OWEN GRADUATE HALL - WEST -

CONVERT OFFICE SPACE TO FRIB HOUSING
MICHIGAN STATE UNIVERSITY

EAST LANSING — MICHIGAN

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ARCHITECT'S PROJECT NO. 2022101

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INDEX OF DRAWINGS:

SCHEDULE OF ALTERNATES

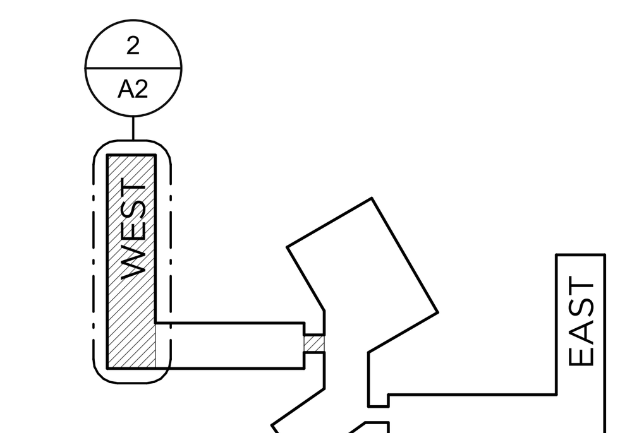
ALTERNATE NO. 1

1. BASE BID: FURNISH AND INSTALL NEW INTERIOR DEMISING WALLS (UNIT SEPERATION WALLS) AS SHOWN ON DRAWINGS
2. ALTERNATE: DEMOLISH AND REMOVE ALL EXISTING DEMISING WALLS (UNIT SEPERATION WALLS) RETAIN ANY ELECTRICAL OUTLETS/ CONDUITS ETC. FURNISH AND INSTALL 3-5/8" METAL STUD WALL 24" O.C WITH 3-1/2" GLASS FIBER FIT TO CAVITY, WITH 5/8" TYPE X GYPSUM BOARD, INSTALL OVER RESILIENT CHANEL (ONE SIDE) PROVIDE ACOUSTICAL SEALANT TOP AND BOTTOM. (RESET ALL EXISTING OUTLETS- SEE ELECTRICAL) UL DESIGN V438 , U465.

ALTERNATE NO. 2

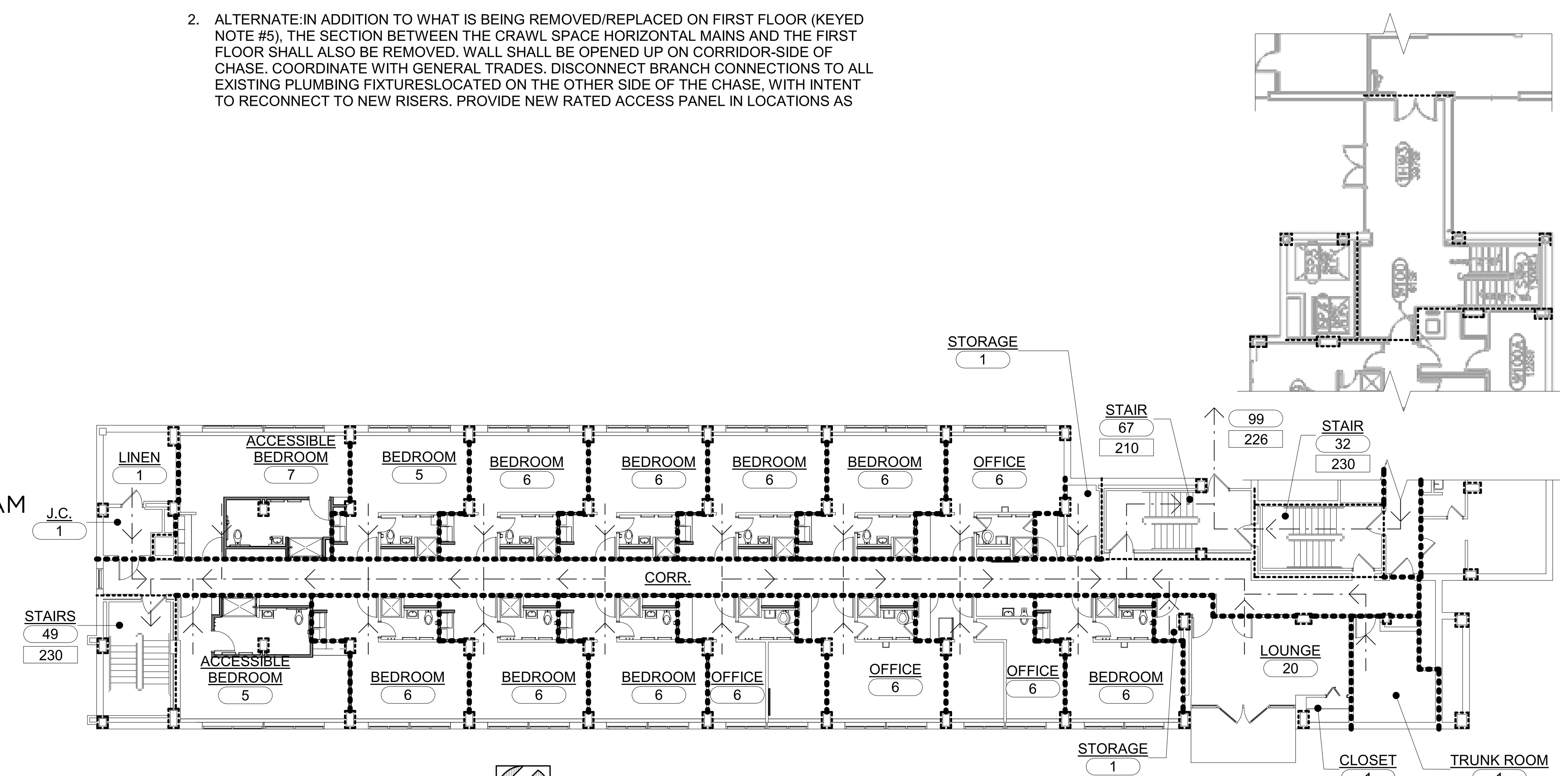
1. BASE BID : REMOVE AND REPLACE EXISITING H2-1/2" CW, 1-1/2" HW, 4" VENT AND 4" SANITARY PIPING RISER FROM FLOOR TO CEILING OF FIRST FLOOR AS INDICATED ON DRAWINGS.INCLUDE ACCESS PANEL IN LOCATIONS INDICATED
2. ALTERNATE:IN ADDITION TO WHAT IS BEING REMOVED/REPLACED ON FIRST FLOOR (KEYED NOTE #5), THE SECTION BETWEEN THE CRAWL SPACE HORIZONTAL MAINS AND THE FIRST FLOOR SHALL ALSO BE REMOVED. WALL SHALL BE OPENED UP ON CORRIDOR-SIDE OF CHASE. COORDINATE WITH GENERAL TRADES. DISCONNECT BRANCH CONNECTIONS TO ALL EXISTING PLUMBING FIXTURESLOCATED ON THE OTHER SIDE OF THE CHASE, WITH INTENT TO RECONNECT TO NEW RISERS. PROVIDE NEW RATED ACCESS PANEL IN LOCATIONS AS

NOTE: CONTRACTOR TO FOLLOW ALL MSU STANDARD DETAILS AND SPECIFICATIONS.



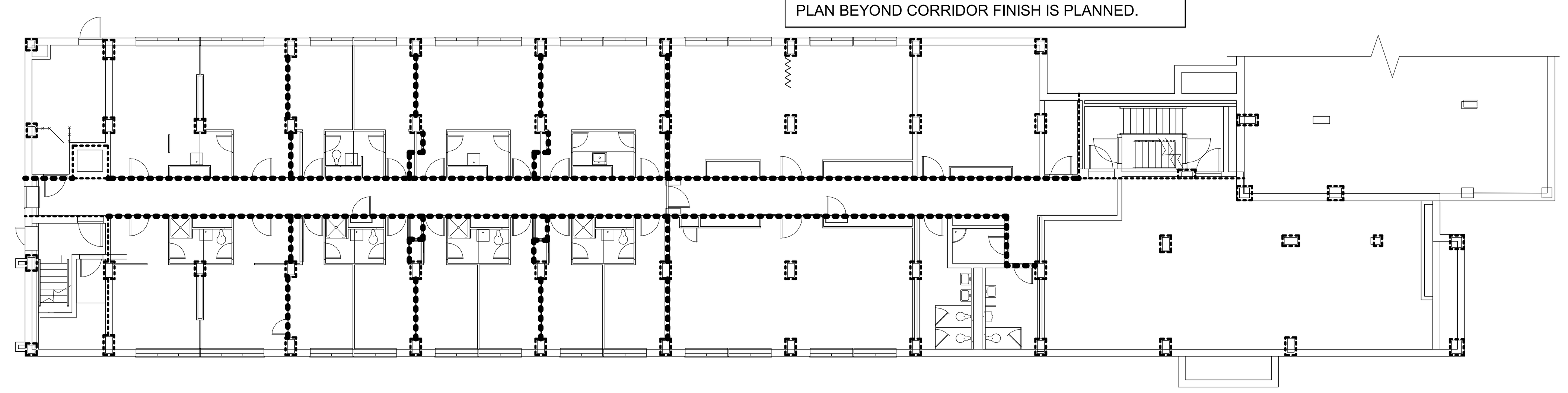
OWEN HALL KEY PLAN
NORTH SCALE: 1/4" = 1'-0"

MSU CAMPUS MAP
NORTH SCALE: 1/32" = 1'-0"



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

NOTE: BASEMENT LIFE SAFETY PLAN SHOWN FOR WALL RATINGS ONLY - NO MODIFICATION TO THE PLAN BEYOND CORRIDOR FINISH IS PLANNED.



BASEMENT LIFE SAFETY PLAN
NORTH SCALE: 1/16" = 1'-0"

CODE LEGEND

•••••••	1/2 HOUR FIRE PARTITION
----------	2 HOUR FIRE BARRIER
XXX (box)	CAPACITY OF EXIT CALCULATED
XXX (oval)	ASSIGNED OR ACTUAL OCCUPANT LOAD

CODE COMPLAINCE BUILDING DATA

- ALTERATIONS: LEVEL 2
- CHANGE OF OCCUPANCY:
  - FROM BUSINESS (B) BACK TO RESIDENTIAL (R-2)
- TYPE OF CONSTRUCTION: IB
  - ENTIRE BUILDING IS SPRINKLED
- FIRE RESISTANCE RATING REQUIREMENTS FOR BUILDING ELEMENTS:
  - STRUCTURAL FRAME — 2 HRS
  - BEARING WALLS
    - EXTERIOR — 2 HRS
    - INTERIOR — 2 HRS
  - NONBEARING WALLS
    - EXTERIOR — VARIES
    - INTERIOR — 0 HRS
  - FLOOR CONSTRUCTION — 2 HRS
  - ROOF CONSTRUCTION — 1 HRS
- CORRIDOR FIRE RESISTANCE RATING
  - WALLS — 1/2 HR FIRE PARTITION
  - DOORS — 20 MIN.
- DWELLING UNIT SEPARATION RATING:
  - WALLS — 1/2 HR FIRE PARTITION
  - FLOORS — 1 HOUR FIRE RATING
- SHAFT ENCLOSURE RATING:
  - WALLS — 2 HR FIRE BARRIER
  - DOORS — 90 MIN.
- MEANS OF EGRESS COMPONENTS:
  - DEAD END CORRIDORS: — 50 FT
  - COMMON PATH OF EGRESS TRAVEL — 125 FT
- OCCUPANT LOAD FACTORS
  - ASSEMBLY (TABLES AND CHAIRS) — 1/15 SF (NET)
  - DORMITORIES — 1/50 SF (GROSS)
  - STORAGE / MECHANICAL — 1/300 (GROSS)

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CONST. REP.	GIBSONA
APPR.	
DATE	06.08.23
SCALE	AS SHOWN

REVISIONS
ISSUED FOR BID

TITLE SHEET, LIFE SAFETY PLAN

TS

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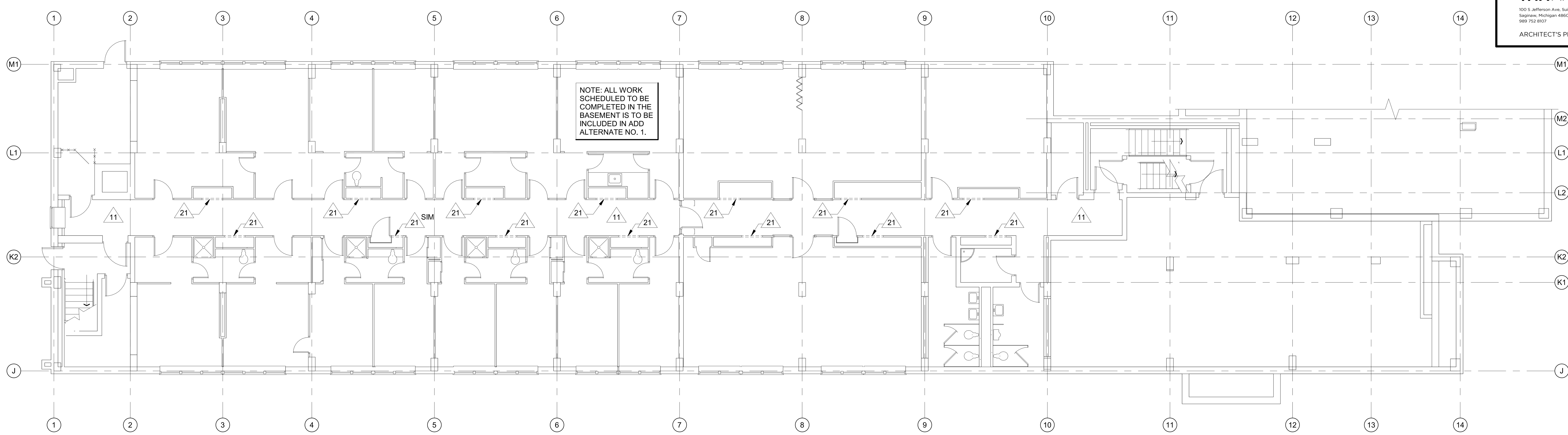


NORTH

1 / A1 **BASEMENT FLOOR WEST - DEMOLITION FLOOR PLAN**
SCALE: 1/8" = 1'-0"

GENERAL DEMOLITION NOTES:

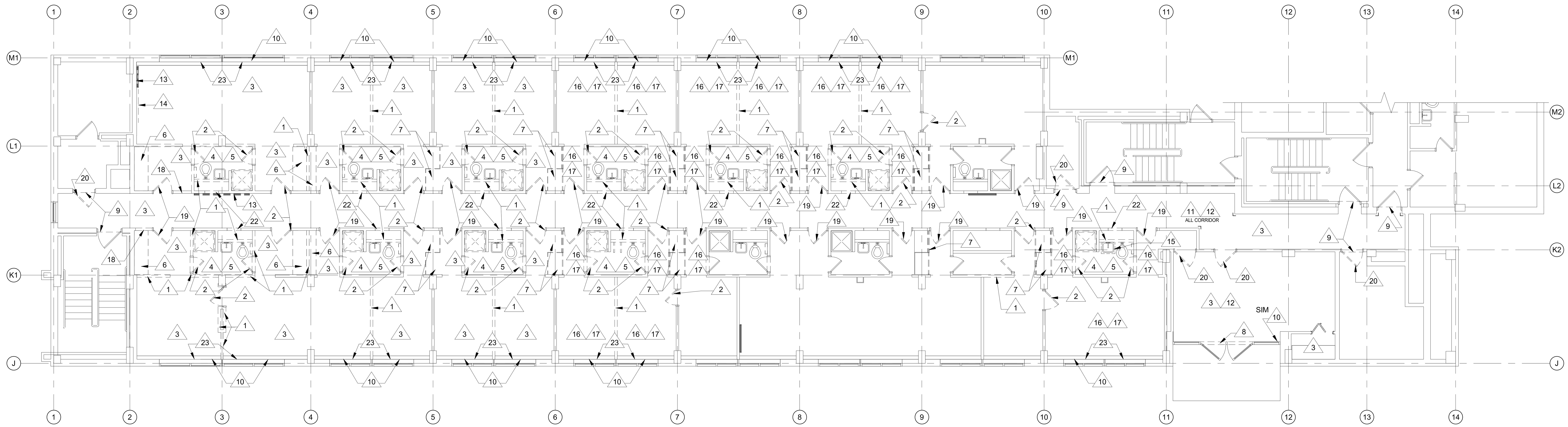
1. SEE ALL ARCHITECTURAL DRAWINGS FOR ADDITIONAL DEMOLITION WORK.
2. SEE ALL MECHANICAL AND ELECTRICAL DRAWINGS FOR ANY ADDITIONAL DEMOLITION WORK. MECHANICAL AND ELECTRICAL DEMOLITION IS NOT INDICATED ON THESE PLANS.
3. THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY SHORING, SUPPORTS, AND BRACING AS REQUIRED FOR THE SAFE DEMOLITION AND ERECTION OF COMPONENTS.
4. PATCH ALL EXISTING WALLS TO REMAIN AT ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DEMOLITION POINTS WITH SIMILAR MATERIALS, MATCHING ADJACENT MATERIALS IN SIZE, COLOR, AND TEXTURE, U.N.O.
5. THE OWNER HAS FIRST SALVAGEABLE RIGHTS TO ALL ITEMS AND EQUIPMENT THAT IS BEING DEMOLISHED. THIS INCLUDES ALL ITEMS CALLED OUT TO BE DEMOLISHED ON THE MECHANICAL AND ELECTRICAL DRAWINGS. DEMOLITION CONTRACTOR SHALL VERIFY WITH THE OWNER WHICH ITEMS THEY WISH TO KEEP PRIOR TO THE COMMENCEMENT OF ANY DEMOLITION WORK. THESE SALVAGED ITEMS ARE TO BE REMOVED IN GOOD CONDITION AND TURNED OVER TO THE OWNER.
6. ALL BUILDING MATERIALS THAT ARE BEING DEMOLISHED, UNLESS NOTED OTHERWISE, EXCLUDING THOSE ITEMS SALVAGED BY THE OWNER, ARE TO BE DISPOSED OF BY THE CONTRACTOR. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
7. PROVIDE TEMPORARY BARRIERS AS REQUIRED TO PREVENT THE MIGRATION OF DUST AND NOISE INTO ADJACENT AREAS, TO PREVENT UNAUTHORIZED ACCESS INTO THE WORK AREA, AND TO PROTECT THE GENERAL PUBLIC.
8. DEMOLITION CONTRACTOR IS TO TAKE DOWN ALL TEMPORARY WALLS AT THE COMPLETION OF THE PROJECT.
9. CONTRACTOR TO PERFORM ASBESTOS ABATEMENT AS NOTED IN SURVEY INCLUDED IN THE SPECIFICATIONS. NOTE: UTILIZE THIS SURVEY TO DETERMINE WHICH ITEMS WILL BE DEMOLISHED AND WHICH ITEMS NEED TO BE ABATED AND DISPOSED OF PROPERLY.

DEMOLITION KEYNOTES

1 REMOVE EXISTING WALL CONSTRUCTION COMPLETELY.
2 REMOVE EXISTING DOOR AND FRAME COMPLETELY INCLUDING ALL RELATED HARDWARE.
3 REMOVE FLOORING AND BASE INCLUDING ALL ADHESIVE.
4 REMOVE CERAMIC TILE FLOORING, WALL FINISH, STONE THRESHOLD AT EACH DOOR, AND SOFFIT ABOVE SINK/TOILET - PATCH AND REPAIR FLOOR AND WALLS AS REQUIRED FOR NEW TILE INSTALLATION.
5 REMOVE ALL BATHROOM ACCESSORIES, INCLUDING TOILET PAPER DISPENSER, PAPER TOWEL DISPENSERS, TOWEL BARS, AND MEDICINE CABINET MIRRORS.
6 REMOVE EXISTING SHELVING COMPLETELY.
7 REMOVE EXISTING CLOSET CONSTRUCTION INCLUDING FLOORING, DIVIDER WALLS, SHELVES, CLOTHING RODS, BLOCKING, TRIM, AND SLIDING DOORS (WHERE PRESENT).
8 REMOVE DOOR THRESHOLD.
9 REMOVE TRANSITION STRIP.
10 REMOVE EXISTING WINDOW BLINDS COMPLETELY INCLUDING ALL RELATED HARDWARE.
11 REMOVE WALL PAPER COMPLETELY INCLUDING ALL ADHESIVE AND CORNER GUARDS.

DEMOLITION KEYNOTES

12 REMOVE ADHERED ACOUSTICAL TILE CEILING COMPLETELY, INCLUDING ALL ADHESIVE.
13 REMOVE TACKBOARD OR MARKERBOARD INCLUDING ALL ADHESIVE.
14 REMOVE WALL-MOUNTED PROJECTION SCREEN - RETURN TO OWNER.
15 REMOVE BASE CABINET.
16 REMOVE EXISTING CARPET AND ADHESIVE COMPLETE
17 REMOVE EXISTING BASE COMPLETELY INCLUDING ADHESIVE.
18 REMOVE WALL CONSTRUCTION AT NEW DOOR LOCATION.
19 REMOVE EXISTING DOOR AND FRAME COMPLETELY INCLUDING ALL RELATED HARDWARE. DEMOLITION TO INCLUDE PORTION OF JAMB CONSTRUCTION AS NEEDED FOR INSTALLATION OF NEW, WIDER DOOR AND FRAME.
20 REMOVE EXISTING DOOR INCLUDING ALL RELATED HARDWARE. PATCH AND REPAIR EXISTING FRAME TO REMAIN.
21 (ALTERNATE NO 2.) REMOVE PLASTER WALL CONSTRUCTION ROUGHLY 3'-0" WIDE X 4'-0" HIGH AS NECESSARY FOR DEMOLITION AND INSTALLATION OF NEW PLUMBING PIPING IN CHASE - REFER TO MECHANICAL.
22 REMOVE PORTION OF EXISTING PLASTER WALL CONSTRUCTION AS REQUIRED FOR INSTALLATION OF NEW FIRE RATED ACCESS PANEL - COORDINATE EXACT LOCATION ON-SITE WITH OWNER/PLUMBING CONTRACTOR. REFER TO MECHANICAL.
23 REMOVE EXISTING METAL SILL AND FASTENERS. EXISTING BLOCKING TO REMAIN.



NORTH

2 / A1 **FIRST FLOOR WEST - DEMOLITION FLOOR PLAN**
SCALE: 1/8" = 1'-0"

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Plotted By: Author
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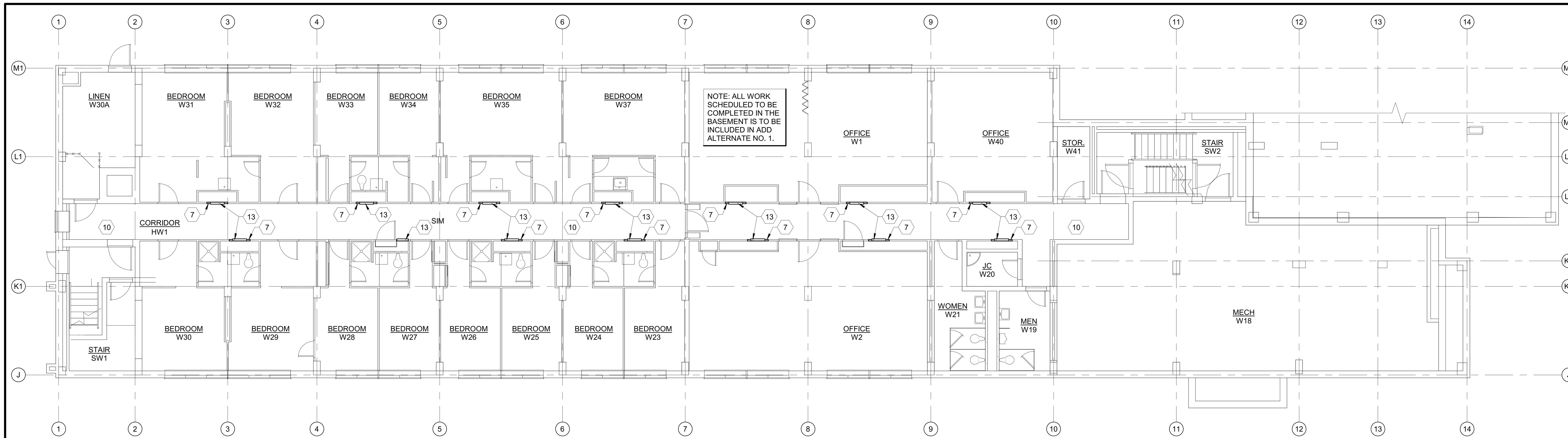
SCALE	AS SHOWN
REVISIONS	ISSUED FOR BID

DEMOLITION PLANS

A1



NORTH

1/A2 BASEMENT FLOOR WEST - NEW FLOOR PLAN

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

GENERAL PLAN NOTES:

1. DISSIMILAR FLOORING TRANSITIONS SHALL OCCUR UNDER DOOR WHEN DOOR IS IN THE CLOSED POSITION.
2. REFER TO ALL ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS FOR RELATED WORK.
3. REFER TO LIFE SAFETY PLANS AND SPECIFICATIONS FOR TYPES OF SEALANT REQUIRED AT WALL ASSEMBLY PENETRATION.
4. PATCH ALL EXISTING WALLS TO REMAIN AT ALL ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DEMOLITION POINTS WITH SIMILAR MATERIALS MATCHING ADJACENT MATERIALS IN SZIE, COLOR, AND TEXTURE.
5. CONSTRUCT TEMPORARY CONSTRUCTION BARRIERS AND PLACE AS REQUIRED TO PREVENT MIGRATION OF DUST AND NOISE TO ADJACENT AREAS, TO PREVENT UNAUTHORIZED ACCESS INTO THE WORK AREA, AND TO PROTECT THE GENERAL PUBLIC.
6. MAINTAIN PROPER EXISTING AND FIRE RESISTANCE SEPARATIONS WHILE EXISTING BUILDING IS OCCUPIED BY THE OWNER.
7. INFILL EXISTING WALLS ABOVE ALL NEW DOOR FRAMES AS NOTED IN THE DOOR AND FRAME SCHEDULE WITH 5/8" GYPSUM BOARD (TYPE "X" AT CORRIDOR WALLS) BOTH SIDES OF 2x WOOD FRAMING@ 24" O.C. - TYP.
8. ALL FLOORS TO RECEIVE NEW LVT-1 TO BE SKIM-COATED PRIOR TO FLOORING INSTALLATION. TOILET ROOMS TO RECEIVE NEW CERAMIC TILE FLOORING, SKIM-COAT FLOOR BEFORE INSTALLATION.

