University of North Carolina - Chapel Hill

BINGHAM HALL RENOVATION

Bid Set

1/8/2023

LAS Project No. 11706-00 SCO ID: 21-23548-02A UNC Project No. CI21212

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SITE LOCATION

PROJECT SITE

LORD AECK SARGENT

REVISION:

LORD AECK SARGENT PLANNING & DESIGN, INC. CERT. NO. 53851 NORTH CAROLINA CHAPEL HILL

SHEET TITLE: COVER SHEET

SCALE: (U.N.O.)

JOB NAME: University of North Carolina - Chapel Hill

SCO#: 21-23548-02A UNC Project No. CI21212

BINGHAM HALL RENOVATION

LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

SEAL: Lauren Dunn Rockart Registered Architect 9074 North Carolina Chapel Hill, NC 01.08.2024

ISSUE DATE: 1/8/2023

JOB NO.: 11706-00

DWG. NO.: G001

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2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
(EXCEPT 1 AND 2-FAMILY DWELLINGS AND TOWNHOUSES
(Reproduce the following data on the building plans sheets 1 or 2)

Name of Project: Bingham Hall Renovation
Address: 201 Lenoir Drive, Chapel Hill Zip Code: 27514
Owner/Authorized Agent: Quade Gallagher Phone # (984) 484- 4113 E-Mail: quadeg@unc.edu
Owned By: ☐ City/County ☐ Private ■ State
Code Enforcement Jurisdiction: ☐ City: ☐ County: ■ State

CONTACT:

DESIGNER	FIRM	NAME	LICENSE #	TELEPHONE #	E-MAIL
Architectural	Lord Aeck Sargent	Lauren Dunn Rockart	9674	(919) 913-2665	lauren.rockart@lordaecksargent.com
Civil	CLH design p.a	Steven Miller	022625	(919) 319-6716	smiller@clhdesignpa.com
Electrical	Newcomb & Boyd	Richard Dozier, III	044143	(404) 730-8494	RDozier@newcomb-boyd.com
Fire Alarm	Newcomb & Boyd	Andrew Strack	054343	(404) 730-8483	AStrack@newcomb-boyd.com
Plumbing	Newcomb & Boyd	Paul Kitchens	043322	(919) 783-7812	PKitchens@newcomb-boyd.com
Mechanical	Newcomb & Boyd	Paul Kitchens	043322	(919) 783-7812	PKitchens@newcomb-boyd.com
Sprinkler-Standpipe	Newcomb & Boyd	Andrew Strack	054343	(404) 730-8488	astrack@newcomb-boyd.com
Structural	Lynch Mykins	Susan Russell	040416	(336) 453-3126	srussell@lynchmykins.com
Retaining Walls >5' High	N/A				
Landscape	CLH Design p.a.	Keith Downing	1047	(919) 319-6716	kdowing@chldesignpa.com

2018 EDITION OF NC CODE FOR: ☐ New Building ☐ Addition ■ Renovation
☐ 1st Time Interior Completion
☐ Shell/Core - Contact the local inspection jurisdiction for possible additional procedures and requirements
☐ Phased Construction - Shell/Core - Contact the local inspection jurisdiction for possible additional procedures and requirements.

2018 NC EXISTING BUILDING CODE: EXISTING: ■ Prescriptive ☐ Repair ☐ Chapter 14
Alteration: ☐ Level I ☐ Level II ■ Level III
☐ Historic Property ☐ Change of Use

CONSTRUCTED: 1928 **CURRENT OCCUPANCY(S)**(Ch. 3): Business (University)
RENOVATED: 1980 **PROPOSED OCCUPANCY(S)**(Ch. 3): Business (University)

RISK CATEGORY (Table 1604.5): Currrent: ☐ I ☐ II ■ III ☐ IV
Proposed: ☐ I ☐ II ■ III ☐ IV

BASIC BUILDING DATA
Construction Type: (check all that apply) ☐ I-A ■ II-A ☐ III-A ☐ IV ☐ V-A
☐ I-B ☐ II-B ☐ III-B ☐ V-B
Sprinklers: ☐ No ☐ Partial ■ Yes ■ NFPA 13 ☐ NFPA 13R ☐ NFPA 13D
Standpipes: ☐ No ■ Yes Class ■ I ☐ II ☐ III ■ Wet ☐ Dry
Fire District: ■ No ☐ Yes **Flood Hazard Area:** ■ No ☐ Yes
Special Inspections Required: ☐ No ■ Yes

Gross Building Area:

FLOOR	EXISTING (SQ FT)	NEW (SQ FT)	SUB-TOTAL
3rd Floor	7,400	0	7,400
2nd Floor	7,291	0	7,291
1st Floor	7,288	0	7,288
Basement	1,461	0	1,461
TOTAL	23,440	0	23,440

ALLOWABLE AREA

Primary Occupancy Classification(s):
Assembly ☐ A-1 ☐ A-2 ■ A-3 ☐ A-4 ☐ A-5
Business ■
Educational ☐
Factory ☐ F-1 Moderate ☐ F-2 Low
Hazardous ☐ H-1 Detonate ☐ H-2 Deflagrate ☐ H-3 Combust ☐ H-4 Health ☐ H-5 HPM
Institutional ☐ I-1 Condition ☐ 1 ☐ 2
☐ I-2 Condition ☐ 1 ☐ 2
☐ I-3 Condition ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
☐ I-4 Condition
Mercantile ☐
Residential ☐ R-1 ☐ R-2 ☐ R-3 ☐ R-4
Storage ☐ S-1 Moderate ☐ S-2 Low ☐ High-piled
☐ Parking Garage ☐ Open ☐ Enclosed ☐ Repair Garage
Utility and Miscellaneous ☐
Accessory Occupancy Classification(s):
Incidental Uses (Table 509)**:**
Special Uses (Chapter 4 - List Code Sections):
Special Provisions: (Chapter 5 - List Code Sections):
Mixed Occupancy: ☐ No ■ Yes Separation: _____Hr. Exception:

■ Non-Separated Use (508.3) - The required type of construction for the building shall be determined by applying the height and area limitations for each of the applicable occupancies to the entire building. The most restrictive type of construction, so determined, shall apply to the entire building.

☐ Separated Use (508.4) - See below for area calculations for each story, the area of the occupancy shall be such that the sum of the ratios of the actual floor area of each use divided by the allowable floor area for each use shall not exceed 1.

$$\frac{\text{Actual Area of Occupancy A}}{\text{Allowable Area of Occupancy A}} + \frac{\text{Actual Area of Occupancy B}}{\text{Allowable Area of Occupancy B}} \leq 1$$

$$\frac{\text{XX,XXX sf of Assembly}}{\text{XX,XXX sf of allowed}} + \frac{\text{XX,XXX sf of Business}}{\text{XX,XXX sf allowed}} = \frac{\text{XX,XXX sf}}{\text{XX,XXX sf}} \leq 1.00$$

STORY NO.	DESCRIPTION AND USE	(A) BLDG AREA PER STORY (ACTUAL)	(B) TABLE 506.2[4] AREA	(C) AREA FOR FRONTAGE INCREASE[1,5]	(D) ALLOWABLE AREA PER STORY OR UNLIMITED[2,3]
B		1,450 sqft	46,500 sqft	N/A	46,500 sqft
1		7,288 sqft	46,500 sqft	N/A	46,500 sqft
2		7,288 sqft	46,500 sqft	N/A	46,500 sqft
3		7,288 sqft	46,500 sqft	N/A	46,500 sqft

[1] Frontage area increases from Section 506.3 are computed thus:
a. Perimeter which fronts a public way or open space having 20 feet minimum width = _____ (F)
b. Total Building Perimeter = _____ (P)
c. Ratio (F/P) = _____ (F/P)
d. W = Minimum width of public way = _____ (W)
e. Percent of frontage increase $I_f = 100\ [\ F/P - 0.25\ ]\ x\ W/30$ = _____ (%)
[2] Unlimited area applicable under conditions of Section 507.
[3] Maximum Building Area = total number of stories in the building x D (maximum 3 stories) (506.2).
[4] The maximum area of open parking garages must comply with Table 406.5.4.
[5] Frontage increase is based on the unsprinklered area value in Table 506.2.

ALLOWABLE HEIGHT

	ALLOWABLE	SHOWN ON PLANS	CODE REFERENCE [1]
Building Height in Feet (Table 504.3) [2]	85'	61'-5"	N/A
Building Height in Stories (Table 504.4) [3]	4	3	N/A

[1] Provide code reference if the "Shown on Plans" quantity is not based on Table 504.3 or 504.4.
[2] The maximum height of air traffic control towers must comply with Table 412.3.1
[3] The maximum height of open parking garages must comply with Table 406.5.4.

FIRE PROTECTION REQUIREMENTS

BUILDING ELEMENT	FIRE SEPARATION DISTANCE (FEET)	RATING REQ'D	RATING PROVIDED (W/ * REDUCTION)	DETAIL # AND SHEET #	DESIGN # FOR RATED ASSEMBLY	SHEET # FOR RATED PENETRATION	SHEET # FOR RATED JOINTS
Structural Frame, including columns, girders, trusses		1	1				
Bearing Walls							
Exterior		1	1				
North							
East							
West							
South							
Interior		1	1				
Nonbearing Walls and Partitions Exterior walls		1	1				
North							
East							
West							
South							
Interior walls and partitions		0	0				
Floor Construction Including supporting beams and joists		1	1				
Floor Ceiling Assembly		1	1				
Columns Supporting Floors		1	1				
Roof Construction, including supporting beams and joists		1	1				
Roof Ceiling Assembly		1	1				
Columns Supporting Roofs		1	1				
Shaft Enclosures - Exit		2 South Stair 1 North Stair	2 South Stair 1 North Stair	G031, G031,G032	UL U415, I514 UL U415, I504, I508		
Shaft Enclosures - Other		1	1	G031	UL U415		
Corridor Separation		0	0				
Occupancy /Fire Barrier Separation		N/A					
Party/Fire Wall Separation		N/A					
Smoke Barrier Separation		N/A					
Smoke Partition		N/A					
Tenant/Dwelling Unit/ Sleeping Unit Separation		N/A					
Incidental Use Separation		N/A					

* Indicate section number permitting reduction

PERCENTAGE OF WALL OPENING CALCULATIONS

FIRE SEPARATION DISTANCE (FEET) FROM PROPERTY LINES	DEGREE OF OPENINGS PROTECTION (TABLE 705.8)	ALLOWABLE AREA (%)	ACTUAL SHOWN ON PLANS (%)
	EXISTING -- NO CHANGE		

LIFE SAFETY SYSTEM REQUIREMENTS

Emergency Lighting: ☐ No ■ Yes
Exit Signs: ☐ No ■ Yes
Fire Alarm: ☐ No ■ Yes
Smoke Detection Systems: ☐ No ☐ Yes ■ Partial _____
Carbon Monoxide Detection: ■ No ☐ Yes

LIFE SAFETY PLAN REQUIREMENTS

Life Safety Plan Sheet #: G100; G101; G102; G103

■ Fire and/or smoke rated wall locations (Chapter 7)
☐ Assumed and real property line locations (if not on the site plan)
☐ Exterior wall opening area with respect to distance to assumed property lines (705.8)
■ Occupancy Use for each area as it relates to occupant load calculation (Table 1004.1.2)
■ Occupant loads for each area
■ Exit sign locations (1013)
■ Exit access travel distances (1017)
■ Common path of travel distances (Tables 1006.2.1 & 1006.3.2(1))
☐ Dead end lengths (1020.4)
■ Clear exit widths for each exit door
■ Maximum calculated occupant load capacity each exit door can accommodate based on egress width (1005.3)
☐ Actual occupant load for each exit door
☐ A separate schematic plan indicating where fire rated floor/ceiling and/or roof structure is provided for purposes of occupancy separation.
■ Location of doors with panic hardware (1010.1.10)
☐ Location of doors with delayed egress locks and the amount of delay (1010.1.9.7)
☐ Location of doors with electromagnetic egress locks (1010.1.9.9)
■ Location of doors equipped with hold-open devices
☐ Location of emergency escape windows (1030)
☐ The square footage of each fire area (202)
☐ The square footage of each smoke compartment for Occupancy Classification I-2 (407.5)
☐ Note any code exceptions or table notes that may have been utilized regarding the items above

ACCESSIBLE DWELLING UNITS
(SECTION 1107)

UNIT CLASSIFICATION	TOTAL UNITS	ACCESSIBLE UNITS REQUIRED	ACCESSIBLE UNITS PROVIDED	TYPE A UNITS REQUIRED	TYPE A UNITS PROVIDED	TYPE B UNITS REQUIRED	TYPE B UNITS PROVIDED	TOTAL ACCESSIBLE UNITS PROVIDED
			NOT APPLICABLE					

ACCESSIBLE PARKING
(SECTION 1106)

LOT OR PARKING AREA	TOTAL # OF PARKING SPACES		# OF ACCESSIBLE SPACES PROVIDED		TOTAL # ACCESSIBLE PROVIDED
	REQUIRED	PROVIDED	96" SPACES	132" SPACES	
		NOT APPLICABLE			
TOTAL					

PLUMBING FIXTURE REQUIREMENTS
(TABLE 2902.1)

USE		WATERCLOSETS			URINALS	LAVATORIES			SHOWERS/ TUBS	DRINKING FOUNTAINS	
		MALE	FEMALE	UNISEX		MALE	FEMALE	UNISEX		REGULAR	ACCESSIBLE
SPACE	EXIST'G	3	5	1	4	5	2	1	0	0	8
	NEW	4	7	2	3	5	5	2	0	3	3
	REQ'D	6	7	0	0	4	4	0	0	2	2

SPECIAL APPROVALS

Special approval: (Local Jurisdiction, Department of Insurance, OSC, DPI, DHHS, etc., describe below)

ENERGY SUMMARY

ENERGY REQUIREMENTS:
The following data shall be considered minimum and any special attribute required to meet the energy code shall also be provided. Each Designer shall furnish the required portions of the project information for the plan data sheet. If performance method, state the annual energy cost for the standard reference design vs annual energy cost for the proposed design.

Existing building envelope complies with code: ■ No ☐ Yes (The remainder of this section is not applicable)

Exempt Building: ■ No ☐ Yes (Provide code or statutory reference): _____

Climate Zone: ☐ 3A ■ 4A ☐ 5A

Method of Compliance: Energy Code ☐ Performance ■ Prescriptive
ASHRAE 90.1 ☐ Performance ☐ Prescriptive
(If "Other" specifify source here)_____

THERMAL ENVELOPE (Prescriptive method only)

Roof/ceiling Assembly (each assembly)
Description of assembly: Cementitious roof deck with spray foam insulation
U-Value of total assembly:
R-Value of insulation: R-49
Skylights in each assembly:
U-Value of skylight:
total square footage of skylights in each assembly:

Exterior Walls (each assembly)
Description of assembly:
U-Value of total assembly:
R-Value of insulation:
Openings (windows or doors with glazing) ALT #3
U-Value of assembly: .40
Solar heat gain coefficient: .16
projection factor:
Door R-Values:

Walls below grade (each assembly)
Description of assembly:
U-Value of total assembly:
R-Value of insulation:

Floors over unconditioned space (each assembly)
Description of assembly:
U-Value of total assembly:
R-Value of insulation:

Floors slab on grade
Description of assembly:
U-Value of total assembly:
R-Value of insulation:
Horizontal/vertical requirement:
slab heated:

2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
STRUCTURAL DESIGN
(PROVIDE ON THE STRUCTURAL SHEETS IF APPLICABLE)

DESIGN LOADS:

Importance Factors: Snow (I_S) 1.10
Seismic (I_E) 1.25

Live Loads: Roof 20 psf
Mezzanine - psf
Floor 100 psf

Ground Snow Load: 15 psf

Wind Loads: Ultimate Wind Speed 120 mph (ASCE-7)
Exposure Category B

SEISMIC DESIGN CATEGORY: ☐ A ■ B ☐ C ☐ D
Provide the following Seismic Design Parameters:
Risk Category (Table 1604.5) ☐ I ☐ II ■ III ☐ IV
Spectral Response Acceleration S_S 15.8 %g S_1 7.8 %g
Site Classification (ASCE 7) ☐ A ☐ B ☐ C ■ D ☐ E ☐ F
Data Source: ☐ Field Test ■ Presumptive ☐ Historical Data
Basic structural system (EXISTING) ■ Bearing Wall ☐ Dual w/Special Moment Frame
☐ Building Frame ☐ Dual w/Intermediate R/C or Special Steel
☐ Moment Frame ☐ Inverted Pendulum
Analysis Procedure: ☐ Simplified ■ Equivalent Lateral Force ☐ Dynamic
Architectural, Mechanical, Components anchored? ☐ Yes ☐ No

LATERAL DESIGN CONTROL: (EXISTING) Earthquake ☐ Wind ☐
SOIL BEARING CAPACITIES:
Field Test (provide copy of test report) _____ psf
Presumptive Bearing capacity 1,500 psf
Pile size, type, and capacity _____

2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
MECHANICAL DESIGN
(PROVIDE ON THE MECHANICAL SHEETS IF APPLICABLE)

MECHANICAL SUMMARY

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT

Thermal Zone
winter dry bulb: 10º F
summer dry bulb: 95º F

Interior design conditions
winter dry bulb: 68º F
summer dry bulb: 78º F
relative humidity: 50%

Building heating load: 925 MBH

Building cooling load: 125 Tons

Mechanical Spacing Conditioning System
Unitary
description of unit: N/A
heating efficiency: N/A
cooling efficiency: N/A
size category of unit: N/A
Boiler
Size category. If oversized, state reason.: N/A
Chiller
Size category. If oversized, state reason.: N/A

List equipment efficiencies: N/A

2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
ELECTRICAL DESIGN
(PROVIDE ON THE ELECTRICAL SHEETS IF APPLICABLE)

ELECTRICAL SUMMARY

ELECTRICAL SYSTEM AND EQUIPMENT

Method of Compliance: Energy Code: ■ Performance ☐ Prescriptive
ASHRAE 90.1: ☐ Performance ☐ Prescriptive

Lighting schedule (each fixture type)
lamp type required in fixture REFER TO LUMINAIRE SCHEDULE
number of lamps in fixture REFER TO LUMINAIRE SCHEDULE
ballast type used in the fixture REFER TO LUMINAIRE SCHEDULE
number of ballasts in fixture REFER TO LUMINAIRE SCHEDULE
total wattage per fixture REFER TO LUMINAIRE SCHEDULE
total interior wattage specified vs. allowed (whole building or space by space) SPECIFIED: 7,921W ALLOWED: 20,294W (WHOLE BUILDING)
total exterior wattage specified vs. allowed SPECIFIED: 345W ALLOWED: 890W

Additional Efficiency Package Options
(When using the 2018 NCECC; not required for ASHRAE 90.1)
☐ C406.2 More Efficient HVAC Equipment Performance
■ C406.3 Reduced Lighting Power Density
☐ C406.4 Enhanced Digital Lighting Controls
☐ C406.5 On-Site Renewable Energy
☐ C406.6 Dedicated Outdoor Air System
☐ C406.7 Reduced Energy Use in Service Water Heating

LORD AECK SARGENT

REVISION:

LORD AECK SARGENT PLANNING & DESIGN, INC. ARCHITECTURAL CORPORATION CERT. NO. 53851 NORTH CAROLINA CHAPEL HILL

SHEET TITLE: APPENDIX B CODE SUMMARY SHEET
SCALE (U.N.O.)

JOB NAME: University of North Carolina - Chapel Hill
SCO# 21-23548-02A UNC Project No. C01212
LOCATION: BINGHAM HALL RENOVATION
36 Lenoir Drive, Chapel Hill, NC 27514

SEAL: Lauren Dunn Rockart, Registered Architect, 9674, North Carolina, Chapel Hill, NC
01.08.2024

ISSUE DATE: 1/8/2023
JOB. NO.: 11706-00
DWG. NO.: G030

Autodesk Docs://11706-00 UNC Bingham Hall/Central_11706-00_v22.rvt
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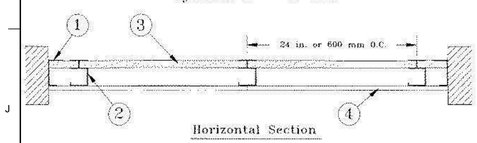

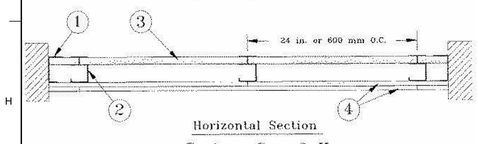

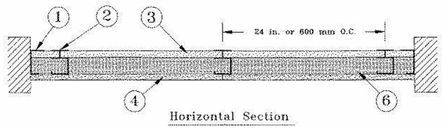

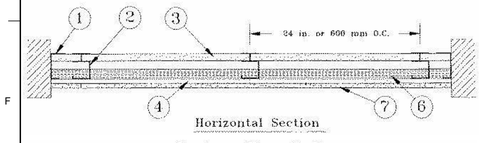

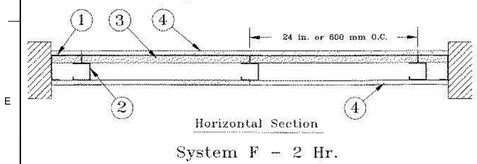

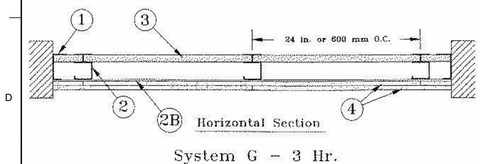

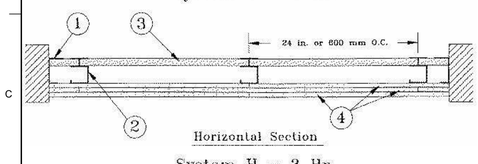

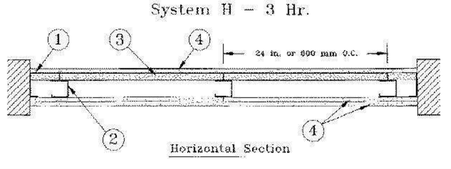

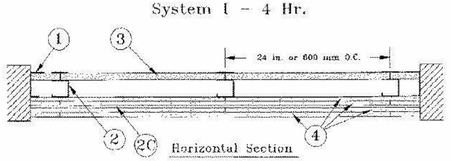

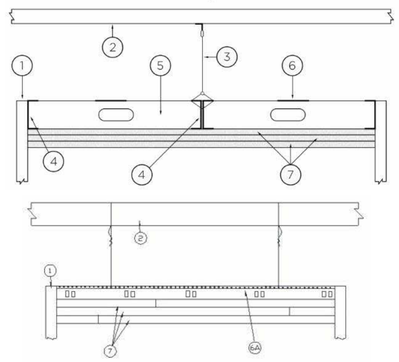

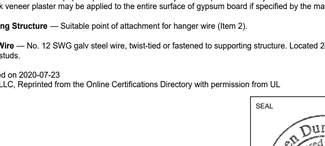

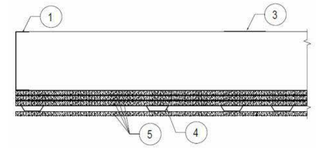

Design No. U415

February 14, 2022

Nonbearing Wall Rating — 1 Hr.

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**

System A - 1 Hr.

System B - 2 Hr.

System C - 2 Hr.

System D - 2 Hr.

System E - 2 Hr.

System F - 2 Hr.

System G - 3 Hr.

System H - 3 Hr.

System I - 4 Hr.

Design No. U415 (cont)

1. **Floor, Side and Ceiling Runners** — "J" - shaped runner, min 2-1/2 in. deep (min 4 in. deep when System C is used), with unequal legs of 1 in. and 2 in., fabricated from min 24 MSG (min 20 MSG when Item 4A, 4B, 4C, 4D or 7 are used) galv steel. Runners positioned with short leg toward finished side of wall. Runners attached to structural supports with steel fasteners located not greater than 2 in. from ends and not greater than 24 in. OC. "E" - shaped studs (Item 2A) may be used as side runners in place of "J" - shaped runners.

2. **Steel Studs** — "C-H" - shaped studs, min 2-1/2 in. deep (min 4 in. deep when System C is used), fabricated from min 25 MSG (min 20 MSG when Items 2D, 4A, 4B, 4C, 4D or 7 is used) galv steel. Cut to lengths 3/8 to 1/2 in. less than floor-to-ceiling height and spaced 24 in. or 600 mm OC (max 16 in. OC when Items 4A, 4B, 4C, or 4D are used).

2A. **Steel Studs** — (Not Shown) — "E" - shaped studs installed back to back in place of "C-H" - shaped studs (Item 2) "E" - shaped studs secured together with steel screws spaced a maximum 12 in. OC. Fabricated from min 25 MSG (min 20 MSG when Item 2D, 4A, 4B or 7 is used) galv steel, min 2-1/2 in. deep (min 4 in. deep when System C is used), with one leg 1 in. long and two legs 3/4 in. long. Shorter legs 1 in. apart to engage gypsum liner panels. Cut to lengths 3/8 to 1/2 in. less than floor to ceiling heights.

2B. **Furring Channels** — (Optional, Not Shown) — For use with single or double layer systems. Resilient furring channels fabricated from min 25MSG corrosion protected steel, installed horizontally, and spaced vertically a max 24 in. OC. Flange portion of channel attached to each intersecting "C-H" or "E" stud on side of stud opposite the 1 in. liner panels with 1/2 in. long Type S or S-12 pan-head steel screws. When furring channels are used, wallboard to be installed vertically only. . Not to be used with Type FRX-G gypsum board, lead backed gypsum boards (Items 4A-4D), or cementitious backer units (Item 7).

2C. **Furring Channels** — For use with System I - "Hat" - shaped, 25 MSG galv steel furring channels attached directly over the inner layers of wallboard to each stud with 2 in. long Type S pan head steel screws. Screws alternate from top flange to bottom flange at each stud intersection. Furring channels spaced vertically max 24 in. OC.

2D. **Steel Framing Members*** — (Optional, Not Shown) — For use with single or double layer systems. Furring channels and Steel Framing Members as described below. Not to be used with Type FRX-G gypsum board, lead backed gypsum boards (Items 4A-4D), or cementitious backer units (Item 7).
a. **Furring Channels** — Formed of No. 25 MSG galv steel. 2-9/16 in. or 2-23/32 in. wide by 7/8 in. deep, spaced max. 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Gypsum board installed vertically only and attached to furring channels as described in Item 4.

b. **Steel Framing Members*** — Used to attach furring channels (Item 2Da) to studs (Item 2 or 2A). Clips spaced max. 24 in. OC., and secured to studs with No. 8 x 1-1/2 in. minimum self-drilling, S-12 steel screw through the center grommet. Furring channels are friction fitted into clips. RSIC-1 clip for use with 2-9/16 in. wide furring channels. RSIC-1 (2.75) clip for use with 2-23/32 in. wide furring channels.
PAC INTERNATIONAL L L C — Types RSIC-1, RSIC-1 (2.75)

2E. **Steel Framing Members*** — (Optional, Not Shown) — Furring channels and Steel Framing Members as described below. . Not to be used with Type FRX-G gypsum board, lead backed gypsum boards (Items 4A-4D), or cementitious backer units (Item 7).
a. **Furring Channels** — Formed of No. 25 MSG galv steel. Spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 AWG galvanized steel wire. Gypsum board attached to furring channels as described in Item 4.

b. **Steel Framing Members*** — Used to attach furring channels (Item 2Ea) to studs. Clips spaced 24 in. OC., and secured to studs with 2 in. coarse drywall screw with 1 in. diam washer through the center hole. Furring channels are friction fitted into clips.
STUDCO BUILDING SYSTEMS — RESILMOUNT Sound Isolation Clips - Type A237R

2F. **Steel Framing Members*** — (Optional, Not Shown) — For use with single or double layer systems. Furring channels and Steel Framing Members as described below. Not to be used with Type FRX-G gypsum board, lead backed gypsum boards (Items 4A-4D), or cementitious backer units (Item 7).
a. **Furring Channels** — Formed of No. 25 MSG galv steel. 2-3/8 in. wide by 7/8 in. deep, spaced max. 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Gypsum board installed vertically only and attached to furring channels as described in Item 3.

b. **Steel Framing Members*** — Used to attach furring channels (Item 2Da) to studs (Item 2 or 2A). Clips spaced max. 24 in. OC. GENIECLIPS secured to studs with No. 8 x 1-1/2 in. minimum self-drilling, S-12 steel screw through the center grommet. Furring channels are friction fitted into clips.
PLITEQ INC — Type GENIECLIP

2G. **Steel Framing Members*** — (Optional, Not Shown) — Furring channels and Steel Framing Members as described below. Not to be used with Type FRX-G gypsum board, lead backed gypsum boards (Items 4A-4D), or cementitious backer units (Item 7).
a. **Furring Channels** — Formed of No. 25 MSG galv steel. Spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item 2Gb. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 AWG galvanized steel wire. Gypsum board attached to furring channels as described in Item 4.

b. **Steel Framing Members*** — Used to attach furring channels (Item 2Ga) to studs. Clips spaced 24 in. OC., and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips.
REGUPOL AMERICA — Type SonusClip

2H. **Steel Framing Members*** — (Optional, Not Shown) — Resilient channels and Steel Framing Members as described below. Not to be used with Type FRX-G gypsum board, lead backed gypsum boards (Items 4A-4D), or cementitious backer units (Item 7).
a. **Resilient Channels** — Formed of No. 25 MSG galv steel, spaced 24 in. OC, and perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and secured in place with two No. 8 15 x 1/2 in. Philips Modified Truss screws spaced 2-1/2 in. from the center of the overlap. Gypsum board attached to resilient channels as described in Item 4.
b. **Steel Framing Members*** — Used to attach resilient channels (Item 2Ha) to studs. Clips spaced 48 in. OC., and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center hole. Resilient channels are secured to clips with one No. 10 x 1/2 in. pan-head self-drilling screw.
KEENE BUILDING PRODUCTS CO INC — Type RC+ Assurance Clip

2I. **Steel Framing Members*** — (Optional, Not Shown) — For use with single or double layer systems. Furring channels and Steel Framing Members as described below. Not to be used with Type FRX-G gypsum board, lead backed gypsum boards (Items 4A-4D), or cementitious backer units (Item 7).
a. **Furring Channels** — Formed of No. 25 MSG galv steel. 2-23/32 in. wide by 7/8 in. deep, spaced max. 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Gypsum board installed vertically only and attached to furring channels as described in Item 4.
b. **Steel Framing Members*** — Used to attach furring channels (Item 2Ia) to studs (Item 2 or 2A). Clips spaced max. 24 in. OC., and secured to studs with No. 8 x 1-1/2 in. minimum self-drilling, S-12 steel screw through the center grommet. Furring channels are friction fitted into clips.
CLARKDIETRICH BUILDING SYSTEMS — Type ClarkDietrich Sound Clip

3. **Gypsum Board*** — Gypsum liner panels, nom 1 in. thick, 24 in. or 600 mm (for metric spacing) wide. Panels cut 1 in. less in length than floor to ceiling height. Vertical edges inserted in "H" portion of "C-H" studs or the gap between the two 3/4 in. legs of the "E" studs. Free edge of end panels attached to long leg of vertical "J" - runners with 1-5/8 in. long Type S steel screws spaced not greater than 12 in. OC. When wall height exceeds liner panel length, liner panel may be butted to extend to the full height of the wall. Horizontal joints need not be backed by steel framing. In System I, butt joints in liner panels are staggered min 36 in. Butt joints backed with 6 in. by 22 in. strips of 3/4 in. thick gypsum wallboard (Item 4). Wallboard strips centered over butt joints and secured to liner panels with six 1-1/2 in. long Type G steel screws, three screws along the 22 in. dimension at the top and bottom of the strips.
CGC INC — Type SLX
UNITED STATES GYPSUM CO — Type SLX
USG BORAL DRYWALL SFZ LLC — Type SLX
USG MEXICO S A DE C V — Type SLX

4. **Gypsum Board*** —

System A — 1 Hr
Gypsum panels, with beveled, square or tapered edges, nom 5/8 in. thick, 48 in. or 1200 mm wide, applied vertically or horizontally, attached to studs with 1 in. long Type S steel screws spaced 12 in. when installed vertically or 8 in OC when installed horizontally. Horizontal joints need not be backed by steel framing.
CGC INC — Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULIX, ULX, USGX, WRC, WRX
THE SIAM GYPSUM INDUSTRY (SONGKHLA) CO — Types C and SCX
UNITED STATES GYPSUM CO — Types AR, C, FRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SGX, SHX, ULIX, ULX, WRC, WRX, USGX.
USG BORAL DRYWALL SFZ LLC — Types C, SCX, SGX, USGX
USG MEXICO S A DE C V — Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX

System B — 2 Hr
Gypsum panels, with beveled, square or tapered edges, nom 1/2 in. or 5/8 in. thick, 48 in. or 1200 mm wide, applied vertically or horizontally in two layers. Inner or base layer attached to studs with 1 in. long Type S steel screws spaced 24 in. OC when installed vertically or 16 in. OC when installed horizontally. Outer or face layer attached to studs with 1-5/8 in. long Type S steel screws spaced 12 in. OC when installed vertically and staggered 12 in. from base layer screws or 8 in. OC when installed horizontally and staggered 8 in. from base layer screws. Horizontal joints between inner and outer layers staggered a min of 12 in. Horizontal joints need not be backed by steel framing. Vertical joints centered over studs and staggered 24 in.
CGC INC — 1/2 in. Type C, IP-X2, IPC-AR or WRC; 5/8 in. Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX
THE SIAM GYPSUM INDUSTRY (SONGKHLA) CO — Types C and SCX
UNITED STATES GYPSUM CO — 1/2 in. Types C, IP-X2, IPC-AR, or WRC; 5/8 in. Types AR, C, FRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SGX, SHX, ULIX, ULX, USGX, WRC, WRX.
USG BORAL DRYWALL SFZ LLC — 1/2 in. Type C; 5/8 in. Types C, SCX, SGX, USGX
USG MEXICO S A DE C V — 1/2 in. Types C, IP-X2, IPC-AR or WRC; 5/8 in. Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX

System C — 2 Hr
Gypsum panels, with beveled, square or tapered edges, nom 3/4 in. thick, 48 in. or 1200 mm wide, applied vertically or horizontally, secured with 1-1/4 in. long Type S steel screws spaced 8 in. OC along vertical edges and 12 in. OC in the field when installed vertically or 8 in. OC along the vertical edges and in the field when installed horizontally. Horizontal joints need not be backed by steel framing. Screws along side joints offset 4 in. Requires min 4 in. deep framing per Items 1, 2 and 3. Requires min 3 in. thick mineral wool batts per Item 6.
CGC INC — Types IP-X3 or ULTRACODE
UNITED STATES GYPSUM CO — Types IP-X3 or ULTRACODE
USG BORAL DRYWALL SFZ LLC — Type ULTRACODE
USG MEXICO S A DE C V — Types IP-X3 or ULTRACODE

Design No. U415 (cont)

System D — 2 Hr
Gypsum panels, with beveled, square or tapered edges, nom 5/8 in. thick, 48 in. or 1200 mm wide, applied vertically or horizontally, attached directly to studs with 1 in. long Type S steel screws spaced 24 in. when installed vertically or 16 in. OC when installed horizontally. Horizontal joints need not be backed by steel framing. Requires face layer of 1/2 or 5/8 in. thick cementitious backer units per Item 7 and min 1-1/2 in. thick mineral wool batts per Item 6.
CGC INC — Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX
THE SIAM GYPSUM INDUSTRY (SONGKHLA) CO — Types C and SCX
UNITED STATES GYPSUM CO — Types AR, C, FRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SGX, SHX, ULIX, ULX, USGX, WRC, WRX.
USG BORAL DRYWALL SFZ LLC — Types C, SCX, SGX, USGX
USG MEXICO S A DE C V — Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX

System E — 2 Hr
Gypsum panels, with beveled, square or tapered edges, nom 1/2 in. or 5/8 in. thick, 48 in. or 1200 mm wide, applied vertically or horizontally, attached to studs with 1 in. long Type S steel screws spaced 12 in. OC when installed vertically or 8 in. when installed horizontally. Horizontal joints need not be backed by steel framing.
CGC INC — 1/2 in. Types C, IP-X2, IPC-AR; 5/8 in. Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX
THE SIAM GYPSUM INDUSTRY (SONGKHLA) CO — Types C and SCX
UNITED STATES GYPSUM CO — 1/2 in. Types C, IP-X2, IPC-AR; 5/8 in. Types AR, C, FRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SGX, SHX, ULIX, ULX, USGX, WRC, WRX.
USG BORAL DRYWALL SFZ LLC — 1/2 in. Type C; 5/8 in. Types C, SCX, SGX, USGX
USG MEXICO S A DE C V — 1/2 in. Types C, IP-X2, IPC-AR; 5/8 in. Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX

System F — 2 Hr
Gypsum panels, with beveled, square or tapered edges, nom 1/2 in. or 5/8 in. thick, 48 in. or 1200 mm wide, applied vertically in two layers. Inner or base layer attached to resilient furring channels (Item 2B) with 1 in. long Type S steel screws spaced 24 in. Outer or face layer attached to resilient furring channels (Item 2B) with 1-5/8 in. long Type S steel screws spaced 12 in. OC and staggered 12 in. from base layer screws. Joints between inner and outer layers staggered 24 in.
CGC INC — 1/2 in. Type C, IP-X2, IPC-AR or WRC; 5/8 in. Types AR, C, FRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX
THE SIAM GYPSUM INDUSTRY (SONGKHLA) CO — Types C and SCX
UNITED STATES GYPSUM CO — 1/2 in. Type C, IP-X2, IPC-AR or WRC; 5/8 in. Types AR, C, FRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SGX, SHX, ULIX, ULX, USGX, WRC, WRX.
USG BORAL DRYWALL SFZ LLC — 1/2 in. Type C; 5/8 in. Types C, SCX
USG MEXICO S A DE C V — 1/2 in. Types C, IP-X2, IPC-AR or WRC; 5/8 in. Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX

System G — 3 Hr
Gypsum panels, with beveled, square or tapered edges, nom 5/8 in. thick, 48 in. or 1200 mm wide, applied vertically or horizontally in three layers. Inner or base layer attached to studs with 1 in. long Type S steel screws spaced 24 in. OC when installed vertically or 16 in OC when installed horizontally. Middle layer attached to studs with 1-5/8 in. long Type S steel screws spaced 24 in. when installed vertically or 16 in. OC when installed horizontally. Outer or face layer attached to studs with 2-1/4 in. long Type S steel screws spaced 16 in. when installed vertically or 12 in. OC when installed horizontally. Screws offset 6 in. from layer below. Horizontal joints on adjacent layers staggered a min of 12 in. . Horizontal joints need not be backed by steel framing. Vertical joints centered over studs and staggered 24 in. on adjacent layers.
CGC INC — Types C, IP-X2, IPC-AR, ULIX, WRC
THE SIAM GYPSUM INDUSTRY (SONGKHLA) CO — Type C
UNITED STATES GYPSUM CO — Types C, IP-X2, IPC-AR, ULIX, WRC
USG BORAL DRYWALL SFZ LLC — Type C
USG MEXICO S A DE C V — Types C, IP-X2, IPC-AR, WRC

System H — 3 Hr
Gypsum panels, with beveled, square or tapered edges, nom 5/8 in. thick, 48 in. or 1200 mm wide, applied vertically or horizontally, two layers over the flange of the "C" section of the studs, one layer over the flange of the "H" section of the studs. Inner or base layer attached to studs with 1 in. long Type S steel screws spaced 24 in. OC when installed vertically or 16 in. OC when installed horizontally. Face layer attached to studs with 1-5/8 in. long Type S steel screws spaced 16 in. when installed vertically or 12 in. OC when installed horizontally. Screws offset 6 in. from layer below. Horizontal joints on adjacent layers staggered a min of 12 in. Horizontal joints need not be backed by steel framing. Vertical joints centered over studs and staggered 24 in. on adjacent layers.
CGC INC — Types C, IP-X2, IPC-AR, ULIX, WRC
THE SIAM GYPSUM INDUSTRY (SONGKHLA) CO — Type C
UNITED STATES GYPSUM CO — Types C, IP-X2, IPC-AR, ULIX, WRC
USG BORAL DRYWALL SFZ LLC — Type C
USG MEXICO S A DE C V — Types C, IP-X2, IPC-AR, WRC

System I — 4 Hr
Gypsum panels, with beveled, square or tapered edges, nom 3/4 in. thick, 4 ft wide (or 1200 mm for metric spacing) wallboard with square or tapered edges. Total of four layers to be used. First and second (inner) layers applied vertically or horizontally over the steel studs. Horizontal joints need not be backed by steel framing. When applied vertically, joints centered over studs and staggered min 24 in., otherwise all joints staggered min 12 in. First layer secured to studs with 1-1/4 in. long Type S self-drilling, self-tapping bugle-head steel screws spaced 24 in. OC. Second layer secured to studs with 2-1/4 in. long Type S self-drilling, self-tapping bugle-head steel screws spaced 12 in. OC. Third layer applied vertically over the furring channels (Item 2C) with a 1-1/4 in. long Type S self-drilling, self-tapping bugle-head steel screws spaced 12 in. OC. Fourth layer applied vertically or horizontally with 2-1/4 in. long Type S self-drilling, self-tapping bugle-head steel screws spaced 12 in. OC. When applied vertically, joints to be staggered min 24 in. from third layer, otherwise all joints staggered min 12 in.
CGC INC — Types IP-X3 or ULTRACODE
UNITED STATES GYPSUM CO — Types IP-X3 or ULTRACODE
USG BORAL DRYWALL SFZ LLC — Type ULTRACODE
USG MEXICO S A DE C V — Types IP-X3 or ULTRACODE

4A. **Gypsum Board*** — (As an alternate to Item 4 Systems A, B, C, D, E, G, H, and I when used as the base layer, For direct attachment only) — Nom 5/8 in. or 3/4 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over 20 MSG steel studs and staggered min 1 stud cavity on opposite sides of studs. See Items 1, 2, 2A, 2B and 2D. Wallboard secured to studs with 1-1/4 in. long Type S-12 steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. For Joint Compound see Item 5. To be used with Lead Batten Strips (see Item 9) or Lead Discs or Tabs (see Item 10).
RAY-BAR ENGINEERING CORP — Type RB-LBG

4B. **Gypsum Board*** — (As an alternate to Item 4 Systems A, B, C, D, E, G, H, and I when used as the base layer, For direct attachment only) — Nominal 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-1/4 in. long Type S-12 (or #6 by 1-1/4 in. long bugle head fine driller) steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field.
NEW ENGLAND LEAD BURNING CO INC, DBA NELCO — Type Nelco

4C. **Gypsum Board*** — (As an alternate to Item 4 Systems A, B, C, D, E, G, H, and I when used as the base layer, For direct attachment only) — Nom 5/8 or 3/4 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over 20 MSG steel studs and staggered min 1 stud cavity on opposite sides of studs. See Items 1, 2, 2A, 2B and 2D. Wallboard secured to studs with 1-1/4 in. long Type S-12 steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. For Joint Compound see Item 5. To be used with Lead Batten Strips (see Item 9A) or Lead Discs (see Item 10A). Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations. Lead batten strips, min 2 in. wide, max 10 ft long with a max thickness of 0.140 in. placed on the face of studs and attached to the stud with two 1 in. long Type S-8 pan head steel screws, one at the top of the strip and one at the bottom of the strip.
MAYCO INDUSTRIES INC — Type X-Ray Shielded Gypsum

4D. **Gypsum Board*** — (As an alternate to Item 4 Systems A, B, C, D, E, G, H, and I when used as the base layer, For direct attachment only) — Nom 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-1/4 in. long Type S-12 steel screws gypsum panel steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations. Lead batten strips, min 2 in. wide, max 8 ft long with a max thickness of 0.14 in. placed on the face of studs and attached to the stud with construction adhesive and two 1 in. long Type S-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead discs, nominal 3/8 in. diam by max 0.085 in. thick. Compression fitted or adhered over the screw heads. Lead batten strips and discs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C".
RADIATION PROTECTION PRODUCTS INC — Type RPP - Lead Lined Drywall

5. **Joint Tape and Compound** — (Not Shown)
Systems A, B, C, E, F, G, H, I
Joints on outer layers of gypsum boards (Item 4 and 4A) covered with paper tape and joint compound. Paper tape and joint compound may be omitted when gypsum boards are supplied with square edges. Exposed screw heads covered with joint compound.

Design No. U415 (cont)

6. **Batts and Blankets*** —
Systems A, B, E, F, G, H, I
(Optional) — Mineral wool or glass fiber batts partially or completely filling stud cavity. Any mineral wool or glass fiber batt mineral bearing the UL Classification Marking as to Fire Resistance.

Systems C & D
Min 3 in. (System C) and min 1-1/2 in. (System D) thick mineral wool batts, friction fitted between the studs and floor and ceiling runners.
ROCKWOOL — Type AFB, min. density 1.8 pcf / 28.8 kg/m3
THERMAFIBER INC — Type SAFB, SAFB FF

7. **Cementitious Backer Units*** — (System D) — Nom 1/2 or 5/8 in. thick panels, square edge, attached to studs over gypsum wallboard with 1-5/8 in. long, Type S-12, corrosion resistant steel screws spaced 8 in. OC and staggered 8 in. from gypsum wall board screws. Joints covered with glass fiber mesh tape. Vertical joints staggered one stud cavity from gypsum wallboard joints. Horizontal joints staggered a min of 12 in. from the gypsum wallboard joints.
UNITED STATES GYPSUM CO — Type DCB

8. **Laminating Adhesive*** — (Optional, Not Shown) — Used to bond outer layer of Cementitious Backer Units (Item 7) to inner layers of Gypsum Board (Item 4) in System D. ANSI A136.1 Type 1 organic adhesive applied with 1/4 in. square notched trowel. See Adhesives (BYWR) in the Fire Resistance Directory or Adhesives (BJLZ) in the Building Materials Directory for names of Classified companies.

9. **Lead Batten Strips** — (Not Shown, For Use With Item 4A) — Lead batten strips, min 1-1/2 in. wide, max 10 ft long with a max thickness of 0.125 in. Strips placed on the interior face of studs and attached from the exterior face of the stud with two 1 in. long Type S-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Lead batten strips required behind vertical joints of lead backed gypsum wallboard (Item 4A) and optional at remaining stud locations. Required behind vertical joints.

9A. **Lead Batten Strips** — (Not Shown, for use with Item 4C) — Lead batten strips, 2 in. wide, max 10 ft long with a max thickness of 0.140 in. Strips placed on the face of studs and attached to the stud with two min. 1 in. long min. Type S-8 pan head steel screws, one at the top of the strip and one at the bottom of the strip or with one min. 1 in. long min. Type S-8 pan head steel screw at the top of the strip. Lead batten strips to have a purity of 99.5% meeting the Federal specification QQ-L-201f, Grades "B, C or D".. Lead batten strips required behind vertical joints of lead backed gypsum wallboard (Item 6) and optional at remaining stud locations.

10. **Lead Discs or Tabs** — (Not Shown, For Use With Item 4A) — Used in lieu of or in addition to the lead batten strips (Item 9) or optional at other locations - Max 3/4 in. diam by max 0.125 in. thick lead discs compression fitted or adhered over steel screw heads or max 1/2 in. by 1-1/4 in. by max 0.125 in. thick lead tabs placed on gypsum boards (Item 4A) underneath screw locations prior to the installation of the screws. Lead discs or tabs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C".
10A. Lead Discs — (Not Shown, for use with Item 4C) — Max 5/16 in. diam by max 0.140 in. thick lead discs compression fitted or adhered over steel screw heads. Lead discs to have a purity of 99.5% meeting the Federal Specification QQ-L-201f, Grades "B, C or D".

11. **Lead Batten Strips** — (Not Shown, For Use With Item 4B) — Lead batten strips, 2 in. wide, max 10 ft long with a max thickness of 0.142 in. Strips placed on the face of studs and attached to the stud with two min. 1 in. long min. Type S-8 pan head steel screws, one at the top of the strip and one at the bottom of the strip or with one min. 1 in. long min. Type S-8 pan head steel screw at the top of the strip. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Lead batten strips required behind vertical joints of lead backed gypsum wallboard (Item 4B) and optional at remaining stud locations.

12. **Lead Tabs** — (Not Shown, For Use With Item 4B) — 2 in. wide, 5 in. long with a max thickness of 0.142 in. Tabs friction-fit around front face of stud, the stud folded back flange, and the back face of the stud. Tabs required at each location where a screw (that secures the gypsum boards, Item 4B) will penetrate the steel stud. Lead tabs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Lead tabs may be held in place with standard adhesive tape if necessary.

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**

Updated on 2022-02-14

Design No. I504

July 19, 2022

Ceiling Membrane Rating - 1 Hr.

Load Restriction - Limited to the Dead Weight of the Assembly

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**

1. **Supporting Structure #1** — Fire-resistance rated. Suitable point of attachment of C-Channels (Item 4).

2. **Supporting Structure #2** — If necessary - Suitable point of attachment of hanger wire (Item 3).

3. **Hanger Wire** — If necessary - Min. 8 gauge steel wire, hung from holes punched in C-Channel (Item 4). Hanger wire spaced nominally 24 in. OC.

4. **C-Channels** — Used to support steel studs at both ends. Min. 3-5/8 in. deep with min. 1-1/4 in. legs and formed from min. No. 20 MSG galv. steel. Perimeter channels attached to a fire-resistance rated supporting structure (Item 1) with fasteners spaced not greater than 24 in. O.C. at both the top and bottom of the vertical leg. When used with Items 2 and 3, C-Channel secured back to back with 1/2 in. Type S screws spaced 24 in. OC along centerline of C-Channels. Where C-Channels form a butt joint, screws placed at both top and bottom of both sides of butt joint.

5. **Steel Studs** — Min. 3-5/8 in. wide with min. 1-5/8 in. legs containing folded back flanges and formed from min. No. 20 MSG galv. Steel. Studs to be cut 3/8 in. to 5/8 in. less than the clear span between the vertical legs of the perimeter channels. Studs spaced a max. 16 in. OC. At each end of the stud, the top and bottom legs shall be secured to the perimeter channel with one 3/8 in. long pan-head steel screw. Studs are used at each end of the horizontal barrier to terminate the assembly at the adjoining wall. These end studs shall be secured to the adjoining wall in the same manner as the perimeter channels (Item 4). Maximum unsupported length of studs not to exceed 8 ft. 1 in.

6. **Steel Strap** — Min 4 in. wide formed from min. No. 20 MSG galv. Steel. Secured perpendicular to the studs at the centerline of the span using one 3/8 in. long pan-head steel screw. Strips to overlap one full stud bay at splice locations. As an alternate to the steel strap, C-Channels (Item 4) may be substituted and installed in the same manner as the steel straps. If a continuous piece is not used, abut channels on each side of the centerline of the span and overlap one full stud bay.

Design No. I504 (cont)

6A. **Framing Members*** — As an alternate to items 3, 4, 5, and 6 - Main runners, cross tees, cross channels and wall angle as listed below:
a. **Main Runners** — Nom 10 or 12 ft long , 15/16 in. or 1-1/2 in. wide face, spaced 4 ft OC. Main runners suspended by min 12 SWG galv steel hanger wires spaced 24 in. OC, twist tied to supporting structure.

b. **Cross Tees** — Nom 4 ft long, 1-1/2 in. wide face, installed perpendicular to the main runners, spaced 16 in. OC. The cross tees or cross channels may be riveted or screw attached to the wall angle or channel to facilitate the ceiling installation.
c. **Cross Channels** — Nom 4 ft long, installed perpendicular to main runners, spaced 16 in. OC.
d. **Wall Angle or Channel** — Painted or galv steel angle with 1 in. legs or channel with 1 in. legs, 1-9/16 in. deep attached to walls at perimeter of ceiling with fasteners 16 in. OC. To support steel framing member ends and for screw-attachment of the gypsum panel.
ARMSTRONG WORLD INDUSTRIES INC — Type DFR-8000.

7. **Gypsum Board*** — Three layers of nom. 5/8 in. thick gypsum board installed with long dimension perpendicular to the steel studs or Framing Members*. Base secured to studs and perimeter channels with 1 in. long Type S steel screws spaced max. 16 in. OC. Middle layer secured to the studs or Framing Members* and perimeter supports with 1-5/8 in. long Type S steel screws spaced max. 16 in. OC. Middle layer edge and end joints staggered a min. 16 in. from base layer joints. Face layer secured to the studs or Framing Members* and perimeter supports with 2-1/4 in. long Type S steel screws spaced max. 12 in. OC. Face layer edge and end joints staggered a min. 16 in. from middle layer joints.
NATIONAL GYPSUM CO — Type FSW

8. **Joint Tape and Compound** — Not Shown — (Optional, Not Required On Joints or Screw Heads) — Vinyl, dry or premixed joint compound, applied in two coats to joints and screw heads; paper tape, nom. 2 in. wide, embedded in first layer of compound over all joints.

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**

Last Updated on 2022-07-19
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Design No. I514

July 23, 2020

Ceiling Membrane Rating — 2 Hr.

Load Restriction - Limited to the Dead Weight of the Assembly.

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**

1. **Perimeter Channels** — C-Shaped runner min. 6 in. deep with min. 2 in. legs and formed from min. No. 20 MSG galv. steel (0.0329 in. thick bare metal thickness). Perimeter channels attached to wall structure with fasteners spaced not greater than 24 in. O.C. at both the top and bottom of the vertical leg.

2. **Steel Studs** — Min. 6 in. wide with min. 1-5/8 in. legs containing folded back flanges and formed from min. No. 20 MSG galv. steel (0.0329 in. thick bare metal thickness). Studs to be cut 1/2 in. to 3/4 in. less than the span between the vertical legs of the perimeter channels. Studs spaced a max. 24 in. O.C. At each end of the stud, the un-faced side shall be secured to the perimeter channel with one 1/2 in. long pan-head steel screw. Studs are used at each end of the horizontal barrier to terminate the assembly at the adjoining wall. These end studs shall be secured to the adjoining wall in the same manner as the perimeter channels (Item 1). Studs installed as described in Items 7 and 8.

3. **Steel Strap** — Min 4 in. wide formed from min. No. 20 MSG galv. steel (0.0329 in. thick bare metal thickness). Secured perpendicular to the studs at the centerline of the span using a 1/2 in. long pan-head steel screw. Strips to overlap one full stud bay at splice locations.

4. **Resilient Channels** — Formed from min 25 MSG galv steel installed perpendicular to steel studs spaced 16 in. OC. Channels overlapped 4 in. at splices and secured to steel framing members with 2-1/4 in. long Types S or S-12 steel screws after first, second and third layers of gypsum board are secured to steel studs. Two channels, spaced 3 in. from each gypsum board butt joint as shown on the illustration above.

4A. **Furring Channels** — (Alternate to Item 4A) — Hat shaped channels, 7/8 in. deep, formed from min 25 MSG galv steel installed perpendicular to steel framing members spaced 16 in. OC. Furring channels overlapped 2-1/2 in. at splices and secured to steel framing members with two 2-1/4 in. long Type S steel screws after first, second and third layers of gypsum board are secured to steel studs. Two channels, spaced 3 in. from each gypsum board butted end joint.

5. **Gypsum Board*** — Four layers of nom 5/8 in. thick, 4 ft wide gypsum board. First three layers installed with long dimension perpendicular to bottom flange of steel studs. Adjacent butt joints staggered approximately 4 ft OC. Overlapping layers installed so that the tapered edges are offset min 12 in. from previous layer. Base layer fastened to bottom flange of steel studs with 1-1/4 in. long Type S-12 steel screws spaced 12 in. OC. Second layer secured to bottom flange of steel studs with 2 in. long Type S-12 steel screws spaced 12 in. OC. Third layer secured to bottom flange of steel studs with 2-1/2 in Type S-12 steel screws spaced 12 in. OC. Fourth layer secured to resilient or furring channels with 1-1/8 in. long Type S steel screws spaced 12 in. OC. Screws to be spaced 3 in. from butted end joints and 1 in. from tapered end joints.
AMERICAN GYPSUM CO — Type AG-C
UNITED STATES GYPSUM CO — Types C, IP-X2
CERTAINTEED GYPSUM INC — Type C

6. **Finishing System** — (Not Shown) — Vinyl, dry or premixed joint compound, applied in two coats to joints and screw-heads. Nom 2 in. wide paper tape embedded in first layer of compound over all joints. As an alternate, nom 3/32 in. thick veneer plaster may be applied to the entire surface of gypsum board if specified by the manufacturer.

7. **Supporting Structure** — Suitable point of attachment for hanger wire (Item 2).

8. **Hanger Wire** — No. 12 SWG galv steel wire, twist-tied or fastened to supporting structure. Located 24 in. O.C. along steel studs.

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SEAL

Lauren Dunn Rockart
Registered Architect
9674
North Carolina
Chapel Hill, NC

01.08.2024

LORD
AECK
SARGENT

REVISION:

Lord Aeck Sargent Planning & Design, Inc
Registered Architectural Corporation
CERT. NO.
53851
North Carolina
Chapel Hill

SHEET TITLE
U.L. DETAILS
SCALE (U.N.O.)

JOB NAME
University of North Carolina - Chapel Hill
SCO#: 21-23548-02A UNC Project No. CI21212
BINGHAM HALL RENOVATION
LOCATION
36 Lenoir Drive, Chapel Hill, NC 27514

ISSUE DATE
1/8/2023
JOB. NO.
11706-00
DWG. NO.
G031

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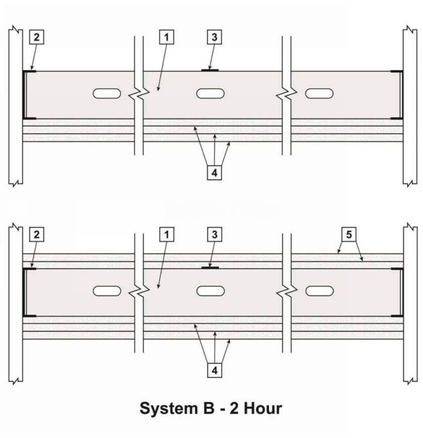
Design No. I508

July 09, 2020

Ceiling Membrane Rating- 1 and 2 Hr (See Item 5)
Load Restriction - 33% of Capacity
*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**



System B - 2 Hour

1. **Steel Joists** — Min. 6 in. wide with min. 1-5/8 in. legs containing folded back flanges and formed from min. No. 20 MSG galv. steel (0.0329 in. thick bare metal thickness). Joists to be cut 1/2 in. to 3/4 in. less than the clear span between the vertical legs of the joist track. Joists spaced a max. 16 in. O.C. At each end of the joist, the upper joist flange shall be secured to the joist track with one 1/2 in. long pan-head steel screw. Joists are used at each end of the horizontal barrier to terminate the assembly at the adjoining wall. These end joists shall be secured to the adjoining wall in the same manner as the joist track (Item2).

2. **Ceiling Joist Track** — Used to support steel joists at both ends of ceiling membrane structure. Min. 6 in. deep with min. 1-1/4 in. legs and formed from min. No. 20 MSG galv. steel (0.0329 in. thick bare metal thickness). Joist track attached to wall structure with fasteners spaced not greater than 24 in. O.C. at both the top and bottom of the vertical leg.

3. **Steel Strap** — Min. 2 in. wide strap formed from min. No. 20 MSG galv. steel (0.0329 in. thick bare steel thickness). Secure perpendicular to the upper joist flange at the centerline of the span using one 1/2 in. long pan-head steel screw at each joist. Steel strap to overtap one fill joist bay at splice locations. As an alternate to the steel strap, joist track (Item 2) may be substituted and installed in the same manner as the steel straps for the 1 Hr. Raing. If a continues piece is not used, the abutted legs are installed on each side of the centerline of the span and overlap one full joist bay.

SYSTEM A - For 1 Hr. Rating

4. **Gypsum Board*** — Three layers of nom. 5/8 in. thick, 48 in. wide, gypsum board installed with long dimension perpendicular to the steel joists. Joints not need to be staggered in individual layers. Base layer secured to joists and joist track with 1-1/4 in. long Type S-12 steel screws spaced max. 16 in. O.C. Middle layer installed with end joints staggered a min. 32 in. from base layer. Middle layer tapered joints staggered a min. 12 in. from base layer tapered joints. Boards secured to the joists and joist track with 1-5/8 in. long Type S-12 steel screws spaced max. 16 in. O.C. Face layer installed with end joints staggered a min. 24 in. from middle layer. Face layer tapered joints staggered a min. 12 in. from middle layer tapered joints. Boards secured to the joists and joist track with 2-1/4 in. long Type S-12 steel screws spaced max. 12 in. O.C. Face layer end joints centered between joists, attached to the middle layer boards with 1-1/2 in. long Type G steel screws spaced 8 in. OC and located 1-1/2 in. from the end joint.
AMERICAN GYPSUM CO — Type AG-C

SYSTEM A - For 1 Hr. Rating

4. **Gypsum Board*** — Three layers of nom. 5/8 in. thick, 48 in. wide, gypsum board installed with long dimension perpendicular to the steel joists. Joints not need to be staggered in individual layers. Base layer secured to joists and joist track with 1-1/4 in. long Type S-12 steel screws spaced max. 16 in. O.C. Middle layer installed with end joints staggered a min. 32 in. from base layer. Middle layer tapered joints staggered a min. 12 in. from base layer tapered joints. Boards secured to the joists and joist track with 1-5/8 in. long Type S-12 steel screws spaced max. 16 in. O.C. Face layer installed with end joints staggered a min. 24 in. from middle layer. Face layer tapered joints staggered a min. 12 in. from middle layer tapered joints. Boards secured to the joists and joist track with 2-1/4 in. long Type S-12 steel screws spaced max. 12 in. O.C. Face layer end joints centered between joists, attached to the middle layer boards with 1-1/2 in. long Type G steel screws spaced 8 in. OC and located 1-1/2 in. from the end joint.
AMERICAN GYPSUM CO — Type AG-C

5. **Gypsum Board*** — (Required the 2 hour rating, not required for the 1 hour rating)- Two layers of nom. 5/8 in. thick, 24 in. wide by 48 in. long. Gypsum board panels are loosely laid perpendicular to the top side of the steel joist flanges. Base layer laid with narrow (2ft.) end joints centered over joists. Short end joints in adjacent rows are not staggered. Face layer laid with narrow (2ft.) end joints centered over joists with end joints in adjacent rows not being staggered. Narrow end joints between layers are staggered 16 in., with long end joints staggered 8 in. between layers.
AMERICAN GYPSUM CO — Type AG-C

6. **Joint Tape and Compound** — Not Shown — (Optional, Not Required on Joints or Screw Heads) — Vinyl, dry or premixed joint compound, applied in two coats to joints and screw heads; paper tape, nom. 2 in. wide, embedded in first layer of compound over all joints.

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**

Last Updated on 2020-07-09

REVISION:

LORD AECK SARGENT PLANNING & DESIGN, INC. — ARCHITECTURAL CORPORATION — CERT. NO. 53851 — NORTH CAROLINA — CHAPEL HILL

SHEET TITLE: U.L. DETAILS

SCALE (U.N.O.)

JOB NAME: University of North Carolina - Chapel Hill

SCI#: 21-23546-02A UNC Project No. C21212

BINGHAM HALL RENOVATION

LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

SEAL: Lauren Dunn Rockett, Registered Architect, 9874, North Carolina, Chapel Hill, NC — 01.08.2024

ISSUE DATE: 1/8/2023

JOB. NO.: 11706-00

DWG. NO.: G032

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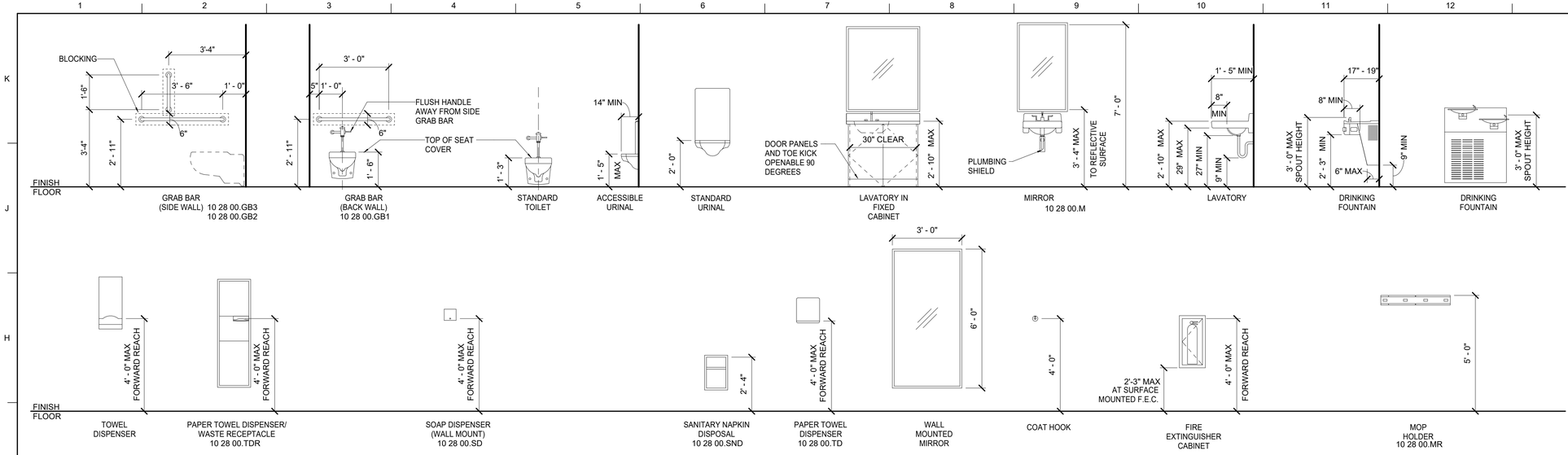
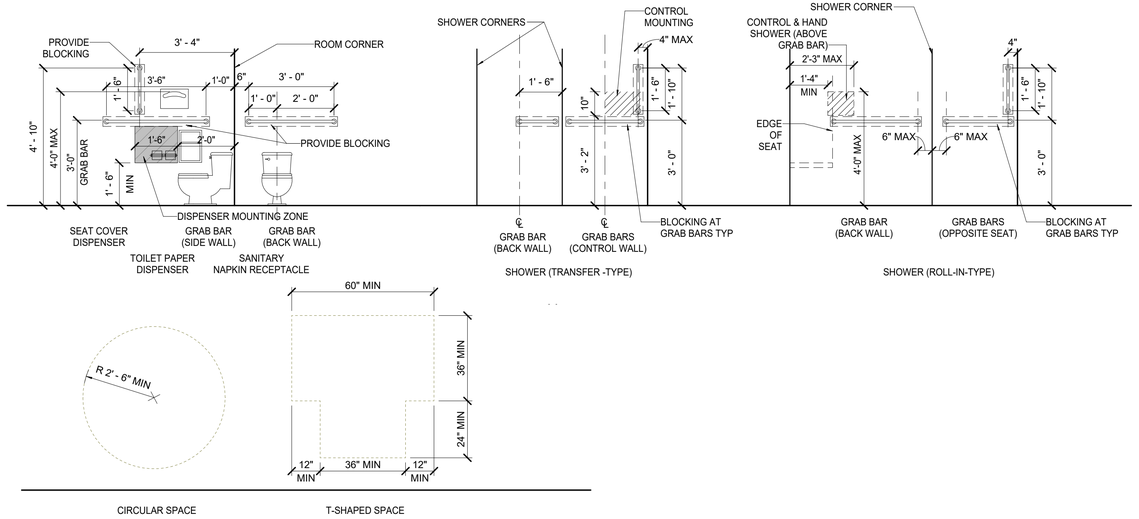
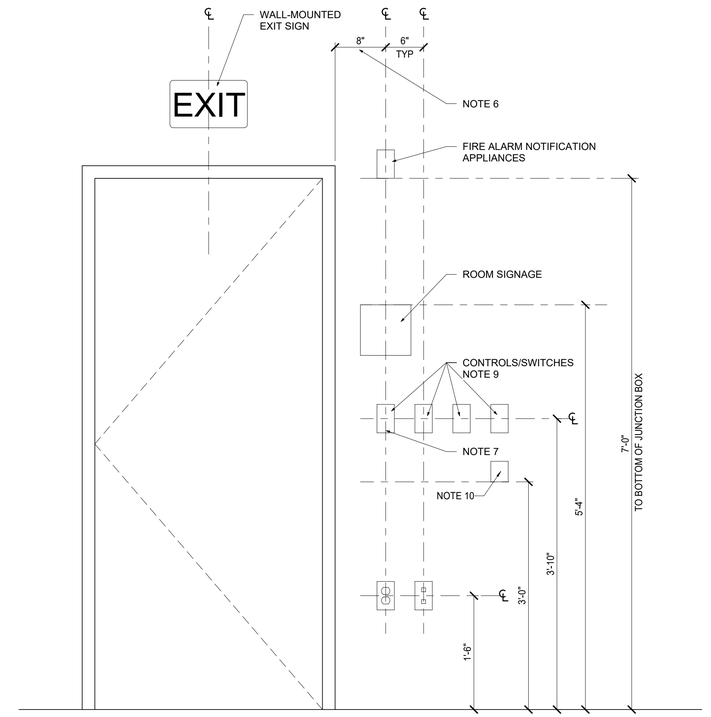


G1 TYPICAL MOUNTING HEIGHTS



C1 03 ACCESSIBLE WATER CLOSETS AND SHOWERS



1. MOUNTING HEIGHTS SHOWN ILLUSTRATE DESIGN INTENT AND ARE TO BE FOLLOWED UNLESS CONTRADICTED BY SPECIFICATIONS, DISCIPLINE, OR APPLICABLE CODE.
2. DIAGRAM INDICATES TYPICAL RELATIONSHIPS TO DOOR, BUT SIMILAR DEVICE MOUNTING AND SPACING SHOULD BE FOLLOWED IN ANY AREA WHERE GROUPS OF DEVICES ARE LOCATED IN PROXIMITY TO EACH OTHER.
3. WHERE DEVICES OF ANY DISCIPLINE ARE LOCATED IN THE SAME GENERAL AREA AND ARE SHOWN TO BE MOUNTED AT A SIMILAR HEIGHT, ALIGN HORIZONTALLY ALONG THE CENTERLINE WITH SPACING AS SHOWN. STARTING CLOSEST TO DOOR, ORDER OF DEVICES (WHERE OCCURRING) TO BE FIRE ALARM PULL STATION; SWITCHES; TEMPERATURE SENSOR; WALL TELEPHONE.
4. WHERE DEVICES OF ANY DISCIPLINE ARE LOCATED IN THE SAME GENERAL AREA AND ARE SHOWN MOUNTED AT DIFFERENT HEIGHTS, ALIGN VERTICALLY ALONG THE CENTERLINE.
5. ARRANGE METAL STUD LOCATIONS AND ADDITIONAL SUPPORTS AS REQUIRED TO MAINTAIN HORIZONTAL SPACING AS INDICATED.
6. WHERE NO SIGNAGE IS REQUIRED, DIMENSION MAY BE REDUCED AS REQUIRED TO PROVIDE ADEQUATE SPACE FOR ALL DEVICES.
7. WHERE SWITCHES OR OTHER DEVICES ARE MOUNTED ON WALL PERPENDICULAR TO DOOR, MOUNT CLOSEST DEVICE JUST PAST EDGE OF DOOR IN FULLY OPEN POSITION.
8. MULTIPLE DEVICES OF THE SAME TYPE ARE TO BE GANGED TOGETHER UNLESS OTHERWISE INDICATED.
9. GANG SWITCH PLATES AT ALL LOCATIONS WHERE POSSIBLE.
10. PANIC BUTTON

A9 TYPICAL DEVICE MOUNTING HEIGHTS & LOCATIONS

LORD AECK SARGENT

REVISION:

LORD AECK SARGENT PLANNING & DESIGN, INC. ARCHITECTURE LANDSCAPE ARCHITECTURAL CORPORATION CERT. NO. 53851 NORTH CAROLINA CHAPEL HILL

SHEET TITLE: TYPICAL MOUNTING HEIGHTS & LOCATIONS

SCALE (U.N.O.)

JOB NAME: University of North Carolina - Chapel Hill
SCI#: 21-2354620A
UNC Project No. C21212
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

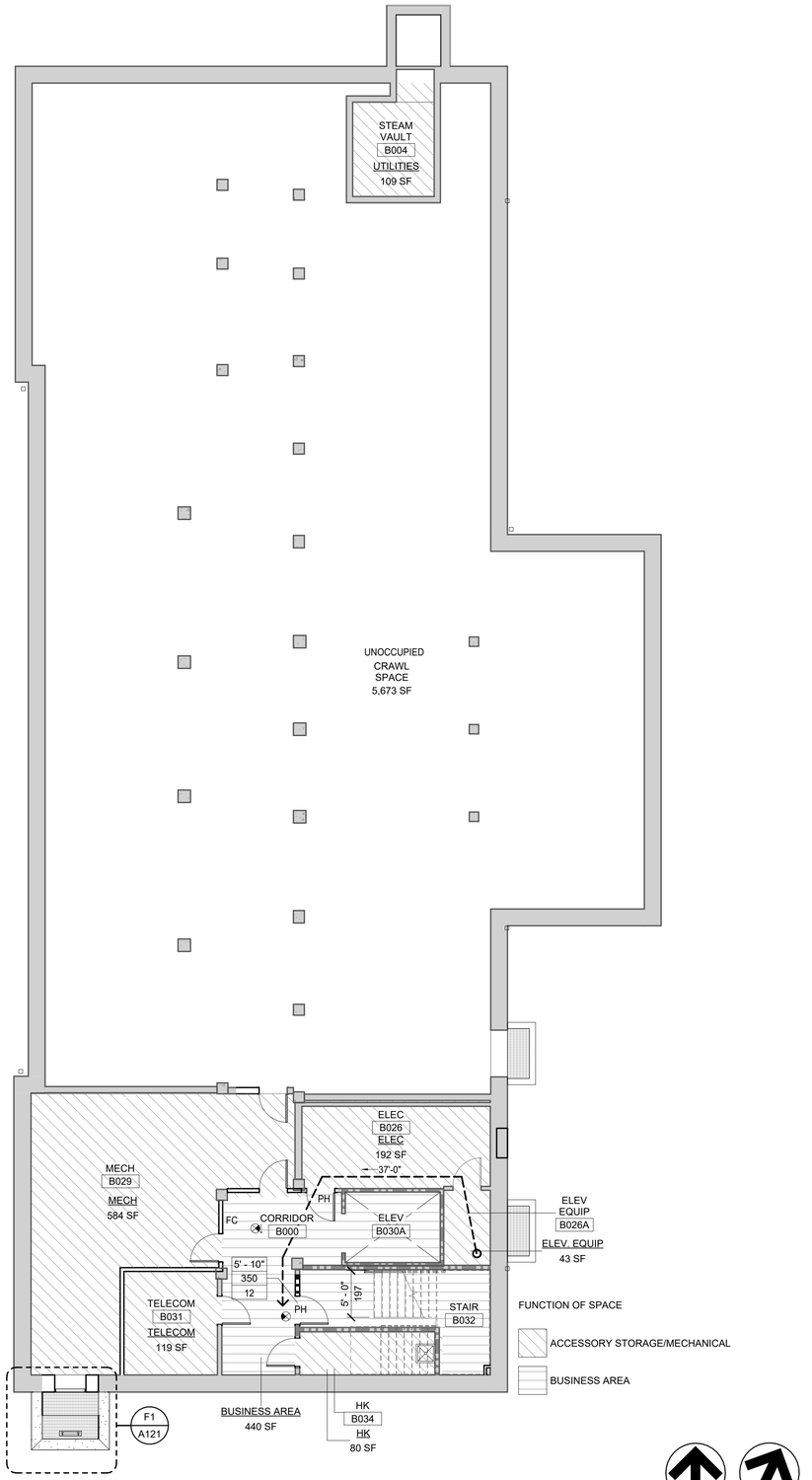
SEAL: Lauren Dunn Rockett, Registered Architect, North Carolina, 9874, Chapel Hill, NC, 01·08·2024

ISSUE DATE: 1/8/2023
JOB. NO.: 11706-00
DWG. NO.: G040

AREA SCHEDULE - BASEMENT

Use Group	Name	Function of space Key	Area	SF/Occ	Gross/Net	Calculated Number of Occupants	Comments
B BUSINESS	MECH	ACCESSORY STORAGE/MECHANICAL	584 SF	300 SF	GROSS	2	B029
B BUSINESS	BUSINESS AREA	BUSINESS AREA	440 SF	100 SF	GROSS	5	B000, B030A, B032
B BUSINESS	ELEC	ACCESSORY STORAGE/MECHANICAL	192 SF	300 SF	GROSS	1	B026
B BUSINESS	HK	ACCESSORY STORAGE/MECHANICAL	80 SF	300 SF	GROSS	1	B034
B BUSINESS	TELECOM	ACCESSORY STORAGE/MECHANICAL	119 SF	300 SF	GROSS	1	B031
B BUSINESS	ELEV. EQUIP	ACCESSORY STORAGE/MECHANICAL	43 SF	300 SF	GROSS	1	B026A
B BUSINESS	UTILITIES	ACCESSORY STORAGE/MECHANICAL	109 SF	300 SF	GROSS	1	B004

12



LIFE SAFETY LEGEND

- SMOKE PARTITION
- 1-HOUR FIRE BARRIER
- 2-HOUR FIRE BARRIER
- 3-HOUR FIRE BARRIER
- X' — GREATEST MINIMUM EGRESS TRAVEL DISTANCE AND PATH TO EXIT/ EXIT ENCLOSURE
- X' — GREATEST MINIMUN COMMON PATH OF EGRESS
- 48" — CLEAR WIDTH
- 65 — CAPACITY OF DOOR OR EXIT
- 35 — ACTUAL NUMBER OF OCCUPANTS
- 8'-0" — WIDTH OF STAIR OR CORRIDOR
- 640 — CAPACITY OF STAIR OR CORRIDOR
- PH — PANIC HARDWARE
- HO — HOLD OPEN
- EXIT SIGN
- FC — FIRE EXTINGUISHER CABINET

OCCUPANCY TYPES:

ACCESSORY STORAGE/ MECHANICAL:	300 GSF / OCCUPANT
ASSEMBLY (UNCONCENTRATED)	15 SF / OCCUPANT
BUSINESS	100 GSF / OCCUPANT
CLASSROOM	100 GSF / OCCUPANT

PROJECT NORTH TRUE NORTH

A8 LIFE SAFETY PLAN - BASEMENT
0 8 16 FT

LORD AECK SARGENT

REVISION:

LORD AECK SARGENT PLANNING & DESIGN, INC. ARCHITECTURAL CORPORATION CERT. NO. 53851 NORTH CAROLINA CHAPEL HILL

SHEET TITLE: LIFE SAFETY PLAN - BASEMENT
SCALE: (U.N.O.)

JOB NAME: University of North Carolina - Chapel Hill
SCO#: 21-235482-02A
UNC Project No. C21212
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

SEAL: Lauren Dunn Rockey, Registered Architect, 9674, North Carolina, Chapel Hill, NC, 01.08.2024

ISSUE DATE: 1/8/2023
JOB. NO.: 11706-00
DWG. NO.: G100

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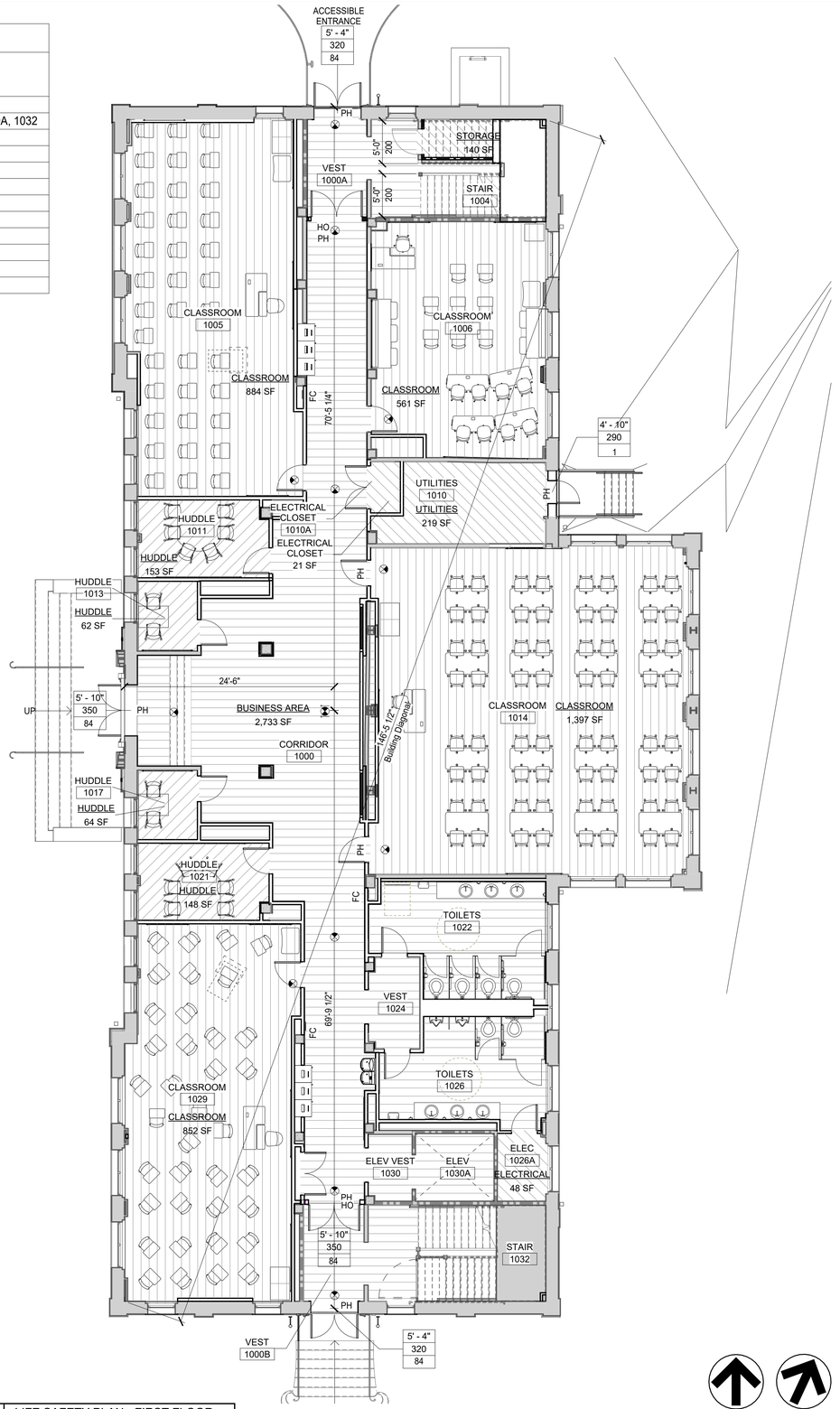
AREA SCHEDULE - FIRST FLOOR							
Use Group	Name	Function of space Key	Area	SF/Occ	Gross/Net	Calculated Number of Occupants	Room Numbers
B BUSINESS	STORAGE	ACCESSORY STORAGE/MECHANICAL	140 SF	300 SF	GROSS	1	1004A
B BUSINESS	BUSINESS AREA	BUSINESS AREA	2,733 SF	100 SF	GROSS	28	1000,1000A, 1000B, 1004, 1022, 1024, 1026, 1030, 1030A, 1032
B BUSINESS	CLASSROOM	CLASSROOM AREA	561 SF	20 SF	NET	29	1006
B BUSINESS	UTILITIES	ACCESSORY STORAGE/MECHANICAL	219 SF	300 SF	GROSS	1	1010
A-3 ASSEMBLY	CLASSROOM	CLASSROOM AREA	1,397 SF	20 SF	NET	70	1014
B BUSINESS	ELECTRICAL	ACCESSORY STORAGE/MECHANICAL	48 SF	300 SF	GROSS	1	1026A
B BUSINESS	CLASSROOM	CLASSROOM AREA	852 SF	20 SF	NET	43	1029
B BUSINESS	HUDDLE	ASSEMBLY - UNCONCENTRATED	148 SF	15 SF	NET	10	1021
B BUSINESS	HUDDLE	ASSEMBLY - UNCONCENTRATED	64 SF	15 SF	NET	5	1017
B BUSINESS	HUDDLE	ASSEMBLY - UNCONCENTRATED	62 SF	15 SF	NET	5	1013
B BUSINESS	HUDDLE	ASSEMBLY - UNCONCENTRATED	153 SF	15 SF	NET	11	1011
B BUSINESS	CLASSROOM	CLASSROOM AREA	884 SF	20 SF	NET	45	1005
						249	



PROJECT NORTH TRUE NORTH

A7 LIFE SAFETY PLAN - FIRST FLOOR
0 8 16 FT

LIFE SAFETY LEGEND

- SMOKE PARTITION
- 1-HOUR FIRE BARRIER
- 2-HOUR FIRE BARRIER
- 3-HOUR FIRE BARRIER
- X' — GREATEST MINIMUM EGRESS TRAVEL DISTANCE AND PATH TO EXIT/ EXIT ENCLOSURE
- X' — GREATEST MINIMUN COMMON PATH OF EGRESS
- 48" — CLEAR WIDTH
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- 35 — ACTUAL NUMBER OF OCCUPANTS
- 8'-0" — WIDTH OF STAIR OR CORRIDOR
- 640 — CAPACITY OF STAIR OR CORRIDOR
- PH — PANIC HARDWARE
- HO — HOLD OPEN
- EXIT SIGN
- FC — FIRE EXTINGUISHER CABINET

OCCUPANCY TYPES:

- ACCESSORY STORAGE/ MECHANICAL: 300 GSF / OCCUPANT
- ASSEMBLY (UNCONCENTRATED): 15 SF / OCCUPANT
- BUSINESS: 100 GSF / OCCUPANT
- CLASSROOM: 100 GSF / OCCUPANT

LORD AECK SARGENT

REVISION:

LORD AECK SARGENT PLANNING & DESIGN, INC
LICENSED ARCHITECTURAL CORPORATION
CERT. NO. 53851
NORTH CAROLINA
CHAPEL HILL

SHEET TITLE: LIFE SAFETY PLAN - FIRST FLOOR PLAN
SCALE (U.N.O.)

JOB NAME: University of North Carolina - Chapel Hill
SCI#: 21-23548-02A
UNC Project No. C21212
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

SEAL
Lauren Dunn Rockett
Registered Architect
9674
North Carolina
Chapel Hill, NC
01·03·2024

ISSUE DATE: 1/8/2023
JOB. NO.: 11706-00
DWG. NO.: G101

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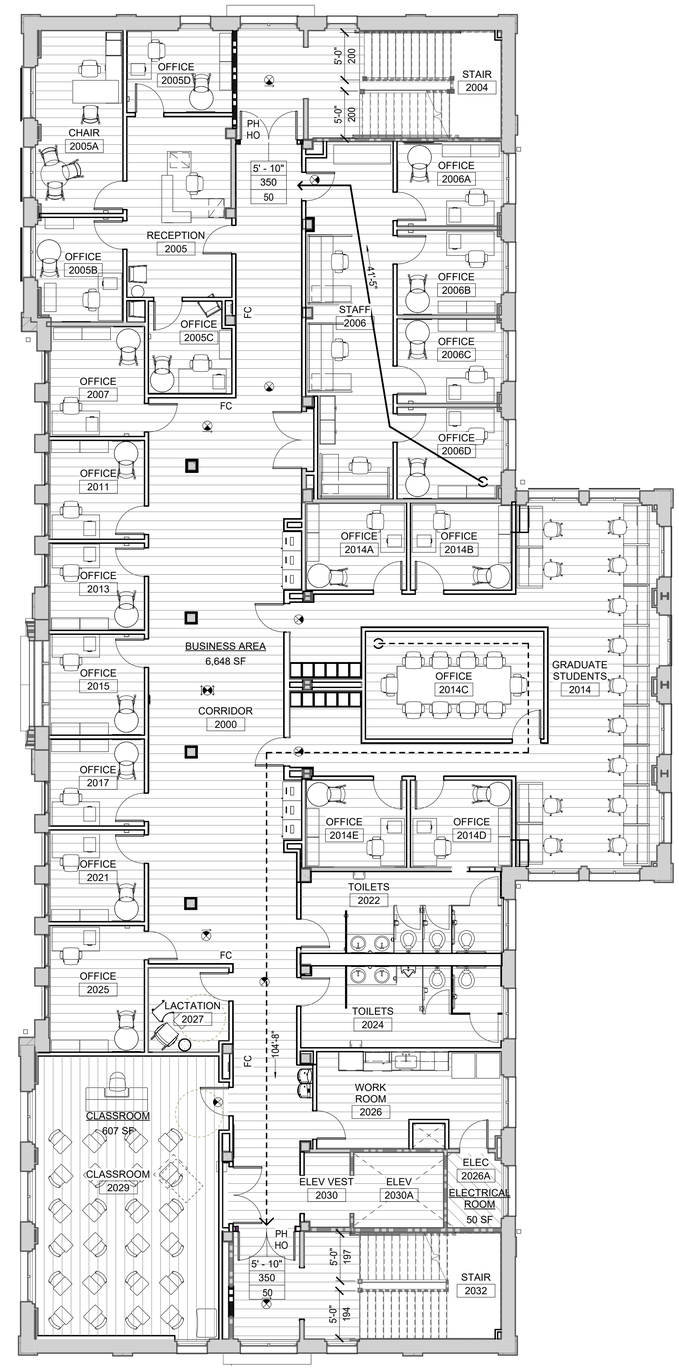
AREA SCHEDULE - SECOND FLOOR							
Use Group	Name	Function of space Key	Area	SF/Occ	Gross/Net	Calculated Number of Occupants	Comments
B BUSINESS	CLASSROOM	CLASSROOM AREA	607 SF	20 SF	NET	31	2029
B BUSINESS	ELECTRICAL ROOM	ACCESSORY STORAGE/MECHANICAL	50 SF	300 SF	GROSS	1	2026A
B BUSINESS	BUSINESS AREA	BUSINESS AREA	6,648 SF	100 SF	GROSS	67	2000,2000A, 2000B, 2004, 2005, 2005A, 2005B, 2005C, 2005D, 2006, 2006A, 2006B, 2006C, 2006D, 2007, 2011, 2013, 2014, 2014A, 2014B, 2014C, 2014D, 2014E, 2015, 2017, 2021, 2022, 2024, 2025,2026, 2027, 2030, 2030A
						99	



LIFE SAFETY LEGEND	
	SMOKE PARTITION
	1-HOUR FIRE BARRIER
	2-HOUR FIRE BARRIER
	3-HOUR FIRE BARRIER
X'	GREATEST MINIMUM EGRESS TRAVEL DISTANCE AND PATH TO EXIT/ EXIT ENCLOSURE
X'	GREATEST MINIMUN COMMON PATH OF EGRESS
48"	CLEAR WIDTH
65	CAPACITY OF DOOR OR EXIT
35	ACTUAL NUMBER OF OCCUPANTS
8'-0"	WIDTH OF STAIR OR CORRIDOR
640	CAPACITY OF STAIR OR CORRIDOR
PH	PANIC HARDWARE
HO	HOLD OPEN
	EXIT SIGN
FC	FIRE EXTINGUISHER CABINET

OCCUPANCY TYPES:

ACCESSORY STORAGE/ MECHANICAL:	300 GSF / OCCUPANT
ASSEMBLY (UNCONCENTRATED)	15 SF / OCCUPANT
BUSINESS	100 GSF / OCCUPANT
CLASSROOM	100 GSF / OCCUPANT

PROJECT NORTH TRUE NORTH

A8 LIFE SAFETY PLAN - SECOND FLOOR
0 8 16 FT

LORD AECK SARGENT

REVISION:

LORD AECK SARGENT PLANNING & DESIGN, INC. HISTORIC ARCHITECTURAL GROUP CERT. NO. 53851 NORTH CAROLINA CHAPEL HILL

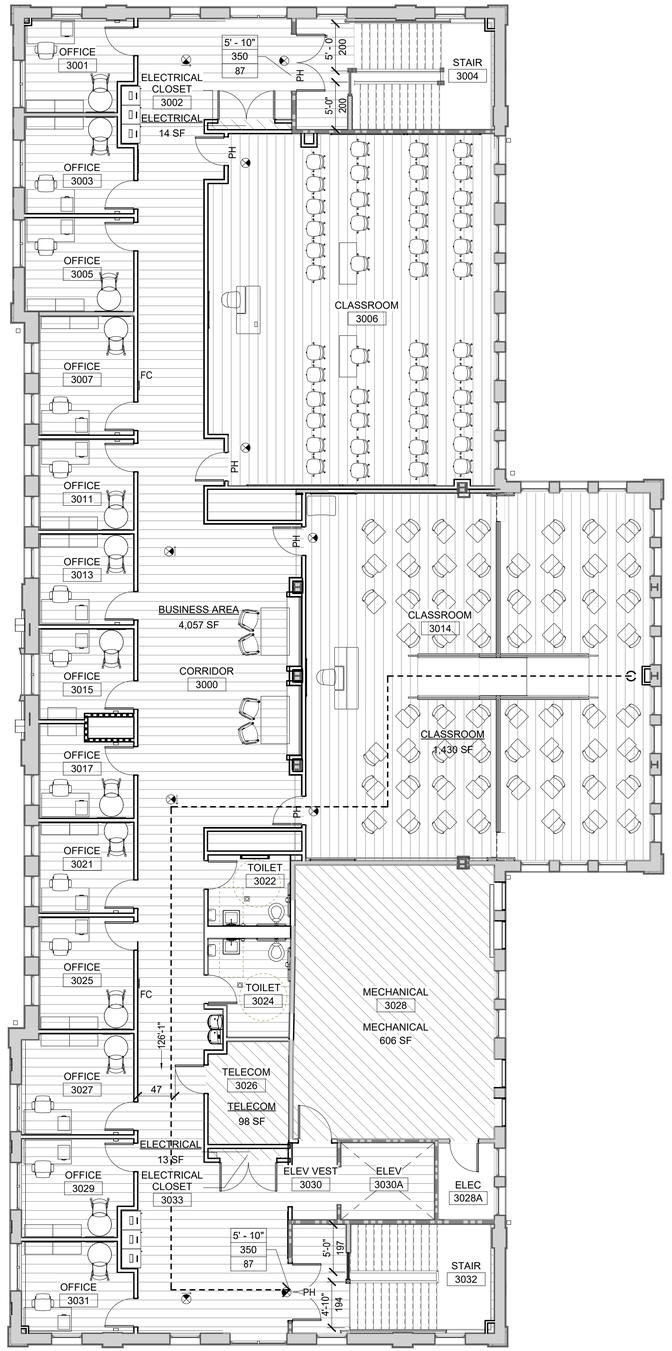
SHEET TITLE: LIFE SAFETY PLAN - SECOND FLOOR
SCALE (U.N.O.)

JOB NAME: University of North Carolina - Chapel Hill
UNC Project No. 021212
SCI# 21-23548-02A
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

SEAL: Lauren Dunn Rockart, Registered Architect, North Carolina, 9074, Chapel Hill, NC, 01.08.2024

ISSUE DATE: 1/8/2023
JOB. NO.: 11706-00
DWG. NO.: G102

AREA SCHEDULE - THIRD FLOOR							
Use Group	Name	Function of space Key	Area	SF/Occ	Gross/Net	Calculated Number of Occupants	Comments
A-3 ASSEMBLY	CLASSROOM	CLASSROOM AREA	1,430 SF	20 SF	NET	72	3014
A-3 ASSEMBLY	CLASSROOM	CLASSROOM AREA	1,097 SF	20 SF	NET	55	3006
B BUSINESS	BUSINESS AREA	BUSINESS AREA	4,057 SF	100 SF	GROSS	41	3000, 3001, 3003, 30.04, 3005, 3007, 3011, 3013, 3015, 3017, 3021, 3022, 3024, 3025, 3027, 3029, 3030, 3030A, 3031
B BUSINESS	MECHANICAL	ACCESSORY STORAGE/MECHANICAL	636 SF	300 SF	GROSS	3	3028
B BUSINESS	TELECOM	ACCESSORY STORAGE/MECHANICAL	98 SF	300 SF	GROSS	1	3026
B BUSINESS	ELECTRICAL	ACCESSORY STORAGE/MECHANICAL	14 SF	300 SF	GROSS	1	3002
B BUSINESS	ELECTRICAL	ACCESSORY STORAGE/MECHANICAL	13 SF	300 SF	GROSS	1	3033
						174	



PROJECT NORTH TRUE NORTH

A8 LIFE SAFETY PLAN - THIRD FLOOR
0 8 16 FT

LIFE SAFETY LEGEND

- SMOKE PARTITION
- 1-HOUR FIRE BARRIER
- 2-HOUR FIRE BARRIER
- 3-HOUR FIRE BARRIER
- X' — GREATEST MINIMUM EGRESS TRAVEL DISTANCE AND PATH TO EXIT/ EXIT ENCLOSURE
- X' — GREATEST MINIMUN COMMON PATH OF EGRESS
- 48" — CLEAR WIDTH
- 65 — CAPACITY OF DOOR OR EXIT
- 35 — ACTUAL NUMBER OF OCCUPANTS
- 8'-0" — WIDTH OF STAIR OR CORRIDOR
- 640 — CAPACITY OF STAIR OR CORRIDOR
- PH — PANIC HARDWARE
- HO — HOLD OPEN
- EXIT SIGN
- FC — FIRE EXTINGUISHER CABINET

OCCUPANCY TYPES:

ACCESSORY STORAGE/ MECHANICAL:	300 GSF / OCCUPANT
ASSEMBLY (UNCONCENTRATED)	15 SF / OCCUPANT
BUSINESS	100 GSF / OCCUPANT
CLASSROOM	100 GSF / OCCUPANT

LORD AECK SARGENT

REVISION:

LORD AECK SARGENT PLANNING & DESIGN, INC. ARCHITECTURAL CORPORATION
CERT. NO. 53851
NORTH CAROLINA
CHAPEL HILL

SHEET TITLE: LIFE SAFETY PLAN - THIRD FLOOR
SCALE (U.N.O.)

JOB NAME: University of North Carolina - Chapel Hill
SCI#: 21-23548-02A
UNC Project No. 023212
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

SEAL
Lauren Dunn Rockart
Registered Architect
9674
North Carolina
Chapel Hill, NC
01.08.2024

ISSUE DATE: 1/8/2023
JOB. NO.: 11706-00
DWG. NO.: G103

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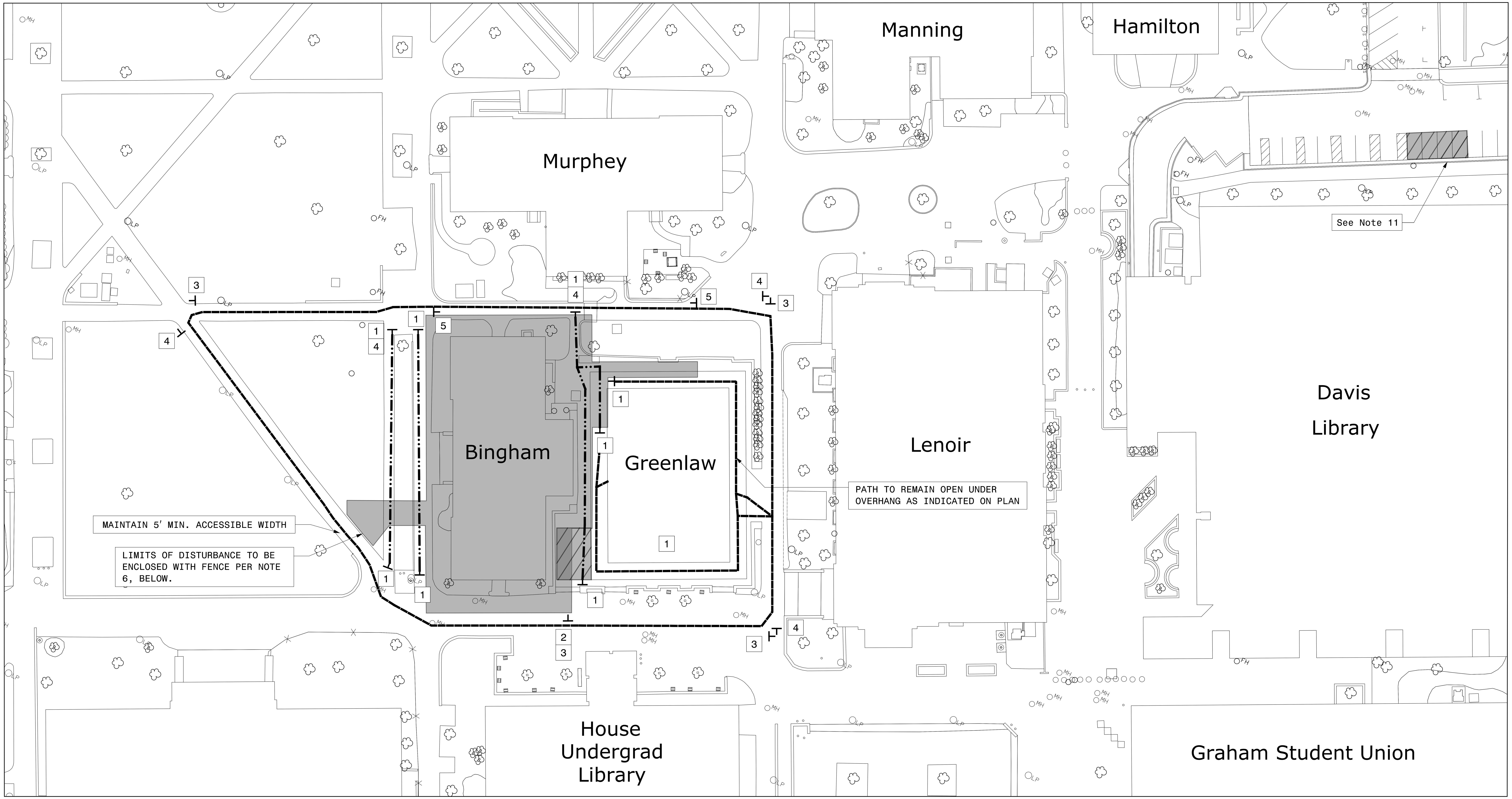


PEDESTRIAN CONTROL PLAN NOTES

1 - This pedestrian control plan addresses the movement of pedestrians during construction activities at Bingham Hall.

2 - This drawing is for a typical situation and should be adapted to the actual field conditions that may exist. Due to unforeseen field situations it may be impossible to adapt the prescribed drawing of standard exactly as shown to the actual field situation. The contractor, at the direction of the University, shall move, supplement, change, and/or remove the traffic control devices associated with these typical drawings and/or standard drawings to ensure that motorists and pedestrian can pass through the construction area in a safe and efficient manner.

3 - The Contractor shall mark all hazards within the limits of the project with well maintained signs. Barricades, signs, warning and/or channelizing devices shall be moved, supplemented, changed, or removed as required during the process of construction as approved by the Town.

4 - The Contractor shall be required to furnish, install, relocate, and maintain all traffic control devices, signs, barricades, warning and/or channelizing devices for work sites and detour routes shown in the plans unless otherwise specified within the traffic control plans. The Town shall approve the location and positioning of these barricades, signs, etc, prior to construction.

5 - All signs must be made of type VII retro-reflectivity material or greater and, if nighttime closures are necessary, signs shall include Type B Warning lights.

6 - Limits of disturbance must be enclosed by a construction fence and gates that satisfy all requirements and standards of the University. Fencing shall be securely installed in-ground. Sandbags and portable fencing shall be unacceptable unless approved by the engineer and UNC PM/CM.

7 - The Contractor is responsible for repairing walkways, walls, signs, utilities, and landscaping that are damaged during construction.

8 - The Contractor shall be required to replace any necessary existing pavement markings that have been obliterated by construction procedures at the end of each day's operation.

9 - The Contractor shall remove any existing signs that conflict with the temporary signs installed during the time of construction. Contact UNC Project Manager and Construction Manager prior to any sign removals to confirm.

10 - All post mounted signs must have a minimum 7' vertical clearance per NCDOT Standard Drawings 904.50.

11 - Contractor shall contact the UNC Project Manager and Construction Manager to confirm the intended use of this laydown area and the number of parking stalls that will be required.

12 - In addition to a construction fence enclosing the area of work, Contractor shall include tree protection fencing. See Civil Drawings for details.

LEGEND

STATIONARY SIGN (NCDOT STANDARD 1110.02)	WORKZONE
OPEN PEDESTRIAN PATH	LAYDOWN AREA
CLOSED PEDESTRIAN PATH	

SIGN LEGEND

No.	Sign	Code / Size
1	SIDEWALK CLOSED	R9-9 24'' X 12''
2	SIDEWALK CLOSED AHEAD	SP-200 36'' X 36''
3	DETOUR ←	M4-9B 30'' X 24''
4	DETOUR →	M4-9B 30'' X 24''
5	NO MOTOR VEHICLES	R5-3 24'' X 24''

NOTE: SIGNAGE MUST COMPLETELY BLOCK SIDEWALK

SCALE: 1''=30'

SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 046057
1/4/2024

LORD AECK SARGENT

REVISION:

VHB Engineering NC, P.C. (C-3705)
940 Main Campus Drive, Suite 500
Raleigh, NC 27606
919.829.0328

SHEET TITLE
PEDESTRIAN MANAGEMENT PLAN PHASE 1

SCALE (U.N.O.)
As indicated

0 30 60 FT

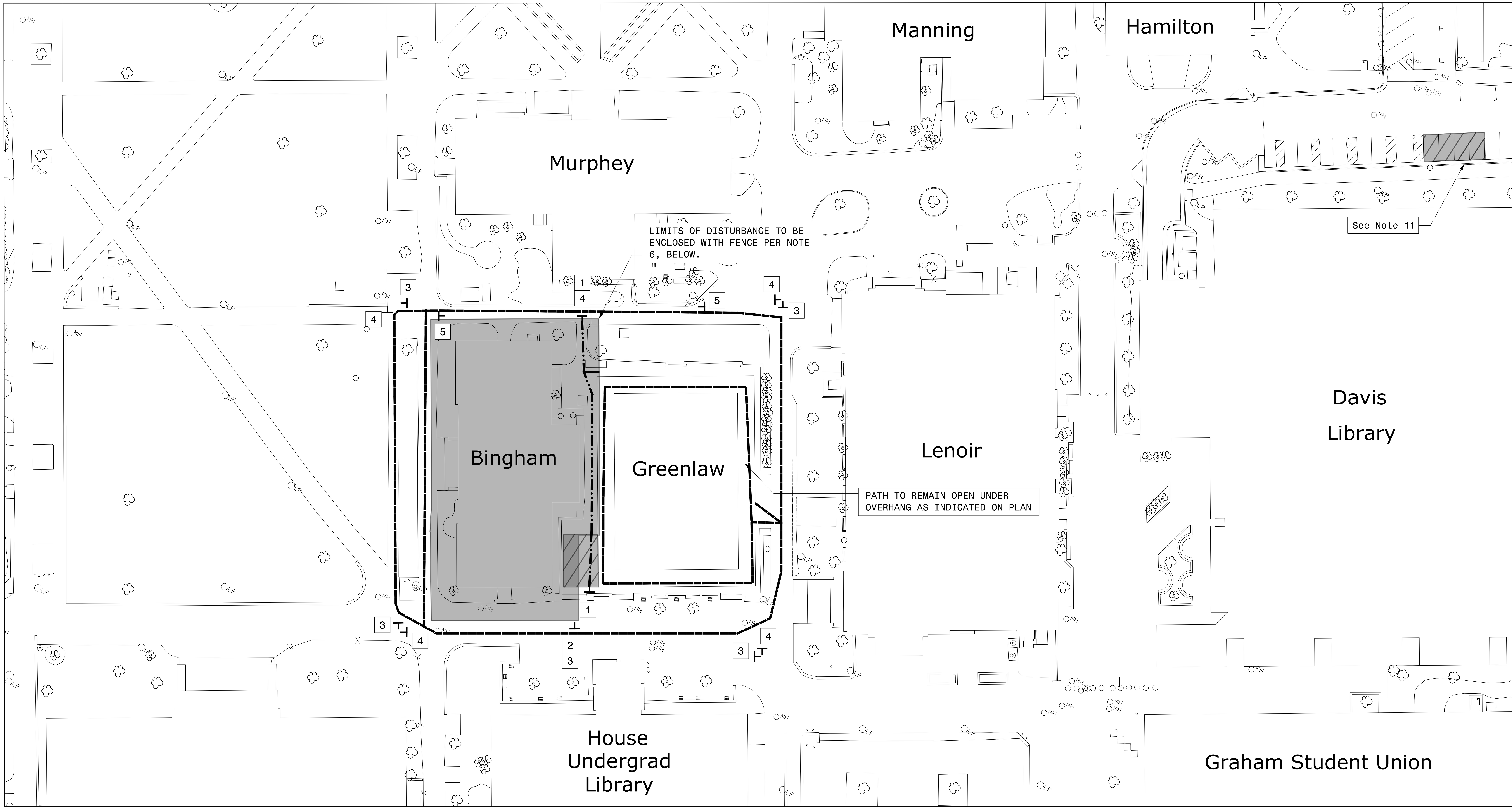
JOB NAME
University of North Carolina - Chapel Hill
SCO#: 21-23548-02A
BINGHAM HALL RENOVATION

LOCATION
36 Lenoir Drive, Chapel Hill, NC 27514

ISSUE DATE
01/08/2024

JOB. NO.
11706-00

DWG. NO.
TC101



PEDESTRIAN CONTROL PLAN NOTES

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3 - The Contractor shall mark all hazards within the limits of the project with well maintained signs. Barricades, signs, warning and/or channelizing devices shall be moved, supplemented, changed, or removed as required during the process of construction as approved by the Town.

4 - The Contractor shall be required to furnish, install, relocate, and maintain all traffic control devices, signs, barricades, warning and/or channelizing devices for work sites and detour routes shown in the plans unless otherwise specified within the traffic control plans. The Town shall approve the location and positioning of these barricades, signs, etc, prior to construction.

5 - All signs must be made of type VII retro-reflectivity material or greater and, if nighttime closures are necessary, signs shall include Type B Warning lights.

6 - Limits of disturbance must be enclosed by a construction fence and gates that satisfy all requirements and standards of the University. Fencing shall be securely installed in-ground. Sandbags and portable fencing shall be unacceptable unless approved by the engineer and UNC PM/CM.

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LEGEND

STATIONARY SIGN (NCDOT STANDARD 1110.02)	WORKZONE
OPEN PEDESTRIAN PATH	LAYDOWN AREA
CLOSED PEDESTRIAN PATH	

SIGN LEGEND

No.	Sign	Code / Size
1	SIDEWALK CLOSED	R9-9 24'' X 12''
2	SIDEWALK CLOSED AHEAD	SP-200 36'' X 36''
3	DETOUR (left arrow)	M4-9B 30'' X 24''
4	DETOUR (right arrow)	M4-9B 30'' X 24''
5	NO MOTOR VEHICLES	R5-3 24'' X 24''

NOTE: SIGNAGE MUST COMPLETELY BLOCK SIDEWALK

SCALE: 1″=30′

LORD AECK SARGENT

REVISION:

VHB Engineering NC, P.C. (C-3705)
940 Main Campus Drive, Suite 500
Raleigh, NC 27606
919.829.0328

SHEET TITLE
PEDESTRIAN MANAGEMENT PLAN PHASE 2

SCALE (U.N.O.) As indicated

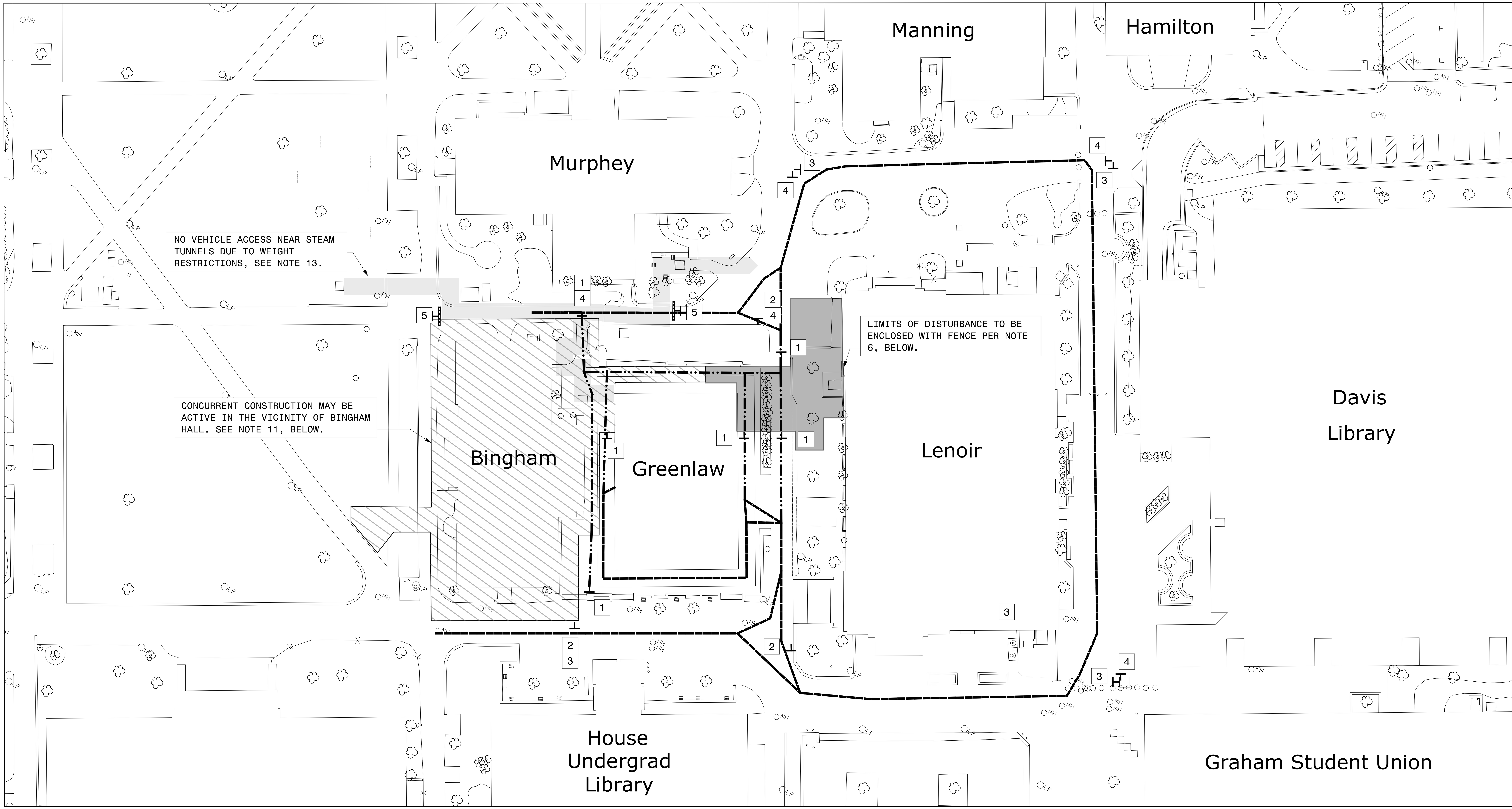
0 30 60 FT

JOB NAME
University of North Carolina - Chapel Hill
SCO#: 21-23548-02A
BINGHAM HALL RENOVATION

LOCATION
36 Lenoir Drive, Chapel Hill, NC 27514

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 046057 ENGINEER
1/4/2024

ISSUE DATE 01/08/2024
JOB. NO. 11706-00
DWG. NO. TC102



PEDESTRIAN CONTROL PLAN NOTES

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5 - All signs must be made of type VII retro-reflectivity material or greater and, if nighttime closures are necessary, signs shall include Type B Warning lights.

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8 - The Contractor shall be required to replace any necessary existing pavement markings that have been obliterated by construction procedures at the end of each day's operation.

9 - The Contractor shall remove any existing signs that conflict with the temporary signs installed during the time of construction. Contact UNC Project Manager and Construction Manager prior to any sign removals to confirm.

10 - All post mounted signs must have a minimum 7' vertical clearance per NCDOT Standard Drawings 904.50.

11 - Contractor shall contact the UNC Project Manager and Construction Manager to confirm the intended use of this laydown area and the number of parking stalls that will be required.

12 - In addition to a construction fence enclosing the area of work, Contractor shall include tree protection fencing. See Civil Drawings for details.

13 - Contractor shall locate steam tunnel protection near Lenoir Hall as indicated by medallions in existing brick pavers. Steam tunnel shall be protected by fencing as indicated on the plans. No motor vehicles may cross over unprotected steam tunnels at any time.

LEGEND

- STATIONARY SIGN (NCDOT STANDARD 1110.02)
- OPEN PEDESTRIAN PATH
- CLOSED PEDESTRIAN PATH
- WORKZONE
- LAYDOWN AREA
- NO VEHICLE ACCESS NEAR STEAM TUNNEL
- 36" BARRICADE (TYPE III)

SIGN LEGEND

1 — SIDEWALK CLOSED — R9-9 24'' X 12''
NOTE: SIGNAGE MUST COMPLETELY BLOCK SIDEWALK

2 — SIDEWALK CLOSED AHEAD — SP-200 36'' X 36''

3 — DETOUR ← — M4-9B 30'' X 24''

4 — DETOUR → — M4-9B 30'' X 24''

5 — NO MOTOR VEHICLES — R5-3 24'' X 24'' — TYPE III BARRICADE

SCALE: 1"=30'

LORD AECK SARGENT

REVISION:

vhb — VHB Engineering NC, P.C. (C-3705) 940 Main Campus Drive, Suite 500 Raleigh, NC 27606 919.829.0328

SHEET TITLE: PEDESTRIAN MANAGEMENT PLAN ELECTRICAL SITE CONSTRUCTION

SCALE (U.N.O.): As indicated

JOB NAME: University of North Carolina - Chapel Hill

BINGHAM HALL RENOVATION

LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

SEAL: NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 046057 MATTHEW ... STYGLES — 1/4/2024

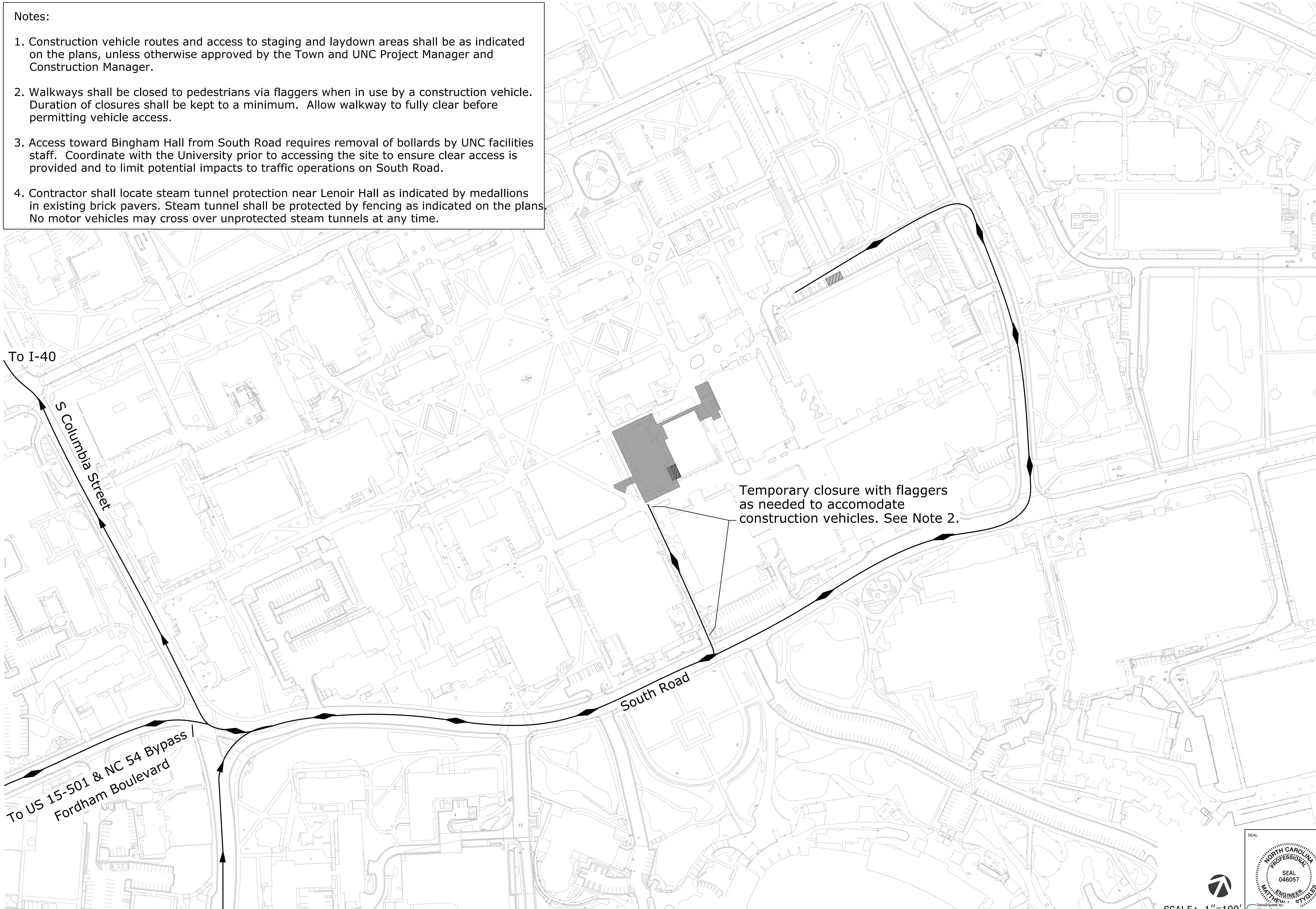
ISSUE DATE: 01/08/2024

JOB. NO.: 11706-00

DWG. NO.: TC103

Notes:

1. Construction vehicle routes and access to staging and laydown areas shall be as indicated on the plans, unless otherwise approved by the Town and UNC Project Manager and Construction Manager.
2. Walkways shall be closed to pedestrians via flaggers when in use by a construction vehicle. Duration of closures shall be kept to a minimum. Allow walkway to fully clear before permitting vehicle access.
3. Access toward Bingham Hall from South Road requires removal of bollards by UNC facilities staff. Coordinate with the University prior to accessing the site to ensure clear access is provided and to limit potential impacts to traffic operations on South Road.
4. Contractor shall locate steam tunnel protection near Lenoir Hall as indicated by medallions in existing brick pavers. Steam tunnel shall be protected by fencing as indicated on the plans. No motor vehicles may cross over unprotected steam tunnels at any time.



REVISION:

vhb
VHB Engineering NC, P.C. (C-3705)
940 Main Campus Drive, Suite 500
Raleigh, NC 27606
919.829.0328

SHEET TITLE: CONSTRUCTION TRAFFIC ROUTE

SCALE (U.N.O.): As indicated

JOB NAME: University of North Carolina - Chapel Hill

SCO#: 21-23548-02A

BINGHAM HALL RENOVATION

LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

SEAL: NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 046057 MATTHEW L. STYGLES

DocuSigned by: 394B61E9449746C...

1/4/2024

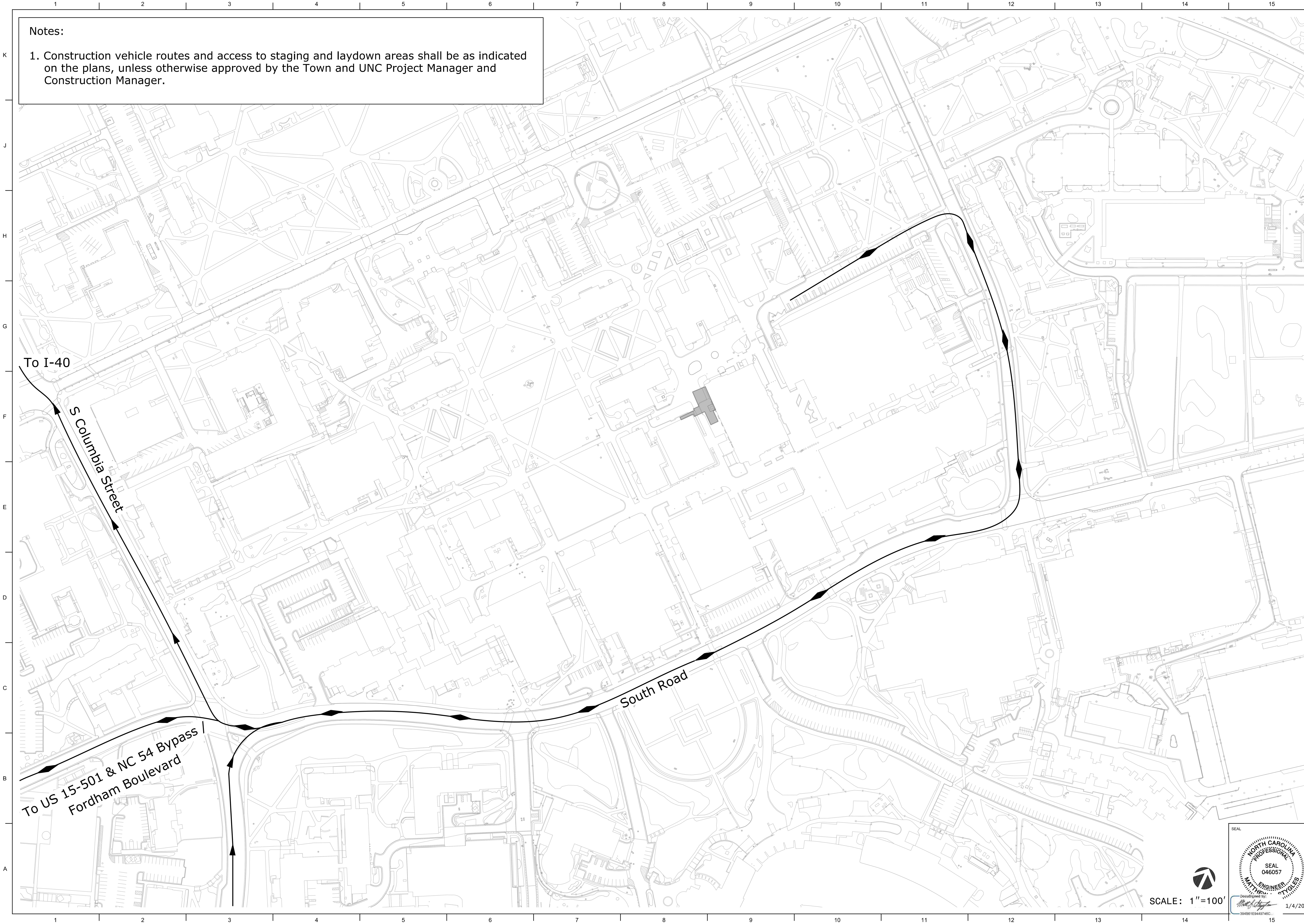
ISSUE DATE: 01/08/2024

JOB. NO.: 11706-00

DWG. NO.: TC104

Notes:

1. Construction vehicle routes and access to staging and laydown areas shall be as indicated on the plans, unless otherwise approved by the Town and UNC Project Manager and Construction Manager.



LORD AECK SARGENT

REVISION:

vhb
VHB Engineering NC, P.C. (C-3705)
940 Main Campus Drive, Suite 500
Raleigh, NC 27606
919.829.0328

SHEET TITLE
CONSTRUCTION TRAFFIC ROUTE
ELECTRICAL SITE CONSTRUCTION

SCALE (U.N.O.)
As indicated

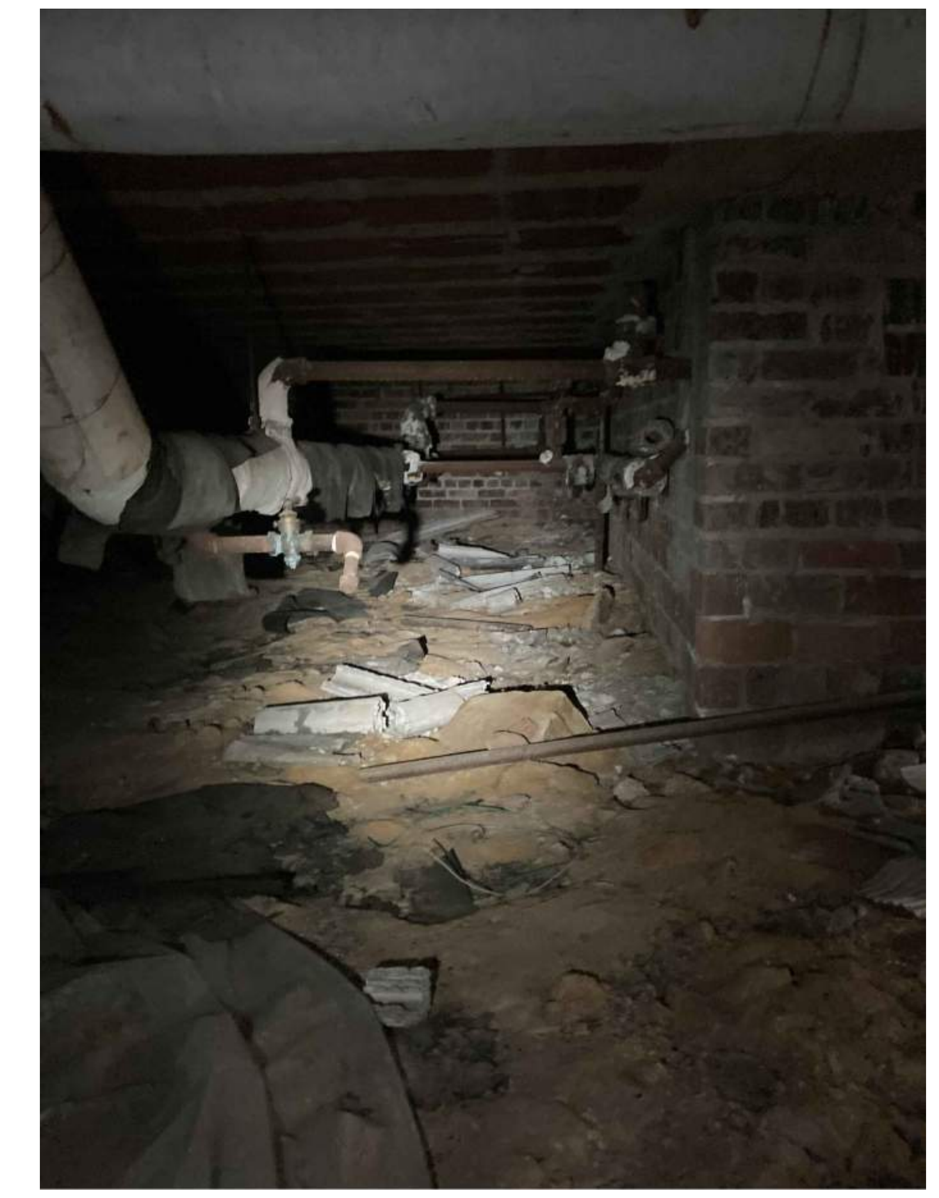
JOB NAME
University of North Carolina - Chapel Hill
SCO#: 21-23548-02A
BINGHAM HALL RENOVATION

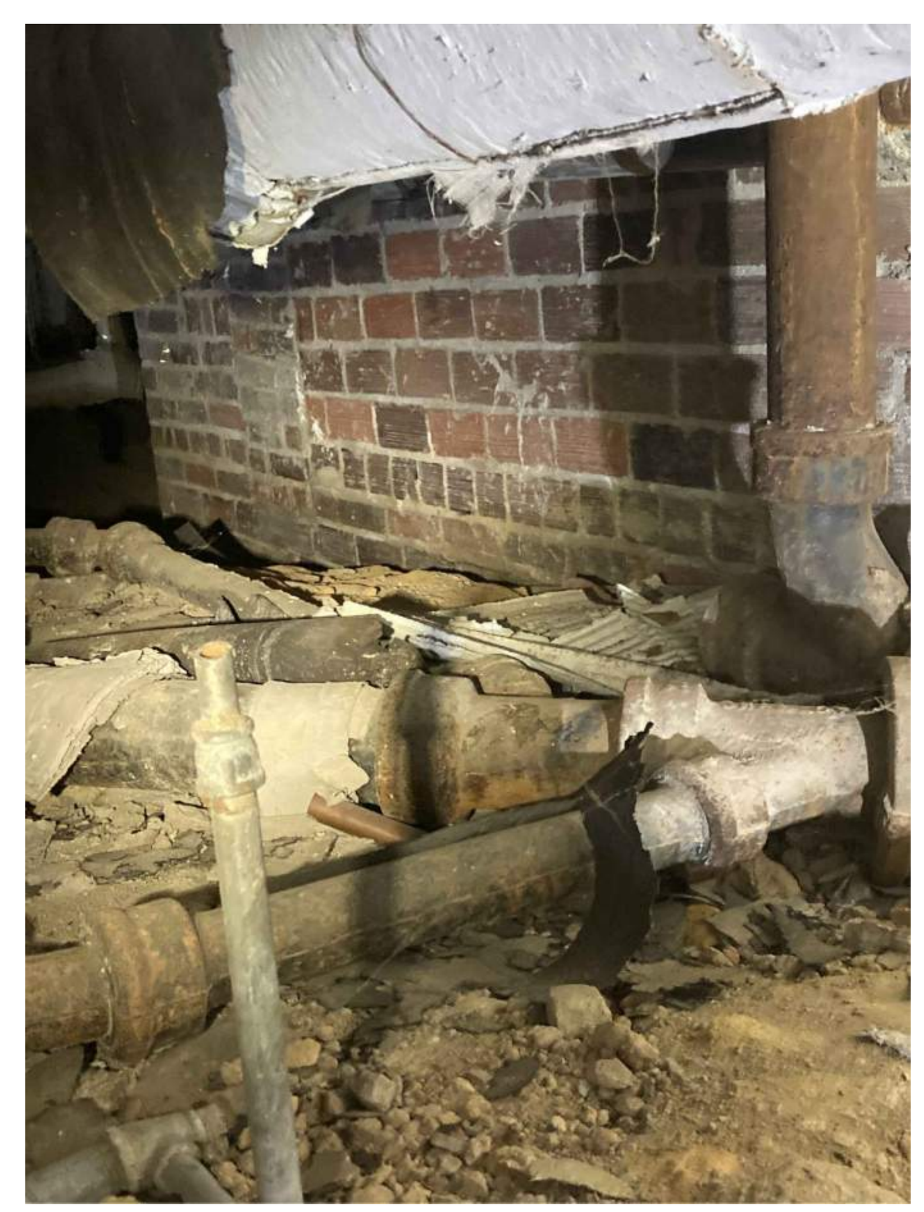
LOCATION
36 Lenoir Drive, Chapel Hill, NC 27514

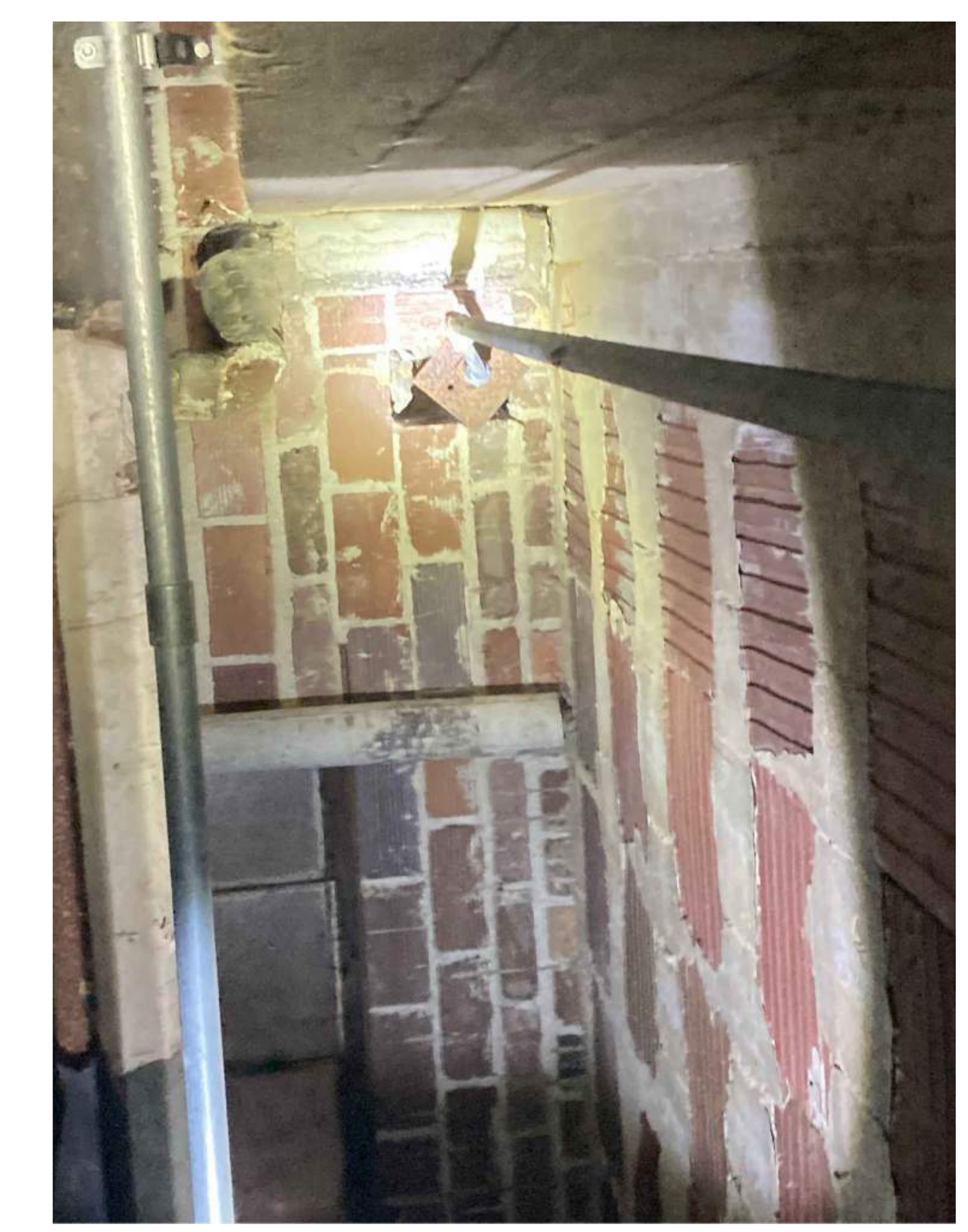
ISSUE DATE
01/08/2024

JOB. NO.
11706-00

DWG. NO.
TC105







LORD AECK SARGENT

REVISION:

S&ME, Inc.
3201 SPRING FOREST ROAD
RALEIGH, NC 27616
(919) 872-2660

SHEET TITLE
ASBESTOS ABATEMENT PLANS -
SITE PHOTOGRAPHS

SCALE (U.N.O.)
NA

JOB NAME
University of North Carolina - Chapel Hill
SCO#: 21-23548-02A UNC Project No. CI21212
BINGHAM HALL RENOVATION

LOCATION
36 Lenoir Drive, Chapel Hill, NC 27514

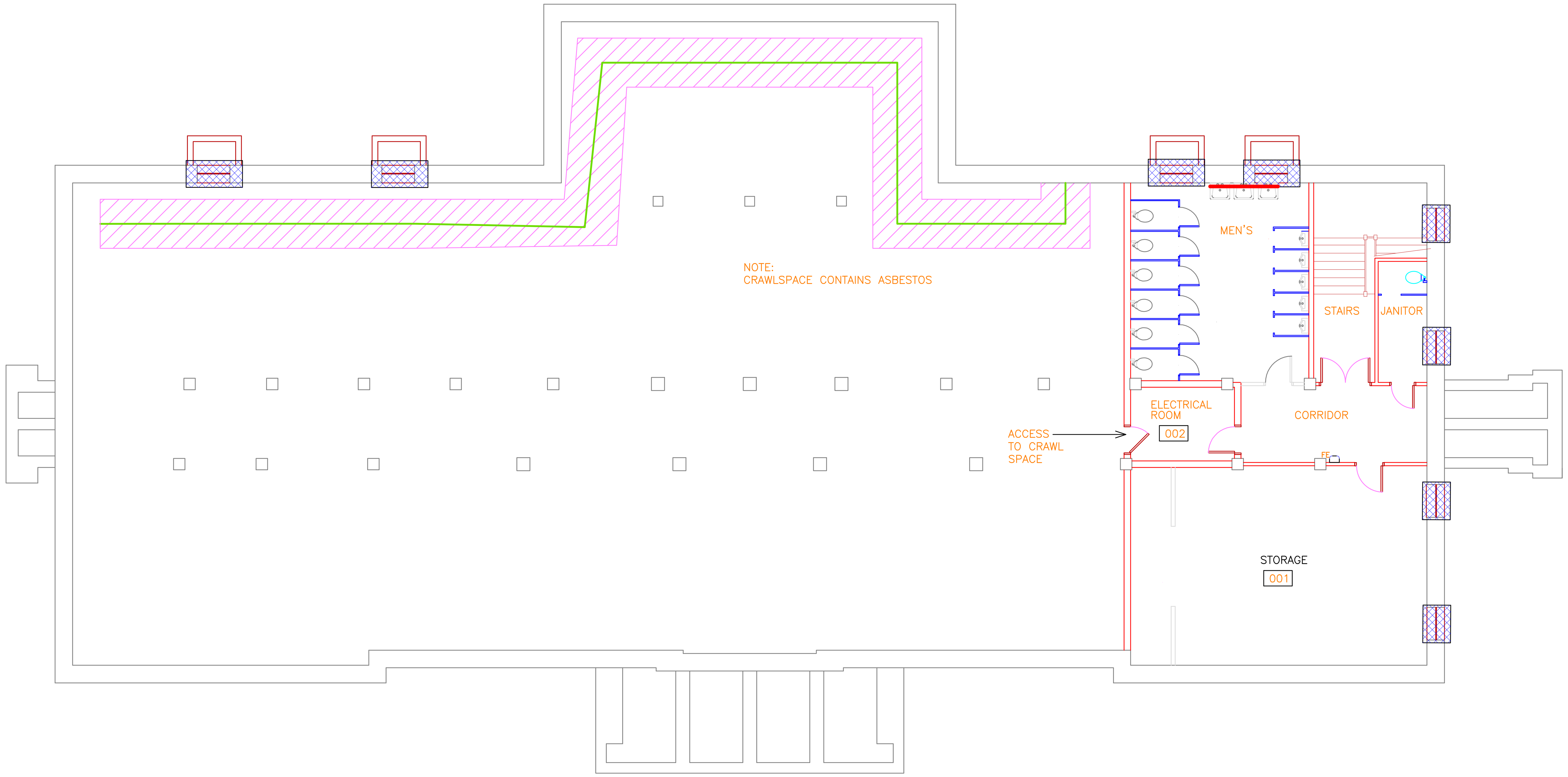
SEAL
North Carolina
Janet K. Phillips
40324
01/08/2024
Asbestos Abatement Designer

ISSUE DATE
01/08/2024

JOB. NO.
11706-00

DWG. NO.
AB-1

NOT FOR CONSTRUCTION



BASEMENT FLOOR/CRAWLSPACE

1. PRIOR TO THE ONSET OF WORK, THE CONTRACTOR SHALL COORDINATE WITH THE OWNER AND IDENTIFY LOCATIONS OF ALL SHUTOFF VALVES, ELECTRICAL PANELS, FIRE ALARM PANELS, DRAINS, DUCTS, ETC. INSIDE OR OUTSIDE THE BUILDING THAT CONTROL SERVICES EXTENDING TO THE BUILDING IN LOCATIONS WHERE ABATEMENT WILL OCCUR.
2. A FULL NEGATIVE PRESSURE ENCLOSURE SHALL BE ESTABLISHED DURING THE REMOVAL OF THE PIPE INSULATION, POTENTIALLY CONTAMINATED DEBRIS, AND THE CONTAMINATED SOIL IN THE CRAWLSPACE. THE NEGATIVE PRESSURE ENCLOSURE SHALL CONSIST OF CRITICAL BARRIERS AND A THREE-STAGE DECONTAMINATION UNIT ATTACHED TO THE ENTRANCE OF THE CRAWLSPACE. THE CRITICAL BARRIERS WILL INCLUDE TWO LAYERS OF A MINIMUM OF SIX MIL POLYETHYLENE SHEETING.
   a. REMOVAL OF THE PIPE INSULATION AND POTENTIALLY CONTAMINATED DEBRIS SHALL INCLUDE WET METHODS AND PROMPT CLEANUP. THE CLEANUP OF THE SOIL SHALL INCLUDE THE REMOVAL OF THE INSULATION AND THE CONTAMINATED SOIL. THE DEPTH OF CONTAMINATION WILL VARY DEPENDING UPON PREVIOUS ACTIVITIES WITHIN THE CRAWLSPACE. IT IS REASONABLE TO ASSUME THE INSULATION COULD BE COMPACTED WITHIN THE SOIL AND CONTAMINATION MAY EXTEND FROM A DEPTH OF TWO TO THREE INCHES.
   b. S&ME WILL CONDUCT A VISUAL INSPECTION OF THE CRAWLSPACE ONCE ABATEMENT IS COMPLETE. AFTER THE VISUAL INSPECTION IS COMPLETE, SOIL SAMPLING WITHIN THE CRAWLSPACE AND TEM AREA SAMPLES WILL BE COLLECTED TO DOCUMENT THE CLEANLINESS OF THE CRAWLSPACE.

LEAD PAINT

LIMITED LEAD SAMPLING WAS CONDUCTED DURING OUR ASBESTOS INSPECTION AND PREVIOUS TESTING BY UNC. LEAD-CONTAINING PAINT AND LEAD-BASED PAINT WERE IDENTIFIED. THE CONTRACTOR SHALL ASSUME LEAD-CONTAINING PAINT IS PRESENT DUE TO THE 1927 DATE OF CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR OSHA COMPLIANCE WITH 29 CFR 1926.62-OSHA LEAD CONSTRUCTION STANDARD. THIS IS STRICTLY AN OSHA CONCERN FOR THE CONTRACTOR AND SHOULD NOT IMPACT THE PRICE FOR ABATEMENT. IN ADDITION, THE CONTRACTOR IS RESPONSIBLE FOR ANY REQUIREMENT OF TCLP SAMPLING FOR DISPOSAL PURPOSES.

LEGEND

- WINDOW CAULKING AND LEAD PAINT
- ASBESTOS CONTAINED SOIL AREA
- PRESUMED ASBESTOS CONTAINING MIRROR MASTIC

0 8 16 24
GRAPHIC SCALE (IN FEET)

LORD AECK SARGENT

REVISION:

S&ME, Inc.
3201 SPRING FOREST ROAD
RALEIGH, NC 27616
(919) 872-2660

SHEET TITLE
ASBESTOS ABATEMENT PLANS - BASEMENT FLOOR

SCALE (U.N.O.)
1/8" = 1'-0"

JOB NAME
University of North Carolina - Chapel Hill
SCO#: 21-23548-02A UNC Project No. CI21212
BINGHAM HALL RENOVATION

LOCATION
36 Lenoir Drive, Chapel Hill, NC 27514

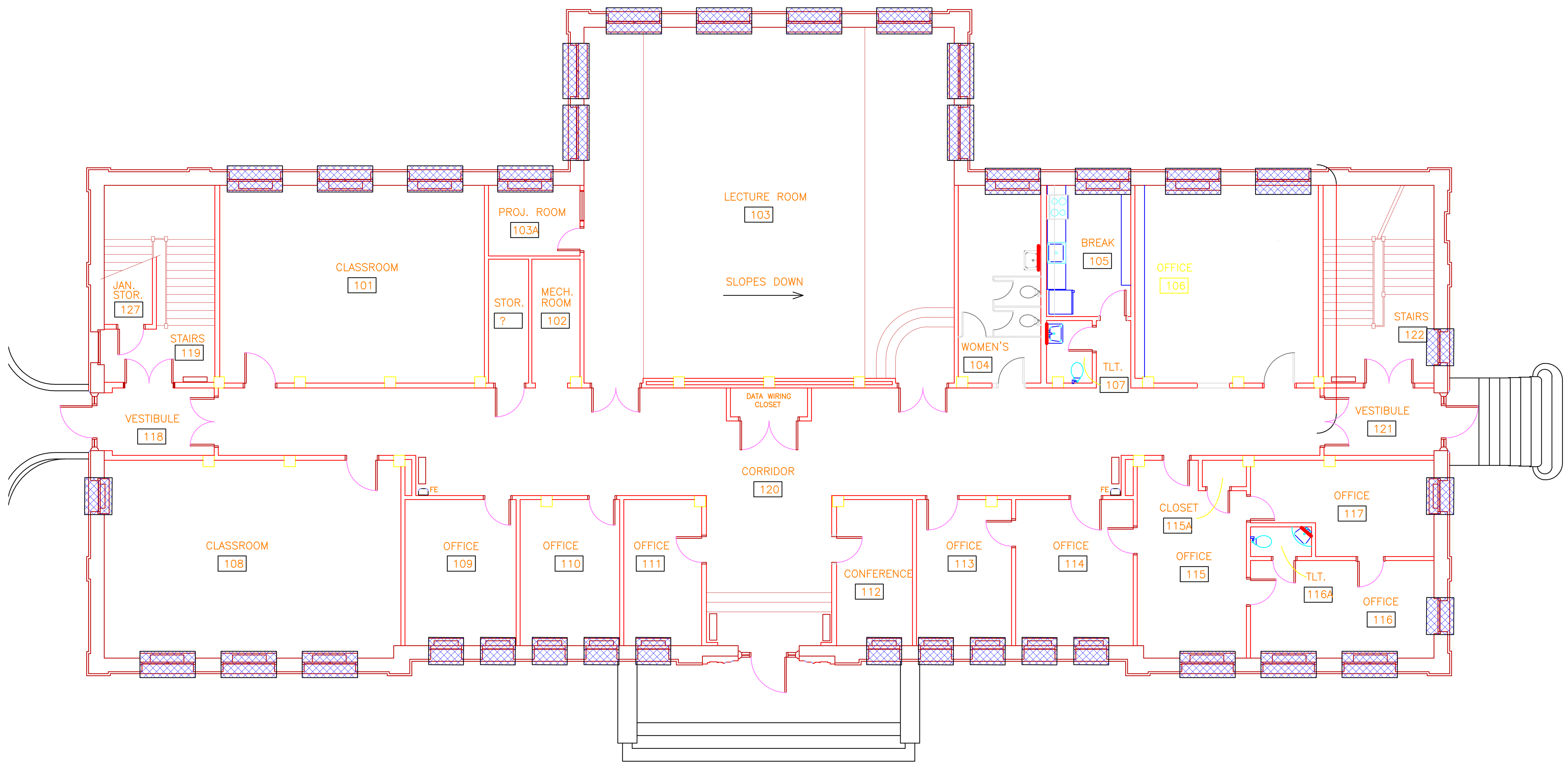
SEAL
North Carolina
Janet K. Phillips
40324
01/08/2024
Asbestos Abatement Designer

ISSUE DATE
01/08/2024

JOB. NO.
11706-00

DWG. NO.
AB-2

NOT FOR CONSTRUCTION



LEAD PAINT

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LEGEND

- WINDOW CAULKING AND LEAD PAINT
- PRESUMED ASBESTOS CONTAINING MIRROR MASTIC

WINDOW CAULKING AND LEAD PAINT

1. THE WINDOWS WILL REMAIN INTACT EXCEPT FOR THE WINDOW SASHES. THE WINDOW SASHES ARE SCHEDULED TO BE REMOVED AND WILL REQUIRE REMOVAL OF THE LEAD-BASED PAINT COATING AND ASBESTOS GLAZING ON THE GRILLES, IF PRESENT. THE REMOVAL OF THE NON-FRIABLE WINDOW CAULKING WILL BE PERFORMED UTILIZING WET METHODS AND HEPA VACUUM INCLUDING A DROP CLOTH BENEATH THE WINDOW(S). NON-FRIABLE REMOVAL METHODS WILL INCLUDE HAND SCRAPING AND ELECTRIC HEAT GUNS WHEN NEEDED TO LOOSEN THE CAULKING ONLY. OPEN FLAME EQUIPMENT WILL NOT BE PERMITTED. IF THE WINDOWS ARE SCHEDULED TO BE REPLACED (ALTERNATE I), THE ENTIRE WINDOW WILL BE REMOVED, ABATE THE WINDOW CAULKING AND GLAZING WHERE APPLICABLE, AND DISPOSE OF IN A CONSTRUCTION AND DEBRIS LANDFILL.

THE TAN PAINT ON THE EXTERIOR AND THE WHITE PAINT ON THE INTERIOR WINDOWS SHALL BE REMOVED IN ACCORDANCE WITH OSHA 29 CFR 1926.62. THE CONTRACTOR SHALL DESIGNATE AN AREA TO PERFORM THE PAINT STABILIZATION OF THE WINDOW FRAMES. DEMARCATE THE AREA WITH BARRIER TAPE AND SIGNAGE WHICH INDICATES LEAD HAZARDS. UTILIZING MANUAL METHODS, REMOVE THE RESIDUAL PAINT FROM THE FRAMES. ONCE THE PAINT IS REMOVED, UTILIZE DISPOSABLE WIPES TO CLEAN THE FRAME, ONLY UTILIZING THE WIPE TO CONDUCT ONE PASS OVER THE FRAME AND DISCARD AS LEAD-CONTAMINATED DEBRIS. ANY LIQUID WASTE GENERATED DURING THE REMOVAL OF THE PAINT, INCLUDING THE PAINT CHIPS SHALL BE COLLECTED AND STORED IN A DRUM WITH A LID ONSITE IN A LOCKED LOCATION. THE WASTE DRUM MUST BE LABELED AS POTENTIAL LEAD WASTE AWAITING RESULTS. A TCLP SAMPLE SHALL BE COLLECTED BY THE CONTRACTOR, AND THE RESULTS MUST BE REPORTED TO MR. MIKE LONG WITH EHS, 919-962-5509, MDLONG@UNC.EDU PRIOR TO DISPOSAL AS HAZARDOUS WASTE OR CONSTRUCTION DEBRIS.

LEAD-CONTAINING PAINT AND LEAD-BASED PAINT WERE IDENTIFIED. THE CONTRACTOR SHALL ASSUME LEAD-CONTAINING PAINT IS PRESENT DUE TO THE 1927 DATE OF CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR OSHA COMPLIANCE WITH 29 CFR 1926.62-OSHA LEAD CONSTRUCTION STANDARD. THIS IS STRICTLY AN OSHA CONCERN FOR THE CONTRACTOR AND SHOULD NOT IMPACT THE PRICE FOR ABATEMENT. IN ADDITION, THE CONTRACTOR IS RESPONSIBLE FOR ANY REQUIREMENT OF TCLP SAMPLING FOR DISPOSAL PURPOSES.

PIPE INSULATION

2. THE REMOVAL OF PIPE INSULATION IN THE WALL CAVITIES AND ABOVE THE PLASTER CEILINGS IN THE RESTROOMS SHALL INCLUDE THE GLOVE BAG METHOD. THE WORK AREA WITHIN THE RESTROOMS SHALL BE DEMARCATED WITH BARRIER TAPE AND ASBESTOS DANGER SIGNS PER OSHA 29 CRF 1926.1101. A LAYER OF 6 MIL POLYETHYLENE SHEETING SHALL BE PLACED BENEATH THE PIPING SCHEDULED TO BE ABATED. A REMOTE DECONTAMINATION UNIT SHALL BE CONTIGUOUS TO THE REGULATED AREA. THE ONSITE IH SHALL OBSERVE THE SMOKE TEST TO ENSURE THE GLOVE BAG(S) ARE PROPERLY SEALED.

LIGHT TUBES

3. THE CONTRACTOR SHALL REMOVE AND HANDLE FLUORESCENT TUBES, HIGH INTENSITY DISCHARGE BULBS AND U-TUBES IN A MANNER WHICH WILL MINIMIZE OCCURRENCES OF LAMP BREAKAGE. UNC'S EHS WILL PROVIDE THE BOXES FOR THE LIGHT TUBES. THE LAMPS SHALL BE PLACED IN THE MANUFACTURERS' BOX OR OTHER SUITABLE CONTAINERS (STURDY CARDBOARD BOX WITH CUSHIONING MATERIAL) APPROPRIATE FOR SHIPMENT TO THE RECYCLING FACILITY. WHEN NOT ACTIVELY PUTTING BULBS INTO THE BOX, THE CONTRACTOR SHALL CLOSE AND SEAL THE BOX. BOXES SHALL BE STORED IN A DRY LOCATION AND SHALL REMAIN DRY. A UNIVERSAL WASTE LABEL SHALL BE PLACED ON EACH BOX AS SOON AS ONE BULB IS PLACED INTO THE BOX. IF A BULB DOES BREAK IT SHALL BE HANDLED AS HAZARDOUS WASTE AND THE MATERIALS SHOULD BE PROPERLY CONTAINED IN A UN POLYETHYLENE DRUM AND DISPOSED OF PROPERLY, AND IN A TIMELY MANNER. THE CONTAINER MUST BE CAPPED WITH A LID THAT ENSURES NO MATERIAL WILL BE SPILLED FROM THE CONTAINER DURING STORAGE OR TRANSPORT AND LABELED APPROPRIATELY, INCLUDING A CLASS 8 CORROSIVE STICKER. THE BOXES CANNOT BE STORED OUTSIDE DUE TO WEATHER CONDITIONS AND POTENTIAL BREAKAGE OF THE BULBS. THE DATE SHALL BE MARKED ON EACH CONTAINER TO DOCUMENT THE GENERATION DATE.

ATTIC

4. DRYCELL D BATTERIES WERE IDENTIFIED IN THE ATTIC WITH ASBESTOS INSULATED WIRING. REMOVE THE WIRING AND DISCARD AS ACM WASTE.

VISIBLE MOLD WAS IDENTIFIED ON THE METAL SUPPORT BEAMS IN THE ATTIC. CLEANING THE METAL BEAMS WITH AN ANTIMICROBIAL AGENT WILL BE REQUIRED. ONCE THE BEAMS ARE CLEANED, THE ONSITE IH WILL PERFORM A VISUAL INSPECTION AND MAY ELECT TO COLLECT RANDOM SWABS TO VERIFY THE CLEANLINESS OF THE BEAMS.

GRAPHIC SCALE 0 8 16 24 (IN FEET)

SEAL: North Carolina Asbestos Abatement Designer, Janet K. Phillips, 40324, 01/08/2024

LORD AECK SARGENT

REVISION:

S&ME, Inc.
3201 SPRING FOREST ROAD
RALEIGH, NC 27616
(919) 872-2660

SHEET TITLE: ASBESTOS ABATEMENT PLANS - FIRST FLOOR

SCALE (U.N.O.): 1/8" = 1'-0"

JOB NAME: University of North Carolina - Chapel Hill

BINGHAM HALL RENOVATION

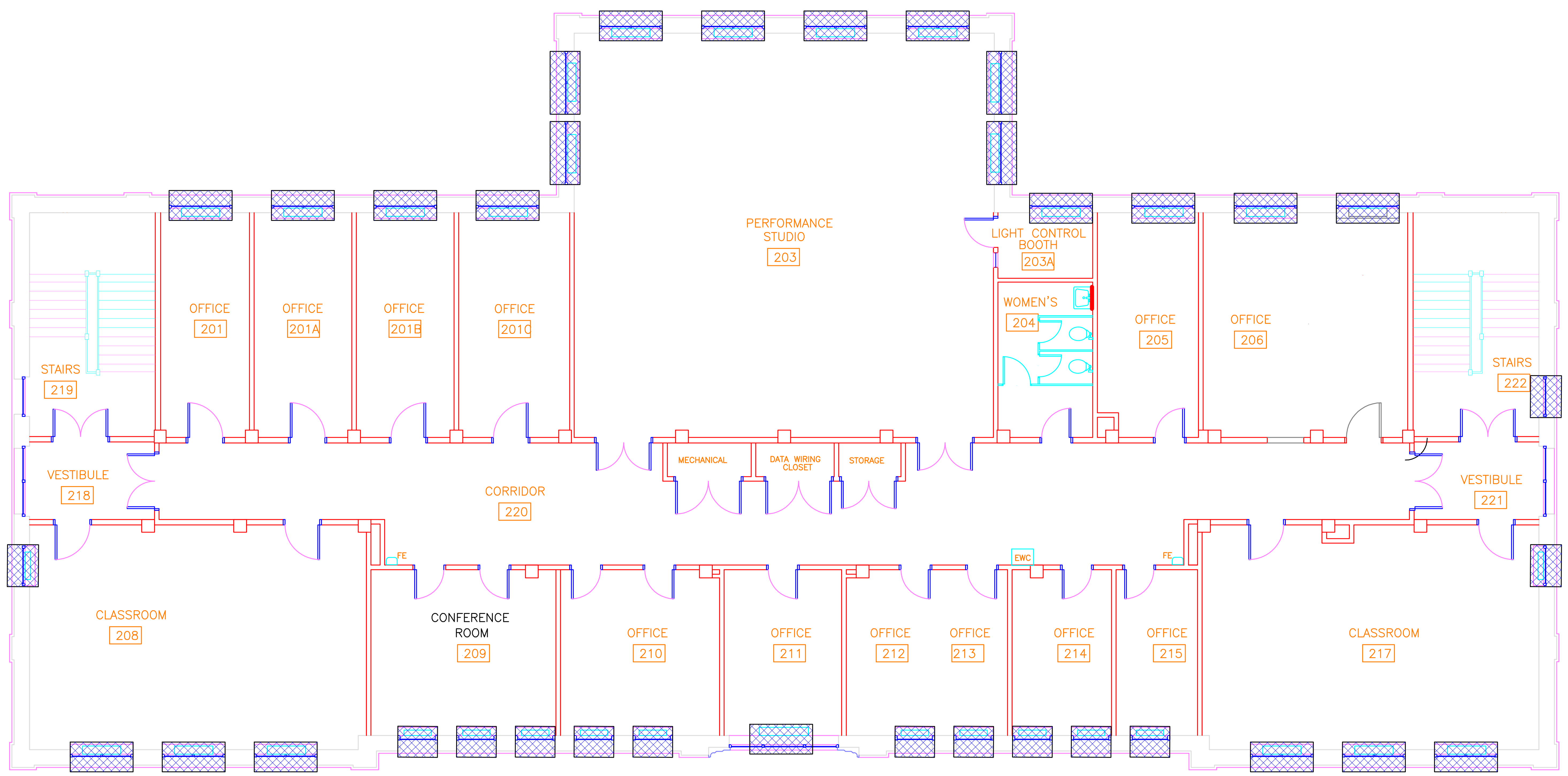
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

ISSUE DATE: 01/08/2024

JOB NO.: 11706-00

DWG. NO.: AB-3

NOT FOR CONSTRUCTION



LEAD PAINT

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LEGEND

- WINDOW CAULKING AND LEAD PAINT
- PRESUMED ASBESTOS CONTAINING MIRROR MASTIC

WINDOW CAULKING AND LEAD PAINT

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0 8 16 24
GRAPHIC SCALE (IN FEET)

SEAL
North Carolina
Janet K. Phillips
40324
01/08/2024
Asbestos Abatement Designer

LORD AECK SARGENT

REVISION:

S&ME, Inc.
3201 SPRING FOREST ROAD
RALEIGH, NC 27616
(919) 872-2660

SHEET TITLE
ASBESTOS ABATEMENT PLANS - SECOND FLOOR

SCALE (U.N.O.)
1/8" = 1'-0"

JOB NAME
University of North Carolina - Chapel Hill
SCO#: 21-23548-02A UNC Project No. CI21212
BINGHAM HALL RENOVATION

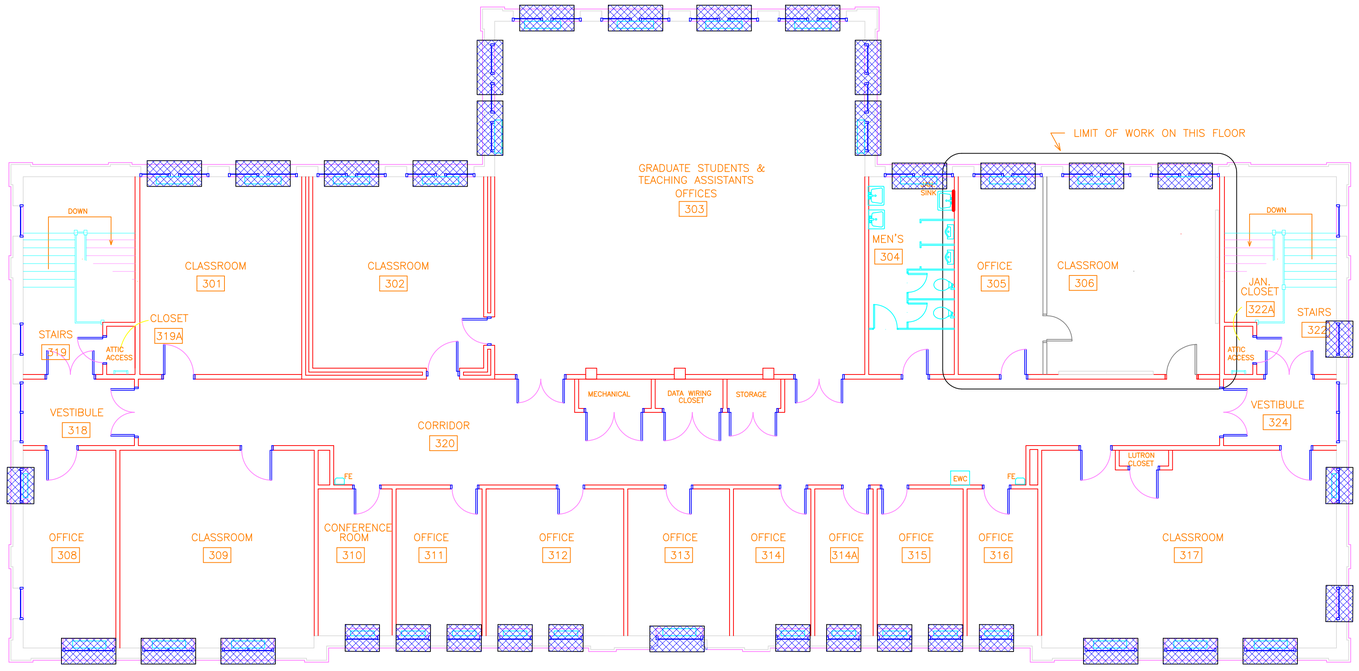
LOCATION
36 Lenoir Drive, Chapel Hill, NC 27514

ISSUE DATE
01/08/2024

JOB. NO.
11706-00

DWG. NO.
AB-4

NOT FOR CONSTRUCTION



LEAD PAINT

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LEGEND

- WINDOW CAULKING AND LEAD PAINT
- PRESUMED ASBESTOS CONTAINING MIRROR MASTIC

WINDOW CAULKING AND LEAD PAINT

1. THE WINDOWS WILL REMAIN INTACT EXCEPT FOR THE WINDOW SASHES. THE WINDOW SASHES ARE SCHEDULED TO BE REMOVED AND WILL REQUIRE REMOVAL OF THE LEAD-BASED PAINT COATING AND ASBESTOS GLAZING ON THE GRILLES, IF PRESENT. THE REMOVAL OF THE NON-FRIABLE WINDOW CAULKING WILL BE PERFORMED UTILIZING WET METHODS AND HEPA VACUUM INCLUDING A DROP CLOTH BENEATH THE WINDOW(S). NON-FRIABLE REMOVAL METHODS WILL INCLUDE HAND SCRAPING AND ELECTRIC HEAT GUNS WHEN NEEDED TO LOOSEN THE CAULKING ONLY. OPEN FLAME EQUIPMENT WILL NOT BE PERMITTED. IF THE WINDOWS ARE SCHEDULED TO BE REPLACED (ALTERNATE I), THE ENTIRE WINDOW WILL BE REMOVED, ABATE THE WINDOW CAULKING AND GLAZING WHERE APPLICABLE, AND DISPOSE OF IN A CONSTRUCTION AND DEBRIS LANDFILL.

   THE TAN PAINT ON THE EXTERIOR AND THE WHITE PAINT ON THE INTERIOR WINDOWS SHALL BE REMOVED IN ACCORDANCE WITH OSHA 29 CFR 1926.62. THE CONTRACTOR SHALL DESIGNATE AN AREA TO PERFORM THE PAINT STABILIZATION OF THE WINDOW FRAMES. DEMARCATE THE AREA WITH BARRIER TAPE AND SIGNAGE WHICH INDICATES LEAD HAZARDS. UTILIZING MANUAL METHODS, REMOVE THE RESIDUAL PAINT FROM THE FRAMES. ONCE THE PAINT IS REMOVED, UTILIZE DISPOSABLE WIPES TO CLEAN THE FRAME, ONLY UTILIZING THE WIPE TO CONDUCT ONE PASS OVER THE FRAME AND DISCARD AS LEAD-CONTAMINATED DEBRIS. ANY LIQUID WASTE GENERATED DURING THE REMOVAL OF THE PAINT, INCLUDING THE PAINT CHIPS SHALL BE COLLECTED AND STORED IN A DRUM WITH A LID ONSITE IN A LOCKED LOCATION. THE WASTE DRUM MUST BE LABELED AS POTENTIAL LEAD WASTE AWAITING RESULTS. A TCLP SAMPLE SHALL BE COLLECTED BY THE CONTRACTOR, AND THE RESULTS MUST BE REPORTED TO MR. MIKE LONG WITH EHS, 919-962-5509, MDLONG@UNC.EDU PRIOR TO DISPOSAL AS HAZARDOUS WASTE OR CONSTRUCTION DEBRIS.

   LEAD-CONTAINING PAINT AND LEAD-BASED PAINT WERE IDENTIFIED. THE CONTRACTOR SHALL ASSUME LEAD-CONTAINING PAINT IS PRESENT DUE TO THE 1927 DATE OF CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR OSHA COMPLIANCE WITH 29 CFR 1926.62-OSHA LEAD CONSTRUCTION STANDARD. THIS IS STRICTLY AN OSHA CONCERN FOR THE CONTRACTOR AND SHOULD NOT IMPACT THE PRICE FOR ABATEMENT. IN ADDITION, THE CONTRACTOR IS RESPONSIBLE FOR ANY REQUIREMENT OF TCLP SAMPLING FOR DISPOSAL PURPOSES.

PIPE INSULATION

2. THE REMOVAL OF PIPE INSULATION IN THE WALL CAVITIES AND ABOVE THE PLASTER CEILINGS IN THE RESTROOMS SHALL INCLUDE THE GLOVE BAG METHOD. THE WORK AREA WITHIN THE RESTROOMS SHALL BE DEMARCATED WITH BARRIER TAPE AND ASBESTOS DANGER SIGNS PER OSHA 29 CRF 1926.1101. A LAYER OF 6 MIL POLYETHYLENE SHEETING SHALL BE PLACED BENEATH THE PIPING SCHEDULED TO BE ABATED. A REMOTE DECONTAMINATION UNIT SHALL BE CONTIGUOUS TO THE REGULATED AREA. THE ONSITE IH SHALL OBSERVE THE SMOKE TEST TO ENSURE THE GLOVE BAG(S) ARE PROPERLY SEALED.

LIGHT TUBES

3. THE CONTRACTOR SHALL REMOVE AND HANDLE FLUORESCENT TUBES, HIGH INTENSITY DISCHARGE BULBS AND U-TUBES IN A MANNER WHICH WILL MINIMIZE OCCURRENCES OF LAMP BREAKAGE. UNC'S EHS WILL PROVIDE THE BOXES FOR THE LIGHT TUBES. THE LAMPS SHALL BE PLACED IN THE MANUFACTURERS' BOX OR OTHER SUITABLE CONTAINERS (STURDY CARDBOARD BOX WITH CUSHIONING MATERIAL) APPROPRIATE FOR SHIPMENT TO THE RECYCLING FACILITY. WHEN NOT ACTIVELY PUTTING BULBS INTO THE BOX, THE CONTRACTOR SHALL CLOSE AND SEAL THE BOX. BOXES SHALL BE STORED IN A DRY LOCATION AND SHALL REMAIN DRY. A UNIVERSAL WASTE LABEL SHALL BE PLACED ON EACH BOX AS SOON AS ONE BULB IS PLACED INTO THE BOX. IF A BULB DOES BREAK IT SHALL BE HANDLED AS HAZARDOUS WASTE AND THE MATERIALS SHOULD BE PROPERLY CONTAINED IN A UN POLYETHYLENE DRUM AND DISPOSED OF PROPERLY, AND IN A TIMELY MANNER. THE CONTAINER MUST BE CAPPED WITH A LID THAT ENSURES NO MATERIAL WILL BE SPILLED FROM THE CONTAINER DURING STORAGE OR TRANSPORT AND LABELED APPROPRIATELY, INCLUDING A CLASS 8 CORROSIVE STICKER. THE BOXES CANNOT BE STORED OUTSIDE DUE TO WEATHER CONDITIONS AND POTENTIAL BREAKAGE OF THE BULBS. THE DATE SHALL BE MARKED ON EACH CONTAINER TO DOCUMENT THE GENERATION DATE.

ATTIC

4. DRYCELL D BATTERIES WERE IDENTIFIED IN THE ATTIC WITH ASBESTOS INSULATED WIRING. REMOVE THE WIRING AND DISCARD AS ACM WASTE.

   VISIBLE MOLD WAS IDENTIFIED ON THE METAL SUPPORT BEAMS IN THE ATTIC. CLEANING THE METAL BEAMS WITH AN ANTIMICROBIAL AGENT WILL BE REQUIRED. ONCE THE BEAMS ARE CLEANED, THE ONSITE IH WILL PERFORM A VISUAL INSPECTION AND MAY ELECT TO COLLECT RANDOM SWABS TO VERIFY THE CLEANLINESS OF THE BEAMS.

GRAPHIC SCALE (IN FEET): 0, 8, 16, 24

SEAL: North Carolina, Janet K. Phillips, 40324, 01/08/2024, Asbestos Abatement Designer

ISSUE DATE: 01/08/2024
JOB. NO.: 11706-00
DWG. NO.: AB-5

REVISION:

LORD AECK SARGENT
S&ME, Inc.
3201 SPRING FOREST ROAD
RALEIGH, NC 27616
(919) 872-2660

SHEET TITLE: ASBESTOS ABATEMENT PLANS - THIRD FLOOR
SCALE (U.N.O.): 1/8" = 1'-0"

JOB NAME: University of North Carolina - Chapel Hill
SCOE: 21-23548-02A
UNC Project No. 021212
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

NOT FOR CONSTRUCTION

ATTIC:

DRYCELL D BATTERIES WERE IDENTIFIED IN THE ATTIC WITH ASBESTOS INSULATED WIRING. REMOVE THE WIRING AND DISCARD AS ACM WASTE.

VISIBLE MOLD WAS IDENTIFIED ON THE METAL SUPPORT BEAMS IN THE ATTIC. CLEANING THE METAL BEAMS WITH AN ANTIMICROBIAL AGENT WILL BE REQUIRED. ONCE THE BEAMS ARE CLEANED, THE ONSITE IH WILL PERFORM A VISUAL INSPECTION AND COLLECT RANDOM SWABS TO VERIFY THE CLEANLINESS OF THE BEAMS. DISCARD THE BATTERIES AS UNIVERSAL WASTE PER UNC-EHS REQUIREMENTS.

LEAD PAINT

LIMITED LEAD SAMPLING WAS CONDUCTED DURING OUR ASBESTOS INSPECTION AND PREVIOUS TESTING BY UNC. LEAD-CONTAINING PAINT AND LEAD-BASED PAINT WERE IDENTIFIED. THE CONTRACTOR SHALL ASSUME LEAD-CONTAINING PAINT IS PRESENT DUE TO THE 1927 DATE OF CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR OSHA COMPLIANCE WITH 29 CFR 1926.62-OSHA LEAD CONSTRUCTION STANDARD. THIS IS STRICTLY AN OSHA CONCERN FOR THE CONTRACTOR AND SHOULD NOT IMPACT THE PRICE FOR ABATEMENT. IN ADDITION, THE CONTRACTOR IS RESPONSIBLE FOR ANY REQUIREMENT OF TCLP SAMPLING FOR DISPOSAL PURPOSES.

LORD AECK SARGENT

REVISION:

S&ME, Inc.
3201 SPRING FOREST ROAD
RALEIGH, NC 27616
(919) 872-2660

SHEET TITLE
ASBESTOS ABATEMENT PLANS - ATTIC AREA

SCALE (U.N.O.)
1/8" = 1'-0"

JOB NAME
University of North Carolina - Chapel Hill
SCO#: 21-23548-02A UNC Project No. CI21212
BINGHAM HALL RENOVATION

LOCATION
36 Lenoir Drive, Chapel Hill, NC 27514

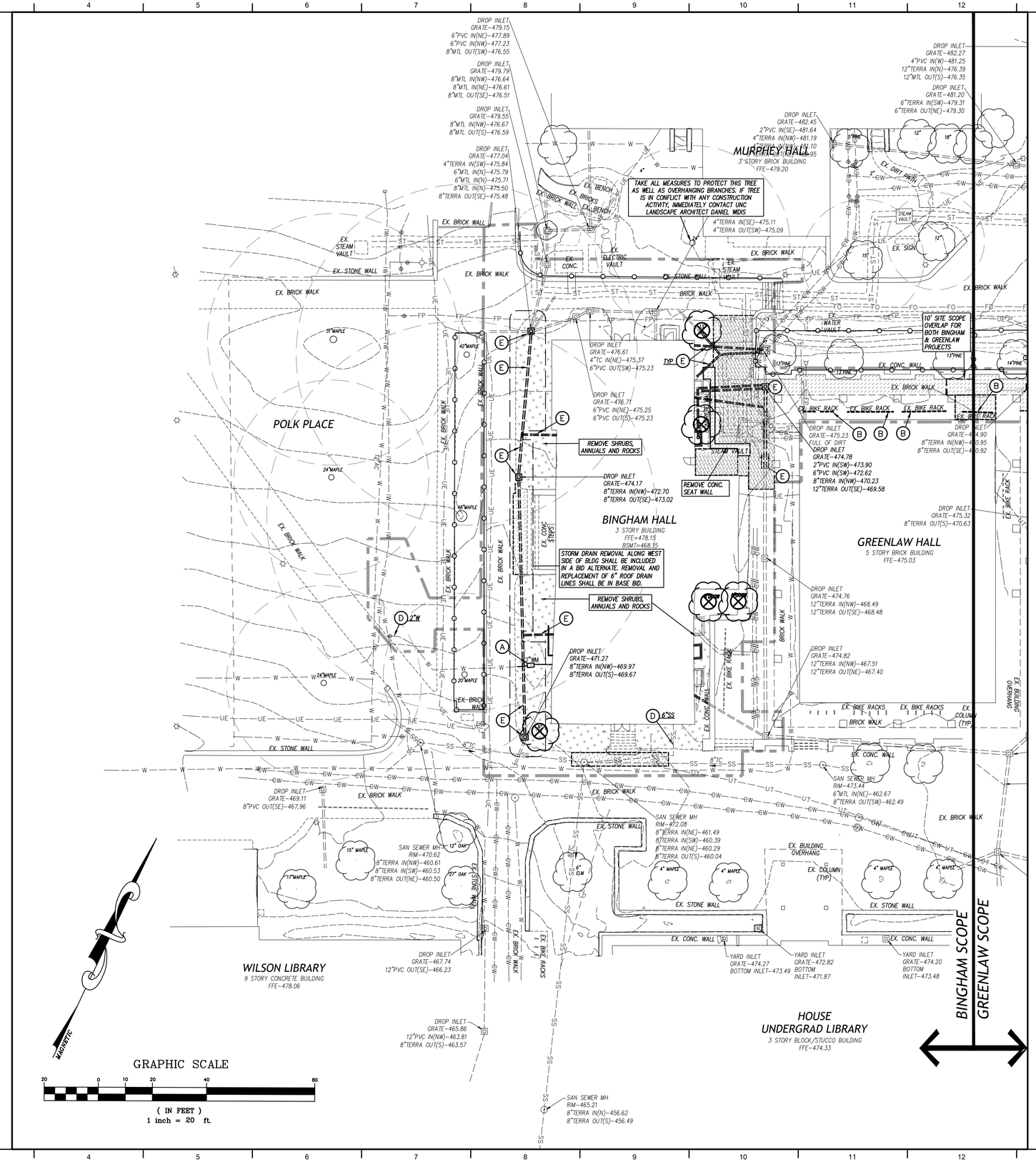
SEAL
North Carolina
Janet K. Phillips
40324
01/08/2024
Asbestos Abatement Designer

ISSUE DATE
01/08/2024

JOB. NO.
11706-00

DWG. NO.
AB-6

NOT FOR CONSTRUCTION



LEGEND

	TO REMAIN	TO BE REMOVED
CHILLED WATER	------CW------	**------CW------**
ELECTRICAL (OVERHEAD)	------ E ------	**------ E ------**
ELECTRICAL (UNDERGROUND)	------UE------	**------UE------**
FIBER OPTIC COMMUNICATION	------FO------	**------FO------**
HOT WATER	------HW------	**------HW------**
SANITARY SEWER	------SS------	**------SS------**
STEAM PIPE/TUNNEL	------ST------	**------ST------**
TELEPHONE (OVERHEAD)	------ T ------	**------ T ------**
TELEPHONE (UNDERGROUND)	------UT------	**------UT------**
WATER	------ W ------	**------ W ------**
STORM DRAIN	══════	══════
LIGHT POLE	☼ LP	☼ LP
UTILITY POLE	⌀ PP	⌀ PP
MANHOLE	⊙ MH	⊙ MH
CLEAN OUT	◎ CO	◎ CO
DROP INLET,CATCH BASIN	□ DI, CB	□ DI, CB
FIRE HYDRANT	-○- FH	-○- FH
WATER VALVE	⊗ WV	⊗ WV
TREE	○	⊗
PAVEMENT, SIDEWALK, G&G, STRUCTURES BE REMOVED		▨
TREE PROTECTION FENCE	——○——○——○——	
LIMITS OF CONSTRUCTION	▬▬ ▬ ▬ ▬▬	

KEY NOTES

Ⓐ REMOVE, SALVAGE AND REINSTALL DOMESTIC WATER METER. REMOVE SERVICE LINE FROM METER TO BLDG. SEE SHEET C401 FOR NEW METER LOCATION.

Ⓑ REMOVE ENTITY.

Ⓒ SEE ARCH FOR DEMOLITION AND INSTALLATION OF WINDOW WELL.

Ⓓ ABANDON EX WATER AND/OR SEWER SERVICES PER SPECIFICATIONS AND OWASA REQUIREMENTS.

Ⓔ EXISTING UTILITY/STORM DRAIN TO BE REMOVED.

GENERAL NOTES

1. INCIDENTAL ITEMS WITHIN THE DEMOLITION ZONES SHALL BE REMOVED TO ALLOW NEW CONSTRUCTION, WHETHER OR NOT SHOWN ON THE PLANS. ALL BIDDERS SHALL VISIT THE SITE AND OBSERVE EXISTING CONDITIONS PRIOR TO BIDDING.
2. INSTALL TREE PROTECTION FENCING PRIOR TO BEGINNING ANY GROUND DISTURBANCE. LIMIT GROUND DISTURBANCE TO ONLY AREAS NECESSARY TO PERMIT NEW CONSTRUCTION.
3. ALL PAVEMENT OR CONCRETE TO BE REMOVED SHALL BE SAW CUT TO PROVIDE A STRAIGHT AND UNIFORM JOINT WITH NEW WORK. ANY EXISTING PAVEMENT, SIDEWALK, BRICK PAVERS, CURB AND GUTTER, ETC. THAT MUST BE REMOVED TO ALLOW NEW CONSTRUCTION SHALL BE REMOVED AND REPAIRED PER THE SPECIFICATIONS AND DETAILS OR TO MATCH PRE–CONSTRUCTION CONDITIONS (WHETHER OR NOT SHOWN ON THE DRAWINGS TO BE REMOVED).
4. ALL WASTE MATERIAL GENERATED FROM DEMOLITION ACTIVITIES SHALL BE DISPOSED OF OFF–SITE IN ACCORDANCE WITH ALL APPLICABLE RULES AND REGULATIONS AND SECTION A–31–"CONSTRUCTION SITE WASTE MANAGEMENT" OF THE UNC–CH UNIVERSITY DESIGN GUIDELINES.
5. EXISTING SITE SURVEY INFORMATION WAS TAKEN FROM SURVEYS PROVIDED BY UNC. THE DESIGNER ASSUMES NO LIABILITY FOR ANY EXISTING INFORMATION BOTH SHOWN AND NOT SHOWN ON THE PLAN. CONTRACTOR SHALL VERIFY ALL EXISTING SITE CONDITIONS PRIOR TO DEMOLITION AND CONSTRUCTION.
6. VERIFY EXISTING CONDITIONS AND ALL ILLUSTRATED UNDERGROUND ELEMENTS. EXERCISE REASONABLE EFFORTS TO PROTECT ANY UNKNOWN UNDERGROUND ELEMENTS. NOTIFY THE ENGINEER IMMEDIATELY IF UNKNOWN ELEMENTS ARE DISCOVERED THAT WOULD NECESSITATE MODIFICATION TO THE PROPOSED DESIGN. CONTACT NC–811 UTILITY LOCATING SERVICE AND UNC (919–962–8394) AT LEAST 48–HRS PRIOR TO EXCAVATION.
7. ALL EXISTING VAULTS, MANHOLES, STORM DRAIN STRUCTURES, CLEANOUTS, ETC. WITHIN AREA OF NEW WORK SHALL BE ADJUSTED AS NEEDED TO MATCH FINISH GRADE.
8. DEMOLITION AND PATCHING OF PAVEMENTS, SIDEWALKS AND OTHER EXISTING PAVED SURFACES IN ADDITION TO THAT INDICATED ON THIS PLAN SHALL BE PERFORMED AS REQUIRED TO CONSTRUCT AND INSTALL NEW UTILITIES AND OTHER IMPROVEMENTS. ALL SUCH DEMOLITION AND PATCHING SHALL BE INCLUDED IN THE BASE BID SCOPE OF WORK.
9. PROTECT ALL ADJACENT PROPERTIES, THE GENERAL PUBLIC AND ALL OF THE OWNER'S FACILITIES FROM DAMAGE DURING CONSTRUCTION. SHOULD DAMAGES OCCUR, REPAIR IMMEDIATELY AS DIRECTED BY THE ARCHITECT.
10. ALL DEMOLITION AND CONSTRUCTION ACTIVITIES SHALL BE COORDINATED AND SCHEDULED TO MAINTAIN FIRE DEPARTMENT ACCESS TO DAUER DRIVE THROUGHOUT CONSTRUCTION.
11. COORDINATE ALL FIRE SPRINKLER SYSTEM OUTAGES WITH UNC FIRE MARSHAL OFFICE.
12. UNC APPROVED HAZARDOUS WASTE HANDLING VENDORS:
    - 12.1. TRADEBE (ROBERT CLARK, 219–354–2525)
    - 12.2. CLEAN HARBORS (JONATHAN STUTTS, 336–361–6195)
    - 12.3. VEOLIA (DOUG ROSS, 919–528–3996)

EXISTING BRICK PAVERS

1. CONTRACTOR SHALL SALVAGE, PALLETIZE, AND STORE SECURELY EXISTING BRICK PAVERS REMOVED AS A RESULT OF INSTALLING PROPOSED IMPROVEMENTS.
2. BRICK PAVERS SHALL BE CAREFULLY CLEANED AND INSPECTED PRIOR TO INSTALLATION.
3. ONLY UNDAMAGED BRICK PAVERS SHALL BE USED FOR REINSTALLATION.
4. DAMAGED BRICK PAVERS SHALL BE REMOVED FROM THE SITE AND REPLACED WITH MATCHING BRICK PAVERS IN QUANTITY AS NEEDED.
5. SUBMIT SAMPLE BRICK PAVERS TO OWNER AND ARCHITECT PRIOR FOR APPROVAL PRIOR TO PURCHASE.
6. SEE KEYNOTE "A" ON STAKING PLAN C101 FOR MORE INFORMATION.

Digitally signed by Steven J. Miller
Date: 2024.01.02 14:36:07-05'00'

SEAL
022625
STEVEN J. MILLER

LORD AECK SARGENT

REVISION:

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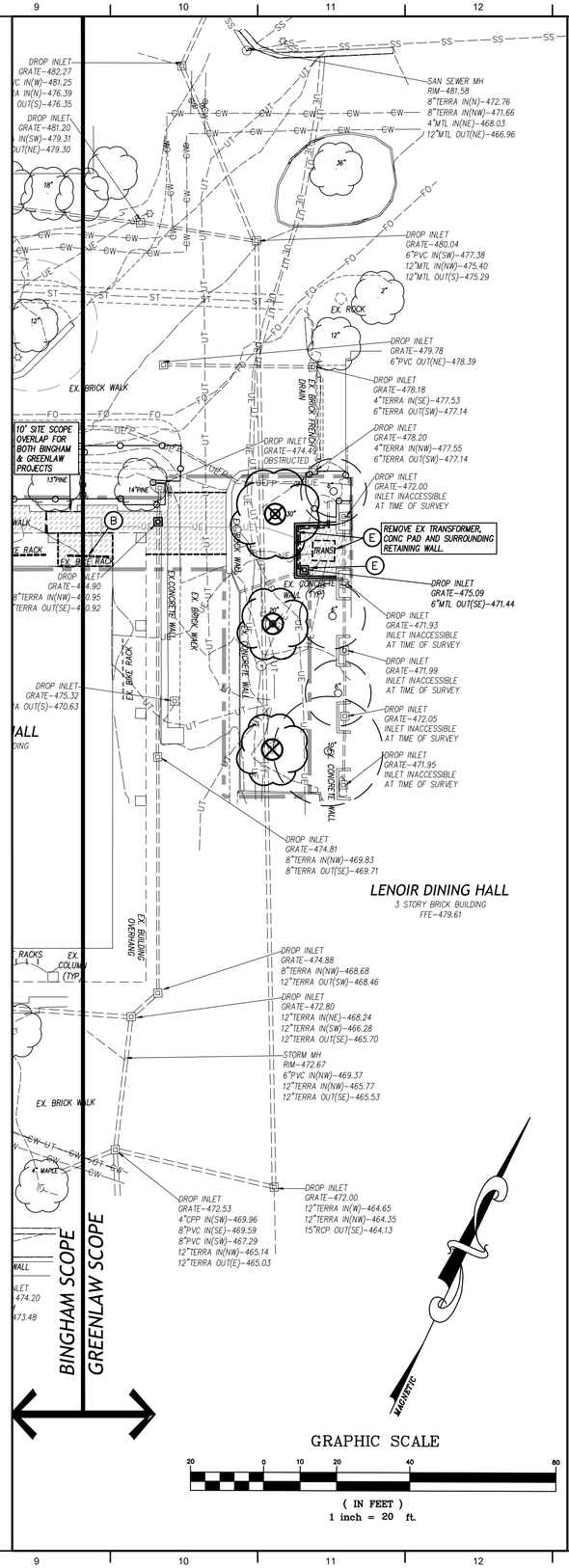
CLH Design, PA
400 Regency Forest Dr.
Suite 120
Cary, NC 27518
Phone: 919.319.6716
LA: C-106, PE: C-1595

SHEET TITLE
BINGHAM SCOPE
EXISTING SITE CONDITION, DEMOLITION AND TREE PROTECTION PLAN

JOB NAME
University of North Carolina - Chapel Hill
SCO#: 21-23548-02A UNC Project No. CI21212
BINGHAM HALL RENOVATION
LOCATION
36 Lenoir Drive, Chapel Hill, NC 27514

ISSUE DATE
1/8/2024
JOB. NO.
11706-00
DWG. NO.
C101



LEGEND

	TO REMAIN	TO BE REMOVED
CHILLED WATER	------CW------	------CW------
ELECTRICAL (OVERHEAD)	------ E ------	------ E ------
ELECTRICAL (UNDERGROUND)	------UE------	------UE------
FIBER OPTIC COMMUNICATION	------FO------	------FO------
HOT WATER	------HW------	------HW------
SANITARY SEWER	------SS------	------SS------
STEAM PIPE/TUNNEL	------ST------	------ST------
TELEPHONE (OVERHEAD)	------ T ------	------ T ------
TELEPHONE (UNDERGROUND)	------UT------	------UT------
WATER	------ W ------	------ W ------
STORM DRAIN	═══════	═══════
LIGHT POLE	LP	LP
UTILITY POLE	PP	PP
MANHOLE	MH	MH
CLEAN OUT	CO	CO
DROP INLET,CATCH BASIN	DI, CB	DI, CB
FIRE HYDRANT	FH	FH
WATER VALVE	WV	WV
TREE		
PAVEMENT, SIDEWALK, C&G, STRUCTURES BE REMOVED		
TREE PROTECTION FENCE		
LIMITS OF CONSTRUCTION		

KEY NOTES

(A) REMOVE, SALVAGE AND REINSTALL DOMESTIC WATER METER. REMOVE SERVICE LINE FROM METER TO BLDG. SEE SHEET C401 FOR NEW METER LOCATION.

(B) REMOVE ENTITY.

(C) SEE ARCH FOR DEMOLITION AND INSTALLATION OF WINDOW WELL.

(D) ABANDON EX WATER AND/OR SEWER SERVICES PER SPECIFICATIONS AND OWASA REQUIREMENTS.

(E) EXISTING UTILITY/STORM DRAIN TO BE REMOVED.

GENERAL NOTES

1. INCIDENTAL ITEMS WITHIN THE DEMOLITION ZONES SHALL BE REMOVED TO ALLOW NEW CONSTRUCTION, WHETHER OR NOT SHOWN ON THE PLANS. ALL BIDDERS SHALL VISIT THE SITE AND OBSERVE EXISTING CONDITIONS PRIOR TO BIDDING.
2. INSTALL TREE PROTECTION FENCING PRIOR TO BEGINNING ANY GROUND DISTURBANCE. LIMIT GROUND DISTURBANCE TO ONLY AREAS NECESSARY TO PERMIT NEW CONSTRUCTION.
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4. ALL WASTE MATERIAL GENERATED FROM DEMOLITION ACTIVITIES SHALL BE DISPOSED OF OFF-SITE IN ACCORDANCE WITH ALL APPLICABLE RULES AND REGULATIONS AND SECTION A-31-"CONSTRUCTION SITE WASTE MANAGEMENT" OF THE UNC-CH UNIVERSITY DESIGN GUIDELINES.
5. EXISTING SITE SURVEY INFORMATION WAS TAKEN FROM SURVEYS PROVIDED BY UNC. THE DESIGNER ASSUMES NO LIABILITY FOR ANY EXISTING INFORMATION BOTH SHOWN AND NOT SHOWN ON THE PLAN. CONTRACTOR SHALL VERIFY ALL EXISTING SITE CONDITIONS PRIOR TO DEMOLITION AND CONSTRUCTION.
6. VERIFY EXISTING CONDITIONS AND ALL ILLUSTRATED UNDERGROUND ELEMENTS. EXERCISE REASONABLE EFFORTS TO PROTECT ANY UNKNOWN UNDERGROUND ELEMENTS. NOTIFY THE ENGINEER IMMEDIATELY IF UNKNOWN ELEMENTS ARE DISCOVERED THAT WOULD NECESSITATE MODIFICATION TO THE PROPOSED DESIGN. CONTACT NC-811 UTILITY LOCATING SERVICE AND UNC (919-962-8394) AT LEAST 48-HRS PRIOR TO EXCAVATION.
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8. DEMOLITION AND PATCHING OF PAVEMENTS, SIDEWALKS AND OTHER EXISTING PAVED SURFACES IN ADDITION TO THAT INDICATED ON THIS PLAN SHALL BE PERFORMED AS REQUIRED TO CONSTRUCT AND INSTALL NEW UTILITIES AND OTHER IMPROVEMENTS. ALL SUCH DEMOLITION AND PATCHING SHALL BE INCLUDED IN THE BASE BID SCOPE OF WORK.
9. PROTECT ALL ADJACENT PROPERTIES, THE GENERAL PUBLIC AND ALL OF THE OWNER'S FACILITIES FROM DAMAGE DURING CONSTRUCTION. SHOULD DAMAGES OCCUR, REPAIR IMMEDIATELY AS DIRECTED BY THE ARCHITECT.
10. ALL DEMOLITION AND CONSTRUCTION ACTIVITIES SHALL BE COORDINATED AND SCHEDULED TO MAINTAIN FIRE DEPARTMENT ACCESS TO DAUER DRIVE THROUGHOUT CONSTRUCTION.
11. COORDINATE ALL FIRE SPRINKLER SYSTEM OUTAGES WITH UNC FIRE MARSHAL OFFICE.
12. UNC APPROVED HAZARDOUS WASTE HANDLING VENDORS:
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    - 12.2. CLEAN HARBORS (JONATHAN STUTTS, 336-361-6195)
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EXISTING BRICK PAVERS

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2. BRICK PAVERS SHALL BE CAREFULLY CLEANED AND INSPECTED PRIOR TO INSTALLATION.
3. ONLY UNDAMAGED BRICK PAVERS SHALL BE USED FOR REINSTALLATION.
4. DAMAGED BRICK PAVERS SHALL BE REMOVED FROM THE SITE AND REPLACED WITH MATCHING BRICK PAVERS IN QUANTITY AS NEEDED.
5. SUBMIT SAMPLE BRICK PAVERS TO OWNER AND ARCHITECT PRIOR FOR APPROVAL PRIOR TO PURCHASE.
6. SEE KEYNOTE "A" ON STAKING PLAN C101 FOR MORE INFORMATION.

LORD AECK SARGENT

REVISION:

CLH DESIGN
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400 Regency Forest Dr.
Suite 120
Cary, NC 27518
Phone: 919.319.6716
LA: C-106, PE: C-1585

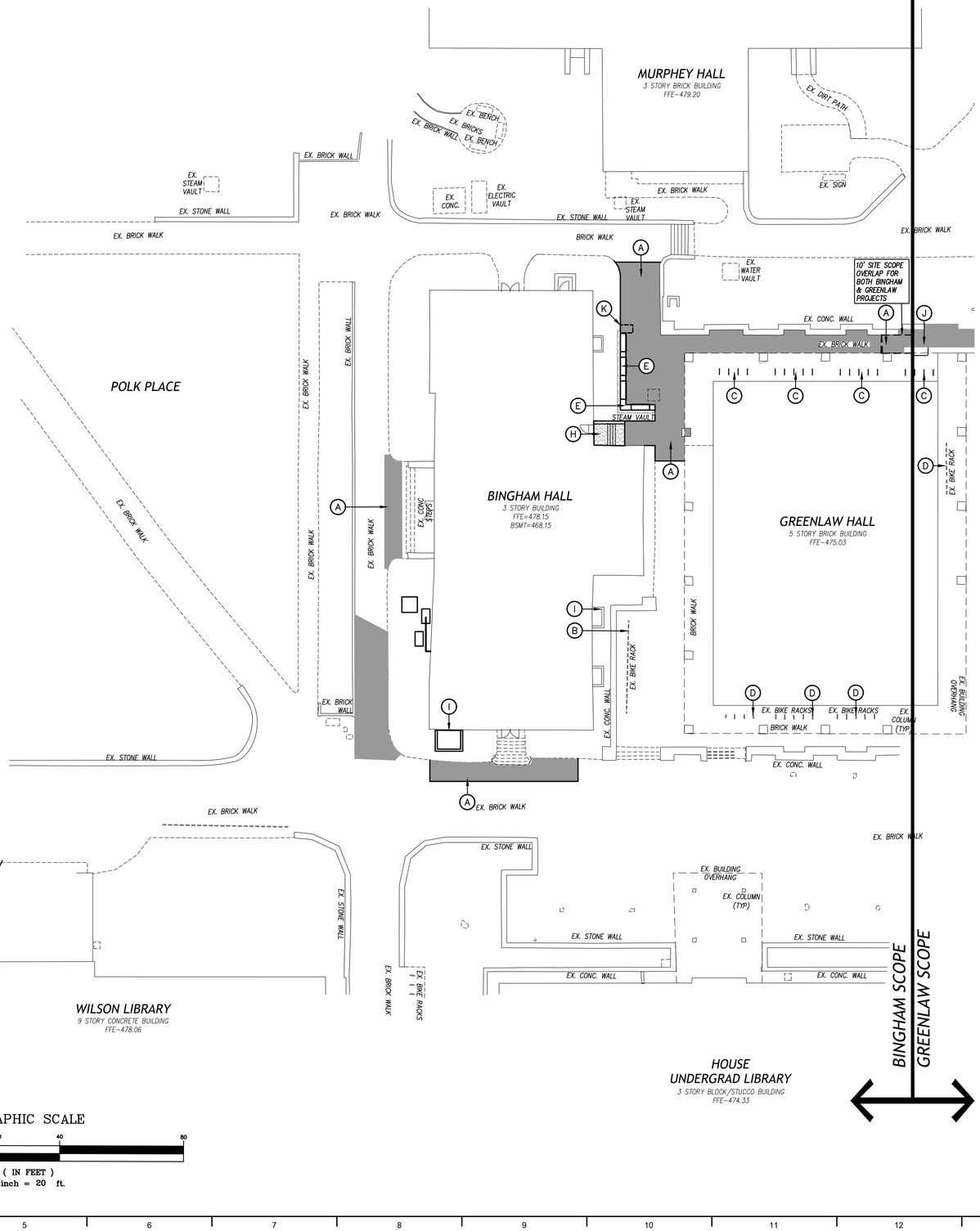
SHEET TITLE
GREENLAW SCOPE
EXISTING SITE CONDITION, DEMOLITION AND TREE PROTECTION PLAN

JOB NAME
University of North Carolina - Chapel Hill
SCD#: 21-23548-02A UNC Project No. 021212
BINGHAM HALL RENOVATION
LOCATION
36 Lenoir Drive, Chapel Hill, NC 27514

Digitally signed by Steven J. Miller
Date: 2024.01.11 14:36:52-05'00'

NORTH CAROLINA REGISTERED SEAL 022625 ENGINEER STEVEN J. MILLER

ISSUE DATE
1/8/2024
JOB. NO.
11706-00
DWG. NO.
C102



KEY NOTES

- (A) REMOVE EX BRICK PAVERS TO THE MINIMUM LIMITS SHOWN. PERFORM CUT/FILL AND FINE GRADE SUBGRADE FOR POSITIVE DRAINAGE AS DIRECTED BY THE ENGINEER AND REINSTALL PAVERS (BIDDERS SHALL INCLUDE PROVIDING AND INSTALLING AN AVERAGE OF 6-IN OF ABC FILL AND CUTTING AND REMOVING AN AVERAGE OF 6-IN OF EX EARTH BENEATH REINSTALLED PAVERS IN SCOPE OF WORK). LIMITS OF PAVER REMOVAL AND REINSTALLATION IS SHOWN TO DEFINE THE EXTENT OF THE PAVER RE-GRADING WORK. REMOVE AND REINSTALL AS NEEDED TO ALLOW NEW WORK.
  ADDITIONAL PAVER REMOVAL AND RESTORATION WHICH IS REQUIRED TO ALLOW OTHER CONSTRUCTION AND SHALL BE INCLUDED IN THE BASE BID.
  INSTALL PAVERS TO MATCH EXISTING PATTERN.
  SEE UNIT PAVING SPECS FOR "NEW PAVER" TYPE IF NEW PAVERS ARE REQUIRED.
  SEE DETAIL SHEET C801.
- (B) EXISTING "U" STYLE CAMPUS STANDARD BIKE RACK TO REMAIN.
- (C) "U" STYLE CAMPUS STANDARD BIKE RACK, SEE SPECIFICATION 32 40 00.
- (D) EXISTING "RIBBON" STYLE BIKE RACK AT GREENLAW BUILDING NOT WITHIN THE SCOPE OF THIS OF THIS PROJECT TO REMAIN.
- (E) PROPOSED "UNIVERSE SYSTEM" SEAT WITH BACK AND ARMS BY LANDSCAPE FORMS, INC. SEE SPECIFICATION 32 40 00
- (F) REMOVE AND RECONSTRUCT EX WALL AS NEEDED TO ALLOW NEW DUCT BANK INSTALLATION. RECONSTRUCT WALL IMMEDIATELY AFTER DUCT BANK INSTALLATION.
- (H) 8'x10'x4" CONCRETE PAD AT NEW STAIRS
- (I) SEE ARCH PLANS FOR WINDOW WELL
- (J) NEW TRANSFORMER, SEE ELEC PLAN. ENSURE CLEARANCES AS SHOWN ON ELEC PLANS ARE MET.
- (K) 30" x 48" ADA CLEARSPACE

SITE RESTORATION NOTE

ALL AREAS OF NEW AND RESTORED SIDEWALK, PAVEMENT, PAVERS, WALLS, LANDSCAPING, ETC. ARE SHOWN ON THIS PLAN TO THE APPROXIMATE LIMITS EXPECTED TO BE IMPACTED BY CONSTRUCTION. THE CONTRACTOR SHALL RESTORE AND/OR RECONSTRUCT ALL EXISTING SURFACES AND SITE ELEMENTS TO THE FULL EXTENT TO WHICH THEY ARE REMOVED TO ALLOW NEW CONSTRUCTION OR OTHERWISE DAMAGED DURING ANY PHASE OF CONSTRUCTION.

LORD AECK SARGENT

REVISION:

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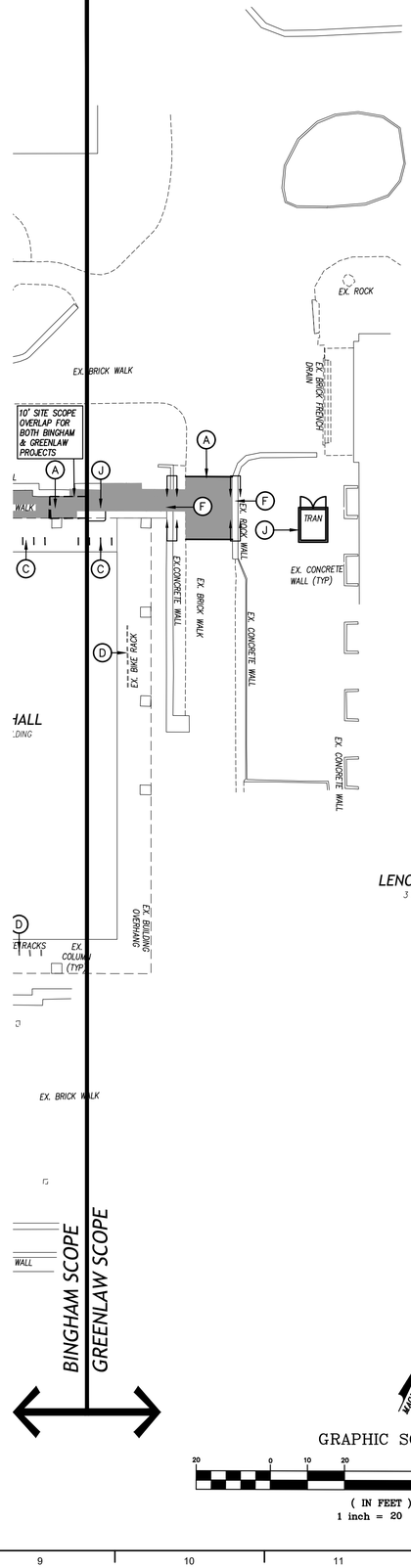
CLH Design, PA
400 Regency Forest Dr.
Suite 120
Cary, NC 27518
Phone: 919.319.6716
LA: C-106, PE: C-1585

SHEET TITLE: BINGHAM SCOPE SITE PLAN
SCALE (U.N.O.)

JOB NAME: University of North Carolina - Chapel Hill
SCOPE: 21-23548-02A UNC Project No. C021212
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

SEAL: NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT LIC. NO. 1047 KEITH DOWNING 1-5-24

ISSUE DATE: 1/8/2024
JOB. NO. 11706-00
DWG. NO. C201



KEY NOTES

- (A) REMOVE EX BRICK PAVERS TO THE MINIMUM LIMITS SHOWN. PERFORM CUT/FILL AND FINE GRADE SUBGRADE FOR POSITIVE DRAINAGE AS DIRECTED BY THE ENGINEER AND REINSTALL PAVERS (BIDDERS SHALL INCLUDE PROVIDING AND INSTALLING AN AVERAGE OF 6-IN OF ABC FILL AND CUTTING AND REMOVING AN AVERAGE OF 6-IN OF EX EARTH BENEATH REINSTALLED PAVERS IN SCOPE OF WORK). LIMITS OF PAVER REMOVAL AND REINSTALLATION IS SHOWN TO DEFINE THE EXTENT OF THE PAVER RE-GRADING WORK. REMOVE AND REINSTALL AS NEEDED TO ALLOW NEW WORK.
  ADDITIONAL PAVER REMOVAL AND RESTORATION WHICH IS REQUIRED TO ALLOW OTHER CONSTRUCTION AND SHALL BE INCLUDED IN THE BASE BID.
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- (B) EXISTING "U" STYLE CAMPUS STANDARD BIKE RACK TO REMAIN.
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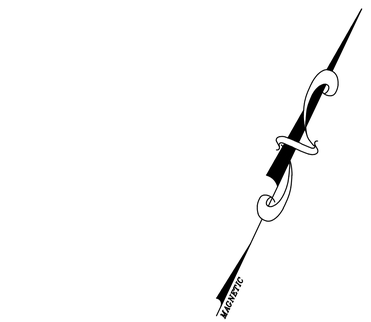
- (D) EXISTING "RIBBON" STYLE BIKE RACK AT GREENLAW BUILDING NOT WITHIN THE SCOPE OF THIS OF THIS PROJECT TO REMAIN.
- (E) PROPOSED "UNIVERSE SYSTEM" SEAT WITH BACK AND ARMS BY LANDSCAPE FORMS, INC. SEE SPECIFICATION 32 40 00
- (F) REMOVE AND RECONSTRUCT EX WALL AS NEEDED TO ALLOW NEW DUCT BANK INSTALLATION. RECONSTRUCT WALL IMMEDIATELY AFTER DUCT BANK INSTALLATION.
- (H) 8'x10'x4" CONCRETE PAD AT NEW STAIRS
- (I) SEE ARCH PLANS FOR WINDOW WELL
- (J) NEW TRANSFORMER, SEE ELEC PLAN. ENSURE CLEARANCES AS SHOWN ON ELEC PLANS ARE MET.
- (K) 30" x 48" ADA CLEARSPACE

SITE RESTORATION NOTE

ALL AREAS OF NEW AND RESTORED SIDEWALK, PAVEMENT, PAVERS, WALLS, LANDSCAPING, ETC. ARE SHOWN ON THIS PLAN TO THE APPROXIMATE LIMITS EXPECTED TO BE IMPACTED BY CONSTRUCTION. THE CONTRACTOR SHALL RESTORE AND/OR RECONSTRUCT ALL EXISTING SURFACES AND SITE ELEMENTS TO THE FULL EXTENT TO WHICH THEY ARE REMOVED TO ALLOW NEW CONSTRUCTION OR OTHERWISE DAMAGED DURING ANY PHASE OF CONSTRUCTION.



GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

LORD AECK SARGENT

REVISION:

CLH DESIGN

CLH Design, PA
400 Regency Forest Dr.
Suite 120
Cary, NC 27518
Phone: 919.319.6716
LA: C-106, PE: C-1585

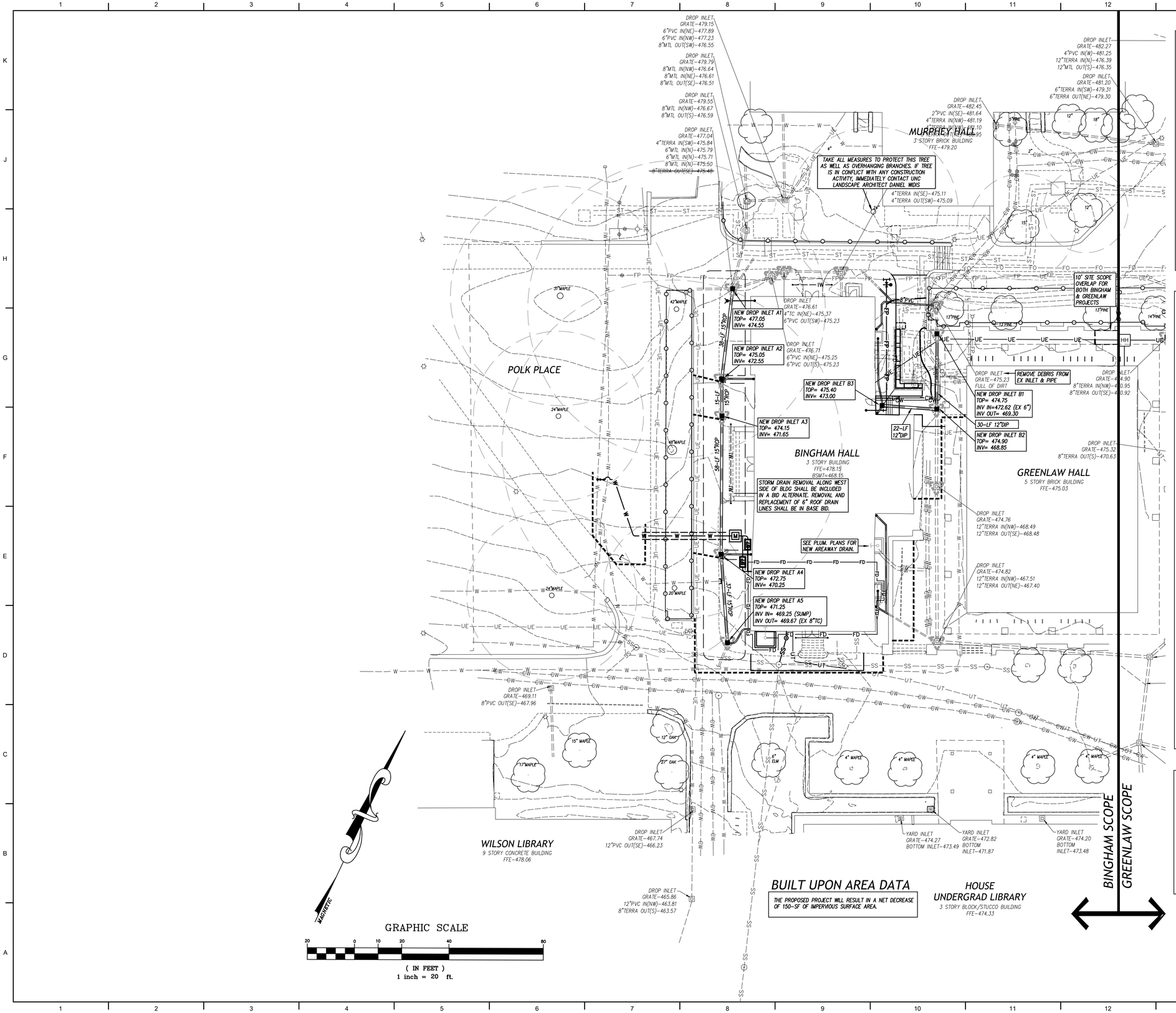
SHEET TITLE
GREENLAW SCOPE
SITE PLAN

SCALE (UNO.)

JOB NAME
University of North Carolina - Chapel Hill
SCD#: 21-23548-02A UNC Project No. CI21212
BINGHAM HALL RENOVATION
LOCATION
36 Lenoir Drive, Chapel Hill, NC 27514

SEAL
NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT No. 1047 SEAL KENNETH DOWNING
1-5-24

ISSUE DATE
1//2024
JOB. NO.
11706-00
DWG. NO.
C202



LEGEND

- EXISTING CONTOURS
- FINAL CONTOURS
- 270.4' + EXISTING SURVEY SPOT ELEVATION
- 270.50T PROPOSED TOP OF CURB SPOT ELEVATION
- 270.50 PROPOSED GROUND/PAVEMENT ELEVATION
- A1 STORM STRUCTURE NUMBER
- EXISTING STORM DRAIN PIPE
- PROPOSED STORM DRAIN PIPE
- EXISTING STORM DRAIN
- PROPOSED STORM DRAIN
- CO EXISTING CLEAN OUT
- PROPOSED CLEAN OUT
- TEMPORARY TREE PROTECTION FENCE
- TEMPORARY SILT FENCE
- SILT COMPOST LOG
- LIMITS OF SITE DISTURBANCE
- SILT BAG INLET PROTECTION

SEE SHEET C-303 FOR COURTYARD GRADING ENLARGEMENT

SEE SHEET C-802 FOR CONCRETE SEATWALL DETAILS

GENERAL NOTES

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH ALL TOWN OF CHAPEL HILL, OWASA AND UNC STANDARDS AND SPECIFICATIONS.
2. TOTAL DISTURBED AREA = 10,000-SF (0.231-AC)
3. CONTRACTOR SHALL ADJUST ALL EXISTING VAULTS, MANHOLES, STORM DRAIN STRUCTURES, CLEANOUTS, ETC. AS NEEDED TO MATCH FINISH GRADE.
4. ALL BACKFILL, COMPACTION, SOILS TESTING, ETC. SHALL BE PERFORMED BY THE OWNERS INDEPENDENT TESTING LABORATORY. (SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION)
5. ANY AND ALL LANDSCAPING AND EXISTING TREES & SHRUBS INDICATED TO REMAIN OR LOCATED OUTSIDE OF THE CONSTRUCTION LIMITS WHICH ARE DAMAGED DURING DEMOLITION OR CONSTRUCTION SHALL BE REPLACED BY THE CONTRACTOR UTILIZING A LICENSED LANDSCAPE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
6. THE GRADING CONTRACTOR SHALL BE RESPONSIBLE FOR OFF-SITE DISPOSAL OF ALL CLEARING AND GRADING WASTE MATERIALS GENERATED DURING CONSTRUCTION AND FOR OBTAINING ALL APPLICABLE PERMITS FOR OFF-SITE STOCKPILES AND/OR WASTE AREAS.
7. THE CONTRACTOR SHALL COMPLY WITH ALL STATE AND LOCAL CODES IN OBSERVING EROSION CONTROL MEASURES BOTH ON AND OFF SITE. ALL OFF-SITE SOIL BORROW AND WASTE SITES SHALL BE PROPERLY PERMITTED FOR SUCH ACTIVITIES.
8. THE GRADING CONTRACTOR SHALL MAINTAIN ALL EROSION CONTROL DEVICES AFTER EACH RAINFALL EVENT OR AS DIRECTED BY THE ARCHITECT AND SHALL PERFORM AND DOCUMENT INSPECTIONS WEEKLY AND AFTER RAINFALL EVENTS OF 0.5-IN OR GREATER.
9. REMOVE ANY ACCUMULATED DEBRIS OR SEDIMENT FROM ALL STORM DRAINAGE PIPES FOLLOWING SITE STABILIZATION. CLEANING SHALL BE PERFORMED IN A MANNER WHICH PREVENTS SEDIMENT FROM BEING FLUSHED THROUGH PIPES TO CAMPUS STREAMS. CLEANING OF SYSTEM SHALL BE PERFORMED AS NEEDED TO MAINTAIN PROPER FUNCTIONING OF THE DRAINAGE SYSTEM.
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14. ALL WATER PUMPED FROM TRENCHES OR OTHER EXCAVATIONS SHALL BE PUMPED THROUGH A DE-WATERING SEDIMENT FILTER BAG BEFORE FLOWING INTO ANY STORM DRAINAGE SYSTEM.
15. ALL TRENCHES FOR PIPE INSTALLATION SHALL BE BACKFILLED DAILY.
16. PROVIDE AND MAINTAIN A RAIN GAUGE ON SITE THROUGHOUT CONSTRUCTION. MONITOR AND RECORD RAIN ON A DAILY BASIS.
17. MANAGEMENT OF FUEL AND OIL ON THE PROJECT SITE SHALL BE CONDUCTED IN ACCORDANCE WITH THE UNC SPILL PREVENTION CONTROL AND COUNTERMEASURES (SPCC) PLAN CONSTRUCTION SITE GUIDELINES.

CONSTRUCTION SEQUENCE

1. INSTALL TREE PROTECTION AND CONSTRUCTION FENCING.
2. CONDUCT PRE-CONSTRUCTION CONFERENCE. INVITE UNC EHS (919-833-7163).
3. INSTALL PERIMETER SILT BARRIERS AND INLET PROTECTION DEVICES ON EXISTING INLETS.
4. PERFORM CONSTRUCTION.
5. VEGETATE (OR OTHERWISE STABILIZE WITH PAVEMENT, ETC.) IMMEDIATELY ALL DISTURBED AREAS WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED IN ACCORDANCE WITH THE SLOPE AND SURFACE STABILIZATION NOTES ON THIS PLAN.
6. MAINTAIN ALL EROSION & SEDIMENT CONTROL MEASURES THROUGHOUT CONSTRUCTION.
7. RESPREAD TOPSOIL AND VEGETATE REMAINING DISTURBED AREAS.
8. SCHEDULE AND COORDINATE LANDSCAPE INSTALLATION WITH UNC GROUNDS.
9. CALL FOR INSPECTION OF STABILIZED SITE. IF APPROVED, REMOVE TEMPORARY MEASURES.

LORD AECK SARGENT

REVISION:

CLH DESIGN
CLH Design, PA
400 Regency Forest Dr.
Suite 120
Cary, NC 27518
Phone: 919.319.6716
LA: C-106, PE: C-1585

SHEET TITLE: BINGHAM SCOPE GRADING & EROSION CONTROL PLAN

SCALE (U/N.O.)

JOB NAME: University of North Carolina - Chapel Hill
SCO#: 21-23548-02A
UNC Project No. C212122
BINGHAM HALL RENOVATION

LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

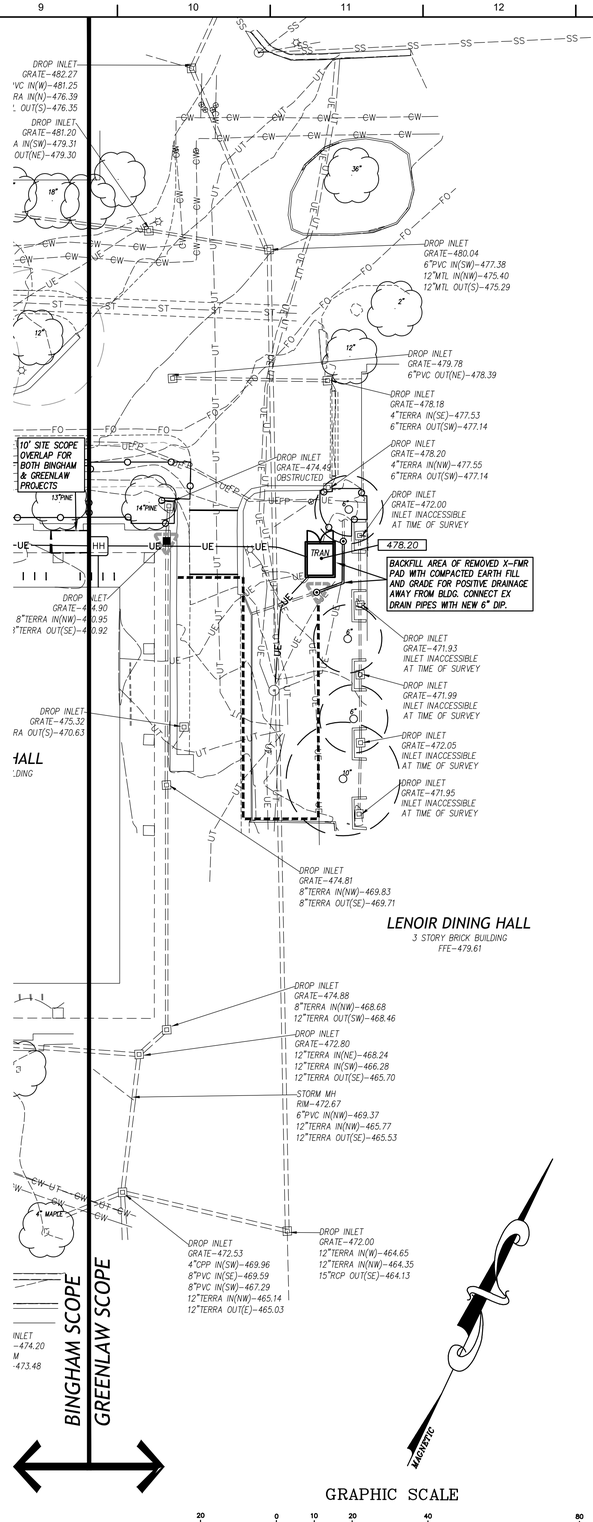
Digitally signed by Steven J. Miller
Date: 2024.01.08 14:37:26-05'00'

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT SEAL 022625 ENGINEER STEVEN J. MILLER

ISSUE DATE: 1/8/2024

JOB. NO.: 11706-00

DWG. NO.: C301



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SEE SHEET C-303 FOR COURTYARD GRADING ENLARGEMENT

SEE SHEET C-802 FOR CONCRETE SEATWALL DETAILS

GENERAL NOTES

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH ALL TOWN OF CHAPEL HILL, OWASA AND UNC STANDARDS AND SPECIFICATIONS.
2. TOTAL DISTURBED AREA = 10,000-SF (0.231-AC)
3. CONTRACTOR SHALL ADJUST ALL EXISTING VAULTS, MANHOLES, STORM DRAIN STRUCTURES, CLEANOUTS, ETC. AS NEEDED TO MATCH FINISH GRADE.
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CONSTRUCTION SEQUENCE

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2. CONDUCT PRE-CONSTRUCTION CONFERENCE. INVITE UNC EHS (919-833-7163).
3. INSTALL PERIMETER SILT BARRIERS AND INLET PROTECTION DEVICES ON EXISTING INLETS.
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Digitally signed by Steven J. Miller
Date: 2024.01.02 14:38:41-05'00'

NORTH CAROLINA PROFESSIONAL SEAL 022625 ENGINEER STEVEN J. MILLER

LORD AECK SARGENT

REVISION:

CLH DESIGN
CLH Design, PA
400 Regency Forest Dr.
Suite 120
Cary, NC 27518
Phone: 919.319.6716
LA: C-106, PE: C-1585

SHEET TITLE
GREENLAW SCOPE
GRADING & EROSION CONTROL PLAN

SCALE (U/A.D.)

JOB NAME
University of North Carolina - Chapel Hill

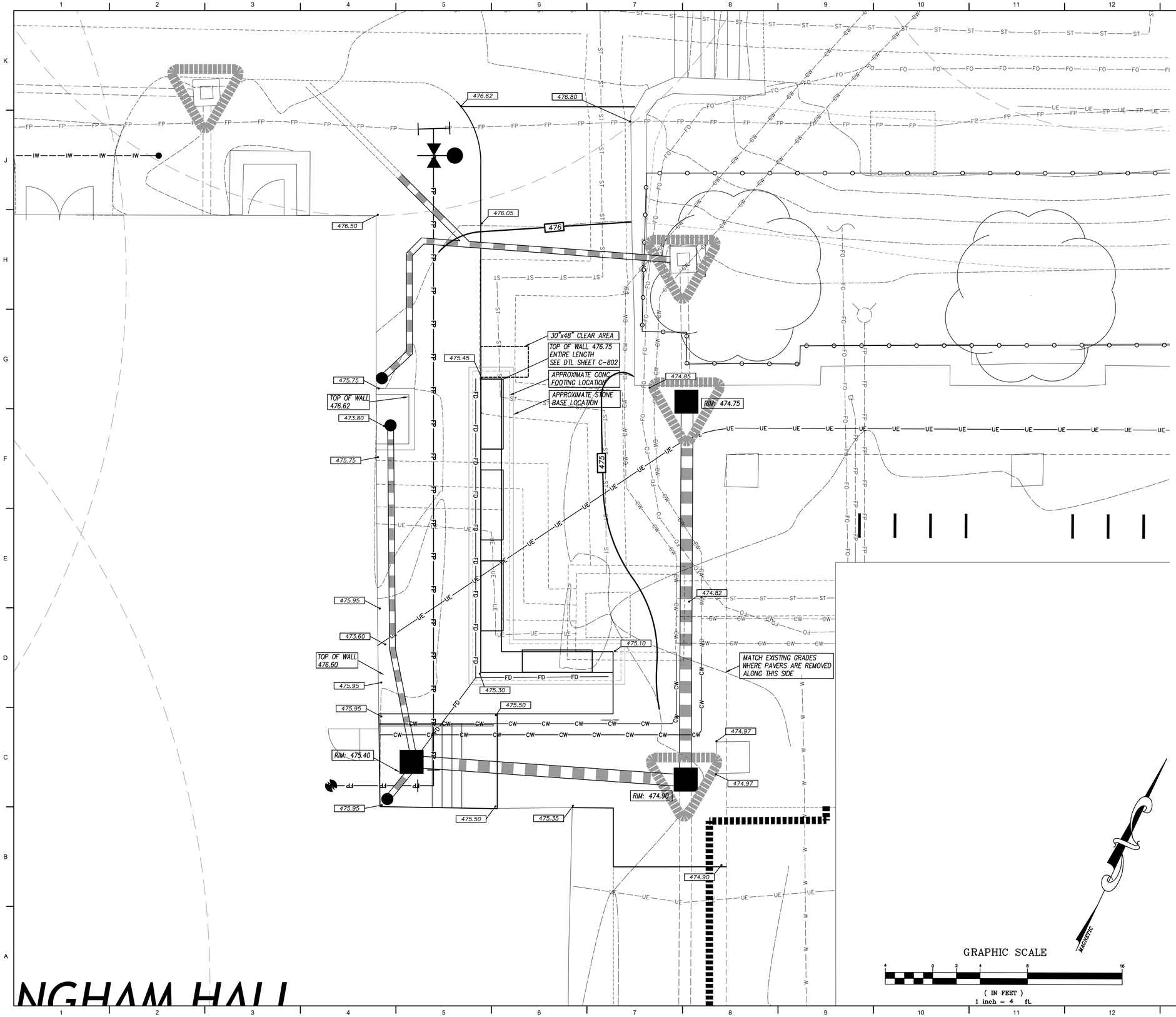
SCOPE 21-23548-02A UNC Project No. CI21212
BINGHAM HALL RENOVATION

LOCATION
36 Lenoir Drive, Chapel Hill, NC 27514

ISSUE DATE
1/8/2024

JOB. NO.
11706-00

DWG. NO.
C302



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SEE SHEET C-303 FOR COURTYARD GRADING ENLARGEMENT

SEE SHEET C-802 FOR CONCRETE SEATWALL DETAILS

GENERAL NOTES

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9. CALL FOR INSPECTION OF STABILIZED SITE. IF APPROVED, REMOVE TEMPORARY MEASURES.

