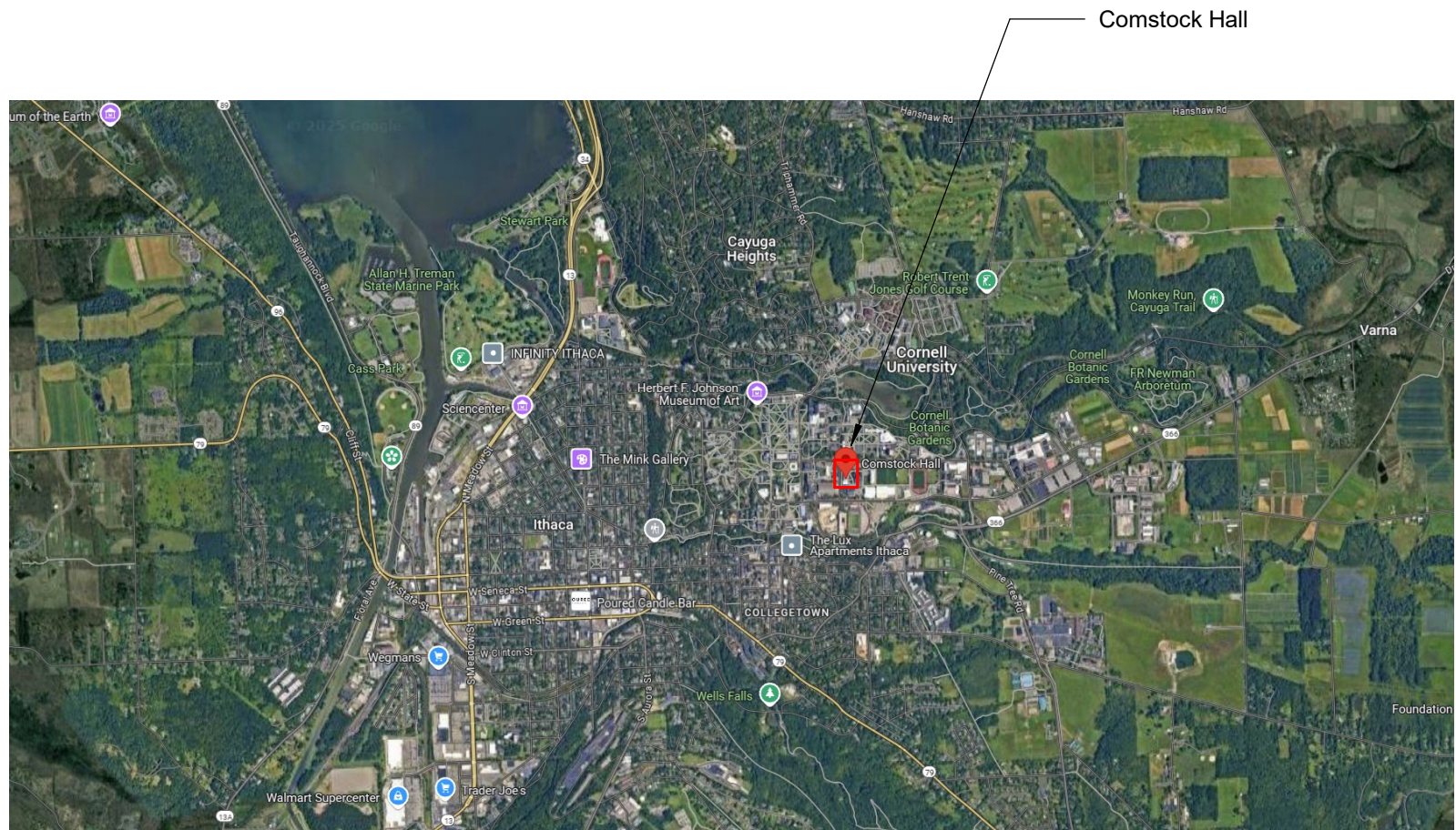
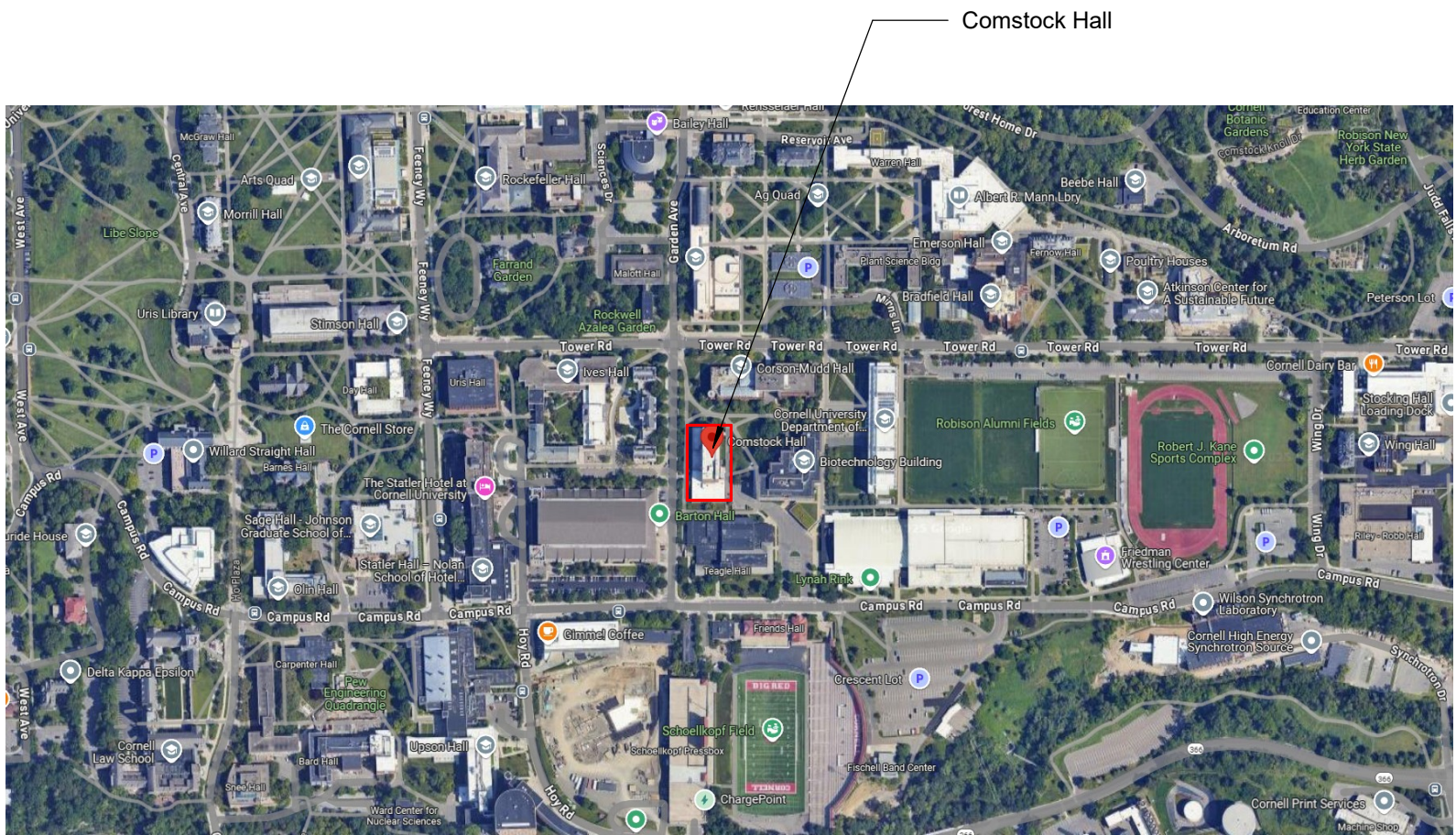




Project Image



Regional Map



Location Map

COMSTOCK HALL 5TH FLOOR LAB AND SUPPORT SPACE RENOVATIONS

100% Construction Documents 11/7/2025

129 Garden Ave
Ithaca, NY 14853

SWBR Project Number # 25044.00

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G-001 GENERAL NOTES AND LEGENDS
G-002 FIFTH FLOOR CODE COMPLIANCE AND LIFE SAFETY PLANS
- ASBESTOS ABATEMENT**
AR-100 FIFTH FLOOR ASBESTOS ABATEMENT PLAN

- ARCHITECTURAL DEMOLITION**
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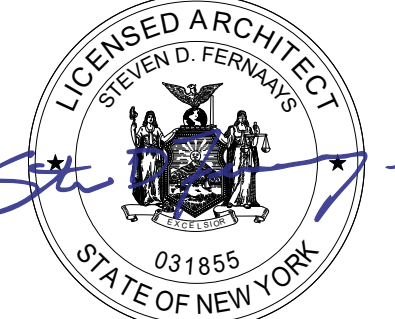
- MECHANICAL**
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ED-121 PARTIAL FIFTH FLOOR DEMOLITION PLAN - FIRE ALARM
ED-131 PARTIAL FIFTH FLOOR DEMOLITION PLAN - DATA

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SWBR NYS Certificate of
Authorization # 235221



Issue Date: 11/07/25
Registration Expires: 11/30/27

Drawn By: SM
Checked By: MJP
Project Manager: MJP

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Revisions

COMSTOCK HALL 5TH FLOOR
LAB AND SUPPORT SPACE
RENOVATIONS
129 Garden Ave
Ithaca, NY 14853
SWBR Project Number 25044.00

Cornell University
Ithaca, NY 14853

G - 000
COVER SHEET

11/7/2025
100% Construction
Documents

Abatement Consultant:

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& Surveyors**
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MEP Consultant:

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SWBR
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Rochester, NY 14604
585 232 8300
rochester@swbr.com

MAXIMUM ALLOWABLE QUANTITIES WHEN STORED IN APPROVED CABINETS

Chemical Quantities Chart - Per FC3806.2.1 - Existing Sprinklered Labs
SWBR Architects

Revised: 12/9/22

Input Page

Facility Name:
Floor Level (in relation to Grade):
Approved Sprinkler:
Approved Cabinets:

Comstock Hall
5th Floor in the 5th level above grade
Yes
Yes

Summary

Two (2) Control Areas are allowed on this level.

Material	Class	Units	Per Control Area	Total per Area Adjusted Floor	Closed System	Per Control Area	Total per Area Adjusted Floor	Open System	Per Control Area	Total per Area Adjusted Floor	Notes
Combustible Liquids	II	Gallons	240.00	480.00	120.00	240.00	30.00	60.00	30.00	60.00	
Combustible Fiber	Unlabeled	Cubic Feet	unlimited	unlimited	unlimited	unlimited	unlimited	unlimited	unlimited	unlimited	Unlimited if building is fully sprinklered
Compressed Gases	I, II, III	Pounds	50.00	100.00	25.00	50.00	10.00	20.00	10.00	20.00	
Cryogenics, Flammable	I, II, III	Gallons	45.00	90.00	45.00	90.00	10.00	20.00	10.00	20.00	
Cryogenics, Oxidizing	I, II, III	Gallons	45.00	90.00	45.00	90.00	10.00	20.00	10.00	20.00	
Explosives	Div 1.1	Pounds	1.00	2.00	0.13	0.25	0.13	0.25	0.13	0.25	Building must be fully sprinklered
	Div 1.2	Pounds	1.00	2.00	0.13	0.25	0.13	0.25	0.13	0.25	Building must be fully sprinklered
	Div 1.3	Pounds	1.00	2.00	0.13	0.25	0.13	0.25	0.13	0.25	Building must be fully sprinklered
	Div 1.4	Pounds	50.00	100.00	25.00	50.00	10.00	20.00	10.00	20.00	Building must be fully sprinklered
	Div 1.5	Pounds	1.00	2.00	0.13	0.25	0.13	0.25	0.13	0.25	Building must be fully sprinklered
	Div 1.6	Pounds	1.00	2.00	0.13	0.25	0.13	0.25	0.13	0.25	Building must be fully sprinklered
Flammable Gas	Gas	Cubic Feet	2000.00	4000.00	2000.00	4000.00	N/A	N/A	N/A	N/A	
Flammable Liquid	II	Gallons	240.00	480.00	120.00	240.00	30.00	60.00	30.00	60.00	See combination values
Combustible Flammable Liquid (A, B, C)	II and III	Gallons	45.00	90.00	45.00	90.00	10.00	20.00	10.00	20.00	See combination values
Organic Peroxide	II	Pounds	250.00	500.00	250.00	500.00	25.00	50.00	25.00	50.00	Building must be fully sprinklered
	III	Pounds	1.00	2.00	0.13	0.25	0.13	0.25	0.13	0.25	Building must be fully sprinklered
	IV	Pounds	1.00	2.00	0.13	0.25	0.13	0.25	0.13	0.25	Building must be fully sprinklered
	V	Pounds	unlimited	unlimited	unlimited	unlimited	unlimited	unlimited	unlimited	unlimited	Unlimited if building is fully sprinklered
	VI	Pounds	unlimited	unlimited	unlimited	unlimited	unlimited	unlimited	unlimited	unlimited	Unlimited if building is fully sprinklered
Oxidizer	II	Pounds	1.00	2.00	0.13	0.25	0.13	0.25	0.13	0.25	Building must be fully sprinklered
	III	Pounds	2.00	4.00	0.25	0.50	0.25	0.50	0.25	0.50	Building must be fully sprinklered
	IV	Pounds	2.00	4.00	0.25	0.50	0.25	0.50	0.25	0.50	Building must be fully sprinklered
Oxidizing Gas	Gas	Cubic Feet	2000.00	4000.00	2000.00	4000.00	N/A	N/A	N/A	N/A	
Pyrophoric Material	II	Pounds	2.00	4.00	0.25	0.50	0.25	0.50	0.25	0.50	Building must be fully sprinklered
	III	Pounds	2.00	4.00	0.25	0.50	0.25	0.50	0.25	0.50	Building must be fully sprinklered
	IV	Pounds	2.00	4.00	0.25	0.50	0.25	0.50	0.25	0.50	Building must be fully sprinklered
Unstable (reactive)	II	Pounds	1.00	2.00	0.13	0.25	0.13	0.25	0.13	0.25	Building must be fully sprinklered
	III	Pounds	1.00	2.00	0.13	0.25	0.13	0.25	0.13	0.25	Building must be fully sprinklered
	IV	Pounds	1.00	2.00	0.13	0.25	0.13	0.25	0.13	0.25	Building must be fully sprinklered
	V	Pounds	1.00	2.00	0.13	0.25	0.13	0.25	0.13	0.25	Building must be fully sprinklered
	VI	Pounds	1.00	2.00	0.13	0.25	0.13	0.25	0.13	0.25	Building must be fully sprinklered
Water Reactive	II	Pounds	1.00	2.00	0.13	0.25	0.13	0.25	0.13	0.25	Building must be fully sprinklered
	III	Pounds	1.00	2.00	0.13	0.25	0.13	0.25	0.13	0.25	Building must be fully sprinklered
	IV	Pounds	1.00	2.00	0.13	0.25	0.13	0.25	0.13	0.25	Building must be fully sprinklered
	V	Pounds	1.00	2.00	0.13	0.25	0.13	0.25	0.13	0.25	Building must be fully sprinklered
	VI	Pounds	1.00	2.00	0.13	0.25	0.13	0.25	0.13	0.25	Building must be fully sprinklered
Corrosive	II	Pounds	1000.00	2000.00	1000.00	2000.00	100.00	200.00	100.00	200.00	See notes on anhydrous ammonia
	III	Pounds	1000.00	2000.00	1000.00	2000.00	100.00	200.00	100.00	200.00	See notes on anhydrous ammonia
	IV	Pounds	1000.00	2000.00	1000.00	2000.00	100.00	200.00	100.00	200.00	See notes on anhydrous ammonia
	V	Pounds	1000.00	2000.00	1000.00	2000.00	100.00	200.00	100.00	200.00	See notes on anhydrous ammonia
	VI	Pounds	1000.00	2000.00	1000.00	2000.00	100.00	200.00	100.00	200.00	See notes on anhydrous ammonia
Highly Toxic	II	Pounds	20.00	40.00	10.00	20.00	2.00	4.00	2.00	4.00	Must be in approved exhausted cabinet
	III	Pounds	20.00	40.00	10.00	20.00	2.00	4.00	2.00	4.00	Must be in approved exhausted cabinet
	IV	Pounds	20.00	40.00	10.00	20.00	2.00	4.00	2.00	4.00	Must be in approved exhausted cabinet
	V	Pounds	20.00	40.00	10.00	20.00	2.00	4.00	2.00	4.00	Must be in approved exhausted cabinet
	VI	Pounds	20.00	40.00	10.00	20.00	2.00	4.00	2.00	4.00	Must be in approved exhausted cabinet
Toxic	II	Pounds	500.00	1000.00	500.00	1000.00	125.00	250.00	125.00	250.00	
	III	Pounds	500.00	1000.00	500.00	1000.00	125.00	250.00	125.00	250.00	
	IV	Pounds	500.00	1000.00	500.00	1000.00	125.00	250.00	125.00	250.00	
	V	Pounds	500.00	1000.00	500.00	1000.00	125.00	250.00	125.00	250.00	
	VI	Pounds	500.00	1000.00	500.00	1000.00	125.00	250.00	125.00	250.00	

MAXIMUM ALLOWABLE QUANTITIES WHEN NOT STORED IN APPROVED CABINETS

Chemical Quantities Chart - Per FC3806.2.1 - Existing Sprinklered Labs
SWBR Architects

Revised: 12/9/22

Input Page

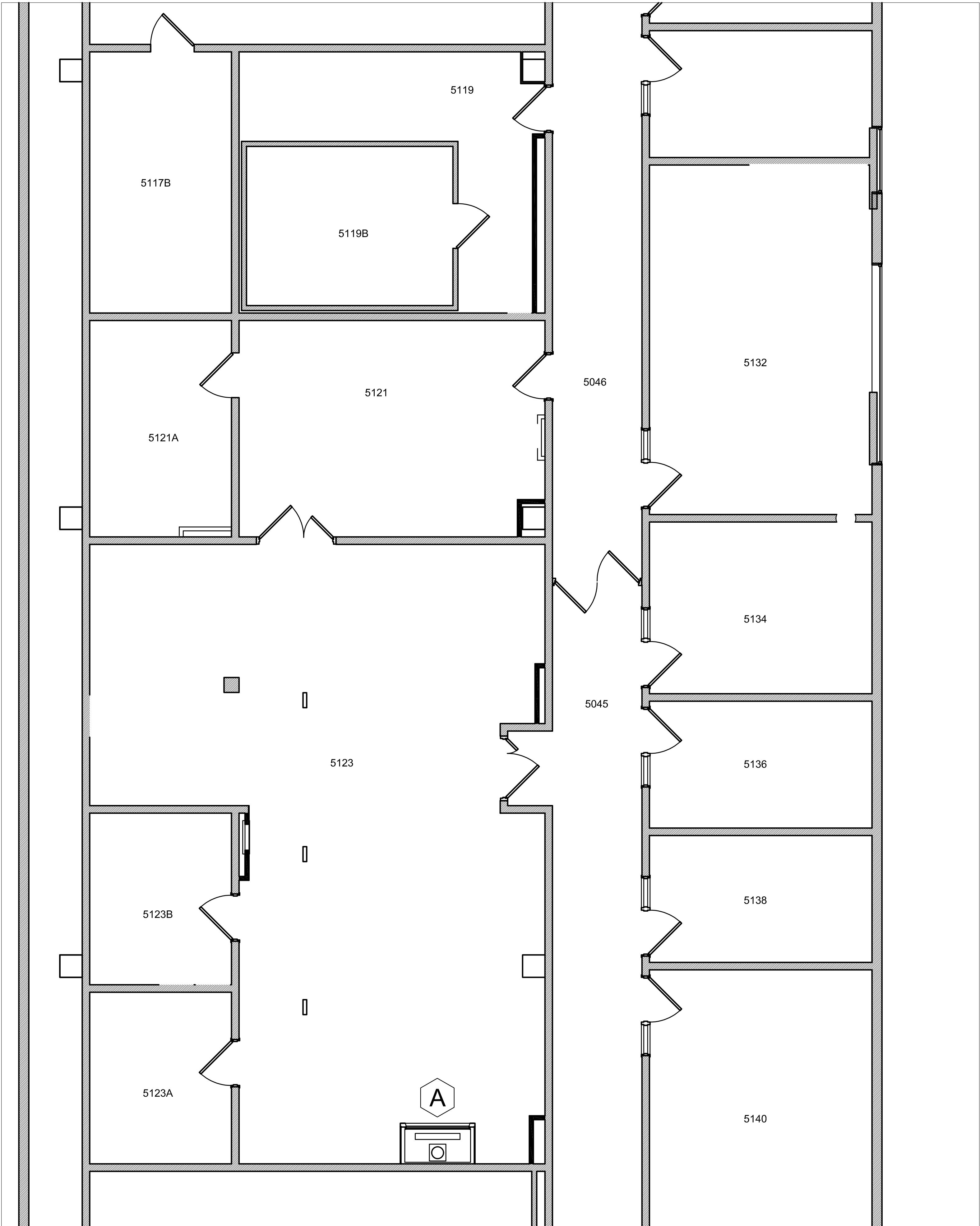
Facility Name:
Floor Level (in relation to Grade):
Approved Sprinkler:
Approved Cabinets:

Comstock Hall
5th Floor in the 5th level above grade
Yes
Yes

Summary

Two (2) Control Areas are allowed on this level.

Material	Class	Units	Storage		Closed System		Open System		Notes
			Per Control Area	Total per Area Adjusted Floor	Per Control Area	Total per Area Adjusted Floor	Per Control Area	Total per Area Adjusted Floor	
1	Combustible Liquids	II	Gallons	120.00 240.00	60.00 120.00	30.00 60.00	30.00 60.00		
III		unlimited unlimited	unlimited unlimited	unlimited unlimited	unlimited unlimited	Unlimited if building is fully sprinklered			
IIIB		unlimited unlimited	unlimited unlimited	unlimited unlimited	unlimited unlimited				
2	Combustible Fiber	Loose Mass	Cubic Feet	50.00 100.00	50.00 100.00	10.00 20.00	10.00 20.00		
3	Compressed Gases	I, II, III	Pounds	50.00 100.00	25.00 50.00	10.00 20.00	10.00 20.00		
IV		unlimited unlimited	unlimited unlimited	unlimited unlimited	unlimited unlimited				
IVB		unlimited unlimited	unlimited unlimited	unlimited unlimited	unlimited unlimited				
4	Compressed Gases	I, II, III	Pounds	15.00 30.00	7.50 15.00	3.00 6.00	3.00 6.00		
IV		unlimited unlimited	unlimited unlimited	unlimited unlimited	unlimited unlimited				
IVB		unlimited unlimited	unlimited unlimited	unlimited unlimited	unlimited unlimited				
5	Cryogenics, Oxidizing	I, II, III	Gallons	45.00 90.00	45.00 90.00	10.00 20.00	10.00 20.00		
IV		unlimited unlimited	unlimited unlimited	unlimited unlimited	unlimited unlimited				
IVB		unlimited unlimited	unlimited unlimited	unlimited unlimited	unlimited unlimited				
6	Explosives	Div 1.1	Pounds	2.50 1.00	0.13 0.25	0.13 0.25	0.13 0.25	Building must be fully sprinklered	
Div 1.2		Pounds	1.00 2.00	0.13 0.25	0.13 0.25	0.13 0.25	Building must be fully sprinklered		
Div 1.3		Pounds	2.50 5.00	0.25 0.50	0.10 0.20	0.10 0.20	Building must be fully sprinklered		
7	Explosives	Div 1.4	Pounds	50.00 100.00	25.00 50.00	10.00 20.00	10.00 20.00	Building must be fully sprinklered	
Div 1.5		Pounds	2.50 5.00	0.25 0.50	0.10 0.20	0.10 0.20	Building must be fully sprinklered		
Div 1.6		Pounds	125.00 250.00	0.00 0.00	0.00 0.00	0.00 0.00	Fuel in tanks or vehicles		
8	Explosives	Div 1.7	Pounds	2.50 1.00	0.13 0.25	0.13 0.25	0.13 0.25	Building must be fully sprinklered	
Div 1.8		Pounds	1.00 2.00	0.13 0.25	0.13 0.25	0.13 0.25	Building must be fully sprinklered		
Div 1.9		Pounds	125.00 250.00	0.00 0.00	0.00 0.00	0.00 0.00	Building must be fully sprinklered		
9	Flammable Gas	Gaseous	Cubic Feet	1000.00 2000.00	1000.00 2000.00	N/A N/A	N/A N/A		
10	Flammable Gas	Liquid	Gallons	100.00 200.00	100.00 200.00	N/A N/A	N/A N/A		
11	Flammable Liquid	IA	Gallons	30.00 60.00	30.00 60.00	10.00 20.00	10.00 20.00	See combination values	
12	Combination Flammable Liquid (IA, B, C)	IB and IC	Gallons	45.00 90.00	45.00 90.00	10.00 20.00	10.00 20.00	See combination values	
13		Flammable Solid	unlimited unlimited	unlimited unlimited	unlimited unlimited	unlimited unlimited			
14	Organic Peroxide	II	Pounds	150.00 300.00	150.00 300.00	25.00 50.00	25.00 50.00	Building must be fully sprinklered	
15		III	Pounds	1.00 2.00	0.13 0.25	0.13 0.25	0.13 0.25	Building must be fully sprinklered	
16		IV	Pounds	unlimited unlimited	unlimited unlimited	unlimited unlimited	unlimited unlimited		
17	Organic Peroxide	III	Pounds	150.00 300.00	150.00 300.00	25.00 50.00	25.00 50.00	Building must be fully sprinklered	
18		IV	Pounds	unlimited unlimited	unlimited unlimited	unlimited unlimited	unlimited unlimited		
19		V	Pounds	unlimited unlimited	unlimited unlimited	unlimited unlimited	unlimited unlimited		
20	Oxidizer	II	Pounds	250.00 500.00	250.00 500.00	50.00 100.00	50.00 100.00	Building must be fully sprinklered	
21		III	Pounds	1.00 2.00	0.13 0.25	0.13 0.25	0.13 0.25	Building must be fully sprinklered	
22		IV	Pounds	unlimited unlimited	unlimited unlimited	unlimited unlimited	unlimited unlimited		
23	Oxidizer	III	Pounds	250.00 500.00	250.00 500.00	50.00 100.00	50.00 100.00	Building must be fully sprinklered	
24		IV	Pounds	unlimited unlimited	unlimited unlimited	unlimited unlimited	unlimited unlimited		
25		V	Pounds	unlimited unlimited	unlimited unlimited	unlimited unlimited	unlimited unlimited		
26	Oxidizing Gas	Gaseous	Cubic Feet	2000.00 4000.00	2000.00 4000.00	unlimited unlimited	unlimited unlimited	Unlimited if building is fully sprinklered	
27		Liquid	Gallons	150.00 300.00	150.00 300.00	N/A N/A	N/A N/A		
28		Pyrophoric Material	unlimited unlimited	unlimited unlimited	unlimited unlimited	unlimited unlimited	unlimited unlimited		
29	Pyrophoric Material	II	Pounds	2.00 4.00	0.25 0.50	0.10 0.20	0.10 0.20	Building must be fully sprinklered	
30		III	Pounds	2.00 4.00	0.25 0.50	0.10 0.20	0.10 0.20	Building must be fully sprinklered	
31		IV	Pounds	unlimited unlimited	unlimited unlimited	unlimited unlimited	unlimited unlimited		
32	Unstable (reactive)	II	Pounds	1.00 2.00	0.13 0.25	0.13 0.25	0.13 0.25	Building must be fully sprinklered	
33		III	Pounds	1.00 2.00	0.13 0.25	0.13 0.25	0.13 0.25	Building must be fully sprinklered	
34		IV	Pounds	unlimited unlimited	unlimited unlimited	unlimited unlimited	unlimited unlimited		
35	Unstable (reactive)	III	Pounds	1.00 2.00	0.13 0.25	0.13 0.25	0.13 0.25	Building must be fully sprinklered	
36		IV	Pounds	unlimited unlimited	unlimited unlimited	unlimited unlimited	unlimited unlimited		
37		V	Pounds	unlimited unlimited	unlimited unlimited	unlimited unlimited	unlimited unlimited		
38	Water Reactive	II	Pounds	1.00 2.00	0.13 0.25	0.13 0.25	0.13 0.25	Building must be fully sprinklered	
39		III	Pounds	1.00 2.00	0.13 0.25	0.13 0.25	0.13 0.25	Building must be fully sprinklered	
40		IV	Pounds	unlimited unlimited	unlimited unlimited	unlimited unlimited	unlimited unlimited		
41	Corrosive	II	Pounds	500.00 1000.00	500.00 1000.00	100.00 200.00	100.00 200.00		
42		Liquid	Gallons	100.00 200.00	100.00 200.00	N/A N/A	N/A N/A		
43		Liquid	Gallons	100.00 200.00	100.00 200.00	N/A N/A	N/A N/A		
44	Corrosive	III	Pounds	100.00 200.00	100.00 200.00	N/A N/A	N/A N/A		
45		Liquid	Gallons	100.00 200.00	100.00 200.00	N/A N/A	N/A N/A		
46		Solid	Pounds	100.00 200.00	100.00 200.00	N/A N/A	N/A N/A		
47	Highly Toxic	II	Pounds	10.00 20.00	10.00 20.00	3.00 6.00	3.00 6.00		
48		Liquid	Gallons	10.00 20.00	10.00 20.00	3.00 6.00	3.00 6.00		
49		Liquid	Gallons	10.00 20.00	10.00 20.00	3.00 6.00	3.00 6.00		
50	Toxic	II	Pounds	500.00 1000.00	500.00 1000.00	125.00 250.00	125.00 250.00		
51		Liquid	Gallons	100.00 200.00	100.00 200.00	25.00 50.00	25.00 50.00		
52		Liquid	Gallons	100.00 200.00	100.00 200.00	25.00 50.00	25.00 50.00		
53	Toxic	III	Pounds	150.00 300.00	150.00 300.00	30.00 60.00	30.00 60.00		
54		Liquid	Gallons	10.00 20.00	10.00 20.00	3.00 6.00	3.00 6.00		
55		Solid	Pounds	10.00 20.00	10.00 20.00	3.00 6.00	3.00 6.00		
56	Toxic	IV	Pounds	unlimited unlimited	unlimited unlimited	unlimited unlimited	unlimited unlimited		
57		Liquid	Gallons	10.00 20.00	10.00 20.00	3.00 6.00	3.00 6.00		
58		Solid	Pounds	10.00 20.00	10.00 20.00	3.00 6.00	3.00 6.00		
59	Toxic	IV	Pounds	unlimited unlimited	unlimited unlimited	unlimited unlimited	unlimited unlimited		
60		Liquid	Gallons	10.00 20.00	10.00 20.00	3.00 6.00	3.00 6.00		
61		Solid	Pounds	10.00 20.00	10.00 20.00	3.00 6.00	3.00 6.00		
62	Toxic	V	Pounds	unlimited unlimited	unlimited unlimited	unlimited unlimited	unlimited unlimited		
63		Liquid	Gallons	10.00 20.00	10.00 20.00	3.00 6.00	3.00 6.00		
64		Solid	Pounds	10.00 20.00	10.00 20.00	3.00 6.00	3.00 6.00		
65	Toxic	V	Pounds	unlimited unlimited	unlimited unlimited	unlimited unlimited	unlimited unlimited		
66		Liquid	Gallons	10.00 20.00	10.00 20.00	3.00 6.00	3.00 6.00		
67		Solid	Pounds	10.00 20.00	10.00 20.00	3.00 6.00	3.00 6.00		
68	Toxic	V	Pounds	unlimited unlimited	unlimited unlimited	unlimited unlimited	unlimited unlimited		
69		Liquid	Gallons	10.00 20.00	10.00 20.00	3.00 6.00	3.00 6.00		
70		Solid	Pounds	10.00 20.00	10.00 20.00	3.00 6.00	3.00 6.00		
71	Toxic	V	Pounds	unlimited unlimited	unlimited unlimited	unlimited unlimited	unlimited unlimited		
72		Liquid	Gallons	10.00 20.00	10.00 20.00	3.00 6.00	3.00 6.00		
73		Solid	Pounds	10.00 20.00	10.00 20.00	3.00 6.00	3.00 6.00		
74	Toxic	V	Pounds	unlimited unlimited	unlimited unlimited	unlimited unlimited	unlimited unlimited		
75		Liquid	Gallons	10.00 20.00	10.00 20.00	3.00 6.00	3.00 6.00		
76		Solid	Pounds	10.00 20.00	10.00 20.00	3.00 6.00	3.00 6.00		
77	Toxic	V	Pounds	unlimited unlimited	unlimited unlimited	unlimited unlimited	unlimited unlimited		
78		Liquid	Gallons	10.00 20.00	10.00 20.00	3.00 6.00	3.00 6.00		
79		Solid	Pounds	10.00 20.00	10.00 20.00	3.00 6.00	3.00 6.00		
80	Toxic	V	Pounds	unlimited unlimited	unlimited unlimited	unlimited unlimited	unlimited unlimited		
81		Liquid	Gallons	10.00 20.00	10.00 20.00	3.00 6.00	3.00 6.00		
82		Solid	Pounds	10.00 20.00	10.00 20.00	3.00 6.00	3.00 6.00		
83	Toxic	V	Pounds	unlimited unlimited	unlimited unlimited	unlimited unlimited	unlimited unlimited		
84		Liquid	Gallons	10.00 20.00	10.00 20.00	3.00 6.00	3.00 6.00		
85		Solid	Pounds	10.00 20.00	10.00 20.00	3.00 6.00	3.00 6.00		
86	Toxic	V	Pounds	unlimited unlimited	unlimited unlimited	unlimited unlimited	unlimited unlimited		
87		Liquid	Gallons	10.00 20.00	10.00 20.00	3.00 6.00	3.00 6.00		
88		Solid	Pounds	10.00 20.00	10.00 20.00	3.00 6.00	3.00 6.00		
89	Toxic	V	Pounds	unlimited unlimited	unlimited unlimited	unlimited unlimited	unlimited unlimited		
90		Liquid	Gallons	10.00 20.00	10.00 20.00	3.00 6.00	3.00 6.00		
91		Solid	Pounds	10.00 20.00	10.00 20.00	3.00 6.00	3.00 6.00		
92	Toxic	V	Pounds	unlimited unlimited	unlimited unlimited	unlimited unlimited	unlimited unlimited		
93		Liquid	Gallons	10.00 20.00	10.00 20.00	3.00 6.00	3.00 6.00		
94		Solid	Pounds	10.00 20.00	10.00 20.00	3.00 6.00	3.00 6.00		
95	Toxic	V	Pounds	unlimited unlimited	unlimited unlimited	unlimited unlimited	unlimited unlimited		
96		Liquid	Gallons	10.00 20.00	10.00 20.00	3.00 6.00	3.00 6.00		
97		Solid	Pounds	10.00 20.00	10.00 20.00	3.00 6.00	3.00 6.00		
98	Toxic	V	Pounds	unlimited unlimited	unlimited unlimited	unlimited unlimited	unlimited unlimited		
99		Liquid	Gallons	10.00 20.00	10.00 20.00	3.00 6.00	3.00 6.00		
100		Solid	Pounds	10.00 20.00	10.00 20.00	3.00 6.00	3.00 6.00		
101	Toxic	V	Pounds	unlimited unlimited	unlimited unlimited	unlimited unlimited	unlimited unlimited		
102		Liquid	Gallons	10.00 20.00	10.00 20.00	3.00 6.00	3.00 6.00		
103		Solid	Pounds	10.00 20.00	10.00 20.00	3.00 6.00	3.00 6.00		
104	Toxic	V	Pounds	unlimited unlimited	unlimited unlimited	unlimited unlimited	unlimited unlimited		
105		Liquid	Gallons	10.00 20.00	10.00 20.00	3.00 6.00	3.00 6.00		
106		Solid	Pounds	10.00 20.00	10.00 20.00	3.00 6.00	3.00 6.00		
107	Toxic	V	Pounds	unlimited unlimited	unlimited unlimited	unlimited unlimited	unlimited unlimited		
108		Liquid	Gallons	10.00 20.00	10.00 20.00	3.00 6.00	3.00 6.00		
109		Solid	Pounds	10.00 20.00	10.00 20.00	3.00 6.00	3.00 6.00		
110	Toxic	V	Pounds	unlimited unlimited	unlimited unlimited	unlimited unlimited	unlimited unlimited		
111		Liquid	Gallons	10.00 20.00	10.00 20.00	3.00 6.00	3.00 6.00		
112		Solid	Pounds	10.00 20.00	10.00 20.00	3.00 6.00	3.00 6.00		
113	Toxic	V	Pounds	unlimited unlimited	unlimited unlimited	unlimited unlimited	unlimited unlimited		
114		Liquid	Gallons	10.00 20.00	10.00 20.00	3.00 6.00	3.00 6.00		
115		Solid	Pounds	10.00 20.00	10.00 20.00	3.00 6.00	3.00 6.00		
116	Toxic	V	Pounds	unlimited unlimited	unlimited unlimited	unlimited unlimited	unlimited unlimited		
117		Liquid	Gallons	10.00 20.00	10.00 20.00	3.00 6.00	3.00 6.00		
118		Solid	Pounds	10.00 20.00	10.00 20.00	3.00 6.00	3.00 6.00		
119	Toxic	V	Pounds	unlimited unlimited	unlimited unlimited	unlimited unlimited	unlimited unlimited		
120		Liquid	Gallons	10.00 20.00	10.00 20.00	3.00 6.00	3.00 6.00		
121		Solid	Pounds	10.00 20.00	10.00 20.00	3.00 6.00	3.00 6.00		
122	Toxic	V	Pounds	unlimited unlimited	unlimited unlimited	unlimited unlimited	unlimited unlimited		
123		Liquid	Gallons	10.00 20.00	10.00 20.00	3.00 6.00	3.00 6.00		
124		Solid	Pounds	10.00 20.00	10.00 20.00	3.00 6.00	3.00 6.00		
125	Toxic	V	Pounds	unlimited unlimited	unlimited unlimited	unlimited unlimited	unlimited unlimited		
126		Liquid	Gallons	10.00 20.00	10.00 20.00	3.00 6.00	3.00 6.00		
127		Solid	Pounds	10.00 20.00	10.00 20.00	3.00 6.00	3.00 6.00		
128	Toxic	V	Pounds	unlimited unlimited	unlimited unlimited	unlimited unlimited	unlimited unlimited		
129		Liquid	Gallons	10.00 20.00	10.00 20.00	3.00 6.00	3.00 6.00		
130		Solid	Pounds	10.00 20.00	10.00 20.00	3.00 6.00	3.00 6.00		
131	Toxic	V	Pounds	unlimited unlimited	unlimited unlimited	unlimited unlimited	unlimited unlimited		
132		Liquid	Gallons	10.00 20.00	10.00 20.00	3.00 6.00	3.00 6.00		
133		Solid	Pounds	10.00 20.00	10.00 20.00	3.00 6.00	3.00 6.00		
134	Toxic	V	Pounds	unlimited unlimited	unlimited unlimited	unlimited unlimited	unlimited unlimited		



1 FIFTH FLOOR ABATEMENT PLAN
1/4" = 1'-0"

ASBESTOS ABATEMENT NOTES:

- THE NOTES AND DETAILS PRESENTED HERE AND INCLUDED IN SPECIFICATION SECTION 02 82 13 ARE APPLICABLE TO DRAWING AR-100.
- THE CONTRACTOR SHALL PERFORM ALL CONTRACT WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. ASBESTOS ABATEMENT OPERATIONS SHALL BE PERFORMED AS PER THE PROVISIONS AND CONDITIONS LISTED IN THE NEW YORK STATE DEPARTMENT OF LABOR (NYS DOL) INDUSTRIAL CODE RULE NO. 56 (CITED AS 12 NYCRR PART 56) AND ALL APPLICABLE STATE, FEDERAL AND LOCAL CODES.
- ANY SITE SPECIFIC VARIANCE (SSV) NECESSARY TO ACCOMPLISH THE REMOVAL OF THE REFERENCED ASBESTOS CONTAINING MATERIALS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE SUBMITTED TO THE OWNERS REPRESENTATIVE FOR APPROVAL PRIOR TO SUBMISSION TO THE NYS DOL. THE COST ASSOCIATED WITH VARIANCE PREPARATION AND SUBMISSION OF ANY VARIANCE PETITION SHALL BE INCLUDED IN THE BASE BID.
- ABATEMENT OPERATIONS SHALL INCLUDE THE REMOVAL, PACKAGING AND DISPOSAL OF NON-ASBESTOS MATERIALS, ASBESTOS-CONTAMINATED MATERIALS AND ASBESTOS CONTAINING MATERIALS PRESENT WITHIN THE COMSTOCK HALL 5TH FLOOR LAB AND SUPPORT SPACE RENOVATION AREAS.
- ASBESTOS CONTAINING AND ASBESTOS CONTAMINATED MATERIALS TO BE REMOVED INCLUDE THE FOLLOWING:
 - NON-ASBESTOS TRESPA FUME HOOD LAB-TOP WITH ASBESTOS CONTAINING MASTIC: THE NON-ASBESTOS TRESPA FUME HOOD LAB-TOP WITH ASBESTOS CONTAINING MASTIC TO BE REMOVED IS PRESENT IN ROOM 5123. REMOVAL SHALL INCLUDE THE NON-ASBESTOS LAB-TOP, ASSOCIATED ASBESTOS CONTAINING MASTIC, AND ANY MASTIC PRESENT ON THE BASE CABINET (1 SF). ABATEMENT OPERATIONS SHALL BE PERFORMED WITHIN A MINOR-PROJECT NEGATIVE PRESSURE TENT WORK AREA AS PER THE REQUIREMENTS OF 12 NYCRR PART 56 SUBPART 56-3 FOR MINOR ASBESTOS PROJECTS.
- ALL UTILITY DISCONNECTS AS NECESSARY FOR THE REMOVAL OF THE FUME HOODS / LAB-TOP SHALL BE PERFORMED BY OTHERS PRIOR TO THE START OF ABATEMENT OPERATIONS.
- FOR MINOR-PROJECT NEGATIVE PRESSURE WORK AREAS, NEGATIVE AIR EXHAUST SHALL BE LOCALIZED VIA A HEPA VACUUM.
- THE CONTRACTOR SHALL SUBMIT A WRITTEN WORK PLAN FOR ASBESTOS ABATEMENT OPERATIONS FOR REVIEW AND APPROVAL AS PER THE REQUIREMENTS OF SPECIFICATIONS SECTION 028213. 1.5.
- THE CONTRACTOR SHALL COORDINATE THE SCHEDULED WORK WITH THE OWNER, OWNERS REPRESENTATIVE, AND ALL OTHER TRADES.
- THE CONTRACTOR SHALL MAINTAIN SECURITY IN EACH WORK AREA AND FOR THE OVERALL BUILDING AT ALL TIMES.
- THE LOCATION OF WASTE DUMPSTERS AND TRAILERS MUST BE APPROVED BY THE OWNER AND OWNERS REPRESENTATIVE PRIOR TO THE START OF THE PROJECT.
- TEMPORARY SHUTDOWN OF HVAC AND LOCK OUT OF ELECTRIC POWER TO ABATEMENT WORK AREAS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE COORDINATED WITH THE OWNER. IF ELECTRICAL CIRCUITS, MACHINERY AND OTHER ELECTRICAL SYSTEMS IN OR PASSING THROUGH A GIVEN REGULATED ABATEMENT WORK AREA MUST STAY IN OPERATION, THE CONTRACTOR SHALL ISOLATE/SEAL THE LIVE ELECTRIC AS PER THE REQUIREMENTS OF 12 NYCRR PART 56 SUBPART 56-7.7. ALL TEMPORARY POWER TO THE WORK AREAS SHALL BE BROUGHT IN FROM OUTSIDE THE WORK AREA THROUGH A GROUND-FAULT CIRCUIT INTERRUPTER AT THE SOURCE. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL TEMPORARY POWER (INCLUDING THE POWER REQUIRED BY THE OWNERS REPRESENTATIVE FOR AIR SAMPLING EQUIPMENT). ALL OPERATIONS ASSOCIATED WITH ELECTRICAL SERVICE WORK (I.E. LOCKOUT, TEMPORARY POWER HOOK-UP, ETC.) SHALL BE PERFORMED BY A LICENSED ELECTRICIAN.
- COORDINATE HOOK-UP OF WATER SOURCE/SERVICE FOR ABATEMENT WORK AND DECONTAMINATION PURPOSES WITH THE OWNER. PROVIDE AND UTILIZE AN ELECTRIC WATER HEATER FOR THE PROJECT. TEMPORARY WATER CONNECTIONS SHALL BE MADE BY THE CONTRACTOR AND MAINTAINED IN A LEAK FREE STATE AT ALL TIMES.
- UNDER NO CIRCUMSTANCES SHALL CONTAMINATED LIQUIDS OR DEBRIS ENTER THE EXISTING SEWER SYSTEM. ALL WASTEWATER SHALL BE FILTERED THROUGH A SYSTEM WITH AT LEAST 5.0 MICRON PARTICLE SIZE COLLECTION CAPABILITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY WASTEWATER PERMITS REQUIRED TO PERFORM HIS WORK UNDER THIS CONTRACT. ANY COST ASSOCIATED WITH WASTE WATER PERMITS SHALL BE INCLUDED IN HIS BID.
- PRE-CLEAN NON-MOVABLE ITEMS PRIOR TO ISOLATING/PROTECTING VIA CRITICAL BARRIER INSTALLATION.
- ABATEMENT CONTRACTOR SHALL RECEIVE APPROVAL FOR EACH WORK AREA BASED ON APM INSPECTION TO ASSURE ALL OPENINGS AND PENETRATIONS HAVE BEEN SEALED PROPERLY AND ALL WORK AREA PREPARATION IS COMPLETE BEFORE ANY ABATEMENT IS UNDERTAKEN.
- AIR MONITORING REQUIRED TO SATISFY THE REQUIREMENTS OF 12 NYCRR PART 56 SHALL BE PERFORMED BY A THIRD PARTY INDEPENDENT ENVIRONMENTAL CONSULTANT HIRED DIRECTLY BY THE OWNER. THE CONTRACTOR SHALL COORDINATE WITH THE THIRD PARTY CONSULTING FIRMS ONSITE APM. AIR MONITORING AND ANALYSIS TO SATISFY OSHA REQUIREMENTS SHALL BE THE CONTRACTORS RESPONSIBILITY.
- COORDINATE ALL ASBESTOS ABATEMENT (INCLUDING BUT NOT LIMITED TO CONTAINMENT CONFIGURATIONS, DECONTAMINATION UNIT LOCATIONS, NEGATIVE AIR EXHAUST LOCATIONS AND SEQUENCE OF ABATEMENT) WITH THE OWNERS REPRESENTATIVE.

LEGEND AND KEYED NOTES

SYMBOL	DESCRIPTION
	NON-ASBESTOS TRESPA FUME HOOD LAB-TOP WITH ASBESTOS CONTAINING MASTIC TO BE REMOVED - 1 LAB-TOP / 1 SF MASTIC TOTAL

ASBESTOS DESIGN
PREPARED BY:
STEPHEN PRISLUPSKY
NYS DOL CERTIFIED ASBESTOS
PROJECT DESIGNER
CERTIFICATE NO. 24-6L43B-SHAB

Drawn By: SMP
Checked By: WTJ
Project Manager: SMP

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Revisions

CORNELL UNIVERSITY
COMSTOCK HALL 5TH FLOOR
LAB AND SUPPORT SPACE
RENOVATIONS

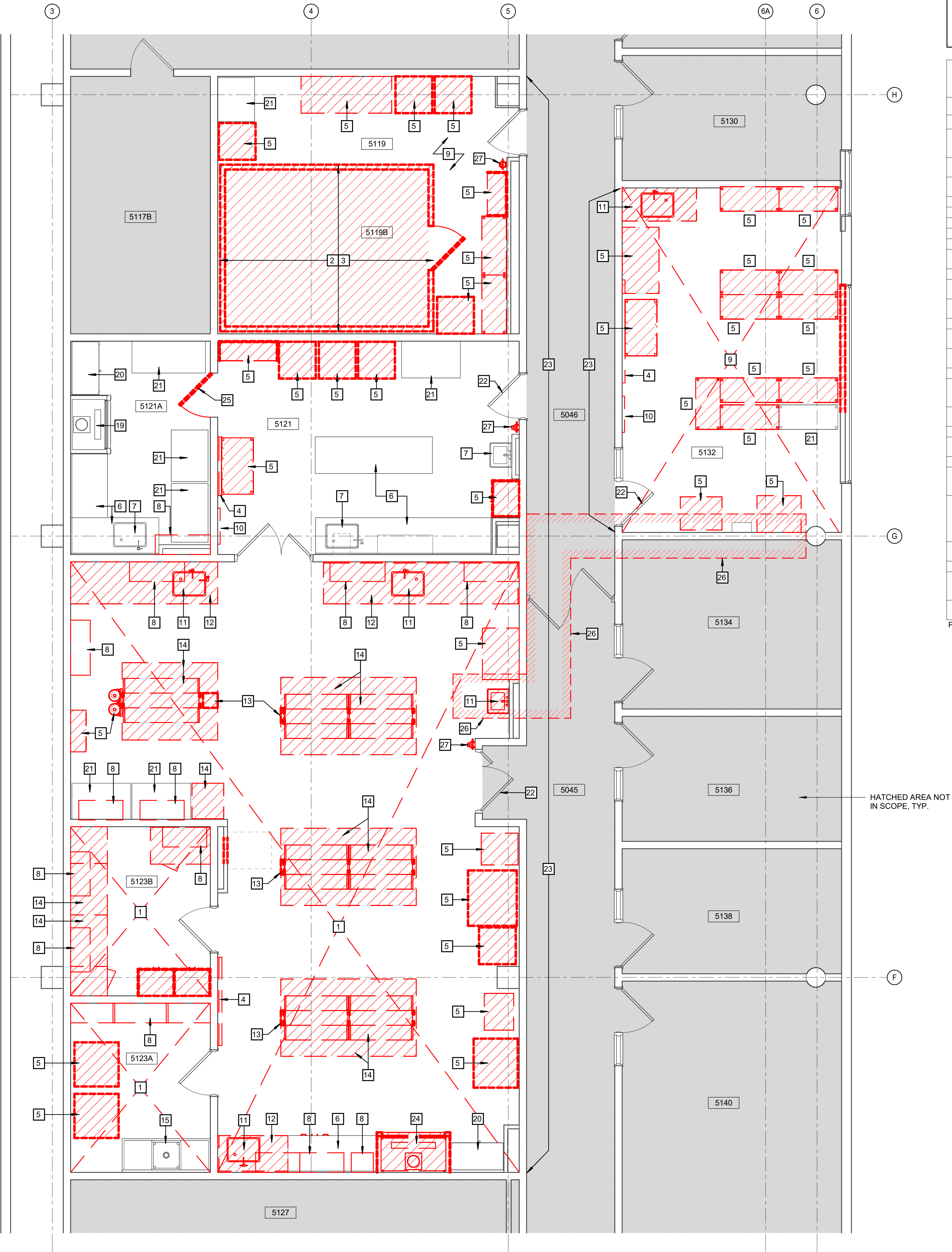
Garden Ave, Ithaca, NY 14853
SWBR Project Number 25044.00

Cornell University
Ithaca, NY 14853

AR-100
FIFTH FLOOR
ASBESTOS
ABATEMENT PLAN

11/7/2025

100% Construction
Documents



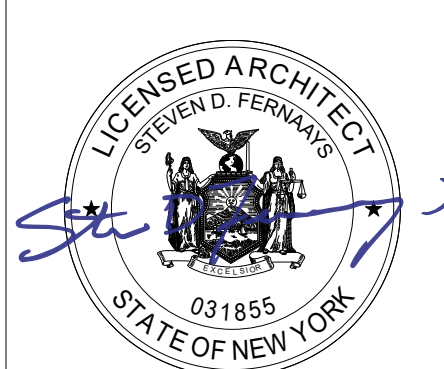
1 PARTIAL FIFTH FLOOR DEMOLITION PLAN
1/4" = 1'-0"

GENERAL DEMOLITION NOTES

1. DOCUMENTATION OF EXISTING CONDITIONS IS DERIVED FROM EXISTING SURVEYS, DRAWINGS AND LIMITED FIELD INSPECTION. PRIOR TO THE SUBMISSION OF BIDS, CONTRACTORS SHALL WALK THE SITE AND SATISFY THEMSELVES TO EXISTING VISUAL CONDITIONS. THE ARCHITECT SHALL BE CONSULTED WHEN ANY QUESTION ARISES RELATIVE TO MATERIALS AND CONDITIONS NOT SPECIFICALLY SHOWN OR SPECIFIED.
2. ALL EXISTING WORK (CEILING, FLOORS, WALLS, FINISHES, ETC.) DISTURBED BY NEW CONSTRUCTION SHALL BE PATCHED AND REFINISHED. PATCHING AND FINISH WORK IS THE REPAIR WORK REQUIRED TO RESTORE SURFACES TO THE ORIGINAL CONDITION AND/OR MATCHING THE ADJACENT SURFACES. MISCELLANEOUS FINISH REQUIREMENTS TO WALL, FLOOR AND CEILING IN AREAS AFFECTED BY DEMOLITION HAVE NOT BEEN TOTALLY INCORPORATED INTO THE ROOM FINISH SCHEDULE. REFER TO THE DEMOLITION, FLOOR AND REFLECTED CEILING PLANS FOR ADDITIONAL CUTTING, PATCHING AND REFINISHING WORK SCOPE.
3. ALL EXISTING FIRE-RESISTANT CONSTRUCTION MUST BE MAINTAINED OR MADE TO COMPLY WITH THE REQUIREMENTS AS ESTABLISHED BY THIS CONTRACT. SEE THE CODE COMPLIANCE PLANS FOR THE FIRE RESISTANT RATINGS OF EXISTING AND NEW CONSTRUCTION.
4. CARE SHALL BE TAKEN TO LIMIT IMPACT OF CONSTRUCTION ON THE SURROUNDING OCCUPANTS AND OPERATIONS DURING THE PROJECT. SAFE LEGAL PASSAGES SHALL BE PROVIDED FOR ALL BUILDING OCCUPANTS DURING ALL THE PHASES OF THIS PROJECT. THE CONTRACTOR SHALL COORDINATE PATHWAYS FOR CONSTRUCTION ACTIVITY AND SCHEDULE LOUD WORK WITH OWNER PRIOR TO COMMENCING CONSTRUCTION.
5. ALL CONTRACTORS ARE RESPONSIBLE FOR CUTTING AND PATCHING REQUIRED TO COMPLETE THEIR WORK. FOR NEW OPENINGS IN EXISTING MASONRY WALLS, UNLESS SPECIFICALLY INDICATED OTHERWISE, THE TRADE REQUIRING THE OPENING SHALL PROVIDE THE DEMOLITION, LINTEL, INSTALLATION AND RECONSTRUCTION.
6. CONTRACTORS ARE TO PROVIDE ADEQUATE SUPPORT FOR WALLS, LOAD-BEARING WALLS, AND PARTITIONS DURING DEMOLITION AND CONSTRUCTION.
7. WHEN EXISTING CONSTRUCTION WHICH IS TO REMAIN IS DAMAGED DURING THE COURSE OF CONSTRUCTION AS A RESULT OF CONTRACTOR'S WORK, IT SHALL BE REPAIRED AND/OR REPLACED WITH SIMILAR OR LIKE MATERIALS, SUBJECT TO ARCHITECT'S APPROVAL AND WITHOUT COMPENSATION.
8. ALL EXISTING FURNITURE AND EQUIPMENT TO BE REMOVED BY OWNER PRIOR TO START OF DEMOLITION. ALL EXISTING CASEWORK OR EQUIPMENT TO BE REMOVED AND INSTALLED, SHALL BE STORED BY CONTRACTOR TO FACILITATE FLOORING IMPROVEMENTS.

