

# UNIVERSITY OF OREGON WATKINS GEOCHEMISTRY ISOTOPE LAB

100% CONSTRUCTION DOCUMENTS 02-18-13

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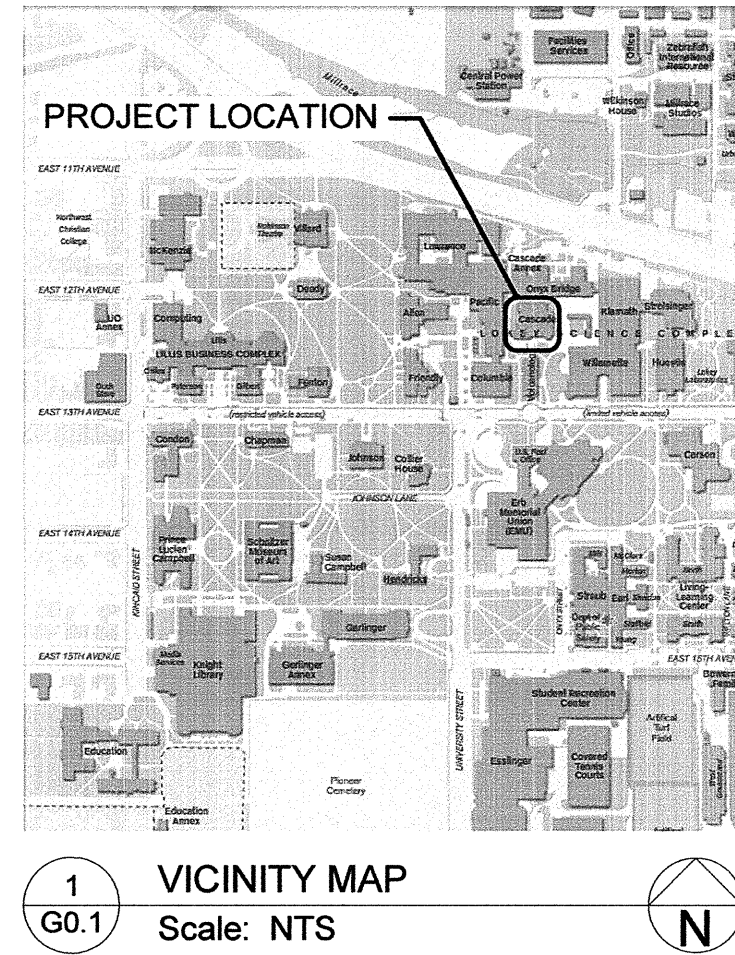
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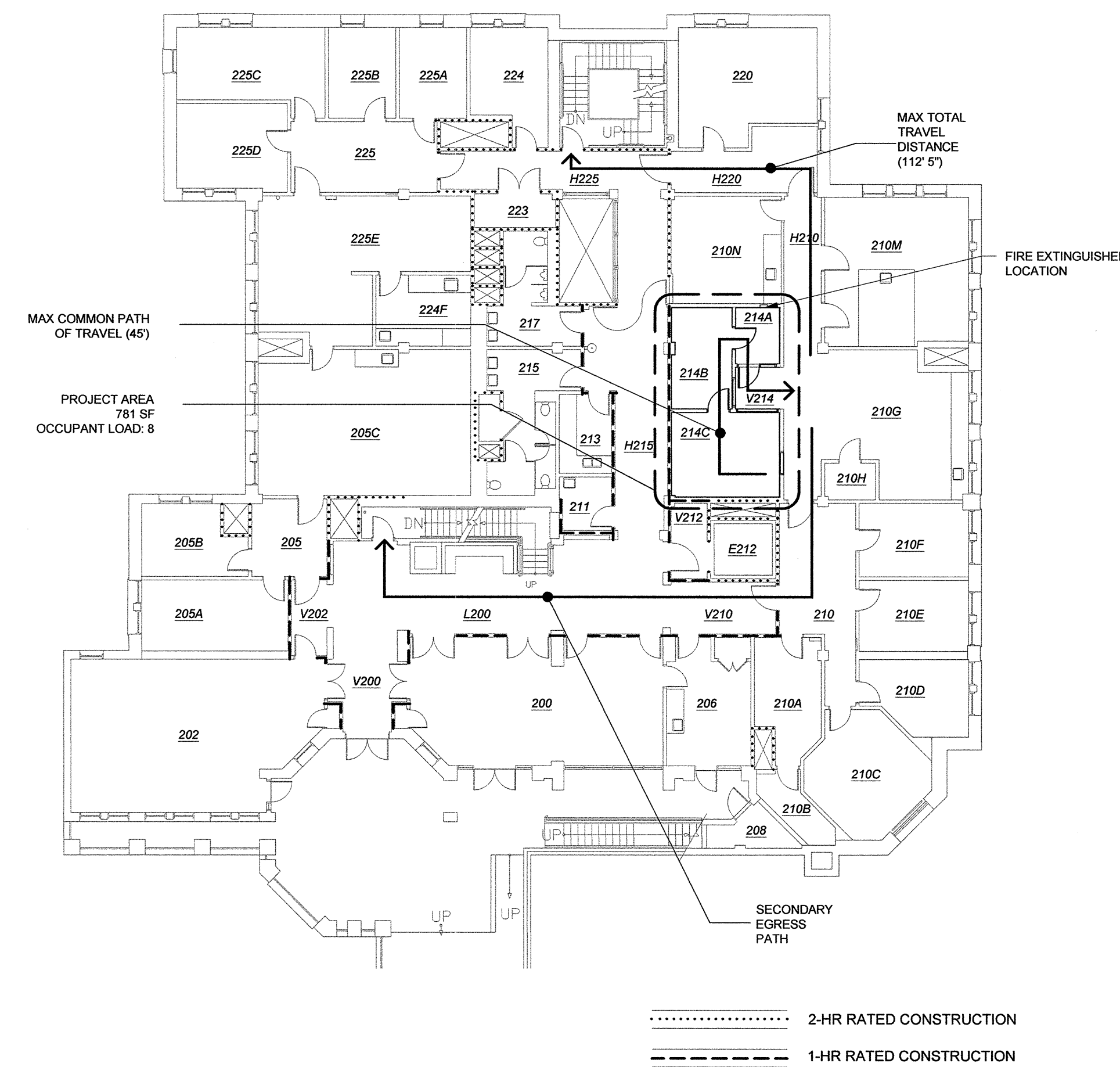
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## ARCHITECTURAL ABBREVIATIONS

@	AT
AFF	ABOVE FINISH FLOOR
ASSY	ASSEMBLY
BD	BOARD
BLW	BELOW
BOS	BOTTOM OF SLAB
BYD	BEYOND
CHNL	CHANNEL
C.I.P.	CAST IN PLACE
CL	CENTER LINE
CLR	CLEAR
COL	COLUMN
CONC	CONCRETE
CONT	CONTINUOUS
DIA.	DIAMETER
DW	DISHWASHER
DWG	DRAWING
(E)	EXISTING
ELEV	ELEVATION
EQ	EQUAL
FD	FLOOR DRAIN
FE	FIRE EXTINGUISHER
FF	FINISH FLOOR
FLR	FLOOR
F.O.	FACE OF
FS	FIRE SPRINKLER
FWD	FORWARD
GA	GAUGE
GWB	GYPSUM BOARD
MAX.	MAXIMUM
MECH.	MECHANICAL
MFR.	MANUFACTURER
MIN.	MINIMUM
MISC.	MISCELLANEOUS
MTD	MOUNTED
(N)	NEW
N.I.C.	NOT IN CONTRACT
N.T.S.	NOT TO SCALE
O/	OVER
OFOI	OWNER FURNISHED, OWNER INSTALLED
O.H.	OPPOSITE HAND
OPP	OPPOSITE
PL	PLATE
PT	PRESSURE TREATED
PTD	PAINTED
R.O.	ROUGH OPENING
SIM	SIMILAR
STRUC	STRUCTURAL
TBD	TO BE DETERMINED
T.U.	TOP OF
TOC	TOP OF CONCRETE
TOS	TOP OF SLAB
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
W	WITH
WD	WOOD



**2 G0.1 CASCADE HALL FIRE SAFETY/EGRESS DIAGRAM**  
Scale: 1/16"=1'-0"

## PROJECT INFORMATION

- GENERAL NOTES:**
- ALL WORK SHALL COMPLY WITH LOCAL CODES, OREGON STATE CODES, AMENDMENTS, RULES, REGULATIONS, ORDINANCES, LAWS, ORDERS, APPROVALS, ETC. THAT ARE REQUIRED BY GOVERNING AUTHORITIES. IN THE EVENT OF CONFLICT, THE MOST STRINGENT REQUIREMENTS SHALL APPLY. REQUIREMENTS INCLUDE, BUT ARE NOT LIMITED TO, THE CURRENTLY APPLICABLE EDITIONS OR PUBLICATIONS OF THE FOLLOWING:
    - 2010 EDITION OSSC
    - OREGON ADMINISTRATIVE CODE
    - NATIONAL FIRE PROTECTION ASSOCIATION
    - STATE OF OREGON 2010 ELECTRICAL SPECIALTY CODE
    - STATE OF OREGON 2011 PLUMBING SPECIALTY CODE
    - STATE OF OREGON 2010 MECHANICAL SPECIALTY CODE
    - STATE OF OREGON 2010 FIRE CODE.
  - CONTRACTOR SHALL EXAMINE AND VERIFY CONDITIONS OF THE JOB SITE. ANY DISCREPANCY BETWEEN DRAWINGS AND EXISTING CONDITIONS SHOULD BE RECORDED IN WRITING AND REPORTED TO THE ARCHITECT FOR RESOLUTION PRIOR TO COMMENCEMENT OF WORK.
  - ALL DIMENSIONS NOTED IN FLOOR PLANS AND SECTIONS ARE TO FINISH UNLESS NOTED OTHERWISE. NOTIFY ARCHITECT OF ANY DISCREPANCIES OR CONFLICT PRIOR TO SUBSEQUENT WORK.
  - DO NOT SCALE DRAWINGS.
  - MATERIAL CHOICES, FIXTURES, ADHESIVES, AND FINISHES NOT SPECIFIED SHALL BE PRE-APPROVED BY OWNER AND ARCHITECT.
  - ALL CHANGE ORDERS SHALL BE WRITTEN AND SHALL BE APPROVED BY ARCHITECT AND OWNER PRIOR TO EXECUTION OF WORK.
  - WOOD IN CONTACT WITH CEMENT OR MASONRY SHALL BE PRESSURE TREATED.
  - PROVIDE ACCESS TO CONCEALED VALVES, DAMPERS, CONTROLS, ELECTRONIC JUNCTION BOXES, ETC. OBTAIN ARCHITECT'S APPROVAL IN LOCATING ACCESS DOORS PRIOR TO INSTALLING.
  - PIPING, CONDUIT, ROUGH-IN AND SIMILAR WORK SHALL BE CONCEALED UNLESS NOTED OTHERWISE.
  - SITE TO BE BROOM CLEANED AT END OF DAY DAILY.

## CODE INFORMATION - WATKINS GEOCHEMISTRY ISOTOPE LAB

**GENERAL:**  
BUILDING OCCUPANCY:  
B - LABORATORIES, TESTING AND RESEARCH (304)

**CONSTRUCTION TYPE:**  
TYPE IA / FULLY SPRINKLERED

**AUTOMATIC SPRINKLER SYSTEM:**  
NFPA 13

**IBC 2009, OSSC 2010 CODE ANALYSIS INFORMATION:**

**CHAPTER 6 GENERAL BLDG HEIGHTS AND AREAS:**  
BASE ALLOWABLE PER IA CONSTRUCTION  
B OCCUPANCY - FLOORS AND AREA UNLIMITED.

**ACTUAL FLOORS / AREA:**  
3 FLRS + BASEMENT / ±11,000 SF PER FLOOR  
THIS IS WITHIN ALLOWABLE WITHOUT TAKING INTO ACCOUNT SPRINKLER OR FRONTAGE INCREASES.

**CHAPTER 6 TYPES OF CONSTRUCTION:**

<b>TYPE I CONSTRUCTION PER TABLE 601:</b>	
STRUCTURAL FRAME	3 HR
BEARING WALLS EXT.	3 HR
BEARING WALLS INT.	3 HR
NON BEARING EXTERIOR WALLS - SEE TABLE 602	
NON BEARING WALLS INT.	0 HR
FLOOR ASSEMBLIES	2 HR
ROOF ASSEMBLIES	1.5 HR CONSTRUCTION.

**NOTE:** ALL PROPOSED NEW CONSTRUCTION IS INTERIOR, NON-BEARING WALLS. PENETRATIONS AT FLOORS AND ROOF TO BE FIRE STOPPED PER REQUIRED RATING OF ASSEMBLY

**PROJECT SCOPE:**  
THIS PROJECT CONSISTS OF THE RENOVATION OF EXISTING LABORATORY SPACE. THE RENOVATED LABORATORY SPACES WILL BE REQUIRED TO MEET CLASS 10,000 CLEANROOM STANDARDS. THE PROJECT IS LOCATED ON THE 'SECOND' FLOOR OF CASCADE HALL AT THE UNIVERSITY OF OREGON. WORK INCLUDES MINOR DEMOLITION OF INTERIOR PARTITION WALLS AND FINISHES. WORK ALSO INCLUDES INSTALLATION OF NEW FINISHES, LIGHTING, AND ALTERATIONS TO THE BUILDING MECHANICAL, ELECTRICAL, AND PLUMBING SYSTEMS.

**METAL EXPOSURE:**  
-DUE TO THE HIGHLY SENSITIVE NATURE OF THE RESEARCH THAT WILL BE DONE WITHIN THE GEOCHEMISTRY LAB, ALL EXPOSED METALS WITHIN THE CLEANROOM SPACES HAVE EITHER BEEN ENTIRELY ELIMINATED BY DESIGN OR HAVE BEEN SPECIFIED WITH COATINGS TO COVER ANY EXPOSED SURFACE AREA. ANY EXPOSED METAL NOT ADDRESSED SPECIFICALLY BY THE CONSTRUCTION DOCUMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND OWNER.

**SPRINKLER / FIRE ALARM NOTE:**  
-EXISTING BUILDING IS FULLY SPRINKLERED AND HAS A FIRE ALARM.

**HAZARDOUS MATERIALS NOTE:**  
-ANY NECESSARY ABATEMENT OF HAZARDOUS MATERIALS IN THE AFFECTED SPACES TO BE COMPLETED BY OWNER PRIOR TO COMMENCEMENT OF THIS PROJECT.

**CLASS 10,000 CLEANROOM STANDARD:**  
-THE PROJECT HAS BEEN DESIGNED AND SHALL BE CONSTRUCTED TO CLASS 10,000 CLEANROOM FEDERAL STANDARD 209E.

**CHAPTER 7 FIRE RESISTANCE RATED CONSTRUCTION:**  
709 FIRE PARTITIONS:  
EXISTING 1 HOUR RATED CORRIDOR WALLS, TO BE REPLACED WITH NEW 1 HOUR RATED CONSTRUCTION WHERE REMOVED. NEW PENETRATIONS SHALL COMPLY WITH SECTION 713.

**714 FIRE RESISTANT JOINT SYSTEMS:**  
JOINTS IN OR BETWEEN FIRE RESISTANT RATED WALLS, FLOOR OR FLOOR/CEILING ASSEMBLIES AND ROOFS SHALL BE PROTECTED BY AN APPROVED FIRE RESISTANT JOINT SYSTEM WITH A RATING OF NOT LESS THAN THAT OF THE ASSEMBLY IN WHICH IT IS INSTALLED.

**CHAPTER 8 INTERIOR FINISHES:**  
IN ACCORDANCE WITH OCCUPANCY AND CONSTRUCTION TYPE. CLASS C FINISH MATERIALS ALLOWED PER 803.9. FUME HOOD INTERIORS SHALL BE CLASS "A".

**CHAPTER 9 FIRE PROTECTION SYSTEMS:**  
MINIMAL SPRINKLER RELOCATION PLANNED AT REMODELED AREAS. ALL WORK TO BE IN ACCORDANCE WITH NFPA 13.

**CHAPTER 10 MEANS OF EGRESS:**  
**OCCUPANT LOAD TABLE 1004.1.1:**  
OCCUPANT FACTOR - LABORATORY SPACES: 1 PER 100 GROSS SF  
OCCUPANT LOAD: 781SF/100 = 8 OCCUPANTS  
OCCUPANT LOAD HAS REMAIN UNCHANGED

**1011.1 EXIT SIGNS**  
EXIT SIGNS ARE NOT REQUIRED FOR ROOMS THAT REQUIRE ONLY ONE EXIT.

## DRAWING INDEX

### ARCHITECTURAL

- G0.1 PROJECT INFORMATION
- A1.1 EXISTING/DEMOLITION PLAN AND RCP
- A2.1 PROPOSED FLOOR PLAN AND RCP
- A3.1 INTERIOR ELEVATIONS
- A4.1 CASEWORK DETAILS
- A5.1 INTERIOR DETAILS
- A6.1 SCHEDULES

### MECHANICAL/PLUMBING

- M0.1 SYMBOLS LIST, SCHEDULES & SHEET LIST
- M1.0 2ND FLOOR PLAN - MECHANICAL
- M2.0 1ST FLOOR PLAN - PLUMBING
- M2.1 2ND FLOOR PLAN - PLUMBING
- M3.0 DETAILS

### ELECTRICAL

- E1.0 FLOOR PLAN - ELECTRICAL DEMOLITION, SYMBOLS LIST & PANEL SCHEDULE
- E2.0 FLOOR PLANS - POWER & LIGHTING
- E3.0 FLOOR PLAN - DATA & FIRE ALARM SCHEDULES

**1014.3 COMMON PATH OF EGRESS TRAVEL**  
SHALL NOT EXCEED 75', BUT EXCEPTION #1 APPLIES TO B OCCUPANCY TO ALLOW 100 MAX' WHEN SPRINKLERED TO NFPA 13. SEE DIAGRAM 2/G0.1 FOR ILLUSTRATIONS OF LONGEST COMMON PATH IN PROJECT AREA.

**1015.1 EXIT AND EXIT ACCESS DOORWAYS:**  
ONLY ONE EXIT IS REQUIRED FOR EACH OF THE NEW ROOMS PROVIDED BY THE PROJECT.

**1016.1 EXIT ACCESS TRAVEL DISTANCE:**  
TABLE 1016.1 WITH SPRINKLER INCREASE ALLOWS THE FOLLOWING:  
B OCCUPANCY 300'  
ACTUAL DISTANCES ARE UNDER 112' 5"

**1018.1 CORRIDORS:**  
CORRIDORS ARE 1 HOUR RATED CONSTRUCTION.

**CHAPTER 11 ACCESSIBILITY:**  
NEW CONSTRUCTION TO BE IN ACCORDANCE WITH ACCESSIBILITY REQUIREMENTS. BUILDING HAS EXISTING ACCESSIBLE ENTRY, ELEVATORS, AND BATHROOMS.

**CHAPTER 24 GLAZING:**  
INTERIOR GLAZING SHALL COMPLY WITH SECTION 2406 SAFETY GLAZING REQUIREMENTS.

**CHAPTER 26 PLASTICS:**  
SEE SPECIFICATIONS FOR MATERIAL REQUIREMENTS FOR WALL AND CEILING PANELS AND COMPLIANCE WITH CHAPTER 8 REQUIREMENTS.

**UFC CHAPTER 9, 906 FIRE EXTINGUISHERS:**  
SEE FIRE SAFETY/EGRESS DIAGRAM FOR FIRE EXTINGUISHER LOCATION.

PROJECT:

**WATKINS  
GEOCHEMISTRY  
ISOTOPE LAB**

PROJECT LOCATION:  
CASCADE HALL 1275 E. 13TH AVE.

CLIENT:

**UNIVERSITY OF  
OREGON**

ISSUED:

02/18/13 - 100% CD

STAMP:



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RBA PROJECT #: 1218  
DRAWN BY: ET  
CHECKED BY: AB  
FILE NAME: 1218\_100CD

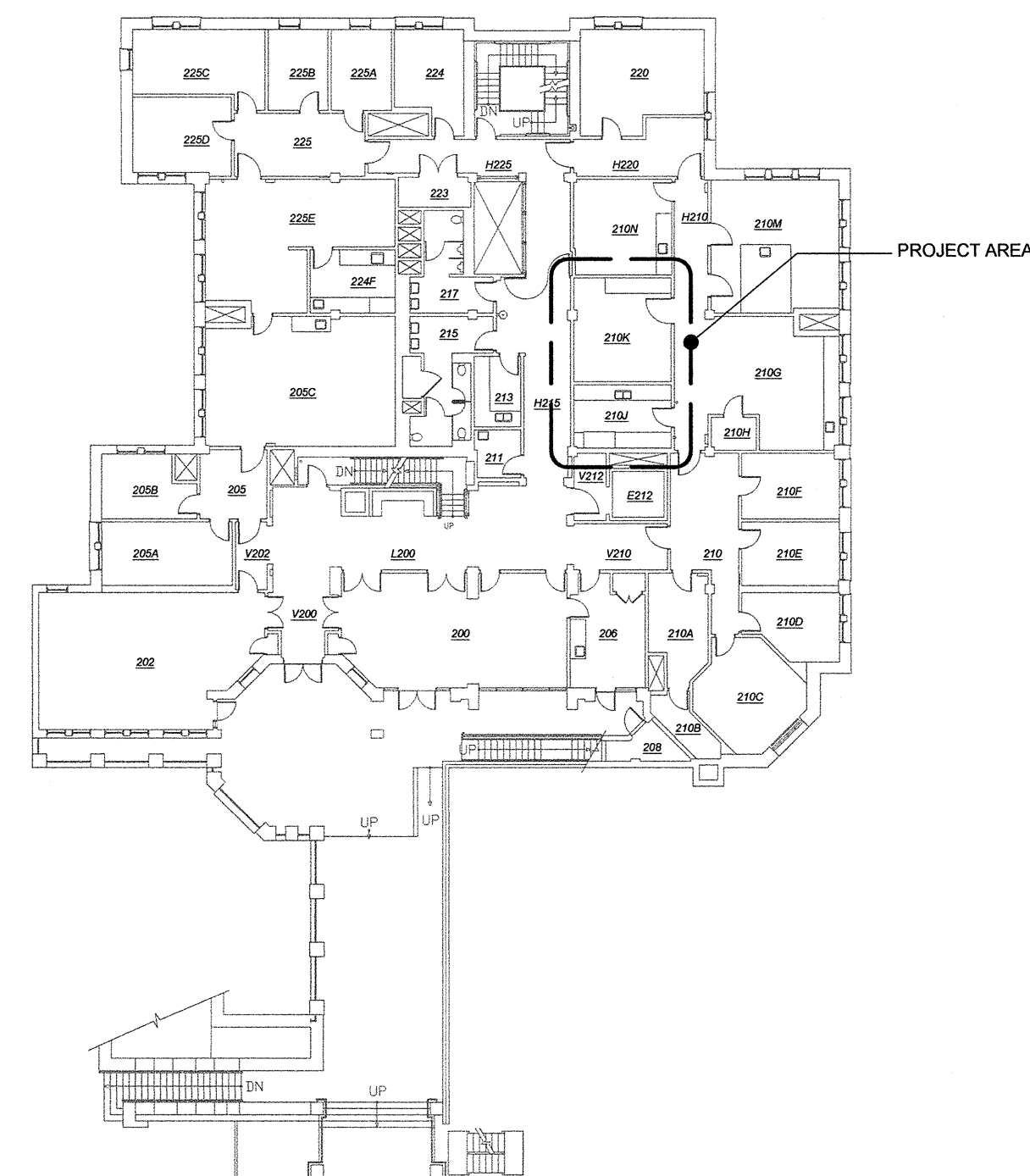
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PROJECT INFORMATION

DRAWING:

**G0.1**





1  
A1.1 ORIENTATION PLAN  
Scale: NOT TO SCALE

**GENERAL NOTES**

1. ALL DIMENSIONS ARE TO FINISH SURFACES U.N.O.
  2. FINISH FLOORING MATERIAL IS TO EXTEND WALL TO WALL - BENEATH CASEWORK, FUME HOODS, AND OWNER INSTALLED EQUIPMENT.
  3. DIMENSIONS AT CASEWORK ARE TO FACE OF CASEWORK AND NOT COUNTERTOP. SEE DETAILS FOR OVERHANG DIMENSIONS.
  4. REMOVE ALL EXISTING CASEWORK, CEILINGS, AND FLOORING.
- KEY NOTES:**
- 1 - REMOVE (E) SUSPENDED CEILING.
  - 2 - REFER TO MEP FOR DEMO OF (E) OVERHEAD FIXTURES, PIPING AND DUCTS.
  - 3 - REMOVE AND SAVE EXISTING FUME HOOD FOR OWNER.
  - 4 - REMOVE (E) DOOR AND FRAME.
  - 5 - REMOVE (E) CASEWORK AND SHELVING.
  - 6 - DEMO (E) WALL-MOUNTED EQUIPMENT AND PIPE.
  - 7 - REMOVE (E) FURNISHINGS.
  - 8 - DEMO (E) SINK.

