RM L546D	277/480V, 3PH, 4W	SERVED FROM GNCH2	A	MOUNT ADJACENT TO FEEDER BREAKER AT GNCH2
3	GNCL2	–	–	C	MOUNT ADJACENT TO FEEDER BREAKER AT GNCLDP
4	PANEL GNCL2	225A 208Y/120 3PH 3W	SERVED FROM GNCLDP	A	MOUNT ON PANEL



TYPE A



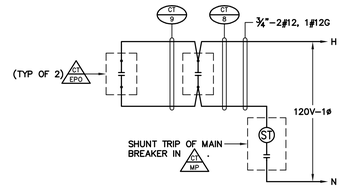
TYPE C

NOTES:

1. PROVIDE NAMEPLATE FOR EQUIPMENT AS SHOWN.
2. SCHEDULE DOES NOT LIST ALL NAMEPLATES REQUIRED. PROVIDE NAMEPLATES FOR ALL EQUIPMENT.
3. ENGRAVED LETTERS: WHITE; FACE PLATE COLOR: BLACK

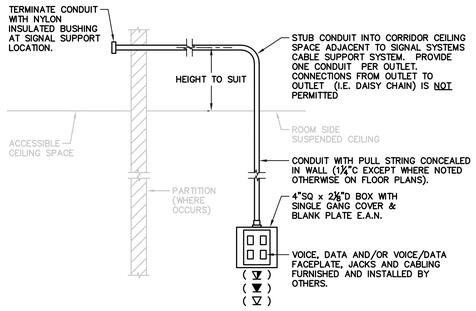
3 NAMEPLATE SCHEDULE & ENGRAVING

SCALE: NO SCALE



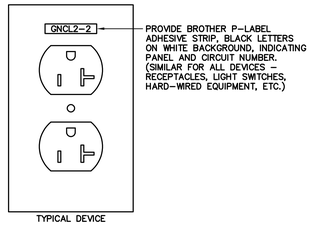
1 EPO SCHEMATIC DIAGRAM

SCALE: NO SCALE



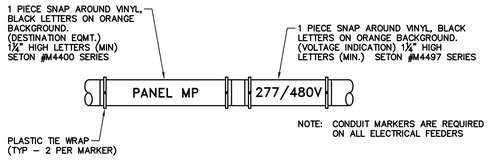
2 VOICE, VOICE/DATA OUTLETS

SCALE: NONE



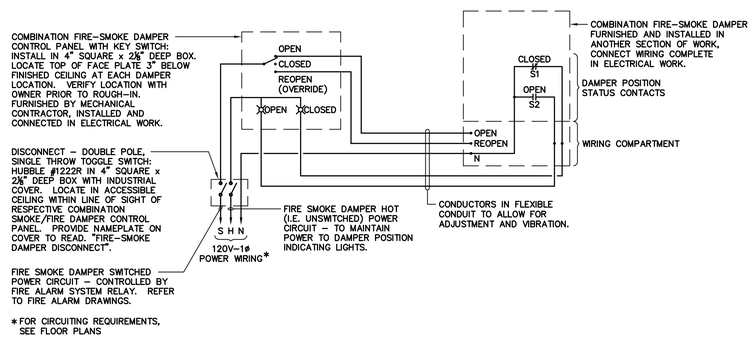
6 DEVICE CIRCUIT IDENTIFICATION

SCALE: NONE



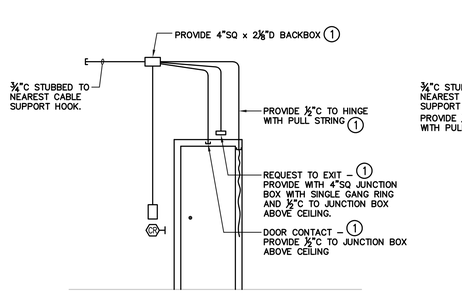
4 FEEDER CONDUIT MARKING

SCALE: NONE



8 COMBINATION FIRE-SMOKE DAMPER FSD – WIRING DIAGRAM

SCALE: NONE



NOTES

1. DEVICES/ROUGH-IN NOT SHOWN ON FLOOR PLANS. PROVIDE ROUGH-IN PER SECURITY SHOP DRAWING SUBMITTAL AND COORDINATE ROUGH-IN INSTALLATION IN FIELD WITH THE SECURITY INSTALLER.
2. TERMINATE TO LOCAL DOOR HARDWARE POWER SUPPLY (WHERE PROVIDED). OTHERWISE, TERMINATE TO AUTODOOR OPERATOR ENCLOSURE. VERIFY TERMINATION SIDE OF DOOR AND COORDINATE INSTALLATION WITH THE SECURITY INSTALLER AND THE DOOR HARDWARE INSTALLER.

7 SECURITY DOOR ROUGH-IN

SCALE: NONE

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Project Name
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Sheet Title
DETAILS

Date 08/05/2022
Scale AS NOTED
Sheet Number E4.1

30 X 42

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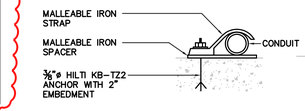
EQUIPMENT ANCHORAGE & SUPPORT NOTES:

1. ALL EQUIPMENT SHALL BE ANCHORED, SUPPORTED AND BRACED TO THE BUILDING STRUCTURE IN ACCORDANCE WITH 2019 CBC.
2. ANCHOR ALL CONDUITS, RACEWAY AND ELECTRICAL EQUIPMENT TO BUILDING STRUCTURE OR STRUCTURAL MEMBERS.
3. SHOP DRAWINGS OF THE SUPPORTS AND BRACING SYSTEMS IN ACCORDANCE WITH OSHPD PRE-APPROVAL OF MANUFACTURER'S CERTIFICATION (OPM) – MASON INDUSTRIES, INC. OPM-0043-13 SHALL BE SUBMITTED TO THE REGISTERED DESIGN PROFESSIONAL (RDP) IN RESPONSIBLE CHARGE OF THE PROJECT FOR REVIEW TO VERIFY THAT THE DETAILS ARE IN CONFORMANCE WITH ALL CODE REQUIREMENTS. THE OPM SHALL AS A MINIMUM SATISFY THE REQUIREMENTS OF ASCE 7 SECTION 13.6 AS MODIFIED BY THE CBC 2016 SECTION 1616A. THE STRUCTURAL ENGINEER OF RECORD (SEOR) SHALL VERIFY THAT THE SUPPORTING STRUCTURE IS ADEQUATE FOR THE FORCES IMPOSED ON IT BY THE SUPPORTS, ATTACHMENTS, AND BRACES INSTALLED IN ACCORDANCE WITH THE PRE-APPROVAL IN ADDITION TO ALL OTHER LOADS. A "SHOP DRAWING STAMP" MAY BE USED TO INDICATE COMPLIANCE WITH THIS REQUIREMENT.
4. THE SEOR SHALL DESIGN ANY SUPPLEMENTARY FRAMING THAT IS NEEDED TO RESIST THE LOADS, MAINTAIN STABILITY AND/OR IS REQUIRED FOR INSTALLATION OF PRE-APPROVAL SYSTEM. THE SUPPLEMENTAL FRAMING SHALL BE SUBMITTED TO OSHPD AS AN AMENDED CONSTRUCTION DOCUMENTS (ACD).
5. A COPY OF THE CHOSEN BRACING SYSTEM(S) INSTALLATION GUIDE/ OPM MANUAL SHALL BE ON THE JOBSITE PRIOR TO STARTING THE INSTALLATION OF HANGERS AND/OR BRACES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN COPIES OF OSHPD PRE-APPROVALS AND FURNISH THE IOR WITH ONE COPY OF EACH.
6. COMPONENTS OF TWO OR MORE PRE-APPROVED BRACING SYSTEMS SHALL NOT BE MIXED. ONLY ONE PRE-APPROVED BRACING SYSTEM MAY BE USED FOR A RUN OF PIPE, DUCT OR CONDUIT. ANY SUBSTITUTION OF COMPONENT OF A PRE-APPROVED BRACING SYSTEM SHALL REQUIRE OSHPD REVIEW AND APPROVAL.
7. PROVIDE CALCULATIONS AND DRAWINGS FOR THE SUPPORTS, ATTACHMENTS, AND BRACING OF ALL CONDUITS. IF AN OSHPD PRE-APPROVAL OF MANUFACTURER'S CERTIFICATION (OPM) IS SPECIFIED, SUPPORTS, ATTACHMENTS, AND BRACING, CALCULATIONS AND DETAILS FOR THE SUPPORTING STRUCTURE IS STILL REQUIRED. ONCE THE EXACT LOCATION OF ALL PIPES, DUCTS, AND CONDUITS HAVE BEEN ESTABLISHED, THE REGISTERED DESIGN PROFESSIONAL (RDP) SHALL VERIFY THE ADEQUACY OF THE SUPPORTING STRUCTURE TO ENSURE THAT THE ORIGINAL DESIGN IS STILL ADEQUATE.
8. WEIGHT ALLOWANCE FOR CONDUIT AND WIRE:

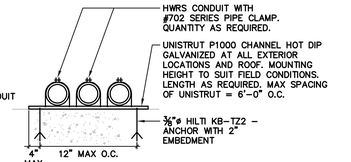
EMT:	
½"C	= 0.42# per FT
¾"C	= 0.68# per FT;
1" C	= 1.03# per FT;
1¼" C	= 1.88# per FT;
1½" C	= 2.27# per FT;
2" C	= 3.65# per FT;
2½"C	= 6.25# per FT;
3" C	= 9.18# per FT;
3½"C	= 11.22# per FT;
4" C	= 13.80# per FT.