5TH FLOOR DEMOLITION KEY NOTES	
NO.	DESCRIPTION
1	CLEAN AND PREP EPOXY FLOORING AND INTEGRAL BASE TO RECEIVE NEW EPOXY FINISHES. REMOVE HIGH SPOTS AND FILL LOW SPOTS TO PROVIDE CONSISTENT SURFACE ACROSS THE LAB SPACES.
2	HATCHED AREA INDICATES REMOVAL OF CONCRETE PAD. PREP THE SURFACE TO RECEIVE SCHEDULED FLOORING AND WALL BASE.
3	REMOVE CHAMBER IN ITS ENTIRETY, INCLUDING ALL ATTACHED DUCTWORK, PIPING, AND CONDUIT. REFER TO MEP DRAWINGS FOR COMPLETE SCOPE OF SYSTEMS DISCONNECTION.
4	REMOVE CHALK/WHITEBOARD, PATCH WALL SURFACE AT REMOVAL.
5	FURNITURE/EQUIPMENT TO BE REMOVED AND STORED BY OWNER, TYP.
6	LAB TABLES AND BENCH TO REMAIN.
7	SINK TO REMAIN.
8	REMOVE WALL SHELF AND STANDARDS, PATCH WALL AT REMOVAL OF ANCHORS.
9	REMOVE VCT FLOORING AND RESILIENT WALL BASE. PREP CONCRETE SUBSTRATE TO RECEIVE NEW FINISH.
10	REMOVE COAT HOOKS.
11	REMOVE SINK AND BASE. CAP PLUMBING FOR SALVAGED SINK INSTALLATION. SEE PLUMBING DWGS. PATCH WALLS AND FLOOR AT REMOVAL OF BASE CABINET.
12	REMOVE LAB BENCH IN ITS ENTIRETY INCLUDING SINK AND BASE. CAP PLUMBING FOR NEW SINK INSTALLATION. SEE PLUMBING DWGS. PATCH WALLS AND FLOOR AT REMOVAL OF BENCH.
13	REMOVE UTILITY CHASE.
14	REMOVE LAB BENCH, CASEWORK, AND UPPER SHELVING ASSEMBLY WHERE PRESENT IN ITS ENTIRETY, INCLUDING ALL SERVICE CONNECTIONS.
15	REMOVE & SALVAGE STAINLESS SINK TO BE RELOCATED TO ROOM 5132. CAP PLUMBING PIPING, SEE PLUMBING DWGS. PATCH WALLS AT REMOVAL OF SINK.
16	REMOVE LIGHT FIXTURE. SEE ELEC. DWGS.
17	REMOVE SUSPENDED CEILING GRID AND PANELS, INCLUDING ALL LIGHTINGS, AIR TERMINALS, AND OTHER DEVICES LOCATED IN THE CEILING SYSTEM. SEE MEP DWGS FOR COMPLETE SCOPE OF REMOVALS.
18	REMOVE & SALVAGE SUSPENDED CEILING GRID AND PANELS. SALVAGE CEILING MOUNT LIGHT FIXTURES FOR REINSTALLATION. SEE MEP DWGS FOR COMPLETE SCOPE OF REMOVALS.
19	FUME HOOD TO REMAIN. PROTECTIVE MEASURES SHALL BE TAKEN DURING CONSTRUCTION.
20	FLAMMABLE CABINET TO REMAIN. PROTECTIVE MEASURES SHALL BE TAKEN DURING CONSTRUCTION.
21	SALVAGE FURNITURE/EQUIPMENT TO BE STORED AND REINSTALLED BY OWNER, TYP.
22	AT DOORS LOCATED IN CORRIDOR WALL THAT IS NO LONGER CONSIDERED RATED, REMOVE ANY TAGS INDICATING A FIRE RATING AND PROVIDE TAGS AT 8'-0" AFF INDICATING THAT OPENING HAS BEEN DECOMMISSIONED. BOD LABEL: REMED18
23	AT CORRIDOR WALL THAT IS NO LONGER CONSIDERED RATED, REMOVE ANY TAGS OR STENCILS INDICATING THAT THE PARTITION AND ANY FIRESTOPPED THROUGH PENETRATIONS ARE RATED. REMOVE ONE (1) FIRE DAMPER WITHIN THE RENOVATION AREA. PROVIDE LABELS AT 8'-0" AFF AND SPACED AT 48" OOC MAX ALONG LENGTH OF CORRIDOR WALL AT WORK AREA INDICATING THAT PARTITION IS DECOMMISSIONED. BOD LABEL: REMED18
24	REMOVE DECOMMISSIONED FUME HOOD. COORDINATE WITH OWNER'S REPRESENTATIVE. REFER TO MECHANICAL AND PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION.
25	REMOVE DOOR, FRAME, AND HARDWARE.
26	EXTENT OF REMOVALS AT 4TH FLOOR HARD CEILING TO FACILITATE PLUMBING INSTALLATION. SEE 2/A-130. APPROXIMATELY 120 SF. REMOVE AND SALVAGE EXISTING LIGHTING, AIR TERMINALS, AND OTHER CEILING-MOUNTED FIXTURES WITHIN AREA REQUIRED FOR PLUMBING INSTALLATION.
27	REMOVE AND SALVAGE FIRE EXTINGUISHER FOR REINSTALLATION. REMOVE EXISTING WALL BRACKET AND PATCH WALL AT REMOVAL.

PLEASE NOTE: NOT ALL KEYNOTES USED IN EACH VIEW.



Drawn By: SM
Checked By: MJP
Project Manager: MJP

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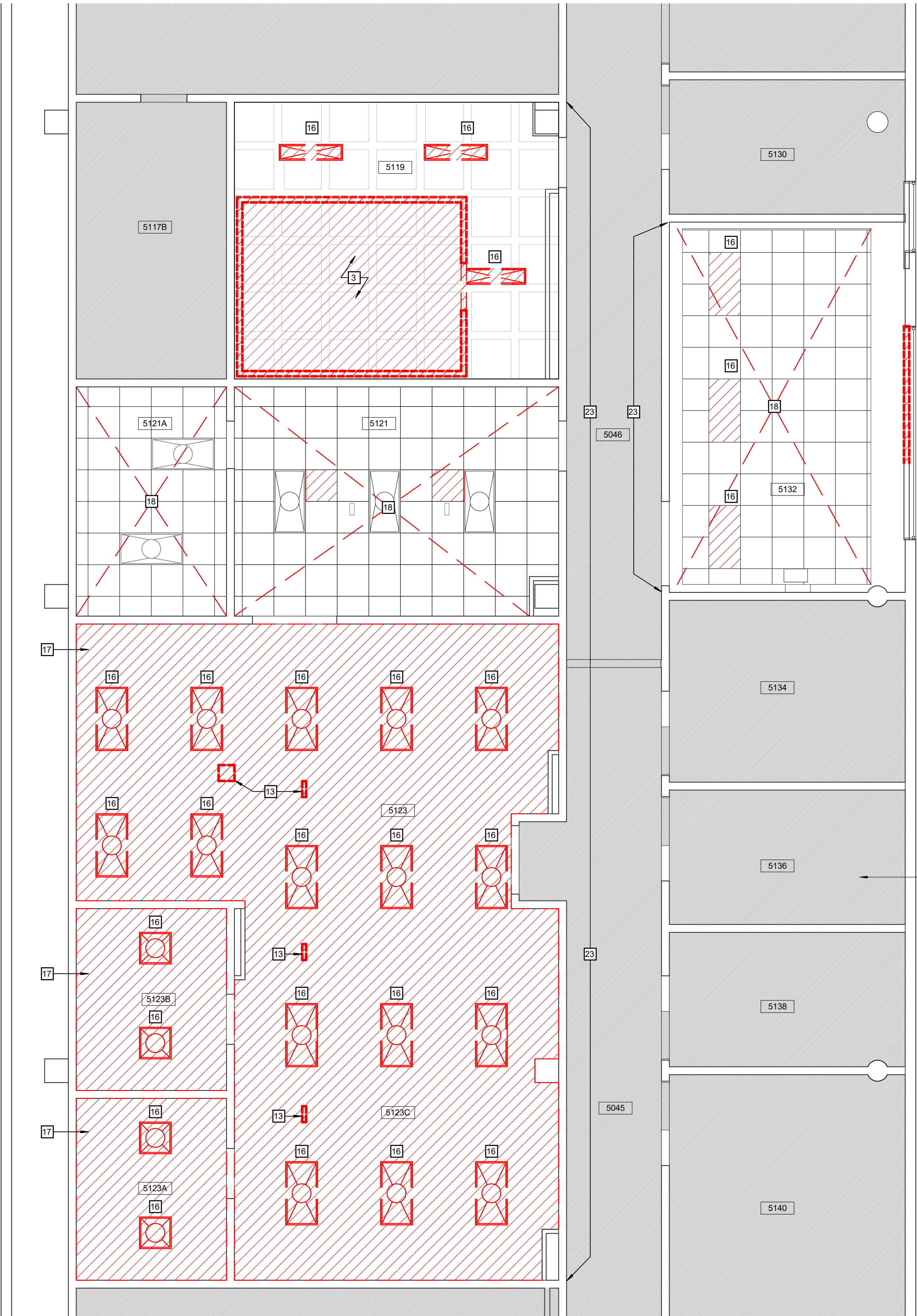
Revisions

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LAB AND SUPPORT SPACE
RENOVATIONS
129 Garden Ave
Ithaca, NY 14853
SWBR Project Number 25044.00

Cornell University
Ithaca, NY 14853

AD-101

FIFTH FLOOR
DEMOLITION PLAN

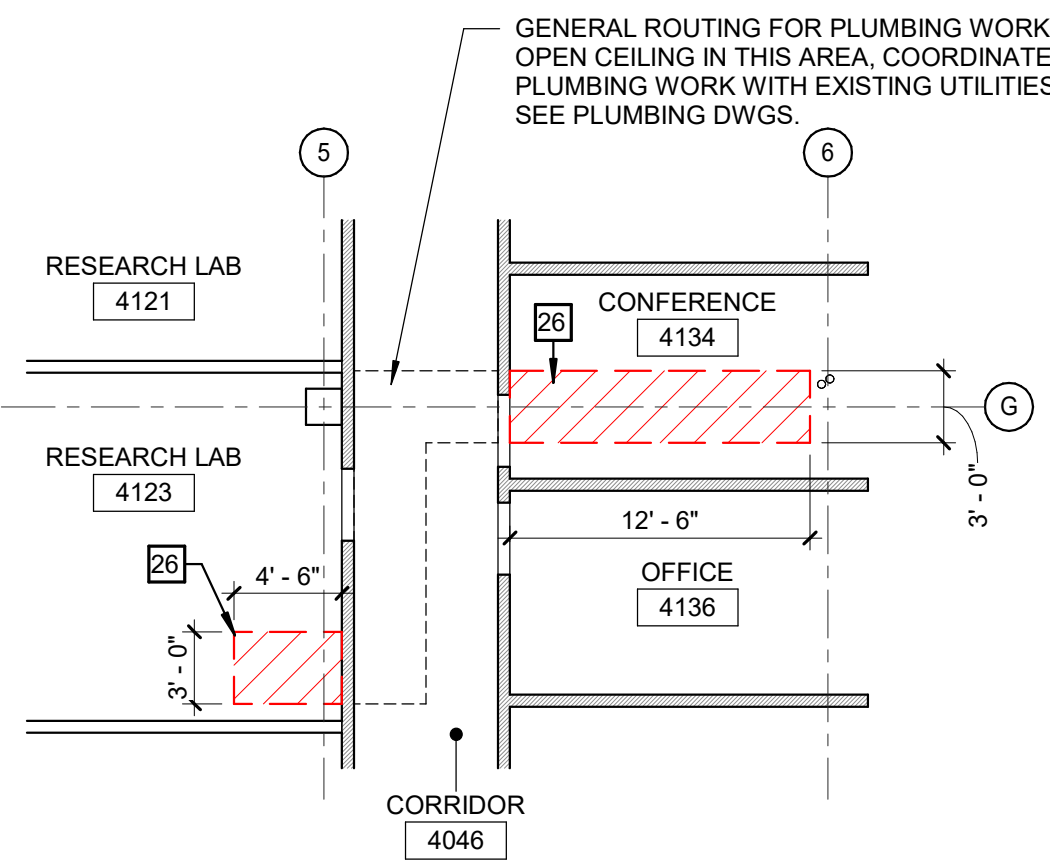


1 PARTIAL FIFTH FLOOR CEILING DEMOLITION PLAN
1/4" = 1'-0"

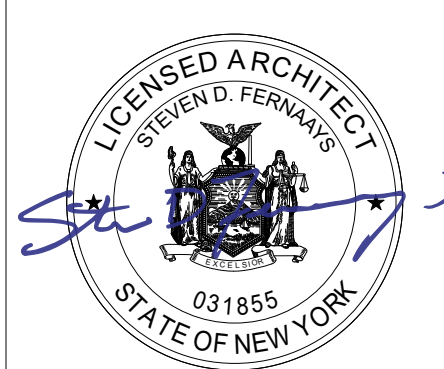
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20	FLAMMABLE CABINET TO REMAIN. PROTECTIVE MEASURES SHALL BE TAKEN DURING CONSTRUCTION.
21	SALVAGE FURNITURE/EQUIPMENT TO BE STORED AND REINSTALLED BY OWNER, TYP.
22	AT DOORS LOCATED IN CORRIDOR WALL THAT IS NO LONGER CONSIDERED RATED, REMOVE ANY TAGS INDICATING A FIRE RATING AND PROVIDE TAGS AT 8' - 0" AFF INDICATING THAT OPENING HAS BEEN DECOMMISSIONED. BOD LABEL: REMEDI8
23	AT CORRIDOR WALL THAT IS NO LONGER CONSIDERED RATED, REMOVE ANY TAGS OR STENCILS INDICATING THE PARTITION AND ANY FIRES TOPPED THROUGH PENETRATIONS ARE RATED. REMOVE ONE (1) FIRE DAMPER WITHIN THE RENOVATION AREA. PROVIDE LABELS AT 8' - 0" AFF AND SPACED AT 48" OC MAX ALONG LENGTH OF CORRIDOR WALL AT WORK AREA INDICATING THAT PARTITION IS DECOMMISSIONED. BOD LABEL: REMEDI8
24	REMOVE DECOMMISSIONED FUME HOOD. COORDINATE WITH OWNER'S REPRESENTATIVE. REFER TO MECHANICAL AND PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION.
25	REMOVE DOOR, FRAME, AND HARDWARE.
26	EXTENT OF REMOVALS AT 4TH FLOOR HARD CEILING TO FACILITATE PLUMBING INSTALLATION. SEE 2/A-130. APPROXIMATELY 120 SF. REMOVE AND SALVAGE EXISTING LIGHTING, AIR TERMINALS, AND OTHER CEILING MOUNTED FIXTURES WITHIN AREA REQUIRED FOR PLUMBING INSTALLATION.
27	REMOVE AND SALVAGE FIRE EXTINGUISHER FOR REINSTALLATION. REMOVE EXISTING WALL BRACKET AND PATCH WALL AT REMOVAL.

PLEASE NOTE: NOT ALL KEYNOTES USED IN EACH VIEW.



2 PARTIAL FOURTH FLOOR CEILING DEMOLITION PLAN
1/8" = 1'-0"



Drawn By: SM
Checked By: MJP
Project Manager: MJP

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Revisions

COMSTOCK HALL 5TH FLOOR
LAB AND SUPPORT SPACE
RENOVATIONS
129 Garden Ave
Ithaca, NY 14853
SWBR Project Number 25044.00

Cornell University
Ithaca, NY 14853

AD-111
FIFTH FLOOR
DEMOLITION RCP



1. ALL FLOORS, WALLS, CEILINGS, AND OTHER SURFACES THAT ARE TO REMAIN ARE TO BE PATCHED, REPAIRED, AND REFINISHED PRIOR TO FINISH INSTALLATION. ALL SURFACES ARE TO BE RESTORED TO THEIR ORIGINAL CONDITION AND/OR MATCH THE ADJACENT SURFACES.

2. NEW ADA FUME HOOD ("FH-1").

11/7/2025
100% Construction Documents

EXISTING LABS	
1	2
3	4
5	6
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9	10
11	12
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99	100



1 PARTIAL 5TH FLOOR REFLECTED CEILING PLAN
1/4" = 1'-0"

RCP LEGEND	
	CEILING TYPE
	CEILING HEIGHT A, F, F
	PAINT COLOR
	2' X 2' SUSPENDED ACOUSTICAL CEILING
	2' X 4' LIGHT FIXTURE - REFER TO E SERIES DWGS
	SUPPLY DIFFUSER - REFER TO M-SERIES DWGS
	RETURN GRILLES - REFER TO M-SERIES DWGS
	SPRINKLER HEAD - REFER TO FP-SERIES DWGS FOR TYPE

CEILING TYPES

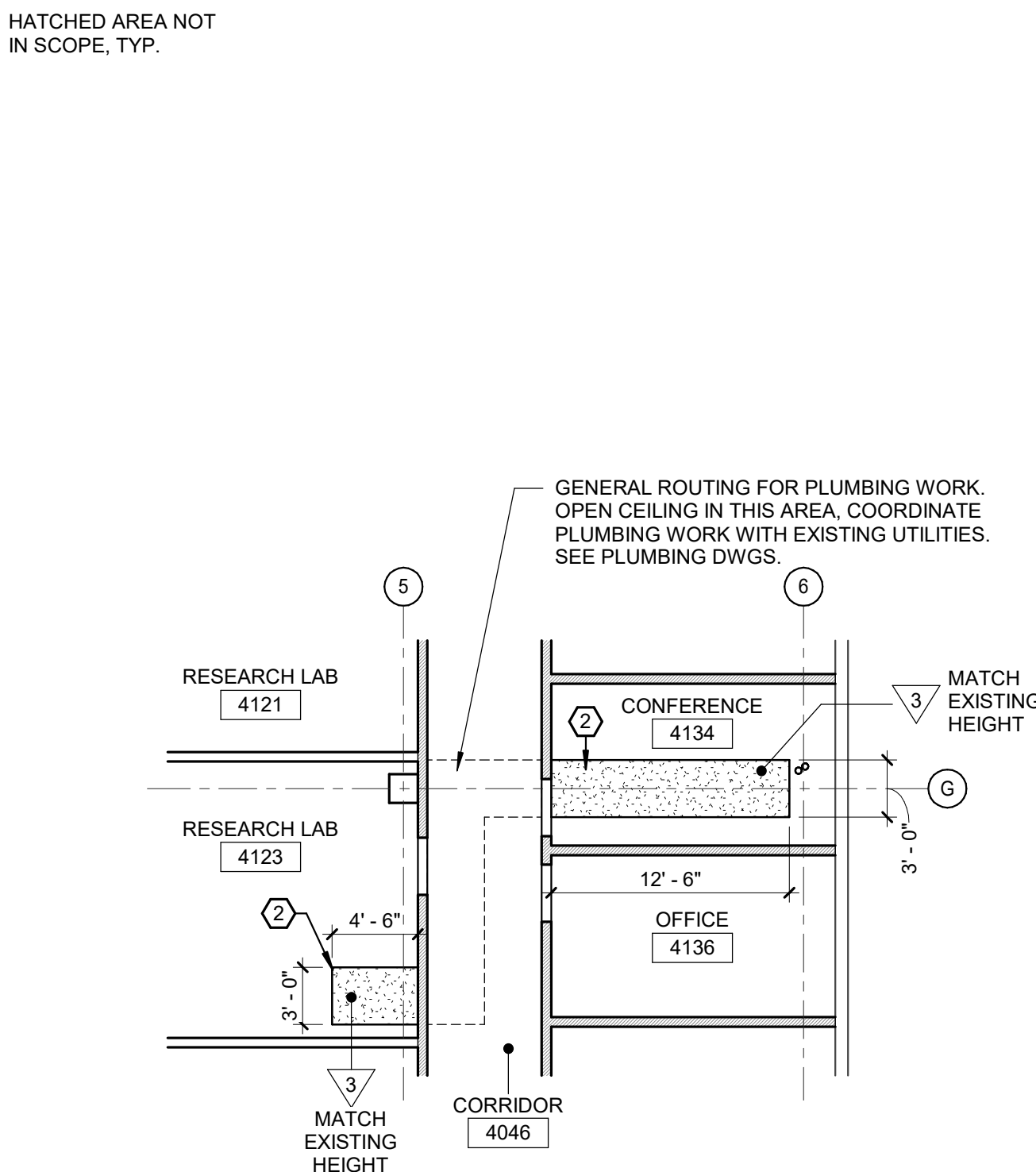
- 1 ACT - 1 ARMSTRONG CLEANROOM FL
- 2 EXISTING ACT CEILING - SALVAGE AND REINSTALL
- 3 INFILL GYP BOARD IN EXISTING CEILING AREA, PAINT

RCP GENERAL NOTES

- A. ALL CEILINGS ARE AT 8'-6" AFF UNLESS NOTED OTHERWISE
- B. ALL CEILINGS TO BE ACT-1 UNLESS NOTED OTHERWISE
- C. REFER TO AND COORDINATE WITH ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR SPECIFIC LIGHT FIXTURE INFORMATION.
- D. ALL GYP. BD. SOFFITS TO HAVE GYP. BD. VERTICAL RETURNS UP TO THE STRUCTURE ABOVE
- E. REFER TO AND COORDINATE WITH MECHANICAL AND PLUMBING DRAWINGS AND SPECIFICATIONS FOR SPECIFIC CEILING-MOUNTED FIXTURE INFORMATION AND LOCATIONS, INCLUDING BUT NOT LIMITED TO DIFFUSERS, GRILLS, ALARMS, EXIT SIGNS AND SENSORS.
- F. PAINT EXPOSED STRUCTURE AS INDICATED ON REFLECTED CEILING PLAN (ROOM FINISH SCHEDULE) INCLUDING STEEL DECK, BEAMS, AND TRUSSES.
- G. PAINT ALL MISCELLANEOUS HVAC, PLUMBING AND ELECTRICAL ITEMS EXPOSED ON WALLS AND HARD CEILINGS THAT ARE NOT OTHERWISE INDICATED TO BE PRE-FINISHED OR A SPECIFIC COLOR. THE COLOR SHALL MATCH THE ADJACENT OR BACKGROUND SURFACE.
- H. PAINT PORTIONS OF INTERNAL SURFACES OF METAL DUCTS, WITHOUT LINERS, BEHIND AIR INLETS AND OUTLETS THAT ARE VISIBLE FROM OCCUPIED SPACES. COLOR SHALL BE "FLAT BLACK."
- I. DO NOT PAINT OPERATIONAL COMPONENTS OF SYSTEMS SUCH AS SPRINKLER HEADS, FIRE, SMOKE, OR HEAT DETECTORS. COLORS OF THESE COMPONENTS ARE TO BE SELECTED TO MATCH BACKGROUND SURFACES, UNLESS OTHERWISE NOTED.
- J. ALL PAINTED CEILINGS AND EXPOSED CEILING ELEMENTS TO HAVE A "FLAT" FINISH, UNLESS OTHERWISE INDICATED.
- K. THE PAINT COLOR INDICATED ON GYPSUM BOARD SOFFITS SHALL APPLY TO BOTH THE HORIZONTAL AND VERTICAL SURFACES UNLESS OTHERWISE INDICATED.

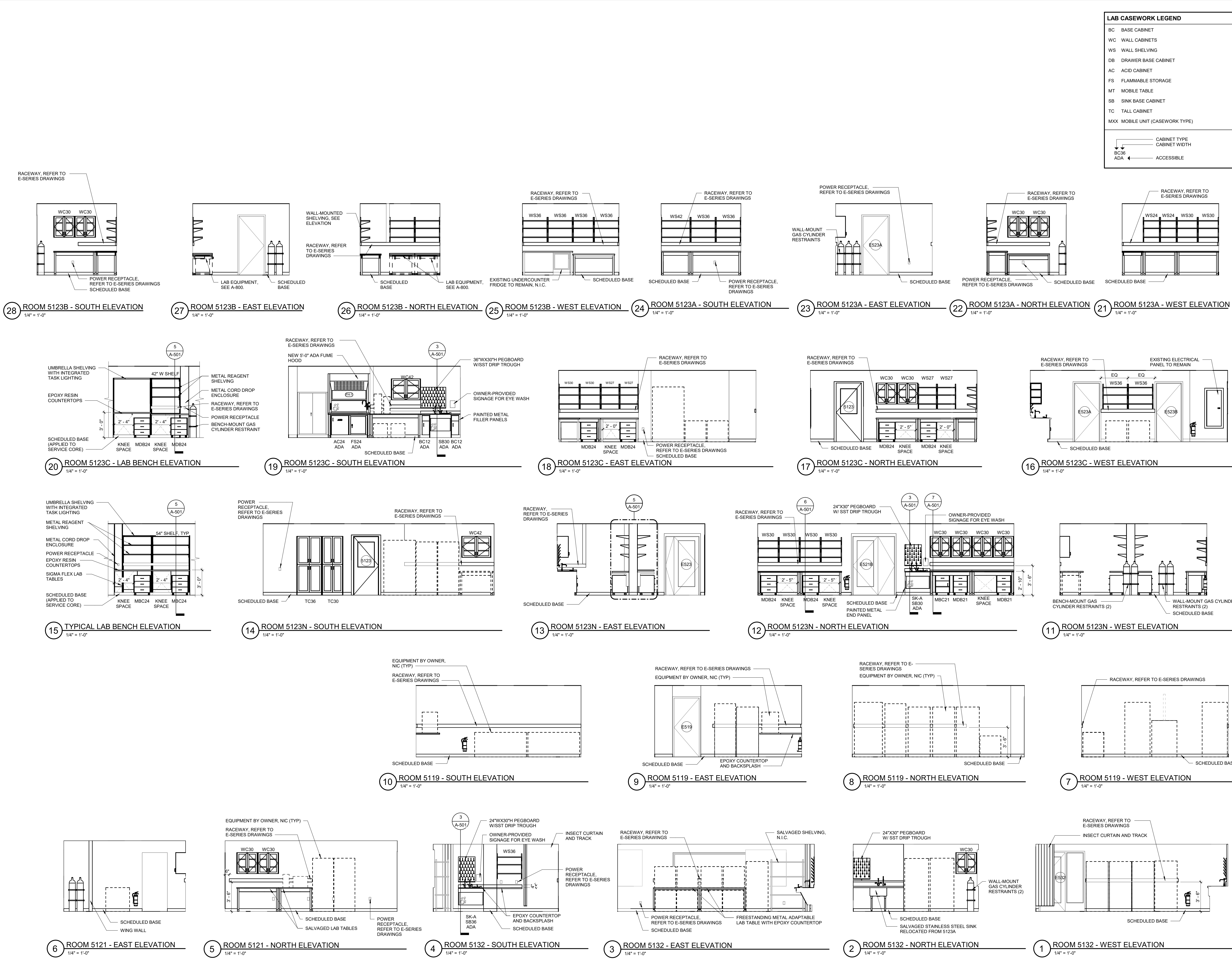
RCP KEY NOTES

RCP KEY NOTES	
NO.	
DESCRIPTION	
1	CORD AND CABLE REELS MOUNTED AT CEILING HEIGHT, ATTACHED TO UNDERSIDE OF DECK ABOVE WITH EXPANSION ANCHORS. PROVIDE SLOTTED CHANNEL TRAPEZE TO SUPPORT CORD REELS WHERE LOCATIONS CONFLICT WITH DUCTWORK OR EQUIPMENT. MOUNT CORD REEL HOUSING FLUSH TO CEILING, CONCEAL ALL PENETRATIONS THROUGH CEILING TILE.
2	EXTENT OF PLUMBING WORK ON THE 4TH FLOOR, PROVIDE GYP BOARD CEILING ON SALVAGED BACKUP SUSPENSION SYSTEM. PROVIDE FINISHED CEILING CONSISTENT WITH EXISTING ADJACENT. REINSTALL LIGHTING, AIR TERMINALS, AND OTHER FIXTURES THAT WERE REMOVED TO FACILITATE PLUMBING INSTALLATION.



2 PARTIAL FOURTH FLOOR REFLECTED CEILING PLAN
1/8" = 1'-0"

Revisions



SWBR

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SWBR NY's Certificate of Authorization # 235221

LICENCED ARCHITECT
RENE D. FERNANDES
021855
STATE OF NEW YORK

Issue Date: 11/07/25
Registration Expires: 11/30/27

Drawn By: SM
Checked By: MJP
Project Manager: MJP

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Revisions

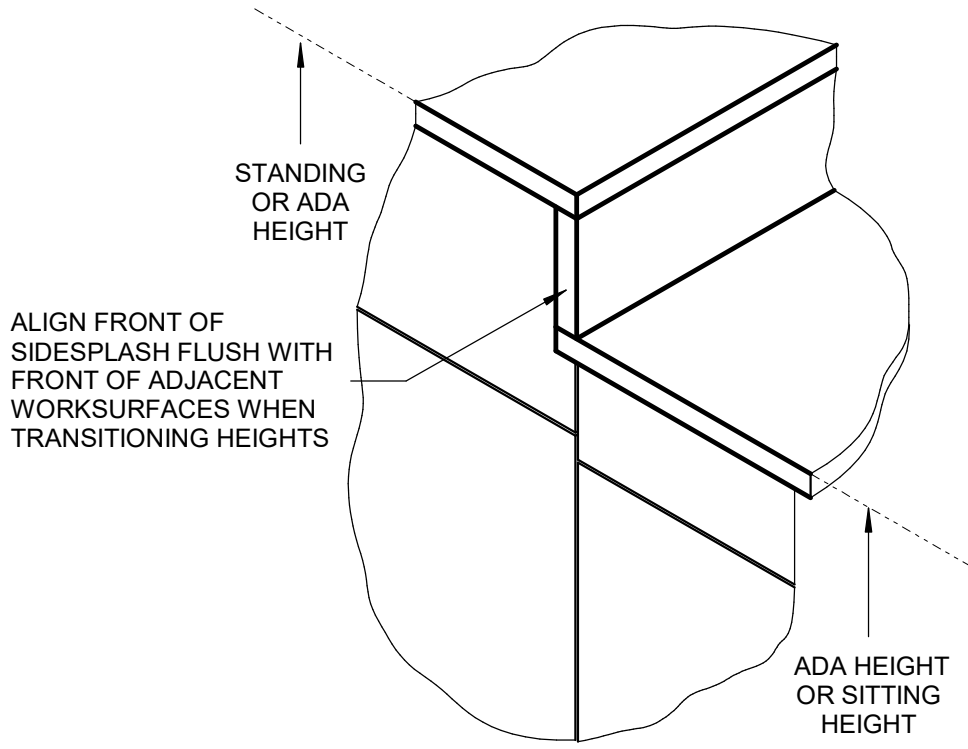
NO.	DESCRIPTION	DATE

**COMSTOCK HALL 5TH FLOOR
LAB AND SUPPORT SPACE
RENOVATIONS**
129 Garden Ave
Ithaca, NY 14853
SWBR Project Number 25044.00

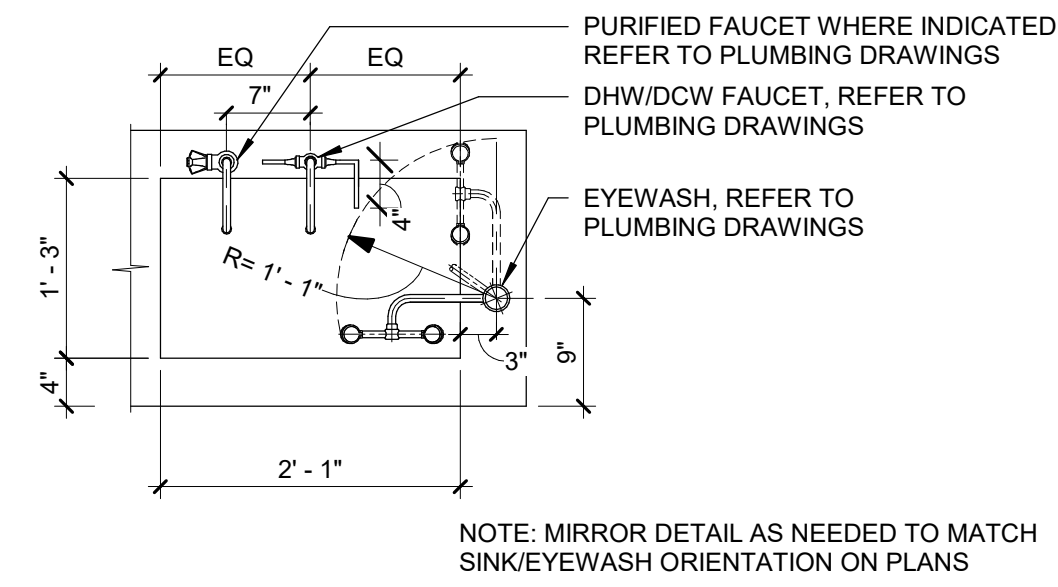
Cornell University
Ithaca, NY 14853

A-421
INTERIOR ELEVATIONS

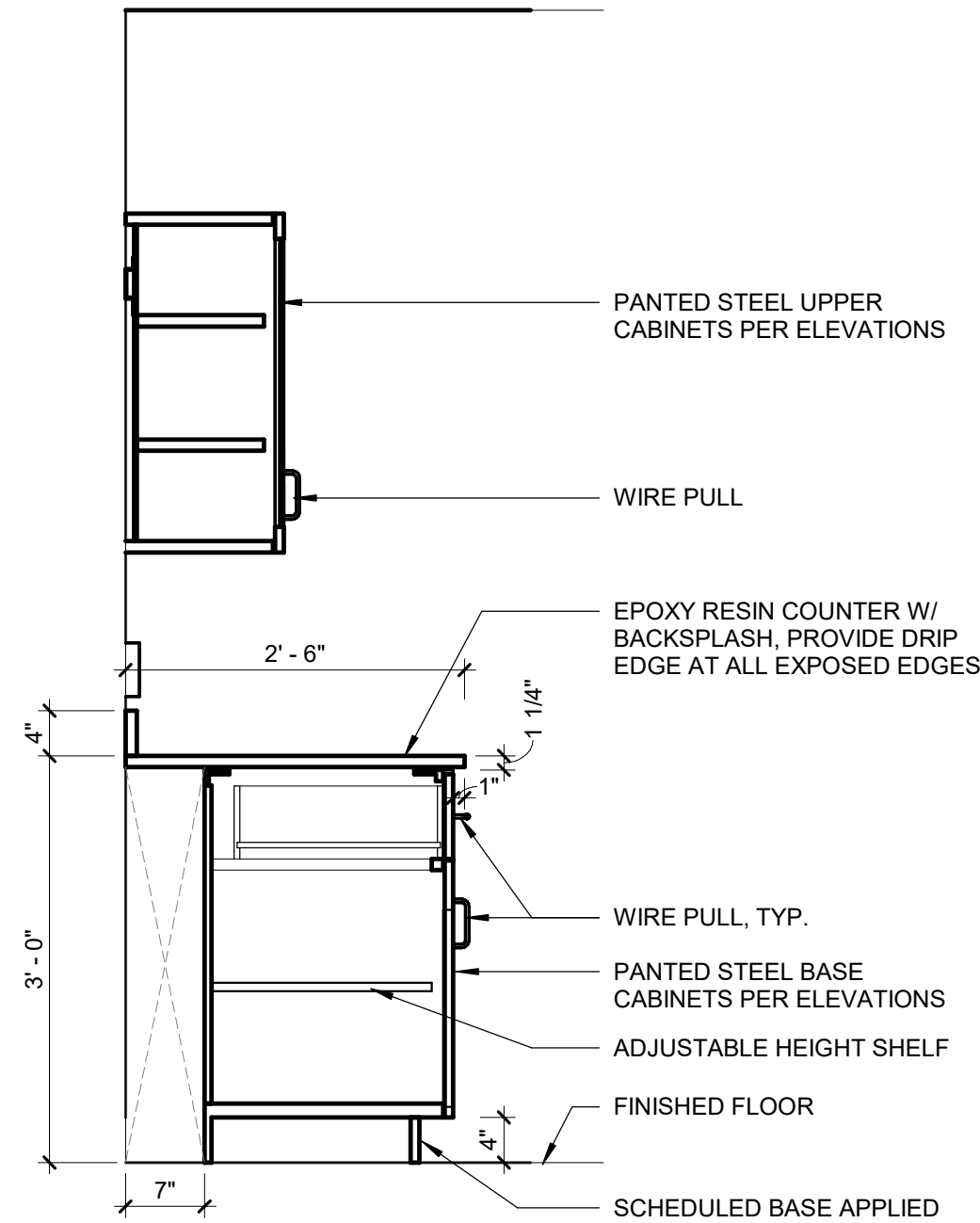
11/7/2025
100% Construction Documents



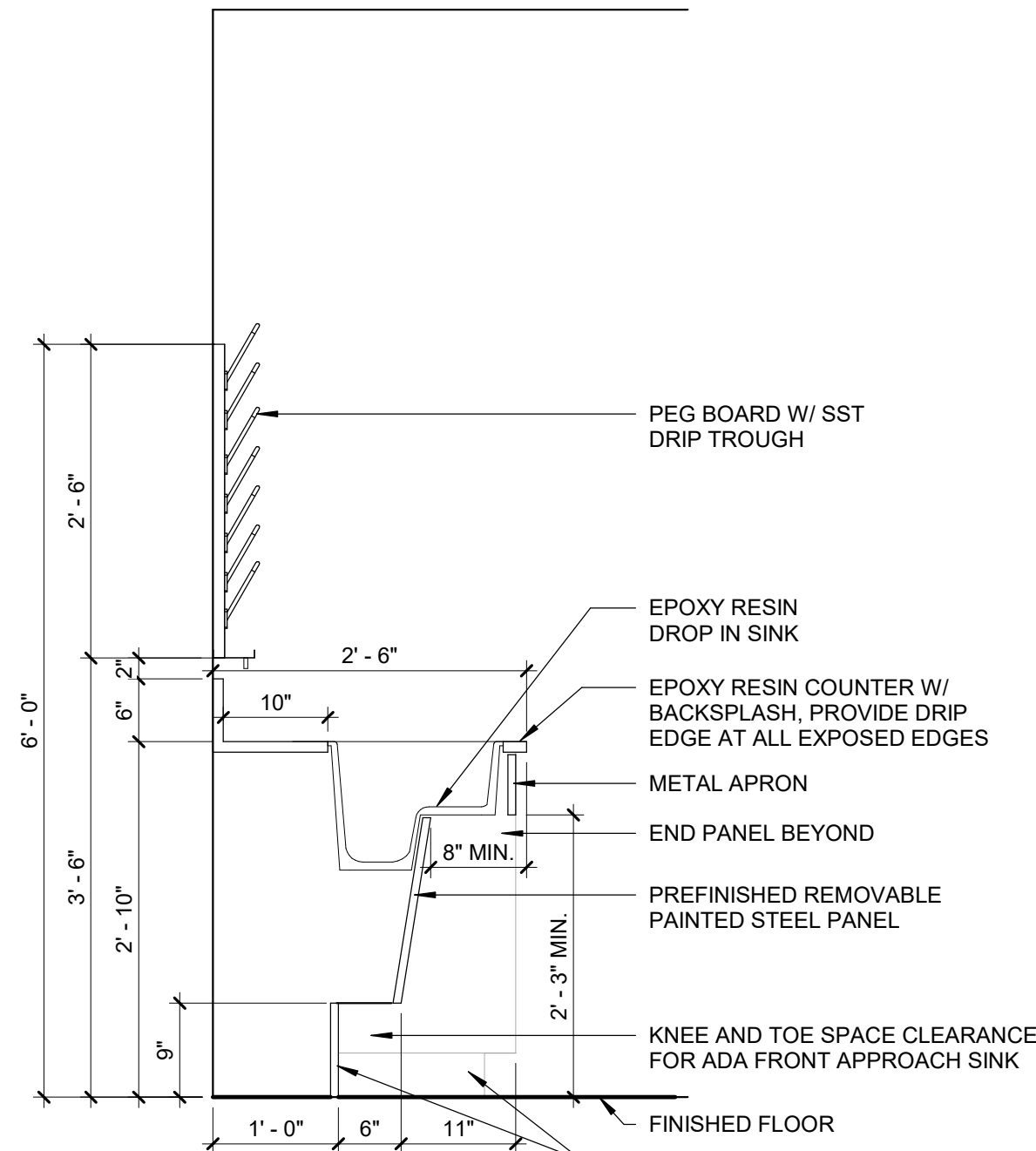
8 WORK SURFACE TRANSITION DETAIL
1 1/2" = 1'-0"



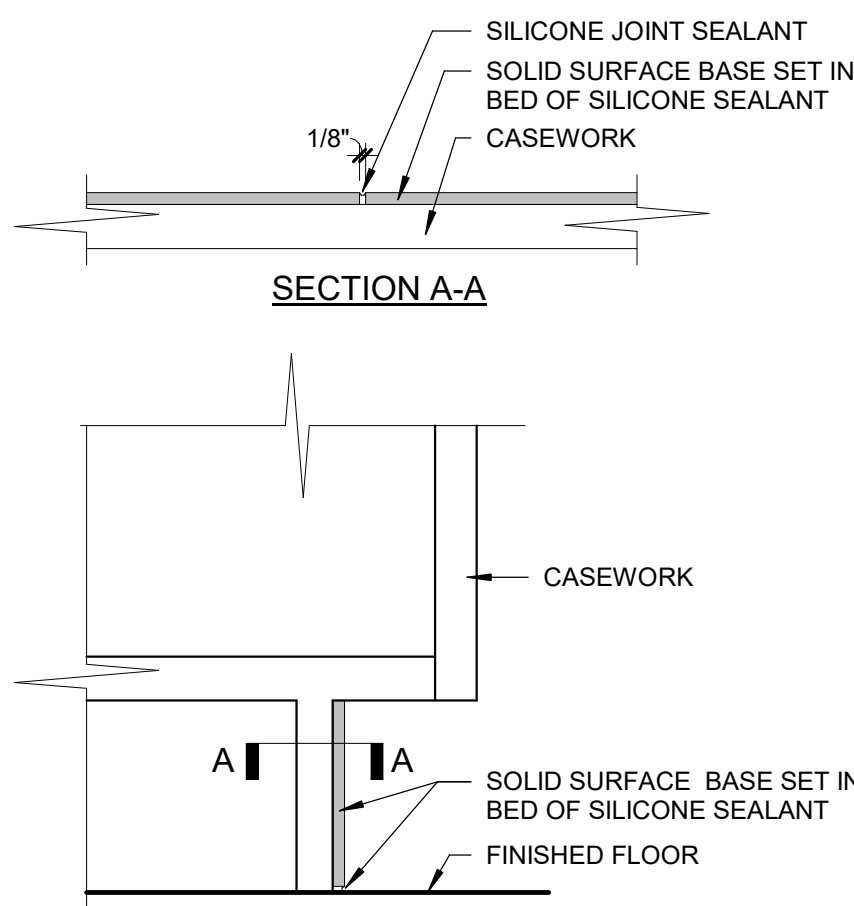
4 SINK WITH EYEWASH DETAIL
3/4" = 1'-0"



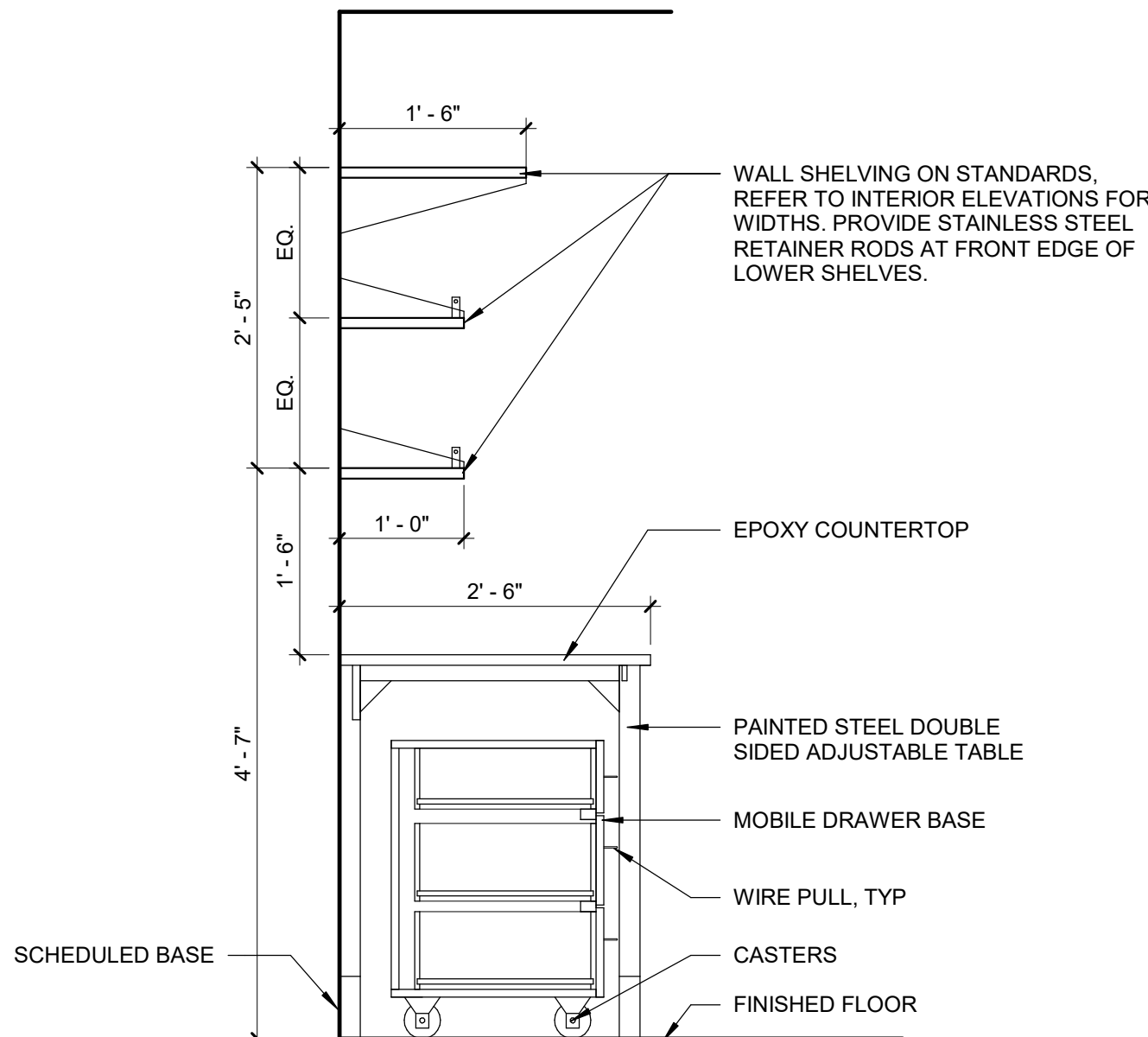
7 SECTION AT FIXED CASEWORK
3/4" = 1'-0"



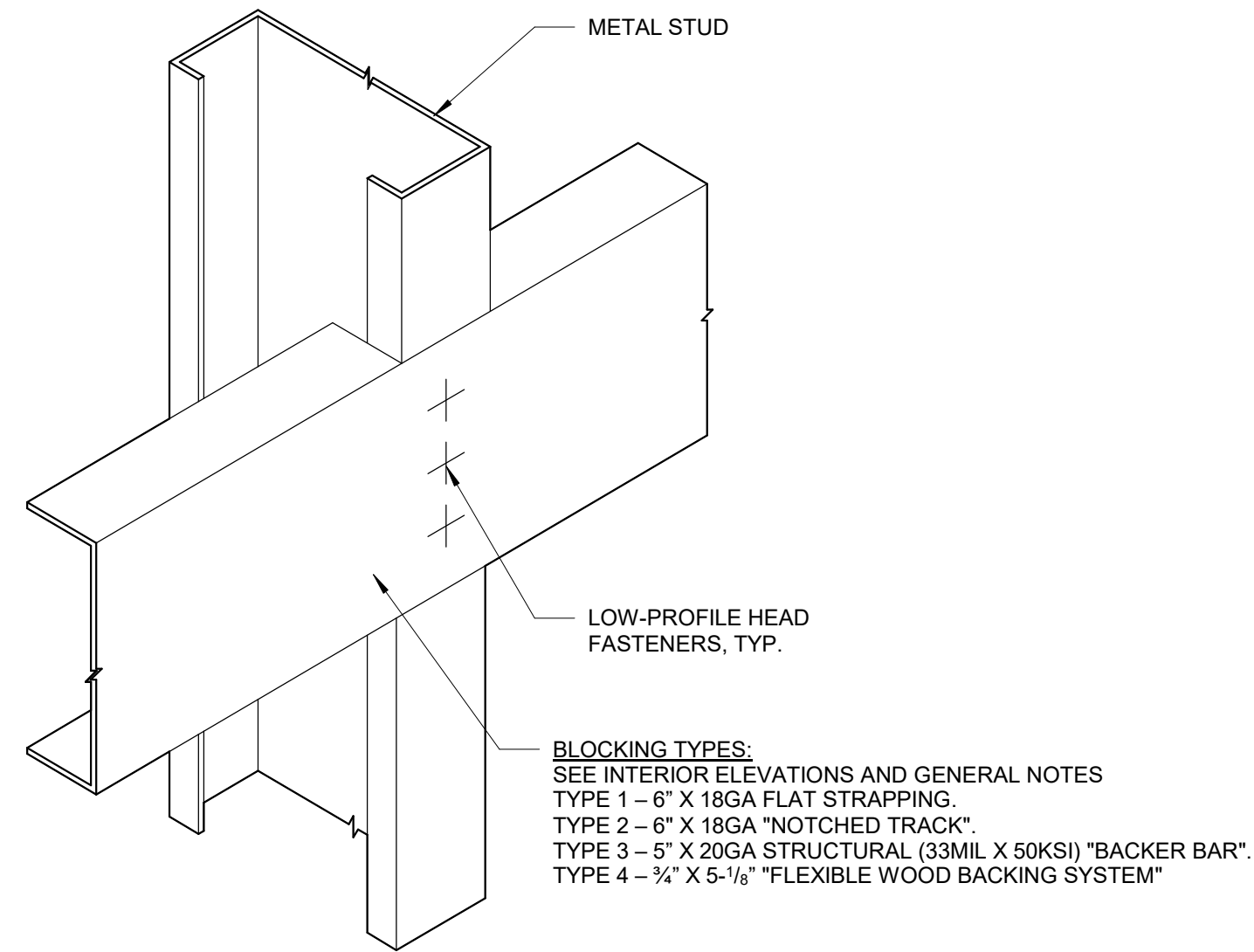
3 SECTION AT ACCESSIBLE SINK - SK-A
3/4" = 1'-0"



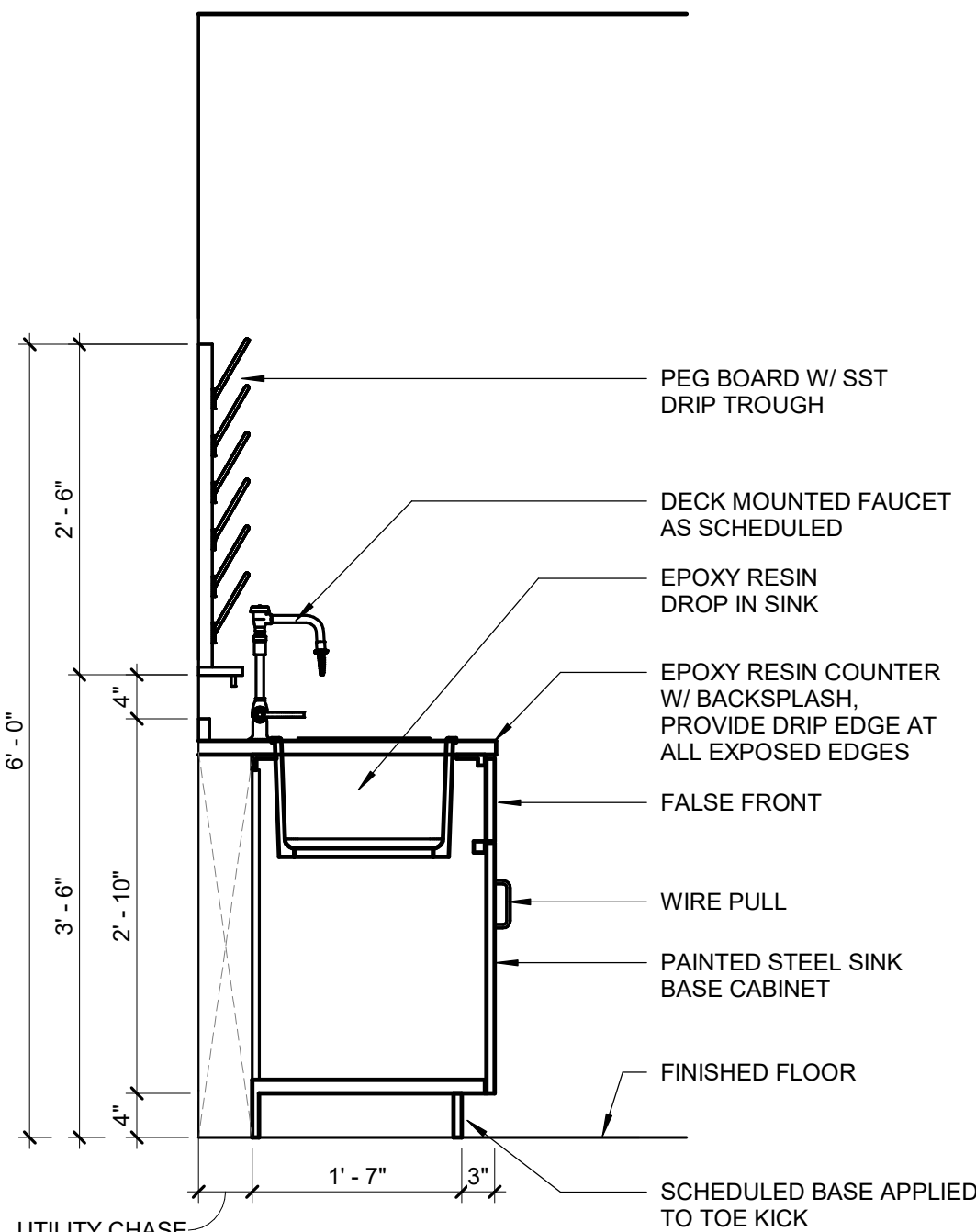
10 LIQUID-TIGHT BASE DETAIL - SSF-1
3" = 1'-0"



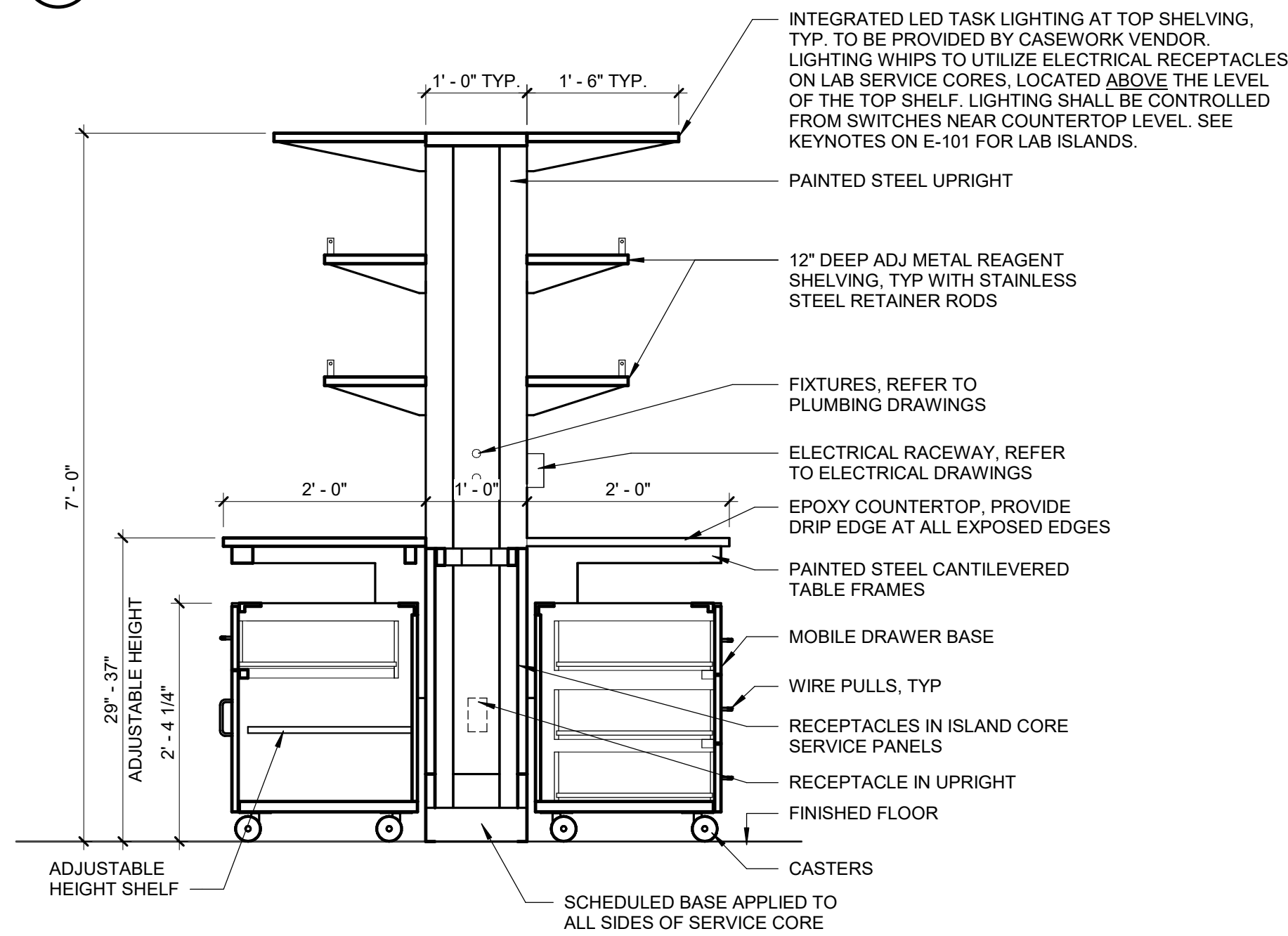
6 SECTION AT ALTUS BENCHES
3/4" = 1'-0"