PROJECT:

**WATKINS  
GEOCHEMISTRY  
ISOTOPE LAB**

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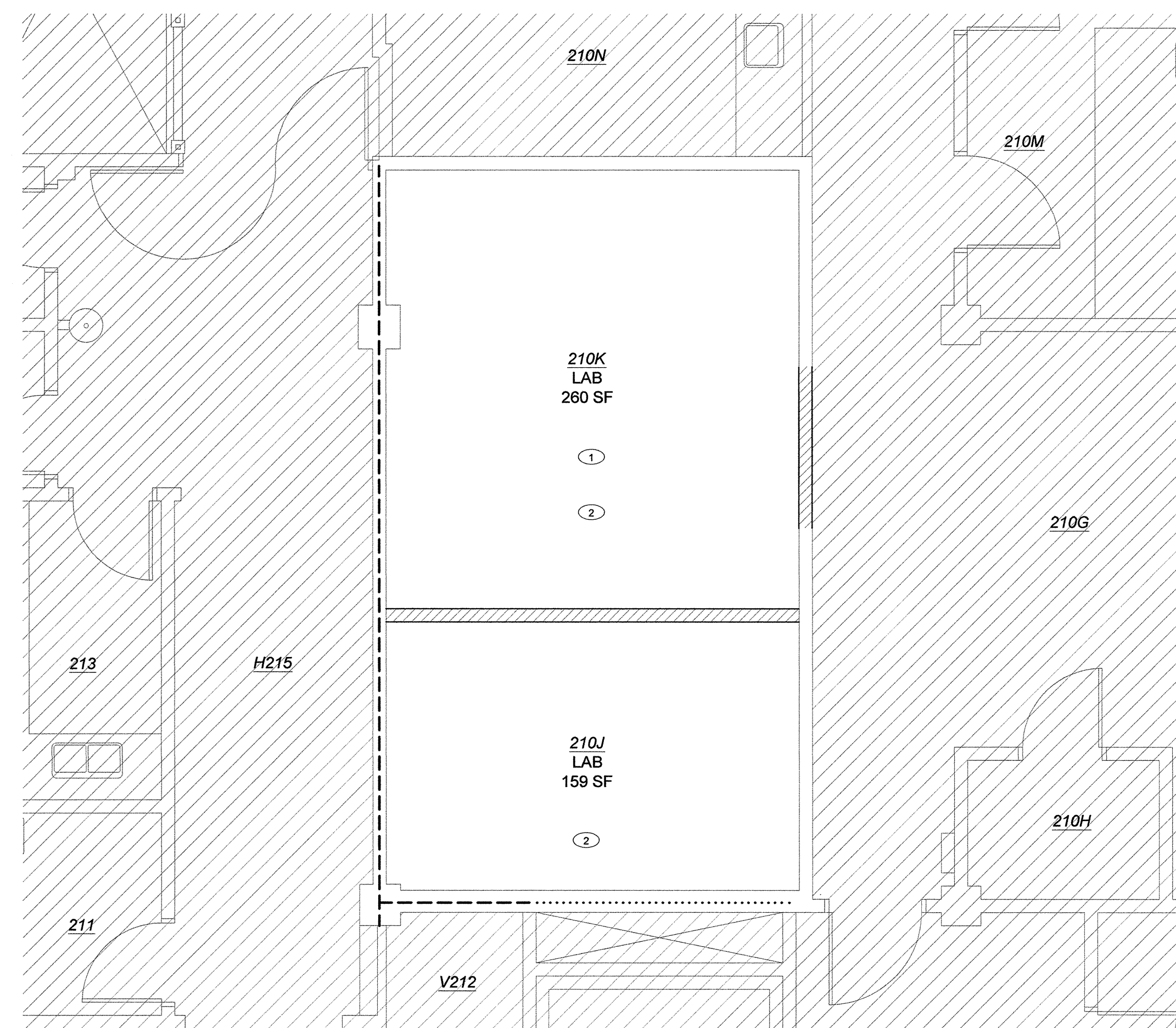
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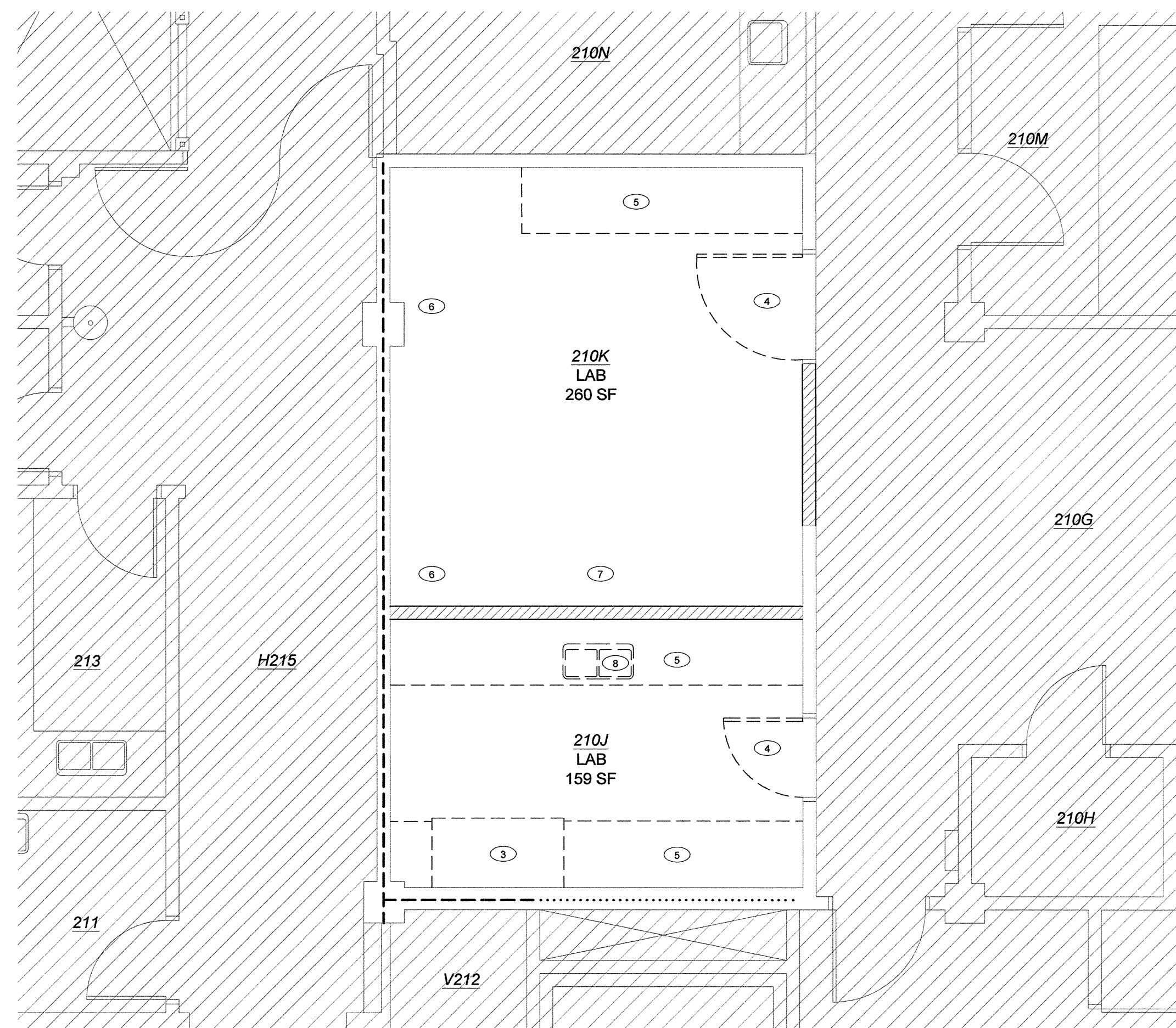
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**WALL TYPE KEY**

- (E) PARTITION WALL TO BE DEMOLISHED
- (E) PARTITION WALL TO REMAIN
- (E) 2-HR RATED CONSTRUCTION TO REMAIN
- (E) 1HR RATED CONSTRUCTION TO REMAIN

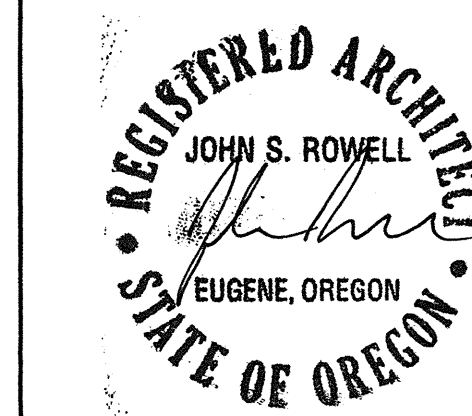


3  
A1.1 DEMO RCP  
Scale: 1/4"=1'-0"



2  
A1.1 DEMO FLOOR PLAN  
Scale: 1/4"=1'-0"

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UO PROJECT #: CP12-128  
RBA PROJECT #: 1218  
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FILE NAME: 1218\_100CD

DRAWING NAME:

EXISTING/DEMO

DRAWING:

**A1.1**



PROJECT:

**WATKINS  
GEOCHEMISTRY  
ISOTOPE LAB**

PROJECT LOCATION:  
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FILE NAME: 1218\_100CD

DRAWING NAME:

**PROPOSED  
FLOOR PLAN  
& RCP**

DRAWING:

**A2.1**

**GENERAL NOTES**

1. ALL DIMENSIONS ARE TO FINISH SURFACES U.N.O.
2. FINISH FLOORING MATERIAL IS TO EXTEND WALL TO WALL - BENEATH CASEWORK, FUME HOODS, AND OWNER INSTALLED EQUIPMENT.
3. DIMENSIONS AT CASEWORK ARE TO FACE OF CASEWORK AND NOT COUNTERTOP. SEE DETAILS FOR OVERHANG DIMENSIONS.
4. SEE A3.1 FOR INTERIOR ELEVATIONS.
5. SEE 2/A5.1 FOR TYPICAL WALL PENETRATION THROUGH CLEANROOM FURRED WALL SYSTEM.
6. SEE 4/A5.1 FOR TYPICAL FIRE SPRINKLER PENETRATION CONDITION THROUGH CLEANROOM CEILING SYSTEM.
7. PATCH WALLS WHERE (E) DUCTWORK, PIPING, OR CONDUIT IS REMOVED. MATCH (E) WALL CONSTRUCTION (AND FIRE RATING WHERE APPLICABLE) AND MATCH FINISH OF ADJACENT SURFACES.

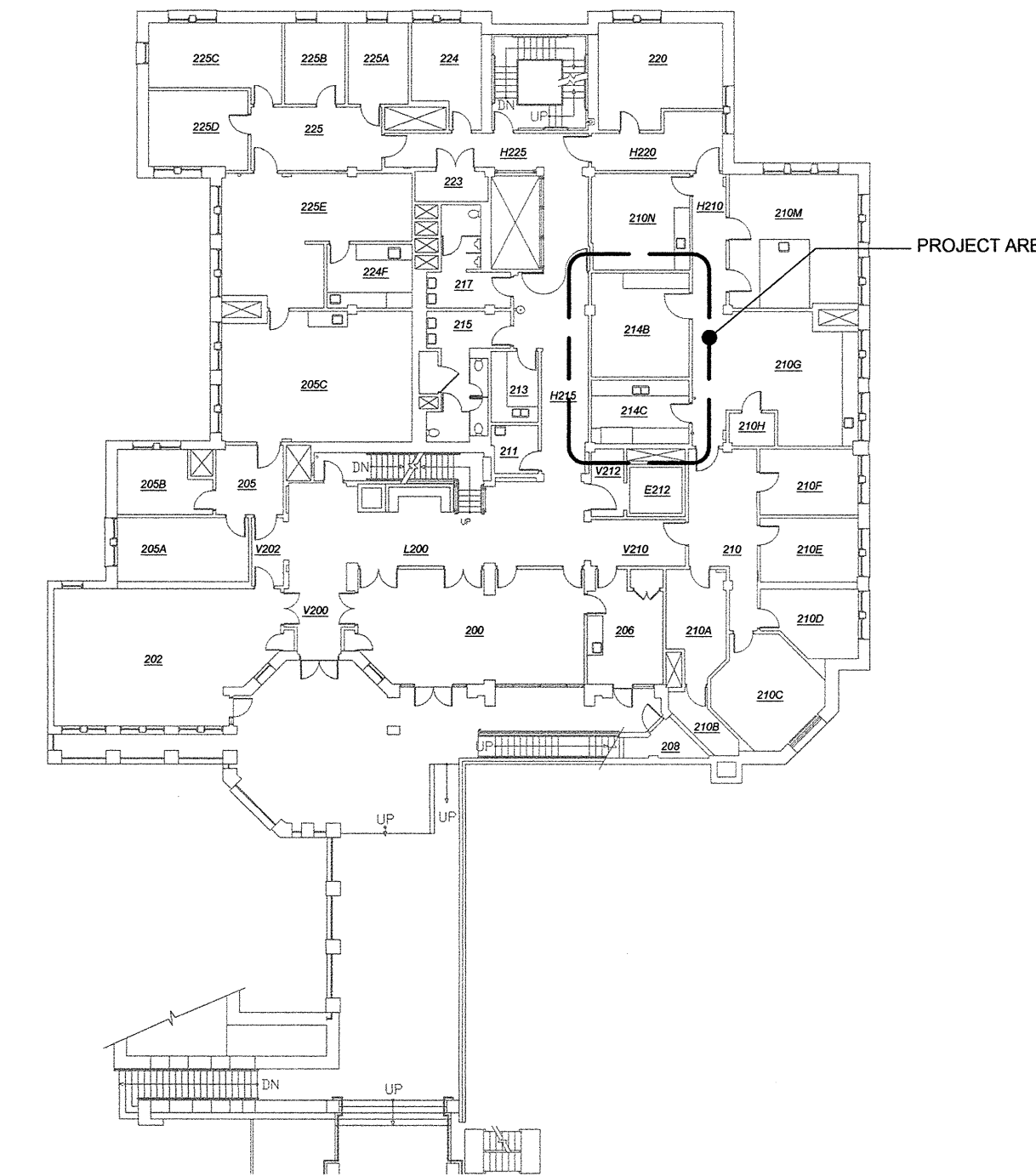
**KEY NOTES:**

- 1 - NITROGEN CYLINDER RESTRAINT. COORDINATE W/ OWNER FOR DIMENSIONS OF OFOI NITROGEN CYLINDER.
- 2 - FIBERGLASS DOOR THRESHOLD.
- 3 - WATER PURIFICATION EQUIPMENT (OF0I).
- 4 - EMERGENCY EYEWASH - SEE PLUMBING.
- 5 - FUME HOOD 1 - SEE SPECIFICATION 11 5310.
- 6 - FUME HOOD 2 - SEE SPECIFICATION 11 5310.
- 7 - VERTICAL LAMINAR FLOW WORKSTATION - SEE LABORATORY EQUIPMENT SPECIFICATION 11 5300.
- 8 - BALANCE TABLE (OF0I).
- 9 - FREE-STANDING SOLID-PLASTIC WORK TABLE.
- 10 - WORK CUBBY - SEE DETAILS AND SOLID-PLASTIC LABORATORY CASEWORK SPECIFICATION 12 3553.23.
- 11 - LAB STOOL (OF0I).
- 12 - FUME HOOD EXHAUST PENETRATION.
- 13 - SAFETY SHOWER - SEE PLUMBING.
- 14 - (N) EPOXY SINK - SEE COUNTERTOP SPECIFICATION 12 3600.
- 15 - STANDARD GRID SUSPENSION SPACING MAY CONFLICT WITH OVERHEAD MEP IN THESE GENERAL LOCATIONS (SEE MEP). CONTRACTOR TO VERIFY.
- 16 - (N) ACCESS PANEL.
- 17 - CONTRACTOR TO VERIFY (E) WALL FRAMING SIZE AT THIS LOCATION AND MATCH INFILL FRAMING TO ALIGN FACE OF FINISH ON BOTH SIDES OF WALL.
- 18 - 1/2" PVC CONDUIT FOR WATER FILTRATION TUBING AND LOW VOLTAGE CONNECTION. EXTEND 1" BEYOND FACE OF WALL AND PROVIDE PLASTIC ESCUTCHEON AT PENETRATION. PROVIDE FIRE CAULKING AT MEMBRANE PENETRATION.

**WALL TYPE KEY**

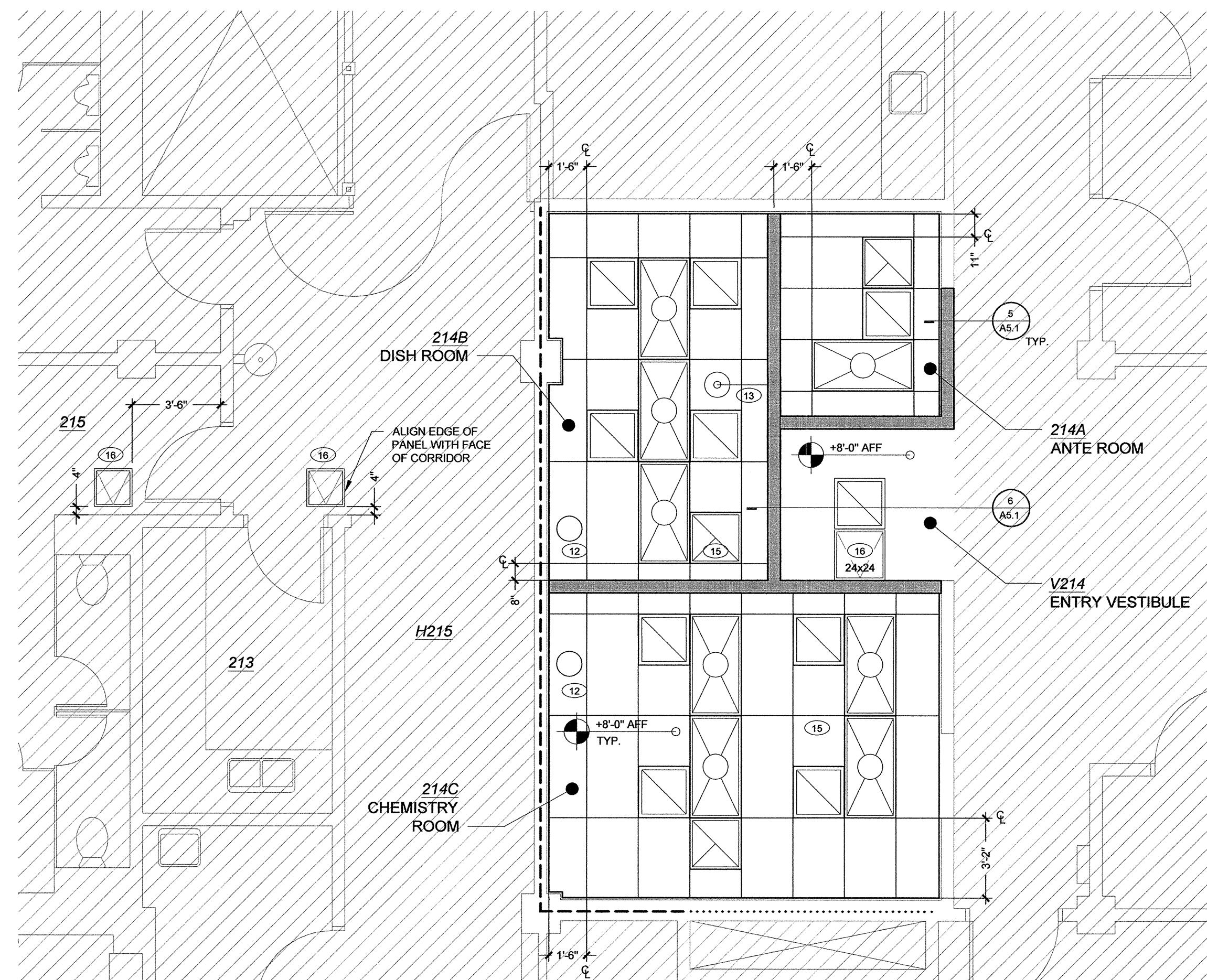
- (N) INTERIOR PARTITION WALL
- (E) INTERIOR PARTITION WALL TO REMAIN
- (E) 2-HR RATED CONSTRUCTION TO REMAIN
- (E) 1-HR RATED CONSTRUCTION TO REMAIN

- FAN FILTER UNIT (FFU)
- LIGHT FIXTURE
- EXHAUST GRILL
- ACCESS PANEL

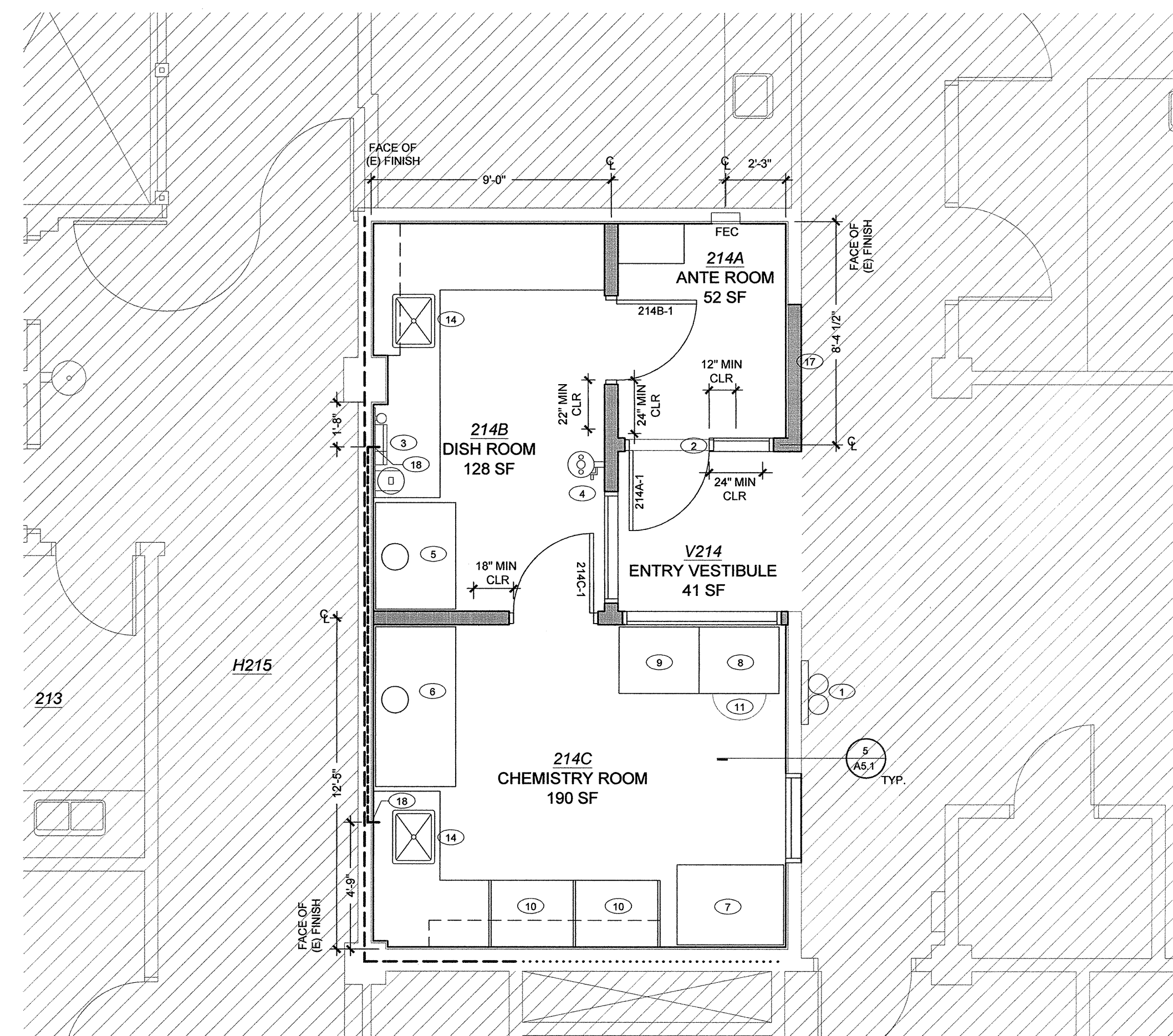


CASCADE HALL

1  
A1.1 ORIENTATION PLAN  
Scale: NOT TO SCALE



2  
A2.1 PROPOSED REFLECTED CEILING PLAN  
Scale: 1/4"=1'-0"



1  
A2.1 PROPOSED FLOOR PLAN  
Scale: 1/4"=1'-0"



PROJECT:

**WATKINS  
GEOCHEMISTRY  
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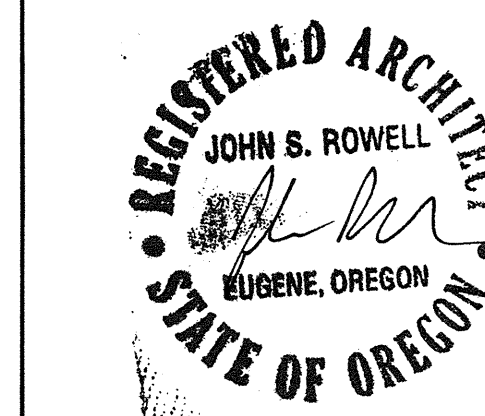
PROJECT LOCATION:  
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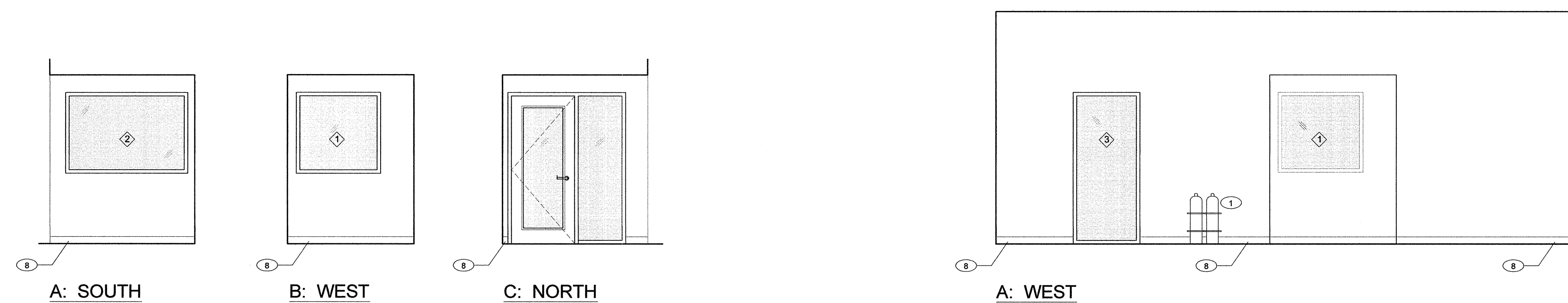
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**INTERIOR ELEVATIONS**

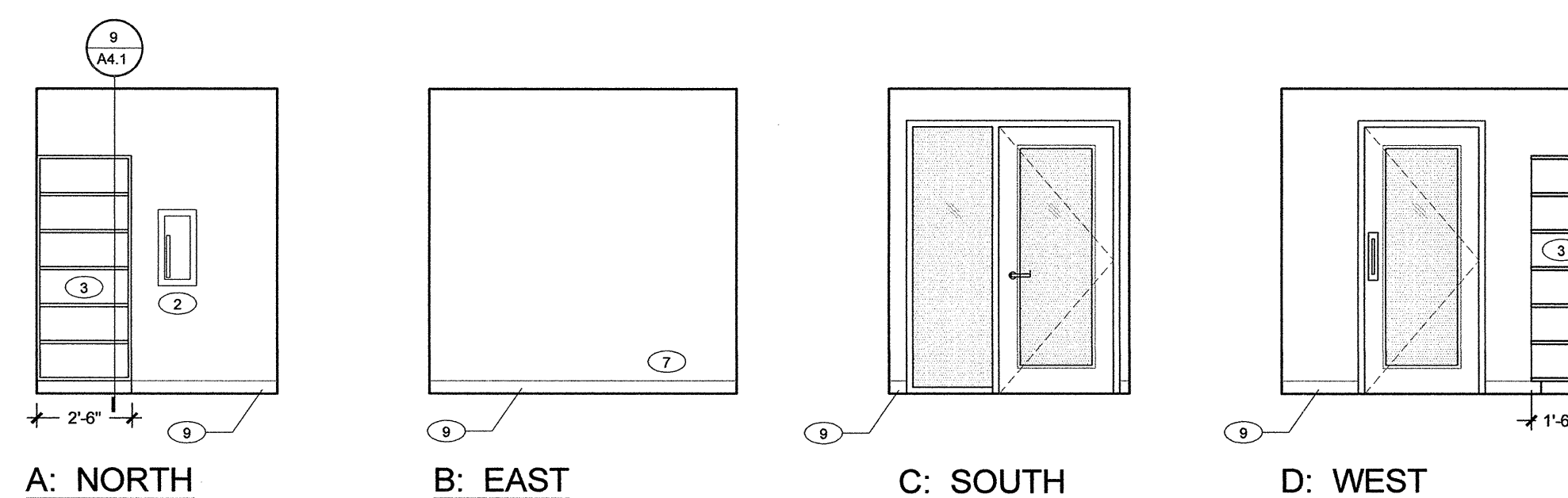
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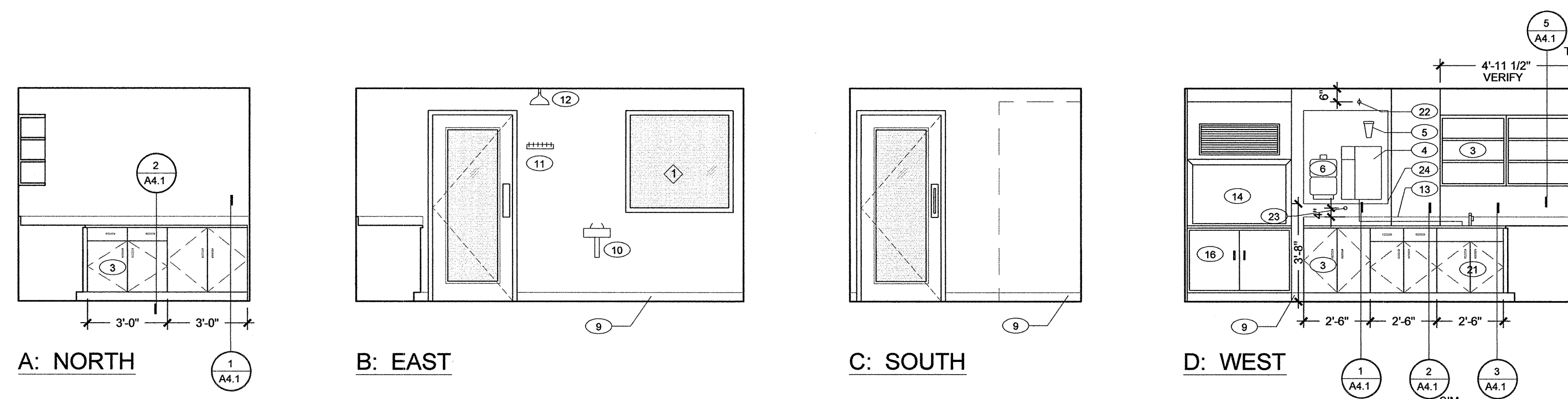