ANCHORAGE SCHEDULE — DETAIL (2)

ITEM	WEIGHT (LBS)	HEIGHT (INCHES)	DEPTH (INCHES)	WIDTH (INCHES)	FLOOR ANCHORS	WALL ANCHORS	FLOOR PLAN LOCATION	MANUFACTURER MODEL NUMBER	OSP NUMBER
PANEL MP	194 (MAX)	60	5¾	20	N/A	SEE SHEET E4.2, DETAIL 1	SEE SHEET E3.1 DETAIL 1	EATON, PRL3X	OSP-0009
PANEL GNCL2	298 (MAX)	48	5¾	17	N/A	N/A	–SEE SHEET E2.0 DETAIL 1, GROUND LEVEL –INSTALLED IN EXISTING INTEGRATED FACILITY SWITCHBOARD	EATON, PRL1X	OSP-0009



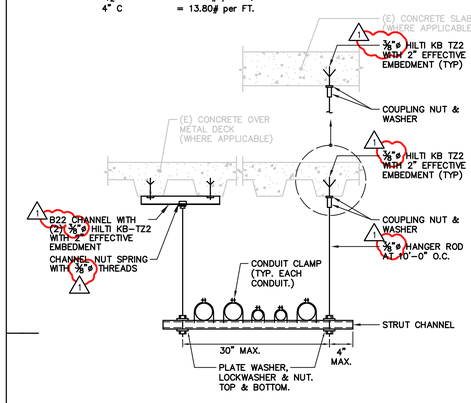
SINGLE CONDUIT



MULTIPLE CONDUITS

4 CONDUITS ATTACHED TO CONCRETE SURFACE

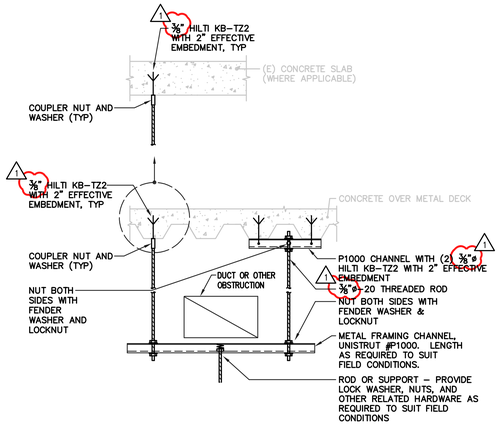
SCALE: NONE



- MAXIMUM TOTAL LOAD LESS THAN 10LBS/LINEAR FOOT – GRAVITY SUPPORT ONLY
- SEISMIC BRACING IS NOT REQUIRED IF HANGER RODS DO NOT EXCEED 12" IN LENGTH FROM THE RACEWAY SUPPORT POINT TO THE CONNECTION AT SUPPORTING STRUCTURE AND WHERE TOTAL WEIGHT SUPPORTED BY A SINGLE TRAPEZE DOES NOT EXCEED 100 LBS.

TYPICAL SMALL TRAPEZE (GRAVITY SUPPORT)

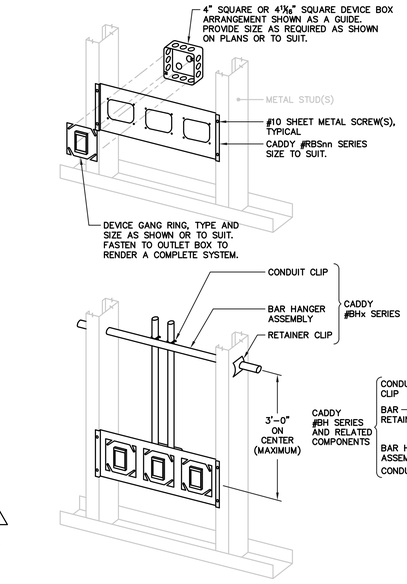
9 SCALE: NONE



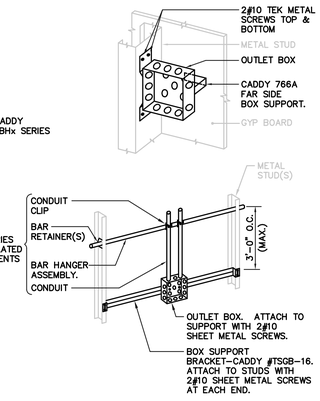
- MAXIMUM TOTAL LOAD LESS THAN 10LBS/LINEAR FOOT – GRAVITY SUPPORT ONLY
- SEISMIC BRACING IS NOT REQUIRED IF HANGER RODS DO NOT EXCEED 12" IN LENGTH FROM THE RACEWAY SUPPORT POINT TO THE CONNECTION AT SUPPORTING STRUCTURE AND WHERE TOTAL WEIGHT SUPPORTED BY A SINGLE TRAPEZE DOES NOT EXCEED 100 LBS.

TYPICAL MOUNTING UNDER OBSTRUCTION(S) (WHERE OCCURS)

8 SCALE: NONE



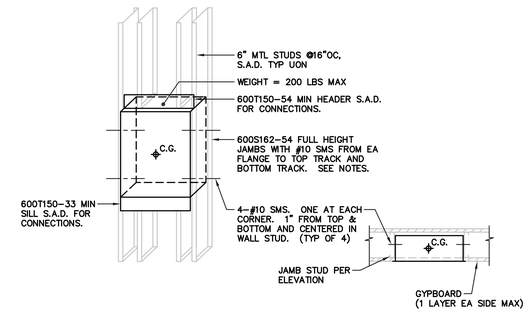
ARRANGEMENT A: PROVIDE WHERE STUD(S) ARRANGEMENT ALLOWS



ARRANGEMENT B: PROVIDE ONLY WHERE ARRANGEMENT 'A' IS NOT ALLOWABLE, DUE TO SPATIAL CONSTRAINTS

3 OUTLET BOX SUPPORT ARRANGEMENTS

SCALE: NONE

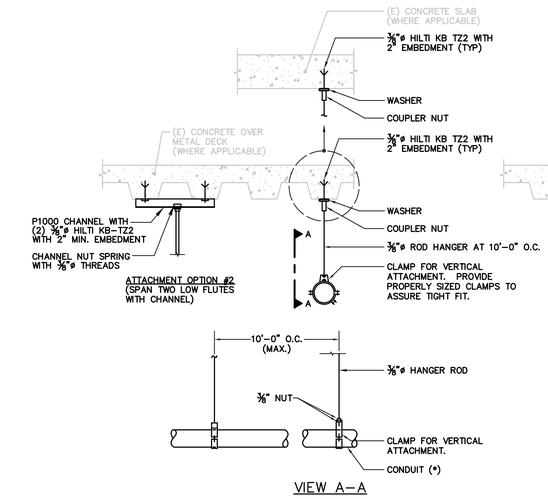


ELEVATION PLAN VIEW

NOTE: 1. SEE ARCHITECTURAL DRAWINGS FOR ALL INFORMATION NOT NOTED.
2. PROVIDE T&B CONNECTIONS PER PARTITION WALL CONDITION 'C'.
3. DO NOT ATTACH EQUIPMENT ABOVE, BELOW OR ON OPPOSITE FACE OF WALL.
4. THIS DETAIL IS APPLICABLE TO PANEL MP. SEE ANCHORAGE SCHEDULE. (1)

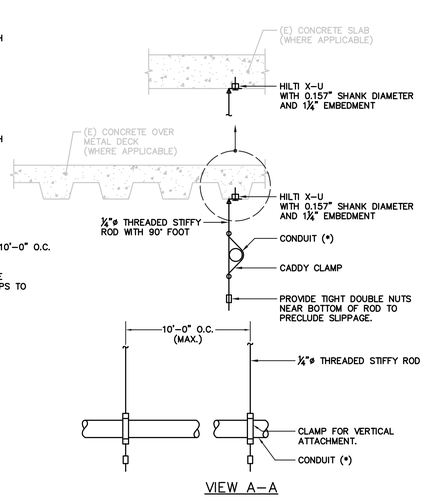
RECESS MOUNTED PANELBOARD (OSP–0009)

1 SCALE: NO SCALE



VIEW A–A

- 1¼ THRU 2" SIZE CONDUITS – GRAVITY SUPPORT ONLY

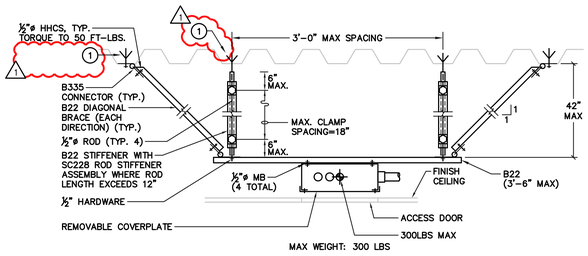


VIEW A–A

- ¾" THRU 1" SIZE CONDUITS – GRAVITY SUPPORT ONLY
- MAX WEIGHT PER HANGER SHALL NOT EXCEED 50 LBS.

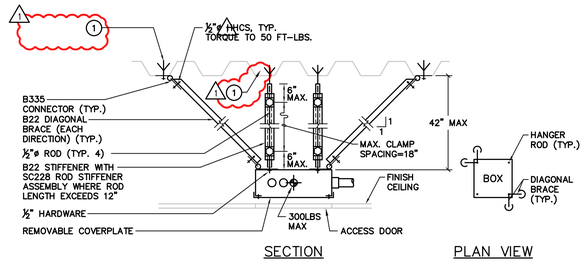
SINGLE RUN CONDUIT (GRAVITY SUPPORT)

10 SCALE: NONE



SECTION

CEILING MOUNTED (ALTERNATE ARRANGEMENT)



SECTION PLAN VIEW

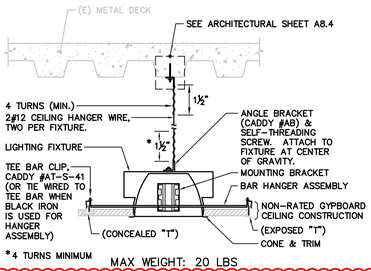
CEILING MOUNTED

MAX WEIGHT: 300 LBS

CEILING PULLBOX MOUNTING ARRANGEMENT

5 SCALE: NO SCALE

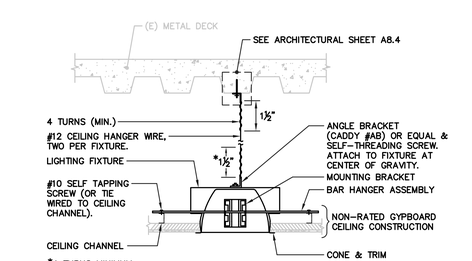
1 NOTE: (1) ANCHORAGE SIMILAR TO DETAIL 9, SHEET E4.2 WHERE STRUT IS NECESSARY, USE ½" DIA BOLT, SPRING NUT AND WASHER TO CONNECT B335.