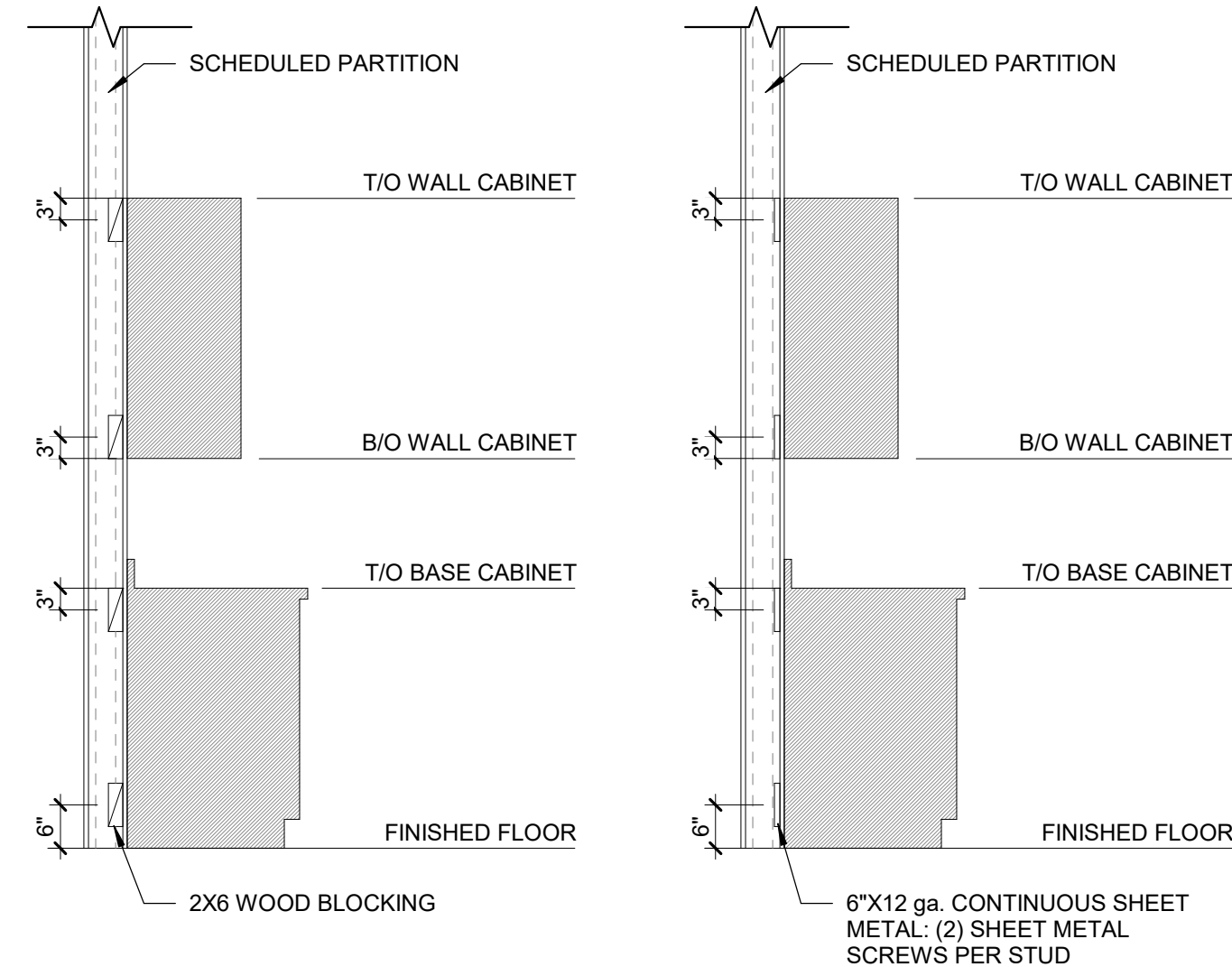
2 TYPICAL DETAIL - METAL STUD BLOCKING
3" = 1'-0"



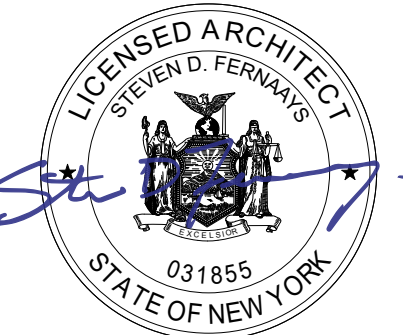
9 SECTION AT SINK SK-B
3/4" = 1'-0"



5 SECTION AT MOBILE WORK BENCHES
3/4" = 1'-0"

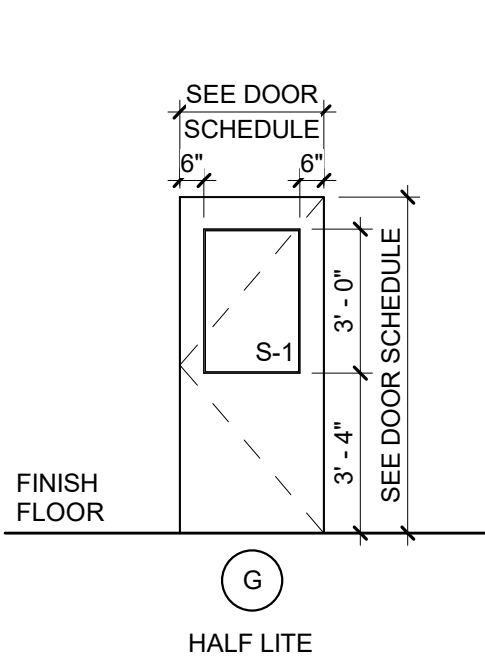


1 TYPICAL DETAIL - BLOCKING LOCATION
1/2" = 1'-0"

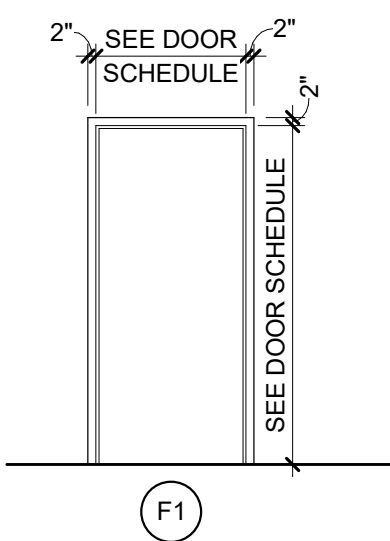


DOOR SCHEDULE																	
DOOR #	DOOR								FRAME				HARDWARE	LABEL	THRESHOLD	REMARKS	
	LEAFS	SIZE			TYPE	MATERIAL	FINISH	GLASS	ELEVATION	JAMB	MATERIAL	FINISH					
		WIDTH	HEIGHT	THICK													
LEVEL 5																	
5123	(1)	3'-0"	7'-0"	1 3/4"	G	HM	PT	S-1	F1	J1	HM	PT	1	-	-		

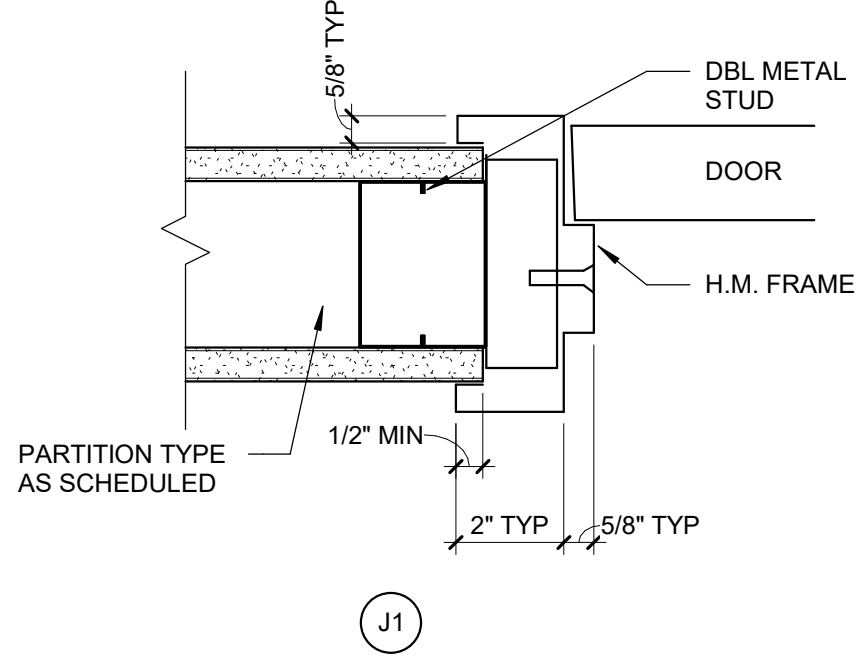
DOOR HARDWARE							
				CLASSROOM LOCKSET (SARGENT DG264 8237 LNL X US26D)	HINGES (MCKINNEY TA2714.4.5 X 4.5 X US26D)	CONCEALED OVERHEAD STOP (ROCKWOOD OH100 US32D)	CYLINDER (SARGENT PERMANENT CORE MATCHING CAMPUS STANDARD X US26D)
SET	DOOR	DOOR LOCATION					
1	5123	LABORATORY	1	3	1	1	
GLAZING TYPES							
S-1	CLEAR LAMINATED SAFETY GLASS						



DOOR TYPES

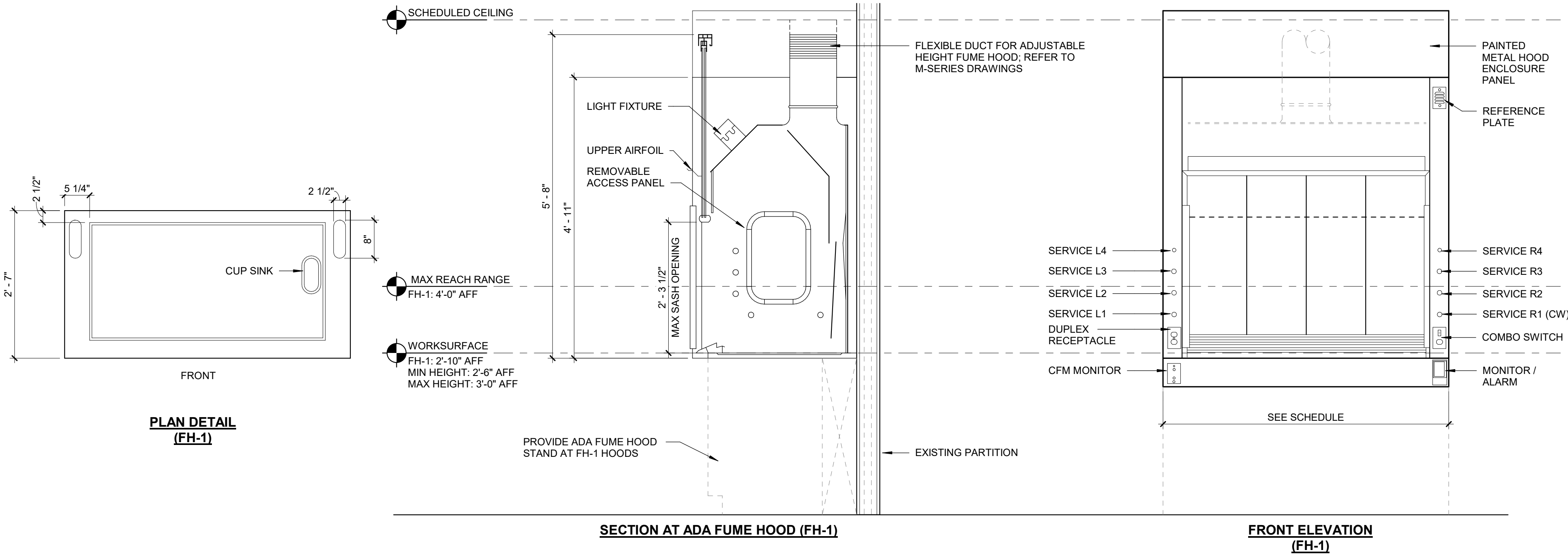


FRAME ELEVATION

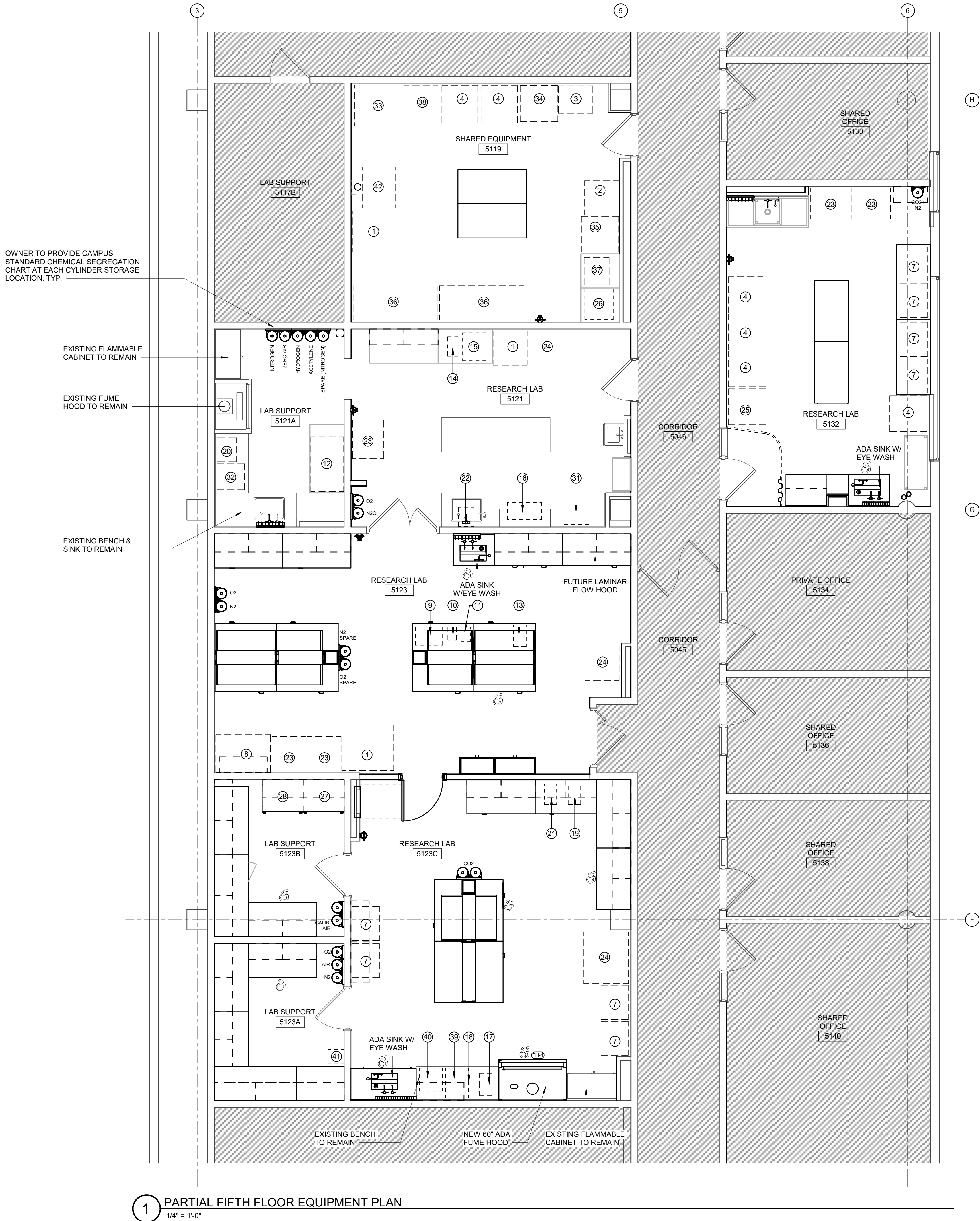


DOOR JAMB DETAIL

LABORATORY FUME HOOD SCHEDULE																		
KEYNOTE	PURPOSE	EXHAUST TYPE	DEPTH	WIDTH	SASH CONFIGURATION	LINER MATERIAL	LEFT CUPSINK	RIGHT CUPSINK	SERVICE L1	SERVICE L2	SERVICE L3	SERVICE L4	SERVICE R1	SERVICE R2	SERVICE R3	SERVICE R4	FURRING PANEL	Additional Requirements
FH-1	ADA	VAV	2'-8"	5'-0"	REFER TO SPEC	FRP	-	Y	-	-	-	-	CW	-	-	-	Y	DUPLEX RECEPTACLE LEFT SIDE, COMBO SWITCH/RECEPTACLE ON RIGHT SIDE

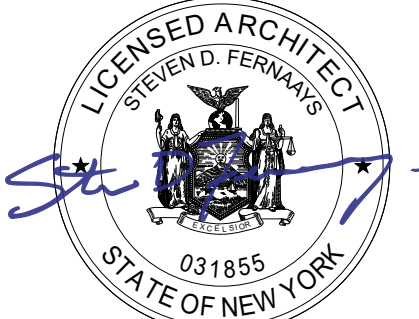


EQUIPMENT SCHEDULE																	
KEY NOTE	QTY	EQUIPMENT NAME	MANUFACTURER	MODEL NO.	LOCATION	DIMENSIONS			ELECTRICAL			HOUSE LABORATORY SYSTEMS				CYLINDER GASES	
						HEIGHT (IN)	WIDTH (IN)	DEPTH (IN)	WEIGH T (LBS)	NORMAL VOLTAGE (VAC)	Hz	AMPS	WATTS	LAB DRAIN	VAC		CA 85 PSI
1	2	-80 Freezer	PHC Corporation - pHCb	MDF-DU020VH-PA	Floor	78.4"	45.2"	39.7"	126	220V	60	4.3	930				
2	1	Low Temperature Incubator	Thermo Scientific	TFFU2066FWA	Floor	76"	32"	31"	125	120V	60						
3	1	Low Temperature Incubator	Percival Scientific	DR-36VL	Floor	77.2"	33.5"	33.6"		120V/220V	60						
4	4	Cooled Incubator	PHC Corporation - pHCb	MIR-554-PA	Floor	71.3"	31.5"	32.8"	453	115V	60						
5	1	Zero Air Generator	Peak Scientific	Precision Zero Air 3500cc 110V	Bench	6.14"	14.9"	21.2"		115V	50/60	2	930			80	
6	1	Compressed Air Generator	Peak Scientific	Precision Compressed Air 110V	Bench	45.9"	14.9"	21.2"		100-115V	50/60	2.45	930				
7	8	Incubator	Sanyo	MIR-153	Bench	40.1"	27.6"	22.9"	153	115V	60	1.9					
8	1	Vibration Isolation Workstation	Kinetic Systems Vibraplane	9101-02-00 & 9101-020-00	Floor	30.5"	48"	33"	20	NA							
9	1	Micro Balance	Sartorius	MCE 6.6S-2500-M	Bench	6"	24"	16"	20	12							
10	1	Analytical Balance	Mettler Toledo	ML204T00	Bench	13"	7.6"	11.42"	9	12							
11	1	Balance	VWR	VWR-1003AC	Bench	13"	8"	13"		12							
12	1	Oxygraph Nextgen O2K			Bench	24"	48"	29"		120V							
13	1	Micro centrifuge - refrigerating	VWR Micro Star 21R	76533-8798	Bench	24"	11"	19"		120V							
14	1	PCR machine	Techne TC-412	FTC41H2D	Bench	19"	9"	17"		115/230V	50/60						
15	1	Plate reader spectrophotometer	Molecular devices	Spectra Max ID3	Bench	16"	21"	24"		100/240V	50/60						
16	1	Lab Computer + monitor + printer			Bench					120							
17	1	Refrigerated circulator	HAAKE	Thermo HAAKE A25 Arctic Chiller	Bench	28"	11"	19"		115V							
18	1	Refrigerated circulator	VWR	89202-974	Bench	24.5"	9"	22"		120V	60	12					
19	1	Chiller Nextreme NRC400	Laird	NRC400	Bench	15"	10.5"	16"		250V							
20	1	Isotracan			Bench	21"	21"	17"		240V	50/60						
21	1	Hel-CHILL Chiller	Hel-CHILL Pelitier 600	591-01910-00-0	Bench	17"	10.5"	16"		100/230V							
22	1	NANOpure water dispenser	Barnstead	D11907	wall mount	20"	14"	17"		100/240	50/60		100				
23	4	Fridge (4°C)	VWR	VWR-HC-FRP-20	Floor	76"	30"	30"	260	115V	60	3					
24	3	Freezer (-20°C)	VWR	VWR-HC-MFP-20	Floor	76"	30"	30"	220	115V	60	6					
25	1	Thermo -20 freezer		Thermo-3767A	Floor	72"	32"	30"		115V	60	5					
26	1	VWR drying oven	VWR	89511-412	Bench	34"	25"	27"		120V	60	13.8					
27	1	Vibration Isolation Workstation	Kinetic Systems Vibraplane		Floor	31"	36"	30"		NA							
28	1	Vibration Isolation Workstation	Kinetic Systems Vibraplane		Floor	31"	48"	30"		NA							
30	1	Microscope automated upright w/camera	LEICA	DM5000B	Bench	24"	14"	25"		120							
31	1	New Geldoc			Bench	22"	26"			120							
32	1	Atomic Absorption Spectrometer	Thermo Scientific ICE 3000 Series	3300 GF AA Furnace Only Spectrometer	Bench	21"	23"	24"		100-240V	50/60						
33	1	Percival incubator #1	Percival		Floor	78"	40"	36"		110-120V							
34	1	VWR incubator	VWR		Floor	77"	38"	35"		110-120V							
35	1	Percival incubator #2	Percival		Floor	79"	35"	35"		110-120V							
36	2	-20°C chest freezer	Unknown		Floor	35"	74"	30"		120V							
37	1	Incubator shaker	New Brunswick Scientific		Bench	24"	22"	30"		110-120V							
38	1	-80 Freezer	VWR		Floor	78"	44"	40"		110V							
39	1	Lauda refrigerated circulator	Lauda	RP-3530	Floor	20"	20"	26"		110V							
40	1	Lauda refrigerated circulator	Lauda	RP-835	Floor	20"	20"	20"		220V							
41	1	Gas Generator			wall mount					120V							
42	1	Ice Machine			Floor	52"	36"	37" (incl. drain and filter)		115V							



1 PARTIAL FIFTH FLOOR EQUIPMENT PLAN

1/4" = 1'-0"



Drawn By: SM
Checked By: MJP
Project Manager: MJP

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Revisions

NO.	DESCRIPTION

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SWBR Project Number 25044.00

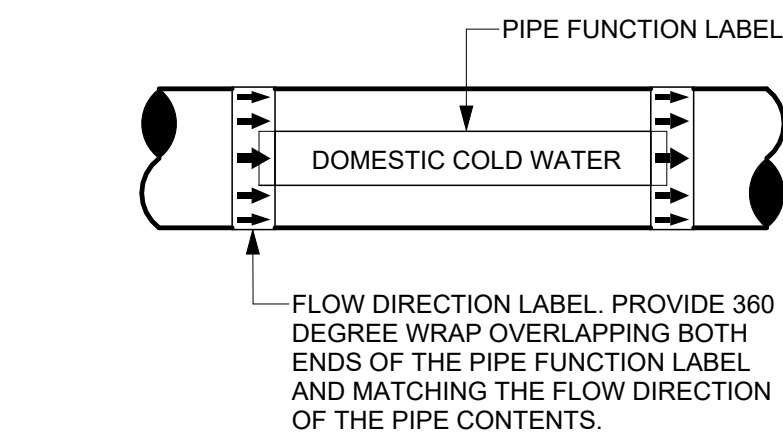
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A-800
FIFTH FLOOR
EQUIPMENT PLAN

GENERAL NOTES:

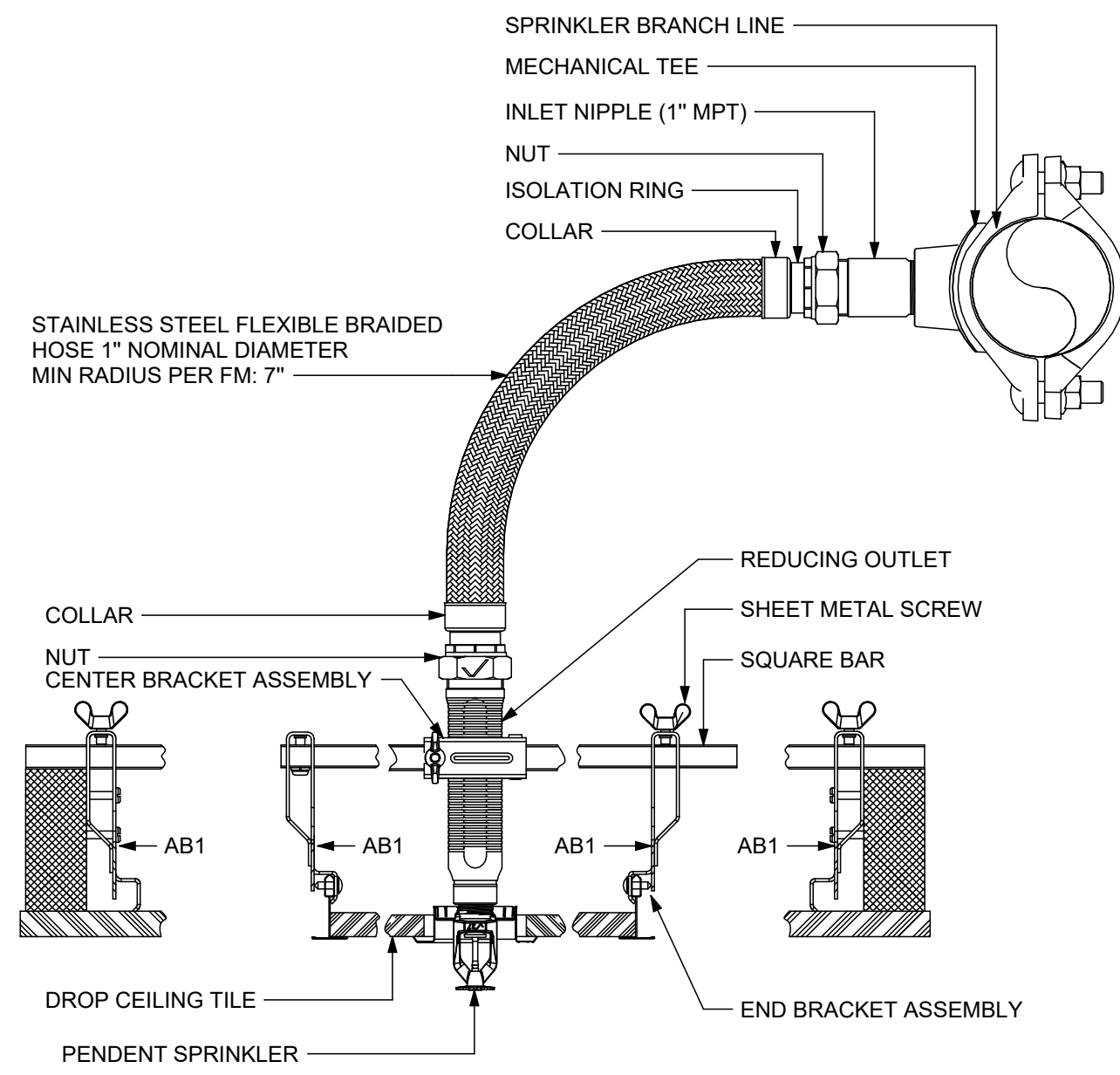
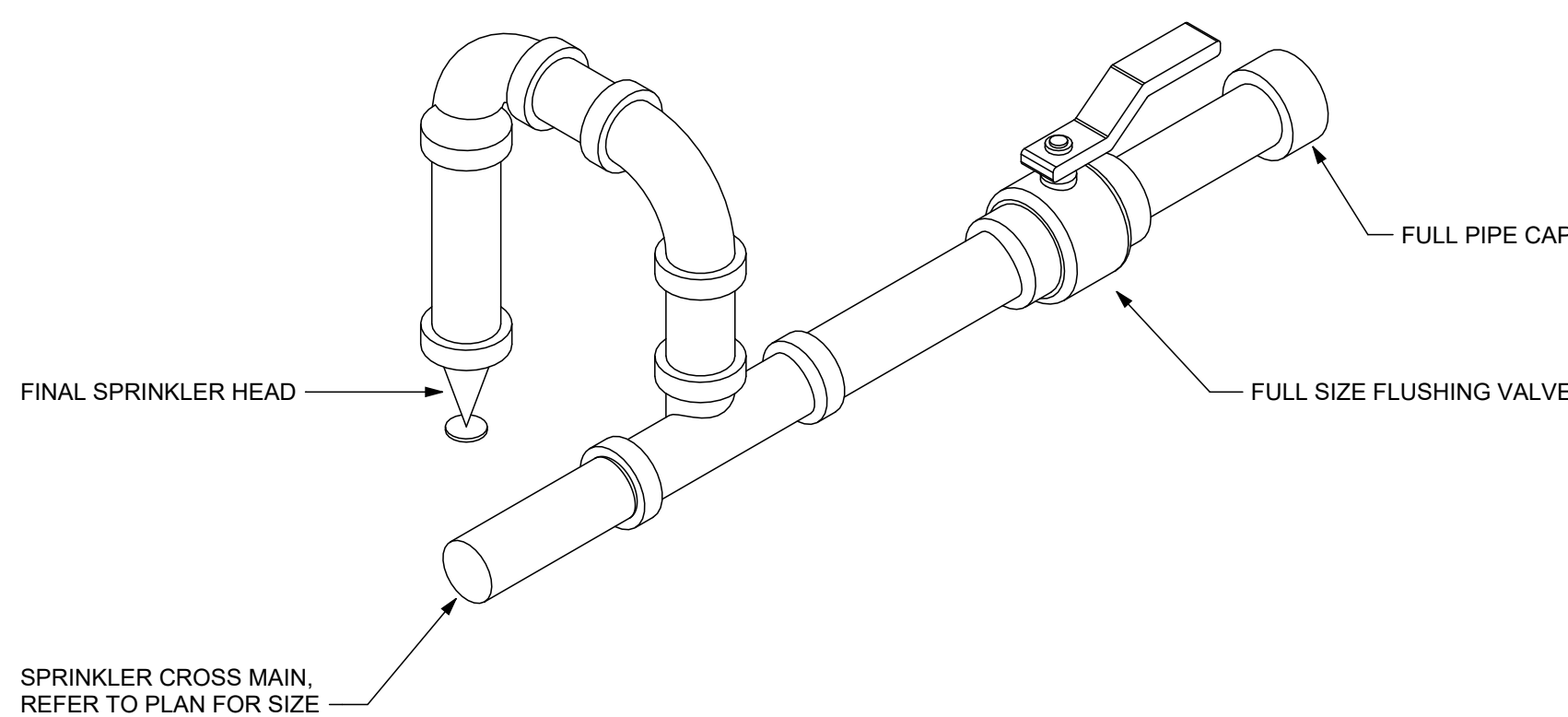
- A. PROVIDE A COMPLETE FIRE PROTECTION SYSTEM FOR THE PROJECT SCOPE IN ACCORDANCE WITH THE 2020 FIRE CODE OF NEW YORK STATE, NFPA 13 2016 ED, FM GLOBAL, AND THE AUTHORITY HAVING JURISDICTION.
- B. EXISTING CONDITIONS ARE TAKEN FROM FIELD OBSERVATIONS AND PRIOR CONSTRUCTION DOCUMENTS WHEN AVAILABLE. THE LOCATIONS SHOWN MUST BE CONSIDERED APPROXIMATE. OTHER SUCH WORK MAY EXIST. HOWEVER, LOCATION AND SIZE ARE NOT PRESENTLY KNOWN. VISIT SITE PRIOR TO BID TO REVIEW EXISTING CONDITIONS AND DETERMINE SCOPE OF WORK.
- C. WHEN EXISTING CONSTRUCTION IS DAMAGED DURING WORK BY THIS CONTRACTOR, REPAIR AND/OR REPLACE WITH SIMILAR OR LIKE MATERIALS AS MUCH AS POSSIBLE. SUBJECT TO ARCHITECTS APPROVAL.
- D. DISPOSE OF ALL DEMOLITION AND/OR OTHER WASTE MATERIALS CAUSED BY WORK OF THIS CONTRACTOR. LEGALLY DISPOSE ALL MATERIALS TO A LOCATION OFF SITE.
- E. COORDINATE AND SCHEDULE WORK AND SHUTDOWNS WITH THE OWNER AND OTHER TRADES PRIOR TO DEMOLITION.
- F. ALL EXISTING PIPING TO REMAIN SHALL BE RECONNECTED TO ACTIVE SERVICE PIPING.
- G. ALL PIPING TO BE REMOVED, SHALL BE REMOVED BACK TO ACTIVE PIPING AND CAPPED. VALVE AND CAP ALL WATER PIPING. REMOVE ALL INACTIVE PIPING UNLESS NOTED.
- H. ALL PIPING TO BE REMOVED AND LOCATED WITHIN A WALL TO REMAIN MAY BE ABANDONED IN PLACE UNLESS NOTED. REMOVE PIPING BACK TO BEHIND THE FINISHED WALL SURFACE AND CAP.
- I. PLUG HOLES IN EXISTING CONSTRUCTION LEFT BY THE REMOVAL OF PIPING OR EQUIPMENT. MAINTAIN FIRE/SMOKE RATING.
- J. DEMOLITION SHALL INCLUDE, BUT NOT BE LIMITED TO: PIPING, VALVES, FIXTURES, EQUIPMENT, HANGERS, SUPPORTS, AND INSULATION EXCEPT ASBESTOS.
- K. ALL SECURING AND ATTACHMENT POINTS TO EXISTING BUILDING STRUCTURE INCLUDING WALLS, CEILINGS, FLOORS, SLABS, DECKS, ETC. SHALL BE REVIEWED WITH CORNELL UNIVERSITY AND THE PROJECT ENVIRONMENTAL CONSULTANT PRIOR TO SECURING AND ATTACHING DEVICES AND EQUIPMENT. SOME BUILDING ELEMENTS MAY CONTAIN ASBESTOS AND ABATEMENT MAY BE REQUIRED. ABATEMENT SHALL BE PERFORMED BY SEPARATE CONTRACTOR WITH THE ASSISTANCE OF THIS CONTRACTOR FOR IDENTIFYING ATTACHMENT POINT LOCATIONS.
- L. MIXING OF DEMOLITION AND CONSTRUCTION DEBRIS IN COMMON DUMPSTER IS NOT ALLOWED. ALL DEMOLITION AND CONSTRUCTION DEBRIS SHALL BE SEPARATED AND SORTED THEN PLACED IN THE DESIGNATED DUMPSTER FOR THAT SPECIFIC MATERIAL IN COMPLIANCE WITH PROJECT LEED CONSTRUCTION WASTE MANAGEMENT REQUIREMENTS.
- M. ABANDONING EXISTING SYSTEMS, EQUIPMENT AND APPURTENANCES IN PLACE IS NOT ALLOWED. ALL SYSTEMS, EQUIPMENT AND APPURTENANCES DEEMED FOR REMOVAL SHALL BE REMOVED. THE CONTRACTOR SHALL NOTIFY CORNELL UNIVERSITY IF EXISTING SYSTEMS, EQUIPMENT AND APPURTENANCES ARE FOUND THAT HAD NOT BEEN INDICATED ON THE PROJECT PLANS TO EITHER BE REMOVED OR TO REMAIN IN PLACE.
- N. PIPE ROUTING DOES NOT SHOW PIPE FITTINGS THAT WILL BE REQUIRED. MOST LOCATIONS WILL REQUIRE PIPING TO RISE INTO STRUCTURAL CAVITY AND THEN BACK DOWN. (TYPICAL ALL LOCATIONS).
- O. PROVIDE TEMPORARY HEAT DETECTORS IN AREAS WHERE SPRINKLERS ARE REMOVED FROM SERVICE DURING CONSTRUCTION FOR MORE THAN 8 HOURS. COORDINATE WITH ELECTRICAL CONTRACTOR. TEMPORARY HEAT NEED TO BE TESTED WITH EHS BEFORE REMOVAL OF SPRINKLER SYSTEM.

FIRE PROTECTION SYMBOL LIST	
SYMBOL	DESCRIPTION
---OR---	EXISTING WORK TO BE REMOVED
---OR---	POINT OF CONNECTION
---OR---	POINT OF DISCONNECTION
NTS	NOT TO SCALE
(E)	EXISTING
(ETR)	EXISTING TO REMAIN
AFF	ABOVE FINISHED FLOOR
GC	GENERAL CONTRACTOR
MC	MECHANICAL CONTRACTOR
PC	PLUMBING CONTRACTOR
EC	ELECTRICAL CONTRACTOR
FC	FLUSHING CONNECTION
(E)	EXISTING PIPING
---	NEW PIPING
FP	FIRE PROTECTION SERVICE (FP)
S	SPRINKLER MAIN/BRANCH PIPING (S)
D	SPRINKLER DRAIN PIPING (D)
---	ELBOW DOWN
---	45° OFFSET
---	ELBOW UP
---	BOTTOM/TEE CONNECTION
---	TOP TEE CONNECTION
---	PIPE CONTINUATION
---	FLUSHING CONNECTION
---	QUICK RESPONSE PENDENT SPRINKLER
---	CONCEALED PENDENT SPRINKLER
---	QUICK RESPONSE UPRIGHT SPRINKLER
---	SIDEWALL SPRINKLER
---	DRY SIDEWALL SPRINKLER
---	DRAIN VALVE
---	CHECK VALVE
---	PRESSURE REDUCING VALVE
---	RELIEF VALVE
---	BACKFLOW PREVENTER (BFP)
---	SHUT-OFF VALVE WITH TAMPER SWITCH (TS)
---	FLOW SWITCH (FS)
---	PRESSURE SWITCH (PS)
---	DRY PRE-ACTION ALARM VALVE
---	ALARM CHECK VALVE WITH TRIM (ACV)
---	FIRE DEPARTMENT VALVE (FDV)
---	POST INDICATOR VALVE (PIV)
---	WATER MOTOR GONG
---	FIRE DEPARTMENT CONNECTION (FDC)
---	INSPECTOR'S TEST CONNECTION (ITC)
(X)	DRAWING KEYNOTE
(X)	DEMOLITION/REMOVAL KEYNOTE



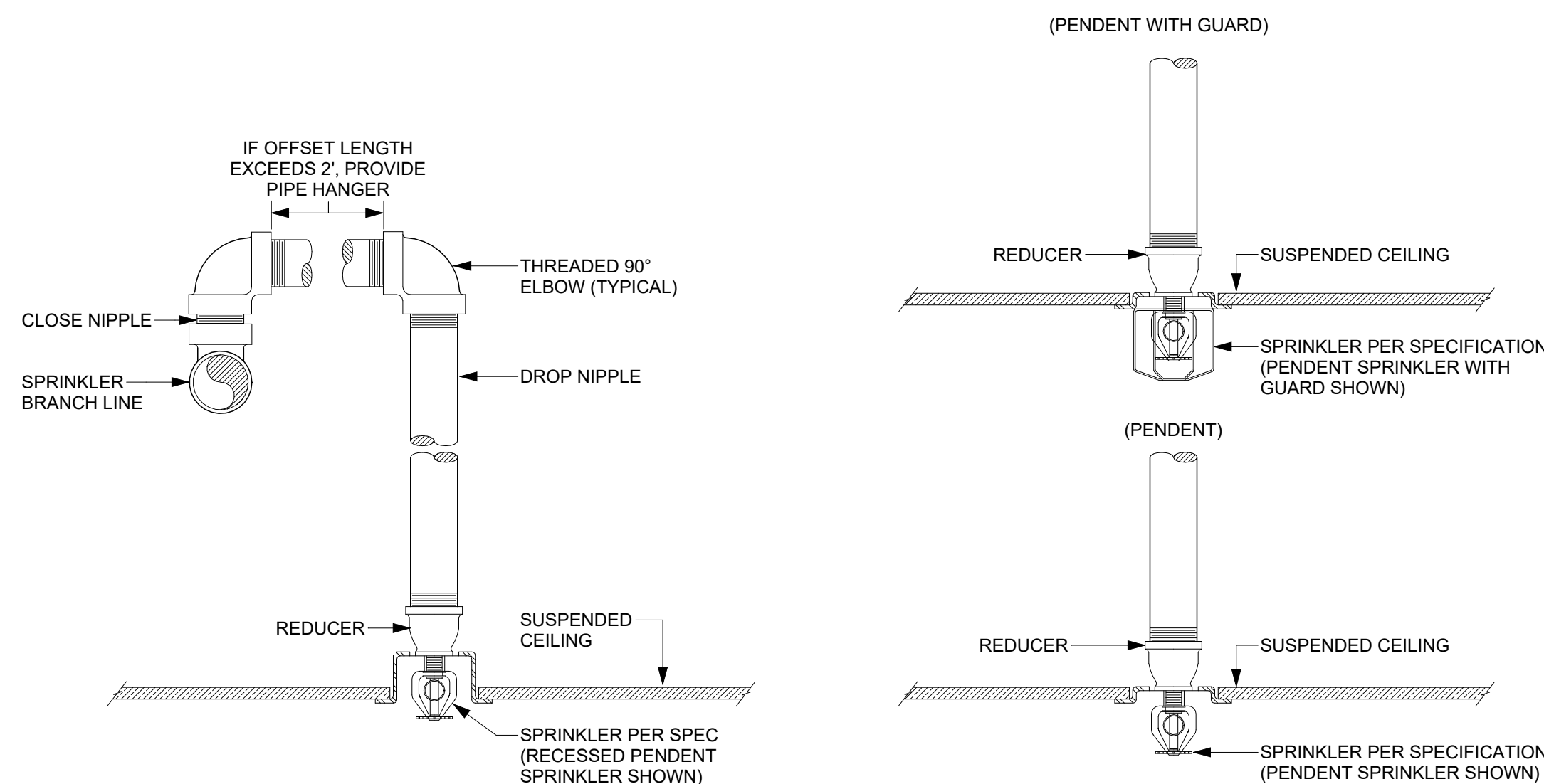
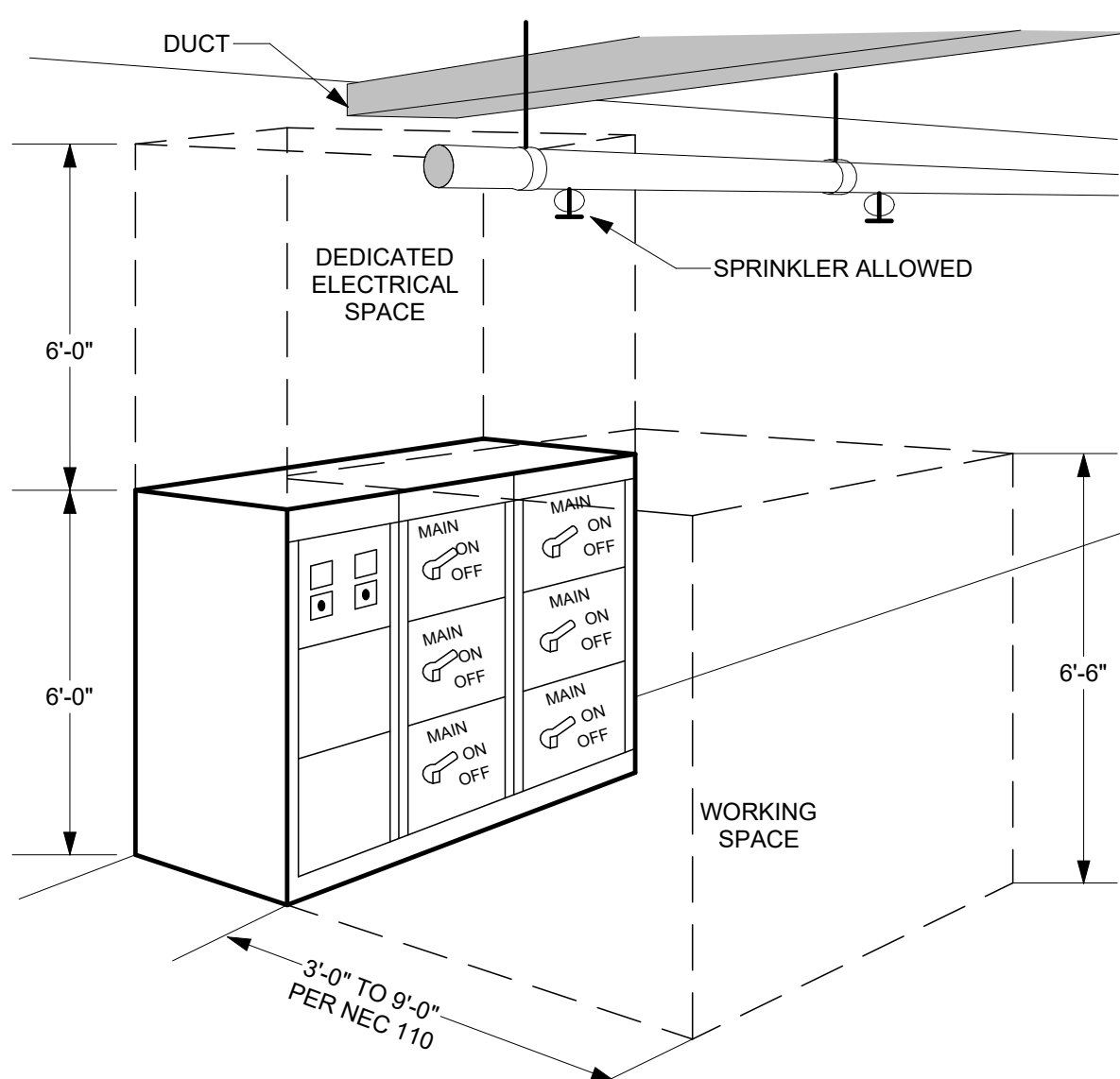
DETAIL NOTES:

- A. PROVIDE A PIPE LABEL FOR EACH PIPE FUNCTION.
- B. PROVIDE AT LEAST ONE LABEL ON EACH PIPE FOR EVERY ROOM THE PIPE PASSES THROUGH.
- C. PROVIDE LABELS IN LARGE SPACES ON MAXIMUM 20' CENTERS FOR EVERY PIPE UNLESS OTHERWISE NOTED IN THE SPECIFICATIONS.
- D. LABELS TO BE LOCATED IN AN EASILY VISIBLE LOCATION AS THEY WOULD NORMALLY BE SEEN, I.E. ON THE BOTTOM HALF OF PIPES IN THE AIR AND ON THE TOP HALF OR SIDES OF PIPES MOUNTED LOW.
- E. LABELS SHALL BE, COLOR CODED, PRE-PRINTED, SELF ADHESIVE VINYL.
- F. SEE SPECIFICATION FOR OTHER REQUIREMENTS AND LIST OF PIPE FUNCTIONS.

1 PIPING IDENTIFICATION LABEL DETAIL
NOT TO SCALE2 FLEXIBLE SPRINKLER HOSE CONNECTION
NOT TO SCALE

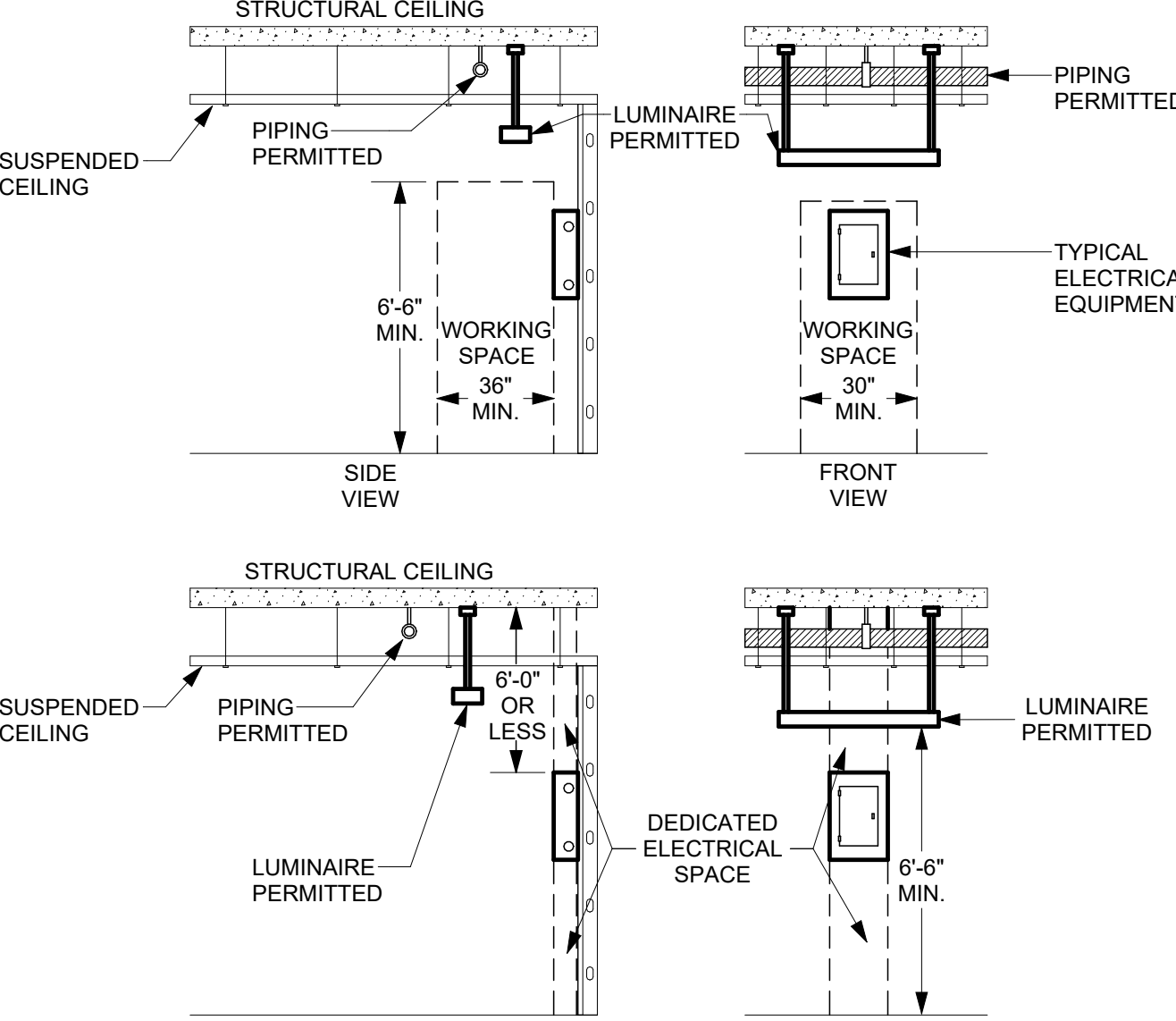
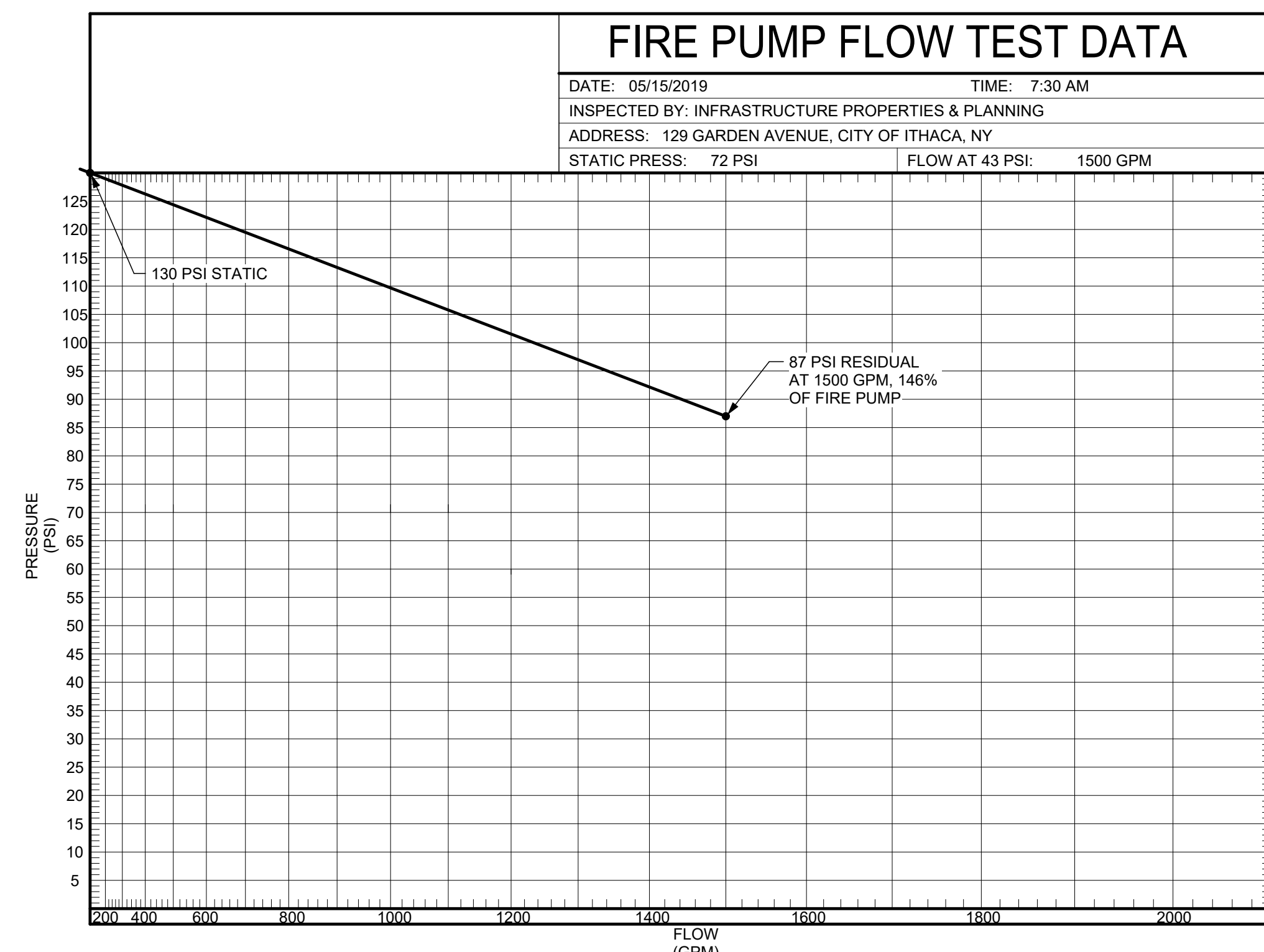
FLUSHING NOTES:

- A. FLUSHING FULL-PORT BALL VALVES SHALL STILL BE PROVIDED ON UNDERGROUND MAINS (INSIDE THE BUILDING) AND ABOVE-GROUND MAINS, CROSS-MAINS, BRANCH LINES AND RUN OUTS OF NEW SPRINKLER SYSTEMS (WET AND DRY), TO FACILITATE ANY FUTURE PERIODIC INTERNAL INSPECTIONS, OBSTRUCTION INVESTIGATIONS AND AS-NEEDED FLUSHING WORK.
- B. VALVES SHALL BE SIZED BY THE ENGINEER OF RECORD AND PER NFPA 25, IN ORDER TO OBTAIN THE NFPA REQUIRED MINIMUM VELOCITY OF 10 FT/S FOR ANY GIVEN PIPE SIZE. AS AN ALTERNATIVE TO THE HYDRAULIC CALCULATION VALVE SIZING METHOD, THE FOLLOWING SIZING RULES CAN BE APPLIED:
- 1-INCH THRU 2-INCH PIPE: LINE-SIZE FULL-PORT BALL VALVE
 - 3-INCH PIPE: ONE (1) 2-INCH BALL VALVE
 - 4-INCH PIPE: TWO (2) 2-INCH BALL VALVES
 - 6-INCH PIPE: THREE (3) 2-INCH BALL VALVES
 - 8-INCH PIPE: FOUR (4) 2-INCH BALL VALVES

3 SPRINKLER LINE FLUSHING DETAIL
NOT TO SCALE4 RETURN BEND DETAIL
NOT TO SCALE

DETAIL NOTES:

- A. ELECTRICAL EQUIPMENT INCLUDES PANELS, TRANSFORMERS, DISCONNECTS, STARTERS, MOTOR CONTROL CENTERS, SWITCHGEAR, ADJUSTABLE SPEED DRIVES, AND FUSED SWITCHES (THIS ALSO APPLIES TO ELECTRICAL GEAR MOUNTED DIRECTLY ON MECHANICAL EQUIPMENT).
- B. DEDICATED ELECTRICAL SPACE IS DEFINED BY NEC 110.
- C. NO PIPING OR DUCTWORK MAY BE INSTALLED IN DEDICATED ELECTRICAL SPACE OR WORKING SPACE.