PLAN KEYNOTES

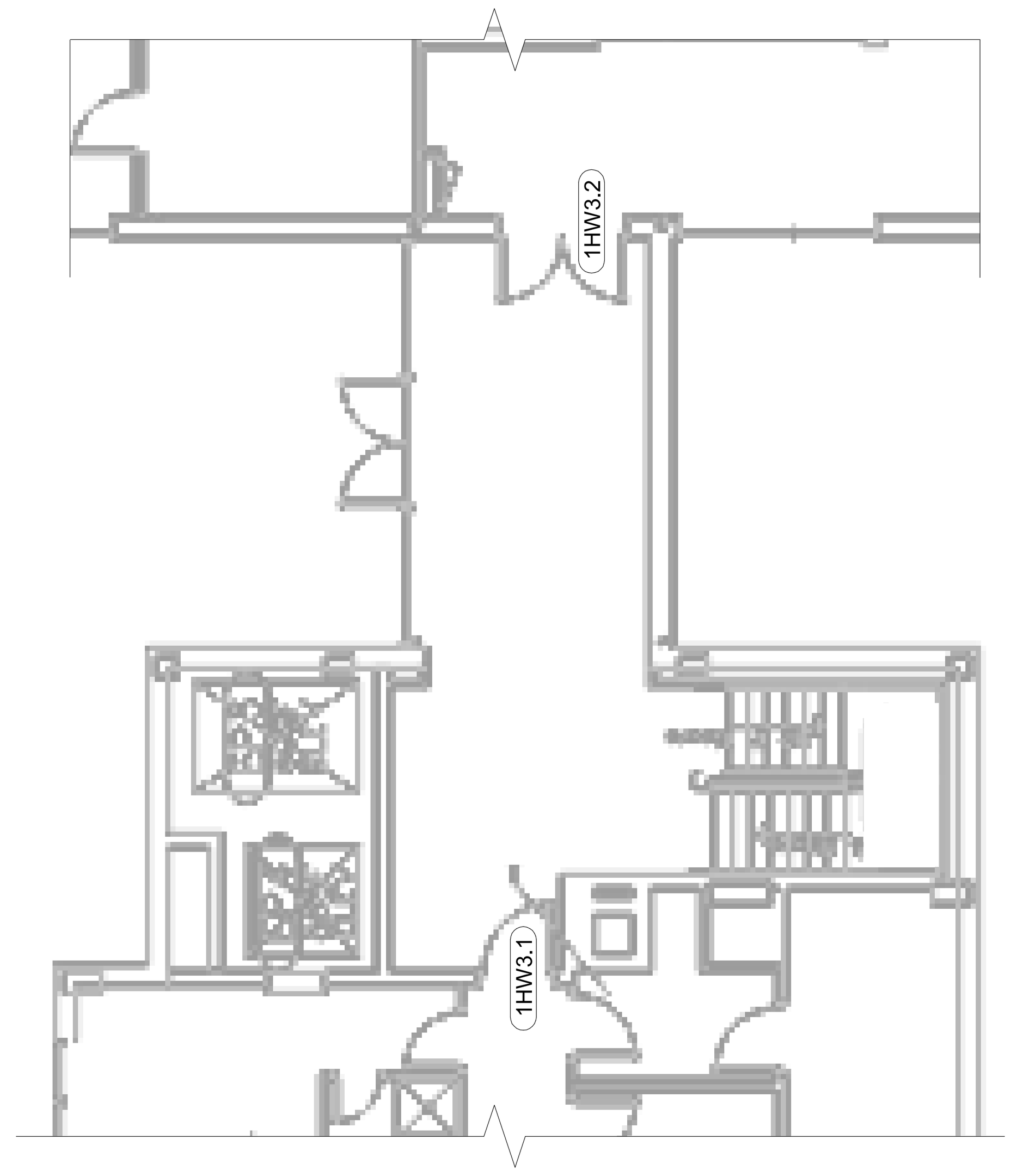
1 1/2" THICK SOLID SURFACE WINDOW STOOL. REFER TO DETAIL 4/A2.03.
2 NOT USED
3 DOOR THRESHOLD - APPLY BEAD OF SILCONE UNDERNEATH PER SPECIFICATIONS.
4 TRANSITION STRIP.
5 REMOVE ALL SPALLING CONCRETE TO EXPOSE STEEL REINFORCING BARS - MINIMUM 1/2 INCH DEPTH. REMOVE RUST FROM SURFACE OF REBAR, CLEAN, PREP, AND COAT WITH A HIGH PERFORMANCE PAINT, TYPICAL ENTIRE EXPOSED SURFACE. INSTALL CONCRETE PATCH FLUSH WITH FINISH BALCONY SURFACE.
6 WOOD CLOSET SHELVING W/ CLOTHES ROD - REFER TO SPECIFICATIONS, ELEVATIONS, AND DETAILS.
7 PATCH WALL CONSTRUCTION AT REMOVED WALL LOCATION.
8 WOOD SHELVING - REFER TO SPECIFICATIONS, ELEVATIONS, AND DETAILS.
9 48" WIDE, FLOOR-TO-CEILING TACKABLE WALL SURFACE W/ ALUMINUM TRIM EACH EDGE - REFER TO SPECIFICATIONS.
10 SKIM COAT EXISTING WALLS AFTER WALL PAPER REMOVAL IN PREPARATION FOR NEW PAINTED FINISH.
11 PATCH THE EXISTING CONCRETE DECK AS NECESSARY AFTER REMOVAL OF SURFACE-MOUNTED ACOUSTICAL TILE CEILING IN PREPARATION FOR NEW PAINTED FINISH.
12 NEW 4' TALL CORNER GUARDS - REFER TO SPECIFICATIONS.
13 NEW 24" X 24" ACCESS PANEL - COORDINATE EXACT LOCATION WITH OWNER / MECHANICAL TRADES. PROVIDE SEPERATE PRICING FOR (ADD ALTERNATE NO. 2) BASEMENT LEVEL ACCESS PANELS.
14 NEW WINDOW AIR CONDITIONING UNIT. REFER TO MECHANICAL. INTENT IS TO REUSE EXISTING MODIFIED WINDOW OPENING. REFER TO MOUNTING PLATFORM DETAIL.
15 NEW ROLLER SHADE, JAMB MOUNTED - REFER TO SPECIFICATIONS.
16 CLEAN, PREP AND PAINT ALL WALLS AND CEILING. NEW LVT FLOOR.

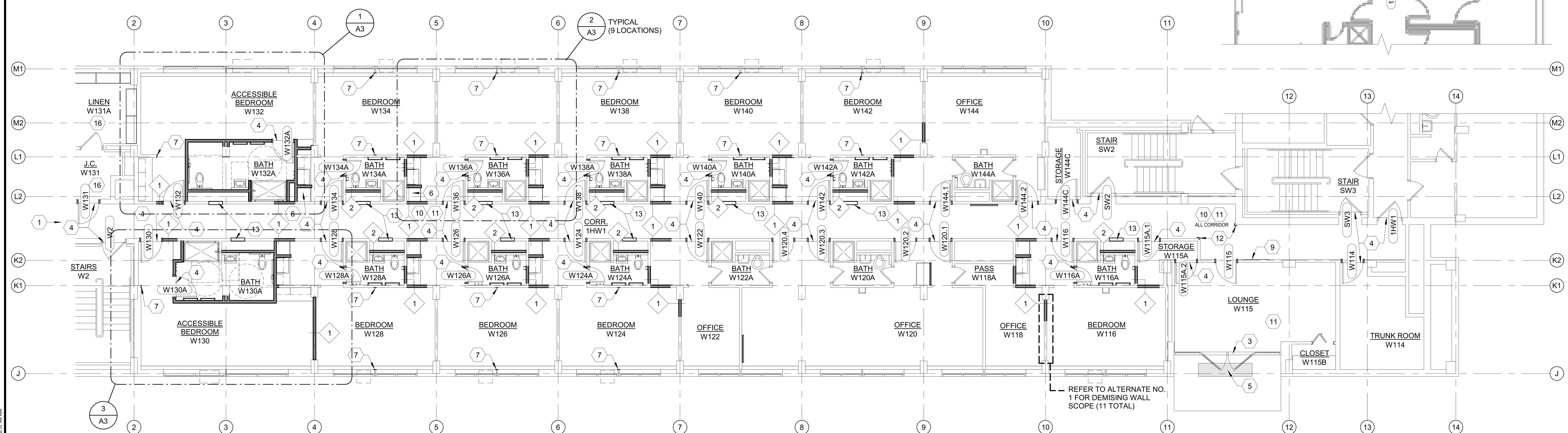
WALL TYPES:

1 VENEER PLASTER APPLIED TO 1/2" FIRE-SHIELD BOARD BOTH SIDES OF 2-1/2" STEEL STUDS @ 16" O.C., MATCHING EXISTING, ADJACENT WALL THICKNESS - SOUND INSULATE AND EXTEND TO DECK AND SEAL.

2 CERAMIC TILE OVER 1/2" BACKER BOARD OVER ONE SIDE OF 2-1/2" METAL STUDS @ 16" O.C.

3 VENEER PLATER APPLIED TO 1/2" PLASTER BOARD BOTH SIDES OF 2-1/2" METAL STUDS @ 16" O.C. - EXTEND TO DECK AND SEAL.





NORTH

2/A2 FIRST FLOOR WEST - NEW FLOOR PLAN

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

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Plotted Date: 6/9/2023 8:57:49 AM

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NEW FLOOR PLANS
A2

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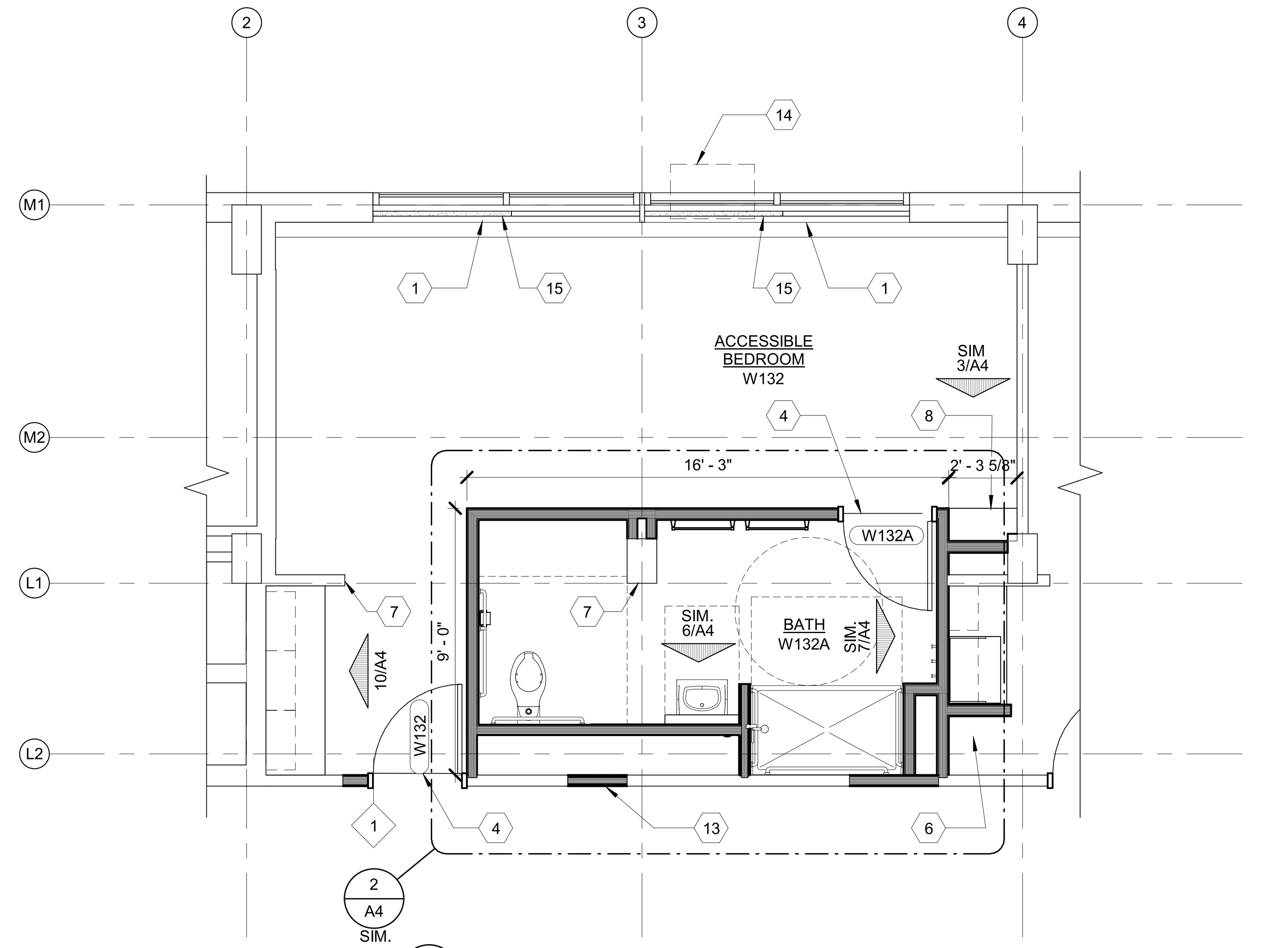
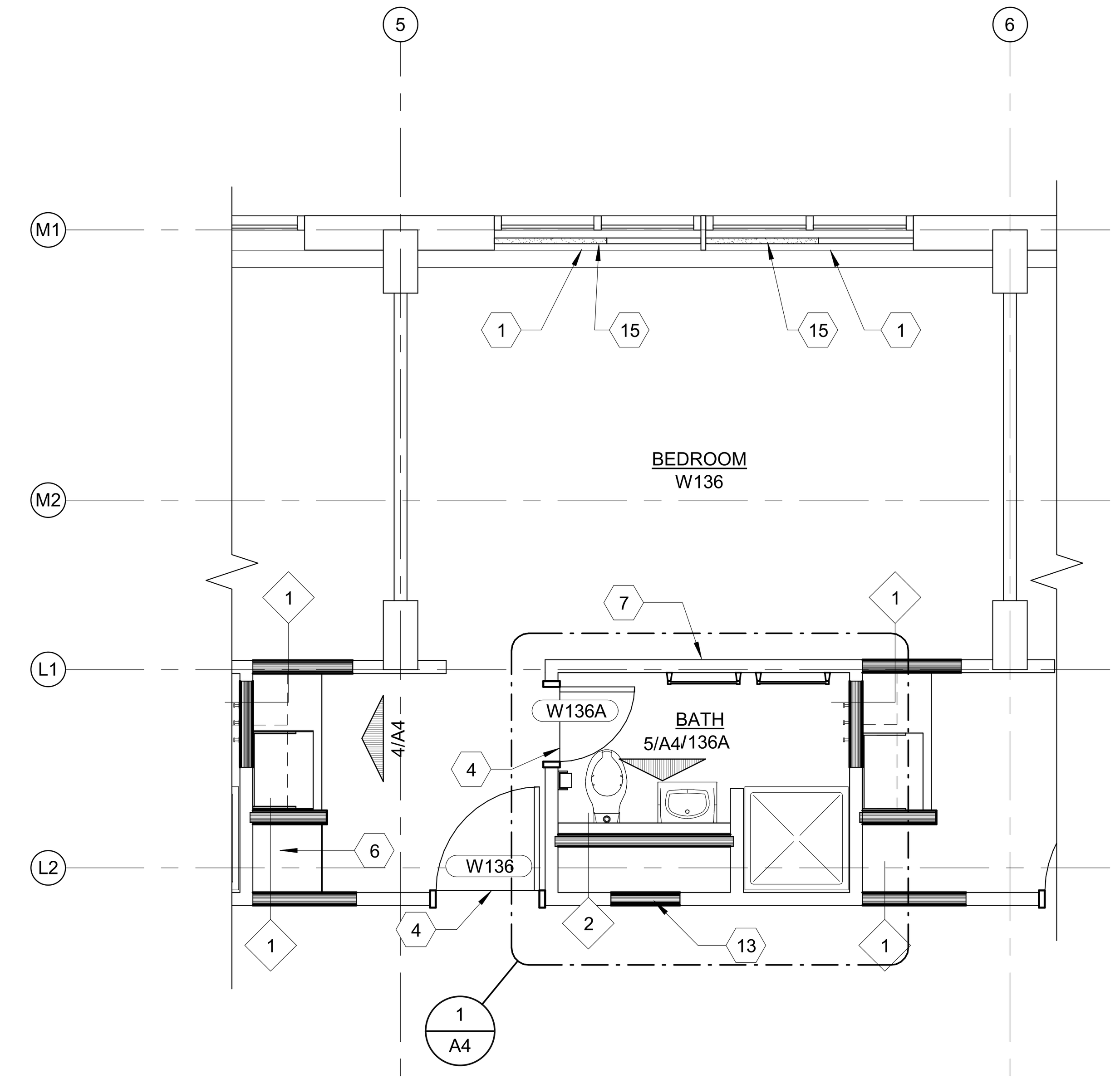
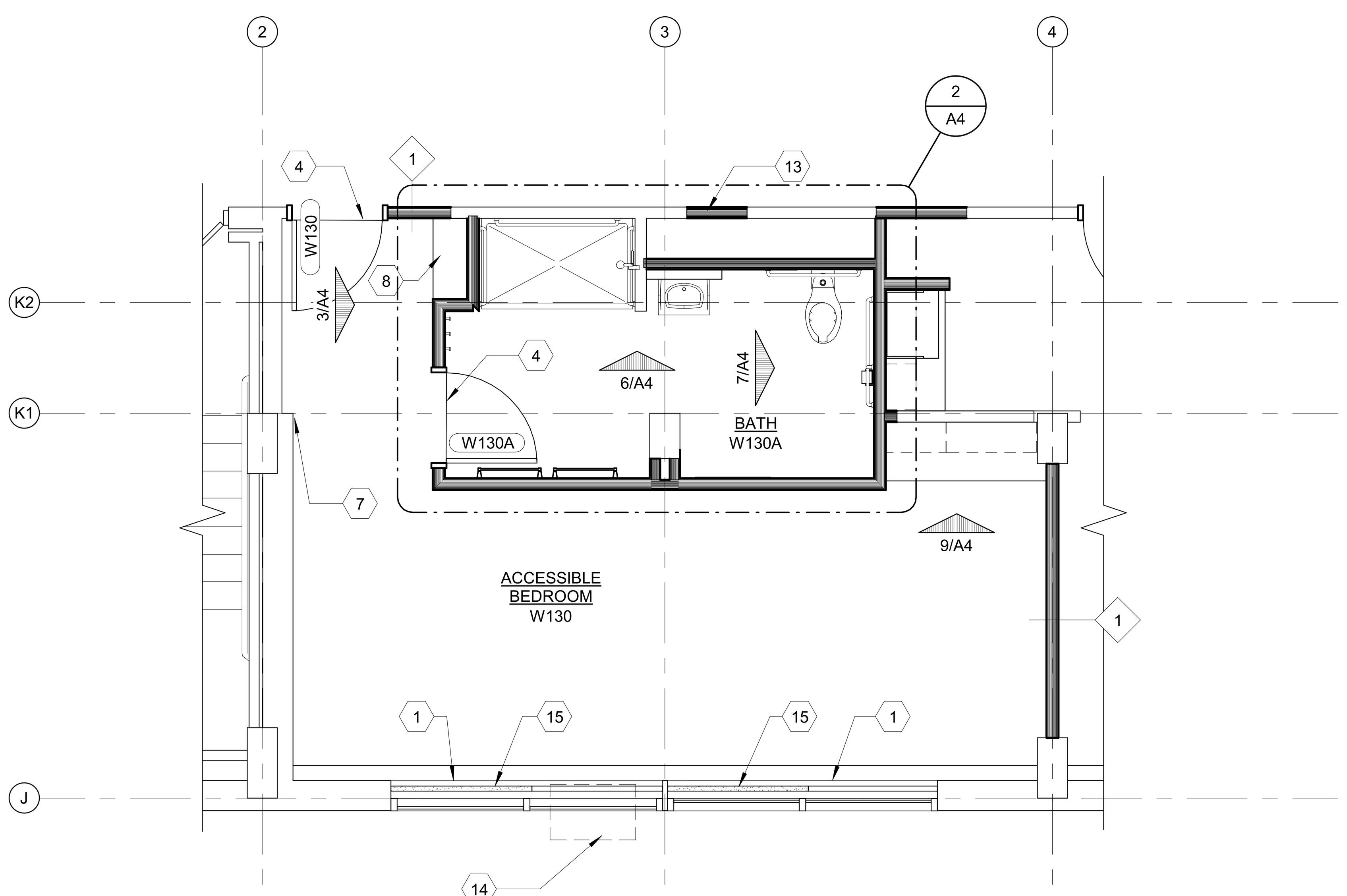


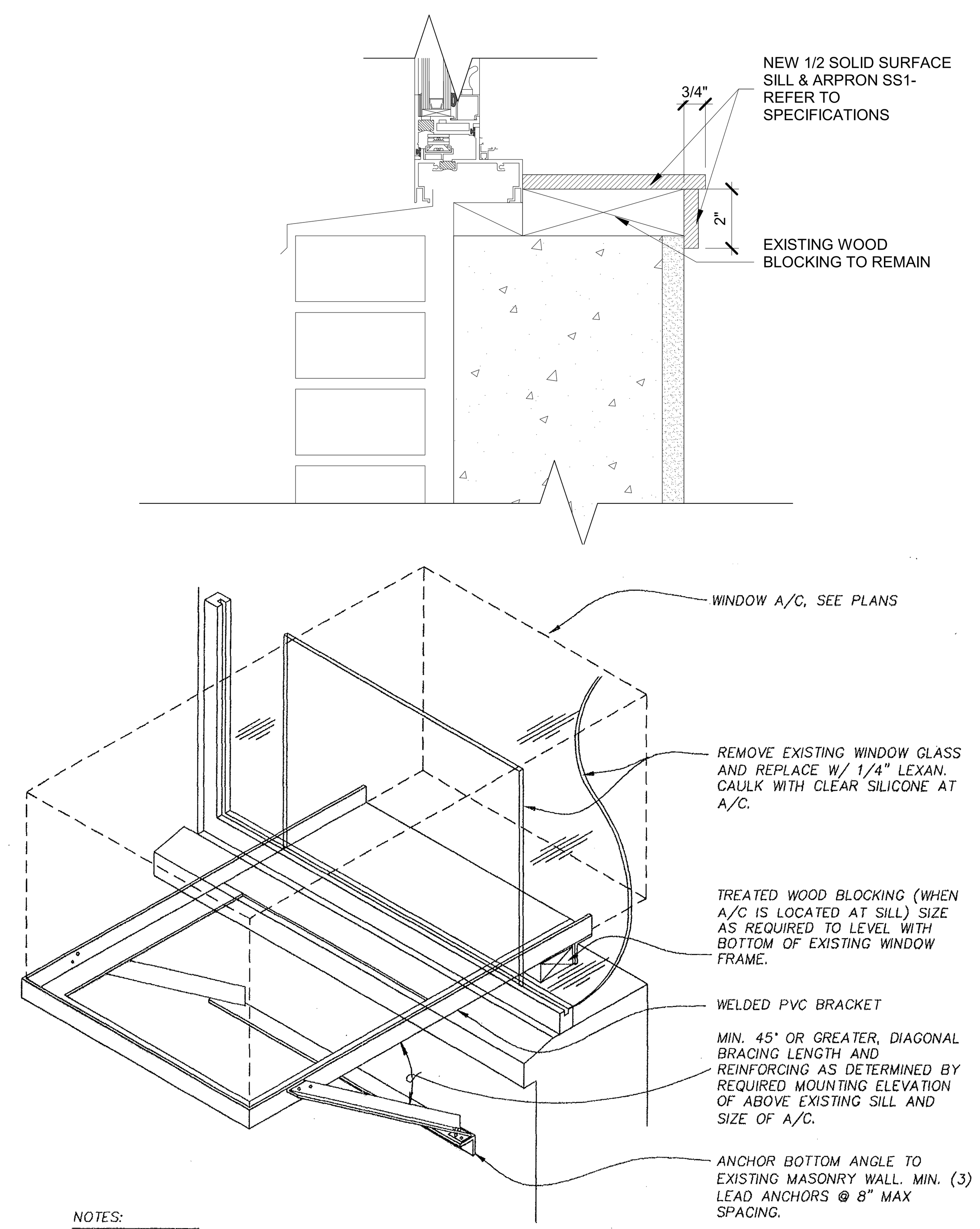
1 A3 ENLARGED BEDROOM W132
SCALE: 1/4" = 1'-0"



2 A3 TYPICAL ROOM PLAN
SCALE: 1/4" = 1'-0"



3 A3 ENLARGED BEDROOM W130
SCALE: 1/4" = 1'-0"



NOTES:
THE ABOVE DETAIL IS SHOWN FOR REFERENCE ONLY AND REPRESENTS INSTALLATION IN A FIXED WINDOW AT THE SILL ELEVATION. EXACT CONDITIONS MAY VARY BASED ON SIZE/STYLE AND OPERATION OF WINDOW AND SIZE OF A/C

CLEANLY SEAL AT PERIMETER OF OPENING, AND ALL EDGES OF LEXAN SHEET W/ CLEAR STRUCTURAL SILICONE.

WINDOW AIR CONDITIONING UNIT DETAIL
NOT TO SCALE

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PLAN KEYNOTES

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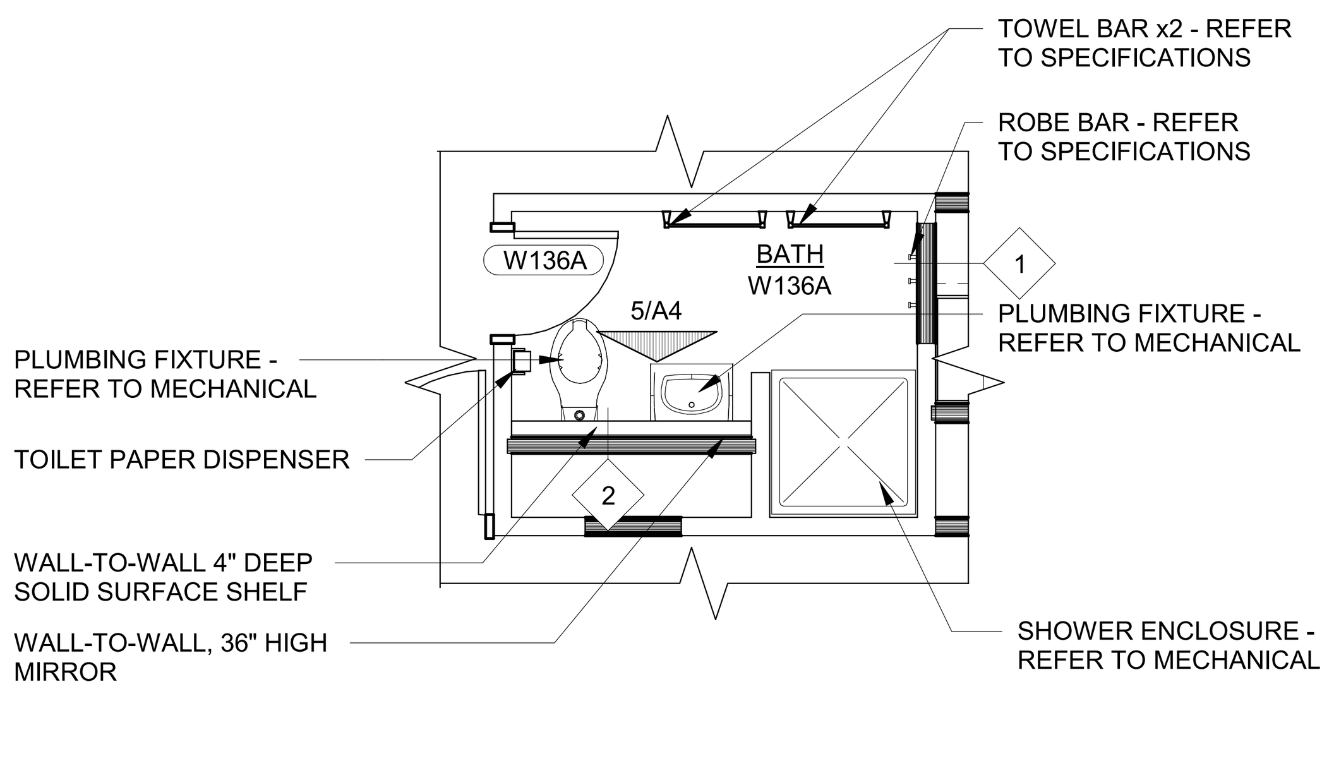
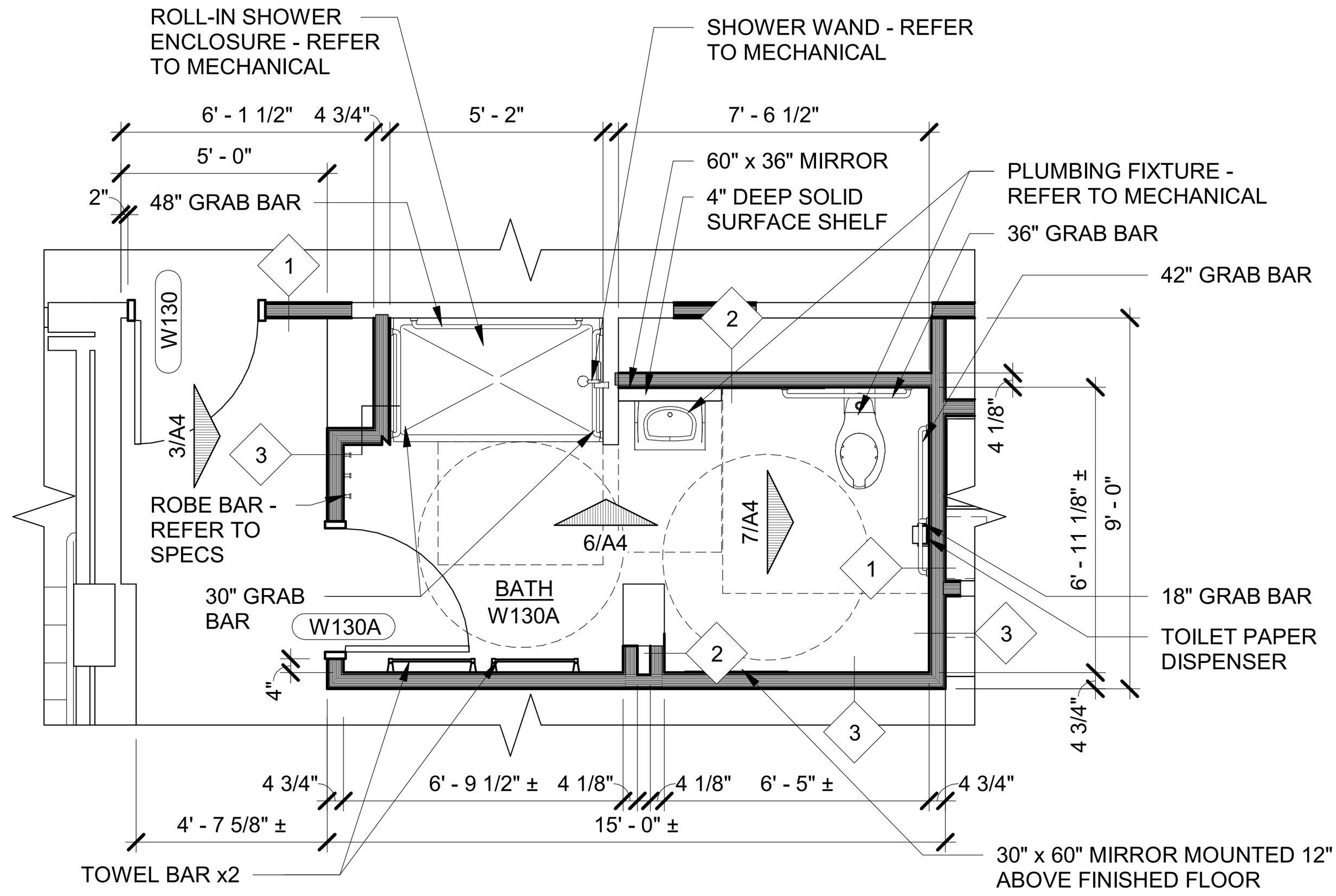
SCALE	AS SHOWN
REVISIONS	ISSUED FOR BID