**3**  
A3.1 ELEVATIONS: ENTRY VESTIBULE  
Scale: 1/4" = 1'-0"

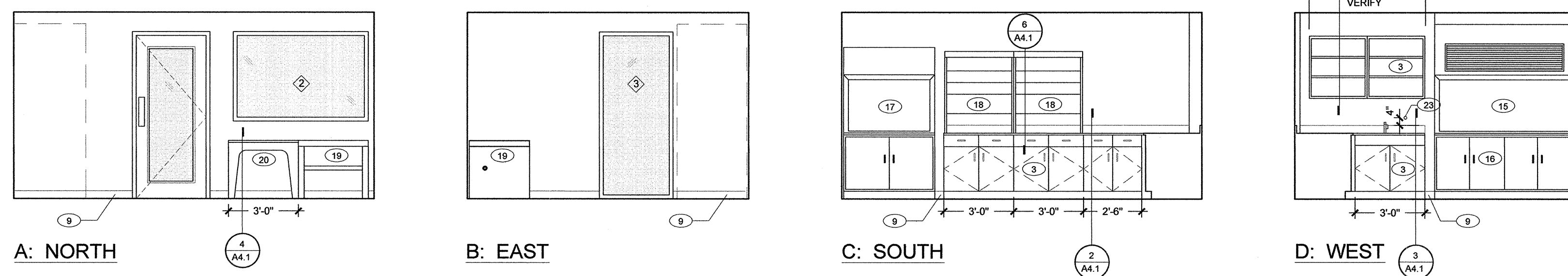
**2**  
A3.1 OUTSIDE ELEVATION OF CLEANROOM  
Scale: 1/4" = 1'-0"



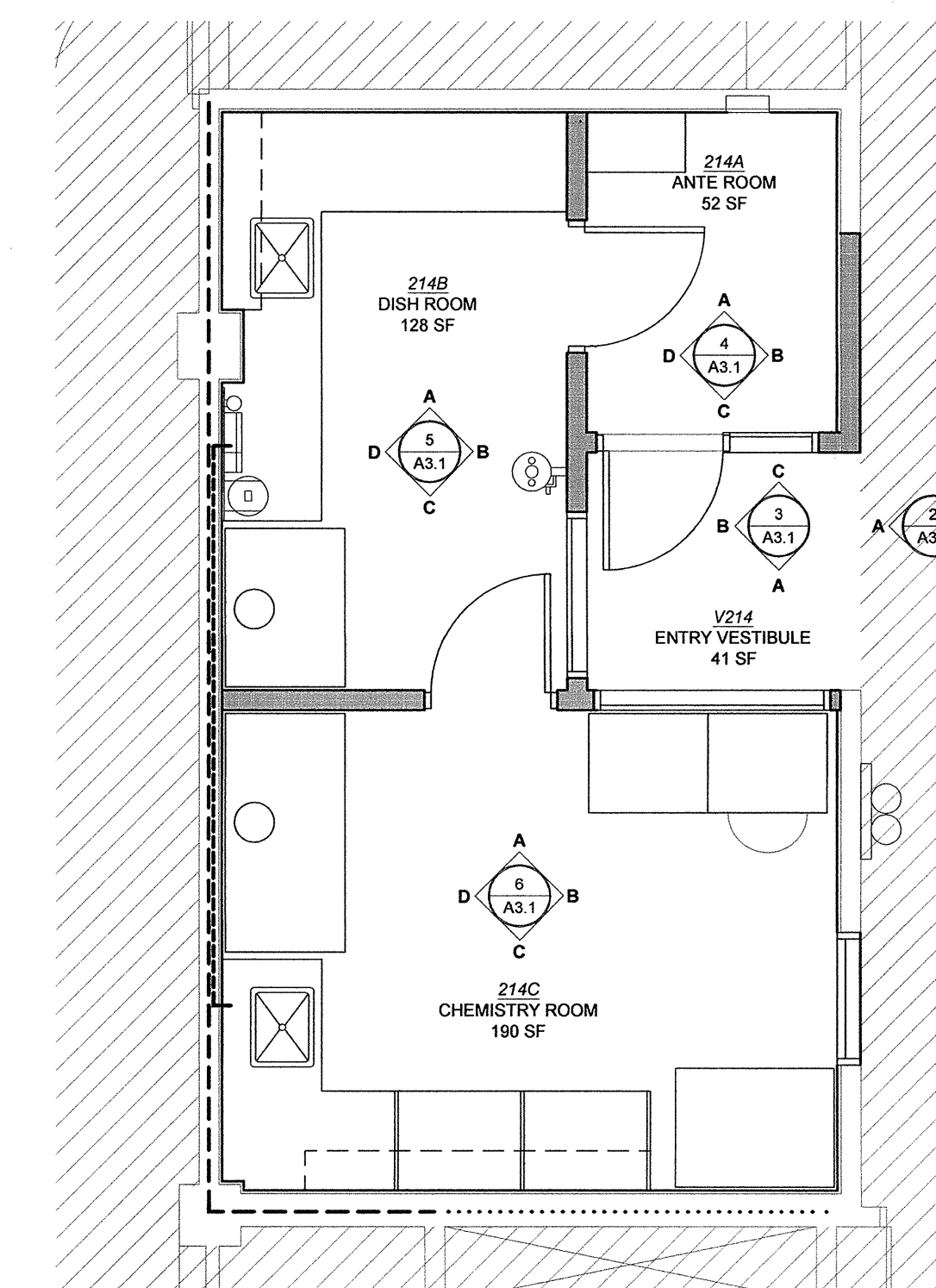
**4**  
A3.1 ELEVATIONS: ANTE ROOM  
Scale: 1/4" = 1'-0"



**5**  
A3.1 ELEVATIONS: DISH ROOM  
Scale: 1/4" = 1'-0"



**6**  
A3.1 ELEVATIONS: CHEMISTRY ROOM  
Scale: 1/4" = 1'-0"



**1**  
A3.1 KEY PLAN  
Scale: NOT TO SCALE

**GENERAL NOTES**

1. ALL DIMENSIONS ARE TO FINISH SURFACES U.N.O.
2. FINISH FLOORING MATERIAL IS TO EXTEND WALL TO WALL - BENEATH CASEWORK, FUME HOODS, AND OWNER INSTALLED EQUIPMENT.
3. DIMENSIONS AT CASEWORK ARE TO FACE OF CASEWORK AND NOT COUNTERTOP. SEE DETAILS FOR OVERHANG DIMENSIONS.

**KEY NOTES:**

- 1 - NITROGEN CYLINDER RESTRAINT. TWO POINTS OF RESTRAINT VERTICALLY. CAPACITY FOR TWO CYLINDERS. COORDINATE WITH OWNER FOR DIMENSIONS OF OFCI NITROGEN CYLINDER.
- 2 - FIRE EXTINGUISHER - SEE SPECIFICATION.
- 3 - SOLID-PLASTIC LABORATORY CASEWORK. PROVIDE BLOCKING FOR UPPER AND FULL HEIGHT CABINETS.
- 4 - MILLIPORE (OFOI), PROVIDE MOUNTING PANEL.
- 5 - PREFILTER (OFOI), PROVIDE MOUNTING PANEL.
- 6 - PUMP RESERVOIR (OFOI), PROVIDE MOUNTING PANEL.
- 7 - WATER FILTRATION DISCHARGE LINE TO ADJACENT SINK PER MANUFACTURER DETAILS.
- 8 - (N) RCB. MATCH EXISTING.
- 9 - INTEGRAL EPOXY COVE BASE, TYP.
- 10 - EMERGENCY EYEWASH - SEE PLUMBING.
- 11 - LAB COAT HOODS - SEE SOLID-PLASTIC LABORATORY CASEWORK SPEC (12 3553.23).
- 12 - EMERGENCY SHOWER - SEE PLUMBING.
- 13 - CONTINUOUS BACKSPASH AROUND COLUMN.
- 14 - FUME HOOD 1. SEE SPECIFICATION 11 5310.
- 15 - FUME HOOD 2. SEE SPECIFICATION 11 5310.
- 16 - VENTED CABINETS (OFCI). SEE SPECIFICATION 11 5310.
- 17 - VERTICAL LAMINAR FLOW WORKSTATION. SEE LAB EQUIP SPECIFICATION 11 5300.
- 18 - CUBBY WORKSTATION - SEE SOLID-PLASTIC LABORATORY CASEWORK SPECIFICATION 12 3553.23.
- 19 - BALANCE TABLE (OFCI).
- 20 - SOLID-PLASTIC WORKTABLE - SEE SPECIFICATION 12 3553.23.
- 21 - SOLID-PLASTIC LABORATORY BASE CABINET AT THIS LOCATION WILL NEED TO BE MODIFIED AT BACK CORNER TO FIT AGAINST CHANGE IN PLANE OF WALL FINISH AT COLUMN.
- 22 - INDUSTRIAL COLD WATER SUPPLY FOR WATER FILTRATION UNIT - SEE M2.1
- 23 - 1/2" PVC CONDUIT FOR WATER FILTRATION TUBING AND LOW VOLTAGE CONNECTION. EXTEND 1" BEYOND FACE OF WALL AND PROVIDE PLASTIC ESCUTCHEON AT PENETRATION. PROVIDE FIRE CAULKING AT MEMBRANE PENETRATION.
- 24 - 3/4" POLYPROPYLENE PANEL FOR MOUNTING WATER PURIFICATION EQUIPMENT. SEE SOLID-PLASTIC LABORATORY CASEWORK SPECIFICATION SECTION 123553.23



PROJECT:

**WATKINS  
GEOCHEMISTRY  
ISOTOPE LAB**

PROJECT LOCATION:  
CASCADE HALL 1275 E. 13TH AVE.

CLIENT:

**UNIVERSITY OF  
OREGON**

ISSUED:  
02/18/13 - 100% CD

STAMP:



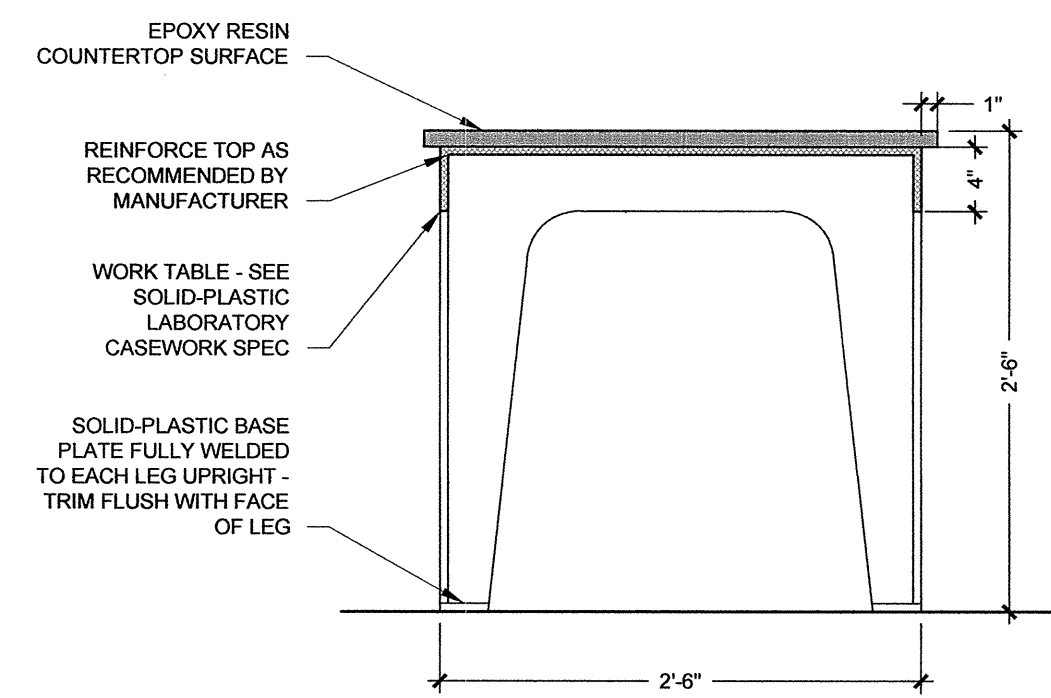
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RBA PROJECT #: 1218  
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CHECKED BY: AB  
FILE NAME: 1218\_100CD

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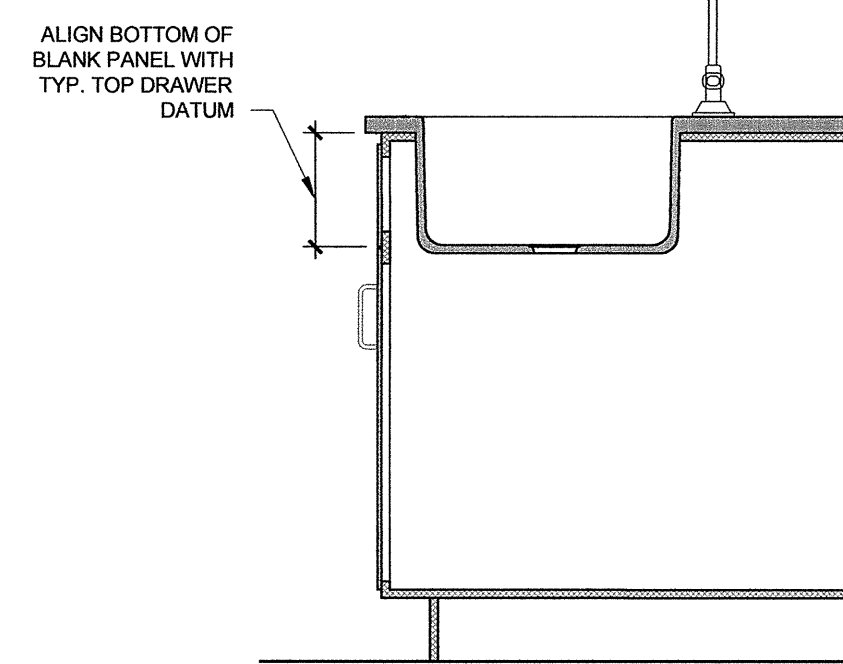
**CASEWORK DETAILS**

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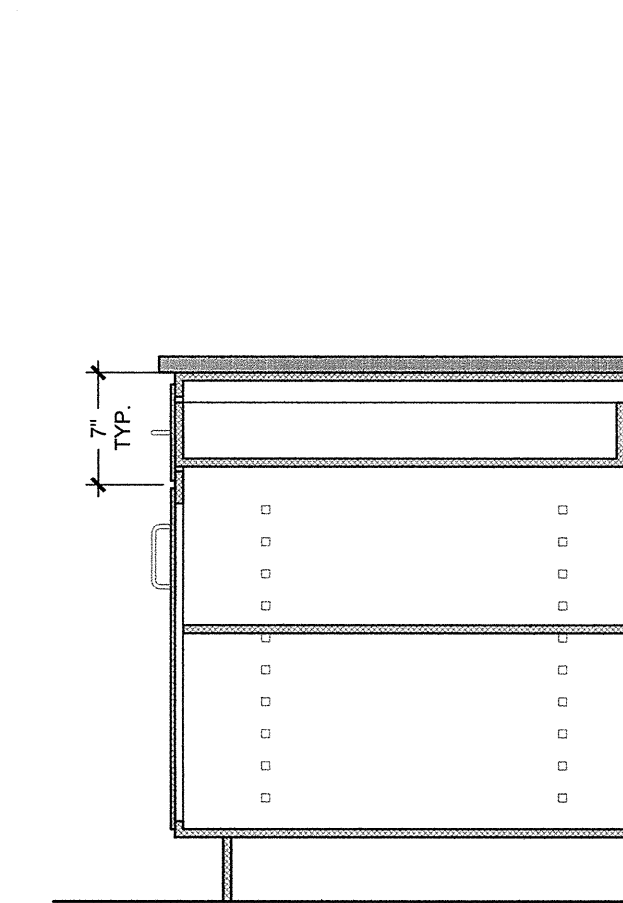
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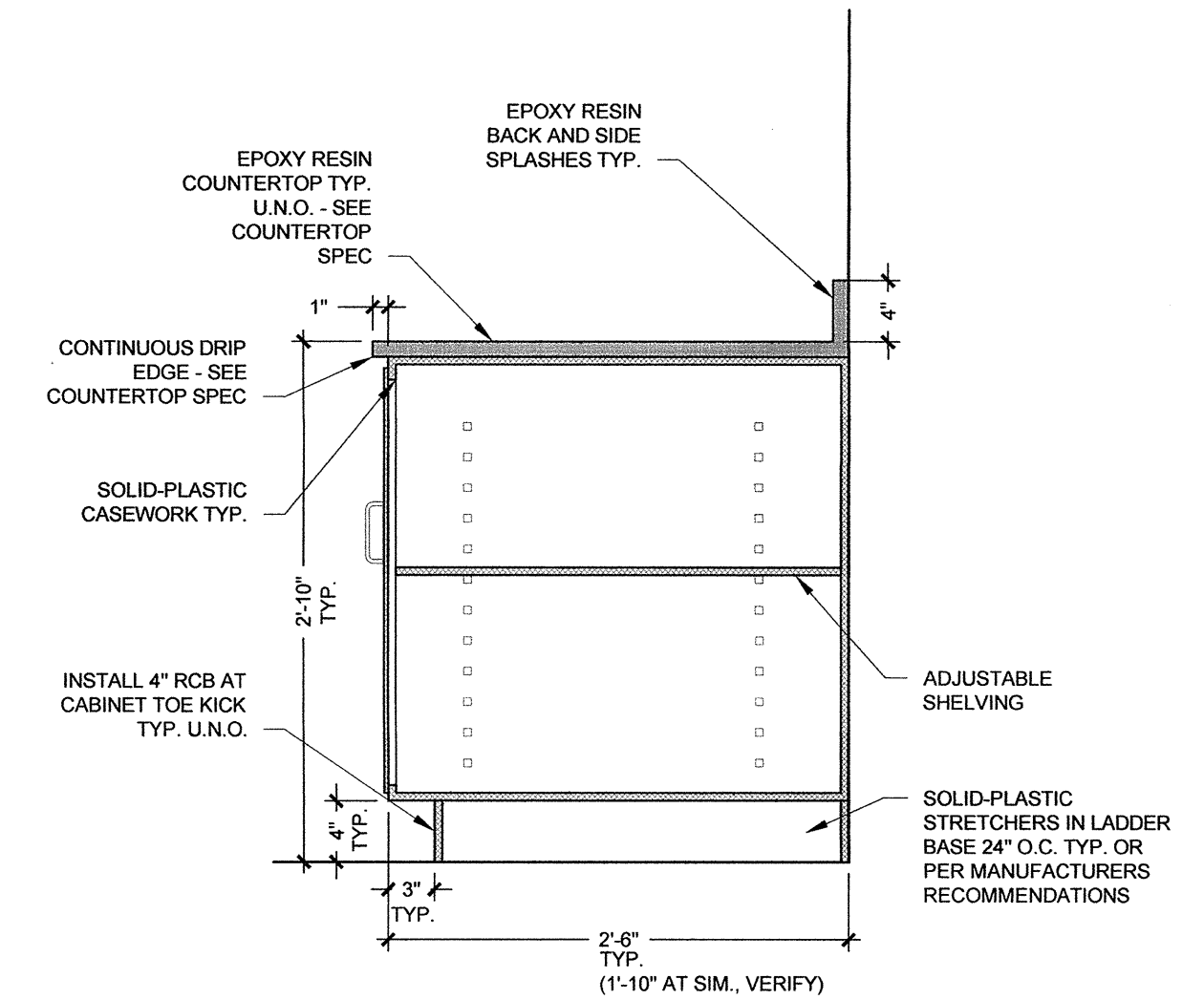
**4**  
A4.1 **WORKTABLE DETAIL**  
Scale: 1" = 1'-0"



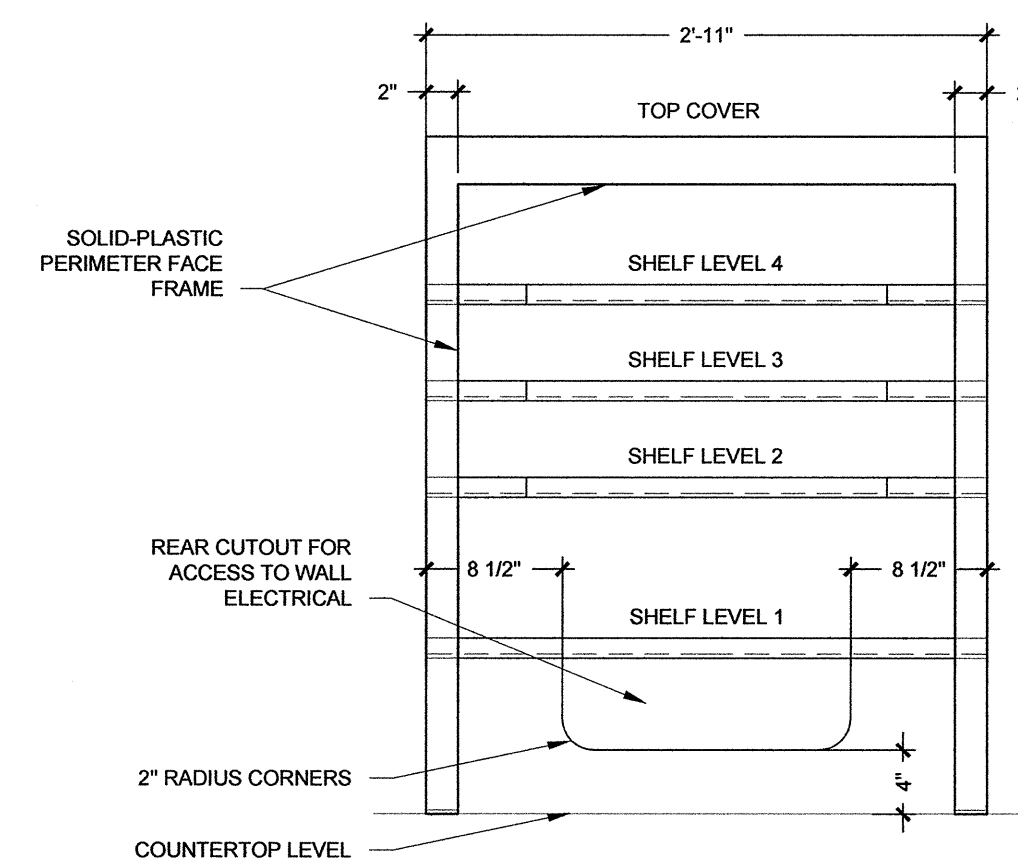
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A4.1 **BASE CABINET DETAILS**  
Scale: 1" = 1'-0"



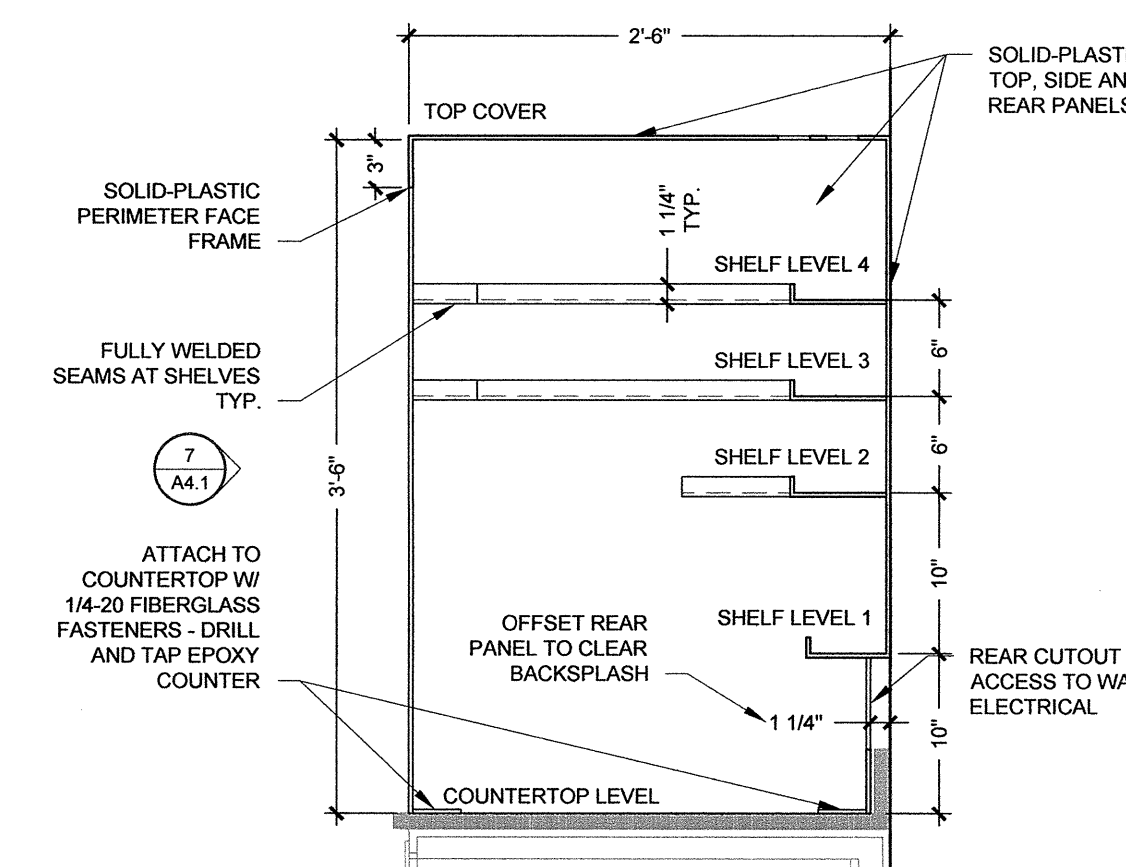
**2**  
A4.1 **BASE CABINET DETAILS**  
Scale: 1" = 1'-0"



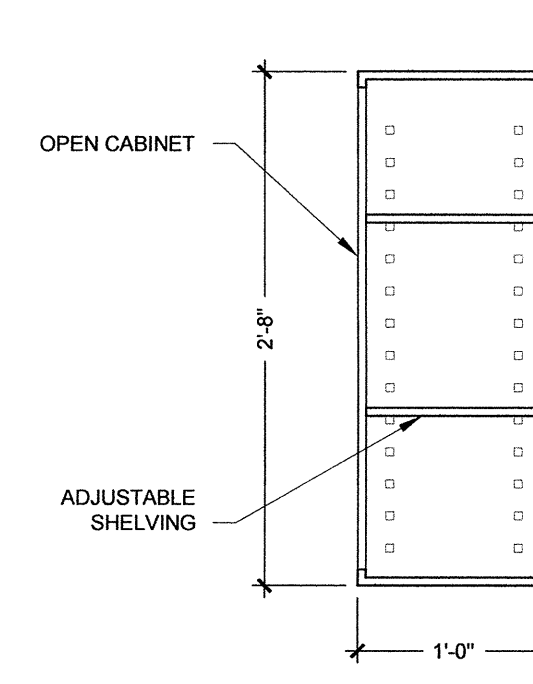
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A4.1 **BASE CABINET DETAILS**  
Scale: 1" = 1'-0"



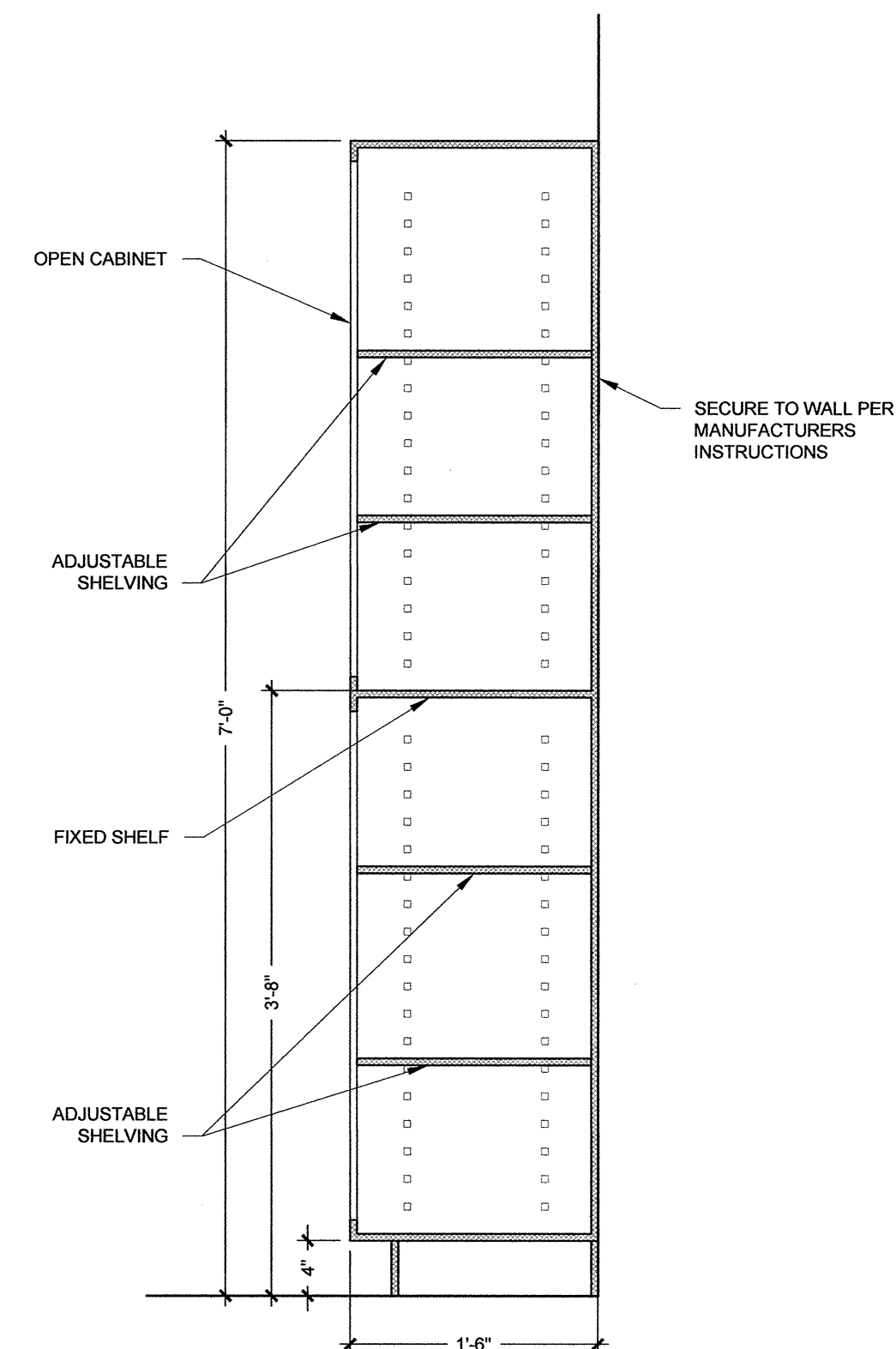
**7**  
A4.1 **CUBBY ELEVATION - FRONT**  
Scale: 1" = 1'-0"  
SEE 8/A4.1 FOR PLAN DETAILS



