Exhibit B

MISSOULA COUNTY COURTHOUSE
SECOND FLOOR SELF HELP MOVE

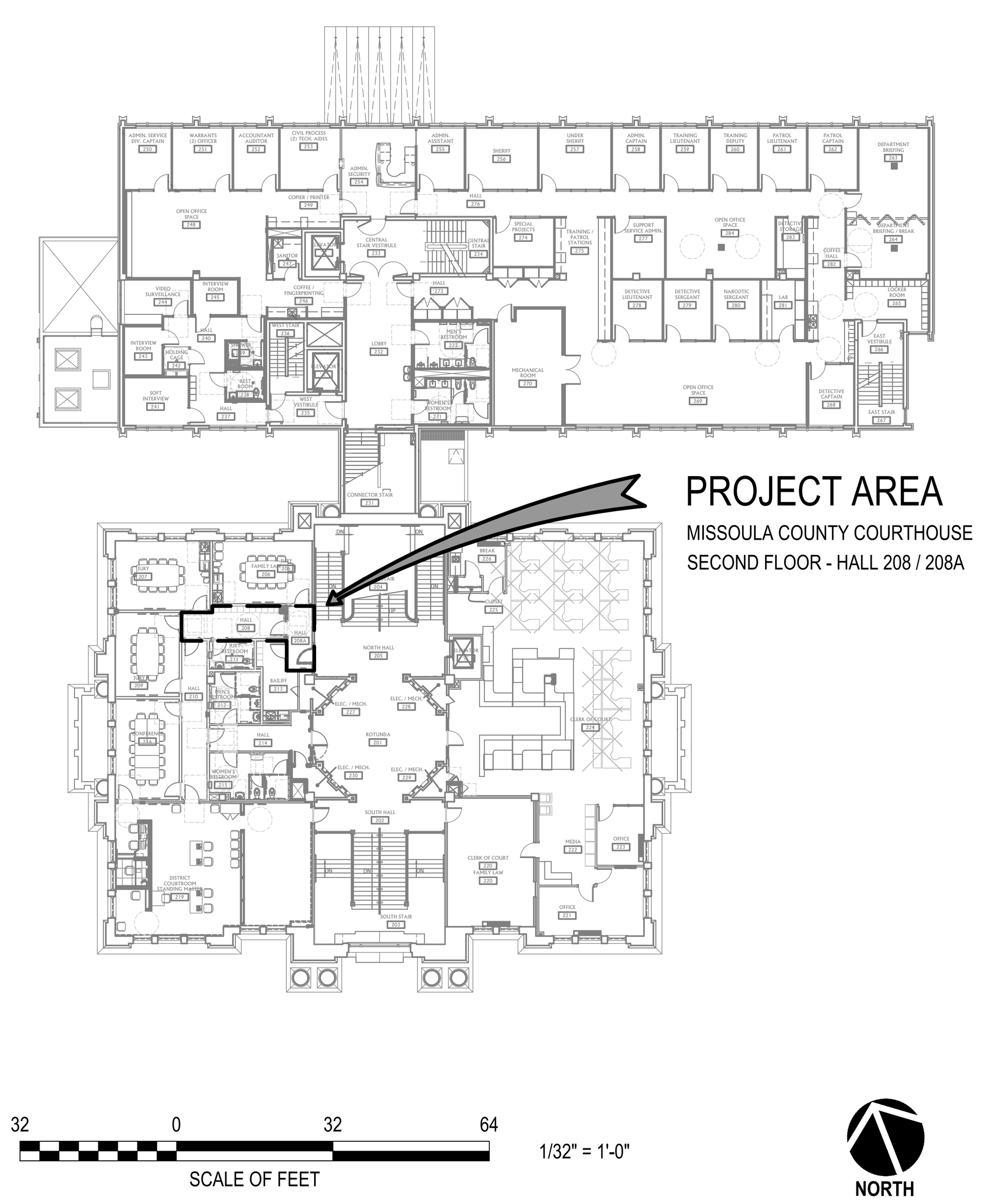
200 WEST BROADWAY STREET
MISSOULA, MONTANA 59802

VICINITY PLAN

GOOGLE EARTH, 2024, NTS

NORTH

KEY PLAN



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ARCHITECTURAL ABBREVIATIONS

AB	ANCHOR BOLT	MEZZ	MEZZANINE
ABA	ARCHITECTURAL BARRIERS ACT	MFR	MANUFACTURER
ABV	ABOVE	MH	MANHOLE
A/C	AIR CONDITIONING	MIN	MINIMUM
ACT	ACOUSTIC CEILING TILE	MISC	MISCELLANEOUS
ADDL	ADDITIONAL	MO	MASONRY OPENING
ADJ	ADJUSTABLE	MTL	METAL
AFF	ABOVE FINISH FLOOR	N	NORTH
ALT	ALTERNATE	(N)	NEW
ALUM	ALUMINUM	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
ARCH	ARCHITECT(URAL)	NIC	NOT IN CONTRACT
AWN	AWNING	NOM	NOMINAL
B/	BOTTOM OF	NTS	NOT TO SCALE
BD	BOARD	OC	ON CENTER
BLDG	BUILDING	OD	OUTSIDE DIAMETER OR OVERFLOW DRAIN
BLKG	BLOCKING	OPNG	OPENING
BM	BEAM OR BENCHMARK	OPP	OPPOSITE
BRG	BEARING	OSB	ORIENTED STRAND BOARD
BTWN	BETWEEN	OVHD	OVERHEAD
BUR	BUILT-UP ROOF	PL	PLATE
CAB	CABINET	PLAM	PLASTIC LAMINATE
CJ	CONTROL JOINT	PLUMB	PLUMBING
CL	CENTERLINE	PLYWD	PLYWOOD
CLG	CEILING	PNL	PANEL
CMU	CONCRETE MASONRY UNIT	PNT	PAINT
CO	CLEAN OUT	POLY	POLYESTER OR POLYOLEFIN
COL	COLUMN	PSF	POUNDS PER SQUARE FOOT
CONC	CONCRETE	PSI	POUND PER SQUARE INCH
CONT	CONTINUOUS	PT	PRESSURE TREATED OR POINT
CONST	CONSTRUCTION	PVMT	PAVEMENT
CG	CORNERGUARD	PVT	PRIVATE
CPT	CARPET	QT	QUARRY TILE
CSMT	CASEMENT	QTR	QUARTER
CT	CERAMIC TILE	QTY	QUANTITY
CTOP	COUNTERTOP	R	RADIUS
D	DEEP	RA	RETURN AIR
DF	DRINKING FOUNTAIN	RB	RUBBER BASE
DH	DOUBLE HUNG	RD	ROOF DRAIN
DIM(S)	DIMENSIONS	RECY	RECYCLE(D)
DISP	DISPENSER	REF	REFERENCE
DN	DOWN	REFRIG	REFRIGERATOR
DR	DOOR	REINF	REINFORCE(D)
DS	DOWNSPOUT	REQD	REQUIRED
DTL	DETAIL	RM	ROOM
DWG	DRAWING	RO	ROUGH OPENING
E	EAST	ROW	RIGHT OF WAY
(E)	EXISTING	RR	RESTROOM
EA	EACH	S	SOUTH
EC	EXISTING COLUMN	SC	SOLID CORE
EJ	EXPANSION JOINT	SCHED	SCHEDULE
ELEC	ELECTRICAL	SECT	SECTION
EL	ELEVATION	SF	SQUARE FEET
ELEV	ELEVATOR	SFRM	SPRAY-APPLIED FIRE RESISTANT MATERIAL
EQ	EQUAL	SGL	SINGLE
EQUIP	EQUIPMENT	SHT	SHEET
EWC	ELECTRIC WATER COOLER	SHTG	SHEATHING
EXH	EXHAUST	SIM	SIMILAR
EXIST	EXISTING	SPECS	SPECIFICATIONS
EXP	EXPANSION OR EXPOSED	SOD	SLAB ON DECK
EXT	EXTERIOR	SOG	SLAB ON GRADE
FACP	FIRE ALARM CONTROL PANEL	SOH	SAME OPPOSITE HAND
FD	FLOOR DRAIN	SS	STAINLESS STEEL
FE	FIRE EXTINGUISHER	ST	STONE TILE
FEC	FIRE EXTINGUISHER CABINET	STND	STANDARD
FFL	FINISH FLOOR LEVEL	STL	STEEL
FIN	FINISH	STRUCT	STRUCTURAL
FIX'T	FIXTURE	TEL	TELEPHONE
FLR	FLOOR	TEMP	TEMPERED
FND	FOUNDATION	THK	THICK
FR	FRAME	THRESH	THRESHOLD
FRMG	FRAMING	T.A.	TOP OF
FT	FEET/FOOT OR FIRE TREATED	TOBM	TOP OF BEAM
FTNG	FOOTING	T.A.P.	TOP OF PLATE
FRP	FIBERGLASS REINFORCED PANEL	T.O.S	TOP OF STEEL
GA	GAUGE OR GAGE	T/	TOP OF
GALV	GALVANIZED	T&G	TONGUE AND GROOVE
GB	GYPSUM BOARD	TRANS	TRANSOM
GC	GENERAL CONTRACTOR	TV	TELEVISION
GL	GLASS, GLAZING	TYP	TYPICAL
GWB	GYPSUM WALL BOARD	UL	UNDERWRITERS LABORATORY
GYP	GYPSUM	UNO	UNLESS NOTED OTHERWISE
HC	HANDICAP	VB	VINYL BASE
HDR	HEADER	VCT	VINYL COMPOSITION TILE
HDW	HARDWARE	VERT	VERTICAL
HM	HOLLOW METAL	VEST	VESTIBULE
HORIZ	HORIZONTAL	VIF	VERIFY IN FIELD
HR	HOUR	VP	VENEER PLASTER
HT	HEIGHT	VR	VAPOR RETARDER
HTD	HEATED	VRF	VARIABLE REFRIGERANT FLOW
HVAC	HEATING/VENTILATION & AIR CONDITIONING	VT	VINYL TILE
ID	INSIDE DIAMETER	VWC	VINYL WALL TILE
INFO	INFORMATION	W	WIDE OR WEST
ISO	INSOCYANURATE	W/	WITH
INSUL	INSULATE/ INSULATION	WC	WATER CLOSET
INT	INTERIOR	WD	WOOD
INV	INVERT	WDW	WINDOW
JT	JOINT	WG	WALL GUARD
J-BOX	JUNCTION BOX	WH	WATER HEATER
KIT	KITCHEN	W/IN	WITHIN
L	LONG/ LENGTH	W/O	WITHOUT
LAM	LAMINATE(D)	WP	WATERPROOF
LAV	LAVATORY	WR	WATER RESISTANT
LF	LINEAR FEET	WT	WEIGHT
LT	LIGHT	WWF	WELDED WIRE FABRIC
MAS	MASONRY	#	NUMBER OR POUND
MATL	MATERIAL	@	AT
MAX	MAXIMUM		
MECH	MECHANICAL		

SHEET LIST

CVR COVER

ARCHITECTURAL

D2.1	SECOND FLOOR DEMOLITION PLAN, REFLECTED CEILING PLAN, AND PHOTOGRAPHS
D2.9	DEMOLITION PHOTOGRAPHS
A2.1	SECOND FLOOR CONSTRUCTION PLAN AND REFLECTED CEILING PLAN
A6.1	INTERIOR ELEVATIONS
A9.1	WALL TYPES, FRAME TYPES, DOOR TYPES, MILLWORK PROFILES

MECHANICAL / ELECTRICAL

M0.1	COVER
M1.0	SPECIFICATIONS
M2.0	SECOND FLOOR MECH/ELECT. DEMOLITION PLANS
M2.1	SECOND FLOOR MECH/ELECT. NEW PLANS

HISTORICAL NOTE

THE CONTRACTOR SHALL PROTECT HISTORIC AND EXISTING FABRIC THROUGHOUT THE CONSTRUCTION, TYPICAL OF BUILDINGS AND SITE. THE MISSOULA COUNTY COURTHOUSE IS RECOGNIZED ON THE NATIONAL REGISTER OF HISTORIC PLACES. THE GROUNDS AND STRUCTURES WITHIN THE SITE NOT SPECIFICALLY CALLED OUT FOR WORK IN THESE DOCUMENTS SHALL BE PROTECTED FROM DAMAGE. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE CAUSED BY THE EXECUTION OF THIS CONTRACT, TO THE SATISFACTION OF THE OWNER WITHOUT ADDITIONAL COMPENSATION. EACH EMPLOYEE OF THE CONTRACTOR AND THEIR SUBCONTRACTORS SHALL BE INFORMED OF THE HISTORIC NATURE OF THE BUILDING AND MADE RESPONSIBLE FOR THE PROTECTION OF BUILDINGS ARTIFACTS, FOUND OBJECTS, AND OTHER "COLLECTABLE" ITEMS UNCOVERED DURING THE WORK. THESE ITEMS ARE THE PROPERTY OF THE OWNER, AND AS SUCH, ARE VALUABLE. NO SUCH PROPERTY SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR, CONTRACTOR'S EMPLOYEES, OR SUBCONTRACTORS.

GENERAL PROJECT NOTES

1. EVERY ATTEMPT HAS BEEN MADE TO ENSURE THE ACCURACY OF THE DRAWINGS THROUGH FIELD VERIFICATION. THE CONTRACTOR IS RESPONSIBLE TO VERIFY EXISTING CONDITIONS BEFORE CONSTRUCTION / ORDERING / INSTALLATION & NOTIFY THE ARCHITECT IMMEDIATELY FOR WRITTEN CLARIFICATION IF ANY DISCREPANCY EXISTS.
2. DRAWINGS CONTAINED WITHIN THESE DOCUMENTS ARE ABBREVIATED IN NATURE. THE CONTRACTOR SHALL USE QUALITY, ACCEPTABLE STANDARD CONSTRUCTION PRACTICES & TECHNIQUES COMPATIBLE WITH THE HISTORIC CHARACTER OF THE BUILDING.
3. ALL CONSTRUCTION SHALL CONFORM TO THE CURRENT VERSIONS OF ALL APPLICABLE STANDARDS & REGULATIONS AS PRESCRIBED BY THE STATE OF MONTANA, INCLUDING BUT NOT LIMITED TO 2021 INTERNATIONAL BUILDING CODE, 2021 INTERNATIONAL EXISTING BUILDING CODE, 2017 ICC A117.1 - ACCESSIBILITY, 2021 UNIFORM PLUMBING CODE, 2021 INTERNATIONAL MECHANICAL CODE, 2021 INTERNATIONAL FUEL GAS CODE, 2020 NATIONAL ELECTRICAL CODE, 2021 INTERNATIONAL ENERGY CONSERVATION CODE, CURRENT ARCHITECTURAL BARRIERS ACT & STANDARDS FOR ACCESSIBILITY, CURRENT NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) STANDARDS FOR LIFE SAFETY SYSTEMS, CURRENT NFPA 101 STANDARDS, CURRENT AMERICAN NATIONAL STANDARDS INDICATED OR APPLICABLE TO THE WORK, & ANY APPLICABLE LOCAL CODES OR REGULATIONS.
5. DO NOT SCALE FROM DRAWINGS. IF A DIMENSION DOES NOT EXIST OR IS IN ERROR, CONTACT THE ARCHITECT IMMEDIATELY FOR WRITTEN CLARIFICATION.

DEFINITIONS

IN-KIND: NEW MATERIALS INDICATED TO MATCH IN-KIND SHALL REPLICATE EXACTLY, IN EVERY REGARD, THE ORIGINAL DETAIL, MATERIAL, TYPE, & FINISH OF ELEMENT TO BE REPLACED AS DETERMINED BY THE CONTRACTING OFFICER.
TYPICAL (TYP.): AS USED IN THESE DOCUMENTS SHALL MEAN THE CONDITION IS THE SAME OR REPRESENTATIVE FOR ALL SIMILAR CONDITIONS UNLESS OTHERWISE NOTED.
ALIGN: SHALL MEAN TO ACCURATELY LOCATE FINISHED FACES IN THE SAME PLANE. CONTRACTOR SHALL COORDINATE ALL WORK NECESSARY TO ACHIEVE SAME.

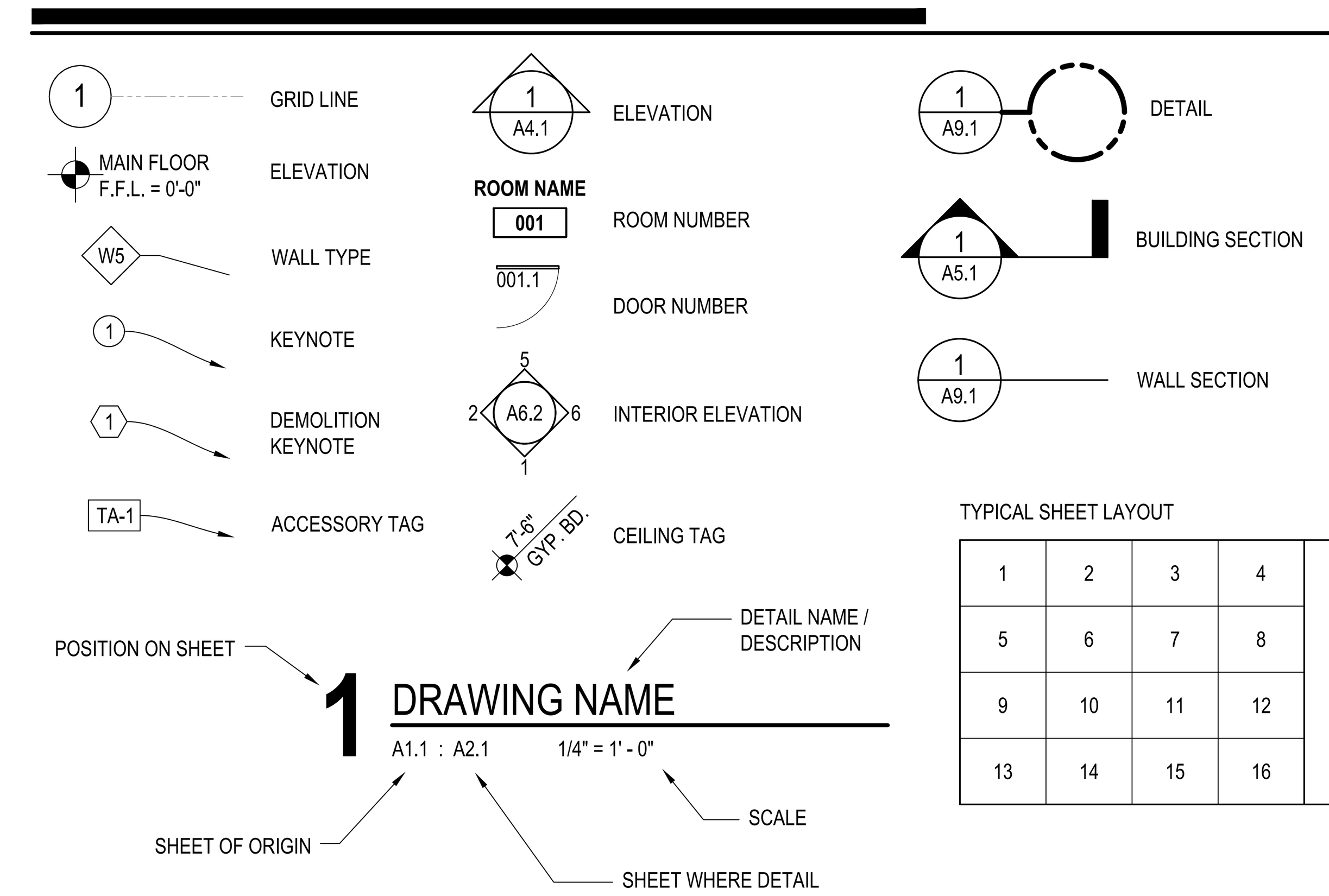
PROJECT TEAM

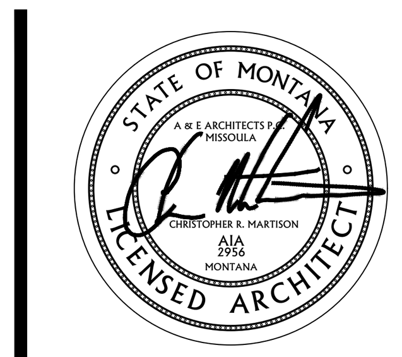
OWNER
MISSOULA COUNTY
200 WEST BROADWAY STREET
MISSOULA, MT 59802

ARCHITECT
A&E DESIGN
222 NORTH HIGGINS AVENUE
MISSOULA, MT 59802
406.721.5643

MECH/ELEC/FP
AXIOM ENGINEERING GROUP
910 BROOKS STREET #203
MISSOULA, MT 59801
406.542.2849

EXPLANATION OF SYMBOLS





sheet COVER
project MISSOULA COUNTY COURTHOUSE SELF HELP MOVE
200 WEST BROADWAY, 2ND FLOOR
owner MISSOULA COUNTY, 200 WEST BROADWAY STREET, MISSOULA, MT 59802