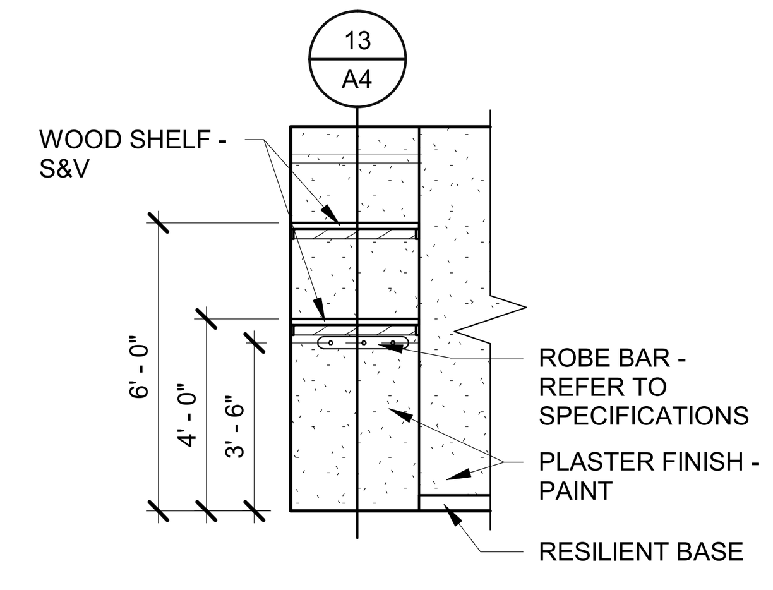
ENLARGED PLANS, INTERIOR ELEV.
A3



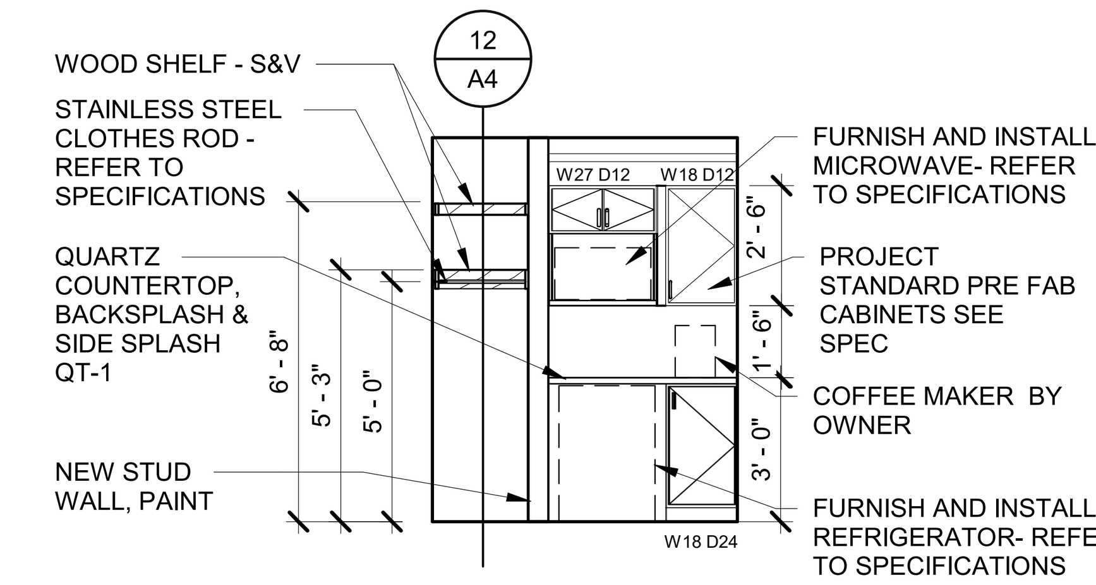
ENLARGED TYPICAL TOILET PLAN
1/A4
SCALE: 1/4" = 1'-0"



BATH W130A - TOILET PLAN
2/A4
SCALE: 1/4" = 1'-0"



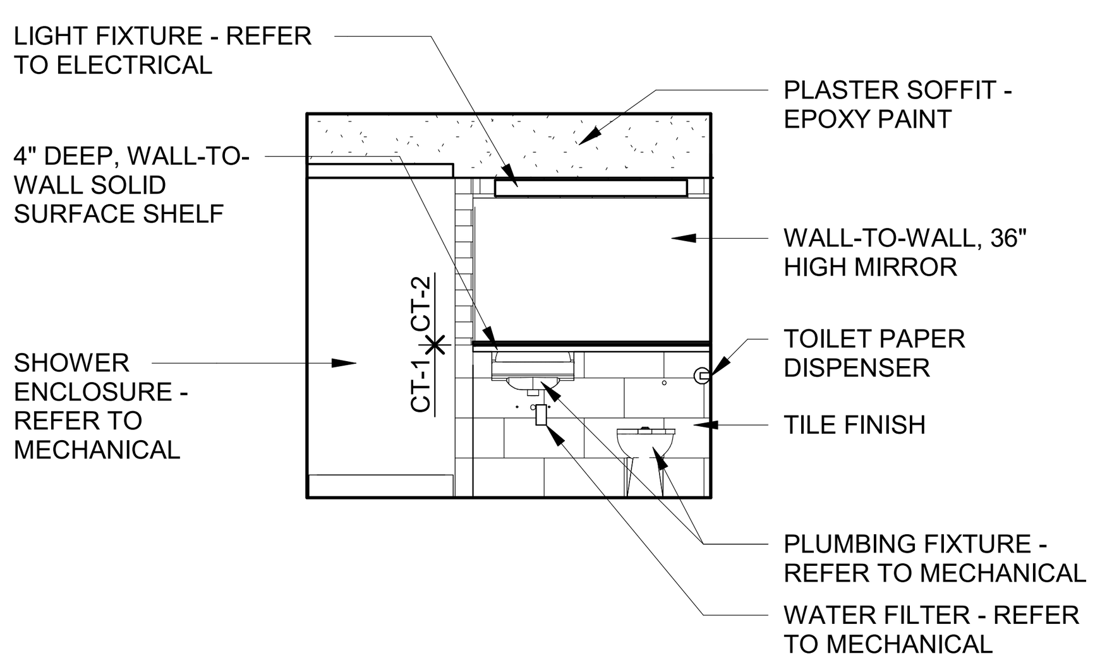
BEDROOM W130 - SOUTH ELEVATION
3/A4
SCALE: 1/4" = 1'-0"



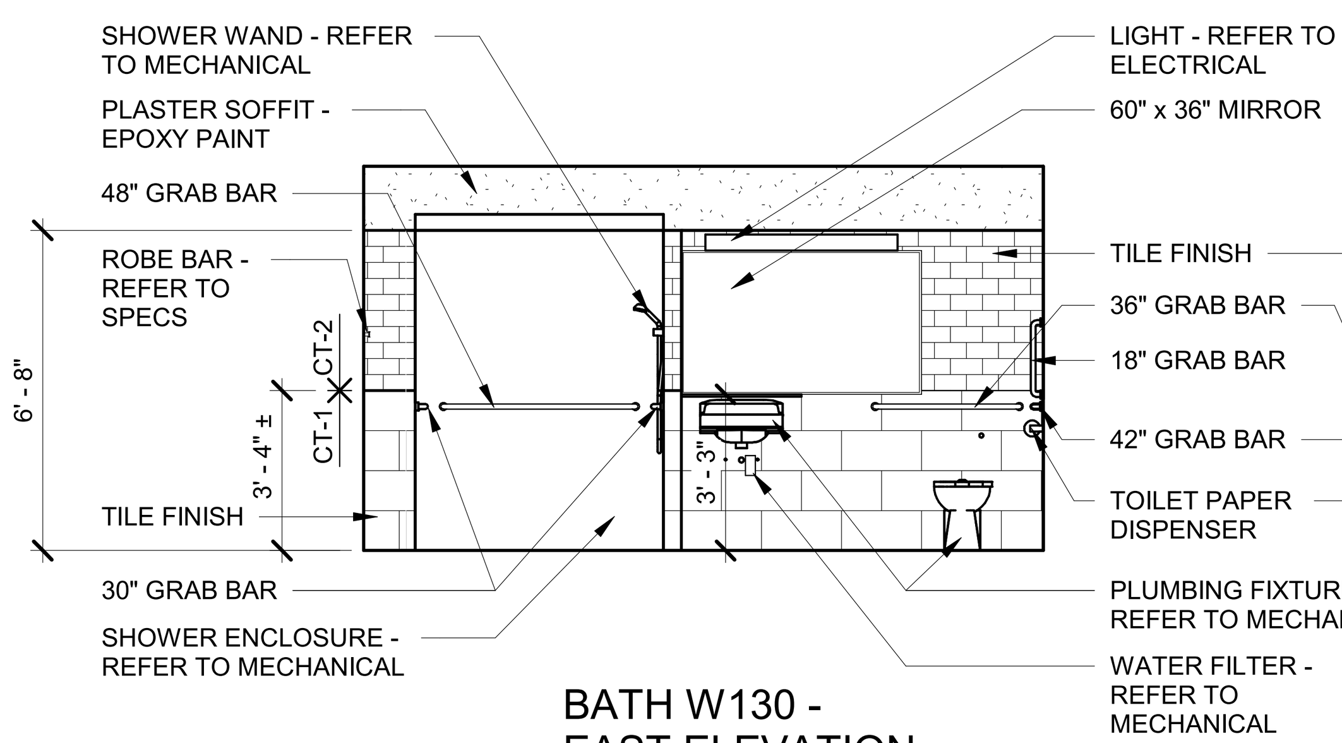
TYPICAL CLOSET/ COUNTER ELEVATION
4/A4
SCALE: 1/4" = 1'-0"

WALL TYPES:

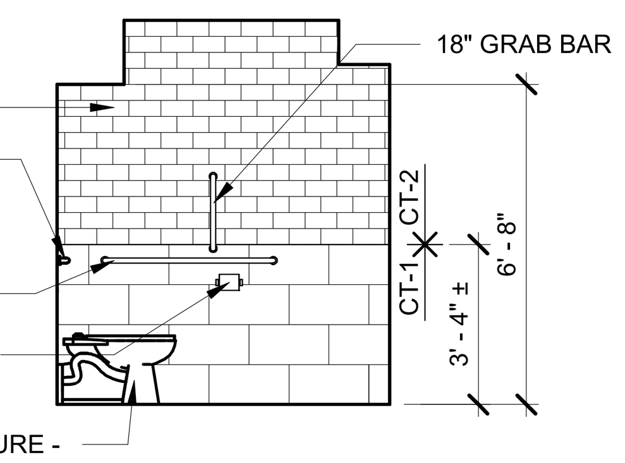
1. VENEER PLASTER APPLIED TO 1/2" FIRE-SHIELD BOARD BOTH SIDES OF 2-1/2" STEEL STUDS @ 16" O.C., MATCHING EXISTING, ADJACENT WALL THICKNESS - SOUND INSULATE AND EXTEND TO DECK AND SEAL.
2. CERAMIC TILE OVER 1/2" BACKER BOARD OVER ONE SIDE OF 2-1/2" METAL STUDS @ 16" O.C.
3. VENEER PLATER APPLIED TO 1/2" PLASTER BOARD BOTH SIDES OF 2-1/2" METAL STUDS @ 16" O.C. - EXTEND TO DECK AND SEAL.



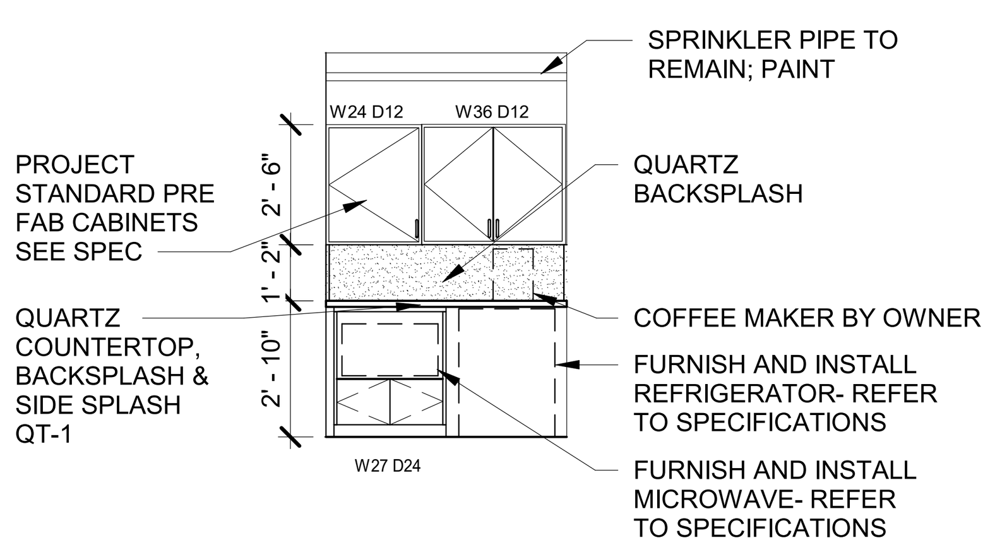
TYPICAL TOILET ELEVATION
5/A4
SCALE: 1/4" = 1'-0"



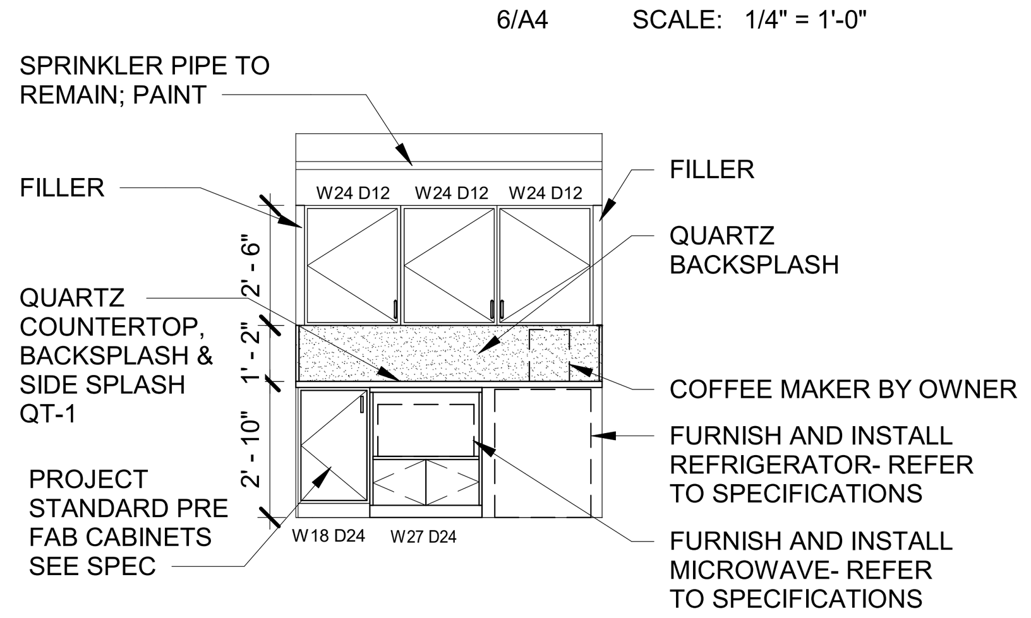
BATH W130 - EAST ELEVATION
6/A4
SCALE: 1/4" = 1'-0"



BATH W130 - SOUTH ELEVATION
7/A4
SCALE: 1/4" = 1'-0"

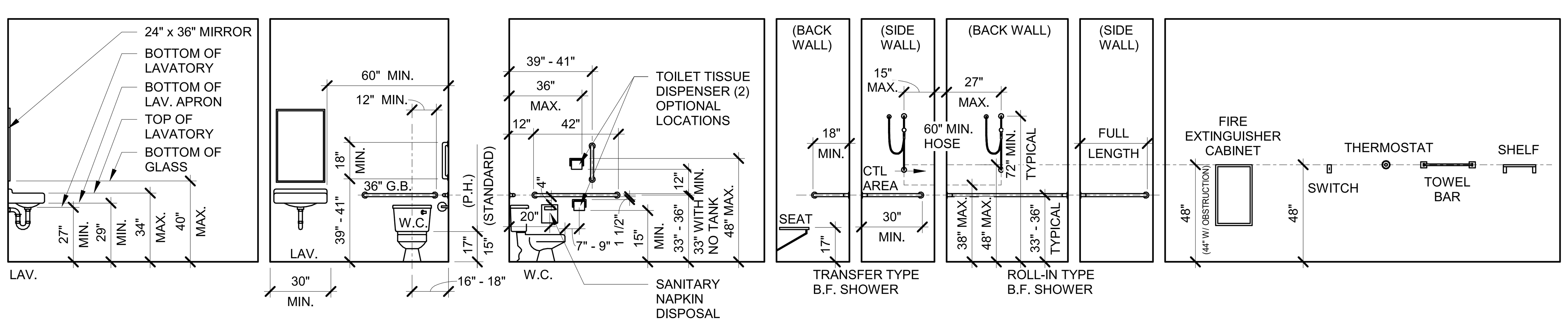


BEDROOM W130 COUNTER ELEVATION
9/A4
SCALE: 1/4" = 1'-0"

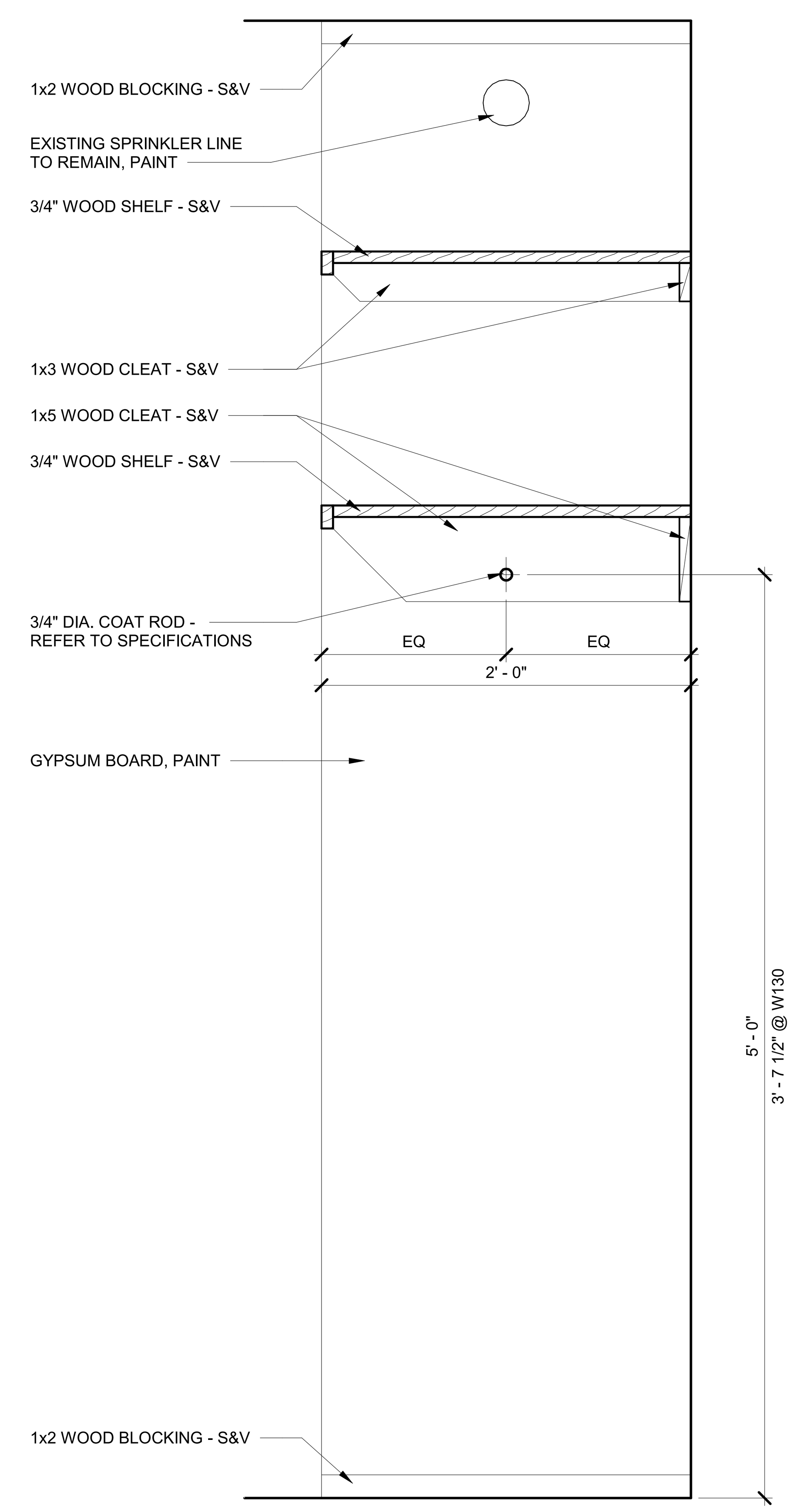


BEDROOM W132 COUNTER ELEVATION
10/A4
SCALE: 1/4" = 1'-0"

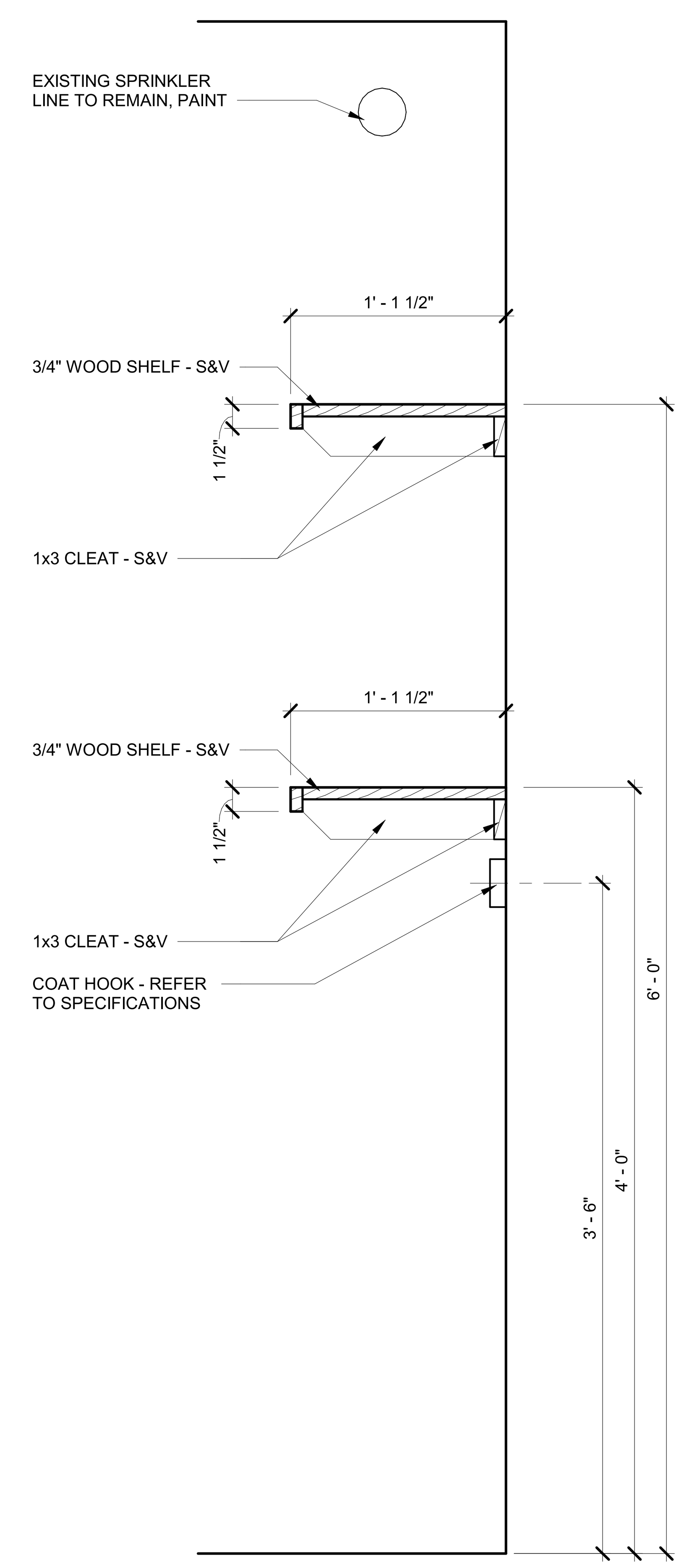
NOTE:
FIXTURES DEPICTED WITHIN THIS SCHEDULE ARE SCHEMATIC ONLY. FOR EXACT FIXTURE TYPES AND QUANTITIES, REFER TO MECHANICAL DRAWINGS AS WELL AS THE SPECIFICATION MANUAL.