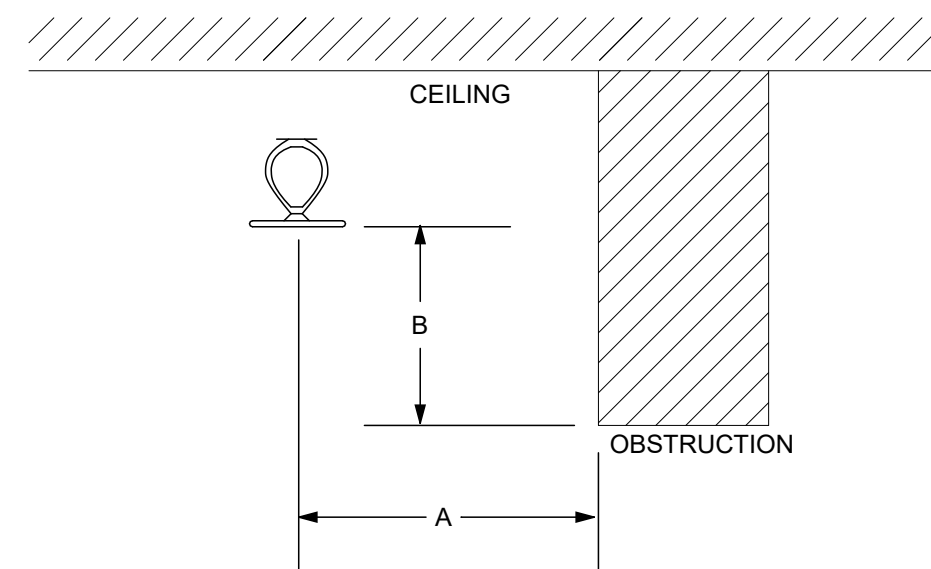
5 PIPING OVER ELECTRICAL EQUIPMENT DETAIL
NOT TO SCALE6 FIRE HYDRANT FLOW TEST DATA CHART
NOT TO SCALE

NOTES:

1. FLOW TEST TAKEN FROM FIRE PUMP.
- 50% 150 PSI @ 500 GPM
 - 100% 130 PSI @ 1000 GPM
 - 146% 87 PSI @ 1500 GPM

STANDARD 'OR' PENDENTS & UPRIGHTS

DISTANCE FROM SPRINKLERS TO SIDE OF OBSTRUCTION (A)	MAXIMUM ALLOWABLE DISTANCE OF DEFLECTOR ABOVE BOTTOM OF OBSTRUCTION - INCHES - (B)
LESS THAN 1'-0"	0
1'-0" TO LESS THAN 1'-6"	2-1/2"
1'-6" TO LESS THAN 2'-0"	3-1/2"
2'-0" TO LESS THAN 2'-6"	5-1/2"
2'-6" TO LESS THAN 3'-0"	7-1/2"
3'-0" TO LESS THAN 3'-6"	9-1/2"
3'-6" TO LESS THAN 4'-0"	12"
4'-0" TO LESS THAN 4'-6"	14"
4'-6" TO LESS THAN 5'-0"	16-1/2"
5'-0" TO LESS THAN 5'-6"	18"
5'-6" TO LESS THAN 6'-0"	20"
6'-0" TO LESS THAN 6'-6"	24"
6'-6" TO LESS THAN 7'-0"	30"
7'-0" TO LESS THAN 7'-6"	35"

7 SPRINKLER OBSTRUCTION DETAIL
1/8" = 1'-0"

Drawn By: CMD
Checked By: THK
Project Manager: GDD

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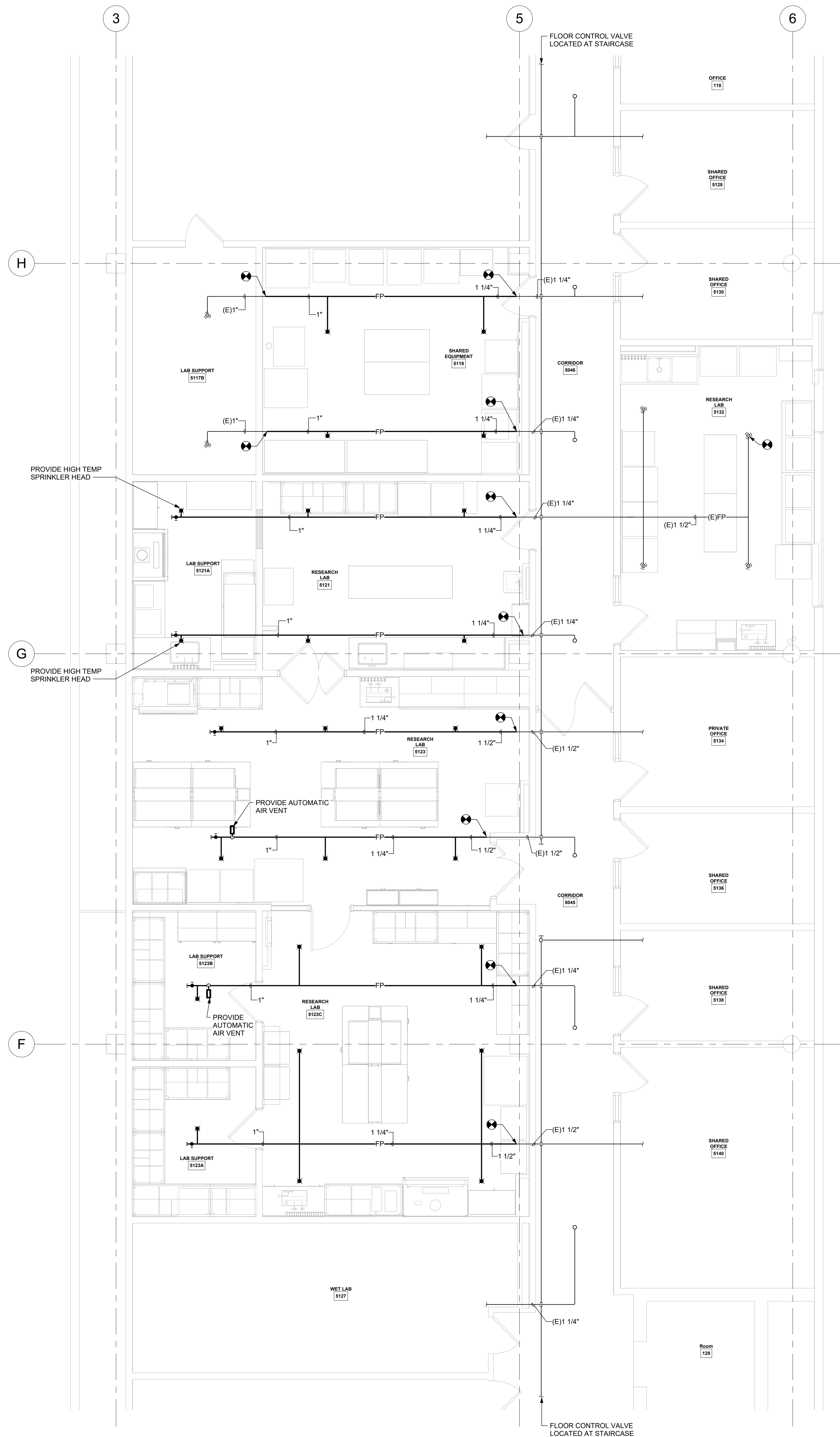
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LAB AND SUPPORT SPACE
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SWBR Project Number 25044.00

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GENERAL NOTES,
SYMBOLS LIST AND
DETAILS

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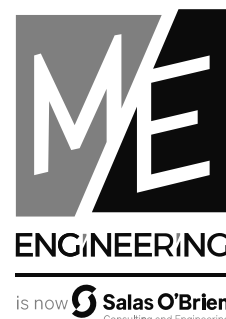
1 FIFTH FLOOR PLAN - FIRE PROTECTION
1/4" = 1'-0"

GENERAL NOTES:

- A. SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR FIRESTOPPING ASSEMBLY AND REQUIREMENTS AT EACH PENETRATION TYPE, INCLUDING EXISTING PENETRATIONS.

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ME PROJECT #: 250032



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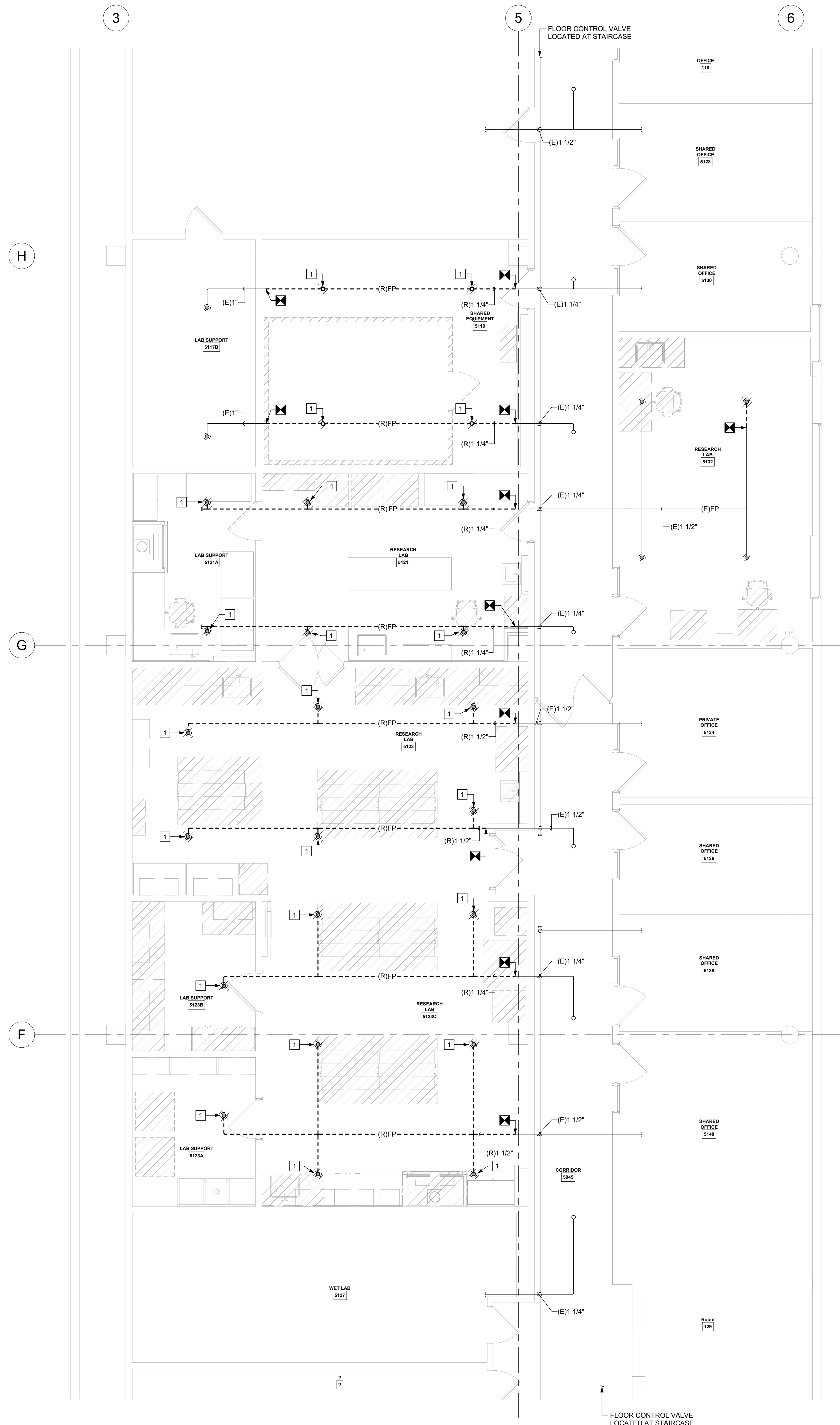
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FIFTH FLOOR PLAN - FIRE
PROTECTION

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1 FIFTH FLOOR DEMOLITION PLAN - FIRE PROTECTION
1/4" = 1'-0"

DEMOLITION NOTES:

- 1 DISCONNECT AND REMOVE SPRINKLER HEAD. REMOVE ASSOCIATED PIPING BACK TO POINT OF DISCONNECT.

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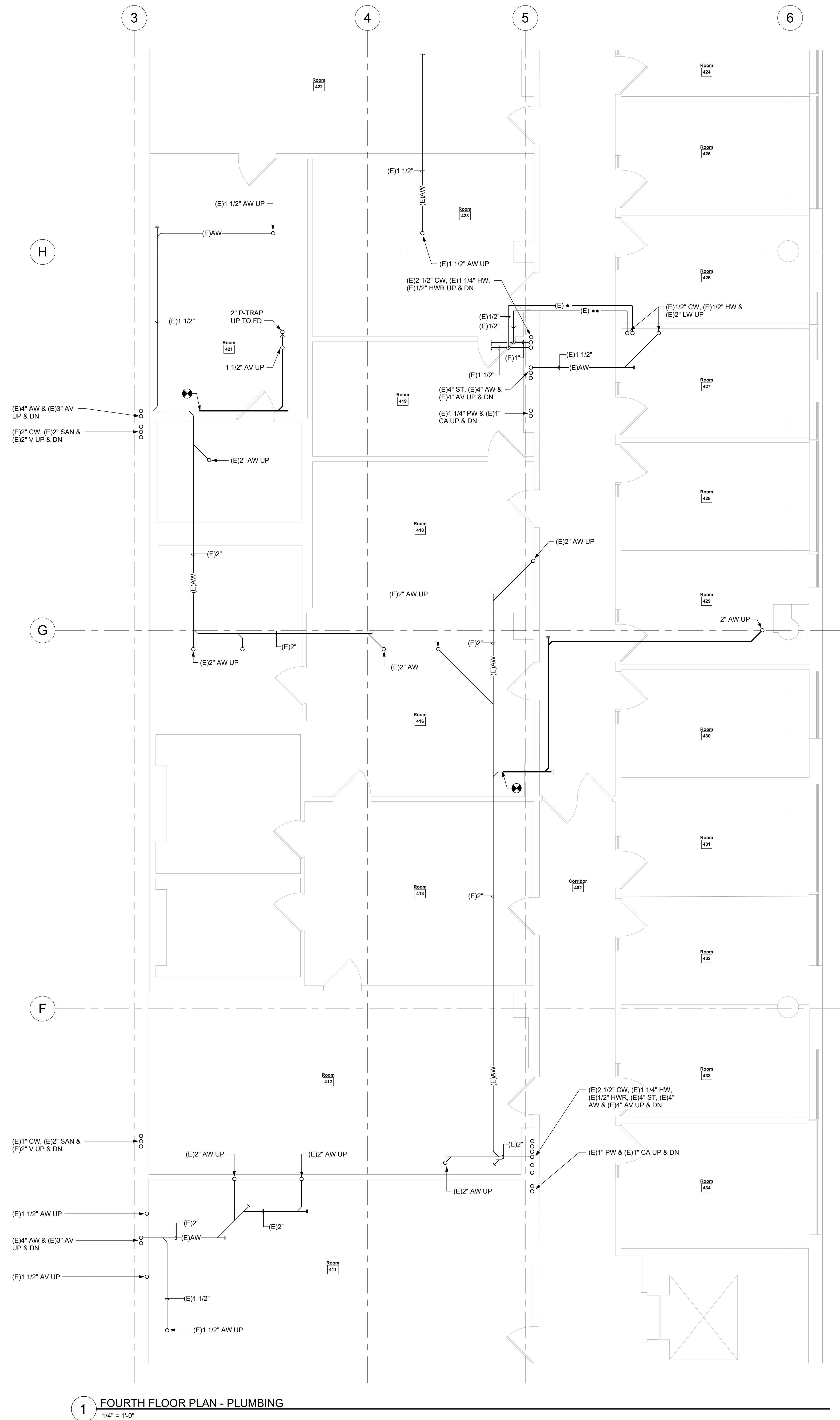
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FIFTH FLOOR
DEMOLITION PLAN - FIRE
PROTECTION

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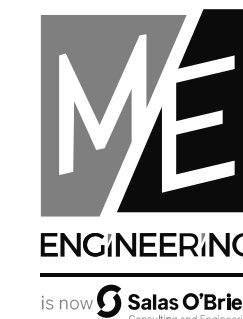


GENERAL NOTES:

A. SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR FIRESTOPPING ASSEMBLY AND REQUIREMENTS AT EACH PENETRATION TYPE, INCLUDING EXISTING PENETRATIONS.

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P-100
FOURTH FLOOR PLAN -
PLUMBING

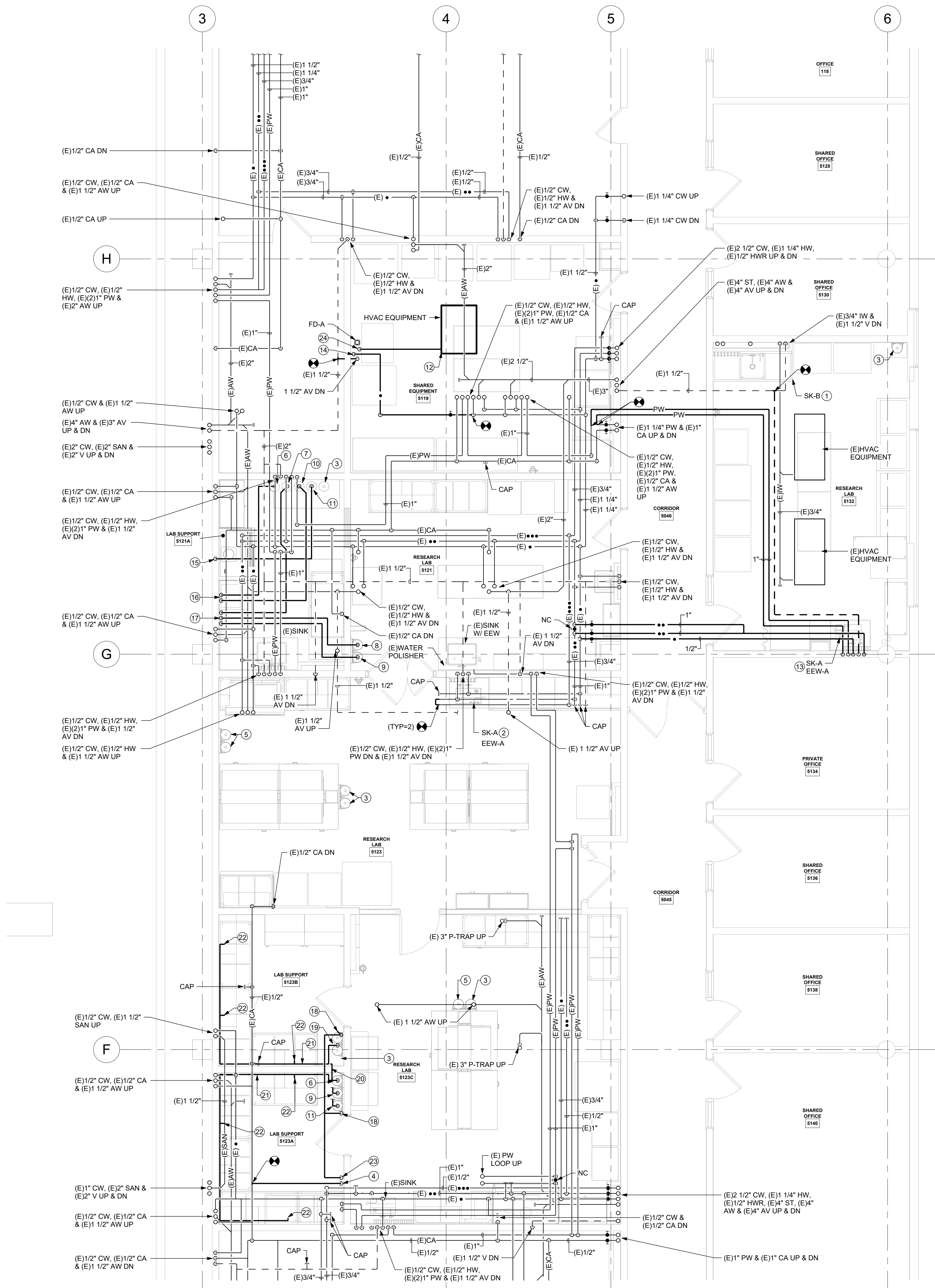
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**GENERAL NOTES:**

- A. SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR FIRESTOPPING ASSEMBLY AND REQUIREMENTS AT EACH PENETRATION TYPE, INCLUDING EXISTING PENETRATIONS.

DRAWING NOTES:

- 1 EXTEND EXISTING CW, HW, & AW, AND NEW 1/2" PW PIPING AS REQUIRED TO CONNECT TO SALVAGED SINK. MAINTAIN EXISTING VENT AND INDIRECT WASTE CONNECTIONS.
- 2 EXTEND EXISTING PIPING AS REQUIRED TO CONNECT TO NEW SINK.
- 3 SPARE CYLINDER LOCATION.
- 4 PROVIDE 1/2" COMPRESSED AIR DOWN WALL WITH SHUT OFF VALVE AND SWAGelok BARBED FITTING. LOCATE OUTLET 5'-0" AFF.
- 5 CO2, N2, OR O2 CYLINDER LOCATION. REGULATOR AND PIPING BY END USER.
- 6 AIR CYLINDER LOCATION. REGULATOR TO BE INSTALLED BY END USER, PROVIDE SS TUBING FROM REGULATOR TO END LOCATION. DESIGN BASIS 1/4" SWAGelok MECHANICAL FITTING. CONFIRM END FITTINGS WITH END USER BEFORE PURCHASE.
- 7 ACETYLENE CYLINDER LOCATION. REGULATOR TO BE INSTALLED BY END USER, PROVIDE SS TUBING FROM REGULATOR TO END LOCATION. DESIGN BASIS 1/4" SWAGelok MECHANICAL FITTING. CONFIRM END FITTINGS WITH END USER BEFORE PURCHASE.
- 8 NO2 CYLINDER LOCATION. REGULATOR TO BE INSTALLED BY END USER, PROVIDE SS TUBING FROM REGULATOR TO END LOCATION. DESIGN BASIS 1/4" SWAGelok MECHANICAL FITTING. CONFIRM END FITTINGS WITH END USER BEFORE PURCHASE.
- 9 OXYGEN CYLINDER LOCATION. REGULATOR TO BE INSTALLED BY END USER, PROVIDE SS TUBING FROM REGULATOR TO END LOCATION. DESIGN BASIS 1/4" SWAGelok MECHANICAL FITTING. CONFIRM END FITTINGS WITH END USER BEFORE PURCHASE.
- 10 H2 CYLINDER LOCATION. REGULATOR TO BE INSTALLED BY END USER, PROVIDE SS TUBING FROM REGULATOR TO END LOCATION. DESIGN BASIS 1/4" SWAGelok MECHANICAL FITTING. CONFIRM END FITTINGS WITH END USER BEFORE PURCHASE.
- 11 N2 CYLINDER LOCATION. REGULATOR TO BE INSTALLED BY END USER, PROVIDE SS TUBING FROM REGULATOR TO END LOCATION. DESIGN BASIS 1/4" SWAGelok MECHANICAL FITTING. CONFIRM END FITTINGS WITH END USER BEFORE PURCHASE.
- 12 PROVIDE 3/4" IW TO HVAC EQUIPMENT. REFER TO DETAIL 4 ON P-000 FOR FURTHER REQUIREMENTS.
- 13 1/2" CW & HW, 1 1/2" AV, & 1" PW LOOP DN TO SINK. 2" AV DN. 1/2" CW & HW TO MIXING VALVE, 1/2" TW TO EEW.
- 14 1/2" CW DN TO ICE MACHINE. INSTALL RELOCATED FILTER SET. EXTEND DRAIN TO FD.
- 15 1/2" N2 DN TO FUME HOOD. DISCONNECT CA AND CONNECT TO N2. REMOVE TAB ON VALVE AND RELABEL TO N2.
- 16 1/4" H2 & ZERO AIR DN. TERMINATE 12" ABOVE TABLETOP WITH SWAGelok SHUTOFF VALVE & BARBED FITTING.
- 17 1/4" ACETYLENE, NO2, & O2 DN. TERMINATE 12" ABOVE TABLETOP WITH SWAGelok SHUTOFF VALVE & BARBED FITTING.
- 18 1/4" ZERO AIR DN TO 1/8" OUTLET WITH SWAGelok SHUTOFF VALVE AND BARBED FITTING. INSTALL AT 3" AFF.
- 19 CALIBRATION AIR CYLINDER LOCATION. REGULATOR TO BE INSTALLED BY END USER, PROVIDE SS TUBING FROM REGULATOR TO END LOCATION. DESIGN BASIS 1/4" SWAGelok MECHANICAL FITTING. CONFIRM END FITTINGS WITH END USER BEFORE PURCHASE.
- 20 ROUTE GASES THROUGH PASS THRU PROVIDED BY GC. REFER TO ARCH DRAWINGS FOR LOCATION AND ADDITIONAL INFORMATION.
- 21 RACK 1/4" CALIBRATION AIR, O2, AIR, & N2 ALONG WALL, ABOVE RACEWAY. ROUTE AROUND ROOM AS SHOWN.
- 22 PROVIDE 1/8" SWAGelok BALL VALVE WITH BARBED FITTING TERMINATION FOR CALIBRATION AIR, O2, AIR, & N2. COORDINATE FINAL LOCATION WITH END USER.
- 23 1/4" ZERO AIR UP FROM ZERO AIR GENERATOR.
- 24 3/4" IW DN TO FD.

**FIFTH FLOOR PLAN - PLUMBING**

1/4" = 1'-0"



Drawn By: CMD
Checked By: THK
Project Manager: GDD

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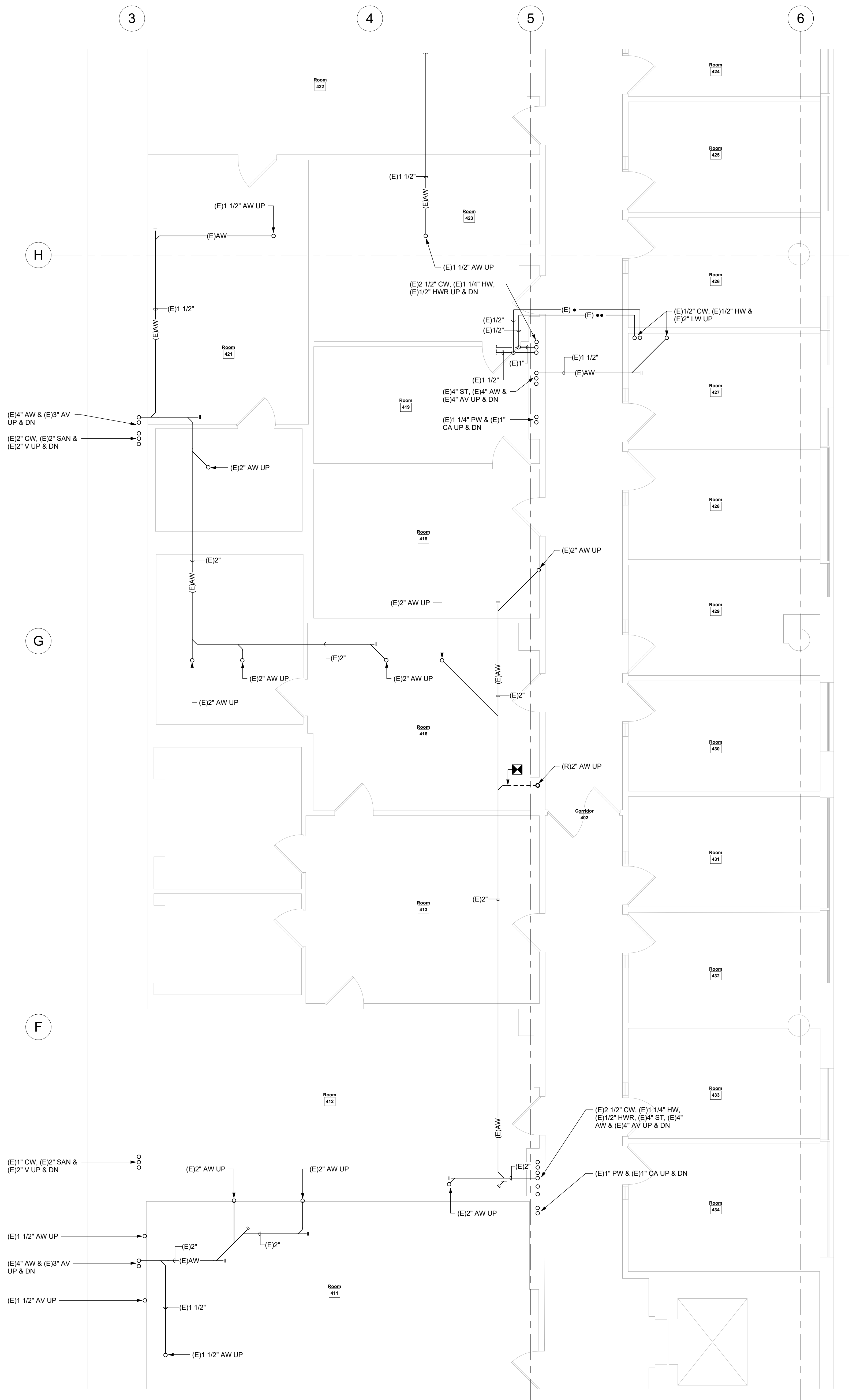
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FIFTH FLOOR PLAN -
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1 FOURTH FLOOR DEMOLITION PLAN - PLUMBING
1/4" = 1'-0"



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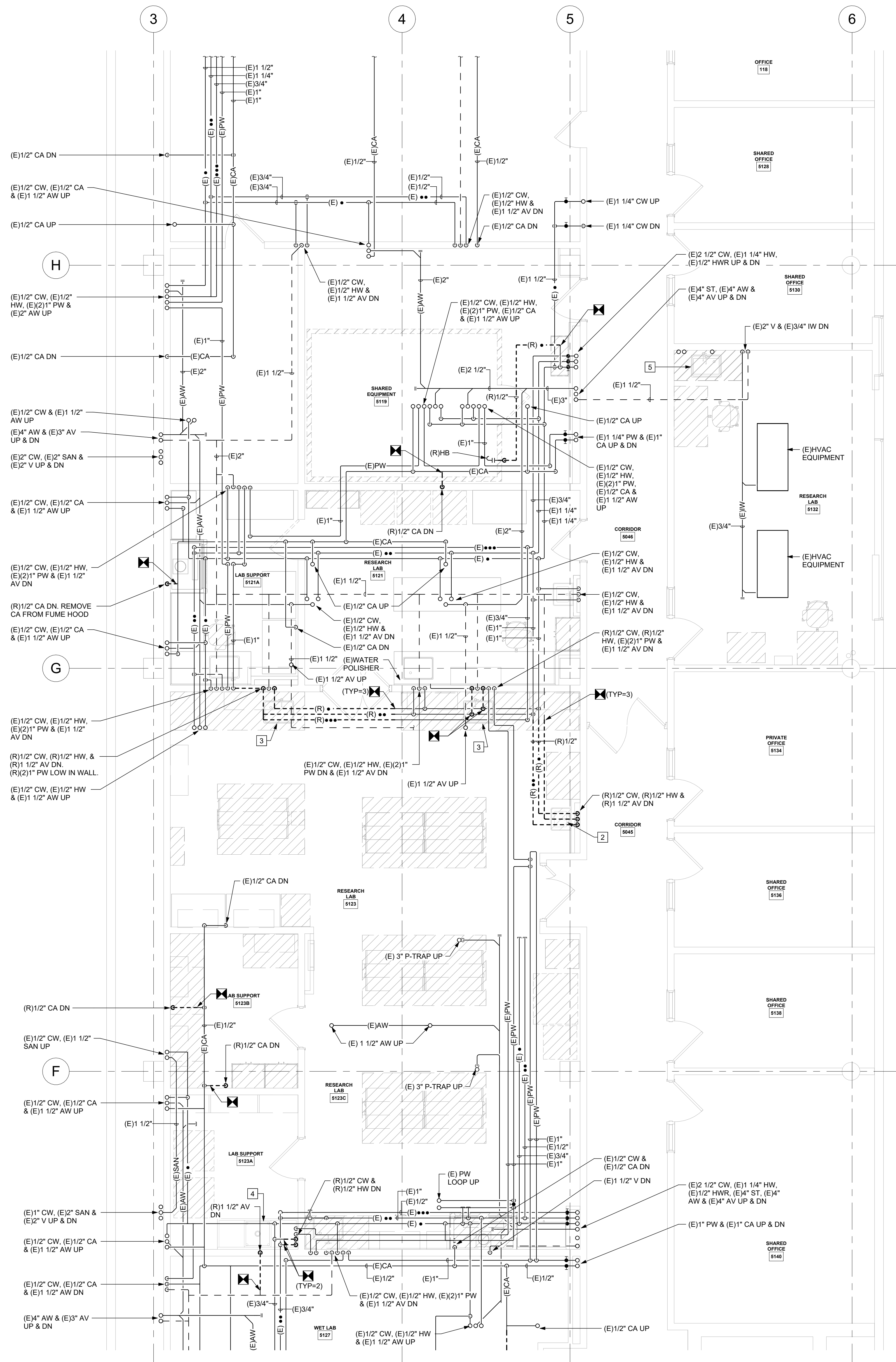
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FOURTH FLOOR
DEMOLITION PLAN -
PLUMBING

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DEMOLITION NOTES:

- 1 DISCONNECT AND REMOVE SINK. DISCONNECT PIPING AND PREP FOR RECONNECTION.
- 2 DISCONNECT AND REMOVE SINK. DISCONNECT AND REMOVE PIPING AND PIPING ACCESSORIES. REMOVE PIPING AS REQUIRED BACK TO POINT OF DISCONNECT.
- 3 DISCONNECT AND REMOVE SINK. DISCONNECT AND REMOVE WATER PIPING AND PIPING ACCESSORIES. REMOVE PIPING AS REQUIRED BACK TO POINT OF DISCONNECT. CAP AW WITHIN WALL. REVISE PW WITHIN WALL AS NEEDED TO KEEP LOOP ACTIVE.
- 4 DISCONNECT AND REMOVE SINK. DISCONNECT AND REMOVE PIPING AND PIPING ACCESSORIES. REMOVE PIPING AS REQUIRED BACK TO POINT OF DISCONNECT. SALVAGE SINK FOR REINSTALLATION IN 5132. DISCARD FAUCET.
- 5 DISCONNECT AND REMOVE SINK. DISCONNECT PIPING AND PREP FOR CONNECTION TO SALVAGED SINK AS REQUIRED.

**FIFTH FLOOR DEMOLITION PLAN - PLUMBING**

1/4" = 1'-0"

Drawn By: CMD
Checked By: THK
Project Manager: GDD

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FIFTH FLOOR
DEMOLITION PLAN -
PLUMBING

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Drawn By: ZMH
Checked By: NMT
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GENERAL NOTES AND
SYMBOLS LISTS - HVAC

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CONTROLS SCHEMATIC SYMBOL LIST

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	BINARY INPUT (GENERAL)		SINGLE POINT SENSOR
	BINARY OUTPUT (GENERAL)		CURRENT TRANSDUCER
	ANALOG INPUT (GENERAL)		ELECTRIC/PNEUMATIC TRANSDUCER
	ANALOG OUTPUT (GENERAL)		ELECTRONIC/ELECTRIC TRANSDUCER
	BINARY POINT		ELECTRICAL INTERFACE
	ANALOG POINT		START/STOP
	BINARY VALUE		OPEN/CLOSE
	BINARY INPUT		ENABLE/DISABLE
	BINARY OUTPUT		HARD WIRE INTERFACE
	ANALOG VALUE		PNEUMATIC CONTROL VALVE (3-WAY)
	ANALOG INPUT		PNEUMATIC CONTROL VALVE (2-WAY)
	ANALOG OUTPUT		ELECTRIC/ELECTRONIC CONTROL VALVE (3-WAY)
	THERMOWELL		ELECTRIC/ELECTRONIC CONTROL VALVE (2-WAY)
	ALARM		SOLENOID VALVE
	ELECTRIC ACTUATOR		THERMOSTATIC EXPANSION VALVE
	FREEZE-STAT		AUTOMATIC AIR DAMPER (PARALLEL BLADE)
	HUMIDIFIER		AUTOMATIC AIR DAMPER (OPPOSED BLADE)
	HUMIDIFIER DISPERSION GRID		BUTTERFLY CONTROL DAMPER
	RELAY		PNEUMATIC ACTUATOR
	STATUS		MAIN TEMPERATURE CONTROL AIR SOURCE
	FLOW METER		EXHAUST AIR
	MOTOR		OUTSIDE AIR
	BTU ENERGY METER		RETURN AIR
	AIR FLOW MEASURING STATION		SUPPLY AIR
	AVERAGING SENSOR		FAIL LAST
	HUMIDITY SENSOR (DUCT MOUNTED)		FAIL OPEN
	TEMPERATURE SENSOR (DUCT OR PIPE MOUNTED)		SUPPLY FAN
	CARBON DIOXIDE SENSOR (DUCT MOUNTED)		SMOKE CONTROL FAN
	CARBON MONOXIDE SENSOR (DUCT MOUNTED)		RETURN AIR FAN
	SPACE SENSOR WITH SETPOINT ADJUSTMENT		EXHAUST AIR FAN
	SPACE SENSOR WITH OCCUPANCY OVERRIDE		FILTER BANK
	SPACE SENSOR WITH VISUAL DISPLAY		BASE MOUNTED PUMP
	SPACE SENSOR WITH FAN ON/OFF SWITCH		IN LINE PUMP
	ROOM TEMPERATURE SENSOR WITH SETPOINT ADJUSTMENT		ADJUSTABLE SPEED DRIVE
	ROOM TEMPERATURE SENSOR WITH OCCUPANCY OVERRIDE		VARIABLE FREQUENCY DRIVE
	ROOM TEMPERATURE SENSOR WITH VISUAL DISPLAY		COOLING COIL
	ROOM TEMPERATURE SENSOR WITH FAN ON/OFF SWITCH		HEATING COIL
	OCCUPANCY SENSOR		HEAT RECOVERY COIL
	MOISTURE SENSOR		GAS BURNER
	PROBE SENSOR		REFRIGERANT R134a SENSOR (WALL MOUNTED)
	FLOW SENSOR		HIGH LEVEL SWITCH
	FLOW SWITCH		LOW LEVEL SWITCH
	END SWITCH		VENTURI AIRFLOW CONTROL VALVE
	MANUAL SWITCH		TRANSFORMER
	PRESSURE SWITCH		MOTOR STARTER
	DIFFERENTIAL STATIC PRESSURE SWITCH		ROTATION DETECTOR
	DIFFERENTIAL STATIC PRESSURE TRANSMITTER		SMOKE DETECTOR
	ELECTRIC/PNEUMATIC SWITCH OR RELAY		CURRENT SENSOR
	PNEUMATIC/ELECTRIC SWITCH OR RELAY		MODULATING
	FLOW TRANSMITTER		SPEED COMMAND
	PRESSURE TRANSMITTER		ADDRESSABLE OUTPUT MODULE (FIRE ALARM INTERFACE)
	DEWPOINT SENSOR (DUCT MOUNTED)		NETWORK COMMUNICATION INTERFACE POINT
	STATIC PRESSURE SENSOR (DUCT MOUNTED)		LIQUID IMMERSION TEMPERATURE SENSOR
	CONDENSATE SENSOR		RELATIVE HUMIDITY SENSOR
	SIGNAL IN AIR IN SIGNAL OUT		LOW LIMIT TEMPERATURE SWITCH
	SIGNAL IN SIGNAL OUT		

HVAC SYMBOL LIST

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	EXISTING WORK TO BE REMOVED		COMPRESSED AIR
	POINT OF CONNECTION		VENT
	POINT OF DISCONNECTION		BOILER BLOW DOWN
	DRAWING KEYNOTE		CONDENSER WATER SUPPLY
	DEMOLITION KEYNOTE		CONDENSER WATER RETURN
	THOUSAND BTU/HOUR		CHILLED WATER SUPPLY
	NOT TO SCALE		CHILLED WATER RETURN
	EXISTING		FUEL OIL FILL
	ACOUSTIC THERMAL LINING - 1-1/2" THICK		FUEL OIL GAUGE
	ACOUSTIC THERMAL LINING - 2" THICK		FUEL OIL SUPPLY
	DOUBLE WALL LINED DUCT		FUEL OIL RETURN
	FEET PER MINUTE		FUEL OIL TANK VENT
	CUBIC FEET PER MINUTE		GAS
	ABOVE FINISHED FLOOR		GLYCOL SUPPLY
	ACCESS DOOR		GLYCOL RETURN
	WALL TO WALL		HEAT PUMP WATER SUPPLY
	GENERAL CONTRACTOR		HEAT PUMP WATER RETURN
	MECHANICAL CONTRACTOR		HOT WATER SUPPLY
	PLUMBING CONTRACTOR		HOT WATER RETURN
	ELECTRICAL CONTRACTOR		LOW PRESSURE STEAM
	NORMALLY OPEN		LOW PRESSURE CONDENSATE
	NORMALLY CLOSED		MEDIUM PRESSURE STEAM
	FLEXIBLE DUCTWORK		MEDIUM PRESSURE CONDENSATE
	DUCT SECTION - FLAT OVAL (FO)		HIGH PRESSURE STEAM
	ROUND DUCT - 12"		HIGH PRESSURE CONDENSATE
	DUCT SECTION - SUPPLY		PUMPED CONDENSATE
	DUCT SECTION - RETURN		REFRIGERANT DISCHARGE
	WIDTH A x DEPTH B		REFRIGERANT LIQUID
	TRANSITION SQUARE TO ROUND		REFRIGERANT SUCTION
	RISE IN DUCT - IN DIRECTION OF AIRFLOW		HOT GAS
	DROP IN DUCT - IN DIRECTION OF AIRFLOW		VACUUM
	SUPPLY DUCT TURNING UP OR DOWN		DOMESTIC COLD WATER
	RETURN DUCT TURNING UP OR DOWN		TRIPLE DUTY VALVE
	6" BOOT TAP		GLOBE VALVE
	SUPPLY/RETURN RECTANGULAR MAIN RECTANGULAR BRANCH		BALL VALVE
	6" BOOT TAP		GATE VALVE
	SUPPLY/RETURN RECTANGULAR MAIN RECTANGULAR BRANCH		CONTROL VALVE
	SUPPLY/RETURN ROUND MAIN ROUND BRANCH		THREE WAY CONTROL VALVE
	SUPPLY/RETURN ROUND MAIN ROUND BRANCH		CHECK VALVE
	MITERED ELBOW WITH TURNING VANES		BALANCING VALVE
	SUPPLY DIFFUSER, REGISTER OR GRILLE		BUTTERFLY VALVE
	RETURN REGISTER		PRESSURE REDUCING VALVE
	EXHAUST GRILLE		PRESSURE/TEMPERATURE TEST PLUG
	FIN TUBE RADIATION		SINGLE LINE PIPE CONTINUED
	VALANCE		DOUBLE LINE PIPE OR ROUND DUCT CONTINUED
	REGISTER, GRILLE OR DIFFUSER TAG		DOUBLE LINE RECTANGULAR DUCT CONTINUED
	FIN TUBE RADIATION TAG		AIR FLOW
	VALANCE TAG		PIPE ANCHOR
	RADIANT CEILING PANEL TAG		PIPE GUIDE
	VALANCE TAG		EXPANSION COMPENSATOR WITH GUIDES
	STATIC PRESSURE SENSOR		PRE-FAB EXPANSION LOOP
	HUMIDISTAT		STRAINER
	TEMPERATURE SENSOR		PRESSURE GAUGE
	CARBON DIOXIDE SENSOR		THERMOMETER
	GAS SENSOR		UNION
	BREAKGLASS VENTILATION SHUTDOWN SWITCH		AIR VENT
	THERMOSTAT/SENSOR WITH GUARD		THERMOSTATIC TRAP
	PNEUMATIC/ELECTRIC THERMOSTAT		FLOAT & THERMOSTATIC TRAP
			THERMODYNAMIC TRAP
			BUCKET TRAP
			DIRECTION OF FLOW
			REDUCER
			CAP OR PLUG
			ELBOW DOWN
			ELBOW UP
			BOTTOM TAP
			AUTOMATIC AIR DAMPER
			FIRE DAMPER
			SMOKE DAMPER
			BACK DRAFT DAMPER
			FLEX CONNECTOR - DUCTWORK
			MOTORIZED DAMPER
			BLAST GATE
			VOLUME DAMPER
			SUCTION DIFFUSER
			FLEXIBLE CONNECTOR - PIPING
			DRAIN VALVE WITH HOSE CONNECTION, CAP AND CHAIN
			WATER FLOW SENSOR
			WATER TEMPERATURE SENSOR
			STATIC PRESSURE SENSOR
			HUMIDISTAT
			TEMPERATURE SENSOR
			CARBON DIOXIDE SENSOR
			GAS SENSOR
			BREAKGLASS VENTILATION SHUTDOWN SWITCH
			THERMOSTAT/SENSOR WITH GUARD
			PNEUMATIC/ELECTRIC THERMOSTAT

GENERAL NOTES:

- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DISPOSE OF ALL DEMOLITION DEBRIS AND MATERIALS OFF SITE IN A PROPER LEGAL MANNER.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE ALL SHUTDOWNS OF AIR HANDLING, CHILLED WATER, HOT WATER, STEAM, ETC. SYSTEMS WITH CORNELL UNIVERSITY FACILITY PERSONNEL FOR TIE-IN CONNECTIONS. THE CONTRACTOR SHALL ASSIST THE UNIVERSITY PERSONNEL IN SHUTTING DOWN, DRAINING, VENTING, ETC. OF SYSTEM TO FACILITATE THE INTENDED WORK.
- DAMAGE TO EXISTING SYSTEMS (EQUIPMENT, PIPING, DUCTWORK, CONTROLS AND ACCESSORIES) SHOWN TO REMAIN AS A RESULT OF THE CONTRACTORS WORK IS THE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR AND/OR REPLACE WITH SIMILAR OR LIKE MATERIALS AT NO ADDITIONAL COST TO THE OWNER.
- THE DEMOLITION DRAWINGS SHOWN IN GENERAL MAJOR EQUIPMENT, PIPING AND DUCTWORK REMOVALS. THE INTENT IS NOT TO IDENTIFY ALL MISCELLANEOUS PIPING, PIPING ACCESSORIES, DUCTWORK, DUCTWORK ACCESSORIES, SUPPORTS, CONTROLS, CONTROL ACCESSORIES, CONTROL WIRING, CONDUIT, AND CONTROL PNEUMATIC TUBING AND ACCESSORIES TO BE DISCONNECTED AND REMOVED BUT IS THE REQUIREMENTS UNDER THIS CONTRACT. NO EQUIPMENT, PIPING OR DUCTWORK SHALL BE ABANDONED IN PLACE UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- EXISTING CONDITIONS ARE TAKEN FROM FIELD OBSERVATIONS AND PRIOR CONSTRUCTION DOCUMENTS AND ARE NOT GUARANTEED. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO BID. NO ALLOWANCE WILL BE MADE FOR ADDITIONAL COSTS DUE TO CONTRACTORS FAILURE TO VERIFY EXISTING CONDITIONS AND DIMENSIONS.
- THE OWNER OCCUPIED AREAS INCLUDE SENSITIVE EQUIPMENT AND RESEARCH WHICH MUST NOT BE INTERRUPTED OR OTHERWISE DISTURBED WITHOUT PRIOR NOTICE AND APPROPRIATE PLANNING.
- ALL WORK SHALL BE COORDINATED WITH ALL TRADES INVOLVED. OFFSETS IN PIPING AND DUCTS (INCLUDING DIVIDED DUCTS) AND TRANSITIONS AROUND OBSTRUCTIONS SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.
- VERIFY ALL EQUIPMENT CONNECTIONS WITH MANUFACTURER'S CERTIFIED DRAWINGS. VERIFY AND PROVIDE DUCT TRANSITIONS TO FURNISHED EQUIPMENT. FIELD VERIFY AND ALL DIMENSIONS BEFORE FABRICATION.
- ALL MATERIAL AND EQUIPMENT SHALL BE NEW.
- INSTALL ALL EQUIPMENT PER MANUFACTURER'S INSTRUCTION AND LOCAL, STATE, AND NATIONAL CODES.
- MECHANICAL CONTRACTOR SHALL PROVIDE ALL PENETRATIONS THROUGH WALLS, FLOORS AND ROOFS NECESSARY FOR INSTALLATION OF MECHANICAL SYSTEMS. DO NOT DRILL, CORE OR CUT ANY PORTION OF COLUMNS, BEAMS, JOISTS OR BRIDGING RIBS.
- IT IS NOT THE INTENT OF THE DRAWINGS TO SHOW ALL AIR VENTS OR DRAINS FOR THE INSTALLATION OF THE PIPING SYSTEMS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE AIR VENTS AT ALL SYSTEM HIGH POINTS AND AT AREAS WITHIN THE PIPING SYSTEMS THAT COULD ACCUMULATE OR TRAP AIR. PREVENTING PROPER OPERATION OF THE SYSTEMS. DRAINS SHALL BE PROVIDED AT ALL LOW POINTS WITHIN THE PIPING SYSTEMS TO FACILITATE DRAINING OF THE SYSTEM COMPLETELY.
- THE DUCTWORK SIZES AND TYPES (ROUND, FLAT OVAL AND RECTANGULAR) WERE SELECTED FOR WITHIN THE BUILDING. IN ADDITION, THE DUCTWORK SIZES AND TYPES WERE CHOSEN TO ALLOW SPACE ABOVE THE CEILINGS FOR FUTURE DUCTWORK, PIPING AND/OR CONDUIT. IT IS NOT ACCEPTABLE FOR THE CONTRACTOR TO CHANGE THE SIZE OR TYPE OF DUCTWORK FOR BIDDING OR INSTALLATION UNLESS SPECIFICALLY APPROVED BY THE ENGINEER.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE THE LOCATIONS OF ALL ROOM TEMPERATURE SENSORS WITH THE ARCHITECT/ENGINEER. THE CONTRACTOR SHALL SCHEDULE A WALK THROUGH WITH THE ARCHITECT/ENGINEER TO LOCATE SENSOR LOCATIONS PRIOR TO INSTALLATION. THE TEMPERATURE SENSORS SHALL BE INSTALLED IN ALIGNMENT WITH ELECTRICAL, FIRE, AND OTHER DEVICES WHEN LOCATED ON COMMON WALLS. THE MOUNTING HEIGHT FOR ALL TEMPERATURE SENSORS SHALL BE 3'-10" TO CENTERLINE OF DEVICE.
- ALL PENETRATIONS THROUGH WALLS, FLOORS AND ROOFS SHALL BE PROVIDED FOR INSTALLATION OF MECHANICAL SYSTEMS INCLUDING, BUT NOT LIMITED TO, EQUIPMENT, DUCTWORK, PIPING, ETC. ALL PENETRATIONS THROUGH RATED WALLS AND FLOORS SHALL BE FIRE/SMOKE STOPPED. ALL PENETRATIONS THROUGH NON RATED WALLS SHALL BE SEALED WITH A NON-HARDENING SEALANT ON BOTH SIDES OF WALL PENETRATION TO REDUCE NOISE TRANSMISSION.
- PROVIDE A VOLUME DAMPER AT EACH DIFFUSER AND GRILLE FOR PROPER BALANCING REGARDLESS IF SHOWN ON DRAWINGS. ALL VOLUME DAMPERS SHALL BE INSTALLED AT THE MAIN BRANCH TAKEOFF WITH A MINIMUM OF 6'-0" FROM DIFFUSER OR GRILLE CONNECTION. IF FLEXIBLE DUCTWORK IS UTILIZED FOR FINAL CONNECTION AT GRILLES, THE CROSS SECTIONAL AREA OF THE FLEXIBLE DUCTWORK SHALL NOT BE LESS THAN THE CROSS SECTIONAL AREA OF THE GRILLE NECK. REFER TO DRAWING DETAILS FOR FURTHER REQUIREMENTS.



Drawn By: ZMH
Checked By: NMT
Project Manager: GDD

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Cornell University
Ithaca, NY 14853

M-101

PARTIAL FIFTH FLOOR
PLAN - DUCTWORK

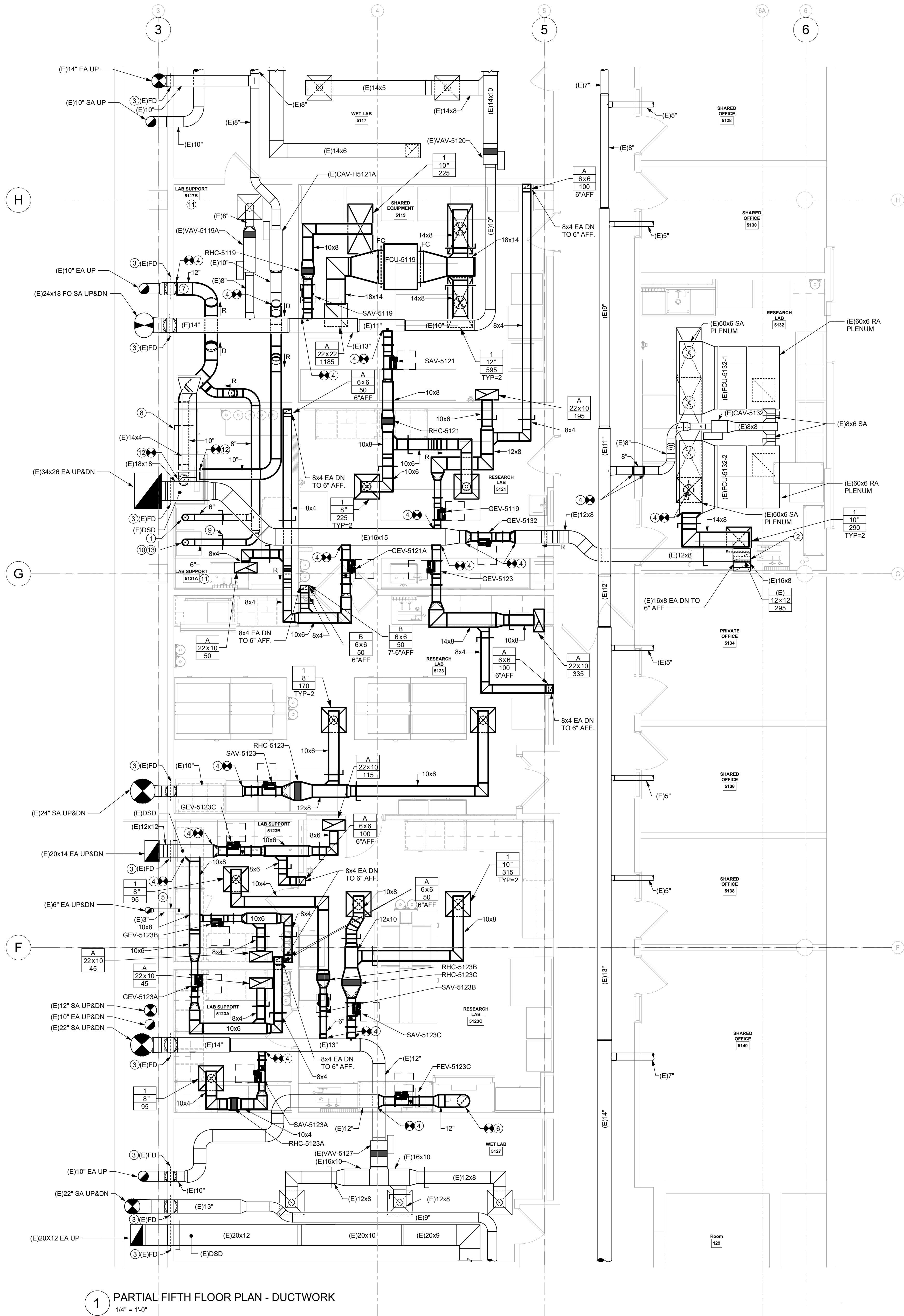
11/7/2025
100% Construction
Documents

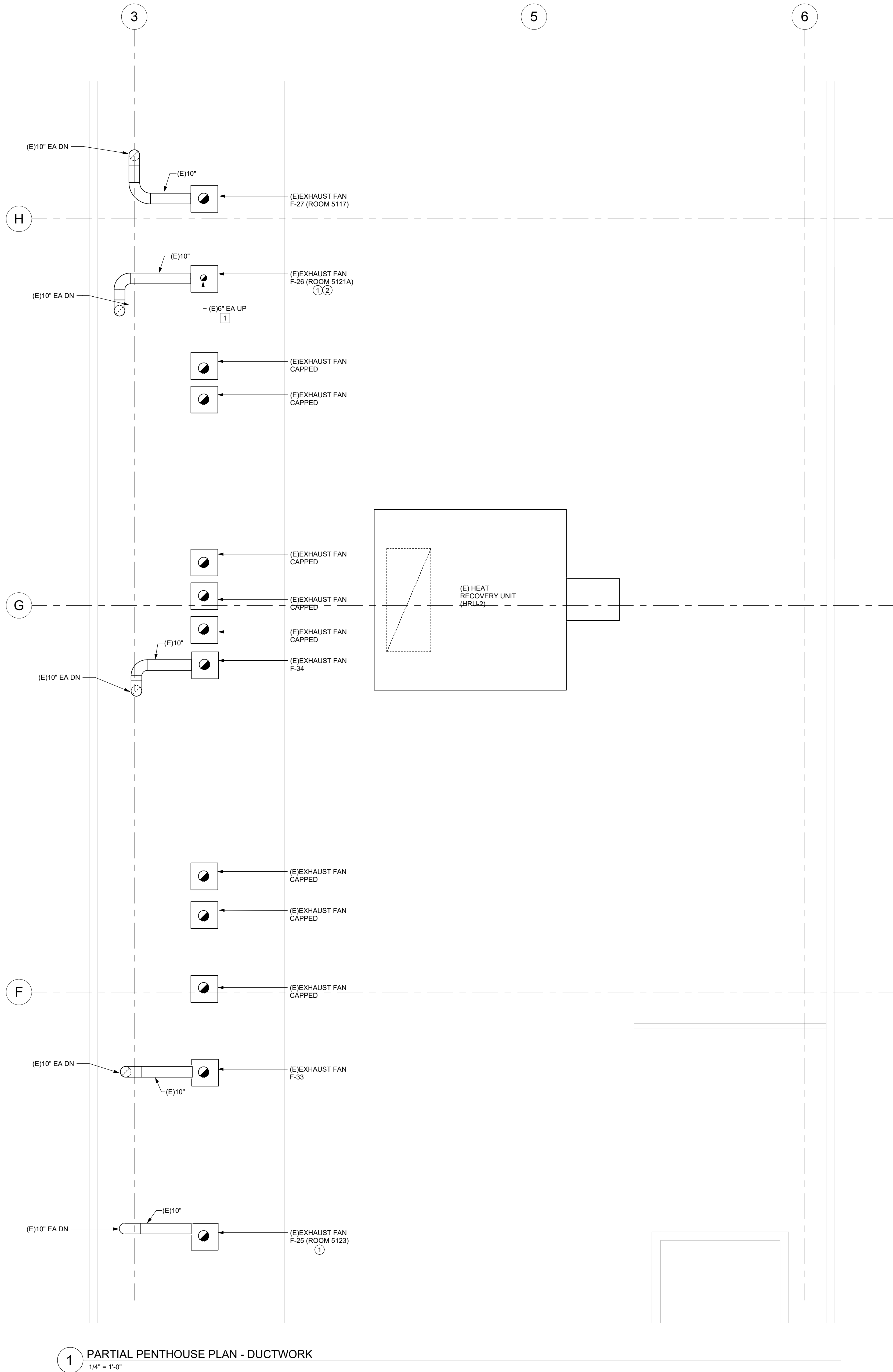
GENERAL NOTES:

- A. UNLESS INDICATED OTHERWISE, THE DUCTWORK AT THE VAV AND AIR VALVE INLET AND OUTLET SHALL MATCH THE SIZES SHOWN ON THE EQUIPMENT SCHEDULE.