project # 25004.0

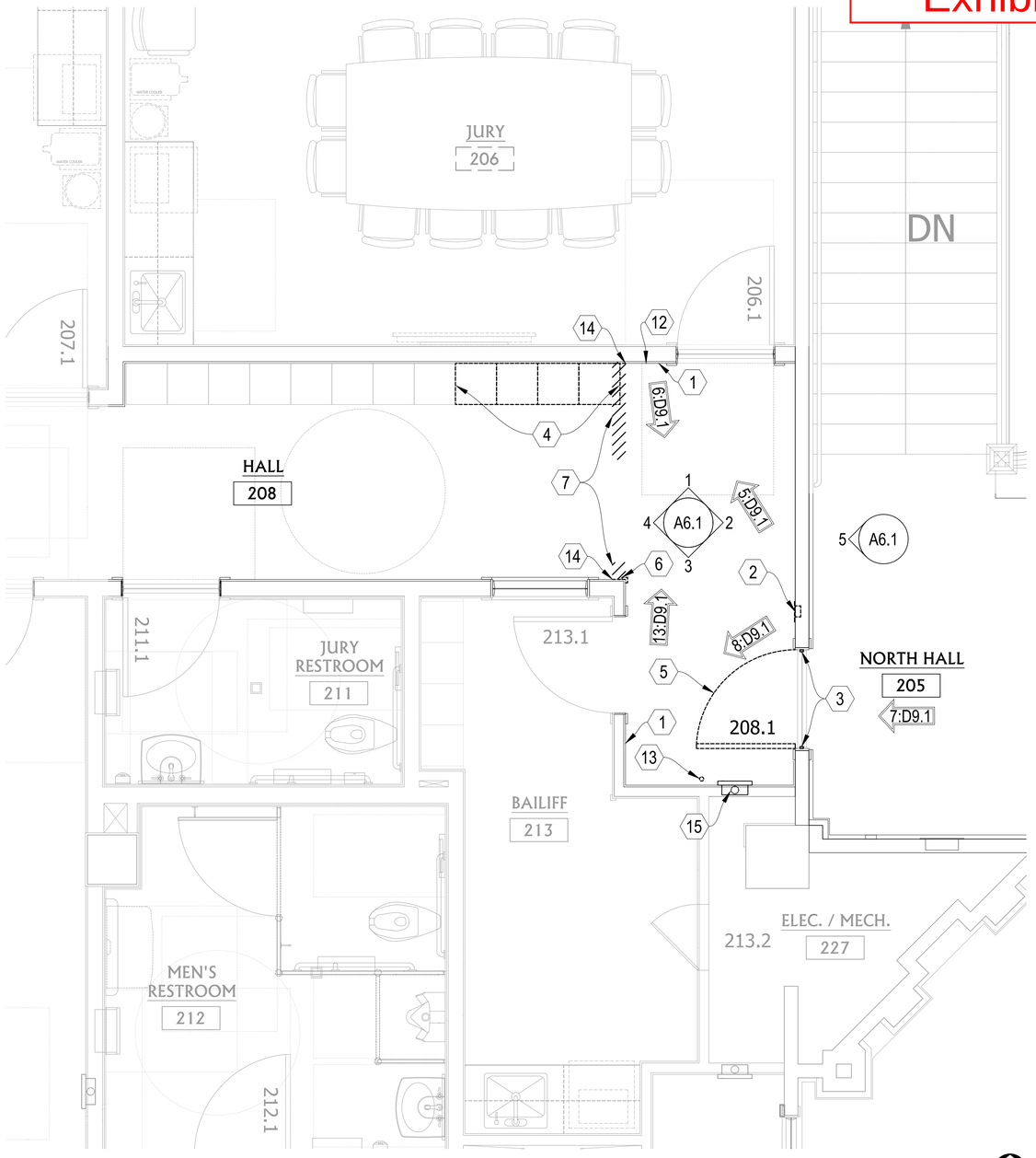
revision | date

phase
CONSTRUCTION DOCUMENTS

issue date
04.24.2025

CVR

Exhibit B



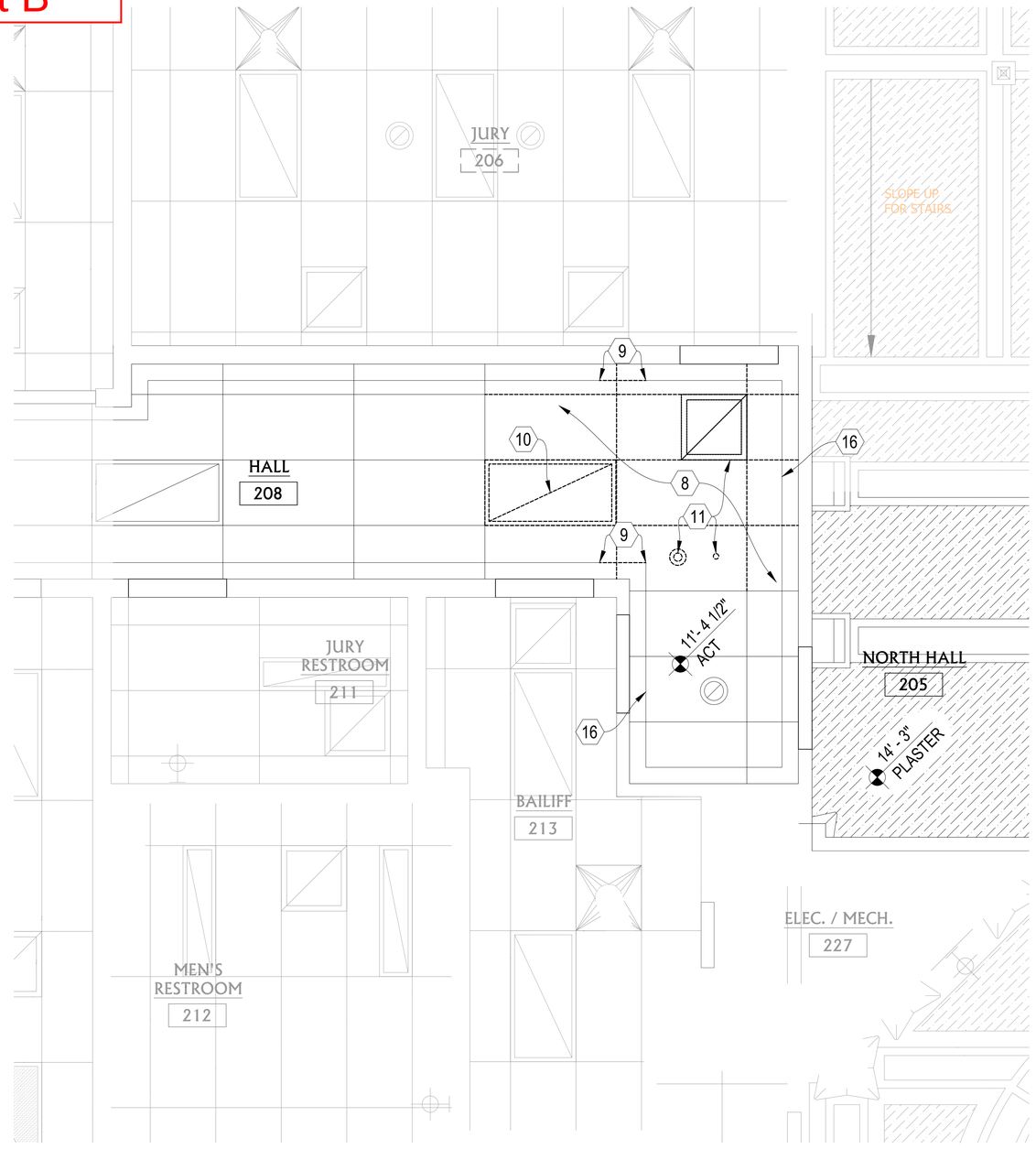
5 SECOND FLOOR DEMOLITION PLAN

D2.1 : D2.1 1/2" = 1' - 0"

NORTH

DEMOLITION KEYNOTES

1	DEMO ROOM SIDE WALL FINISH AS REQ. FOR (N) CARD READER AND HARDWARE.
2	REMOVE AND SALVAGE (E) CARD READER AND ACCESS PANEL TO OWNER.
3	REMOVE AND SALVAGE (E) DOOR STOPS TO DOOR 208.1 ON SIDES AND TOP OF DOOR FRAME FOR RE-LOCATION.
4	REMOVE ONE SECTION (FOUR STACKS) OF LOCKERS INCLUDING BASE, SLOPED HOOD, END PANEL, AND WALL ANCHORS. SALVAGE END PANEL FOR RE-USE IN (N) WORK. SALVAGE LOCKERS, BASE, SLOPED HOOD, AND WALL ANCHORS TO OWNER.
5	REMOVE AND SALVAGE (E) DOOR AND DOOR HARDWARE TO BE RE-LOCATED. TRANSOM AND DOOR FRAME TO REMAIN.
6	REMOVE (E) CORNER GUARD IN PREPARATION FOR (N) WALL.
7	CUT AND REMOVE CARPET IN COORDINATION WITH (N) WALL CONSTRUCTION. MAINTAIN CARPET AT (N) DOOR LOCATION.
8	CUT AND REMOVE (E) CEILING TILE AND METAL GRID AS REQUIRED FOR NEW WALL CONSTRUCTION.
9	CUT, REMOVE, AND SALVAGE PORTION OF (E) PICTURE RAIL TO ACCOMMODATE (N) WORK.
10	(E) LIGHT. REFERENCE ELECTRICAL DRAWINGS.
11	(E) SMOKE ALARM, SPRINKLER, AND MECHANICAL DIFFUSER. REFERENCE MECHANICAL AND ELECTRICAL DRAWINGS.
12	REMOVE (E) SIGN, SALVAGE TO OWNER.
13	REMOVE AND SALVAGE (E) FLOOR-MOUNTED DOOR STOP TO BE RE-LOCATED.
14	REMOVE AND SALVAGE SECTION OF (E) WOOD BASEBOARD TO BE RE-INSTALLED IN (N) WORK.
15	(E) FIRE EXTINGUISHER CABINET TO REMAIN.
16	(E) PICTURE RAIL TO REMAIN.
17	(E) SIGN TO REMAIN, NO WORK.



7 SECOND FLOOR DEMOLITION REFLECTED CEILING PLAN

D2.1 : D2.1 1/2" = 1' - 0"

NORTH

DEMOLITION GENERAL NOTES

1. FIELD VERIFY ALL DIMENSIONS. DO NOT SCALE DRAWINGS. VERIFY EXISTING CONDITIONS AND NOTIFY THE ARCHITECT OF ANY DISCREPANCIES PRIOR TO COMMENCING WORK.
2. COORDINATE ALL DEMOLITION WORK WITH EXISTING CONDITIONS AND NEW WORK INDICATED.
3. REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL DEMOLITION WORK, TYP.
4. ANY ITEM SHOWN OR REFERENCED IN ONE INSTANCE SHALL BE AS IF SHOWN IN ALL INSTANCES.
5. XXX REFERENCE TO DEMOLITION PHOTOGRAPH.
6. SALVAGE ALL EXISTING SIGNAGE TO OWNER WITHIN AREAS OF WORK, TYP. CLEAN SURFACE AT ALL FORMER SIGNAGE LOCATIONS TO REMOVE ADHESIVE AND/OR TAPE(S) IN ENTIRETY.
7. PROTECT ALL EXISTING SURFACES AND FINISHES TO REMAIN, TYP.
8. SALVAGE ALL EXISTING OAK STANDING AND RUNNING WOOD TRIM, INCLUDING, BUT NOT LIMITED TO, DOOR STOPS, PICTURE RAILS, AND WALL BASE, WITHIN AREA OF WORK, U.N.O. PREP FOR RE-INSTALLATION. SALVAGE ALL UNUSED OAK STANDING AND RUNNING TRIM TO OWNER, TYP.
9. PROTECT EXISTING MARBLE WAINSCOTING IN ROTUNDA SPACES.
10. PROTECT ALL COURTHOUSE HISTORIC MOSAIC FLOOR TILE DURING WORK, TYP.
11. SALVAGE EXISTING PANELED OAK DOOR, (E) FRAMES, TRANSOMS, GLAZING, TRIM, DOOR AND TRANSOM HARDWARE TO REMAIN. REPAIR AS INDICATED, FOR RE-USE AT NEW LOCATION.

LEGEND

HATCH INDICATES APPROXIMATE AREA TO CUT CARPET IN COORDINATION WITH (N) WALL CONSTRUCTION.

2 0 2 4

SCALE OF FEET

1/2" = 1'-0"

STATE OF MONTANA
CHRISTOPHER A. HUSTON
LICENSED ARCHITECT

sheet SECOND FLOOR DEMOLITION PLAN & REFLECTED CEILING PLAN

project **MISSOULA COUNTY COURTHOUSE SELF HELP MOVE**
200 WEST BROADWAY, 2ND FLOOR

owner MISSOULA COUNTY, 200 WEST BROADWAY STREET, MISSOULA, MT 59802

project # **25004.0**

revision date

phase
CONSTRUCTION DOCUMENTS

a&e

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issue date
04.24.2025

D2.1

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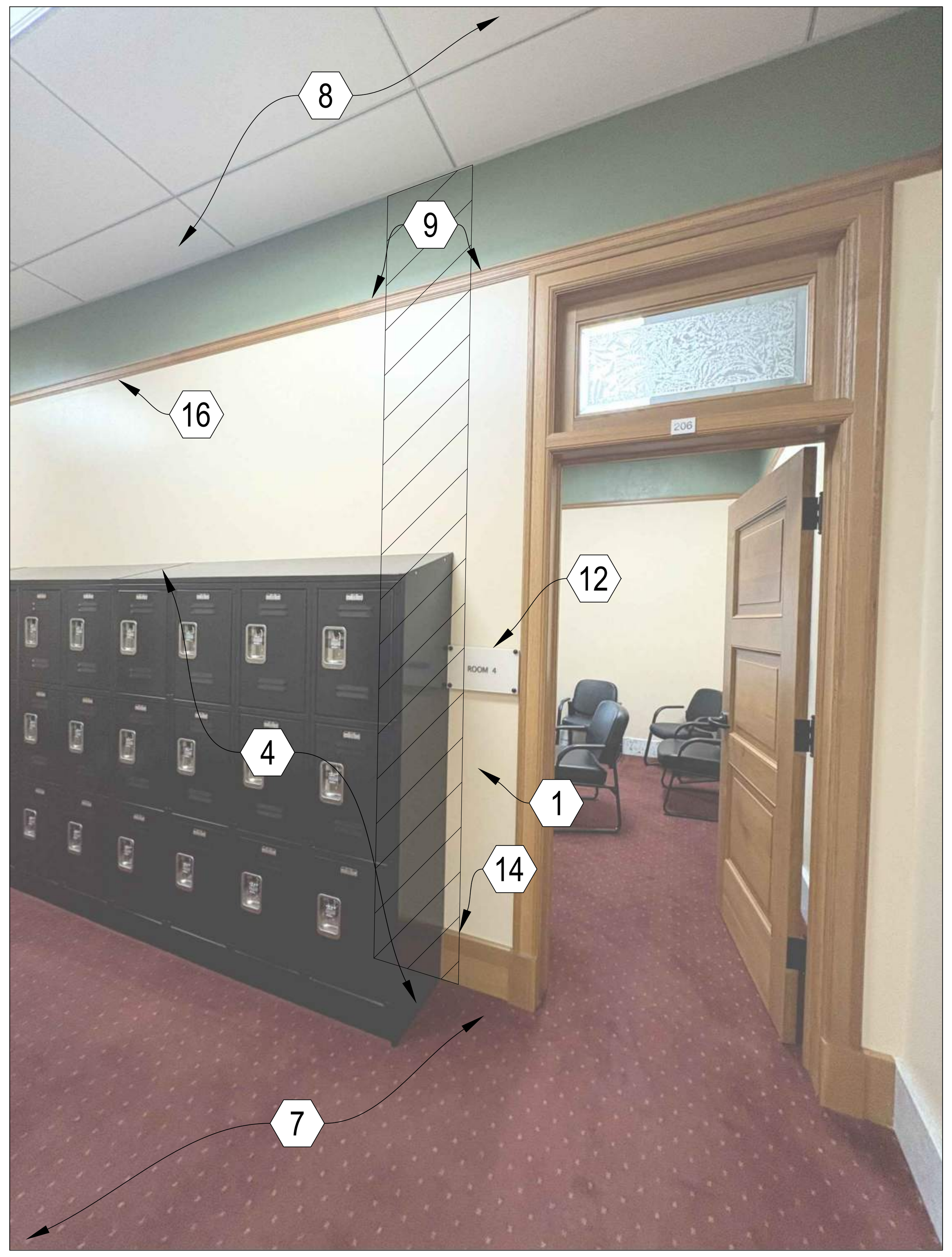
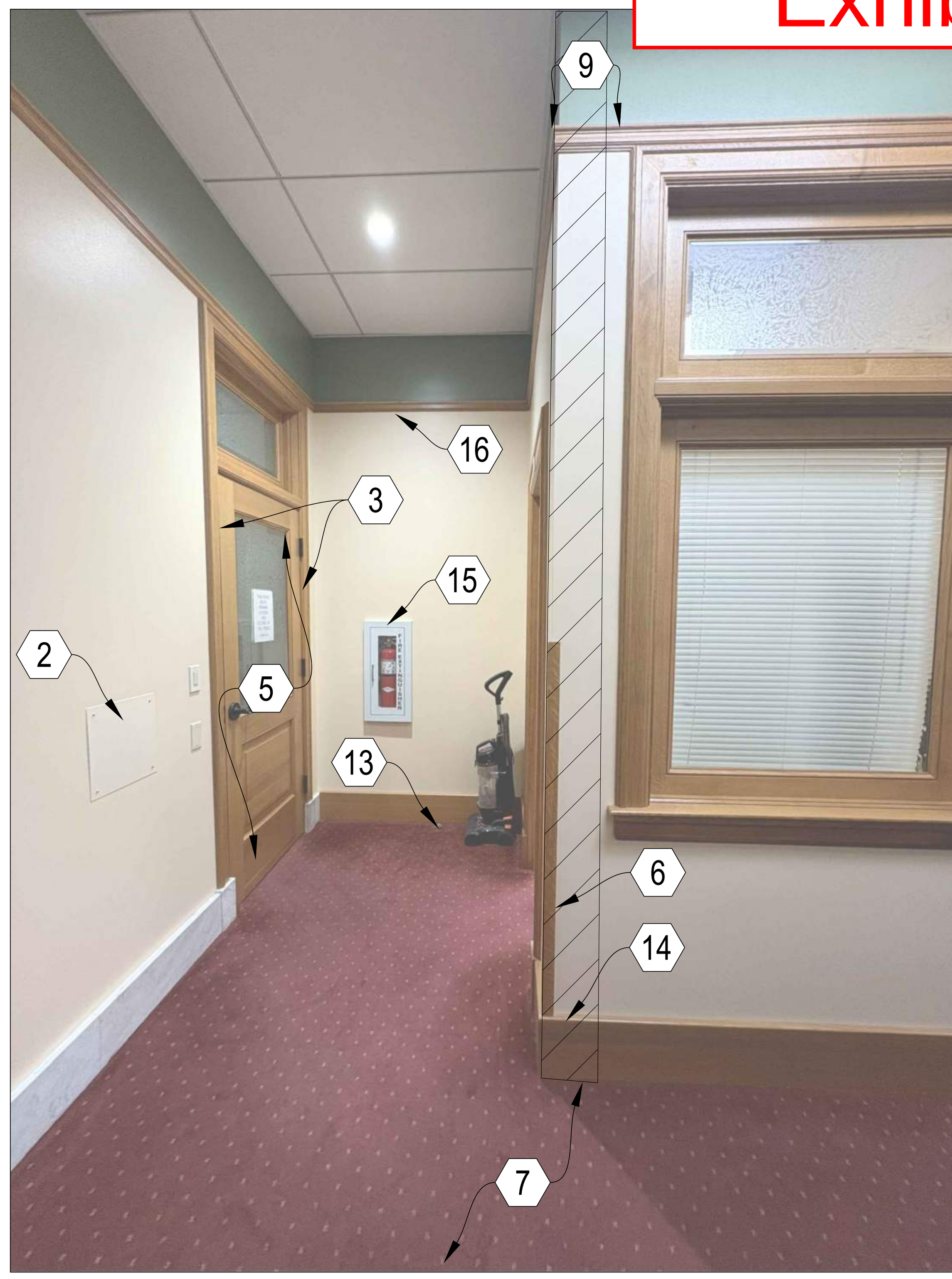
Exhibit B

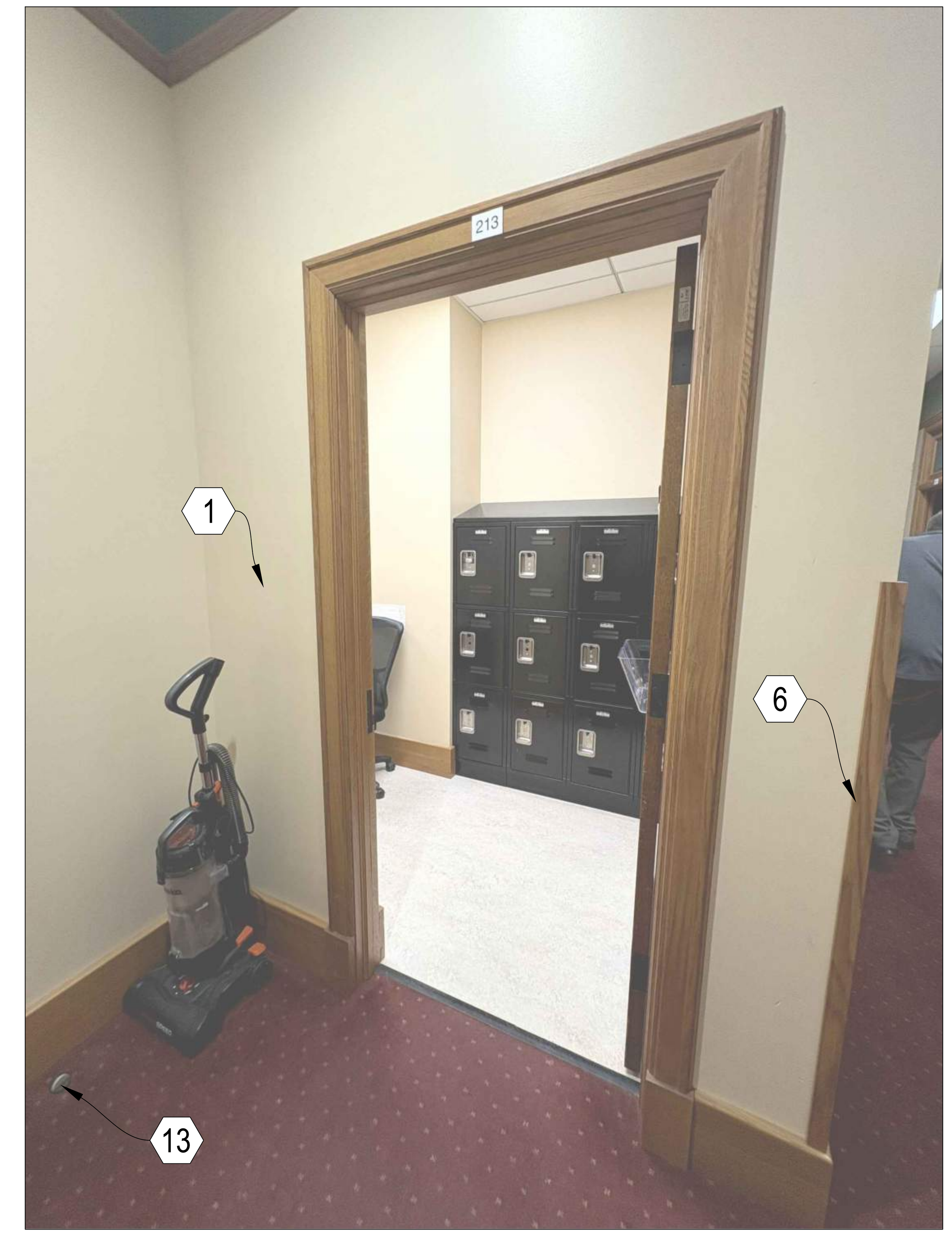


5 DEMOLITION - PHOTOGRAPH
D2.1 : D2.1 NTS

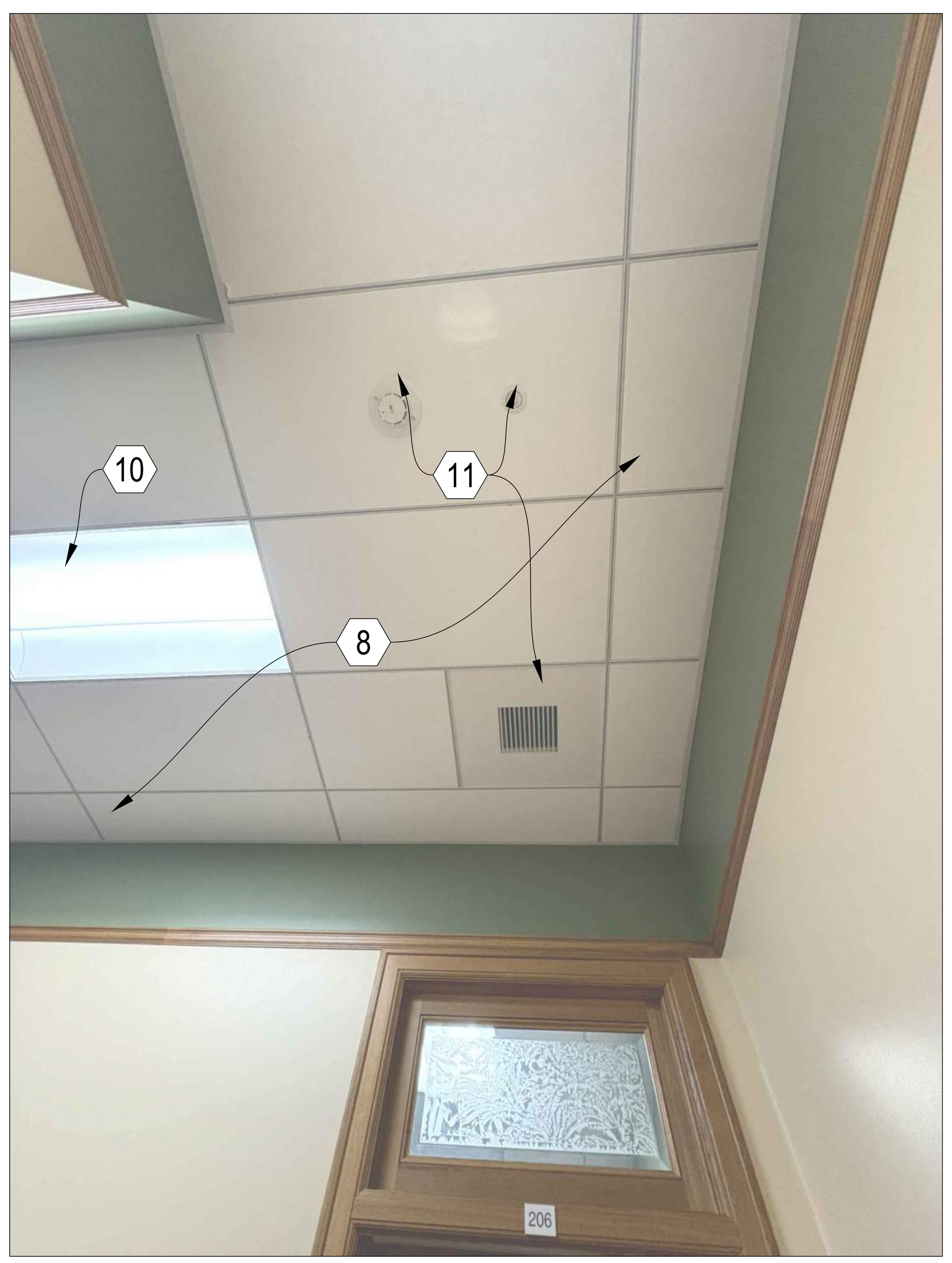


6 DEMOLITION - PHOTOGRAPH
D2.1 : D2.1 NTS

7 DEMOLITION - PHOTOGRAPH
D2.1 : D2.1 NTS



8 DEMOLITION - PHOTOGRAPH
D2.1 : D2.1 NTS



13 DEMOLITION - PHOTOGRAPH
D2.1 : D2.1 NTS

DEMOLITION GENERAL NOTES

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2. COORDINATE ALL DEMOLITION WORK WITH EXISTING CONDITIONS AND NEW WORK INDICATED.
3. REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL DEMOLITION WORK, TYP.
4. ANY ITEM SHOWN OR REFERENCED IN ONE INSTANCE SHALL BE AS IF SHOWN IN ALL INSTANCES.
5. X:X.X REFERENCE TO DEMOLITION PHOTOGRAPH.
6. SALVAGE ALL EXISTING SIGNAGE TO OWNER WITHIN AREAS OF WORK, TYP. CLEAN SURFACE AT ALL FORMER SIGNAGE LOCATIONS TO REMOVE ADHESIVE AND/OR TAPE(S) IN ENTIRETY.
7. PROTECT ALL EXISTING SURFACES AND FINISHES TO REMAIN, TYP.
8. SALVAGE ALL EXISTING OAK STANDING AND RUNNING WOOD TRIM; INCLUDING, BUT NOT LIMITED TO, DOOR STOPS, PICTURE RAILS, AND WALL BASE, WITHIN AREA OF WORK, U.N.O. PREP FOR RE-INSTALLATION. SALVAGE ALL UNUSED OAK STANDING AND RUNNING TRIM TO OWNER, TYP.
9. PROTECT EXISTING MARBLE WAINSCOTING IN ROTUNDA SPACES.
10. PROTECT ALL COURTHOUSE HISTORIC MOSAIC FLOOR TILE DURING WORK, TYP.
11. SALVAGE EXISTING PANELED OAK DOOR, (E) FRAMES, TRANSOMS, GLAZING, TRIM, DOOR AND TRANSOM HARDWARE TO REMAIN. REPAIR AS INDICATED, FOR RE-USE AT NEW LOCATION.