MAGNETIC

GRAPHIC SCALE

4 0 2 4 8 16

(IN FEET)

1 inch = 4 ft.

NGHAM HALL

LORD AECK SARGENT

REVISION:

CLH DESIGN
CLH Design, PA
400 Regency Forest Dr.
Suite 120
Cary, NC 27518
Phone: 919.319.6716
LA: C-106, PE: C-1585

SHEET TITLE
BINGHAM SCOPE
GRADING ENLARGEMENT

SCALE (UNO)

JOB NAME
University of North Carolina - Chapel Hill

SCH#: 21-23548-02A UNC Project No. CI21212

BINGHAM HALL RENOVATION

LOCATION
36 Lenoir Drive, Chapel Hill, NC 27514

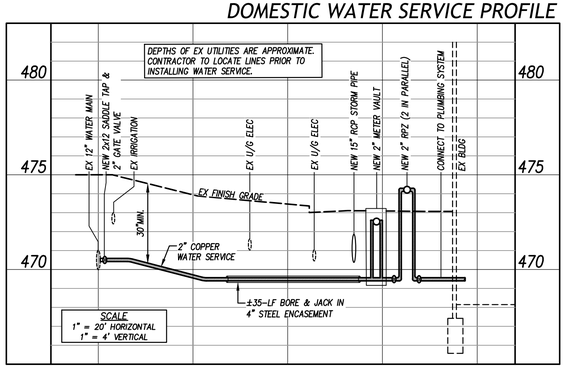
Digitally signed by Steven J. Miller
Date: 2024.01.18 14:51:18-05'00'

NORTH CAROLINA PROFESSIONAL SEAL 022625 ENGINEER STEVEN J. MILLER

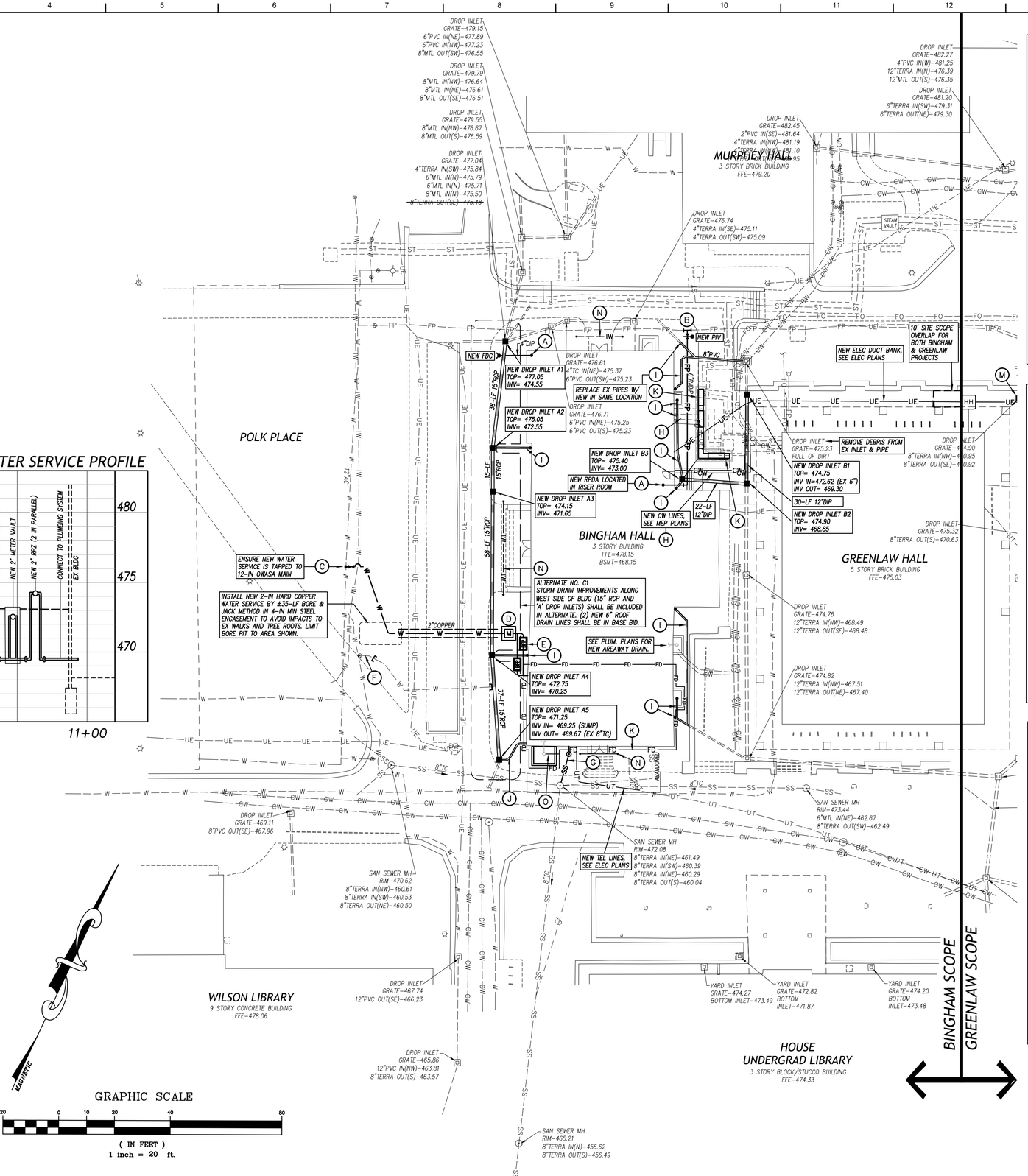
ISSUE DATE
1/8/2024

JOB. NO.
11706-00

DWG. NO.
C303



DOMESTIC WATER SERVICE PROFILE



UTILITY LEGEND

	EXISTING	PROPOSED
CHILLED WATER	------CW------	CW
ELECTRICAL (OVERHEAD)	------ E ------	E
ELECTRICAL (UNDERGROUND)	------UE------	UE
FOUNDATION DRAIN	------FD------	FD
FIBER OPTIC COMMUNICATION	------FO------	FO
FIRE PROTECTION	------FP------	FP
HOT WATER	------HW------	HW
IRRIGATION	------IW------	IW
SANITARY SEWER	------SS------	SS
STEAM PIPE/TUNNEL	------ST------	ST
TELEPHONE (OVERHEAD)	------ T ------	T
TELEPHONE (UNDERGROUND)	------UT------	UT
WATER	------ W ------	W
STORM DRAIN	═══════	
LIGHT POLE	LP	
UTILITY POLE	PP	
MANHOLE	MH	
CLEAN OUT	CO	
DROP INLET,CATCH BASIN	DI, CB	
FIRE HYDRANT	FH	
WATER VALVE	WV	
POST INDICATOR VALVE		
THRUST BLOCKING		

GENERAL UTILITY NOTES

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH ALL UNC, TOWN OF CHAPEL HILL, OWASA AND NCDOT STANDARDS AND SPECIFICATIONS.
2. INSTALL DOMESTIC WATER SERVICE LINE WITH MIN COVER OF 30-IN.
3. INSTALL FIRE PROTECTION LINE WITH MIN COVER OF 42-IN.
4. ALL NEW WATERLINES 4-IN OR GREATER SHALL BE INSTALLED WITH RESTRAINED JOINTS.
5. INSTALL ALL UTILITIES TO PROVIDE REQUIRED CLEARANCES PER OWASA STANDARDS.
6. WATER MAINS AND SEWER MAINS SHALL BE INSTALLED WITH A MINIMUM VERTICAL CLEARANCE OF 24-IN TO STORM DRAINAGE PIPES.
7. VERIFY EXISTING CONDITIONS AND CONNECTIONS TO EXISTING UTILITIES PRIOR TO CONSTRUCTION. NOTIFY ARCHITECT IF ANY DISCREPANCIES ARE DISCOVERED.
8. CONTRACTOR IS RESPONSIBLE FOR ALL DAMAGES DURING CONSTRUCTION AND SHALL MAKE REPAIRS AT NO EXPENSE TO THE OWNER.
9. ALL CONSTRUCTION SHALL COMPLY WITH ALL APPLICABLE NCSBC AND OSHA REQUIREMENTS.
10. THE CONTRACTOR SHALL PROVIDE AN AS-BUILT SURVEY OF ALL UTILITY AND STORM DRAINAGE IMPROVEMENTS FOLLOWING CONSTRUCTION. SEE SPECIFICATIONS FOR MINIMUM REQUIREMENTS.
11. REPAIR OF SURFACES, INCLUDING PAVEMENT PATCHING, SHALL BE INCLUDED IN BASE BID FOR UTILITY INSTALLATIONS.
12. CONTRACTOR SHALL PHASE DEMOLITION AND NEW CONSTRUCTION TO ENSURE UNINTERRUPTED ACCESS AND UTILITY SERVICE TO ADJACENT FACILITIES. IN THE EVENT OF AN UNAVOIDABLE UTILITY DISRUPTION, THE CONTRACTOR IS TO COORDINATE TEMPORARY UTILITY SHUT-DOWNS WITH OWNER/UNC AT LEAST THREE WEEKS PRIOR TO COMMENCEMENT OF ANY NECESSARY DISRUPTION.
13. ALL ROOF DRAINS AND WINDOW WELL DRAINS SHALL BE 6" DIP AT 1.04% MIN. SLOPE UNLESS INDICATED OTHERWISE.
11. ALL UNDERGROUND UTILITY LINES OUTSIDE OF THE BUILDING FOOTPRINT, EXCEPT LAWN IRRIGATION LINES, SHALL BE PROVIDED WITH ELECTRONICALLY DETECTABLE WARNING TAPE INSTALLED AT A DEPTH OF 6-24 INCHES BELOW FINISH GRADE DIRECTLY OVER PIPING.
    - WARNING TAPES SHALL BE MIN. 3-IN WIDE WITH LETTERING TO IDENTIFY BURIED LINE BELOW.
    - AN INSULATED COPPER TRACER WIRE OR OTHER APPROVED CONDUCTOR SHALL BE INSTALLED ADJACENT TO UNDERGROUND NON-METALIC GAS LINES. ACCESS SHALL BE PROVIDED TO THE TRACER WIRE OR THE TRACER WIRE SHALL TERMINATE ABOVE-GROUND AT THE END OF THE NON-METALIC PIPING. THE TRACER WIRE SIZE SHALL BE NOT LESS THAN 18-AWG AND THE INSULATION TYPE SHALL BE SUITABLE FOR DIRECT BURIAL.

KEY NOTES

- (A) EXTEND FP LINE TO 12" A.F.F. COORD. EXACT LOCATION WITH FP CONTR.
- (B) NEW 10x6 TAPPING SLEEVE AND VALVE [OWASA STD. 512.04]. PROVIDE INDICATOR POST ON TAPPING VALVE. VERIFY EX FP LINE SIZE IN FIELD.
- (C) NEW 2x12 DOM. WATER SADDLE TAP WITH GATE VALVE [OWASA STD. 515.04].
- (D) NEW 2" DOM. WATER METER VAULT [OWASA STD. 515.04]. RELOCATE EX 2" METER TO NEW SETTER AND VAULT.
- (E) (2) NEW 2" RP BACKFLOW ASSEMBLIES IN HEATED ENCLOSURES INSTALLED IN PARALLEL. INSTALL 2-IN GATE VALVES UPSTREAM AND DOWNSTREAM OF EACH BACKFLOW PREVENTER TO ALLOW SEPARATE ISOLATION OF EACH DEVICE (VALVES NOT SHOWN IN PLAN FOR CLARITY). JOIN TWO COPPER LINES WITH A TEE FITTING WITH 2"x3" INCREASER AND EXTEND 3" COPPER WATER SERVICE TO BLDG. COORDINATE CONNECTION TO PLUMBING SYSTEM WITH P.C.
- (F) REMOVE EX WATER SERVICE AT MAIN PER OWASA STANDARDS AND ABANDON SECTION OF SERVICE IN-PLACE IN VICINITY OF EX TREE.
- (G) REPLACE EX SAN SEWER SERVICE WITH NEW 6-IN DIP. CONNECT TO EX MH WITH OUTSIDE DROP CONNECTION [OWASA STD. 532.03]. SET NEW CLEANOUT AT 5'-0" OUTSIDE BLDG. COORDINATE EXACT LOCATION WITH P.C. COORDINATE ASSESSMENT OF EX MANHOLE BY OWASA TO VERIFY MANHOLE DOES NOT REQUIRE FULL REPLACEMENT.
- (H) ALL BACKFILL MATERIAL PLACED BETWEEN THE EX STREAM TUNNEL AND NEW DUCTBANK AND CHILLED WATERLINES SHALL BE EXCAVATABLE FLOWABLE FILL.
- (I) NEW 6" PVC ROOF DRAIN OR WINDOW WELL DRAIN (SEE GEN UTIL NOTE 13).
- (J) NEW 3" PVC STORM DRAIN FORCEMAIN. CONNECT TO PLUMBING LINE AT 5'-0" OUTSIDE BUILDING AND EXTEND TO DROP INLET.
- (K) FOUNDATION DRAIN. SEE SPECIFICATIONS.
- (L) 4" PVC CONDUIT FOR FUTURE IRRIGATION
- (M) REMOVE AND REPLACE EX DROP INLET TO ALLOW NEW DUCT BANK INSTALLATION
- (N) 4" PVC CONDUIT WITH VERTICAL STUBS FOR FUTURE IRRIGATION
- (O) CONNECT FOUNDATION DRAIN TO AREAWAY DRAIN PIPING. SEE PLUMBING PLANS FOR AREAWAY DRAIN BY P.C. AND CONTINUATION INTO BUILDING.

LORD AECK SARGENT

REVISION:

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LA: C-106, PE: C-1585

SHEET TITLE
BINGHAM SCOPE
SITE UTILITY PLAN

SCALE (U.N.O.)

JOB NAME
University of North Carolina - Chapel Hill
SCI#: 21-23548-02A UNC Project No. C21212

LOCATION
BINGHAM HALL RENOVATION
36 Lenoir Drive, Chapel Hill, NC 27514

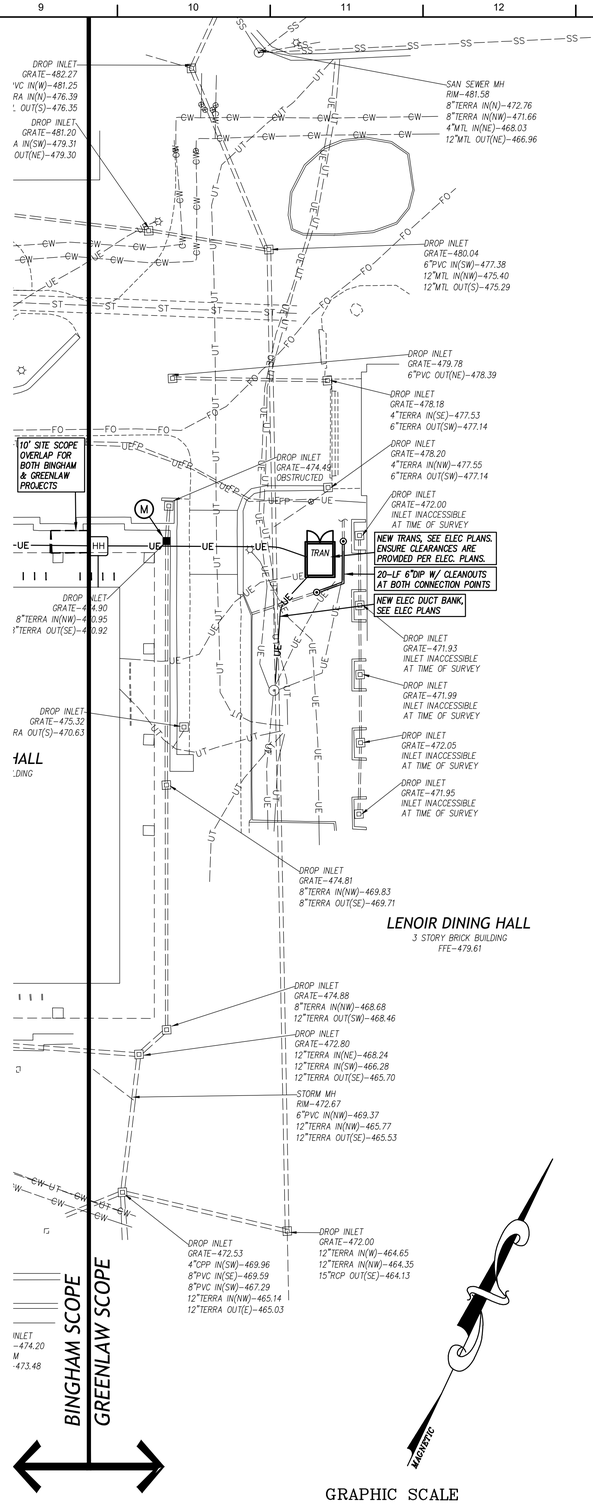
Digitally signed by Steven J. Miller
Date: 2024.01.08 11:52:39-05'00'

NORTH CAROLINA PROFESSIONAL SEAL 022625 ENGINEER STEVEN J. MILLER

ISSUE DATE
1/8/2024

JOB. NO.
11706-00

DWG. NO.
C401



UTILITY LEGEND

	EXISTING	PROPOSED
CHILLED WATER	------CW------	CW
ELECTRICAL (OVERHEAD)	------ E ------	E
ELECTRICAL (UNDERGROUND)	------UE------	UE
FOUNDATION DRAIN	------FD------	FD
FIBER OPTIC COMMUNICATION	------FO------	FO
FIRE PROTECTION	------FP------	FP
HOT WATER	------HW------	HW
IRRIGATION	------IW------	IW
SANITARY SEWER	------SS------	SS
STEAM PIPE/TUNNEL	------ST------	ST
TELEPHONE (OVERHEAD)	------ T ------	T
TELEPHONE (UNDERGROUND)	------UT------	UT
WATER	------ W ------	W
STORM DRAIN	═══════	═══════
LIGHT POLE	LP	
UTILITY POLE	PP	
MANHOLE	MH	
CLEAN OUT	CO	
DROP INLET,CATCH BASIN	DI, CB	
FIRE HYDRANT	FH	
WATER VALVE	WV	
POST INDICATOR VALVE		
THRUST BLOCKING		

GENERAL UTILITY NOTES

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH ALL UNC, TOWN OF CHAPEL HILL, OWASA AND NCDOT STANDARDS AND SPECIFICATIONS.
2. INSTALL DOMESTIC WATER SERVICE LINE WITH MIN COVER OF 30-IN.
3. INSTALL FIRE PROTECTION LINE WITH MIN COVER OF 42-IN.
4. ALL NEW WATERLINES 4-IN OR GREATER SHALL BE INSTALLED WITH RESTRAINED JOINTS.
5. INSTALL ALL UTILITIES TO PROVIDE REQUIRED CLEARANCES PER OWASA STANDARDS.
6. WATER MAINS AND SEWER MAINS SHALL BE INSTALLED WITH A MINIMUM VERTICAL CLEARANCE OF 24-IN TO STORM DRAINAGE PIPES.
7. VERIFY EXISTING CONDITIONS AND CONNECTIONS TO EXISTING UTILITIES PRIOR TO CONSTRUCTION. NOTIFY ARCHITECT IF ANY DISCREPANCIES ARE DISCOVERED.
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LORD AECK SARGENT

REVISION:

CLH DESIGN
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Phone: 919.319.6716
LA: C-106, PE: C-1585

SHEET TITLE: GREENLAW SCOPE SITE UTILITY PLAN

SCALE (U.N.O.)

JOB NAME: University of North Carolina - Chapel Hill

SCO#: 21-23548-02A UNC Project No. C21212

LOCATION: BINGHAM HALL RENOVATION

36 Lenoir Drive, Chapel Hill, NC 27514

Digitally signed by Steven J. Miller
Date: 2024.01.02 14:54:58-05'00'

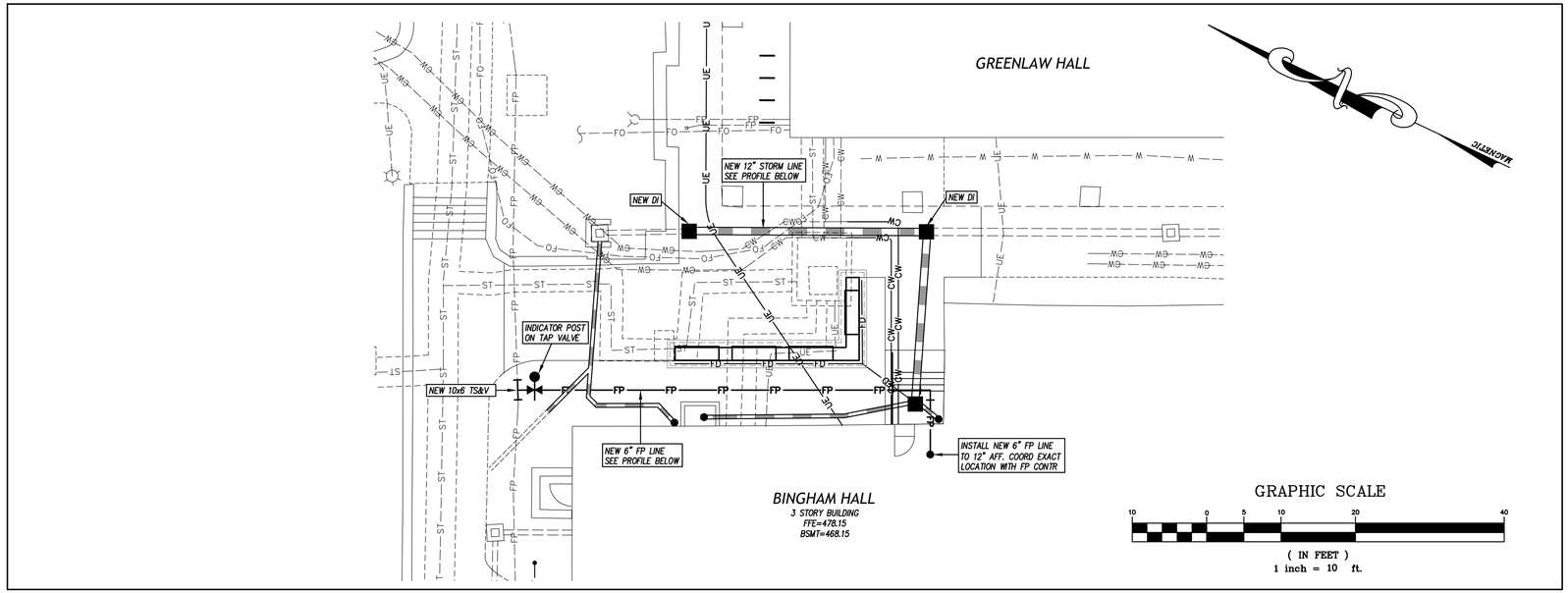
NORTH CAROLINA PROFESSIONAL SEAL 022625 ENGINEER STEVEN J. MILLER

ISSUE DATE: 1/8/2024

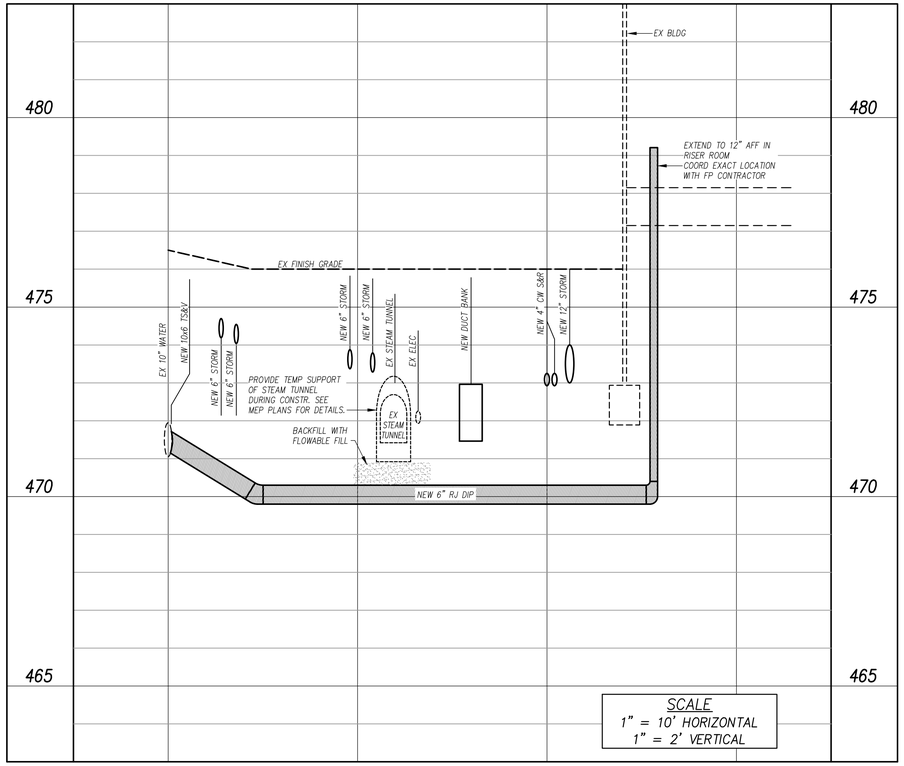
JOB. NO. 11706-00

DWG. NO. C402

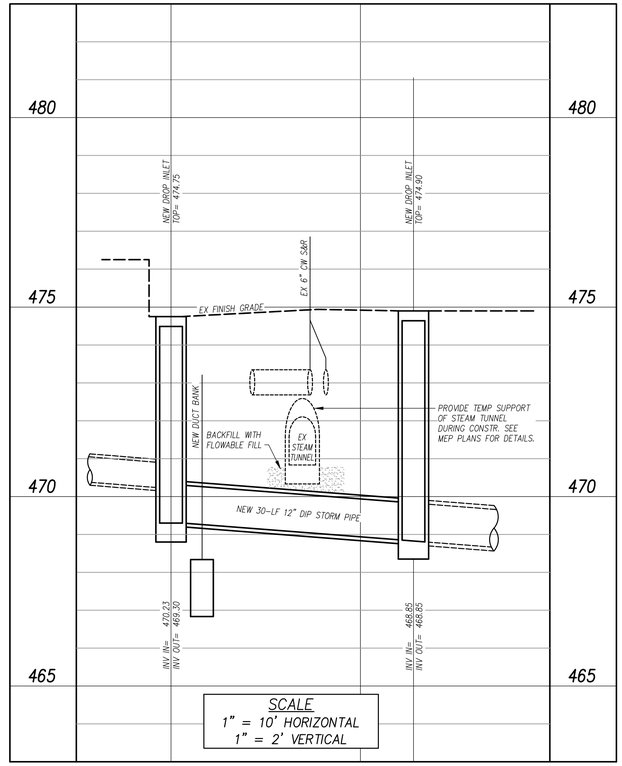
PLAN



FIRE LINE PROFILE



STORM DRAIN PROFILE



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SHEET TITLE
FIRE PROTECTION & STORM DRAIN PROFILES

SCALE (U.N.O.)

JOB NAME
University of North Carolina - Chapel Hill

SCOPE 21-23548-02A
UNC Project No. C21212

BINGHAM HALL RENOVATION

LOCATION
36 Lenoir Drive, Chapel Hill, NC 27514

Digitally signed by Steven J. Miller
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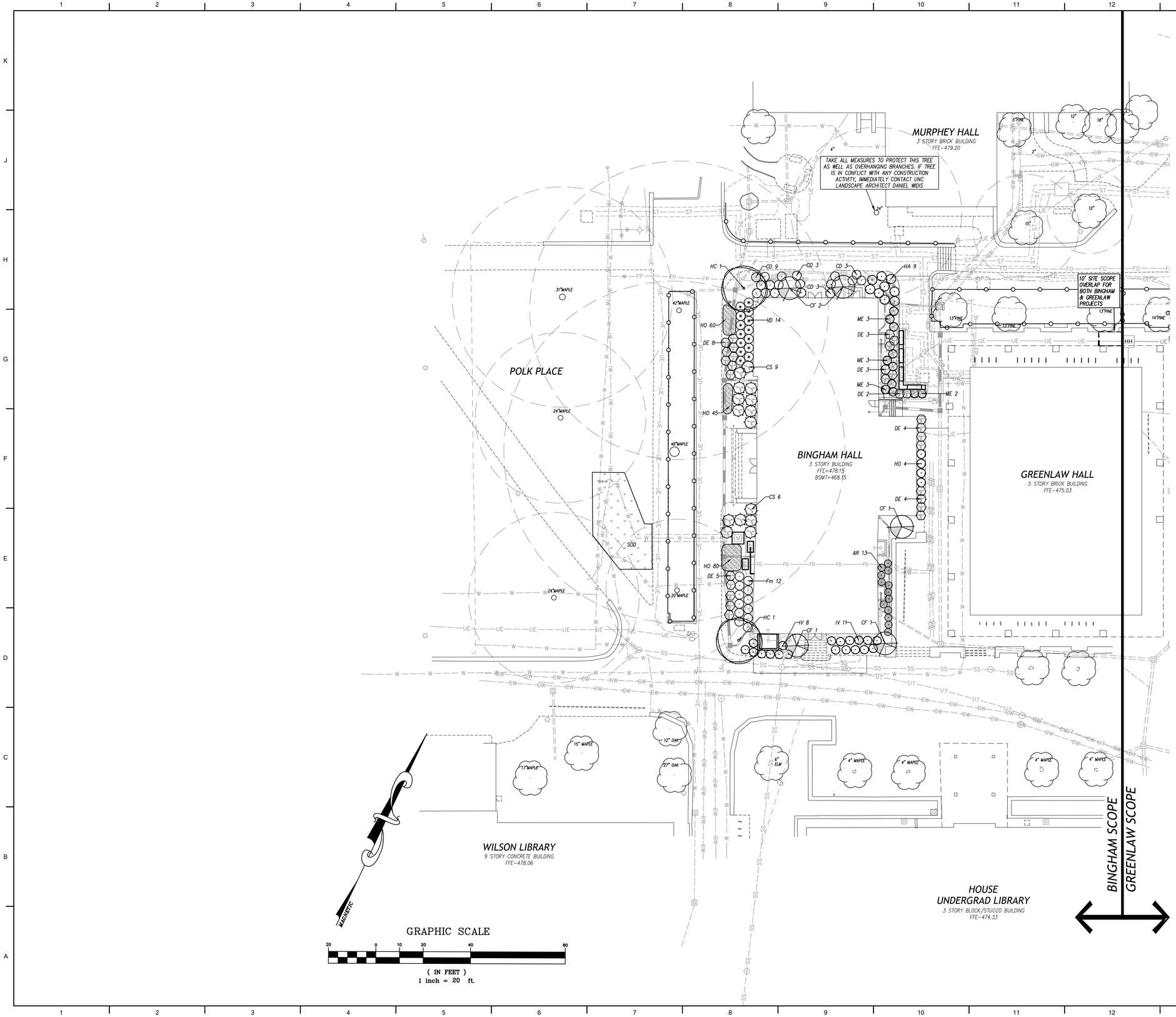
NORTH CAROLINA PROFESSIONAL SEAL 022625 ENGINEER STEVEN J. MILLER

ISSUE DATE
1/8/2024

JOB. NO.
11706-00

DWG. NO.
C403



LANDSCAPE SCOPE NOTES

1. GENERAL CONTRACTOR IS RESPONSIBLE FOR PROVIDING TOPSOIL TO THE ALL LANDSCAPE AND TURF AREAS AND PROVIDING TEMPORARY SEEDING ON THE SITE UNTIL IT IS TURNED OVER TO THE UNIVERSITY FOR PLANTING.
2. CONTRACTOR SHALL PROVIDE TOPSOIL IN THE PLANTING BEDS AND IN LAWN/SOD AREAS AS SPECIFIED BELOW. SUBGRADE SHALL BE GRADED TO ACCOMODATE TOPSOIL AND PROVIDE POSITIVE DRAINAGE. CONTRACTOR SHALL PREVENT ANY SOIL EROSION OF ANY DISTURBED GROUND AREA AS WELL AS ANY AREA USED FOR STORAGE, STAGING, ETC.
3. CONTRACTOR SHALL REMOVE ALL CONSTRUCTION DEBRIS AND UNUSABLE CONSTRUCTION SPOIL AND DEBRIS IN ALL AREAS TO BE LANDSCAPED PRIOR TO TURNING OVER TO THE UNIVERSITY FOR PLANTING.
4. LANDSCAPE ARCHITECT & UNC SHALL APPROVE ALL TOPSOIL PRIOR TO FINAL GRADING AND/OR PLANTING.
5. UNC TO FURNISH AND INSTALL ALL TREES, SHRUBS, GROUND COVERS, TURF, SOD, AND PLANTING BED MULCH.
6. SEE SHEET C400 FOR IRRIGATION CONDUIT LOCATIONS

TOPSOIL

1. TOPSOIL IS TO BE PROVIDED AND INSTALLED BY THE CONTRACTOR PRIOR TO THE SITE BEING TURNED OVER TO UNC FOR PLANTING.
2. ALL AREAS THAT ARE DISTURBED AND ARE TO BE REPLANTED BY UNC SHALL RECEIVE TOPSOIL AS INDICATED BELOW.
3. TOPSOIL SHALL BE PREMIXED AND PRESCREENED PRIOR TO PLACING.
4. TOPSOIL SHALL BE 3 PARTS SANDY-LOAM WITH A pH OF 5.5-6.5 RANGE AND 1 PART COMPOSTED PINE BARK ORGANIC MATERIAL.
5. A MINIMUM OF 4" TOPSOIL SHALL BE APPLIED IN DISTURBED AREAS TO BE SEEDED, SODDED OR MULCHED (WITHOUT PLANTS) BY THE OWNER AND A MINIMUM OF 12" TOPSOIL IS TO BE APPLIED IN ALL LANDSCAPE PLANT BED AREAS WHERE PLANTS ARE TO BE INSTALLED BY THE OWNER.
6. PRIOR TO TOPSOIL APPLICATION, THE CONTRACTOR SHALL SCARIFY THE SOIL AREAS WHERE TOPSOIL IS TO BE APPLIED TO A DEPTH OF 12 INCHES AND REMOVE AND HAUL OFF ALL CONSTRUCTION DEBRIS BEFORE SPREADING THE TOPSOIL. SUBBGRADE SURFACES SHALL BE PROPERLY GRADED TO ACCEPT SPECIFIED THICKNESS OF TOPSOIL SUCH THAT POSITIVE DRAINAGE WILL BE ACHIEVED FOLLOWING TOPSOIL INSTALLATION.
7. NO SCARIFICATION OR SUBSOILING SHALL BE DONE WITHIN THE DRIPLINE OF ANY EXISTING TREE TO REMAIN.

PLANT LIST

KEY	QTY	PLANT NAME	SIZE	REMARKS
UNDERSTORY TREES				
CF	5	KOUSA DOGWOOD Cornus kousa 'National'	4'-5' HT. #10 CONT.	B&B, STRAIGHT TRUNK FULL CROWN
HC	5	CAROLINA SILVERBELL Halesia caroliniana	8'-10' HT. #10 CONT.	B&B, STRAIGHT TRUNK FULL CROWN
DECIDUOUS & EVERGREEN SHRUBS				
AR	13	ABELIA Abelia 'Rose creek'	12"-15" HT. #3 CONT.	FULL PLANTS
CD	18	DUKE GARDEN YEW Cephalotaxus harringtonia	12"-15" HT./SPR. #3 CONT.	FULL PLANTS
CS	15	WHITE DOVE CAMELLIA Camellia sasanqua 'White Doves'	15"-18" HT. #3 CONT.	FULL PLANTS
DE	29	AUTUMN FERN Dryopteris erythrosora 'Brilliance'	10" HT. 3 GAL.	FULL PLANTS
Fm	12	MT. AIRY FOTHERGILLA Fothergilla 'Mount airy'	10"-12" HT. #3 CONT.	FULL PLANTS
HA	9	ANNABELLE HYDRANGEA Hydrangea Aborescens 'Annabelle'	24"-30" HT. #3 CONT.	FULL PLANTS
HV	4	AMERICAN WITCHAZEL Hamamelis virginiana	4"-5" HT. #10 CONT.	FULL PLANTS
IV	19	VIRGINIA SWEETSPIE Itea virginica 'Henry's granet'	18"-24" HT. #3 CONT.	FULL PLANTS
ME	11	'SOFT CARESS' MAHONIA Mahonia eurybracteata 'soft caress'	10"-12" HT. #3 CONT.	FULL PLANTS
VD	14	DAVID VIBURNUM Viburnum davidii	12"-15" HT.	FULL PLANTS
PERENNIALS & GROUND COVER				
HO	185	HELLABORE Helleborus orientalis	8" HT. 2 GAL.	
IG	160	BEARDED IRIS 'VICTORIA FALLS' Iris x germanica 'Victoria Falls"	8" HT. 2 GAL.	
LM	840	BIG BLUE LILYTURF Liriope muscari	FULL #1 CONT.	
SOD		MATCH EXISTING		

GRAPHIC SYMBOLS SUPERCEDE WRITTEN QUANTITIES WHERE DISCREPANCIES OCCUR.
PLANT MATERIAL FURNISHED AND INSTALLED BY OWNER.

LORD AECK SARGENT

REVISION:

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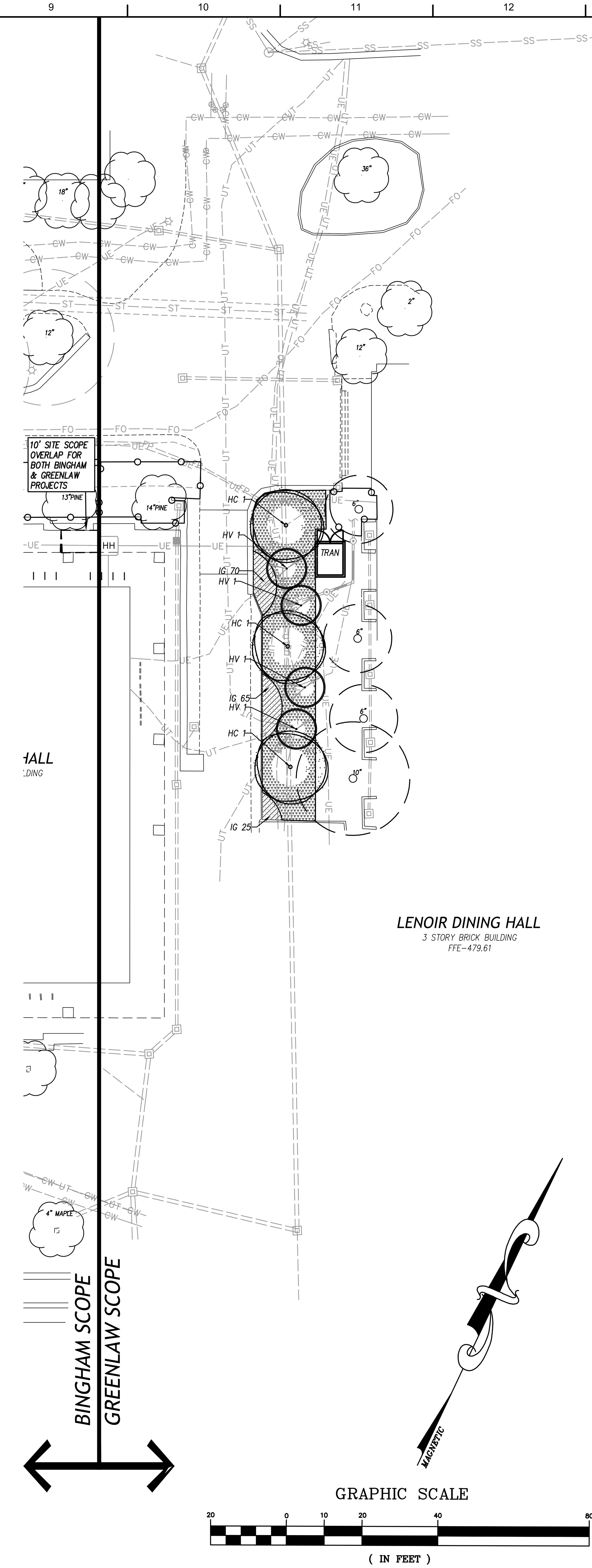
Phone: 919.319.6716
LA: C-106, PE: C-1585

SHEET TITLE: BINGHAM SCOPE LANDSCAPE PLAN
SCALE (U.N.O.)

JOB NAME: University of North Carolina - Chapel Hill
SCR#: 21-23548-02A
UNC Project No: C21212
LOCATION: BINGHAM HALL RENOVATION
36 Lenoir Drive, Chapel Hill, NC 27514

SEAL

ISSUE DATE: 1/8/2024
JOB. NO. 11706-00
DWG. NO. C501



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GRAPHIC SYMBOLS SUPERCEDE WRITTEN QUANTITIES WHERE DISCREPANCIES OCCUR.
PLANT MATERIAL FURNISHED AND INSTALLED BY OWNER.

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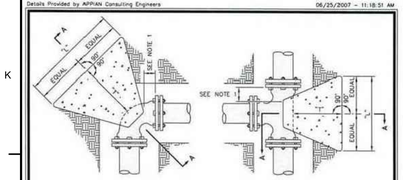
SHEET TITLE
GREENLAW SCOPE
LANDSCAPE PLAN
SCALE (U.N.O.)

JOB NAME
University of North Carolina - Chapel Hill
SCO#: 21-23548-02A UNC Project No. CI21212
BINGHAM HALL RENOVATION
LOCATION
36 Lenoir Drive, Chapel Hill, NC 27514

SEAL
NORTH CAROLINA LANDSCAPE ARCHITECT No. 1047 KEITH DOWNING
1-8-24

ISSUE DATE
1/8/2024
JOB. NO.
11706-00
DWG. NO.
C502



NOTES:
1. Concrete blocking is to be formed to ensure accessibility to fittings and poured against undisturbed earth.
2. Fittings are to be completely wrapped with plastic, prior to pouring concrete.
3. Concrete to be minimum 3,000 psi. @ 28 days.

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BLOCKING DETAIL for HORIZONTAL BENDS AND TEE

SCALE: Not To Scale | DETAIL #: s512.02 | REVISION DATE(S): August 15, 2003 | SHEET #: 1 of 4

TEST PRESSURE = 200 P.S.I.

PIPE SIZE	TYPE FITTING	DIMENSIONS (Ft.) "L"	"W"	"T"	VOLUME CONCRETE CU. YD.
<4 INCHES	11 1/4°	1.00	1.00	1.00	0.04
	22 1/2°	1.00	1.00	1.50	0.06
	45°	1.00	1.00	1.50	0.06
	90°	1.50	1.50	2.50	0.15
	TEE / PLUG	1.50	1.50	2.00	0.12
4 INCHES	11 1/4°	1.00	1.00	2.50	0.09
	22 1/2°	1.00	1.00	2.50	0.09
	45°	1.50	1.50	2.50	0.15
	90°	1.50	1.50	2.50	0.15
	TEE / PLUG	1.50	1.50	2.00	0.12
6 INCHES	11 1/4°	1.50	1.50	2.50	0.15
	22 1/2°	1.50	1.50	2.50	0.15
	45°	1.50	1.50	2.50	0.15
	90°	2.00	2.00	3.00	0.33
	TEE / PLUG	2.50	2.00	2.50	0.28
8 INCHES	11 1/4°	2.00	2.00	2.50	0.23
	22 1/2°	2.00	2.00	2.50	0.23
	45°	2.00	2.00	2.50	0.23
	90°	4.00	2.00	3.00	0.50
	TEE / PLUG	4.00	2.00	2.50	0.42
12 INCHES	11 1/4°	2.00	2.00	3.00	0.28
	22 1/2°	3.00	2.00	3.00	0.39
	45°	4.00	2.50	3.00	0.61
	90°	5.50	3.00	3.50	1.13
	TEE / PLUG	5.50	3.00	3.00	0.97
16 INCHES	11 1/4°	2.00	2.00	3.00	0.28
	22 1/2°	4.00	2.00	3.00	0.50
	45°	5.50	3.00	3.50	1.13
	90°	7.50	4.00	3.50	2.01
	TEE / PLUG	7.50	4.00	3.00	1.72

CHART NOTES:
1. If blocking excavation is in lightly compacted fill areas, or in areas where boulders or stumps have been removed, blocking size must be re-sized for the specific location/circumstance by a NC licensed Professional Engineer.
2. Blocking sizes shown in these tables assume the following:
   a. Blocking is constructed in residual soils as shown in detail
   b. Soil bearing pressure = 2000 psf
   c. Velocity of flow = 15 fps
3. This detail not applicable to reducing bends.
4. Neither the weight of the concrete blocking nor friction between concrete blocking and soil was added into blocking sizes computation. Therefore, blocking size is conservative.

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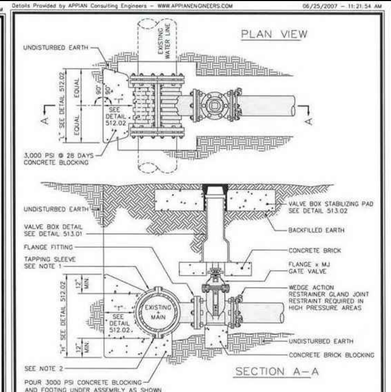
BLOCKING DETAIL for HORIZONTAL BENDS AND TEE

SCALE: Not To Scale | DETAIL #: s512.02 | REVISION DATE(S): August 15, 2003 | SHEET #: 2 of 4



NOTES:
1. Concrete blocking is to be formed to ensure accesibility to fittings and poured against undisturbed earth.
2. Fittings are to be completely wrapped with plastic, prior to pouring concrete.
3. Concrete to be minimum 3,000 psi. @ 28 days.
4. Taps onto in-service mains by OWASA personnel only.

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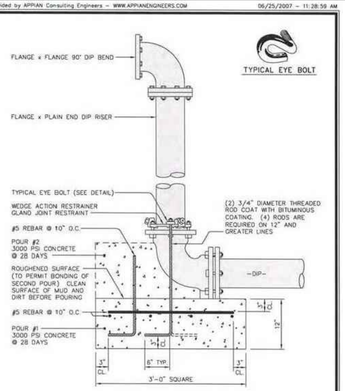
4" to 12" STANDARD TAPPING SLEEVE and VALVE ASSEMBLY

SCALE: Not To Scale | DETAIL #: s512.04 | REVISION DATE(S): August 15, 2003 | SHEET #: 3 of 4



NOTES:
1. Excavate under elbow for footing, place steel & rods in footing & pour (pour #1)
2. Once concrete has set in footing pour horizontal blocking (pour #2)
3. Footing adequate for water mains up to 8". North Carolina licensed Professional Engineer to design footings for lines greater than 8" diameter.

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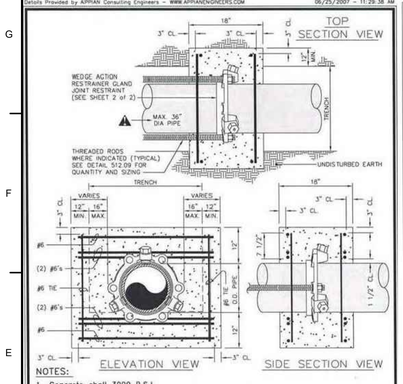
THRUST FOOTING DETAIL

SCALE: Not To Scale | DETAIL #: s512.07 | REVISION DATE(S): August 15, 2003 | SHEET #: 4 of 4



NOTES:
1. Concrete shall 3000 P.S.I.
2. Reinforcing bars shall be deformed bars, and tied together.
3. Trench bottom width in vicinity of thrust block(s) installation shall be the minimum width for placement of pipe (Max trench width = pipe O.D.+2 Ft.)
4. Backfill and compact in 6" layers.
5. Place thrust collar on one full joint of pipe.
6. Last joint of pipe with thrust collar to be mechanical joint pipe.
7. Place wedge action restrainer gland joint restraint 4 feet from plug end of pipe.

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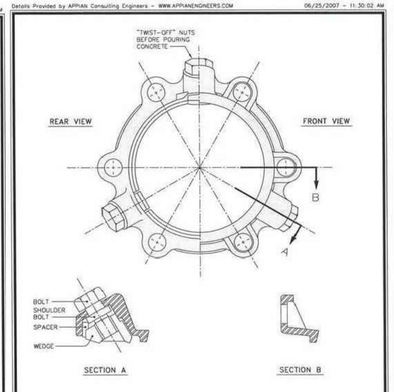
THRUST COLLAR & BLOCKING with WEDGE ACTION RESTRAINER GLAND

SCALE: Not To Scale | DETAIL #: s512.08 | REVISION DATE(S): August 15, 2003 | SHEET #: 1 of 3



⚠ A MEG–A–LUG SERIES 1100 or FORD WEDGE ACTION RESTRAINER GLAND UFR SERIES 1400 MECHANICAL JOINT RESTRAINT SHALL BE PLACED ON DIP. CONCRETE & REINFORCEMENT STEEL SHALL ALSO BE AS SHOWN ON SHEET 1 of 2.

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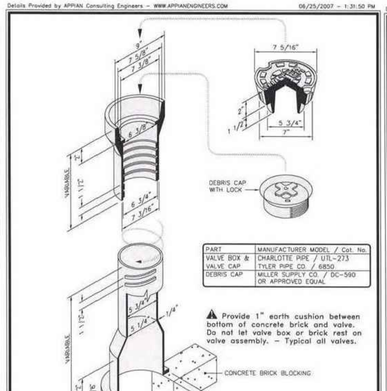
THRUST COLLAR & BLOCKING with WEDGE ACTION RESTRAINER GLAND

SCALE: Not To Scale | DETAIL #: s512.08 | REVISION DATE(S): August 15, 2003 | SHEET #: 2 of 3



PART	MANUFACTURER MODEL / Cat. No.
VALVE BOX & VALVE CAP	CHARLOTTE PIPE / U/L-273
	TYLER PIPE CO. / 6850
DEBRIS CAP	MILLER SUPPLY CO. / DC-590 OR APPROVED EQUAL

⚠ Provide 1" earth cushion between bottom of concrete brick and valve. Do not let valve box or brick rest on valve assembly. – Typical all valves.

NOTES:
1. Use heavy duty traffic lid marked "WATER".

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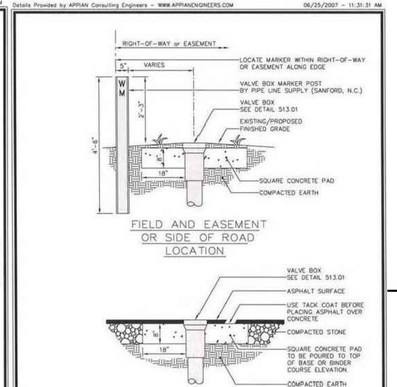
STANDARD SCREW VALVE BOX DETAIL

SCALE: Not To Scale | DETAIL #: s513.01 | REVISION DATE(S): August 15, 2003 | SHEET #: 1 of 2



NOTES:
1. Concrete to be minimum 3,000 PSI @ 28 days.

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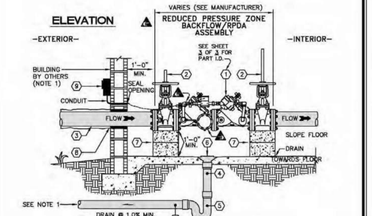
VALVE BOX STABILIZING PAD DETAILS

SCALE: Not To Scale | DETAIL #: s513.02 | REVISION DATE(S): August 15, 2003 | SHEET #: 2 of 2



⚠ SEE SHEET 3 of 3 FOR ALTERNATE THRU FLOOR ACCESS INTO BUILDING

NOTES:
1. OPTIONAL FLOOR DRAIN.

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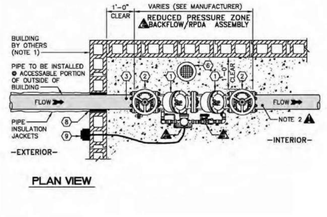
2 1/2" to 10" RPZ, RPDA ASSEMBLY (INDOOR)

SCALE: Not To Scale | DETAIL #: s515.09 | REVISION DATE(S): December 20, 2016 | SHEET #: 1 of 3



NOTES:
1. Backflow assembly is to be installed at an accessible portion of the building, provide doorway & key.
2. For critical facilities, provide bypass line with backflow assembly.
3. Provide minimum 3" annular clearance around riser.

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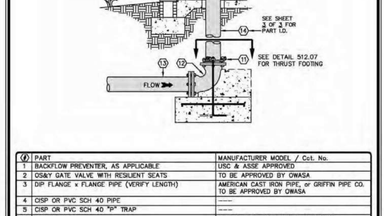
2 1/2" to 10" RPZ, RPDA ASSEMBLY (INDOOR)

SCALE: Not To Scale | DETAIL #: s515.09 | REVISION DATE(S): December 20, 2016 | SHEET #: 2 of 3



ⓘ	PART	MANUFACTURER MODEL / Cat. No.
1	BACKFLOW PREVENTER, AS APPLICABLE	USC & ASSE APPROVED
2	OS&Y GATE VALVE WITH RESILIENT SEATS	TO BE APPROVED BY OWASA
3	DIP FLANGE x FLANGE PIPE (VERIFY LENGTH)	AMERICAN CAST IRON PIPE, or GRIFFIN PIPE CO. TO BE APPROVED BY OWASA
4	CISP OR PVC SCH 40 PIPE	———
5	CISP OR PVC SCH 40 "P" TRAP	———
6	FLOOR DRAIN	SIZE & TYPE DETERMINED BY NC PE. TO BE APPROVED BY OWASA
7	MASONRY BLOCK	
8	WALL SLEEVE with LINK SEAL	TO BE APPROVED BY OWASA
9	METER BOX WITH ERT AND METER	PURCHASED FROM OWASA
10	90° DIP FLANGE x FLANGE ELBOW	AMERICAN CAST IRON PIPE, or GRIFFIN PIPE CO., or UNION–TYLER PIPE CO., or U.S. PIPE & FOUNDRY
11	WEDGE ACTION RESTRAINER GLAND JOINT RESTRAINT	EBAA IRON SALES, INC. , FORD
12	90° DIP MJ x MJ ELBOW	AMERICAN CAST IRON PIPE, GRIFFIN PIPE CO., UNION–TYLER PIPE CO., U.S. PIPE & FOUNDRY
13	DIP FLANGE x PE PIPE (VERIFY LENGTH)	AMERICAN CAST IRON PIPE, GRIFFIN PIPE CO., UNION–TYLER PIPE CO., U.S. PIPE & FOUNDRY
14	3" THRU 10" DIP	AMERICAN CAST IRON PIPE, GRIFFIN PIPE CO., UNION–TYLER PIPE CO., U.S. PIPE & FOUNDRY

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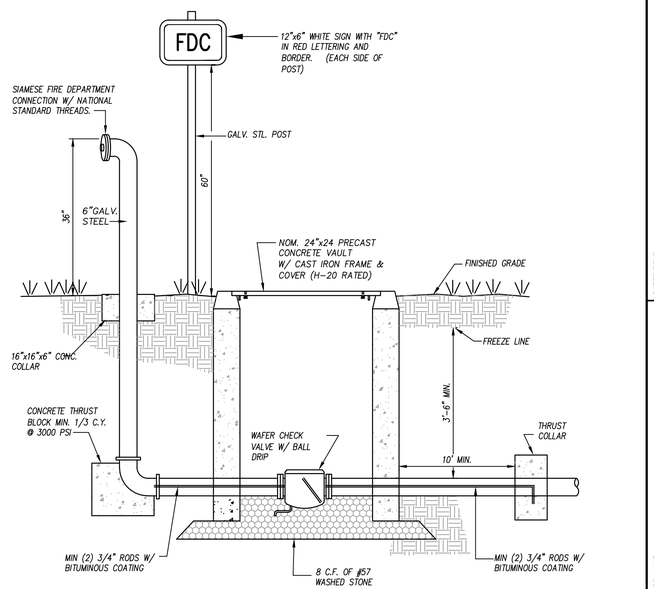
2 1/2" to 10" RPZ, RPDA ASSEMBLY (INDOOR)

SCALE: Not To Scale | DETAIL #: s515.09 | REVISION DATE(S): December 20, 2016 | SHEET #: 3 of 3

ORANGE WATER AND SEWER AUTHORITY STANDARD DETAILS — N.T.S.



FIRE DEPARTMENT CONNECTION — N.T.S.

LORD AECK SARGENT

REVISION:

CLH DESIGN
CLH Design, PA
400 Regency Forest Dr.
Suite 120
Cary, NC 27518
Phone: 919.319.6716
LA: C-106, PE: C-1585

SHEET TITLE: UTILITY DETAILS

SCALE: (U.N.O.)

JOB NAME: University of North Carolina - Chapel Hill
UNC Project No. 021212
SCD#: 21-23948-02A
BINGHAM HALL RENOVATION
LOCATION: 30 Lenoir Drive, Chapel Hill, NC 27514

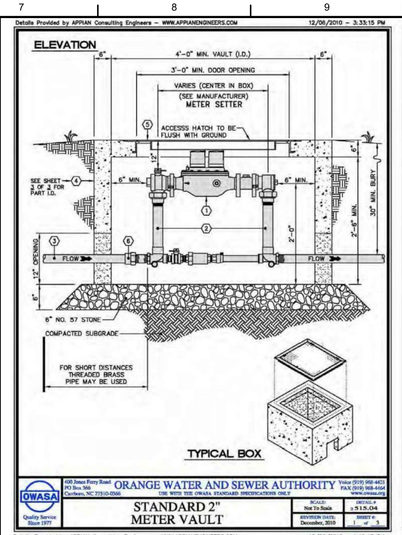
Digitally signed by Steven J. Miller
Date: 2024.01.02 14:53:34-05'00'

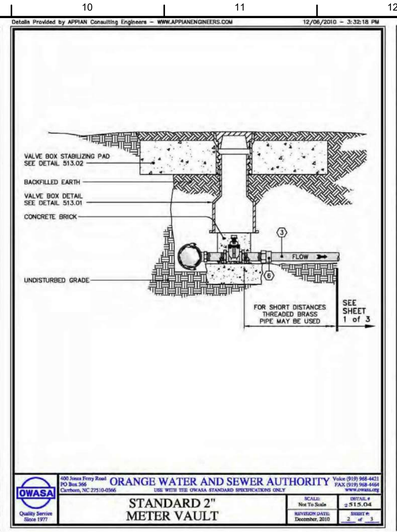
NORTH CAROLINA PROFESSIONAL SEAL 022625 ENGINEER STEVEN J. MILLER

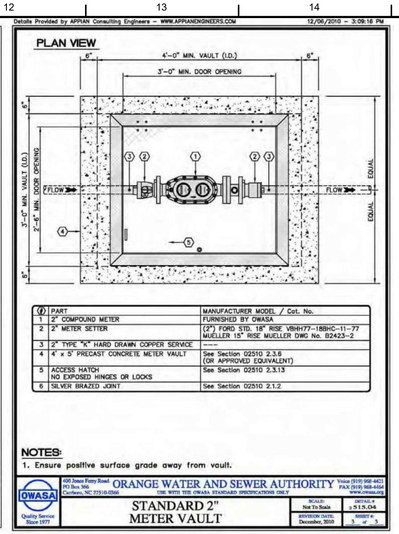
ISSUE DATE: 1/8/2024

JOB. NO.: 11706-00

DWG. NO.: C701







ⓘ	PART	MANUFACTURER MODEL / Cat. No.
1	2" COMPOUND METER	FURNISHED BY OWASA
2	2" METER SETTER	(2") FORD STD. 18" RISE VBHHY7-1BBHC-11-77 MUELLER 15" RISE MUELLER DWG No. B2423-2
3	2" TYPE "K" HARD DRAWN COPPER SERVICE	-----
4	4' x 3' PRECAST CONCRETE METER VAULT	See Section 02510 2.3.6 (OR APPROVED EQUIVALENT)
5	ACCESS HATCH NO EXPOSED HINGES OR LOCKS	See Section 02510 2.3.13
6	SILVER BRAZED JOINT	See Section 02510 2.1.2

Details Provided by APPIAN Consulting Engineers – WWW.APPIANENGINEERS.COM 12/06/2010 – 3:33:15 PM

Details Provided by APPIAN Consulting Engineers – WWW.APPIANENGINEERS.COM 12/06/2010 – 3:33:18 PM

Details Provided by APPIAN Consulting Engineers – WWW.APPIANENGINEERS.COM 12/06/2010 – 3:09:16 PM

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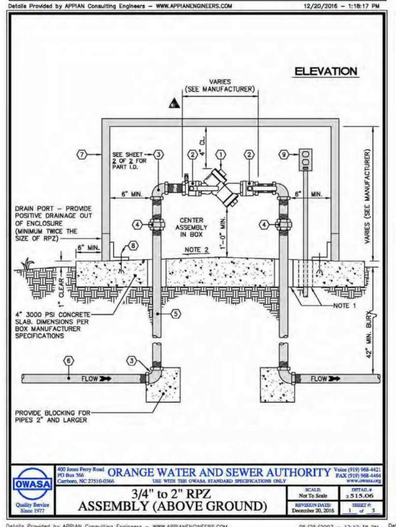
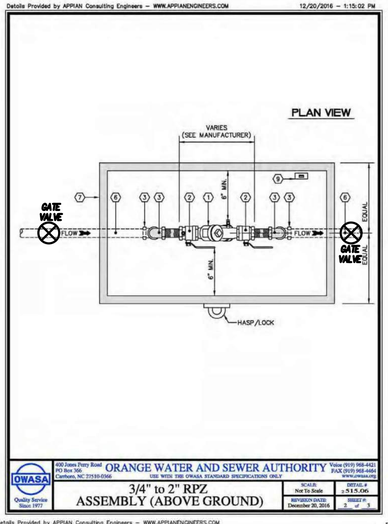
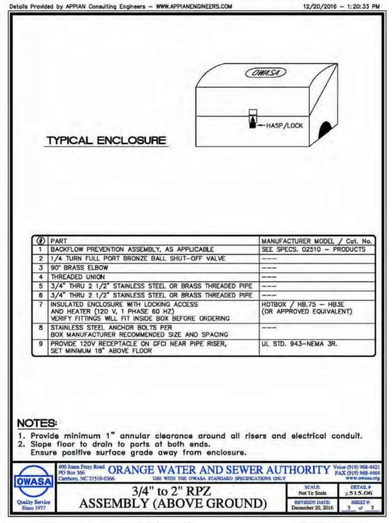
STANDARD 2" METER VAULT
SCALE: Not To Scale
DETAIL # ▷515.04
REVISION DATE: December, 2010
SHEET # 1 of 3







ⓘ	PART	MANUFACTURER MODEL / Cat. No.
1	BACKFLOW PREVENTION ASSEMBLY, AS APPLICABLE	SEE SPECS. 02510 – PRODUCTS
2	1/4 TURN FULL PORT BRONZE BALL SHUT-OFF VALVE	-----
3	90° BRASS ELBOW	-----
4	THREADED UNION	-----
5	3/4" THRU 2 1/2" STAINLESS STEEL OR BRASS THREADED PIPE	-----
6	3/4" THRU 2 1/2" STAINLESS STEEL OR BRASS THREADED PIPE	-----
7	INSULATED ENCLOSURE WITH LOCKING ACCESS AND HEATER (120 V, 1 PHASE 60 HZ) VERIFY FITTINGS WILL FIT INSIDE BOX BEFORE ORDERING	HOTBOX / HB.73 – HB3E (OR APPROVED EQUIVALENT)
8	STAINLESS STEEL ANCHOR BOLTS PER BOX MANUFACTURER RECOMMENDED SIZE AND SPACING	-----
9	PROVIDE 120V RECEPTACLE ON GFCI NEAR PIPE RISER, SET MINIMUM 18" ABOVE FLOOR	UL STD. 943–NEMA 3R.

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Details Provided by APPIAN Consulting Engineers – WWW.APPIANENGINEERS.COM 12/20/2016 – 1:15:02 PM

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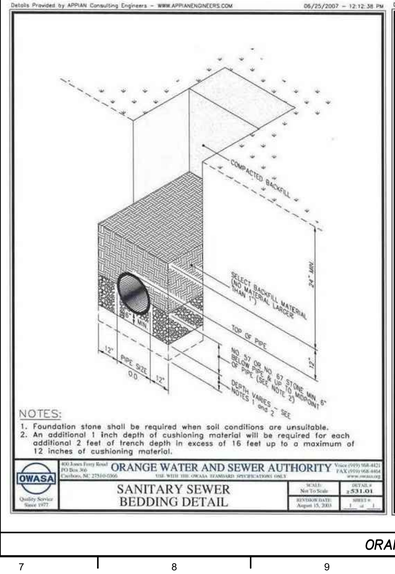
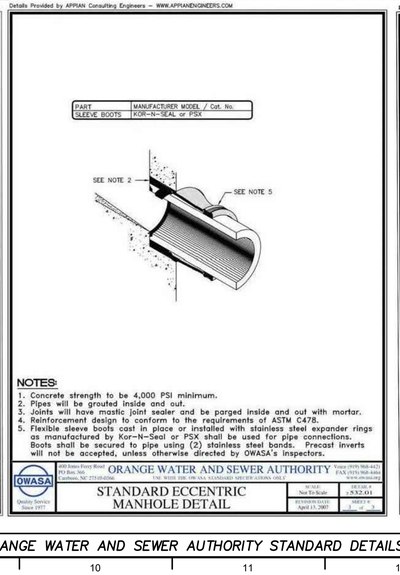
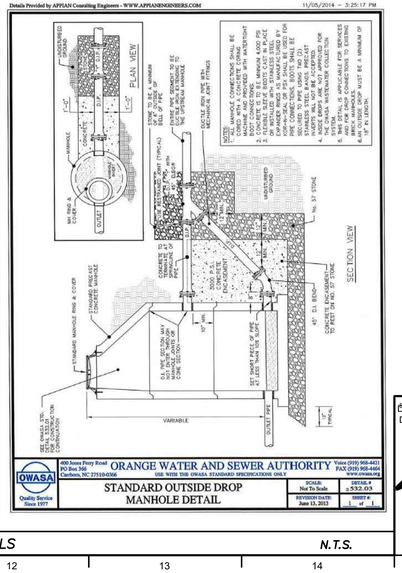
3/4" to 2" RPZ ASSEMBLY (ABOVE GROUND)
SCALE: Not To Scale
DETAIL # ▷515.06
REVISION DATE: December 30, 2016
SHEET # 1 of 3





PART	MANUFACTURER MODEL / Cat. No.
SLEEVE BOOTS	KOR-N-SEAL or PSX



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SANITARY SEWER BEDDING DETAIL
SCALE: Not To Scale
DETAIL # ▷531.01
REVISION DATE: August 15, 2013
SHEET # 1 of 1

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OWASA Quality Service Since 1977
STANDARD ECCENTRIC MANHOLE DETAIL
SCALE: Not To Scale
DETAIL # ▷532.01
REVISION DATE: April 11, 2007
SHEET # 1 of 1

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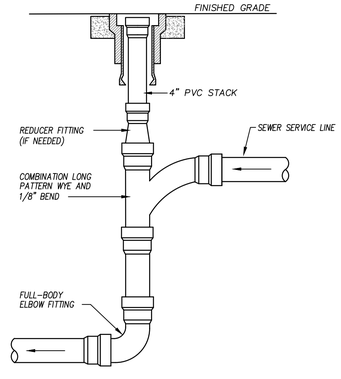
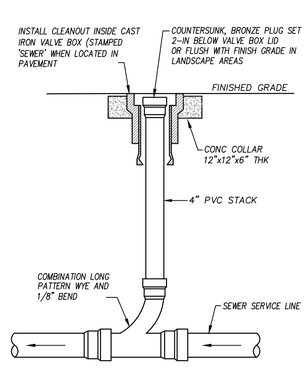
USE WITH THE OWASA STANDARD SPECIFICATIONS ONLY
OWASA Quality Service Since 1977
STANDARD OUTSIDE DROP MANHOLE DETAIL
SCALE: Not To Scale
DETAIL # ▷532.03
REVISION DATE: June 13, 2013
SHEET # 1 of 1



DROP CLEANOUT
N.T.S.



STANDARD CLEANOUT
N.T.S.

SEWER CLEANOUT N.T.S.

ORANGE WATER AND SEWER AUTHORITY STANDARD DETAILS N.T.S.

LORD AECK SARGENT

REVISION:

CLH DESIGN
CLH Design, PA
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Cary, NC 27518
Phone: 919.319.6716
LA: C-106, PE: C-1585

SHEET TITLE: UTILITY DETAILS

SCALE (U.N.O.)

JOB NAME: University of North Carolina - Chapel Hill

SCO#: 21-23548-02A UNC Project No. C21212

BINGHAM HALL RENOVATION

LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

Digitally signed by Steven J. Miller
Date: 2024.01.08 14:53:10-05'00'

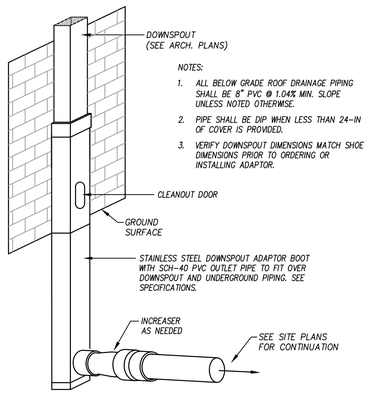
NORTH CAROLINA PROFESSIONAL SEAL 022625 ENGINEER STEVEN J. MILLER

ISSUE DATE: 1/8/2024

JOB. NO.: 11706-00

DWG. NO.: C702

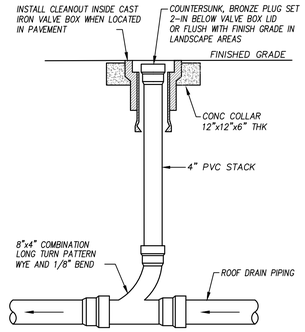
DOWNSPOUT CONNECTION N.T.S.



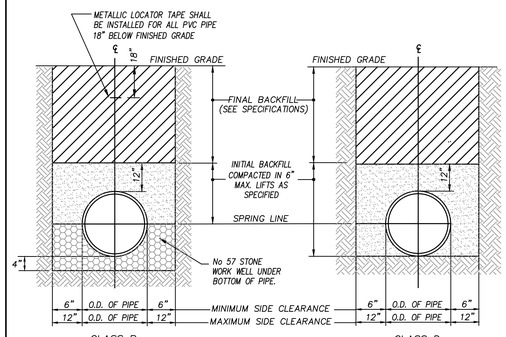
NOTES:

1. ALL BELOW GRADE ROOF DRAINAGE PIPING SHALL BE 8" PVC @ 1.04% MIN. SLOPE UNLESS NOTED OTHERWISE.
2. PIPE SHALL BE DIP WHEN LESS THAN 24-IN OF COVER IS PROVIDED.
3. VERIFY DOWNSPOUT DIMENSIONS MATCH SHOE DIMENSIONS PRIOR TO ORDERING OR INSTALLING ADAPTOR.

STORM DRAIN CLEANOUT N.T.S.



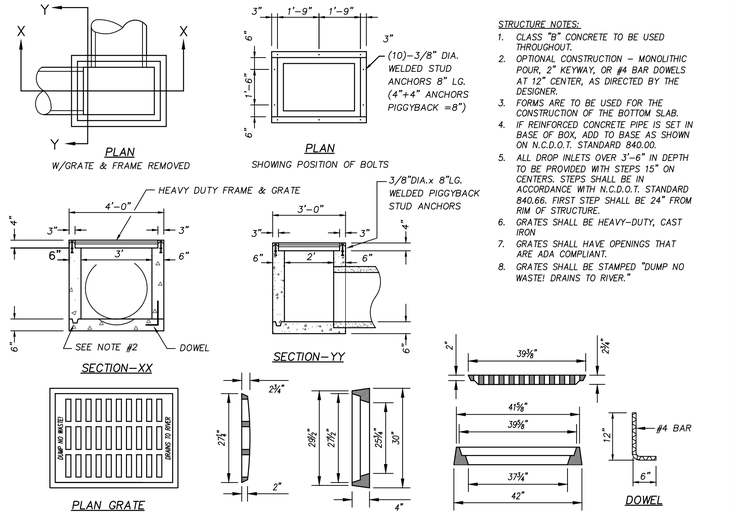
STORM DRAINAGE TRENCHING DETAIL N.T.S.



NOTES

1. FOR TRENCHES REQUIRING SHORING AND BRACING, DIMENSIONS SHALL BE TAKEN FROM THE INSIDE FACE OF THE SHORING AND BRACING.
2. NO ROCKS OR BOLDERS 3" OR LARGER TO BE USED IN INITIAL BACKFILL.
3. ALL BACKFILL MATERIAL SHALL BE SUITABLE APPROVED MATERIAL.
4. BACKFILL SHALL BE TAMPED IN 6" LAYERS.
5. IF ROCK IS ENCOUNTERED AT BOTTOM OF TRENCH, OVER EXCAVATE ROCK A MIN. OF 6-INCHS AND BACK FILL WITH NO. 67 STONE TO THE BOTTOM OF PIPE.

DROP INLET N.T.S.



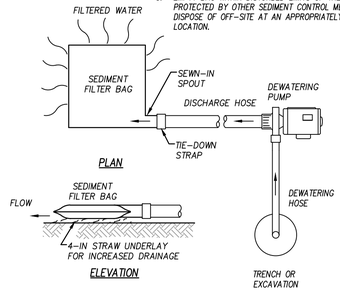
STRUCTURE NOTES:

1. CLASS "B" CONCRETE TO BE USED THROUGHOUT.
2. OPTIONAL CONSTRUCTION - MONOLITHIC POUR, 2" KEYWAY, OR #4 BAR DOWELS AT 12" CENTER, AS DIRECTED BY THE DESIGNER.
3. FORMS ARE TO BE USED FOR THE CONSTRUCTION OF THE BOTTOM SLAB.
4. IF REINFORCED CONCRETE PIPE IS SET IN BASE OF BOX, ADD TO BASE AS SHOWN ON N.C.D.O.T. STANDARD 840.00.
5. ALL DROP INLETS OVER 3'-6" IN DEPTH TO BE PROVIDED WITH STEPS 15" ON CENTERS. STEPS SHALL BE IN ACCORDANCE WITH N.C.D.O.T. STANDARD 840.66. FIRST STEP SHALL BE 24" FROM RIM OF STRUCTURE.
6. GRATES SHALL BE HEAVY-DUTY, CAST IRON
7. GRATES SHALL HAVE OPENINGS THAT ARE ADA COMPLIANT.
8. GRATES SHALL BE STAMPED "DUMP NO WASTE! DRAINS TO RIVER."

DEWATERING SEDIMENT FILTER BAG N.T.S.

CONSTRUCTION NOTES:

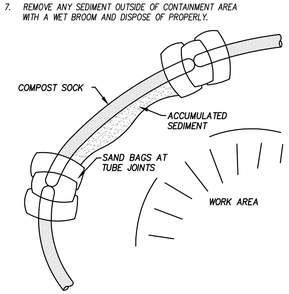
1. SILT BAG SHALL BE A PERMEABLE, NON-WOVEN GEOTEXTILE BAG MANUFACTURED TO ACCEPT AND FILTER PUMPED, SEDIMENT-LADEN WATER FROM DEWATERING ACTIVITIES.
2. SILT BAG SHALL BE SIZED AS APPROPRIATE FOR THE DEWATERING PUMP DISCHARGE RATE AND SHALL BE FITTED WITH A FILL SPOUT LARGE ENOUGH TO ACCOMMODATE THE DISCHARGE PIPING OF THE DEWATERING PUMP.
3. INSTALL SILT BAG ON AN UNDISTURBED OR FULLY STABILIZED SLOPE SO INCOMING WATER FLOWS DOWNHILL THROUGH THE BAG WITHOUT CAUSING EROSION.
4. REMOVE AND REPLACE SILT BAG WHEN DEVICE NO LONGER DRAINS EFFICIENTLY DUE TO ACCUMULATED SEDIMENT IN BAG.
5. EMPTY BAG WITHIN DISTURBED LIMITS OF THE SITE PROTECTED BY OTHER SEDIMENT CONTROL MEASURES OR DISPOSE OF OFF-SITE AT AN APPROPRIATELY PERMITTED LOCATION.



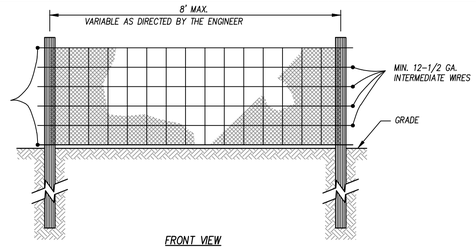
TEMP. COMPOST SOCK N.T.S.

NOTES:

1. COMPOST SOCKS SHALL BE 5-IN MIN. DIAMETER MANUFACTURED TUBES DESIGNED TO FILTER SEDIMENT FROM STORMWATER RUNOFF OVER PAVED SURFACES. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
2. INSTALL AND MAINTAIN SOCKS DOWN-GRADIENT OF CONSTRUCTION AREAS TO FILTER SEDIMENT FROM STORMWATER RUNOFF.
3. JOINTS OF ADJOINING SOCKS SHALL BE REINFORCED WITH SAND BAGS.
4. SOCKS SHALL BE INSPECTED AFTER EACH RAINFALL EVENT AND AFTER EACH DAY OF ACTIVE STOCKPILE USAGE. ADJUST LOCATION OF SOCKS AS NEEDED TO MAINTAIN A CONTINUOUS BARRIER.
5. ALL SEDIMENT ACCUMULATED AGAINST SOCK SHALL BE COLLECTED AND PLACED BACK ON THE STOCKPILE TO RE-ESTABLISH SEDIMENT STORAGE VOLUME.
6. REPLACE COMPOST SOCKS WHEN THEY BECOME CLOGGED AND NO LONGER DRAIN OR FILTER EFFICIENTLY.
7. REMOVE ANY SEDIMENT OUTSIDE OF CONTAINMENT AREA WITH A WET BROOM AND DISPOSE OF PROPERLY.



TEMPORARY SILT FENCE N.T.S.



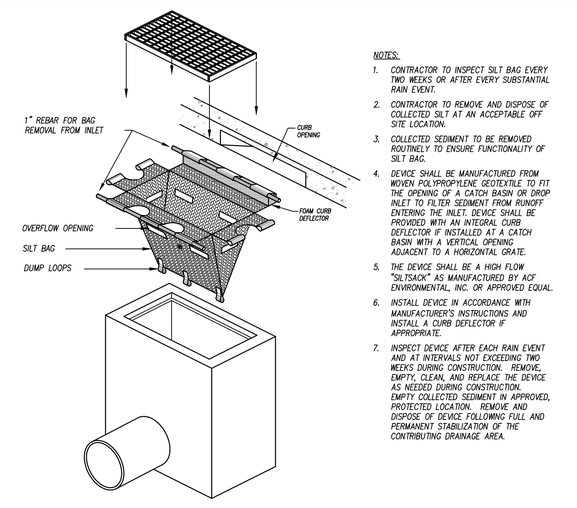
INSTALLATION NOTE:

USE SILT FENCE ONLY WHEN DRAINAGE AREA DOES NOT EXCEED 1/4 ACRE AND NEVER IN AREAS OF CONCENTRATED FLOW.

MAINTENANCE NOTES:

1. REMOVE SEDIMENT DEPOSITS AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE FENCE. TAKE CARE TO AVOID UNDERMINING THE FENCE DURING CLEANOUT.
2. REMOVE ALL FENCING MATERIALS AND UNSTABLE SEDIMENT DEPOSITS AND BRING THE AREA TO GRADE AND STABILIZE IT AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.
3. REPAIR SILT FENCE FAILURES WITH NO. 57 WASHED STONE BERM.

TEMPORARY INLET PROTECTION N.T.S.



NOTES:

1. CONTRACTOR TO INSPECT SILT BAG EVERY TWO WEEKS OR AFTER EVERY SUBSTANTIAL RAIN EVENT.
2. CONTRACTOR TO REMOVE AND DISPOSE OF COLLECTED SILT AT AN ACCEPTABLE OFF SITE LOCATION.
3. COLLECTED SEDIMENT TO BE REMOVED ROUTINELY TO ENSURE FUNCTIONALITY OF SILT BAG.
4. DEVICE SHALL BE MANUFACTURED FROM WOVEN POLYPROPYLENE GEOTEXTILE TO FIT THE OPENING OF A CATCH BASIN OR DROP INLET TO FILTER SEDIMENT FROM RUNOFF ENTERING THE INLET. DEVICE SHALL BE PROVIDED WITH AN INTEGRAL CURB DEFLECTOR IF INSTALLED AT A CATCH BASIN WITH A VERTICAL OPENING ADJACENT TO A HORIZONTAL GRATE.
5. THE DEVICE SHALL BE A HIGH FLOW "SILTSACK" AS MANUFACTURED BY ACF ENVIRONMENTAL, INC. OR APPROVED EQUAL.
6. INSTALL DEVICE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND INSTALL A CURB DEFLECTOR IF APPROPRIATE.
7. INSPECT DEVICE AFTER EACH RAIN EVENT AND AT INTERVALS NOT EXCEEDING TWO WEEKS DURING CONSTRUCTION. REMOVE, EMPTY, CLEAN, AND REPLACE THE DEVICE AS NEEDED DURING CONSTRUCTION. EMPTY COLLECTED SEDIMENT IN APPROVED, PROTECTED LOCATION. REMOVE AND DISPOSE OF DEVICE FOLLOWING FULL AND PERMANENT STABILIZATION OF THE CONTRIBUTING DRAINAGE AREA.

LORD AECK SARGENT

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SHEET TITLE: UTILITY DETAILS

SCALE (U.N.O.)

JOB NAME: University of North Carolina - Chapel Hill

SCD#: 21-23548-02A UNC Project No. CI21212

BINGHAM HALL RENOVATION

LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

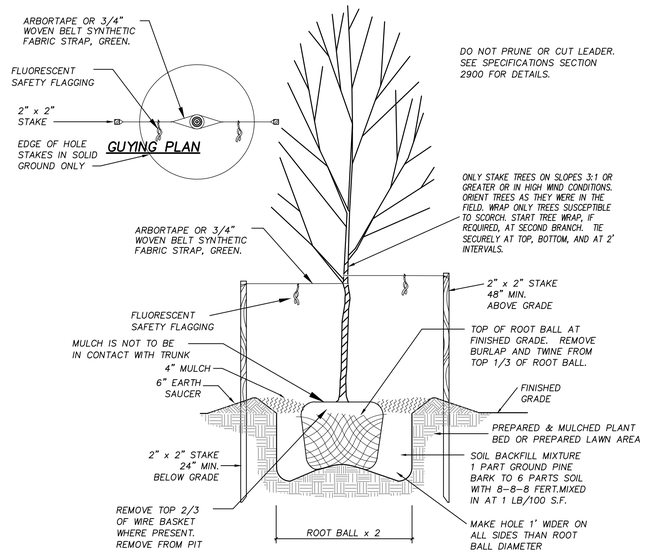
Digitally signed by Steven J. Miller
Date: 2024.01.02 11:51:53-05'00'

NORTH CAROLINA PROFESSIONAL SEAL 022625 ENGINEER STEVEN J. MILLER

ISSUE DATE: 1/8/2024

JOB. NO. 11706-00

DWG. NO. C703



PLANTING DETAILS N.T.S.

LANDSCAPE NOTES

PROTECTION OF EXISTING TREES AND VEGETATION:

1. PROTECT EXISTING TREES AND OTHER VEGETATION INDICATED TO REMAIN IN PLACE, AGAINST UNNECESSARY CUTTING, BREAKING OR SKINNING OR ROOTS, SKINNING OR BRUISING OF BARK, SMOTHERING OF TREES BY STOCKPILING CONSTRUCTION MATERIALS OR EXCAVATED MATERIALS WITHIN DRIP LINE, EXCESS FOOT OR VEHICULAR TRAFFIC, OR PARKING OF VEHICLES WITHIN DRIP LINE. PROVIDE TEMPORARY GUARDS AT DRIP LINES TO PROTECT TREES AND VEGETATION TO BE LEFT STANDING.
2. WHERE TREES ARE DESIGNATED TO REMAIN ON THE SITE: PROVIDE ORANGE PLASTIC FENCES, MINIMUM 3'-0" HIGH AROUND INDIVIDUAL TREES AND GROUPS OF TREES. PLACE FENCES AT DRIP LINE.
3. PROTECT TREE ROOT SYSTEMS FROM DAMAGE DUE TO DELETERIOUS MATERIALS CAUSED BY RUN-OFF OR SPILLAGE DURING MIXING, USE OR DISCARDING OF CONSTRUCTION MATERIALS OR DRAINAGE FROM STORED MATERIALS. PROTECT ROOT SYSTEMS FROM COMPACTION, FLOODING, EROSION OR EXCESSIVE WETTING.
4. WATER TREES AND OTHER VEGETATION TO REMAIN WITHIN LIMITS OF CONTRACT WORK AS REQUIRED TO MAINTAIN THEIR HEALTH DURING COURSE OF CONSTRUCTION OPERATIONS.
5. REPAIR OR REPLACE TREES AND VEGETATION INDICATED TO REMAIN WHICH ARE DAMAGED BY CONSTRUCTION OPERATIONS, IN A MANNER ACCEPTABLE TO ENGINEER. EMPLOY A LICENSED ARBORIST TO REPAIR DAMAGES TO TREES AND SHRUBS AT COMPLETION OF PROJECT.
6. REPLACE TREES WHICH CANNOT BE REPAIRED AND RESTORED TO FULL-GROWTH STATUS, AS DETERMINED BY ARBORIST.
7. ALL TREES AND SHRUBS THAT WILL BE REMOVED WILL BE INSPECTED BY UNC GROUNDS DEPARTMENT PRIOR TO REMOVAL. THOSE TREES OR SHRUBS THAT CAN BE SAVED WILL BE IDENTIFIED BY UNC. UNC WILL REMOVE SMALLER PLANTS, BUT CONTRACTOR SHALL REMOVE LARGER PLANTS AND TAKE THEM TO A LOCATION DESIGNATED BY UNC WITHIN THE LIMITS OF CHAPEL HILL. UNC WILL REPLANT ALL PLANTS TO BE SAVED.

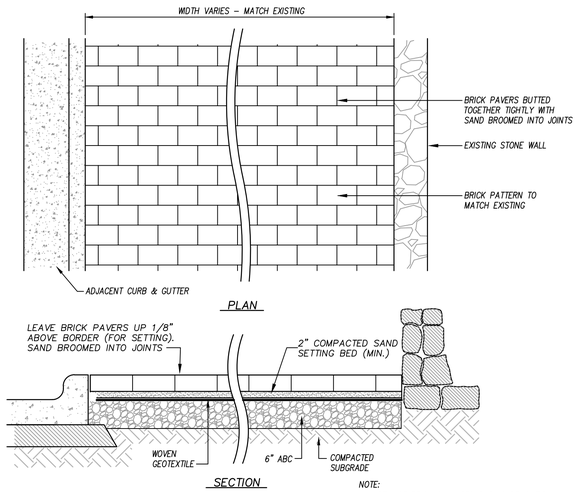
EXCAVATION AROUND TREES:

1. CARE MUST BE TAKEN IN EXCAVATING FOUNDATIONS AND INSTALLATION OF UTILITY LINES ADJACENT TO TREES THAT ARE TO BE SAVED.
2. EXCAVATE WITHIN DRIP LINES OF TREES ONLY WHERE INDICATED ON PLANS. IF EXCAVATION WILL DAMAGE TREES EXTENSIVELY, THE TREES SHOULD BE REMOVED AND REPLACED.
3. WHERE TRENCHING FOR UTILITIES IS REQUIRED WITHIN THE DRIP LINE, TUNNEL UNDER OR AROUND ROOTS BY HAND DIGGING. DO NOT CUT MAIN LATERAL OR TAP ROOTS. CUT SMALLER ROOTS WHICH INTERFERE WITH A SHARP PRUNING TOOL; DO NOT CHOP OR BREAK.
4. DO NOT ALLOW EXPOSED ROOTS TO DRY OUT BEFORE BACKFILL IS PLACED; PROVIDE TEMPORARY EARTH OR MOIST BURLAP COVER. PROVIDE PROTECTION FOR ROOTS OVER 1-1/2 INCH DIAMETER THAT ARE CUT DURING CONSTRUCTION OPERATIONS. COAT CUT FACES WITH AN EMULSIFIED ASPHALT, OR OTHER ACCEPTABLE COATING, FORMULATED FOR USE ON DAMAGED PLANT TISSUES. TEMPORARILY COVER EXPOSED ROOTS WITH WET BURLAP TO PREVENT ROOTS FROM DRYING OUT; COVER WITH EARTH AS SOON AS POSSIBLE.

GRADING AND FILLING AROUND TREES NEAR GRADING LIMITS:

1. EXISTING GRADES: MAINTAIN EXISTING GRADING WITHIN DRIP LINE OF TREES, UNLESS OTHERWISE INDICATED ON THE DRAWINGS.
2. LOWERING GRADES: WHERE EXISTING GRADE IS ABOVE NEW FINISH GRADE SHOW AROUND TREES, CAREFULLY HAND EXCAVATE WITHIN DRIP LINE TO NEW FINISH GRADE. CUT ROOTS EXPOSED BY EXCAVATION OR PROVIDE PERMANENT PROTECTION AS RECOMMENDED BY ARBORIST.
3. RAISING GRADES, MINOR FILL: WHERE EXISTING GRADE IS 6" OR LESS BELOW ELEVATION OF FINISH GRADE SHOWN, USE TOPSOIL FILL MIXTURE. PLACE A SINGLE LAYER AND DO NOT COMPACT; HAND GRADE TO REQUIRED FINISH ELEVATIONS.
4. RAISING GRADES, MODERATE FILLS: WHERE EXISTING GRADE IS MORE THAN 6" BUT LESS THAN 12" BELOW FINISH GRADE ELEVATION, PLACE LAYER OF DRAINAGE FILL ON EXISTING GRADE PRIOR TO PLACING TOPSOIL. CAREFULLY PLACE AGAINST TRUNK OF TREE APPROXIMATELY 2" ABOVE FINISH GRADE ELEVATION AND EXTEND NOT LESS THAN 18" FROM TREE TRUNK ON ALL SIDES. FOR BALANCE OF AREA WITHIN DRIP LINE PERIMETER, PLACE DRAINAGE FILL TO AN ELEVATION OF 6" BELOW GRADE AND COMPLETE FILL WITH A LAYER OF TOPSOIL TO FINISH GRADE ELEVATION. DO NOT COMPACT STONE OR GRAVEL OR TOPSOIL LAYERS, AND GRADE TO REQUIRED ELEVATIONS.

TREE PROTECTION NOTES N.T.S.



NOTE:
1. RE-USE BRICK SALVAGED DURING DEMOLITION.
2. NEW BRICK, IF NEEDED, SHALL MATCH EXISTING BRICK SIDEWALK AND SHALL BE SUBMITTED TO ARCHITECT FOR APPROVAL.

PLEASE REFERENCE UNC UNIVERSITY DESIGN GUIDELINES SECTION (B-40.1 SIDEWALKS SECTION PAGE: 2) FOR CAMPUS STANDARD PEDESTRIAN BRICK PAVING AND BRICKWORK DETAIL INCLUDING EDGE BRICK AT LAWN AND LANDSCAPE BEDS.

BRICK SIDEWALK N.T.S.

SEEDBED PREPARATION

1. CHISEL ALL CUT GRADED OR COMPACTED AREAS TO A MINIMUM DEPTH OF 8"
2. DISC ALL AREAS TO RECEIVE GRASS TO A MINIMUM OF 8 INCHES, MIX AND AMEND WITH 3 INCHES OF IMPORTED TOPSOIL. REFER TO SPECIFICATIONS FOR TOPSOIL REQUIREMENTS.
3. REMOVE ALL LOOSE ROCK, ROOTS, AND OTHER OBSTRUCTIONS LEAVING SURFACE REASONABLY SMOOTH AND UNIFORM. CONSTRUCTION EQUIPMENT & TRAFFIC SHALL BE REMOVED PRIOR TO SEEDING.
4. APPLY AGRICULTURAL LIME, FERTILIZER, AND PHOSPHATE UNIFORMLY AS PER SPECIFICATIONS AND MIX WELL WITH SOIL.
5. CONTINUE TILLAGE UNTIL A WELL-PULVERIZED, FIRM, REASONABLY UNIFORM SEEDBED IS PREPARED TO A 6 INCHES DEPTH.
6. SEED AT RATE SPECIFIED. ACHIEVE AND MAINTAIN MINIMUM 95% COVERAGE PRIOR TO FINAL ACCEPTANCE, AS DETERMINED ON A PER SQUARE YARD SAMPLE BASIS.
7. MULCH IMMEDIATELY AFTER SEEDING AND ANCHOR MULCH. BEGIN THOROUGH WATERING OF GRASSED AREAS IMMEDIATELY UPON INSTALLATION. DO NOT ALLOW GRASSED AREAS TO BECOME EXCESSIVELY DRY.
8. INSPECT ALL SEEDED AREAS AND MAKE NECESSARY REPAIRS OR RESEEDINGS WITHIN THE PLANTING SEASON, IF POSSIBLE. IF STAND SHOULD BE OVER 60% DAMAGED, REESTABLISH FOLLOWING ORIGINAL LIME, FERTILIZER AND SEEDING RATES.
9. REFER TO WRITTEN SPECIFICATIONS FOR WARRANTY AND MAINTENANCE OF LAWNS PRIOR TO OWNER'S FINAL ACCEPTANCE.
10. IF CONFLICTS OCCUR BETWEEN WRITTEN SPECIFICATIONS AND THE DRAWINGS, THE WRITTEN SPECIFICATIONS SHALL PREVAIL.

LIME & FERTILIZATION SCHEDULE

APPLY LIME AND FERTILIZER ACCORDING TO SOIL TESTS, AS NEEDED TO ESTABLISH 95% COVERAGE (AS DETERMINED ON A PER SQUARE YARD BASIS) PRIOR TO SUBSTANTIAL COMPLETION. CONTRACTOR TO SUBMIT A COPY OF ALL SOIL REPORTS TO OWNER UPON RECEIPT.

OR APPLY AT THE FOLLOWING MIN. RATES:
4,000 LB/ACRE GROUND AGRICULTURAL LIMESTONE
500 LB/ACRE 10-10-10 FERTILIZER

SURFACE STABILIZATION REQUIREMENTS

1. DURING ALL PHASES OF CONSTRUCTION, GROUNDCOVER ON EXPOSED SLOPES SHALL BE PROVIDED WITHIN TIME CONSTRAINTS DETAILED ON C3.1.
2. USE EXCELSIOR MATTING OR OTHER APPROVED CHANNEL LINING MATERIAL TO COVER THE BOTTOM OF CHANNELS.
3. APPLY 4000 LB/ACRE GRAIN STRAW OVER SEEDED AREAS AND ANCHOR STRAW BY CRIMPING (WITH A TRACTOR-DRAWN MULCH ANCHORING TOOL DESIGNED TO PUNCH MULCH INTO SOIL), ASPHALT TACKING (AT 400-GAL/ACRE) OR OTHER APPROVED METHOD.
4. MULCH AND ANCHORING MATERIALS MUST NOT BE ALLOWED TO WASH DOWN SLOPES AND CLOG DRAINAGE DEVICES.

SEEDING INFORMATION

TEMPORARY SEEDING SCHEDULE (JUNE 1-FEB 28 'NO MOW' AREAS & EROSION CONTROL PHASE)

DATE	TYPE	PLANTING RATE
AUG 15 – APR 15	3-WAY TALL FESCUE BLEND AND WINTER RYE (GRAIN)	125 LBS/ACRE 25 LBS/ACRE
APR 15 – AUG 15	3-WAY TALL FESCUE BLEND AND GERMAN MILLET *** OR SUDANGRASS (SMALL-STEMMED VAR.) ***	120 LBS/ACRE 25 LBS/ACRE 30 LBS/ACRE

CONSULT CONSERVATION ENGINEER OR SOIL CONSERVATION SERVICE FOR ADDITIONAL INFORMATION CONCERNING OTHER ALTERNATIVES FOR VEGETATION OF DENUDED AREAS. THE ABOVE VEGETATION RATES ARE THOSE WHICH DO WELL UNDER LOCAL CONDITIONS; OTHER SEEDING RATE COMBINATIONS ARE POSSIBLE.

*** TEMPORARY - RESEED ACCORDING TO OPTIMUM SEASON FOR DESIRED PERMANENT VEGETATION. DO NOT ALLOW TEMPORARY COVER TO GROW OVER 12" IN HEIGHT BEFORE MOWING, OTHERWISE FESCUE MAY BE SHADED OUT.

PERMANENT SEEDING SCHEDULE – LAWN AREAS

DATE	TYPE	PLANTING RATE
AUG 15 – APR 1	TALL FESCUE BLEND (MIN OF 4 VARIETIES)	7-10 LBS/1,000 SF

CONSULT CONSERVATION ENGINEER OR SOIL CONSERVATION SERVICE FOR ADDITIONAL INFORMATION CONCERNING OTHER ALTERNATIVES FOR VEGETATION OF DENUDED AREAS. THE ABOVE VEGETATION RATES ARE THOSE WHICH DO WELL UNDER LOCAL CONDITIONS; OTHER SEEDING RATE COMBINATIONS ARE POSSIBLE.

LORD AECK SARGENT

REVISION:

CLH DESIGN

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Suite 120
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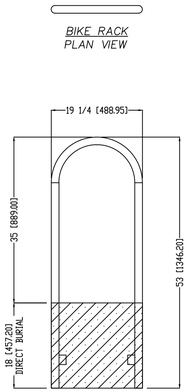
Phone: 919.319.6716
LA: C-106, PE: C-1585

SHEET TITLE: SITE DETAILS
SCALE (U.N.O.)

JOB NAME: University of North Carolina - Chapel Hill
SCM#: 21-23548-02A UNC Project No. C021212
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

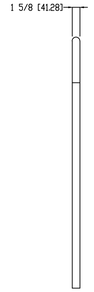
SEAL
NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT No. 1047 KEITH DOWNING

ISSUE DATE: 1/8/2024
JOB. NO. 11706-00
DWG. NO. C801



BIKE RACK
PLAN VIEW

BIKE RACK
SECTION



BIKE RACK
SECTION

BIKE RACK
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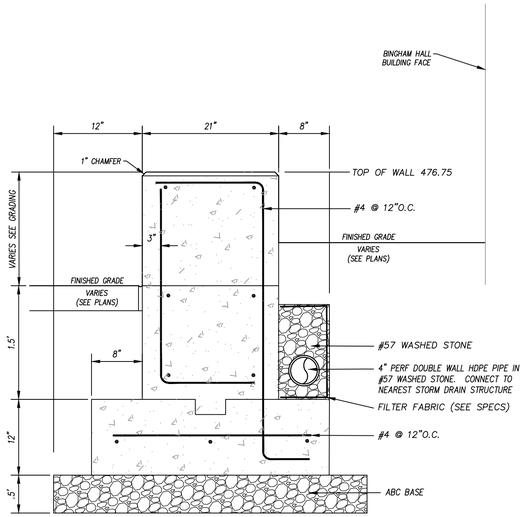
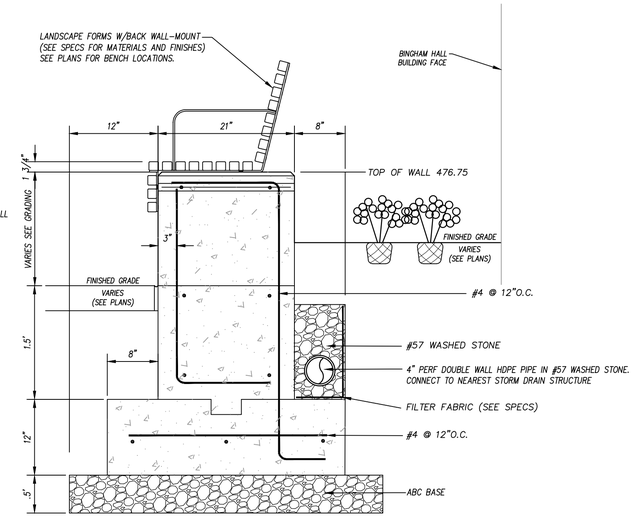


CONCRETE SEAT WALL
SECTION

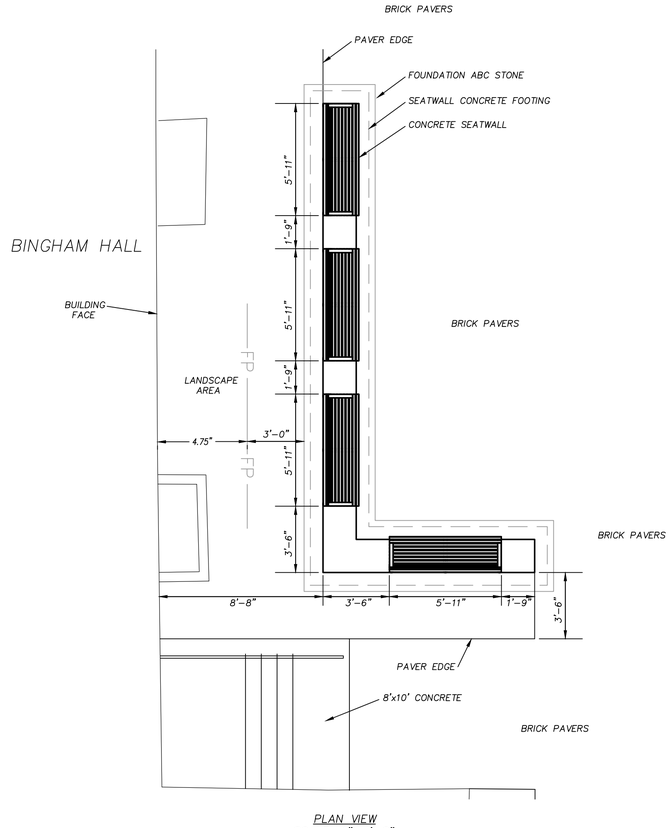
NOTE:

1. CONTRACTOR SHALL STAKE OUT AND CONFIRM ELEVATIONS PRIOR TO CONSTRUCTIONS.
2. CONTRACTOR TO PROVIDE SHOP DRAWING FOR ALL CONCRETE WALL TO DESIGN TEAM PRIOR TO CONSTRUCTION.
3. LANDSCAPE FORMS WALL MOUNT BENCH TO BE INSTALL PER MANUFACTURES RECOMMENDATIONS. SEE SPECIFICATIONS
4. ALL REBAR SHALL BE #4.

NOTES
1. CONCRETE SHALL BE 4,000-PSI @ 28 DAYS.
2. INSTALL A 4-IN PERF PVC DRAIN BEHIND WALL IN LANDSCAPE AREAS. CONNECT TO STORM DRAINAGE.



SEAT WALL WITH MOUNTED BENCH – 71" WITH BACK
SECTION



PLAN VIEW
SCALE: 1"=4'-0"

MAGLIN SITE FURNITURE INC.
WWW.MAGLINCOM
TEL: 800-716-5506
FAX: 877-260-9393

TITLE:	BIKE RACK, 500-DIRECT BURIAL
PART NO:	MKR500-DB
SCALE (A)	1:16
WEIGHT:	159.41LBS
DATE:	2014-04-26

CONCRETE SEAT WALL WITH MOUNTED BENCH

N.T.S.

LORD AECK SARGENT

REVISION:

CLH DESIGN
CLH Design, PA
400 Regency Forest Dr.
Suite 120
Cary, NC 27518
Phone: 919.319.6716
LA: C-106, PE: C-1585

SHEET TITLE: SITE DETAILS

SCALE (U.N.O.)

JOB NAME: University of North Carolina - Chapel Hill

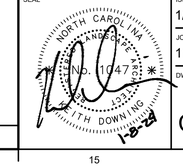
SCD#: 21-23548-02A

UNC Project No. CI21212

BINGHAM HALL RENOVATION

LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

SEAL



ISSUE DATE: 1/8/2024

JOB. NO.: 11706-00

DWG. NO.: C802

DESIGN CRITERIA:

CLASSIFICATION OF BUILDING
- RISK CATEGORY III

SUPER IMPOSED ROOF DEAD LOADS - UNIFORM:
- EXISTING TRUSS TOP CHORD LOADS:
  - EXISTING SLATE TILE ..... 10 PSF
  - EXISTING PYROBAR ROOF TILE (DECK) ..... 17 PSF
  - LEVELING AND UNDERLAYMENT ..... 2 PSF
  - 8" INSULATION ..... 12 PSF
  - DUCTS, MECHANICAL ..... AS SHOWN ON MECH DWGS
- EXISTING TRUSS BOTTOM CHORD LOADS:
  - DUCTS, MISC. MECHANICAL ..... AS SHOWN ON MECH DWGS
  - CEILINGS ..... 2 PSF
  - LIGHTS ..... 2 PSF
  - SPRINKLERS ..... 3 PSF

SUPER IMPOSED FLOOR DEAD LOADS - UNIFORM:
- 4" LIGHT WEIGHT GROUT FILL WITH TERRAZZO ..... 40 PSF
- WOOD FLOORING ..... 4 PSF
- CEILING ..... 2 PSF
- SPRINKLERS ..... 3 PSF
- DUCTS, LIGHTS, MISC. MECHANICAL ..... 3 PSF
- COLLATERAL ..... 2 PSF

LIVE LOADS - UNIFORM:
- SLAB ON GRADE ..... 100 PSF
- TRUSS BOTTOM CHORD ..... 20 PSF
- ROOF ..... 20 PSF
- CLASSROOMS ..... 40 PSF
- OFFICES ..... 50 PSF
- PARTITION ALLOWANCE ..... 0 PSF AT LL ≥ 80 PSF; 15 PSF
- STORAGE ..... 100 PSF
- BASEMENT MECHANICAL SPACE ..... 150 PSF
- 3RD FLOOR MECHANICAL SPACE ..... 75 PSF
- LOBBIES ..... 100 PSF
- CORRIDORS (FIRST FLOOR) ..... 100 PSF
- CORRIDORS (SERVING PUBLIC SPACES) ..... 100 PSF
- CORRIDORS (ABOVE FIRST FLOOR) ..... 80 PSF
- STAIRWAYS ..... 100 PSF

LIVE LOAD REDUCTION OF THE UNIFORMLY DISTRIBUTED FLOOR LIVE LOADS HAS BEEN UTILIZED.

LIVE LOADS - CONCENTRATED:
- FLOORS SCHOOLS ..... 1,000#
- FLOOR OFFICES ..... 2,000#
- ROOFS ..... 300#

UNLESS OTHERWISE NOTED, CONCENTRATED LOADS ARE APPLIED UNIFORMLY OVER 2'-6" x 2'-6" AREA.

SNOW LOADS:
- GROUND SNOW LOAD ..... 15 PSF
- SLOPED ROOF LOAD ..... 13 PSF
- IMPORTANCE FACTOR (Is) 1.1
- THERMAL FACTOR (Ct) 1.0
- EXPOSURE FACTOR (Ce) 1.0

WIND LOADS:
- ULTIMATE DESIGN WIND SPEED (VULT) ..... 120 MPH
- NOMINAL DESIGN (VASD WIND SPEED ..... 93 MPH
- EXPOSURE CATEGORY ..... B
- INTERNAL PRESSURE COEFFICIENT ..... ±0.18
- COMPONENT AND CLADDING PRESSURES:
  - WALLS, ZONE 5 (10 SF) ..... 31/-42 PSF
  - ROOF, ZONE 3 (10 SF) ..... 29/-37 PSF
  - PARAPET, END/CORNER (10 SF) ..... N/A
  - ULTIMATE WIND BASE SHEARS (FOR MWFRS): ..... EXISTING

SEISMIC LOADS:
- SITE CLASSIFICATION ..... D
- SEISMIC DESIGN CATEGORY ..... B
- IMPORTANCE FACTOR (IE) 1.25
- SPECTRAL RESPONSE ACCELERATIONS:
  - S_S ..... 0.158 S_1 ..... 0.078
  - S_{MS} ..... 0.253 S_{M1} 0.188
  - S_{DS} ..... 0.169 S_{D1} 0.125
- ANALYSIS PROCEDURE ..... EQUIVALENT LATERAL FORCE
- LATERAL FORCE RESISTING SYSTEM ..... ORDINARY PLAIN MASONRY SHEAR WALLS
- RESPONSE MODIFICATION COEFFICIENT (R) 1 1/2
- SEISMIC RESPONSE COEFFICIENT (Cs) 0.141
- ULTIMATE SEISMIC BASE SHEAR (V) ..... EXISTING

GENERAL NOTES:

1. THE STRUCTURAL DRAWINGS MUST BE USED IN CONJUNCTION WITH THE ARCHITECTURAL, CIVIL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS, AND THE SPECIFICATIONS. THE CONTRACTOR MUST VERIFY THE REQUIREMENTS OF OTHER TRADES AS TO SLEEVES, CHASES, HANGERS, INSERTS, ANCHORS, HOLES, AND ADDITIONAL ITEMS TO BE PLACED OR SET IN THE STRUCTURAL WORK.
2. THIS STRUCTURE HAS BEEN DESIGNED IN ACCORDANCE WITH THE PROVISIONS OF THE NORTH CAROLINA STATE BUILDING CODE, 2018 EDITION AND THE NORTH CAROLINA STATE EXISTING BUILDING CODE, 2018 EDITION.
3. THE WORK OUTLINED IN THE BUILDING CODE IS SUBJECT TO SPECIAL INSPECTIONS AS DESCRIBED IN THE TECHNICAL SPECIFICATIONS REFER TO S003 AND S004 FOR ADDATIONAL INFORMATION.
4. THE CONTRACTOR MUST PROVIDE TEMPORARY SHORING AND BRACING REQUIRED TO ERECT AND HOLD THE STRUCTURE IN PROPER ALIGNMENT UNTIL PERMANENT SUPPORTS AND LATERAL BRACING ARE IN PLACE.
5. PORTIONS OF THE STRUCTURE NOT ALTERED AND NOT AFFECTED BY THE ALTERATION HAVE NOT BEEN REVIEWED FOR COMPLIANCE WITH THE CODE REQUIREMENTS FOR A NEW STRUCTURE.
6. BEFORE PROCEEDING WITH WORK WITHIN THE EXISTING STRUCTURE, THE CONTRACTOR MUST BECOME FAMILIAR WITH THE EXISTING STRUCTURAL CONDITIONS. ANY SHORING OR BRACING SHOWN IS A PARTIAL AND SCHEMATIC REPRESENTATION OF THAT REQUIRED. THE CONTRACTOR MUST BE SOLELY RESPONSIBLE FOR THE DESIGN AND ERECTION OF ANY AND ALL SAFEGUARDS NECESSARY TO PROTECT THE EXISTING STRUCTURE. THE CONTRACTOR MUST PROVIDE SHORING, BRACING, AND OTHER SAFEGUARDS TO MAINTAIN ALL PARTS OF THE STRUCTURE IN A SAFE CONDITION AT ALL TIMES DURING THE PROCESS OF DEMOLITION AND CONSTRUCTION.
7. THE CONTRACTOR MUST FIELD VERIFY THE DIMENSIONS, ELEVATIONS, AND OTHER REQUIREMENTS NECESSARY FOR THE PROPER CONSTRUCTION AND ALIGNMENT OF THE NEW PORTIONS OF THE STRUCTURE TO THE EXISTING. ANY DIMENSIONS SHOWN OF EXISTING STRUCTURES MUST BE CONSIDERED AS APPROXIMATE AND ADEQUATE FOR BIDDING PURPOSES ONLY. THE CONTRACTOR MUST MAKE ALL MEASUREMENTS NECESSARY FOR THE FABRICATION AND ERECTION OF STRUCTURAL MEMBERS. DISCREPANCIES MUST BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
8. DISCREPANCIES BETWEEN DRAWINGS, BETWEEN THE DRAWINGS AND THE SPECIFICATIONS, OR WITHIN THE SPECIFICATIONS, MUST BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND ENGINEER DURING THE BIDDING PROCESS IN TIME TO PERMIT CLARIFICATION BY ADDENDUM. IF INCONSISTENCIES, DISCREPANCIES OR CONTRADICTIONS IN THE CONTRACT DOCUMENTS ARE DISCOVERED AFTER THE CLOSE OF BIDDING QUESTIONS, THE CONTRACTOR MUST BE DEEMED BY SUBMITTAL OF THEIR BID, TO HAVE BID THE MOST COSTLY AS TO LABOR, MATERIALS, DURATION, SEQUENCE AND METHOD OF CONSTRUCTION TO PROVIDE THE WORK.
9. PRIOR TO ISSUING THE STRUCTURAL DRAWINGS FOR ANY PURPOSE, AUTHORIZATION MUST BE OBTAINED FROM THE STRUCTURAL ENGINEER OF RECORD. WHEN AUTHORIZED, THE DOCUMENTS THAT ARE RELEASED MUST BE CLEARLY IDENTIFIED WITH THE AUTHORIZED PURPOSE AND MUST INCLUDE THE DATE OF RELEASE.

DEMOLITION NOTES:

1. SOME TERMS INDICATED ON PLAN ARE DEFINED AS FOLLOWS:
   - A. REMOVE: DETACH ITEMS FROM EXISTING CONSTRUCTION AND LEGALLY DISPOSE OF THEM OFF-SITE, COMPLYING WITH UNC DG A-31 FOR WASTE MANAGEMENT.
   - B. REMOVE AND SALVAGE: DETACH ITEMS FROM EXISTING CONSTRUCTION AND DELIVER THEM TO THE OWNER READY FOR REUSE.
   - C. REMOVE AND REINSTALL: DETACH ITEMS FROM EXISTING CONSTRUCTION, PREPARE THEM FOR REUSE, AND REINSTALL THEM WHERE INDICATED.
   - D. EXISTING TO REMAIN: EXISTING ITEMS OF CONSTRUCTION THAT ARE NOT TO BE REMOVED.
2. COMPLY WITH LOCAL NOISE, DUST AND EROSION CONTROL REGULATIONS. CONTROL DUST FROM DEMOLITION TO PREVENT IT FROM SPREADING TO OCCUPIED PORTIONS OF BUILDING AND TO AVOID CREATING A NUISANCE IN SURROUNDING AREA.
3. OBTAIN REQUIRED PERMITS FROM GOVERNING AUTHORITIES.
4. PROVIDE TEMPORARY BARRICADES AND OTHER PROTECTION REQUIRED TO PREVENT INJURY TO PEOPLE AND DAMAGE TO ADJACENT PROPERTY.
5. AT END OF EACH WORKDAY AND DURING INCLEMENT WEATHER, COVER AND PROTECT AREAS OF OPENED UP AND UNFINISHED WORK WITH WEATHER PROOF BARRIERS, AS REQUIRED.
6. PROTECT FROM DAMAGE EXISTING ROADS, WALKS, CURBS, LANDSCAPE, AND OTHER SITE AND BUILDING STRUCTURES. REPAIR OR REPLACE DAMAGED ITEMS.
7. REMOVE MATERIAL RESULTING FROM DEMOLITION OPERATIONS, EXCEPT AS OTHERWISE INDICATED, AND DISPOSE OF IN ACCORDANCE WITH APPLICABLE LAWS AND REGULATIONS AS PART OF THE WORK. CONTROL RUBBISH, DEBRIS, AND DUST BY APPROVED METHODS, AS REQUIRED BY LOCAL NOISE, DUST, AND EROSION CONTROL REGULATIONS.

FOUNDATION NOTES:

1. FOUNDATIONS HAVE BEEN DESIGNED FOR A NET ALLOWABLE PRESUMPTIVE SOIL BEARING PRESSURE OF 1,500 PSF.
2. PRIOR TO PLACING FOUNDATION CONCRETE, ALL FOUNDATION EXCAVATIONS MUST BE INSPECTED BY THE OWNER'S GEOTECHNICAL SPECIAL INSPECTOR TO EXPLORE THE EXTENT OF LOOSE, SOFT, EXPANSIVE, OR OTHERWISE UNSATISFACTORY SOIL MATERIAL AND TO VERIFY DESIGN BEARING PRESSURE. DIRECTION FOR CORRECTIVE ACTION WILL BE PROVIDED BY THE OWNER'S SPECIAL INSPECTOR WHERE UNSATISFACTORY SOILS ARE PRESENT.
3. NO UNBALANCED BACKFILLING MUST BE DONE AGAINST MASONRY OR CONCRETE WALLS UNLESS WALLS ARE SECURELY BRACED AGAINST OVERTURNING, EITHER BY TEMPORARY CONSTRUCTION BRACING OR BY PERMANENT CONSTRUCTION.
4. CONTROL GROUNDWATER AND SURFACE RUNOFF THROUGHOUT THE CONSTRUCTION PROCESS. INUNDATION AND LONG TERM EXPOSURE OF BEARING SURFACES WHICH RESULT IN DETERIORATION OF BEARING MUST BE PREVENTED.

CAST-IN-PLACE CONCRETE NOTES:

1. CONCRETE MUST BE IN ACCORDANCE WITH AMERICAN CONCRETE INSTITUTE (ACI) 301 AND 318.
2. CONCRETE MUST BE NORMAL WEIGHT UNLESS OTHERWISE DENOTED AS LW (LIGHTWEIGHT) AND MUST OBTAIN 28 DAY COMPRESSIVE STRENGTHS AS FOLLOWS:
   - A. FOUNDATIONS ..... 3,000 PSI
   - B. HOUSEKEEPING PAD ON ELEVATED STRUCTURE ..... 4,000 PSI (LW)
   - C. EXTERIOR SLAB ON GRADE AND RETAINING WALLS ..... 4,500 PSI (AE)
   - D. SLAB-ON-GRADE ..... 4,000 PSI
   - E. CONCRETE NOT OTHERWISE NOTED ..... 3,000 PSI
3. REINFORCING MATERIALS MUST BE AS FOLLOWS:
   - A. REINFORCING BARS - ASTM A615, GRADE 60, DEFORMED.
   - B. WELDED REINFORCING BARS - ASTM A706, GRADE 60.
   - C. WELDED WIRE REINFORCEMENT - ASTM A1064, WELDED STEEL WIRE REINFORCEMENT; PROVIDE SHEET TYPE, ROLL TYPE IS NOT ACCEPTABLE.
4. ALL REINFORCING STEEL AND EMBEDDED ITEMS SUCH AS ANCHOR RODS AND WELD PLATES MUST BE ACCURATELY PLACED AND ADEQUATELY TIED AND SUPPORTED BEFORE CONCRETE IS PLACED TO PREVENT DISPLACEMENT BEYOND PERMITTED TOLERANCES.
5. CONCRETE COVER TO REINFORCING STEEL MUST CONFORM TO THE MINIMUM COVER RECOMMENDATIONS IN ACI 318, UNLESS THE DRAWINGS SHOW GREATER COVER REQUIREMENTS.
6. LAP CONTINUOUS REINFORCING STEEL 57 X BAR DIAMETER, TYPICAL UNLESS OTHERWISE NOTED.
7. PROVIDE AN ADDITIONAL 1/4 TON OF STOCK LENGTH #5 REINFORCING STEEL TO BE CUT AND PLACED IN THE FIELD AS DIRECTED BY THE ENGINEER.

STRUCTURAL STEEL NOTES:

1. STRUCTURAL STEEL MUST BE IN ACCORDANCE WITH THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) 360.
2. STRUCTURAL STEEL MUST COMPLY WITH THE FOLLOWING SPECIFICATIONS:
   - A. STRUCTURAL STEEL SHAPES, PLATES AND BARS UNLESS OTHERWISE NOTED - ASTM A36, Fy = 36 KSI
   - B. STRUCTURAL STEEL W-SHAPES - ASTM A992, Fy = 50 KSI
   - C. HOLLOW STRUCTURAL SECTIONS (HSS):
     - a. SQUARE AND RECTANGULAR - ASTM A500, GRADE C, Fy = 50 KSI
     - b. ROUND - ASTM A500, GRADE C, Fy = 46 KSI
   - D. ANCHOR RODS - ASTM F1554, GRADE 36
   - E. HIGH STRENGTH BOLTS - ASTM A325 (TYPICAL UON)
   - F. FULLY PRETENSIONED BOLTS - ASTM F1852 (TWIST-OFF TYPE)
   - G. WASHERS - ASTM F436
   - H. NUTS - ASTM A563
3. UNLESS OTHERWISE NOTED, ALL REQUIRED DESIGN STRENGTHS AND REACTIONS INDICATED ARE BASED ON THE "LOADING COMBINATIONS USING STRENGTH DESIGN OR LOAD AND RESISTANCE FACTOR DESIGN" PER SECTION 1605.2 OF THE BUILDING CODE.
4. STRUCTURAL STEEL FRAME IS CONSIDERED AS UNRESTRAINED FOR FIRE PROTECTION PURPOSES.
5. UNLESS OTHERWISE NOTED, BEAM CONNECTIONS MUST BE AISC "SIMPLE SHEAR CONNECTIONS" WITH ASTM A325 BOLTS DESIGNED FOR ONE HALF THE MAXIMUM TOTAL UNIFORM LOAD FOR LATERALLY SUPPORTED BEAMS GIVEN IN TABLE 3-6 OF THE "STEEL CONSTRUCTION MANUAL."
6. HIGH STRENGTH BOLTS MAY BE TIGHTENED TO THE "SNUG TIGHT" CONDITION IN LIEU OF FULL PRETENSIONING EXCEPT FOR THE FOLLOWING CONNECTIONS WHICH MUST BE FULLY PRETENSIONED:
   - A. SLIP-CRITICAL CONNECTIONS IDENTIFIED AS (SC) ON PLAN. PROVIDE CLASS A CONTACT SURFACE.
   - B. DIRECT TENSION CONNECTIONS IDENTIFIED AS (DT) ON PLAN.
   - C. BOLTED CONNECTIONS USING NON-STANDARD HOLES.
7. REFER TO THE SPECIFICATIONS FOR REQUIREMENTS OF "DELEGATED DESIGN" CONNECTIONS.

STRUCTURAL STEEL NOTES (CONT):

8. FOR STRUCTURAL STEEL CONNECTIONS INDICATED AS "DELEGATED DESIGN", INCLUDE STRUCTURAL CALCULATIONS SIGNED AND SEALED BY THE QUALIFIED PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF NORTH CAROLINA RESPONSIBLE FOR THEIR PREPARATION. IN ADDITION, THE PROFESSIONAL ENGINEER RESPONSIBLE FOR CONNECTION DESIGN MUST REVIEW THE SHOP DRAWINGS PRIOR TO SUBMITTAL TO VERIFY THAT THE CONNECTIONS AS DETAILED ON THE SHOP DRAWINGS COMPLY WITH THE CONNECTION DESIGN REQUIREMENTS OF THE FINAL CALCULATIONS. A REVIEW LETTER, SIGNED AND SEALED BY THE PROFESSIONAL ENGINEER RESPONSIBLE FOR CONNECTION DESIGN MUST BE PROVIDED WITH THE SHOP DRAWINGS AND CALCULATION SUBMITTAL STATING THAT THIS REVIEW AND VERIFICATION HAS BEEN COMPLETED.
9. DELEGATED DESIGN CONNECTIONS ARE AS FOLLOWS:
   - A. SIMPLE SHEAR CONNECTIONS
10. HIGH STRENGTH BOLTS MUST BE FULLY PRETENSIONED USING LOAD INDICATOR WASHERS OR TENSION CONTROL "TWIST OFF" BOLTS.
11. PROVIDE ANGLE FRAMING AROUND OPENINGS LARGER THAN 6 INCHES IN ANY DIMENSION (INCLUDING ROOF DRAINS) TO SUPPORT STEEL DECK, TYPICAL UNLESS OTHERWISE NOTED OR DETAILED AS FOLLOWS:
12. WELDING MUST BE IN ACCORDANCE WITH AWS D1.1, "STRUCTURAL WELDING CODE - STEEL." WELD ELECTRODES MUST BE E70XX LOW HYDROGEN. UNLESS OTHERWISE NOTED, PROVIDE CONTINUOUS FILLET WELDS WITH MINIMUM SIZE REQUIRED BY TABLE J2.4 AISC 360.
13. COORDINATE ALL MEMBER LOCATIONS, UNIT WEIGHTS, OPENING SIZES, AND CURB DIMENSIONS FOR MECHANICAL EQUIPMENT WITH THE ACTUAL EQUIPMENT FURNISHED.
14. STRUCTURAL STEEL SCHEDULED TO RECEIVE SPRAYED-ON FIREPROOFING MUST NOT BE PRIME PAINTED.
15. HOT-DIP GALVANIZE AFTER FABRICATION THE FOLLOWING:
   - A. ANGLES AND PLATES SUPPORTING MASONRY IN EXTERIOR WALLS.
   - B. LINTELS AND LINTEL ASSEMBLIES SUPPORTING MASONRY IN EXTERIOR WALLS.
   - C. ALL STEEL EXPOSED TO WEATHER IN THE FINAL CONSTRUCTION.
   - D. ITEMS IDENTIFIED AS GALVANIZED ON ARCHITECTURAL OR STRUCTURAL DRAWINGS.
16. STEEL MEMBERS MUST BE SPLICED ONLY WHERE INDICATED. CONTINUOUS MEMBERS MUST BE SPLICED OVER SUPPORTS, UNLESS OTHERWISE NOTED.

COLD-FORMED METAL FRAMING NOTES:

1. COLD-FORMED METAL FRAMING MUST BE IN ACCORDANCE WITH THE AMERICAN IRON AND STEEL INSTITUTE (AISI) "NORTH AMERICAN STANDARD FOR COLD-FORMED STEEL FRAMING - GENERAL PROVISIONS"
2. SUBMIT SHOP DRAWINGS SIGNED AND SEALED BY A NORTH CAROLINA LICENSED PROFESSIONAL ENGINEER RESPONSIBLE FOR THE DESIGN OF COLD-FORMED METAL FRAMING. SHOP DRAWINGS MUST INCLUDE DESIGN LOADINGS AND REACTIONS APPLIED TO THE SUPPORTING STRUCTURE. INCLUDE PLACING DRAWINGS FOR FRAMING MEMBERS SHOWING SIZE AND GAGE DESIGNATIONS, NUMBER, TYPE, LOCATION AND SPACING. INDICATE CONNECTIONS, SUPPLEMENTAL STRAPPING, BRACING, SPLICES, BRIDGING, ACCESSORIES AND DETAILS AND CONSTRUCTION SEQUENCE REQUIRED FOR PROPER AND SAFE INSTALLATION.
3. WELDING MUST BE IN ACCORDANCE WITH AWS D1.3, "STRUCTURAL WELDING CODE - SHEET STEEL". TOUCH UP ALL WELDS WITH SPECIFIED COATING SYSTEMS.
4. COLD-FORMED METAL FRAMING MEMBERS MUST CONFORM TO ASTM C955, AND BE FORMED OF CORROSION-RESISTANT STEEL CONFORMING TO ASTM A653 AND ASTM C955 WITH A MINIMUM YIELD STRENGTH OF 33 KSI FOR 43 MIL AND THINNER MEMBERS AND 50 KSI FOR ALL OTHER MEMBERS.
5. MEMBER SECTION PROPERTIES MUST CONFORM TO PART 'I' OF THE "COLD-FORMED STEEL DESIGN MANUAL."
6. COLD-FORMED METAL FRAMING MEMBERS, HEADERS AND CONNECTIONS SHOWN ON STRUCTURAL AND ARCHITECTURAL DRAWINGS ARE SCHEMATIC ONLY AND MUST BE DESIGNED TO MEET PERFORMANCE SPECIFICATION REQUIREMENTS.
7. PROVIDE BRIDGING LINES AT 4'-0" MAXIMUM ON CENTER IN ALL WALLS UNLESS OTHERWISE INDICATED. BRIDGING MUST BE FULLY INSTALLED AND ANCHORED AT ENDS BEFORE SUPERIMPOSING LOADS ONTO THE STUDS.
8. COLD-FORMED METAL FRAMING DESIGN LOADS MUST BE AS INDICATED IN THE "GENERAL NOTES".

LORD AECK SARGENT

REVISION:

lynchmykins CONSULTING STRUCTURAL ENGINEERS
Structural Engineers
301 N West St., Suite 105
Raleigh, NC 27603
919.782.1833 - lynchmykins.com

SHEET TITLE: GENERAL NOTES
SCALE (U.N.O.)

JOB NAME: University of North Carolina - Chapel Hill
SCI#: 21-23545-02A
UNC Project No: C021212
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

SEAL

NORTH CAROLINA PROFESSIONAL ENGINEERING SEAL C-4360 LYNCHMYKINS STRUCTURAL ENGINEERS, PC

NORTH CAROLINA PROFESSIONAL SEAL 040416 ENGINEER SUSAN W. RUSSELL

ISSUE DATE: 01/08/2024
JOB. NO.: 11706-00
DWG. NO.: S001

2024-01-03

FOR BID

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1/3/2024 4:28:40 PM

SPECIALTY STRUCTURAL ELEMENTS:

1. THE FOLLOWING BUILDING ELEMENTS REQUIRE DELEGATED DESIGN AND ENGINEERING BY A SPECIALTY STRUCTURAL ENGINEER:

   A. METAL STAIRS
   B. CURTAIN WALL AND GLAZING ASSEMBLIES INCLUDING CONNECTIONS TO THE STRUCTURE
   C. COLD-FORMED METAL FRAMING (CFMF)
   D. STRUCTURAL STEEL CONNECTIONS
   E. FALL ARREST SYSTEMS
   F. TEMPORARY SHORING AND/OR EXCAVATION SUPPORT

   REFERENECE SPECIFICATIONS FOR COMPLETE REQUIREMENTS

2. SUBMIT COMPLETE CALCULATIONS AND SHOP DRAWINGS, SIGNED AND SEALED BY THE PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF NORTH CAROLINA RESPONSIBLE FOR THE DESIGN, INCLUDING DESIGN LOADINGS AND REACTIONS APPLIED TO THE SUPPORTING STRUCTURE. INCLUDE A SUMMARY OF THE CONTROLLING LOAD CASES FOR EACH LOCATION.

3. IN ADDITION TO THEIR OWN DEAD WEIGHT AND THE DEAD LOADS SHOWN OR INDICATED IN THE DRAWINGS, MEMBERS MUST BE DESIGNED TO SUPPORT THE LOADS INDICATED IN THE GENERAL NOTES.

4. CONNECTION DETAILS SHOWN ARE SCHEMATIC ONLY. ALL CONNECTIONS MUST BE DESIGNED AND DETAILED BY THE MANUFACTURER TO SUIT THE SPECIFIED LOADS. CONNECTIONS MUST ACCOUNT FOR THERMAL MOVEMENT, DEFLECTION AND CREEP. DETAIL ALL CONNECTIONS ON SHOP DRAWINGS.

5. THE CONTRACTOR MUST BE RESPONSIBLE FOR THE COORDINATION OF ALL SPECIALTY STRUCTURAL ELEMENTS AND COST ASSOCIATED WITH A CONTRACTOR INITIATED CHANGE IN BUILDING STRUCTURE, INCLUDING CONSTRUCTION COSTS AND RE-ENGINEERING COSTS.

LIGHT DUTY STEEL GRATING NOTES:

1. PROVIDE PRESSURE LOCKED RECTANGULAR STEEL GRATING WITH A HOT DIPPED GALVANIZED FINISH APPLIED AFTER ASSEMBLY IS COMPLETE.
2. MAIN BARS ARE TO BE A MINIMUM OF 2"x3/16" AND SPACED AT11/16" OC
3. CROSS BARS ARE TO BE OF RECTANGULAR CROSS SECTION, FLUSH WITH TOP OF MAIN BARS AND SPACED AT 2" OC MAXIMUM.
4. GRATING SHALL BE 11-W-2 AS MANUFACTURED BY OHIO GRATINGS, INC OR AN APPROVED EQUIVALENT.
5. MAIN BARS AND CROSS BARS ARE TO BE SLOTTED AT THEIR INTERSECTIONS SO AS NOT TO REMOVE EXCESSIVE MATERIAL FROM THE LOAD SUSTAINING MEMBERS.
6. MAIN BARS ARE TO BE "DOVETAIL" SLOTTED AND ARE TO HAVE THEIR SLOTS SOLIDLY FILED BY INTERSECTING CROSS BAR.
7. ALL ENDS OF BEARING BARS ARE TO BE BANDED WITH BARS EQUAL IN SIZE TO THE MAIN BEARING BARS.
8. GRATING IS TO SAFELY SUSTAIN A UNIFORM DISTRIBUTED LOAD OF 600 PSF ON MAXIMUM 6'-6" SPAN, AND DEFLECT LESS THAN L/240.
9. GRATING IS TO SAFELY CONCENTRATED LOAD OF 2,000 POUNDS ON MAXIMUM 6'-6" SPAN, AND DEFLECT LESS THAN L/240.
10. ALL GRATING IS TO BE ATTACHED TO SUPPORTS BY STANDARD HOT DIPPED GALVANIZED CLIPS SPACED AT 24" OC MAXIMUM. MINIMUM FOUR (4) FASTENERS PER PANEL. FASTENERS SHALL BE STAINLESS STEEL.
11. ALL GRATING IS TO BE DESIGNED AND THE SPECIFIED MINIMUM SIZES ARE TO BE VERIFIED FOR STRUCTURAL ADEQUACY UNDER THE GIVEN LIVE LOAD CONDITIONS BY THE GRATING MANUFACTURER.

POST-INSTALLED ANCHOR NOTES:

1. ALL POST INSTALLED ANCHORS INDICATED ON THE DRAWINGS ARE BY HILTI, INC, AND MUST BE CONSIDERED THE BASIS OF DESIGN PRODUCT. WHERE NOT EXPLICITLY INDICATED IN THE DRAWINGS, THE FOLLOWING ANCHORS/ADHESIVES MUST BE USED:
   A. ANCHORAGE TO CONCRETE
      1. ADHESIVE ANCHORS FOR CRACKED AND UNCRACKED CONCRETE USE:
         a. HILTI HIT-HY 200 SAFE SET SYSTEM WITH HILTI HOLLOW DRILL BIT (TE-CD OR TE-YD) AND VC 20/40 VACUUM SYSTEM (VC 20-U OR VC40U) WITH STEEL THREADED ROD PER ICC ESR-3187.
      2. SCREW ANCHORS FOR CRACKED AND UNCRACKED CONCRETE USE:
         a. HILTI KWIK HUS EZ SCREW ANCHORS PER ICC ESR-3027.
   B. REBAR DOWELING INTO CONCRETE
      1. ADHESIVE ANCHORS FOR CRACKED AND UNCRACKED CONCRETE USE:
         a. HILTI HIT-HY 200 SAFE SET SYSTEM WITH HILTI HOLLOW DRILL BIT (TE-CD OR TE-YD) AND VC 20/40 VACUUM SYSTEM (VC 20-U OR VC 40-U) WITH CONTINUOUSLY DEFORMED REBAR PER ICC ESR-3187.
   C. ANCHORAGE TO SOLID GROUTED MASONRY
      1. ADHESIVE ANCHORS USE:
         a. HILTI HIT-HY 270 MASONRY ADHESIVE ANCHORING SYSTEM (ICC PENDING).
         b. STEEL ANCHOR ELEMENT MUST BE HILTI HAS-E CONTINUOUSLY THREADED ROD.
      2. MECHANICAL ANCHORS USE:
         a. HILTI KWIK HUS EZ SCREW ANCHORS PER ICC ESR 3056.
   D. ANCHORAGE TO HOLLOW / MULTI-WYTHE MASONRY
      1. ADHESIVE ANCHORS USE:
         a. HILTI HIT-HY 270 MASONRY ADHESIVE ANCHORING SYSTEM PER ICC ESR-3342.
         b. STEEL ANCHOR ELEMENT MUST BE HILTI HAS-E CONTINUOUSLY THREADED ROD OR CONTINUOUSLY DEFORMED STEEL REBAR.
         c. THE APPROPRIATE SIZE SCREEN TUBE MUST BE USED PER ADHESIVE MANUFACTURER'S RECOMMENDATION.
2. ALTERNATE POST INSTALLED ANCHOR PRODUCTS MAY BE SUBMITTED TO THE ENGINEER FOR REVIEW AND POSSIBLE APPROVAL. ALL SUBSTITUTION REQUESTS MUST BE ACCOMPANIED BY AN ICC ESR SHOWING COMPLIANCE WITH THE RELEVANT BUILDING CODE FOR SEISMIC USES, LOAD RESISTANCE, INSTALLATION CATEGORY, AND COMPREHENSIVE INSTALLATION INSTRUCTIONS. ADHESIVE ANCHOR EVALUATION WILL ALSO CONSIDER CREEP, IN-SERVICE TEMPERATURE AND INSTALLATION TEMPERATURE. ALTERNATE PRODUCTS MAY REQUIRE MODIFICATIONS TO ANCHOR DIAMETER, SPACING, AND EMBEDMENT.
3. INSTALL ANCHORS PER THE MANUFACTURER INSTRUCTIONS, AS INCLUDED IN THE ANCHOR PACKAGING.
4. THE CONTRACTOR MUST ARRANGE FOR AN ANCHOR MANUFACTURER'S REPRESENTATIVE TO PROVIDE ONSITE INSTALLATION TRAINING FOR ALL OF THEIR ANCHORING PRODUCTS SPECIFIED. THE STRUCTURAL ENGINEER OF RECORD MUST RECEIVE DOCUMENTED CONFIRMATION THAT ALL OF THE CONTRACTOR'S PERSONNEL WHO INSTALL ANCHORS ARE TRAINED PRIOR TO THE COMMENCEMENT OF ANCHOR INSTALLATION.
5. ANCHOR CAPACITY IS DEPENDANT UPON SPACING BETWEEN ADJACENT ANCHORS AND PROXIMITY OF ANCHORS TO EDGE OF CONCRETE. INSTALL ANCHORS IN ACCORDANCE WITH SPACING AND EDGE CLEARANCES INDICATED ON THE DRAWINGS.
6. EXISTING REINFORCING BARS IN THE CONCRETE STRUCTURE MAY CONFLICT WITH SPECIFIC ANCHOR LOCATIONS. UNLESS NOTED ON THE DRAWINGS THAT THE BARS CAN BE CUT, THE CONTRACTOR MUST LOCATE THE POSITION OF THE REINFORCING BARS AT THE LOCATIONS OF THE CONCRETE ANCHORS, BY FERROSCAN OR GPR.
7. ALL POST INSTALLED ANCHORS REQUIRE CONTINUOUS SPECIAL INSPECTIONS TO VERIFY INSTALLATION HAS BEEN PERFORMED IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS. REFERENCE THE STATEMENT AND SCHEDULE OF SPECIAL INSPECTIONS FOR ADDITIONAL INFORMATION.

PLAN LEGEND:

TOS = +X'-X"	=	TOP OF STEEL ELEVATION MEASURED FROM REFERENCED FINISHED FLOOR ELEVATION = 0'-0"	SW1	=	SHEARWALL MARK
				=	BEARING WALL
BOS = +X'-X"	=	BOTTOM OF STEEL ELEVATION MEASURED FROM REFERENCED FINISHED FLOOR ELEVATION = 0'-0"		=	BEARING WALL BELOW
				=	CMU FIREWALL
TOM = +X'-X"	=	TOP OF MASONRY ELEVATION MEASURED FROM REFERENCED FINISHED FLOOR ELEVATION = 0'-0"		=	CONCRETE FIREWALL
				=	CMU SHEARWALL
TBE = +X'-X"	=	TRUSS BEARING ELEVATION MEASURED FROM REFERENCED FINISHED FLOOR ELEVATION = 0'-0"		=	CONCRETE SHEARWALL
				=	CFMF SHEARWALL
JBE = +X'-X"	=	JOIST BEARING ELEVATION MEASURED FROM REFERENCED FINISHED FLOOR ELEVATION = 0'-0"		=	WOOD SHEARWALL
				=	HOLD-DOWN ANCHOR
BOD = +X'-X"	=	BOTTOM OF DECK ELEVATION MEASURED FROM REFERENCED FINISHED FLOOR ELEVATION = 0'-0"	BSCA	=	BUILT-UP STUD COLUMN
RTU-X XXXX#	=	MECHANICAL UNIT SUPPORTED ABOVE FRAMING (WEIGHT IN POUNDS) - COORD W/ MECH DWGS		=	MOMENT CONNECTION
				=	AXIAL CONNECTION
RTU-X XXXX#	=	MECHANICAL UNIT SUPPORTED BELOW FRAMING (WEIGHT IN POUNDS) - COORD W/ MECH DWGS		=	JOIST BOTTOM CHORD EXTENSION
	=	FLOOR / ROOF OPENING		=	BEAM BOTTOM FLANGE BRACE
(-X'-X")	=	TOP OF FOOTING ELEVATION MEASURED FROM REFERENCED FINISHED FLOOR ELEVATION = 0'-0"		=	BEAM SPLICE
			KB	=	KNUCKLED BEAM
(-X'-X")	=	TOP OF PILE CAP / GRADE BEAM ELEVATION MEASURED FROM REFERENCED FINISHED FLOOR ELEVATION = 0'-0"		=	HORIZONTAL BRIDGING
				=	CROSS BRIDGING
<-X'-X">	=	TOP OF EXISITNG FOOTING ELEVATION MEASURED FROM REFERENCED FINISHED FLOOR ELEVATION = 0'-0"	WFX	=	WALL FOOTING MARK
	=	CHANGE IN ELEVATION	CFX	=	COLUMN FOOTING MARK
	=	CHANGE IN SLOPE	PCX	=	PILE CAP MARK
SL	=	DIRECTION OF SLOPE	GBX	=	GRADE BEAM MARK
	=	SLAB-ON-GRADE JOINT	TPX	=	TEST PILE MARK
	=	WARP LINE OF ROOF DECK	CBX	=	CONCRETE BEAM MARK
SF SF PIPE	=	PIPE CROSSING FOOTING	BPX	=	BASE PLATE MARK
			BBPX	=	BEAM BEARING PLATE MARK
W1	=	BEARING WALL MARK	L-X	=	CONCRETE / STEEL LINTEL MARK
			T-X	=	TRUSS MARK
			SJ	=	JOIST SLIP CONNECTION
			SG	=	JOIST GIRDER SLIP CONNECTION
			SB	=	BEAM SLIP CONNECTION
				=	JOIST GIRDER MOMENT MARK
			S-X	=	SLAB MARK / SPAN DIRECTION

DRAWING SYMBOL LEGEND:

X / SX	=	SECTION/DETAIL NUMBER/LETTER SECTION/DETAIL MARK SHEET NUMBER WHERE SECTION/DETAIL MARK IS DRAWN	X'-X"	=	TOP OF SLAB ELEVATION MEASURED FROM REFERENCED FINISHED FLOOR ELEVATION = 0'-0"
			X	=	COLUMN GRID MARK
X / SX SX	=	SECTION/DETAIL NUMBER/LETTER SECTION/DETAIL MARK SHEET NUMBER WHERE SECTION/DETAIL MARK IS DRAWN SHEET NUMBER WHERE SECTION/DETAIL MARK IS CUT	X	=	EXISTING COLUMN GRID MARK
			X	=	PLAN KEY NOTE MARK
			±	=	FIELD VERIFY

ABBREVIATIONS:

AFF	ABOVE FINISHED FLOOR	HSA	HEADED STUD ANCHOR
ARCH	ARCHITECT	HT	HEIGHT
BD	BAR DIAMETER	HVY	HEAVY
BF	BRACED FRAME	INT	INTERIOR
BEJ	BUILDING EXPANSION JOINT	JBE	JOIST BEARING ELEVATION
BLDG	BUILDING	JT	JOINT
BM	BEAM	KCJ	KEYED CONSTRUCTION JOINT
BOD	BOTTOM OF DECK	L	LOW
BOT, B	BOTTOM	LLH	LONG LEG HORIZONTAL
BRG	BEARING	LLV	LONG LEG VERTICAL
BTWN	BETWEEN	LSH	LONG SIDE HORIZONTAL
C TO C	CENTER TO CENTER	LSV	LONG SIDE VERTICAL
CFMF	COLD-FORMED METAL FRAMING	LTWT	LIGHTWEIGHT
		LWC	LIGHTWEIGHT CONCRETE
CJ	CONTROL JOINT	MAS	MASONRY
CL	CENTERLINE	MATL	MATERIAL
CLR	CLEAR	MAX	MAXIMUM
CMU	CONCRETE MASONRY UNIT	MECH	MECHANICAL
COL	COLUMN	MF	MOMENT FRAME
CONC	CONCRETE	MFR	MANUFACTURER
CONN	CONNECTION	MID	MIDDLE
CONSTR	CONSTRUCTION	MIN	MINIMUM
CONT	CONTINUOUS	MOD	MODIFY
COORD	COORDINATE	MOS	MIDDEPTH OF SLAB
CTR	CENTER	NOM	NOMINAL
CTRD	CENTERED	NTS	NOT TO SCALE
CW	CURTAIN WALL	OC	ON CENTER
DBA	DEFORMED BAR ANCHOR	OPH	OPPOSITE HAND
DBL	DOUBLE	OPNG	OPENING
DC	DIAPHRAGM CHORD	PAF	POWDER ACTUATED FASTENER
DCJ	DOWELED CONSTRUCTION JOINT	PAR	PARALLEL
		PC	PIECE
DIA, Ø	DIAMETER	PEMB	PRE-ENGINEERED METAL BUILDING
DJ	DOUBLE JOIST		
DWGS	DRAWINGS	PEN	PENETRATE, PENETRATION
EA	EACH	PERP	PERPENDICULAR
EF	EACH FACE	PL	PLATE
EJ	EXPANSION JOINT	R	RADIUS
EL	ELEVATION	REF	REFERENCE, REFER TO
ELEV	ELEVATOR	REINF	REINFORCE, REINFORCED, REINFORCING
EMBED	EMBEDMENT		
EOD	EDGE OF DECK	REQD	REQUIRED
EOS	EDGE OF SLAB	REQMTS	REQUIREMENTS
EQ	EQUAL	SCHED	SCHEDULE
EW	EACH WAY	SF	STEPPED FOOTING
EXIST	EXISTING	SGB	STEPPED GRADE BEAM
EXP	EXPANSION	SIM	SIMILAR
EXT	EXTERIOR	SJ	SAWED JOINT
FD	FLOOR DRAIN	SL	SLOPE
FDN	FOUNDATION	SOG	SLAB-ON-GRADE
FO	FACE OF	SPF	SIDEPLATE FRAME
FF EL	FINISHED FLOOR ELEVATION	STD	STANDARD
		TBE	TRUSS BEARING ELEVATION
FIN	FINISH	T&B	TOP & BOTTOM
FIN FLR	FINISHED FLOOR	T&G	TONGUE AND GROOVE
FOB	FACE OF BUILDING	THK	THICKNESS
FOC	FACE OF CONCRETE	TOC	TOP OF CONCRETE
FOM	FACE OF MASONRY	TOF	TOP OF FOOTING
FOS	FACE OF SLAB/ STUD	TOM	TOP OF MASONRY
FRMG	FRAMING	TOCP	TOP OF CONCRETE PEDESTAL
FTG	FOOTING	TOS	TOP OF STEEL
FV, ±	FIELD VERIFY	TS	THICKENED SLAB
GALV	GALVANIZED	TYP	TYPICAL
GEN	GENERAL	UON	UNLESS OTHERWISE NOTED
GR BM	GRADE BEAM	VERT	VERTICAL
H	HIGH	W/	WITH
HK	HOOK	WP	WORKING POINT
HORIZ	HORIZONTAL	WSP	WOOD STRUCTURAL PANEL(S)
HSS	HOLLOW STRUCTURAL SECTION	WWR	WELDED WIRE REINFORCING

LORD AECK SARGENT

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SHEET TITLE: GENERAL NOTES

SCALE (U.N.O.)

JOB NAME: University of North Carolina - Chapel Hill
SCD#: 21-25548-02A
UNC Project No: C0121Z
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

SEAL

NORTH CAROLINA PROFESSIONAL ENGINEERING CORPORATION C-4360 LYNCH MYKINS STRUCTURAL ENGINEERS, P.C.

NORTH CAROLINA PROFESSIONAL 040416 ENGINEER SUSAN W. RUSSELL

2024-01-03

ISSUE DATE: 01/08/2024
JOB. NO.: 11706-00
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STATEMENT OF SPECIAL INSPECTION SERVICES

PROJECT: BINGHAM HALL RENOVATION
LOCATION: 201 LENOIR DRIVE, CHAPEL HILL 27514
OWNER'S REPRESENTATIVE: QUADE GALLAGHER
OWNER'S ADDRESS: 103 AIRPORT DRIVE, CHAPEL HILL, NC 27599

THIS STATEMENT OF SPECIAL INSPECTIONS IS SUBMITTED AS A CONDITION FOR PERMIT ISSUANCE IN ACCORDANCE WITH THE SPECIAL INSPECTION REQUIREMENTS OF THE 2018 NORTH CAROLINA STATE BUILDING CODE. IT INCLUDES A SCHEDULE OF SPECIAL INSPECTION SERVICES APPLICABLE TO THIS PROJECT, THE NAME OF THE SPECIAL INSPECTOR, THE IDENTITY OF OTHER APPROVED AGENCIES RETAINED FOR CONDUCTING SPECIAL INSPECTIONS, AND THE REQUIRED INSPECTOR QUALIFICATIONS. THIS STATEMENT OF SPECIAL INSPECTIONS WAS PREPARED BY THE FOLLOWING DESIGNERS OF RECORD:

	(Type or print name)	(Signature)	(Date)
STRUCTURAL	Susan W. Russell	SW Russell	2023-01-03
ARCHITECTURAL	Lauren Dunn Rockart		–
MECHANICAL	Paul Kitchens		–
OTHER			

THE SPECIAL INSPECTOR MUST KEEP RECORDS OF ALL SPECIAL INSPECTIONS AND TESTS AND MUST FURNISH REPORTS TO THE STATE CONSTRUCTION OFFICE AND THE DESIGNERS OF RECORD. REPORTS MUST INDICATE IF THE WORK INSPECTED OR TESTED WAS OR WAS NOT COMPLETED IN CONFORMANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS. DISCOVERED DISCREPANCIES MUST BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION. IF SUCH DISCREPANCIES ARE NOT CORRECTED, THE DISCREPANCIES MUST BE BROUGHT TO THE ATTENTION OF THE STATE CONSTRUCTION OFFICE AND THE DESIGNERS OF RECORD. THE SPECIAL INSPECTIONS PROGRAM DOES NOT RELIEVE THE CONTRACTOR OF HIS OR HER RESPONSIBILITIES.

INTERIM REPORTS MUST BE SUBMITTED TO THE STATE CONSTRUCTION OFFICE, OWNER, AND THE DESIGNERS OF RECORD.

INTERIM REPORT FREQUENCY: MONTHLY

A FINAL REPORT OF SPECIAL INSPECTIONS DOCUMENTING COMPLETION OF ALL REQUIRED SPECIAL INSPECTIONS, TESTING, AND CORRECTION OF ANY DISCREPANCIES SHOULD BE SUBMITTED PRIOR TO ISSUANCE OF A CERTIFICATE OF USE AND OCCUPANCY.

JOB SITE SAFETY AND MEANS AND METHODS OF CONSTRUCTION ARE SOLELY THE RESPONSIBILITY OF THE CONTRACTOR.

OWNER'S AUTHORIZATION

(Signature) (Date)

ACCEPTED FOR THE SCO BY:

(Signature) (Date)

SCHEDULE OF SPECIAL INSPECTION SERVICES [A]

THE FOLLOWING COMPRISES THE REQUIRED SCHEDULE OF SPECIAL INSPECTIONS FOR THIS PROJECT. THE CONSTRUCTION DIVISIONS WHICH REQUIRE SPECIAL INSPECTIONS FOR THIS PROJECT ARE AS FOLLOWS.

- [X] STRUCTURAL STEEL & HIGH STRENGTH BOLTING
- [X] WELDING OF STRUCTURAL STEEL
- [ ] COLD-FORMED STEEL DECK
- [ ] OPEN-WEB STEEL JOISTS & JOIST GIRDERS
- [X] COLD-FORMED STEEL FRAMING
- [X] CONCRETE CONSTRUCTION
- [ ] MASONRY CONSTRUCTION [B]
- [ ] WOOD CONSTRUCTION
- [X] SOILS
- [ ] DRIVEN DEEP FOUNDATIONS
- [ ] CAST-IN-PLACE DEEP FOUNDATIONS
- [ ] HELICAL PILE FOUNDATIONS
- [ ] RAMMED AGGREGATE PIERS & STONE COLUMNS
- [ ] SPRAYED FIRE-RESISTANT MATERIAL
- [ ] MASTIC & INTUMESCENT FIRE-RESISTANT COATINGS
- [ ] EXTERIOR INSULATION & FINISH SYSTEM
- [X] FIRE-RESISTANT PENETRATIONS & JOINTS
- [ ] SMOKE CONTROL
- [X] RETAINING WALL & SYSTEMS > 5 FEET
- [ ] SPECIAL INSPECTIONS FOR WIND RESISTANCE
- [ ] SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE

A. THE INSPECTION FREQUENCY INDICATED ON THE FOLLOWING INSPECTION TABLES ARE "C" CONTINUOUS, "P" PERIODIC, & "O" RANDOM ON A DAILY BASIS.
B. LEVEL A IS THE MINIMUM INSPECTION PROGRAM FOR EMPIRICALLY / PRESCRIPTIVELY DESIGNED MASONRY IN RISK CATEGORY I, II OR III STRUCTURES. LEVEL B IS THE MINIMUM INSPECTION PROGRAM FOR EMPIRICALLY / PRESCRIPTIVELY DESIGNED MASONRY IN RISK CATEGORY IV STRUCTURES AND ENGINEERED MASONRY IN RISK CATEGORY I, II OR III STRUCTURES. LEVEL C IS THE MINIMUM INSPECTION PROGRAM FOR ENGINEERED MASONRY IN RISK CATEGORY IV STRUCTURES. ENGINEERED MASONRY STRUCTURES ARE THOSE DESIGNED IN ACCORDANCE WITH PORTIONS OF THE TMS 402-13 / ACI 530-13/ASCE 5-13 OTHER THAN PART 4 OR APPENDIX A.

INSPECTION AGENTS	FIRM NAME & POINT OF CONTACT	ADDRESS / PHONE / E-MAIL
1. SPECIAL INSPECTOR (SI-1)		
2. TESTING AGENCY (TA-1)		
3. TESTING AGENCY (TA-2)		
4. GEOTECHNICAL ENGINEER (GE-1)		
5. OTHER (O-1)		

NOTE: THE INSPECTION AND TESTING AGENT(S) MUST BE ENGAGED BY THE OWNER OR THE REGISTERED DESIGN PROFESSIONAL OF RECORD ACTING AS THE OWNER'S AGENT, AND NOT BY THE CONTRACTOR OR SUBCONTRACTOR WHOSE WORK IS TO BE INSPECTED OR TESTED. ANY CONFLICT OF INTEREST MUST BE DISCLOSED TO THE STATE CONSTRUCTION OFFICE, PRIOR TO COMMENCING WORK.

SEISMIC DESIGN CATEGORY: [ ] A [X] B [ ] C [ ] D

BASIC WIND SPEED (V_{ASD}): [X] 90-109 MPH [ ] 110-119 MPH [ ] >120 MPH

WIND EXPOSURE CATEGORY: [X] B [ ] C [ ] D

STRUCTURAL STEEL AND HIGH-STRENGTH BOLTING

INSPECTION TASK	TASK REQD	FREQ	REFERENCE FOR CRITERIA: AISC 360	REFERENCE FOR CRITERIA: NCBC
1. FABRICATOR CERTIFICATION / VERIFICATION OF QUALITY CONTROL PROCEDURES				
a. VERIFY FABRICATOR QUALIFICATIONS	X	C		1704.2.5.1
b. REVIEW MATERIAL TEST REPORTS & CERTIFICATIONS	X	C	N5.2	
c. COLLECT CERTIFICATES OF COMPLIANCE FROM THE STEEL FABRICATOR AT COMPLETION OF FABRICATION	X	C		1704.5
2. INSPECTIONS PRIOR TO HIGH-STRENGTH BOLTING AT PRETENSIONED AND SLIP-CRITICAL JOINTS				
a. COLLECT MANUFACTURER'S CERTIFICATIONS FOR FASTENER MATERIALS	X	C	TBL N5.6-1	
b. FASTENERS ARE MARKED PER ASTM REQUIREMENTS	X	P	TBL N5.6-1	
c. ENSURE CORRECT FASTENERS AND BOLTING PROCEDURES ARE SELECTED FOR JOINT DETAILS	X	P	TBL N5.6-1	
d. VERIFY CONNECTING ELEMENTS, INCLUDING THE APPROPRIATE FAYING SURFACE CONDITION AND HOLE PREPARATION WHEN SPECIFIED, COMPLY WITH THE CONSTRUCTION DOCUMENTS	X	P	TBL N5.6-1	
e. OBSERVE AND DOCUMENT PRE-INSTALLATION VERIFICATION TESTING BY INSTALLATION PERSONAL FOR FASTENER ASSEMBLIES AND METHODS	X	P	TBL N5.6-1	
f. VERIFY PROPER STORAGE PROVIDED FOR ALL FASTENER COMPONENTS	X	P	TBL N5.6-1	
3. INSPECTIONS DURING HIGH-STRENGTH BOLTING AT PRETENSIONED AND SLIP-CRITICAL JOINTS				
a. ENSURE CORRECT FASTENER ASSEMBLIES PLACED IN ALL HOLES AND WASHERS, WHEN SPECIFIED, ARE POSITIONED AS REQUIRED	X	P	TBL N5.6-2	
b. VERIFY JOINT BROUGHT TO SNUG-TIGHT CONDITION PRIOR TO PRETENSIONING	X	P	TBL N5.6-2	
c. VERIFY FASTENER COMPONENTS NOT TURNED BY THE WRENCH PREVENTED FROM ROTATING	X	P	TBL N5.6-2	
d. ENSURE FASTENERS ARE PRETENSIONED IN ACCORDANCE WITH RCSC, PROGRESSING FROM THE MOST RIGID POINT TOWARDS FREE EDGES	X	P	TBL N5.6-2	
4. DOCUMENT ACCEPTANCE OR REJECTION OF BOLTED CONNECTIONS AFTER HIGH-STRENGTH BOLTING IS COMPLETE	X	C	TBL N5.6-3	
5. STRUCTURAL DETAILS				
a. VERIFY DIAMETER, GRADE, TYPE AND LENGTH OF ANCHOR RODS AND OTHER EMBEDDED ITEMS SUPPORTING STRUCTURAL STEEL	X	P	N5.7	
b. INSPECTION OF FABRICATED ASSEMBLIES & ERECTED STEEL FRAMING VERIFYING COMPLIANCE WITH THE CONSTRUCTION DOCUMENTS	X	P	N5.7	
6. COMPOSITE CONSTRUCTION				
a. VERIFY PLACEMENT & INSTALLATION OF STEEL DECK	[ ]	P	TBL N6.1	
b. OBSERVE PLACEMENT AND INSTALLATION OF STEEL HEADED STUD ANCHORS	[ ]		TBL N6.1	
c. DOCUMENT ACCEPTANCE OR REJECTION OF COMPOSITE CONSTRUCTION ELEMENTS	[ ]	P	TBL N6.1	

COLD-FORMED STEEL FRAMING

INSPECTION TASK	TASK REQD	FREQ	REFERENCE FOR CRITERIA: STANDARD	REFERENCE FOR CRITERIA: NCBC
1. FABRICATOR CERTIFICATION / VERIFICATION OF QUALITY CONTROL PROCEDURES				
a. VERIFY FABRICATOR QUALIFICATIONS	X	C		1704.2.5.1
b. COLLECT CERTIFICATES OF COMPLIANCE FROM THE STEEL FABRICATOR AT COMPLETION OF FABRICATION	X	C		1704.5
2. FOR TRUSSES CLEAR SPANNING 60 FEET OR MORE, VERIFY THAT BOTH TEMPORARY AND PERMANENT RESTRAINTS AND BRACES ARE INSTALLED IN ACCORDANCE WITH THE APPROVED TRUSS SUBMITTAL PACKAGE.	[ ]	P		1705.2.4

WELDING OF STRUCTURAL STEEL

INSPECTION TASK	TASK REQD	FREQ	REFERENCE FOR CRITERIA: AISC 360	REFERENCE FOR CRITERIA: NCBC
1. INSPECTIONS PRIOR TO WELDING			N5.4	
a. COLLECT & REVIEW WELDING PROCEDURE SPECIFICATION (WPS) AND VERIFY MANUFACTURER CERTIFICATIONS FOR WELDING CONSUMABLES	X	C	TBL N5.4-1	
b. CONFIRM WELD MATERIAL TYPE & GRADE	X	P	TBL N5.4-1	
c. CONFIRM METHOD OF WELDER IDENTIFICATION	X	P	TBL N5.4-1	
d. INSPECTION OF FIT-UP FOR GROOVE & FILLET WELDS INCLUDING ACCESS HOLE CONFIGURATION & FINISH	X	P	TBL N5.4-1	
2. INSPECTIONS DURING WELDING			N5.4	
a. VERIFY WELDER QUALIFICATIONS	X	P	TBL N5.4-2	
b. VERIFY PROPER CONTROL AND HANDLING OF WELDING CONSUMABLES	X	P	TBL N5.4-2	
c. MONITOR ENVIRONMENTAL CONDITIONS	X	P	TBL N5.4-2	
d. MONITOR PROPER IMPLEMENTATION OF WPS	X	P	TBL N5.4-2	
e. INSPECTION OF WELDING TECHNIQUES INCLUDING NO WELDING OVER CRACKED TACK WELDS	X	P	TBL N5.4-2	
3. INSPECTIONS AFTER WELDING			N5.4, N5.5	
a. VERIFY WELDS HAVE BEEN CLEANED	X	P	TBL N5.4.3	
b. CONFIRM THE INSTALLED SIZE, LENGTH AND LOCATION OF WELDS MATCHES THE CONTRACT DOCUMENTS	X	C	TBL N5.4.3	
c. VERIFY WELDS MEET VISUAL ACCEPTANCE CRITERIA	X	C	TBL N5.4.3	
d. CONFIRM ARC STRIKES COMPLY WITH PART 5.28 OF AWS D1.1	X	C	TBL N5.4.3	
e. VISUALLY OBSERVE WEB K-AREA FOR CRACKS WITHIN 3" OF WELDED DOUBLER PLATES, CONTINUITY PLATES AND STIFFENERS	X	C	TBL N5.4.3	
f. BACKING AND WELD TABS REMOVED PER CONTRACT DOCUMENTS	X	C	TBL N5.4.3	
g. OBSERVE AND INSPECT WELD REPAIR ACTIVITIES	X	C	TBL N5.4.3	
h. FOR RISK CATEGORY III OR IV STRUCTURES, CONDUCT ULTRASONIC TESTING (UT) OF CJP GROOVE WELDS IN MATERIALS ≥ 5/16" AT BUTT, T- AND CORNER JOINTS SUBJECT TO TRANSVERSELY APPLIED TENSION LOADING	X	C	N5.5B, N5.5E	
i. FOR RISK CATEGORY II STRUCTURES, CONDUCT ULTRASONIC TESTING (UT) OF CJP GROOVE WELDS IN MATERIALS ≥ 5/16" AT BUTT, T- AND CORNER JOINTS SUBJECT TO TRANSVERSELY APPLIED TENSION LOADING	[ ]	P	N5.5.B, N5.5F	
j. CONDUCT MAGNETIC PARTICLE TESTING (MT) OR LIQUID PENETRANT TESTING (PT) AT THERMALLY CUT SURFACES OF ACCESS HOLES FOR ROLLED SECTION WITH TF > 2" AND BUILT-UP SHAPE WITH TW > 2"	X	C	N5.5C	
k. RADIOGRAPHIC OR ULTRASONIC INSPECTION AT JOINTS SUBJECT TO FATIGUE	X	C	N5.5D, TBL A-3.1	
l. DOCUMENT ACCEPTANCE / REJECTION OF WELDED JOINTS AND MEMBERS	X	C	TBL N5.4-3, N5.5G	

FIRE-RESISTANT PENETRATIONS AND JOINTS [A]

INSPECTION TASK	TASK REQD	FREQ	REFERENCE FOR CRITERIA: STANDARD	REFERENCE FOR CRITERIA: NCBC
1. INSPECT THROUGH-PENETRATION FIRESTOP SYSTEMS AT FIRE WALLS, FIRE BARRIERS, SMOKE BARRIERS AND FIRE PARTITION WALLS IN ACCORDANCE WITH ASTM E2174	X	P		1705.17.1, 714.3.1.2
2. INSPECT PENETRATION FIRESTOP SYSTEMS AT PENETRATIONS THROUGH MEMBRANES THAT ARE PART OF A HORIZONTAL ASSEMBLY IN ACCORDANCE WITH ASTM E2174	X	P		1705.17.1, 714.4.2
3. INSPECT FIRE-RESISTANT JOINT SYSTEMS IN ACCORDANCE WITH ASTM 2393	X	P		1705.17.2, 715.3, 715.4

A. THE INSPECTION OF FIRE-RESISTANT PENETRATIONS AND JOINTS APPLIES ONLY TO HIGH-RISE BUILDINGS OR BUILDINGS ASSIGNED TO RISK CATEGORY III OR IV.

LORD AECK SARGENT

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SHEET TITLE: SPECIAL INSPECTIONS NC

SCALE (U.N.O.)

JOB NAME: University of North Carolina - Chapel Hill
SCD# 21-23484-02A UNC Project No: 012212
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

SEAL: NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 040416 ENGINEER SUSAN W. RUSSELL — 2023-01-03

NORTH CAROLINA ENGINEERING CORPORATION C-4360 LYNCHMYKINS STRUCTURAL ENGINEERS, PC

ISSUE DATE: 01/08/2024
JOB. NO.: 11706-00
DWG. NO.: S003

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CONCRETE CONSTRUCTION

	INSPECTION TASK	TASK REQD	FREQ	REFERENCE FOR CRITERIA	
				STANDARD[A]	NCBC
1.	INSPECT REINFORCEMENT, INCLUDING PRESTRESSING TENDONS, AND VERIFY PLACEMENT	☒	P	ACI CH.20, 25.2, 25.3, 26.6.1-26.6.3	1908.4
2.	REINFORCING BAR WELDING:			AWS D1.4	
a.	VERIFY WELDABILITY OF REINFORCING BARS OTHER THAN ASTM A706 AND COLLECT REPORTS	☒	P	ACI 26.6.4	1704.5
b.	INSPECT SINGLE-PASS FILLET WELDS ≤ 5/16"	☒	P	ACI 26.6.4	
c.	INSPECT ALL WELDS OTHER THAN SINGLE-PASS FILLET WELDS ≤ 5/16"	☒	C	ACI 26.6.4	
3.	CONCRETE ANCHORS:				
a.	INSPECT ANCHORS CAST IN CONCRETE	☒	P	ACI 17.8.2	
b.	INSPECT ADHESIVE ANCHORS INSTALLED IN HARDENED CONCRETE WITH HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS THAT RESIST SUSTAINED TENSION LOADS	☒	C	ACI 17.8.2.4	
c.	INSPECT ADHESIVE ANCHORS INSTALLED IN HARDENED CONCRETE WITH ORIENTATIONS DIFFERENT FROM ITEM 3.B	☒	P	ACI 17.8.2	
d.	INSPECT MECHANICAL ANCHORS INSTALLED IN HARDENED CONCRETE	☒	P	ACI 17.8.2	
4.	COLLECT MIX DESIGNS AND VERIFY THE CORRECT MIX USED DURING INSTALLATION	☒	P	ACI CH 19, 26.4.3, 26.4.4	1904.1, 1904.2, 1908.2, 1908.3
5.	PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE	☒	C	ASTM C172, ASTM C31, ACI 26.4, 26.12	1908.10
6.	INSPECT CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES	☒	C	ACI 26.5	1908.6, 1908.7, 1908.8
7.	COLLECT REPORTS OF PRECONSTRUCTION TESTS FOR SHOTCRETE WHEN PRECONSTRUCTION TESTS ARE REQUIRED BY NCBC SECTION 1908.4	☐	C		1704.5, 1908.5
8.	VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES	☒	P	ACI 26.5.3-26.5.5	1908.9
9.	INSPECTIONS FOR PRESTRESSED CONCRETE				
a.	OBSERVE APPLICATION OF PRESTRESSING FORCE	☐	C	ACI 26.10	
b.	INSPECT GROUTING OF BONDED PRESTRESSING TENDONS	☐	C	ACI 26.10	
10.	VERIFY CONCRETE STRENGTH PRIOR TO STRESSING OF PT TENDONS AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM PT & MILD BEAMS AND STRUCTURAL SLABS	☐	P	ACI 26.11.2	
11.	INSPECT ERECTION OF PRECAST MEMBERS	☐	P	ACI 26.8	
12.	INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED	☒	P	ACI 26.11.1.2(B)	
13.	COLLECT MILL TEST REPORTS FOR ASTM A615 REBAR USED BY SFRS SPECIAL MOMENT FRAMES, SPECIAL STRUCTURAL WALLS OR COUPLING BEAMS	☐	C	ACI 20.2.2.5	1704.5

A. REFERENCES TO "ACI" IN THIS TABLE ARE TO THE ACI 318-14.

SOILS

	INSPECTION TASK	TASK REQD	FREQ	REFERENCE FOR CRITERIA	
				STANDARD	NCBC
1.	VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY	☒	P		1705.6
2.	VERIFY EXCAVATIONS EXTEND TO PROPER DEPTH AND HAVE REACHED THE CORRECT SOIL MATERIAL	☒	P		1705.6
3.	PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS	☒	P		1705.6
4.	VERIFY THAT MATERIALS USED, DENSITIES, LIFT THICKNESS AND PROCEDURES USED DURING PLACEMENT AND COMPACTION OF COMPACTED FILL ARE IN ACCORDANCE WITH THE APPROVED SOILS REPORT AND THE CONSTRUCTION DOCUMENTS	☒	C		1705.6
5.	PRIOR TO PLACEMENT OF COMPACTED FILL, VERIFY THAT THE SUBGRADE HAS BEEN PREPARED IN ACCORDANCE WITH THE APPROVED SOILS REPORT AND THE CONSTRUCTION DOCUMENTS	☒	P		1705.6

RETAINING WALLS EXCEEDING 5 FEET[A B C D]

	INSPECTION TASK	TASK REQD	FREQ[(A)]	REFERENCE FOR CRITERIA	
				STANDARD	NCBC
1.	FOUNDATION SUPPORT SYSTEM IS ADEQUATE FOR THE INTENDED SITE CONDITIONS	☒	P		1807.2.5.1
2.	VERIFY THAT RETAINING WALL MATERIALS AND INSTALLATIONS ARE IN COMPLIANCE WITH THE CONSTRUCTION DOCUMENTS	☒	P		1807.2.5.2
3.	VERIFY THAT ACTUAL SOIL CONDITIONS ARE SIMILAR TO THOSE ANTICIPATED BY THE APPROVED ENGINEERED DESIGN	☒	P		1807.2.5.3
4.	EXAMINATION OF BACKFILL MATERIALS FOR COMPLIANCE WITH THE APPROVED SPECIFICATIONS	☒	P		1807.2.5.4
5.	CONFIRM THAT ALL SUBSOIL DRAINAGE PIPING IS UNDAMAGED, DRAINS FREELY TO THE DESIGNATED OUTLET OR STRUCTURE, AND HAS BEEN INSTALLED PER THE APPROVED ENGINEERED DESIGN	☒	P		1807.2.5.4

A. ALL RETAINING WALLS EXCEEDING 5 FEET IN HEIGHT REQUIRE SPECIAL INSPECTIONS.
B. FOR CONCRETE RETAINING WALLS AND FOOTINGS, PERFORM ADDITIONAL INSPECTIONS IN ACCORDANCE WITH SECTION 1705.3 OF THE NORTH CAROLINA BUILDING CODE AND THE APPLICABLE SCHEDULES INCLUDED HEREIN
C. FOR MASONRY RETAINING WALLS, PERFORM ADDITIONAL INSPECTIONS IN ACCORDANCE WITH SECTION 1705.4 OF THE NORTH CAROLINA BUILDING CODE AND THE APPLICABLE SCHEDULES INCLUDED HEREIN
D. FOR SOILS, PERFORM ADDITIONAL INSPECTIONS IN ACCORDANCE WITH SECTION 1705.6 OF THE NORTH CAROLINA BUILDING CODE AND THE APPLICABLE SCHEDULES INCLUDED HEREIN

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SHEET TITLE: SPECIAL INSPECTIONS NC

SCALE (U.N.O.):

JOB NAME: University of North Carolina - Chapel Hill
SCD# 21-23545-02A
UNC Project No. C021212
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

SEAL

NORTH CAROLINA PROFESSIONAL ENGINEERING CORPORATION C-4360 LYNCHMYKINS STRUCTURAL ENGINEERS, PC

NORTH CAROLINA PROFESSIONAL 040416 ENGINEER SUSAN W. RUSSELL

ISSUE DATE: 01/08/2024
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DWG. NO.: S004

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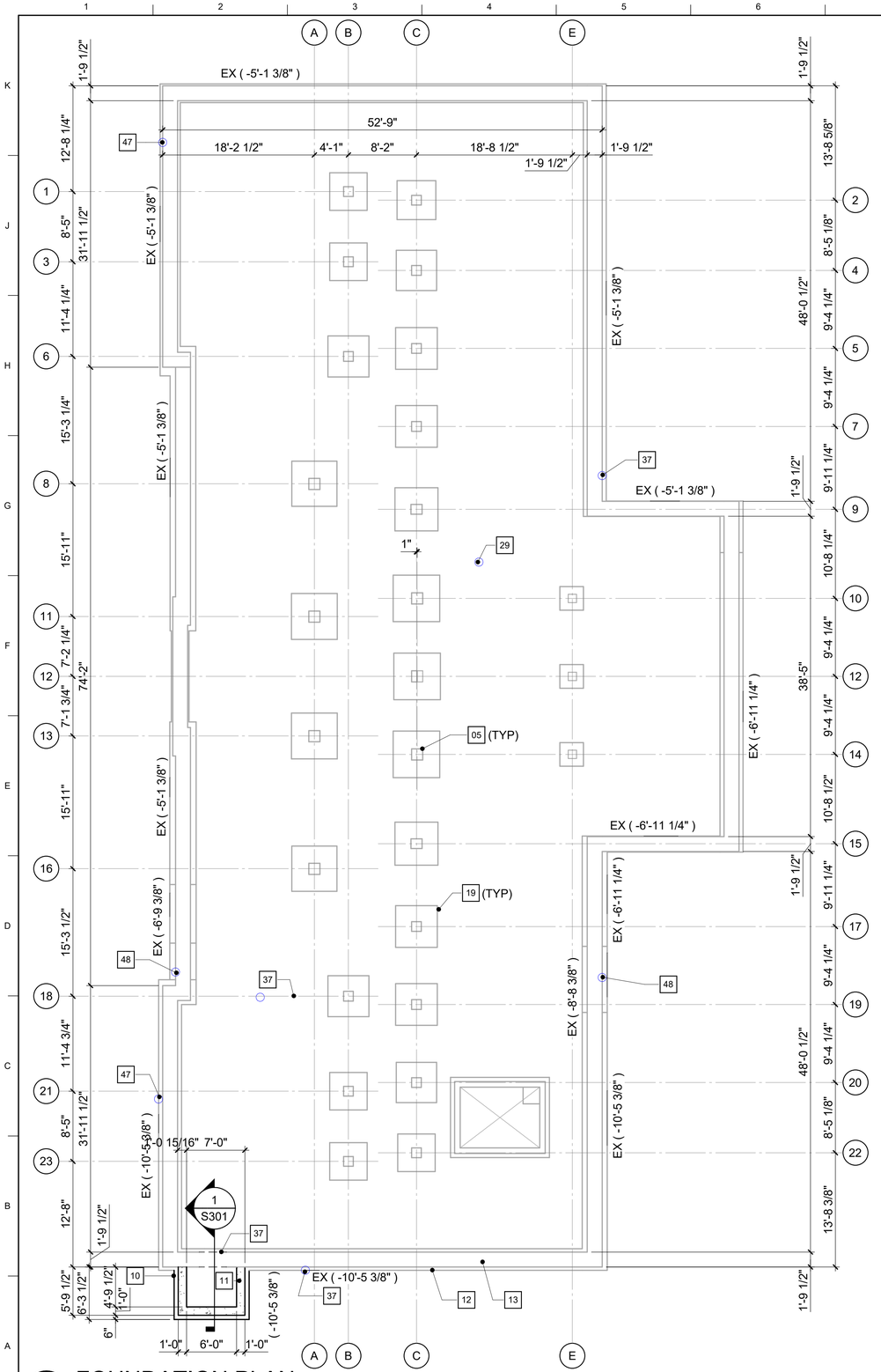


1 FOUNDATION PLAN

1/8" = 1'-0"

FOUNDATION / SLAB PLAN NOTES

A. REFERENCE ARCHITECTURAL DRAWINGS FOR DIMENSIONS TO NON-BEARING WALLS, WALL CONTROL JOINTS AND OPENINGS. DIMENSIONS SHOWN ARE TAKEN FROM ORIGINAL CONSTRUCTION DRAWINGS DATED 5-12-28 AND CONTRACTOR SHALL VERIFY BY FIELD MEASUREMENTS PRIOR TO FABRICATION OF NEW FRAMING.

B. UNLESS OTHERWISE NOTED, ALL ELEVATIONS ARE BASED ON A FINISHED FIRST FLOOR REFERENCE OF 0'-0". ACTUAL FINISHED FLOOR ELEVATION IS 478.15'. FINISHED FLOOR ELEVATIONS AT EACH LEVEL ARE INDICATED ON SLAB PLANS. REFERENCE ARCHITECTURAL DRAWINGS FOR FINISHED FLOOR MATERIALS.

C. NOT ALL UTILITY LOCATIONS ARE SHOWN ON PLAN. THE CONTRACTOR MUST COORDINATE THE LOCATIONS, SIZES, AND INVERTS OF UTILITIES. NEW UTILITIES SHALL PASS THROUGH THE FOUNDATION WALL ABOVE THE FOOTING. PROVIDE LINTEL AT ALL OPENINGS GREATER THAN 6" - REF TYPICAL DETAILS.

D. UNLESS OTHERWISE INDICATED, EXTEND WALL FOOTINGS A MINIMUM OF 6 INCHES BEYOND ENDS OF WALLS.

E. SITE WALLS ARE NOT SHOWN ON PLAN. CONTRACTOR MUST COORDINATE CIVIL AND LANDSCAPE DRAWINGS FOR SITE WALL INFORMATION.

F. DIMENSIONS SHOWN ON FOUNDATION PLAN ARE TO COLUMN GRIDLINES AND OUTSIDE FACE OF FOUNDATION WALLS, UNLESS OTHERWISE NOTED.

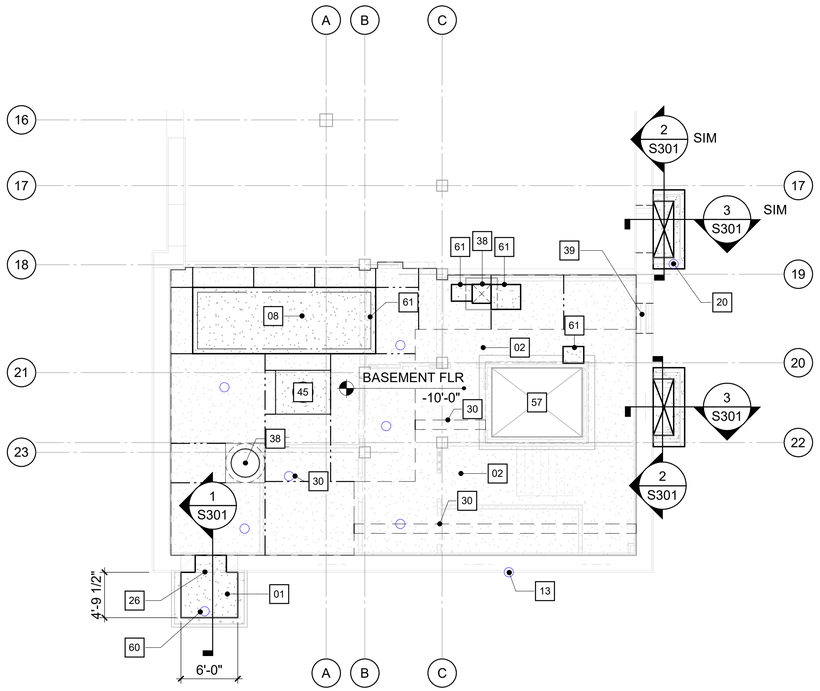
G. REFERENCE ARCHITECTURAL DRAWINGS FOR EXACT LIMITS OF SLAB DEPRESSIONS AND OMITTED SLABS.

H. FLOOR SINKS AND DRAINS ARE NOT SHOWN ON PLAN. REFERENCE PME DRAWINGS FOR LOCATIONS.

I. REFERENCE CIVIL AND LANDSCAPE DRAWINGS FOR EXTERIOR CONCRETE SLABS AND PAVING.

J. SLAB-ON-GRADE JOINTS MUST BE SAWED JOINTS OR KEYED CONSTRUCTION JOINTS, UNLESS OTHERWISE NOTED. CONTRACTOR MUST COORDINATE ALL SLAB JOINTS WITH JOINTS IN BONDED FLOOR FINISHES. REFERENCE ARCHITECTURAL DRAWINGS FOR FLOOR FINISH JOINT LOCATIONS.

K. PLACE (1) #4 x 3'-0" IN MIDDLE OF SLAB AT RE-ENTRANT CORNERS WHERE A SLAB JOINT DOES NOT OCCUR.



2 BASEMENT SLAB ON GRADE PLAN

1/8" = 1'-0"

KEY NOTES

01	4" CONCRETE SLAB-ON-GRADE OVER 15 MIL, CLASS A VAPOR RETARDER AND 4" DEPTH OF POROUS FILL UNLESS OTHERWISE INDICATED. REINFORCE SLAB WITH 6x6-W2.9xW2.9 WELDED WIRE REINFORCING PLACED 1" CLEAR BELOW TOP OF SLAB. MAINTAIN REINFORCEMENT IN POSITION ON BOLSTERS, CHAIRS OR SPACERS DURING CONCRETE PLACEMENT. SLOPE SLAB TO NEW DRAIN - REF PLUMBING DRAWINGS
02	EXISTING 4 1/2" SLAB ON GRADE TO REMAIN.
05	EXISTING CONCRETE COLUMN - FIELD VERIFY
08	AHU-B-1, WT=7,250 LBS - REF MECH DRAWINGS
10	MAT FOUNDATION (ELEVATION TO MATCH EXISTING) - REF DETAIL 1/S301.
11	CONCRETE RETAINING WALL - REF DETAIL 1/S301.
12	EXISTING CONT WALL FOUNDATION - FIELD VERIFY
13	EXISTING MULTI-WYTHE MASONRY WALL - FIELD VERIFY
19	EXISTING COLUMN FOOTING - FIELD VERIFY
20	AREA WAY - REF DETAILS 2 AND 3/S301 AND ARCH DRAWINGS. SLOPE SLAB TO NEW DRAIN - REF CIVIL DRAWINGS.
26	LOUVER - REF ARCHITECTURAL AND MECHANICAL DRAWINGS.
29	SOIL REMOVED AS PART OF THE ABATEMENT OF HAZARDOUS MATERIALS SHALL NOT UNDERMINE EXISTING FOOTING OR GRADE BEAMS. IN NO CASE SHALL EXCAVATION BE LOWER THAN BOTTOM OF FOOTING.
30	REMOVE EXISTING SLAB ON GRADE FOR INSTALLATION OF NEW UTILITES. DO NOT UNDERMINE EXISTING FOOTINGS - EXCAVTIONS SHALL BE NO CLOSER THAN 1'-0" FROM EDGE OF EXISTING FOOTING AND NO MORE THAN 1:2 SLOPE FROM BOTTOM OF FOOTING. REF TYPICAL DETAIL 2/S501 FOR REPLACEMENT.
37	NEW UTILITY LINES ARE TO BE BORED UNDER THE EXISTING FOUNDATION SO THAT THE RESIDUAL SOILS UNDER EXSTING FOOTING ARE NOT DISTURBED - REFER TO CIVIL DRAWINGS.
38	PIT FOR SUMP PUMP - REFEER TO TYPICAL DETAIL 3/S501 AND PLUMBING DRAWINGS.
39	INFILL EXISTING OPENING - REF TYPICAL DETAIL 5/S501
45	REMOVE AND REPLACE SLAB ON GRADE AS REQUIRED TO INSTALL NEW OIL/SAND SEPARATOR - REF MECH. SEE TYPICAL DETAIL 2/S501 FOR SLAB REPLACEMENT.
47	CORE DRILL NEW OPENING THROUGH FOUNDATION WALL - REF FIRE PROTECTION AND PLUMBING DRAWINGS.
48	EXISTING OPENING TO BE REUSED AT NEW FOUNDATION DRAIN.
57	EXISTING ELEVATOR PIT TO REMAIN - FIELD VERIFY
60	LADDER - REFER TO ARCHITECTURAL DRAWINGS.
61	12" THICK CONCRETE HOUSE KEEPING PAD - REF TYPICAL DETAIL 1/S501.

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SHEET TITLE: FOUNDATION AND BASEMENT PLANS

SCALE (U.N.O.)

JOB NAME: University of North Carolina - Chapel Hill
SCI#: 21-235452A
UNC Project No. C21212

BINGHAM HALL RENOVATION

LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

SEAL: NORTH CAROLINA PROFESSIONAL ENGINEER 040416 SUSAN W. RUSSELL

ISSUE DATE: 01/08/2024
JOB. NO.: 11706-00
DWG. NO.: S101

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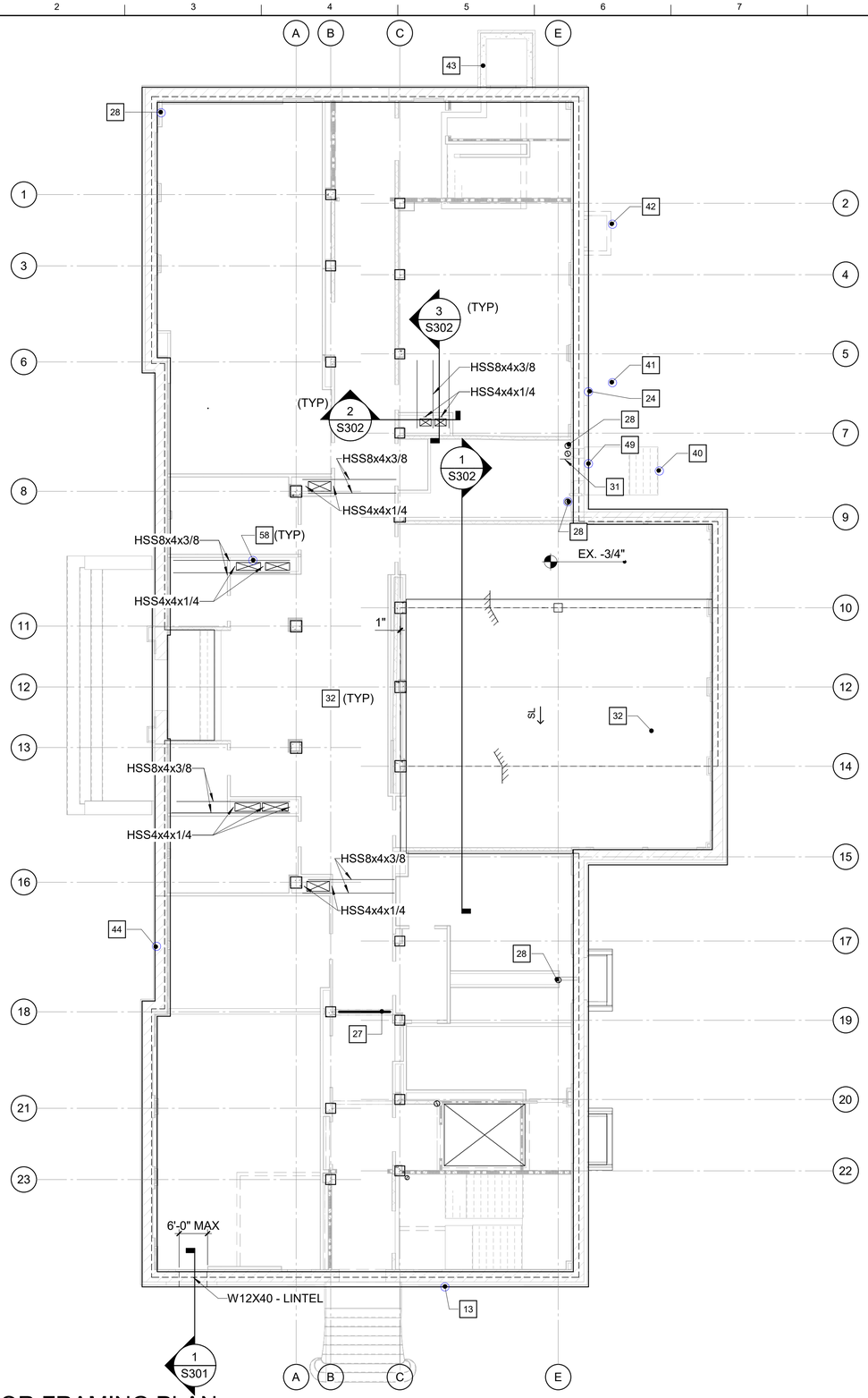

1 1ST FLOOR FRAMING PLAN

1/8" = 1'-0"

FRAMING PLAN NOTES

A. REFERENCE FOUNDATION PLAN AND ARCHITECTURAL DRAWINGS FOR DIMENSIONS NOT SHOWN. DIMENSIONS SHOWN ARE TAKEN FROM ORIGINAL CONSTRUCTION DRAWINGS DATED 5-12-28 AND CONTRACTOR SHALL VERIFY BY FIELD MEASUREMENTS PRIOR TO FABRICATION OF NEW FRAMING.

B. TOP OF FINISHED FLOOR ELEVATION SHALL BE AS NOTED ON SLAB PLANS.

C. COORDINATE AND VERIFY ALL MEMBER LOCATIONS, DIMENSIONS, WEIGHTS, OPENING SIZES, AND CURB DIMENSIONS FOR ALL MECHANICAL EQUIPMENT WITH THE ACTUAL EQUIPMENT FURNISHED. NOTIFY ENGINEER OF DISCREPANCIES BETWEEN DRAWINGS AND ACTUAL EQUIPMENT.

KEY NOTES

13	EXISTING MULTI-WYTHE MASONRY WALL - FIELD VERIFY
24	NEW DUCKBANK TO USE EXISTING WINDOW OPENING - INFILL EXISTING OPENING AROUND NEW UTILITIES AS SHOWN IN TYPICAL DETAIL 5/S501 - REF ELECTRICAL DRAWINGS.
27	NEW HSS6x4x3/8 (LLH) LINTEL WITH 3/8" BOTTOM PLATE TO SUIT - ANCHOR TO CONC COLUMN TOP AND BOTTOM WITH L4x4x3/8x0'-8" WITH 5/8" DIAx5" SCREW ANCHOR. 1/4"x6" FILLET WELD TO EACH CONNECTION ANGLE.
28	CORE DRILL OPENING IN EXIST CONCRETE SLAB - DO NOT DAMAGE EXISTING RIB CONSTRUCTION - REF 2/S502.
31	ADD FRAMING AT MULTIPLE OPENINGS IN EXISTING SLAB - REF 2/S502
32	EXISTING CAST-IN-PLACE CONCRETE FLOOR SLAB SYSTEM - 2" THICK SLAB ON 6" DEEP BY 4" WIDE RIBS AT 16" ON CENTER WITH 4" CLAY TILE INFILL - FIELD VERIFY.
40	NEW PREFABRICATED METAL STAIR - REF ARCH DRAWINGS
41	EXISTING AREA WAY TO BE REMOVED - REF ARCH DRAWINGS
42	EXISTING AREA WAY TO REMAIN - REF ARCH DRAWINGS
43	EXISTING STEAM VAULT TO REMAIN - FIELD VERIFY
44	INFILL EXISTING OPENING FROM DEMOED UTILITIES AND CORE DRILL OPENINGS FOR NEW UTILITIES - REF MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS.
49	CORE DRILL NEW OPENING THROUGH FOUNDATION WALL - REF CIVIL DWGS. PROVIDE NEW LINTEL AS SHOWN IN DETAIL 4/S502 WHERE OPENING IS GREATER THAN 4" DIA.
58	NEW FLOOR OPENING - INSTALL NEW FRAMING PRIOR TO CUTTING OPENING. REF DETAILS FOR ADDITIONAL INFORMATION.

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SHEET TITLE: FIRST FLOOR FRAMING PLAN

SCALE (U.N.O.)

JOB NAME: University of North Carolina - Chapel Hill
SCH#: 21-035482-02A
UNC Project No: C21212
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

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DWG. NO.: S111

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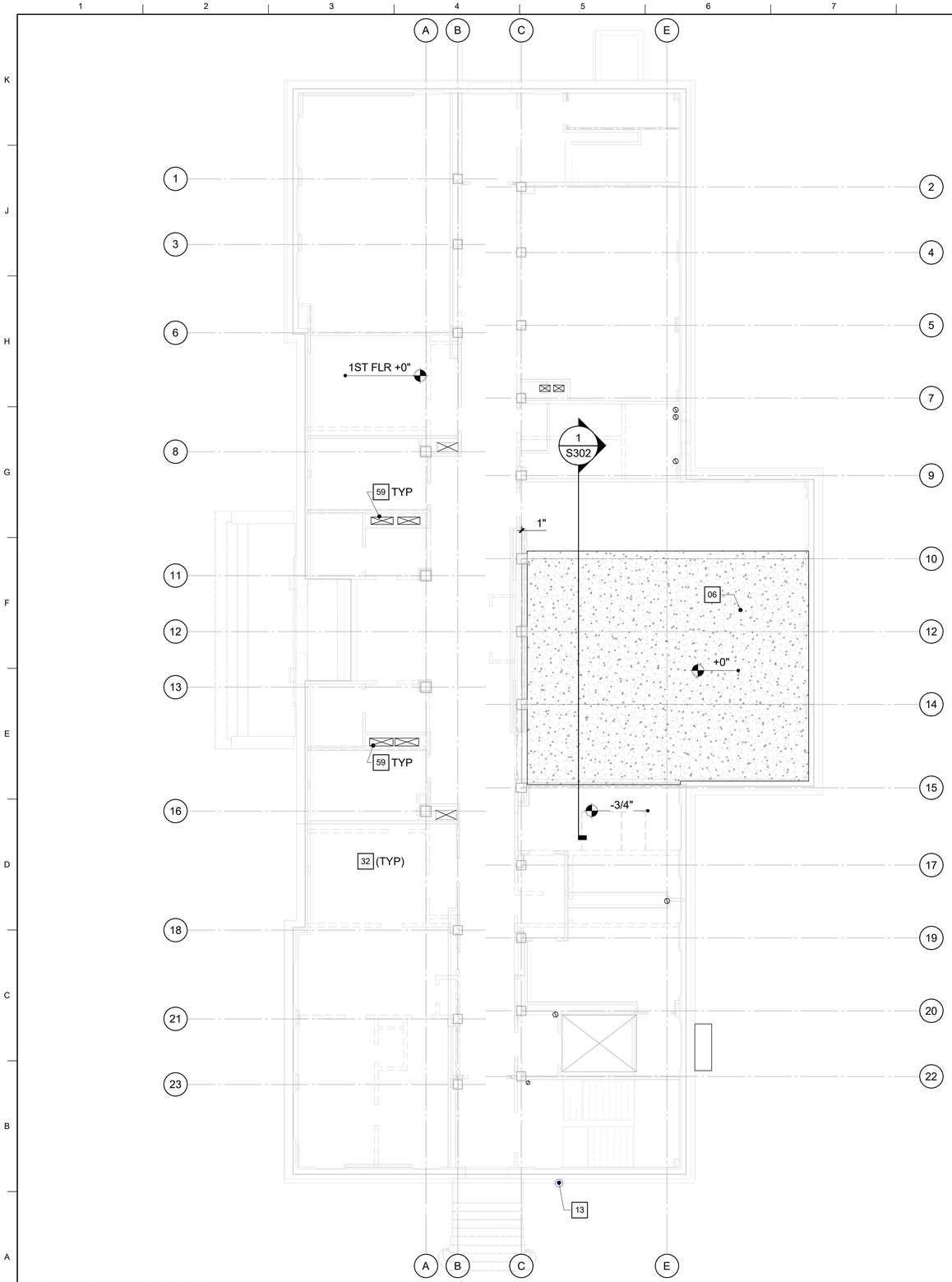

KEY NOTES

06	NEW 3/4" NONCOMBUSTIBLE REINFORCED CONCRETE STRUCTURAL PANEL WITH UNIFORM LOAD RATING OF 475 PSF OR GREATER ON METAL STUD FRAMING - REF SECTION
13	EXISTING MULTI-WYTHE MASONRY WALL - FIELD VERIFY
32	EXISTING CAST-IN-PLACE CONCRETE FLOOR SLAB SYSTEM - 2" THICK SLAB ON 6" DEEP BY 4" WIDE RIBS AT 16" ON CENTER WITH 4" CLAY TILE INFILL - FIELD VERIFY.
59	NEW FLOOR OPENING - REFER TO FRAMING PLAN.

1 1ST FLOOR SLAB PLAN
1/8" = 1'-0"

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SHEET TITLE: FIRST FLOOR SLAB PLAN
SCALE (U.N.O.):

JOB NAME: University of North Carolina - Chapel Hill
SCI#: 21-2548-02A
UNC Project No. C21212
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

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NORTH CAROLINA REGISTERED PROFESSIONAL ENGINEERING CORPORATION C-4360 LYNCHMYKINS STRUCTURAL ENGINEERS, P.C.
NORTH CAROLINA PROFESSIONAL SEAL 040416 ENGINEER SUSAN W. RUSSELL
2024-01-03

ISSUE DATE: 01/08/2024
JOB. NO.: 11706-00
DWG. NO.: S112

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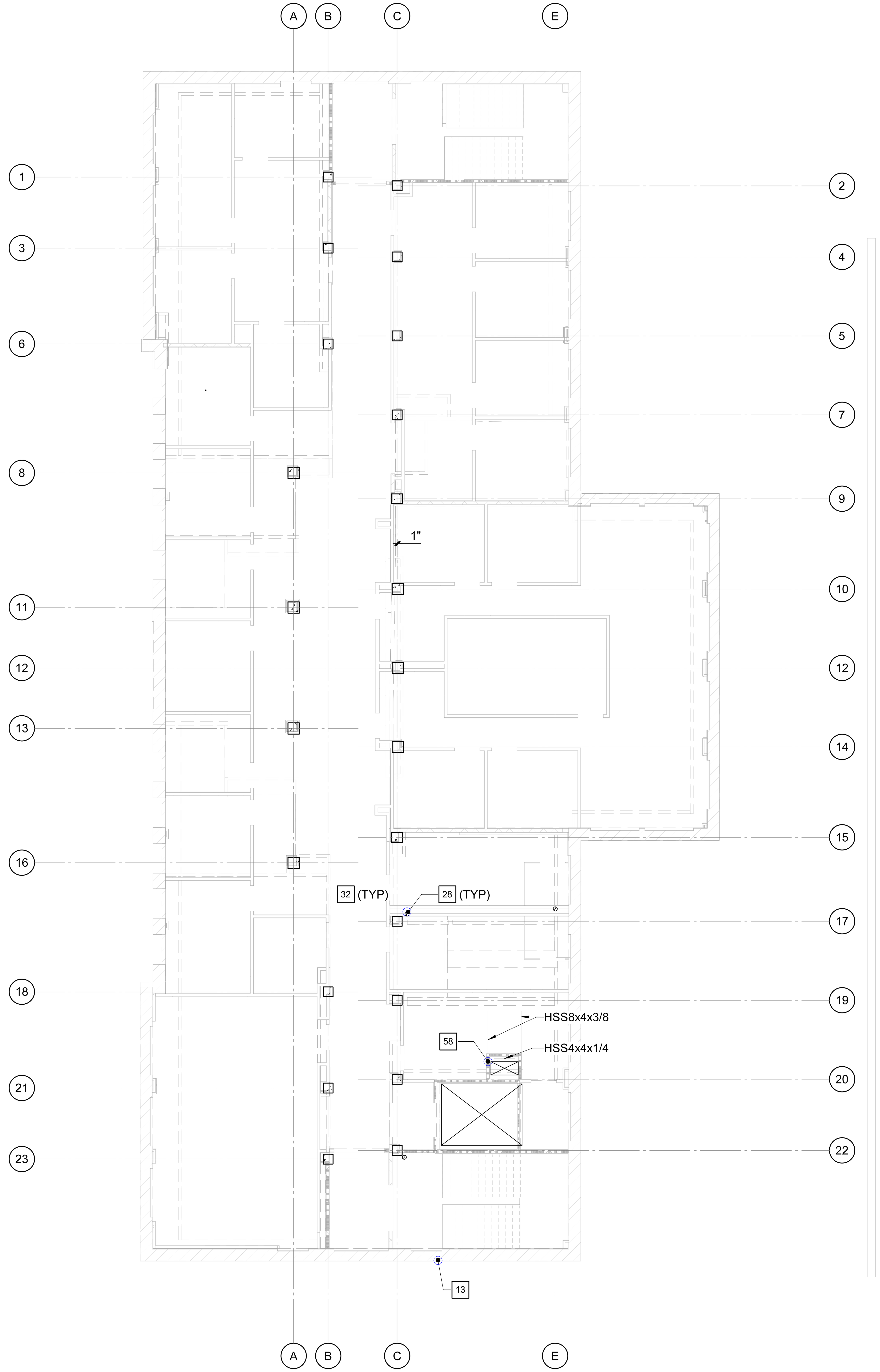

1 2ND FLOOR FRAMING PLAN

1/8" = 1'-0"

FRAMING PLAN NOTES

A. REFERENCE FOUNDATION PLAN AND ARCHITECTURAL DRAWINGS FOR DIMENSIONS NOT SHOWN. DIMENSIONS SHOWN ARE TAKEN FROM ORIGINAL CONSTRUCTION DRAWINGS DATED 5-12-28 AND CONTRACTOR SHALL VERIFY BY FIELD MEASUREMENTS PRIOR TO FABRICATION OF NEW FRAMING.

B. TOP OF FINISHED FLOOR ELEVATION SHALL BE AS NOTED ON SLAB PLANS.

C. COORDINATE AND VERIFY ALL MEMBER LOCATIONS, DIMENSIONS, WEIGHTS, OPENING SIZES, AND CURB DIMENSIONS FOR ALL MECHANICAL EQUIPMENT WITH THE ACTUAL EQUIPMENT FURNISHED. NOTIFY ENGINEER OF DISCREPANCIES BETWEEN DRAWINGS AND ACTUAL EQUIPMENT.

KEY NOTES

13 EXISTING MULTI-WYTHE MASONRY WALL - FIELD VERIFY

28 CORE DRILL OPENING IN EXIST CONCRETE SLAB - DO NOT DAMAGE EXISTING RIB CONSTRUCTION - REF 2/S502.

32 EXISTING CAST-IN-PLACE CONCRETE FLOOR SLAB SYSTEM - 2" THICK SLAB ON 6" DEEP BY 4" WIDE RIBS AT 16" ON CENTER WITH 4" CLAY TILE INFILL - FIELD VERIFY.

58 NEW FLOOR OPENING - INSTALL NEW FRAMING PRIOR TO CUTTING OPENING. REF DETAILS FOR ADDITIONAL INFORMATION.

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SHEET TITLE: SECOND FLOOR FRAMING PLAN

SCALE (U.N.O.)

JOB NAME: University of North Carolina - Chapel Hill

SCO#: 21-23548-02A UNC Project No. C21212

BINGHAM HALL RENOVATION

LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

SEAL

ISSUE DATE: 01/08/2024

JOB. NO.: 11706-00

DWG. NO.: S121

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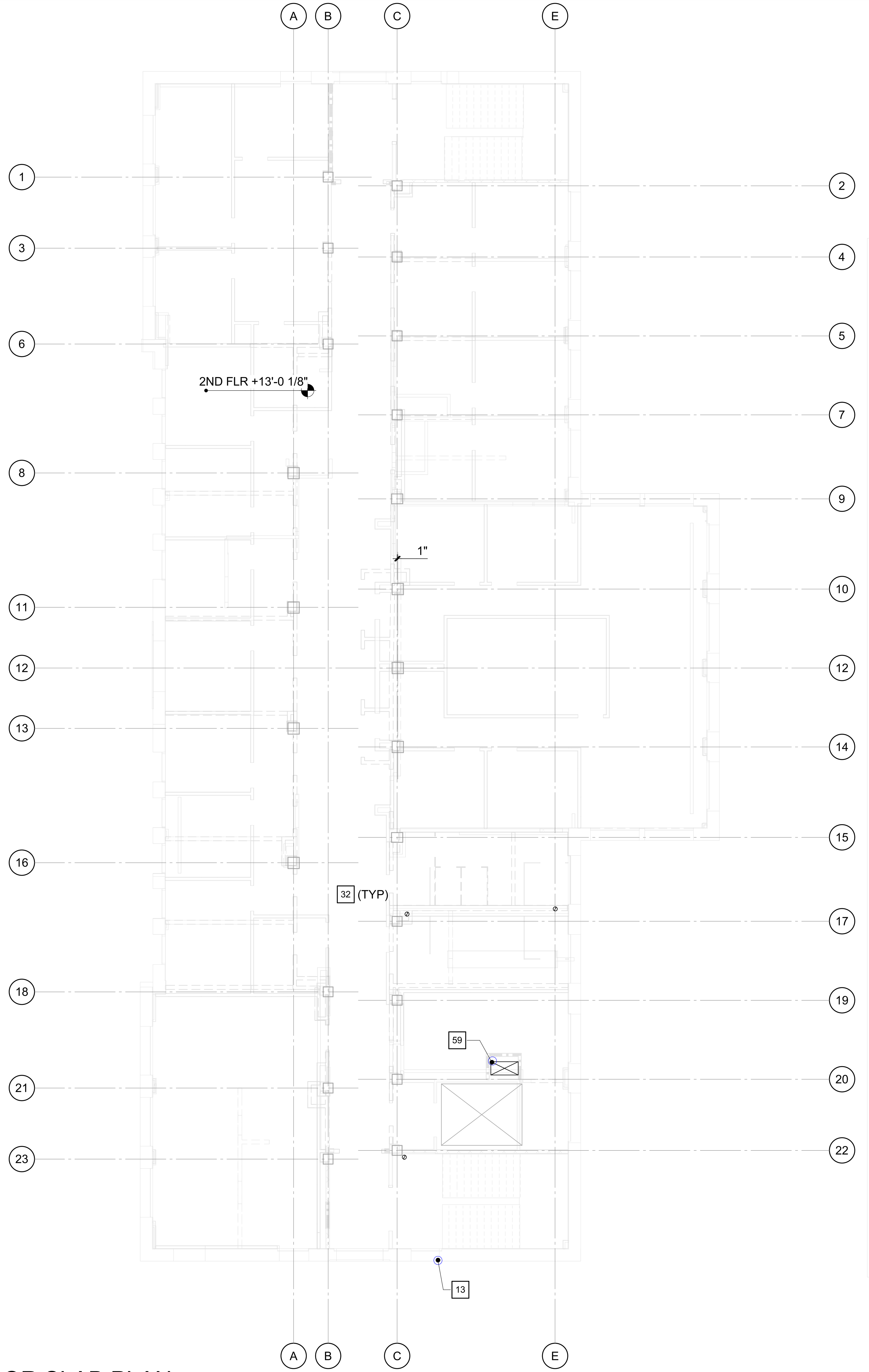

1 2ND FLOOR SLAB PLAN
1/8" = 1'-0"

FRAMING PLAN NOTES

A. REFERENCE FOUNDATION PLAN AND ARCHITECTURAL DRAWINGS FOR DIMENSIONS NOT SHOWN. DIMENSIONS SHOWN ARE TAKEN FROM ORIGINAL CONSTRUCTION DRAWINGS DATED 5-12-28 AND CONTRACTOR SHALL VERIFY BY FIELD MEASUREMENTS PRIOR TO FABRICATION OF NEW FRAMING.

B. TOP OF FINISHED FLOOR ELEVATION SHALL BE AS NOTED ON SLAB PLANS.

C. COORDINATE AND VERIFY ALL MEMBER LOCATIONS, DIMENSIONS, WEIGHTS, OPENING SIZES, AND CURB DIMENSIONS FOR ALL MECHANICAL EQUIPMENT WITH THE ACTUAL EQUIPMENT FURNISHED. NOTIFY ENGINEER OF DISCREPANCIES BETWEEN DRAWINGS AND ACTUAL EQUIPMENT.

KEY NOTES

13	EXISTING MULTI-WYTHE MASONRY WALL - FIELD VERIFY
32	EXISTING CAST-IN-PLACE CONCRETE FLOOR SLAB SYSTEM - 2" THICK SLAB ON 6" DEEP BY 4" WIDE RIBS AT 16" ON CENTER WITH 4" CLAY TILE INFILL - FIELD VERIFY.
59	NEW FLOOR OPENING - REFER TO FRAMING PLAN.

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SHEET TITLE
SECOND FLOOR SLAB PLAN
SCALE (U.N.O.)

JOB NAME
University of North Carolina - Chapel Hill
SCO# 21-23548-02A UNC Project No. C21212
BINGHAM HALL RENOVATION
LOCATION
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2024-01-03

ISSUE DATE
01/08/2024
JOB NO.
11706-00
DWG. NO.
S122

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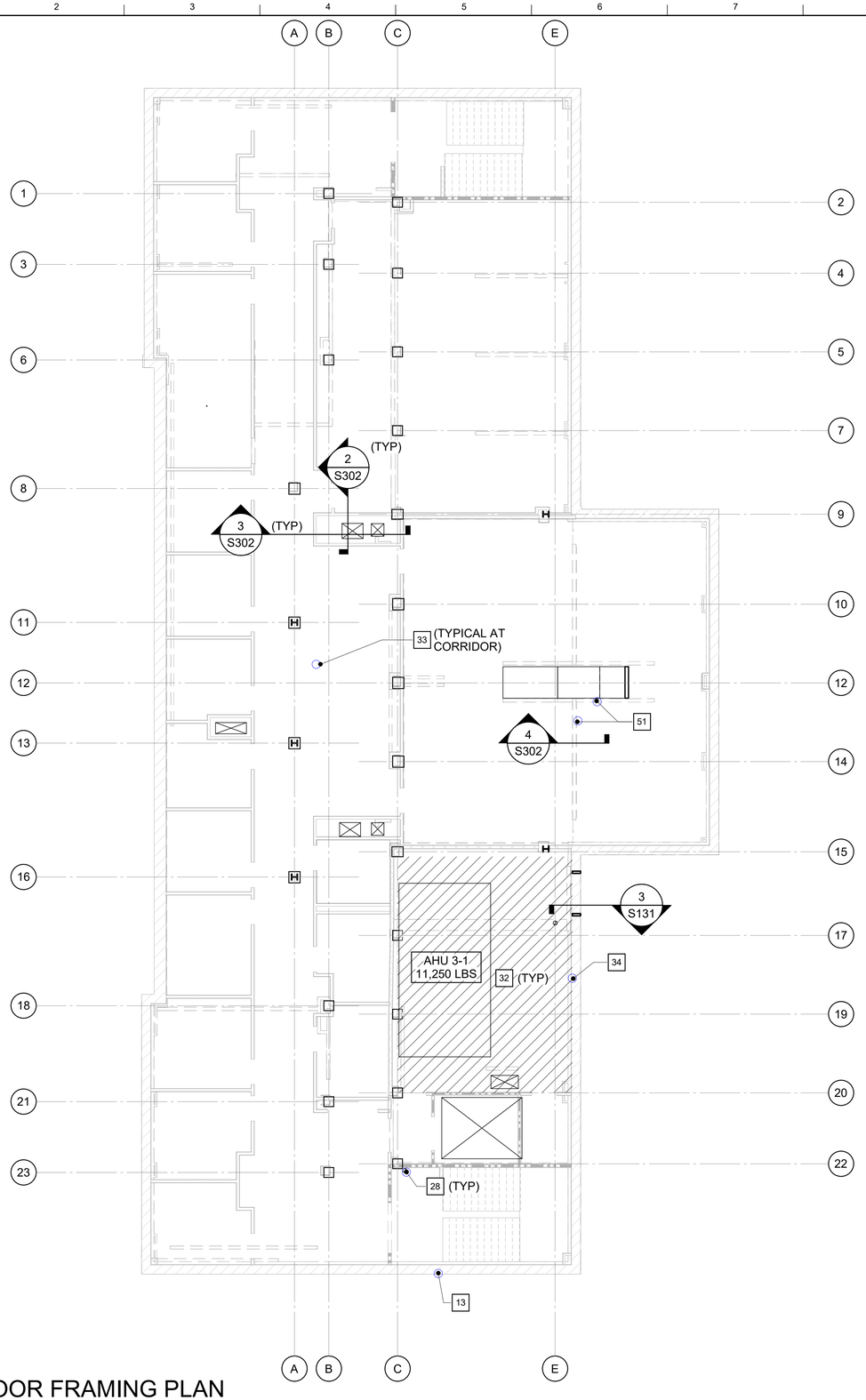


1 3RD FLOOR FRAMING PLAN

1/8" = 1'-0"

KEY NOTES

13 EXISTING MULTI-WYTHE MASONRY WALL - FIELD VERIFY

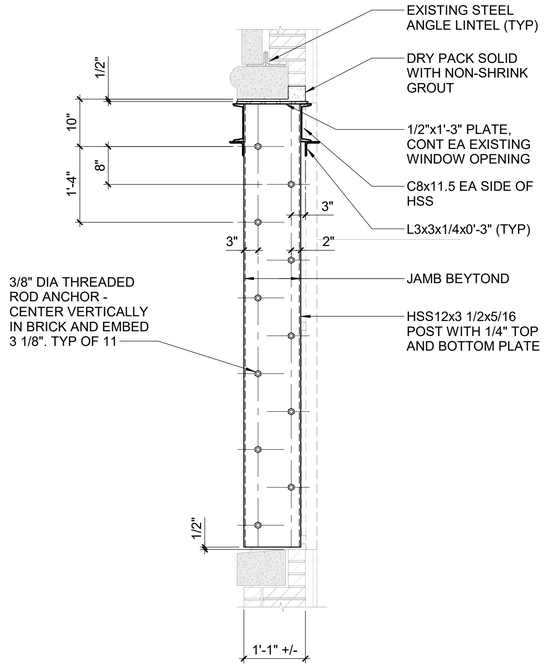
28 CORE DRILL OPENING IN EXIST CONCRETE SLAB - DO NOT DAMAGE EXISTING RIB CONSTRUCTION - REF 2/S502.

32 EXISTING CAST-IN-PLACE CONCRETE FLOOR SLAB SYSTEM - 2" THICK SLAB ON 6" DEEP BY 4" WIDE RIBS AT 16" ON CENTER WITH 4" CLAY TILE INFILL - FIELD VERIFY.

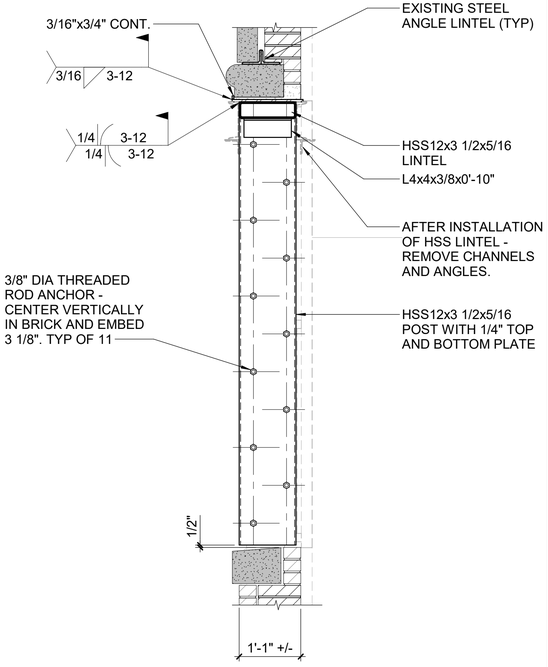
33 EXISTING CAST-IN-PLACE CONCRETE FLOOR SLAB SYSTEM - 2" THICK SLAB ON 8" DEEP BY 4" WIDE RIBS AT 16" ON CENTER WITH 6" CLAY TILE INFILL.

34 LIVE LOAD LIMITED TO 75 PSF THIS AREA

51 LIGHT GAUGE KNEE WALL - REFER TO SECTION 4/S302.



TEMPORARY LINTEL



PERMANENT LINTEL

FRAMING PLAN NOTES

A. REFERENCE FOUNDATION PLAN AND ARCHITECTURAL DRAWINGS FOR DIMENSIONS NOT SHOWN. DIMENSIONS SHOWN ARE TAKEN FROM ORIGINAL CONSTRUCTION DRAWINGS DATED 5-12-28 AND CONTRACTOR SHALL VERIFY BY FIELD MEASUREMENTS PRIOR TO FABRICATION OF NEW FRAMING.

B. TOP OF FINISHED FLOOR ELEVATION SHALL BE AS NOTED ON SLAB PLANS.

C. COORDINATE AND VERIFY ALL MEMBER LOCATIONS, DIMENSIONS, WEIGHTS, OPENING SIZES, AND CURB DIMENSIONS FOR ALL MECHANICAL EQUIPMENT WITH THE ACTUAL EQUIPMENT FURNISHED. NOTIFY ENGINEER OF DISCREPANCIES BETWEEN DRAWINGS AND ACTUAL EQUIPMENT.

SECTION NOTES

THESE NOTES ARE INTENDED TO PROVIDE SEQUENCE GUIDELINES TO THE CONTRACTOR TO ASSIST IN UNDERSTANDING OF DESIGN INTENT AT THIS LOCATION. CONTRACTOR MUST SUBMIT CONSTRUCTION SEQUENCE PLAN TO SHOW CONFORMANCE WITH CONSTRUCTION REQUIREMENTS.

1. REMOVE EXISTING WINDOWS:
   A. CONTRACTOR MUST PROVIDE TEMPORARY ENVELOPE PROTECTION THROUGHOUT REPAIR AS REQUIRED BY SPECIFICATIONS.
2. INSTALL NEW LINTEL:
   A. CONTRACTOR MUST INSTALL JAMB POST AND TEMPORARY FRAMING AT EXISTING OPENING AS SHOWN IN SECTION.
   B. REMOVE EXISTING BRICK PIER BETWEEN WINDOW OPENINGS.
   C. INSTALL PERMANENT LINTEL AS SHOWN IN SECTION.
3. INSTALL NEW MECHANICAL UNIT SECTIOINS (AND ANY OTHER CONSTRUCTION NECESSARY).
4. INSTALL NEW WATERPOOFING MATERIALS AND LOUVER
   A. REFER TO ARCHITECTURAL DRAWINGS FOR REQUIREMENTS

3 SECTION

3/4" = 1'-0"

LORD AECK SARGENT

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SHEET TITLE: THIRD FLOOR FRAMING PLAN

SCALE (U.N.O.)

JOB NAME: University of North Carolina - Chapel Hill
SCI#: 21-235462A
UNC Project No. C21212
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

SEAL

NORTH CAROLINA PROFESSIONAL ENGINEERING CORPORATION LYNCH MYKINS STRUCTURAL ENGINEERS, PC P-C-4360

NORTH CAROLINA PROFESSIONAL 040416 ENGINEER SUSAN W. RUSSELL

2024-01-03

ISSUE DATE: 01/08/2024
JOB. NO. 11706-00
DWG. NO. S131

FOR BID

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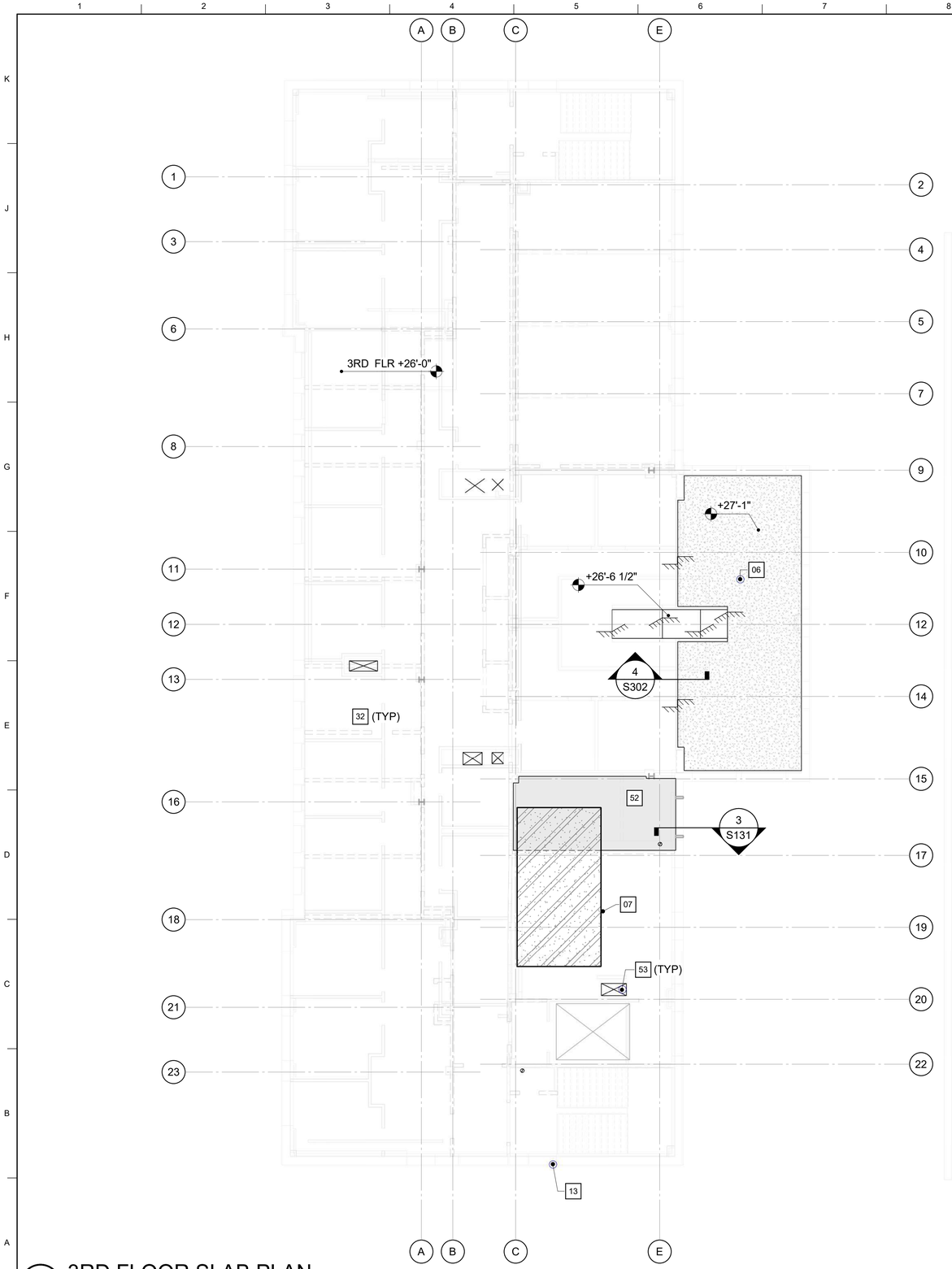

1 3RD FLOOR SLAB PLAN
1/8" = 1'-0"

FRAMING PLAN NOTES

A. REFERENCE FOUNDATION PLAN AND ARCHITECTURAL DRAWINGS FOR DIMENSIONS NOT SHOWN. DIMENSIONS SHOWN ARE TAKEN FROM ORIGINAL CONSTRUCTION DRAWINGS DATED 5-12-28 AND CONTRACTOR SHALL VERIFY BY FIELD MEASUREMENTS PRIOR TO FABRICATION OF NEW FRAMING.

B. TOP OF FINISHED FLOOR ELEVATION SHALL BE AS NOTED ON SLAB PLANS.

C. COORDINATE AND VERIFY ALL MEMBER LOCATIONS, DIMENSIONS, WEIGHTS, OPENING SIZES, AND CURB DIMENSIONS FOR ALL MECHANICAL EQUIPMENT WITH THE ACTUAL EQUIPMENT FURNISHED. NOTIFY ENGINEER OF DISCREPANCIES BETWEEN DRAWINGS AND ACTUAL EQUIPMENT.

KEY NOTES

06 NEW 3/4" NONCOMBUSTIBLE REINFORCED CONCRETE STRUCTURAL PANEL WITH UNIFORM LOAD RATING OF 475 PSF OR GREATER ON METAL STUD FRAMING - REF SECTION

07 4" THICK LIGHT WEIGHT CONCRETE HOUSE KEEPING PAD - REF TYPICAL DETAIL 3/S502

09 AHU-3-1, WT=11,250 LBS - REF MECH DRAWINGS

13 EXISTING MULTI-WYTHE MASONRY WALL - FIELD VERIFY

32 EXISTING CAST-IN-PLACE CONCRETE FLOOR SLAB SYSTEM - 2" THICK SLAB ON 6" DEEP BY 4" WIDE RIBS AT 16" ON CENTER WITH 4" CLAY TILE INFILL - FIELD VERIFY.

52 LIGHTWEIGHT INFILL - REFER TO ARCHITECTURAL DRAWINGS.

53 SLAB OPENING - REF DETAILS 2 AND 3/S302 FOR REQUIREMENTS.

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SHEET TITLE: THIRD FLOOR SLAB PLAN
SCALE (U.N.O.):

JOB NAME: University of North Carolina - Chapel Hill
SCD#: 21-2348-02A
UNC Project No: C021212
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

SEAL: NORTH CAROLINA PROFESSIONAL ENGINEERING CORPORATION C-4360 LYNCHMYKINS STRUCTURAL ENGINEERS, P.A.
NORTH CAROLINA PROFESSIONAL 040416 ENGINEER SUSAN W. RUSSELL
2024-01-03

ISSUE DATE: 01/08/2024
JOB. NO.: 11706-00
DWG. NO.: S132

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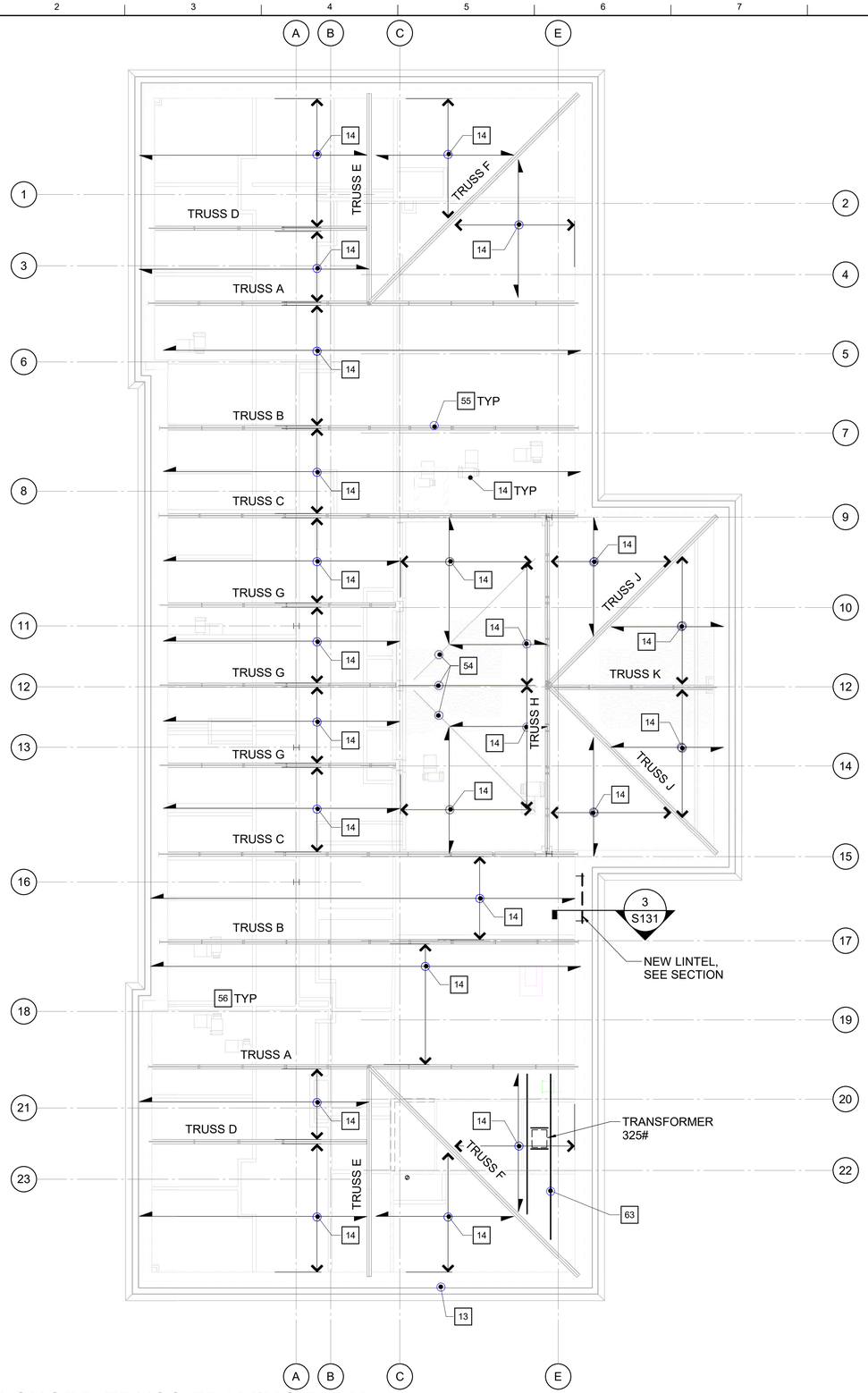

1 BOTTOM CHORD TRUSS FRAMING PLAN

1/8" = 1'-0"

KEY NOTES

13 EXISTING MULTI-WYTHE MASONRY WALL - FIELD VERIFY

14 P1001(SL) UNITSTRUT AT 48" OC. A MINIMUM OF (2) AT EA MECHANICAL TERMINAL UNIT (75LB OR LESS), A MINIMUM OF (4) AT EA EXHAUST FAN (200LB OR LESS), TYPICAL - REF TYP DETAIL 5/S502.