MOUNTING HEIGHT SCHEDULE
1/4" = 1'-0"



CLOSET DETAIL
12/A4
SCALE: 1 1/2" = 1'-0"



SHELF DETAIL
13/A4
SCALE: 1 1/2" = 1'-0"

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OWEN GRADUATE HALL - WEST - CONVERT OFFICE SPACE TO FRIB HOUSING
MICHIGAN STATE UNIVERSITY

CAPITAL PROJ. NO.	CP22127
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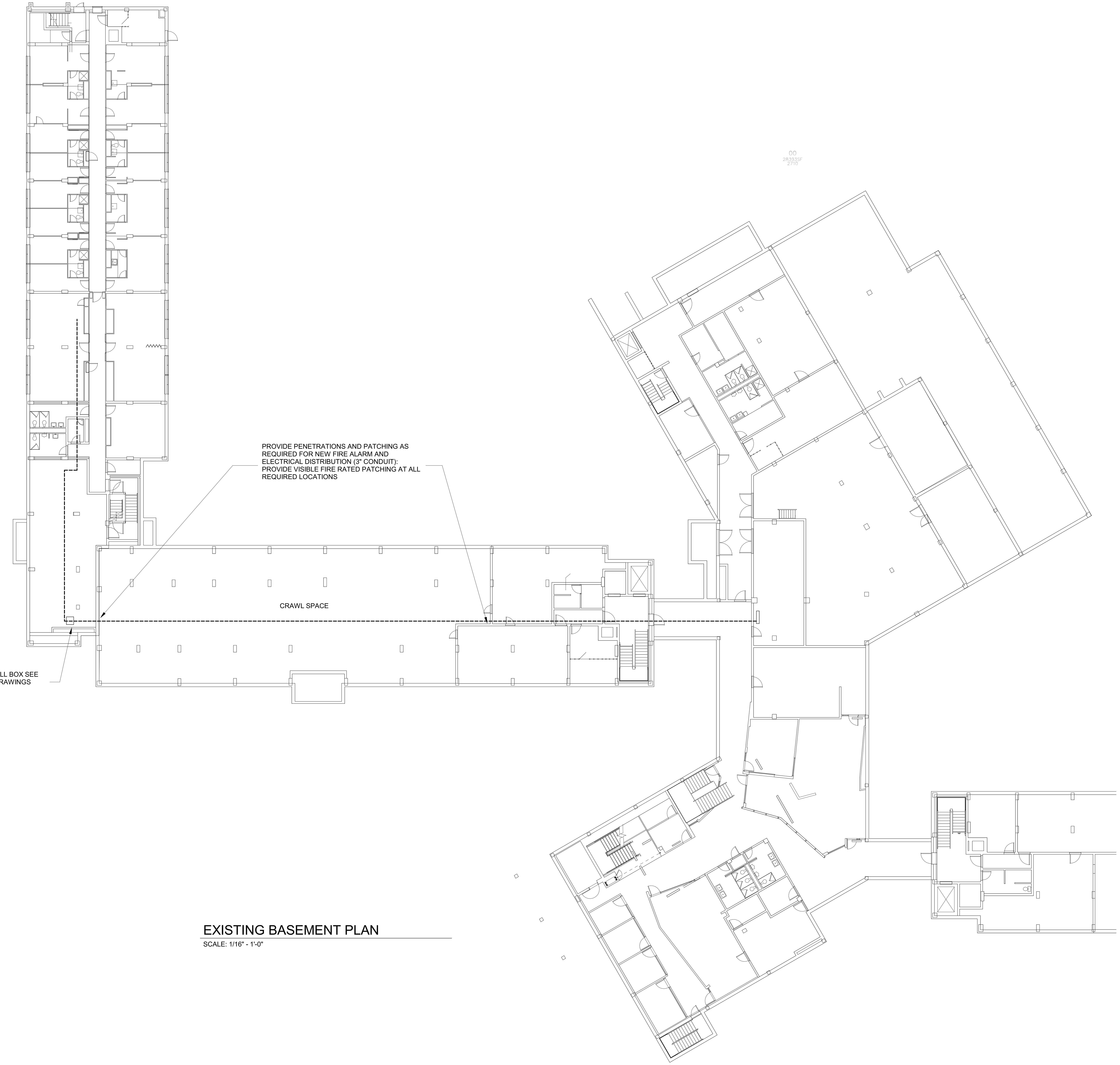
ARCH.	CHARLANDB
MECH.	GOERGES
ELEC.	HOWARDK
CIVIL	
L.A.	
INT. DES.	
CONST. REP.	GIBSONA
APPR.	
DATE	06.08.23
SCALE	AS SHOWN
REVISIONS	ISSUED FOR BID

ENLARGED PLANS, INTERIOR ELEV.
A4

Drawing File: C:\Users\csoukne\Documents\central\2022101-cd2_wsoukne37MP.rvt
Plotted By: Author
Plotted Date: 6/9/2023 8:57:51 AM



EXISTING BASEMENT PLAN

SCALE: 1/16" - 1'-0"

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CIVIL	
L.A.	
INT. DES.	
CONST. REP.	GIBSONA
APPR.	
DATE	06.08.23
SCALE	AS SHOWN

REVISIONS
ISSUED FOR BID

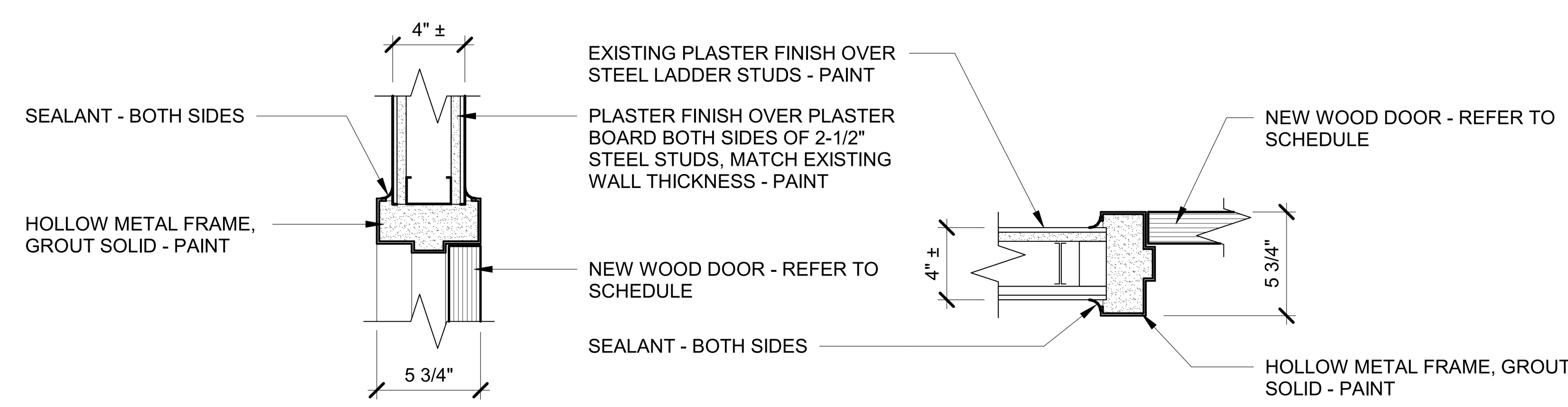
EXISTING BASEMENT PLAN
A5

ROOM FINISH SCHEDULE

ROOM. NO.	ROOM NAME	FLOOR	BASE	NORTH WALL		EAST WALL		SOUTH WALL		WEST WALL		CEILING			REMARKS
				MAT.	FINISH	MAT.	FINISH	MAT.	FINISH	MAT.	FINISH	MAT.	FINISH	CLG. HEIGHT	
1HW1	CORRIDOR	CPT-1	RES-1	EXIST.	PAINT	EXIST. / PL.	PAINT	EXIST.	PAINT	EXIST. / PL.	PAINT	EXIST.	PAINT	EXIST.	1, 2
HIDE	STORAGE	LVT-1	RES-1	EXIST. / PL.	PAINT	EXIST. / PL.	PAINT	EXIST.	PAINT	EXIST. / PL.	PAINT	EXIST.	PAINT	EXIST.	11
HIDE	CLOSET	LVT-1	RES-1	EXIST. / PL.	PAINT	PL.	PAINT	PL.	PAINT	EXIST. / PL.	PAINT	EXIST.	PAINT	EXIST.	11
HW1	CORRIDOR	EXIST.	EXIST.	EXIST.	PAINT	EXIST.	PAINT	EXIST.	PAINT	EXIST.	PAINT	EXIST.	--	EXIST.	
SW2	STAIR	EXIST.	EXIST.	EXIST.	--	EXIST.	--	EXIST.	--	EXIST.	--	EXIST.	--	EXIST.	
SW3	STAIR	EXIST.	EXIST.	EXIST.	--	EXIST.	--	EXIST.	--	EXIST.	--	EXIST.	--	EXIST.	
W2	STAIRS	EXIST.	EXIST.	EXIST.	--	EXIST.	--	EXIST.	--	EXIST.	--	EXIST.	--	EXIST.	
W114	TRUNK ROOM	EXIST.	EXIST.	EXIST.	--	EXIST.	--	EXIST.	--	EXIST.	--	EXIST.	--	EXIST.	
W115	LOUNGE	CPT-1	RES-1	EXIST.	PAINT	EXIST.	PAINT	EXIST.	PAINT	EXIST.	PAINT	EXIST.	PAINT	EXIST.	1
W115A	STORAGE	LVT-1	RES-1	EXIST. / PL.	PAINT	EXIST. / PL.	PAINT	EXIST.	PAINT	EXIST. / PL.	PAINT	EXIST.	PAINT	EXIST.	11
W115B	CLOSET	CPT-1	RES-1	EXIST.	PAINT	EXIST.	PAINT	EXIST.	PAINT	EXIST.	PAINT	EXIST.	PAINT	EXIST.	
W116	BEDROOM	LVT-1	RES-1	EXIST. / PL.	PAINT	EXIST. / PL.	PAINT	EXIST. / PL.	PAINT	EXIST. / PL.	PAINT	EXIST.	PAINT	EXIST.	11
W116A	BATH	CT-1	CT-1	CT-1 / CT-2	--	CT-1 / CT-2 / PL.	-- / E. PAINT	CT-1 / CT-2	--	CT-1 / CT-2	--	EXIST. / PL.	E. PAINT	VARIES	3, 4
W118	OFFICE	EXIST.	EXIST.	EXIST.	--	EXIST. / PL.	PAINT	EXIST. / PL.	PAINT	EXIST.	PAINT	EXIST.	--	EXIST.	
W118A	PASS	EXIST.	EXIST.	EXIST.	--	EXIST.	--	EXIST.	--	EXIST.	--	EXIST.	--	EXIST.	
W120	OFFICE	EXIST.	EXIST.	EXIST.	--	EXIST.	--	EXIST.	--	EXIST.	--	EXIST.	--	EXIST.	
W120A	BATH	EXIST.	EXIST.	EXIST.	--	EXIST.	--	EXIST.	--	EXIST.	--	EXIST.	--	EXIST.	
W122	OFFICE	EXIST.	EXIST.	EXIST. / PL.	PAINT	EXIST. / PL.	PAINT	EXIST.	--	EXIST. / PL.	PAINT	EXIST.	--	EXIST.	
W122A	BATH	EXIST.	EXIST.	EXIST.	--	EXIST.	--	EXIST.	--	EXIST.	--	EXIST.	--	EXIST.	
W124	BEDROOM	LVT-1	RES-1	EXIST. / PL.	PAINT	EXIST. / PL.	PAINT	EXIST. / PL.	PAINT	EXIST. / PL.	PAINT	EXIST.	PAINT	EXIST.	11
W124A	BATH	CT-1	CT-1	CT-1 / CT-2	--	CT-1 / CT-2 / PL.	-- / E. PAINT	CT-1 / CT-2	--	CT-1 / CT-2	--	EXIST. / PL.	E. PAINT	VARIES	3, 4
W126	BEDROOM	LVT-1	RES-1	EXIST. / PL.	PAINT	EXIST. / PL.	PAINT	EXIST. / PL.	PAINT	EXIST. / PL.	PAINT	EXIST.	PAINT	EXIST.	11
W126A	BATH	CT-1	CT-1	CT-1 / CT-2	--	CT-1 / CT-2 / PL.	-- / E. PAINT	CT-1 / CT-2	--	CT-1 / CT-2	--	EXIST. / PL.	E. PAINT	VARIES	3, 4
W128	BEDROOM	LVT-1	RES-1	EXIST. / PL.	PAINT	EXIST. / PL.	PAINT	EXIST. / PL.	PAINT	EXIST. / PL.	PAINT	EXIST.	PAINT	EXIST.	11
W128A	BATH	CT-1	CT-1	CT-1 / CT-2	--	CT-1 / CT-2 / PL.	-- / E. PAINT	CT-1 / CT-2	--	CT-1 / CT-2	--	EXIST. / PL.	E. PAINT	VARIES	3, 4
W130	ACCESSIBLE BEDROOM	LVT-1	RES-1	EXIST. / PL.	PAINT	EXIST. / PL.	PAINT	EXIST. / PL.	PAINT	EXIST. / PL.	PAINT	EXIST.	PAINT	EXIST.	11
W130A	BATH	CT-1	CT-1	CT-1 / CT-2	--	CT-1 / CT-2 / PL.	-- / E. PAINT	CT-1 / CT-2	--	CT-1 / CT-2	--	EXIST. / PL.	E. PAINT	VARIES	3, 4
W131	J.C.	EPOXY	EXIST.	EXIST.	PAINT	EXIST.	PAINT	EXIST.	PAINT	EXIST.	PAINT	EXIST.	PAINT	EXIST.	12
W131A	LINEN	EPOXY	EXIST.	EXIST.	PAINT	EXIST.	PAINT	EXIST.	PAINT	EXIST.	PAINT	EXIST.	PAINT	EXIST.	12
W132	ACCESSIBLE BEDROOM	CPT-1	RES-1	EXIST.	PAINT	EXIST.	PAINT	EXIST. / PL.	PAINT	EXIST. / PL.	PAINT	EXIST.	PAINT	EXIST.	11
W132A	BATH	CT-1	CT-1	CT-1 / CT-2	--	CT-1 / CT-2	--	CT-1 / CT-2	--	CT-1 / CT-2 / PL.	-- / E. PAINT	EXIST. / PL.	E. PAINT	VARIES	3, 4
W134	BEDROOM	LVT-1	RES-1	EXIST. / PL.	PAINT	EXIST. / PL.	PAINT	EXIST. / PL.	PAINT	EXIST. / PL.	PAINT	EXIST.	PAINT	EXIST.	11
W134A	BATH	CT-1	CT-1	CT-1 / CT-2	--	CT-1 / CT-2	--	CT-1 / CT-2	--	CT-1 / CT-2 / PL.	-- / E. PAINT	EXIST. / PL.	E. PAINT	VARIES	3, 4
W136	BEDROOM	LVT-1	RES-1	EXIST. / PL.	PAINT	EXIST. / PL.	PAINT	EXIST. / PL.	PAINT	EXIST. / PL.	PAINT	EXIST.	PAINT	EXIST.	11
W136A	BATH	CT-1	CT-1	CT-1 / CT-2	--	CT-1 / CT-2	--	CT-1 / CT-2	--	CT-1 / CT-2 / PL.	-- / E. PAINT	EXIST. / PL.	E. PAINT	VARIES	3, 4
W138	BEDROOM	LVT-1	RES-1	EXIST. / PL.	PAINT	EXIST. / PL.	PAINT	EXIST. / PL.	PAINT	EXIST. / PL.	PAINT	EXIST.	PAINT	EXIST.	11
W138A	BATH	CT-1	CT-1	CT-1 / CT-2	--	CT-1 / CT-2	--	CT-1 / CT-2	--	CT-1 / CT-2 / PL.	-- / E. PAINT	EXIST. / PL.	E. PAINT	VARIES	3, 4
W140	BEDROOM	LVT-1	RES-1	EXIST. / PL.	PAINT	EXIST. / PL.	PAINT	EXIST. / PL.	PAINT	EXIST. / PL.	PAINT	EXIST.	PAINT	EXIST.	11
W140A	BATH	CT-1	CT-1	CT-1 / CT-2	--	CT-1 / CT-2	--	CT-1 / CT-2	--	CT-1 / CT-2 / PL.	--	EXIST. / PL.	E. PAINT	VARIES	3, 4
W142	BEDROOM	LVT-1	RES-1	EXIST. / PL.	PAINT	EXIST. / PL.	PAINT	EXIST. / PL.	PAINT	EXIST. / PL.	PAINT	EXIST.	PAINT	EXIST.	11
W142A	BATH	CT-1	CT-1	CT-1 / CT-2	--	CT-1 / CT-2	--	CT-1 / CT-2	--	CT-1 / CT-2 / PL.	-- / E. PAINT	EXIST. / PL.	E. PAINT	VARIES	3, 4
W144	OFFICE	EXIST.	EXIST.	EXIST. / PL.	PAINT	EXIST.	--	EXIST.	--	EXIST.	-- / E. PAINT	EXIST.	--	EXIST.	
W144A	BATH	EXIST.	EXIST.	EXIST.	--	EXIST.	--	EXIST.	--	EXIST.	--	EXIST.	--	EXIST.	
W144C	STORAGE	EXIST.	EXIST.	EXIST.	--	EXIST.	--	EXIST.	--	EXIST.	--	EXIST.	--	EXIST.	

DOOR & FRAME FINISH SCHEDULE

DOOR							FRAME		DETAILS			FIRE RATING			HW SET
NUMBER	PAIR	WIDTH	HEIGHT	THK.	MAT.	TYPE	MAT.	TYPE	HEAD	JAMB	SILL	LABEL	MIN.	REMARKS	
1HW1		3' - 4"	7' - 0"	1 3/4"	EX.	--	EX.	--	--	--	--	EX.	EX.	5, 6, 9	01
1HW3.1		3' - 0"	7' - 0"	1 3/4"	EX.	--	EX.	--	--	--	--	EX.	EX.	9	02
1HW3.2	X	6' - 0"	7' - 0"	1 3/4"	EX.	--	EX.	--	--	--	--	EX.	EX.	9	02
SW2		3' - 4"	7' - 0"	1 3/4"	EX.	--	EX.	--	--	--	--	EX.	EX.	5, 6	03
SW3		3' - 0"	7' - 0"	1 3/4"	EX.	--	EX.	--	--	--	--	EX.	EX.	5, 6	03
W2		3' - 4"	7' - 0"	1 3/4"	EX.	--	EX.	--	--	--	--	EX.	EX.	5, 6	03
W114		V.I.F.	V.I.F.	1 3/4"	WD	A	EX.	--	--	--	--	B	90	7, 8	04
W115		V.I.F.	V.I.F.	1 3/4"	WD	A	EX.	--	--	--	--	--	20	7, 8	09
W115A.1		3' - 0"	7' - 0"	1 3/4"	WD	A	H.M.	I	1/A3.01	2/A3.01	--	--	20		04
W115A.2		V.I.F.	V.I.F.	1 3/4"	WD	A	EX.	--	--	--	--	--	--	7, 8	06
W116		3' - 0"	7' - 0"	1 3/4"	WD	A	H.M.	I	1/A3.01	2/A3.01	--	--	20	10	05
W116A		2' - 2"	7' - 0"	1 3/4"	WD	A	H.M.	I	1/A3.01 SIM.	2/A3.01 SIM.	--	--	--	10	08
W120.1		3' - 0"	7' - 0"	1 3/4"	WD	A	H.M.	I	1/A3.01	2/A3.01	--	--	20	10	05
W120.2		3' - 0"	7' - 0"	1 3/4"	WD	A	H.M.	I	1/A3.01	2/A3.01	--	--	20	10	05
W120.3		3' - 0"	7' - 0"	1 3/4"	WD	A	H.M.	I	1/A3.01	2/A3.01	--	--	20	10	05
W120.4		3' - 0"	7' - 0"	1 3/4"	WD	A	H.M.	I	1/A3.01	2/A3.01	--	--	20	10	05
W122		3' - 0"	7' - 0"	1 3/4"	WD	A	H.M.	I	1/A3.01	2/A3.01	--	--	20	10	05
W124		3' - 0"	7' - 0"	1 3/4"	WD	A	H.M.	I	1/A3.01	2/A3.01	--	--	20	10	05
W124A		2' - 2"	7' - 0"	1 3/4"	WD	A	H.M.	I	1/A3.01 SIM.	2/A3.01 SIM.	--	--	--	10	08
W126		3' - 0"	7' - 0"	1 3/4"	WD	A	H.M.	I	1/A3.01	2/A3.01	--	--	20	10	05
W126A		2' - 2"	7' - 0"	1 3/4"	WD	A	H.M.	I	1/A3.01 SIM.	2/A3.01 SIM.	--	--	--	10	08
W128		3' - 0"	7' - 0"	1 3/4"	WD	A	H.M.	I	1/A3.01	2/A3.01	--	--	20	10	05
W128A		2' - 2"	7' - 0"	1 3/4"	WD	A	H.M.	I	1/A3.01 SIM.	2/A3.01 SIM.	--	--	--	10	08
W130		3' - 0"	7' - 0"	1 3/4"	WD	A	H.M.	I	1/A3.01	2/A3.01	--	--	20	10	10
W130A		3' - 0"	7' - 0"	1 3/4"	WD	A	H.M.	I	1/A3.01 SIM.	2/A3.01 SIM.	--	--	--	10	07
W131		V.I.F.	V.I.F.	1 3/4"	WD	A	EX.	--	--	--	--	B	90	7, 8	07
W132		3' - 0"	7' - 0"	1 3/4"	WD	A	H.M.	I	1/A3.01	2/A3.01	--	--	20	10	05
W132A		3' - 0"	7' - 0"	1 3/4"	WD	A	H.M.	I	1/A3.01 SIM.	2/A3.01 SIM.	--	--	--	10	07
W134		3' - 0"	7' - 0"	1 3/4"	WD	A	H.M.	I	1/A3.01	2/A3.01	--	--	20	10	05
W134A		2' - 2"	7' - 0"	1 3/4"	WD	A	H.M.	I	1/A3.01 SIM.	2/A3.01 SIM.	--	--	--	10	08
W136		3' - 0"	7' - 0"	1 3/4"	WD	A	H.M.	I	1/A3.01	2/A3.01	--	--	20	10	05
W136A		2' - 2"	7' - 0"	1 3/4"	WD	A	H.M.	I	1/A3.01 SIM.	2/A3.01 SIM.	--	--	--	10	08
W138		3' - 0"	7' - 0"	1 3/4"	WD	A	H.M.	I	1/A3.01	2/A3.01	--	--	20	10	05
W138A		2' - 2"	7' - 0"	1 3/4"	WD	A	H.M.	I	1/A3.01 SIM.	2/A3.01 SIM.	--	--	--	10	08
W140		3' - 0"	7' - 0"	1 3/4"	WD	A	H.M.	I	1/A3.01	2/A3.01	--	--	20	10	05
W140A		2' - 2"	7' - 0"	1 3/4"	WD	A	H.M.	I	1/A3.01 SIM.	2/A3.01 SIM.	--	--	--	10	08
W142		3' - 0"	7' - 0"	1 3/4"	WD	A	H.M.	I	1/A3.01	2/A3.01	--	--	20	10	05
W142A		2' - 2"	7' - 0"	1 3/4"	WD	A	H.M.	I	1/A3.01 SIM.	2/A3.01 SIM.	--	--	--	10	08
W144.1		3' - 0"	7' - 0"	1 3/4"	WD	A	H.M.	I	1/A3.01	2/A3.01	--	--	20	10	05
W144.2		3' - 0"	7' - 0"	1 3/4"	WD	A	H.M.	I	1/A3.01	2/A3.01	--	--	20	10	05
W144C		V.I.F.	V.I.F.	1 3/4"	WD	A	EX.	--	--	--	--	--	20	7, 8	04



1 / A6 **HEAD DETAIL**
SCALE: 1 1/2" = 1'-0"

2 / A6 **JAMB DETAIL**
SCALE: 1 1/2" = 1'-0"

SCHEDULE OF ABBREVIATIONS:

CPT-#	CARPET TILE
CT-#	CERAMIC TILE
E. PAINT	EPOXY PAINT
EX. / EXIST.	EXISTING
H.M.	HOLLOW METAL
LVT-#	LUXURY VINYL TILE
PL.	PLASTER
RES-#	RESILIENT
WD	WOOD

FINISH SCHEDULE COMMENTS:

1. REMOVE ALL ADHESIVE FROM CEILING TILE DEMOLITION COMPLETELY AND PATCH AND REPAIR CONCRETE DECK AS REQUIRED PRIOR TO PAINTING.
2. PAINT CEILING COLOR PT-3.
3. EPOXY PAINT FACE AND UNDERSIDE OF NEW PLASTER SOFFIT CONSTRUCTION PT-2.
4. EPOXY PAINT FACE AND UNDERSIDE OF EXISTING CONCRETE BEAM PT-2.
5. CARD ACCESS CONTROL - PULL-SIDE OF DOOR.
6. PAINT EXISTING HOLLOW METAL DOOR AND FRAME.
7. FIELD VERIFY EXISTING FRAME DIMENSIONS PRIOR TO FABRICATION OF NEW DOOR.
8. PATCH AND REPAIR EXISTING HOLLOW METAL FRAME AT HARDWARE DEMOLITION POINTS - PREP, PRIME, AND PAINT FRAME.
9. PROVIDE AND INSTALL ADA OPERATOR - REFER TO DOOR HARDWARE SPECIFICATIONS.
10. EXISTING DOOR HEAD HEIGHT LOWERED. INFILL WITH STEEL STUD AND PLASTER FINISH, TYP. - REFER TO DETAIL.
11. ALL FLOORS TO RECEIVE NEW LVT-1 TO BE SKIM-COATED PRIOR TO FLOORING INSTALLATION.
12. CLEAN, PREP AND PAINT ALL WALLS AND CEILING.

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OWEN GRADUATE HALL - WEST -
CONVERT OFFICE SPACE TO FRIB HOUSING
MICHIGAN STATE UNIVERSITY

CAPITAL PROJ. NO.
CP22127

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MECH.	GOERGES
ELEC.	HOWARDK
CIVIL	
L.A.	
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REVISIONS
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ROOM SCHED. & DOOR SCHED.
A6

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REFLECTED CEILING LEGEND:

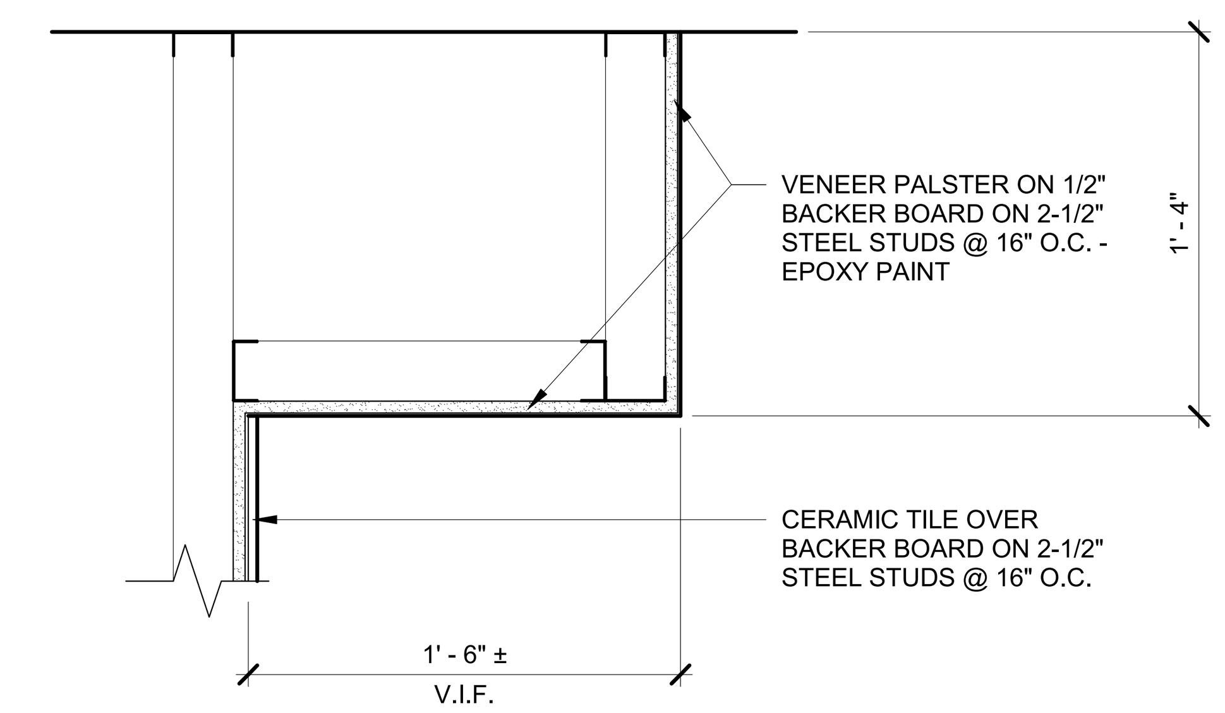
- CORR. — ROOM NAME - SEE FINISH SCHEDULE
- 122 — ROOM NO. - SEE FINISH SCHEDULE
- SURFACE MOUNTED LIGHT FIXTURES. REFER TO ELECTRICAL DRAWINGS.
- RECESSED LIGHT FIXTURE. REFER TO ELECTRICAL DRAWINGS.
- EXIT FIXTURE. REFER TO ELECTRICAL DRAWINGS.
- SURFACE-MOUNTED CONDUIT. REFER TO ELECTRICAL.
- EXHAUST GRILLE. REFER TO MECHANICAL.
- S — SMOKE DETECTOR. REFER TO ELECTRICAL.

