
INDIAN HEALTH SERVICE - BILLINGS AREA WIDE AIRBORNE INFECTION ISOLATION ROOM RENOVATION AND MODERNIZATION

IHS Project No.:BI20A0200Z6
MONTANA & WYOMING

INDIAN HEALTH SERVICE - BILLINGS
AREA WIDE AIRBORNE INFECTION ISOLATION
ROOM RENOVATION AND MODERNIZATION
MONTANA & WYOMING
BWS Project No. 1818.300


FORT BELKNAP SERVICE UNIT

CONSTRUCTION DOCUMENTS

05/26/2021

CONSTRUCTION DOCUMENTS
05/26/2021

OWNER

 U. S. DEPARTMENT
OF HEALTH AND
HUMAN SERVICES
INDIAN HEALTH SERVICE
DIVISION OF FACILITIES ENGINEERING
BILLINGS AREA



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bws | ARCHITECTS

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1 ABBREVIATIONS		
@	AT	ID
A/C	AIR CONDITIONING	IE
AB	ANCHOR BOLT	IN
ABC	AGGREGATE BASE COURSE	INCL
AC	ACOUSTICAL CEILING	INSUL
ADJ	ADJACENT	INT
AFF	ABOVE FINISH FLOOR	JC
AGG	AGGREGATE	JST
ALT	ALTERNATE	JT
ALUM	ALUMINUM	KD
ANCH	ANCHOR	KIT
AND	AND/ODD	KO
AESS	ARCHITECTURALLY EXPOSED STRUCTURAL STEEL	KP
BD	BOARD	L
BFF	BELOW FINISH FLOOR	LAB
BLDG	BUILDING	LAM
BLK(G)	BLOCK (ING)	LAV
BM	BENCHMARK	LF
BO	BOTTOM OF	LH
BOT	BOTTOM	LL
BRG	BEARING	LLH
BRK	BRICK	LLV
BSMT	BASEMENT	LP
BUR	BUILT-UP ROOFING	LT
C	CHANNEL	LTWT
C/C	CENTER TO CENTER	LVR
CAB	CABINET	MAS
CB	CHALKBOARD, CATCH BASIN	MAX
CEM	CEMENT	MATL
CFCI	CONTRACTOR FURNISHED, CONTRACTOR INSTALLED	MED
CFOI	CONTRACTOR FURNISHED, OWNER INSTALLED	MECH
CG	CORNER GUARD	MET
CI	CAST IRON	MEZZ
CIP	CAST IN PLACE	MFR
CJ	CONTROL JOINT	MH
CLR	CLEAR(ANCE)	MIN
CMP	CORRUGATED METAL PIPE	MISC
CMTS	COMPONENTS	MO
CMU	CONCRETE MASONRY UNIT	MOD
CMWP	COMPOSITE METAL WALL PANEL	MOV
CO	CLEAN OUT	MTD
COL	COLUMN	MTL
COMB	COMBINATION	MWP
CONC	CONCRETE	N
CONST	CONSTRUCTION	NA
CONN	CONNECTION	NIC
CONT	CONTINUOUS CONTINUE	NO
CORR	CORRIDOR, CORRUGATED	NOM
CPT	CARPET	NRC
CFT	COUNTERSINK	NO
CSK	CERAMIC TILE	OA
CU	CUBIC	OC
CU FT	CUBIT FOOT (FEET)	OD
CW	COLD WATER	OFCI
D	DEPTH	OFF
DEMO	DEMOLISH, DEMOLITION	OFGI
DF	DRINKING FOUNTAIN	OH
DIA	DIAMETER	OH
DIAG	DIAGONAL	OPG
DIM	DIMENSION	OPR
DISP	DISPENSER	ORD
DM	DOWN	P
DITTO	DITTO	P
DP	DAMP PROOFING	PAR
DR	DOWNSPOUT	PART
DS	DETAIL	PART BD
DTL	DRAWING	PC
DWG	DRAWING	PCC
DWC	DRYWALL CHANNELS (HAT)	PCF
E	EAST	PERF
EA	EACH	PREFAB
EF	EACH FACE	PERIM
FJ	EXPANSION JOINT	PERP
ELEC	ELECTRICAL	PF
ELEV	ELEVATION, ELEVATOR	PJ
EMER	EMERGENCY	PL
EP	EPOXY PAINT	PLBG
EQ	EQUAL	PLAM
EQUIP	EQUIPMENT	PLF
ES	EXPOSED STRUCTURE	PNL
EST	ESTIMATE(D)	PO
EW	EACH WAY	PR
EW	ELECTRIC WATER COOLER	PSF
EXC	EXCAVATED(ION)	PSI
EXH	EXHAUST	PT
EXST	EXISTING	PTD
EXP	EXPANSION	PTR
EXT	EXTERIOR	PVC
EFS	EXTERIOR INSULATION FINISH SYSTEM	PVMT
EFS	EXTERIOR FINISH SYSTEM	PWD
F	FAHRENHEIT	QT
FA	FIRE ALARM	QTR
FAB	FABRICATE	QTY
FD	FLOOR DRAIN	(R)
FDN	FOUNDATION	R
FE	FIRE EXTINGUISHER	RA
FEC	FIRE EXTINGUISHER CABINET	RB
FF	FINISH FLOOR	RCP
FN	FINISH(ED)	RD
FLA	FLASHING	REF
FLEX	FLEXIBLE	REF)
FLUOR	FLUORESCENT	RELO
FO	FACE OF	REPL
FP	FIREPROOF	RES
FR	FIRE RESISTANT	RES
FRP	FIBER REINFORCED PLASTIC	REV
FT	FOOT, FEET	RH
FTG	FOOTING	RM
FUR	FURRIED(ING)	RO
FUT	FUTURE	ROW
GA	GAGE, GAUGE	REO
GALV	GALVANIZED	RWL
GC	GENERAL CONTRACT(OR)	
GD	GRADE	
GL	GLASS, GLAZING	
GWB	GYPSON WALL BOARD	
GYP	GYPSON	
H(T)	HEIGHT	
HB	HOSE BIB	
HC	HOLLOW CORE	
HD	HEAVY DUTY	
HDBD	HARDBOARD	
HDWD	HARDWOOD	
HDWR	HARDWARE	
HW	HIGH IMPACT WOOD FIBER PANEL	
HM	HOLLOW METAL	
HORIZ	HORIZONTAL	
HP	HIGH POINT	
HR	HOUR	
HVAC	HEATING/VENTILATING/ AIR CONDITIONING	
HW	HOT WATER	

2 SYMBOLS	
	COLUMN GRID
	BUILDING SECTION
	WALL SECTION
	ENLARGED AREA OR DETAIL MARK
	INTERIOR ELEVATION
	EXTERIOR ELEVATION
	ROOM NAME AND NUMBER
	DOOR MARK
	WINDOW MARK
	MATCH LINE
	WALL TYPE
	KEYNOTE TAG
	ELEVATION INDICATOR
	REVISION CLOUD
MATERIALS	
	EARTH
	POROUS FILL, STONE, GRAVEL
	CONCRETE
	CONCRETE MASONRY UNIT
	METAL (LARGE SCALE)
	METAL (SMALL SCALE)
	INSULATION BLANKET, BATTS
	RIGID INSULATION
	CERAMIC TILE
	PLASTER, SAND CEMENT & GROUT
	ROUGH WOOD CONTINUOUS
	ROUGH WOOD NON CONTINUOUS
	ROOFING / FLASHING
	GYPSON WALL BOARD
	MILLWORK
	PLYWOOD
	ACOUSTICAL PANEL/TILE
	BRICK
	CONCRETE, PLASTER, GWB
	WOOD
	SHEET METAL
	GLASS
	CERAMIC TILE

3 GENERAL NOTES	
GENERAL NOTES:	
A.	TO THE BEST OF OUR KNOWLEDGE AND INFORMATION AND IN ACCORDANCE WITH ACCEPTED PROFESSIONAL STANDARDS, WE HAVE COMPLIED WITH APPLICABLE PORTIONS OF THE AMERICAN WITH DISABILITIES ACT PERTAINING TO BUILDING ACCESSIBILITY FOR THE PHYSICALLY HANDICAPPED.
B.	ALL DIMENSIONS GIVEN TO FACE OF MASONRY/CONCRETE, AND GYPSUM BOARD AND METAL STUD CONSTRUCTION. EXPECTATIONS AS INDICATED ON DRAWINGS.
C.	DRAWINGS SHALL NOT BE SCALED. ALL WORK SHALL BE LAID OUT BY DIMENSIONS NOTED ON THE DRAWINGS.
D.	CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTION OF ALL EQUIPMENT PADS REQUIRED BY EQUIPMENT MANUFACTURER. ACTUAL SIZE AND LOCATION TO BE COORDINATED WITH APPROVED EQUIPMENT MANUFACTURER.
E.	HVAC AND ELECTRICAL EQUIPMENT SHOWN ON ARCHITECTURAL DRAWINGS IS FOR GENERAL REFERENCE ONLY. COORDINATE EQUIPMENT AND LOCATIONS WITH MECHANICAL AND ELECTRICAL DRAWINGS.
F.	FIRE RATINGS SHALL BE MAINTAINED AT FIRE RATED PARTITIONS BY PROVIDING FIRE SAFING MATERIAL AT GAPS AND VOIDS CREATED BY PENETRATIONS, STRUCTURAL MEMBERS, AND INTERSECTIONS WITH ADJACENT SURFACES AS REQUIRED. REFER TO FIRE PROTECTION LISTINGS FOR SPECIFIC ASSEMBLIES.
G.	ALL DETAILS APPLY WHETHER OR NOT SPECIFICALLY REFERENCED.
H.	ITEMS LOCATED IN CEILING TILES ARE TO BE CENTERED AT THE MIDPOINT OF EACH TILE. TYPICALLY, WHERE TWO ITEMS OCCUR, LOCATE AT THIRD POINTS, THREE ITEMS TO BE LOCATED AT QUARTER POINTS.
APPLICABLE CODES:	
- INTERNATIONAL BUILDING CODE 2018	
- INTERNATIONAL MECHANICAL CODE 2018	
- INTERNATIONAL ELECTRICAL CODE 2018	
- INTERNATIONAL PLUMBING CODE 2018	
- INTERNATIONAL ENERGY CONSERVATION CODE 2018	
- NATIONAL FIRE PROTECTION CODE 2018	
- NATIONAL FIRE PROTECTION ASSOCIATION CODE 99	
- HEALTH CARE FACILITIES 2012	
- NATIONAL FIRE PROTECTION ASSOCIATION CODE 101-2012	
4 SERVICE UNIT DRAWINGS INDEX	
0-GENERAL	
0-CVR	SEVICE UNIT COVER
0-GO.0	INDEX, ABBREVIATION, SYMBOLS, PROJECT DATA
1-FORT BELKNAP HOSPITAL	
1-CVR	COVER
1-G1.0	PROJECT INFO & OVERALL PLAN CONSTRUCTION PHASING & EXIT PLAN
1-G1.1	DEMOLITION PLAN
1-A2.0	FLOOR PLAN, ELEVATIONS, SCHEDULES
1-A2.1	ROOF PLAN
1-M1.0	OVERALL MECHANICAL PLAN
1-M2.0	ENLARGED MECHANICAL FLOOR PLANS
1-E1.0	OVERALL ELECTRICAL PLAN
1-E2.0	ENLARGED FLOOR PLANS - ELECTRICAL ELECTRICAL
1-E3.0	ONE-LINE AND SCHEDULES
2-EAGLE CHILD HEALTH STATION	
2-CVR	COVER
2-G1.0	PROJECT INFO & OVERALL PLAN CONSTRUCTION PHASING & EXIT PLAN
2-G1.1	DEMOLITION PLAN
2-A2.0	FLOOR PLAN, ELEVATIONS, SCHEDULES
2-A2.1	ROOF PLAN
2-M1.0	OVERALL MECHANICAL PLAN
2-M2.0	ENLARGED MECHANICAL FLOOR PLANS
2-E1.0	OVERALL ELECTRICAL PLAN
2-E2.0	ENLARGED FLOOR PLANS - ELECTRICAL ELECTRICAL ONE-LINE
2-E3.0	AND SCHEDULES
0-SERVICE UNIT STANDARD DRAWINGS AND INFORMATION	
0-A1.0	STANDARD WALL TYPES
0-A1.1	STANDARD DOOR & WINDOW DETAILS
0-A1.2	STANDARD CEILING DETAILS
0-S1.0	STANDARD STRUCTURAL NOTES
0-S1.1	TYPICAL STRUCTURAL DETAILS
0-M1.0	MECHANICAL SCHEDULES
0-M2.0	MECHANICAL DETAILS
0-M3.0	MECHANICAL CONTROLS
0-E0.0	ELECTRICAL SYMBOLS AND ABBREVIATIONS
ALTERNATES	
(NO ALTERNATES)	
LOCATION MAP - MONTANA	

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MONTANA & WYOMING IHS PROJECT NO. BI20A0200Z6		
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REVIEWED:		
D/E ENGINEER/PROJECT MANAGER	DATE	
APPROVED:		
D/E BRANCH CHIEF	DATE	
CONCURRENCE:		
D/E CHIEF	DATE	
REV	DATE	DESCRIPTION
ISSUE:	05/26/2021	- CONSTRUCTION DOCUMENTS
PROJECT NO.:	1818.300	
CAD DWG FILE:		
DRAWN BY:	RL	
CHECKED BY:		
SHEET TITLE		
INDEX, ABBREVIATIONS, SYMBOLS & PROJECT DATA		
0-GO.0		
SHEET 2 OF 33		

FORT BELKNAP HOSPITAL

669 Agency Main St, Harlem, Montana 59526

IHS Project No.:BI20A0200Z6

CONSTRUCTION DOCUMENTS

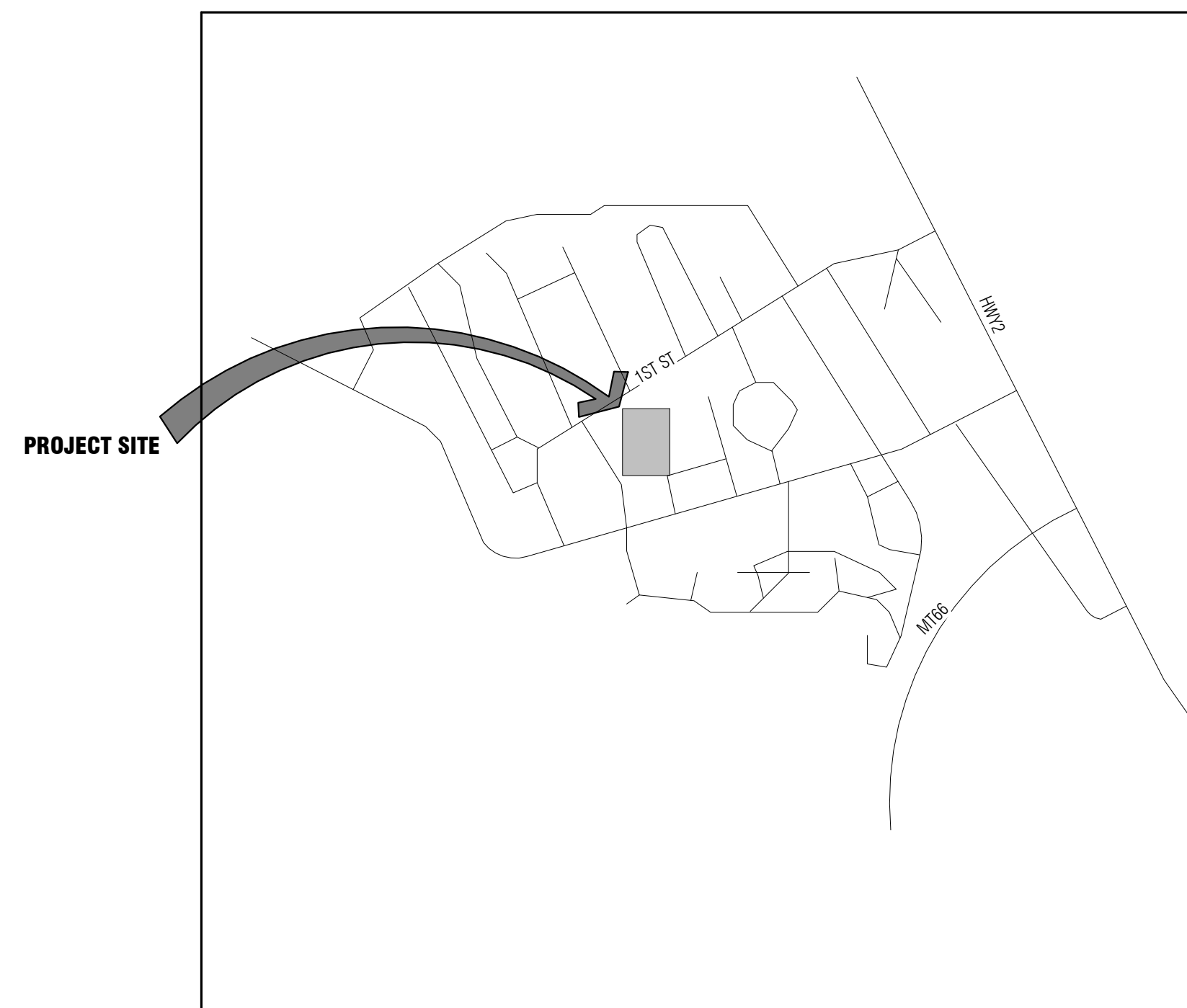
05/26/2021

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FORT BELKNAP HOSPITAL

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BWS Project No. 1818.300

1-FORT BELKNAP HOSPITAL DRAWINGS INDEX

SHEET #	SHEET TITLE	DISCIPLINE
1-CVR	COVER	GENERAL
1-G1.0	INFORMATION & OVERALL PLAN	GENERAL
1-G1.1	CONSTRUCTION PHASING & EXITING PLAN	GENERAL
1-AD2.0	DEMOLITION PLANS	ARCHITECTURAL
1-A2.0	PLANS, ELEVATIONS, SCHEDULES	ARCHITECTURAL
1-A2.1	ROOF PLAN	ARCHITECTURAL
1-M1.0	OVERALL MECHANICAL PLAN	MECHANICAL
1-M2.0	ENLARGED MECHANICAL FLOOR PLANS	MECHANICAL
1-E1.0	OVERALL ELECTRICAL PLAN ENLARGED	ELECTRICAL
1-E2.0	FLOOR PLANS - ELECTRICAL	ELECTRICAL
1-E3.0	ELECTRICAL ONE-LINE AND SCHEDULES	ELECTRICAL
TOTAL: 11		



VICINITY MAP

CONSTRUCTION DOCUMENTS
05/26/2021

OWNER

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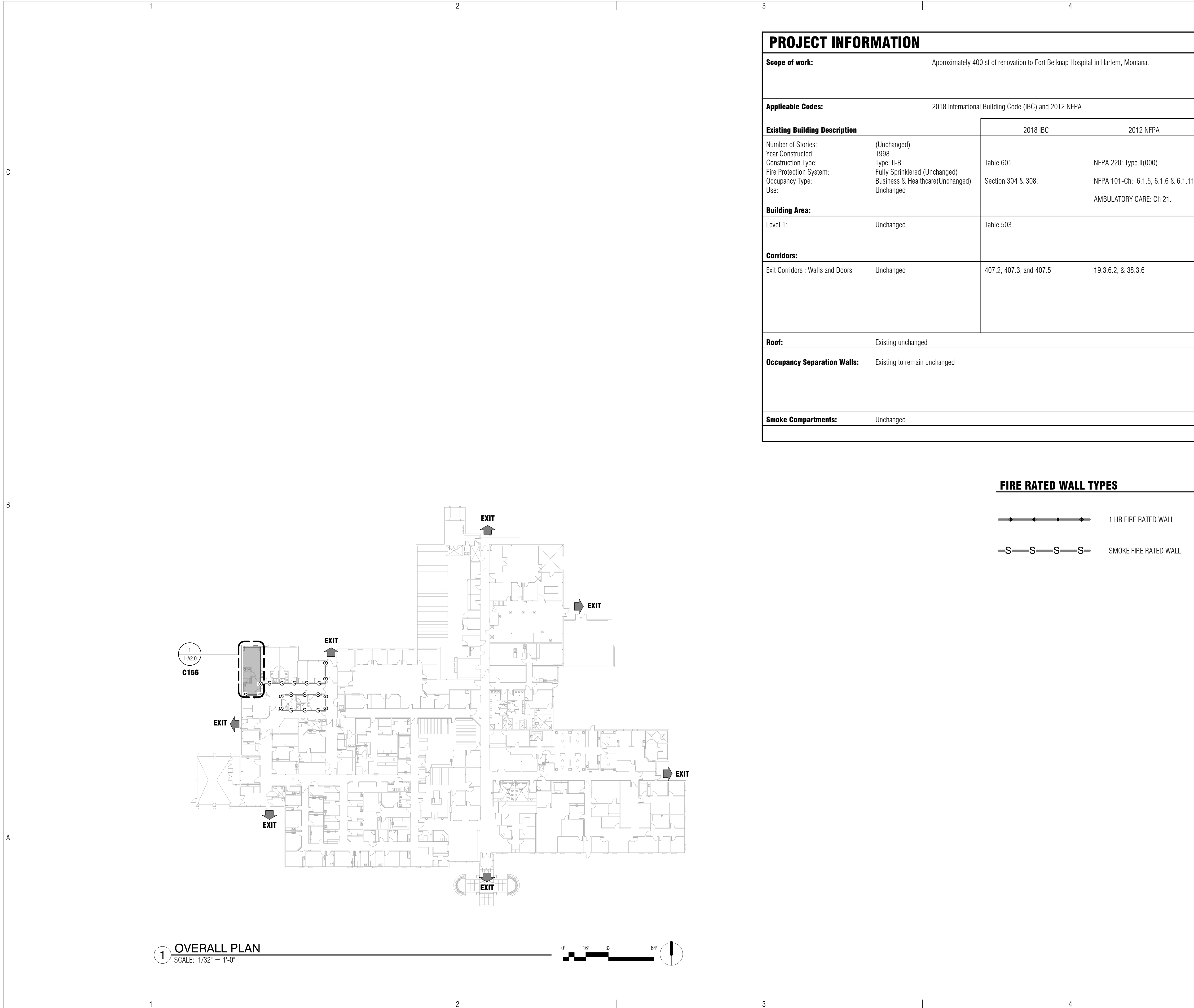
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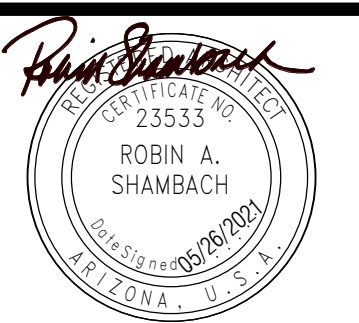
PROJECT INFORMATION

Scope of work:	Approximately 400 sf of renovation to Fort Belknap Hospital in Harlem, Montana.	
Applicable Codes:	2018 International Building Code (IBC) and 2012 NFPA	
Existing Building Description	2018 IBC	2012 NFPA
Number of Stories:	(Unchanged)	
Year Constructed:	1998	
Construction Type:	Type: II-B	NFPA 220: Type II(000)
Fire Protection System:	Fully Sprinklered (Unchanged)	
Occupancy Type:	Business & Healthcare(Unchanged)	NFPA 101-Ch: 6.1.5, 6.1.6 & 6.1.11
Use:	Unchanged	AMBULATORY CARE: Ch 21.
Building Area:		
Level 1:	Unchanged	Table 503
Corridors:		
Exit Corridors : Walls and Doors:	Unchanged	407.2, 407.3, and 407.5
		19.3.6.2, & 38.3.6
Roof:	Existing unchanged	
Occupancy Separation Walls:	Existing to remain unchanged	
Smoke Compartments:	Unchanged	

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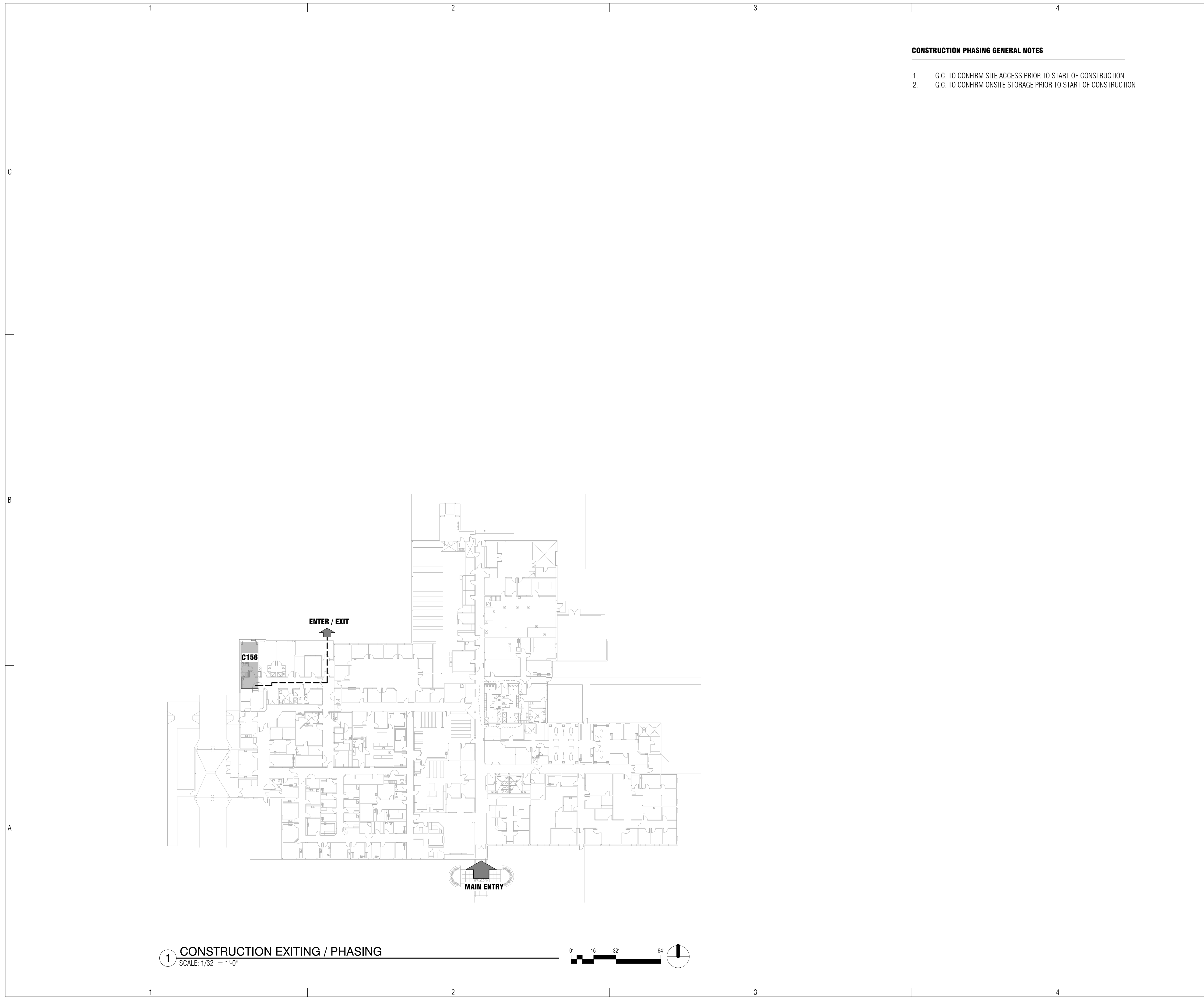


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CONCURRENCE:	
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CHECKED BY:		

SHEET TITLE
INFORMATION & OVERALL PLAN

1-G1.0



CONSTRUCTION PHASING GENERAL NOTES

1. G.C. TO CONFIRM SITE ACCESS PRIOR TO START OF CONSTRUCTION
2. G.C. TO CONFIRM ONSITE STORAGE PRIOR TO START OF CONSTRUCTION

1 **CONSTRUCTION EXITING / PHASING**
SCALE: 1/32" = 1'-0"



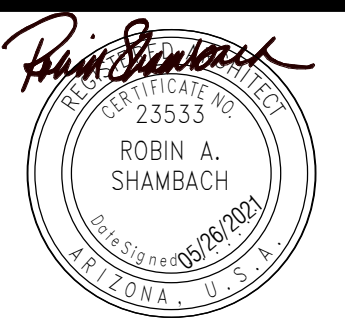
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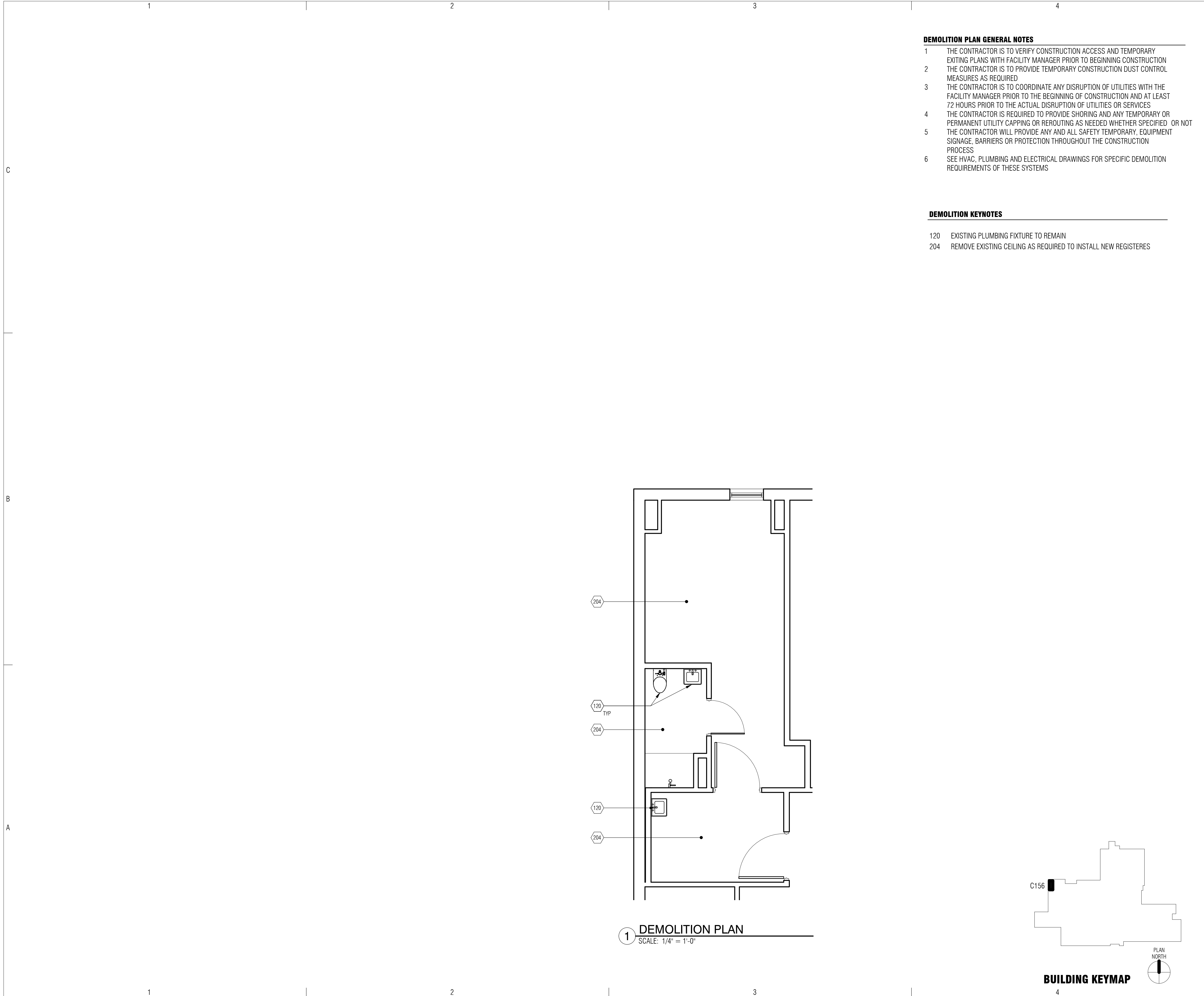
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**SHEET TITLE
CONSTRUCTION PHASING
& EXITING PLAN**

1-G1.1

SHEET 5 OF 33



- DEMOLITION PLAN GENERAL NOTES**
- 1 THE CONTRACTOR IS TO VERIFY CONSTRUCTION ACCESS AND TEMPORARY EXISTING PLANS WITH FACILITY MANAGER PRIOR TO BEGINNING CONSTRUCTION
 - 2 THE CONTRACTOR IS TO PROVIDE TEMPORARY CONSTRUCTION DUST CONTROL MEASURES AS REQUIRED
 - 3 THE CONTRACTOR IS TO COORDINATE ANY DISRUPTION OF UTILITIES WITH THE FACILITY MANAGER PRIOR TO THE BEGINNING OF CONSTRUCTION AND AT LEAST 72 HOURS PRIOR TO THE ACTUAL DISRUPTION OF UTILITIES OR SERVICES
 - 4 THE CONTRACTOR IS REQUIRED TO PROVIDE SHORING AND ANY TEMPORARY OR PERMANENT UTILITY CAPPING OR REROUTING AS NEEDED WHETHER SPECIFIED OR NOT
 - 5 THE CONTRACTOR WILL PROVIDE ANY AND ALL SAFETY TEMPORARY, EQUIPMENT SIGNAGE, BARRIERS OR PROTECTION THROUGHOUT THE CONSTRUCTION PROCESS
 - 6 SEE HVAC, PLUMBING AND ELECTRICAL DRAWINGS FOR SPECIFIC DEMOLITION REQUIREMENTS OF THESE SYSTEMS