54 EXISTING C12x20.7 BEAM - FIELD VERIFY.

55 EXISTING ROOF TRUSS - REFERENCE S161.

56 EXISTING CEILING CHANNELS TO REMAIN.

63 A MINIMUM OF (2)P1001C41 (SL) (QUADRUPLE COMBINATION) UNISTRUT AT TRANSFORMER (325 LB OR LESS) - REF TYP DETAIL 5/S502.

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SHEET TITLE: BOTTOM CHORD TRUSS PLAN

SCALE (U.N.O.)

JOB NAME: University of North Carolina - Chapel Hill
SCI#: 21-235452A
UNC Project No. C21212
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

SEAL

NORTH CAROLINA PROFESSIONAL ENGINEERING SEAL C-4360 LYNCH MYKINS STRUCTURAL ENGINEERS, PC

NORTH CAROLINA PROFESSIONAL SEAL 040416 ENGINEER SUSAN W. RUSSELL

Expires: 01-03

ISSUE DATE: 01/08/2024
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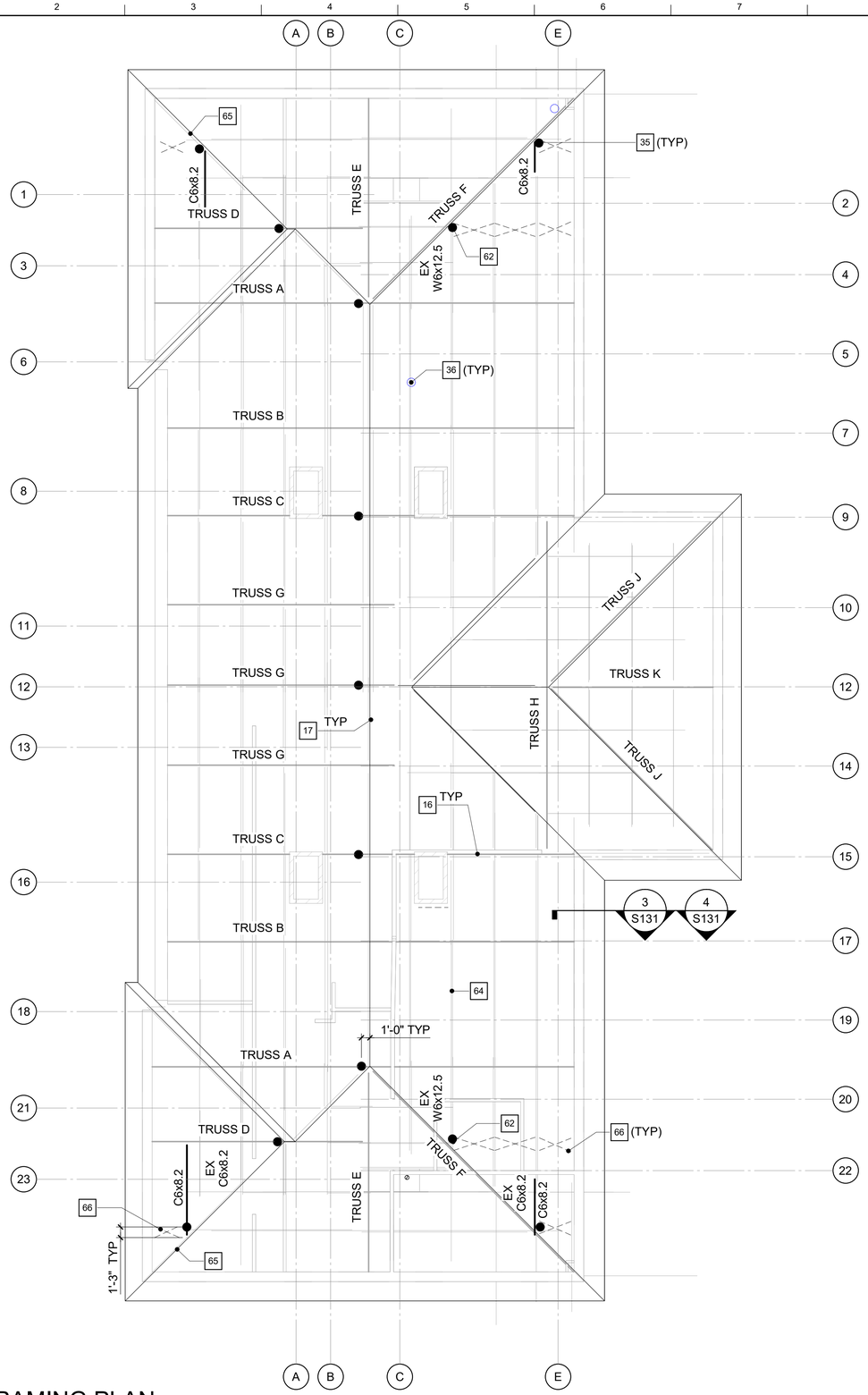

1 ROOF FRAMING PLAN

1/8" = 1'-0"

KEY NOTES

16	EXISTING ROOF TRUSS - REF ELEVATIONS S201
17	EXISTING STEEL CHANNEL FRAMING
35	ROOF ANCHOR - REF TYPICAL DETAIL
36	EXISTING CHANNEL FRAMING
62	1/4" STIFFENER PLATE EACH SIDE OF W6 AT EACH DAVIR BOLT.
64	REPAIR DAMAGED X-BRACE WITH L2 1/2x2 1/2x 3/16 X 2'-0" CENTERED ON NOTCH. PROVIDE 3/16" FILLET WELD EACH LEG OF ANGLE WITH 2-6 PATTERN AND 3" EACH END WITH 1" RETURN.
65	REINFORCE WITH 5/8"x6" PLATE WELDED TO BOTTOM FLANGE WITH 1/4" FILLET WELD EACH SIDE OF CHANNEL WITH 3-10 PATTERN, STAGGERED. STOP PLATE 2'-0" FROM EACH END OF CHANNEL.
66	L3x3x1/4 HORIZONTAL X-BRACE. ATTACH TO WALL WITH L4x4x1/4 WITH 1/2" DIA THREADED ROD IN SCREEN TUBE. EMBED 6"

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SHEET TITLE: ROOF FRAMING PLAN

SCALE (U.N.O.):

JOB NAME: University of North Carolina - Chapel Hill
SCD#: 21-035448-02A
UNC Project No: C21212
BINGHAM HALL RENOVATION

LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

SEAL

NORTH CAROLINA PROFESSIONAL ENGINEERING C-4360 LYNCHMYKINS STRUCTURAL ENGINEERS, PC

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2024-01-03

ISSUE DATE: 01/08/2024

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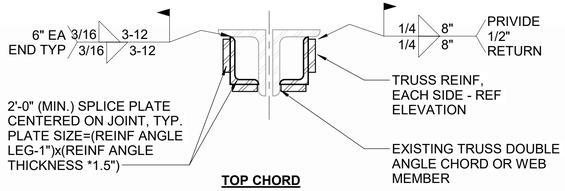
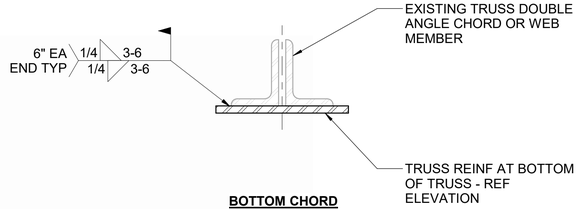


TOP CHORD



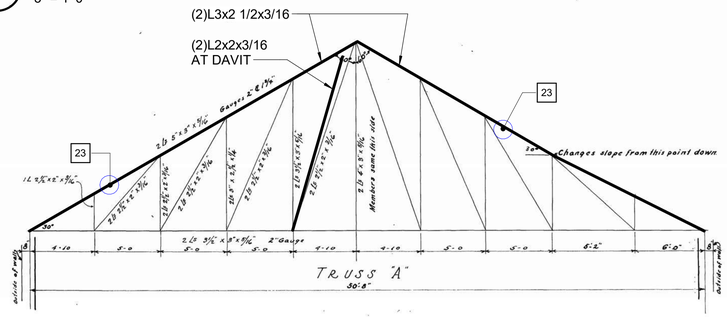
BOTTOM CHORD

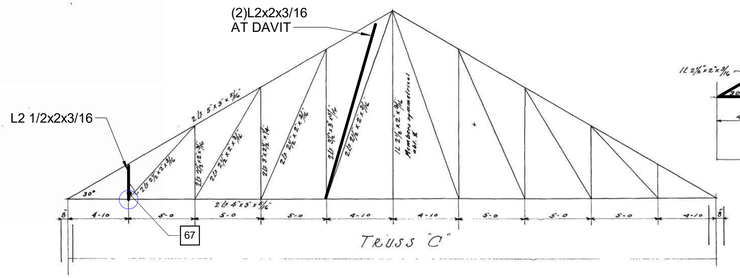
TRUSS ELEVATION NOTES:

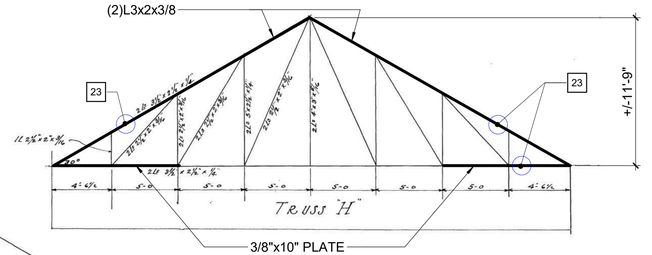
1. EXISTING TRUSS CONSTRUCTION IS TAKEN FROM THE ORIGINAL CONSTRUCTION DOCUMENTS. CONTRACTOR SHALL FIELD VERIFY CONSTRUCTION SHOWN AND NOTIFY THE DESIGNER IN WRITING OF DEVIATIONS.
2. EXISTING TRUSS MEMBERS AND ASSOCIATED STRENGTHENING, IF REQUIRED ANALYZED FOR IMPOSED LOADING AS INDICATED IN GENERAL NOTES.
3. EXISTING TRUSS ANGLE MEMBERS HAVE BEEN TESTED FOR AND SHOW COMPATIBILITY WITH ASTM A36 STEEL PROPERTIES.
4. ULTRASONIC TESTING OF 10% OF WELDS AT EACH MEMBER (MINIMUM 2 WELDS) IS REQUIRED. TESTING MUST BE DONE A MINIMUM OF 72 HOURS AFTER WELD IS COMPLETED.

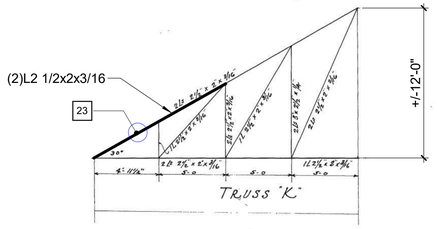
2 EXISTING TRUSS ELEVATIONS STRENGTHING TYPICAL DETAIL

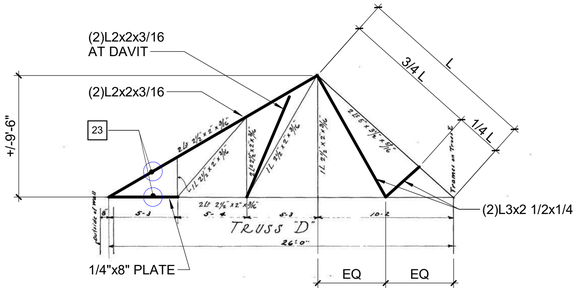
3" = 1'-0"

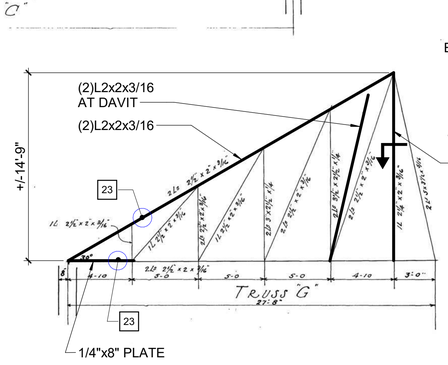






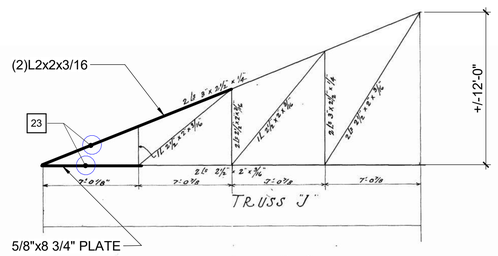


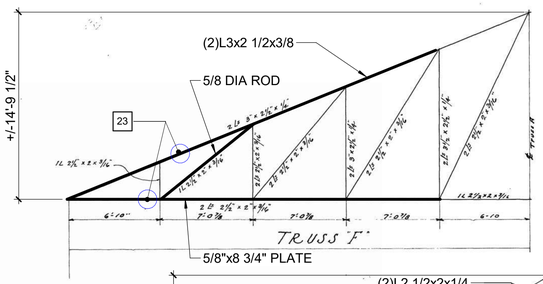


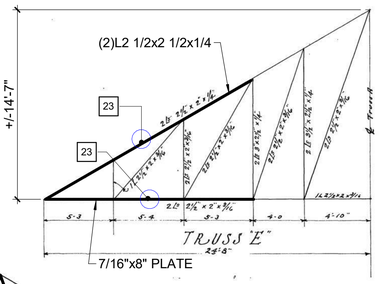


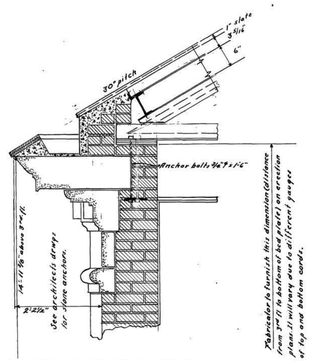
KEY NOTES

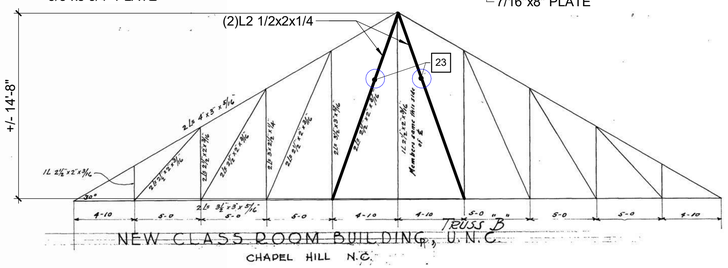
23	TRUSS CHORDS AND WEB MEMBERS REQUIRE STRENGTHING AS SHOWN ON ELEVATION - REF DETAILS
67	ADDED L2 1/2x2x3/16 WEB MEMBER. PROVIDE 3/16" FILLET WELD 2" EACH END WITH 1" RETURN.











Connections must develop full stress of members.

1 EXISTING TRUSS ELEVATIONS

NTS

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SHEET TITLE: EXISTING TRUSS ELEVATIONS

SCALE (U.N.O.)

JOB NAME: University of North Carolina - Chapel Hill
SCI#: 21-25548-02A
UNC Project No. C02122
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

ISSUE DATE: 01/08/2024
JOB. NO.: 11706-00
DWG. NO.: S201

FOR BID

SEAL

NORTH CAROLINA PROFESSIONAL ENGINEERING CORPORATION LYNCHMYKINS STRUCTURAL ENGINEERS, P.C. C-4360

NORTH CAROLINA PROFESSIONAL SEAL 040416 ENGINEER SUSAN W. RUSSELL

2024-01-03

SECTION NOTES

THESE NOTES ARE INTENDED TO PROVIDE SEQUENCE GUIDELINES TO THE CONTRACTOR TO ASSIST IN UNDERSTANDING OF DESIGN INTENT AT THIS LOCATION. CONTRACTOR MUST SUBMIT CONSTRUCTION SEQUENCE PLAN TO SHOW CONFORMANCE WITH CONSTRUCTION REQUIREMENTS.

1. EXCAVATE EXISTING SOILS:
   - A. CONTRACTOR MUST EXCAVATE EXISTING SOIL AS REQUIRED TO FACILITATE INSTALLATION OF MECHANICAL UNIT SECTIONS.
   - B. DO NOT UNDERMINE EXISTING FOOTINGS.
   - C. PRIOR TO EXCAVATION CONTRACTOR MUST LOCATE EXISTING UTILITIES IN THE VICINITY OF EXCAVATION IN ACCORDANCE WITH LOCAL REQUIREMENTS.

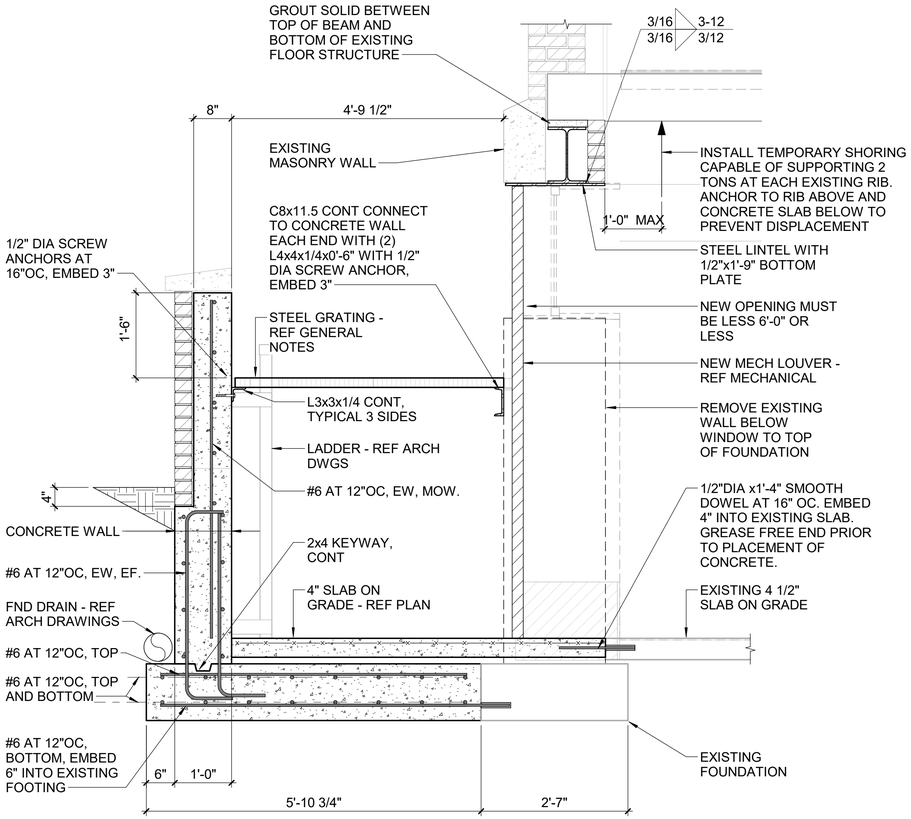
2. INSTALL NEW LINTEL:
   - A. WIDTH OF NEW OPENING MUST BE 6'-0" OR LESS, COORDINATE WITH MECHANICAL UNIT.
   - B. CONTRACTOR MUST INSTALL SHORING AT EXISTING STRUCTURE AS SHOWN IN SECTION. SHORING MUST EXTEND 2'-0" BEYOND EACH END OF THE NEW OPENING
   - C. REMOVE EXISTING BRICK, LIMESTONE, AND STEEL ANGLE LINTEL AT NEW OPENING PLUS 8" EACH END.
   - D. INSTALL NEW STEEL LINTEL WITH 8" BEARING ON EXISTING BRICK WALL AT EACH END.
   - E. RE-INSTALL EXTERIOR LIMESTONE AND EXERIOR WYTHE BRICK.
   - F. GROUT CAVITY SOLID ABOVE NEW STEEL LINTEL TO PROVIDE FULL BEARING OF CONCRETE STRUCTURE ABOVE.
   - G. INSTALL INTERIOR WYTHE BRICK.
   - H. REMOVE BRICK BELOW NEW LINTEL WITHIN EXTENTS OF NEW OPENING.

3. INSTALL NEW MECHANICAL UNIT SECTIONS (AND ANY OTHER CONSTRUCTION NECESSARY).

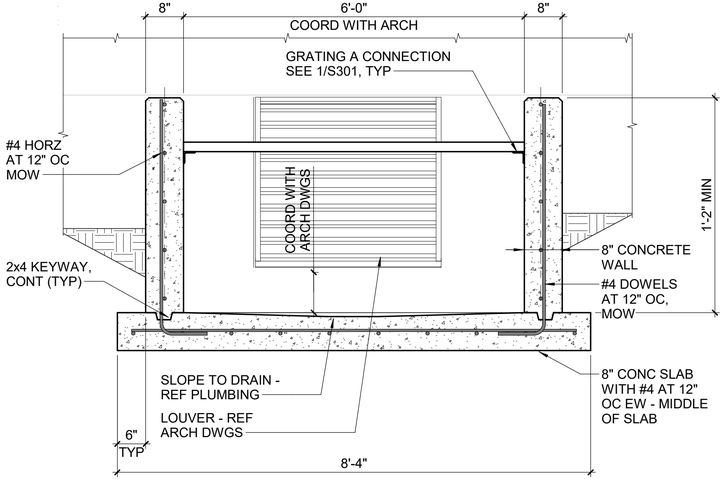
4. INFILL BRICK MASONRY
   - A. INFILL OPENING WITH NEW BRICK MASONRY CONSTRUCTION MATCHING EXISTING 5 WYTHE BRICK MASONRY CONSTRUCTION.
   - B. MORTAR FOR BRICK MASONRY MUST BE TYPE O MORTAR CEMENT.
   - C. TOOTH EXPOSED FACES OF MASONRY INTO ADJACENT CONSTRUCTION.

5. INSTALL NEW AREAWAY:
   - A. AS SHOWN IN SECTION.
   - B. REFER TO ARCHITECTURAL AND UTILITY DRAWINGS FOR ADDITIONAL REQUIREMENTS.

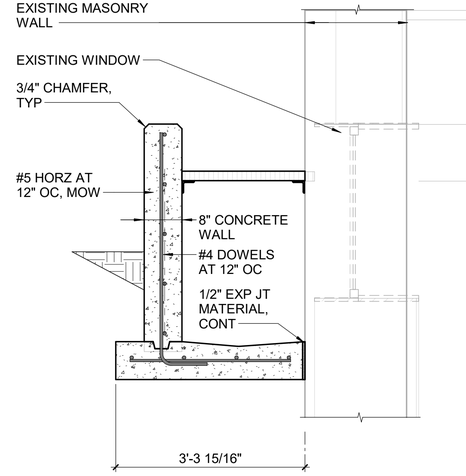
6. INSTALL WATERPROOFING MATERIALS:
   - A. REFER TO ARCHITECTURAL DRAWINGS FOR REQUIREMENTS.



1 SECTION
3/4" = 1'-0"



2 SECTION
3/4" = 1'-0"



3 SECTION
3/4" = 1'-0"

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SHEET TITLE: SECTIONS
SCALE: (U.N.O.)

JOB NAME: University of North Carolina - Chapel Hill
SCD#: 21-23545-02A
UNC Project No: C021212
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

FOR BID

SEAL

NORTH CAROLINA PROFESSIONAL ENGINEERING CORPORATION C-4360 LYNCH MYKINS STRUCTURAL ENGINEERS, PA

NORTH CAROLINA PROFESSIONAL 040416 ENGINEER SUSAN W. RUSSELL

2024-01-03

ISSUE DATE: 01/08/2024
JOB. NO.: 11706-00
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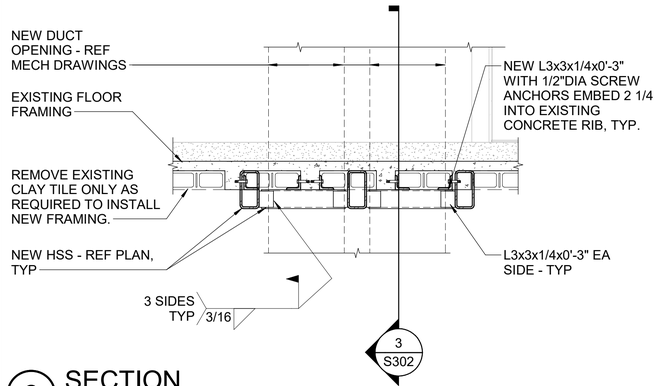

2 SECTION
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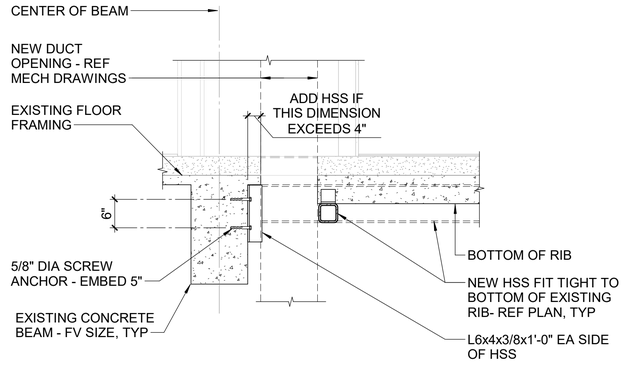

3 SECTION
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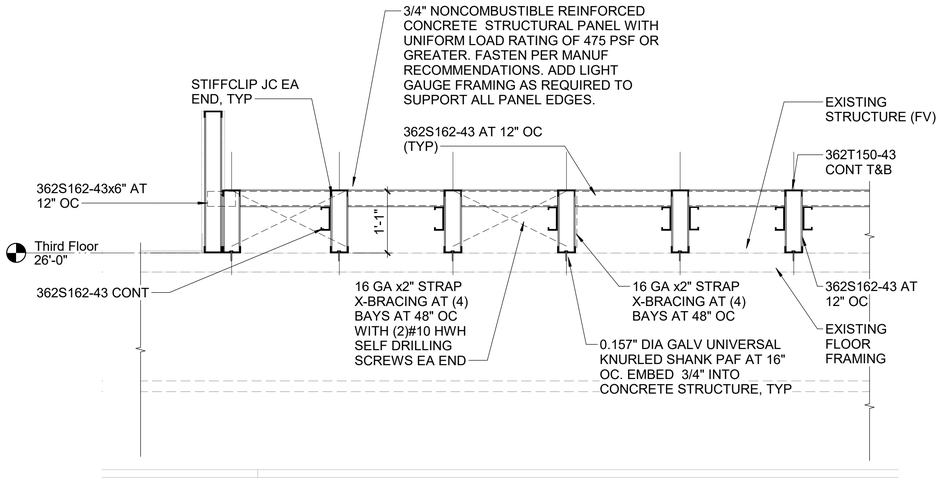
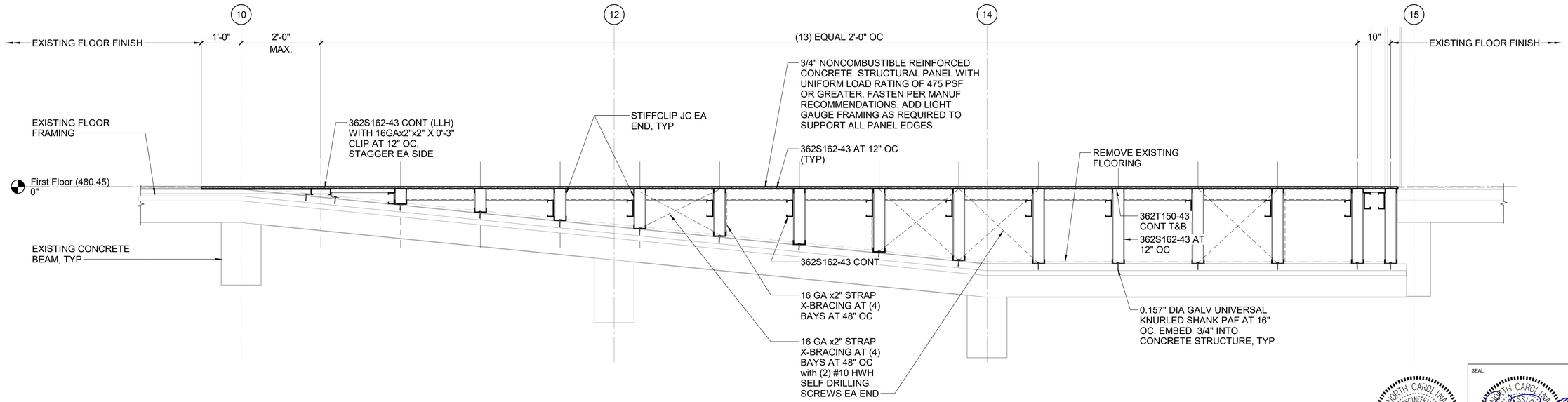


4 SECTION
3/4" = 1'-0"



1 SECTION
3/4" = 1'-0"

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SHEET TITLE: SECTIONS
SCALE (U.N.O.)

JOB NAME: University of North Carolina - Chapel Hill
SCD#: 21-2364b02A
UNC Project No: C021212
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

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NORTH CAROLINA PROFESSIONAL ENGINEERING CORPORATION C-4360 LYNCHMYKINS STRUCTURAL ENGINEERS, PC

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2024-01-03

ISSUE DATE: 01/08/2024
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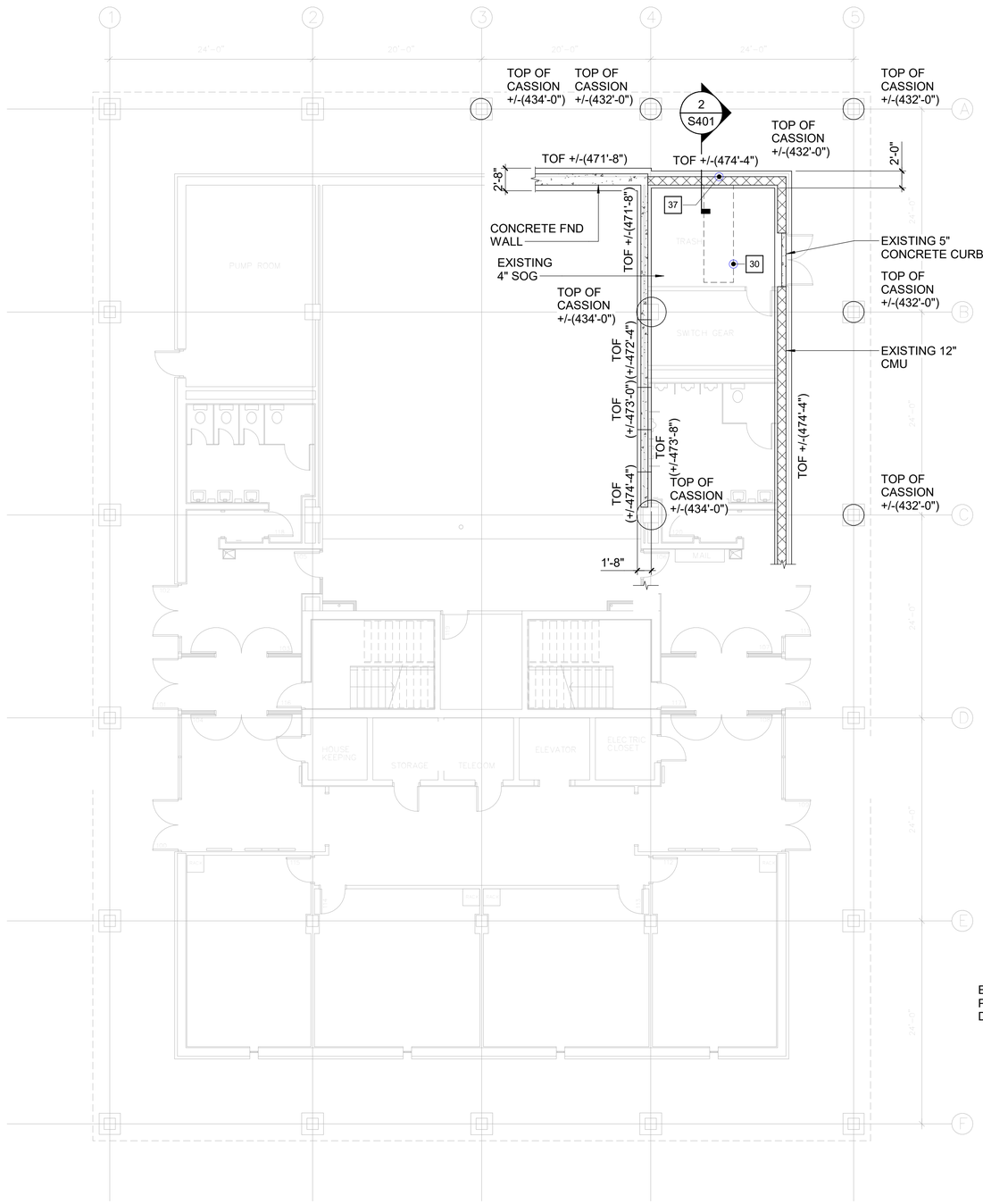
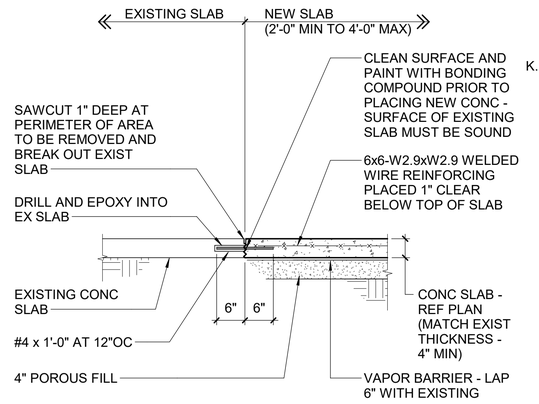


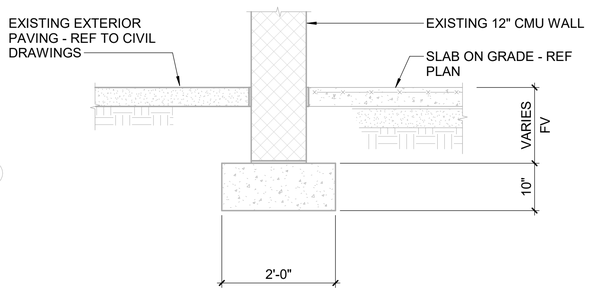
1 GREENLAW PARTIAL FLOOR PLAN

1/8" = 1'-0"



3 TYPICAL SLAB REMOVAL & REPLACEMENT DETAIL

3/4" = 1'-0"



2 SECTION

3/4" = 1'-0"

FOUNDATION / SLAB PLAN NOTES

A. REFERENCE ARCHITECTURAL DRAWINGS FOR DIMENSIONS TO NON-BEARING WALLS, WALL CONTROL JOINTS AND OPENINGS. DIMENSIONS SHOWN ARE TAKEN FROM ORIGINAL CONSTRUCTION DRAWINGS DATED 5-12-28 AND CONTRACTOR SHALL VERIFY BY FIELD MEASUREMENTS PRIOR TO FABRICATION OF NEW FRAMING.

B. UNLESS OTHERWISE NOTED, ALL ELEVATIONS ARE BASED ON A FINISHED FIRST FLOOR REFERENCE OF 0'-0". ACTUAL FINISHED FLOOR ELEVATION IS 478.15'. FINISHED FLOOR ELEVATIONS AT EACH LEVEL ARE INDICATED ON SLAB PLANS. REFERENCE ARCHITECTURAL DRAWINGS FOR FINISHED FLOOR MATERIALS.

C. NOT ALL UTILITY LOCATIONS ARE SHOWN ON PLAN. THE CONTRACTOR MUST COORDINATE THE LOCATIONS, SIZES, AND INVERTS OF UTILITIES. NEW UTILITIES SHALL PASS THROUGH THE FOUNDATION WALL ABOVE THE FOOTING. PROVIDE LINTEL AT ALL OPENINGS GREATER THAN 6" - REF TYPICAL DETAILS.

D. UNLESS OTHERWISE INDICATED, EXTEND WALL FOOTINGS A MINIMUM OF 6 INCHES BEYOND ENDS OF WALLS.

E. SITE WALLS ARE NOT SHOWN ON PLAN. CONTRACTOR MUST COORDINATE CIVIL AND LANDSCAPE DRAWINGS FOR SITE WALL INFORMATION.

F. DIMENSIONS SHOWN ON FOUNDATION PLAN ARE TO COLUMN GRIDLINES AND OUTSIDE FACE OF FOUNDATION WALLS, UNLESS OTHERWISE NOTED.

G. REFERENCE ARCHITECTURAL DRAWINGS FOR EXACT LIMITS OF SLAB DEPRESSIONS AND OMITTED SLABS.

H. FLOOR SINKS AND DRAINS ARE NOT SHOWN ON PLAN. REFERENCE PME DRAWINGS FOR LOCATIONS.

I. REFERENCE CIVIL AND LANDSCAPE DRAWINGS FOR EXTERIOR CONCRETE SLABS AND PAVING.

J. SLAB-ON-GRADE JOINTS MUST BE SAWED JOINTS OR KEYED CONSTRUCTION JOINTS, UNLESS OTHERWISE NOTED. CONTRACTOR MUST COORDINATE ALL SLAB JOINTS WITH JOINTS IN BONDED FLOOR FINISHES. REFERENCE ARCHITECTURAL DRAWINGS FOR FLOOR FINISH JOINT LOCATIONS.

K. PLACE (1) #4 x 3'-0" IN MIDDLE OF SLAB AT RE-ENTRANT CORNERS WHERE A SLAB JOINT DOES NOT OCCUR.

KEY NOTES

30 REMOVE EXISTING SLAB ON GRADE FOR INSTALLATION OF NEW UTILITES. DO NOT UNDERMINE EXISTING FOOTINGS - EXCAVTIONS SHALL BE NO CLOSER THAN 1'-0" FROM EDGE OF EXISTING FOOTING AND NO MORE THAN 1:2 SLOPE FROM BOTTOM OF FOOTING. REF TYPICAL DETAIL 2/S501 FOR REPLACEMENT.

37 NEW UTILITY LINES ARE TO BE BORED UNDER THE EXISTING FOUNDATION SO THAT THE RESIDUAL SOILS UNDER EXSTING FOOTING ARE NOT DISTURBED - REFER TO CIVIL DRAWINGS.

LORD AECK SARGENT

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SHEET TITLE: GREENLAW BUILDING - LEVEL 1 PLAN

SCALE (U.N.O.)

JOB NAME: University of North Carolina - Chapel Hill
SCI#: 21-2354/42A
UNC Project No. 021212
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

SEAL

NORTH CAROLINA PROFESSIONAL ENGINEERING C-4360 LYNCH MYKINS STRUCTURAL ENGINEERS, PC

NORTH CAROLINA PROFESSIONAL 040416 ENGINEER SUSAN W. RUSSELL

2024-01-03

ISSUE DATE: 01/08/2024
JOB. NO.: 11706-00
DWG. NO.: S401

FOR BID

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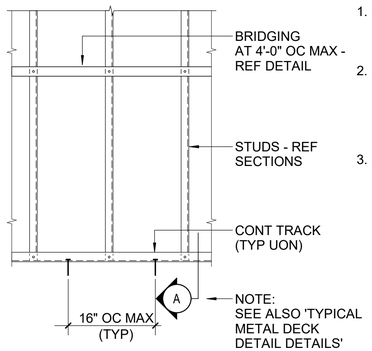
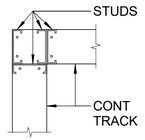
METAL STUD FRAMING NOTES:

1. SCREWS ARE SELF DRILLING SCREWS (SDS). MINIMUM SCREW SPACING AND EDGE DISTANCE MUST BE 3/4" IN ANY DIRECTION, TYPICAL.
2. POWDER ACTUATED FASTENERS (PAF) MUST HAVE A MINIMUM ALLOWABLE CAPACITY INTO THE BASE MATERIAL AS FOLLOWS, UNLESS OTHERWISE NOTED:
   STEEL: SHEAR = 600 LBS; TENSION = 250 LBS
   CONCRETE: SHEAR = 260 LBS; TENSION = 255 LBS
3. USE LOW PROFILE SCREWS AS REQUIRED FOR ARCHITECTURAL REQUIREMENTS.

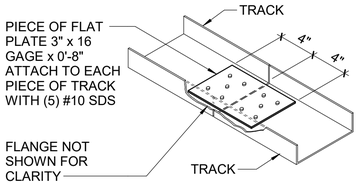
GAGE KEY	
GAGE	MILS
20	33
18	43
16	54
14	68
12	97



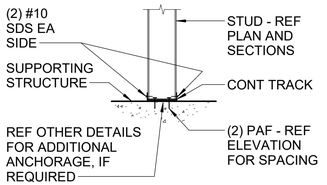
TYPICAL ELEVATION



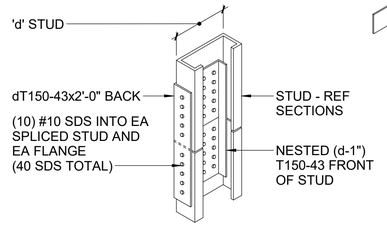
DETAIL AT CORNER



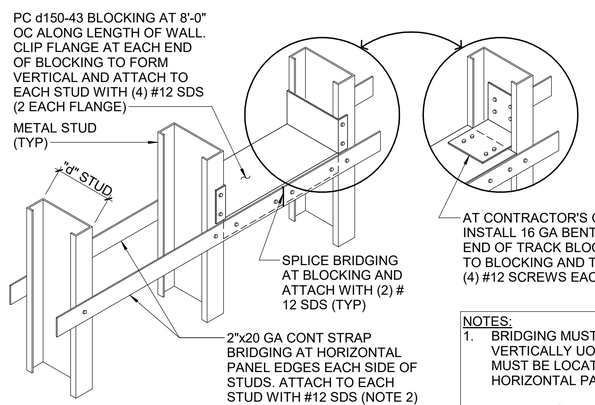
TRACK SPLICE DETAIL



A DETAIL AT SUPPORT



STUD SPLICE

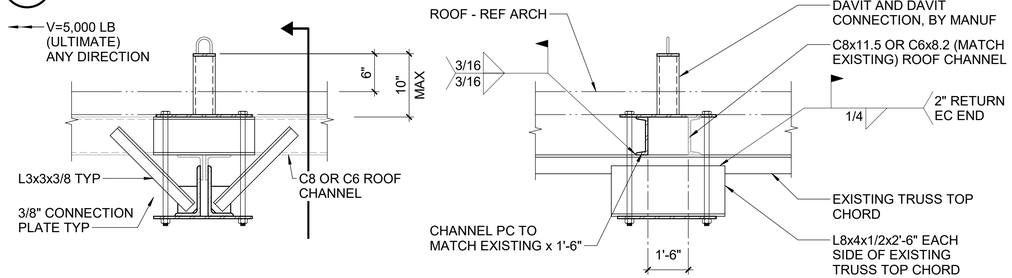


TYPICAL BRIDGING DETAIL

NOTES:
1. BRIDGING MUST BE AT 4'-0"OC VERTICALLY UON. BLOCKING/BRIDGING MUST BE LOCATED TO ALIGN WITH HORIZONTAL PANEL EDGES.
2. IF EXTERIOR FACE OF STUDS ARE SHEATHED DURING INSTALLATION, STRAP BRIDGING IS REQUIRED ON THE INTERIOR FACE ONLY.
3. USE LOW PROFILE SCREWS AS REQUIRED FOR ARCHITECTURAL REQUIREMENTS.

7 TYPICAL COLD-FORMED METAL FRAMING DETAILS

3/4" = 1'-0"

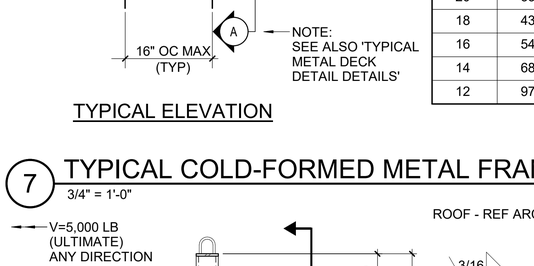


GALVANIZED POST ASSEMBLY DAVIT DESIGN ASSUMPTIONS (PER DAVIT POST):
THE FOLLOWING GUIDELINES ARE MINIMUM REQUIREMENTS. REFER TO MANUFACTURER GUIDELINE FOR ADDITIONAL REQUIREMENTS.

1. FALL PROTECTION LIFE LINE AND EQUIPMENT ARE NOT TO BE CONNECTED TO THE SAME CABLE.
2. EACH CABLE MAY SUPPORT EITHER:
   A. 1 PERSONNEL FALL PROTECTION LIFE LINE PER CABLE.
   B. 1 EQUIPMENT (1,000# TOTAL RATED LOAD) LINE PER CABLE.
3. D-RING MUST BE RATED FOR 5,000# IN ANY DIRECTION AND MUST MEET ANSI Z359 REQUIREMENTS FOR ALL LOCATIONS.
4. REFER TO MANUFACTURER'S GUIDELINES FOR ALLOWABLE EQUIPMENT LINE ANGLES.

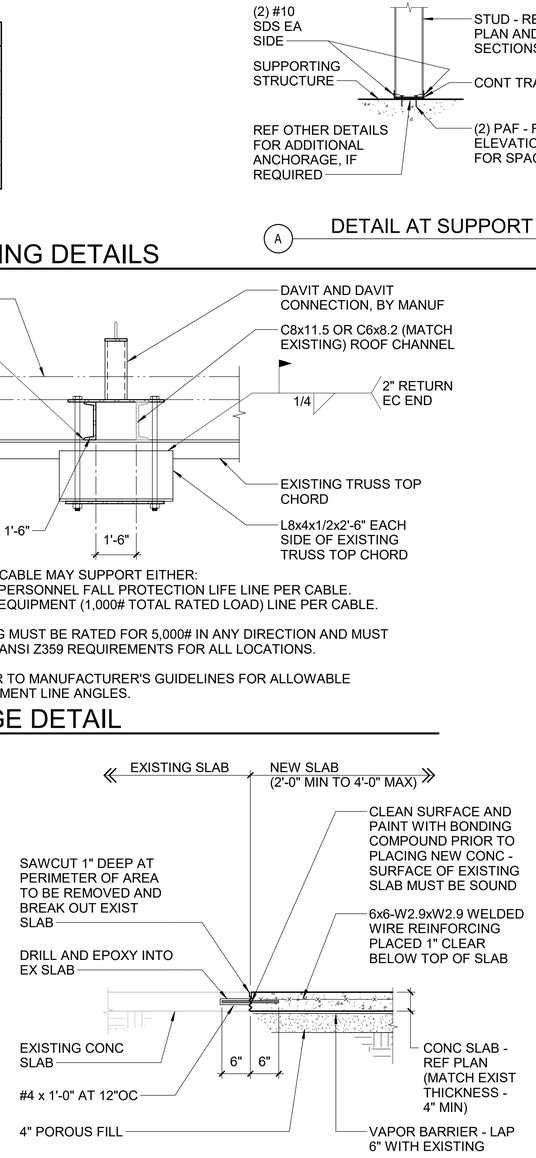
4 TYPICAL ROOF TOP DAVIT ANCHORAGE DETAIL

1" = 1'-0"



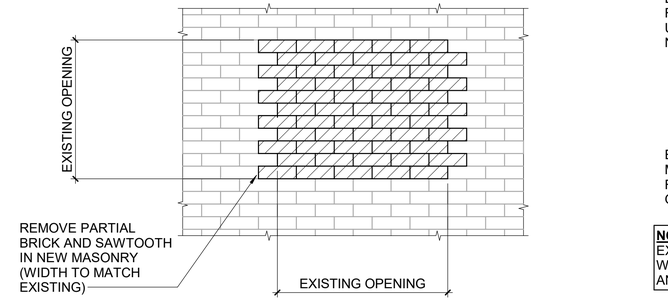
TYPICAL INTERIOR EQUIPMENT PAD DETAIL

1 3/4" = 1'-0"



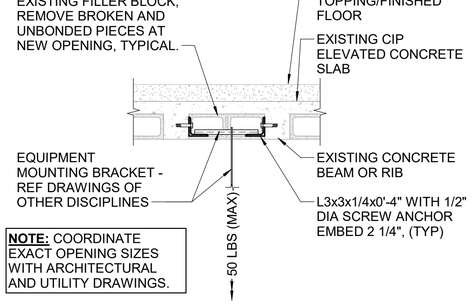
TYPICAL SLAB REMOVAL & REPLACEMENT DETAIL

2 3/4" = 1'-0"



TYPICAL MASONRY BRICK INFILL DETAIL

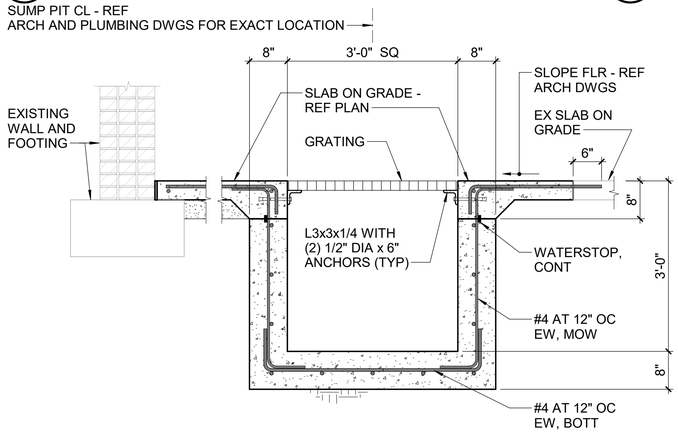
5 3/4" = 1'-0"



NOTE: COORDINATE EXACT OPENING SIZES WITH ARCHITECTURAL AND UTILITY DRAWINGS.

TYPICAL EQUIPMENT SUPPORT DETAIL

6 1" = 1'-0"



SUMP PIT DETAIL

3 3/4" = 1'-0"

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SHEET TITLE: TYPICAL DETAILS
SCALE (U.N.O.)

JOB NAME: University of North Carolina - Chapel Hill
UNC Project No. C21212
SCOP: 21-2548-60A
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

SEAL
NORTH CAROLINA REGISTERED PROFESSIONAL ENGINEERING LYNCH MYKINS STRUCTURAL ENGINEERS, P.C. C-4360
NORTH CAROLINA REGISTERED PROFESSIONAL ENGINEER 040416 SUSAN W. RUSSELL
2024-01-03

ISSUE DATE: 01/08/2024
JOB. NO.: 11706-00
DWG. NO.: S501

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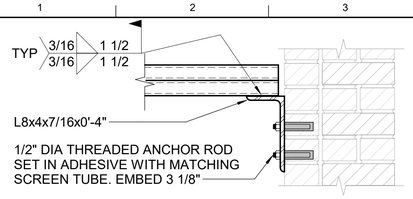
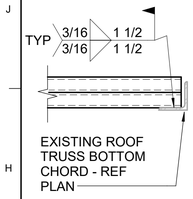
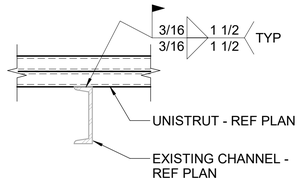


AT EXISTING MULTI-WYTHE BRICK WALL

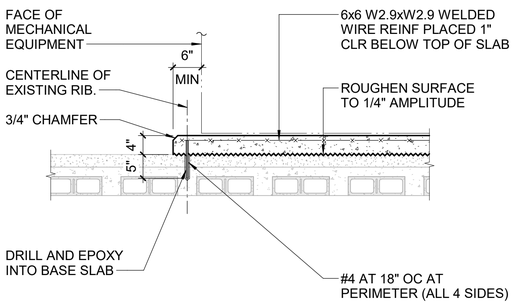


AT EXISTING TRUSS BOTTOM CHORD

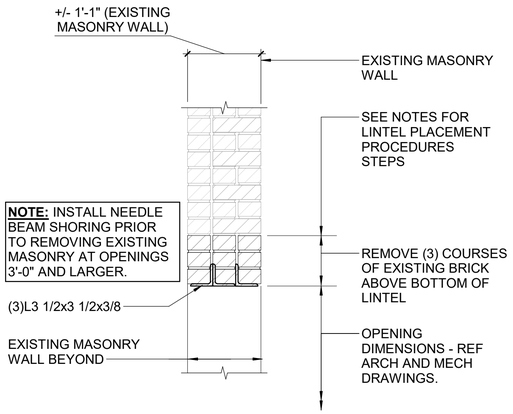


AT EXISTING CEILING CHANNEL

5 UNISTRUT TYPICAL DETAIL
1 1/2" = 1'-0"

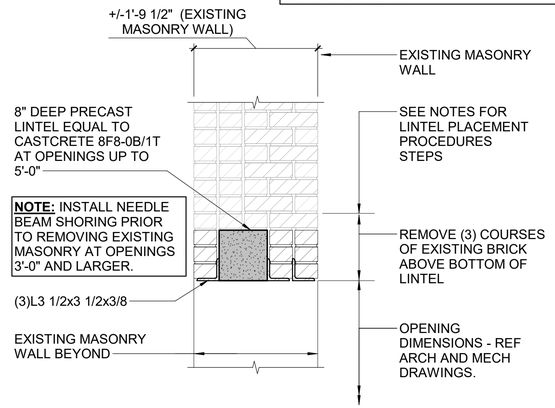


3 TYPICAL HOUSEKEEPING PAD AT ELEVATED STRUCTURE DETAIL
3/4" = 1'-0"



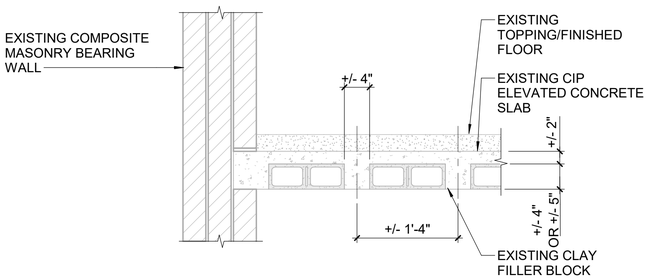
AT 3 WYTHES OPENING ≤5'-0"

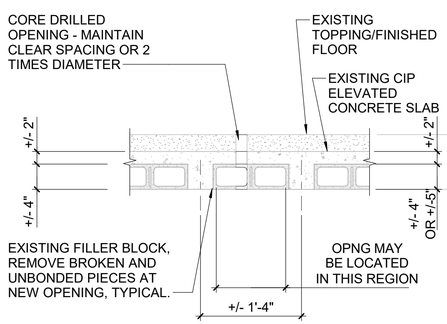
INSTALL SHORING AT EXISTING FLOOR STRUCTURE WHERE TOP OF OPENING IS LESS THAN OPENING WIDTH +12" FROM BOTTOM OF BEAM.



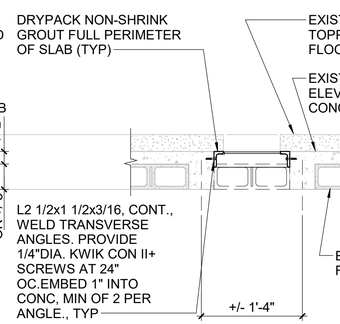
AT 5 WYTHES OPENING <5'-0"

4 NEW OPENING IN EXISTING WALL
1" = 1'-0"



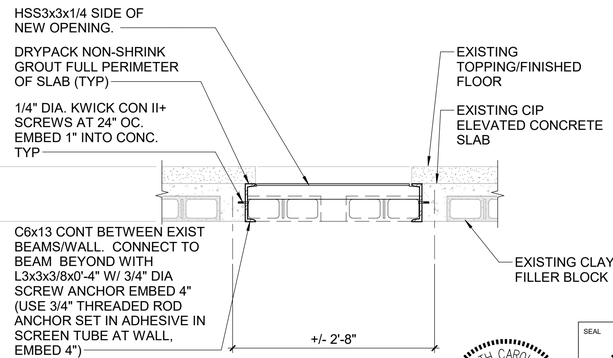


TYPICAL AT CORE DRILLED OPENINGS LESS THAN 6" INCHES



TYPICAL AT CORE DRILLED OPENINGS SAWCUT OPENINGS GREATER THAN 6" TO 9" INCHES

NOTE: COORDINATE EXACT OPENING SIZES WITH ARCHITECTURAL AND UTILITY DRAWINGS.



TYPICAL AT CORE DRILLED OPENINGS SAWCUT OPENINGS GREATER THAN 9" TO 32" INCHES

1 EXISTING FLOOR DETAIL
1" = 1'-0"

2 OPENING IN EXISTING FLOOR DETAILS
1" = 1'-0"

PROCEDURE NOTES AT 3 WYTHE BRICK:

1. NEW WALL OPENING
   A. FOR ALL EXPOSED OPENINGS THE CONTRACTOR SHALL REMOVE AND RETOOTH ALL BRICK REQUIRED TO FORM SMOOTH, SQUARE, FINISHED BRICK JAMB. EACH SIDE OF OPENINGS.
2. REMOVE MAXIMUM 1 WYTHE OF BRICK 3 COURSES ABOVE BOTTOM OF LINTEL, BY WIDTH OF CLEAR OPENING PLUS 8" AT EACH END.
3. REMOVE MAXIMUM 2 COURSES BRICK BELOW BOTTOM OF LINTEL BY WIDTH OF CLEAR OPENING.
4. INSTALL STEEL LINTEL IN VOID CREATED BY REMOVING THE BRICK. LENGTH OF STEEL LINTEL IS EQUAL TO WIDTH OF CLEAR OPENING PLUS 16". REST EACH END OF STEEL LINTEL ON THE 8" BRICK SHELF.
5. PUSH STEEL LINTEL TO BACK OF VOID.
6. PLACE 3 COURSES BRICK AND MORTAR ON TOP OF STEEL LINTEL.
7. DRYPACK TOP JOINT SOLID WITH PRE-HYDRATED MORTAR AND TUCK POINT
8. WAIT 72 HOURS FOR MASONRY TO CURE PROPERLY BEFORE PROCEEDING WITH STEP 9.
9. GO TO OTHER SIDE OF WALL.
10. REMOVE MAXIMUM 2 WYTHES OF BRICK, 3 COURSES ABOVE TOP OF LINTEL, BY WIDTH OF CLEAR OPENING PLUS 8" AT EACH END.
11. REMOVE MAXIMUM 2 COURSES BRICK BELOW BOTTOM OF LINTEL BY WIDTH OF CLEAR OPENING.
12. AT 5 WYTHE BRICK: INSTALL PRECAST LINTEL IN BACK OF VOID CREATED BY REMOVING THE BRICK. LENGTH OF PRECAST IS EQUAL TO WIDTH OF CLEAR OPENING PLUS 16". REST EACH END OF PRECAST LINTEL ON THE 8" BRICK SHELF. AT 3 WYTHE BRICK: CONTINUE TO STEP #15.
13. PLACE 2 COURSES BRICK AND MORTAR ON TOP OF PRECAST.
14. DRY PACK TOP JOINT SOLID WITH PRE-HYDRATED MORTAR.
15. INSTALL STEEL LINTEL IN VOID CREATED BY REMOVING THE BRICK. LENGTH OF ANGLE IS EQUAL TO WIDTH OF CLEAR OPENING PLUS 16". REST EACH END OF ANGLE ON THE 8" BRICK SHELF.
16. PUSH ANGLE BACK TO INSIDE OF INTERIOR OF BRICK FACE.
17. PLACE 3 COURSES HIGH OF BRICK MASONRY AND MORTAR ON STEEL ANGLE.
18. DRYPACK TOP JOINT SOLID WITH PRE-HYDRATED MORTAR AND TUCK POINT.
19. WAIT 72 HOURS FOR MASONRY WORK TO CURE PROPERLY BEFORE PROCEEDING WITH STEP 12.
20. REMOVE PORTION OF WALL BELOW AS REQUIRED FOR OPENING DEPTH, (SEE ARCH. AND MECH. DRAWINGS).

PROCEDURE NOTES AT 5 WYTHES BRICK:

1. NEW WALL OPENING
   A. FOR ALL EXPOSED OPENINGS THE CONTRACTOR SHALL REMOVE AND RETOOTH ALL BRICK REQUIRED TO FORM SMOOTH, SQUARE, FINISHED BRICK JAMB. EACH SIDE OF OPENINGS.
2. REMOVE MAXIMUM 3 WYTHES OF BRICK, 4 COURSES ABOVE BOTTOM OF LINTEL, BY WIDTH OF CLEAR OPENING PLUS 8" AT EACH END.
3. REMOVE MAXIMUM 2 COURSES BRICK BELOW BOTTOM OF LINTEL BY WIDTH OF CLEAR OPENING.
4. INSTALL PRECAST LINTEL IN VOID CREATED BY REMOVING THE BRICK. LENGTH OF PRECAST IS EQUAL TO WIDTH OF CLEAR OPENING PLUS 16". REST EACH END OF PRECAST LINTEL ON THE 8" BRICK SHELF.
5. PUSH PRECAST TO BACK OF VOID.
6. PLACE 1 COURSE BRICK AND MORTAR ON TOP OF PRECAST.
7. DRYPACK TOP JOINT SOLID WITH PRE-HYDRATED MORTAR AND TUCK POINT
8. WAIT 72 HOURS FOR MASONRY TO CURE PROPERLY BEFORE PROCEEDING WITH STEP 9.
9. INSTALL L3 1/2x3 1/2x3/8 IN VOID CREATED BY REMOVING THE BRICK. LENGTH OF ANGLE IS TO WIDTH OF CLEAR OPENING PLUS 16". REST EACH END OF ANGLE ON THE 8" BRICK SHELF.
10. PUSH ANGLE BACK TO INSIDE OF THE INTERIOR OF BRICK FACE.
11. PLACE 4 COURSES HIGH OF BRICK MASONRY AND MORTAR ON ANGLE.
12. DRYPACK TOP JOINT SOLID WITH PRE-HYDRATED MORTAR AND TUCK POINT
13. WAIT 72 HOURS FOR MASONRY WORK TO CURE PROPERLY BEFORE PROCEEDING WITH STEP 14.
14. GO TO OTHER SIDE OF WALL.
15. REMOVE MAXIMUM 2 WYTHES OF BRICK, 3 COURSES ABOVE TOP OF LINTEL, BY WIDTH OF CLEAR OPENING PLUS 8" AT EACH END.
16. REMOVE MAXIMUM 3 COURSES BRICK BELOW BOTTOM OF LINTEL BY WIDTH OF CLEAR OPENING.
17. INSTALL STEEL LINTEL IN VOID CREATED BY REMOVING THE BRICK. LENGTH OF ANGLE IS EQUAL TO WIDTH OF CLEAR OPENING PLUS 16". REST EACH END OF ANGLE ON THE 8" BRICK SHELF.
18. PUSH ANGLE BACK TO INSIDE OF INTERIOR OF BRICK FACE.
19. PLACE 3 COURSES HIGH OF BRICK MASONRY AND MORTAR ON STEEL LINTEL.
20. DRYPACK TOP JOINT SOLID WITH PRE-HYDRATED MORTAR AND TUCK POINT.
21. WAIT 72 HOURS FOR MASONRY WORK TO CURE PROPERLY BEFORE PROCEEDING WITH STEP 17.
22. REMOVE PORTION OF WALL BELOW AS REQUIRED FOR OPENING DEPTH, (SEE ARCH. AND MECH. DRAWINGS).

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SHEET TITLE: TYPICAL DETAILS
SCALE: (U.N.O.)

JOB NAME: University of North Carolina - Chapel Hill
SCD#: 21-23545-02A
UNC Project No: 021212
BINGHAM HALL RENOVATION
LOCATION: 38 Lenoir Drive, Chapel Hill, NC 27514

SEAL

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 040416 ENGINEER SUSAN W. RUSSELL

NORTH CAROLINA ENGINEERING CORPORATION C-4360 LYNCH MYKINS STRUCTURAL ENGINEERS, PA

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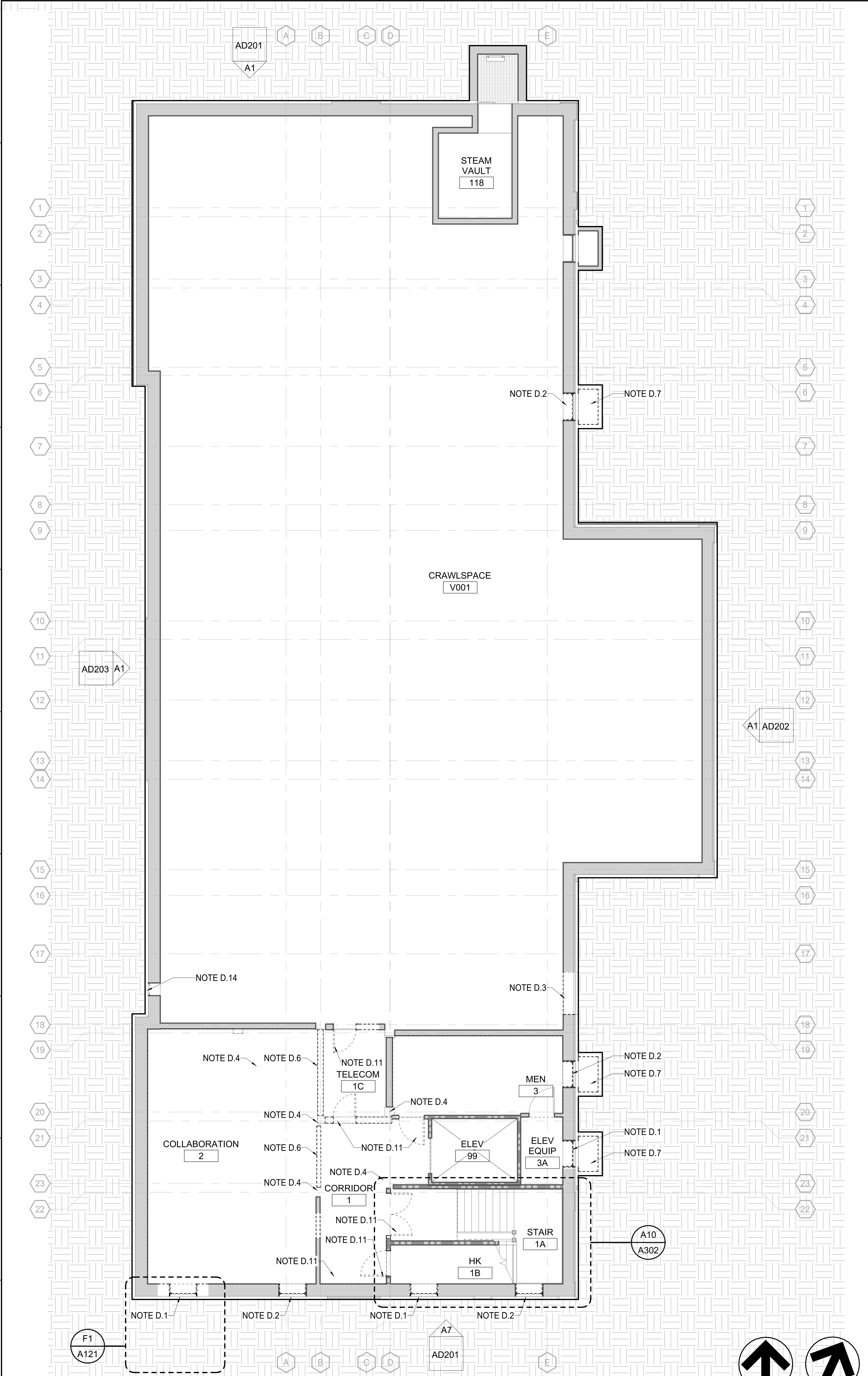
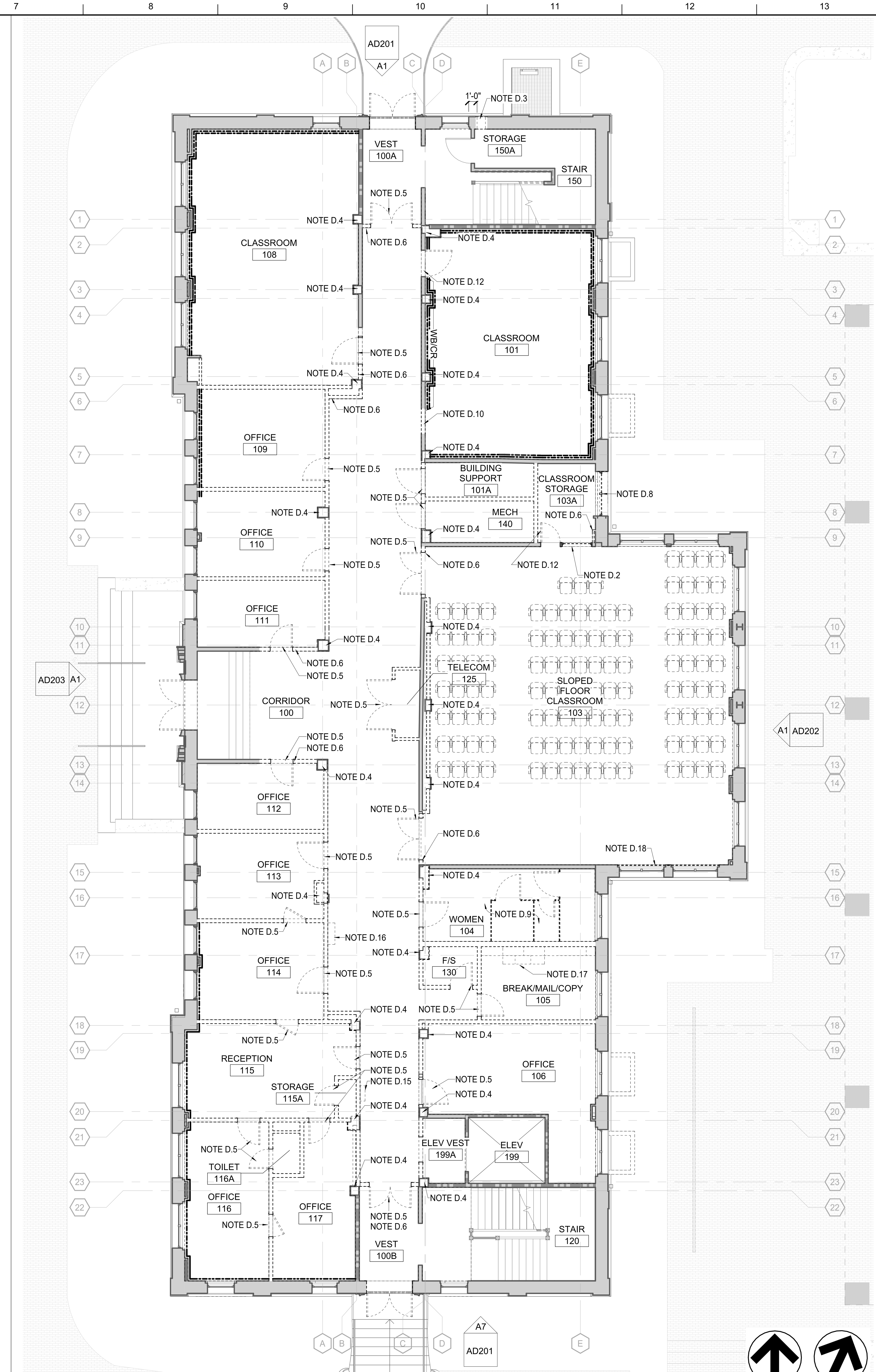


A1 BASEMENT DEMOLITION PLAN
0 8 16 FT



A7 DEMOLITION PLAN-FIRST FLOOR PLAN
0 8 16 FT

GENERAL NOTES

1. **EXTENT OF DEMOLITION:** CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO FINISHES OR COMPONENTS NOT SCHEDULED FOR DEMOLITION. DAMAGED ITEMS SHALL BE REPLACED OR REPAIRED TO MEET OR EXCEED FORMER CONDITIONS. REFER TO ARCHITECTURAL DEMOLITION DRAWING AND ENGINEERING DEMOLITION DRAWINGS FOR EXTENT OF DEMOLITION.

2. **CLEAN-UP:** CONTRACTOR SHALL REMOVE TRASH FROM THE SITE AND LEAVE THE SPACE IN BROOM-CLEANED CONDITION DAILY. DURING THE DEMOLITION PHASE, A REASONABLE CLEAN-UP IS TO BE CONSIDERED.

3. **REMOVAL AND STORAGE:** CONTRACTOR SHALL EXERCISE CARE IN REMOVAL OF ANY COMPONENTS (I.E. DOORS, FRAMES, FIXTURES, CEILING TILE) THAT MAY BE REUSED ON THIS OR FUTURE PROJECTS. CONTRACTOR SHALL COORDINATE APPROPRIATE STORAGE LOCATIONS FOR SUCH COMPONENTS DIRECTLY WITH OWNER'S REPRESENTATIVE. REFER TO SALVAGED MATERIALS LIST FOR ITEMS SPECIFICALLY INTENDED TO BE SALVAGED AND RELOCATED.

4. **CABLING/LOW VOLTAGE WIRING:** THE CONTRACTOR SHALL REMOVE FROM EXISTING DRYWALL PARTITIONS AND CEILING PLENUM ALL ABANDONED CIRCUITING, WIRING, CABLING, AND CONDUIT SYSTEMS FOR POWER, LOW VOLTAGE CONTROLS AND COMMUNICATIONS BACK TO THEIR SOURCE.

5. **MATERIALS ABOVE CEILING:** DURING DEMOLITION AFFECTED BY THIS SCOPE OF WORK, THE CONTRACTOR SHALL REMOVE ALL ITEMS LOCATED ABOVE CEILING GRID THAT ARE NOT TO BE REUSED AND MAY NOT BE EVIDENT BY STANDARD FIELD VERIFICATION. CONTRACTOR TO REMOVE CEILING TILE AS NECESSARY TO FIELD VERIFY AND INCLUDE ANY COST ASSOCIATED WITH REMOVAL IN THE PROJECT COST. AFTER DEMOLITION AND BEFORE CEILING COVER-UP, THE OWNER'S REPRESENTATIVE SHALL VISUALLY VERIFY THAT THIS REMOVAL HAS BEEN PERFORMED.

6. **DUCTWORK:** CONTRACTOR SHALL REMOVE ALL DUCTWORK NOT TO BE REUSED. (SEE MECHANICAL DOCUMENTS FOR ADDITIONAL CRITERIA.)

9. **THERMOSTATS AND TEMPERATURE SENSORS:** THERMOSTATS AND TEMPERATURE SENSORS ARE TO BE PROTECTED AND STORED ABOVE THE CEILING DURING DEMOLITION FOR RE-USE.

8. **RECYCLING:** THE CONTRACTOR SHALL DEVELOP A CONSTRUCTION WASTE MANAGEMENT PLAN WITH INPUT FROM THE OWNER AND ARCHITECT. BEFORE ANY WASTE REMOVAL BEGINS, THE PLAN MUST BE APPROVED BY THE OWNER. THE PLAN SHALL FOLLOW ALL APPLICABLE STATE, COUNTY, AND TOWN LAWS AND ORDINANCES.

9. **ROOF:** CAREFULLY REMOVE, INSPECT, AND SALVAGE ALL SLATES IN GOOD CONDITION. DISPOSE OF EXISTING SLATES THAT ARE CRACKED, DAMAGED, OR DETERIORATED. FOR THE PURPOSE OF BASE BID, ASSUME 50% NEW SLATE WILL BE NEEDED TO SUPPLEMENT EXISTING SLATE BEING REINSTALLED. DEMO EXISTING UNDERLAYMENT, FLASHINGS (VALLEY AND CHIMNEY) AND GUTTER LINING.

10. **WOOD TRIM**: WOOD BASE AND CHAIR RAIL TO REMAIN AT LOCATIONS SHOWN IN DEMO PLANS. THE REMAINING EXISTING BASE AND CHAIR RAIL SHALL BE CAREFULLY REMOVED FOR RE-INSTALL AT LOCATIONS INDICATED ON INTERIOR ELEVATION DRAWINGS.

DEMOLITION LEGEND

- - - - -	INDICATES EXISTING CONSTRUCTION TO BE DEMOLISHED TO LIMITS SHOWN ON DRAWINGS, PATCH, REPAIR, SMOOTH, AND CLEAN ADJACENT FLOORS, WALLS, AND CEILINGS AS REQUIRED TO PROVIDE SMOOTH SURFACE FOR NEW FINISHES.
(hatched wall)	EXISTING WALLS TO REMAIN
(dashed door)	INDICATES EXISTING CONSTRUCTION TO BE DEMOLISHED TO LIMITS SHOWN ON DRAWINGS, PATCH, REPAIR, SMOOTH AND CLEAN ADJACENT FLOORS, WALLS AND CEILINGS AS REQUIRED TO PROVIDE SMOOTH SURFACE FOR NEW FINISHES.
	1 HR FIRE BARRIER
	2 HR FIRE BARRIER
	EXISTING WALL BASE TO REMAIN
	EXISTING CHAIR RAIL TO REMAIN

SEE AD 700 SERIES FOR FLOORING DEMOLISH PLAN

SHEET SPECIFIC NOTES

D.1	REMOVE EXISTING WINDOW AND PREPARE OPENING FOR NEW LOUVER.
D.2	REMOVE EXISTING WINDOW AND PREPARE OPENING FOR INFILL.
D.3	REMOVE EXISTING BRICK AND PREPARE OPENING FOR NEW LOUVER.
D.4	EXISTING COLUMN AND FINISH TO REMAIN, TYPICAL.
D.5	EXISTING DOOR AND FRAME TO BE REMOVED.
D.6	EXISTING WALL TO BE REMOVED.
D.7	EXISTING AREAWAY TO BE REMOVED.
D.8	REMOVE EXISTING WINDOW AND DEMOLISH BRICK TO CREATE NEW OPENING; PREPARE OPENING FOR NEW DOOR.
D.9	REMOVE EXISTING RESTROOM TOILET DOORS AND PARTITIONS. SEE MEP DRAWINGS FOR PLUMBING FIXTURE DETAILS.
D.10	PREPARE FOR NEW FRAME AND DOOR. REMOVE EXISTING WALL UP TO DECK.
D.11	EXISTING DOOR AND FRAME TO BE REMOVED. REMOVE WALL ABOVE DOOR UP TO DECK. PREPARE FOR NEW DOOR AND FRAME.
D.12	EXISTING DOOR AND FRAME TO BE REMOVED. REMOVE WALL ABOVE DOOR UP TO DECK. PREPARE FOR INFILL.
D.13	WALL BASE TO REMAIN
D.14	REMOVE EXISTING CRAWLSPACE VENT AND PERPARE OPENING FOR INFILL
D.15	REMOVE AND SALVAGE HISTORICAL MAIL BOX
D.16	REMOVE UNC MAIL BOX AND TURN OVER TO OWNER
D.17	DEMOLISH CASEWORK
D.18	DEMOLISH EXISTING WINDOW WALL INFILL

SEAL
Lauren Dunn Rockart, Registered Architect, 9074, North Carolina, Chapel Hill, NC
01·08·2024

LORD AECK SARGENT

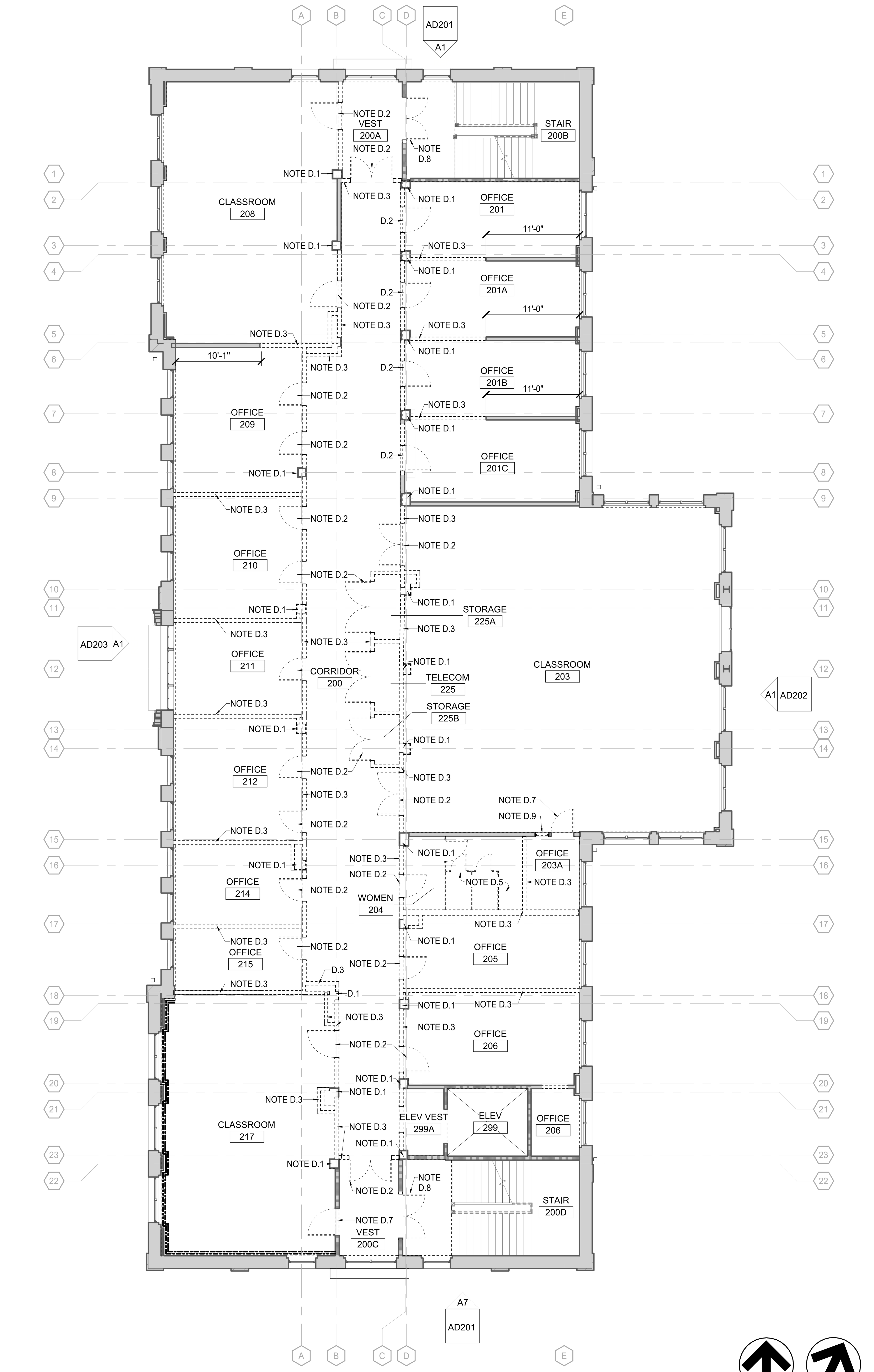
REVISION:

LORD AECK SARGENT PLANNING & DESIGN, INC. REGISTERED ARCHITECTURAL CORPORATION CERT. NO. 53851 NORTH CAROLINA CHAPEL HILL

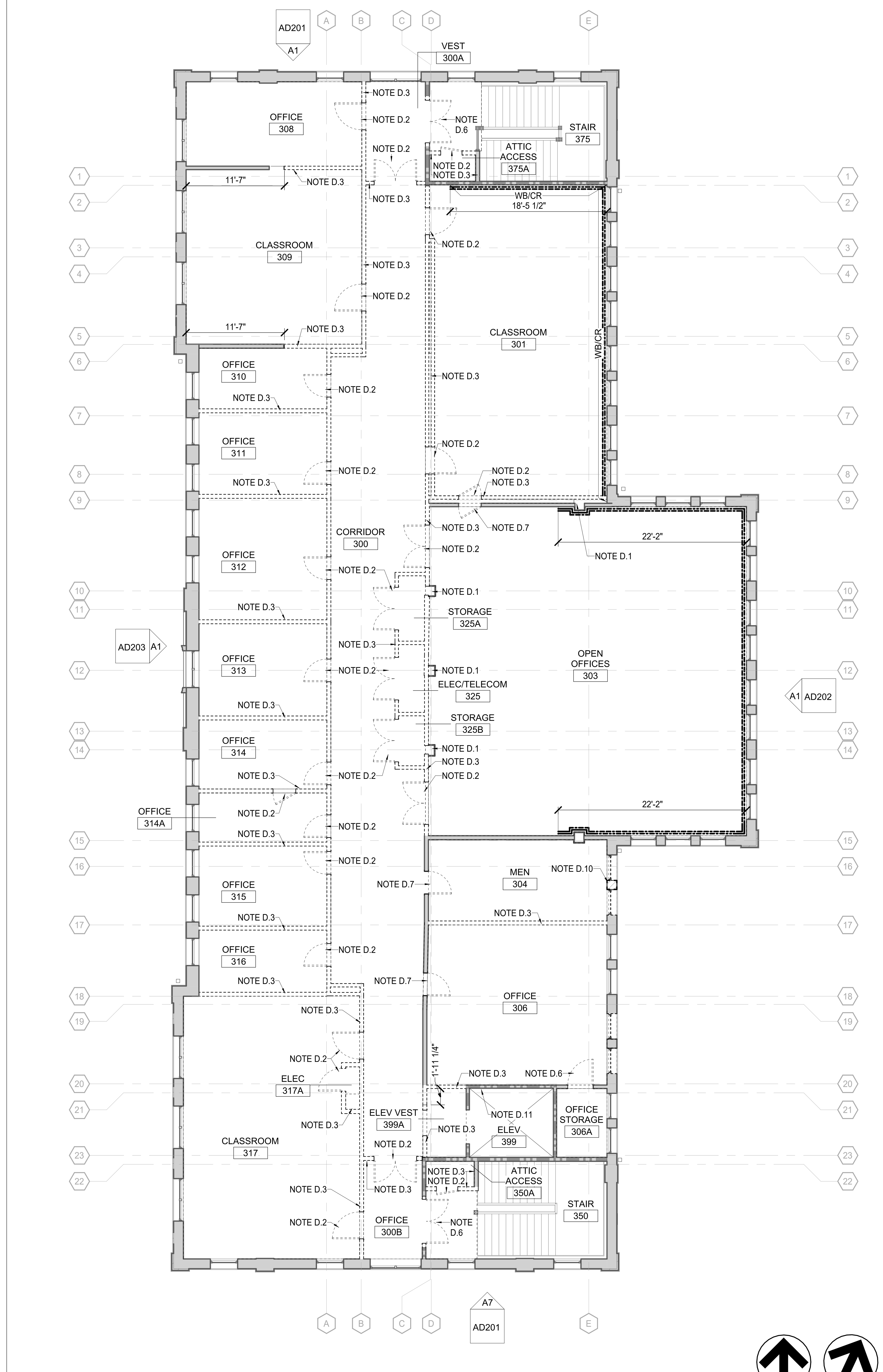
SHEET TITLE: BASEMENT & FIRST FLOOR DEMOLITION PLAN
SCALE (U.N.O.)

JOB NAME: University of North Carolina - Chapel Hill
SCO#: 21-23548-02A UNC Project No. C21212
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

ISSUE DATE: 1/8/2023
JOB. NO.: 11706-00
DWG. NO.: AD101



A1 SECOND FLOOR DEMOLITION PLAN
0 8 16 FT



A7 THIRD FLOOR DEMOLITION PLAN
0 8 16 FT

GENERAL NOTES

1. **EXTENT OF DEMOLITION:** CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO FINISHES OR COMPONENTS NOT SCHEDULED FOR DEMOLITION. DAMAGED ITEMS SHALL BE REPLACED OR REPAIRED TO MEET OR EXCEED FORMER CONDITIONS. REFER TO ARCHITECTURAL DEMOLITION DRAWING AND ENGINEERING DEMOLITION DRAWINGS FOR EXTENT OF DEMOLITION.

2. **CLEAN-UP:** CONTRACTOR SHALL REMOVE TRASH FROM THE SITE AND LEAVE THE SPACE IN BROOM-CLEANED CONDITION DAILY. DURING THE DEMOLITION PHASE, A REASONABLE CLEAN-UP IS TO BE CONSIDERED.

3. **REMOVAL AND STORAGE:** CONTRACTOR SHALL EXERCISE CARE IN REMOVAL OF ANY COMPONENTS (I.E. DOORS, FRAMES, FIXTURES, CEILING TILE) THAT MAY BE REUSED ON THIS OR FUTURE PROJECTS. CONTRACTOR SHALL COORDINATE APPROPRIATE STORAGE LOCATIONS FOR SUCH COMPONENTS DIRECTLY WITH OWNER'S REPRESENTATIVE. REFER TO SALVAGED MATERIALS LIST FOR ITEMS SPECIFICALLY INTENDED TO BE SALVAGED AND RELOCATED.

4. **CABLING/LOW VOLTAGE WIRING:** THE CONTRACTOR SHALL REMOVE FROM EXISTING DRYWALL PARTITIONS AND CEILING PLENUM ALL ABANDONED CIRCUITING, WIRING, CABLING, AND CONDUIT SYSTEMS FOR POWER, LOW VOLTAGE CONTROLS AND COMMUNICATIONS BACK TO THEIR SOURCE.

5. **MATERIALS ABOVE CEILING:** DURING DEMOLITION AFFECTED BY THIS SCOPE OF WORK, THE CONTRACTOR SHALL REMOVE ALL ITEMS LOCATED ABOVE CEILING GRID THAT ARE NOT TO BE REUSED AND MAY NOT BE EVIDENT BY STANDARD FIELD VERIFICATION. CONTRACTOR TO REMOVE CEILING TILE AS NECESSARY TO FIELD VERIFY AND INCLUDE ANY COST ASSOCIATED WITH REMOVAL IN THE PROJECT COST. AFTER DEMOLITION AND BEFORE CEILING COVER-UP, THE OWNER'S REPRESENTATIVE SHALL VISUALLY VERIFY THAT THIS REMOVAL HAS BEEN PERFORMED.

6. **DUCTWORK:** CONTRACTOR SHALL REMOVE ALL DUCTWORK NOT TO BE REUSED. (SEE MECHANICAL DOCUMENTS FOR ADDITIONAL CRITERIA.)

9. **THERMOSTATS AND TEMPERATURE SENSORS:** THERMOSTATS AND TEMPERATURE SENSORS ARE TO BE PROTECTED AND STORED ABOVE THE CEILING DURING DEMOLITION FOR RE-USE.

8. **RECYCLING:** THE CONTRACTOR SHALL DEVELOP A CONSTRUCTION WASTE MANAGEMENT PLAN WITH INPUT FROM THE OWNER AND ARCHITECT. BEFORE ANY WASTE REMOVAL BEGINS, THE PLAN MUST BE APPROVED BY THE OWNER. THE PLAN SHALL FOLLOW ALL APPLICABLE STATE, COUNTY, AND TOWN LAWS AND ORDINANCES.

9. **ROOF:** CAREFULLY REMOVE, INSPECT, AND SALVAGE ALL SLATES IN GOOD CONDITION. DISPOSE OF EXISTING SLATES THAT ARE CRACKED, DAMAGED, OR DETERIORATED. FOR THE PURPOSE OF BASE BID, ASSUME 50% NEW SLATE WILL BE NEEDED TO SUPPLEMENT EXISTING SLATE BEING REINSTALLED. DEMO EXISTING UNDERLAYMENT, FLASHINGS (VALLEY AND CHIMNEY) AND GUTTER LINING.

10. **WOOD TRIM**: WOOD BASE AND CHAIR RAIL TO REMAIN AT LOCATIONS SHOWN IN DEMO PLANS. THE REMAINING EXISTING BASE AND CHAIR RAIL SHALL BE CAREFULLY REMOVED FOR RE-INSTALL AT LOCATIONS INDICATED ON INTERIOR ELEVATION DRAWINGS.

DEMOLITION LEGEND

INDICATES EXISTING CONSTRUCTION TO BE DEMOLISHED TO LIMITS SHOWN ON DRAWINGS, PATCH, REPAIR, SMOOTH, AND CLEAN ADJACENT FLOORS, WALLS, AND CEILINGS AS REQUIRED TO PROVIDE SMOOTH SURFACE FOR NEW FINISHES.

EXISTING WALLS TO REMAIN

INDICATES EXISTING CONSTRUCTION TO BE DEMOLISHED TO LIMITS SHOWN ON DRAWINGS, PATCH, REPAIR, SMOOTH AND CLEAN ADJACENT FLOORS, WALLS AND CEILINGS AS REQUIRED TO PROVIDE SMOOTH SURFACE FOR NEW FINISHES.

1 HR FIRE BARRIER

2 HR FIRE BARRIER

EXISTING WALL BASE TO REMAIN

EXISTING CHAIR RAIL TO REMAIN

SEE AD 700 SERIES FOR FLOORING DEMOLISH PLAN

SHEET SPECIFIC NOTES

D.1 EXISTING COLUMN AND FINISH TO REMAIN, TYPICAL.
D.2 EXISTING DOOR AND FRAME TO BE REMOVED.
D.3 EXISTING WALL TO BE REMOVED.
D.4 PREPARE FOR NEW FRAME AND DOOR. REMOVE EXISTING WALL UP TO STRUCTURE.
D.5 REMOVE EXISTING RESTROOM TOILET DOORS AND PARTITIONS. SELVEDGE MARBLE PARTITION FOR REINSTALLATION. SEE MEP DRAWINGS FOR PLUMBING FIXTURE DETAILS.
D.6 EXISTING DOOR AND FRAME TO BE REMOVED. REMOVE WALL ABOVE DOOR UP TO DECK. PREPARE FOR NEW DOOR AND FRAME.
D.7 EXISTING DOOR AND FRAME TO BE REMOVED. REMOVE WALL ABOVE DOOR UP TO STRUCTURE. PREPARE FOR INFILL.
D.8 EXISTING DOOR AND FRAME TO BE REMOVED. REMOVE WALL ABOVE DOOR UP TO STRUCTURE. PREPARE FOR NEW CASED OPENING.
D.9 DEMOLISH WINDOW AND BLACKOUT FILM. PREPARE FOR INFILL THE OPENING.
D.10 DEMOLISH WALL IN PREPARATION FOR HAVC INSTALLATION
D.11 DEMOLISH EXISTING FINISHING WITHIN ELEVATOR AREA

SEAL

LORD AECK SARGENT

REVISION:

LORD AECK SARGENT PLANNING & DESIGN, INC. CERT. NO. 53851 CHAPEL HILL NORTH CAROLINA

SHEET TITLE
SECOND & THIRD FLOOR DEMOLITION PLAN
SCALE (U.N.O.)

JOB NAME
University of North Carolina - Chapel Hill
SCO#: 21-23548-02A UNC Project No. CI21212
BINGHAM HALL RENOVATION
LOCATION
36 Lenoir Drive, Chapel Hill, NC 27514

ISSUE DATE
1/8/2023
JOB. NO.
11706-00
DWG. NO.
AD102

Lauren Dunn Rockart Registered Architect 9074 North Carolina Chapel Hill, NC
01-08-2024

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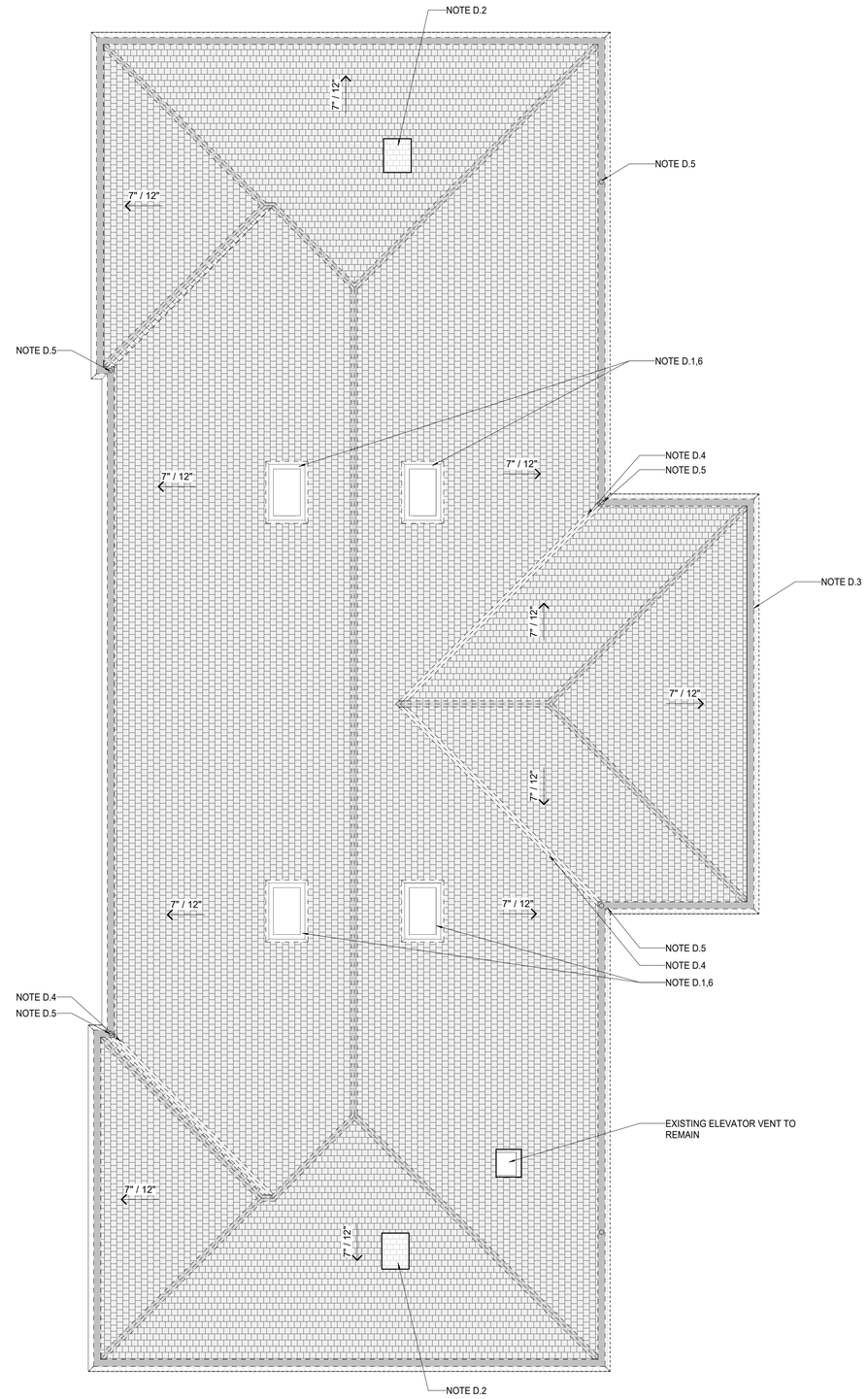

GENERAL NOTES

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SHEET SPECIFIC NOTES

D.1 EXISTING CHIMNEY TO REMAIN.
D.2 REMOVE EXISTING HATCH
D.3 DEMO EXISTING GUTTER LINING.
D.4 DEMO EXISTING UNDERLAYMENT ON VALLEY.
D.5 REMOVE EXISTING DOWNSPOUT.
D.6 DEMOLISH EXISTING UNDERLAYMENT AND FLASHING.

PROJECT NORTH TRUE NORTH

LORD AECK SARGENT

REVISION:

LORD AECK SARGENT PLANNING & DESIGN, INC. — NORTH CAROLINA ARCHITECTURAL CORPORATION — CERT. NO. 53851 — CHAPEL HILL

SHEET TITLE: DEMOLITION ROOF PLAN
SCALE (U.N.O.)

JOB NAME: University of North Carolina - Chapel Hill
SCI#: 21-23548-02A
UNC Project No. C021212
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

SEAL: Lauren Dunn Rockart, Registered Architect, 9074, North Carolina, Chapel Hill, NC — 01.08.2024

ISSUE DATE: 1/8/2023
JOB. NO.: 11706-00
DWG. NO.: AD103

A1 DEMOLITION ROOF PLAN
0 8 16 FT

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A1 NORTH ELEVATION

0 8' 16 FT

A7 SOUTH ELEVATION

0 8' 16 FT

GENERAL NOTES

1. **EXTENT OF DEMOLITION:** CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO FINISHES OR COMPONENTS NOT SCHEDULED FOR DEMOLITION. DAMAGED ITEMS SHALL BE REPLACED OR REPAIRED TO MEET OR EXCEED FORMER CONDITIONS. REFER TO ARCHITECTURAL DEMOLITION DRAWING AND ENGINEERING DEMOLITION DRAWINGS FOR EXTENT OF DEMOLITION.

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5. **MATERIALS ABOVE CEILING:** DURING DEMOLITION AFFECTED BY THIS SCOPE OF WORK, THE CONTRACTOR SHALL REMOVE ALL ITEMS LOCATED ABOVE CEILING GRID THAT ARE NOT TO BE REUSED AND MAY NOT BE EVIDENT BY STANDARD FIELD VERIFICATION. CONTRACTOR TO REMOVE CEILING TILE AS NECESSARY TO FIELD VERIFY AND INCLUDE ANY COST ASSOCIATED WITH REMOVAL IN THE PROJECT COST. AFTER DEMOLITION AND BEFORE CEILING COVER-UP, THE OWNER'S REPRESENTATIVE SHALL VISUALLY VERIFY THAT THIS REMOVAL HAS BEEN PERFORMED.

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9. **ROOF:** CAREFULLY REMOVE, INSPECT, AND SALVAGE ALL SLATES IN GOOD CONDITION. DISPOSE OF EXISTING SLATES THAT ARE CRACKED, DAMAGED, OR DETERIORATED. FOR THE PURPOSE OF BASE BID, ASSUME 50% NEW SLATE WILL BE NEEDED TO SUPPLEMENT EXISTING SLATE BEING REINSTALLED. DEMO EXISTING UNDERLAYMENT, FLASHINGS (VALLEY AND CHIMNEY) AND GUTTER LINING.

10. **WOOD TRIM:** WOOD BASE AND CHAIR RAIL TO REMAIN AT LOCATIONS SHOWN IN DEMO PLANS. THE REMAINING EXISTING BASE AND CHAIR RAIL SHALL BE CAREFULLY REMOVED FOR RE-INSTALL AT LOCATIONS INDICATED ON INTERIOR ELEVATION DRAWINGS.

INDICATES EXISTING CONSTRUCTION TO BE DEMOLISHED TO LIMITS SHOWN ON DRAWINGS, PATCH, REPAIR, SMOOTH, AND CLEAN ADJACENT FLOORS, WALLS, AND CEILINGS AS REQUIRED TO PROVIDE SMOOTH SURFACE FOR NEW FINISHES.

EXISTING WALLS TO REMAIN

INDICATES EXISTING CONSTRUCTION TO BE DEMOLISHED TO LIMITS SHOWN ON DRAWINGS, PATCH, REPAIR, SMOOTH AND CLEAN ADJACENT FLOORS, WALLS AND CEILINGS AS REQUIRED TO PROVIDE SMOOTH SURFACE FOR NEW FINISHES.

1 HR FIRE BARRIER

2 HR FIRE BARRIER

EXISTING WALL BASE TO REMAIN

EXISTING CHAIR RAIL TO REMAIN

SEE AD 700 SERIES FOR FLOORING DEMOLISH PLAN

SHEET SPECIFIC NOTES

1. DEMOLISH BRICK
2. DEMOLISH WINDOWS
3. REMOVE DOOR AND TRANSOM, PREP FRAME FOR NEW DOOR
4. SEE AD103 FOR ROOF DEMOLITION SCOPE

LORD AECK SARGENT

REVISION:

LORD AECK SARGENT PLANNING & DESIGN, INC. LANDSCAPE ARCHITECTURAL CORPORATION CERT. NO. 53851 NORTH CAROLINA CHAPEL HILL

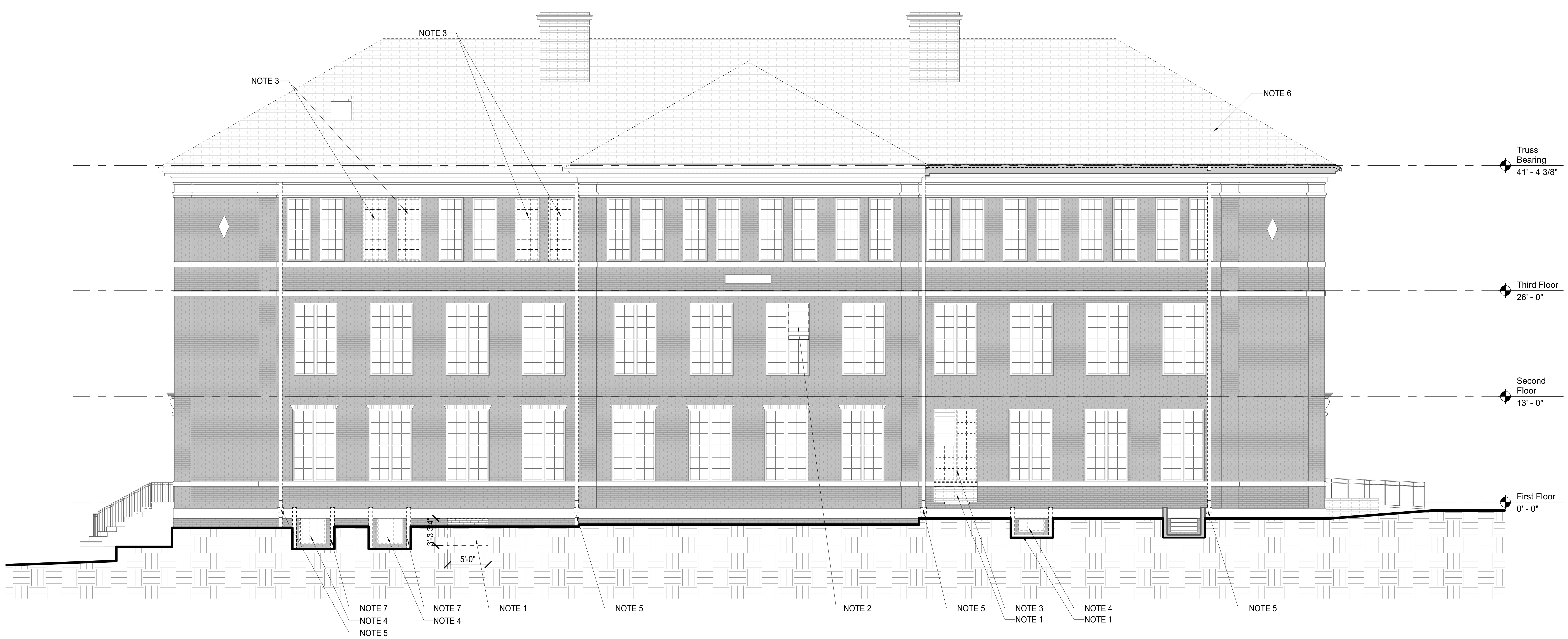
SHEET TITLE: EXTERIOR DEMOLITION ELEVATIONS

SCALE (U.N.O.)

JOB NAME: University of North Carolina - Chapel Hill
SCI#: 21-23548-02A
UNC Project No.: C01212
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

SEAL: Lauren Dunn Rockart, Registered Architect, 9874, North Carolina, Chapel Hill, NC, 01.08.2024

ISSUE DATE: 1/8/2023
JOB. NO.: 11706-00
DWG. NO.: AD201



A1 EAST ELEVATION

0 8 16 FT

GENERAL NOTES

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INDICATES EXISTING CONSTRUCTION TO BE DEMOLISHED TO LIMITS SHOWN ON DRAWINGS, PATCH, REPAIR, SMOOTH, AND CLEAN ADJACENT FLOORS, WALLS, AND CEILINGS AS REQUIRED TO PROVIDE SMOOTH SURFACE FOR NEW FINISHES.

EXISTING WALLS TO REMAIN

INDICATES EXISTING CONSTRUCTION TO BE DEMOLISHED TO LIMITS SHOWN ON DRAWINGS, PATCH, REPAIR, SMOOTH AND CLEAN ADJACENT FLOORS, WALLS AND CEILINGS AS REQUIRED TO PROVIDE SMOOTH SURFACE FOR NEW FINISHES.

1 HR FIRE BARRIER

2 HR FIRE BARRIER

EXISTING WALL BASE TO REMAIN

EXISTING CHAIR RAIL TO REMAIN

SEE AD 700 SERIES FOR FLOORING DEMOLISH PLAN

SHEET SPECIFIC NOTES

1. DEMOLISH BRICK.
2. DEMOLISH LOUVER SASH.
3. REMOVE WINDOW. SALVAGE ONE SASH FOR RE-INSTALLTION IN E207, TURN OVER UNUSED WINDOW TO OWNER.
4. DEMOLISH WINDOW.
5. DEMOLISH DOWN LEADER AND TERRA-COTTA BOOT
6. SEE AD103 FOR ROOF DEMOLITION SCOPE
7. DEMOLISH EXISTING CONCRETE WINDOW WELL.

LORD AECK SARGENT

REVISION:

LORD AECK SARGENT PLANNING & DESIGN, INC. REGISTERED ARCHITECTURAL CORPORATION CERT. NO. 53851 NORTH CAROLINA CHAPEL HILL

SHEET TITLE
EXTERIOR DEMOLITION ELEVATIONS
SCALE (U.N.O.)

JOB NAME
University of North Carolina - Chapel Hill
SCO# 21-23548-02A UNC Project No. C21212
BINGHAM HALL RENOVATION
LOCATION
36 Lenoir Drive, Chapel Hill, NC 27514

SEAL
Lauren Dunn Rockart Registered Architect 9074 North Carolina Chapel Hill, NC
01.08.2024

ISSUE DATE
1/8/2023
JOB. NO.
11706-00
DWG. NO.
AD202

Autodesk Docs://11706-00 UNC Bingham Hall/Central_11706-00_v22.rvt
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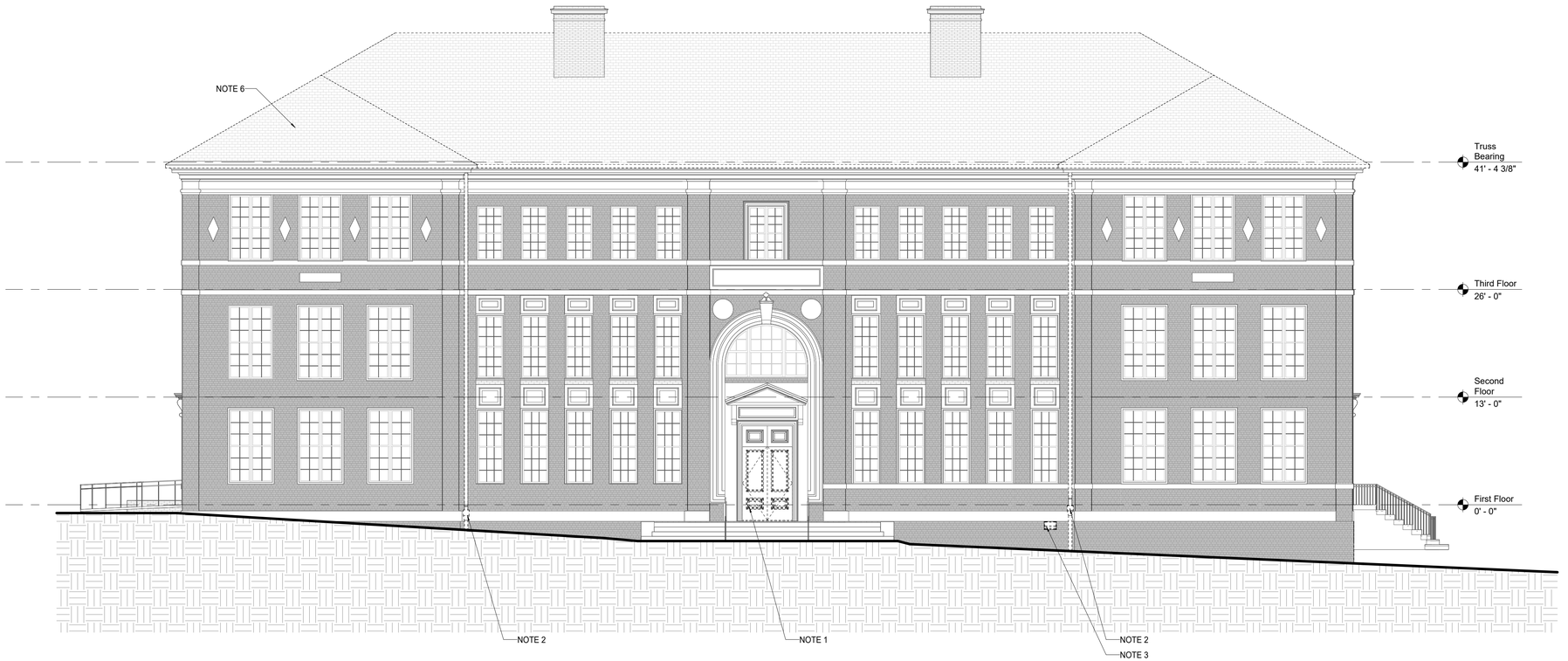

GENERAL NOTES

1. **EXTENT OF DEMOLITION:** CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO FINISHES OR COMPONENTS NOT SCHEDULED FOR DEMOLITION. DAMAGED ITEMS SHALL BE REPLACED OR REPAIRED TO MEET OR EXCEED FORMER CONDITIONS. REFER TO ARCHITECTURAL DEMOLITION DRAWING AND ENGINEERING DEMOLITION DRAWINGS FOR EXTENT OF DEMOLITION.

2. **CLEAN-UP:** CONTRACTOR SHALL REMOVE TRASH FROM THE SITE AND LEAVE THE SPACE IN BROOM-CLEANED CONDITION DAILY. DURING THE DEMOLITION PHASE, A REASONABLE CLEAN-UP IS TO BE CONSIDERED.

3. **REMOVAL AND STORAGE:** CONTRACTOR SHALL EXERCISE CARE IN REMOVAL OF ANY COMPONENTS (I.E. DOORS, FRAMES, FIXTURES, CEILING TILE) THAT MAY BE REUSED ON THIS OR FUTURE PROJECTS. CONTRACTOR SHALL COORDINATE APPROPRIATE STORAGE LOCATIONS FOR SUCH COMPONENTS DIRECTLY WITH OWNER'S REPRESENTATIVE. REFER TO SALVAGED MATERIALS LIST FOR ITEMS SPECIFICALLY INTENDED TO BE SALVAGED AND RELOCATED.

4. **CABLING/LOW VOLTAGE WIRING:** THE CONTRACTOR SHALL REMOVE FROM EXISTING DRYWALL PARTITIONS AND CEILING PLENUM ALL ABANDONED CIRCUITING, WIRING, CABLING, AND CONDUIT SYSTEMS FOR POWER, LOW VOLTAGE CONTROLS AND COMMUNICATIONS BACK TO THEIR SOURCE.

5. **MATERIALS ABOVE CEILING:** DURING DEMOLITION AFFECTED BY THIS SCOPE OF WORK, THE CONTRACTOR SHALL REMOVE ALL ITEMS LOCATED ABOVE CEILING GRID THAT ARE NOT TO BE REUSED AND MAY NOT BE EVIDENT BY STANDARD FIELD VERIFICATION. CONTRACTOR TO REMOVE CEILING TILE AS NECESSARY TO FIELD VERIFY AND INCLUDE ANY COST ASSOCIATED WITH REMOVAL IN THE PROJECT COST. AFTER DEMOLITION AND BEFORE CEILING COVER-UP, THE OWNER'S REPRESENTATIVE SHALL VISUALLY VERIFY THAT THIS REMOVAL HAS BEEN PERFORMED.

6. **DUCTWORK:** CONTRACTOR SHALL REMOVE ALL DUCTWORK NOT TO BE REUSED. (SEE MECHANICAL DOCUMENTS FOR ADDITIONAL CRITERIA.)

9. **THERMOSTATS AND TEMPERATURE SENSORS:** THERMOSTATS AND TEMPERATURE SENSORS ARE TO BE PROTECTED AND STORED ABOVE THE CEILING DURING DEMOLITION FOR RE-USE.

8. **RECYCLING:** THE CONTRACTOR SHALL DEVELOP A CONSTRUCTION WASTE MANAGEMENT PLAN WITH INPUT FROM THE OWNER AND ARCHITECT. BEFORE ANY WASTE REMOVAL BEGINS, THE PLAN MUST BE APPROVED BY THE OWNER. THE PLAN SHALL FOLLOW ALL APPLICABLE STATE, COUNTY, AND TOWN LAWS AND ORDINANCES.

9. **ROOF:** CAREFULLY REMOVE, INSPECT, AND SALVAGE ALL SLATES IN GOOD CONDITION. DISPOSE OF EXISTING SLATES THAT ARE CRACKED, DAMAGED, OR DETERIORATED. FOR THE PURPOSE OF BASE BID, ASSUME 50% NEW SLATE WILL BE NEEDED TO SUPPLEMENT EXISTING SLATE BEING REINSTALLED. DEMO EXISTING UNDERLAYMENT, FLASHINGS (VALLEY AND CHIMNEY) AND GUTTER LINING.

10. **WOOD TRIM:** WOOD BASE AND CHAIR RAIL TO REMAIN AT LOCATIONS SHOWN IN DEMO PLANS. THE REMAINING EXISTING BASE AND CHAIR RAIL SHALL BE CAREFULLY REMOVED FOR RE-INSTALL AT LOCATIONS INDICATED ON INTERIOR ELEVATION DRAWINGS.

INDICATES EXISTING CONSTRUCTION TO BE DEMOLISHED TO LIMITS SHOWN ON DRAWINGS, PATCH, REPAIR, SMOOTH, AND CLEAN ADJACENT FLOORS, WALLS, AND CEILINGS AS REQUIRED TO PROVIDE SMOOTH SURFACE FOR NEW FINISHES.

EXISTING WALLS TO REMAIN

INDICATES EXISTING CONSTRUCTION TO BE DEMOLISHED TO LIMITS SHOWN ON DRAWINGS, PATCH, REPAIR, SMOOTH AND CLEAN ADJACENT FLOORS, WALLS AND CEILINGS AS REQUIRED TO PROVIDE SMOOTH SURFACE FOR NEW FINISHES.

1 HR FIRE BARRIER

2 HR FIRE BARRIER

EXISTING WALL BASE TO REMAIN

EXISTING CHAIR RAIL TO REMAIN

SEE AD 700 SERIES FOR FLOORING DEMOLISH PLAN

SHEET SPECIFIC NOTES

1. REMOVE DOOR AND PREP FRAME FOR NEW DOOR.
2. DEMOLISH DOWN LEADER AND TERRA-COTTA BOOT.
3. DEMOLISH EXISTING CRAWLSPACE VENT.

LORD AECK SARGENT

REVISION:

LORD AECK SARGENT PLANNING & DESIGN, INC. ARCHITECTURAL CORPORATION CERT. NO. 53851 NORTH CAROLINA CHAPEL HILL

SHEET TITLE: EXTERIOR DEMOLITION ELEVATIONS

SCALE (U.N.O.)

JOB NAME: University of North Carolina - Chapel Hill

SCH#: 21-2354602A UNC Project No. C21212

BINGHAM HALL RENOVATION

LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

SEAL: Lauren Dunn Rockart, Registered Architect, North Carolina, 9674, Chapel Hill, NC, 01.08.2024

ISSUE DATE: 1/8/2023

JOB. NO. 11706-00

DWG. NO. AD203

A1 WEST ELEVATION

0 8 16 FT

Autodesk Docs://11706-00 UNC Bingham Hall/Central_11706-00_v22.rvt
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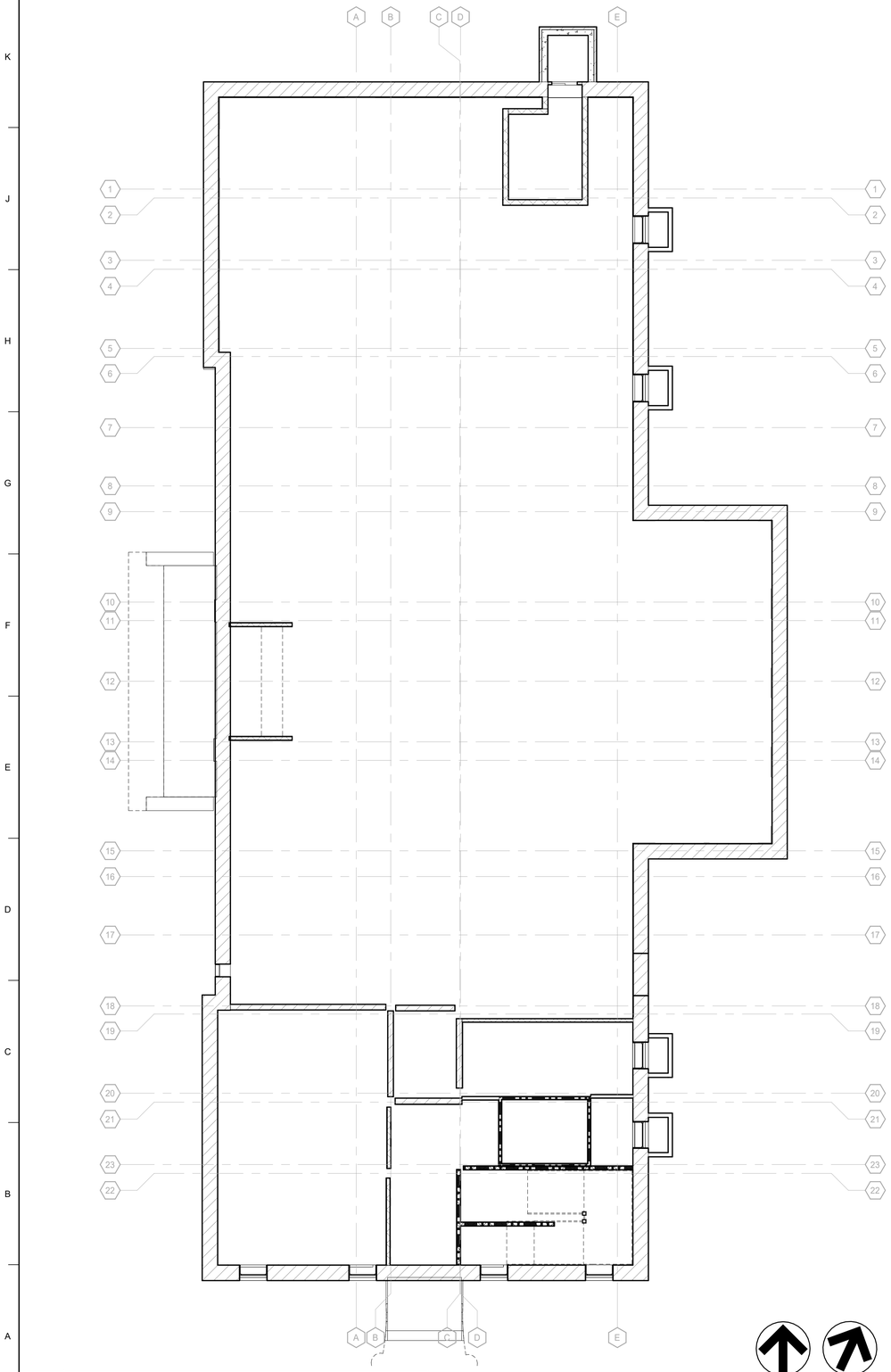
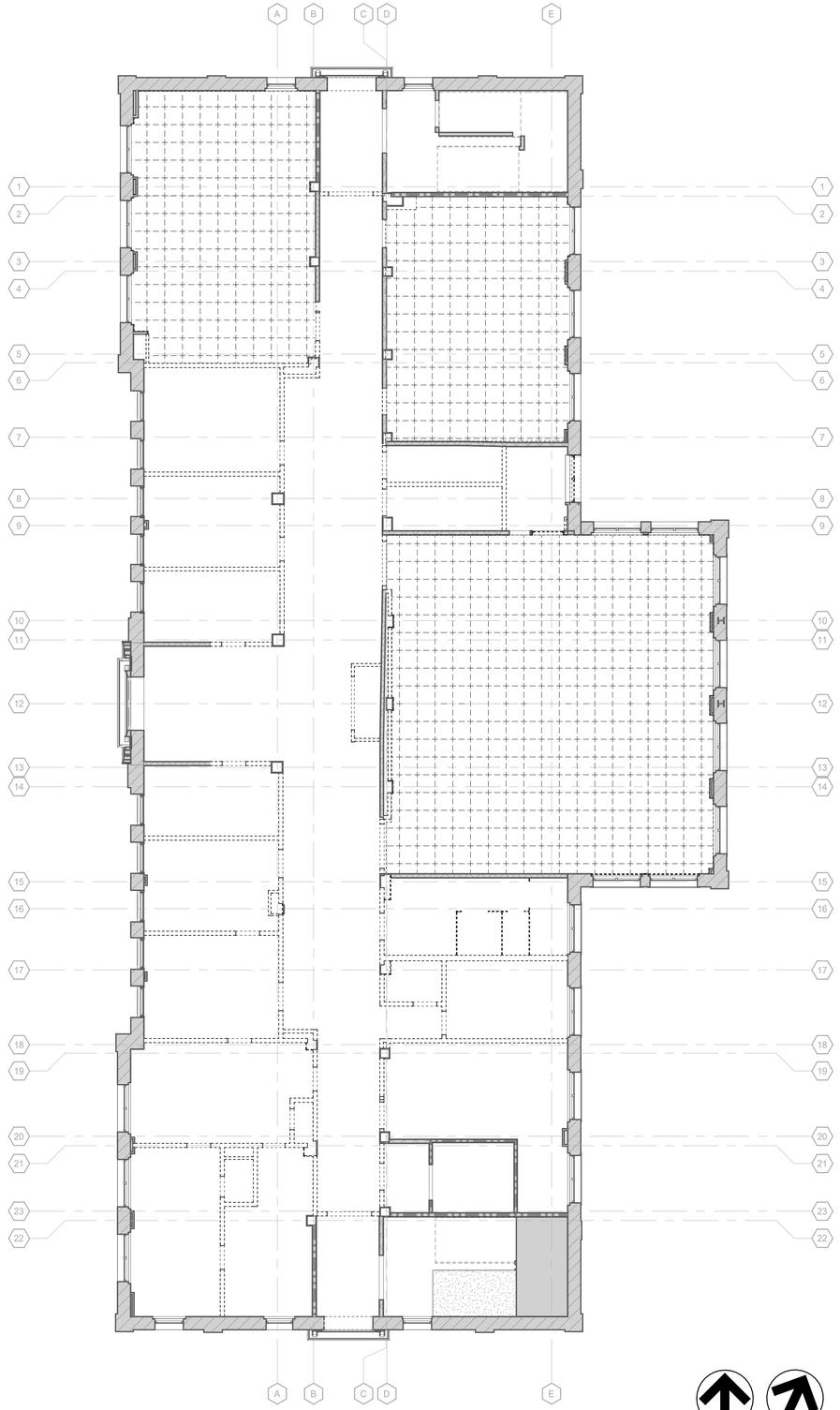


A1 BASEMENT REFLECTED CEILING DEMOLITION PLAN

0 8 16 FT

PROJECT NORTH TRUE NORTH



A7 FIRST FLOOR REFLECTED CEILING DEMOLITION PLAN

0 8 16 FT

PROJECT NORTH TRUE NORTH

GENERAL NOTES

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SHEET SPECIFIC NOTES

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LORD AECK SARGENT

REVISION:

LORD AECK SARGENT PLANNING & DESIGN, INC. — ARCHITECTURAL CORPORATION — CERT. NO. 53851 — NORTH CAROLINA — CHAPEL HILL

SHEET TITLE
BASEMENT & FIRST FLOOR DEMOLITION REFLECTED CEILING PLAN

SCALE (U.N.O.)

JOB NAME
University of North Carolina - Chapel Hill

SCO# 21-23548-02A UNC Project No. C01212

BINGHAM HALL RENOVATION

LOCATION
36 Lenoir Drive, Chapel Hill, NC 27514

SEAL
Lauren Dunn Rockett — Registered Architect — 9874 — North Carolina — Chapel Hill, NC
01.08.2024

ISSUE DATE
1/8/2023

JOB. NO.
11706-00

DWG. NO.
AD401

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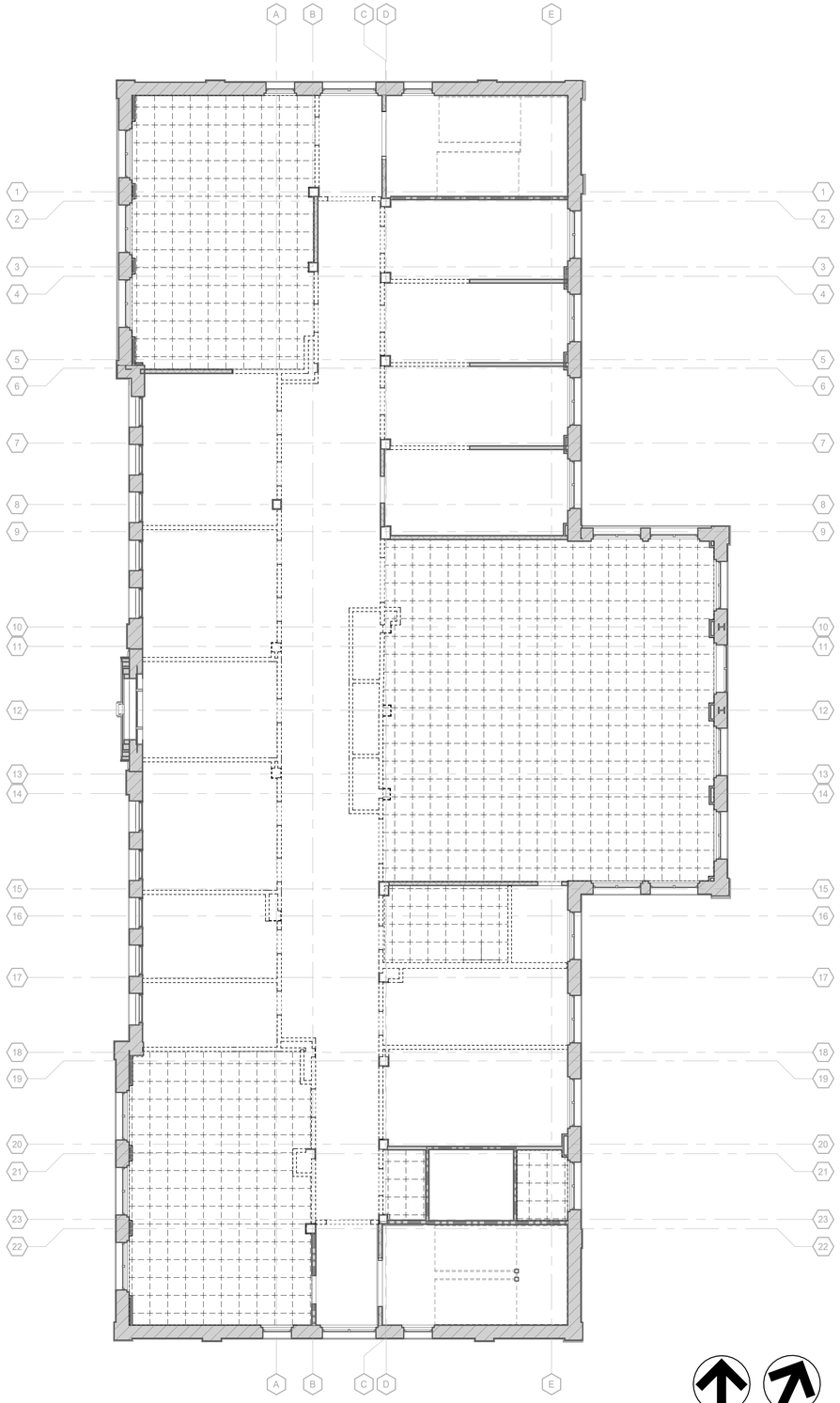
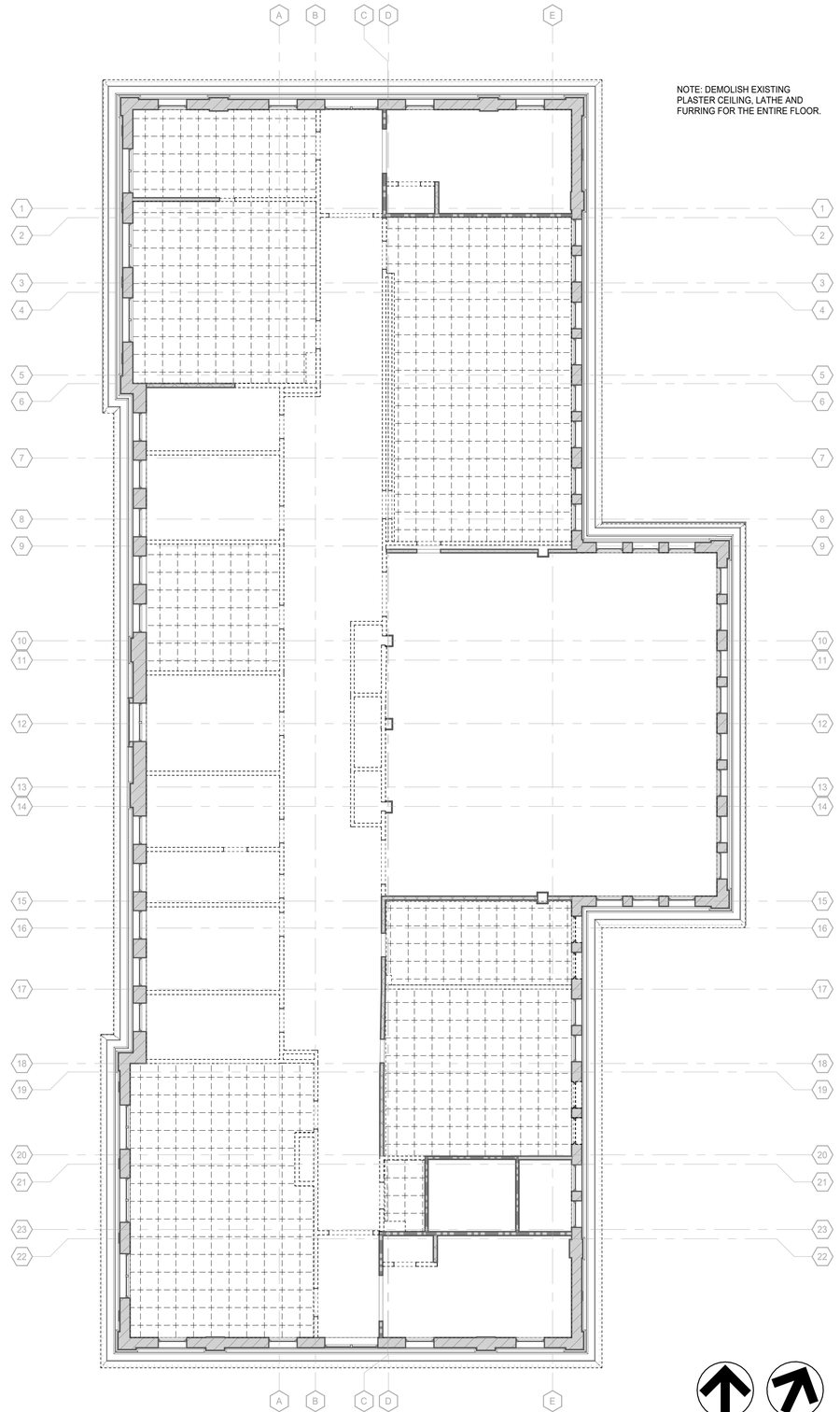


A1 SECOND FLOOR REFLECTED CEILING DEMOLITION PLAN

0 8 16 FT



NOTE: DEMOLISH EXISTING PLASTER CEILING, LATHE AND FURRING FOR THE ENTIRE FLOOR.

A8 THIRD FLOOR REFLECTED CEILING DEMOLITION PLAN

0 8 16 FT

PROJECT NORTH TRUE NORTH

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LORD AECK SARGENT

REVISION:

LORD AECK SARGENT PLANNING & DESIGN, INC. LANDSCAPE ARCHITECTURAL CORPORATION CERT. NO. 53851 NORTH CAROLINA CHAPEL HILL

SHEET TITLE
SECOND & THIRD FLOOR DEMOLITION REFLECTED CEILING PLAN

SCALE (U.N.O.)

JOB NAME
University of North Carolina - Chapel Hill

SCO# 21-235464-02A UNC Project No. C21212

BINGHAM HALL RENOVATION

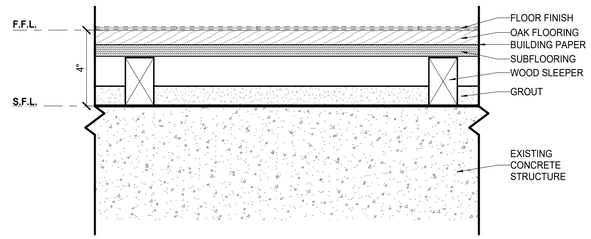
LOCATION
36 Lenoir Drive, Chapel Hill, NC 27514

SEAL
Lauren Dunn Rockett Registered Architect North Carolina 9874 Chapel Hill, NC
01.08.2024

ISSUE DATE
1/8/2023

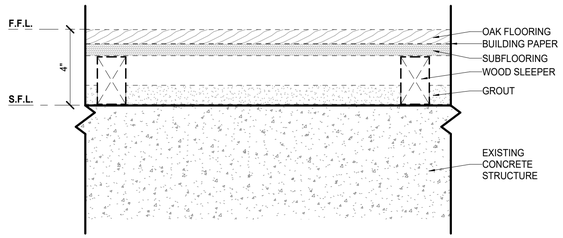
JOB. NO.
11706-00

DWG. NO.
AD402



H1 DEMO. DETAIL - NEW FLOOR FINISH

0 6 12 IN



H5 DEMO. DETAIL - TO STRUCTURE

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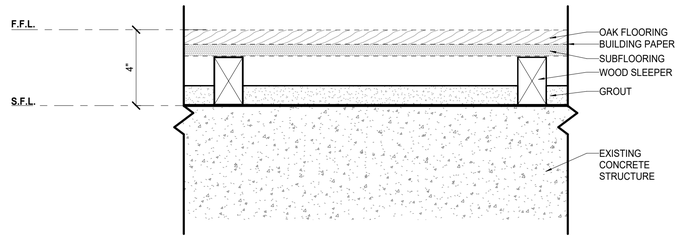

H9 DEMO. DETAIL - EXISTING FLOORING

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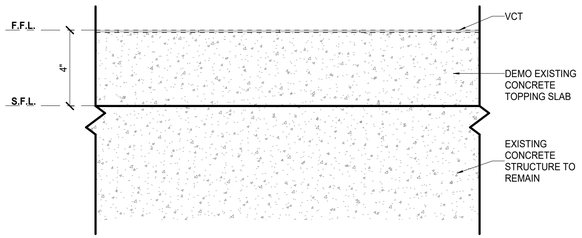

F1 DEMO. DETAIL - VCT FLOORING

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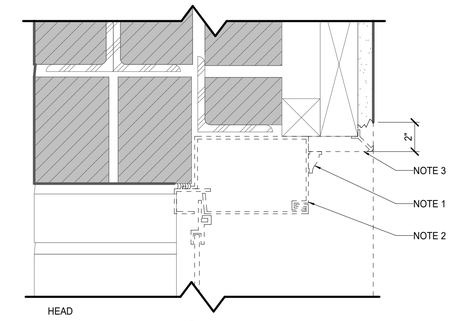
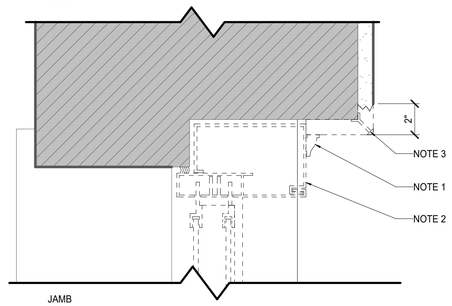
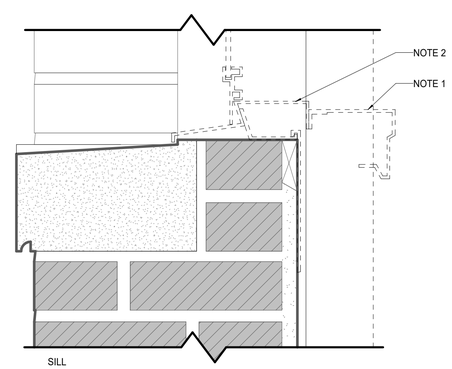
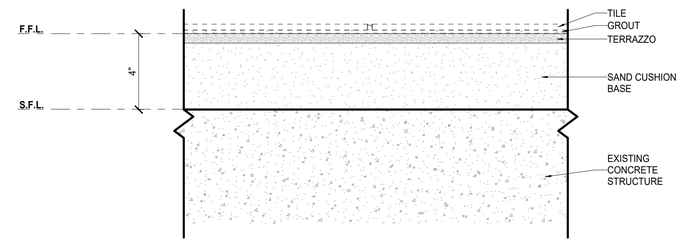






DEMO DETAILS



F9 DEMO. DETAIL - TILE OVER TERRAZZO

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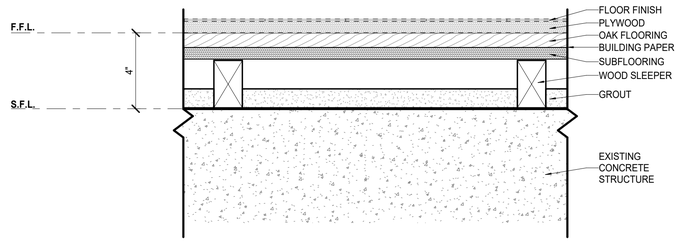
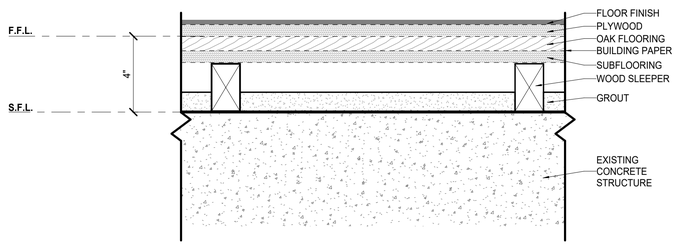


C9 DEMO. DETAIL - NEW FLOOR PLYWOOD UNDERLAY

0 6 12 IN



A9 DEMO. DETAIL - NEW FLOORING W/ PLYWOOD UNDERLAY

0 6 12 IN

A5 ALT #1 - EXISTING WINDOW DEMOLITION

SHEET SPECIFIC NOTES

1. REMOVE EXISTING STOOL AND TRIM.
2. REMOVE EXISTING STEEL WINDOW.
3. REMOVE EXISTING PLASTER TRIM.

LORD AECK SARGENT

REVISION:

LORD AECK SARGENT PLANNING & DESIGN, INC. ARCHITECTURAL CORPORATION CERT. NO. 53851 NORTH CAROLINA CHAPEL HILL

SHEET TITLE: DEMOLITION DETAILS

SCALE (U.N.O.)

JOB NAME: University of North Carolina - Chapel Hill

UNC Project No. 021212

SCR#: 21-23548-02A

BINGHAM HALL RENOVATION

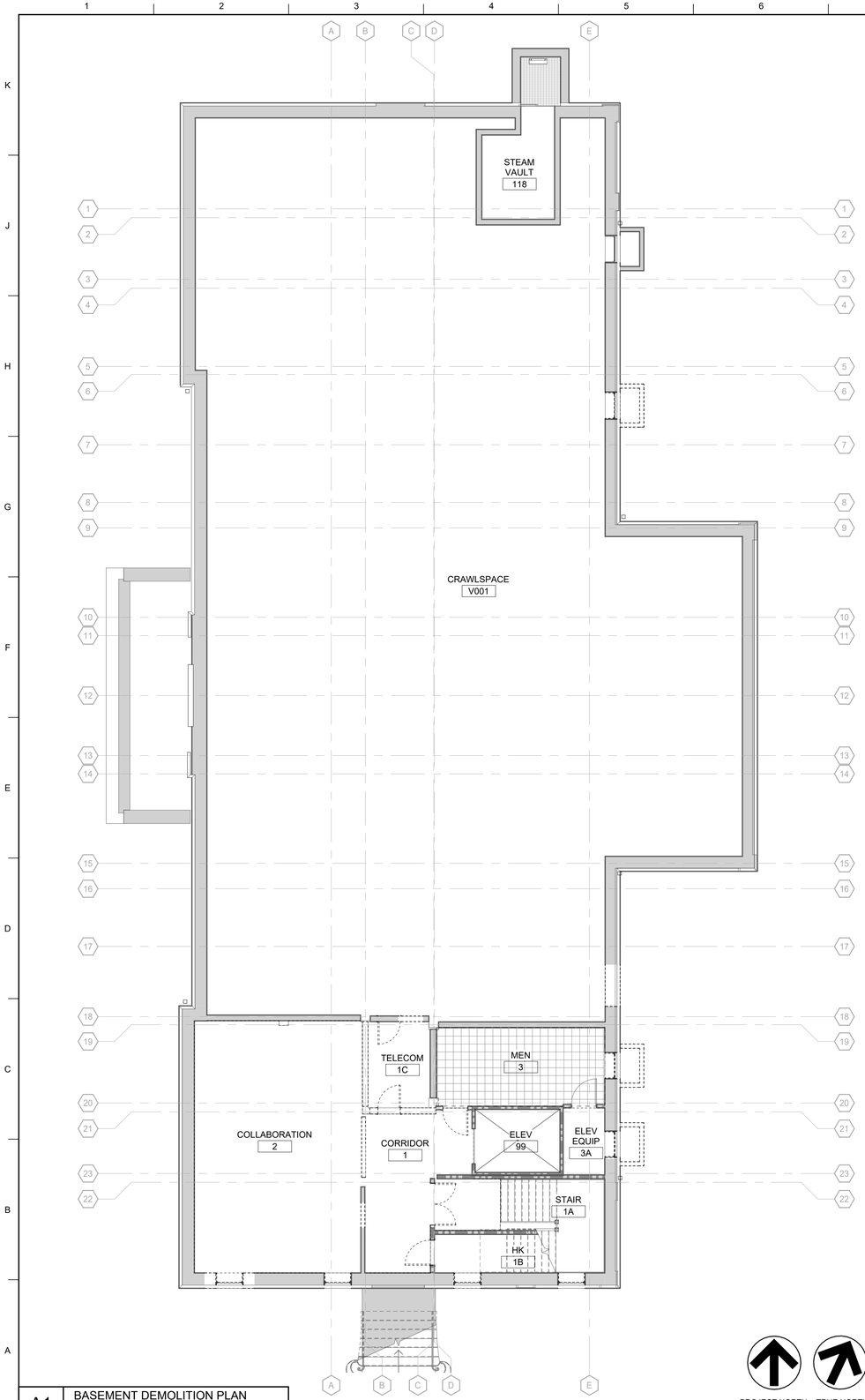
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

SEAL: Lauren Dunn Rockart, Registered Architect, North Carolina, 9874, Chapel Hill, NC, 01.08.2024

ISSUE DATE: 1/8/2023

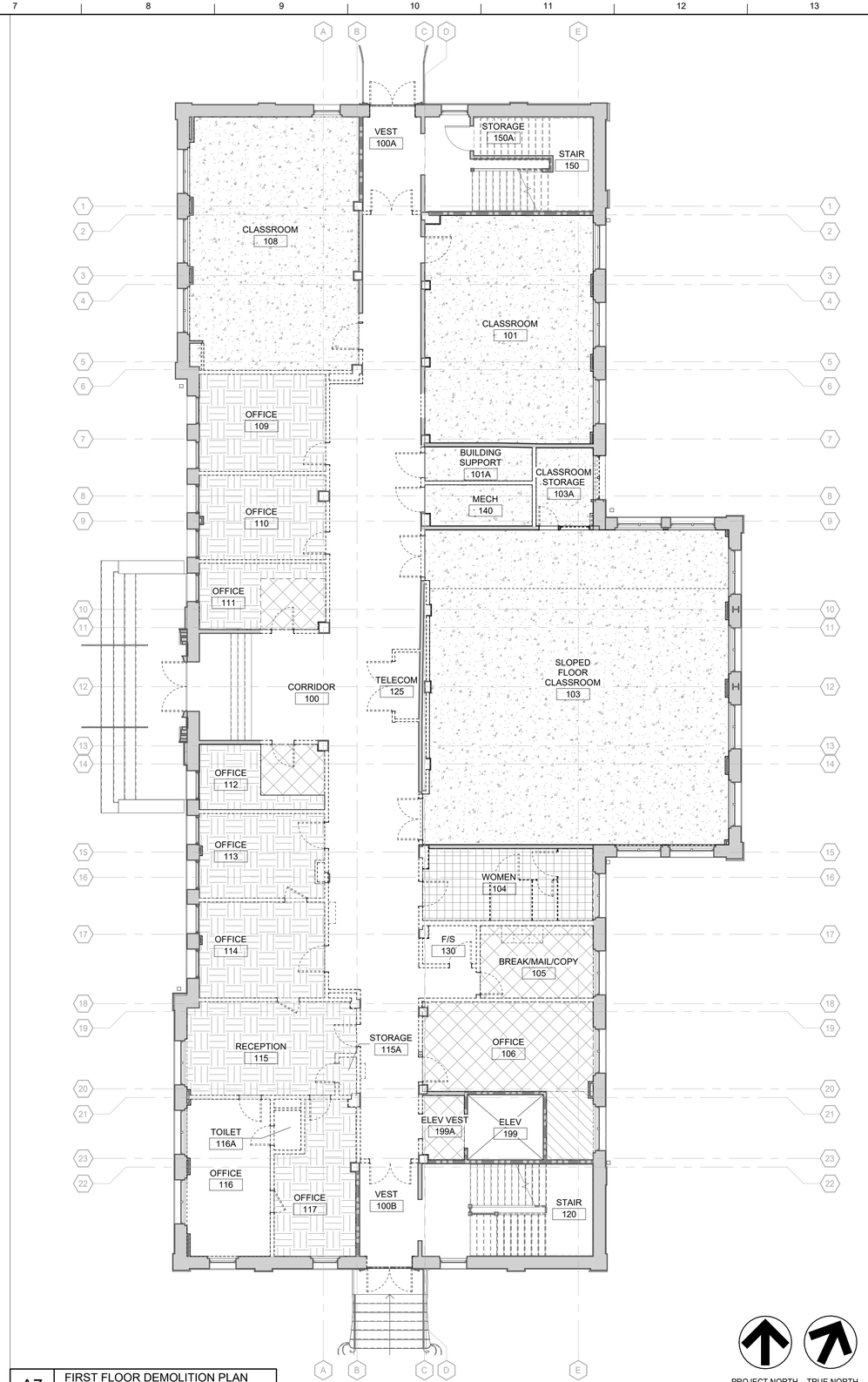
JOB. NO. 11706-00

DWG. NO. AD501



A1 BASEMENT DEMOLITION PLAN

0 8 16 FT



A7 FIRST FLOOR DEMOLITION PLAN

0 8 16 FT

PROJECT NORTH TRUE NORTH

EXISTING FLOOR FINISH LEGEND

- DEMOLISH EXISTING FLOORING DOWN TO THE EXISTING SLEEPERS (SEE DETAIL H9/AD501 FOR MORE INFORMATION)
- DEMOLISH EXISTING FLOORING DOWN TO THE EXISTING SLEEPERS (SEE DETAIL A9/AD501 FOR MORE INFORMATION)
- DEMOLISH FLOOR FINISH AND PLYWOOD BACK TO ORIGINAL WOOD FLOORING (SEE DETAIL C9/AD501 FOR MORE INFORMATION)
- DEMOLISH TILE AND TILE BASE (SEE DETAIL F9/AD501 FOR MORE INFORMATION)
- DEMOLISH FINISH BACK TO ORIGINAL WOOD FLOORING (SEE DETAIL H1/AD501 FOR MORE INFORMATION)
- DEMOLISH EXISTING FLOORING AND SLEEPERS (SEE DETAIL H5/AD501 FOR MORE INFORMATION)
- DEMOLISH EXISTING VCT FLOORING AND CONCRETE PAD (SEE DETAIL F1/AD501 FOR MORE INFORMATION)
- DEMOLISH EXISTING CONCRETE FLOORING
- DEMOLISH EXISTING FLOORING AND STRUCTURE BENEATH

LORD AECK SARGENT

REVISION:

LORD AECK SARGENT PLANNING & DESIGN, INC. ARCHITECTURAL CORPORATION
CERT. NO. 53851
NORTH CAROLINA
CHAPEL HILL

SHEET TITLE
BASEMENT & FIRST FLOOR DEMOLITION FINISH PLAN

SCALE (U.N.O.)

JOB NAME
University of North Carolina - Chapel Hill

SCM# 21-23548-02A UNC Project No. C012/12

BINGHAM HALL RENOVATION

LOCATION
36 Lenoir Drive, Chapel Hill, NC 27514

SEAL
Lauren Dunn Rockey
Registered Architect
9574
North Carolina
Chapel Hill, NC
01.08.2024

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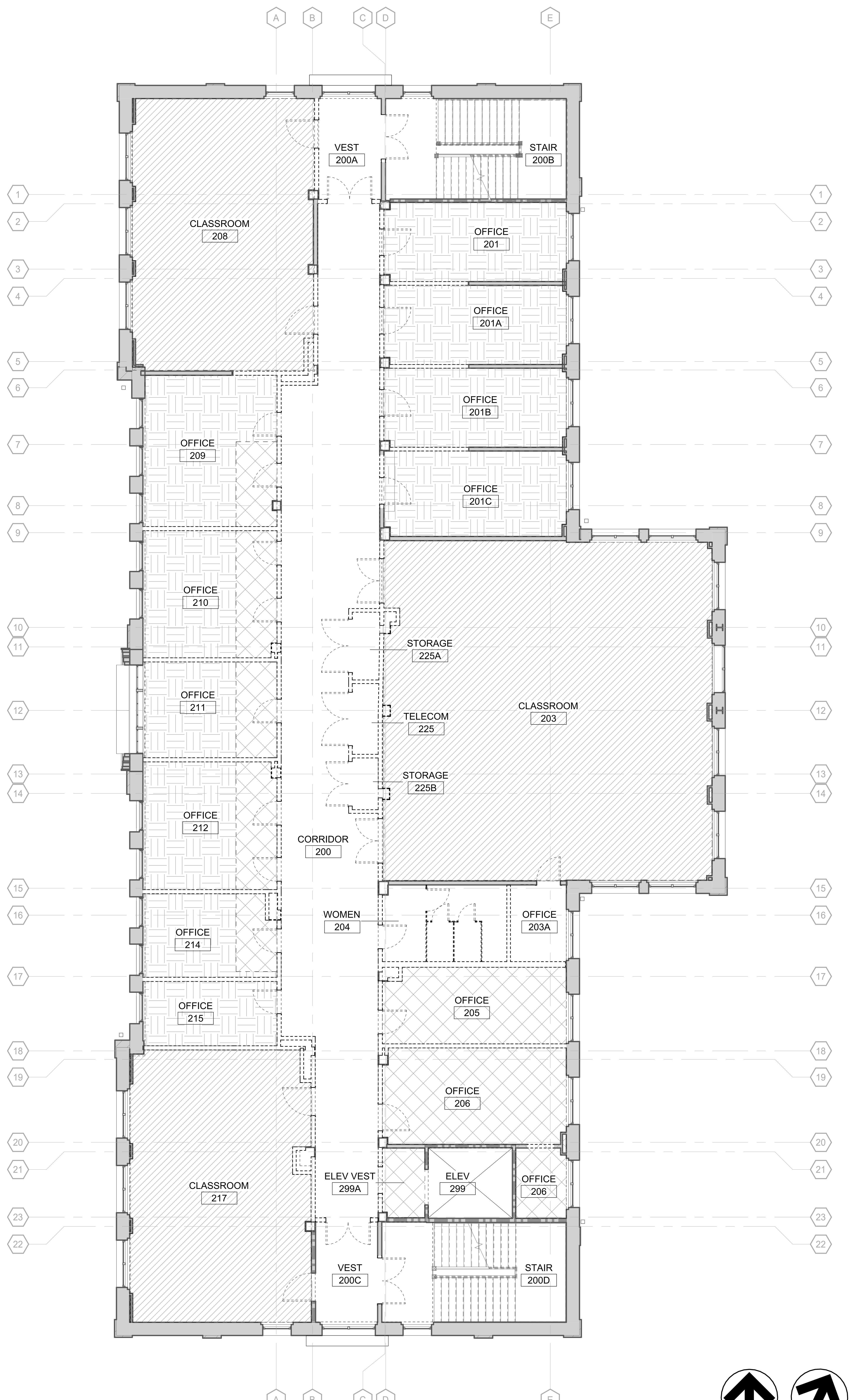
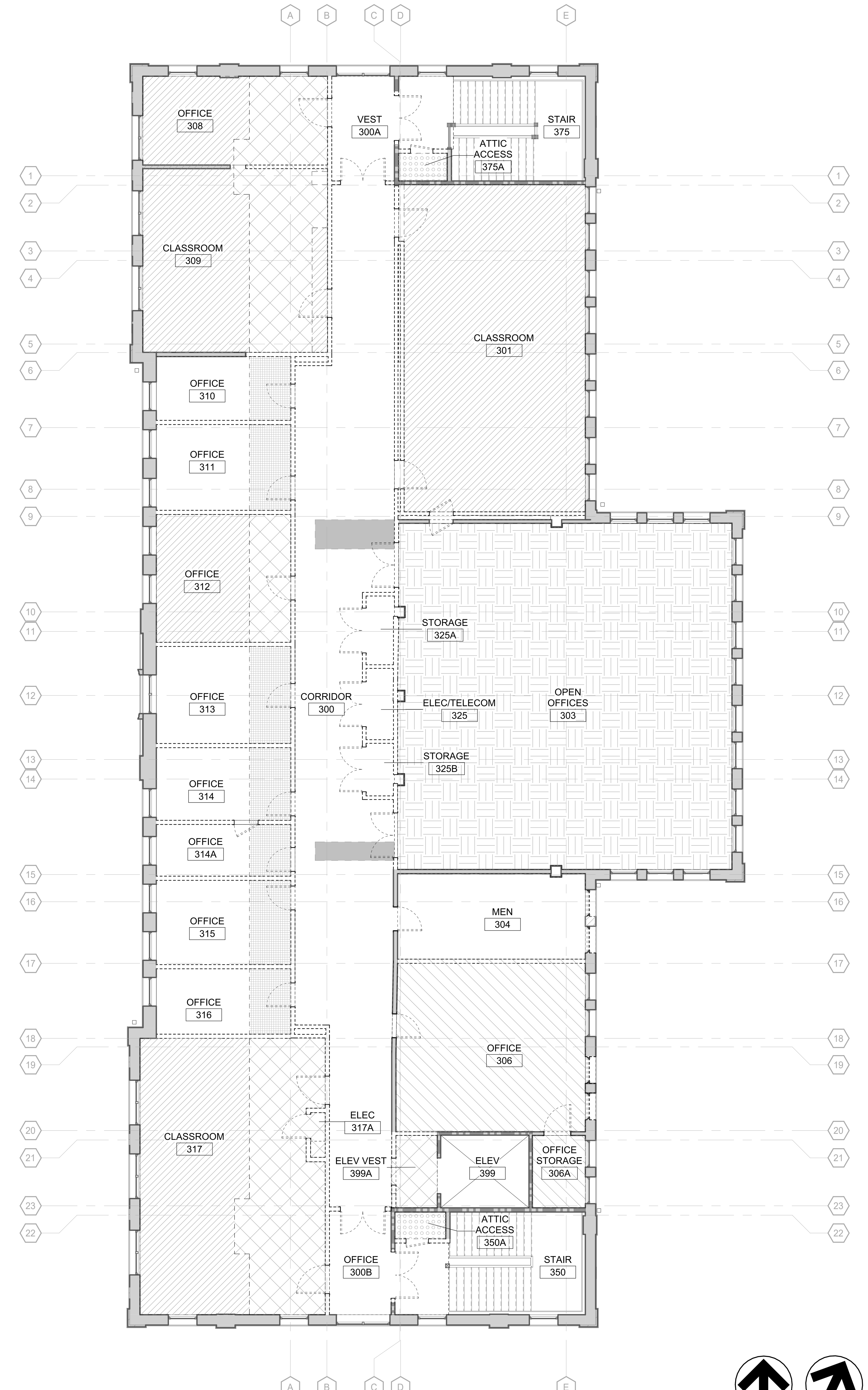


A1 SECOND FLOOR DEMOLITION PLAN



A7 THIRD FLOOR DEMOLITION PLAN

EXISTING FLOOR FINISH LEGEND

- DEMOLISH EXISTING FLOORING DOWN TO THE EXISTING SLEEPERS (SEE DETAIL H9/AD501 FOR MORE INFORMATION)
- DEMOLISH EXISTING FLOORING DOWN TO THE EXISTING SLEEPERS (SEE DETAIL A9/AD501 FOR MORE INFORMATION)
- DEMOLISH FLOOR FINISH AND PLYWOOD BACK TO ORIGINAL WOOD FLOORING (SEE DETAIL C9/AD501 FOR MORE INFORMATION)
- DEMOLISH TILE AND TILE BASE (SEE DETAIL F9/AD501 FOR MORE INFORMATION)
- DEMOLISH FINISH BACK TO ORIGINAL WOOD FLOORING (SEE DETAIL H1/AD501 FOR MORE INFORMATION)
- DEMOLISH EXISTING FLOORING AND SLEEPERS (SEE DETAIL H5/AD501 FOR MORE INFORMATION)
- DEMOLISH EXISTING VCT FLOORING AND CONCRETE PAD (SEE DETAIL F1/AD501 FOR MORE INFORMATION)
- DEMOLISH EXISTING CONCRETE FLOORING
- DEMOLISH EXISTING FLOORING AND STRUCTURE BENEATH

LORD AECK SARGENT

REVISION:

LORD AECK SARGENT PLANNING & DESIGN, INC.
CERT. NO.
53851
NORTH CAROLINA
CHAPEL HILL

SHEET TITLE
SECOND & THIRD FLOOR DEMOLITION FINISH PLAN
SCALE (U.N.O.)

JOB NAME
University of North Carolina - Chapel Hill
SCO#: 21-23548-02A UNC Project No. CI21212
BINGHAM HALL RENOVATION
LOCATION
36 Lenoir Drive, Chapel Hill, NC 27514

SEAL
Lauren Dunn Rockart
Registered Architect
9074
North Carolina
Chapel Hill, NC
01.08.2024

ISSUE DATE
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PROJECT KEYNOTE LIST

03 30 00.C	Concrete
03 30 00.CS	Concrete Slab
03 30 00.EJ	Expansion Joint
03 54 00.SL	Self Leveling Underlayment
04 20 00.B	BRICK
05 44 00.S	STUD
05 51 00.MS	METAL STAIRS
05 52 13.PRS	PIPE RAILING, STAINLESS STEEL
05 70 00.B	PIPE RAILING SUPPORT BRACKET
05 70 00.HRW	HANDRAIL WALL MOUNTED
06 10 00.S	PLYWOOD SHEATHING
06 20 00.CR1	Wood Chair Rail
06 20 00.CR2	Wood Chair Rail
06 41 00.BC	Base Cabinet
06 41 00.C	Cabinet
06 41 00.PLF	Plastic Laminate
06 41 00.WC	Wall Cabinet
06 42 00.WP1	Wood Paneling
07 10 00.DL	Drainage Layer
07 10 00.W	Waterproofing Membrane
07 10 00.WCF	Cold Fluid-Applied Waterproofing
07 21 00.PI2	2" POLYISOCYANURATE INSULATION
07 25 40.HR	HIGH TEMPERATURE ROOF UNDERLAYMENT
07 31 26.SS	SLATE SHINGLES
07 62 00.CF	COPPER SHEET METAL FLASHING
07 92 00.JS	Joint Sealant
08 11 13.SF	Steel Frame
08 80 00.LA	Laminated Acoustical Glass
08 91 00.L	LOUVER
09 21 16.CF	Interior Ceiling Framing
09 21 16.F	Framing
09 21 16.FHC	Hat-Shaped Furring Channel
09 21 16.FS	Metal Stud
09 21 16.GW	Gypsum Wallboard
09 21 16.MCT	Mullion to Partition Connection Trim
09 21 16.SAB	Sound Attenuation Batt
09 21 16.T	Trim
09 21 16.TTJ	J Trim
09 30 00.T1	Tile 1
09 51 00.AC6	Acoustical Ceiling System 6
09 65 00.RB	Resilient Base
09 68 13.CT3	Carpet Tile 3 (Classrooms)
10 11 01.TB	TACKBOARD
10 28 00.DCS	Diaper Changing Station
10 28 00.GB	Grab Bar
10 28 00.GB1	Grab Bar (36")
10 28 00.GB2	Grab Bar (42")
10 28 00.GB3	Grab Bar (18")
10 28 00.M	Mirror
10 28 00.MR	Mop And Broom Rack
10 28 00.SCD	Seat Cover Dispenser
10 28 00.SD	Soap Dispenser
10 28 00.SND	Sanitary Napkin Disposal Unit
10 28 00.TD	Towel Dispenser
10 28 00.TDR	Towel Dispenser/Disposal, Recessed
10 28 00.TDS	Towel Dispenser/Disposal, Surface Mt.
10 28 00.TH	Toilet Tissue Holder
10 44 00.DSR	Fire Extinguisher Cabinet
10 51 29.PHL	Phenolic Lockers
11 81 29.D	Davit
11 81 29.DB	Davit Base
11 81 29.HL	Horizontal Lifeline
12 36 00.CT	Countertop
12 36 00.SOC	SOLID SURFACE COUNTERTOP
12 36 00.SS3	Solid Surface 3

ABBREVIATIONS

A	
&	AND
@	AT
A/C	AIR CONDITIONING
AB	ANCHOR BOLT
ACOUST	ACOUSTICAL
ACT	ACOUSTIC CEILING TILE
AD	AREA DRAIN
AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
ALT	ALTERNATE
ALUM	ALUMINUM
APPROX	APPROXIMATE
ARCH	ARCHITECTURAL
AV	AUDIO-VISUAL
AVG	AVERAGE
B	
BD	BOARD
BEJ	BRICK EXPANSION JOINT
BLDG	BUILDING
BLKG	BLOCKING
BO	BOTTOM OF
BOT	BOTTOM
BRG	BEARING
BRK	BRICK
BSMT	BASEMENT
BUR	BUILT-UP ROOF
C	
CAB	CABINET
CB	CATCH BASIN
CF	CUBIC FEET
CFM	CUBIC FEET PER MINUTE
CFMF	COLD-FORMED METAL FRAMING
CJ	CONTROL JOINT
CL	CENTERLINE
CLG	CEILING
CLOS	CLOSET
CM	CENTIMETER
CMU	CONCRETE MASONRY UNIT
CO	CLEAR OPENING, CLEAN OUT
COL	COL
CONC	CONCRETE
CONF	CONFERENCE
CONST	CONSTRUCTION
CONT	CONTINUOUS
CORR	CORRIDOR
CPT	CARPET
CT	CERAMIC TILE
CW	CHILLED WATER
CY	CUBIC YARD
D	
D	DEEP
DBL	DOUBLE
DET	DETAIL
DF	DRINKING FOUNTAIN
DIA	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DN	DOWN
DR	DOOR
DS	DOWNSPOUT
DWG(S)	DRAWING(S)
E	
E	EAST
EA	EACH
EF	EACH FACE
EIFS	EXTERIOR INSULATION FINISH SYSTEM
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRICAL
ELEV	ELEVATION
EQ	EQUAL
EQUIP	EQUIPMENT
EW	EYE WASH, EACH WAY
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
EXIST	EXISTING
EXP	EXPANSION, EXPOSED
EXT	EXTERIOR
F	
FA	FIRE ALARM
FB	FACE BRICK
FD	FLOOR DRAIN
FE	FIRE EXTINGUISHER IN CABINET
FEX	FIRE EXTINGUISHER ON BRACKET
FF	FINISHED FLOOR
FFE	FINISHED FLOOR ELEVATION
FH	FIRE HYDRANT
FHC	FIRE HOSE CABINET
FIN	FINISH
FL	FLOOR, FLOORING
FO	FACE OF
FOC	FACE OF CONCRETE
FOM	FACE OF MASONRY
FOS	FACE OF STUDS
FP	FIREPROOF
FR	FIRE RATED
FRP	FIBERGLASS REINFORCED PLASTIC
FRT	FIRE RETARDED TREATED
FS	FULL-SIZED
FT	FOOT, FEET
FTG	FOOTING
FURN	FURNISH
FUT	FUTURE
FV	FIELD VERIFY
G	
G	GAS
GA	GAUGE
GALV	GALVANIZED
GB	GRAB BAR
GC	GENERAL CONTRACTOR
GCMU	GLAZED CONCRETE MASONRY UNIT
GD	GRADE
GFRC	GLASS FIBER REINFORCED CONCRETE
GFRG	GLASS FIBER REINFORCED GYPSUM
GL	GLASS
GWB	GYPSUM WALL BOARD
GYP	GYPSUM
H	
HB	HOSE BIBB
HC	HOLLOW CORE
HD	HAND
HDR	HEADER
HDW	HARDWARE
HDWD	HARDWOOD
HK	HOOK(S)
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HP	HIGH POINT, HORSE POWER
HR	HOUR
HS	HEAT STRENGTHENED
HT	HEIGHT
HVAC	HEATING VENTILATION AIR CONDITIONING
HW	HOT WATER
I	
ID	INSIDE DIAMETER
INSUL	INSULATION
INT	INTERIOR
INV	INVERT
J	
JAN	JANITOR
JC	JANITOR CLOSET
JST	JOIST
JT	JOINT
K	
KD	KNOCKDOWN
KG	KILOGRAM
KIT	KITCHEN
KO	KNOCKOUT, KNEE OPENING
KS	KNEE SPACE
L	
L	LONG, LENGTH
LAB	LABORATORY
LAV	LAVATORY
LB	LOAD BEARING
LBS	POUNDS
LEV	LEVEL
LH	LEFT HAND
LHR	LEFT HAND REVERSE
LIN	LINOLEUM
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LP	LOW POINT
LT	LIGHT
LTL	LINTEL
LVR	LOUVER
LW	LIGHTWEIGHT
M	
M	METER
MAINT	MAINTENANCE
MAX	MAXIMUM
MDF	MEDIUM DENSITY FIBERBOARD
MDO	MEDIUM DENSITY OVERLAY
MECH	MECHANICAL
MET	METAL
MEZZ	MEZZANINE
MFG	MANUFACTURING
MFR	MANUFACTURER
MH	MANHOLE
MIN	MINIMUM
MIR	MIRROR
MISC	MISCELLANEOUS
MM	MILLIMETER
MNT	MOUNT
MO	MASONRY OPENING
MTG	MOUNTING
MTL	METAL
MULL	MULLION
N	
N	NORTH
NE	NORTHEAST
NIC	NOT IN CONTRACT
NO	NUMBER
NOM	NOMINAL
NPS	NOMINAL PIPE SIZE
NTS	NOT TO SCALE
NW	NORTHWEST
O	
OA	OVERALL
OC	ON CENTER
OD	OUTSIDE DIAMETER
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
OFF	OFFICE
OFOI	OWNER FURNISHED OWNER INSTALLED
OH	OVERHEAD, OPPOSITE HAND
OPNG	OPENING
OPP	OPPOSITE
OTO	OUT-TO-OUT
P	
PBD	PARTICLE BOARD
PC	PRECAST
PERF	PERFORATED
PL	PLATE, PROPERTY LINE
PLAM	PLASTIC LAMINATE
PLAS	PLASTER
PLBG	PLUMBING
PLWD	PLYWOOD
PLYWD	PLYWOOD
PNL	PANEL
PNT(D)	PAINT(ED)
POL	POLISHED
PR	PAIR
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	PRESSURE TREATED
PTN	PARTITION
PVC	POLYVINYL CHLORIDE
PVG	PAVING
PWD	PLYWOOD
Q	
QT	QUARRY TILE
R	
R	RADIUS, RISER
R/A	RETURN AIR
RB	RESILIENT BASE
RD	ROOF DRAIN
REF	REFERENCE
REINF	REINFORCED, REINFORCING
REQ'D	REQUIRED
RES	RESILIENT
REV	REVISION
RH	RIGHT HAND
RHR	RIGHT HAND REVERSE
RL	RAIN LEADER
RM	ROOM
ROW	RIGHT OF WAY
RTU	ROOFTOP UNIT
RUB	RUBBER
S	
S	SOUTH
S/A	SUPPLY AIR
S/CONC	SEALED CONCRETE
SCHED	SCHEDULE
SE	SOUTHEAST
SECT	SECTION
SF	SQUARE FOOT
SIM	SIMILAR
SPECS	SPECIFICATIONS
SQ	SQUARE
SS	SERVICE SINK
SST	STAINLESS STEEL
STD	STANDARD
STL	STEEL
STND	STAINED
STOR	STORAGE
STRUCT	STRUCTURAL
SUSP	SUSPENDED
SW	SOUTHWEST
SYM	SYMMETRICAL
SYS	SYSTEM
T	
T	TREAD
T&B	TOP AND BOTTOM
T&G	TONGUE AND GROOVE
TC	TOP OF CURB
TEL	TELEPHONE
TEMP	TEMPORARY
THK	THICK, THICKNESS
TO	TOP OF
TOC	TOP OF CONCRETE
TOS	TOP OF STEEL
TOW	TOP OF WALL
TS	TRANSPARENT
TYP	TYPICAL
U	
UC	UNDERCUT
UH	UNIT HEATER
UNFIN	UNFINISHED
UNO	UNLESS NOTED OTHERWISE
UTIL	UTILITY
V	
VB	VAPOR BARRIER
VCT	VINYL COMPOSITION TILE
VERT	VERTICAL
VIF	VERIFY IN FIELD
VTR	VENT THROUGH ROOF
VWC	VINYL WALL COVERING
W	
W	WIDTH, WEST
W/	WITH
W/O	WITHOUT
WC	WATER CLOSET, WALL COVERING
WD	WOOD
WGL	WIRE GLASS
WH	WATER HEATER
WP	WATERPROOFING
WT	WEIGHT
WWM	WELDED WIRE MESH

GENERAL PROJECT NOTES

DIMENSIONING

1. DIMENSIONS ON PLANS ARE TO FACE OF CMU OR FACE OF GWB UNLESS NOTED OTHERWISE.
2. MASONRY DIMENSIONS SHOWN ARE ACTUAL DIMENSIONS.
3. DO NOT SCALE DRAWINGS. USE DIMENSIONS ONLY.
4. DIMENSIONS RELATED TO THE EXISTING BUILDING SHALL BE VERIFIED PRIOR TO CONSTRUCTION.
5. EXTERIOR DIMENSIONS ARE GIVEN TYPICALLY TO THE OUTSIDE FACE OF GLAZING, MASONRY OR EIFS.

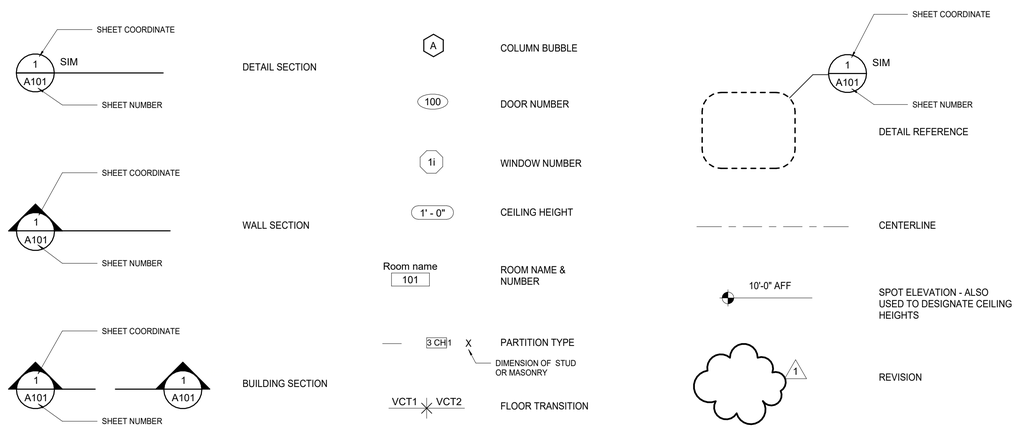
PARTITIONS/FINISHES/GENERAL

6. SEE LIFE SAFETY PLANS, FLOOR PLANS & PARTITION TYPES FOR LOCATION OF FIRE RATED WALLS.
7. PROVIDE CONTINUOUS HORIZONTAL BLOCKING IN ALL PARTITIONS WHERE INDICATED AND WHERE REQUIRED FOR EQUIPMENT AND CASEWORK ATTACHMENT.
8. ALL INTERIOR AND EXTERIOR WOOD BLOCKING SHALL BE TREATED AS CALLED FOR IN SPECIFICATIONS.
9. IN GENERAL, THERE SHALL BE NO BACK-TO-BACK ELECTRICAL, TELEPHONE OR OTHER OUTLETS. OUTLET HOLES SHALL BE PACKED WITH ACOUSTICAL SEALANT.
10. WHEN OUTLETS ARE INDICATED AS OCCURRING BACK-TO-BACK THEY SHOULD BE SEPARATED BY 16 INCHES HORIZONTALLY. WHERE DIMENSIONS ARE SHOWN WHICH CONFLICT WITH THIS, OBTAIN DIRECTION FROM ARCHITECT.
11. PROVIDE A SEALANT JOINT AT ALL INTERSECTIONS OF GWB WALLS OR GWB CEILINGS WITH CMU PARTITIONS.
12. MAINTAIN INTEGRITY OF ALL RATED PARTITIONS AT INSTALLATION OF RECESSED FIRE EXTINGUISHER CABINETS, CABINETS, TOWEL DISPENSERS, RECEPTACLES, ELECTRICAL PANELS AND OTHER RECESSED ITEMS. AT GWB WALLS, OBTAIN THIS INTEGRITY BY INSTALLING AN ADDITIONAL LAYER OF GYPSUM BOARD WITHIN WALL AROUND ALL SIDES OF ITEM AND AN ADDITIONAL LAYER BEHIND ITEM.
13. WHERE HVAC OR OTHER MECHANICAL, ELECTRICAL AND PLUMBING ITEMS PENETRATE PARTITIONS, STUDS SHALL BE BRACED AND FRAMED TO STRUCTURE AS REQUIRED TO PROVIDE ADEQUATE SUPPORT. ALL PENETRATIONS THROUGH WALLS SHALL BE SEALED TO PROVIDE FIRE, SMOKE AND/OR ACOUSTIC ISOLATION SPACES.
14. BEFORE PATCHING ANY FIRE-RATED CMU PARTITION, FILL ANY EXPOSED CELLS SOLID WITH GROUT.
15. PROVIDE FINISHED WALL UNDER AND BEHIND WALL EQUIPMENT AND CASEWORK.

COORDINATION/INDICATION OF ENGINEERING WORK ON ARCHITECTURAL DRAWINGS:

16. WORK OF ENGINEERING DISCIPLINES IS SHOWN ON ARCHITECTURAL DRAWINGS FOR COORDINATION AND CONVENIENCE PURPOSES ONLY. REFER TO APPROPRIATE DISCIPLINE DRAWINGS FOR COMPLETE AND GOVERNING INFORMATION REGARDING THEIR WORK.
17. SEE ARCHITECTURAL REFLECTED CEILING PLANS FOR LOCATION OF CEILING MOUNTED MECHANICAL, ELECTRICAL AND PLUMBING FIXTURES.
18. WHERE EXPOSED STRUCTURE CEILING AREAS OCCUR IN ARCHITECTURAL REFLECTED CEILING PLANS, FULL DELINEATION OF STRUCTURAL, MECHANICAL, ELECTRICAL, PLUMBING, AND FIRE PROTECTION SYSTEMS IS NOT PROVIDED, SELECTED ELEMENTS AND DEVICES MAY BE SHOWN FOR LOCATION OR COORDINATION (E.G. LIGHT AND SPRINKLER SPACING)

SYMBOLS



DRAWING KEYNOTING SYSTEM

A KEYNOTING SYSTEM IS USED ON THE DRAWINGS FOR MATERIAL REFERENCES AND NOTES. REFER TO THE KEY LEGEND ON THE DRAWING FOR THE INFORMATION WHICH RELATES TO EACH KEYNOTE SYMBOL ON THE RESPECTIVE DRAWING.

EACH KEYNOTE SYMBOL CONSISTS OF A 6-DIGIT NUMBER FOLLOWED BY AN ALPHA-NUMERIC SUFFIX. THE 6-DIGIT NUMBER RELATES TO THE SPECIFICATION SECTION WHICH GENERALLY COVERS THE ITEM THAT IS REFERENCED AND THE SUFFIX COMBINED WITH THE 6-DIGIT NUMBER CREATES A KEYNOTE SYMBOL WHICH IDENTIFIES THE SPECIFIC REFERENCE NOTATION USED ON THE DRAWING. THE SUFFIX DOES NOT RELATE TO ANY CORRESPONDING REFERENCE LETTER OR NUMBER IN THE SPECIFICATION.

THE ORGANIZATION OF THE KEYNOTING SYSTEM ON THE DRAWINGS, WITH THE KEYNOTING SYSTEM REFERENCE NUMBER RELATED TO THE SPECIFICATIONS SECTIONS NUMBERING SYSTEM, SHALL NOT CONTROL THE CONTRACTOR IN DIVIDING THE WORK AMONG SUBCONTRACTORS OR IN ESTABLISHING THE EXTENT OF WORK TO BE PERFORMED BY ANY TRADE.

THE KEYNOTE LIST IS NOT A COMPLETE LIST OF THE CONTRACT SPECIFICATIONS NOR IS IT A COMPLETE LIST OF ALL MATERIALS CALLED FOR.

LORD AECK SARGENT

REVISION:

LORD AECK SARGENT PLANNING & DESIGN, INC. — ARCHITECTURAL CORPORATION — CERT. NO. 53851 — NORTH CAROLINA — CHAPEL HILL

SHEET TITLE: KEYNOTE LIST / SYMBOLS / LEGEND / GENERAL NOTES

SCALE: (U.N.O.)

JOB NAME: University of North Carolina - Chapel Hill
SCD# 21-23548-02A
UNC Project No. C21212
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

SEAL: Lauren Dunn Rockett, Registered Architect, 9574, North Carolina, Chapel Hill, NC — 01.08.2024

ISSUE DATE: 1/8/2023
JOB. NO.: 11706-00
DWG. NO.: A001

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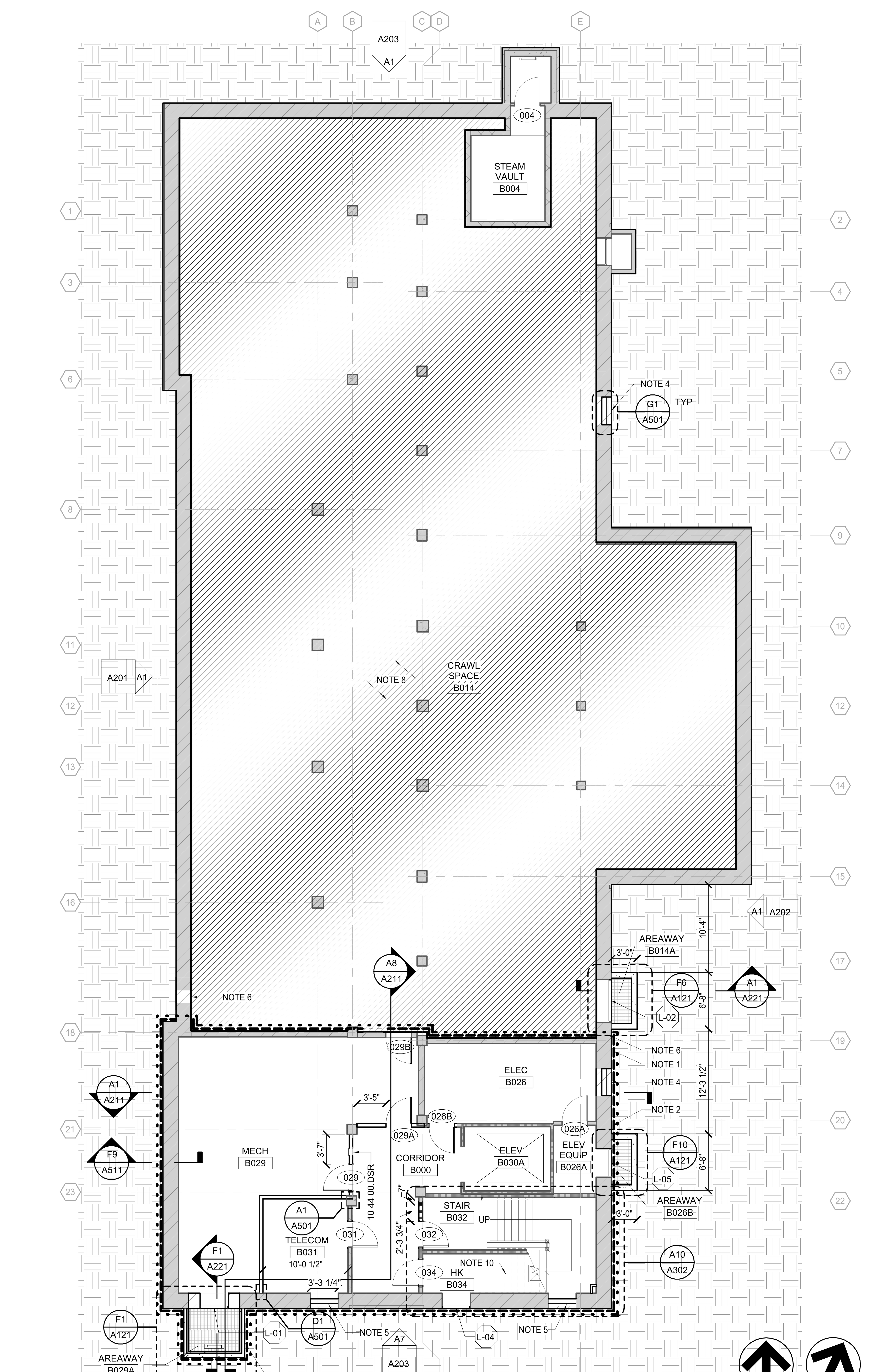
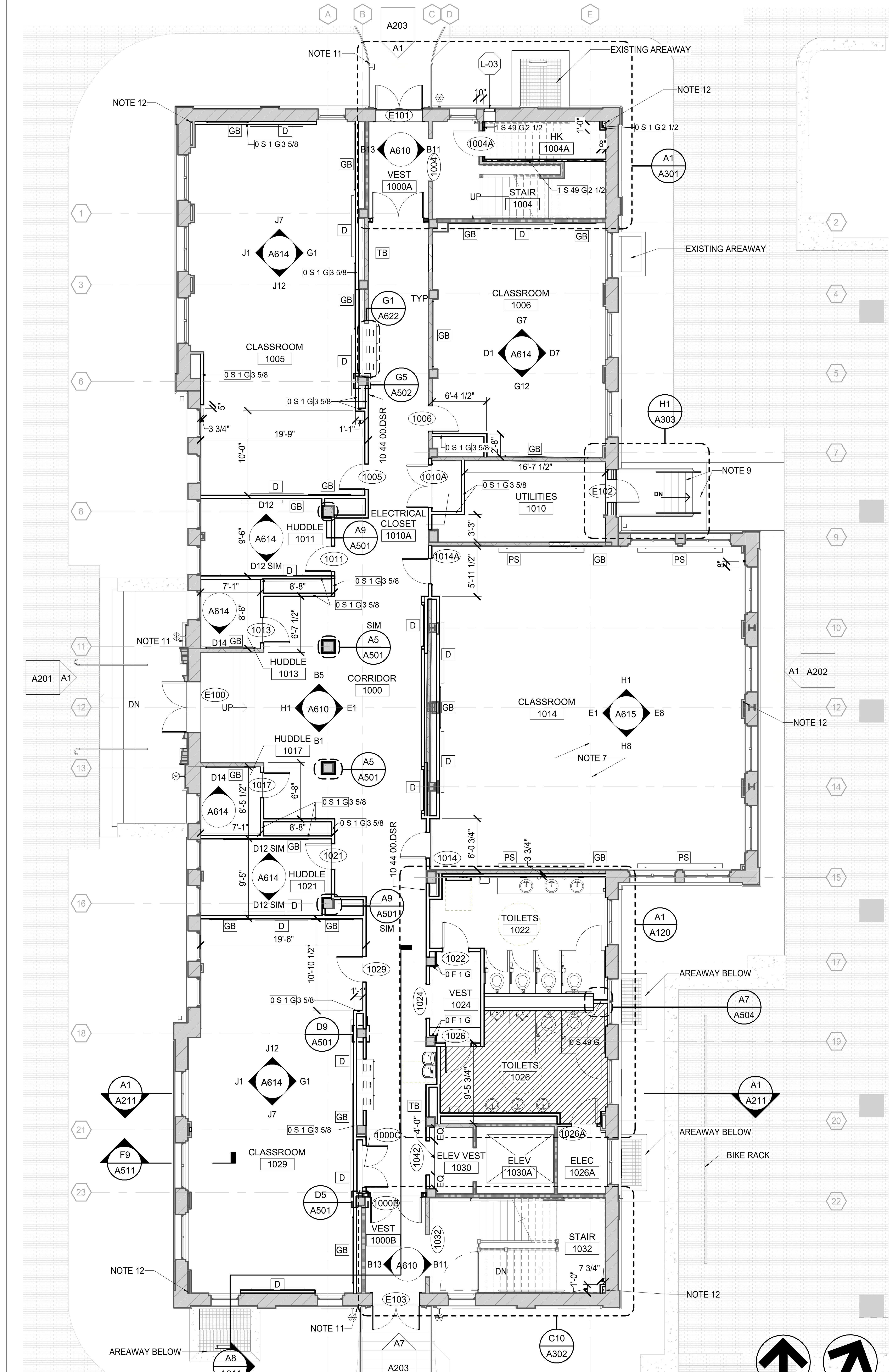


A1 BASEMENT PARTITION FLOOR PLAN

0 8 16 FT



A7 FIRST FLOOR PARTITION PLAN

0 8 16 FT

GENERAL NOTES

A. WORK OF ENGINEERING DISCIPLINES IS SHOWN FOR COORDINATION AND CONVENIENCE ONLY. REFER TO APPROPRIATE DISCIPLINE DRAWINGS FOR COMPLETE AND GOVERNING INFORMATION REGARDING THE SCOPE OF WORK.
B. TYPICAL PARTITION TYPES ARE 0 S 55 G UNLESS NOTED OTHERWISE. REFER TO DIVISION 9 SPECIFICATIONS FOR ADDITIONAL INFORMATION.
C. ALL DIMENSIONS ARE MEASURED TO FINISH FACE FOR EXISTING PARTITIONS AND TO STUD FACE FOR NEW PARTITIONS U.N.O.
D. PENETRATIONS THROUGH FIRE RATED PARTITIONS ARE TO RECEIVE FIRESTOPPING MATERIAL.
E. PROVIDE IN-WALL BLOCKING AT ALL TV MONITOR, HUNG EQUIPMENT, AND HUNG CASEWORK/MILLWORK LOCATIONS.
F. DOOR DIMENSIONS ARE TAKEN FROM FRAME TO CENTERLINE OF WALL OR COLUMN GRID.
G. REFER TO FINISH PLANS, INDIVIDUAL SPECIFICATIONS, AND ELEVATIONS FOR ALL FINISHES IN THESE SPACES.

SHEET SPECIFIC NOTES

1. PROVIDE NEW FOUNDATION DRAIN.
2. PROVIDE NEW COLD-FLUID APPLIED WATERPROOFING AND DRAINAGE MAT.
3. PROVIDE NEW WALL MOUNTED ACCESS LADDER.
4. INFILL EXISTING WINDOW OPENING WITH MASONRY, FLUSH WITH EXISTING WALL FACE.
5. INFILL EXISTING WINDOW OPENING WITH MASONRY, RECESS WALL FACE 4".
6. EXISTING DRAINAGE SLEEVE IN EXISTING MASONRY WALL TO REMAIN. CONNECT NEW FOUNDATION DRAINS THROUGH SLEEVE.
7. INSTALL NEW FLOOR FRAMING TO MAKE FLOOR LEVEL. (SEE STRUCTURAL FOR MORE INFORMATION)
8. INSTALL VAPOR BARRIER OVER DIRT FLOOR.
9. INSTALL METAL STAIR AND LANDING.
10. INSTALL NEW MOP SINK UNDER THE STAIR.
11. NEW CARD READER (SEE ELEVATIONS).
12. TRENCH EXISTING WALL TO INSTALL DOWN CONDUCTORS. PATCH PLASTER BACK PER SPECIFICATION.

LEGEND

(symbol)	1 HR FIRE BARRIER
(symbol)	2 HR FIRE BARRIER
(symbol)	FOUNDATION DRAIN
(symbol)	WATERPROOFING
R	RECYCLING
T	TRASH
(hatch)	INSTALL VAPOR BARRIER UNDER FLOOR FINISH
D	DISPLAY
GB	GLASSBOARD, 101101.GB1
PS	PROJECTION SCREEN
S	BLACKOUT SHADES
EJ	EXPANSION JOINT
TB	TACK BOARD, 101101.TB

LORD AECK SARGENT

REVISION:

LORD AECK SARGENT PLANNING & DESIGN, INC. REGISTERED ARCHITECTURAL CORPORATION CERT. NO. 53851 NORTH CAROLINA CHAPEL HILL

SHEET TITLE: BASEMENT & FIRST FLOOR PARTITION PLANS

SCALE: (U.N.O.) 0 8 16 FT

JOB NAME: University of North Carolina - Chapel Hill
SCO#: 21-23548-02A UNC Project No. C21212
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

SEAL: Lauren Dunn Rockart, Registered Architect, 9074, North Carolina, Chapel Hill, NC — 01.08.2024

ISSUE DATE: 1/8/2023
JOB NO.: 11706-00
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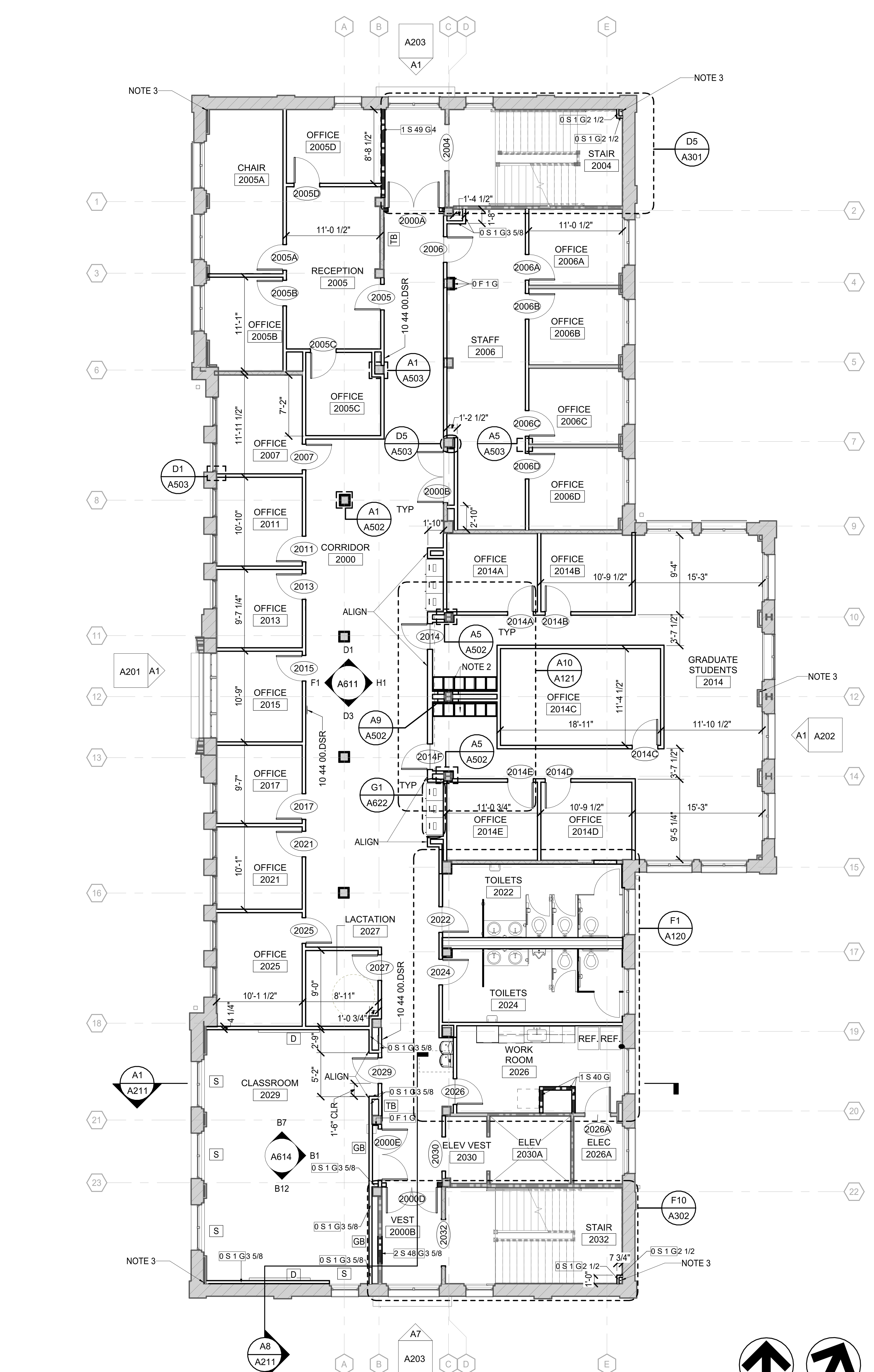
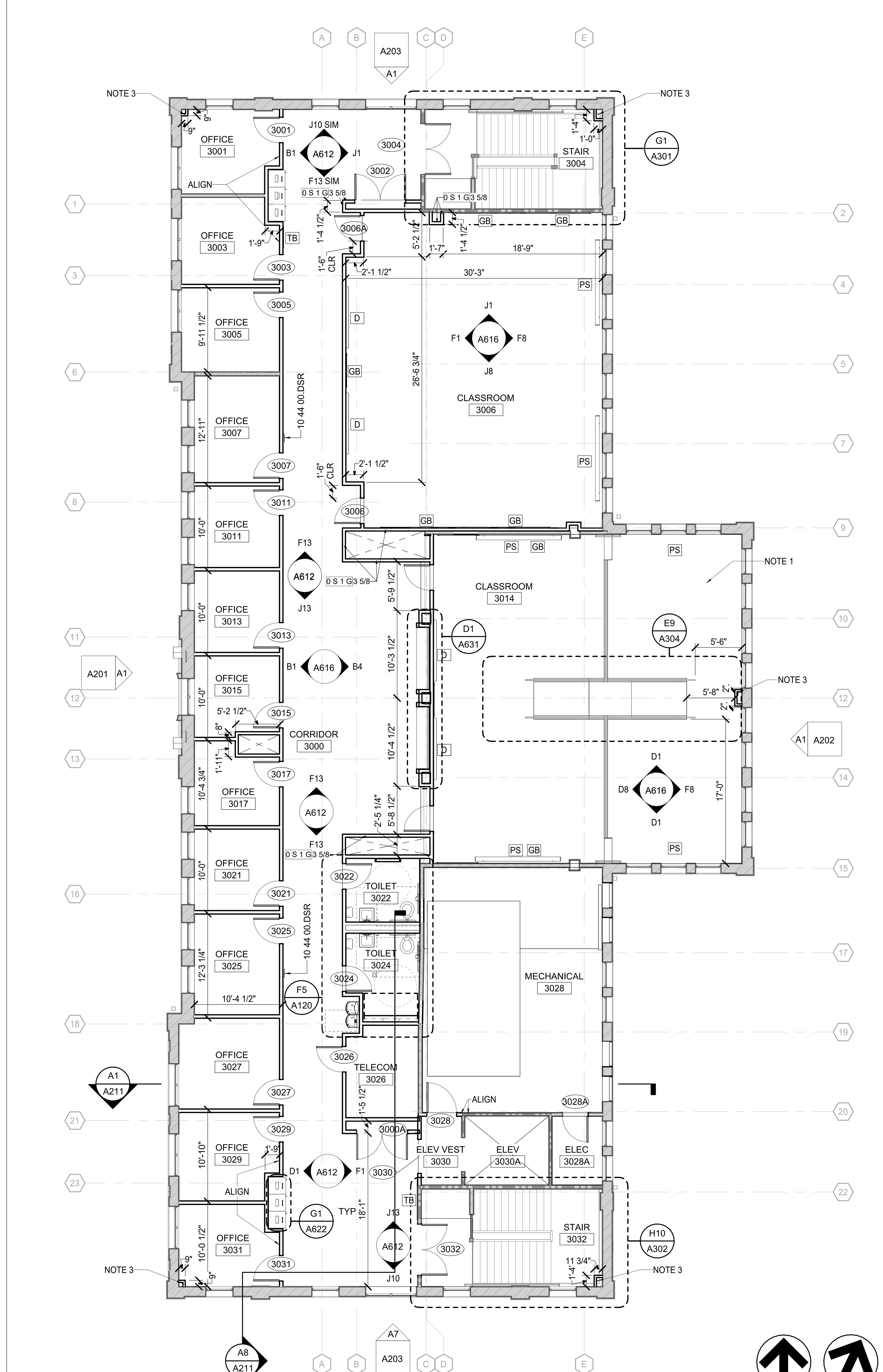


A1 SECOND FLOOR PARTITION PLAN

0 8 16 FT



A7 THIRD FLOOR PARTITION PLAN

0 8 16 FT

MATERIAL KEYNOTES

10 44 00.DSR Fire Extinguisher Cabinet

GENERAL NOTES

A. WORK OF ENGINEERING DISCIPLINES IS SHOWN FOR COORDINATION AND CONVENIENCE ONLY. REFER TO APPROPRIATE DISCIPLINE DRAWINGS FOR COMPLETE AND GOVERNING INFORMATION REGARDING THE SCOPE OF WORK.
B. TYPICAL PARTITION TYPES ARE 0 S 55 G UNLESS NOTED OTHERWISE. REFER TO DIVISION 9 SPECIFICATIONS FOR ADDITIONAL INFORMATION.
C. ALL DIMENSIONS ARE MEASURED TO FINISH FACE FOR EXISTING PARTITIONS AND TO STUD FACE FOR NEW PARTITIONS U.N.O.
D. PENETRATIONS THROUGH FIRE RATED PARTITIONS ARE TO RECEIVE FIRESTOPPING MATERIAL.
E. PROVIDE IN-WALL BLOCKING AT ALL TV MONITOR, HUNG EQUIPMENT, AND HUNG CASEWORK/MILLWORK LOCATIONS.
F. DOOR DIMENSIONS ARE TAKEN FROM FRAME TO CENTERLINE OF WALL OR COLUMN GRID.
G. REFER TO FINISH PLANS, INDIVIDUAL SPECIFICATIONS, AND ELEVATIONS FOR ALL FINISHES IN THESE SPACES.

SHEET SPECIFIC NOTES

1. NEW TIER WITH STAIRS AND RAMP (SEE STRUCTURAL DRAWINGS FOR MORE INFORMATION.)
2. LOCKERS
3. TRENCH EXISTING WALL TO INSTALL DOWN CONDUCTORS. PATCH PLASTER BACK PER SPECIFICATION.

LEGEND

	1 HR FIRE BARRIER
	2 HR FIRE BARRIER
	FOUNDATION DRAIN
	WATERPROOFING
R	RECYCLING
T	TRASH
	INSTALL VAPOR BARRIER UNDER FLOOR FINISH
D	DISPLAY
GB	GLASSBOARD, 101101.GB1
PS	PROJECTION SCREEN
S	BLACKOUT SHADES
EJ	EXPANSION JOINT
TB	TACK BOARD, 101101.TB

LORD AECK SARGENT

REVISION:

LORD AECK SARGENT PLANNING & DESIGN, INC. REGISTERED ARCHITECTURAL CORPORATION CERT. NO. 53851 NORTH CAROLINA CHAPEL HILL

SHEET TITLE
SECOND & THIRD FLOOR PARTITION PLANS

SCALE (U.N.O.)
0 8 16 FT

JOB NAME
University of North Carolina - Chapel Hill
UNC Project No. C21212
SCO# 21-23548-02A
BINGHAM HALL RENOVATION
LOCATION
36 Lenoir Drive, Chapel Hill, NC 27514

SEAL
Lauren Dunn Rockart Registered Architect 9974 North Carolina Chapel Hill, NC
01.08.2024

ISSUE DATE
1/8/2023

JOB NO.
11706-00

DWG. NO.
A102

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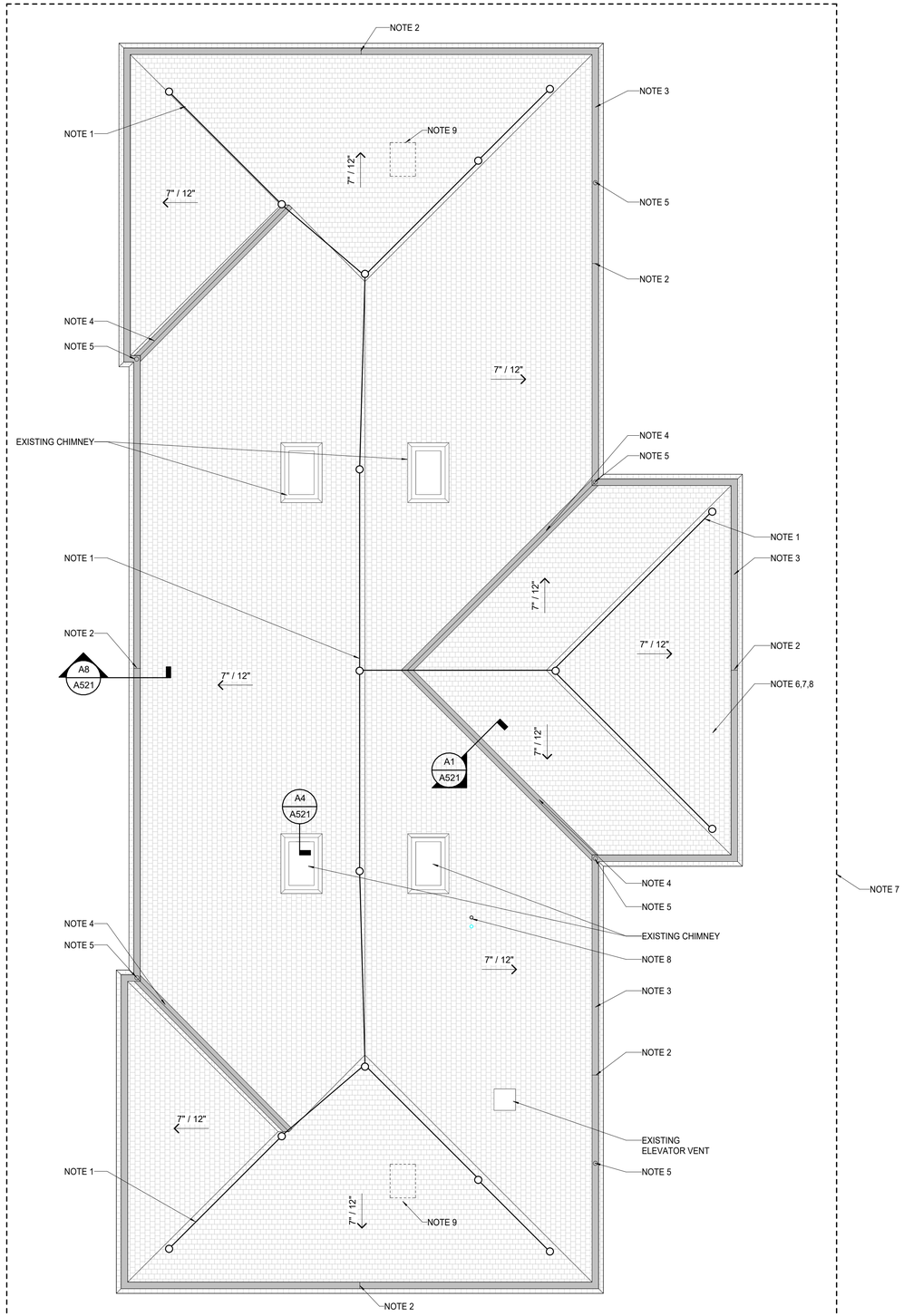

GENERAL NOTES

A. WORK OF ENGINEERING DISCIPLINES IS SHOWN FOR COORDINATION AND CONVENIENCE ONLY. REFER TO APPROPRIATE DISCIPLINE DRAWINGS FOR COMPLETE AND GOVERNING INFORMATION REGARDING THE SCOPE OF WORK.
B. TYPICAL PARTITION TYPES ARE 0 S 55 G UNLESS NOTED OTHERWISE. REFER TO DIVISION 9 SPECIFICATIONS FOR ADDITIONAL INFORMATION.
C. ALL DIMENSIONS ARE MEASURED TO FINISH FACE FOR EXISTING PARTITIONS AND TO STUD FACE FOR NEW PARTITIONS U.N.O.
D. PENETRATIONS THROUGH FIRE RATED PARTITIONS ARE TO RECEIVE FIRESTOPPING MATERIAL.
E. PROVIDE IN-WALL BLOCKING AT ALL TV MONITOR, HUNG EQUIPMENT, AND HUNG CASEWORK/MILLWORK LOCATIONS.
F. DOOR DIMENSIONS ARE TAKEN FROM FRAME TO CENTERLINE OF WALL OR COLUMN GRID.
G. REFER TO FINISH PLANS, INDIVIDUAL SPECIFICATIONS, AND ELEVATIONS FOR ALL FINISHES IN THESE SPACES.

SHEET SPECIFIC NOTES

1. CABLE FALL PROTECTION SYSTEM. REFER TO STRUCTURAL FOR SYSTEM DESIGN. ATTACHMENT LOCATIONS DETERMINED BY MFR AND INSTALLER.
2. GUTTER EXPANSION JOINT.
3. INTEGRAL GUTTER WITH METAL LINING.
4. OPEN VALLEY, EXPOSED METAL FLASHING.
5. DOWNSPOUT.
6. INSTALL NEW UNDERLAYMENT, FLASHING AND GUTTER LINING. INCLUDE SPLASH GUARDS AT THE VALLEYS.
7. REPAIR AND LEVEL CEMENTIOUS ROOF DECK; INSTALL NEW SLATE TILES MAKING USE OF SALVAGE TILES; INSTALL NEW UNDERLAYMENT. THIS NOTE APPLY TO THE WHOLE ROOF.
8. PLUMBING VENT
9. NEW ROOF DECK

PROJECT NORTH TRUE NORTH

LORD AECK SARGENT

REVISION:

LORD AECK SARGENT PLANNING & DESIGN, INC. — ARCHITECTURAL CORPORATION — CERT. NO. 53851 — NORTH CAROLINA — CHAPEL HILL

SHEET TITLE: ROOF PLAN

SCALE (U.N.O.): 0 8 16 FT

JOB NAME: University of North Carolina - Chapel Hill
SCI#: 21-23548-02A UNC Project No. C21212
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

SEAL: Lauren Dunn Rockart, Registered Architect, 9874, North Carolina, Chapel Hill, NC — 01.08.2024

ISSUE DATE: 1/8/2023
JOB. NO.: 11706-00
DWG. NO.: A103

A1 ROOF PLAN
0 8 16 FT

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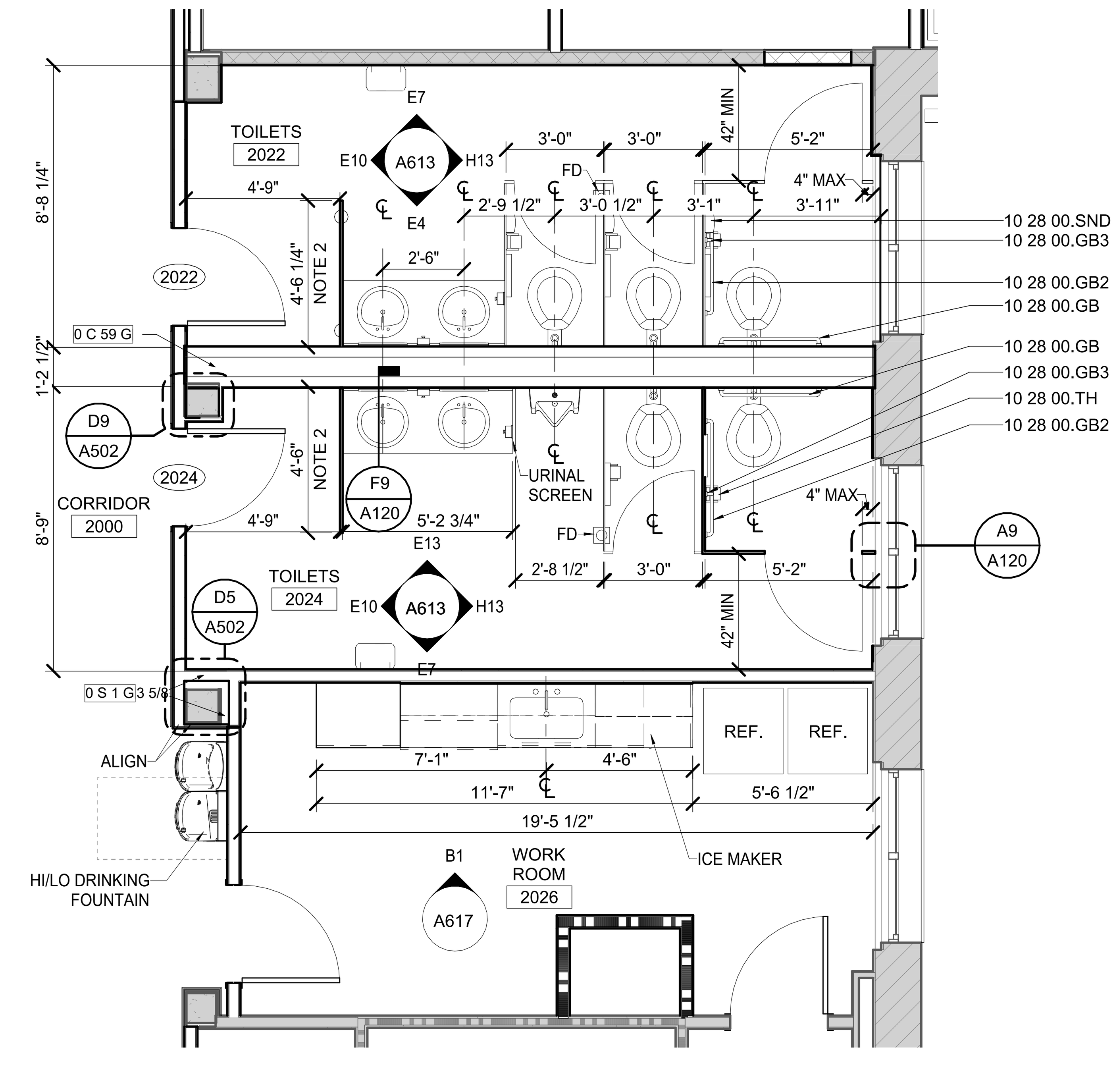
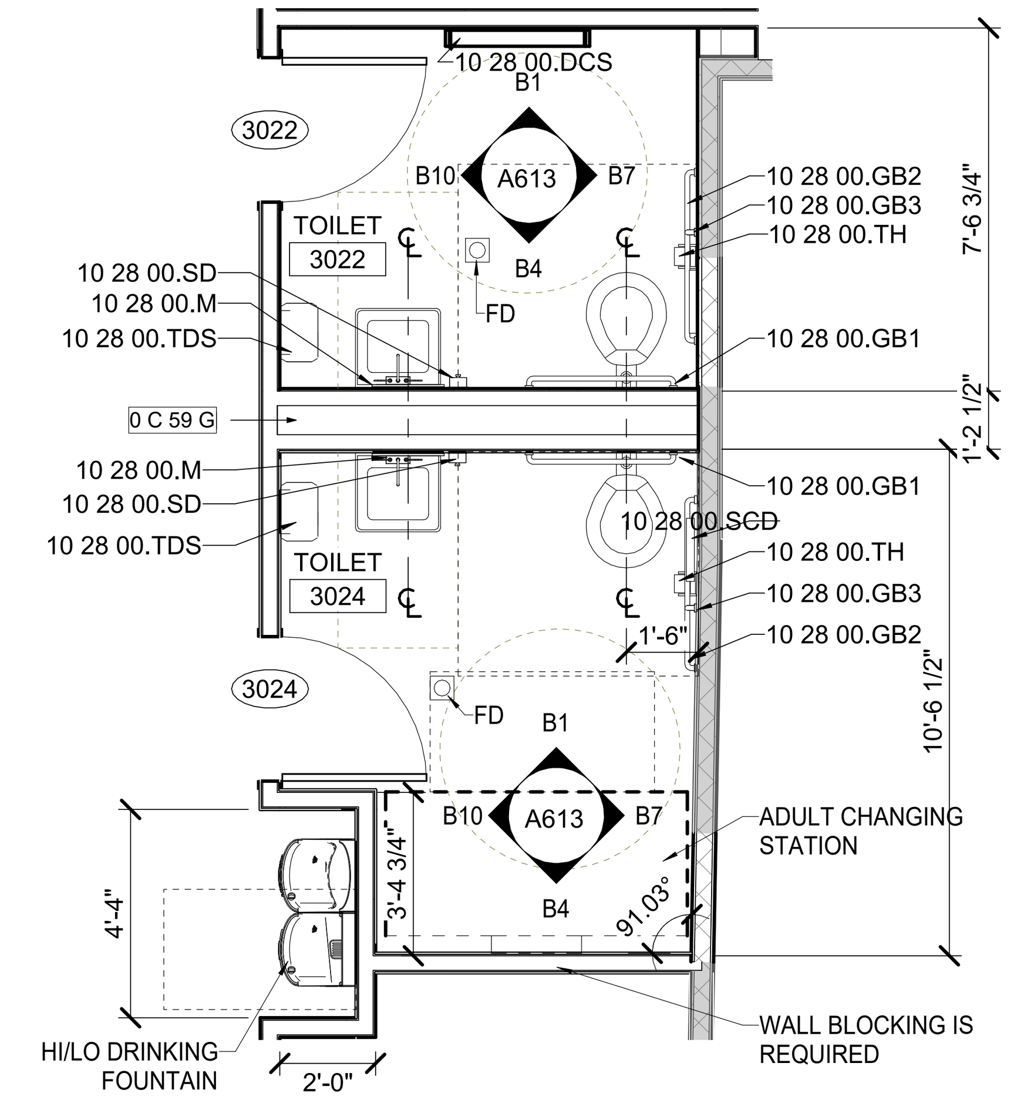
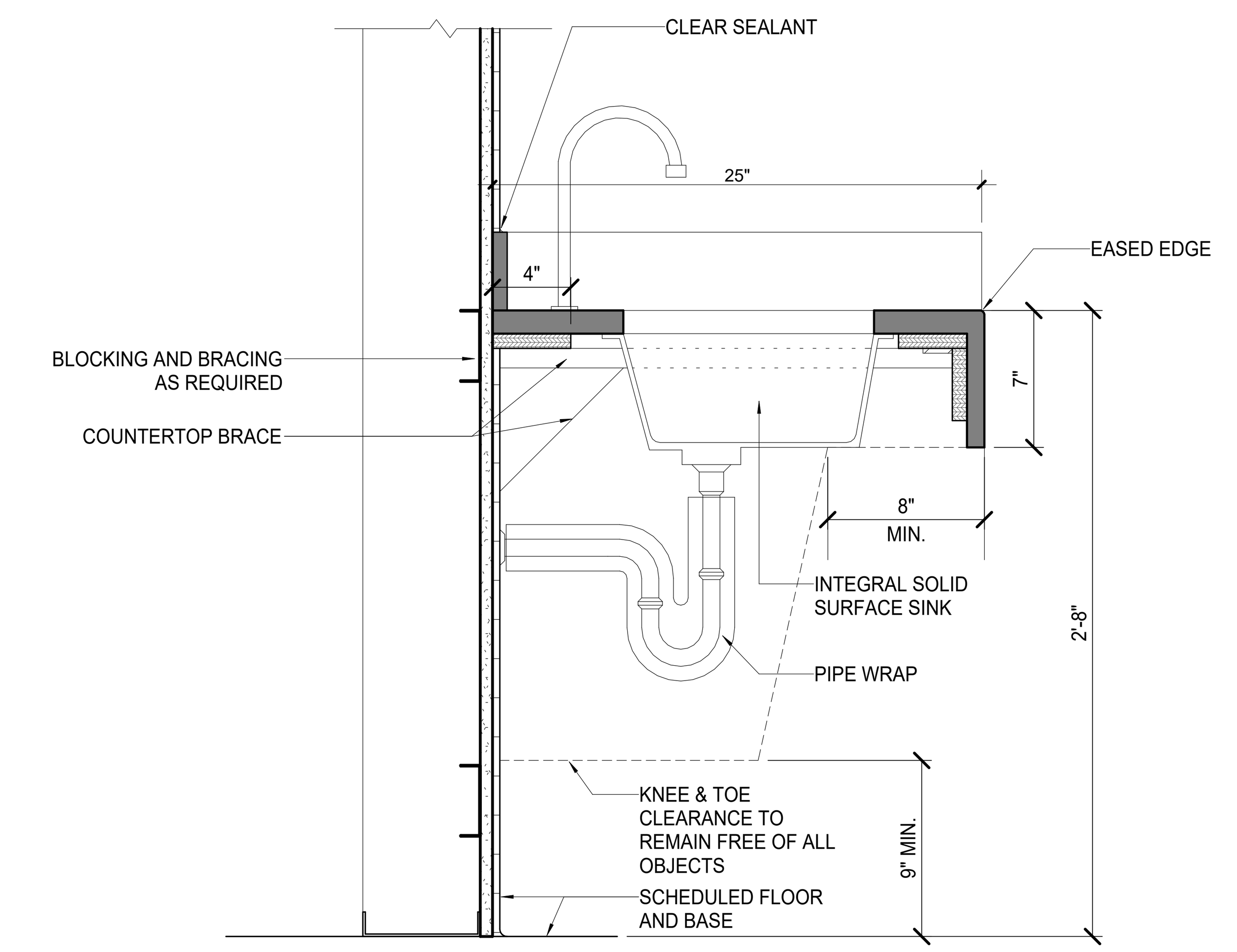


F1 2ND FLOOR RESTROOMS + WORK ROOM - ENLARGED PLAN
0 4 8 FT



F5 THIRD FLOOR RESTROOMS - ENLARGED PLANS
0 4 8 FT



F9 TYPICAL RESTROOM ACCESSIBLE SINK
0 1 2 FT

MATERIAL KEYNOTES

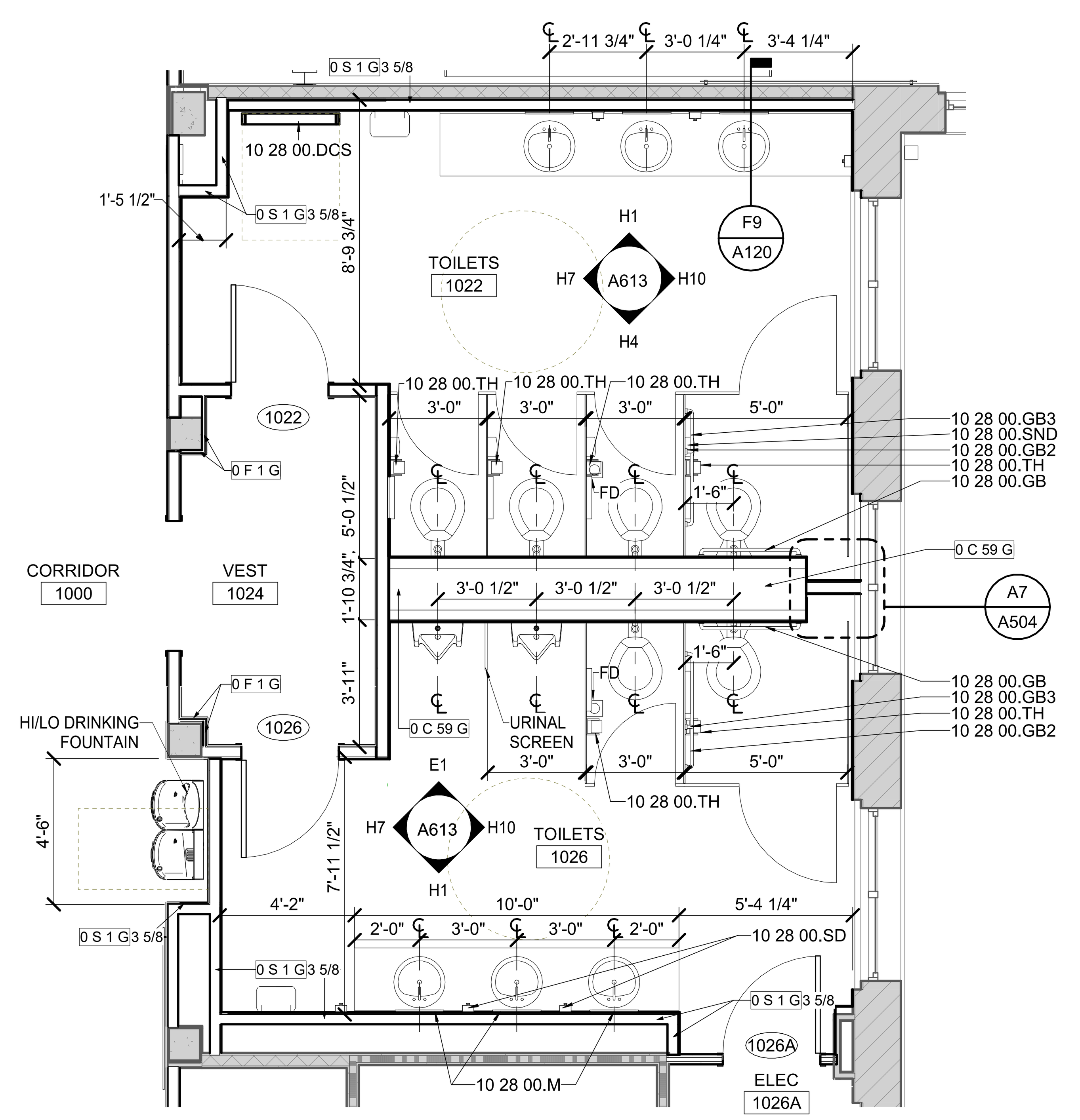
10 28 00.DCS	Diaper Changing Station
10 28 00.GB	Grab Bar
10 28 00.GB1	Grab Bar (36")
10 28 00.GB2	Grab Bar (42")
10 28 00.GB3	Grab Bar (18")
10 28 00.M	Mirror
10 28 00.SCD	Seat Cover Dispenser
10 28 00.SD	Soap Dispenser
10 28 00.SND	Sanitary Napkin Disposal Unit
10 28 00.TDS	Towel Dispenser/Disposal, Surface Mt.
10 28 00.TH	Toilet Tissue Holder

GENERAL NOTES

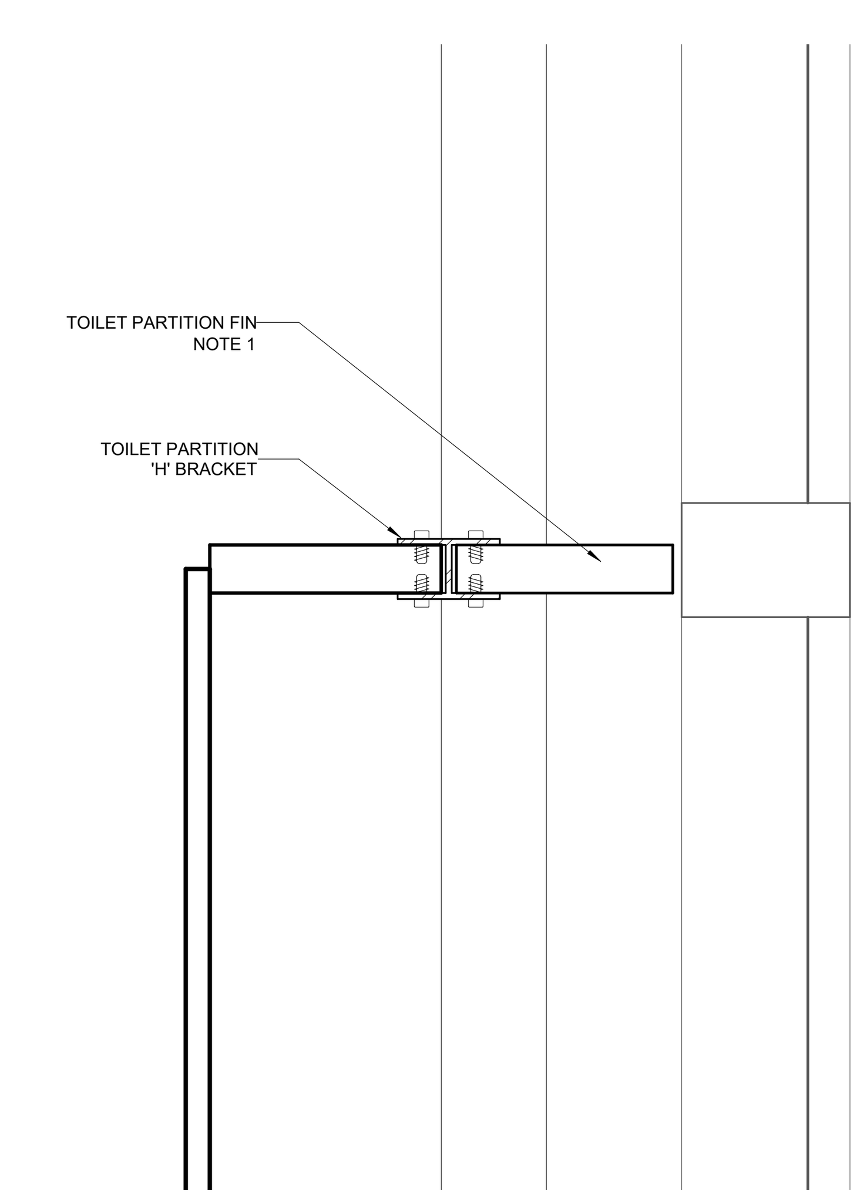
A. ALL DIMENSIONS ARE MEASURED TO FINISH FACE FOR EXISTING PARTITIONS AND TO STUD FACE FOR NEW PARTITIONS U.N.O.