GENERAL CEILING PLAN NOTES:

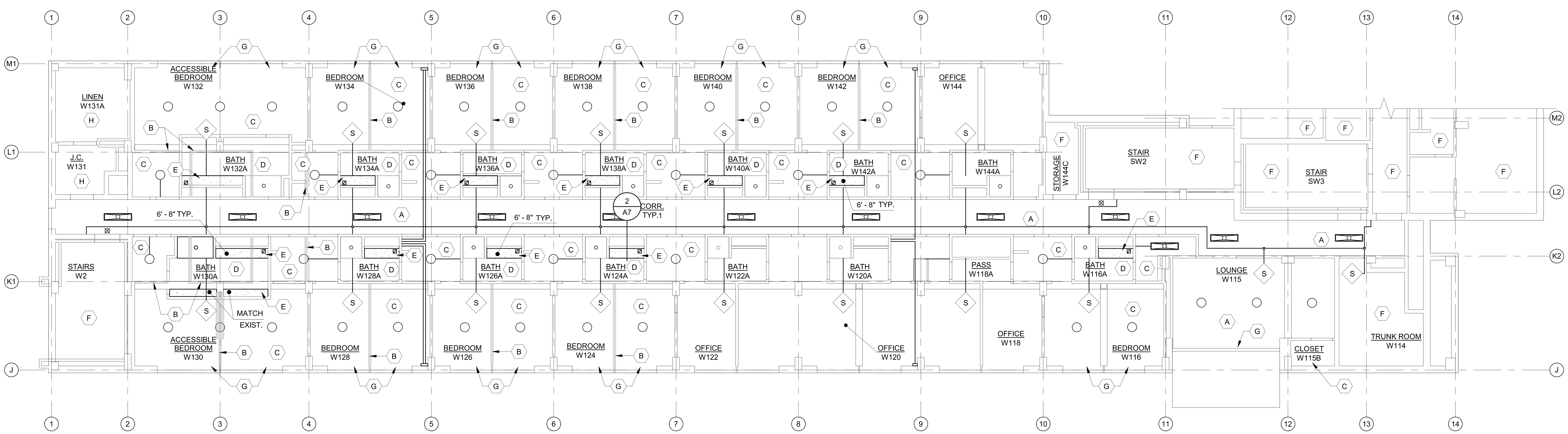
1. ALL WALLS SHALL EXTEND TIGHT TO THE UNDERSIDE OF THE CONCRETE DECK, U.N.O.
2. NOT ALL EXIT LIGHTS, FIRE ALARM DEVICES, AND MISCELLANEOUS ELECTRICAL ITEMS ARE SHOWN ON THE DRAWINGS. REFER TO THE ELECTRICAL DRAWINGS FOR THE COMPLETE SCOPE OF ELECTRICAL ITEMS LOCATED IN THE CEILINGS. LOCATE ITEMS IN THE CEILING SYMMETRICAL TO THE SPACE.
3. PAINT ALL NEW CEILING-MOUNTED CONDUIT AND PIPES ATTACHED TO EXISTING CEILING STRUCTURE - TYP.
4. AT ALL CEILING, SURFACE-MOUNTED LIGHTS SCHEDULED FOR DEMOLITION, REMOVE ATTACHMENT ANCHORS AND PATCH CONCRETE DECK - TYPICAL.

CEILING KEYNOTES

- A REMOVE 1x1 SURFACE-APPLIED ACOUSTICAL TILE, PATCH AND REPAIR CONCRETE DECK AND PAINT.
- B PATCH EXPOSED CONCRETE DECK AT REMOVED WALL LOCATION - PAINT.
- C PATCH EXISTING CONCRETE DECK (AND SOFFITS) AT POINTS OF DEMOTION - PAINT ENTIRE CEILING.
- D EPOXY PAINT EXISTING CONCRETE DECK.
- E NEW GYPSUM BOARD SOFFIT - EPOXY PAINT.
- F EXISTING EXPOSED CEILING.
- G VERTICAL LOUVER BLINDS - REFER TO SPECIFICATIONS.
- H EXISTING EXPOSED CEILNG, CLEAN AND PAINT.



2 / A7 TYP. BATHROOM SOFFIT DETAIL
SCALE: 1 1/2" = 1'-0"



NORTH

1 / A7 FIRST FLOOR WEST - REFLECTED CEILING PLAN
SCALE: 1/8" = 1'-0"

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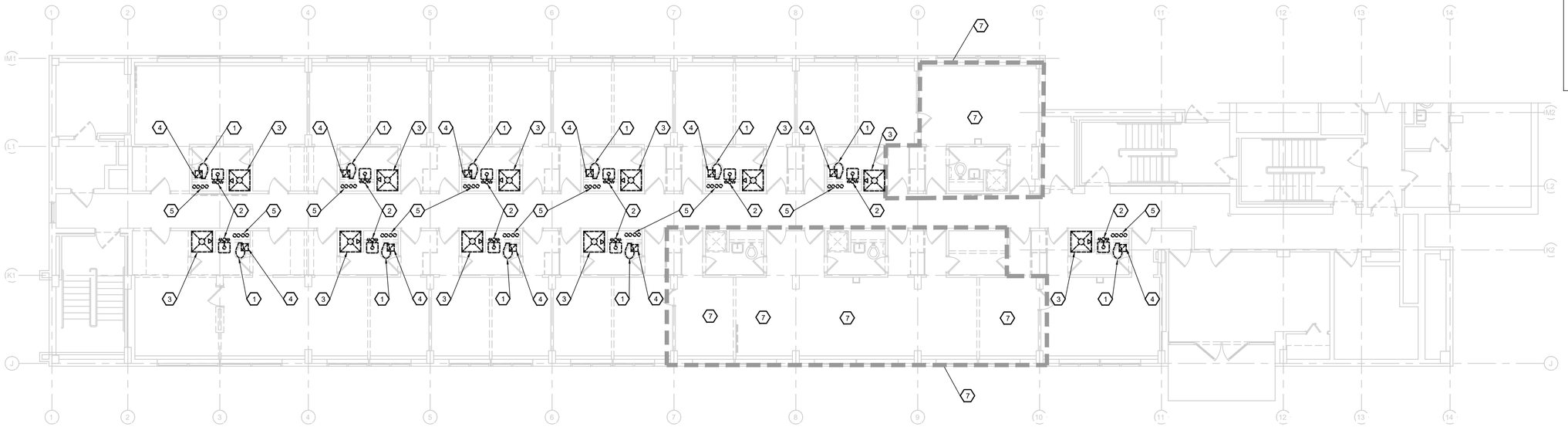
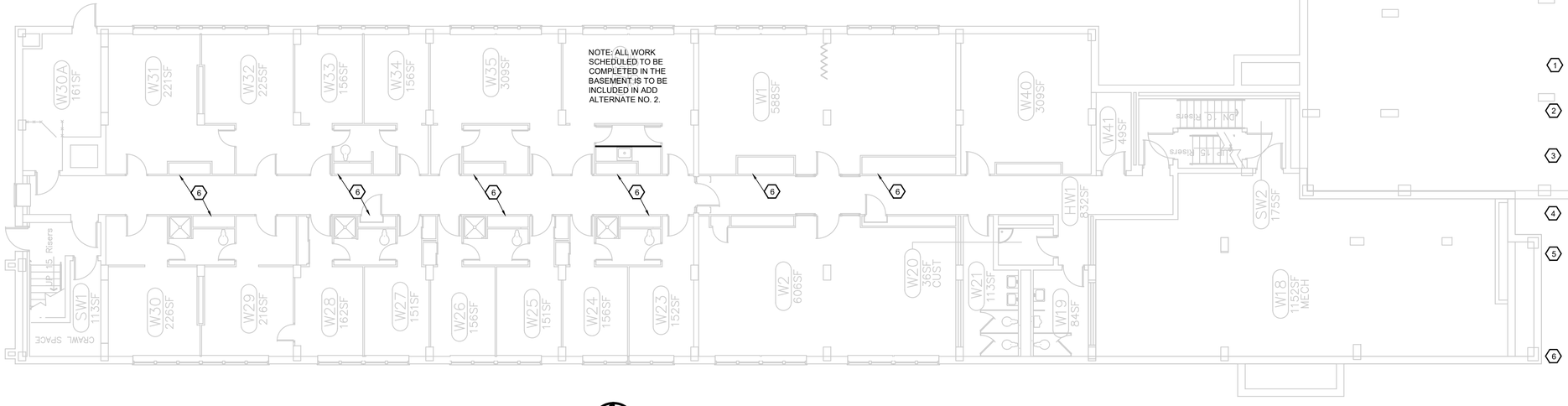


NORTH

FIRST FLOOR WEST - MECHANICAL DEMOLITION
1/8"=1'-0"



NOTE: ALL WORK SCHEDULED TO BE COMPLETED IN THE BASEMENT IS TO BE INCLUDED IN ADD ALTERNATE NO. 2.

NORTH

BASEMENT WEST - MECHANICAL DEMOLITION(ALTERNATE)
1/8"=1'-0"

KEYED NOTES:

1. EXISTING WATER CLOSET TO BE REMOVED. EXISTING SANITARY AND CW PIPING SHALL BE REMOVED BACK TO FLOOR AND WALL/CHASE, WITH INTENT TO BE REWORKED TO SERVE NEW WATER CLOSET.
2. EXISTING LAVATORY AND FAUCET TO BE REMOVED. EXISTING CW AND HW PIPING SHALL BE REMOVED BACK TO WALL/CHASE, WITH INTENT TO BE REWORKED TO SERVE NEW SINK.
3. EXISTING MODULAR SHOWER STALL, SHOWER HEAD, SHOWER VALVE, HANDLE, AND FLOOR DRAIN TO BE REMOVED. SANITARY, CW, AND HW CONNECTIONS SHALL BE DISCONNECTED WITH INTENT TO BE REWORKED TO SERVE NEW SHOWER VALVE, SHOWER HEAD, AND DRAIN.
4. REMOVE EXISTING EXHAUST GRILLE IN CEILING. EXISTING OPENING LEFT IN SOFFIT SHALL BE USED FOR INSTALLATION OF NEW EXHAUST FAN.
5. EXISTING 2-1/2" CW, 1-1/2" HW, 4" VENT, AND 4" SANITARY PIPING RISERS IN CHASE FROM FLOOR TO CEILING OF FIRST FLOOR SHALL BE REMOVED AND REPLACED. COORDINATE EXTENT OF PIPE REMOVAL/REPLACEMENT WITH ACCESS TO CHASE AND OPENINGS PROVIDED BY GENERAL TRADES. FIELD VERIFY ACCESS TO OPENING IN WALL CREATED BY GENERAL TRADES AND ABILITY TO REMOVE AND REPLACE SECTION OF VERTICAL PIPING.INTENT IS TO REPLACE VERTICAL MAINS, SO DEMOLITION SHALL BE CLOSELY COORDINATED WITH PLUMBING CONTRACTOR.
6. ALTERNATE NO.2: REMOVE EXISTING CW, HW, SANITARY AND VENT PIPING RISERS IN CHASE. IN ADDITION TO WHAT IS BEING REMOVED/REPLACED ON FIRST FLOOR (KEYED NOTE #5), THE SECTION BETWEEN THE CRAWL SPACE HORIZONTAL MAINS AND THE FIRST FLOOR SHALL ALSO BE REMOVED. WALL SHALL BE OPENED UP ON CORRIDOR-SIDE OF CHASE. COORDINATE WITH GENERAL TRADES. DISCONNECT BRANCH CONNECTIONS TO ALL EXISTING PLUMBING FIXTURES LOCATED ON THE OTHER SIDE OF THE CHASE, WITH INTENT TO RECONNECT TO NEW RISERS.
7. NO NEW WORK IN THIS ROOM.

0.0" 0.5" 1.0" 1.5" 2.0"

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MECHANICAL
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M1

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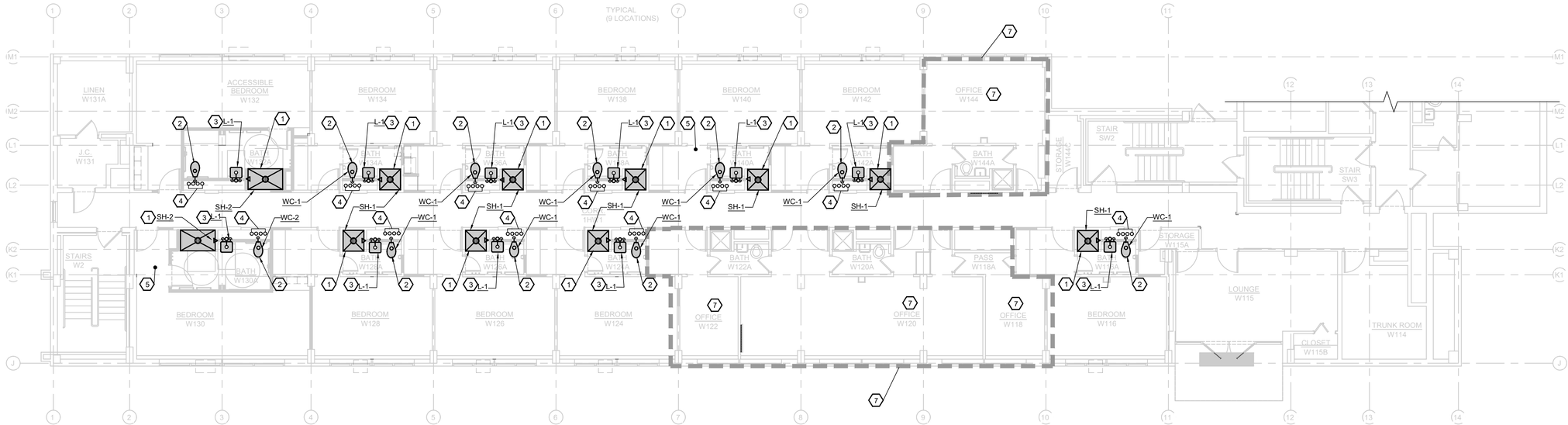
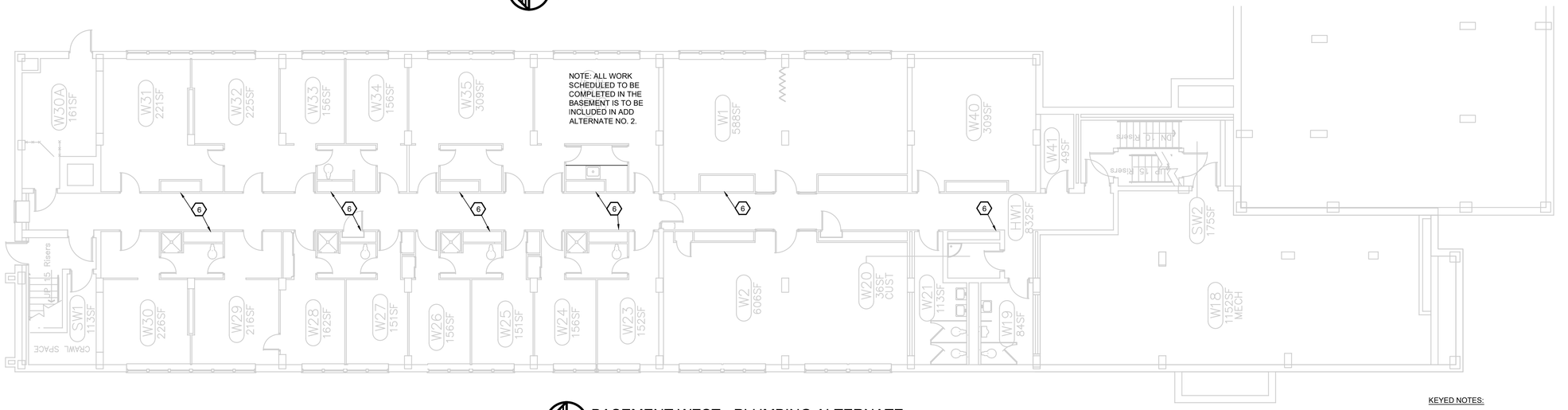


NORTH

FIRST FLOOR WEST - PLUMBING

1/8"=1'-0"



NORTH

BASEMENT WEST - PLUMBING ALTERNATE

1/8"=1'-0"

GENERAL NOTES:

1. MECHANICAL TRADES SHALL PROVIDE AND LOCATE CEILING AND ACCESS DOORS AS REQUIRED FOR ACCESS TO EQUIPMENT. ACCESS TO BE INSTALLED BY ARCHITECTURAL TRADES.
2. COORDINATE ROUTING AND LOCATION OF PIPING PRIOR TO INSTALLING. THE MECHANICAL TRADE SHALL BE RESPONSIBLE FOR REMOVAL AND REINSTALLATION OF ANY PIPING THAT HAS NOT BEEN PROPERLY COORDINATED AS NECESSARY, TO ALLOW INSTALLATION OF ALL TRADES WORK, AND TO ALLOW PROPER COORDINATION/LOCATION OF ALL SYSTEMS.
3. COORDINATE ALL PIPING LOCATED ABOVE THE FLOOR AND IN CEILING SPACE WITH OTHER TRADES. ROUTE PIPING AS NECESSARY TO AVOID CONFLICTS WITH ALL OTHER TRADES.
4. FURNISH AND INSTALL ISOLATION BALL VALVE ON ALL BRANCH CW, HW AND GAS PIPING SERVING EACH FIXTURE OR PIECE OF EQUIPMENT.
5. ALL PLUMBING PIPING AND VENTING SHALL BE INSTALLED PER STATE/LOCAL CODES.
6. NO PIPING SHALL BE LOCATED DIRECTLY ABOVE ELECTRICAL PANELS OR DEVICES. NO PIPING SHALL BE ALLOWED WITHIN 3'-0" OF PANELS, UNLESS PIPING IS HIGHER THAN 7'-0" ABOVE FLOOR. VERIFY ALL PIPE ROUTING WITH ELECTRICAL TRADES.
7. FURNISH AND INSTALL CHECK VALVES ON CW AND HW BRANCH LINES SERVING SINKS AND LAVATORIES. CHECK VALVES SHALL BE INSTALLED UPSTREAM OF THERMOSTATIC MIXING VALVE.

UNIT PRICE NOTE

MECHANICAL CONTRACTOR SHALL PROVIDE A UNIT PRICE WITH THEIR BID FOR THE INSTALLATION OF (1) NEW BALL VALVE ON THE EXISTING VERTICAL WATER RISER IN CRAWL SPACE. INTENT IS FOR NEW VALVE TO BE INSTALLED IN THE INSTANCE THAT THE EXISTING VALVE DOES NOT CLOSE PROPERLY.

KEYED NOTES:

1. NEW SHOWER ASSEMBLY(ACRYLIC WALLS, CEILING AND BASE) TO BE INSTALLED PER MANUFACTURER'S REQUIREMENTS. INSTALL NEW SHOWER VALVE, SHOWER HEAD, AND FLOOR DRAIN. CONNECT TO EXISTING SANITARY PIPING IN FLOOR AND EXISTING HW AND CW IN WALL/CHASE. FIELD VERIFY EXACT CONNECTION LOCATIONS.
2. NEW FLOOR MOUNTED WATER CLOSET TO BE INSTALLED. ROUTE CW PIPING INTO CHASE TO CONNECT TO CW RISER. CONNECT SANITARY PIPING TO EXISTING PIPING IN FLOOR. VERIFY LOCATION AND DIMENSIONS OF NEW WATER CLOSET PRIOR TO ORDERING FIXTURE. FIELD VERIFY EXACT CONNECTION LOCATIONS.
3. NEW WALL MOUNTED LAVATORY TO BE INSTALLED. INSTALL NEW MIXING VALVE, AND FAUCETS. ROUTE NEW CW AND HW PIPING INTO CHASE TO CONNECT TO CW AND HW RISERS. RECONNECT TO EXISTING SANITARY AND VENT RISERS IN CHASE. FIELD VERIFY EXACT CONNECTION LOCATIONS. EACH NEW LAVATORY SHALL HAVE AN INLINE FILTRATION UNIT INSTALLED ON CW PIPING. FILTER SHALL BE LOCATED BELOW SINK AND FASTENED TO WALL.
4. INSTALL NEW 2" CW, 1-1/2" HW, 4" VENT AND 4" SANITARY PIPING IN CHASE. INTENT IS TO REPLACE ALL PIPING FROM FLOOR TO CEILING ON FIRST FLOOR. ACCESS TO CHASE SHALL BE PROVIDED WITH AN OPENING ON THE WALL OF FIRST FLOOR (COORDINATE WITH GENERAL TRADES). NEW PIPING SHALL BE RECONNECTED TO VERTICAL RISERS ABOVE AND BELOW FIRST FLOOR CHASE SPACE.
5. FIRE PROTECTION SPRINKLER HEADS ARE TO BE REWORKED TO ACCOMMODATE REVISED FLOOR PLAN. FIELD VERIFY EXISTING PIPING AND NEW ROUTE. COORDINATE WITH GENERAL TRADES AND ELECTRICAL TRADES.
6. ALTERNATE NO.2: INSTALL NEW 2" CW, 1-1/2" HW, 4" SANITARY AND 4" VENT PIPING RISERS IN CHASE. IN ADDITION TO WHAT IS BEING REPLACED ON FIRST FLOOR (KEYED NOTE #4), THE SECTION BETWEEN THE CRAWL SPACE HORIZONTAL MAINS AND THE FIRST FLOOR SHALL ALSO BE REPLACED. WALL SHALL BE OPENED UP ON CORRIDOR-SIDE OF CHASE. COORDINATE WITH GENERAL TRADES. RECONNECT BRANCH PIPING TO ALL EXISTING PLUMBING FIXTURES LOCATED ON THE OTHER SIDE OF THE CHASE. FIELD VERIFY ALL CONNECTION SIZES AND INSTALL NEW BALL VALVES ON CW AND HW BRANCHES.
7. NO NEW WORK IN THESE SPACES.

0.0" 0.5" 1.0" 1.5" 2.0"

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PLUMBING

M2

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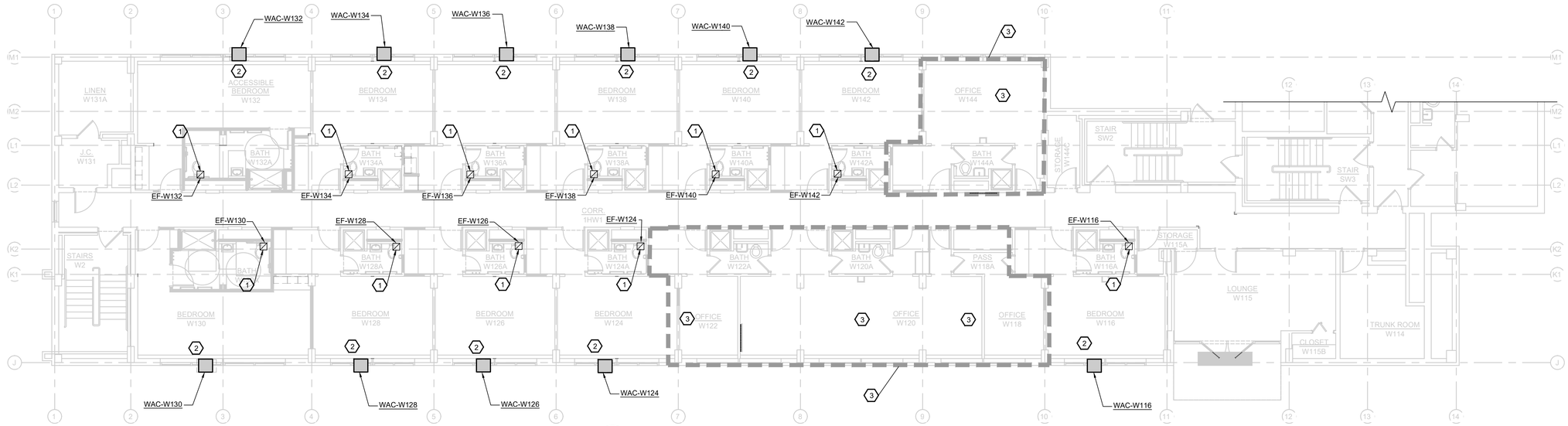

NORTH

FIRST FLOOR WEST - HVAC

1/8"=1'-0"

KEYED NOTES:

1. NEW CEILING EXHAUST FAN TO BE INSTALLED ABOVE TOILET IN BOTTOM OF NEW SOFFIT. FIELD VERIFY EXACT DIMENSIONS OF SOFFIT AND OPENING, AND COORDINATE WITH GENERAL TRADES.
2. FURNISH AND INSTALL NEW WINDOW AIR CONDITIONING UNIT. UTILIZE EXISTING WINDOW FRAMING ALREADY IN PLACE FOR EXISTING WINDOW UNITS. COORDINATE WITH GENERAL TRADES TO ADJUST GLAZING PANELS AS NEEDED TO INSTALL NEW UNIT. ALL PANELS AND FRAMING ADJUSTED OR REVISED SHALL BE SEALED PROPERLY AND COORDINATED WITH MSU INSPECTORS AND STANDARDS.
3. NO NEW WORK IN THESE SPACES.

GENERAL NOTES

1. COORDINATE ROUTES/LOCATIONS OF ALL DUCTWORK, DIFFUSERS, ETC. WITH ALL CONDITIONS, OTHER TRADES, ETC. THE MECHANICAL TRADES SHALL BE RESPONSIBLE FOR ROUTING DUCT THROUGH JOIST SPACE AS REQUIRED TO AVOID CONFLICTS WITH OTHER SYSTEMS, DUCTWORK, ETC. FURNISH AND INSTALL ALL FITTINGS, DUCTWORK, ETC. TO OFFSET DUCTWORK UP AND DOWN AS REQUIRED TO ACHIEVE INSTALLATION OF DUCT SYSTEM.
2. COORDINATE ALL WORK IN SOFFIT WITH GENERAL TRADES.
3. COORDINATE LOCATION FOR ELECTRICAL CONNECTION ON NEW FAN WITH ELECTRICAL TRADES.
4. COORDINATE NEW WINDOW AIR CONDITIONING UNIT PLUG WITH ELECTRICAL TRADES.

0.0" 0.5" 1.0" 1.5" 2.0"

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GENERAL NOTES

ALL WORK COMPLETED AND ALL MATERIALS PROVIDED SHALL MEET THE MSU STANDARDS FOR CONSTRUCTION.