1 NOTE: FOR LIGHT FIXTURE WEIGHING GREATER THAN 10LBS BUT LESS THAN OR EQUAL TO 56LBS SHALL HAVE TWO NO. 12-GUAGE SAFETY WIRES CONNECTED FROM FIXTURE HOUSING TO STRUCTURE ABOVE THAT ACT AS SAFETY WIRE. REFER TO ARCH DETAILS ON SHEET A8.3.

RECESSED DOWNLIGHT TEE–BAR CEILING

7 SCALE: NONE



1 NOTE: FOR LIGHT FIXTURE WEIGHING GREATER THAN 10LBS BUT LESS THAN OR EQUAL TO 56LBS SHALL HAVE TWO NO. 12-GUAGE SAFETY WIRES CONNECTED FROM FIXTURE HOUSING TO STRUCTURE ABOVE THAT ACT AS SAFETY WIRE. REFER TO ARCH DETAILS ON SHEET A8.3.

RECESSED DOWNLIGHT GYPSUM BOARD CEILING

6 SCALE: NONE

Architect
SKA SMITH-KARNG ARCHITECTURE
800 Halght Street
San Francisco, CA 94117
Office: 415.552.3600

Owner
marin health Medical Center
250 BON AIR ROAD,
GREENBRAE, CA 94904

Consultant
CAMMISA + WIPF
CONSULTING ENGINEERS
333 BRYANT STREET, SUITE 220
SAN FRANCISCO, CA 94107
T: 415.863.5740 | www.cammisawipf.com

SKA Project Number
2136

OSHPD Number
HCAI# S221296-21-00

HCAI seal/signature
REVIEWED IN ACCORDANCE WITH THE REQUIREMENTS OF 7 CA. CCR
APPROVED
Department of Health Care Access & Information
Office of Statewide Hospital Planning & Development
2/13/2023, 11:24:21 PM
S221296-21-00
Pedar Remme

Seal/Signature
REGISTERED ARCHITECT KASTEN MCCLAIN C37097 EXP. 9/30/2023 STATE OF CALIFORNIA
REGISTERED PROFESSIONAL ENGINEER PAUL L. O'CONNELL No. E15435 EXP. 8/31/2023 ELECTRICAL STATE OF CALIFORNIA

Issued for
HCAI SUBMITTAL

1	BACKCHECK 1	12/09/2022
2	DESIGN CHANGE	12/09/2022

Drawn by KT
Checked by PO

Project Name
HOSPITAL REPLACEMENT BUILDING-
NUCLEAR MEDICINE SUITE RELOCATION

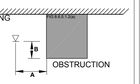
Sheet Title
DETAILS

Date 08/05/2022
Scale AS NOTED
Sheet Number
E4.2

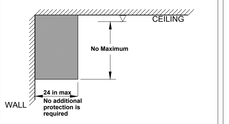
30 X 42

POSITIONING OF SPRINKLERS TO AVOID OBSTRUCTIONS
(STANDARD SPRAY SPRINKLERS)
NFPA 13 2016 8.6.5.1.2 (a)

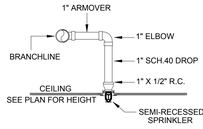
DISTANCE FROM SPRINKLERS TO SIDE OF	MAXIMUM ALLOWABLE DISTANCE OF DEFLECTOR ABOVE BOTTOM OF
LESS THAN 1'-0	0"
1'-0 TO LESS THAN 1'-6	2½"
1'-6 TO LESS THAN 2'-0	3½"
2'-0 TO LESS THAN 2'-6	5½"
2'-6 TO LESS THAN 3'-0	7½"
3'-0 TO LESS THAN 3'-6	9½"
3'-6 TO LESS THAN 4'-0	12"
4'-0 TO LESS THAN 4'-6	14"
4'-6 TO LESS THAN 5'-0	16½"
5'-0 TO LESS THAN 5'-6	18"
5'-6 TO LESS THAN 6'-0	20"
6'-0 TO LESS THAN 6'-6	24"
6'-6 TO LESS THAN 7'-0	30"
7'-0 TO LESS THAN 7'-6	35"



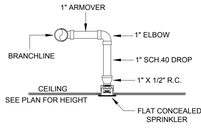
OBSTRUCTION AGAINST A WALL
(STANDARD SPRAY SPRINKLERS)
NFPA 13 2016 8.6.5.1.2 (c)



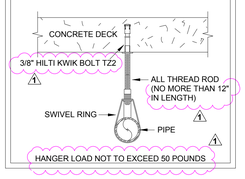
DROP TO PENDENT SPRINKLER
(RECESSED SPRINKLER)



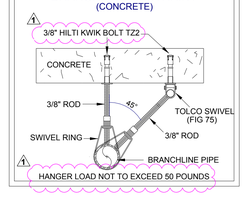
DROP TO PENDENT SPRINKLER
(CONCEALED SPRINKLER)



KWIK BOLT ANCHOR



BRANCHLINE RESTRAINT
(CONCRETE)



Sprinkler Legend

Symbol	Manufacturer	SIN	Model	Quantity	K-Factor	Type	Size	Response	Finish	Temperature	Note
◉	Tyco	TY323	TYFRB	16	5.6	Pendent		Quick	Chrome	155°F	Relocated
				Total = 16							

GENERAL NOTES

1. SPRINKLER SYSTEM DESIGNED TO CONFORM TO NFPA 13 2016 AND OSHPD.
2. ALL INSTALLED MATERIAL TO BE NEW AND UL LISTED OR FM APPROVED FOR FIRE PROTECTION.
3. ALL NEW PIPING TO MATCH (E) PIPING LIKE FOR LIKE, SCH 40 BLACK WITH CAST IRON FITTINGS, UNLESS OTHERWISE NOTED.
4. SPACING AND DETAILS OF THE SUPPORTS, ATTACHMENTS, AND BRACING OF FIRE SPRINKLER PIPING SHALL COMPLY WITH THE NFPA 13 AS MODIFIED BY THE 2019 CBC. 1
5. UNLESS OTHERWISE NOTED, ALL RELOCATED DROP PENDENTS UTILIZE EXISTING 1" OUTLETS.
6. HANGERS SHALL BE SPACED TO CONFORM TO NFPA 13 AND OSHPD.
7. ON COMPLETION OF WORK AN INSPECTION IS REQUIRED BY OSHPD.
8. ALL RELOCATED HEADS TO BE REPLACED W/ NEW SPRINKLER HEAD PER NFPA 13 2016 6.2.1.1

HANGER NOTES

1. ALL BRANCHLINES BEING RAISED WILL USE EXISTING HANGERS
2. ALL NEW HANGERS SHALL BE PER NFPA 13 2016 & OSHPD
3. ALL PIPING WITH A CUMULATIVE HORIZONTAL DISTANCE OVER 12" SHALL REQUIRE A HANGER
4. NEW HANGERS SHALL CONSIST OF THE FOLLOWING:
   TOLCO FIG 200 RING HANGER
   TOLCO FIG 99 PLATED ATR

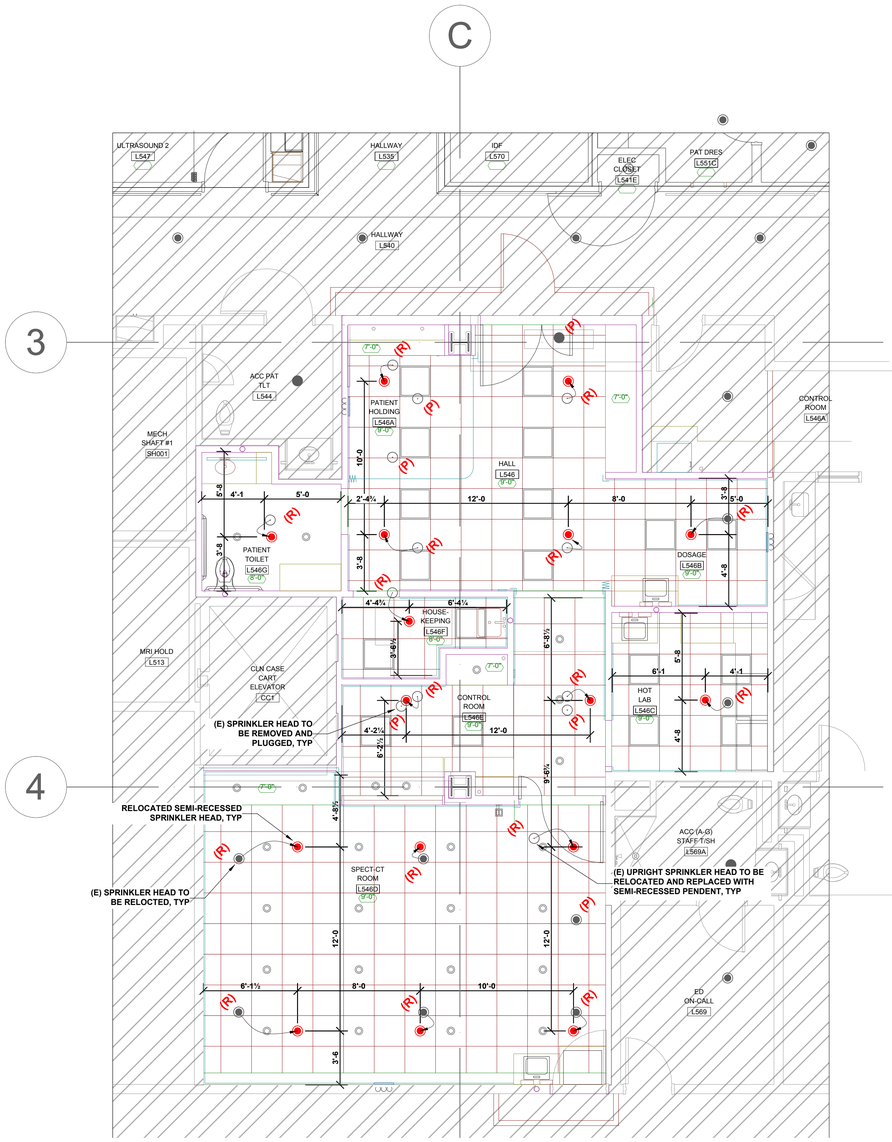
DESIGN CRITERIA

AUTHORITY HAVING JURISDITION: OSHPD
STANDARD: NFPA 13 2016
CONSTRUCTION TYPE: CONCRETE
SPRINKLER SYSTEM: WET
SPRINKLER OCCUPANCY CLASSIFICATION: LIGHT HAZARD
Ss (PER STURCTURAL SHEET S1.00): 1.500g
Cp (PER NFPA 2016 TABLE 9.3.5.9.3): 0.7