DRAWING NOTES:

1. PROVIDE CEILING MOUNTED SNORKEL, BALANCE TO 100 CFM. REFER TO DETAILS FOR FURTHER REQUIREMENTS.
2. PROVIDE ALL MODIFICATIONS TO EXTEND THE LOW EXHAUST GRILLE TO ACCOMMODATE THE NEW CHASE ENCLOSURE.
3. EXISTING FIRE / SMOKE DAMPER SHALL BE TESTED AND CERTIFIED. REFER TO FIRE / SMOKE DAMPER SPECIFICATION FOR FURTHER REQUIREMENTS.
4. TIE DUCTWORK INTO EXISTING. TRANSITION AS REQUIRED TO MAKE THE CONNECTION.
5. PROVIDE FIRE WRAP ON THE EXPOSED DUCTWORK TO PROVIDE A CONTINUOUS RATING OF THE 2-HR SHIRT ENCLOSURE.
6. TIE DUCTWORK INTO ADJUSTABLE HEIGHT ADA FUME HOOD. REFER TO DETAILS FOR CONNECTION REQUIREMENTS.
7. PROVIDE AN ACCESS DOOR FOR THE EXISTING FIRE DAMPER.
8. BALANCE FUME HOOD TO 485 CFM.
9. BALANCE EXHAUST HOOD TO 100 CFM.
10. PROVIDE EXHAUST HOOD FOR OWNER PROVIDED LAB EQUIPMENT. REFER TO EXHAUST HOOD INSTALLATION DETAIL FOR FURTHER REQUIREMENTS.
11. ALL NEW EXHAUST DUCTWORK WITHIN LAB 5121A AND 5117B SHALL BE WELDED 304 STAINLESS STEEL, UNLESS NOTED OTHERWISE.
12. TIE DUCTWORK INTO EXISTING FIXED HEIGHT FUME HOOD.
13. INSULATE THE EXHAUST DUCTWORK FROM THE CEILING PENETRATION TO THE 5121A WALL PENETRATION.

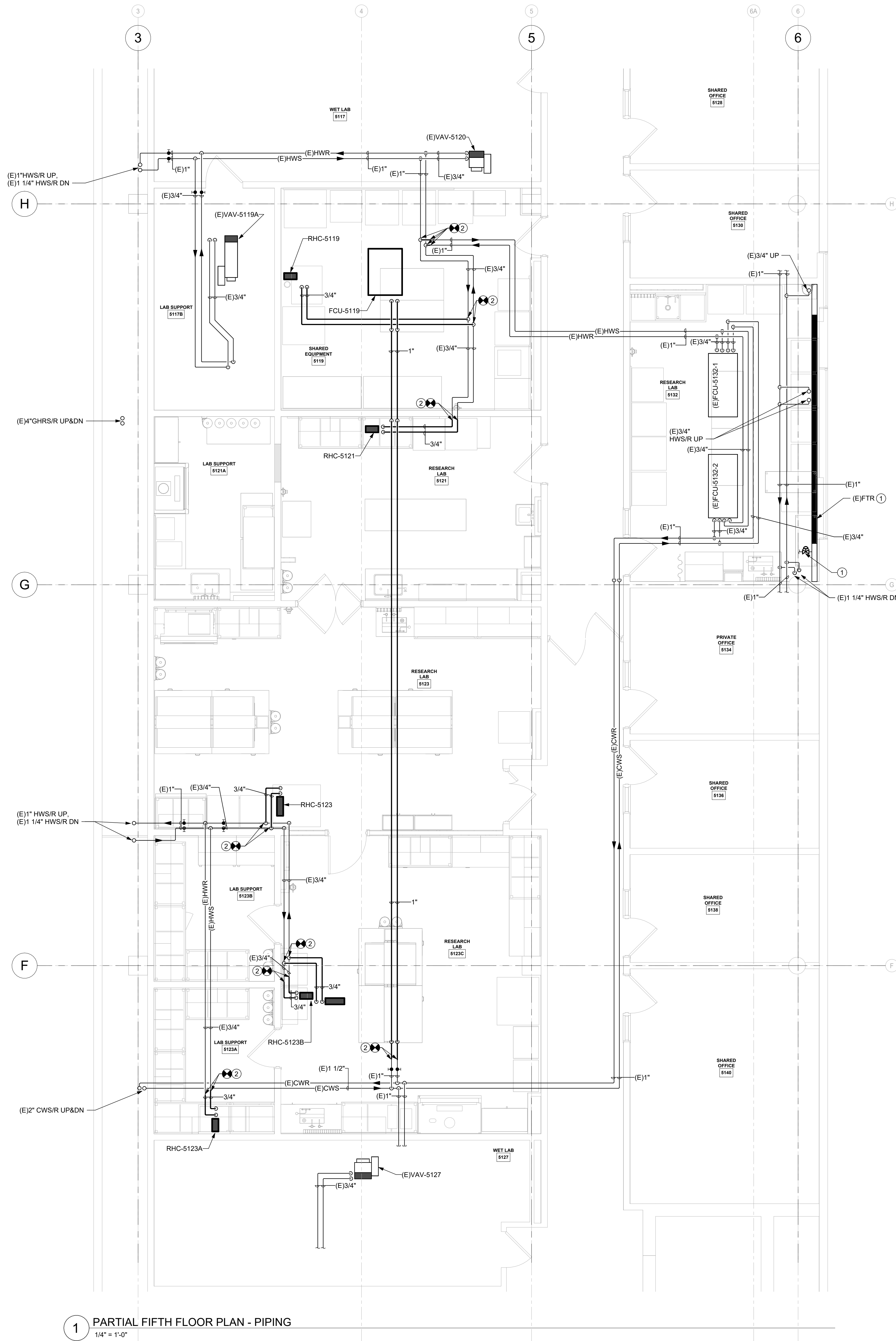




- DEMOLITION NOTES:**
- DISCONNECT AND REMOVE THE EXISTING DISCHARGE NOZZLE ON THE EXTERIOR EXHAUST STACK. FAN DISCHARGE NOZZLE SHALL BE 6 INCHES TO ACCOMMODATE NEW AIRFLOW.
- DRAWING NOTES:**
- PROVIDE ELECTRONIC CONTROLS FOR THE EXISTING EXHAUST FANS.
 - RESHAPE EXISTING EXHAUST FAN AS REQUIRED TO ACHIEVE SCHEDULED AIRFLOW. REFER TO EXHAUST FAN SCHEDULE FOR AIRFLOW. EXISTING SHEAVE DATA IS AVAILABLE FOR CONTRACTOR'S REFERENCE.

1 PARTIAL PENTHOUSE PLAN - DUCTWORK
1/4" = 1'-0"

Revisions



1 PARTIAL FIFTH FLOOR PLAN - PIPING
1/4" = 1'-0"

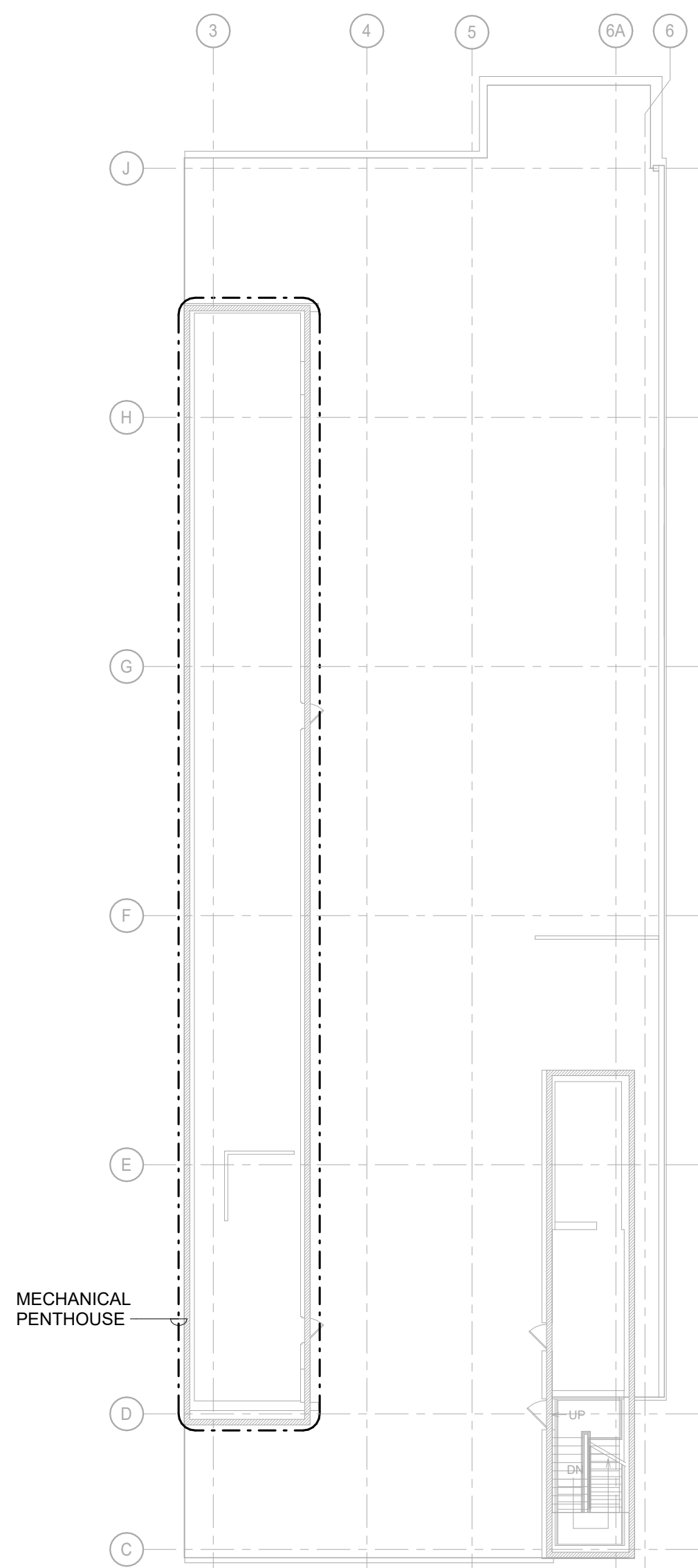
GENERAL NOTES:

- A. SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR FIRESTOPPING ASSEMBLY AND REQUIREMENTS AT EACH PENETRATION TYPE INCLUDING EXISTING.

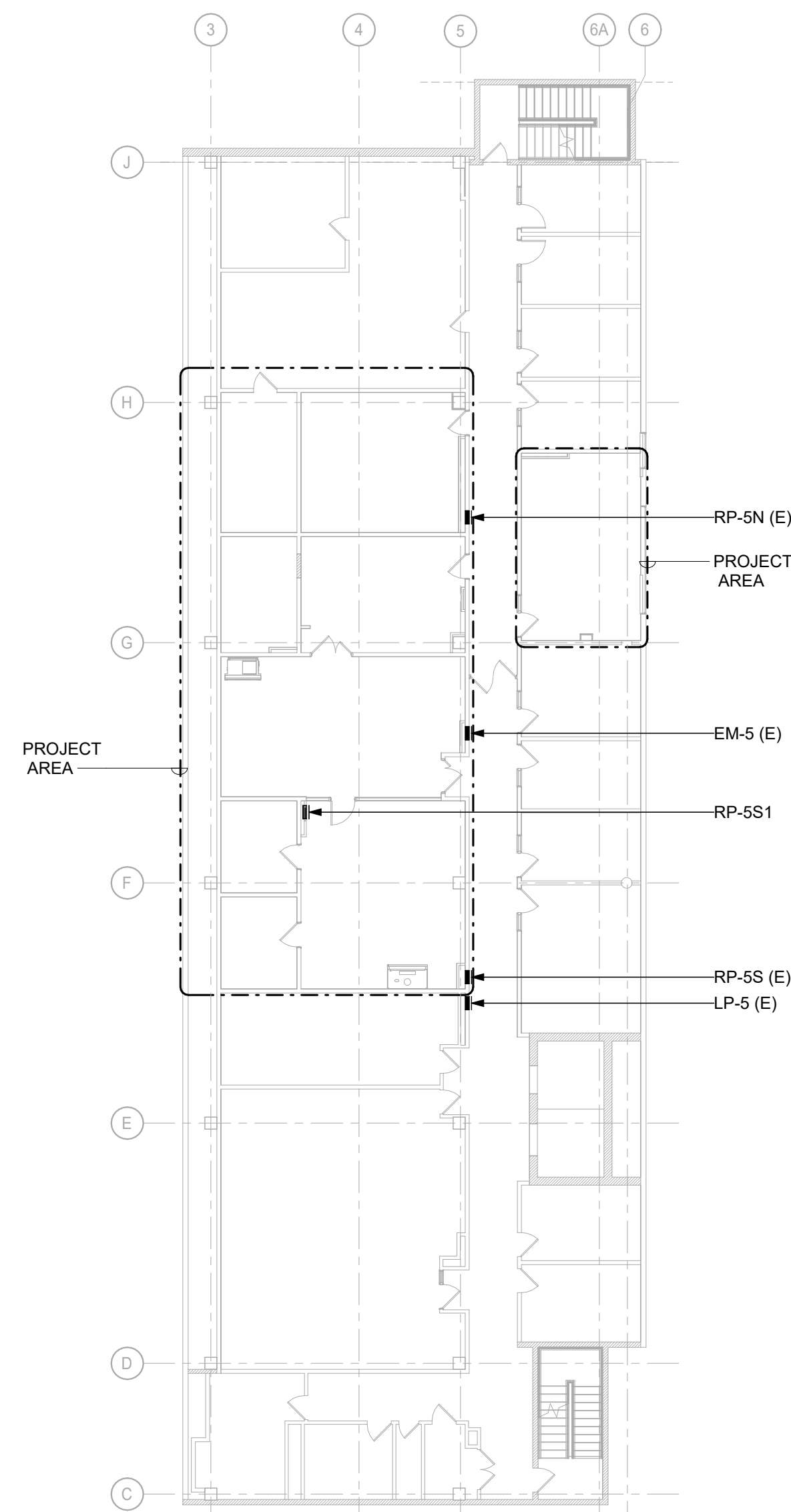
DRAWING NOTES:

1. PROVIDE ALL PIPING MODIFICATIONS AS REQUIRED TO PROVIDE THE ELECTRONIC CONTROL VALVE.
2. TIE PIPING INTO EXISTING. PROVIDE ALL PIPING MODIFICATIONS AS REQUIRED TO MAKE THE CONNECTION.

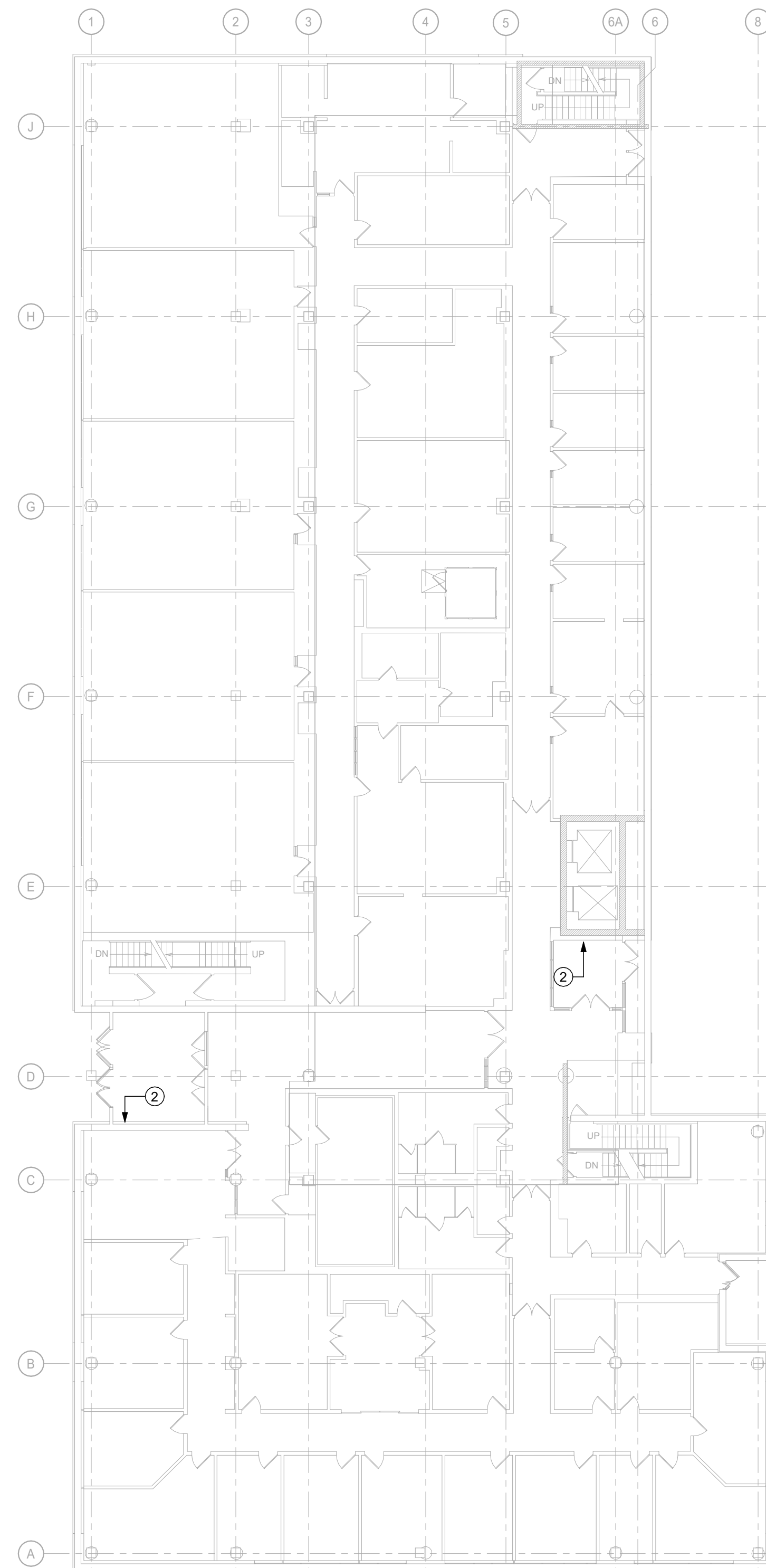
Revisions



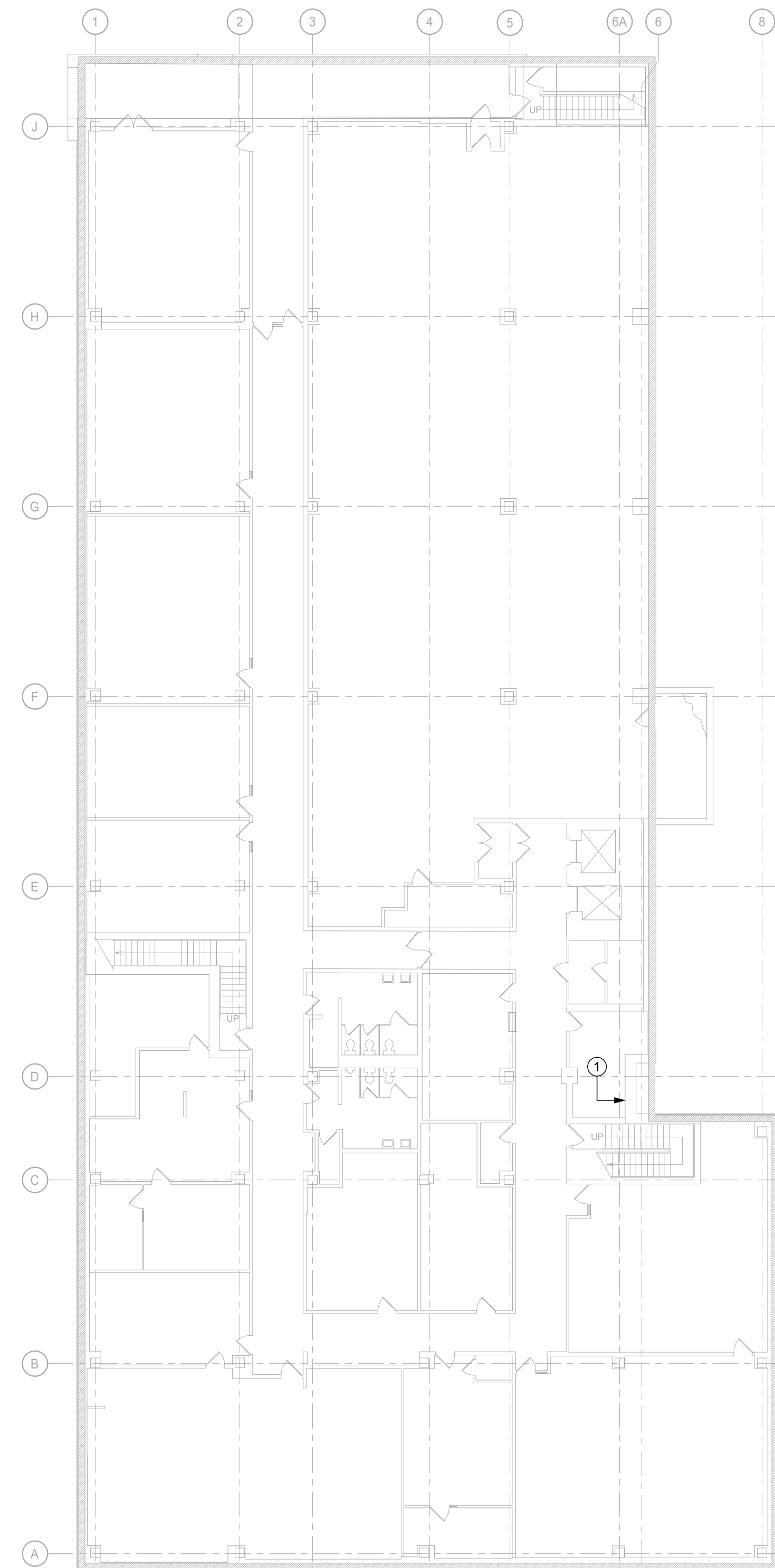
4 OVERALL PENTHOUSE PLAN
1/16" = 1'-0"



3 OVERALL FIFTH FLOOR PLAN
1/16" = 1'-0"



2 OVERALL FIRST FLOOR PLAN
1/16" = 1'-0"



1 OVERALL BASEMENT PLAN
1/16" = 1'-0"

ⓧ **DRAWING NOTES:**

- 1 EXISTING FIRE ALARM CONTROL PANEL.
- 2 EXISTING FIRE ALARM ANNUNCIATOR PANEL.



Drawn By: ECS
Checked By: ECS
Project Manager: GDD

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SWBR Project Number 25044.00

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E-010
ELECTRICAL OVERALL
PLANS

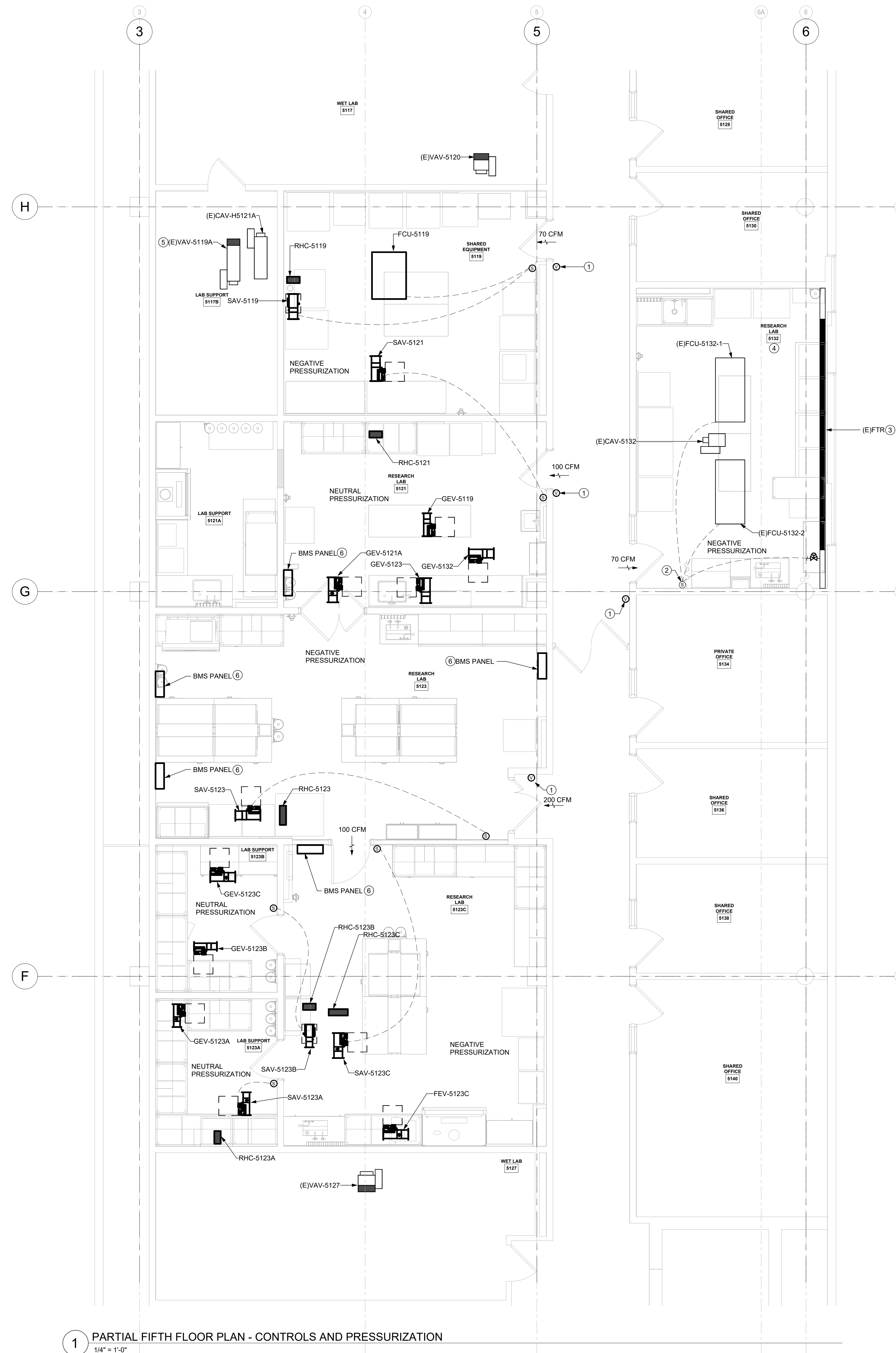
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GENERAL NOTES:

- A. REFER TO E-SERIES DRAWINGS FOR OCCUPANCY SENSORS LOCATIONS. OCCUPANCY SENSORS ARE PROVIDED BY DIVISION 26. CONTROL WIRING FROM OCCUPANCY SENSOR TO BACS CONTROLLER SHALL BE PROVIDED BY DIVISION 23.

DRAWING NOTES:

1. PROVIDE SURFACE MOUNTED BREAK GLASS VENTILATION SHUT-OFF SWITCH.
2. RELOCATE EXISTING SPACE SENSOR TO ACCOMMODATE NEW EQUIPMENT LAYOUT. PROVIDE ALL CONTROL WIRING MODIFICATIONS.
3. PROVIDE ELECTRONIC CONTROL VALVE FOR EXISTING FIN RADIATION.
4. MODIFY THE EXISTING SEQUENCE OF OPERATION FOR THIS LAB TO ACCOMMODATE THE RENOVATION.
5. PROVIDE ELECTRONIC CONTROLS FOR THE EXISTING AIR TERMINAL UNIT.
6. POWER TO BMS PANEL BY DIVISION 23.



1 PARTIAL FIFTH FLOOR PLAN - CONTROLS AND PRESSURIZATION
1/4" = 1'-0"



Drawn By: ZMH
Checked By: NMT
Project Manager: GDD

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M-300
CONTROLS AND
PRESSURIZATION PLAN

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CHILLED WATER LOAD SHED MATRIX				
CONTROL POINT	LOAD SHED 1 CHILLED WATER DAYTIME (DEFCON 2)	LOAD SHED 2 CHILLED WATER NIGHT (DEFCON 3)	LOAD SHED 3 CHILLED WATER EMERGENCY (DEFCON 1)	LOAD SHED 4 CHILLED WATER LSC EMERGENCY (DEFCON)
ZONE CONTROL				
RESEARCH SPACES	INDEX SPACE TO UNOCCUPIED MODE, RESETTABLE TO OCCUPIED MODE			INDEX CHILLED WATER CONTROL VALVE CLOSED

1 CHILLED WATER LOAD SHED MATRIX

NOT TO SCALE

STEAM LOAD SHED MATRIX						
CONTROL POINT	LOAD SHED 1 STEAM	LOAD SHED 2 STEAM	LOAD SHED 3 STEAM	LOAD SHED 4 STEAM	LOAD SHED 5 STEAM	LOAD SHED 6 STEAM
ZONE CONTROL						
RESEARCH SPACES	INDEX SPACE TO UNOCCUPIED MODE, RESETTABLE TO OCCUPIED MODE				INDEX SPACE AIR CHANGE RATE TO MIN UNOCCUPIED ACPH AND SPACE TEMPERATURE SETPOINT TO 60°F	

2 STEAM LOAD SHED MATRIX

NOT TO SCALE

SEQUENCE OF OPERATION

SYSTEM DESCRIPTION

GENERAL EXHAUST AIR VALVE (GEV)
SUPPLY AIR VAV (CAV)
4 PIPE FAN COIL UNIT (FCU)

GENERAL

SYSTEM SHALL BE CONTROLLED THROUGH THE BUILDING AUTOMATION AND CONTROL SYSTEM (BACS).

THE BACS SHALL BE CAPABLE OF RETAINING ITS PROGRAMMING AND TIME SETTING DURING A LOSS OF POWER FOR AT LEAST TEN HOURS.

ALL SETPOINTS SHALL BE ADJUSTABLE.

THE BACS SHALL BE CAPABLE OF STARTING AND STOPPING THE SYSTEM FOR SEVEN DIFFERENT DAILY SCHEDULES PER WEEK.

LABORATORY AIR CHANGE RATE ARE BASED ON TOTAL SUPPLY AIRFLOW FROM THE SPACE.

THE SPACE SHALL BE CONTROLLED TO AN AIR CHANGE RATE. THE BACS SHALL CALCULATE THE REQUIRED CFM USING THE ROOM GROSS VOLUME (AREA x CEILING HEIGHT).

LOAD SHED: REFER TO LOAD SHED MATRICES FOR THE SYSTEM CONTROL REQUIREMENTS FOR RESEARCH SPACES.

THE SEQUENCE OF OPERATION SHALL BE MODIFIED AS FOLLOWS:

SETPOINTS

SPACE COOLING TEMPERATURE SETPOINTS:

OCCUPIED: 75°F ± 1.5°F
UNOCCUPIED SETBACK: 75°F - 3.0°F
UNOCCUPIED: 75°F + 6.0°F

SPACE HEATING TEMPERATURE SETPOINTS:

OCCUPIED: 70°F ± 1.5°F
UNOCCUPIED SETBACK: 70°F - 3.0°F
UNOCCUPIED: 70°F + 6.0°F

MINIMUM LABORATORY OCCUPANCY INDEX TIME: 30 MINUTES

ZONE OCCUPANCY SCHEDULE: 6 AM TO 6 PM, MON-FRI

TOTAL EXHAUST AIR CHANGE RATE (ACH):
REFER TO LAB AIRFLOW SCHEDULE
ACH = TOTAL EXHAUST CFM X 60 / ROOM VOLUME

TOTAL EXHAUST AIRFLOW RATE (CFM):
REFER TO LAB AIRFLOW SCHEDULE

TOTAL SUPPLY AIRFLOW RATE (CFM):
REFER TO LAB AIRFLOW SCHEDULE
GENERAL EXHAUST AIRFLOW RATE + OFFSET

SPACE AIR DIFFERENTIAL OFFSET (CFM):
REFER TO LAB AIRFLOW SCHEDULE

SPACE OCCUPANCY

ZONE OCCUPANCY SHALL BE DETERMINED BASED ON A COMBINATION OF TIME OF DAY SCHEDULE AND A SPACE OCCUPANCY SENSOR.

DURING THE SCHEDULED OCCUPANCY PERIOD, THE ZONE SHALL BE INITIALLY INDEXED TO OCCUPIED AND OPERATE FOR THE MINIMUM DURATION, AT WHICH TIME THE SPACE OCCUPANCY SENSOR SHALL INDEX THE SPACE BETWEEN OCCUPIED AND OCCUPIED SETBACK MODE.

DURING THE SCHEDULED UNOCCUPIED PERIOD, THE SPACE OCCUPANCY SENSOR SHALL INDEX THE ZONE TO UNOCCUPIED FOR THE DURATION OF OCCUPANCY. THE ZONE SHALL INDEX BACK TO UNOCCUPIED WHEN OCCUPANCY IS NOT SENSED FOR A PERIOD OF MINIMUM DURATION.

FOR ZONES WITH MULTIPLE SPACES, AN OCCUPANCY SENSOR SHALL BE PROVIDED IN EACH SPACE, AND ZONE OCCUPANCY SHALL BE BASED ON OCCUPANCY INPUTS FROM ANY OF THE SPACE OCCUPANCY SENSORS ASSOCIATED WITH THAT ZONE.

LABORATORY AIRFLOW CONTROL — NEGATIVE PRESSURIZATION

AIR VALVE POSITIONS SHALL BE BASED ON MODE. UNDER NORMAL CONTROL, ROOM OCCUPANCY SHALL BE DETERMINED VIA ROOM OCCUPANCY SENSORS.

WHEN THE ROOM IS OCCUPIED, THE GENERAL EXHAUST AIR VALVE SHALL MODULATE AS NEEDED TO MAINTAIN THE OCCUPIED AIR CHANGE. THE SUPPLY AIR VAV SHALL MODULATE AS NEEDED TO MAINTAIN THE SPECIFIED AIRFLOW DIFFERENTIAL.

WHEN THE ROOM IS UNOCCUPIED, THE GENERAL EXHAUST AIR VALVE SHALL MODULATE AS NEEDED TO MAINTAIN THE UNOCCUPIED AIR CHANGE RATE. THE SUPPLY AIR VAV SHALL MODULATE AS NEEDED TO MAINTAIN THE SPECIFIED AIRFLOW DIFFERENTIAL.

REGARDLESS OF THE OCCUPANCY MODE, ALL THE SUPPLY AND EXHAUST AIR VALVES SHALL COMMAND CLOSED UPON ACTIVATION OF THE MANUAL VENTILATION SHUTDOWN SWITCH.

ZONE TEMPERATURE CONTROL

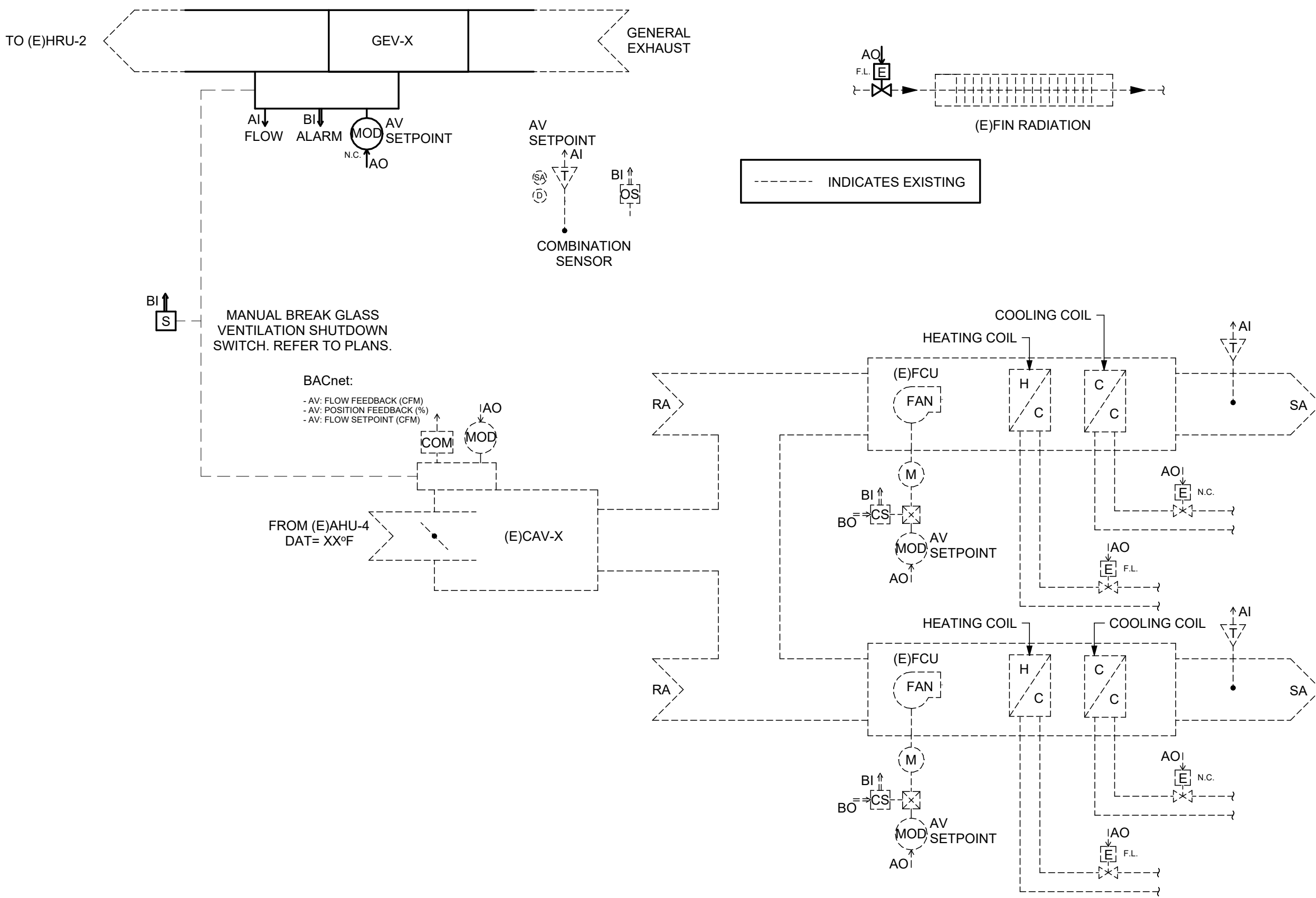
TEMPERATURE SETPOINTS SHALL BE DETERMINED BASED ON A COMBINATION OF PROGRAMMED SCHEDULE AND SPACE OCCUPANCY SENSORS.

OCCUPIED HEATING: IF THE SPACE IS OCCUPIED DURING THE SCHEDULED OCCUPIED PERIOD AND THE SPACE TEMPERATURE FALLS BELOW THE OCCUPIED HEATING TEMPERATURE SETPOINT, THE RADIATION CONTROL VALVE SHALL MODULATE TO MAINTAIN SETPOINT. IF THE TEMPERATURE IS NOT AT SETPOINT WITH THE RADIATION VALVE FULLY OPEN, THE FCU HEATING COIL VALVE SHALL THEN BE INDEXED TO MODULATE AS REQUIRED TO MAINTAIN SETPOINT. THE COOLING COIL CONTROL VALVE SHALL BE CLOSED. WHEN THE SPACE TEMPERATURE IS AT SETPOINT, THE RADIATION AND HEATING COIL CONTROL VALVES SHALL BE CLOSED.

OCCUPIED SETBACK: IF THE SPACE BECOMES UNOCCUPIED DURING THE SCHEDULED OCCUPIED PERIOD, THE ABOVE OCCUPIED HEATING/COOLING SEQUENCE SHALL APPLY, BUT THE SPACE SHALL BE MAINTAINED AT THE OCCUPIED SETBACK TEMPERATURE SETPOINT.

UNOCCUPIED HEATING: IF THE SPACE IS UNOCCUPIED DURING THE SCHEDULED UNOCCUPIED PERIOD AND THE SPACE TEMPERATURE FALLS BELOW THE UNOCCUPIED HEATING TEMPERATURE SETPOINT, THE ABOVE OCCUPIED HEATING/COOLING SEQUENCE SHALL APPLY, BUT THE SPACE SHALL BE MAINTAINED AT THE UNOCCUPIED HEATING TEMPERATURE SETPOINT.

IF THE ZONE BECOMES OCCUPIED DURING THE SCHEDULED UNOCCUPIED PERIOD, THE OCCUPIED HEATING/COOLING SEQUENCES SHALL APPLY FOR THE DURATION OF OCCUPANCY. THE ZONE SHALL BE MAINTAINED AT THE OCCUPIED TEMPERATURE SETPOINTS. WHEN THE ZONES BECOMES UNOCCUPIED AGAIN DURING THE SCHEDULED UNOCCUPIED PERIOD, THE ZONE SHALL INDEX BACK TO UNOCCUPIED MODE.



POINT SCHEDULE																
CONTROL POINT NAME	HARDWARE POINTS				SOFTWARE POINTS										SHOWN ON GRAPHIC	NOTES
	BI	BO	AI	AO	AV	BV	SCH	TREND	BACS	EMCS	ALARM					
											DESCRIPTION					
STEAM LOAD SHED						X(6)										BINARY NETWORK INPUT FROM EMCS
CHILLED WATER LOAD SHED						X(4)										BINARY NETWORK INPUT FROM EMCS
LABORATORY AIR CHANGE RATE (ACH)						X		X							X	
FLOW OFFSET SETPOINT (CFM)															X	
FLOW OFFSET ACTUAL (CFM)						X									X	
GENERAL EXHAUST AIR VALVE FLOW FEEDBACK (CFM)			X					X							X	
GENERAL EXHAUST AIR VALVE ALARM	X								X						X	
GENERAL EXHAUST AIR VALVE POSITION COMMAND / SETPOINT (CFM)				X	X			X	X				FAILURE		X	
10% FLOW DEVIATION FROM SETPOINT															X	
BREAKGLASS VENTILATION STOP	X							X	X	X					X	REFER TO PLANS FOR LOCATION
RADIATION CONTROL VALVE POSITION COMMAND (%)				X				X							X	FAIL LAST

LAB AIRFLOW SCHEDULE - NEGATIVE PRESSURIZATION																							
ROOM NUMBER	DESCRIPTION (NOTE 1)	ROOM DIMENSIONS		CODE MINIMUM VENTILATION				EXHAUST POINT (NOTE 2)	VALVE SIZE	EXHAUST AIR				OCCUPIED	UNOCCUPIED	SUPPLY POINT (NOTE 2)	VALVE SIZE	SUPPLY AIR				XFER ALL MODES	
		AREA	HEIGHT	NYS OUTDOOR AIRFLOW		NYS EXHAUST AIRFLOW				VALVE RANGE		VALVE RANGE						OCC	UNOCC	ALL MODES			
				(CFM)	(ACH)	(CFM)	(ACH)			MAX (CFM)	MIN (CFM)	(CFM)	(ACH)								(CFM)		(ACH)
5132	ACH/R	347	8.5	82	1.7	347	7.1	GEV-5132	8	800	80	295	6.0	150	3.1	(E)CAV-5132			225	80	-70		

NOTES

- THIS REPRESENTS A LABORATORY WHERE EXHAUST AIRFLOW IS DRIVEN BY THE MINIMUM REQUIRED AIR CHANGE RATES ESTABLISHED FOR THE LABORATORY OR A MINIMUM OF 1 CFM/SF DURING OCCUPIED CONDITIONS.
- THE MAX / MIN POSITIONS ON THE VALVE WILL BE SET AT THE FACTORY TO THE FULL FANGE WITH ACTUAL AIRFLOW SET IN SOFTWARE.

3 LAB 5132 CONTROL SCHEMATIC AND SYSTEM SUMMARY

NOT TO SCALE



Drawn By: NMT
Checked By: NMT
Project Manager: GDD

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Revisions

COMSTOCK HALL 5TH FLOOR LAB AND SUPPORT SPACE RENOVATIONS

129 Garden Ave.
Ithaca, NY 14853
SWBR Project Number 25044.00

Cornell University
Ithaca, NY 14853

M-400

CONTROL SCHEMATIC
AND SYSTEM
SUMMARIES

11/7/2025
100% Construction
Documents

SEQUENCE OF OPERATION

SYSTEM DESCRIPTION

GENERAL EXHAUST AIR VALVE (GEV)
SUPPLY AIR VALVE (SAV)
DUCT MOUNTED REHEAT COIL (RHC)
FAN COIL UNIT (FCU) — LAB 5119 ONLY

GENERAL

SYSTEM SHALL BE CONTROLLED THROUGH THE BUILDING AUTOMATION AND CONTROL SYSTEM (BACS).

THE BACS SHALL BE CAPABLE OF RETAINING ITS PROGRAMMING AND TIME SETTING DURING A LOSS OF POWER FOR AT LEAST TEN HOURS.

ALL SETPOINTS SHALL BE ADJUSTABLE.

THE BACS SHALL BE CAPABLE OF STARTING AND STOPPING THE SYSTEM FOR SEVEN DIFFERENT DAILY SCHEDULES PER WEEK.

LABORATORY AIR CHANGE RATE ARE BASED ON TOTAL SUPPLY AIRFLOW FROM THE SPACE.

THE SPACE SHALL BE CONTROLLED TO AN AIR CHANGE RATE. THE BACS SHALL CALCULATE THE REQUIRED CFM USING THE ROOM GROSS VOLUME (AREA X CEILING HEIGHT).

LOAD SHED: REFER TO LOAD SHED MATRICES FOR THE SYSTEM CONTROL REQUIREMENTS FOR RESEARCH SPACES.

SETPOINTS

SPACE COOLING TEMPERATURE SETPOINTS:

OCCUPIED: 75°F ± 1.5°F
UNOCCUPIED SETBACK: 75°F + 3.0°F
UNOCCUPIED: 75°F + 6.0°F

SPACE HEATING TEMPERATURE SETPOINTS:

OCCUPIED: 70°F ± 1.5°F
UNOCCUPIED SETBACK: 70°F - 3.0°F
UNOCCUPIED: 70°F - 6.0°F

MINIMUM LABORATORY OCCUPANCY INDEX TIME: 30 MINUTES

ZONE OCCUPANCY SCHEDULE: 6 AM TO 6 PM. MON-FRI

TOTAL EXHAUST AIR CHANGE RATE (ACH):

REFER TO LAB AIRFLOW SCHEDULE
ACH = TOTAL EXHAUST CFM X 60 / ROOM VOLUME

TOTAL EXHAUST AIRFLOW RATE (CFM):

REFER TO LAB AIRFLOW SCHEDULE

TOTAL SUPPLY AIRFLOW RATE (CFM):

REFER TO LAB AIRFLOW SCHEDULE
GENERAL EXHAUST AIRFLOW RATE + OFFSET

SPACE AIR DIFFERENTIAL OFFSET (CFM):

REFER TO LAB AIRFLOW SCHEDULE

SPACE OCCUPANCY

ZONE OCCUPANCY SHALL BE DETERMINED BASED ON A COMBINATION OF TIME OF DAY SCHEDULE AND A SPACE OCCUPANCY SENSOR.

DURING THE SCHEDULED OCCUPANCY PERIOD, THE ZONE SHALL BE INITIALLY INDEXED TO OCCUPIED AND OPERATE FOR THE MINIMUM DURATION, AT WHICH TIME THE SPACE OCCUPANCY SENSOR SHALL INDEX THE SPACE BETWEEN OCCUPIED AND OCCUPIED SETBACK MODE.

DURING THE SCHEDULED UNOCCUPIED PERIOD, THE SPACE OCCUPANCY SENSOR SHALL INDEX THE ZONE TO OCCUPIED FOR THE DURATION OF OCCUPANCY. THE ZONE SHALL INDEX BACK TO UNOCCUPIED WHEN OCCUPANCY IS NOT SENSED FOR A PERIOD OF MINIMUM DURATION.

FOR ZONES WITH MULTIPLE SPACES, AN OCCUPANCY SENSOR SHALL BE PROVIDED IN EACH SPACE, AND ZONE OCCUPANCY SHALL BE BASED ON OCCUPANCY INPUTS FROM ANY OF THE SPACE OCCUPANCY SENSORS ASSOCIATED WITH THAT ZONE.

LABORATORY AIRFLOW CONTROL —NEGATIVE PRESSURIZATION

AIR VALVE POSITIONS SHALL BE BASED ON MODE. UNDER NORMAL CONTROL, ROOM OCCUPANCY SHALL BE DETERMINED VIA ROOM OCCUPANCY SENSORS.

WHEN THE ROOM IS OCCUPIED, THE GENERAL EXHAUST AIR VALVE SHALL MODULATE AS NEEDED TO MAINTAIN THE OCCUPIED AIR CHANGE. THE SUPPLY AIR VALVE SHALL MODULATE AS NEEDED TO MAINTAIN THE SPECIFIED AIRFLOW DIFFERENTIAL.

WHEN THE ROOM IS UNOCCUPIED, THE GENERAL EXHAUST AIR VALVE SHALL MODULATE AS NEEDED TO MAINTAIN THE UNOCCUPIED AIR CHANGE RATE. THE SUPPLY AIR VALVE SHALL MODULATE AS NEEDED TO MAINTAIN THE SPECIFIED AIRFLOW DIFFERENTIAL.

REGARDLESS OF THE OCCUPANCY MODE, ALL THE SUPPLY AND EXHAUST AIR VALVES SHALL COMMAND CLOSED UPON ACTIVATION OF THE MANUAL VENTILATION SHUTDOWN SWITCH.

ZONE TEMPERATURE CONTROL

TEMPERATURE SETPOINTS SHALL BE DETERMINED BASED ON A COMBINATION OF PROGRAMMED SCHEDULE AND SPACE OCCUPANCY SENSORS.

OCCUPIED HEATING: IF THE SPACE IS OCCUPIED DURING THE SCHEDULED OCCUPIED PERIOD AND THE SPACE TEMPERATURE FALLS BELOW THE OCCUPIED HEATING TEMPERATURE SETPOINT, THE REHEAT CONTROL VALVE SHALL MODULATE TO MAINTAIN THE SPACE TEMPERATURE SETPOINT. WHEN THE SPACE TEMPERATURE IS AT SETPOINT, THE REHEAT COIL CONTROL VALVES SHALL BE CLOSED.

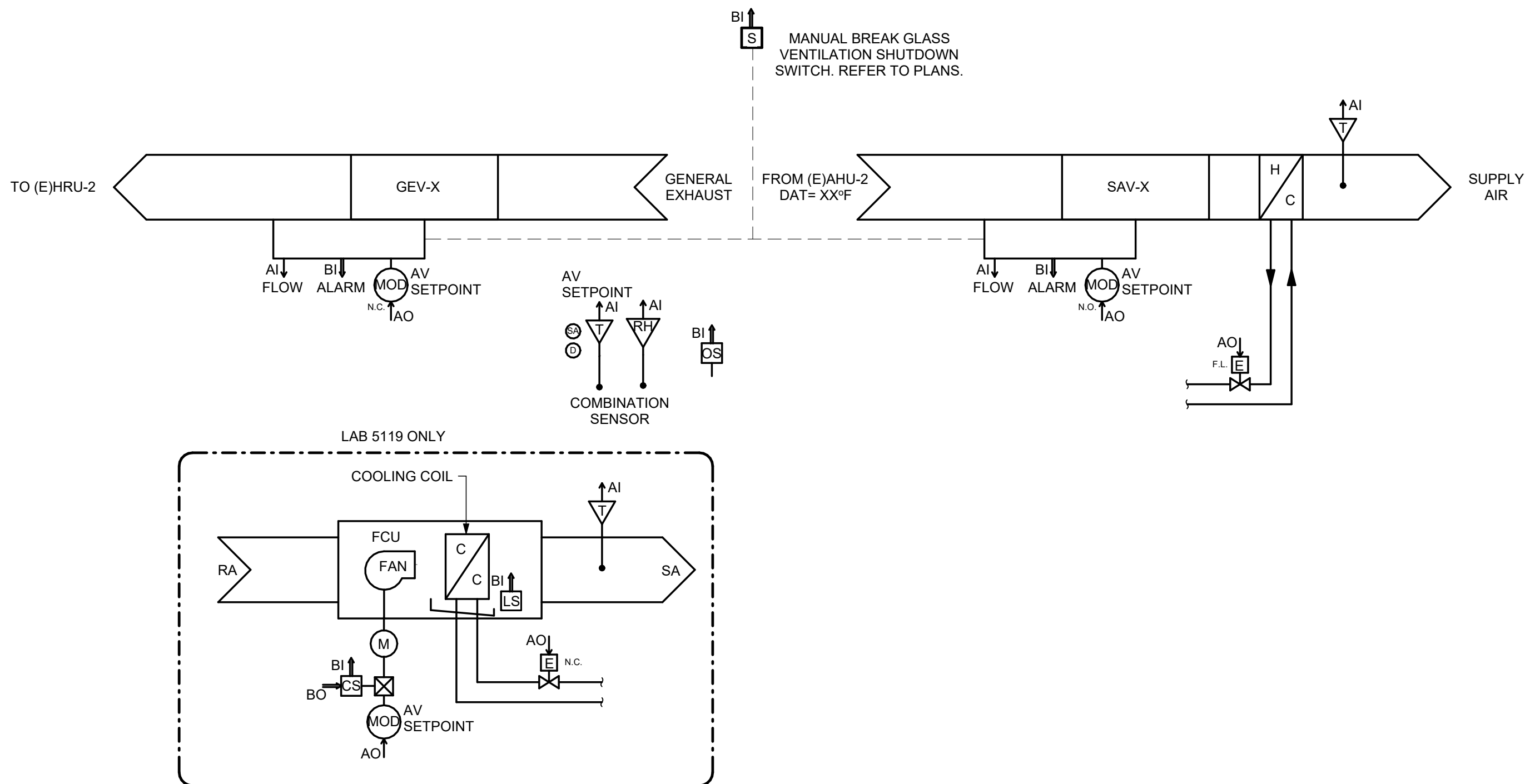
OCCUPIED COOLING: IF THE SPACE IS OCCUPIED DURING THE SCHEDULED OCCUPIED PERIOD AND THE SPACE TEMPERATURE RISES ABOVE THE OCCUPIED COOLING TEMPERATURE SETPOINT, THE REHEAT COIL CONTROL VALVE SHALL CLOSE.

OCCUPIED SETBACK: IF THE SPACE BECOMES UNOCCUPIED DURING THE SCHEDULED OCCUPIED PERIOD, THE ABOVE OCCUPIED HEATING/COOLING SEQUENCE SHALL APPLY, BUT THE SPACE SHALL BE MAINTAINED AT THE OCCUPIED SETBACK TEMPERATURE SETPOINT.

UNOCCUPIED HEATING: IF THE SPACE IS UNOCCUPIED DURING THE SCHEDULED UNOCCUPIED PERIOD AND THE SPACE TEMPERATURE FALLS BELOW THE UNOCCUPIED HEATING TEMPERATURE SETPOINT, THE ABOVE OCCUPIED HEATING SEQUENCE SHALL APPLY, BUT THE SPACE SHALL BE MAINTAINED AT THE UNOCCUPIED HEATING TEMPERATURE SETPOINT.

UNOCCUPIED COOLING: IF THE SPACE IS UNOCCUPIED DURING THE SCHEDULED UNOCCUPIED PERIOD AND THE SPACE TEMPERATURE RISES ABOVE THE UNOCCUPIED COOLING TEMPERATURE SETPOINT, THE ABOVE OCCUPIED SETBACK SEQUENCE SHALL APPLY, BUT THE SPACE SHALL BE MAINTAINED AT THE UNOCCUPIED COOLING TEMPERATURE SETPOINT AND THE REHEAT COIL CONTROL VALVE SHALL CLOSE.