#	DEMOLITION KEYNOTES
1	DEMO ROOM SIDE WALL FINISH AS REQ. FOR (N) CARD READER AND HARDWARE.
2	REMOVE AND SALVAGE (E) CARD READER AND ACCESS PANEL TO OWNER.
3	REMOVE AND SALVAGE (E) DOOR STOPS TO DOOR 208.1 ON SIDES AND TOP OF DOOR FRAME FOR RE-LOCATION.
4	REMOVE ONE SECTION (FOUR STACKS) OF LOCKERS INCLUDING BASE, SLOPED HOOD, END PANEL, AND WALL ANCHORS. SALVAGE END PANEL FOR RE-USE IN (N) WORK. SALVAGE LOCKERS, BASE, SLOPED HOOD, AND WALL ANCHORS TO OWNER.
5	REMOVE AND SALVAGE (E) DOOR AND DOOR HARDWARE TO BE RE-LOCATED. TRANSOM AND DOOR FRAME TO REMAIN.
6	REMOVE (E) CORNER GUARD IN PREPARATION FOR (N) WALL.
7	CUT AND REMOVE CARPET IN COORDINATION WITH (N) WALL CONSTRUCTION. MAINTAIN CARPET AT (N) DOOR LOCATION.
8	CUT AND REMOVE (E) CEILING TILE AND METAL GRID AS REQUIRED FOR (N) CONSTRUCTION.
9	CUT, REMOVE, AND SALVAGE PORTION OF (E) PICTURE RAIL TO ACCOMMODATE (N) WORK.
10	(E) LIGHT. REFERENCE ELECTRICAL DRAWINGS.
11	(E) SMOKE ALARM, SPRINKLER, AND MECHANICAL DIFFUSER. REFERENCE MECHANICAL AND ELECTRICAL DRAWINGS.
12	REMOVE (E) SIGN, SALVAGE TO OWNER.
13	REMOVE AND SALVAGE (E) FLOOR-MOUNTED DOOR STOP TO BE RE-LOCATED.
14	REMOVE AND SALVAGE SECTION OF (E) WOOD BASEBOARD TO BE RE-INSTALLED IN (N) WORK.
15	(E) FIRE EXTINGUISHER CABINET TO REMAIN.
16	(E) PICTURE RAIL TO REMAIN.
17	(E) SIGN TO REMAIN, NO WORK.

LEGEND

HATCH INDICATES APPROXIMATE AREA TO PREPARE FOR (N) WALL AND DOOR CONSTRUCTION.

sheet: DEMOLITION PHOTOGRAPHS
project: **MISSOULA COUNTY COURTHOUSE SELF HELP MOVE**
200 WEST BROADWAY, 2ND FLOOR
owner: MISSOULA COUNTY, 200 WEST BROADWAY STREET, MISSOULA, MT 59802

project # **25004.0**

revision date

phase
CONSTRUCTION DOCUMENTS

issue date
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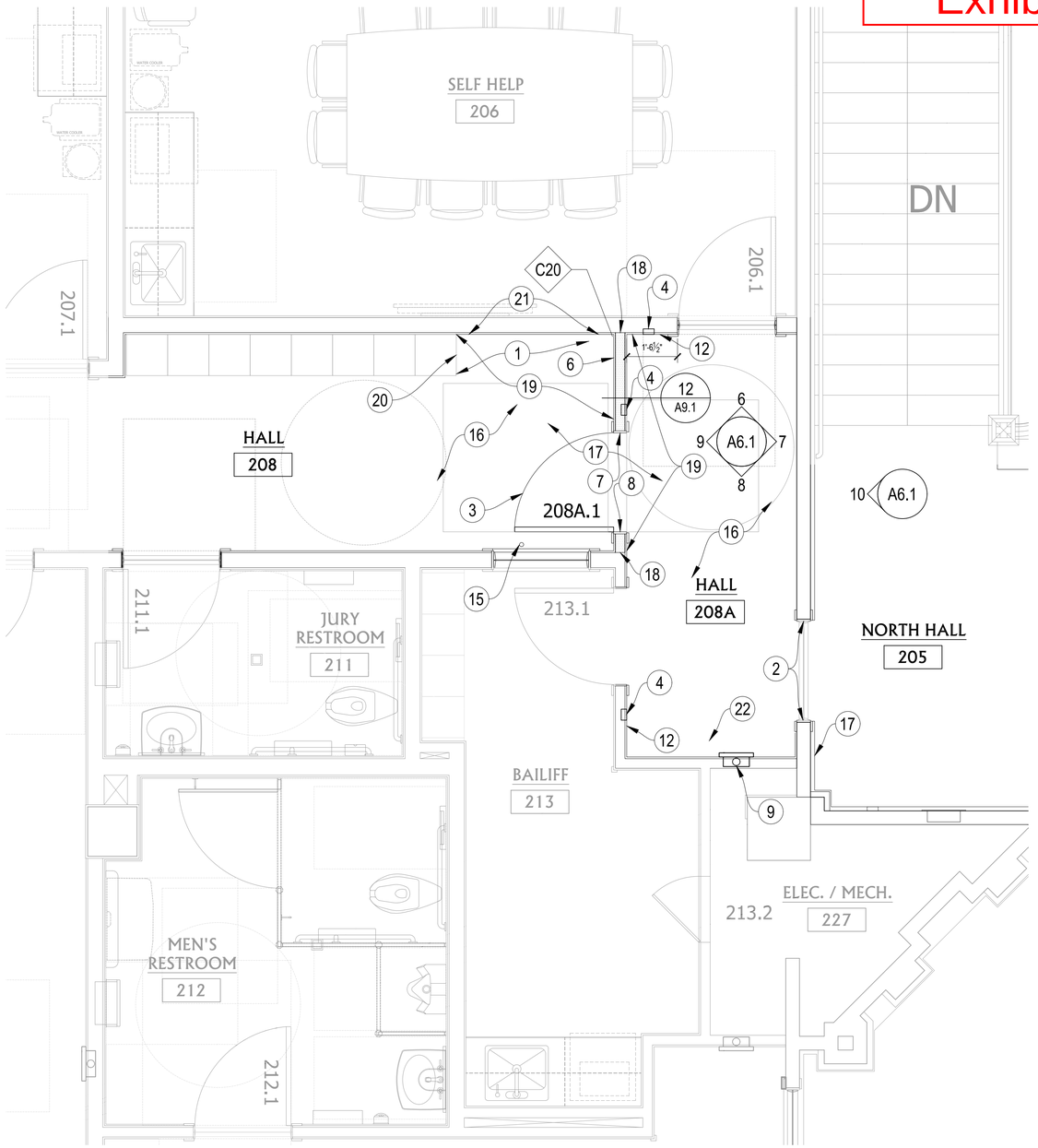
D9.1

P:\25004.00\Drawings & Models\AutoCAD\D9.1 Demo Photographs.dwg Apr 28, 2025 - 4:04pm

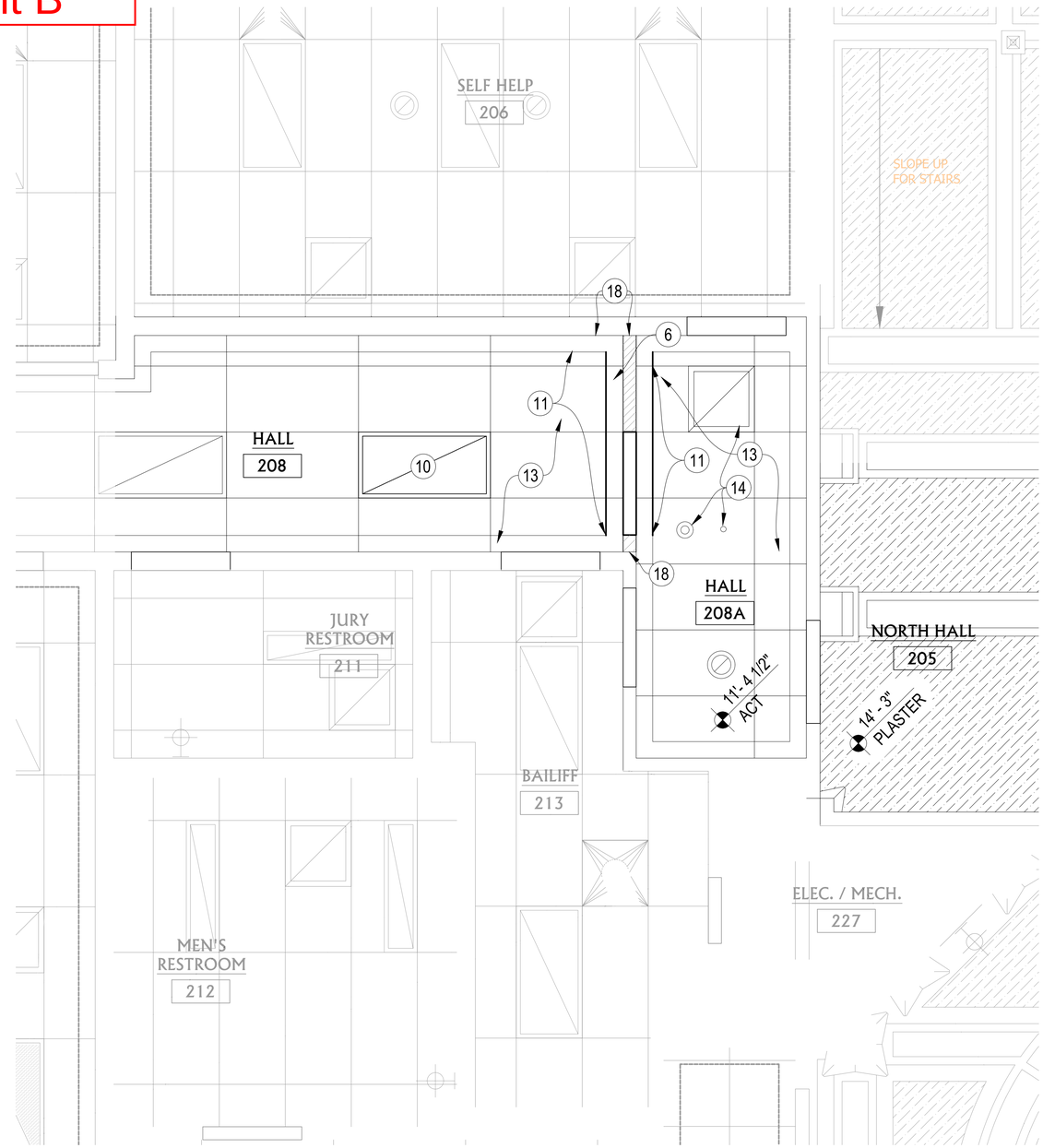
Exhibit B



9 SECOND FLOOR CONSTRUCTION PLAN

A2.1 : A2.1 1/2" = 1' - 0"

NORTH



11 SECOND FLOOR REFLECTED CEILING PLAN

A2.1 : A2.1 1/2" = 1' - 0"

NORTH

NEW WORK KEYNOTES

1	(E) CARPET UNDERNEATH LOCKERS.
2	DUTCHMAN REPAIR (E) DOOR FRAME DUE TO REMOVAL OF HARDWARE AND WOOD STOPS. SAND, PREP, AND REFINISH ENTIRE CASED OPENING FRAME. COLOR TOUCH UP 'AGED OAK' AS REQ.
3	RE-INSTALL (E) SALVAGED DOOR AND HARDWARE TO (N) LOCATION.
4	(N) CARD READER LOCATION.
5	NOT USED.
6	(N) WALL, SEE A9.1 FOR WALL TYPE.
7	(N) WOOD DOOR JAMB & FRAME TO MATCH IN-KIND TO (E) DOOR JAMB AND FRAME CONDITIONS AT RE-LOCATED DOOR.
8	RE-LOCATE (E) DOOR STOPS TO (N) 208A.1 DOOR LOCATION.
9	(E) FIRE EXTINGUISHER TO REMAIN.
10	RELOCATED (E) LIGHT IN ACT CEILING. COORDINATE WITH ELECTRICAL DRAWINGS.
11	(N) PICTURE RAIL FOR (N) WALL MATCH IN-KIND TO (E). REUSE SALVAGED PICTURE RAIL WHERE APPLICABLE, MITER 45 DEGREES AT CORNERS. FINISH (N) AND (E) TO MATCH IN-KIND TO (E).
12	PATCH AND REPAIR WALL FINISHES DUE TO INSTALLATION OF (N) CARD READER AND DOOR HARDWARE.
13	RE-INSTALL (E) SALVAGED ACT TILE AND DETAIL GRID CEILING TO COORDINATE WITH (N) WALL CONSTRUCTION.
14	(E) MECHANICAL DIFFUSER, SMOKE ALARM, AND SPRINKLER. REFERENCE MECHANICAL AND ELECTRICAL DRAWINGS FOR (N) WORK.
15	RE-INSTALL SALVAGED FLOOR-MOUNTED DOOR STOP IN (N) LOCATION.
16	PRIME AND PAINT WALL BELOW PICTURE RAIL EDGE TO EDGE, TOP TO BOTTOM.
17	ENSURE CARPET IS CUT AND ALIGNED TO (N) WALL WITHOUT SEAM IN TRAFFIC AREA.
18	PROVIDE BLOCKING AT AREA OF (N) WALL CONSTRUCTION TO TIE INTO (E).
19	(N) WOOD BASEBOARD, USE SALVAGED PORTIONS WHERE INSTALLATION CAN BE DONE WITHOUT SEAMS.
20	RE-INSTALL SALVAGED END PANEL TO (E) LOCKER SECTION.
21	PATCH AND REPAIR WALL AFTER REMOVAL OF LOCKER SECTION. MATCH ADJACENT CONDITIONS.
22	SPOT REPAIR CARPET DUE TO REMOVAL OF FLOOR-MOUNTED DOOR STOP.

GENERAL NOTES

1. REFERENCE SHEET A9.1 FOR WALL TYPES, DOOR AND DOOR FRAME TYPES.
2. REFERENCE SHEET A9.1 FOR STANDING AND RUNNING TRIM PROFILES.
3. REFERENCE MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL WORK.

2 0 2 4

SCALE OF FEET

1/2" = 1'-0"

STATE OF MONTANA
CHRISTOPHER A. MATSON
LICENSED ARCHITECT

SECOND FLOOR CONSTRUCTION PLAN & REFLECTED CEILING PLAN

sheet

MISSOULA COUNTY COURTHOUSE SELF HELP MOVE
200 WEST BROADWAY, 2ND FLOOR

project

MISSOULA COUNTY, 200 WEST BROADWAY STREET, MISSOULA, MT 59802

owner

project # **25004.0**

revision	date

phase
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issue date
04.24.2025

A2.1

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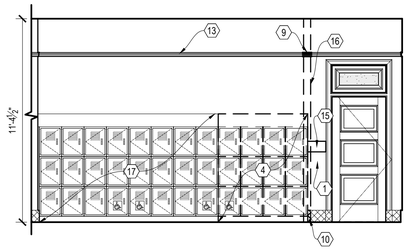
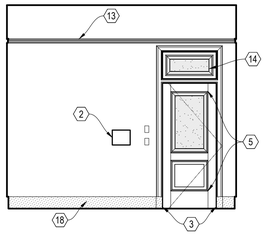
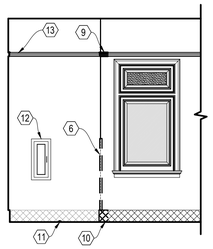
Exhibit B



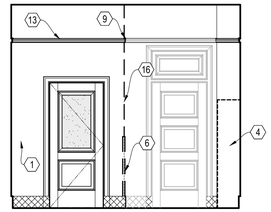
1 HALL 208 - DEMOLITION NORTH ELEVATION
D2.1 : A6.1 1/4" = 1' - 0"



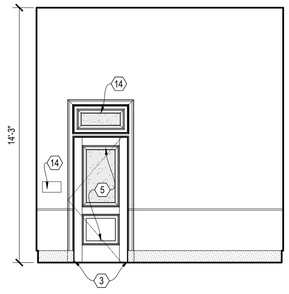
2 HALL 208 - DEMOLITION EAST ELEVATION
D2.1 : A6.1 1/4" = 1' - 0"



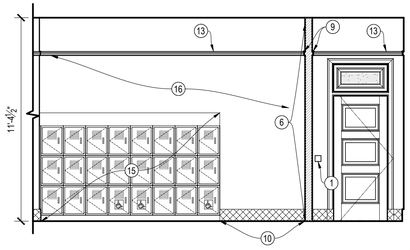
3 HALL 208 - DEMOLITION SOUTH ELEVATION
D2.1 : A6.1 1/4" = 1' - 0"



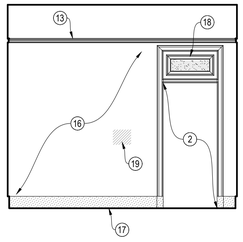
4 HALL 208 - DEMOLITION WEST ELEVATION
D2.1 : A6.1 1/4" = 1' - 0"



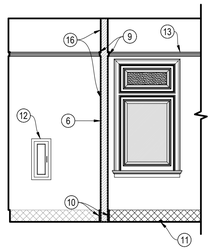
5 NORTH HALL 205 - DEMOLITION WEST ELEVATION
D2.1 : A6.1 1/4" = 1' - 0"



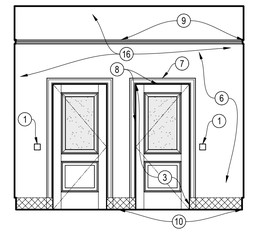
6 HALL 208 / 208A NORTH ELEVATION
A2.1 : A6.1 1/4" = 1' - 0"



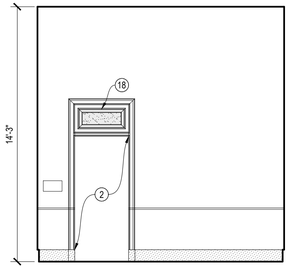
7 HALL 208A EAST ELEVATION
A2.1 : A6.1 1/4" = 1' - 0"



8 HALL 208 / 208A SOUTH ELEVATION
A2.1 : A6.1 1/4" = 1' - 0"



9 HALL 208A WEST ELEVATION
A2.1 : A6.1 1/4" = 1' - 0"



10 NORTH HALL 205 WEST ELEVATION
A2.1 : A6.1 1/4" = 1' - 0"

DEMOLITION KEYNOTES

#	
1	DEMO ROOM SIDE WALL FINISH AS REQ. FOR (N) CARD READER AND HARDWARE.
2	REMOVE AND SALVAGE (E) CARD READER AND ACCESS PANEL TO OWNER.
3	REMOVE AND SALVAGE (E) DOOR STOPS TO DOOR 208.1 ON SIDES AND TOP OF DOOR FRAME FOR RE-LOCATION.
4	REMOVE ONE SECTION (FOUR STACKS) OF LOCKERS INCLUDING BASE, SLOPED HOOD, END PANEL, AND WALL ANCHORS. SALVAGE END PANEL FOR RE-USE IN (N) WORK. SALVAGE LOCKERS, BASE, SLOPED HOOD, AND WALL ANCHORS TO OWNER.
5	REMOVE AND SALVAGE (E) DOOR AND DOOR HARDWARE TO BE RE-LOCATED. TRANSOM AND DOOR FRAME TO REMAIN.
6	REMOVE (E) CORNER GUARD IN PREPARATION FOR (N) WALL.
7	NOT USED.
8	NOT USED.
9	CUT, REMOVE, AND SALVAGE PORTION OF (E) PICTURE RAIL TO ACCOMMODATE (N) WORK.
10	REMOVE AND SALVAGE SECTION OF (E) WOOD BASEBOARD TO BE RE-INSTALLED IN (N) WORK.
11	REMOVE AND SALVAGE (E) FLOOR-MOUNTED DOOR STOP TO BE RE-LOCATED.
12	(E) FIRE EXTINGUISHER CABINET TO REMAIN.
13	(E) PICTURE RAIL TO REMAIN.
14	(E) SIGN TO REMAIN, NO WORK.
15	REMOVE (E) SIGN, SALVAGE TO OWNER.
16	DEMO (E) WALL FINISHES TO COORDINATE WITH (N) CONSTRUCTION.
17	(E) LOCKERS, PROTECT IN PLACE.
18	(E) MARBLE WALL BASE TO REMAIN.