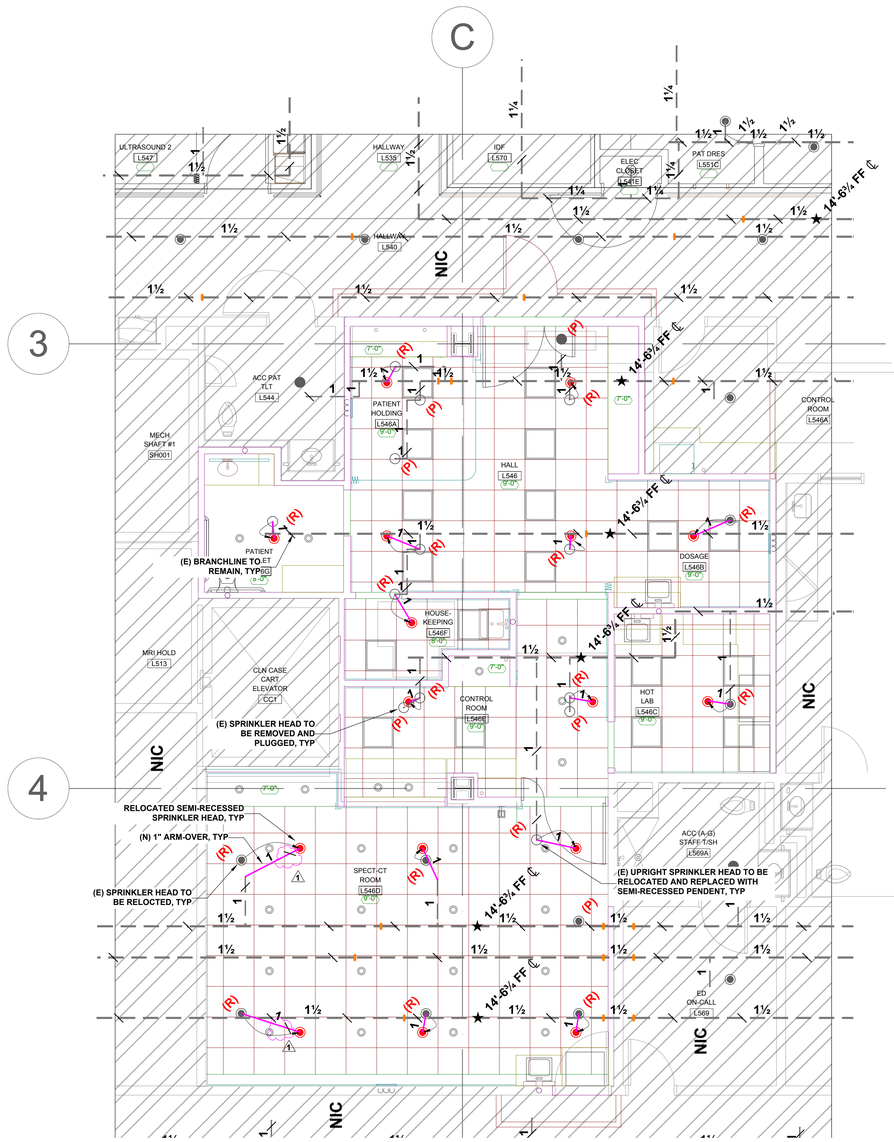
SCOPE OF WORK

JOHNSON CONTROLS SCOPE OF WORK IS TO:

1. RELOCATE (16) (E) SPRINKLER HEADS TO PROVIDE COVERAGE PER NEW CEILING AND WALL LAYOUT.



Nuclear Med Relocation RCP
1/4" = 1'-0



Nuclear Med Relocation Piping Plan
1/4" = 1'-0

TENANT FINISH LEGEND

- ◉(R) SPRINKLER HEAD TO BE RELOCATED
- ◉(P) PLUGGED SPRINKLER HEAD
- ◉ RELOCATED SPRINKLER HEAD
- EXISTING SPRINKLER PIPE
- NEW SPRINKLER PIPE
- HANGER LOCATION
- AREA NOT IN SCOPE (NIC)
- S.R.R. SMALL ROOM RULE APPLIED PER NFPA 13 2016 SECTION 8.6.3.2.4

REVIEWED IN ACCORDANCE WITH THE REQUIREMENTS OF 7 CA. CCR
APPROVED
Department of Health Care Access & Information
Office of Statewide Hospital Planning & Development
2/13/2023, 11:24:21 PM
S221296-21-00
Pedar Pomme

Architect
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SMITH-KARNG ARCHITECTURE
800 Haight Street
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Owner
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Consultant
Johnson Controls
District - 412
3077 Wiljan Ct, Ste A
Santa Rosa, CA 95407
1-707-578-3212

SKA Project Number
2136

HCAI Number
HCAI# S221296-21-00

HCAI seal/signature

Seal/Signature
LICENSED ARCHITECT JUSTIN MCCRETE C37097 EXP. 9/30/2023 STATE OF CALIFORNIA
LICENSED FIRE PROTECTION CONTRACTOR PROVIDES FIRE SPRINKLER SYSTEMS CLASSIFICATION C-10 / C-16 LICENSE No. 986047 STATE OF CALIFORNIA

Issued for
HCAI SUBMITTAL

1	BACKCHECK #1	12/09/2022

Drawn by
Checked by RA
Project Name RA

HOSPITAL REPLACEMENT BUILDING -
NUCLEAR MEDICINE SUITE RELOCATION

Sheet Title
NUCLEAR MED RELOCATION PIPING PLAN

Date 08/05/2022
Scale AS NOTED
Sheet Number
FP-1

30 X 42

John T Stalp LLC……Certified Radiological Physicist
……107 Taylor Drive, Fairfax, CA 94930……

Tel. 415-902-3663

July 5, 2022

Marin Health Medical Center
250 Bon Air Road
Greenbrae CA 94904

Subject: X-ray Shielding specifications for Nuclear Medicine Suite
SPECT/CT Scanner & hot lab

The following shielding plan is based on the floor plan and other information supplied by your institution. This is a plan for a nuclear medicine suite with a single SPECT/CT scanner and a hot lab. There is occupied above and below the suite. The plan is to shield for nuclear medicine studies and a small number of CT only exams. In this manner the scanner can be use for full time nuclear medicine studies and as a backup CT scanner. I checked with the end user and they felt this was the preferred plan of action.

The shielding plan detailed in this document will protect individuals from unreasonable radiation exposure based on 10 CFR 20 requirements and satisfy your ALARA commitment. Please note that radiation levels around shielded X-ray rooms are not zero. Required shielding is based on workload, occupancy factors, inherent shielding, distance, and radiation type. I declare under penalty of perjury that in my professional opinion the radiation project conforms to the applicable provisions of Chapter 91, California Building Code (Title 14, CCR), relating to radiation protection. I am a radiological physicist and hold certification by the American Board of Radiology.

Shielding plans are designed for specific applications and for specific functions. Any change in these applications, location of equipment, traffic patterns, control functions, or occupancy factors should be reviewed by a qualified expert for possible changes in shielding requirements.

Based on a projected maximum workload of 25 nuclear medicine patients per week and 10 CT only patients per week, the shielding requirement ranges from 0-4 pound per square foot lead in perimeter walls, doors, frames, and windows. However, I have simplified the plan to use only 2 and 4 pound lead. Note: 4 pound per square foot lead is 1/16 inch thick (nominal 1.5 mm) and 2 pound lead is half this value.

North wall – MRI wall	2 pound/sq. ft. lead from floor to height 7 feet
East wall/Control/Entry/Window	4 pound/ sq. ft. lead from floor to height 7 feet
South wall – toilet/sleep room	2 pound/sq. ft. lead from floor to height 7 feet
West corridor	2 pound/sq. ft. lead from floor to height 7 feet
Ceiling of scanner room	3 ¼ inch light weight concrete – no changes
Floor of scanner room	3 ¼ inch light weight concrete – no changes

It is not necessary to cover the metal screw or steel nail heads in the 4 pound leaded wall. The above are minimum requirements, you may add additional shielding or shield other areas if you desire. A structural engineer must approve all lead loading. The ceiling will need to be carefully inspected for cracks and voids during construction.

Attached are detailing instructions and a list of assumptions. Please contact me with your questions. Thank you for using our physics service.

Sincerely,

John T. Stalp

John T. Stalp, M.S. Attachments -6

Shielding Assumptions

1. Workload is for a moderate workload: nuclear medicine patients (SPECT/CT) – 25/wk and a light CT only workload -10 patients per week.