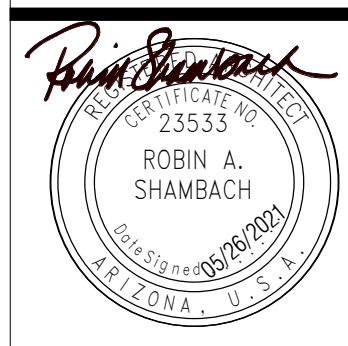
- DEMOLITION KEYNOTES**
- 120 EXISTING PLUMBING FIXTURE TO REMAIN
 - 204 REMOVE EXISTING CEILING AS REQUIRED TO INSTALL NEW REGISTERS

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DFE CHIEF DATE _____

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SHEET TITLE

DEMOLITION PLANS

1-AD2.0

SHEET 6 OF 33

DOOR SCHEDULE													
OPENING NO.	ROOMS		DOOR						FRAME			FIRE LABEL	REMARKS
	FROM	TO	TYPE	PANEL SIZE		MATERIAL	FINISH	GLASS	TYPE	MATERIAL	FINISH		
				WIDTH	HEIGHT								
1-190AA	C160	C156		4' - 0"	7' - 0"								EXISTING TO REMAIN
1-190BB	C157	C156		3' - 0"	7' - 0"								EXISTING TO REMAIN

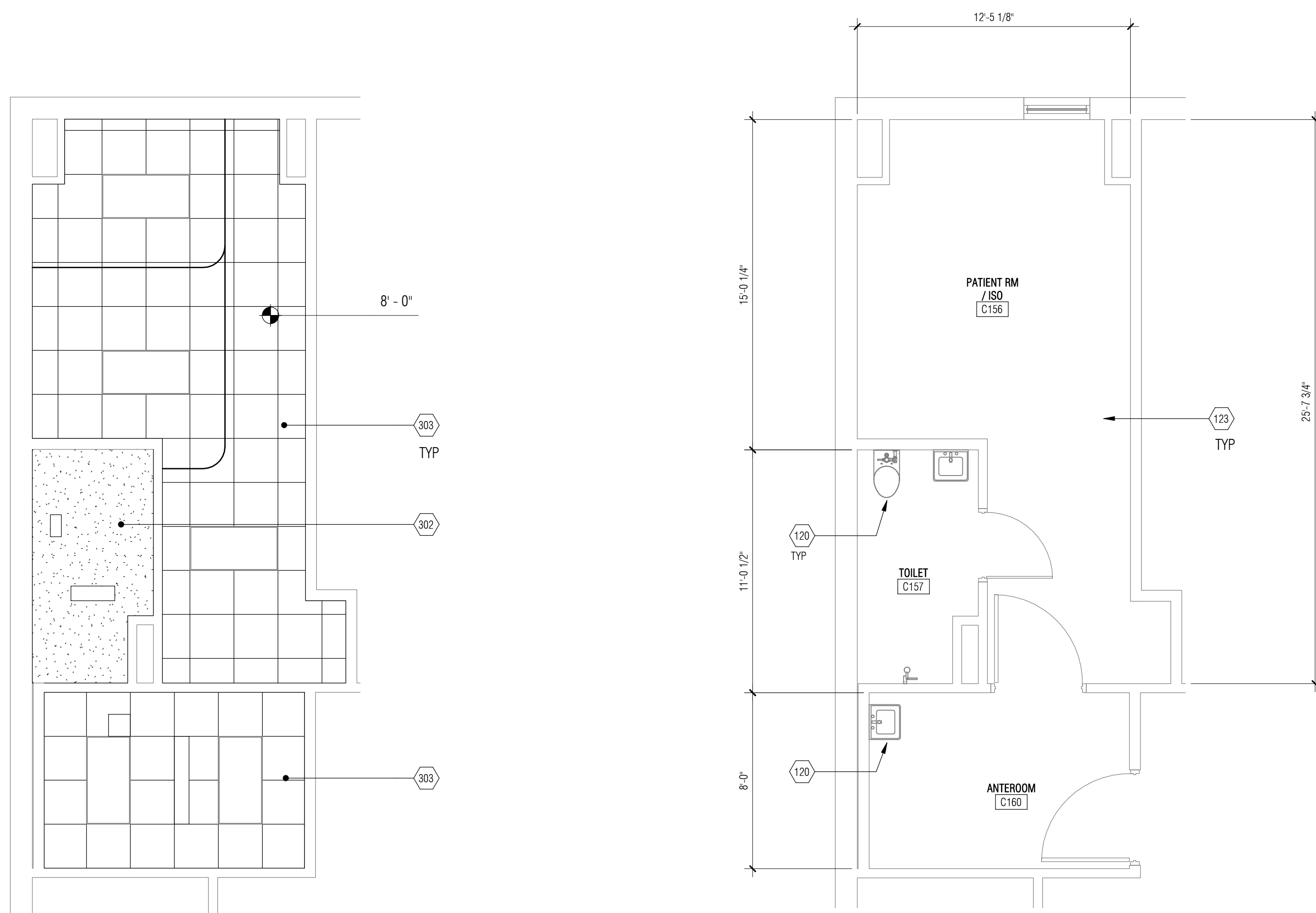
ROOM FINISH SCHEDULE														
WT	ROOM NAME	FLOOR		WALLS								CEILING		REMARKS
		FINISH	BASE	NORTH		EAST		SOUTH		WEST		SURFACE	FINISH	
				SURFACE	FINISH	SURFACE	FINISH	SURFACE	FINISH	SURFACE	FINISH			
C156	PATIENT RM / ISO	(E)	(E)	(E)	P	(E)	P	(E)	P	(E)	P	ACT		EXISTING TO REMAIN
C157	TOILET	(E)	(E)	(E)	P	(E)	P	(E)	P	(E)	P	BWB	P	EXISTING TO REMAIN
C160	ANTEROOM	(E)	(E)	(E)	P	(E)	P	(E)	P	(E)	P	ACT		EXISTING TO REMAIN

FLOOR PLAN GENERAL NOTES

1. THE CONTRACTOR IS TO CONFIRM EXISTING CONDITIONS PRIOR TO BEGINNING CONSTRUCTION
2. THE CONTRACTOR IS TO PROVIDE NEW FINISHES AS INDICATED ON FINISH SCHEDULE
3. THE CONTRACTOR IS TO PROVIDE NEW DOORS AND HARDWARE AS INDICATED ON DOOR SCHEDULE
4. THE CONTRACTOR IS TO PROVIDE SUPPORT BLOCKING AT ALL NEW OR REINSTALLED WALL SUPPORTED EQUIPMENT, PLUMBING FIXTURES, ACCESSORIES AND CABINETS
5. SEE SHEET 0-A1.0 FOR WALL TYPES
6. SEE SHEET 0-A1.1 FOR DOOR AND WINDOW DETAILS
7. SEE SHEET 0-A1.2 FOR STANDARD CEILING AND FRAMING DETAILS
8. ALL DIMENSIONS ARE TO FACE OF STUD UNLESS NOTED OTHERWISE
9. SIGNAGE IS TO MATCH THE FACILITY'S EXISTING SIGNAGE. NEW SIGNAGE SHOULD BE HANDLED BY IHS

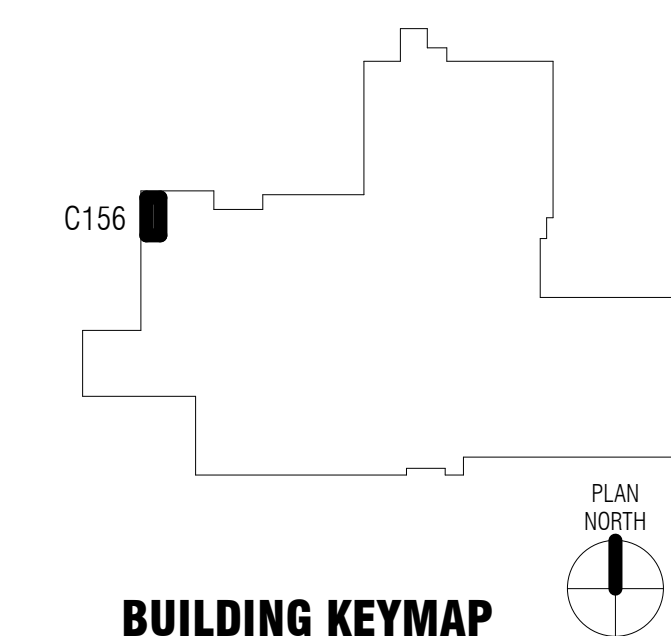
KEYNOTES

- 120 EXISTING PLUMBING FIXTURE TO REMAIN
- 123 EXISTING FLOORING TO REMAIN
- 302 NEW GYPSUM WALL BOARD CEILING
- 303 NEW ACT SUSPENDED CEILING SYSTEMS AS SHOWN



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

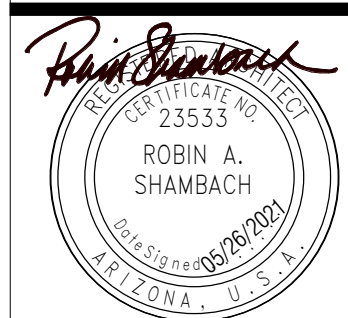
1 ENLARGED PLAN
SCALE: 1/4" = 1'-0"



CONSULTANTS

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Adams & Associates
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STRUCTURAL
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Phone: 520.323.3422



EXPIRES 06/30/2022

**FORT BELKNAP SERVICE UNIT
FORT BELKNAP HOSPITAL**

669 Agency Main St, Harlem, Montana 59526
IHS PROJECT NO. BI20A0200Z6

U. S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

INDIAN HEALTH SERVICE
DIVISION OF FACILITIES ENGINEERING
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DFE ENGINEER/PROJECT MANAGER DATE

APPROVED:

DFE BRANCH CHIEF DATE

CONCURRENCE:

DFE CHIEF DATE

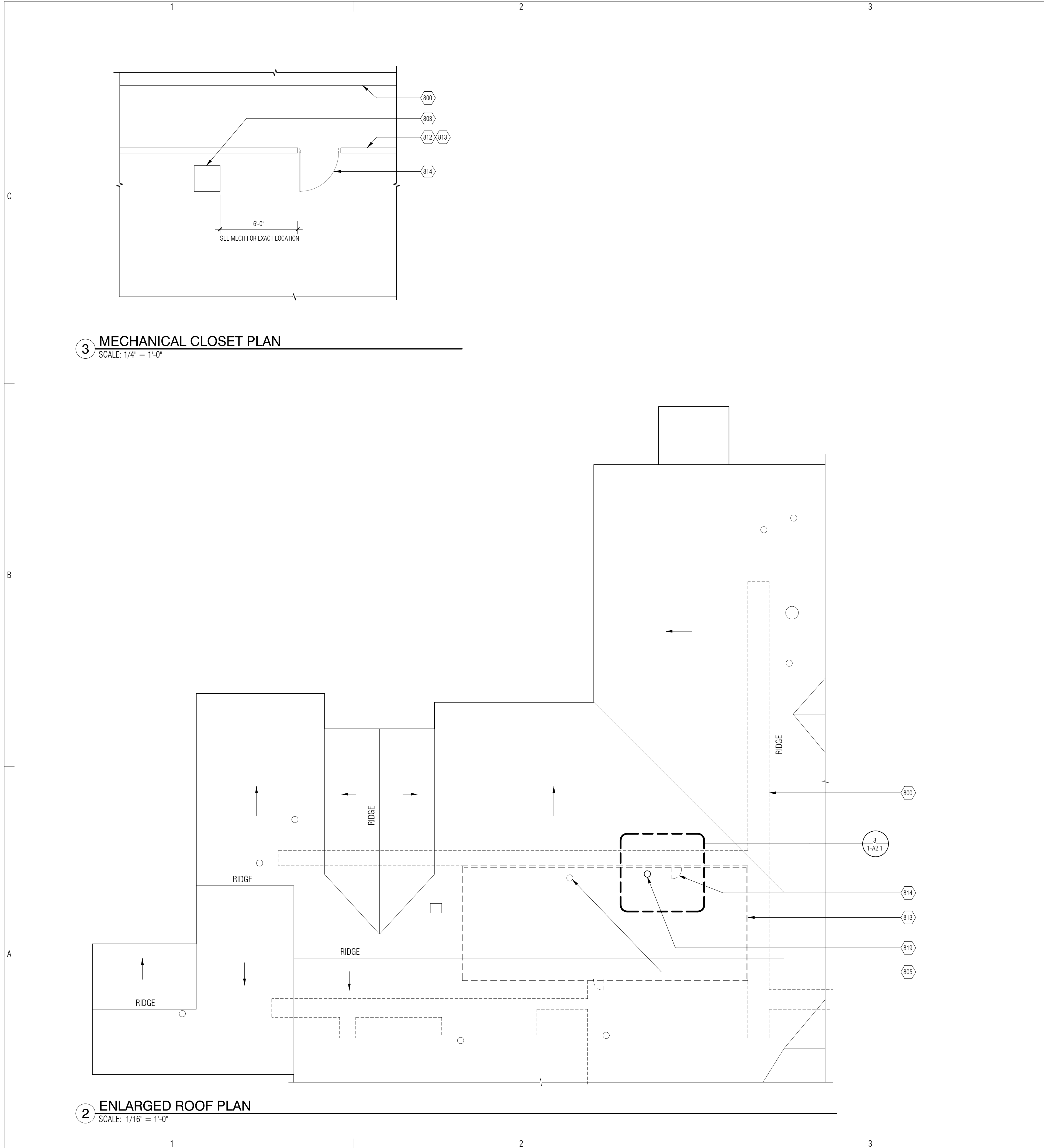
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ISSUE:	05/26/2021	- CONSTRUCTION DOCUMENTS
PROJECT NO.:	1818.300	
CAD DWG FILE:		
DRAWN BY:	RL	
CHECKED BY:		

SHEET TITLE

**PLANS, ELEVATIONS,
SCHEDULES**

1-A2.0

SHEET 7 OF 33



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

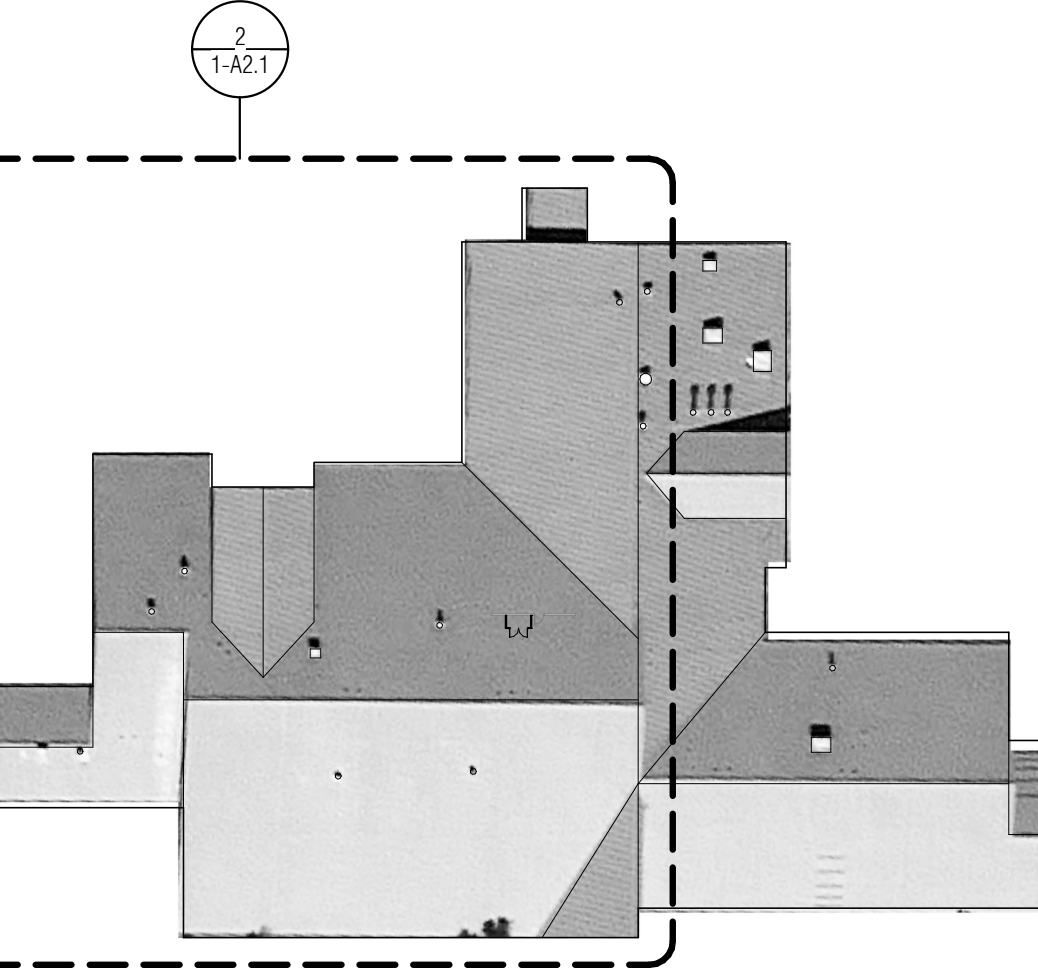
2 ENLARGED ROOF PLAN
SCALE: 1/16" = 1'-0"

ROOF PLAN GENERAL NOTES

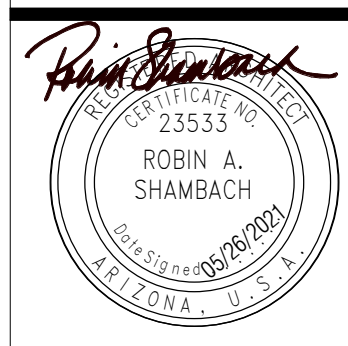
1. VERIFY EXISTING ROOF CONDITIONS AND EXISTING EQUIPMENT LOCATIONS PRIOR TO STARTING WORK.
2. COORDINATE THE ROOF PLAN WITH PLUMBING, MECHANICAL AND ELECTRICAL DRAWINGS.
3. REFER TO MECHANICAL DRAWINGS FOR VENT STACK PENETRATION DETAILS.
4. PROVIDE CRICKETS AND FLASHINGS AS REQUIRED AT NEW WORK. VALLEYS AT CRICKETS SHALL BE A MINIMUM OF 1/4" PER FOOT.

KEYNOTES

- 800 EXISTING CATWALK IN ATTIC
- 803 NEW UTILITY SET EXHAUST FAN ON ROOF, SEE MECH SHEETS FOR UTILITY SET DETAILS, SEE SHEET 0-S1.1 FOR ROOF PENETRATION SUPPORT DETAILS
- 805 EXISTING ROOF EQUIPMENT, CONTRACTOR TO CONFIRM EXISTING CONDITIONS
- 812 EXISTING WALL
- 813 EXISTING FAN ROOM IN ATTIC
- 814 EXISTING DOOR
- 819 NEW EXHAUST STACK THRU ROOF, REFER TO MECH, BRACE STACK TO ROOF PER DETAIL 11/0-S1.1



1 ROOF PLAN
SCALE: 1/64" = 1'-0"



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DFE CHIEF	DATE

REV	DATE	DESCRIPTION

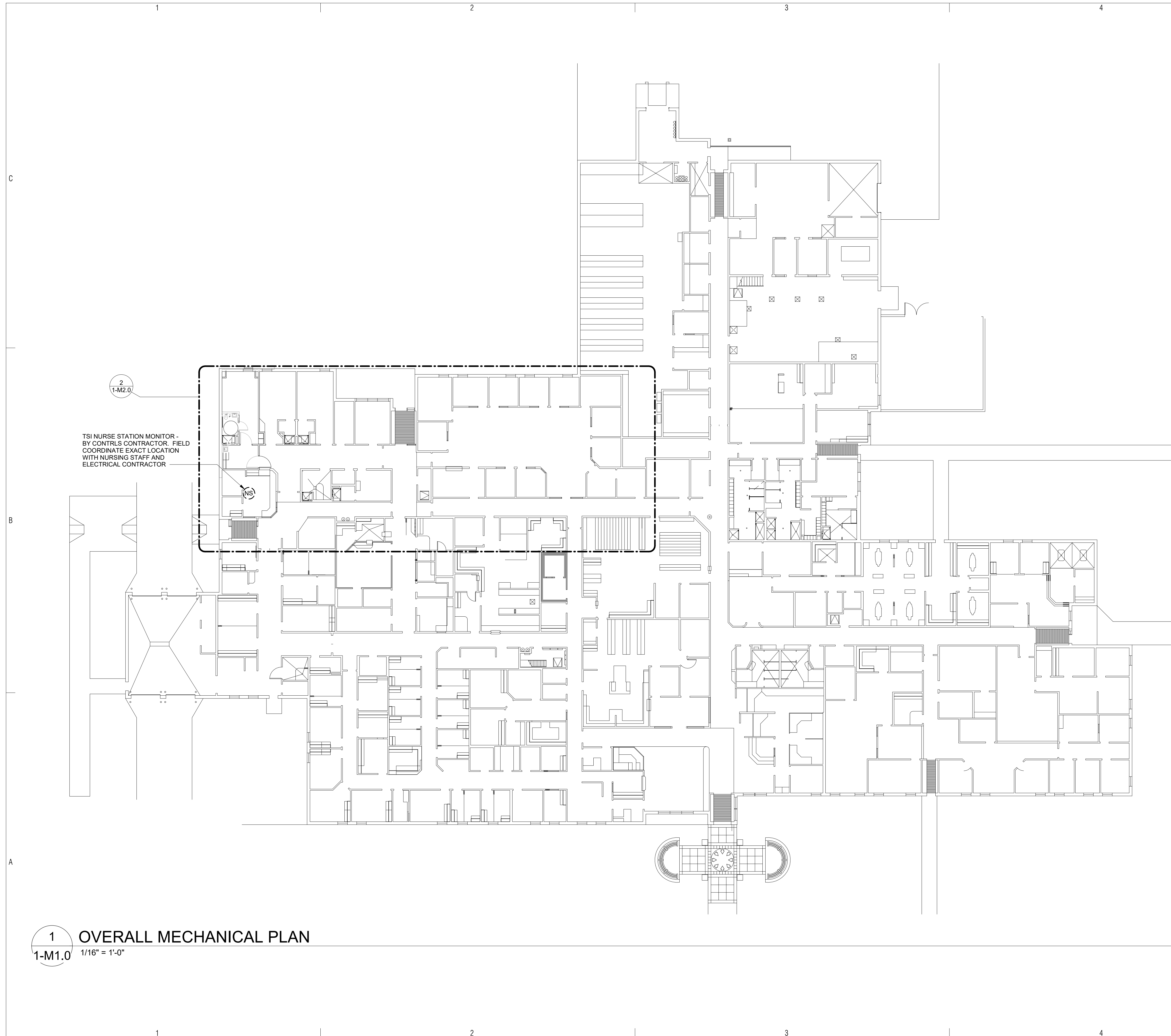
ISSUE: 05/26/2021 - CONSTRUCTION DOCUMENTS
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SHEET TITLE

ROOF PLAN

1-A2.1

SHEET 8 OF 33



1 OVERALL MECHANICAL PLAN
 1-M1.0 1/16" = 1'-0"

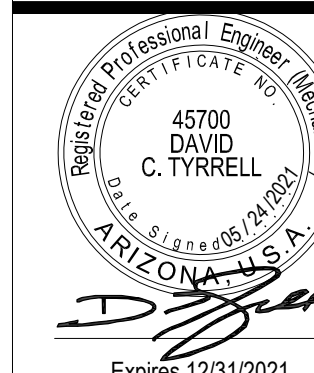
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 www.adamsmep.com
 PROJECT No. 20104

**FORT BELKNAP SERVICE UNIT
 FORT BELKNAP HOSPITAL**

669 Agency Main St, Harlem, Montana
 59526
 IHS PROJECT NO. BI20A0200Z6

U. S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

INDIAN HEALTH SERVICE
 DIVISION OF FACILITIES ENGINEERING
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PROJECT NO.: 1818.300

CAD DWG FILE:

DRAWN BY: Author

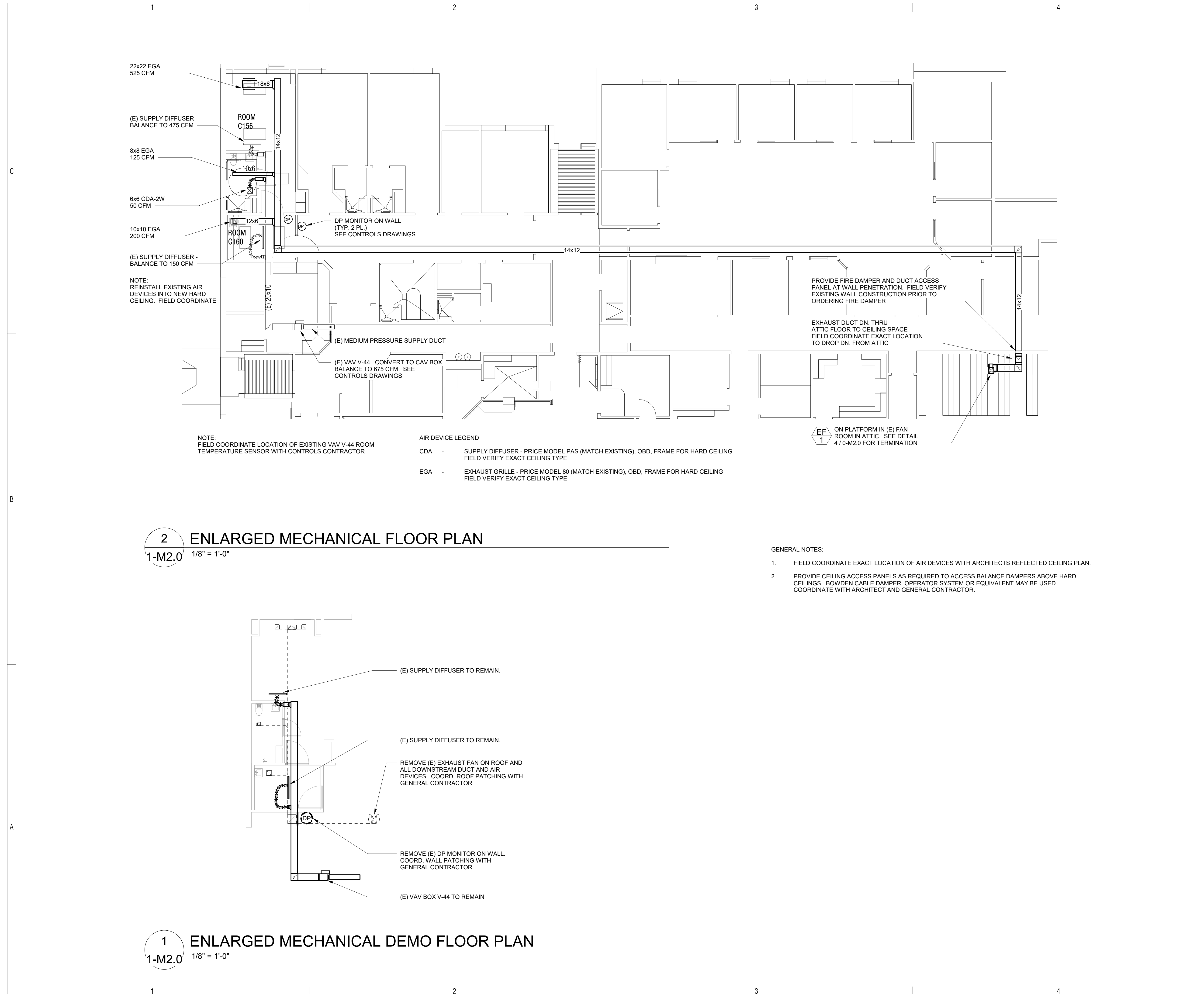
CHECKED BY:

SHEET TITLE

OVERALL MECHANICAL PLAN

1-M1.0

SHEET 9 OF 33



22x22 EGA
525 CFM

(E) SUPPLY DIFFUSER -
BALANCE TO 475 CFM

8x8 EGA
125 CFM

6x6 CDA-ZW
50 CFM

10x10 EGA
200 CFM

(E) SUPPLY DIFFUSER -
BALANCE TO 150 CFM

NOTE:
REINSTALL EXISTING AIR
DEVICES INTO NEW HARD
CEILING. FIELD COORDINATE

NOTE:
FIELD COORDINATE LOCATION OF EXISTING VAV V-44 ROOM
TEMPERATURE SENSOR WITH CONTROLS CONTRACTOR

AIR DEVICE LEGEND

CDA - SUPPLY DIFFUSER - PRICE MODEL PAS (MATCH EXISTING), OBD, FRAME FOR HARD CEILING
FIELD VERIFY EXACT CEILING TYPE

EGA - EXHAUST GRILLE - PRICE MODEL 80 (MATCH EXISTING), OBD, FRAME FOR HARD CEILING
FIELD VERIFY EXACT CEILING TYPE

ON PLATFORM IN (E) FAN
ROOM IN ATTIC. SEE DETAIL
4 / 0-M2.0 FOR TERMINATION

PROVIDE FIRE DAMPER AND DUCT ACCESS
PANEL AT WALL PENETRATION. FIELD VERIFY
EXISTING WALL CONSTRUCTION PRIOR TO
ORDERING FIRE DAMPER

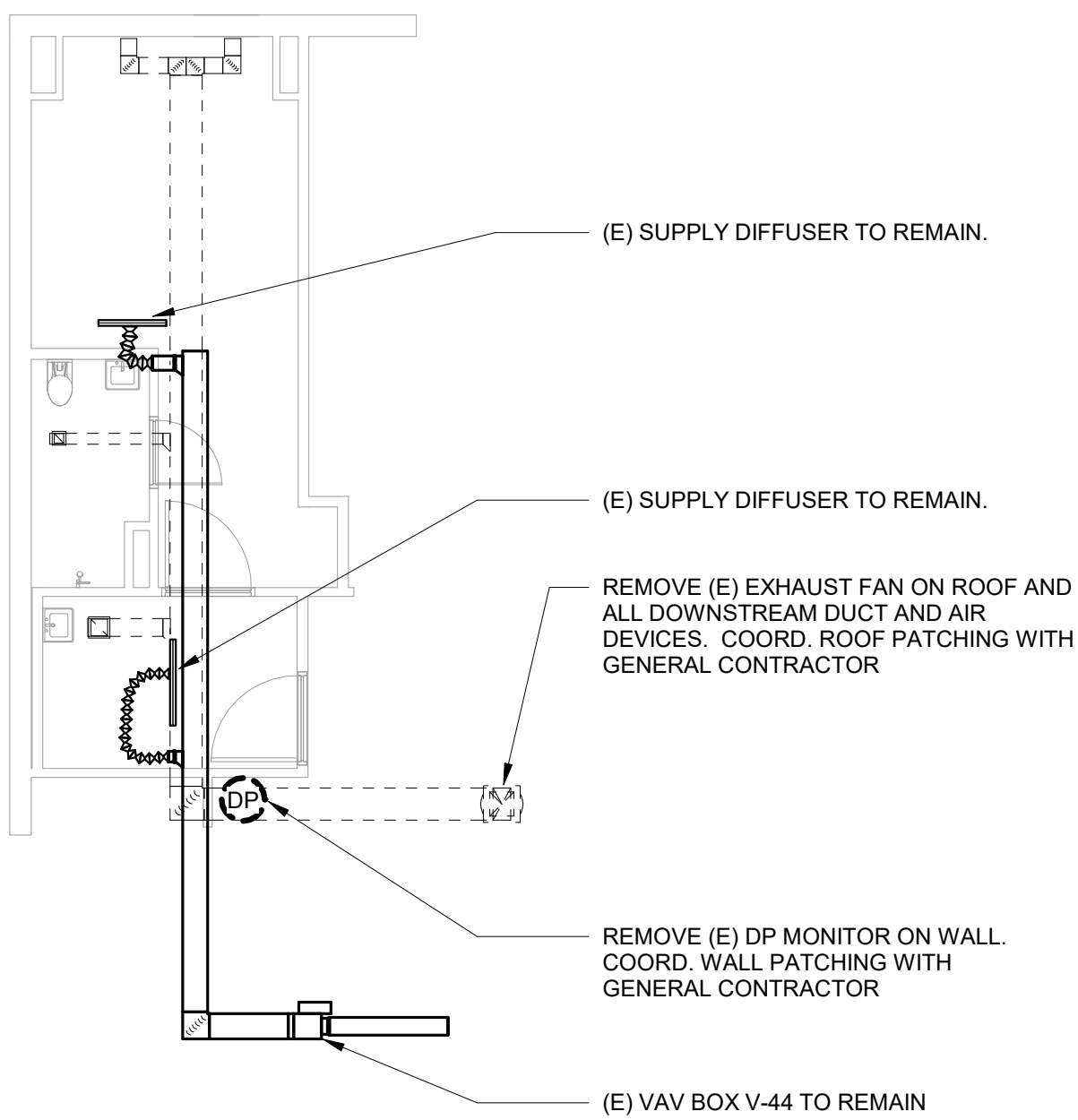
EXHAUST DUCT DN. THRU
ATTIC FLOOR TO CEILING SPACE -
FIELD COORDINATE EXACT LOCATION
TO DROP DN. FROM ATTIC

(E) MEDIUM PRESSURE SUPPLY DUCT

(E) VAV V-44. CONVERT TO CAV BOX.
BALANCE TO 675 CFM. SEE
CONTROLS DRAWINGS

2 ENLARGED MECHANICAL FLOOR PLAN
1-M2.0 1/8" = 1'-0"

- GENERAL NOTES:
- FIELD COORDINATE EXACT LOCATION OF AIR DEVICES WITH ARCHITECTS REFLECTED CEILING PLAN.
 - PROVIDE CEILING ACCESS PANELS AS REQUIRED TO ACCESS BALANCE DAMPERS ABOVE HARD CEILINGS. BOWDEN CABLE DAMPER OPERATOR SYSTEM OR EQUIVALENT MAY BE USED. COORDINATE WITH ARCHITECT AND GENERAL CONTRACTOR.