TOILET ACCESSORIES

KEYNOTE	DESCRIPTION	PROVIDER
10 28 00.M	MIRROR	CFCI
10 28 00.GB	GRAB BAR	CFCI
10 28 00.SCD	TOILET SEAT COVER DISPENSER	OFCI
10 28 00.SD	WALL MOUNTED SOAP DISPENSER	OFCI
10 28 00.TH	TOILET TISSUE DISPENSER - PARTITION/WALL MOUNTED	OFCI
10 28 00.TDS	PAPER TOWEL DISPENSER - WALL MOUTNED	OFCI



A1 FIRST FLOOR RESTROOMS - ENLARGED PLAN
0 4 8 FT



A9 TOILETS 2024 ADA PARTITION DTL
0 6 12 IN

SHEET SPECIFIC NOTES

1. TOILET PARTITION TO EXTEND TO FACE OF WALL. FIN TO SPAN FROM EXISTING SILL HEIGHT TO FULL HEIGHT OF TOILET PARTITION.
2. RE-INSTALL MARBLE TOILET PARTITION

LORD AECK SARGENT

REVISION:

LORD AECK SARGENT PLANNING & DESIGN, INC. REGISTERED ARCHITECTURAL CORPORATION CERT. NO. 53851 NORTH CAROLINA CHAPEL HILL

SHEET TITLE
ENLARGED PLANS - TOILET ROOMS
SCALE (U.N.O.)

JOB NAME
University of North Carolina - Chapel Hill
SCO# 21-23548-02A UNC Project No. C21212
BINGHAM HALL RENOVATION
LOCATION
36 Lenoir Drive, Chapel Hill, NC 27514

SEAL
Lauren Dunn Rockart Registered Architect 9874 North Carolina Chapel Hill, NC
01.08.2024

ISSUE DATE
1/8/2023
JOB NO.
11706-00
DWG. NO.
A120

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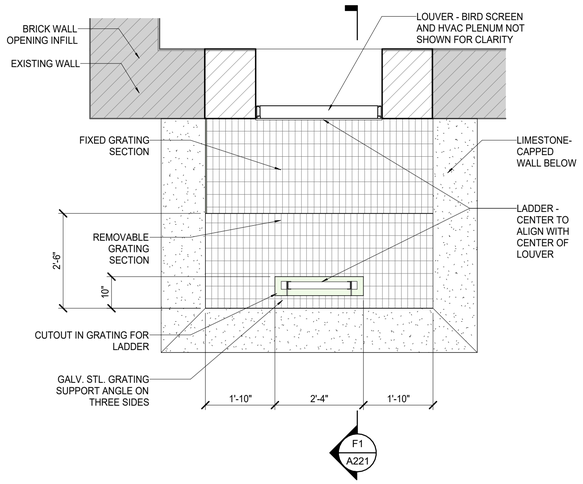
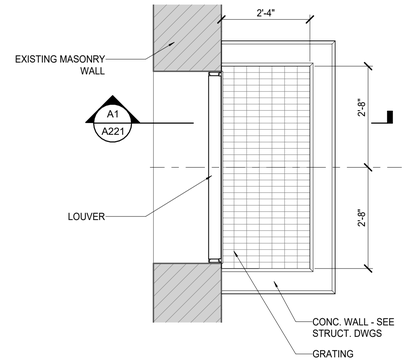
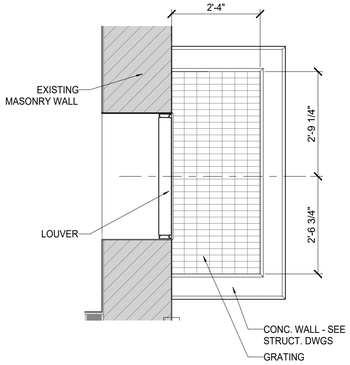


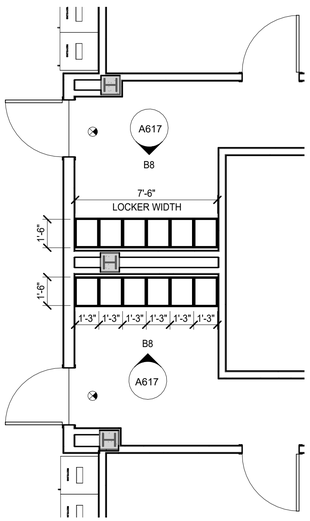
F1 ENLARGED B029A AREAWAY PLAN



F6 ENLARGED B014A AREAWAY PLAN



F10 ENLARGED B026B AREAWAY PLAN



A10 SECOND FLOOR GRADUATE STUDENTS - LOCKERS

LORD AECK SARGENT

REVISION:

LORD AECK SARGENT PLANNING & DESIGN INC
LANDSCAPE ARCHITECTURAL CORPORATION
CERT. NO. 53851
NORTH CAROLINA
CHAPEL HILL

SHEET TITLE
ENLARGED PLANS

SCALE (U.N.O.)
0 2 4FT

JOB NAME
University of North Carolina - Chapel Hill

SCO# 21-23548-02A UNC Project No. C21212
BINGHAM HALL RENOVATION

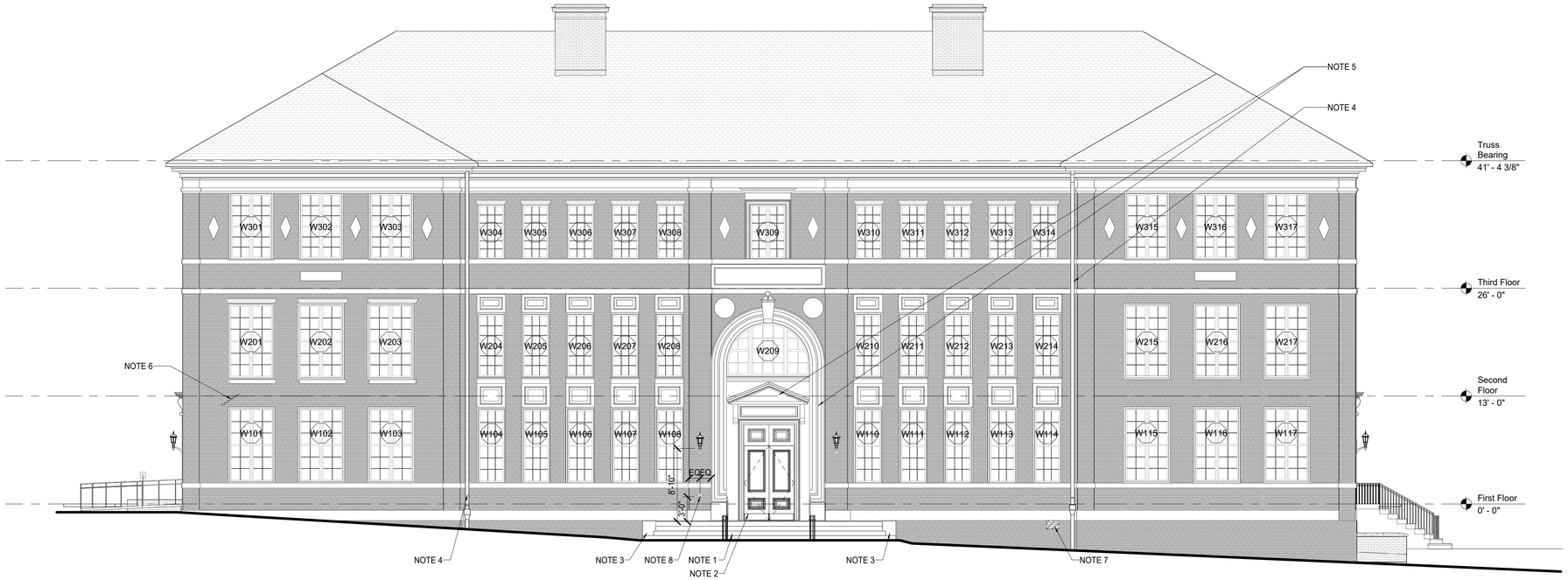
LOCATION
36 Lenoir Drive, Chapel Hill, NC 27514

SEAL
Lauren Dunn Rockett
Registered Architect
9574
North Carolina
Chapel Hill, NC
01.08.2024

ISSUE DATE
1/8/2023

JOB. NO.
11706-00

DWG. NO.
A121



LEGEND

NEW BRICK INFILL

GENERAL NOTES

A. CLEAN ALL MASONRY SURFACES. SEE SPECIFICATION 04 0120.
B. REPLACE DAMAGED BRICKS. ASSUME APPROXIMATELY 200 BRICKS. SEE SPECIFICATION SECTION 04 2000.
C. REPOINT ALL VERTICAL JOINTS AT STONE BANDING, INCLUDING AT STONE DOOR SURROUNDS.
D. REPOINT ALL VERTICAL AND HORIZONTAL STONE MORTAR JOINTS AT CORNICE LEVEL.
E. REMOVE EXISTING DOWNSPOUTS AND GUTTER LINER. PROVIDE NEW GUTTER LINER AND DOWNSPOUTS.
F. REMOVE ALL METAL STRAPS AND ANCHORS; REPOINT.
G. WALK ENTIRE BUILDING WITH ARCHITECT AND ENGINEER TO IDENTIFY HOLES IN MASONRY THAT NEED TO BE FILLED.
H. CONTRACTOR TO SCOPE AND CLEAN OUT WINDOW WELL DRAINS. NOTIFY ARCHITECT IF WINDOW WELL DRAINS DO NOT EXIST.
I. ALL EXISTING MECHANICAL WINDOW UNITS TO BE REMOVED.

SHEET SPECIFIC NOTES

1. REPOINT STONE STEPS, SEE SPECIFICATION 04 0920.
2. PROVIDE NEW WOOD DOOR AND TRANSOM TO MATCH HISTORIC PROFILE. SEE A601.
3. REPOINT ALL SIDES OF WING WALLS, TYP. SEE SPECIFICATION 04 0920.
4. EXISTING DOWNSPOUT TO BE REMOVED. PROVIDE NEW DOWNSPOUT AND DOWNSPOUT BOOT.
5. REPOINT ENTRANCE STONE AND GRANITE, ALL JOINTS ON ALL SIDES. SEE SPECIFICATION 040920.
6. REPOINT CRACK IN BRICK MASONRY.
7. INFILL OPENING.
8. CARD READER

LORD AECK SARGENT

REVISION:

LORD AECK SARGENT PLANNING & DESIGN, INC. — HISTORIC ARCHITECTURAL GROUP — CERT. NO. 53851 — NORTH CAROLINA — CHAPEL HILL

SHEET TITLE: EXTERIOR ELEVATIONS
SCALE (U.N.O.)

JOB NAME: University of North Carolina - Chapel Hill
SCI#: 21-2354520A
UNC Project No. C21212
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

SEAL: Lauren Dunn Rockett, Registered Architect, 9874, North Carolina, Chapel Hill, NC — 01.08.2024

ISSUE DATE: 1/8/2023
JOB. NO.: 11706-00
DWG. NO.: A201

A1 WEST ELEVATION
0 8 16 FT

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A1 EAST ELEVATION

0 8 16 FT

LEGEND

NEW BRICK INFILL

GENERAL NOTES

A. CLEAN ALL MASONRY SURFACES. SEE SPECIFICATION 04 0120.
B. REPLACE DAMAGED BRICKS. ASSUME APPROXIMATELY 200 BRICKS. SEE SPECIFICATION SECTION 04 2000.
C. REPOINT ALL VERTICAL JOINTS AT STONE BANDING, INCLUDING AT STONE DOOR SURROUNDS.
D. REPOINT ALL VERTICAL AND HORIZONTAL STONE MORTAR JOINTS AT CORNICE LEVEL.
E. REMOVE EXISTING DOWNSPOUTS AND GUTTER LINER. PROVIDE NEW GUTTER LINER AND DOWNSPOUTS.
F. REMOVE ALL METAL STRAPS AND ANCHORS; REPOINT.
G. WALK ENTIRE BUILDING WITH ARCHITECT AND ENGINEER TO IDENTIFY HOLES IN MASONRY THAT NEED TO BE FILLED.
H. CONTRACTOR TO SCOPE AND CLEAN OUT WINDOW WELL DRAINS. NOTIFY ARCHITECT IF WINDOW WELL DRAINS DO NOT EXIST.
I. ALL EXISTING MECHANICAL WINDOW UNITS TO BE REMOVED.

SHEET SPECIFIC NOTES

1. REPLACE DAMAGED DOWNSPOUT BOOTS, TYPICAL.
2. PATCH CONCRETE WINDOW WALL, SEE SPECIFICATION 04 0920. PATCH STONE FACE.
3. REVIEW EXTENT OF DAMAGE WITH ARCHITECT/ENGINEER. REPAIR DAMAGED STONE AT CORNICE WITH NEW CARVED STONE DUTCHMAN, ANCHORED TO EXISTING SOUND STONE.
4. REPLACE LOUVER WITH SASH FROM SALVAGED WINDOW
5. REMOVE BRICK BETWEEN WINDOWS TO FACILITATE INSTALLATION OF AHU. SUPPORT OPENING WHILE UNDER CONSTRUCTION. INSTALL NEW BRICK AND LOUVERS.
6. REPLACE DOWN SPOUT

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REVISION:

LORD AECK SARGENT PLANNING & DESIGN, INC. LANDSCAPE ARCHITECTURAL CORPORATION CERT. NO. 53851 NORTH CAROLINA CHAPEL HILL

SEAL

Lauren Dunn Rockart Registered Architect 9874 North Carolina Chapel Hill, NC 01.08.2024

ISSUE DATE 1/8/2023

JOB. NO. 11706-00

DWG. NO. A202

SHEET TITLE EXTERIOR ELEVATIONS

SCALE (U.N.O.)

JOB NAME University of North Carolina - Chapel Hill

SCM#: 21-235484-02A UNC Project No: C01212

BINGHAM HALL RENOVATION

LOCATION 36 Lenoir Drive, Chapel Hill, NC 27514

A1 NORTH ELEVATION

0 8 16 FT

A7 SOUTH ELEVATION

0 8 16 FT

LEGEND

NEW BRICK INFILL

GENERAL NOTES

A. CLEAN ALL MASONRY SURFACES. SEE SPECIFICATION 04 0120.
B. REPLACE DAMAGED BRICKS. ASSUME APPROXIMATELY 200 BRICKS. SEE SPECIFICATION SECTION 04 2000.
C. REPOINT ALL VERTICAL JOINTS AT STONE BANDING, INCLUDING AT STONE DOOR SURROUNDS.
D. REPOINT ALL VERTICAL AND HORIZONTAL STONE MORTAR JOINTS AT CORNICE LEVEL.
E. REMOVE EXISTING DOWNSPOUTS AND GUTTER LINER. PROVIDE NEW GUTTER LINER AND DOWNSPOUTS.
F. REMOVE ALL METAL STRAPS AND ANCHORS; REPOINT.
G. WALK ENTIRE BUILDING WITH ARCHITECT AND ENGINEER TO IDENTIFY HOLES IN MASONRY THAT NEED TO BE FILLED.
H. CONTRACTOR TO SCOPE AND CLEAN OUT WINDOW WELL DRAINS. NOTIFY ARCHITECT IF WINDOW WELL DRAINS DO NOT EXIST.
I. ALL EXISTING MECHANICAL WINDOW UNITS TO BE REMOVED.

SHEET SPECIFIC NOTES

1. REPOINT GRANITE STEPS, SEE SPECIFICATION SECTION 04 0920.
2. REPOINT ENTIRE SIDE WALL OF STEPS 100%, SEE SPECIFICATION SECTION 04 0920.
3. REMOVE, REPLACE DOOR AND TRANSOM. SEE A601.
4. REPAIR DAMAGED STONE, SEE SPECIFCIATION SECTION 04 0920.
5. NEW WALL LIGHT.
6. EXISTING KNOXBOX.
7. NEW CARD READER.

LORD AECK SARGENT

REVISION:

LORD AECK SARGENT PLANNING & DESIGN, INC. — REGISTERED ARCHITECTURAL CORPORATION — CERT. NO. 53851 — NORTH CAROLINA — CHAPEL HILL

SHEET TITLE
EXTERIOR ELEVATIONS
SCALE (U.N.O.)

JOB NAME
University of North Carolina - Chapel Hill
SCO# 21-23548-02A UNC Project No. C21212
BINGHAM HALL RENOVATION
LOCATION
36 Lenoir Drive, Chapel Hill, NC 27514

SEAL
Lauren Dunn Rockart — Registered Architect — 9074 — North Carolina — Chapel Hill, NC
01.08.2024

ISSUE DATE
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JOB NO.
11706-00
DWG. NO.
A203

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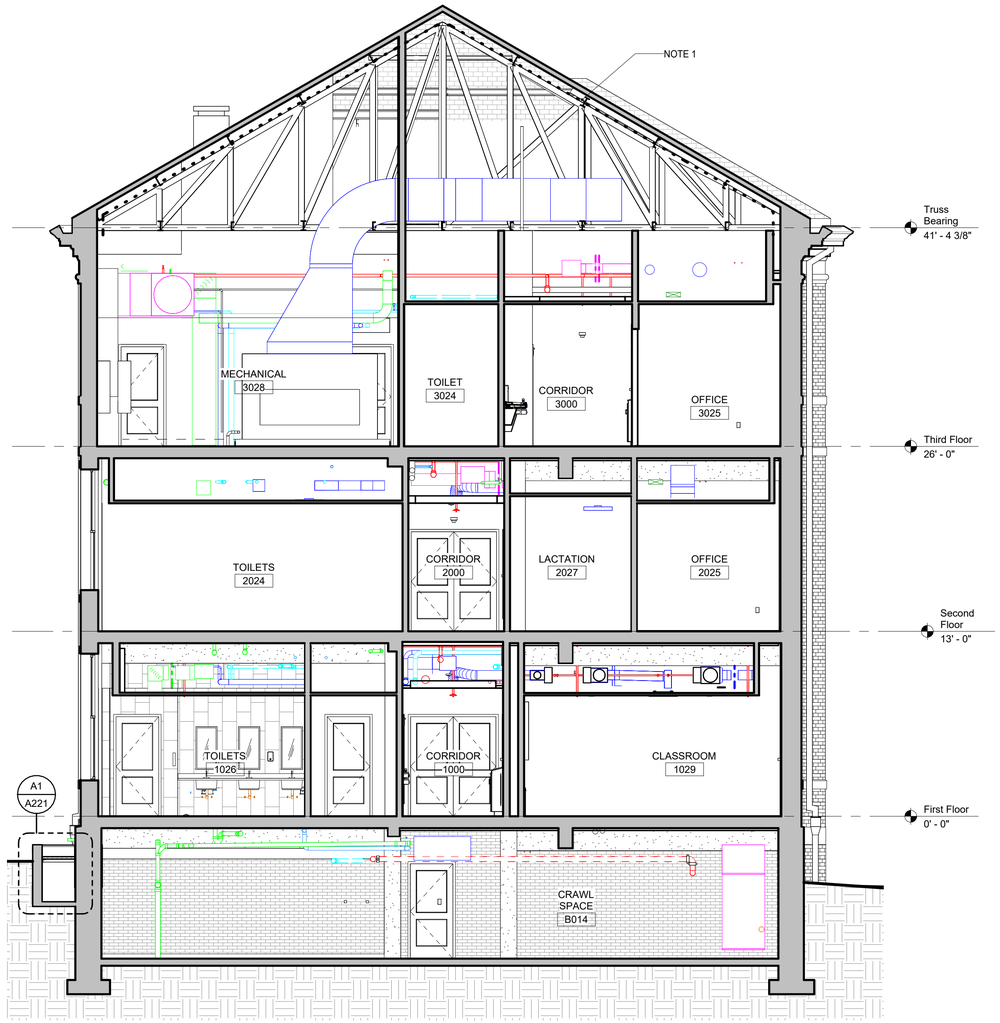
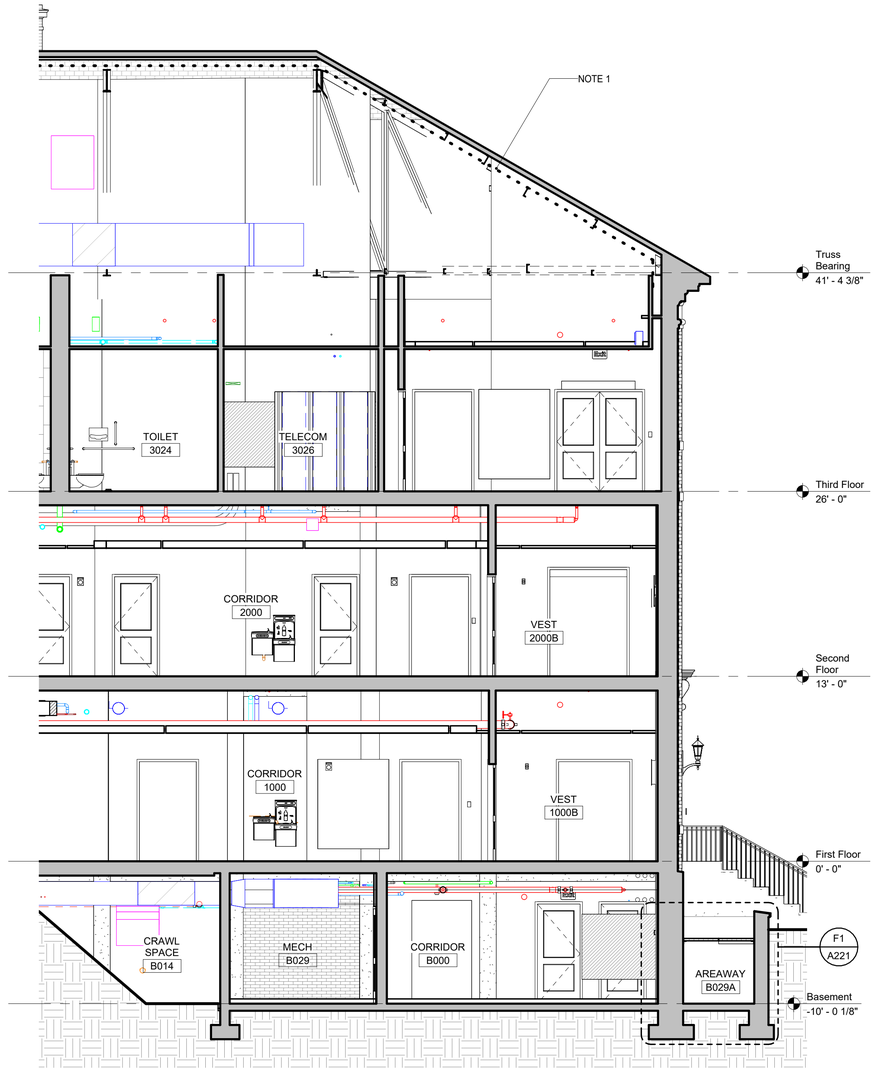


A1 SECTION EAST-WEST

0 8 16FT



A8 SECTION - NORTH SOUTH

0 8 16FT

SHEET SPECIFIC NOTES

1. AT THE ROOF INSULATION, APPLIED R-49 CLOSED CELL SPRAY FOAM INSULATION ON THE UNDERSIDE OF ROOF DECK.

LORD AECK SARGENT

REVISION:

LORD AECK SARGENT PLANNING & DESIGN, INC. ARCHITECTURAL CORPORATION CERT. NO. 53851 NORTH CAROLINA CHAPEL HILL

SHEET TITLE: BUILDING SECTIONS

SCALE (U.N.O.)

JOB NAME: University of North Carolina - Chapel Hill

SCO# 21-230464-02A UNC Project No. C21212

BINGHAM HALL RENOVATION

LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

SEAL

Lauren Dunn Rockett Registered Architect 9874 North Carolina Chapel Hill, NC

01.08.2024

ISSUE DATE: 1/8/2023

JOB. NO. 11706-00

DWG. NO. A211

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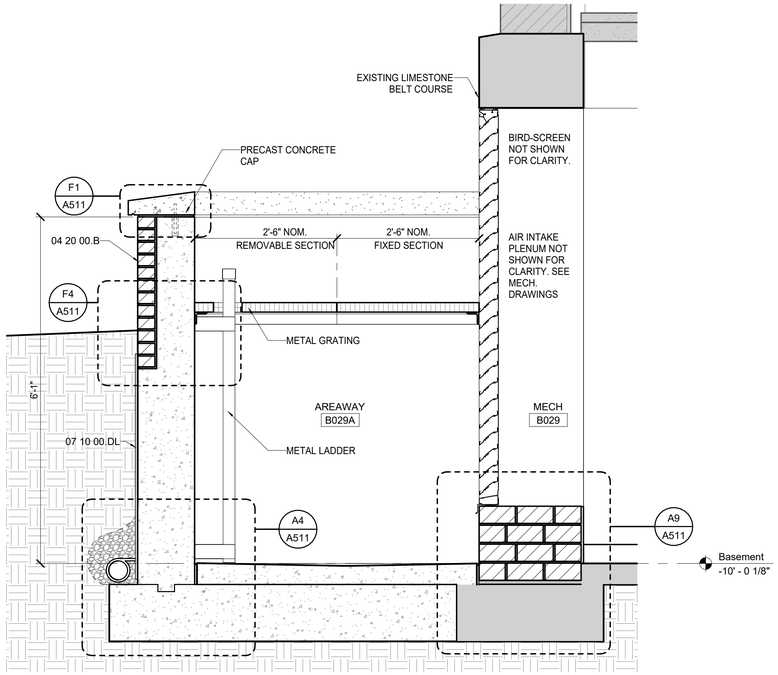
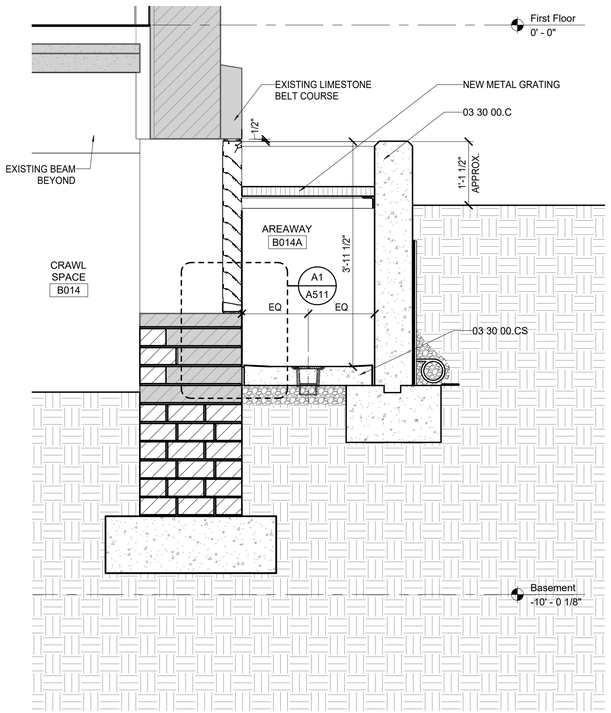


F1 WALL SECTION - AREAWAY

0 2' 4 FT



A1 SECTION @ AREAWAY B014A

0 2' 4 FT

MATERIAL KEYNOTES

03 30 00.C	Concrete
03 30 00.CS	Concrete Slab
04 20 00.B	BRICK
07 10 00.DL	Drainage Layer

LORD AECK SARGENT

REVISION:

LORD AECK SARGENT PLANNING & DESIGN, INC. LANDSCAPE ARCHITECTURAL CORPORATION CERT. NO. 53851 NORTH CAROLINA CHAPEL HILL

SHEET TITLE: WALL SECTIONS

SCALE (U.N.O.):

JOB NAME: University of North Carolina - Chapel Hill

SCD# 21-23548-02A UNC Project No. C21212

BINGHAM HALL RENOVATION

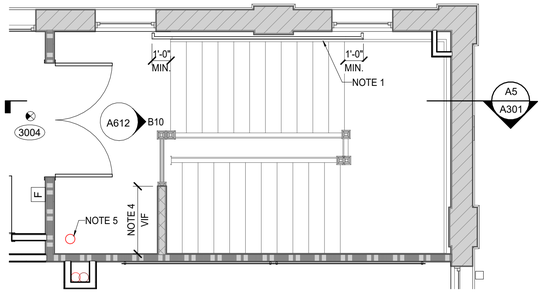
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

SEAL: Lauren Dunn Rockett, Registered Architect, 9574, North Carolina, Chapel Hill, NC, 01.08.2024

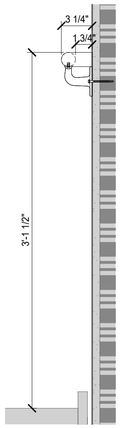
ISSUE DATE: 1/8/2023

JOB. NO.: 11706-00

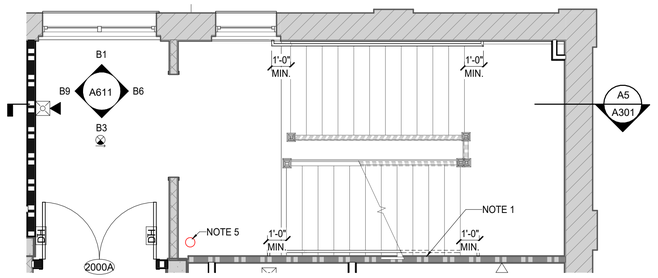
DWG. NO.: A221



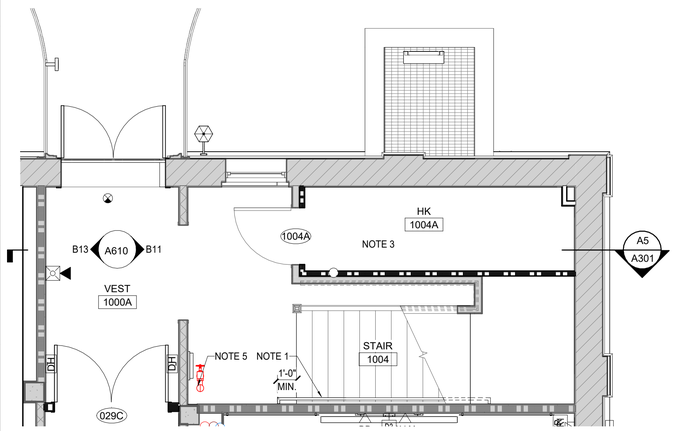
G1 North Stair - Third Floor Plan
0 4 8 FT



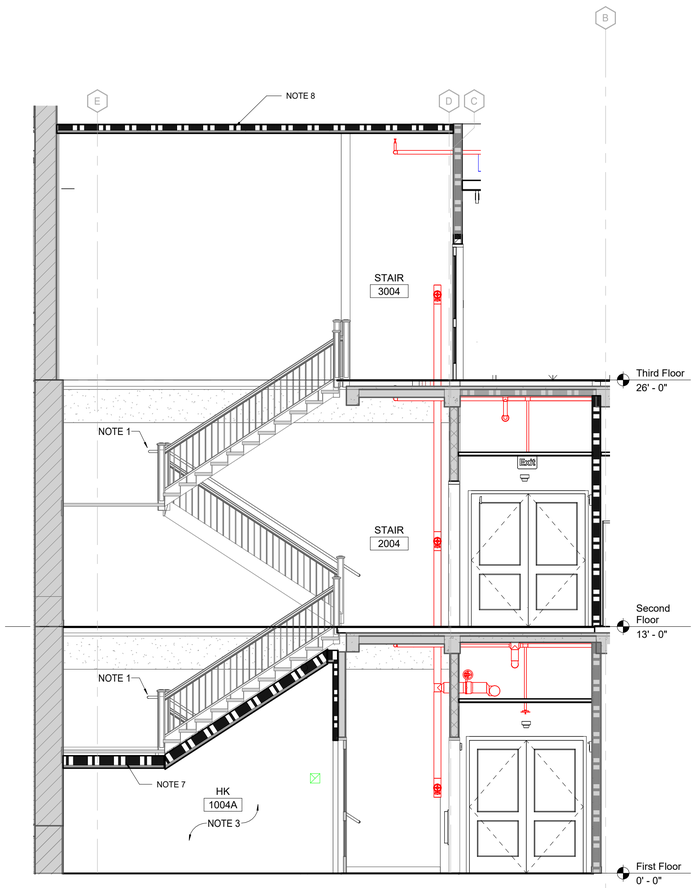
G5 DETAIL - METAL PIPE HAND RAIL
0 1 2 FT



D5 North Stair - Second Floor Plan
0 4 8 FT



A1 North Stair - First Floor Plan
0 4 8 FT



A5 North Stair - Section
0 4 8 FT

MATERIAL KEYNOTES

05 70 00.HRW HANDRAIL WALL MOUNTED

LEGEND

- 1 HR FIRE BARRIER
- 2 HR FIRE BARRIER
- FOUNDATION DRAIN
- WATERPROOFING
- R — RECYCLING
- T — TRASH
- INSTALL VAPOR BARRIER UNDER FLOOR FINISH
- D — DISPLAY
- GB — GLASSBOARD, 101101.GB1
- PS — PROJECTION SCREEN
- S — BLACKOUT SHADES
- EJ — EXPANSION JOINT
- TB — TACK BOARD, 101101.TB

GENERAL NOTES

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B. TYPICAL PARTITION TYPES ARE 0 S 55 G UNLESS NOTED OTHERWISE. REFER TO DIVISION 9 SPECIFICATIONS FOR ADDITIONAL INFORMATION.
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D. PENETRATIONS THROUGH FIRE RATED PARTITIONS ARE TO RECEIVE FIRESTOPPING MATERIAL.
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F. DOOR DIMENSIONS ARE TAKEN FROM FRAME TO CENTERLINE OF WALL OR COLUMN GRID.
G. REFER TO FINISH PLANS, INDIVIDUAL SPECIFICATIONS, AND ELEVATIONS FOR ALL FINISHES IN THESE SPACES.

SHEET SPECIFIC NOTES

1. NEW METAL PIPE HAND RAIL
2. NOT USED
3. EXISTING HOUSE KEEPING CLOSET TO REMAIN
4. NEW GUARDRAIL
5. STAND PIPE (SEE MEP DRAWINGS)
6. EXISTING STAIR CONSTRUCTION
7. BUILD NEW PARTITION PER UL I508 BELOW EXISTING STAIR CONSTRUCTION.
8.NEW CEILING CONSTRUCTED PER UL DETAIL I504

LORD AECK SARGENT

REVISION:

LORD AECK SARGENT PLANNING & DESIGN, INC. ARCHITECTURAL CORPORATION CERT. NO. 53851 NORTH CAROLINA CHAPEL HILL

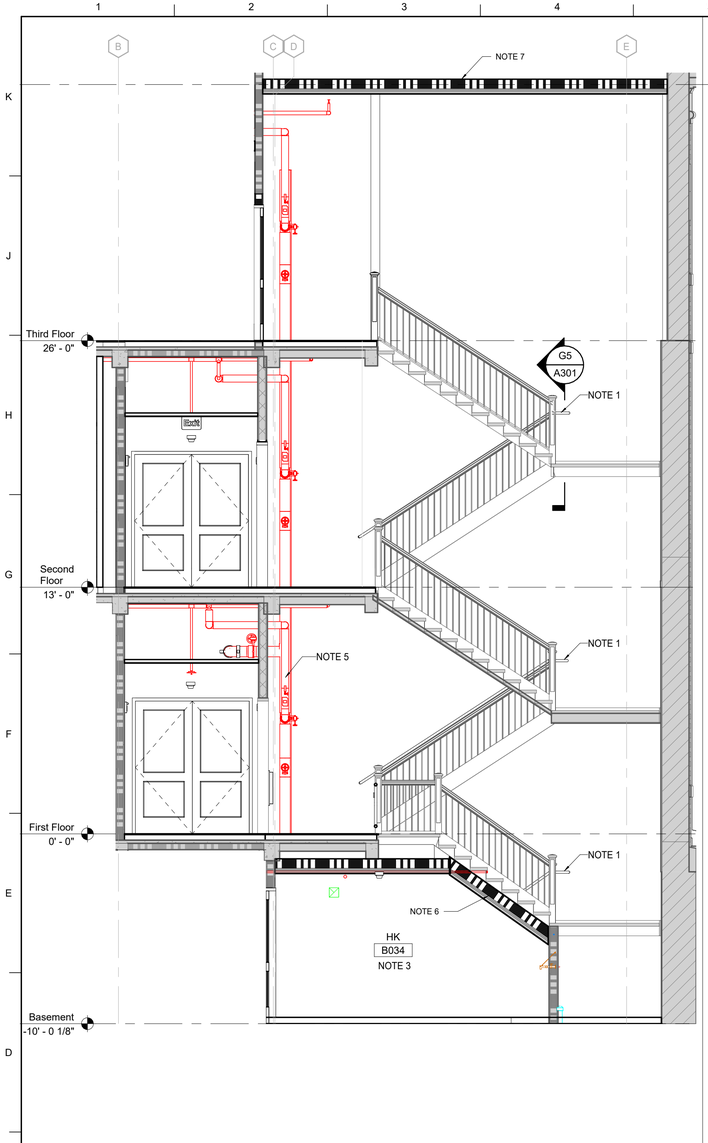
SHEET TITLE: VERTICAL CIRCULATION

SCALE (U.N.O.)

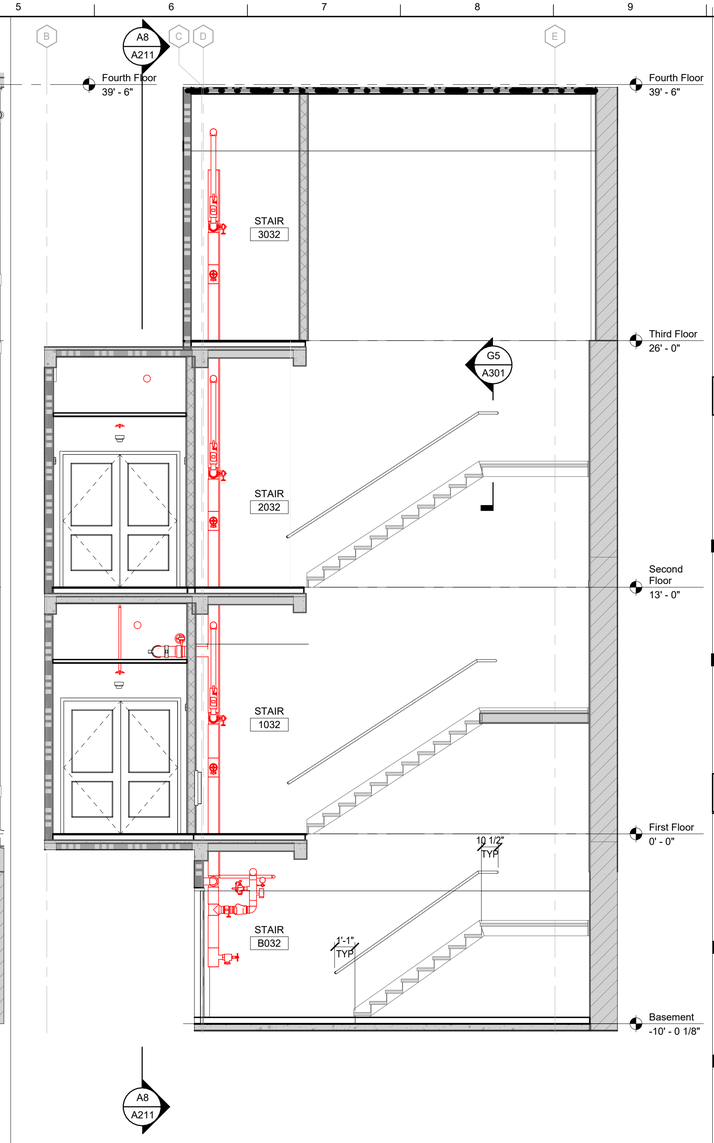
JOB NAME: University of North Carolina - Chapel Hill
SCM# 21-23548-02A UNC Project No. C01212
LOCATION: BINGHAM HALL RENOVATION
38 Lenoir Drive, Chapel Hill, NC 27514

SEAL: Lauren Dunn Rockart, Registered Architect, North Carolina, 39674, Chapel Hill, NC
01.08.2024

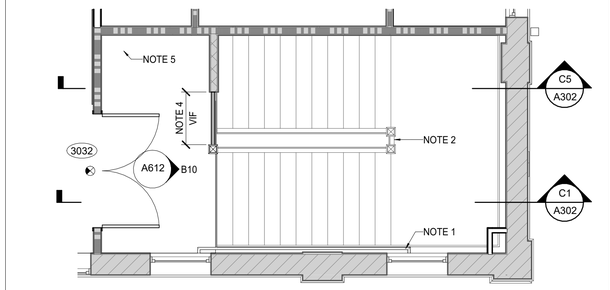
ISSUE DATE: 1/8/2023
JOB. NO.: 11706-00
DWG. NO.: A301



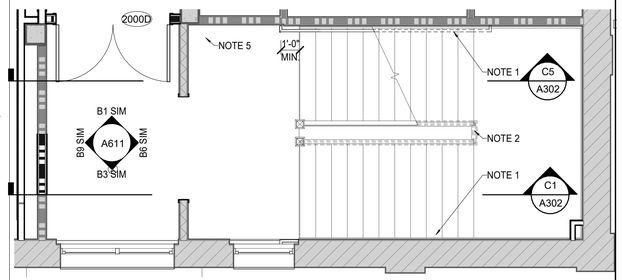
C1 South Stair - Section
0 4 8 FT



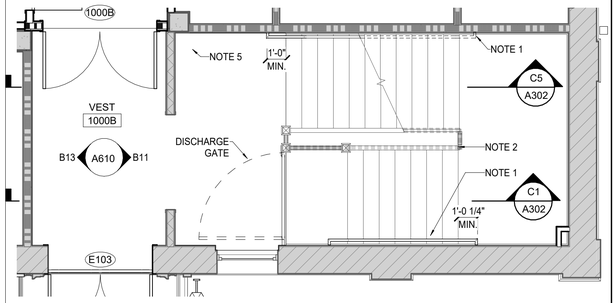
C5 South Stair - Section
0 4 8 FT



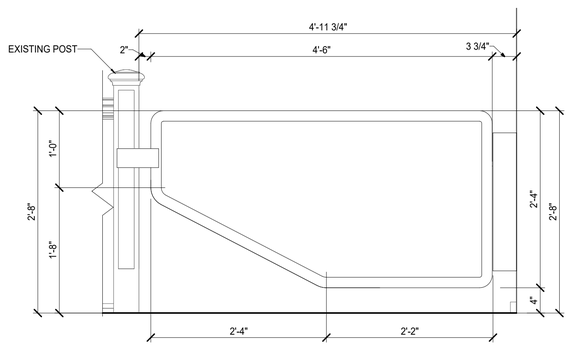
H10 South Stair - Thrid Floor Plan
0 4 8 FT



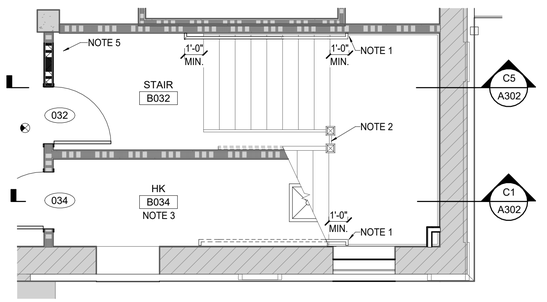
F10 South Stair - Second Floor Plan
0 4 8 FT



C10 South Stair - First Floor Plan
0 4 8 FT



A1 DISCHARGE GATE
0 1 2 FT



A10 South Stair - Basement Plan
0 4 8 FT

SHEET SPECIFIC NOTES

1. NEW METAL PIPE HAND RAIL
2. GUARD RAIL EXTENSION ON EXISTING RAILING CAP
3. EXISTING HOUSE KEEPING CLOSET TO REMAIN
4. NEW GUARDRAIL
5. STANDPIPE (SEE MEP DRAWINGS)
6. BUILD NEW PARTITION PER UL I514 BELOW EXISTING STAIR CONSTRUCTION.
7. NEW CEILING CONSTRUCTED PER UL DETAIL I514

LORD AECK SARGENT

REVISION:

LORD AECK SARGENT PLANNING & DESIGN, INC. — ARCHITECTURAL CORPORATION — CERT. NO. 53851 — NORTH CAROLINA — CHAPEL HILL

SHEET TITLE: VERTICAL CIRCULATION

SCALE (U.N.O.)

JOB NAME: University of North Carolina - Chapel Hill
SCI#: 21-23548-02A
UNC Project No. 021212
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

SEAL: Lauren Dunn Rockart, Registered Architect, 9074, North Carolina, Chapel Hill, NC
01.08.2024

ISSUE DATE: 1/8/2023
JOB. NO.: 11706-00
DWG. NO.: A302

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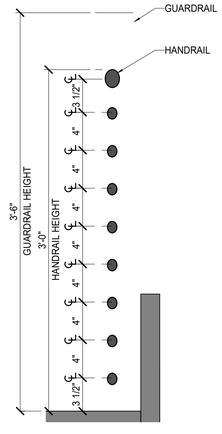
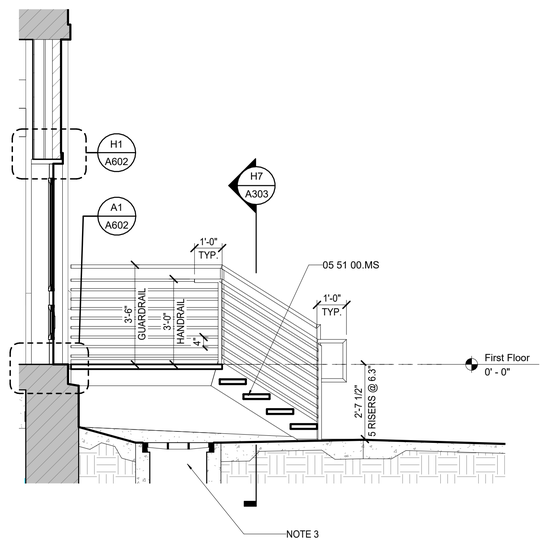
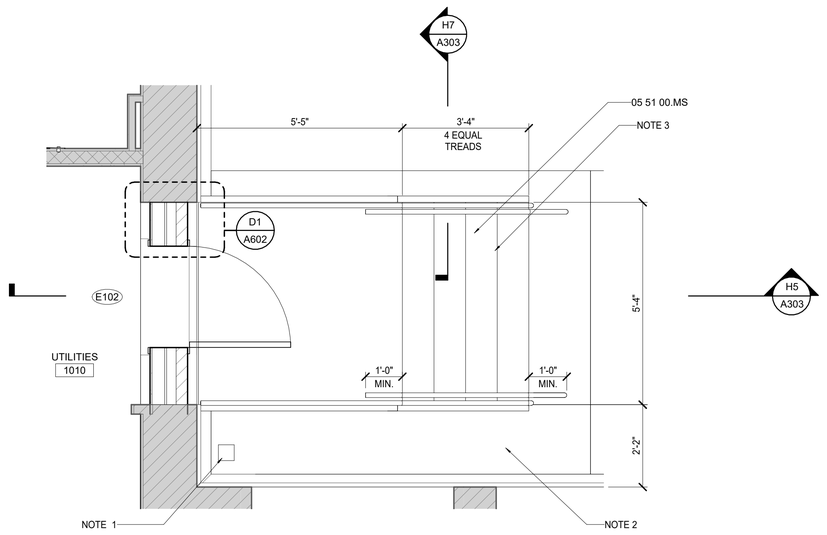


H7 DETAIL - GUARD
0 1 2 FT



H5 STAIR - SECTION
0 2 4 FT



H1 STAIR - FIRST FLOOR PLAN
0 2 4 FT

MATERIAL KEYNOTES

05 51 00.MS METAL STAIRS

GENERAL NOTES

A. WORK OF ENGINEERING DISCIPLINES IS SHOWN FOR COORDINATION AND CONVENIENCE ONLY. REFER TO APPROPRIATE DISCIPLINE DRAWINGS FOR COMPLETE AND GOVERNING INFORMATION REGARDING THE SCOPE OF WORK.
B. TYPICAL PARTITION TYPES ARE 0 S 55 G UNLESS NOTED OTHERWISE. REFER TO DIVISION 9 SPECIFICATIONS FOR ADDITIONAL INFORMATION.
C. ALL DIMENSIONS ARE MEASURED TO FINISH FACE FOR EXISTING PARTITIONS AND TO STUD FACE FOR NEW PARTITIONS U.N.O.
D. PENETRATIONS THROUGH FIRE RATED PARTITIONS ARE TO RECEIVE FIRESTOPPING MATERIAL.
E. PROVIDE IN-WALL BLOCKING AT ALL TV MONITOR, HUNG EQUIPMENT, AND HUNG CASEWORK/MILLWORK LOCATIONS.
F. DOOR DIMENSIONS ARE TAKEN FROM FRAME TO CENTERLINE OF WALL OR COLUMN GRID.
G. REFER TO FINISH PLANS, INDIVIDUAL SPECIFICATIONS, AND ELEVATIONS FOR ALL FINISHES IN THESE SPACES.

SHEET SPECIFIC NOTES

1. INSTALL DOWNSPOUT
2. INSTALL SLOPE PAD
3. NEW DROP INLET (SEE CIVIL DRAWINGS FOR MORE INFORMATION)

LORD AECK SARGENT

REVISION:

LORD AECK SARGENT PLANNING & DESIGN, INC. — ARCHITECTURAL CORPORATION — CERT. NO. 53851 — NORTH CAROLINA — CHAPEL HILL

SHEET TITLE: VERTICAL CIRCULATION
SCALE (U.N.O.)

JOB NAME: University of North Carolina - Chapel Hill
SCO#: 21-23548-02A
UNC Project No. C21212
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

SEAL: Lauren Dunn Rockett, Registered Architect, 9574, North Carolina, Chapel Hill, NC
01.08.2024

ISSUE DATE: 1/8/2023
JOB. NO.: 11706-00
DWG. NO.: A303

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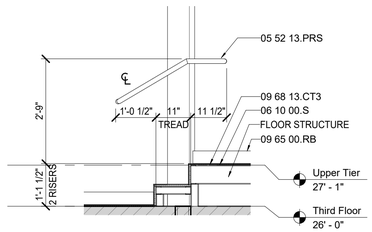
MATERIAL KEYNOTES

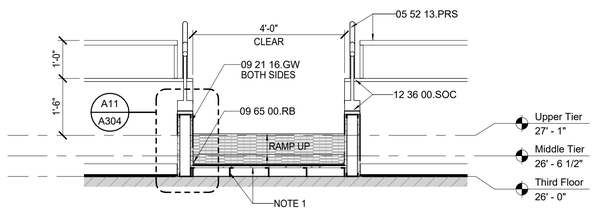
05 52 13.PRS	PIPE RAILING, STAINLESS STEEL
06 10 00.S	PLYWOOD SHEATHING
09 21 16.F	Framing
09 21 16.GW	Gypsum Wallboard
09 65 00.RB	Resilient Base
09 68 13.CT3	Carpet Tile 3 (Classrooms)
12 36 00.SOC	SOLID SURFACE COUNTERTOP

SHEET SPECIFIC NOTES

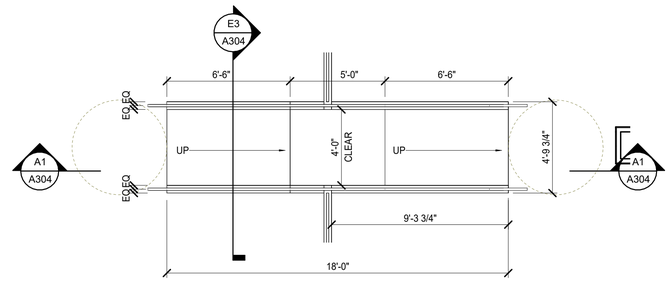
1. REFER TO STRUCTURAL DRAWINGS FOR STRUCTURE.



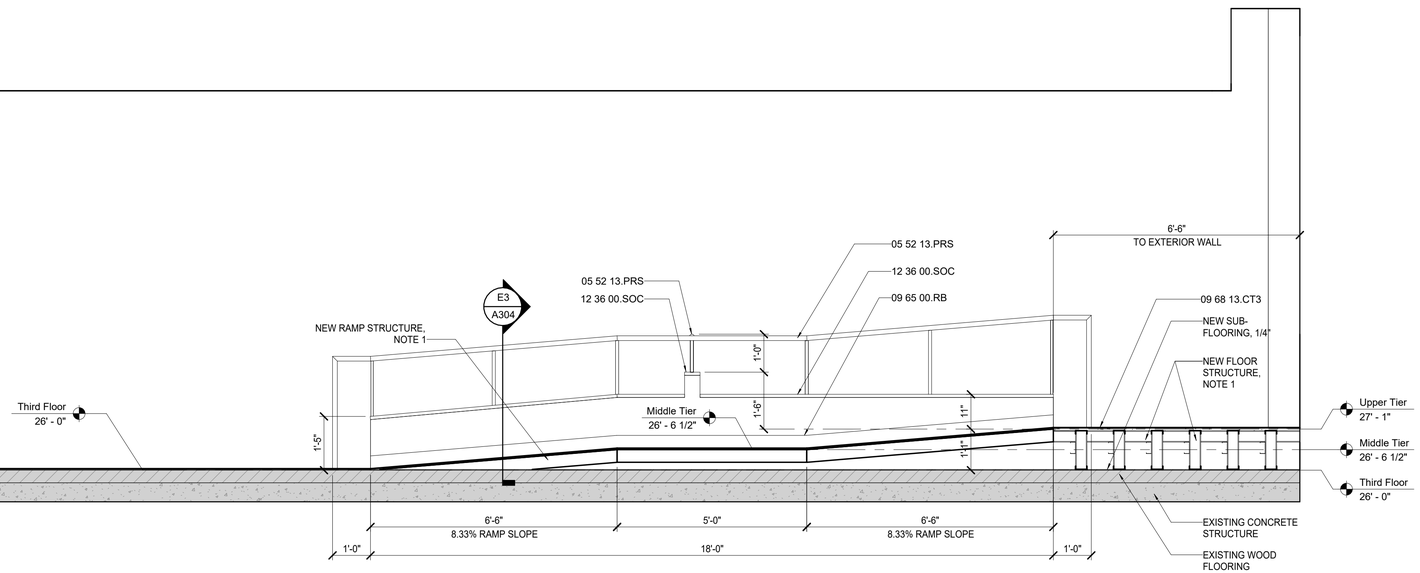
E1 CLASSROOM 3014 STAIR SECTION
0 2 4 FT



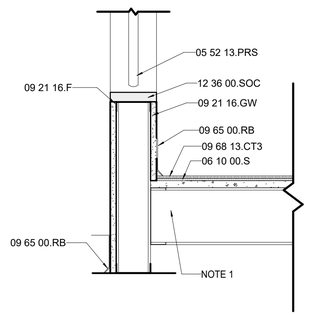
E3 CLASSROOM RAMP SECTION
0 2 4 FT



E9 CLASSROOM 3014 RAMP PLAN
0 4 8 FT



A1 CLASSROOM 3014 RAMP SECTION
0 2 4 FT



A11 RAMP WALL DETAIL
0 1 2 FT

REVISION:

LORD AECK SARGENT PLANNING & DESIGN, INC
ARCHITECTURAL CORPORATION
CERT. NO. 53851
NORTH CAROLINA
CHAPEL HILL

SHEET TITLE
VERTICAL CIRCULATION

SCALE (U.N.O.)

JOB NAME
University of North Carolina - Chapel Hill

SCI#: 21-23548-02A
UNC Project No: C21212
BINGHAM HALL RENOVATION

LOCATION
36 Lenoir Drive, Chapel Hill, NC 27514

SEAL
Lauren Dunn Rockett
Registered Architect
North Carolina
9874
Chapel Hill, NC
01.03.2024

ISSUE DATE
1/8/2023

JOB. NO.
11706-00

DWG. NO.
A304

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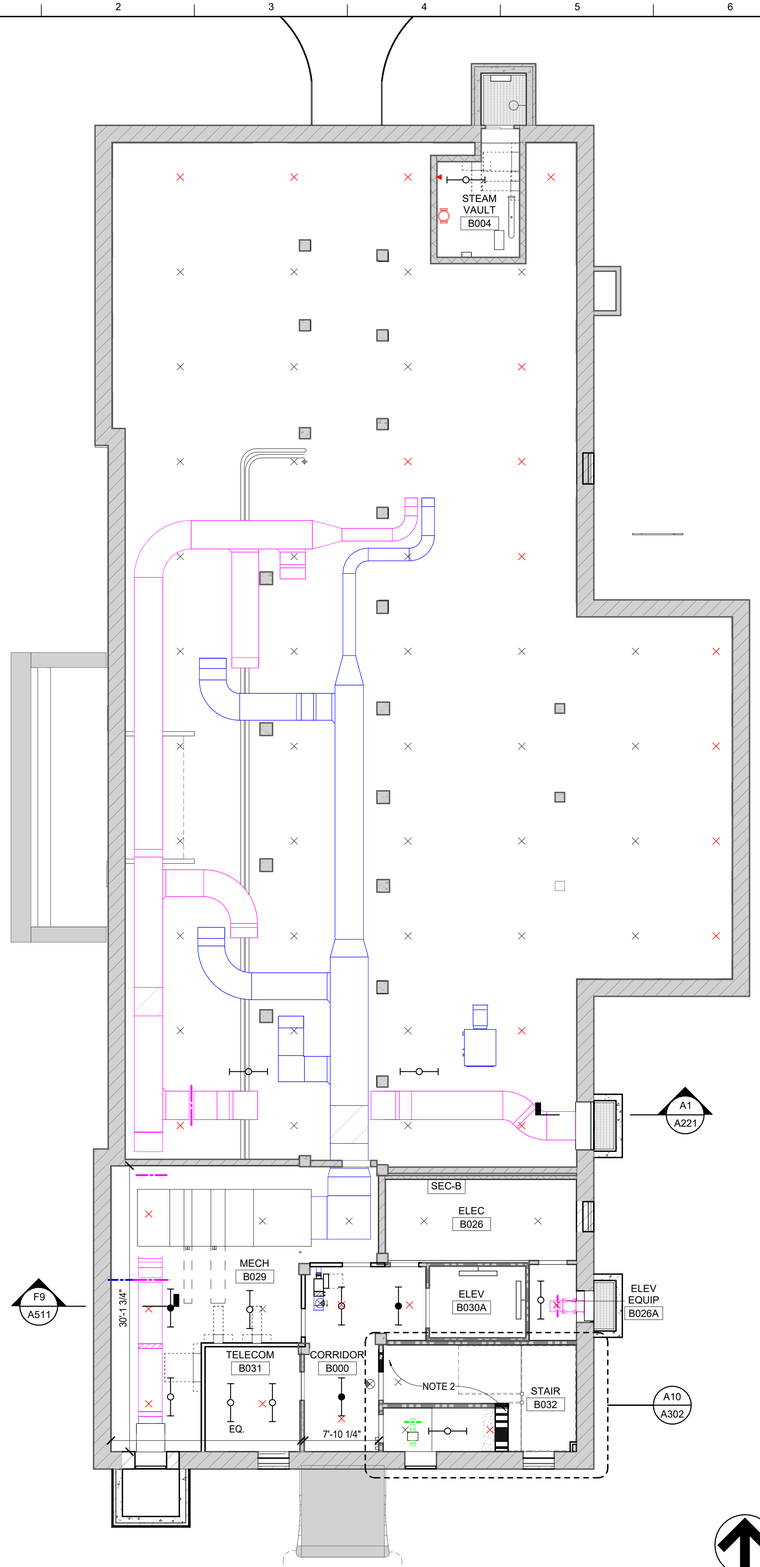
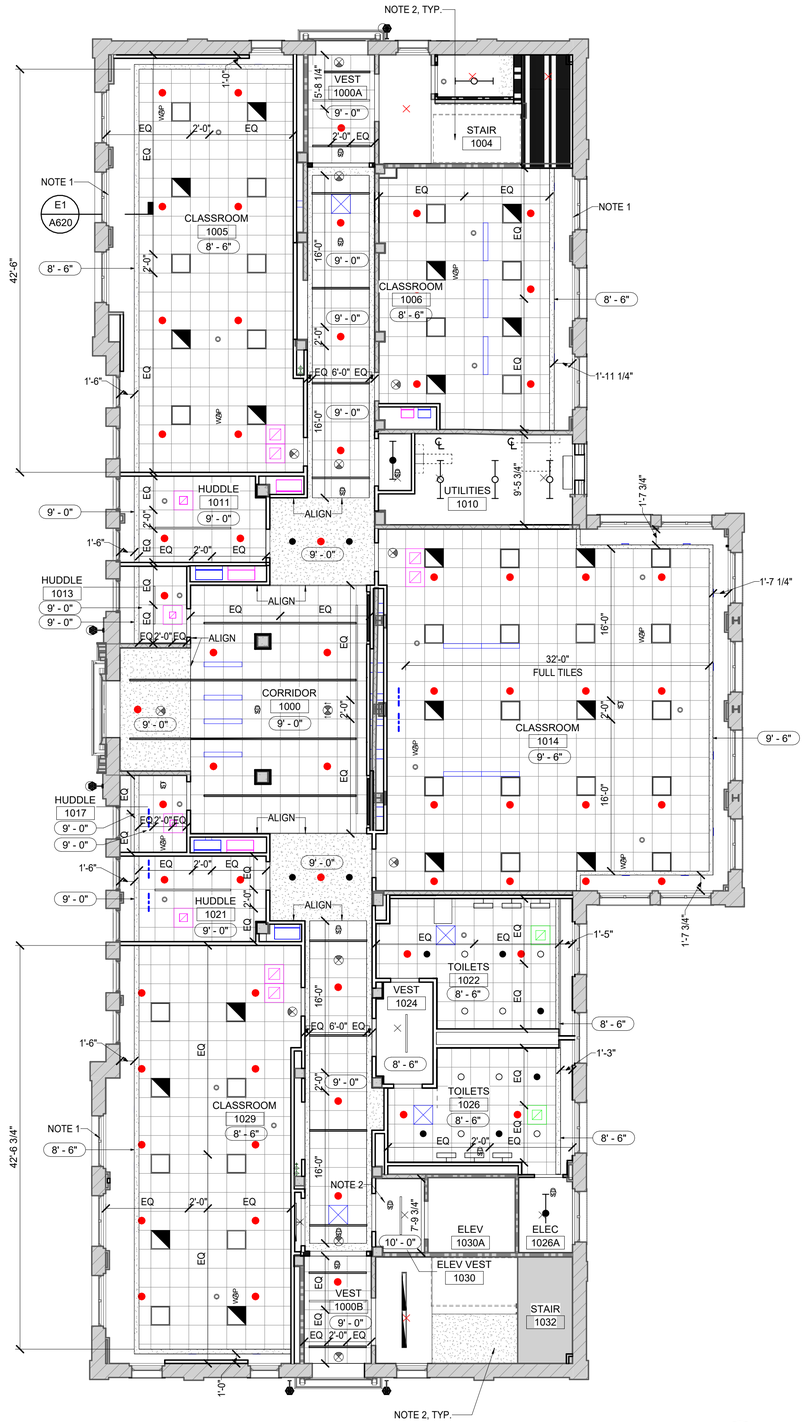


A1 BASEMENT REFLECTED CEILING PLAN

0 8 16 FT

PROJECT NORTH TRUE NORTH



A8 FIRST FLOOR REFLECTED CEILING PLAN

0 8 16 FT

PROJECT NORTH TRUE NORTH

LEGEND- RCP

- 2x2 SUSPENDED ACOUSTICAL CEILING; 095100.AC1
- 2x2 SUSPENDED ACOUSTICAL CEILING ; 095100.AC2
- GYP. BD. CEILING; PAINTED 099100.PC1.
- GYP. BD. CEILING WITH INSULATION BATTS ABOVE; PAINTED 099100.PC1.
- EXISTING OPEN CEILING; PATCH AND REPAIR AS REQUIRED
- LINEAR LIGHT FIXTURE
- 2x2 DIRECT/INDIRECT LIGHT FIXTURE
- 2x4 DIRECT/INDIRECT LIGHT FIXTURE
- SURFACE MOUNT LIGHT FIXTURE
- RECESSED CAN LIGHT
- UTILITY STRIP LIGHT
- WALL MOUNTED VANITY LIGHT
- SD SMOKE DETECTOR
- OCCUPANCY SENSOR
- WAP WIRELESS ACCESS POINT
- ST STROBE
- SPRINKLER
- SPRINKLER
- AIR RETURN
- AIR TERMINAL
- AIR TERMINAL

GENERAL NOTES - RCP

A. REFER TO PARTITION PLANS ON A101 & A102 FOR PLAN NOTES.
B. REFER TO ELECTRICAL DRAWINGS FOR LIGHTING FIXTURE TYPES AND DESCRIPTIONS.
C. OVERHEAD SYSTEMS THAT ARE EXPOSED TO VIEW ARE NOT SHOWN FOR REFERENCE. REFER TO MEP DRAWINGS FOR SYSTEMS.
D. ALL EXPOSED CEILINGS ARE TO BE PAINTED 099100.PC1 U.N.O.
E. ALL GYPSUM BOARD CEILINGS/SOFFITS ARE PAINTED 099100.PC1, U.N.O.
F. ALL LIGHT FIXTURES IN ROOMS WITH EXPOSED TO DECK CEILING ARE TO BE CENTERED IN THE ROOM U.N.O.
G. PROVIDE MANUAL WINDOW SHADE SYSTEM 1 AT ALL EXTERIOR WINDOWS UNLESS NOTED OTHERWISE. REFER TO SPECIFICATION SECTION 122413.

SHEET SPECIFIC NOTES

1. NOT USED.
2. EXISTING PLASTER COATING IS TO REMAIN. PATCH AND REPAIR AS REQUIRED.

LORD AECK SARGENT

REVISION:

LORD AECK SARGENT PLANNING & DESIGN, INC. ARCHITECTURAL CORPORATION CERT. NO. 53851 NORTH CAROLINA CHAPEL HILL

SHEET TITLE: BASEMENT & FIRST FLOOR REFLECTED CEILING PLAN

SCALE (U.N.O.)

JOB NAME: University of North Carolina - Chapel Hill
SCH# 21-235468-02A UNC Project No. C21212
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

BINGHAM HALL RENOVATION

SEAL: Lauren Dunn Rockett, Registered Architect, North Carolina, 9874, Chapel Hill, NC, 01.08.2024

ISSUE DATE: 1/8/2023
JOB. NO. 11706-00
DWG. NO. A401

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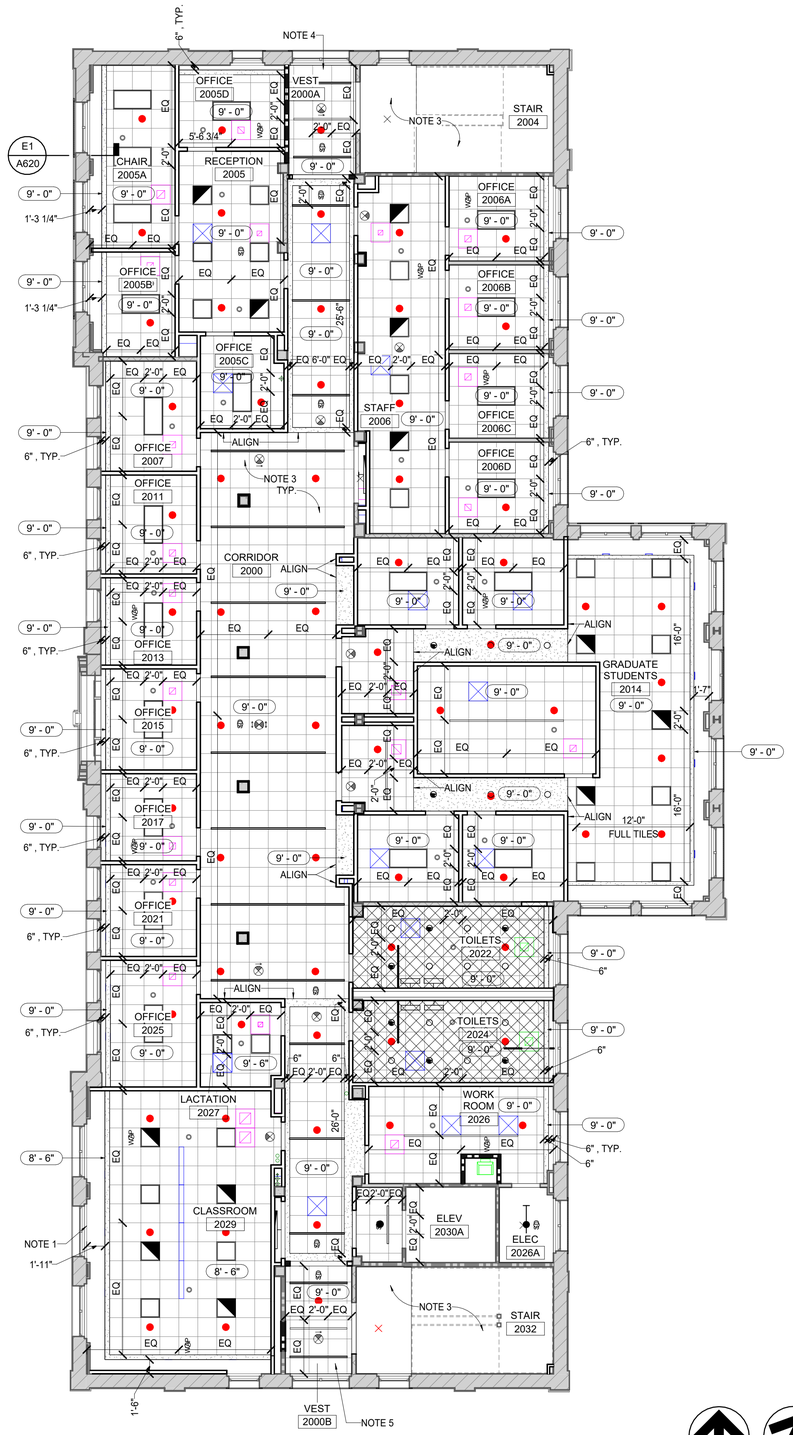

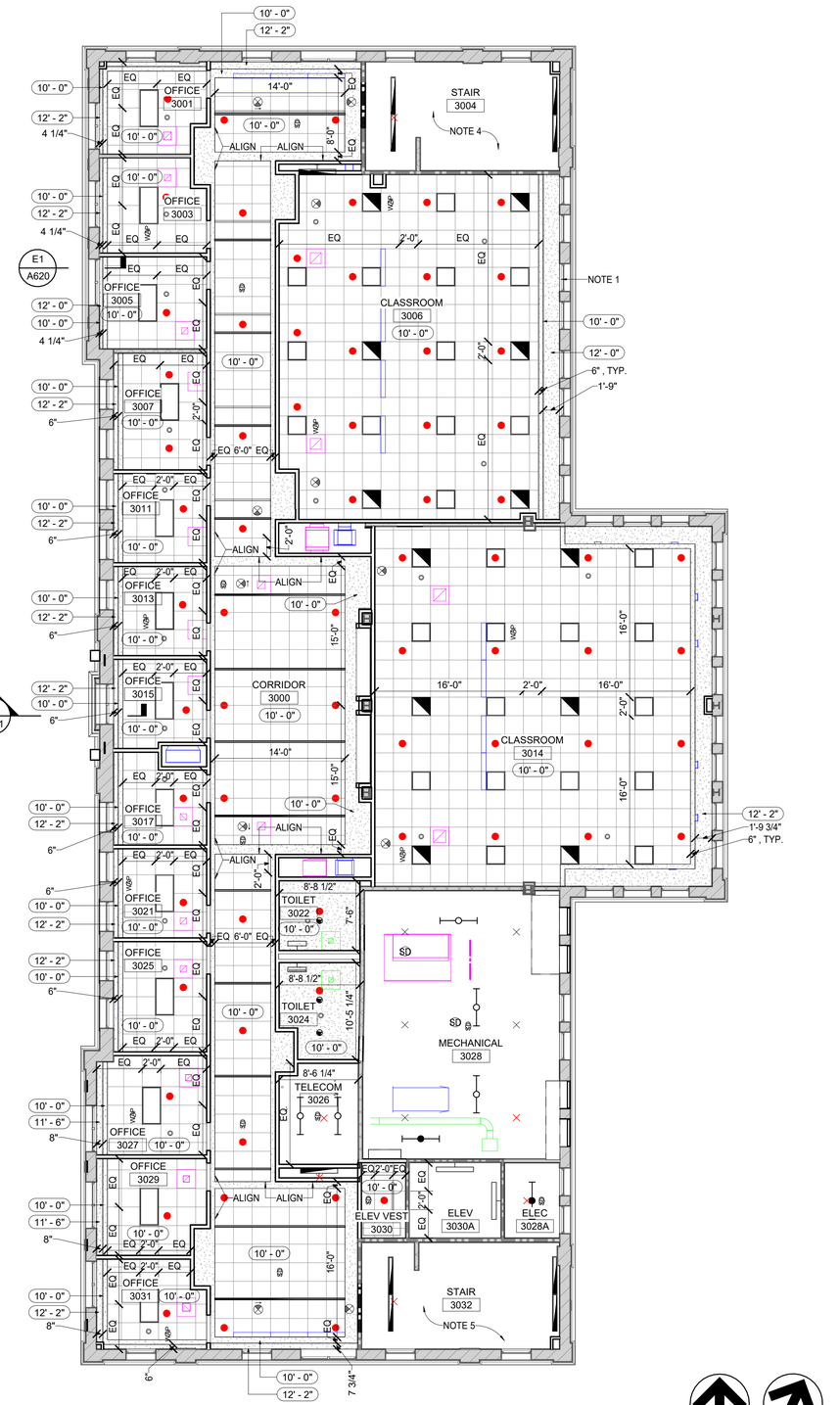

LEGEND- RCP

- 2x2 SUSPENDED ACOUSTICAL CEILING; 095100.AC1
- 2x2 SUSPENDED ACOUSTICAL CEILING ; 095100.AC2
- GYP. BD. CEILING; PAINTED 099100.PC1.
- GYP. BD. CEILING WITH INSULATION BATTS ABOVE; PAINTED 099100.PC1.
- EXISTING OPEN CEILING; PATCH AND REPAIR AS REQUIRED
- LINEAR LIGHT FIXTURE
- 2x2 DIRECT/INDIRECT LIGHT FIXTURE
- 2x4 DIRECT/INDIRECT LIGHT FIXTURE
- SURFACE MOUNT LIGHT FIXTURE
- RECESSED CAN LIGHT
- UTILITY STRIP LIGHT
- WALL MOUNTED VANITY LIGHT
- SD SMOKE DETECTOR
- OCCUPANCY SENSOR
- WAP WIRELESS ACCESS POINT
- ST STROBE
- SPRINKLER
- SPRINKLER
- AIR RETURN
- AIR TERMINAL
- AIR TERMINAL

GENERAL NOTES - RCP

A. REFER TO PARTITION PLANS ON A101 & A102 FOR PLAN NOTES.
B. REFER TO ELECTRICAL DRAWINGS FOR LIGHTING FIXTURE TYPES AND DESCRIPTIONS.
C. OVERHEAD SYSTEMS THAT ARE EXPOSED TO VIEW ARE NOT SHOWN FOR REFERENCE. REFER TO MEP DRAWINGS FOR SYSTEMS.
D. ALL EXPOSED CEILINGS ARE TO BE PAINTED 099100.PC1 U.N.O.
E. ALL GYPSUM BOARD CEILINGS/SOFFITS ARE PAINTED 099100.PC1, U.N.O.
F. ALL LIGHT FIXTURES IN ROOMS WITH EXPOSED TO DECK CEILING ARE TO BE CENTERED IN THE ROOM U.N.O.
G. PROVIDE MANUAL WINDOW SHADE SYSTEM 1 AT ALL EXTERIOR WINDOWS UNLESS NOTED OTHERWISE. REFER TO SPECIFICATION SECTION 122413.

SHEET SPECIFIC NOTES

1. PROVIDE MANUAL SHADE SYSTEM 2. REFER TO SPECIFICATION SECTION 012413.
2. GYP FINISHED FACE CEILING IS TO BE PAINTED AN ACCENT COLOR. COLOR TO BE SELECTED BY ARCHITECT/DESIGNER.
3. EXISTING PLASTER COATING IS TO REMAIN. PATCH AND REPAIR AS REQUIRED.
4. PROVIDE 1-HR HORIZONTAL RATED CONSTRUCTION PER UL DETAIL #I504
5. PROVIDE 2-HR HORIZONTAL RATED CONSTRUCTION PER UL DETAIL #I514

PROJECT NORTH TRUE NORTH

A1 SECOND FLOOR REFLECTED CEILING PLAN
0 8 16 FT

PROJECT NORTH TRUE NORTH

A8 THIRD FLOOR REFLECTED CEILING PLAN
0 8 16 FT

LORD AECK SARGENT

REVISION:

LORD AECK SARGENT PLANNING & DESIGN, INC. LANDSCAPE ARCHITECTURAL CORPORATION CERT. NO. 53851 NORTH CAROLINA CHAPEL HILL

SHEET TITLE: SECOND & THIRD FLOOR REFLECTED CEILING PLAN
SCALE (U.N.O.)

JOB NAME: University of North Carolina - Chapel Hill
SCH#: 21-23548-02A
UNC Project No. C21212
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

SEAL: Lauren Dunn Rockett, Registered Architect, 9874, North Carolina, Chapel Hill, NC, 01.08.2024

ISSUE DATE: 1/8/2023
JOB. NO.: 11706-00
DWG. NO.: A402

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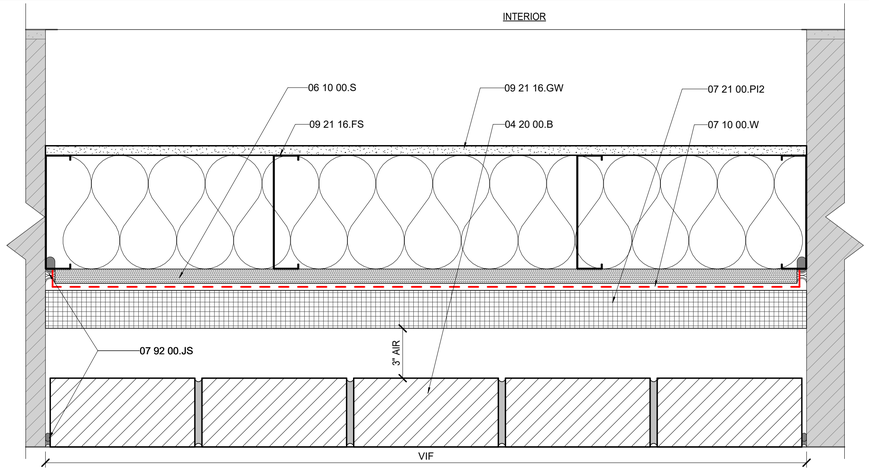
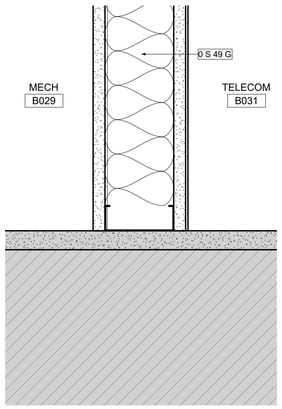
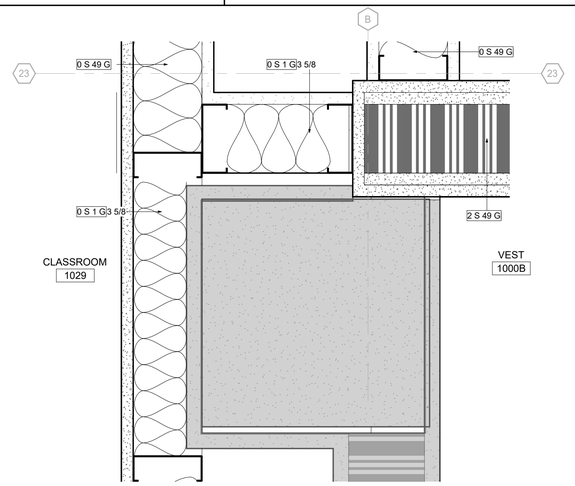


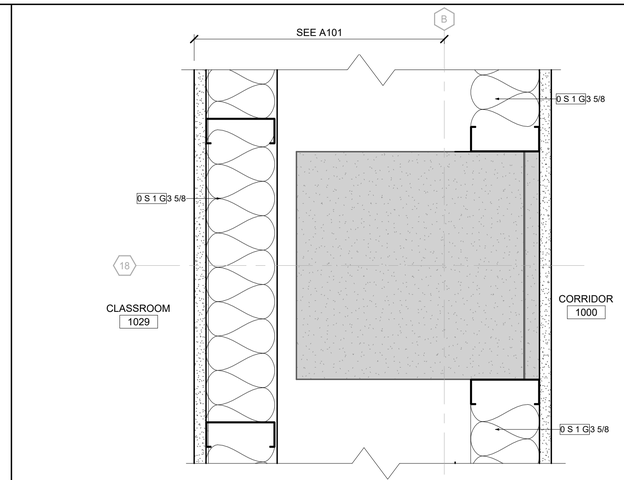
G1 BASEMENT ENLARGED PLAN - E.5
0 6 12 IN



D1 BASEMENT ENLARGED PLAN - AA.23
0 6 12 IN



D5 FIRST FLOOR ENLARGED PLAN - B.23
0 6 12 IN



D9 FIRST FLOOR ENLARGED PLAN - B.18
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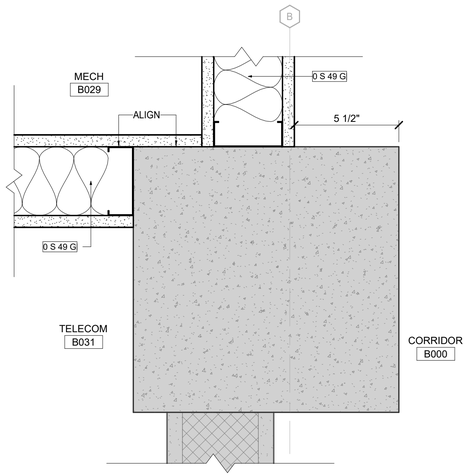

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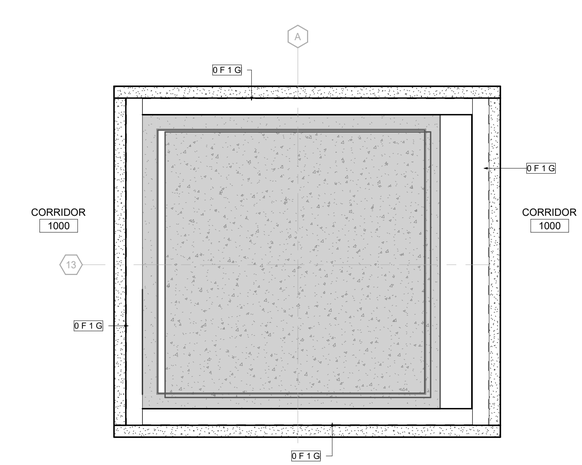
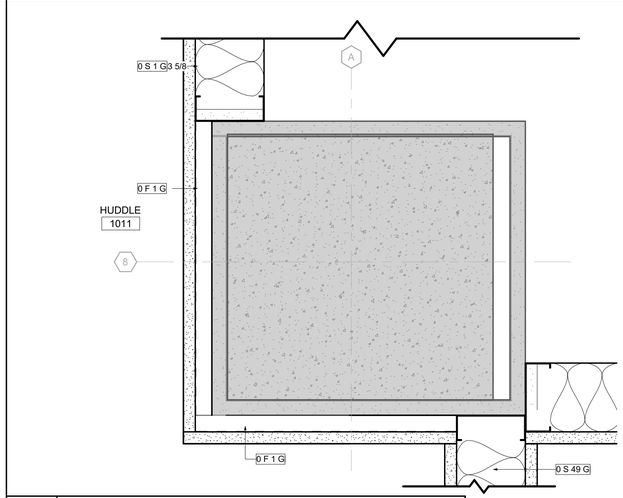


A5 FIRST FLOOR ENLARGED PLAN - A.13 AND A.11 SIM
0 6 12 IN



A9 FIRST FLOOR ENLARGED PLAN - A.8 AND A.16 SIM
0 6 12 IN

MATERIAL KEYNOTES

04 20 00.B	BRICK
06 10 00.S	PLYWOOD SHEATHING
07 10 00.W	Waterproofing Membrane
07 21 00.PI2	2" POLYISOCYANURATE INSULATION
07 92 00.JS	Joint Sealant
09 21 16.FS	Metal Stud
09 21 16.GW	Gypsum Wallboard

LORD AECK SARGENT

REVISION:

LORD AECK SARGENT PLANNING & DESIGN, INC. ARCHITECTURAL CORPORATION
CERT. NO. 53851
NORTH CAROLINA
CHAPEL HILL

SHEET TITLE
PLAN DETAILS
SCALE (U.N.O.)

JOB NAME
University of North Carolina - Chapel Hill
SCH# 21-235459-02A UNC Project No. C21212
BINGHAM HALL RENOVATION
LOCATION
36 Lenoir Drive, Chapel Hill, NC 27514

SEAL
Lauren Dunn Rockett
Registered Architect
9874
North Carolina
Chapel Hill, NC
01·03·2024

ISSUE DATE
1/8/2023
JOB. NO.
11706-00
DWG. NO.
A501

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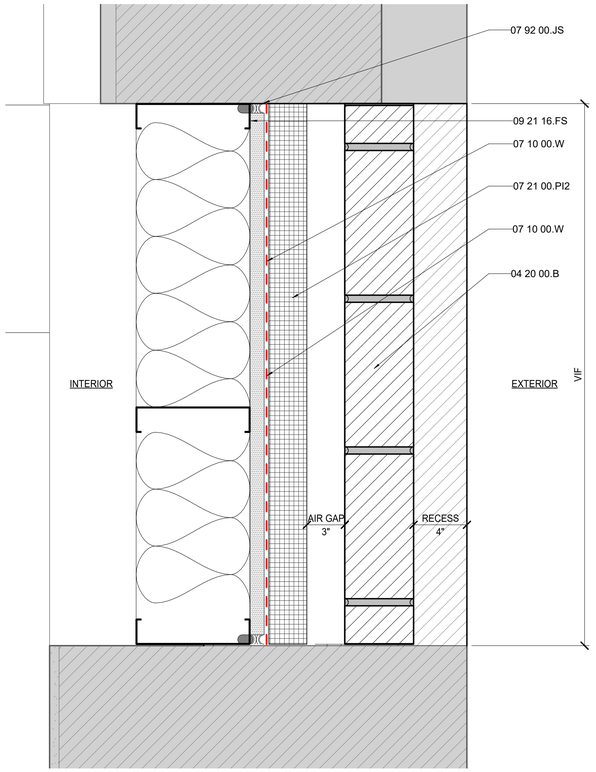
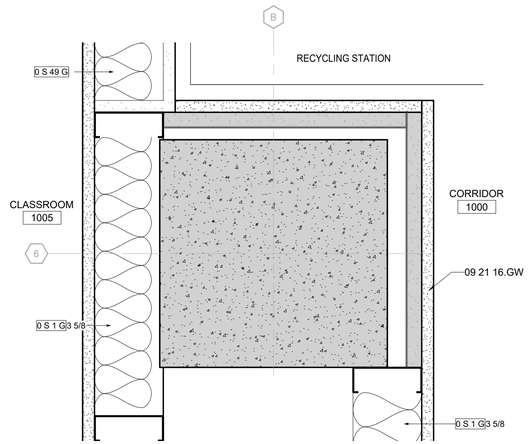
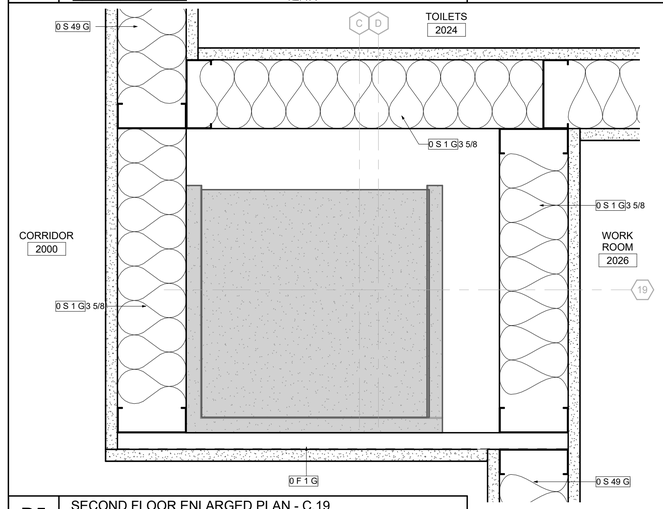


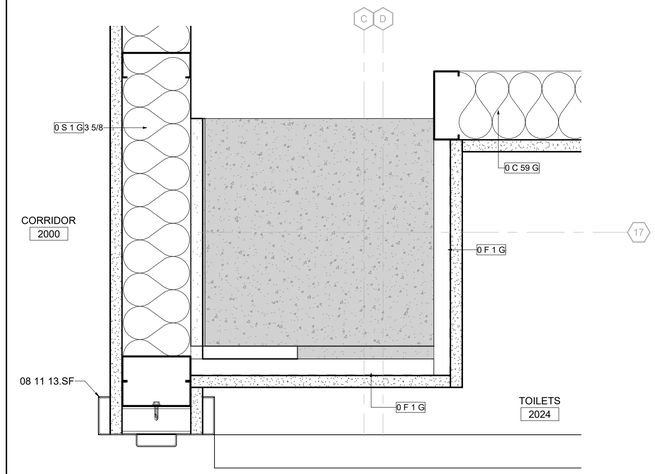
D1 RECESSED INFILL SECTION DTL - A.23
0 6 12 IN



G5 FIRST FLOOR ENLARGED PLAN - B.6
0 6 12 IN



D5 SECOND FLOOR ENLARGED PLAN - C.19
0 6 12 IN



D9 SECOND FLOOR ENLARGED PLAN - C.17
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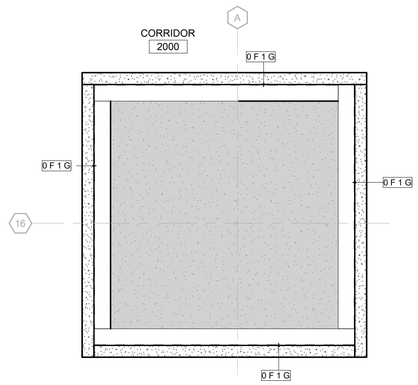
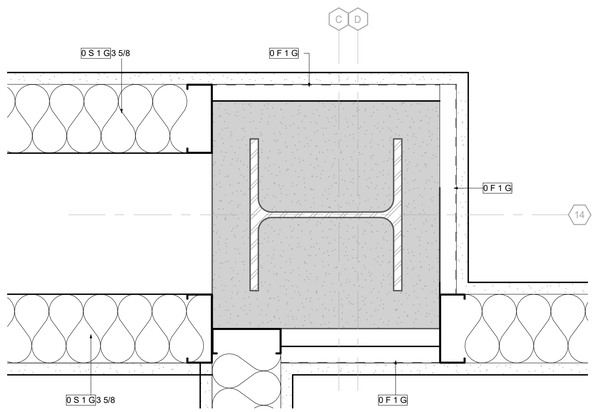
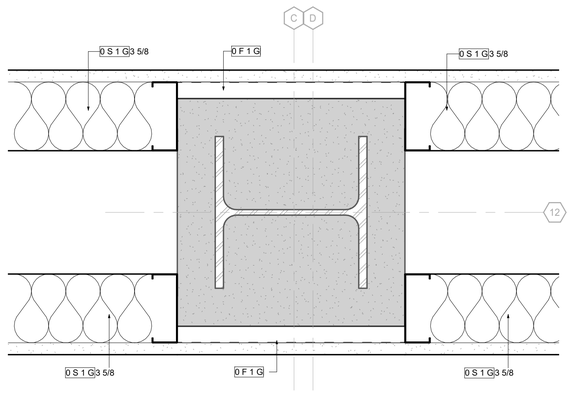


A1 SECOND FLOOR ENLARGED PLAN - A.16 (TYPICAL)
0 6 12 IN



A5 SECOND FLOOR ENLARGED PLAN - D.14 AND D.10 SIM
0 6 12 IN



A9 SECOND FLOOR ENLARGED PLAN - D.12
0 6 12 IN

MATERIAL KEYNOTES

04 20 00.B	BRICK
07 10 00.W	Waterproofing Membrane
07 21 00.PI2	2" POLYISOCYANURATE INSULATION
07 92 00.JS	Joint Sealant
08 11 13.SF	Steel Frame
09 21 16.FS	Metal Stud
09 21 16.GW	Gypsum Wallboard

LORD AECK SARGENT

REVISION:

LORD AECK SARGENT PLANNING & DESIGN, INC. ARCHITECTURAL CORPORATION CERT. NO. 53851 NORTH CAROLINA CHAPEL HILL

SHEET TITLE: PLAN DETAILS
SCALE (U.N.O.)

JOB NAME: University of North Carolina - Chapel Hill
UNC Project No. C01212
SCOM: 21-23548-02A
BINGHAM HALL RENOVATION
LOCATION: 38 Lenoir Drive, Chapel Hill, NC 27514

SEAL: Lauren Dunn Rockart, Registered Architect, North Carolina, 39674, Chapel Hill, NC, 01.08.2024

ISSUE DATE: 1/8/2023
JOB. NO.: 11706-00
DWG. NO.: A502

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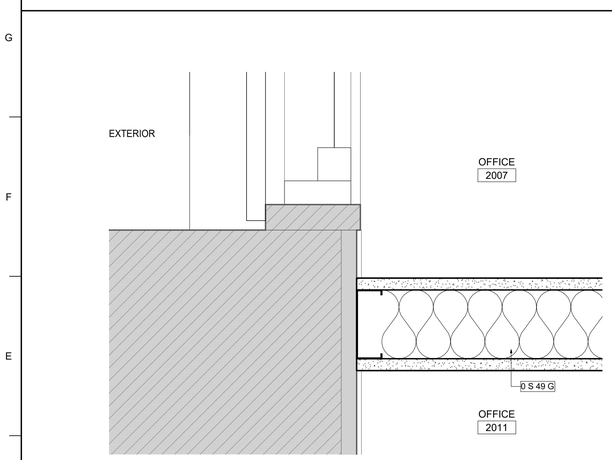
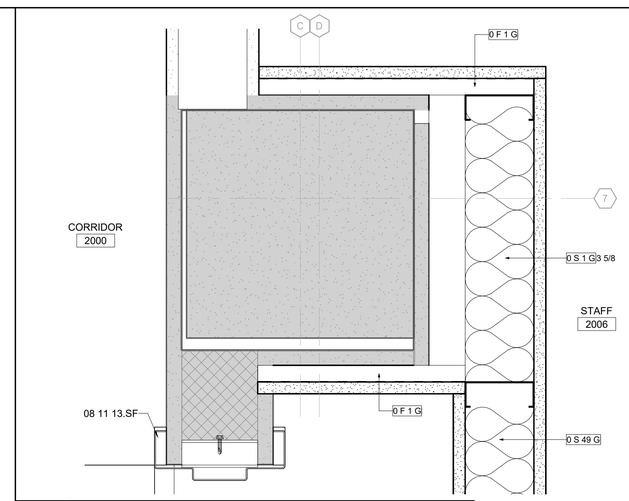
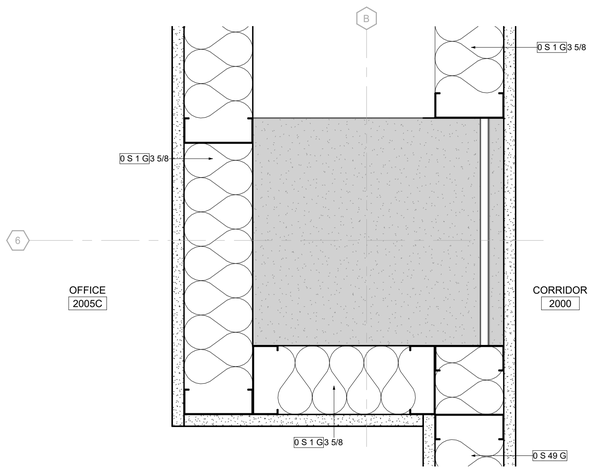


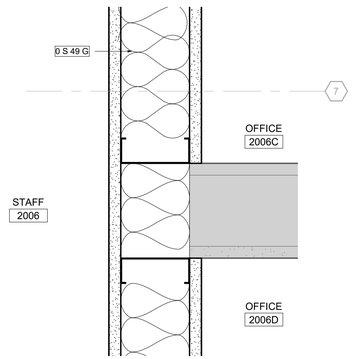
D1 SECOND FLOOR ENLARGED PLAN - A.8
0 6 12 IN



D5 SECOND FLOOR ENLARGED PLAN - D.7
0 6 12 IN



A1 SECOND FLOOR ENLARGED PLAN - B.6
0 6 12 IN



A5 SECOND FLOOR ENLARGED PLAN - E.7 AND TYPICAL
0 6 12 IN

MATERIAL KEYNOTES

08 11 13.SF Steel Frame

LORD AECK SARGENT

REVISION:

LORD AECK SARGENT PLANNING & DESIGN INC
ARCHITECTURAL CORPORATION
CERT. NO. 53851
NORTH CAROLINA
CHAPEL HILL

SHEET TITLE
PLAN DETAILS

SCALE (U.N.O.)
0 4 8 FT

JOB NAME
University of North Carolina - Chapel Hill

UNC Project No. 021212
SCI#: 21-23548-02A
BINGHAM HALL RENOVATION

LOCATION
36 Lenoir Drive, Chapel Hill, NC 27514

SEAL
Lauren Dunn Rockett
Registered Architect
9074
North Carolina
Chapel Hill, NC
01.08.2024

ISSUE DATE
1/8/2023

JOB. NO.
11706-00

DWG. NO.
A503

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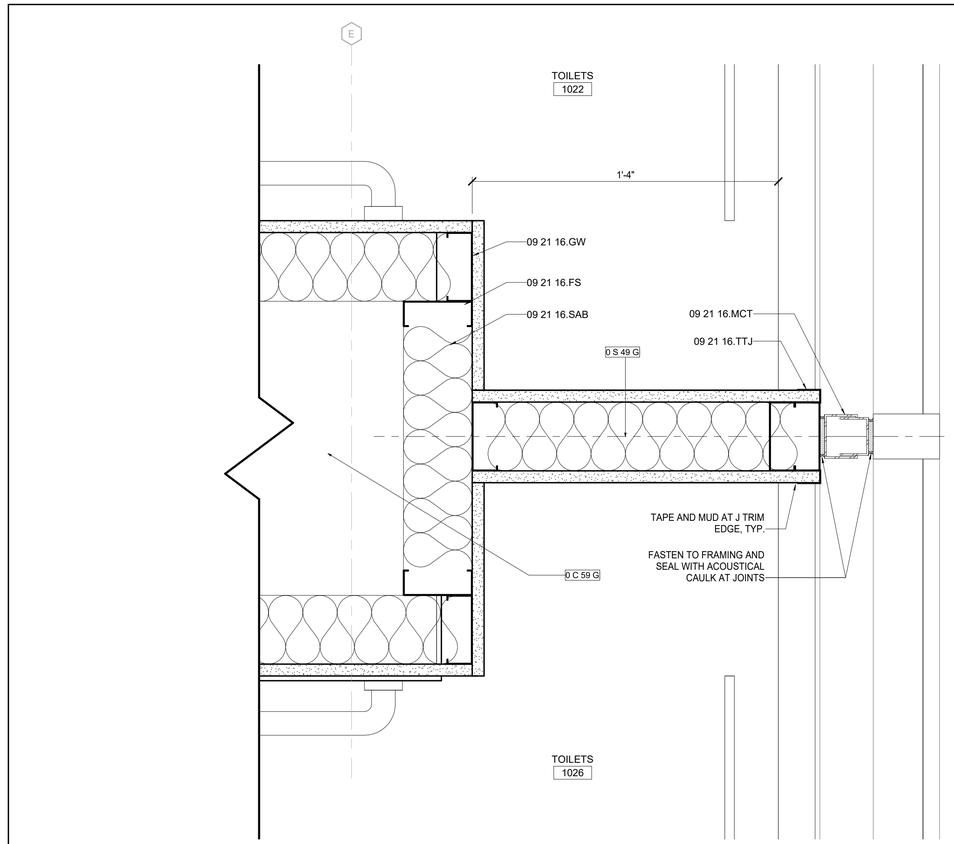

A7 FIRST FLOOR ENLARGED PLAN - D.19

0 6 12 IN

MATERIAL KEYNOTES

09 21 16.FS	Metal Stud
09 21 16.GW	Gypsum Wallboard
09 21 16.MCT	Mullion to Partition Connection Trim
09 21 16.SAB	Sound Attenuation Batt
09 21 16.TTJ	J Trim

LORD AECK SARGENT

REVISION:

LORD AECK SARGENT PLANNING & DESIGN, INC. — ARCHITECTURAL CORPORATION — CERT. NO. 53851 — NORTH CAROLINA — CHAPEL HILL

SHEET TITLE: PLAN DETAILS

SCALE (U.N.O.)

JOB NAME: University of North Carolina - Chapel Hill

SCI#: 21-23548-02A UNC Project No. C01212

BINGHAM HALL RENOVATION

LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

SEAL: Lauren Dunn Rockey, Registered Architect, 9574, North Carolina, Chapel Hill, NC — 01.08.2024

ISSUE DATE: 1/8/2023

JOB. NO.: 11706-00

DWG. NO.: A504

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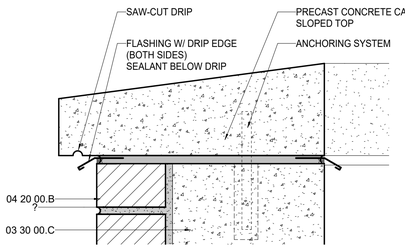
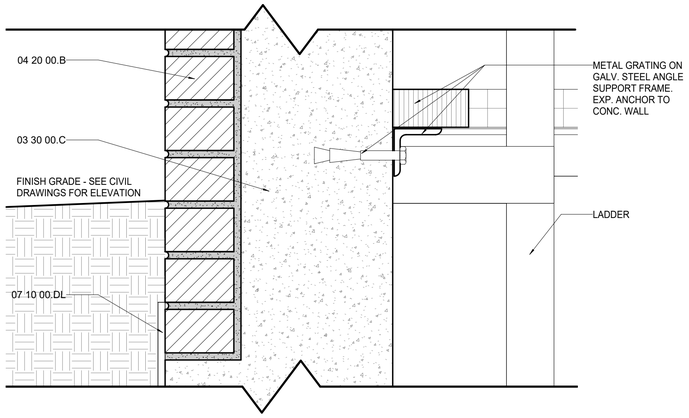
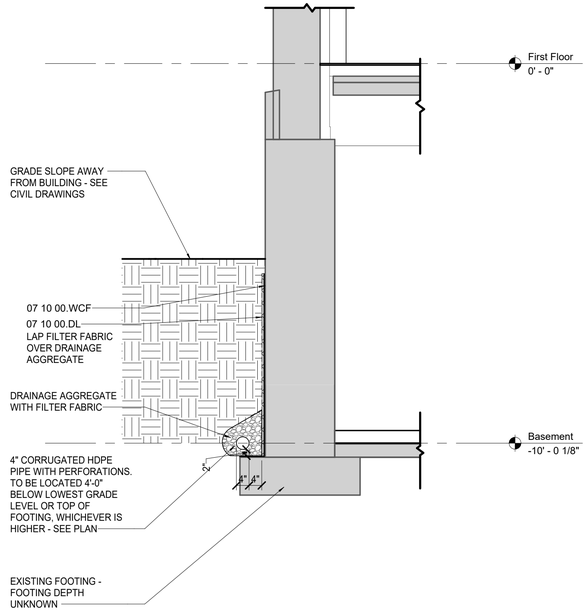


F1 ENLARGED DETAIL - AREAWAY B029A
0 6 12 IN



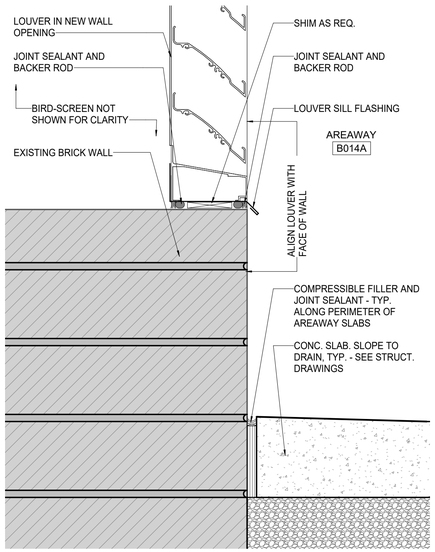
F4 ENLARGED DETAIL - AREAWAY B029A
0 6 12 IN



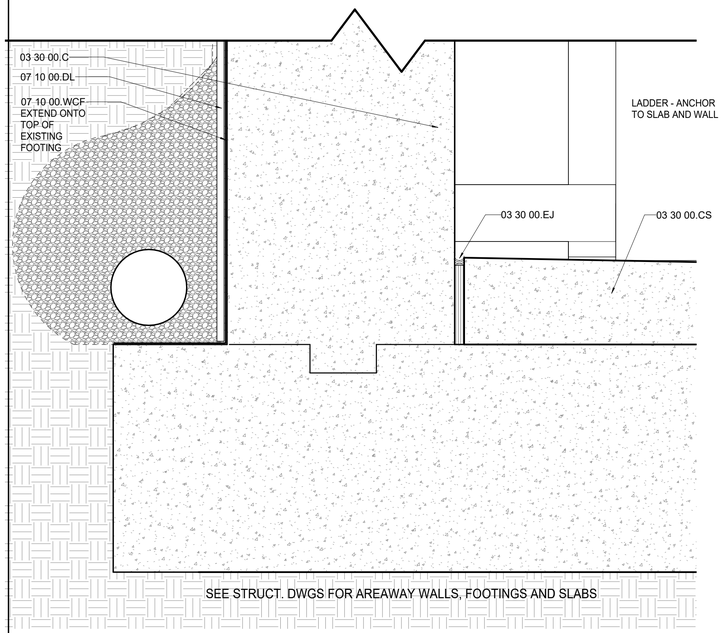
F9 WATERPROOFING AT EXISTING WALL
0 2 4 FT

MATERIAL KEYNOTES

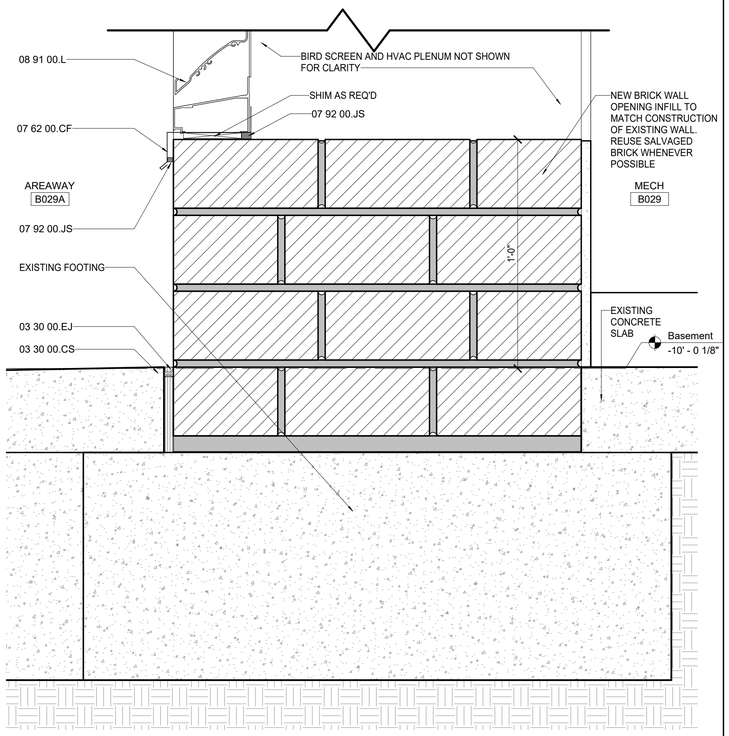
03 30 00.C	Concrete
03 30 00.CS	Concrete Slab
03 30 00.EJ	Expansion Joint
04 20 00.B	BRICK
07 10 00.DL	Drainage Layer
07 10 00.WCF	Cold Fluid-Applied Waterproofing
07 62 00.CF	COPPER SHEET METAL FLASHING
07 92 00.JS	Joint Sealant
08 91 00.L	LOUVER



A1 ENLARGED DETAIL - LOUVER
0 1 2 FT



A4 ENLARGED DETAIL - AREAWAY B029A
0 6 12 IN



A9 ENLARGED DETAIL - AREAWAY B029A
0 6 12 IN

REVISION:

LORD AECK SARGENT PLANNING & DESIGN INC. ARCHITECTURAL CORPORATION CERT. NO. 53851 NORTH CAROLINA CHAPEL HILL

SEAL
Lauren Dunn Rockett Registered Architect 9574 North Carolina Chapel Hill, NC
01.08.2024

ISSUE DATE
1/8/2023
JOB. NO.
11706-00
DWG. NO.
A511

SHEET TITLE
EXTERIOR DETAILS
SCALE (U.N.O.)

JOB NAME
University of North Carolina - Chapel Hill
SCO#: 21-235482-02A
UNC Project No. C21212
BINGHAM HALL RENOVATION
LOCATION
36 Lenoir Drive, Chapel Hill, NC 27514

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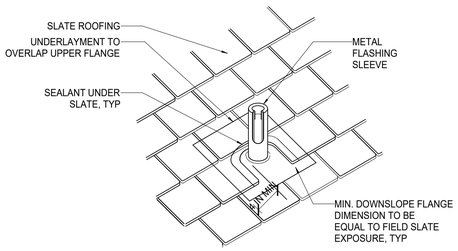
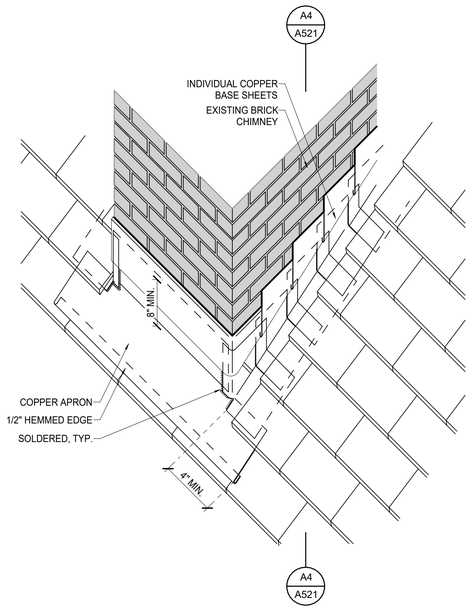


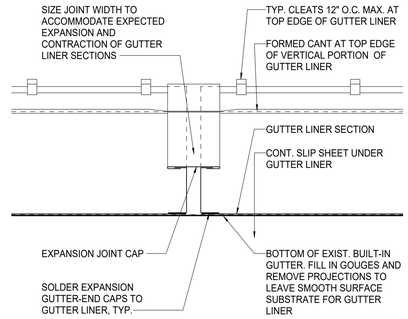
F1 TYPICAL PIPE PENETRATION @ SLATE ROOF

0 1 2 FT



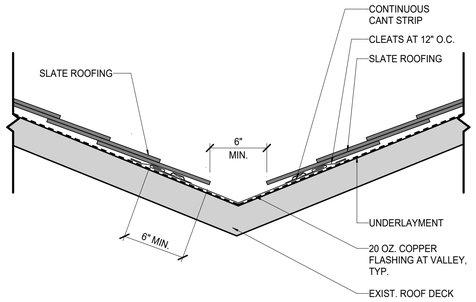
F4 DETAIL - BRICK CHIMNEY STEP FLASHING

0 1 2 FT



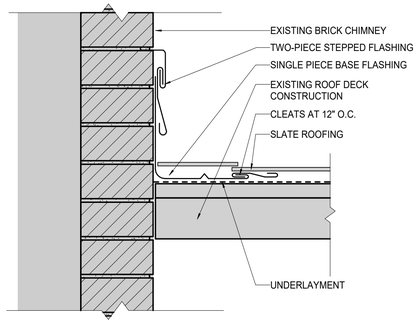
F8 GUTTER LINER TYPICAL EXPANSION JOINT

0 1 2 FT



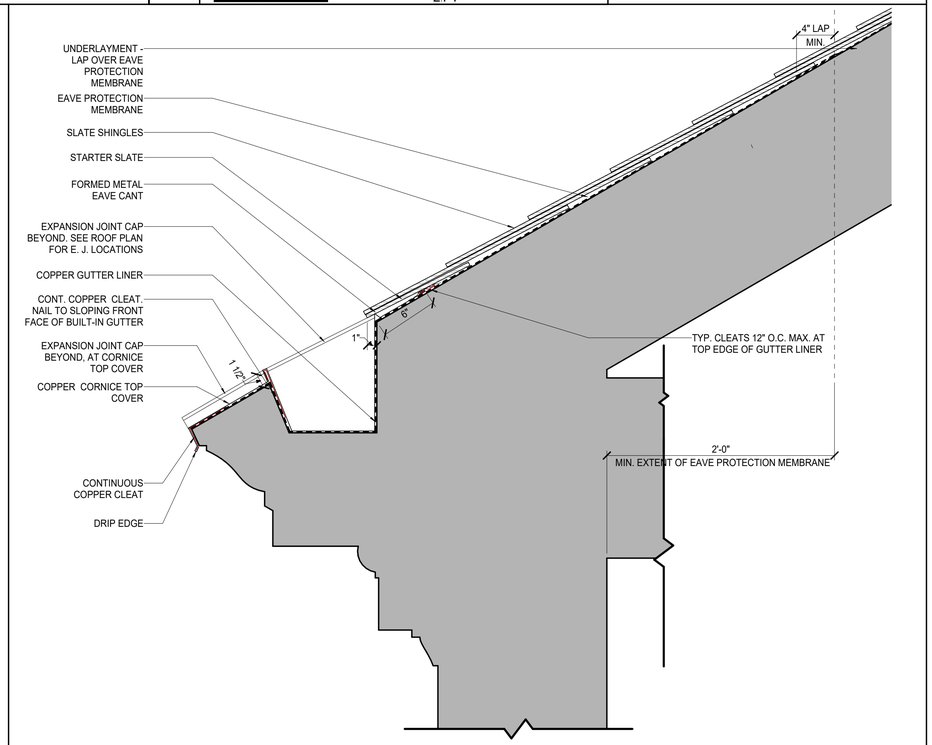
A1 DETAIL - VALLEY FLASHING

0 1 2 FT



A4 DETAIL - TWO PIECE CAP FLASHING

0 1 2 FT



A8 GUTTER SECTION

0 1 2 FT

REVISION:

LORD AECK SARGENT PLANNING & DESIGN, INC. LANDSCAPE ARCHITECTURAL CORPORATION CERT. NO. 53851 NORTH CAROLINA CHAPEL HILL

SHEET TITLE: ROOF DETAILS

SCALE (U.N.O.):

JOB NAME: University of North Carolina - Chapel Hill

SCM# 21-23548-02A UNC Project No. C012122

BINGHAM HALL RENOVATION

LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

SEAL: Lauren Dunn Rockey, Registered Architect, 9574, North Carolina, Chapel Hill, NC, 01.08.2024

ISSUE DATE: 1/8/2023

JOB. NO.: 11706-00

DWG. NO.: A521

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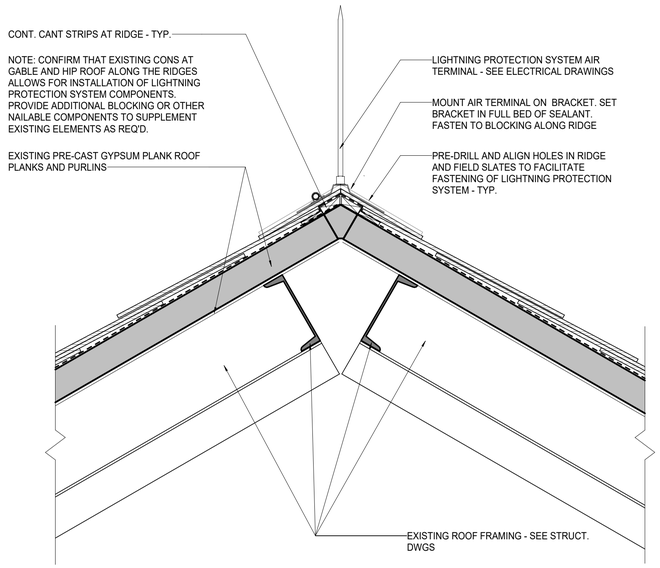
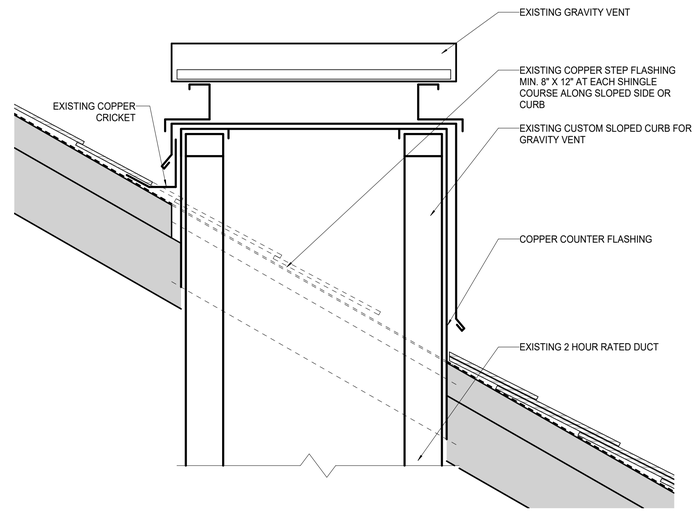


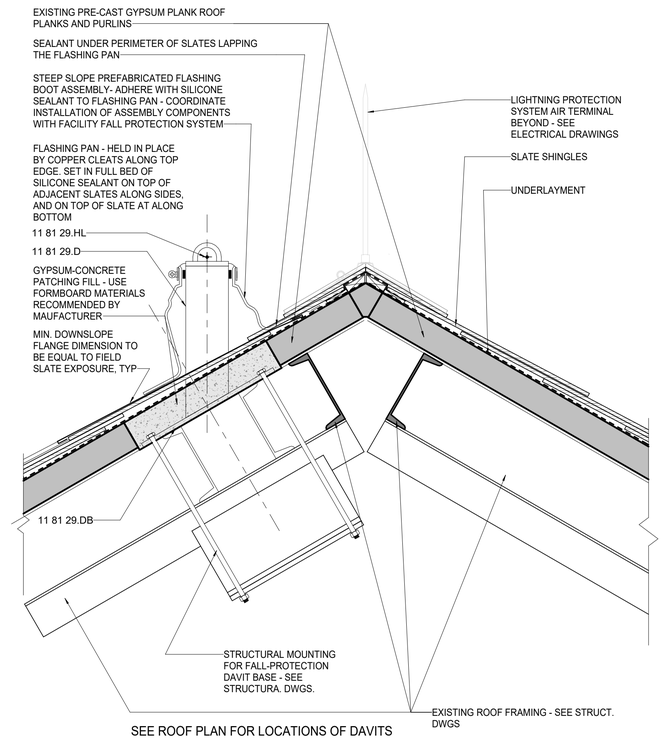
F1 LIGHTNING PROTECTION SYSTEM AT RIDGE

0 1 2FT



F9 DETAIL - EXISTING HATCH

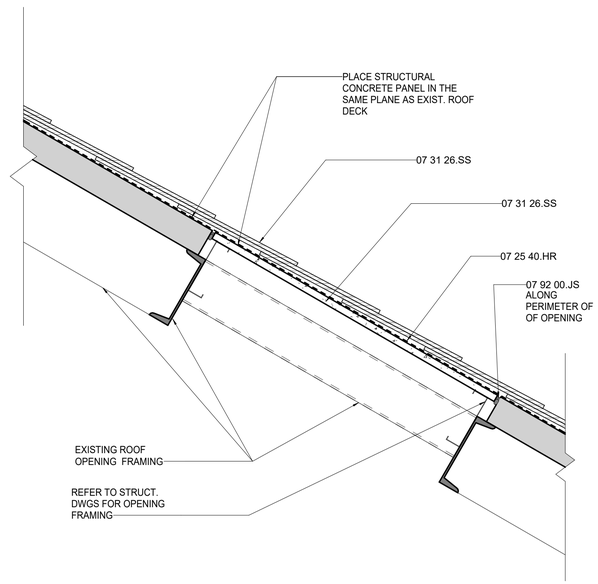
0 1 2FT



SEE ROOF PLAN FOR LOCATIONS OF DAVITS

A1 FACILITY FALL PROTECTION SYSTEM AT RIDGE

0 1 2FT



A9 EXISTING HATCH OPENING INFILL

0 1 2FT

LORD AECK SARGENT

REVISION:

LORD AECK SARGENT PLANNING & DESIGN INC
ARCHITECTURAL CORPORATION
CERT. NO. 53851
NORTH CAROLINA
CHAPEL HILL

SHEET TITLE: ROOF DETAILS

SCALE (U.N.O.)

JOB NAME: University of North Carolina - Chapel Hill
SCI#: 21-23548-02A
UNC Project No. C21212
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

SEAL

Lauren Dunn Rockett
Registered Architect
9674
North Carolina
Chapel Hill, NC
01.08.2024

ISSUE DATE: 1/8/2023
JOB. NO.: 11706-00
DWG. NO.: A522

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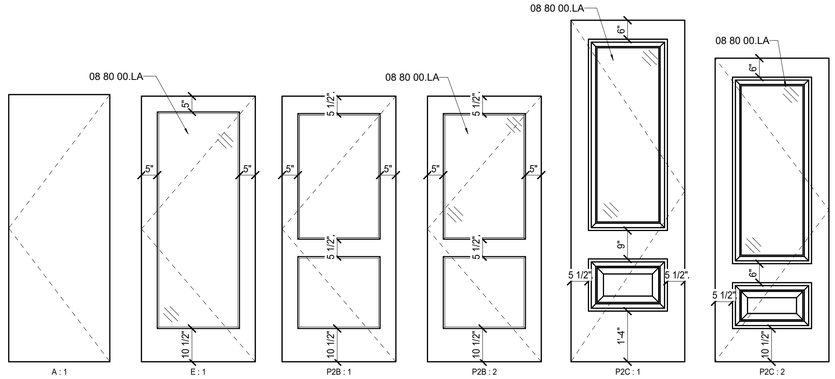
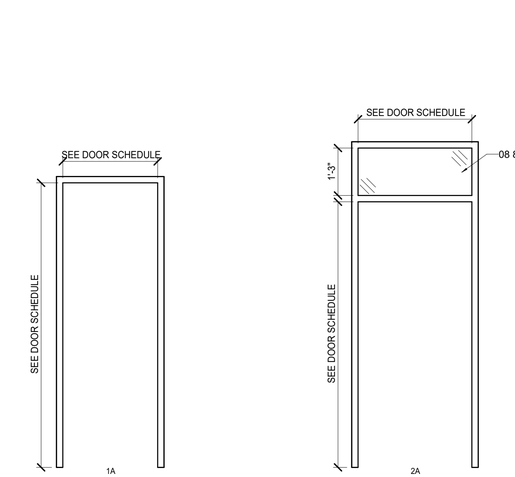
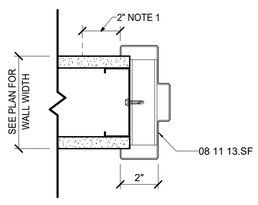


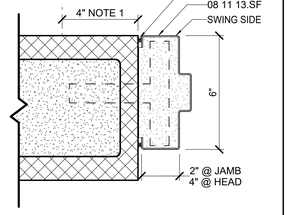
F1 DOOR ELEVATION TYPES (0 2 4 FT)



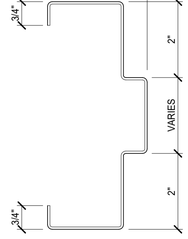
C1 DOOR FRAME TYPES (0 2 4 FT)



HEAD/JAMB @ GWB PARTITION



HEAD/JAMB @ BLOCK WALL



A1 TYP DOOR HEAD/JAMB DETAILS (0 6 12 IN)

A5 TYP DOOR FRAME PROFILE (0 3 6 IN)

DOOR SCHEDULE

DOOR NO.	PR	DOOR 1 TYPE	DOOR 1 WIDTH	DOOR 2 TYPE	DOOR 2 WIDTH	HEIGHT	T	MAT	FIN	FRAME TYPE	FRAME TRIM HW	FRAME MAT	RATING (MIN.)	REMARKS	OVT Hardware Set
Basement															
004		A : 1	3' - 0"	--	0"	3' - 6"	1 3/4"	EXT	PT	1 : A	2"	EXT			22
026A		P2B : 1	3' - 0"	--	0"	7' - 0"	1 3/4"	EXT	PT	1 : A	2"	EXT			07
026B		P2B : 1	3' - 0"	--	0"	7' - 0"	1 3/4"	WD	PT	1 : A	2"	HM			25
029		P2B : 1	3' - 0"	--	0"	7' - 0"	1 3/4"	WD	PT	1 : A	2"	HM			17
029A		P2B : 1	3' - 0"	--	0"	6' - 8"	1 3/4"	WD	PT	1 : A	2"	HM			06
029B		P2B : 1	3' - 0"	--	0"	6' - 8"	1 3/4"	WD	PT	1 : A	2"	HM			09
031		P2B : 1	3' - 0"	--	0"	7' - 0"	1 3/4"	WD	PT	1 : A	2"	HM			30
032		P2B : 1	3' - 0"	--	0"	7' - 0"	1 3/4"	WD	PT	1 : A	2"	HM	90 MIN		19
034		P2B : 1	3' - 0"	--	0"	7' - 0"	1 3/4"	WD	PT	1 : A	2"	HM	90 MIN		19
First Floor															
029C	PR	P2B : 1	3' - 0"	P2B : 1	3' - 0"	7' - 0"	1 3/4"			1 : A	2 1/2"		60 MIN		
1000B	PR	P2B : 1	3' - 0"	P2B : 1	3' - 0"	7' - 0"	1 3/4"	WD	STN	1 : A	2"	HM	90 MIN		26
1000C	PR	P2B : 1	2' - 6"	P2B : 1	2' - 6"	7' - 0"	1 3/4"	WD	STN	1 : A	2"	HM			14
1004		--	5' - 0"	--	0"	7' - 0"	1 3/4"			1 : A	2"	HM			34
1004A		P2B : 1	3' - 0"	--	0"	7' - 0"	1 3/4"	WD	PT	1 : A	2"	HM	60 MIN		20
1005		P2B : 2	3' - 0"	--	0"	7' - 0"	1 3/4"	WD	STN	1 : A	2"	HM			04
1006		P2B : 2	3' - 0"	--	0"	7' - 0"	1 3/4"	WD	STN	1 : A	2"	HM			04
1010A	PR	P2B : 1	2' - 6"	P2B : 1	2' - 6"	7' - 0"	1 3/4"	WD	STN	1 : A	2"	HM			14
1011		E : 1	3' - 0"	--	0"	7' - 0"	1 3/4"	WD	STN	1 : A	2"	HM			04
1013		E : 1	3' - 0"	--	0"	7' - 0"	1 3/4"	WD	STN	1 : A	2"	HM			05
1014		P2B : 2	3' - 0"	--	0"	7' - 0"	1 3/4"	WD	STN	1 : A	2"	HM			24
1014A		P2B : 2	3' - 0"	--	0"	7' - 0"	1 3/4"	WD	STN	1 : A	2"	HM			24
1017		E : 1	3' - 0"	--	0"	7' - 0"	1 3/4"	WD	STN	1 : A	2"	HM			05
1021		E : 1	3' - 0"	--	0"	7' - 0"	1 3/4"	WD	STN	1 : A	2"	HM			04
1022		P2B : 1	3' - 0"	--	0"	7' - 0"	1 3/4"	WD	STN	1 : A	2"	HM			32
1024		--	4' - 0"	--	0"	7' - 0"	1 3/4"			1 : A	2"	HM			34
1026		P2B : 1	3' - 0"	--	0"	7' - 0"	1 3/4"	WD	STN	1 : A	2"	HM			32
1026A		P2B : 1	3' - 0"	--	0"	7' - 0"	1 3/4"	WD	STN	1 : A	2"	EXT			20
1029		P2B : 2	3' - 0"	--	0"	7' - 0"	1 3/4"	WD	STN	1 : A	2"	HM			04
1032		--	5' - 0"	--	0"	7' - 0"	1 3/4"			1 : A	2"	HM			34
1042		--	4' - 0"	--	0"	7' - 0"	1 3/4"			1 : A	2"	HM			34
E100	PR	P2C : 1	3' - 0"	P2C : 1	3' - 0"	9' - 0"	1 3/4"	WD	STN	1 : A	0"	EXT			28
E101	PR	P2C : 2	2' - 9"	P2C : 2	2' - 9"	8' - 0"	1 3/4"	WD	STN	10 : A	2"	HM			29
E102		P2C : 2	2' - 8"	--	0"	7' - 0 1/2"	1 3/4"	WD	STN	1 : A	2"	HM			18
E103	PR	P2C : 2	2' - 9"	P2C : 2	2' - 9"	8' - 0"	1 3/4"	WD	STN	10 : A	2"	HM			28
Second Floor															
2000A	PR	P2B : 1	3' - 0"	P2B : 1	3' - 0"	7' - 0"	1 3/4"	WD	STN	1 : A	2"	HM	60 MIN		26
2000B	PR	P2B : 1	3' - 0"	P2B : 1	3' - 0"	7' - 0"	1 3/4"	WD	STN	1 : A	2"	HM			14
2000D	PR	P2B : 1	3' - 0"	P2B : 1	3' - 0"	7' - 0"	1 3/4"	WD	STN	1 : A	2"	HM	90 MIN		26
2000E	PR	P2B : 1	3' - 0"	P2B : 1	3' - 0"	7' - 0"	1 3/4"	WD	STN	1 : A	2"	HM			14
2004		--	5' - 5"	--	0"	7' - 6"	1 3/4"	HM	STN	1 : A	2"	HM			34
2005		P2B : 2	3' - 0"	--	0"	7' - 0"	1 3/4"	WD	STN	1 : A	2"	HM			15
2005A		P2B : 1	3' - 0"	--	0"	7' - 0"	1 3/4"	WD	STN	2 : A	2"	HM			01
2005B		P2B : 1	3' - 0"	--	0"	7' - 0"	1 3/4"	WD	STN	2 : A	2"	HM			01
2005C		P2B : 2	3' - 0"	--	0"	7' - 0"	1 3/4"	WD	STN	1 : A	2"	HM			01
2005D		P2B : 1	3' - 0"	--	0"	7' - 0"	1 3/4"	WD	STN	2 : A	2"	HM			01
2006		P2B : 2	3' - 0"	--	0"	7' - 0"	1 3/4"	WD	STN	1 : A	2"	HM			15
2006A		P2B : 1	3' - 0"	--	0"	7' - 0"	1 3/4"	WD	STN	2 : A	2"	HM			01
2006B		P2B : 1	3' - 0"	--	0"	7' - 0"	1 3/4"	WD	STN	2 : A	2"	HM			01
2006C		P2B : 1	3' - 0"	--	0"	7' - 0"	1 3/4"	WD	STN	2 : A	2"	HM			01
2006D		P2B : 1	3' - 0"	--	0"	7' - 0"	1 3/4"	WD	STN	2 : A	2"	HM			01
2007		P2B : 1	3' - 0"	--	0"	7' - 0"	1 3/4"	WD	STN	2 : A	2"	HM			02
2011		P2B : 1	3' - 0"	--	0"	7' - 0"	1 3/4"	WD	STN	2 : A	2"	HM			03
2013		P2B : 1	3' - 0"	--	0"	7' - 0"	1 3/4"	WD	STN	2 : A	2"	HM			03
2014		P2B : 1	3' - 0"	--	0"	7' - 0"	1 3/4"	WD	STN	2 : A	2"	HM			16
2014A		P2B : 1	3' - 0"	--	0"	7' - 0"	1 3/4"	WD	STN	2 : A	2"	HM			01
2014B		P2B : 1	3' - 0"	--	0"	7' - 0"	1 3/4"	WD	STN	2 : A	2"	HM			01
2014C		P2B : 1	3' - 0"	--	0"	7' - 0"	1 3/4"	WD	STN	2 : A	2"	HM			01
2014D		P2B : 1	3' - 0"	--	0"	7' - 0"	1 3/4"	WD	STN	2 : A	2"	HM			01
2014E		P2B : 1	3' - 0"	--	0"	7' - 0"	1 3/4"	WD	STN	2 : A	2"	HM			01
2014F		P2B : 1	3' - 0"	--	0"	7' - 0"	1 3/4"	WD	STN	2 : A	2"	HM			16
2015		P2B : 1	3' - 0"	--	0"	7' - 0"	1 3/4"	WD	STN	2 : A	2"	HM			03
2017		P2B : 1	3' - 0"	--	0"	7' - 0"	1 3/4"	WD	STN	2 : A	2"	HM			03
2021		P2B : 1	3' - 0"	--	0"	7' - 0"	1 3/4"	WD	STN	2 : A	2"	HM			03
2022		P2B : 1	3' - 0"	--	0"	7' - 0"	1 3/4"	WD	STN	1 : A	2"	HM			32
2024		P2B : 1	3' - 0"	--	0"	7' - 0"	1 3/4"	WD	STN	1 : A	2"	HM			33
2025		P2B : 1	3' - 0"	--	0"	7' - 0"	1 3/4"	WD	STN	2 : A	2"	HM			02
2026		P2B : 2	3' - 0"	--	0"	7' - 0"	1 3/4"	WD	STN	1 : A	2"	HM			04
2026A		P2B : 1	3' - 0"	--	0"	7' - 0"	1 3/4"	WD	STN	1 : A	2"	HM			08
2027		P2B : 1	3' - 0"	--	0"	7' - 0"	1 3/4"	WD	STN	1 : A	2"	HM			12
2029		P2B : 2	3' - 0"	--	0"	7' - 0"	1 3/4"	WD	STN	1 : A	2"	HM			10
2030		--	4' - 0"	--	0"	7' - 0"	1 3/4"			1 : A	2"				34
2032		--	5' - 5"	--	0"	7' - 6"	1 3/4"			1 : A	2"				34
Third Floor															
3000A	PR	P2B : 1	3' - 0"	P2B : 1	3' - 0"	7' - 0"	1 3/4"	WD	STN	1 : A	2"	HM			14
3001		P2B : 1	3' - 0"	--	0"	7' - 0"	1 3/4"	WD	STN	2 : A	2"	HM			03
3002	PR	P2B : 1	3' - 0"	P2B : 1	3' - 0"	7' - 0"	1 3/4"			1 : A	2"				14
3003		P2B : 1	3' - 0"	--	0"	7' - 0"	1 3/4"	WD	STN	2 : A	2"	HM			03
3004	PR	P2B : 1	3' - 0"	P2B : 1	3' - 0"	7' - 0"	1 3/4"	WD	STN	1 : A	2"	HM	60 MIN		27
3005		P2B : 1	3' - 0"	--	0"	7' - 0"	1 3/4"	WD	STN	2 : A	2"	HM			03
3006		P2B : 2	3' - 0"	--	0"	7' - 0"	1 3/4"	WD	STN	1 : A	2"	HM			24
3006A		P2B : 2	3' - 0"	--	0"	7' - 0"	1 3/4"	WD	STN	1 : A	2"	HM			24
3007		P2B : 1	3' - 0"	--	0"	7' - 0"	1 3/4"	WD	STN	2 : A	2"	HM			03
3011		P2B : 1	3' - 0"	--	0"	7' - 0"	1 3/4"	WD	STN	2 : A	2"	HM			03
3013		P2B : 1	3' - 0"	--	0"	7' - 0"	1 3/4"	WD	STN	2 : A	2"	HM			03
3014		P2B : 2	3' - 0"	--	0"	7' - 0"	1 3/4"	WD	STN	1 : A	2"	HM			23
3014A		P2B : 2	3' - 0"	--	0"	7' - 0"	1 3/4"	WD	STN	1 : A	2"	HM			23
3015		P2B : 1	3' - 0"	--	0"	7' - 0"	1 3/4"	WD	STN	2 : A	2"	HM			03
3017		P2B : 1	3' - 0"	--	0"	7' - 0"	1 3/4"	WD	STN	2 : A	2"	HM			03
3021		P2B : 1	3' - 0"	--	0"	7' - 0"	1 3/4"	WD	STN	2 : A	2"	HM			03
3022		P2B : 1	3' - 0"	--	0"	7' - 0"	1 3/4"	WD	STN	1 : A	2"	HM			11
3024		P2B : 1	3' - 0"	--	0"	7' - 0"	1 3/4"	WD	STN	1 : A	2"	HM			13
3025		P2B : 1	3' - 0"	--	0"	7' - 0"	1 3/4"	WD	STN	2 : A	2"	HM			03
3026		P2B : 1	3' - 0"	--	0"	7' - 0"	1 3/4"	WD	STN	1 : A	2"	HM			31
3027		P2B : 1	3' - 0"	--	0"	7' - 0"	1 3/4"	WD	STN	2 : A	2"	HM			03
3028		P2B : 1	3' - 6"	--	0"	7' - 0"	1 3/4"	WD	STN	1 : A	2"	HM			21
3028A		P2B : 1	3' - 0"	--	0"	7' - 0"	1 3/4"	WD	STN	1 : A	2"	HM			06
3029		P2B : 1	3' - 0"	--	0"	7' - 0"	1 3/4"	WD	STN	2 : A	2"	HM			03
3030		--	4' - 0"	--	0"	7' - 0"	1 3/4"			1 : A	2"				34
3031		P2B : 1	3' - 0"	--	0"	7' - 0"	1 3/4"	WD	STN	2 : A	2"	HM			03
3032	PR	P2B : 1	3' - 0"	P2B : 1	3' - 0"	7' - 0"	1 3/4"	WD	STN	1 : A	2"	HM	90 MIN		27

MATERIAL KEYNOTES

07 92 00.JS	Joint Sealant
08 11 13.SF	Steel Frame
08 80 00.LA	Laminated Acoustical Glass

ABBREVIATIONS

PR:	PAIR OF DOORS
UPR:	UNEVEN PAIR OF DOORS
T:	THICKNESS
MAT:	MATERIAL
WD:	WOOD (08 1416.FWD)
AL:	ALUMINUM (08 1116.AD)
GL:	GLASS
ST:	STEEL (08 1100.SD OR 08 1100.SF)
FIN:	FINISH
PT:	PAINTED
STN:	STAINED
HW:	HEAD WIDTH
HM:	HOLLOW METAL
SF:	STORE FRONT
EXT:	EXISTING TO REMAIN

GENERAL NOTES

DOOR SCHEDULE NOTES:

A.	PR:	ALL DOORS ARE SINGLE DOORS U.N.O.
B.	DOOR MAT:	ALL DOORS ARE 08 11 00.SD U.N.O.
C.	DOOR FIN:	ALL DOORS ARE PAINTED U.N.O.
D.	FRAME MAT:	ALL FRAMES ARE 08 1100.SF U.N.O.
E.	RATING:	ALL DOORS ARE NON-RATED U.N.O.
F.	GLASS:	ALL GLAZING IS SAFETY GLAZING U.N.O.; ALL GLAZING IN FIRE-RATED CONSTRUCTION IS FIRE-RATED GLAZING.
G.	DETAILS:	SEE A3 / A601 FOR ALL DETAILS U.N.O.

SPECIALTY DOOR SCHEDULE NOTES:

A.	PR:	ALL DOORS ARE SINGLE DOORS U.N.O.

SHEET SPECIFIC NOTES

1. DISTANCE FROM FRAME TO INTERSECTING PARTITION U.N.O. ON PLANS OR DETAILS.

LORD AECK SARGENT

REVISION:

LORD AECK SARGENT PLANNING & DESIGN, INC. — ARCHITECTURAL CORPORATION — CERT. NO. 53851 — NORTH CAROLINA — CHAPEL HILL

SHEET TITLE: DOOR SCHEDULE

SCALE (U.N.O.)

JOB NAME: University of North Carolina - Chapel Hill
SCI#: 21-23548-02A
UNC Project No. 012212
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

SEAL: Lauren Dunn Rockett, Registered Architect, 9674, North Carolina, Chapel Hill, NC — 01.08.2024

ISSUE DATE: 1/8/2023
JOB. NO.: 11706-00
DWG. NO.: A601

Autodesk Docs://11706-00 UNC Bingham Hall/Central_11706-00_v22.rvt
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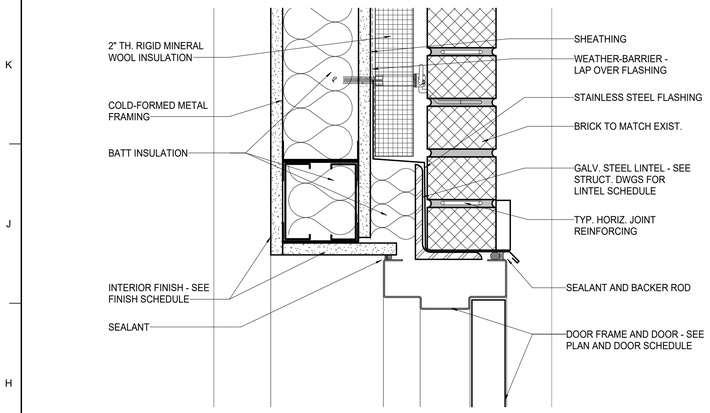
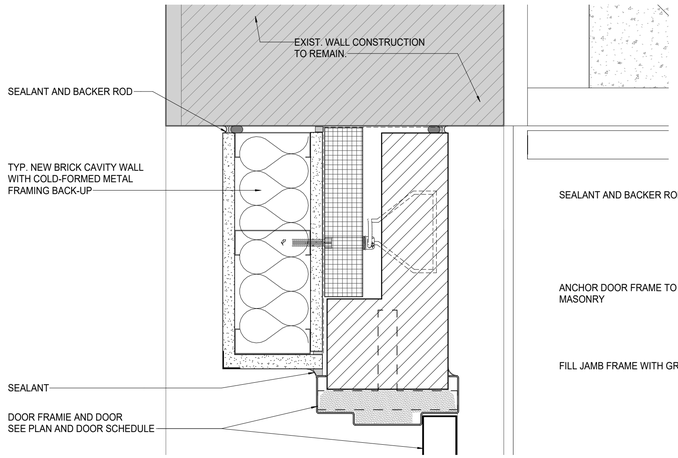


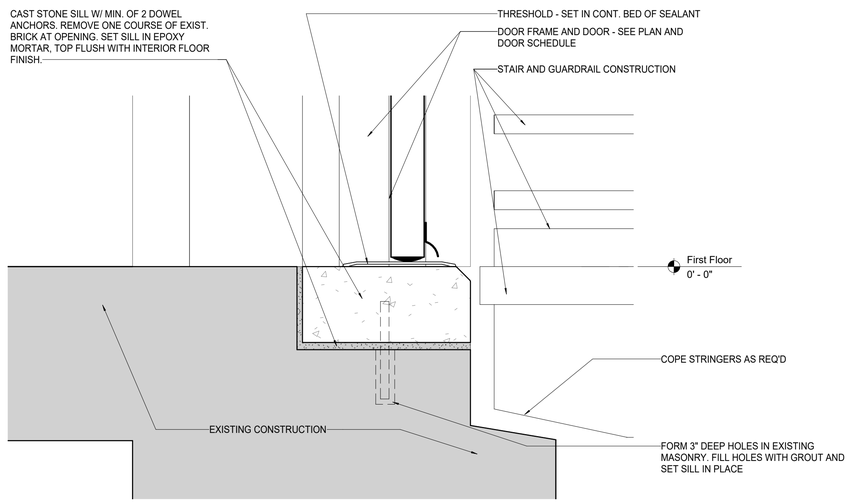
H1 DOOR E102 HEAD DETAIL

0 6 12 IN



D1 DOOR E102 JAMB DETAIL

0 6 12 IN



A1 DOOR E102 SILL DETAIL

0 6 12 IN

REVISION:

LORD AECK SARGENT PLANNING & DESIGN, INC. LANDSCAPE ARCHITECTURAL CORPORATION CERT. NO. 53851 NORTH CAROLINA CHAPEL HILL

SHEET TITLE: DOOR DETAILS

SCALE (U.N.O.)

JOB NAME: University of North Carolina - Chapel Hill

SCM# 21-23546-02A UNC Project No. C21212

BINGHAM HALL RENOVATION

LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

SEAL: Lauren Dunn Rockett, Registered Architect, 9874, North Carolina, Chapel Hill, NC, 01·08·2024

ISSUE DATE: 1/8/2023

JOB. NO.: 11706-00

DWG. NO.: A602

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Window Schedule South

Level	Mark	Type Mark	Height	Width	Note
First Floor	S101	A4	8' - 10 7/8"	3' - 2 1/2"	
First Floor	S102	A10	8' - 10 7/8"	3' - 0"	
First Floor	S104	A4	8' - 10 7/8"	3' - 2 1/2"	
First Floor	S105	A1	8' - 10 7/8"	5' - 4"	
First Floor	S106	A1	8' - 10 7/8"	5' - 4"	
Second Floor	S201	A4	8' - 10 7/8"	3' - 2 1/2"	
Second Floor	S202	A2	8' - 10 7/8"	6' - 0"	
Second Floor	S203	A4	8' - 10 7/8"	3' - 2 1/2"	
Second Floor	S204	A1	8' - 10 7/8"	5' - 4"	
Second Floor	S205	A1	8' - 10 7/8"	5' - 4"	
Third Floor	S301	A8	7' - 10 3/8"	3' - 2 1/2"	
Third Floor	S302	A8	7' - 10 3/8"	3' - 2 1/2"	
Third Floor	S303	A6	7' - 10 3/8"	6' - 0"	
Third Floor	S304	A8	7' - 10 3/8"	3' - 2 1/2"	
Third Floor	S305	A8	7' - 10 3/8"	3' - 2 1/2"	
Third Floor	S306	A9	7' - 10 3/8"	3' - 0"	
Third Floor	S307	A9	7' - 10 3/8"	3' - 0"	
Third Floor	S308	A9	7' - 10 3/8"	3' - 0"	

Window Schedule North

Level	Mark	Type Mark	Height	Width	Note
First Floor	N101	A1	8' - 10 7/8"	5' - 4"	
First Floor	N102	A1	8' - 10 7/8"	5' - 4"	
First Floor	N103	A4	8' - 10 7/8"	3' - 2 1/2"	
First Floor	N105	A4	8' - 10 7/8"	3' - 2 1/2"	
Second Floor	N201	A1	8' - 10 7/8"	5' - 4"	
Second Floor	N202	A1	8' - 10 7/8"	5' - 4"	
Second Floor	N203	A4	8' - 10 7/8"	3' - 2 1/2"	
Second Floor	N204	A2	8' - 10 7/8"	6' - 0"	
Second Floor	N205	A4	8' - 10 7/8"	3' - 2 1/2"	
Third Floor	N301	A9	7' - 10 3/8"	3' - 0"	
Third Floor	N302	A9	7' - 10 3/8"	3' - 0"	
Third Floor	N303	A9	7' - 10 3/8"	3' - 0"	
Third Floor	N304	A8	7' - 10 3/8"	3' - 2 1/2"	
Third Floor	N305	A8	7' - 10 3/8"	3' - 2 1/2"	
Third Floor	N306	A6	7' - 10 3/8"	6' - 0"	
Third Floor	N307	A8	7' - 10 3/8"	3' - 2 1/2"	
Third Floor	N308	A8	7' - 10 3/8"	3' - 2 1/2"	

Window Schedule West

Level	Mark	Type Mark	Height	Width	Note
First Floor	W101	A1	8' - 10 7/8"	5' - 4"	
First Floor	W102	A1	8' - 10 7/8"	5' - 4"	
First Floor	W103	A1	8' - 10 7/8"	5' - 4"	
First Floor	W104	A4	8' - 10 7/8"	3' - 2 1/2"	
First Floor	W105	A4	8' - 10 7/8"	3' - 2 1/2"	
First Floor	W106	A4	8' - 10 7/8"	3' - 2 1/2"	
First Floor	W107	A4	8' - 10 7/8"	3' - 2 1/2"	
First Floor	W108	A4	8' - 10 7/8"	3' - 2 1/2"	
First Floor	W110	A4	8' - 10 7/8"	3' - 2 1/2"	
First Floor	W111	A4	8' - 10 7/8"	3' - 2 1/2"	
First Floor	W112	A4	8' - 10 7/8"	3' - 2 1/2"	
First Floor	W113	A4	8' - 10 7/8"	3' - 2 1/2"	
First Floor	W114	A4	8' - 10 7/8"	3' - 2 1/2"	
First Floor	W115	A1	8' - 10 7/8"	5' - 4"	
First Floor	W116	A1	8' - 10 7/8"	5' - 4"	
First Floor	W117	A1	8' - 10 7/8"	5' - 4"	
Second Floor	W201	A1	8' - 10 7/8"	5' - 4"	
Second Floor	W202	A1	8' - 10 7/8"	5' - 4"	
Second Floor	W203	A1	8' - 10 7/8"	5' - 4"	
Second Floor	W204	A3	7' - 7 1/4"	3' - 2 1/2"	
Second Floor	W205	A3	7' - 7 1/4"	3' - 2 1/2"	
Second Floor	W206	A3	7' - 7 1/4"	3' - 2 1/2"	
Second Floor	W207	A3	7' - 7 1/4"	3' - 2 1/2"	
Second Floor	W208	A3	7' - 7 1/4"	3' - 2 1/2"	
Second Floor	W209	D1	6' - 0"	10' - 0"	HALF ROUND WINDOW
Second Floor	W210	A3	7' - 7 1/4"	3' - 2 1/2"	
Second Floor	W211	A3	7' - 7 1/4"	3' - 2 1/2"	
Second Floor	W212	A3	7' - 7 1/4"	3' - 2 1/2"	
Second Floor	W213	A3	7' - 7 1/4"	3' - 2 1/2"	
Second Floor	W214	A3	7' - 7 1/4"	3' - 2 1/2"	
Second Floor	W215	A1	8' - 10 7/8"	5' - 4"	
Second Floor	W216	A1	8' - 10 7/8"	5' - 4"	
Second Floor	W217	A1	8' - 10 7/8"	5' - 4"	
Third Floor	W301	A7	7' - 10 7/8"	5' - 0"	
Third Floor	W302	A7	7' - 10 7/8"	5' - 0"	
Third Floor	W303	A7	7' - 10 7/8"	5' - 0"	
Third Floor	W304	A5	6' - 6 3/4"	3' - 2 1/2"	
Third Floor	W305	A5	6' - 6 3/4"	3' - 2 1/2"	
Third Floor	W306	A5	6' - 6 3/4"	3' - 2 1/2"	
Third Floor	W307	A5	6' - 6 3/4"	3' - 2 1/2"	
Third Floor	W308	A5	6' - 6 3/4"	3' - 2 1/2"	
Third Floor	W309	A11	6' - 6 3/4"	4' - 4"	
Third Floor	W310	A5	6' - 6 3/4"	3' - 2 1/2"	
Third Floor	W311	A5	6' - 6 3/4"	3' - 2 1/2"	
Third Floor	W312	A5	6' - 6 3/4"	3' - 2 1/2"	
Third Floor	W313	A5	6' - 6 3/4"	3' - 2 1/2"	
Third Floor	W314	A5	6' - 6 3/4"	3' - 2 1/2"	
Third Floor	W315	A7	7' - 10 7/8"	5' - 0"	
Third Floor	W316	A7	7' - 10 7/8"	5' - 0"	
Third Floor	W317	A7	7' - 10 7/8"	5' - 0"	

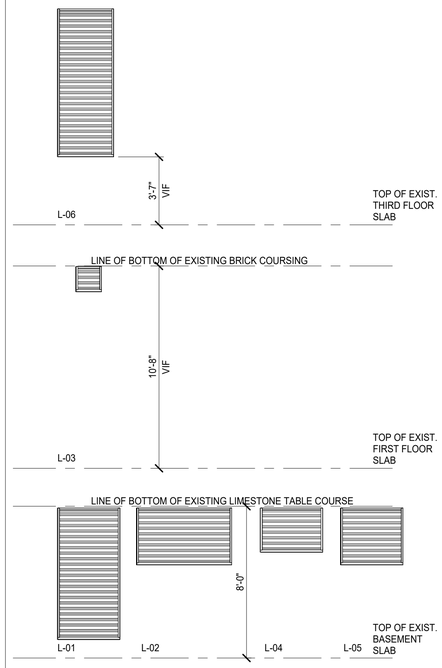
Window Schedule East

Level	Mark	Type Mark	Height	Width	Note
First Floor	E101	A1	8' - 10 7/8"	5' - 4"	
First Floor	E102	A1	8' - 10 7/8"	5' - 4"	DECORATIVE GLAZING FILM: 09 77 56.GF3
First Floor	E103	A1	8' - 10 7/8"	5' - 4"	DECORATIVE GLAZING FILM: 09 77 56.GF3
First Floor	E104	A1	8' - 10 7/8"	5' - 4"	DECORATIVE GLAZING FILM: 09 77 56.GF3
First Floor	E105	A1	8' - 10 7/8"	5' - 4"	
First Floor	E106	A1	8' - 10 7/8"	5' - 4"	
First Floor	E107	A1	8' - 10 7/8"	5' - 4"	
First Floor	E108	A1	8' - 10 7/8"	5' - 4"	
First Floor	E110	A1	8' - 10 7/8"	5' - 4"	
First Floor	E111	A1	8' - 10 7/8"	5' - 4"	
First Floor	E112	A1	8' - 10 7/8"	5' - 4"	
Second Floor	E201	A1	8' - 10 7/8"	5' - 4"	
Second Floor	E202	A1	8' - 10 7/8"	5' - 4"	
Second Floor	E203	A1	8' - 10 7/8"	5' - 4"	DECORATIVE GLAZING FILM: 09 77 56.GF3
Second Floor	E204	A1	8' - 10 7/8"	5' - 4"	DECORATIVE GLAZING FILM: 09 77 56.GF3
Second Floor	E205	A1	8' - 10 7/8"	5' - 4"	
Second Floor	E206	A1	8' - 10 7/8"	5' - 4"	
Second Floor	E207	A1	8' - 10 7/8"	5' - 4"	REPLACE LOUVER WITH SALVAGED WINDOW SASH
Second Floor	E208	A1	8' - 10 7/8"	5' - 4"	
Second Floor	E209	A1	8' - 10 7/8"	5' - 4"	
Second Floor	E210	A1	8' - 10 7/8"	5' - 4"	
Second Floor	E211	A1	8' - 10 7/8"	5' - 4"	
Second Floor	E212	A1	8' - 10 7/8"	5' - 4"	
Third Floor	E301	A9	7' - 10 3/8"	3' - 0"	
Third Floor	E302	A9	7' - 10 3/8"	3' - 0"	
Third Floor	E305	A9	7' - 10 3/8"	3' - 0"	
Third Floor	E306	A9	7' - 10 3/8"	3' - 0"	
Third Floor	E309	A9	7' - 10 3/8"	3' - 0"	
Third Floor	E310	A9	7' - 10 3/8"	3' - 0"	
Third Floor	E311	A9	7' - 10 3/8"	3' - 0"	
Third Floor	E312	A9	7' - 10 3/8"	3' - 0"	
Third Floor	E313	A9	7' - 10 3/8"	3' - 0"	
Third Floor	E314	A9	7' - 10 3/8"	3' - 0"	
Third Floor	E315	A9	7' - 10 3/8"	3' - 0"	
Third Floor	E316	A9	7' - 10 3/8"	3' - 0"	
Third Floor	E317	A9	7' - 10 3/8"	3' - 0"	
Third Floor	E318	A9	7' - 10 3/8"	3' - 0"	
Third Floor	E319	A9	7' - 10 3/8"	3' - 0"	
Third Floor	E320	A9	7' - 10 3/8"	3' - 0"	
Third Floor	E321	A9	7' - 10 3/8"	3' - 0"	
Third Floor	E322	A9	7' - 10 3/8"	3' - 0"	
Third Floor	E323	A9	7' - 10 3/8"	3' - 0"	
Third Floor	E324	A9	7' - 10 3/8"	3' - 0"	

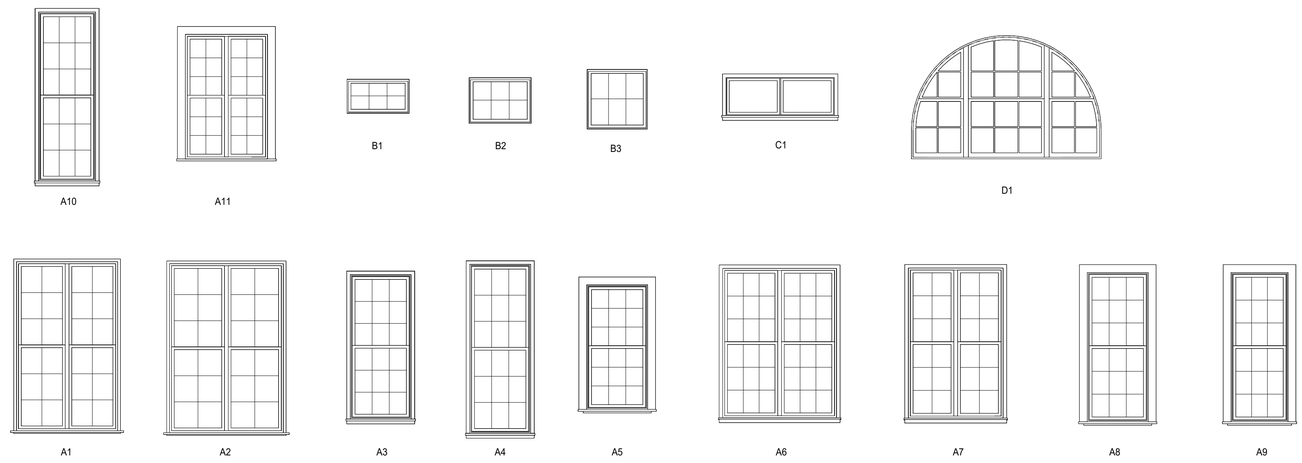
LOUVER SCHEDULE

Level	Type Mark	Width	Height	Notes
Basement	L-01	3' - 3 1/4"	6' - 11 1/4"	
Basement	L-02	5' - 0"	3' - 0"	
Basement	L-04	3' - 3 1/4"	2' - 4"	
Basement	L-05	3' - 3 1/4"	3' - 0"	
First Floor	L-03	1' - 4"	1' - 4"	
Third Floor	L-06	2' - 11 1/4"	7' - 9 5/8"	

1. NOMINAL DIMENSIONS, VERIFY ROUGH OPENING DIMENSIONS AND SQUARENESS IN THE FIELD PRIOR TO FABRICATION
2. REFER TO PLANS AND ELEVATIONS FOR LOCATIONS OF EACH LOUVER TYPE



D11 LOUVER SCHEDULE AND LEGEND



A1 WINDOW LEGEND

LORD AECK SARGENT

REVISION:

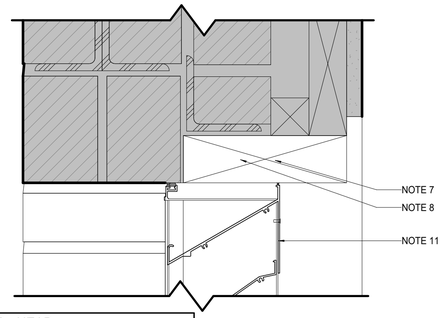
LORD AECK SARGENT PLANNING & DESIGN, INC. ARCHITECTURAL CORPORATION CERT. NO. 53851 NORTH CAROLINA CHAPEL HILL

SHEET TITLE: WINDOW ELEVATIONS & SCHEDULE
SCALE (U.N.O.)

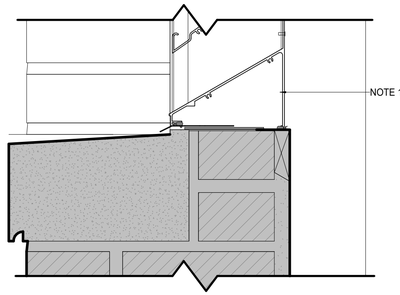
JOB NAME: University of North Carolina - Chapel Hill
SCI#: 21-23548-02A UNC Project No. C021212
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

SEAL: Lauren Dunn Rockart, Registered Architect, 19074, North Carolina, Chapel Hill, NC
01.08.2024

ISSUE DATE: 1/8/2023
JOB. NO.: 11706-00
DWG. NO.: A603



H1 LOUVER - HEAD
0 6 12 IN



H5 LOUVER - SILL
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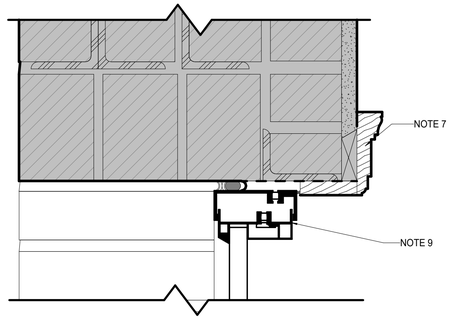
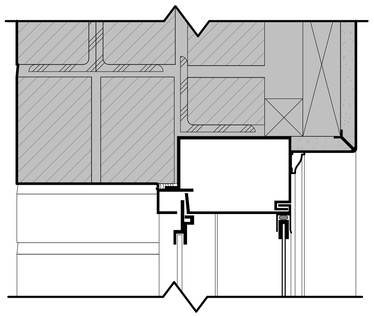
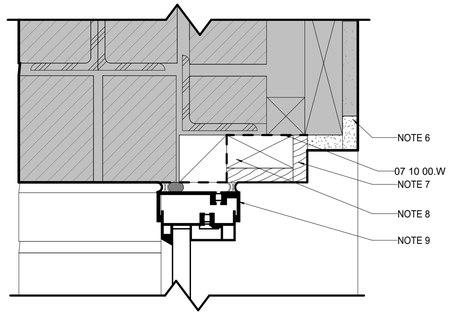


H9 ALT #1 - REPLACEMENT WINDOW HEAD
0 6 12 IN



F1 BASE BID - WINDOW REFURBISHMENT HEAD
0 6 12 IN



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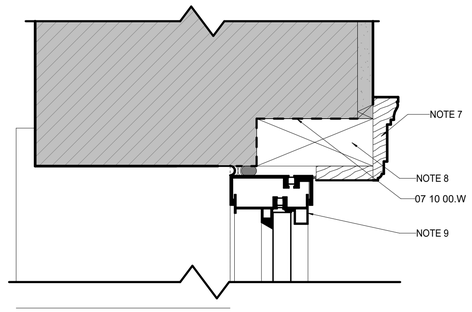

F9 ALT #1 - REPLACEMENT WINDOW JAMB
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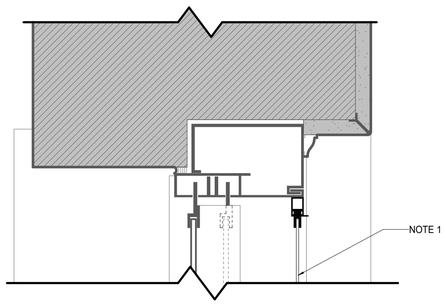

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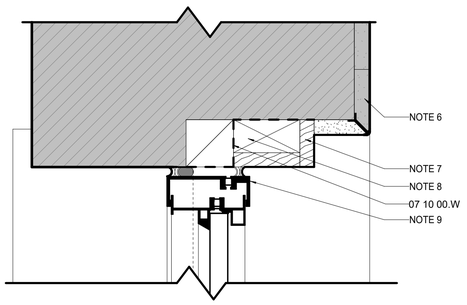
0 6 12 IN



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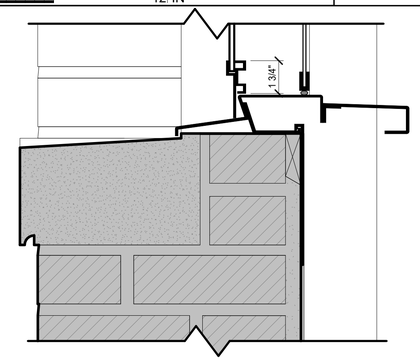
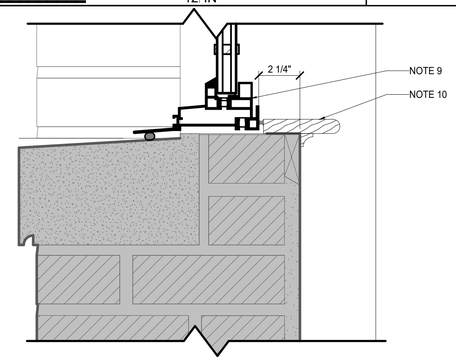


A1 BASE BID - WINDOW REFURBISHMENT SILL
0 6 12 IN



A5 ALT #1 - REPLACEMENT WINDOW SILL
0 6 12 IN

MATERIAL KEYNOTES

07 10 00.W	Waterproofing Membrane

GENERAL NOTES

A. **BASIS OF DESIGN** - CONTRACTOR TO PROVIDE PRICING TO RESTORE EXISTING WINDOWS. REMOVE ALL EXTERIOR CAULKING AND PAINT ON INTERIOR AND EXTERIOR OF WINDOWS. CAREFULLY REMOVE RUST, REPLACE ANY BROKEN GLASS, AND DEFORMED COMPONENTS AS NEEDED. SEAL THE EXTERIOR PERIMETER OF THE WINDOWS TO ADJACENT EXISTING MASONRY. REPAINT ALL UNITS IN THE ORIGINAL OPENINGS. INSTALL SINGLE-PANE, FIXED STORM WINDOWS ON THE INTERIOR SIDE OF ALL UNITS. SEE SPECIFICATIONS 08 5900.

B. **ALTERNATE #3 -** CONTRACTOR TO PROVIDE PRICING TO REMOVE EXISTING WINDOWS AND PROVIDE NEW WINDOWS. NEW WINDOWS SHALL MATCH THE ARCHITECTURAL CHARACTER OF THE ORIGINAL WINDOWS. BASIS OF DESIGN: GRAHAM GT2200 OR EFCO 6715 HUNG REPLICA WINDOW. GLAZING SHALL BE HIGH-PERFORMANCE LOW-E TYPE, 1" INSULATING VISION GLASS UNITS. BASIS OF DESIGN: PPG SOLARBAN 70XL.SEE SPECIFICATIONS 08 5113.

SHEET SPECIFIC NOTES

1. PROVIDE NEW INTERIOR STORM WINDOW.
2. REMOVE EXISTING STOOL AND TRIM.
3. REMOVE EXISTING STEEL WINDOW.
4. REMOVE EXISTING PLASTER TRIM.
5. REMOVE EXISTING PLASTER BACK TO DIMENSION SHOWN.
6. INSTALL NEW PLASTER FLUSH WITH FACE OF EXISTING PLASTER.
7. INSTALL NEW PAINTED TRIM.
8. INSTALL NEW FRAMING WITH 5/8" GYP. AROUND WINDOW OPENING.
9. INSTALL NEW ALUMINUM WINDOWS.
10. INSTALL NEW PAINTED STOOL.
11. INSTALL NEW LOUVERS.
12. INSTALL NEW LINTELS. SEE STRUCTURAL FOR DETAILS.

LORD AECK SARGENT

REVISION:

LORD AECK SARGENT PLANNING & DESIGN, INC. — ARCHITECTURAL CORPORATION — CERT. NO. 53851 — NORTH CAROLINA — CHAPEL HILL

SHEET TITLE: WINDOW DETAILS
SCALE (U.N.O.)

JOB NAME: University of North Carolina - Chapel Hill
SCI#: 21-23548-02A
UNC Project No. C01212
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

SEAL: Lauren Dunn Rockey, Registered Architect, 9574, North Carolina, Chapel Hill, NC — 01.08.2024

ISSUE DATE: 1/8/2023
JOB. NO.: 11706-00
DWG. NO.: A604

Autodesk Docs://11706-00 UNC Bingham Hall/Central_11706-00_v22.rvt
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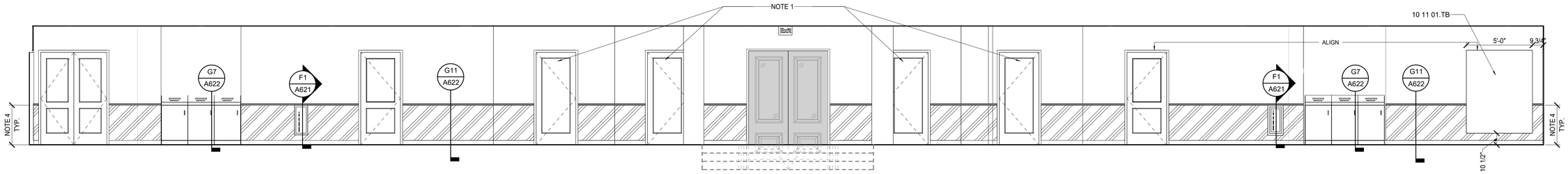

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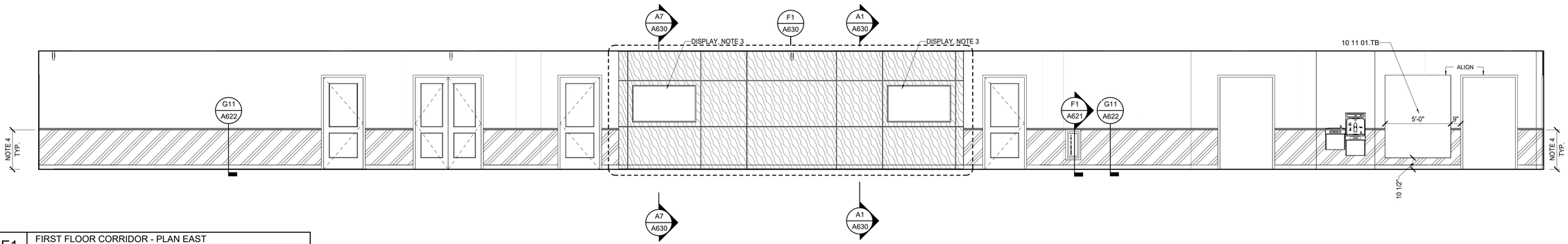

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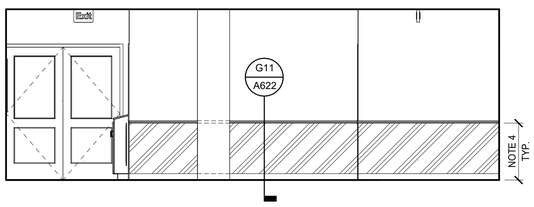

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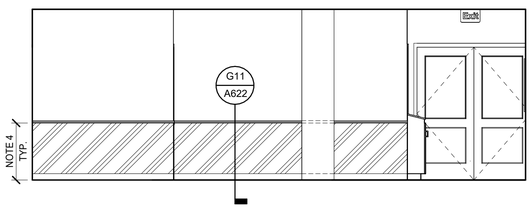

B5 FIRST FLOOR CORRIDOR - PLAN NORTH
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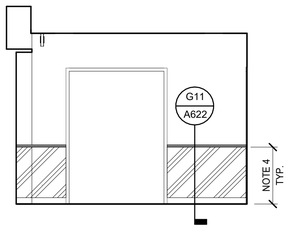

B11 FIRST FLOOR CORRIDOR VESTIBULE - PLAN EAST
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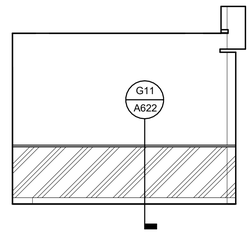

B13 FIRST FLOOR CORRIDOR VESTIBULE - PLAN WEST
0 4 8 FT

MATERIAL KEYNOTES

10 11 01.TB TACKBOARD

ELEVATION FINISH LEGEND

- WALLCOVERING 1; 097200.WC1 (CORRIDORS)
- WALLCOVERING 2; 097200.WC2 (CLASSROOMS)
- CUSTOM SUPERGRAPHIC WALL FILM 1; 097756.GF1
- CUSTOM SUPERGRAPHIC GLASS FILM 2; 097756.GF2
- WOOD TRIM; 062000.CR1
- WOOD WALL PANELING; 064200.WP1
- TILE; 09300.T1
- RECLAIMED WOOD PLANKS; 064200.RWP1
- SALVAGED MARBLE

GENERAL NOTES

A. REFER TO ARCHITECTURAL MOUNTING SHEET G040 FOR ADDITIONAL INFORMATION.
B. REFER TO SPECIFICATION SECTION ALTERNATES 012300 FOR ADDITIONAL INFORMATION ON ALTERNATE MATERIALS.
C. ALL WALLS NOT TAGGED ARE TO RECEIVE PAINT 099100.PC1.
D. REFER TO SHEETS A721 & A722 FOR WALL BASE PATCHING INFO AT CORRIDORS; EXISTING TERRAZZO BASE IS TO REMAIN.
E. ALL ROOMS ARE TO RECEIVE RUBBER BASE 096500.RB1 U.N.O.
F. REFER TO INDIVIDUAL SPECIFICATIONS SECTIONS IN DIVISIONS 6, 8 & 9 FOR ADDITIONAL INFORMATION ON MATERIALS.

SHEET SPECIFIC NOTES

1. PROVIDE CUSTOM SUPERGRAPHIC CLING AT WOOD STOREFRONT AND FULL LITE WOOD DOORS.
2. WOOD FRAMED STOREFRONT AND DOOR. BASED ON MANF. ADOTTA AND PRODUCT WALLEN.
3. PROVIDE BLOCKING IN WALL ALCOVE FOR DISPLAY BOARDS/SCREENS.
4. ALL WALLCOVERING AND TOP OF CHAIR RAIL IS TO ALIGN WITH THE TOP OF THE WINDOW SILL IN CORRIDORS AND CLASSROOMS. HEIGHTS WILL VARY BASED ON LOCATION.

SEAL

Lauren Dunn Rockett
Registered Architect
9874
North Carolina
Chapel Hill, NC
01.08.2024

LORD AECK SARGENT

REVISION:

LORD AECK SARGENT PLANNING & DESIGN, INC.
ARCHITECTURAL CORPORATION
CERT. NO. 53851
NORTH CAROLINA
CHAPEL HILL

SHEET TITLE
INTERIOR ELEVATIONS

SCALE (U.N.O.)

JOB NAME
University of North Carolina - Chapel Hill

UNC Project No. C01212
SCH#: 21-23548-02A
BINGHAM HALL RENOVATION

LOCATION
36 Lenoir Drive, Chapel Hill, NC 27514

ISSUE DATE
1/8/2023

JOB. NO.
11706-00

DWG. NO.
A610

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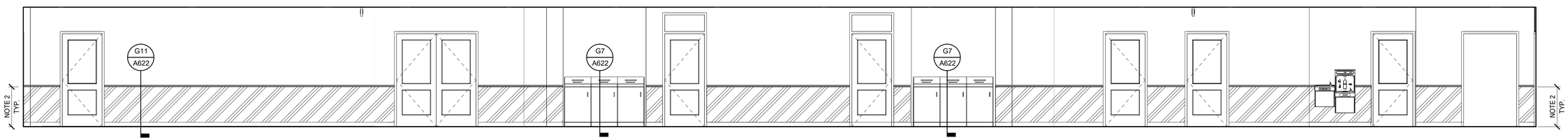

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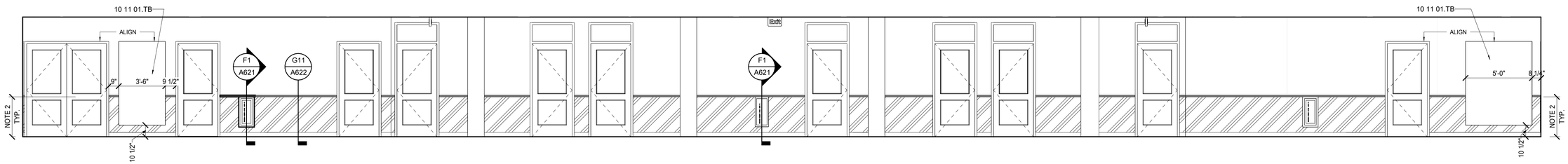

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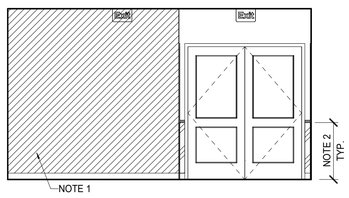

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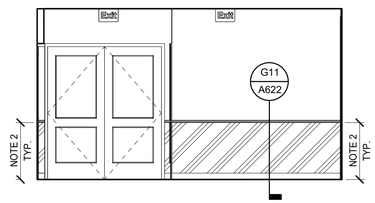

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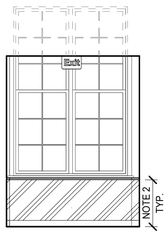
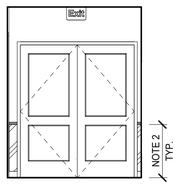


B1 SECOND FLOOR VEST - PLAN NORTH
0 4 8 FT



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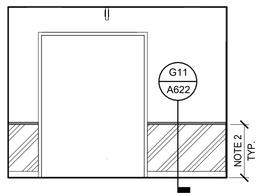

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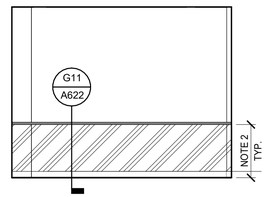

B9 SECOND FLOOR VEST - PLAN WEST
0 4 8 FT

MATERIAL KEYNOTES

10 11 01.TB TACKBOARD

ELEVATION FINISH LEGEND

- WALLCOVERING 1; 097200.WC1 (CORRIDORS)
- WALLCOVERING 2; 097200.WC2 (CLASSROOMS)
- CUSTOM SUPERGRAPHIC WALL FILM 1; 097756.GF1
- CUSTOM SUPERGRAPHIC GLASS FILM 2; 097756.GF2
- WOOD TRIM; 062000.CR1
- WOOD WALL PANELING; 064200.WP1
- TILE; 09300.T1
- RECLAIMED WOOD PLANKS; 064200.RWP1
- SALVAGED MARBLE

GENERAL NOTES

A. REFER TO ARCHITECTURAL MOUNTING SHEET G040 FOR ADDITIONAL INFORMATION.
B. REFER TO SPECIFICATION SECTION ALTERNATES 012300 FOR ADDITIONAL INFORMATION ON ALTERNATE MATERIALS.
C. ALL WALLS NOT TAGGED ARE TO RECEIVE PAINT 099100.PC1.
D. REFER TO SHEETS A721 & A722 FOR WALL BASE PATCHING INFO AT CORRIDORS; EXISTING TERRAZZO BASE IS TO REMAIN.
E. ALL ROOMS ARE TO RECEIVE RUBBER BASE 096500.RB1 U.N.O.
F. REFER TO INDIVIDUAL SPECIFICATIONS SECTIONS IN DIVISIONS 6, 8 & 9 FOR ADDITIONAL INFORMATION ON MATERIALS.

SHEET SPECIFIC NOTES

1. PROVIDE CUSTOM WALL SUPERGRAPHIC AT DEPARTMENT OFFICE FOR DEPARTMENT IDENTIFICATION. GRAPHIC TO BE PROVIDED BY OWNER.
2. ALL WALLCOVERING AND TOP OF CHAIR RAIL IS TO ALIGN WITH THE TOP OF THE WINDOW SILL IN CORRIDORS AND CLASSROOMS. HEIGHTS WILL VARY BASED ON LOCATION.

LORD AECK SARGENT

REVISION:

LORD AECK SARGENT PLANNING & DESIGN, INC
ARCHITECTURAL CORPORATION
CERT. NO. 53851
NORTH CAROLINA
CHAPEL HILL

SEAL
Lauren Dunn Rockett
Registered Architect
North Carolina
9574
Chapel Hill, NC
01.08.2024

SHEET TITLE
INTERIOR ELEVATIONS

SCALE (U.N.O.)

JOB NAME
University of North Carolina - Chapel Hill

SCO# 21-23484-02A
UNC Project No. C21212
BINGHAM HALL RENOVATION

LOCATION
36 Lenoir Drive, Chapel Hill, NC 27514

ISSUE DATE
1/8/2023

JOB. NO.
11706-00

DWG. NO.
A611

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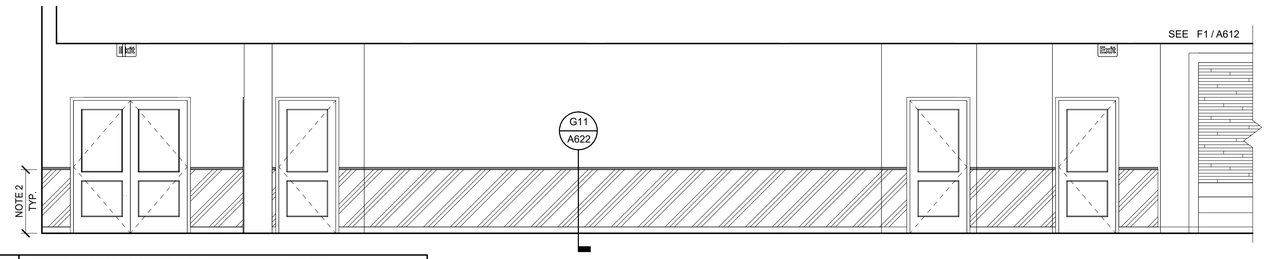
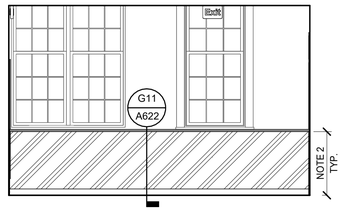


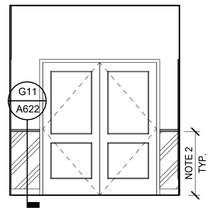
J1 THIRD FLOOR CORRIDOR - PLAN EAST /NORTH

0 4 8 FT



J10 THIRD FLOOR CORRIDOR - PLAN SOUTH

0 4 8 FT



J13 THIRD FLOOR CORRIDOR - PLAN SOUTH / NORTH

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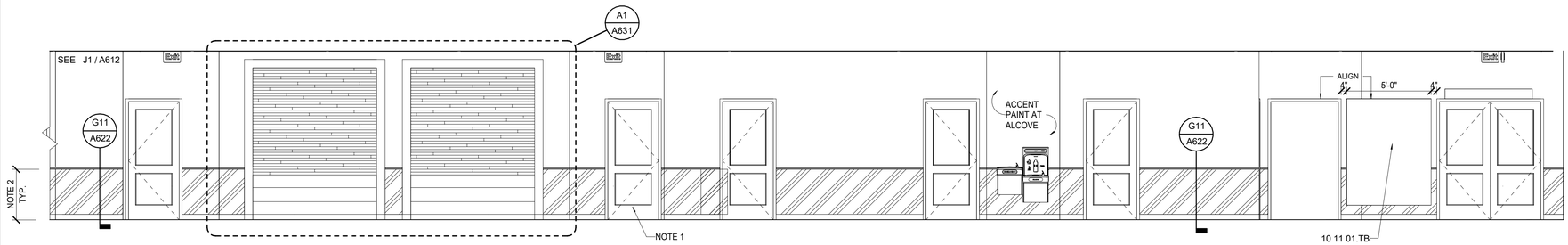

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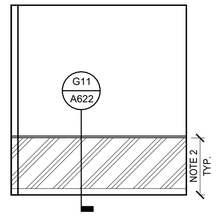
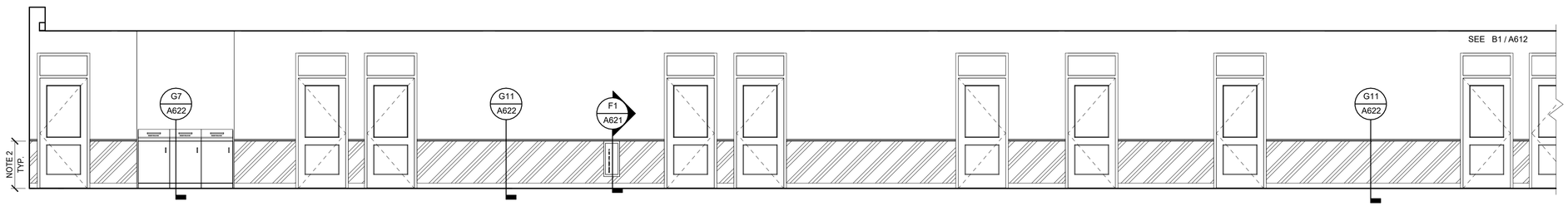
0 4 8 FT



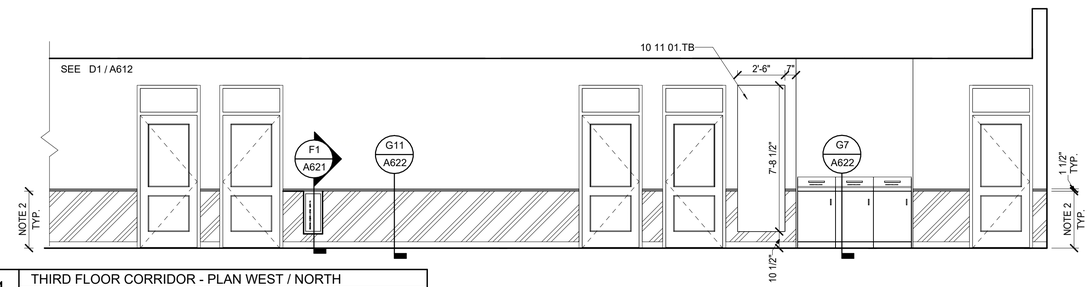
F13 THIRD FLOOR CORRIDOR - PLAN SOUTH / NORTH

0 4 8 FT



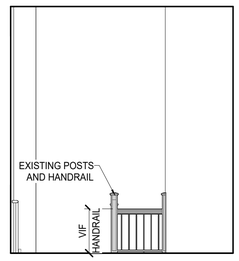
D1 THIRD FLOOR CORRIDOR - PLAN WEST / SOUTH

0 4 8 FT



B1 THIRD FLOOR CORRIDOR - PLAN WEST / NORTH

0 4 8 FT



B10 THIRD FLOOR STAIR - PLAN EAST

0 4 8 FT

MATERIAL KEYNOTES

10 11 01.TB TACKBOARD

ELEVATION FINISH LEGEND

- WALLCOVERING 1; 097200.WC1 (CORRIDORS)
- WALLCOVERING 2; 097200.WC2 (CLASSROOMS)
- CUSTOM SUPERGRAPHIC WALL FILM 1; 097756.GF1
- CUSTOM SUPERGRAPHIC GLASS FILM 2; 097756.GF2
- WOOD TRIM; 062000.CR1
- WOOD WALL PANELING; 064200.WP1
- TILE; 09300.T1
- RECLAIMED WOOD PLANKS; 064200.RWP1
- SALVAGED MARBLE

GENERAL NOTES

A. REFER TO ARCHITECTURAL MOUNTING SHEET G040 FOR ADDITIONAL INFORMATION.
B. REFER TO SPECIFICATION SECTION ALTERNATES 012300 FOR ADDITIONAL INFORMATION ON ALTERNATE MATERIALS.
C. ALL WALLS NOT TAGGED ARE TO RECEIVE PAINT 099100.PC1.
D. REFER TO SHEETS A721 & A722 FOR WALL BASE PATCHING INFO AT CORRIDORS; EXISTING TERRAZZO BASE IS TO REMAIN.
E. ALL ROOMS ARE TO RECEIVE RUBBER BASE 096500.RB1 U.N.O.
F. REFER TO INDIVIDUAL SPECIFICATIONS SECTIONS IN DIVISIONS 6, 8 & 9 FOR ADDITIONAL INFORMATION ON MATERIALS.

SHEET SPECIFIC NOTES

1. WOOD FRAMED STOREFRONT AND DOOR. BASED ON MANF. ADOTTA AND PRODUCT WALLEN.
2. ALL WALLCOVERING AND TOP OF CHAIR RAIL IS TO ALIGN WITH THE TOP OF THE WINDOW SILL IN CORRIDORS AND CLASSROOMS. HEIGHTS WILL VARY BASED ON LOCATION.

SEAL

Lauren Dunn Rockett, Registered Architect, North Carolina, 9874, Chapel Hill, NC

01.08.2024

LORD AECK SARGENT

REVISION:

LORD AECK SARGENT PLANNING & DESIGN, INC. LANDSCAPE ARCHITECTURAL CORPORATION CERT. NO. 53851 NORTH CAROLINA CHAPEL HILL

SHEET TITLE: INTERIOR ELEVATIONS

SCALE (U.N.O.)

JOB NAME: University of North Carolina - Chapel Hill
SCI#: 21-2354620A
UNC Project No. C21212
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

ISSUE DATE: 1/8/2023

JOB. NO.: 11706-00

DWG. NO.: A612

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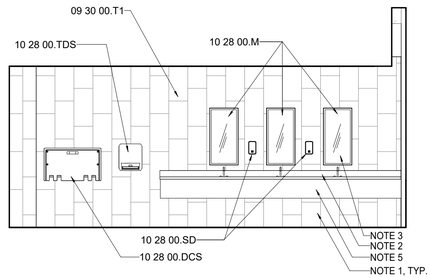
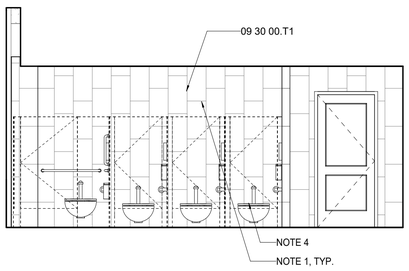


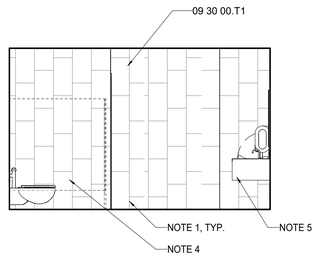
H1 FIRST FLOOR WOMENS RESTROOM - PLAN NORTH

0 4 8 FT



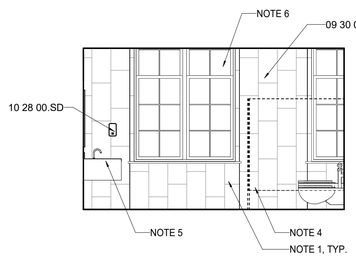
H4 FIRST FLOOR WOMENS RESTROOM - PLAN SOUTH

0 4 8 FT



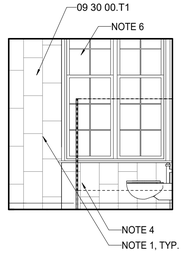
H7 FIRST FLOOR WOMENS - PLAN WEST

0 4 8 FT



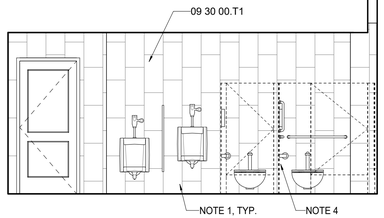
H10 FIRST FLOOR WOMENS - PLAN EAST

0 4 8 FT



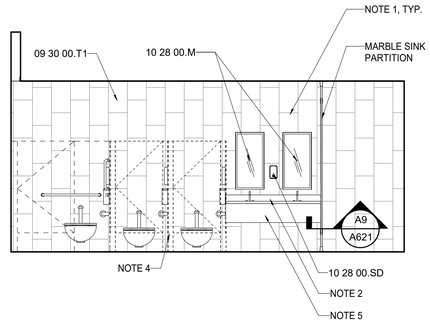
H13 SECOND FLOOR WOMENS - PLAN EAST

0 4 8 FT



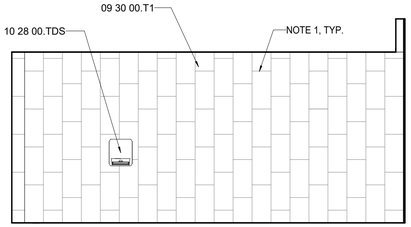
E1 FIRST FLOOR MENS RESTROOM - PLAN NORTH

0 4 8 FT



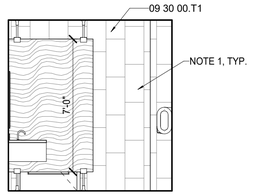
E4 SECOND FLOOR WOMENS RESTROOMS - PLAN SOUTH

0 4 8 FT



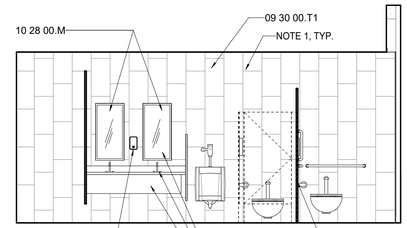
E7 SECOND FLOOR RESTROOMS - PLAN NORTH & SOUTH

0 4 8 FT



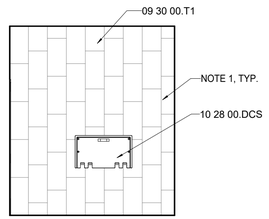
E10 SECOND FLOOR RESTROOMS - PLAN WEST

0 4 8 FT



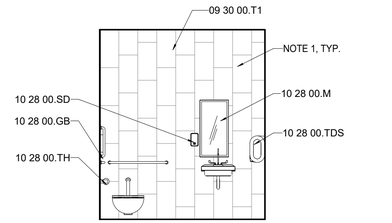
E13 SECOND FLOOR MENS RESTROOM - PLAN NORTH

0 4 8 FT



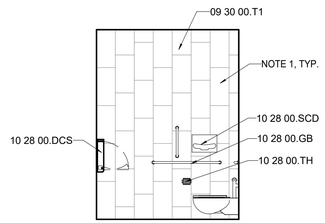
B1 THIRD FLOOR RESTROOMS - PLAN NRTH.

0 4 8 FT



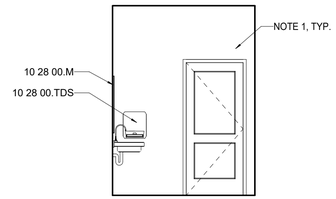
B4 THIRD FLOOR RESTROOMS - PLAN STH.

0 4 8 FT



B7 THIRD FLOOR RESTROOMS - PLAN EAST

0 4 8 FT



B10 THIRD FLOOR RESTROOMS - PLAN WEST

0 4 8 FT

MATERIAL KEYNOTES

09 30 00.T1	Tile 1
10 28 00.DCS	Diaper Changing Station
10 28 00.GB	Grab Bar
10 28 00.M	Mirror
10 28 00.SCD	Seat Cover Dispenser
10 28 00.SD	Soap Dispenser
10 28 00.TDS	Towel Dispenser/Disposal, Surface Mt.
10 28 00.TH	Toilet Tissue Holder

ELEVATION FINISH LEGEND

- WALLCOVERING 1; 097200.WC1 (CORRIDORS)
- WALLCOVERING 2; 097200.WC2 (CLASSROOMS)
- CUSTOM SUPERGRAPHIC WALL FILM 1; 097756.GF1
- CUSTOM SUPERGRAPHIC GLASS FILM 2; 097756.GF2
- WOOD TRIM; 062000.CR1
- WOOD WALL PANELING; 064200.WP1
- TILE; 09300.T1
- RECLAIMED WOOD PLANKS; 064200.RWP1
- SALVAGED MARBLE

GENERAL NOTES

A. REFER TO ARCHITECTURAL MOUNTING SHEET G040 FOR ADDITIONAL INFORMATION.
B. REFER TO SPECIFICATION SECTION ALTERNATES 012300 FOR ADDITIONAL INFORMATION ON ALTERNATE MATERIALS.
C. ALL WALLS NOT TAGGED ARE TO RECEIVE PAINT 099100.PC1.
D. REFER TO SHEETS A721 & A722 FOR WALL BASE PATCHING INFO AT CORRIDORS; EXISTING TERRAZZO BASE IS TO REMAIN.
E. ALL ROOMS ARE TO RECEIVE RUBBER BASE 096500.RB1 U.N.O.
F. REFER TO INDIVIDUAL SPECIFICATIONS SECTIONS IN DIVISIONS 6, 8 & 9 FOR ADDITIONAL INFORMATION ON MATERIALS.

SHEET SPECIFIC NOTES

1. WALLS ARE FULLY TILED UP TO 9'-0". REFER TO SPECIFICATION SECTION 093000.
2. COUNTERTOPS AND BACKSPLASHES ARE SOLID SURFACE MATERIAL. REFER TO SPECIFICATION SECTION 123600.
3. NOT USED
4. REFER TO SPECIFICATION 102113 FOR TOILET PARTITION MATERIAL AND HARDWARE INFO.
5. COUNTER FRONTS AND EXPOSED SIDES ARE PLASTIC LAMINATE; 064100.PL1.
6. DECORATIVE GLAZING FILM: 09 77 56.GF3

SEAL

Lauren Dunn Rockett Registered Architect North Carolina 9874 Chapel Hill, NC

01.08.2024

ISSUE DATE 1/8/2023

JOB NO. 11706-00

DWG. NO. A613

LORD AECK SARGENT

REVISION:

LORD AECK SARGENT PLANNING & DESIGN, INC. ARCHITECTURAL CORPORATION CERT. NO. 53851 NORTH CAROLINA CHAPEL HILL

SHEET TITLE: INTERIOR ELEVATIONS

SCALE (U.N.O.)

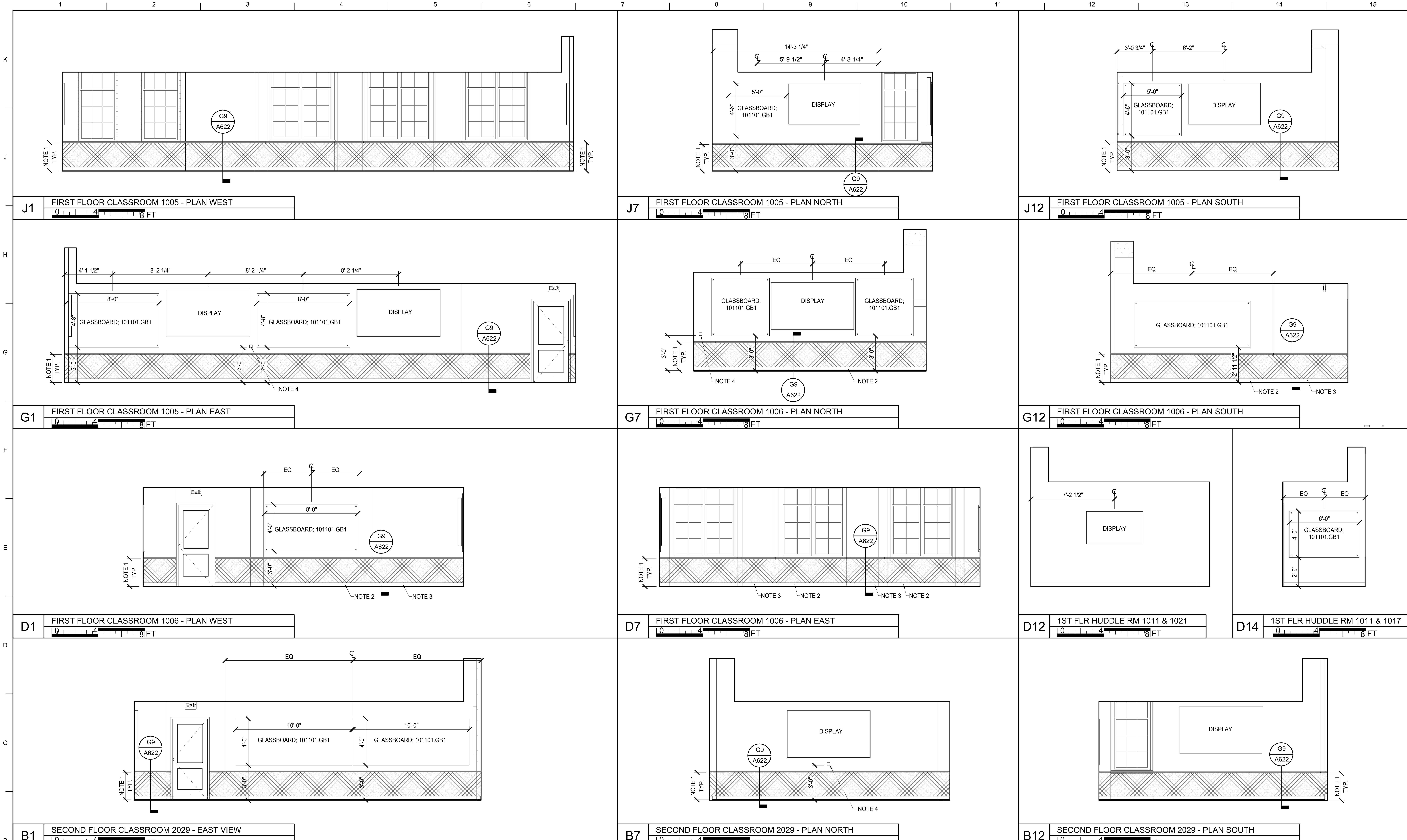
JOB NAME: University of North Carolina - Chapel Hill

UNC Project No. C01212

SCOM: 21-23548-02A

BINGHAM HALL RENOVATION

LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514



ELEVATION FINISH LEGEND

- WALLCOVERING 1; 097200.WC1 (CORRIDORS)
- WALLCOVERING 2; 097200.WC2 (CLASSROOMS)
- CUSTOM SUPERGRAPHIC WALL FILM 1; 097756.GF1
- CUSTOM SUPERGRAPHIC GLASS FILM 2; 097756.GF2
- WOOD TRIM; 062000.CR1
- WOOD WALL PANELING; 064200.WP1
- TILE; 09300.T1
- RECLAIMED WOOD PLANKS; 064200.RWP1
- SALVAGED MARBLE

GENERAL NOTES

A. REFER TO ARCHITECTURAL MOUNTING SHEET G040 FOR ADDITIONAL INFORMATION.
B. REFER TO SPECIFICATION SECTION ALTERNATES 012300 FOR ADDITIONAL INFORMATION ON ALTERNATE MATERIALS.
C. ALL WALLS NOT TAGGED ARE TO RECEIVE PAINT 099100.PC1.
D. REFER TO SHEETS A721 & A722 FOR WALL BASE PATCHING INFO AT CORRIDORS; EXISTING TERRAZZO BASE IS TO REMAIN.
E. ALL ROOMS ARE TO RECEIVE RUBBER BASE 096500.RB1 U.N.O.
F. REFER TO INDIVIDUAL SPECIFICATIONS SECTIONS IN DIVISIONS 6, 8 & 9 FOR ADDITIONAL INFORMATION ON MATERIALS.

SHEET SPECIFIC NOTES

1. ALL WALLCOVERING AND TOP OF CHAIR RAIL IS TO ALIGN WITH THE TOP OF THE WINDOW SILL IN CORRIDORS AND CLASSROOMS. HEIGHTS WILL VARY BASED ON LOCATION.
2. EXISTING WOOD BASE REMAINS AT THIS LOCATION. PREP FOR REFINISHING & PROVIDE NEW STAIN.
3. PROVIDE NEW WOOD BASE AT NEW WALLS. REFER TO SPECIFICATION SECTION 062000 FINISH CARPENTRY.
4. LOCKDOWN PUSH BUTTON DEVICE. REFER TO SECURITY DRAWINGS AND SPECIFICATIONS.

LORD AECK SARGENT

REVISION:

LORD AECK SARGENT PLANNING & DESIGN, INC. CERT. NO. 53851 NORTH CAROLINA CHAPEL HILL

SHEET TITLE
INTERIOR ELEVATIONS
SCALE (U.N.O.)

JOB NAME
University of North Carolina - Chapel Hill
SCO#: 21-23548-02A UNC Project No. C21212
BINGHAM HALL RENOVATION
LOCATION
36 Lenoir Drive, Chapel Hill, NC 27514

SEAL
Lauren Dunn Rockart Registered Architect 9574 North Carolina Chapel Hill, NC
01·08·2024

ISSUE DATE
1/8/2023
JOB. NO.
11706-00
DWG. NO.
A614

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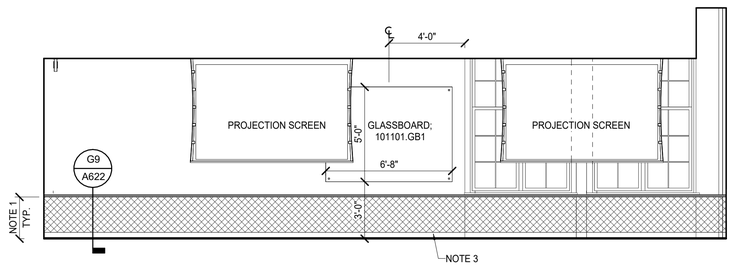
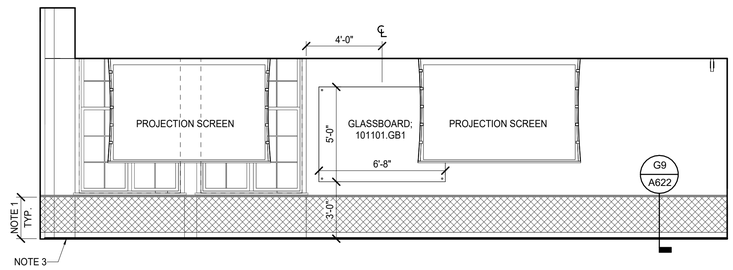


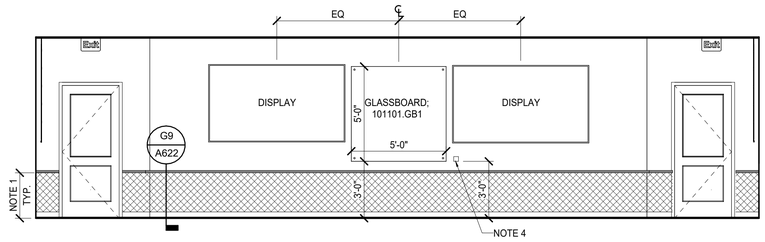
H1 FIRST FLOOR CLASSROOM 1014 - PLAN NORTH

0 4 8 FT



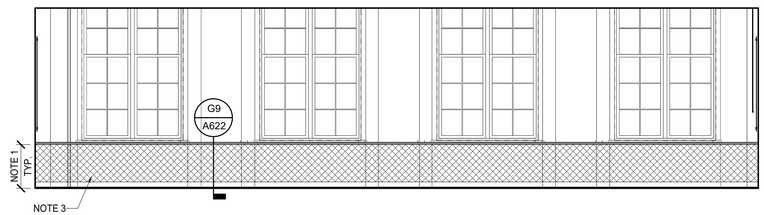
H8 FIRST FLOOR CLASSROOM 1014 - PLAN SOUTH

0 4 8 FT



E1 FIRST FLOOR CLASSROOM 1014 - PLAN WEST

0 4 8 FT



E8 FIRST FLOOR CLASSROOM 1014- PLAN EAST

0 4 8 FT

ELEVATION FINISH LEGEND

- WALLCOVERING 1; 097200.WC1 (CORRIDORS)
- WALLCOVERING 2; 097200.WC2 (CLASSROOMS)
- CUSTOM SUPERGRAPHIC WALL FILM 1; 097756.GF1
- CUSTOM SUPERGRAPHIC GLASS FILM 2; 097756.GF2
- WOOD TRIM; 062000.CR1
- WOOD WALL PANELING; 064200.WP1
- TILE; 09300.T1
- RECLAIMED WOOD PLANKS; 064200.RWP1
- SALVAGED MARBLE

GENERAL NOTES

A. REFER TO ARCHITECTURAL MOUNTING SHEET G040 FOR ADDITIONAL INFORMATION.
B. REFER TO SPECIFICATION SECTION ALTERNATES 012300 FOR ADDITIONAL INFORMATION ON ALTERNATE MATERIALS.
C. ALL WALLS NOT TAGGED ARE TO RECEIVE PAINT 099100.PC1.
D. REFER TO SHEETS A721 & A722 FOR WALL BASE PATCHING INFO AT CORRIDORS; EXISTING TERRAZZO BASE IS TO REMAIN.
E. ALL ROOMS ARE TO RECEIVE RUBBER BASE 096500.RB1 U.N.O.
F. REFER TO INDIVIDUAL SPECIFICATIONS SECTIONS IN DIVISIONS 6, 8 & 9 FOR ADDITIONAL INFORMATION ON MATERIALS.

SHEET SPECIFIC NOTES

1. ALL WALLCOVERING AND TOP OF CHAIR RAIL IS TO ALIGN WITH THE TOP OF THE WINDOW SILL IN CORRIDORS AND CLASSROOMS. HEIGHTS WILL VARY BASED ON LOCATION.
2. COUNTERTOPS AND BACKSPLASHES ARE SOLID SURFACE MATERIAL. REFER TO SPECIFICATION SECTION 123600.
3. EXISTING WOOD BASE REMAINS AT THIS LOCATION. PREP FOR REFINISHING & PROVIDE NEW STAIN.
4. LOCKDOWN PUSH BUTTON DEVICE. REFER TO SECURITY DRAWINGS AND SPECIFICATIONS.

SEAL

Lauren Dunn Rockart, Registered Architect, North Carolina, 39174, Chapel Hill, NC

01.08.2024

LORD AECK SARGENT

REVISION:

LORD AECK SARGENT PLANNING & DESIGN, INC. ARCHITECTURAL CORPORATION CERT. NO. 53851 NORTH CAROLINA CHAPEL HILL

SHEET TITLE: INTERIOR ELEVATIONS

SCALE (U.N.O.)

JOB NAME: University of North Carolina - Chapel Hill
SCM# 21-23548-02A UNC Project No. C01212
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

ISSUE DATE: 1/8/2023
JOB. NO. 11706-00
DWG. NO. A615

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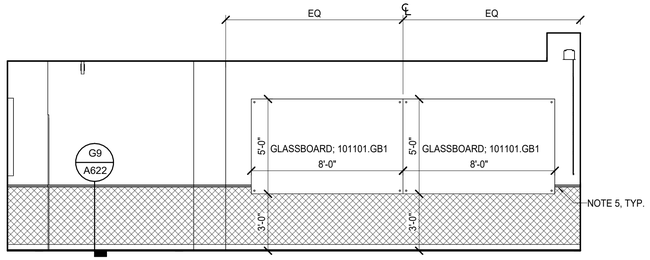

J1 THIRD FLOOR CLASSROOM 3006 - PLAN NORTH

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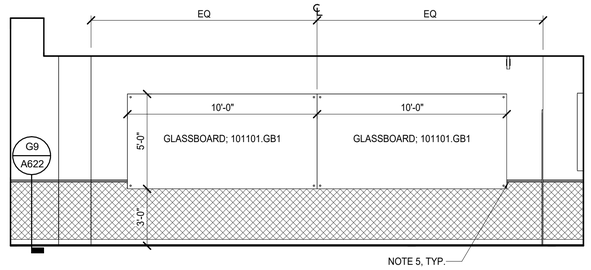
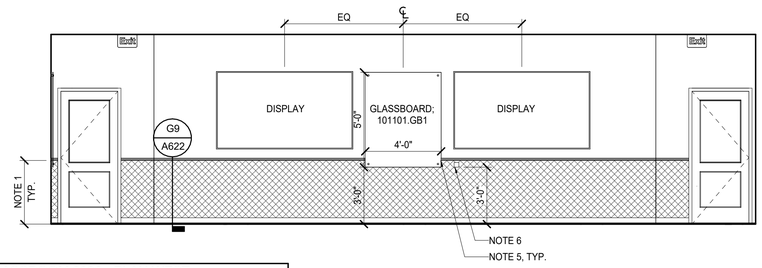


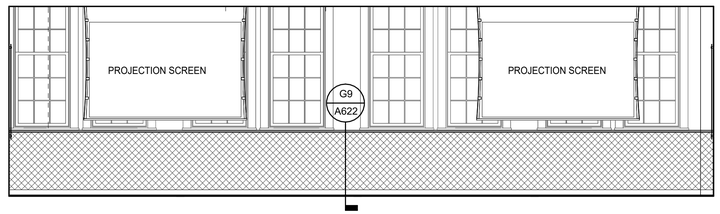
J8 THIRD FLOOR CLASSROOM 3006 - PLAN SOUTH

0 4 8 FT



F1 THIRD FLOOR CLASSROOM 3006 - PLAN WEST

0 4 8 FT



F8 THIRD FLOOR CLASSROOM 3006 - PLAN EAST

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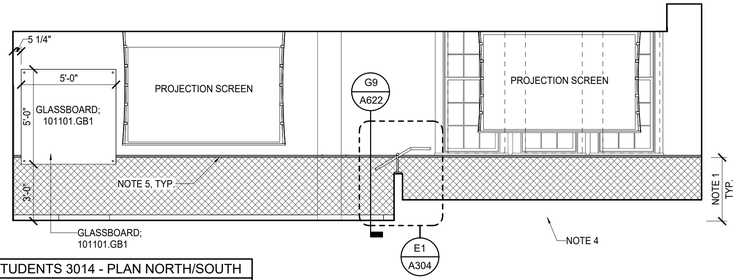
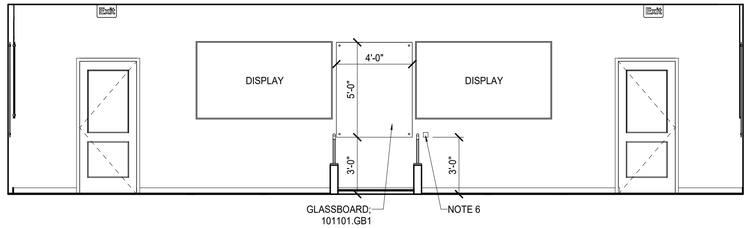


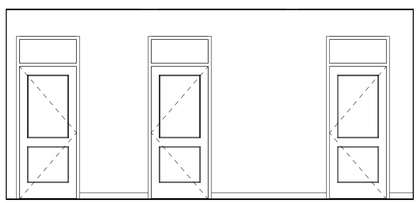
D1 3RD FLR GRADUATE STUDENTS 3014 - PLAN NORTH/SOUTH

0 4 8 FT



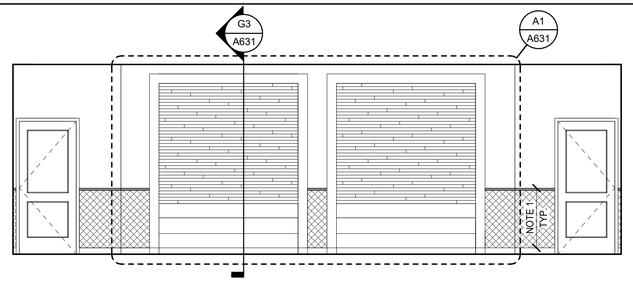
D8 THIRD FLOOR GRADUATE STUDENTS 3014 - PLAN WEST

0 4 8 FT



B1 THIRD FLOOR CORRIDOR 3000 - PLAN WEST

0 4 8 FT



B4 THIRD FLOOR CORRIDOR 3000 - PLAN EAST

0 4 8 FT

MATERIAL KEYNOTES

ELEVATION FINISH LEGEND

- WALLCOVERING 1; 097200.WC1 (CORRIDORS)
- WALLCOVERING 2; 097200.WC2 (CLASSROOMS)
- CUSTOM SUPERGRAPHIC WALL FILM 1; 097756.GF1
- CUSTOM SUPERGRAPHIC GLASS FILM 2; 097756.GF2
- WOOD TRIM; 062000.CR1
- WOOD WALL PANELING; 064200.WP1
- TILE; 09300.T1
- RECLAIMED WOOD PLANKS; 064200.RWP1
- SALVAGED MARBLE

GENERAL NOTES

A. REFER TO ARCHITECTURAL MOUNTING SHEET G040 FOR ADDITIONAL INFORMATION.
B. REFER TO SPECIFICATION SECTION ALTERNATES 012300 FOR ADDITIONAL INFORMATION ON ALTERNATE MATERIALS.
C. ALL WALLS NOT TAGGED ARE TO RECEIVE PAINT 099100.PC1.
D. REFER TO SHEETS A721 & A722 FOR WALL BASE PATCHING INFO AT CORRIDORS; EXISTING TERRAZZO BASE IS TO REMAIN.
E. ALL ROOMS ARE TO RECEIVE RUBBER BASE 096500.RB1 U.N.O.
F. REFER TO INDIVIDUAL SPECIFICATIONS SECTIONS IN DIVISIONS 6, 8 & 9 FOR ADDITIONAL INFORMATION ON MATERIALS.

SHEET SPECIFIC NOTES

1. ALL WALLCOVERING AND TOP OF CHAIR RAIL IS TO ALIGN WITH THE TOP OF THE WINDOW SILL IN CORRIDORS AND CLASSROOMS. HEIGHTS WILL VARY BASED ON LOCATION.
2. NOT USED
3. WOOD FRAMED STOREFRONT AND DOOR. BASED ON MANF. ADOTTA AND PRODUCT WALLEN.
4. EXISTING WOOD BASE REMAINS AT THIS LOCATION. PREP FOR REFINISHING & PROVIDE NEW STAIN.
5. CHAIR RAIL TO TERMINATE AT GLASSBOARD LOCATIONS, WALLCOVERING TO CONTINUE BEHIND GLASSBOARD. HEIGHT OF WALLCOVERING BASED ON LOCATION PER NOTE 1.
6. LOCKDOWN PUSH BUTTON DEVICE. REFER TO SECURITY DRAWINGS AND SPECIFICATIONS.

LORD AECK SARGENT

REVISION:

LORD AECK SARGENT PLANNING & DESIGN, INC. LANDSCAPE ARCHITECTURAL CORPORATION CERT. NO. 53851 NORTH CAROLINA CHAPEL HILL

SHEET TITLE: INTERIOR ELEVATIONS

SCALE (U.N.O.)

JOB NAME: University of North Carolina - Chapel Hill

SCO# 21-23548-02A UNC Project No. C021212

BINGHAM HALL RENOVATION

LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

SEAL: Lauren Dunn Rockett, Registered Architect, 29574, North Carolina, Chapel Hill, NC, 01.08.2024

ISSUE DATE: 1/8/2023

JOB. NO.: 11706-00

DWG. NO.: A616

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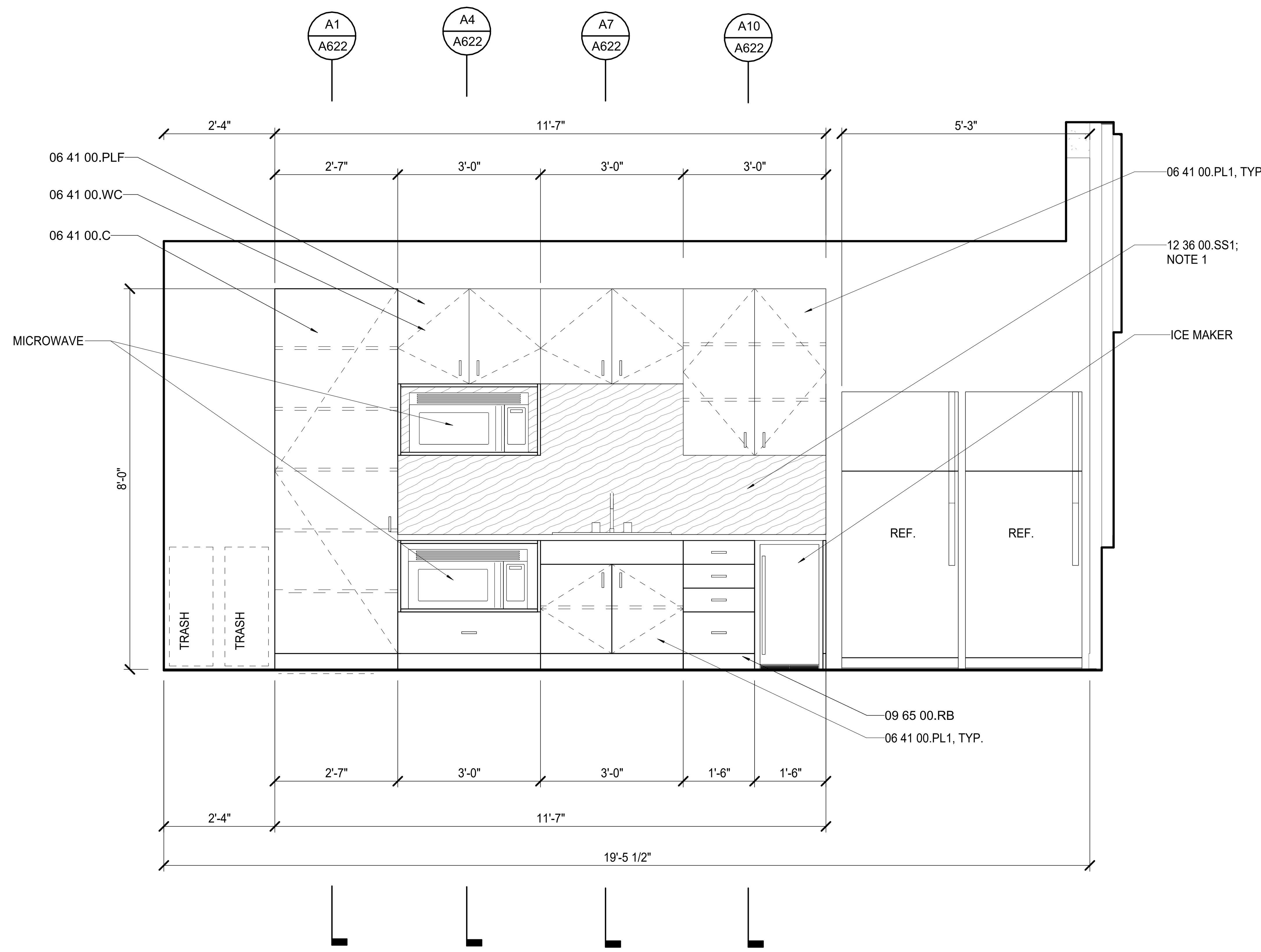
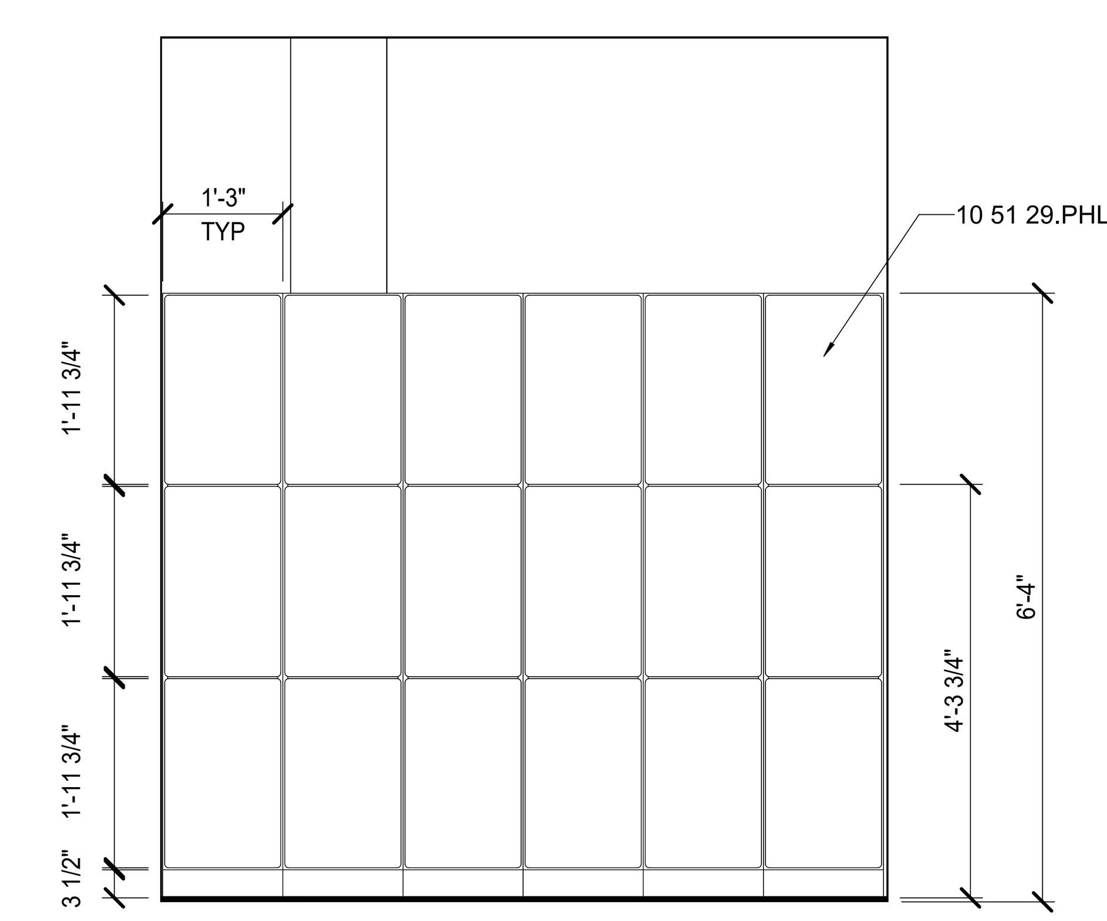


B1 2ND FLOOR WORK ROOM 2026 - PLAN NORTH

0 2 4 FT



B8 GRADUATE OFFICES 2014 - LOCKERS

0 2 4 FT

MATERIAL KEYNOTES

06 41 00.C	Cabinet
06 41 00.PLF	Plastic Laminate
06 41 00.WC	Wall Cabinet
09 65 00.RB	Resilient Base
10 51 29.PHL	Phenolic Lockers

GENERAL NOTES

A. REFER TO ARCHITECTURAL MOUNTING SHEET G040 FOR ADDITIONAL INFORMATION.
B. REFER TO SPECIFICATION SECTION ALTERNATES 012300 FOR ADDITIONAL INFORMATION ON ALTERNATE MATERIALS.
C. ALL WALLS NOT TAGGED ARE TO RECEIVE PAINT 099100.PC1.
D. REFER TO SHEETS A721 & A722 FOR WALL BASE PATCHING INFO AT CORRIDORS; EXISTING TERRAZZO BASE IS TO REMAIN.
E. ALL ROOMS ARE TO RECEIVE RUBBER BASE 096500.RB1 U.N.O.
F. REFER TO INDIVIDUAL SPECIFICATIONS SECTIONS IN DIVISIONS 6, 8 & 9 FOR ADDITIONAL INFORMATION ON MATERIALS.

SHEET SPECIFIC NOTES

1. BACKSPLASH IS FULL HEIGHT

LORD AECK SARGENT

REVISION:

LORD AECK SARGENT PLANNING & DESIGN, INC. CERT. NO. 53851 NORTH CAROLINA CHAPEL HILL

SHEET TITLE
INTERIOR ELEVATIONS
SCALE (U.N.O.)

JOB NAME
University of North Carolina - Chapel Hill
SCO# 21-23548-02A UNC Project No. C21212
BINGHAM HALL RENOVATION
LOCATION
36 Lenoir Drive, Chapel Hill, NC 27514

SEAL
Lauren Dunn Rockart Registered Architect 9374 North Carolina Chapel Hill, NC
01·08·2024

ISSUE DATE
1/8/2023
JOB NO.
11706-00
DWG. NO.
A617

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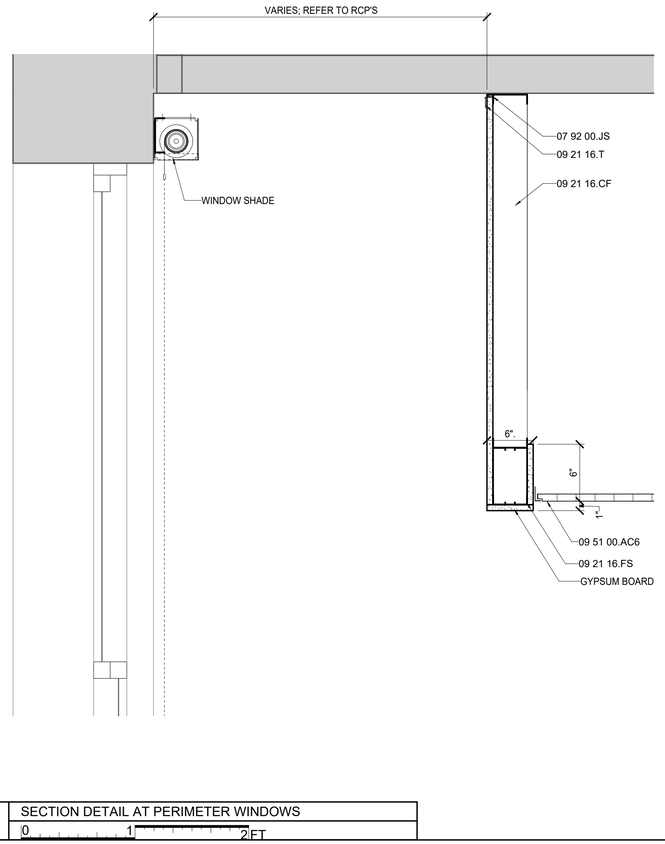

E1 SECTION DETAIL AT PERIMETER WINDOWS

0 1 2FT

MATERIAL KEYNOTES

07 92 00.JS	Joint Sealant
09 21 16.CF	Interior Ceiling Framing
09 21 16.FS	Metal Stud
09 21 16.T	Trim
09 51 00.AC6	Acoustical Ceiling System 6

LORD AECK SARGENT

REVISION:

LORD AECK SARGENT PLANNING & DESIGN, INC
ARCHITECTURAL CORPORATION
CERT. NO. 53851
NORTH CAROLINA
CHAPEL HILL

SHEET TITLE: INTERIOR SECTIONS

SCALE (U.N.O.)