2. Location of adjacent buildings is not of interest.

3. Design is to keep annual doses below 100 mrem per year at all locations.

4.. Make and model of scanner – Siemens Inveto SPECT/CT

7. Assumed Occupancy Factors

Offices, labs, pharmacies, receptionist areas, attended waiting rooms, kids' play areas, x-ray rooms, film reading areas, nursing stations, x-ray control rooms	1
Patient exam & treatment rooms	½
Corridors, patient rooms, employee lounges, staff rest rooms	1/5
Corridor doors	1/8
Public toilets, vending areas, storage rooms, outdoor areas w/ seating, unattended waiting rooms, patient holding	1/20
Outdoors, unattended parking lots, attics, stairways, unattended elevators, janitor's closets	1/40

DETAILING - LEAD SHIELDING INSTALLATION

1. National publications deal with detailing. They are, National Council on Radiation Protection # 147 and National Bureau of Standards # 76, entitled "Medical X-ray Protection".

2. Lead lined plywood or sheetrock are commonly used to shield X-ray & gamma rays due to ease of installation. Steel screws or nails are commonly used to affix the board to the support members. It is necessary to cover the screw or nail heads in the leaded wall areas with lead inserts only when more than 4 pound per square foot (1/16 inch thick) lead is installed on that segment of the shielding plan.

3. Shielding of the radiation room shall be constructed so that the protection is not impaired by joints, by openings for ducts, pipes, etc. passing through the barriers, or by conduits, service boxes, etc. embedded in the barriers. The only exception is that cracks under doors are not considered a problem as long as the crack is less than 2 cm in height. Structures above seven feet do not require shielding unless noted.

4 Shielding material can be applied to the inner or outer surface of the walls.

5. Scanner room doors (or other means to access the room) and observation windows also require special consideration to ensure adequate protection without sacrifice of operational efficiency.

6. Joints between lead sheets should be constructed so that their surfaces are in contact and with an overlap of not less than 1 cm or twice the thickness of the sheet, whichever is greater.

7. Openings in the protective barriers for ventilation ducts, pipes, and electrical outlets need to be backed with lead or fitted with radiation baffles to ensure that the required degree of overall protection is maintained. In many cases, where there are many openings in a wall, the opposite side of the wall is leaded. Structures above seven feet do not require shielding unless noted in this report.

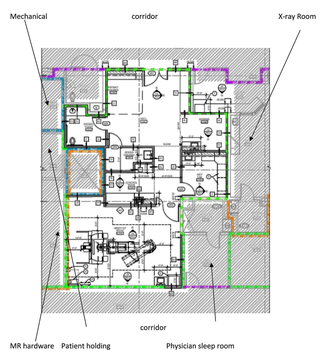
8. While specific recommendations are given, alternate methods of shielding may prove equally satisfactory. From the point of view of radiation protection, the particular method used is not important provided that the radiation survey of the completed installation establishes that the structural shielding is adequate.

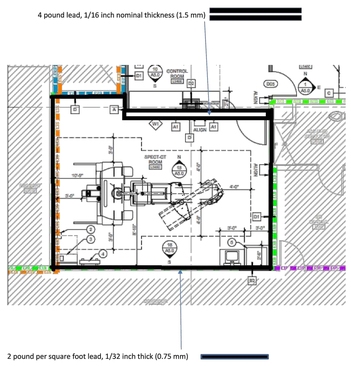
9. The adequacy and proper installation of radiation barriers should be verified by a qualified expert conducting a radiation protection survey using an anthropomorphic phantom after the radiation machine has been installed.

10. The locations of shielding material are designed for specific applications and for specific functions. Any change in these applications, location of equipment, traffic patterns, control functions, or occupancy factors should be reviewed by a qualified expert for possible changes in shielding requirements.

Nuclear Medicine Floorplan

SPECT/CT Scanner Room, Hot Lab, and support areas





NM shielding questions – SKA RESPONSE

1. Name of site and address.
Marin Health Medical Center
250 Bon Air Road
Greenbrae CA 94904

2. What types of nuclear med. procedures will be performed?
We will be doing SPECT scanning with CT attenuation as well as whole body bone, gallium and WBC scanning, Myocardial Perfusion scans, Pyrophosphate scans, thyroid scans, gallbladder (HIDA) scans, parathyroid scans, lung ventilation and perfusion scans, renal scans, Meckels scans, MUGA scans, liver scans, liver shunt studies, csf shunt studies, Thallium viability, GI bleeding, Gastric emptying, Octreotide, and brain death.

3. How many patients per week?
Approx. 24 per week.

4. List imaging device(s).
Siemens Symbia Intevo Excel

5. Show orientation of machines in the room(s)?
See Siemens' final site-specific drawings. Device is oriented plan East/plan West.

6. If this is a multistory building, on which floor will you reside?
Lobby level.

7. What is the composition of the decks above and below (concrete thickness)?
Concrete & steel composite decking, type D-1 in both cases per the attached image file.

8. What is composition of interior walls?
Metal stud framing and gypsum board typical.

9. What is the composition of exterior walls?
N/A.

10. What is above and below the radiation room(s).
Clean Work Area (B555) and Sterile Storage (B554) below.
Operating Room 10 (1533), Int. Lab Equipment (1533B) and Sterile Core (1545) above.

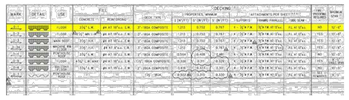
11. Is there a room for stress testing?
No. All stress testing is done in the Cardiac unit procedure room on the 3rd floor Cedar Pavilion.

12. What is on the opposite side of the hot lab and imaging room(s) walls?
Hot Lab: Dosage (North), R/F L548 (East), Accessory Staff Toilet/Shower L569A (South), Spect-CT (Imaging) Room (West)
Imaging: Elevator CC1 & Control Room L546E (North), Accessory Staff Toilet/Shower L569A & ED On-Call L569 (East), Public Corridor L560 (South), MRI Equipment L513A (West).
See the attached floorplan 10/A2.2.

13. What isotopes will be used?
We use Tc-99, In-111, GA-67, Tl-201, Y-90, I-123, I-131, Xe-133 and Ra-223.

14. Will there be radioisotope therapies?
Therapies are I-131 Hyperthyroid therapy, Ra-223 therapy, Y-90 SIRTex and Y-90 Theraspheres.

15. Is this new construction, remodel, or just adapting an existing room?
Remodel existing spaces for a new nuclear medicine suite.





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Owner

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2136

HCAI Number
S221296-21-00

HCAI seal/signature

REVIEWED IN ACCORDANCE WITH THE REQUIREMENTS OF 7 CCR
APPROVED
Department of Health Care Access & Information
Office of Statewide Hospital Planning & Development
2/13/2023, 11:24:21 PM
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CHRISTIN MICHAEL KARNG
C37007
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STATE OF CALIFORNIA

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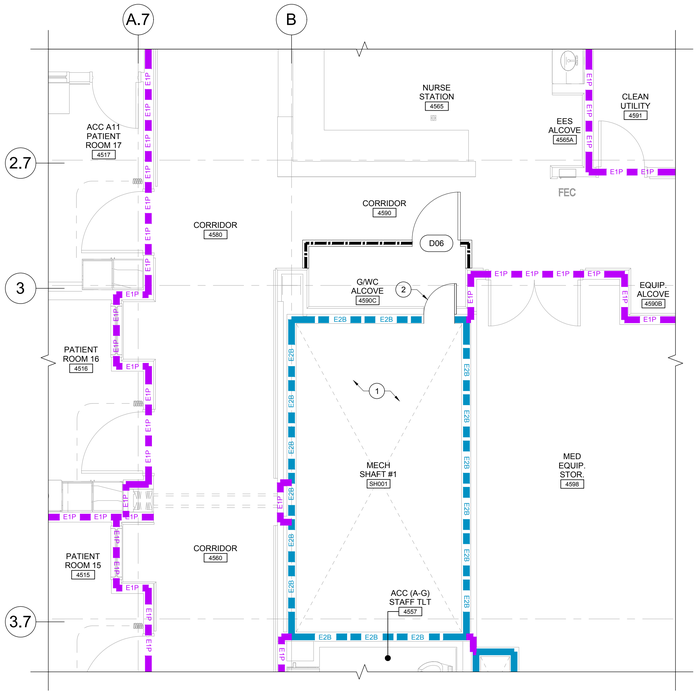
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Project Name
HOSPITAL REPLACEMENT BUILDING-
NUCLEAR MEDICINE SUITE RELOCATION

Sheet Title
PHYSICIST'S REPORT

Date 08/05/2022
Scale AS NOTED
Sheet Number
PR-1

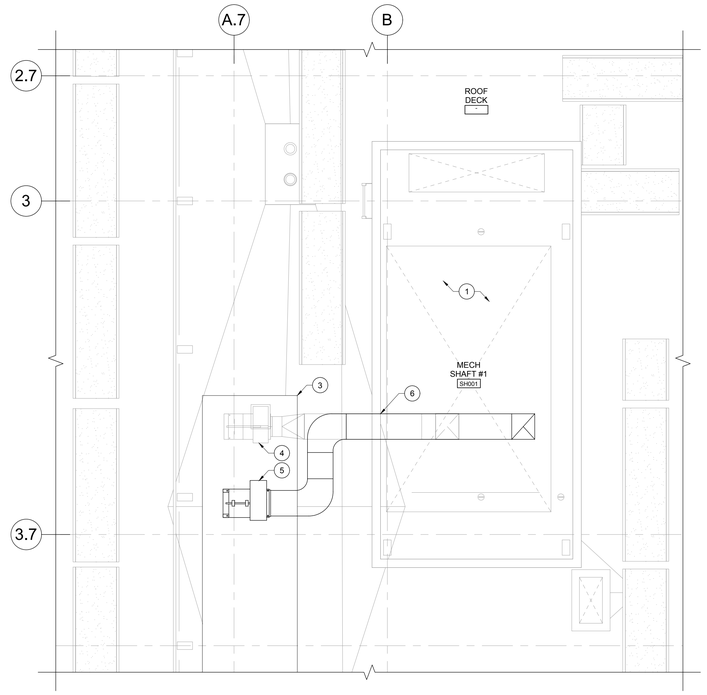
30 X 42



NOTE:
WORK ON THIS LEVEL OCCURS IN A RESTRICTED CORRIDOR.
FOLLOW HOSPITAL INFECTION CONTROL AND SECURITY PROTOCOL.