NEW WORK KEYNOTES

#	
1	(N) CARD READER LOCATION.
2	DUTCHMAN REPAIR (E) DOOR FRAME DUE TO REMOVAL OR HARDWARE, SAND, PREP, AND REFINISH ENTIRE CASED OPENING FRAME. COLOR TOUCH UP 'AGED OAK' AS REQ.
3	RE-INSTALL (E) SALVAGED DOOR AND HARDWARE TO (N) LOCATION.
4	NOT USED.
5	NOT USED.
6	(N) WALL, SEE A9.1 FOR WALL TYPE.
7	(N) WOOD DOOR JAMB & FRAME TO MATCH IN-KIND TO (E) DOOR JAMB AND FRAME CONDITIONS AT RELOCATED DOOR.
8	RE-LOCATE (E) DOOR STOPS TO (N) 208A.1 DOOR LOCATION.
9	(N) PICTURE RAIL FOR (N) WALL MATCH IN-KIND TO (E). REUSE SALVAGED PICTURE RAIL WHERE APPLICABLE, MITER 45 DEGREES AT CORNERS.
10	(N) WOOD BASEBOARD TO ACCOMMODATE (N) WALL. MATCH IN-KIND TO (E). USE SALVAGED BASEBOARD WHERE APPLICABLE.
11	RE-INSTALL SALVAGED FLOOR-MOUNTED DOOR STOP IN (N) LOCATION.
12	(E) FIRE EXTINGUISHER CABINET TO REMAIN.
13	(E) PICTURE RAIL TO REMAIN.
14	(E) DOOR AND FRAME, COORDINATE WITH (N) CARD READER.
15	(E) LOCKERS, PROTECT IN PLACE.
16	PRIME AND PAINT (E) AND (N) WALL EDGE TO EDGE, TOP TO BOTTOM, COLOR TO MATCH (E).
17	(E) MARBLE WALL BASE TO REMAIN.
18	(E) TRANSOM AND FRAME TO REMAIN.
19	INFILL AND FINISH WALL TO MATCH (E) ADJACENT CONDITIONS, PRIME AND PAINT WALL EDGE TO EDGE, TOP TO BOTTOM.

LEGEND

	HATCH INDICATES AREA OF MARBLE BASEBOARD.
	HATCH INDICATES AREA OF WOOD BASEBOARD.

4 0 4 8
SCALE OF FEET 1/4" = 1'-0"

2 0 2 4
SCALE OF FEET 1/2" = 1'-0"

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STATE OF MONTANA
CHRISTOPHER A. HUNTSON
LICENSED ARCHITECT

sheet DEMO & NEW CONSTRUCTION INTERIOR ELEVATIONS
project **MISSOULA COUNTY COURTHOUSE SELF HELP MOVE**
200 WEST BROADWAY, 2ND FLOOR
owner MISSOULA COUNTY, 200 WEST BROADWAY STREET, MISSOULA, MT 59802

project # **25004.0**

revision date

phase
CONSTRUCTION DOCUMENTS

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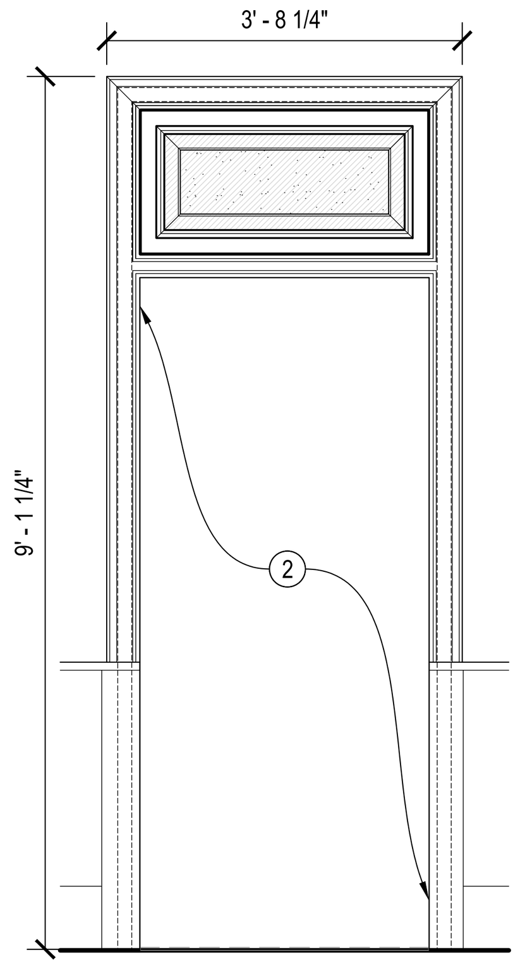
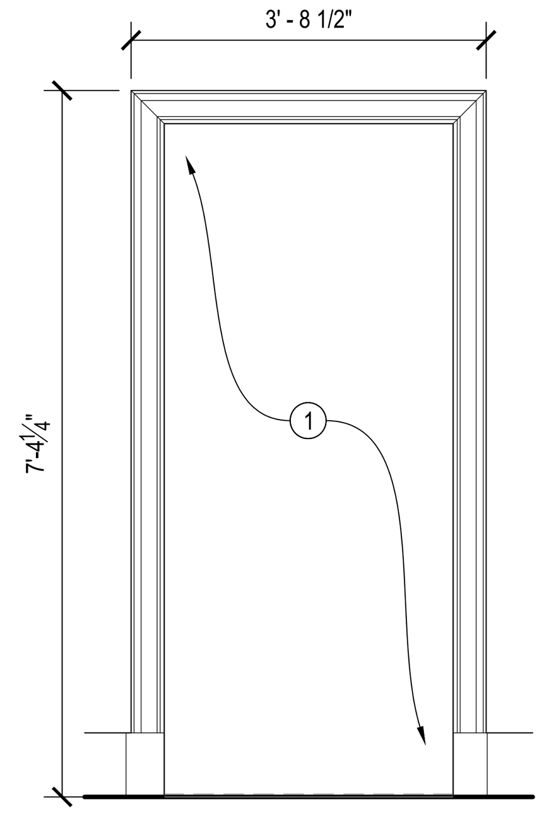
issue date
04.24.2025

A6.1

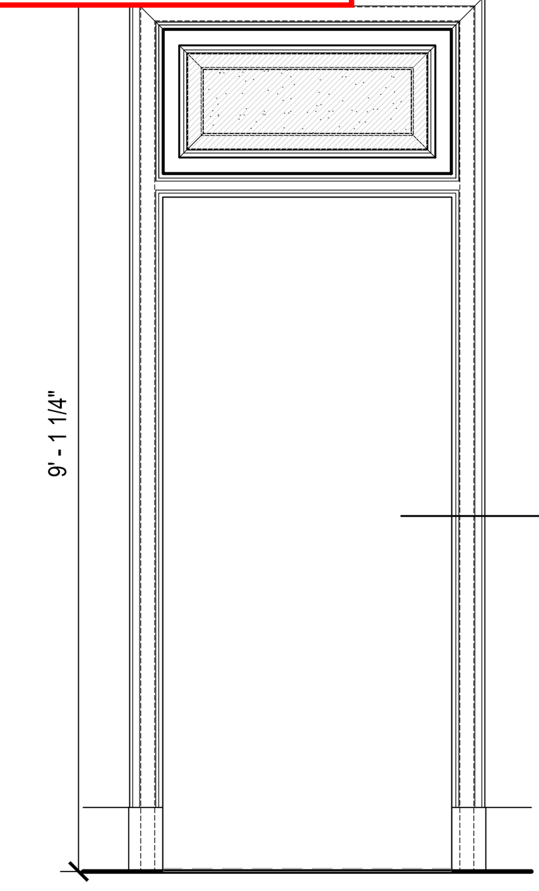
Exhibit B



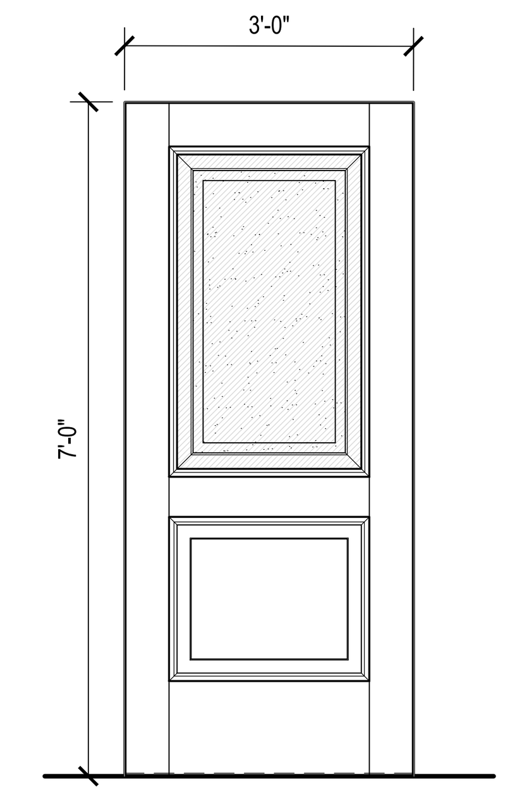
1 DOOR FRAME - (E) FIXED TRANSOM, MARBLE WAINSCOT
A9.1 : A9.1 1/2" = 1' - 0"



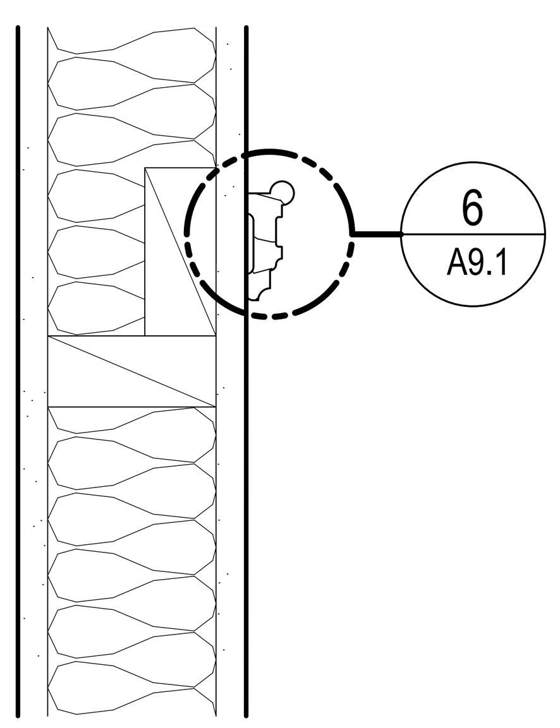
2 DOOR FRAME - TYPE A2
A9.1 : A9.1 1/2" = 1' - 0"



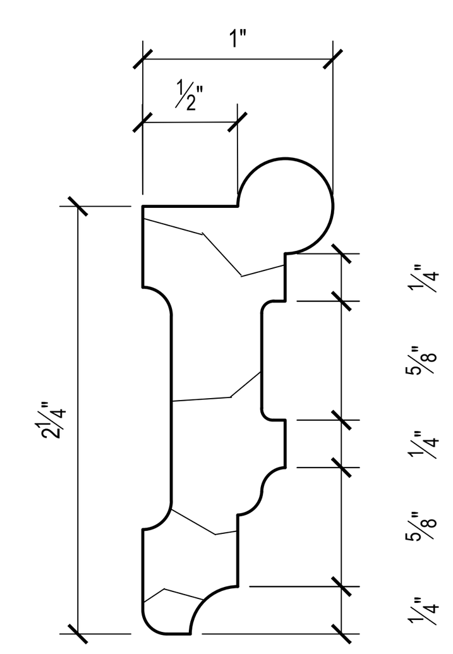
3 DOOR FRAME - (E), FIXED TRANSOM, MARBLE BASE
A9.1 : A9.1 1/2" = 1' - 0"



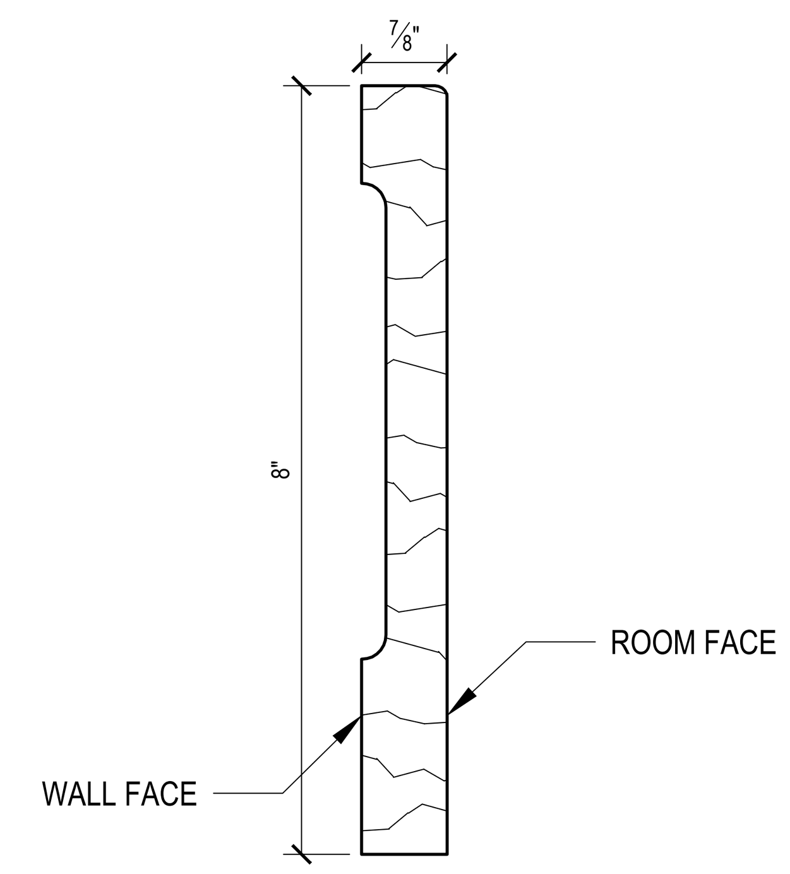
4 RE-LOCATED DOOR
A9.1 : A9.1 1/2" = 1' - 0"



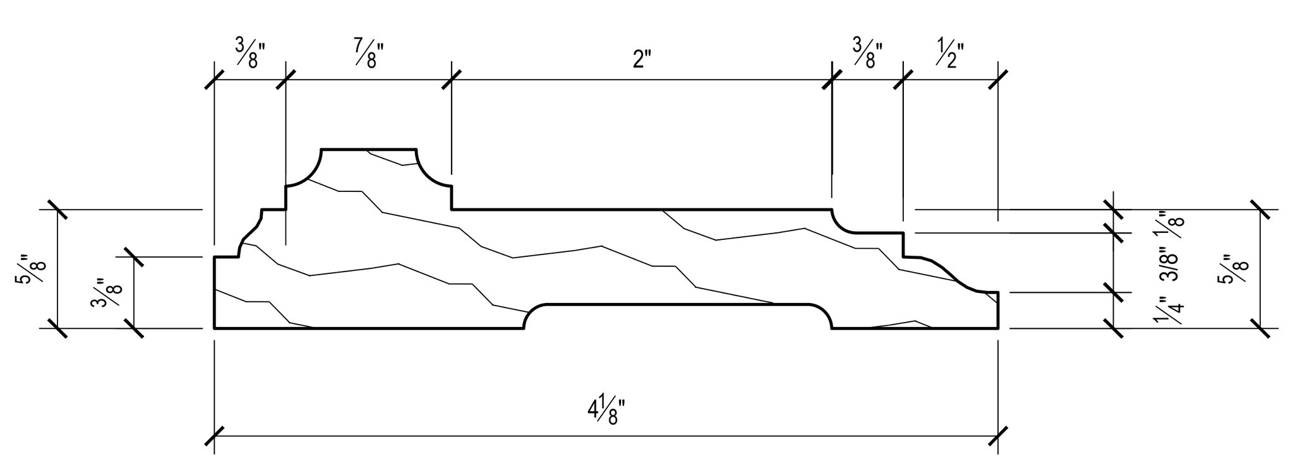
5 TYP. CP-PR
A9.1 : A9.1 3" = 1' - 0"



6 PICTURE RAIL - TYPE CP-PR
A9.1 : A9.1 1' - 0" = 1' - 0"

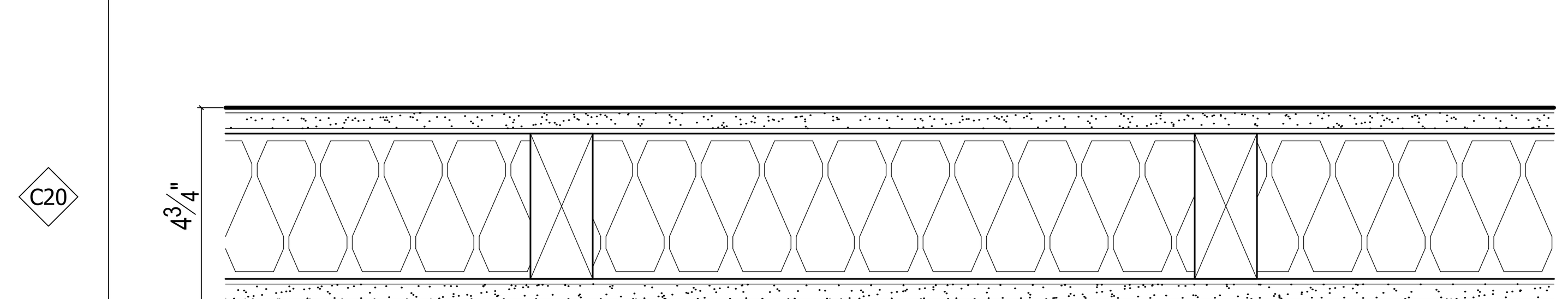


7 TYP. WOOD BASE PROFILE, CP-WB
A9.1 : A9.1 6" = 1' - 0"



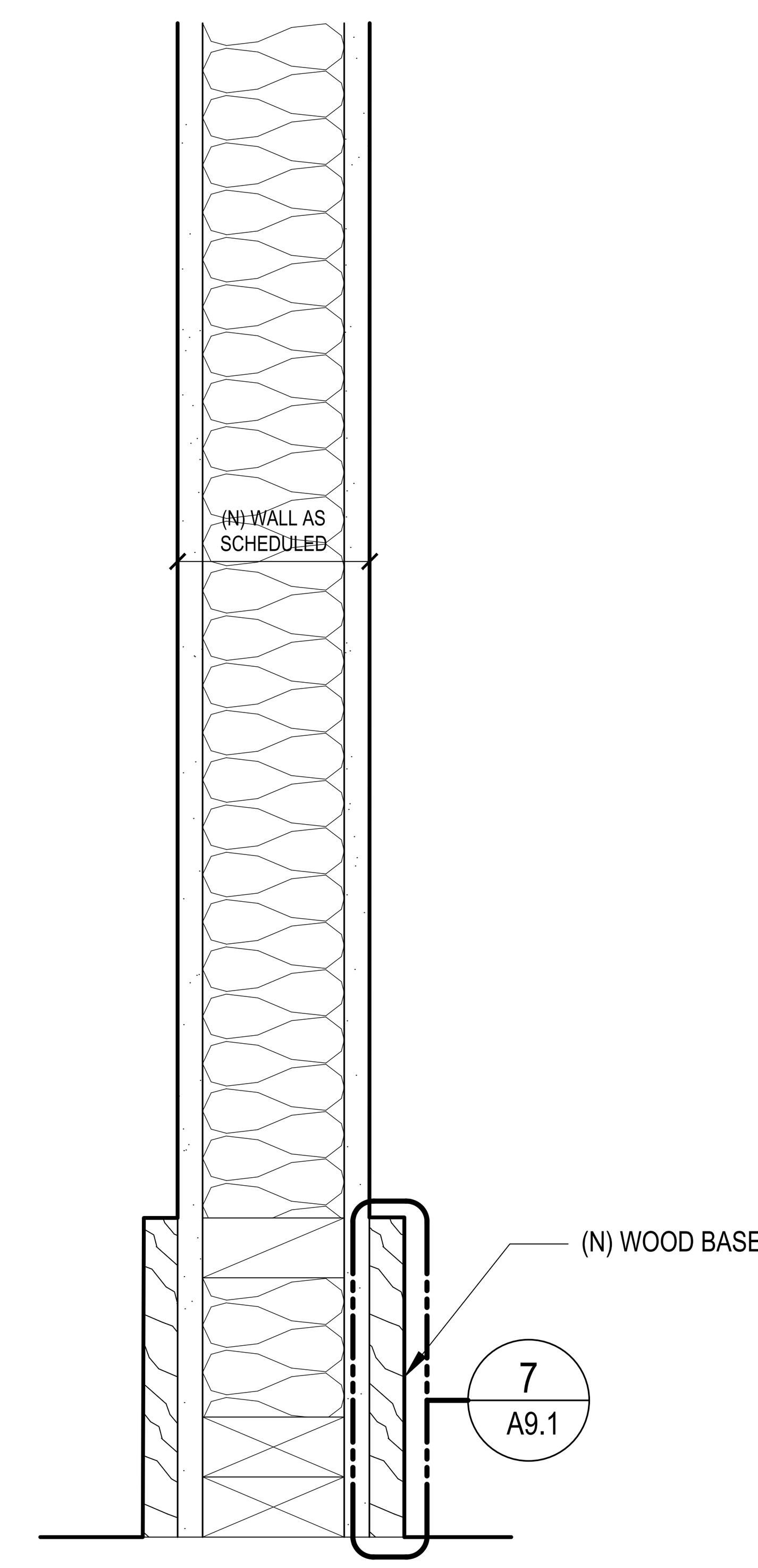
9 TYP. DOOR TRIM, TYPE CP-WT
A9.1 : A9.1 1' - 0" = 1' - 0"

WALL TYPES LEGEND



INTERIOR COURTHOUSE WALL
WALL FINISH, LEVEL 5 TO MATCH (E)
5/8" TYPE X GYP. BOARD
3 1/2" WOOD STUD W/ SOUND BATT INSULATION
5/8" TYPE X GYP. BOARD
WALL FINISH, LEVEL 5 TO MATCH (E)

NOTE: PRIME & PAINT GYP. BOARD, 3 COATS, COLORS TO MATCH (E).



12 NEW WALL - WOOD BASE
A2.1 : A9.1 3" = 1' - 0"

DOOR SCHEDULE

DOOR	DESCRIPTION	SIZE (W X L X THICKNESS)	DOOR			FRAME			HARDWARE GROUP	REMARKS
			TYPE	MATERIAL	FINISH	TYPE	MATERIAL	FINISH		
206.1	SELF HELP DOOR	(E)							C02	(E) TRANSOM IN FRAME
208.1	HALL 208 DOOR FROM NORTH HALL									NO WORK
208A.1	HALL DOOR BETWEEN 208 AND 208A	RELOCATED	(E)	(E)	(E)	A2	WOOD	TRANSPARENT MATCH (E)	C12	(N) RELOCATED DOOR & (N) DOOR FRAME
211.1	JURY RESTROOM DOOR									NO WORK
213.1	BAILIFF DOOR	(E)							C06	(E) DOOR & DOOR FRAME W/ (N) HARDWARE

DOOR HARDWARE SCHEDULE

DOOR 208A.1 HARDWARE GROUP C12
- HINGES: SALVAGE AND REUSE (E)
- LEVER : SALVAGE AND REUSE (E) SCHLAGE ND92PD SPA
- FLOOR DOME STOP: SALVAGE AND REUSE (E)
- ELECTRIC STRIKE: SALVAGE AND REUSE (E) HES 7000-791 LBSM 12VDC
- CARD READER: (n) CARD READER, COORD W OWNER

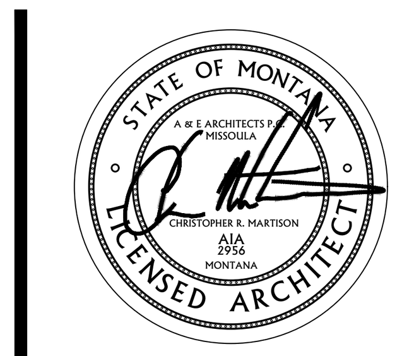
DOOR 206.1 HARDWARE GROUP C02
- HINGES: (E)
- LEVER : (E) SCHLAGE ND50PD SPA
- FLOOR DOME STOP: (E)
- ELECTRIC STRIKE: HES 7000-791 LBSM 12VDC
- CARD READER: (N) CARD READER, COORDINATE W OWNER

DOOR 213.1 HARDWARE GROUP C06
- HINGES: (E) HISTORIC
- LEVER : (E) HISTORIC KNOB MORTICE LATCH
- DEADBOLT: (E) SCHLAGE B662P
- FLOOR DOME STOPS: (E)
- ELECTRIC STRIKE HES 7000-791 LBSM 12VDC
- CARD READER: (n) CARD REDER, COORDINATE W OWNER

KEYNOTES

#	KEYNOTES
1	(N) WOOD DOOR JAMB & FRAME TO MATCH IN-KIND TO (E) DOOR JAMB AND FRAME CONDITIONS AT RE-LOCATED DOOR.
2	REPAIR (E) DOOR JAMB. FILL IN LATCH AND HINGE HOLES. SAND, PREP, RESTORE FRAME FINISHES. COLOR TOUCH UP 'AGED OAK' AS REQ.