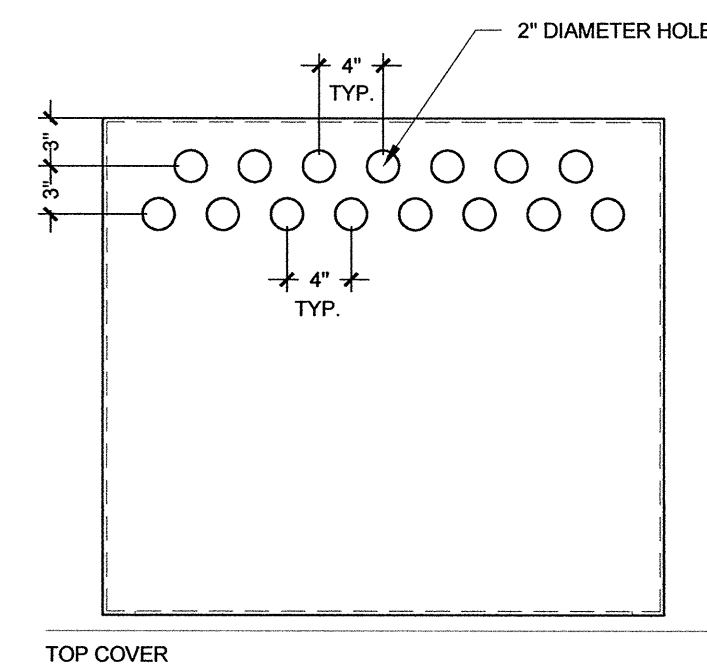
**6**  
A4.1 **CUBBY SECTION**  
Scale: 1" = 1'-0"  
SEE 8/A4.1 FOR PLAN DETAILS



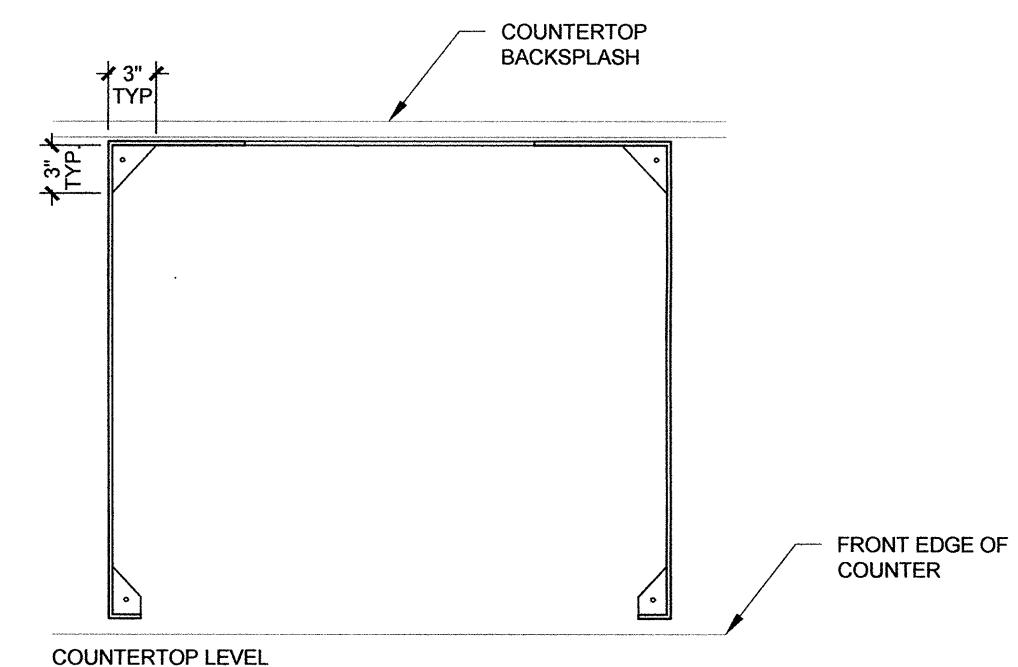
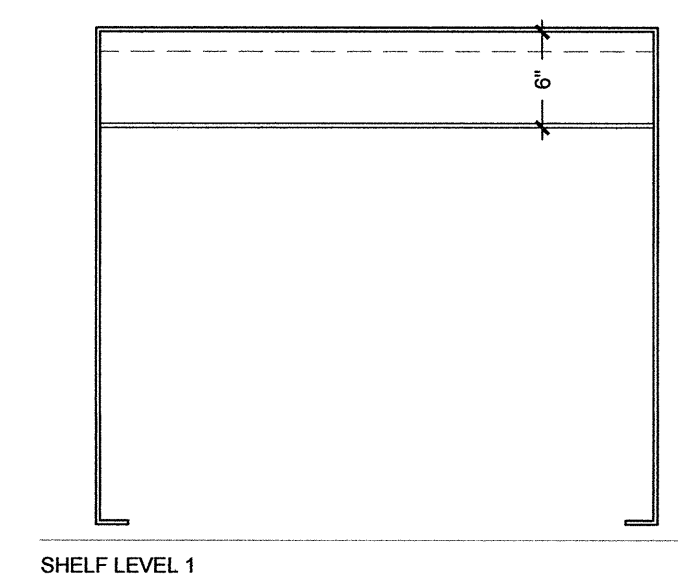
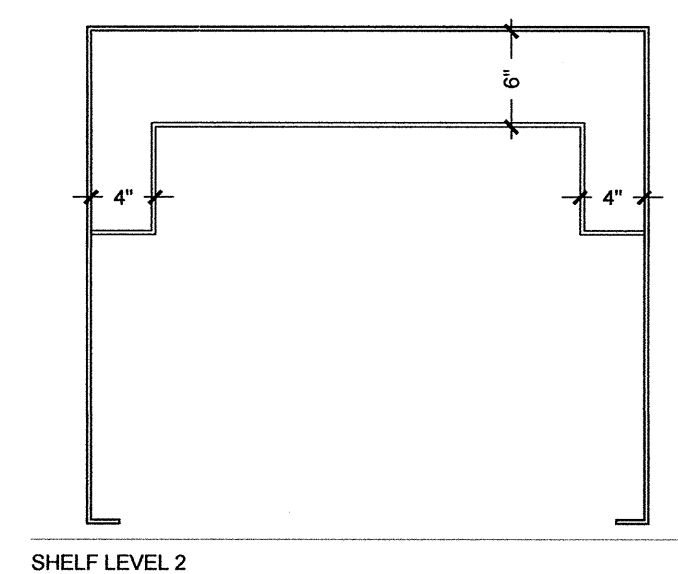
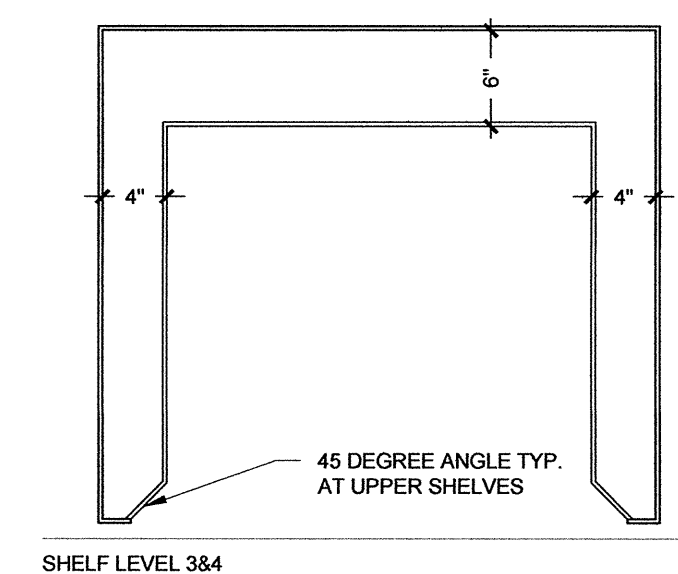
**5**  
A4.1 **UPPER CABINET DETAIL**  
Scale: 1" = 1'-0"



**9**  
A4.1 **FULL HEIGHT CABINET DETAIL**  
Scale: 1" = 1'-0"



**8**  
A4.1 **CUBBY PLAN DETAILS**  
Scale: 1" = 1'-0"





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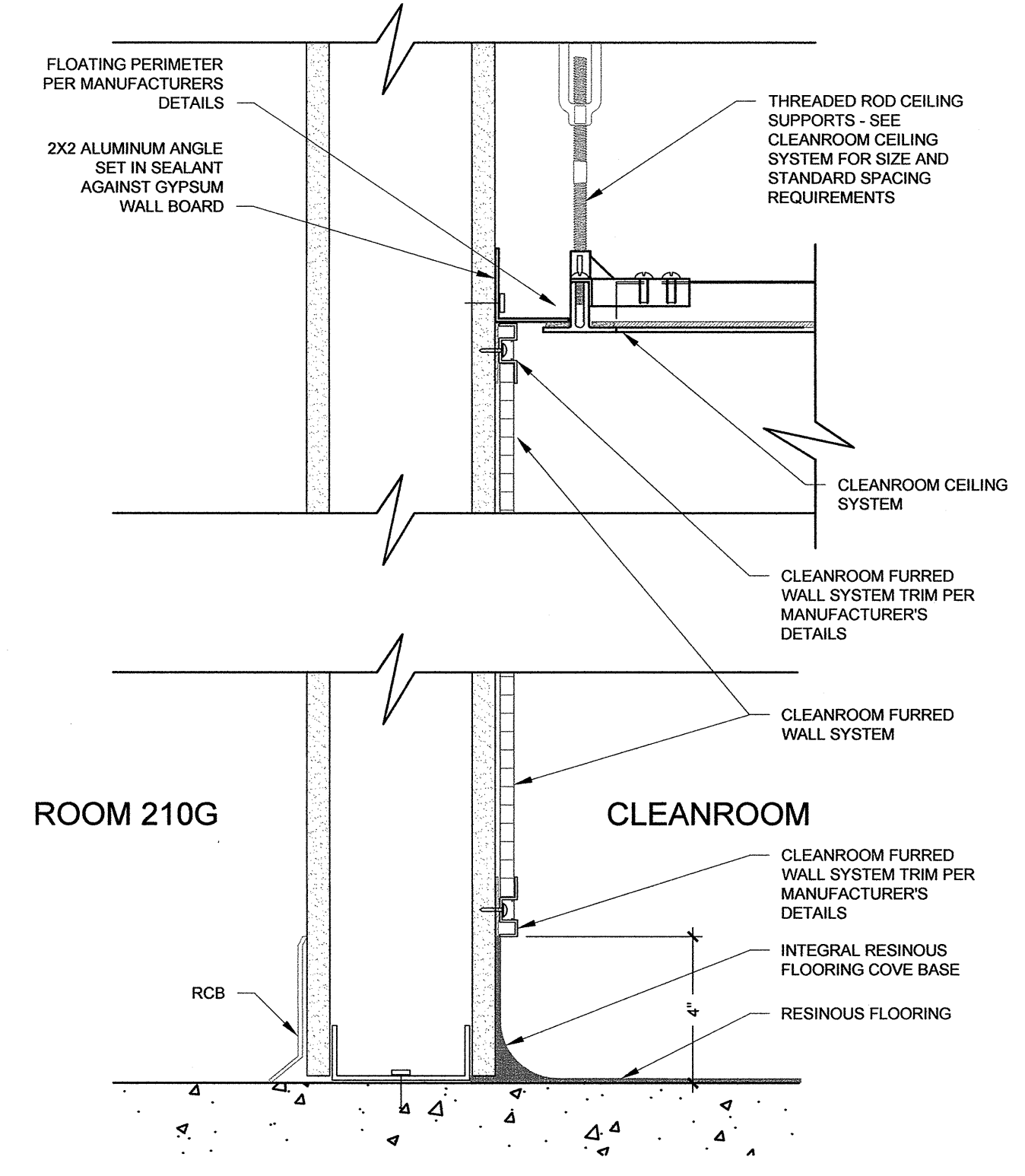


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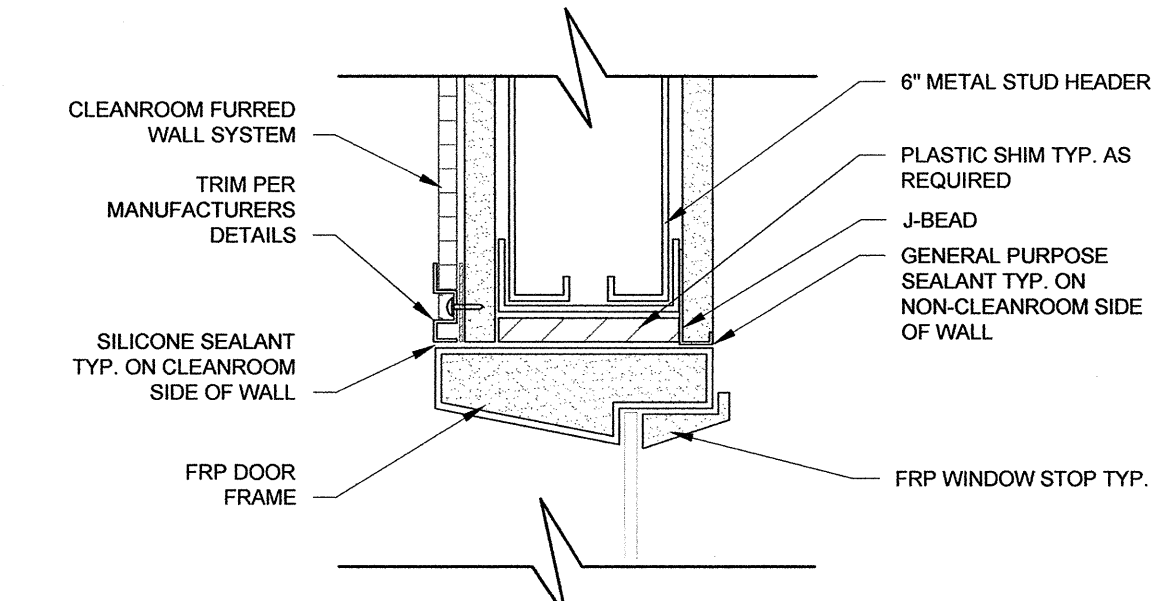
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DETAILS**

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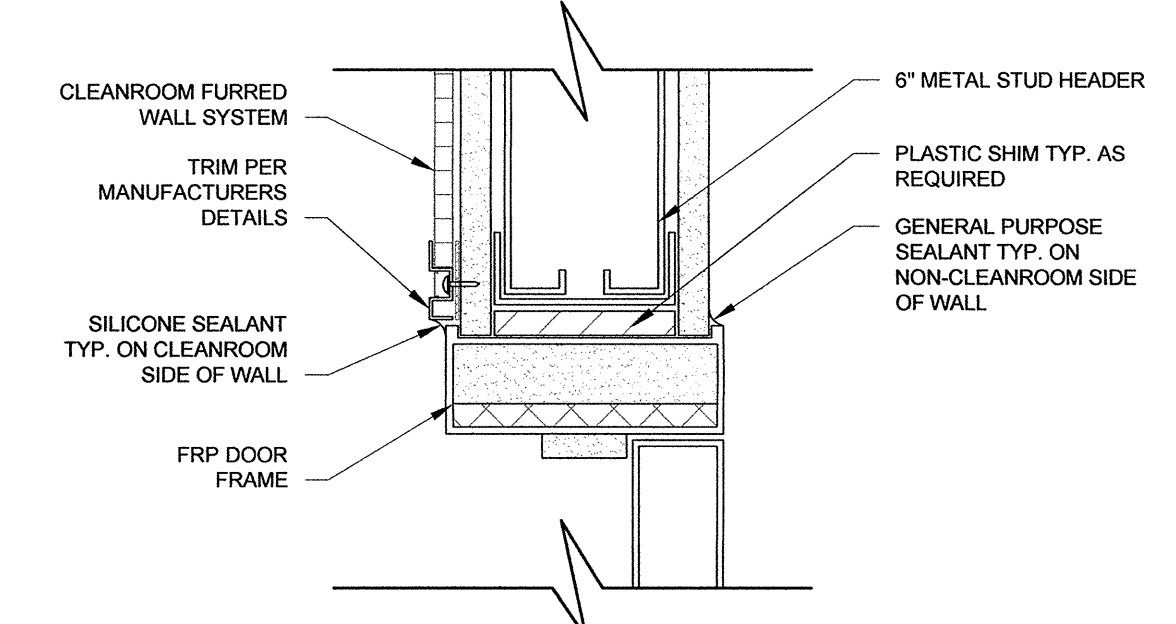
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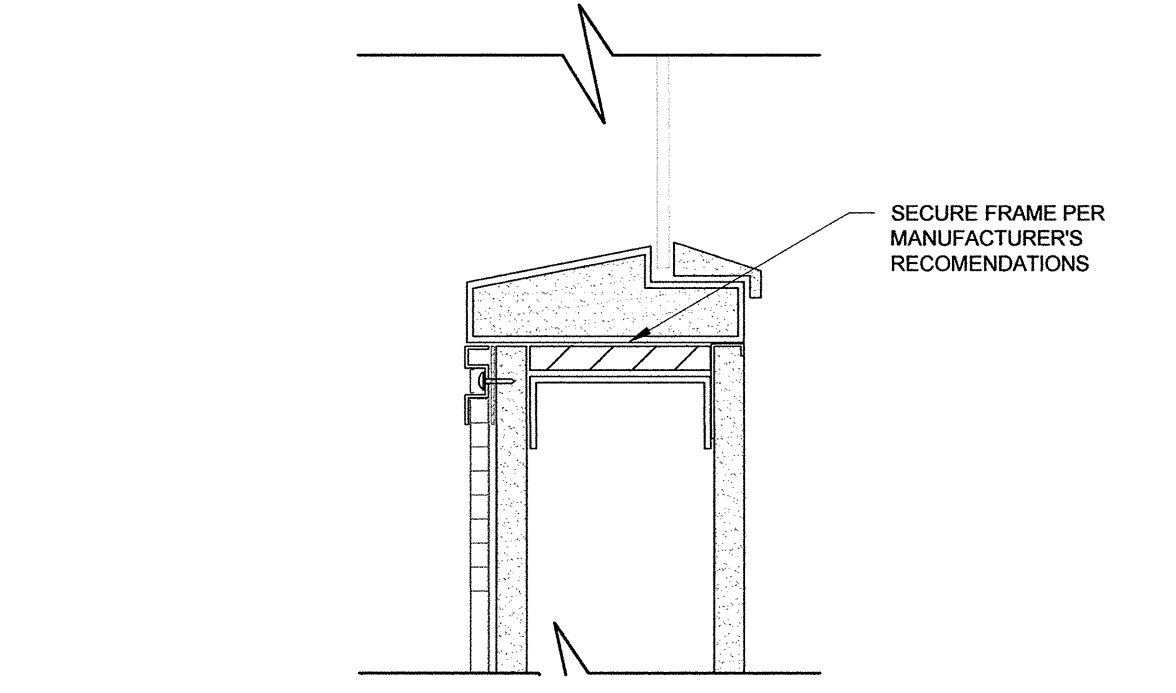
5 WALL SECTION TYP.  
Scale: 3" = 1'-0"