1 ENLARGED MECHANICAL DEMO FLOOR PLAN
1-M2.0 1/8" = 1'-0"

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IHS PROJECT NO. BI20A020026

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APPROVED: _____

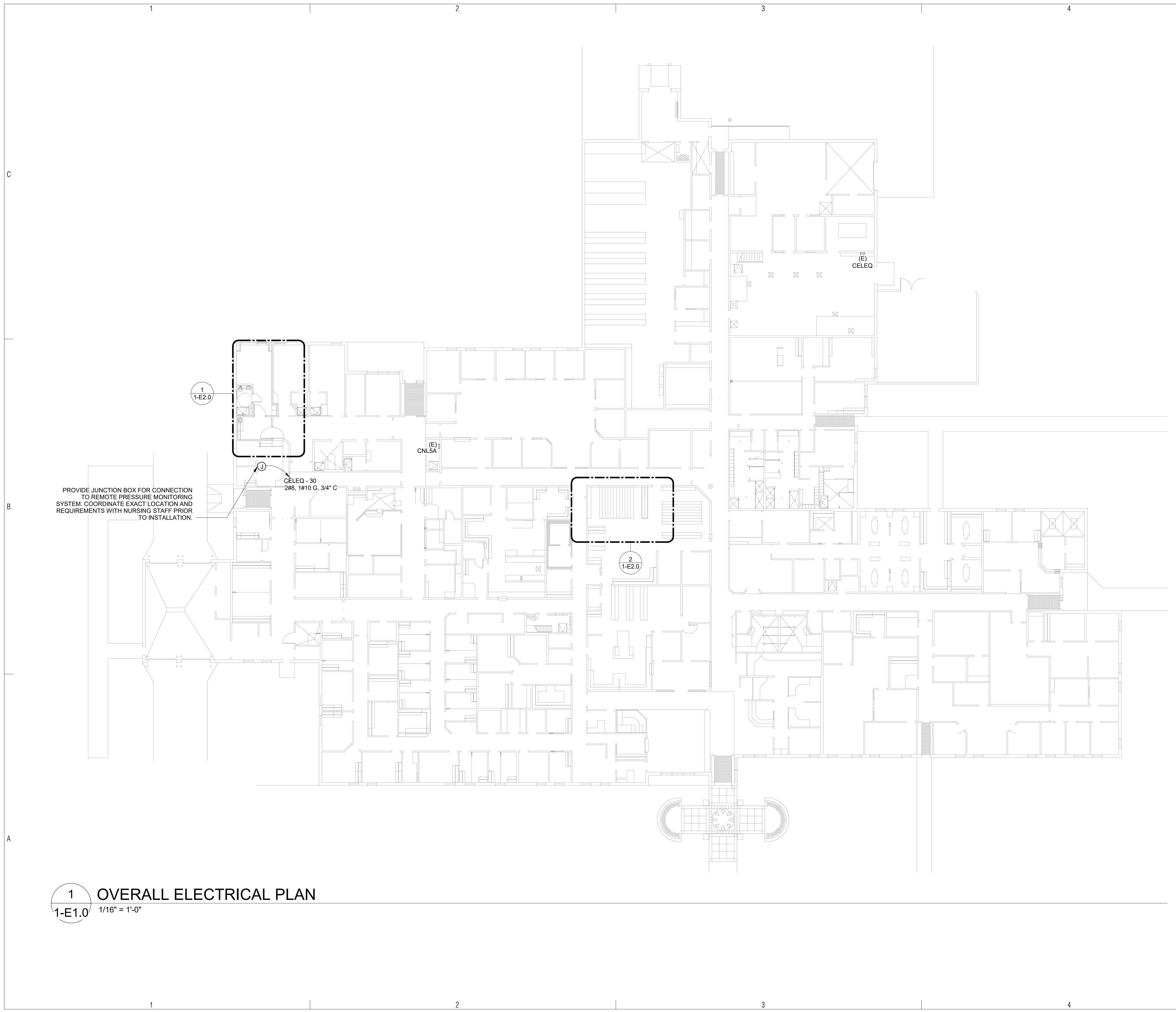
DFE BRANCH CHIEF _____ DATE _____

CONCURRENCE: _____

DFE CHIEF _____ DATE _____

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1 OVERALL ELECTRICAL PLAN
 1-E1.0 1/16" = 1'-0"

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 www.adamsnep.com

PROJECT No. 20104

FORT BELKNAP SERVICE UNIT
FORT BELKNAP HOSPITAL

669 Agency Main St, Harlem, Montana
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 IHS PROJECT NO. BI20A0200Z6



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 APPROVED:

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 CONCURRENCE:

DFE CHIEF _____ DATE _____

REV	DATE	DESCRIPTION

SHEET TITLE
OVERALL ELECTRICAL PLAN

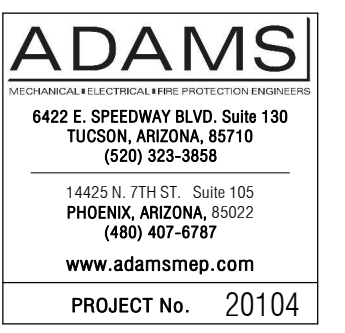
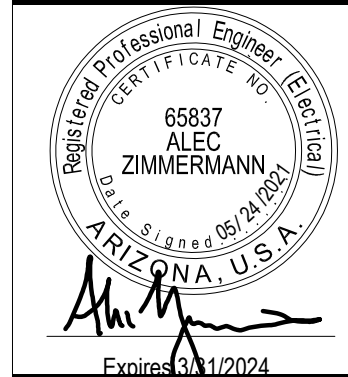
1-E1.0
 SHEET 11 OF 33



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**FORT BELKNAP SERVICE UNIT
FORT BELKNAP HOSPITAL**

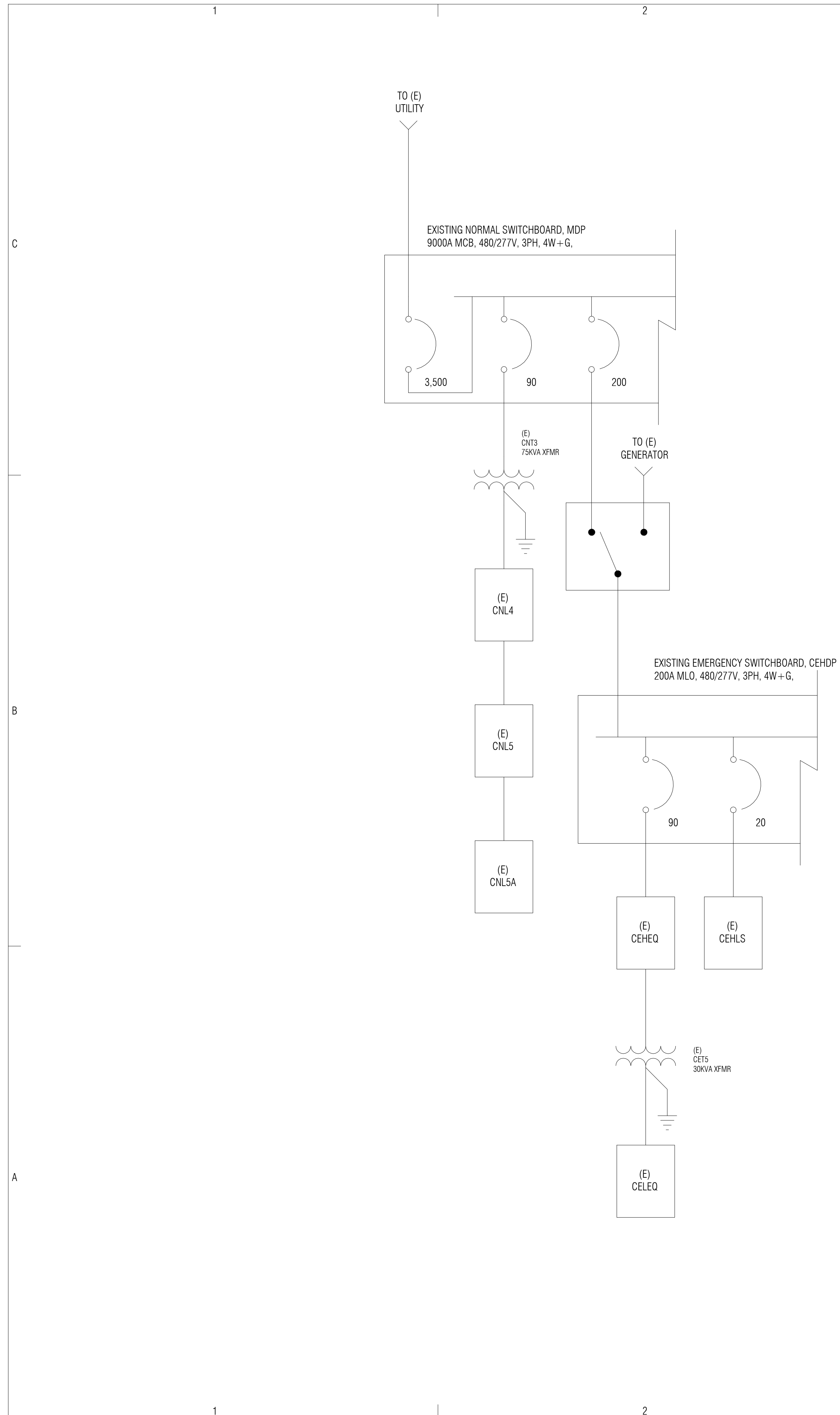
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IHS PROJECT NO. BI20A0200Z6



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DFE CHIEF	DATE

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ISSUE:	05/26/2021	- CONSTRUCTION DOCUMENTS
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DRAWN BY:	AZ	
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SHEET TITLE
**ENLARGED FLOOR PLANS
- ELECTRICAL**



(E) Branch Panel: CELEQ

Location: (E) Mech Room		Voltage: 120/208 Wye		Branch: EQUIPMENT	
Fed From: (E) CEHEQ VIA XFMR		Phases: 3		A.I.C. Rating: 10KAIC	
Mounting: Surface		Wires: 4		AFC Value:	
Enclosure: Type 1		Neutral Bus: Y		Main Bus: 100 A	
Feed Thru Lugs: Y		Ground Bus: Y		MCB: 90 A	
				Bus Type: Existing	

Notes:
*PROVIDE NEW CIRCUIT BREAKER IN EXISTING SPACE. MATCH EXISTING TYPE AND AIC RATING.

CKT	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	CKT	
1	Existing Load	20 A	1	852 VA	2300...			3	40 A	Existing Load	2
3	Existing Load	20 A	1		500 VA	2300...		--	--		4
5	Existing Load	20 A	1			500 VA	2300...	--	--		6
7	Existing Load	20 A	1	900 VA	500 VA			1	20 A	Existing Load	8
9	Existing Load	20 A	1		500 VA	500 VA		1	20 A	Existing Load	10
11	Existing Load	20 A	1			400 VA	500 VA	1	20 A	Existing Load	12
13	Existing Load	20 A	1	500 VA	1200...			2	20 A	Existing Load	14
15	Existing Load	20 A	1		450 VA	1200...		--	--		16
17	Existing Load	20 A	1			700 VA	1200...	2	20 A	Existing Load	18
19	Existing Load	20 A	1	450 VA	1200...			--	--		20
21	Existing Load	20 A	1		500 VA	1100...		2	20 A	Existing Load	22
23	Existing Load	20 A	1			550 VA	1100...	--	--		24
25	Existing Load	20 A	1	700 VA	1300...			2	20 A	Existing Load	26
27	Existing Load	20 A	1		800 VA	1300...		--	--		28
29	*EF-1	20 A	1			1127...	200 VA	1	20 A	*REMOTE PRESSURE MONITORING	30
				Total Load:	9902 VA	9150 VA	8577 VA				
				Total Amps:	83 A	77 A	71 A				

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
MTRS	1327 VA	121.23%	1609 VA	Total Conn. Load: 27629 VA
Spare	26302 VA	100.00%	26302 VA	Total Est. Demand: 27911 VA
				Total Conn. Current: 77 A
				Total Est. Demand Current: 77 A

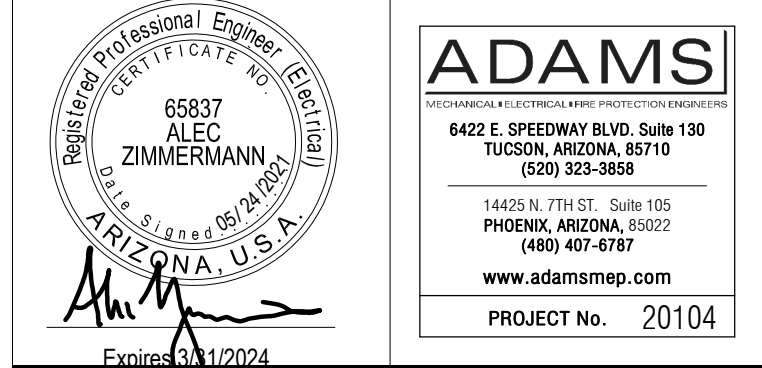
Notes:

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FORT BELKNAP SERVICE UNIT
FORT BELKNAP HOSPITAL

669 Agency Main St, Harlem, Montana 59526
 IHS PROJECT NO. BI20A0200Z6

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 INDIAN HEALTH SERVICE
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SHEET TITLE

ELECTRICAL ONE-LINE AND SCHEDULES

1-E3.0

SHEET 13 OF 33

EAGLE CHILD HEALTH STATION

453 Pine Grove Rd, Hays, Montana 59527

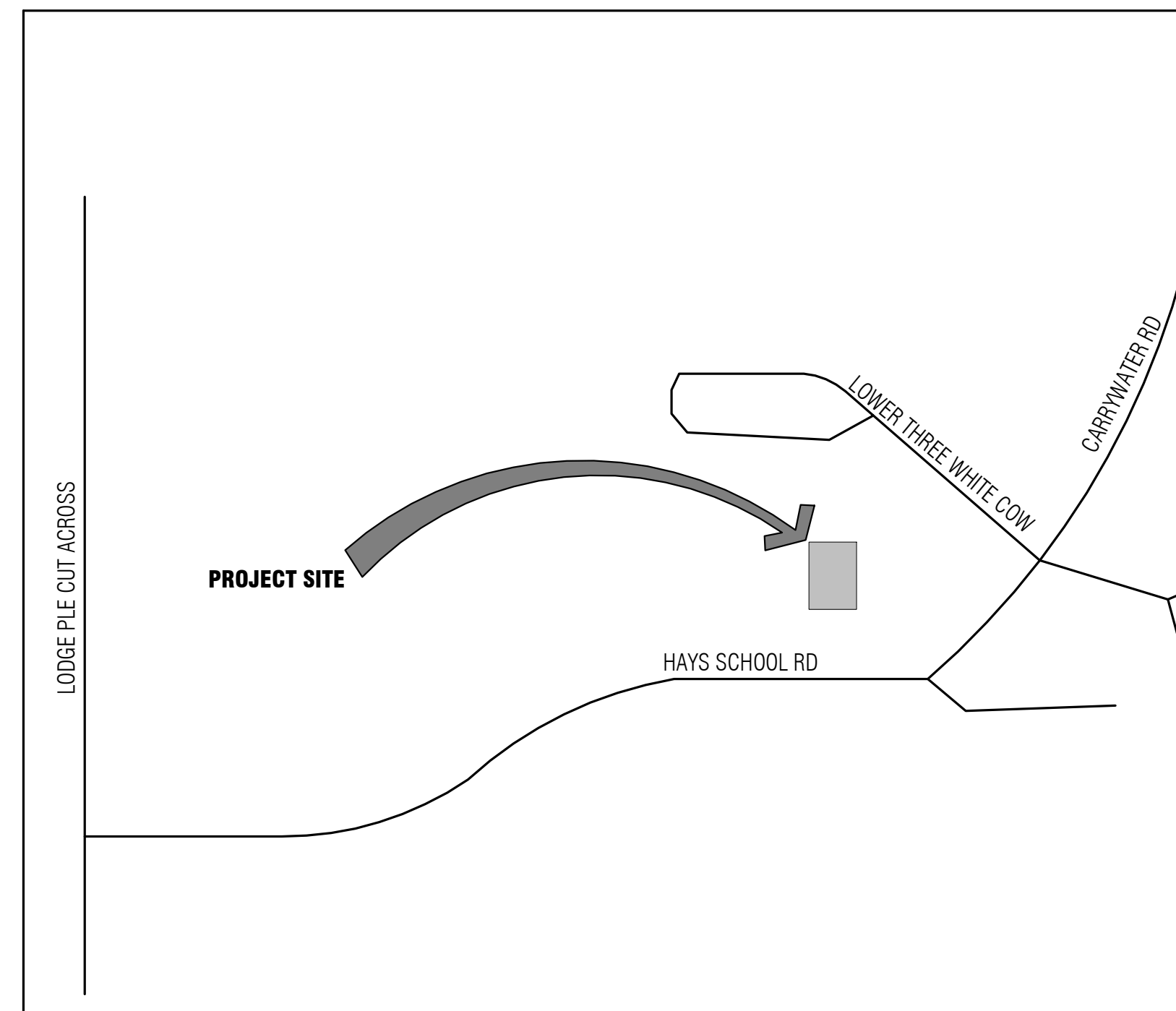
IHS Project No.:BI20A0200Z6

CONSTRUCTION DOCUMENTS

05/26/2021

FORT BELKNAP SERVICE UNIT
EAGLE CHILD HEALTH STATION

453 Pine Grove Rd, Hays, Montana 59527
BWS Project No. 1818.300



VICINITY MAP

2-EAGLE CHILD DRAWINGS INDEX

SHEET #	SHEET TITLE	DISCIPLINE	DATE ISSUED	REVISION
2-CVR	COVER	GENERAL		
2-G1.0	INFORMATION & OVERALL PLAN	GENERAL		
2-G1.1	CONSTRUCTION PHASING & EXITING PLAN	GENERAL		
2-AD2.0	DEMOLITION PLANS	ARCHITECTURAL		
2-A2.0	PLANS, ELEVATIONS, SCHEDULES	ARCHITECTURAL		
2-A2.1	ROOF PLAN	ARCHITECTURAL		
2-M1.0	OVERALL MECHANICAL PLAN	MECHANICAL		
2-M2.0	ENLARGED MECHANICAL FLOOR PLANS	MECHANICAL		
2-E1.0	OVERALL ELECTRICAL PLAN	ELECTRICAL		
2-E2.0	ENLARGED FLOOR PLANS - ELECTRICAL	ELECTRICAL		
2-E3.0	ELECTRICAL ONE-LINE AND SCHEDULES	ELECTRICAL		
TOTAL: 11				

CONSTRUCTION DOCUMENTS
05/26/2021

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1 OVERALL PLAN
SCALE: 1/16" = 1'-0"

PROJECT INFORMATION

Scope of work: Approximately 300 sf of renovation to Eagle Child Health Station in Hays, Montana.

Applicable Codes: 2018 International Building Code (IBC) and 2012 NFPA

Existing Building Description		2018 IBC	2018 NFPA
Number of Stories:	(Unchanged) 1998	Table 601	NFPA 220: Type II(000)
Year Constructed:	1998		
Construction Type:	Type: II-B		
Fire Protection System:	Fully Sprinklered (Unchanged)	Section 304 & 308.	NFPA 101-Ch: 6.1.5, 6.1.6 & 6.1.11
Occupancy Type:	Business & Healthcare(Unchanged)		AMBULATORY CARE: Ch 21.
Use:	Unchanged		

Building Area:

Level 1:	Unchanged	Table 503	
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Corridors:

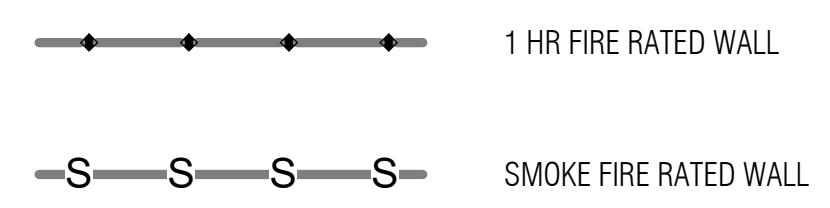
Exit Corridors : Walls and Doors:	Unchanged	407.2, 407.3, and 407.5	19.3.6.2, & 38.3.6
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Roof: Existing unchanged

Occupancy Separation Walls: Existing to remain unchanged

Smoke Compartments: Unchanged

FIRE RATED WALL TYPES

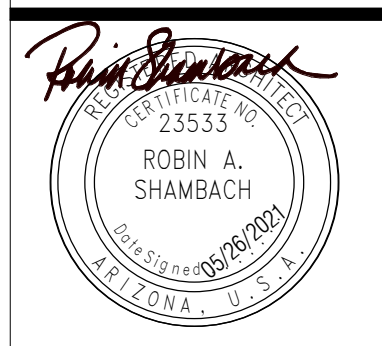


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EAGLE CHILD HEALTH STATION**

453 Pine Grove Rd, Hays, Montana
59527
IHS PROJECT NO. BI20A0200Z6



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SHEET TITLE
INFORMATION & OVERALL PLAN

2-G1.0
SHEET 15 OF 33



CONSTRUCTION PHASING GENERAL NOTES

1. G.C. TO CONFIRM SITE ACCESS PRIOR TO START OF CONSTRUCTION
2. G.C. TO CONFIRM ONSITE STORAGE PRIOR TO START OF CONSTRUCTION

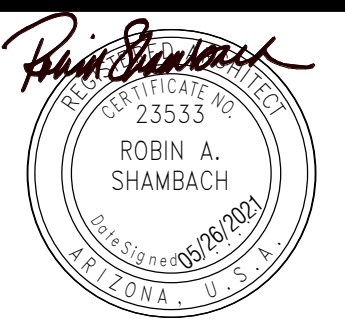
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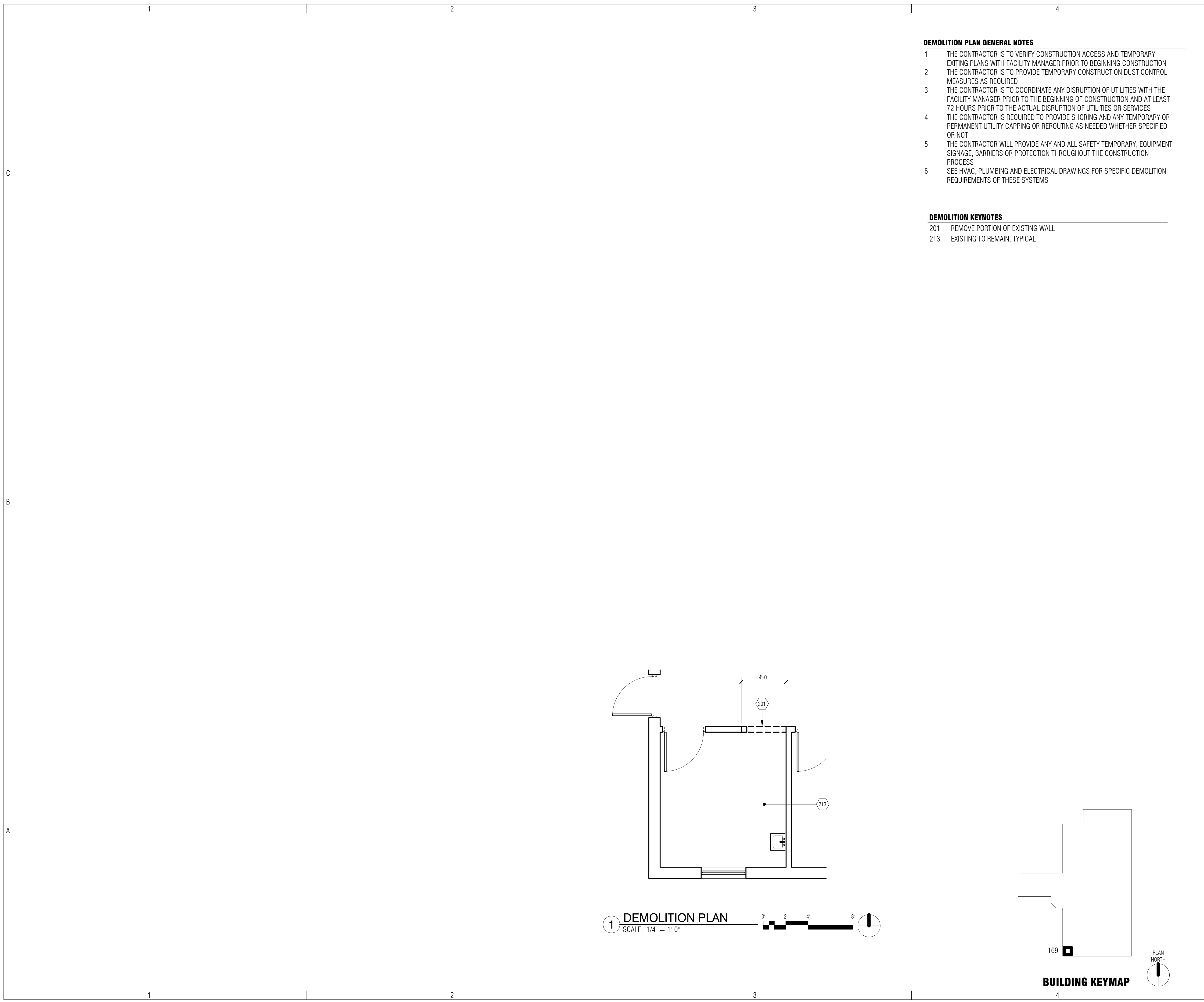
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SHEET TITLE

**CONSTRUCTION PHASING
 & EXITING PLAN**

2-G1.1

SHEET 16 OF 33



DEMOLITION PLAN GENERAL NOTES

- 1 THE CONTRACTOR IS TO VERIFY CONSTRUCTION ACCESS AND TEMPORARY EXISTING PLANS WITH FACILITY MANAGER PRIOR TO BEGINNING CONSTRUCTION
- 2 THE CONTRACTOR IS TO PROVIDE TEMPORARY CONSTRUCTION DUST CONTROL MEASURES AS REQUIRED
- 3 THE CONTRACTOR IS TO COORDINATE ANY DISRUPTION OF UTILITIES WITH THE FACILITY MANAGER PRIOR TO THE BEGINNING OF CONSTRUCTION AND AT LEAST 72 HOURS PRIOR TO THE ACTUAL DISRUPTION OF UTILITIES OR SERVICES
- 4 THE CONTRACTOR IS REQUIRED TO PROVIDE SHORING AND ANY TEMPORARY OR PERMANENT UTILITY CAPPING OR REROUTING AS NEEDED WHETHER SPECIFIED OR NOT
- 5 THE CONTRACTOR WILL PROVIDE ANY AND ALL SAFETY TEMPORARY, EQUIPMENT SIGNAGE, BARRIERS OR PROTECTION THROUGHOUT THE CONSTRUCTION PROCESS
- 6 SEE HVAC, PLUMBING AND ELECTRICAL DRAWINGS FOR SPECIFIC DEMOLITION REQUIREMENTS OF THESE SYSTEMS

DEMOLITION KEYNOTES

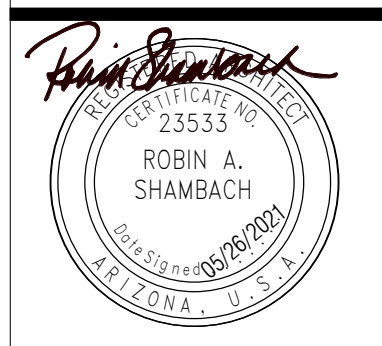
- 201 REMOVE PORTION OF EXISTING WALL
- 213 EXISTING TO REMAIN, TYPICAL

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EXPIRES 06/30/2022

**FORT BELKNAP SERVICE UNIT
 EAGLE CHILD HEALTH STATION**

453 Pine Grove Rd, Hays, Montana 59527
 IHS PROJECT NO. BI20A0200Z6



REVIEWED: _____

DFE ENGINEER/PROJECT MANAGER _____ DATE _____
 APPROVED: _____

DFE BRANCH CHIEF _____ DATE _____
 CONCURRENCE: _____

DFE CHIEF _____ DATE _____

REV	DATE	DESCRIPTION

ISSUE: 05/26/2021 - CONSTRUCTION DOCUMENTS
 PROJECT NO.: 1818.300
 CAD DWG FILE: _____
 DRAWN BY: RL
 CHECKED BY: _____

SHEET TITLE
DEMOLITION PLANS

DOOR SCHEDULE													
OPENING NO.	ROOMS		DOOR						FRAME				REMARKS
	FROM	TO	TYPE	PANEL SIZE		MATERIAL	FINISH	GLASS	TYPE	MATERIAL	FINISH	FIRE LABEL	
				WIDTH	HEIGHT								
196		196		3'-6"	7'-0"	(E)			(E)				EXISTING TO REMAIN

FINISH ROOM SCHEDULE														
WT	ROOM NAME	FLOOR		WALLS								CEILING		REMARKS
		FINISH	BASE	NORTH		EAST		SOUTH		WEST		SURFACE	FINISH	
				SURFACE	FINISH	SURFACE	FINISH	SURFACE	FINISH	SURFACE	FINISH			
000	PPE ALCOVE	SF	RB			GWB	P	GWB	P	GWB	P	GWB	P	
196	EXAM 4	(E)	(E)	(E)	P	(E)	P	(E)	P	(E)	P	(E)	P	

FLOOR PLAN GENERAL NOTES

1. THE CONTRACTOR IS TO CONFIRM EXISTING CONDITIONS PRIOR TO BEGINNING CONSTRUCTION
2. THE CONTRACTOR IS TO PROVIDE NEW FINISHES AS INDICATED ON FINISH SCHEDULE
3. THE CONTRACTOR IS TO PROVIDE NEW DOORS AND HARDWARE AS INDICATED ON DOOR SCHEDULE
4. THE CONTRACTOR IS TO PROVIDE SUPPORT BLOCKING AT ALL NEW OR REINSTALLED WALL SUPPORTED EQUIPMENT, PLUMBING FIXTURES, ACCESSORIES AND CABINETS
5. SEE SHEET 0-A1.0 FOR WALL TYPES
6. SEE SHEET 0-A1.1 FOR DOOR AND WINDOW DETAILS
7. SEE SHEET 0-A1.2 FOR STANDARD CEILING AND FRAMING DETAILS
8. ALL DIMENSIONS ARE TO FACE OF STUD UNLESS NOTED OTHERWISE
9. SIGNAGE IS TO MATCH THE FACILITY'S EXISTING SIGNAGE. NEW SIGNAGE SHOULD BE HANDLED BY IHS

KEYNOTES

- 101 NEW WALL PER NOTED WALL TYPE
- 106 4" RUBBER BASE
- 108 NEW WALL FINISH PER SCHEDULE
- 120 EXISTING PLUMBING FIXTURE TO REMAIN
- 121 NEW FLOORING
- 300 GYPSUM WALL BOARD BULKHEAD
- 304 REPLACE DAMAGED CEILING GRID AND TILES IMPACTED BY MECHANICAL DEMOLITION AND NEW CONSTRUCTION
- 609 BIOWASTE BIN, OWNER PROVIDED
- 610 PPE STORAGE
- 612 WALL CORNER GUARD