2 0 2 4 SCALE OF FEET 1/2" = 1'-0"
0 1/2 1 SCALE OF FEET 3" = 1'-0"
0 1/4 1/2 SCALE OF FEET 6" = 1'-0"
0 1/8 1/4 SCALE OF FEET 1'-0" = 1'-0"



sheet: WALL TYPES, FRAME TYPES, DOOR TYPES, MILLWORK PROFILES, DOOR & HARDWARE SCHEDULES
project: **MISSOULA COUNTY COURTHOUSE SELF HELP MOVE**
200 WEST BROADWAY, 2ND FLOOR
owner: MISSOULA COUNTY, 200 WEST BROADWAY STREET, MISSOULA, MT 59802

project # 25004.0
revision date

phase
CONSTRUCTION DOCUMENTS

a&e

issue date
04.24.2025

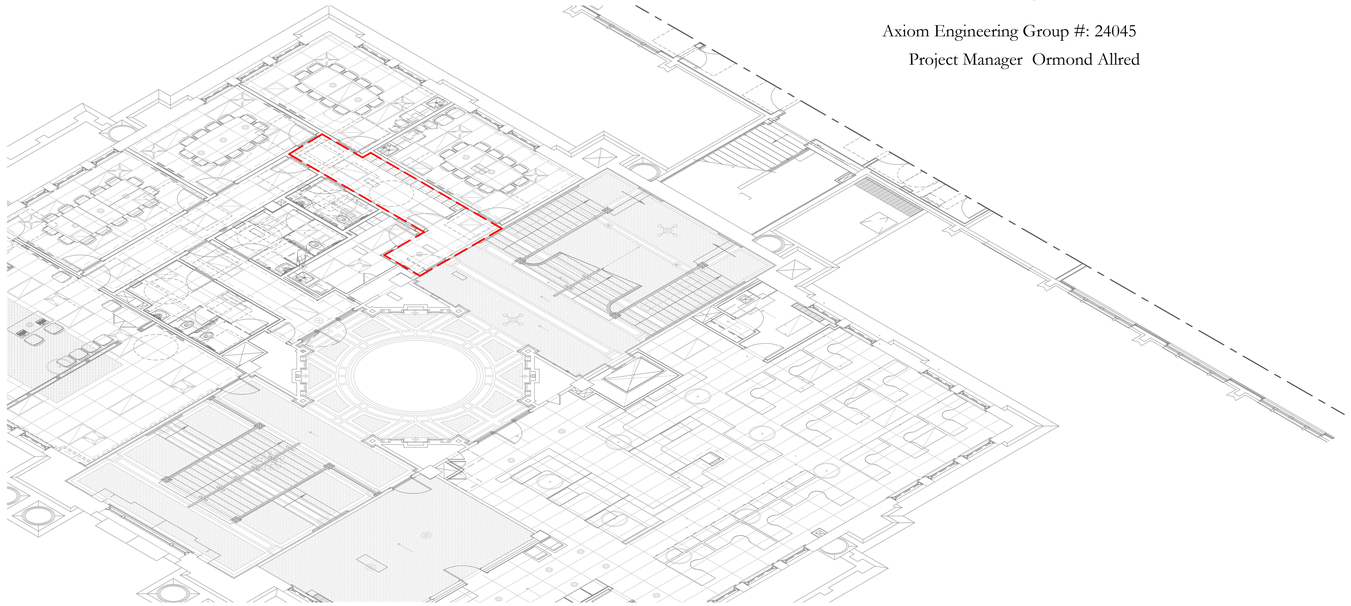
A9.1

Exhibit B

MISSOULA COUNTY COURTHOUSE
SELF HELP MOVE

200 WEST BROADWAY
MISSOULA, MT 59802

Axiom Engineering Group #: 24045
Project Manager Ormond Allred



GENERAL LEGEND

NOTE: THESE ARE STANDARDIZED SYMBOLS LEGENDS. AS SUCH, ALL SYMBOLS SHOWN MAY NOT APPEAR ON OR WITHIN THIS SET OF CONTRACT DOCUMENTS.

SYMBOL	NAME	SYMBOL	NAME
X	SPECIFIC SHEET NOTE	X / XX	SECTION REFERENCE NUMBER SECTION REFERENCE SHEET
X-X	PLUMBING FIXTURE IDENTIFICATION		ON DEMOLITION PLANS: INDICATES ITEMS TO BE REMOVED
X / XX	EQUIPMENT MARK "X" INDICATES TYPE "XX" INDICATES NUMBER		POINT OF NEW CONNECTION
X-X / XXX	G-R-D IDENTIFICATION CFM AIR FLOW		

MECHANICAL AND PLUMBING LEGEND

DUCTWORK - DRYSIDE

SYMBOL	DESCRIPTION
Level 2 13'-11"	**NOTE: DUCT DIMENSIONS INDICATE CLEAR INSIDE DIMENSIONS. EXTERIOR INSULATION OR ACOUSTICAL LINER THICKNESS IS NOT INCLUDED IN DIMENSIONS INDICATED.**
12"x6"	RECTANGULAR DUCT (VIEW WIDTH x VIEW DEPTH)
12"ø	ROUND DUCT
12"/6"	OVAL DUCT (VIEW WIDTH x VIEW DEPTH)
	ACOUSTICALLY LINED DUCT
	EXTERIOR INSULATED DUCT
	EXTERIOR INSULATED AND ACOUSTICALLY LINED DUCT
	FLEXIBLE ROUND DUCT
	VERTICAL SUPPLY AIR OR POSITIVE PRESSURE DUCTS
	VERTICAL RETURN AIR OR NEGATIVE PRESSURE DUCTS
	VERTICAL EXHAUST AIR DUCTS
	MANUAL BALANCING / VOLUME DAMPER
	PARALLEL BLADE DAMPER
	OPPOSED BLADE DUCT
	MOTOR ACTUATED DAMPER
F	DUCT MOUNTED VERTICAL FIRE DAMPER
F/S	DUCT MOUNTED VERTICAL FIRE / SMOKE DAMPER
F/S	DUCT MOUNTED HORIZONTAL FIRE OR FIRE / SMOKE DAMPER
	STRAIGHT TAKE-OFF
	CONICAL TAKE-OFF
	HIGH EFFICIENCY TAKE-OFF (HETO)
	MITERED RECTANGULAR DUCT ELBOW WITH TURNING VANES
	SHARP-THROAT RADIUS-HEEL RECTANGULAR DUCT ELBOW
	1.0 RADIUS AND 1.5 RADIUS SMOOTH ROUND OR OVAL ELBOW
	1.0 RADIUS AND 1.5 RADIUS 3-GORE ROUND OR OVAL ELBOW
	1.0 RADIUS AND 1.5 RADIUS 5-GORE ROUND OR OVAL ELBOW

TEMPERATURE CONTROLS

SYMBOL	DESCRIPTION
RTU-1 (T)	THERMOSTAT - LABEL INDICATES ASSOCIATED SYSTEM
RZ-1 (S)	SENSOR - LABEL INDICATES ASSOCIATED SYSTEM
FC-1 (H)	HUMIDISTAT - LABEL INDICATES ASSOCIATED SYSTEM
AHU-1 (CO2)	CARBON DIOXIDE SENSOR - LABEL INDICATES ASSOCIATED SYSTEM
(P)	PRESSURE SENSOR
(DP)	DIFFERENTIAL PRESSURE SENSOR
(FS)	FLOW SWITCH
(CS)	CURRENT SENSOR

PIPING / PLUMBING - WETSIDE

SYMBOL	DESCRIPTION
HWS	HEATING WATER SUPPLY
HWR	HEATING WATER RETURN
CWS	CHILLED WATER SUPPLY
CWR	CHILLED WATER RETURN
CTWS	COOLING TOWER WATER SUPPLY
CTWR	COOLING TOWER WATER RETURN
HPSS	HEAT PUMP SOURCE SUPPLY
HPSR	HEAT PUMP SOURCE RETURN
HPLS	HEAT PUMP LOAD SUPPLY
HPLR	HEAT PUMP LOAD RETURN
HSP	HIGH PRESSURE STEAM
HSC	HIGH PRESSURE STEAM CONDENSATE
MPS	MEDIUM PRESSURE STEAM
MPC	MEDIUM PRESSURE STEAM CONDENSATE
LPS	LOW PRESSURE STEAM
LPC	LOW PRESSURE STEAM CONDENSATE
RS	REFRIGERANT SUCTION
RL	REFRIGERANT LIQUID
COND	CONDENSATE
NG	NATURAL GAS
LPG	LIQUEFIED PETROLEUM GAS (PROPANE)
	DOMESTIC COLD WATER (DCW)
	DOMESTIC HOT WATER (DHW)
	DOMESTIC HOT CIRCULATION (DHC)
V	VENT - SANITARY
SAN	SANITARY WASTE - ABOVE GRADE
SAN	SANITARY WASTE - BELOW GRADE
RDL	ROOF DRAIN LEADER
RDO	ROOF DRAIN OVERFLOW
	PIPE UP
	PIPE DOWN
	PIPE REDUCER / INCREASER
	BALL VALVE
	GATE VALVE
	GLOBE VALVE
	PLUG VALVE
	BUTTERFLY VALVE
	CHECK VALVE
	BALANCING VALVE / CIRCUIT SETTER
	CIRCUIT SETTER
	COMBINATION AUTO BALANCE AND SHUT-OFF WITH TEST PORTS AND UNION
	STRAINER
	COMBINATION STRAINER AND SHUT-OFF WITH TEST PORTS AND UNION
	BACKFLOW PREVENTER
	PRESSURE REDUCING / REGULATING VALVE
	MOTORIZED CONTROL VALVE
	SOLENOID VALVE
	PRESSURE GAUGE
	THERMOMETER
	PRESSURE RELIEF VALVE
	FLEXIBLE PIPE CONNECTOR
	3-WAY VALVE
	STEAM TRAP
	PUMP / CIRCULATOR
	HOSE BIBB
	ROUND FLOOR DRAIN
	SQUARE FLOOR DRAIN
	SQUARE FLOOR DRAIN
WCO	WALL CLEANOUT (WCO)
FCO	FLOOR CLEANOUT (FCO)
COTG	CLEANOUT-TO-GRADE (COTG)

NOTE: THESE ARE STANDARDIZED SYMBOLS LEGENDS. AS SUCH, ALL SYMBOLS SHOWN MAY NOT APPEAR ON OR WITHIN THIS SET OF CONTRACT DOCUMENTS.

PROVIDE SUBMITTALS FOR ALL COMPONENTS OF THE MECHANICAL AND PLUMBING SYSTEMS AS NOTED BELOW. ANY MATERIALS NOT SUBMITTED ON MAY BE REJECTED IN THE FIELD AND REQUIRE THE INSTALLER TO REMOVE AND REPLACE, AT THEIR COST, AS DEEMED NECESSARY BY THE ENGINEER. FOR RESIDENTIAL PROJECTS: NO EQUIPMENT SHALL BE 3-PHASE.

REFER TO SPECIFICATIONS FOR ALL MECHANICAL AND PLUMBING RELATED WORK. ALL WORK SHALL BE IN STRICT ACCORDANCE WITH THE PLANS, SPECIFICATIONS, AND MANUFACTURER'S WRITTEN INSTRUCTIONS. ALL DEVIATIONS FROM THE PLANS AND/OR SPECIFICATIONS SHALL REQUIRE WRITTEN PRIOR APPROVAL FROM THE ENGINEER.

SUBMITTALS SHALL BE IN PDF FORMAT ONLY. PARTIAL OR INCOMPLETE SUBMITTALS AND PAPER COPIES WILL NOT BE REVIEWED. SUBMITTALS SHALL BE COMBINED INTO ONE FILE, WITH EACH SECTION LABELED ACCORDING TO IT'S RESPECTIVE SPECIFICATION SECTION.

NOTE:
HYDRONIC SYSTEM AS WELL AS **AIR BALANCE** OF SYSTEMS ***IS REQUIRED***. DELIVER TESTING AND BALANCE REPORTS TO ENGINEER FOR REVIEW PRIOR TO PROJECT COMPLETION.

THIS PROJECT WILL REQUIRE COMMISSIONING TO ENSURE THE DESIGNED SYSTEMS ARE OPERATING THE WAY THE ENGINEERS, DESIGNERS AND OWNER INTEND.

ABBREVIATIONS

(E)	EXISTING
(IJS) or I.J.S.	IN JOIST SPACE
(N)	NEW
(NL)	NEW LOCATION
(REL)	RELOCATE or RELOCATED
A.D.	ACCESS DOOR
A.F.F.	ABOVE FINISH FLOOR
A.F.G.	ABOVE FINISH GRADE
AHU	AIR HANDLING UNIT
ARCH	ARCHITECT or ARCHITECTURAL
CA	COMPRESSED AIR
CC	COOLING COIL
CFM	CUBIC FEET PER MINUTE
CH	CABINET HEATER
CHWR / CWR	CHILLED WATER RETURN
CHWS / CWS	CHILLED WATER SUPPLY
CO or C.O.	CLEANOUT
CONT.	CONTINUATION
COTG	CLEANOUT TO GRADE
CUH	CABINET UNIT HEATER
DCW	DOMESTIC COLD WATER
DHW	DOMESTIC HOT WATER
DHC	DOMESTIC HOT WATER RECIRCULATION
DF	DRINKING FOUNTAIN
EA	EXHAUST AIR
EC	ELECTRICAL CONTRACTOR
EF	EXHAUST FAN
FA	FRESH AIR
FC	FAN COIL
FD	FLOOR DRAIN
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FF / FIN.FLR.	FINISH FLOOR
FS	FLOOR SINK
FT	FIN TUBE
G.C.	GENERAL CONTRACTOR
HB	HOSE BIBB
HC	HEATING COIL
HHW	HEATING HOT WATER
HWR	HEATING WATER RETURN
HWS	HEATING WATER SUPPLY
LAV	LAVATORY
LCUV	LARGE CAPACITY UNIT VENTILATOR
MA	MIXED AIR
MAX.	MAXIMUM
MC	MECHANICAL CONTRACTOR
MECH.	MECHANICAL
MFR.	MANUFACTURER
MIN.	MINIMUM
N.C.	NORMALLY CLOSED
N.O.	NORMALLY OPEN
O.C.	ON CENTER
OA	OUTSIDE AIR
PG	PROPYLENE GLYCOL
PICV	PRESSURE INDEPENDENT CONTROL VALVE
RA	RETURN AIR
RDL	ROOF DRAIN LEADER
RDO	ROOF DRAIN OVERFLOW
REQ'D	REQUIRED
RHC	REHEAT COIL
S.M.	SHEET METAL
S.S.	STAINLESS STEEL
SA	SUPPLY AIR
SAN	SANITARY SEWER
SIM.	SIMILAR
SPEC.	SPECIFICATION or SPECIFIED
TA	TRANSFER AIR
TYP.	TYPICAL
U.N.O.	UNLESS NOTED OTHERWISE
UH	UNIT HEATER
UR	URINAL
UV	UNIT VENTILATOR
VFD	VARIABLE FREQUENCY DRIVE
V	VENT
VTR	VENT THROUGH ROOF
WC	WATER CLOSET
WS / WF	WASH SINK/FOUNTAIN (LAVATORY)

DRAWING INDEX

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project: MISSOULA COUNTY COURTHOUSE SELF HELP MOVE
200 WEST BROADWAY, 2ND FLOOR
owner: MISSOULA COUNTY, 200 WEST BROADWAY STREET, MISSOULA, MT 59802

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Exhibit B

MECHANICAL SPECIFICATIONS

PART 1 - GENERAL

1.1 GENERAL INTENT

A. THE INTENTION OF THE CONTRACT DOCUMENTS IS TO INCLUDE ALL LABOR AND MATERIALS, AND EQUIPMENT, NECESSARY, OR REASONABLY INFERABLE AS BEING NECESSARY, FOR FURNISHING, INSTALLATION AND TESTING, COMPLETE AND READY FOR SAFE OPERATION OF THE SYSTEMS DESCRIBED HEREIN.

B. SUBMISSION OF A PROPOSAL SHALL BE CONSTRUED AS EVIDENCE THAT THE CONTRACTOR HAS MADE A THOROUGH EXAMINATION OF THE SITE, AND ALL EXISTING CONDITIONS AND LIMITATIONS WHICH AFFECT THIS WORK. LATER CLAIMS SHALL NOT BE MADE FOR LABOR, EQUIPMENT OR MATERIALS REQUIRED BECAUSE OF DIFFICULTIES ENCOUNTERED, WHICH COULD HAVE BEEN FORESEEN DURING SUCH AN EXAMINATION.

C. THE DRAWINGS INDICATE DIAGRAMMATICALLY THE EXTENT, GENERAL CHARACTER, AND LOCATION OF THE WORK TO BE PERFORMED. WHERE MINOR ADJUSTMENTS OF THE WORK ARE NECESSARY FOR PURPOSES OF FABRICATION OR INSTALLATION OF ITEMS, THE CONTRACTOR SHALL MAKE SUCH ADJUSTMENTS WITH NO ADDED COMPENSATION. WHERE SUCH ADJUSTMENTS AFFECT FUNCTIONAL OR AESTHETIC DESIGN OF THE WORK, THEY SHALL FIRST BE SUBMITTED TO THE ARCHITECT FOR REVIEW AND APPROVAL.

D. SITE UTILITIES: THE MECHANICAL DOCUMENTS INDICATE CONNECTION LOCATION OF VARIOUS BUILDING SERVICES. COORDINATE WORK WITH THE SITE UTILITIES CONTRACTOR TO ENSURE PROPER INVERT ELEVATION, PIPE SLOPE GRADIENT, PIPE SIZE AND SEPARATION WITHIN TRENCH WORK. NOTIFY ARCHITECT OR ENGINEER OF ANY DISCREPANCY BETWEEN DRAWINGS AND FIELD CONDITIONS.

E. COMPLY WITH ALL LOCAL AND STATE CODES REGARDING SEISMIC SUPPORT AND ISOLATION. NOT ALL SEISMIC REQUIREMENTS ARE SHOWN ON THESE DRAWINGS. CONTRACTOR SHALL MEET THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION FOR SEISMIC SUPPORT/ISOLATION OF HIS WORK.

1.2 GENERAL COORDINATION

A. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF A SATISFACTORY, COMPLETE, AND FULLY OPERATIONAL PIECE OF WORK IN ACCORDANCE WITH TRUE INTENT OF THE DRAWINGS AND SPECIFICATIONS.

B. CONTRACTOR SHALL CONSULT ALL DRAWINGS FOR THE PROJECT TO DETERMINE THAT THE WORK AND EQUIPMENT WILL FIT AS PLANNED.

C. THE LOCATION OF PIPING, DUCTS, EQUIPMENT, ETC., SHALL BE CHECKED TO ENSURE CLEARANCE FROM OPENINGS, STRUCTURAL MEMBERS, CABINETS, LIGHTS, OUTLETS AND EQUIPMENT HAVING FIXED LOCATIONS. THIS SHALL BE ACCOMPLISHED PRIOR TO FABRICATION OF PIPE OR DUCTS.

D. IF, AT ANY TIME, AND IN ANY CASE, CHANGES IN LOCATION OF PIPING, DUCTS, EQUIPMENT, ETC., BECOMES NECESSARY DUE TO EXISTING OBSTACLES OR INSTALLATION OF OTHER TRADES SHOWN ON ANY OF THE PROJECT DRAWINGS AND SUCH CONFLICT COULD HAVE BEEN AVOIDED BY PROPER COORDINATION BETWEEN TRADES OR PROPER PRE-PLANNING OF WORK, SUCH REQUIRED CHANGES SHALL BE MADE BY THE CONTRACTOR AT NO EXTRA COST. THESE CHANGES ARE TO BE RECORDED ON THE RECORD DRAWINGS.

E. THIS CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL INCIDENTAL ELECTRICAL INTERCONNECTIONS, CONTROL WIRING, ETC., WHICH ARE NECESSARY FOR SYSTEM COMPLETION AND WHICH ARE NOT SPECIFICALLY SHOWN OR OTHERWISE INDICATED ON THE ELECTRICAL DRAWINGS OR SPECIFIED IN DIVISION 26.

F. ALL ELECTRICAL WORK INCIDENTAL TO OR ACCOMPLISHED UNDER THIS DIVISION SHALL COMPLY WITH ALL REQUIREMENTS OF DIVISION 26.

G. PLANS ARE DIAGRAMMATIC IN NATURE. CONTRACTOR IS RESPONSIBLE FOR REFERRING TO THE DESIGN DOCUMENTS FOR ALL OTHER DISCIPLINES FOR PROJECT CONSTRUCTION AND OTHER DETAILS WHICH AFFECT THE MECHANICAL INSTALLATION. CONTRACTOR SHALL CONFER WITH ALL OTHER TRADES FOR FINISH ADJACENT TO ITS WORK AND ARRANGE TO HAVE VISIBLE PORTIONS OF THIS WORK (SUCH AS ACCESS DOORS, VALVES, SPRINKLER HEADS, ESCUTCHEONS, ETC.) MERGE WITH THE FINISH IN A MANNER SATISFACTORY TO THE ARCHITECT.

H. CONTRACTOR SHALL IDENTIFY ALL SERVICEABLE ITEMS (VALVES, DAMPERS, COILS, ETC.) SO THAT THE CEILING SUBCONTRACTOR MAY KNOW WHERE TO INSTALL ACCESS-TYPE PANELS SHOULD A LIFT-UP TYPE CEILING NOT BE INSTALLED. THIS CONTRACTOR SHALL PROVIDE ACCESS PANELS FOR HIS WORK UNLESS SPECIFICALLY NOTED ON THE DRAWINGS. ARCHITECT SHALL APPROVE LOCATIONS OF ACCESS PANELS PRIOR TO INSTALLATION.

I. CEILING HEIGHTS: ARCHITECTURAL DRAWINGS SHALL BE CHECKED FOR CEILING HEIGHTS, WALLS, AND CABINETS THAT ARE INTENDED TO CONCEAL WORK OF THIS SECTION. WHERE CONFLICTS OCCUR, THE ARCHITECT SHALL BE NOTIFIED PRIOR TO INSTALLATION OF THE WORK. LOCATION OF EXPOSED WORK SUCH AS LIGHTS, DIFFUSERS, SPEAKERS, SPRINKLER HEADS TAKE PRECEDENCE OVER CONCEALED WORK.

J. CONTRACTOR SHALL EXERCISE CARE TO MINIMIZE ANY DISTURBANCE TO ADJACENT AREAS OF THE BUILDING WHICH ARE TO REMAIN IN OPERATION. ISOLATE WORK AREAS BY TEMPORARY PARTITIONS, TARPS, ETC., TO KEEP DUST AND DIRT IN THE CONSTRUCTION AREA.