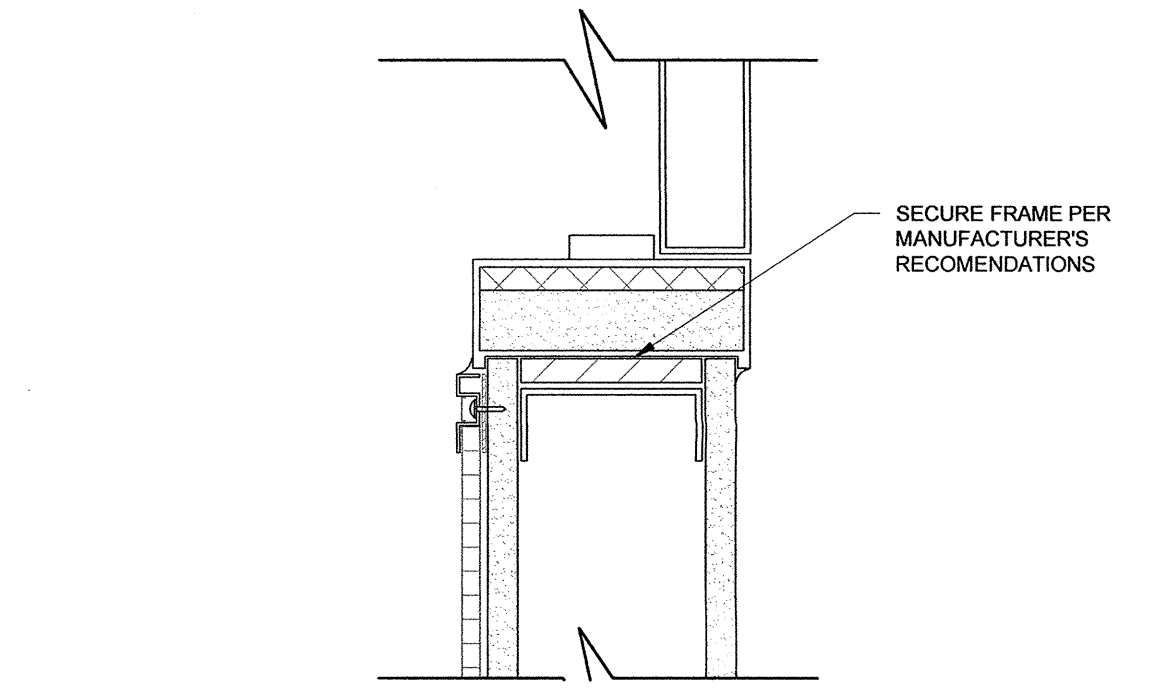
A: WINDOW HEAD



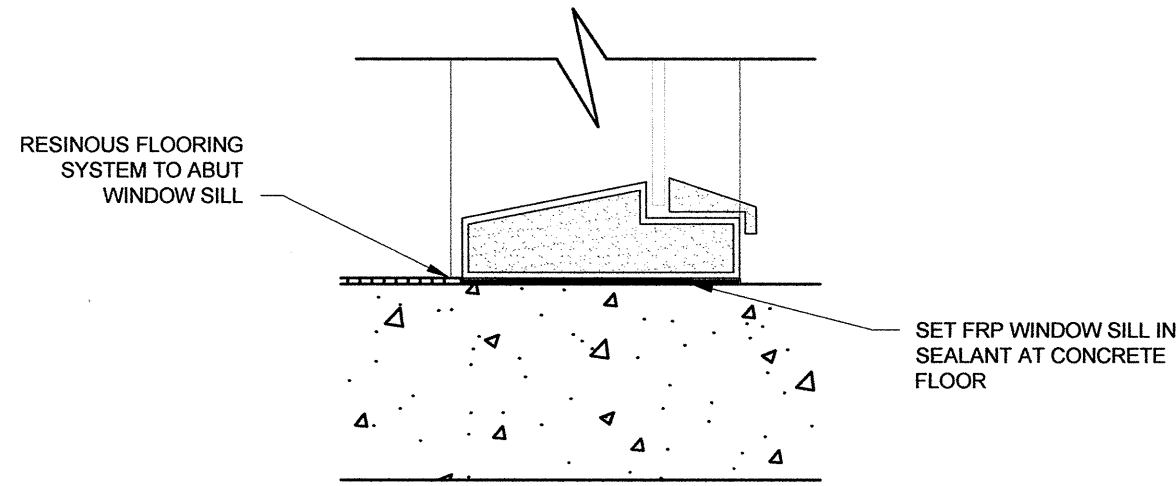
A: DOOR HEAD



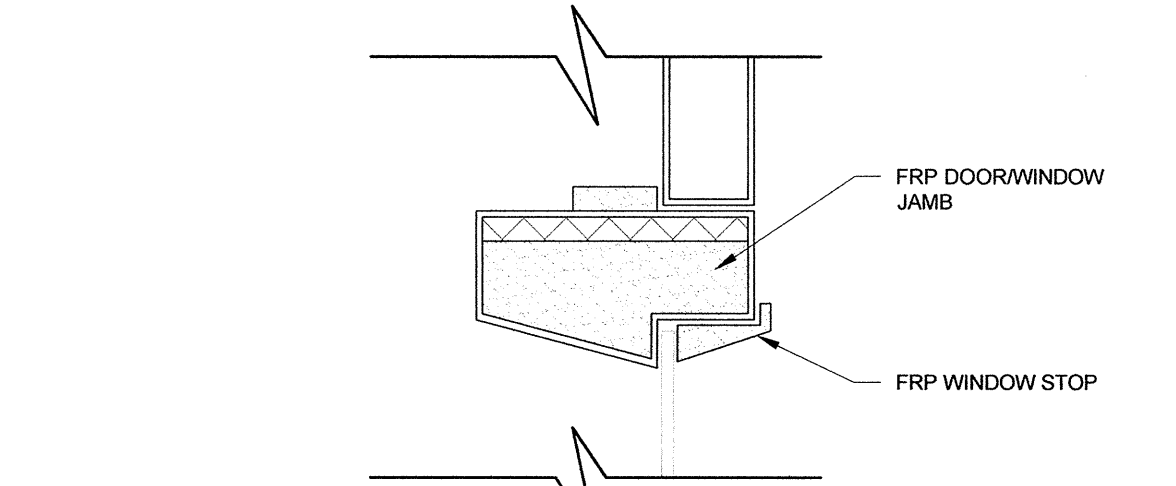
B: WINDOW JAMB AND SILL



B: DOOR JAMB

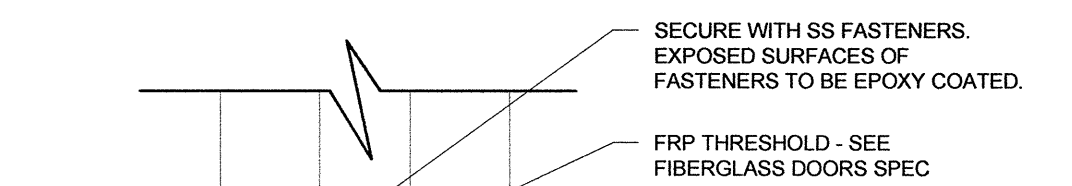


C: SILL AT FULL HEIGHT



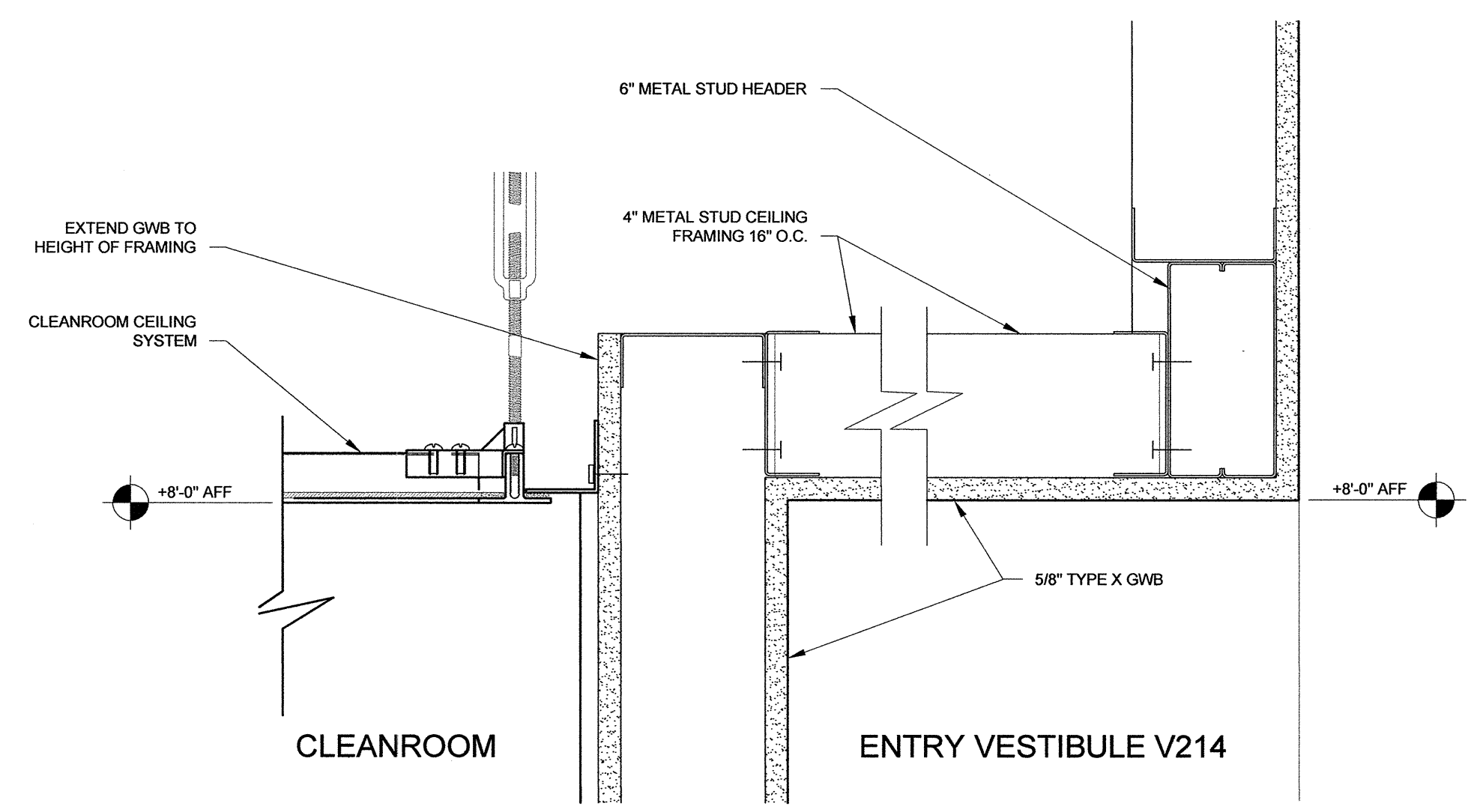
C: SIDE-LITE/DOOR JAMB

3 WINDOW DETAILS  
Scale: 3" = 1'-0"

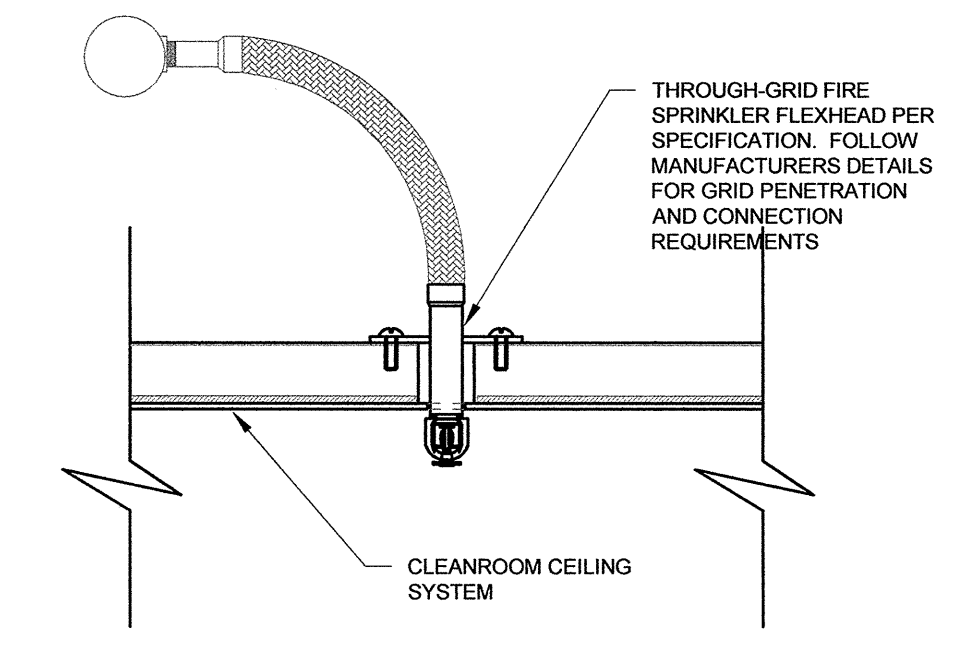


D: DOOR THRESHOLD

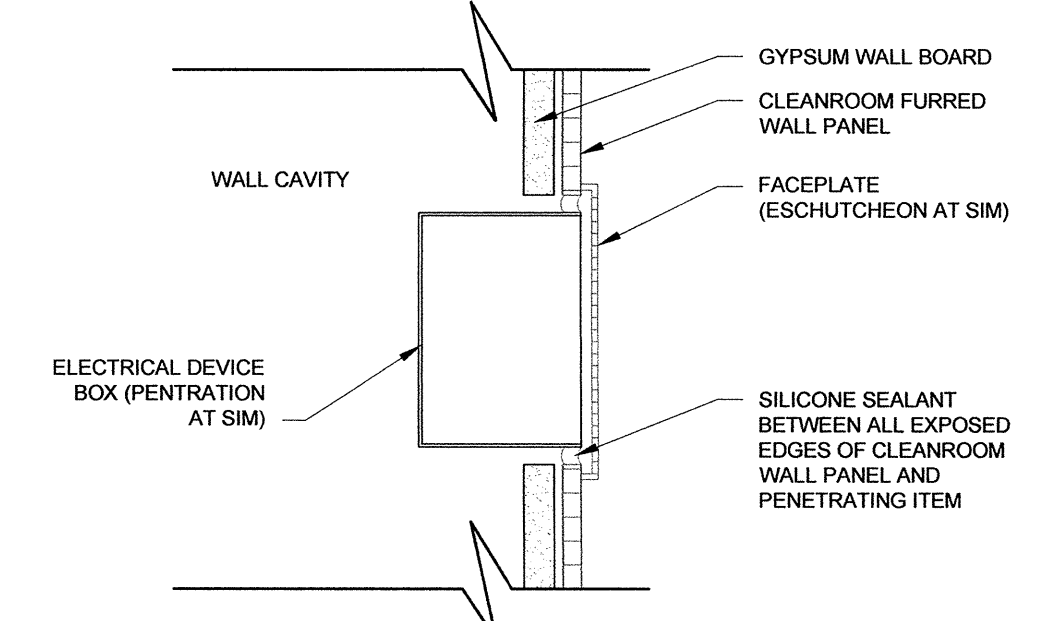
1 DOOR DETAILS  
Scale: 3" = 1'-0"



6 SOFFIT DETAILS  
Scale: 3" = 1'-0"

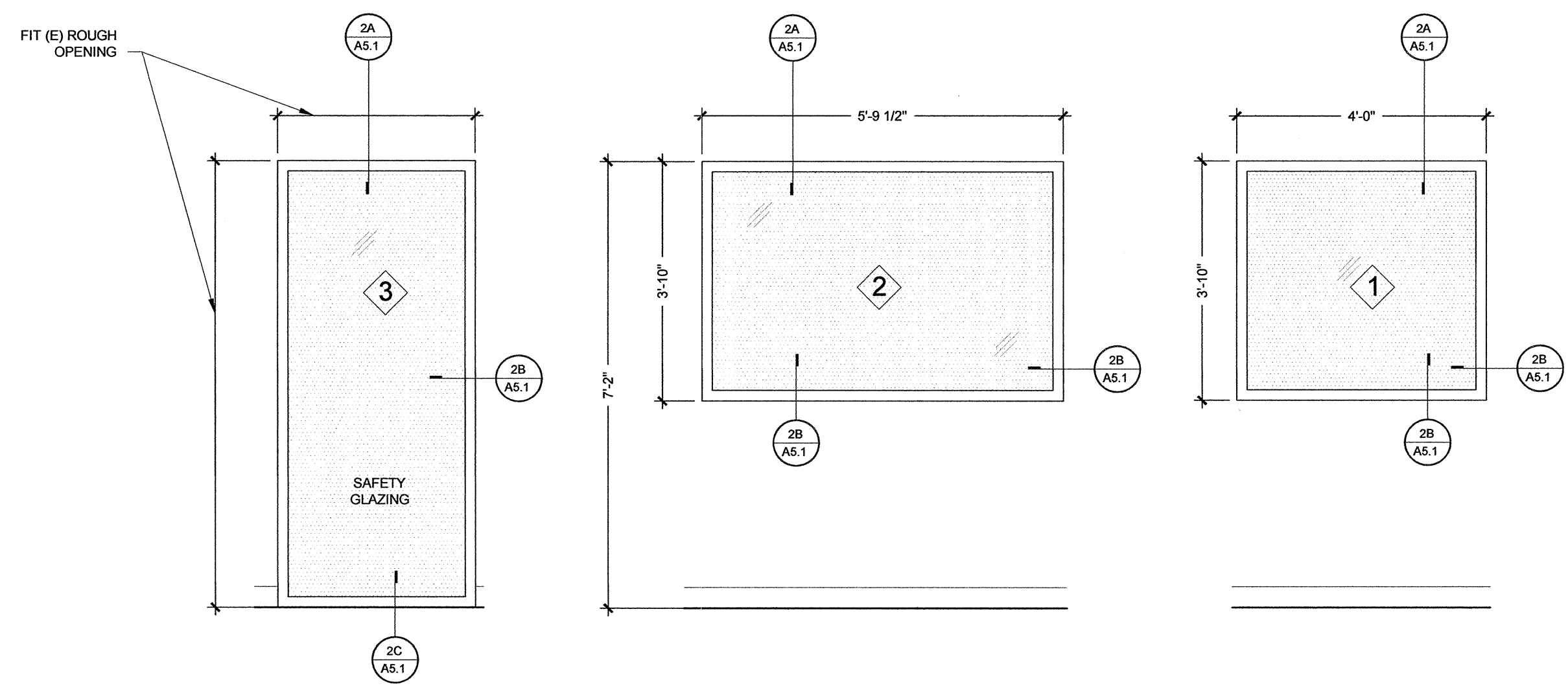


4 CEILING GRID PENETRATION, TYP.  
Scale: 3" = 1'-0"



2 WALL PENETRATION DETAIL, TYP.  
Scale: 3" = 1'-0"





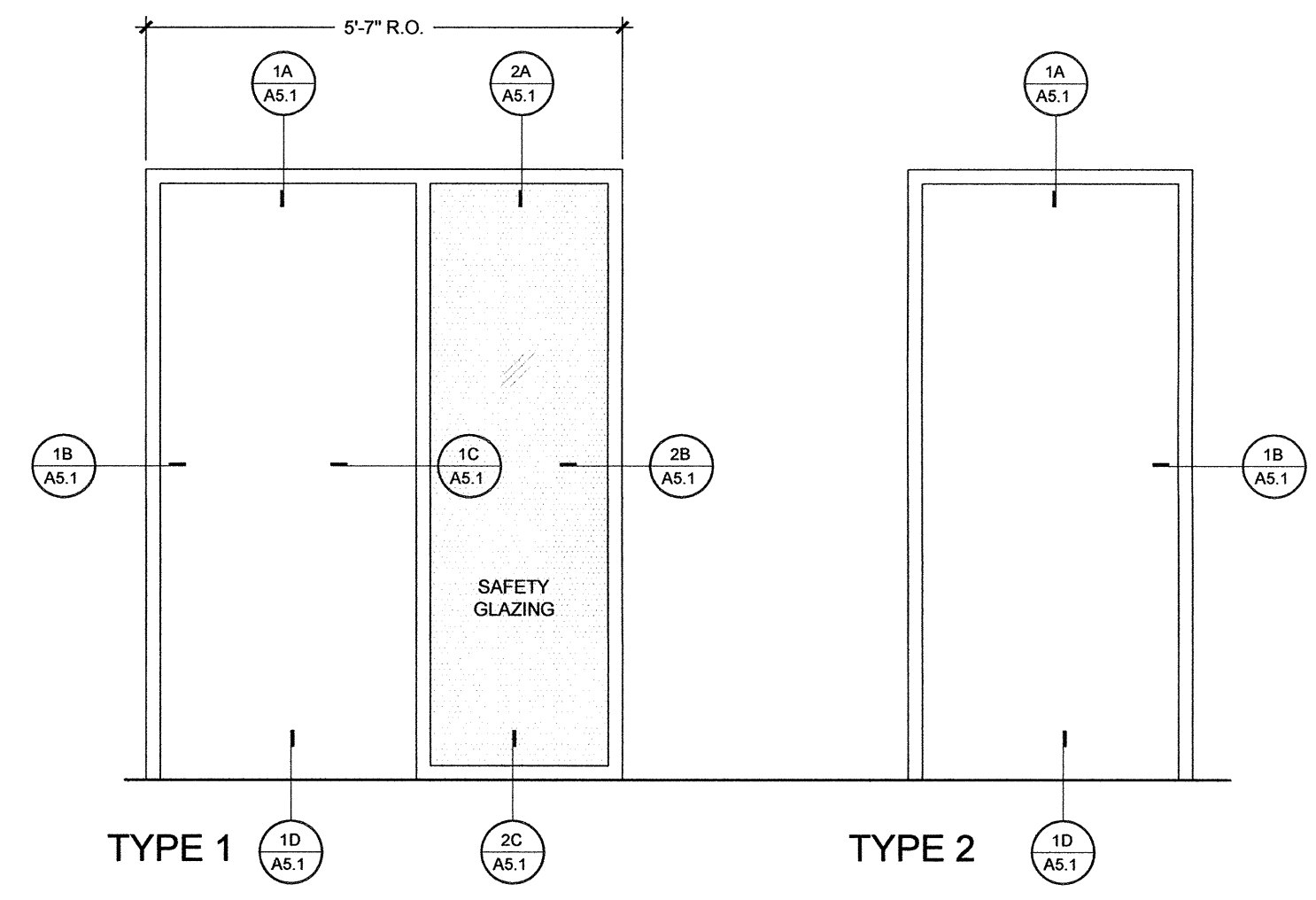
2 WINDOW SCHEDULE  
Scale: 1/2" = 1'-0"

DOOR SCHEDULE											
LOCATION	DOOR						FRAME		HARDWARE GROUP #	FIRE RATING	NOTES
	DOOR ID	TYPE	MAT.	FIN.	WIDTH	HEIGHT	MAT.	FIN.			
214A-1	A	FRP	FAC	3'-0"	7'-0"	FRP	FAC	1	1	N/A	CLASSROOM LOCK, SURFACE CLOSER, CONCEALED BEARING HINGES, FRP THRESHOLD
214B-1	A	FRP	FAC	3'-0"	7'-0"	FRP	FAC	2	2	N/A	PLASTIC SELF-CLOSING HINGES, POWDERCOATED STEEL PUSH AND PULL PLATES, NO LATCH
214C-1	A	FRP	FAC	3'-0"	7'-0"	FRP	FAC	2	2	N/A	PLASTIC SELF-CLOSING HINGES, POWDERCOATED STEEL PUSH AND PULL PLATES, NO LATCH

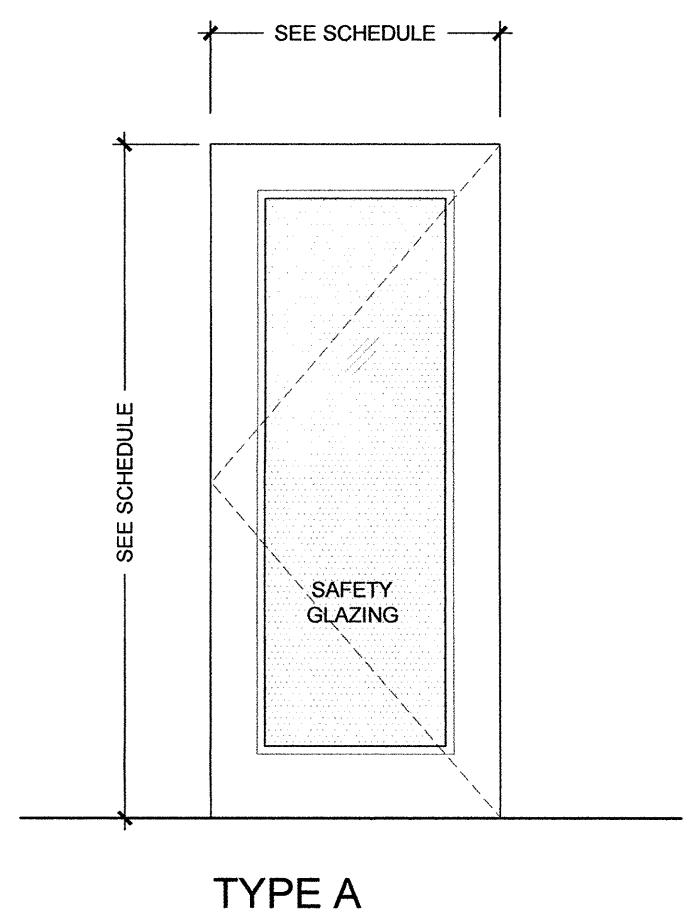
ABBREVIATION KEY  
 FAC FACTORY  
 FRP FIBERGLASS REINFORCED POLYESTER  
 N/A NOT APPLICABLE

FINISH SCHEDULE						
ROOM #	ROOM TYPE	FINISH				NOTES
		FLOOR	BASE	WALLS	CLG.	
V214	VESTIBULE	EPOXY	RCB	PAINT	PAINT	CEILING FINISH IS AT HARD-LID SOFFIT PER DETAIL 6/A5.1
214A	ANTEROOM	EPOXY	COVE	CW	CG	
214B	DISH ROOM	EPOXY	COVE	CW	CG	
214C	CHEMISTRY ROOM	EPOXY	COVE	CW	CG	

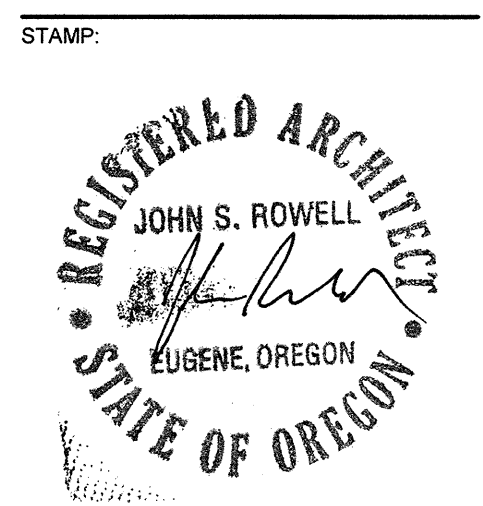
ABBREVIATION KEY  
 EPOXY MORTAR-BASED EPOXY FLOORING SYSTEM  
 COVE INTEGRAL EPOXY COVE BASE  
 CG CLEANROOM CEILING SYSTEM  
 CW CLEANROOM WALL SYSTEM  
 RCB RUBBER COVE BASE  
 N/A NOT APPLICABLE



1 FRAME TYPES  
Scale: 1/2" = 1'-0"



2 PANEL TYPE  
Scale: 1/2" = 1'-0"





MECHANICAL SYMBOLS LIST											
SYMBOL	ABBR.	DESCRIPTION	SYMBOL	ABBR.	DESCRIPTION	SYMBOL	ABBR.	DESCRIPTION	SYMBOL	ABBR.	DESCRIPTION
	CW	COLD WATER PIPE			PIPE TAKE OFF - UP			MANUAL AIR VENT			DUCT DROP/RISE
	HW	HOT WATER PIPE			PIPE TAKE OFF - DOWN			AIR FLOW (CFM) - TYPE / NECK SIZE - PATTERN		(E)	EXISTING
	HWR	HOT WATER RECIRCULATION PIPE			90 DEGREE ELBOW UP			ROOM SENSOR		(R)	REMOVE
	W	SANITARY WASTE PIPE			90 DEGREE ELBOW DOWN			DIRECTION OF AIR FLOW			MAINTENANCE ACCESS AREA
	OFD	OVERFLOW DRAIN PIPE			BRANCH TEE			SUPPLY DUCT UP AND DOWN			DETAIL & SHEET NUMBER
	SD	STORM DRAIN PIPE			TEE UP			EXHAUST DUCT UP AND DOWN			KEYED NOTE REFERENCE
	V	VENT PIPE			TEE DOWN			RECTANGULAR DUCT - 1ST DIMENSION IS SIDE SHOWN			POINT OF CONNECTION BETWEEN NEW & EXISTING WORK
	X	PIPE TO BE REMOVED		PT	PRESSURE/TEMPERATURE TEST PLUG			ROUND DUCT			
	D	INDIRECT DRAIN PIPE			BREAK IN LINE - SHOWN FOR CLARITY		CR	CORROSION RESISTANT DUCT		HFU	HEPA FAN UNIT
	HS	HEATING WATER SUPPLY PIPE			PIPE CAP			DUCT WITH INTERNAL LINER		TUGE	TERMINAL UNIT GENERAL EXHAUST
	HR	HEATING WATER RETURN PIPE			PIPE UNION			DUCT WITH RADIUS ELBOW		HC	HEATING COIL
	VAC	VACUUM PIPE			FLEXIBLE PIPE CONNECTOR			DUCT WITH RECTANGULAR ELBOW AND TURNING VANES		SA	SUPPLY AIR
	A	COMPRESSED AIR PIPE			GATE VALVE			DUCT WITH RECTANGULAR ELBOW AND TURNING VANES		EA	EXHAUST AIR
	F	FIRE SPRINKLER PIPE			BALL VALVE			TAKE-OFF WITH 45 DEGREE ENTRY		SDC	SUPPLY DIFFUSER CEILING
	G	LOW PRESSURE GAS PIPE			BALANCING VALVE			DUCT TRANSITION		SRW	SUPPLY REGISTER WALL
		STRAINER			2-WAY CONTROL VALVE					EGC	EXHAUST GRILLE CEILING
		CONCENTRIC REDUCER			GAS VALVE					EGW	EXHAUST GRILLE WALL
		VERTICAL PIPE DROP OR RISER		FCV	FLOW CONTROL VALVE						

PLUMBING FIXTURE					
TAG	DESCRIPTION	PIPE CONNECTIONS			
		LW	LV	ICW	CW
S-1	SINK	2	1-1/2	--	--
EW-1	EMERGENCY EYEWASH	--	--	--	3/4
ES-1	EMERGENCY SHOWER	--	--	--	1-1/4
ICW-1	WATER CONNECTION	--	--	1/2	--
ICW-2	FAUCET CONNECTION	--	--	1/2	--

NOTES:  
CONNECTION SIZES SHOWN ARE FOR INDIVIDUAL FIXTURES ONLY.

OPERATION, MAINTENANCE AND SHUTDOWN SCHEDULE									
CONDITION	BUILDING SUPPLY FAN	BUILDING EXHAUST FAN	HFUS	LAB PRESSURE	DUCT PRE-FILTER	HFU HEPA FILTERS	BYPASS DUCT DAMPER	GENERAL EXHAUST AIR VALVE (T.U.)	COMMENTS
NORMAL	ON	ON	ON	+	NORMAL	NORMAL	CLOSED	OPEN	NORMAL CONDITION
BLDG EA FAN FAILS OR STOPPED FOR MAINTENANCE	ON	OFF	ON	HIGH +	NORMAL	NORMAL	CLOSED	OPEN	OCCUPANTS MUST EXIT THE LABS
BLDG SA FAN FAILS OR STOPPED FOR MAINTENANCE	OFF	ON	ON @ REDUCED CFM	LOW +	NORMAL	NORMAL	OPEN FOR HFU SUPPLY	CLOSED TO KEEP ROOM EXHAUST LOW	BUILDING AUTOMATION SYSTEM DETECTS IF BLDG SUPPLY FAN IS ON/OFF AND OPENS DUCT BYPASS DAMPER IN 210G TO ALLOW AN AIR PATH TO THE HFUS
REPLACE PRE-FILTER. FANS STOPPED MANUALLY	OFF	OFF	OFF	NEUTRAL	REPLACE	NORMAL	CLOSED	CLOSED	CLOSING G.E. VALVE (T.U.) WILL HELP KEEP LAB POSITIVE AS EXHAUST FAN STARTS BACK UP
REPLACE HEPA FILTERS. FANS STOPPED MANUALLY	OFF	OFF	OFF	NEUTRAL	NORMAL	REPLACE	CLOSED	CLOSED	CLOSING G.E. VALVE (T.U.) WILL HELP KEEP LAB POSITIVE AS EXHAUST FAN STARTS BACK UP

EXHAUST TERMINAL UNITS									
TAG	MODEL	PRIMARY AIR [ 3 ]				NOISE CRITERIA (NC) [ 2 ]		NOTES	
		INLET SIZE (IN)	MAX CFM	MIN CFM	APD [ 1 ]	DISCH.	RAD		
TUGE-2-1	SDV	10	800	400	0.01	--	--		

NOTES:  
BASIS OF DESIGN: PRICE.  
[ 1 ] APD IS AIR PRESSURE DROP ACROSS TERMINAL UNIT.  
[ 2 ] MAXIMUM NOISE CRITERIA (NC). A VALUE OF (-) INDICATES A NC VALUE LESS THEN 20.  
[ 3 ] SEE AIRFLOW BALANCING SCHEDULE FOR ACTUAL TOTAL AIRFLOW FOR BALANCING.

VENTILATION AIR COMPLIANCE												
TAG	ROOM NUMBER / NAME	SPACE TYPE	USE AREA (SQ. FT.)	ZONE POPULATION	PEOPLE OA RATE - CFM / PERSON	AREA OA RATE - CFM / SF	UNCORRECTED OSA TOTAL - CFM	AIR DISTRIBUTION EFFECTIVENESS	REQUIRED OSA TO ROOM - CFM	OSA AIRFLOW PROVIDED TO ROOM - CFM	SUPPLY AIR PROVIDED TO ROOM - CFM	OSA / SUPPLY AIR %
AHU-4	214A ANTE	LABORATORY	50	1	10	0.18	19	0.8	24	330	330	100%
	214B DISH ROOM	LABORATORY	125	2	10	0.18	43	0.8	54	900	900	100%
	214C CHEMISTRY ROOM	LABORATORY	190	2	10	0.18	55	0.8	69	1400	1400	100%

NOTES:

HEPA FAN UNIT											
TAG	SERVICE	SIZE	ACTIVE FILTER FACE AREA (SQ.FT)	RATED CFM AT 90 FPM [ 1 ]	SOUND LEVEL (dBA)	MOTOR				APPROX WEIGHT (LBS)	NOTES
						WATTS / HP	VOLT	PHASE	FLA		
HFU-1	ANTE ROOM	24" x 48"	5.3	470	48	110 / 0.33	120	1	3.4	71	[ 2 ]
HFU-2	DISH ROOM	24" x 48"	5.3	470	48	110 / 0.33	120	1	3.4	71	[ 2 ]
HFU-3	DISH ROOM	24" x 48"	5.3	470	48	110 / 0.33	120	1	3.4	71	[ 2 ]
HFU-4	DISH ROOM	24" x 48"	5.3	470	48	110 / 0.33	120	1	3.4	71	[ 2 ]
HFU-5	CHEMISTRY ROOM	24" x 48"	5.3	470	48	110 / 0.33	120	1	3.4	71	[ 2 ]
HFU-6	CHEMISTRY ROOM	24" x 48"	5.3	470	48	110 / 0.33	120	1	3.4	71	[ 2 ]
HFU-7	CHEMISTRY ROOM	24" x 48"	5.3	470	48	110 / 0.33	120	1	3.4	71	[ 2 ]
HFU-8	CHEMISTRY ROOM	24" x 48"	5.3	470	48	110 / 0.33	120	1	3.4	71	[ 2 ]

NOTES:  
BASIS OF DESIGN: ENVIRCO MAC 10 IQ RSRE  
[ 1 ] REFER TO AIRFLOW BALANCING SCHEDULE FOR ACTUAL AIRFLOW FOR BALANCING.  
[ 2 ] HEPA FILTER AND FAN MOTOR ACCESSIBLE FROM ROOM SIDE OF UNIT.  
FAN MOTOR: ECM

AIRFLOW BALANCING SCHEDULE									
FUME HOOD MANUFACTURER INSTALLED	6 FT HOOD FH-1 CFM [ 1 ]	4 FT HOOD FH-2 CFM [ 1 ]	HFU - SUPPLY CFM EACH			GENERAL EXHAUST GRILLE CFM - EACH			NOTES
			ANTE ROOM NO. = 1	DISH ROOM NO. = 3	CHEMISTRY NO. = 4	ANTE ROOM	DISH ROOM	CHEMISTRY	
TFI INLINE	820	500	330	300	350	300	330	480	
SOLARE	770	470	330	290	340	300	330	490	
VABAIRE	740	440	330	280	335	300	330	500	

NOTES:  
[ 1 ] WITH 100 FPM FACE VELOCITY AND 18" SASH HEIGHT

REHEAT WATER COILS														
TAG	ROOMS SERVED	CFM	SIZE (IN)		AREA (SQ. FT.)	FACE VELOCITY (FPM)	ROWS / FPI	MAX APD	EAT (DB / WB)	MIN LAT (DB / WB)	EWT	LWT	GPM	MAX WPD (FT)
			FL	FH										
RHC-1	214A, 214B, 214C	2630	38	18	4.75	554	1 / 10	0.1	55.0	79.0	180	144	4.0	2.21

NOTES:  
BASIS OF DESIGN: TITUS  
TEMPERATURES ARE IN DEGREES F.  
FL x FH IS THE COIL FINNED LENGTH (I.E. WIDTH) BY FINNED HEIGHT IN INCHES.