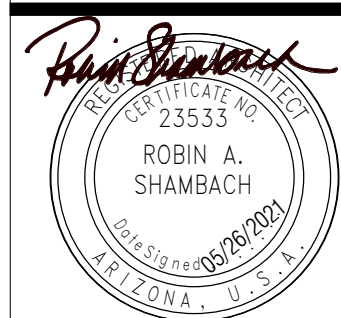
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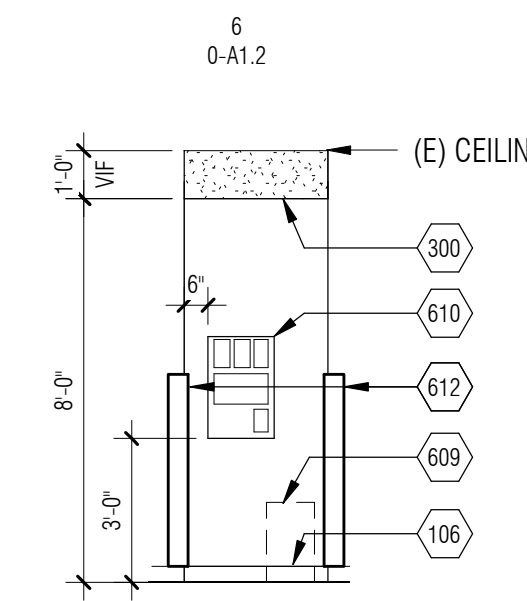
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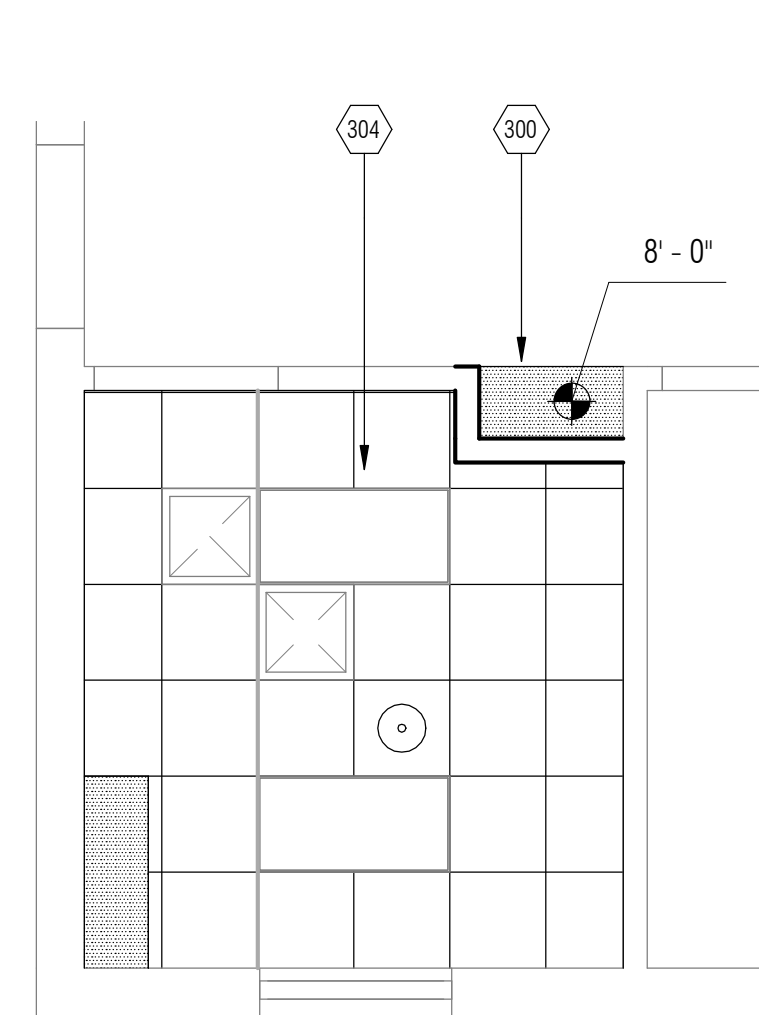
**PLANS, ELEVATIONS,
 SCHEDULES**

2-A2.0

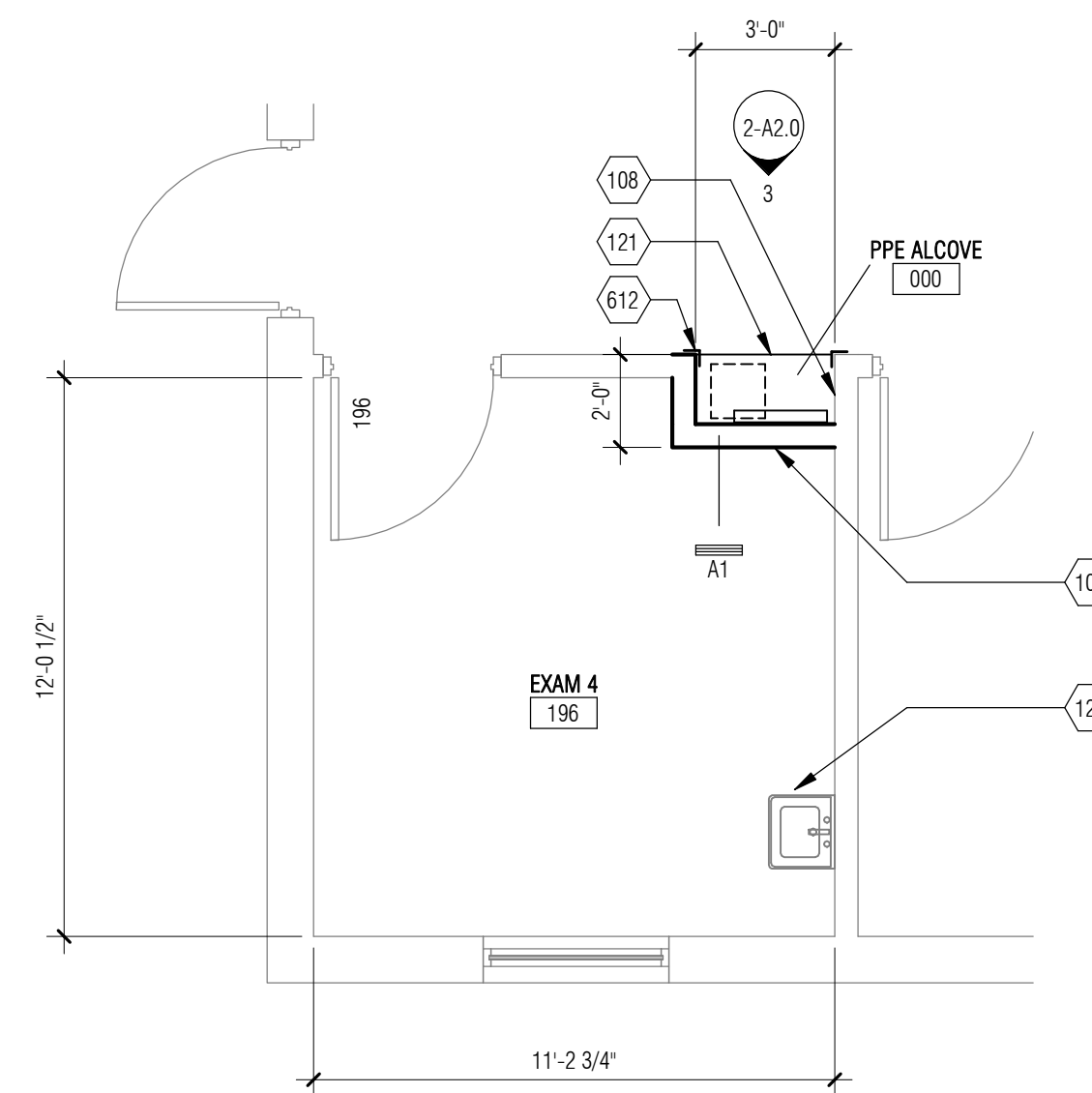
SHEET 18 OF 33



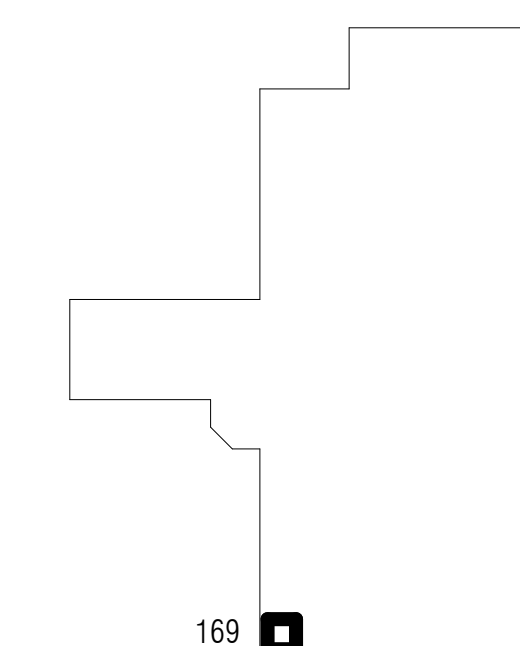
3 ELEVATION - PPE ALCOVE
 SCALE: 1/4" = 1'-0"



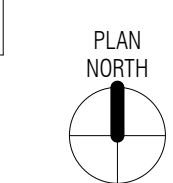
2 RCP
 SCALE: 1/4" = 1'-0"



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



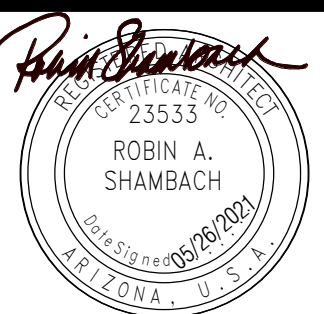
BUILDING KEYMAP



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SHEET TITLE

ROOF PLAN

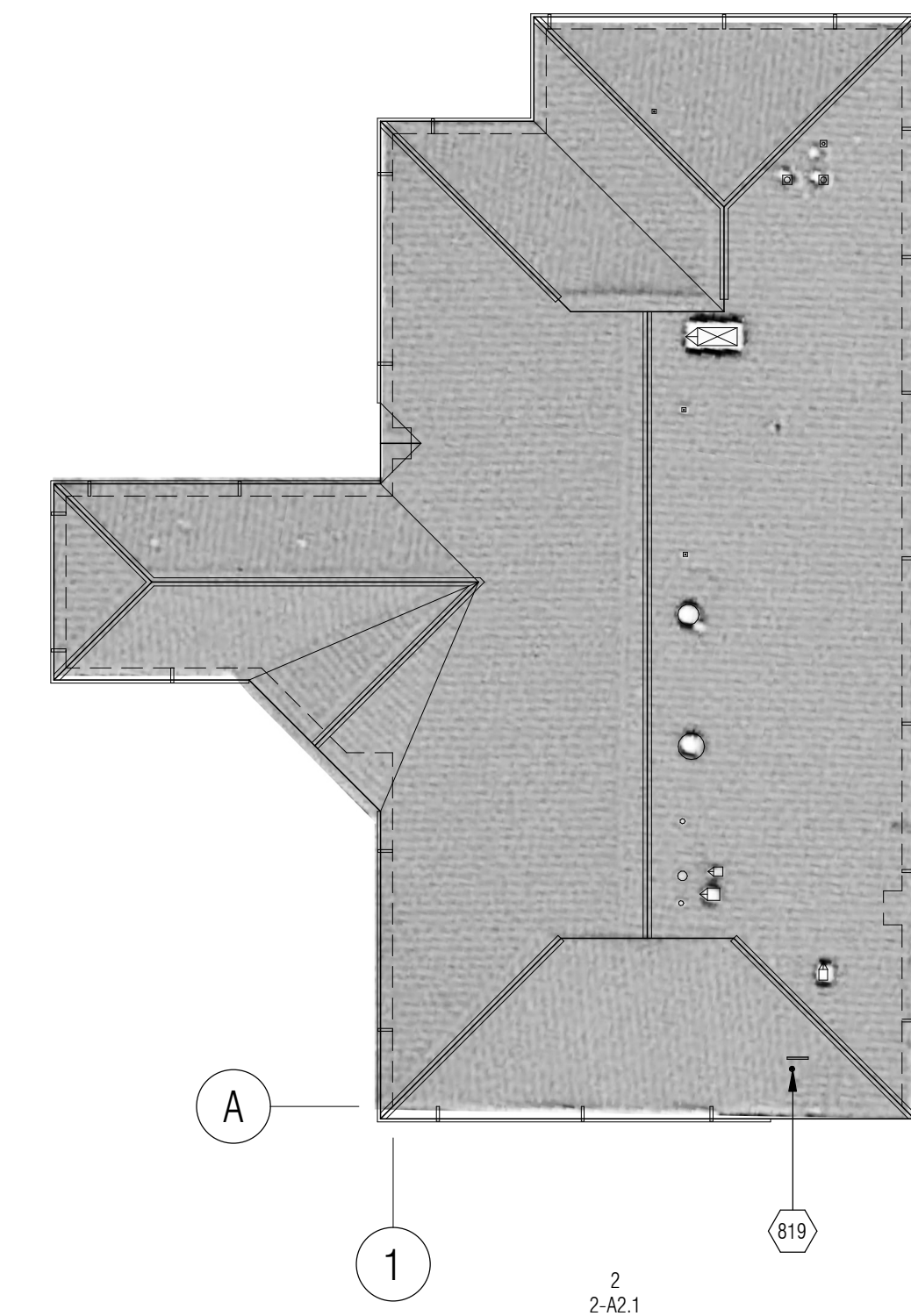
2-A2.1

ROOF PLAN GENERAL NOTES

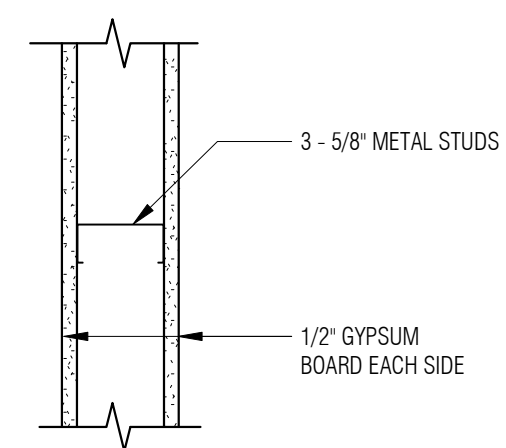
- VERIFY EXISTING ROOF CONDITIONS AND EXISTING EQUIPMENT LOCATIONS PRIOR TO STARTING WORK.
- COORDINATE THE ROOF PLAN WITH PLUMBING, MECHANICAL AND ELECTRICAL DRAWINGS.
- REFER TO MECHANICAL DRAWINGS FOR VENT STACK PENETRATION DETAILS.
- PROVIDE CRICKETS AND FLASHINGS AS REQUIRED AT NEW WORK. VALLEYS AT CRICKETS SHALL BE A MINIMUM OF 1/4" PER FOOT.

KEYNOTES

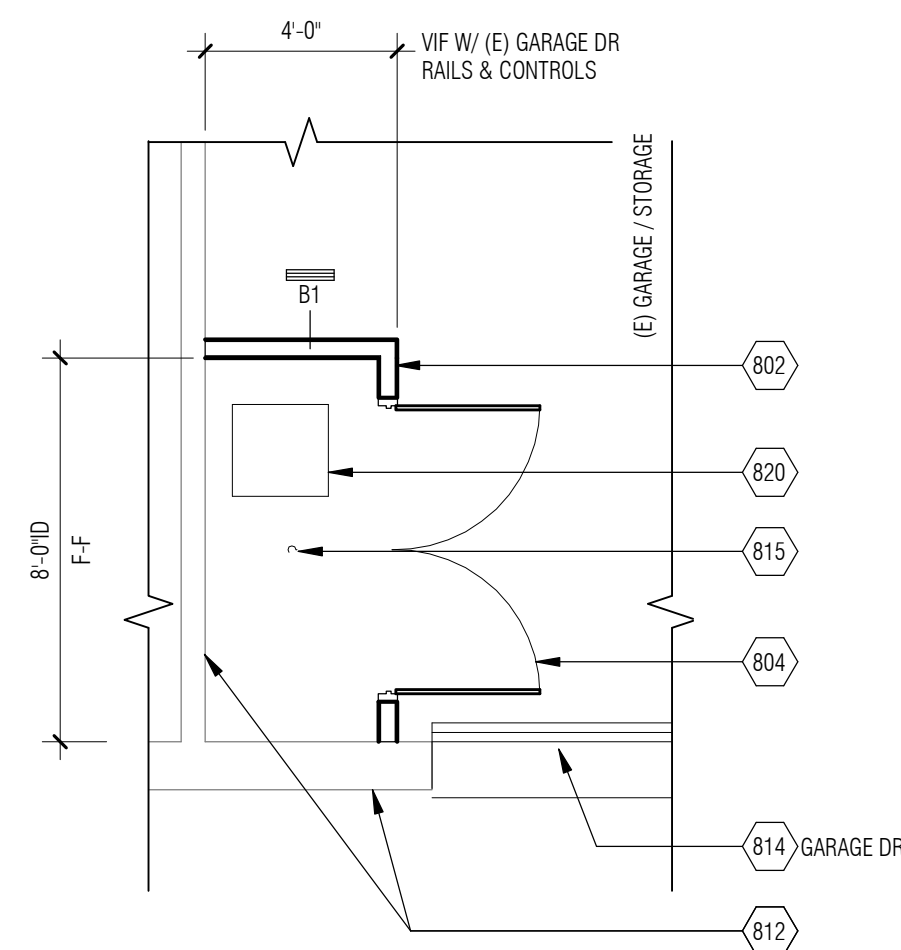
- 802 NEW WALL, FROM MECHANICAL CLOSET FLOOR TO BOTTOM OF STRUCTURE ABOVE, CAP W/ 1/2" PLYWOOD AS REQUIRED
- 804 NEW HM DOOR AND HM FRAME, 3'-0" WIDE, HEIGHT TO BE CONFIRMED IN FIELD - HARDWARE: TWO HINGES PER DOOR, FLUSH BOLT, LATCH SET, PERIMETER GASKET SEALS - REFER TO SPEC
- 806 EDGE OF EXISTING ROOF
- 812 EXISTING WALL
- 814 EXISTING DOOR
- 815 NEW FIRE SUPPRESSION SPRINKLER OVERHEAD
- 816 MECHANICAL ROOM IN STORAGE/GARAGE
- 819 NEW EXHAUST STACK THRU ROOF, REFER TO MECH, BRACE STACK TO ROOF PER DETAIL 11/0-S1.1
- 820 NEW UTILITY SET EXHAUST FAN ON EXISTING CONCRETE FLOOR, SEE MECH SHEETS FOR UTILITY SET DETAILS



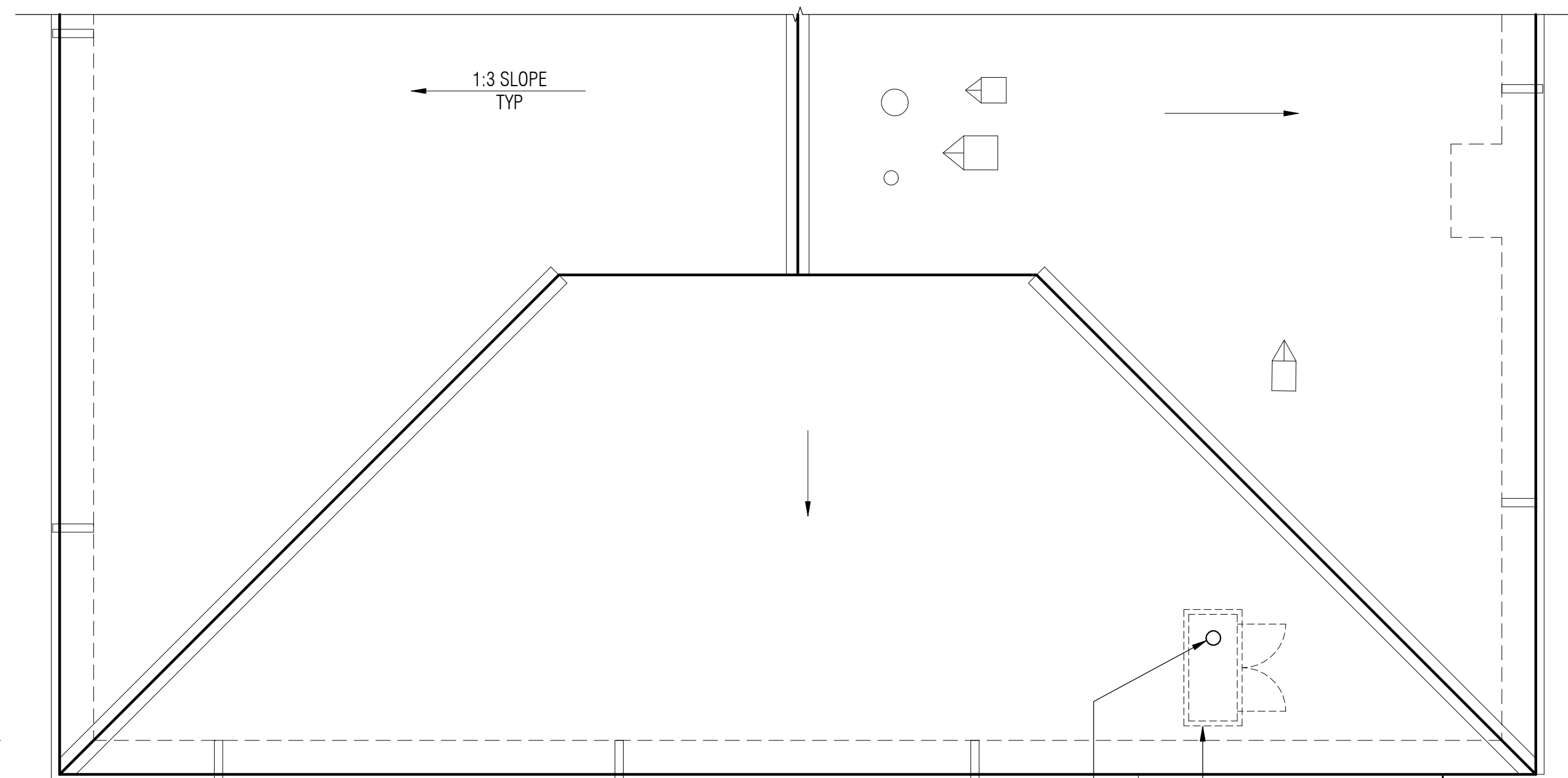
1 ROOF PLAN
 SCALE: 1/32" = 1'-0"



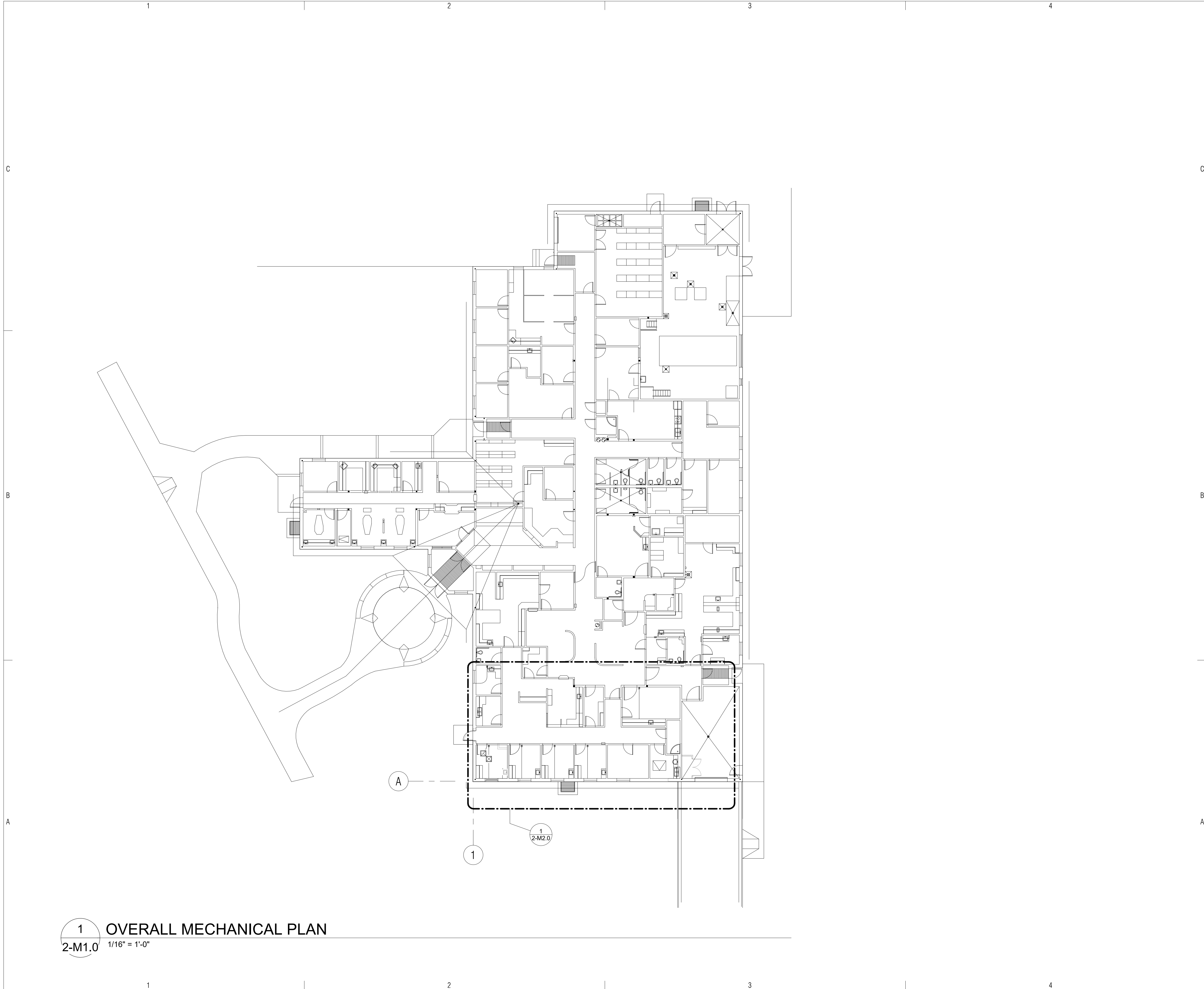
4 B1 - 3 5/8" INT. PARTITION
 SCALE: 1 1/2" = 1'-0"



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



2 ENLARGED ROOF PLAN
 SCALE: 1/8" = 1'-0"



1 OVERALL MECHANICAL PLAN
 2-M1.0 1/16" = 1'-0"

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45700
DAVID
C. TYRRELL
ARIZONA U.S.A.
Expires 12/31/2021

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 PROJECT No. 20104

**FORT BELKNAP SERVICE UNIT
 EAGLE CHILD HEALTH STATION**

453 Pine Grove Rd, Hays, Montana
 59527
 IHS PROJECT NO. BI20A0200Z6

U. S. DEPARTMENT
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HUMAN SERVICES

INDIAN HEALTH SERVICE
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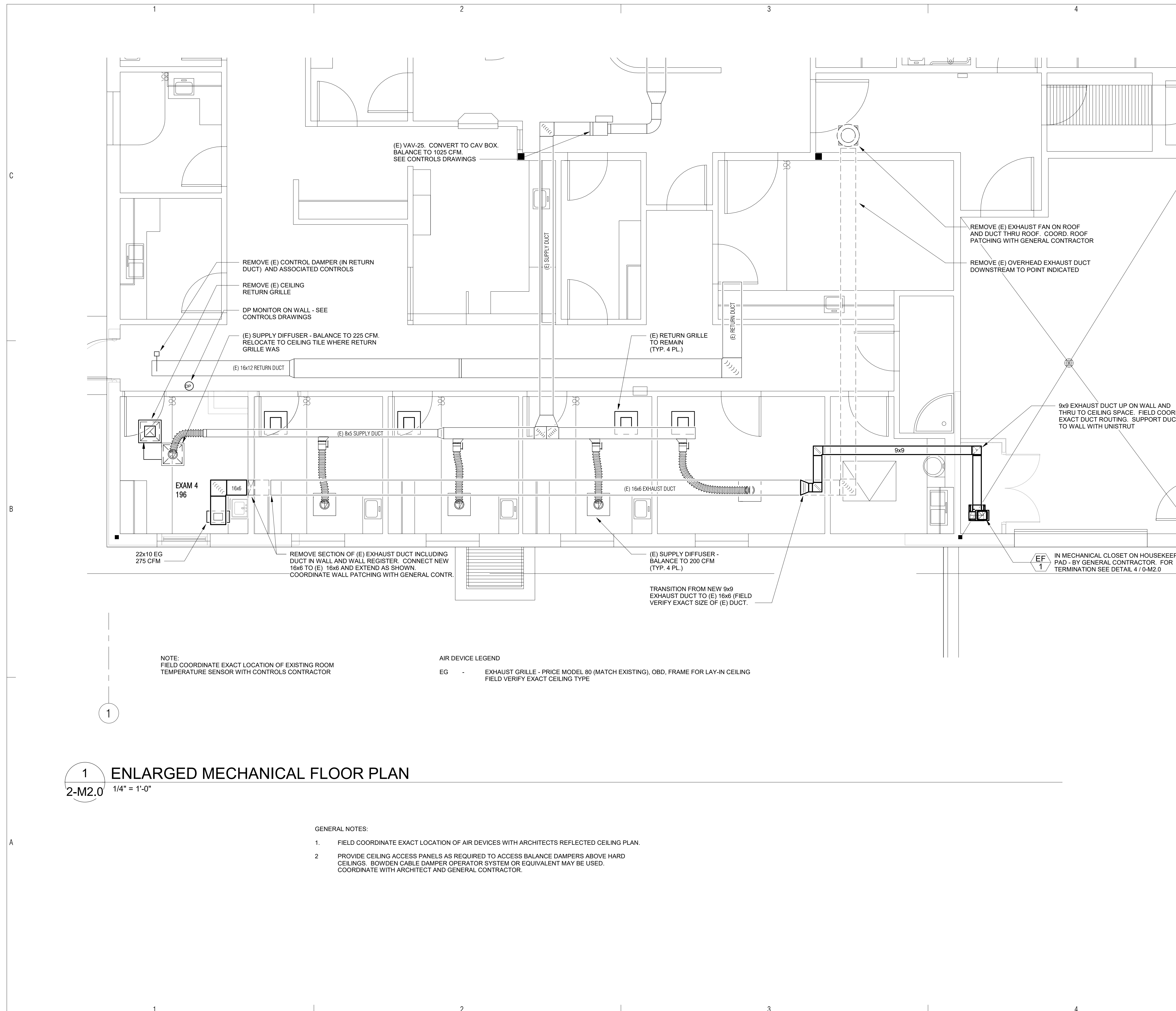
DFE CHIEF _____ DATE _____

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SHEET TITLE
OVERALL MECHANICAL PLAN

2-M1.0
 SHEET 20 OF 33



NOTE:
FIELD COORDINATE EXACT LOCATION OF EXISTING ROOM
TEMPERATURE SENSOR WITH CONTROLS CONTRACTOR

AIR DEVICE LEGEND

EG - EXHAUST GRILLE - PRICE MODEL 80 (MATCH EXISTING), OBD, FRAME FOR LAY-IN CEILING
FIELD VERIFY EXACT CEILING TYPE

GENERAL NOTES:

1. FIELD COORDINATE EXACT LOCATION OF AIR DEVICES WITH ARCHITECTS REFLECTED CEILING PLAN.
2. PROVIDE CEILING ACCESS PANELS AS REQUIRED TO ACCESS BALANCE DAMPERS ABOVE HARD CEILINGS. BOWDEN CABLE DAMPER OPERATOR SYSTEM OR EQUIVALENT MAY BE USED. COORDINATE WITH ARCHITECT AND GENERAL CONTRACTOR.