K. PROVIDE ALL NECESSARY FLASHING, SEALING, ETC., TO MAINTAIN THE WATERPROOF INTEGRITY OF THE BUILDING AS REQUIRED BY THE INSTALLATION OR REMOVAL OF ITEMS AS REQUIRED BY THIS SCOPE OF WORK.

L. INSTALL ALL WORK OF THIS SCOPE TO BE READILY ACCESSIBLE FOR OPERATION, MAINTENANCE, AND REPAIR. MINOR DEVIATIONS FROM THE DRAWINGS MAY BE MADE TO ACCOMPLISH THIS, BUT CHANGES INVOLVING OTHER TRADES MAY NOT BE MADE WITHOUT PRIOR APPROVAL.

M. ALL PENETRATIONS MADE THROUGH RATED ASSEMBLIES TO ACCOMMODATE WORK OF THIS SECTION, MUST BE SEALED TO MAINTAIN THE RATING OF SUCH ASSEMBLY BY A U.L. RECOGNIZED SEALING METHOD.

N. PROVIDE ALL CUTTING AND PATCHING REQUIRED FOR INSTALLATION OF THIS WORK. COORDINATE ALL BLOCKING, SUPPORT, ETC., NECESSARY FOR THE INSTALLATION OF THIS WORK WITH THE GENERAL CONTRACTOR.

1.3 CODES, STANDARDS, PERMITS, AND FEES

A. ALL APPLICABLE CODE LAWS AND REGULATIONS GOVERNING OR RELATING TO ANY PORTION OF THIS WORK ARE HEREBY INCORPORATED INTO AND MADE A PART OF THESE SPECIFICATIONS. THEIR PROVISIONS SHALL BE CARRIED OUT BY THE CONTRACTOR, WHO SHALL INFORM THE ARCHITECT IN WRITING PRIOR TO SUBMITTING A BID, OF ANY WORK OR MATERIALS WHICH VIOLATE ANY OF THE ENFORCED LAWS, CODES, OR REGULATIONS. IF THE CONTRACTOR PERFORMS ANY WORK CONTRARY TO SUCH LAWS, ORDINANCES, RULES AND REGULATIONS, HE SHALL ASSUME FULL RESPONSIBILITY, AND SHALL BEAR ALL COSTS ASSOCIATED WITH BRINGING WORK INTO COMPLIANCE.

B. WHERE DRAWINGS OR SPECIFICATIONS CALL FOR MATERIAL OR CONSTRUCTION OF A BETTER QUALITY OR HIGHER CAPACITY THAN REQUIRED BY THE ABOVE-MENTIONED CODES AND STANDARDS, THE PROVISIONS OF THE DRAWINGS OR SPECIFICATIONS SHALL TAKE PRECEDENCE OVER THE REQUIREMENTS OF THE CODES AND STANDARDS.

C. THE RESPECTIVE SUB-CONTRACTOR, AT HIS EXPENSE, SHALL OBTAIN ALL PERMITS AND FEES REQUIRED FOR THIS SCOPE OF WORK ON THIS PROJECT. THE SUB-CONTRACTORS SHALL ALSO SCHEDULE ALL REQUIRED INSPECTIONS AND OBTAIN CERTIFICATES FOR HIS WORK, AT HIS EXPENSE.

D. THE FOLLOWING SPECIFIC STANDARDS SHALL BE CONSIDERED AS MINIMUM REQUIREMENTS FOR WORK OF THIS SECTION:
   1. DUCTWORK: ALL DUCTWORK SHALL BE FABRICATED AND INSTALLED PER THE PUBLISHED STANDARDS OF THE AMERICAN SOCIETY OF HEATING, REFRIGERATION, AND AIR CONDITIONING ENGINEERS (ASHRAE) AND THE SHEET METAL AND AIR CONDITIONING NATIONAL ASSOCIATION (SMACNA), AND MEET THE REQUIREMENTS OF NFPA 90 AND NFPA 91.
   2. FILTERS: ALL FILTER MEDIA SHALL BE UL CLASS 2.
   3. FIRE DAMPERS: ALL FIRE DAMPERS SHALL BE LISTED AND INSTALLED PER UL FOR THE ASSEMBLY THEY ARE INSTALLED IN, AND MEET THE REQUIREMENTS OF THE LOCAL BUILDING CODE.

1.4 SUBMITTALS AND SUBSTITUTIONS

A. SUBMITTAL MATERIALS SHALL BE COMPLETE IN EVERY RESPECT AND SHALL CLEARLY INDICATE EQUIPMENT FEATURES, DIMENSIONS, WEIGHTS, PERFORMANCE CHARACTERISTICS, AND CAPACITIES. CAPACITY AND PERFORMANCE CALCULATIONS SHALL BE ADJUSTED TO INDICATE ACTUAL EQUIPMENT PERFORMANCE AT THE PROJECT ELEVATION. LITERATURE OR DRAWINGS THAT DESCRIBE MORE THAN ONE MODEL OR SIZE OF EQUIPMENT SHALL BE MARKED WITH ARROWS OR OTHERWISE CLEARLY INSCRIBED TO IDENTIFY THE ACTUAL EQUIPMENT THAT WILL BE FURNISHED. ALL OPTIONS AND SPECIAL PARTS OF FEATURES SHALL ALSO BE CLEARLY IDENTIFIED. ALL SUBMITTED MATERIALS MUST BE CLEAR, COMPLETE, AND LEGIBLE. ALL SUBMITTALS OF THIS SCOPE MUST BE SUBMITTED AT ONE TIME; MULTIPLE AND VARIED SUBMITTALS WILL BE REJECTED.

B. SUBMITTALS FOR ALL EQUIPMENT SHALL BE ROUTED THROUGH AND REVIEWED BY THE CONTRACTOR. THE CONTRACTOR SHALL CHECK ALL SUBMITTALS FOR ADEQUATE IDENTIFICATION, CORRECTNESS, AND COMPLIANCE WITH CONTRACT DRAWINGS AND SPECIFICATIONS AND APPLY A STAMP OF APPROVAL. FOR SUBMITTALS THAT ARE REQUIRED TO BE REVIEWED BY THE ENGINEER, A DIGITAL COPY SHALL BE FORWARDED FOR REVIEW AFTER REVIEW AND APPROVAL BY THE CONTRACTOR. THESE SHALL BE RETURNED AND SHALL BE REVISED AND RESUBMITTED UNTIL ACCEPTED BY THE ENGINEER. PROVIDE PRODUCT DATA FOR EACH PIECE OF EQUIPMENT/COMPONENT LISTED BELOW:
   1. 1AIR MOVING EQUIPMENT.
   2. GRILLES, REGISTERS, AND DIFFUSERS.
   3. EXHAUST HOODS.
   4. WHERE SEISMIC SUPPORT IS REQUIRED BY CODES, PROVIDE SHOP DRAWINGS AND SUPPORTING CALCULATIONS IN ACCORDANCE WITH THE ASCE 7 CHAPTER 13. CALCULATIONS AND SHOP DRAWINGS SHALL BE SIGNED AND SEALED BY A LICENSED ENGINEER IN THE STATE IN WHICH THE PROJECT SITE OCCURS.

C. APPROVED MANUFACTURERS, WHICH MAY SUBMIT EQUAL PRODUCT TO THOSE SPECIFIED, ARE LISTED IN THE EQUIPMENT SCHEDULES. ANY SUBMITTAL FOR CONSIDERATION AS AN EQUAL TO THAT SCHEDULED MUST CONTAIN ALL INFORMATION REQUIRED TO EVALUATE THIS CLAIM. MANUFACTURERS NOT LISTED AS EQUAL MUST SUBMIT IN WRITING FOR REVIEW FIVE DAYS PRIOR TO BID CLOSING. CONTRACTOR IS RESPONSIBLE TO ASSURE ANY SUBSTITUTED ITEM MEETS ALL PHYSICAL AND PERFORMANCE REQUIREMENTS AS INTENDED IN THE DESIGN DOCUMENTS.

D. APPROVAL OF SUBMITTALS BY THE ENGINEER SHALL NOT RELIEVE THE CONTRACTOR FROM RESPONSIBILITY FOR DEVIATIONS FROM DRAWINGS OR SPECIFICATIONS, NOR SHALL IT RELIEVE HIM FROM RESPONSIBILITY FOR ERRORS IN SHOP DRAWINGS OR OTHER SUBMITTAL LITERATURE.

E. CONTRACTOR HAS SOLE RESPONSIBILITY TO COORDINATE ANY SUBSTITUTIONS WITH ALL OTHER DISCIPLINES. EQUIPMENT OF GREATER POWER, DIMENSIONS, CAPACITIES, AND RATINGS MAY BE FURNISHED PROVIDED SUCH PROPOSED EQUIPMENT IS APPROVED IN WRITING AND CONNECTING MECHANICAL AND ELECTRICAL SERVICES, CIRCUIT BREAKERS, CONDUIT, MOTORS, BASES, AND EQUIPMENT SPACES ARE INCREASED. NO ADDITIONAL COSTS WILL BE ACCEPTED FOR THESE INCREASES, IF LARGER EQUIPMENT IS PROVIDED. IF MINIMUM ENERGY RATINGS OR EFFICIENCIES OF THE EQUIPMENT ARE SPECIFIED, THE EQUIPMENT MUST MEET THE DESIGN REQUIREMENTS AND COMMISSIONING REQUIREMENTS. DESIGN OF ELECTRICAL REQUIREMENTS IS BASED ON MECHANICAL EQUIPMENT SPECIFIED. MECHANICAL CONTRACTOR SHALL COORDINATE WITH ELECTRICAL CONTRACTOR IF EQUIPMENT PURCHASED IS DIFFERENT FROM THAT SPECIFIED STILL MEETS DESIGN INTENT, INCLUDING BUT NOT LIMITED TO OVERCURRENT PROTECTION, LOCAL DISCONNECTION MEANS, WIRE SIZING, AND DESIGN COSTS.

1.5 DELIVERY, STORAGE, AND HANDLING

A. DELIVER PRODUCTS TO THE PROJECT PROPERLY IDENTIFIED WITH NAMES, MODEL NUMBERS, TYPES, GRADES, COMPLIANCE LABELS, AND OTHER INFORMATION NEEDED FOR IDENTIFICATION.

B. ALL MECHANICAL EQUIPMENT AND MATERIAL ITEMS SHALL BE PROTECTED FROM WEATHER AND VANDALISM PRIOR TO ACTUAL INSTALLATION. FAN WHEELS, PUMPS AND OTHER ROTATING MACHINERY SHALL BE PERIODICALLY ROTATED DURING STORAGE. ANY FACTORY PAINTED EQUIPMENT SCRATCHED OR MARRED DURING SHIPMENT OR CONSTRUCTION SHALL BE RESTORED TO ORIGINAL, "NEW" CONDITION. THIS INCLUDES COMPLETE REPAINTING OF THE EQUIPMENT IF NECESSARY TO PROVIDE EXACT PAINT MATCH.

C. CONTRACTOR IS RESPONSIBLE FOR RECEIVING AND OFFLOADING EQUIPMENT OF HIS SCOPE. IMMEDIATELY UPON RECEIPT, CONTRACTOR SHALL INSPECT ALL EQUIPMENT AND MATERIAL FOR SHIPPING DAMAGE AND REPLACE ANY DEFECTIVE ITEMS AT NO INCREASE TO CONTRACT AMOUNT.

1.6 SEQUENCING AND SCHEDULING

A. COORDINATE MECHANICAL EQUIPMENT INSTALLATION WITH OTHER BUILDING COMPONENTS PRIOR TO ORDERING OR FABRICATION OF ADJOINING WORK.

B. COORDINATE THE INSTALLATION OF REQUIRED SUPPORTING DEVICES AND SET SLEEVES IN POURED-IN-PLACE CONCRETE AND OTHER STRUCTURAL COMPONENTS AS THEY ARE CONSTRUCTED. ARRANGE FOR CHASES, SLOTS, AND OPENINGS IN BUILDING STRUCTURE DURING PROGRESS OF CONSTRUCTION TO ALLOW FOR MECHANICAL INSTALLATIONS.

C. SEQUENCE, COORDINATE, AND INTEGRATE INSTALLATIONS OF MECHANICAL MATERIALS AND EQUIPMENT FOR EFFICIENT FLOW OF THE WORK. COORDINATE INSTALLATION OF LARGE EQUIPMENT REQUIRING POSITIONING PRIOR TO CLOSING IN THE BUILDING.

D. COORDINATE CONNECTION OF MECHANICAL SYSTEMS WITH EXTERIOR UNDERGROUND AND OVERHEAD UTILITIES AND SERVICES. COMPLY WITH REQUIREMENTS OF GOVERNING REGULATIONS, FRANCHISED SERVICE COMPANIES, AND CONTROLLING AGENCIES. COORDINATE CONNECTION OF ELECTRICAL SERVICES.

E. PROVIDE IDENTIFICATION OF ALL EQUIPMENT. COORDINATE INSTALLATION OF IDENTIFYING DEVICES AFTER COMPLETING COVERING AND PAINTING WHERE DEVICES ARE APPLIED TO SURFACES. INSTALL IDENTIFYING DEVICES PRIOR TO INSTALLING ACOUSTICAL CEILINGS AND SIMILAR CONCEALMENT.

1.7 PROJECT CLOSE-OUT

A. CONTRACTOR SHALL FURNISH A WRITTEN GUARANTEE TO REPLACE OR REPAIR ANY DEFECTS IN WORKMANSHIP OR EQUIPMENT, WHICH DEVELOP WITHIN ONE YEAR FROM ACCEPTANCE BY THE OWNER. CONTRACTOR MUST ASSUME RESPONSIBILITY FOR ALL EXPENSES INCURRED TO REPAIR OR REPLACE HIS WORK AS WELL AS WORK OF OTHER TRADES THAT MAY BE AFFECTED BY THIS REPLACEMENT.

B. CONTRACTOR SHALL MAINTAIN A REDLINED SET OF CONSTRUCTION DRAWINGS SHOWING DEVIATIONS BETWEEN THE DRAWINGS AND INSTALLED CONDITIONS. THESE SHALL BE TURNED OVER TO THE OWNER AT ACCEPTANCE OF THE WORK.

C. PROVIDE THREE (3) COMPLETE SETS OF OPERATION AND MAINTENANCE MANUALS. THESE ARE TO INCLUDE ALL EQUIPMENT CUT-SHEETS, MANUFACTURERS RECOMMENDED MAINTENANCE PROCEDURES, MANUFACTURERS WARRANTEE INFORMATION, AND CONTRACTORS WARRANTEE LETTER AND CONTACT INFORMATION.

D. PROVIDE THREE (3) REVIEWED BALANCE REPORTS OF WATER AND AIR SYSTEMS AS APPLICABLE.

E. CONTRACTOR SHALL INSTRUCT THE OWNER ON THE OPERATION AND MAINTENANCE OF ALL SYSTEMS PROVIDED UNDER THIS CONTRACT.

PART 2 - PRODUCTS

2.1 GENERAL

A. DUCT DIMENSIONS SHOWN ON PLANS ARE NET FREE AREA.

B. ROUND ELBOWS MUST HAVE A CENTERLINE RADIUS OF NO LESS THAN 1.5 TIMES THE DIAMETER OF THE ELBOW. SQUARE ELBOWS SHALL HAVE TURNING VANES.

C. ALL DUCTWORK EXPOSED TO VIEW SHALL BE ROUND OR OVAL SPIRAL.

2.2 DUCTWORK MATERIALS

A. COMPLY WITH SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS--METAL AND FLEXIBLE" FOR ACCEPTABLE MATERIALS, MATERIAL THICKNESS, AND DUCT CONSTRUCTION METHODS, UNLESS OTHERWISE INDICATED. SHEET METAL MATERIALS SHALL BE FREE OF PITTING, SEAM MARKS, ROLLER MARKS, STAINS, DISCOLORATIONS, AND OTHER IMPERFECTIONS. UNLESS STATED OTHERWISE, ALL DUCTWORK TO BE 26 GAUGE MINIMUM.

B. GALVANIZED SHEET STEEL: LOCK-FORMING QUALITY; COMPLYING WITH ASTM A 653/A 653M AND HAVING G90 (Z275) COATING DESIGNATION; DUCTS SHALL HAVE MILL-PHOSPHATIZED FINISH FOR SURFACES EXPOSED TO VIEW.

C. CARBON-STEEL SHEETS: ASTM A 366/A 366M, COLD-ROLLED SHEETS; COMMERCIAL QUALITY; WITH OILED, MATTE FINISH FOR EXPOSED DUCTS.

D. STAINLESS STEEL: ASTM A 480/A 480M, TYPE 316 OR 304, AND HAVING A NO. 2D FINISH FOR CONCEALED DUCTS AND SUITABLE FINISH FOR EXPOSED DUCTS.

2.3 INSULATION AND LINER

A. GENERAL:
   1. FIRE-HAZARD CLASSIFICATION: MAXIMUM FLAME-SPREAD INDEX OF 25 AND SMOKE-DEVELOPED INDEX OF 50 WHEN TESTED ACCORDING TO ASTM E 84.
   2. INSULATION SCHEDULE:
      a. OUTSIDE THE BUILDING THERMAL ENVELOPE
         1. INSULATE ALL SUPPLY AND RETURN DUCTS TO R-8INSIDE THE BUILDING THERMAL ENVELOPE
      b. INSIDE THE BUILDING THERMAL ENVELOPE
         1. INSULATE SUPPLY AIR DUCTS TO R-6.
         2. INSULATE RETURN AIR DUCTS LOCATED IN UNCONDITIONED SPACES TO R-6.
         3. INSULATE OUTSIDE AIR DUCTS TO R-8 WITH CLOSED CELL INSULATION TO PREVENT CONDENSATION.
      c. INSIDE THE BUILDING THERMAL ENVELOPE AND EXPOSED WITHIN THE SPACE DUCTWORK IS SERVING
         1. SUPPLY AND RETURN DUCTS INSULATION NOT REQUIRED.

B. DUCT INSULATION: MINERAL OR GLASS FIBERS BONDED WITH A THERMOSETTING RESIN. COMPLY WITH ASTM C 553, TYPE II AND ASTM C 1290, TYPE III WITH FACTORY-APPLIED FSK JACKET.

C. FIBROUS-GLASS LINER: COMPLY WITH NFPA 90A OR NFPA 90B AND WITH NAIMA AH124.
   1. MATERIALS: ASTM C 1071; SURFACES EXPOSED TO AIRSTREAM SHALL BE COATED TO PREVENT EROSION OF GLASS FIBERS.
      a. THICKNESS: 1"
      b. LINER ADHESIVE: COMPLY WITH NFPA 90A OR NFPA 90B AND WITH ASTM C 916.
      c. MECHANICAL FASTENERS: GALVANIZED STEEL SUITABLE FOR ADHESIVE ATTACHMENT, MECHANICAL ATTACHMENT, OR WELDING ATTACHMENT TO DUCT WITHOUT DAMAGING LINER WHEN APPLIED AS RECOMMENDED BY MANUFACTURER AND WITHOUT CAUSING LEAKAGE IN DUCT.

D. FIRE-RATED INSULATION SYSTEMS: HIGH-TEMPERATURE, FLEXIBLE, BLANKET INSULATION WITH FSK JACKET THAT IS UL TESTED AND CERTIFIED TO PROVIDE REQUIRED FIRE RATING.

E. E. REFRIGERANT PIPING INSULATION: SUCTION PIPING - FLEXIBLE ELASTOMERIC, 1" THICK.

2.4 DUCT ACCESSORIES

A. STANDARD VOLUME DAMPERS: SINGLE OR OPPOSED-BLADE DESIGN, STANDARD LEAKAGE RATING, AND SUITABLE FOR HORIZONTAL OR VERTICAL APPLICATIONS. SHAFTS TO BE FULL LENGTH, GALVANIZED STEEL, WITH ZINC-PLATED, DIE-CAST CORE WITH DIAL AND HANDLE MADE OF 3/32-INCH- THICK ZINC-PLATED STEEL, AND A 3/4-INCH HEXAGON LOCKING NUT. INCLUDE CENTER HOLE TO SUIT DAMPER OPERATING-ROD SIZE. INCLUDE ELEVATED PLATFORM FOR INSULATED DUCT MOUNTING.

B. FIRE DAMPERS: CURTAIN TYPE; FIRE DAMPERS SHALL BE LABELED ACCORDING TO UL 555.
   1. FRAME: FABRICATED WITH ROLL-FORMED, 0.034-INCH- THICK GALVANIZED STEEL; WITH MITERED AND INTERLOCKING CORNERS.
   2. BLADES: ROLL-FORMED, INTERLOCKING, 0.034-INCH- THICK, GALVANIZED SHEET STEEL. IN PLACE OF INTERLOCKING BLADES, USE FULL-LENGTH, 0.034-INCH- THICK, GALVANIZED-STEEL BLADE CONNECTORS.
   3. FUSIBLE LINK: REPLACEABLE, 165 DEGREE F RATED.

C. CEILING FIRE DAMPERS: LABELED ACCORDING TO UL 555C; COMPLY WITH CONSTRUCTION DETAILS FOR TESTED FLOOR- AND ROOF-CEILING ASSEMBLIES AS INDICATED IN UL'S "FIRE RESISTANCE DIRECTORY."
   1. FRAME: GALVANIZED SHEET STEEL, ROUND OR RECTANGULAR, STYLE TO SUIT CEILING CONSTRUCTION.
   2. BLADES: GALVANIZED SHEET STEEL WITH REFRACTORY INSULATION.
   3. FUSIBLE LINK: REPLACEABLE, 165 DEGREE F RATED.

D. COMBINATION FIRE/SMOKE DAMPERS: LABELED ACCORDING TO UL 555S. COMBINATION FIRE AND SMOKE DAMPERS SHALL BE LABELED ACCORDING TO UL 555 FOR 1-1/2-HOUR RATING.
   1. FRAME AND BLADES: 0.064-INCH THICK, GALVANIZED SHEET STEEL.
   2. MOUNTING SLEEVE: FACTORY-INSTALLED, 0.052-INCH THICK, GALVANIZED SHEET STEEL; LENGTH TO SUIT WALL OR FLOOR APPLICATION.
   3. FUSIBLE LINK: REPLACEABLE, 165 DEGREE F RATED.
   4. DAMPER MOTORS: MODULATING AND TWO-POSITION ACTION. EQUIP WITH AN INTEGRAL SPIRAL-SPRING MECHANISM WHERE INDICATED. ENCLOSE ENTIRE SPRING MECHANISM IN A REMOVABLE HOUSING DESIGNED FOR SERVICE OR ADJUSTMENTS.
   5. ELECTRICAL CONNECTION: 115 V, SINGLE PHASE, 60 HZ.
   6. SMOKE DETECTOR: INTEGRAL, FACTORY WIRED FOR SINGLE-POINT CONNECTION, COORDINATE WITH ELECTRICAL CONTRACTOR AND FIRE ALARM CONTRACTOR.

E. FLEXIBLE CONNECTORS: FLAME-RETARDANT OR NONCOMBUSTIBLE FABRICS, COATINGS, AND ADHESIVES COMPLYING WITH UL 181, CLASS 1. PROVIDE HEAVY METAL EDGE BANDS, SEALED TO PREVENT LEAKAGE.
   1. INDOOR SYSTEM, FLEXIBLE CONNECTOR FABRIC: GLASS FABRIC DOUBLE COATED WITH NEOPRENE.
   2. OUTDOOR SYSTEM, FLEXIBLE CONNECTOR FABRIC: GLASS FABRIC DOUBLE COATED WITH WEATHERPROOF, SYNTHETIC RUBBER RESISTANT TO UV RAYS AND OZONE.