JOB NAME: University of North Carolina - Chapel Hill
SCM# 21-235492A UNC Project No. C21212
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

SEAL

Lauren Dunn Rockett
Registered Architect
9874
North Carolina
Chapel Hill, NC
01.08.2024

ISSUE DATE: 1/8/2023
JOB. NO.: 11706-00
DWG. NO.: A620

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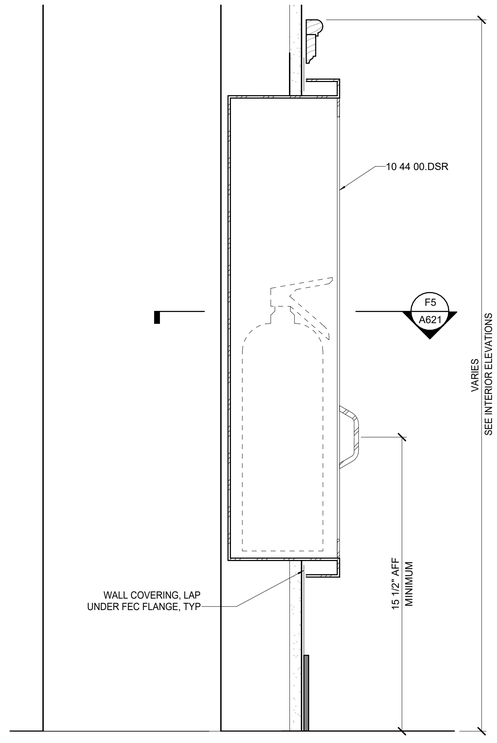
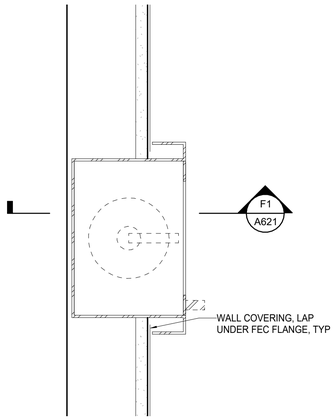


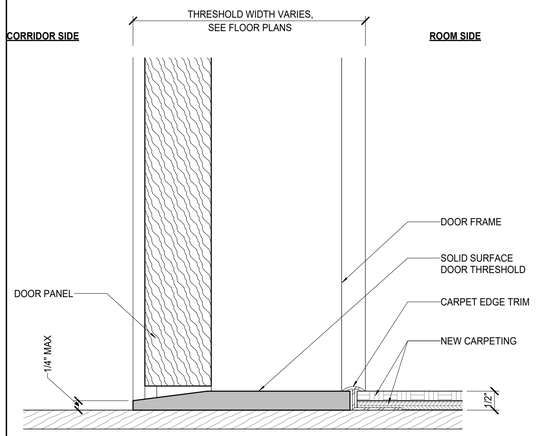
F1 10 44 00.DSR - TYP CORRIDOR FEC SECTION

0 6 12 IN



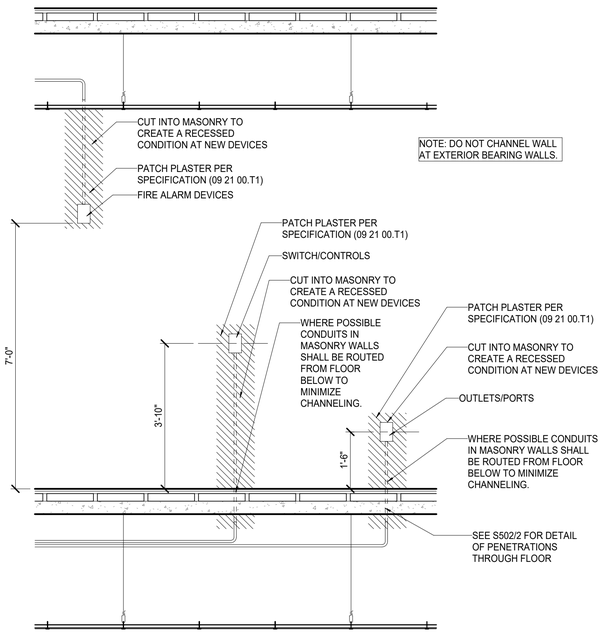
F5 10 44 00.DSR - TYP CORRIDOR FEC PLAN DTL

0 6 12 IN



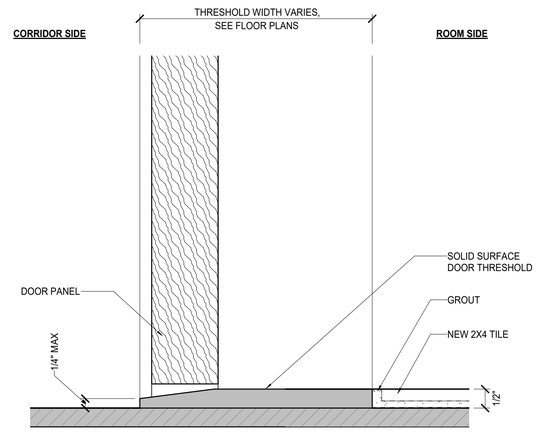
F8 INTERIOR THRESHOLD DETAIL - TERRAZZO TO CARPET

0 3 6 IN



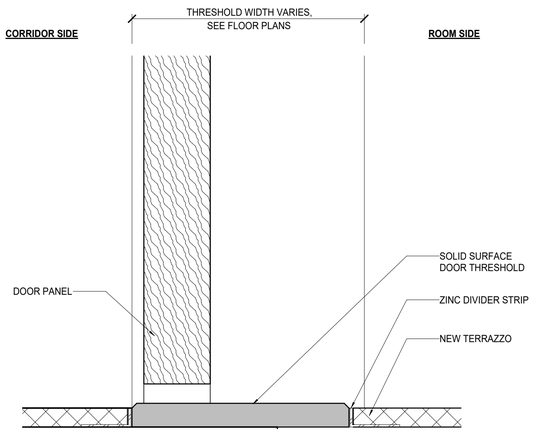
F11 DEVICES IN EXISTING INTERIOR MASONRY WALL

0 2 4 FT



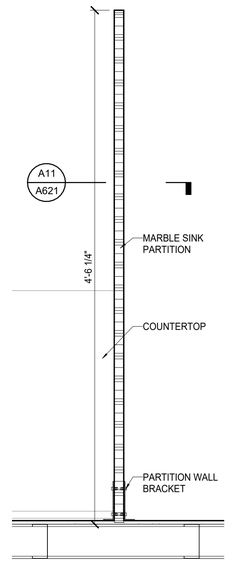
A1 INTERIOR THRESHOLD DETAIL - TERRAZZO TO TILE

0 3 6 IN



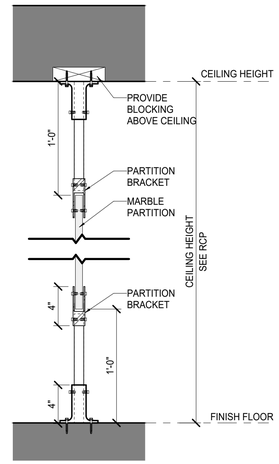
A5 INTERIOR THRESHOLD DETAIL - TERRAZZO TO TERRAZZO

0 3 6 IN



A9 MARBLE SINK PARTITION PLAN DTL

0 1 2 FT



A11 SECTION - MARBLE SINK PARTITION

0 1 2 FT

REVISION:

LORD AECK SARGENT PLANNING & DESIGN, INC. ARCHITECTURAL CORPORATION
CERT. NO. 53851
NORTH CAROLINA
CHAPEL HILL

SHEET TITLE
INTERIOR DETAILS

SCALE (U.N.O.)

JOB NAME
University of North Carolina - Chapel Hill

SCO# 21-23548-02A
UNC Project No. C21212
BINGHAM HALL RENOVATION

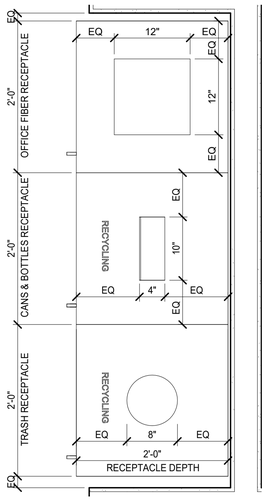
LOCATION
36 Lenoir Drive, Chapel Hill, NC 27514

SEAL
Lauren Dunn Rockett
Registered Architect
North Carolina
9574
Chapel Hill, NC
01.08.2024

ISSUE DATE
1/8/2023

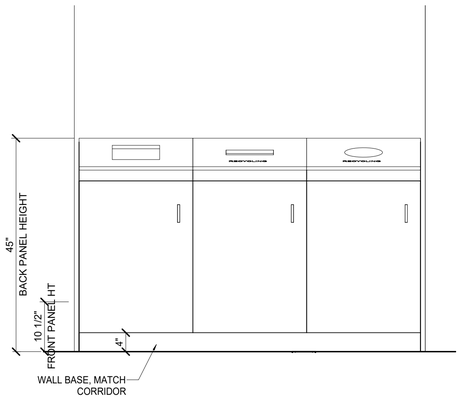
JOB. NO.
11706-00

DWG. NO.
A621



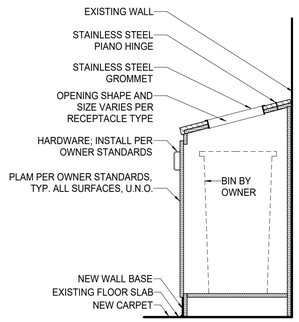
G1 PLAN DETAIL - RECYCLING STATION

0 1 2 FT



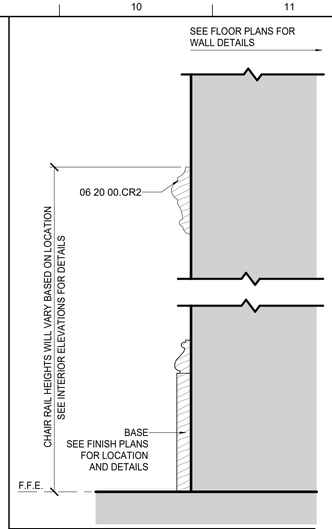
G4 ELEVATION - RECYCLING STATION

0 2 4 FT



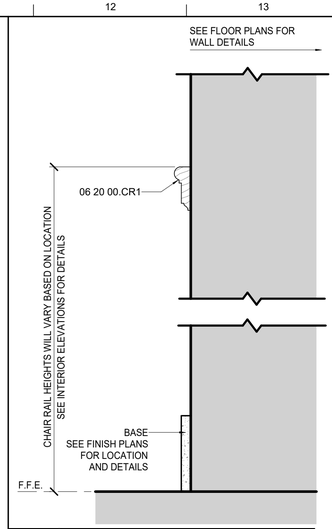
G7 SECTION - RECYCLING STATION

0 2 4 FT



G9 DETAIL - TRIM @ CLASSROOMS

0 6 12 IN

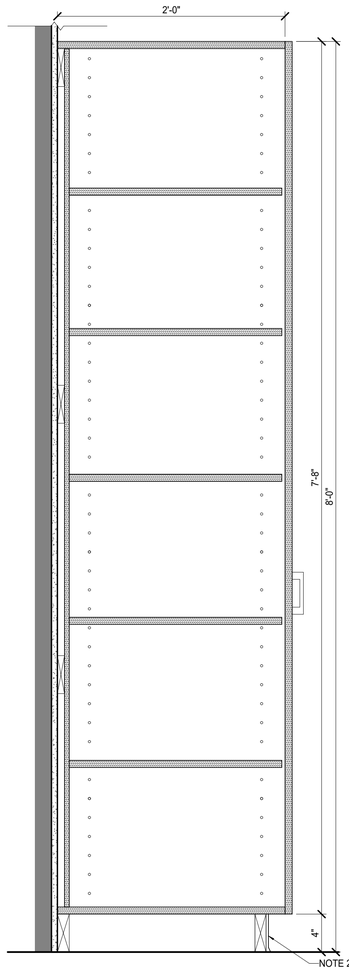


G11 DETAIL - CHAIR RAIL CORRIDORS

0 6 12 IN

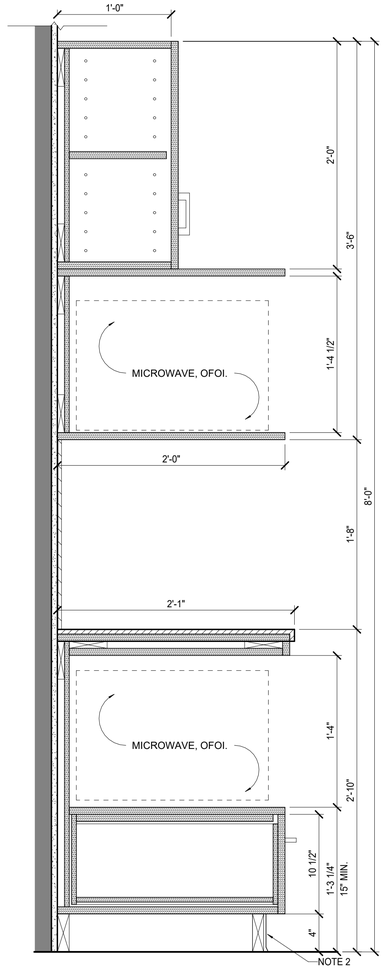
MATERIAL KEYNOTES

06 20 00.CR1	Wood Chair Rail
06 20 00.CR2	Wood Chair Rail



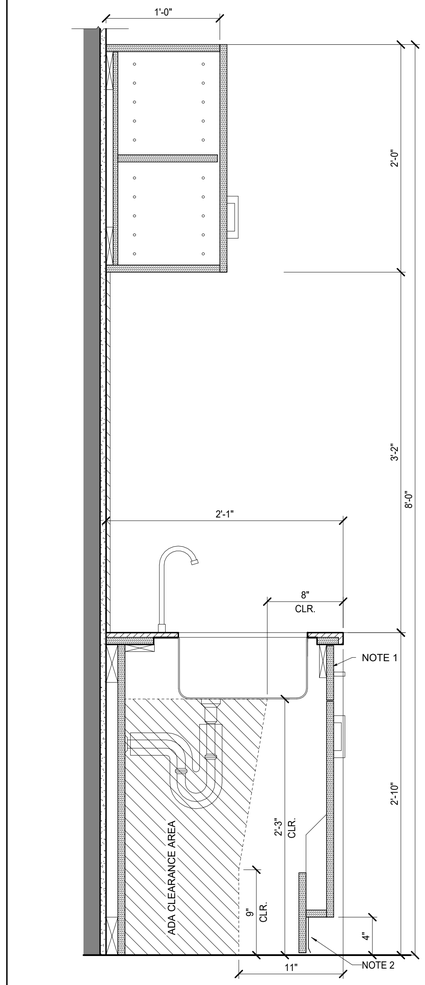
A1 CASEWORK DETAIL

0 1 2 FT



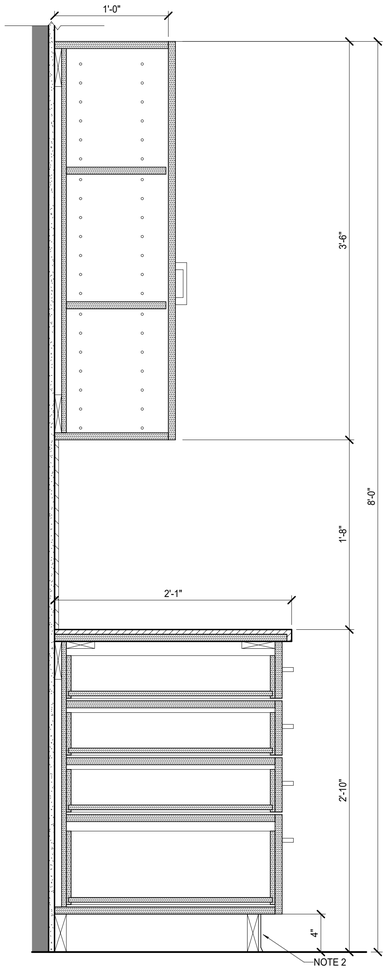
A4 CASEWORK DETAIL

0 1 2 FT



A7 CASEWORK DETAIL

0 1 2 FT



A10 CASEWORK DETAIL

0 1 2 FT

SHEET SPECIFIC NOTES

1. FALSE DRAWER FRONT IN FRONT OF SINK.
2. INTEGRAL TOE KICK WITH BASE.
3. PROVIDE FULL HEIGHT BACKSPLASH AT THIS LOCATION.

LORD AECK SARGENT

REVISION:

LORD AECK SARGENT PLANNING & DESIGN, INC. — LANDSCAPE ARCHITECTURAL CORPORATION — CERT. NO. 53851 — NORTH CAROLINA — CHAPEL HILL

SHEET TITLE: INTERIOR DETAILS

SCALE (U.N.O.)

JOB NAME: University of North Carolina - Chapel Hill
SCI#: 21-23548-02A
UNC Project No: C21212
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

SEAL: Lauren Dunn Rockett, Registered Architect, 9874, North Carolina, Chapel Hill, NC — 01.08.2024

ISSUE DATE: 1/8/2023
JOB. NO.: 11706-00
DWG. NO.: A622

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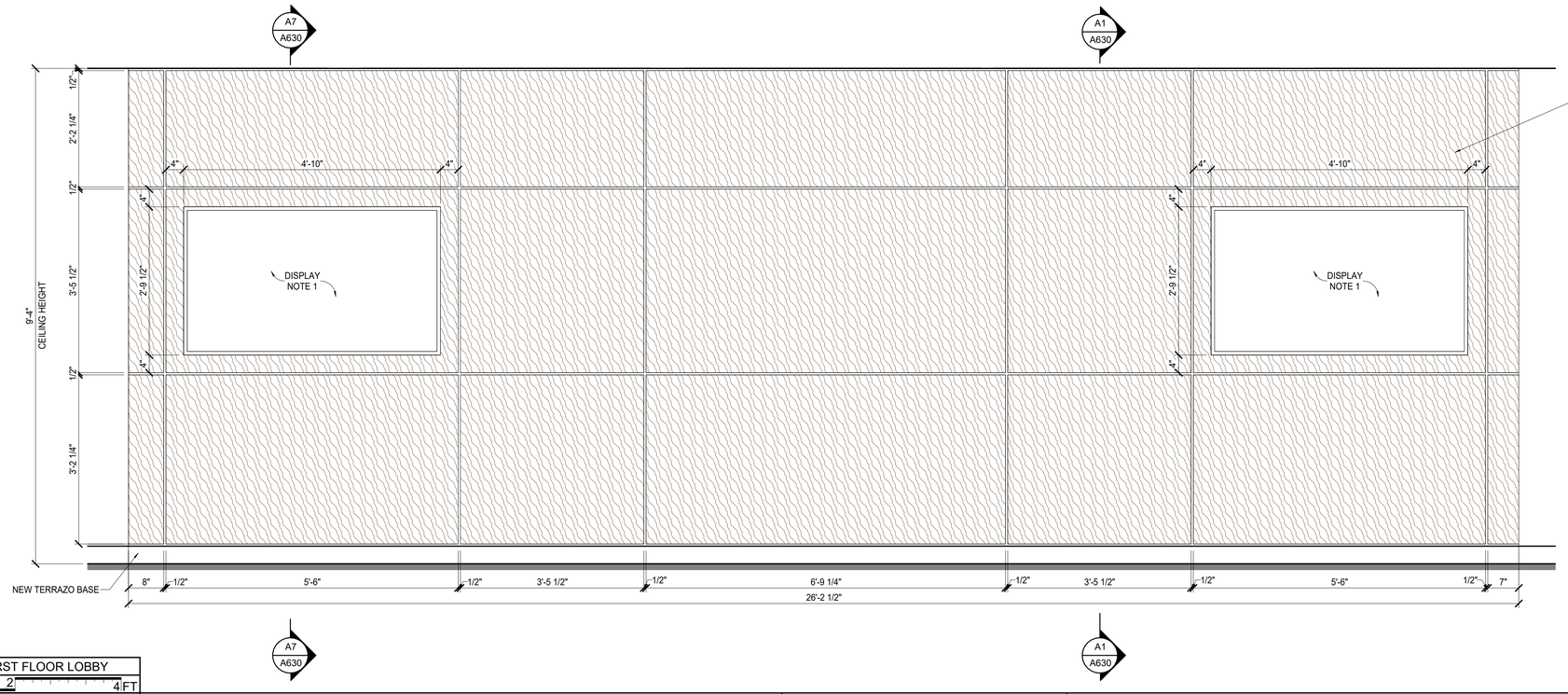
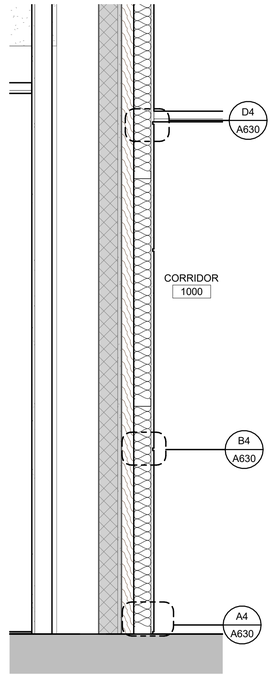
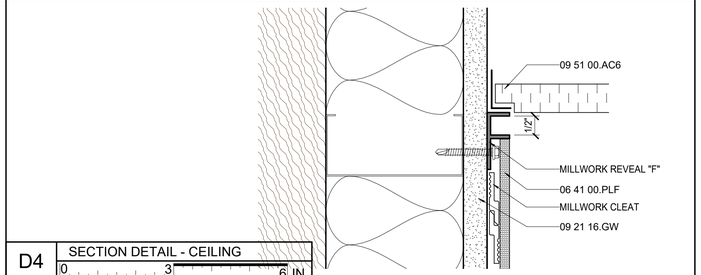


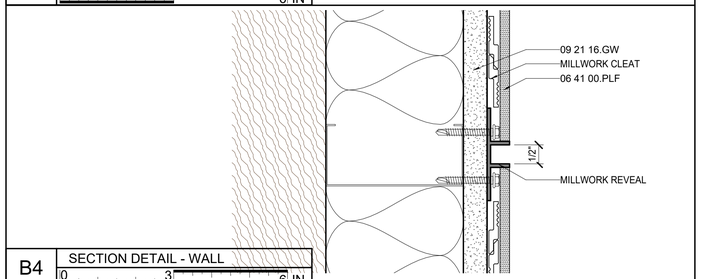
F1 INTERIOR - FIRST FLOOR LOBBY
0 2 4 FT



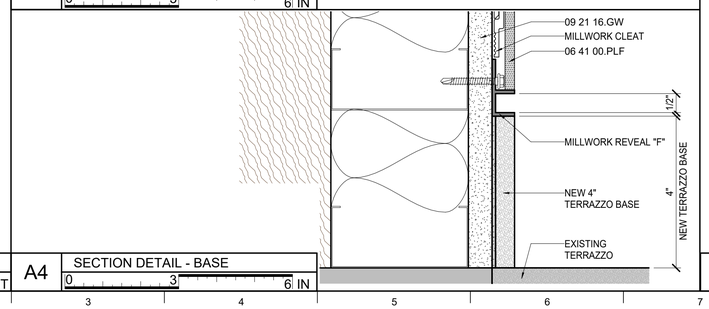
A1 SECTION - FIRST FLOOR LOBBY
0 2 4 FT



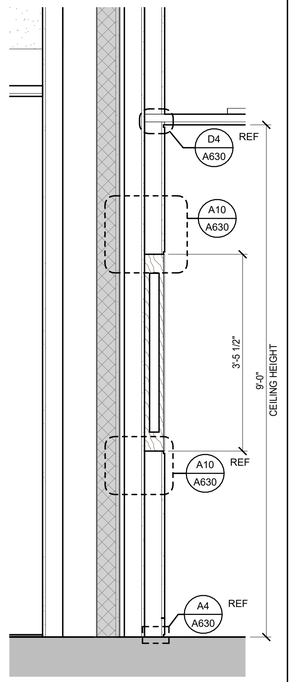
D4 SECTION DETAIL - CEILING
0 3 6 IN



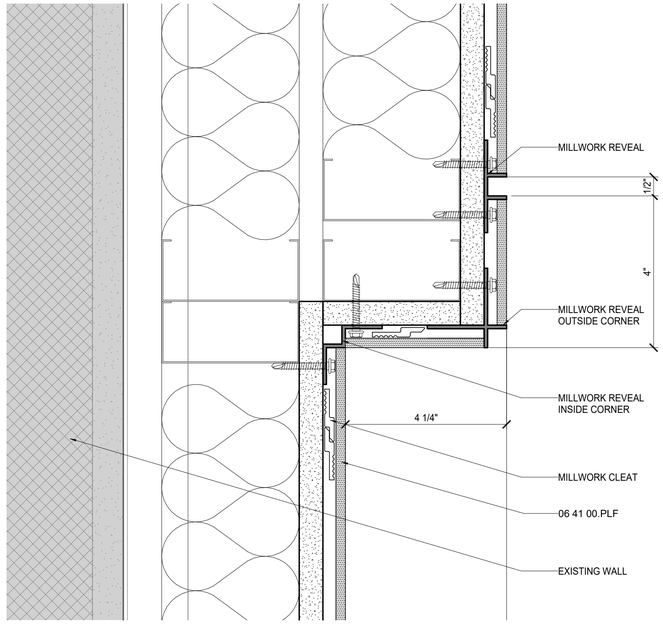
B4 SECTION DETAIL - WALL
0 3 6 IN



A4 SECTION DETAIL - BASE
0 3 6 IN



A7 SECTION - FIRST FLOOR LOBBY
0 2 4 FT



A10 SECTION DETAIL - CORNER
0 3 6 IN

MATERIAL KEYNOTES

06 41 00.PLF	Plastic Laminate
06 42 00.WP1	Wood Paneling
09 21 16.GW	Gypsum Wallboard
09 51 00.AC6	Acoustical Ceiling System 6

SHEET SPECIFIC NOTES

1. PROVIDE BLOCKING IN WALL ALCOVE FOR DISPLAY BOARDS/SCREENS.

LORD AECK SARGENT

REVISION:

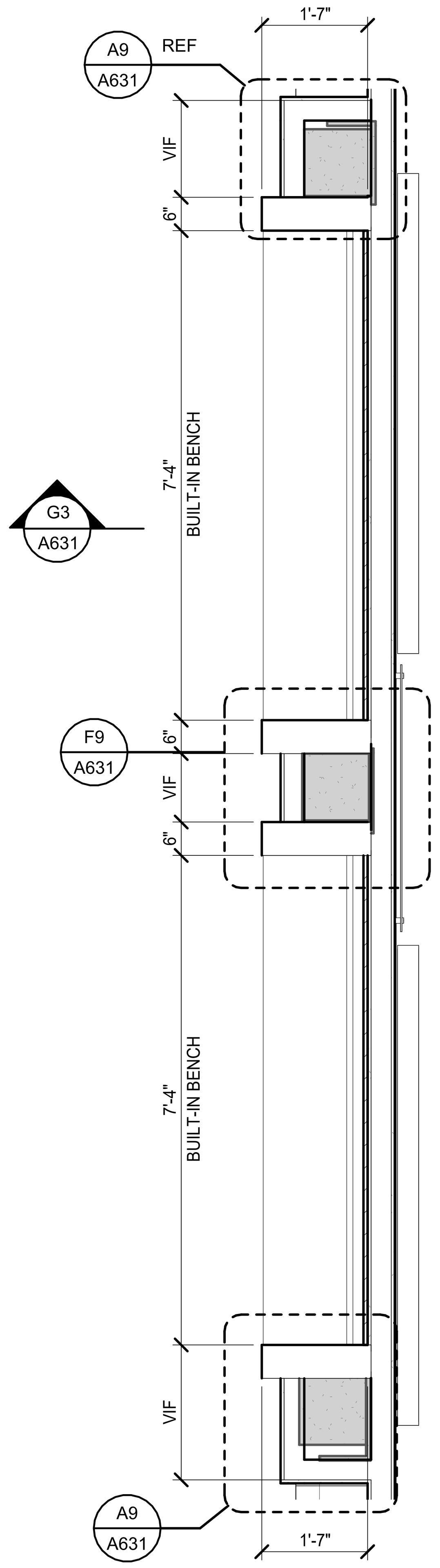
LORD AECK SARGENT PLANNING & DESIGN, INC
LANDSCAPE ARCHITECTURAL CORPORATION
CERT. NO. 53851
NORTH CAROLINA
CHAPEL HILL

SHEET TITLE: LOBBY WALL DETAILS
SCALE (U.N.O.)

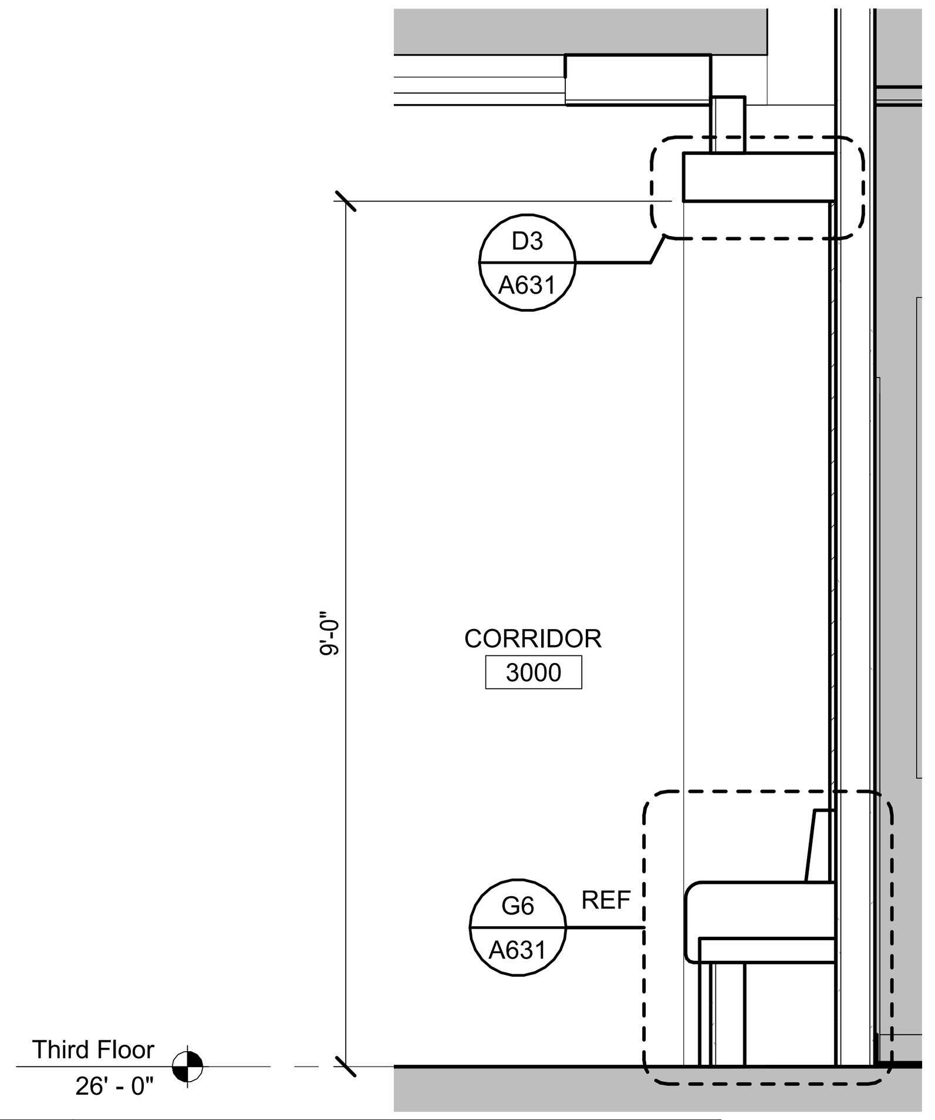
JOB NAME: University of North Carolina - Chapel Hill
SCI#: 21-2354520A
UNC Project No. C21212
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

SEAL: Lauren Dunn Rockett, Registered Architect, 9874, North Carolina, Chapel Hill, NC
01.08.2024

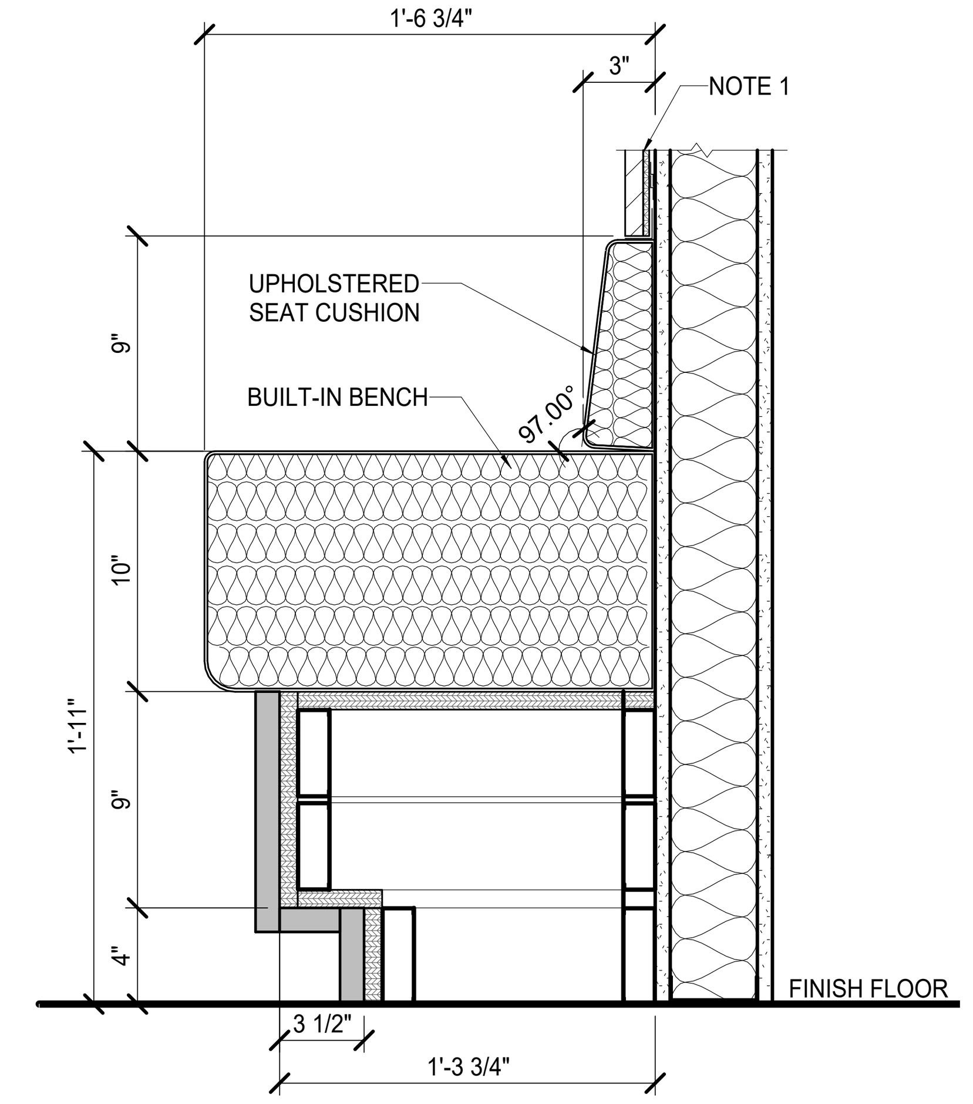
ISSUE DATE: 1/8/2023
JOB. NO. 11706-00
DWG. NO. A630



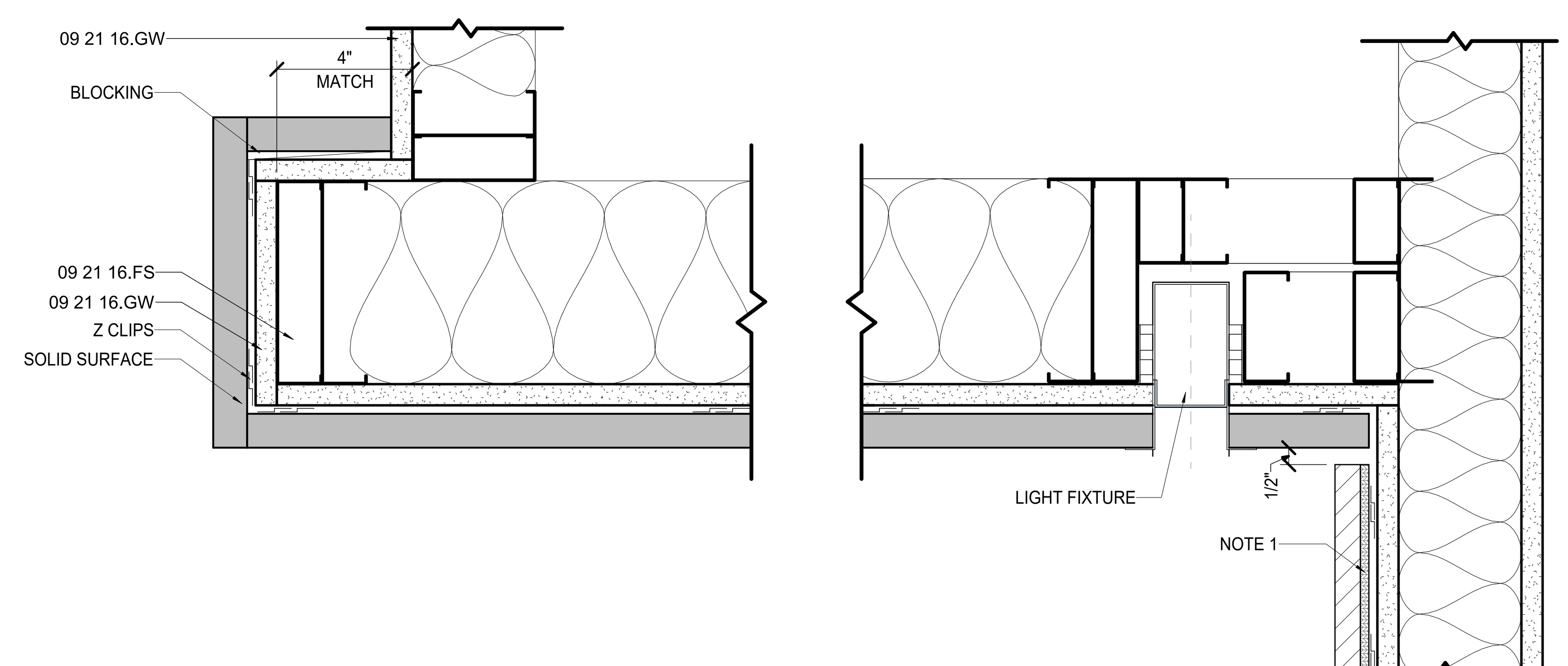
D1 PLAN - BUILT IN BENCH
0 2 4 FT



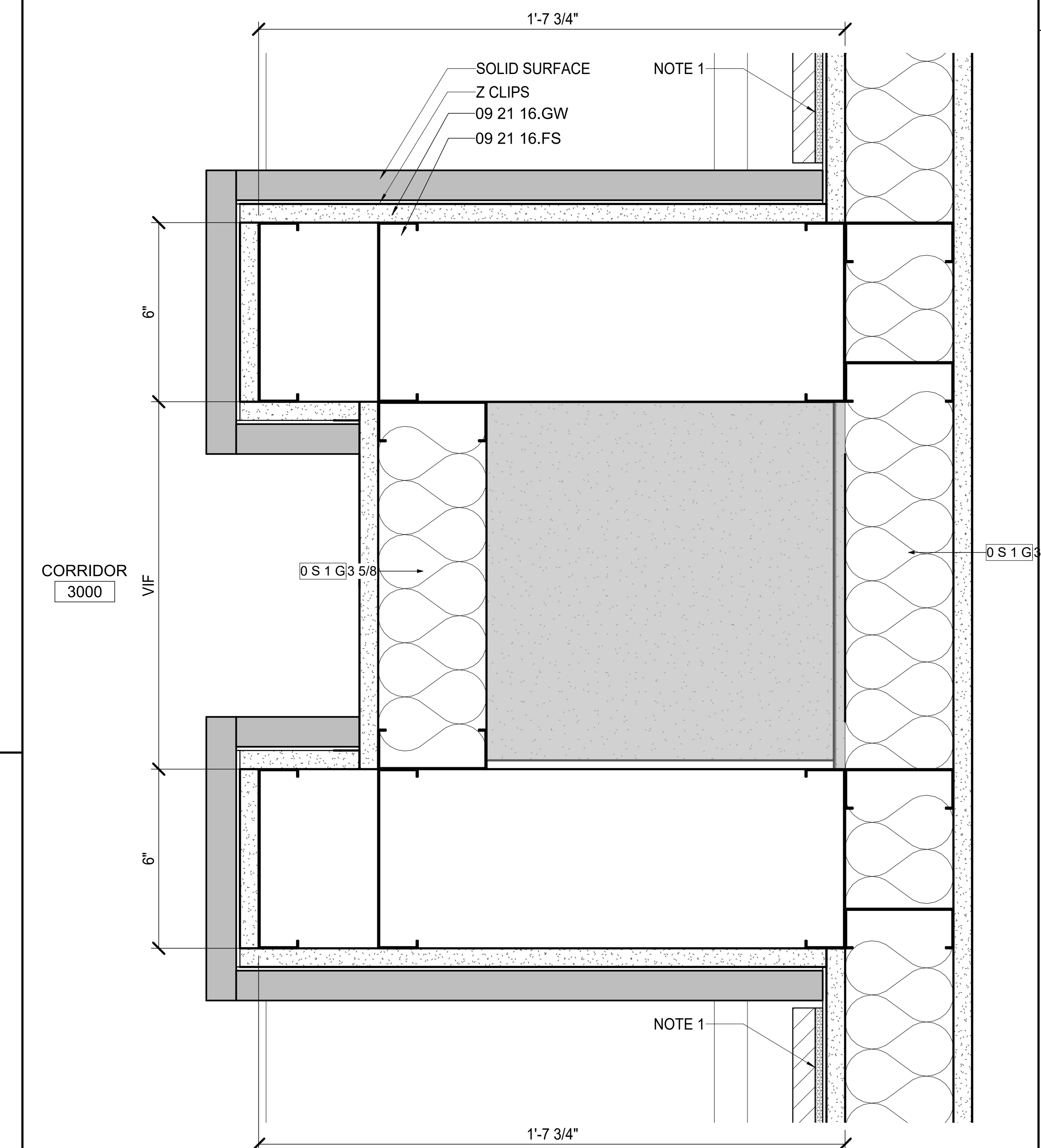
G3 SECTION - BUILT IN BENCH
0 2 4 FT



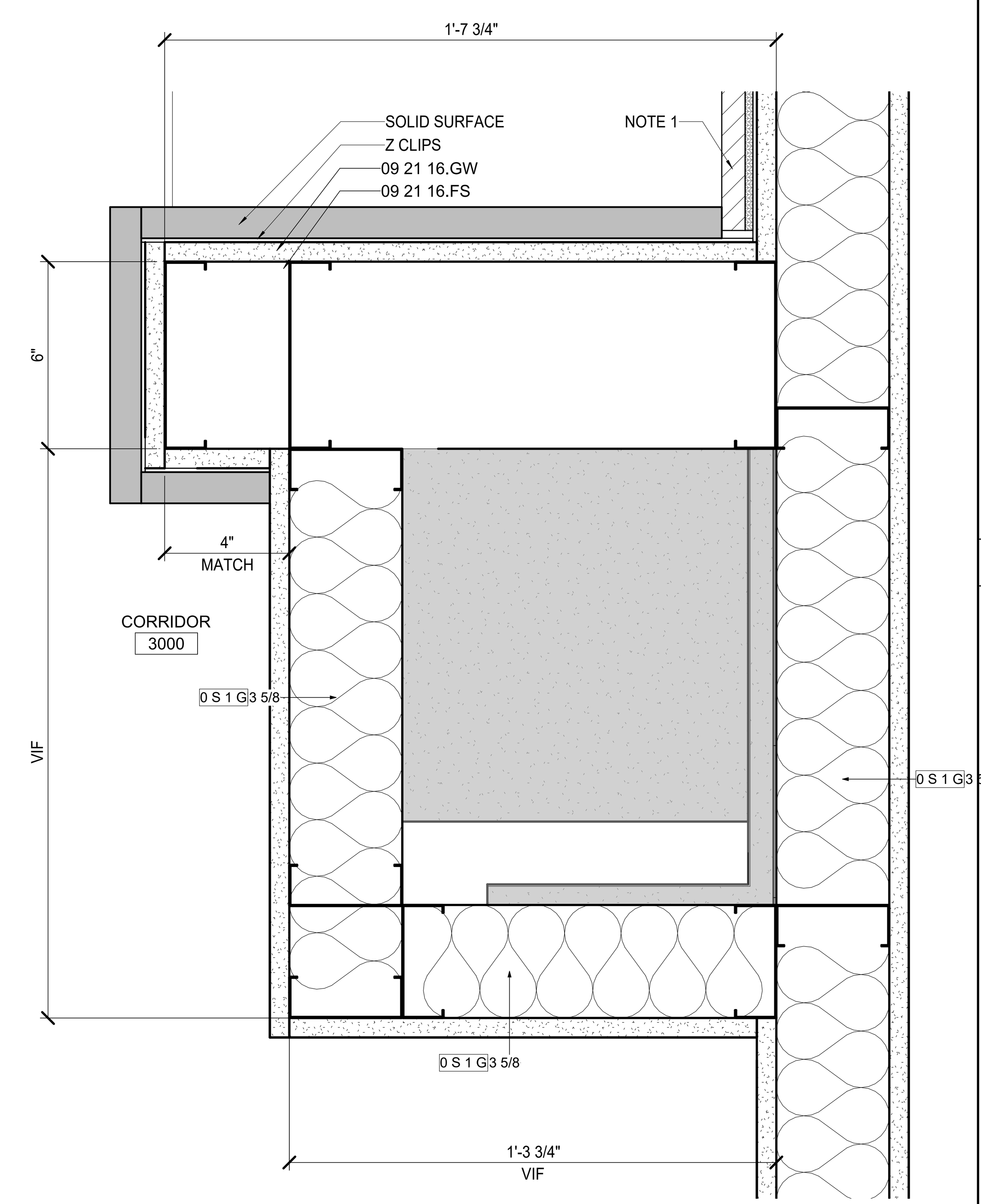
G6 SECTION - BUILT-IN BENCH
0 1 2 FT



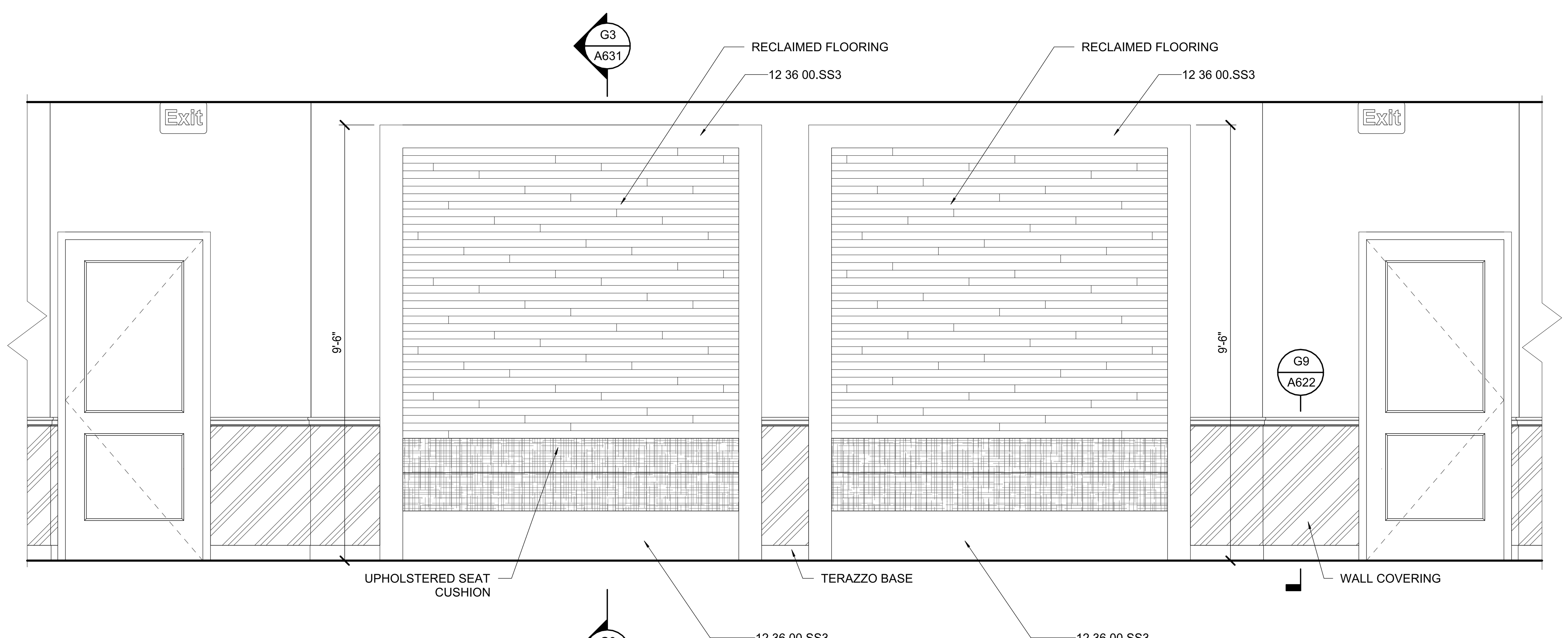
D3 BUILT IN BENCH - CEILING DETAIL SECTION
0 6 12 IN



F9 PLAN - BUILT-IN BENCH
0 6 12 IN



A9 PLAN - BUILT-IN BENCH
0 6 12 IN



A1 BENCH ELEVATION
0 2 4 FT

MATERIAL KEYNOTES

09 21 16.FS	Metal Stud
09 21 16.GW	Gypsum Wallboard
12 36 00.SS3	Solid Surface 3

SHEET SPECIFIC NOTES

1. RECLAIMED WOOD FLOORING ATTACHED TO A PLYWOOD BACKER BOARD. INSTALLED TO THE WALL WITH Z CLIPS.

LORD AECK SARGENT

REVISION:

LORD AECK SARGENT PLANNING & DESIGN, INC.
REGISTERED ARCHITECTURAL CORPORATION
CERT. NO. 53851
NORTH CAROLINA
CHAPEL HILL

SHEET TITLE
BUILT-IN BENCH DETAILS
SCALE (U.N.O.)

JOB NAME
University of North Carolina - Chapel Hill
SCO# 21-23548-02A UNC Project No. C21212
BINGHAM HALL RENOVATION
LOCATION
36 Lenoir Drive, Chapel Hill, NC 27514

SEAL
Lauren Dunn Rockart
Registered Architect
9974
North Carolina
Chapel Hill, NC
01.08.2024

ISSUE DATE
1/8/2023
JOB. NO.
11706-00
DWG. NO.
A631

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MATERIAL KEYNOTES

GENERAL NOTES

SHEET SPECIFIC NOTES

LORD AECK SARGENT

REVISION:

LORD AECK SARGENT PLANNING & DESIGN, INC
LICENSED ARCHITECTURAL CORPORATION
CERT. NO. 53851
NORTH CAROLINA
CHAPEL HILL

SHEET TITLE
MISC. INTERIOR DETAILS

SCALE (U.N.O.)

JOB NAME
University of North Carolina - Chapel Hill

SCI#: 21-235492A UNC Project No. C21212

BINGHAM HALL RENOVATION

LOCATION
36 Lenoir Drive, Chapel Hill, NC 27514

KEY PLAN

PROJECT NORTH

SEAL

Lauren Dunn Rockett
Registered Architect
9874
North Carolina
Chapel Hill, NC
01.08.2024

ISSUE DATE
1/8/2023

JOB. NO.
11706-00

DWG. NO.
A632

NOT FOR CONSTRUCTION

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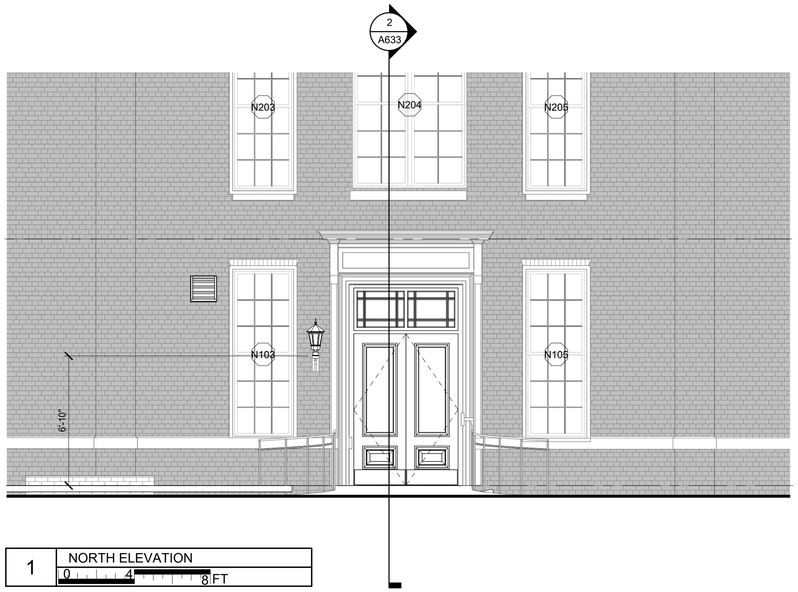
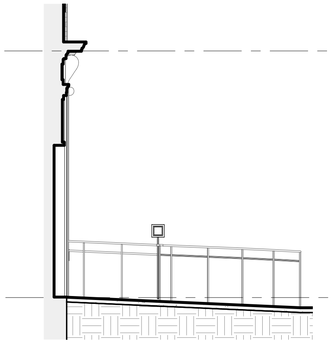
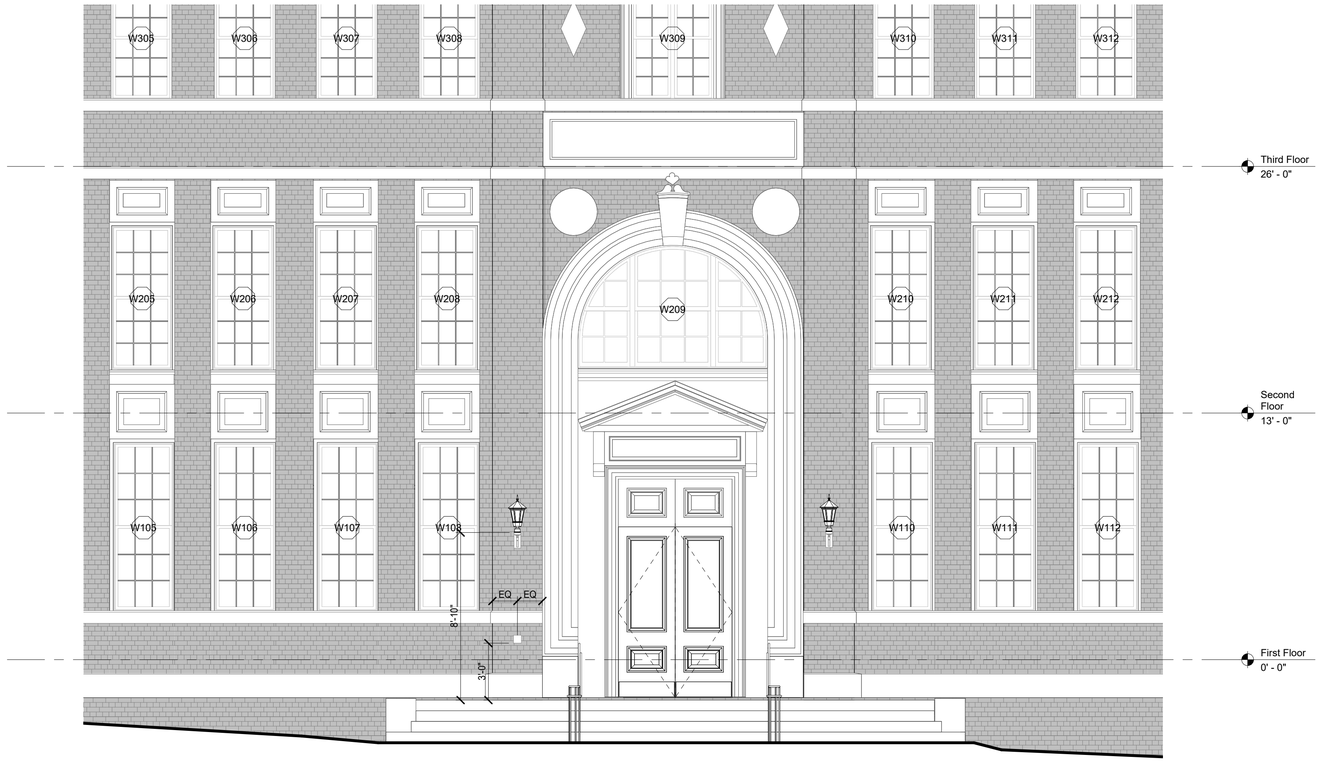


1 NORTH ELEVATION
0 4 8 FT

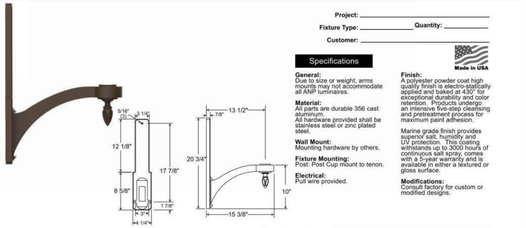


2 SECTION
0 4 8 FT



3 WEST ELEVATION
0 4 8 FT

ANP Lighting WM517



Project: _____
Fixture Type: _____ Quantity: _____
Customer: _____

Made in USA

Specifications

General:
Due to size or weight, arms mounts may not accommodate all ANP luminaires.

Material:
All parts are durable 356 cast aluminum. All hardware provided shall be stainless steel or zinc plated steel.

Wall Mount:
Mounting hardware by others.

Fixture Mounting:
Post: Post Cup mount to tenon.

Electrical:
Pull wire provided.

Finish:
A polyester powder coat high quality finish is electro-statically applied and baked at 430° for exceptional durability and color retention. Products undergo an intensive five-step cleansing and pretreatment process for maximum paint adhesion.

Marine grade finish provides superior salt, humidity and UV protection. This coating withstands up to 3000 hours of continuous salt spray, comes with a 5-year warranty and is available in either a textured or gloss surface.

Modifications:
Consult factory for custom or modified designs.

WM517
Wall Mount

Weight: 7.0 lbs
EPA: 0.41

Catalog Logic

WM517	-	1	-	72
Wall Mount Style		Mounting Type		Finish

Catalog Number

WM517	–	1	–	
		1		2

1 MOUNTING TYPE

1	Post

2 FINISHES
***Premium and Marine Grade Finish have additional charges**

Standard Colors	Standard Gloss	Marine Grade*	Standard Colors	Standard Gloss	Marine Grade*
Aspen Green	10	10M	Architectural Bronze	51	51M
Cantaloupe	11	11M	Patina Verde	52	52M
Lilac	12	12M	Copper Clay	53	53M
Putty	13	13M	Silver	56	56M
Raw Unfinished	40	NA	Black Verde	61	61M
Black	41	41M	Painted Chrome	70	70M
Forest Green	42	42M	Painted Copper	71	71M
Bright Red	43	43M	Textured Black	72	72M
White	44	44M	Matte Black	73	73M
Bright Blue	45	45M	Textured Architectural Bronze	76	76M
Sunny Yellow	46	46M	Textured White	77	77M
Aqua Green	47	47M	Textured Silver	79	79M
Galvanized	49	NA		Premium Finish*	Marine Grade*
Navy	50	50M	Carbon Graphite	96	96M

Consult Factory for additional paint charges and availability.

1-800-548-3227
ANPlighting.com

ANP Lighting Specifications LA810

Project: _____
Fixture Type: _____ Quantity: _____
Customer: _____

Illuminating

Specifications

Material:
All parts are durable 356 cast aluminum. All hardware provided shall be stainless steel or zinc plated steel.

Lens:
Choice of polycarbonate lens or no lens

Fixture Mounting:
Post Mount: Post Cap with set screws.
Pendant Mount: Pin mount to tenon.
Fits 3" and 4" poles.

Drivers:
Universal voltage 120-277 is standard. 0-10V, TRIAC and ELV dimming to 1% protocols are standard for LED module.

See page 2 table for LED engine and driver specs, voltage and dimming protocols.

Electrical:
Approximately 12" of pull wire extends from luminaire. Additional pull wire provided for post mount arms and wall mounts.

Finish:
A polyester powder coat high quality finish is electro-statically applied and baked at 430° for exceptional durability and color retention. Products undergo an intensive five-step cleansing and pretreatment process for maximum paint adhesion.

Marine grade finish provides superior salt, humidity and UV protection. This coating withstands up to 3000 hours of continuous salt spray, comes with a 5-year warranty and is available in either a textured or gloss surface.

Modifications:
Consult factory for custom or modified designs.

LA810
LED

Weight: 13.8 lbs
EPA: 0.84

Catalog Logic

LA810	1	CL	M016LDD	T5	40K	-	PC	-	PA5651	-	72
Luminaire Series	Pendant or Post Mount	Lens	Light Source & Wattage	Optics	CCT		Accessories		Mounting Source		Finish

Catalog Number

LA810	1	2	3	4	5	6	–	7	–	8

1 FIXTURE ORIENTATION

1	Post
3	Pendant

2 LENS

NL	(No Lens)
CL	(Clear Acrylic)
FR	(Frosted Acrylic)
PR	(Prismatic Acrylic)
SE	(Seeded Acrylic)
WH	(White Opal Acrylic)

3 LIGHT SOURCE & WATTAGES

M016LDD	(16w, 2000 lumen, Cree module)

4 OPTICS

W	(T5 Wide Distribution with Dome LED Lens)
N	(T5 Narrow Distribution with Flat LED Lens)

5 COLOR TEMPERATURE (CCT)

27K	(2700K)
30K	(3000K)
35K	(3500K)
40K	(4000K)

6 ACCESSORIES

HS590	(90° House Side Shield, polished)
HS5120	(120° House Side Shield, polished)
**4ST36	(3 Ft, 1 1/4" Ridged Stem & Canopy)
**PEND-CH3	(3 Ft Pendant Chain & Canopy)
*EMG-LED5	(5w, LED Emergency Driver, remote placement, Cree module only)
*EMG-LED7	(7w, LED Emergency Driver, remote placement, Cree module only)
*EMG-LED10	(10w, LED Emergency Driver, remote placement, Cree module only)
HLMSPC-06	(High-Low Motion Sensor/Photocell; 15' - 30' Sensor Mounting Height)
HLMSPC-10	(High-Low Motion Sensor/Photocell; 8' - 15' Sensor Mounting Height)
PC	(Button Photo Cell)
SP	(Surge Protector, 10kA & 10kV)
TLPC	(Twist Lock photo cell, includes receptacle & photo cell)
TL5	(5-pin Twist Lock receptacle)
TL7	(7-pin Twist Lock receptacle)

***For Emergency lumen output data, see Resources section at www.ANPlighting.com.**

****Accessory finish will match fixture finish.**

7 MOUNTING SOURCE

Post Mount Arms *See Page 3 for Style/Size		Wall Mount Arms *See Page 3 for Style/Size	
PA5151	PA8521	WM3351	WM5601
PA5153	PA8523	WM3353	WM5603
PA5411		WM4511	
PA5413		WM4513	
PA5611		WM5131	
PA5613		WM5133	
PA5651		WM5161	
PA5653		WM5163	
PA8031		WM5311	
PA8033		WM5313	
Column Mount *See Page 3 for Style/Size			
CM	Column Mount		

8 FINISHES
***Premium and Marine Grade Finish have additional charges**

Standard Colors	Standard Gloss	Marine Grade*	Standard Colors	Standard Gloss	Marine Grade*
Aspen Green	10	10M	Architectural Bronze	51	51M
Cantaloupe	11	11M	Patina Verde	52	52M
Lilac	12	12M	Copper Clay	53	53M
Putty	13	13M	Silver	56	56M
Raw Unfinished	40	NA	Black Verde	61	61M
Black	41	41M	Painted Chrome	70	70M
Forest Green	42	42M	Painted Copper	71	71M
Bright Red	43	43M	Textured Black	72	72M
White	44	44M	Matte Black	73	73M
Bright Blue	45	45M	Textured Architectural Bronze	76	76M
Sunny Yellow	46	46M	Textured White	77	77M
Aqua Green	47	47M	Textured Silver	79	79M
Galvanized	49	NA	**PREMIUM FINISH**	Premium Finish*	Marine Grade*
Navy	50	50M	**Carbon Graphite**	96	96M

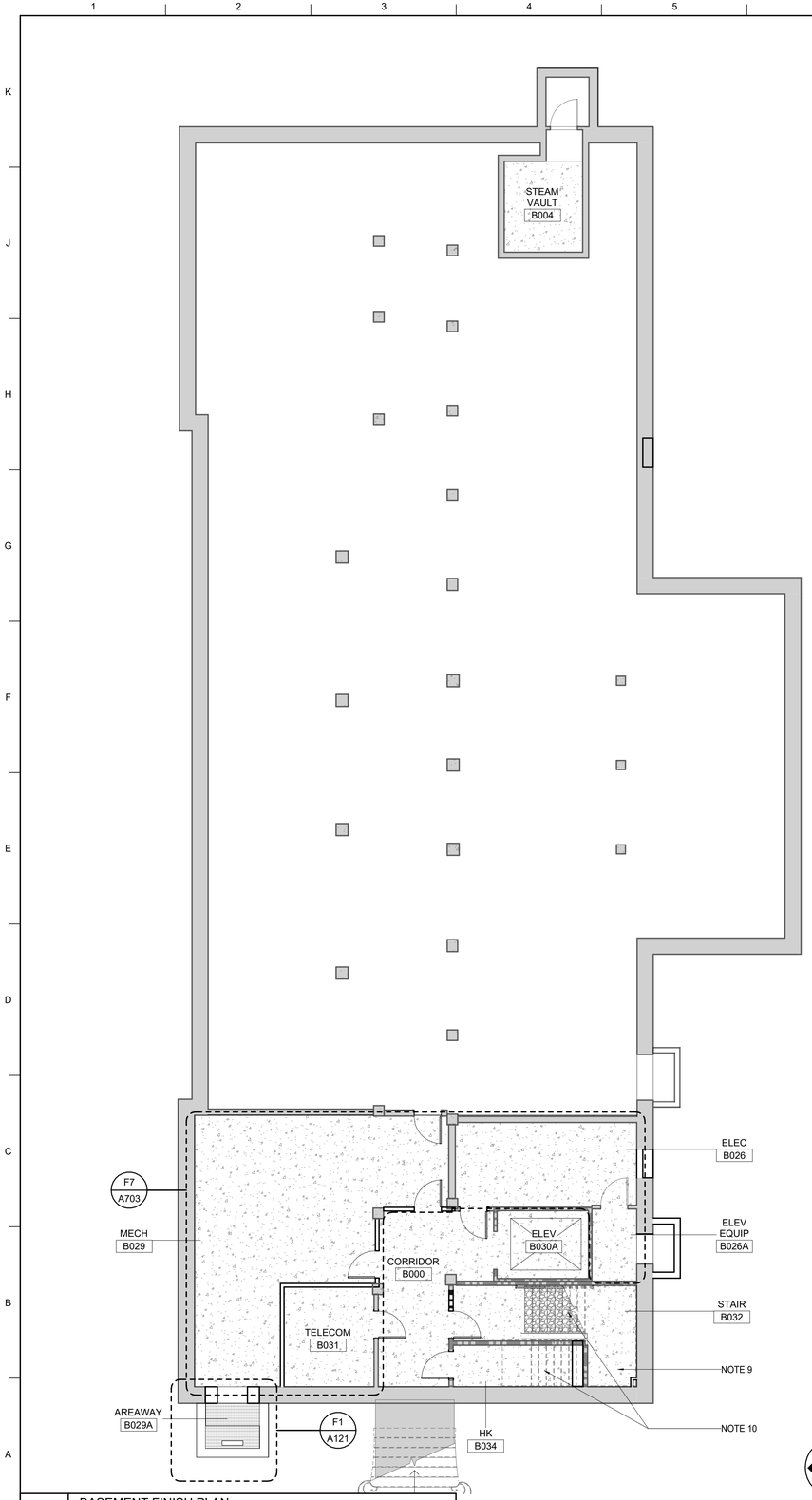
Consult Factory for additional paint charges and availability.

1-800-548-3227
ANPlighting.com

Exterior Ligthing

BINGHAM HALL RENOVATION
36 Lenoir Drive, Chapel Hill, NC 27514
10/13/23
LAS #11706-00

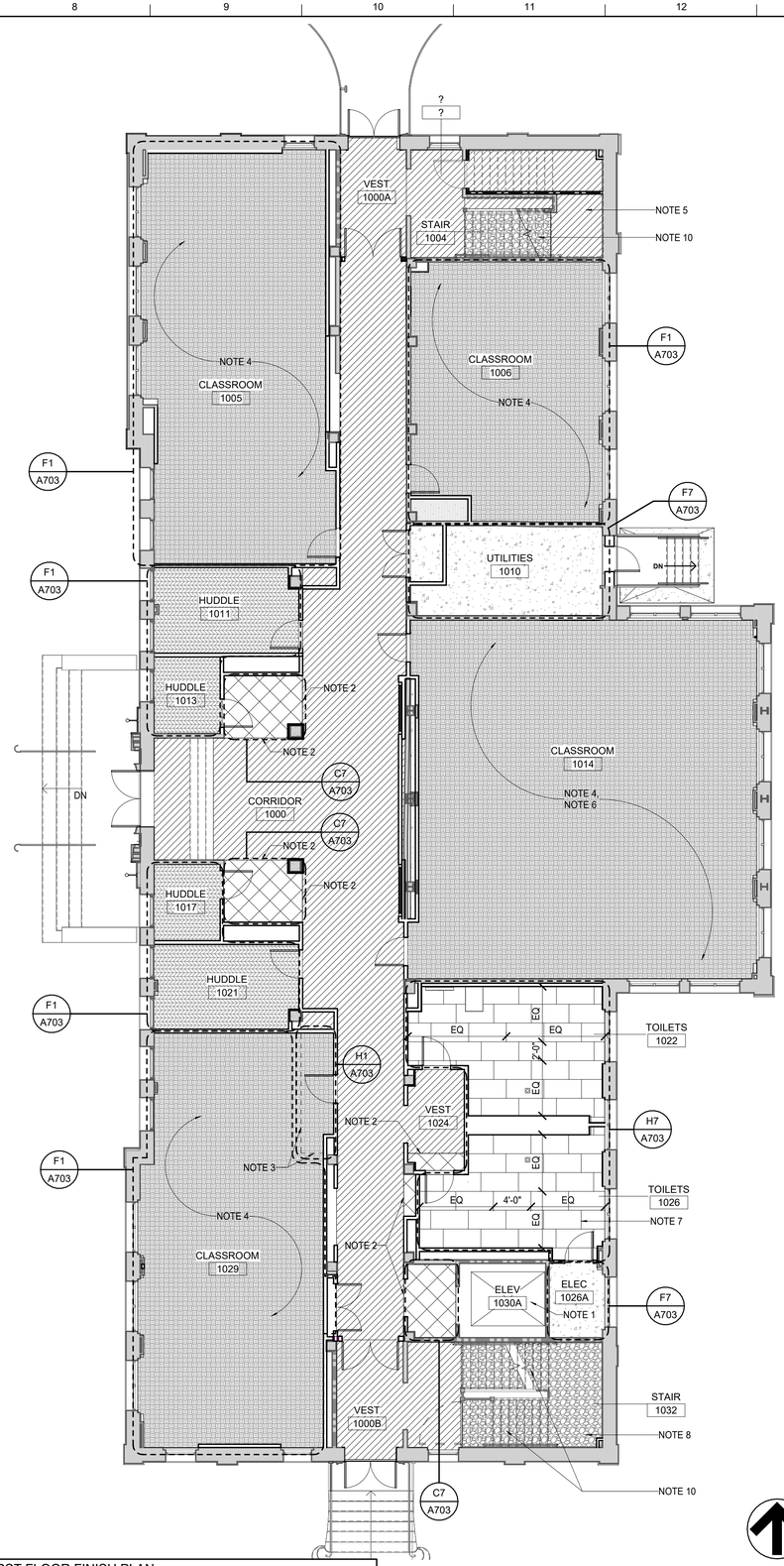
LORD AECK SARGENT



A1 BASEMENT FINISH PLAN

0 8 16 FT

PROJECT NORTH TRUE NORTH



A7 FIRST FLOOR FINISH PLAN

0 8 16 FT

PROJECT NORTH TRUE NORTH

FLOOR FINISH LEGEND

- EXISTING TERRAZZO/MARBLE FLOORING TO REMAIN
- EXISTING CONCRETE FLOORING TO REMAIN
- CARPET TILE 1; 096813.CT1 (OFFICES)
- CARPET TILE 2; 096813.CT2 (MEETING/HUDDLE)
- CARPET TILE 3; 096813.CT3; CLASSROOM (OFCI)
- CARPET TILE 4; 096813.CT4; CLASSROOM (OFCI)
- CARPET TILE 5; 096813.CT5; ELEVATOR
- RUBBER TILE 1; 096500.RT1
- FLOOR TILE 1; 093000.T1
- HARDENED CONCRETE; 033550.HC
- TERRAZZO (NEW); 096623.TZ1

GENERAL NOTES

A. REFER TO ELEVATIONS AND SPECIFICATIONS FOR SPECIALTY FINISHES, THEIR LOCATIONS, AND ADDITIONAL INFORMATION.
B. REFER TO SPECIFICATIONS MANUAL FOR INDIVIDUAL SECTIONS NOTING MANUFACTURER, COLOR, PATTERN, INSTALLATION PATTERNS, AND SIZES OF APPLIED FINISHES.
C. FLOORING TRANSITIONS SHOULD OCCUR AT CENTERLINE OF DOOR WAYS OR CASED OPENINGS, U.N.O.
D. ALL WALLS ARE PAINTED 099100.PC1 U.N.O. REFER TO ELEVATIONS FOR COLOR CHANGES NOT NOTED ON FINISH PLAN.
E. ALL WALLS RECEIVE WALL BASE 096500.RB1, U.N.O.
F. ALL FLOOR FINISHES EXTEND UNDER ALL MILLWORK AND CASEWORK, U.N.O.
G. INSTALL RESILIENT BASE ON MILLWORK AND CASEWORK BASES, U.N.O.
H. SEE SHEET A621 FOR THRESHOLD DETAILS

SHEET SPECIFIC NOTES

1. REFER TO SPECIFICATION SECTION 14 00 00 FOR FLOOR FINISH FOR ELEVATOR CAB.
2. PROVIDE 1/2 INCH ZINC DIVIDER STRIP AT JOINT OF NEW AND EXISTING TERRAZZO.
3. LINE DRAWN TO INDICATE EDGE OF EXISTING SUBFLOOR CONDITIONS ONLY. INSTALL CARPET TILE WITHOUT VISIBLE JOINT
4. PROVIDE NEW RUBBER WALL BASE 096500.RB2 IN THIS ROOM.
5. BASE BID: INTERMEDIATE LANDINGS TO RECEIVE RUBBER FLOORING AS SPECIFIED ALT #3: DEMOLISH EXISTING TILE FLOOR FINISH AT LANDING, INSTALL NEW TERRAZZO LANDING.
6. INSTALL NEW CARPET DIRECTLY OVER NEW FLOOR STRUCTURE. SEE STRUCTURAL SHEET S302 FOR FLOOR STRUCTURE COMPOSITION.
7. INSTALL WATERPROOFING MEMBRANE UNDERNEATH TILE IN THIS ROOM
8. BASE BID: INTERMEDIATE LANDINGS TO RECEIVE RUBBER FLOORING AS SPECIFIED. ALT #3: REFINISH THE EXISTING TERRAZZO LANDING.
9. BASE BID AND ALT#3 : INTERMEDIATE LANDINGS AND STAIR TREADS ARE TO RECEIVE RUBBER FLOORING AS SPECIFIED.
10. STAIR TREADS ARE TO RECEIVE RUBBER FLOORING AS SPECIFIED.

LORD AECK SARGENT

REVISION:

LORD AECK SARGENT PLANNING & DESIGN, INC. ARCHITECTURAL CORPORATION CERT. NO. 53851 NORTH CAROLINA CHAPEL HILL

SHEET TITLE: BASEMENT & FIRST FLOOR FINISH PLAN

SCALE (U.N.O.)

JOB NAME: University of North Carolina - Chapel Hill

UNC Project No. 021212

SCI# 21-23548-02A

BINGHAM HALL RENOVATION

LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

SEAL: Lauren Dunn Rockett, Registered Architect, 9074, North Carolina, Chapel Hill, NC, 01.08.2024

ISSUE DATE: 1/8/2023

JOB. NO. 11706-00

DWG. NO. A701

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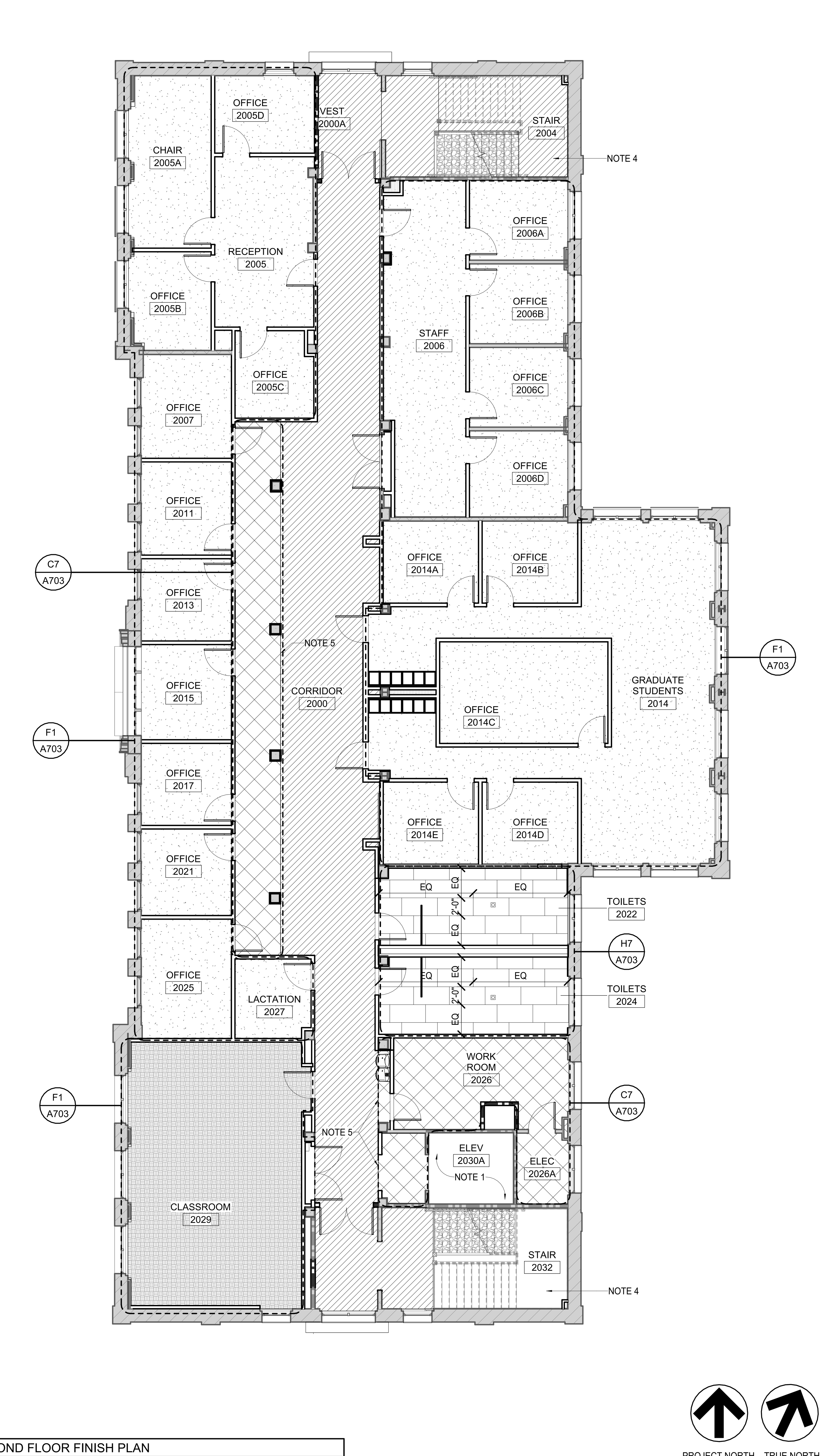
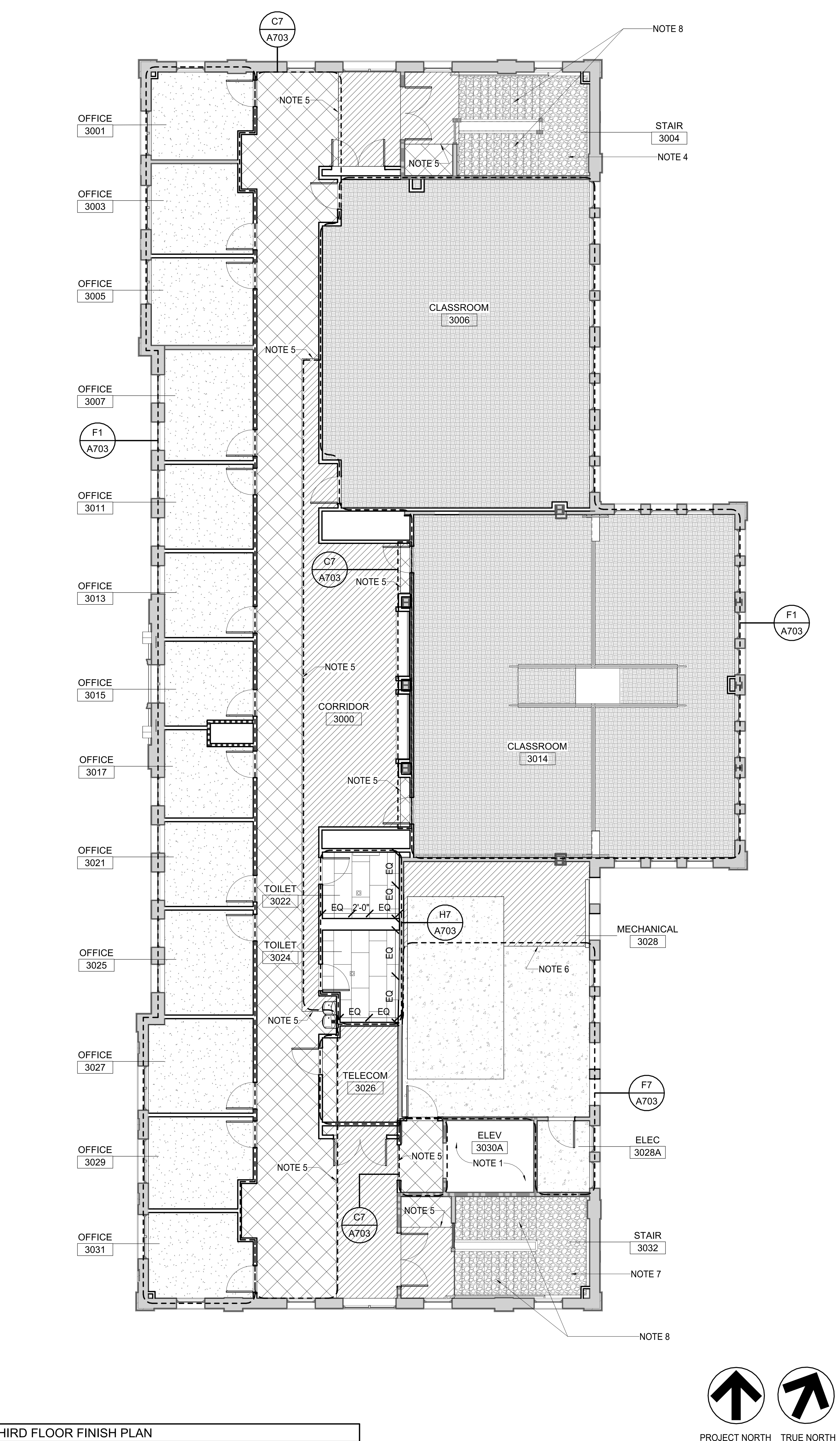


A1 SECOND FLOOR FINISH PLAN
0 8 16 FT



A7 THIRD FLOOR FINISH PLAN
0 8 16 FT

FLOOR FINISH LEGEND

- EXISTING TERRAZZO/MARBLE FLOORING TO REMAIN
- EXISTING CONCRETE FLOORING TO REMAIN
- CARPET TILE 1; 096813.CT1 (OFFICES)
- CARPET TILE 2; 096813.CT2 (MEETING/HUDDLE)
- CARPET TILE 3; 096813.CT3; CLASSROOM (OFCI)
- CARPET TILE 4; 096813.CT4; CLASSROOM (OFCI)
- CARPET TILE 5; 096813.CT5; ELEVATOR
- RUBBER TILE 1; 096500.RT1
- FLOOR TILE 1; 093000.T1
- HARDENED CONCRETE; 033550.HC
- TERRAZZO (NEW); 096623.TZ1

GENERAL NOTES

A. REFER TO ELEVATIONS AND SPECIFICATIONS FOR SPECIALTY FINISHES, THEIR LOCATIONS, AND ADDITIONAL INFORMATION.
B. REFER TO SPECIFICATIONS MANUAL FOR INDIVIDUAL SECTIONS NOTING MANUFACTURER, COLOR, PATTERN, INSTALLATION PATTERNS, AND SIZES OF APPLIED FINISHES.
C. FLOORING TRANSITIONS SHOULD OCCUR AT CENTERLINE OF DOOR WAYS OR CASED OPENINGS, U.N.O.
D. ALL WALLS ARE PAINTED 099100.PC1 U.N.O. REFER TO ELEVATIONS FOR COLOR CHANGES NOT NOTED ON FINISH PLAN.
E. ALL WALLS RECEIVE WALL BASE 096500.RB1, U.N.O.
F. ALL FLOOR FINISHES EXTEND UNDER ALL MILLWORK AND CASEWORK, U.N.O.
G. INSTALL RESILIENT BASE ON MILLWORK AND CASEWORK BASES, U.N.O.
H. SEE SHEET A621 FOR THRESHOLD DETAILS

SHEET SPECIFIC NOTES

1. REFER TO FIRST FLOOR FINISH PLAN FOR FLOOR MATERIAL IN THIS AREA.
2. NOT USED
3. NOT USED
4. BASE BID: INTERMEDIATE LANDINGS ARE TO RECEIVE RUBBER FLOORING AS SPECIFIED. ALT #A3: DEMOLISH EXISTING FLOOR FINISH, INSTALL NEW TERRAZZO LANDING.
5. PROVIDE 1/2 INCH ZINC DIVIDER STRIP AT JOINT OF NEW AND EXISTING TERRAZZO.
6. PROVIDE 1/2 INCH ZINC DIVIDER STRIP AT JOINT OF NEW CONCRETE PAD AND EXISTING TERRAZZO
7. BASE BID: INTERMEDIATE LANDINGS ARE TO RECEIVE RUBBER FLOORING AS SPECIFIED. ALT #A3: REFINISH THE EXISTING TERRAZZO LANDING.
8. STAIR TREADS ARE TO RECEIVE RUBBER FLOORING AS SPECIFIED

LORD AECK SARGENT

REVISION:

LORD AECK SARGENT PLANNING & DESIGN, INC
REGISTERED ARCHITECTURAL CORPORATION
CERT. NO. 53851
NORTH CAROLINA
CHAPEL HILL

SHEET TITLE
SECOND & THIRD FLOOR FINISH PLAN
SCALE (U.N.O.)

JOB NAME
University of North Carolina - Chapel Hill
SCO#: 21-23548-02A UNC Project No. CI21212
BINGHAM HALL RENOVATION
LOCATION
36 Lenoir Drive, Chapel Hill, NC 27514

SEAL
Lauren Dunn Rockart, Registered Architect, 9674, North Carolina, Chapel Hill, NC
01·08·2024

ISSUE DATE
1/8/2023
JOB. NO.
11706-00
DWG. NO.
A702

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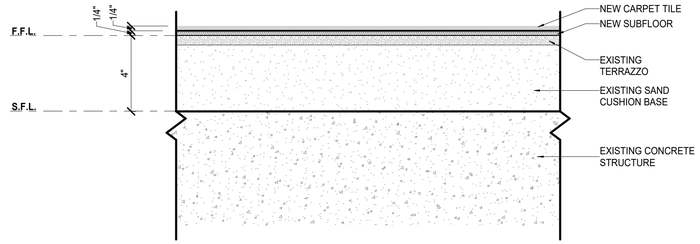
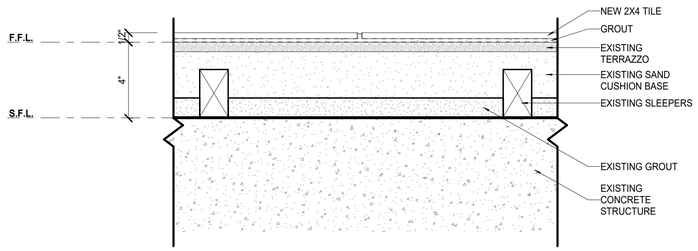


NEW CARPET TILE OVER TERRAZZO

H1 DETAIL - NEW CARPET TILE OVER TERRAZZO

0 6 12 IN



NEW TILE

H7 DETAIL - NEW TILE OVER TERRAZZO

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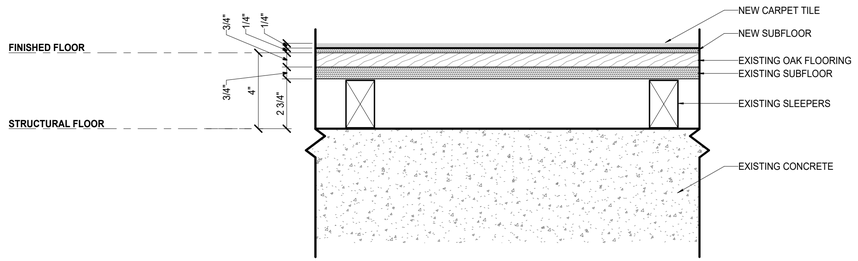
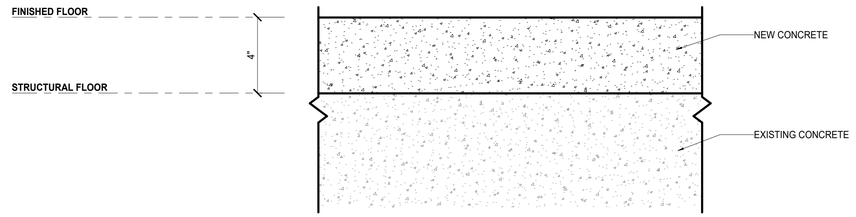


NEW CARPET TILE

F1 DETAIL - NEW CARPET TILE

0 6 12 IN



NEW SEALED CONCRETE

F7 DETAIL - NEW SEALED CONCRETE

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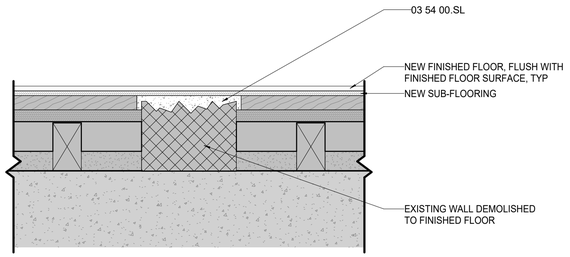

C1 DETAIL @ DEMOLISHED WALLS

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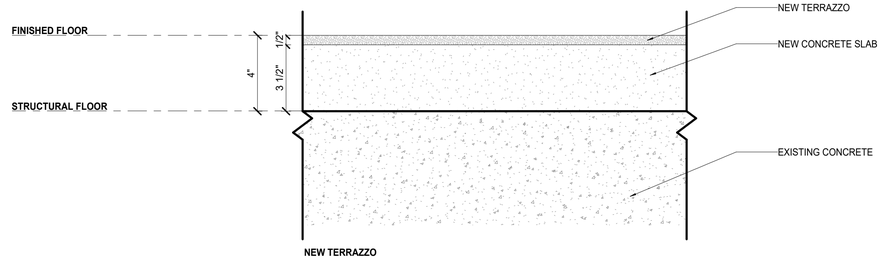

NEW TERRAZZO

C7 DETAIL - NEW TERRAZZO

0 6 12 IN

REVISION:

LORD AECK SARGENT PLANNING & DESIGN, INC. ARCHITECTURAL CORPORATION CERT. NO. 53851 NORTH CAROLINA CHAPEL HILL

SHEET TITLE
FINISH FLOOR DETAILS

SCALE (U.N.O.)

JOB NAME
University of North Carolina - Chapel Hill

SCO# 21-23548-02A

UNC Project No. C21212

BINGHAM HALL RENOVATION

LOCATION
36 Lenoir Drive, Chapel Hill, NC 27514

SEAL

Lauren Dunn Rockett Registered Architect 9574 North Carolina Chapel Hill, NC

01.08.2024

ISSUE DATE
1/8/2023

JOB. NO.
11706-00

DWG. NO.
A703

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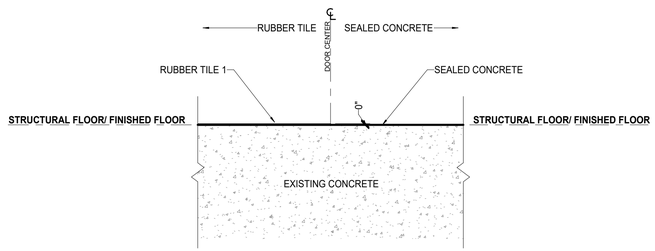

H1 TRANSITION - RUBBER TILE TO SEALED CONCRETE

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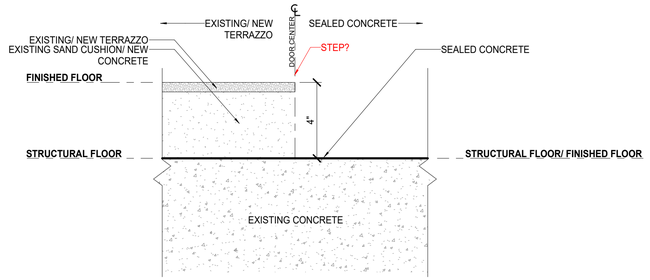

H7 TRANSITION - NEW/EXISTING TERRAZZO TO SEALED CONCRETE

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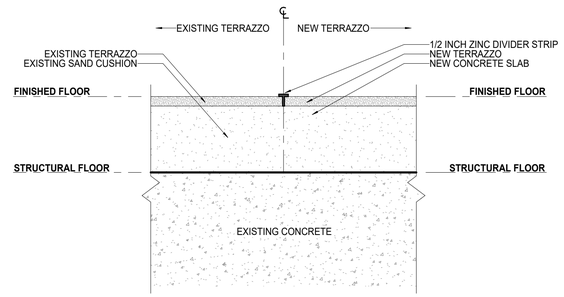
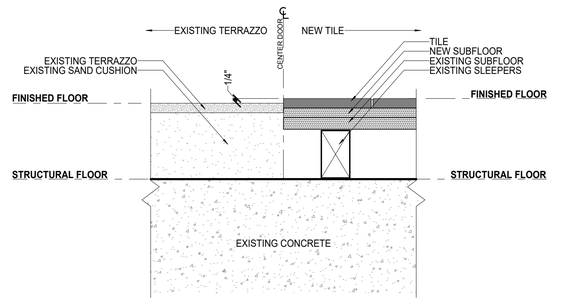


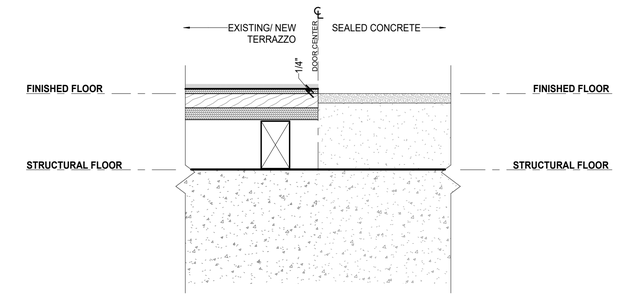
F1 TRANSITION - EXISTING TERRAZZO TO NEW TERRAZZO

0 6 12 IN



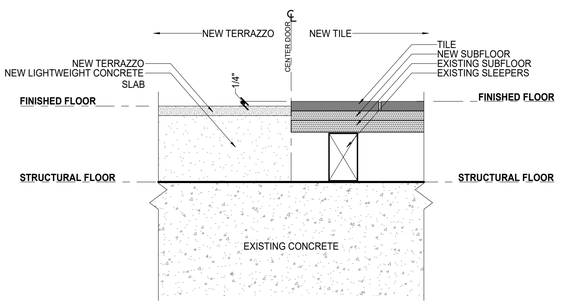
C4 TRANSITION - EXISTING TERRAZZO TO TILE

0 6 12 IN



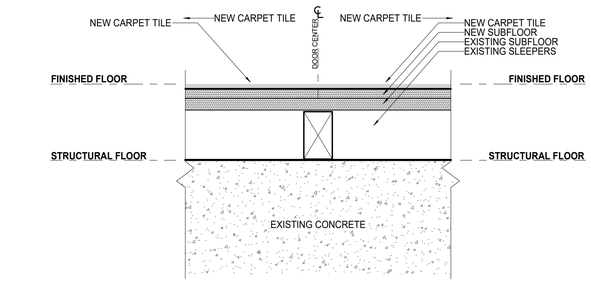
F7 TRANSITION - N.CARPET/ E. TERRAZZO

0 6 12 IN



A1 TRANSITION - NEW TERRAZZO TO TILE

0 6 12 IN



C7 TRANSITION - CARPET TO CARPET

0 6 12 IN

MATERIAL KEYNOTES

GENERAL NOTES

SHEET SPECIFIC NOTES

LORD AECK SARGENT

REVISION:

LORD AECK SARGENT PLANNING & DESIGN INC
CERT. NO. 53851
NORTH CAROLINA
CHAPEL HILL

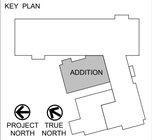
SHEET TITLE: TRANSITION DETAILS

SCALE (U.N.O.)

JOB NAME: University of North Carolina - Chapel Hill ADDITION
STATE ID # 20-22566-01F

LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

KEY PLAN



SEAL

ISSUE DATE: 09/29/2022

JOB. NO.: 11716 - 03

DWG. NO.: A704

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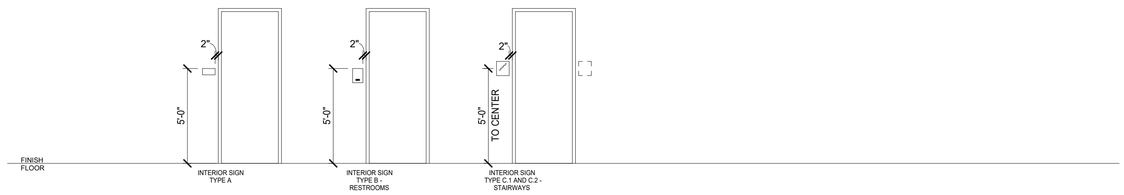


H1 TYPICAL SIGN MOUNTING LOCATIONS

Signage Schedule				
Number	Name	Sign Type	Sign Text	Comments
Basement				
B014	CRAWL SPACE	A	CRAWL SPACE	
B026	ELEC	A	ELECTRICAL ROOM	
B026A	ELEV EQUIP	A	ELEVATOR EQUIPMENT	
B029	MECH	A	MECHANICAL ROOM	Provide one sign at each of the two doors into this room
B031	TELECOM	A	TELECOMMUNICATION CLOSET	
B032	STAIR	C.1	STAIR A / LEVEL 00	Install sign on the corridor side of the door.
B032.	STAIR	C.2	STAIR A / LEVEL 00	Install sign on the stair side of the door.
B034	HK	A	HOUSE KEEPING	
Level 1				
1004	STAIR	C.1	STAIR A / LEVEL 01	Install sign on the corridor side of the door.
1004.	STAIR	C.2	STAIR A / LEVEL 01	Install sign on the stair side of the door.
1004A	HK	A	HOUSE KEEPING	
1005	CLASSROOM	A	CLASSROOM	
1006	CLASSROOM	A	CLASSROOM	
1010	UTILITIES	A	UTILITIES	
1010A	ELECTRICAL CLOSET	A	ELECTRICAL CLOSET	
1011	HUDDLE	A	HUDDLE	
1013	HUDDLE	A	HUDDLE	
1014	CLASSROOM	A	CLASSROOM	Provide one sign at each of the two doors into this room
1017	HUDDLE	A	HUDDLE	
1021	HUDDLE	A	HUDDLE	
1022	TOILETS	B	WOMEN	
1026	TOILETS	B	MEN	
1026A	ELEC	A	ELECTRICAL ROOM	
1029	CLASSROOM	A	CLASSROOM	
1032	STAIR	C.1	STAIR B / LEVEL 01	Install sign on the corridor side of the door.
1032.	STAIR	C.2	STAIR B / LEVEL 01	Install sign on the stair side of the door.
Level 2				
2004	STAIR	C.1	STAIR A / LEVEL 02	Install sign on the corridor side of the door.
2004.	STAIR	C.2	STAIR A / LEVEL 02	Install sign on the stair side of the door.
2005	RECEPTION	A	RECEPTION	
2005A	CHAIR	A	CHAIR	
2005B	OFFICE	A	OFFICE	
2005C	OFFICE	A	OFFICE	
2005D	OFFICE	A	OFFICE	
2006	STAFF	A	SUITE 2006	
2006A	OFFICE	A	OFFICE	
2006B	OFFICE	A	OFFICE	
2006C	OFFICE	A	OFFICE	
2006D	OFFICE	A	OFFICE	
2007	OFFICE	A	OFFICE	
2011	OFFICE	A	OFFICE	
2013	OFFICE	A	OFFICE	
2014	GRADUATE STUDENTS	A	SUITE 2014	Provide one sign at each of the two doors into this room
2014A	OFFICE	A	OFFICE	
2014B	OFFICE	A	OFFICE	
2014C	OFFICE	A	OFFICE	
2014D	OFFICE	A	OFFICE	
2014E	OFFICE	A	OFFICE	

Signage Schedule				
Number	Name	Sign Type	Sign Text	Comments
2015	OFFICE	A	OFFICE	
2017	OFFICE	A	OFFICE	
2021	OFFICE	A	OFFICE	
2022	TOILETS	B	WOMEN	
2024	TOILETS	B	MEN	
2025	OFFICE	A	OFFICE	
2026	WORK ROOM	A	WORK ROOM	
2026A	ELEC	A	ELECTRICAL ROOM	
2027	LACTATION	A	LACTATION	
2029	CLASSROOM	A	CLASSROOM	
2032	STAIR	C.1	STAIR B / LEVEL 02	Install sign on the corridor side of the door.
2032.	STAIR	C.2	STAIR B / LEVEL 02	Install sign on the stair side of the door.
Level 3				
3001	OFFICE	A	OFFICE	
3002	ELECTRICAL CLOSET	A	ELECTRICAL CLOSET	
3003	OFFICE	A	OFFICE	
3004	STAIR	C.1	STAIR A / LEVEL 03	Install sign on the corridor side of the door.
3004.	STAIR	C.2	STAIR A / LEVEL 03	Install sign on the stair side of the door.
3005	OFFICE	A	OFFICE	
3006	CLASSROOM	A	CLASSROOM	Provide one sign at each of the two doors into this room
3007	OFFICE	A	OFFICE	
3011	OFFICE	A	OFFICE	
3013	OFFICE	A	OFFICE	
3014	CLASSROOM	A	CLASSROOM	Provide one sign at each of the two doors into this room
3015	OFFICE	A	OFFICE	
3017	OFFICE	A	OFFICE	
3021	OFFICE	A	OFFICE	
3022	TOILET	B	UNISEX TOILET	
3024	TOILET	B	UNISEX TOILET	
3025	OFFICE	A	OFFICE	
3026	TELECOM	A	TELECOMMUNICATION CLOSET	
3027	OFFICE	A	OFFICE	
3028	MECHANICAL	A	MECHANICAL ROOM	
3028A	ELEC	A	ELECTRICAL ROOM	
3029	OFFICE	A	OFFICE	
3031	OFFICE	A	OFFICE	
3032	STAIR	C.1	STAIR B / LEVEL 03	Install sign on the corridor side of the door.
3032.	STAIR	C.2	STAIR B / LEVEL 03	Install sign on the stair side of the door.
3033	ELECTRICAL CLOSET	A	ELECTRICAL CLOSET	

LORD AECK SARGENT

REVISION:

LORD AECK SARGENT PLANNING & DESIGN, INC. ARCHITECTURE | ARCHITECTURAL CORPORATION CERT. NO. 53851 NORTH CAROLINA CHAPEL HILL

SHEET TITLE: SIGNAGE SCHEDULE
SCALE (U.N.O.)

JOB NAME: University of North Carolina - Chapel Hill
SCM# 21-23548-02A UNC Project No. C21212
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

SEAL: Lauren Dunn Rockett, Registered Architect, 9874, North Carolina, Chapel Hill, NC, 01·08·2024

ISSUE DATE: 1/8/2023
JOB. NO.: 11706-00
DWG. NO.: A720

GENERAL NOTES

PART 1: GENERAL

A. DESCRIPTION/SCOPE OF WORK
1. GENERAL PROVISIONS AND OTHER FIRE SUPPRESSION SYSTEMS ARE SPECIFIED IN SPECIFICATION PACKAGE.
2. THESE NOTES COVER THE WET AUTOMATIC FIRE SPRINKLER SYSTEMS
3. THESE NOTES COVER THE WET MANUAL CLASS 1 STANDPIPES.

B. QUALITY ASSURANCE
1. FIRE SUPPRESSION SYSTEMS SHALL BE INSTALLED BY A COMPANY REGULARLY ENGAGED IN THE INSTALLATION OF SPRINKLER SYSTEMS AND WHICH HOLDS A CURRENT SPRINKLER CONTRACTOR'S LICENSE FROM THE STATE OF NORTH CAROLINA. SUBMITTAL SHOP DRAWINGS SHALL BEAR THE STAMP AND LICENSE NUMBER OF THE INSTALLING CONTRACTOR.
2. SHOP DRAWINGS SHALL BE PREPARED UNDER THE SUPERVISION OF A PROFESSIONAL ENGINEER LICENSED OR A NICET LEVEL III TECHNICIAN CERTIFIED IN FIRE PROTECTION ENGINEERING TECHNOLOGY WATER-BASED SYSTEMS LAYOUT IN THE STATE OF NORTH CAROLINA. SUBMITTALS, DRAWINGS, AND HYDRAULIC CALCULATIONS SHALL BEAR THE STAMP OF THE SUPERVISING PROFESSIONAL ENGINEER & SIGNATURE OR NICET TECHNICIANS'S CERTIFICATION NUMBER, EXPIRATION DATE, NICET LEVEL, AND SIGNATURE.
3. UNLESS INDICATED OTHERWISE ON THE DRAWINGS, MATERIALS SHALL BE NEW AND FREE FROM DEFECTS. SPRINKLER HEADS SHALL NEVER BE REUSED ONCE REMOVED FROM SYSTEM.
4. MATERIALS AND EQUIPMENT USED FOR SIMILAR APPLICATIONS SHALL BE THE PRODUCTS OF ONE MANUFACTURER.
5. PRODUCTS AND COMPONENTS INSTALLED IN THE SYSTEM SHALL BE LISTED BY UNDERWRITERS LABORATORIES (UL).

C. BASIS OF DESIGN
1. OBTAIN A CURRENT TWO-HYDRANT FIRE HYDRANT FLOW TEST AT THE SITE. THE TEST SHALL BE MADE IN ACCORDANCE WITH NFPA 13-2013 AND SHALL INDICATE NORMAL STATIC PRESSURE CONDITIONS, RESIDUAL PRESSURE, AND FLOW RATE. THE WATERFLOW TEST SHALL BE ADJUSTED DOWNWARD TO REFLECT ANY LOW PRESSURE CONDITION WITH A DURATION EXCEEDING 30 MINUTES DURING THE 24 HOUR PERIOD. PAY ALL CHARGES AND FEES ASSOCIATE WITH THE TESTS. IF THE ONE YEAR TEST LIMITATION EXCEEDS ONE YEAR BEFORE SPRINKLER CONTRACTOR IS ABLE TO SUBMIT TO AHJ FOR REVIEW, SPRINKLER CONTRACTOR IS RESPONSIBLE FOR MAINTAINING CURRENT DATE STATUS OF THE TWO-HYDRANT TEST.
2. THE DESIGN OF THE FIRE SUPPRESSION SYSTEM SHALL BE BASED ON THE FOLLOWING WATERFLOW TEST CONDUCTED AT STATIC PRESSURE 68 PSIG, RESIDUAL PRESSURE 60 PSIG, AND FLOW 1250 GPM. AS A SAFETY FACTOR TO ACCOUNT FOR FLUCTUATIONS IN THE WATER SUPPLY, CALCULATIONS SHALL BE BASED ON AN AVAILABLE WATER SUPPLY WITH 10 PSI LESS STATIC PRESSURE AND 10 PSI LESS RESIDUAL PRESSURE WHEN FLOWING 10% LESS FLOW THAN MEASURED. FOR CONTRACT DRAWINGS THIS RESULT IN A STATIC PRESURE OF 58 PSI AND A RESIDUAL PRESSURE OF 50 PSI WHEN FLOWING 1125 GPM.
3. HYDRAULIC CALCULATIONS SHALL INCLUDE A MINIMUM SAFETY FACTOR OF 10 PSIG LESS STATIC AND RESIDUAL WITH A REDUCTION OF 10% LESS FLOW.

D. SHOP DRAWINGS & CALCULATIONS
1. THE CONTRACTOR SHALL DEVELOP COORDINATED INSTALLATION SHOP DRAWINGS AND HYDRAULIC CALCULATIONS INCLUDING THE FOLLOWING:
   A. SITE PLAN SHOWING LOCATIONS & TWO-HYDRANT FLOW TEST INFORMATION, UNDERGROUND WATER LINES WITH SIZES AND LENGTHS, AND RELATIVE HYDRANT ELEVATIONS BASED ON SITE FINISHED FLOOR ELEVATION (FFE). WITHOUT THIS INFORMATION, THE SUBMITTAL SHALL BE AUTOMATICALLY REJECTED FOR RESUBMIT.
   B. PIPING PLANS SHALL BE GENERATED BY A COMPUTER GENERATED DRAFTING PROGRAM WITH A MINIMUM 1/8" SCALE FLOORPLANS. ENLARGED PLANS OF CONGESTED AREAS SHALL BE MINIMUM 1/4" SCALE. PLANS SHALL HAVE PIPING LEGENDS AND BLACK & WHITE. DRAFTING PRACTICES SHALL FOLLOW COLORBLIND DRAFTING STANDARDS.
   C. PIPING PLANS SHALL SHOW CORRECTLY ELEVATED SECTION VIEWS THAT MATCH THE HYDRAULIC CALCULATIONS ELEVATIONS, PIPE ELEVATION TAGS, PIPE DIAMETER SIZES, CENTER TO CENTER PIPE CUT LENGTHS, PIPE OFFSETS, HANGER LOCATIONS AND TYPES, SEISMIC RESTRAINTS LOCATIONS & TYPES, SEISMIC ZONE OF INFLUENCE, CALCULATION REMOTE DESIGN AREAS, AND HYDRAULIC CALCULATION REFERENCE POINT/NODES. SECTIONS VIEWS OR 3D RENDERINGS REQUIRED BUT NOT LIMITED TO SHALL BE RISER ROOMS AND STANDPIPES.
   D. HYDRAULIC REFERENCE NODES SHALL BE IN NUMERICAL ORDER FROM SOURCE. KEY EQUIPMENT AND FEATURES SHALL BE LABELED IN A MANOR TO IDENTIFY WITHIN HYDRAULIC CALCULATIONS. E.X. SOURCE - SRC, BASE OF RISER - BOR-#, BACKFLOW PREVENTER - BPF-#, CHECK VALVE - CKV-#, BUTTERFLY VALVE - BFV-#, SPRINKLER HEAD - SP-#, FIRE HOSE VALVE - FHV-#.
   E. HYDRAULIC CALCULATIONS SHALL BE PERFORMED BY A COMPUTER CALCULATION PROGRAM SPECIFICALLY DESIGNED FOR THE ANALYSIS OF FIRE SPRINKLER SYSTEMS. CALCULATIONS SHALL USE THE AREA/DENSITY METHOD DESCRIBER IN NFPA 13-2013.
   F. SYSTEM DESIGN DENSITIES AND REMOTE AREA OF SPRINKLER OPERATION SHALL BE AS INDICATED ON THE DRAWINGS.
   G. A SPRINKLER HEAD SYMBOL LEGEND SHALL BE PROVIDED WITH K-FACTOR, ORIFICE SIZE, SIN MODEL NUMBER, AND QUANTITY ON PAGE. A TOTAL QUANTITY OF EACH SPRINKLER HEAD SHALL BE INDICATED ON TITLE BLOCK PAGE WITH WRENCH NUMBER PART NUMBERS AND QUANTITIES PER NFPA 13 - STOCK OF SPARE SPRINKLERS. THE HEAD CABINET QUANTITY SHALL BE NOTED ON SHOP DRAWINGS FOR REVIEW.
   H. SUBMITTAL PACKAGE SHALL BE APPROVED BY ENGINEER OF RECORD BEFORE CONTRACTOR IS PERMITTED TO SUBMIT FOR AHJ APPROVAL PER THE INTERNATIONAL BUILDING CODE DEFERRED SUBMITTAL PROCESS - 107.3.4.1.
   I. ALL REDUCTIONS IN DESIGN AREAS FOR QUICK RESPONSE OR OTHER NFPA 13 APPROVED METHODS SHALL BE INDICATED WITH A NOTE AND PROVIDED WITH THE MATHEMATIC PROCESS FOR REVIEW.

E. CODES
1. THIS SUBMITTAL SHALL FOLLOW THE 2018 NORTH CAROLINA BUILDING CODE AND 2015 INTERNATIONAL FIRE CODE.
2. CONFORM TO THE FOLLOW STANDARDS: NFPA 13-2013, NFPA 14-2013,NFPA 24-2013, NFPA 70-2014, NFPA 72-2013, NFPA 101-2013.

F. MINIMUM SUBMITTAL INFORMATION REQUIRED (BUT NOT LIMITED TO)
- DEFERRED SUBMITTAL PROCESS IBC
- SCOPE OF WORK DESCRIPTION
- STANDPIPE INFORMATION
- SPRINKLER SYSTEM INFORMATION
- SPRINKLER HEAD INFORMATION
- PIPE SCHEDULE & TYPE, COUNTRY OF ORIGIN
- FITTINGS MATERIALS & SCHEDULE RATING
- COORDINATION DRAWINGS
- FIRE DEPARTMENT CONNECTIONS & LOCKING CAPS
- FIRE WATER SERVICE ENTRANCE
- WATER SUPPLY INFORMATION
- SPRINKLER SYSTEM DESIGN CRITERIA
- INSURANCE PROVIDER REQUIREMENTS
- SEISMIC LEGEND, LOCATION, MATERIALS, & CALCULATIONS
- ELEVATOR COVERAGE REQUIREMENTS
- STANDARD LISTED FIRE PROTECTION VALVES
- DRAINAGE PIPING SIZE AND LOCATIONS
- PENETRATION DETAILS
- ACCESS PANEL LOCATIONS
- INSPECTOR'S TEST LOCATION AND DETAIL
- AUXILIARY DRAINS
- AIR VENTS
- HANGERS & HANGING ASSEMBLIES
- BUILDING CONSTRUCTION METHOD
- DEMOLITION DRAWINGS/DESCRIPTION
- BRAIDED FLEX DROPS AND LISTED CEILING ATTACHMENT ASSEMBLY

Orange Water And Sewer Authority

OWASA

Fire Flow Test Report

Location: Bingham Hall

Test Made By: Crew 4 **Time:** 08:00 AM **Date:** 10/12/23

Requested By: Chris Johnson **Phone:** (919) 349-6098

Date Requested: 10/3/2023 **FAX:**

Hydrant Make Flow: American Darling **Nozzle Size:** 2½"

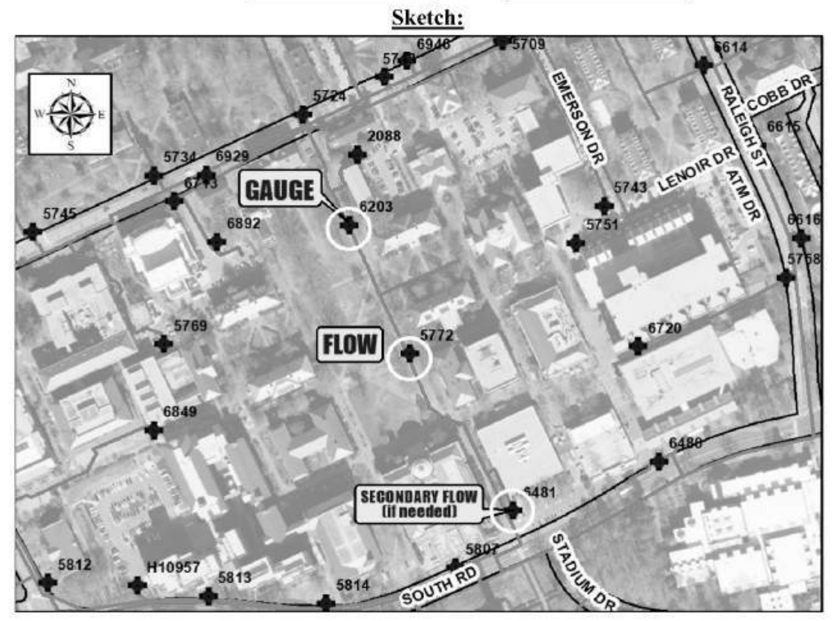
Hydrant Make Gauge: Mueller

Flow Hydrant No. 5772 **Static Pressure (PSI):** 65

Gauge Hydrant No. 6203 **Residual Pressure (PSI):** 60

	Hydrant #1	Hydrant #2
Pitot Reading:	55 PSI	60 PSI
Flow (GPM):	1250 GPM	1300 GPM

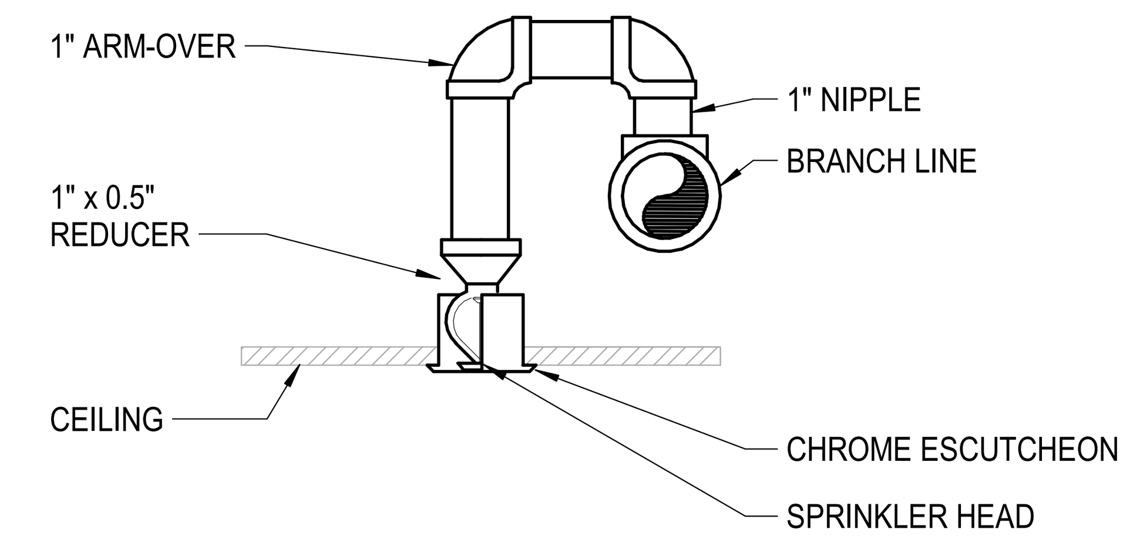
Sketch:



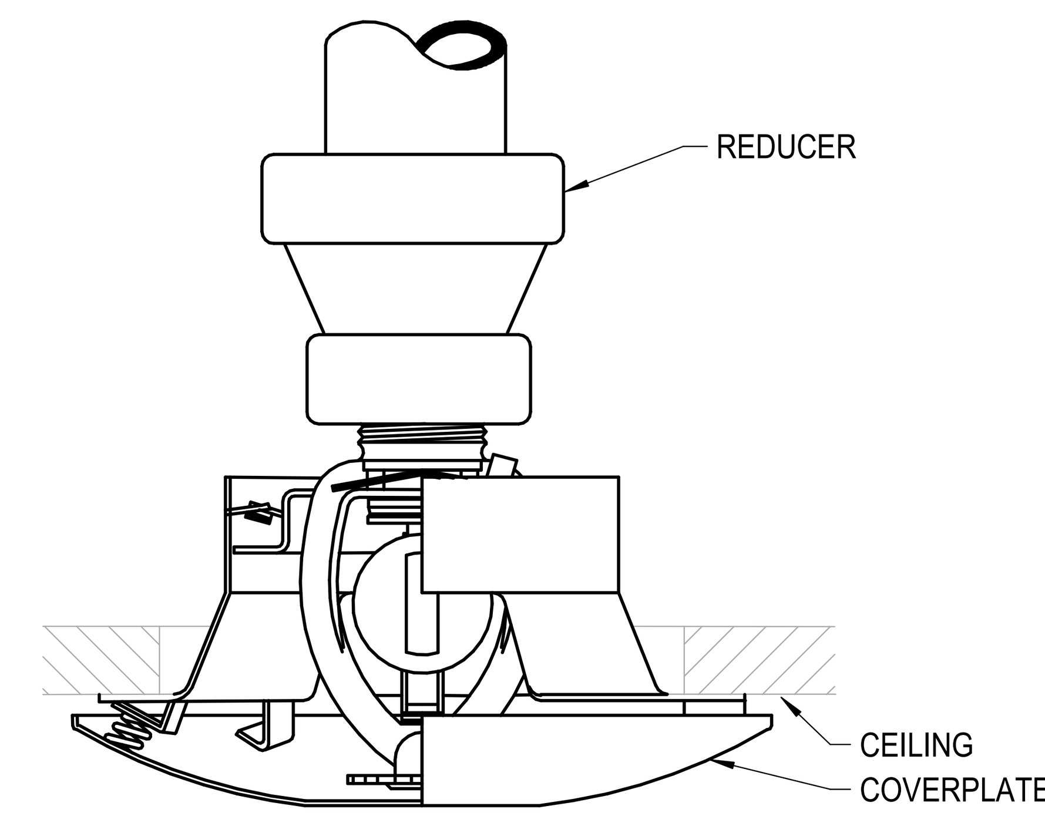
SPRINKLER LEGEND

× UPRIGHT SPRINKLER

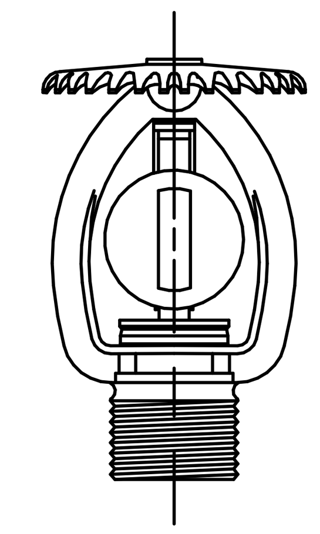
● CONCEALED SPRINKLER



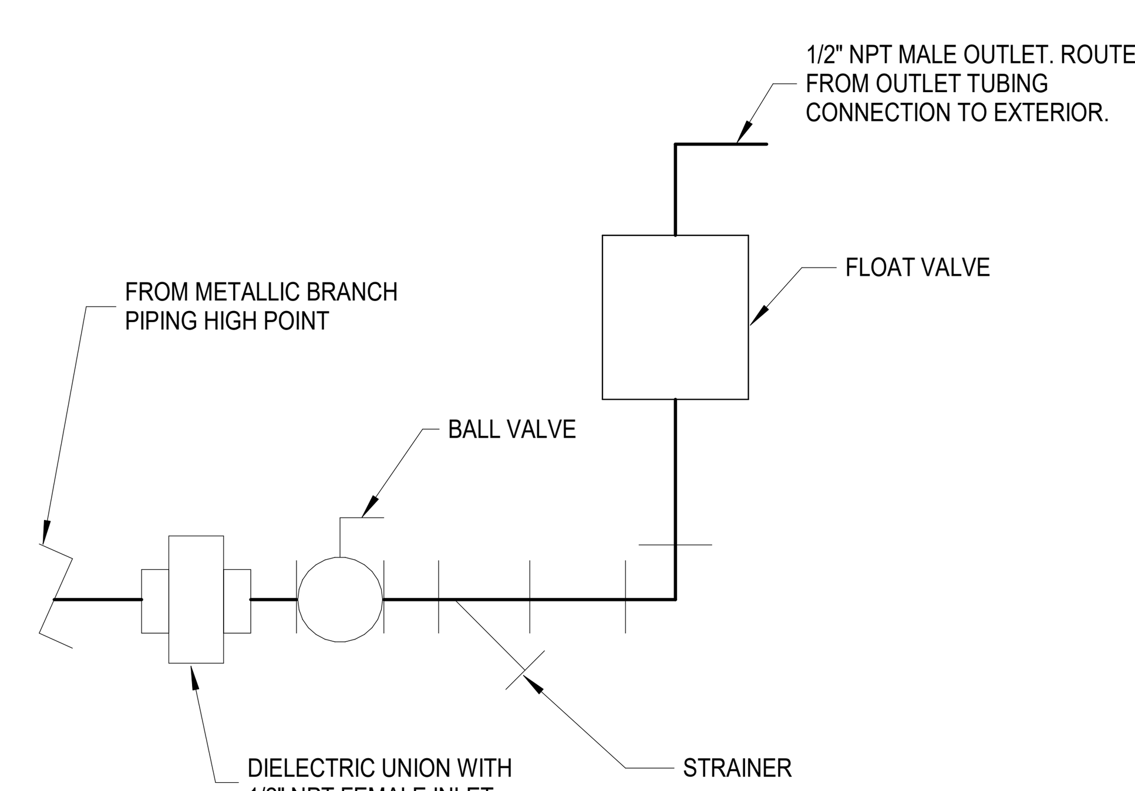
1 **SPRINKLER ARM-OVERS**
NO SCALE



2 **CONCEALED SPRINKLER HEADS**
NO SCALE



3 **UPRIGHT SPRINKLER HEADS**
NO SCALE



NOTES:
1. COMPONENTS LISTING SHALL BE FM APPROVED.
2. MAXIMUM PRESSURE: 175 PSI
3. CONTRACTOR SHALL LOCATE ON SHOP DRAWINGS FOR APPROVAL WITH OUTLET TUBING ROUTING WHEN ABOVE FINISHED CEILINGS.

4 **WET SPRINKLER SYSTEM AIR VENT**
NO SCALE

APPLICABLE DESIGN INFORMATION

CODES AND STANDARDS:
- BUILDING CODE: NORTH CAROLINA STATE BUILDING CODE - 2018
- MECHANICAL CODE: NORTH CAROLINA STATE MECHANICAL CODE - 2018
- PLUMBING CODE: NORTH CAROLINA STATE PLUMBING CODE - 2018
- ELECTRICAL CODE: NORTH CAROLINA STATE ELECTRICAL CODE - 2018
- FIRE CODE: NORTH CAROLINA FIRE PREVENTION CODE - 2018
- ENERGY CODE: NORTH CAROLINA STATE ENERGY CONSERVATION CODE - 2018

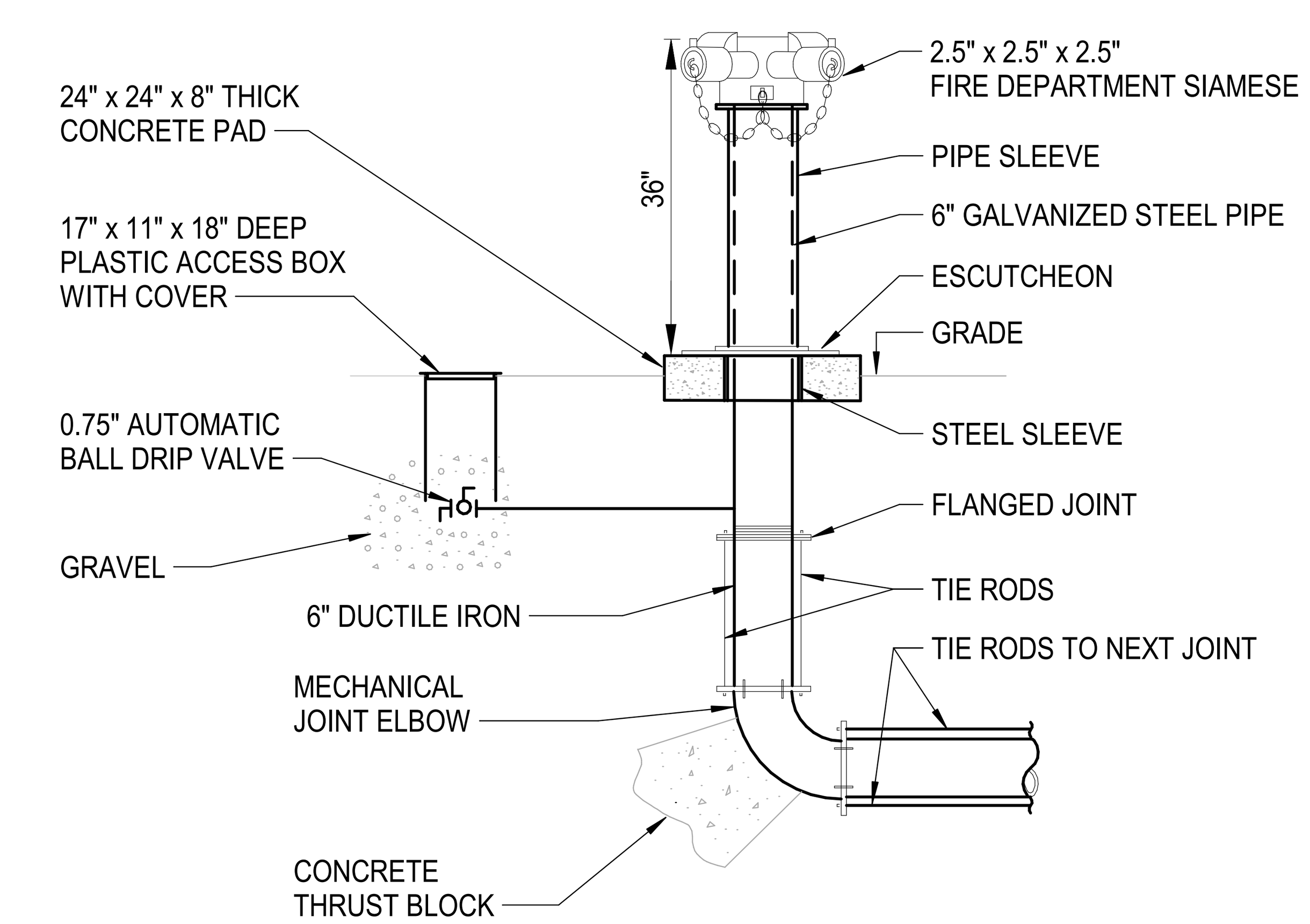
OCCUPANCY USE GROUP:
- A-3

CONSTRUCTION CLASSIFICATIONS:
- II-A

SPRINKLER SYSTEM:
- NATIONAL FIRE PROTECTION ASSOCIATION - 2013

OWNER GUIDELINES:
- UNIVERSITY OF NORTH CAROLINA DESIGN GUIDELINES - 2020

NORTH CAROLINA SCO GUIDELINES:
- WATER BASED FIRE PROTECTION SYSTEM GUIDELINES - 2020
- FIRE ALARM GUIDELINES - 2020
- ELECTRICAL GUIDELINES - 2020



NOTES:
1. COAT TIE RODS, FLANGES AND BOLTS WITH 2 COATS OF TAR AFTER ASSEMBLY.
2. COAT GALVANIZED PIPE WITH TAR AND WRAP WITH PLASTIC TAPE PRIOR TO INSTALLATION OF PIPE SLEEVE.

5 **FREE-STANDING FIRE DEPARTMENT SIAMESE CONNECTIONS**
NO SCALE

LORD AECK SARGENT

REVISION:

NEWCOMB & BOYD
5425 Page Road
Suite 215
Durham, NC 27703
NB Contact: Reade Daniel
N&B PROJECT: 21N242
Newcomb & Boyd, LLP
Firm Lic. # F-0312

SHEET TITLE
FIRE PROTECTION GENERAL NOTES, SYMBOLS, AND ABBREVIATIONS

SCALE (U.N.O.)
As indicated

JOB NAME
University of North Carolina - Chapel Hill
SCO#: 21-23548-02A
BINGHAM HALL RENOVATION

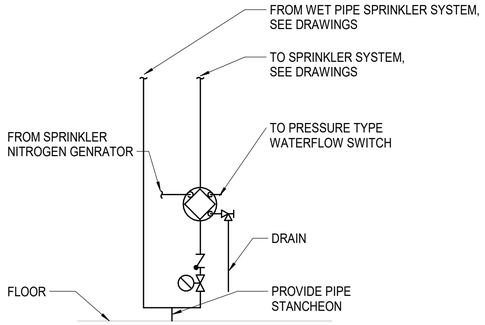
LOCATION
36 Lenoir Drive, Chapel Hill, NC 27514

SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER ANDREW R. STRACK
DocuSigned by: Andrew Strack
FD3295FC9082412...
Signed on 01/03/2024 using a Digital Signature.

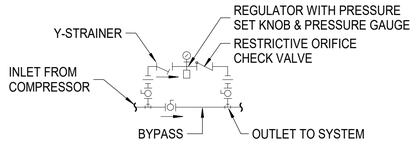
ISSUE DATE
1/8/2024

JOB. NO.
11706-00

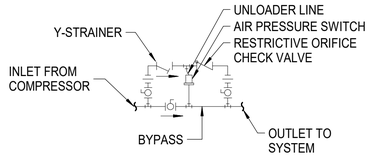
DWG. NO.
FP001



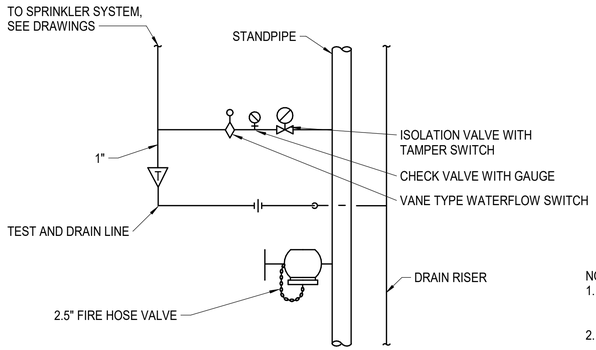
1 DRY SPRINKLER WATER ENTRANCE
NO SCALE



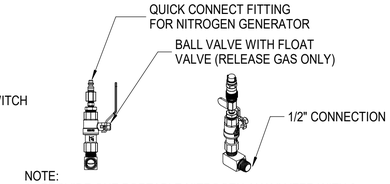
1. PROVIDE WHEN SUPPLY AIR IS FROM A PLANT/UTILITY SOURCE.
2. IF DRY PIPE VALVE IS EQUIPPED WITH AN ACCELERATOR, USE OTHER AIR MAINTENANCE DIAGRAM.



4 DRY SYSTEM AIR MAINTENANCE DEVICE
NO SCALE

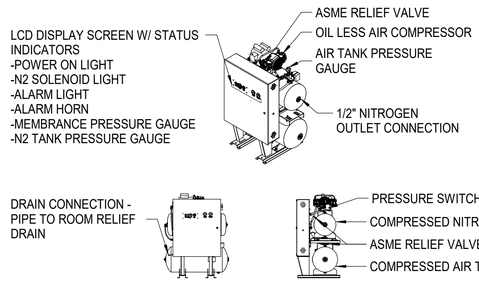


2 WET STANDPIPE SPRINKLER CONNECTIONS
NO SCALE

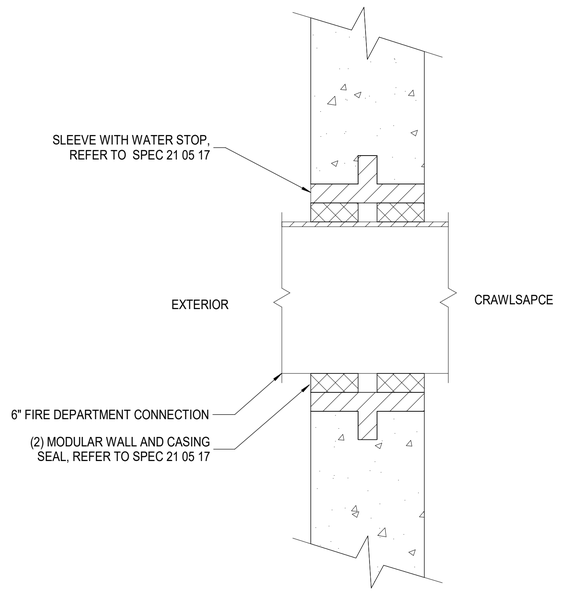


NOTE:
1. PROVIDE ONE PORTABLE NITROGEN ANAYLYZER WITH 3 DIGIT LCD DISPLAY, POWER BUTTON, CALIBRATION BUTTON, WITH QUICK CONNECTION FITTING.
2. INSTALL PER MANUFACTURER'S SPECIFICATIONS.

5 NITROGEN GENERATOR PURGE VENT & SAMPLING PORT
NO SCALE



6 NITROGEN GENERATOR WITH AIR COMPRESSOR
NO SCALE



3 FDC PENETRATION
NO SCALE

LORD AECK SARGENT

REVISION:

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Suite 215
Durham, NC 27703
NB Contact: Reade Daniel
N&B PROJECT: 21N242
Newcomb & Boyd, LLP
Firm Lic. # P0312

SHEET TITLE: FIRE PROTECTION DETAILS

SCALE (U.N.O.): As indicated

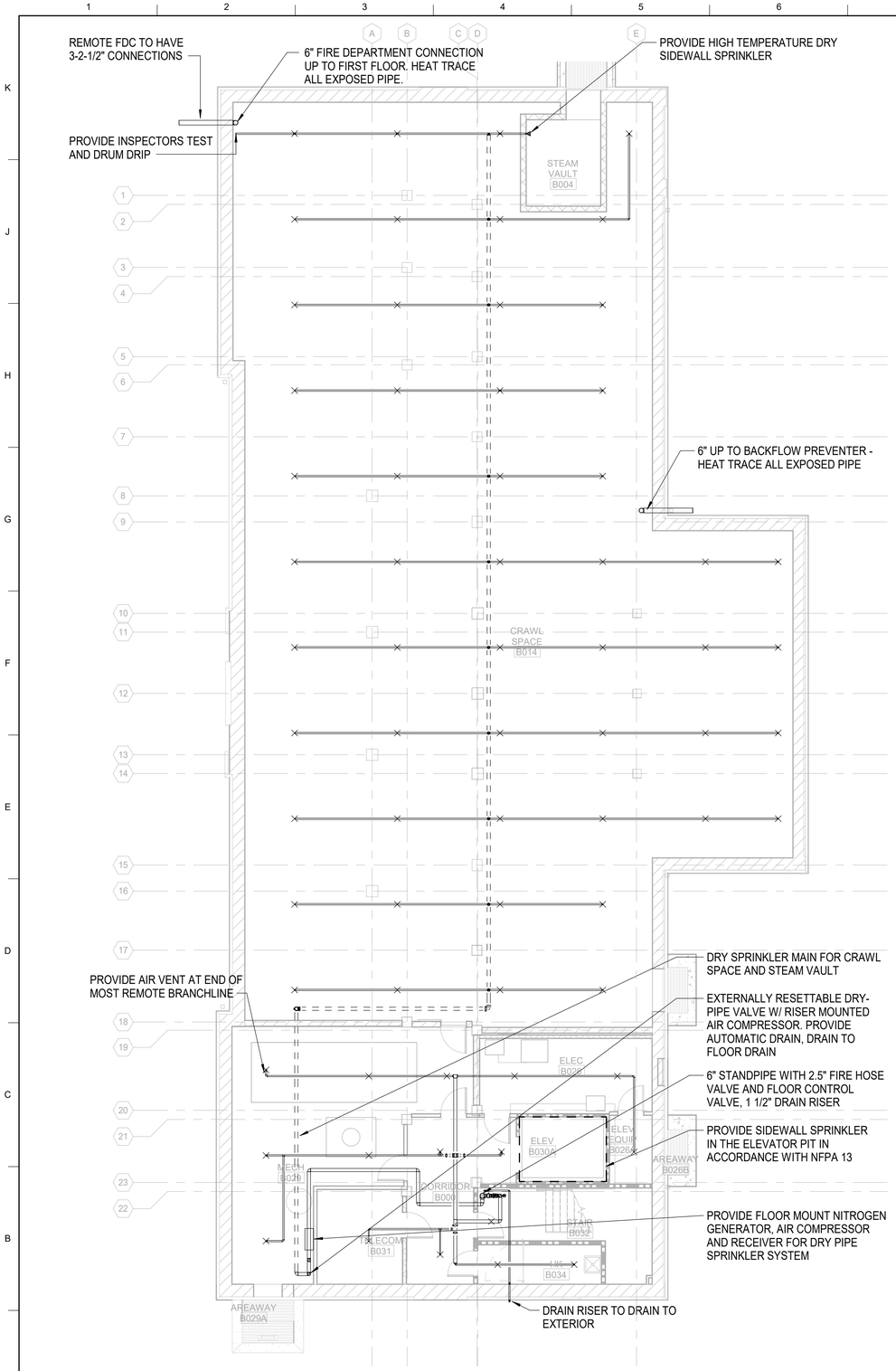
JOB NAME: University of North Carolina - Chapel Hill
SCD#: 21-25548-02A
BINGHAM HALL RENOVATION

LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

SEAL
NORTH CAROLINA PROFESSIONAL
DocuSigned by: Andrew Strack
ENGINEER
ANDREW R. STRACK

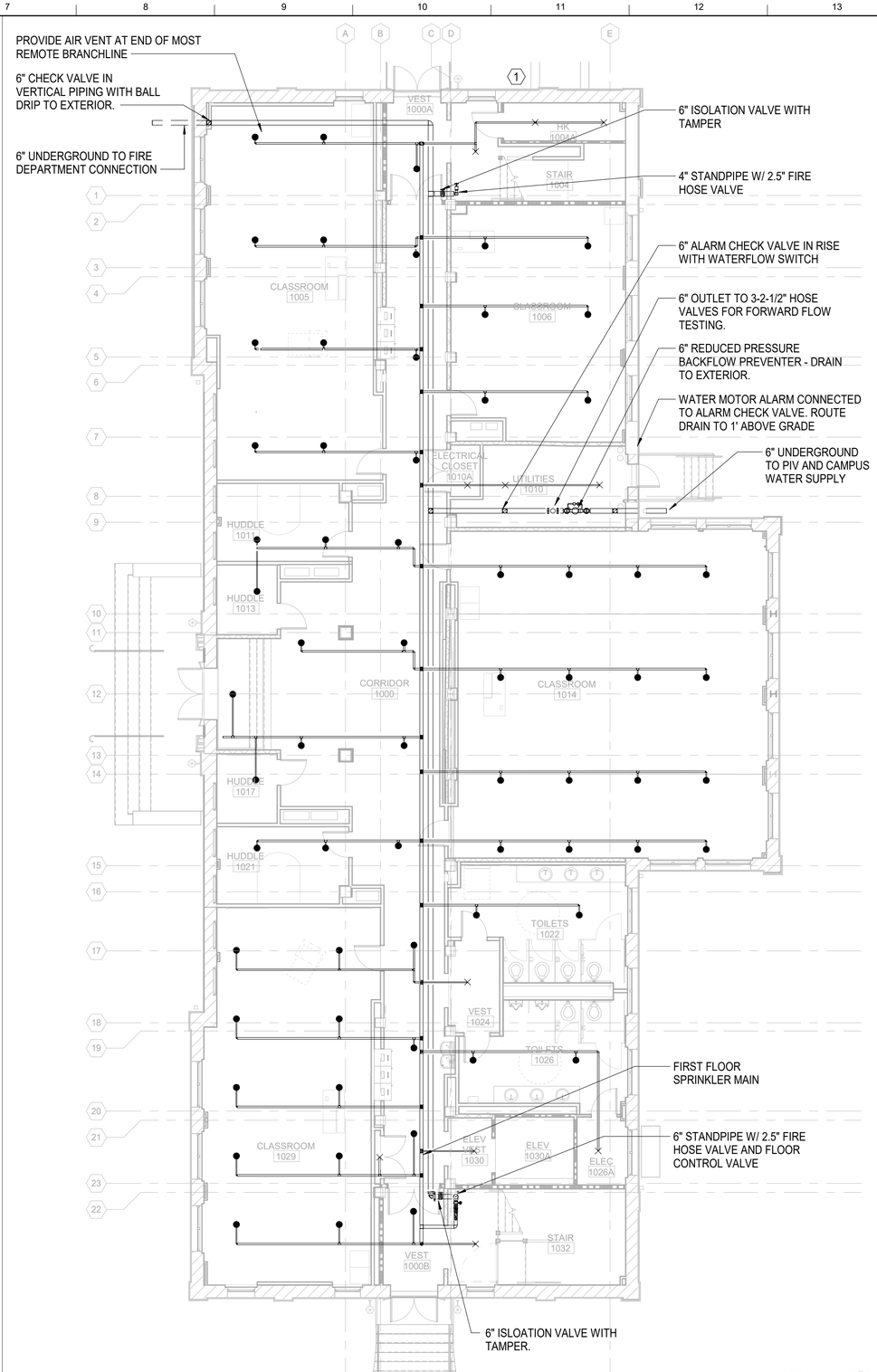
Signed on 01/03/2024 using a Digital Signature.

ISSUE DATE: 1/8/2024
JOB. NO.: 11706-00
DWG. NO.: FP002



1 FIRE PROTECTION BASEMENT FLOOR PLAN

0 8 16 FT



2 FIRE PROTECTION FIRST FLOOR PLAN

0 8 16 FT

PROJECT NORTH TRUE NORTH

GENERAL NOTES

1. THE ENTIRETY OF THE BUILDING IS CLASSIFIED AS ORDINARY HAZARD GROUP I, DESIGN DENSITY OF 0.15GPM OVER 1500 SF PER NFPA 13 CRITERIA.

SHEET SPECIFIC NOTES

LIFE SAFETY LEGEND

- SMOKE PARTITION
- 1-HOUR RATED WALL
- 2-HOUR RATED WALL
- 3-HOUR RATED WALL

LORD AECK SARGENT

REVISION:

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5425 Page Road
Suite 215
Durham, NC 27703
NB Contact: Reade Daniel
N&B PROJECT: 21N242
Newcomb & Boyd, LLP
Firm Lic. # P-0312

SHEET TITLE
FIRE PROTECTION BASEMENT & FIRST FLOOR PLANS

SCALE (U.N.O.)
1/8" = 1'-0"

0 8 16 FT

JOB NAME
University of North Carolina - Chapel Hill
SCI#: 21-235452A

LOCATION
BINGHAM HALL RENOVATION
36 Lenoir Drive, Chapel Hill, NC 27514

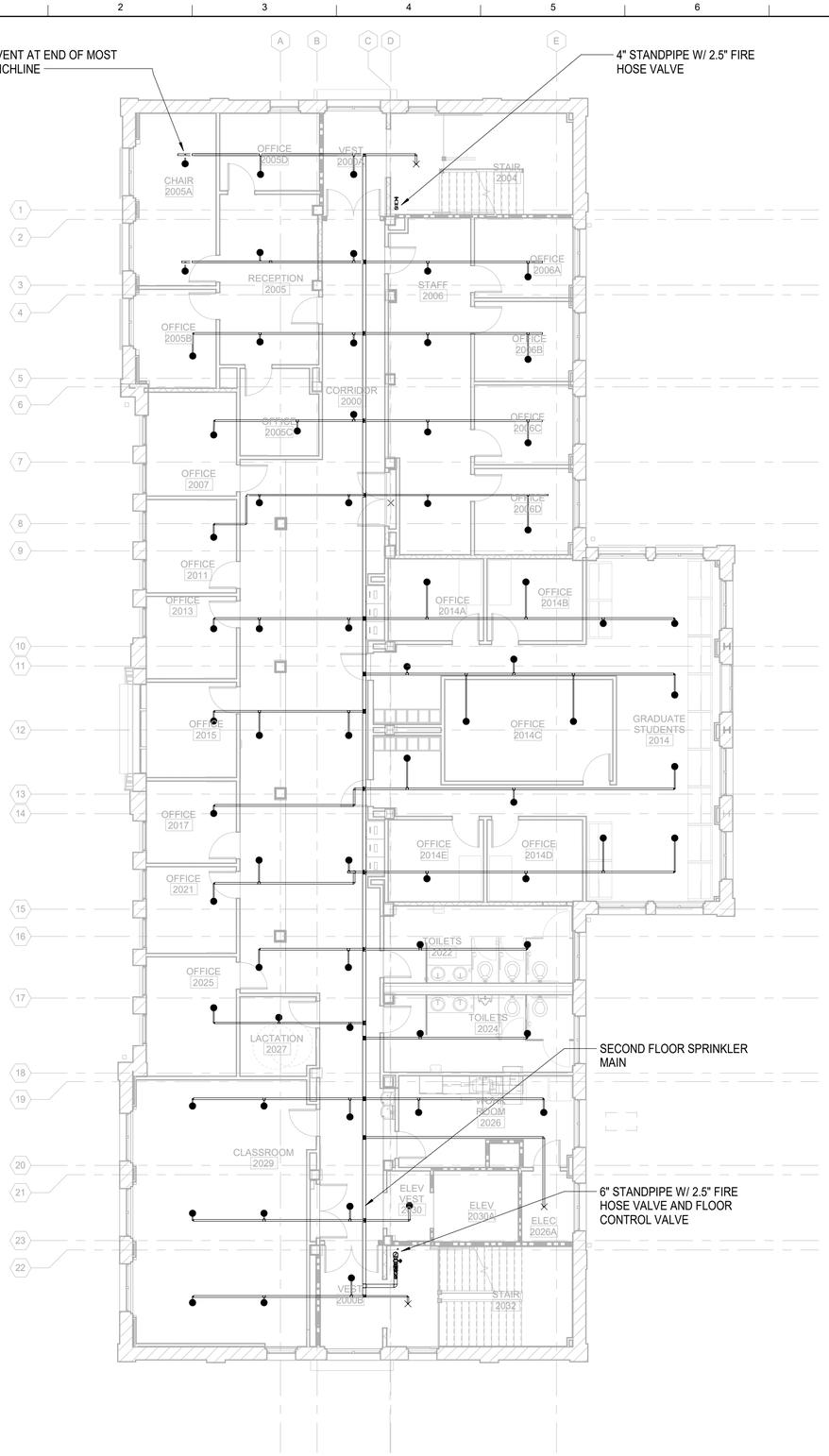
SEAL
NORTH CAROLINA PROFESSIONAL
DocuSigned by: Andrew Strack FD3295FC90824122...
ENGINEER
ANDREW R. STRICK

Signed on 01/03/2024 using a Digital Signature.

ISSUE DATE
1/8/2024

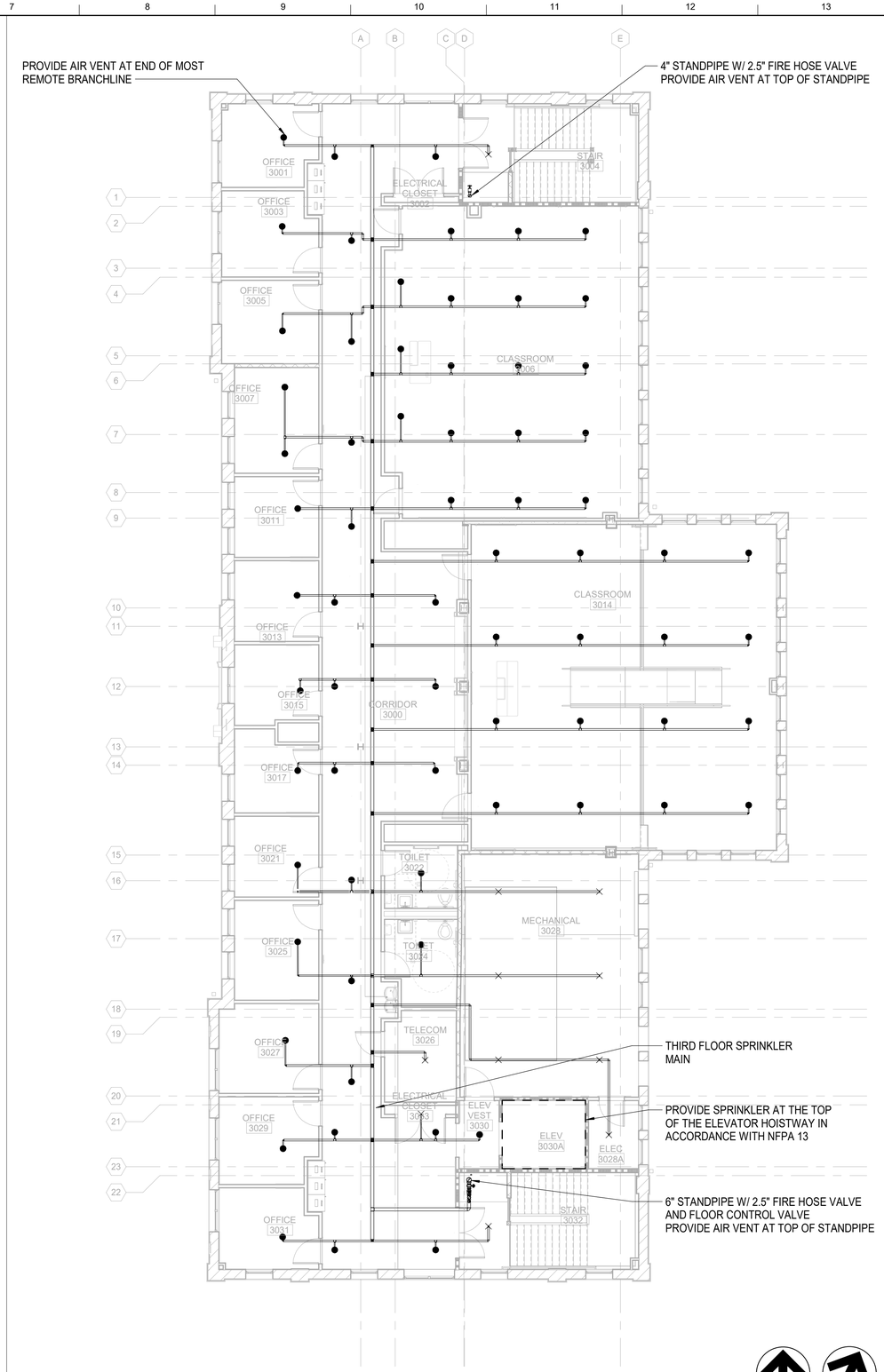
JOB. NO.
11706-00

DWG. NO.
FP101



1 FIRE PROTECTION SECOND FLOOR PLAN

0 8 16 FT



2 FIRE PROTECTION THIRD FLOOR PLAN

0 8 16 FT

PROJECT NORTH TRUE NORTH

GENERAL NOTES

1. THE ENTIRETY OF THE BUILDING IS CLASSIFIED AS ORDINARY HAZARD GROUP I, DESIGN DENSITY OF 0.15GPM OVER 1500 SF PER NFPA 13 CRITERIA.

SHEET SPECIFIC NOTES

LIFE SAFETY LEGEND

- SMOKE PARTITION
- 1-HOUR RATED WALL
- 2-HOUR RATED WALL
- 3-HOUR RATED WALL

LORD AECK SARGENT

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Newcomb & Boyd, LLP
Firm Lic # P0312

SHEET TITLE: FIRE PROTECTION SECOND & THIRD FLOOR PLANS

SCALE (U.N.O.): 1/8" = 1'-0"

0 8 16 FT

JOB NAME: University of North Carolina - Chapel Hill
SCI#: 21-235492A

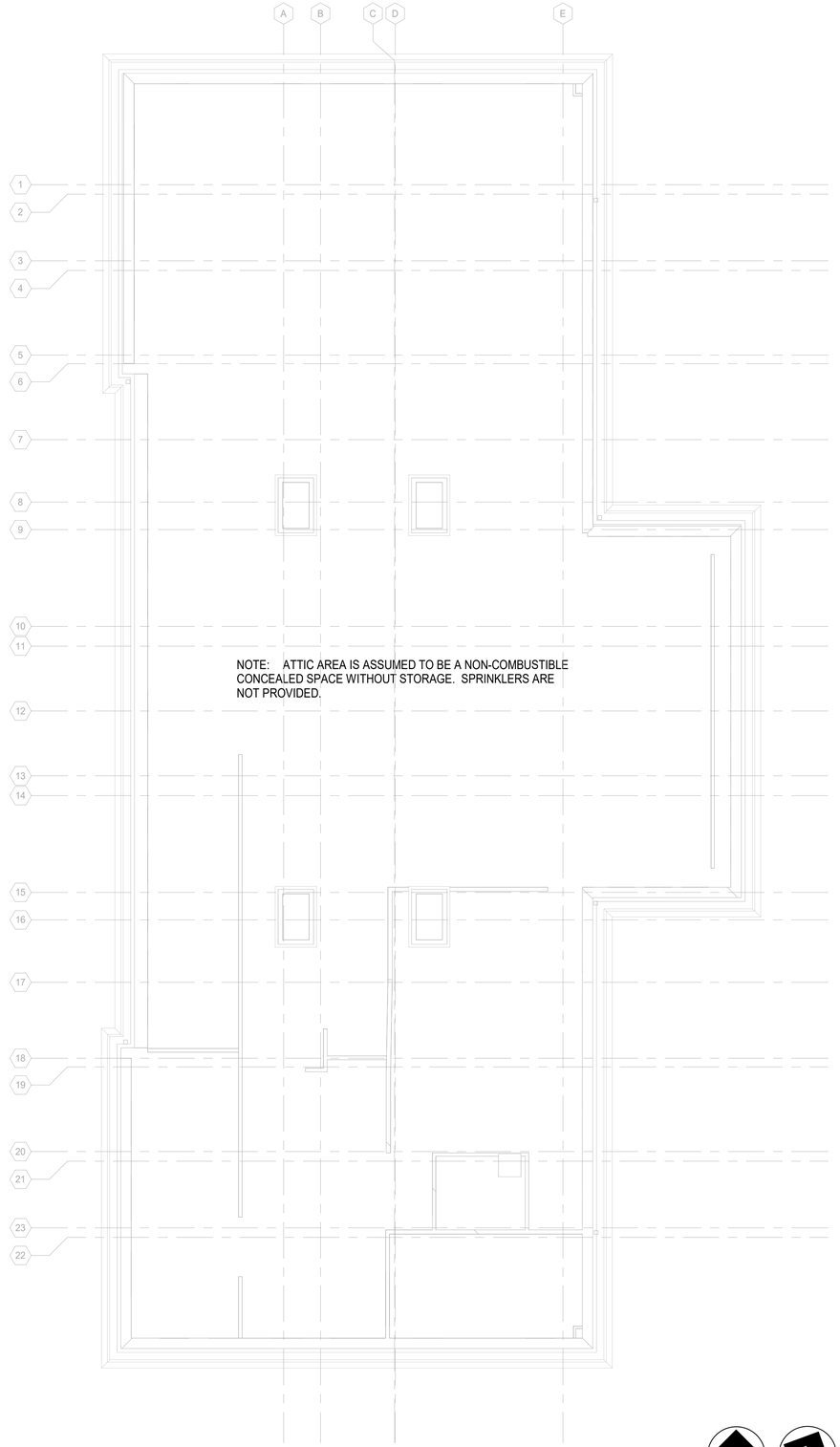
LOCATION: BINGHAM HALL RENOVATION
36 Lenoir Drive, Chapel Hill, NC 27514

SEAL: NORTH CAROLINA PROFESSIONAL ENGINEER ANDREW R. STRICK
DocuSigned by: Andrew Strack FD3295FC9082412...
Signed on 01/03/2024 using a Digital Signature.

ISSUE DATE: 1/8/2024

JOB. NO.: 11706-00

DWG. NO.: FP102



NOTE: ATTIC AREA IS ASSUMED TO BE A NON-COMBUSTIBLE CONCEALED SPACE WITHOUT STORAGE. SPRINKLERS ARE NOT PROVIDED.

1 FIRE PROTECTION ATTIC PLAN

0 8 16 FT

PROJECT NORTH TRUE NORTH

GENERAL NOTES

SHEET SPECIFIC NOTES

LORD AECK SARGENT

REVISION:

NEWCOMB & BOYD
5425 Page Road
Suite 215
Durham, NC 27703
NB Contact: Reade Daniel
N&B PROJECT: 21N242
Newcomb & Boyd, LLP
Firm Lic # P-0312

SHEET TITLE: FIRE PROTECTION ATTIC PLAN

SCALE (U.N.O.): NO SCALE

0 8 16 FT

JOB NAME: University of North Carolina - Chapel Hill
SCD#: 21-035482-02A
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

SEAL: NORTH CAROLINA PROFESSIONAL ENGINEER ANDREW R. STRACK
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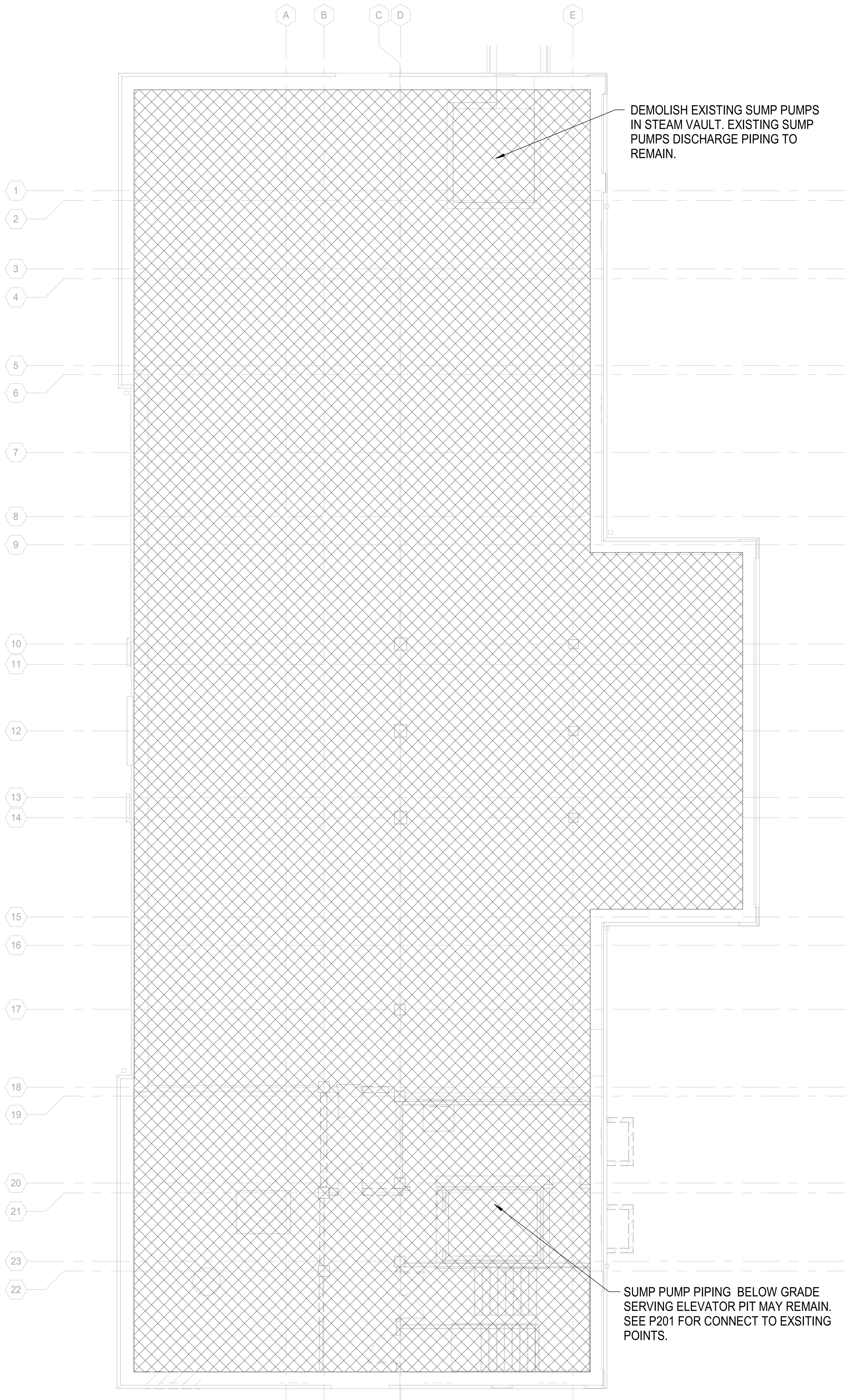
ISSUE DATE: 1/8/2024

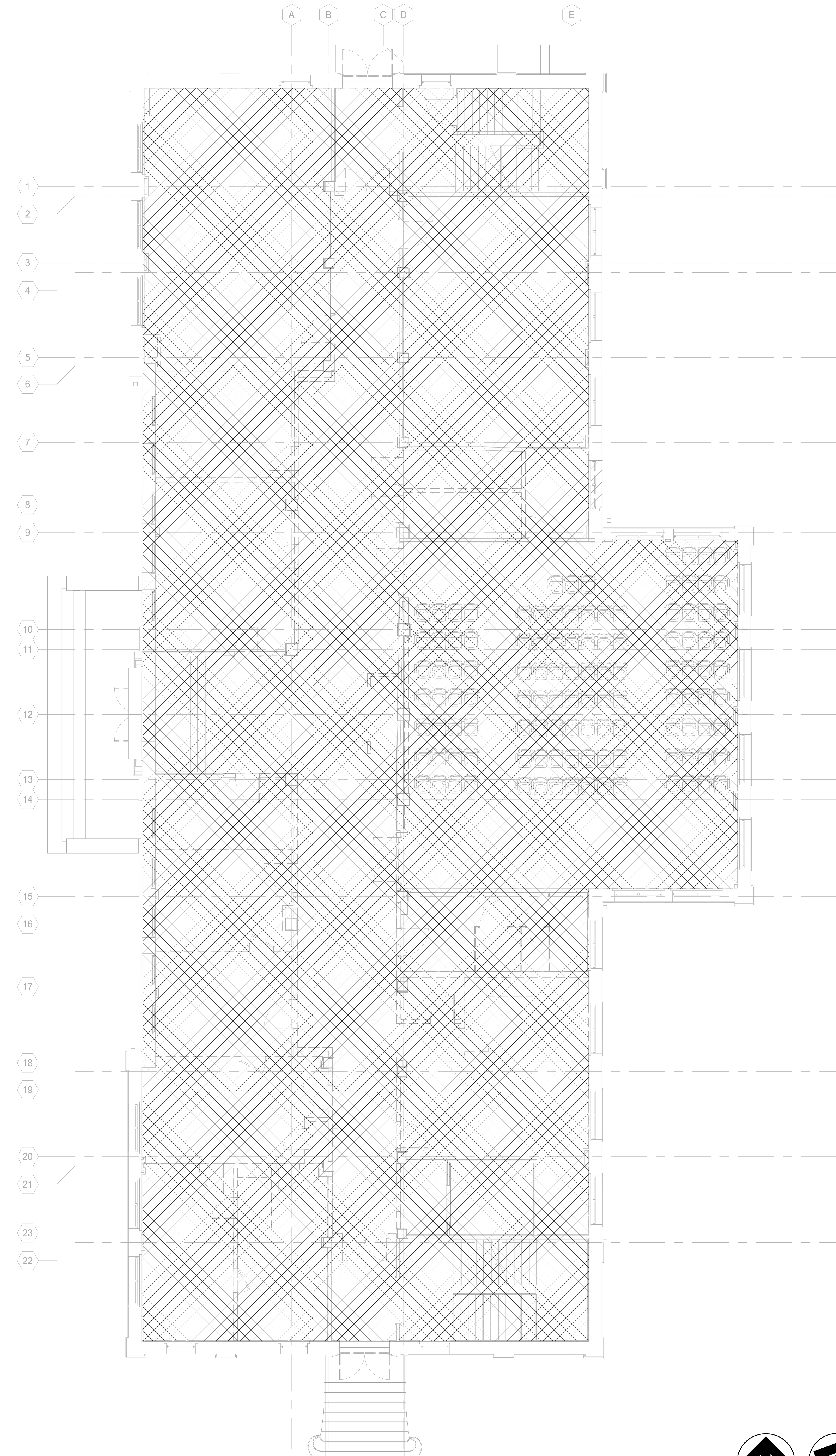
JOB. NO.: 11706-00

DWG. NO.: FP103



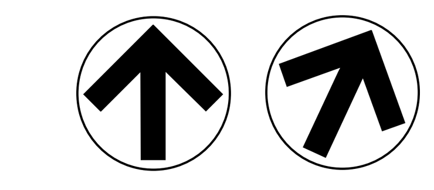
1 PLUMBING BASEMENT DEMOLITION PLAN

0 8 16 FT



2 PLUMBING FIRST DEMOLITION PLAN

0 8 16 FT



GENERAL NOTES

1. ALL EXSITING PLUMBING PIPING, FITTINGS, VALVES, ACCESSORIES, FIXTURES, AND EQUIPMENT SHALL BE DEMOLISHED AND REMOVED FROM THE BUILDING.
2. NO PLUMBING INFRASTRUCTURE SHALL REMAIN WITHIN OR BELOW THE BUILDING.

SHEET SPECIFIC NOTES

LORD AECK SARGENT

REVISION:

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Suite 215
Durham, NC 27703
NB Contact: Reade Daniel
N&B PROJECT: 21N242
Newcomb & Boyd, LLP
Firm Lic. # F-0312

SHEET TITLE
PLUMBING BASEMENT & FIRST DEMOLITION PLANS

SCALE (U.N.O.)
NO SCALE
0 8 16 FT

JOB NAME
University of North Carolina - Chapel Hill
SCO#: 21-23548-02A
BINGHAM HALL RENOVATION

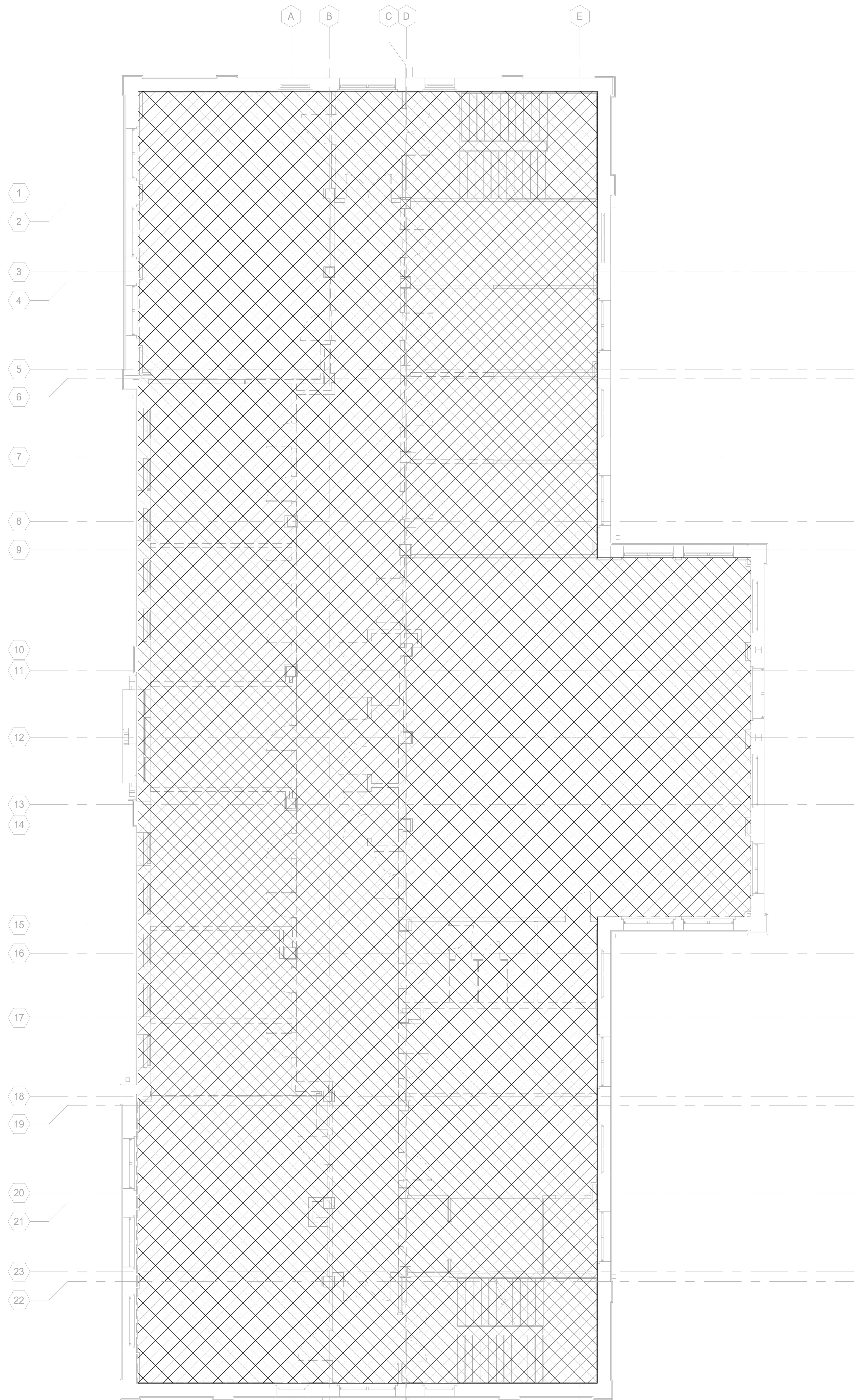
LOCATION
36 Lenoir Drive, Chapel Hill, NC 27514

SEAL
DocuSigned by:
CAROLINA PROFESSIONAL SEAL 043322 ENGINEER PAUL JACKSON KITCHENS
Signed on 01/03/2024 using a Digital Signature.

ISSUE DATE
1/8/2024

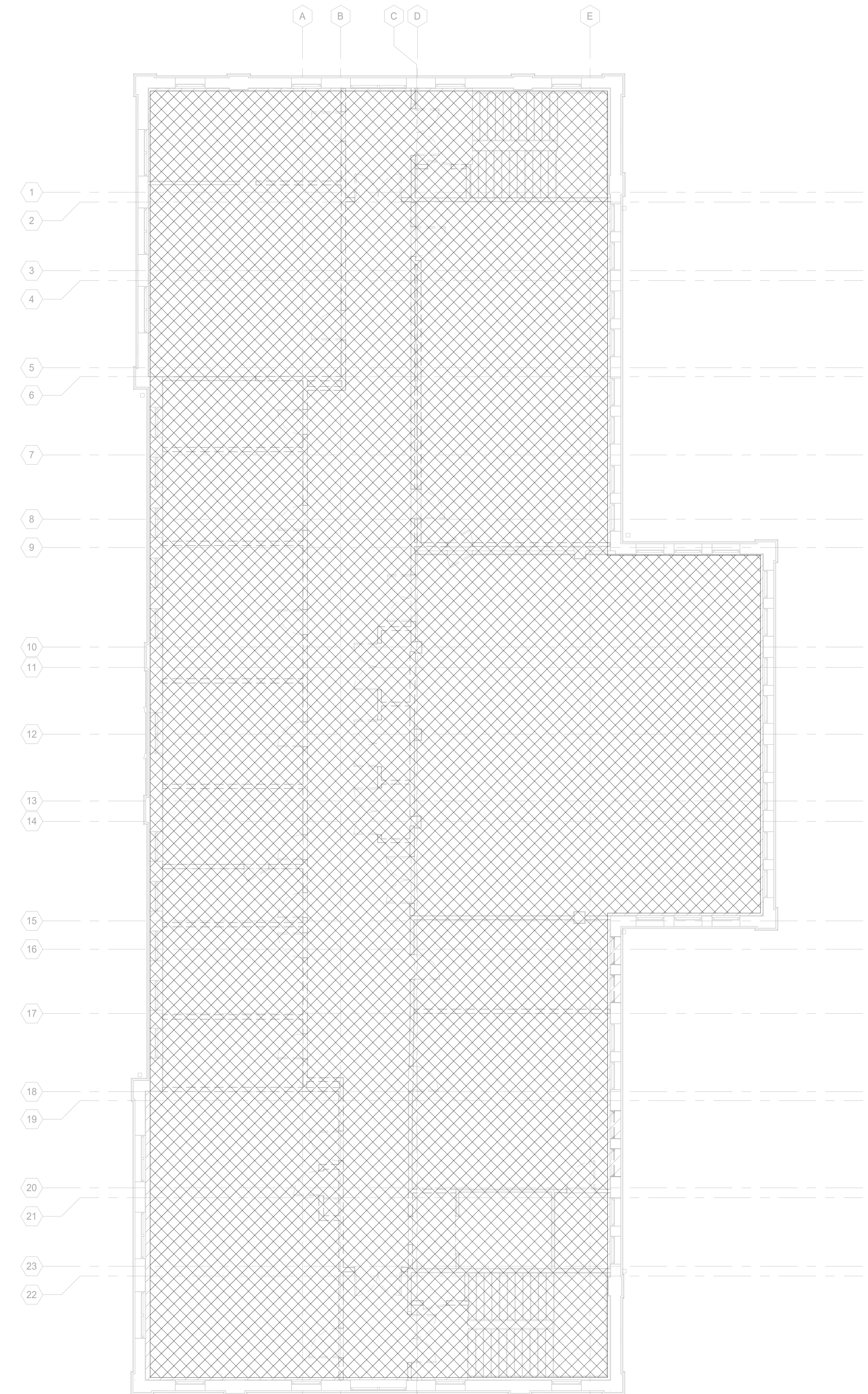
JOB. NO.
11706-00

DWG. NO.
PD101



1 PLUMBING SECOND DEMOLITION PLAN

0 8 16 FT



2 PLUMBING THIRD DEMOLITION PLAN

0 8 16 FT

PROJECT NORTH

TRUE NORTH

GENERAL NOTES

1. ALL EXSITING PLUMBING PIPING, FITTINGS, VALVES, ACCESSORIES, FIXTURES, AND EQUIPMENT SHALL BE DEMOLISHED AND REMOVED FROM THE BUILDING.
2. NO PLUMBING INFRASTRUCTURE SHALL REMAIN WITHIN OR BELOW THE BUILDING.

SHEET SPECIFIC NOTES

LORD AECK SARGENT

REVISION:

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Suite 215
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NB Contact: Reade Daniel
N&B PROJECT: 21N242
Newcomb & Boyd, LLP
Firm Lic. # F-0312

SHEET TITLE
PLUMBING SECOND & THIRD DEMOLITION PLANS

SCALE (U.N.O.)
NO SCALE

0 8 16 FT

JOB NAME
University of North Carolina - Chapel Hill
SCO#: 21-23548-02A
BINGHAM HALL RENOVATION

LOCATION
36 Lenoir Drive, Chapel Hill, NC 27514

SEAL
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SEAL 043322
ENGINEER
PAUL JACKSON KITCHENS
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ISSUE DATE
1/8/2024

JOB. NO.
11706-00

DWG. NO.
PD102

APPLICABLE DESIGN INFORMATION

CODES AND STANDARDS:
- BUILDING CODE: NORTH CAROLINA STATE BUILDING CODE - 2018
- MECHANICAL CODE: NORTH CAROLINA STATE MECHANICAL CODE - 2018
- PLUMBING CODE: NORTH CAROLINA STATE PLUMBING CODE - 2018
- ELECTRICAL CODE: NORTH CAROLINA STATE ELECTRICAL CODE - 2018
- FIRE CODE: NORTH CAROLINA FIRE PREVENTION CODE - 2018
- ENERGY CODE: NORTH CAROLINA STATE ENERGY CONSERVATION CODE - 2018

OCCUPANCY USE GROUP:
- A-3

CONSTRUCTION CLASSIFICATIONS:
- II-A

SPRINKLER SYSTEM:
- NATIONAL FIRE PROTECTION ASSOCIATION - 2013

OWNER GUIDELINES:
- UNIVERSITY OF NORTH CAROLINA DESIGN GUIDELINES - 2020

NORTH CAROLINA SCO GUIDELINES:
- WATER BASED FIRE PROTECTION SYSTEM GUIDELINES - 2020
- FIRE ALARM GUIDELINES - 2020
- ELECTRICAL GUIDELINES - 2020

PLUMBING LEGEND

SYMBOLS

	SOIL (S) OR WASTE (W) ABOVE FLOOR OR GRADE
	SOIL (S) OR WASTE (W) BELOW FLOOR OR GRADE
	VENT (V)
RW	RAINWATER (RW) ABOVE FLOOR OR GRADE
RW	RAINWATER (RW) BELOW FLOOR OR GRADE
	COLD WATER (CW)
	HOT WATER (HW)
T	TRAP PRIMER (T)
PD	PUMPED DISCHARGE (PD)
	DRAIN
	FLOOR CLEANOUT (FCO)
	GROUND CLEANOUT (GCO)
	CLEANOUT (CO)
	STRAINER
	UNION OR FLANGE
	HOSE BIB
	PRESSURE REDUCING VALVE
	CHECK VALVE
	GLOBE VALVE
	AUTOMATIC OR MANUAL FLOW CONTROL FITTING
	BALANCING VALVE
	GATE VALVE OR BUTTERFLY VALVE
	GATE VALVE IN VERTICAL RISE
	BALL VALVE
	BALL VALVE IN VERTICAL RISE
	TEMPERATURE AND PRESSURE RELIEF VALVE
	PRESSURE RELIEF VALVE
	VACUUM BREAKER
	VACUUM RELIEF VALVE
	THERMOMETER
	PRESSURE GAUGE
	WATER HAMMER ARRESTER
	TRAP PRIMER
	TRAP PRIMER WITH DISTRIBUTION UNIT
	PUMP

ABBREVIATIONS

AAV	AIR ADMITTANCE VALVE
ABV	ABOVE
AC	ABOVE CEILING
AFF/AFG/ARF	ABOVE FINISHED FLOOR/GRADE/RAISED FLOOR
AP	ACCESS PANEL
ARCH	ARCHITECT/ARCHITECTURAL
ATTP (#)	AUTOMATIC TRAP PRIMER PANEL (# INDICATES THE NUMBER OF OUTLETS)
BEL	BELOW
BF	BELOW FLOOR
CTE	CONNECT TO EXISTING
DN	DOWN
DWG	DRAWING
ELE	ELEVATOR
ELEC	ELECTRICAL/ELECTRIC
EWC	ELECTRIC WATER COOLER
EX	EXISTING
EXP	EXPOSED
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
FS	FLOOR SINK
FTG	FOOTING
GR	GRADE
HC	HANDICAPPED
HD	HUB DRAIN
IE	INVERT ELEVATION
IM	ICE MACHINE/ICE MAKER
LAV	LAVATORY
MECH	MECHANICAL
MH	MANHOLE
PDI	PLUMBING AND DRAINAGE INSTITUTE
PS	PIPE STAND SUPPORT
SPEC	SPECIFICATION
TP	TRAP PRIMER
TS	TIGHT TO STRUCTURE
UC	UNDERCOUNTER
UG	UNDERGROUND
UR	URINAL
VB	VACUUM BREAKER
VTR	VENT THROUGH ROOF
WC	WATER CLOSET
WCO	WALL CLEANOUT
WG	WATER GAUGE
WM	WASHING MACHINE

PROJECT GENERAL NOTES:

1. "UP" INDICATES PIPING THAT IS PENETRATING THE FLOOR TO THE LEVEL ABOVE. "DN" INDICATES PIPING THAT IS PENETRATING THE FLOOR TO THE LEVEL BELOW.
2. "RISE" INDICATES PIPING THAT IS ASCENDING WITHIN THE SAME LEVEL WITH NO FLOOR PENETRATION. "DROP" INDICATES PIPING THAT IS DESCENDING WITHIN THE SAME LEVEL WITH NO FLOOR PENETRATION.
3. PROVIDE TRAP PRIMERS FOR ALL FLOOR DRAINS. PROVIDE LINE PRESSURE OPERATION TYPE TRAP PRIMER IN CHASE SPACE TO SERVE FLOOR DRAINS IN RESTROOMS. TRAP PRIMER SHALL ACTUATE AT A MINIMUM LINE PRESSURE DROP OF 3 PSI.

PLUMBING LOAD SUMMARY:

TOTAL DRAINAGE FIXTURE UNITS: 83 DFU
WASTE SERVICE PIPE SIZE: 6"

TOTAL WATER SERVICE FIXTURE UNITS: 142 WSFU
TOTAL WATER SERVICE PEAK DEMAND: 61 GPM
WATER SERVICE PIPE SIZE: 3"

SEAL
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NORTH CAROLINA PROFESSIONAL SEAL 043322 ENGINEER PAUL JACKSON KITCHINS
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ISSUE DATE 1/8/2024
JOB. NO. 11706-00
DWG. NO. P001

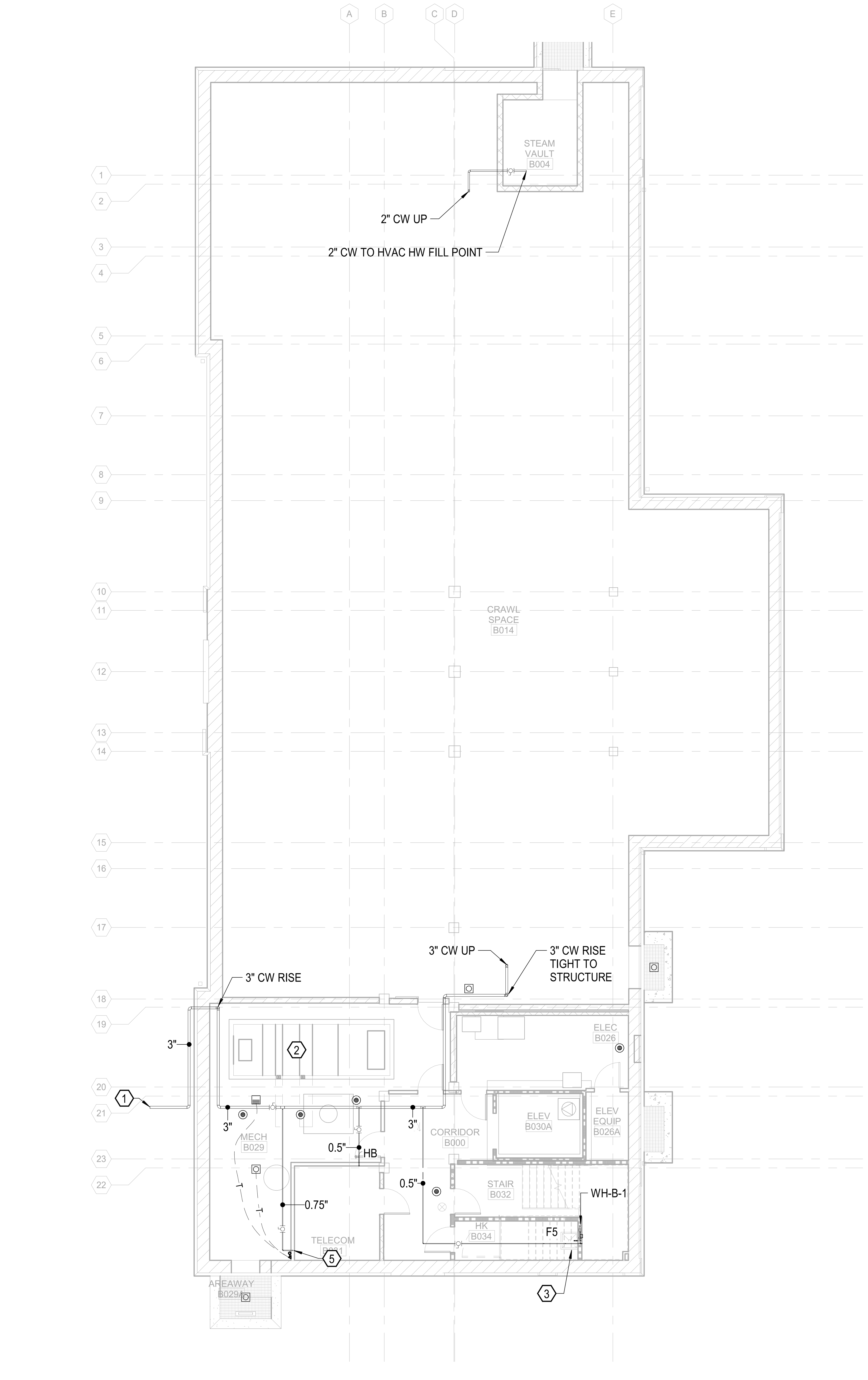
LORD AECK SARGENT

REVISION:

NEWCOMB & BOYD NB
5425 Page Road
Suite 215
Durham, NC 27703
NB Contact: Reade Daniel
N&B PROJECT: 21N242
Newcomb & Boyd, LLP
Firm Lic # P0312

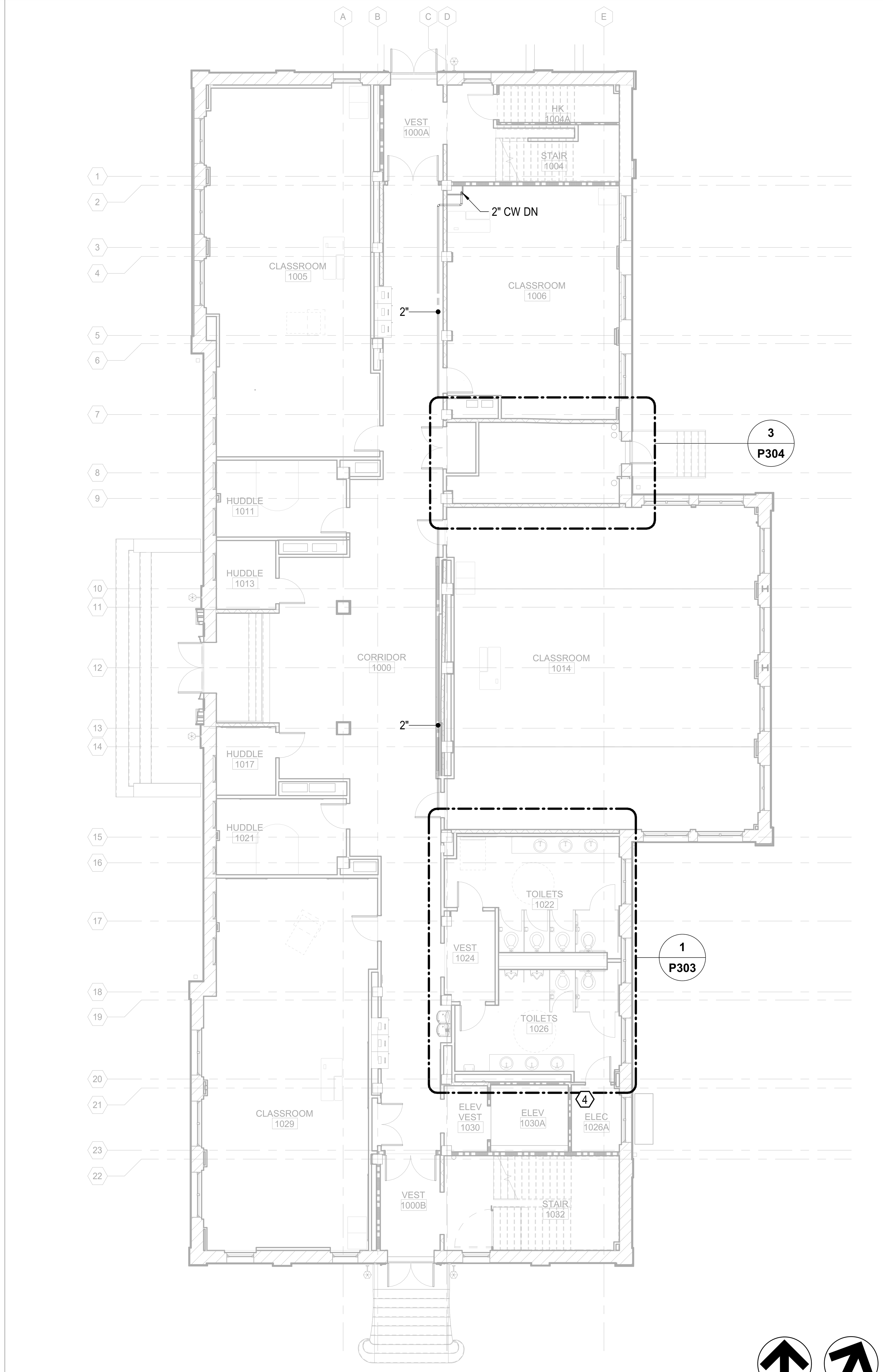
SHEET TITLE: PLUMBING GENERAL NOTES, SYMBOLS, AND ABBREVIATIONS
SCALE (U.N.O.): As indicated

JOB NAME: University of North Carolina - Chapel Hill
SCD#: 21-035482A
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514



1 PLUMBING PRESSURE BASEMENT FLOOR PLAN

0 8 16 FT



2 PLUMBING PRESSURE FIRST FLOOR PLAN

0 8 16 FT

PROJECT NORTH

TRUE NORTH

GENERAL NOTES

SHEET SPECIFIC NOTES

1. 3" CW SVC FROM EXTERIOR BFP. BURY PIPING 3'-0" BFG.
2. AHU-B-1. SEE M SHEETS FOR ASSOCIATED DUCT ROUTING. COORDINATE CW PIPING WITH AHU AND ASSOCIATED DUCTWORK.
3. FLOOR MOUNTED TERRAZZO SERVICE SINK WITH WALL MOUNTED MANUAL FAUCET. BASIN SHALL BE STERN-WILLIAMS HL-1800 OR APPROVED EQUAL. FAUCET SHALL BE T&S BRASS B-0665-BSTR OR APPROVED EQUAL.
4. PROVIDE TRANSFORMERS FOR FLUSH VALVES IN ADJACENT ELECTRICAL ROOM. COORDINATE LOCATIONS AND REQUIREMENTS WITH ELECTRICAL.
5. 0.75" CW DOWN IN WALL TO AUTOMATIC TRAP PRIMER PANEL DISTRIBUTION UNIT. AUTOMATIC TRAP PRIMER PANEL SHALL BE PPP PTS-1320 OR APPROVED EQUAL.

LIFE SAFETY LEGEND

- SMOKE PARTITION
- 1-HOUR RATED WALL
- 2-HOUR RATED WALL
- 3-HOUR RATED WALL

SEAL

DocuSigned by:

SEAL 043322 ENGINEER PAUL JACKSON KITCHENS

Signed on 01/03/2024 using a Digital Signature.

LORD AECK SARGENT

REVISION:

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Durham, NC 27703
NB Contact: Reade Daniel
N&B PROJECT: 21N242
Newcomb & Boyd, LLP
Firm Lic. # F-0312

SHEET TITLE
PLUMBING PRESSURE BASEMENT & FIRST FLOOR PLANS

SCALE (U.N.O.)
1/8" = 1'-0"
0 8 16 FT

JOB NAME
University of North Carolina - Chapel Hill
SCO#: 21-23548-02A
BINGHAM HALL RENOVATION

LOCATION
36 Lenoir Drive, Chapel Hill, NC 27514

ISSUE DATE
1/8/2024

JOB. NO.
11706-00

DWG. NO.
P101

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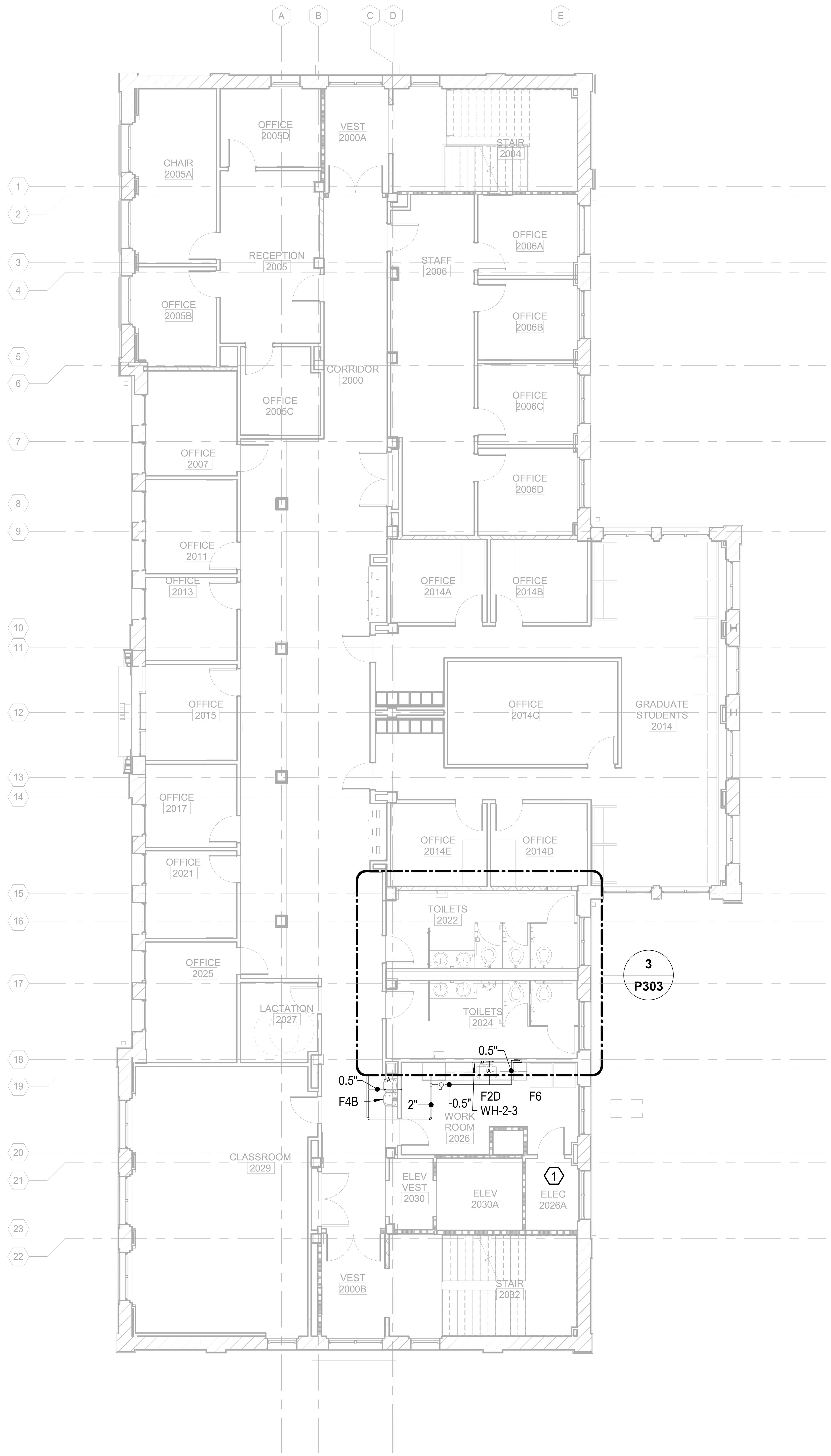
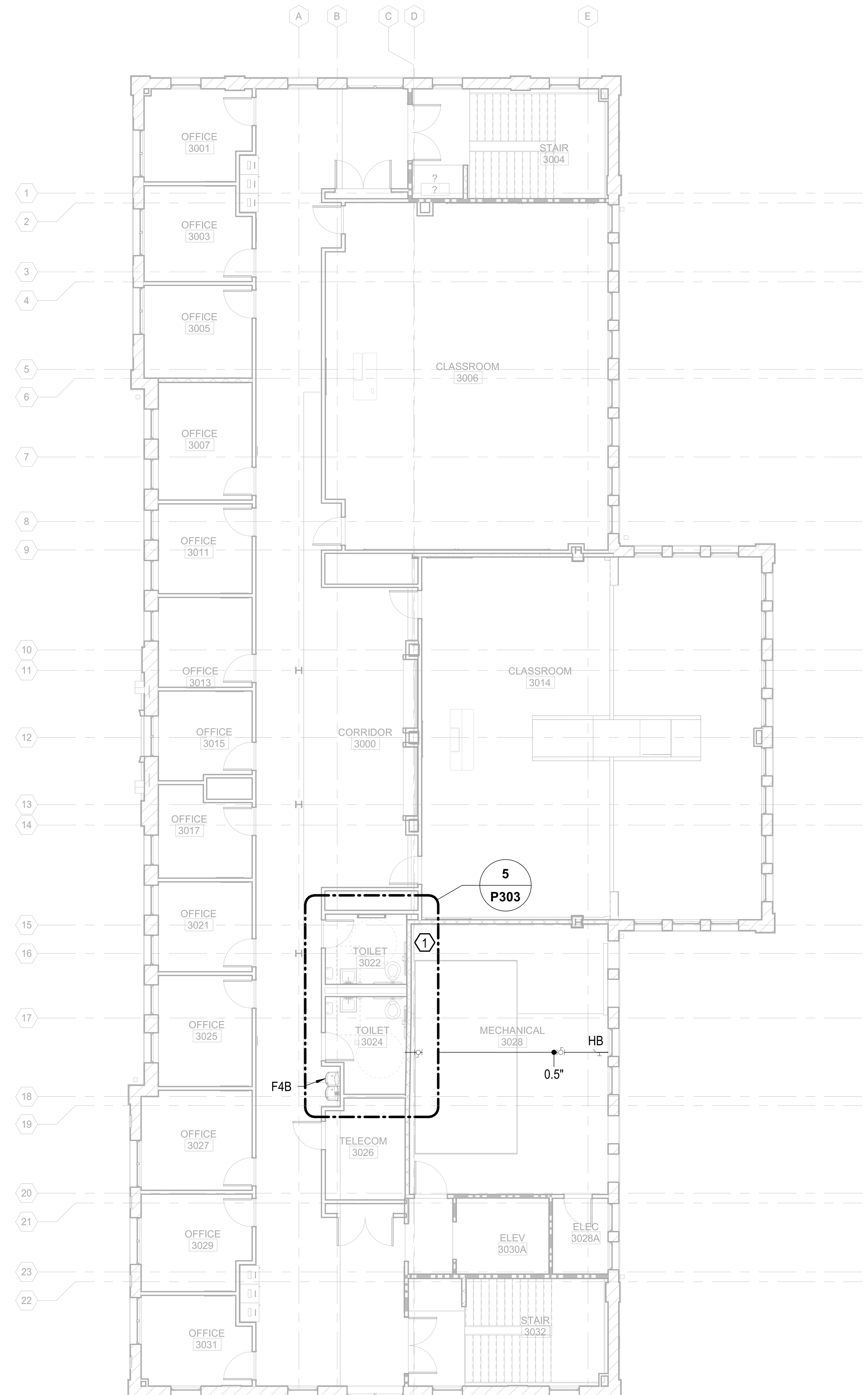


1 PLUMBING PRESSURE SECOND FLOOR PLAN

0 8 16 FT



2 PLUMBING PRESSURE THIRD FLOOR PLAN

0 8 16 FT

PROJECT NORTH

TRUE NORTH

GENERAL NOTES

SHEET SPECIFIC NOTES

1. PROVIDE TRANSFORMERS FOR FLUSH VALVES ABOVE ACCESSIBLE CEILING. COORDINATE LOCATIONS AND REQUIREMENTS WITH ELECTRICAL.

LIFE SAFETY LEGEND

- SMOKE PARTITION
- 1-HOUR RATED WALL
- 2-HOUR RATED WALL
- 3-HOUR RATED WALL

LORD AECK SARGENT

REVISION:

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N&B Contact: Roade Daniel
N&B PROJECT: 21N042
Newcomb & Boyd, LLP
Firm Lic. # F-0312

SHEET TITLE
PLUMBING PRESSURE SECOND & THIRD FLOOR PLANS

SCALE (U.N.O.)
1/8" = 1'-0"

0 8 16 FT

JOB NAME
University of North Carolina - Chapel Hill
SCO# 21-23548-02A
BINGHAM HALL RENOVATION
LOCATION
36 Lenoir Drive, Chapel Hill, NC 27514

SEAL
DocuSigned by:
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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 043322 PAUL JACKSON KITCHENS
Signed on 01/03/2024 using a Digital Signature.

ISSUE DATE
1/8/2024
JOB NO.
11706-00
DWG. NO.
P102

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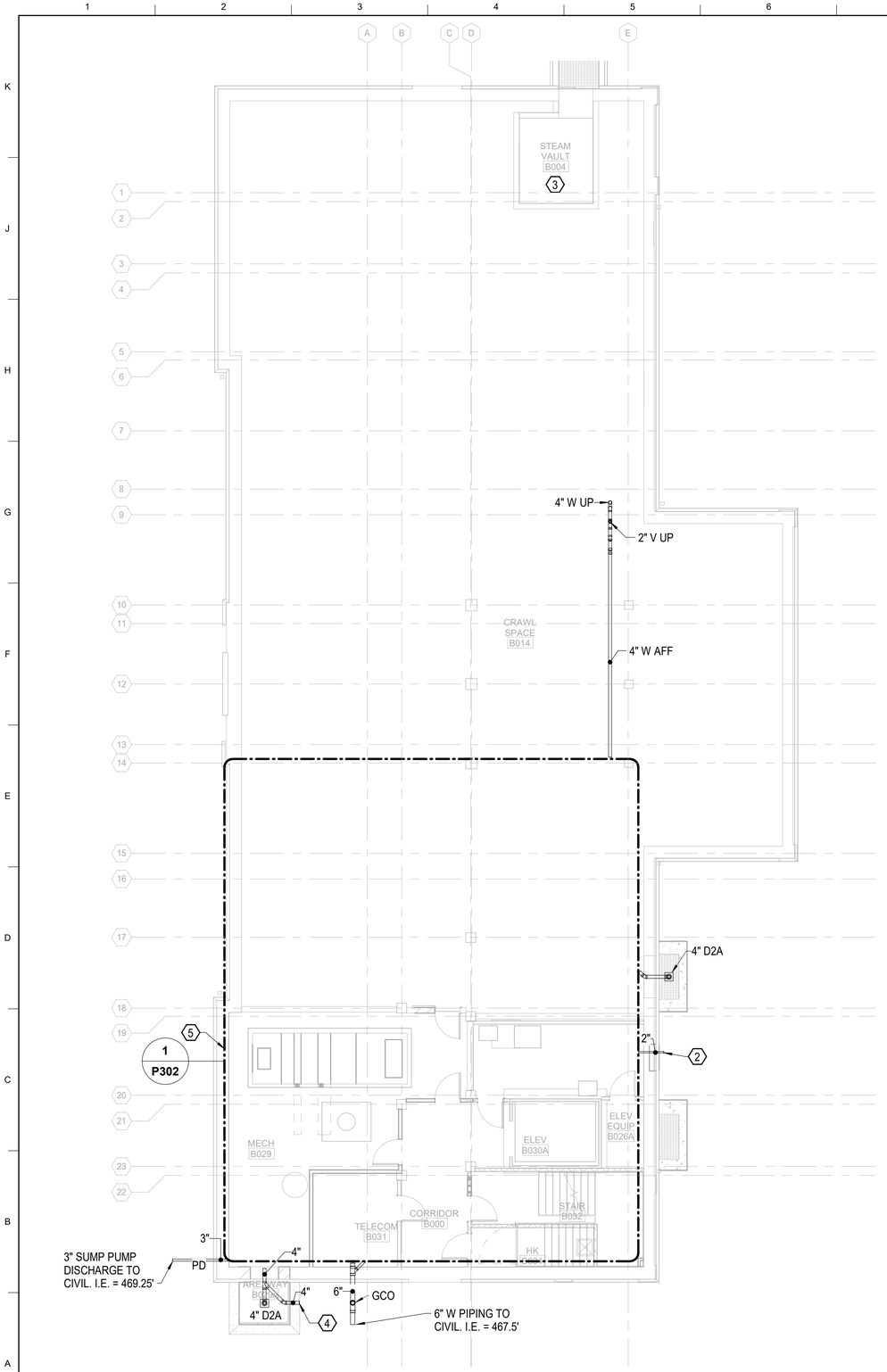
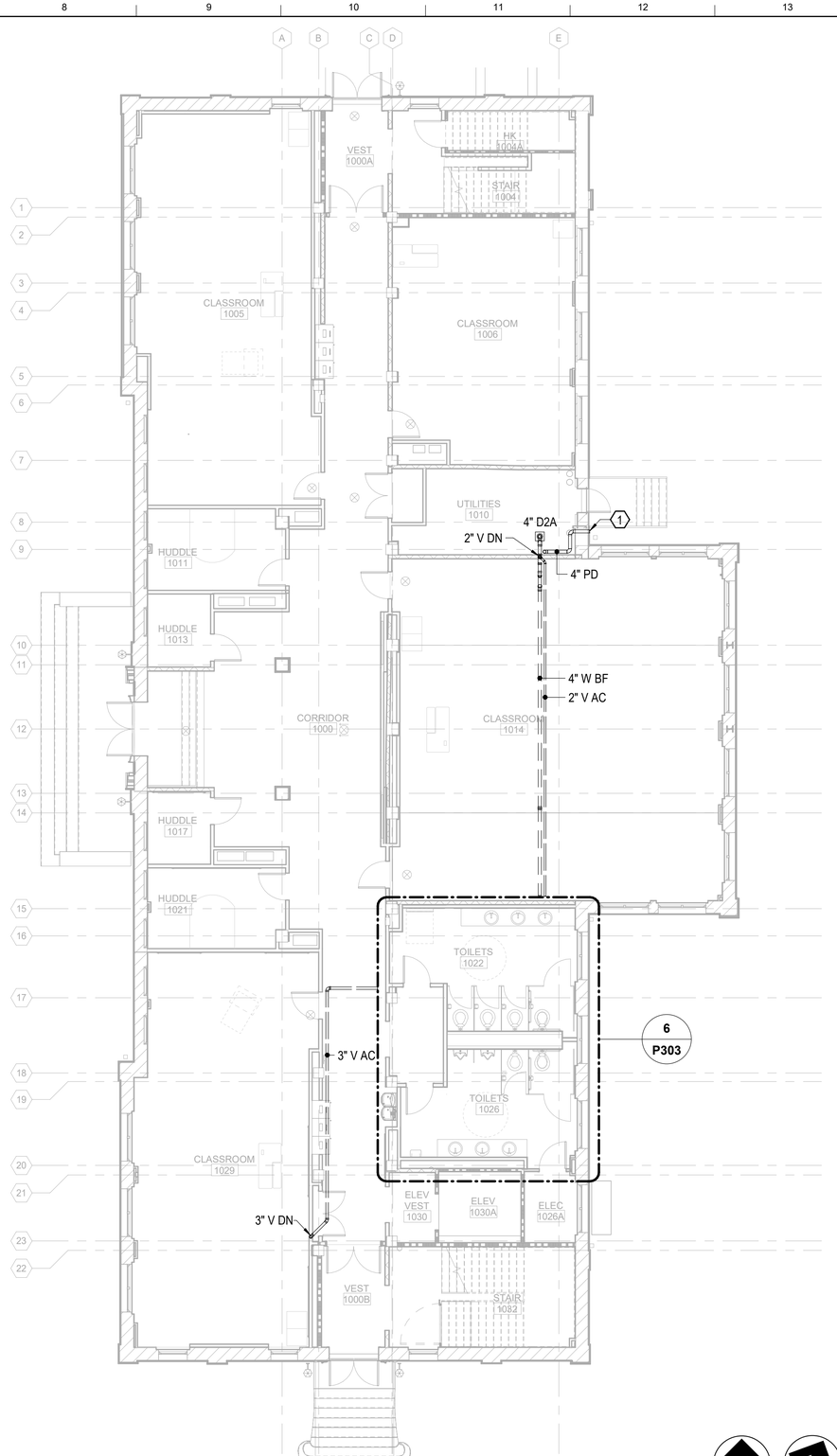


1 PLUMBING WASTE BASEMENT FLOOR PLAN

0 8 16 FT



2 PLUMBING WASTE FIRST FLOOR PLAN

0 8 16 FT

PROJECT NORTH TRUE NORTH

GENERAL NOTES

SHEET SPECIFIC NOTES

1. ROUTE BACKFLOW PREVENTER DISCHARGE DRAIN PIPING ABOVE SLAB TO THE OUTDOORS. TERMINATE DISCHARGE 1'-6" ABOVE FINISHED GRADE BELOW METAL STAIR.
2. DISCHARGE FROM SUMP PUMP SP-0-3 TO DISCHARGE ABOVE GRADE.
3. RECONNECT NEW SUMP PUMPS IN STEAM VAULT TO EXISTING DISCHARGE PIPING. NEW SUMP PUMPS SHALL MEET THE EXISTING SUMP PUMPS HEAD AND FLOW REQUIREMENTS.
4. 4" RAINWATER PIPING TO PICKUP FOUNDATION DRAINAGE.
5. FOR THE UNDERGROUND PLAN OF THIS AREA, REFER TO 1/P302. FOR THE ABOVEGROUND PLAN OF THIS AREA, REFER TO 1/P303.

LIFE SAFETY LEGEND

- SMOKE PARTITION
- 1-HOUR RATED WALL
- 2-HOUR RATED WALL
- 3-HOUR RATED WALL

LORD AECK SARGENT

REVISION:

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5425 Page Road
Suite 215
Durham, NC 27703
NB Contact: Reade Daniel
N&B PROJECT: 21N242
Newcomb & Boyd, LLP
Firm Lic # P0312

SHEET TITLE
PLUMBING WASTE BASEMENT & FIRST FLOOR PLANS

SCALE (U.N.O.)
1/8" = 1'-0"

JOB NAME
University of North Carolina - Chapel Hill

SCI#: 21-25548-02A

LOCATION
BINGHAM HALL RENOVATION
30 Lenoir Drive, Chapel Hill, NC 27514

SEAL
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NORTH CAROLINA REGISTERED
SEAL 043322
ENGINEER PAUL JACKSON KITCHENS
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1/8/2024

JOB. NO.
11706-00

DWG. NO.
P201

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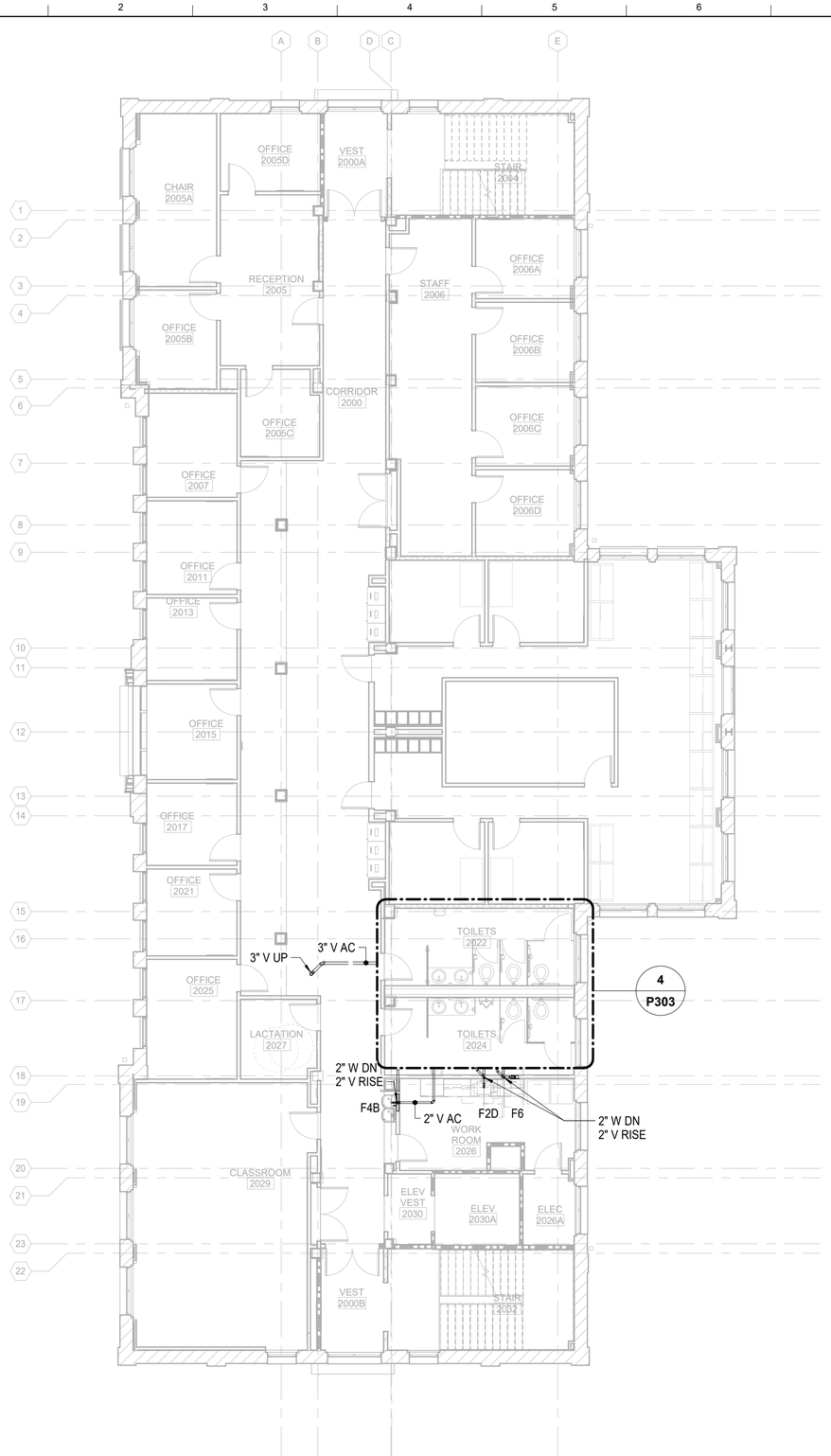
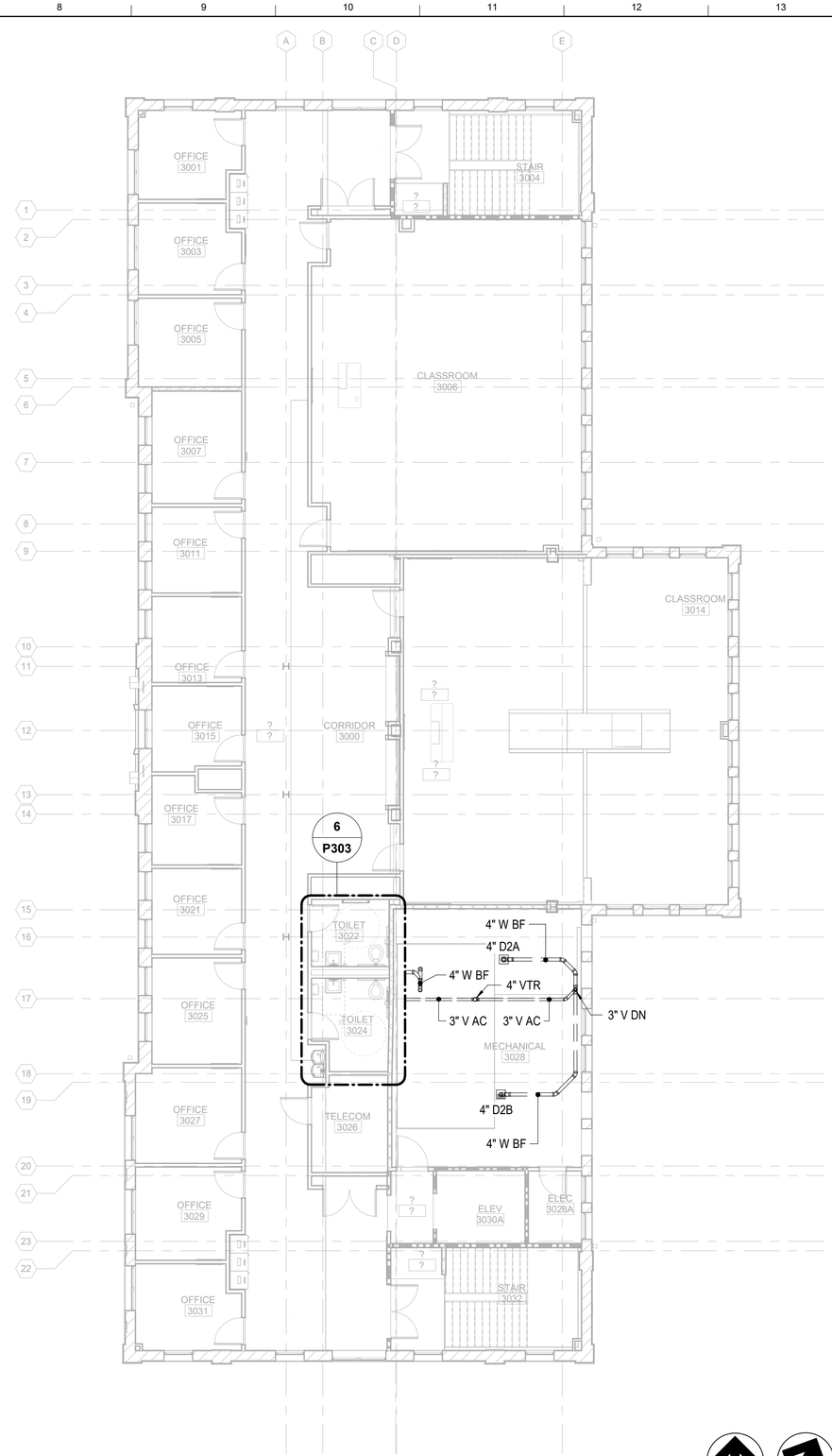


1 PLUMBING WASTE SECOND FLOOR PLAN

0 8 16 FT



2 PLUMBING WASTE THIRD FLOOR PLAN

0 8 16 FT

PROJECT NORTH TRUE NORTH

GENERAL NOTES

SHEET SPECIFIC NOTES

LIFE SAFETY LEGEND

- SMOKE PARTITION
- 1-HOUR RATED WALL
- 2-HOUR RATED WALL
- 3-HOUR RATED WALL

LORD AECK SARGENT

REVISION:

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NB Contact: Reide Daniel
N&B PROJECT: 21N242
Newcomb & Boyd, LLP
Firm Lic. # P0912

SHEET TITLE: PLUMBING WASTE SECOND & THIRD FLOOR PLANS

SCALE (U.N.O.): 1/8" = 1'-0"

0 8 16 FT

JOB NAME: University of North Carolina - Chapel Hill
SCD#: 21-035482-02A
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

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NORTH CAROLINA REGISTERED
SEAL 043322
ENGINEER
PAUL JACKSON KITCHINS
Signed on 01/03/2024 using a Digital Signature.

ISSUE DATE: 1/8/2024
JOB. NO.: 11706-00
DWG. NO.: P202

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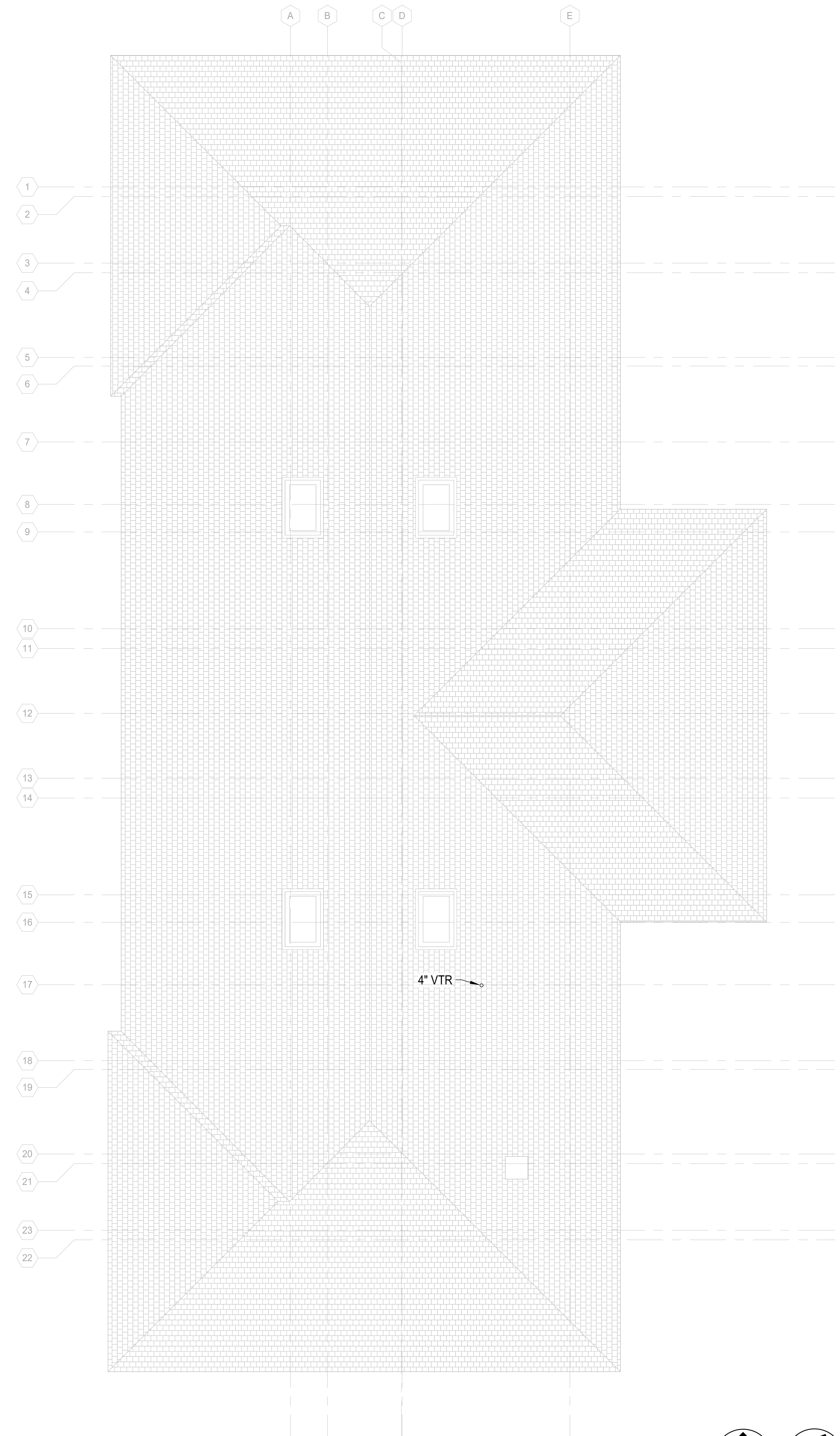

1 PLUMBING WASTE ROOF PLAN

0 8 16 FT

PROJECT NORTH

TRUE NORTH

GENERAL NOTES

SHEET SPECIFIC NOTES

LORD AECK SARGENT

REVISION:

NEWCOMB & BOYD

5425 Page Road
Suite 215
Durham, NC 27703
NB Contact: Reade Daniel
N&B PROJECT: 21N242
Newcomb & Boyd, LLP
Firm Lic. # F-0312

SHEET TITLE
PLUMBING WASTE ROOF PLAN

SCALE (U.N.O.)
NO SCALE

0 8 16 FT

JOB NAME
University of North Carolina - Chapel Hill
SCO#: 21-23548-02A
BINGHAM HALL RENOVATION

LOCATION
36 Lenoir Drive, Chapel Hill, NC 27514

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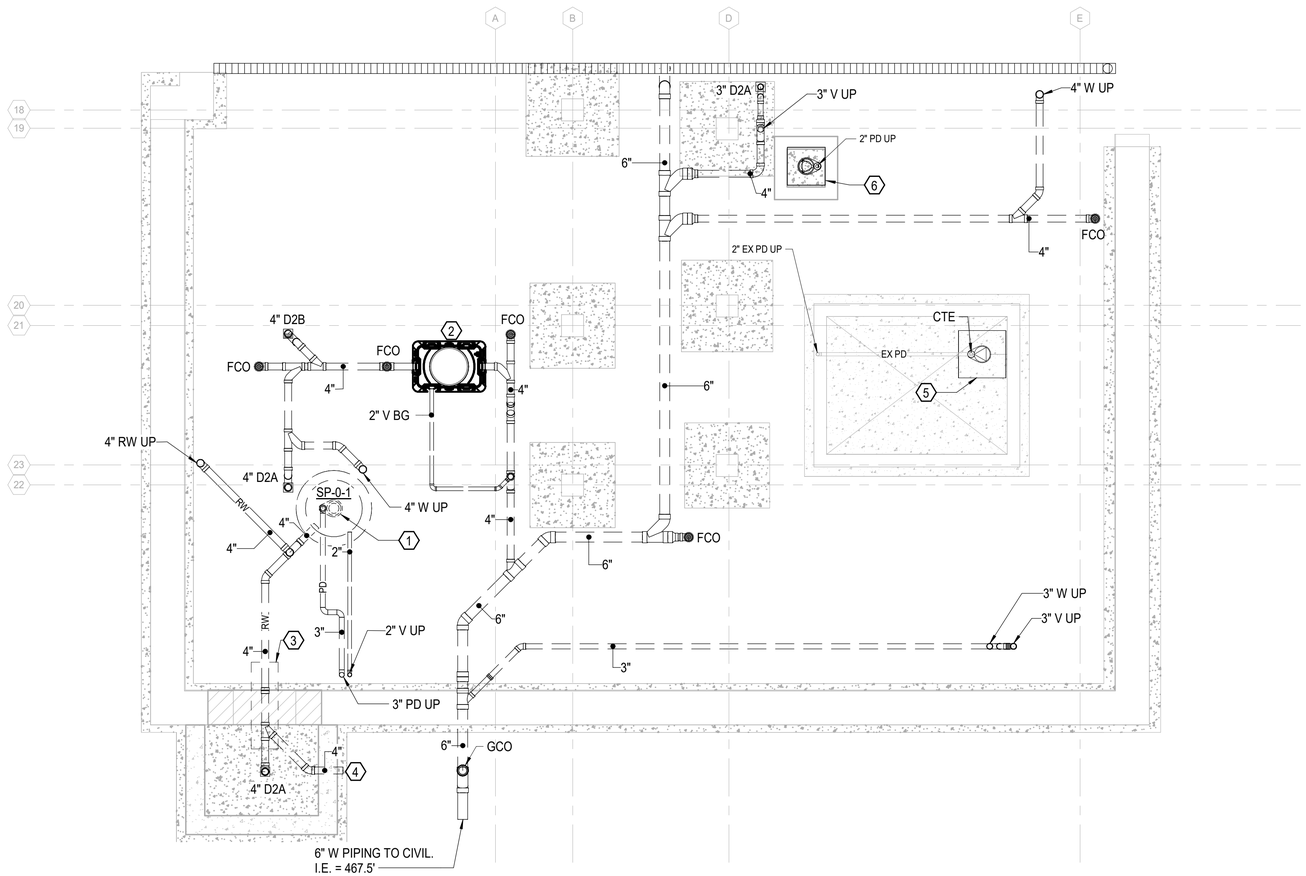
JOB. NO.
11706-00

DWG. NO.
P203



1 PLUMBING WASTE UNDERGROUND PART PLAN

0 4 8 FT

GENERAL NOTES

SHEET SPECIFIC NOTES

1. SP-0-1. 30 GPM SUMP PUMP WITHIN A COVERED CONCRETE BASIN. DIRECT BURY THE BASIN. COORDINATE LOCATION WITH THE ARCHITECT AND STRUCTURAL ENGINEER PRIOR TO INSTALLATION. THIS SUMP PUMP SHALL RECEIVE FOUNDATION DRAINAGE DISCHARGE AND AREAWAY DRAIN DISCHARGE. REFER TO DETAIL 1/P602 FOR BURIAL DEPTH AND CONTROL DETAILS.
2. 75 GPM OIL-WATER SEPARATOR. DIRECT BURIED, SINGLE PIECE POLYETHYLENE TANK. PROVIDE A LOCKABLE, STAINLESS STEEL COVER MOUNTED IN THE MECHANICAL ROOM FLOOR.
3. SLEEVE PIPING UNDERNEATH FOOTING. SEE DETAIL 5/P601.
4. 4" RAINWATER PIPING TO PICKUP FOUNDATION DRAINAGE.
5. SP-0-2. 50 GPM SUMP PUMP WITHIN THE EXISTING ELEVATOR PIT SUMP. EXACT PIT DIMENSIONS SHALL BE FIELD VERIFIED. REFER TO DETAIL 1/P601.
6. SP-0-3. 15 GPM SUMP PUMP WITHIN ELECTRICAL ROOM. REFER TO DETAIL 4/P601.