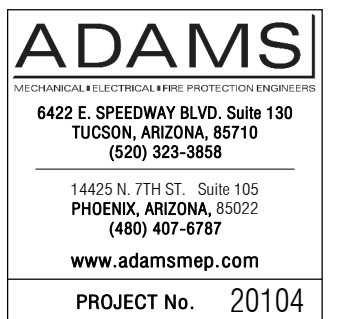
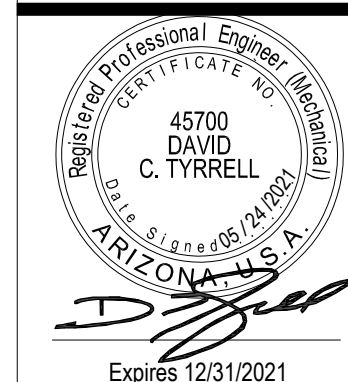
1 ENLARGED MECHANICAL FLOOR PLAN

2-M2.0 1/4" = 1'-0"

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SHEET TITLE

ENLARGED MECHANICAL FLOOR PLAN

2-M2.0



1 OVERALL ELECTRICAL PLAN
 2-E1.0 1/16" = 1'-0"

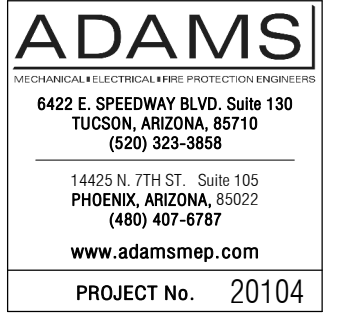
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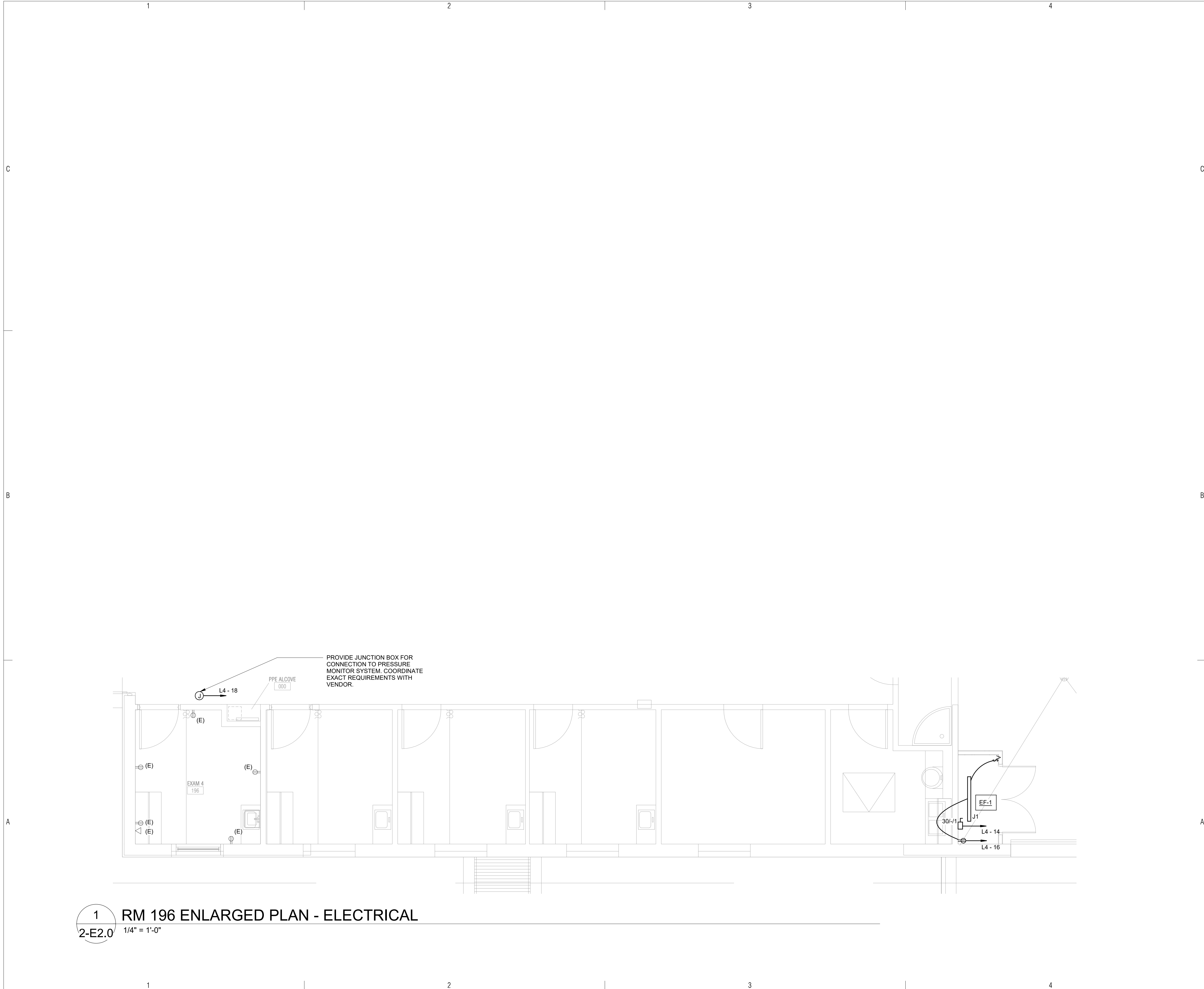
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**SHEET TITLE
 OVERALL ELECTRICAL
 PLAN**

2-E1.0

SHEET 22 OF 33



1
2-E2.0 1/4" = 1'-0"

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DRAWN BY:	AZ	
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SHEET TITLE
**ENLARGED FLOOR PLANS
 - ELECTRICAL**

2-E2.0
 SHEET 23 OF 33

(E) Branch Panel: L4			Branch: NORMAL		
Location: (E) Elec Room			Voltage: 120/208 Wye		
Fed From: (E) SDP			A.I.C. Rating: 10KAIC		
Mounting: Surface			Phases: 3		
Enclosure: Type 1			Wires: 4		
Feed Thru Lugs: Y			Neutral Bus: Y		
			Ground Bus: Y		
			AFC Value: 100 A		
			MCB: N/A		
			Bus Type: Existing		

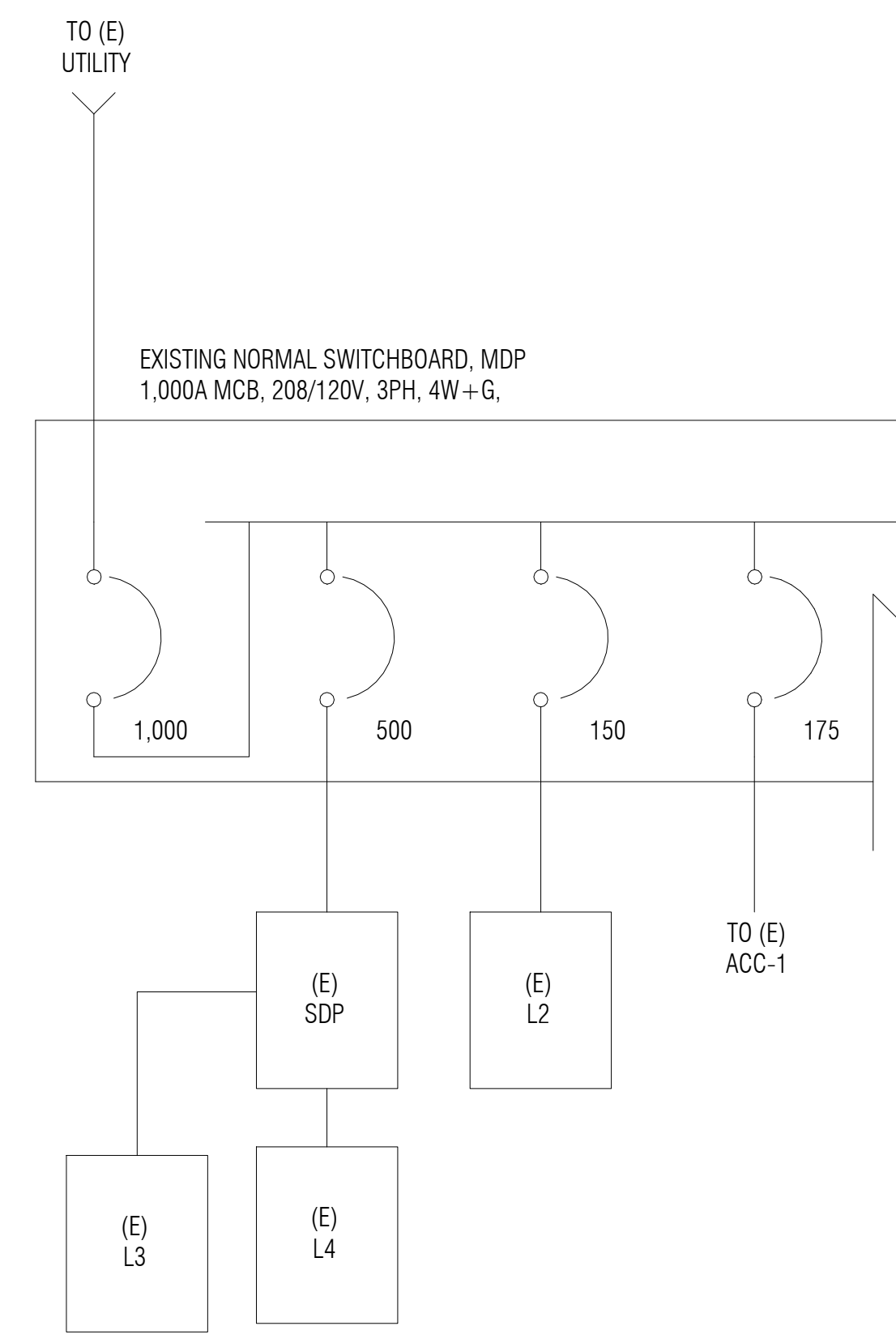
Notes:

CKT	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	CKT
1	Existing Load	20 A	1	720 VA	0 VA		2	20 A	Spare	2
3	Existing Load	20 A	1		540 VA	0 VA		--	--	4
5	Existing Load	20 A	1			540 VA	720 VA	1	20 A	Existing Load
7	Existing Load	20 A	1	540 VA	0 VA			1	20 A	Spare
9	Existing Load	20 A	1		900 VA	0 VA		1	20 A	Spare
11	Existing Load	20 A	1			900 VA	900 VA	1	20 A	Existing Load
13	Existing Load	20 A	1	900 VA	1127...			1	20 A	*EF-1
15	Existing Load	20 A	1		720 VA	180 VA		1	20 A	*ROOF TOP - RCPT
17	Existing Load	20 A	1			720 VA	500 VA	1	20 A	*PRESSURE MON EXAM 4
19	Existing Load	20 A	1	720 VA	0 VA			1	20 A	Spare
21	Existing Load	20 A	1		720 VA	0 VA		1	20 A	Spare
23	Existing Load	20 A	1			1080...	540 VA	1	20 A	Existing Load
25	Existing Load	20 A	1	540 VA	1500...			2	30 A	Existing Load
27	Existing Load	20 A	1		540 VA	1500...		--	--	--
29	Existing Load	20 A	1			900 VA	--	1	--	Space
31	Existing Load	20 A	1	360 VA	--			1	--	Space
33	Existing Load	20 A	1		900 VA	--		1	--	Space
35	Existing Load	20 A	1			540 VA	--	1	--	Space
37	Space	--	1	--	--			1	--	Space
39	Space	--	1	--	--			1	--	Space
41	Space	--	1	--	--			1	--	Space
				Total Load:	6407 VA	6000 VA	7340 VA			
				Total Amps:	54 A	50 A	62 A			

Legend:
*REUSE EXISTING SPARE CIRCUIT BREAKER.

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
MISC	500 VA	100.00%	500 VA	
MTRS	1127 VA	125.00%	1409 VA	Total Conn. Load: 19747 VA
RCPTS	180 VA	100.00%	180 VA	Total Est. Demand: 20029 VA
Spare	17940 VA	100.00%	17940 VA	Total Conn. Current: 55 A
				Total Est. Demand Current: 56 A

Notes:



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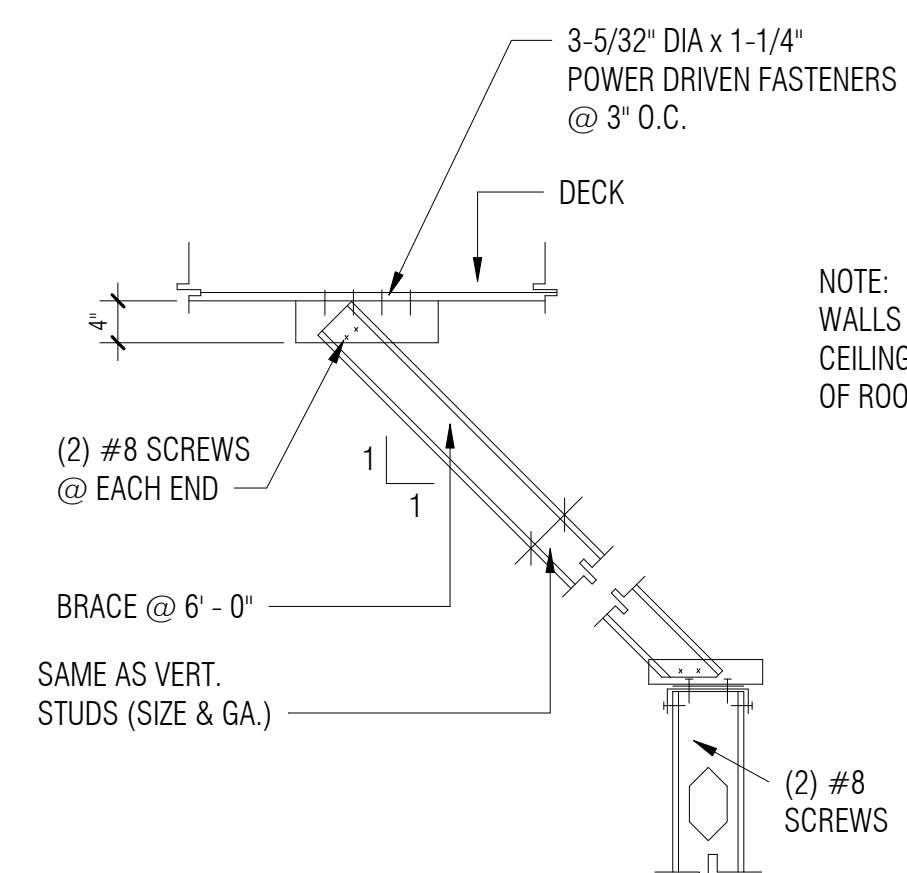
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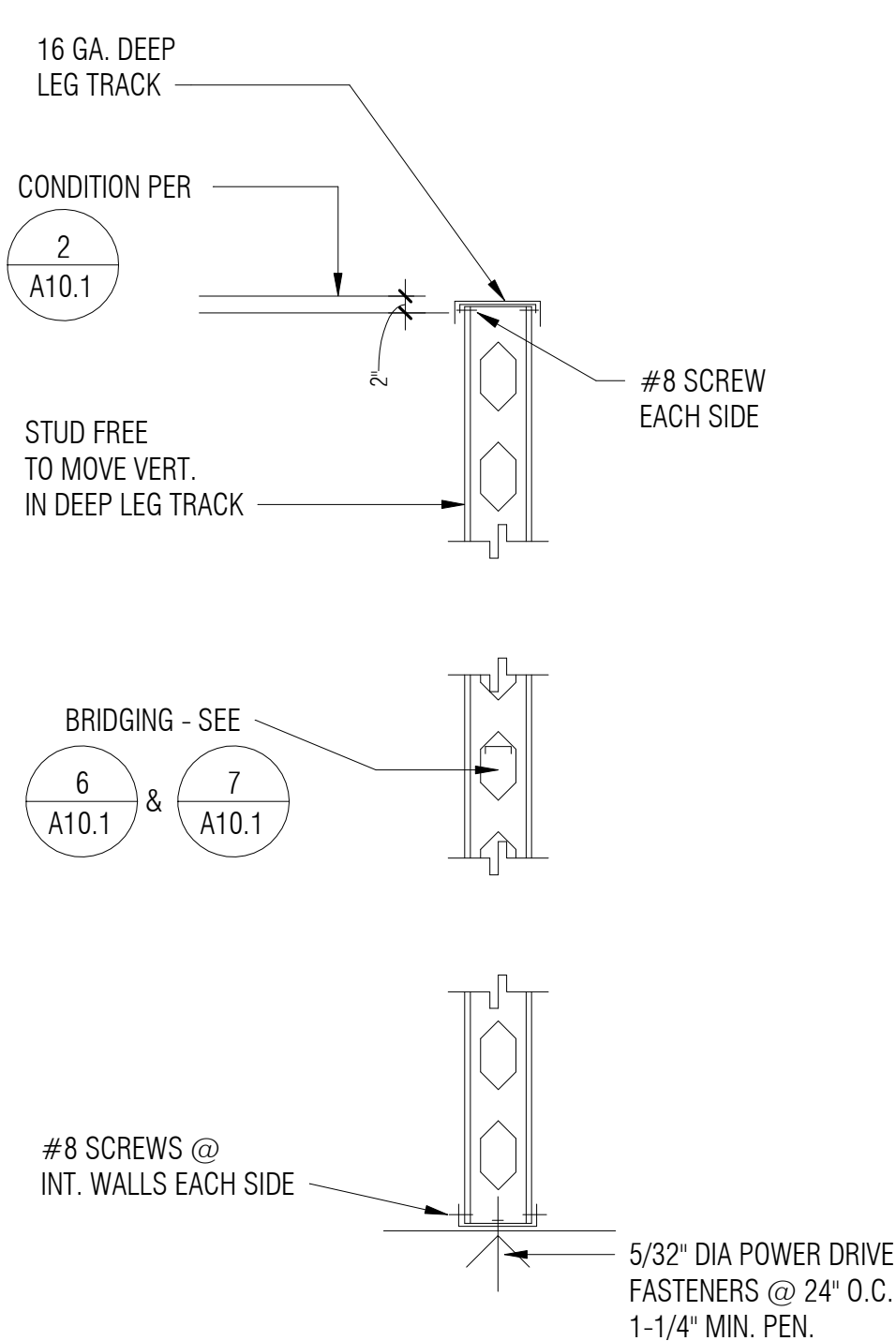
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SHEET TITLE
ELECTRICAL ONE-LINE AND SCHEDULES
2-E3.0
 SHEET 24 OF 33

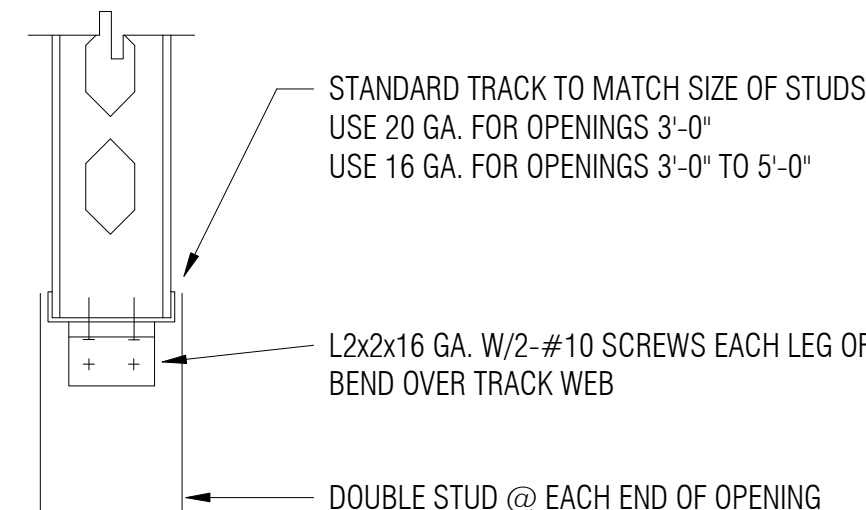
METAL STUD DETAILS - INTERIOR WALLS



1 BRACING ANCHORAGE

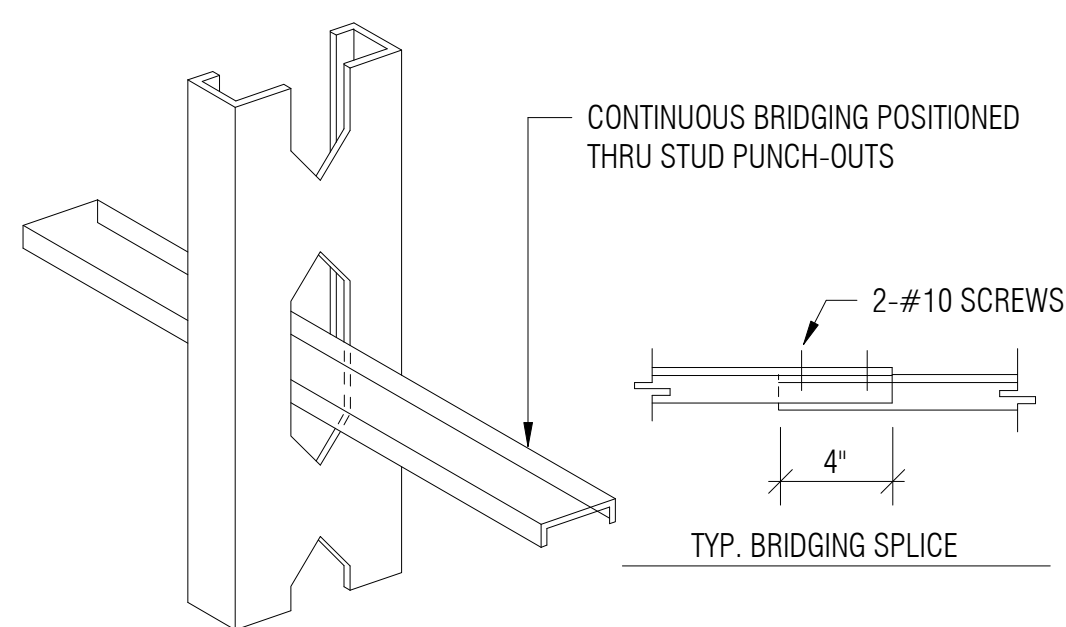


2 INTERIOR HEAD DETAILS



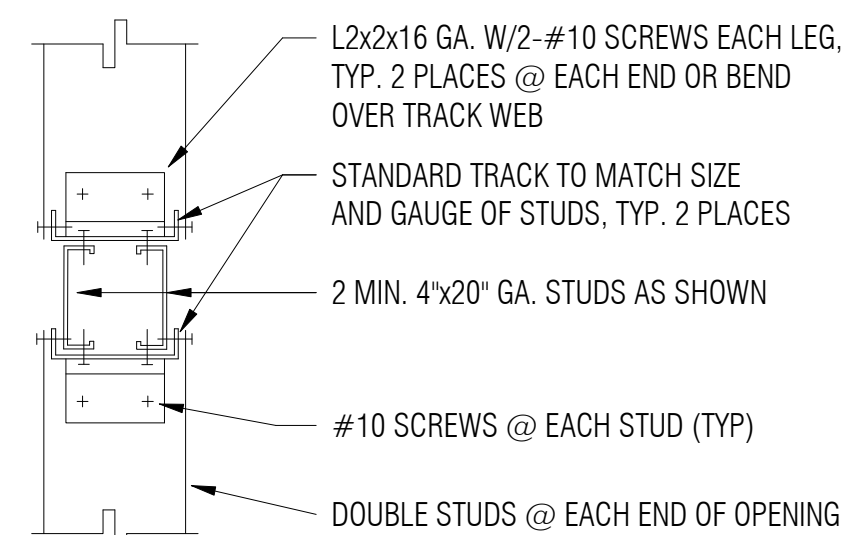
3 METAL STUD WALL SECTION

FOR 6" STUD USE 2-1/2"x16 GA. W/1/2" FLANGE HORIZONTAL BRIDGING
FOR 3-5/8" OR 4" STUD USE 3/4"x16 GA. W/1/2" FLANGE HORIZONTAL BRIDGING

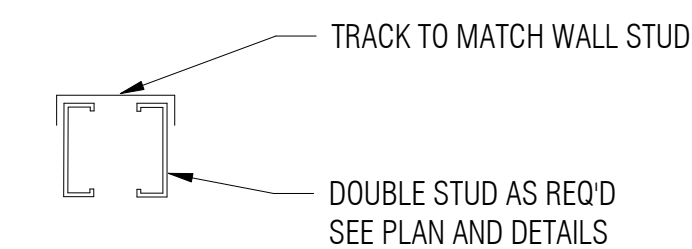


4 TYP. INTERIOR STUD WALL ELEV.

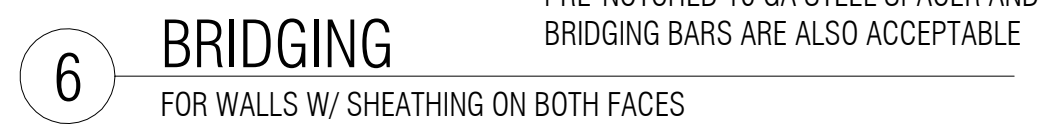
LINTEL OPENINGS IN STUD WALLS TO 5'-0" (SILL SIMILAR)



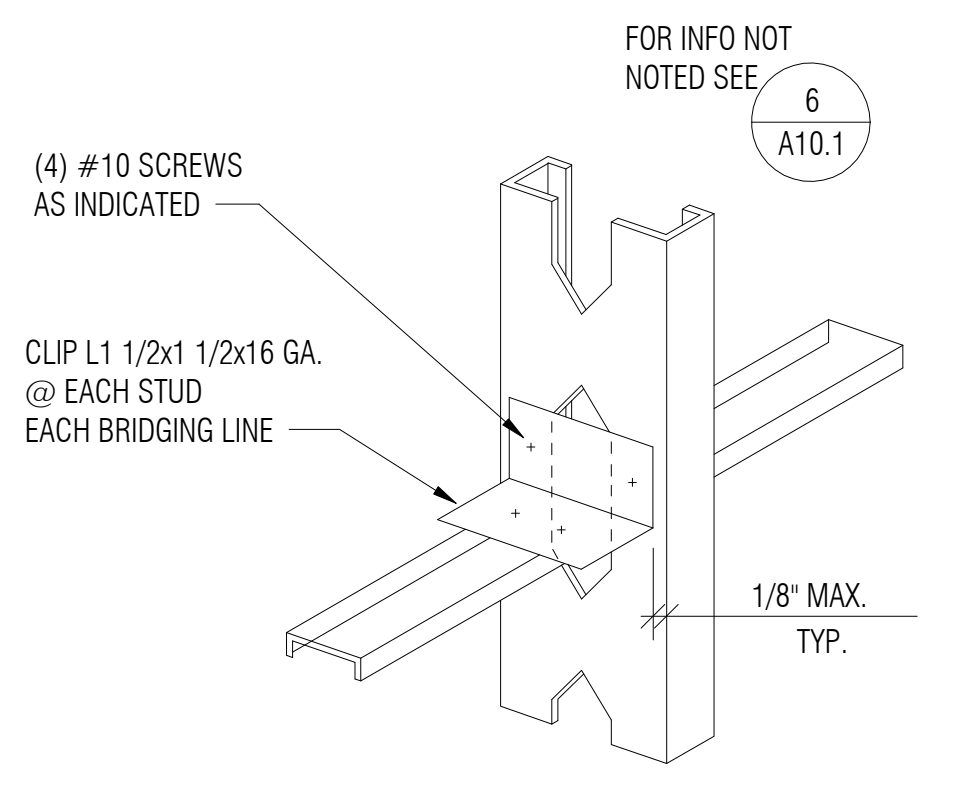
5 DOUBLE STUD DETAIL



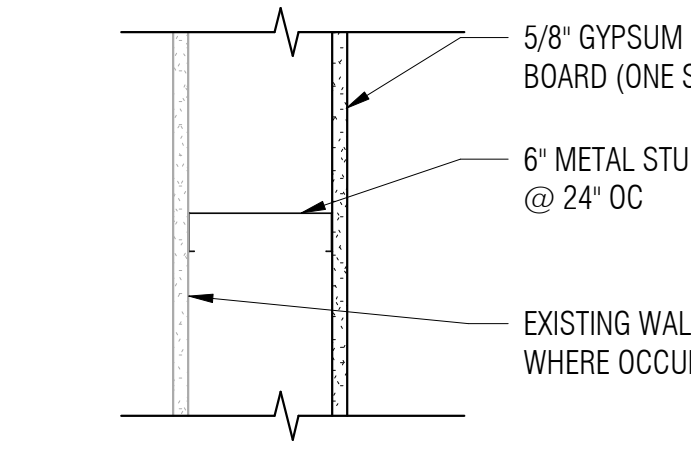
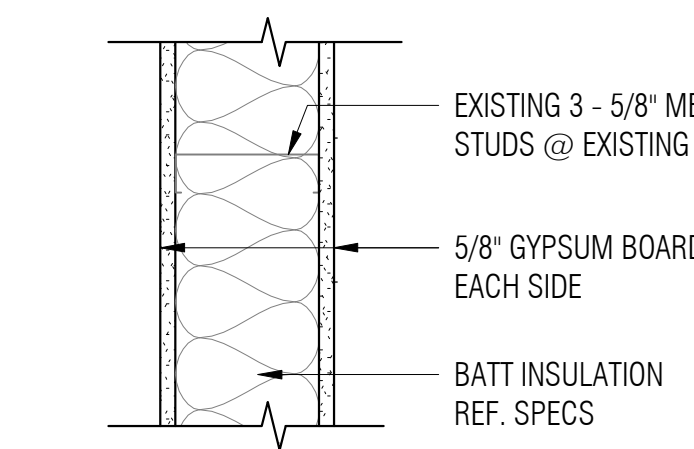
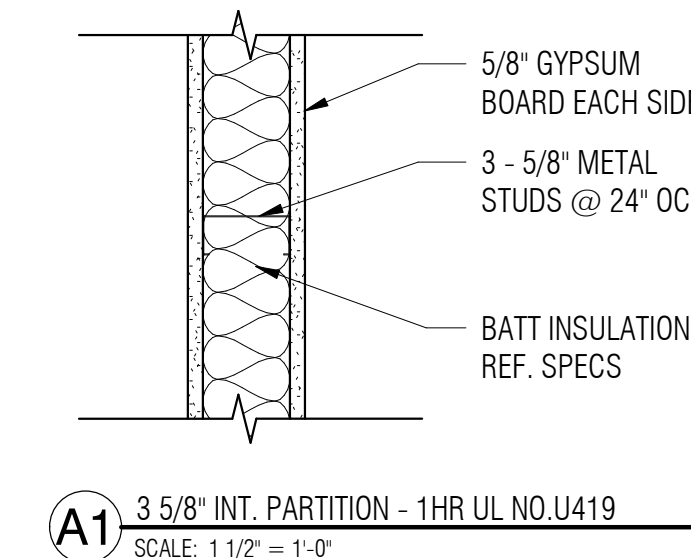
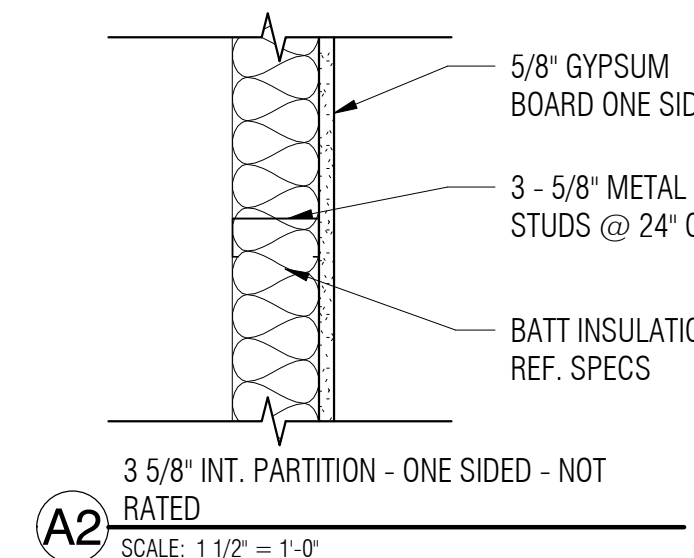
NOTES:
1. BRIDGING: (CONT THRU STUD PUNCHOUTS)
A. WALLS UP TO 10'-0" HIGH:
ONE ROW OF BRIDGING AT MID-HEIGHT (TYP)
B. WALLS OVER 10'-0" HIGH:
BRIDGING AT 6'-0" MAX. (TYP)
C. PROVIDE ADDITIONAL ROW OF BRIDGING AT FLOOR AND ROOF LINES