IF THE ZONE BECOMES OCCUPIED DURING THE SCHEDULED UNOCCUPIED PERIOD, THE OCCUPIED HEATING/COOLING SEQUENCES SHALL APPLY FOR THE DURATION OF OCCUPANCY. THE ZONE SHALL BE MAINTAINED AT THE OCCUPIED TEMPERATURE SETPOINTS. WHEN THE ZONES BECOMES UNOCCUPIED AGAIN DURING THE SCHEDULED UNOCCUPIED PERIOD, THE ZONE SHALL INDEX BACK TO UNOCCUPIED MODE.



POINT SCHEDULE

CONTROL POINT NAME	HARDWARE POINTS								SOFTWARE POINTS										SHOWN ON GRAPHIC	NOTES																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
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LAB AIRFLOW SCHEDULE - NEGATIVE PRESSURIZATION

ROOM NUMBER	DESCRIPTION (NOTE 1)	ROOM DIMENSIONS		CODE MINIMUM VENTILATION				EXHAUST POINT (NOTE 2)	VALVE SIZE	EXHAUST AIR				OCCUPIED		UNOCCUPIED		SUPPLY POINT (NOTE 2)	VALVE SIZE	SUPPLY AIR VALVE RANGE		OCC	UNOCC	XFER ALL MODES				
		AREA	HEIGHT	NYS OUTDOOR AIRFLOW	NYS EXHAUST AIRFLOW	MAX	MIN			OCCUPIED	UNOCCUPIED	MAX	MIN															
														(CFM)	(ACH)	(CFM)	(ACH)			(CFM)	(ACH)				(CFM)	(ACH)	(CFM)	(ACH)
5119	ACH/R	345	8.5	82	1.7	345	7.1	GEV-5119	8	800	80	295	6.0	150	3.1	SAV-5119	8	800	80	225	80	-70						
5123	ACH/R	515	8.5	113	1.5	515	7.1	GEV-5123	8	800	80	435	6.0	220	3.0	SAV-5123	8	800	80	335	120	-100						
5123A	ACH/R	109	8.5	40	2.6	109	7.1	GEV-5123A	6	315	30	95	6.2	50	3.2	SAV-5123A	6	315	30	95	50	0						
5123B	ACH/R	108	8.5	39	2.6	108	7.1	GEV-5123B	6	315	30	95	6.2	50	3.3	SAV-5123B	6	315	30	95	50	0						

NOTES

- THIS REPRESENTS A LABORATORY WHERE EXHAUST AIRFLOW IS DRIVEN BY THE MINIMUM REQUIRED AIR CHANGE RATES ESTABLISHED FOR THE LABORATORY OR A MINIMUM OF 1 CFM/SF DURING OCCUPIED CONDITIONS.
- THE MAX / MIN POSITIONS ON THE VALVE WILL BE SET AT THE FACTORY TO THE FULL FANGE WITH ACTUAL AIRFLOW SET IN SOFTWARE.

Drawn By: NMT
Checked By: NMT
Project Manager: GDD

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Revisions

NO.	DESCRIPTION	DATE

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LAB AND SUPPORT SPACE
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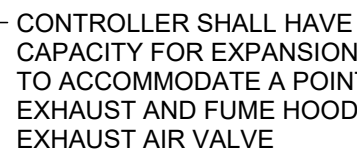
M-401

CONTROL SCHEMATIC
AND SYSTEM
SUMMARIES

11/7/2025

100% Construction
Documents

THE SPACE SHALL BE MAINTAINED AT THE UNOCCUPIED SETBACK TEMPERATURE SETPOINT.

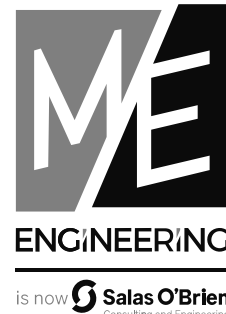


LAB AIRFLOW SCHEDULE																						
ROOM NUMBER	DESCRIPTION (NOTE 1)	ROOM DIMENSIONS		CODE MINIMUM VENTILATION				EXHAUST POINT (NOTE 2)	VALVE SIZE	EXHAUST AIR						SUPPLY AIR POINT (NOTE 2)	VALVE SIZE	SUPPLY AIR			XFER ALL MODES	
		AREA	HEIGHT	NYS OUTDOOR AIRFLOW		NYS EXHAUST AIRFLOW				VALVE RANGE		OCCUPIED	UNOCCUPIED	VALVE RANGE				OCC	UNOCC			
				(SF)	(FT)	(CFM)	(ACH)			(CFM)	(ACH)	MAX	MIN	100 FPM	100 FPM			MAX	MIN	100 FPM		
												(CFM)	(CFM)	(CFM)	(ACH)			(CFM)	(ACH)	(CFM)		(CFM)
5121/5121A	VAV	429	8.0	207	3.6	429	7.5															
								E/F-26	-							(E/CV-H5121A	-					
								GEV-5121A	8	800	80	200	15.5	200	15.5	SAY-5121	8	800	80	445	445	-100
								TOTAL					885	885		TOTAL				785	785	

NOTES

1. THIS REPRESENTS A LABORATORY WHERE THE REQUIREMENTS OF THE FUME HOODS EXCEEDS THE MINIMUM REQUIRED AIR CHANGE RATES ESTABLISHED FOR THE LABORATORY.

2. THE MAX / MIN POSITIONS ON THE VALVE WILL BE SET AT THE FACTORY TO THE FULL FANGE WITH ACTUAL AIRFLOW SET IN SOFTWARE.



SEQUENCE OF OPERATION

SYSTEM DESCRIPTION

FUME HOOD EXHAUST AIR VALVE (FEV)
GENERAL EXHAUST AIR VALVE (GEV)
SUPPLY AIR VALVE (SAV)
DUCT MOUNTED REHEAT COIL (RHC)

GENERAL

SYSTEM SHALL BE CONTROLLED THROUGH THE BUILDING AUTOMATION AND CONTROL SYSTEM (BACS).

THE BACS SHALL BE CAPABLE OF RETAINING ITS PROGRAMMING AND TIME SETTING DURING A LOSS OF POWER FOR AT LEAST TEN HOURS.

ALL SETPOINTS SHALL BE ADJUSTABLE.

THE BACS SHALL BE CAPABLE OF STARTING AND STOPPING THE SYSTEM FOR SEVEN DIFFERENT DAILY SCHEDULES PER WEEK.

LABORATORY AIR CHANGE RATE ARE BASED ON TOTAL SUPPLY AIRFLOW FROM THE SPACE.

THE SPACE SHALL BE CONTROLLED TO AN AIR CHANGE RATE. THE BACS SHALL CALCULATE THE REQUIRED CFM USING THE ROOM GROSS VOLUME (AREA x CEILING HEIGHT).

LOAD SHED: REFER TO LOAD SHED MATRICES FOR THE SYSTEM CONTROL REQUIREMENTS FOR RESEARCH SPACES.

SETPOINTS

SPACE COOLING TEMPERATURE SETPOINTS:

OCCUPIED: 75°F ± 1.5°F
UNOCCUPIED SETBACK: 75°F + 3.0°F
UNOCCUPIED: 75°F + 6.0°F

SPACE HEATING TEMPERATURE SETPOINTS:

OCCUPIED: 70°F ± 1.5°F
UNOCCUPIED SETBACK: 70°F - 3.0°F
UNOCCUPIED: 70°F - 6.0°F

MINIMUM LABORATORY OCCUPANCY INDEX TIME: 30 MINUTES

ZONE OCCUPANCY SCHEDULE: 6 AM TO 6 PM, MON-FRI

TOTAL EXHAUST AIR CHANGE RATE (ACPH):
REFER TO LAB AIRFLOW SCHEDULES
ACPH = TOTAL EXHAUST CFM X 60 / ROOM VOLUME

TOTAL EXHAUST AIRFLOW RATE (CFM):
REFER TO LAB AIRFLOW SCHEDULE

SUPPLY AIRFLOW RATE (CFM):
REFER TO LAB AIRFLOW SCHEDULE
TOTAL EXHAUST AIRFLOW RATE + OFFSET

FUME HOOD EXHAUST AIRFLOW RATE (CFM):
NOT CONTROLLED BY BACS. VALVE IS CONTROLLED BY FUME HOOD MONITOR TO MAINTAIN FACE VELOCITY SETPOINTS.

GENERAL EXHAUST AIRFLOW RATE (CFM):
REFER TO LAB AIRFLOW SCHEDULE
TOTAL EXHAUST AIRFLOW RATE - FUME HOOD EXHAUST AIRFLOW RATE

SPACE AIR DIFFERENTIAL OFFSET (CFM):
REFER TO LAB AIRFLOW SCHEDULE

FUME HOOD FACE VELOCITY (CFM):
NOT CONTROLLED BY BACS. FACE VELOCITY SETPOINTS ARE PROGRAMMED INTO FUME HOOD MONITOR.

FACE VELOCITY CONTROL

THE FUME HOOD SHALL BE EQUIPPED WITH A FUME HOOD MONITOR AND SASH POSITION INDICATOR.

THE MONITOR SHALL MODULATE THE FUME HOOD EXHAUST VALVE TO MAINTAIN THE FACE VELOCITY SETPOINT.

THE MONITOR SHALL, AS A MINIMUM, HAVE THE FOLLOWING CAPABILITIES:

- SASH POSITION INPUT
- STANDBY MODE INPUT TO ALLOW ADJUST OF FACE VELOCITY
- HOOD DECOMMISSION MODE

LABORATORY AIRFLOW CONTROL

AIR VALVE POSITIONS SHALL BE BASED ON MODE. UNDER NORMAL CONTROL, ROOM OCCUPANCY SHALL BE DETERMINED VIA ROOM OCCUPANCY SENSORS.

WHEN THE ROOM IS OCCUPIED, THE BACS SHALL SEND AN OCCUPIED COMMAND TO THE FUME HOOD EXHAUST AIR VALVE. THE FUME HOOD MONITOR SHALL INDEX THE FUME HOOD EXHAUST AIR VALVE BETWEEN MINIMUM AND MAXIMUM POSITIONS AS NEEDED TO MAINTAIN THE OCCUPIED FACE VELOCITY SETPOINT BASED ON THE SASH POSITION. THE GENERAL EXHAUST AIR VALVE SHALL MODULATE AS NEEDED TO MAINTAIN THE OCCUPIED AIR CHANGE RATE. THE SUPPLY AIR VALVE SHALL MODULATE AS NEEDED TO MAINTAIN THE SPECIFIED AIRFLOW DIFFERENTIAL.

WHEN THE ROOM IS UNOCCUPIED, AND THE SASH IS AT OR BELOW 18-INCHES, THE BACS SHALL SEND AN UNOCCUPIED COMMAND TO THE FUME HOOD EXHAUST AIR VALVE. THE FUME HOOD MONITOR SHALL INDEX THE FUME HOOD EXHAUST AIR VALVE BETWEEN MINIMUM AND MAXIMUM POSITIONS AS NEEDED TO MAINTAIN THE UNOCCUPIED FACE VELOCITY SETPOINT. THE GENERAL EXHAUST AIR VALVE SHALL MODULATE AS NEEDED TO MAINTAIN THE UNOCCUPIED AIR CHANGE RATE. THE SUPPLY AIR VALVE SHALL MODULATE AS NEEDED TO MAINTAIN THE SPECIFIED AIRFLOW DIFFERENTIAL.

WHEN THE ROOM IS UNOCCUPIED AND THE FUME HOOD SASH IS ABOVE 18-INCHES, THE BACS SHALL NOT SEND THE SPACE UNOCCUPIED COMMAND TO THE FUME HOOD EXHAUST AIR VALVE. THE FUME HOOD MONITOR SHALL INDEX THE FUME HOOD EXHAUST AIR VALVE TO MAINTAIN THE OCCUPIED SASH OPEN AIRFLOW SETPOINT. THE GENERAL EXHAUST AIR VALVE SHALL MODULATE AS NEEDED TO MAINTAIN THE UNOCCUPIED AIR CHANGE RATE. THE SUPPLY AIR VALVE SHALL MODULATE AS REQUIRED TO MAINTAIN THE SPECIFIED AIRFLOW DIFFERENTIAL.

VACANT MODE: THE BACS SHALL SEND A DECOMMISSION COMMAND TO THE FUME HOOD EXHAUST AIR VALVE. THE FUME HOOD MONITOR SHALL INDEX THE FUME HOOD EXHAUST AIR VALVE TO CLOSE. THE GENERAL EXHAUST AIR VALVE SHALL MODULATE AS NEEDED TO MAINTAIN AIRFLOW SETPOINT. THE SUPPLY AIR VALVE SHALL MODULATE AS REQUIRED TO MAINTAIN THE SPECIFIED AIRFLOW DIFFERENTIAL.

REGARDLESS OF THE OCCUPANCY MODE, ALL THE SUPPLY AND EXHAUST AIR VALVES SHALL COMMAND CLOSED UPON ACTIVATION OF THE MANUAL VENTILATION SHUTDOWN SWITCH.

ZONE TEMPERATURE CONTROL

TEMPERATURE SETPOINTS SHALL BE DETERMINED BASED ON A COMBINATION OF PROGRAMMED SCHEDULE AND SPACE OCCUPANCY SENSORS.

OCCUPIED HEATING: IF THE SPACE IS OCCUPIED DURING THE SCHEDULED OCCUPIED PERIOD AND THE SPACE TEMPERATURE FALLS BELOW THE OCCUPIED HEATING TEMPERATURE SETPOINT, THE REHEAT CONTROL VALVE SHALL MODULATE TO MAINTAIN THE SPACE TEMPERATURE SETPOINT. WHEN THE SPACE TEMPERATURE IS AT SETPOINT, THE REHEAT COIL CONTROL VALVES SHALL BE CLOSED.

OCCUPIED COOLING: IF THE SPACE IS OCCUPIED DURING THE SCHEDULED OCCUPIED PERIOD AND THE SPACE TEMPERATURE RISES ABOVE THE OCCUPIED COOLING TEMPERATURE SETPOINT, THE REHEAT COIL CONTROL VALVE SHALL CLOSE.

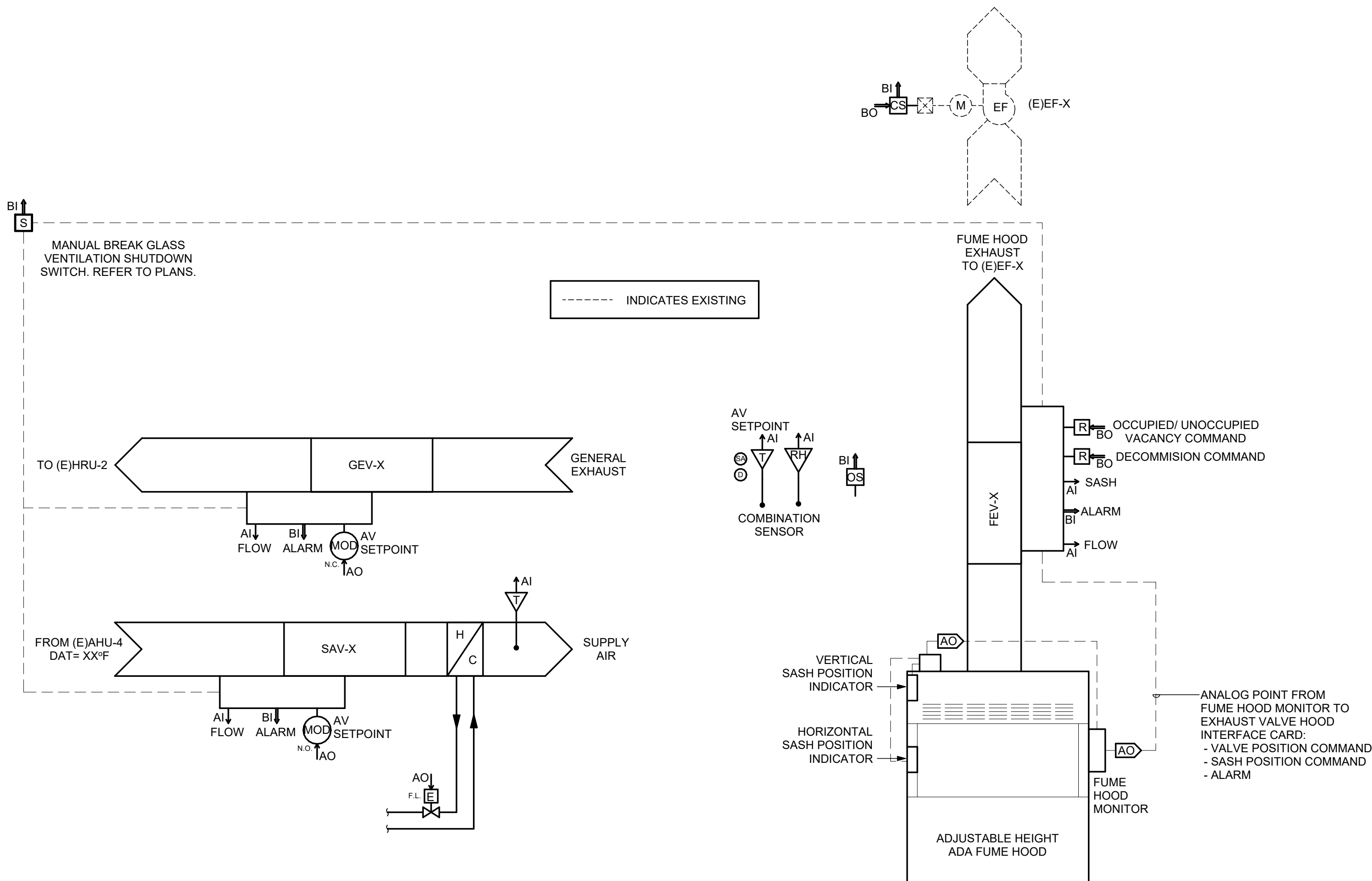
OCCUPIED SETBACK: IF THE SPACE BECOMES UNOCCUPIED DURING THE SCHEDULED OCCUPIED PERIOD, THE ABOVE OCCUPIED HEATING/COOLING SEQUENCE SHALL APPLY, BUT THE SPACE SHALL BE MAINTAINED AT THE OCCUPIED SETBACK TEMPERATURE SETPOINT.

UNOCCUPIED HEATING: IF THE SPACE IS UNOCCUPIED DURING THE SCHEDULED UNOCCUPIED PERIOD AND THE SPACE TEMPERATURE FALLS BELOW THE UNOCCUPIED HEATING TEMPERATURE SETPOINT, THE ABOVE OCCUPIED HEATING SEQUENCE SHALL APPLY, BUT THE SPACE SHALL BE MAINTAINED AT THE UNOCCUPIED HEATING TEMPERATURE SETPOINT.

UNOCCUPIED COOLING: IF THE SPACE IS UNOCCUPIED DURING THE SCHEDULED UNOCCUPIED PERIOD AND THE SPACE TEMPERATURE RISES ABOVE THE UNOCCUPIED COOLING TEMPERATURE SETPOINT, THE ABOVE OCCUPIED SETBACK SEQUENCE SHALL APPLY, BUT THE SPACE SHALL BE MAINTAINED AT THE UNOCCUPIED COOLING TEMPERATURE SETPOINT AND THE REHEAT COIL CONTROL VALVE SHALL CLOSE.

IF THE ZONE BECOMES OCCUPIED DURING THE SCHEDULED UNOCCUPIED PERIOD, THE OCCUPIED HEATING/COOLING SEQUENCES SHALL APPLY FOR THE DURATION OF OCCUPANCY. THE ZONE SHALL BE MAINTAINED AT THE OCCUPIED TEMPERATURE SETPOINTS. WHEN THE ZONES BECOMES UNOCCUPIED AGAIN DURING THE SCHEDULED UNOCCUPIED PERIOD, THE ZONE SHALL INDEX BACK TO UNOCCUPIED MODE

VACANT MODE: THE ABOVE UNOCCUPIED HEATING/COOLING SEQUENCE SHALL APPLY, BUT THE SPACE SHALL BE MAINTAINED AT THE UNOCCUPIED SETBACK TEMPERATURE SETPOINT.



POINT SCHEDULE

CONTROL POINT NAME	HARDWARE POINTS				SOFTWARE POINTS										SHOWN ON GRAPHIC	NOTES
	BI	BO	AI	AO	AV	BV	SCH	TREND	ALARM		DESCRIPTION					
									BACS	EMCS						
STEAM LOAD SHED					X(6)											
CHILLED WATER LOAD SHED					X(4)										BINARY NETWORK INPUT FROM EMCS	
TOTAL EXHAUST AIRFLOW (CFM)					X			X						X	BINARY NETWORK INPUT FROM EMCS	
TOTAL EXHAUST SETPOINT (CFM)					X			X						X		
LABORATORY AIR CHANGE RATE (ACH)					X			X						X		
FLOW OFFSET SETPOINT (CFM)					X									X		
FLOW OFFSET ACTUAL (CFM)					X									X		
SUPPLY AIR VALVE FLOW FEEDBACK (CFM)			X											X		
SUPPLY VALVE ALARM	X								X					X		
SUPPLY AIR VALVE POSITION COMMAND / SETPOINT (CFM)				X	X			X	X					X		
REHEAT COIL LEAVING AIR TEMPERATURE / SETPOINT (°F)				X	X			X						X		
REHEAT COIL VALVE COMMAND (%)				X				X	X					X		
GENERAL EXHAUST AIR VALVE FLOW FEEDBACK (CFM)			X					X						X		
GENERAL EXHAUST AIR VALVE ALARM	X								X					X		
GENERAL EXHAUST AIR VALVE POSITION COMMAND / SETPOINT (CFM)				X	X			X	X					X		
FUME HOOD EXHAUST FAN MOTOR STATUS (ON/OFF)	X							X	X					X		
FUME HOOD EXHAUST FAN MOTOR START/STOP		X						X						X		
FUME HOOD EXHAUST AIR VALVE FLOW FEEDBACK (CFM)			X					X						X		
FUME HOOD EXHAUST AIR VALVE ALARM	X								X					X		
FUME HOOD EXHAUST AIR VALVE DECOMMISSION COMMAND		X												X		
FUME HOOD SASH POSITION			X					X	X					X		
FUME HOOD EXHAUST AIR VALVE OCC / UNOCC COMMAND			X											X		
SPACE TEMPERATURE / SETPOINT (°F)				X		X		X	X					X		
SPACE RELATIVE HUMIDITY (%RH)				X					X					X	MONITORING ONLY	
SPACE OCCUPANCY		X						X	X					X		
BREAKGLASS VENTILATION STOP	X							X	X	X				X	REFER TO PLANS FOR LOCATION	

LAB AIRFLOW SCHEDULE

LAB AIRFLOW SCHEDULE																																				
ROOM NUMBER	DESCRIPTION (NOTE 1)	ROOM DIMENSIONS		CODE MINIMUM VENTILATION				EXHAUST AIR																SUPPLY AIR												XFER ALL MODES
		AREA	HEIGHT	NYS		EXHAUST POINT (NOTE 2)	VALVE SIZE	VALVE RANGE		OCCUPIED SASH OPEN (NOTE 3)		OCCUPIED SASH CLOSED		UNOCCUPIED SASH FULL (NOTE 3)		UNOCCUPIED SASH OPEN (NOTE 3)		UNOCCUPIED SASH CLOSED		SUPPLY POINT (NOTE 2)	VALVE SIZE	VALVE RANGE		OCC SASH OPEN		OCC SASH CLOSED		UNOCC SASH FULL	UNOCC SASH OPEN	UNOCC SASH CLOSED						
				OUTDOOR AIRFLOW	EXHAUST AIRFLOW			MAX	MIN	100 FPM	MAX	MIN	100 FPM	MAX	MIN	100 FPM	MAX	MIN	100 FPM																	
				(CFM)	(ACH)			(CFM)	(ACH)	(CFM)	(ACH)	(CFM)	(ACH)	(CFM)	(ACH)	(CFM)	(ACH)	(CFM)	(ACH)			(CFM)	(ACH)	(CFM)	(ACH)											
				(SF)	(FT)			(CFM)	(ACH)	(CFM)	(ACH)	(CFM)	(CFM)	(CFM)	(CFM)	(CFM)	(CFM)	(CFM)	(CFM)			(CFM)	(CFM)	(CFM)	(CFM)	(CFM)	(CFM)				(CFM)	(CFM)	(CFM)	(CFM)	(CFM)	
5123C	VAV	475	8.5	216	3.2	475	7.1	FEV-5123C	8	800	80	625	190	625	410	190	625	10.8	100	7.6	190	4.3	SAV-5123C	8	800	80	625	305	625	410	190	-100				
								GEV-5123C	8	800	80	100	215	6.0	100	10.8	100	510	290																	
								TOTAL				725	405			725																				

NOTES

1. THIS REPRESENTS A LABORATORY WHERE THE REQUIREMENTS OF THE FUME HOODS EXCEEDS THE MINIMUM REQUIRED AIR CHANGE RATES ESTABLISHED FOR THE LABORATORY.
2. THE MAX / MIN POSITIONS ON THE VALVE WILL BE SET AT THE FACTORY TO THE FULL FANGE WITH ACTUAL AIRFLOW SET IN SOFTWARE.
3. FUME HOOD EXHAUST FAN IS CONSTANT VOLUME AND DOES NOT CURRENTLY HAVE THE CAPABILITY TO MODULATE AIRFLOW.



Drawn By: NMT
Checked By: NMT
Project Manager: GDD

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Revisions

NO.	DESCRIPTION	DATE

COMSTOCK HALL 5TH FLOOR
LAB AND SUPPORT SPACE
RENOVATIONS

129 Garden Ave.
Ithaca, NY 14853
SWBR Project Number 25044.00

Cornell University
Ithaca, NY 14853

M-403

CONTROL SCHEMATIC
AND SYSTEM
SUMMARIES

11/7/2025
100% Construction
Documents

REHEAT COIL SCHEDULE - HOT WATER

UNIT NO.	LOCATION	SERVICE	TYPE	MOUNTING	CAPACITY (MBH)	AIR SIDE		ENT. AIR TEMP. (DEG. F)	LVG. AIR TEMP. (DEG. F)	AIR P.D. (In. W.G.)	MAX. FACE VELOCITY (FPM)	WATER SIDE		LVG. WATER TEMP. (DEG. F)	WATER P.D. (FL HD)	FLUID	ROWS DEEP	FINS PER INCH (MAX)	COIL FACE DIMENSIONS		MANUFACTURER & MODEL No.	REMARKS
						AIR FLOW (CFM)	EXT. AIR FLOW (CFM)					WATER FLOW (GPM)	ENT. WATER TEMP. (DEG. F)						LENGTH (In.)	WIDTH (In.)		
RHC-5119	5119	SAV-5119	STANDARD	FLANGED	12.1	320	55	90	90	0.07	320	1.2	130	106	1.0	WATER	2	11	14	10	AEROFIN HWP	-
RHC-5121	5121	SAV-5121	STANDARD	FLANGED	13.0	345	55	90	90	0.06	296	1.1	130	106	0.9	WATER	2	11	16	10	AEROFIN HWP	-
RHC-5123A	5123A	SAV-5123A	STANDARD	FLANGED	4.7	125	55	90	90	0.03	200	0.4	130	106	0.1	WATER	2	11	8	6	AEROFIN HWP	-
RHC-5123B	5123B	SAV-5123B	STANDARD	FLANGED	4.7	125	55	90	90	0.03	200	0.4	130	106	0.1	WATER	2	11	8	6	AEROFIN HWP	-
RHC-5123	5123	SAV-5123	STANDARD	FLANGED	18.3	485	55	90	90	0.09	291	1.2	130	100	1.2	WATER	2	11	20	12	AEROFIN HWP	-
RHC-5123C	5123C	SAV-5123C	STANDARD	FLANGED	23.6	625	55	90	90	0.06	300	1.6	130	100	2.4	WATER	2	11	26	12	AEROFIN HWP	-

REGISTER GRILLE AND DIFFUSER SCHEDULE

TYPE	APPLICATION	MATERIAL	FINISH	MANUFACTURER & MODEL NO.	REMARKS
1	SUPPLY	STEEL	WHITE	TITUS TRITEC	
A	RETURN/EXHAUST	STEEL	WHITE	TITUS 355-RL	
B	RETURN/EXHAUST	STEEL	WHITE	TITUS 355-RL	1

REMARKS:

- PROVIDE WITH OPPOSED BLADE VOLUME DAMPER.

FAN COIL UNIT SCHEDULE - CHILLED WATER

UNIT NO.	LOCATION	TYPE	AIR SIDE	COOLING COIL								FAN MOTOR		MANUFACTURER & MODEL No.								REMARKS		
				AIR FLOW (CFM)	EXT. STATIC (In. WC)	CAPACITY SENSIBLE (MBH)	TOTAL (MBH)	EAT (DEG. F)		LAT (DEG. F)		WATER FLOW (GPM)	WATER P.D. (FL HD)										ENT. WATER TEMP. (DEG. F)	LVG. WATER TEMP. (DEG. F)
FCU-5119	LAB 5119	HORZ. CONCEALED	1185	0	24.51	27.82	75	63	56.1	54.8	4	6.16	47	62	6	12	907	1/2	7.7	115	1	5	JOHNSON CONTROLS FNX12	1,2,3,4

REMARKS:

- SPECIFIED COOLING AND HEATING AND AIR FLOW CHARACTERISTICS ARE BASED UPON MEDIUM FAN SPEED.
- PROVIDE UNIT WITH VARIABLE SPEED (2-10 VDC) EC MOTOR.
- PROVIDE UNIT WITH MERV 13 FILTERS.
- PROVIDE UNIT STAINLESS STEEL DRAIN PAN AND CONDENSATE OVERFLOW SWITCH.

FAN COIL UNIT SOUND SCHEDULE

UNIT NO.	LOCATION	SUPPLY FAN OUTLET SOUND POWER LEVELS (dB)							MANUFACTURER & MODEL NO.	REMARKS
		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz		
FCU-5119	LAB 5119	72	70	67	6	63	60	52	JOHNSON CONTROLS FNX12	

LAB AIR VALVE SCHEDULE

UNIT NO.	LOCATION	SERVICE	SIZE (in.)	FACTORY RANGE		OPERATIONAL RANGE		MOUNTING POSITION	MINIMUM OPERATING PRESSURE (In. W.G.)	MANUFACTURER & MODEL NO.	REMARKS
				MAX AIR FLOW (CFM)	MIN AIR FLOW (CFM)	MAX AIR FLOW (CFM)	MIN AIR FLOW (CFM)				
SAV-5119	5119	LAB 5119	8	800	80	320	125	HORIZONTAL	0.07	ACCUTROL AVC6000	1,2,3,4,5
SAV-5121	5119	LAB 5121	8	800	80	345	170	HORIZONTAL	0.1	ACCUTROL AVC6000	1,2,3,4,5
SAV-5123A	5123A	LAB 5123A	6	315	30	125	65	HORIZONTAL	0.1	ACCUTROL AVC6000	1,2,3,4,5
SAV-5123B	5123C	LAB 5123B	6	315	30	125	65	HORIZONTAL	0.1	ACCUTROL AVC6000	1,2,3,4,5
SAV-5123	5123	LAB 5123	8	800	80	485	190	HORIZONTAL	0.17	ACCUTROL AVC6000	1,2,3,4,5
SAV-5123C	5123C	LAB 5123C	8	800	80	625	190	HORIZONTAL	0.27	ACCUTROL AVC6000	1,2,3,4,5
GEV-5119	5119	LAB 5119	8	800	80	390	195	HORIZONTAL	0.12	ACCUTROL AVC6000	1,2,3,4
GEV-5121A	5121A	LAB 5121A	8	800	80	200	200	HORIZONTAL	0.07	ACCUTROL AVC6000	1,2,3,4
GEV-5123A	5123A	LAB 5123A	6	315	30	125	65	HORIZONTAL	0.1	ACCUTROL AVC6000	1,2,3,4
GEV-5123B	5123B	LAB 5123B	6	315	30	125	65	HORIZONTAL	0.1	ACCUTROL AVC6000	1,2,3,4
GEV-5123	5121	LAB 5123	8	800	80	585	290	HORIZONTAL	0.25	ACCUTROL AVC6000	1,2,3,4
GEV-5123C	5123C	LAB 5123C	8	800	80	350	100	HORIZONTAL	0.1	ACCUTROL AVC6000	1,2,3,4
GEV-5132	5121	LAB 5132	8	800	80	295	150	HORIZONTAL	0.07	ACCUTROL AVC6000	1,2,3,4
FEV-5123C	5123C	LAB 5123C	8	800	80	625	190	HORIZONTAL	0.27	ACCUTROL AVC6000	1,2,3,4,6

REMARKS:

- PROVIDE WITH TIGHT SHUT-OFF.
- THE MAX / MIN POSITIONS ON THE VALVE WILL BE SET AT THE FACTORY TO THE FULL RANGE WITH ACTUAL SETPOINTS IN SOFTWARE
- PROVIDE WITH FAN STATIC RESET IF VENTURI STYLE VALVE IS PROVIDED
- PROVIDE WITH FACTORY DRAW BAND CLAMPS
- PROVIDE INSULATED VALVE BODY.
- STAINLESS STEEL CONSTRUCTION

DESIGNER NOTES:

FAN SCHEDULE

UNIT NO.	LOCATION	SERVICE	FAN CHARACTERISTICS				MOTOR CHARACTERISTICS				STARTER	MANUFACTURER & MODEL NO.	REMARKS
			TYPE	CFM	DISCHARGE STACK SIZE	MAX. OUTLET VELOCITY (FPM)	RPM	HP	VOLTS	PHASE			
(E)F-26	RM 7062	RM 5121A EXHAUST	-	685	6	5450	1750	0.5	460	3	COMB	EXISTING	1

REMARKS:

- RESHEAVE EXISTING EXHAST FAN AS REQUIRED TO ACHIEVE SCHEDULED AIRFLOW.

SWBR

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Drawn By: ZMH
Checked By: NMT
Project Manager: GDD

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Revisions

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LAB AND SUPPORT SPACE
RENOVATIONS**
129 Garden Ave.
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SWBR Project Number 25044.00

Cornell University
Ithaca, NY 14853

M-600
SCHEDULES - HVAC

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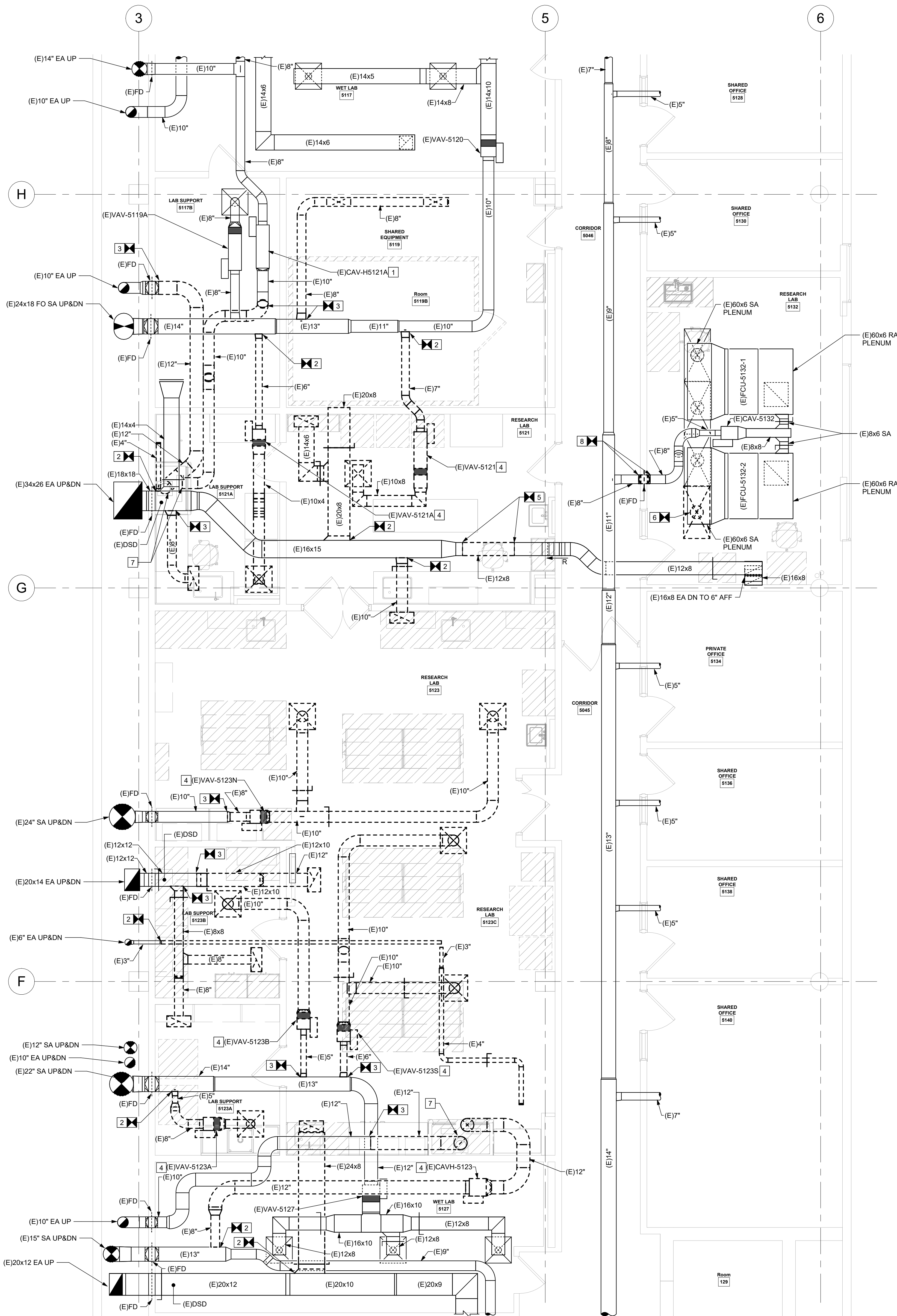
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MD-101
PARTIAL FIFTH FLOOR
DEMOLITION PLAN -
DUCTWORK

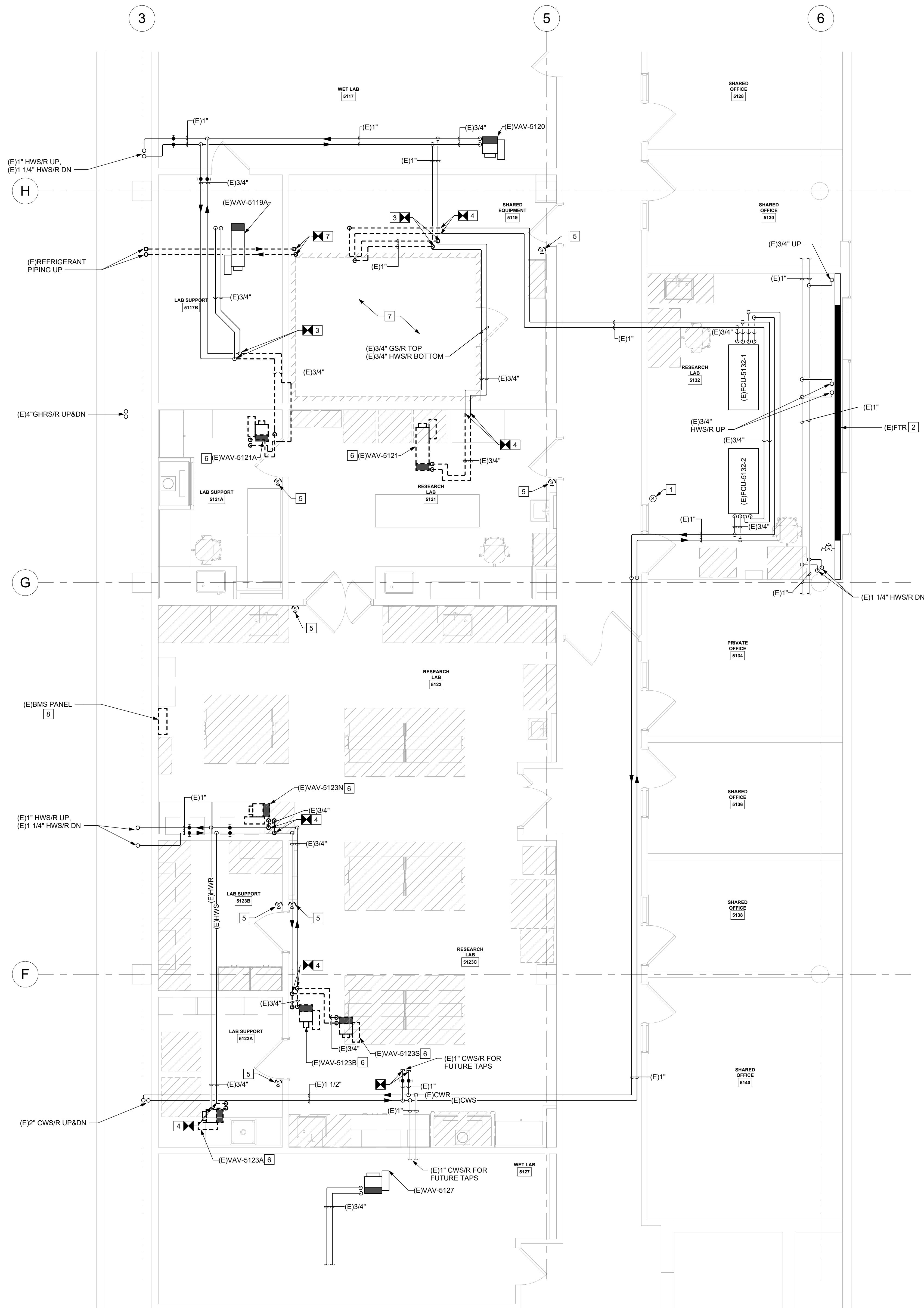
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DEMOLITION NOTES:

1. DISCONNECT AND REMOVE THE EXISTING ALTERNATE CONTROLS FOR THE EXISTING TO REMAIN SUPPLY AIR TERMINAL UNIT.
2. DISCONNECT AND REMOVE DUCTWORK AND ALL ASSOCIATED ACCESSORIES BACK TO MAIN /INDICATED POINT. CAP AND SEAL AIR TIGHT.
3. DISCONNECT AND REMOVE DUCTWORK AND ALL ASSOCIATED ACCESSORIES BACK TO MAIN /INDICATED POINT. PREP FOR CONNECTION TO NEW.
4. DISCONNECT AND REMOVE EXISTING AIR TERMINAL UNIT AND ALL ASSOCIATED DUCTWORK AND CONTROLS.
5. DISCONNECT AND REMOVE DUCTWORK AS REQUIRED TO INSTALL NEW AIR VALVE.
6. DISCONNECT AND REMOVE EXISTING DIFFUSER AND ASSOCIATED BRANCH DUCTWORK. REMOVE DUCTWORK BACK TO THE MAIN AND CAP AND SEAL AIR TIGHT.
7. DISCONNECT AND REMOVE DUCTWORK BACK TO FUME HOOD CONNECTION.
8. DISCONNECT AND REMOVE EXISTING FIRE DAMPER. CORRIDOR WALL IS NO LONGER RATED CONSTRUCTION.



1 PARTIAL FIFTH FLOOR DEMOLITION PLAN - DUCTWORK
1/4" = 1'-0"



1 PARTIAL FIFTH FLOOR DEMOLITION PLAN - PIPING
1/4" = 1'-0"

DEMOLITION NOTES:

1. DISCONNECT AND RELOCATE THE EXISTING SPACE SENSOR TO ACCOMMODATE THE NEW EQUIPMENT LAYOUT.
2. PROVIDE ALL MODIFICATIONS AS REQUIRED TO REMOVE EXISTING CONTROL VALVE.
3. DISCONNECT AND REMOVE PIPING BACK TO MAIN / INDICATED POINT. CAP AND SEAL WATER TIGHT.
4. DISCONNECT AND REMOVE PIPING BACK TO MAIN / INDICATED POINT. PREP FOR CONNECTION TO NEW.
5. DISCONNECT AND REMOVE EXISTING SPACE SENSOR AND ALL ASSOCIATED CONTROL WIRING BACK TO SOURCE.
6. DISCONNECT AND REMOVE EXISTING AIR TERMINAL UNIT AND ALL ASSOCIATED PIPING AND CONTROLS.
7. DISCONNECT AND REMOVE INDOOR PACKAGED TEMPERATURE CONTROL UNIT. REMOVE ALL ASSOCIATED COMPONENTS INCLUDING HEATER, EVAPORATOR AND FANS. DISCONNECT AND REMOVE ALL ASSOCIATED CONTROLS. DISCONNECT AND REMOVE ASSOCIATED REFRIGERANT PIPING BACK TO THE CONDENSING UNIT IN THE PENTHOUSE. DISCONNECT AND REMOVE THE WATER COOLED CONDENSING UNIT WITHIN THE PENTHOUSE. DISCONNECT THE CONDENSER WATER PIPING AND CAP WATER TIGHT.
8. DISCONNECT AND REMOVE EXISTING PASCO BMS PANEL.



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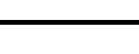
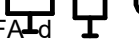
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129 Garden Ave.
Ithaca, NY 14853
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Cornell University
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MD-201
PARTIAL FIFTH FLOOR
DEMOLITION PLAN -
PIPING

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COMMUNICATIONS	
SYMBOL	DESCRIPTION
	TEL/DATA DROP, EXISTING
	TEL/DATA DROP: 4"x4"x20" BOX WITH A 1-GANG MUD RING AND FLATEPLATE WITH DUPLEX DESIGN. 1" CONDUIT EXTENDED TO NEAREST CABLE TRAY IN CORRIDOR (UNLESS OTHERWISE NOTED) FOR DATA/VOICE. TERMINATE CONDUIT AT J HOOK IN CORRIDOR WITH CONDUIT BUSHING. PULL (2) CAT 6 CABLE. TERMINATE AT PATCH PANEL IN IDF.
	WAP - WIRELESS ACCESS POINT MOUNTED FROM CEILING AT SAME AFF HEIGHT AS EXISTING LIGHT FIXTURES. SUPPORT WITH THREADED ROD. 4"x2"x20" BOX WITH A 1-GANG MUD RING AND 1" EMT CONDUIT EXTENDED TO NEAREST CABLE TRAY IN CORRIDOR (UNLESS OTHERWISE NOTED). PROVIDE (2) CAT 6A CABLES. TERMINATE IN IDF AND 6'-8" PISTAILL WITHOUT FLATEPLATE
	COMBINATION POWER/COMMUNICATION SURFACE RACEWAY WITH DEVICES AS INDICATED. WIREMOLD G4000. RACEWAY SHALL BE MOUNTED "OVER COUNTER" UNLESS OTHERWISE NOTED. REFER TO ARCHITECTURAL PLANS FOR FINAL MOUNTING HEIGHTS.

LUMINAIRES	
SYMBOL	DESCRIPTION
	LUMINAIRE CONNECTED TO NORMAL POWER. UPPER CASE LETTERS INDICATE FIXTURE TYPE ON SCHEDULE, LOWER CASE LETTER INDICATES SWITCHING DESIGNATION. 'N' INDICATES UNSWITCHED
	WALL MOUNTED LUMINAIRE CONNECTED TO NORMAL POWER. UPPER CASE LETTERS INDICATE FIXTURE TYPE ON SCHEDULE, LOWER CASE LETTER INDICATES SWITCHING DESIGNATION. 'N' INDICATES UNSWITCHED
	LUMINAIRE CONNECTED TO LIFE SAFETY CIRCUIT. 'LS' ALSO INDICATES LIFE SAFETY CIRCUIT. PROVIDE UL 924 RELAY FOR EACH FIXTURE. 'N' INDICATES UNSWITCHED.
	CEILING-MOUNTED EXIT LUMINAIRE
	WALL-MOUNTED EXIT LUMINAIRE

LIGHTING CONTROLS	
SYMBOL	DESCRIPTION
	SWITCH (DIMMING, MOMENTARY, DIGITAL, ETC.), VOLTAGE AS INDICATED ON FIXTURE SCHEDULE. SUBSCRIPTS INDICATE QUANTITY AND/OR TYPE. 3 - THREE-WAY SWITCH 4 - FOUR-WAY SWITCH OS - OCCUPANCY SENSOR PL - PILOT LIGHT LV - LOW VOLTAGE P - PRESET a.b.c - SWITCHING DESIGNATIONS NUMBER OF LETTERS EQUALS NO. OF GANGED SWITCHES
 a.b.c	REFER TO SPECIFICATIONS FOR ADDITIONAL LIGHT SWITCH DESCRIPTIONS.
	DIMMER SWITCH, VOLTAGE AS INDICATED ON FIXTURE SCHEDULE. DIMMER SHALL BE COMPATIBLE WITH PROVIDED LIGHT FIXTURE BEING CONTROLLED BY DIMMER. IF DIMMER PROVIDED DOES NOT OPERATE WITH A VACANCY SENSOR A DECORA-STYLE ON/OFF SWITCH SHALL BE PROVIDED IN THE SAME SWITCH BOX. SUBSCRIPTS INDICATE TYPE: 3 - THREE-WAY SWITCH 4 - FOUR-WAY SWITCH OS - OCCUPANCY SENSOR a.b.c - SWITCHING DESIGNATIONS NUMBER OF LETTERS EQUALS NO. OF GANGED SWITCHES
 OS OS	DUAL-TECHNOLOGY CEILING- OR WALL-MOUNTED OCCUPANCY SENSOR UNLESS OTHERWISE NOTED.

BRANCH CIRCUITING IDENTIFICATION

The diagram illustrates the branch circuiting identification for two types of electrical devices: a switch and a receptacle. It shows how the circuit number and panel designation are indicated on the device symbols.

Switch Identification:

- FIXTURE TYPE:** Indicated by the letter 'B' in the top-left corner of the switch symbol.
- NUMBER INDICATES CIRCUIT:** Indicated by the number '2' in the top-right corner of the switch symbol.
- SWITCH LEG:** Indicated by the letter 'II' in the bottom-right corner of the switch symbol.

Receptacle Identification:

- NUMBER INDICATES CIRCUIT:** Indicated by the number '1' in the top-right corner of the receptacle symbol.
- MOUNTING HEIGHT AND MISC. INFO.:** Indicated by the letter 'P' in the bottom-right corner of the receptacle symbol.

Panel Designation:

- CIRCUIT NUMBER:** Indicated by the number '1' in the top-left corner of the panel designation symbol.
- PANEL DESIGNATION:** Indicated by the text 'NLGP-B' in the bottom-right corner of the panel designation symbol.

Legend:

NOTE:
TYPICAL FOR ALL DEVICES AND HOMERUNS.

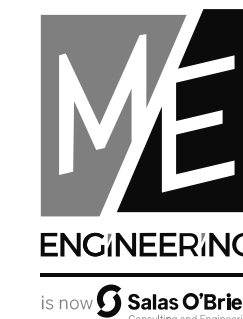
BRANCH CIRCUIT WIRE SIZES	
SYMBOL	SIZE
<u>30A 1P</u> 	2-#10 & 1-#10EG in 3/4" C.
<u>50A 1P</u> 	2-#6 & 1-#10EG in 1" C.
<u>60A 1P</u> 	2-#6 & 1-#10EG in 1" C.
<u>20A 2P</u> 	3-#12 & 1-#12EG in 3/4" C.
<u>30A 2P</u> 	3-#12 & 1-#12EG in 3/4" C.
<u>40A 2P</u> 	3-#8 & 1-#10EG in 3/4" C.
<u>20A 3P</u> 	3-#12 & 1-#12EG in 3/4" C.
<u>30A 3P</u> 	3-#10 & 1-#10EG in 3/4" C.

PROVIDE NEMA RECEPTACLE CONFIGURATION TO MATCH EQUIPMENT.

GENERAL REMOVAL NOTES (APPLY TO ALL DRAWINGS)

- A. WHEN EXISTING CONSTRUCTION, WHICH IS TO REMAIN, IS DAMAGED DURING THE COURSE OF CONSTRUCTION AS A RESULT OF THE CONTRACTOR'S WORK, IT SHALL BE REPAIRED AND/OR REPLACED WITH SIMILAR OR LIKE MATERIALS, AS MUCH AS POSSIBLE, SUBJECT TO THE OWNERS' APPROVAL.
- B. THE CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL AND REPLACEMENT OF EXISTING CONSTRUCTION IN THE WAY OF NEW WORK, PROTECT BUILDING AND FURNISHINGS FROM DAMAGE.
- C. COORDINATE PHASING OF WORK WITH OWNERS' REPRESENTATIVE.
- D. COORDINATE ALL SHUTDOWNS WITH UNIVERSITY PRIOR TO DEMOLITION. ALL FIRE ALARM SHUTDOWNS SHALL BE SCHEDULED THROUGH CUSTOMER SERVICE WITH AT LEAST 24 HOURS NOTICE BEFORE WORK IS TO BE STARTED.
- E. EXISTING CONDITIONS ARE TAKEN FROM FIELD OBSERVATIONS AND PRIOR CONSTRUCTION DOCUMENTS WHEN AVAILABLE AND ARE NOT GUARANTEED. PRIOR TO SUBMITTING BID, VISIT SITE AND IDENTIFY EXISTING CONDITIONS AND DIFFICULTIES THAT WILL AFFECT THE DEMOLITION WORK. NO COMPENSATION WILL BE GRANTED FOR ADDITIONAL WORK CAUSED BY UNFAMILIARITY WITH EXISTING CONDITIONS THAT ARE VISIBLE OR REASONABLY CONSIDERED BY OBSERVING. THIS CONTRACTOR SHALL PARTICIPATE IN SURVEY OF THE EXISTING ELECTRICAL SYSTEMS. THE CONTRACTOR SHALL DISCONNECT AND CAP ALL SERVICE LINES TO BE DISCONNECTED FOR THOSE SERVICES WHICH NORMALLY ARE INCLUDED IN HIS FIELD OF WORK. PARTICULAR CARE SHALL BE TAKEN TO AVOID CREATING HAZARD OR CAUSING DISRUPTION IN ADJACENT AREAS. NOT ALL DEVICES TERMINATIONS, JUNCTION BOXES AND WIRING HAVE BEEN SHOWN.
- F. REFER TO PLUMBING CONTRACT DRAWINGS AND SPECIFICATIONS FOR EXACT QUANTITIES AND LOCATIONS OF ALL PLUMBING EQUIPMENT BEING ABANDONED OR REMOVED, WHICH WILL REQUIRE DE-ENERGIZATION, REMOVAL AND BLANK-OFF BY THE CONTRACTOR.
- G. EXISTING FIRE ALARM SYSTEM SHALL BE KEPT OPERATIONAL DURING THE CONSTRUCTION PERIOD. THE BUILDING UNDER RENOVATION MAY BE DISCONNECTED FROM SERVICE DURING THE HOURS THE CONTRACTOR IS WORKING. AT THE DISCRETION OF THE FIRE DEPARTMENT AND THE OWNERS' REPRESENTATIVE, BUT MUST BE PLACED BACK ON LINE DURING OTHER PERIODS. APPROVAL TO BE IN WRITING.
- H. IN THE EXISTING ELECTRICAL EQUIPMENT AND DEVICES WITHIN DEMOLITION AREA SHALL BE DEMOLISHED ALONG WITH ALL FEEDERS AND CONDUITS BACK TO POINT OF SOURCE UNLESS OTHERWISE NOTED. EQUIPMENT WITHIN DEMOLITION AREA SHALL BE DISCONNECTED AND REMOVED UNLESS NOTED OTHERWISE. WALL BOXES, BACKBOXES AND CONDUIT SHALL BE REUSED AS DETERMINED BY CONTRACTOR. ALL UNUSED CONDUITS SHALL BE REMOVED. DISCONNECT AND MAKE SAFE ANY EQUIPMENT TO BE REMOVED BY OTHERS. COORDINATE REMOVAL OF EQUIPMENT WITH OTHER TRADES PRIOR TO DEMOLITION.