PROJECT NORTH TRUE NORTH

LORD AECK SARGENT

REVISION:

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5425 Page Road
Suite 215
Durham, NC 27703
NB Contact: Reade Daniel
N&B PROJECT: 21N242
Newcomb & Boyd, LLP
Firm Lic # P-0312

SHEET TITLE: PLUMBING ENLARGED PLANS

SCALE (U.N.O.): As indicated

0 4 8 FT

JOB NAME: University of North Carolina - Chapel Hill
SCI#: 21-25548-02A
LOCATION: BINGHAM HALL RENOVATION
30 Lenoir Drive, Chapel Hill, NC 27514

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JOB. NO.: 11706-00
DWG. NO.: P301

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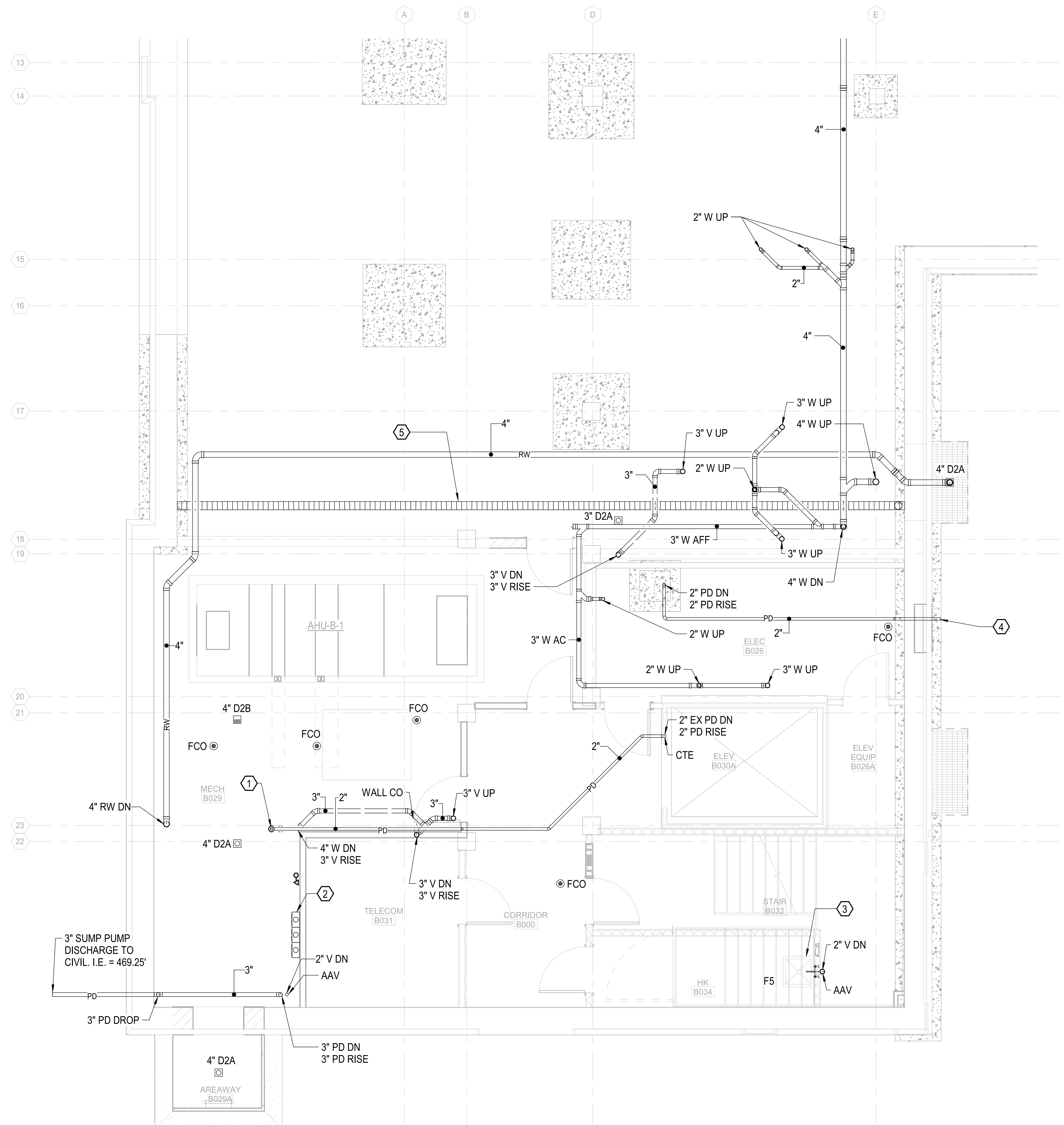

1	PLUMBING WASTE BASEMENT PART PLAN
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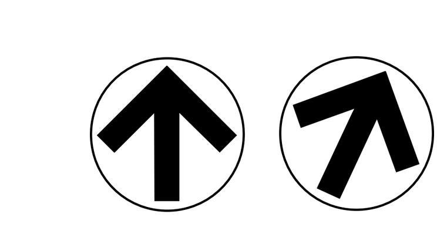

GENERAL NOTES

SHEET SPECIFIC NOTES

1. DISCHARGE ELEVATOR SUMP PUMP INTO 4" STAND PIPE. EXTEND STAND PIPE UP 4' FROM SLAB. ROUTE PUMPED DISCHARGE DOWN INTO STAND PIPE 6" ABOVE FLOOR.
2. SPCP-0-1, SPCP-0-2, SPCP-0-3. SUMP PUMP CONTROL PANELS FOR EACH SUMP PUMP SHALL BE MOUNTED 4'-0" ABOVE FLOOR. PANELS SHALL COMMUNICATE WITH BAS FOR PUMP ALARM CONDITIONS.
3. FLOOR MOUNTED TERRAZZO SERVICE SINK WITH WALL MOUNTED MANUAL FAUCET. BASIN SHALL BE STERN-WILLIAMS HL-1800 OR APPROVED EQUAL. TRAP SHALL BE VENTED VIA AIR ADMITTANCE VALVE (AAV) TERMINATED 6" MIN. ABOVE FINISHED FLOOR. AAV SHALL BE OATEY 39016 OR APPROVED EQUAL.
4. DISCHARGE FROM SUMP PUMP SP-0-3 TO DISCHARGE ABOVE GRADE.
5. 6" D3A TRENCH DRAIN. UPON INSTALLATION, PLACE GRATE OVER THE EDGES OF WATER PROOFING MEMBRANE.

LORD AECK SARGENT

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N&B PROJECT: 21N242
Newcomb & Boyd, LLP
Firm Lic. # F-0312

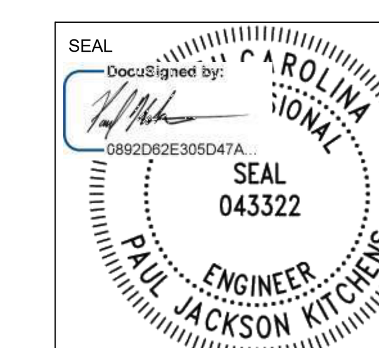
SHEET TITLE: PLUMBING ENLARGED PLANS

SCALE (U.N.O.): As indicated

0 4 8FT

JOB NAME: University of North Carolina - Chapel Hill
SCO# 21-23548-02A
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

SEAL



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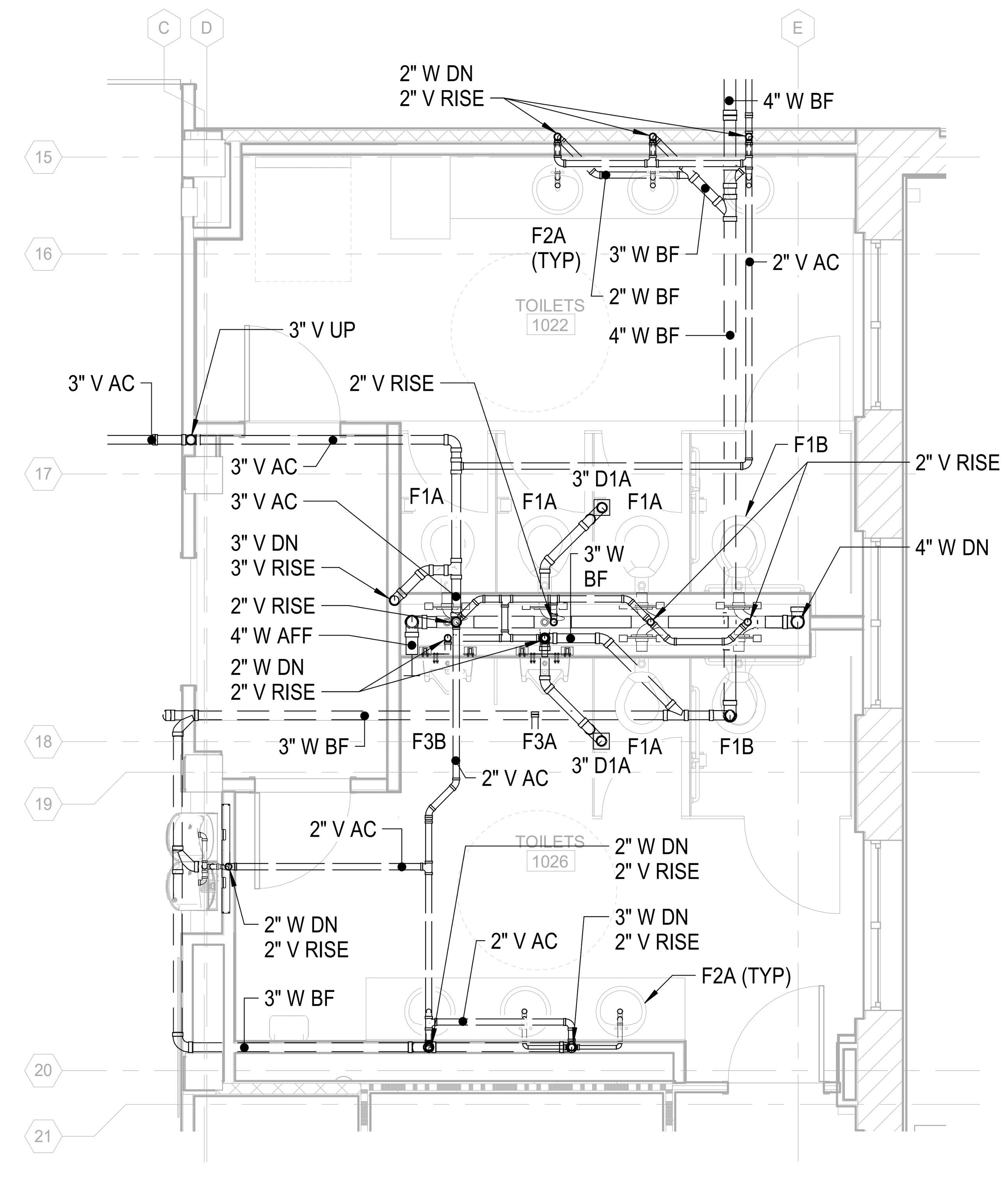
ISSUE DATE: 1/8/2024

JOB NO.: 11706-00

DWG. NO.: P302



2 PLMB PART PLAN TLTS 1022 & 1024 - WASTE

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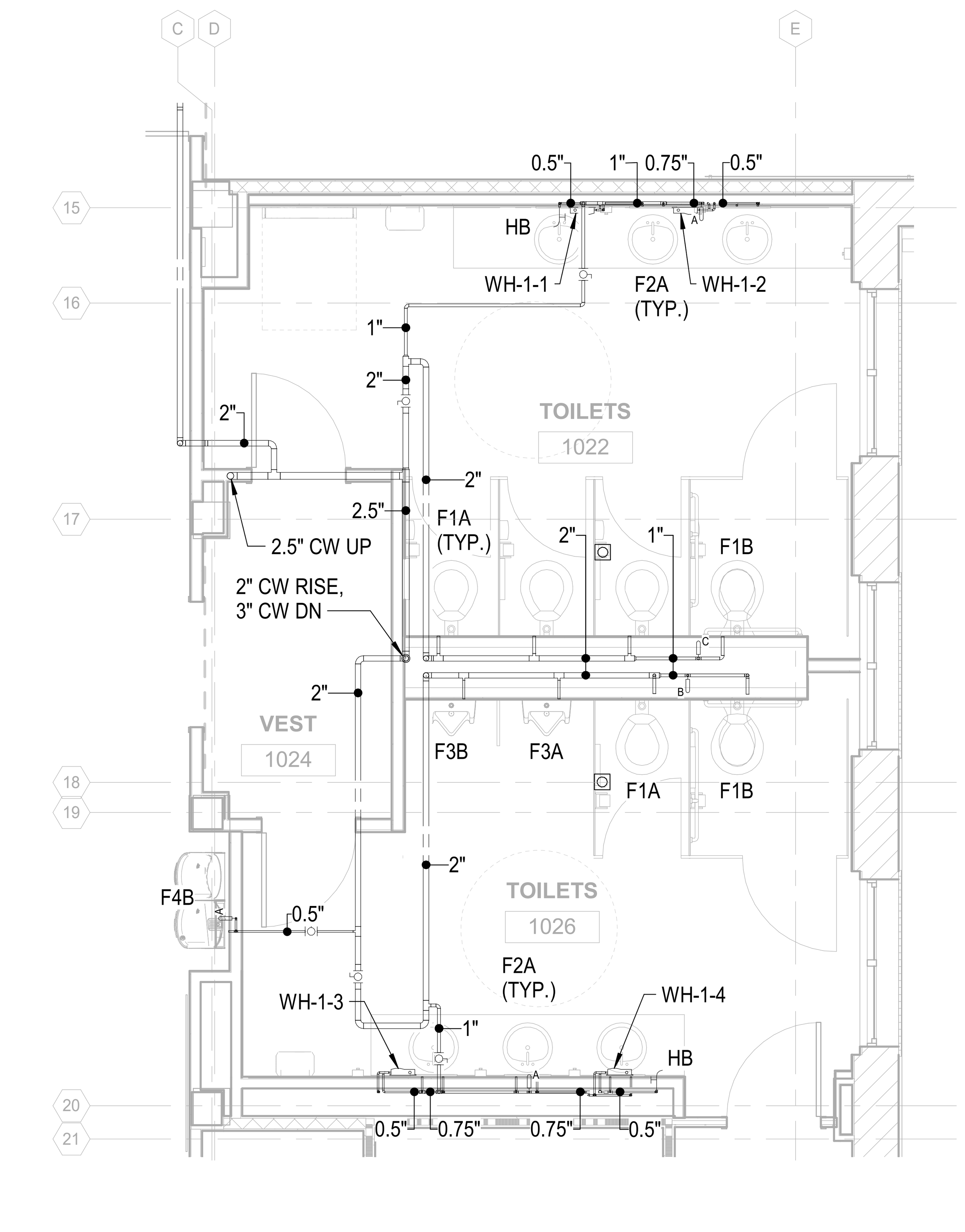

1 PLMB PART PLAN - TLTS 1022 & 1026 - PRESSURE

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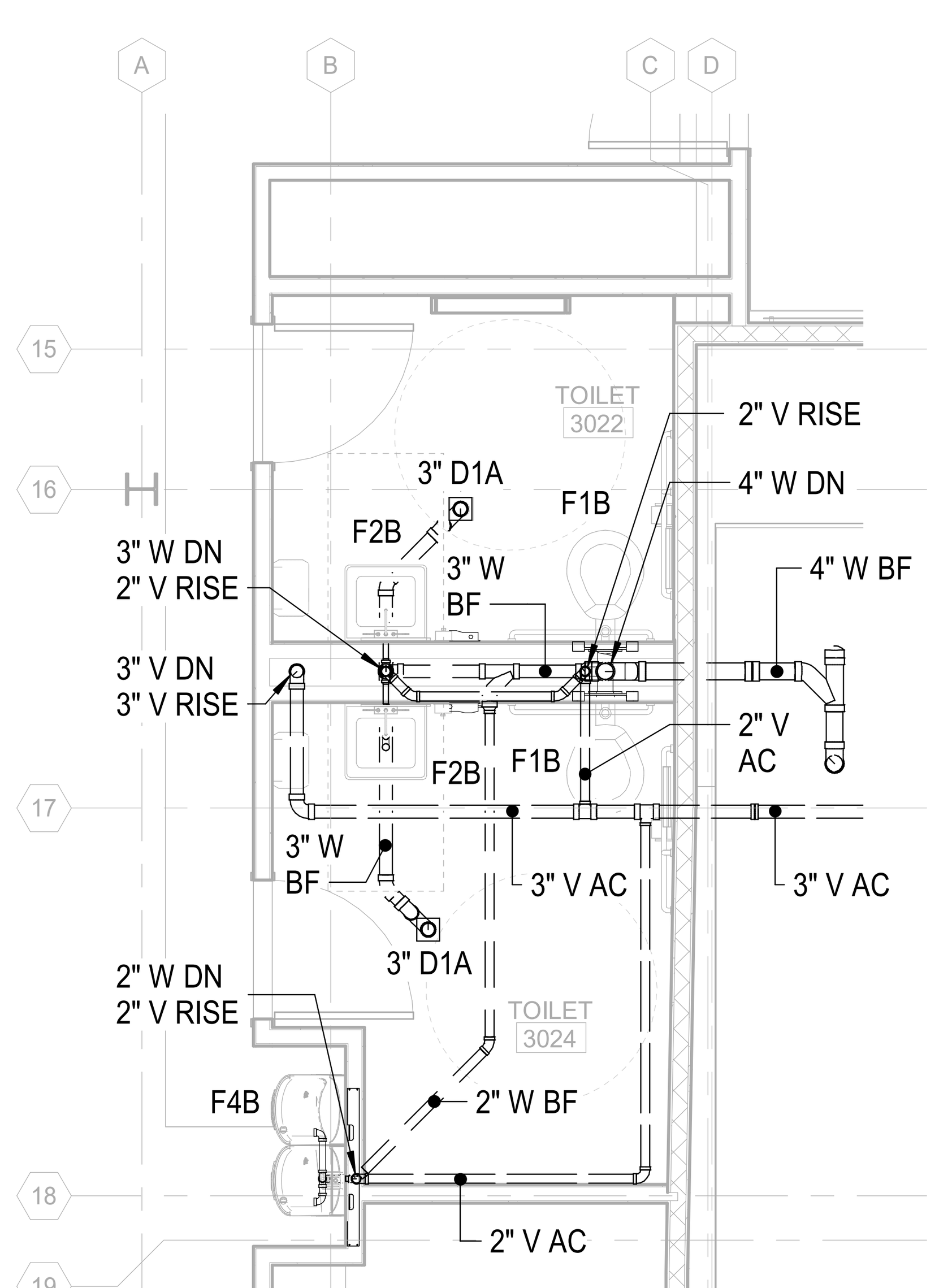

6 PLMB PART PLAN TLTS 3022 & 3024 WASTE

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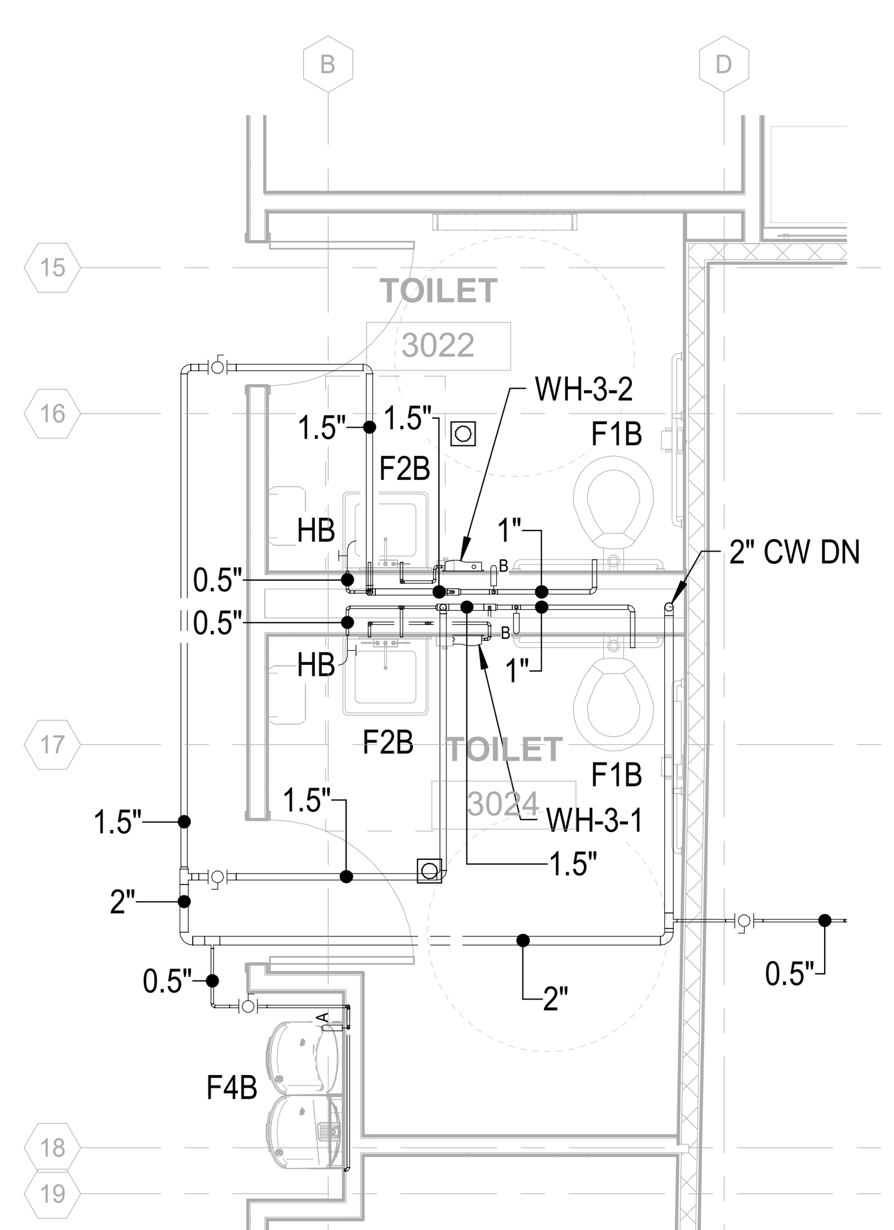

5 PLMB PART PLAN TLTS 3022 & 3024 - PRESSURE

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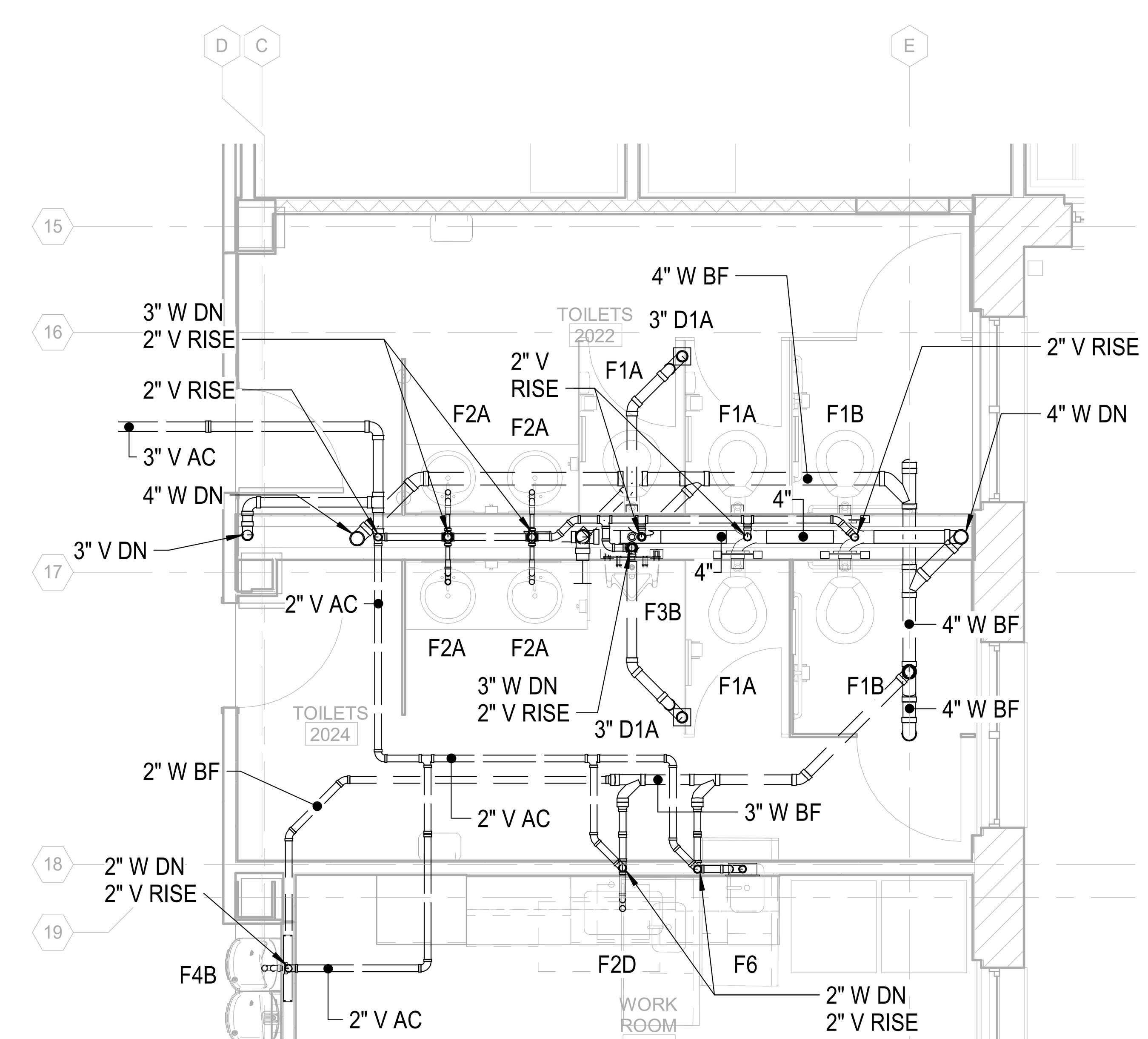

4 PLMB PART PLAN TLTS 2022 & 2024 WASTE

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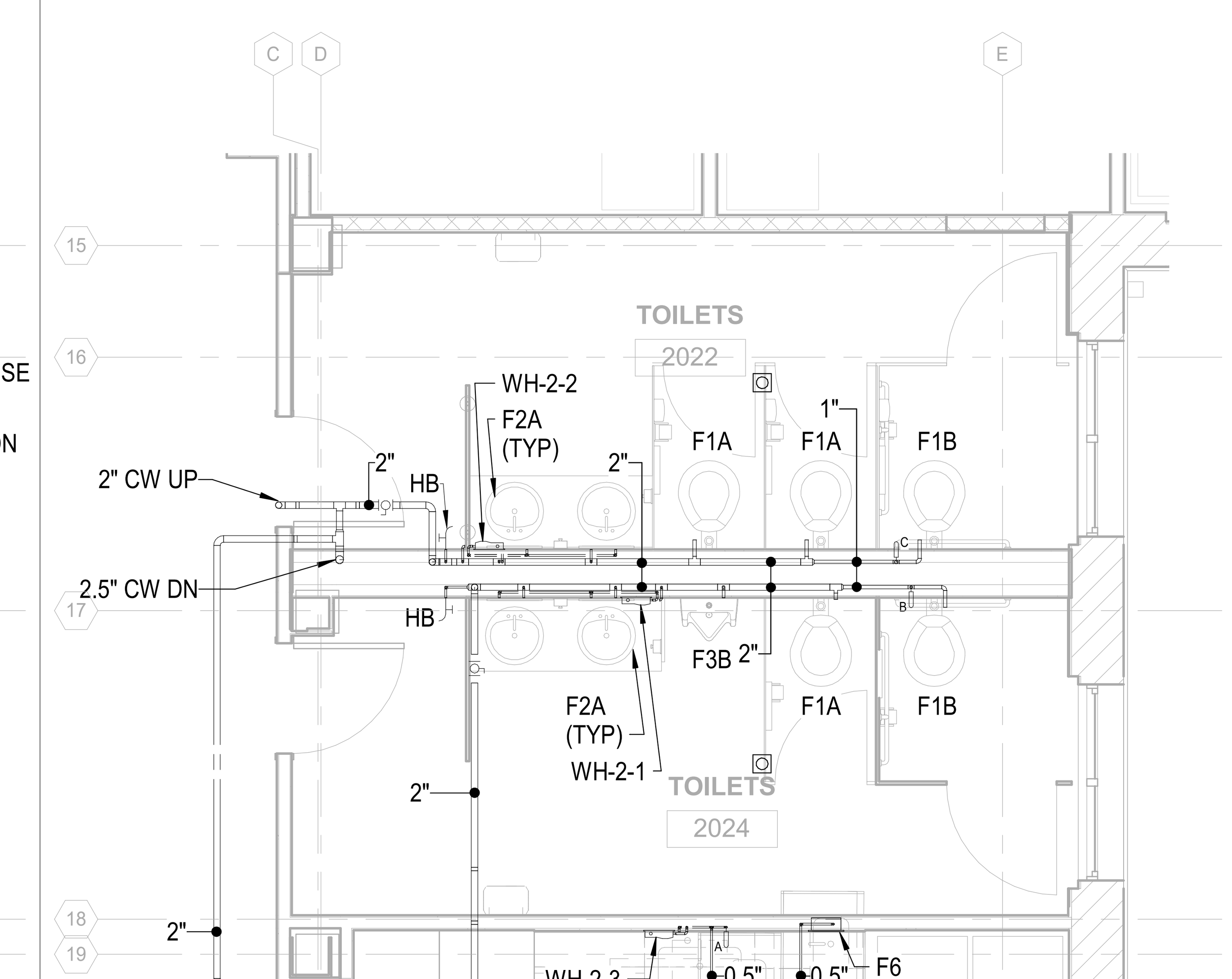

3 PLMB PART PLAN - TLTS 2022 & 2024 - PRESSURE

0 4 8FT

PROJECT NORTH TRUE NORTH

SEAL

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 043322 PAUL JACKSON KITCHENS

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SHEET TITLE
PLUMBING ENLARGED PLANS

SCALE (U.N.O.) As indicated

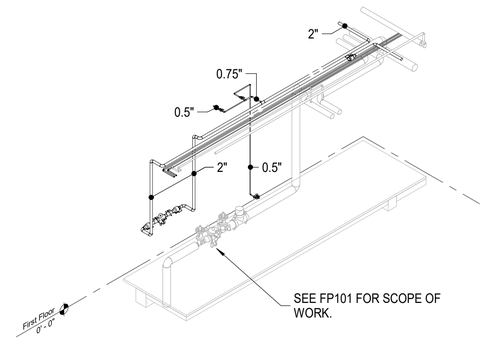
0 4 8FT

JOB NAME
University of North Carolina - Chapel Hill
SCO# 21-23548-02A
BINGHAM HALL RENOVATION
LOCATION
36 Lenoir Drive, Chapel Hill, NC 27514

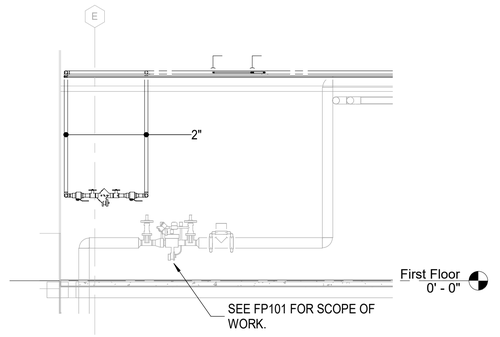
ISSUE DATE 1/8/2024

JOB NO. 11706-00

DWG. NO. P303



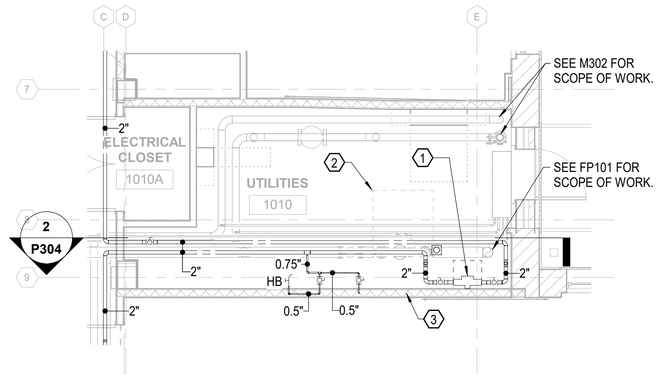
1 PLMB RISER - UTILITIES 1010 - PRESSURE



2 PLMB SECTION - UTILITIES 1010 - PRESSURE
0 4 8 FT

KEYNOTES - 3/P301:

1. 2" RPZ BACKFLOW PREVENTER. ROUTE DRAINAGE TO THE OUTDOORS. INSTALL BFP 4'-6" ABOVE FINISHED FLOOR. REFER TO SECTION 1/P301 AND RISER 2/P301. MINIMUM CLEAR MAINTENANCE ACCESS INDICATED WITH DASHED LINES.
2. 6" RPZ BACKFLOW PREVENTER. MINIMUM CLEAR MAINTENANCE ACCESS INDICATED WITH DASHED LINES. REFER TO FP101 FOR ADDITIONAL INFORMATION.
3. PROVIDE LINE PRESSURE OPERATION TYPE TRAP PRIMER IN CEILING SPACE TO SERVE FLOOR DRAIN BELOW IN UTILITIES ROOM. TRAP PRIMER SHALL ACTUATE AT A MINIMUM LINE PRESSURE DROP OF 3 PSI.



3 PLMB PART PLAN - UTILITIES 1010 - PRESSURE
0 4 8 FT

PROJECT NORTH

TRUE NORTH

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SEAL 043322
ENGINEER PAUL JACKSON KITCHINS
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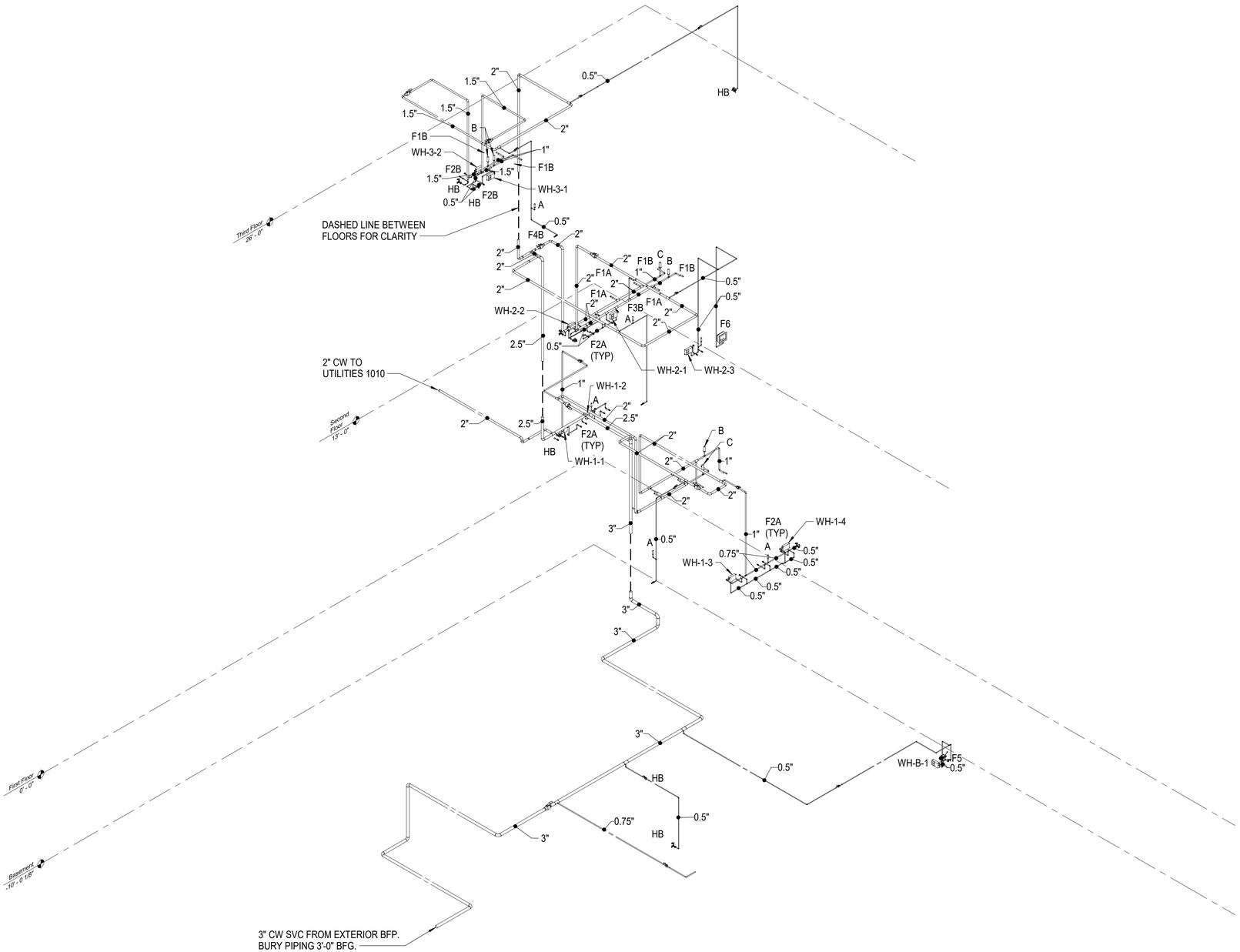
SHEET TITLE: PLUMBING ENLARGED PLANS

SCALE (U.N.O.): As indicated

0 4 8 FT

JOB NAME: University of North Carolina - Chapel Hill
SCI#: 21-035482-02A
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

ISSUE DATE: 1/8/2024
JOB. NO.: 11706-00
DWG. NO.: P304



1 PLUMBING PRESSURE BUILDING RISER DIAGRAM

LORD AECK SARGENT

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Newcomb & Boyd, LLP
Firm Id: P-0312

SHEET TITLE: PLUMBING RISER DIAGRAMS
SCALE (U.N.O.)

JOB NAME: University of North Carolina - Chapel Hill
SCD#: 21-2354842A
LOCATION: BINGHAM HALL RENOVATION
36 Lenoir Drive, Chapel Hill, NC 27514

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ENGINEER
PAUL JACKSON KITCHINS
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ISSUE DATE: 1/8/2024
JOB. NO. 11706-00
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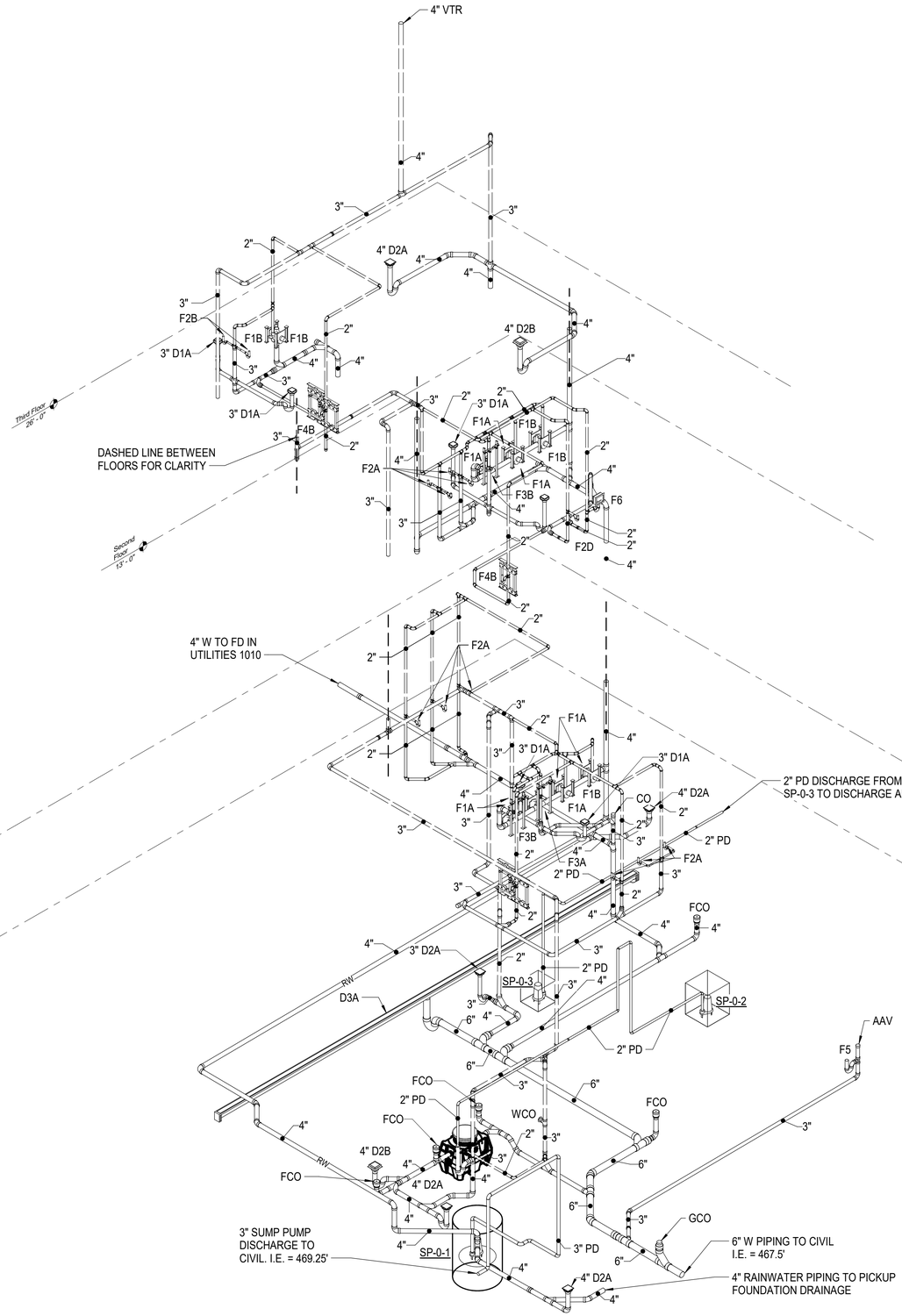

1 PLUMBING WASTE BUILDING RISER DIAGRAM

LORD AECK SARGENT

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Newcomb & Boyd, LLP
Firm Lic. # P-0412

SHEET TITLE: PLUMBING RISER DIAGRAMS

SCALE (U.N.O.)

JOB NAME: University of North Carolina - Chapel Hill
SCD#: 21-035482-02A

LOCATION: BINGHAM HALL RENOVATION
36 Lenoir Drive, Chapel Hill, NC 27514

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ISSUE DATE: 1/8/2024

JOB. NO.: 11706-00

DWG. NO.: P402

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PLUMBING FIXTURE SCHEDULE

NO.	FIXTURE TYPE	PIPING CONNECTION SIZE			
		HW	CW	S OR W	TW
F1A	WATER CLOSET WALL TYPE, (FLUSH VALVE)	-	1"	4"	-
F1B	WATER CLOSET WALL TYPE, (FLUSH VALVE), ADA USABLE	-	1"	4"	-
F2A	LAVATORY COUNTERTOP, ADA USABLE	0.5"	0.5"	1.25"	-
F2B	LAVATORY WALL MOUNTED, ADA USABLE	0.5"	0.5"	1.25"	-
F2C	DOUBLE BOWL, SS SINK, COUNTERTOP, ADA USABLE	0.5"	0.5"	1.25"	-
F2D	SINGLE BOWL, SS SINK, COUNTERTOP, ADA USABLE	0.5"	0.5"	1.25"	-
F3A	URINAL WALL TYPE	-	0.75"	2"	-
F3B	URINAL WALL TYPE, ADA USABLE	-	0.75"	2"	-
F4A	WATER FOUNTAIN, ADA USABLE	-	0.5"	1.25"	-
F4B	WATER FOUNTAIIN, ADA USABLE, BI-LEVEL	-	0.5"	1.25"	-
F5	FLOOR MOUNTED SERVICE SINK, 36"x36" TERRAZZO BASIN	0.5"	0.5"	3"	-
F6	ICE MAKER BOX	-	0.5"	2"	-

WATER HEATER SCHEDULE

NO.	SERVICE	TYPE (NOTE 1)	ENERGY SOURCE		STORAGE CAPACITY, GAL	RECOVERY CAPACITY, GPH (NOTE 3)	VOLTAGE	MCA	MOCP	NOTES
			SOURCE (NOTE 2)	DEMAND						
WH-B-1	HK B034	I	E	75 KW	-	300	480 V	112.8	125	4,6,7,9
WH-1-1	TOILETS 1022	I	E	4.2 KW	-	30	277 V	18.9	20	4,6,7,8
WH-1-2	TOILETS 1026	I	E	4.2 KW	-	30	277 V	18.9	20	4,6,7,8
WH-1-3	TOILETS 1022	I	E	4.2 KW	-	30	277 V	18.9	20	4,6,7,8
WH-1-4	TOILETS 1026	I	E	4.2 KW	-	30	277 V	18.9	20	4,6,7,8
WH-2-1	TOILETS 2022	I	E	8.3 KW	-	60	480 V	21.6	30	4,6,7,8
WH-2-2	TOILETS 2024	I	E	8.3 KW	-	60	480 V	21.6	30	4,6,7,8
WH-2-3	WORK ROOM 2026	I	E	4.2 KW	-	30	480 V	21.6	30	4,6,7,8
WH-3-1	TOILETS 3022	I	E	4.2 KW	-	30	480 V	21.6	30	4,6,7,8
WH-3-2	TOILETS 3024	I	E	4.2 KW	-	30	480 V	21.6	30	4,6,7,8

NOTES: (WH-WATER HEATER)

1. TYPE:
   - S STORAGE
   - I INSTANTANEOUS (TANKLESS)
2. SOURCE:
   - G GAS
   - E ELECTRICITY
3. BASED ON 100°F DIFFERENTIAL BETWEEN INLET AND OUTLET WATER TEMPERATURES.
4. REFER TO THE ELECTRICAL DRAWINGS FOR EQUIPMENT ELECTRICAL CHARACTERISTICS.
5. WATER HEATER BASIS OF DESIGN IS PVI DURAWATT.
6. BASED ON 70°F DIFFERENTIAL BETWEEN INLET AND OUTLET WATER TEMPERATURES.
7. THIS WATER HEATER SHALL BE INSTALLED WALL MOUNTED, BELOW COUNTER. COORDINATE THE FINAL LOCATION OF THE WATER HEATER WITH THE MILLWORK INSTALLER PRIOR TO INSTALLATION.
8. WATER HEATER BASIS OF DESIGN IS CHRONOMITE COMPLIANTMIX SERIES.
9. WATER HEATER BASIS OF DESIGN IS CHRONOMITE BOXER SERIES.

SUMP PUMP SCHEDULE

NO.	SERVICE (NOTE 1)	TYPE (NOTE 2)	GPM (NOTE 3)	TOTAL DYNAMIC HEAD, FT. WG	MINIMUM MOTOR HP	BASIN DIMENSIONS		VOLTAGE	MCA	MOCP	NOTES
						SIZE	DEPTH				
SP-0-1	SU	D - I	30	20	0.5	36" Ø	69"	120 V	12.3	30	3,5,6
SP-0-2	SU	S - I	50	10	0.5	36" x 36"	36"	120 V	12.3	30	3,4,5,6
SP-0-3	SU	S - I	15	10	0.5	24" x 24"	24"	120 V	12.3	30	3,5,6

NOTES:

1. SERVICE:
   SU SUMP
2. TYPE:
   S SIMPLEX D DUPLEX I INTERIOR
3. REFER TO ELECTRICAL DRAWING FOR EQUIPMENT ELECTRICAL CHARACTERISTICS.
4. EXISTING SUMP PIT TO BE REUSED. PIT DIMENSIONS MAY VARY THAN WHAT IS NOTED IN SCHEDULE.
5. EACH SUMP PUMP SHALL BE PROVIDED WITH A CONTROL PANEL BY THE PUMP MANUFACTURER. PANEL SHALL COMMUNICATE WITH THE BUILDING CONTROL/AUTOMATION SYSTEM TO NOTIFY PERSONNELL OF ALARM CONDITIONS.
6. ALARM CONDITIONS SHALL BE HIGH WATER, LEAK, PUMP FAIL, PUMP RUN.

DRAIN SCHEDULE

NO.	TYPE (NOTE 1)	GENERAL LOCATION	NOTES
D1A	F	FINISHED AREA	
D2A	F	MECHANICAL ROOM	
D2B	FS	UTILITES/MECHANICAL ROOM	
D3A	T	CRAWLSPACE	

NOTES: (D-DRAIN)

1. TYPE:
   - F FLOOR DRAIN
   - FS FLOOR SINK
   - R ROOF DRAIN
   - P PARKING DRAIN
   - PR PROMENADE DRAIN
   - T TRENCH DRAIN
   - SO SEDIMENT/OIL INTERCEPTOR

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Firm Lic. # P-0312

SHEET TITLE: PLUMBING SCHEDULES

SCALE (U.N.O.)

JOB NAME: University of North Carolina - Chapel Hill
SCI#: 21-235452A
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

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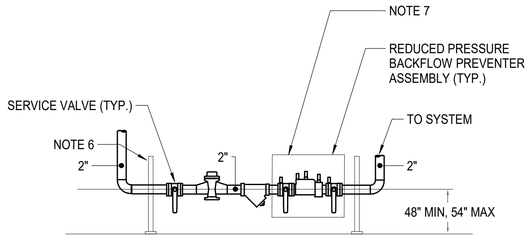
SEAL 043322
ENGINEER
PAUL JACKSON KITCHENS
Signed on 01/03/2024 using a Digital Signature.

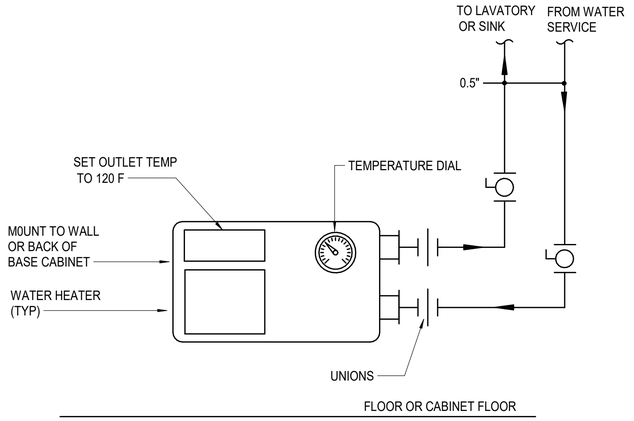
ISSUE DATE: 1/8/2024
JOB. NO.: 11706-00
DWG. NO.: P501



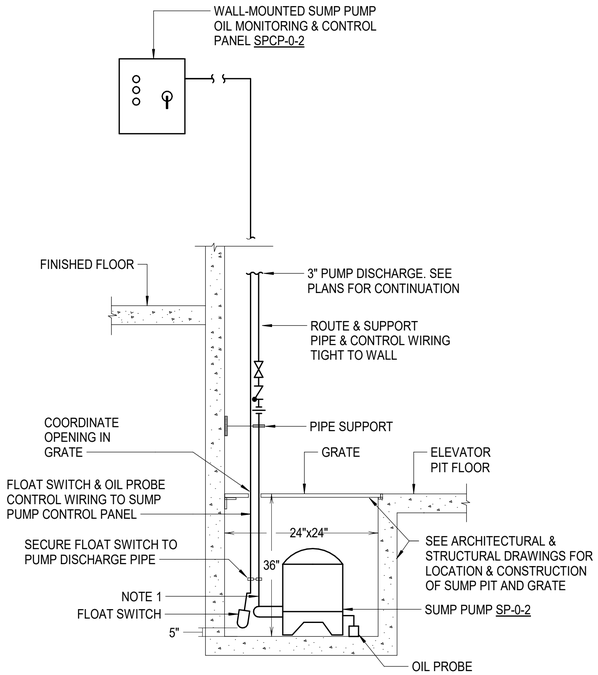
NOTES:

1. SEE SCHEDULES FOR BACKFLOW PREVENTERS.
2. PROVIDE BLOWDOWN BALL VALVE AND CAP ON EACH STRAINER.
3. PROVIDE INTEGRAL BODY UNIONS OR FLANGED END ADAPTERS.
4. EXTEND DRAINS FULL SIZE SEPARATELY, AND DISCHARGE TO EXTERIOR.
5. INSTALL DIELECTRIC FITTINGS AND/OR PIPE SURROUNDS THROUGHOUT THE ASSEMBLY WHERE DISSIMILAR METALS WOULD MAKE CONTACT.
6. PROVIDE 1-5/8" X 3-1/4" X 12 GAUGE GALVANIZED STEEL CHANNELS AND STRAP TYPE CLAMPS AND SPRING NUTS TO CLAMP PIPING TO CHANNELS. ISOLATE CHANNELS FROM COPPER PIPE WITH RUBBER PIPE SURROUNDS. SECURE CHANNELS TO FLOOR AND WALL STRUCTURE.

3 BACKFLOW PREVENTER (RP SMALL)
NO SCALE



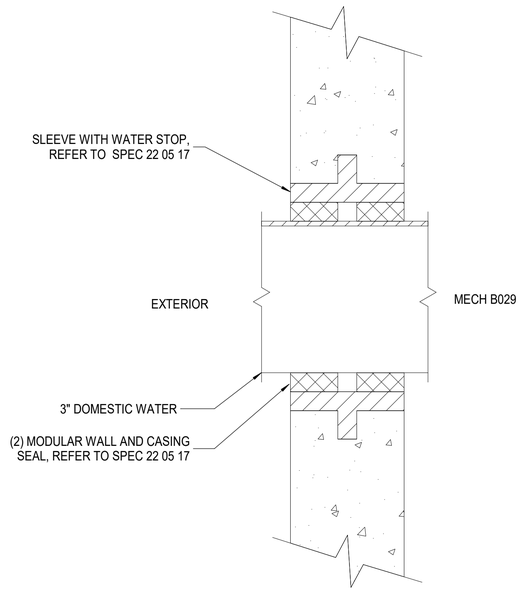
2 ELECTRIC WATER HEATER - INSTANTANEOUS
NO SCALE



NOTES:

1. PROVIDE PUMP WITH 2" VERTICAL DISCHARGE. PROVIDE 3" INCREASER-REDUCER ON PIPE AFTER CLEARING PUMP.

1 ELEVATOR SUMP PUMP WITH OIL PROBE
NO SCALE



4 UTILITY PENETRATION
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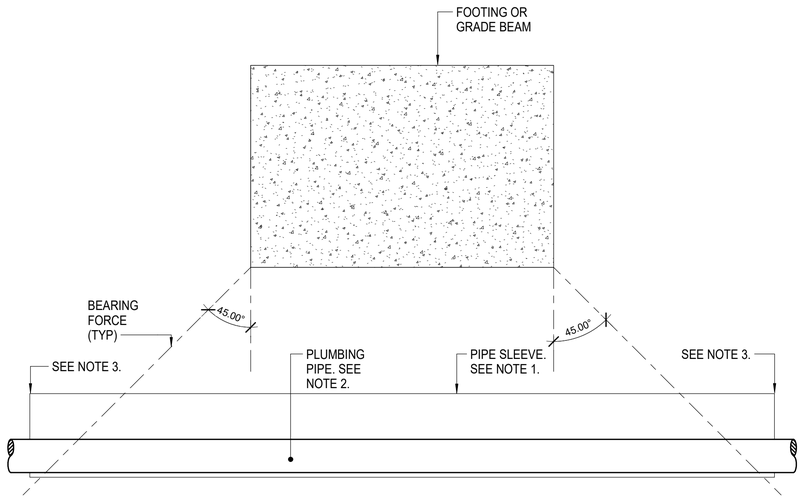
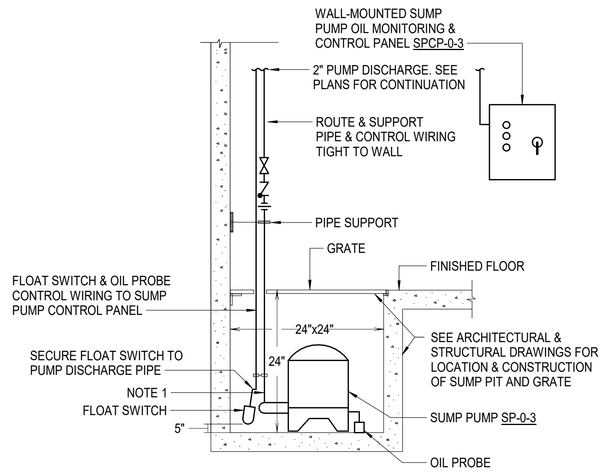


NOTES:

1. PIPE SLEEVE SHALL BE SCHEDULE 40 BLACK STEEL. PAINT OUTER SURFACE OF SLEEVE WITH TWO COATS OF BITUMASTIC PAINT. SLEEVE SHALL BE NOMINAL 2 PIPE SIZES LARGER THAN THE PLUMBING PIPE THAT IT ENCASES.
2. ALLOW PIPE TO REST ON BOTTOM SURFACE OF SLEEVE.
3. EXTEND SLEEVE PAST BEARING FORCE OF FOOTING.

5 SLEEVE DETAIL FOR BELOW-GRADE PIPING
NO SCALE



NOTES:

1. PROVIDE PUMP WITH 2" VERTICAL DISCHARGE. PROVIDE 3" INCREASER-REDUCER ON PIPE AFTER CLEARING PUMP.

6 ELECTRICAL ROOM SUMP PUMP
NO SCALE

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SHEET TITLE: PLUMBING DETAILS
SCALE: (U.N.O.) NO SCALE

JOB NAME: University of North Carolina - Chapel Hill
SCH#: 21-2594-02A
LOCATION: BINGHAM HALL RENOVATION
36 Lenoir Drive, Chapel Hill, NC 27514

SEAL
Docusigned by: 08920D82E305D47A...
NORTH CAROLINA PROFESSIONAL SEAL 043322 ENGINEER PAUL JACKSON HITCHENS
Signed on 01/03/2024 using a Digital Signature.

ISSUE DATE: 1/8/2024
JOB. NO.: 11706-00
DWG. NO.: P601

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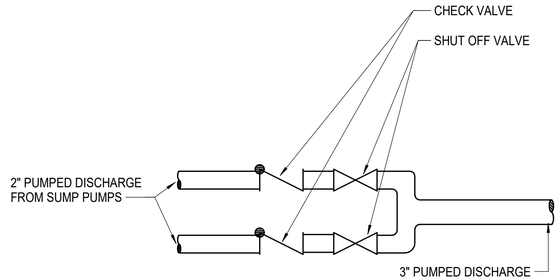

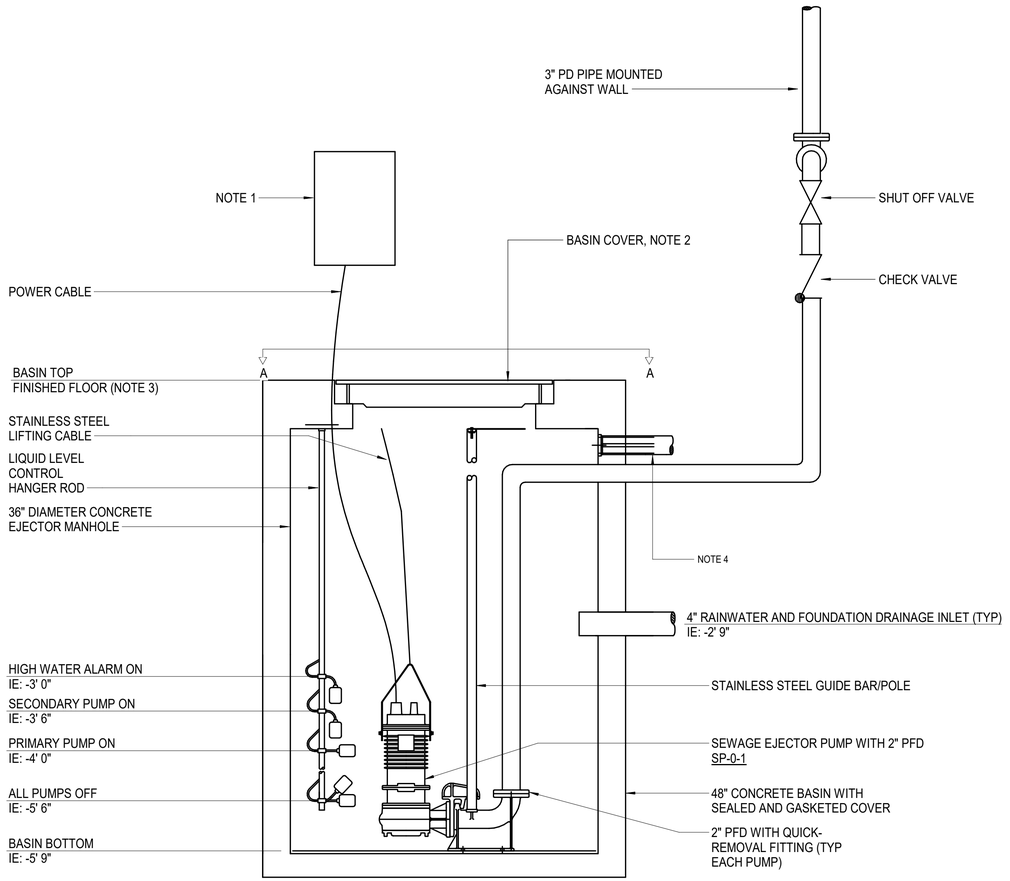

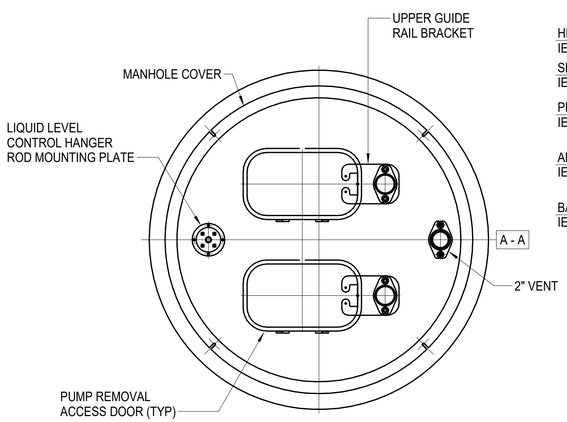

NOTES:
1. EJECTOR SYSTEM CONTROL PANEL MOUNTED ON WALL IN MECHANICAL ROOM.
2. 36" DIAMETER PRECAST REINFORCED CONCRETE MANHOLE - COORDINATE REQUIRED DEPTH WITH PUMPED DISCHARGE ELEVATIONS.
3. BASIN COVER SHALL BE SEALED AND GASKETED.
4. ROUTE 2" VENT BELOW GRADE. SEE FLOOR PLANS FOR CONTINUATION.

1 DUPLEX SEWAGE EJECTOR
NO SCALE

LORD AECK SARGENT

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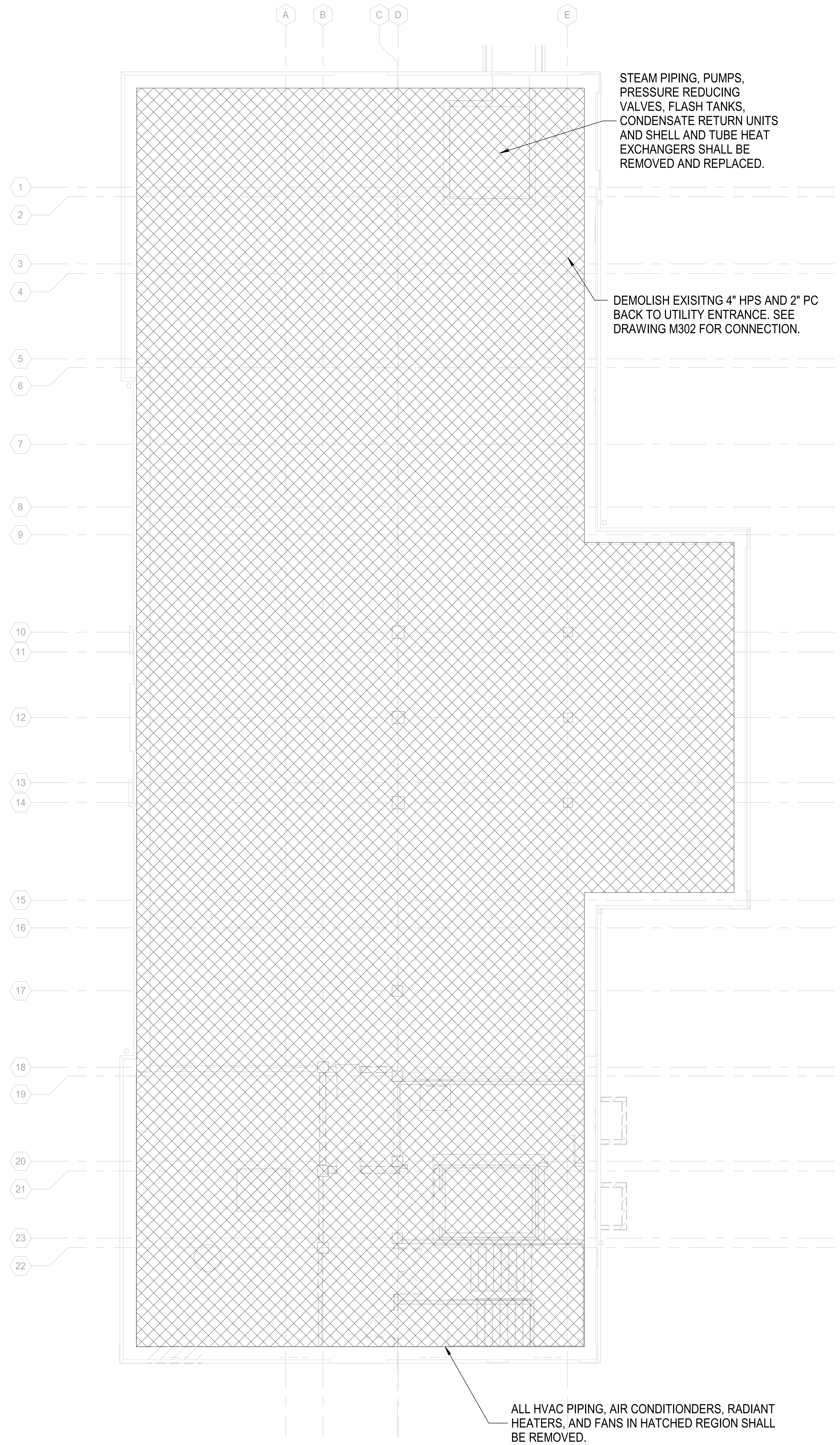
SHEET TITLE: PLUMBING DETAILS
SCALE (U.N.O.): NO SCALE

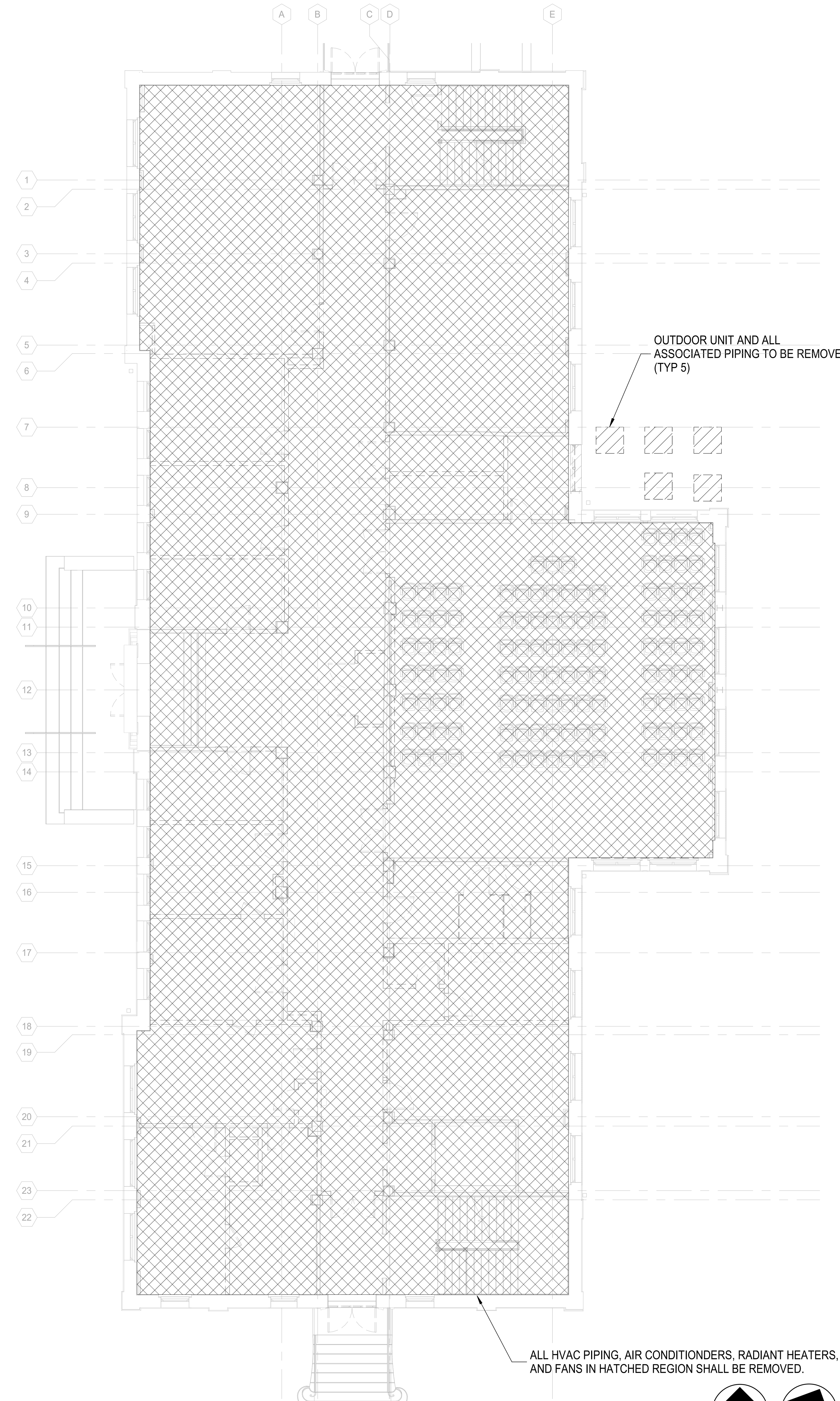
JOB NAME: University of North Carolina - Chapel Hill
SCI#: 21-235482-02A
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

SEAL
DocuSigned by:
DB92D62E305D47A...
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 043322 PAUL JACKSON KITCHINS
Signed on 01/03/2024 using a Digital Signature.

ISSUE DATE: 1/8/2024
JOB. NO.: 11706-00
DWG. NO.: P602



1 HVAC BASEMENT DEMOLITION PLAN
0 8 16 FT



2 HVAC FIRST DEMOLITION PLAN
0 8 16 FT

PROJECT NORTH
TRUE NORTH

GENERAL NOTES

1. PRIOR TO STARTING DEMOLITION, COORDINATE WITH OWNER ON WHAT EQUIPMENT SHALL BE SALVAGED. THE OWNER HAS INTERESTS IN KEEPING NEWCONDITION WATER FOUNTAINS, NEW CONDITION WINDOW UNITS, DEHUMIDIFIERS, HHW FILTER FEEDER UNITS, DDC CONTROLERS, BAS COMPONENTS, NEWER CONDITION LARGE CONTROL VALVES, CONDENSATE PUMP WITH CONTROL PANEL, AND HVAC UNITS.

SHEET SPECIFIC NOTES

LORD AECK SARGENT

REVISION:

NEWCOMB & BOYD
5425 Page Road
Suite 215
Durham, NC 27703
NB Contact: Reade Daniel
N&B PROJECT: 21N242
Newcomb & Boyd, LLP
Firm Lic. # F-0312

SHEET TITLE
HVAC BASEMENT & FIRST DEMOLITION PLANS

SCALE (U.N.O.)
NO SCALE
0 8 16 FT

JOB NAME
University of North Carolina - Chapel Hill
SCO#: 21-23548-02A
BINGHAM HALL RENOVATION

LOCATION
36 Lenoir Drive, Chapel Hill, NC 27514

SEAL
DocuSigned by:
0892D62E305D47A...
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 043322 PAUL JACKSON KITCHENS
Signed on 01/03/2024 using a Digital Signature.

ISSUE DATE
1/8/2024

JOB. NO.
11706-00

DWG. NO.
MD101

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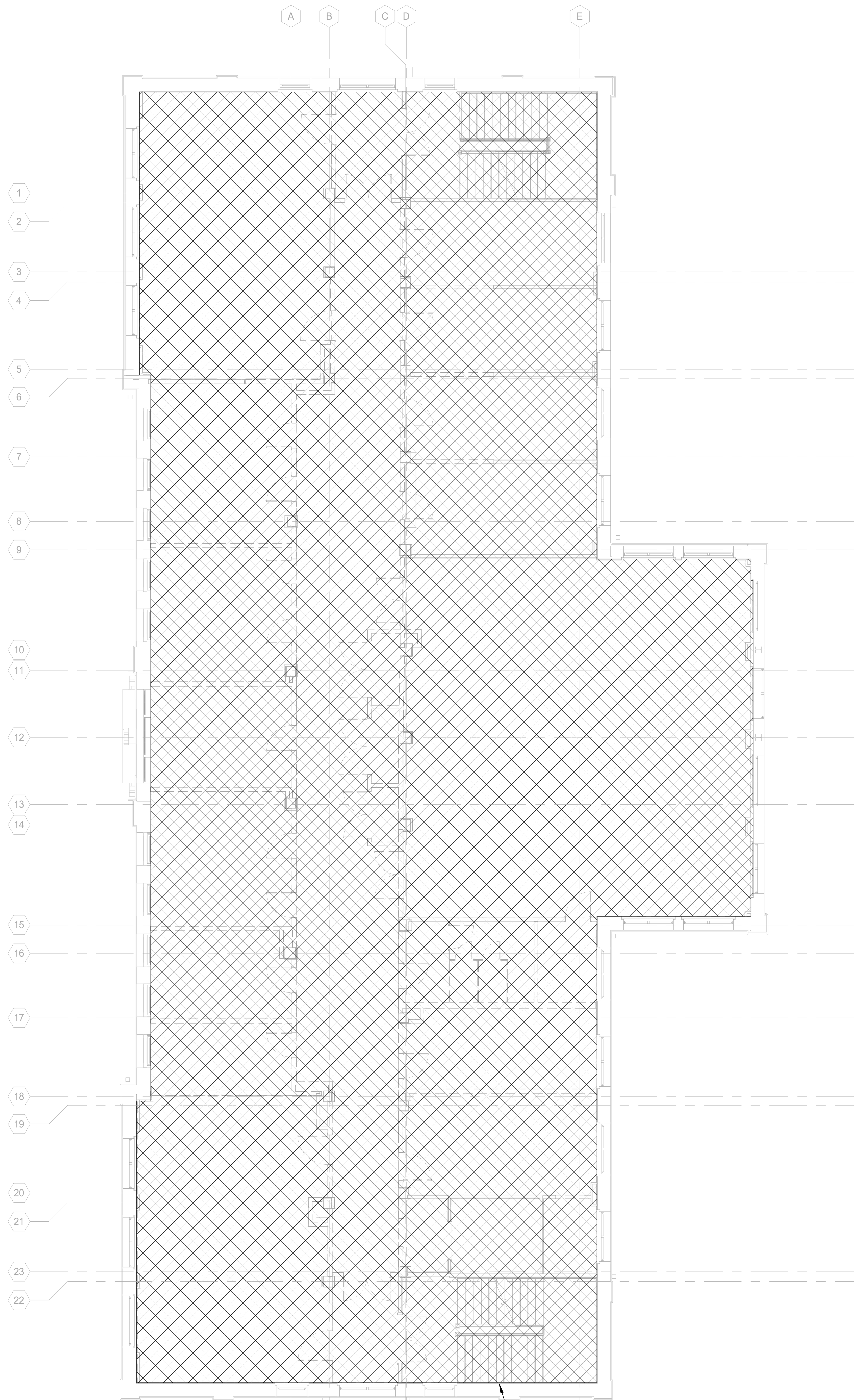
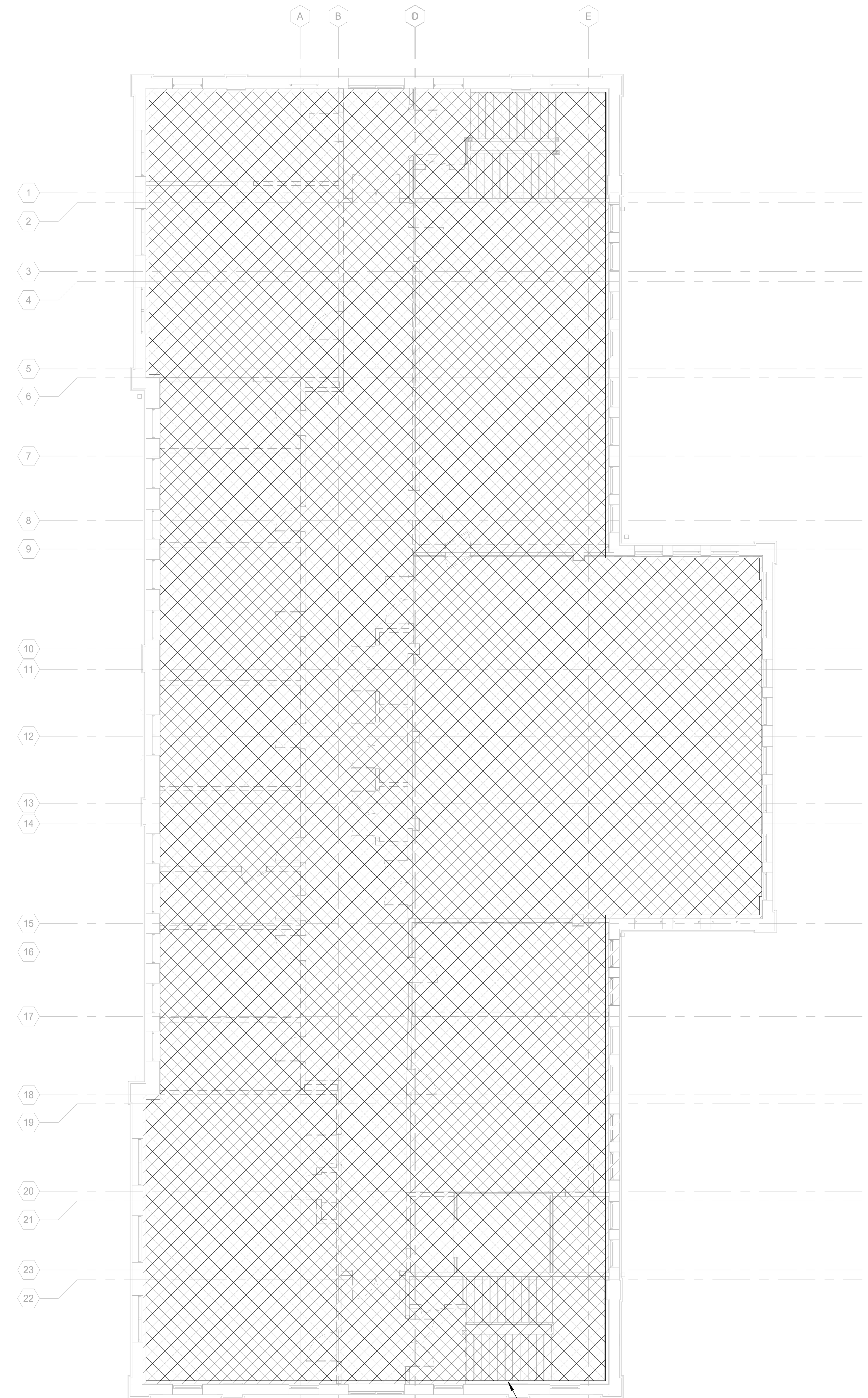


ALL HVAC PIPING, AIR CONDITIONDERS, RADIANT HEATERS, AND FANS IN HATCHED REGION SHALL BE REMOVED.

1 HVAC SECOND DEMOLITION PLAN

0 8 16 FT



ALL HVAC PIPING, AIR CONDITIONDERS, RADIANT HEATERS AND FANS IN HATCHED REGION SHALL BE REMOVED.

2 HVAC THIRD DEMOLITION PLAN

0 8 16 FT

PROJECT NORTH

TRUE NORTH

GENERAL NOTES

1. PRIOR TO STARTING DEMOLITION, COORDINATE WITH OWNER ON WHAT EQUIPMENT SHALL BE SALVAGED. THE OWNER HAS INTERESTS IN KEEPING NEWCONDITION WATER FOUNTAINS, NEW CONDITION WINDOW UNITS, DEHUMIDIFIERS, HHW FILTER FEEDER UNITS, DDC CONTROLERS, BAS COMPONENTS, NEWER CONDITION LARGE CONTROL VALVES, CONDENSATE PUMP WITH CONTROL PANEL, AND HVAC UNITS.

SHEET SPECIFIC NOTES

LORD AECK SARGENT

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Newcomb & Boyd, LLP
Firm Lic. # F-0312

SHEET TITLE
HVAC SECOND & THIRD DEMOLITION PLANS

SCALE (U.N.O.)
NO SCALE

0 8 16 FT

JOB NAME
University of North Carolina - Chapel Hill
SCO#: 21-23548-02A
BINGHAM HALL RENOVATION

LOCATION
36 Lenoir Drive, Chapel Hill, NC 27514

SEAL
DocuSigned by:
CAROLINA
SEAL
043322
ENGINEER
PAUL JACKSON KITCHENS
Signed on 01/03/2024 using a Digital Signature.

ISSUE DATE
1/8/2024

JOB. NO.
11706-00

DWG. NO.
MD102

GENERAL NOTES

1. DRAWINGS ARE DIAGRAMMATIC IN NATURE AND, UNLESS EXPLICITLY DIMENSIONED, INDICATE APPROXIMATE LOCATIONS OF APPARATUS, EQUIPMENT, DUCTWORK AND PIPING. CHANGES IN THE LOCATION, AND OFFSETS, OF SAME WHICH ARE NOT SHOWN ON THE DRAWINGS BUT ARE NECESSARY IN ORDER TO ACCOMMODATE BUILDING CONDITIONS AND COORDINATION WITH THE WORK OF OTHER TRADES, SHALL BE MADE DURING THE PREPARATION OF COORDINATION DRAWINGS AND PRIOR TO INITIAL INSTALLATION, WITHOUT ADDITIONAL COST TO THE OWNER.
2. DO NOT LOCATE VALVES, DAMPERS, ACTUATORS, CONTROL COMPONENTS, ANY EQUIPMENT WITH MOVING PARTS OR ANY EQUIPMENT REQUIRING ACCESS OR REGULAR MAINTENANCE ABOVE INACCESSIBLE CEILINGS. OBTAIN PRIOR APPROVAL IF UNAVOIDABLE & PROVIDE AN ACCESS PANEL THAT WILL ALLOW SAFE AND PRACTICAL ACCESS.
3. PIPING, EQUIPMENT, OR DUCTWORK SHALL NOT BE INSTALLED IN ELECTRICAL EQUIPMENT ROOMS, ELEVATOR EQUIPMENT ROOMS, COMMUNICATION ROOMS, OR ELEVATOR SHAFTS UNLESS SPECIFICALLY INDICATED ON THE DRAWINGS. IN ADDITION, PIPING, DUCTWORK, OR MECHANICAL EQUIPMENT SHALL NOT BE INSTALLED IN THE SPACE EQUAL TO THE WIDTH AND DEPTH OF SWITCHGEAR, SWITCHBOARDS, PANELBOARDS, AND MOTOR CONTROL CENTERS FROM FLOOR TO STRUCTURE ABOVE NOR WITHIN THE WORKING SPACE IN FRONT, REAR AND/OR SIDE (WHERE REAR AND/OR SIDE ACCESS IS REQUIRED TO WORK ON EQUIPMENT) OF ELECTRICAL EQUIPMENT (SWITCHGEAR, SWITCHBOARDS, PANELBOARDS, MOTOR CONTROL CENTERS, VARIABLE FREQUENCY DRIVES, TRANSFORMERS, AND STARTERS). DIMENSIONS OF THE WORKING SPACE SHALL BE A MINIMUM DEPTH OF 42" HORIZONTALLY, THE WIDTH OF THE EQUIPMENT OR 30", WHICHEVER IS GREATER, AND THE HEIGHT OF THE EQUIPMENT OR 78", WHICHEVER IS GREATER. MINIMUM DEPTH SHALL BE INCREASED TO 60" FOR EQUIPMENT RATED OVER 600 V.
4. MOUNT SPACE HUMIDITY SENSORS, HUMIDISTATS, SPACE CO2 SENSORS, SPACE TEMPERATURE SENSORS, AND THERMOSTATS AT 48" ABOVE THE FLOOR.
   A. ALIGN HORIZONTALLY WITH ADJACENT LIGHT SWITCHES.
   B. FINAL LOCATIONS SHALL BE ACCESSIBLE AND SHALL BE COORDINATED WITH THE FURNITURE LAYOUT AND ARCHITECTURAL LAYOUT.
   C. MORE THAN 2 SENSORS IN A SINGLE LOCATION SHALL BE INSTALLED WITH A COMMON FACEPLATE TO MINIMIZE WALL SPACE.
5. PROVIDE INSULATED BASES FOR THERMOSTATS AND TEMPERATURE SENSORS INSTALLED ON EXTERIOR WALLS OR WALLS TO UNCONDITIONED SPACES.
6. HVAC/ELECTRICAL DESIGN COORDINATION:
   A. THE POWER RATINGS OF MOTORS AND OTHER HVAC EQUIPMENT AND THE ELECTRICAL CHARACTERISTICS OF ELECTRICAL SYSTEMS SERVING THEM, AS SPECIFIED HEREIN AND INDICATED ON THE DRAWINGS, HAVE BEEN ESTABLISHED AS MINIMUMS WHICH WILL ALLOW THAT EQUIPMENT TO SATISFACTORILY FUNCTION WHILE PRODUCING THE REQUIRED CAPACITIES. THESE POWER RATINGS INCLUDE A SAFETY FACTOR DEEMED APPROPRIATE TO ACCOMMODATE COMMON DIFFERENCES BETWEEN DESIGN PARAMETERS AND FIELD CONSTRUCTION PRACTICES. UNDER NO CIRCUMSTANCES SHALL EQUIPMENT WITH POWER RATINGS LESS THAN THOSE INDICATED ON THE DRAWINGS OR SPECIFIED HEREIN BE PROVIDED.
   B. REASONABLE EFFORTS HAVE BEEN MADE TO COORDINATE THE ELECTRICAL REQUIREMENTS OF THE HVAC EQUIPMENT WITH THE ELECTRICAL SYSTEMS SERVING THAT EQUIPMENT. DIFFERENCES AMONG MANUFACTURERS OF HVAC EQUIPMENT MAKE IT IMPOSSIBLE TO PRODUCE A SINGLE ELECTRICAL DESIGN WHICH WILL SATISFY THE VARYING ELECTRICAL REQUIREMENTS OF THOSE MANUFACTURERS. CONSEQUENTLY, THE CONTRACTOR SHALL COORDINATE THE ELECTRICAL REQUIREMENTS OF THE HVAC EQUIPMENT ACTUALLY FURNISHED ON THIS PROJECT AND PROVIDE THE ELECTRICAL SYSTEMS REQUIRED BY THAT EQUIPMENT. THIS COORDINATION EFFORT SHALL BE COMPLETED PRIOR TO THE INSTALLATION OF EITHER THE HVAC EQUIPMENT OR THE ELECTRICAL SYSTEMS SERVING THAT EQUIPMENT. ELECTRICAL SYSTEM REVISIONS REQUIRED TO COORDINATE WITH THE HVAC EQUIPMENT ACTUALLY FURNISHED SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.
7. MOTOR QUANTITIES, SIZES AND EQUIPMENT WATTAGE RATINGS SPECIFIED HEREIN OR INDICATED ON THE DRAWINGS ARE THE MINIMUM REQUIREMENTS, UNLESS NOTED OTHERWISE. MOTOR QUANTITIES, SIZES AND EQUIPMENT WATTAGE RATINGS LESS THAN THOSE SPECIFIED HEREIN OR INDICATED ON THE DRAWINGS ARE NOT ACCEPTABLE. LARGER MOTOR SIZES AND EQUIPMENT WATTAGE RATINGS MAY ONLY BE PROVIDED IF NECESSARY, TO MEET THE PRESCRIPTIVE REQUIREMENTS SPECIFIED HEREIN OR INDICATED ON THE DRAWINGS. WHERE MULTIPLE MOTORS OR MOTOR SIZES OR EQUIPMENT WATTAGE RATINGS LARGER THAN SPECIFIED HEREIN OR INDICATED ON THE DRAWINGS ARE FURNISHED, PROVIDE AND COORDINATE THE CORRESPONDING INCREASED NUMBER OR CAPACITY OF FEEDERS AND OTHER ELECTRICAL EQUIPMENT SERVING THEM, AT NO ADDITIONAL COST TO THE OWNER.
9. ALL ELECTRICAL WORK IN CEILING CAVITIES USED AS RETURN AIR PLENUMS SHALL USE PLENUM RATED CABLE OR WIRING IN CONDUIT.
10. PIPING, CONDUITS, CABLES, ETC. SHALL BE RUN NEATLY AND GENERALLY PARALLEL TO BUILDING STRUCTURE.
11. ALL FLOOR OR SLAB-ON-GRADE MOUNTED EQUIPMENT SHALL BE MOUNTED ON A MINIMUM OF 4" HIGH CONCRETE HOUSEKEEPING PAD(S) OR AS RECOMENDED BY THE EQUIPMENT MANUFACTURER. FOR EQUIPMENT WITH CONDENSATE DRAINAGE, PROVIDE SUFFICIENT PAD HEIGHT FOR INSTALLATION OF CONDENSATE TRAP.
12. PROTECT ALL MATERIALS AND EQUIPMENT FROM DAMAGE.
13. INSTALLATION OF ALL EQUIPMENT SHALL PERMIT ACCESSIBILITY FOR SERVICE AND/OR REPLACEMENT.
14. THE INSTALLATION OF MOTOR STARTERS THAT ARE NOT FACTORY-INSTALLED, THERMAL OVERLOAD SWITCHES, AND POWER WIRING TO MOTORS, STARTERS, THERMAL OVERLOAD SWITCHES, ELECTRIC HEATING COILS, ELECTRIC HUMIDIFIERS, AND CONTACTORS, IS SPECIFIED IN ANOTHER DIVISION. THIS SECTION INCLUDES THE FURNISHING AND INSTALLATION OF CONTROLS AND WIRING FOR AUTOMATIC CONTROLS, ELECTRIC DAMPER AND VALVE ACTUATORS AND MOTORS, TERMINAL UNIT CONTROLLERS, INTERLOCKS, STARTING CIRCUITS, AND 120 V AND LOW VOLTAGE POWER WIRING TO POWER CONSUMING CONTROL DEVICES.
15. SEAL ALL EXTERIOR WALL PENETRATIONS WATERPROOF.
16. COORDINATE ALL WALL, CEILING, FLOOR, ROOF, AND BEAM PENETRATIONS WITH ARCHITECT AND STRUCTURAL ENGINEER.
17. PROVIDE ALL MISCELLANEOUS STRUCTURAL SUPPORTS REQUIRED FOR DUCTWORK, PIPING, AND EQUIPMENT INSTALLATIONS.
18. COLOR AND FINISHES FOR ALL EXPOSED EQUIPMENT (REGISTERS, UNIT HEATERS, ETC.) SHALL BE SELECTED BY ARCHITECT, UNLESS OTHERWISE NOTED.

PROJECT DEMOLITION GENERAL NOTES

1. THE DRAWINGS DEPICT ONLY GENERALLY THE EXISTING CONDITIONS. THE CONTRACTOR SHALL MAKE FIELD OBSERVATIONS AND VERIFY LOCATIONS OF ALL EXISTING DUCTWORK, PIPING, AND EQUIPMENT.
2. ALL CONFLICTS AND ITEMS FOR CLARIFICATION SHALL BE BROUGHT TO THE ARCHITECTS/ENGINEERS'S ATTENTION PRIOR TO WORK IN THE AREA.
3. ALL DEMOLITION WORK WILL BE SCHEDULED WITH THE OWNER AND PERFORMED ONLY FOLLOWING APPROVAL.
4. THE CONTRACTOR SHALL INFORM THE OWNER AND RECEIVE SCHEDULE APPROVAL FOR ANY REQUIRED UTILITY SHUTDOWN.

DUCTWORK AND AIR DISTRIBUTION

20X20	DUCT (FIRST DIMENSION IS SIDE SHOWN IN INCHES)
20/20	DOUBLE FLAT OVAL DUCT (DIMENSIONS SHOWN IS CLEAR AREA)
	SUPPLY OR OUTSIDE AIR DUCT SECTION
	RETURN DUCT SECTION
	EXHAUST OR RELIEF AIR DUCT SECTION
	TRANSITION - RECTANGULAR TO RECTANGULAR
	TRANSITION - RECTANGULAR TO ROUND
	SPIN-IN COLLAR FITTING WITH ROUND FLEXIBLE DUCT AND MANUAL DAMPER
	SPIN-IN COLLAR FITTING WITH ROUND FLEXIBLE DUCT AND MANUAL DAMPER
	90° BRANCH TAKEOFF
	RADIUS BRANCH TAKEOFF
	AIRFLOW MEASURING STATION
SP	STATIC PRESSURE SENSOR SENSING LOCATION
	RECTANGULAR OR FLAT OVAL DUCTWORK WITH CONICAL TAP AND FLAT OVAL OR ROUND BRANCH DUCT
	TRANSITION FROM RECTANGULAR TO ROUND DUCTWORK
M	MANUAL DAMPER (M), CONTROL DAMPER (C), OR BACKDRAFT DAMPER (B)
F	FIRE DAMPER (F), OR COMBINATION FIRE/SMOKE DAMPER (FS)
	MITERED ELBOWS WITH TURNING VANES
12X12 S-100	SIDEWALL SUPPLY GRILLE OR REGISTER WITH SIZE, TYPE, AND CFM
12X12 R-100	SIDEWALL RETURN OR EXHAUST GRILLE OR REGISTER WITH SIZE, TYPE, AND CFM
18X18 R-600	CEILING RETURN OR EXHAUST GRILLE OR REGISTER WITH SIZE, TYPE, AND CFM
12"Ø S-600	RIGID DUCT AND CEILING SUPPLY DIFFUSER WITH ROUND NECK SIZE, TYPE, AND CFM
12"Ø S-600	FLEXIBLE DUCT AND CEILING SUPPLY DIFFUSER WITH ROUND NECK SIZE, TYPE, AND CFM
10"Ø S-LD 330	FLEXIBLE DUCT AND LINEAR DIFFUSER WITH NECK SIZE, TYPE, AND CFM
	EXISTING DUCTWORK OR EQUIPMENT
	EXISTING DUCTWORK OR EQUIPMENT TO BE REMOVED
AD	ACCESS DOOR, OPENING OUTWARD
AD	ACCESS DOOR, OPENING INWARD
PRD	PRESSURE RELIEF DOOR, OPENING OUTWARD
PRD	PRESSURE RELIEF DOOR, OPENING INWARD

DUCTWORK AND AIR DISTRIBUTION

	12" x 12" CEILING RETURN GRILLE (R-EG UNLESS NOTED OTHERWISE)
	12" x 24" CEILING RETURN GRILLE (R-EG UNLESS NOTED OTHERWISE)
	24" x 24" CEILING RETURN GRILLE (R-EG UNLESS NOTED OTHERWISE)
2	2 SQUARE FOOT DOOR GRILLE, SEE ARCHITECTURAL DRAWINGS
	FLEXIBLE DUCT
H	TERMINAL UNIT WITH HOT WATER REHEAT
Ø	ROUND OR FLAT OVAL DUCTWORK

STEAM PIPING

HPS	HIGH PRESSURE STEAM (16 PSIG AND ABOVE)
HPC	HIGH PRESSURE STEAM CONDENSATE (16 PSIG AND ABOVE)
LPS	LOW PRESSURE STEAM (0 PSIG THROUGH 15 PSIG)
LPC	LOW PRESSURE STEAM CONDENSATE (0 PSIG THROUGH 15 PSIG)
PC	PUMPED STEAM CONDENSATE

ABBREVIATIONS

ABV	ABOVE	FL	FLOOR
AD	ACCESS DOOR	FPM	FEET PER MINUTE
AFF	ABOVE FINISHED FLOOR	FPS	FEET PER SECOND
AFG	ABOVE RAISED FLOOR	GPM	GALLONS PER MINUTE
AFMS	AIRFLOW MEASURING STATION	GR	GRADE
ARF	ABOVE FINISHED GRADE	HPD	HIGH PRESSURE DRIP ASSEMBLY
AP	ACCESS PANEL	HT	HOT TAP
APR	AIR PRESSURE	LAT	LEAVING AIR TEMPERATURE
APD	AIR PRESSURE DROP	LS	LINE STOP
ARCH	ARCHITECT/ARCHITECTURAL	LWT	LEAVING WATER TEMPERATURE
BSL	BIOSAFETY LEVEL	MPD	MEDIUM PRESSURE DRIP ASSEMBLY
BEL	BELOW	NC	NORMALLY CLOSED
BF	BELOW FLOOR	NO	NORMALLY OPEN
BM	BEAM	OA	OUTSIDE AIR
BOD	BOTTOM OF DUCT	OBD	OPPOSED-BLADE DAMPER
BCS	BUILDING CONTROL SYSTEM	OC	ON CENTER
CFM	CUBIC FEET PER MINUTE	PS	PIPE STAND SUPPORT
CLG	CEILING	PRV	PRESSURE REDUCING VALVE
COL	COLUMN	RA	RETURN AIR
CONN	CONNECT/CONNECTION	REL	RELOCATE
CONT	CONTINUATION/CONTINUOUS	REM	REMOVE
CTE	CONNECT TO EXISTING	SA	SOUND ATTENUATOR
DB	DRY BULB	SDA	STEAM DRIP ASSEMBLY
DN	DOWN	SPEC	SPECIFICATION
DWG	DRAWING	TEMP	TEMPERATURE
EA	EXHAUST AIR	TS	TIGHT TO STRUCTURE
EAT	ENTERING AIR TEMPERATURE	TYP	TYPICAL
ELEC	ELECTRICAL/ELECTRIC	UG	UNDERGROUND
EWT	ENTERING WATER TEMPERATURE	VFD	VARIABLE FREQUENCY DRIVE
EX	EXISTING	WB	WET BULB
EXP	EXPOSED	WG	WATER GAUGE
FC	FLEXIBLE CONNECTION	WPD	WATER PRESSURE DROP

APPLICABLE DESIGN INFORMATION

CODES AND STANDARDS:
- BUILDING CODE: NORTH CAROLINA STATE BUILDING CODE - 2018
- MECHANICAL CODE: NORTH CAROLINA STATE MECHANICAL CODE - 2018
- PLUMBING CODE: NORTH CAROLINA STATE PLUMBING CODE - 2018
- ELECTRICAL CODE: NORTH CAROLINA STATE ELECTRICAL CODE - 2018
- FIRE CODE: NORTH CAROLINA FIRE PREVENTION CODE - 2018
- ENERGY CODE: NORTH CAROLINA STATE ENERGY CONSERVATION CODE - 2018

OCCUPANCY USE GROUP:
- A-3

CONSTRUCTION CLASSIFICATIONS:
- II-A

SPRINKLER SYSTEM:
- NATIONAL FIRE PROTECTION ASSOCIATION - 2013

OWNER GUIDELINES:
- UNIVERSITY OF NORTH CAROLINA DESIGN GUIDELINES - 2020

NORTH CAROLINA SCO GUIDELINES:
- WATER BASED FIRE PROTECTION SYSTEM GUIDELINES - 2020
- FIRE ALARM GUIDELINES - 2020
- ELECTRICAL GUIDELINES - 2020

PIPING AND VALVES

	BLIND FLANGE
	HOSE END CONNECTION
	PIPE CAP
	CLEANOUT (CO) IN DRAIN LINE
	DIRECTION OF FLOW
	ELBOW - 45°
	ELBOW - 90°
	ELBOW - TURNED DOWN
	ELBOW - TURNED UP
	FLEXIBLE CONNECTOR - PIPING
	FLOOR DRAIN, SEE PLUMBING DRAWINGS
	STRAINER
	REDUCER - CONCENTRIC
	REDUCER - ECCENTRIC
	TEE
	TEE OUTLET DOWN
	TEE OUTLET UP
	UNION OR FLANGE
	STEAM TRAP (SEE SPECIFICATIONS FOR TYPE AND USE)
	STEAM DRIP ASSEMBLY
	2-WAY CONTROL VALVE
	EXISTING PIPING
	EXISTING PIPING TO BE REMOVED
	VALVE (SEE SPECIFICATIONS FOR TYPE)
T	FLOW METER (T-TURBINE TYPE)
M F	FLOW CONTROL VALVE (M-MANUAL TYPE)
M V	AIR VENT (M-MANUAL TYPE; A-AUTOMATIC TYPE)
	THERMOMETER
	PRESSURE GAUGE
	COMBINATION PRESSURE & TEMPERATURE TEST PLUG
	THERMOMETER TEST WELL
	WATER PRESSURE REDUCING VALVE
	STEAM PRESSURE REDUCING VALVE
	BALANCING VALVE
	RELIEF VALVE

HYDRONIC PIPING

CHS	CHILLED WATER SUPPLY
CHR	CHILLED WATER RETURN
D	DRAIN
R	REFRIGERANT
V	VENT
HWS	HOT WATER SUPPLY
HWR	HOT WATER RETURN

LORD AECK SARGENT

REVISION:

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NB Contact: Reade Daniel
N&B PROJECT: 21N242
Newcomb & Boyd, LLP
Firm Lic. # P-0212

SHEET TITLE: MECHANICAL GENERAL NOTES, SYMBOLS, AND ABBREVIATIONS
SCALE (U.N.O.): NO SCALE

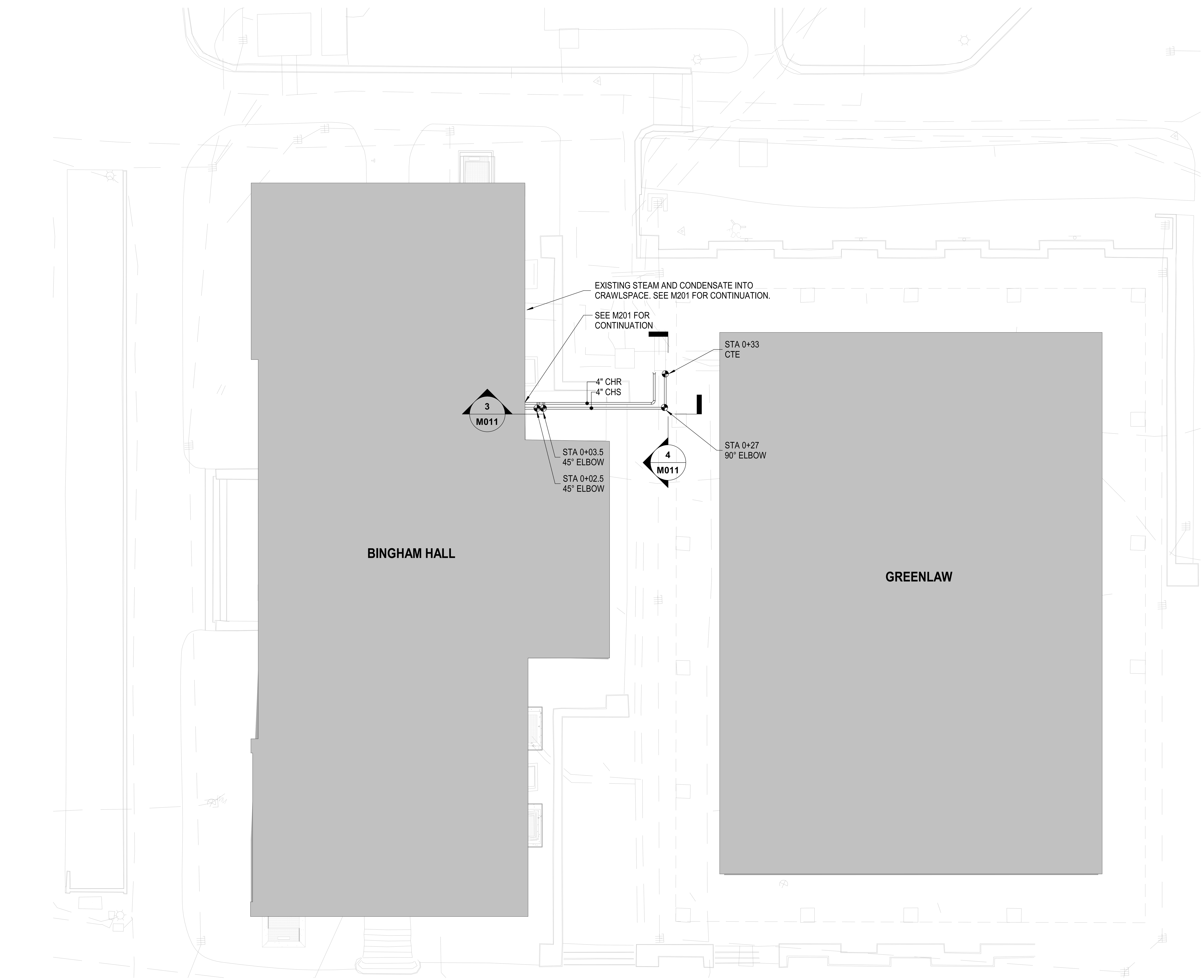
JOB NAME: University of North Carolina - Chapel Hill
SCH#: 21-235402A
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

SEAL: NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 043322 PAUL JACKSON KITCHINS
Signed on 01/03/2024 using a Digital Signature.

ISSUE DATE: 1/8/2024
JOB. NO.: 11706-00
DWG. NO.: M001

GENERAL NOTES:

1. LOCATION AND SIZES OF UTILITY PIPING ARE BASED ON PROJECT-SPECIFIC SURVEY INFORMATION PROVIDED BY UNC CHAPEL HILL. CONTRACTOR SHALL VERIFY LOCATIONS AND SIZING OF EXISTING UTIITIES AND OTHER EXISTING CONDITIONS PRIOR TO THE COMMENCEMENT OF WORK.



1 HVAC SITE PLAN

0 10 20 FT

PROJECT NORTH

TRUE NORTH

LORD AECK SARGENT

REVISION:

NEWCOMB & BOYD

5425 Page Road
Suite 215
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N&B Contact: Roade Daniel
N&B PROJECT: 21N242
Newcomb & Boyd, LLP
Firm Lic. # F-0312

SHEET TITLE: HVAC SITE PLAN

SCALE (U.N.O.): As indicated

0 10 20 FT

JOB NAME: University of North Carolina - Chapel Hill

SCO# 21-25548-02A

BINGHAM HALL RENOVATION

LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

SEAL

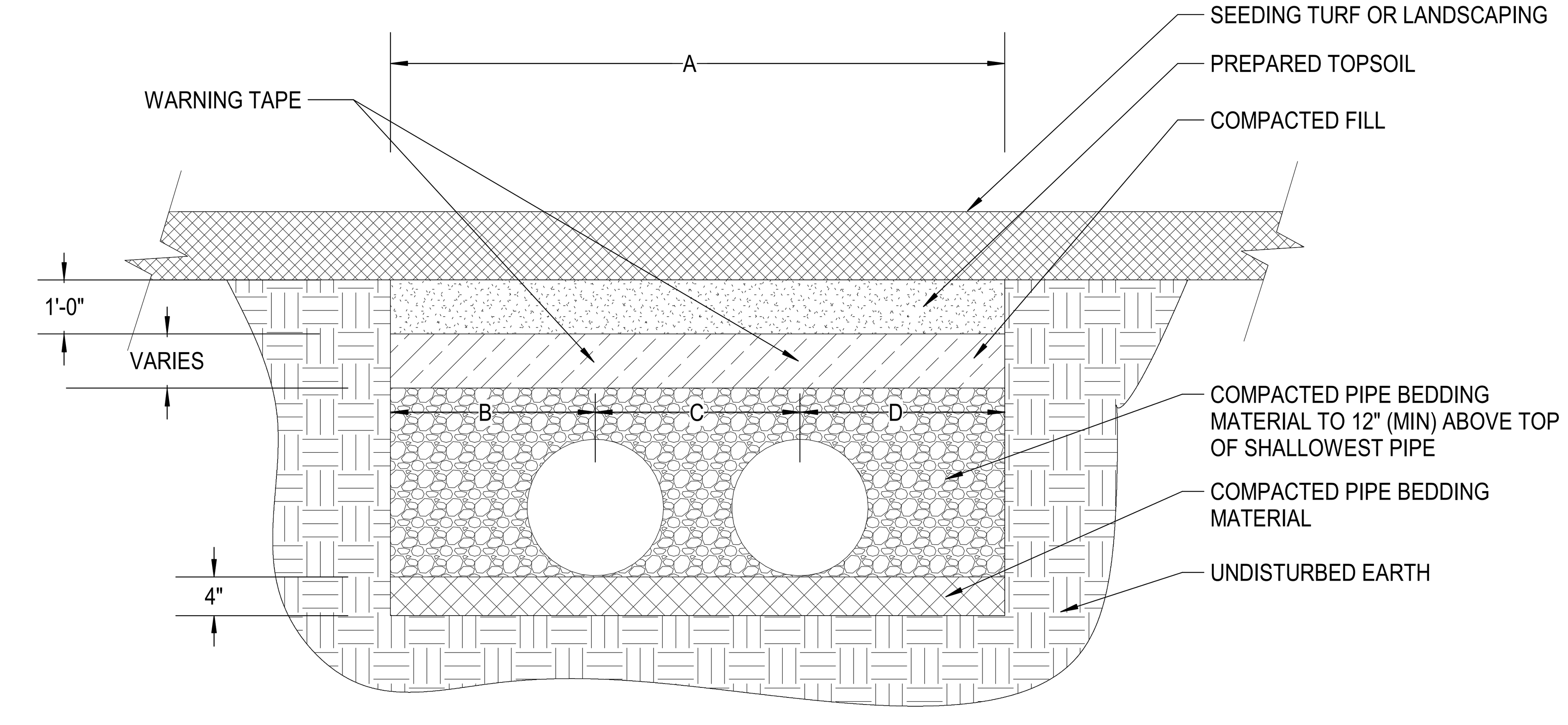
DocuSigned by: PAUL JACKSON KITCHENS, ENGINEER, SEAL 043322, NORTH CAROLINA PROFESSIONAL

Signed on 01/03/2024 using a Digital Signature.

ISSUE DATE: 1/8/2024

JOB. NO. 11706-00

DWG. NO. M010



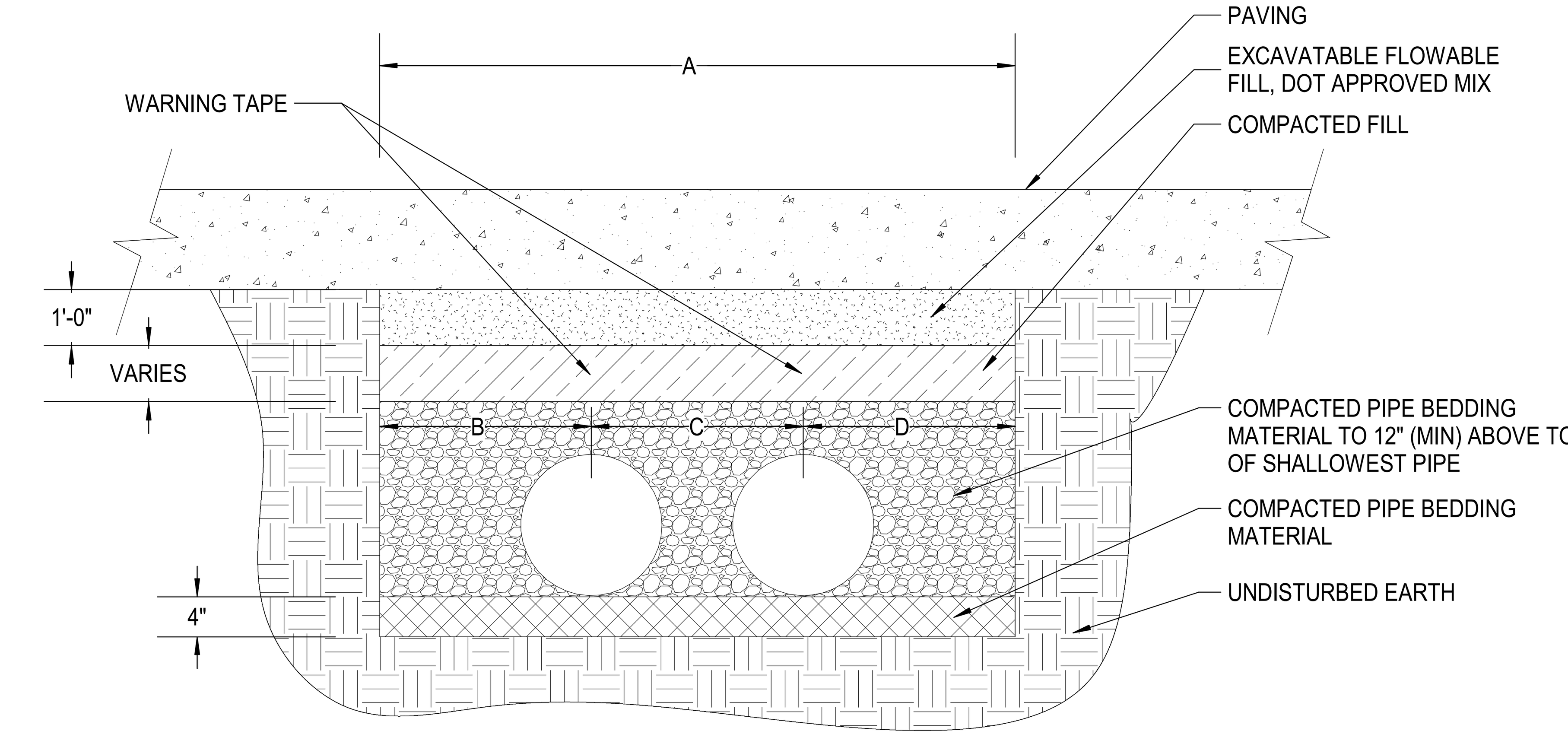
PIPE SIZE	A	B/D	C
4"	4' - 8"	1' - 2"	2' - 4"
6"	5' - 0"	1' - 3"	2' - 6"
8"	5' - 4"	1' - 4"	2' - 8"
10"	5' - 8"	1' - 5"	2' - 10"
12"	6' - 0"	1' - 6"	3' - 0"
14"	6' - 4"	1' - 7"	3' - 2"
16"	6' - 8"	1' - 8"	3' - 4"
18"	7' - 0"	1' - 9"	3' - 6"
20"	8' - 4"	2' - 4"	3' - 8"
24"	9' - 0"	2' - 6"	4' - 0"
30"	11' - 0"	2' - 9"	5' - 6"
36"	12' - 0"	3' - 0"	6' - 0"

NOTES:

1. EXISTING CHILLED WATER PIPING EXPOSED DURING EXCAVATION AND CHILLED WATER PIPING SHOWN TO HAVE MECHANICAL RESTRAINTS ADDED ARE TO BE BACKFILLED AS SHOWN HERE FOR NEW PIPING.
2. MINIMUM BURIAL DEPTH SHALL BE 36".

1 CHILLED WATER TRENCH LANDSCAPE AREA

NO SCALE



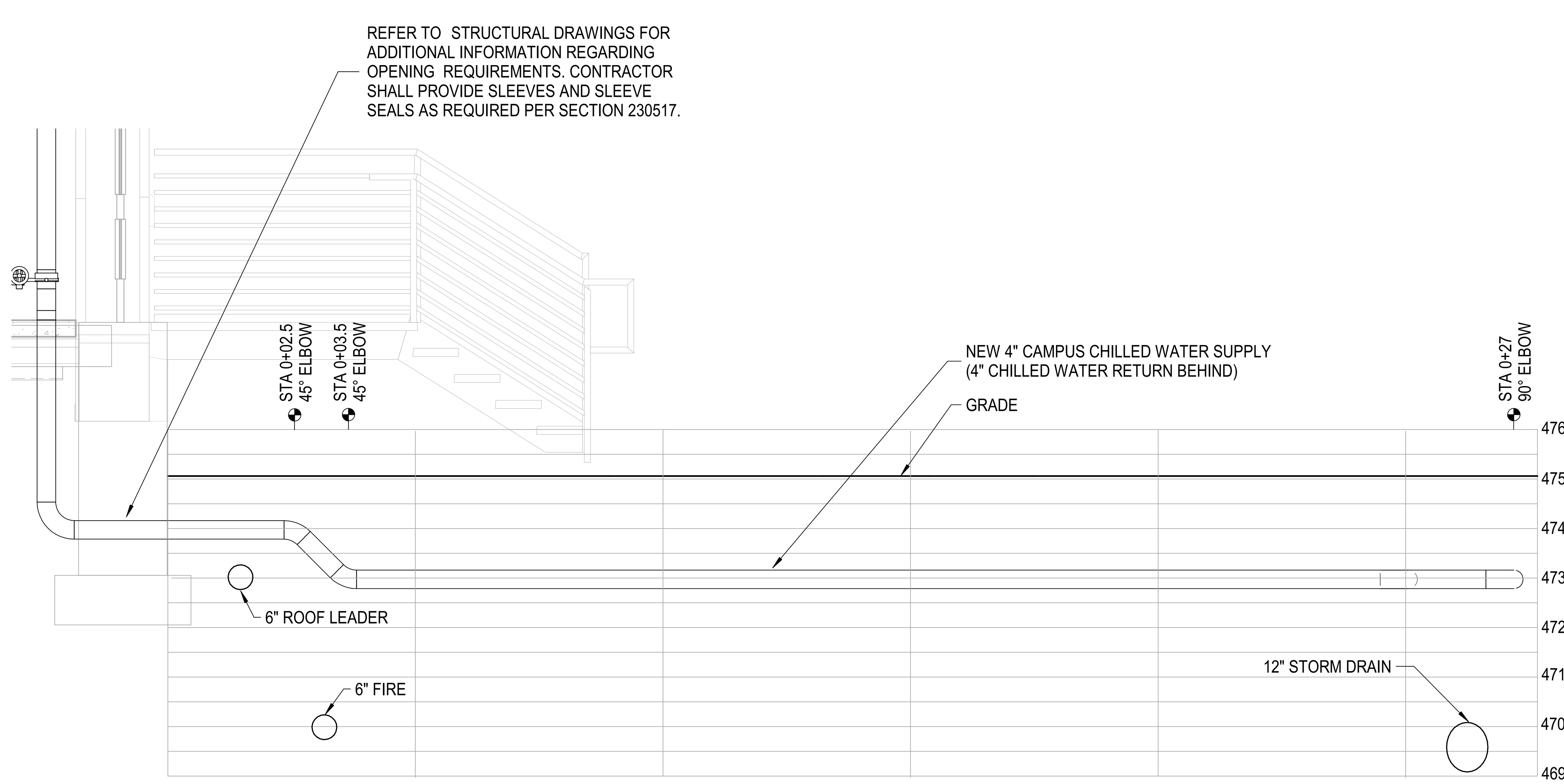
PIPE SIZE	A	B/D	C
4"	4' - 8"	1' - 2"	2' - 4"
6"	5' - 0"	1' - 3"	2' - 6"
8"	5' - 4"	1' - 4"	2' - 8"
10"	5' - 8"	1' - 5"	2' - 10"
12"	6' - 0"	1' - 6"	3' - 0"
14"	6' - 4"	1' - 7"	3' - 2"
16"	6' - 8"	1' - 8"	3' - 4"
18"	7' - 0"	1' - 9"	3' - 6"
20"	8' - 4"	2' - 4"	3' - 8"
24"	9' - 0"	2' - 6"	4' - 0"
30"	11' - 0"	2' - 9"	5' - 6"
36"	12' - 0"	3' - 0"	6' - 0"

NOTES:

1. EXISTING CHILLED WATER PIPING EXPOSED DURING EXCAVATION AND CHILLED WATER PIPING SHOWN TO HAVE MECHANICAL RESTRAINTS ADDED ARE TO BE BACKFILLED AS SHOWN HERE FOR NEW PIPING.
2. MINIMUM BURIAL DEPTH SHALL BE 36".

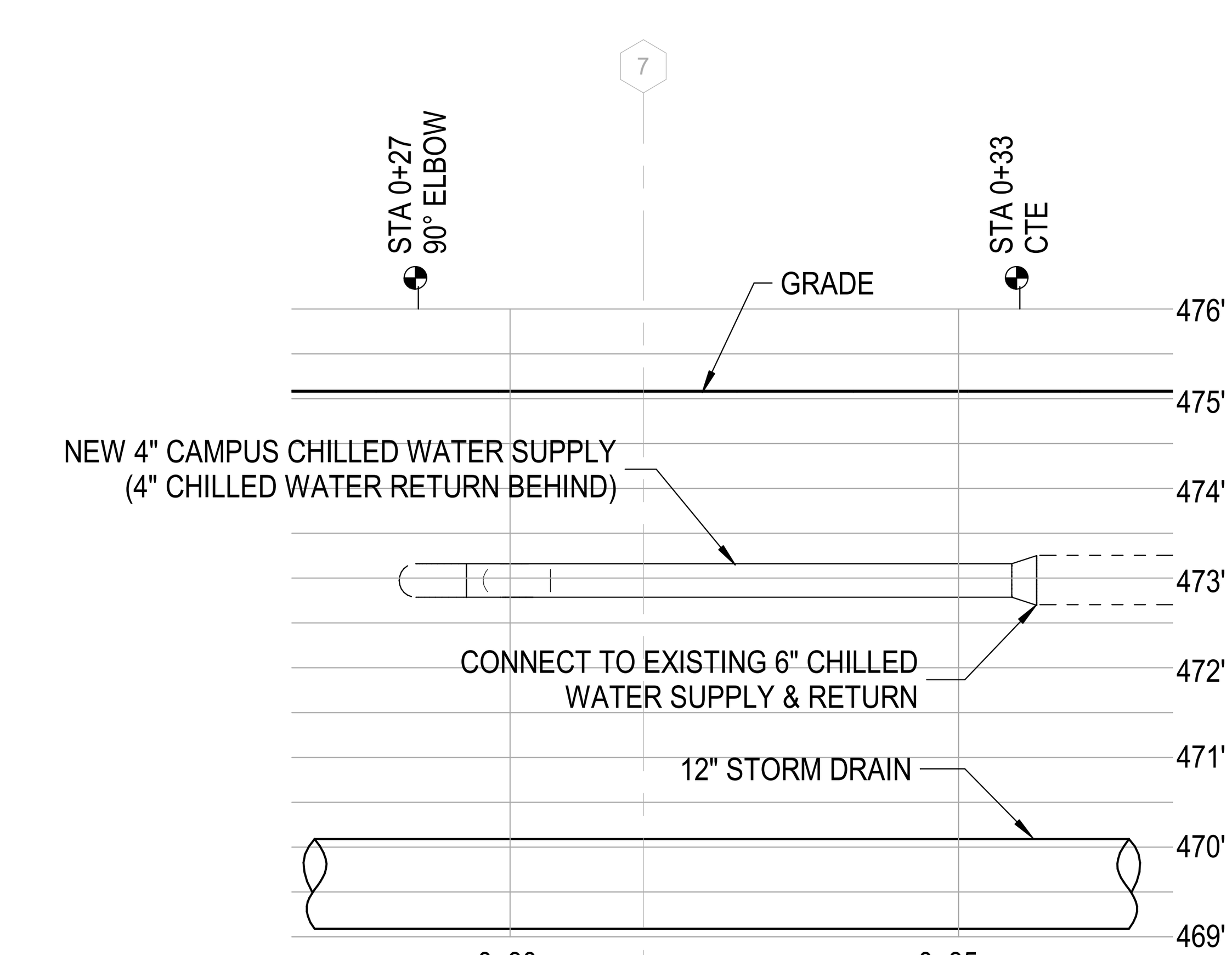
2 CHILLED WATER TRENCH PAVED AREA

NO SCALE



3 CHILLED WATER BUILDING ENTRY PROFILE

1/2" = 1'-0"



4 CHILLED WATER CTE PROFILE

1/2" = 1'-0"

LORD AECK SARGENT

REVISION:

NEWCOMB & BOYD NB

5425 Page Road
Suite 215
Durham, NC 27703
NB Contact: Roade Daniel
N&B PROJECT: 21N242
Newcomb & Boyd, LLP
Firm Lic. # F-0312

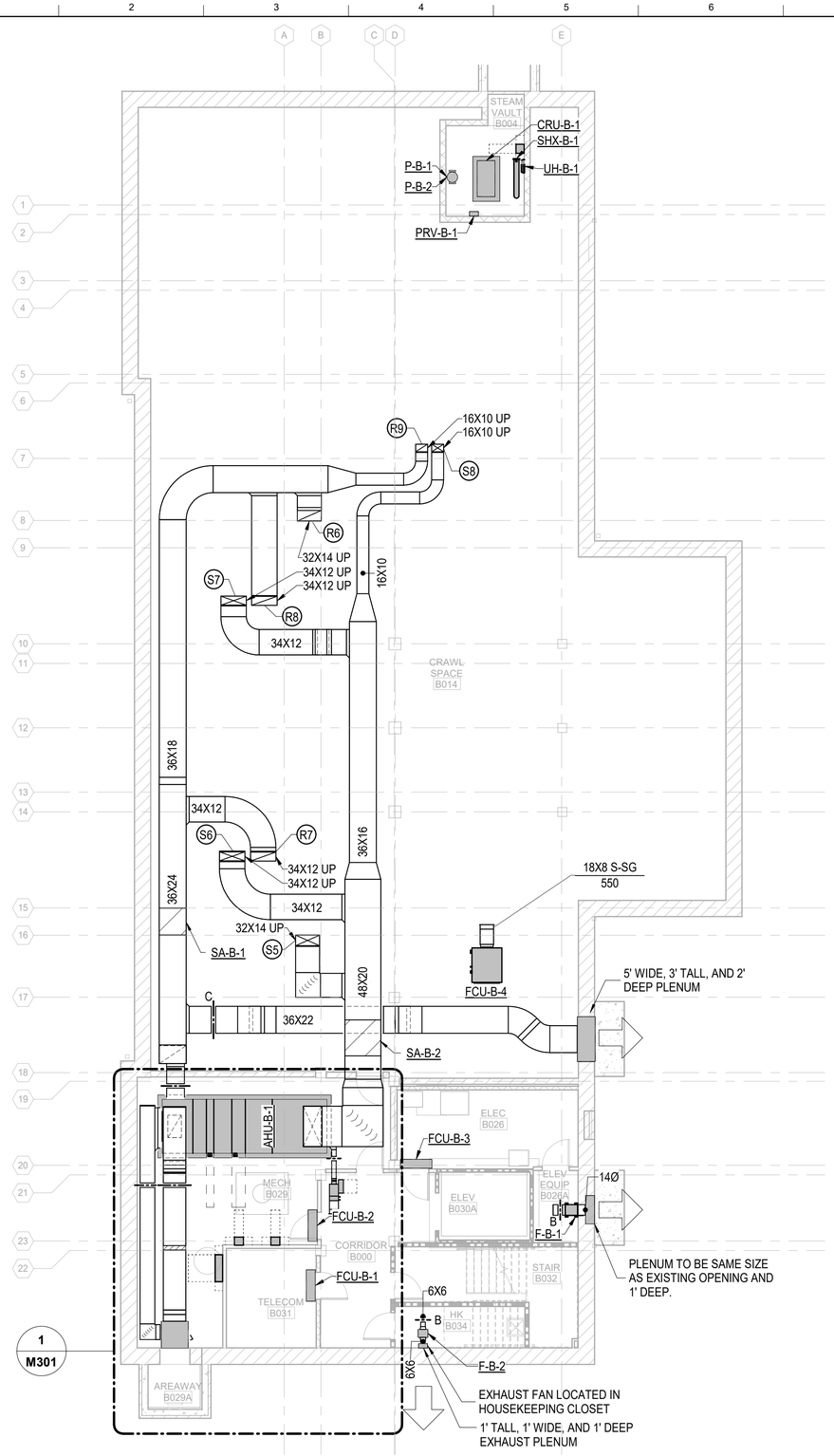
SHEET TITLE
HVAC SITE DETAILS & PROFILES

SCALE (U.N.O.)
As indicated

JOB NAME
University of North Carolina - Chapel Hill
SCO# 21-23546-02A
BINGHAM HALL RENOVATION
LOCATION
36 Lenoir Drive, Chapel Hill, NC 27514

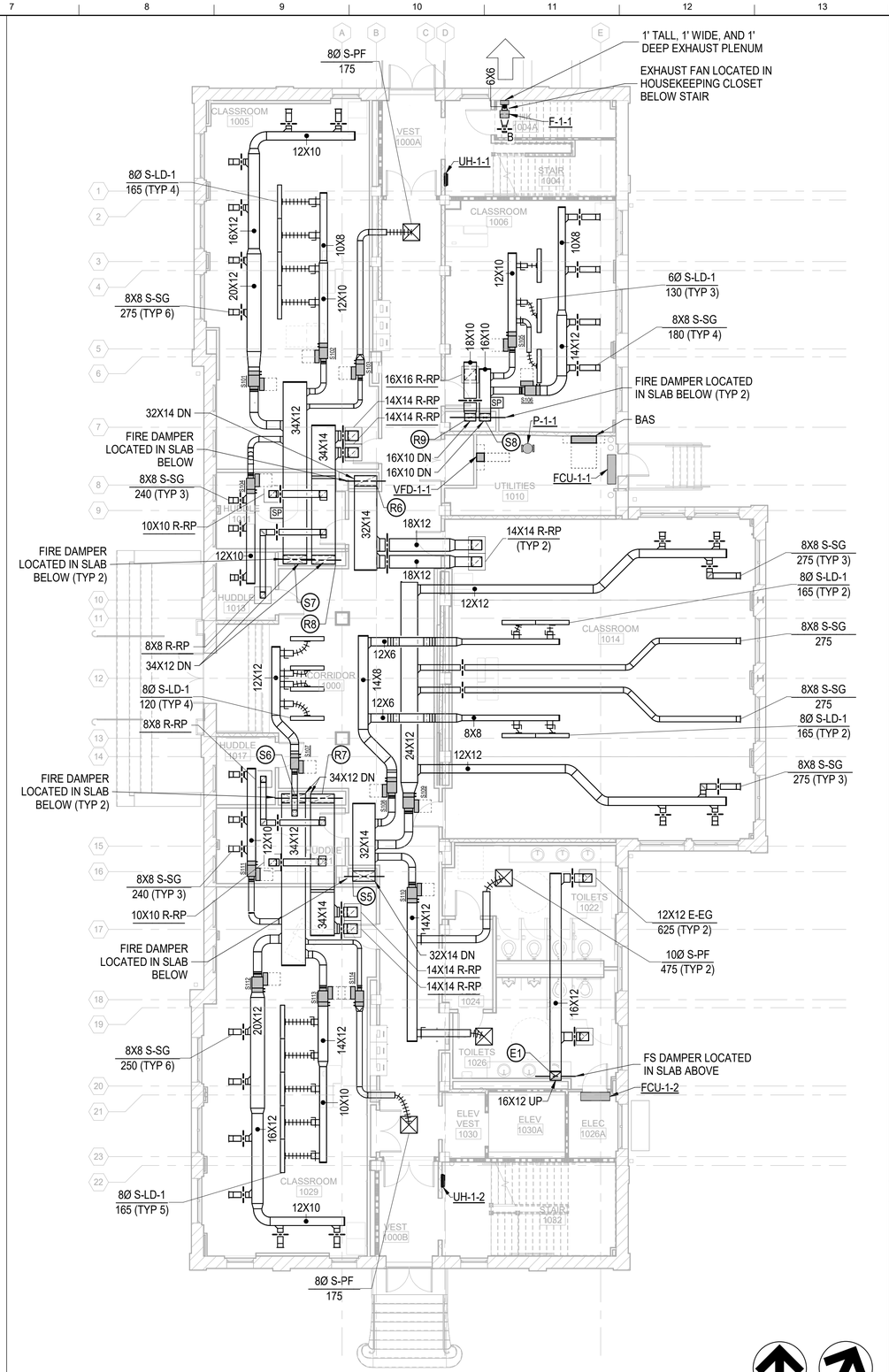
SEAL
NORTH CAROLINA PROFESSIONAL SEAL 043322 ENGINEER PAUL JACKSON KITCHENS
Signed on 01/03/2024 using a Digital Signature.

ISSUE DATE
1/8/2024
JOB NO.
11706-00
DWG. NO.
M011



1 HVAC DUCTWORK BASEMENT FLOOR PLAN

0 8 16 FT



2 HVAC DUCTWORK FIRST FLOOR PLAN

0 8 16 FT

PROJECT NORTH TRUE NORTH

GENERAL NOTES

SHEET SPECIFIC NOTES

LIFE SAFETY LEGEND

- SMOKE PARTITION
- 1-HOUR RATED WALL
- 2-HOUR RATED WALL
- 3-HOUR RATED WALL

LORD AECK SARGENT

REVISION:

NEWCOMB & BOYD

5425 Page Road
Suite 215
Durham, NC 27703
NB Contact: Reade Daniel
N&B PROJECT: 21N242
Newcomb & Boyd, LLP
Firm Lic. # P-0312

SHEET TITLE: HVAC DUCTWORK BASEMENT & FIRST FLOOR PLANS

SCALE (U.N.O.): 1/8" = 1'-0"

JOB NAME: University of North Carolina - Chapel Hill
SCI#: 21-23845-02A

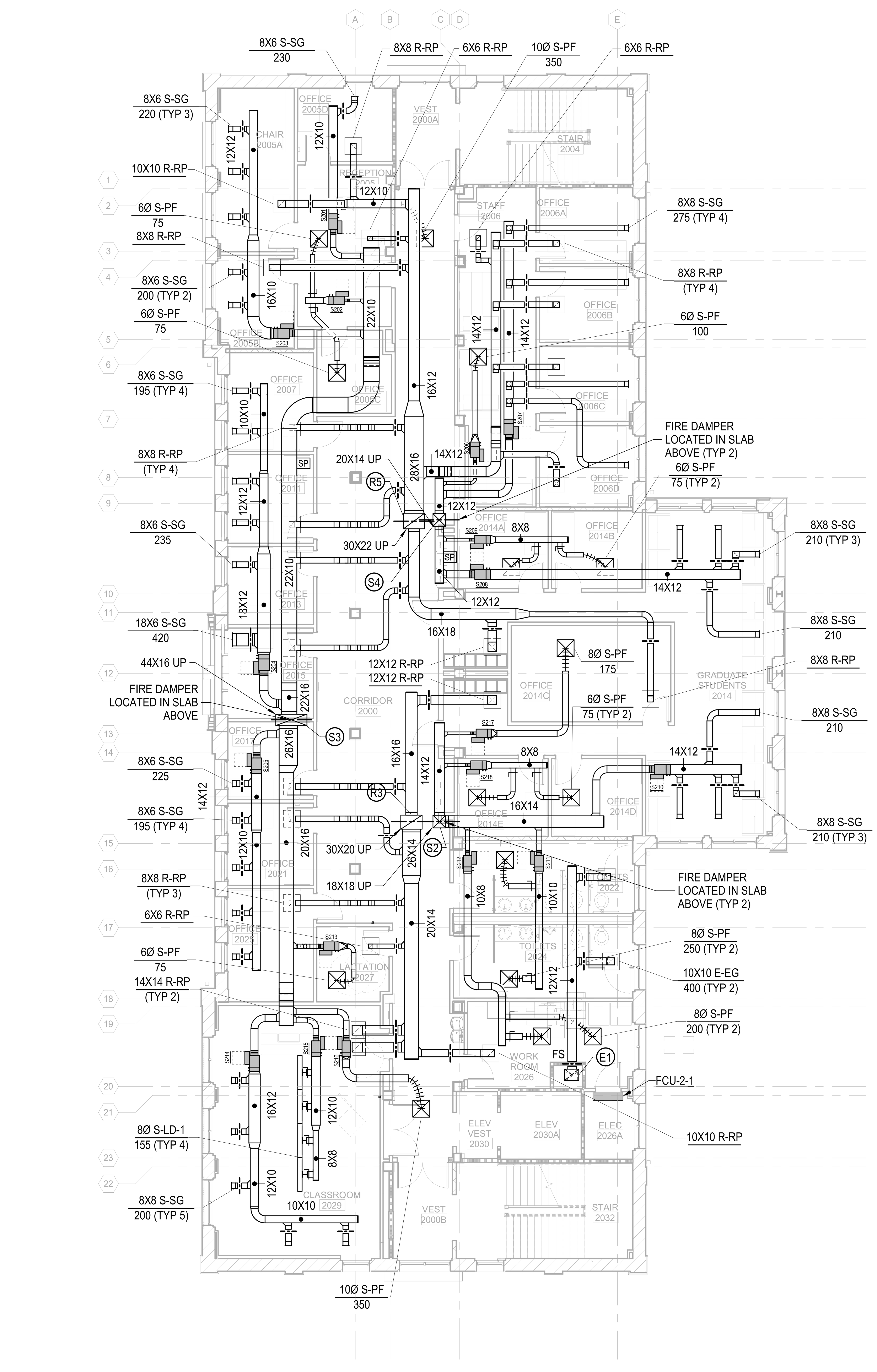
LOCATION: BINGHAM HALL RENOVATION
36 Lenoir Drive, Chapel Hill, NC 27514

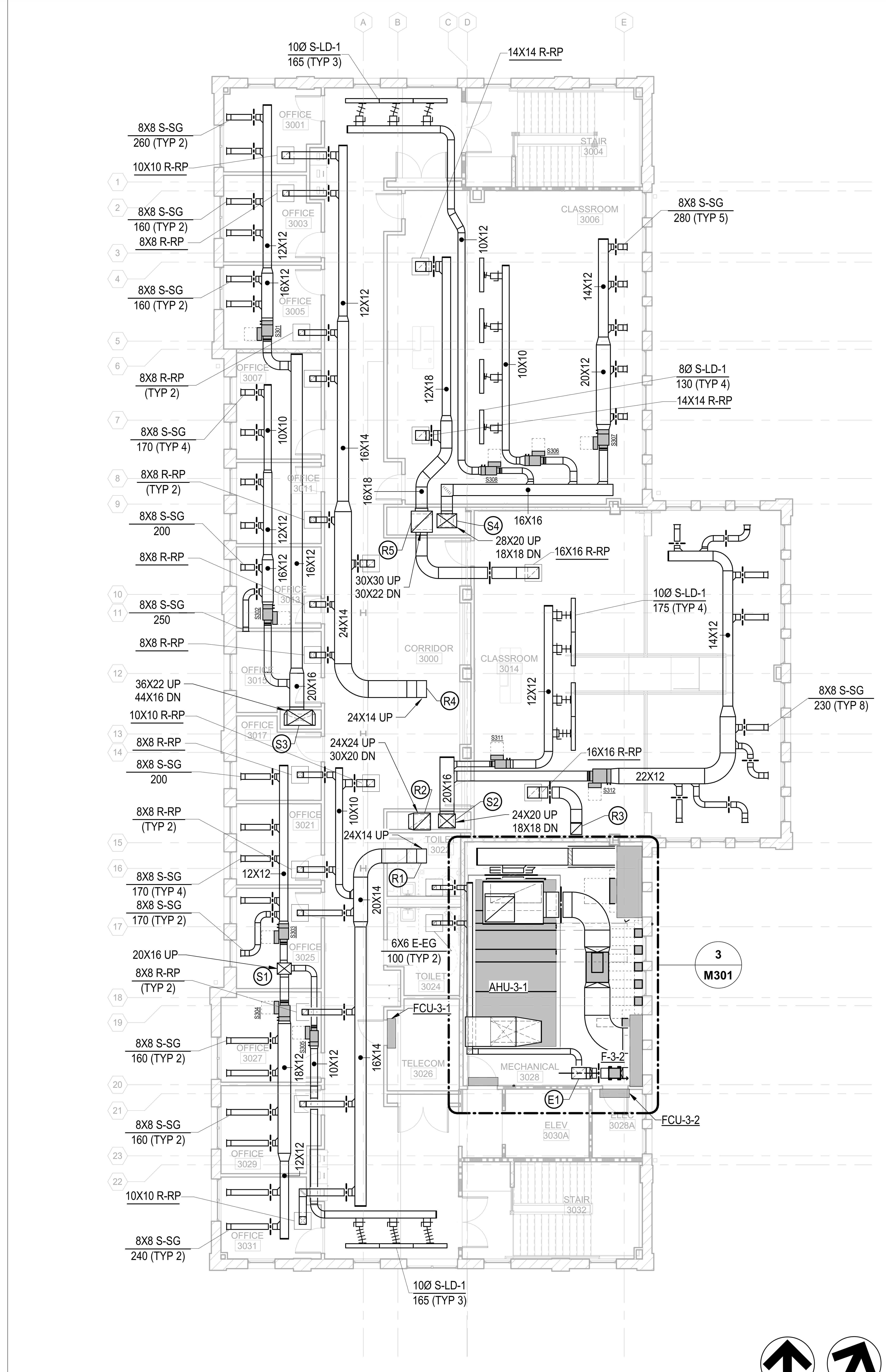
SEAL
Docusigned by:
NORTH CAROLINA REGISTERED PROFESSIONAL
SEAL 043322
ENGINEER
PAUL JACKSON KITCHENS
Signed on 01/03/2024 using a Digital Signature.

ISSUE DATE: 1/8/2024

JOB. NO.: 11706-00

DWG. NO.: M101





GENERAL NOTES

SHEET SPECIFIC NOTES

LIFE SAFETY LEGEND

	SMOKE PARTITION
	1-HOUR RATED WALL
	2-HOUR RATED WALL
	3-HOUR RATED WALL

LORD AECK SARGENT

REVISION:

NEWCOMB & BOYD
5425 Page Road
Suite 215
Durham, NC 27703
N&B Contact: Reade Daniel
N&B PROJECT: 21N242
Newcomb & Boyd, LLP
Firm Lic. # F-0312

SHEET TITLE
HVAC DUCTWORK SECOND & THIRD FLOOR PLANS

SCALE (U.N.O.) 1/8" = 1'-0"

JOB NAME
University of North Carolina - Chapel Hill
SCO# 21-25548-02A
BINGHAM HALL RENOVATION
LOCATION
36 Lenoir Drive, Chapel Hill, NC 27514

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 043322 ENGINEER PAUL JACKSON KITCHENS
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ISSUE DATE 1/8/2024
JOB. NO. 11706-00
DWG. NO. M102

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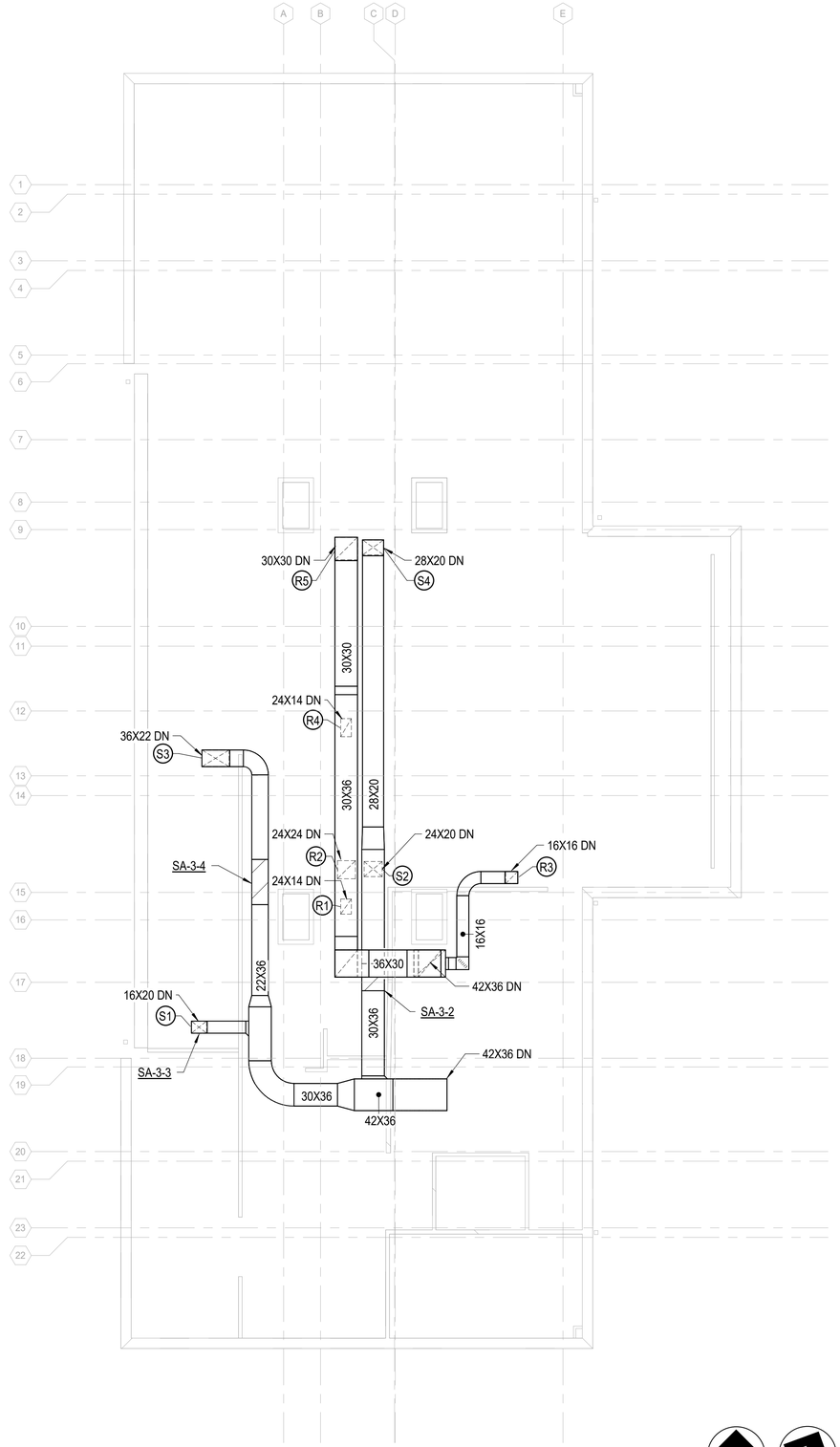

1 HVAC DUCTWORK ATTIC PLAN

0 8 16 FT

PROJECT NORTH TRUE NORTH

GENERAL NOTES

SHEET SPECIFIC NOTES

LORD AECK SARGENT

REVISION:

NEWCOMB & BOYD
5425 Page Road
Suite 215
Durham, NC 27703
NB Contact: Reade Daniel
N&B PROJECT: 21N242
Newcomb & Boyd, LLP
Firm Lic # P-0312

SHEET TITLE: HVAC DUCTWORK ATTIC PLAN

SCALE (U.N.O.): NO SCALE

0 8 16 FT

JOB NAME: University of North Carolina - Chapel Hill
SCI#: 21-2354/02A

LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

SEAL
Docusigned by:
08D2E02E305D47A...
NORTH CAROLINA PROFESSIONAL SEAL 043322 ENGINEER PAUL JACKSON KITCHENS
Signed on 01/03/2024 using a Digital Signature.

ISSUE. DATE: 1/8/2024

JOB. NO.: 11706-00

DWG. NO.: M103

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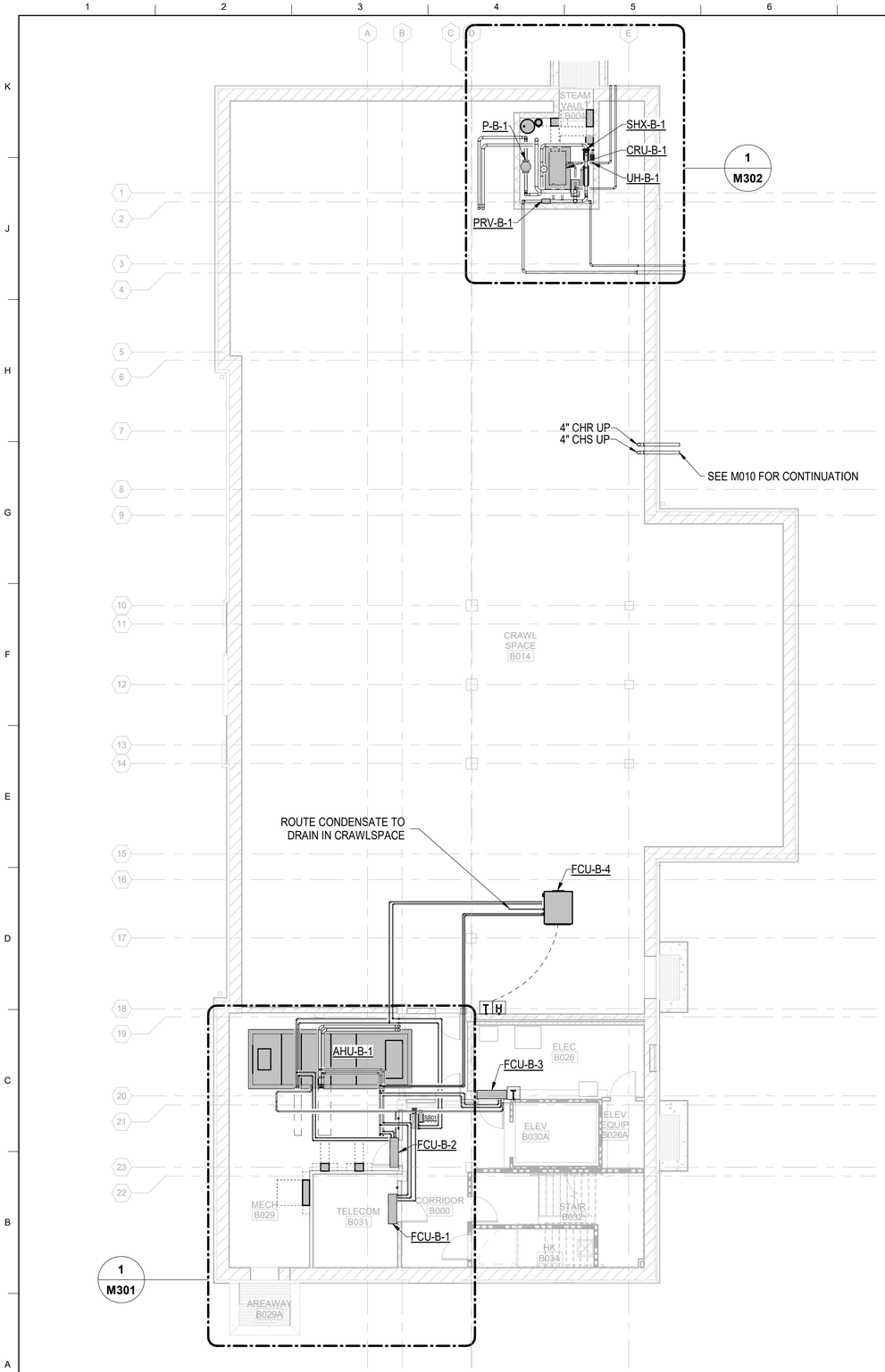
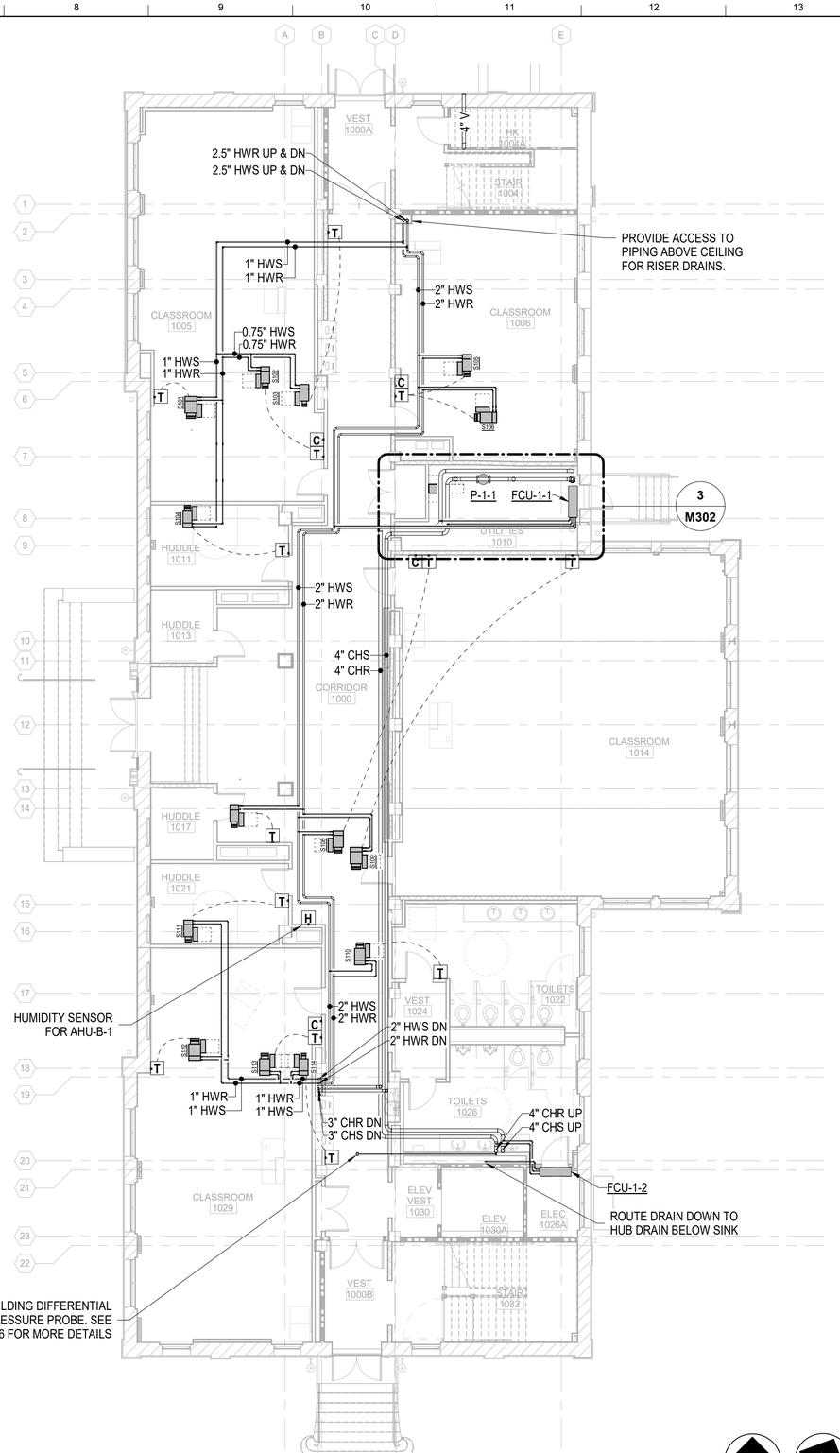


1 HVAC PIPING BASEMENT FLOOR PLAN

0 8 16 FT



2 HVAC PIPING FIRST FLOOR PLAN

0 8 16 FT

PROJECT NORTH TRUE NORTH

GENERAL NOTES

SHEET SPECIFIC NOTES

LIFE SAFETY LEGEND

- SMOKE PARTITION
- 1-HOUR RATED WALL
- 2-HOUR RATED WALL
- 3-HOUR RATED WALL

LORD AECK SARGENT

REVISION:

NEWCOMB & BOYD
5425 Page Road
Suite 215
Durham, NC 27703
NB Contact: Reade Daniel
N&B PROJECT : 21N242
Newcomb & Boyd, LLP
Firm Lic # P-0312

SHEET TITLE: HVAC PIPING BASEMENT & FIRST FLOOR PLANS

SCALE (U.N.O.): 1/8" = 1'-0"

0 8 16 FT

JOB NAME: University of North Carolina - Chapel Hill

SCD# 21-23548-02A

BINGHAM HALL RENOVATION

LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

SEAL

Docusigned by: 08920D82E305047A...

NORTH CAROLINA REGISTERED SEAL 043322 ENGINEER PAUL JACKSON KITCHENS

Signed on 01/03/2024 using a Digital Signature.

ISSUE DATE: 1/8/2024

JOB. NO. 11706-00

DWG. NO. M201

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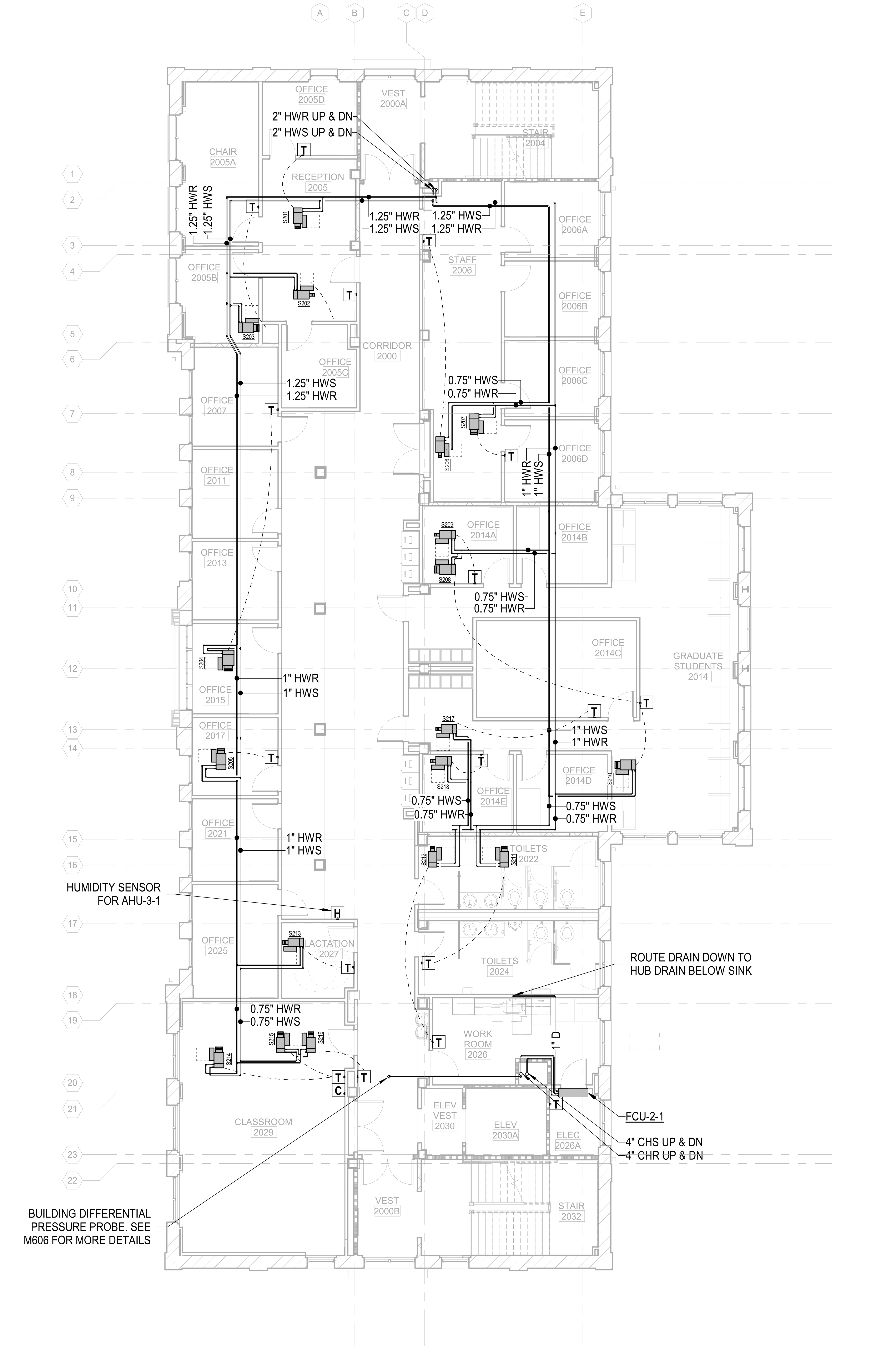
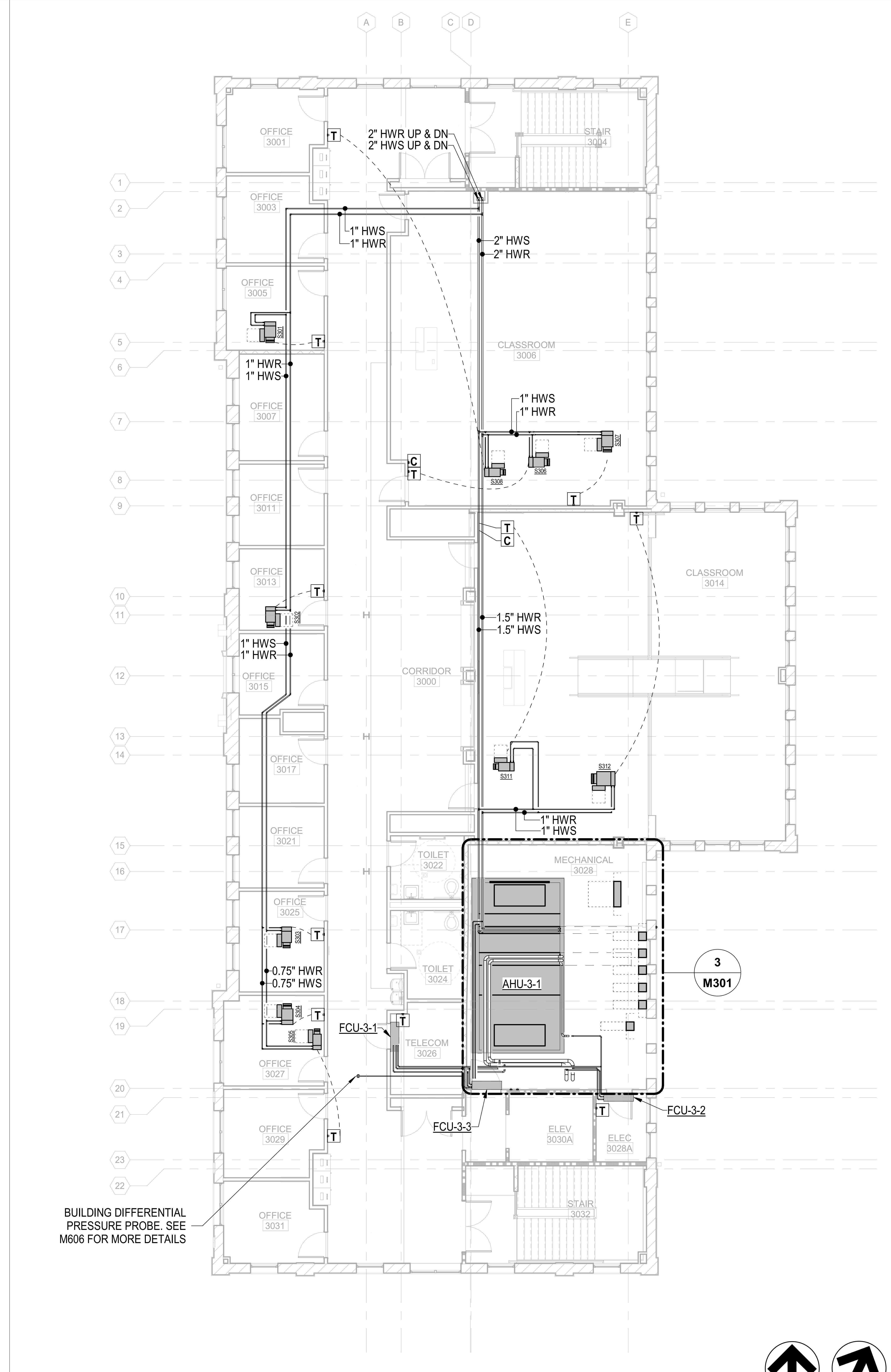


1 HVAC PIPING SECOND FLOOR PLAN
0 8 16 FT



2 HVAC PIPING THIRD FLOOR PLAN
0 8 16 FT

PROJECT NORTH
TRUE NORTH

GENERAL NOTES

SHEET SPECIFIC NOTES

LIFE SAFETY LEGEND

- SMOKE PARTITION
- 1-HOUR RATED WALL
- 2-HOUR RATED WALL
- 3-HOUR RATED WALL

LORD AECK SARGENT

REVISION:

NEWCOMB & BOYD
5425 Page Road Suite 215 Durham, NC 27703
N&B Contact: Reade Daniel
N&B PROJECT: 21N242
Newcomb & Boyd, LLP
Firm Lic. # F-0312

SHEET TITLE: HVAC PIPING SECOND & THIRD FLOOR PLANS

SCALE (U.N.O.): 1/8" = 1'-0"

JOB NAME: University of North Carolina - Chapel Hill
SCO#: 21-23548-02A
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

SEAL
CAROLINA
SEAL 043322
ENGINEER
PAUL JACKSON KITCHENS
Signed on 01/03/2024 using a Digital Signature.

ISSUE DATE: 1/8/2024
JOB. NO.: 11706-00
DWG. NO.: M202

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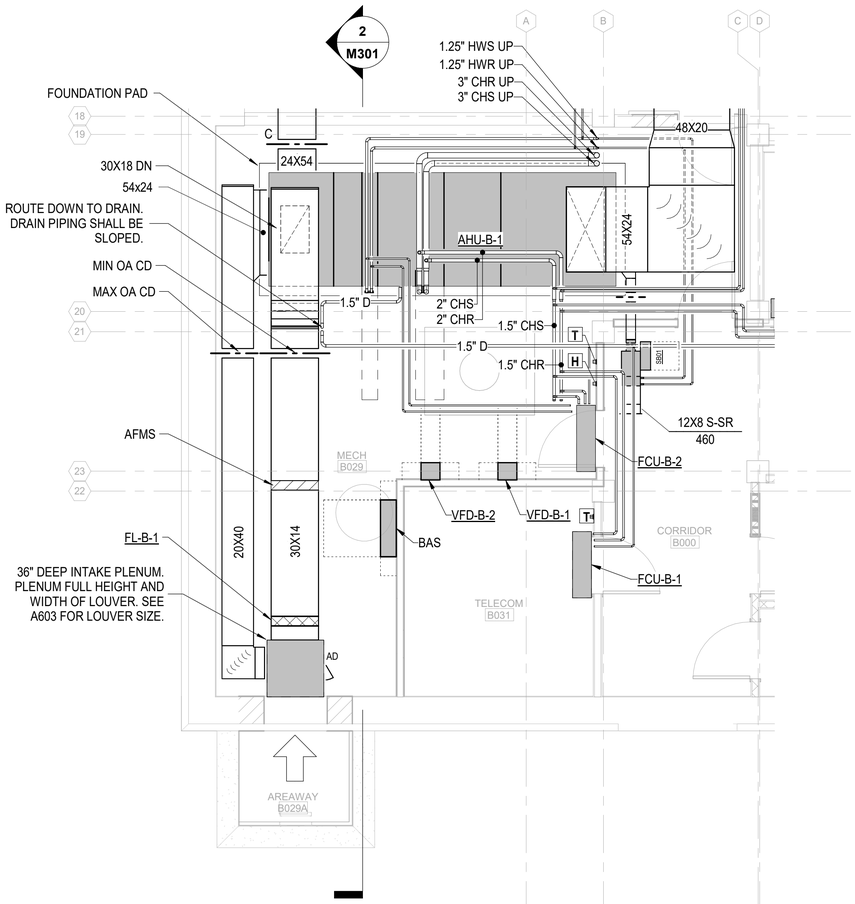
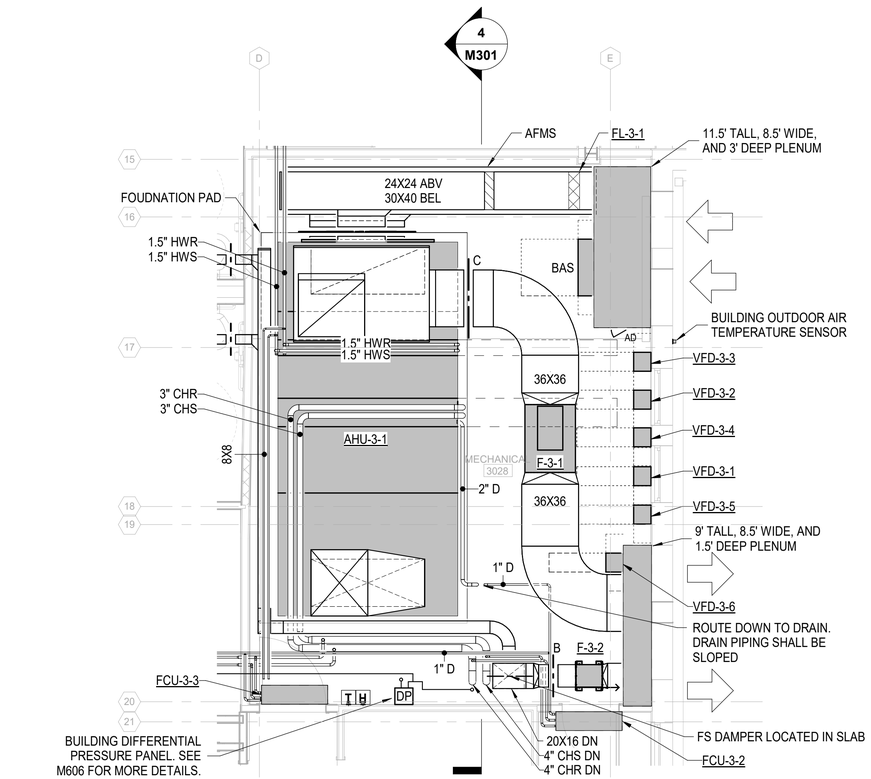
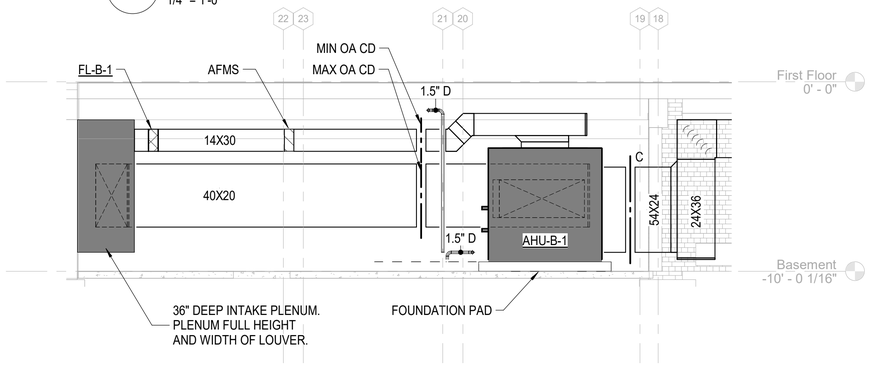


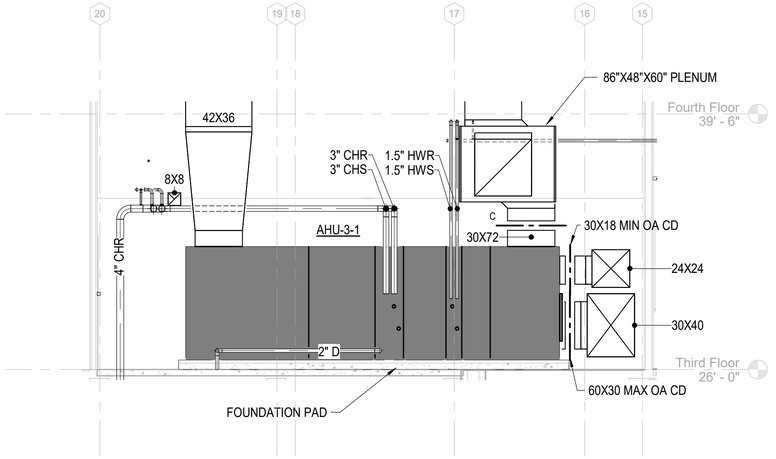
1 HVAC PART PLAN - BASEMENT MECHANICAL ROOM
1/4" = 1'-0"



3 HVAC PART PLAN - THIRD FLOOR MECHANICAL ROOM
1/4" = 1'-0"



2 HVAC BASEMENT MECHANICAL ROOM LOOKING WEST
1/4" = 1'-0"



4 HVAC THIRD FLOOR MECHANICAL ROOM LOOKING WEST
1/4" = 1'-0"

PROJECT NORTH TRUE NORTH

GENERAL NOTES

SHEET SPECIFIC NOTES

LORD AECK SARGENT

REVISION:

NEWCOMB & BOYD
5425 Page Road
Suite 215
Durham, NC 27703
NB Contact: Reade Daniel
N&B PROJECT: 21N242
Newcomb & Boyd, LLP
Firm Lic. # P0312

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SEAL 043322
ENGINEER PAUL JACKSON KITCHENS
Signed on 01/03/2024 using a Digital Signature.

ISSUE DATE
1/8/2024

JOB. NO.
11706-00

DWG. NO.
M301

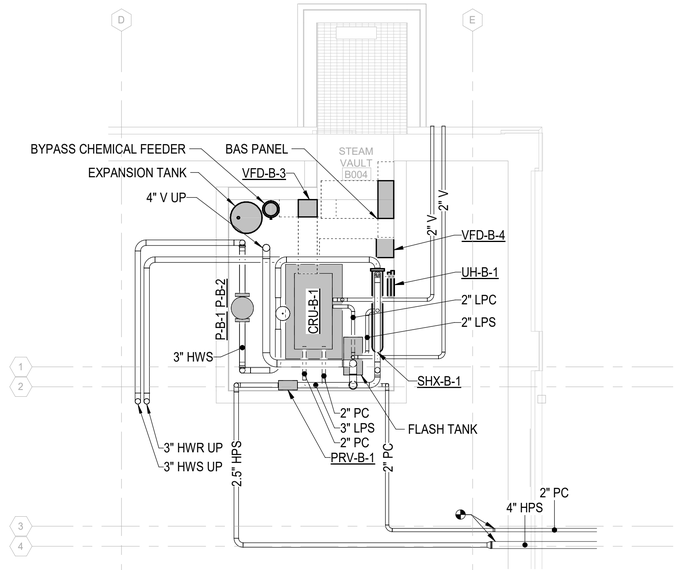
SHEET TITLE
HVAC ENLARGED PLANS

SCALE (U.N.O.)
As indicated

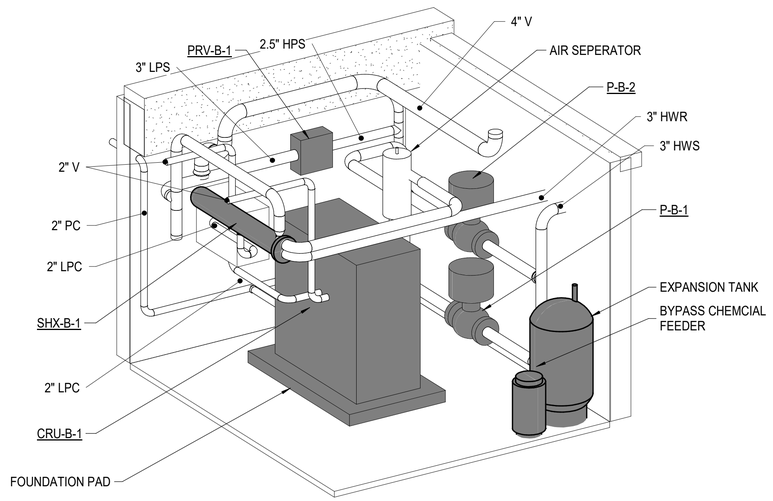
0 4 8FT

JOB NAME
University of North Carolina - Chapel Hill
SCI# 21-23464-02A

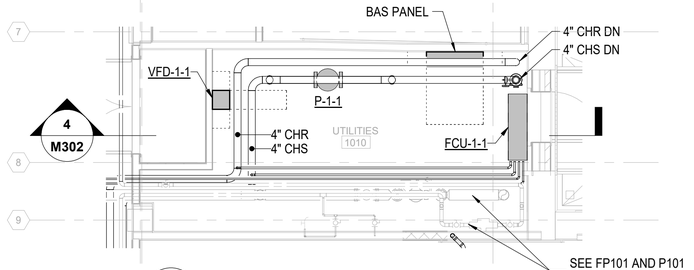
LOCATION
BINGHAM HALL RENOVATION
306 Lenoir Drive, Chapel Hill, NC 27514



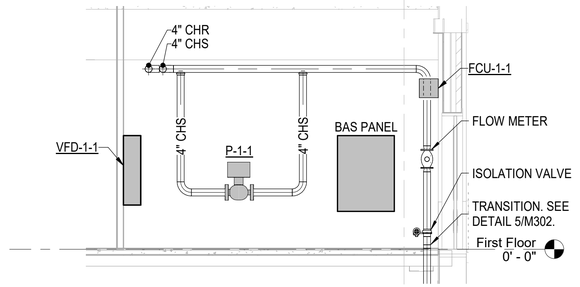
1 HVAC PART PLAN - STEAM VAULT B004
1/4" = 1'-0"



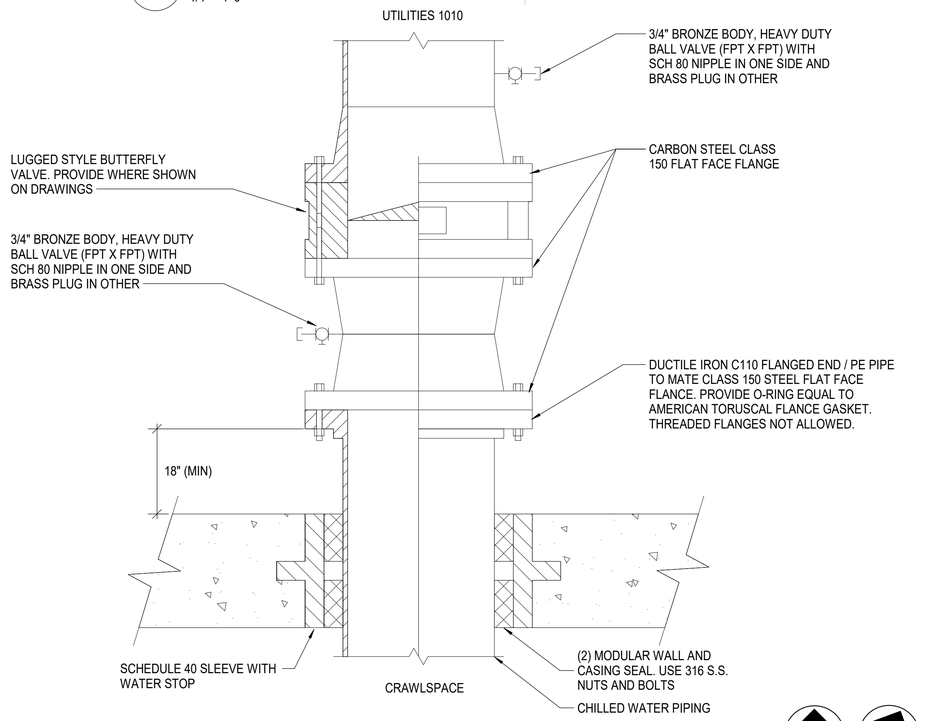
2 HVAC STEAM VAULT B004 ISOMETRIC



3 HVAC PART PLAN - UTILITIES 1010
1/4" = 1'-0"



4 HVAC SECTION - UTILITIES 1010 LOOKING NORTH
1/4" = 1'-0"



5 CHILLED WATER PIPE TRANSITION AT BUILDING
NO SCALE

PROJECT NORTH TRUE NORTH

GENERAL NOTES

SHEET SPECIFIC NOTES

LORD AECK SARGENT

REVISION:

NEWCOMB & BOYD
5425 Page Road
Suite 215
Durham, NC 27703
NB Contact: Reade Daniel
N&B PROJECT: 21N242
Newcomb & Boyd, LLP
Firm Lic. # P-0312

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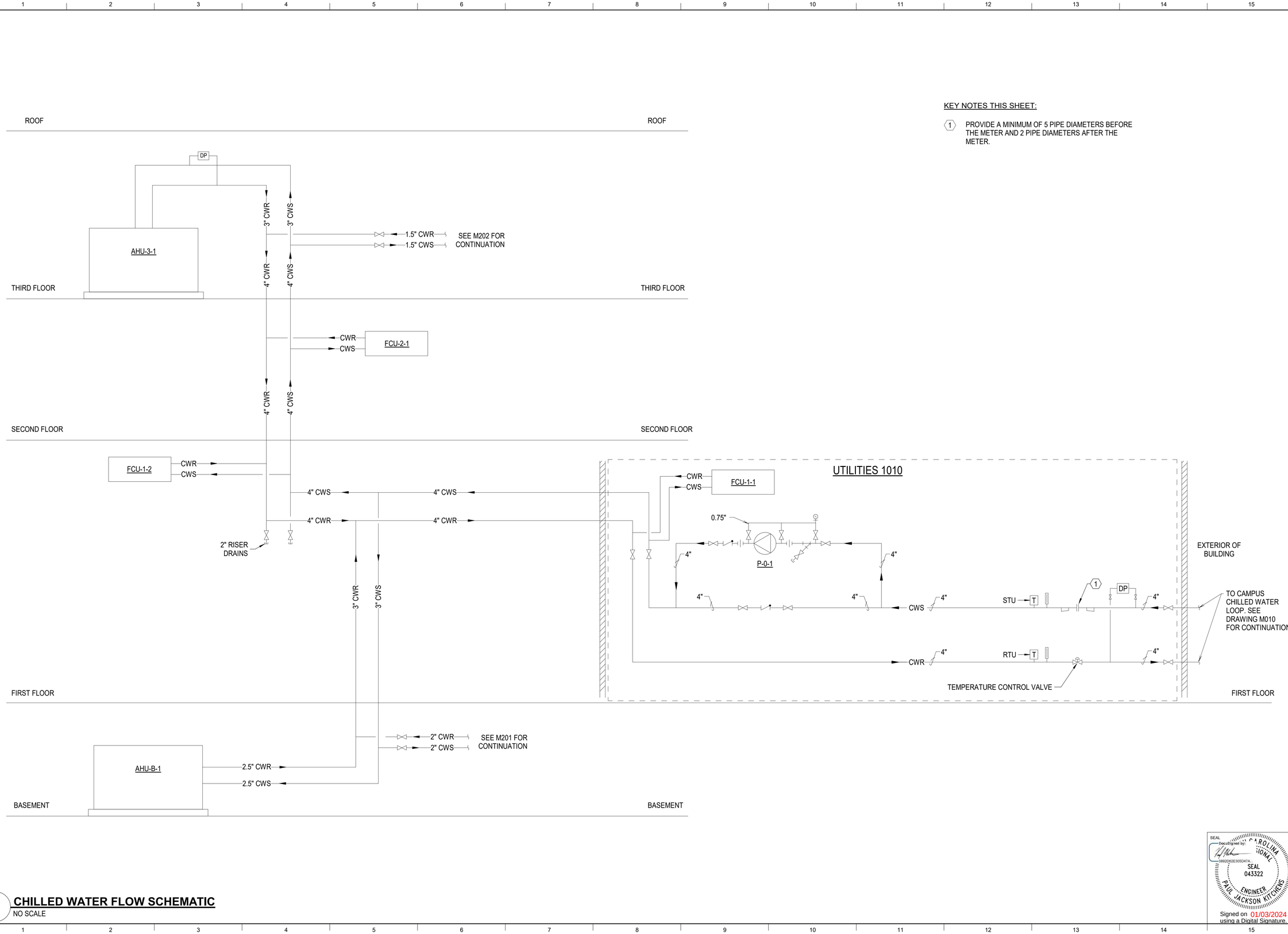
DocuSigned by:
0892D62E305D47A...
SEAL 043322
NORTH CAROLINA REGISTERED PROFESSIONAL ENGINEER PAUL JACKSON KITCHINS
Signed on 01/03/2024 using a Digital Signature.

ISSUE DATE
1/8/2024
JOB. NO.
11706-00
DWG. NO.
M302

SHEET TITLE
HVAC ENLARGED PLANS

SCALE (U.N.O.)
As indicated
0 4 8 FT

JOB NAME
University of North Carolina - Chapel Hill
SCI#: 21-25548-02A
BINGHAM HALL RENOVATION
LOCATION
36 Lenoir Drive, Chapel Hill, NC 27514



1 **CHILLED WATER FLOW SCHEMATIC**
NO SCALE

KEY NOTES THIS SHEET:

1 PROVIDE A MINIMUM OF 5 PIPE DIAMETERS BEFORE THE METER AND 2 PIPE DIAMETERS AFTER THE METER.

REVISION:

LORD AECK SARGENT

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5425 Page Road
Suite 215
Durham, NC 27703
NB Contact: Reade Daniel
N&B PROJECT: 21N242
Newcomb & Boyd, LLP
Firm Lic # P-0312

SHEET TITLE: HVAC CHILLED WATER FLOW SCHEMATIC
SCALE (U.N.O.): NO SCALE

JOB NAME: University of North Carolina - Chapel Hill
SCD#: 21-035482A
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

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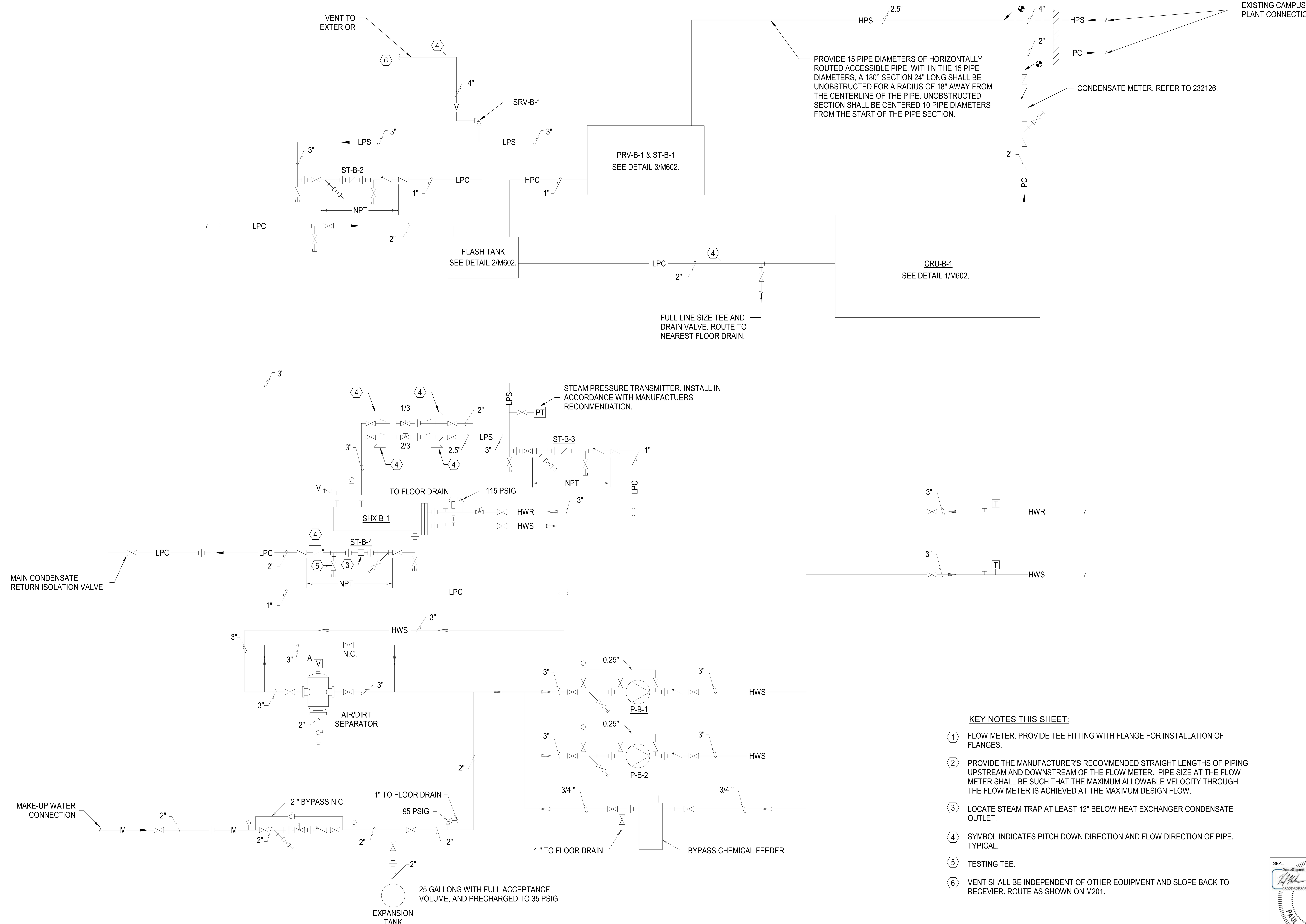
NORTH CAROLINA PROFESSIONAL SEAL 043322 ENGINEER PAUL JACKSON KITCHINS
Signed on 01/03/2024 using a Digital Signature.

ISSUE DATE: 1/8/2024
JOB. NO.: 11706-00
DWG. NO.: M401



KEY NOTES THIS SHEET:

1. FLOW METER. PROVIDE TEE FITTING WITH FLANGE FOR INSTALLATION OF FLANGES.
2. PROVIDE THE MANUFACTURER'S RECOMMENDED STRAIGHT LENGTHS OF PIPING UPSTREAM AND DOWNSTREAM OF THE FLOW METER. PIPE SIZE AT THE FLOW METER SHALL BE SUCH THAT THE MAXIMUM ALLOWABLE VELOCITY THROUGH THE FLOW METER IS ACHIEVED AT THE MAXIMUM DESIGN FLOW.
3. LOCATE STEAM TRAP AT LEAST 12" BELOW HEAT EXCHANGER CONDENSATE OUTLET.
4. SYMBOL INDICATES PITCH DOWN DIRECTION AND FLOW DIRECTION OF PIPE. TYPICAL.
5. TESTING TEE.
6. VENT SHALL BE INDEPENDENT OF OTHER EQUIPMENT AND SLOPE BACK TO RECEVIER. ROUTE AS SHOWN ON M201.

1 **HVAC STEAM FLOW SCHEMATIC**
NO SCALE

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LORD AECK SARGENT

REVISION:

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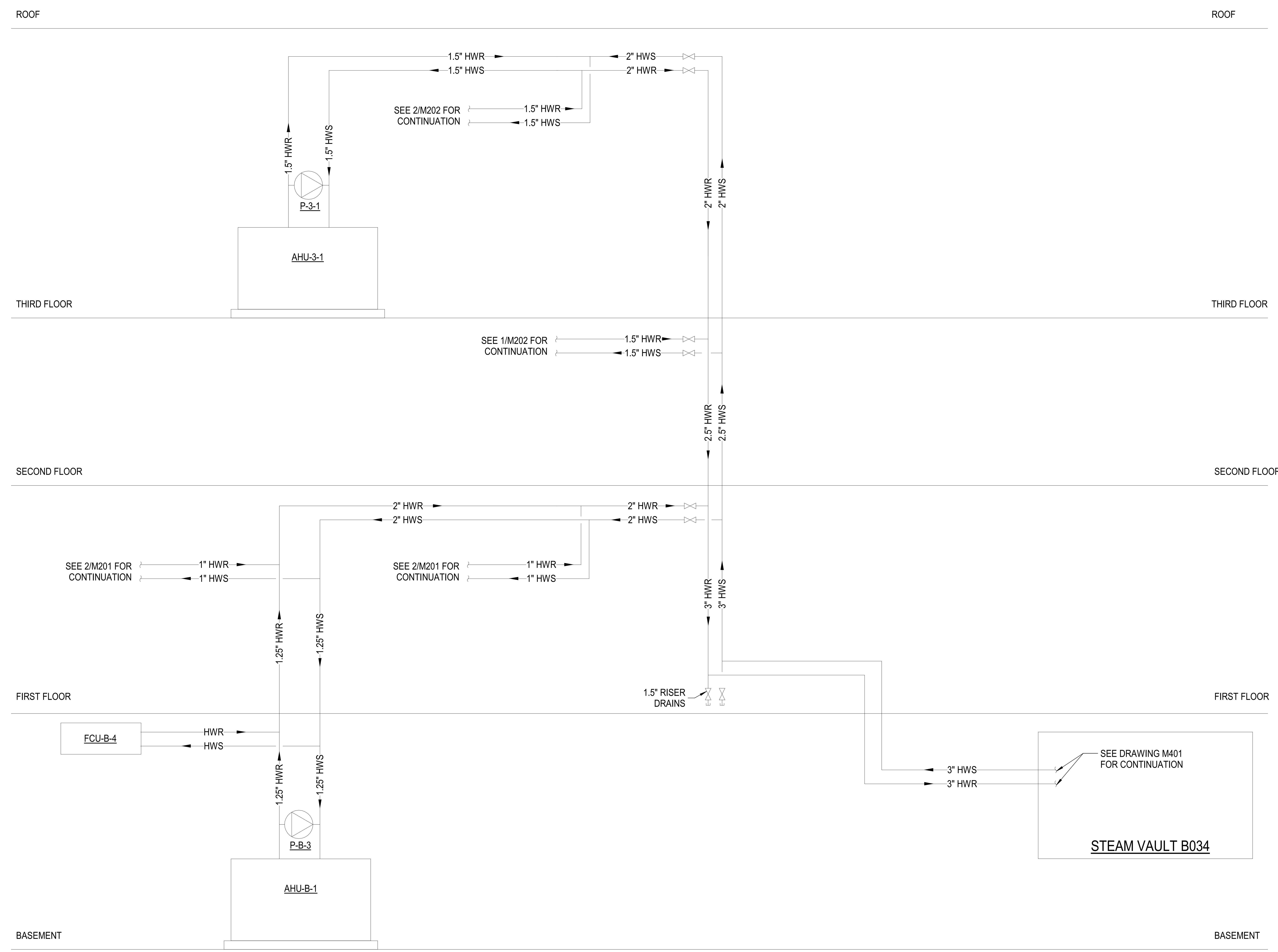
5425 Page Road
Suite 215
Durham, NC 27703
N&B Contact: Reade Daniel
N&B PROJECT: 21N242
Newcomb & Boyd, LLP
Firm Lic. # F-0312

SHEET TITLE: HVAC STEAM FLOW SCHEMATIC
SCALE (U.N.O.): NO SCALE

JOB NAME: University of North Carolina - Chapel Hill
SCO# 21-23548-02A
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

SEAL
DocuSigned by:
SEAL 043322
ENGINEER
PAUL JACKSON KITCHENS
Signed on 01/03/2024 using a Digital Signature.

ISSUE DATE: 1/8/2024
JOB. NO. 11706-00
DWG. NO. M402



1 **HOT WATER FLOW SCHEMATIC**
NO SACLE

LORD AECK SARGENT

REVISION:

NEWCOMB & BOYD
5425 Page Road
Suite 215
Durham, NC 27703
NB Contact: Reade Daniel
N&B PROJECT: 21N042
Newcomb & Boyd, LLP
Firm Lic. # F-0312

SHEET TITLE
HVAC HOT WATER FLOW SCHEMATIC

SCALE (U.N.O.)
NO SACLE

JOB NAME
University of North Carolina - Chapel Hill
SCO# 21-23548-02A
BINGHAM HALL RENOVATION

LOCATION
36 Lenoir Drive, Chapel Hill, NC 27514

SEAL
DocuSigned by:
SEAL 043322
ENGINEER
PAUL JACKSON KITCHENS
Signed on 01/03/2024 using a Digital Signature.

ISSUE DATE
1/8/2024

JOB. NO.
11706-00

DWG. NO.
M403

RISER DESIGNATIONS

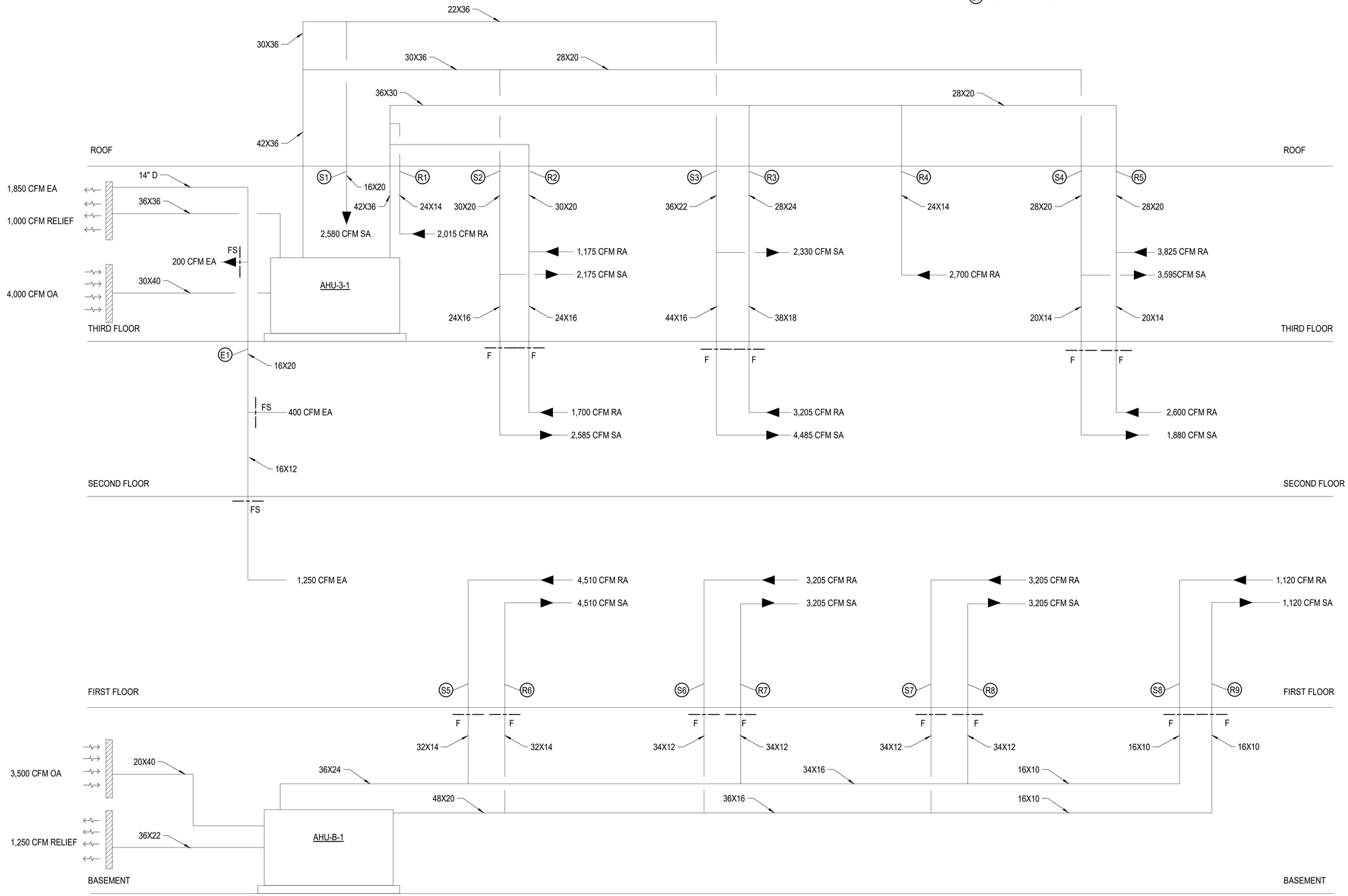
S1 ▶ S8 GENERAL SUPPLY

R1 ▶ R9 GENERAL RETURN

E1 GENERAL EXHAUST

GENERAL NOTES

1. AIRFLOWS SHOWN ARE A SUM AND DO NOT REPRESENT PEAK OPERATING CONDITION.



1 DUCTWORK RISER FLOW SCHEMATIC

NO SCALE

LORD AECK SARGENT

REVISION:

NEWCOMB & BOYD
5425 Page Road
Suite 215
Durham, NC 27703
NB Contact: Reade Daniel
N&B PROJECT: 21N242
Newcomb & Boyd, LLP
Firm Lic. # P0312

SHEET TITLE: HVAC DUCTWORK RISER FLOW SCHEMATIC

SCALE (U.N.O.): NO SCALE

JOB NAME: University of North Carolina - Chapel Hill
SCI# 21-23845-02A

LOCATION: BINGHAM HALL RENOVATION
36 Lenoir Drive, Chapel Hill, NC 27514

SEAL
Docusigned by:
5892D62E3D5D47A...
NORTH CAROLINA PROFESSIONAL SEAL 043322 ENGINEER PAUL JACKSON KITCHENS
Signed on 01/03/2024 using a Digital Signature.

ISSUE DATE: 1/8/2024

JOB. NO.: 11706-00

DWG. NO.: M404

AIR HANDLING UNIT SCHEDULE PT 1

NO.	AREA SERVED (NOTE 1)	TYPE & CONFIGURATION (NOTE 2)	FAN: CFM	FAN: MAXIMUM RPM	FAN: TYPE (NOTE 3)	FAN: STATIC PRESSURE, IN. WG (NOTE 4): ESP.	FAN: STATIC PRESSURE, IN. WG (NOTE 4): MIN. FILTER ALLOWANCE	FAN: FAN ARRAY ARRANGEMENT (NOTE 5)	FAN: MOTOR: MINIMUM HP PER FAN	FAN: MOTOR: MAXIMUM TOTAL BRAKE HP	MINIMUM OA CFM (NOTE 7): LOWER LIMIT	MINIMUM OA CFM (NOTE 7): UPPER LIMIT
AHU-B-1	1ST FLOOR	DT-VV-HZ	10,000	1,800	P-AF	3.5	1.5"	2 X 1	10	16.5	1,725	3,500
AHU-3-1	2ND & 3RD FLOOR	DT-VV-HZ	17,000	1,800	P-AF	3.75	1.5"	2 X 2	10	26.8	2,000	4,000

AIR HANDLING UNIT SCHEDULE PT 2

COOLING COIL: CFM (NOTE 8)	COOLING COIL: MAXIMUM CHILLED WATER GPM (NOTE 9)	COOLING COIL: EAT ºF DB	COOLING COIL: EAT ºF WB	COOLING COIL: LAT ºF DB	COOLING COIL: LAT ºF WB	COOLING COIL: CONTROL VALVE TYPE (NOTE 10)	HEATING COIL: COIL SECTION AIRFLOW DURING MAXIMUM COOLING DEMAND, CFM (NOTE 11)	HEATING COIL: CONDITIONS DURING MAXIMUM HEATING DEMAND: CFM	GPM (NOTE 12)	EAT ºF	LAT ºF	HEATING COIL: TYPE - POSITION (NOTE 13)	HEATING COIL: CONTROL VALVE TYPE (NOTE 10)	FILTER DEPTH AND TYPE (NOTE 15)	VIBRATION ISOLATION: TYPE	VIBRATION ISOLATION: MIN. STATIC DEFLECTION, IN.	ELECTRICAL CONNECTIONS: VOLTAGE	MCA	MCOP	NOTES
10,000	67	81.8	67.6	52.0	52.0	2	10,000	5,000	13	26.5	55	S-P	2	PL-C	FS	1.5	480 V	14	40	14
17,000	100	79.6	66.0	52.0	52.0	2	17,000	5,100	15	21.8	55	S-P	2	PL-C	FS	1.5	480 V	14	40	14

NOTES:

1. DESIGN CONDITIONS:

	SUMMER	WINTER
OUTSIDE	95ºF DB, 76ºF WB	10ºF
OFFICE	75ºF DB, 50% RH	70ºF
CLASSROOM	75ºF DB, 50% RH	70ºF

2. CONFIGURATION:
   - DT DRAW-THROUGH
   - VV VARIABLE VOLUME
   - HZ HORIZONTAL
3. FAN TYPE:
   - FAN: P PLUG
   - WHEEL: AF AIRFOIL
4. EXTERNAL STATIC PRESSURE DOES NOT INCLUDE UNIT CASING, PLENUMS, DIFFUSER SECTION, UNIT MOUNTED HEATING AND COOLING COILS, OR FILTERS. THE TOTAL STATIC PRESSURE SHALL INCLUDE A FILTER PRESSURE DROP NO LOWER THAN THE MINIMUM FILTER ALLOWANCE AND CASING ENTRY AND EXIT LOSSES BASED ON THE ACTUAL OPENING SIZES.
5. SELECT FAN PERFORMANCE TO MEET THE SCHEDULED AIRFLOW. PROVIDE ALL INTERNAL WIRING, DISCONNECTS, AND MOTOR OVERLOAD PROTECTION TO EACH FAN IN ARRAY.
6. PROVIDE VFD WITH ALL OPTIONS LISTED:
   - F FIELD MOUNTED
7. THE CFM VALUES LISTED ARE THE LOWER AND UPPER LIMITS OF THE DCV CONTROL RANGE.
8. MAXIMUM FACE VELOCITY: 450 FPM
   MAXIMUM APD: 1.0" WG
9. CHILLED WATER BASED ON 45°F EWT, A MINIMUM DELTA-T OF 14°F, AND MAXIMUM 18' WPD.
10. CONTROL VALVE TYPE:
    - 2 2-WAY
11. COIL FACE AREA SHALL BE BASED ON THIS CFM WITH 0.2" WG AIR PRESSURE DROP.
12. HOT WATER BASED ON 160°F EWT, A MINIMUM DELTA-T OF 25°F, AND MAXIMUM 3' WPD.
13. TYPE: S STANDARD
    POSITION: P PREHEAT
14. REFER TO THE ELECTRICAL DRAWINGS FOR EQUIPMENT ELECTRICAL CHARACTERISTICS.
15. TYPE:
    - PL 2" PLEATED MERV 8
    - C 6" CARTRIDGE MERV 14

FAN SCHEDULE

NO.	AREA SERVED	TYPE (NOTES 1 & 2)	CFM	STATIC PRESSURE, IN. WG	MAXIMUM RPM	MOTOR: MINIMUM HP	MOTOR: MAXIMUM BRAKE HP	DRIVE (NOTE 32	VIBRATION ISOLATION: TYPE	VIBRATION ISOLATION: MINIMUM STATIC DEFLECTION, IN.	VIBRATION ISOLATION: VIBRATION BASE	ELECTRICAL CONNECTION: VOLTAGE	MCA	MCOP	NOTES
F-B-2	ELEVATOR EQUIPMENT	CID	370	0.3	1,000	0.25	0.05	D	LS	1.5	--	480 V	0.9	15	4
F-B-3	HOUSEKEEPING EXHAUST	CID	100	0.2	1,100	0.0625	0.03	D	--	--	--	480 V	1.875	15	4
F-1-1	HOUSEKEEPING EXHAUST	CID	100	0.2	1,100	0.0625	0.03	D	--	--	--	480 V	1.875	15	4
F-3-1	AHU-3-1 RELIEF	CID	15,000	2.0	1,300	10	7.7	D	LS	2.5	--	480 V	17.5	40	3,4
F-3-2	RESTROOM EXHAUST	CID	2,500	2.0	2,200	2	1.5	D	LS	1.5	--	480 V	4.25	15	3,4

NOTES:

1. TYPE:
   - CID CENTRIFUGAL INLINE DUCT
2. DRIVE:
   - D DIRECT
3. PROVIDE VFD.
4. REFER TO THE ELECTRICAL DRAWINGS FOR THE EQUIPMENT ELECTRICAL CHARACTERISTICS.

PUMP SCHEDULE

NO.	SERVICE	TYPE (NOTE 1)	GPM	TOTAL DYNAMIC HEAD, FT. WG	MINIMUM EFFICIENCY, %	RPM	MOTOR: MINIMUM HP	MOTOR: MAXIMUM BRAKE HP	VIBRATION ISOLATION: TYPE	VIBRATION ISOLATION: MINIMUM STATIC DEFLECTION, IN.	VIBRATION ISOLATION: INERTIA BASE	ELECTRICAL CONNECTION: VOLTAGE	MCA	MCOP	NOTES
P-B-1	HEATING HOT WATER	V	75	60	53	1,760	3.0	2.0	--	--	--	480 V	6	15	2,3
P-B-2	HEATING HOT WATER	V	75	60	53	1,760	3.0	2.0	--	--	--	480 V	6	15	2,3
P-B-3	AHU-B-1 HW RECIRC	V	13	10	70	1,760	0.125	0.1	--	--	--	120 V	2.8	15	2
P-1-1	CHILLED WATER	V	275	80	70	1,760	10	7.5	FS	2.0	--	480 V	17.5	15	2,4
P-3-1	AHU-3-1 HW RECIRC	V	15	10	70	1,760	0.125	0.1	--	--	--	120 V	2.8	15	2

NOTES:

1. TYPE:
   - V VERTICAL INLINE
2. REFER TO THE ELECTRICAL DRAWINGS FOR THE EQUIPMENT ELECTRICAL CHARACTERISTICS.
3. PROVIDE VFD.
4. VFD PROVIDED BY OWNER AND INSTALLED BY CONTRACTOR.

CONDENSATE RETURN UNIT SCHEDULE

NO.	TYPE (NOTE 1)	RECEIVER CAPACITY, GAL	DISCHARGE PRESSURE, PSIG	GPM (NOTE 2)	MINIMUM MOTOR HP (NOTE 2)	ELECTRICAL CONNECTION: VOLTAGE	MCA	MCOP	NOTES
CRU-B-1	P	15	75	6	3.0	480 V	5.0	15.0	3

NOTES:

1. TYPE:
   - P PEC
2. GPM AND MOTOR HP IS FOR EACH PUMP.
3. REFER TO THE ELECTRICAL DRAWINGS FOR THE EQUIPMENT ELECTRICAL CHARACTERISTICS.

UNIT HEATER SCHEDULE

NO.	AREA SERVED	TYPE (NOTE 1)	CAPACITY, kW (NOTE 2)	NOMINAL CFM	MOUNTING HEIGHT, FEET (NOTE 3)	ELECTRICAL CONNECTION: VOLTAGE	MCA	MCOP	NOTES
UH-1-1	NORTH STAIR	W	5.5	300	4	277 V	24.8	30	4
UH-1-2	SOUTH STAIR	W	6.5	300	4	277 V	29.3	30	4
UH-B-1	STEAM ROOM	W	1	100	4	277 V	4.5	15	4

NOTES:

1. TYPE:
   - W WALL
2. BASED ON 60ºF EAT.
3. FOR EXPOSED HORIZONTAL AND VERTICAL TYPES ONLY. HEIGHT IS TO CENTERLINE OF HEATER ABOVE FINISHED FLOOR.
4. REFER TO THE ELECTRICAL DRAWINGS FOR THE EQUIPMENT ELECTRICAL CHARACTERISTICS.

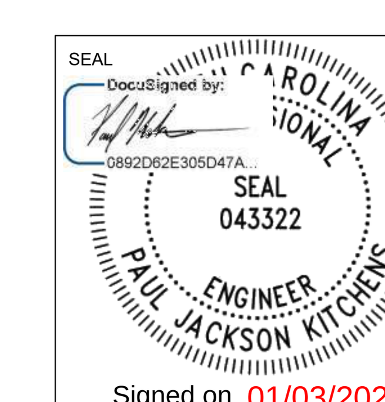
SHELL AND TUBE HEAT EXCHANGER SCHEDULE (STEAM-TO-WATER)

NO.	SYSTEM	STEAM IN SHELL: LB/H	STEAM IN SHELL: ENTERING PRESSURE, PSIG (SEE NOTE 1)	WATER IN TUBES: MAXIMUM FOULING FACTOR	WATER IN TUBES: GPM	WATER IN TUBES: MAXIMUM PRESSURE DROP, FT. WG.	WATER IN TUBES: TEMP.ºF ENT	WATER IN TUBES: TEMP.ºF LVG	CONTROL VALVE Cv: VALVE 1	CONTROL VALVE Cv: VALVE 2
SHX-B-1	HEATING HOT WATER	1,000	13	0.001	75	1	160	135	7.0	13.9

NOTES:

1. STEAM PRESSURE AFTER CONTROL VALVES.

SEAL



LORD AECK SARGENT

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SHEET TITLE: HVAC SCHEDULES

SCALE (U.N.O.)

JOB NAME: University of North Carolina - Chapel Hill

SCO#: 21-23548-02A

BINGHAM HALL RENOVATION

LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

ISSUE DATE: 1/8/2024

JOB. NO.: 11706-00

DWG. NO.: M501

DUCT ACCESS DOOR SCHEDULE

DUCT SIZE	MINIMUM DOOR SIZE	MAXIMUM LEAKAGE
< 18"	12"X6"	0.064 CFM
18" - 28"	18"X10"	0.133 CFM
> 28"	21"X14"	0.206 CFM
BODY ACCESS	25"X17"	0.286 CFM

STEAM PRESSURE REDUCING VALVE ASSEMBLY SCHEDULE

NO.	LOCATION	STEAM PRESSURE, PSIG		CAPACITY, LB/H
		ENTERING	LEAVING	
PRV-B-1	STEAM VAULT B004	30	15	1,000

NOTES:
1. RELIEF VALVE CAPACITY SHALL BE EQUAL TO THE MAXIMUM CAPACITY OF THE PRV.

STEAM TRAP SCHEDULE

NO.	SERVICE	TYPE (NOTE 1)	MINIMUM CAPACITY, LBS/HR
ST-B-1	UPSTREAM OF PRV	IB	300
ST-B-2	DOWNSTREAM OF PRV	IB	300
ST-B-3	LPS CTRL VALVE DRIP LEG	IB	300
ST-B-4	SHX-B-1 CONDENSATE	FT	1,000

NOTES:
1. TYPE:
   IB INVERTED BUCKET
   FT FLOAT-AND-THERMOSTATIC
2. TRAP LOCATIONS SHOWN ON FLOW SCHEMATIC ARE BASED ON PIPE LAYOUT DEPCITED ON FLOOR PLANS AND DO NOT REPRESENT FINAL INSTALLED LOCATIONS OR QUANTITY. CONTRACTOR SHALL LOCATE TRAPS PER SECTION 232216.

FILTER SCHEDULE

NO.	SYSTEM SERVED	TYPE (NOTE 1)	SIZE, INCHES
FL-B-1	AHU-B-1	PL	30X14
FL-3-1	AHU-3-1	PL	24X24

NOTES:
1. TYPE:
   PL 2" PLEATED

STEAM SAFETY RELIEF VALVE SCHEDULE

NO.	SERVICE	RELIEF VALVE SETTING PRESSURE	NOTES
SRV-B-1	PRV-B-1	25 PSIG	1

NOTES:
1. RELIEF VALVE CAPACITY SHALL BE EQUAL TO THE MAXIMUM CAPACITY OF THE PRV.

AIR DISTRIBUTION SCHEDULE

PRODUCT SPECIFICATIONS:
1. ACTION SUBMITTALS - PRODUCT DATA: FOR EACH TYPE OF PRODUCT.
   a.DATA SHEET: INDICATE MATERIALS OF CONSTRUCTION, FINISH, AND MOUNTING DETAILS; AND PERFORMANCE DATA INCLUDING THROW AND DROP, STATIC-PRESSURE DROP, AND NOISE RATINGS.
2. SELECTION OF GRILLES, REGISTERS AND DIFFUSERS SHALL BE BASED ON AIR INTRODUCED AT A 20°F TEMPERATURE DIFFERENTIAL.
3. GRILLES AND REGISTERS WITH BORDERS SHALL HAVE FELT OR RUBBER GASKETS CEMENTED TO THE BACK FACE AND HOLDING SCREWS NOT OVER 18" ON CENTER AROUND THE PERIMETER.
4. WALL-MOUNTED GRILLES AND REGISTERS LOCATED LESS THAN 7' ABOVE FINISHED FLOOR SHALL BE HEAVY DUTY, IMPACT-RESISTANT TYPE.
5. DIFFUSERS IN LAY-IN CEILINGS SHALL LAY IN A NOMINAL 24" X 24" GRID OPENING AND SHALL BE FURNISHED WITHOUT EXPOSED FLANGES.
6. PERFORATED PLATE DIFFUSERS IN LAY-IN CEILINGS WITH TEGULAR TILE PATTERNS SHALL HAVE A DROPPED FACE.
7. DIFFUSERS SHALL HAVE ROUND NECKS OR SHALL BE PROVIDED WITH SQUARE-TO-ROUND COLLARS WHERE CONNECTED TO ROUND OR FLEXIBLE DUCT.
8. FINISHES, UNLESS OTHERWISE SPECIFIED HEREIN:
   a.STEEL GRILLES AND REGISTERS: WHITE BAKED ENAMEL.
   b.DIFFUSER FACES AND FRAMES: COLOR SELECTED BY ARCHITECT.
   c.DIFFUSERS INTERIOR: FLAT BLACK.
   d.T-BAR SLOT DIFFUSERS: FLAT BLACK.
9. GRILLES, REGISTERS AND DIFFUSERS SHALL BE PROVIDED WITH FRAMES, BORDERS, AND MOUNTING ATTACHMENTS FOR INSTALLATION IN THE ACTUAL WALL, SOFFIT, AND CEILING CONSTRUCTION IN WHICH INSTALLED.
10. REUSED GRILLES, REGISTERS, DIFFUSERS AND DAMPERS SHALL BE IN FIRST CLASS CONDITION OR NEW SHALL BE INSTALLED.
11. WALL RETURN AND RELIEF GRILLES INSTALLED ABOVE EYE LEVEL SHALL BE INSTALLED WITH BLADES ANGLED SO THE INSIDE OF THE DUCT OR THE ADJACENT SPACE WILL NOT BE VISIBLE THROUGH THE GRILLES.
12. FINISH SHALL BE COORDIANTED WITH ARCHITECT.
13. EXAMINATION
   a.EXAMINE AREAS WHERE DIFFUSERS ARE INSTALLED FOR COMPLIANCE WITH REQUIREMENTS FOR INSTALLATION TOLERANCES AND OTHER CONDITIONS AFFECTING PERFORMANCE OF EQUIPMENT.
   b.PROCEED WITH INSTALLATION ONLY AFTER UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.
14. INSTALLATION
   a.INSTALL DIFFUSERS LEVEL AND PLUMB.
   b.OUTLETS AND INLETS: DRAWINGS INDICATE GENERAL ARRANGEMENT OF DUCTS, FITTINGS, AND ACCESSORIES. AIR OUTLET AND INLET LOCATIONS HAVE BEEN INDICATED TO ACHIEVE DESIGN REQUIREMENTS FOR AIR VOLUME, NOISE CRITERIA, AIRFLOW PATTERN, THROW, AND PRESSURE DROP. MAKE FINAL LOCATIONS WHERE INDICATED, AS MUCH AS PRACTICAL. FOR UNITS INSTALLED IN LAY-IN CEILING PANELS, LOCATE UNITS IN THE CENTER OF PANEL. WHERE ARCHITECTURAL FEATURES OR OTHER ITEMS CONFLICT WITH INSTALLATION, NOTIFY ARCHITECT. FOR A DETERMINATION OF FINAL LOCATION.
   c.INSTALL DIFFUSERS WITH AIRTIGHT CONNECTIONS TO DUCTS AND TO ALLOW SERVICE AND MAINTENANCE OF DAMPERS, AND FIRE DAMPERS.
   d.INSTALL REGISTERS AND GRILLES WITH AIRTIGHT CONNECTIONS TO DUCTS AND TO ALLOW SERVICE AND MAINTENANCE OF DAMPERS, AND FIRE DAMPERS.
15. AFTER INSTALLATION, ADJUST DIFFUSERS TO AIR PATTERNS INDICATED, OR AS DIRECTED, BEFORE STARTING AIR BALANCING.

TYPE	CHARACTERISTICS						MANUFACTURER	DESCRIPTION
S-PF	---	---	---	---	---	---	NOTE 1	SQUARE PLATE FACE DIFFUSER TYPE WITH SINGLE SQUARE AIR DIFFUSION PANEL. DIFFUSERS SHALL HAVE AN 18" X 18" STEEL FACE PANEL MOUNTED ON AN AERODYNAMICALLY SHAPED, ONE-PIECE, SEAMLESS 24" X 24" BACKPAN. EXPOSED SURFACES OF FACE PANELS SHALL BE SMOOTH, FLAT, AND FREE OF VISIBLE FASTENERS.
S-SG	---	---	---	---	---	---	NOTE 1	SIDEWALL SUPPLY GRILLE, DOUBLE-DEFLECTION TYPE WITH VERTICAL FRONT BLADES AND HORIZONTAL REAR BLADES.
S-LD-1 S-LD-2 S-LD-3	NUMBER OF SLOTS 2 3 4	SLOT WIDTH 1" 1" 1"	---	---	---	---	NOTE 1	4' LINEAR DIFFUSER, EXTRUDED ALUMINUM TYPE, WITH INTEGRAL VOLUME CONTROL AND PATTERN ADJUSTMENT AND CONCEALED MOUNTING FRAME WITH FACTORY FURNISHED PLENUM. FINISH SHALL BE COORDINATED WITH ARCHITECT, AND INTERIOR COMPONENTS VISIBLE AFTER INSTALLATION FINISHED FLAT BLACK. ALL DIFFUSERS SHOWN IN TEGULAR CEILING GRID SHALL INTERFACE PER CEILING MANUFACTURER INSTALLATION INSTRUCTIONS.
R-RP	---	---	---	---	---	---	NOTE 1	PERFORATED PLATE GRILLE, SAME AS SUPPLY DIFFUSER, BUT WITHOUT PATTERN ADJUSTMENT DEVICE. ENTIRE GRILLE FACE SHALL BE PERFORATED, SIZE ON DRAWINGS REFERS TO BACK PAN DUCT CONNECTION SIZE.
R-SG E-SG	--- ---	--- ---	--- ---	--- ---	--- ---	--- ---	NOTE 1 NOTE 1	SIDEWALL GRILLE, SINGLE-DEFLECTION, 35° FIXED POSITION, 0.5" ON CENTER, HORIZONTAL BLADES.
E-EG	---	---	---	---	---	---	NOTE 1	EGGCRATE GRILLE, 0.5" X 0.5" X 0.5" FABRICATED ALUMINUM EGGCRATE. ENTIRE GRILLE FACE SHALL BE EGGCRATE, SIZE ON DRAWINGS REFERS TO BACK PAN DUCT CONNECTION SIZE.

NOTES:
1. MANUFACTURER: ANEMOSTAT, CARNES, KRUEGER, METAL*AIRE, NAILOR, E.H. PRICE, TITUS, OR TUTTLE & BAILEY.

SOUND ATTENUATOR SCHEDULE

NO.	SERVICE	TYPE (NOTE 1)	NOMINAL DIMENSIONS, IN.			AIRFLOW CFM (NOTE 3)	VELOCITY, FT/MIN (NOTE 3)	MAX. APD, IN. WG	MINIMUM DYNAMIC INSERTION LOSS, dB, OCTAVE BAND CENTER FREQUENCY, Hz								MAXIMUM GENERATED NOISE, dB, OCTAVE BAND CENTER FREQUENCY, Hz								NOTES
			LENGTH (NOTE 2)	WIDTH/ INSIDE DIA.	HEIGHT/ OUTSIDE DIA.				63	125	250	500	1000	2000	4000	8000	63	125	250	500	1000	2000	4000	8000	
SA-B-1	AHU-B-1 RETURN	RS	36	36	24	-11,500	-1,500	0.20	3	7	6	10	8	12	10	8	57	51	45	41	41	42	34	29	4,5,6
SA-B-2	AHU-B-1 SUPPLY	RS	48	48	20	11,500	1,500	0.20	3	3	3	8	6	6	5	6	56	46	37	36	38	39	23	26	4,5,6
SA-3-2	AHU-3-1 SUPPLY 1	RS	36	30	36	10,870	1,449	0.20	3	3	3	7	11	10	9	9	55	54	47	46	48	49	40	31	4,5,6
SA-3-3	AHU-3-1 SUPPLY 2	ES	84	16	20	2,580	1,161	0.20	3	7	17	31	34	33	31	31	55	34	23	23	24	19	10	12	4,5,6
SA-3-4	AHU-3-1 SUPPLY 3	RS	60	36	30	8500	1,133	0.20	4	4	9	20	18	17	15	15	54	35	26	25	25	20	10	14	4,5,6

NOTES:
1. TYPE:
   R RECTANGULAR S STANDARD
   E ELBOW
2. ELBOW SOUND ATTENUATOR LENGTHS SHOWN ARE COMBINED CENTERLINE LENGTHS.
3. FORWARD AIR FLOW (+); REVERSE AIR FLOW (-).
4. AIR FLOW, INSERTION LOSS, AND SELF-GENERATED NOISE PERFORMANCE SHALL BE IN ACCORDANCE WITH ASTM E477-2013e OR MORE RECENT.
5. SELF-GENERATED NOISE SHALL BE BASED ON ASTM E477-2013 OR MORE RECENT, MEASUREMENT DATA WITH CORRECTIONS BASED ON SILENCER CROSS SECTIONAL AREA.
6. ASTM E477-2013 OR MORE RECENT TEST REPORTS SHALL BE PROVIDED UPON REQUEST FROM THE ENGINEER.

SEAL
DocuSigned by:
D892D62E305D47A...
NORTH CAROLINA PROFESSIONAL
SEAL 043322
ENGINEER
PAUL JACKSON KITCHINS
Signed on 01/03/2024 using a Digital Signature.

LORD AECK SARGENT

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Firm Lic. # P-0212

SHEET TITLE: HVAC SCHEDULES
SCALE (U.N.O.)

JOB NAME: University of North Carolina - Chapel Hill
SCI#: 21-25548-00A
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

ISSUE DATE: 1/8/2024
JOB. NO. 11706-00
DWG. NO. M502

VARIABLE FREQUENCY DRIVE SCHEDULE

NO.	LOCATION	SERVICE	HP	VOLTAGE/ PHASE	UL ENCLOSURE TYPE	BYPASS	INPUT DISCONNECTING MEANS
VFD-B-1	MECH B029	AHU-B-1	10	480/3	TYPE 1	YES	FUSED DISCONNECT
VFD-B-2	MECH B029	AHU-B-1	10	480/3	TYPE 1	YES	FUSED DISCONNECT
VFD-B-3	STEAM VAULT B004	P-B-1	3.0	480/3	TYPE 1	YES	FUSED DISCONNECT
VFD-B-4	STEAM VAULT B004	P-B-1	3.0	480/3	TYPE 1	YES	FUSED DISCONNECT
VFD-1-1	UTILITIES 1010	P-1-1	7.5	480/3	TYPE 1	YES	FUSED DISCONNECT
VFD-3-1	MECH 3028	AHU-3-1	10	480/3	TYPE 1	YES	FUSED DISCONNECT
VFD-3-2	MECH 3028	AHU-3-1	10	480/3	TYPE 1	YES	FUSED DISCONNECT
VFD-3-3	MECH 3028	AHU-3-1	10	480/3	TYPE 1	YES	FUSED DISCONNECT
VFD-3-4	MECH 3028	AHU-3-1	10	480/3	TYPE 1	YES	FUSED DISCONNECT
VFD-3-5	MECH 3028	F-3-1	10	480/3	TYPE 1	YES	FUSED DISCONNECT
VFD-3-6	MECH 3028	F-3-2	2	480/3	TYPE 1	YES	FUSED DISCONNECT

FAN-COIL UNIT SCHEDULE

NO.	AREA SERVED	TYPE (NOTE 1)	MINIMUM MOTOR HP	NOMINAL CFM (NOTE 2)	COOLING COIL			HEATING COIL (NOTE 5)			ELECTRICAL CONNECTION			NOTES
					SENSIBLE MBH	GPM	RUNOUT SIZES, IN.	MBH	GPM	RUNOUT SIZES, IN.	VOLTAGE	MCA	MCOP	
FCU-B-1	TELECOM B031	W	1/12	850	24	8	1.0				120 V	2.8	15.0	3,6
FCU-B-2	MECH B029	W	1/12	850	24	8	1.0	12	1.0	0.75	120 V	2.8	15.0	3,6
FCU-B-3	ELEC B026	W	1/12	850	24	8	1.0				120 V	2.8	15.0	3,6
FCU-B-4	CRAWLSPACE	D	1/2	550	13	3.8	1.0	13	1.0	0.75	120 V	6.0	15.0	4,6
FCU-1-1	UTILITIES 1010	W	1/12	850	24	8	1.0	12	1.0	0.75	120 V	2.8	15.0	3,6
FCU-1-2	ELEC 1026A	W	1/12	850	24	8	1.0				120 V	2.8	15.0	3,6
FCU-2-1	ELEC 2026A	W	1/12	850	24	8	1.0				120 V	2.8	15.0	3,6
FCU-3-1	TELECOM 3026	W	1/12	850	24	8	1.0				120 V	2.8	15.0	3,6
FCU-3-2	ELEC 3028A	W	1/12	850	24	8	1.0				120 V	2.8	15.0	3,6
FCU-3-3	MECH 3028	W	1/12	850	24	8	1.0	12	1.0	0.75	120 V	2.8	15.0	3,6

NOTES:

1. TYPE:
   W HIGH WALL
   D DUCTED
2. CFM BASED ON HIGH FAN SPEED.
3. CHILLED WATER BASED ON: 75°F DB AND 63°F WB EAT, 45°F EWT, 14° DIFFERENTIAL, AND MAXIMUM 20' WPD.
4. CHILLED WATER BASED ON: 80°F DB AND 71°F WB EAT, 45°F EWT, 14° DIFFERENTIAL, AND MAXIMUM 3' WPD.
5. HOT WATER BASED ON: 70°DB EAT, 160°F EWT, 25° DIFFERENTIAL, AND MAXIMUM 3' WPD. ALL COILS TO BE IN THE REHEAT POSITION.
6. REFER TO THE ELECTRICAL DRAWINGS FOR THE EQUIPMENT ELECTRICAL CHARACTERISTICS.