FILTER MEDIA MODULE											
TAG	SYSTEM	CFM [ 2 ]	OVERALL HOUSING SIZE		FILTER SIZE W x H x D (IN.) - (QUANTITY)	FILTER MEDIA					NOTES
			W x H x L (IN.)	STYLE		TOTAL FACE AREA (SQ. FT.)	FACE VELOCITY (FPM)	EFF. %	CLEAN FILTER APD (IN. W.G.)	CHANGE OUT APD (IN. W.G.)	
F-1	CLEAN LAB	2630	46.75 x 27.25 x 13	FLAT	24 x 24 x 4 - (2)	8.0	329	MERV 7	0.15	0.35	[ 1 ]

NOTES:  
BASIS OF DESIGN: FARR GLIDE / PACK MULTI-TRACK 13  
[ 1 ] SIDE ACCESS HOUSING  
[ 2 ] SEE AIRFLOW BALANCING SCHEDULE FOR ACTUAL TOTAL AIRFLOW.  
TOTAL FACE AREA IS THE TOTAL AREA OF ALL INDIVIDUAL FILTERS IN AN ANGULAR OR FLAT PATTERN.

ROOM PRESSURIZATION			
ROOM NUMBER	ROOM NAME	TARGET ROOM PRESSURIZATION INS W.G.	RELATIVE TO
214A	ANTE ROOM	+ 0.01" TO +0.02"	ENTRY VESTIBULE
214B	DISH ROOM	+ 0.02" TO +0.03"	ANTE ROOM
214C	CHEMISTRY ROOM	+ 0.03" TO +0.04"	DISH ROOM

MECHANICAL SHEET INDEX	
SHEET NO.	SHEET TITLE
M0.1	SYMBOLS LIST, SCHEDULES & SHEET INDEX
M1.0	SECOND FLOOR PLAN - MECHANICAL
M2.0	FIRST FLOOR PLAN - PLUMBING
M2.1	SECOND FLOOR PLAN - PLUMBING
M3.0	DETAILS

Rowell Brokaw Architects

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F: 541-546-5262

PROJECT:

WATKINS GEOCHEMISTRY ISOTOPE LAB

PROJECT LOCATION:

CASCADE HALL, 1275 E. 13TH AVE.

CLIENT:

UNIVERSITY OF OREGON

ISSUED:

02/18/13 - 100% CD

STAMP:



UD PROJECT #:

CP12-128

RBA PROJECT #:

1216

DRAWN BY:

DJW

CHECKED BY:

DWK

FILE NAME:

8900-003-12m0.1.dwg

DRAWING NAME:

SYMBOLS LIST, SCHEDULES & SHEET INDEX

M0.1





PROJECT:

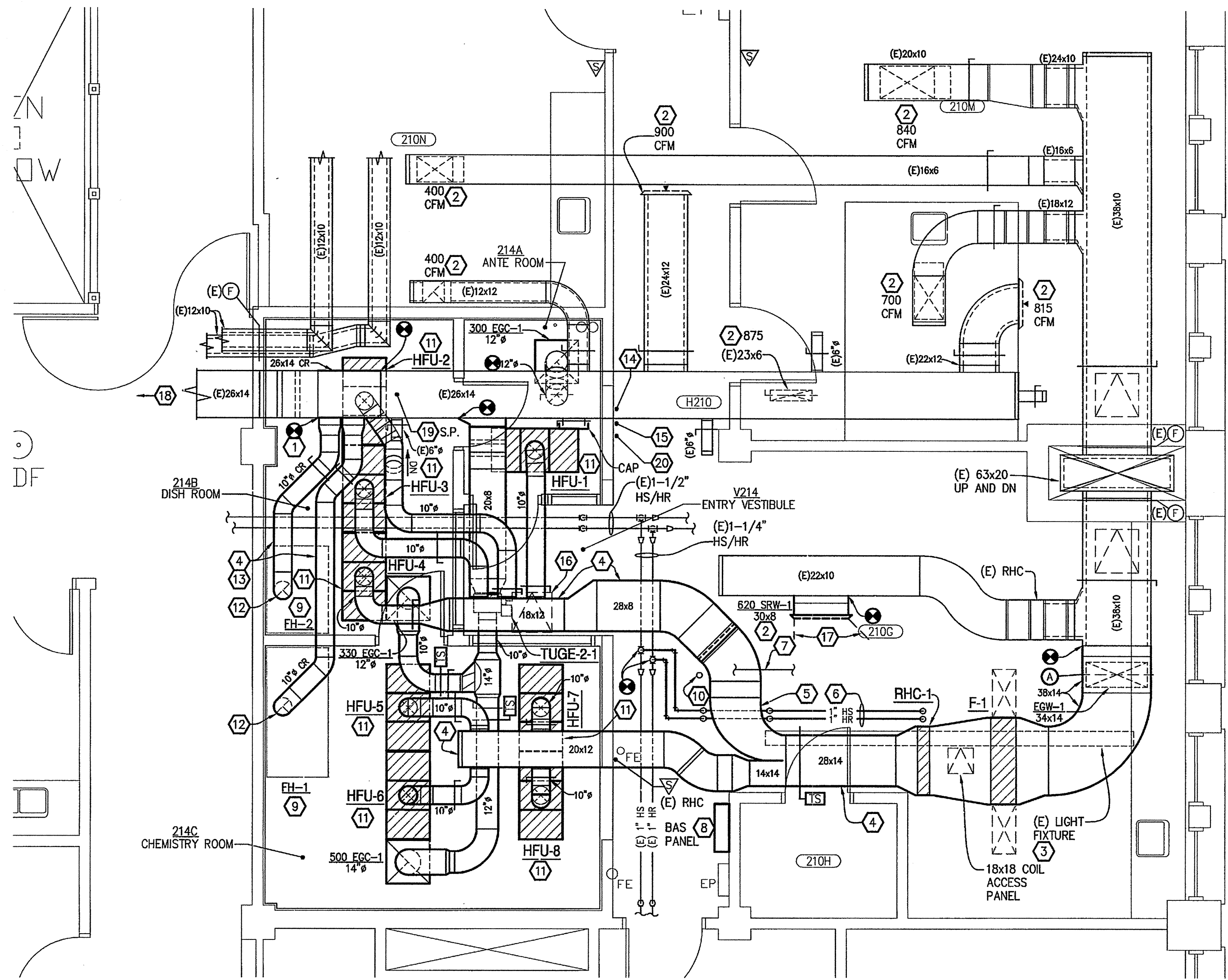
**WATKINS GEOCHEMISTRY ISOTOPE LAB**

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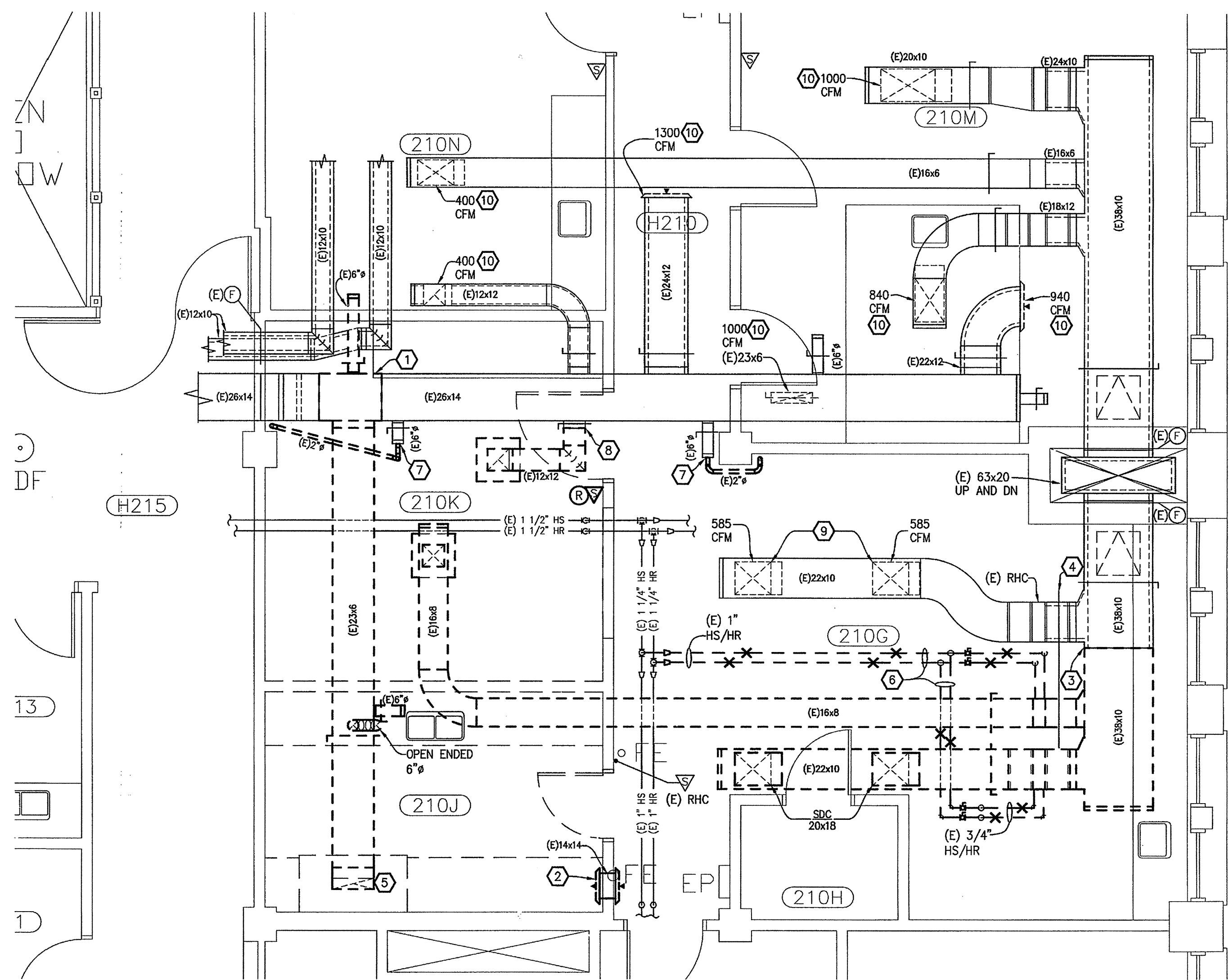
CLIENT:

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**2 SECOND FLOOR PLAN - MECHANICAL - NEW**  
 SCALE: 1/4"=1'-0"



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

**KEYED NOTES (FOR 2/M1.0):**

- 1 NEW 26x14 CORROSION RESISTANT (CR) DUCT SECTION WITH TWO (2) 12"x12" SQUARE TO 10" ROUND BRANCH TAPS INSTALLED BETWEEN EXISTING FUME EXHAUST DUCT STEEL FLANGES. FIELD MEASURE DUCT SIZE, DISTANCE BETWEEN FLANGES, FLANGE DIMENSIONS AND FLANGE BOLT PATTERN. PROVIDE THESE MEASUREMENTS TO THE CR DUCT MANUFACTURER TO FABRICATE NEW DUCT AND FLANGES TO ALLOW A BOLTED CONNECTION TO THE EXISTING DUCTS. SEAL FLANGED JOINTS WITH PTFE JOINT GASKET.
- 2 BALANCE TO NEW AIRFLOW INDICATED.
- 3 COORDINATE LOWERING OF SUSPENDED LIGHT FIXTURE BELOW FILTER BOX (F-1) IN ROOM 210G WITH DIVISION 26 TO ALLOW INSTALLATION OF FILTER BOX ABOVE.
- 4 ROUTE DUCTWORK AS HIGH AS POSSIBLE.
- 5 14x14 TO 28x8 REDUCING ELBOW.
- 6 ROUTE 1" HS/HR PIPING TIGHT TO STRUCTURE.
- 7 COORDINATE RELOCATION OF ELECTRICAL CONDUIT DROP WITH DIVISION 26 THIS AREA TO ALLOW PASSAGE OF NEW DUCTWORK.
- 8 BUILDING AUTOMATION SYSTEM (BAS) CONTROL PANEL.
- 9 BALANCE FUME HOOD TO AIR QUANTITY SHOWN IN AIRFLOW BALANCING SCHEDULE WITH SASH HEIGHT SET AT 18" OPERATING HEIGHT AND 100 FPM FACE VELOCITY.
- 10 COORDINATE NEW DUCTWORK AROUND EXISTING 2" LW RISER.
- 11 ADJUST HEPA FAN UNIT TO CFM SHOWN IN AIRFLOW BALANCING SCHEDULE.
- 12 CONNECT EXHAUST DUCT TO FUME HOOD COLLAR USING A FLANGE CONNECTION. FUME HOOD MANUFACTURER TO PROVIDE A FLANGE CONNECTION AT THE FUME HOOD COLLAR. COORDINATE FLANGE SIZE AND BOLT PATTERN WITH THE FUME HOOD MANUFACTURER TO ALLOW THE EXTERNAL CR DUCT FLANGE TO MATE WITH THE COLLAR FLANGE. SEAL THE FLANGE JOINT WITH PTFE GASKET. FUME HOOD DUCT BELOW THE CEILING SHALL BE NON-METALLIC SPECIFIED FRP MATERIAL. SEAL DUCT PENETRATION AT CEILING AND FINISH WITH A FRP FLANGE OR NON-METALLIC FLANGE MATERIAL SEALED TO THE DUCT.

- 13 CORROSION RESISTANT DUCTWORK (CR) ABOVE THE CEILING SHALL BE EITHER LINED STAINLESS STEEL OR FIBERGLASS REINFORCED PLASTIC (FRP) WITH SPECIFIED FM APPROVAL AND UL LISTING. PROVIDE DUCT MEASUREMENTS TO CR DUCT MANUFACTURER TO FABRICATE DUCT SECTIONS AND FITTINGS. FOLLOW MANUFACTURER'S RECOMMENDATIONS FOR DUCT INSTALLATION AND FOR FIELD MODIFICATIONS IF THESE ARE NEEDED.
- 14 HEPA FAN UNIT REMOTE MONITORING CONSOLE MOUNTED ON WALL INSIDE A UNIVERSAL HOUSING PANEL PROVIDED BY CONTROL CONTRACTOR.
- 15 ROOM DIFFERENTIAL PRESSURE AND ALARM MONITOR RECESSED IN WALL APPROXIMATELY 5 FT ABOVE FLOOR TO ALLOW USERS TO MONITOR ROOM PRESSURE PROVIDED BY CONTROL CONTRACTOR.
- 16 TERMINAL UNIT CEILING ACCESS PANEL BY DIVISION 8.
- 17 ADJUST REGISTER VERTICAL LOUVERS TO DIRECT AIRFLOW AS INDICATED.
- 18 REPAIR HANDLE ON BALANCING DAMPER LOCATED IN UPSTREAM EXHAUST DUCT. ACCESS ABOVE MEN'S RESTROOM. AIR BALANCER TO OPEN DAMPER TO ALLOW ADDITIONAL STATIC PRESSURE FOR FUME HOOD EXHAUST.
- 19 LOCATION OF DUCT STATIC PRESSURE READOUT REQUIRED FOR STATIC PRESSURE TRANSMITTER "LO" PORT.
- 20 EXHAUST DUCT MAGNETIC TRANSMITTER/INDICATOR GAUGE MOUNTED ON WALL INSIDE ACCESSORY PANEL.

**GENERAL NOTES:**

1. THE LOCATION AND IDENTIFICATION OF DUCTS AND PIPING SHOWN ON THE DRAWINGS IS BASED ON EXISTING RECORD DRAWINGS. A FIELD SURVEY OF DUCTS AND PIPES HAS NOT BEEN CONFIRMED IN EVERY LOCATION. THE MECHANICAL CONTRACTOR WILL BE REQUIRED TO FIELD VERIFY THE EXACT LOCATION AND IDENTIFICATION OF EACH SERVICE PRIOR TO STARTING DEMOLITION OR NEW WORK.
2. REMOVE PIPING APPURTENANCES ASSOCIATED WITH PIPING SHOWN TO BE REMOVED: TO INCLUDE INSULATION AND PIPING SUPPORTS.
3. REMOVE DUCTWORK APPURTENANCES ASSOCIATED WITH DUCTWORK SHOWN TO BE REMOVED INCLUDING REHEAT COILS, ASSOCIATED PNEUMATIC CONTROLS, TUBING, THERMOSTAT AND DUCT SUPPORTS. CAP PNEUMATIC TUBING AT NEAREST MAIN UNLESS OTHERWISE NOTED. REMOVE PNEUMATIC TUBING NOT USED.
4. REFER TO ARCHITECTURAL DRAWINGS FOR PATCHING REQUIREMENTS FOR WALLS WHERE DUCTWORK IS SHOWN REMOVED.
5. REFER TO 1/M3.0 FOR REHEAT COIL PIPING DETAIL.
6. FLEX DUCT CONNECTION AT HEPA FAN UNITS TYPICAL. REFER TO 2/M3.0.
7. REFER TO 4/M3.0 FOR GENERAL DUCT CONSTRUCTION REQUIREMENT DETAILS.
8. ALL MATERIALS EXPOSED TO CLEAN ROOM ENVIRONMENT SHALL BE METAL FREE.
9. SEE OPERATION, MAINTENANCE AND SHUTDOWN PROCEDURE SCHEDULE FOR REPLACING FILTERS, MAINTENANCE AND UNSCHEDULED SHUTDOWN OF BUILDING FAN SYSTEMS.
10. REFER TO AIRFLOW BALANCING SCHEDULE FOR ACTUAL AIRFLOW AT HFU'S EXHAUST GRILLES, AND FUME HOODS FOR ROOMS 214A, 214B AND 214C. COORDINATE NEW DUCTWORK WITH DIVISION 9 FOR CEILING SUPPORT ROD AND SEISMIC BRACING LOCATIONS.
11. ROD SUSPENDED CEILING IN CLEAN LAB SPACES, 214A, 214B AND 214C. COORDINATE NEW DUCTWORK WITH DIVISION 9 FOR CEILING SUPPORT ROD AND SEISMIC BRACING LOCATIONS.
12. EXISTING CONCRETE FLOORS HAVE CAST-IN-PLACE ELECTRICAL CONDUITS. COORDINATE WITH SECTION 01 70 00 TO X-RAY FLOOR SLAB BEFORE DRILLING FOR PIPING AND DUCTWORK SUPPORT ANCHORS.

**KEYED NOTES (FOR 1/M1.0):**

- 1 REMOVE SECTION OF 26x14 EXHAUST DUCT BETWEEN JOINT FLANGES.
- 2 REMOVE TRANSFER DUCT AND GRILLES.
- 3 REMOVE 38x10 SECTION OF DUCTWORK UP TO FLANGED JOINT AT LOCATION SHOWN.
- 4 RELOCATE LIGHTING FIXTURE CHANNEL STRUT SUPPORT TIGHT TO STRUCTURE TO ALLOW PASSAGE OF NEW DUCTWORK.
- 5 REMOVE DUCT TO EXISTING FUME HOOD.
- 6 REMOVE HS/HR PIPING BACK TO MAIN.
- 7 REMOVE 2" PVC EXHAUST DROP. CAP AT 6" DUCT STUB AT MAIN.
- 8 REMOVE EXHAUST BRANCH CONNECTION TO EXTENT SHOWN. CAP DUCT AIRTIGHT.
- 9 REMOVE DUCT DROP AND GRILLE. CLOSE OPENING WITH SHEET METAL PANEL.
- 10 ORIGINAL DESIGN CFM SHOWN. REFER TO 2/M1.0 FOR NEW CFM.

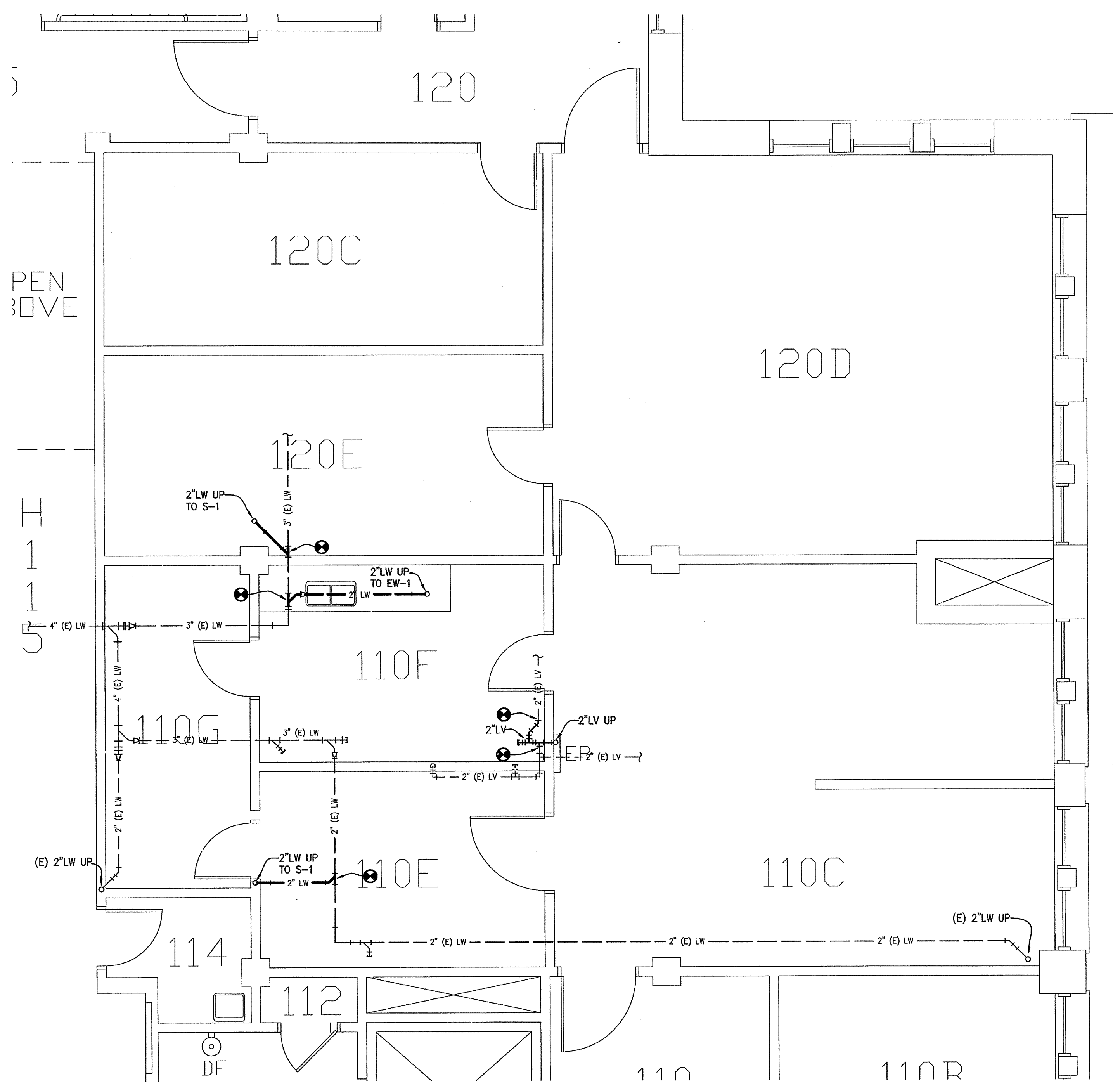
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 RBA PROJECT #: 1215  
 DRAWN BY: CAS  
 CHECKED BY: DMK  
 FILE NAME: 8900-003-12m1.0.dwg

DRAWING NAME:  
**SECOND FLOOR PLAN - MECHANICAL**

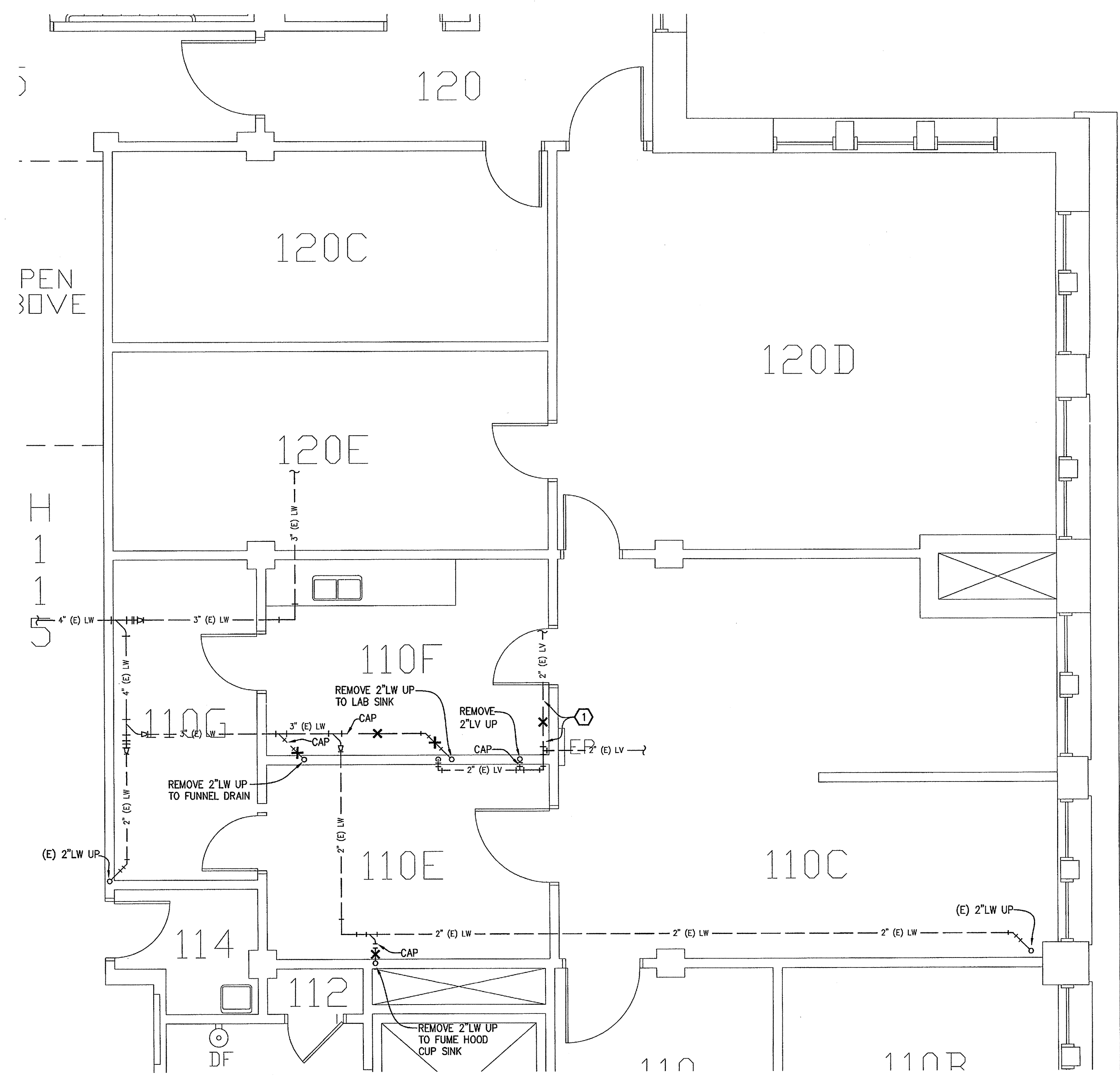
**M1.0**



**2** FIRST FLOOR PLAN - PLUMBING - NEW  
SCALE: 1/4"=1'-0"

**GENERAL NOTES:**

- FOR CONTINUATION OF PIPES UP, REFER TO P2.1.
- AT DEMOLITION OF PIPES THROUGH EXISTING FLOOR, PATCH FLOOR TO MATCH EXISTING.