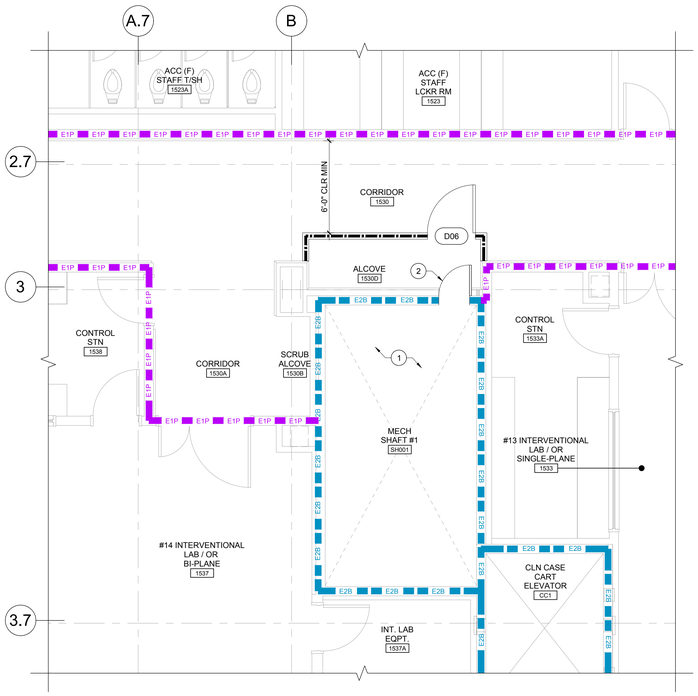
19 LEVEL 4 PARTIAL FLOOR PLAN
SCALE: 1/4" = 1'-0"

NORTH



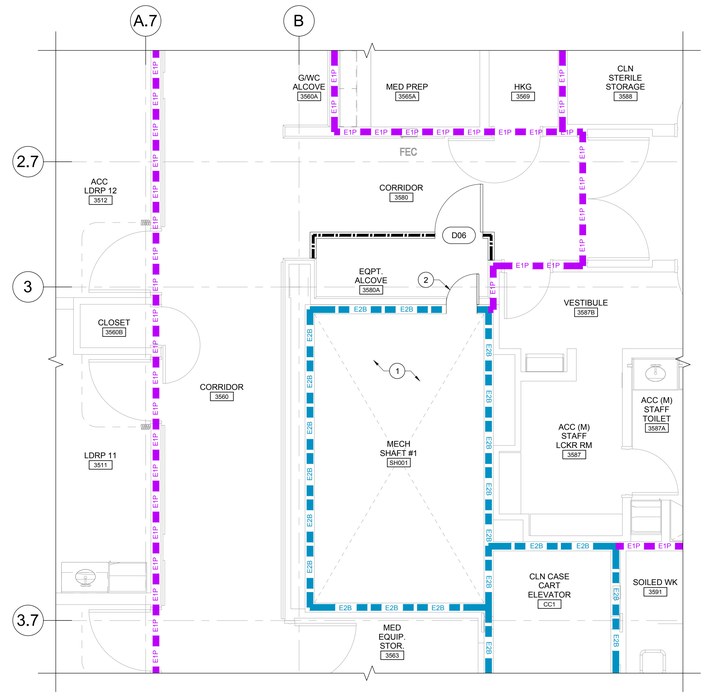
11 ROOF LEVEL PARTIAL FLOOR PLAN
SCALE: 1/4" = 1'-0"

NORTH



17 LEVEL 1 PARTIAL FLOOR PLAN
SCALE: 1/4" = 1'-0"

NORTH



9 LEVEL 3 PARTIAL FLOOR PLAN
SCALE: 1/4" = 1'-0"

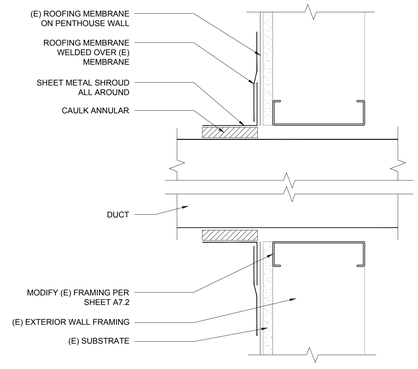
NORTH

LEGEND

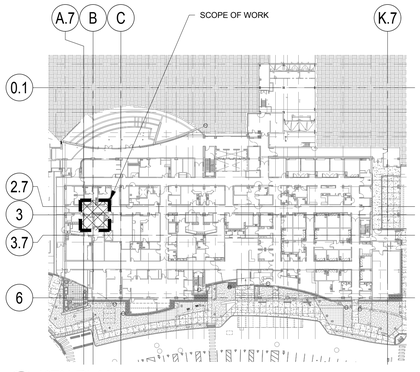
- E1S — (E) 1-HR. SMOKE BARRIER PER CBC 709.3
- E1B — (E) 1-HR FIRE BARRIER PER CBC 707
- N1B — (N) 1-HR FIRE BARRIER PER CBC 707
- E2B — (E) 2-HR FIRE BARRIER PER CBC 707
- N1P — (N) 1-HR FIRE RATED PARTITION PER CBC 708
- E1P — (E) 1-HR FIRE RATED PARTITION PER CBC 708
- (N) DOOR
- TEMP CONSTRUCTION BARRIER
- (E) OUT OF SCOPE

KEYNOTES:

1. SEE M2.3 FOR MECH WORK IN SHAFT
2. 24"W x 48"H 90 MINUTE FIRE RATED ACCESS DOOR (ACUDOR, FB-5060, OR APPROVED EQ) INSTALLED ON SHAFT WALL. REMOVE PORTION OF EXISTING FURRING WALL. PATCH FURRING WALL AFTER WORK IS COMPLETED. TAPE AND PAINT TO MATCH (E). SEE A7.7 FOR ACCESS PANEL DETAILS.
3. (E) CONC PAD
4. (E) MECH UNIT
5. EXHAUST FAN
6. DUCT PENETRATION; SEE 2/-



2 DUCT PENETRATION THROUGH PENTHOUSE WALL
SCALE: 3"= 1'-0"



1 KEY PLAN
SCALE: NTS

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S221296-21-00

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2	DESIGN CHANGE	12/09/2022

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Checked by CL

Project Name
HOSPITAL REPLACEMENT BUILDING-
NUCLEAR MEDICINE SUITE RELOCATION

Sheet Title
FLOOR PLANS - DUCTWORK TO ROOF LEVEL

Date 08/05/2022
Scale AS NOTED
Sheet Number A2.6

30 X 42

PLOT DATE: Jan 06, 2017

POWER ACTUATED FASTENER (PAF) ALLOWABLE STRENGTHS (INSTALLED IN CONCRETE FILLED B-DECK)

TABLE 1
POWER ACTUATED FASTENER INSTALLED TO THE UNDERSIDE OF NORMAL WEIGHT OR SAND-LIGHTWEIGHT CONCRETE THROUGH B-DECK (f'c MIN = 3000 PSI)

NOMINAL SHANK DIAMETER (IN)	MIN. EMBED (IN)	MIN. SPACING (IN)	MIN. EDGE DISTANCE (IN)	TENSION (LB) SEE NOTE 15	SHEAR (LB) (SEE NOTE 15)
0.157 MIN	1"	4"	4"	90	90

REVIEWED FOR CODE COMPLIANCE
CALIFORNIA BUILDING CODE: 2013
OSHPD
OPD-0001-13
BY: M. R. Karim
DATE: 05/11/2017

SECTION TITLE:
STANDARD PARTITION WALL DETAILS

SHEET TITLE:
POWER ACTUATED FASTENER (PAF)
ALLOWABLE STRENGTHS (INSTALLED IN
CONC FILLED METAL B DECK

OPD NO.: ST1.12

PLOT DATE: Jan 06, 2017

EXPANSION ANCHOR GENERAL NOTES

1. ALLOWABLE STRENGTHS SHALL BE COMPARED TO ALLOWABLE STRESS DESIGN (ASD) LEVEL DEMAND IN ACCORDANCE WITH THE 2013 CBC SECTION 1605A.3.1.
2. ALLOWABLE STRENGTHS SHOWN IN TABLES ON ST1.14 ARE FOR SINGLE ANCHORS WHICH MEET MIN. REQUIREMENTS PER TABLE AND SECTION BELOW.
3. MINIMUM CONCRETE STRENGTH f'c = 3000 PSI.
4. EXPANSION ANCHORS INSTALLED THROUGH LOWER FLUTES OF METAL DECK SHALL MEET THE REQUIREMENTS OF THE INSTALLATION CRITERIA AND SECTION BELOW.
5. STEEL DECK TO BE MIN 20 GA. B-DECK.
6. MINIMUM CONCRETE FILL DEPTH ABOVE THE TOP OF THE METAL DECK PER SECTION AND INSTALLATION CRITERIA BELOW.
7. EXPANSION ANCHORS SHALL NOT BE USED IN PRE-STRESSED CONCRETE UNLESS NON-DESTRUCTIVE TESTING METHODS ARE USED TO LOCATE STRAND & REINFORCING PRIOR TO ANCHOR INSTALLATION.
8. EXPANSION ANCHOR INSTALLATION SHALL NOT NICK OR DAMAGE EXISTING REINFORCEMENT. SHOULD THIS OCCUR, THE RDP IN RESPONSIBLE CHARGE SHALL BE NOTIFIED IMMEDIATELY. EXPANSION ANCHORS SHALL BE INSTALLED 1" CLEAR OF EXISTING REINFORCEMENT.
9. EXPANSION ANCHORS SHALL BE INSTALLED PER CURRENT ICC-ES EVALUATION REPORT OR REPORT FROM OTHER TESTING AGENCY ACCEPTABLE TO OSHPD.
10. TESTING OF EXPANSION ANCHORS SHALL BE PER 2013 CBC SECTION 1913A.7.
12. REFER TO NOTE 6c ON S70.01 FOR ADDITIONAL EXPANSION ANCHOR REQUIREMENTS.
13. ALL VALUES IN TABLES ARE FOR CRACKED CONCRETE & INCLUDE REDUCTION BASED ON ACI 318-11 D.3.3.4.3 REQUIREMENTS. THE ALLOWABLE STRENGTHS ARE BASED UPON THE LEAST OF THE ALLOWABLE STRENGTHS CALCULATED USING THE ICC ESRS 1917 AND 2502 AND USING AN α FACTOR OF 1.4.
14. ALL VALUES IN TABLE REFLECT ALLOWABLE STRENGTHS WITH 20% ALLOWABLE STRESS INCREASE FOR LOAD COMBINATIONS WITH OVERSTRENGTH FACTOR IN ACCORDANCE WITH ASCE 7-10 SECTION 12.4.3.3.