- I. MAINTAIN AND RESTORE IF INTERRUPTED BY REMOVALS OR IN PATH OF NEW CONSTRUCTION. ALL CIRCUITS, CONDUITS AND FEEDERS PASSING THROUGH AND SERVING UNDISTURBED AREAS (SHOWN OR NOT SHOWN).
- J. ALL EXISTING CONDUITS STUBBED THROUGH FLOOR SERVING ITEMS TO BE REMOVED AND NOT SHOWN OR REQUIRED TO BE REUSED, SHALL BE CUT OFF FLUSH WITH SLAB LEVEL WITH CONCRETE.
- K. IN ANY AREA REQUIRING THE PERFORMANCE OF ANY TRADE'S WORK, THIS CONTRACTOR SHALL CAREFULLY REMOVE AND STORE ANY OR ALL ELECTRICAL ITEMS IN PATH OF WORK, REINSTALLING AND RECONNECTING SAME AS REQUIRED, IN ACCORDANCE WITH THE PLANS AND/OR AS DIRECTED AFTER COMPLETION OF OTHER TRADE'S WORK IN THAT AREA.
- L. DISCONNECT, MAKE SAFE AND REMOVE ALL DEMOLITION AND ABANDONED WIRE WITHIN THE SPACE.
- M. BRANCH CIRCUIT WIRING TO DEVICES IN AREAS WHERE DEMOLITION SHALL BE DISCONNECTED, MAKE SAFE AND REMOVED COMPLETELY BACK TO THE PANELBOARD. THE CONTRACTOR SHALL NOT ABANDON BRANCH CIRCUIT WIRING TO ANY AREAS WHICH ARE TO REMAIN BUT ARE AFFECTED BY THE DEMOLITION OR NEW CONSTRUCTION.
- N. DISCONNECT AND REMOVE PANEL, FEEDERS AND BRANCH CIRCUITS BACK TO POINT OF SOURCE PRIOR TO THE START OF DEMOLITION. CONTRACTOR SHALL FIELD VERIFY ALL BRANCH CIRCUITS AND MAKE SURE CIRCUITS THAT EXTEND OUTSIDE OF THE SCOPE OF WORK.
- O. AFTER REMOVING EXISTING ELECTRICAL WORK, THE CONTRACTOR SHALL INSURE THAT ALL REMAINING AND NEW EQUIPMENT WILL OPERATE PROPERLY.
- P. PROVIDE TEMPORARY FIRE DETECTORS IN AREAS WHERE SPRINKLERS ARE REMOVED FROM SERVICE DURING CONSTRUCTION. COORDINATE WITH FIRE PROTECTION CONTRACTOR. TEMPORARY HEED NEED TO BE TESTED WITH EHS BEFORE REMOVAL OF SPRINKLER SYSTEM.
- Q. REFER TO HVAC CONTRACT DRAWINGS AND SPECIFICATIONS FOR EXACT QUANTITIES AND LOCATIONS OF ALL HVAC EQUIPMENT BEING ABANDONED OR REMOVED, WHICH WILL REQUIRE DE-ENERGIZATION, REMOVAL AND BLANK-OFF BY THE CONTRACTOR.
- R. DISCONNECT, SALVAGE AND TURN OVER ALL REMOVED ELECTRICAL PANELS TO CORNELL FACILITIES.

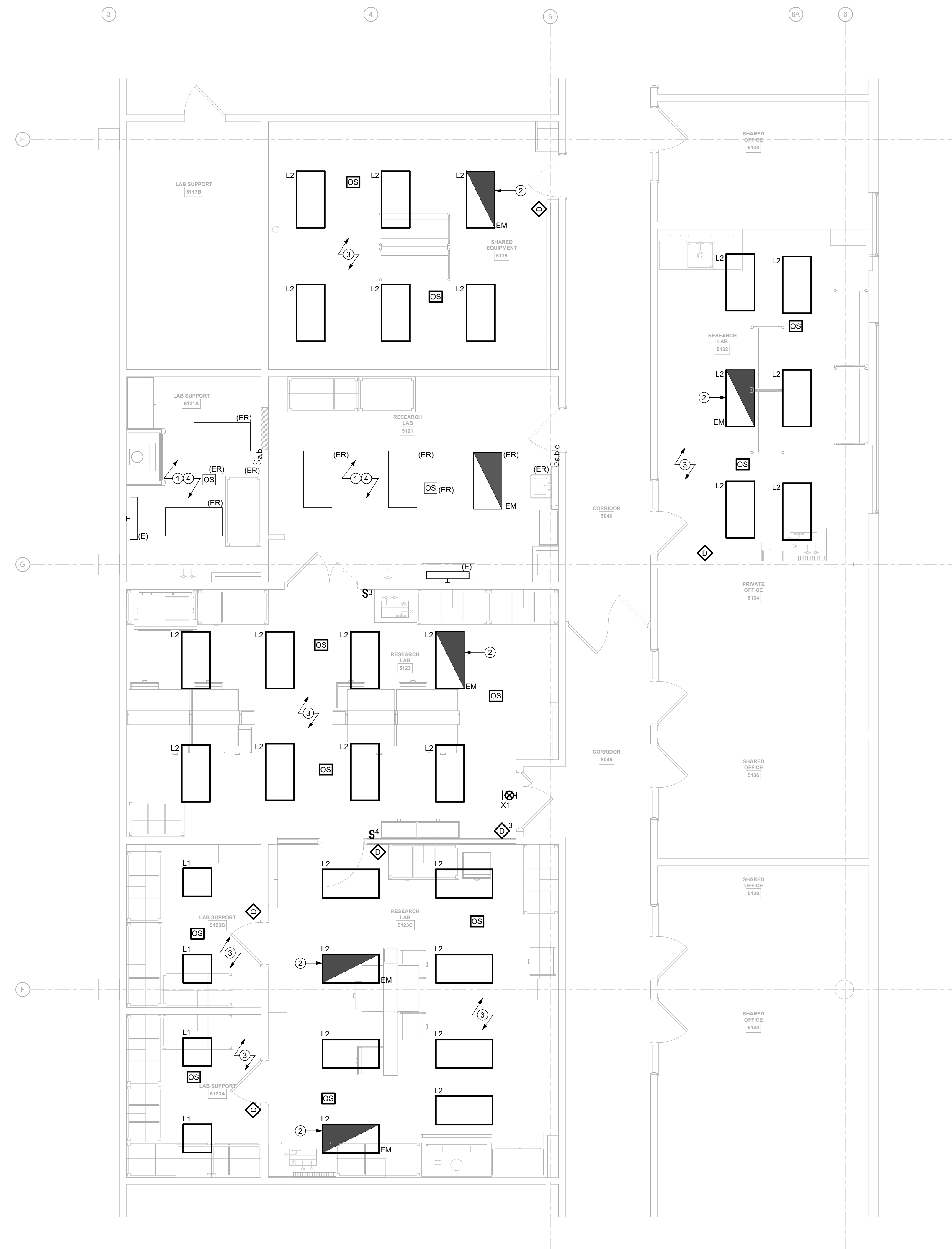


GENERAL NOTES

- A EXTEND EXISTING ROOM LIGHTING CIRCUITS MADE SPARE DURING DEMOLITION TO LIGHTS. EXTEND EMERGENCY LIGHTING CIRCUIT TO LIGHTS AS SHOWN. PROVIDE UL-924 DEVICE FOR ALL EMERGENCY LIGHTS. CONNECT TO NORMAL SENSING CIRCUIT AHEAD OF ALL CONTROLS.
- B EXTEND EMERGENCY LIGHTING CIRCUIT TO EXIT SIGN.

DRAWING NOTES:

- 1 COORDINATE REMOVAL AND REINSTALLATION OF LUMINAIRES AND OCCUPANCY SENSORS AS NEEDED TO FACILITATE WORK BY OTHER TRADES.
- 2 PROVIDE UL924 DEVICE FOR EMERGENCY LIGHT. EXTEND 120V EMERGENCY LIGHT CIRCUIT FROM CORRIDOR EM LIGHTING CIRCUIT AHEAD OF CONTROLS. LIGHTS TO BE CONTROLLED WITH OTHER NORMAL-POWER FIXTURES IN THE ROOM. PROVIDE SENSING CONNECTION TO 277V LIGHTING CIRCUIT IN ROOM AHEAD OF ALL CONTROLS.
- 3 CONNECT NORMAL-POWER LIGHTS TO 277V LIGHTING CIRCUIT FROM EXISTING CORRIDOR PANELBOARD LP-S. EXTEND EXISTING ROOM CIRCUIT(S) AS REQUIRED
- 4 EXISTING LIGHTING CIRCUIT IN THIS ROOM TO REMAIN FOR EXISTING LUMINAIRES.



1 PARTIAL FIFTH FLOOR PLAN - LIGHTING
1/4" = 1'-0"



Drawn By: JAM
Checked By: ECS
Project Manager: GDD

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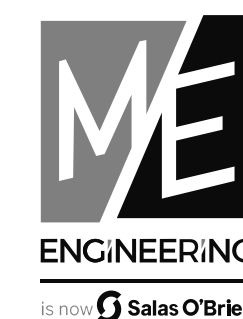
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RENOVATIONS
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Ithaca, NY 14853
SWBR Project Number 25044.00

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Ithaca, NY 14853

E-101

PARTIAL FIFTH FLOOR
PLAN - LIGHTING

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Documents

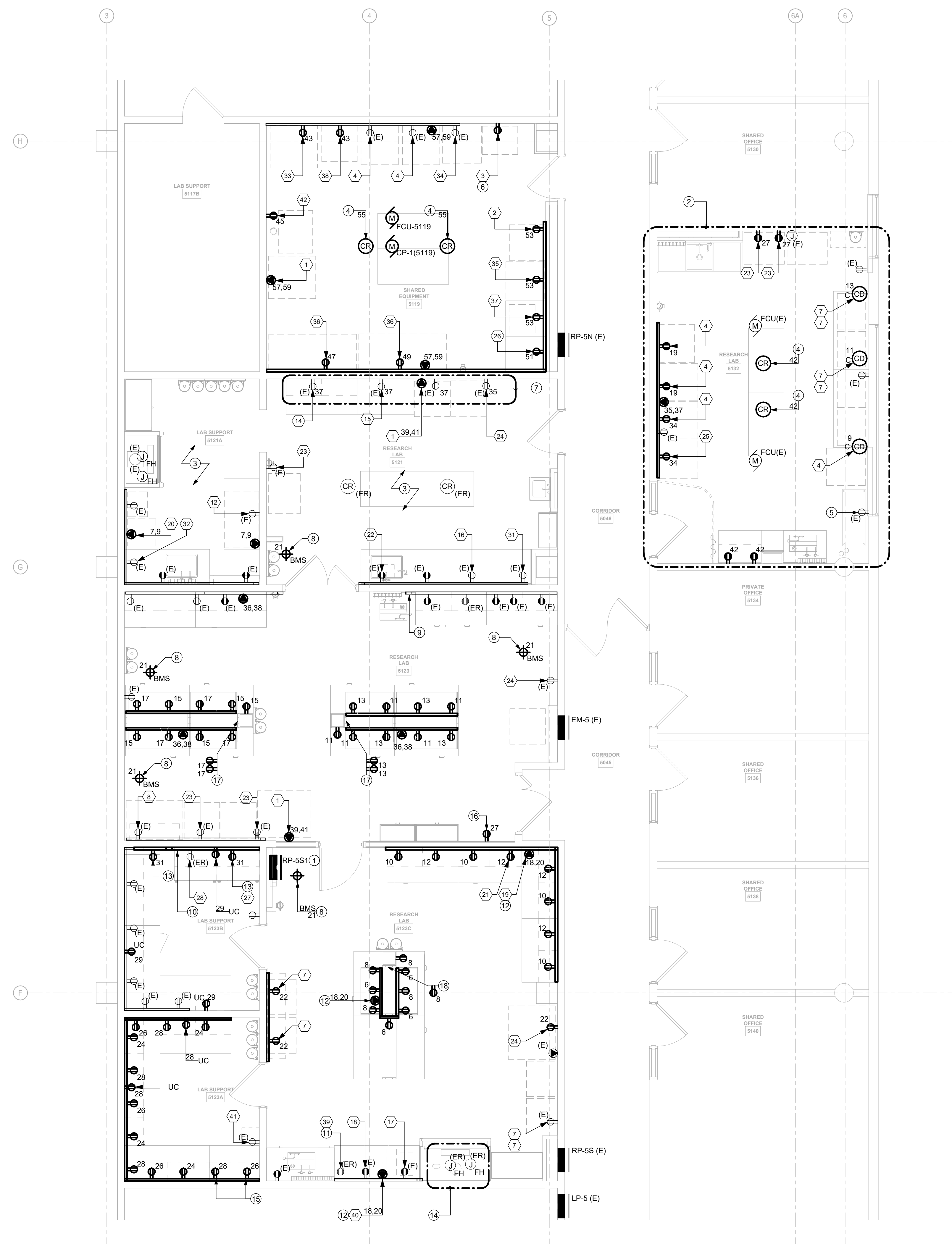


GENERAL NOTES

- A CIRCUITS IN LAB SUITES 5119, 5121, AND 5123 TO BE CONNECTED TO PANELBOARD RP-SS1 UNLESS OTHERWISE NOTED.
- B UNLESS OTHERWISE NOTED, ALL SPECIAL RECEPTACLES TO BE NEMA TYPE B-20R, CIRCUIT TO 20A, 2P CIRCUIT BREAKER. FOR RECEPTACLES WITHIN 6'-0" OF SINKS PROVIDE GFCI CIRCUIT BREAKER IN EXISTING PANELBOARD.
- C HEXAGON NOTES ALIGN WITH ARCHITECTURAL EQUIPMENT SCHEDULE. REFER TO SHEET A-800. COORDINATE CONNECTIONS AND DEVICES WITH FINAL ARCHITECTURAL EQUIPMENT PLAN AND OWNER CONFIRMATION.
- D POWER TO LAB BENCHES SHALL BE FED DOWN SERVICE CHASE FROM ABOVE.
- E UNLESS OTHERWISE NOTED, ALL SURFACE METAL RACEWAY TO BE DUAL CHANNEL. UPPER CHANNEL TO BE DATA, LOWER CHANNEL TO BE UTILIZED FOR POWER. COORDINATE WITH ARCHITECTURAL ELEVATIONS PROVIDE CONCEALED PATHWAYS TO BACKBOYES IN NEW WALLS. IN EXISTING WALLS, COORDINATE PATHWAY DROPS WITH OTHER WALL-MOUNTED ELEMENTS.
- F PROVIDE CIRCUIT LABELS FOR ALL EXISTING-TO-REMAIN DEVICES IN PROJECT AREA.

X DRAWING NOTES:

- 1 PROVIDE 125A, 60-SPACE, MAIN LUG PANELBOARD TO REPLACE EXISTING 42-SPACE PANELBOARD. REWORK AND EXTEND EXISTING FEED FROM PANEL RP-SS. SALVAGE ALL EXISTING TO REMAIN CIRCUITS AND EXTEND TO PANELBOARD. REFER TO PANEL SCHEDULE.
- 2 DEVICES IN THIS ROOM TO BE CIRCUITED TO EXISTING PANELBOARD RP-SN. UTILIZE SPARE CIRCUIT BREAKERS AS AVAILABLE IN PANELBOARD. PROVIDE CIRCUIT BREAKERS AS REQUIRED. CIRCUIT BREAKERS TO MATCH EXISTING PANELBOARD MANUFACTURER AND PANELBOARD RATINGS.
- 3 COORDINATE REMOVAL AND REINSTALLATION OF CEILING-MOUNTED DEVICES AS NEEDED TO FACILITATE WORK BY OTHER TRADES.
- 4 PROVIDE ABOVE-CEILING SUPPORTS AS REQUIRED FOR CORD REEL MOUNTING. COORDINATE WITH ABOVE-CEILING SERVICES.
- 5 PROVIDE GFCI RECEPTACLE AT EXISTING OUTLET LOCATION.
- 6 PROVIDE SURFACE-MOUNTED CONDUIT FROM END OF EXISTING RACEWAY TO SURFACE-MOUNTED RECEPTACLE. EXTEND EXISTING CIRCUIT TO RECEPTACLE LOCATION.
- 7 REWORK CIRCUITING FOR EXISTING SURFACE-MOUNTED RECEPTACLES AS SHOWN. PROVIDE ADDITIONAL WIRING IF REQUIRED. CIRCUITS 35, 37, 39, AND 41 TO BE REWORKED FROM (4) SINGLE-POLE, 120V CIRCUITS TO (2) SINGLE POLE, 120V CIRCUITS AND (1) 2-POLE 208V CIRCUIT. PROVIDE CIRCUIT BREAKER AS REQUIRED.
- 8 PROVIDE 20A, 120V CIRCUIT TO BMS PANEL. COORDINATE CONNECTION LOCATION WITH MECHANICAL CONTRACTOR. IF ADDITIONAL PANELS ARE REQUIRED, EXTEND CIRCUIT TO ALL PANELS. CIRCUIT NUMBER AS NOTED TO EXISTING PANELBOARD RP-SS1, CIRCUIT NUMBER NOTED. PROVIDE (2) #12AWG & (1) #12EG IN 3/4" C.
- 9 PROVIDE SURFACE RACEWAY VERTICAL DROP FEED TO EXISTING SURFACE RACEWAY. COORDINATE VERTICAL DROP WITH CASEWORK SHOP DRAWINGS AND ARCHITECTURAL ELEVATIONS. VERTICAL DROP TO BE OUTSIDE OF WALL-MOUNTED SHELVING AND CASEWORK. MATCH EXISTING RACEWAY FINISH AND MANUFACTURER.
- 10 PROVIDE SURFACE RACEWAY VERTICAL DROP FEED AND HORIZONTAL RACEWAY SECTION AS SHOWN ON THIS WALL. COORDINATE VERTICAL DROP WITH CASEWORK SHOP DRAWINGS AND ARCHITECTURAL ELEVATIONS. VERTICAL DROP TO BE OUTSIDE OF WALL-MOUNTED SHELVING AND CASEWORK.
- 11 RELOCATE RECEPTACLE FROM DEMOLISHED PORTION OF RACEWAY TO EXISTING-TO-REMAIN PORTION OF RACEWAY. MODIFY COVER AS REQUIRED. PROVIDE OR RELOCATE RACEWAY END-CAP.
- 12 CONNECT RECEPTACLES TO EXISTING 208V, 2P CIRCUIT.
- 13 PROVIDE RECEPTACLE IN RACEWAY EXTENSION, EXTEND REWORKED RACEWAY CIRCUIT TO THIS RECEPTACLE.
- 14 COORDINATE DISCONNECT AND RECONNECT OF FUME HOOD COMPONENTS.
- 15 REUSE/EXTEND EXISTING CIRCUITS REMAINING AFTER DEMOLITION.
- 16 EXTEND EXISTING CIRCUIT TO RECEPTACLE.
- 17 PROVIDE RECEPTACLES UP HIGH ON SERVICE CHASE TO SERVE PLUG-IN POWER SUPPLIES FOR TASK LIGHTING LOCATED WITHIN SHELVING ASSOCIATED WITH BUILT-IN LAB BENCHES. PROVIDE WIRING FROM THE RECEPTACLES TO CASEWORK-VENDOR-SUPPLIED SWITCHES LOCATED IN VENDOR UPRIGHTS. EACH SWITCH IS TO CONTROL (2) NEMA 5-15 OUTLETS.
- 18 PROVIDE RECEPTACLES UP HIGH ON SERVICE CHASE TO SERVE PLUG-IN POWER SUPPLIES FOR TASK LIGHTING LOCATED WITHIN SHELVING ASSOCIATED WITH BUILT-IN LAB BENCHES. PROVIDE WIRING FROM THE RECEPTACLES TO CASEWORK-VENDOR-SUPPLIED SWITCHES LOCATED IN VENDOR UPRIGHTS. EACH SWITCH IS TO CONTROL (1) NEMA 5-15.



1 PARTIAL FIFTH FLOOR PLAN - POWER
1/4" = 1'-0"



Drawn By: JAM
Checked By: ECS
Project Manager: GDD

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PARTIAL FIFTH FLOOR
PLAN - POWER

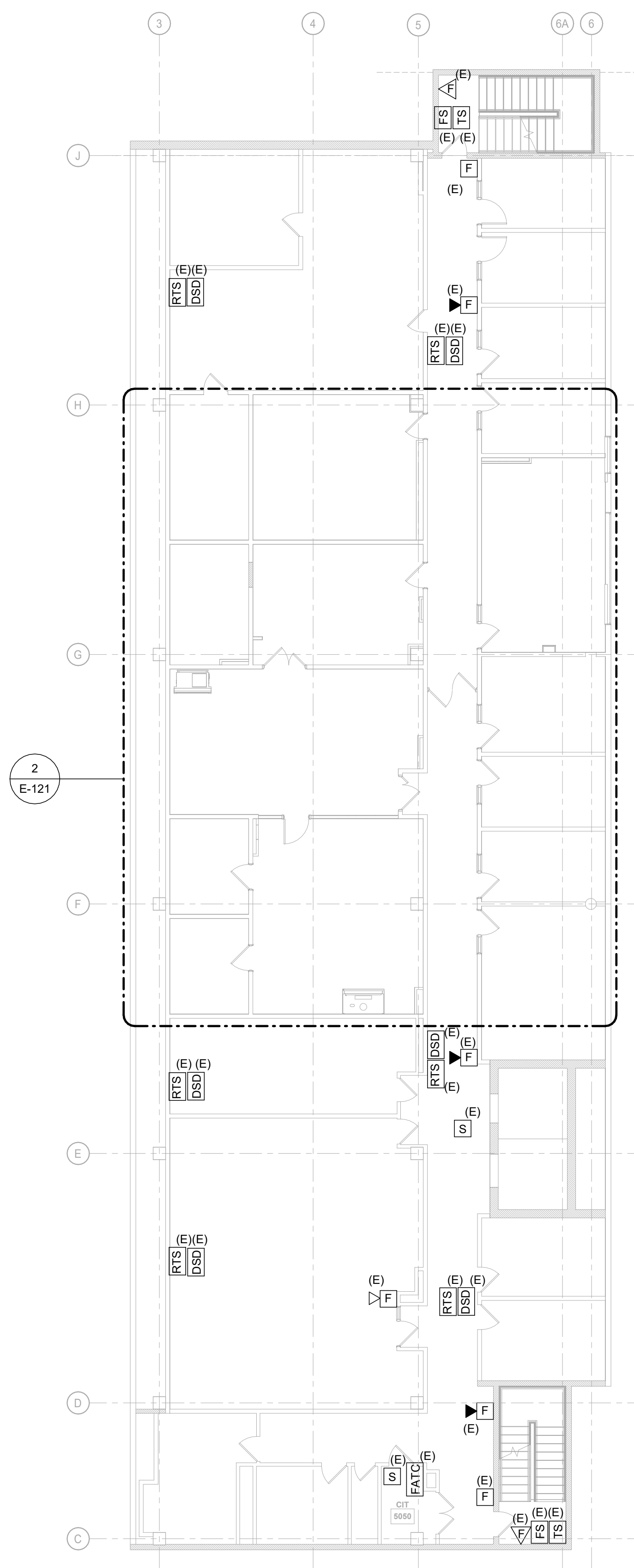
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GENERAL NOTES

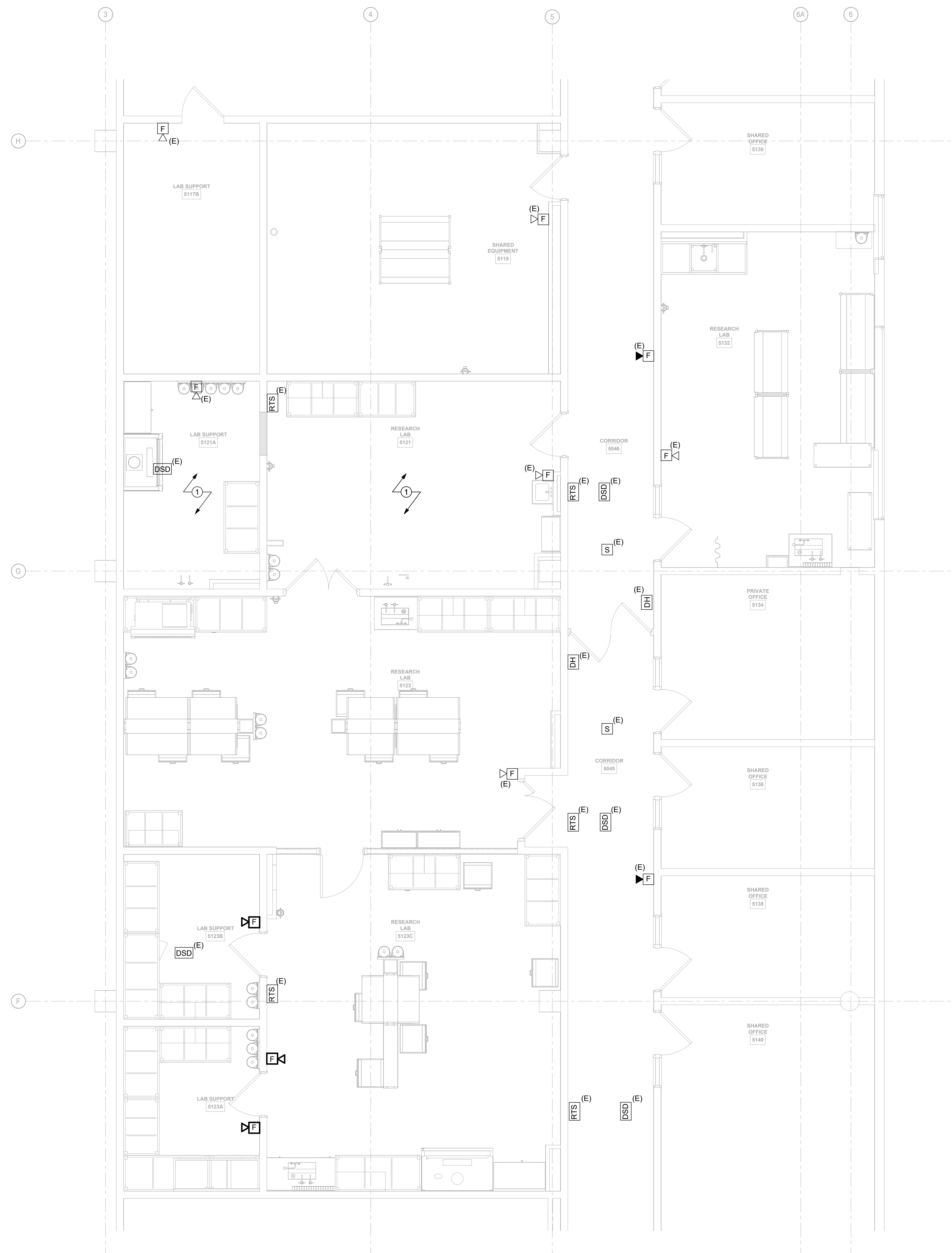
- A EXTEND EXISTING FIRE ALARM CIRCUITRY TO DEVICES SHOWN.
- B PROVIDE TEMPORARY HEAT DETECTORS IN AREAS WHERE SPRINKLERS ARE REMOVED FROM SERVICE DURING CONSTRUCTION. REFER TO FIRE PROTECTION DRAWINGS, COORDINATE WITH FIRE PROTECTION CONTRACTOR. TEST TEMPORARY HEAT WITH EHS BEFORE REMOVAL OF SPRINKLER SYSTEM.
- C REFER TO E-010 FOR FIRE ALARM CONTROL PANEL AND FIRE ALARM ANNUNCIATOR PANEL LOCATIONS.

DRAWING NOTES:

- 1 COORDINATE REMOVAL AND REINSTALLATION OF CEILING-MOUNTED DEVICES AS NEEDED TO FACILITATE WORK BY OTHER TRADES.



1 OVERALL FIFTH FLOOR PLAN - FIRE ALARM
3/32" = 1'-0"



2 PARTIAL FIFTH FLOOR PLAN - FIRE ALARM
1/4" = 1'-0"



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PARTIAL FIFTH FLOOR
PLAN - FIRE ALARM

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A REFER TO FLOOR PLANS FOR EXISTING-TO-BE-REDESIGNATED DATA DROPS IN OFFICES. UPDATE LABELING FOR EXISTING LOCATIONS AT PATCH PANEL AND AT DEVICE WALLPLATE.

B CONTRACTOR SHALL PROVIDE AS-BUILT DRAWINGS AND CABLE SCHEDULE TO CIT PRIOR TO SUBMITTAL OF SERVICE ACTIVATION REQUEST.

C PROVIDE PATHWAY FOR EACH SECTION OF DUAL CHANNEL RACEWAY WITHOUT DATA OUTLETS SHOWN. RACEWAY TOBE 1" MINIMUM TO ACCESSIBLE CEILING SPACE WITH PULL STRING.

- 1 WIRELESS ACCESS POINT TO BE CEILING MOUNTED. COORDINATE LOCATION WITH OTHER CEILING SERVICES.
- 2 COORDINATE REMOVAL AND REINSTALLATION OF CEILING-MOUNTED DEVICES AS NEEDED TO FACILITATE WORK BY OTHER TRADES.
- 3 CABLING TO DATA OUTLET TO BE REFEED DUE TO SURFACE RACEWAY REWORK. CABLING TO BE PULLED AND REUSED. RELOCATE DATA OUTLET IN WIREWAY IF REQUIRED DUE TO CABLE LENGTH RESTRAINTS.



Drawn By:	JAM
Checked By:	ECS
Project Manager:	GDD

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PARTIAL FIFTH FLOOR

PLAN - DATA

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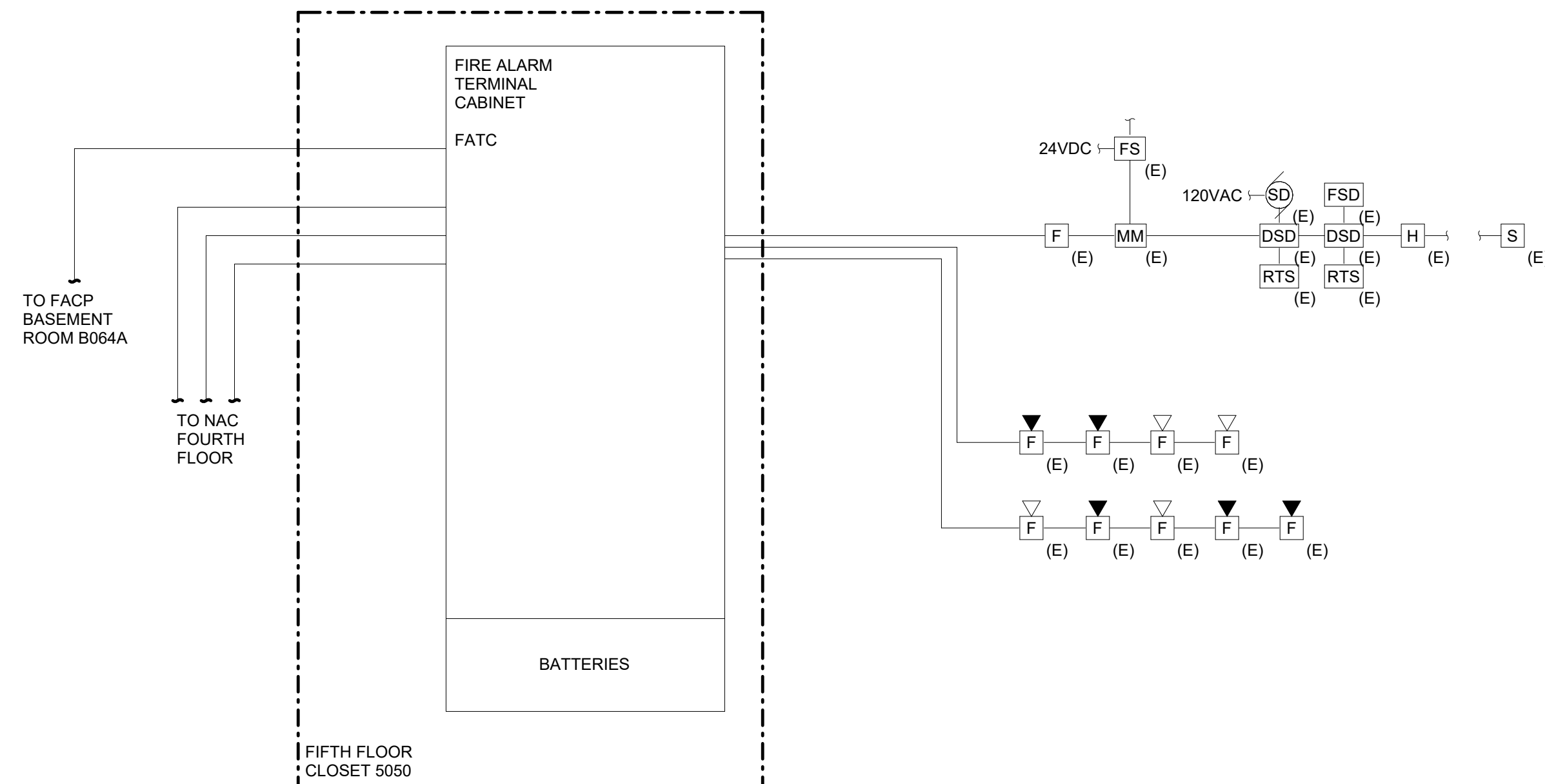
FIRE ALARM NOTES:

- A. DEVICES SHOWN ARE DIAGRAMMATICALLY ONLY. FOR EXACT LOCATIONS AND QUANTITIES SEE FLOOR PLANS.
- B. ALL WIRING SHALL BE CLASS A FOR INITIATING CIRCUIT AND CLASS A FOR NOTIFICATION CIRCUITS. REFER TO SECTION 283102 OF THE SPECIFICATION FOR ADDITIONAL FIRE ALARM SYSTEM REQUIREMENTS.
- C. ALL FIRE ALARM SYSTEM RACEWAY SIZES AND CIRCUITRY REQUIREMENTS SHALL BE IN ACCORDANCE WITH EQUIPMENT MANUFACTURERS RECOMMENDATIONS AND ALL CODES THAT MAY APPLY.
- D. CABLING MUST BE UNIQUELY IDENTIFIED AND LABELED, AND A PERMANENT, ACCURATE RECORD OF THE IDENTIFICATION AND USE OF EACH ABLE MUST BE MADE AT THE TIME OF INSTALLATION. LABELING IS TO BE DONE WITH PERMANENT MARKERS ON CLEAR NYLAR TAPE. THE TAPE SHALL BE LONG ENOUGH SO WHEN WRAPPED ROUND THE CABLE IT WILL WRAP OVER ITSELF, PROTECTING THE WRITING.
- E. FACP AND OTHER PANELS SHALL BE MOUNTED WITH CLEARANCES FOR OBSERVATION AND TESTING. ALL OTHER FIRE ALARM JUNCTION BOXES SHALL BE MARKED FOR IDENTIFICATION.
- F. PROVIDE 120V, 20A DEDICATED BRANCH CIRCUITS FROM THE LOCAL AREA PANELBOARD TO CONTROL PANELS, TERMINAL CABINETS, ETC. AS REQUIRED. THE CIRCUIT BREAKER SHALL BE CLEARLY MARKED "FIRE ALARM CIRCUIT CONTROL" IN THE PANELBOARD DIRECTORY. PROVIDE CIRCUIT BREAKER LOCKS ON ALL BREAKERS ASSOCIATED WITH FIRE ALARM EQUIPMENT.
- G. SPACE DETECTORS IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDED DISTANCE. PROVIDE ADDITIONAL DETECTORS WHERE REQUIRED.
- H. ALL LOW VOLTAGE FIRE ALARM CIRCUITS MAY OCCUPY A COMMON CONDUIT. RUN AC POWER AND CONTROL WIRING (FAN SHUTDOWN, ETC.) IN SEPARATE CONDUIT. DO NOT RUN WITH ANY OTHER FIRE ALARM SYSTEM WIRING IN A COMMON CONDUIT.
- I. ALL CONDUIT, MOUNTING BOXES AND PANELS SHALL BE HUNG AND FASTENED WITH FITTINGS TO ENSURE POSITIVE GROUNDING THROUGHOUT THE ENTIRE SYSTEM.
- J. TRANSPOSING OR CHANGING COLOR CODING OF WIRES IS NOT PERMITTED. ALL CONDUCTORS IN CONDUIT CONTAINING MORE THAN ONE WIRE SHALL BE LABELED ON EACH END WITH "E-Z MARKERS".
- K. CONDUCTORS IN CABINETS SHALL BE FORMED AND HARNESSSED SO THAT EACH DROPS OFF DIRECTLY OPPOSITE ITS TERMINAL.
- L. ALL WIRING SHALL BE CHECKED AND TESTED TO ENSURE THAT THERE ARE NO GROUNDS, OPENS, OR SHORTS.
- M. WIRING COLOR CODES SHALL BE CONSISTENT THROUGHOUT THE SYSTEM AND SHALL ALLOW FOR EASY IDENTIFICATION OF INITIATING, INDICATING AND AUXILIARY CONTROL CIRCUITS.
- N. THE FIRE ALARM RISER DENOTES THE GENERAL ARRANGEMENT OF THE SYSTEM WITH TYPICAL DEVICES AND MINIMUM QUANTITIES OF TERMINAL CABINETS & POWER BOOSTERS. PROVIDE ADDITIONAL TERMINAL CABINETS, BOOSTERS, ETC. AS REQUIRED TO PROVIDE A COMPLETE AND OPERATIONAL SYSTEM.
- O. ALL FIRE ALARM SYSTEM JUNCTION BOXES SHALL BE PAINTED RED WITH STENCIL LETTERING INDICATING "FIRE ALARM SYSTEM".
- P. WIRING INDICATED ON THE RISER DIAGRAM IS DIAGRAMMATIC ONLY. IT IS NOT INTENDED TO INDICATE ROUTING OR QUANTITY OF WIRES REQUIRED. PROVIDE WIRING FOR A COMPLETE SYSTEM AS REQUIRED BY SYSTEM MANUFACTURER.
- Q. REFER TO FLOOR PLANS FOR EQUIPMENT LOCATIONS.
- R. NOT USED.

- S. ALL FIRE ALARM WIRING SHALL BE INSTALLED IN RED 3/4" EMT CONDUIT.
- T. PROVIDE LABELING FOR ALARM INITIATING DEVICES AND NOTIFICATION DEVICES PER CORNELL STANDARD 283100.
- U. PROVIDE CO DETECTION AND ASSOCIATED NOTIFICATION AS PER NYS BUILDING CODE.
- V. BATTERIES SHALL BE FOR 60 HOURS OF USAGE.
- W. ALL FIRE ALARM EQUIPMENT TO BE ACCEPTANCE TESTED. TESTING TO BE WITNESSED BY THE AHJ AND CU FIRE MARSHAL OFFICE.
- X. REFER TO SPECIFICATIONS FOR FIRE ALARM MATRIX.
- Y. FIRE ALARM SYSTEM SHALL BE INSTALLED IN ACCORDNACE WITH FM GLOBAL DATA SHEET 5-40 (FIRE ALARM SYSTEMS).
- Z. FIRE DETECTION SHALL BE INSTALLED IN ACCORDDNACE WITH FM GLOBAL DATA SHEET 5-48 (AUTOMATIC FIRE DETECTION).
- AA. ALL FIRE ALARM EQUIPMENT SHALL BE FM GLOBAL APPROVED.
- BB. PERFORM INSTALLATION, ACCEPTANCE TESTING, MAINTAINANCE INSPECTIONS, AND OTHER TESTINGS IN ACCORDNACE WITH FM GLOBAL DATA SHEET 5-40 AND FM GLOBAL TABLE 1.

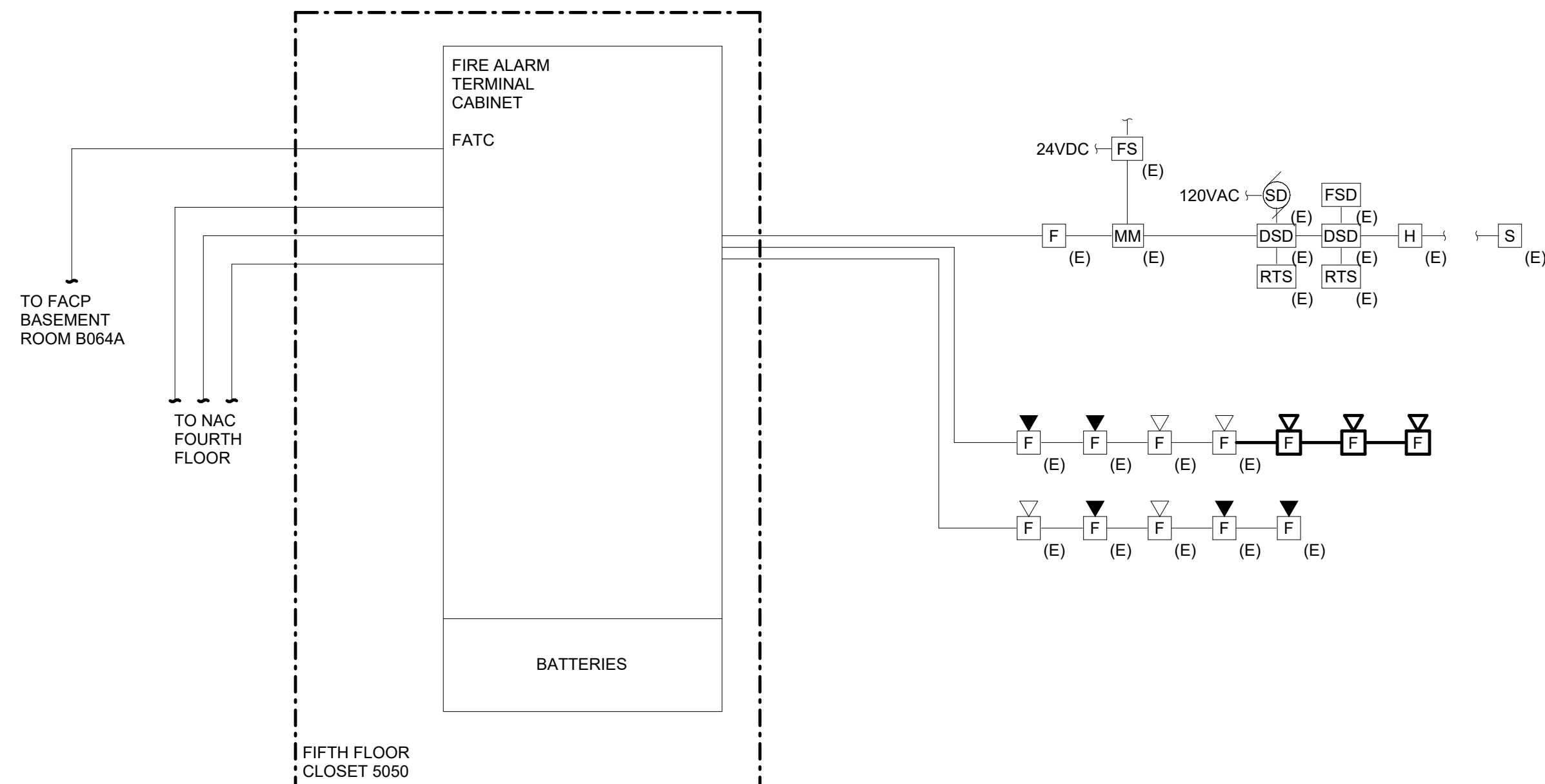
FIRE ALARM NOTES:

1. MANUAL FIRE ALARM BOXES: MOUNTING HEIGHT 42-48 INCHES TO HANDLE. LOCATE NO MORE THAN 5 FEET FROM THE ENTRANCE TO AN EXIT. LOCATE ON THE LATCH SIDE OF DOOR. IF POSSIBLE, BOXES ARE TO BE CONSPICUOUS, UNOBSTRUCTED, AND ACCESSIBLE.
2. SPOT TYPE HEAT AND SMOKE DETECTORS: FOR SMOOTH CEILINGS, ALL POINTS ON THE CEILING SHALL HAVE A DETECTOR WITHIN 0.7 TIMES THE DETECTOR SPACING. SPACING IS 50 FEET FOR SMOKE DETECTORS AND 50 FEET FOR HEAT DETECTORS. PROVIDE A SPACING OF 3 FEET OR MORE FROM SUPPLY AND RETURN DIFFUSERS. COORDINATE TRADES BY MEANS OF THE REFLECTED CEILING PLAN. (IF DESIGN CONDITIONS OTHER THAN SMOOTH CEILINGS OR CEILING HEIGHTS OVER 12 FEET ARE ENCOUNTERED, SHOW CONDITIONS AND GIVE REASONS FOR COVERAGE DESIGN.)
3. DOOR RELEASE: SMOKE DETECTION PROVIDING AREA COVERAGE ON EITHER SIDE OF THE DOORS MAY BE USED FOR DOOR RELEASE. SMOKE DETECTORS, WHICH ARE PROVIDED FOR DOOR RELEASE ONLY, SHALL BE ON THE CENTERLINE OF DOORWAY AND NOT MORE THAN 5 FEET FROM DOOR.
4. VISUAL AND COMBINATION AUDIBLE/VISUAL NOTIFICATION APPLIANCES: THE ENTIRE LENS SHALL BE WITHIN 80 INCHES-96 INCHES ABOVE THE FLOOR, DEPENDING ON CEILING HEIGHT. HIGHER MOUNTING IS PREFERRED. VISIBLE APPLIANCES SHALL BE LOCATED NOT MORE THAN 15 FEET FROM END OF THE CORRIDOR, WITH A SEPARATION NOT GREATER THAN 100 FEET BETWEEN APPLIANCES IN CORRIDORS. LOCATE AN APPLIANCE OPPOSITE EACH ACCESS DOOR TO AN EXIT STAIR SO THAT IT WILL BE VISIBLE TO PERSONS ENTERING THE FLOOR FROM THE EXIT STAIR.
5. AUDIBLE NOTIFICATION APPLIANCES: TOP OF DEVICE NOT LESS THAN 90 INCHES ABOVE FLOOR OR NOT LESS THAN 6 INCHES BELOW CEILING.
6. FIRE ALARM CONTROL PANELS, ANNUNCIATOR PANELS, WARDEN STATIONS, ETC.: MOUNT IN ACCESSIBLE LOCATION APPROXIMATELY 5 FEET IN HEIGHT TO PANEL DISPLAY READOUT. ALL PANELS SHALL HAVE 36 INCHES OF WORKING CLEARANCE IN FRONT OF PANEL.
7. REMOTE TEST STATIONS FOR DUCT DETECTORS AND BEAM DETECTORS: MOUNT AT 80" AFF IN AN ACCESSIBLE AND CONSPICUOUS LOCATION.
8. ADDRESSABLE CONTROL DEVICES SHALL BE LOCATED WITHIN 3 FEET OF THE CONTROLLED DEVICE, SUCH AS VENTILATION FAN OR ELEVATOR CONTROLLER. ADDRESSABLE MONITOR DEVICES SHALL BE LOCATED ADJACENT TO MONITORED DEVICE.



2 FIRE ALARM RISER FIFTH FLOOR - DEMOLITION

NTS



1 FIRE ALARM RISER FIFTH FLOOR

NTS



Drawn By: JAM
Checked By: ECS
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E-310
SYSTEMS ONE-LINE
DIAGRAMS

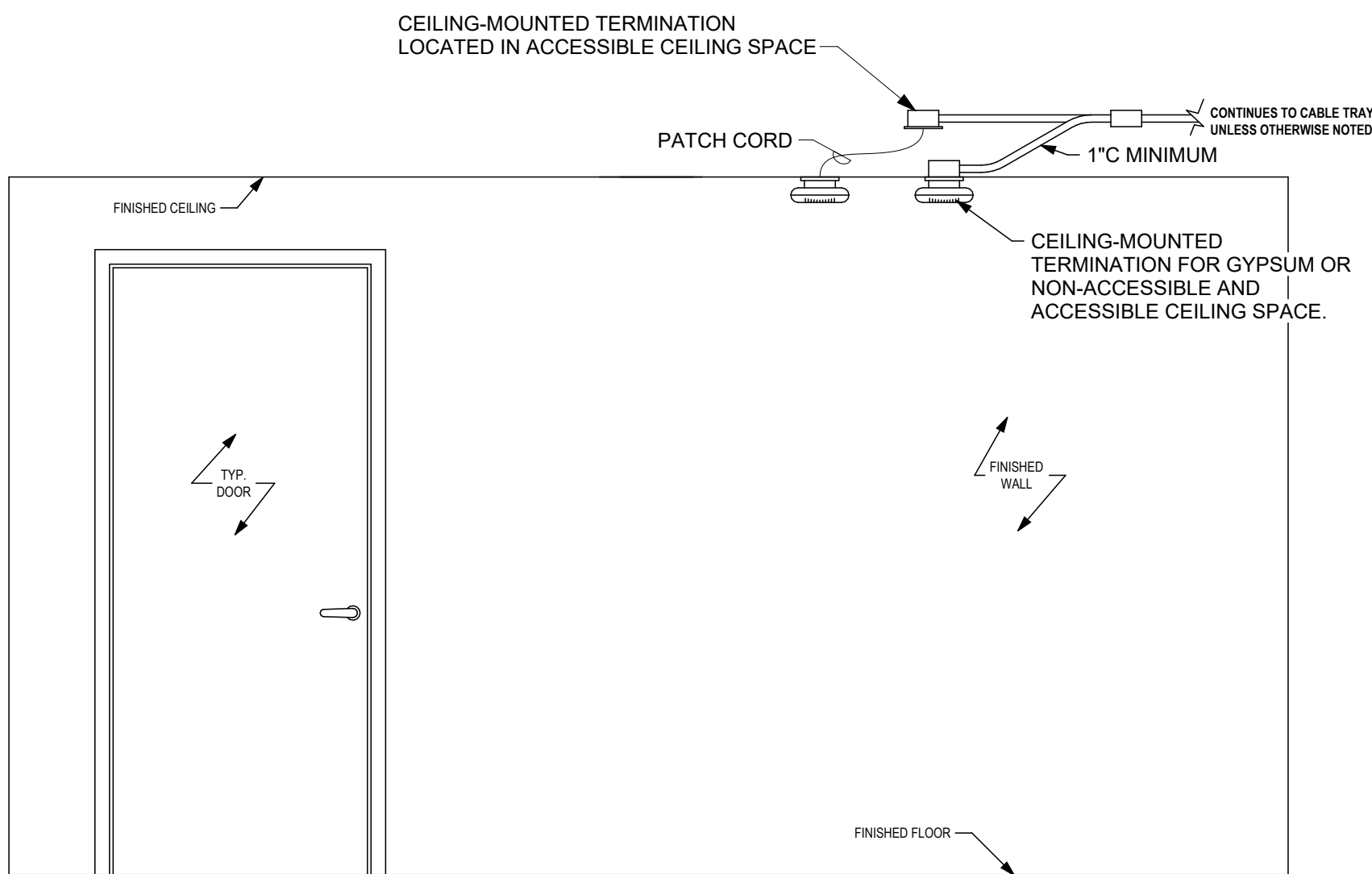
COPPER FEEDER SIZE SCHEDULE (600V)										
OCPD RATING	3-WIRE FEEDER AND EQUIPMENT GROUNDING CONDUCTOR (EGC)					4-WIRE FEEDER AND EQUIPMENT GROUNDING CONDUCTOR (EGC)				
	IDENT.	NUMBER OF SETS	WIRE SIZE	EGC	EMT CONDUIT	IDENT.	NUMBER OF SETS	WIRE SIZE	EGC	EMT CONDUIT
20	A1	1	12	12	3/4"	A	1	12	12	3/4"
25,30	B1	1	10	10	3/4"	B	1	10	10	3/4"
35,40	C1	1	8	10	3/4"	C	1	8	10	3/4"
45	D1	1	6	10	3/4"	D	1	8	10	3/4"
50,60	E1	1	6	10	3/4"	E	1	6	10	1"
70,80	F1	1	4	8	1"	F	1	4	8	1 1/4"
90	G1	1	3	8	1"	G	1	3	8	1 1/4"
100	H1	1	2	8	1 1/4"	H	1	3	8	1 1/4"
110	I1	1	2	6	1 1/4"	I	1	2	6	1 1/4"
125	J1	1	2	6	1 1/4"	J	1	1	6	1 1/2"
150	K1	1	1/0	6	1 1/2"	K	1	1/0	6	1 1/2"
175	L1	1	2/0	6	1 1/2"	L	1	2/0	6	2"
200	M1	1	3/0	6	2"	M	1	3/0	6	2"
225	N1	1	4/0	4	2"	N	1	4/0	4	2 1/2"
250	O1	1	4/0	4	2"	O	1	250	4	2 1/2"
300	P1	1	300	4	2 1/2"	P	1	350	4	2 1/2"
350	Q1	1	400	3	2 1/2"	Q	1	500	3	3"
400	R1	1	500	3	2 1/2"	R	1	600	3	3 1/2"
450	S1	1	600	2	3"	S	2	4/0	2	2 1/2"
500	T1	2	4/0	2	2"	T	2	250	2	2 1/2"
600	U1	2	300	1	2 1/2"	U	2	350	1	2 1/2"
700	V1	2	400	1/0	2 1/2"	V	2	400	1/0	3"
800	W1	2	600	1/0	2 1/2"	W	2	600	1/0	4"
1000	X1	3	400	2/0	2 1/2"	X	3	500	2/0	3"
1200	Y1	3	600	3/0	3"	Y	4	400	3/0	3"
1600	Z1	4	600	4/0	3"	Z	5	500	4/0	3"
2000	AA1	5	600	250	3"	AA	6	500	250	3"
2500	BB1	6	600	350	3"	BB	7	600	350	4"
3000	CC1	8	500	400	3"	CC	8	600	400	4"
4000	DD1	10	600	500	3"	DD	11	600	500	4"
5000	EE1	12	600	700	4"	EE	14	600	700	4"
6000	FF1	15	600	800	4"	FF	16	600	800	4"

NOTES:

A. WHERE MULTIPLE SETS ARE SPECIFIED, PROVIDE PHASE, NEUTRAL (IF REQUIRED), AND EGC OF WIRE SIZE INDICATED IN EACH CONDUIT. CONDUCTORS AND CONDUITS SHALL BE EQUAL IN LENGTH AND EACH BE OF SAME MANUFACTURER.

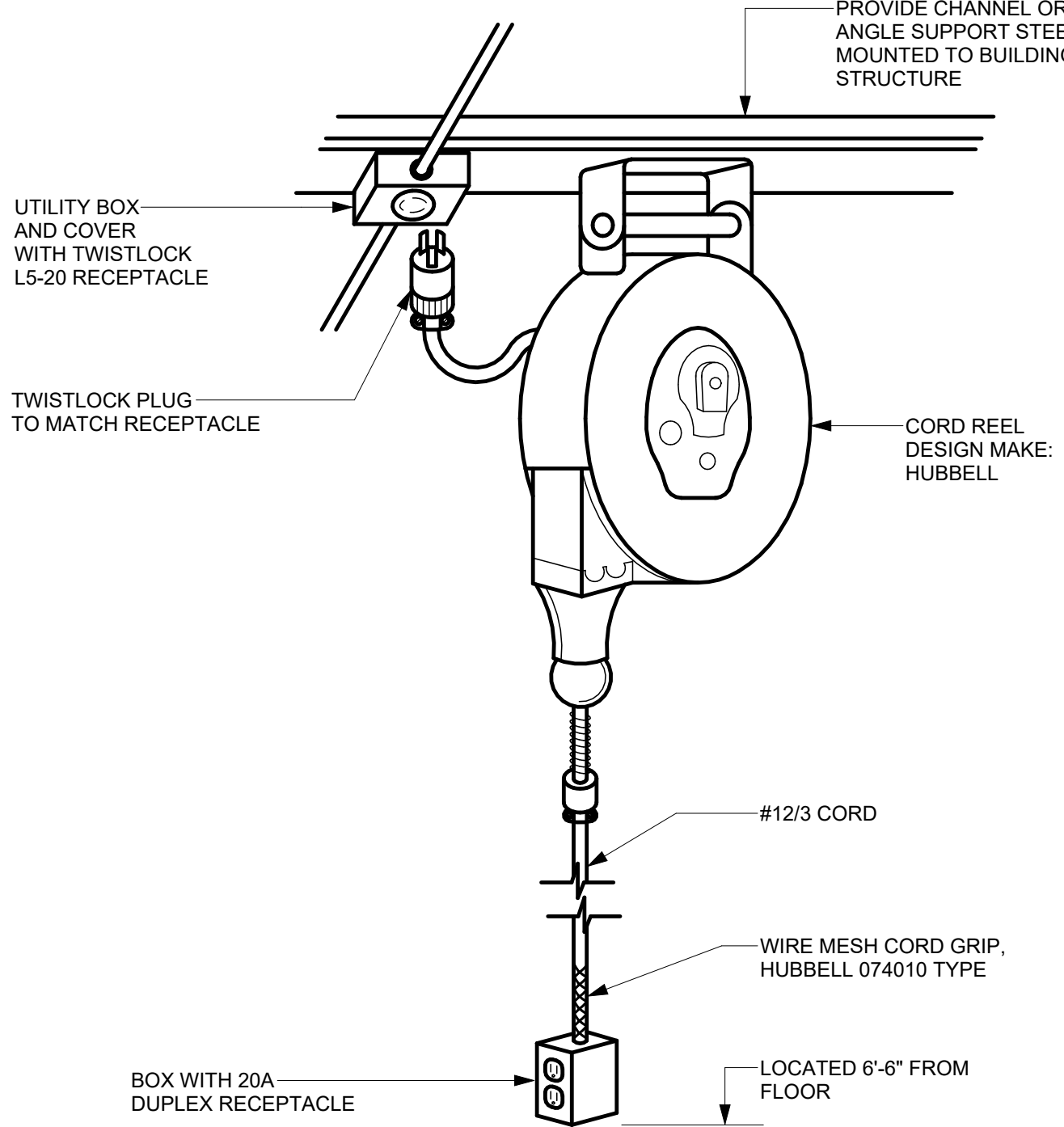
B. MINIMUM EMT CONDUIT SIZE IS BASED ON 40% FILL.

C. A 3-WIRE FEEDER IS (3) PHASE CONDUCTORS WHEN PROTECTED BY A 3-POLE OCPD. A 3-WIRE FEEDER IS (2) PHASE CONDUCTORS AND (1) NEUTRAL CONDUCTOR WHEN PROTECTED BY A 2-POLE OCPD. A 4-WIRE FEEDER IS (3) PHASE CONDUCTORS & (1) NEUTRAL CONDUCTOR. A 5-WIRE FEEDER IS (3) PHASE CONDUCTORS & (2) NEUTRAL CONDUCTORS.