6 BRIDGING FOR WALLS W/ SHEATHING ON BOTH FACES

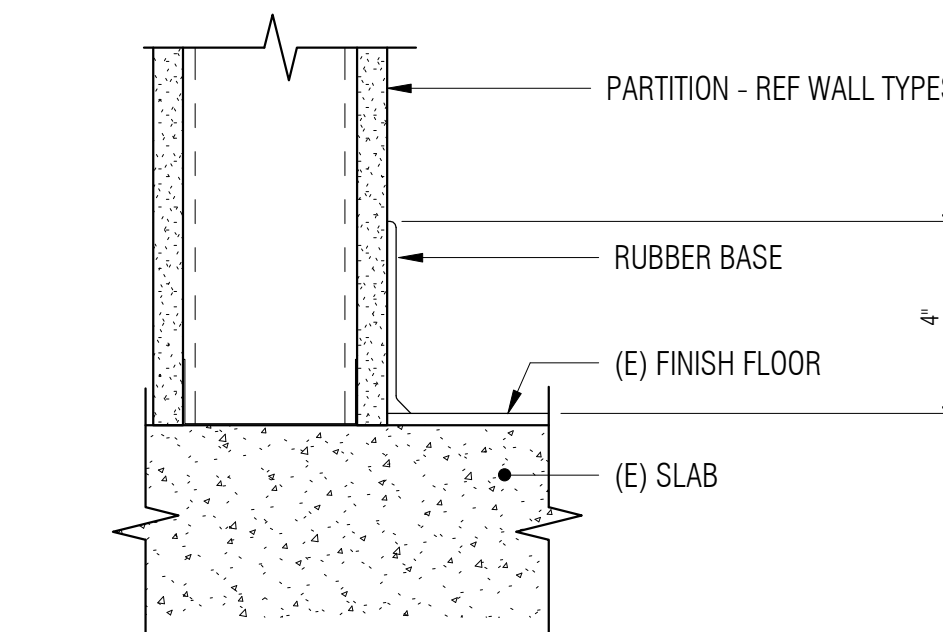


7 BRIDGING FOR WALLS WITH OR WITHOUT SHEATHING

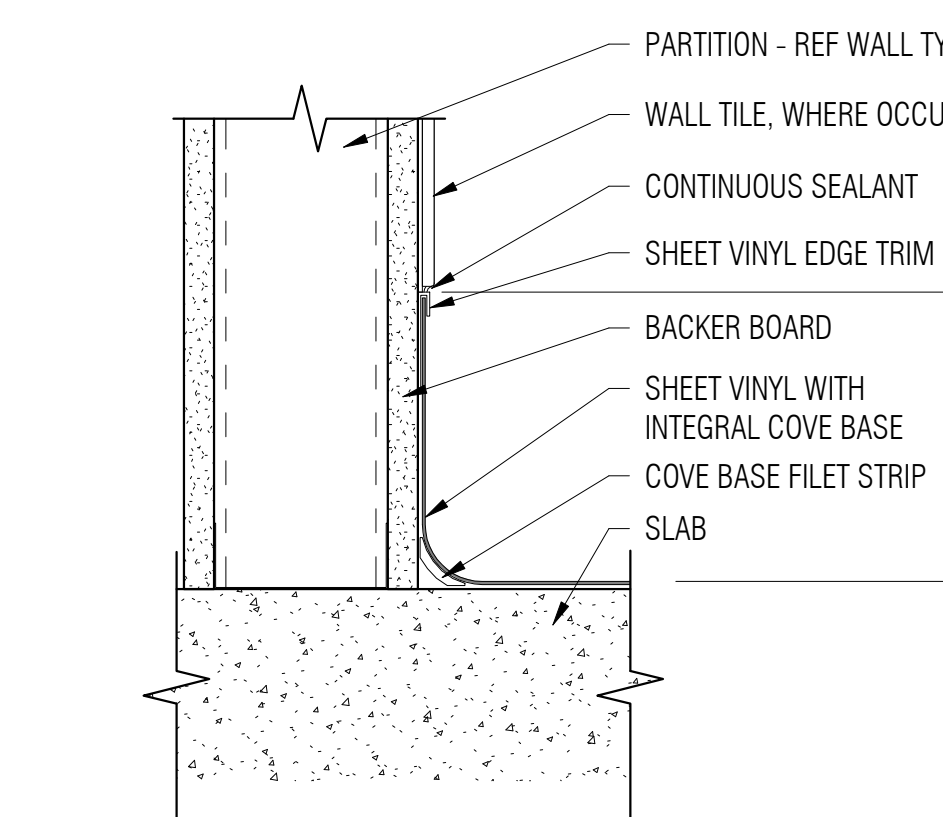


A3 6" INT. PARTITION - 1HR UL NO. U419
SCALE: 1 1/2" = 1'-0"

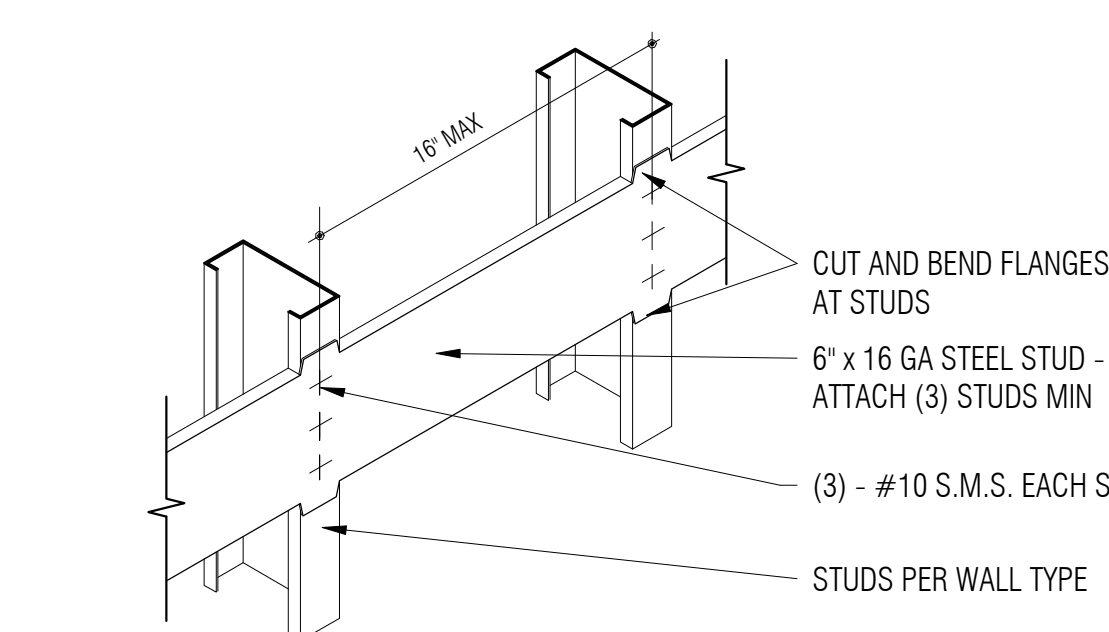
B2 6" STUD INTERIOR PARTITION - NOT RATED
SCALE: 1 1/2" = 1'-0"



8 COVE BASE @ EXISTING FLOORING
3" = 1'-0"



8 SHEET VINYL INTEGRAL COVE BASE
3" = 1'-0"

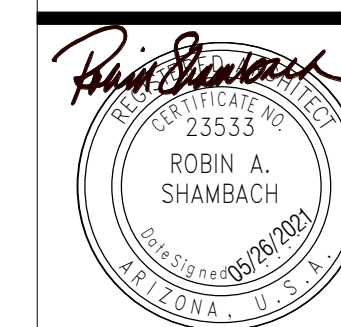


9 WL-TYPICAL WALL BACKING
1 1/2" = 1'-0"

CONSULTANTS

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EXPIRES 06/30/2022

INDIAN HEALTH SERVICE - BILLINGS
AREA WIDE AIRBORNE
INFECTION ISOLATION
ROOM RENOVATION AND
MODERNIZATION

MONTANA & WYOMING
IHS PROJECT NO. BI20A0200Z6



INDIAN HEALTH SERVICE
DIVISION OF FACILITIES ENGINEERING
BILLINGS AREA



REVIEWED:	
DFE ENGINEER/PROJECT MANAGER	DATE
APPROVED:	
DFE BRANCH CHIEF	DATE
CONCURRENCE:	
DFE CHIEF	DATE

REV	DATE	DESCRIPTION

SHEET TITLE
STANDARD WALL TYPES

0-A1.0

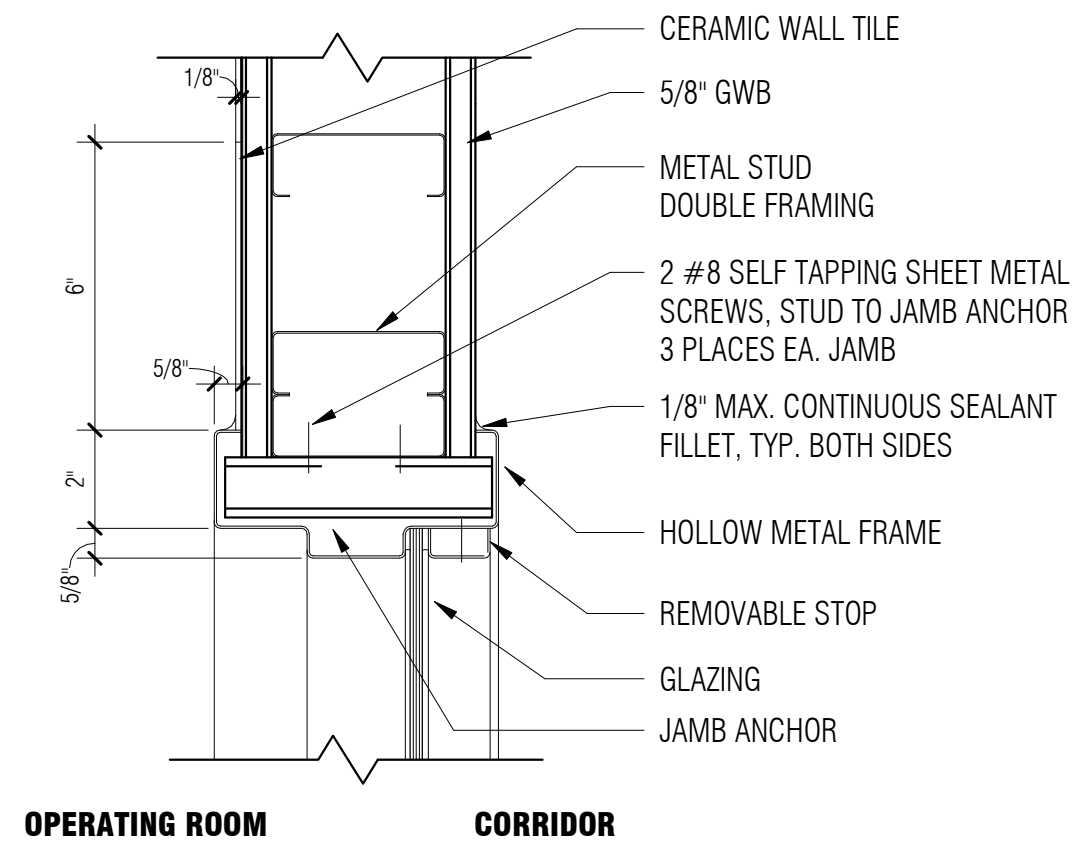
1 2 3 4

C

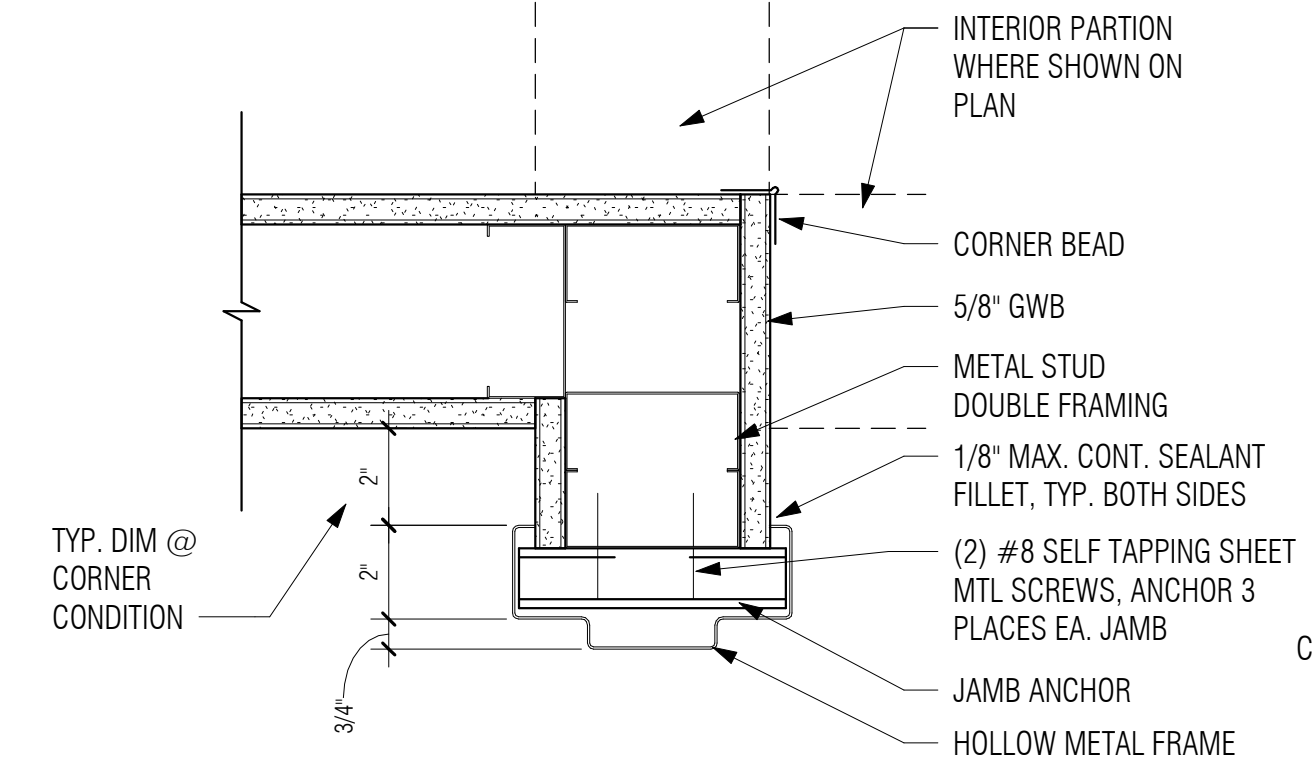
B

A

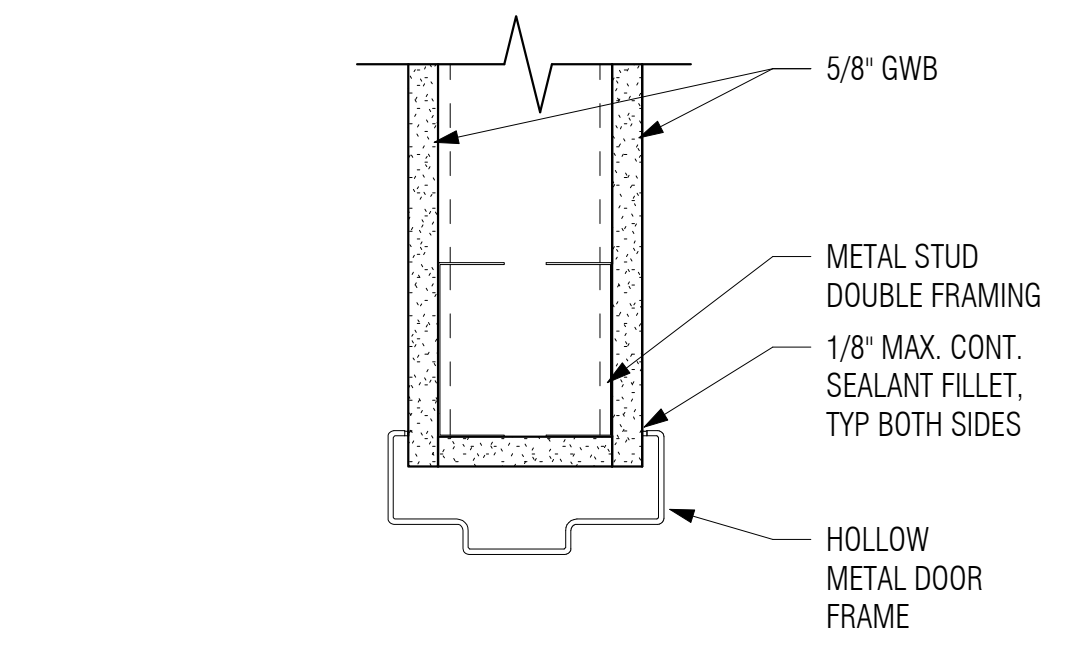
1 2 3 4



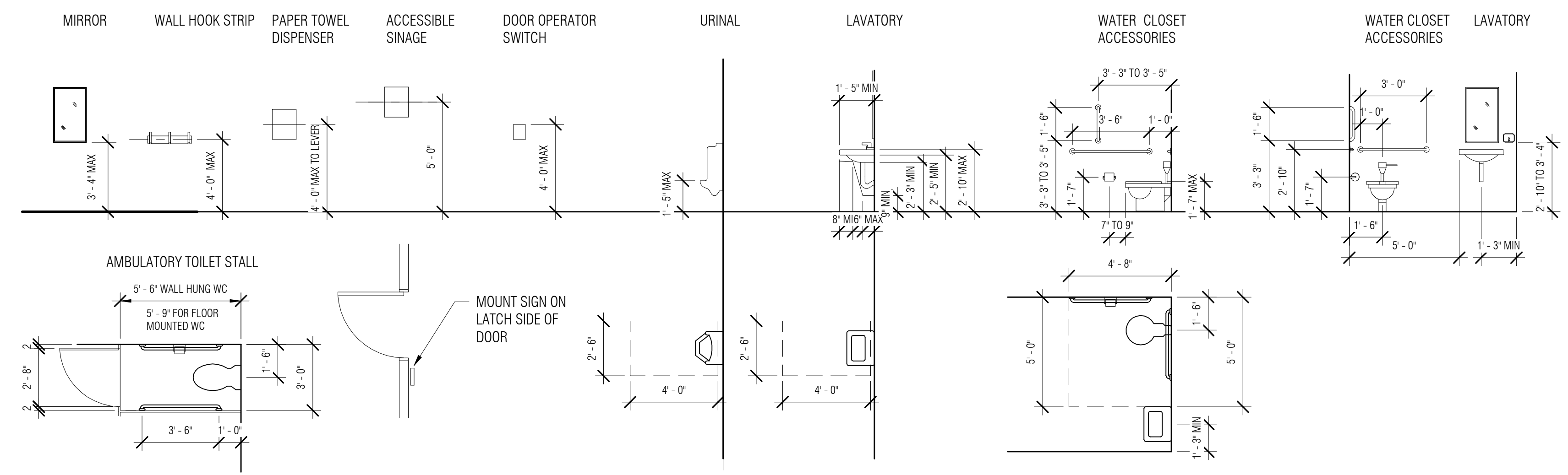
3 WINDOW JAMB HEAD AND HIGH WINDOW SILL SIM
SCALE: 3" = 1'-0"



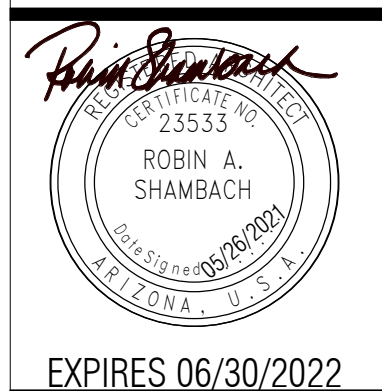
1 INT - HM DOOR JAMB
SCALE: 3" = 1'-0"



2 INT - HM DOOR HEAD
SCALE: 3" = 1'-0"



4 STANDARD MOUNTING HEIGHTS AND CLEARANCES
1/4" = 1'-0"



**INDIAN HEALTH
SERVICE - BILLINGS
AREA WIDE AIRBORNE
INFECTION ISOLATION
ROOM RENOVATION AND
MODERNIZATION**

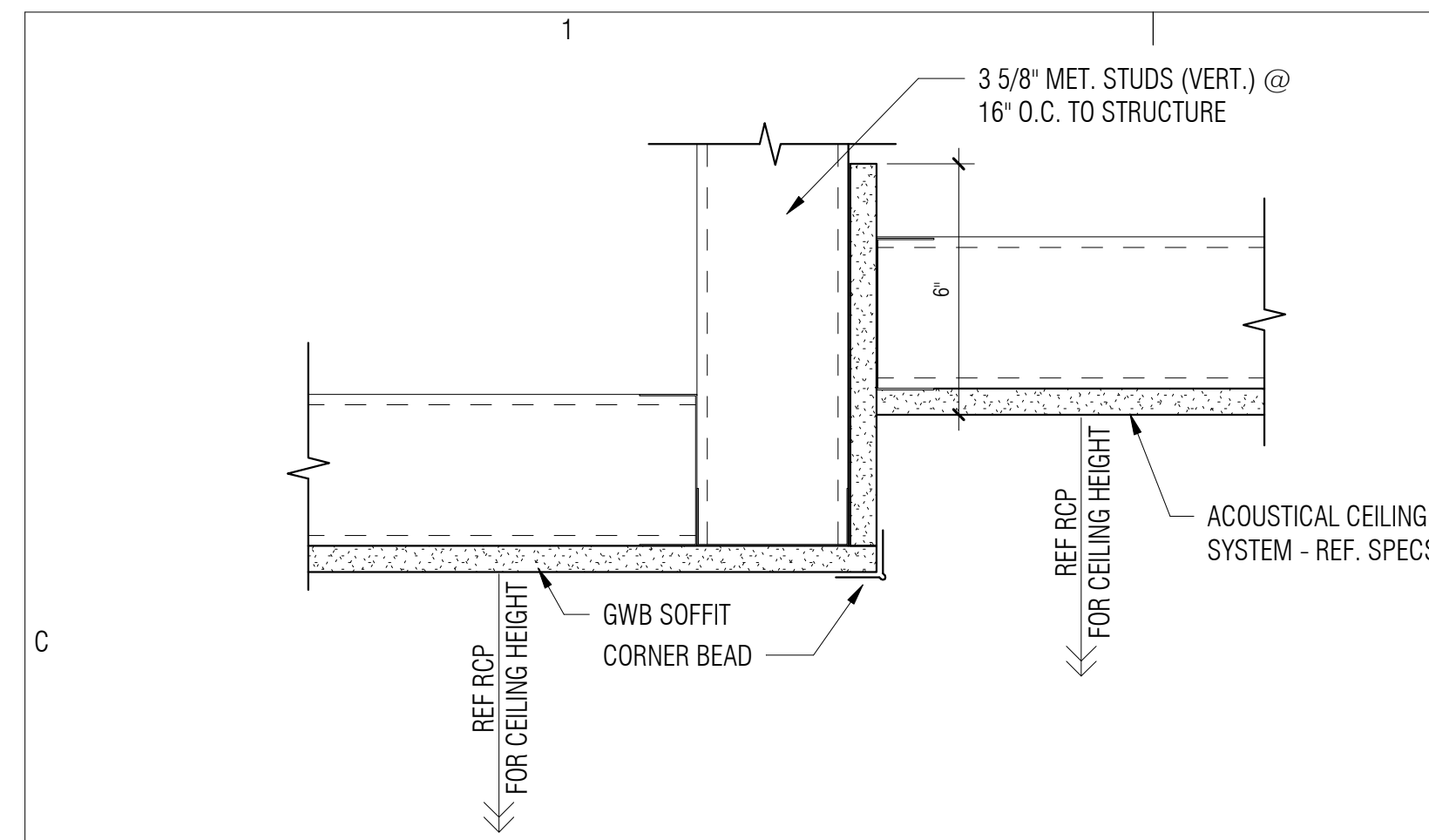
MONTANA & WYOMING
IHS PROJECT NO. BI20A0200Z6



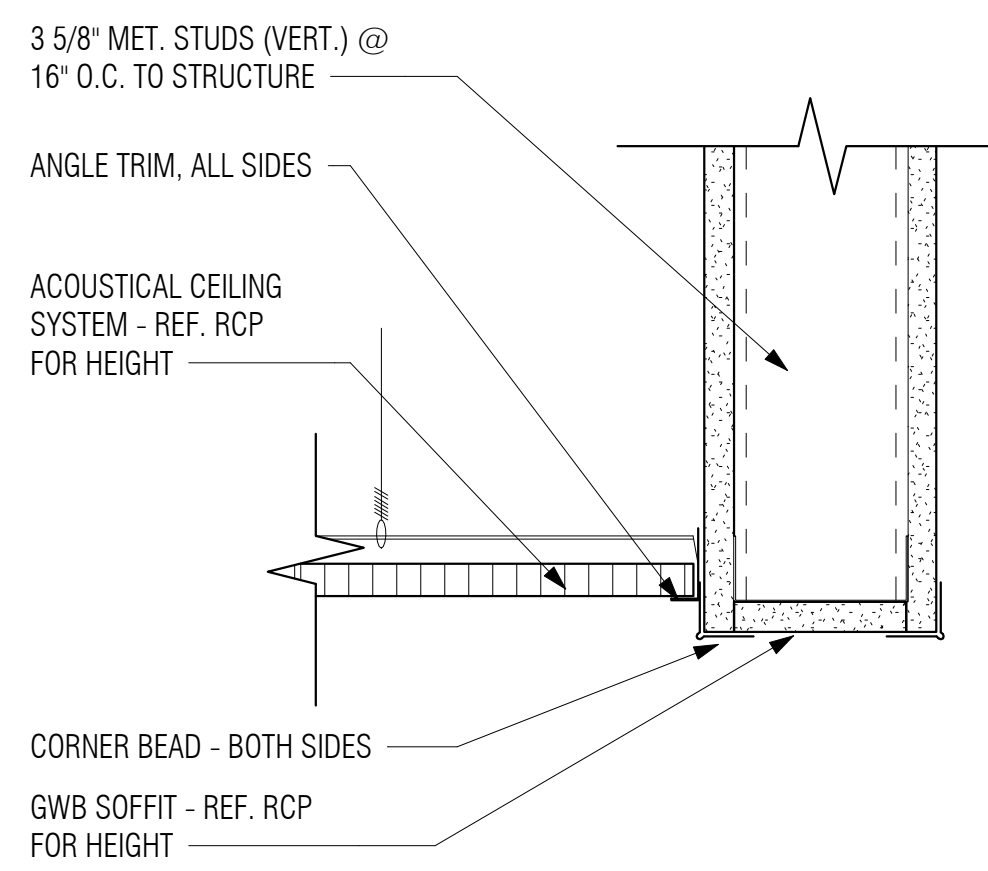
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REV	DATE	DESCRIPTION

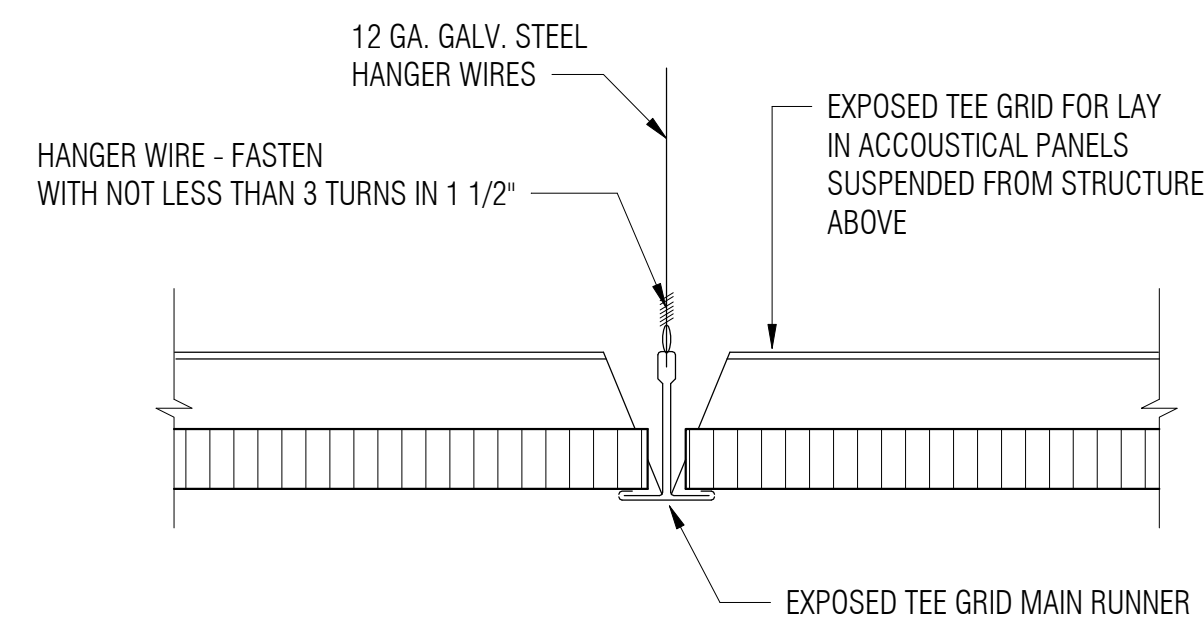
SHEET TITLE
**STANDARD DOOR &
WINDOW DETAILS**



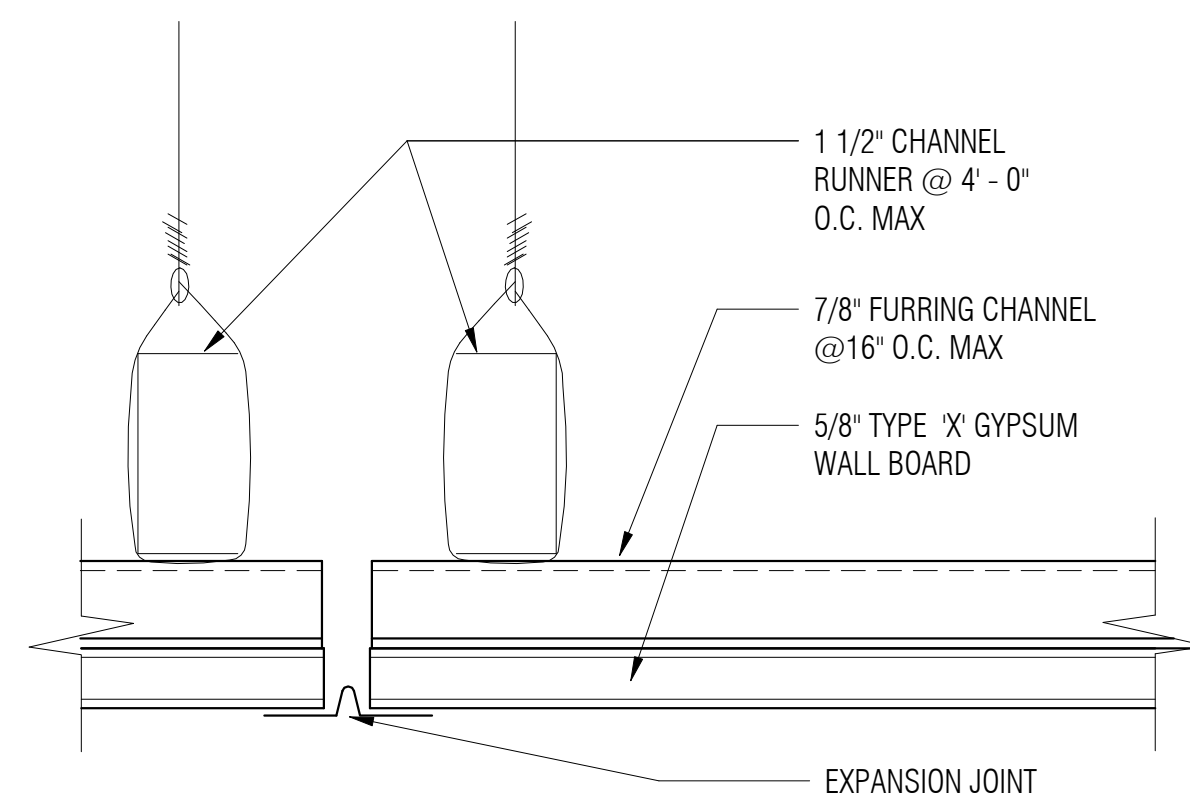
7 **GWB TO GWB SOFFIT**
SCALE: 3" = 1'-0"



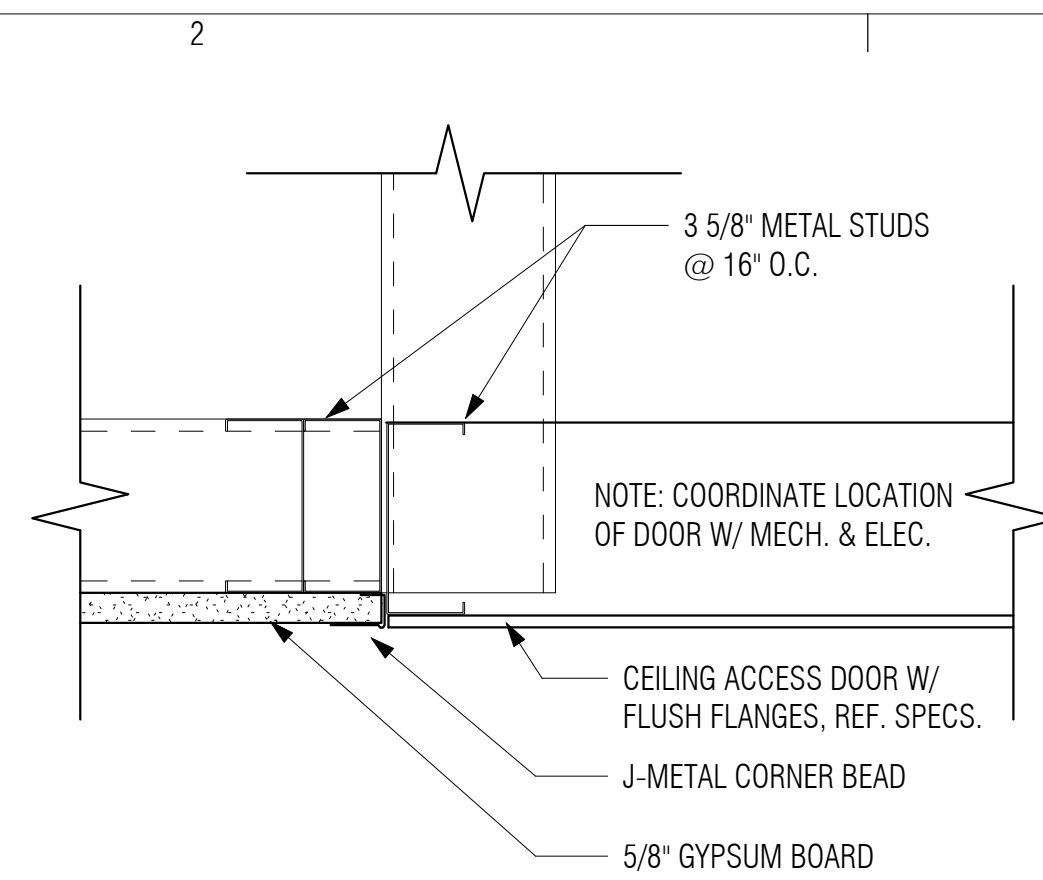
8 **ACT CEILING EDGE @ WALL SOFFIT**
3" = 1'-0"