F. FLEXIBLE DUCTS: UL 181, CLASS 1, UL 181, CLASS 1, BLACK POLYMER FILM SUPPORTED BY HELICALLY WOUND, SPRING-STEEL WIRE; 1-1/2" FIBROUS-GLASS INSULATION; POLYETHYLENE VAPOR BARRIER FILM. FLEX DUCT SHALL BE EQUAL TO CERTAINTEED "CERTAFLEX" G25.

2.5 ACCESS DOORS AND PANELS

A. DUCT MOUNTED ACCESS DOORS: DOUBLE WALL, DUCT MOUNTING, AND RECTANGULAR; FABRICATED OF GALVANIZED SHEET METAL WITH INSULATION FILL AND THICKNESS AS INDICATED FOR DUCT PRESSURE CLASS.
   1. FRAME: GALVANIZED SHEET STEEL, WITH BEND-OVER TABS AND FOAM GASKETS.
   2. PROVIDE NUMBER OF HINGES AND LOCKS AS FOLLOWS:
      a. LESS THAN 12 INCHES SQUARE: SECURE WITH TWO SASH LOCKS.
      b. UP TO 18 INCHES SQUARE: TWO HINGES AND TWO SASH LOCKS.
      c. UP TO 24 BY 48 INCHES: THREE HINGES AND TWO COMPRESSION LATCHES.

2.6 EQUIPMENT CURBS AND SUPPORT

A. ROOF MOUNTED EQUIPMENT: PROVIDE FACTORY CURB TO MATCH EQUIPMENT PROVIDED. CURB TO MATCH ROOF SLOPE, TYPE, AND INSULATION DEPTHS FOR PROPER EQUIPMENT MOUNTING (ACCOUNT FOR APPLICABLE ACCESSORIES SUCH AS ECONOMIZERS AND ERVS).

B. GROUND/FLOOR MOUNTED EQUIPMENT: PROVIDE CONCRETE HOUSE-KEEPING PAD AT LEAST 4" THICK AND AT LEAST 6" LARGER THAN THE EQUIPMENT BEING SUPPORTED.

PART 3 - EXECUTION

3.1 EXAMINATION

A. VERIFY FINAL LOCATIONS FOR ROUGH-INS WITH FIELD MEASUREMENTS AND WITH THE REQUIREMENTS OF THE ACTUAL EQUIPMENT TO BE CONNECTED.

B. LOCATIONS OF EQUIPMENT AND DEVICES, AS SHOWN ON THE DRAWINGS, ARE APPROXIMATE UNLESS DIMENSIONED; DO NOT SCALE DRAWINGS. EXACT LOCATIONS OF SUCH ITEMS SHALL BE DETERMINED BY THE ARCHITECT'S REPRESENTATIVE AND/OR DETERMINED FROM SPECIAL DETAILS AND DRAWINGS. VERIFY THE PHYSICAL DIMENSIONS OF EACH ITEM OF MECHANICAL EQUIPMENT TO FIT THE AVAILABLE SPACE AND PROMPTLY NOTIFY THE ARCHITECT PRIOR TO ROUGHING-IN IF CONFLICTS APPEAR. COORDINATION OF DIVISION 15 EQUIPMENT AND SYSTEMS TO THE AVAILABLE WIRING, EQUIPMENT, DUCTWORK, PIPING, ETC. SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE INSTALLATION SHALL BE CONCEALED WITHIN BUILDING CONSTRUCTION, OR EXPOSED IN MECHANICAL ROOMS, UNLESS OTHERWISE NOTED.

3.2 GENERAL INSTALLATION

A. PROVIDE ALL VALVES, DAMPERS AND CONTROL DEVICES REQUIRED TO COMPLETE BALANCING OF SYSTEMS AS DESCRIBED IN THESE DOCUMENTS OR AS NORMALLY ASSOCIATED WITH THE SYSTEMS TO BE INSTALLED WHETHER SPECIFICALLY CALLED FOR ON THE DRAWINGS, DETAILS OR SPECIFICATIONS OR NOT. IT SHALL BE UNDERSTOOD, UNLESS SPECIFICALLY STATED OTHERWISE, THAT ALL SYSTEMS INSTALLED SHALL COMPLY WITH INDUSTRY RECOGNIZED STANDARDS AND FEATURES.

B. COORDINATE MECHANICAL SYSTEMS, EQUIPMENT, AND MATERIALS INSTALLATION WITH OTHER BUILDING COMPONENTS. SEQUENCE, COORDINATE, AND INTEGRATE INSTALLATIONS OF MECHANICAL MATERIALS AND EQUIPMENT FOR EFFICIENT FLOW OF THE WORK. GIVE PARTICULAR ATTENTION TO LARGE EQUIPMENT REQUIRING POSITIONING PRIOR TO CLOSING IN THE BUILDING. GIVE RIGHT-OF-WAY PRIORITY TO SYSTEMS REQUIRED TO BE INSTALLED AT A SPECIFIED SLOPE.

C. WHERE MOUNTING HEIGHTS ARE NOT DETAILED OR DIMENSIONED, INSTALL SYSTEMS, MATERIALS, AND EQUIPMENT TO PROVIDE THE MAXIMUM HEADROOM POSSIBLE.

D. INSTALL SYSTEMS, MATERIALS, AND EQUIPMENT LEVEL AND PLUMB, PARALLEL AND PERPENDICULAR TO OTHER BUILDING SYSTEMS AND COMPONENTS, WHERE INSTALLED EXPOSED IN FINISHED SPACES.

E. INSTALL MECHANICAL EQUIPMENT TO FACILITATE SERVICING, MAINTENANCE, AND REPAIR OR REPLACEMENT OF EQUIPMENT COMPONENTS. AS MUCH AS PRACTICAL, CONNECT EQUIPMENT FOR EASE OF DISCONNECTING, WITH MINIMUM OF INTERFERENCE WITH OTHER INSTALLATIONS. EXTEND GREASE FITTINGS TO AN ACCESSIBLE LOCATION.

F. DRAWINGS ARE NOT DETAILED TO THE EXTENT THAT ALL DUCTWORK AND PIPING OFFSETS, BENDS, AND SPECIAL FITTINGS ARE SHOWN AND EXACT LOCATION INDICATED; HOWEVER, THEY ARE TO BE PROVIDED WHETHER SHOWN OR NOT. REFER TO SCHEDULES FOR ACCESSORIES.

G. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPERLY PROTECTING ANY PENETRATION OF A FIRE RATED ASSEMBLY. FIRE SEAL, CAULKING, AND APPURTENANCES SHALL BE UL LISTED FOR THE ASSEMBLY RATING IT IS APPLIED TO AND SHALL BE INSTALLED PER THE MANUFACTURERS WRITTEN INSTRUCTIONS. ALL SUCH MATERIALS SHALL MEET STATE, LOCAL, AND AUTHORITIES CODES AND STANDARDS.

H. PENETRATIONS ARE PROHIBITED IN ANY STRUCTURAL MEMBERS (EXCEPT WHERE NOTED IN DRAWINGS) WITHOUT THE WRITTEN CONSENT OF THE ARCHITECT. OBTAIN APPROVAL FOR OTHER FRAMED OPENINGS WHICH MAY BE REQUIRED IN ADDITION TO THOSE SHOWN ON DRAWINGS. PAY ALL COSTS FOR ADDITIONAL CUTTING OF HOLES AS THE RESULT OF INCORRECT LOCATION OF SLEEVES OR FURNISHING INCORRECT INFORMATION AS TO THE REQUIREMENTS OF FRAMED OPENINGS.

I. FIRE-RATED ASSEMBLY PENETRATIONS:
   1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPERLY PROTECTING ANY PENETRATION OF A FIRE RATED ASSEMBLY. FIRE SEAL, CAULKING, AND APPURTENANCES SHALL BE UL LISTED FOR THE ASSEMBLY RATING IT IS APPLIED TO AND SHALL BE INSTALLED PER THE MANUFACTURERS WRITTEN INSTRUCTIONS. ALL SUCH MATERIALS SHALL MEET STATE, LOCAL, AND AUTHORITIES CODES AND STANDARDS.
   2. REFER TO ARCHITECTURAL DRAWINGS FOR ALL FIRE RATED ASSEMBLY LOCATIONS AND RATINGS.

J. SEISMIC RESTRAINT:
   1. THE CONTRACTOR SHALL PROVIDE PROPER MECHANICAL SEISMIC RESTRAINTS FOR ALL INSTALLED ITEMS INCLUDING, BUT NOT LIMITED TO, DUCTS, PIPING, EQUIPMENT AND ACCESSORIES. THE CONTRACTOR SHALL PROVIDE SEISMIC RESTRAINTS AS LISTED BY THE CODES USED BY THE AHJ OR AS SHOWN ON THE DRAWINGS (WHICHEVER IS MORE STRINGENT).

3.3 DUCT INSTALLATION

A. CONSTRUCT AND INSTALL DUCTS ACCORDING TO SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS--METAL AND FLEXIBLE."

B. INSTALL DUCTS WITH FEWEST POSSIBLE JOINTS. INSTALL FABRICATED FITTINGS FOR CHANGES IN DIRECTIONS, SIZE, AND SHAPE AND FOR CONNECTIONS.

C. COORDINATE LAYOUT WITH SUSPENDED CEILING, FIRE- AND SMOKE-CONTROL DAMPERS, LIGHTING LAYOUTS, AND SIMILAR FINISHED WORK.

D. SEAL ALL JOINTS WITH UNITED DUCT SEALANT. APPLY SEALANT TO MALE END CONNECTORS BEFORE INSERTION, AND AFTERWARD TO COVER ENTIRE JOINT AND SHEET METAL SCREWS.

E. NON-FIRE-RATED PARTITION PENETRATIONS: WHERE DUCTS PASS THROUGH INTERIOR PARTITIONS AND EXTERIOR WALLS AND ARE EXPOSED TO VIEW, CONCEAL SPACES BETWEEN CONSTRUCTION OPENINGS AND DUCTS OR DUCT INSULATION WITH SHEET METAL FLANGES OF SAME METAL THICKNESS AS DUCTS. OVERLAP OPENINGS ON 4 SIDES BY AT LEAST 1-1/2 INCHES.

F. FIRE-RATED PARTITION PENETRATIONS: WHERE DUCTS PASS THROUGH INTERIOR PARTITIONS AND EXTERIOR WALLS, INSTALL APPROPRIATELY RATED FIRE DAMPERS, SLEEVES, AND FIRESTOPPING SEALANT.

G. PAINT INTERIORS OF METAL DUCTS, THAT DO NOT HAVE DUCT LINER, FOR 24 INCHES UPSTREAM OF REGISTERS AND GRILLES. APPLY ONE COAT OF FLAT, BLACK, LATEX FINISH COAT OVER A COMPATIBLE GALVANIZED-STEEL PRIMER.

H. PROVIDE BALANCING DAMPERS AT POINTS ON SUPPLY, RETURN, AND EXHAUST SYSTEMS WHERE BRANCHES LEAD FROM LARGER DUCTS AS REQUIRED FOR AIR BALANCING. INSTALL AT A MINIMUM OF TWO DUCT WIDTHS FROM BRANCH TAKEOFF.

I. INSTALL FLEXIBLE CONNECTORS IMMEDIATELY ADJACENT TO EQUIPMENT IN DUCTS ASSOCIATED WITH FANS AND MOTORIZED EQUIPMENT SUPPORTED BY VIBRATION ISOLATORS.

J. CONNECT DIFFUSERS GRILLES TO LOW PRESSURE DUCTS WITH MAXIMUM 72-INCH LENGTHS OF FLEXIBLE DUCT CLAMPED OR STRAPPED IN PLACE. CONNECT FLEXIBLE DUCTS TO METAL DUCTS WITH DRAW BANDS.

K. INSTALL BACKDRAFT DAMPERS ON EXHAUST FANS OR EXHAUST DUCTS NEAREST TO OUTSIDE AND WHERE INDICATED.

L. TYPE I HOOD EXHAUST DUCTS: COMPLY WITH NFPA 96.
   1. CONCEALED: CARBON-STEEL SHEET.
   2. EXPOSED: TYPE 304, STAINLESS STEEL WITH FINISH TO MATCH KITCHEN EQUIPMENT AND RANGE HOOD.
   3. WELD SEAMS AND JOINTS.
   4. PROVIDE RATED ACCESS DOORS FOR DUCT CLEANING AS REQUIRED BY CODE.
   5. INSTALL DUCTS TO ALLOW FOR THERMAL EXPANSION THROUGH 2000 DEG F (1110 DEG C) TEMPERATURE RANGE.

M. DISHWASHER HOOD EXHAUST DUCTS:
   1. TYPE 304, STAINLESS STEEL WITH FINISH TO MATCH KITCHEN EQUIPMENT AND RANGE HOOD.
   2. WELD SEAMS AND JOINTS.

3.4 HANGING AND SUPPORTING

A. SUPPORT HORIZONTAL DUCTS WITHIN 24 INCHES OF EACH ELBOW AND WITHIN 48 INCHES OF EACH BRANCH INTERSECTION.

B. SUPPORT VERTICAL DUCTS AT MAXIMUM INTERVALS OF 16 FEET AND AT EACH FLOOR.

C. SUPPORT ALL DUCTWORK, PIPING, AND EQUIPMENT AS REQUIRED BY THE LOCAL CODES, MANUFACTURERS RECOMMENDATIONS, AND STANDARD INDUSTRY PRACTICE.

D. USE MATERIALS COMPATIBLE WITH ITEMS BEING SUPPORTED TO AVOID ELECTROLYTIC ACTION, AND CONFORM TO SMACNA, ANSI/ASME B31, NFPA, MSS SP-58, 69, 89.

3.5 ACCESS DOORS AND PANELS

A. DUCT ACCESS DOORS: INSTALL DUCT ACCESS DOORS TO ALLOW FOR INSPECTING, ADJUSTING, AND MAINTAINING ACCESSORIES AND TERMINAL UNITS AS FOLLOWS:
   1. ADJACENT TO FIRE OR SMOKE DAMPERS, PROVIDING ACCESS TO RESET OR REINSTALL FUSIBLE LINKS.

B. ARCHITECTURAL ACCESS DOORS OR PANELS: COORDINATE REQUIREMENTS FOR ACCESS PANELS AND DOORS WHERE MECHANICAL ITEMS REQUIRING ACCESS ARE CONCEALED BEHIND FINISHED SURFACES. THIS CONTRACTOR SHALL PROVIDE ACCESS PANELS OR DOORS OF SUFFICIENT SIZE TO ALLOW ACCESS TO HIS WORK THAT REQUIRES ACCESS FOR MAINTENANCE OR INSPECTION.

3.6 TESTING AND BALANCING

A. PERFORM TESTING AND BALANCING PROCEDURES ON EACH SYSTEM ACCORDING TO THE PROCEDURES CONTAINED IN NEBB'S "PROCEDURAL STANDARDS FOR TESTING, ADJUSTING, AND BALANCING OF ENVIRONMENTAL SYSTEMS" OR SMACNA'S "HVAC SYSTEMS - TESTING, ADJUSTING, AND BALANCING".

B. PREPARE TEST REPORTS FOR BOTH FANS AND OUTLETS. OBTAIN MANUFACTURER'S OUTLET FACTORS AND RECOMMENDED TESTING PROCEDURES. CROSSCHECK THE SUMMATION OF REQUIRED OUTLET VOLUMES WITH REQUIRED FAN VOLUMES.

C. ADJUST TERMINAL OUTLETS AND INLETS FOR EACH SPACE TO INDICATED AIRFLOWS WITHIN SPECIFIED TOLERANCES OF INDICATED VALUES. MAKE ADJUSTMENTS USING VOLUME DAMPERS RATHER THAN EXTRACTORS AND THE DAMPERS AT AIR TERMINALS.

D. PREPARE TEST REPORTS WITH PERTINENT DESIGN DATA AND NUMBER IN SEQUENCE STARTING AT PUMP TO END OF SYSTEM. CHECK THE SUM OF BRANCH-CIRCUIT FLOWS AGAINST APPROVED PUMP FLOW RATE. CORRECT VARIATIONS THAT EXCEED PLUS OR MINUS 5 PERCENT.

3.7 CONTROLS AND ELECTRICAL COMPONENTS

A. WHERE REQUIRED, CONTRACTOR SHALL FURNISH A COMBINATION STARTER SIZED IN ACCORDANCE WITH THE MOTOR RATING. STARTER SHALL BE SUPPLIED WITH FUSES OR CIRCUIT BREAKERS, CONTROL TRANSFORMER, OVERLOADS, ONE N.O. AND ONE N.C. AUXILIARY CONTACTS, AND AN HOA SWITCH IN THE CABINET COVER. STARTER ENCLOSURE SHALL BE NEMA RATED FOR ITS LOCATION. STARTER SHALL BE WIRED AND INSTALLED BY THE ELECTRICAL CONTRACTOR.

B. CONTRACTOR SHALL PROVIDE A COMPLETE CONTROL SYSTEM TO OPERATE THE EQUIPMENT AS DESCRIBED IN THESE DOCUMENTS. SYSTEM SHALL INCLUDE THERMOSTATS, LOW VOLTAGE WIRING, REQUIRED CONDUIT, TRANSFORMERS, AND ASSOCIATED APPURTENANCES REQUIRED TO MEET THE INTENT OF THESE DOCUMENTS.

C. CONTRACTOR SHALL PROVIDE AND INSTALL UL LISTED DUCT SMOKE DETECTORS AS SHOWN ON THE DRAWINGS. DETECTORS SHALL HAVE AUXILIARY CONTACTS FOR CONNECTION TO THE FIRE ALARM SYSTEM IF REQUIRED. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR LOW VOLTAGE WIRING TO SHUT DOWN HIS EQUIPMENT BASED ON THE STATUS OF THIS DEVICE. POWER WIRING AND WIRING TO FIRE ALARM SYSTEM TO BE BY OTHERS.

GENERAL MECHANICAL NOTES

(TYPICAL FOR ALL MECHANICAL SHEETS)

A. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL UTILITIES, PIPING, UNDERGROUND WIRING, TELEPHONE, TV AND/OR SATELLITE DISH CABLES, ETC. BEFORE WORK BEGINS.

B. EQUIPMENT, MECHANICAL PIPING AND DUCTWORK INDICATED IS PARTIALLY DIAGRAMMATIC. CONTRACTOR SHALL DETERMINE IN FIELD EXACT LOCATION OF ALL DUCTWORK, PIPING AND EQUIPMENT. CONTRACTOR SHALL COORDINATE WITH ALL OTHER TRADES PRIOR TO INSTALLATION OF HIS/HER EQUIPMENT.

C. UPON COMPLETION OF WORK THE CONTRACTOR SHALL CLEAN ALL DEBRIS FROM THE WORK AREA AND OTHER AREAS USED BY THE CONTRACTOR, AND LEAVE PREMISES IN A NEAT AND CLEAN CONDITION. CLEAN, PATCH AND REPAIR ALL WALLS, FLOORS, CEILINGS, AND OTHER SURFACES DAMAGED OR MARKED DURING CONSTRUCTION.

D. ALL WORK SHALL COMPLY WITH THE MOST STRINGENT OF APPLICABLE CODES, ORDINANCES, AND REQUIREMENTS BY THE OWNER AND MANUFACTURER.

E. COORDINATE DIFFUSER/GRILLE LOCATIONS WITH ARCHITECT.

F. INSULATE ALL PIPING & DUCTWORK COMPLETE IN ACCORDANCE WITH THE PLANS, SPECIFICATIONS AND APPLICABLE ENERGY CODE. INSULATION WORK SHALL BE PERFORMED BY A COMPANY WHO'S PRIMARY FUNCTION IS MECHANICAL INSULATION INSTALLATION, AND SHALL HAVE A MINIMUM OF THREE YEARS DOCUMENTED EXPERIENCE.

G. CONTRACTOR SHALL THOROUGHLY CLEAN ALL DUCTWORK AND EQUIPMENT COMPLETE AND INSTALL NEW FILTERS PRIOR TO AIR BALANCE. ALL DUCTWORK OPENINGS INCLUDING GRILLES AND DIFFUSERS SHALL BE SEALED AIR TIGHT UNTIL CONSTRUCTION IS 100% COMPLETE AND FINAL CLEANING HAS BEEN COMPLETED.

H. INSTALL ALL EQUIPMENT IN STRICT ACCORDANCE WITH MANUFACTURERS WRITTEN INSTRUCTIONS.

I. COORDINATE ALL MECHANICAL PIPING & DUCTWORK PENETRATIONS WITH STRUCTURAL PLANS AND SCHEDULES. CRITICAL INSTALLATION AREAS ARE INDICATED WITH DIMENSIONS.

J. INSTALL FLEXIBLE DUCT CONNECTIONS AT ALL UNIT CONNECTIONS. ALL SUSPENDED EQUIPMENT SHALL BE ISOLATED FROM THE STRUCTURE WITH SPRING VIBRATION ISOLATORS AND KELLET PADS.

K. INSTALL ALL SLAB MOUNTED EQUIPMENT EXCEPT FOR TANKS ON KELLET ISOLATOR PADS - NO EXCEPTIONS.

L. INSULATE ALL HYDRONIC PIPING COMPLETE.

M. FOR HYDRONIC/HVAC PIPING SYSTEMS, BRASS VALVES SHALL BE USED EXCLUSIVELY IN ALL AREAS OUTSIDE OF MECHANICAL ROOMS. THIS VALVE REQUIREMENT SHALL SUPERSEDE DIVISION 22 AND 23 SPECIFICATIONS.

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sheet **MECHANICAL SPECIFICATIONS SHEET**

project **MISSOULA COUNTY COURTHOUSE SELF HELP MOVE**
200 WEST BROADWAY, 2ND FLOOR

owner MISSOULA COUNTY, 200 WEST BROADWAY STREET, MISSOULA, MT 59802

project # **25004.0**
AEG # **24045**

revision date

phase
CONSTRUCTION DOCUMENTS

a&e

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issue date
04.24.2025

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Exhibit B

SPECIFIC SHEET NOTES

1. E.C. SHALL CAUTIOUSLY REMOVE EXISTING CARD READER, SAVE FOR RELOCATION. REPAIR WALL TO MATCH ADJACENT FINISHES, PER ARCHITECTURAL.

2. E.C. TO REMOVE EXISTING LIGHT, FOR RELOCATION IN NEW CEILING, REFERENCE ARCHITECTURAL.

3. E.C. SHALL CAUTIOUSLY REMOVE EXISTING SMOKE ALARM, TO BE RELOCATED IN NEW CEILING, REFERENCE ARCHITECTURAL.

4. M.C. SHALL CAUTIOUSLY REMOVE CEILING AROUND EXISTING SPRINKLER HEAD. TO BE RELOCATED, AND REROUTED AS NECESSARY IN NEW CEILING, REFERENCE ARCHITECTURAL.