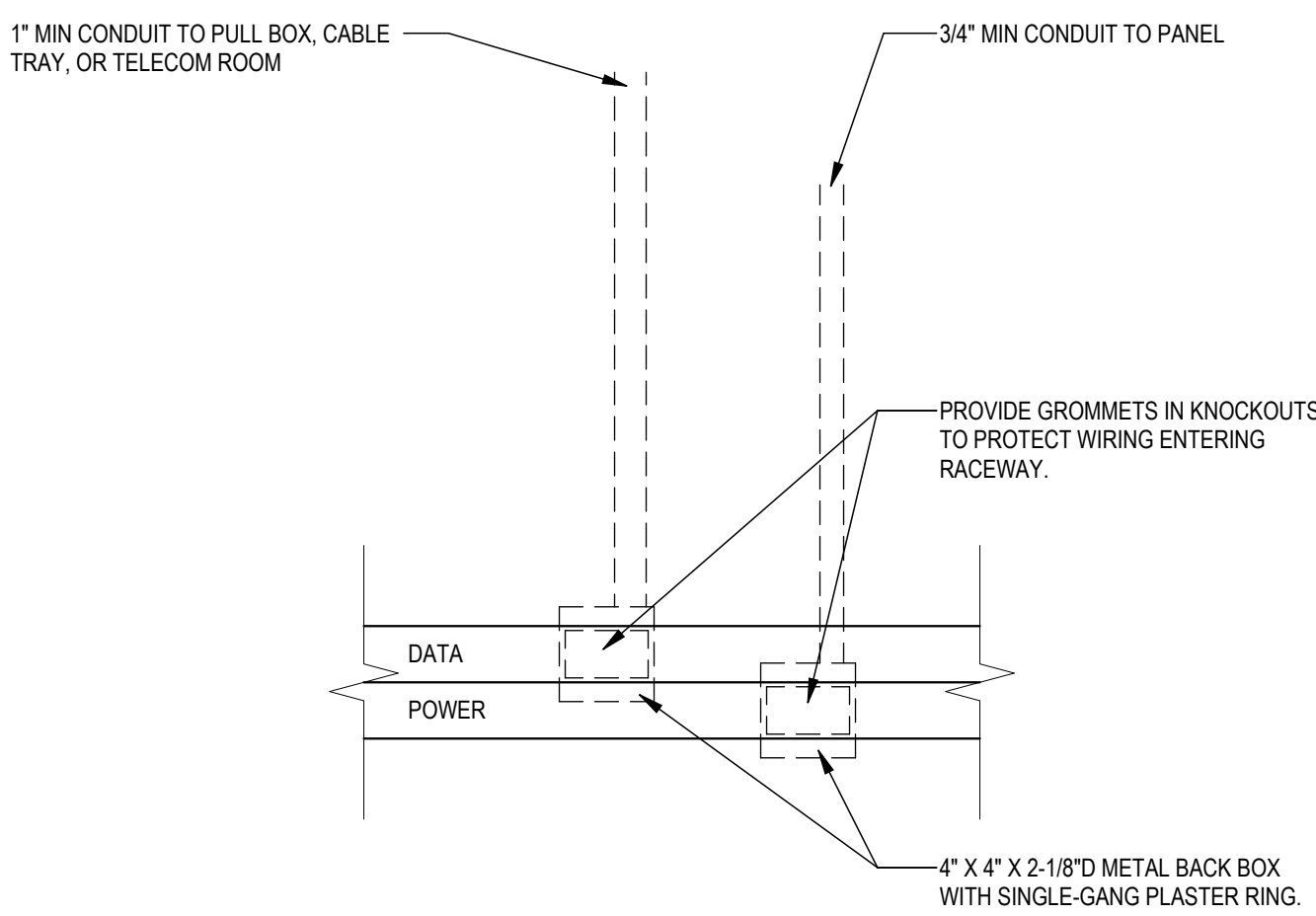


- GENERAL DETAIL NOTES:
- NEW INSTALLS SHOULD USE DOUBLE-GANG 2.25" DEEP OUTLET BOXES.
 - FLUSH-MOUNT RETROFITS MAY USE 15/16" EXTERNAL RINGS AS NEEDED.
 - REFER TO FLOOR PLANS FOR LOCATIONS.
 - COORDINATE FINAL INSTALLATION WITH CIT.

9 TYPICAL WI-FI ACCESS POINT CEILING MOUNTING

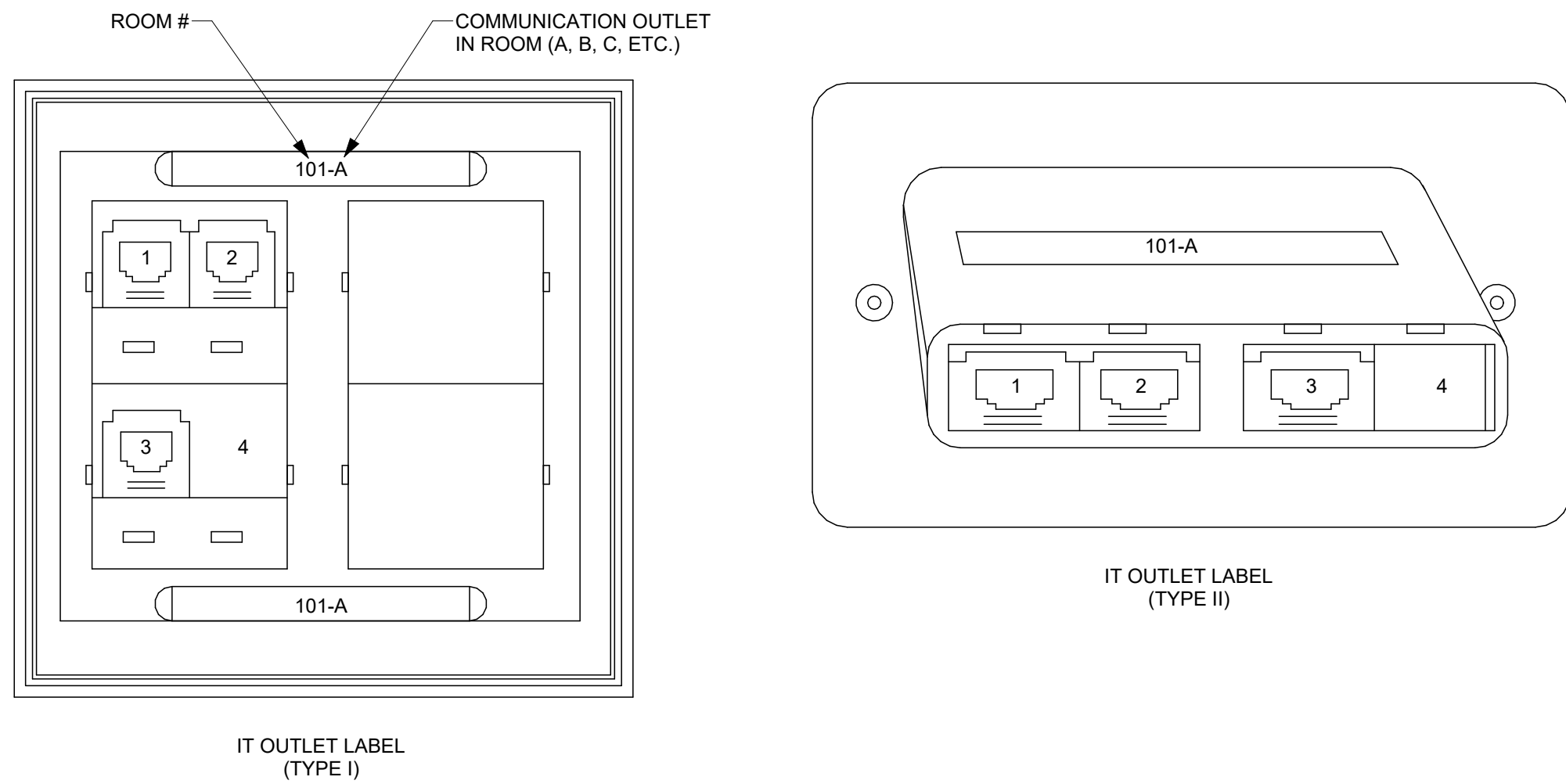


6 CORD REEL DETAIL

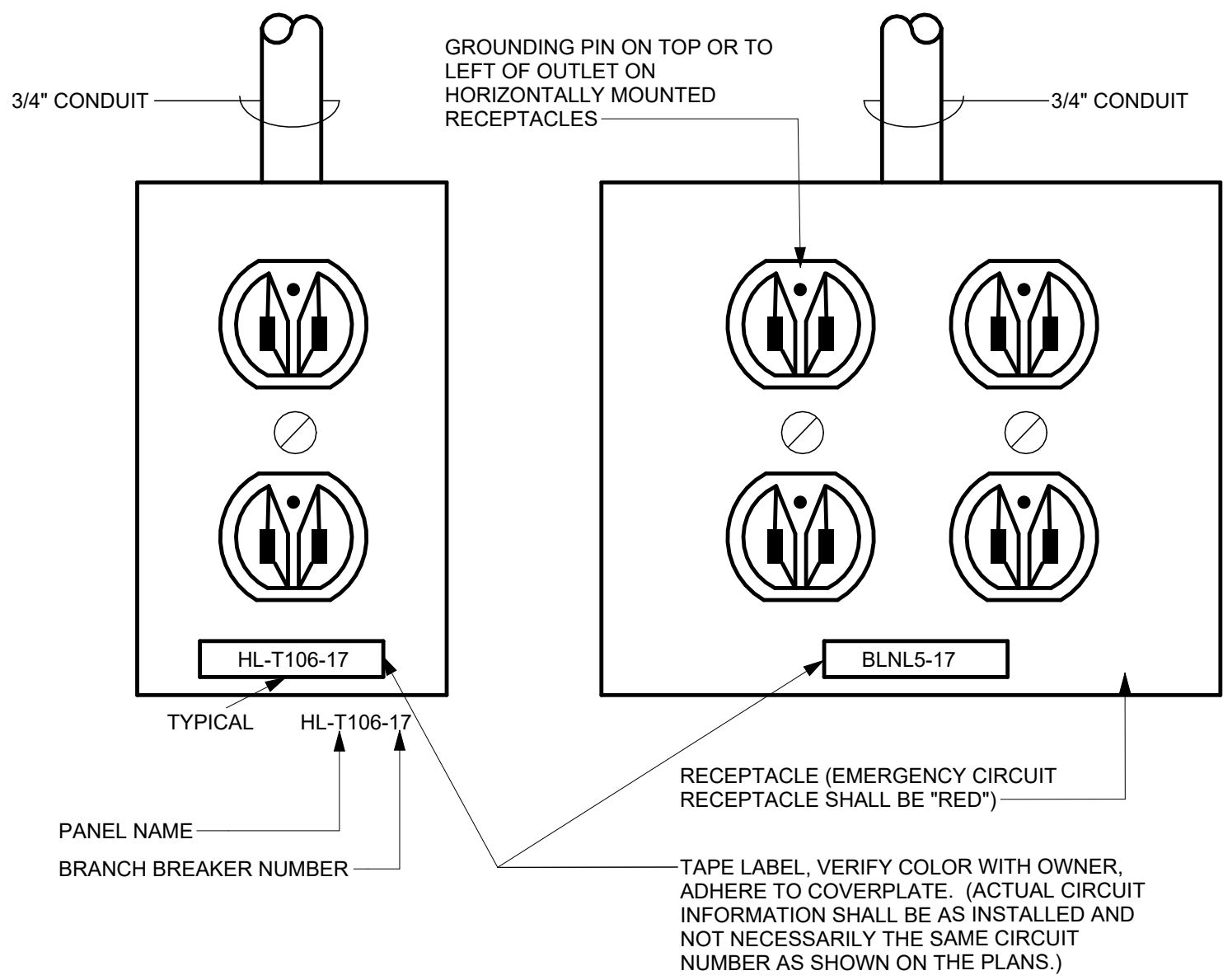


- NOTES
- DUAL-CHANNEL SURFACE METAL RACEWAY BASIS OF DESIGN IS LEGRAND WIREMOLD 4000-SERIES WITH DIVIDER.
 - REFER TO FLOOR PLANS FOR DEVICE LOCATIONS, QUANTITIES, AND CIRCUITING.
 - PROVIDE QUANTITY OF BACK BOXES AND FEEDS AS NEEDED TO SERVE ALL POWER AND LOW-VOLTAGE DEVICES. PROVIDE (1) 1" C PER 4 CABLE DROPS TO ALLOW FOR FUTURE EXPANSION.
 - FINISH PER ARCHITECT.
 - COORDINATE ELEVATION WITH ARCHITECTURAL DRAWINGS.

8 DUAL CHANNEL SURFACE METAL RACEWAY

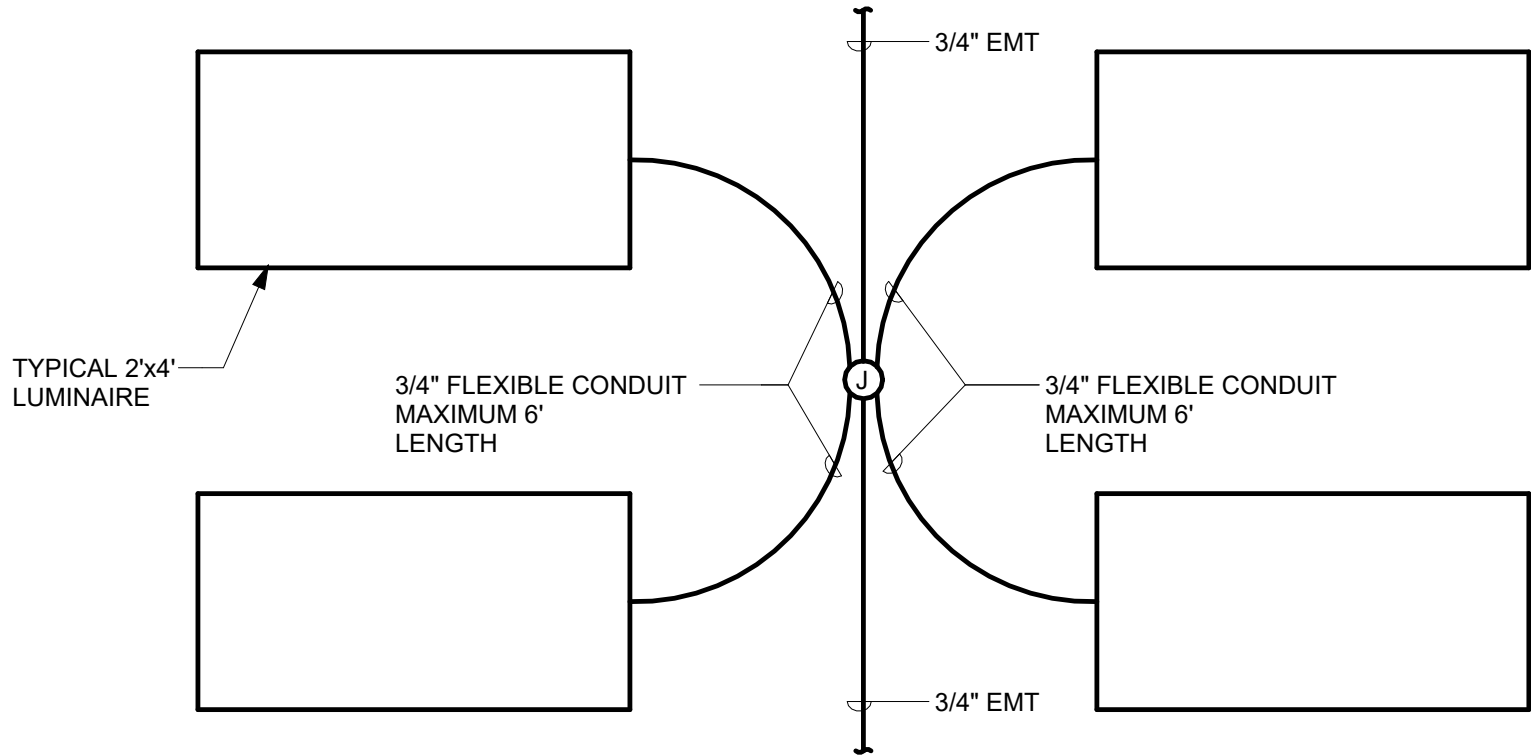


5 ASSIGNING OUTLET NUMBERS



2 TYPICAL RECEPTACLE IDENTIFICATION REQUIREMENTS

10 COPPER FEEDER SCHEDULE



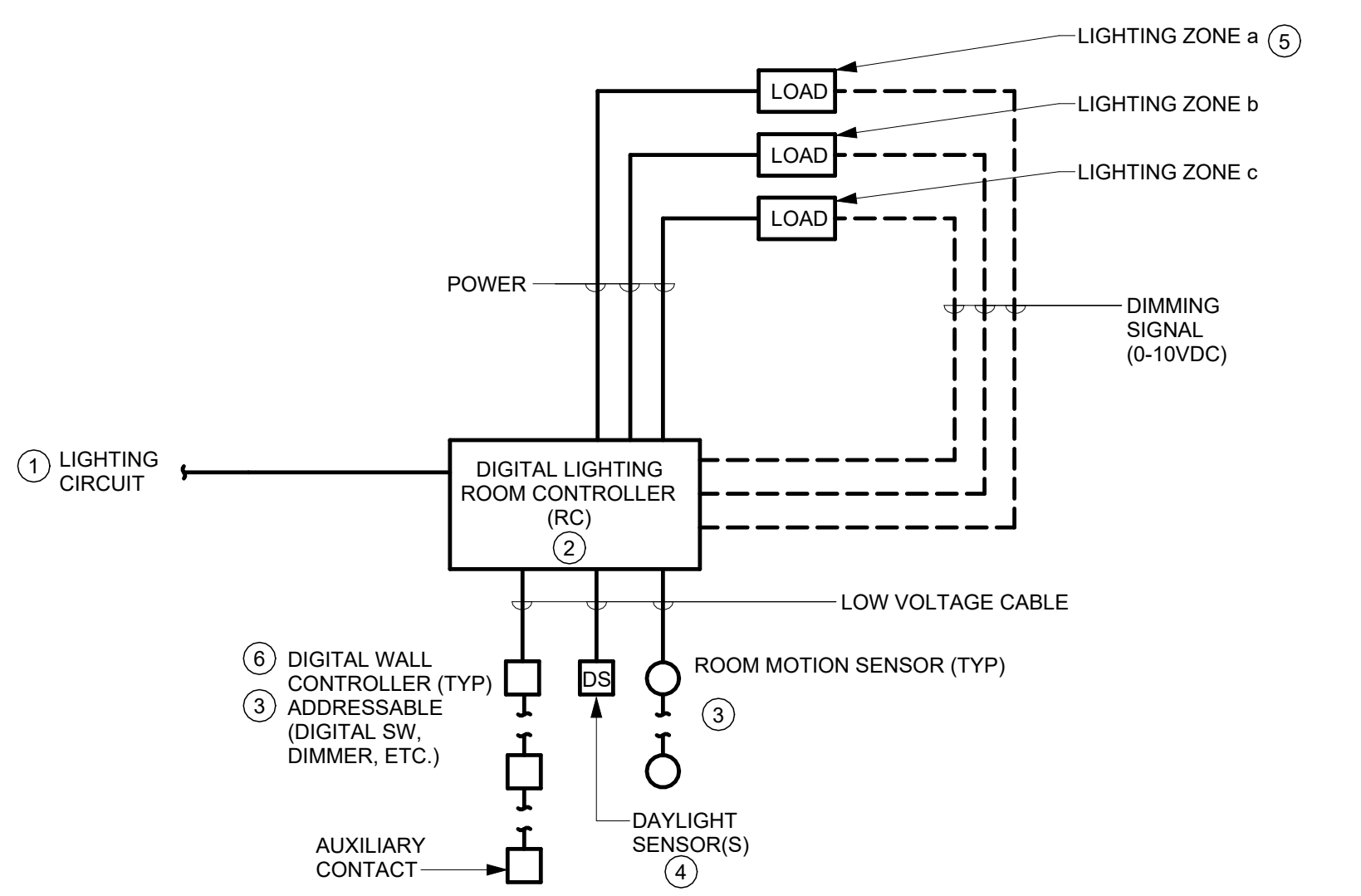
7 TYPICAL BRANCH CIRCUIT WIRING FOR CEILING

EQUIPMENT: "INSERT DESIGNATION"
POWER SOURCE: "INSERT SOURCE"
TYPE SUPPLY: INSERT-NORMAL, OR CRITICAL OPERATION POWER, OR OPTIONAL STANDBY, OR LEGALLY REQUIRED, OR LIFE SAFETY EMERGENCY AS APPLICABLE.
VOLTAGE: "INSERT APPLICABLE VOLTAGE-208/120V OR 480/277V, ETC."
CONDUCTOR COLOR CODING:
PHASE A - "BLACK OR BROWN"
PHASE B - "RED OR ORANGE"
PHASE C - "BLUE OR YELLOW"
NEUTRAL - "WHITE OR GRAY"
GROUND - GREEN
AVAILABLE SHORT CIRCUIT CURRENT: "INSERT AMPS RMS"
SERVICE OCPD CLEARING TIME: XX SECONDS
"INFORMATION DATE: XX"

DETAIL NOTES:

- PROVIDE CUSTOM NAMEPLATE AS INDICATED FOR ALL PANELBOARDS, MCC'S, SWITCHBOARDS, SWITCHGEAR, TRANSFER SWITCHES, GENERATORS ETC.
- NAMEPLATE SHALL BE ENGRAVED (WHITE LETTERING, BLACK BACKGROUND) AND ATTACHED TO THE EQUIPMENT WITH SCREWS. LETTERING SHALL BE 1/4" HIGH WITH SPACE BETWEEN LINES 1/8" MINIMUM. MINIMUM SHALL BE 8"H x 8"W.
- PROVIDE SAMPLE NAMEPLATE FOR REVIEW.
- THE AVAILABLE SHORT CIRCUIT AND OCPD CLEARING TIME SHOULD BE PROVIDED AT THE SERVICE ENTRANCE IF GREATER THAN OR EQUAL TO 1200A.

4 EQUIPMENT NAMEPLATE DETAIL



3 ROOM LIGHTING CONTROL DETAIL

Revisions



ELECTRIC EQUIPMENT AND CONTROL SCHEDULE										ABBREVIATIONS						GENERAL NOTES																	
										AU	AT UNIT	H	HAR...	R	REDU...	A. REFER TO SPECIFICATIONS FOR EQUIPMENT REQUIREMENTS																	
										B	ASD WITH BYPASS	HOA	HAND-OFF-AUTO WITH RELAY		ASD	B. PROVIDE CONTROLLER SIZED PER HP/AMPS																	
										D	DV/DI FILTER	IU	INTEGRAL WITH UNIT	RE	REM...	C. LOCATIONS/QUANTITIES OF FIRE ALARM DUCT DETECTORS ARE SHOWN ON PLANS																	
										ECB	ENCLOSED CIRCUIT BREAKER	M	MULTIPLE MOTOR ASD																				
										F	FUSED	NF	NON-FUSED																				
EQUIPMENT								POWER SOURCE, PROTECTION & WIRING								MOTOR CONTROLLER						DISCONNECTING MEANS						CONNECTIONS				EQUIPMENT	
ITEM ID	NAME	ROOM LOCATION	HP	KW	AMPERAGE	PHASE	VOLTAGE	SOURCE	OCPD RATING	WIRING FROM SOURCE TO EQUIPMENT VIA CONTROLLER / DISCONNECTING MEANS			MANUAL MOTOR STARTER WITH RELAY	MAGNETIC MOTOR STARTER	COMBINATION MAGNETIC STARTER AND SAFETY SWITCH	ADJUSTABLE SPEED DRIVE	PACKAGED CONTROL UNIT	NEMA ENCLOSURE TYPE	NEMA STARTER SIZE	LOCATION	SAFETY SWITCH	SAFETY SWITCH AMPERE RATING	FUSE/CB AMPERE RATING	NEMA ENCLOSURE TYPE	LOCATION	FIRE ALARM SHUTDOWN	FIRE ALARM DUCT DETECTOR(S)	MOTORIZED DAMPER	LINE VOLTAGE TEMPERATURE CONTROL	REFERENCE NOTES	ITEM ID		
										PHASE	GROUND	CONDUIT																					
FCU-5119	FAN COIL UNIT	RROOM 5119	1/2		9.8	1	120	RP-SS1	20/1	2#12	1#12	3/4"	X							AU	Y	30	NF	12	AU							FCU-5119	
CP-1(5119)	CONDENSATE PUMP	ROOM 5119	1/30		1.0	1	120	RP-SS1	20/1	2#12	1#12	3/4"					X			AU	y	30	NF	12	AU							CP-1(5119)	
END OF SCHEDULE																																	

LUMINAIRE SCHEDULE								
TYPE	DESCRIPTION	MFR. & CATALOG No.	LIGHT SOURCE	DRIVER	MOUNTING	LUMENS	WATTS	REFERENCE NOTES
L1	2X2 RECESSED LED TROFFER, FLAT LENS FIXTURE	FINELITE #HPR LED-F-2X2-H-835-DCO-XXX-FC-10%-XX-96LG	LED 3500K 80CRI	120V - EM 277V 0-10V, 10%	RECESSED	4942	42.8	1.2
L2	2X4 RECESSED LED TROFFER, FLAT LENS FIXTURE	FINELITE #HPR LED EP-F-2X4-B-835-DCO-XXX-F-C-10%-XX-96LG	LED 3500K 80CRI	120V - EM 277V 0-10V, 10%	RECESSED	4379	35.2	1.2
X1	INTERIOR EXIT SIGN: EDGE-LIT, RED LETTERS WITH MIRRORED BACKGROUND. PROVIDE MOUNTING, NUMBER OF FACES, AND DIRECTION ARROWS PER DRAWINGS.	EXITRONIX S9000 #S9000UM-LB-SR-R-XX	LED	120/277V	WALL-MOUNTED			
END OF SCHEDULE								

- REFERENCE NOTES:
- COORDINATE MOUNTING REQUIREMENTS WITH FINAL APPROVED CEILING SUBMITTALS.
 - EMERGENCY FIXTURE TO BE CONNECTED TO 120V CIRCUIT. NORMAL FIXTURES TO BE CONNECTED TO 277V CIRCUIT. REFER TO FLOOR PLANS.

CABLE SCHEDULE									
MLC	RLC	PORT	TR	RACK/ CABINET	PATCH PANEL	PORT	CIT LABEL	NOTES	
5119	A	1	5150	1	D	1	5119-A1	WAP	
5119	A	2	5150	1	D	2	5119-A2	WAP	
5121	A	1	5150	1	D	3	5121-A1		
5121	A	2	5150	1	D	4	5121-A2		
5121	B	1	5150	1	D	5	5121-B1		
5121	B	2	5150	1	D	6	5121-B2		
5121	C	1	5150	1	D	7	5121-C1		
5121	C	2	5150	1	D	8	5121-C2		
5121	D	1	5150	1	D	9	5121-D1	WAP	
5121	D	2	5150	1	D	10	5121-D2	WAP	
5121A	A	1	5150	1	D	11	5121A-A1		
5121A	A	2	5150	1	D	12	5121A-A2		
5121B	B	1	5150	1	D	13	5121B-B1		
5121B	B	2	5150	1	D	14	5121B-B2		
5123	A	1	5150	1	D	15	5123-A1		
5123	A	2	5150	1	D	16	5123-A2		
5123	B	1	5150	1	D	17	5123-B1		
5123	B	2	5150	1	D	18	5123-B2		
5123	C	1	5150	1	D	19	5123-C1		
5123	C	2	5150	1	D	20	5123-C2		
5123	D	1	5150	1	D	21	5123-D1	WAP	
5123	D	2	5150	1	D	22	5123-D2	WAP	
5123A	A	1	5150	1	F	33	5123A-A1	WAP	
5123A	A	2	5150	1	F	34	5123A-A2	WAP	
5123B	A	1	5150	1	F	35	5123B-A1		
5123B	A	2	5150	1	F	36	5123B-A2		
5123B	B	1	5150	1	F	37	5123B-B1		
5123B	B	2	5150	1	F	38	5123B-B2		
5123B	C	1	5150	1	F	39	5123B-C1		
5123B	C	2	5150	1	F	40	5123B-C2		
5123C	A	1	5150	1	F	41	5123C-A1		
5123C	A	2	5150	1	F	42	5123C-A2		
5123C	B	1	5150	1	F	43	5123C-B1		
5123C	B	2	5150	1	F	44	5123C-B2		
5123C	C	1	5150	1	F	45	5123C-C1	WAP	
5123C	C	2	5150	1	F	46	5123C-C2	WAP	
5132	A	1	5150	1	F	47	5132-A1	WAP	
5132	A	2	5150	1	F	48	5132-A2	WAP	
END OF SCHEDULE									

- GENERAL NOTES:
- REFER TO FLOOR PLANS FOR EXISTING-TO-BE-REDESIGNATED DATA DROPS IN OFFICES. UPDATE LABELING FOR EXISTING LOCATIONS AT PATCH PANEL AND AT DEVICE WALLPLATE.
 - CONTRACTOR SHALL PROVIDE AS-BUILT DRAWINGS AND CABLE SCHEDULE TO CIT PRIOR TO SUBMITTAL OF ACTIVATION REQUEST.

- CABLE SCHEDULE REFERENCE NOTES:
- CONTRACTOR SHALL USE EXISTING PATCH PANEL OPENINGS MADE SPARE DURING DEMOLITION.
 - CONTRACTOR SHALL REDESIGNATE EXISTING DATA DROPS AS REQUIRED FOR NEW ROOM LAYOUTS. UPDATE PATCH PANEL, CABLE, AND WALLPLATE MARKINGS.



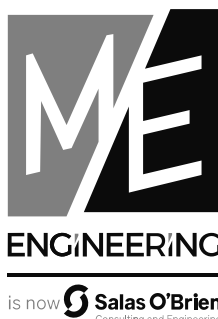
Drawn By: ECS
Checked By: ECS
Project Manager: GDD

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Revisions

COMSTOCK HALL 5TH FLOOR
LAB AND SUPPORT SPACE
RENOVATIONS
129 Garden Ave,
Ithaca, NY 14853
SWBR Project Number 25044.00

Cornell University
Ithaca, NY 14853



GENERAL NOTES

- A. PANELBOARD SCHEDULES ARE PROVIDED FOR REFERENCE ONLY. INFORMATION CONTAINED WITHIN THESE REFLECTS EXISTING INSTALLED CIRCUIT BREAKERS AND DESCRIPTIONS AS NOTED ON EXISTING PANELBOARD SCHEDULES.
- B. CONFIRM PANELBOARD TYPES IN FIELD. UNLESS OTHERWISE NOTED, TURN OVER ALL REMOVED CIRCUIT BREAKERS TO OWNER. ALL CIRCUIT BREAKERS SHALL MATCH EACH EXISTING MANUFACTURER AND RATINGS. CONFIRM LOCATIONS OF NOTED SPARE CIRCUITS TO BE REPURPOSED FOR PROPOSED CIRCUITS.
- C. CONTRACTOR TO PROVIDE UPDATED TYPED PANELBOARD SCHEDULES FOR ALL PANELBOARDS. COORDINATE WITH OWNER FOR NAMES OF PROPOSED CIRCUITS ASSOCIATED WITH THIS PROJECT. CIRCUIT NAMES MAY NOT MATCH THOSE PROVIDED ON THIS SHEET.

DRAWING NOTES:

1. CIRCUITS DESIGNATED WITH (E) ARE EXISTING TO BE REFEED FROM PANELBOARD. CIRCUITS DESIGNATED (ER) ARE EXISTING CIRCUITS THAT MAY HAVE BEEN MODIFIED (EXTENDED OR REWORKED) FROM EXISTING CONDITIONS. PANELBOARD IS TO REPLACE EXISTING 42-SPACE PANELBOARD IN SAME LOCATION. FEED FROM PANEL RP-5S IS TO BE REUSED AND EXTENDED. EXISTING CIRCUITS ARE TO BE SALVAGED AND EXTENDED.

RP-5N (E)										
Mains Type: MCB			Volts: 208Y/120V			Location: CORRIDOR 5046				
Mains Rating: 225 A			Phases: 3			Enclosure: Type 1				
A.I.C. Rating:			Wires: 4			Mounting: RECESSED				
CKT	Circuit Description		Trip	A	B	C	Trip	Circuit Description		CKT
1	Receptacles (E)	5117A	20 A	...			20 A	Receptacles (E)	5117	2
3	Receptacles Lab Bench (E)	5117	20 A	...			20 A	Receptacles E (E)	5117	4
5	Receptacles (E)	5119	20 A	...			20 A	Receptacles (E)	5117	6
7	Receptacles (E)	5119	20 A	...			20 A	Receptacles S (E)	5117	8
9	5132 CORD DROP		20 A	...			20 A	Receptacles (E)	5117	10
11	5132 CORD DROP		20 A	...			20 A	Fumehood 27a (E)	5117	12
13	5132 CORD DROP		20 A	...			20 A	Receptacles E (E)	5119A	14
15	(ON) Spare (E)		20 A	...			20 A	Receptacles (E)	5119A	16
17	(ON) Spare (E)		20 A	...			20 A	Spare (ON) (E)		18
19	5132 RECEPTACLE		20 A	...			20 A	Receptacles (E)	5128 & 5130	20
21	Receptacles (E)	5132	20 A	...			20 A	Receptacles (E)	5124 & 5126	22
23	FCU 1 & FCU 2 (E)	5132	20 A	...			20 A	Receptacle (E)	5119	24
25	Lights (E)	5117A	20 A	...			20 A	Fumehood 27b (E)	5117	26
27	5132 RECEPTACLE		20 A	...			20 A	(ON) Spare (E)		28
29	SPARE		20 A	...			20 A	Wiremold (E)	5119A	30
31	Wiremold (E)	5119A	20 A	...			20 A	(OFF) Wiremold (E)	5119A	32
33	Wiremold (E)	5119A	20 A	...			20 A	5132 RECEPTACLE		34
35	5132 RECEP 208V		20 A	...			20 A	Wiremold (E)	5119A	36
37			20 A	...			20 A	Wiremold (E)	5119A	38
39	Wiremold (E)	5119A	20 A	...			20 A	Wiremold (E)	5119A	40
41	Wiremold (E)	5119A	20 A	...			20 A	5132 RECEPTACLES		42
Load Classification										

RP-5S1

Mains Type: MAIN LUG

Volts: 208Y/120V

Location: RESEARCH LAB 5123C

Mains Rating: 125 A

Phases: 3

Enclosure: Type 1

A.I.C. Rating: 14k

Wires: 4

Mounting: RECESSED

CKT	Circuit Description	Trip	A	B	C	Trip	Circuit Description	CKT
1	(E) FUME HOOD 5121A	20 A	...			20 A	(ER) FUME HOOD 5123	2
3	(E) FUME HOOD 5121A	20 A	...			20 A	(ER) FUME HOOD 5123	4
5	(E) LIGHTING 5121/5121A	20 A	...			20 A	5123C BENCH WM	6
7	5121A EQUIPMENT	20 A	...			20 A	5123C BENCH WM	8
9		20 A	...			20 A	5123C WM	10
11	5123 BENCH WM	20 A	...			20 A	5123C WM	12
13	5123 BENCH WM	20 A	...			20 A	(E) 5123C BENCH RECEPTACLES	14
15	5123 BENCH WM	20 A	...			20 A	(E) 5123C RECEPTACLE	16
17	5123 BENCH WM	20 A	...			20 A	(E) 5123C RECEPTACLES (1)	18
19	(E) 5123 RECEPTACLE	20 A	...			20 A	5123C RECEPTACLES	20
21	5123 / 5123C BMS CONNECTION	20 A	...			20 A	5123A RECEPTACLES	22
23	(E) 5123 BENCH RECEPTACLES	20 A	...			20 A	(E) 5123A RECEPTACLE	24
25	(E) 5123 BENCH RECEPTACLES	20 A	...			20 A	5123A BENCH RECEPTACLES	26
27	(E) 5123 BENCH RECEPTACLES	20 A	...			20 A	(E) 5121A RECEPTACLES	28
29	(E) 5123B BENCH RECEPTACLES	20 A	...			20 A	(E) 5121A RECEPTACLES	30
31	(E) 5123B BENCH RECEPTACLES	20 A	...			20 A	FCU-5119 & CP-1(5119)	32
33	(E) 5121 RECEPTACLES	20 A	...			20 A		34
35	(E) RECEPTACLE	20 A	...			20 A	5123 BENCH 208V	36
37	(ER) RECEPTACLES	20 A	...			20 A		38
39	5121 EQUIPMENT	20 A	...			20 A	SPARE	40
41		20 A	...			20 A	(E) WATER POLISHER	42
43	5119 EQUIPMENT	20 A	...			20 A	SPARE	44
45	5119 EQUIPMENT	20 A	...			20 A	SPARE	46
47	5119 EQUIPMENT	20 A	...			20 A	SPARE	48
49	5119 EQUIPMENT	20 A	...			20 A	SPARE	50
51	5119 EQUIPMENT	20 A	...			20 A	SPARE	52
53	5119 EQUIPMENT	20 A	...			20 A	SPARE	54
55	5119 CORD REELS	20 A	...			20 A	SPARE	56
57		20 A	...			20 A	SPARE	58
59	5119 EQUIPMENT	20 A	...			20 A	SPARE	60

Load Classification



Drawn By: ECS
Checked By: ECS
Project Manager: GDD

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SWBR Project Number 25044.00

Cornell University
Ithaca, NY 14853

E-610
ELECTRICAL
PANELBOARD
SCHEDULES

11/7/2025
100% Construction
Documents



Drawn By: JAM
Checked By: ECS
Project Manager: GDD

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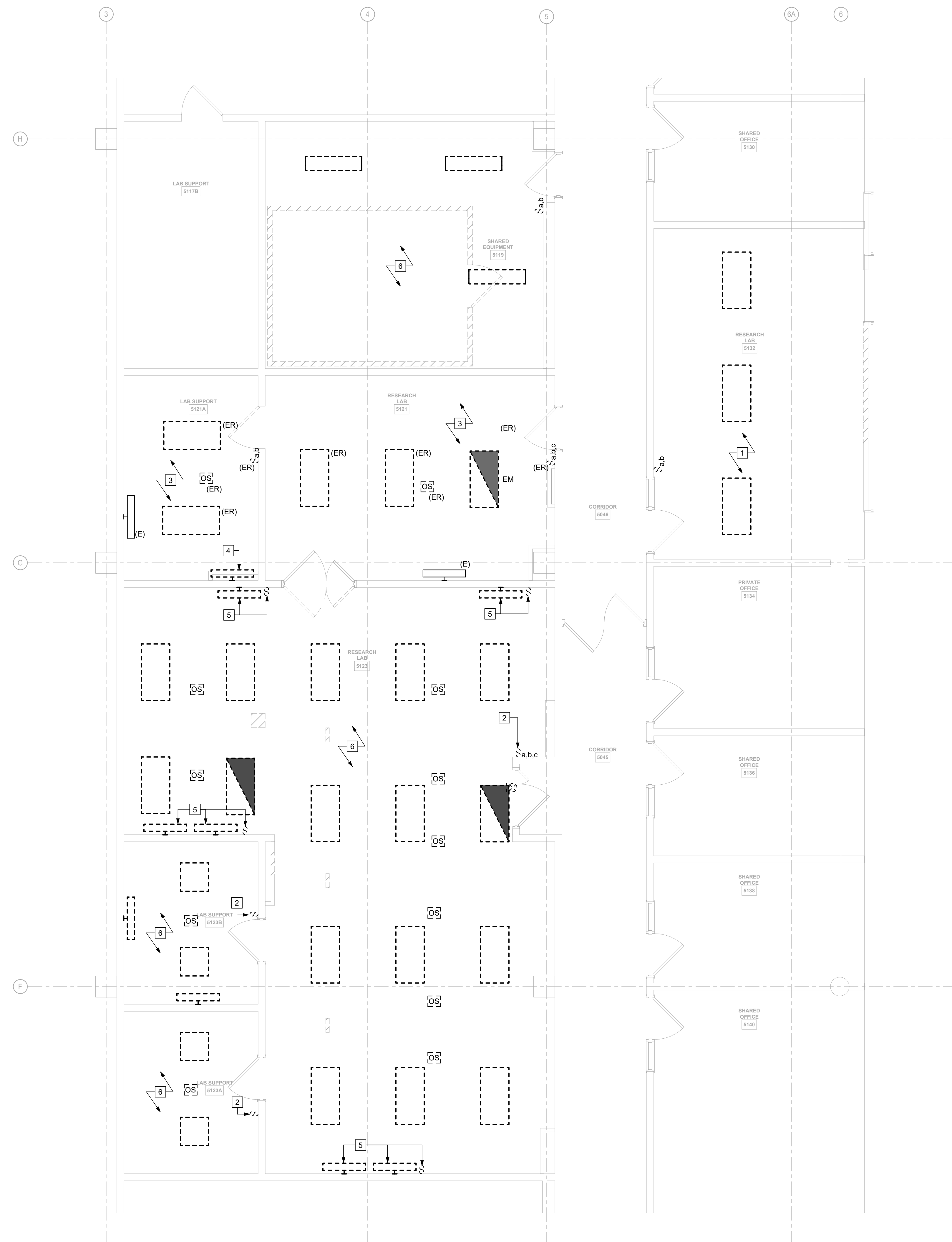
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Ithaca, NY 14853

ED-101
PARTIAL FIFTH FLOOR
DEMOLITION PLAN -
LIGHTING

11/7/2025
100% Construction
Documents

GENERAL NOTES

- A EXISTING ROOM LIGHTING CIRCUITS TO BE SALVAGED WHERE APPLICABLE FOR EXTENSION AND REUSE.
- X **DEMOLITION NOTES:**
- LUMINAIRES AND LIGHTING CONTROLS IN THIS ROOM TO BE DEMOLISHED. SALVAGE LIGHTING CIRCUIT FOR REWORK AND EXTENSION IN CONSTRUCTION PHASE.
 - SALVAGE LIGHTING CONTROLS BACK BOX. REFER TO CONSTRUCTION PLANS FOR LIGHTING CONTROLS TO BE INSTALLED IN EXISTING BACK BOX.
 - LUMINAIRES AND LIGHTING CONTROLS IN THIS ROOM TO REMAIN. REMOVE AND REINSTALL LIGHTS AND OCCUPANCY SENSORS AS REQUIRED TO FACILITATE WORK BY OTHER TRADES.
 - COORDINATE REMOVAL OF UNDERSHELF LIGHTING WITH SHELF DEMOLITION. CONTROLS ASSOCIATED WITH EXISTING-TO-REMAIN LIGHTING ARE TO REMAIN OR BE RELOCATED.
 - REMOVE UNDERSHELF LIGHT, WALL SWITCH, AND ASSOCIATED WIRING. COORDINATE WITH REMOVAL OF SHELF. PROVIDE CONDUIT SEAL FOR ALL WIREMOLD OPENINGS MADE SPARE BY REMOVAL.
 - LUMINAIRES AND LIGHTING CONTROLS IN THIS ROOM TO BE DEMOLISHED.



1 PARTIAL FIFTH FLOOR DEMOLITION PLAN - LIGHTING
1/4" = 1'-0"

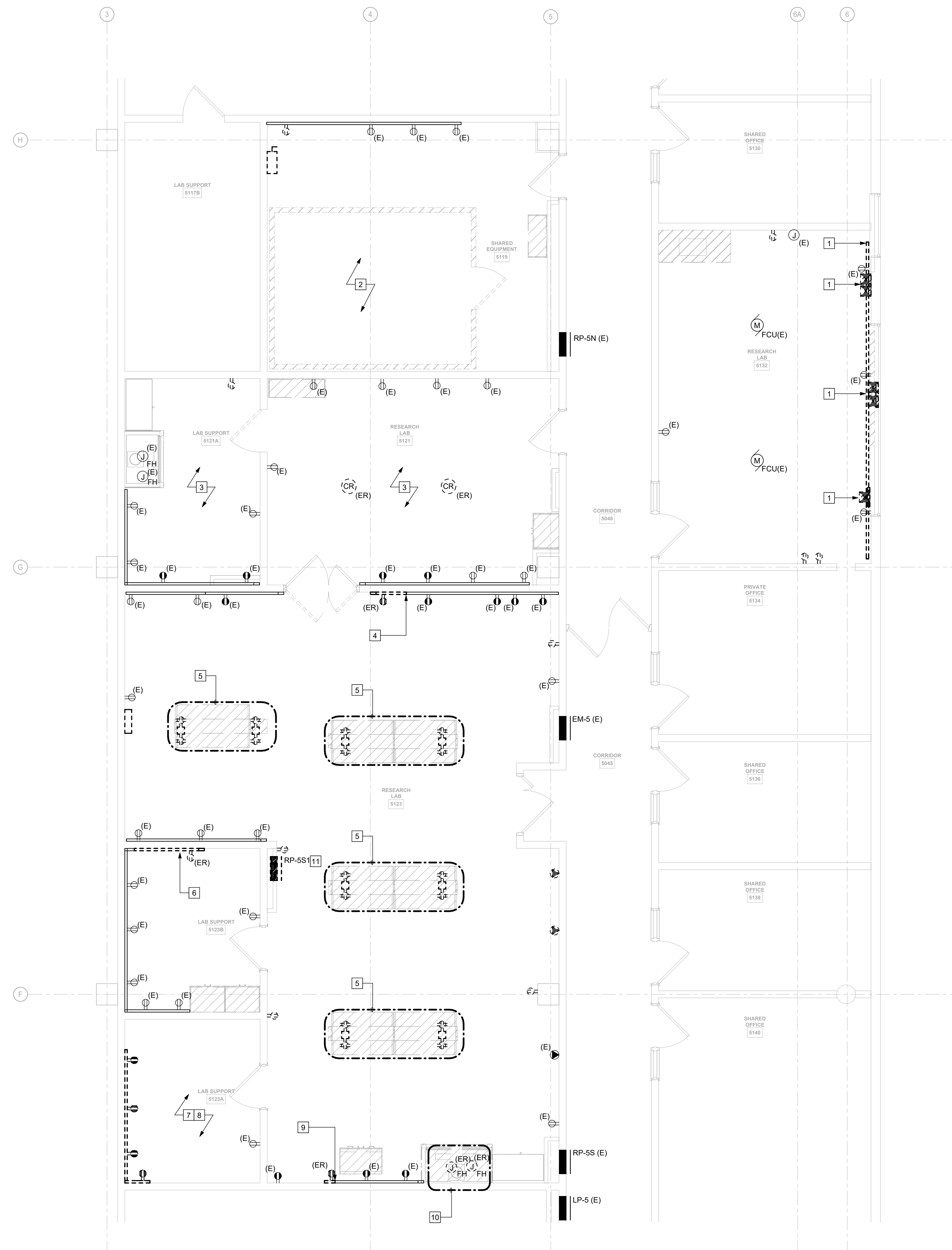


GENERAL NOTES

- A EXISTING ROOM LIGHTING CIRCUITS TO BE SALVAGED WHERE APPLICABLE FOR EXTENSION AND REUSE.

DEMOLITION NOTES:

- 1 REMOVE TIMECLOCKS, CONTROLS, AND WIREWAY BELOW CEILING. TURN OVER CONTROLS AND COMPONENTS TO OWNER. CIRCUIT TO BE SALVAGED FOR EXTENSION AND REWORK IN CONSTRUCTION PHASE.
- 2 DEMOLISH ALL ELECTRICAL CONNECTIONS TO ENVIRONMENTAL CONTROL ROOM. THIS INCLUDES CONDUIT, WIRING, AND CONNECTIONS IN THIS ROOM, PATHWAYS FROM PENTHOUSE, AND ALL COMPRESSORS, DISCONNECTS, TRANSFORMERS, AND CIRCUITS. TURN OVER ALL REMOVED EQUIPMENT TO OWNER, INCLUDING TRANSFORMER AND DISCONNECTS. COORDINATE WITH OTHER TRADES.
- 3 COORDINATE REMOVAL AND REINSTALLATION OF CEILING-MOUNTED DEVICES AS NEEDED TO FACILITATE WORK BY OTHER TRADES.
- 4 DEMOLISH EXISTING VERTICAL WIREMOLD SECTION AND PORTION OF HORIZONTAL SURFACE RACEWAY TO ENABLE PEGBOARD INSTALLATION. COORDINATE NEW FEED TO HORIZONTAL RACEWAY WITH CASEWORK SHOP DRAWINGS AND ARCHITECTURAL ELEVATIONS. REMAINDER OF RACEWAY TO BE LEFT IN PLACE. DEVICES TO BE RECONNECTED.
- 5 COORDINATE WITH OTHER TRADES TO DEMOLISH CIRCUITS AND DEVICES ON CASEWORK THAT IS TO BE REMOVED, INCLUDING DEVICES, PEDESTALS, DATA PORTS, TASK LIGHTING, AND TASK LIGHTING CONTROLS. DEMOLISH CIRCUITS BACK TO SOURCE.
- 6 VERTICAL SECTION OF SURFACE RACEWAY TO BE RELOCATED TO COORDINATE WITH WALL-MOUNTED CASEWORK AND SHELVING. HORIZONTAL RACEWAY TO BE EXTENDED IN CONSTRUCTION PHASE. DEMO PORTION OF HORIZONTAL RACEWAY AND VERTICAL DROP AS REQUIRED TO REFEED FROM LOCATION OUTSIDE OF WALL-MOUNTED SHELVING. REFER TO ARCHITECTURAL ELEVATION DETAILS. COORDINATE FINAL VERTICAL DROP LOCATION WITH CASEWORK SUBMITTALS. REMAINDER OF RACEWAY TO BE LEFT IN PLACE. DEVICES ARE TO BE REFEED.
- 7 SURFACE METAL RACEWAY IN THIS ROOM TO BE REMOVED. SALVAGE CIRCUITS FOR RACEWAY TO BE PROVIDED IN CONSTRUCTION PHASE.
- 8 CIRCUITS IN THIS ROOM TO BE EXTENDED AND REUSED.
- 9 COORDINATE DEMOLITION OF PORTION OF HORIZONTAL RACEWAY TO COORDINATE WITH UPDATED CASEWORK AND WALL-MOUNTED PEGBOARD. REFER TO ARCHITECTURAL ELEVATION DRAWINGS. COORDINATE WITH CASEWORK SHOP DRAWINGS. RECEPTACLE AT END OF RACEWAY TO BE RELOCATED IN EXISTING-TO-REMAIN PORTION OF RACEWAY.
- 10 COORDINATE DISCONNECT OF FUME HOOD TO BE REMOVED.
- 11 42-SPACE, 125A MAIN LUG PANELBOARD TO BE REMOVED AND REPLACED WITH 60-SPACE PANELBOARD. REFER TO E-111. SALVAGE ALL EXISTING-TO-REMAIN CIRCUITS FOR EXTENSION AND REUSE.



1 PARTIAL FIFTH FLOOR DEMOLITION PLAN - POWER
1/4" = 1'-0"



Drawn By: JAM
Checked By: ECS
Project Manager: GDD

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ED-111
PARTIAL FIFTH FLOOR
DEMOLITION PLAN -
POWER

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100% Construction
Documents

1 PARTIAL FIFTH FLOOR DEMOLITION PLAN - FIRE ALARM
1/4" = 1'-0"

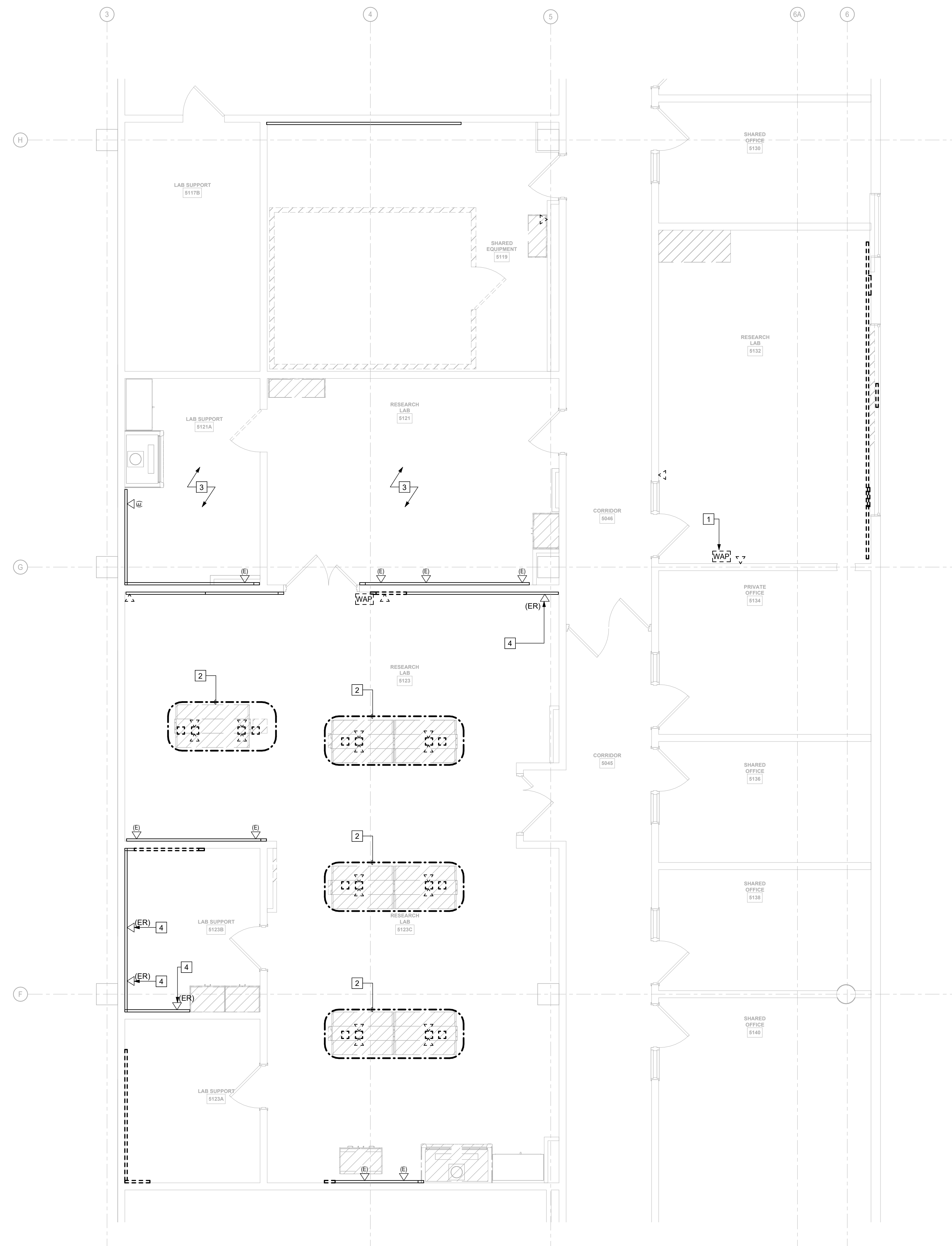
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ENGINEERING
EST. 1974Rochester | Buffalo | Syracuse | Capital District
300 TROILEY BLVD. 585.588.5595
ROCHESTER, NY 14606 www.meeengineering.com
ME PROJECT #: 260032**GENERAL NOTES**

- A ALL DEMOLISHED DATA CIRCUITS TO BE REMOVED BACK TO TELECOM ROOM AT THE SOUTH END OF THIS FLOOR. CAP DATA CONDUITS MADE SPARE AFTER THEY PENETRATE INTO THE ROOM FROM CORRIDOR CABLE TRAY.
- B COORDINATE WITH CIT FOR REMOVALS OF WIRELESS ACCESS POINTS.
- C CONTRACTOR TO PROVIDE CABLE SCHEDULE IDENTIFYING ANY CABLES REMOVED OR RELOCATED.
- D REFER TO ED-111 FOR SURFACE RACEWAY DEMOLITION SCOPE.

DEMOLITION NOTES:

- 1 EXISTING WIRELESS ACCESS POINT LOCATION TO BE DEMOLISHED.
- 2 COORDINATE WITH OTHER TRADES TO DEMOLISH CIRCUITS AND DEVICES ON CASEWORK THAT IS TO BE REMOVED, INCLUDING DEVICES, PEDESTALS, DATA PORTS, TASK LIGHTING, AND TASK LIGHTING CONTROLS. DEMOLISH CIRCUITS BACK TO SOURCE.
- 3 COORDINATE REMOVAL AND REINSTALLATION OF CEILING-MOUNTED DEVICES AS NEEDED TO FACILITATE WORK BY OTHER TRADES.
- 4 CABLING FOR DATA OUTLET TO BE SALVAGED AND REINSTALLED DUE TO SURFACE RACEWAY REWORK. REFER TO ED-111.



1 PARTIAL FIFTH FLOOR DEMOLITION PLAN - DATA
1/4" = 1'-0"



Drawn By: JAM
Checked By: ECS
Project Manager: GDD

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Revisions

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SWBR Project Number 25044.00

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ED-131

PARTIAL FIFTH FLOOR
DEMOLITION PLAN -
DATA

11/7/2025
100% Construction
Documents