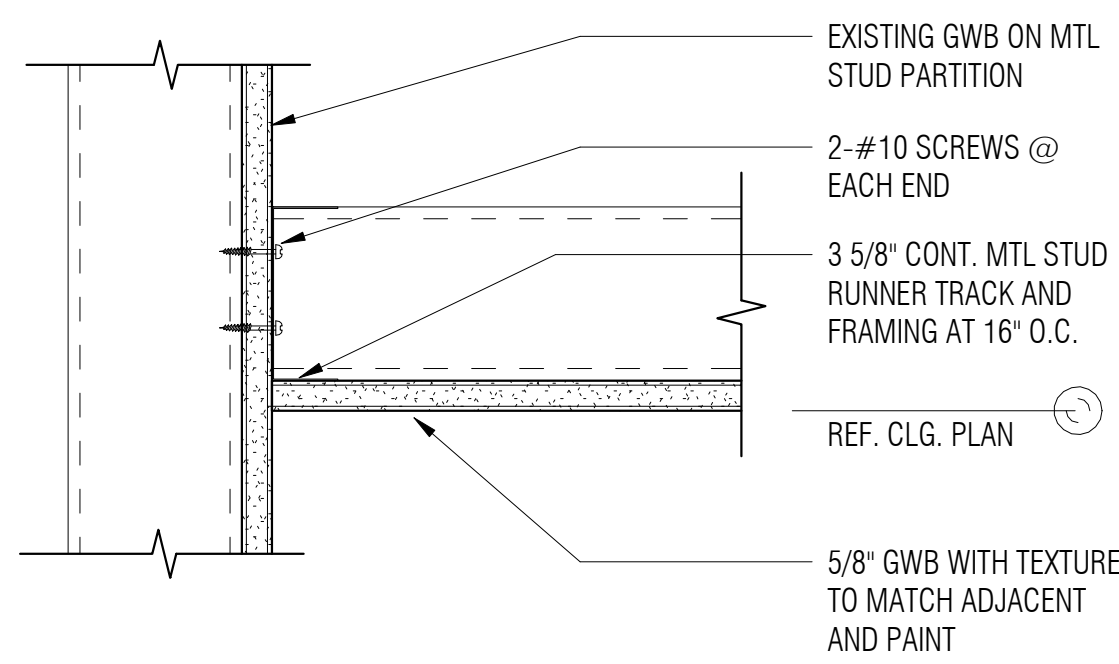
9 **SUSPENDED CEILING GRID MAIN RUNNER - TYPICAL**
SCALE: 6" = 1'-0"



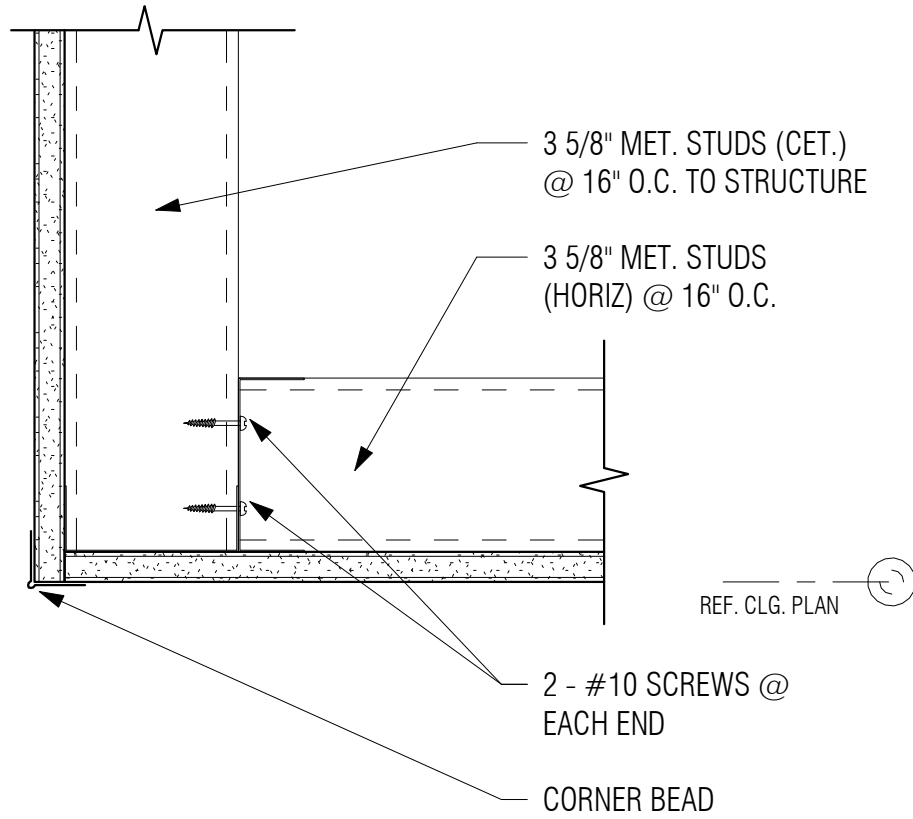
10 **SUSPENDED GWB - TYPICAL EXPANSION JOINT**
SCALE: 6" = 1'-0"



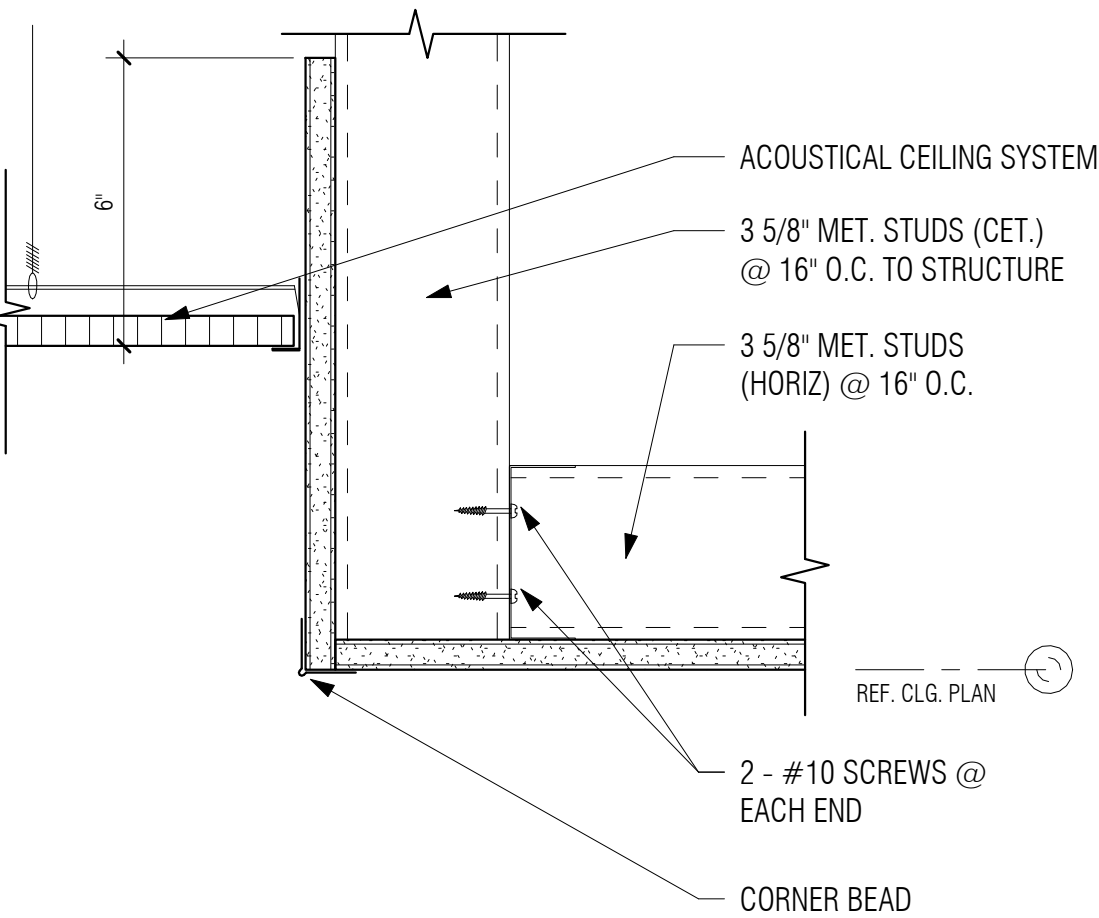
3 **CEILING ACCESS PANEL**
SCALE: 3" = 1'-0"



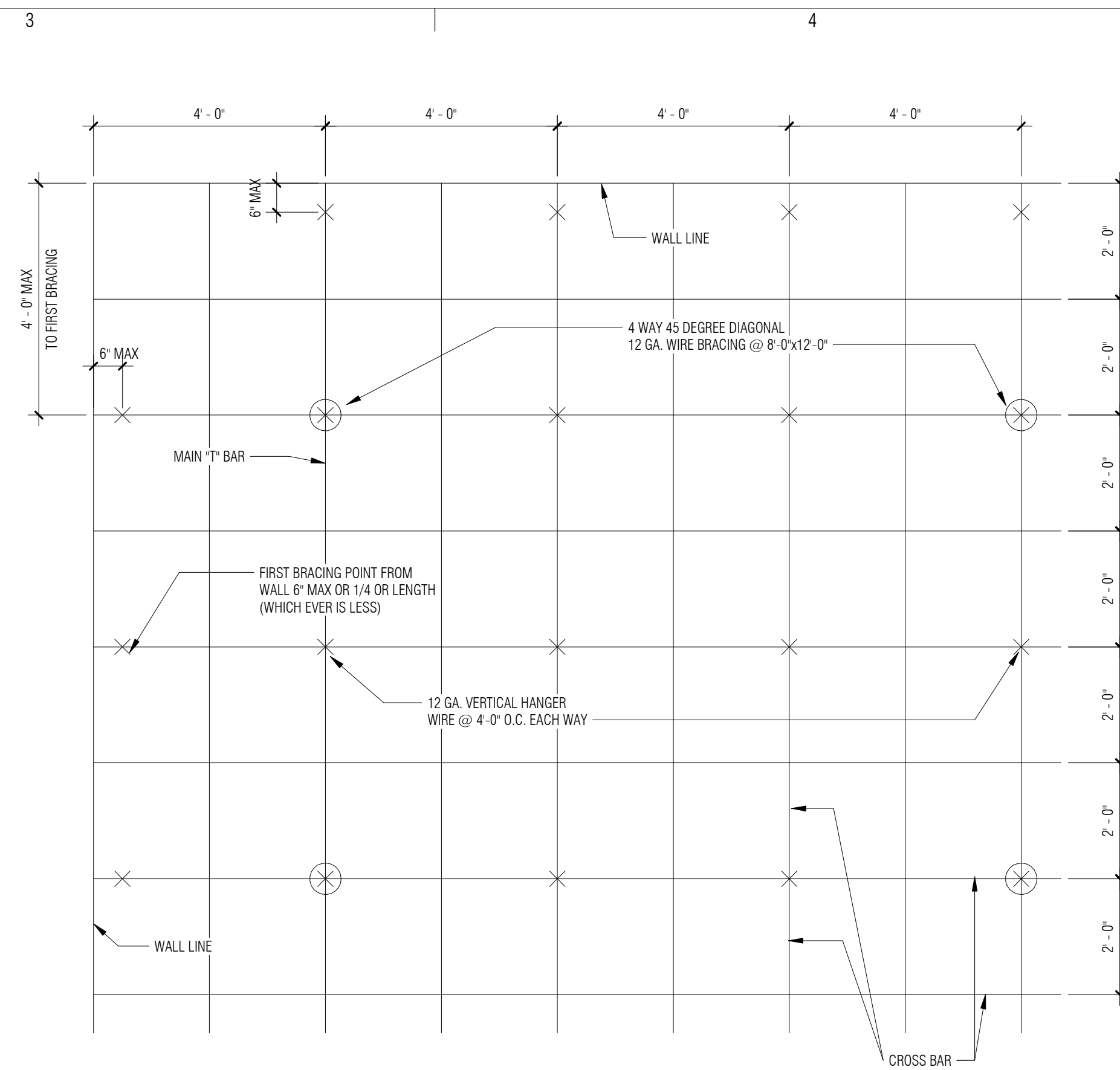
4 **GWb CEILING - INSIDE CORNER**
3" = 1'-0"



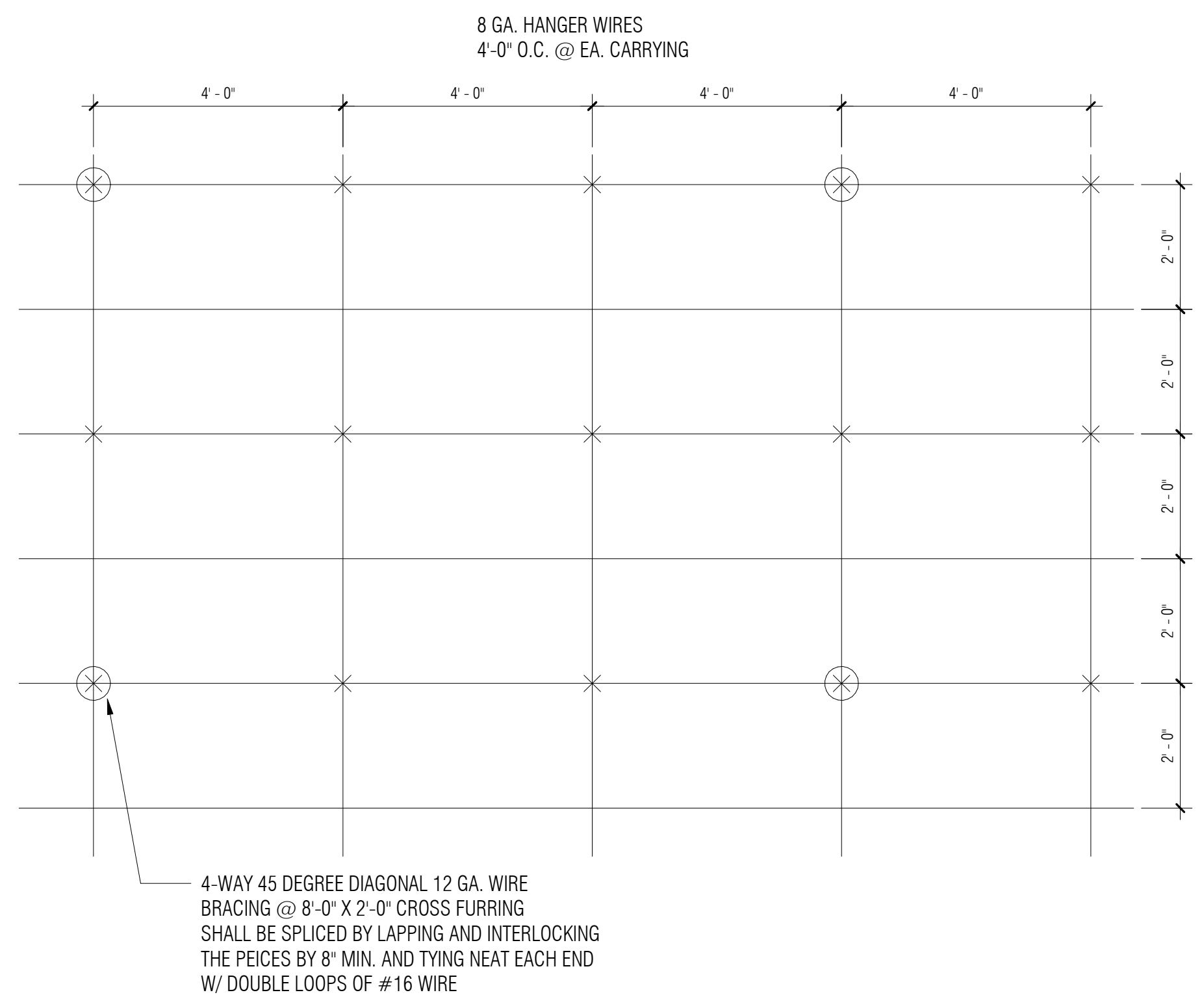
5 **GWb CEILING SOFFIT**
SCALE: 3" = 1'-0"



6 **ACT CEILING EDGE @ FRAMED SOFFIT**
3" = 1'-0"



11 **DIAGRAMATIC CEILING PLAN - 2X4 SUSPENDED CEILING**
1/2" = 1'-0"

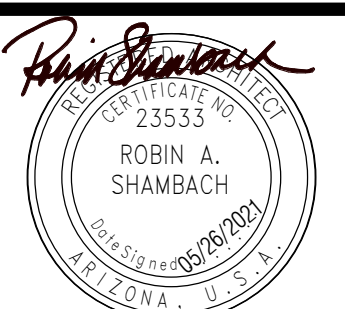


2 **DIAGRAMATIC CEILING PLAN - GYPSUM BOARD CEILINGS**
1/2" = 1'-0"

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EXPIRES 06/30/2022

INDIAN HEALTH SERVICE - BILLINGS AREA WIDE AIRBORNE INFECTION ISOLATION ROOM RENOVATION AND MODERNIZATION

MONTANA & WYOMING
IHS PROJECT NO. BI20A0200Z6



INDIAN HEALTH SERVICE
DIVISION OF FACILITIES ENGINEERING
BILLINGS AREA



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DFE BRANCH CHIEF _____ DATE _____

CONCURRENCE: _____

DFE CHIEF _____ DATE _____

REV	DATE	DESCRIPTION

ISSUE: 05/26/2021 - CONSTRUCTION DOCUMENTS
PROJECT NO: 1818.300
CAD DWG FILE:
DRAWN BY: RL
CHECKED BY:

SHEET TITLE

STANDARD CEILING DETAILS

0-A1.2

ABBREVIATIONS

A.B.	ANCHOR BOLT
A.C.I.	AMERICAN CONCRETE INSTITUTE
A.E.	ARCHITECT ENGINEER
A.I.A.	AMERICAN INSTITUTE OF ARCHITECTS
ALT.	ALTERNATE
ARCH.	ARCHITECT (URAL)
@	AT
BOT.	BOTTOM
BD.	BOARD
BTWN.	BETWEEN
BLDG.	BUILDING
BLK.	BLOCK
BLKG.	BLOCKING
BM.	BEAM
B.O.F.	BOTTOM OF FOOTING
BRG.	BEARING
BSMT.	BASEMENT
CHAN.	CHANNEL
CEM.	CEMENT
C.I.P.	CAST IN PLACE
C.J.	CONTROL/CONSTRUCTION JOINT
CLR.	CLEAR
C.M.U.	CONCRETE MASONRY UNIT
COL.	COLUMN
CONC.	CONCRETE
CONN.	CONNECT (ION)
CONST.	CONSTRUCT (ION)
CONT.	CONTINUOUS
∅	CENTER LINE
DBL.	DOUBLE
DEMO.	DEMOLITION
DET.	DETAIL
DIA. ∅	DIAMETER
DIM.	DIMENSION
DN.	DOWN
DO.	DITTO
DWG.	DRAWING
EA.	EACH
EL.	ELEVATION
ELEC.	ELECTRICAL
ENG.	ENGINEER
EQ.	EQUAL
EQUIP.	EQUIPMENT
EW.	EACH WAY
EXTG.	EXISTING
EXP.	EXPANSION
EXT.	EXTERIOR
FDN.	FOUNDATION
F.F.	FINISH FLOOR
FIN.	FINISH
FRMG.	FRAMING
FT.	FOOT
FTG.	FOOTING
GA.	GAUGE
GALV.	GALVANIZED
G.L.	GLU-LAM
GYP.	GYPNUM
HORIZ.	HORIZONTAL
H.S.A.	HEADED STUD ANCHOR
HT.	HEIGHT
H.V.A.C.	HEATING/VENTILATING
IN.	INCH
INT.	INTERIOR
JST.	JOIST
JT.	JOINT
K.	KIP (1000)
KO.	KNOCK OUT
L.L.	LIVE LOAD
L.L.H.	LONG LEG HORIZONTAL
L.L.V.	LONG LEG VERTICAL
MAT.	MATERIAL
MAX.	MAXIMUM
M.B.	MACHINE BOLT
MECH.	MECHANICAL
MFR.	MANUFACTURER
MIN.	MINIMUM
MISC.	MISCELLANEOUS
N.I.C.	NOT IN CONTRACT
N.T.S.	NOT TO SCALE
O.C.	ON CENTER
OPNG.	OPENING
PL.	PLATE
PT.	POINT
PWD.	PLYWOOD
REINF.	REINFORCE (D)
REQD.	REQUIRED
SCHED.	SCHEDULE
SECT.	SECTION
SHT.	SHEET
SIM.	SIMILAR
SPEC.	SPECIFICATION
SQ.	SQUARE
ST.	STEEL
SYM.	SYMMETRICAL
T. & B.	TOP AND BOTTOM
THK.	THICKNESS
T.O.B.	TOP OF BEAM
T.O.F.	TOP OF FOOTING
T.O.J.	TOP OF JOIST
T.O.S.	TOP OF STEEL
T.O.W.	TOP OF WALL
TYP.	TYPICAL
U.N.O.	UNLESS NOTED OTHERWISE
VERT.	VERTICAL
W.	WITH
W/O.	WITHOUT
W.W.M.	WELDED WIRE MESH

SYMBOLS and LEGENDS

	C.M.U.
	GRANULAR BASE COURSE
	PLYWOOD SHEATHING
	STEEL
	SECTION CUT
	KEYNOTE
	SHEAR WALL
	DETAIL TITLE
	ELEVATION TARGET
	REVISION
	STEP IN FOOTING
	CENTER LINE
	COLUMN MARK
	FOOTING MARK
	SLAB DEPRESSION
	OPENINGS
	COLUMN GRID
	DECK SPAN
	CONTROL/CONSTRUCTION JOINT
	PLYWOOD TRUSS JOIST
	"LH" SERIES JOIST MARK
	STEEL BEAM SIZE
	"K" SERIES JOIST MARK

STANDARD STRUCTURAL NOTES

- I. GENERAL:
- ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE INTERNATIONAL BUILDING CODE, 2018 EDITION WITH LOCAL MODIFICATIONS.
 - DESIGN LOADS: (AT NEW CONSTRUCTION)
 - A. WIND LOAD: BASIC WIND SPEED = 120 MPH
RISK CATEGORY IV
EXPOSURE C
 - B. EARTHQUAKE DESIGN DATA: SEISMIC DESIGN CATEGORY.....VARIES
SITE CLASS: D (ASSUMED)
 - C. ALLOWABLE SOIL BEARING = 1,500 PSF PER IBC TABLE 1806.2 (NO SOILS REPORT).
 - THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO STARTING CONSTRUCTION. THE ARCHITECT/ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES OR INCONSISTENCIES.
 - DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALES SHOWN ON DRAWINGS.
 - ALL DETAILS SHOWN APPLY WHETHER SPECIFICALLY REFERENCED OR NOT.
 - ALL STRUCTURAL CALCULATIONS SUBMITTED TO THE ARCHITECT/ENGINEER FOR REVIEW, SHALL BEAR THE SEAL OF A PROFESSIONAL ENGINEER (STRUCTURAL) REGISTERED IN THE STATE OF ARIZONA.
- II. FOUNDATION AND EARTHWORK
- ALL FOOTINGS SHALL BE FOUNDED AT THE DEPTHS INDICATED ON CONSTRUCTION DRAWINGS, OR 18 INCHES MINIMUM BELOW LOWEST ADJACENT GRADE.
 - SCARIFY SOILS TO A DEPTH OF 12 INCHES BELOW BOTTOM OF FOOTINGS, MOISTURE CONDITION, AND COMPACT TO 95% OF MAXIMUM DENSITY.
 - SCARIFY, MOISTURE CONDITION, AND COMPACT SUBGRADE SOILS TO A DEPTH OF 8 INCHES BELOW BOTTOM OF SLAB.
 - PROVIDE 4" THICK GRANULAR BASE COURSE BELOW ALL SLABS ON GRADE.
 - EXTERIOR FINISHED GRADES SHALL SLOPE TO DRAIN AWAY FROM BUILDING WALLS TO ELIMINATE WATER POCKETS ADJACENT TO BUILDING FOUNDATIONS.
- III. CONCRETE:
- ALL CONCRETE SHALL CONFORM WITH ASTM C-94 AND ATTAIN THE FOLLOWING MINIMUM STRENGTHS AT 28 DAYS:
 - A. FOOTINGS, SLAB ON GRADE, EQUIP. PADS 3,000 PSI
 - B. CURBS & SIDEWALKS. 2,500 PSI
 - ALL CONSTRUCTION SHALL COMPLY WITH APPLICABLE PROVISIONS FOR THE FOLLOWING LATEST ACI STANDARDS.
 - A. ACI 301 - SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS
 - B. ACI 318 - BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE
 - CONCRETE FOOTINGS AND PADS MAY BE POURED AGAINST NEAT EXCAVATIONS, PROVIDED PLAN DIMENSIONS ARE ADHERED TO.
 - MINIMUM CONCRETE COVER OVER REINFORCING BARS SHALL BE AS FOLLOWS:
 - A. CONCRETE POURED DIRECTLY AGAINST EARTH. 3 INCHES
 - B. FORMED CONCRETE. 1 1/2 INCHES
 - ALL REINFORCING BARS, ANCHOR BOLTS, AND CONCRETE INSERTS SHALL BE SECURED IN POSITION PRIOR TO PLACING CONCRETE.
 - PROVIDE SLEEVES FOR PLUMBING AND ELECTRICAL OPENINGS IN CONCRETE BEFORE PLACING CONCRETE. DO NOT CUT ANY REINFORCING WHICH MAY CONFLICT. CONSULT ARCHITECT/ENGINEER OF SUCH CONFLICTS.
 - NO CONSTRUCTION JOINTS (OTHER THAN THOSE SHOWN ON DRAWINGS) SHALL BE INSTALLED WITHOUT APPROVAL OF THE ARCHITECT/ENGINEER. PROVIDE 1/4" BULLNOSE AT SLAB JOINTS. CHAMFER CORNER ON VERTICAL ONLY.
 - CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER TO OBSERVE COMPLETED FOOTING EXCAVATION AND ALL REINFORCING BAR PLACEMENTS BEFORE ANY CONCRETE IS PLACED.
 - REINFORCING STEEL:
 - A. ALL REINFORCING STEEL SHALL BE DEFORMED BARS CONFORMING TO ASTM A-615 GRADE 60.
 - B. ALL REINFORCING IN CONCRETE SHALL BE CONTINUOUS OR LAPPED IN ACCORDANCE WITH ACI 318, AND NOT LESS THAN 48 BAR DIAMETERS.
- IV. CARPENTRY:
- ROUGH CARPENTRY:
 - A. ALL LUMBER SHALL BE DOUGLAS FIR-LARCH OF THE FOLLOWING GRADE:
 - STUDS & BLOCKING. Fb = 900 PSI E = 1,600,000 PSI
 - JOISTS & LINTELS. Fb = 900 PSI E = 1,600,000 PSI
 - POSTS. Fc = 1,350 PSI E = 1,600,000 PSI
 - LEDGERS & PLATES. Fb = 900 PSI E = 1,600,000 PSI
 - ROOF AND WALL SHEATHING SHALL BE APA RATED SHEATHING PLYWOOD OR OSB, EXPOSURE I.
 - ALL NAILING SHALL CONFORM TO THE 2018 IBC TABLE NO. 2304.10.1 AND AS NOTED ON DRAWINGS.
 - ALL LUMBER SHALL BEAR THE STAMP OF AN APPROVED GRADING AGENCY.

GENERAL NOTES:

FOR COMPLETE DIMENSIONS SEE ARCHITECTURAL DRAWINGS

SPECIAL INSPECTION:
THE FOLLOWING PORTIONS OF THE WORK REQUIRE SPECIAL INSPECTION TO BE PERFORMED IN ACCORDANCE WITH CHAPTER 17 OF THE INTERNATIONAL BUILDING CODE. (NOTE: SPECIAL INSPECTION OF CONCRETE FOOTINGS IS NOT REQUIRED. 3,000 PSI CONCRETE IS SPECIFIED FOR SERVICEABILITY, BUT IS DESIGNED FOR 2,500 PSI.)