GENERAL MECHANICAL NOTES

1. THE MECHANICAL TRADES SHALL FAMILIARIZE THEMSELVES WITH ALL EXISTING AND NEW CONDITIONS, THESE DRAWINGS, ADDENDA & RELATED SPECIFICATIONS. THEY SHALL COMPLETELY SATISFY THEMSELVES AS TO THE CONDITIONS TO WHICH THE WORK IS TO BE PERFORMED BEFORE SUBMITTING THEIR BID. NO ALLOWANCES OR CONSIDERATIONS WILL BE GIVEN AT A LATER DATE FOR ALLEGED MISUNDERSTANDINGS AS TO THE REQUIREMENTS OF THE WORK, MATERIALS TO BE FURNISHED, OR CONDITIONS REQUIRED BY THE NATURE OF THIS PROJECT SITE DUE TO NEGLECT ON THE BIDDERS PART TO MAKE SUCH AN EXAMINATION AND COORDINATION.
2. DRAWINGS ARE DIAGRAMMATIC AND ARE INTENDED TO SHOW APPROXIMATE LOCATION AND GENERAL ARRANGEMENT OF SYSTEMS AND EQUIPMENT. DRAWINGS SHALL NOT BE SCALED FOR LOCATION OF SYSTEMS, EQUIPMENT, ETC. ALL LOCATIONS OF SYSTEMS AND EQUIPMENT SHALL BE VERIFIED IN FIELD AND COORDINATED WITH ALL OTHER TRADES AND EXISTING FIELD CONDITIONS. SOME SYSTEMS (PIPING, DUCTWORK, ETC.) AND EQUIPMENT LOCATIONS MAY REQUIRE CHANGES IN LOCATION DUE TO FIELD CONDITIONS AND COORDINATION WITH OTHER TRADES. THESE CHANGES SHALL BE MADE WITH NO ADDITIONAL COST TO THE OWNER. FAILURE TO VERIFY AND COORDINATE WILL BE NO REASON FOR ADDITIONAL COMPENSATION.
3. THE INSTALLATION OF ALL SYSTEMS, EQUIPMENT, ETC., IS SUBJECT TO CLARIFICATION WITH SUBMITTED SHOP DRAWINGS AND FIELD COORDINATION REQUIREMENTS. EQUIPMENT OUTLINES SHOWN ON DRAWINGS OR DIMENSIONED ON DRAWINGS ARE LIMITING DIMENSIONS. ANY EQUIPMENT THAT REDUCES THE INDICATED CLEARANCES OR EXCEEDS SPECIFIED OR SCHEDULED EQUIPMENT DIMENSIONS SHALL NOT BE USED.
4. THE MECHANICAL CONTRACTOR SHALL COORDINATE FINAL LOCATION OF ALL EQUIPMENT WITH PIPING, DUCTWORK, ETC., AT THE TIME OF ROUGH-IN. ALL EQUIPMENT TO BE SERVICEABLE. ABOVE CEILING EQUIPMENT SHALL BE WITHIN 18" OF CEILING WITHOUT ANY OBSTRUCTIONS AND SHALL HAVE ALL SERVICE AND ACCESS SPACES KEPT CLEAR. PERFORM ABOVE CEILING COORDINATION WITH ALL TRADES.
5. THESE DRAWINGS AND THE ASSOCIATED SPECIFICATIONS ARE INTENDED TO PROVIDE COMPLETELY FURNISHED, INSTALLED AND OPERATIONAL MECHANICAL SYSTEM (HEATING, VENTILATING, AIR CONDITIONING, PLUMBING AND PIPING, ETC.). IF THESE DRAWINGS AND ASSOCIATED SPECIFICATIONS HAVE INFORMATION OMITTED THAT WOULD NOT ALLOW A COMPLETELY OPERATIONAL SYSTEM AS IS THE INTENT OF THE ENGINEER, THE BIDDER SHALL NOTIFY THE ENGINEER A MINIMUM ONE WEEK PRIOR TO THE BID DATE TO ALLOW FOR ADDENDA. ONCE BIDS HAVE BEEN RECEIVED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MATERIAL, LABOR, ETC., TO FURNISH AND INSTALL A COMPLETELY OPERATIONAL MECHANICAL SYSTEM AS IS THE INTENT OF THESE DRAWINGS AND ASSOCIATED SPECIFICATION. ALL EQUIPMENT SHALL BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS. IF ANY DISCREPANCIES ARE ON DRAWINGS, AS COMPARED TO MANUFACTURER'S INSTALLATION INSTRUCTIONS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND INSTALL EQUIPMENT AS REQUIRED AT NO ADDITIONAL COST TO THE PROJECT.
6. THE MECHANICAL TRADES SHALL TAKE OUT ALL PERMITS AND ARRANGE FOR NECESSARY INSPECTIONS AND SHALL PAY ALL FEES AND COSTS.
7. THE MECHANICAL TRADES SHALL VERIFY AMOUNT OF EXISTING PIPING, VALVES, DUCTWORK, ETC. TO BE REMOVED OR RELOCATED TO ALLOW FOR INSTALLATION OF NEW PIPING, DUCTWORK, VALVES, EQUIPMENT, WALLS, ETC. ALL ABANDONED PIPING, VALVES, ETC., SHALL BE REMOVED.
8. THE MECHANICAL TRADES SHALL COORDINATE ALL WORK WITH OTHER TRADES AND SHALL COORDINATE ANY SYSTEMS SHUT-DOWN WITH THE ARCHITECT/ENGINEER AND OWNER.
9. ALL EXISTING EQUIPMENT, PIPING, DUCTWORK, ETC. THAT IS TO BE REMOVED SHALL REMAIN THE PROPERTY OF THE OWNER. THE CONTRACTOR SHALL REMOVE AND LOCATE THIS MATERIAL THAT REMAINS THE PROPERTY OF THE OWNER TO A LOCATION DETERMINED BY THE OWNER SOMEWHERE ON SITE. IF THE OWNER DOES NOT WANT TO MAINTAIN POSSESSION OF THE REMOVED MATERIAL, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING MATERIAL FROM THE SITE AND DISPOSING OF THIS MATERIAL AS NECESSARY TO MEET ALL CODES AND REQUIREMENTS AND SHALL PAY ALL COSTS AS REQUIRED FOR ANY DISPOSAL FEES, INSPECTIONS, PERMITS, ETC.
10. ATTACHMENTS OF MECHANICAL OR ELECTRICAL EQUIPMENT TO STRUCTURAL MEMBERS ARE THE RESPONSIBILITY OF THE INSTALLING TRADE. STRUCTURAL MEMBERS SHALL NOT BE FIELD CUT, WELDED OR OTHERWISE MODIFIED WITHOUT APPROVAL OF THE ARCHITECT/ENGINEER. ATTACHMENT TO STEEL JOISTS SHALL BE MADE AT PANEL POINTS WHENEVER POSSIBLE. STEEL JOISTS SHALL BE REINFORCED FOR NON-PANEL POINT CONCENTRATED LOADS IN ACCORDANCE WITH THE STRUCTURAL DETAILS; THIS WORK SHALL BE PERFORMED BY CERTIFIED WELDERS AND IS THE RESPONSIBILITY OF THE TRADE INSTALLING THE SUBJECT LOAD. STRUCTURAL MEMBERS SHALL NOT BE OVERLOADED AS A RESULT OF ATTACHMENTS. ATTACHMENT/EQUIPMENT LOADING FOR ALL TRADES RESULTING IN TOTAL LOAD GREATER THAN AN EQUIVALENT UNIFORM 5 PSF FOR ANY MEMBER SHALL BE SUBMITTED TO THE ARCHITECT/ENGINEER FOR REVIEW.
11. SEE SPECIFICATION FOR FURTHER INFORMATION. REFER TO MSU STANDARDS.

SPECIFIED AND SCHEDULED EQUIPMENT NOTE

EQUIPMENT MANUFACTURERS AND MATERIALS SPECIFIED OR SCHEDULED ON THESE PROJECT DRAWINGS AND SPECIFICATIONS SHALL BE INCLUDED UNDER THE BASE BID PRICE. SUBSTITUTE OR ALTERNATE EQUIPMENT SHALL BE PRICED AS AN ADD OR DEDUCT PRICE TO THE CONTRACTOR'S BASE BID PRICE. IF ONE OR MORE SUBSTITUTIONS ARE ACCEPTED WITH THE PROPOSAL AT THE CORRESPONDING ALTERNATE PRICE, IT SHALL BE UNDERSTOOD THAT APPROVAL OF SAID EQUIPMENT SHALL BE SUBJECT TO STRICT ADHERENCE TO THE PLANS AND SPECIFICATIONS. SHOULD ANY OF THE SUBSTITUTE EQUIPMENT FAIL TO MEET THE SPECIFICATIONS AFTER THE PROPOSAL HAS BEEN ACCEPTED, REGARDLESS IF EQUIPMENT HAS BEEN SHIPPED TO THE SITE AND INSTALLED, THE CONTRACTOR SHALL FURNISH AT NO EXTRA COST TO THE OWNER, THE SPECIFIED EQUIPMENT MEETING THE REQUIREMENTS AS STATED IN THESE SPECIFICATIONS AND COVER ALL COSTS NECESSARY FOR REMOVAL AND REINSTALLATION OF EQUIPMENT.

FIRE PROTECTION NOTES

1. THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR HIRING THE SERVICES OF A LICENSED FIRE PROTECTION CONTRACTOR TO DESIGN, DETAIL AND INSTALL ALL FIRE PROTECTION SPRINKLER PIPING REVISIONS.
2. THE ENTIRE FIRE PROTECTION SYSTEM DESIGN AND INSTALLATION SHALL BE STRICTLY IN ACCORDANCE WITH NFPA 13 SPRINKLER SYSTEMS AND SHALL MEET THE REQUIREMENTS OF THE LOCAL AND STATE FIRE MARSHAL AND ALL OTHER AUTHORITIES HAVING JURISDICTION.
3. ALL PERMITS, LICENSES, FEES, INSPECTIONS AND ARRANGEMENT/COORDINATION OF SUCH SHALL BE OBTAINED AND PAID FOR BY THE FIRE PROTECTION CONTRACTOR.
4. THE FIRE PROTECTION CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND VERIFY TIE-IN LOCATION, ROUTING OF PIPING, LOCATION OF SPRINKLER HEADS WITH RESPECT TO DUCTS, EQUIPMENT, LIGHT FIXTURES, ETC. SPRINKLER HEADS SHALL BE CENTERED IN CEILING TILES AND HALF TILES.
5. SEE SPECIFICATION FOR FURTHER INFORMATION AND REQUIREMENTS.

EXHAUST FAN SCHEDULE

MARK	SERVING	AIRFLOW (CFM)	EXTERNAL STATIC PRESSURE (IN. W.G.)	MOTOR	BHP	HP	FLA	VOLTS/PH/HZ	MANUFACTURER MODEL NUMBER	SONES	WEIGHT (LBS)	DIMENSIONS
EF	BATHROOM	150	0.50	DIRECT-DRIVE	0.07	N/A	1.8	115/60/1	GREENHECK SP-B150	3.5	55	15"W X 12" L X 7"H

NOTES:

1. DIRECT DRIVE MOTOR.
2. DISCONNECT (PLUG-TYPE) SHALL BE PROVIDED AND FACTORY-MOUNTED BY FAN MANUFACTURER.
3. EXHAUST FANS SHALL BE RATED FOR CONTINUOUS OPERATION.
4. THIS SCHEDULE SHALL APPLY TO ALL NEW EXHAUST FANS SHOWN ON THE PLANS.

WINDOW AIR CONDITIONING UNIT SCHEDULE

MARK	MANUFACTURER	MODEL NO.	COOLING CAPACITY (BTUH)	AIRFLOW (CFM)	EER	AMPS	VOLTS/PH/HZ
WAC-W116, W124, W126, W128, W134, W136, W138, W140, W142	FRIEDRICH - KUHL	KCS10A10A	10,000	300	12.1	8.5	115/60/1
WAC-W130, W132	FRIEDRICH - KUHL	KCS12A10A	12,000	300	12	9.5	115/60/1

NOTES:

1. POWER CORD SHALL BE 6 FOOT LONG, NEMA 5-15P PLUG FACE (STANDARD), 15 AMP CIRCUIT RATING.
2. PROVIDE SLEEVE AND COORDINATE INSTALLATION DEPTH WITH GENERAL TRADES.
3. MERV 6 FILTRATION.
4. CONTROLS SHALL INCLUDE INDIVIDUAL CUSTOMIZABLE SETTINGS, 24-HOUR TIMER OPTION, SPEED CONTROL, AUTO FAN, AUTO RESTART, ABILITY TO GROUP MULTIPLE UNITS.
5. CONTROL PANEL LOCKOUT OPTION (ON/OFF).
6. HIGH-TECH ALUMINUM FINS WITH RIFLED COPPER TUBING.

PLUMBING FIXTURE SCHEDULE

TAG/ DESCRIPTION	MANUFACTURER	MODEL #	DESCRIPTION
L-1	AMERICAN STANDARD	#0355.012	WALL HUNG LAVATORY: AMERICAN STANDARD #0355.012 LUCERNE, NOMINAL 20"X18" WHITE VITREOUS CHINA, FRONT OVERFLOW, FAUCET LEDGE, "D" SHAPED BOWL, SELF DRAINING DECK, HOLES 4" ON CENTER, CONSTRUCTED FOR CONCEALED ARM CARRIER AND ADA COMPLIANT. INSTALL THERMOSTATIC MIXING VALVE THAT IS ASSE 1070 LISTED UNDER EACH LAVATORY, PIPE TO HOT WATER SIDE OF FAUCET, AND ADJUST TO 105 DEGREE HOT WATER MAXIMUM AT FAUCET. FITTINGS SHALL INCLUDE CHICAGO 410-E2805ABCP LAVATORY FAUCET WITH CERAMIC DISC CARTRIDGES, 0.5 GPM FLOW DEVICE, 4" ON CENTER INLETS, 4" LEVER HANDLE WITH COLOR INDEXES, 4" LONG INTEGRAL CAST RIGID SPOUT, GRID DRAIN, P-TRAP, WHEEL HANDLE STOPS AND TAILPIECE, ALL POLISHED CHROME FINISH, UNDERSINK PROTECTIVE COVERS, ETC. FURNISH AND INSTALL INLINE FILTER ON COLD WATER LINE BELOW LAVATORY, REFER TO FILTER SCHEDULE BELOW.
WC-1	AMERICAN STANDARD	#2234.001	FLOOR MOUNTED FLUSH VALVE WATER CLOSET: AMERICAN STANDARD #2234.001 MADERA FLOWISE, 15" HIGH WITH SIPHON JET ACTION, ELONGATED BOWL, WHITE VITREOUS CHINA, 1 1/2" TOP SPUD, 1.6 GALLONS PER FLUSH. FITTINGS SHALL INCLUDE SLOAN ROYAL 110 OR ZURN Z6000 FLUSH VALVE WITH VACUUM BREAKER, CENTOCO 1500CC WHITE OPEN FRONT SEAT LESS COVER, BOLT CAPS, ETC. CONTROL FOR FLUSH VALVE SHALL BE MOUNTED ON THE WIDE SIDE OF TOILET AREA.
WC-2	AMERICAN STANDARD	#3043.001	FLOOR MOUNTED FLUSH VALVE WATER CLOSET (BARRIER FREE): AMERICAN STANDARD #3043.001 MADERA FLOWISE ADA EL 1.6, 16 1/2" HIGH WATER SAVER TOILET WITH SIPHON JET ACTION, ELONGATED BOWL, WHITE VITREOUS CHINA, 1 1/2" TOP SPUD, 1.6 GALLONS PER FLUSH. FITTINGS SHALL INCLUDE SLOAN ROYAL 110 OR ZURN Z6000 FLUSH VALVE WITH VACUUM BREAKER, CENTOCO 1500CC WHITE OPEN FRONT SEAT LESS COVER, TO GIVE 17" HIGH TOP OF SEAT ABOVE FINISHED FLOOR FOR BARRIER FREE USE, BOLT CAPS, ETC. INSTALLATION SHALL MEET ADA REQUIREMENTS. CONTROL FOR FLUSH VALVE SHALL BE MOUNTED ON THE WIDE SIDE OF TOILET AREA.
SH-1	SYMMONS/BATH FITTER	SYMMONS 1-H901S / BATH FITTER #SHO067AW	STANDARD SHOWER FITTINGS: SYMMONS 1-H901S OR ZURN Z7500, SINGLE BLADE METAL HANDLE PRESSURE BALANCING MIXING SHOWER UNIT, WITH SINGLE BRONZE STEM, STAINLESS STEEL BALANCING PISTON INTEGRAL WITH STEM ASSEMBLY, AND BRASS ADJUSTMENT LIMIT STOP SCREW IN CAP. COMPLETE WITH DOUBLE SEAL PACKING, ADJUSTABLE BRASS PACKING NUT, AND REMOVABLE BRASS SEATS, ALL EXPOSED TRIM WITH POLISHED NICKEL CHROME PLATED SURFACE. DELTA 52102-MB SHOWER HEAD, ARM AND WALL FLANGES, INTEGRAL SERVICE CHECK-STOPS. VALVE SHALL MEET A.S.S.E. STANDARD 1016. VERIFY MOUNTING HEIGHTS AND LOCATIONS WITH ARCHITECTURAL DRAWINGS BEFORE STARTING WORK. ADJUST LIMIT STOP SCREW TO PROVIDE MAXIMUM OF 105 DEGREE WATER TEMPERATURE FROM SHOWER HEAD. ADA SHOWER ASSEMBLY: BATH FITTER FREE-STANDING ACRYLIC SHOWER BASE (36"X36"), BATH FITTER CUSTOM-MADE SEAMLESS ACRYLIC WALL AND CEILING PANEL. WALL AND CEILING PANELS TO BE STANDARD WHITE GLOSS FINISH, STANDARD SMOOTH FINISH, MODEL 084-132AW.
SH-2	SYMMONS	SYMMONS 1-H901S	BARRIER FREE/ADA SHOWER FITTINGS: SYMMONS 1-H901S OR ZURN Z7500, SINGLE BLADE METAL HANDLE PRESSURE BALANCING MIXING SHOWER UNIT, WITH SINGLE BRONZE STEM, STAINLESS STEEL BALANCING PISTON INTEGRAL WITH STEM ASSEMBLY, AND BRASS ADJUSTMENT LIMIT STOP SCREW IN CAP. COMPLETE WITH DOUBLE SEAL PACKING, ADJUSTABLE BRASS PACKING NUT, AND REMOVABLE BRASS SEATS, ALL EXPOSED TRIM WITH POLISHED NICKEL CHROME PLATED SURFACE. VALVE SUPPLIED WITH TWO-WAY BRASS DIVERTER VALVE, DELTA 75800-140 HAND-WALL SHOWER HEAD, 60" FLEXIBLE METAL HOSE, 24" MOUNTING SLIDE BAR WALL CONNECTION, ARM AND WALL FLANGES, INTEGRAL SERVICE CHECK-STOPS. VALVE SHALL MEET A.S.S.E. STANDARD 1016. VERIFY MOUNTING HEIGHTS AND LOCATIONS WITH ADA REQUIREMENTS AND ARCHITECTURAL DRAWINGS BEFORE STARTING WORK. COORDINATE LOCATIONS WITH GRAB BAR AND FOLDING SEAT AS REQUIRED. ADJUST LIMIT STOP SCREW TO PROVIDE MAXIMUM OF 105 DEGREE WATER TEMPERATURE FROM SHOWER HEAD. SHOWER ASSEMBLY: BATH FITTER FREE-STANDING ACRYLIC SHOWER BASE (62"X33"), BATH FITTER CUSTOM-MADE SEAMLESS ACRYLIC WALL AND CEILING PANEL. WALL AND CEILING PANELS TO BE STANDARD WHITE GLOSS FINISH, STANDARD SMOOTH FINISH, MODEL 084-132AW.
UNDER LAVATORY PROTECTIVE PIPE COVERS	ZURN		TRAP AND STOP/RISER INSULATED COVERS SHALL BE FURNISHED AND INSTALLED ON ALL EXPOSED PIPING AND VALVES BELOW LAVATORIES TO MEET ADA REQUIREMENTS. THIS SHALL INCLUDE DRAIN, CW AND HW PIPING, FITTINGS, VALVES, ETC.
THERMOSTATIC MIXING VALVE		ASSE 1070	THERMOSTATIC MIXING VALVE SHALL BE FURNISHED AND INSTALLED UNDER EACH NEW LAVATORY, HAND SINK, COUNTERTOP SINK AND SIMILAR FIXTURES. VALVE SHALL BE LISTED ASSE 1070, 1/2" SIZE WITH STRAINER AND CHECK-STOPS, PIPE TO HOT WATER SIDE OF FAUCET AND ADJUST TO PROVIDE 105F HOT WATER AT FAUCET.
INLINE WATER FILTER	ATLAS FILTRI	#ZC1350327	UNDER-COUNTER INLINE WATER FILTER: ATLAS-FILTRI DP MONO #ZC1350327, 2.5" DIA X 5", WHITE, 1/2" NPT PIPE CONNECTIONS, REINFORCED HEAD CONNECTION, PET HOUSING CONSTRUCTION, FDA-GRADE EPDM SEAL, POLYPROPYLENE FILTER WITH GLASSY POLYPROPYLENE FILTER MEDIA, PROVIDED WITH MOUNTING BRACKET, PROVIDED WITH OPENING WRENCH. FURNISH FILTER WITH (3) ADDITIONAL FILTER CARTRIDGES PER INSTALLATION.
TRAP SEAL			EACH FLOOR DRAIN, FLOOR SINK AND HUB DRAIN SHALL HAVE A MEANS OF MAINTAINING THE WATER SEAL IN THE TRAP BY MEANS OF A TRAP SEAL. SIZE OF TRAP SEAL SHALL MATCH INTERNAL PIPE SIZE DIAMETER.FLOW RATES: 2"-8 GPM, 3"-24 GPM, 4"-35 GPM.

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SCHEDULES AND DETAILS
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0.0" 0.5" 1.0" 1.5" 2.0"

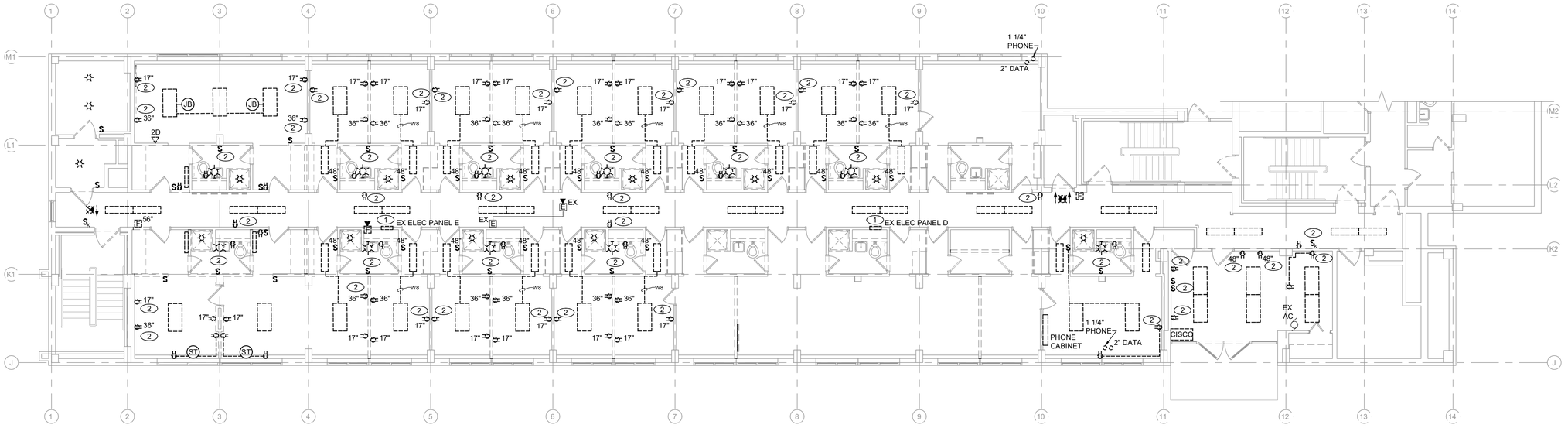
KEYED NOTES

(1) ELECTRICAL CONTRACTOR SHALL COORDINATE WITH OWNER TO SCHEDULE A TIME TO REPLACE THE THE ELECTRICAL PANEL ONE FOR ONE. THE EXISTING PANEL IS A FEED THROUGH TYPE PANEL AND FEEDS THE FLOORS ABOVE. SCHEDULE THE OUTING TO MINIMIZE THE DOWNTIME TO OTHER FLOORS.

(2) EXISTING ROUGH IN SHALL BE REUSED.

GENERAL DEMOLITION NOTES

1. DEVICE LOCATIONS ARE SHOWN DIAGRAMMATICAL. FIELD CONFIRM EXACT LOCATION.
2. DASHED LINES SHOWN ON DEMOLITION SHEETS ARE ITEMS SHOWN TO BE REMOVED UNLESS NOTED OTHERWISE.
3. THE DESIGN INTENT IS TO COMPLETELY DISCONNECT AND REMOVE ALL ELECTRICAL SYSTEMS BACK TO THE SOURCE. INCLUDE ALL CONDUIT, HANGERS AND WIRING IN THE AREA OF REMODEL. ONLY SELECT ROUGH-INS WILL BE REUSED AS SPECIFICALLY NOTED.
4. ALL DEMOLITION ITEMS ARE NOT SHOWN CONTRACTORS SHALL FIELD VERIFY EXTEND AND QUANTITY OF DEMOLITION AND ALSO FULLY COORDINATE WITH THE ARCHITECTURAL AND MECHANICAL DRAWINGS.
5. REMOVE ALL EXISTING AP DEVICES, SAVE AND RETURN TO OWNER.
6. EXISTING FIRE ALARM SYSTEM PANELS ARE LOCATED IN THE CENTER WING BASEMENT ELECTRICAL ROOM. SAVE ALL EXISTING DEVICES AND RETURN TO OWNER.
7. CONTRACTOR SHALL REMOVE ALL EXISTING FIRE ALARM SO THAT ALL REMAINING FIRE ALARM DEVICES REMAIN ACTIVE AND FUNCTIONAL. REWIRE REMAINING DEVICES AS REQUIRED.



NORTH

FIRST FLOOR WEST - DEMOLITION ELECTRICAL FLOOR PLAN

1/8"=1'-0"

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ELEC DEMO

E1

13 OF 18

0.0" 0.5" 1.0" 1.5" 2.0"

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KEYED NOTES

1. REUSE EXISTING CORRIDOR LIGHTING CIRCUIT. MODIFY AND EXTEND AS REQUIRED.
2. ELECTRICAL CONTRACTOR SHALL EXTEND THE EXISTING LIGHTING CIRCUIT FROM THE EXISTING SWITCH LOCATION TO THE NEW SWITCH LOCATION. FISH NEW CONDUIT AND WIRING THROUGH EXISTING SHOWER WALL, OVER ACROSS THE INFILLED DOOR HEADER AND ACROSS CONCEALED WITHIN THE EXISTING WALL TO THE NEW SWITCH LOCATION.
3. ELECTRICAL CONTRACTOR SHALL INSTALL SURFACE CONDUIT FROM THE NEW DORM ENTRY SWITCH UP THE WALL AND ACROSS TO THE NEW ENTRY LIGHT AS SHOWN.