**1** FIRST FLOOR PLAN - PLUMBING - DEMOLITION  
SCALE: 1/4"=1'-0"

**KEYED NOTES - DEMO:**

① LIMIT OF DEMOLITION. EXISTING TO REMAIN BEYOND THIS POINT.

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PROJECT:  
**WATKINS GEOCHEMISTRY ISOTOPE LAB**

PROJECT LOCATION:  
CASCADE HALL, 1275 E. 13TH AVE.

CLIENT:  
**UNIVERSITY OF OREGON**

ISSUED:  
02/18/13 - 100% CD

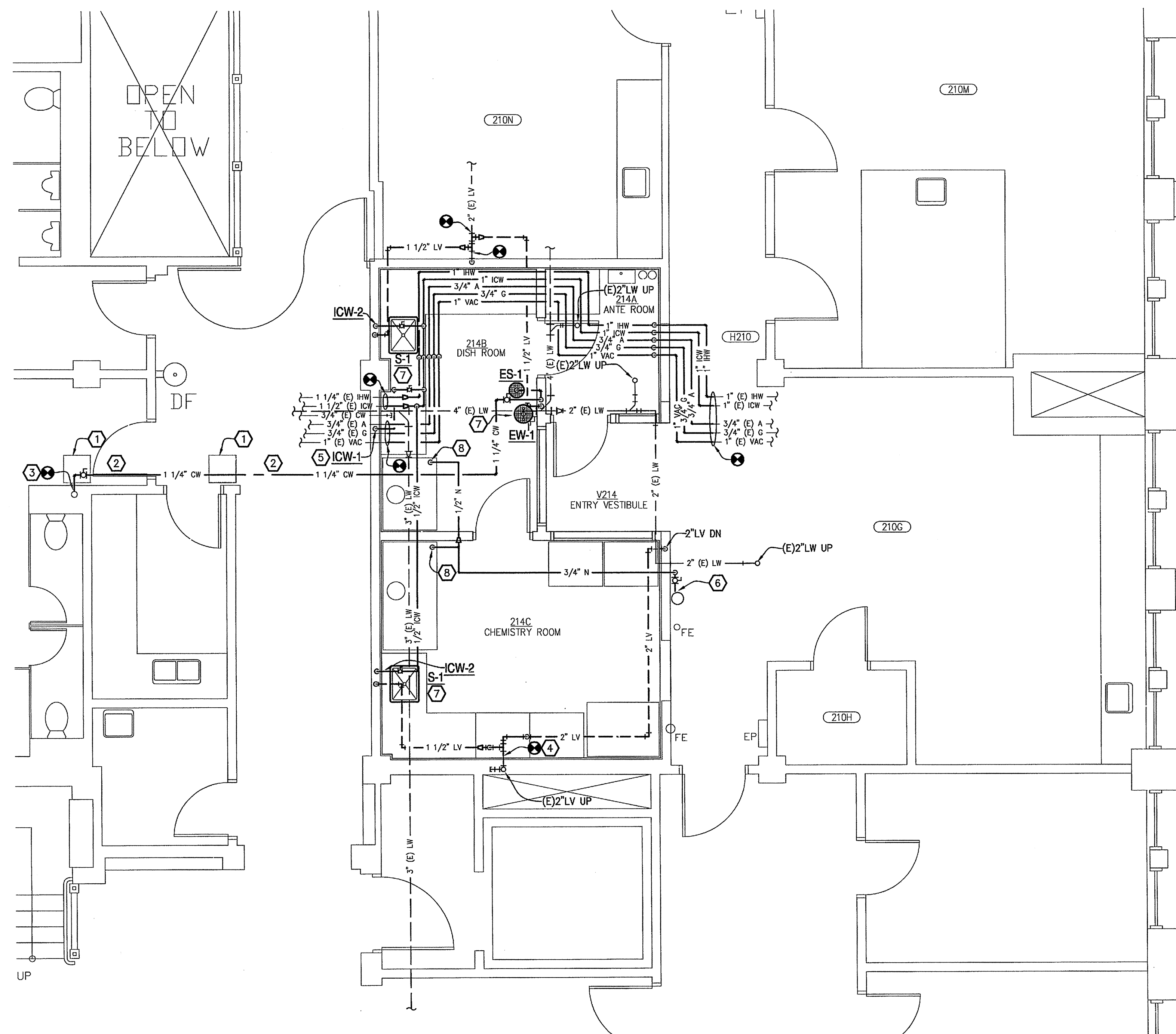
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OREGON  
NOV 19, 1991  
DAVID W. KNIGHTON  
EXPRES 08/30/13

UO PROJECT #: CP12-128  
RBA PROJECT #: 1218  
DRAWN BY: JDB  
CHECKED BY: DWK  
FILE NAME: 8900-003-12m2.0.dwg

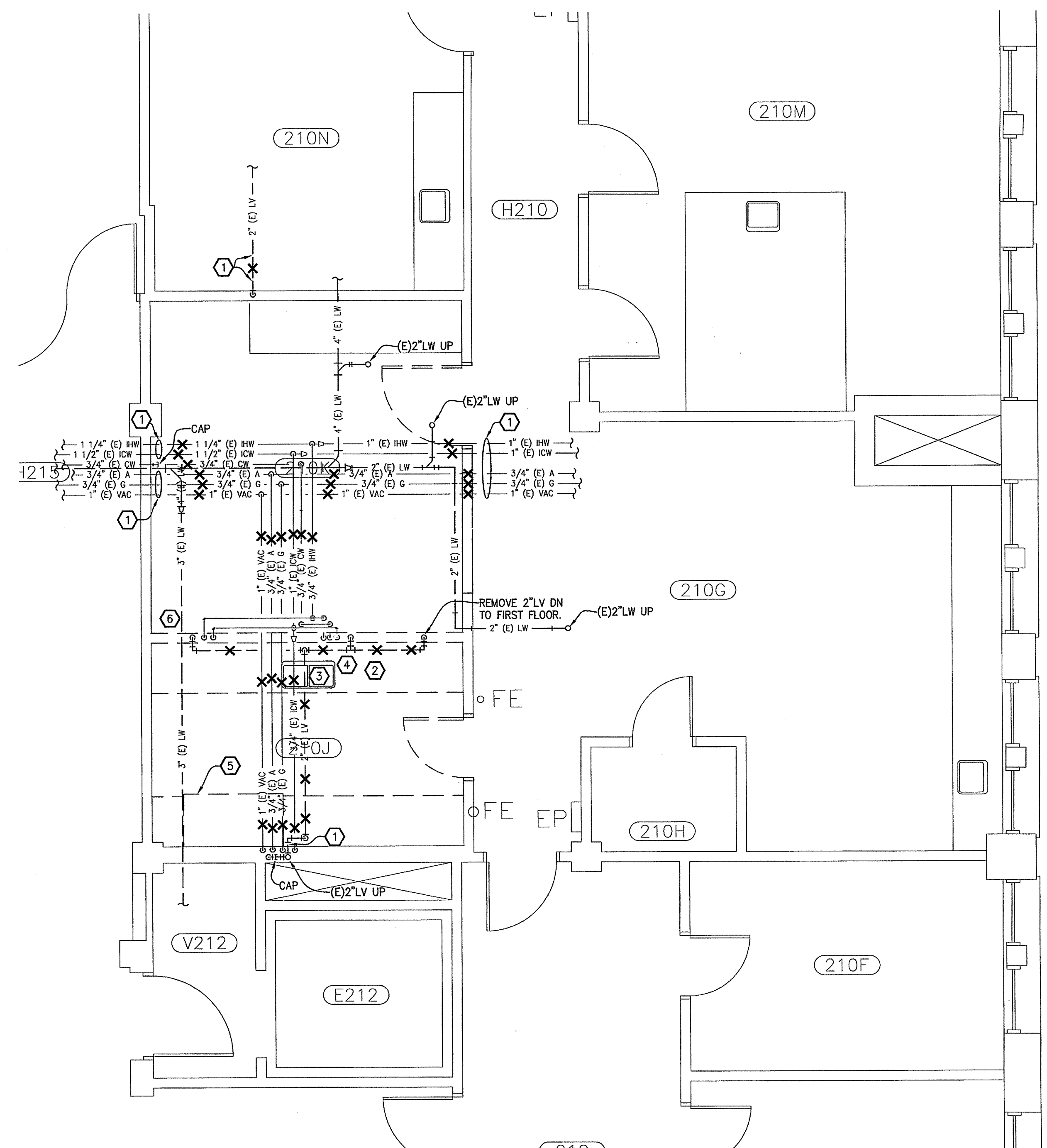
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FIRST FLOOR PLAN - PLUMBING

**M2.0**





**2 SECOND FLOOR PLAN - PLUMBING - NEW**  
 SCALE: 1/4"=1'-0"



**1 SECOND FLOOR PLAN - PLUMBING - DEMOLITION**  
 SCALE: 1/4"=1'-0"

- KEYED NOTES (FOR 2/M2.1):**
- 1 NEW ACCESS DOOR IN EXISTING GYP. BD. CEILING. REFER TO ARCHITECTURAL.
  - 2 INSTALL PIPE ABOVE EXISTING GYP. BD. CEILING. LIMIT CEILING DEMOLITION TO OPENINGS FOR NEW ACCESS DOORS.
  - 3 CONNECT 1-1/4" CW TO EXISTING 2" CW RISER.
  - 4 CONNECT 2" LV TO EXISTING 2" LV.
  - 5 LOCATE INDUSTRIAL COLD WATER OUTLET AT 90° AFF.
  - 6 CONNECT 3/4" N TO NITROGEN CYLINDER. PIPE MATERIAL SHALL BE ABS INSIDE CLEAN ROOM AND COPPER OR ABS OUTSIDE OF CLEAN ROOM. REFER TO SPECIFICATIONS FOR PIPE MATERIAL. ABS SHALL BE RATED FOR COMPRESSED AIR.
  - 7 CONNECT LW, LV, & ICW PIPING FOR LAB SINK. REFER TO DIVISION 12 FOR LAB SINK SPECIFICATIONS. EXPOSED PLUMBING SPECIALTIES BELOW FIXTURE AND EXPOSED TO CLEAN ROOM SHALL BE NON-METALLIC.
    - P-TRAP SHALL BE POLYPROPYLENE, SAME MFGOR AS LAB WASTE PIPE.
    - WATER SUPPLY CONNECTION SHALL BE SCHEDULE 80 PVC PIPING AND BALL ISOLATION VALVE INSIDE CABINET.
  - 8 CONNECT 1/2" N TO FUME HOOD. FUME HOOD WILL HAVE FACTORY-INSTALLED NITROGEN OUTLET AND PIPING EXTENDED TO TOP OF HOOD. FINISH CEILING PENETRATION WITH NON-METALLIC ESCUTCHEON.

- GENERAL NOTES:**
1. FOR CONTINUATION OF PIPES DOWN, REFER TO P2.0.
  2. EXISTING CONCRETE FLOORS HAVE CAST-IN-PLACE ELECTRICAL CONDUITS. COORDINATE WITH SECTION 01 70 00 TO X-RAY FLOOR SLAB BEFORE DRILLING FOR PIPING AND DUCTWORK SUPPORT ANCHORS.
  3. ALL MATERIALS EXPOSED TO CLEAN ROOM ENVIRONMENT SHALL BE METAL FREE.

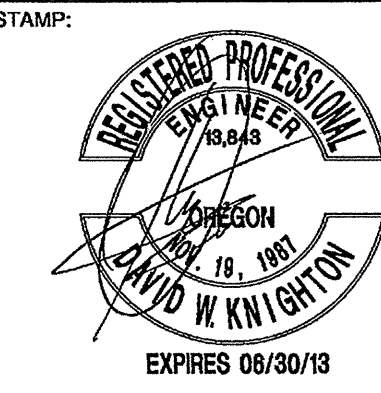
- KEYED NOTES (FOR 1/M2.1):**
- 1 LIMIT OF DEMOLITION. EXISTING TO REMAIN BEYOND THIS POINT.
  - 2 REMOVE COMPRESSED AIR OUTLET & ASSOCIATED PIPING.
  - 3 REMOVE LAB SINK & ASSOCIATED PIPING.
  - 4 REMOVE DRENCH HOSE & ASSOCIATED PIPING.
  - 5 REMOVE PIPING ASSOCIATED WITH FUME HOOD & CUP SINK.
  - 6 REMOVE FUNNEL DRAIN, WATER OUTLET, & ASSOCIATED PIPING.

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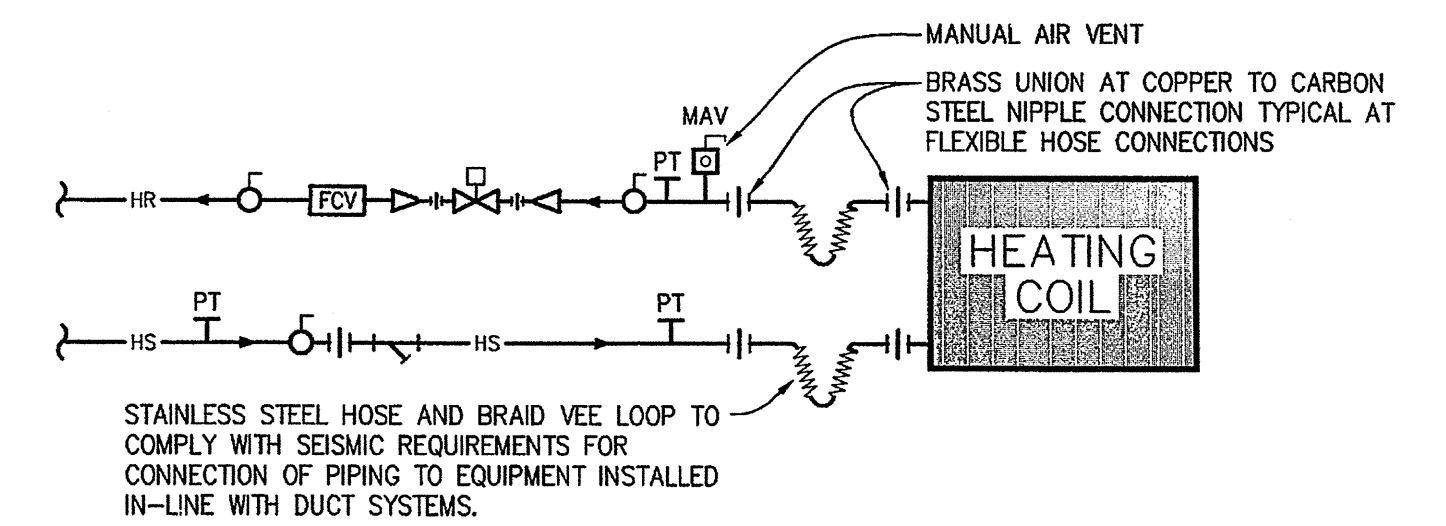
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 CHECKED BY: DWK  
 FILE NAME: 8900-003-12m2.1.dwg

DRAWING NAME:  
**SECOND FLOOR PLAN - PLUMBING**

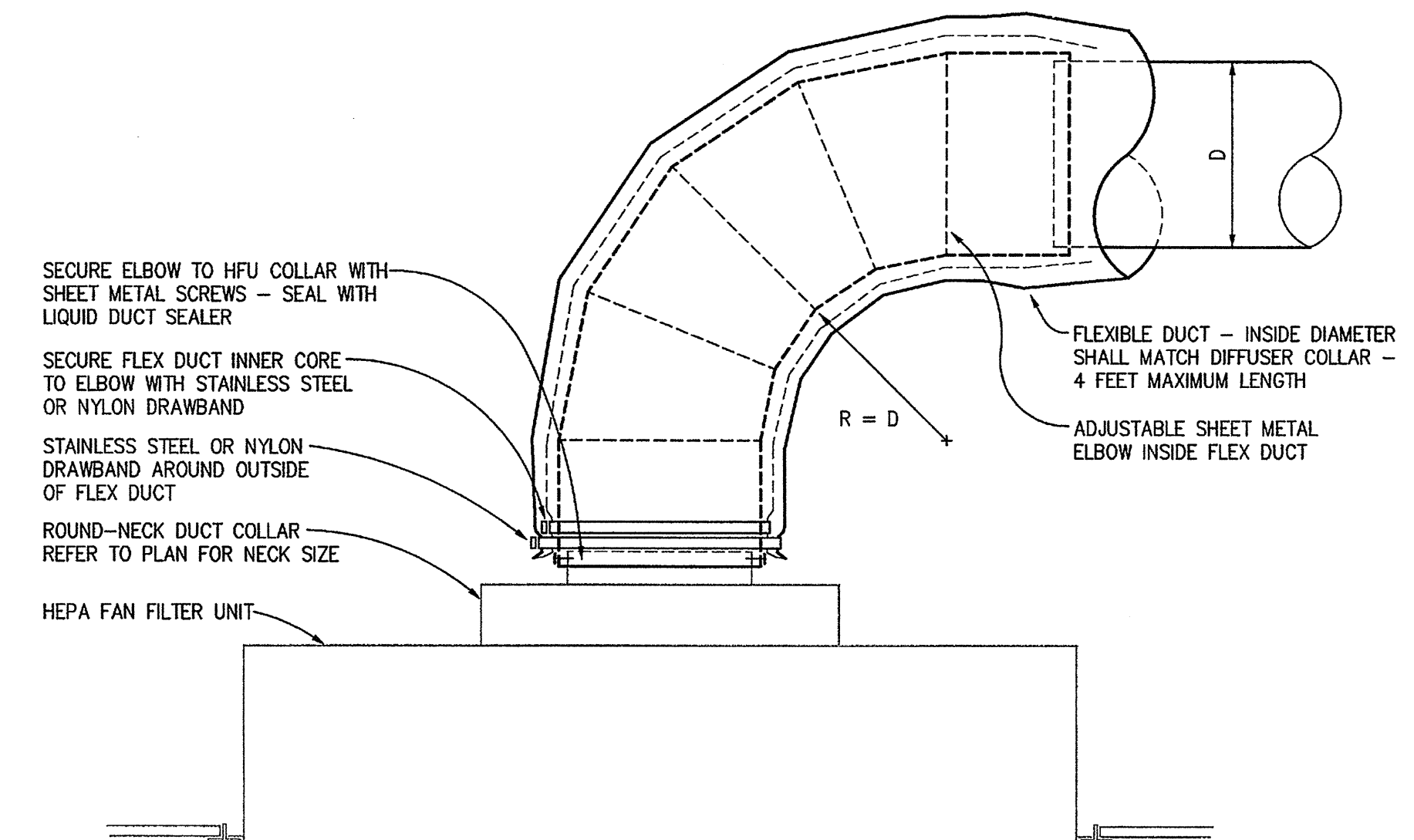
**M2.1**

DESCRIPTION	PLAN VIEW - DOUBLE LINE	DESCRIPTION	PLAN VIEW - DOUBLE LINE
RECTANGULAR TO RECTANGULAR BRANCH WITH 45° ENTRY		SIDE WALL GRILLE OR REGISTER	
RECTANGULAR TO ROUND BRANCH WITH 45° ENTRY		ROUND RADIUS ELBOW	
RECTANGULAR RADIUS ELBOW		ROUND TO ROUND TEE WITH 45° ENTRY - LOW LOSS (FULL BODY)	
RECTANGULAR RADIUS OFFSET		ROUND TO ROUND 45° LATERAL BRANCH (FULL BODY)	
RECTANGULAR OR OVAL MITERED ELBOW WITH TURN VANES		ROUND TO ROUND CONCENTRIC TRANSITION	
RECTANGULAR OR OVAL TO ROUND TRANSITION		ROUND TO ROUND ECCENTRIC TRANSITION	
RECTANGULAR CONCENTRIC TRANSITION			
RECTANGULAR ECCENTRIC TRANSITION			

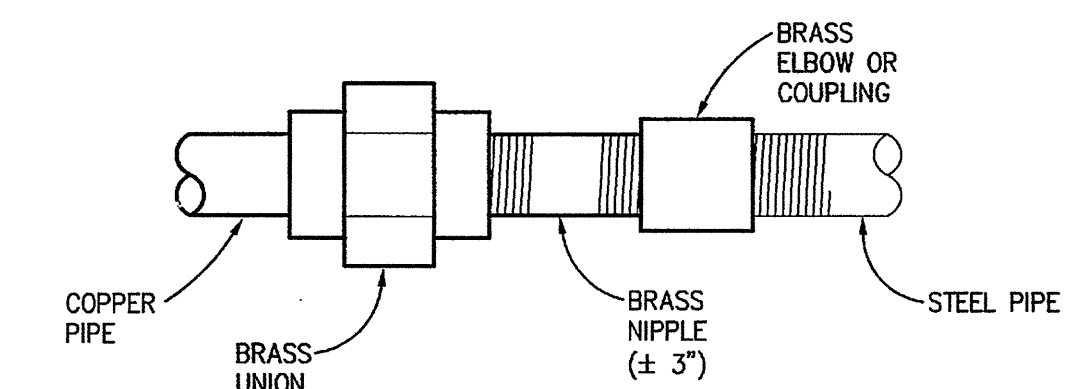
**4** DUCT CONSTRUCTION  
NO SCALE



**1** 2-WAY TERMINAL HEATING CONTROL VALVE - PIPING  
NO SCALE



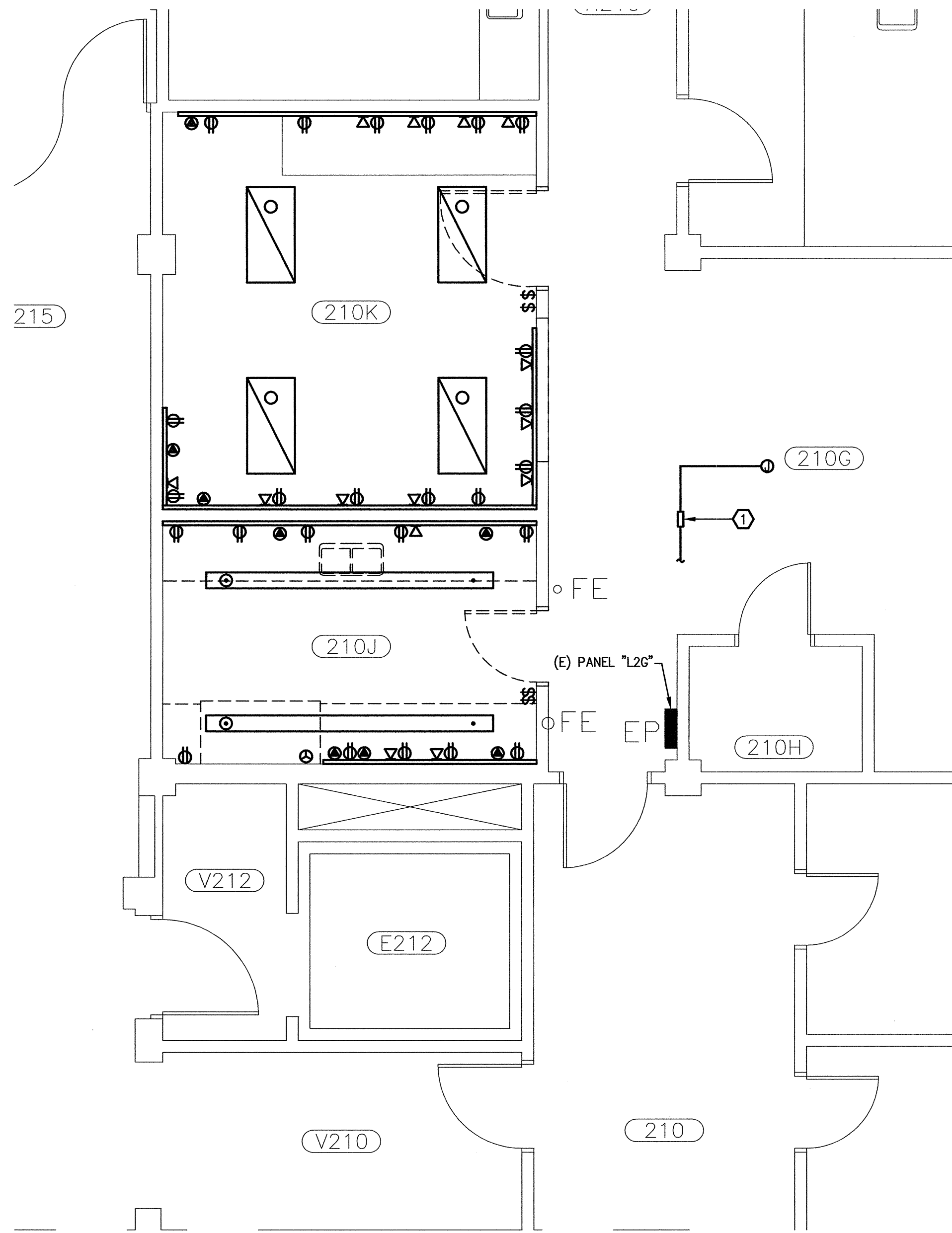
**2** HEPA FAN FILTER UNIT - DUCT CONNECTION  
NO SCALE



**3** TYPICAL STEEL PIPE TO COPPER CONNECTION  
NO SCALE







**1 FLOOR PLAN - ELECTRICAL DEMOLITION**  
 SCALE: 1/4"=1'-0"

**SHEET NOTES:**  
 1 REMOVE CONDUIT, SERVING LIGHT FIXTURE, BACK TO CONDUIT COUPLING. LIGHT FIXTURE TO BE SERVED BY SAME CONDUIT WITH DIFFERENT ROUTING. REFERENCE 2/E2.0 FOR NEW CONDUIT ROUTING.

**PANEL SCHEDULE**  
 DATE: February 14, 2013  
 PROJECT: \_\_\_\_\_

PANEL: L2G  
 VOLTS: 120/208  
 LOCATION: RM H210  
 MOUNTING: SURFACE

TYPE: \_\_\_\_\_ AMPS: 100  
 PHASE: 3 WIRE: 4  
 MAIN: \_\_\_\_\_

NOTES: (E) INDICATES EXISTING CIRCUIT BREAKER.  
 (N) INDICATES NEW CIRCUIT BREAKER.  
 NEW BREAKERS TO MATCH EXISTING.