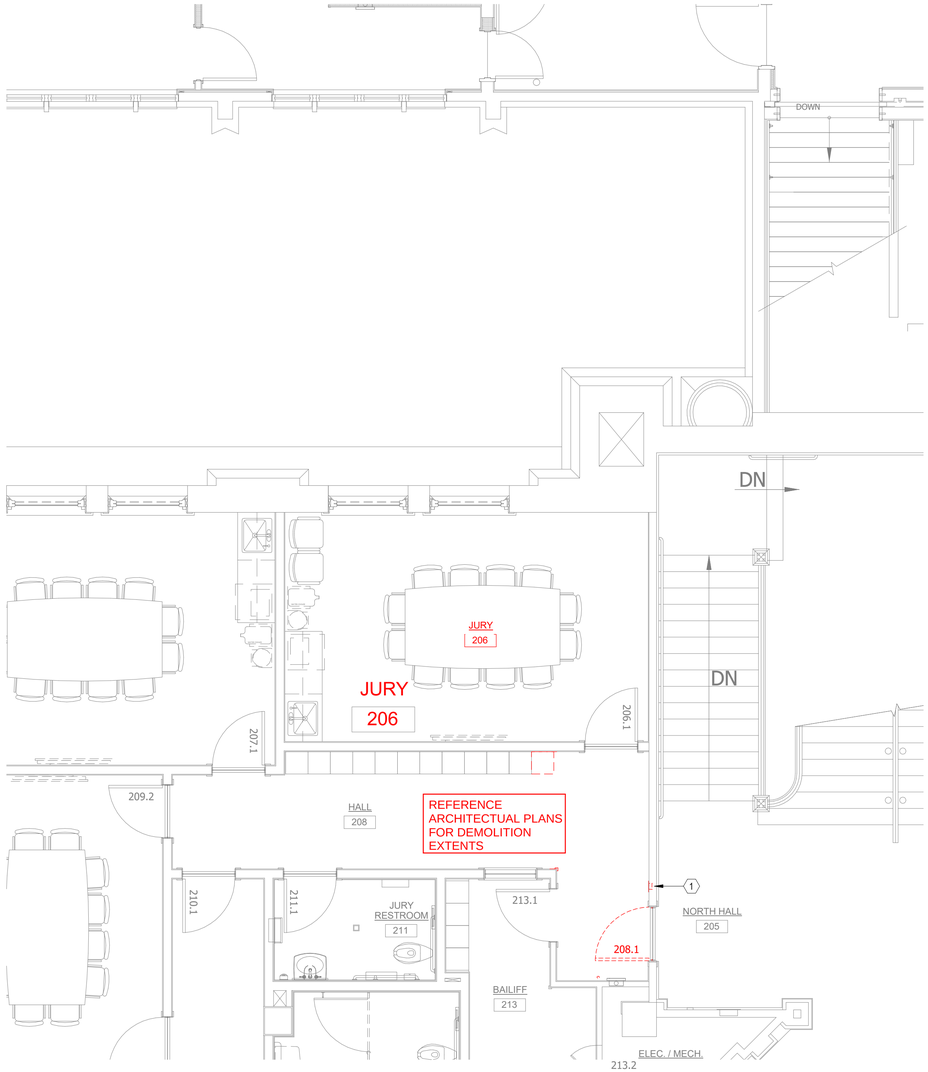
5. M.C. TO REMOVE TRANSFER GRILLE, SAVE FOR RELOCATION IN NEW CEILING, REFERENCE ARCHITECTURAL.

ELECTRICAL PROJECT NOTES

1. THIS PROJECT CONSISTS OF REMOVING, RELOCATING, AND FURNISHING NEW ELECTRICAL WORK AT THE REDESIGNED 2ND LEVEL SELF HELP AREA AT THE MISSOULA COUNTY COURTHOUSE ANNEX.
2. E.C. SHALL BE COGNIZANT THAT THIS IS A REMODELING PROJECT AND CERTAIN DETAILS AND ITEMS CANNOT BE FULLY EXPLAINED WITHOUT FIELD OBSERVATION. E.C. SHALL VISIT AND EXAMINE THE PROJECT AREA AND MAKE ALLOWANCES IN THEIR PROPOSAL FOR ALL CONDITIONS IMPACTING THEIR WORK.
3. THESE DRAWINGS HAVE BEEN PREPARED USING SITE INVESTIGATIONS AND PROVIDED RECORD DRAWINGS OF THE PROJECT AREA. NONE OF THE EXISTING BRANCH CIRCUITS OR THEIR PANEL DIRECTORIES HAVE BEEN VERIFIED. E.C. SHALL VERIFY EXISTING CONDITIONS AND INCLUDE IN THEIR BID A SUFFICIENT SUM OF MONEY TO COVER ANY DISCREPANCY BETWEEN THE DRAWINGS AND THE PROJECT'S EXISTING CONDITIONS.
4. ALL ITEMS (INCLUDING ALL ASSOCIATED OUTLET BOXES, WIRES, AND CONDUIT SUPPORTS) THAT ARE TO TO BE REMOVED SHALL BE REMOVED COMPLETELY TO THE LAST ACTIVE JUNCTION BOX FOR BRANCH CIRCUITS TO REMAIN; OR TO THE ELECTRICAL PANEL FOR COMPLETELY REMOVED BRANCH CIRCUITS.
5. E.C. SHALL TERMINATE ALL CONDUCTORS, RACEWAYS, ENCLOSURES, AND OTHER ELECTRICAL ITEMS USING APPROVED METHODS.
6. ALL TEMPORARY HAZARDOUS EXPOSURES SHALL BE PROPERLY ENCLOSED, GUARDED, BARRIERED, OR BARRICADED AT ALL TIMES TO PROTECT NON-ELECTRICAL PERSONNEL.
7. E.C. SHALL COORDINATE ALL COMMUNICATIONS UTILITIES (VOICE, DATA, SECURITY, TELEVISION, ETC.) WITH THE OWNER AND THE OWNER'S SUBCONTRACTORS PRIOR TO PERFORMING THE ROUGH-IN OF THE RACEWAYS, BOXES, AND CABLING INSTALLATIONS.
8. E.C. SHALL FURNISH COMPLETE ELECTRICAL SYSTEMS FOR ALL WORK THEY ARE BIDDING. E.C. SHALL INFORM THE ENGINEER OF ALL CONSTRUCTION ISSUES PRIOR TO PLACING THEIR BID THAT MAY IMPACT THEIR WORK AND CONTRACT BID AMOUNT.
9. E.C. SHALL BE RESPONSIBLE FOR ALL LINE VOLTAGE AND FIRE ALARM WIRING, COMMUNICATIONS, AND SPECIAL SYSTEMS RACEWAYS IN THIS PROJECT.
10. E.C. SHALL COORDINATE THEIR WORK WITH ALL OTHER TRADES.
11. E.C. SHALL FURNISH NEW, UPDATED PANEL DIRECTORIES FOR PANELS WHERE BRANCH CIRCUIT ADDITIONS, MODIFICATIONS, AND REMOVALS OCCUR. BRANCH CIRCUITS INDICATED ON THESE DRAWINGS ARE FROM THE RECORD DRAWINGS' PANEL SCHEDULES.
12. CONTRACTOR IS RESPONSIBLE FOR COORDINATING POWER CONNECTIONS TO FIRE SMOKE DAMPERS.

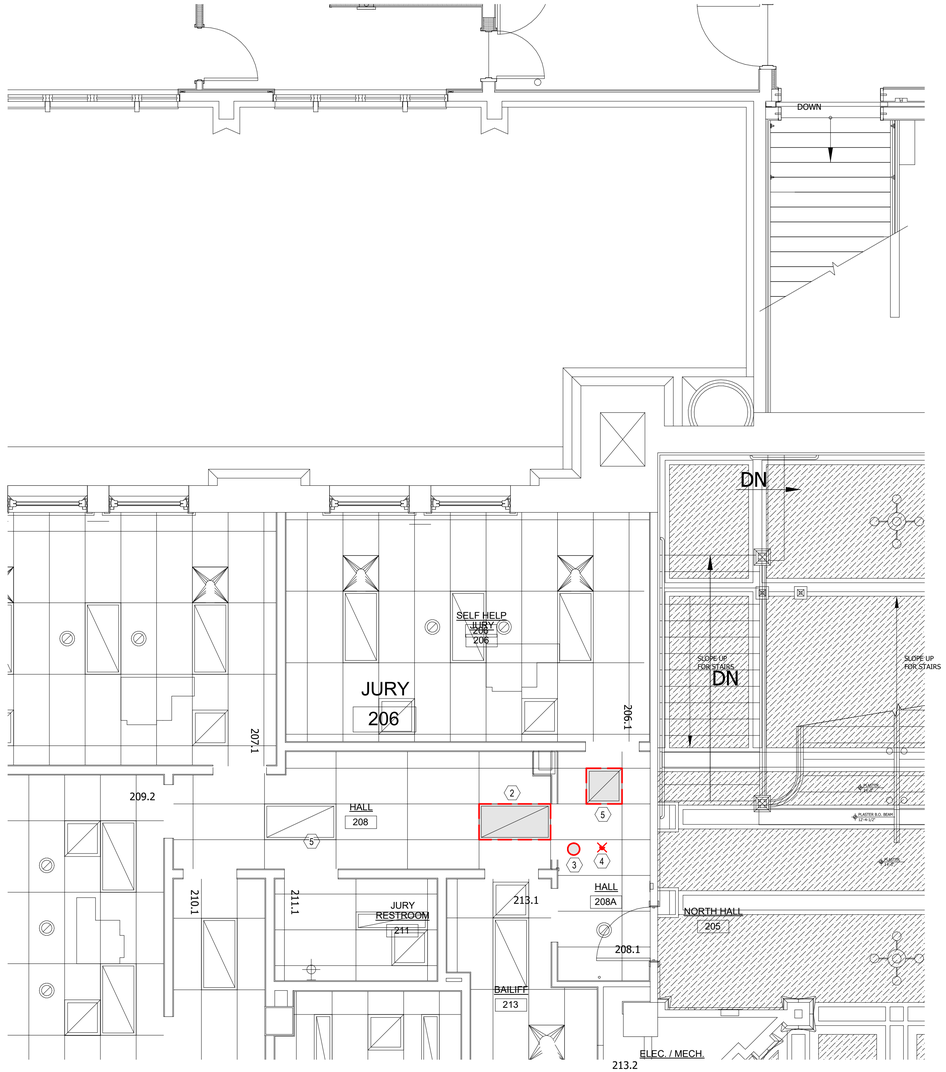
GENERAL MECHANICAL NOTES

A. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL UTILITIES, PIPING, UNDERGROUND WIRING, TELEPHONE, TV AND/OR SATELLITE DISH CABLES, ETC. BEFORE WORK BEGINS.
B. EQUIPMENT, MECHANICAL PIPING AND DUCTWORK INDICATED IS PARTIALLY DIAGRAMMATIC. CONTRACTOR SHALL DETERMINE IN FIELD EXACT LOCATION OF ALL DUCTWORK, PIPING AND EQUIPMENT. CONTRACTOR SHALL COORDINATE WITH ALL OTHER TRADES PRIOR TO INSTALLATION OF HIS/HER EQUIPMENT.
C. UPON COMPLETION OF WORK THE CONTRACTOR SHALL CLEAN ALL DEBRIS FROM THE WORK AREA AND OTHER AREAS USED BY THE CONTRACTOR, AND LEAVE PREMISES IN A NEAT AND CLEAN CONDITION. CLEAN, PATCH AND REPAIR ALL WALLS, FLOORS, CEILINGS, AND OTHER SURFACES DAMAGED OR MARKED DURING CONSTRUCTION.
D. ALL WORK SHALL COMPLY WITH THE MOST STRINGENT OF APPLICABLE CODES, ORDINANCES, AND REQUIREMENTS BY THE OWNER AND MANUFACTURER.
E. COORDINATE DIFFUSER/GRILLE LOCATIONS WITH ARCHITECT.
F. INSULATE ALL PIPING & DUCTWORK COMPLETE IN ACCORDANCE WITH THE PLANS, SPECIFICATIONS AND APPLICABLE ENERGY CODE. INSULATION WORK SHALL BE PERFORMED BY A COMPANY WHO'S PRIMARY FUNCTION IS MECHANICAL INSULATION INSTALLATION, AND SHALL HAVE A MINIMUM OF THREE YEARS DOCUMENTED EXPERIENCE.
G. CONTRACTOR SHALL THOROUGHLY CLEAN ALL DUCTWORK AND EQUIPMENT COMPLETE AND INSTALL NEW FILTERS PRIOR TO AIR BALANCE. ALL DUCTWORK OPENINGS INCLUDING GRILLES AND DIFFUSERS SHALL BE SEALED AIR TIGHT UNTIL CONSTRUCTION IS 100% COMPLETE AND FINAL CLEANING HAS BEEN COMPLETED.
H. INSTALL ALL EQUIPMENT IN STRICT ACCORDANCE WITH MANUFACTURERS WRITTEN INSTRUCTIONS.
I. COORDINATE ALL MECHANICAL PIPING & DUCTWORK PENETRATIONS WITH STRUCTURAL PLANS AND SCHEDULES. CRITICAL INSTALLATION AREAS ARE INDICATED WITH DIMENSIONS.
J. INSTALL FLEXIBLE DUCT CONNECTIONS AT ALL UNIT CONNECTIONS. ALL SUSPENDED EQUIPMENT SHALL BE ISOLATED FROM THE STRUCTURE WITH SPRING VIBRATION ISOLATORS AND KELLET PADS.
K. INSTALL ALL SLAB MOUNTED EQUIPMENT EXCEPT FOR TANKS ON KELLET ISOLATOR PADS - NO EXCEPTIONS.
L. INSULATE ALL HYDRONIC PIPING COMPLETE.
M. FOR HYDRONIC/HVAC PIPING SYSTEMS, BRASS VALVES SHALL BE USED EXCLUSIVELY IN ALL AREAS OUTSIDE OF MECHANICAL ROOMS. THIS VALVE REQUIREMENT SHALL SUPERSEDE DIVISION 22 AND 23 SPECIFICATIONS.



9 SECOND FLOOR MECHANICAL / ELECTRICAL DEMOLITION PLAN
SCALE: 1/4" = 1'-0"

NORTH



1 SECOND FLOOR - SELF HELP - RCP DEMOLITION PLAN
SCALE: 1/4" = 1'-0"

NORTH

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sheet: SECOND FLOOR MECH/ELECT. DEMOLITION PLANS
project: MISSOULA COUNTY COURTHOUSE SELF HELP MOVE
200 WEST BROADWAY, 2ND FLOOR
owner: MISSOULA COUNTY, 200 WEST BROADWAY STREET, MISSOULA, MT 59802

project # 25004.0
AEG # 24045

revision | date

phase: CONSTRUCTION DOCUMENTS

issue date: 04.24.2025

M2.0

Exhibit B

SPECIFIC SHEET NOTES

1. E.C. SHALL REINSTALL CARD READER TO THIS LOCATION.

2. E.C. SHALL PROVIDE AND INSTALL NEW CARD READER AT THIS LOCATION.

3. M.C. TO INSTALL TRANSFER GRILLE FOR AIR TRANSFER FROM MAIN (NORTH) HALL INTO NEW HALLWAY. 6X6, 4X10 OR SIMILAR SIZED GRILLE TO ACCOMODATE APPROXIMATE 60CFM FLOW.

4. M.C. TO INSTALL TRANSFER GRILLE FOR AIR TRANSFER FROM HALLWAY INTO RESTROOM. 6X6, 4X10 OR SIMILAR GRILLE TO ACCOMODATE APPROXIMATE 60CFM FLOW.

5. E.C. TO RELOCATE LIGHT IN NEW CEILING, REFERENCE ARCHITECTURAL.

6. E.C. TO RELOCATE EXISTING SMOKE ALARM IN NEW CEILING, REFERENCE ARCHITECTURAL.

7. M.C. TO REROUTE AND RELOCATE SPRINKLER HEAD AS NECESSARY IN NEW CEILING, REFERENCE ARCHITECTURAL.

8. M.C. TO RELOCATE TRANSFER GRILLE IN NEW CEILING, REFERENCE ARCHITECTURAL.

GENERAL MECHANICAL NOTES

A. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL UTILITIES, PIPING, UNDERGROUND WIRING, TELEPHONE, TV AND/OR SATELLITE DISH CABLES, ETC. BEFORE WORK BEGINS.
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C. UPON COMPLETION OF WORK THE CONTRACTOR SHALL CLEAN ALL DEBRIS FROM THE WORK AREA AND OTHER AREAS USED BY THE CONTRACTOR, AND LEAVE PREMISES IN A NEAT AND CLEAN CONDITION. CLEAN, PATCH AND REPAIR ALL WALLS, FLOORS, CEILINGS, AND OTHER SURFACES DAMAGED OR MARKED DURING CONSTRUCTION.
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F. INSULATE ALL PIPING & DUCTWORK COMPLETE IN ACCORDANCE WITH THE PLANS, SPECIFICATIONS AND APPLICABLE ENERGY CODE. INSULATION WORK SHALL BE PERFORMED BY A COMPANY WHO'S PRIMARY FUNCTION IS MECHANICAL INSULATION INSTALLATION, AND SHALL HAVE A MINIMUM OF THREE YEARS DOCUMENTED EXPERIENCE.
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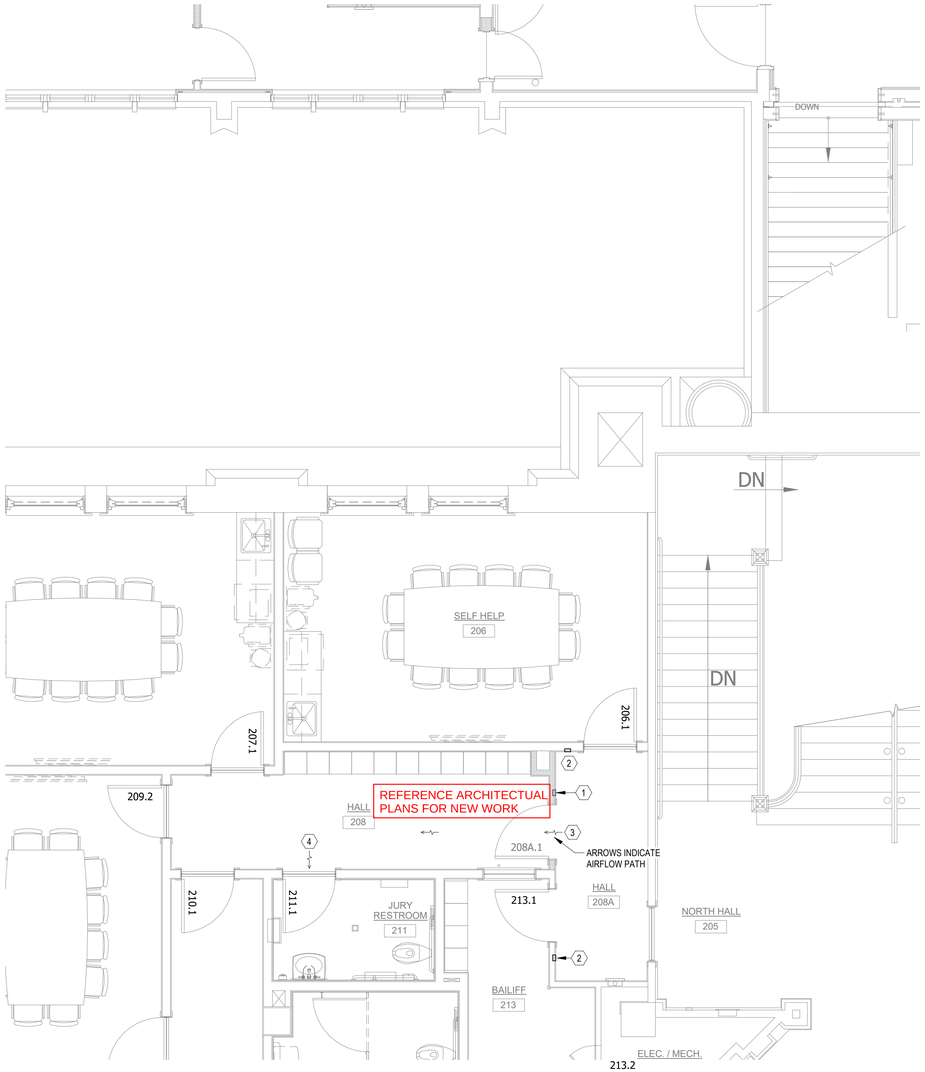
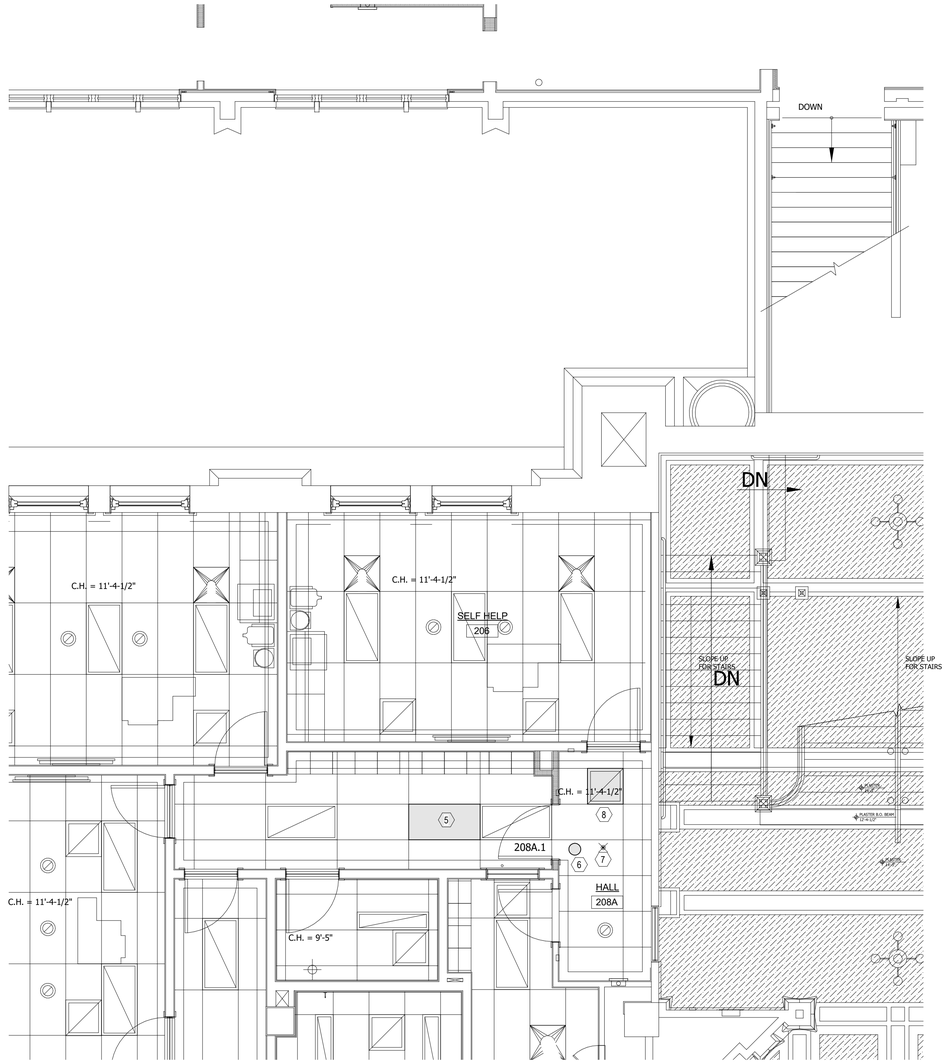
K. INSTALL ALL SLAB MOUNTED EQUIPMENT EXCEPT FOR TANKS ON KELLET ISOLATOR PADS - NO EXCEPTIONS.
L. INSULATE ALL HYDRONIC PIPING COMPLETE.
M. FOR HYDRONIC/HVAC PIPING SYSTEMS, BRASS VALVES SHALL BE USED EXCLUSIVELY IN ALL AREAS OUTSIDE OF MECHANICAL ROOMS. THIS VALVE REQUIREMENT SHALL SUPERSEDE DIVISION 22 AND 23 SPECIFICATIONS.



9 SECOND FLOOR MECHANICAL / ELECTRICAL NEW PLAN
SCALE: 1/4" = 1'-0"

NORTH



11 SECOND FLOOR - SELF HELP - ELECTRICAL NEW PLAN
SCALE: 1/4" = 1'-0"

NORTH

3/28/2025 4:59:58 PM

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sheet: SECOND FLOOR MECH/ELECT. NEW PLANS
project: MISSOULA COUNTY COURTHOUSE SELF HELP MOVE
200 WEST BROADWAY, 2ND FLOOR
owner: MISSOULA COUNTY, 200 WEST BROADWAY STREET, MISSOULA, MT 59802

project # 25004.0
AEG # 24045

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phase: CONSTRUCTION DOCUMENTS

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M2.1