LIGHT FIXTURE SCHEDULE

TYPE	DESCRIPTION
A	16 INCH ROUND CEILING FIXTURE OR APPROVED EQUAL. FIXTURES TO BE WHITE FINISH, 3000K, 90 CRI, 1850 DELIVERED LUMENS, 25 WATT, WITH WHITE ACRYLIC DIFFUSER. FIXTURE TO BE DIMMABLE. FIXTURES MUST HAVE 5 YEAR OR GREATER MANUFACTURER WARRANTY.KICHLER MODEL 10761 WHLED
B	48 INCH LONG RECTANGULAR, WALL MOUNTED, DAMP RATED, LED LIGHT FIXTURE. FIXTURES TO BE WHITE FINISH, 3500K, 85 CRI, 1340 DELIVERED LUMENS (WITH DIFFUSER), 16 WATT, DIMMABLE, WITH EXPECTED LIFE 36000 HOURS OR GREATER. FIXTURES MUST HAVE 5 YEAR OR GREATER MANUFACTURER WARRANTY. WAC # WS-248-35-WT
C	5" DIE CAST ALUMINUM SURFACE SLIM DOWNLIGHT MOUNTED TO A JUNCTION BOX. WHITE TRIM, 3000K,90CRI, 13 WATT HALO#SLD50693WHR/20473
D	1X4 LED FLAT PANEL. WITH SURFACE MOUNT KIT 3500K. LITHONIA EPANL 1X4 80CRI 35K MINIO ZT MVOLT 1X4SMKSH OR EQUAL
DE	SAME AS TYPE D EXCEPT EQUIPPED WITH A 10 WATT CONSTANT POWER EMERGENCY BATTERY
E2	LED EXIT SIGN, 3 WATT LED, BLACK DIE CAST ALUMINUM HOUSING, BRUSHED ALUMINUM FACE WITH 6" GREEN LETTERS, NICAD BATTERY W/ SELF DIAGNOSTICS, UNIVERSAL MOUNTING, UL 924 COMPLIANT. LITHONIA #LESG-ELM-SD OR EQUAL

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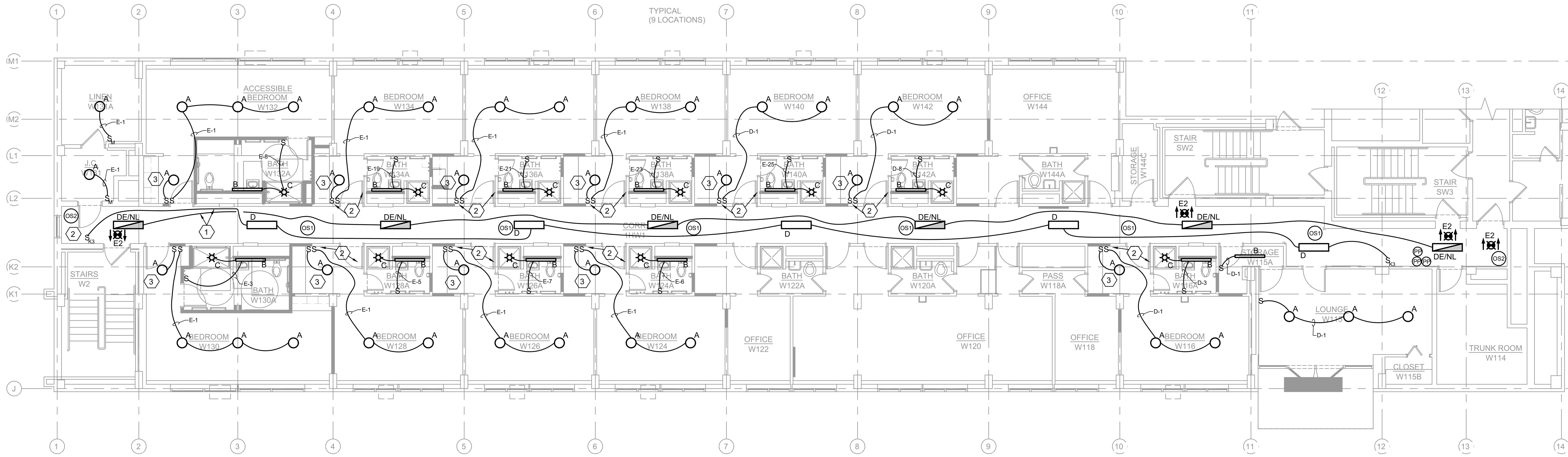


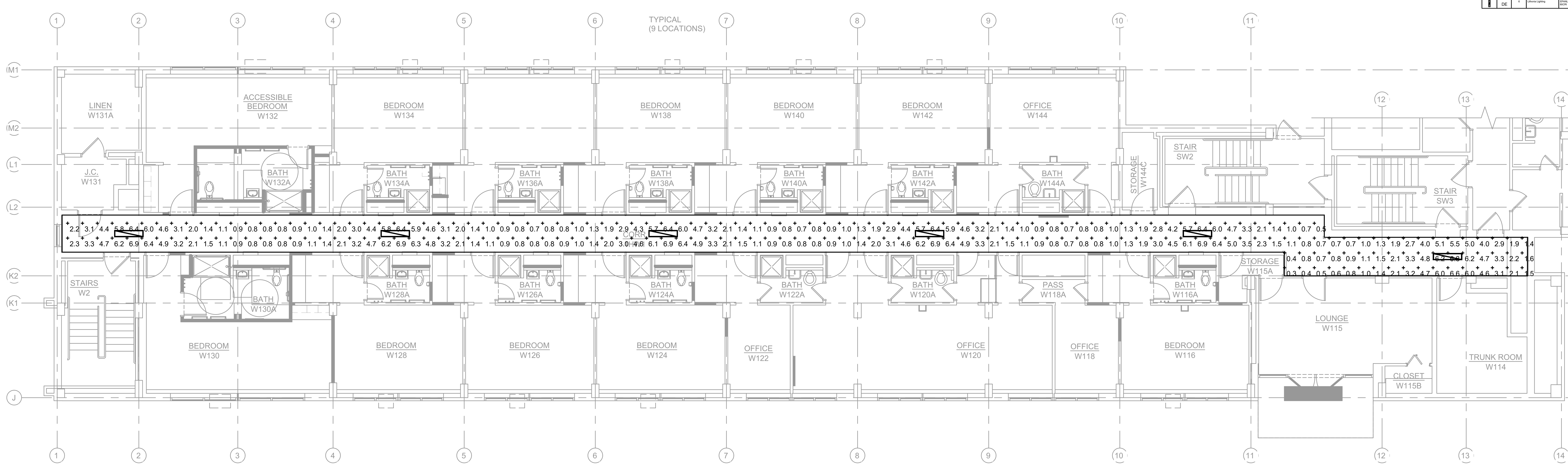
NORTH
FIRST FLOOR WEST - NEW LIGHTING FLOOR PLAN
1/8"=1'-0"

Statistics

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Corridor	+	2.7 fc	6.9 fc	0.3 fc	23.0:1	9.0:1

Schedule

Symbol	Label	Quantity	Manufacturer	Catalog Number	Description	Number Lamps	Lumens Per Lamp	Lumen Multiplier	Light Loss Factor	Wattage
	DE	6	Lithonia Lighting	EPANL 1x4 4000LM 80CRI 40K	EPANL 1x4, 4000 Nominal Lumens, 80 CRI, 4000K CCT	1	4198	0.25	0.95	38.01



NORTH
FIRST FLOOR WEST - NEW EMERGENCY LIGHTING FLOOR PLAN
1/8"=1'-0"

0.0" 0.5" 1.0" 1.5" 2.0"

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E2

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FIRE ALARM NOTES (PART OF DIV 26000 SCOPE OF WORK)

1. PROVIDE FIRE ALARM DEVICES AT LOCATIONS SHOWN.
2. COORDINATE ALL FIRE ALARM WORK WITH MSU SAFETY AND SECURITY SERVICES.
3. PROVIDE CONFIGURATION, PROGRAMMING AND COMMISSIONING OF THE FIRE ALARM EQUIPMENT.
4. PROVIDE ALL BFS/LARA DOCUMENTATION REQUIRED INCLUDING THE BFS-12A FORM.
5. PROVIDE PROGRAMMING FOR SLEEPING ROOMS THAT WILL SOUND THE LOCAL SOUNDER BASE IF SMOKE IS DETECTED. IF THERE IS DETECTION OF SMOKE IN (2) SLEEPING ROOMS THIS WILL THEN ACTIVATE THE BUILDING GENERAL ALARM.
6. UPDATE ALL GRAPHIC ANNUNCIATORS AS REQUIRED.
7. CROSS TIE NEW FACP TO THE EXISTING SIEMENS XLS PANEL AS REQUIRED.
8. ALL CONDUIT, JUNCTION BOXES ASSOCIATED WITH FIRE ALARM SHALL BE PAINTED RED TO MEET MSU STANDARDS.
9. ELECTRICAL CONTRACTOR SHALL VERIFY EXISTING FIRE ALARM WIRING PRIOR TO DEMOLITION TO THEN REWIRE SYSTEM AS NEEDED TO MAINTAIN OPERATION OF SYSTEM ON OTHER FLOORS.

SURFACE RACEWAY SCHEDULE

ALUMINUM RACEWAY. FIELD INSTALLED STEEL DIVIDER FOR POWER AND DATA. 2-7/8" X 1-7/8" 6063 T6 ALUMINUM ALLOY. ANODIZED FINISH. HALF DIVIDER.
RACEWAY BASE: LEGRAND #AL3300B10
RACEWAY COVER: LEGRAND #AL3300C5
RACEWAY DIVIDER: LEGRAND #AL3300D5
DUPLEX RECEPTACLE COVER: LEGRAND #AL3346D
RECTANGULAR HOLE CUT COVER: LEGRAND #AL3356R

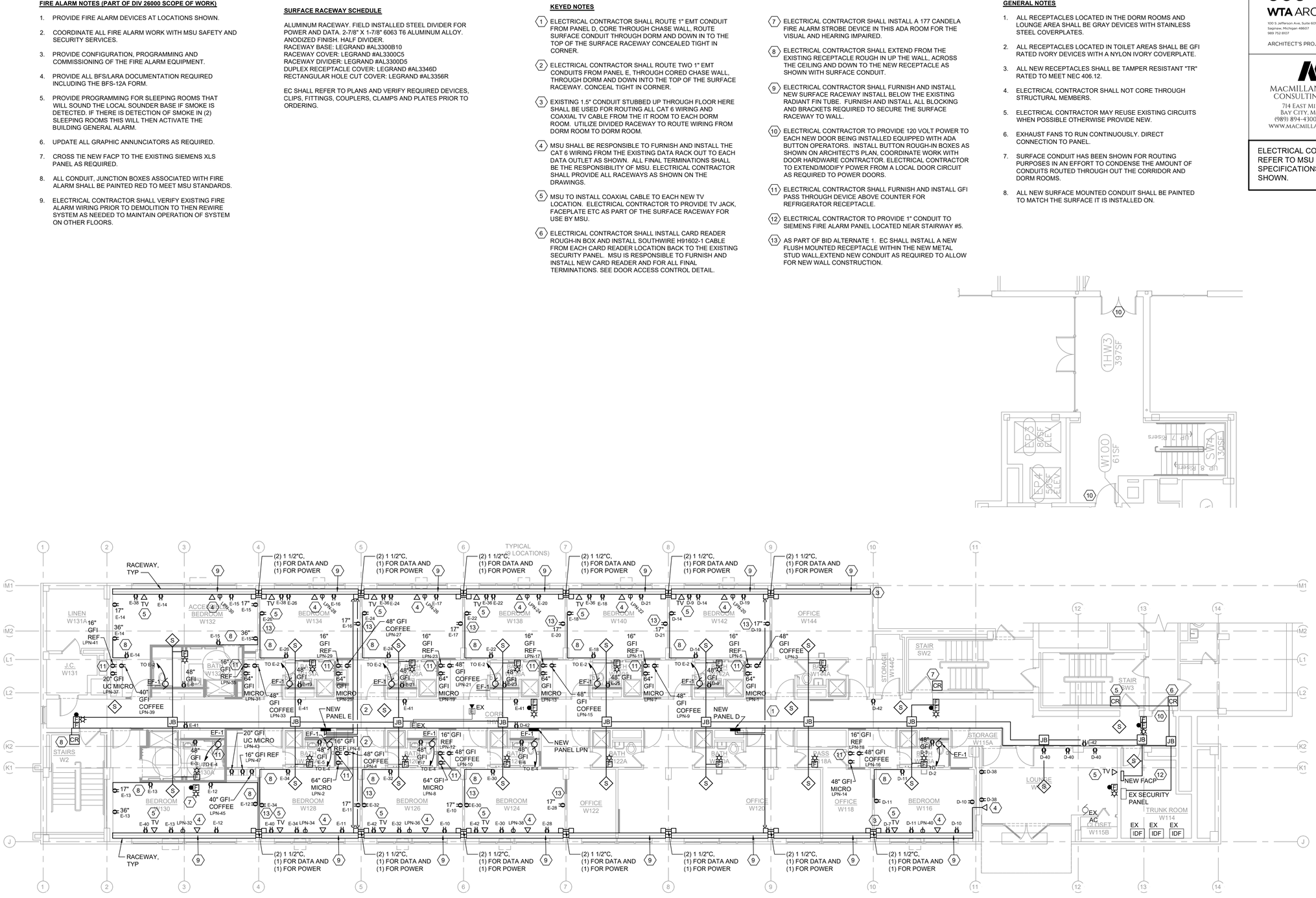
EC SHALL REFER TO PLANS AND VERIFY REQUIRED DEVICES, CLIPS, FITTINGS, COUPLERS, CLAMPS AND PLATES PRIOR TO ORDERING.

KEYED NOTES

1. ELECTRICAL CONTRACTOR SHALL ROUTE 1" EMT CONDUIT FROM PANEL D, CORE THROUGH CHASE WALL, ROUTE SURFACE CONDUIT THROUGH DORM AND DOWN IN TO THE TOP OF THE SURFACE RACEWAY CONCEALED TIGHT IN CORNER.
2. ELECTRICAL CONTRACTOR SHALL ROUTE TWO 1" EMT CONDUITS FROM PANEL E, THROUGH CORED CHASE WALL, THROUGH DORM AND DOWN INTO THE TOP OF THE SURFACE RACEWAY. CONCEAL TIGHT IN CORNER.
3. EXISTING 1.5" CONDUIT STUBBED UP THROUGH FLOOR HERE SHALL BE USED FOR ROUTING ALL CAT 6 WIRING AND COAXIAL TV CABLE FROM THE IT ROOM TO EACH DORM ROOM. UTILIZE DIVIDED RACEWAY TO ROUTE WIRING FROM DORM ROOM TO DORM ROOM.
4. MSU SHALL BE RESPONSIBLE TO FURNISH AND INSTALL THE CAT 6 WIRING FROM THE EXISTING DATA RACK OUT TO EACH DATA OUTLET AS SHOWN. ALL FINAL TERMINATIONS SHALL BE THE RESPONSIBILITY OF MSU. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL RACEWAYS AS SHOWN ON THE DRAWINGS.
5. MSU TO INSTALL COAXIAL CABLE TO EACH NEW TV LOCATION. ELECTRICAL CONTRACTOR TO PROVIDE TV JACK, FACEPLATE ETC AS PART OF THE SURFACE RACEWAY FOR USE BY MSU.
6. ELECTRICAL CONTRACTOR SHALL INSTALL CARD READER ROUGH-IN BOX AND INSTALL SOUTHWIRE H91602-1 CABLE FROM EACH CARD READER LOCATION BACK TO THE EXISTING SECURITY PANEL. MSU IS RESPONSIBLE TO FURNISH AND INSTALL NEW CARD READER AND FOR ALL FINAL TERMINATIONS. SEE DOOR ACCESS CONTROL DETAIL.
7. ELECTRICAL CONTRACTOR SHALL INSTALL A 177 CANDELA FIRE ALARM STROBE DEVICE IN THIS ADA ROOM FOR THE VISUAL AND HEARING IMPAIRED.
8. ELECTRICAL CONTRACTOR SHALL EXTEND FROM THE EXISTING RECEPTACLE ROUGH IN UP THE WALL, ACROSS THE CEILING AND DOWN TO THE NEW RECEPTACLE AS SHOWN WITH SURFACE CONDUIT.
9. ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL NEW SURFACE RACEWAY INSTALL BELOW THE EXISTING RADIANT FIN TUBE. FURNISH AND INSTALL ALL BLOCKING AND BRACKETS REQUIRED TO SECURE THE SURFACE RACEWAY TO WALL.
10. ELECTRICAL CONTRACTOR TO PROVIDE 120 VOLT POWER TO EACH NEW DOOR BEING INSTALLED EQUIPPED WITH ADA BUTTON OPERATORS. INSTALL BUTTON ROUGH-IN BOXES AS SHOWN ON ARCHITECT'S PLAN, COORDINATE WORK WITH DOOR HARDWARE CONTRACTOR. ELECTRICAL CONTRACTOR TO EXTEND/MODIFY POWER FROM A LOCAL DOOR CIRCUIT AS REQUIRED TO POWER DOORS.
11. ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL GFI PASS THROUGH DEVICE ABOVE COUNTER FOR REFRIGERATOR RECEPTACLE.
12. ELECTRICAL CONTRACTOR TO PROVIDE 1" CONDUIT TO SIEMENS FIRE ALARM PANEL LOCATED NEAR STAIRWAY #5.
13. AS PART OF BID ALTERNATE 1. EC SHALL INSTALL A NEW FLUSH MOUNTED RECEPTACLE WITHIN THE NEW METAL STUD WALL,EXTEND NEW CONDUIT AS REQUIRED TO ALLOW FOR NEW WALL CONSTRUCTION.

GENERAL NOTES

1. ALL RECEPTACLES LOCATED IN THE DORM ROOMS AND LOUNGE AREA SHALL BE GRAY DEVICES WITH STAINLESS STEEL COVERPLATES.
2. ALL RECEPTACLES LOCATED IN TOILET AREAS SHALL BE GFI RATED IVORY DEVICES WITH A NYLON IVORY COVERPLATE.
3. ALL NEW RECEPTACLES SHALL BE TAMPER RESISTANT "TR" RATED TO MEET NEC 406.12.
4. ELECTRICAL CONTRACTOR SHALL NOT CORE THROUGH STRUCTURAL MEMBERS.
5. ELECTRICAL CONTRACTOR MAY REUSE EXISTING CIRCUITS WHEN POSSIBLE OTHERWISE PROVIDE NEW.
6. EXHAUST FANS TO RUN CONTINUOUSLY. DIRECT CONNECTION TO PANEL.
7. SURFACE CONDUIT HAS BEEN SHOWN FOR ROUTING PURPOSES IN AN EFFORT TO CONDENSE THE AMOUNT OF CONDUITS ROUTED THROUGH OUT THE CORRIDOR AND DORM ROOMS.
8. ALL NEW SURFACE MOUNTED CONDUIT SHALL BE PAINTED TO MATCH THE SURFACE IT IS INSTALLED ON.



NORTH

FIRST FLOOR WEST - NEW POWER AND SYSTEMS FLOOR PLAN

1/8"=1'-0"

0.0" 0.5" 1.0" 1.5" 2.0"

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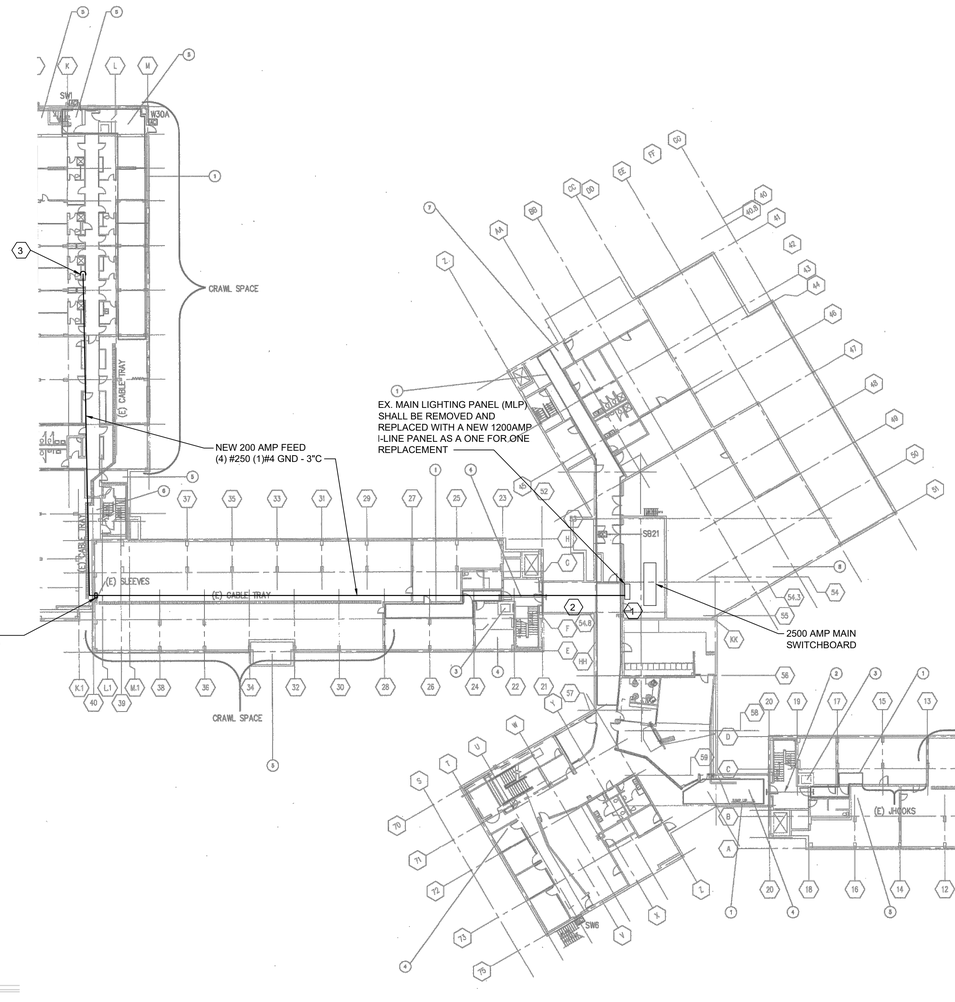
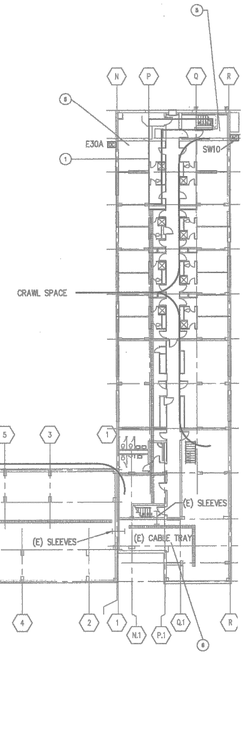
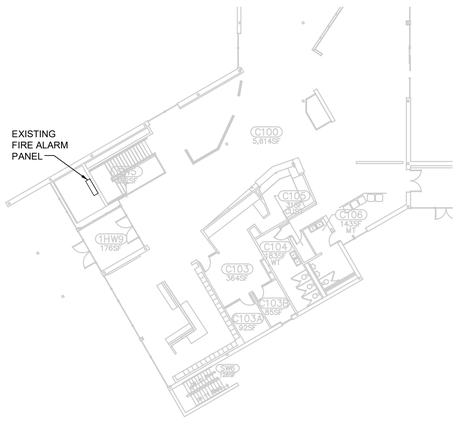


NORTH
OVERALL LOWER ELECTRICAL PLAN
1"=20'-0"



KEYED NOTES

1. ELECTRICAL CONTRACTOR SHALL REMOVE EXISTING PANEL MLP AND REPLACE WITH NEW 1200A I-LINE PANEL. REUSE EXISTING CONDUCTORS.
2. ELECTRICAL CONTRACTOR SHALL ROUTE CONDUIT IN EXPOSED BASEMENT CEILING AND INTO CRAWLSPACE. ELECTRICAL CONTRACTOR SHALL VERIFY ROUTE IN THE FIELD PRIOR TO BIDDING WITH MSU/ENGINEER TO COORDINATE CONDUIT PATH.
3. ELECTRICAL CONTRACTOR SHALL INSTALL VERTICAL CONDUIT THROUGH CHASE UP TO NEW PANEL LPN. REMOVE PARTS OF CHASE AS NECESSARY TO ACCOMMODATE CONDUIT RUN. FIRE CAULK ALL PENETRATIONS.



NORTH
PARTIAL FIRST FLOOR ELECTRICAL PLAN
1"=20'-0"

Infrastructure Planning and Facilities

MICHIGAN STATE UNIVERSITY

OWEN GRADUATE HALL - WEST -
CONVERT OFFICE SPACE TO FRIB HOUSING
MICHIGAN STATE UNIVERSITY

CAPITAL PROJ. NO.
CP22127

PR. MGR.	GIBSON
ARCH.	CHARLAND
MECH.	GOERGE
ELEC.	HOWARD
CIVIL	
L.A.	
INT. DES.	
CONST. REP.	GIBSON
APPR.	
DATE	06.08.23
SCALE	AS SHOWN

REVISIONS
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OVERALL ELEC

E4

16 OF 18

0.0" 0.5" 1.0" 1.5" 2.0"

Drawing File:
Plotted By:
Plotted Date:

NEW

PNL D

MAIN SIZE & TYPE: **200 A**
BUS RATING: **200 A**
VOLTAGE: **120 / 240 V 1 Ø, 3 WIRE**
MOUNTING: RECESSED

PANEL LOCATION: **CORRIDOR 1HW1**
FEEDER SIZE:
FED FROM:
MIN RMS AMPS: **14KAIC**

CKT #	CIRCUIT DESCRIPTION	LOAD (kVA) A	LOAD (kVA) C	AMPS / POLES	CKT #	LOAD TYPE	CKT #	AMPS / POLES	LOAD (kVA) A	LOAD (kVA) C	CIRCUIT DESCRIPTION	CKT #
1	122,140,142,144 LIGHTS	0.553		20/1	1	L H	2	20/1	0.720		EF 116,118,120,122,142,144	2
	3 SPARE			20/1	3	L	4	20/1		0.250	BATHROOM W120A	4
	5 SPARE			20/1	5	L	6	20/1	0.250		BATHROOM W122A	6
1	7 SPARE			20/1	7	L	8	20/1		0.250	BATHROOM W142A	8
1	9 BEDROOM 142, 144 TV RECP	0.360		20/1	9 R		10	20/1			SPARE	10 1
1	11 SPARE			20/1	11		12	20/1			SPARE	12 1
1	13 SPARE			20/1	13	R	14	20/1	0.360		BEDROOM W142 RECP	14 1
1	15 SPARE			20/1	15		16	20/1			SPARE	16 1
	17 SPARE			20/1	17		18	20/1			SPARE	18 1
1	19 BEDROOM W142 RECP		0.360	20/1	19 R	R	20	20/1		0.360	BEDROOM W120 RECP	20 1
1	21 BEDROOM W140 RECP	0.360		20/1	21 R	R	22	20/1	0.360		BEDROOM W122 RECP	22 1
	23 SPARE			20/1	23		24	20/1			SPARE	24
	25 SPARE			20/1	25		26	20/1			SPARE	26
	27 SPARE			20/1	27		28	20/1			SPARE	28
	29 SPARE			20/1	29		30	20/1			SPARE	30
	31 SPARE			20/1	31		32	20/1			SPARE	32
	33 SPARE			20/1	33		34	20/1			SPARE	34
	35 SPARE			20/1	35		36	20/1			SPARE	36
	37 SPARE			20/1	37		38	20/1	0.360		Lounge W115 Recepts	38
	39 SPARE			20/1	39		40	20/1		0.540	Lounge W115 Recepts	40
	41 SPARE			20/1	41	R	42	20/1	0.540		Corridor Receptacles	42

LOAD SUMMARY		KVA CONNECTED A	B	C	KVA SUMMARY TOTAL	DEMAND	
RECEPTACLES	R	1.980		0.720	2.700	2.700	
LIGHTING	L	0.803		0.500	1.303	1.000	1.303
HVAC	H	0.720		0.000	0.720	0.950	0.684
OTHER	O	0.000		0.000	0.000	0.600	0.000
EXISTING	E	0.000		0.000	0.000	1.000	0.000
TOTAL KVA		3.503		1.220	4.723		4.687 TOTAL ESTIMATE KVA
VOLTS / PHASE		120		120	240		240 SYSTEM VOLTAGE
AMPS / PHASE		29.192		10.167	19.679		19.529 AMPS

NOTES:
PROVIDE SUB-FEED LUG KIT
EX CIRCUITS TO BE REUSED WHEN POSSIBLE
1. AFCI BREAKER

NEW

PNL E

MAIN SIZE & TYPE: **200 A**
BUS RATING: **200 A**
VOLTAGE: **120 / 240 V 1 Ø, 3 WIRE**
MOUNTING: RECESSED

PANEL LOCATION: **CORRIDOR 1HW1**
FEEDER SIZE:
FED FROM:
MIN RMS AMPS: **14KAIC**

CKT #	CIRCUIT DESCRIPTION	LOAD (kVA) A	LOAD (kVA) C	AMPS / POLES	CKT #	LOAD TYPE	CKT #	AMPS / POLES	LOAD (kVA) A	LOAD (kVA) C	CIRCUIT DESCRIPTION	CKT #
1	1 124,126,128,130,132,134,136,138 LIGHTS	0.594		20/1	1	L H	2	20/1	0.600		EF 132,134,136,138,140	2
1	3 BATHROOM W130A		0.250	20/1	3	L H	4	20/1		0.480	EF 124,126,128,130	4
1	5 BATHROOM W128A	0.250		20/1	5	L L	6	20/1	0.250		BATHROOM W124A	6 1
1	7 BATHROOM W126A		0.250	20/1	7	L L	8	20/1		0.250	BATHROOM W132A	8 1
1	9 BEDROOM W122 RECP	0.360		20/1	9	R R	10	20/1	0.360		BEDROOM W126 RECP	10 1
1	11 BEDROOM W128 RECP		0.360	20/1	11	R R	12	20/1		0.360	BEDROOM W130 RECP	12 1
1	13 BEDROOM W130 RECP	0.540		20/1	13	R R	14	20/1	0.540		BEDROOM W132 RECP	14 1
1	15 BEDROOM W132 RECP		0.540	20/1	15	R R	16	20/1		0.360	BEDROOM W134 RECP	16 1
1	17 BEDROOM W136 RECP	0.360		20/1	17	R R	18	20/1	0.360		BEDROOM W140 RECP	18 1
1	19 BATHROOM 134A		0.250	20/1	19	L R	20	20/1		0.360	BEDROOM W138 RECP	20 1
1	21 BATHROOM 136A	0.250		20/1	21	L R	22	20/1	0.360		BEDROOM W138 RECP	22 1
1	23 BATHROOM 138A		0.250	20/1	23	L R	24	20/1		0.360	BEDROOM W136 RECP	24 1
1	25 BATHROOM 140A	0.250		20/1	25	L R	26	20/1	0.360		BEDROOM W134 RECP	26 1
	27 SPARE			20/1	27	R	28	20/1		0.360	BEDROOM W124 RECP	28 1
	29 SPARE			20/1	29	R	30	20/1	0.360		BEDROOM W124 RECP	30 1
	31 SPARE			20/1	31	R	32	20/1		0.360	BEDROOM W126 RECP	32 1
	33 SPARE			20/1	33	R	34	20/1	0.360		BEDROOM W128 RECP	34 1
	35 SPARE			20/1	35	R	36	20/1		0.540	BEDROOM 136,138,140 TV RECP	36 1
	37 SPARE			20/1	37	R	38	20/1	0.360		BEDROOM 132,134 TV RECP	38 1
	39 SPARE			20/1	39	R	40	20/1		0.360	BEDROOM 128,130 TV RECP	40 1
	41 Corridor Receptacles	0.720		20/1	41	R R	42	20/1	0.540		BEDROOM 122,124,126 TV RECP	42 1