	ANCHOR DIAMETER	EFFECTIVE EMBEDMENT	MIN EDGE DISTANCE	MIN SPACING
UNDERSIDE INSTALLATION **	⅜"	2"	6"	6⅜"
	½"	2"	7"	6⅜"

** UNDERSIDE APPLICATION ONLY.

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CALIFORNIA BUILDING CODE: 2013
OSHPD
OPD-0001-13
BY: M. R. Karim
DATE: 05/11/2017

SECTION TITLE:
STANDARD PARTITION WALL DETAILS

SHEET TITLE:
EXPANSION ANCHOR GENERAL NOTES
INSTALLED IN CONCRETE FILLED METAL B DECK

OPD NO.: ST1.13

PLOT DATE: Jan 06, 2017

EXPANSION ANCHOR ALLOWABLE STRENGTHS INTO B-DECK

TABLE 1
EXPANSION ANCHORS INSTALLED INTO THE UNDERSIDE OF NORMAL WEIGHT CONCRETE THROUGH B-DECK (f'c MIN = 3000 PSI)

ANCHOR DIAMETER (IN)	EMBED (IN)	SHEAR (LB)	TENSION (LB)
⅜"	2	997	522
½"	2	1440	600

** UNDERSIDE APPLICATION ONLY. SEE NOTE ON ST1.13.

REVIEWED FOR CODE COMPLIANCE
CALIFORNIA BUILDING CODE: 2013
OSHPD
OPD-0001-13
BY: M. R. Karim
DATE: 05/11/2017

SECTION TITLE:
STANDARD PARTITION WALL DETAILS

SHEET TITLE:
EXPANSION ANCHOR ALLOWABLE STRENGTHS
INSTALLED IN CONCRETE FILLED METAL B DECK

OPD NO.: ST1.14

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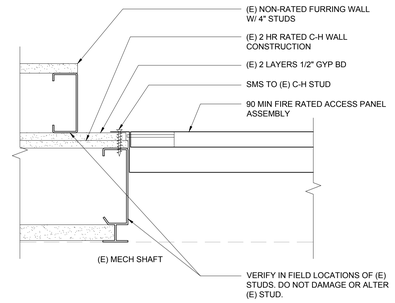
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Project Name
HOSPITAL REPLACEMENT BUILDING-
NUCLEAR MEDICINE SUITE RELOCATION

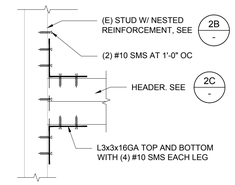
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GENERAL NOTES & STUD FRAMING AND CONNECTIONS DETAILS

Date 08/05/2022
Scale AS NOTED
Sheet Number 1 A7.1A

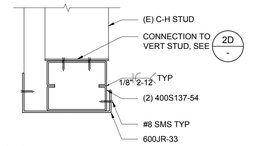
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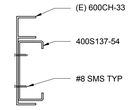
4 ACCESS PANEL FRAMING DETAIL
SCALE: 3" = 1'-0"



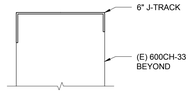
D. CONNECTION



C. HEADER

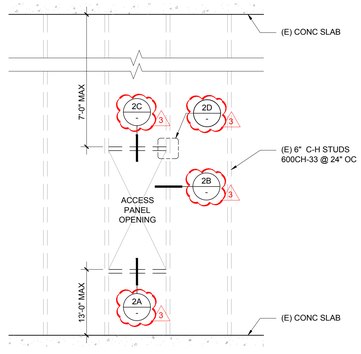


B. JAMB



A. SILL

2 SHAFT WALL OPENING FRAMING DETAIL
SCALE: 3" = 1'-0"



1 ACCESS PANEL FRAMING
SCALE: 1/2" = 1'-0"

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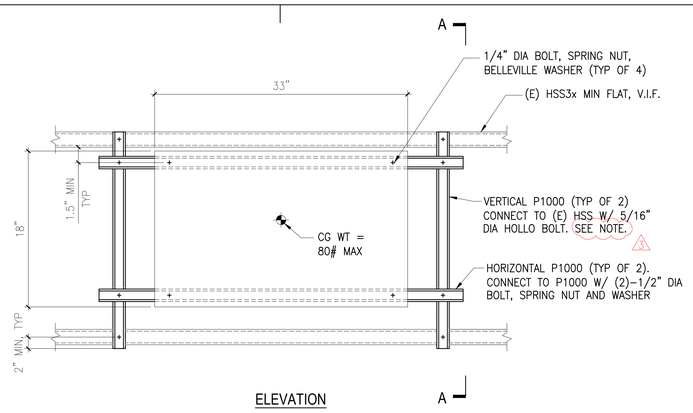
Project Name
HOSPITAL REPLACEMENT BUILDING-
NUCLEAR MEDICINE SUITE RELOCATION

Sheet Title
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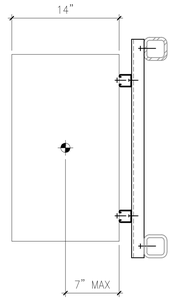
Date 08/05/2022
Scale AS NOTED

Sheet Number
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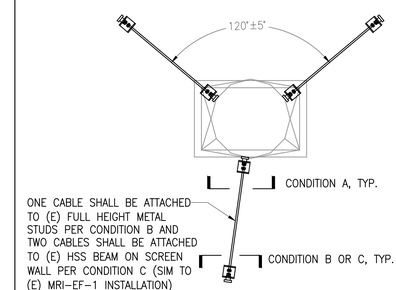
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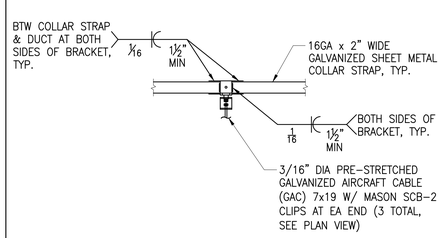
SECTION A-A

NOTE: TORQUE TEST $\frac{5}{16}$" DIA HOLLO BOLT TO 17 FT-LB PER ESR-3330. SPECIAL INSPECTION IS REQUIRED PER ESR-3330. 3

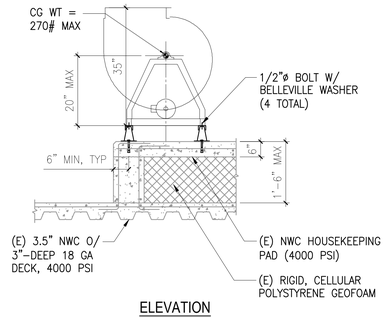
18 VFD (OSP-0575)
N.T.S.



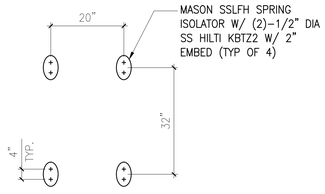
PLAN VIEW



CONDITION A : AT DUCT STACK

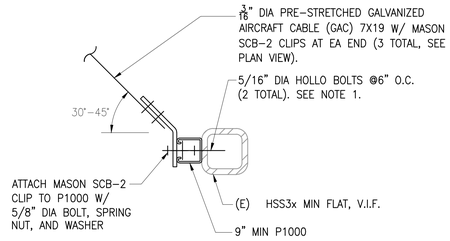


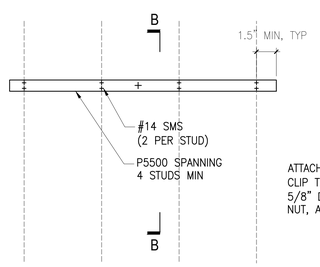
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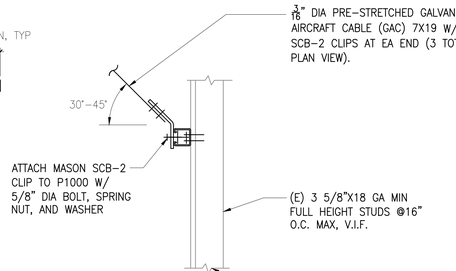
BASE PLAN

6 EXHAUST FAN (OSP-0503)
N.T.S.





ELEVATION



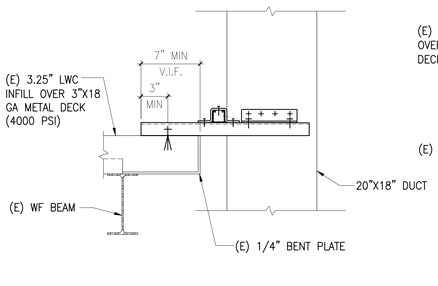
VIEW B-B

CONDITION C : AT HSS BEAM

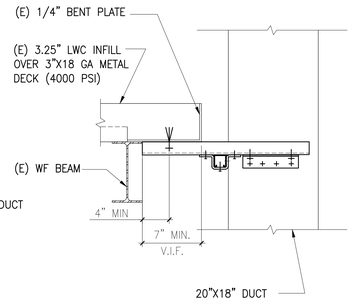
CONDITION B : AT METAL STUD WALL

NOTES:
1. TORQUE TEST $\frac{5}{16}$" DIA HOLLO BOLT TO 17 FT-LB PER ESR-3330. SPECIAL INSPECTION IS REQUIRED PER ESR-3330.
2. SEE 3/M8.2 FOR INFO NOT NOTED

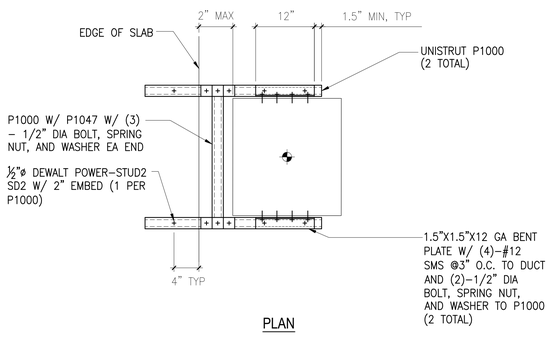
4 19 ROOF DUCT STACK BRACING
N.T.S.