- STRUCTURAL WELDING

THIS NOTE APPLIES TO ALL EXISTING BUILDING AREAS:

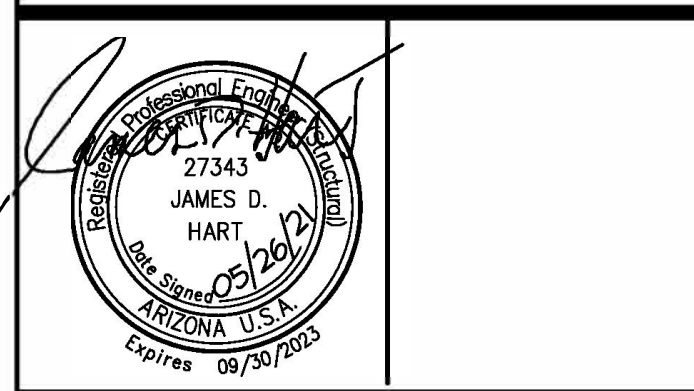
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CUTTING OF ALL REQUIRED OPENINGS THROUGH BUILDING FLOORS, WALLS, ROOFS, AND FOR THE INSTALLATION OF WALL STRUCTURAL SUPPORT MEMBERS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE INSTALLATION OF ALL EQUIPMENT, FIXTURES, PIPING, AND CONDUIT INCLUDING SLEEVES, CONCRETE INSERTS, THREADED RODS AND HANGERS.
- THIS PROJECT INVOLVES ADDITIONS AND ALTERATIONS TO EXISTING CONSTRUCTION, EVERY EFFORT HAS BEEN MADE TO DETAIL THE DRAWINGS TO CONFORM WITH EXISTING CONSTRUCTION IN ACCORDANCE WITH THE AS-BUILT DRAWINGS. IF CONDITIONS ARE UNCOVERED WHICH DIFFER FROM WHAT IS SHOWN ON THE DRAWINGS, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT AND STRUCTURAL ENGINEER FOR RECOMMENDATIONS PRIOR TO PROCEEDING WITH THE WORK.
- THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN, PLACEMENT, AND MAINTENANCE OF ALL SHORING AND BRACING OF EXISTING CONSTRUCTION THAT MAY BE REQUIRED TO INSURE THAT NO SETTLEMENT OR MOVEMENT OF ANY EXISTING CONSTRUCTION OCCURS.
- ALL DIMENSIONS OF EXISTING CONSTRUCTION HAVE BEEN TAKEN FROM AS-BUILT DRAWINGS AND SITE SURVEY INFORMATION. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL DIMENSIONS AND SHALL NOTIFY THE ARCHITECT OF ANY

BURNS WALD-HOPKINS SHAMBACH ARCHITECTS
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CONSULTANTS

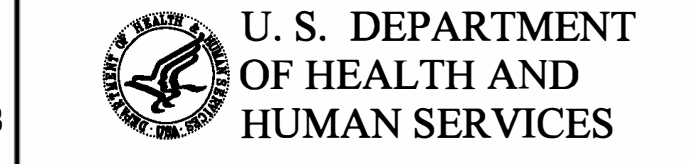
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STRUCTURAL
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INDIAN HEALTH SERVICE - BILLINGS AREA WIDE AIRBORNE INFECTION ISOLATION ROOM RENOVATION AND MODERNIZATION

MONTANA & WYOMING
IHS PROJECT NO. BI20AO200Z6



INDIAN HEALTH SERVICE DIVISION OF FACILITIES ENGINEERING BILLINGS AREA



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CONCURRENCE:

DPE CHIEF DATE

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ISSUE: 05/26/2021 - CONSTRUCTION DOCUMENTS
PROJECT NO.: 1818.300
CAD DWG FILE: 21025
DRAWN BY: TG
CHECKED BY: JH

SHEET TITLE

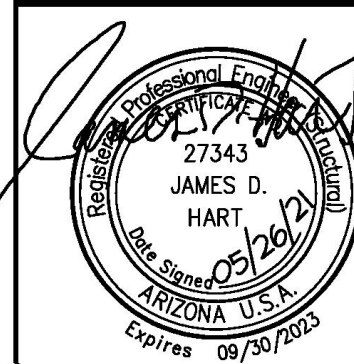
STANDARD STRUCTURAL NOTES

0-S1.0

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MONTANA & WYOMING
 IHS PROJECT NO. BI20A0200Z6

U. S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

INDIAN HEALTH SERVICE
 DIVISION OF FACILITIES ENGINEERING
 BILLINGS AREA



REVIEWED: _____ DATE _____

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CONCURRENCE: _____ DATE _____

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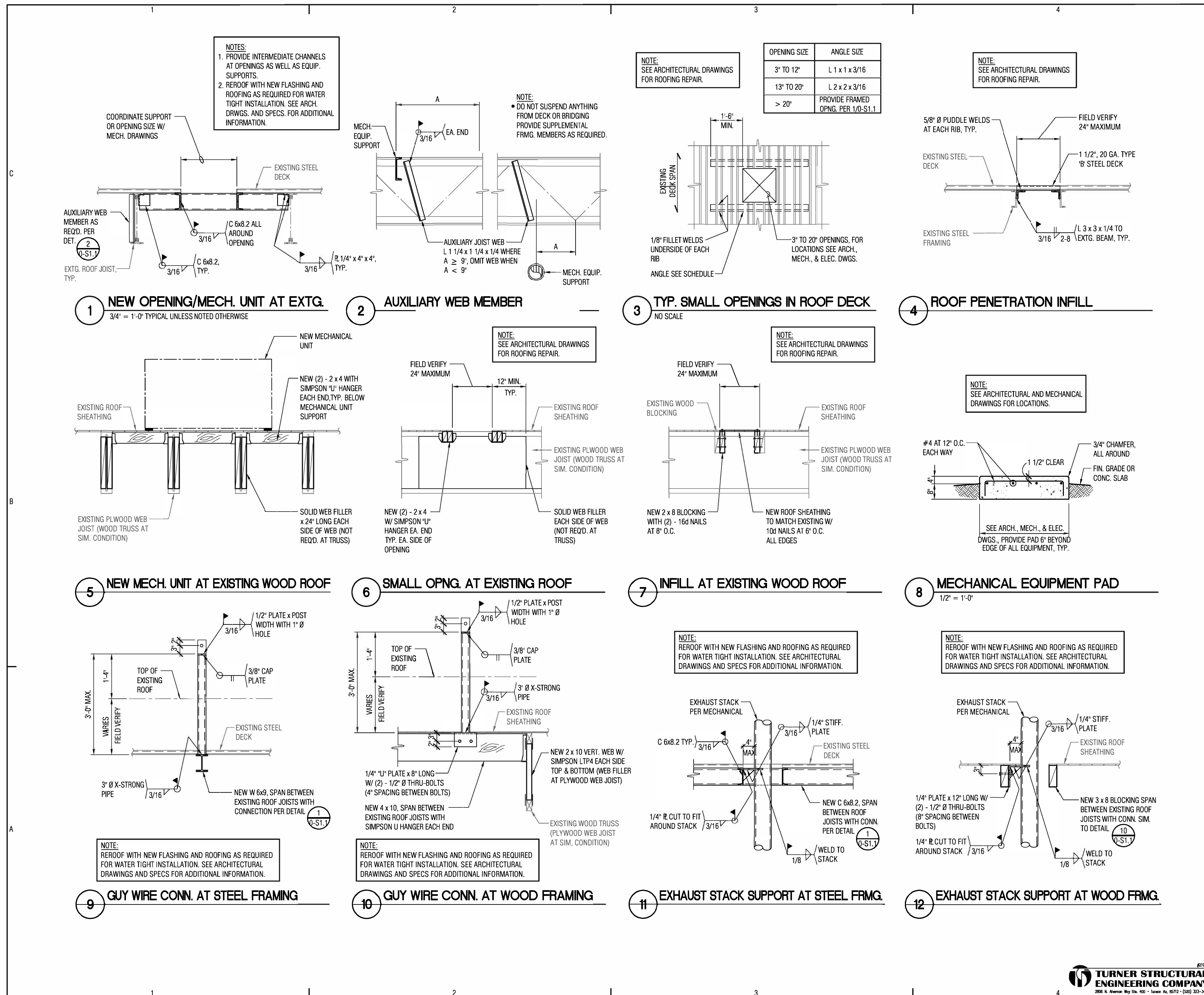
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SHEET TITLE

TYPICAL STRUCTURAL DETAILS

0-S1.1

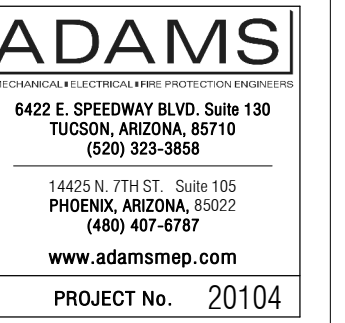
SHEET 29 OF 33



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INDIAN HEALTH SERVICE
DIVISION OF FACILITIES ENGINEERING
BILLINGS AREA



REVIEWED: _____

DFE ENGINEER/PROJECT MANAGER DATE _____

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DFE BRANCH CHIEF DATE _____

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REV	DATE	DESCRIPTION

ISSUE: 05/26/2021 - CONSTRUCTION DOCUMENTS
PROJECT NO: 1818.300
CAD DWG FILE:
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SHEET TITLE
MECHANICAL SCEHDULES

O-M1.0

EXHAUST FAN SCHEDULE

FORT BELKNAP HOSPITAL

MARK	MANUFACTURER	TYPE	MODEL	CFM	ESP	MAX RPM	MAX INLET dBA	UNIT ELECTRICAL DATA		UNIT WEIGHT	AREA SERVED	REMARKS
								VOLTAGE	HP			
EF 1	COOK	ROOFTOP UTILITY SET BELT DRIVE	CPV 100	850	1.0"	2210	64	115/1/60	1/3	250 LBS.	FORT BELKNAP PATIENT ISOLATION ROOM 156	FAN TO BE CONTROLLED BY ISOLATION ROOM CONTROLLER - SEE CONTROLS DRAWINGS

NOTES: UNIT COMPLETE WITH ELECTRONICALLY COMMUTATED MOTOR (ECM), EXTENDED LIFE BEARINGS, OPTIONAL DRAIN (OPEN), WEATHER COVER WITH ACCESS DOOR, INLET/OUTLET COMPANION FLANGE, DISCHARGE STACK, AND ISOLATION RAIL.

EXHAUST FAN SCHEDULE

EAGLE CHILD HEALTH STATION

MARK	MANUFACTURER	TYPE	MODEL	CFM	ESP	MAX RPM	MAX INLET dBA	UNIT ELECTRICAL DATA		UNIT WEIGHT	AREA SERVED	REMARKS
								VOLTAGE	HP			
EF 1	COOK	ROOFTOP UTILITY SET BELT DRIVE	CPV 70	275	1.0"	2100	64	115/1/60	1/3	250 LBS.	EAGLE CHILD EXAM ROOM 196	FAN TO BE CONTROLLED BY ISOLATION ROOM CONTROLLER - SEE CONTROLS DRAWINGS

NOTES: UNIT COMPLETE WITH ELECTRONICALLY COMMUTATED MOTOR (ECM), EXTENDED LIFE BEARINGS, OPTIONAL DRAIN (OPEN), WEATHER COVER WITH ACCESS DOOR, INLET/OUTLET COMPANION FLANGE, DISCHARGE STACK, AND ISOLATION RAIL.

Ft. Belknap Hospital

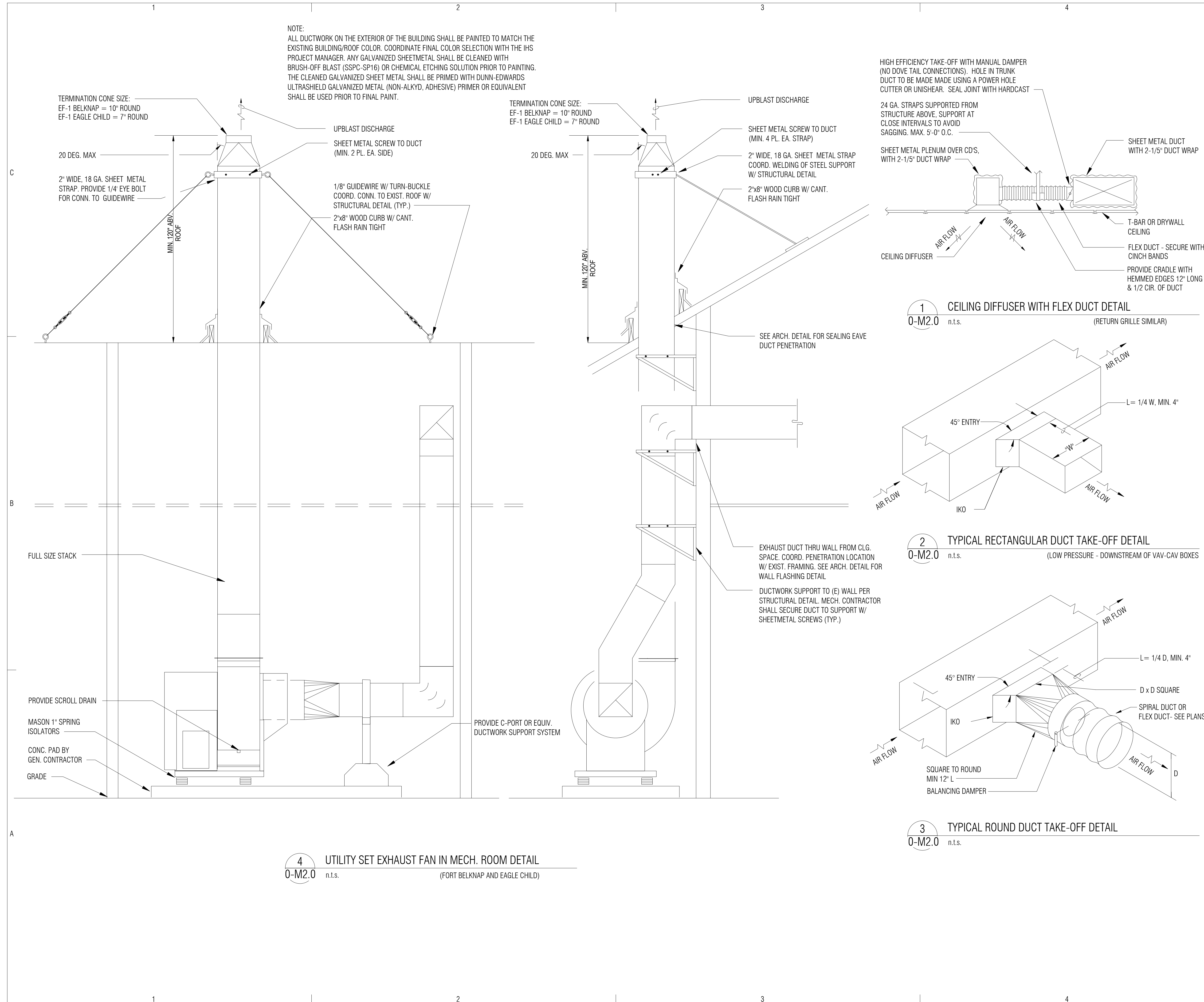
Room	Room Description	Plan Area (ft ²)	Clg. Height (ft)	Calc. Room Volume (ft ³)	Min. Vent Air per Hour	Min Ventilation Airflow (cfm)	Min. A/C per Hour	Min Exhaust Airflow (cfm)	Design Exhaust Airflow (cfm@ 15 A/C per hour)
C156	Patient Isolation Room	253	8.2	2074.6	2	69.2	12	414.9	519
C157	Toilet	55	8.2	451	0	0.0	12	90.2	113
C160	Anteroom	95	8.2	779	0	0.0	10	129.8	195
									827.0

Eagle Child Health Station (Hays)

Room	Room Description	Plan Area (ft ²)	Clg. Height (ft)	Calc. Room Volume (ft ³)	Min. Vent Air per Hour	Min Ventilation Airflow (cfm)	Min. A/C per Hour	Min Exhaust Airflow (cfm)	Design Exhaust Airflow (cfm@ 15 A/C per hour)
196	Exam	129	8.5	1096.5	2	36.6	12	219.3	275

NOTES:

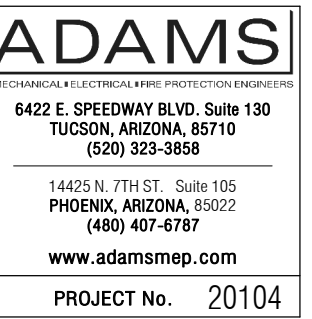
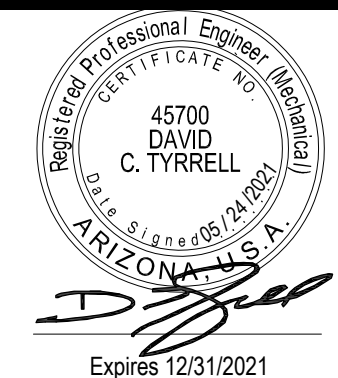
- TAB AGENCY SHALL BE A SUBCONTRACTOR TO THE GENERAL CONTRACTOR AND NOT BY THE GOVERNMENT.
- THE SUBCONTRACTOR SHALL FINALIZE THE EXHAUST AIR FLOW FOR EACH ROOM TO ENSURE DESIGN EXHAUST AIRFLOW FOR EACH ROOM IS ACHIEVED.
- TAB SUBCONTRACTOR SHALL ADJUST THE SUPPLY AIRFLOW FOR EACH ROOM TO MAINTAIN THE CASCDING MINIMUM DIFFERENTIAL PRESSURE (-0.03") ACROSS PRESSURE ZONES.



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INDIAN HEALTH SERVICE -BILLINGS AREA WIDE AIRBORNE INFECTION ISOLATION ROOM RENOVATION AND MODERNIZATION

MONTANA & WYOMING
IHS PROJECT NO. B120A0200Z6



INDIAN HEALTH SERVICE
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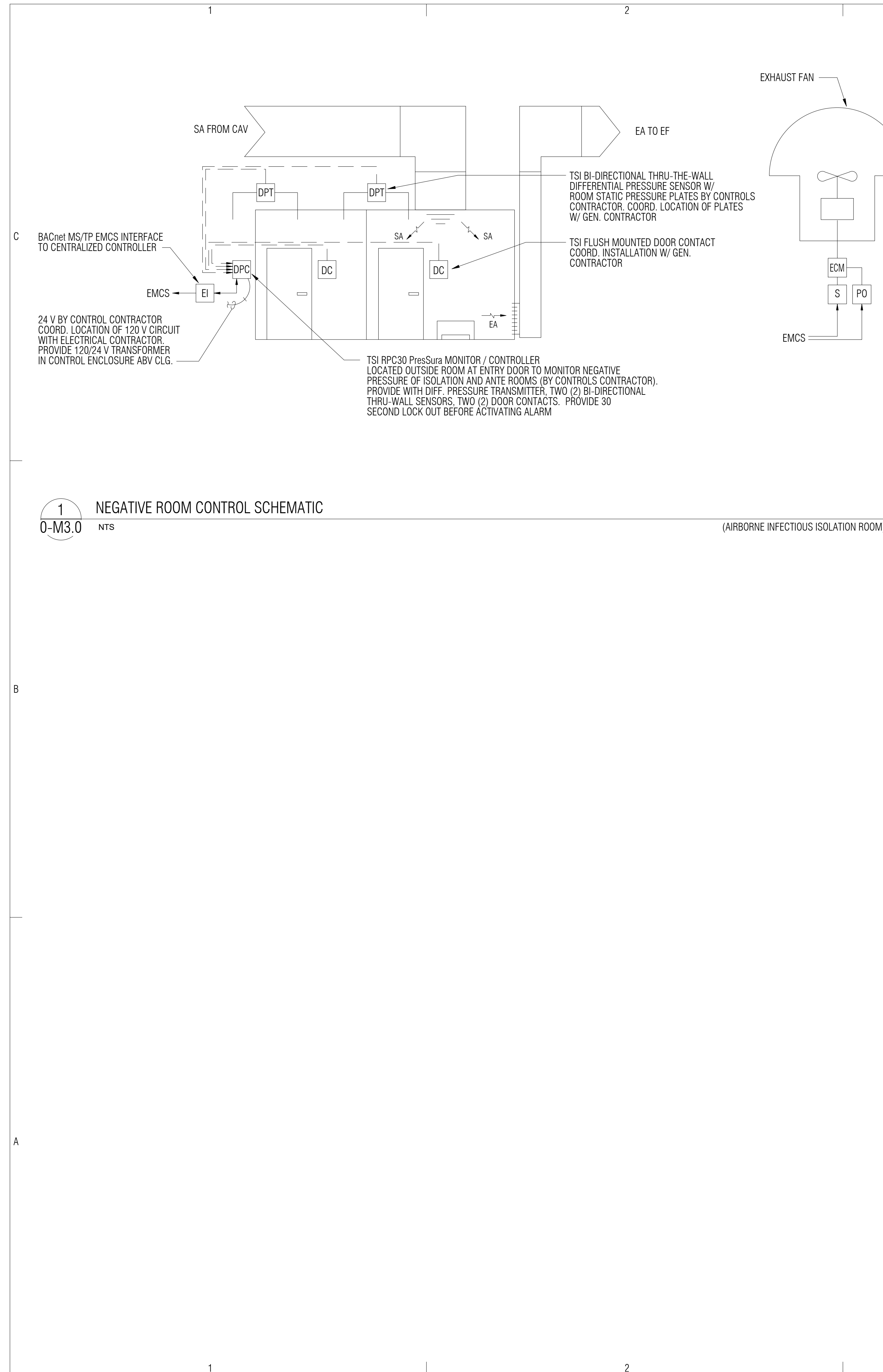
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MECHANICAL DETAILS



EMCS POINTS LIST	HARDWARE				SOFTWARE		REMARKS
	OUTPUT		INPUT		ALARMS		
	DGTL.	ANALOG	DIGITAL	ANALOG	DGTL.	ANALOG	
AIRBORNE INFECTIOUS ISOLATION ROOM							SEE FLOOR PLANS FOR QUANTITY
DIFFERENTIAL PRESSURE MONITOR	⊙						
EXHAUST FAN	⊙						

NOTES:
1. DIFFERENTIAL PRESSURE MONITOR SHALL BE COMPLETE W/ BACNET/MSTP COMMUNICATION CARD FOR EMCS INTERFACE. SEE DIFFERENTIAL PRESSURE MONITOR INSTALLATION MANUAL FOR LIST OF SOFTWARE POINTS TO BE PASSED BETWEEN UNIT AND EMCS.

SEQUENCE OF OPERATIONS

AIRBORNE INFECTION ISOLATION (AII) ROOM CONTROL:

THE AII ROOM SHALL OPERATE AS A NEGATIVE PRESSURE ISOLATION ROOM AT ALL TIMES. FOOTNOTE U OF TABLE 7.1-ASHRAE 170-2017 REQUIRES THE ROOM PRESSURE TO ALL ADJACENT AREAS TO REMAIN UNCHANGED (NEGATIVE) DURING ALL UNOCCUPIED PERIODS. THE MIN. EXHAUST AIR CHANGES MAY BE REDUCED TO 6 AC/HR DURING UNOCCUPIED HOURS. EXHAUST FAN SHALL BE CONTROLLED BY THE EMCS AND MONITORING OF THE DIFFERENTIAL PRESSURE TRANSMITTER AND DOOR CONTACT SHALL BE THROUGH THE TSI RPC30 PresSura MONITOR / CONTROLLER.

THE MONITOR/CONTROLLER SHALL BE PROVIDED WITH A BACnet MS/TP EMCS INTERFACE TO THE EMCS. THE ROOM PRESSURE CONTROLLER SHALL BE SET UP BY THE CONTROL CONTRACTOR FOR NEGATIVE ROOM PRESSURIZATION CONTROL. THE MIN. DIFFERENTIAL SET POINT SHALL BE -0.01" AND THE MAX. DIFFERENTIAL SET POINT SHALL BE -0.1". THE MAX. DIFFERENTIAL SET POINT SHALL BE VERIFIED WITH THE MEASURED DIFFERENTIAL PRESSURE OF THE ROOM WITH THE ASSOCIATED AC UNIT SUPPLY FAN DISABLED AND EXHAUST FAN ENABLED. ALARM DELAY SHALL BE SET FOR 30 SECONDS. THE ALARM DELAY SHALL BE VERIFIED WITH LOCAL SERVICE UNIT STAFF PRIOR TO FINAL PROGRAMMING.

THE EMCS SHALL MONITOR SHALL CONTROL THE CONSTANT AIR VOLUME (CAV) TERMINAL UNIT TO MAINTAIN A CONSTANT AIRFLOW THROUGH THE AII ROOM DURING ALL OCCUPIED HOURS. THE CAV REHEAT VALVE SHALL BE MODULATED TO MAINTAIN SPACE TEMPERATURE CONTROL. ANYTIME THE ROOM DIFFERENTIAL PRESSURE IS OUTSIDE THE MIN. / MAX. SET POINTS FOR MORE THAN 30-SECONDS, THE TOUCH SCREEN PANEL SHALL PROVIDE AN AUDIBLE AND VISUAL ALARM TO STAFF AND AN ALARM SHALL BE PROVIDED TO THE OPERATOR'S WORKSTATION THROUGH BACnet MS/TP EMCS INTERFACE.

CONTROLS LEGEND	
EMCS	- ENERGY MONITORING & CONTROL SYSTEM
LCI	- LOCAL CONTROL INTERLOCK
LLC	- LOCAL LOOP CONTROL
SA	- SUPPLY AIR
RA	- RETURN AIR
OA	- OUTSIDE AIR
S	- SPACE TEMPERATURE SENSOR
EI	- EMCS INTERFACE (BACNET/IP)
DP	- DIFFERENTIAL PRESSURE MONITOR
S	- START / STOP INTERFACE
ECM	- ELECTRONICALLY COMMUTATED MOTOR
PO	- POSITION ADJUSTMENT

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INDIAN HEALTH SERVICE -BILLINGS AREA WIDE AIRBORNE INFECTION ISOLATION ROOM RENOVATION AND MODERNIZATION

MONTANA & WYOMING
IHS PROJECT NO. BI20A0200Z6

U. S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
INDIAN HEALTH SERVICE
DIVISION OF FACILITIES ENGINEERING
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SHEET TITLE
MECHANICAL CONTROLS

0-M3.0
SHEET 32 OF 33

POWER SYMBOLS LEGEND		
SYMBOLS	DESCRIPTION	MOUNTING HEIGHT
	DUPLEX RECEPTACLE (20A/125V/2P/3W/G NEMA 5-15R)	18" AFF
	QUADRAPLEX RECEPTACLE (20A/125V/2P/3W/G NEMA 5-15R)	18" AFF
	ABOVE COUNTER DUPLEX RECEPTACLE (20A/125V/2P/3W/G NEMA 5-15R)	42" AFF
	DUPLEX RECEPTACLE GFCI PROTECTION (20A/125V/2P/3W/G NEMA 5-15R)	18" AFF
	DUPLEX RECEPTACLE ON ESSENTIAL SYSTEM (20A/125V/2P/3W/G NEMA 5-15R)	18" AFF
	DUPLEX RECEPTACLE W/ WEATHER PROOF ENCLOSURE AND GFCI (20A/125V/2P/3W/G NEMA 5-15R)	18" AFF
	SPECIAL NEMA CONFIGURATION RECEPTACLE. REFER TO FLOOR PLANS FOR EXACT NEMA CONFIGURATION.	18" AFF
	JUNCTION BOX, SIZING AND MOUNTING AS REQUIRED BY SPECIFICATIONS AND NEC.	-
	HEAVY DUTY DISCONNECT, FRAME, FUSE AND POLES INDICATED ON FLOOR PLAN.	AS REQUIRED
	COMBINATION MOTOR STARTER/DISCONNECT	AS REQUIRED
	208Y/120V BRANCH PANEL BOARD. REFER TO PANEL SCHEDULE FOR ADDITIONAL INFORMATION.	-
	480Y/277V BRANCH PANEL BOARD. REFER TO PANEL SCHEDULE FOR ADDITIONAL INFORMATION.	-
	CIRCUIT HOMERUN TO PANEL BOARD VIA 2#12, 1#12 G, 3/4" C. AND 20A/1P CB UNO	-
	THREE SINGLE POLE DEVICE CIRCUIT NUMBERS	-
	MULTI-POLE DEVICE CIRCUIT NUMBERS	-

LIGHTING SYMBOLS LEGEND		
SYMBOLS	DESCRIPTION	MOUNTING HEIGHT
	2X4 FIXTURE	SEE FIXTURE SCHEDULE
	2X2 FIXTURE	SEE FIXTURE SCHEDULE
	WALL MOUNTED SCONCE FIXTURE	SEE FIXTURE SCHEDULE
	WALL MOUNTED LINEAR FIXTURE	SEE FIXTURE SCHEDULE
	LINEAR FIXTURE	SEE FIXTURE SCHEDULE
	DOWNLIGHT FIXTURE	SEE FIXTURE SCHEDULE
	WALL SWITCH	44" AFF
	3-WAY WALL SWITCH	44" AFF
	DIMMER WALL SWITCH (0-10V)	44" AFF
	3-WAY DIMMER WALL SWITCH (0-10V)	44" AFF
	CEILING MOUNTED VARIABLE PHOTOCCELL	-
	CEILING MOUNTED DUAL TECHNOLOGY VACANCY SENSOR	-

NURSE CALL SYMBOLS LEGEND		
SYMBOLS	DESCRIPTION	MOUNTING HEIGHT
	DOME LIGHT. REFER TO ARCHITECTURAL OR OWNER NURSECALL DRAWINGS FOR EXACT MOUNTING LOCATION. MAY BE CEILING OR WALL MOUNTED	-
	STAFF ASSIST STATION	48"
	SINGLE PATIENT STATION WITH CODE BLUE	48"
	EMERGENCY PULL STATION	48"
	NURSE CALL CONSOLE	-

PROVIDE 1" C ABOVE TO ABOVE ACCESSIBLE CEILING. CONFIRM ALL BACKBOX AND CONDUIT SIZES WITH VENDOR AND/OR OWNER GROUP PRIOR TO INSTALLATION. ALL CONDUITS SHALL HAVE NYLON PULLCORDS AND NYLON BUSHINGS AT EACH END.

DATA SYMBOLS LEGEND		
SYMBOLS	DESCRIPTION	MOUNTING HEIGHT
	DATA OUTLET, 4" SQUARE BOX AND SINGLE GANG ADAPTER OUTLET. PROVIDE 1" C TO ABOVE ACCESSIBLE CEILING FROM BOX. # QUANTIFIES AMOUNT OF DATA AND OR VIDEO CABLES.	18" AFF
	DATA OUTLET, IN COMBO DEVICE. REFER TO RECEPTACLE SYMBOL FOR SPECIFICATIONS AND MOUNTING HEIGHTS. # QUANTIFIES AMOUNT OF DATA AND OR VIDEO CABLES.	72" AFF
	WALL PHONE, 4" SQUARE BOX AND SINGLE GANG ADAPTER OUTLET. PROVIDE 1" C TO ABOVE ACCESSIBLE CEILING FROM BOX. SINGLE DATA OR PHONE CABLE	44" AFF

ONE-LINE SYMBOLS LEGEND			
SYMBOLS	DESCRIPTION	SYMBOLS	DESCRIPTION
	BRANCH PANEL BOARD, REFER TO PANEL SCHEDULE FOR ADDITIONAL INFORMATION.		TRANSFORMER
	CIRCUIT BREAKER AT=TRIP LSIG = LONG TIME, SHORT TIME, INSTANTANEOUS AND GROUND FAULT SETTINGS		GROUNDING ELECTRODE
	FUSED SWITCH AF = SWITCH FRAME RATING AT = FUSE TRIP RATING		ELECTRICAL METER

ELECTRICAL ABBREVIATIONS			
ABBREVIATION	DESCRIPTION	ABBREVIATION	DESCRIPTION
AFC	ABOVE FINISHED CEILING	LTG	LIGHTING
AFF	ABOVE FINISHED FLOOR	LTS	LIGHTS
ARCH	ARCHITECT	LV	LOW VOLTAGE
ATS	AUTOMATIC TRANSFER SWITCH	MCB	MAIN CIRCUIT BREAKER
BFC	BELOW FINISHED FLOOR	MCC	MOTOR CONTROL CENTER
CB, C/B	CIRCUIT BREAKER	MH	MAN HOLE
CKT	CIRCUIT	MLO	MAIN LUGS ONLY
CLG	CEILING	N.C.	NORMALLY CLOSED
CR	CIRCUIT	NEC	NATIONAL ELECTRIC CODE
EC	EMPTY CONDUIT	(R)	RELOCATED
ELEC	ELECTRIC	RCPT	RECEPTACLE
EMS,BMS	ENERGY/BUILDING AUTOMATION SYSTEM	S.O.	SPACE ONLY
E	EMERGENCY	SPD	SURGE PROTECTION DEVICE
EP	EXPLOSION PROOF	ST	SHUNT TRIP
EWK	ELECTRICAL WATER COOLER	TP	TAMPER PROOF
(E)	EXISTING	TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSION
FA	FIRE ALARM	UNO	UNLESS NOTED OTHERWISE
FACP, FAP	FIRE ALARM CONTROL PANEL	V	VOLTAGE
FLR	FLOOR	VFD	VARIABLE FREQUENCY DRIVE
FUT	FUTURE	VP	VAPOR PROOF
G	EQUIPMENT GROUND	W	WIRE
GFI, GFCI	GROUND FAULT CIRCUIT INTERRUPTER	W/	WITH
HP	HORSE POWER	WP	WEATHER PROOF
IG	ISOLATED GROUND	XFMR	TRANSFORMER
		(X)	DEMOLISHED

LIGHT FIXTURE SCHEDULE								
FIXTURE NAME	DESCRIPTION	WATTAGE	LUMENS	COLOR TEMP	MOUNTING	MANUFACTURER	SPECIFICATION NUMBER	ALTERNATE MANUFACTURER
J	4' LED STRIP	25	3,200	3500K	CHAIN HUNG @9FT	LITHONIA	ZL1N-L48-SMR-3000LM-FST-35K*-80CRI	COLUMBIA PHILLIPS

*PROVIDE FIXTURE WITH COLOR TEMPERATURE OF EXISTING FACILITY.

ELECTRICAL GENERAL NOTES	
A.	DESIGNATION '(E)' REPRESENTS EXISTING ELECTRICAL DEVICE OR EQUIPMENT EXISTING TO REMAIN AS CIRCUITED AND SWITCHED UNLESS NOTED OTHERWISE.
B.	DESIGNATION '(X)' REPRESENTS EXISTING ELECTRICAL DEVICE OR EQUIPMENT TO BE DEMOLISHED IN SCOPE OF THIS PROJECT. DEMOLISH DEVICE(S), CONDUIT(S) AND CONDUCTOR(S) BACK TO POINT OF ORIGINATION. IF PANEL BOARD IS POINT OF ORIGINATION, TURN OCPD OFF AND LABEL AS 'SPARE'.
C.	DESIGNATION '(R)' REPRESENTS EXISTING ELECTRICAL DEVICE OR EQUIPMENT TO BE RELOCATED IN SCOPE OF THIS PROJECT. RELOCATE AND EXTEND DEVICE(S), CONDUIT(S) AND CONDUCTOR(S) AS NEED TO PROVIDE A CODE COMPLIANT FINAL INSTALLATION.
D.	ELECTRICAL CONTRACTOR SHALL COORDINATE ALL PATCHING AND REPAIRING WORK WITH THE GENERAL CONTRACTOR.
E.	CONTRACTOR SHALL REMOVE ALL CONDUIT AND WIRING ASSOCIATED WITH DEVICES AND EQUIPMENT TO BE REMOVED AND/OR RELOCATED UNLESS NOTED OTHERWISE. PROVIDE AND INSTALL NECESSARY DEVICES, EQUIPMENT AND ACCESSORIES REQUIRED TO MAINTAIN SERVICE TO ALL 'EXISTING TO REMAIN' DEVICES AND EQUIPMENT THAT MAY BE INTERRUPTED DURING DEMOLITION.
F.	PROVIDE FOR ANY AND ALL DEMOLITION WORK NECESSARY TO ACCOMMODATE ALL NEW CONSTRUCTION, INCLUDING BUT NOT LIMITED TO ARCHITECTURAL, MECHANICAL, PLUMBING OR ELECTRICAL WORK.
G.	CONTRACTOR TO VERIFY ALL ELECTRICAL CONNECTIONS TO OWNER PROVIDED EQUIPMENT. IF EQUIPMENT SIZES AND CONNECTIONS ARE DIFFERENT. PROVIDE MODIFIED CB, CONDUIT AND CONDUCTORS PER NEC REQUIREMENTS.
H.	PROVIDE UPDATED TYPE WRITTEN DIRECTORY OF ALL CORRECT CIRCUITS WITH LOAD DEFINITIONS FOR EACH PANEL BOARD. DIRECTORY SHALL BE LOCATED INSIDE PANEL DOOR.
I.	PROVIDE GFCI PROTECTION FOR ALL NEW/EXISTING/RELOCATED ELECTRICAL RECEPTACLES WITHIN THE SCOPE OF THE PROJECT.

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INDIAN HEALTH SERVICE -BILLINGS AREA WIDE AIRBORNE INFECTION ISOLATION ROOM RENOVATION AND MODERNIZATION

MONTANA & WYOMING
 IHS PROJECT NO. BI20A0200Z6

U. S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
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