LOAD SUMMARY		KVA CONNECTED A	B	C	KVA SUMMARY TOTAL	DEMAND	
RECEPTACLES	R	5.580		3.960	9.540	9.540	
LIGHTING	L	1.594		1.250	2.844	1.000	2.844
HVAC	H	0.600		0.480	1.080	0.950	1.026
OTHER	O	0.000		0.000	0.000	0.600	0.000
EXISTING	E	0.000		0.000	0.000	1.000	0.000
TOTAL KVA		7.774		5.690	13.464		13.410 TOTAL ESTIMATE KVA
VOLTS / PHASE		120		120	240		240 SYSTEM VOLTAGE
AMPS / PHASE		64.783		47.417	56.100		55.875 AMPS

NOTES:
PROVIDE SUB-FEED LUG KIT
EX CIRCUITS TO BE REUSED WHEN POSSIBLE
1. AFCI BREAKER

NEW

PNL LPN

MAIN SIZE & TYPE: **200 A MLO**
BUS RATING: **200 A**
VOLTAGE: **120 / 208 V 3 Ø, 4 WIRE**
MOUNTING: **RECESSED**

PANEL LOCATION: **CORRIDOR 1HW1**
FEEDER SIZE: **200A**
FED FROM: **NEW MPL**
MIN RMS AMPS: **14 KAIC**

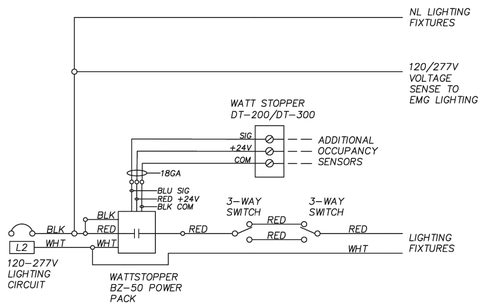
CKT #	CIRCUIT DESCRIPTION	LOAD (kVA) A	B	C	AMPS / POLES	CKT #	LOAD TYPE	CKT #	AMPS / POLES	LOAD (kVA) A	B	C	CIRCUIT DESCRIPTION	CKT #
1	1 OFFICE W144 MICROWAVE REC	1.200			20/1	1	R R	2	20/1	1.200			BEDROOM W126 MICROWAVE REC	2 1
1	3 OFFICE W144 COFFEE REC		1.000		20/1	3	R R	4	20/1		1.000		BEDROOM W126 COFFEE REC	4 1
1	5 OFFICE W144 KITCHEN REC			0.180	20/1	5	R R	6	20/1			0.180	BEDROOM W126 KITCHEN REC	6 1
1	7 BEDROOM W142 MICROWAVE REC	1.200			20/1	7	R R	8	20/1	1.200			BEDROOM W124 MICROWAVE REC	8 1
1	9 BEDROOM W142 COFFEE REC		1.000		20/1	9	R R	10	20/1		1.000		BEDROOM W124 COFFEE REC	10 1
1	11 BEDROOM W142 KITCHEN REC			0.180	20/1	11	R R	12	20/1			0.180	BEDROOM W124 KITCHEN REC	12 1
1	13 BEDROOM W140 MICROWAVE REC	1.200			20/1	13	R R	14	20/1	1.200			BEDROOM W116 MICROWAVE REC	14 1
1	15 BEDROOM W140 COFFEE REC		1.000		20/1	15	R R	16	20/1		1.000		BEDROOM W116 COFFEE REC	16 1
1	17 BEDROOM W140 KITCHEN REC			0.180	20/1	17	R R	18	20/1			0.180	BEDROOM W116 KITCHEN REC	18 1
1	19 BEDROOM W138 MICROWAVE REC	1.200			20/1	19	R H	20	20/1	1.200			BEDROOM W142 AC	20 1
1	21 BEDROOM W138 COFFEE REC		1.000		20/1	21	R H	22	20/1		1.200		BEDROOM W140 AC	22 1
1	23 BEDROOM W138 KITCHEN REC			0.180	20/1	23	R H	24	20/1			1.200	BEDROOM W138 AC	24 1
1	25 BEDROOM W136 MICROWAVE REC	1.200			20/1	25	R H	26	20/1	1.200			BEDROOM W136 AC	26 1
1	27 BEDROOM W136 COFFEE REC		1.000		20/1	27	R H	28	20/1		1.200		BEDROOM W134 AC	28 1
1	29 BEDROOM W136 KITCHEN REC			0.180	20/1	29	R H	30	20/1			1.200	BEDROOM W132 AC	30 1
1	31 BEDROOM W134 MICROWAVE REC	1.200			20/1	31	R H	32	20/1	1.200			BEDROOM W130 AC	32 1
1	33 BEDROOM W134 COFFEE REC		1.000		20/1	33	R H	34	20/1		1.200		BEDROOM W128 AC	34 1
1	35 BEDROOM W134 KITCHEN REC			0.180	20/1	35	R H	36	20/1			1.200	BEDROOM W126 AC	36 1
1	37 BEDROOM W132 MICROWAVE REC	1.200			20/1	37	R H	38	20/1	1.200			BEDROOM W124 AC	38 1
1	39 BEDROOM W132 COFFEE REC		1.000		20/1	39	R H	40	20/1		1.200		BEDROOM W116 AC	40 1
1	41 BEDROOM W132 KITCHEN REC			0.180	20/1	41	R H	42	20/1				SPARE	42 1
1	43 BEDROOM W128 MICROWAVE REC	1.200			20/1	43	R	44	20/1				SPARE	44 1
1	45 BEDROOM W128 COFFEE REC		1.000		20/1	45	R	46	20/1				SPARE	46 1
1	47 BEDROOM W128 KITCHEN REC			0.180	20/1	47	R	48	20/1				SPARE	48 1
	49 SPARE				20/1	49		50	20/1				SPARE	50 1
	51 SPARE				20/1	51		52	20/1				SPARE	52 1
	53 SPARE				20/1	53	O	54	20/1			1.500	ADA DOOR OPERATOR	54 1

LOAD SUMMARY		KVA CONNECTED A	B	C	KVA SUMMARY TOTAL	DEMAND	
RECEPTACLES	R	13.200	11.000	1.980	26.180	18.090	
LIGHTING	L	0.000	0.000	0.000	0.000	1.000	0.000
HVAC	H	4.800	4.800	3.600	13.200	0.950	12.540
OTHER	O	0.000	0.000	1.500	1.500	1.000	1.500
EXISTING	E	0.000	0.000	0.000	0.000	1.000	0.000
TOTAL KVA		18.000	15.800	7.080	40.880		32.130 TOTAL ESTIMATE KVA
VOLTS / PHASE		120	120	120	208		208 SYSTEM VOLTAGE
AMPS / PHASE		150.000	131.667	59.000	113.475		89.187 AMPS

NOTES:
1. AFCI BREAKER

LIGHTING WIRING METHODS

1. EXIT LIGHTS SHALL OPERATE 24-7 AND SHALL BE EQUIPPED WITH A BATTERY RATED FOR 90 MINUTES.
2. HALF-TONE SHADED FIXTURES REPRESENTS THE FIXTURE IS AN NITE LIGHT/EMERGENCY LIGHT AND IS EQUIPPED WITH AN EMERGENCY BATTERY.
3. ALL LIGHTING CIRCUITS SHALL BE INSTALLED IN CONDUIT.
4. CONFIRM LIGHT FIXTURE LAYOUT WITH THE ARCHITECTURAL REFLECTED CEILING PLAN FOR LOCATION COORDINATION.
5. MC CABLE IS ONLY ACCEPTABLE AS A FINAL WIRING CONNECTION TO RECESSED LIGHTING INSTALLED IN ACCESSIBLE CEILINGS. MC CABLE LENGTH SHALL NOT EXCEED 6'-0".
6. CEILING OCCUPANCY SENSORS SHALL BE WIRED AHEAD OF THE LOCAL SWITCHING. THIS ALLOWS THE LOCAL SWITCHES TO OVERRIDE THE SENSOR TO TURN OFF THE LIGHTS.
7. PROVIDE A DEDICATED NEUTRAL CONDUCTOR FOR EACH NEW LIGHTING CIRCUIT. SHARED NEUTRALS ARE NOT PERMITTED FOR THIS PROJECT.
8. PROVIDE AN EQUIPMENT GROUNDING CONDUCTOR FOR NEW LIGHTING CIRCUITS. THE USE OF THE RACEWAY FOR A GROUNDING PATH IS NOT ACCEPTABLE FOR THIS PROJECT.
9. OCCUPANCY SENSORS, POWER PACKS AND CONTROLS ARE SHOWN DIAGRAMMATICALLY. THE MANUFACTURER SHALL DETERMINE FINAL DEVICE LOCATION FOR OPTIMUM SYSTEM OPERATION. INFRARED SENSORS MUST REMAIN AT A MINIMUM OF 4'-0" AWAY FROM ANY MECHANICAL HEAT DIFFUSER TO ELIMINATE FALSE TRIPS. CIRCUIT LINES ARE SHOWN FROM SWITCHES TO LIGHT FIXTURES TO COMMUNICATE SWITCHING CONFIGURATION ONLY. ALL SENSORS, POWER PACKS AND WIRING MUST BE WIRED PER MANUFACTURER'S WIRING METHOD.
10. A SINGLE POWER PACK CAN HAVE MULTIPLE SWITCHES WIRED TO THE DEVICE PROVIDED THAT THE FIXTURES BEING CONTROLLED BY THESE SWITCHES ARE ON THE SAME CIRCUIT. TWO POWER PACKS ARE REQUIRED IF A SECOND CIRCUIT IS INTRODUCED. REFER TO MANUFACTURER'S WIRING METHODS. PROVIDE AS REQUIRED FOR A FULLY OPERATIONAL SYSTEM.
11. COMPLETE ALL WIRING BETWEEN THE OCCUPANCY SENSOR, POWER PACK AND LOCAL SWITCHING IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTION.
12. ELECTRICAL CONTRACTOR SHALL REUSE EXISTING CONDUIT WHEREVER PRACTICAL. INSTALL NEW CONDUIT TO COMPLETE INSTALLATION. ANY UNUSED CONDUIT SHALL BE REMOVED.



NOTES:
1. PROVIDE BATTERY PACKS FOR EMERGENCY LIGHTING
2. (3) OS MAX FOR EACH POWER PACK WITH 2ND POWER PACK FOR UP TO (6) OS.
2. TURN DIP SWITCH 6 ON FOR EITHER TECHNOLOGY.
4. SET ULTRASONIC TO MAX. AS REQD.

COMMISSIONING NOTES:
WHEN USING (2) OR MORE WATTSTOPPER DT-200/DT-300 OCCUPANCY SENSORS USE THE FOLLOWING PROCEDURE FOR CHECKOUT. VERIFY WITH MANUFACTURERS LITERATURE.
1. TURN DIP SW1 TO TEST MODE ON ALL OCCUPANCY SENSORS TO INITIATE TEST MODE.
2. TURN THE CIRCUIT BREAKER OFF, WAIT 10 SECONDS AND TURN CIRCUIT BREAKER BACK ON. AFTER A 30 SECOND WARMUP, THE OCCUPANCY SENSORS WILL NOW BE IN TEST MODE WITH A 10 SECOND TIMEOUT FOR 5 MINUTES.
3. LEAVE THE ROOM AND CLOSE THE DOOR. WAIT 10 SECONDS AND VERIFY THE LIGHTING IS OFF.
4. ENTER THE ROOM AND VERIFY THE LIGHTING COMES BACK ON. WALK AROUND THE PERIMETER OF THE ROOM FOR APPROX 60 SECONDS TO VERIFY THE LIGHTING STAYS ON.
5. VERIFY THE EMERGENCY LIGHTING IS OPERATIONAL WHEN THE NORMAL POWER IS SHUT OFF.
6. TURN DIP SW1 TO TEST MODE OFF ALL OCCUPANCY SENSORS TO INITIATE AUTO MODE.
7. TURN THE CIRCUIT BREAKER OFF, WAIT 10 SECONDS AND TURN CIRCUIT BREAKER BACK ON. AFTER A 30 SECOND WARMUP, THE OCCUPANCY SENSORS WILL NOW BE IN AUTO MODE.

MSU TYPICAL OCCUPANCY WIRING DIAGRAM

NO SCALE

ELECTRICAL SYMBOLS

- A — 2'x4' FIXTURE TYPE INDICATED
- A — HALF SHADED FIXTURE REPRESENTS AN EMERGENCY BATTERY BACKED UP FIXTURE
- A — 4' FLUORESCENT STRIP
- DOWN LIGHT OR SURFACE FIXTURE
- WALL MOUNTED FIXTURE
- EXIT LIGHT
- WALL MOUNTED EXIT LIGHT
- DUPLEX RECEPTACLE
- QUADPLEX RECEPTACLE
- GFI — GFI RECEPTACLE
- DUPLEX RECEPTACLE WITH USB
- QUADPLEX RECEPTACLE WITH USB
- S — SINGLE POLE SWITCH
- S_3 — 3-WAY SWITCH
- S_D — DIMMER SWITCH
- S_F — FUSED TOGGLE SWITCH
- S_{K3} — KEYED 3-WAY SWITCH
- S_{IR} — WALL SWITCH INFRARED OCCUPANCY SENSOR LEVITON #OPSI5-ID OR EQUAL
- S_{MD} — WALL SWITCH DUAL TECHNOLOGY OCCUPANCY SENSOR LEVITON #088MT-MD OR EQUAL
- 0-10 VOLT DIMMER . ILLUMATECH #IP710-DOZ
- DEVICE CONNECTION
- FUSED DISCONNECT SWITCH
- DATA OUTLET (1) DATA JACKS
- (1) DATA JACK (1) RG6 TV CABLE WITH JACK AND FACE PLATE
- HOME RUN W/ CIRCUIT
- SINGLE DEDICATED RECEPTACLE
- JB — JUNCTION BOX
- THREE PHASE MOTOR
- SINGLE PHASE MOTOR
- MANUAL MOTOR STARTER
- PANEL BOARD
- POWER PANEL
- F — FIRE ALARM PULL STATION 48" AFF TO TOP MAXIMUM
- F — FIRE ALARM SPEAKER/STROBE COMBO
- F — FIRE ALARM STROBE ONLY
- FACP — FIRE ALARM CONTROL PANEL
- S — CEILING MOUNTED SIEMENS SOUNDER BASE/SMOKE DETECTOR #ABHW-4S
- SECURITY EMERGENCY CALL STATION
- CR — CARD/PROX READER
- NAC — FIRE ALARM NAC PANEL
- ANNU — ANNUCIATOR PANEL
- PP — POWER PACK WATTSTOPPER BZ-50
- DS2 — DUAL TECH CEILAING/WALL WATTSTOPPER DT-200 OR EQUAL
- DASHED INDICATES DEMOLITION
- WP — WEATHER PROOF
- EX — EXISTING
- EC — ELECTRICAL CONTRACTOR
- IDF — INTERMEDIATE DATA FRAME
- BOD — BOTTOM OF DEVICE
- TOD — TOP OF DEVICE
- CH — CABINET HEATER
- CP — CIRCULATION PUMP
- EF — EXHAUST FAN
- AFF — ABOVE FINISHED FLOOR
- MDF — MAIN DATA FRAME

POWER & SYSTEMS WIRING METHODS

1. PROVIDE A DEDICATED NEUTRAL CONDUCTOR FOR EACH RECEPTACLE CIRCUIT. SHARED NEUTRALS ARE NOT PERMITTED.
2. PROVIDE EQUIPMENT GROUNDING CONDUCTOR FOR EACH RECEPTACLE. PROVIDE A #12 MINIMUM GROUNDING CONDUCTOR IN EACH RACEWAY. THE USE OF METAL CONDUIT OR RACEWAY FOR A BOND PATH IS NOT ACCEPTABLE FOR THIS PROJECT.
3. ALL POWER WIRING SHALL BE INSTALLED IN CONDUIT.
4. ALL BRANCH DEVICES SHALL USE A 4" SQUARE STEEL BOX WITH A SINGLE GANG TRIM RING FOR INTERIOR GYPSUM BOARD WALLS. MASONRY BOXES ARE ACCEPTABLE FOR ALL NEW OR EXISTING MASONRY WALL INSTALLATION. NON-METALLIC BOXES ARE NOT ACCEPTABLE FOR THIS PROJECT.
5. MC CABLE IS NOT ACCEPTABLE FOR THIS PROJECT, UNLESS SPECIFICALLY NOTED.

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ELECTRICAL CONTRACTOR SHALL REFER TO MSU STANDARDS AND SPECIFICATIONS FOR ALL WORK SHOWN.

MICHIGAN STATE UNIVERSITY
Infrastructure Planning and Facilities

OWEN GRADUATE HALL - WEST -
CONVERT OFFICE SPACE TO FRIB HOUSING
MICHIGAN STATE UNIVERSITY

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APPR.	
DATE	06.08.23
SCALE	AS SHOWN

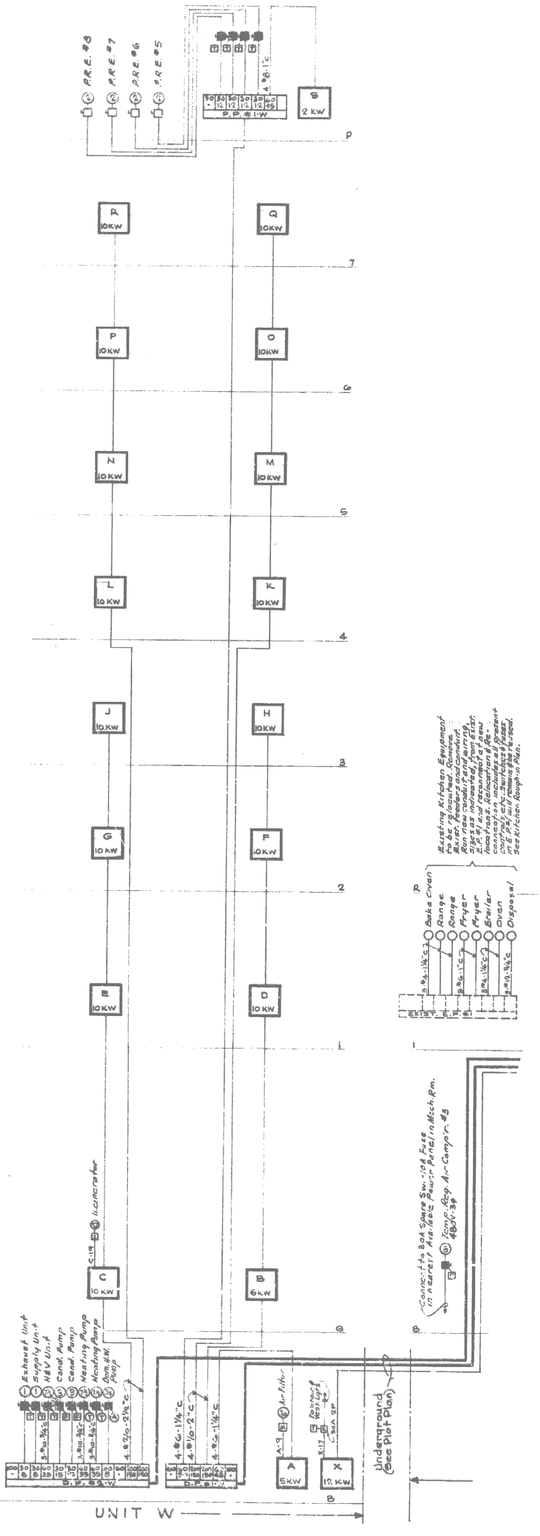
REVISIONS
ISSUED FOR BID

ELECTRICAL INFO

E5

0.0" 0.5" 1.0" 1.5" 2.0"

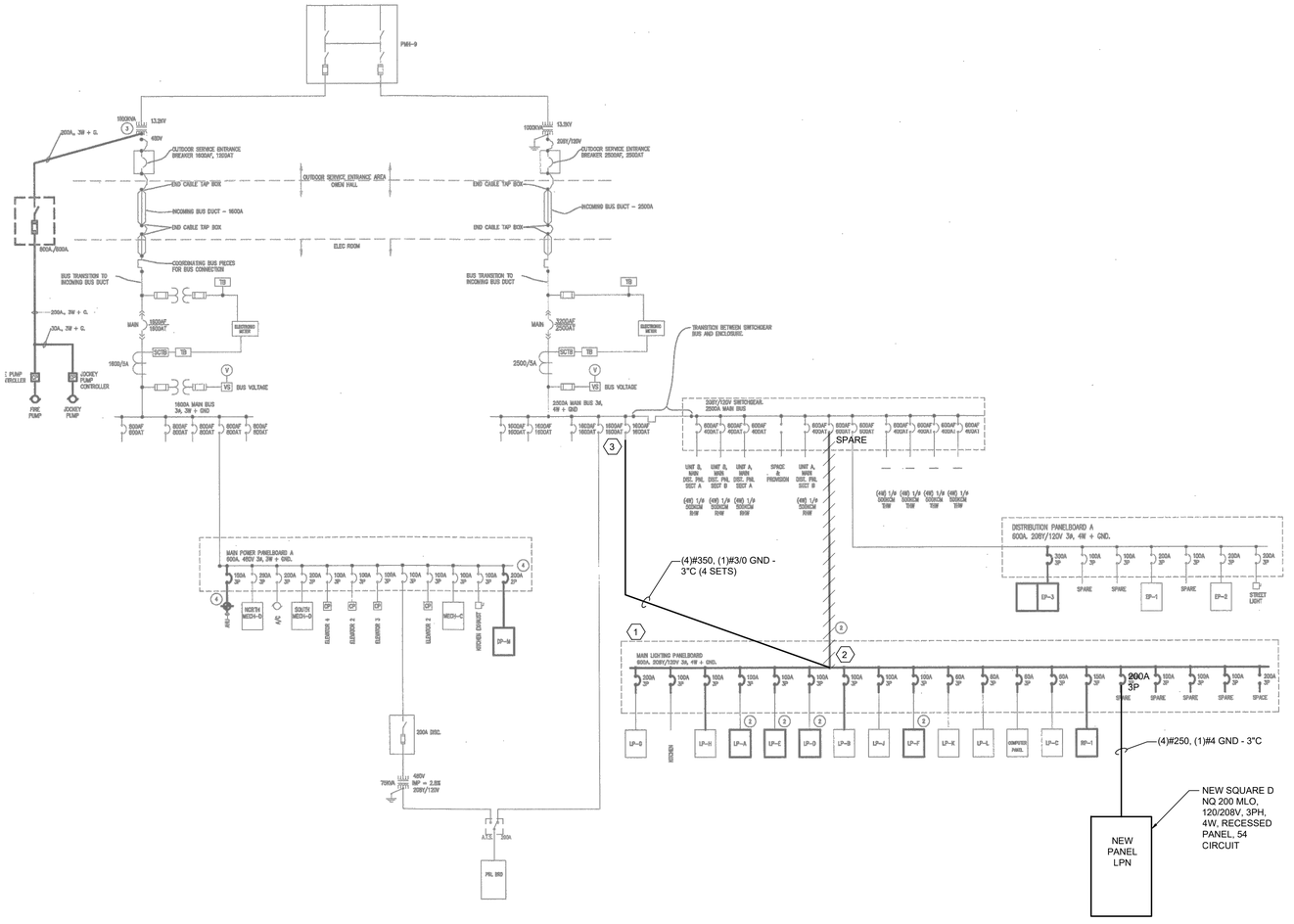
Drawing File:
Plotted By:
Plotted Date:



NEW MLP	MAIN: SIZE & TYPE: 1200 A MLO						PANEL LOCATION:					
	BUS RATING: 1200 A						FEEDER SIZE: 1200A					
	VOLTAGE: 120 / 208 V 3 Ø, 4 WIRE						FED FROM: MDP					
	MOUNTING: SURFACE						MIN RMS AMPS: 42 KAIC					

CKT #	CIRCUIT DESCRIPTION	LOAD (KVA) A	B	C	AMPS / POLES	CKT #	LOAD	CKT #	AMPS / POLES	LOAD (KVA) A	B	C	CIRCUIT DESCRIPTION	CKT #
1	RP1				150	1		2	200				LPG	2
3	RP1				/	3		4	/				LPG	4
5	RP1				3P	5		6	3P				LPG	6
7	SPARE				200	7		8	200				WEST WING 1ST FLR LPN	8
9	SPARE				/	9		10	/				WEST WING 1ST FLR LPN	10
11	SPARE				3P	11		12	3P				WEST WING 1ST FLR LPN	12
13	SPARE				100	13		14	100				SPARE	14
15	SPARE				/	15		16	/				SPARE	16
17	SPARE				3P	17		18	3P				SPARE	18
19	COMP PANEL LP-M				60	19		20	100				LPJ	20
21	COMP PANEL LP-M				/	21		22	/				LPJ	22
23	COMP PANEL LP-M				3P	23		24	3P				LPJ	24
25	SPARE				?	25		26	60				LPC	26
27	SPARE				/	27		28	/				LPC	28
29	SPARE				3P	29		30	3P				LPC	30
31	LAUNDRY LP-L				60	31		32	60				LPK	32
33	LAUNDRY LP-L				/	33		34	/				LPK	34
35	LAUNDRY LP-L				3P	35		36	3P				LPK	36
37	LPA				100	37		38	100				LP-MECH ROOM (LPB)	38
39	LPA				/	39		40	/				LP-MECH ROOM (LPB)	40
41	LPA				3P	41		42	3P				LP-MECH ROOM (LPB)	42
43	LPD				100	43		44	100				LPH	44
45	LPD				/	45		46	/				LPH	46
47	LPD				3P	47		48	3P				LPH	48
49	LPE				100	49		50	100				LPF	50
51	LPE				/	51		52	/				LPF	52
53	LPE				3P	53		54	3P				LPF	54
55	BLANK					55		56					BLANK	56
57	BLANK					57		58					BLANK	58
59	BLANK					59		60					BLANK	60

NOTES: SQUARE D I-LINE
EX LOAD = 85.6 KVA x 125% = 107 KVA + NEW LOAD 40 KVA = 147 KVA/408 AMPS



KEYED NOTES

1. ELECTRICAL CONTRACTOR SHALL DISCONNECT AND REMOVE THE EXISTING MLP TO INSTALL A NEW 1200 AMP MLP IN ITS PLACE.
2. ELECTRICAL CONTRACTOR SHALL REMOVE THE EXISTING 600 AMP FEED, LABEL BREAKER AS SPARE.
3. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH MSU TO ADJUST THE 1600 AMP TRIP SETTINGS DOWN TO 1200 AMPS TO FEED NEW MLP.

GENERAL NOTES

A 1-WEEK ENERGY STUDY WAS CONDUCTED FROM 12/13/2021 TO 12/20/2021 ON THE MAIN LIGHTING PANELBOARD (MLP). PER-PHASE CURRENT DRAW RESULTS ARE SUMMARIZED IN THE FOLLOWING TABLE.

	AØ	BØ	CØ
MAX	223.6A	238.0A	199.4A
AVG	85.1A	92.0A	85.4A
MIN	46.6A	49.0A	40.6A

EXISTING PARTIAL RISER FROM 1964 - ISSUED AS REFERENCE
NO SCALE

ELECTRICAL RISER DIAGRAM
NO SCALE

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Infrastructure Planning and Facilities

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MECH.	GOERGE
ELEC.	HOWARD
CIVIL	
L.A.	
INT. DES.	
CONST. REP.	GIBSON
APPR.	
DATE	06.08.23
SCALE	AS SHOWN

REVISIONS
ISSUED FOR BID

ELECTRICAL RISER

E6

Drawing File:
Plotted By:
Plotted Date:

0.0" 0.5" 1.0" 1.5" 2.0"