CONDITION A : TOP OF DECK



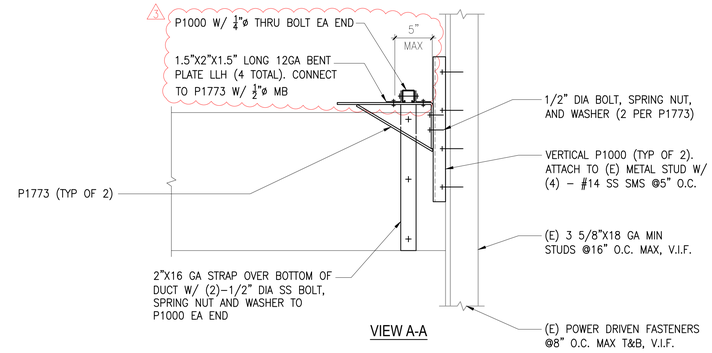
CONDITION B : UNDERSIDE OF DECK



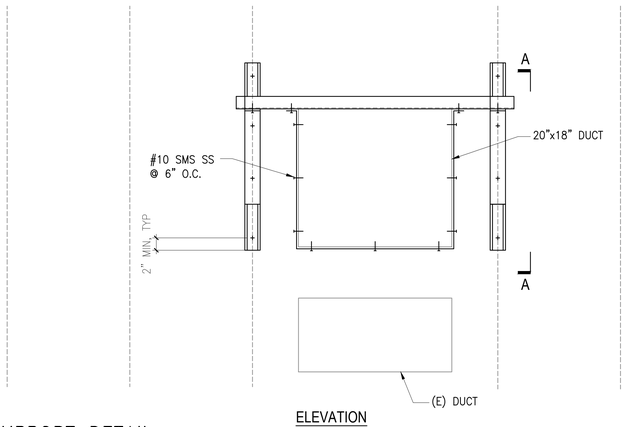
PLAN

NOTE: DEWALT POWER-STUD+ MAY NOT BE SUBSTITUTED FOR ANOTHER EXPANSION ANCHOR IN THIS APPLICATION.

20 DUCT RISER SUPPORT
N.T.S.



VIEW A-A



ELEVATION

8 DUCT WALL SUPPORT DETAIL
N.T.S.

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Seal/Signature
REGISTERED PROFESSIONAL ENGINEER Barbara J. Thompson No. 2995 EXP. 6/30/24 STRUCTURAL STATE OF CALIFORNIA
LICENSED ARCHITECT Kevin McCarthy C37097 EXP. 9/30/2023 STATE OF CALIFORNIA

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1	BACKCHECK #1	12/09/22
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3	BACKCHECK #2	01/25/23
4	DESIGN CHANGE	01/25/23

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Checked by DBH
Project Name
HOSPITAL REPLACEMENT BUILDING-
NUCLEAR MEDICINE SUITE RELOCATION

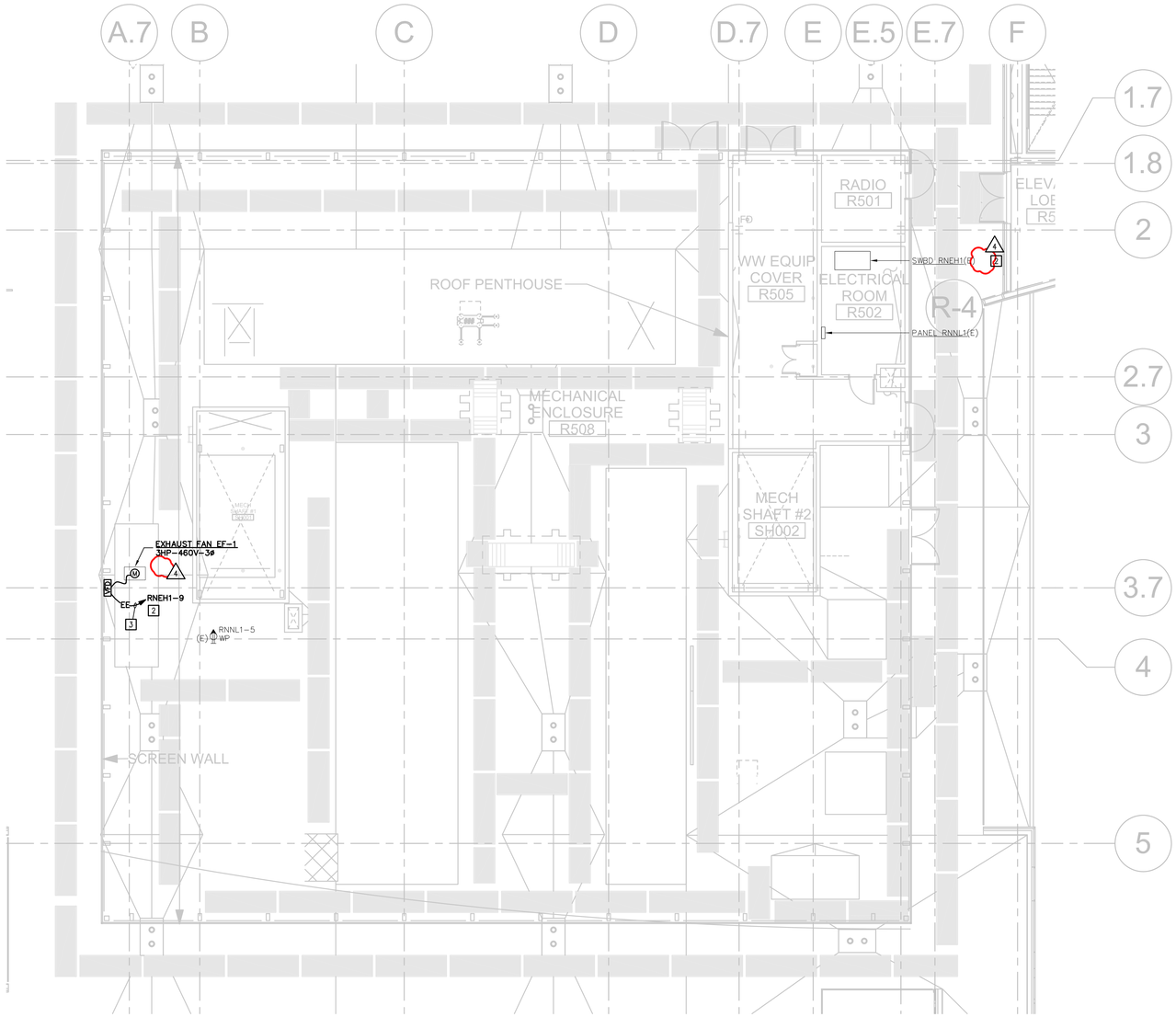
Sheet Title
MECHANICAL EQUIPMENT DETAILS

Date 08/05/2022
Scale AS NOTED
Sheet Number 3 S3.3

30 X 42

SHEET NOTES

1. SEAL CONDUIT PENETRATION THROUGH EXTERIOR WALL.
2. PROVIDE HOMERUN FROM EXHAUST FAN VFD TO SWITCHBOARD RNEH1 AND CONNECT WIRING TO EXISTING SPARE 15A-3P CIRCUIT BREAKER. ROUTE CONDUIT ALONG PERIMETER SCREEN FENCE OR ON THE ROOF WITH B-LINE DURABLOCK CONDUIT SUPPORT.
3. FOR WIRING AND OTHER REQUIREMENTS, REFER TO ONE LINE DIAGRAM ON SHEET E0.1.. (4)



1 PARTIAL ROOF PLAN – POWER (1)(4)
SCALE: 1/8" = 1'-0"

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Office: 415.552.3600

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SKA Project Number
2136

OSHPD Number
HCAI# S221296-21-00

HCAI seal/signature
REVIEWED IN ACCORDANCE WITH THE REQUIREMENTS OF 7 CA. CCR
APPROVED
Department of Health Care Access & Information
Office of Statewide Hospital Planning & Development
2/13/2023, 11:24:21 PM
S221296-21-00
Pedar Pomme

Seal/Signature
REGISTERED ARCHITECT KENNETH MCCLAIN C37097 EXP. 9/30/2023 STATE OF CALIFORNIA
REGISTERED PROFESSIONAL ENGINEER PAUL T. O'CONNELL No. E15435 EXP. 6/30/2023 ELECTRICAL STATE OF CALIFORNIA

Issued for
HCAI SUBMITTAL

2	DESIGN CHANGE	12/09/2022
4	DESIGN CHANGE	01/25/2023

Drawn by KT
Checked by PO

Project Name
HOSPITAL REPLACEMENT BUILDING-
NUCLEAR MEDICINE SUITE RELOCATION

Sheet Title
PARTIAL ROOF PLAN - POWER

Date 08/05/2022
Scale AS NOTED
Sheet Number (4)E2.3

30 X 42

NAME: G:\21039 MGH HRB Nuclear Medicine Suite\CAD-Revit\Electrical\ E23plan.dwg DATE: DEC 05, 2022 TIME: 3:37 PM SCALE: 1=1 SIZE: 42"X30" BY: KT