TERMINAL UNIT SCHEDULE

NO.	TYPE (NOTE 1)	PRIMARY CFM			HOT WATER COIL		PIPE RUNOUT SIZE, IN.	SOUND POWER LEVEL, dB (NOTE 4) OCTAVE BAND						NOTES
								CASING RADIATED			DISCHARGE			
		COOLING MAXIMUM	MINIMUM	HEATING MAXIMUM	CAPACITY MBH (NOTE 2)	GPM (NOTE 3)		2	3	4	2	3	4	
S101	VV-R	1650	495	825	34.9	2.8	0.75"	63	57	53	73	62	53	8
S102	VV-R	660	200	330	12.7	1.0	0.75"	63	57	53	62	58	58	8
S103	VV-R	175	55	90	3.4	1.0	0.75"	63	57	53				
S104	VV-R	720	220	360	13.6	1.1	0.75"	50	43	36	61	50	42	
S105	VV-R	390	120	195	7.4	1.0	0.75"	63	57	53	62	58	58	8
S106	VV-R	720	220	360	19.6	1.6	0.75"	63	57	53	63	53	46	8
S107	VV-R	480	145	240	9.1	1.0	0.75"	63	57	53				
S108	VV-R	495	150	250	9.5	1.0	0.75"	63	57	53	66	63	67	8
S109	VV-R	2200	660	1100	49.2	4.1	1"	63	57	53	78	67	60	8
S110	CV-R	950	950	950	35.9	3.0	0.75"							
S111	VV-R	720	220	360	13.6	1.1	0.75"	50	43	36	61	50	42	
S112	VV-R	1500	450	750	33.5	2.8	0.75"	63	57	53	71	60	52	8
S113	VV-R	825	250	415	15.7	1.3	0.75"	63	57	53	62	58	58	8
S114	VV-R	175	55	90	3.4	1.0	0.75"	63	57	53				
S201	VV-R	550	165	275	10.4	1.0	0.75"	63	58	54	77	66	57	
S202	VV-R	150	50	75	2.8	1.0	0.75"	63	58	54	70	66	67	
S203	VV-R	1060	320	530	22.2	1.8	0.75"	59	54	49	67	57	50	
S204	VV-R	1435	435	720	27.7	2.3	0.75"	59	54	49	65	54	46	
S205	VV-R	1005	305	505	19.2	1.6	0.75"	59	54	49	65	54	46	
S206	VV-R	100	50	50	1.9	1.0	0.75"	63	58	43	59	57	59	
S207	VV-R	1100	330	550	22.1	1.8	0.75"	63	58	43	69	58	51	
S208	VV-R	840	255	420	15.9	1.3	0.75"	67	61	57	70	67	71	8
S210	VV-R	840	255	420	32.5	2.7	0.75"	67	61	57	82	71	64	8
S211	CV-R	500	500	500	18.9	1.6	0.75"							
S212	VV-R	400	120	200	7.6	1.0	0.75"							
S213	VV-R	75	50	50	1.9	1.0	0.75"	59	54	49	59	57	59	
S214	VV-R	1000	300	500	24.3	2.0	0.75"	63	57	53	75	64	56	8
S215	VV-R	620	190	310	11.7	1.0	0.75"	63	57	53	62	58	58	8
S216	VV-R	350	105	175	6.6	1.0	0.75"	63	57	53	160	154	149	
S301	VV-R	1160	350	580	24.5	2.0	0.75"	59	54	49	65	54	46	
S302	VV-R	1130	340	565	23.2	1.9	0.75"	59	54	49	67	57	50	
S303	VV-R	880	265	440	17.9	1.5	0.75"	59	54	49	65	54	46	
S304	VV-R	1120	340	560	23.5	1.9	0.75"	55	50	45	61	50	42	
S305	VV-R	495	150	250	9.5	1.0	0.75"	55	50	45				
S306	VV-R	520	160	260	9.8	1.0	0.75"	63	57	53				8
S307	VV-R	1400	420	700	26.5	2.2	0.75"	63	57	53	65	54	46	8
S308	VV-R	495	150	250	9.5	1.0	0.75"	63	57	53				
S311	VV-R	700	210	350	13.2	1.1	0.75"	67	61	57	70	67	71	8
S312	VV-R	1840	555	920	41.4	3.4	0.75"	67	61	57	77	66	57	8
SB01	VV-R	460	460	460	17.4	1.4	0.75"							

NOTES:

1. TYPE:
   VV VARIABLE VOLUME - R REHEAT
   CV CONSTANT VOLUME
2. CAPACITY BASED ON 55°F EAT FOR VV-R AND CV-R UNITS.
3. HOT WATER BASED ON 160°F EWT, A MINIMUM DELTA-T OF 25F, AND A MAXIMUM OF 3' WPD.
4. SEE SPECIFICATIONS FOR AHRI TESTING/CERTIFICATION REQUIREMENTS AND SUPPLEMENTAL SOUND ATTENUATION REQUIREMENTS.
   FOR TERMINAL UNITS WHERE THE SOUND POWER LEVEL FIELDS OF THE SCHEDULE ABOVE ARE LEFT BLANK, THE MAXIMUM ALLOWABLE SOUND POWER LEVELS N dB @ 10 pW, SHALL BE THE FOLLOWING LEVELS:

	OCTAVE BAND 2	3	4
CASING RADIATED	71	66	63
DISCHARGE, LESS THAN 900 CFM	66	63	59
DISCHARGE, 900 CFM OR MORE	68	63	61

   TERMINAL UNITS SHALL BE UPSIZED TO MEET SCHEDULED SOUND POWER LIMITS IF NEEDED.
5. DIFFERENTIAL STATIC PRESSURE DROP ACROSS COMPLETE ASSEMBLY, INCLUDING HEATING COIL, FOR ALL UNITS SHALL NOT EXCEED 0.3" WG APD.
6. REFER TO THE ELECTRICAL DRAWINGS FOR THE EQUIPMENT ELECTRICAL CHARACTERISTICS.
7. THE DRAWINGS INDICATE THE DESIGN INTENT TO PROVIDE ACCESS TO HEATING COILS, CONTROL PANELS, AND ACCESS DOORS. IF TERMINAL UNITS PROVIDED ARE CONFIGURED DIFFERENTLY, THE ACCESS REQUIREMENTS SHALL BE ADJUSTED IN THE FIELD.
8. TERMINAL UNIT TO HAVE DEMAND CONTROL VENTILATION CAPABILITY AS DESCRIBED IN SPECIFICATION 238006.
9. ALL TERMINAL UNITS TO BE 24V WITHOUT INTEGRAL TRANSFORMER.

LORD AECK SARGENT

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SHEET TITLE: HVAC SCHEDULES
SCALE (U.N.O.)

JOB NAME: University of North Carolina - Chapel Hill
SCD#: 21-035482A
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

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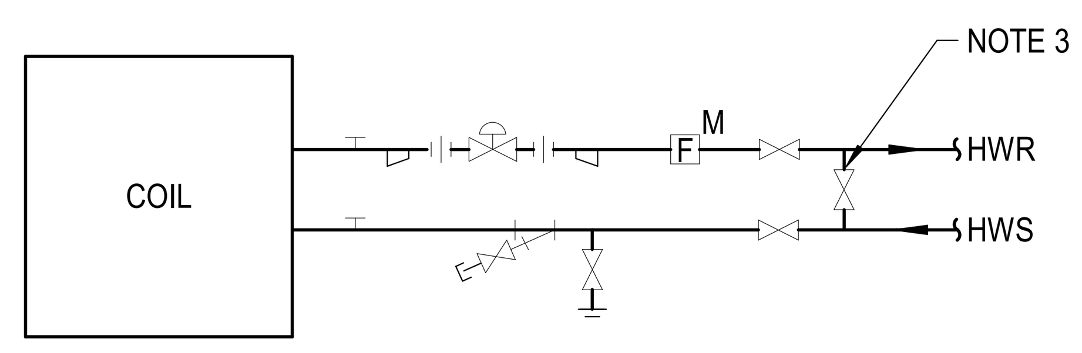
SEAL 043322
ENGINEER PAUL JACKSON KITCHINS
Signed on 01/03/2024 using a Digital Signature.

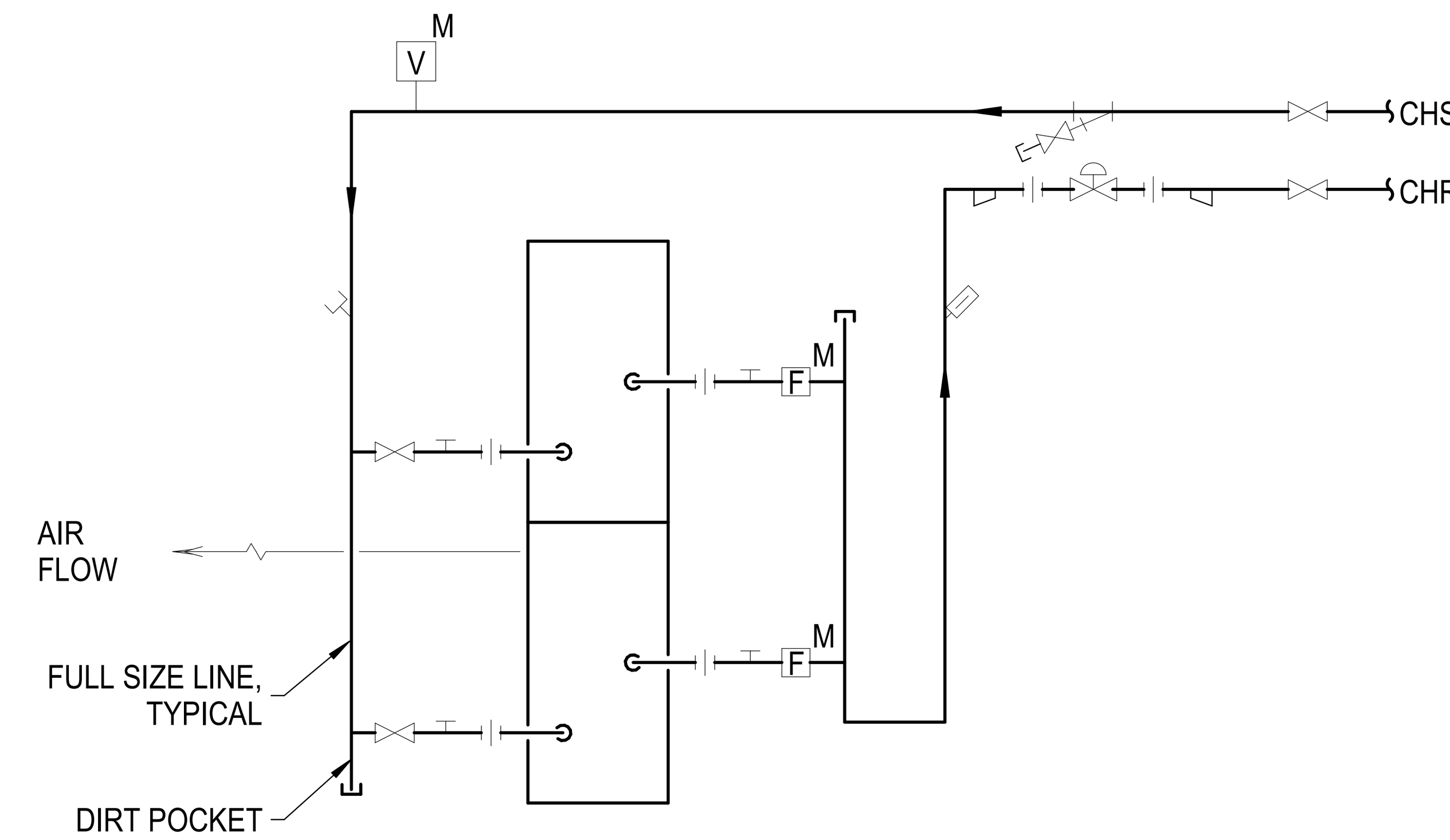
ISSUE DATE: 1/8/2024
JOB. NO.: 11706-00
DWG. NO.: M503



FOR 2-WAY VALVES

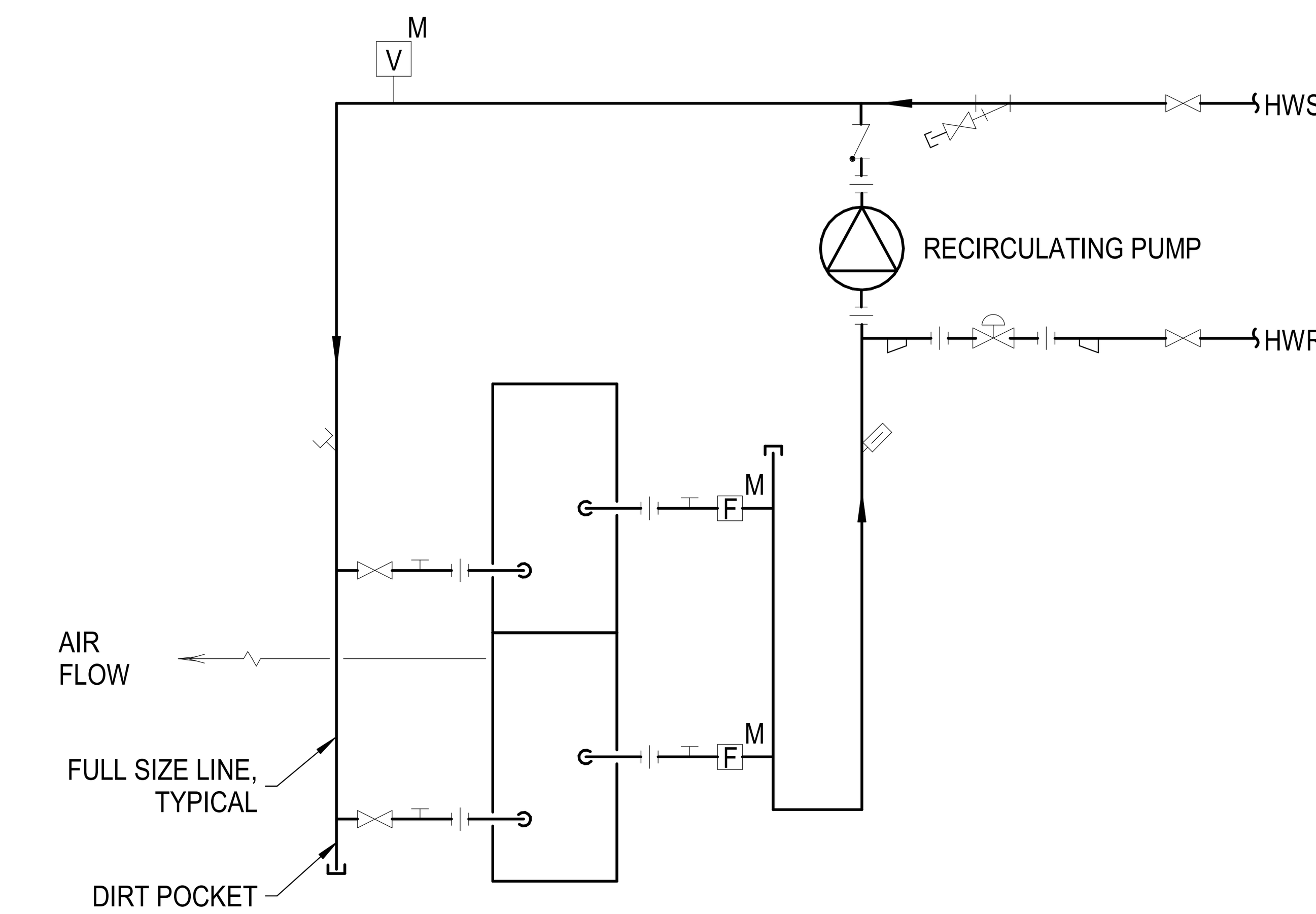
NOTES:
1. PROVIDE SWING JOINTS AT SUPPLY AND RETURN CONNECTIONS TO MAINS WHERE COIL RUNOUTS ARE LESS THAN 5'-0" LONG.
2. LOCATE NEEDLE VALVES AS CLOSE TO COIL CONNECTIONS AS POSSIBLE.
3. BYPASS CONNECTION AND VALVE USED FOR FLUSHING, CLOSE VALVE ONCE CONSTRUCTION IS COMPLETE.

1 TERMINAL UNIT HOT WATER COILS
NO SCALE



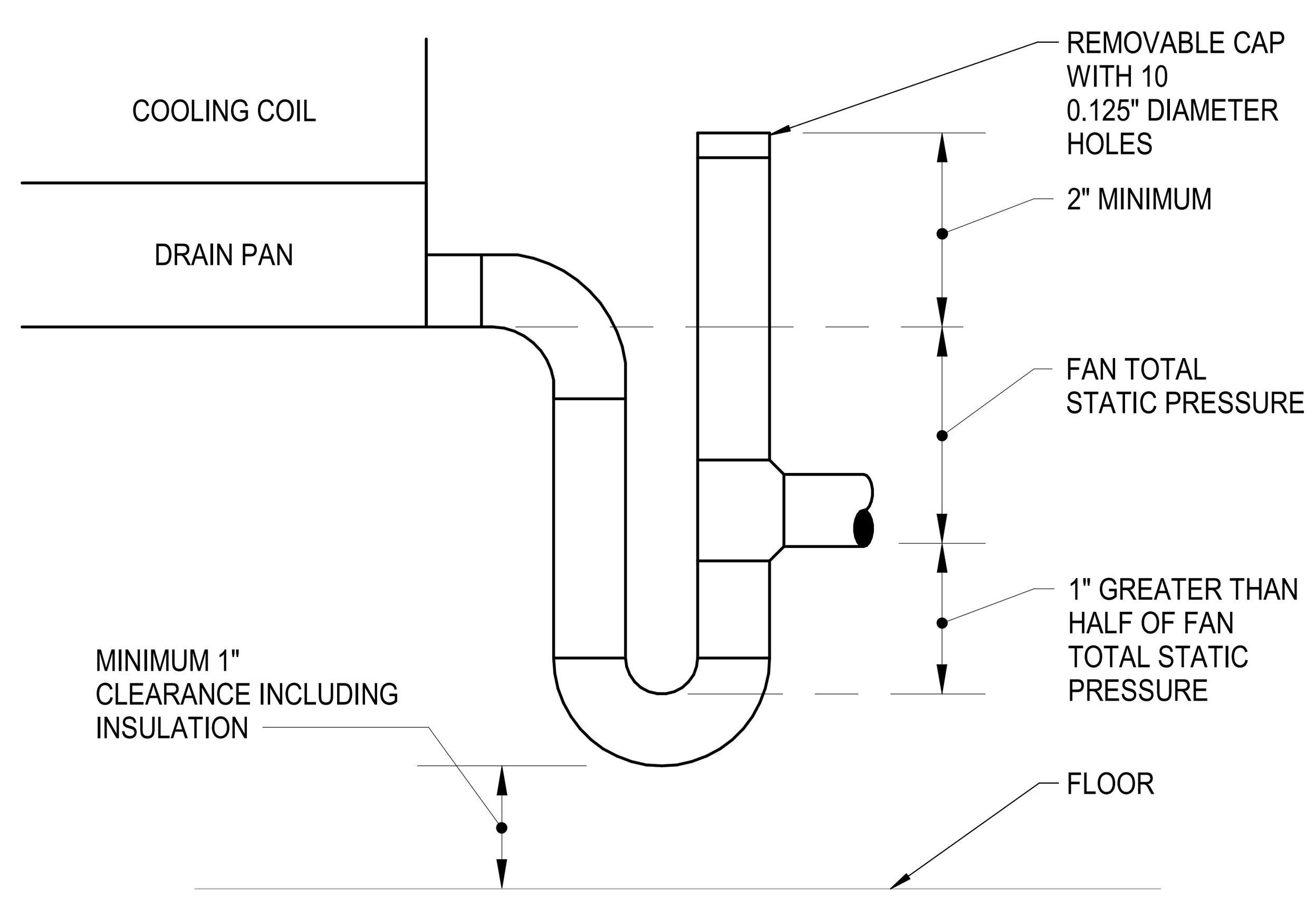
NOTES:
1. COIL CONNECTIONS SHALL BE ARRANGED TO ACCOMMODATE COIL PULL AND TO ISOLATE COIL PIPING FROM SYSTEM.
2. PROVIDE MEANS OF DRAINING AND VENTING EACH COIL.
3. DELETE INDIVIDUAL COIL ISOLATION VALVES IN SINGLE COIL APPLICATIONS.

2 CHILLED WATER COILS IN AHUs
NO SCALE



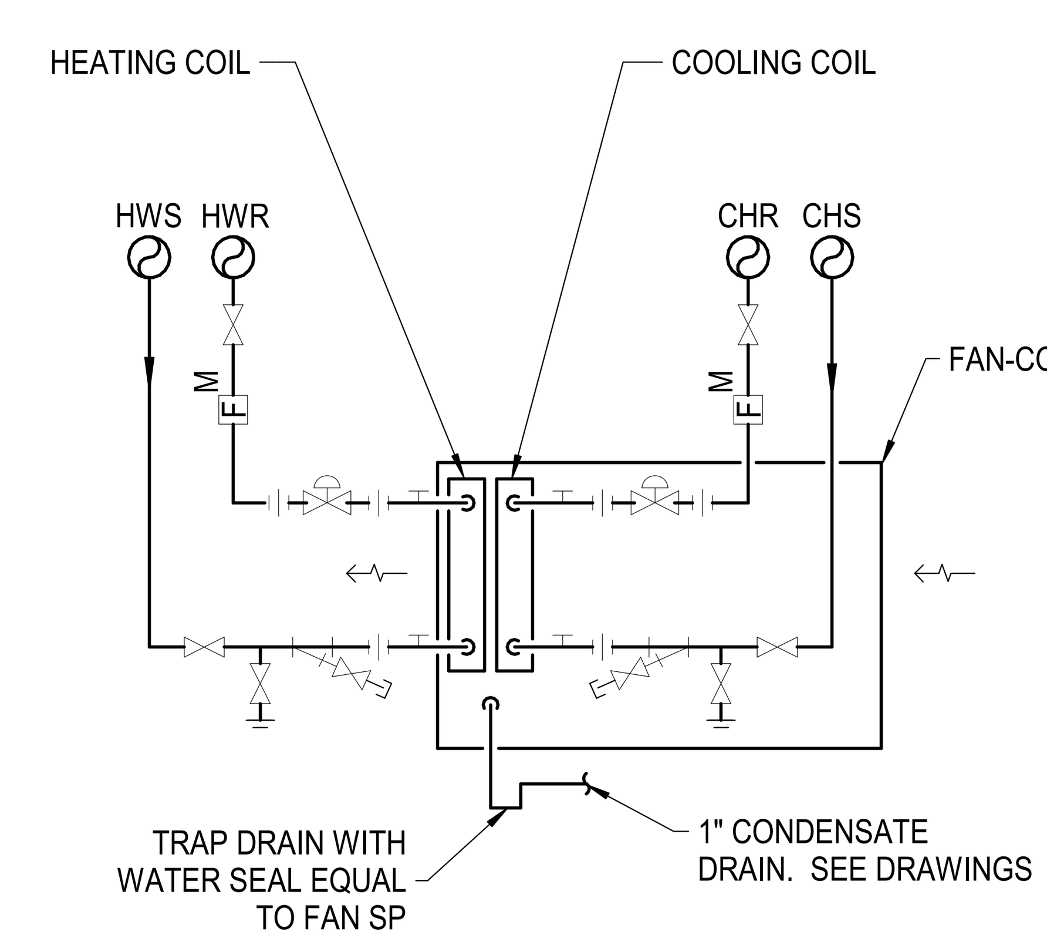
NOTES:
1. COIL CONNECTIONS SHALL BE ARRANGED TO ACCOMMODATE COIL PULL AND TO ISOLATE COIL PIPING FROM SYSTEM.
2. PROVIDE MEANS OF DRAINING AND VENTING EACH COIL.
3. DELETE INDIVIDUAL COIL ISOLATION VALVES IN SINGLE COIL APPLICATIONS.
4. CENTERLINE OF RECIRCULATING PUMP SHALL BE BETWEEN 4FT AND 6FT ABOVE FINSIHED LINE.

3 HOT WATER COILS IN AHUs
NO SCALE



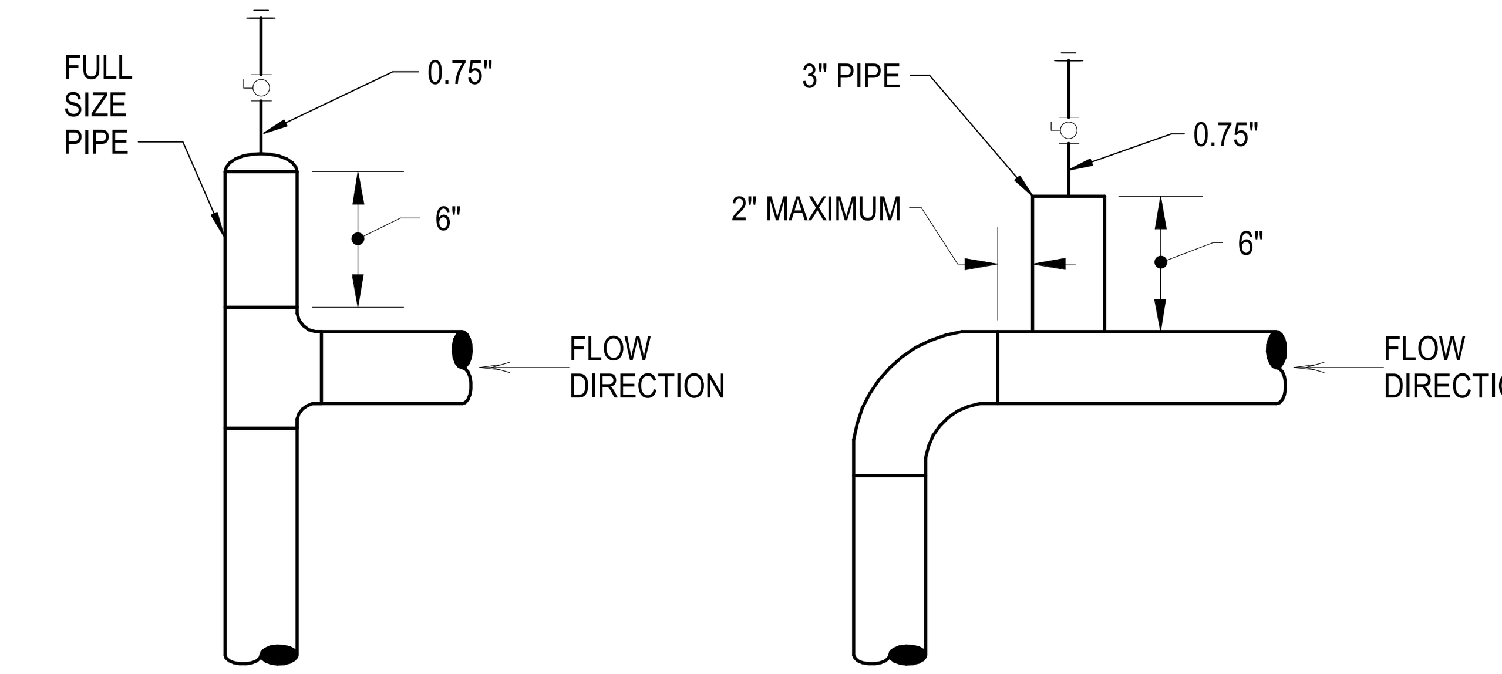
NOTES:
1. PIPING SHALL BE FULL SIZE OF DRAIN CONNECTION.
2. EXTEND DRAIN PIPING AS INDICATED ON THE DRAWINGS OR TO THE NEAREST INDIRECT WASTE RECEPTOR FLOOR DRAIN ADJACENT TO EQUIPMENT.
3. WHERE SUPPORTED, ISOLATE DRAIN PIPING FROM CLAMPS WITH TYPE PI ISOLATORS.

5 CONDENSATE DRAIN FOR DRAW THROUGH UNIT
NO SCALE



NOTES:
1. FACTORY-INSTALLED WATER CONTROL PACKAGES ARE ACCEPTABLE. ALL COMPONENTS SHALL MEET THE SPECIFICATION REQUIREMENTS.
2. PROVIDE SWING JOINTS AT HOT WATER SUPPLY AND RETURN CONNECTIONS TO MAINS WHERE COIL RUNOUTS ARE LESS THAN 5'-0" LONG.

4 FAN-COIL UNIT WATER COILS
NO SCALE



FOR PIPING 2.5" AND SMALLER

FOR PIPING 3" AND LARGER

6 MANUAL AIR VENTS
NO SCALE

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SHEET TITLE
HVAC DETAILS

SCALE (U.N.O.)
NO SCALE

JOB NAME
University of North Carolina - Chapel Hill
SCO#: 21-23548-02A
BINGHAM HALL RENOVATION

LOCATION
36 Lenoir Drive, Chapel Hill, NC 27514

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 043322 PAUL JACKSON KITCHENS
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ISSUE DATE
1/8/2024

JOB. NO.
11706-00

DWG. NO.
M601

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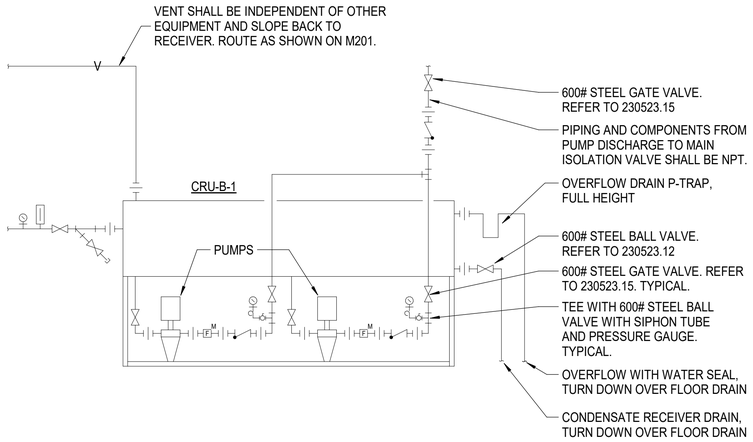
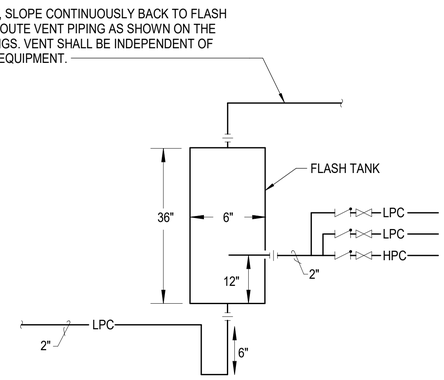


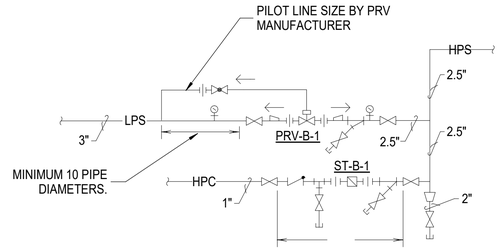
NOTES:
1. SEE DRAWING M402 FOR CONTINUATION.

1 CONDENSATE RETURN UNIT
NO SCALE



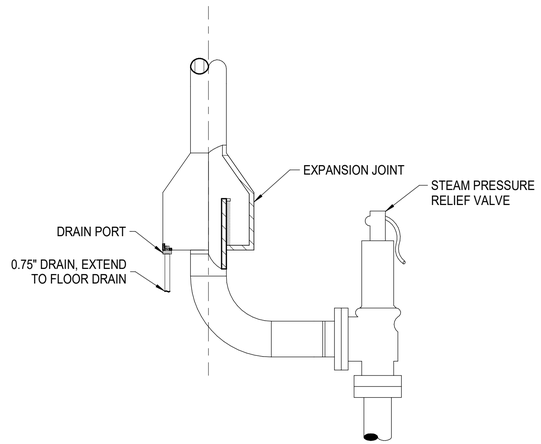
NOTES:
1. SEE DRAWING M402 FOR CONTINUATION.
2. PROVIDE A P-TRAP ON FLASH TANK OUTLET.

2 FLASH TANKS VENTED TO ATMOSPHERE
NO SCALE



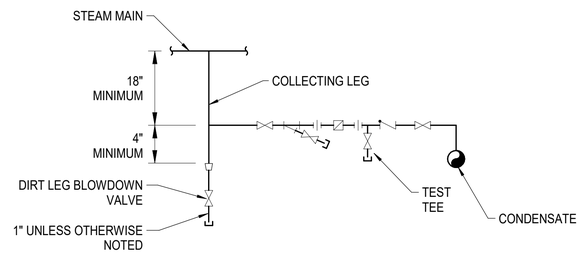
NOTES:
1. SEE DRAWING M402 FOR CONTINUATION.
2. ARROWS INDICATE PITCH DOWN DIRECTION AND TYPICAL FLOW OF PIPE.
3. PREFABRICATED PRV STATION NOT ACCEPTABLE. PROVIDE INDIVIUDAL COMPONENTS PER DRAWINGS AND SPECIFICATIONS.

3 SINGLE-STAGE STEAM PRESSURE REDUCING VALVE ASSEMBLY
NO SCALE



NOTES:
1. EXPANSION JOINT TO BE FULL SIZE OF SAFETY RELIEF VALVE.

5 SAFETY RELIEF VALVE WITHOUT DRIP PAN ELBOW
NO SCALE



NOTES:

1. COLLECTING LEG SHALL BE LINE SIZE BUT NO MORE THAN 4" DIAMETER. TERMINATE WITH THREADED CAP OR FLANGE AND PROVIDE ACCESS CLEARANCE.
2. WELDED CONNECTIONS SHALL BE UTILIZED UP TO AND INCLUDING ISOLATION VALVES. NPT CONECTIONS SHALL BE UTILIZED BETWEEN ISOLATION VALVES.

4 STEAM DRIP ASSEMBLY
NO SCALE

LORD AECK SARGENT

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SHEET TITLE: HVAC DETAILS
SCALE: (U.N.O.) NO SCALE

JOB NAME: University of North Carolina - Chapel Hill
SCR#: 21-2354b02A
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

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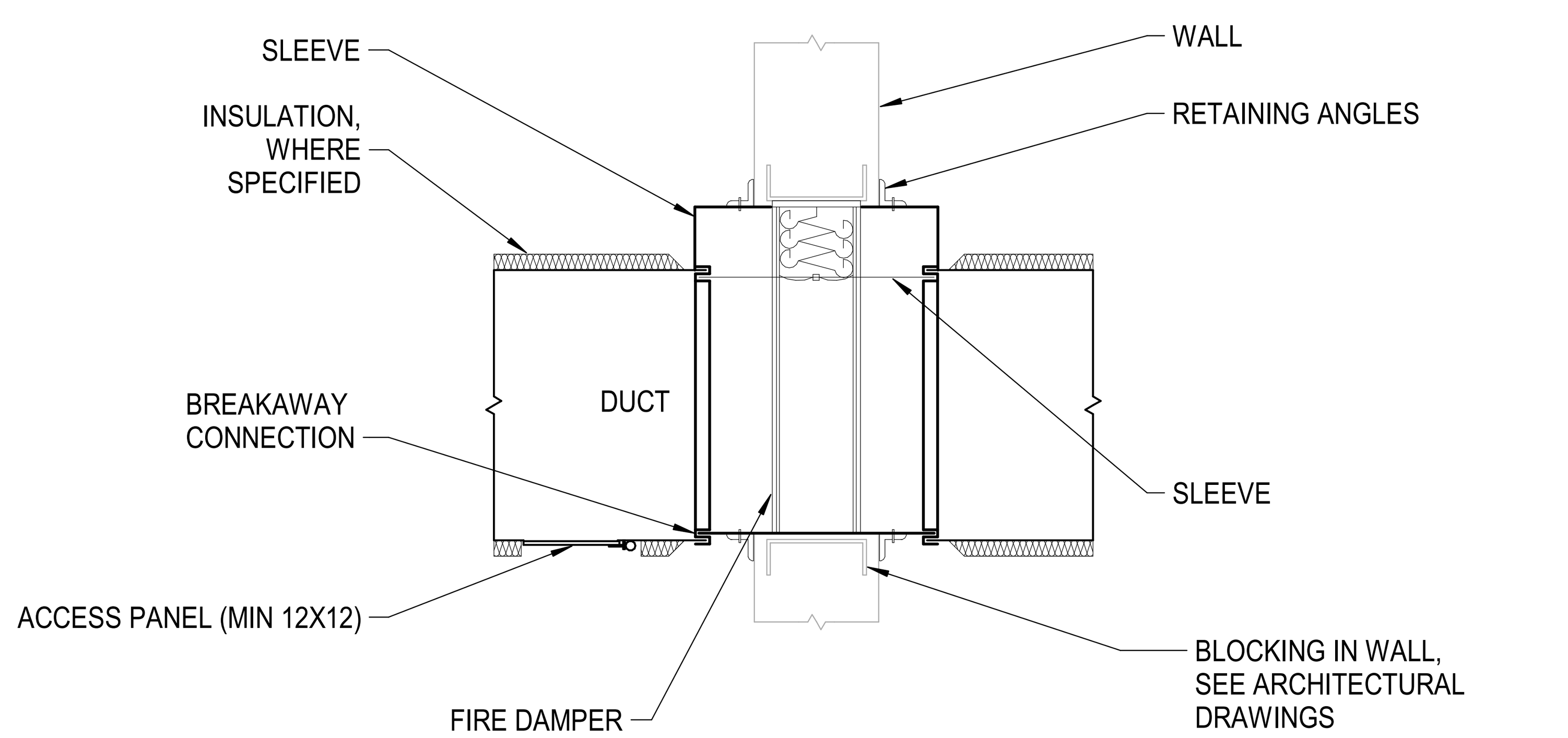
ISSUE DATE: 1/8/2024
JOB. NO. 11706-00
DWG. NO. M602

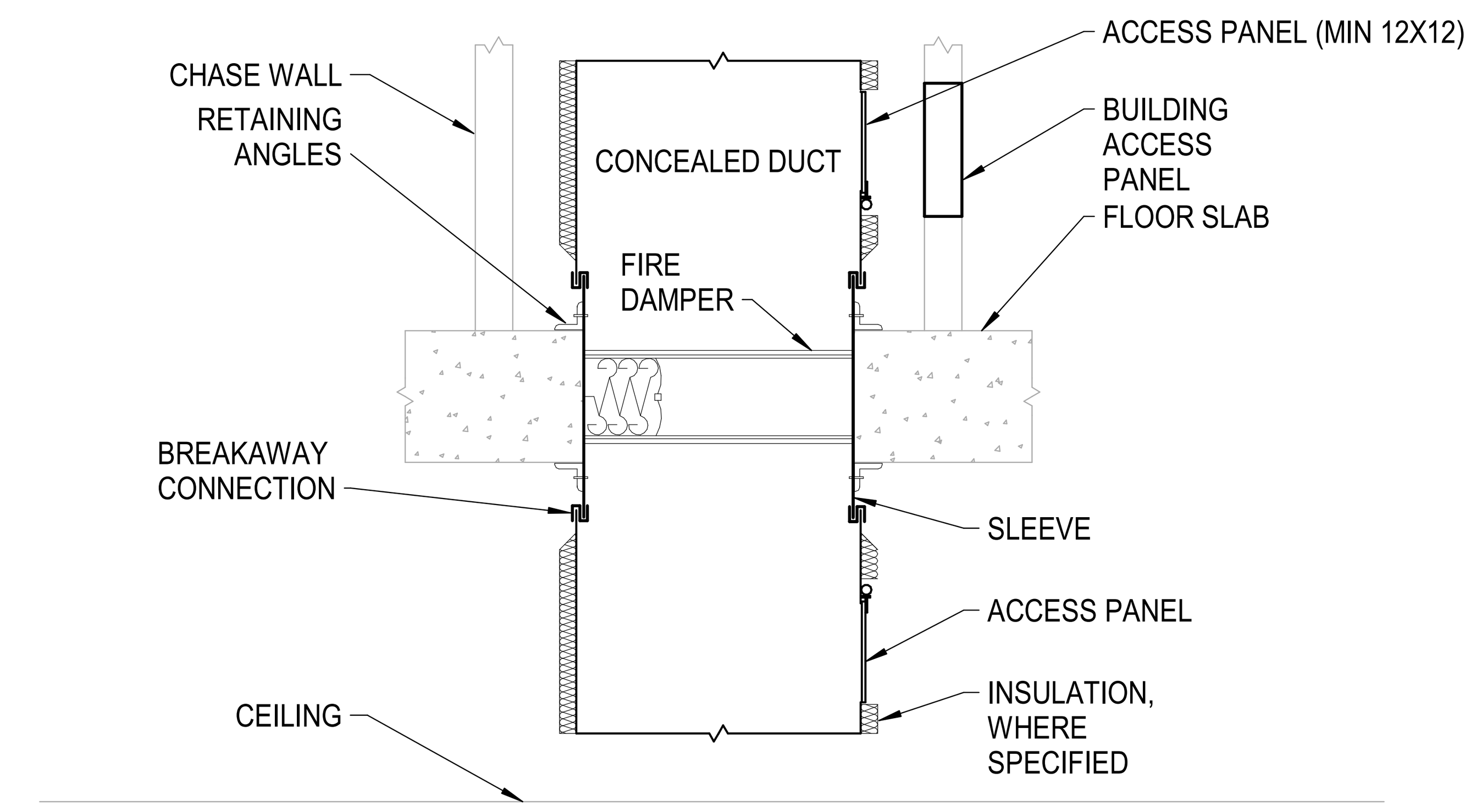


NOTES:

1. INSTALL DAMPERS IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS.
2. TAPE INSULATION TO DUCT AT BREAKAWAY CONNECTIONS. BREAKAWAY CONNECTIONS AND RETAINING ANGLES SHALL BE VISIBLE.
3. TYPE B FIRE DAMPER SHOWN. INSTALLATION SIMILAR FOR TYPE A AND TYPE C DAMPERS.
4. INSTALLATION SIMILAR FOR COMBINATION FIRE/SMOKE DAMPERS.
5. SEAL BREAKAWAY CONNECTIONS.
6. LOCATE ACCESS PANEL ON SIDE OF WALL WITH NO CEILING, OR OVER CORRIDOR CEILING, WHERE APPLICABLE.
7. IF DUCT IS SMALLER THAN 12' WIDE, PROVIDE REMOVABLE SECTION OF DUCT FOR FIRE DAMPER ACCESS.

1 DUCT WALL PENETRATIONS WITH FD

NO SCALE

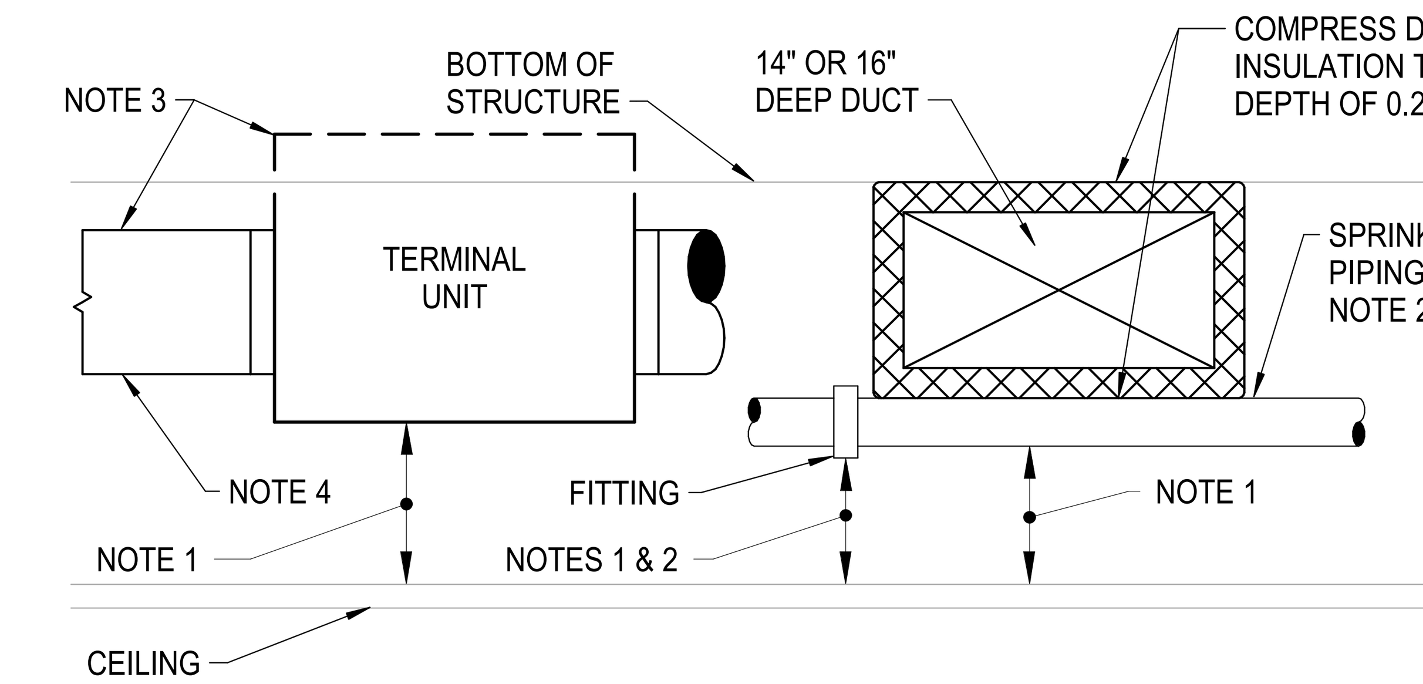


NOTES:

1. INSTALL DAMPERS IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS.
2. TAPE INSULATION TO DUCT AT BREAKAWAY CONNECTIONS. BREAKAWAY CONNECTIONS AND RETAINING ANGLES SHALL BE VISIBLE.
3. TYPE A FIRE DAMPER SHOWN. INSTALLATION SIMILAR FOR TYPE B AND TYPE C DAMPERS.
4. INSTALLATION SIMILAR FOR COMBINATION FIRE/SMOKE DAMPERS.
5. SEAL BREAKAWAY CONNECTIONS.
6. LOCATE DUCT ACCESS PANEL EITHER ABOVE OR BELOW SLAB FOR THE MOST CONVENIENT ACCESS TO THE FIRE DAMPER.
7. BUILDING ACCESS PANEL ONLY NECESSARY WHEN DUCT ACCESS PANEL LOCATION IS CONCEALED BY CHASE WALLS.

2 CONCEALED DUCT FLOOR PENETRATIONS WITH FIRE DAMPERS

NO SCALE

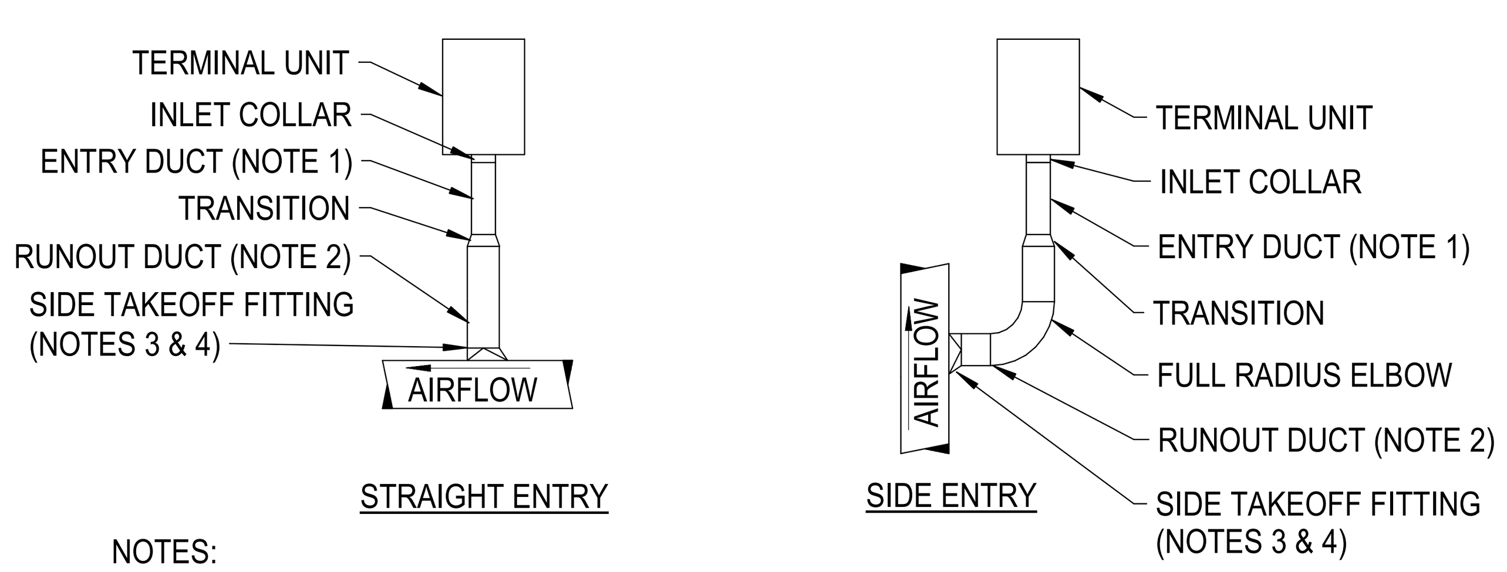


NOTES:

1. MAINTAIN MINIMUM 7" HIGH CLEARANCE FROM BOTTOM OF CEILING FOR LUMINAIRES.
2. DO NOT LOCATE SPRINKLER PIPE FITTINGS UNDER DUCTWORK, DUCTWORK FLANGES, OR TERMINAL UNITS UNLESS 7" CLEARANCE CAN BE MAINTAINED.
3. OFFSET TERMINAL UNITS AND CONNECTING DUCTWORK UP INTO STRUCTURE OR BETWEEN JOISTS TO MAINTAIN 7" CLEARANCE WHERE UNITS HAVE A DEPTH GREATER THAN 16".
4. OFFSET DUCTWORK AND RUNOUTS TO PASS BETWEEN LUMINAIRES TALLER THAN 6.75".
5. OFFSET PIPING, DUCTWORK AND EQUIPMENT TO ACCOMMODATE CEILING COVES AND FRAMING.

3 DUCTWORK INSTALLATION AND COORDINATION

NO SCALE



NOTES:

1. ENTRY DUCT SHALL MATCH INLET COLLAR SIZE, BE INDEPENDENTLY SUPPORTED FROM THE TERMINAL UNIT, AND HAVE A TOTAL LENGTH THAT IS 3 TIMES THE DIAMETER OR WIDTH OF THE INLET COLLAR SIZE.
2. THE RUNOUT FROM THE PRIMARY DUCT TO THE ENTRY DUCT, SHALL BE SIZED AS FOLLOWS UNLESS NOTED OTHERWISE ON THE DRAWINGS.

INLET COLLAR AND ENTRY DUCT SIZES	RUNOUT FROM PRIMARY TO ENTRY DUCT
4"ø	8"ø
5"ø	8"ø
6"ø	10"ø
7"ø	12"ø
8"ø	12"ø
9"ø	14"ø
10"ø	14"ø
12"ø	16"ø
14"ø	18"ø
16"ø	20"ø
24"X16"	AS INDICATED ON PLANS

3. FOR ROUND TAKEOFF CONNECTIONS TO ROUND OR FLAT OVAL PRIMARY SUPPLY DUCTS,PROVIDE A CONICAL TAP IN LIEU OF A SIDE TAKEOFF FITTING.
4. FOR AIR HANDLING SYSTEMS WHERE THE PRIMARY SUPPLY DUCT DISTRIBUTION IS PROVIDE A CONICAL TAP IN LIEU OF A SIDE TAKEOFF FITTING. FITTINGS SHALL BE CONCENTRIC TYPE.

4 TERMINAL UNIT INLET

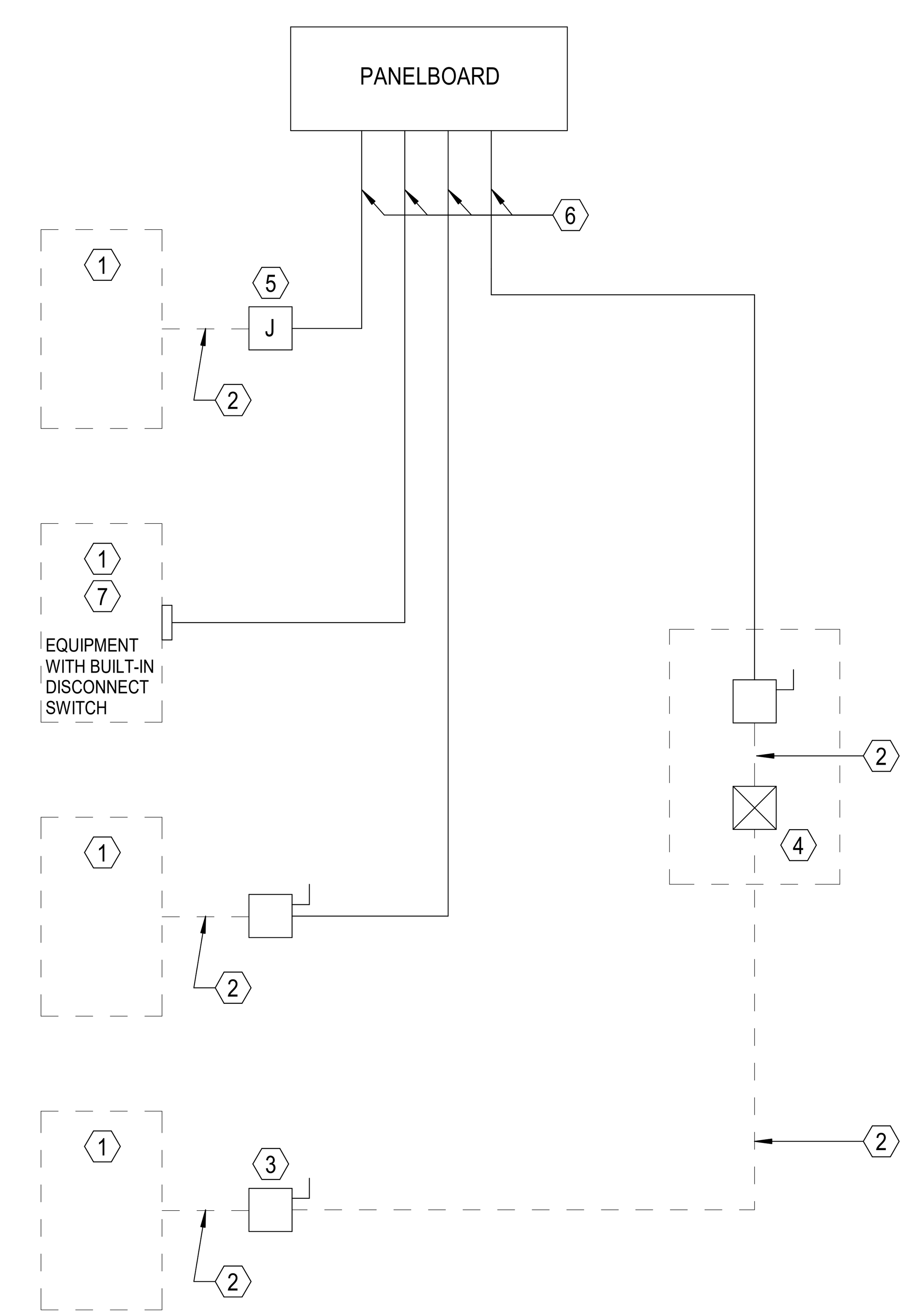
NO SCALE

KEY NOTES (THIS DETAIL ONLY):

1. EQUIPMENT OF TRADES OTHER THAN DIVISION 26.
2. CONDUIT AND WIRING BY DIVISION 22, 23 OR RESPECTIVE TRADE.
3. IF AN ADDITIONAL DISCONNECT IS REQUIRED BY NFPA 70, THE DISCONNECT SHALL BE FURNISHED AND INSTALLED BY THE EQUIPMENT CONTRACTOR.
4. A COMBINATION STARTER OR VFD MAY BE USED IN LIEU OF A SEPARATE DISCONNECT SWITCH AND STARTER. LOCATE ADJACENT TO EQUIPMENT.
5. DIVISION 26 SHALL PROVIDE JUNCTION BOX AS SHOWN ON DRAWINGS OR AS REQUIRED PER EQUIPMENT (SUPPLIED BY OTHERS). ELECTRICAL CONTRACTOR SHALL PROVIDE LINE SIDE WIRING. DIVISION 22, 23, OR ASSOCIATED CONTRACTOR SHALL PROVIDE LOAD SIDE WIRING AND MAKE FINAL CONNECTIONS TO EQUIPMENT.
6. FEEDER RACEWAYS AND CONDUCTORS SHALL BE PROVIDED BY DIVISION 26. SEE PANELBOARD SCHEDULES FOR REQUIREMENTS.
7. IF THE MECHANICAL EQUIPMENT DOES NOT INCLUDE AN INTEGRAL DISCONNECT SWITCH, DIVISION 26 SHALL PROVIDE.

GENERAL NOTES (THIS DETAIL ONLY):

1. GENERAL CONTRACTOR SHALL COORDINATE BETWEEN THE ELECTRICAL AND THE OTHER DRADES.
2. ELECTRICAL CONTRACTOR SHALL PROVIDE DISCONNECT SWITCH IF NEEDED FOR ELEVATORS, KITCHEN EQUIPMENT, AND OWNER FURNISHED EQUIPMENT.
3. IN ALL CASES, THE EQUIPMENT CONTRACTOR SHALL MAKE FINAL CONNECTIONS, START UP, AND TEST EQUIPMENT.



5 EQUIPMENT CONNECTIONS DIVISION OF WORK

NO SCALE

LORD AECK SARGENT

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SHEET TITLE: HVAC DETAILS
SCALE (U.N.O.): NO SCALE

JOB NAME: University of North Carolina - Chapel Hill
SCO#: 21-23548-02A
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

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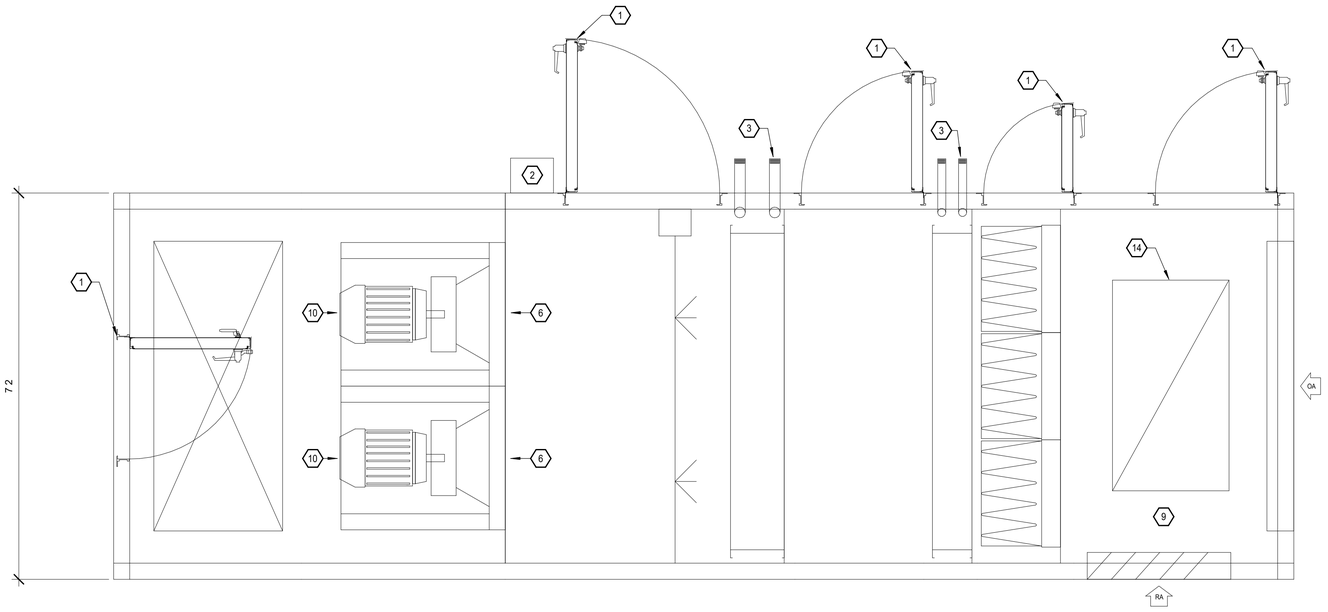
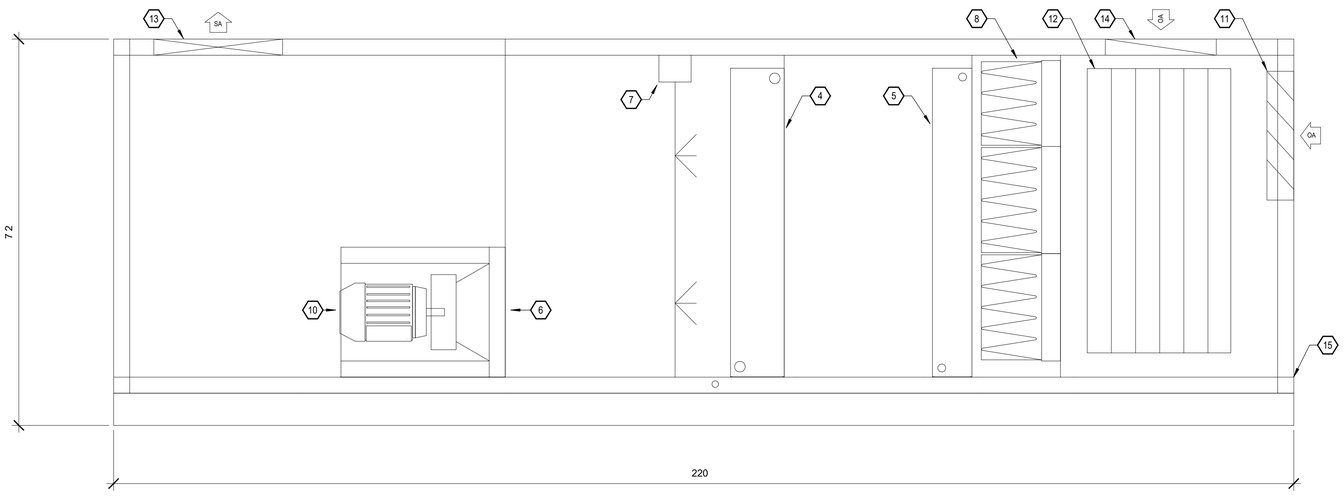
ISSUE DATE: 1/8/2024
JOB NO.: 11706-00
DWG. NO.: M603



PLAN VIEW

KEYNOTES

1. ACCESS DOOR
2. ULTRAVIOLET LIGHTING DICONNECT SWITCH
3. COIL PULL
4. COOLING COIL
5. HEATING COIL
6. SUPPLY FAN BACKDRAFT DAMPER
7. ULTRAVIOLET LIGHTING
8. HIGH EFFICIENCY FILTER
9. MIXING BOX
10. SUPPLY FAN ARRAY - PLENUM FAN
11. 54"x24" OUTSIDE AIR DAMPER
12. 24"x54" RETURN AIR DAMPER
13. 54"x24" SUPPLY AIR DAMPER
14. 30"x18" OUTSIDE AIR DAMPER
15. 6" BASERAIL



ELEVATION VIEW

1 AHU-B-1 DETAIL
NO SCALE

LORD AECK SARGENT

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SHEET TITLE: HVAC DETAILS - AHU-B-1

SCALE (U.N.O.): NO SCALE

JOB NAME: University of North Carolina - Chapel Hill
SCI#: 21-035482-02A
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

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ISSUE DATE: 1/8/2024
JOB. NO.: 11706-00
DWG. NO.: M604

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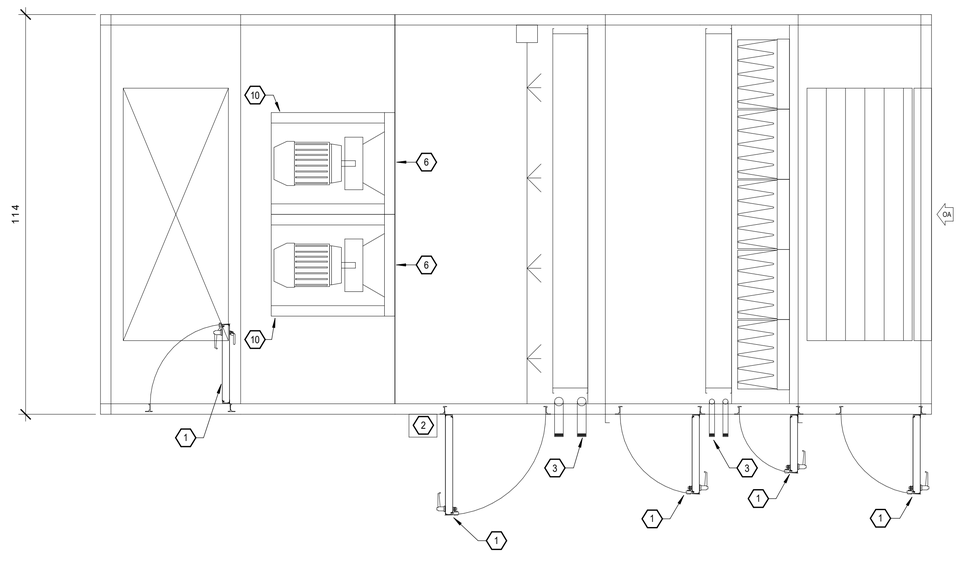
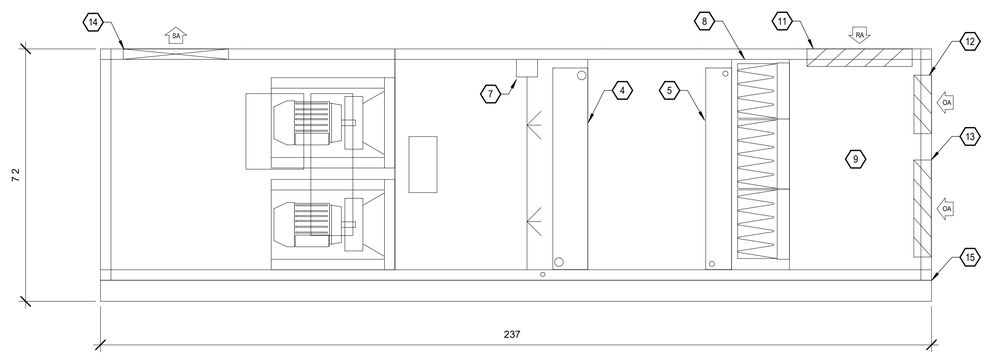


PLAN VIEW

KEYNOTES

1. ACCESS DOOR
2. ULTRAVIOLET LIGHTING DICONNECT SWITCH
3. COIL PULL
4. COOLING COIL
5. HEATING COIL
6. SUPPLY FAN BACKDRAFT DAMPER
7. ULTRAVIOLET LIGHTING
8. HIGH EFFICIENCY FILTER
9. MIXING BOX
10. SUPPLY FAN ARRAY - PLENUM FAN
11. 72"x30" RETURN AIR DAMPER
12. 30"x18" OUTSIDE AIR DAMPER
13. 60"x30" OUTSIDE AIR DAMPER
14. 72"x30" SUPPLY AIR DAMPER
15. 6" BASERAIL



ELEVATION VIEW

1 AHU-3-1 DETAIL
NO SCALE

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SHEET TITLE: HVAC DETAILS - AHU-3-1

SCALE (U.N.O.): NO SCALE

JOB NAME: University of North Carolina - Chapel Hill
SCD#: 21-035482-02A
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

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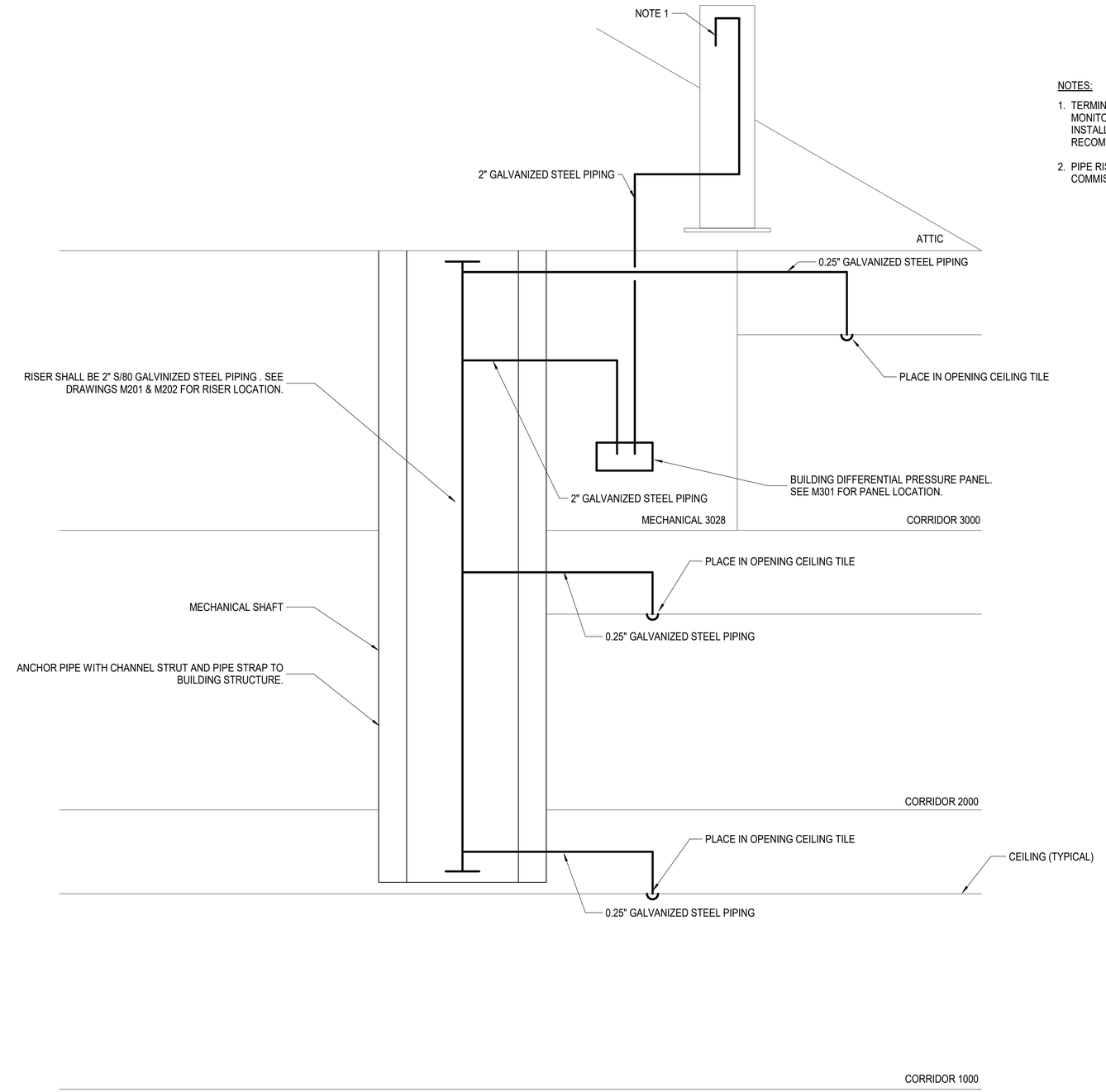
0892D62E305D47A...
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 043322 PAUL JACKSON KITCHINS
Signed on 01/03/2024 using a Digital Signature.

ISSUE DATE: 1/8/2024
JOB. NO.: 11706-00
DWG. NO.: M605



1 BUILDING DIFFERENTIAL PRESSURE SCHEMATIC
NO SCALE

NOTES:

1. TERMINATE WITH STATIC OUTSIDE AIR PROPE (S.O.A.P.) BY AIR MONITORING INC. SOAP SHALL BE LOCATED WITHIN EXISTING CHIMNEY. INSTALLATION SHALL COMPLY WITH AIR MONITORING RECOMMENDATIONS. PIPE SHALL BE 2".
2. PIPE RISER SHALL BE PRESSURE TESTED. COORDINATE SPECIFICS WITH COMMISSIONING AGENT.

LORD AECK SARGENT

REVISION:

NEWCOMB & BOYD
5425 Page Road
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Durham, NC 27703
NB Contact: Reide Daniel
N&B PROJECT: 21N242
Newcomb & Boyd, LLP
Firm Lic # P-0312

SHEET TITLE: HVAC DETAILS
SCALE (U.N.O.): NO SCALE

JOB NAME: University of North Carolina - Chapel Hill
SCI#: 21-2584-60A
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

SEAL
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NORTH CAROLINA REGISTERED PROFESSIONAL SEAL 043322 ENGINEER PAUL JACKSON KITCHENS
Signed on 01/03/2024 using a Digital Signature.

ISSUE DATE: 1/8/2024
JOB. NO.: 11706-00
DWG. NO.: M606

DDC FUNCTION BLOCK LOGIC SYMBOLS

SYMBOL	DESCRIPTION
Point Name AO	OUTPUT POINT - TRANSMITS A VALUE FROM THE FB TO A PHYSICAL OUTPUT CHANNEL ON THE CONTROLLER. DESCRIPTOR - CONTROLLER ADDRESS, POINTNAME AND POINT TYPE AO - ANALOG OUTPUT DO - DIGITAL OUTPUT
Point Name AI	INPUT POINT - READS A VALUE FROM A PHYSICAL INPUT ON THE CONTROLLER AND CONVERTS FOR USE INSIDE THE FB. DESCRIPTOR - CONTROLLER ADDRESS, POINTNAME AND POINT TYPE AI - ANALOG INPUT DI - DIGITAL INPUT
	VIRTUAL POINT - ANALOG OR DIGITAL VALUE USED WITHIN A FB OR BROADCAST ACROSS THE LAN.
	DIGITAL WIRE - DIGITAL LOGIC CONNECTION BETWEEN FB'S
	ANALOG WIRE - ANALOG LOGIC CONNECTION BETWEEN FB'S
CONST	CONSTANT - CONSTANT VALUE INPUTS
G VALUE DISPLAYED & EDITABLE ON GRAPHIC PAGE / G VALUE DISPLAYED ON GRAPHIC	GRAPHIC INTERFACE - VALUE APPEARS ON GRAPHIC SCREEN. WHEN BLOCK PRECEEDS (IS TO THE LEFT OF) A CONSTANT BLOCK OR VERTUAL POINT BLOCK, THE VALUE SHALL BE EDITABLE FROM THE GRAPHIC SCREEN
A#	ALARM & PRIORITY - TRANSMITS AN ALARM AND ALARM PRIORITY TO THE ENTERPRISE BUILDING MANAGEMENT SYSTEM (EBMS).
M#	MESSAGE AND NUMBER - TRANSMITS A MESSAGE AND MESSAGE NUMBER TO THE ENTERPRISE BUILDING MANAGEMENT SYSTEM (EBMS).
T	TREND - ESTABLISHES TREND IN CONTROLLER.
RTM	RUN TIME MONITOR - ACCUMULATES RUNTIME FOR DIGITAL OUTPUT AND CONVERTS TIME TO HOURS.
REF#	REFERENCE FLAG - USED AS CONNECTION TO FB'S BY REFERENCE INSTEAD OF WIRES.
AND	DIGITAL AND GATE - OUTPUT IS ON IF ALL INPUTS ARE TRUE
OR	DIGITAL OR GATE - OUTPUT IS ON IF ANY INPUT IS TRUE.
XOR	DIGITAL EXCLUSIVE OR GATE - OUTPUT IS ON IF ONLY ONE INPUT IS TRUE.
N	INVERSE (NOT) - IF INPUT = ON, OUTPUT = OFF; CONVERSELY IF INPUT =OFF, OUTPUT =ON
RST LATCH0	LATCH OFF - OUTPUT IS OFF WHENEVER INPUT IS ON. OUTPUT REMAINS OFF UNTIL RESET CHANGES FROM OFF TO ON.
RST LATCH1	LATCH ON - OUTPUT IS ON WHENEVER INPUT IS ON. OUTPUT REMAINS ON UNTIL RESET CHANGES FROM OFF TO ON.
ON/OFF # DELAY	ON/OFF DELAY TIMER - AFTER INPUT IS ON, OUTPUT IS ON/OFF AFTER A PREDETERMINED TIME (#) HAS ELAPSED.
CYCLE # DELAY	CYCLE DELAY TIMER - WHEN SET TIME HAS ELAPSED, THE FIRST TIME INPUT IS ON, OUTPUT IS ON AND TIMER RESETS. BEFORE SET TIME HAS ELAPSED, OUTPUT IS OFF WHEN INPUT IS OFF. IF INPUT GOES FROM OFF TO ON BEFORE SET TIME HAS ELAPSED, OUTPUT WILL REMAIN OFF.
PWR	POWER FLAG - ON WHEN CONTROLLER IS INITIALLY POWERED ON AND NO PHASE LOSS IS DETECTED
R S FF	FLIP FLOP - CHANGE STATE OF OUTPUT WHEN INPUT CHANGES FROM OFF TO ON: OUTPUT SET TO OFF WHEN RESET (R) GOES CHANGES FROM OFF TO ON
OPTIMUM (DB, HI, I, O, INC, LO)	SETPOINT OPTIMIZATION - RESET OF OUTPUT FROM A MAXIMUM VALUE TO A MINIMUM VALUE BASED ON VALUES OR REQUESTS) DB - DEAD BAND INC - INCREMENT/DECREMENT VALUE HI - MAXIMUM RESET VALUE LO - MINIMUM RESET VALUE
SP INTVL MX; > +IE+OA O; I S & B; < -IE-OA MN	SAMPLE & BUMP - CHANGE IN OUTPUT (WITH DEFINED MINIMUM & MAXIMUM VALUES) BY A DEFINED AMOUNT WHEN INPUT DEVIATES FROM SETPOINT (SP) BY A DEFINED AMOUNT AT A DEFINED INTERVAL. I - INPUT O - OUTPUT MX - MAXIMUM OUTPUT MN - MINIMUM OUTPUT INTVL - INTERVAL > +IE, +OA - WHEN INPUT RISES ABOVE SETPOINT BY AMOUNT '+IE', OUTPUT IS INCREASED BY AMOUNT '+OA' < -IE, -OA - WHEN INPUT FALLS BELOW SETPOINT BY AMOUNT '-IE', OUTPUT IS REDUCED BY AMOUNT '-OA'

SYMBOL	DESCRIPTION
SP PID O	PID CONTROLLER - PROPORTIONAL, INTEGRAL, DERIVATIVE LOOPS USE STANDARD ALGORITHMS TO CALCULATE AN OUTPUT BASED ON A VARIABLE INPUT. PROPORTIONAL IS BASED ON THE DIFFERENCE BETWEEN THE INPUT AND THE SETPOINT. INTEGRAL IS BASED ON THE THE TIME THE INPUT DEVIATES FROM THE SETPOINT. DERIVATIVE IS BASED ON THE THE RATE THE INPUT IS APPROACHING THE SETPOINT. THE PID CAN BE EITHER DIRECT ACTING (DA) OR REVERSE ACTING (RA). IN A DA PID WHEN THE INPUT INCREASES THE OUTPUT INCREASES. IN A RA PID WHEN THE INPUT INCREASES THE OUTPUT DECREASES. OPTIONALLY, AN ADDITIONAL DIGITAL TRIGGER MAY BE ASSIGNED TO THE INPUT SECTION THAT WILL ENABLE/DISABLE CALCULATION OF THE PID LOOP.
FLT Inc Dec	FLOATING CONTROLLER - OUTPUT WILL INCREASE OR DECREASE INCREMENTALLY AS INPUT DEVIATES FROM SETPOINT. IN A DA CONTROLLER WHEN THE INPUT INCREASES THE OUTPUT INCREASES. IN A RA CONTROLLER WHEN THE INPUT INCREASES THE OUTPUT DECREASES.
RESET (100, 180, 0, 100)	RESET CONTROLLER - USER DEFINED OUTPUT VALUE WILL RESET IN A LINEAR RELATIONSHIP BASED ON USER DEFINED INPUT VALUE.
OFF SR ON P	SWITCHING RELAY - SWITCHES OUTPUT BETWEEN TWO INPUTS WHEN DIGITAL PILOT INPUT IS ON. SWITCH SHOWN IN NORMAL POSITION
OFF DSR SP2 SP1 ON	DEADBAND SWITCHING RELAY - DIGITAL OUTPUT CHANGES WHEN INPUT VALUE RISES/FALLS ABOVE/BELOW SETPOINT 1 (SP1). DIGITAL OUTPUT RESTORES TO NORMAL WHEN INPUT RISES/FALLS ABOVE/BELOW SETPOINT 2 (SP2). SWITCH SHOWN IN NORMAL POSITION
I IF > SP O	LOGICAL IF EXPRESSION - THE OUTPUT IS ON IF THE INPUT MEETS THE CONDITION OF THE SETPOINT.
RAMP chng % Sec Min Max	RAMP CONTROLLER - LIMITS THE RATE OF CHANGE OF AN OUTPUT ON AN INCREASE IN VALUE OR A DECREASE IN VALUE. CHNG% - % OF TOTAL MAXIMUM OUTPUT VALUE ALLOWED FOR OUTPUT CHANGE # = TIME IN SECONDS MAX = MAXIMUM OUTPUT VALUE MIN = MINIMUM OUTPUT VALUE
TMR 2HR	TIMER - OUTPUT IS ON FOR A USER SPECIFIED TIME AFTER INPUT CHANGES FROM OFF TO ON
ATS OVR flag	AUTOMATIC TIME SCHEDULER - INCLUDES SCHEDULES ENTERED INTO CONTROLLER FOR 7 DAY SCHEDULING WITH HOLIDAYS AND OVERRIDE SCHEDULES. INCLUDES OVERRIDE INPUT FOR UNSCHEDULED OVERRIDE. OUTPUTS REFERENCE FLAGS CAN INCLUDE : HEATING SETBACK, COOLING SETBACK, AND UNOCCUPIED
OS/S OVR flag	OPTIMUM START/STOP TIME SCHEDULER - INCLUDES SCHEDULES ENTERED INTO CONTROLLER FOR 7 DAY SCHEDULING WITH HOLIDAYS AND OVERRIDE SCHEDULES. INCLUDES OPTIMUM START STOP ROUTINE. OUTPUTS REFERENCE FLAGS CAN INCLUDE : WARM-UP, COOL-DOWN, HEATING SETBACK, COOLING SETBACK, AND UNOCCUPIED. INCLUDES OVERRIDE INPUT (OVR) FOR UNSCHEDULED OVERRIDE
CALC # + # =	CALCULATION BLOCK - OUTPUT IS EQUAL TO CALCULATION USING INPUT(S). EQUATION CAN BE MATHEMATICAL OR A PREDEFINED INDUSTRY STANDARD ALGORITHM (ie. CFM, VELOCITY PRESSURE, ENTHALPY, DEW POINT ETC.)
HI	HIGH SELECTOR - SELECTS HIGHER OF INPUT VALUES
LO	LOW SELECTOR - SELECTS LOWER OF INPUT VALUES
AVE	AVERAGING BLOCK - MATHEMATICALLY AVERAGES INPUT VALUES.
DLY MTR COM PROOF RST ALM NML	PROOFING MODULE - GENERATES VALUES BASED ON A COMPARISON OF COMMAND AND MONITORING INPUTS. DLY - PROOFING DELAY PERIOD MTR - MONITOR (INPUT FOR PROOF) COM - COMMAND (INPUT FOR PROOF) RST - RESET (IF LATCHING IS USED) ALM - (ON WHEN MONITOR INPUT IS NOT EQUAL TO COMMAND INPUT) NML - OUTPUT IS ON WHEN MONITOR AND COMMAND INPUTS ARE ON AND NORMAL CONDITIONS ARE MET
TIME AVG SUM(I[x-t]:I[t])/x	TIME AVERAGE BLOCK - OUTPUT IS EQUAL TO SUM OF INPUTS FROM USER SPECIFIED PREVIOUS TIME PERIOD (OR NUMBER OF SCANS) TO CURRENT TIME (OR SCAN) DIVIDED BY NUMBER OF DISCRETE POINTS IN THE SUMMATION PERIOD. OUTPUT IS A ROLLING TIME BASED AVERAGE OF THE INPUT VALUE.
REQUEST ALCK BLCK CLCK DLCK STAGER A B C D ROTATE	STAGER BLOCK - OUTPUT IS EQUAL TO SUM OF REQUESTS FROM USER SPECIFIED INPUTS. ROTATION SHALL BE DETERMINED BY USER DEFINED PARAMETERS. EACH INDIVIDUAL OUTPUT CAN BE LOCKED OUT BY USER DEFINED INDIVIDUAL INPUTS. LOCKED OUT OUTPUTS SHALL BE SKIPPED IN ROTATION. (SEE SEQUENCE OF OPERATION FOR DETAILS)
PWR SWAP FAILA FAILB ACK OUTA OUTB LEAD/STANDBY	LEAD/STANDBY BLOCK - ON RUN COMMAND, LEAD OUTPUT IS SELECTED. LEAD OUTPUT CAN BE SWAPPED MANUALLY OR BY A TIME SCHEDULE. WHEN THE LEAD EQUIPMENT FAILS, THE STANDBY OUTPUT IS SELECTED. (SEE SEQUENCE OF OPERATION FOR DETAILS)

CONTROL SYMBOLS

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
Supply Fan Speed AO; Supply Fan Status DI	DDC POINT DESCRIPTOR WITH NAME AI - ANALOG INPUT DI - DIGITAL INPUT AO - ANALOG OUTPUT DO - DIGITAL OUTPUT		DISCONNECT SWITCH
TS1	TEMPERATURE SENSOR WITH AVERAGING ELEMENT	480V 120V	CONTROL TRANSFORMER
TS1	TEMPERATURE SENSOR WITH SINGLE POINT ELEMENT	MS EP1 S	RELAY COILS
TS1	TEMPERATURE SENSOR WITH PIPE WELL		FUSE
TS1	SPACE TEMPERATURE SENSOR	OL	THERMAL OVERLOAD
2% HS1	HUMIDITY SENSOR		NORMALLY OPEN AND NORMALLY CLOSED CONTACTS
	CURRENT SENSOR	HAND AUTO OFF	HAND-OFF-AUTO SELECTOR SWITCH
SD1	SMOKE DETECTOR		WIRING DESIGNATION. (NO. OF HATCHES INDICATES NO. OF CONDUCTORS)
DPS2	DIFFERENTIAL PRESSURE SWITCH		WIRING CONNECTION
FS1	WATER FLOW SWITCH	ON-OFF	ON-OFF SELECTOR SWITCH
V1 N.C.	TWO WAY CONTROL VALVE	V2 C. N.C. N.O.	THREE WAY CONTROL VALVE
DI	DAMPER ACTUATOR	LS1	LIMIT SWITCH
DPT1 0-5" w.c.	AIR DIFFERENTIAL PRESSURE TRANSMITTER (0 - 5" RANGE)	D-1	CONTROL DAMPER
VFD	VARIABLE FREQUENCY DRIVE	DP	HYDRONIC DIFFERENTIAL PRESSURE TRANSMITTER
FZ1	FREEZESTAT	FM1	HYDRONIC FLOWMETER
AFMS1	AIRFLOW MEASURING STATION		THERMOSTAT
	FAN INLET AIRFLOW MEASURING STATION		ULTRAVIOLET LIGHT
FILTR EF1 Safety Interlock	ELECTROSTATIC FILTER		

LEGEND	
TUBING DESIGNATIONS	
— – — – —	TUBING
WIRING DESIGNATIONS	
— - — - —	WIRING

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SHEET TITLE: HVAC CONTROLS - LEGEND
SCALE (U.N.O.): NO SCALE

JOB NAME: University of North Carolina - Chapel Hill
SCI#: 21-23484-02A
LOCATION: BINGHAM HALL RENOVATION
36 Lenoir Drive, Chapel Hill, NC 27514

SEAL: NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 043322 PAUL JACKSON KITCHENS
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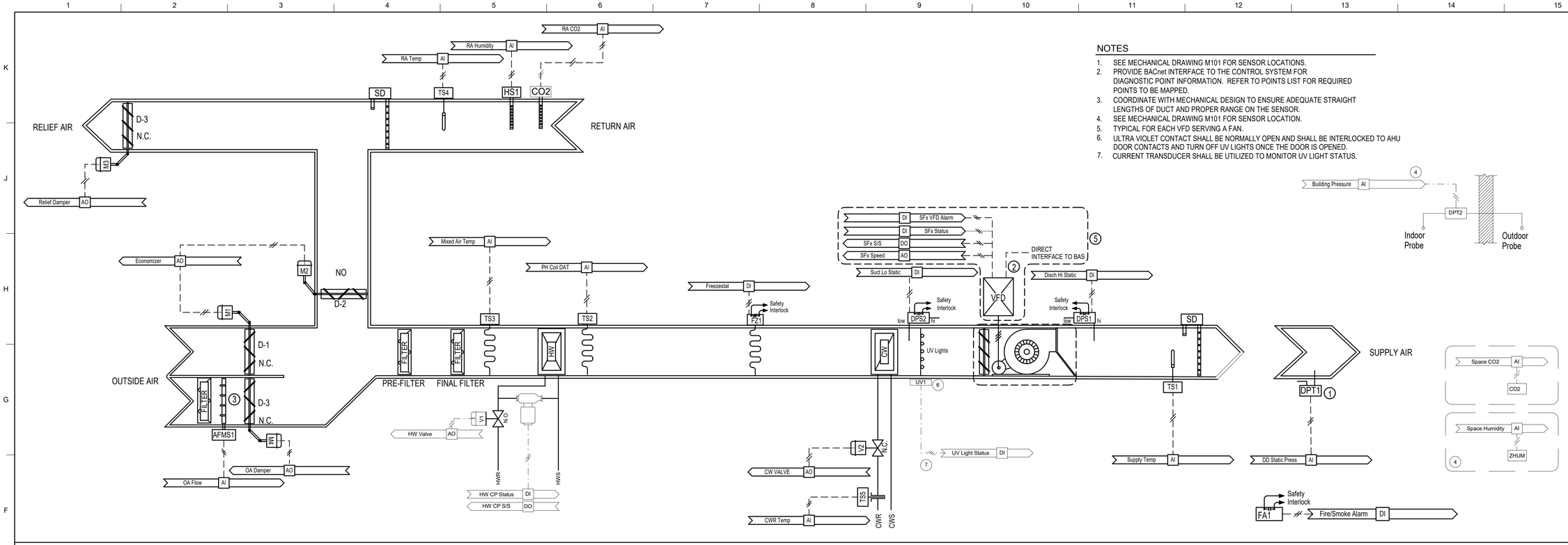
ISSUE DATE: 1/8/2024
JOB. NO.: 11706-00
DWG. NO.: M701



NOTES

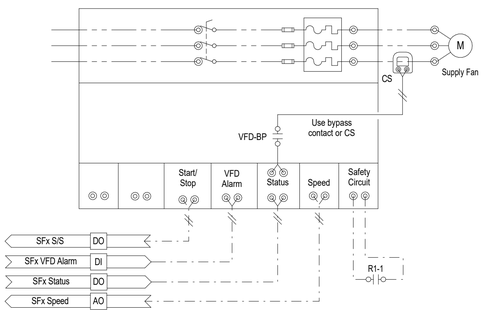
1. SEE MECHANICAL DRAWING M101 FOR SENSOR LOCATIONS.
2. PROVIDE BACnet INTERFACE TO THE CONTROL SYSTEM FOR DIAGNOSTIC POINT INFORMATION. REFER TO POINTS LIST FOR REQUIRED POINTS TO BE MAPPED.
3. COORDINATE WITH MECHANICAL DESIGN TO ENSURE ADEQUATE STRAIGHT LENGTHS OF DUCT AND PROPER RANGE ON THE SENSOR.
4. SEE MECHANICAL DRAWING M101 FOR SENSOR LOCATION.
5. TYPICAL FOR EACH VFD SERVING A FAN.
6. ULTRA VIOLET CONTACT SHALL BE NORMALLY OPEN AND SHALL BE INTERLOCKED TO AHU DOOR CONTACTS AND TURN OFF UV LIGHTS ONCE THE DOOR IS OPENED.
7. CURRENT TRANSDUCER SHALL BE UTILIZED TO MONITOR UV LIGHT STATUS.

AIR HANDLING UNIT - B - 1

POINTS LIST

ADDRESS	POINT DESCRIPTOR	DI	AI	DO	AO	VP	REMARKS
	SFx S/S			◦			Typical for each VFD
	SFx Status	◦					Typical for each fan
	SFx Speed				◦		Typical for each VFD
	SFx VFD Alarm	◦					Typical for each VFD
	Supply Temp		◦				
	PH Coil DAT		◦				
	Freezestat	◦					
	Mixed Air Temp		◦				
	Disch Hi Static	◦					
	Suction Low Static	◦					
	CW Valve				◦		
	CWR Temp		◦				
	HW Valve				◦		
	Fire/Smoke Alarm	◦					
	OA Flow		◦				
	OA Damper				◦		
	RA Temp		◦				
	Economizer				◦		
	Relief Damper				◦		
	RA Humidity		◦				
	RA CO2		◦				
	DD Static Press		◦				Typical for each
	Space Humidity		◦				
	Building Pressure		◦				
	HW CP STATUS	◦					
	HW CP S/S			◦			
	Space Humidity		◦				
	Space CO2		◦				
	UV Light Status	◦					
	SF VFD FAULT	◦				◦	Interface Point, Typical for each VFD
	SF VFD FAULT CODE		◦			◦	Interface Point, Typical for each VFD
	SF VFD FEEDBACK		◦			◦	Interface Point, Typical for each VFD
	SF VFD KW		◦			◦	Interface Point, Typical for each VFD
	SF VFD KWH		◦			◦	Interface Point, Typical for each VFD
	SF VFD BYPASS	◦				◦	Interface Point, Typical for each VFD

ELECTRIC LADDER DIAGRAMS



SUPPLY FAN VFD (TYP)

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SHEET TITLE: HVAC CONTROLS - AHU-B-1

SCALE (U.N.O.): NO SCALE

JOB NAME: University of North Carolina - Chapel Hill
SCI#: 21-235482-02A

LOCATION: BINGHAM HALL RENOVATION
36 Lenoir Drive, Chapel Hill, NC 27514

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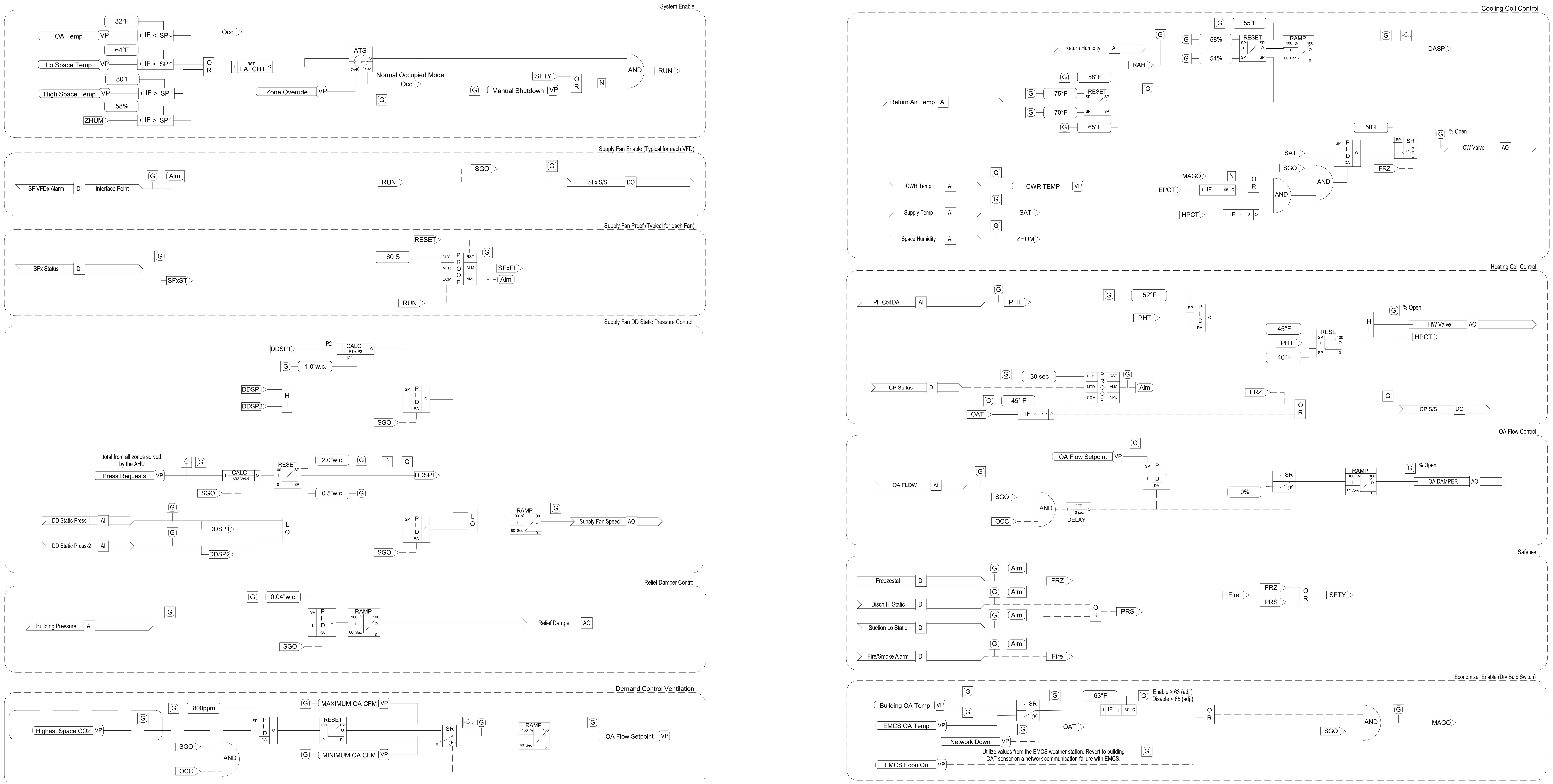
ISSUE DATE: 1/8/2024

JOB. NO. 11706-00

DWG. NO. M702



LOGIC VARIABLES

BINARY	ANALOG	DESCRIPTION
Occ		ON WHEN OCCUPIED MODE ACTIVE
RUN		ON WHEN SYSTEM REQUESTED TO START
SFxFL		ON WHEN SUPPLY FAN x IS ASSESSED AS FAILED
PRS		ON WHEN EITHER PRESSURE SWITCH IS IN ALARM
FRZ		ON WHEN FREEZESTAT IS IN ALARM
Fire		ON WHEN FIRE ALARM IS ACTIVE
SFTY		ON WHEN "FRZ", "Fire" OR "PRS" ARE ON
SFxST		ON WHEN SUPPLY FAN x'S STATUS IS ON
SGO		ON WHEN SUPPLY FAN ENERGIZED AND STATUS PROVEN

LOGIC VARIABLES (continued)

BINARY	ANALOG	DESCRIPTION
MAGO		ON WHEN OA CONDITIONS ALLOW ECONOMIZER CONTROL
	SAT	VARIABLE VALUE OF SUPPLY AIR TEMPERATURE
	PHT	VARIABLE VALUE OF PREHEAT AIR TEMPERATURE
	MAT	VARIABLE VALUE OF MIXED AIR TEMPERATURE
	RAH	VARIABLE VALUE OF RETURN AIR HUMIDITY
	OAT	VARIABLE VALUE OF OUTSIDE AIR TEMPERATURE
	DASP	VARIABLE CALCULATED VALUE OF DISCHARGE TEMPERATURE SETPOINT
	CPCT	VARIABLE CALCULATED VALUE OF CW VALVE POSITION
	HPCT	VARIABLE CALCULATED VALUE OF HW VALVE POSITION
	EPCT	VARIABLE CALCULATED VALUE OF ECONOMIZER PID OUTPUT

AHU-B-1 SOFTWARE LOGIC DIAGRAM

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SHEET TITLE: HVAC CONTROLS - AHU-B-1 LOGIC

SCALE (U.N.O.): NO SCALE

JOB NAME: University of North Carolina - Chapel Hill
SCO# 21-23548-02A
BINGHAM HALL RENOVATION

LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

SEAL: DocuSigned by: NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 043322 PAUL JACKSON KITCHENS

Signed on 01/03/2024 using a Digital Signature.

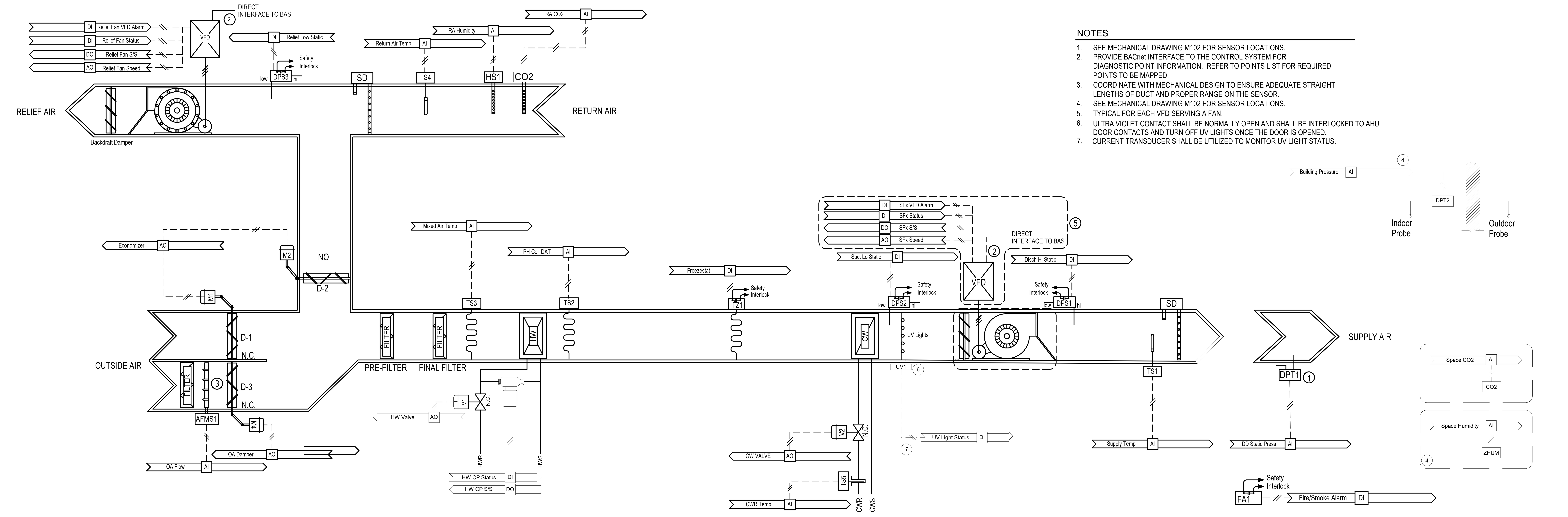
ISSUE DATE: 1/8/2024

JOB. NO.: 11706-00

DWG. NO.: M703

NOTES

1. SEE MECHANICAL DRAWING M102 FOR SENSOR LOCATIONS.
2. PROVIDE BACnet INTERFACE TO THE CONTROL SYSTEM FOR DIAGNOSTIC POINT INFORMATION. REFER TO POINTS LIST FOR REQUIRED POINTS TO BE MAPPED.
3. COORDINATE WITH MECHANICAL DESIGN TO ENSURE ADEQUATE STRAIGHT LENGTHS OF DUCT AND PROPER RANGE ON THE SENSOR.
4. SEE MECHANICAL DRAWING M102 FOR SENSOR LOCATIONS.
5. TYPICAL FOR EACH VFD SERVING A FAN.
6. ULTRA VIOLET CONTACT SHALL BE NORMALLY OPEN AND SHALL BE INTERLOCKED TO AHU DOOR CONTACTS AND TURN OFF UV LIGHTS ONCE THE DOOR IS OPENED.
7. CURRENT TRANSDUCER SHALL BE UTILIZED TO MONITOR UV LIGHT STATUS.

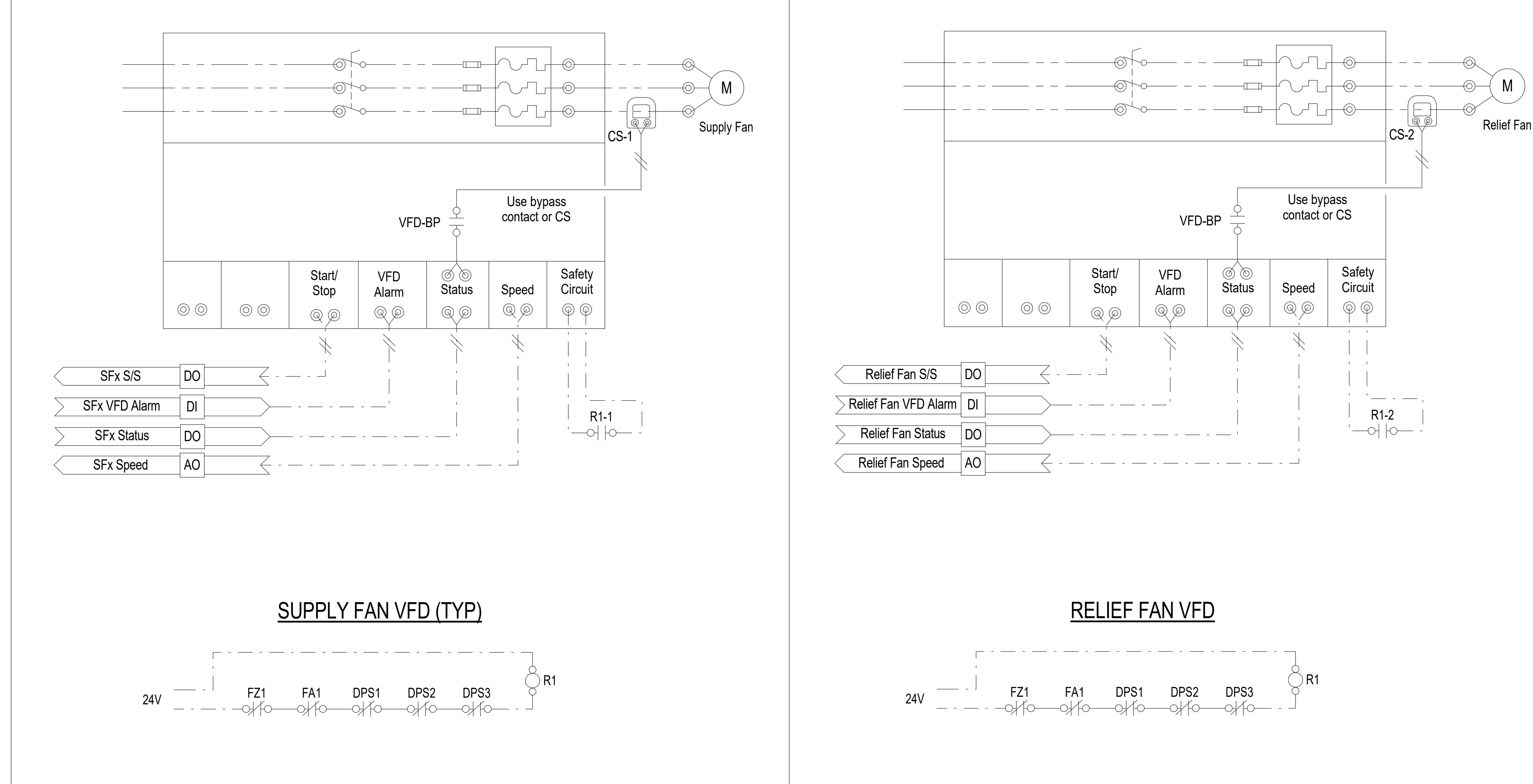


AIR HANDLING UNIT - 3 - 1

POINTS LIST

ADDRESS	POINT DESCRIPTOR	DI	AI	DO	AO	VP	REMARKS
	SFx S/S			○			Typical for each VFD
	SFx Status	○					Typical for each fan
	SFx Speed				○		Typical for each VFD
	SFx VFD Alarm	○					Typical for each VFD
	Supply Temp		○				
	PH Coil DAT		○				
	Freezestat	○					
	Mixed Air Temp		○				
	Disch Hi Static	○					
	Suction Low Static	○					
	CW Valve				○		
	CWR Temp		○				
	HW Valve				○		
	HW CP STATUS	○					
	HW CP S/S			○			
	Fire/Smoke Alarm	○					
	Relief Fan S/S			○			
	Relief Fan Status	○					
	Relief Fan Speed				○		
	Relief Fan VFD Alarm						
	OA Flow		○				
	OA Damper				○		
	RA Temp						
	Economizer				○		
	RA Humidity		○				
	RA CO2		○				
	Relief Low Static	○					
	DD Static Press		○				Typical for each
	Space Humidity		○				
	Space CO2		○				
	Building Pressure		○				
	UV Light Status	○					
	SF VFD FAULT	○				○	Interface Point, Typical for each VFD
	SF VFD FAULT CODE		○			○	Interface Point, Typical for each VFD
	SF VFD FEEDBACK		○			○	Interface Point, Typical for each VFD
	SF VFD KW		○			○	Interface Point, Typical for each VFD
	SF VFD KWH		○			○	Interface Point, Typical for each VFD
	SF VFD BYPASS	○				○	Interface Point, Typical for each VFD
	RF VFD FAULT	○				○	Interface Point
	RF VFD FAULT CODE		○			○	Interface Point
	RF VFD FEEDBACK		○			○	Interface Point
	RF VFD KW		○			○	Interface Point
	RF VFD KWH		○			○	Interface Point
	RF VFD BYPASS	○				○	Interface Point

ELECTRIC LADDER DIAGRAMS



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SHEET TITLE: HVAC CONTROLS - AHU-3-1

SCALE (U.N.O.): 1/8" = 1'-0"

JOB NAME: University of North Carolina - Chapel Hill

SCO# 21-25548-02A

BINGHAM HALL RENOVATION

LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

SEAL: NORTH CAROLINA PROFESSIONAL SEAL 043322 ENGINEER PAUL JACKSON KITCHENS

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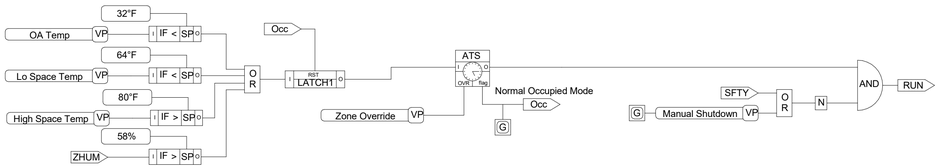
Signed on 01/03/2024 using a Digital Signature.

ISSUE DATE: 1/8/2024

JOB NO.: 11706-00

DWG. NO.: M704

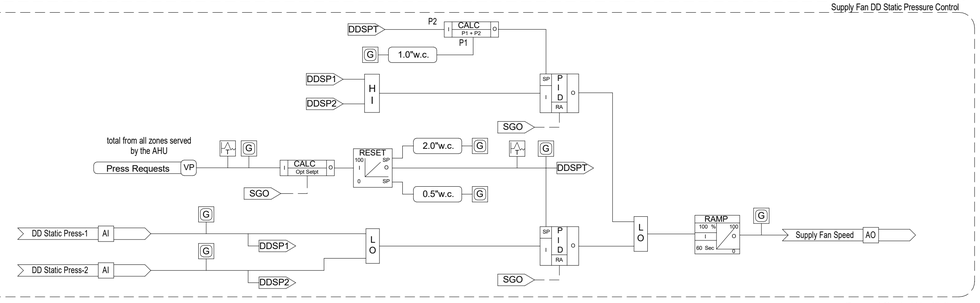
System Enable



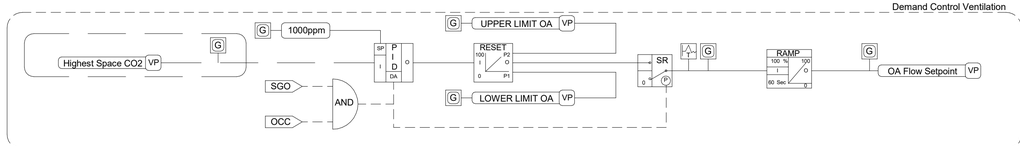
Supply Fan Enable (Typical for each VFD)

Supply Fan Proof (Typical for each Fan)

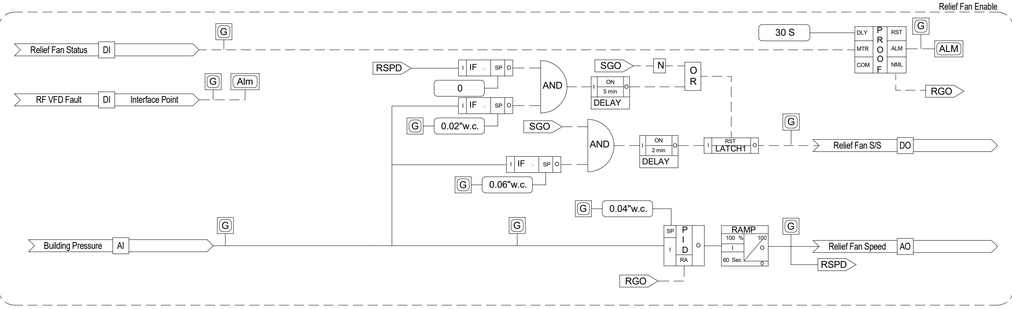
Supply Fan DD Static Pressure Control



Demand Control Ventilation



Relief Fan Enable



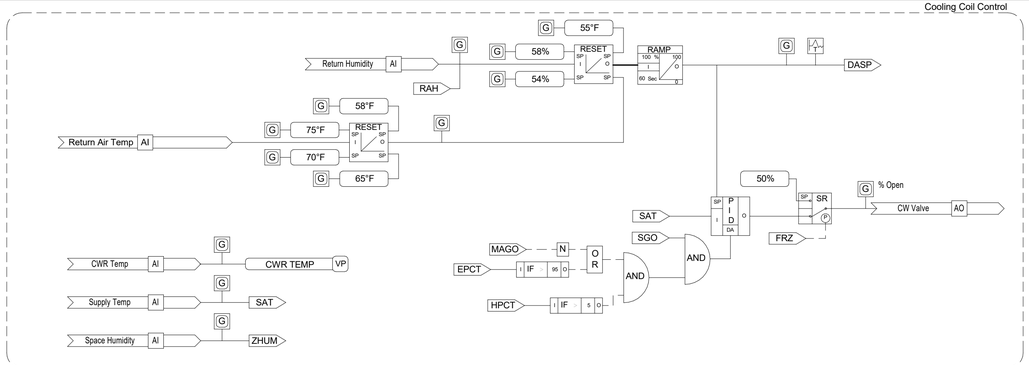
LOGIC VARIABLES

BINARY	ANALOG	DESCRIPTION
Occ		ON WHEN OCCUPIED MODE ACTIVE
RUN		ON WHEN SYSTEM REQUESTED TO START
SFxFL		ON WHEN SUPPLY FAN x IS ASSESSED AS FAILED
PRS		ON WHEN EITHER PRESSURE SWITCH IS IN ALARM
FRZ		ON WHEN FREEZESTAT IS IN ALARM
Fire		ON WHEN FIRE ALARM IS ACTIVE
SFTY		ON WHEN "FRZ", "Fire" OR "PRS" ARE ON
SFxST		ON WHEN SUPPLY FAN x'S STATUS IS ON
RGO		ON WHEN RELIEF FAN STATUS IS PROVEN ON

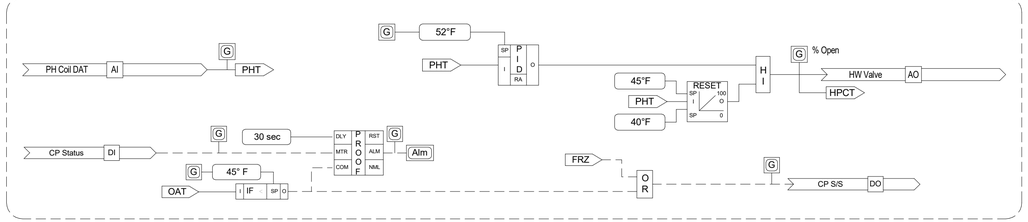
LOGIC VARIABLES (continued)

BINARY	ANALOG	DESCRIPTION
MAGO		ON WHEN OA CONDITIONS ALLOW ECONOMIZER CONTROL
	SAT	VARIABLE VALUE OF SUPPLY AIR TEMPERATURE
	PHT	VARIABLE VALUE OF PREHEAT AIR TEMPERATURE
	MAT	VARIABLE VALUE OF MIXED AIR TEMPERATURE
	RAH	VARIABLE VALUE OF RETURN AIR HUMIDITY
	OAT	VARIABLE VALUE OF OUTSIDE AIR TEMPERATURE
	DASP	VARIABLE CALCULATED VALUE OF DISCHARGE TEMPERATURE SETPOINT
	CPCT	VARIABLE CALCULATED VALUE OF CW VALVE POSITION
	HPCT	VARIABLE CALCULATED VALUE OF HW VALVE POSITION
	RSPD	VARIABLE CALCULATED VALUE OF RELIEF FAN SPEED COMMAND (%)

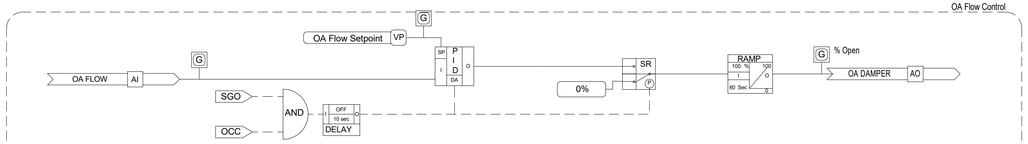
Cooling Coil Control



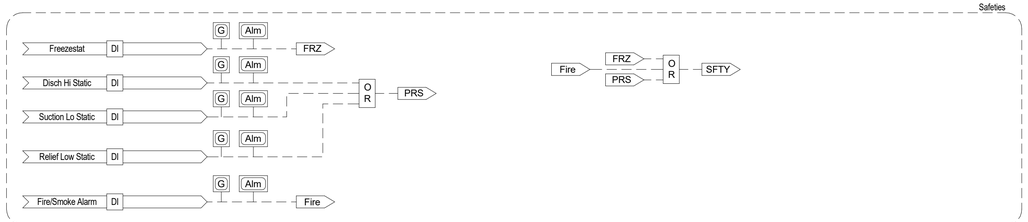
Heating Coil Control



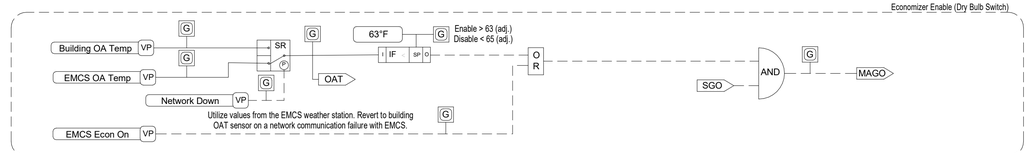
OA Flow Control



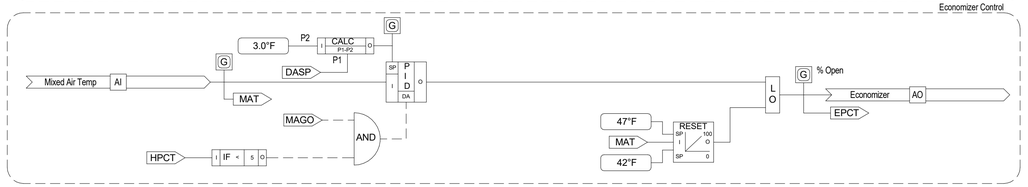
Safeties



Economizer Enable (Dry Bulb Switch)



Economizer Control



Misc Monitoring

AHU-3-1 - SOFTWARE LOGIC DIAGRAM

LORD AECK SARGENT

REVISION:

NEWCOMB & BOYD
5425 Page Road
Suite 215
Durham, NC 27703
NB Contact: Reade Daniel
N&B PROJECT: 21N242
Newcomb & Boyd, LLP
Firm Lic. # P-0312

SHEET TITLE: HVAC CONTROLS - AHU-3-1 LOGIC

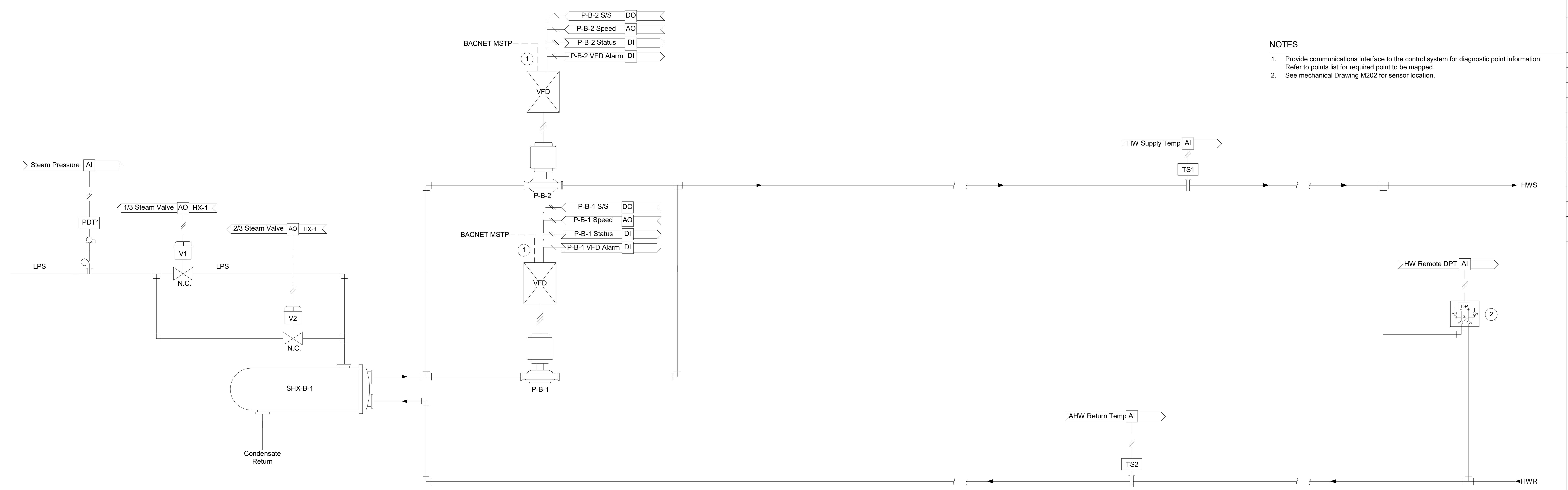
SCALE (U.N.O.): 1/8" = 1'-0"

JOB NAME: University of North Carolina - Chapel Hill
SCD#: 21-25548-20A
BINGHAM HALL RENOVATION

LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

SEAL
DocuSigned by:
0892D62E305D47A...
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 043322 PAUL JACKSON KITCHENS
Signed on 01/03/2024 using a Digital Signature.

ISSUE DATE: 1/8/2024
JOB. NO.: 11706-00
DWG. NO.: M705



STEAM TO HOT WATER CONVERTER WITH VARIABLE VOLUME PUMP

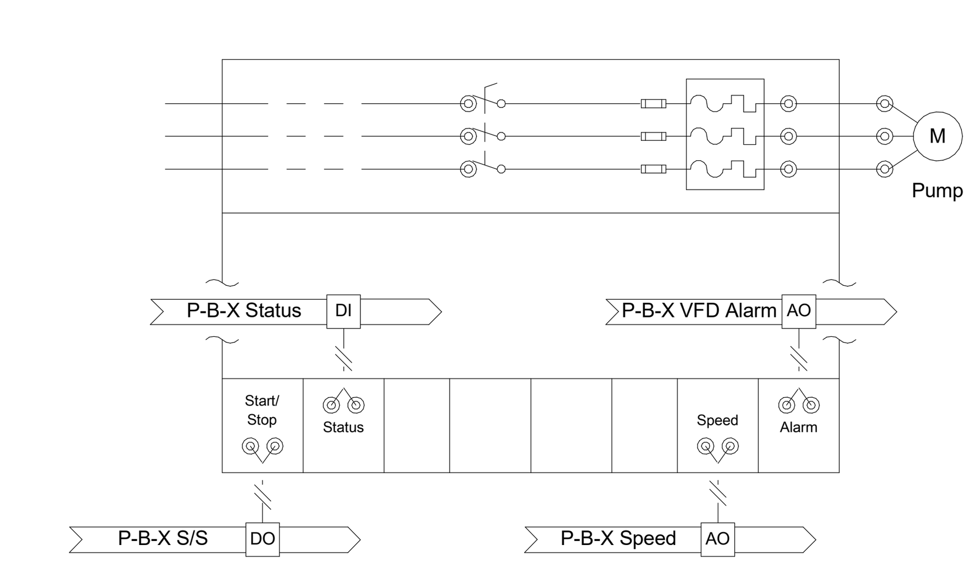
NOTES

1. Provide communications interface to the control system for diagnostic point information. Refer to points list for required point to be mapped.
2. See mechanical Drawing M202 for sensor location.

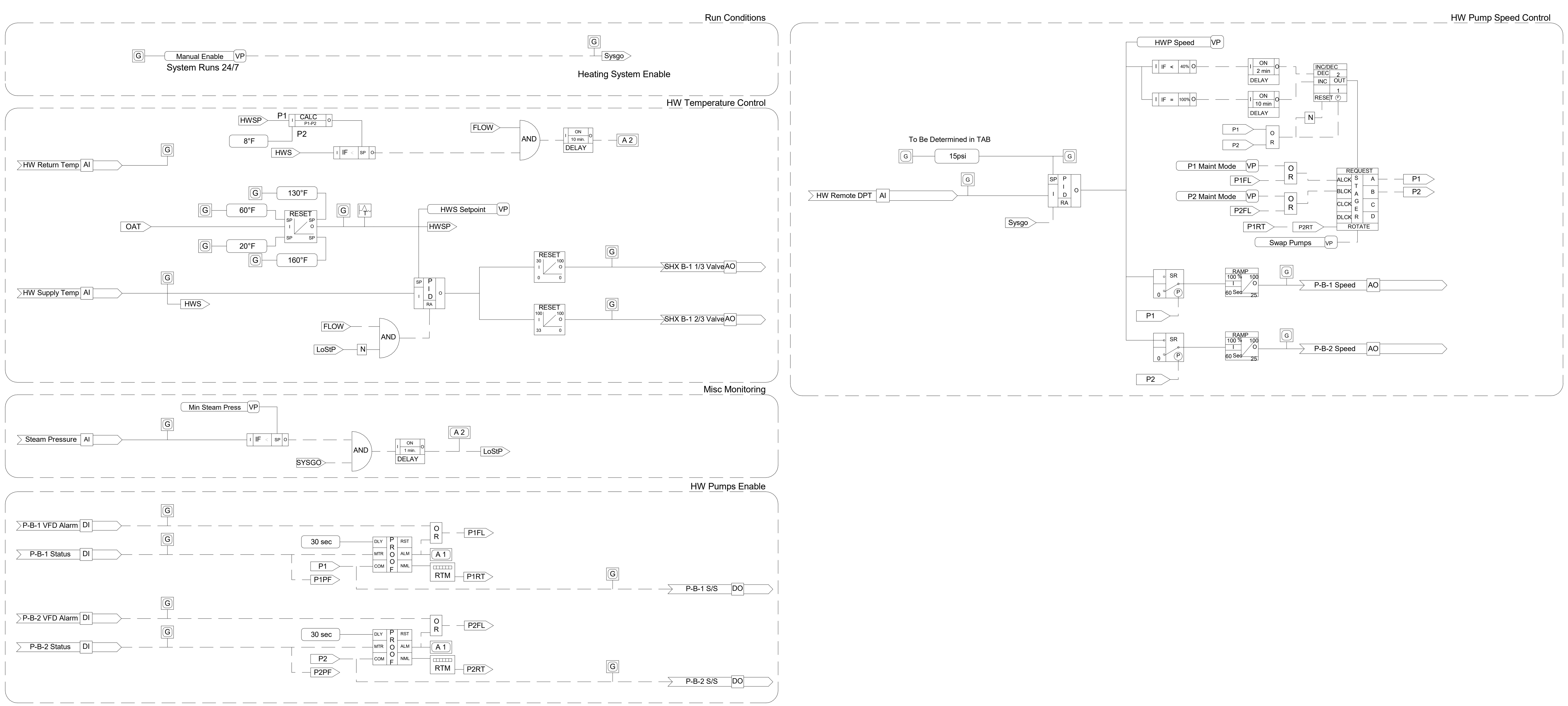
POINTS LIST

ADDRESS	POINT DESCRIPTOR	POINT TYPE DI	AI	DO	AO	VP	REMARKS
	1/3 STEAM VALVE				◦		
	2/3 STEAM VALVE				◦		
	P-B-X S/S			◦			Typical for each pump
	P-B-X STATUS	◦					Typical for each pump
	P-B-X SPEED				◦		Typical for each pump
	P-B-X VFD ALARM	◦					Typical for each pump
	HW SUPPLY TEMP		◦				
	HW RETURN TEMP		◦				
	HW REMOTE DPT		◦				
	STEAM PRESSURE		◦				

ELECTRIC LADDER DIAGRAM



PUMP VFD (TYP)



SOFTWARE LOGIC DIAGRAM

LOGIC VARIABLES

BINARY	ANALOG	DESCRIPTION
SYSGO		ON WHEN HEATING SYSTEM IS ENABLED
PxPF		ON WHEN PUMP x STATUS IS PROVEN
PxFL		ON WHEN PUMP x PROOF HAS FAILED
FLOW		ON WHEN EITHER PUMP IS PROVEN
Px		ON WHEN PUMP x IS COMMANDED TO RUN
LoStP		ON WHEN CAMPUS STEAM PRESSURE IS LOW
	OAT	VARIABLE VALUE OF OUTDOOR AIR TEMPERATURE
	PxRT	VARIABLE VALUE OF PUMP x RUNTIME (HH:MM)
	HWSP	VARIABLE CALCULATED VALUE OF HW SUPPLY TEMP SETPOINT
	HWS	VARIABLE VALUE OF HOT WATER SUPPLY TEMPERATURE

LORD AECK SARGENT

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Newcomb & Boyd, LLP
Firm Lic. # F-0312

SHEET TITLE: HVAC CONTROLS - HOT WATER HEATING SYSTEM

SCALE (U.N.O.): NO SCALE

JOB NAME: University of North Carolina - Chapel Hill

SCO#: 21-23548-02A

BINGHAM HALL RENOVATION

LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

SEAL: NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 043322 PAUL JACKSON KITCHENS

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Signed on 01/03/2024 using a Digital Signature.

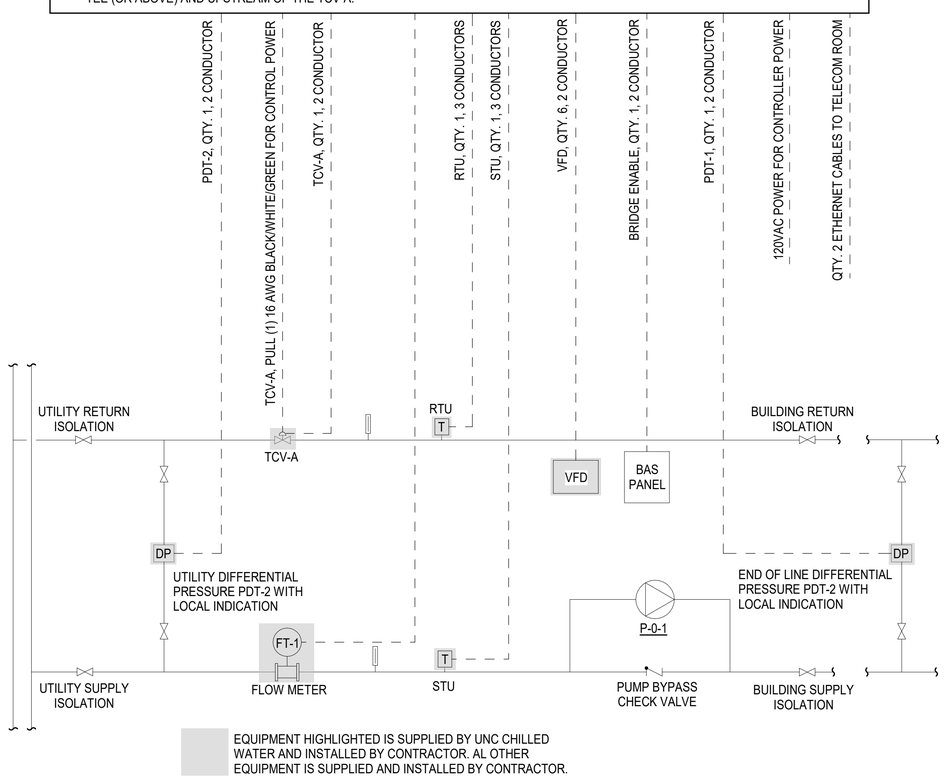
ISSUE DATE: 1/8/2024

JOB NO.: 11706-00

DWG. NO.: M706

UNC CHILLED WATER BRIDGE CONTROLLER PANEL

- VFD, QTY. 6, 2 CONDUCTOR CABLES FROM CHILLED WATER PANEL TO VFD.
- FOR TCV-A ELECTRIC ACTUATOR, PULL (1) 16 AWG BLACK/WHITE/GREEN FOR CONTROL POWER AND QTY. 1, 2 CONDUCTOR FOR ANALOG. WIRING SHALL BE IN SEPARATE CONDUITS.
- RTU & STU, QTY. 1 EACH, 3 CONDUCTOR CABLE TO EACH INSTRUMENT.
- PDT-1 & PDT-2, QTY. 1 EACH, 2 CONDUCTOR CABLE TO EACH INSTRUMENT.
- FLOW METER, PULL 1 EACH 16 AWG BLACK/WHITE/GREEN FOR CONTROL POWER AND QTY. 1, 2 CONDUCTOR CABLE FOR ANALOG. WIRING SHALL BE INSEPARATE CONDUITS.
- BRIDGE ENABLE, QTY.1, 2 CONDUCTOR CABLE. BRIDGE ENABLE PARAMETERS WILL BE SET BY BAS PROGRAMMING TO DETERMINE NEED FOR COOLING. CONNECTION TO BAS NEEDS TO BE ANALOG SIGNAL FOR VARIABLE BRIDGE ENABLE.
- 120 VAC POWER FOR CONTROLLER POWER SHALL BE ON ITS OWN DEDICATED 20A CIRCUIT BREAKER.
- 2 ETHERNET CABLES SHALL BE RUN FROM BRIDGE PANEL TO TELECOM ROOM. THIS SHALL BE A DEDICATED CONDUIT SHARING NO OTHER CABLES.
- RTU SENSOR MUST BE A MINIMUM 7 PIPE DIAMETERS FROM LAST TEE OUTLET TO ENSURE PROPER MIXING, ON THE SAME PLANE AS THE TEE (OR ABOVE) AND UPSTREAM OF THE TCV-A.



1 UNC CHILLED WATER BRIDGE CONTROLER
NO SCALE

BRIDGE CONTROL NOTES:

1. BRIDGE ENABLE SIGNAL SHALL BE A DRY CONTACT FROM BAS. CONTACT SHALL CLOSE WHEN THERE IS A DEMAND FOR CHILLED WATER AND OPEN WHEN THERE IS NO DEMAND. WHEN THE BUILDING CONTROL SYSTEM IS USED TO PROVIDE THIS SIGNAL, OUTDOOR AIR TEMPERATURE, COOLING COIL VALVE OUTPUT, OR OTHER PARAMETERS MAY BE USED TO INITIATE BRIDGE OPERATION/SHUTDOWN. DESIGNER SHALL SPECIFY PARAMETER TO BE USED. BRIDGE MODES OF OPERATION WILL BE CONTROLLED BY CHILLED WATER BASED ON THE BRIDGE ENABLE SIGNAL FROM THE BAS.

2. IN A FAILURE OF THE BRIDGE CONTROLS OR PUMP FAILURE, THE POSITION OF THE TCV-A WILL BE DETERMINED BY THE TYPE OF BRIDGE. IN THE EVENT OF A FAILURE, A NON-CRITICAL VALVE WILL FAIL IN THE CLOSED POSITION AND A CRITICAL VALVE WILL FAIL IN THE OPEN POSITION. THE CHILLED WATER ENGINEER SHALL DETERMINE WHETHER THE BUILDING IS CRITICAL OR NON-CRITICAL.

3. THE BRIDGE ENCLOSURE CABINET IS SUPPLIED BY UNC – CHILLED WATER DEPARTMENT AT A TIME WHEN REQUESTED BY THE CONTRACTOR THROUGH UNC CONSTRUCTION MANAGEMENT. THE PANEL IS MOUNTED IN A PLACE AGREED UPON BY CONTRACTOR AND UNC CHILLED WATER ENGINEER. THE PANEL SHALL BE MOUNTED AND CONDUITS AND WIRING TO THE FIELD INSTRUMENTS INSTALLED BEFORE THE BACK PLANE IS REQUESTED AND DELIVERED. ALL CONTROL WIRING IN BRIDGE PANEL, VFDS AND ALL CHILLED WATER INSTRUMENTS WILL BE TERMINATED BY UNC – CHILLED WATER DEPARTMENT PERSONNEL. NO PENETRATIONS ARE ALLOWED IN THE TOP OF THE PANEL BOX. ALL PENETRATIONS MUST BE MADE WITH LIQUID TIGHT CONNECTORS.THE 120VAC POWER TO THE PANEL MUST BE ON ITS OWN DESIGNATED BREAKER AND HAVE NOTHING ELSE TAPPED OFF IT. NO JUNCTION BOXES ARE ALLOWED IN THE CONDUIT RUN TO ENSURE THAT NO OTHER CIRCUITS CAN BE TAPPED OFF IT. A PULLING “C” MAY BE USED INSTEAD OF A JUNCTION BOX TO ASSIST IN WIRE PULLING OR IF MAXIMUM NUMBER OF BENDS IN CONDUIT HAS BEEN REACHED.

4. ALL CONTROL FUNCTIONS FOR THIS SYSTEM ARE PERFORMED BY A MULTI-LOOP CONTROLLER. THIS CONTROLLER WILL BE PURCHASED, PROGRAMMED AND INSTALLED IN A CONTROL PANEL BY CHILLED WATER DEPARTMENT. BEFORE THE INSTALLATION OF THE BACK PLANE, THE INSTRUMENTS AND TRANSMITTERS SHALL BE CHECKED FOR COMMUNICATION AND OPERATIONAL CAPABILITY BY UNC – CHILLED WATER PERSONNEL. TO PERFORM THIS TESTING ALL ASSOCIATED EQUIPMENT FOR THE OPERATION MUST BE COMPLETED, INCLUDING COMPRESSED AIR LINES AND ANY OTHER REQUIRED EQUIPMENT. ONCE THIS TESTING IS COMPLETED, THE RESPONSIBLE CHILLED WATER TECHNICIAN WILL BRING THE BACK PLANE, COMPLETE INSTALLATION AND TERMINATION OF ALL CONTROL WIRING AND TEST THE OPERATION AND COMMUNICATION OF THE BRIDGE PANEL. THE CONTROLLER SHALL BE PROVIDED WITH TWO ETHERNET CONNECTIONS TO THE CAMPUS NETWORK.

5. VFD MUST NOT BE POWERED UP OR OPERATED UNTIL IT HAS BEEN CERTIFIED AND COMMISSIONED BY CHILLED WATER PERSONNEL.UNLESS OTHERWISE AS REQUIRED BY THE VFD MANUFACTURER, THE MOTOR DRIVE OUTPUT WIRING FROM THE VFD SHALL BE PROPERLY SIZED XHHW-2 RUN IN GROUNDED METALLIC CONDUIT. THE USE OF SPECIFIC “VFD CABLE” IS GENERALLY NOT REQUIRED. NO TOP ENTRY ALLOWED. INSTALLATION NOTE: SEPARATE CONDUIT SHALL BE USED FOR INPUT POWER WIRING, MOTOR WIRING, CONTROL AND COMMUNICATIONS WIRING AND IF SUPPLIED, BRAKE UNIT WIRING.

6. UNC CHILLED WATER SHALL PROVIDE A LUG STYLE OR FLANGED, CLASS 150 BUTTERFLY VALVE FOR INSTALLATION BY THE CONTRACTOR. THE VALVE SHALL INCLUDE THE ACTUATOR. THE ACTUATOR WILL BE ELECTRIC AND SHALL USE 120V POWER. BACKUP POWER TO ENSURE THE PROPER FAILURE POSITION WILL BE FROM A UPS, WHICH WILL BE PROVIDED AND INSTALLED BY UNC CHILLED WATER. PREFERRED VALVE ORIENTATION IS WITH THE SHAFT IN THE HORIZONTAL PLANE. WHEN MOUNTED IN THE HORIZONTAL PLANE, THE ACTUATOR ASSEMBLY MUST NOT BE LOCATED AT THE BOTTOM OF THE PIPE. THE POSITION INDICATOR MUST BE VISIBLE FROM THE ME ROOM FLOOR. THERE MUST BE SUFFICIENT CLEARANCE TO REMOVE THE ACTUATOR ASSEMBLY FROM THE VALVE. SLIP-ON FLANGES SHALL NOT BE USED FOR CONTROL VALVE INSTALLATION AND CAN ONLY BE USED IF APPROVED FOR INSTALLATION BY UNC CHILLED WATER DIRECTOR.

7. MAGMETER FLOW METER: THE CHILLED WATER DEPARTMENT WILL PURCHASE THIS EQUIPMENT WITH PROJECT FUNDS. THE MECHANICAL CONTRACTOR SHALL INSTALL THIS FLOW ELEMENT IN THE PIPING SYSTEM AS SPECIFIED BY THE DESIGNER. THE CONTRACTOR SHALL FURNISH AND INSTALL FLANGES FOR FLOW METER. DESIGNER SHALL CLEARLY SHOW THE ORIENTATION AND MOUNTING OF THE FLOW METER ON THE CONSTRUCTION DRAWINGS. THE PREFERRED METER INSTALLATION IS IN HORIZONTAL PIPE RUNS. FOR A METER BEING INSTALLED IN THE SAME SIZE BRIDGE PIPING, THERE SHALL BE A MINIMUM OF 5 PIPE DIAMETERS BEFORE THE METER AND 2 PIPE DIAMETERS AFTER THE METER. IF INSTALLING SMALLER METER THAN THE BRIDGE PIPING, HAVE FOUR PIPE DIAMETERS BETWEEN THE METER FLANGES AND THE REDUCERS ON BOTH SIDES OF THE METER, THE SAME REQUIREMENT SHALL BE USED FOR ANY FITTINGS USED ADJACENT TO THE METER. FOR HORIZONTAL INSTALLATION, THIS METER MUST BE INSTALLED IN EITHER THE THREE O’CLOCK OR NINE O’CLOCK POSITIONS OR A MAXIMUM OF 45 DEGREES BELOW THESE POSITIONS. THE METER MUST NOT BE INSTALLED DOWNSTREAM FROM A CONTROL VALVE. THE METER MUST NOT BE INSTALLED IN THE HIGHEST POINT OF A PIPE SYSTEM.

8. TEMPERATURE SENSORS: RTU – RETURN TEMPERATURE UTILITY – MUST BE INSTALLED A MINIMUM OF 7 PIPE DIAMETERS DOWNSTREAM OF THE LAST CONNECTED TEE. THE THERMOWELL MUST BE INSTALLED IN THE SAME PLANE OR ABOVE THE TEE AND UPSTREAM OF THE CONTROL VALVE TO AVOID COLD TRAP. STU – SUPPLY TEMPERATURE UTILITY – MUST BE INSTALLED A MINIMUM OF 3 PIPE DIAMETERS FROM PIPE FITTINGS. INSTALL WITH ENOUGH LENGTH IN LIQUID-TITE METALLIC CONDUIT AND LEADS TO ALLOW REMOVAL OF THE RTD FOR CALIBRATION WITHOUT DISCONNECTING WIRING OR LIQUID-TITE METALLIC CONDUIT. ENSURE THE THERMOWELL IS INSTALLED ON THE SIDE OF THE PIPE.

9. TAPS FOR DIFFERENTIAL PRESSURE TRANSMITTERS SHALL BE ½" THREAD-O-LETS® WITH A ½" BALL VALVE ATTACHED. DOWNSTREAM OF THE BALL VALVE CONTRACTOR SHALL RUN 3/8" COPPER OR STAINLESS-STEEL TUBING TO CONNECT TO THE TRANSMITTER. THE END OF LINE DIFFERENTIAL PRESSURE TRANSMITTER (PDT-1) SHALL BE INSTALLED AT THE WORST LOCATION IN THE SYSTEM FROM A PRESSURE STANDPOINT. THIS IS TYPICALLY NEAR THE MOST REMOTE AIR HANDLER, OR THE AIR HANDLER LOCATED ON THE HIGHEST FLOOR OF THE BUILDING. CONTACT THE CHILLED WATER ENGINEER FOR ASSISTANCE IN DETERMINING THE APPROPRIATE LOCATION. THE UTILITY DIFFERENTIAL PRESSURE TRANSMITTER (PDT-2) SHALL BE LOCATED JUST INSIDE THE BRIDGE ISOLATION VALVES, AS CLOSE AS POSSIBLE TO THE LOCATION THAT THE CHILLED WATER PIPES ENTER THE BUILDING. THE CHILLED WATER ENGINEER CAN ASSIST WITH THIS PLACEMENT AS WELL. VERIFY TAPS FOR PDTS ARE MOUNTED ON THE SIDE OF HORIZONTAL RUNS IN PIPING, NOT ON TOP OR BOTTOM. PDTS SHALL BE MOUNTED WITH CONNECTION TAPS ON TOP OF UNIT AND TUBING RUN UP TO CONNECTIONS. TUBING MUST BE RUN SO AIR IS NOT TRAPPED IN LINES.

10. CONTROL CABLE TYPE: CHARLOTTE WIRE AND CABLE NO. CW09305 (OR EQUIVALENT APPROVED BY CHILLED WATER), 2-CONDUCTOR, STRANDED, TWISTED, 18-GAUGE, FOIL SHIELD WITH DRAIN WIRE, STRANDED, TINNED COPPER, PVC JACKET, 300VOLT RATING. RTD TEMPERATURE SENSORS: CHARLOTTE WIRE AND CABLE NO. CW09306 (OR EQUIVALENT APPROVED BY CHILLED WATER), 3-CONDUCTOR, STRANDED, TWISTED, 18-GAUGE, FOIL SHIELD WITH DRAIN WIRE, STRANDED, TINNED COPPER, PVC JACKET, 300VOLT RATING. NO BRIDGE WIRING CONDUITS WILL BE SHARED WITH ANY OTHER SYSTEM. POWER WIRING SHALL BE IN ONE DEDICATED CONDUIT WITH NO JUNCTION BOXES. PULLING “C” AND/OR “LB” ONLY.

11. ALL CONDUIT FOR WIRING CAN BE EMT CONDUIT. CONDUIT WILL BE RUN FOR ALL BRIDGE PANEL WIRING. EACH CONDUIT MUST HAVE SIMILAR TYPE WIRING. DO NOT MIX SHIELDED CABLE WITH AC POWER. ALL WIRING IN CONDUITS SHALL BE CONTINUOUS WIRE RUNS WITH NO SPLICES. NO JUNCTION BOXES ARE ALLOWED. ONLY PULLING “C” AND “LB”. IF THERE ARE ANY TRANSITIONS FROM EMT TO FLEXIBLE CONDUIT, THAT FLEXIBLE CONDUIT MUST BE LIQUID-TIGHT METALLIC CONDUIT. CONDUIT FOR PDT-1 WILL BE RUN FROM THE BRIDGE PANEL TO THE TRANSMITTER WITH ONLY THE WIRE FOR THE TRANSMITTER IN THE CONDUIT.

LORD AECK SARGENT

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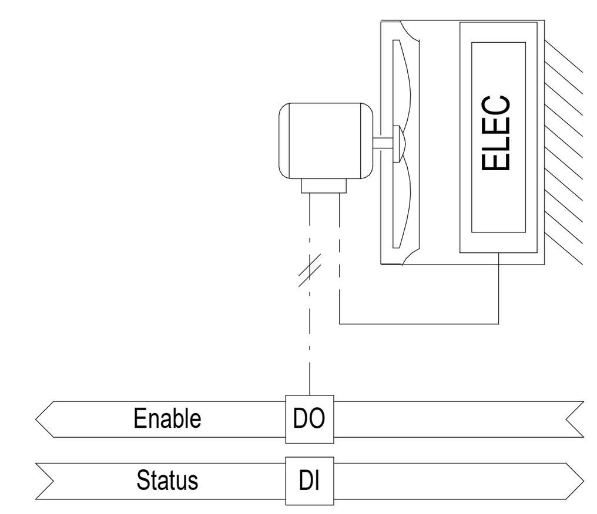
Newcomb & Boyd, LLP
Firm Lic # P-0212

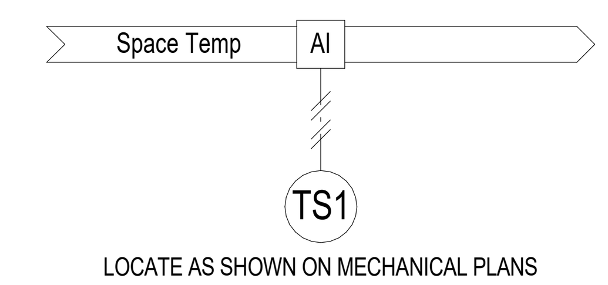
SHEET TITLE: HVAC CONTROLS - CHILLED WATER SYSTEM
SCALE (U.N.O.): NO SCALE

JOB NAME: University of North Carolina - Chapel Hill
SCH#: 21-035482-02A
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

SEAL
DocuSigned by:
0892D82E305D47A...
NORTH CAROLINA PROFESSIONAL SEAL 043322 ENGINEER PAUL JACKSON KITCHINS
Signed on 01/03/2024 using a Digital Signature.

ISSUE DATE: 1/8/2024
JOB. NO.: 11706-00
DWG. NO.: M707

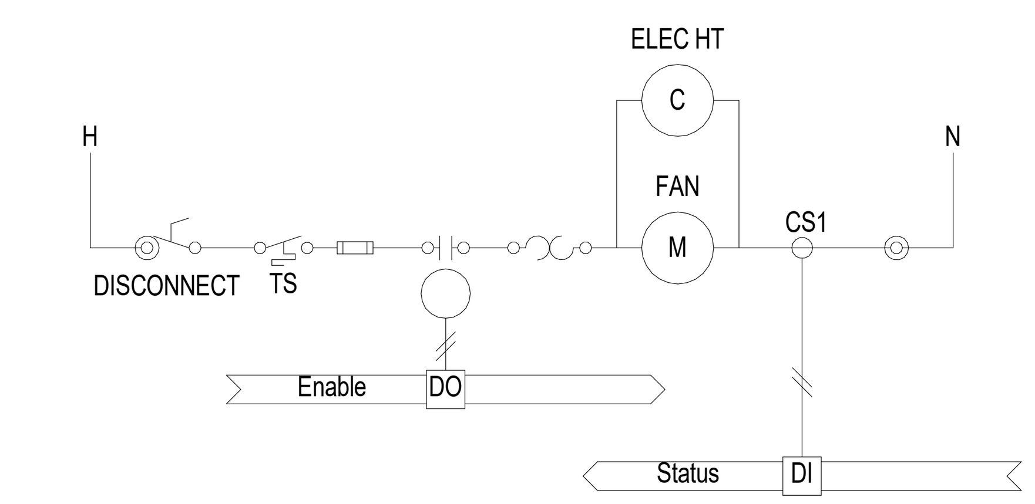




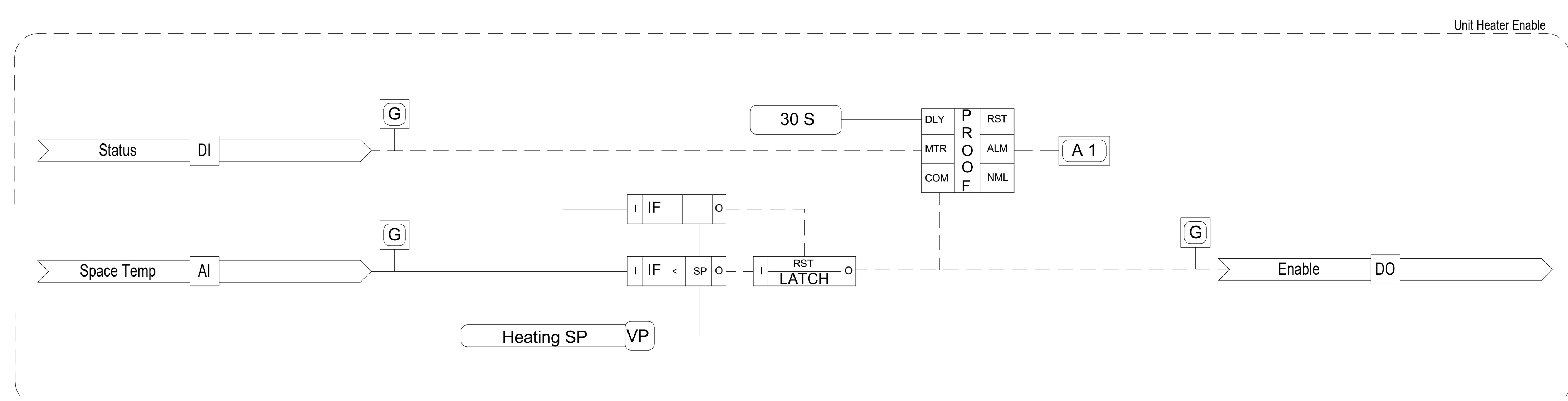
POINTS LIST

ADDRESS	POINT DESCRIPTOR	POINT TYPE DI	AI	DO	AO	VP	REMARKS
	Space Temp		○				
	Enable			○			
	Status	○					

ELECTRIC LADDER DIAGRAM



ELECTRIC UNIT HEATERS



LOGIC VARIABLES

BINARY	ANALOG	DESCRIPTION

SOFTWARE LOGIC DIAGRAM

REVISION:

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Newcomb & Boyd, LLP
Firm Lic. # F-0312

SHEET TITLE
HVAC CONTROLS - ELECTRIC UNIT HEATERS

SCALE (U.N.O.)
NO SCALE

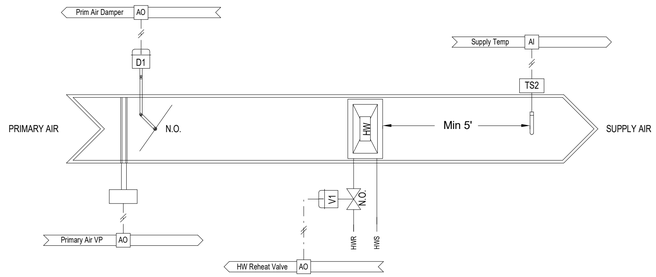
JOB NAME
University of North Carolina - Chapel Hill
SCO# 21-23548-02A
BINGHAM HALL RENOVATION
LOCATION
36 Lenoir Drive, Chapel Hill, NC 27514

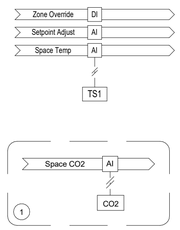
SEAL
DocuSigned by:
G892D62E305D47A...
CAROLINA PROFESSIONAL SEAL 043322 ENGINEER PAUL JACKSON KITCHENS
Signed on 01/03/2024
using a Digital Signature.

ISSUE DATE
1/8/2024
JOB. NO.
11706-00
DWG. NO.
M708

NOTES

1. See mechanical drawing M503 for applicable terminal units.





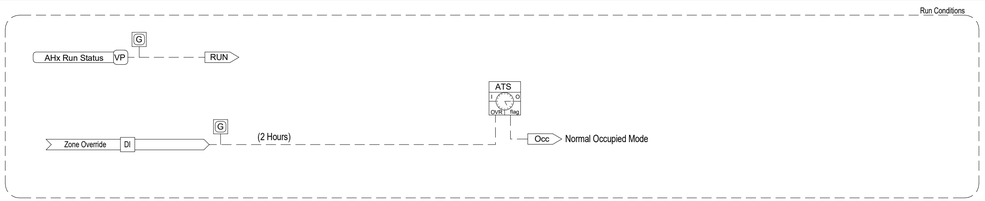
POINTS LIST

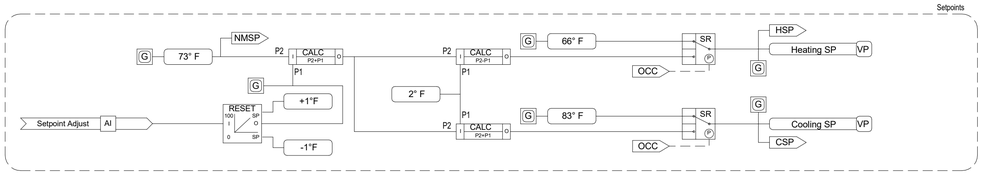
ADDRESS	POINT DESCRIPTOR	POINT TYPE DI	AI	DO	AO	VP	REMARKS
	Space Temp		*				
	Prim Air Damper				*		
	Primary Air VP		*				
	Supply Air Temp		*				
	HW Reheat Valve			*			
	Setpoint Adjust		*				
	Zone Override		*				
	Space CO2		*				

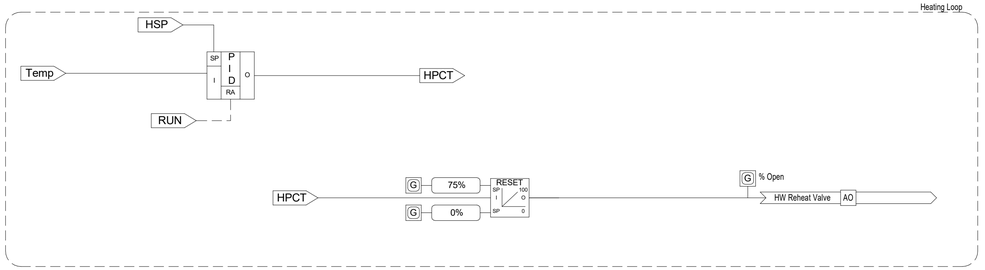
LOGIC VARIABLES

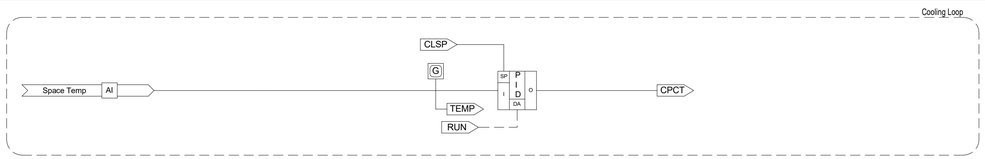
BINARY	ANALOG	DESCRIPTION
Occ		ON WHEN OCCUPIED MODE ACTIVE
SFST		ON WHEN FAN STATUS IS ON
	Temp	VARIABLE VALUE OF SPACE TEMPERATURE
	CPCT	VARIABLE VALUE OF UNIT COOLING OUTPUT %
	CSP	VARIABLE VALUE OF EFFECTIVE SPACE COOLING SETPOINT
	Temp	VARIABLE VALUE OF SPACE TEMPERATURE
	HSP	VARIABLE CALCULATED VALUE OF ACTIVE HEATING SETPOINT
	CSP	VARIABLE CALCULATED VALUE OF ACTIVE COOLING SETPOINT
	CCSP	VARIABLE CALCULATED VALUE OF CURRENT CFM SETPOINT
	CPCT	VARIABLE CALCULATED VALUE OF THE COOLING LOOP OUTPUT (COOLING %)
	HPCT	VARIABLE CALCULATED VALUE OF THE HEATING LOOP OUTPUT (HEATING %)
	NMSP	VARIABLE VALUE OF THE NOMINAL SPACE TEMPERATURE SETPOINT

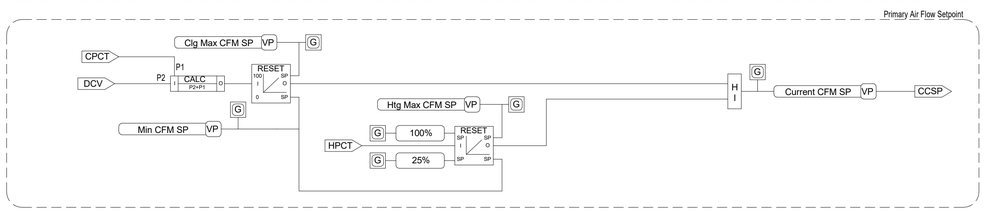
SINGLE DUCT TERMINAL UNIT (WITH REHEAT COIL)

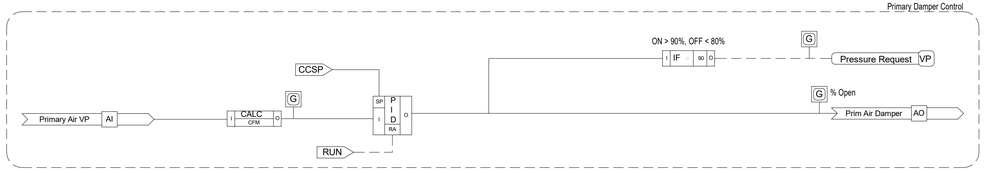


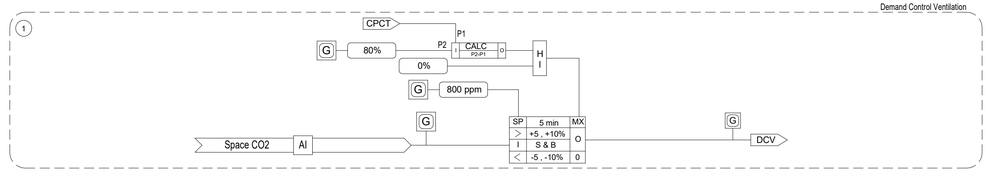












SOFTWARE LOGIC DIAGRAM

REVISION:

NEWCOMB & BOYD
5425 Page Road
Suite 215
Durham, NC 27703
NB Contact: Reade Daniel
N&B PROJECT : 21N242
Newcomb & Boyd, LLP
Firm Lic # P-0312

SHEET TITLE: HVAC CONTROLS - VV-R TERMINAL UNITS

SCALE: (U.N.O.) NO SCALE

JOB NAME: University of North Carolina - Chapel Hill

SCD# 21-23548-02A

BINGHAM HALL RENOVATION

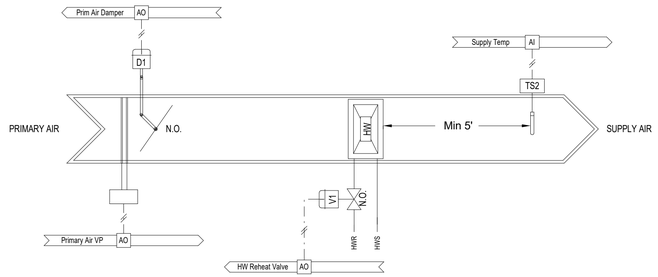
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

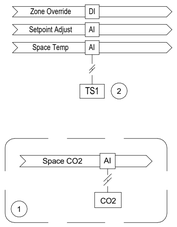
SEAL
Docusigned by:
0892D62E3050474...
NORTH CAROLINA PROFESSIONAL SEAL 043322 ENGINEER PAUL JACKSON KITCHENS
Signed on 01/03/2024 using a Digital Signature.

ISSUE DATE: 1/8/2024

JOB. NO. 11706-00

DWG. NO. M709





NOTES

1. See mechanical drawing M503 for applicable terminal units.
2. Where more than one terminal unit serves the same zone. A single master zone sensor shall be configured with setpoint adjust and override button. Zone temperature control logic shall utilize the average temperature of all zone sensors in the same zone. See mechanical piping plans for averaged zones.

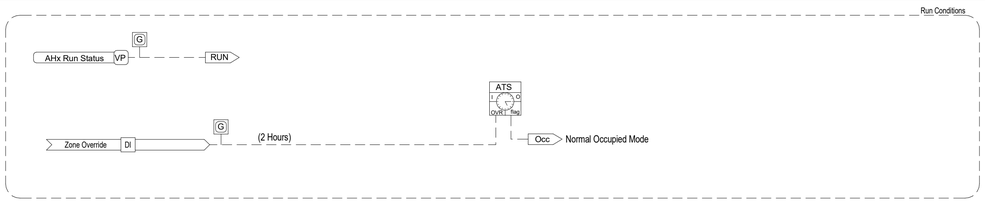
POINTS LIST

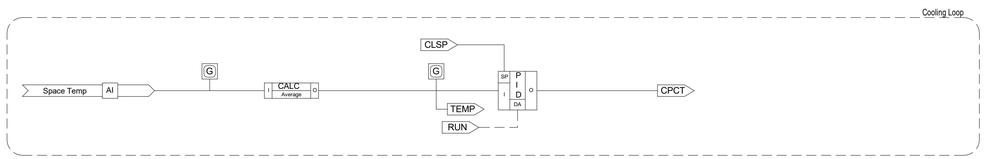
ADDRESS	POINT DESCRIPTOR	POINT TYPE DI	AI	DO	AO	VP	REMARKS
	Space Temp		*				
	Prim Air Damper				*		
	Primary Air VP		*				
	Supply Air Temp		*				
	HW Reheat Valve			*			
	Setpoint Adjust		*				
	Zone Override		*				
	Space CO2		*				

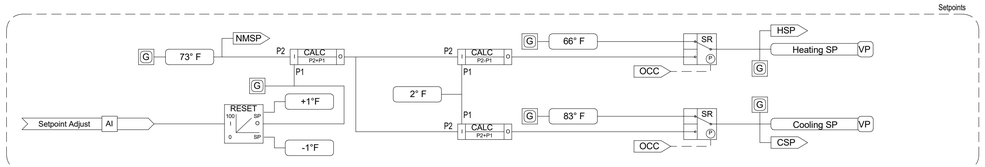
LOGIC VARIABLES

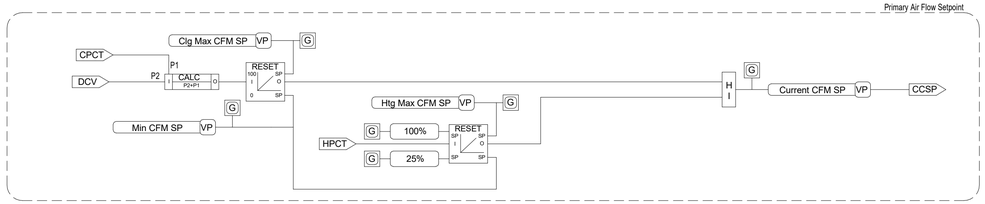
BINARY	ANALOG	DESCRIPTION
Occ		ON WHEN OCCUPIED MODE ACTIVE
SFST		ON WHEN FAN STATUS IS ON
	Temp	VARIABLE VALUE OF SPACE TEMPERATURE
	CPCT	VARIABLE VALUE OF UNIT COOLING OUTPUT %
	CSP	VARIABLE VALUE OF EFFECTIVE SPACE COOLING SETPOINT
	Temp	VARIABLE VALUE OF SPACE TEMPERATURE
	HSP	VARIABLE CALCULATED VALUE OF ACTIVE HEATING SETPOINT
	CSP	VARIABLE CALCULATED VALUE OF ACTIVE COOLING SETPOINT
	CCSP	VARIABLE CALCULATED VALUE OF CURRENT CFM SETPOINT
	CPCT	VARIABLE CALCULATED VALUE OF THE COOLING LOOP OUTPUT (COOLING %)
	HPCT	VARIABLE CALCULATED VALUE OF THE HEATING LOOP OUTPUT (HEATING %)
	NMSP	VARIABLE VALUE OF THE NOMINAL SPACE TEMPERATURE SETPOINT

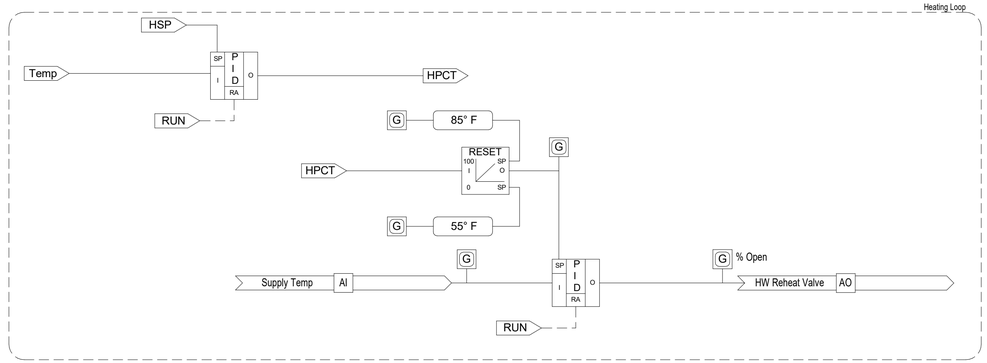
MULTIPLE SINGLE DUCT TERMINAL UNITS (WITH REHEAT COIL) SERVING ONE TEMPERATURE ZONE

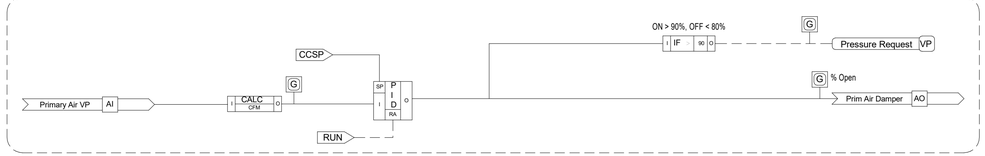


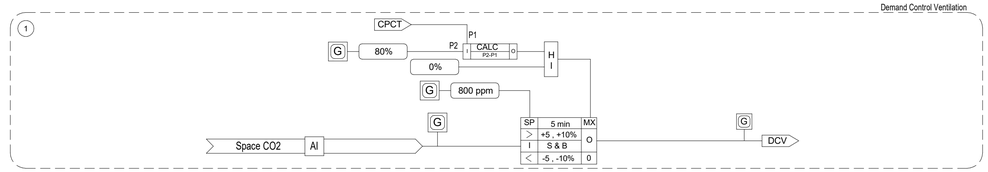












SOFTWARE LOGIC DIAGRAM

REVISION:

NEWCOMB & BOYD
5425 Page Road
Suite 215
Durham, NC 27703
NB Contact: Reade Daniel
N&B PROJECT: 21N242
Newcomb & Boyd, LLP
Firm Lic # P-0312

SHEET TITLE: HVAC CONTROLS - VV-R TERMINAL UNITS (MULTI)

SCALE: (U.N.O.) 1/8" = 1'-0"

JOB NAME: University of North Carolina - Chapel Hill

SCO#: 21-235482-02A

BINGHAM HALL RENOVATION

LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

SEAL
DocuSigned by:
0892D62E3050474...
NORTH CAROLINA PROFESSIONAL SEAL 043322 ENGINEER PAUL JACKSON KITCHENS
Signed on 01/03/2024 using a Digital Signature.

ISSUE DATE: 1/8/2024

JOB. NO. 11706-00

DWG. NO. M710

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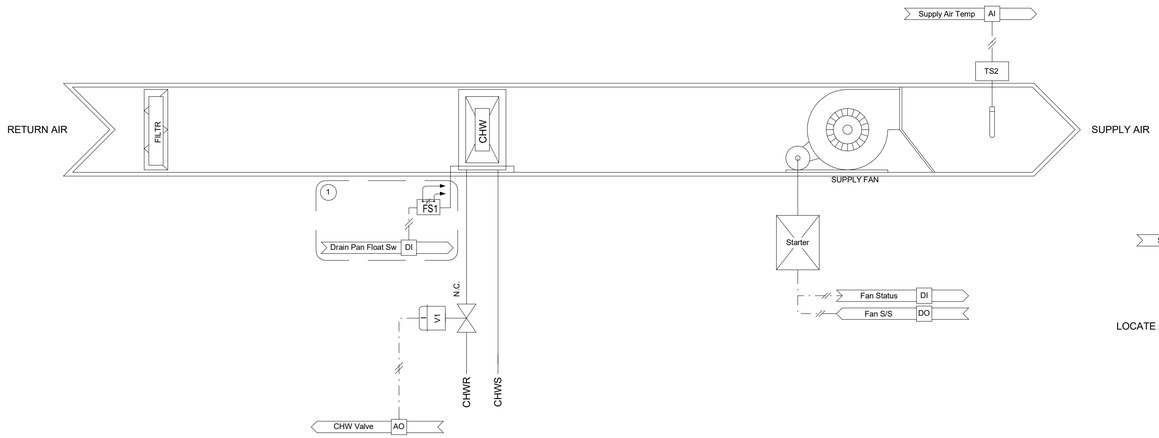
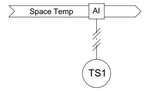
NOTES

1. Provide condensate pump controls where indicated on M-500 or where pump is required for drain requirements.



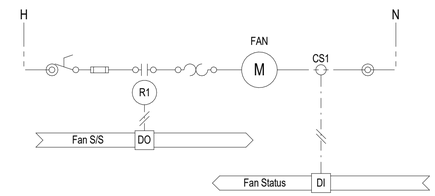


LOCATE AS SHOWN ON MECHANICAL PLANS

POINTS LIST

ADDRESS	POINT DESCRIPTOR	POINT TYPE DI	AI	DO	AO	VP	REMARKS
	Space Temp		◦				
	CW Valve				◦		
	Supply Air Temp		◦				
	Fan S/S			◦			
	Fan Status	◦					
	Drain Pan float Sw	◦					

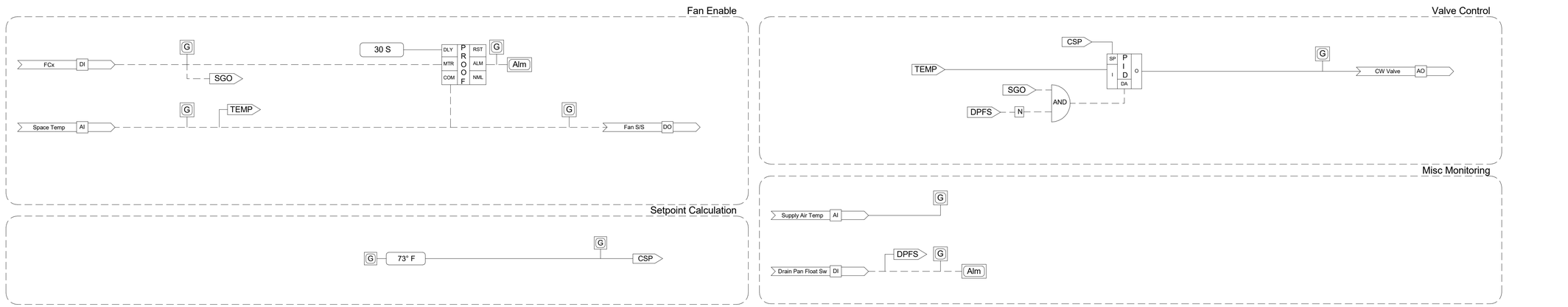
ELECTRIC LADDER DIAGRAM



FAN-COIL UNITS (COOLING ONLY)

LOGIC VARIABLES

BINARY	ANALOG	DESCRIPTION
Occ		ON WHEN OCCUPIED MODE ACTIVE
SFST		ON WHEN FAN STATUS IS ON
	Temp	VARIABLE VALUE OF SPACE TEMPERATURE
	CPCT	VARIABLE VALUE OF UNIT COOLING OUTPUT %
	CSP	VARIABLE VALUE OF EFFECTIVE SPACE COOLING SETPOINT
DPFS		ON WHEN FLOAT SWITCH IS ACTIVATED



SOFTWARE LOGIC DIAGRAM

LORD AECK SARGENT

REVISION:

NEWCOMB & BOYD
5425 Page Road
Suite 215
Durham, NC 27703
NB Contact: Reade Daniel
N&B PROJECT: 21N242
Newcomb & Boyd, LLP
Firm Lic # P-0312

SHEET TITLE: HVAC CONTROLS - FAN COIL UNITS (COOLING ONLY)

SCALE (U.N.O.): NO SCALE

JOB NAME: University of North Carolina - Chapel Hill
SCI#: 21-235482-0A
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 043322 PAUL JACKSON KITCHINS
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ISSUE DATE: 1/8/2024
JOB. NO. 11706-00
DWG. NO. M711

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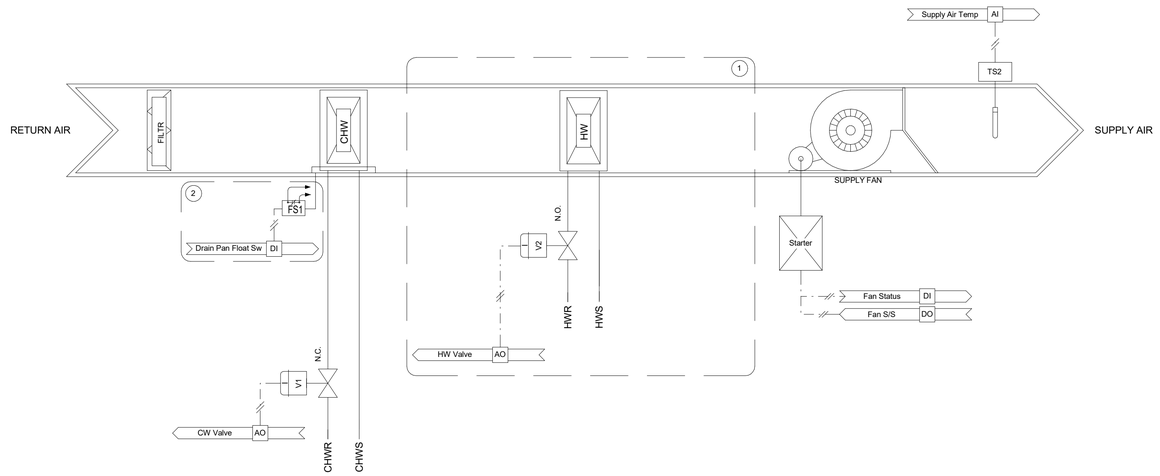
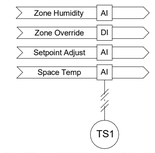
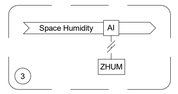


NOTES

1. Provide controls for HW coil where indicated on M-500.
2. Provide condensate pump controls where indicated on M-500 or where pump is required for drain requirements.
3. See mechanical piping plans for sensor locations.



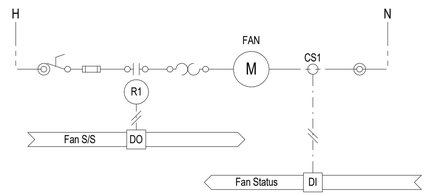
LOCATE AS SHOWN ON MECHANICAL PLANS



POINTS LIST

ADDRESS	POINT DESCRIPTOR	POINT TYPE DI	AI	DO	AO	VP	REMARKS
	Space Temp		◦				
	Setpoint Adjust		◦				
	Zone Override	◦					
	Zone Humidity		◦				
	CW Valve				◦		
	Supply Air Temp		◦				
	Fan S/S			◦			
	Fan Status	◦					
	Drain Pan float Sw	◦					
	HW Valve				◦		

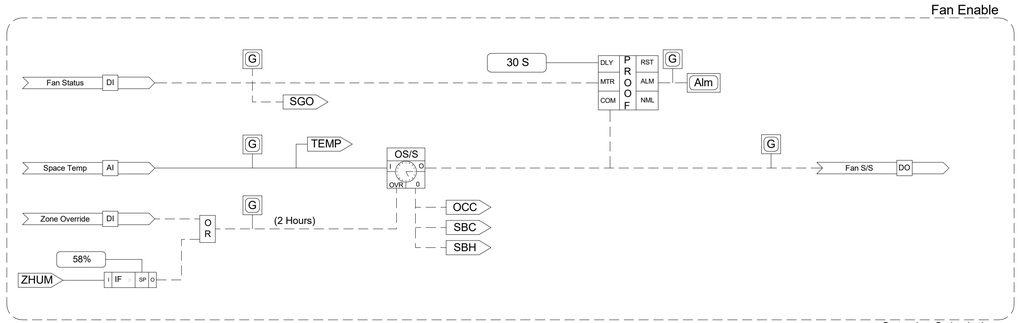
ELECTRIC LADDER DIAGRAM

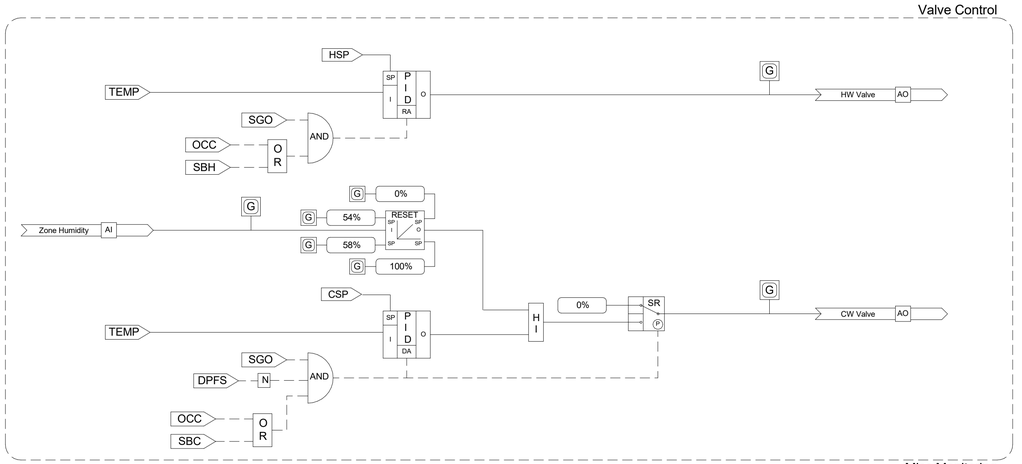


FAN-COIL UNITS

LOGIC VARIABLES

BINARY	ANALOG	DESCRIPTION
Occ		ON WHEN OCCUPIED MODE ACTIVE
SFST		ON WHEN FAN STATUS IS ON
	Temp	VARIABLE VALUE OF SPACE TEMPERATURE
	CPCT	VARIABLE VALUE OF UNIT COOLING OUTPUT %
	CSP	VARIABLE VALUE OF EFFECTIVE SPACE COOLING SETPOINT
DPFS		ON WHEN FLOAT SWITCH IS ACTIVATED





SOFTWARE LOGIC DIAGRAM

REVISION:

LORD AECK SARGENT

NEWCOMB & BOYD
5425 Page Road
Suite 215
Durham, NC 27703
NB Contact: Reade Daniel
N&B PROJECT : 21N242
Newcomb & Boyd, LLP
Firm Lic # P-0412

SHEET TITLE: CONTROLS FAN COIL UNITS

SCALE (U.N.O.): 1/8" = 1'-0"

JOB NAME: University of North Carolina - Chapel Hill
SCH#: 21-035482-02A
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

SEAL
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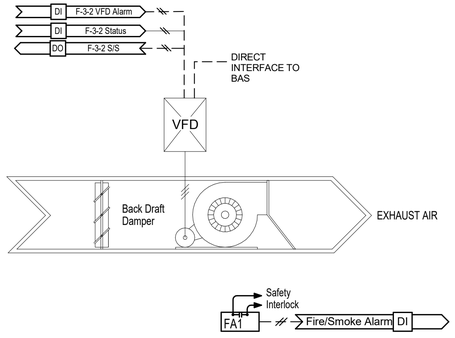
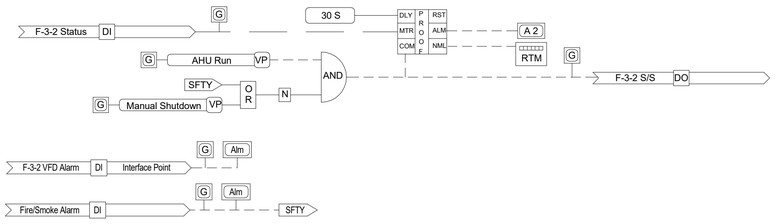
0892D62E305D47A...
NORTH CAROLINA PROFESSIONAL
SEAL 043322
ENGINEER
PAUL JACKSON KITCHINS
Signed on 01/03/2024 using a Digital Signature.

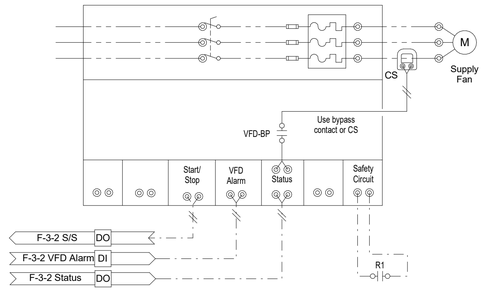
ISSUE DATE: 1/8/2024
JOB. NO.: 11706-00
DWG. NO.: M712



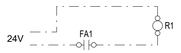
Exhaust Fan F-3-2



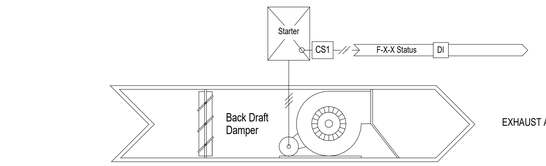
ELECTRIC LADDER DIAGRAMS



EXHAUST FAN VFD



POINTS LIST							
ADDRESS	POINT DESCRIPTOR	POINT TYPE DI	AI	DO	AO	VP	REMARKS
	F-3-2 S/S			*			
	F-3-2 Status	*					
	F-3-2 VFD Alarm	*					
	Fire/Smoke Alarm	*					
	AHU Run					*	

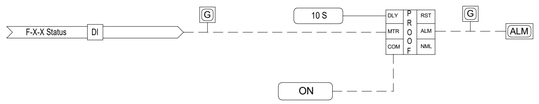


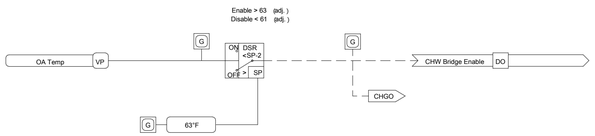
Exhaust Fan F-B-1, F-B-2, & F-1-1

POINTS LIST							
ADDRESS	POINT DESCRIPTOR	POINT TYPE DI	AI	DO	AO	VP	REMARKS
	F-X-X Status	*					

NOTES

Fans shall run continuously BAS shall enunciate an alarm whenever status is not detected.

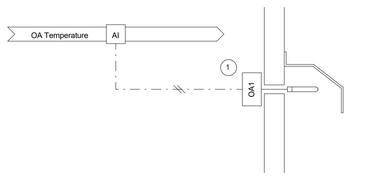




POINTS LIST							
ADDRESS	POINT DESCRIPTOR	POINT TYPE DI	AI	DO	AO	VP	REMARKS
	OA Temp					*	
	CHW Bridge Enable Signal			*			

LOGIC VARIABLES		
BINARY	ANALOG	DESCRIPTION
CWGO		ON WHEN CHILLED WATER BRIDGE IS ENABLED

Chilled Water Bridge Enable Signal

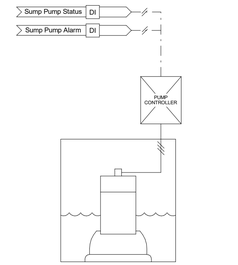


POINTS LIST							
ADDRESS	POINT DESCRIPTOR	POINT TYPE DI	AI	DO	AO	VP	REMARKS
	OA Temperature		*				See Note 1

NOTES

1. Provide outside air temperature sensor as shown on M-202.

OUTSIDE AIR TEMPERATURE SENSOR



POINTS LIST							
ADDRESS	POINT DESCRIPTOR	POINT TYPE DI	AI	DO	AO	VP	REMARKS
	Sump Pump Alarm	*					
	Sump Pump Status	*					

Sump Pump

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DB92D62E305D47A...
CAROLINA NATIONAL
SEAL 043322
ENGINEER
PAUL JACKSON KITCHINS
Signed on 01/03/2024 using a Digital Signature.

LORD AECK SARGENT

REVISION:

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Durham, NC 27703
NB Contact: Reade Daniel
N&B PROJECT: 21N242
Newcomb & Boyd, LLP
Firm Lic. # P-0412

SHEET TITLE: HVAC CONTROLS - MISCELLANEOUS
SCALE (U.N.O.): NO SCALE

JOB NAME: University of North Carolina - Chapel Hill
SCD#: 21-235482-02A
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

ISSUE DATE: 1/8/2024
JOB. NO. 11706-00
DWG. NO. M713

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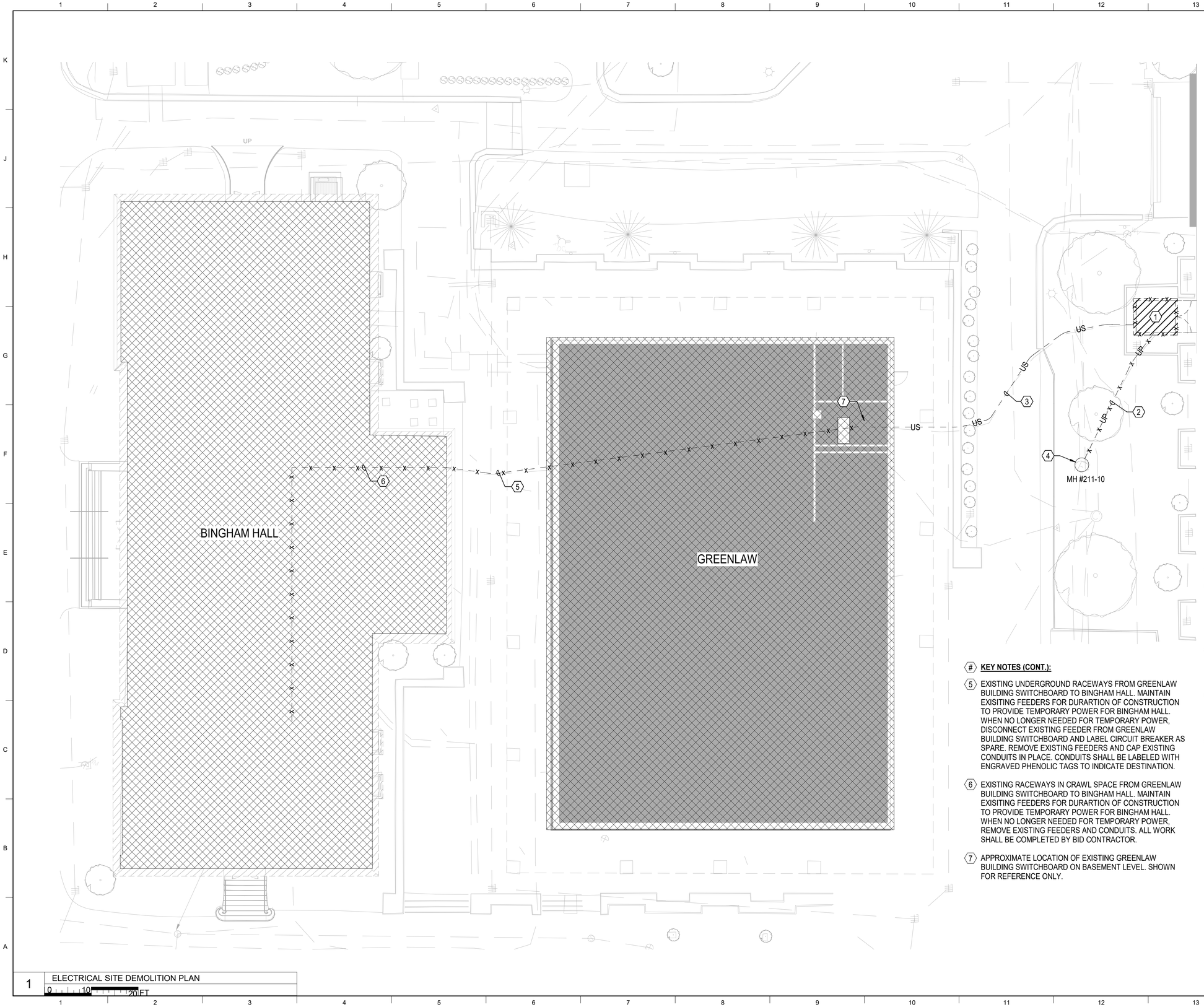

ELECTRICAL PHASING NOTES:

1. EXISTING GREENLAW BUILDING CANNOT BE SUBJECT TO A PROLONGED POWER OUTAGE. COORDINATE THE POWER OUTAGE DURATION WITH OWNER PRIOR TO CONSTRUCTION.

2. ELECTRICAL SITE WORK SHALL BE PERFORMED IN PHASES AS FOLLOWS TO MINIMIZE THE POWER OUTAGE.

   PHASE 1 SHALL INCLUDE THE FOLLOWING SCOPE:
   - REMOVAL OF EXISTING SITE UTILITY TRANSFORMER AND INSTALLATION OF NEW SITE UTILITY TRANSFORMER. BY UNC EDS CONTRACTOR.
   - REMOVAL OF EXISTING FEEDER SERVING BINGHAM HALL. BY UNC EDS CONTRACTOR.
   - INSTALLATION OF NEW SECONDARY DUCTBANK TO SITE PULL BOX. BY UNC EDS CONTRACTOR.
   - INSTALLATION OF NEW SECONDARY CONDUITS FROM SITE PULL BOX TO GREENLAW. BY UNC EDS CONTRACTOR.
   - INSTALLATION OF NEW SECONDARY CONDUCTORS SERVING GREENLAW. BY UNC EDS CONTRACTOR.
   - INSTALLATION OF NEW PRIMARY DUCTBANK TO NEW SITE UTILITY TANSFORMER LOCATION. BY UNC EDS CONTRACTOR.
   - INSTALLATION OF UNDERGROUND RACEWAYS FOR NEW LIGHTING PEDESTAL AND INSTALLATION OF NEW CONCRETE PAD FOR LIGHTING PEDESTAL. BY UNC EDS CONTRACTOR.

   PHASE 2 SHALL INCLUDE THE FOLLOWING SCOPE:
   - REMOVAL OF EXISTING SITE UTILITY TRANSFORMER AND INSTALLATION OF NEW SITE UTILITY TRANSFORMER. BY OWNER.
   - REMOVAL OF EXISTING PRIMARY FEEDER SERVING EXISTING SITE TRANSFORMER. BY OWNER.
   - REMOVAL OF EXISTING SECONDARY FEEDER SERVING GREENLAW BUILDING. BY OWNER.
   - INSTALLATION OF NEW SECONDARY FEEDER SERVING GREENLAW BUILDING. BY OWNER.
   - MAKE PRIMARY AND SECONDARY CONNECTIONS TO NEW SITE UTILITY TRANSFORMER. EXTEND PRIMARY AND SECONDARY RACEWAYS AND FEEDERS AS NECESSARY TO CONNECT TO NEW SITE UTILITY TRANSFORMER. BY OWNER.

3. A TEMPORARY GENERATOR SHALL BE PROVIDED BY THE CONTRACTOR TO MAINTAIN EMERGENCY POWER TO THE GREENLAW BUILDING DURING PHASE 2 OUTAGE. TEMPORARY GENERATOR SHALL BE 30KW, 480/277V, 3-PHASE.

4. CONTRACTOR SHALL PREPARE A SCHEDULE OF ACTIVITIES AND SHUTDOWN REQUIREMENTS AND PRESENT TO THE OWNER A MINIMUM OF 14 DAYS IN ADVANCE OF THE SCHEDULED OUTAGE.

(#) KEY NOTES:

(1) REMOVE EXISTING TRANSFORMER AND METER SERVING EXISTING GREENLAW BUILDING. TRANSFORMER AND METER SHALL BE REMOVED AND STORED BY OWNER. PROVIDE PRESSURE TREATED CRIBBING TO SUPPORT TRANSFORMERS IN STORAGE YARD. ALL WORK SHALL BE COMPLETED BY UNC EDS.

(2) ABANDON EXISTING PRIMARY DUCTBANK SERVING EXISTING GREENLAW BUILDING TRANSFORMER. CAP EXISTING CONDUITS IN PLACE. ALL WORK SHALL BE COMPLETED BY UNC EDS.

(3) EXISTING TO BE ABANDON SECONDARY DUCTBANK SERVING EXISTING GREENLAW BUILDING. REMOVE EXISTING FEEDERS AND CAP EXISTING CONDUITS IN PLACE. ALL WORK SHALL BE COMPLETED BY UNC EDS.

(4) EXISTING PRIMARY MANHOLE TO REMAIN.

(#) KEY NOTES (CONT.):

(5) EXISTING UNDERGROUND RACEWAYS FROM GREENLAW BUILDING SWITCHBOARD TO BINGHAM HALL. MAINTAIN EXISITING FEEDERS FOR DURARTION OF CONSTRUCTION TO PROVIDE TEMPORARY POWER FOR BINGHAM HALL. WHEN NO LONGER NEEDED FOR TEMPORARY POWER, DISCONNECT EXISTING FEEDER FROM GREENLAW BUILDING SWITCHBOARD AND LABEL CIRCUIT BREAKER AS SPARE. REMOVE EXISTING FEEDERS AND CAP EXISTING CONDUITS IN PLACE. CONDUITS SHALL BE LABELED WITH ENGRAVED PHENOLIC TAGS TO INDICATE DESTINATION.

(6) EXISTING RACEWAYS IN CRAWL SPACE FROM GREENLAW BUILDING SWITCHBOARD TO BINGHAM HALL. MAINTAIN EXISITING FEEDERS FOR DURARTION OF CONSTRUCTION TO PROVIDE TEMPORARY POWER FOR BINGHAM HALL. WHEN NO LONGER NEEDED FOR TEMPORARY POWER, REMOVE EXISTING FEEDERS AND CONDUITS. ALL WORK SHALL BE COMPLETED BY BID CONTRACTOR.

(7) APPROXIMATE LOCATION OF EXISTING GREENLAW BUILDING SWITCHBOARD ON BASEMENT LEVEL. SHOWN FOR REFERENCE ONLY.

1 ELECTRICAL SITE DEMOLITION PLAN
0 10 20 FT

PROJECT NORTH TRUE NORTH

SEAL
DocuSigned by:
88290DD38DE3467...
SEAL 044143
ENGINEER RICHARD O. DOZIER III
Signed on 01/03/2024 using a Digital Signature.

LORD AECK SARGENT

REVISION:

NEWCOMB & BOYD
5425 Page Road
Suite 215
Durham, NC 27703
NB Contact: Reade Daniel
N&B PROJECT: 21N242
Newcomb & Boyd, LLP
Firm Lic # P-0212

SHEET TITLE: ELECTRICAL SITE DEMOLITION PLAN
SCALE (U.N.O.): As indicated
0 10 20 FT

JOB NAME: University of North Carolina - Chapel Hill
SCI#: 21-235492A
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

ISSUE DATE: 1/8/2024
OB. NO.: 11706-00
DWG. NO.: ED010

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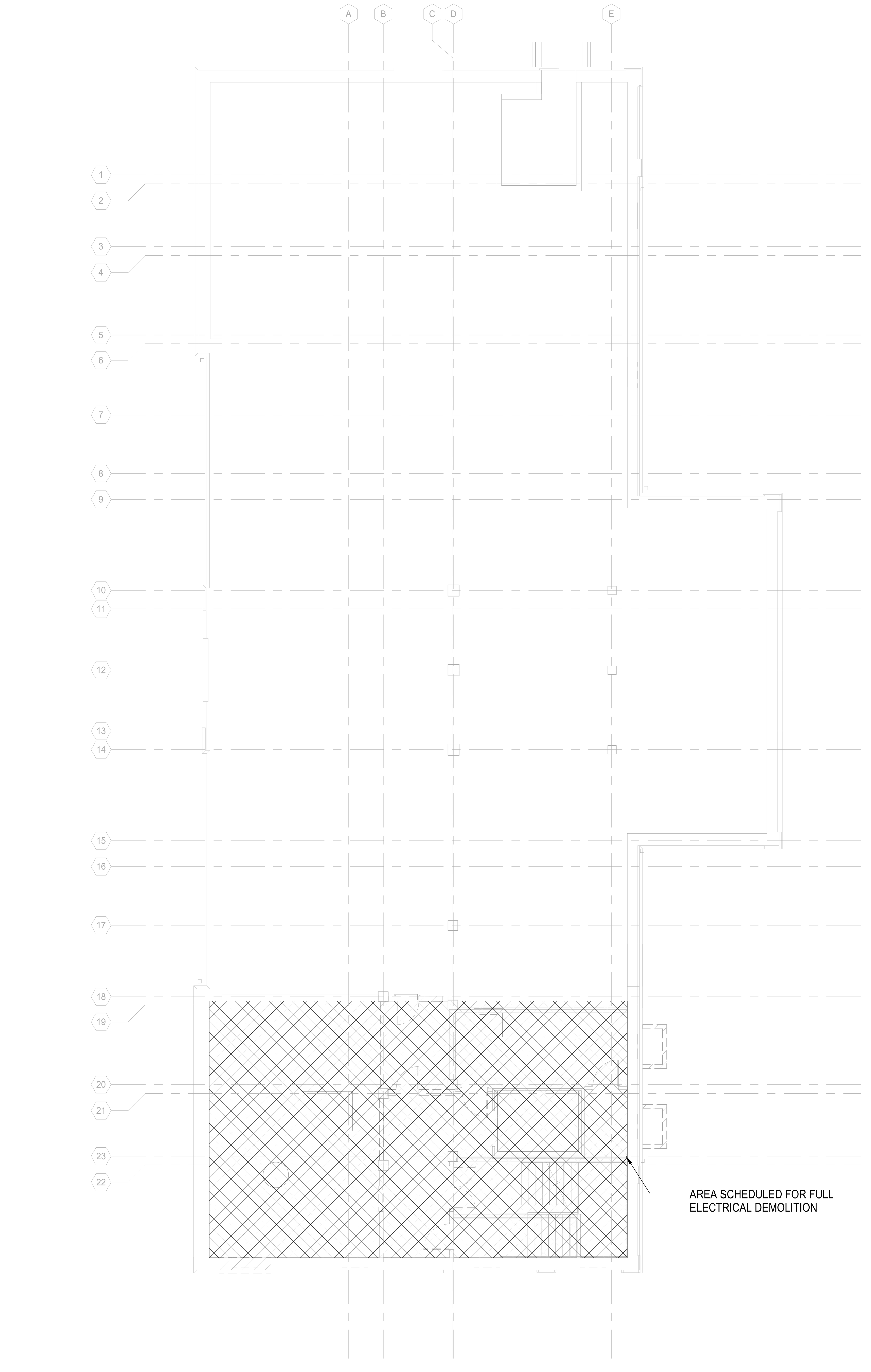
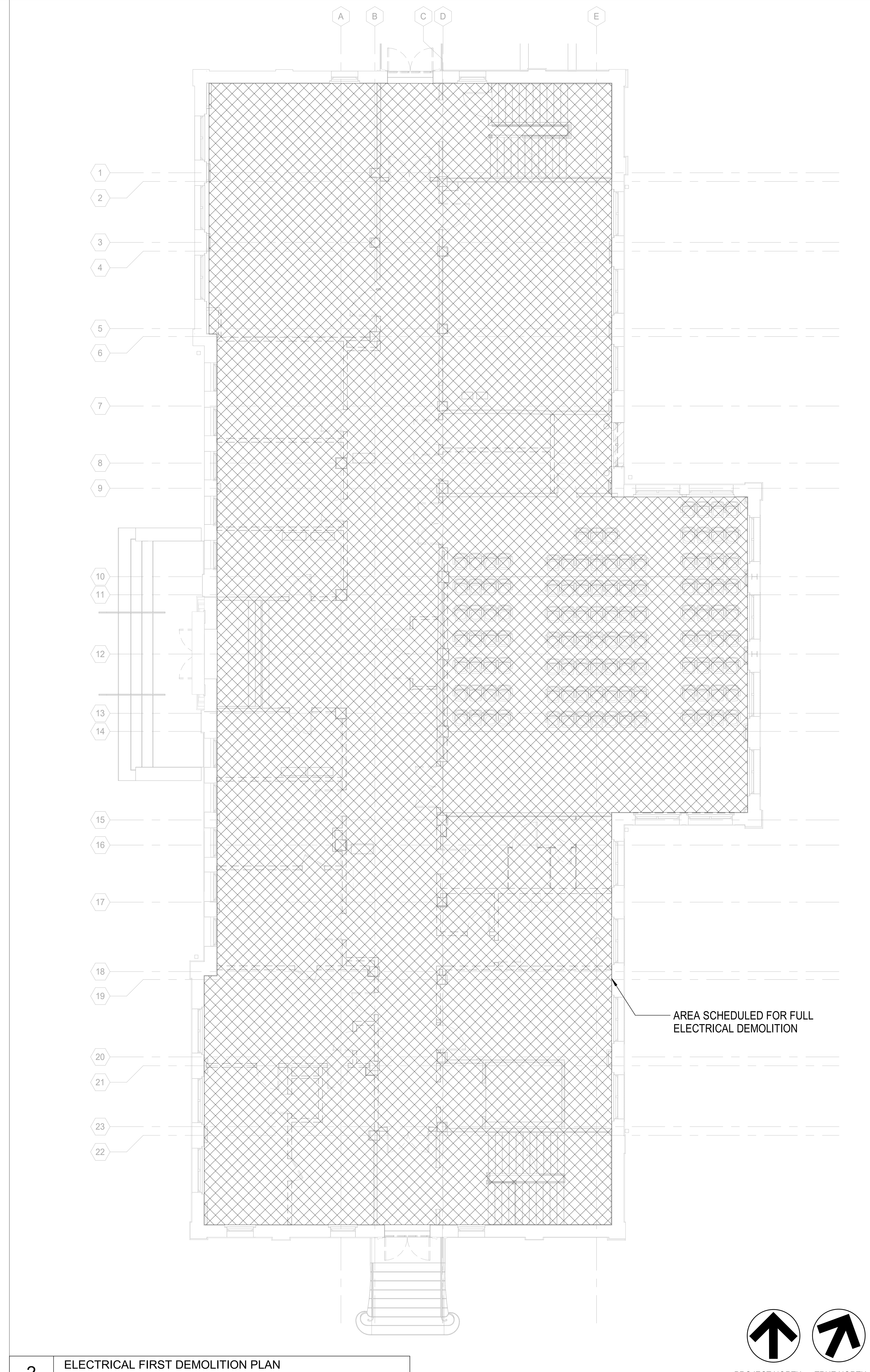


1 ELECTRICAL BASEMENT DEMOLITION PLAN



2 ELECTRICAL FIRST DEMOLITION PLAN

GENERAL DEMOLITION NOTES:

1. THE EXISTING INSTALLATION SHALL REMAIN AS-IS EXCEPT AS OTHERWISE INDICATED ON THE DRAWINGS OR SPECIFIED HEREIN. PERFORM WORK TO TIE IN THE NEW WORK WITH THE EXISTING WORK AND TO ADAPT THE EXISTING WORK TO THE CHANGES IN THE BUILDING AND SYSTEMS.
2. REMOVE EQUIPMENT, APPARATUS, AND EXPOSED WIRING AND RACEWAYS RENDERED USELESS DUE TO CHANGES.
3. WHERE EXISTING CEILINGS ARE REMOVED, REMOVE LUMINAIRES, EXIT SIGNS, AND OTHER ELECTRICAL POWER AND SIGNAL APPARATUS MOUNTED TO THE CEILING OR CEILING SUPPORTS, INCLUDING ASSOCIATED RACEWAYS AND WIRING.
4. EXISTING FIXTURES, EQUIPMENT, AND APPARATUS WHICH ARE REMOVED AND NOT REUSED IN THE NEW WORK SHALL BE TURNED OVER TO THE OWNER.
5. MATERIAL AND EQUIPMENT WHICH HAS BEEN REMOVED AND NOT ACCEPTED BY THE OWNER SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE.
6. EXISTING ELECTRICAL EQUIPMENT, INCLUDING LAMPS AND BALLASTS, REMOVED AND NOT REUSED SHALL BE HANDLED AND DISPOSED OF IN ACCORDANCE WITH APPLICABLE STATE AND FEDERAL REGULATIONS.
7. MATERIAL AND EQUIPMENT WHICH HAS BEEN REMOVED SHALL NOT BE USED IN THE NEW WORK, EXCEPT AS SPECIFIED HEREIN.
8. WHERE EXISTING RACEWAYS AND EQUIPMENT ARE INDICATED ON THE DRAWINGS, SIZE AND LOCATION SHALL BE VERIFIED PRIOR TO BIDDING.
9. PROVIDE CIRCUIT CONTINUITY FOR EXISTING WIRING DEVICES AND EQUIPMENT OUTSIDE THE RENOVATION AREA SERVED FROM OR THROUGH THE RENOVATION AREA.
10. REMOVE CONCEALED WIRING AND RACEWAYS WHICH ARE EXPOSED BY THE REMOVAL OF WALLS, PARTITIONS, AND CEILINGS. PROVIDE NEW CONCEALED WIRING AND RACEWAYS TO SERVE EXISTING LOADS PRESENTLY SERVED BY THE REMOVED WIRING AND RACEWAYS.
11. SLEEVES LEFT OPEN BY REMOVAL OF CONDUIT OR RACEWAYS SHALL BE CUT FLUSH WITH THE FINISHED SLAB, AND FILLED WITH GROUT FLUSH WITH BOTH SIDES OF SLAB.
12. CONCEALED RACEWAYS IN MASONRY WALLS RENDERED USELESS BY REVISIONS SHALL BE CUT FLUSH WITH WALL SURFACE AND SEALED WITH GROUT.
13. WHERE EXISTING MECHANICAL EQUIPMENT IS REMOVED, REMOVE ELECTRIC WIRING, RACEWAYS, SWITCHES, AND STARTERS ASSOCIATED WITH THE EQUIPMENT.
14. WHERE EXISTING MECHANICAL EQUIPMENT IS MODIFIED OR RELOCATED, MODIFY THE ELECTRICAL CONNECTIONS TO THE EQUIPMENT TO ADAPT IT TO ITS NEW FUNCTION OR LOCATION.
15. PROVIDE BLANK FACEPLATE COVERS FOR ABANDONED BACK BOXES IN EXISTING MASONRY WALLS.
16. CIRCUITS SHALL BE DE-ENERGIZED PRIOR TO DEMOLITION WORK AND OUTAGES COORDINATED WITH THE OWNER.

LORD AECK SARGENT

REVISION:

NEWCOMB & BOYD
5425 Page Road Suite 216 Durham, NC 27703 NB Contact: Reade Daniel N&B PROJECT: 21N242 Newcomb & Boyd, LLP Firm Lic. # F-0312

SHEET TITLE: ELECTRICAL BASEMENT & FIRST FLOOR DEMOLITION PLANS

SCALE (U.N.O.): NO SCALE

JOB NAME: University of North Carolina - Chapel Hill
SCO#: 21-23548-02A
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

SEAL: DocuSigned by: SEAL 044143 ENGINEER RICHARD O. DOZIER, III
Signed on 01/03/2024 using a Digital Signature.

ISSUE DATE: 1/8/2024
JOB NO.: 11706-00
DWG. NO.: ED101

Autodesk Docs://11706-00 UNC Bingham Hall/MEP_UNC Bingham Hall_R22.rvt
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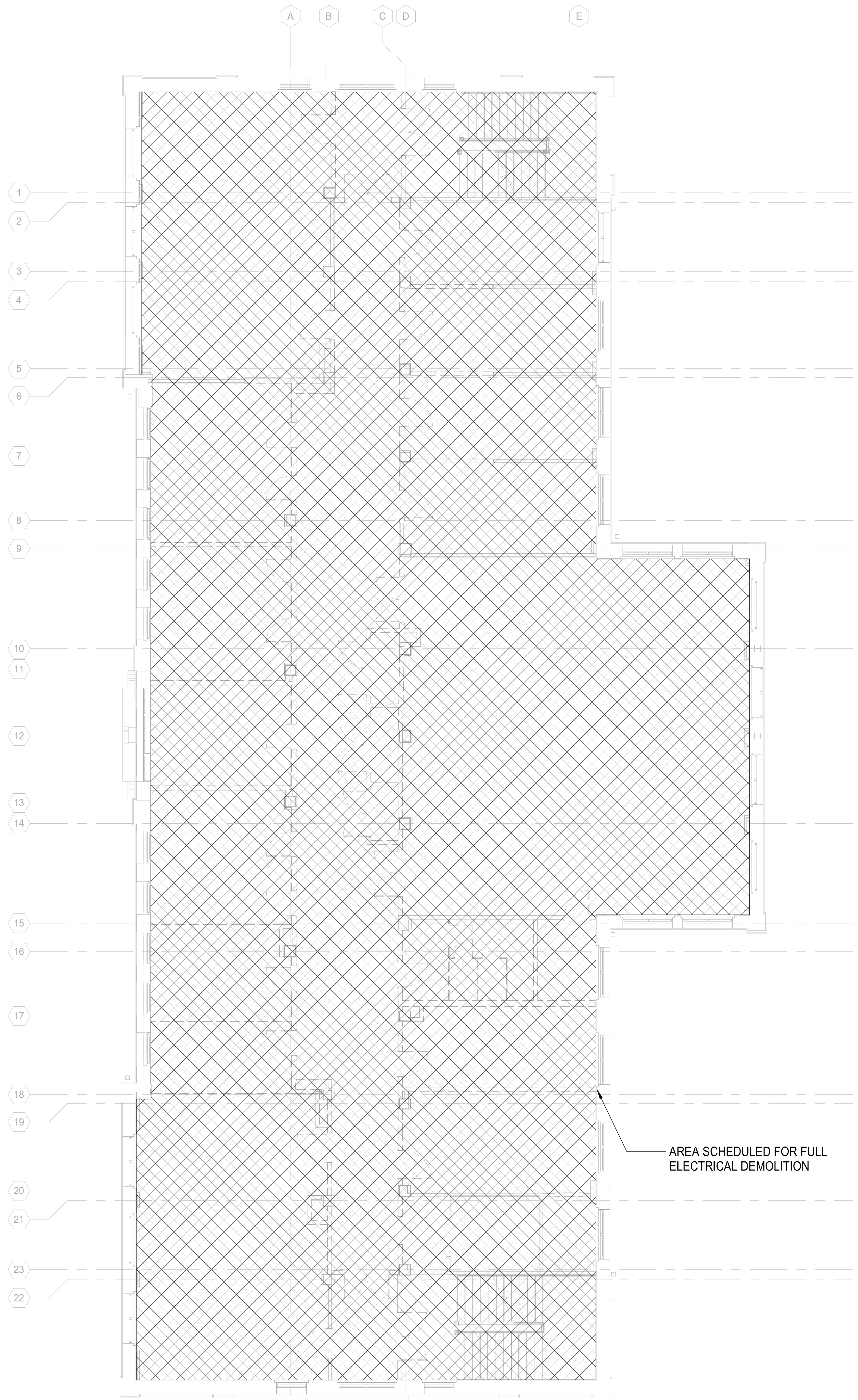
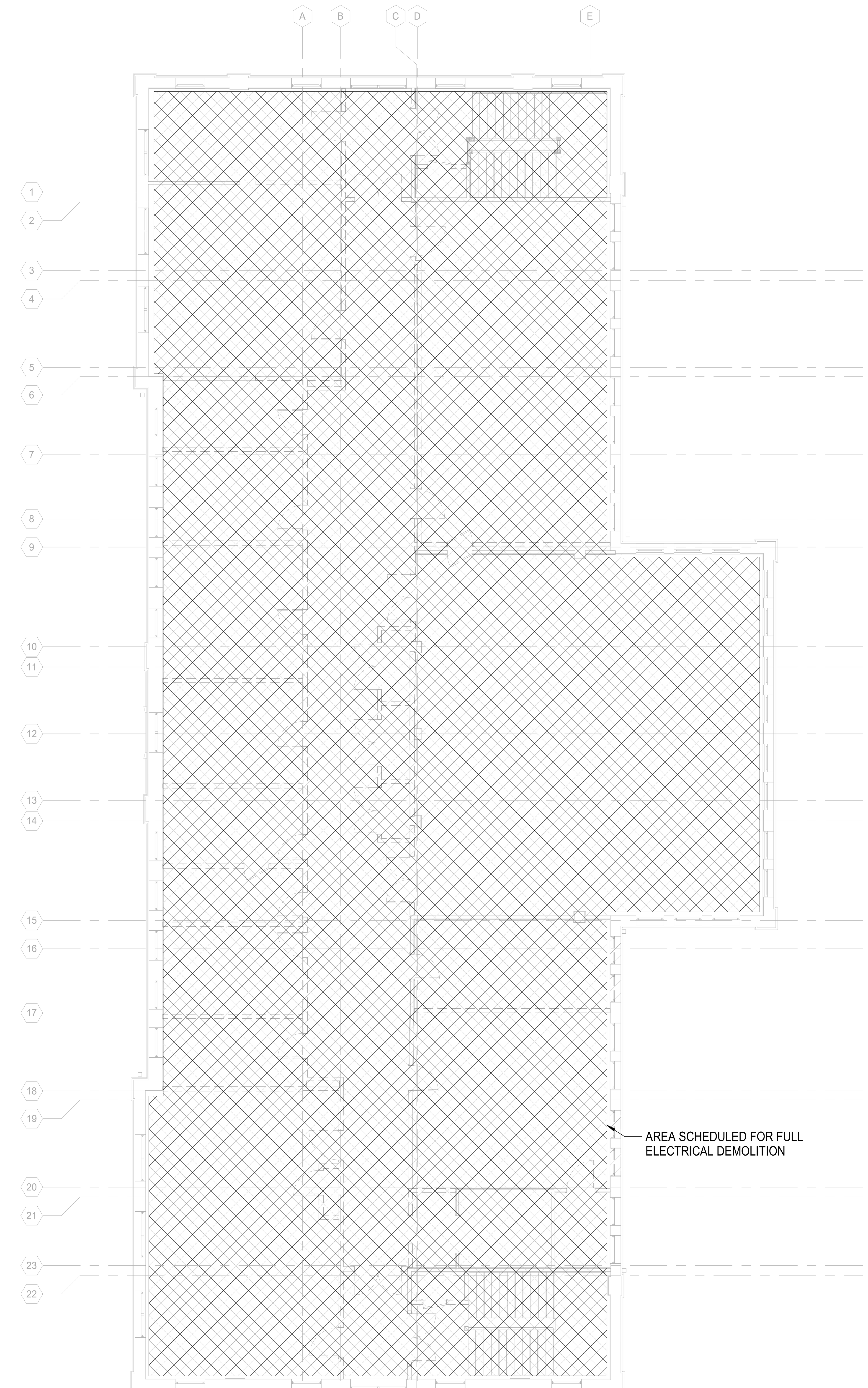


1 ELECTRICAL SECOND DEMOLITION PLAN



2 ELECTRICAL THIRD DEMOLITION PLAN

PROJECT NORTH TRUE NORTH

GENERAL DEMOLITION NOTES:

1. THE EXISTING INSTALLATION SHALL REMAIN AS-IS EXCEPT AS OTHERWISE INDICATED ON THE DRAWINGS OR SPECIFIED HEREIN. PERFORM WORK TO TIE IN THE NEW WORK WITH THE EXISTING WORK AND TO ADAPT THE EXISTING WORK TO THE CHANGES IN THE BUILDING AND SYSTEMS.
2. REMOVE EQUIPMENT, APPARATUS, AND EXPOSED WIRING AND RACEWAYS RENDERED USELESS DUE TO CHANGES.
3. WHERE EXISTING CEILINGS ARE REMOVED, REMOVE LUMINAIRES, EXIT SIGNS, AND OTHER ELECTRICAL POWER AND SIGNAL APPARATUS MOUNTED TO THE CEILING OR CEILING SUPPORTS, INCLUDING ASSOCIATED RACEWAYS AND WIRING.
4. EXISTING FIXTURES, EQUIPMENT, AND APPARATUS WHICH ARE REMOVED AND NOT REUSED IN THE NEW WORK SHALL BE TURNED OVER TO THE OWNER.
5. MATERIAL AND EQUIPMENT WHICH HAS BEEN REMOVED AND NOT ACCEPTED BY THE OWNER SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE.
6. EXISTING ELECTRICAL EQUIPMENT, INCLUDING LAMPS AND BALLASTS, REMOVED AND NOT REUSED SHALL BE HANDLED AND DISPOSED OF IN ACCORDANCE WITH APPLICABLE STATE AND FEDERAL REGULATIONS.
7. MATERIAL AND EQUIPMENT WHICH HAS BEEN REMOVED SHALL NOT BE USED IN THE NEW WORK, EXCEPT AS SPECIFIED HEREIN.
8. WHERE EXISTING RACEWAYS AND EQUIPMENT ARE INDICATED ON THE DRAWINGS, SIZE AND LOCATION SHALL BE VERIFIED PRIOR TO BIDDING.
9. PROVIDE CIRCUIT CONTINUITY FOR EXISTING WIRING DEVICES AND EQUIPMENT OUTSIDE THE RENOVATION AREA SERVED FROM OR THROUGH THE RENOVATION AREA.
10. REMOVE CONCEALED WIRING AND RACEWAYS WHICH ARE EXPOSED BY THE REMOVAL OF WALLS, PARTITIONS, AND CEILINGS. PROVIDE NEW CONCEALED WIRING AND RACEWAYS TO SERVE EXISTING LOADS PRESENTLY SERVED BY THE REMOVED WIRING AND RACEWAYS.
11. SLEEVES LEFT OPEN BY REMOVAL OF CONDUIT OR RACEWAYS SHALL BE CUT FLUSH WITH THE FINISHED SLAB, AND FILLED WITH GROUT FLUSH WITH BOTH SIDES OF SLAB.
12. CONCEALED RACEWAYS IN MASONRY WALLS RENDERED USELESS BY REVISIONS SHALL BE CUT FLUSH WITH WALL SURFACE AND SEALED WITH GROUT.
13. WHERE EXISTING MECHANICAL EQUIPMENT IS REMOVED, REMOVE ELECTRIC WIRING, RACEWAYS, SWITCHES, AND STARTERS ASSOCIATED WITH THE EQUIPMENT.
14. WHERE EXISTING MECHANICAL EQUIPMENT IS MODIFIED OR RELOCATED, MODIFY THE ELECTRICAL CONNECTIONS TO THE EQUIPMENT TO ADAPT IT TO ITS NEW FUNCTION OR LOCATION.
15. PROVIDE BLANK FACEPLATE COVERS FOR ABANDONED BACK BOXES IN EXISTING MASONRY WALLS.
16. CIRCUITS SHALL BE DE-ENERGIZED PRIOR TO DEMOLITION WORK AND OUTAGES COORDINATED WITH THE OWNER.

LORD AECK SARGENT

REVISION:

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NB Contact: Reade Daniel
N&B PROJECT: 21N242
Newcomb & Boyd, LLP
Firm Lic. # F-0312

SHEET TITLE
ELECTRICAL SECOND & THIRD FLOOR DEMOLITION PLANS

SCALE (U.N.O.)
NO SCALE

JOB NAME
University of North Carolina - Chapel Hill
SCO#: 21-23548-02A
BINGHAM HALL RENOVATION

LOCATION
36 Lenoir Drive, Chapel Hill, NC 27514

SEAL
DocuSigned by: Richard O. Dozier, III
SEAL 044143 ENGINEER
Signed on 01/03/2024 using a Digital Signature.

ISSUE DATE 1/8/2024
JOB. NO. 11706-00
DWG. NO. ED102

ELECTRICAL EQUIPMENT

SYMBOL	DESCRIPTION
	RACEWAY EXPOSED TO VIEW UNLESS OTHERWISE NOTED.
	3 WIRES #12 AWG IN CABLE OR CONDUIT, EXCLUDING GROUNDING CONDUCTOR. NOTE: NUMBER OF CROSS HATCHES INDICATES NUMBER OF # 12 AWG CONDUCTORS, LESS GROUNDING CONDUCTOR. SHORT CROSS HATCH = PHASE CONDUCTOR. LONG CROSS HATCH = NEUTRAL. NO CROSS HATCHES INDICATES 2 #12 AWG EXCLUDING GROUNDING CONDUCTOR IN CABLE OR CONDUIT.
	RACEWAY TURNED UP.
	RACEWAY TURNED DOWN.
–UP–	UNDERGROUND PRIMARY.
–US–	UNDERGROUND SECONDARY.
–UE–	UNDERGROUND EMERGENCY.
OR	GROUNDING ELECTRODE.
A A	DUCT BANK SECTION. REFER TO SHEET E506.
MH	MANHOLE.
	PANELBOARD, FLUSH-MOUNTED.
	PANELBOARD, SURFACE-MOUNTED.
2	MOTOR, NUMERAL INDICATES HP. "F" INDICATES FRACTIONAL HORSE POWER.
	MOTOR CONTROLLER. MOUNT 48" AFF, UNLESS OTHERWISE NOTED.
	COMBINATION MOTOR CONTROLLER/DISCONNECT. MOUNT 48" AFF, UNLESS OTHERWISE NOTED.
30/3/20/3R	DISCONNECT SWITCH, SIZE/POLES/FUSE/ENCLOSURE TYPE IF OTHER THAN NEMA 1. MOUNT 48" AFF, UNLESS OTHERWISE NOTED.
30/3	INDIVIDUAL CIRCUIT BREAKER, TRIP/POLES. MOUNT 48" AFF, UNLESS OTHERWISE NOTED.

LUMINAIRES

SYMBOL	DESCRIPTION
D D	LINEAR LUMINAIRE. SHADED REGION INDICATES PROVISION FOR EMERGENCY LIGHTING. LETTER INDICATES LUMINAIRE TYPE. SEE SCHEDULE.
F F	2' X 2' LUMINAIRE. SHADED REGION INDICATES PROVISION FOR EMERGENCY LIGHTING. LETTER INDICATES LUMINAIRE TYPE. SEE SCHEDULE.
S S	LINEAR WALL-MOUNTED LUMINAIRE. SHADED REGION INDICATES PROVISION FOR EMERGENCY LIGHTING. LETTER INDICATES LUMINAIRE TYPE. SEE SCHEDULE.
A A	CIRCULAR RECESSED OR SUSPENDED LUMINAIRE. SHADED REGION INDICATES PROVISION FOR EMERGENCY LIGHTING. LETTER INDICATES LUMINAIRE TYPE. SEE SCHEDULE.
V V	WALL-MOUNTED LUMINAIRE. SHADED REGION INDICATES PROVISION FOR EMERGENCY LIGHTING. LETTER INDICATES LUMINAIRE TYPE. SEE SCHEDULE.
F F	STRIP LUMINAIRE. SHADED REGION INDICATES PROVISION FOR EMERGENCY LIGHTING. LETTER INDICATES LUMINAIRE TYPE. SEE SCHEDULE.
X X	EXIT LIGHT, CEILING-, PENDANT, OR WALL-MOUNTED. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR ARROW AND FACE REQUIREMENTS. ELECTRICAL DRAWINGS REFERENCE LOCATIONS AND INDICATED CODE REQUIRED CIRCUIT INFORMATION. LETTER INDICATES TYPE, SEE SCHEDULE.
C C	2' X 4' LUMINAIRE. SHADED REGION INDICATES PROVISION FOR EMERGENCY LIGHTING. LETTER INDICATES LUMINAIRE TYPE. SEE SCHEDULE.
EM	EMERGENCY BUG-EYE LUMINAIRE. LETTER INDICATES LUMINAIRE TYPE. SEE SCHEDULE.

DISCLAIMER

SYMBOLS, ABBREVIATIONS, AND OTHER INFORMATION DEPICTED ON THIS SHEET ARE FOR INFORMATION ONLY AND SHALL NOT CONSTITUTE A CHECKLIST FOR SCOPE INCLUDED IN THIS CONTRACT. ITEMS SHOWN ON THIS SHEET MAY NOT APPEAR AGAIN IN THE ELECTRICAL SERIES.

ELECTRICAL DEVICES

SYMBOL	DESCRIPTION	MOUNTING HEIGHT AFF, UON
	DUPLEX RECEPTACLE. TYPE DESIGNATED: BLANK - DUPLEX RECEPTACLE TV - RECEPTACLE FOR TV MONITOR. COORDINATE MOUNTING HEIGHT WITH ARCHITECTURAL DRAWINGS AND WITH RECESSED TV MOUNTING BRACKET. REFER TO AV DRAWINGS FOR TV MOUNTING DETAIL.	18"
	DOUBLE DUPLEX RECEPTACLE OUTLET.	18"
	DUPLEX RECEPTACLE, ABOVE COUNTER.	
	GFCI DUPLEX RECEPTACLE. TYPE DESIGNATED: WP - GFCI DUPLEX RECEPTACLE PROTECTED BY A WHILE-IN-USE WEATHERPROOF ENCLOSURE.	18"
	GFCI DOUBLE DUPLEX RECEPTACLE OUTLET.	18"
	GFCI DUPLEX RECEPTACLE, ABOVE COUNTER.	
J	JUNCTION BOX, WALL-MOUNTED.	
J	JUNCTION BOX, FLOOR.	
J	JUNCTION BOX, ABOVE CEILING. ADO - JUNCTION BOX FOR AUTOMATIC DOOR OPERATOR. COORDINATE EXACT LOCATION AND MOUNTING HEIGHT WITH ARCHITECTURAL DRAWINGS. PROVIDE SINGLE GANG BOX FOR ACTUATOR. PROVIDE 3/4" CONDUIT FROM AUTOMATIC DOOR OPERATOR CONTROLLER TO ACTUATOR LOCATION SHOWN ON THE ARCHITECTURAL DRAWINGS. TU - JUNCTION BOX FOR 120V HVAC TERMINAL UNITS CONTROL/DAMPER POWER. REFER TO MECHANICAL DRAWINGS FOR UNIT LOCATIONS AND QUANTITIES. COORDINATE LOCATIONS AND LOADS OF ALL CONNECTION POINTS WITH DIVISION 23. PS - FOR CONNECTION TO PROJECTION SCREEN.	
	DUPLEX RECEPTACLE WITH DEDICATED GROUND, CEILING-MOUNTED. TYPE DESIGNATED: PR - OUTLET FOR CONNECTION TO PROJECTOR. COORDINATE EXACT LOCATION WITH ARCHITECTURAL AND AV DRAWINGS.	
A PT	FLOOR BOX. A - POWER ONLY POKE-THROUGH ASSEMBLY. PROVIDE (2) 20A DUPLEX RECEPTACLES WITHIN THE BOX. WIREMOLD EVOLUTION SERIES, HUBBELL, OR FSR. COORDINATE COVER WITH ARCHITECT. B - A/V POKE-THROUGH ASSEMBLY. PROVIDE (2) 20A DUPLEX OUTLETS WITHIN THE BOX. WIREMOLD EVOLUTION SERIES, HUBBELL, OR FSR. REFER TO TELECOM DRAWINGS FOR TYPE AND QUANTITIES OF DATA DEVICES WITHIN THE BOX. REFER TO A/V DRAWINGS FOR TYPE AND QUANTITIES OF A/V DEVICES WITHIN THE BOX. COORDINATE COVER WITH ARCHITECT.	