LOAD CLASS	Conn. VA	Demand Factor	Demand Load VA
LIGHTING	0	125%	0
OUTLETS	3060	**	3060
MOTOR LOADS	3360	**	3675
RESISTANCE LOADS	0	100%	0
SUBFEED	0	100%	0
MISC. LOADS	1300	100%	1300
SUBFEED BREAKER	0		0
<b>TOTAL VOLT-AMPS</b>		<b>Connected</b>	<b>Demand</b>
		7,720	8,035
<b>MAXIMUM PHASE AMPS</b>		22.7	23.5

BREAKER A	P	DESCRIPTION	WATTS	CIR. NO.	PHASE	CIR. NO.	WATTS	DESCRIPTION	BREAKER P	A
20	1	RECEPT - LAB 210H & 210		1	A	2		RECEPT - LAB 210G	1	20
20	1	RECEPT - LAB 210H & 210		3	B	4		RECEPT - LAB 210G	1	20
20	1	RECEPT - LAB 210H & 210		5	C	6		RECEPT - LAB 210G	1	20
20	1	RECEPT - LAB 210G		7	A	8		RECEPT - RM 210H	3	20
20	1	RECEPT - LAB 210G		9	B	10				
20	1	(E) HFU-2	420	11	C	12				
20	1	(N) HFU-3	420	13	A	14	420	(E) HFU-1	1	20
20	1	(N) HFU-4	420	15	B	16	400	(N) FUME HOOD, DISH V214	1	20
20	1	(N) HFU-5	420	17	C	18	400	(N) FUME HOOD, CHEMISTRY V214	1	20
20	1	(E) HFU-6	420	19	A	20	100	(E) BAS PANEL	1	20
20	1	(E) HFU-7	420	21	B	22	400	(E) LAM FLOW WORKST, CHEM V214	1	20
20	1	(E) HFU-8	420	23	C	24		RECEPT - LAB 210G (PENDANT)	1	20
20	1	RECEPT		25	A	26	540	(E) RECEPT, CHEMISTRY V214	1	20
20	1	RECEPT - HALL		27	B	28	180	(E) RECEPT, D.I. WATER FILTER	1	20
20	1	TABLE RECEPT		29	C	30	360	(N) RECEPT, DISH V214	1	20
20	1	TABLE RECEPT		31	A	32		(GFI TYPE BREAKER)		
20	1	(E) RECEPT, ANT & DISH V214	540	33	B	34	360	(N) RECEPT, DISH V214	1	20
20	1	FUME HOOD PLUGS & LIGHTS		35	C	36		(GFI TYPE BREAKER)		
20	1	(N) RECEPT, CHEMISTRY V214 (GFI TYPE BREAKER)	360	37	A	38	360	(N) RECEPT, CHEMISTRY V214 (GFI TYPE BREAKER)	1	20
20	1	(N)		39	B	40				
20	1	(N)		41	C	42	360	(N) RECEPT - 214A ANTE ROOM	1	20

PHASE TOTALS	Connected VA	Demand VA	Connected Amps	Demand Amps
A	2620	2725	21.8	22.7
B	2720	2825	22.7	23.5
C	2380	2485	19.8	20.7
AB			3.5%	
BC				-13.7%
CA				8.8%

\* 10kVA at 100%, remainder at 50%  
 \*\* 100% plus 25% of the largest Motor

**BUILDING ELECTRICAL LOAD SUMMARY**

EXISTING LOADS REMOVED FROM PANEL "L2G".....17.3KW (48 AMPS AT 208V, 3PH)

NEW CONNECTED LOADS THIS PROJECT:

OUTLETS..... 2.7KW  
 MOTOR LOADS..... 3.7KW  
 MISC. LOADS..... 1.5KW

TOTAL NEW CONNECTED LOAD IN PANEL "L2G"..... 7.9KW (22 AMPS AT 208V, 3PH)

**ELECTRICAL SYMBOLS LIST - POWER**

SYMBOL	ABBR.	DESCRIPTION
⊕		120 VOLT, DUPLEX RECEPTACLE, MOUNTED AT STANDARD HEIGHT.
⊕		120 VOLT, DUPLEX RECEPTACLE, MOUNT AFF TO BOTTOM OF BOX.
⊕ TR		120 VOLT, DUPLEX RECEPTACLE, TAMPER RESISTANT.
⊕		EQUIPMENT CONNECTION.
⊕		JUNCTION BOX.
⊕		MOTOR CONNECTION.
⊕		SPECIAL POWER OUTLET.
⊕		BRANCH PANEL. SURFACE MOUNTED.
⊕		BRANCH PANEL. FLUSH MOUNTED.
⊕		CABINET. SURFACE MOUNTED. TYPE AS NOTED.
⊕		CEILING, RECESSED LUMINAIRE. SEE LUMINAIRE SCHEDULE FOR DETAILS.
⊕		LINEAR FIXTURE, PENDANT MOUNT. QUANTITY AND APPROXIMATE LOCATION OF PENDANTS SHOWN.
⊕		SWITCH. SINGLE POLE.
⊕		WIRING IN OR ON CEILING OR WALLS.
⊕		CONDUCTORS IN CONDUIT. THREE SHOWN, #12 U.O.N.
⊕		WIRING RUN IN OR UNDER FLOOR OR GROUND.
⊕		FLEXIBLE CONDUIT.
⊕		HOME RUN TO PANEL.
⊕		CONDUIT STUB OR CAP.
⊕		CONDUIT UP - CONDUIT DOWN.
⊕		EXISTING WIRING TO REMAIN.
⊕		WIRING TO BE REMOVED.
⊕		FIRE ALARM SMOKE DETECTOR.
⊕		FIRE ALARM HEAT DETECTOR.
⊕		FIRE ALARM STROBE LIGHT, WALL MOUNTED.
⊕		FIRE ALARM HORN/STROBE LIGHT, WALL MOUNTED.
⊕		FIRE ALARM BELL.
⊕		PROVIDE 4 SQUARE JUNCTION BOX WITH SINGLE GANG MUDRING AND BLANK PLASTIC COVER PLATE. ROUTE 1" CONDUIT FROM JUNCTION BOX TO CABLE TRAY IN HALL H210.
⊕		NOTE REFERENCE.
(N)		INDICATES NEW DEVICE.
(E)		INDICATES EXISTING DEVICE TO REMAIN.
(R)		INDICATES EXISTING DEVICE TO BE REMOVED.
(RL)		INDICATES EXISTING DEVICE TO BE RELOCATED.
(NL)		INDICATES EXISTING DEVICE AT NEW LOCATION.
(RP)		INDICATES EXISTING DEVICE TO BE REPLACED AT SAME LOCATION.
GFI		GROUND FAULT INTERRUPTER.
CO		CONDUIT ONLY.
WP		WEATHERPROOF.
AFF		ABOVE FINISH FLOOR.

- GENERAL NOTES:**
- MAINTAIN ACCESSIBILITY OF EQUIPMENT AND JUNCTION BOXES AS NECESSARY AND TO OWNER'S SATISFACTION.
  - CARRY GROUND WIRE IN ALL POWER CIRCUITS.
  - COORDINATE ALL CONDUIT AND EQUIPMENT LOCATIONS WITH OTHER TRADES TO AVOID POSSIBLE CONFLICTS WITH DUCTS, SPRINKLER PIPING, AND OTHER OBSTACLES AFFECTING INSTALLATION.
  - REMOVE ALL ABANDONED WIRING TO SOURCE OF SUPPLY.
  - ALL DEVICES SHOWN SHALL BE REMOVED UNLESS OTHERWISE NOTED.
  - THE TERM "WIRING" AS USED ON DRAWINGS INCLUDES BOTH RACEWAY AND CONDUCTORS WITHIN.
  - REMOVE ALL DEMOLISHED TELECOM CABLING BACK TO CABLE TRAY. IDENTIFY BY TAPING CABLES TOGETHER. OWNER WILL COMPLETE TELECOM CABLING DEMO TO RELAY RACKS.
  - EXISTING CONCRETE FLOOR HAVE CAST-IN-PLACE ELECTRICAL CONDUITS. X-RAY FLOOR SLAB TO LOCATE CONDUITS PRIOR TO DRILLING FOR SUPPORT ANCHORS.
  - WHERE CONDUITS ARE EXPOSED IN THE CONFINES OF ROOMS 214A, 214B, & 214C, PVC CONDUIT SHALL BE USED. USE OF EXPOSED METAL CONDUIT IN ROOMS 214A, 214B, & 214C IS NOT ACCEPTABLE.

**ELECTRICAL SHEET INDEX**

SHEET NO.	SHEET TITLE
E1.0	FLOOR PLAN - ELECTRICAL DEMOLITION, SYMBOLS LIST & PANEL SCHEDULE
E2.0	FLOOR PLANS - POWER & LIGHTING
E3.0	FLOOR PLAN - DATA & FIRE ALARM, SCHEDULES

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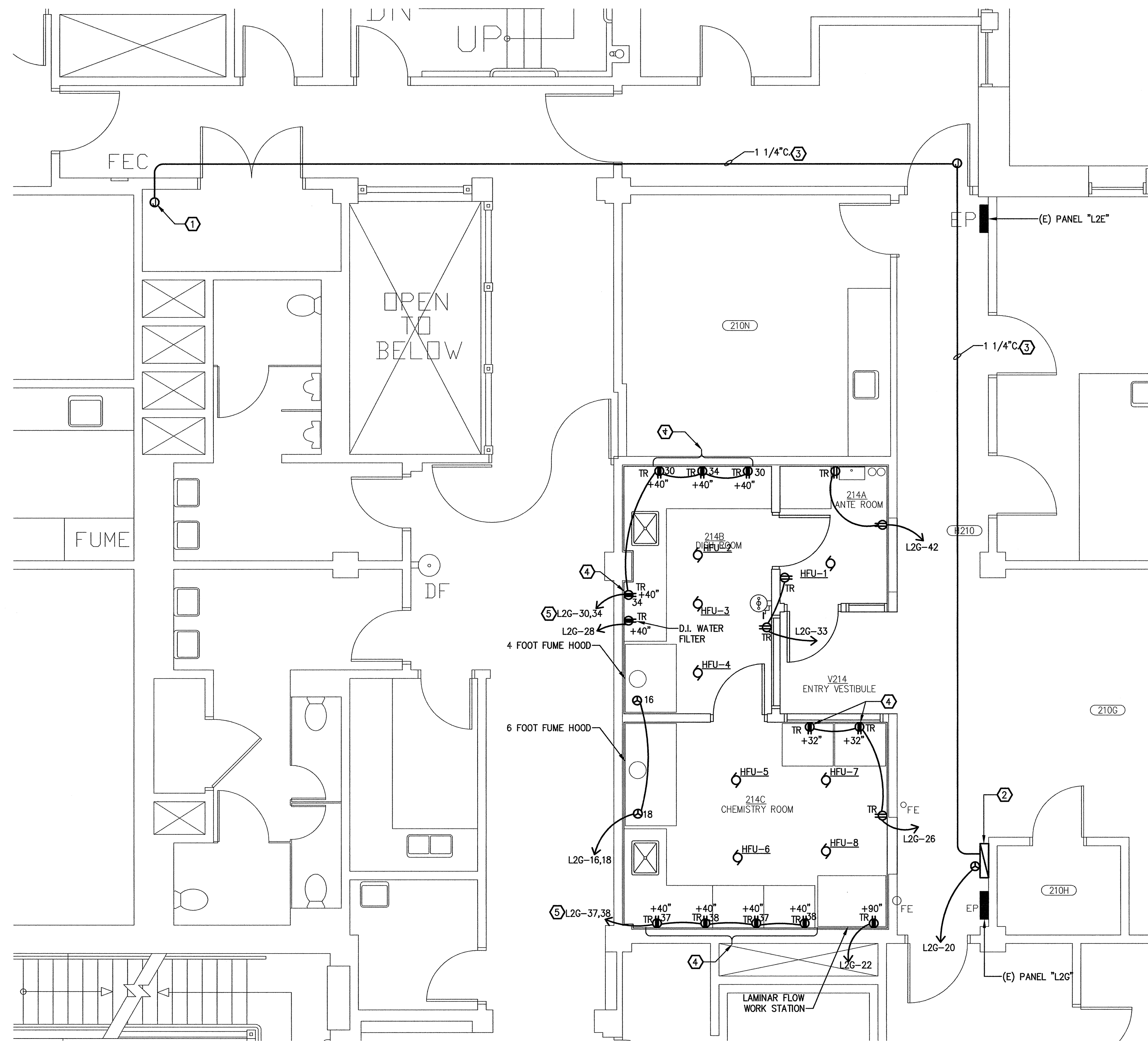
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 KEVIN M. WHITE  
 EXPIRES 8/30/14

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 CHECKED BY: KMW  
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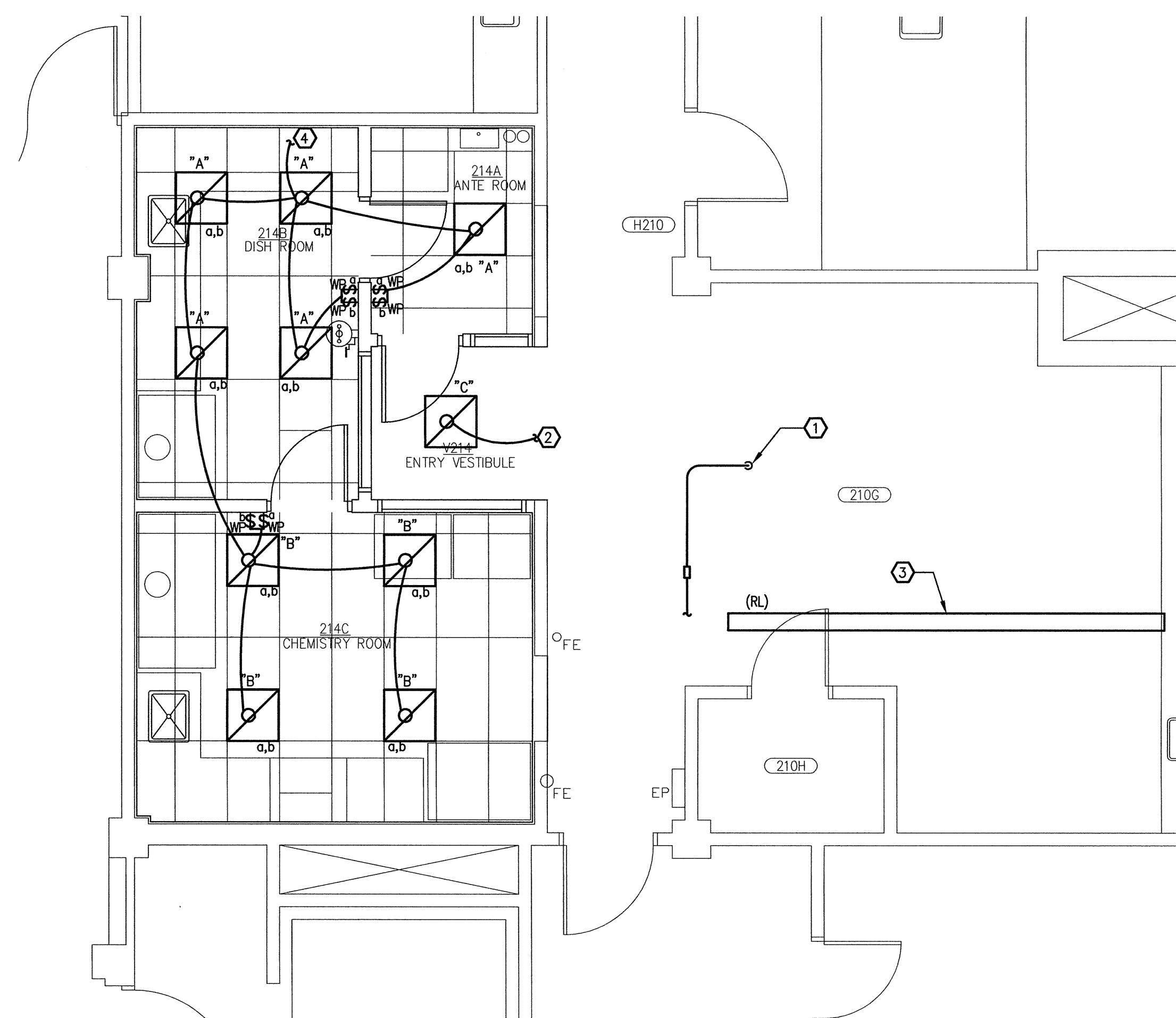
DRAWING NAME:  
**FLOOR PLAN - ELECTRICAL DEMOLITION, SYMBOLS LIST**

**E1.0**



**1 FLOOR PLAN - POWER**  
SCALE: 1/4"=1'-0"

- FLOOR PLAN POWER NOTES:
- ① ROUTE CONDUIT TO BASEMENT TELCO CLOSET. PROVIDE 4-SQUARE JUNCTION BOX IN CONDUIT RUN AT FIRST FLOOR AND BASEMENT TELCO CLOSETS FOR FUTURE B.A.S. WIRING. STUB CONDUIT OUT WEST WALL OF BASEMENT CLOSET TO LOCATION OF EXISTING B.A.S. MBC COORDINATE WITH MECHANICAL.
  - ② NEW B.A.S. PANEL BY MECHANICAL.
  - ③ PROVIDE PATHWAY FOR B.A.S. CABLING. CONDUIT TO USE EXISTING UNISTRUT RACK FOR SUPPORT. WHERE EXPOSED, PAINT CONDUIT TO MATCH EXISTING CONDUITS.
  - ④ OUTLET BOXES TO BE MOUNTED HORIZONTALLY.
  - ⑤ PROVIDE GF1 TYPE BREAKER IN PANELBOARD.



**2 FLOOR PLAN - LIGHTING**  
SCALE: 1/4"=1'-0"

- FLOOR PLAN LIGHTING NOTES:
- ① CONDUIT TO BE ROUTED ALONG CEILING AND DOWN TO EXISTING JUNCTION BOX SERVING LIGHT FIXTURES. EXTEND CONDUCTORS AS REQUIRED TO FACILITATE CONDUIT REROUTING. COORDINATE ROUTING WITH MECHANICAL.
  - ② CIRCUIT DOWNLIGHT WITH EXISTING CORRIDOR LIGHTS IN HALL H210.
  - ③ LUMINAIRE MOUNTING HEIGHT SHALL BE LOWERED BY 2 INCHES TO PROVIDE ADEQUATE CLEARANCES FOR NEW FILTER BOX. COORDINATE WITH MECHANICAL.
  - ④ NEW LIGHTING SHALL BE SERVED FROM EXISTING CIRCUIT H2-11, WHICH WAS PREVIOUSLY SERVING LIGHTS IN DEMOLISHED SPACE 210K.

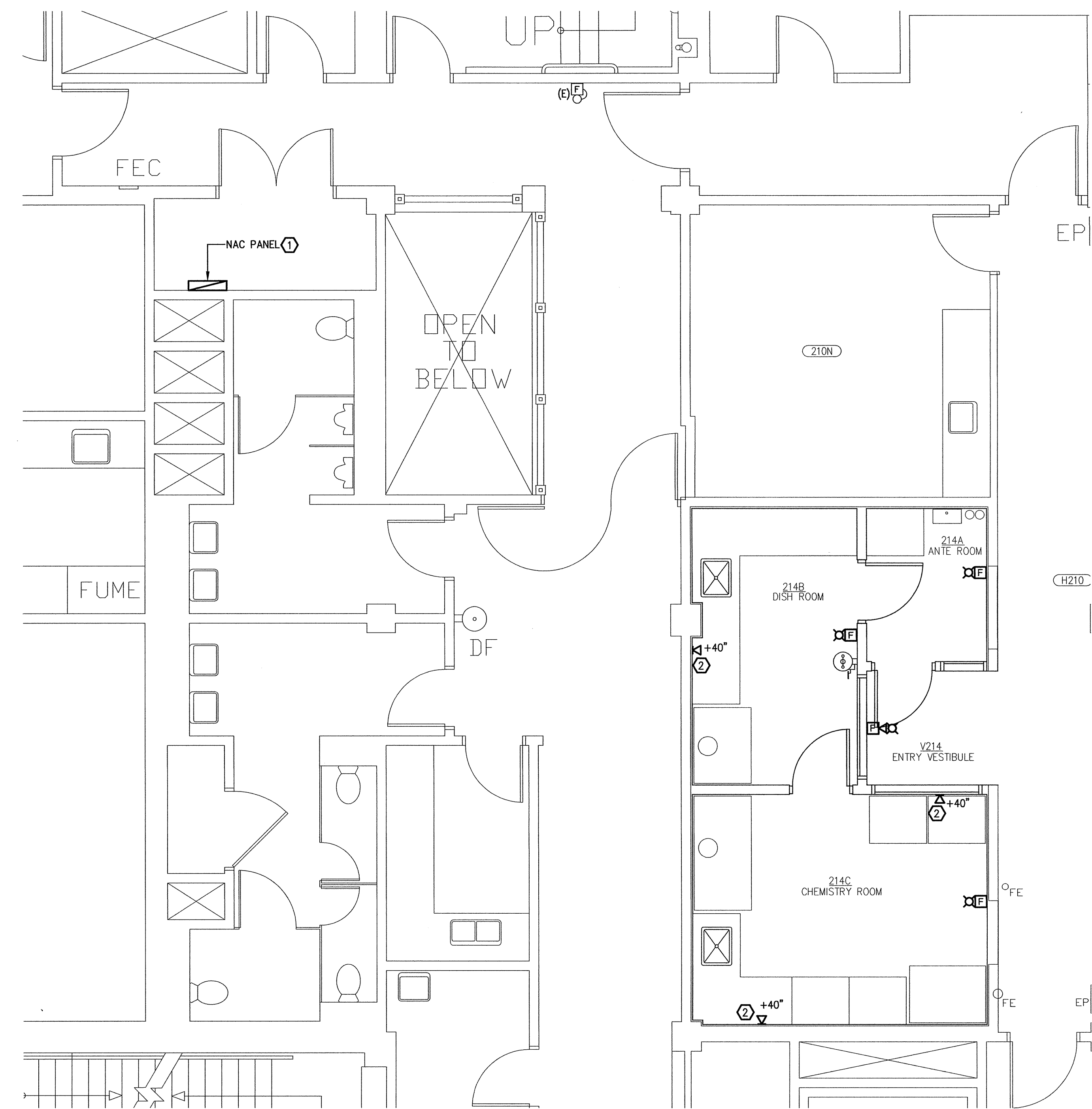


LUMINAIRE SCHEDULE

TYPE	DESCRIPTION	MANUFACTURER	LAMP	BALLAST	MOUNTING	FINISH	REMARKS
A	NOMINAL 24" X 24" RECESSED 4 LAMP FLUORESCENT LUMINAIRE WITH 20 GAUGE CRS ONE-PIECE 60° BEVELLED PERIMETER DOOR FRAME WITH CONTINUOUS ANGLE LENS RETENTION SYSTEM, WITH ONE PIECE CLOSED CELL EXTRUDED SILICONE GASKET, AND 0.156" PRISMATIC ACRYLIC LENS SMOOTH SIDE DOWN	KENALL ESEGI-GCH-MOD SERIES	F17T8/835/XPS 1010 LUMENS	(2) TWO LAMP OSRAM PSX 0.71 BF	RECESSED - MODIFIED FOR COMPATABILITY WITH GORDON GRID DS20 GRID SYSTEM	WHITE URETHANE POWDER COAT FINISH - 5 STEP PRE-TREATMENT LABORATORY SALT SPRAY TEST 1,000 HOURS	CERTIFIED IP 65 PER IEC 60598 NSF2 SPLASH/NON-FOOD ZONE MEETS K230 LEAKAGE STANDARD FOR LUMINAIRE LEAKAGE IN PRESSURIZED ENVIRONMENTS RED-STD-209E/CLASS 100 CLEANROOMS
B	NOMINAL 24" X 24" RECESSED 6 LAMP FLUORESCENT LUMINAIRE WITH 20 GAUGE CRS ONE-PIECE 60° BEVELLED PERIMETER DOOR FRAME WITH CONTINUOUS ANGLE LENS RETENTION SYSTEM, WITH ONE PIECE CLOSED CELL EXTRUDED SILICONE GASKET, AND 0.156" PRISMATIC ACRYLIC LENS SMOOTH SIDE DOWN	KENALL ESEGI-GCH-MOD SERIES	F17T8/835/XPS 1010 LUMENS	(2) THREE LAMP OSRAM PSX 0.71 BF	RECESSED - MODIFIED FOR COMPATABILITY WITH GORDON GRID DS20 GRID SYSTEM	WHITE URETHANE POWDER COAT FINISH - 5 STEP PRE-TREATMENT LABORATORY SALT SPRAY TEST 1,000 HOURS	CERTIFIED IP 65 PER IEC 60598 NSF2 SPLASH/NON-FOOD ZONE MEETS K230 LEAKAGE STANDARD FOR LUMINAIRE LEAKAGE IN PRESSURIZED ENVIRONMENTS RED-STD-209E/CLASS 100 CLEANROOMS
C	NOMINAL 24" X 24" RECESSED 3 LAMP FLUORESCENT WITH 0.156" ACRYLIC LENS AND 0.71 BF BALLAST	LITHONIA ZSP SERIES	F17T8/835/XPS 1010 LUMENS	OSRAM PSX 0.71 BF	RECESSED - GYP CEILING	WHITE	PROVIDE WITH FLANGE KIT

MECHANICAL EQUIPMENT CONNECTION SCHEDULE

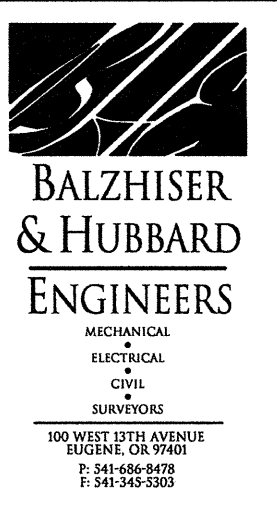
TAG	DESCRIPTION	VOLTAGE	PHASE	HP	KW	AMP	FEEDER DESCRIPTION	CIRCUIT BREAKER	CIRCUIT NUMBER	STARTER	STARTER SIZE	DISCONNECT	VFD	NOTES
HFU-1	HEPA FILTER FAN UNIT	120	1	1/3		7.2	2 #12 CU, 1 #12 GND. IN 1/2" C.	15/1	L2G - 14	NA	NA	DIV 26	N/A	
HFU-2	HEPA FILTER FAN UNIT	120	1	1/3		7.2	2 #12 CU, 1 #12 GND. IN 1/2" C.	15/1	L2G - 11	NA	NA	DIV 26	N/A	
HFU-3	HEPA FILTER FAN UNIT	120	1	1/3		7.2	2 #12 CU, 1 #12 GND. IN 1/2" C.	15/1	L2G - 13	NA	NA	DIV 26	N/A	
HFU-4	HEPA FILTER FAN UNIT	120	1	1/3		7.2	2 #12 CU, 1 #12 GND. IN 1/2" C.	15/1	L2G - 15	NA	NA	DIV 26	N/A	
HFU-5	HEPA FILTER FAN UNIT	120	1	1/3		7.2	2 #12 CU, 1 #12 GND. IN 1/2" C.	15/1	L2G - 17	NA	NA	DIV 26	N/A	
HFU-6	HEPA FILTER FAN UNIT	120	1	1/3		7.2	2 #12 CU, 1 #12 GND. IN 1/2" C.	15/1	L2G - 19	NA	NA	DIV 26	N/A	
HFU-7	HEPA FILTER FAN UNIT	120	1	1/3		7.2	2 #12 CU, 1 #12 GND. IN 1/2" C.	15/1	L2G - 21	NA	NA	DIV 26	N/A	
HFU-8	HEPA FILTER FAN UNIT	120	1	1/3		7.2	2 #12 CU, 1 #12 GND. IN 1/2" C.	15/1	L2G - 23	NA	NA	DIV 26	N/A	



**1 FLOOR PLAN - DATA & FIRE ALARM**  
SCALE: 1/4"=1'-0"

- FLOOR PLAN DATA & FIRE ALARM NOTES:
- ① PROVIDE FIRE ALARM NAC PANEL, TO MATCH EXISTING NOTIFIER AFP-200 SYSTEM, TO SUPPORT NEW NOTIFICATION APPLIANCES. INTERCEPT EXISTING ADDRESSABLE INITIATION CIRCUIT TO MONITOR NEW NAC PANEL. PROVIDE POWER FROM NAC PANEL FOR DEVICES SHOWN.
  - ② DATA OUTLETS TO BE MOUNTED HORIZONTALLY.

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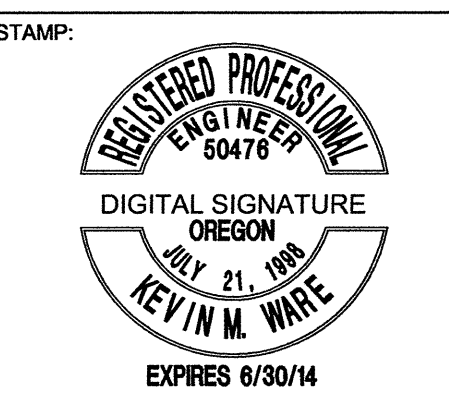


PROJECT:  
**WATKINS GEOCHEMISTRY ISOTOPE LAB**

PROJECT LOCATION:  
CASCADE HALL, 1275 E. 13TH AVE.

CLIENT:  
**UNIVERSITY OF OREGON**

ISSUED:  
02/18/13 - 100% CD



UO PROJECT #: CP12-128  
RBA PROJECT #: 1218  
DRAWN BY: MBR  
CHECKED BY: KMW  
FILE NAME: 8900-003-12e3.0.dwg

DRAWING NAME:  
**FLOOR PLAN - DATA & FIRE ALARM**

**E3.0**