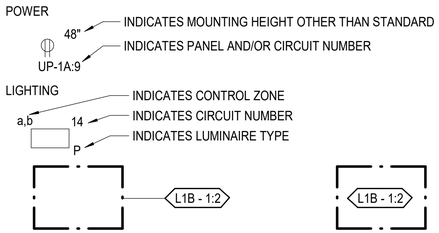
LIGHTING CONTROL DEVICES

SYMBOL	DESCRIPTION	MOUNTING HEIGHT AFF, UON
S	LOW VOLTAGE SWITCH, UON, WALL-MOUNTED, DALI-2 OR KNX COMPATIBLE, LOWERCASE LETTERING INDICATES CONTROLLED ZONE, TYPE DESIGNATED: BLANK - SINGLE-BUTTON	48"
D LV	LOW VOLTAGE DIMMER SWITCH, WALL-MOUNTED, DALI-2 OR KNX COMPATIBLE, LOWERCASE LETTERING INDICATES CONTROLLED ZONE, TYPE DESIGNATED: BLANK - ON/OFF PUSHBUTTON WITH RAISE/LOWER BUTTONS	48"
ELR	UL924 EMERGENCY LIGHTING RELAY (ELR), DALI-2 OR KNX COMPATIBLE. REFER TO SPECIFICATIONS AND ELECTRICAL DETAILS FOR MORE INFORMATION.	
IR	DALI-2 OR KNX COMPATIBLE LIGHTING CONTROL SENSOR DEVICE, OCCUPANCY SENSOR, PHOTOSENSOR, VACANCY SENSOR. WHERE NO LETTER IS SHOWN, SENSOR(S) SHALL CONTROL ALL LUMINAIRES IN CORRESPONDING ROOM. (IR = PASSIVE INFRARED)	
PS4	DALI-2 OR KNX COMPATIBLE LOW VOLTAGE CONTROL STATION FOR NETWORKED LIGHTING CONTROLS AND A/V INTEGRATION, TYPE DESIGNATED: FR - LOW VOLTAGE EMERGENCY OVERRIDE KEYED SWITCH FOR FIRST RESPONDERS PS4 - LOW VOLTAGE PRESET STATION, FOUR BUTTON LAYOUT PS6 - LOW VOLTAGE PRESET STATION, SIX BUTTON LAYOUT	48"

ABBREVIATIONS

AFF/AFG/ARF	ABOVE FINISHED FLOOR/GRADE/RAISED FLOOR
ABV	ABOVE
AC	ALTERNATING CURRENT
ARCH	ARCHITECT/ARCHITECTURAL
A/V	AUDIO/VISUAL
BEL	BELOW
BF	BELOW FLOOR
BFC	BELOW FINISHED CEILING
BM	BEAM
C	CONDUIT
CB	CIRCUIT BREAKER
CKT	CIRCUIT
CLG	CEILING
COL	COLUMN
CONN	CONNECT/CONNECTION
CONT	CONTINUATION/CONTINUOUS
CTE	CONNECT TO EXISTING
DC	DIRECT CURRENT
DN	DOWN
EC	EMPTY CONDUIT
ELEV	ELEVATOR
EMT	ELECTRICAL METALLIC TUBING
ENT	ELECTRICAL NONMETALLIC TUBING
EX	EXISTING
ETR	EXISTING TO REMAIN
EXP	EXPOSED
GRC	RIGID METAL CONDUIT
F	FUSED
FA	FIRE ALARM
LCM	LIGHTING CONTROL MODULE
LMNR	LUMINAIRE
LSIGA	LSIG BREAKER WITH GROUND FAULT ALARM ONLY
FL	FLOOR
G	GROUND
GFP	GROUND FAULT PROTECTION
GR	GRADE
HID	HIGH INTENSITY DISCHARGE
HOA	HAND-OFF-AUTOMATIC
HPS	HIGH PRESSURE SODIUM
IG	ISOLATED GROUND
IMC	INTERMEDIATE METAL CONDUIT
INV	INVERTER
JB	JUNCTION BOX
kcmil	THOUSAND CIRCULAR MILLS
MC	METAL-CLAD CABLE
MCC	MOTOR CONTROL CENTER
NC	NORMALLY CLOSED
NF	NONFUSIBLE
NO	NORMALLY OPEN
OC	ON CENTER
OCP	OVERCURRENT PROTECTION
PC	PHOTOCELL
PH OR Ø	PHASE
PL	PILOT LIGHT
PNL	PANEL
PV	PHOTO-VOLTAIC
RC	REMOTE CONTROL
REC	RECEPTACLE
REL	RELOCATE
REM	REMOVE
RS	RAPID START
SC	SPLIT CIRCUIT
SPEC	SPECIFICATION
SPDT	SINGLE-POLE DOUBLE-THROW
ST	SHUNT STRIP
SW	SWITCH
TELE	TELEPHONE
TS	TIGHT TO STRUCTURE
UG	UNDERGROUND
WP	WEATHER PROOF
XFMR	TRANSFORMER
UON	UNLESS OTHERWISE NOTED

CIRCUITING



DENOTES PANELBOARD FROM WHICH ALL CIRCUITS WITHIN DESIGNATED AREA SHALL BE SERVED, OR DENOTES SPECIFIC CIRCUIT FROM WHICH ALL CONNECTIONS SHALL BE MADE, UON. SEE PANELBOARD SCHEDULES FROM CIRCUITING REQUIREMENTS, THE MAXIMUM NUMBER OR BRANCH CIRCUIT PHASE CONDUCTORS INSTALLED IN SINGLE CONDUIT SHALL NOT EXCEED THREE (3), UON.

MECHANICAL CONNECTIONS

MECHANICAL EQUIPMENT IS DENOTED WITH SYMBOLS WHICH REPRESENT THE ACTUAL EQUIPMENT.

SYMBOLS INDICATED WITH AN UNDERLINED TAG ARE MECHANICAL EQUIPMENT WHICH REQUIRE AN ELECTRICAL CONNECTION. EXAMPLES INCLUDE:

REFER TO BUILDING-SPECIFIC MECHANICAL EQUIPMENT CONNECTION SCHEDULE AND REFER TO ONE-LINES, SWITCHBOARD SCHEDULES, OR PANELBOARD SCHEDULES FOR CIRCUIT INFORMATION.

APPLICABLE DESIGN INFORMATION

CODES AND STANDARDS:
- BUILDING CODE: NC STATE BUILDING CODE - 2018
- MECHANICAL CODE: NC STATE MECHANICAL CODE - 2018
- PLUMBING CODE: NC STATE PLUMBING CODE - 2018
- ELECTRICAL CODE: NC STATE ELECTRICAL CODE - 2020
- FIRE CODE: NC FIRE PREVENTION CODE - 2018
- ENERGY CODE: NC STATE ENERGY CONSERVATION CODE - 2018

OCCUPANCY USE GROUP:
- A-3

CONSTRUCTION CLASSIFICATIONS:
- II-A

SPRINKLER SYSTEM:
- NATIONAL FIRE PROTECTION ASSOCIATION - 2013

OWNER GUIDELINES:
- UNIVERSITY OF NORTH CAROLINA DESIGN GUIDELINES - 2020

NC SCO GUIDELINES:
- WATER BASED FIRE PROTECTION SYSTEM GUIDELINES - 2020
- FIRE ALARM GUIDELINES - 2020
- ELECTRICAL GUIDELINES - 2020

DIVISION OF WORK MATRIX

	DESIGN	CONDUIT/BOXES/CABLE TRAY	WIRING/CABLING	TERMINATING	ACTIVE SYSTEMS/WARRANTY	COMMISSIOING
ELECTRICAL	FULL DESIGN BY DESIGN TEAM	ELECTRICAL CONTRACTOR, THROUGH GENERAL CONTRACTOR	ELECTRICAL CONTRACTOR, THROUGH GENERAL CONTRACTOR	ELECTRICAL CONTRACTOR, THROUGH GENERAL CONTRACTOR	ELECTRICAL CONTRACTOR, THROUGH GENERAL CONTRACTOR	BY COMMISSIONING AGENT
FIRE ALARM	FULL DESIGN BY DESIGN TEAM	ELECTRICAL CONTRACTOR, THROUGH GENERAL CONTRACTOR	FIRE ALARM CONTRACTOR, THROUGH GENERAL CONTRACTOR	FIRE ALARM CONTRACTOR, THROUGH GENERAL CONTRACTOR	FIRE ALARM CONTRACTOR, THROUGH GENERAL CONTRACTOR	BY COMMISSIONING AGENT
TELECOM (T-DRAWINGS)	DESIGN TEAM - CONDUIT/BOXES/CABLING SYSTEM, ACTIVE EQUIPMENT - UNC ITS	ELECTRICAL CONTRACTOR, THROUGH GENERAL CONTRACTOR	GENERAL CONTRACTOR TELECOM CONTRACTOR	GENERAL CONTRACTOR TELECOM CONTRACTOR	UNC ITS	N/A
SECURITY (SC-DRAWINGS)	CONDUIT/BOXES	ELECTRICAL CONTRACTOR, THROUGH GENERAL CONTRACTOR	ELECTRICAL CONTRACTOR, THROUGH GENERAL CONTRACTOR	UNC	UNC	N/A
AUDIO VISUAL (AV-DRAWINGS)	DESIGN TEAM - CONDUIT/BOXES, ACTIVE EQUIPMENT - VENDOR	ELECTRICAL CONTRACTOR, THROUGH GENERAL CONTRACTOR	UNC VENDOR, SEPARATE CONTRACT	UNC VENDOR, SEPARATE CONTRACT	UNC VENDOR, SEPARATE CONTRACT, SAME AS CABLING VENDOR.	N/A
LIGHITNG & LIGHTING CONTROLS	FULL DESIGN BY DESIGN TEAM	ELECTRICAL CONTRACTOR, THROUGH GENERAL CONTRACTOR	ELECTRICAL CONTRACTOR, THROUGH GENERAL CONTRACTOR	ELECTRICAL CONTRACTOR, THROUGH GENERAL CONTRACTOR	ELECTRICAL CONTRACTOR, THROUGH GENERAL CONTRACTOR	BY COMMISSIONING AGENT/ MANUFACTURER

REFER TO LIGHTING CONTROL INTEGRATOR NOTES ON DRAWING E403 FOR ADDITIONAL INFORMATION.

SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER RICHARD O. DOZIER
DocuSigned by: CCAI
Richard Dozier
BB290D03BCE3457...
Signed on 01/04/2024 using a Digital Signature.

LORD AECK SARGENT

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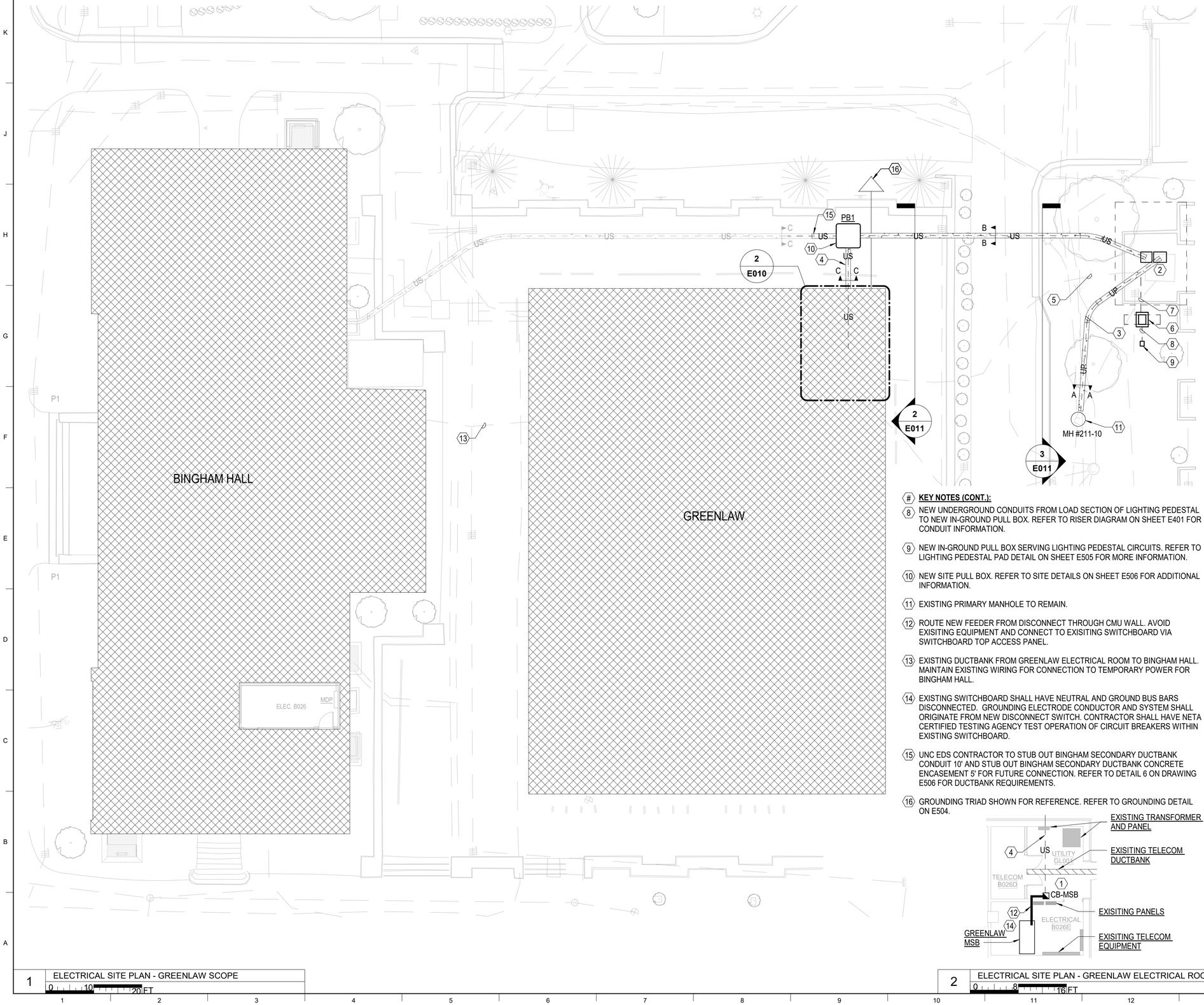
Suite 215
Durham, NC 27703
NB Contact: Reade Daniel
N&B PROJECT: 21N242
Newcomb & Boyd, LLP
Firm Lic. # C-0512

SHEET TITLE: ELECTRICAL GENERAL NOTES, SYMBOLS, AND ABBREVIATIONS
SCALE (U.N.O.): NO SCALE

JOB NAME: University of North Carolina - Chapel Hill
SCI#: 21-235462GA
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

ISSUE DATE: 1/8/2024
OB. NO.: 11706-00
DWG. NO.: E001



1 ELECTRICAL SITE PLAN - GREENLAW SCOPE
0 10 20 FT

2 ELECTRICAL SITE PLAN - GREENLAW ELECTRICAL ROOM
0 8 16 FT

PROJECT NORTH TRUE NORTH

GENERAL NOTES:

1. REFER TO CIVIL PLANS FOR LOCATIONS OF OTHER UTILITIES. CONTRACTOR TO FIELD VERIFY LOCATIONS OF EXISTING UTILITIES PRIOR TO INSTALLATION OF NEW DUCTS. POTHOLE INFORMATION TO BE PROVIDED TO DESIGN TEAM FOR REVIEW. OFFSET DUCTS TO AVOID CONFLICTS WITH EXISTING UNDERGROUND OBSTRUCTIONS. DUCTS SHALL CLEAR STEAM LINES AND COMMUNICATION LINES 4'-0" WHERE PARALLEL AND 18" WHERE CROSSING PERPENDICULAR. CLEAR ALL OTHER UTILITIES BY 1'-0".
2. ALL UNDERGROUND DUCTS SHALL BE CONCRETE ENCASED, UNLESS OTHERWISE NOTED.
3. REFER TO TELECOM DRAWINGS FOR ADDITIONAL DUCTBANK ROUTING PLANS NOT SHOWN ON THIS SHEET.
4. COORDINATE THE INSTALLATION AND ROUTING OF NEW UNDERGROUND DUCTBANKS TO AVOID CONFLICTS WITH STRUCTURAL FOOTINGS.
5. EXACT LOCATIONS OF NEW AND EXISTING UTILITIES SHALL BE COORDINATED IN THE FIELD BY THE CONTRACTOR. CONTRACTOR SHALL SCHEDULE A MEETING WITH UNC ELECTRICAL DISTRIBUTION SYSTEMS (919-962-8394) TO DETERMINE EXACT UTILITY LOCATIONS PRIOR TO BEGINNING WORK.
6. MAXIMUM CUMULATIVE EFFECT OF FIELD BENDS FOR FACTORY CONDUIT ELBOWS BETWEEN TERMINATION POINTS SHALL NOT EXCEED NET 270 DEGREES OR CONDUIT LENGTHS EXCEED 500 FEET FOR PRIMARY VOLTAGE CONDUITS, AND NET 360 DEGREES OR CONDUIT LENGTHS EXCEEDING 500 FEET FOR SECONDARY VOLTAGE CONDUITS.
7. REFER TO ELECTRICAL DETAILS SHEET E506 FOR DUCTBANK SECTIONS.
8. REFER TO ELECTRICAL PHASING NOTES ON SHEET ED010 FOR ADDITIONAL INFORMATION.
9. WORK SHOWN IN BOLD ON THIS DRAWING WILL BE COMPLETED BY UNC EDS CONTRACTOR. THIS WORK MAY BE COMPLETED AT A SEPARATE TIME FROM THE BINGHAM SCOPE.
10. WORK SHOWN HALF-TONE WILL BE COMPLETED BY BINGHAM CONTRACTOR AND IS SHOWN FOR REFERENCE ONLY TO ILLUSTRATE THE COMPLETE INSTALLATION.
11. FOR THE PRIMARY SERVICE, ANY CONTRACTOR OR SUBCONTRACTOR MUST HAVE A NORTH CAROLINA GENERAL CONTRACTOR'S LICENSE WITH A PUBLIC UTILITY-ELECTRICAL-AHEAD OF POINT OF DELIVERY - UNLIMITED CLASSIFICATION, PER THE NORTH CAROLINA LICENSING BOARD FOR GENERAL CONTRACTORS.

KEY NOTES (CONT.):

8. NEW UNDERGROUND CONDUITS FROM LOAD SECTION OF LIGHTING PEDESTAL TO NEW IN-GROUND PULL BOX. REFER TO RISER DIAGRAM ON SHEET E401 FOR CONDUIT INFORMATION.
9. NEW IN-GROUND PULL BOX SERVING LIGHTING PEDESTAL CIRCUITS. REFER TO LIGHTING PEDESTAL PAD DETAIL ON SHEET E505 FOR MORE INFORMATION.
10. NEW SITE PULL BOX. REFER TO SITE DETAILS ON SHEET E506 FOR ADDITIONAL INFORMATION.
11. EXISTING PRIMARY MANHOLE TO REMAIN.
12. ROUTE NEW FEEDER FROM DISCONNECT THROUGH CMU WALL. AVOID EXISITING EQUIPMENT AND CONNECT TO EXISITING SWITCHBOARD VIA SWITCHBOARD TOP ACCESS PANEL.
13. EXISTING DUCTBANK FROM GREENLAW ELECTRICAL ROOM TO BINGHAM HALL. MAINTAIN EXISTING WIRING FOR CONNECTION TO TEMPORARY POWER FOR BINGHAM HALL.
14. EXISTING SWITCHBOARD SHALL HAVE NEUTRAL AND GROUND BUS BARS DISCONNECTED. GROUNDING ELECTRODE CONDUCTOR AND SYSTEM SHALL ORIGINATE FROM NEW DISCONNECT SWITCH. CONTRACTOR SHALL HAVE NETA CERTIFIED TESTING AGENCY TEST OPERATION OF CIRCUIT BREAKERS WITHIN EXISTING SWITCHBOARD.
15. UNC EDS CONTRACTOR TO STUB OUT BINGHAM SECONDARY DUCTBANK CONDUIT 10' AND STUB OUT BINGHAM SECONDARY DUCTBANK CONCRETE ENCASEMENT 5' FOR FUTURE CONNECTION. REFER TO DETAIL 6 ON DRAWING E506 FOR DUCTBANK REQUIREMENTS.
16. GROUNDING TRIAD SHOWN FOR REFERENCE. REFER TO GROUNDING DETAIL ON E504.

KEY NOTES:

1. NEW 800A/3P 65K AIC SERVICE ENTRANCE RATED, 100% RATED LOCKABLE ENCLOSED CIRCUIT BREAKER WITH LSI TRIP UNIT SERVING EXISIITING GREENLAW MAIN SWITCHBOARD.
2. NEW PAD MOUNTED TRANSFORMER SERVING BINGHAM AND GREENLAW BUILDINGS. NEW ELECTRICAL EQUIPMENT PAD SHALL BE INSTALLED. REFER TO ELECTRICAL DETAILS ON SHEET E505 FOR EQUIPMENT PAD DETAILS.
3. NEW PRIMARY DUCTBANK FROM EXISTING MANHOLE #211-10 TO NEW PAD MOUNTED TRANSFORMER. INSTALL NEW CONDUCTORS AND TERMINATE ON TRANSFORMER PRIMARY.
4. NEW SECONDARY FEEDER FOR GREENLAW BUILDING. THE SECONDARY SERVICE SHALL BE RIGID METAL CONDUIT WITH CONCRETE ENCASEMENT DUE TO PROXIMITY TO BUILDING EXTERIOR WALL. REFER TO SECTIONS 260543 AND 260544 FOR ADDITIONAL REQUIREMENTS REGARDING INSTALLATION. ONCE THE NEW PULL BOX HAS BEEN INSTALLED THE CONTRACTOR SHALL SCHEDULE A MEETING WITH UNC, NC SCO, AND THE DESIGN TEAM TO REVIEW DUCTBANK INSTALLATION. CONNECT NEW SERVICE CONDUCTORS TO NEW CIRCUIT BREAKER IN GREENLAW BUILDING. COORDINATE ROUTING WITH EXISITNG TELECOM DUCTBANK AND EXISTING ELECTRICAL EQUIPMENT.
5. EXISTING DUCTBANK TO BE ABANDON IN PLACE OR REMOVED AS NECESSARY FOR CONSTRUCTION ACTIVITIES. REMOVE EXISTING CONDUCTORS AND CAP EXISTING CONDUITS IN PLACE.
6. NEW LIGHTING PEDESTAL SERVING NEW SITE LIGHTING. MAINTAIN 3' OF WORKING CLEARANCE IN FRONT AND BACK OF PEDESTAL. NEW CONCRETE EQUIPMENT PAD SHALL BE INSTALLED. REFER TO SHEET E505 FOR LIGHTING PEDESTAL PAD DETAIL.
7. NEW UNDERGROUND CONDUIT AND CONDUCTORS TO LIGHTING PEDESTAL SERVICE TERMINATION WINDOW. REFER TO RISER DIAGRAM ON SHEET E401 FOR ADDITIONAL INFORMATION.

LORD AECK SARGENT

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Firm Lic. # P-0312

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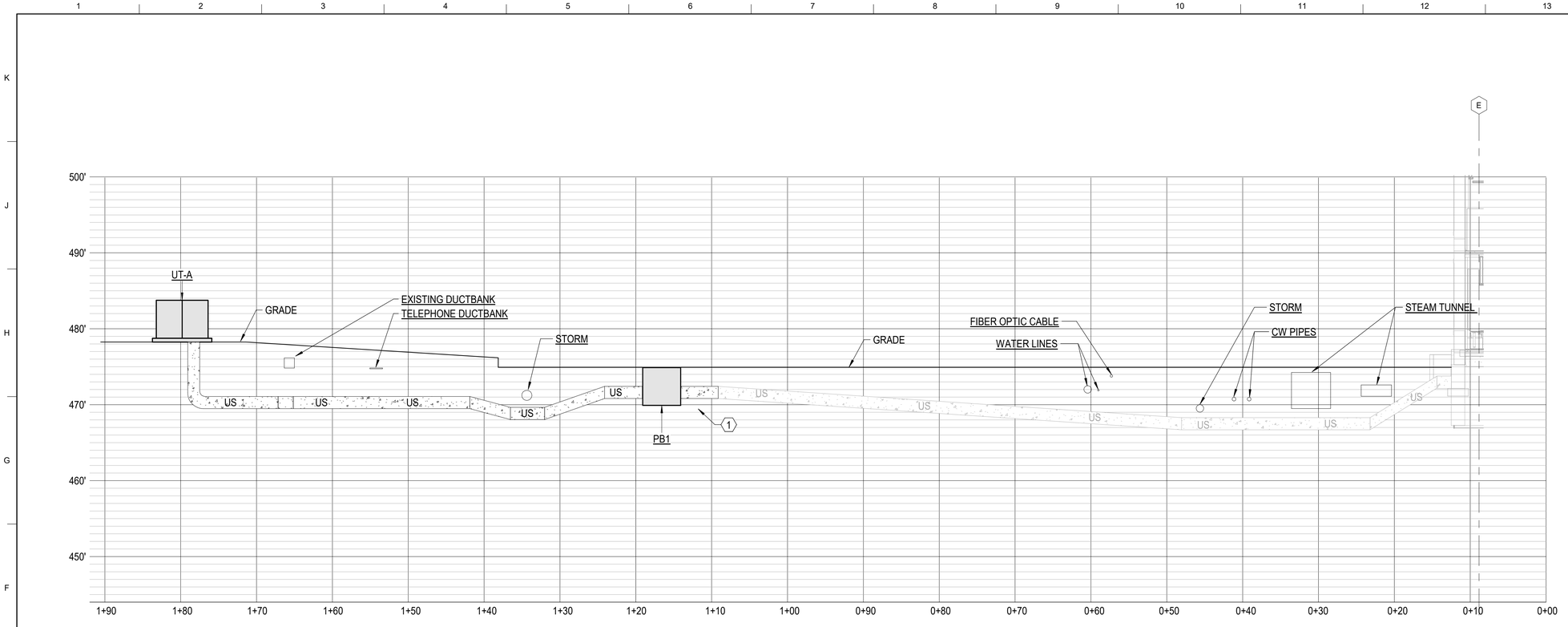
SEAL 044143
ENGINEER
RICHARD O. DOZIER, III
Signed on 01/03/2024 using a Digital Signature.

ISSUE DATE: 1/8/2024
OB. NO.: 11706-00
DWG. NO.: E010

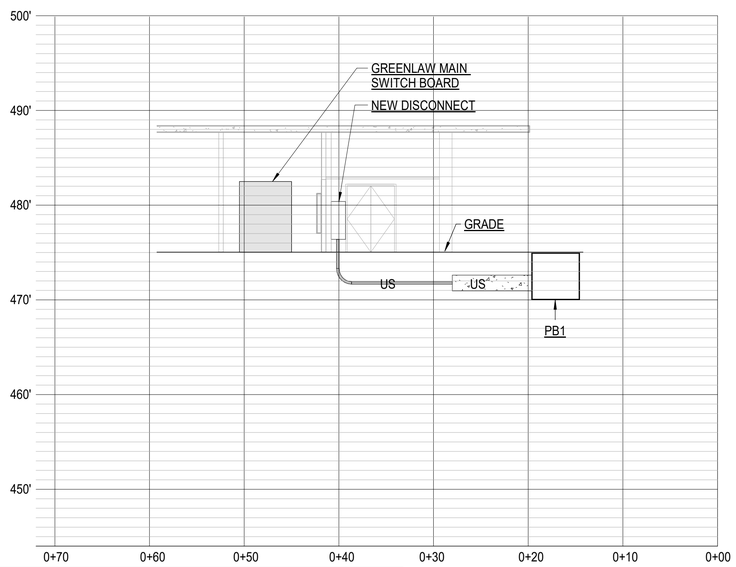
SHEET TITLE: ELECTRICAL SITE PLAN - GREENLAW SCOPE
SCALE (U.N.O.): As indicated

JOB NAME: University of North Carolina - Chapel Hill
SCO# 21-25548-02A
LOCATION: BINGHAM HALL RENOVATION
36 Lenoir Drive, Chapel Hill, NC 27514



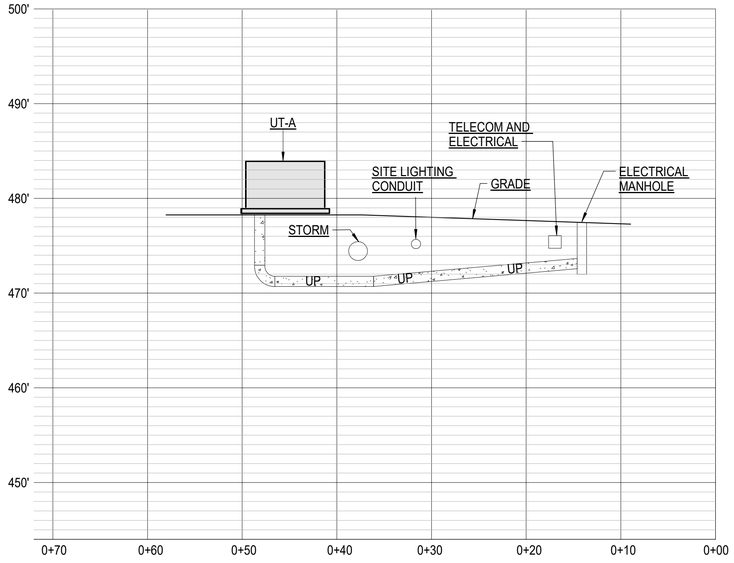
1 SECONDARY DUCTBANK PROFILE TO PULL BOX

0 8 16 FT



2 SECONDARY DUCTBANK PROFILE TO GREENLAW

0 8 16 FT



3 PRIMARY DUCTBANK PROFILE

0 8 16 FT

GENERAL NOTES

1. LOCATIONS AND SIZES OF EXISTING UTILITIES ARE BASED ON PROJECT-SPECIFIC SURVEY INFORMATION PROVIDED BY UNC CHAPEL HILL. THE CONTRACTOR SHALL VERIFY THE LOCATIONS AND SIZES OF EXISTING UTILITIES AND OTHER EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF WORK.
2. PERFORM WORK AT SUCH TIME AND IN SUCH MANNER AS TO CAUSE MINIMUM INCONVENIENCE TO THE OWNER. NO ALLOWANCE WILL BE MADE FOR LACK OF KNOWLEDGE OF EXISTING CONDITIONS.
3. COORDINATE DISRUPTION OF ELECTRICAL SERVICE WITH UNC ENERGY SERVICES AND UNC FACILITIES AT LEAST 14 DAYS PRIOR TO ANY UTILITY DISRUPTION.
4. CONDUIT ENTERING A BUILDING OR ELECTRICAL EQUIPMENT SHALL BE SLOPED AWAY FROM ENTRANCE POINT TO PREVENT MOISTURE LEAKING INTO BUILDINGS AND EQUIPMENT.
5. UTILITIES NOTED ON DUCTBANK PROFILES ARE EXISTING TO REMAIN, UON.
6. WORK SHOWN IN BOLD ON THIS DRAWING WILL BE COMPLETED BY UNC EDS CONTRACTOR. THIS WORK MAY BE COMPLETED AT A SEPARATE TIME FROM THE BINGHAM SCOPE.
7. WORK SHOWN HALF-TONED WILL BE COMPLETED BY BINGHAM CONTRACTOR AND IS SHOWN FOR REFERENCE ONLY TO ILLUSTRATE THE COMPLETE INSTALLATION.

SHEET SPECIFIC NOTES

1. UNC EDS CONTRACTOR SHALL INSTALL APPROXIMATELY 10' OF BINGHAM SECONDARY DUCTBANK FOR FUTURE CONNECTION BY BINGHAM CONTRACTOR.

LORD AECK SARGENT

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Newcomb & Boyd, LLP
Firm Lic # P-0312

SHEET TITLE: ELECTRICAL DUCTBANK PROFILE - GREENLAW SCOPE

SCALE (U.N.O.): As indicated

0 8 16 FT

JOB NAME: University of North Carolina - Chapel Hill
SCD#: 21-235482-02A
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

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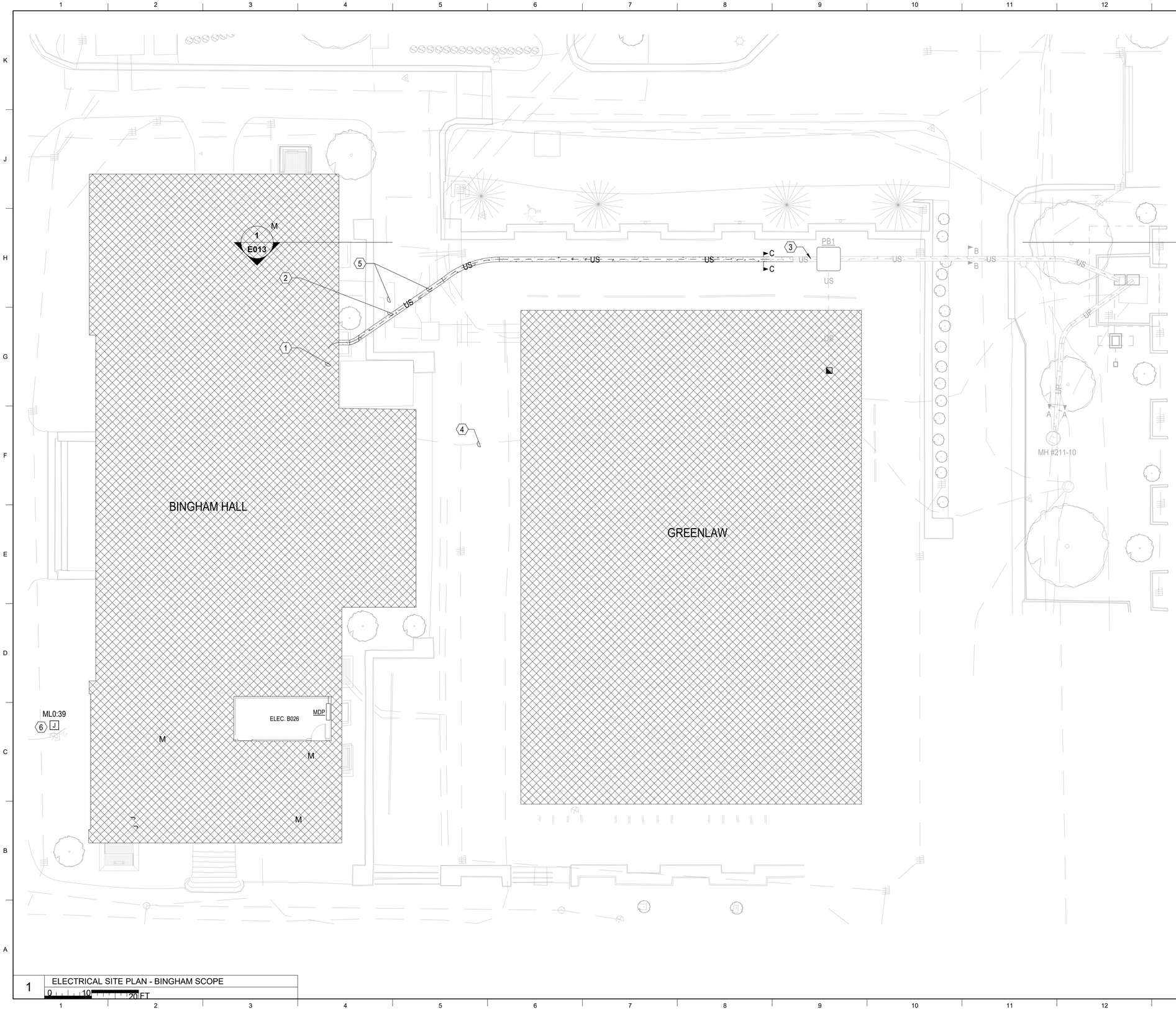
SEAL 044143 ENGINEER RICHARD O. DOZIER III
Signed on 01/03/2024 using a Digital Signature.

ISSUE DATE: 1/8/2024
OB. NO.: 11706-00
DWG. NO.: E011



GENERAL NOTES:

1. REFER TO CIVIL PLANS FOR LOCATIONS OF OTHER UTILITIES. CONTRACTOR TO FIELD VERIFY LOCATIONS OF EXISTING UTILITIES PRIOR TO INSTALLATION OF NEW DUCTS. POTHOLE INFORMATION TO BE PROVIDED TO DESIGN TEAM FOR REVIEW. OFFSET DUCTS TO AVOID CONFLICTS WITH EXISTING UNDERGROUND OBSTRUCTIONS. DUCTS SHALL CLEAR STEAM LINES AND COMMUNICATION LINES 4'-0" WHERE PARALLEL AND 18" WHERE CROSSING PERPENDICULAR. CLEAR ALL OTHER UTILITIES BY 1'-0".
2. ALL UNDERGROUND DUCTS SHALL BE CONCRETE ENCASED, UNLESS OTHERWISE NOTED.
3. REFER TO TELECOM DRAWINGS FOR ADDITIONAL DUCTBANK ROUTING PLANS NOT SHOWN ON THIS SHEET.
4. COORDINATE THE INSTALLATION AND ROUTING OF NEW UNDERGROUND DUCTBANKS TO AVOID CONFLICTS WITH STRUCTURAL FOOTINGS.
5. EXACT LOCATIONS OF NEW AND EXISTING UTILITIES SHALL BE COORDINATED IN THE FIELD BY THE CONTRACTOR. CONTRACTOR SHALL SCHEDULE A MEETING WITH UNC ELECTRICAL DISTRIBUTION SYSTEMS (919-962-8394) TO DETERMINE EXACT UTILITY LOCATIONS PRIOR TO BEGINNING WORK.
6. MAXIMUM CUMULATIVE EFFECT OF FIELD BENDS FOR FACTORY CONDUIT ELBOWS BETWEEN TERMINATION POINTS SHALL NOT EXCEED NET 270 DEGREES OR CONDUIT LENGTHS EXCEED 500 FEET FOR PRIMARY VOLTAGE CONDUITS, AND NET 360 DEGREES OR CONDUIT LENGTHS EXCEEDING 500 FEET FOR SECONDARY VOLTAGE CONDUITS.
7. REFER TO ELECTRICAL DETAILS SHEET E506 FOR DUCTBANK SECTIONS.
8. REFER TO ELECTRICAL PHASING NOTES ON SHEET ED010 FOR ADDITIONAL INFORMATION.
9. WORK SHOWN IN BOLD ON THIS DRAWING SHALL BE COMPLETED BY THE BINGHAM CONTRACTOR. WORK SHOWN HALF-TONE WILL BE COMPLETED BY A CONTRACTOR HIRED DIRECTLY BY THE OWNER.
10. CONTRACTOR SHALL COORDINATE THE BINGHAM SCOPE WITH THE OWNER AND OWNER'S CONTRACTOR TO ENSURE PHASING, SCHEDULING, AND INTERCONNECTIONS ARE COORDINATED.

(#) KEY NOTES:

(1) NEW SERVICE ENTRANCE CONDUCTORS SUPPLYING BINGHAM HALL SHALL BE ROUTED THROUGH THE EXISTING AREAWAY AND INTO THE EXISTING CRAWL SPACE/BASEMENT AREA. WITHIN THE CRAWL SPACE, FEEDERS SHALL BE INSTALLED WITHIN CONCRETE ENCASED DUCTBANK ABOVE CRAWL SPACE FLOOR TO MEET REQUIREMENTS OF NEC ARTICLE 230.6. THE FINAL PORTION OF SERVICE DUCTBANK SHALL BE COORDINATED WITH PANELBOARD LOCATION WITHIN THE MAIN ELECTRICAL ROOM AND AMOUNT OF EXPOSED RACEWAY SHALL BE LIMITED AS REQUIRED PER NC SCO REQUIREMENTS.

(2) CONTRACTOR TO VERIFY LOCATION OF UTILITIES PRIOR TO INSTALLATION OF DUCTBANK.

(3) NEW SECONDARY DUCTBANK FOR BINGHAM ELECTRICAL SERVICE. NEW DUCTBANK SHALL CONNECT TO EXISTING PULL BOX INSTALLED BY OWNER'S CONTRACTOR. DUCT BANK SHALL TRANSITION TO RMC WITH IN 10' OF BUILDING PENETRATION. INSTALLATION OF SECONDARY CONDUCTORS THROUGH PULL BOX SHALL BE COORDINATED AND REVIEWED BY OWNER PRIOR TO COMPLETION.

(4) EXISTING DUCTBANK FROM GREENLAW ELECTRICAL ROOM TO BINGHAM HALL. MAINTAIN EXISTING WIRING FOR CONNECTION TO TEMPORARY POWER FOR BINGHAM HALL.

(5) SEE DETAIL 7/E506 FOR SUPPORT OF THE STEAM TUNNEL DURING EXCAVATION.

(6) ELECTRICAL SERVICE FOR HOTBOX. COORDINATE LOCATION WITH EQUIPMENT AND REFER TO CIVIL DRAWINGS FOR ADDITIONAL INFORMATION. PROVIDE OUTDOOR RATED JUNCTION BOX WITH A WATERTIGHT FLEXIBLE CONNECTION. PROVIDE TWO (2) SPARE 1.25" CONDUITS STUBBED INTO MECHANICAL ROOM B029 FOR FUTURE USE.

PROJECT NORTH

TRUE NORTH

1 ELECTRICAL SITE PLAN - BINGHAM SCOPE

0 10 20 FT

LORD AECK SARGENT

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Newcomb & Boyd, LLP
Firm Lic # P-0312

SHEET TITLE: ELECTRICAL SITE PLAN - BINGHAM SCOPE

SCALE (U.N.O.): As indicated

JOB NAME: University of North Carolina - Chapel Hill
SCO#: 21-235482-0A
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

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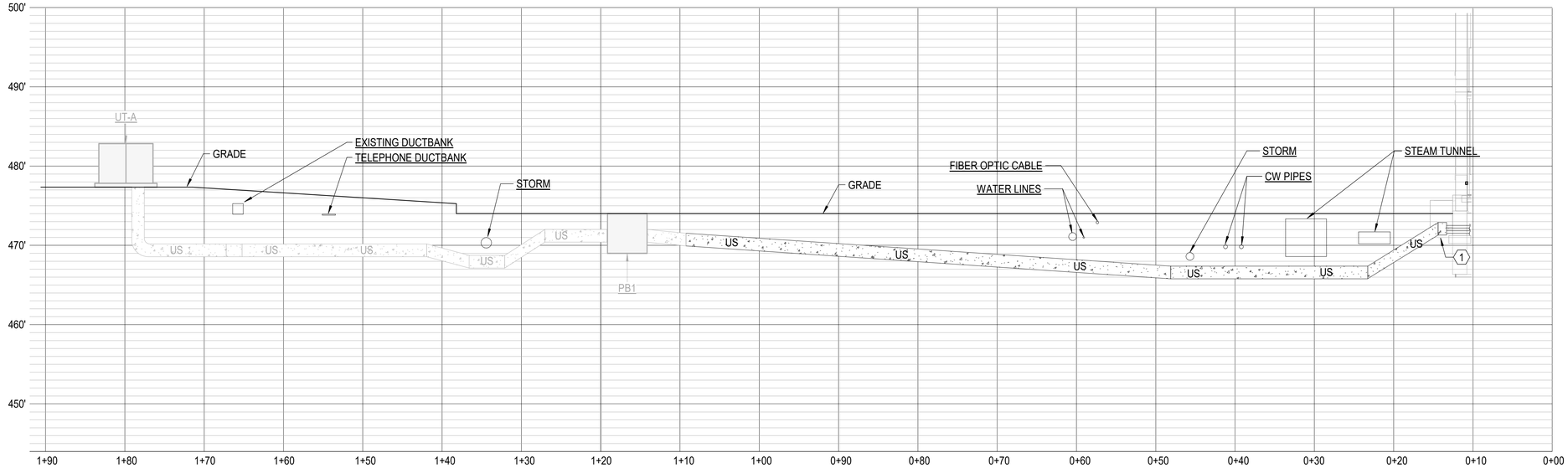
SEAL 044143
ENGINEER
RICHARD O. DOZIER, III

Signed on 01/03/2024 using a Digital Signature.

ISSUE DATE: 1/8/2024
OB. NO.: 11706-00
DWG. NO.: E012



01 SECONDARY DUCTBANK PROFILE TO BINGHAM

0 8 16 FT

GENERAL NOTES

1. LOCATIONS AND SIZES OF EXISTING UTILITIES ARE BASED ON PROJECT-SPECIFIC SURVEY INFORMATION PROVIDED BY UNC CHAPEL HILL. THE CONTRACTOR SHALL VERIFY THE LOCATIONS AND SIZES OF EXISTING UTILITIES AND OTHER EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF WORK.
2. PERFORM WORK AT SUCH TIME AND IN SUCH MANNER AS TO CAUSE MINIMUM INCONVENIENCE TO THE OWNER. NO ALLOWANCE WILL BE MADE FOR LACK OF KNOWLEDGE OF EXISTING CONDITIONS.
3. COORDINATE DISRUPTION OF ELECTRICAL SERVICE WITH UNC ENERGY SERVICES AND UNC FACILITIES AT LEAST 14 DAYS PRIOR TO ANY UTILITY DISRUPTION.
4. CONDUIT ENTERING A BUILDING OR ELECTRICAL EQUIPMENT SHALL BE SLOPED AWAY FROM ENTRANCE POINT TO PREVENT MOISTURE LEAKING INTO BUILDINGS AND EQUIPMENT.
5. UTILITIES NOTED ON DUCTBANK PROFILES ARE EXISTING TO REMAIN, UON.
6. WORK SHOWN IN BOLD ON THIS DRAWING WILL BE COMPLETED BY UNC EDS CONTRACTOR. THIS WORK MAY BE COMPLETED AT A SEPARATE TIME FROM THE BINGHAM SCOPE.
7. WORK SHOWN HALF-TONED WILL BE COMPLETED BY BINGHAM CONTRACTOR AND IS SHOWN FOR REFERENCE ONLY TO ILLUSTRATE THE COMPLETE INSTALLATION.

SHEET SPECIFIC NOTES

1. SECONDARY DUCTBANK CONDUITS SHALL ENTER EXISTING OPENING IN BINGHAM EXTERIOR WALL STRAIGHT AND NOT ANGLED. REFER TO STRUCTURAL DRAWINGS FOR ADDITIONAL INFORMATION REGARDING OPENING AND FILL-IN REQUIREMENTS. CONTRACTOR SHALL TRANSITION FROM PVC TO RMC AS REQUIRED PER SECTION 260543-3.05.B.11 AND PROVIDE SLEEVES AND SLEEVE SEALS AS REQUIRED PER SECTION 260444. DUCTBANK IS ALLOWED TO HAVE LESS THAN 30" OF COVERAGE AS REQUIRED PER DETAIL 6 ON DRAWING E506 TO COORDINATE WITH EXISTING OPENING IN EXTERIOR WALL, BUT COVERAGE SHALL NOT BE LESS THAN MINIMUM REQUIRED PER THE NEC.

LORD AECK SARGENT

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Newcomb & Boyd, LLP
Firm Lic # P-0212

SHEET TITLE: ELECTRICAL DUCTBANK PROFILE - BINGHAM SCOPE

SCALE (U.N.O.): As indicated

0 8 16 FT

JOB NAME: University of North Carolina - Chapel Hill
SCO#: 21-035482-0A
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

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RICHARD O. DOZIER, III

Signed on 01/03/2024 using a Digital Signature.

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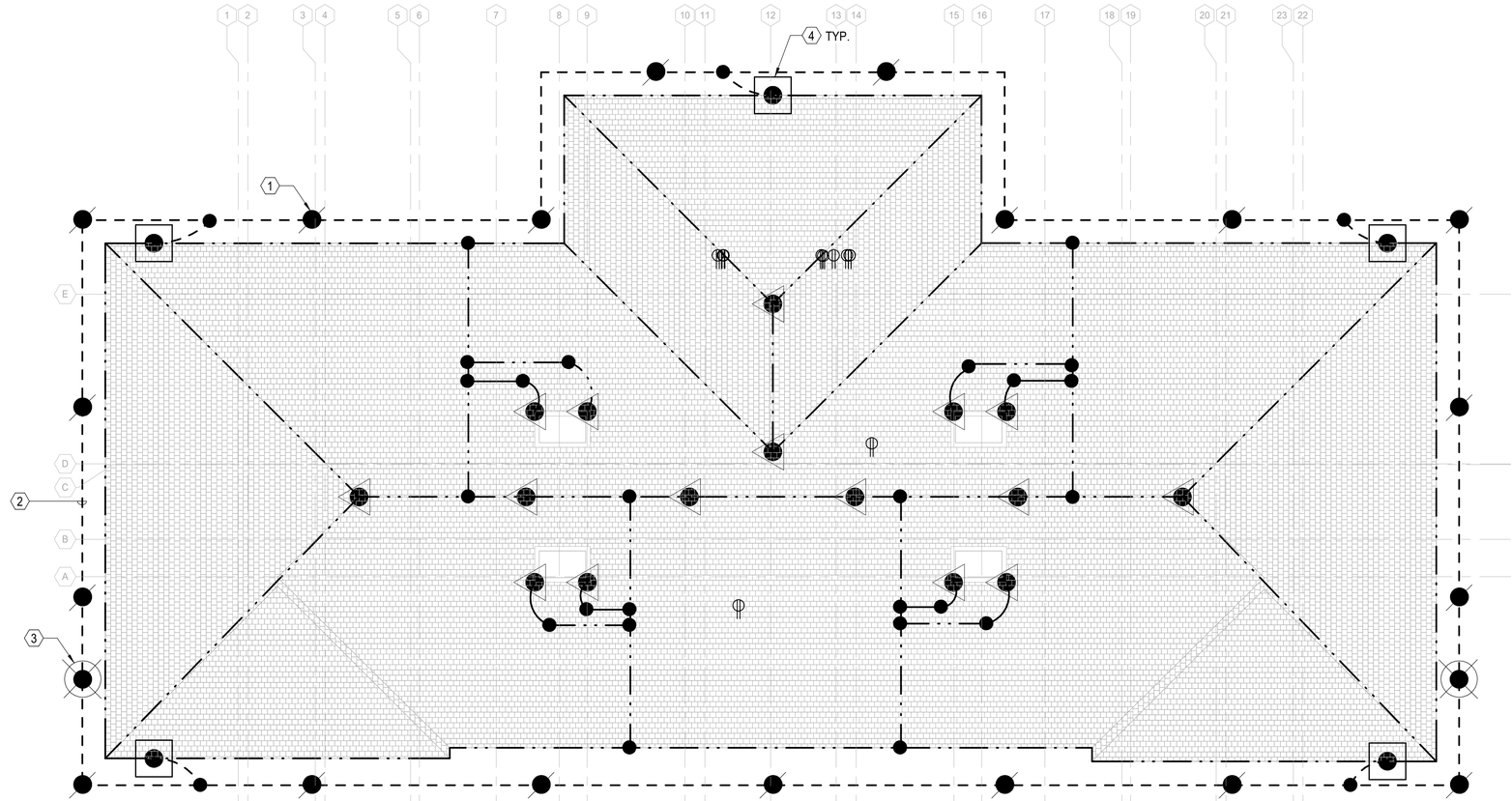
DWG. NO.: E013

GROUNDING SYSTEM SYMBOL LEGEND

- AIR TERMINAL ON ROOF PERIMETER
- AIR TERMINAL ON ROOF INTERIOR OR CHIMNEY
- THROUGH-ROOF CONDUCTOR
- EXOTHERMIC BOND
- ROOF CONDUCTOR
- BARE COPPER COUNTERPOISE
- 0.75" x 10' COPPER-CLAD STEEL GROUND ROD
- GROUNDING TEST WELL

LIGHTNING PROTECTION SYSTEM GENERAL NOTES

1. CONDUCTORS SHALL INTERCONNECT AIR TERMINALS AND FORM A TWO-WAY PATH FROM EACH POINT, HORIZONTALLY OR DOWNWARD, TO CONNECTIONS WITH GROUND TERMINALS.
2. LIGHTNING PROTECTION CONDUCTORS SHALL BE FASTENED NO MORE THAN 36" OC.
3. NO BEND OF CONDUCTOR SHALL FORM A FINAL INCLUDED ANGLE OF LESS THAN 90° OR HAVE A RADIUS OF BEND LESS THAN 8". ANY RISE IN A HORIZONTAL CONDUCTOR RUN SHALL NOT EXCEED 6".
4. AIR TERMINALS SHALL BE PLACED 20' OC MAXIMUM AROUND ROOF PERIMETER OR RIDGE AND WITHIN 2' OF OUTSIDE EDGE AND SHALL PROJECT A MINIMUM OF 10" ABOVE THE AREA PROTECTED.
5. MIDROOF AIR TERMINALS SHALL BE PLACED 50' OC MAXIMUM.
6. PRIMARY METAL BODIES (OF CONDUCTANCE) LOCATED ABOUT THE ROOF (EXHAUST FANS, COOLING TOWERS, ETC) SHALL BE BONDED WITH FULL SIZE CONDUCTORS AND FITTED WITH AIR TERMINALS IF THEY ARE AS HIGH, OR HIGHER, THAN ADJACENT AIR TERMINALS, UNLESS LOCATED ENTIRELY WITHIN A ZONE OF PROTECTION AS DEFINED BY CODE.
7. SECONDARY METAL BODIES (OF INDUCTANCE) LOCATED ABOUT THE ROOF (FLASHINGS, GRAVEL STOPS, ROOF DRAINS, SOIL PIPE VENTS, LOUVERS, DOOR FRAMES, ETC) WITHIN 6' OF THE MAIN CONDUCTOR OR BONDED BODY SHALL BE INTERCONNECTED WITH SECONDARY BONDING CONDUCTORS.
8. BIMETAL CONNECTORS SHALL BE USED WHERE DISSIMILAR METALS COME IN CONTACT WITH EACH OTHER. COPPER LIGHTNING PROTECTION MATERIALS SHALL NOT BE INSTALLED ON ALUMINUM SURFACES NOR SHALL ALUMINUM BE INSTALLED ON COPPER SURFACES.
9. CONNECTIONS TO GROUND RODS (OR COUNTERPOISE) SHALL BE MADE NO LESS THAN 2' BELOW GRADE AND 2' FROM FOUNDATION.
10. THE LIGHTNING PROTECTION SYSTEM SHALL BE INSTALLED IN A NEAT AND INCONSPICUOUS MANNER.
11. ELECTRIC AND TELEPHONE SERVICE ENTRANCE GROUNDS SHALL BE INTERCONNECTED TO THE LIGHTNING PROTECTION SYSTEM GROUND.
12. CONNECTIONS OF UNDERGROUND METAL PIPING SYSTEMS TO THE LIGHTNING PROTECTION SYSTEM GROUND SHALL BE MADE AT THEIR SERVICE ENTRANCE TO STRUCTURE.
13. ADHESIVE FIXTURES SHALL BE SET WITH AN ADHESIVE COMPOUND COMPATIBLE WITH THE ROOFING MATERIALS. ADHESIVE SHALL BE APPROVED IN ADVANCE BY ROOFING CONTRACTOR.
14. SEAL ENDS OF CONDUITS MOISTURETIGHT WITH DUCT SEAL OR LEAD WEDGES UNLESS OTHERWISE INDICATED.
15. WHERE THE STRUCTURAL STEEL FRAMEWORK IS UTILIZED AS MAIN C0NDUCTORS FOR THE SYSTEM, PERIMETER COLUMNS SHALL BE GROUNDED AT INTERVALS AVERAGING NOT MORE THAN 60' APART, COLUMNS SHALL BE GROUNDED USING BONDING PLATES HAVING 8 SQUARE INCHES OF SURFACE CONTACT AREA OR BY EXOTHERMIC WELDED CONNECTIONS.
16. ALL UNDERGROUND GROUNDING CONDUCTORS TO BE #4/0 BARE COPPER GROUND, UON.
17. SEE LIGHTNING PROTECTION DETAIL SHEET E507 FOR MORE INFORMATION.
18. REFER TO GROUNDING AND BONDING SPECIFICATIONS FOR REQUIRED COMPLIANCE WITH NFPA780 WHEN BONDING TO STEEL ROOF STRUCTURE.



1 ELECTRICAL LIGHTNING PROTECTION PLAN
0 8 16 FT

SHEET SPECIFIC NOTES

1. INSTALL GROUND ROD MINIMUM OF 24" BELOW GRADE, TYPICAL.
2. BURIED LIGHTNING PROTECTION SYSTEM COUNTERPOISE CONDUCTOR. INSTALL CONDUCTOR MINIMUM OF 24" BELOW GRADE. CONNECTOR CONDUCTOR TO GROUND RODS AS INDICATED WITH EXOTHERMIC WELDS, TYPICAL.
3. SEE DETAILS ON SHEET E504 FOR GROUNDING TEST WELL DETAILS.
4. DOWN CONDUCTORS SHALL BE ROUTED CONCEALED INSIDE BUILDING EXTERIOR WALL. REFER TO DETAIL 2 ON DRAWING E507 AND ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION.

LORD AECK SARGENT

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NB Contact: Reade Daniel
N&B PROJECT: 21N242
Newcomb & Boyd, LLP
Firm Lic # P-0312

SHEET TITLE: ELECTRICAL LIGHTNING PROTECTION PLAN

SCALE (U.N.O.): 1/8" = 1'-0"
0 8 16 FT

JOB NAME: University of North Carolina - Chapel Hill
SCI# 21-25548-02A
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

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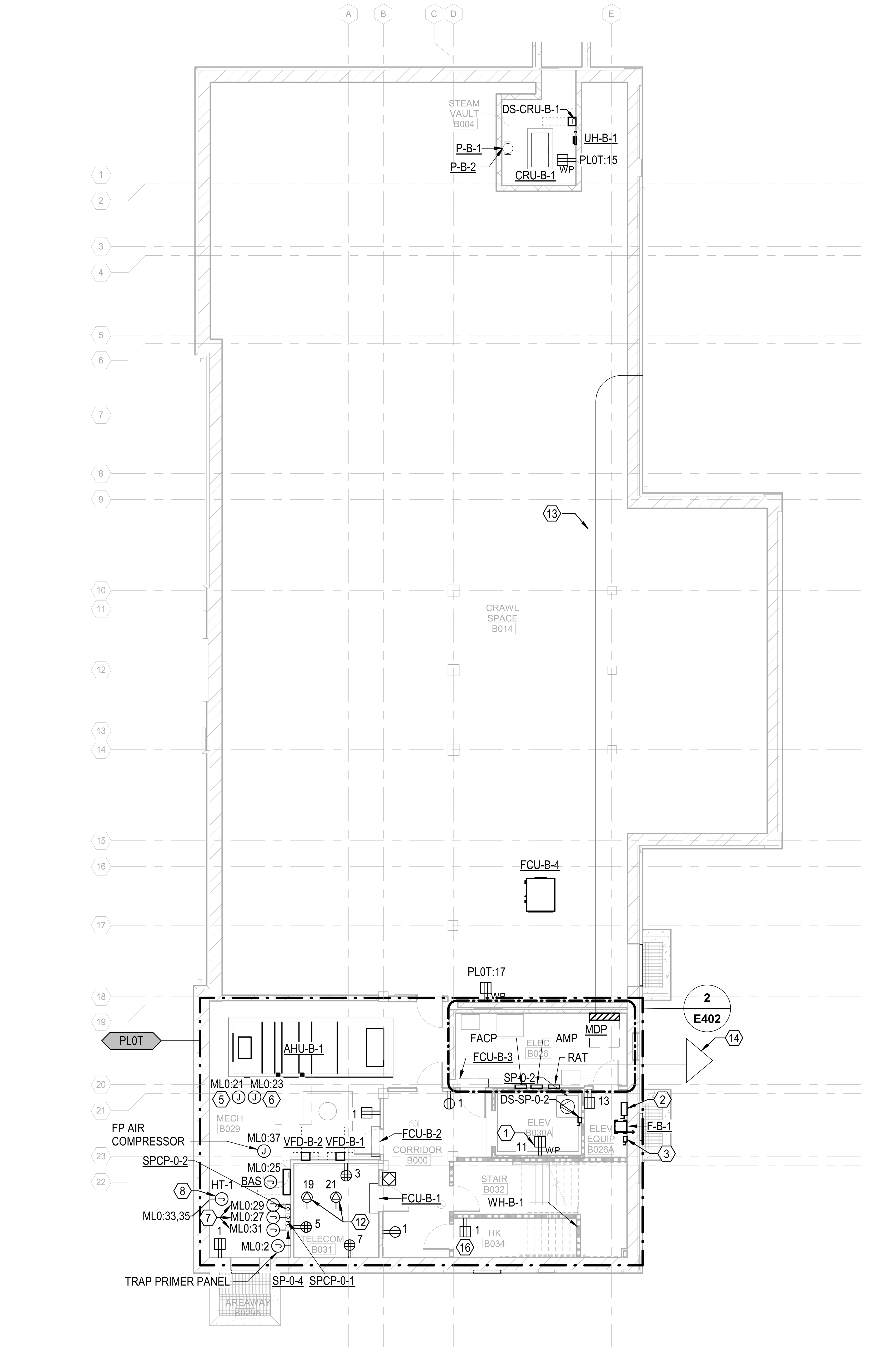
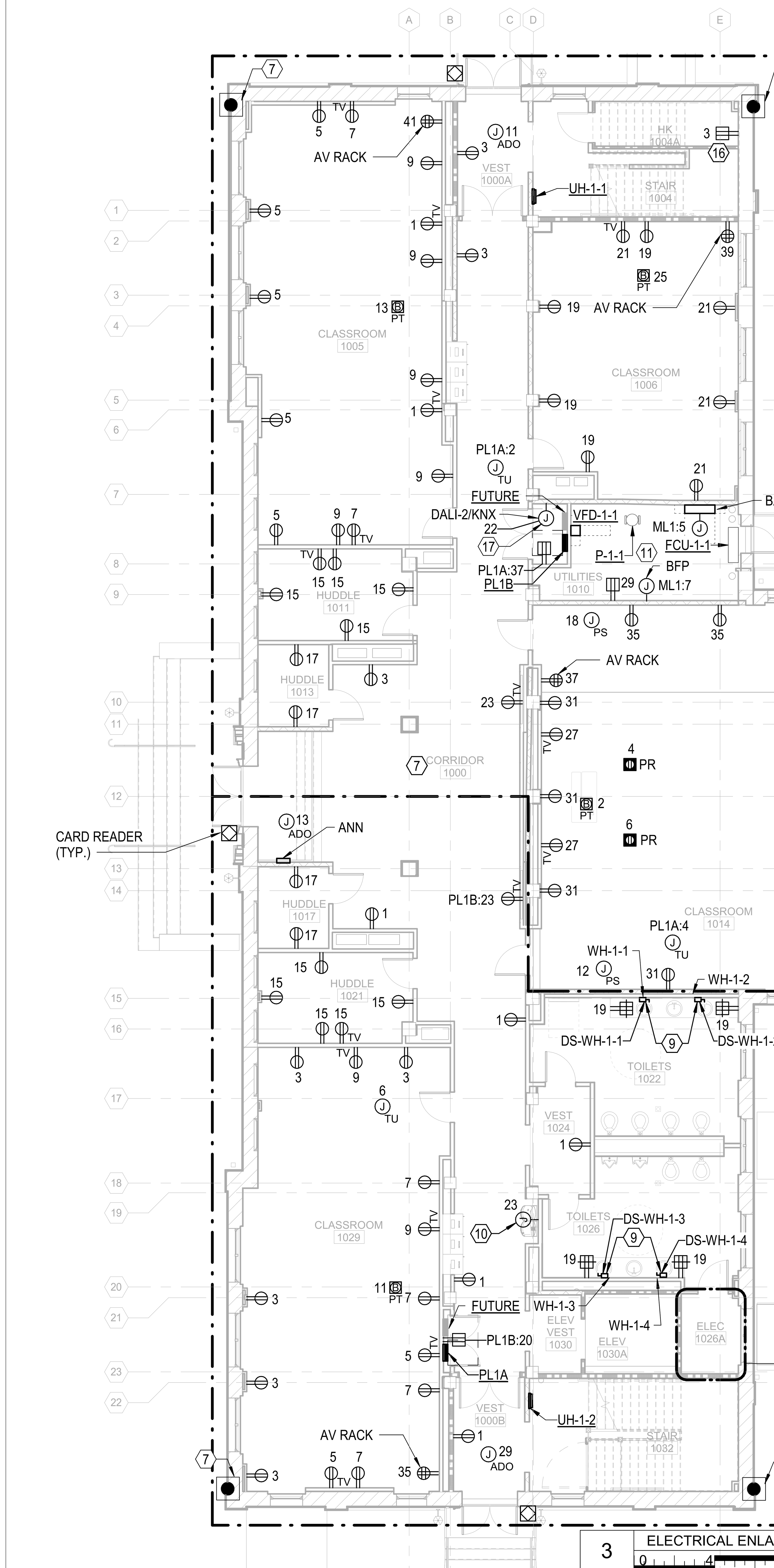


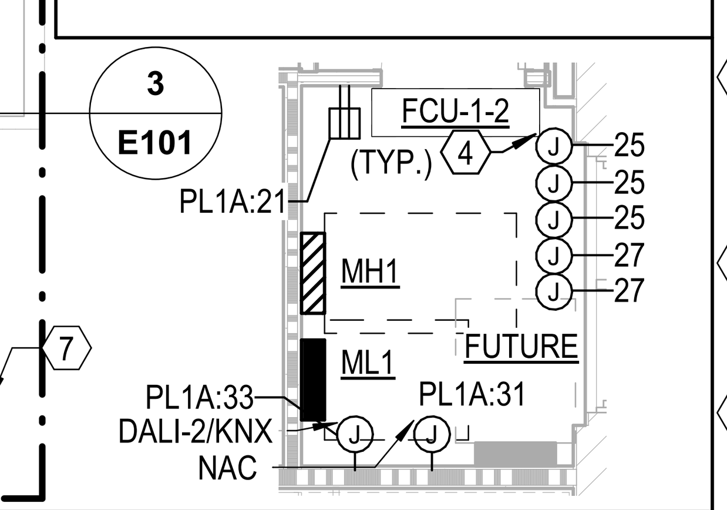
1 ELECTRICAL POWER BASEMENT FLOOR PLAN

0 8 16FT



2 ELECTRICAL POWER FIRST FLOOR PLAN

0 8 16FT



3 ELECTRICAL ENLARGED PLAN - ELECTRICAL 1026A

0 4 8FT

GENERAL NOTES

1. REFER TO E-600 SERIES SHEETS FOR MECHANICAL AND ELECTRICAL EQUIPMENT CONNECTION SCHEDULES.
2. WHEN OUTLETS ARE INDICATED AS OCCURRING BACK-TO-BACK THEY SHALL BE SEPARATED BY 16 INCHES HORIZONTALLY. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT DEVICE LOCATIONS AND MOUNTING HEIGHTS.
3. ELECTRICAL POWER PLANS INDICATE POWER CONNECTIONS TO AV DEVICES ONLY. REFER TO AV SET OF DRAWINGS FOR EXACT DEVICE LOCATIONS, RACEWAY REQUIREMENTS AND ALL ADDITIONAL AV SCOPE RELATED INFORMATION.
4. IN ALL CLASSROOMS, SEAL OPENINGS AND KNOCKOUTS IN BACK AND SIDES OF ALL BOXES AND ENCLOSURES WITH ACOUSTICALLY RATED PUTTY.
5. COORDINATE INSTALATION OF POKE-THRUS WITH NEW FLOOR CONSTRUCTION.
6. VERTICAL RACEWAY INSTALLATION IN EXISTING EXTERIOR WALLS SHALL BE ACCOMPLISHED BY CHANNELING AND REPARING AS NECESSARY. REFER TO ARCHITECTURAL DETAIL ON DRAWING A621. DEVICES SHALL BE INSTALLED RECESSED.

SHEET SPECIFIC NOTES

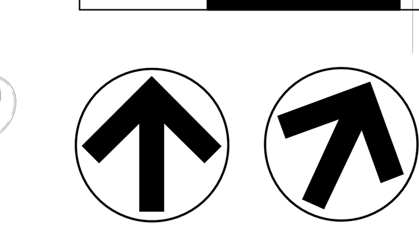
1. REPLACE EXISTING RECEPTACLES IN ELEVATOR WITH NEW AS INDICATED.
2. PROVIDE NEW 200/3/F/3R DISCONNECT SWITCH FOR ELEVATOR. RECONNECT EXISTING ELEVATOR TO LOAD SIDE OF NEW DISCONNECT SWITCH.
3. PROVIDE NEW 30/1/F/3R DISCONNECT SWITCH FOR CAB LIGHTING. RECONNECT EXISTING ELEVATOR CAB LIGHTING TO LOAD SIDE OF NEW DISCONNECT SWITCH.
4. FOR CONNECTION TO AUTOMATIC FLUSH TOILETS, URINAL AND LAVATORY FAUCETS TRANSFORMERS POWER. LOCATE REMOTELY IN ELECTRCIAL 1026A. COORDINATE LOCATION, CONNECTION REQUIREMENTS, AND QUANTITY WITH EQUIPMENT. REFER TO ARCHITECTURAL AND PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION.
5. FOR CONNECTION TO AHU ENCLOSURE LIGHTING.
6. FOR CONNECTION TO AHU UV LIGHTING.
7. LOCATE PULL BOXES ABOVE CEILING IN ACCESIBLE LOCATIONS. REFER TO DETAIL 3 ON SHEET E502.
8. FOR CONNECTION TO HEAT TRACE CONTROL PANEL. CIRCUIT SHALL BE PROTECTED BY GFEP CIRCUIT BREAKER IN PANEL. COORDINATE EXACT CONNECTION REQUIREMENTS WITH EQUIPMENT PROVIDER.
9. COORDINATE MOUNTING OF DISCONNECT SWITCH FOR WATER HEATER WILL MILLWORK. PROVIDE NEC REQUIRED CLEARANCE IN FRONT OF DISCONNECT AND 30" WORKING CLEARANCE THROUGH DOOR ACCESS.
10. FOR CONNECTION TO WATER COOLER/FOUNTAINS. CIRCUIT SHALL BE PROTECTED BY GFCI CIRCUIT BREAKER IN PANEL.
11. PROVIDE GROUND CONNECTION TO WATER SERVICE ENTRY PIPE.
12. PROVIDE A NEMA L5-20R LOCKING TYPE, 120V, 1 PHASE, SPECIAL OUTLET FOR TELECOM RACK. MOUNT TO CABLE TRAY ABOVE TELECOM RACK.
13. CONDUIT FROM PULLBOX VIA UNDERGROUND DUCT BANK. REFER TO E013/BINGHAM SCOPE SITE PLAN FOR MORE INFORMATION.
14. GROUNDING TRIAD SHOWN FOR REFERENCE. REFER TO GROUNDING DETAIL ON E503.

SHEET SPECIFIC NOTES (CONT.)

15. ROUTE DOWN CONDUCTOR FOR LIGHTNING PROTECTION SYSTEM CONCEALED WITHIN EXTERIOR WALL. DOWN CONDUCTORS SHALL NOT BE INSTALLED EXPOSED. REFER TO LIGHTNING PROTECTION DETAILS FOR ADDITIONAL INFORMATION. TYPICAL FOR ALL FLOORS.
16. RECEPTACLE INSTALLED IN HOUSE KEEPING ROOM UNDER STAIRS.
17. RESERVE CIRCUIT FOR POWER OF ADDITIONAL DALI-2 OR KNX APPLICATION CONTROLLERS AS NEEDED.

LIFE SAFETY LEGEND

- SMOKE PARTITION
- 1-HOUR RATED WALL
- 2-HOUR RATED WALL
- 3-HOUR RATED WALL



PROJECT NORTH TRUE NORTH

LORD AECK SARGENT

REVISION:

NEWCOMB & BOYD NB

5425 Page Road Suite 216 Durham, NC 27703 NB Contact: Roade Daniel N&B PROJECT: 21N242 Newcomb & Boyd, LLP Firm Lic. # F-0312

SHEET TITLE: ELECTRICAL POWER BASEMENT & FIRST FLOOR PLANS

SCALE (U.N.O.): As indicated

0 8 16FT

JOB NAME: University of North Carolina - Chapel Hill

SCO# 21-25548-02A

BINGHAM HALL RENOVATION

LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

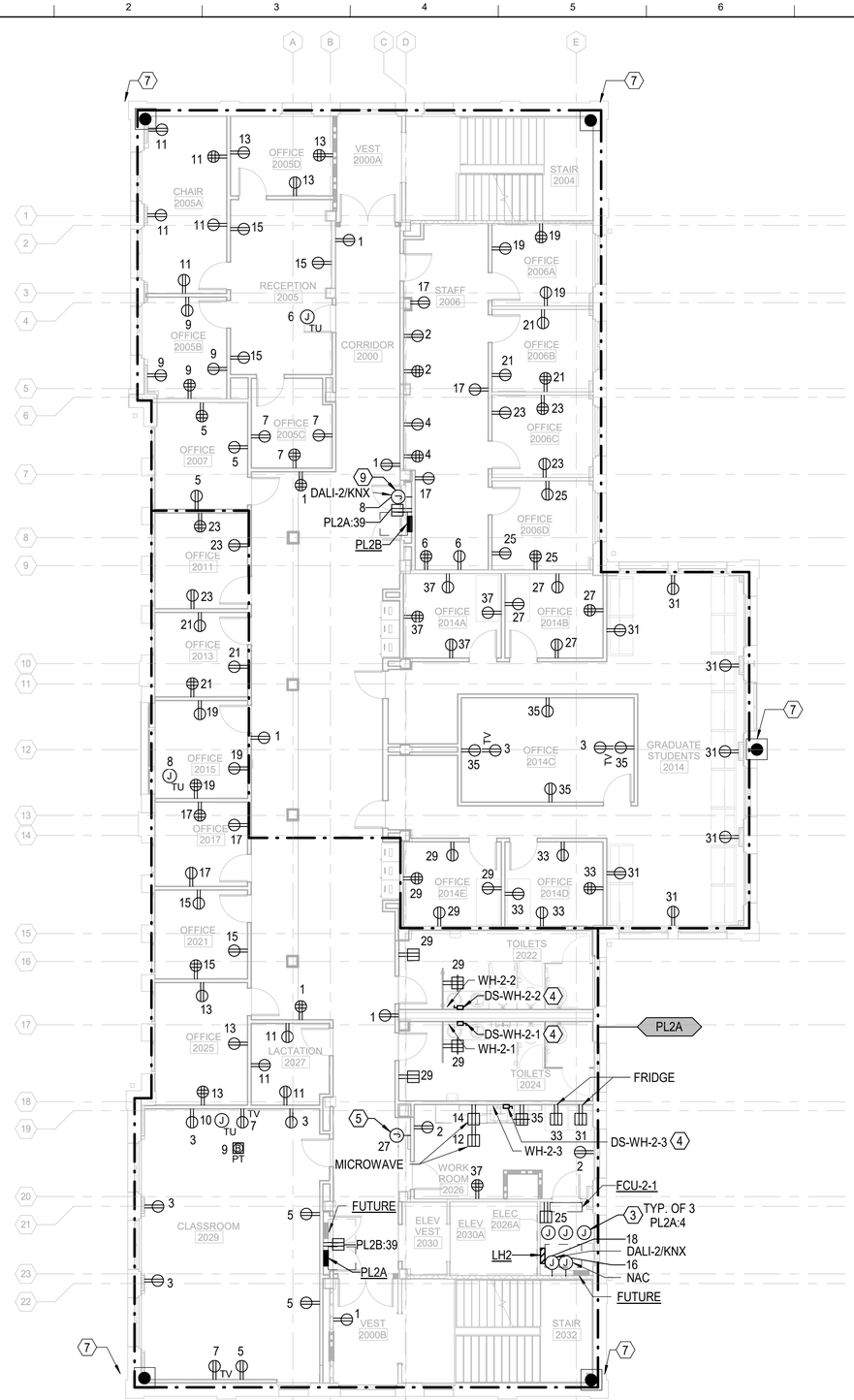
SEAL: NORTH CAROLINA PROFESSIONAL ENGINEER RICHARD O. DOZIER

Signed on 01/04/2024 using a Digital Signature.

ISSUE DATE: 1/8/2024

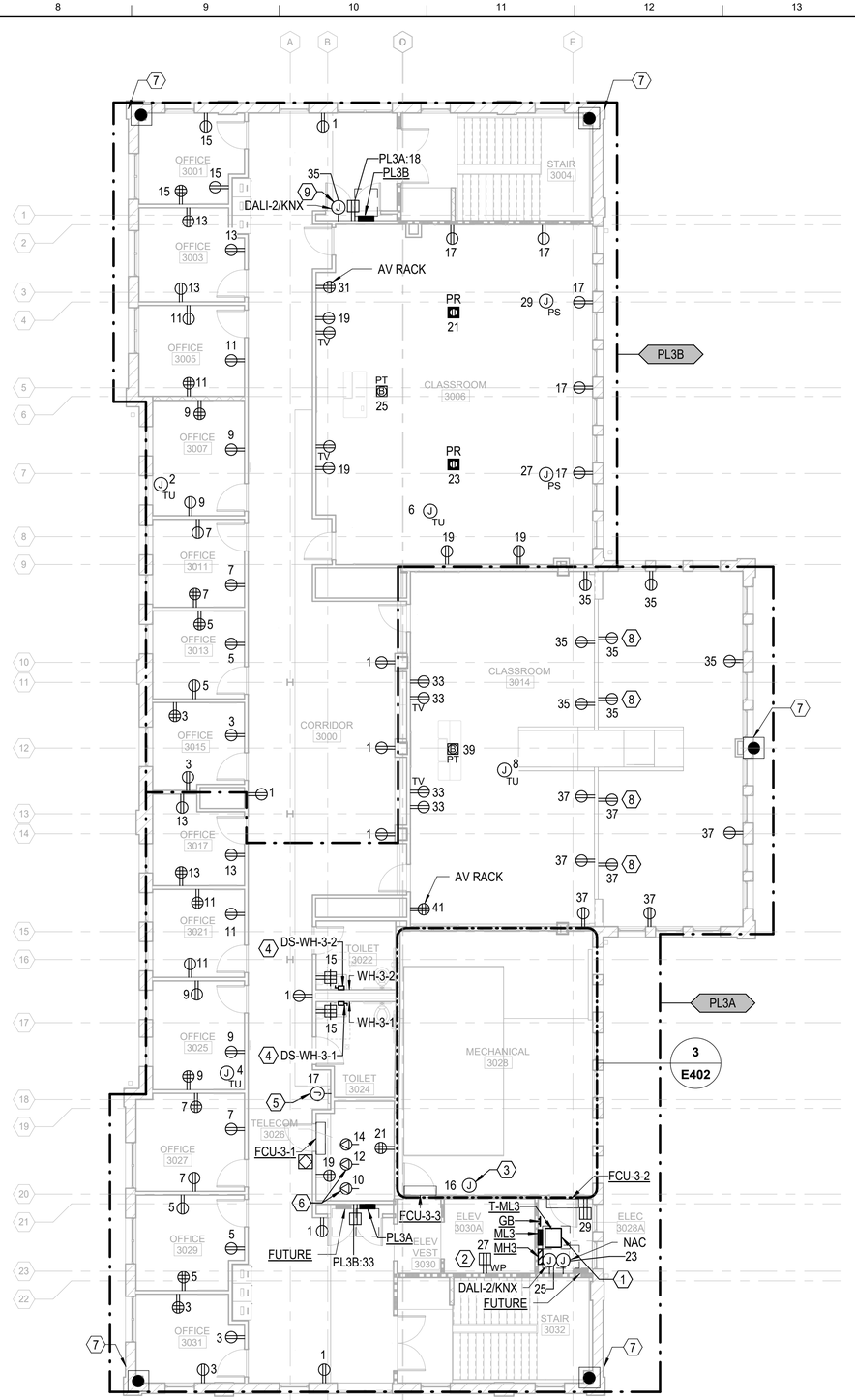
JOB NO.: 11706-00

DWG. NO.: E101



1 ELECTRICAL POWER SECOND FLOOR PLAN

0 8 16 FT



2 ELECTRICAL POWER THIRD FLOOR PLAN

0 8 16 FT

PROJECT NORTH TRUE NORTH

GENERAL NOTES

1. REFER TO E-600 SERIES SHEETS FOR MECHANICAL AND ELECTRICAL EQUIPMENT CONNECTION SCHEDULES.
2. WHEN OUTLETS ARE INDICATED AS OCCURRING BACK-TO-BACK THEY SHALL BE SEPARATED BY 16 INCHES HORIZONTALLY. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT DEVICE LOCATIONS AND MOUNTING HEIGHTS.
3. ELECTRICAL POWER PLANS INDICATE POWER CONNECTIONS TO AV DEVICES ONLY. REFER TO AV SET OF DRAWINGS FOR EXACT DEVICE LOCATIONS, RACEWAY REQUIREMENTS AND ALL ADDITIONAL AV SCOPE RELATED INFORMATION.
4. IN ALL CLASSROOMS, SEAL OPENINGS AND KNOCKOUTS IN BACK AND SIDES OF ALL BOXES AND ENCLOSURES WITH ACOUSTICALLY RATED PUTTY.
5. COORDINATE INSTALATION OF POKE-THRUS WITH NEW FLOOR CONSTRUCTION.
6. VERTICAL RACEWAY INSTALLATION IN EXISTING EXTERIOR WALLS SHALL BE ACCOMPLISHED BY CHANNELING AND REPARING AS NECESSARY. REFER TO ARCHITECTURAL DETAIL ON DRAWING A621. DEVICES SHALL BE INSTALLED RECESSED.

SHEET SPECIFIC NOTES

1. SUSPEND TRANSFORMER FROM STRUCTURE ABOVE.
2. REPLACE EXISTING RECEPTACLES IN ELEVATOR WITH NEW AS INDICATED AT TOP OF ELEVATOR SHAFT.
3. FOR CONNECTION TO AUTOMATIC FLUSH TOILETS, URINAL AND LAVATORY FAUCETS TRANSFORMERS POWER. LOCATE REMOTELY, COORDINATE LOCATION, CONNECTION REQUIREMENTS, AND QUANTITY WITH EQUIPMENT. REFER TO ARCHITECTURAL AND PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION.
4. MOUNT DISCONNECT SWITCH FOR WATER HEATER BELOW SINK WITHIN CABINET. PROVIDE NEC REQUIRED CLEARANCE IN FRONT OF DISCONNECT AND POSITION HANDLE IN VERTICAL POSITION.
5. FOR CONNECTION TO WATER COOLER/FOUNTAINS. CIRCUIT SHALL BE PROTECTED BY GFCI CIRCUIT BREAKER IN PANEL.
6. PROVIDE A NEMA L5-20R LOCKING TYPE, 120V, 1 PHASE, SPECIAL OUTLET FOR TELECOM RACK. MOUNT TO CABLE TRAY ABOVE TELECOM RACK.
7. ROUTE DOWN CONDUCTOR FOR LIGHTNING PROTECTION SYSTEM CONCEALED WITHIN EXTERIOR WALL. EXTERIOR WALL WILL BE CHANNELED AND PATCHED TO CONCEAL DOWN CONDUCTORS. REFER TO ARCHITECTURAL DRAWINGS FOR COORDINATION.
8. INSTALL RECEPTACLE HORIZONTALLY.
9. RESERVE CIRCUIT FOR POWER OF ADDITIONAL DALI-2 OR KNX APPLICATION CONTROLLERS AS NEEDED.

LIFE SAFETY LEGEND

- SMOKE PARTITION
- 1-HOUR RATED WALL
- 2-HOUR RATED WALL
- 3-HOUR RATED WALL

SEAL

NORTH CAROLINA PROFESSIONAL ENGINEER RICHARD O. DOZIER

DocuSigned by: [signature] 8B290D03BCE3457...

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ISSUE DATE 1/8/2024

JOB. NO. 11706-00

DWG. NO. E102

LORD AECK SARGENT

REVISION:

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Suite 215
Durham, NC 27703
NB Contact: Reade Daniel
N&B PROJECT: 21N242
Newcomb & Boyd, LLP
Firm Lic # P-0312

SHEET TITLE: ELECTRICAL POWER SECOND & THIRD FLOOR PLANS

SCALE (U.N.O.) 1/8" = 1'-0"

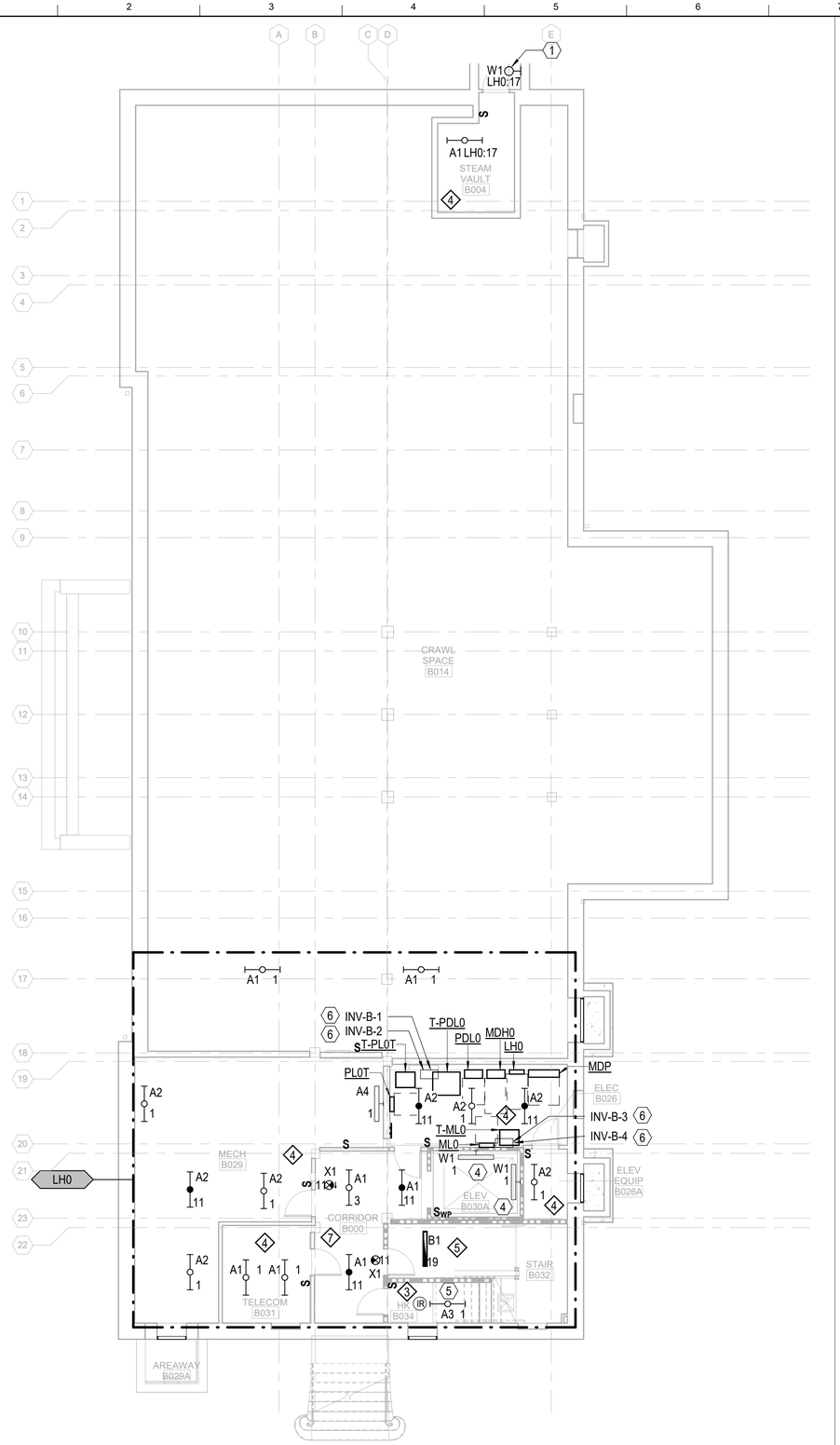
0 8 16 FT

JOB NAME: University of North Carolina - Chapel Hill

SCI#: 21-235492A

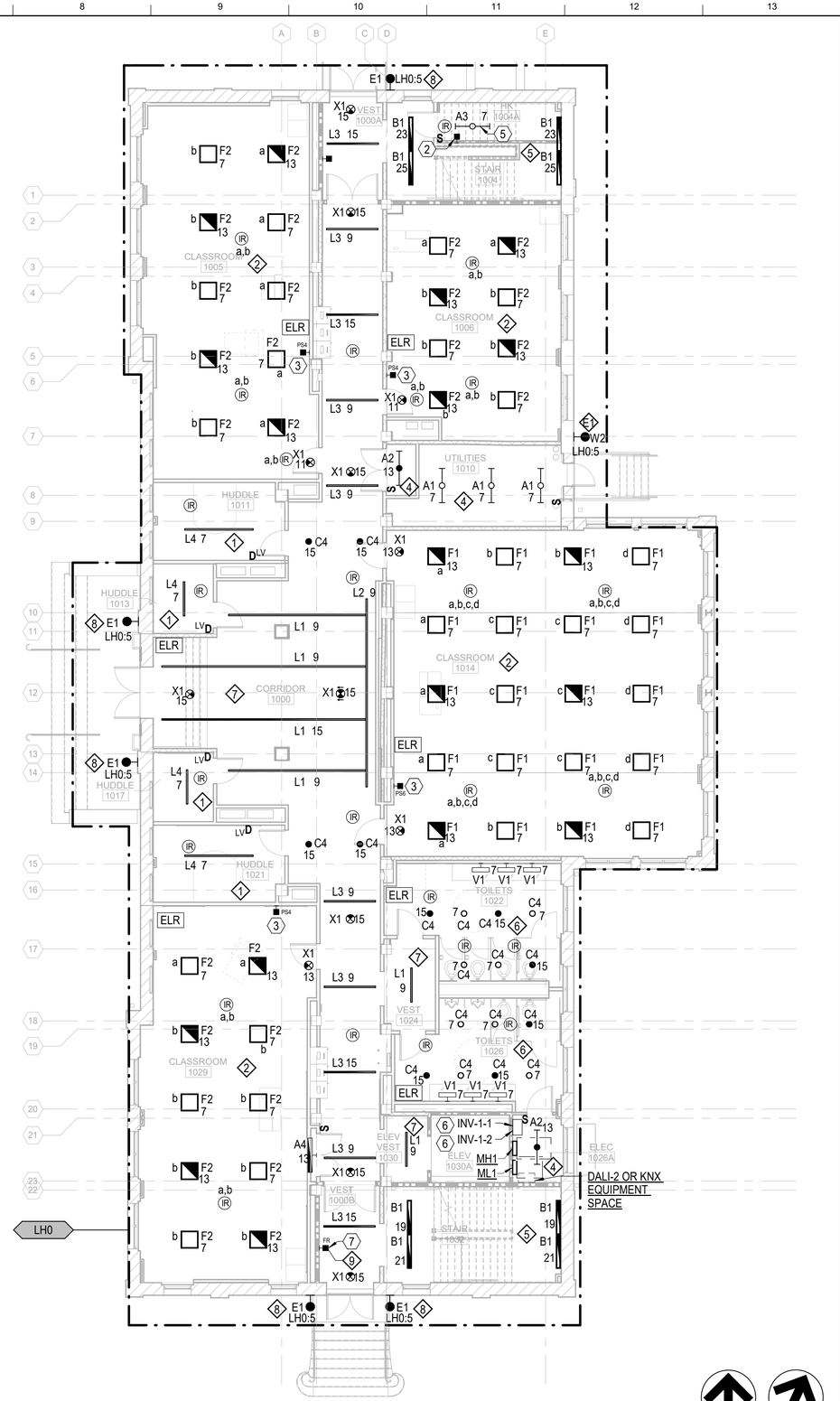
BINGHAM HALL RENOVATION

LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514



1 ELECTRICAL LIGHTING BASEMENT FLOOR PLAN

0 8 16 FT



2 ELECTRICAL LIGHTING FIRST FLOOR PLAN

0 8 16 FT

PROJECT NORTH TRUE NORTH

GENERAL NOTES

1. ALL EMERGENCY LIGHTING ALONG THE PATH OF EGRESS (CORRIDORS, LOBBIES, STAIRWELLS) IS INTENDED FOR 24/7 HOUR OPERATION AND SHALL NOT BE TURNED OFF (MANUALLY OR AUTOMATICALLY). EMERGENCY LIGHTING SHALL BE REDUCED TO 3X CODE MINIMUM AFTER HOURS VIA 12 HOUR MOMENTARY OVERRIDE SWITCH.
2. IN AREAS WHERE EMERGENCY AND NORMAL LIGHTING IS BEING CONTROLLED, THE (DIMMED AND SWITCHED) EMERGENCY FIXTURES SHALL BE BROUGHT TO 100% BRIGHTNESS UPON LOSS OF NORMAL POWER OR FIRE ALARM EVENT VIA UL924 DEVICE.
3. ALL EMERGENCY LIGHTING ON THE BASEMENT FLOOR AND THE FIRST FLOOR SHALL BE SERVED FROM LIGHTING INVERTERS IN MAIN ELEC. B026 AND ELEC. 1026A.
4. REFER TO LUMINAIRE SCHEDULE ON SHEET E600 FOR FIXTURE TYPES AND DESCRIPTIONS.
5. SEE ELECTRICAL LEGEND SHEET FOR ADDITIONAL INFORMATION ON ZONE NOTATION AND CONTROL DEVICE TYPES.
6. LOCATE POWER PACKS AND EMERGENCY SHUNT RELAYS ABOVE ACCESSIBLE CEILING NEAREST TO THE MANUAL STATION.
7. LIGHTING CONTROLS SYSTEM INTEGRATOR TO BE UNDER DIRECT CONTROL OF ELECTRCIAL CONTRACTOR. COMMISSIONING PROVIDER TO INTERFACE LIGHTING CONTROLS WITH A/V SYSTEMS.
8. NUMBERED DIAMOND SYMBOLS REFER TO LIGHTING CONTROL SEQUENCE OF OPPERATION SPACE DESCRIPTION. REFER TO SHEET E403 FOR MORE INFORMATION.
9. PROVIDE SEPARATE CONDUIT PATHWAYS FOR EMEGENCY AND NORMAL LIGHTING TO COMPLY WITH NEC ARTICLE 700.

SHEET SPECIFIC NOTES

1. WALL MOUNTED FIXTURE IN AREAWAY WITH INTEGRAL MOTION SENSOR, MOUNT BELOW GRATE IN AREAWAY.
2. LOW VOLTAGE TIMECLOCK OVERRIDE SWITCH FOR CONTROL OF CORRIDOR LIGHTING ON ALL BUILDING LEVELS.
3. MULTI-SCENE PRESET DIMMING STATION WITH AV INTEGRATION. COORDINATE NUMBER OF SCENES AND SCENE SETTINGS WITH LIGHTING CONTROL SCHEDULE.
4. REPLACE EXISTING LIGHTS IN ELEVATOR PIT WITH NEW AS INDICATED.
5. INSTALL FIXTURE UNDERNEATH STAIRS.
6. PROVIDE WALL MOUNTED INVERTERS AS INDICATED. INVERTERS SHOWN IN THE SAME LOCATION SHALL BE STACKED VERTICALLY. REFER TO ELECTRICAL SCHEDULE SHEETS FOR INVERTER SCHEDULE.
7. LOW VOLTAGE EMERGENCY OVERRIDE KEYED SWITCH FOR FIRST RESPONDERS. SWITCH SHALL BE PROVIDED WITH PLASTIC COVER TO PREVENT INADVERTENT OPERATION. KEYS AND OPERATION OF SWITCH SHALL BE COORDINATED WITH UNC. SWITCH IS ANTICIPATED TO PROVIDE 12 HOUR OVERRIDE OF ALL GROUPS AND RETURN ALL LUMINAIRES TO FULL BRIGHTNESS.

LIFE SAFETY LEGEND

- SMOKE PARTITION
- 1-HOUR RATED WALL
- 2-HOUR RATED WALL
- 3-HOUR RATED WALL

LORD AECK SARGENT

REVISION:

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NB Contact: Reade Daniel
N&B PROJECT: 21N242
Newcomb & Boyd, LLP
Firm Lic. # P-0312

SHEET TITLE
ELECTRICAL LIGHTING BASEMENT & FIRST FLOOR PLANS

SCALE (U.N.O.)
1/8" = 1'-0"

0 8 16 FT

JOB NAME
University of North Carolina - Chapel Hill
SCI# 21-2554I-02A

LOCATION
BINGHAM HALL RENOVATION
36 Lenoir Drive, Chapel Hill, NC 27514

SEAL
NORTH CAROLINA PROFESSIONAL
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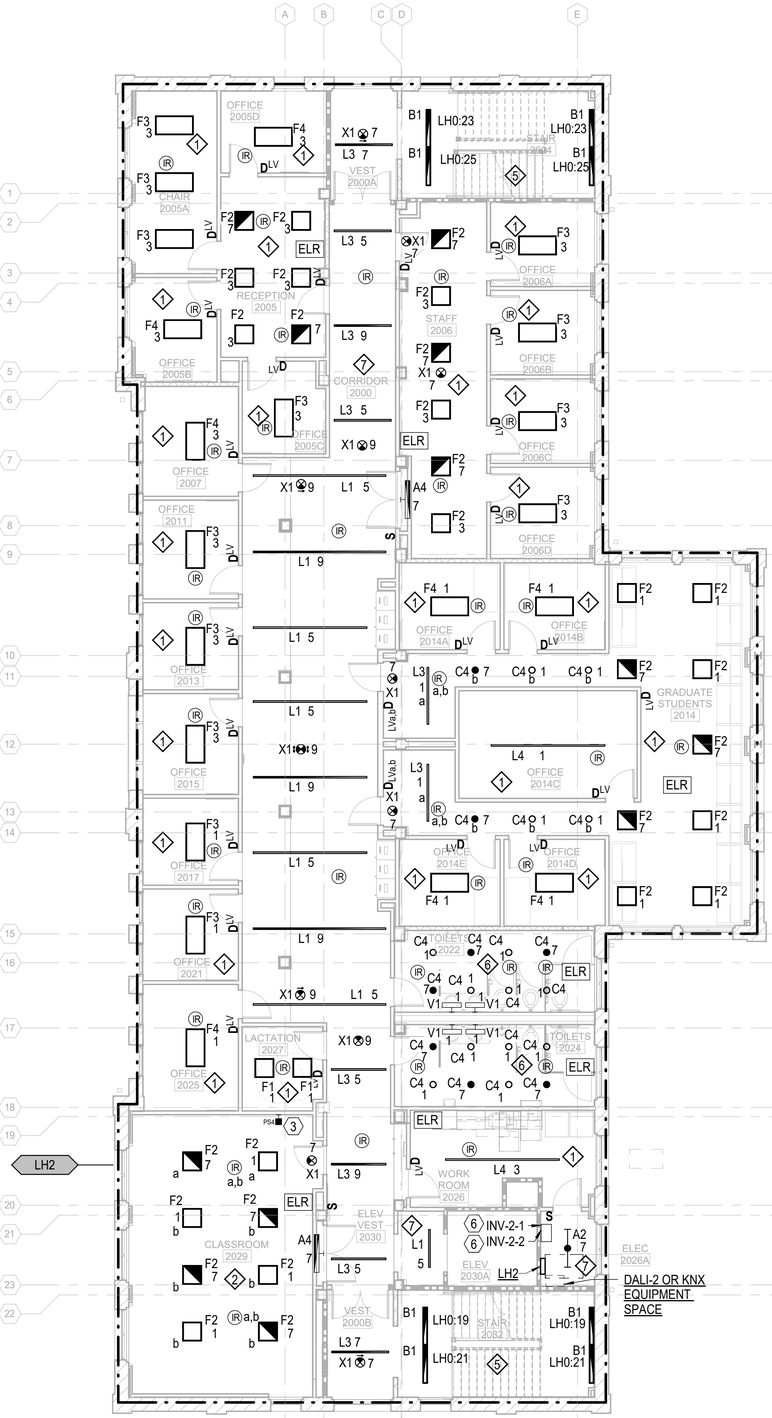
SB299D03BCE3457...
ENGINEER
RICHARD O. DOTZER
Signed on 01/04/2024
using a Digital Signature.

ISSUE DATE
1/8/2024

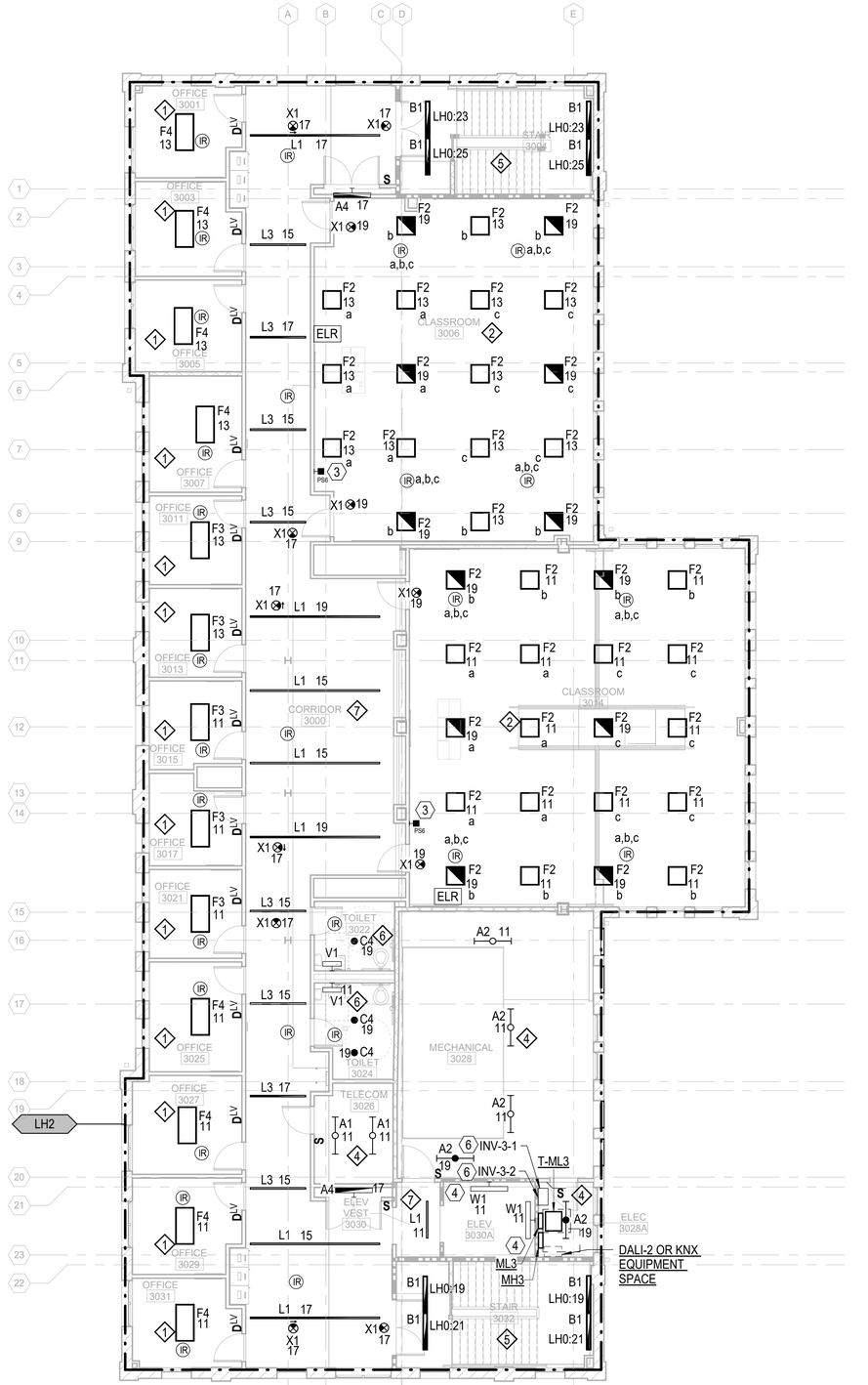
JOB. NO.
11706-00

DWG. NO.
E201



1 ELECTRICAL LIGHTING SECOND FLOOR PLAN

0 8 16FT



2 ELECTRICAL LIGHTING THIRD FLOOR PLAN

0 8 16FT

PROJECT NORTH TRUE NORTH

GENERAL NOTES

1. ALL EMERGENCY LIGHTING ALONG THE PATH OF EGRESS (CORRIDORS, LOBBIES, STAIRWELLS) IS INTENDED FOR 24/7 HOUR OPERATION AND SHALL NOT BE TURNED OFF (MANUALLY OR AUTOMATICALLY). EMERGENCY LIGHTING SHALL BE REDUCED TO 3X CODE MINIMUM AFTER HOURS VIA 12 HOUR MOMENTARY OVERRIDE SWITCH.
2. IN AREAS WHERE EMERGENCY AND NORMAL LIGHTING IS BEING CONTROLLED, THE (DIMMED AND SWITCHED) EMERGENCY FIXTURES SHALL BE BROUGHT TO 100% BRIGHTNESS UPON LOSS OF NORMAL POWER OR FIRE ALARM EVENT VIA UL924 DEVICE.
3. ALL EMERGENCY LIGHTING ON THE SECOND FLOOR SHALL BE SERVED FROM LIGHTING INVERTERS IN ELEC. 2026A. ALL EMERGENCY LIGHTING ON THE THIRD FLOOR SHALL BE SERVED FROM LIGHTING INVERTERS IN ELEC. 3028A.
4. SEE ELECTRICAL LEGEND SHEET FOR ADDITIONAL INFORMATION ON ZONE NOTATION AND CONTROL DEVICE TYPES.
5. LOCATE POWER PACKS AND EMERGENCY SHUNT RELAYS ABOVE ACCESSIBLE CEILING NEAREST TO THE MANUAL STATION.
6. LIGHTING CONTROLS SYSTEM INTEGRATOR TO BE UNDER DIRECT CONTROL OF ELECTRCIAL CONTRACTOR. COMMISSIONING PROVIDER TO INTERFACE LIGHTING CONTROLS WITH A/V SYSTEMS.
7. NUMBERED DIAMOND SYMBOLS REFER TO LIGHTING CONTROL SEQUENCE OF OPPERATION SPACE DESCRIPTION. REFER TO SHEET E403 FOR MORE INFORMATION.
8. PROVIDE SEPARATE CONDUIT PATHWAYS FOR EMEGENCY AND NORMAL LIGHTING TO COMPLY WITH NEC ARTICLE 700.

SHEET SPECIFIC NOTES

1. NOT USED.
2. LOW VOLTAGE 2-HOUR TIMECLOCK OVERRIDE SWITCH FOR CONTROL OF CORRIDOR LIGHTING ON THE SAME LEVEL.
3. MULTI-SCENE PRESET DIMMING STATION WITH AV INTEGRATION. COORDINATE NUMBER OF SCENES AND SCENE SETTINGS WITH LIGHTING CONTROL SCHEDULE.
4. REPLACE EXISTING LUMINAIRES IN ELEVATOR SHAFT WITH NEW AS INDICATED.
5. NOT USED.
6. PROVIDE WALL MOUNTED INVERTERS AS INDICATED. INVERTERS SHOWN IN THE SAME LOCATION SHALL BE STACKED VERTICALLY. REFER TO ELECTRICAL SCHEDULE SHEETS FOR INVERTER SCHEDULE.

LIFE SAFETY LEGEND

- SMOKE PARTITION
- 1-HOUR RATED WALL
- 2-HOUR RATED WALL
- 3-HOUR RATED WALL

LORD AECK SARGENT

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NB Contact: Reade Daniel
N&B PROJECT: 21N242
Newcomb & Boyd, LLP
Firm Lic. # P-0212

SHEET TITLE: ELECTRICAL LIGHTING SECOND & THIRD FLOOR PLANS

SCALE (U.N.O.) 1/8" = 1'-0"

0 8 16FT

JOB NAME: University of North Carolina - Chapel Hill
SCI#: 21-23545-02A
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

SEAL: NORTH CAROLINA PROFESSIONAL ENGINEER RICHARD O. DOZIER

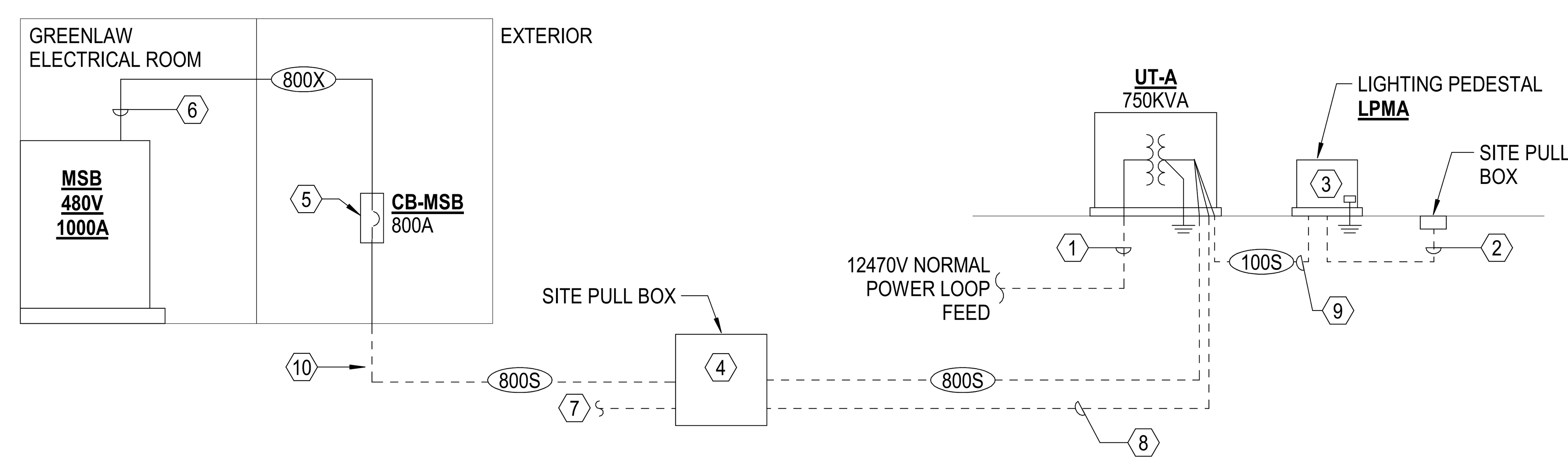
Docu/Signed by: 8B290D3BCE3457...

Signed on 01/04/2024 using a Digital Signature.

ISSUE DATE: 1/8/2024

JOB. NO. 11706-00

DWG. NO. E202



1 ELECTRICAL RISER DIAGRAM - GREENLAW SCOPE

NO SCALE

GENERAL NOTES:

1. WORK SHOWN ABOVE SHALL BE COMPLETED BY UNC EDS CONTRACTOR. WORK IS SHOWN FOR REFERENCE ONLY FOR BINGHAM CONTRACTOR.

 # KEY NOTES:

1. PROVIDE (2) 6" CONDUITS FOR MEDIUM VOLTAGE CABLES AND (1) 1.25" CONDUIT FOR COMMUNICATION WIRING. REFER TO SITE PLAN AND DUCTBANK DETAILS FOR MORE INFORMATION. INSTALL PULL STRINGS. MEDIUM VOLTAGE CABLES ARE FURNISHED AND INSTALLED BY UNC ELECTRICAL DISTRIBUTION SYSTEMS.
2. PROVIDE (2) 1.25" CONDUITS FOR LIGHTING BRANCH CIRCUIT WIRING. WIRING ARE FURNISHED AND INSTALLED BY UNC ELECTRICAL DISTRIBUTION SERVICES. INSTALL PULL STRING. REFER TO SITE PLAN FOR ADDITIONAL INFORMATION.
3. LIGHTING PEDESTAL PROVIDED BY OWNER. EQUIPMENT CONCRETE PAD PROVIDED BY UNC ELECTRICAL DISTRIBUTION SERVICES.
4. NEW SITE PULL BOX. REFER TO SITE PLAN FOR ADDTIONAL INFORMATION.
5. NEW SERVICE ENTRANCE RATED, 800A/3P, 65K AIC, 100%RATED LOCKABLE ENCLOSED CIRCUIT BREAKER WITH LSI TRIP UNIT. BOTTOM OF DISCONNECT SHALL BE A MINIMUM OF 24" ABOVE THE FINISHED FLOOR.
6. CONNECT NEW DISCONNECT TO EXISITING MAIN SWITCHBOARD.
7. UNC EDS CONTRACTOR TO STUB OUT CONDUITS APPROXIMATELY 10' FROM HANDHOLE FOR CONNECTION BY BINGHAM CONTRACTOR. REFER TO DETAIL 6 ON DRAWING E506 FOR DUCTBANK REQUIREMENTS.
8. COMBINED DUCTBANK FROM PAD-MOUNT TRANSFORMER UT-A TO PULL BOX PB1. REFER TO DETAIL 4 ON DRAWING E506 FOR DUCTBANK REQUIREMENTS.
9. PRIOR TO ENERGIZATON, VERIFY THAT OWNER PROVIDED EQUIPMENT PROPERLY PROTECTS FEEDER TO LIGHTING PEDESTAL.
10. FEEDER FROM PULL BOX PB1 TO NEW SERVICE ENTRANCE RATED CIRCUIT BREAKER.

PANEL DESIGNATION SCHEME: ____

E M H 1 A

- BLANK - NORMAL / E - EMERGENCY
- M - MECHANICAL EQUIP. PANELBOARD / P - RECEPTACLE AND EQUIP. PANELBOARD / L - LIGHTING PANELBOARD / D - DISTRIBUTION PANELBOARD
- H - 480Y/277V PANELBOARD / L - 208Y/120V PANELBOARD
- FLOOR LEVEL (0,1,2,3)
- PANELBOARD SEQUENCE (A,B,C,...)

RISER DIAGRAM LEGEND

	NEW CONDUIT/FEEDER
NAME	NEW PANELBOARD
NAME SIZE	NEW INDIVIDUALLY MOUNTED CIRCUIT BREAKER, TRIP AND POLE SIZE AS INDICATED
NAME SIZE	NEW FUSED DISCONNECT, FRAME SIZE AS INDICATED
NAME SIZE	NEW AUTOMATIC TRANSFER SWITCH, AMPACITY AND NUMBER OF POLES AS INDICATED. SEE SCHEDULE FOR MORE INFORMATION.
NAME SIZE	NEW DRY-TYPE TRANSFORMER (480V, 3-PHASE, DELTA PRIMARY 208/120V, 3-PHASE, 4-WIRE WYE-CONNECTED SECONDARY)
15.7 k	CALCULATED FAULT CURRENT
25 k	SHORT CIRCUIT RATING OF EQUIPMENT

FEEDER SIZE SCHEDULE

FEEDER MARK	COPPER CONDUCTORS AND CONDUIT SIZE
20N	4 #12 AND 1 #12 G ~ 0.75" C
20X	4 #12 AND 1 #8 G ~ 0.75" C
20	3 #12 AND 1 #12 G ~ 0.75" C
30N	4 #10 AND 1 #10 G ~ 0.75" C
30X	4 #10 AND 1 #8 G ~ 0.75" C
30	3 #10 AND 1 #10 G ~ 0.75" C
40N	4 #8 AND 1 #10 G ~ 1" C
40	3 #8 AND 1 #10 G ~ 1" C
50N	4 #6 AND 1 #8 G ~ 1.25" C
50X	4 #6 AND 1 #8 G ~ 1.25" C
50	3 #6 AND 1 #8 G ~ 1.25" C
60N	4 #4 AND 1 #8 G ~ 1.25" C
60	3 #4 AND 1 #8 G ~ 1.25" C
70	3 #4 AND 1 #8 G ~ 1.25" C
70N	4 #4 AND 1 #8 G ~ 1.25" C
100N	4 #2 AND 1 #8 G ~ 1.5" C
100X	4 #1 AND 1 #6 G ~ 1.5" C
100K	5 #1/0 AND 1 #6 G ~ 2" C
100S	2 #4 ~ 2" C
100	3 #2 AND 1 #8 G ~ 1.5" C
125N	4 #1/0 AND 1 #6 G ~ 2" C
125	3 #1/0 AND 1 #6 G ~ 2" C
150N	4 #2/0 AND 1 #6 G ~ 2" C
150X	4 #2/0 AND 1 #4 G ~ 2" C
150K	5 #3/0 AND 1 #2 G ~ 2.5" C
150	3 #2/0 AND 1 #6 G ~ 2" C
175	3 #2/0 AND 1 #6 G ~ 2" C
200N	4 #3/0 AND 1 #6 G ~ 2" C
200	3 #3/0 AND 1 #6 G ~ 2" C
225N	4 #4/0 AND 1 #4 G ~ 2.5" C
225X	4 #4/0 AND 1 #2 G ~ 2.5" C
225K	5-300 kcmil AND 1 #2 G ~ 3" C
225	3 #4/0 AND 1 #4 G ~ 2.5" C
300N	4-300 kcmil AND 1 #4 G ~ 3" C
300	3-300 kcmil AND 1 #4 G ~ 3" C
350	3-400 kcmil AND 1 #3 G ~ 3" C
400N	4-500 kcmil AND 1 #3 G ~ 3.5" C
400X	2 SETS (4 #3/0 AND 1 #1/0 G ~ 2.5" C)
400K	2 SETS (5-250 kcmil AND 1 #1/0 G ~ 3" C)
400	3-500 kcmil AND 1 #3 G ~ 3.5" C
600N	2 SETS (4-350 kcmil AND 1 #2/0 G ~ 3" C)
600X	2 SETS (4-350 kcmil AND 1 #2/0 G ~ 3" C)
600K	2 SETS (5-500 kcmil AND 1 #2/0 G ~ 3.5" C)
600	2 SETS (3-350 kcmil AND 1 #2/0 G ~ 3" C)
800N	2 SETS (4-500 kcmil AND 1 #2/0 G ~ 3.5" C)
800X	3 SETS (4-300 kcmil AND 1 #2/0 G ~ 3" C)
800S	3 SETS (4-300 kcmil ~ 4" C) AND (1) 4" C SPARE
800	2 SETS (3-500 kcmil AND 1 #2/0 G ~ 3.5" C)
1000N	3 SETS (4-400 kcmil AND 1 #2/0 G ~ 3.5" C)
1000X	3 SETS (4-400 kcmil AND 1 #4/0 G ~ 3.5" C)
1000K	4 SETS (5-400 kcmil AND 1 #4/0 G ~ 3.5" C)
1200N	4 SETS (4-350 kcmil AND 1 #3/0 G ~ 3" C)
1200	4 SETS (3-350 kcmil AND 1 #3/0 G ~ 3" C)
1600N	6 SETS (4-300 kcmil AND 1 #4/0 G ~ 3" C)
1600X	6 SETS (4-300 kcmil AND 1-250 kcmil G ~ 3" C)
1600K	6 SETS (5-400 kcmil AND 1-300 kcmil G ~ 3.5" C)
GLS	3 SETS (4-500 kcmil ~ EXISTING 3.5" C)

LORD AECK SARGENT

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N&B PROJECT: 21N242
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Firm Lic. # F-0312

SHEET TITLE: ELECTRICAL RISER DIAGRAM - GREENLAW SCOPE

SCALE (U.N.O.): As indicated

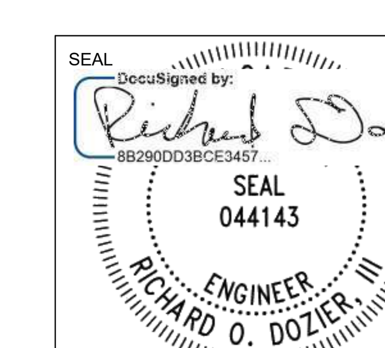
JOB NAME: University of North Carolina - Chapel Hill

SCO#: 21-23548-02A

BINGHAM HALL RENOVATION

LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

SEAL

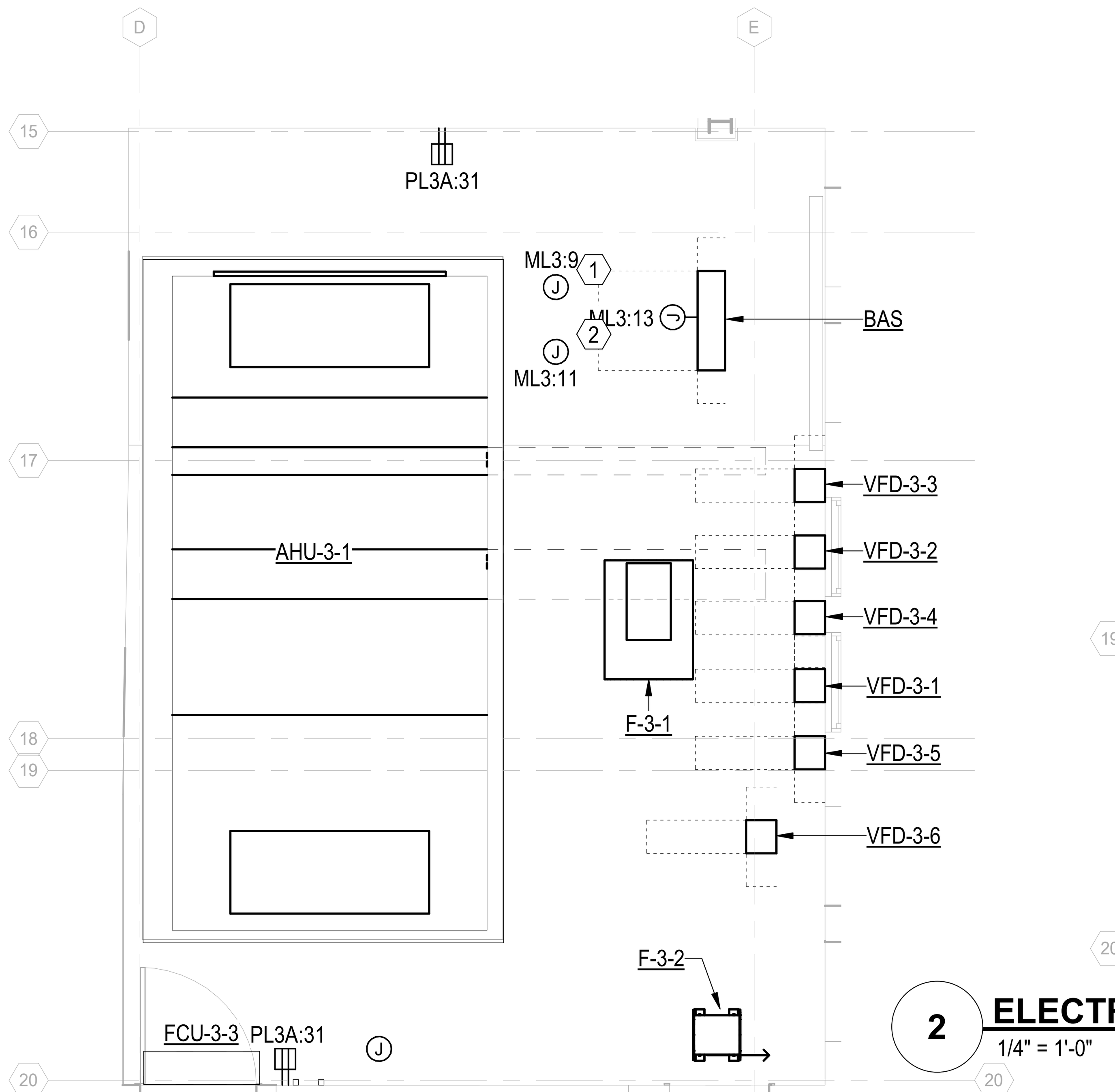


Signed on 01/03/2024
using a Digital Signature.

ISSUE DATE: 1/8/2024

JOB NO.: 11706-00

DWG. NO.: E401

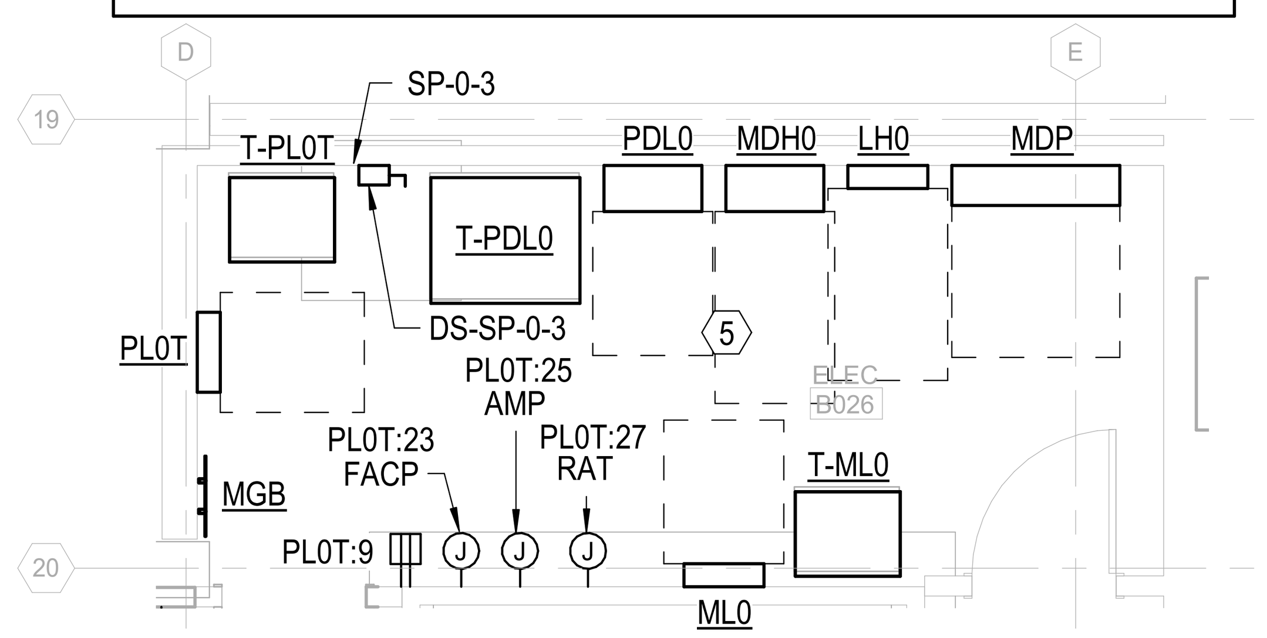


3 ELECTRICAL ENLARGED PLAN - MECHANICAL 3028
1/4" = 1'-0"

PANEL DESIGNATION SCHEME: ____

E M H 1 A

- BLANK - NORMAL / E - EMERGENCY → E
- M - MECHANICAL EQUIP. PANELBOARD / P - RECEPTACLE AND EQUIP. PANELBOARD / L - LIGHTING PANELBOARD / D - DISTRIBUTION PANELBOARD → M
- H - 480Y/277V PANELBOARD / L - 208Y/120V PANELBOARD → H
- FLOOR LEVEL (0,1,2,3) → 1
- PANELBOARD SEQUENCE (A,B,C,...) → A



2 ELECTRICAL ENLARGED PLAN - MAIN ELECTRICAL B026
1/4" = 1'-0"

RIISER DIAGRAM LEGEND

Symbol	Description
(line)	NEW CONDUIT/FEEDER
NAME	NEW PANELBOARD
NAME SIZE	NEW INDIVIDUALLY MOUNTED CIRCUIT BREAKER, TRIP AND POLE SIZE AS INDICATED
NAME SIZE	NEW FUSED DISCONNECT, FRAME SIZE AS INDICATED
NAME SIZE	NEW AUTOMATIC TRANSFER SWITCH, AMPACITY AND NUMBER OF POLES AS INDICATED. SEE SCHEDULE FOR MORE INFORMATION.
NAME SIZE	NEW DRY-TYPE TRANSFORMER (480V, 3-PHASE, DELTA PRIMARY 208/120V, 3-PHASE, 4-WIRE WYE-CONNECTED SECONDARY)
15.7 k	CALCULATED FAULT CURRENT
25 k	SHORT CIRCUIT RATING OF EQUIPMENT

DRY-TYPE TRANSFORMER FEEDER SCHEDULE

kVA	PRIMARY FEEDER MARK	SECONDARY FEEDER MARK	GROUNDING ELECTRODE CONDUCTOR
9	20	30X	#8
15	30	50X	#8
30	50	100X	#6
45	70	150X	#4
75	125	225X	#2
112.5	175	400X	#1/0
150	225	600X	#2/0
225	350	800X	#2/0
300	400	1000X	#3/0
500	800	1600X	#3/0

NOTES:
1. TRANSFORMER FEEDER SIZES BASED ON 480 V, 3-PHASE, DELTA PRIMARY AND 208Y/120 V, 3-PHASE, 4-WIRE SECONDARY.
2. GROUNDING ELECTRODE CONDUCTORS SHALL BE INSTALLED IN METALLIC RACEWAY, MINIMUM SIZE PER NFPA 70, ARTICLE 250.
3. REFER TO FEEDER SIZE SCHEDULE FOR CONDUCTORS AND RACEWAYS.

FEEDER SIZE SCHEDULE

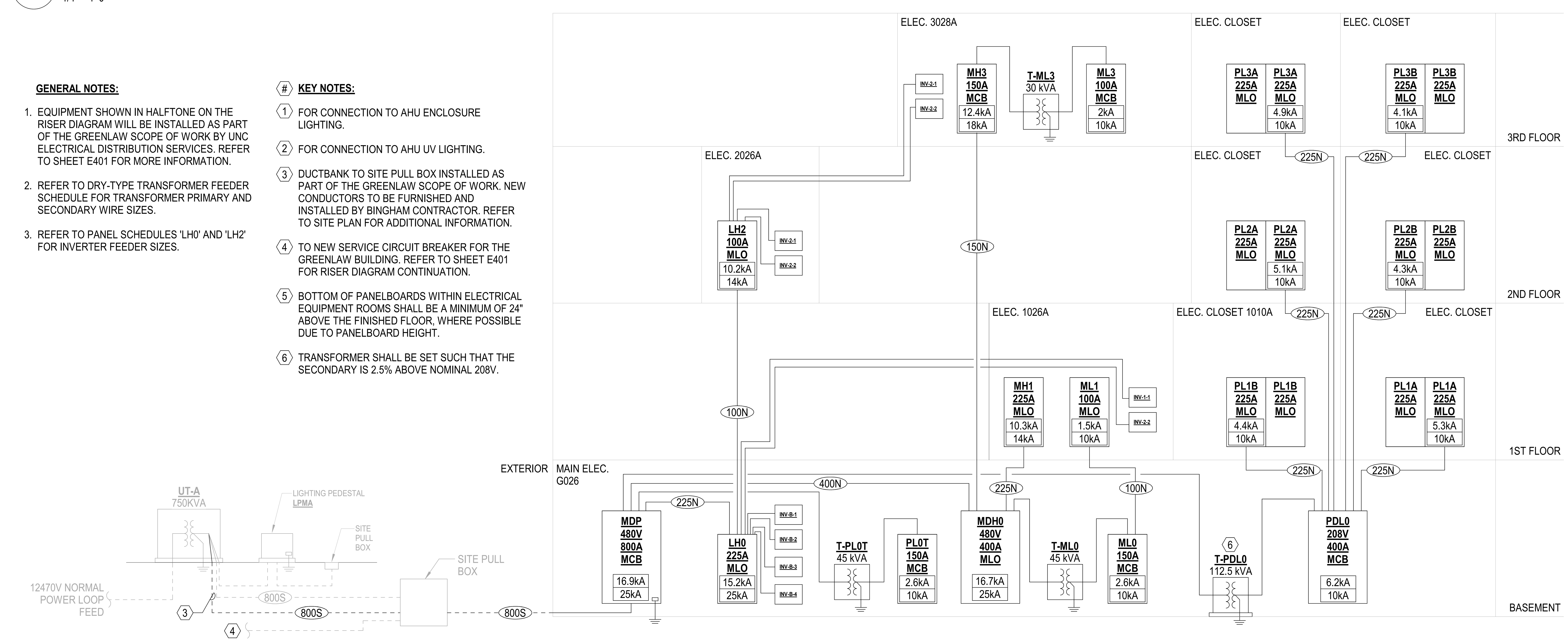
FEEDER MARK	COPPER CONDUCTORS AND CONDUIT SIZE
20N	4 #12 AND 1 #12 G ~ 0.75" C
20X	4 #12 AND 1 #8 G ~ 0.75" C
20	3 #12 AND 1 #12 G ~ 0.75" C
30N	4 #10 AND 1 #10 G ~ 0.75" C
30X	4 #10 AND 1 #8 G ~ 0.75" C
30	3 #10 AND 1 #10 G ~ 0.75" C
40N	4 #8 AND 1 #10 G ~ 1" C
40	3 #8 AND 1 #10 G ~ 1" C
50N	4 #6 AND 1 #8 G ~ 1.25" C
50X	4 #6 AND 1 #8 G ~ 1.25" C
50	3 #6 AND 1 #8 G ~ 1.25" C
60N	4 #4 AND 1 #8 G ~ 1.25" C
60	3 #4 AND 1 #8 G ~ 1.25" C
70	3 #4 AND 1 #8 G ~ 1.25" C
70N	4 #4 AND 1 #8 G ~ 1.25" C
100N	4 #2 AND 1 #8 G ~ 1.5" C
100X	4 #1 AND 1 #6 G ~ 1.5" C
100K	5 #1/0 AND 1 #6 G ~ 2" C
100S	2 #4 ~ 2" C
100	3 #2 AND 1 #8 G ~ 1.5" C
125N	4 #1/0 AND 1 #6 G ~ 2" C
125	3 #1/0 AND 1 #6 G ~ 2" C
150N	4 #2/0 AND 1 #6 G ~ 2" C
150X	4 #2/0 AND 1 #4 G ~ 2" C
150K	5 #3/0 AND 1 #2 G ~ 2.5" C
150	3 #2/0 AND 1 #6 G ~ 2" C
175	3 #2/0 AND 1 #6 G ~ 2" C
200N	4 #3/0 AND 1 #6 G ~ 2" C
200	3 #3/0 AND 1 #6 G ~ 2" C
225N	4 #4/0 AND 1 #4 G ~ 2.5" C
225X	4 #4/0 AND 1 #2 G ~ 2.5" C
225K	5-300 kcmil AND 1 #2 G ~ 3" C
225	3 #4/0 AND 1 #4 G ~ 2.5" C
300N	4-300 kcmil AND 1 #4 G ~ 3" C
300	3-300 kcmil AND 1 #4 G ~ 3" C
350	3-400 kcmil AND 1 #3 G ~ 3" C
400N	4-500 kcmil AND 1 #3 G ~ 3.5" C
400X	2 SETS (4 #3/0 AND 1 #1/0 G ~ 2.5" C)
400K	2 SETS (5-250 kcmil AND 1 #1/0 G ~ 3" C)
400	3-500 kcmil AND 1 #3 G ~ 3.5" C
600N	2 SETS (4-350 kcmil AND 1 #2/0 G ~ 3" C)
600X	2 SETS (4-350 kcmil AND 1 #2/0 G ~ 3" C)
600K	2 SETS (5-500 kcmil AND 1 #2/0 G ~ 3.5" C)
600	2 SETS (3-350 kcmil AND 1 #2/0 G ~ 3" C)
800N	2 SETS (4-500 kcmil AND 1 #2/0 G ~ 3.5" C)
800X	3 SETS (4-300 kcmil AND 1 #2/0 G ~ 3" C)
800S	3 SETS (4-300 kcmil ~ 4" C) AND (1) 4" C SPARE
800	2 SETS (3-500 kcmil AND 1 #2/0 G ~ 3.5" C)
1000N	3 SETS (4-400 kcmil AND 1 #2/0 G ~ 3.5" C)
1000X	3 SETS (4-400 kcmil AND 1 #4/0 G ~ 3.5" C)
1000K	4 SETS (5-400 kcmil AND 1 #4/0 G ~ 3.5" C)
1200N	4 SETS (4-350 kcmil AND 1 #3/0 G ~ 3" C)
1200	4 SETS (3-350 kcmil AND 1 #3/0 G ~ 3" C)
1600N	6 SETS (4-300 kcmil AND 1 #4/0 G ~ 3" C)
1600X	6 SETS (4-300 kcmil AND 1-250 kcmil G ~ 3" C)
1600K	6 SETS (5-400 kcmil AND 1-300 kcmil G ~ 3.5" C)
GLS	3 SETS (4-500 kcmil ~ EXISTING 3.5" C)

GENERAL NOTES:

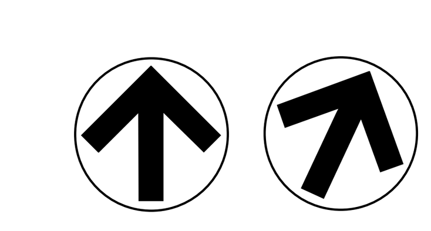
1. EQUIPMENT SHOWN IN HALFTONE ON THE RISER DIAGRAM WILL BE INSTALLED AS PART OF THE GREENLAW SCOPE OF WORK BY UNC ELECTRICAL DISTRIBUTION SERVICES. REFER TO SHEET E401 FOR MORE INFORMATION.
2. REFER TO DRY-TYPE TRANSFORMER FEEDER SCHEDULE FOR TRANSFORMER PRIMARY AND SECONDARY WIRE SIZES.
3. REFER TO PANEL SCHEDULES 'LH0' AND 'LH2' FOR INVERTER FEEDER SIZES.

KEY NOTES:

1. FOR CONNECTION TO AHU ENCLOSURE LIGHTING.
2. FOR CONNECTION TO AHU UV LIGHTING.
3. DUCTBANK TO SITE PULL BOX INSTALLED AS PART OF THE GREENLAW SCOPE OF WORK. NEW CONDUCTORS TO BE FURNISHED AND INSTALLED BY BINGHAM CONTRACTOR. REFER TO SITE PLAN FOR ADDITIONAL INFORMATION.
4. TO NEW SERVICE CIRCUIT BREAKER FOR THE GREENLAW BUILDING. REFER TO SHEET E401 FOR RISER DIAGRAM CONTINUATION.
5. BOTTOM OF PANELBOARDS WITHIN ELECTRICAL EQUIPMENT ROOMS SHALL BE A MINIMUM OF 24" ABOVE THE FINISHED FLOOR, WHERE POSSIBLE DUE TO PANELBOARD HEIGHT.
6. TRANSFORMER SHALL BE SET SUCH THAT THE SECONDARY IS 2.5% ABOVE NOMINAL 208V.



1 ELECTRICAL RISER DIAGRAM - BINGHAM SCOPE
NO SCALE



SEAL
DocuSigned by:
SEAL 044143
ENGINEER
RICHARD O. DOZIER, III
Signed on 01/03/2024 using a Digital Signature.

LORD AECK SARGENT

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NB Contact: Reade Daniel
N&B PROJECT: 21N242
Newcomb & Boyd, LLP
Firm Lic. # F-0312

SHEET TITLE: ELECTRICAL RISER DIAGRAM - BINGHAM SCOPE
SCALE (U.N.O.): As indicated

JOB NAME: University of North Carolina - Chapel Hill
SCO# 21-23548-02A
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

ISSUE DATE: 1/8/2024
JOB NO.: 11706-00
DWG. NO.: E402

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LIGHTING CONTROL SEQUENCE OF OPERATION SCHEDULE

DESIGNATION #	SPACE DESCRIPTION	SEQUENCE OF OPERATION	OCCUPANCY SENSOR (SEE NOTE 1)	VACANCY SENSOR (SEE NOTE 1)	TIMECLOCK (SEE NOTE 2)	DIGITAL TIMER	LOCAL CONTROLS (SEE NOTE 3)	NETWORK CONTROLS (SEE NOTE 4)	MULTI-ZONE DIMMING CONTROL SYSTEM (SEE NOTE 5)	AV INTEGRATION (SEE NOTE 6)	NOTES
1	PRIVATE OFFICE/ STUDY/WORK ROOM	• MANUAL ON. • LOCAL DIMMING CONTROL VIA DALI-2/KNX COMPATIBLE INPUT DEVICE. • AUTOMATIC OFF WITHIN 20 MINUTES OF NO OCCUPANT ACTIVITY VIA DALI-2/KNX COMPATIBLE PIR SENSOR.	-	X	-	-	-	X	-	-	
2	CLASSROOMS	• MANUAL ON. • LOCAL DIMMING CONTROL VIA DALI-2/KNX COMPATIBLE INPUT DEVICE. • AUTOMATIC OFF WITHIN 20 MINUTES OF NO OCCUPANT ACTIVITY VIA DALI-2/KNX COMPATIBLE PIR SENSOR. • EMERGENCY LIGHTING TO BE CONTROLLED WITH NORMAL LIGHTING VIA DALI-2/KNX COMPATIBLE UL924 DEVICE. • UPON ACTIVATION OF THE FIRE ALARM SYSTEM, EMERGENCY LIGHTING SHALL BE AUTOMATICALLY BROUGHT TO FULL BRIGHTNESS REGARDLESS OF THE STATUS OF THE OCCUPANCY SENSOR OR LOCAL SWITCH.	-	X	-	-	-	X	X	X	6
3	STORAGE ROOM/ JANITOR CLOSET	• MANUAL ON. • AUTOMATIC OFF WITHIN 20 MINUTES OF NO OCCUPANT ACTIVITY.	-	X	-	-	X	-	-	-	
4	MECHANICAL/ ELECTRICAL/ COMMUNICATION EQUIPMENT ROOMS	• MANUAL ON. • MANUAL OFF. • EMERGENCY LIGHTING TO BE CONTROLLED WITH NORMAL LIGHTING VIA UL924 DEVICE. • UPON ACTIVATION OF THE FIRE ALARM SYSTEM, EMERGENCY LIGHTING SHALL BE AUTOMATICALLY BROUGHT TO FULL BRIGHTNESS REGARDLESS OF THE STATUS OF THE OCCUPANCY SENSOR OR LOCAL SWITCH.	-	-	-	-	X	-	-	-	
5	STAIRS	• LIGHTS TO REMAIN ON 24/7. • AUTOMATICALLY DIM TO 50% WITHIN 20 MINUTES OF NO OCCUPANT ACTIVITY VIA INTEGRAL SENSOR. • UPON ACTIVATION OF THE FIRE ALARM SYSTEM, EMERGENCY LIGHTING SHALL BE AUTOMATICALLY BROUGHT TO FULL BRIGHTNESS REGARDLESS OF THE STATUS OF THE OCCUPANCY SENSOR OR LOCAL SWITCH.	-	-	-	-	-	-	-	-	
6	RESTROOMS (PUBLIC)	• AUTOMATIC ON TO FULL LIGHT OUTPUT VIA DALI-2/KNX COMPATIBLE PIR SENSOR. • AUTOMATIC OFF WITHIN 20 MINUTES OF NO OCCUPANT ACTIVITY VIA DALI-2/KNX COMPATIBLE PIR SENSOR. • EMERGENCY LIGHTING TO BE CONTROLLED WITH NORMAL LIGHTING VIA DALI-2/KNX COMPATIBLE UL924 DEVICE.	X	-	-	-	-	X	-	-	
7	CORRIDORS/ LOBBY	DURING NORMAL WORKING HOURS • AUTOMATIC ON TO FULL LIGHT OUTPUT VIA DALI-2/KNX SYSTEM TIMECLOCK. • EMERGENCY LIGHTING TO BE CONTROLLED WITH NORMAL LIGHTING VIA DALI-2/KNX COMPATIBLE UL924 DEVICE. OUTSIDE OF NORMAL WORKING HOURS • AUTOMATIC OFF OF NORMAL LIGHTING VIA DALI-2/KNX SYSTEM TIMECLOCK. • EMERGENCY LIGHTING TO BE AUTOMATICALLY DIMMED TO 50% LIGHT OUTPUT. OVERRIDE CONDITIONS • MANUAL OVERRIDE TO TOGGLE AFTER-HOURS CONDITIONS VIA DALI-2/KNX COMPATIBLE INPUT DEVICE. • UPON ACTIVATION OF THE FIRE ALARM SYSTEM, EMERGENCY LIGHTING SHALL BE AUTOMATICALLY BROUGHT TO FULL BRIGHTNESS REGARDLESS OF THE STATUS OF THE LOCAL SWITCH.	-	-	X	-	-	X	-	-	
8	EXTERIOR	• AUTOMATIC ON VIA DALI-2/KNX SYSTEM TIMECLOCK. • AUTOMATIC OFF VIA DALI-2/KNX SYSTEM TIMECLOCK. • MATCH UNC CAMPUS STANDARDS FOR ON/OFF TIMING. • UPON ACTIVATION OF THE FIRE ALARM SYSTEM, EMERGENCY LIGHTING SHALL BE AUTOMATICALLY BROUGHT TO FULL BRIGHTNESS. • PHOTOCELL INPUT FOR COORDINATION WITH EXTERIOR LIGHTING.	-	-	X	-	-	X	-	-	
9	WHOLE BUILDING	OVERRIDE CONDITIONS • EMERGENCY OVERRIDE KEYED SWITCH FOR FIRST RESPONDERS. MANUAL 12 HOUR OVERRIDE OF ALL ZONES SHALL RETURN ALL NETWORKED LUMINAIRES TO FULL BRIGHTNESS.	-	-	-	-	-	X	-	-	

NOTES:

1. LIGHTING CONTROL SYSTEM SHALL BE A DALI-2/KNX OPEN PROTOCAL SYSTEM. CONTRACTOR SHALL HIRE A LIGHTING CONTROL SYSTEM INTEGRATOR, REFER TO ADDITIONAL NOTES ON THIS SHEET.
2. OCCUPANCY AND VACANCY SENSORS SHALL BE INFRARED PIR TYPE AS INDICATED ON THE DRAWINGS.
3. TIMECLOCK CONTROL ACCOMPLISHED VIA DALI-2 OR KNX LIGHITNG CONTROL PANELS WITH TIME SCHEDULING VIA DALI-2 OR KNX SYSTEM.
4. LOCAL CONTROLS ARE INDEPENDANT OF BUILDING DALI LIGHTING CONTROL PANELS.
5. REFER TO MULTI-ZONE DIMMING SCENE CONTROL SCHEDULE ON SHEET E404 FOR ROOM SPECIFIC CONTROL SCENES.
6. MULTI-ZONE DIMMING CONTROL SYSTEM SHALL HAVE NUMBER OF ZONES AS INDICATED ON THE LIGHTING PLANS, MINIMUM OF 4 CONTROL SCENES, AND AV INTEGRATION.
7. LIGHTING, POWERED SHADE, AND PROJECTOR SCREENS, IF APPLICABLE, OPERATION CONTROLLABLE THRU AV SYSTEM WITHIN THE SPACE ALONG WITH OTHER CONTROLS NOTED. REFER TO DETAIL 2 ON SHEET E502.
8. PROVIDE DALI-2 OR KNX COMPATIBLE UL 924 LISTED EMERGENCY LIGHTING CONTROL RELAYS FOR CONTROL OF EMERGENCY LIGHTING WHERE EMERGENCY LIGHTING IS CONTROLLED ALONG WITH NORMAL LIGHTING. VERIFY WIRING OF EMERGENCY LIGHTING RELAYS AND DALI-2 OR KNX SYSTEM WITH SYSTEMS INTEGRATOR PRIOR TO INSTALLATION.

LIGHTING INTEGRATOR SCOPE:

1. THE LIGHTING CONTROL SYSTEM FOR THIS PROJECT UTILIZES A DALI-2 BUS AND/OR KNX BUS. THIS SYSTEM PROVIDES AN OPEN PROTOCOL ARRANGEMENT WHERE COMPONENTS CAN BE REPLACED AND MODIFIED WITHOUT HAVING RESTRICTIONS ON MANUFACTURER OR MODEL. THE SOFTWARE FOR PROGRAMMING THE LIGHTING CONTROL SYSTEM SHALL BE ETS PROFESSIONAL. LIGHTING CONTROL SYSTEMS THAT REQUIRE A PROPRIETARY COMMUNICATION SYSTEM ARE NOT ALLOWED.
2. DUE TO THE NATURE OF THIS SYSTEM, THE CONSTRUCTION WILL REQUIRE A THIRD-PARTY CONTROLS INTEGRATOR THAT SHALL BE HIRED BY THE CONTRACTOR. THE LIGHTING CONTROL INTEGRATOR WILL BE RESPONSIBLE FOR COORDINATING THE REQUIREMENTS OF THE SYSTEM (LED DRIVERS, DEVICES, EQUIPMENT, WIRING, SOFTWARE, ETC.) TO PROVIDE A FULLY PROGRAMMED AND TURN-KEY SYSTEM TO THE OWNER.
3. THE CONTRACTOR SHALL WORK CLOSELY WITH THE LIGHTING INTEGRATOR TO ENSURE THE COMPONENTS AND WIRING ARE INSTALLED IN COORDINATION WITH THE ELECTRICAL SCOPE. INFRASTRUCTURE REQUIREMENTS (RACEWAYS, BOXES, ETC.), WIRING, AND DEVICES FOR THE LIGHTING CONTROL SYSTEM SHALL BE INSTALLED BY THE ELECTRICAL CONTRACTOR UDNER THE SUPERVISION AND COORDINATION OF THE LIGHTING INTEGRATOR.
4. THE SCOPE OF THE LIGHTING INTEGRATOR SHALL INCLUDE, AT A MINIMUM:
   A. SELECTING DEVICES AND EQUIPMENT THAT MEET THE PROJECT REQUIREMENTS AND ARE DALI-2 AND/OR KNX COMPATIBLE.
   B. DEVELOPING SUBMITTALS TO BE PROVIDED TO THE DESIGN TEAM. SUBMITTALS SHALL MEET THE REQUIREMENTS OF THE PROJECT SPECIFICATIONS (SECTION 260923 and 260943.16), BUT AT A MINIMUM SHALL INCLUDE PRODUCT DATA, SHOP DRAWINGS, FIELD QUALITY REPORTS, ETC.
   C. INITIAL PROGRAMMING OF THE LIGHTING CONTROL SYSTEM BASED ON SCHEDULES AND SCENES INDICATED ON THE DRAWINGS. SYSTEM PROGRAMMING SHALL THEN BE MODIFIED BASED ON IN-PERSON REVIEW OF SPACES WITH THE OWNER AND THE DESIGN TEAM. TRAINING OF THE SOFTWARE AND TROUBLESHOOTING OR MODIFICATIONS SHALL BE PROVIDED. THE SOFTWARE AND ASSOCIATED LICENSES SHALL BE PROVIDED TO THE OWNER.
   D. A MINIMUM OF TWO (2) MEETINGS WITH THE OWNER/DESIGN TEAM PRIOR TO INSTALLATION.
   E. SITE VISITS AS NECESSARY DURING CONSTRUCTION TO REVIEW INSTALLATION, AT A MINIMUM, MONTHLY VISITS DURING ACTIVE LIGHTING CONTROL SYSTEM INSTALLATION. INTEGRATOR SHALL ASSUME SIX (6) MONTHS OF ACTIVE LIGHTING AND LIGHTING CONTROL INSTALLATION.
   F. PARTICIPATION IN MEETINGS WITH THE COMMISSIONING AGENT TO REVIEW LIGHTING CONTROL INSTALLATION PROGRESS, CONSTRUCTION PROGRESS, ETC. PARTICIPATION IN COMMISSIONING MEETINGS CAN BE REMOTE.
   G. PROVIDE VIDEO RECORDED OWNER TRAINING. TRAINING SHALL BE A MINIMUM OF 4 HOURS.
5. WITHIN TWO WEEKS AFTER AWARD OF PROJECT, THE CONTRACTOR AND LIGHTING CONTROL INTEGRATOR SHALL ARRANGE A MEETING WITH THE OWNER AND DESIGN TEAM TO DISCUSS PROJECT SCOPE AND REQUIREMENTS.
6. BASIS OF DESIGN LIGHTING CONTROLS INTEGRATOR: WOLF BUILDING TECHNOLOGIES, JOSE MORCILLO (786) 956-6821.

LORD AECK SARGENT

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Firm Lic. # F-0312

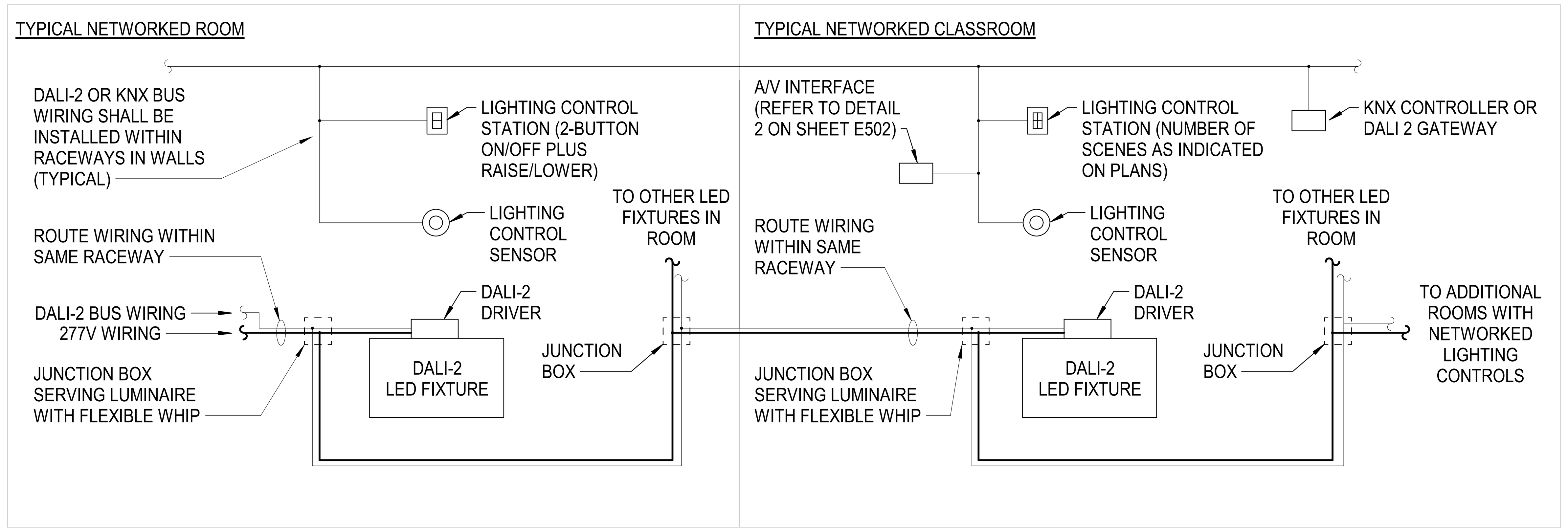
SHEET TITLE
ELECTRICAL LIGHTING SEQUENCE OF OPERATION AND CONTROL DIAGRAM

SCALE (U.N.O.)

JOB NAME
University of North Carolina - Chapel Hill
SCO# 21-23548-02A
BINGHAM HALL RENOVATION
LOCATION
36 Lenoir Drive, Chapel Hill, NC 27514

SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER — RICHARD O. DOZIER
Signed on 01/04/2024 using a Digital Signature.

ISSUE DATE 1/8/2024
JOB NO. 11706-00
DWG. NO. E403



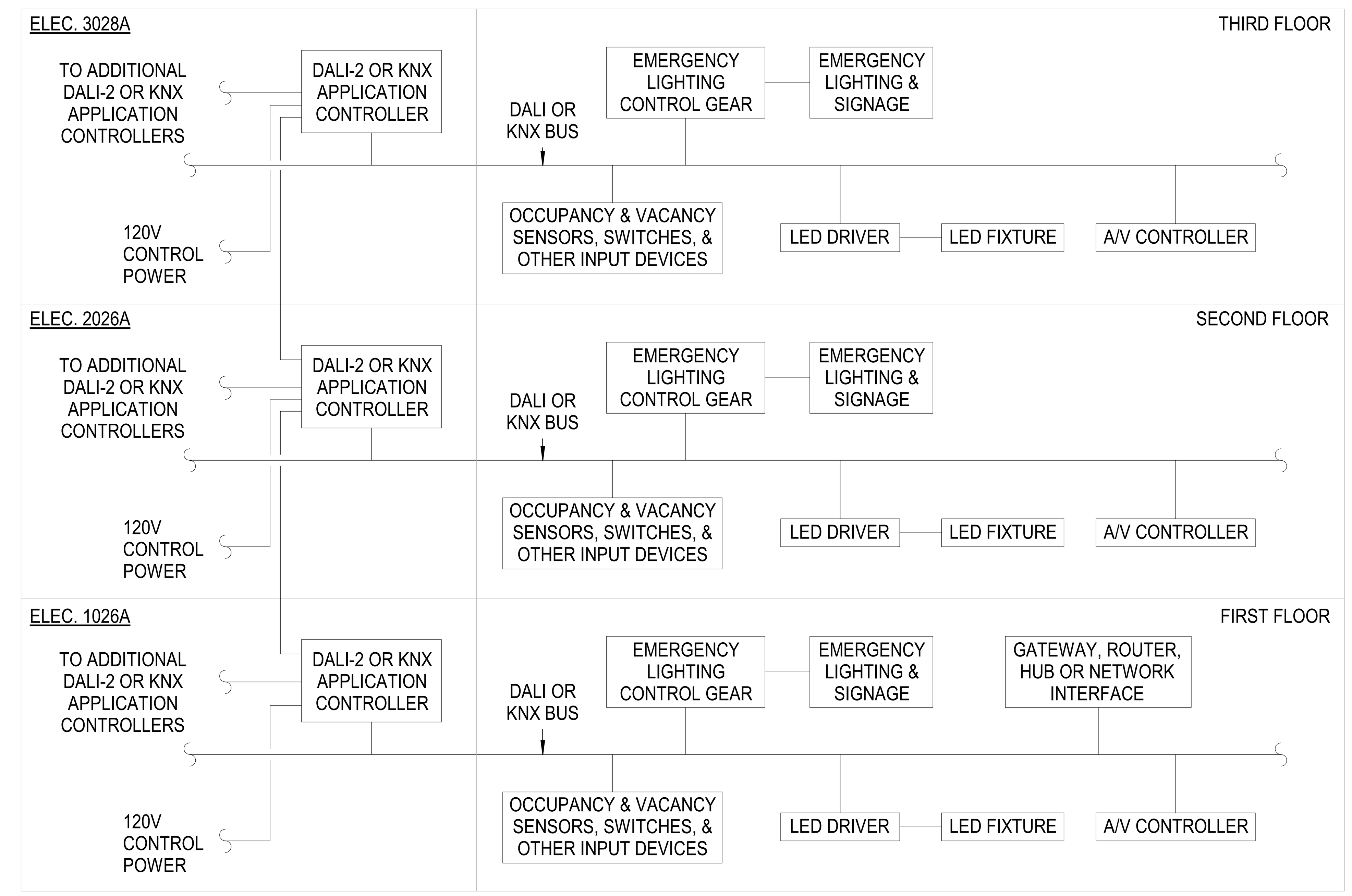
3 TYPICAL DALI-2 ROOM/CLASSROOM WIRING DIAGRAM

NO SCALE

MULTI-ZONE DIMMING SCENE CONTROL SCHEDULE		
ROOM NAME	NUMBER OF CONTROL SCENES	CONTROL SCENE DESCRIPTIONS
CLASSROOM 1005	4	SCENE 1 - ON: ALL ZONES FULL ON SCENE 2 - OFF: ALL ZONES FULL OFF SCENE 3 - PRESENTATION: ZONE A OFF, ZONE B DIMMED TO 50% SCENE 4 - SPEAKER: ZONE A FULL ON, ZONE B DIMMED TO 50%
CLASSROOM 1006	4	SCENE 1 - ON: ALL ZONES FULL ON SCENE 2 - OFF: ALL ZONES FULL OFF SCENE 3 - PRESENTATION: ZONE A OFF, ZONE B DIMMED TO 50% SCENE 4 - SPEAKER: ZONE A FULL ON, ZONE B DIMMED TO 50%
CLASSROOM 1014	6	SCENE 1 - FULL ON: ALL ZONES SCENE 2 - FULL OFF: ALL ZONES SCENE 3 - PRESENTATION: ZONE A FULL OFF, ZONE B FULL OFF, ZONE C DIMMED TO 50%, ZONE D DIMMED TO 50% SCENE 4 - SPEAKER: ZONE A FULL ON, ZONE B DIMMED TO 50%, ZONE C DIMMED TO 50%, ZONE D DIMMED TO 50% SCENE 5 - SCREENS DOWN: PROJECTOR SCREENS ROLL DOWN SCENE 6 - SCREENS UP: PROJECTOR SCREENS ROLL UP
CLASSROOM 1029	4	SCENE 1 - ON: ALL ZONES FULL ON SCENE 2 - OFF: ALL ZONES FULL OFF SCENE 3 - PRESENTATION: ZONE A OFF, ZONE B DIMMED TO 50% SCENE 4 - SPEAKER: ZONE A FULL ON, ZONE B DIMMED TO 50%
CLASSROOM 2029	4	SCENE 1 - ON: ALL ZONES FULL ON SCENE 2 - OFF: ALL ZONES FULL OFF SCENE 3 - PRESENTATION: ZONE A OFF, ZONE B DIMMED TO 50% SCENE 4 - SPEAKER: ZONE A FULL ON, ZONE B DIMMED TO 50%
CLASSROOM 3006	6	SCENE 1 - FULL ON: ALL ZONES SCENE 2 - FULL OFF: ALL ZONES SCENE 3 - PRESENTATION: ZONE A FULL OFF, ZONE B FULL OFF, ZONE C DIMMED TO 50% SCENE 4 - SPEAKER: ZONE A FULL ON, ZONE B DIMMED TO 50%, ZONE C DIMMED TO 50% SCENE 5 - SCREENS DOWN: PROJECTOR SCREENS ROLL DOWN SCENE 6 - SCREENS UP: PROJECTOR SCREENS ROLL UP
CLASSROOM 3014	6	SCENE 1 - FULL ON: ALL ZONES SCENE 2 - FULL OFF: ALL ZONES SCENE 3 - PRESENTATION: ZONE A FULL OFF, ZONE B FULL OFF, ZONE C DIMMED TO 50% SCENE 4 - SPEAKER: ZONE A FULL ON, ZONE B DIMMED TO 50%, ZONE C DIMMED TO 50% SCENE 5 - SCREENS DOWN: PROJECTOR SCREENS ROLL DOWN SCENE 6 - SCREENS UP: PROJECTOR SCREENS ROLL UP

NOTES:

1. LIGHTING CONTROL SYSTEM FOR CLASSROOM SPACES SHALL BE PROGRAMMED AS INDICATED ABOVE. PROGRAMMING WILL BE VERIFIED WITH OWNER DURING SYSTEM START UP AND MODIFICATIONS REQUIRED SHALL BE MADE BY THE CONTRACTOR.
2. LIGHTING CONTROL INTERFACE WITH AUDIO VISUAL SYSTEMS AND SHADE CONTROLS SHALL BE COORDINATED BY THE CONTRACTOR AMONGST THE DIFFERENT MANUFACTUERS.

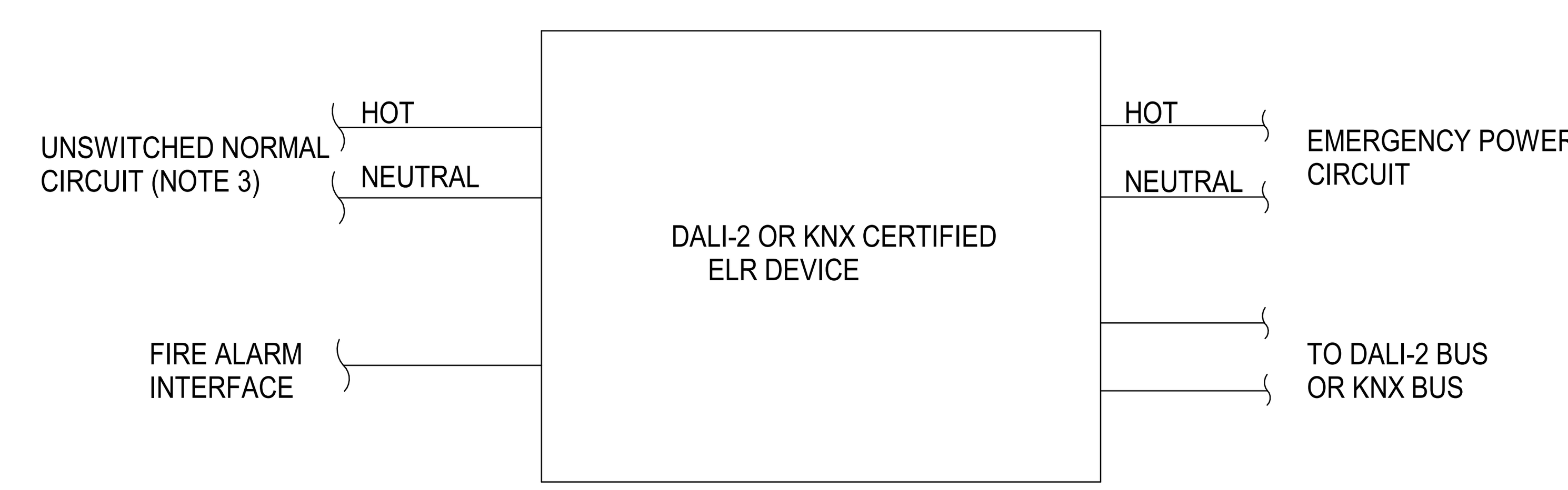


1 TYPICAL DALI-2 BUS CONNECTION

NO SCALE

NOTES:

1. TURN-KEY DALI-2/KNX LIGHTING CONTROL SYSTEM CONSISTING OF LUMINAIRES USING DALI-2 CERTIFIED DRIVERS WITH WIRED MANUAL AND AUTOMATIC CONTROL COMPONENTS TESTED AND CERTIFIED TO PERFORM TO THE IEC STANDARD 62386 OR KNX COMPATIBILE CONTROL DEVICES.
2. ALL FIXTURES, INPUT DEVICES, AND UL924 DEVICES SHALL BE DALI-2 COMPATIBLE OR KNX COMPATIBLE.
3. EACH DALI BUS OR KNX BUS SHALL CONTROL A MAXIMUM OF 52 DEVICE DRIVERS AND 52 CONTROL DEVICES.
4. PROVIDE QUANTITY OF BUSES AND APPLICATION CONTROLLERS AS REQUIRED TO ACCOMODATE LUMINIARES AND LIGHTING CONTROL DEVICES AS INDICATED ON THE FLOOR PLANS.
5. COORDINATE AV CONTROLLER CONNECTION WITH SYSTEMS INTEGRATOR. COMMISSIONING PROVIDER TO INTERFACE LIGHTING CONTROLS WITH A/V SYSTEMS.



NOTES:

1. WHEN NORMAL POWER IS LOST ELR DEVICE SHALL BRING EMERGENCY LIGHT FIXTURES TO FULL BRIGHTNESS. ELR SHALL BE COMPATIBLE WITH LIGHTING CONTROL SYSTEM.
2. ELR'S SHOWN ON PLANS ARE FOR DIAGRAMMATIC PURPOSES ONLY. PROVIDE QUANTITY OF DEVICES AS REQUIRED. ELR SHALL BE MOUNTED NEATLY TO STRUCTURE.
3. UNSWITCHED NORMAL CIRCUIT FOR SENSING LOSS OF NORMAL POWER SHALL BE SOURCED FROM THE SAME CIRCUIT SERVING THE NORMAL LIGHTING IN THE AREA.

2 DALI-2 OR KNX CERTIFIED EMERGENCY LIGHTING RELAY SCHEME

NO SCALE

LORD AECK SARGENT

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SHEET TITLE: ELECTRICAL LIGHTING SEQUENCE OF OPERATION AND CONTROL DIAGRAM

SCALE (U.N.O.): NO SCALE

JOB NAME: University of North Carolina - Chapel Hill

SCO# 21-23548-02A

BINGHAM HALL RENOVATION

LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

SEAL: NORTH CAROLINA PROFESSIONAL ENGINEER RICHARD O. DOZIER

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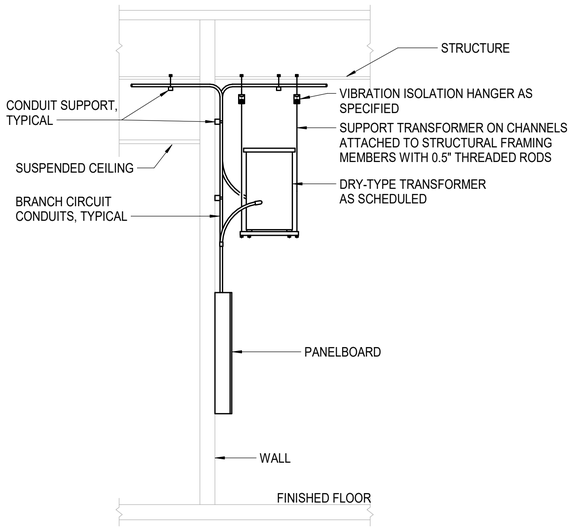
Signed on 01/04/2024 using a Digital Signature.

ISSUE DATE: 1/8/2024

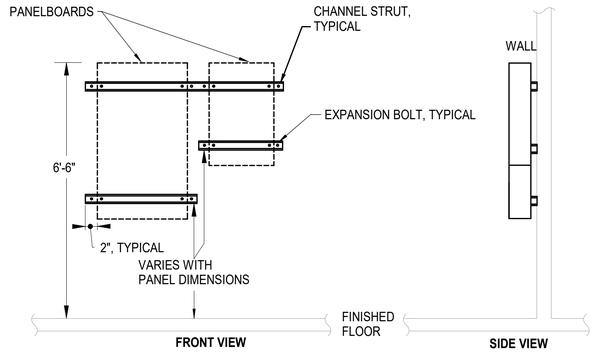
JOB NO. 11706-00

DWG. NO. E404

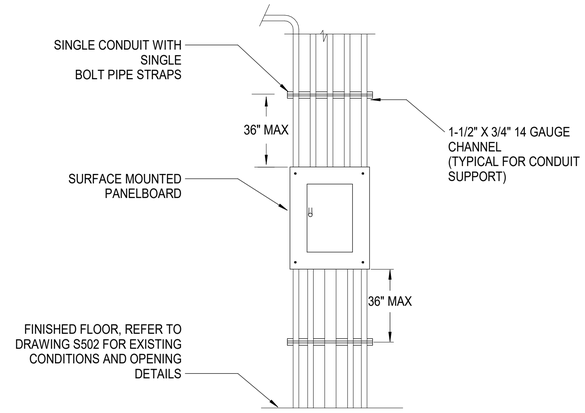


NOTES:
1. PROVIDE ROD STIFFENER ON EACH THREADED ROD AND LATERAL SUPPORT AT EACH CORNER FOR SEISMIC RESTRAINT.

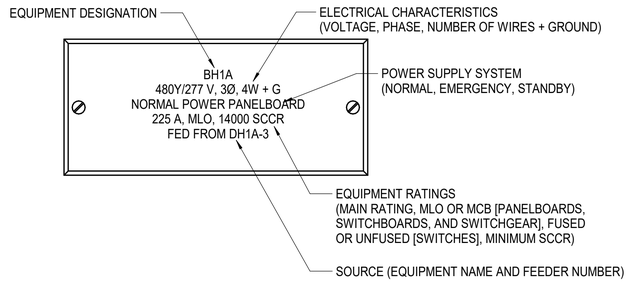
7 SUSPENDED DRY-TYPE TRANSFORMERS
NO SCALE



4 WALL-MOUNTED PANELBOARD MOUNTING
NO SCALE

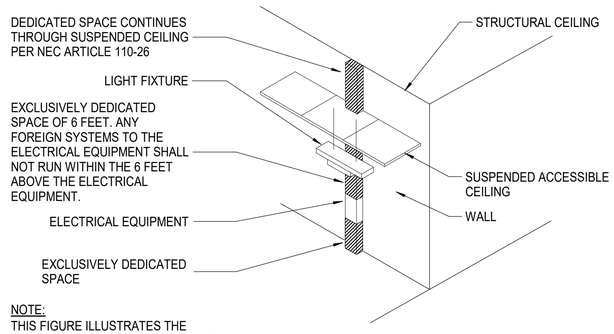


1 CONDUIT SUPPORT SURFACE MOUNTED PANEL
NO SCALE



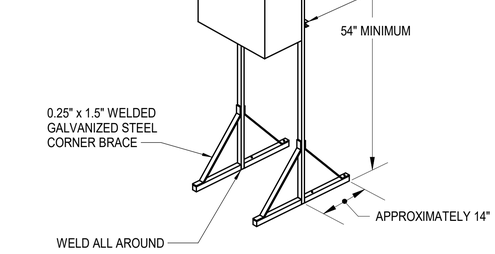
NOTES:
1. NAMEPLATE BACKGROUND COLORS SHALL BE AS FOLLOWS:
   A. BLUE SURFACE WITH WHITE CORE FOR 120/208V EQUIPMENT
   B. BLACK SURFACE WITH WHITE CORE FOR 277/480V EQUIPMENT.
   C. GREEN SURFACE WITH WHITE CORE FOR EMERGENCY SYSTEM RELATED EQUIPMENT.
2. LEGALLY REQUIRED AND OPTIONAL STANDBY SYSTEMS SHALL NOT BE UNIQUELY IDENTIFIED AND SHALL RETAIN THE NAMEPLATE COLOR CONSISTENT WITH THEIR SYSTEM VOLTAGE.

5 EQUIPMENT NAMEPLATES
NO SCALE

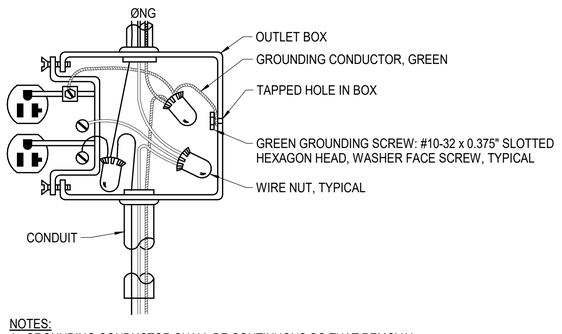


NOTE:
THIS FIGURE ILLUSTRATES THE ADDITIONAL EXCLUSIVELY DEDICATED SPACE REQUIRED OVER AND UNDER THE ELECTRICAL EQUIPMENT FOR THE CABLES, RACEWAYS, ETC... TO AND FROM THE ELECTRICAL EQUIPMENT REQUIRED BY SECTION 110-26 OF THE NATIONAL ELECTRICAL CODE

2 DEDICATED SPACE FOR ELECTRICAL EQUIPMENT
NO SCALE



8 FLOOR MOUNTED EQUIPMENT
NO SCALE



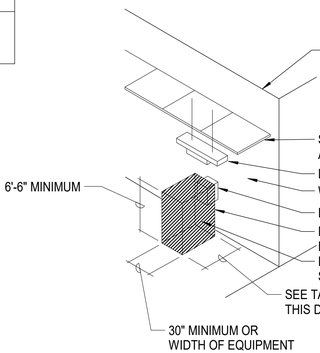
NOTES:
1. GROUNDING CONDUCTOR SHALL BE CONTINUOUS SO THAT REMOVAL OF DEVICE WILL NOT INTERFERE WITH CONDUCTOR CONTINUITY.
2. PROVIDE COMPRESSION TYPE FITTINGS FOR CONDUIT USED FOR RECEPTACLE WIRING.

6 RECEPTACLE WIRING
NO SCALE

TABLE A - WORKING CLEARANCES			
VOLTAGE TO GROUND NOMINAL	MINIMUM CLEAR DISTANCE(FEET)		
CONDITION:	1	2	3
0 -150	3	3	3
151 - 600	3	3	4

WHERE THE "CONDITIONS" ARE AS FOLLOWS.
1. EXPOSED LIVE PARTS ON ONE SIDE AND NO LIVE OR GROUNDED PARTS ON THE OTHER SIDE OF THE WORKING SPACE, OR EXPOSED LIVE PARTS ON BOTH SIDES EFFECTIVELY GUARDED BY SUITABLE WOOD OR OTHER INSULATING MATERIALS. INSULATED WIRE OR INSULATED BUSBARS OPERATING AT NOT OVER 300V SHALL NOT BE CONSIDERED LIVE PARTS.
2. EXPOSED LIVE PARTS ON ONE SIDE AND GROUNDED PARTS ON THE OTHER SIDE.
3. EXPOSED LIVE PARTS ON BOTH SIDES OF THE WORK SPACE (NOT GUARDED AS PROVIDED IN CONDITION 1) WITH THE OPERATOR BETWEEN.

NOTE:
THIS FIGURE ILLUSTRATES THE WORKING SPACE IN FRONT OF THE ELECTRICAL EQUIPMENT REQUIRED BY SECTION 110-26 OF THE NATIONAL ELECTRIC CODE.



3 WORKING CLEARANCE FOR ELECTRICAL EQUIPMENT
NO SCALE

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SHEET TITLE: ELECTRICAL DETAILS
SCALE (U.N.O.): NO SCALE

JOB NAME: University of North Carolina - Chapel Hill
SCI#: 21-25548-02A
BINGHAM HALL RENOVATION
LOCATION: 30 Lenoir Drive, Chapel Hill, NC 27514

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ISSUE DATE: 1/8/2024
OB. NO.: 11706-00
DWG. NO.: E501

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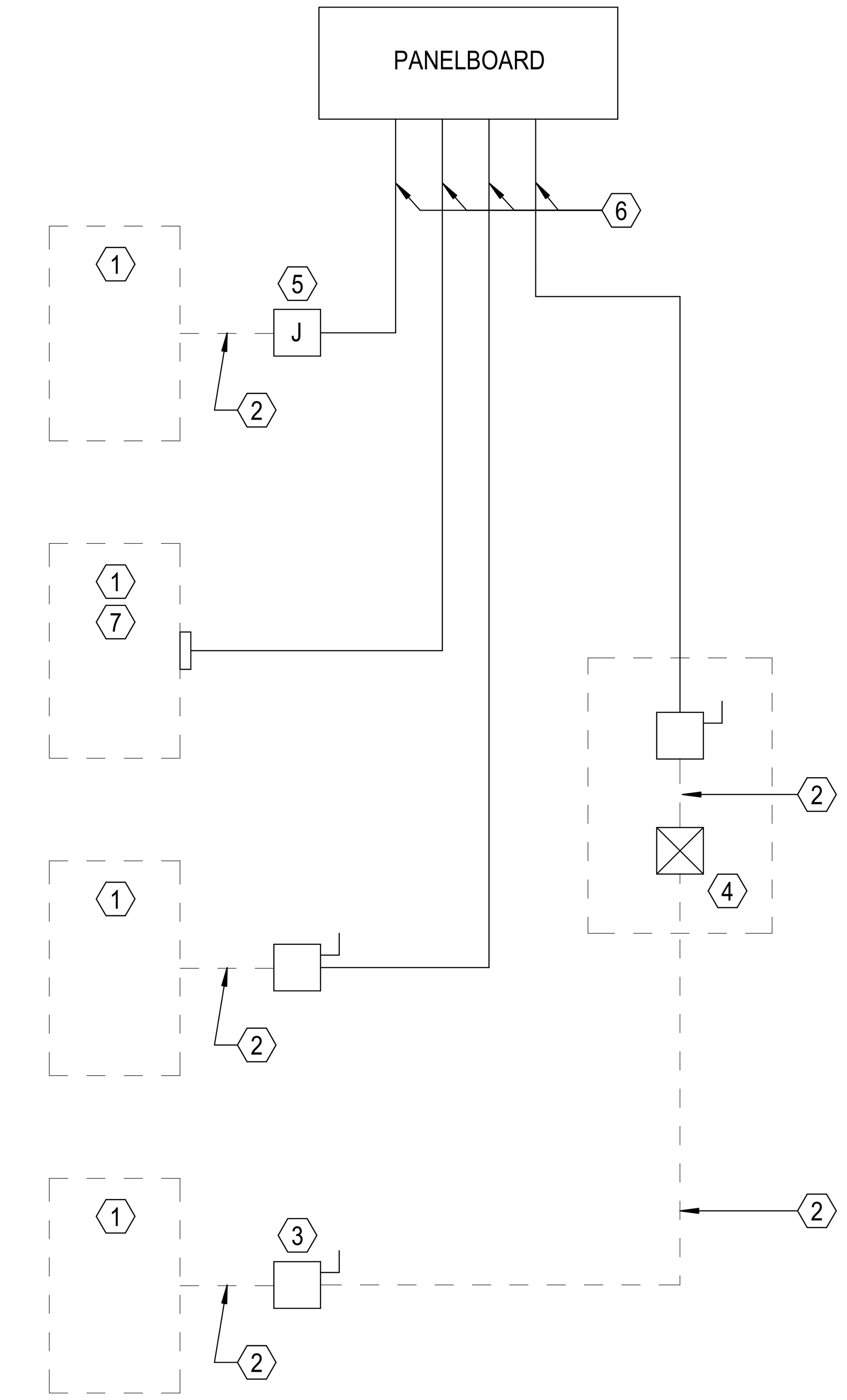
KEY NOTES (THIS DETAIL ONLY):

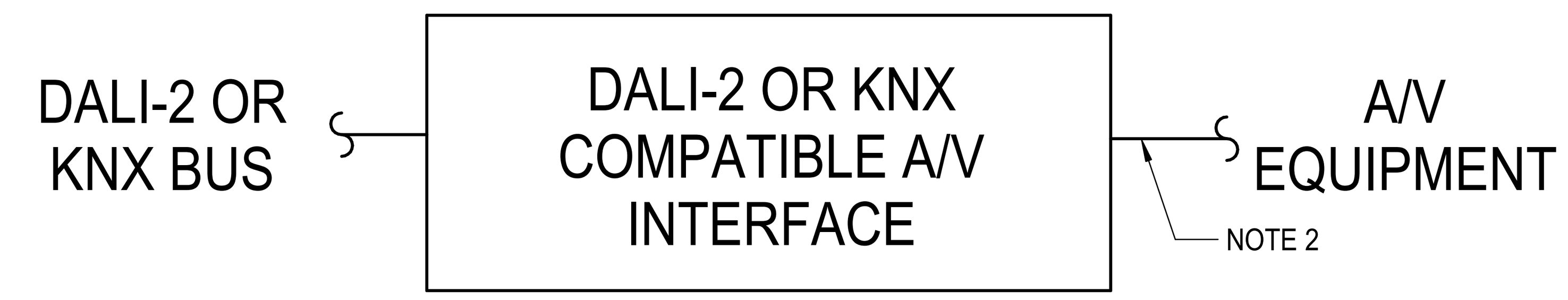
1. EQUIPMENT OF TRADES OTHER THAN DIVISION 26.
2. CONDUIT AND WIRING BY DIVISION 22, 23 OR RESPECTIVE TRADE.
3. IF AN ADDITIONAL DISCONNECT IS REQUIRED BY NFPA 70, THE DISCONNECT SHALL BE FURNISHED AND INSTALLED BY THE EQUIPMENT CONTRACTOR.
4. STARTER OR VARIABLE FREQUENCY DRIVE SHALL BE FURNISHED AND INSTALLED BY DIVISION 23. STARTER OR VFD MAY BE LOCATED ADJACENT TO EQUIPMENT AS SHOWN ON PLANS.
5. DIVISION 26 SHALL PROVIDE JUNCTION BOX AS SHOWN ON DRAWINGS OR AS REQUIRED PER EQUIPMENT (SUPPLIED BY OTHERS). ELECTRICAL CONTRACTOR SHALL PROVIDE LINE SIDE WIRING. DIVISION 22, 23, OR ASSOCIATED CONTRACTOR SHALL PROVIDE LOAD SIDE WIRING AND MAKE FINAL CONNECTIONS TO EQUIPMENT.
6. FEEDER RACEWAYS AND CONDUCTORS SHALL BE PROVIDED BY DIVISION 26. SEE PANELBOARD SCHEDULES FOR REQUIREMENTS.
7. IF THE MECHANICAL EQUIPMENT DOES NOT INCLUDE AN INTEGRAL DISCONNECT SWITCH, DIVISION 26 SHALL PROVIDE.

GENERAL NOTES (THIS DETAIL ONLY):

1. SEE SPECIFICATION SECTION 26 0010-1.2 FOR ADDITIONAL REQUIREMENTS.
2. IN ALL CASES, THE EQUIPMENT CONTRACTOR SHALL MAKE FINAL CONNECTIONS, START UP, AND TEST EQUIPMENT.



1 EQUIPMENT CONNECTIONS - DIVISION OF WORK
NO SCALE



NOTES:

1. PROVIDE DALI-2 OR KNX COMPATIBLE A/V INTERFACE FOR COMMUNICATION WITH A/V SYSTEM AND LIGHTING CONTROL SYSTEM. A/V SYSTEM PROVIDES HIGH-LEVEL I/O INTERFACE WITH THE LIGHTING CONTROL SYSTEM TO CONTROL FIELD DEVICES.
2. PROVIDE RS232 CONNECTION FROM A/V INTERFACE TO A/V SYSTEM EQUIPMENT. MOUNT INTERFACE ON DIN-RAIL IN ENCLOSURE ABOVE CEILING WITHIN ROOM.
3. BASIS OF DESIGN IS HELVAR 503 AV INTERFACE. OTHER ACCEPTABLE PRODUCTS CERTIFIED AS DALI-2 COMPLIANT OR KNX COMPLIANT.
4. COORDINATE INSTALLATION AND SET-UP REQUIREMENTS WITH AV SYSTEM INSTALLER.

2 DALI-2 OR KNX A/V INTERFACE
NO SCALE

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SHEET TITLE: ELECTRICAL DETAILS
SCALE (U.N.O.): NO SCALE

JOB NAME: University of North Carolina - Chapel Hill
SCO# 21-25548-02A
BINGHAM HALL RENOVATION
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JOB. NO.: 11706-00
DWG. NO.: E502

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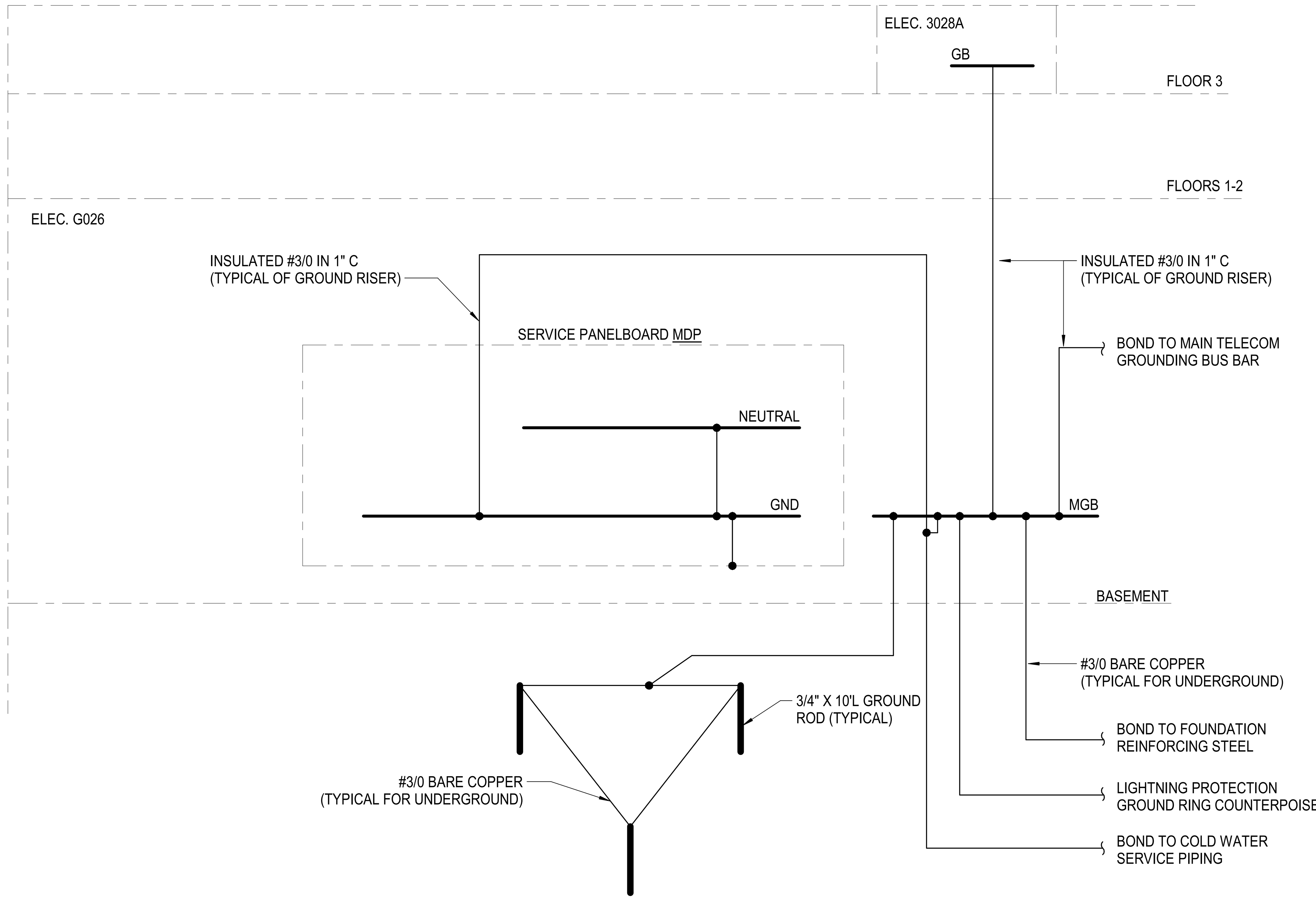
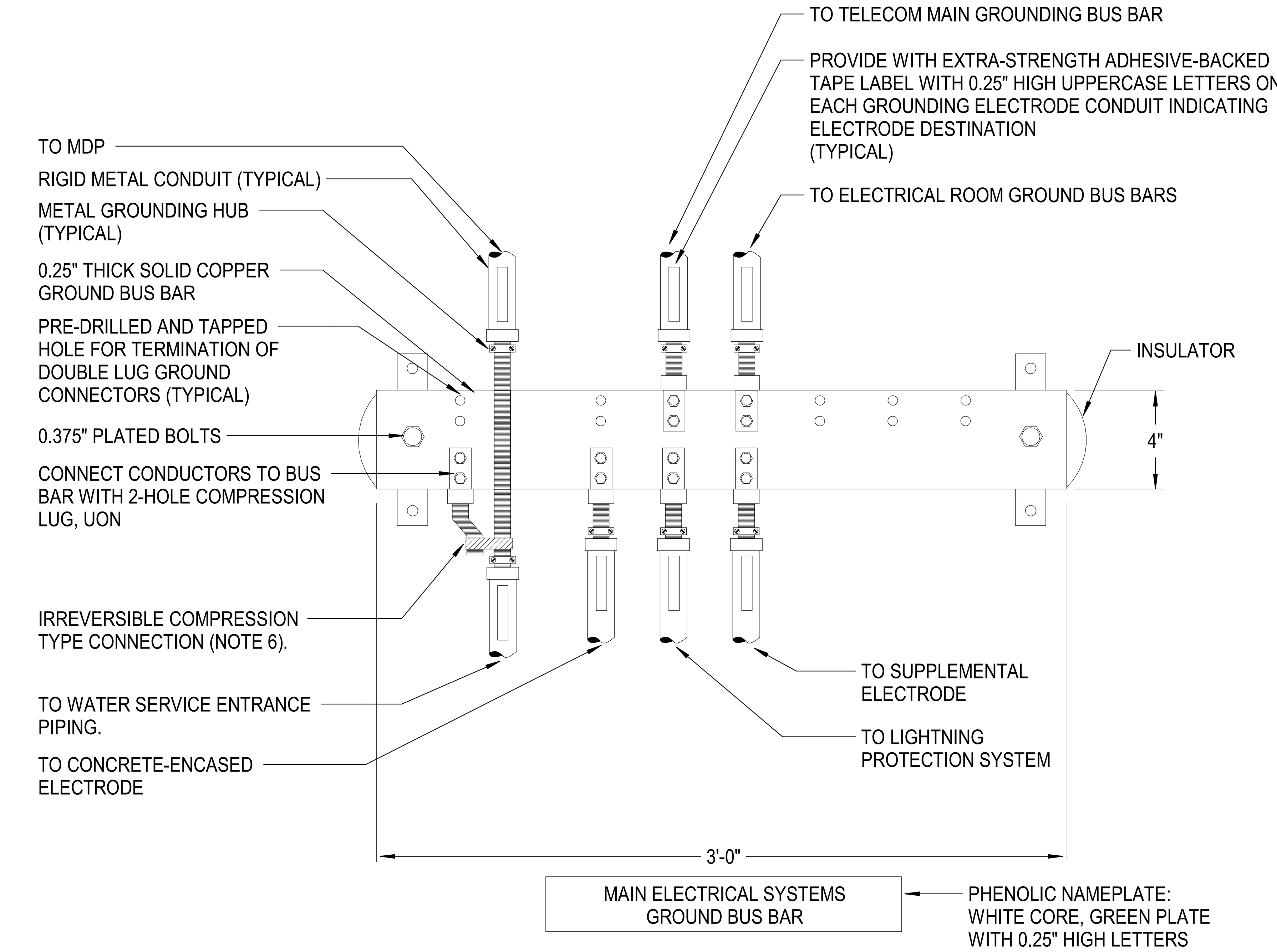


3 GROUNDING RISER DIAGRAM - BINGHAM
NO SCALE

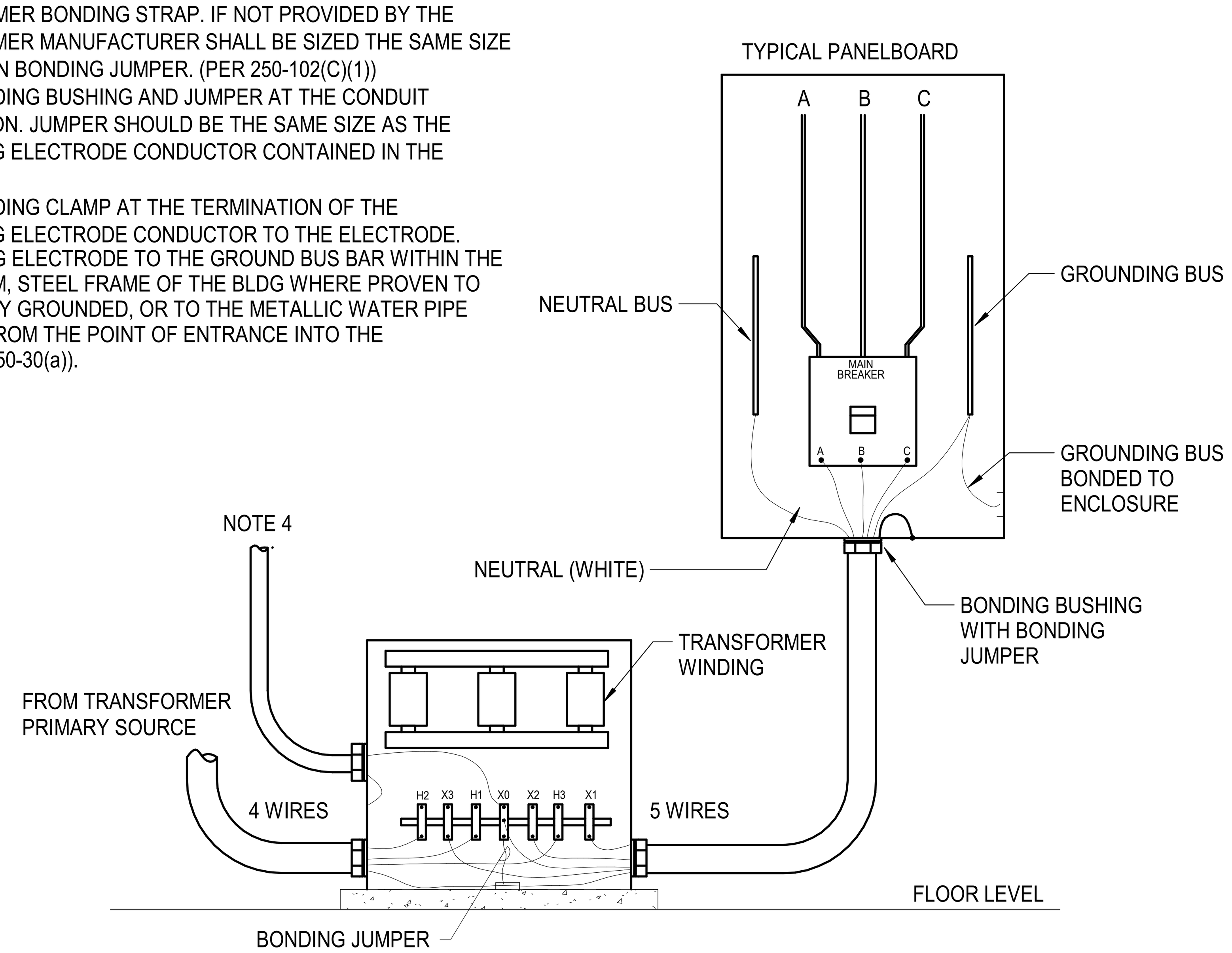


NOTES:
1. INSTALL BUS BAR 8'-0" AFF, UNLESS OTHERWISE NOTED.
2. PROVIDE THREADED BRONZE GROUND HUB AT ENDS OF RIGID METAL CONDUITS TO BOND ENCLOSED ELECTRODE TO CONDUIT.
3. REFER TO GROUNDING RISER DIAGRAM (THIS SHEET) FOR QUANTITY OF ELECTRICAL COMMON GROUNDING ELECTRODE RISERS. CONDUCTOR SIZE FOR TELECOM TO BE SIZED PER CHART ON T502 AND SHALL BE NO SMALLER THAN THE LARGEST TELECOMMUNICATION BONDING BABCKBONE.
4. FOR BARE COPPER PROVIDE SEGMENT OF 1" RIGID METAL CONDUIT AT GROUND BAR FOR INSTALLATION OF LABEL NOTED.
5. UNDERGROUND WATER PIPE TO MAINTAIN 10' OF ELECTRICAL CONTINUITY OF UNDERGROUND WATER PIPE ELECTRODE, PROVIDE BONDING JUMPERS AROUND INSULATED JOINTS, FILTERING DEVICE AND METERING EQUIPMENT. CONNECTION SHALL BE MADE WITH GROUND CLAMP WITHIN 5' OF WATER PIPE ENTRANCE INTO BUILDING AND AHEAD OF ANY VALVE, CONNECTOR, OR METERING DEVICE. PIPE SHALL BE SCRAPED AND THE CLAMP SHALL BE EMBEDDED IN NOALOX COMPOUND.
6. PROVIDE BURNDY YGHC29C26 3/0 COMP GROUND TAPS, OR APPROVED EQUAL, FOR CONNECTION TO GROUNDING ELECTRODE CONDUCTOR.

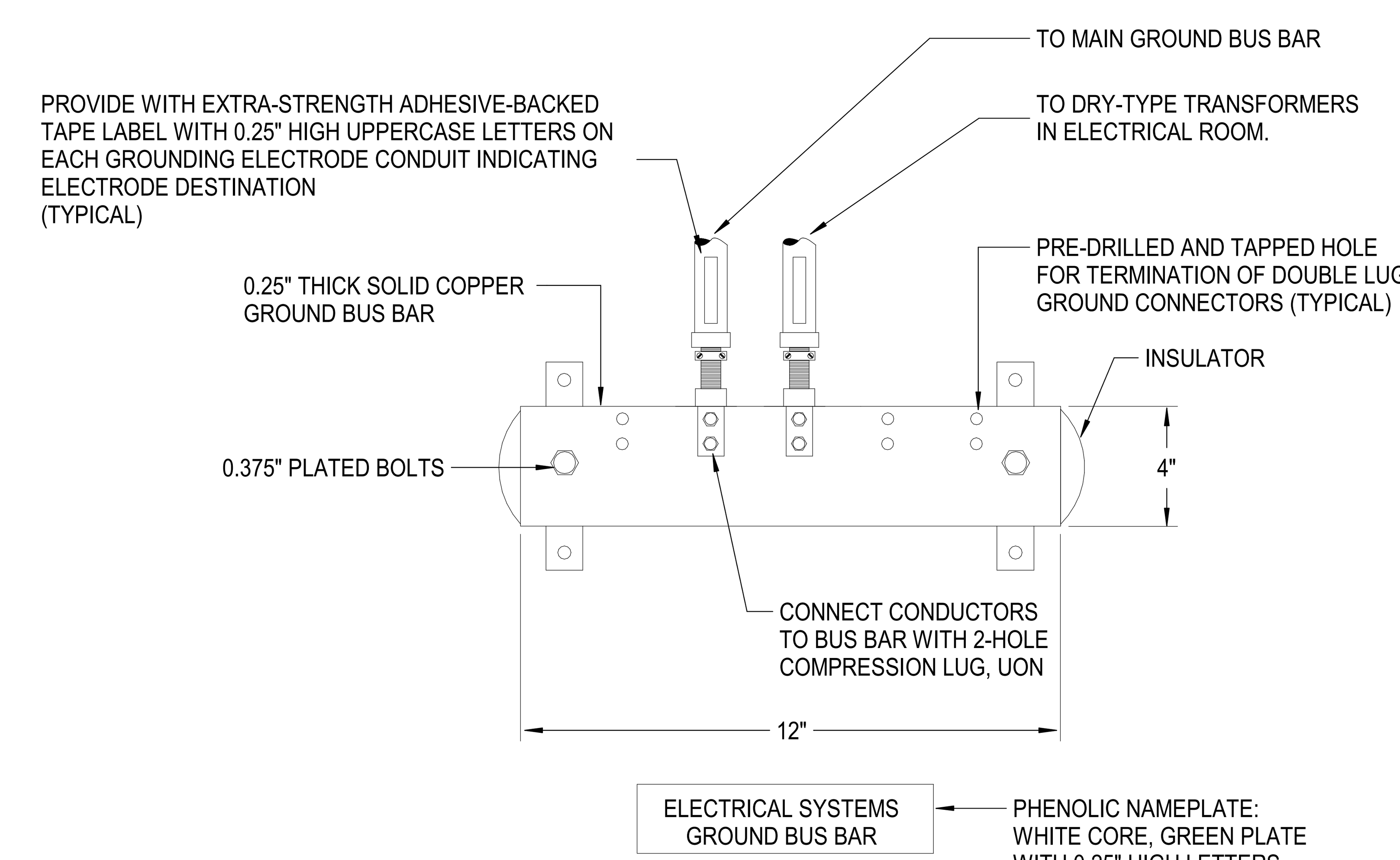
1 MAIN ELECTRICAL SYSTEMS GROUND BUS BAR (MGB)
NO SCALE

NOTES:

1. TRANSFORMER BONDING STRAP. IF NOT PROVIDED BY THE TRANSFORMER MANUFACTURER SHALL BE SIZED THE SAME SIZE AS THE MAIN BONDING JUMPER. (PER 250-102(C)(1))
2. USE A BONDING BUSHING AND JUMPER AT THE CONDUIT TERMINATION. JUMPER SHOULD BE THE SAME SIZE AS THE GROUNDING ELECTRODE CONDUCTOR CONTAINED IN THE CONDUIT.
3. USE A BONDING CLAMP AT THE TERMINATION OF THE GROUNDING ELECTRODE CONDUCTOR TO THE ELECTRODE.
4. GROUNDING ELECTRODE TO THE GROUND BUS BAR WITHIN THE SAME ROOM, STEEL FRAME OF THE BLDG WHERE PROVEN TO BE SUITABLY GROUNDED, OR TO THE METALLIC WATER PIPE WITHIN 5' FROM THE POINT OF ENTRANCE INTO THE BUILDING(250-30(a)).



4 DRY-TYPE TRANSFORMER GROUNDING DETAIL
NO SCALE



NOTES:
1. INSTALL BUS BAR 8'-0" AFF, UNLESS OTHERWISE NOTED.
2. PROVIDE THREADED BRONZE GROUND HUB AT ENDS OF RIGID METAL CONDUITS TO BOND ENCLOSED ELECTRODE TO CONDUIT.
3. INSTALLATION SHALL BE SIMILAR TO MAIN GROUND BUS BAR. REFER TO OTHER DETAIL, THIS SHEET, FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

2 ELECTRICAL SYSTEMS GROUND BUS BAR (GB)
NO SCALE

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SHEET TITLE
ELECTRICAL DETAILS - GROUNDING

SCALE (U.N.O.)
NO SCALE

JOB NAME
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SCO# 21-23548-02A
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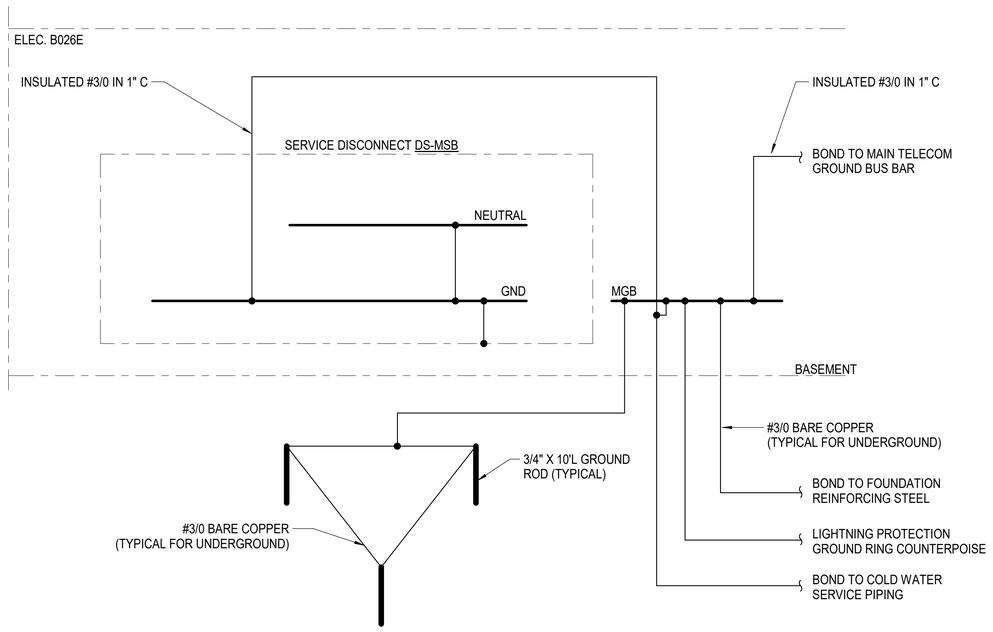
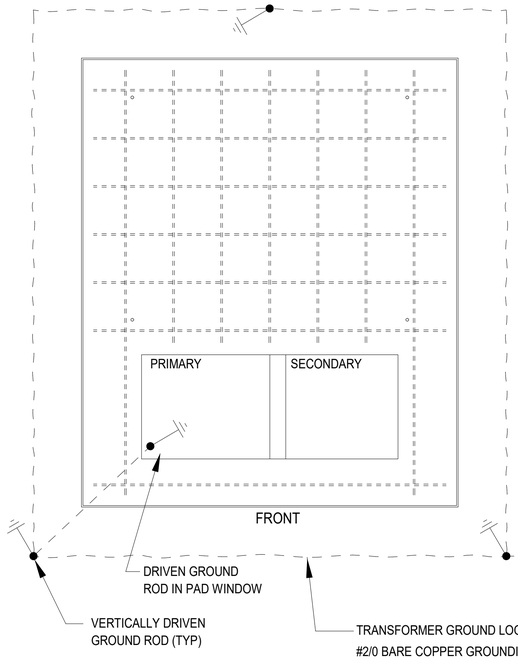
11706-00
DWG. NO.
E503

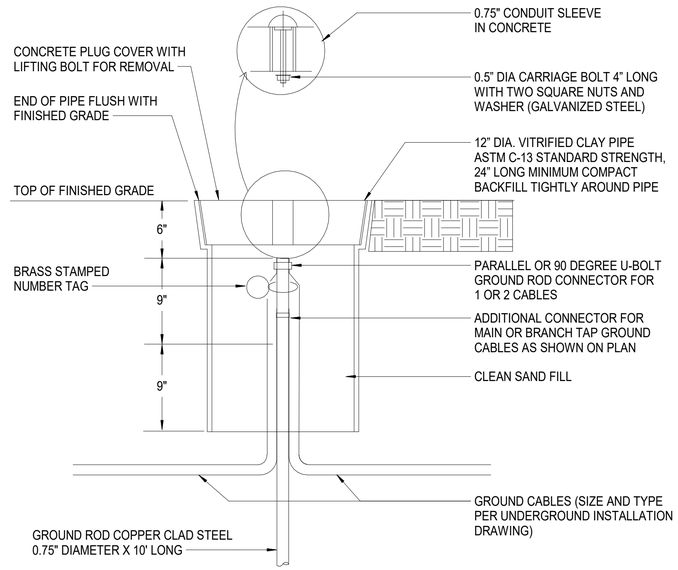


3 GROUNDING RISER DIAGRAM - GREENLAW
NO SCALE



NOTES:
1. GROUND RODS TO BE 3/4" IN DIAMETER x 10' LONG COPPER CLAD STEEL.
2. GROUND ROD IN PRIMARY WINDOW TO BE 4" FROM EACH SIDE OF THE CORNER.
3. GROUNDING CONDUCTOR TO BE #2/0 BARE COPPER MINIMUM.
4. GROUNDING CONDUCTOR DEPTH TO BE 30" MINIMUM.
5. MECHANICAL/ELECTRICAL CONNECTIONS IN THE GROUND SHALL BE EXOTHERMIC WELDS (EX. CADWELD).
6. GROUNDING CONDUCTOR TO BE 10" TO 12" FROM THE EDGE OF CONCRETE PAD.
7. ANY VARIATIONS OR CONFLICTS MUST BE REVIEWED AND APPROVED BY ELECTRIC DISTRIBUTION ENGINEERING.
8. CONTRACTOR SHALL CALL EDS (919-962-8394) FOR FINAL INSPECTION. THIS SHALL BE DONE BEFORE ANY CONCRETE POURING AND/OR BACKFILLING.
9. EXOTHERMIC WELD ALL GROUNDING CONDUCTORS NO LESS THAN 4 INCHES DOWN FROM THE TOP OF THE GROUND ROD.
10. GROUND RODS SHALL BE DRIVEN IN WET DIRT TO ACHIEVE THE RESISTIVITY LEVEL INDICATED IN ELECTRICAL SPECIFICATION SECTION 260526 GROUNDING.

1 TRANSFORMER GROUNDING DETAIL
NO SCALE



2 GROUNDING TEST WELL
NO SCALE

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SHEET TITLE: ELECTRICAL DETAILS - GROUNDING
SCALE (U.N.O.): As indicated

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ISSUE DATE: 1/8/2024
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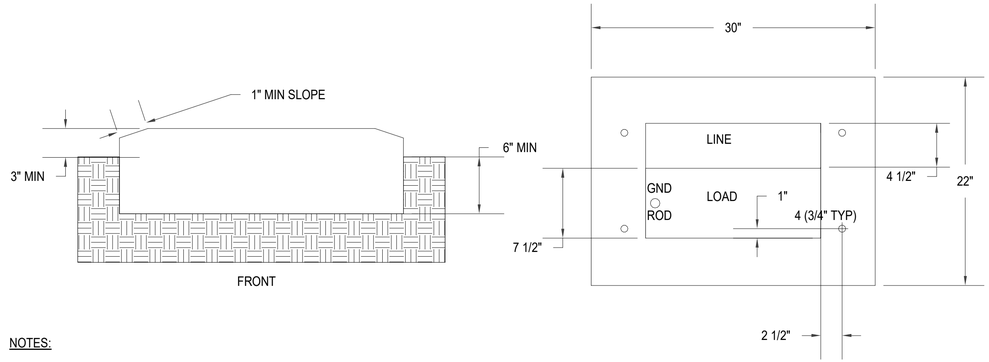
DWG. NO.: E504

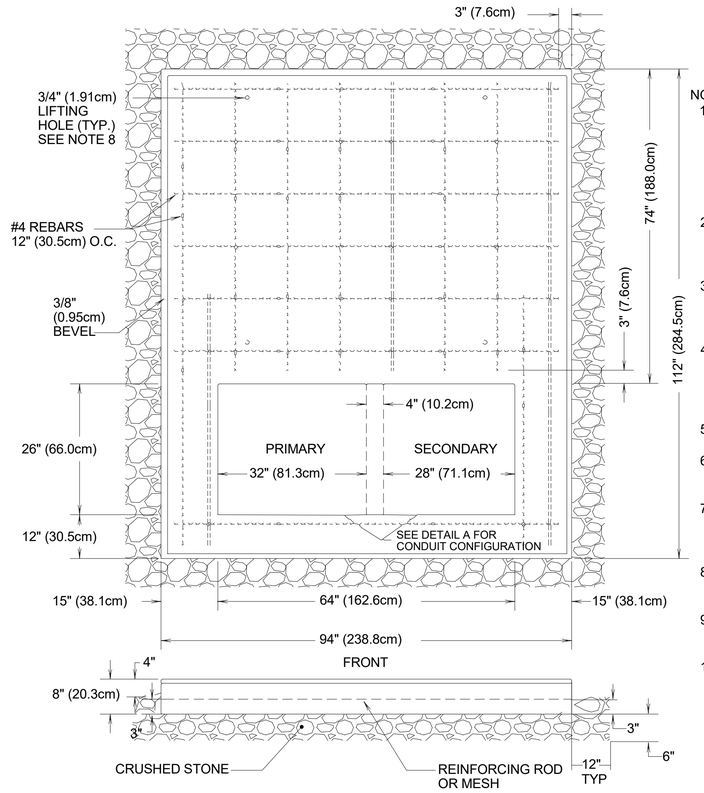


NOTES:

1. CONTRACTOR PROVIDED CONCRETE PAD FOR OWNER PROVIDED LIGHTING PEDESTAL (MILBANK CATALOG NUMBER CP3B5143FB65DGSP1). PAD SHALL BE 30"L X 22"W X 6"D WITH 36" MINIMUM CLEARANCE FRONT AND BACK. COORDINATE WITH MANUFACTURER'S REQUIREMENTS. OWNER PROVIDED (1) 2" CONDUIT UNDERGROUND FROM TRANSFORMER SECONDARY COMPARTMENT TO SERVICE TERMINATION SECTION OF PEDESTAL. OWNER PROVIDED (2) 1 1/4" CONDUITS UNDERGROUND FROM LOAD SECTION OF PEDESTAL TO INGROUND JUNCTION BOX (QUAZITE PC1212BG12 WITH PC1212HG00 COVER OR APPROVED EQUIVALENT). IN ADDITION OWNER SHALL PROVIDE GROUND ROD IN CUSTOMER SIDE OF PEDESTAL AND BOND TO TRANSFORMER GROUND RODS WITH #3/0 COPPER CONDUCTOR. COORDINATE LOCATION AND INSTALLATION WITH OWNER.

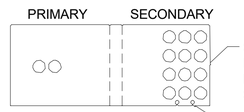
1 FREE STANDING LIGHTING PEDESTAL PAD DETAIL

NO SCALE



NOTES:

1. TRANSFORMER PADS SHALL BE INSTALLED IN A LOCATION TO REMAIN READILY ACCESSIBLE FOR LINE TRUCKS. PADS SHALL HAVE A MINIMUM CLEARANCE FROM OBSTRUCTIONS AND BUILDINGS IN COMPLIANCE WITH APPLICABLE CODES. MINIMUM WORKING CLEARANCES SHALL BE: TEN (10) FEET ON THE FRONT (DOOR SIDE), FOUR (4) FEET ON SECONDARY SIDE, THREE (3) FEET ON REAR AND PRIMARY SIDE.
2. SOIL UNDERNEATH PADS SHALL BE FREE OF ROOTS AND OTHER ORGANIC MATERIALS AND BE THOROUGHLY TAMPED TO PREVENT WASHING. EXERCISE CARE IN BACKFILLING AND GRADING AROUND PAD.
3. REINFORCE WITH #4 REBARS ON A 12" X 12" GRID TIED SECURELY 3" ABOVE BASE ON CLEAN CONCRETE OR BRICK SUPPORTS. END OF REBARS TO BE 3" FROM OUTSIDE EDGE OF PAD.
4. CONCRETE TO BE 5-1/2% AIR-ENTRAINED WITH A MINIMUM 28 DAY STRENGTH OF 3000 PSI. MIXTURE TO BE 1:2:4 PROPORTIONS OF CEMENT, SAND, AND GRAVEL. USE NO MORE THAN 6 GALLONS OF WATER PER SACK OF CONCRETE.
5. TOP SURFACE TO BE LEVEL, SMOOTH, AND BEVELED APPROXIMATELY 3/8".
6. SERVICE CONDUIT SHALL BE LOCATED IN THE EXTREME RIGHT SIDE OF THE SECONDARY COMPARTMENT.
7. SOME OLDER MODEL TRANSFORMERS MAY HAVE SMALLER COMPARTMENTS AND IT MAY BE NECESSARY TO GROUT A SMALL PORTION OF THE PAD OPENING.
8. ONLY REQUIRED IF SLAB IS PLACED AT THE CONTRACTORS SITE AND TRANSPORTED TO THE INSTALLATION SITE.
9. FOR SPECIAL CIRCUMSTANCES CONTACT ELECTRICAL DISTRIBUTION SYSTEMS MANAGER.
10. TERMINATE ALL CONDUIT END POINTS IN SWITCHING CABINETS AND AT TRANSFORMER PADS NO LESS THAN 2 INCHES AN NO MORE THAN 4 INCHES ABOVE FINISHED SLAB.



DETAIL A

2 TRANSFORMER PAD DETAIL

NO SCALE

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SHEET TITLE: ELECTRICAL DETAILS - EQUIPMENT PADS

SCALE (U.N.O.): As indicated

JOB NAME: University of North Carolina - Chapel Hill
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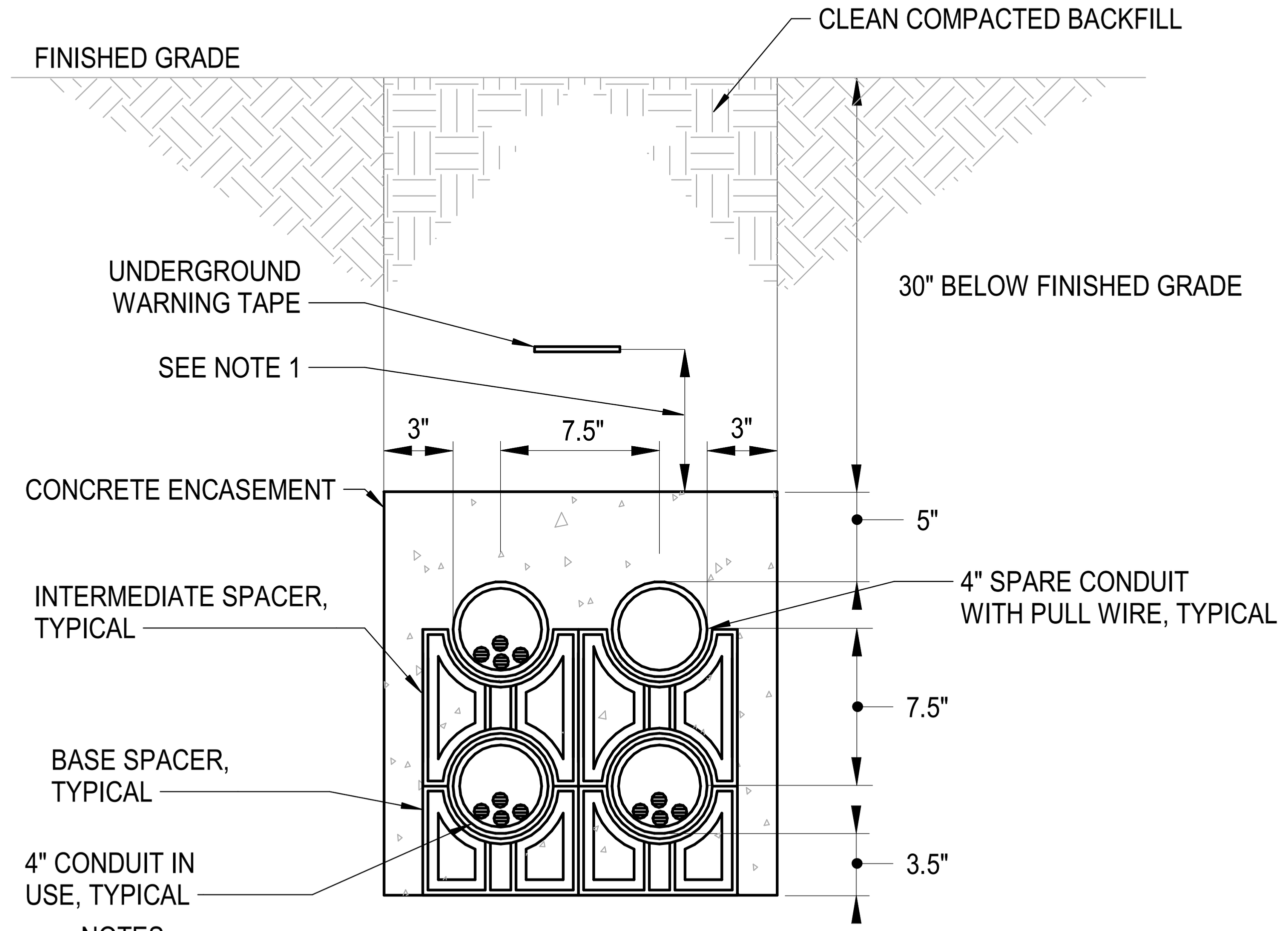
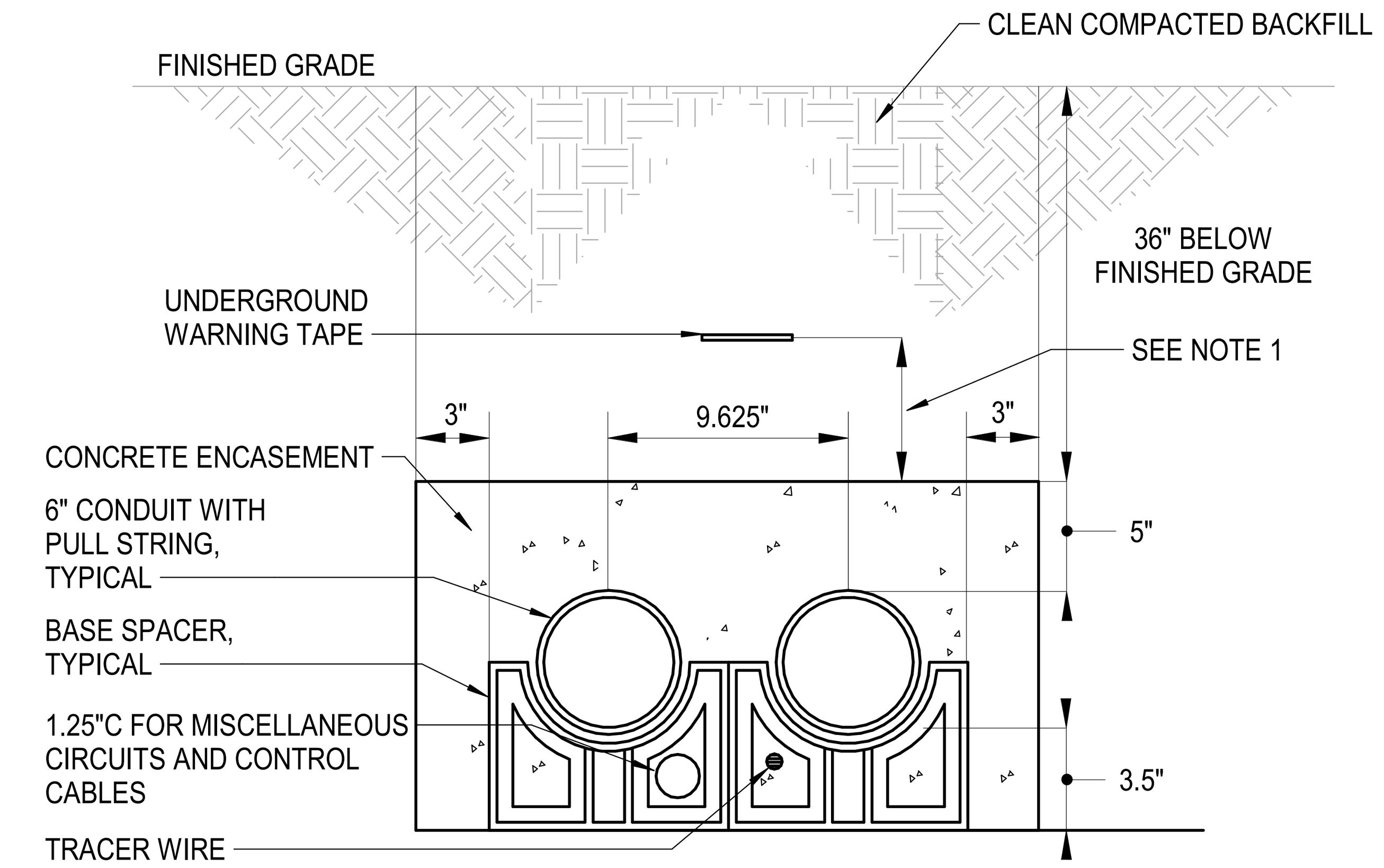


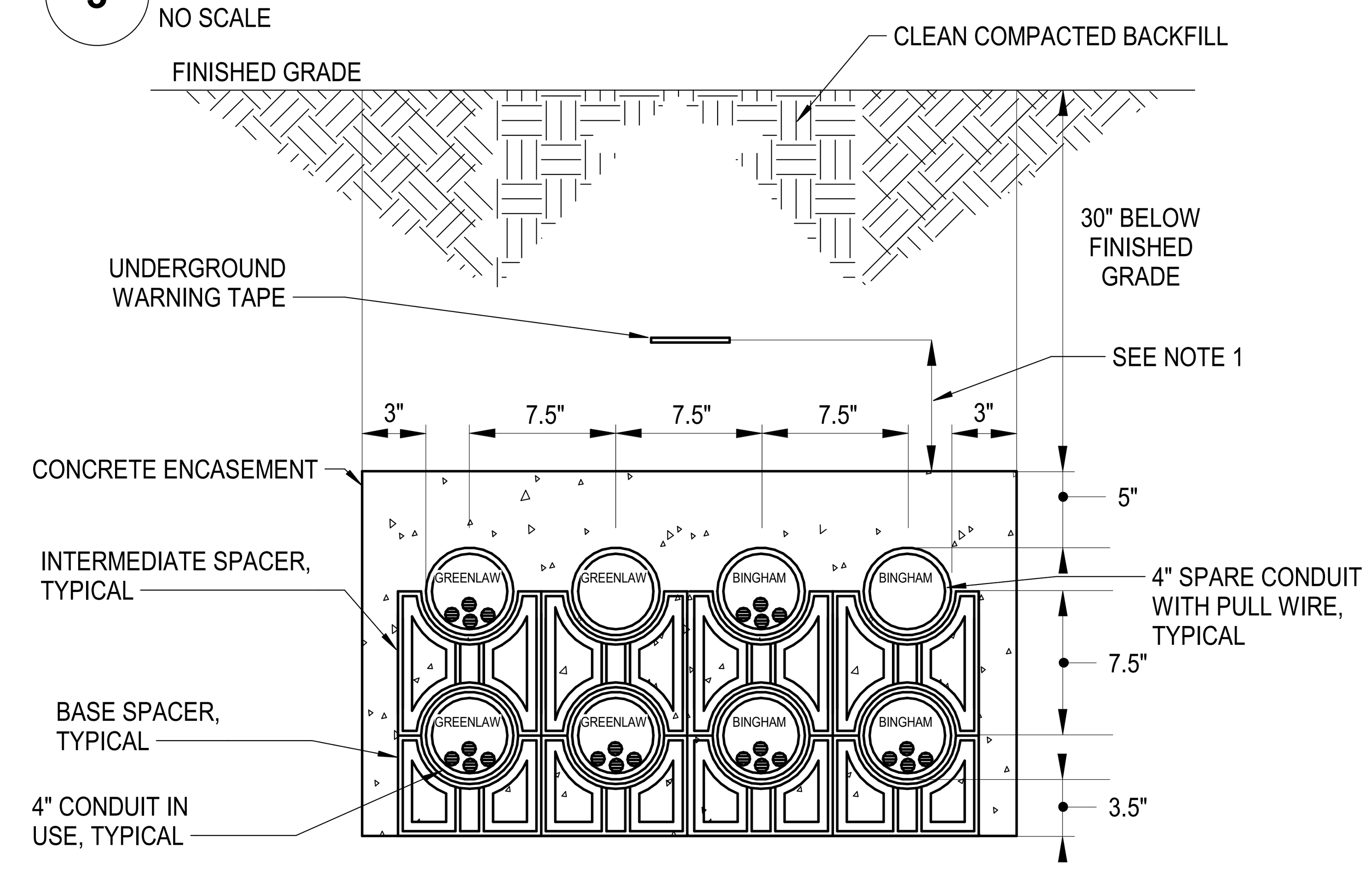
NOTES:
1. INSTALL WARNING TAPE NO LESS THAN 6" AND NO MORE THAN 12" ABOVE TOP OF DUCTBANK CONCRETE. REFER TO SPECIFICATION SECTION 260010 FOR MORE INFORMATION.

6 SECONDARY CONCRETE-ENCASED DUCTBANK - C
NO SCALE



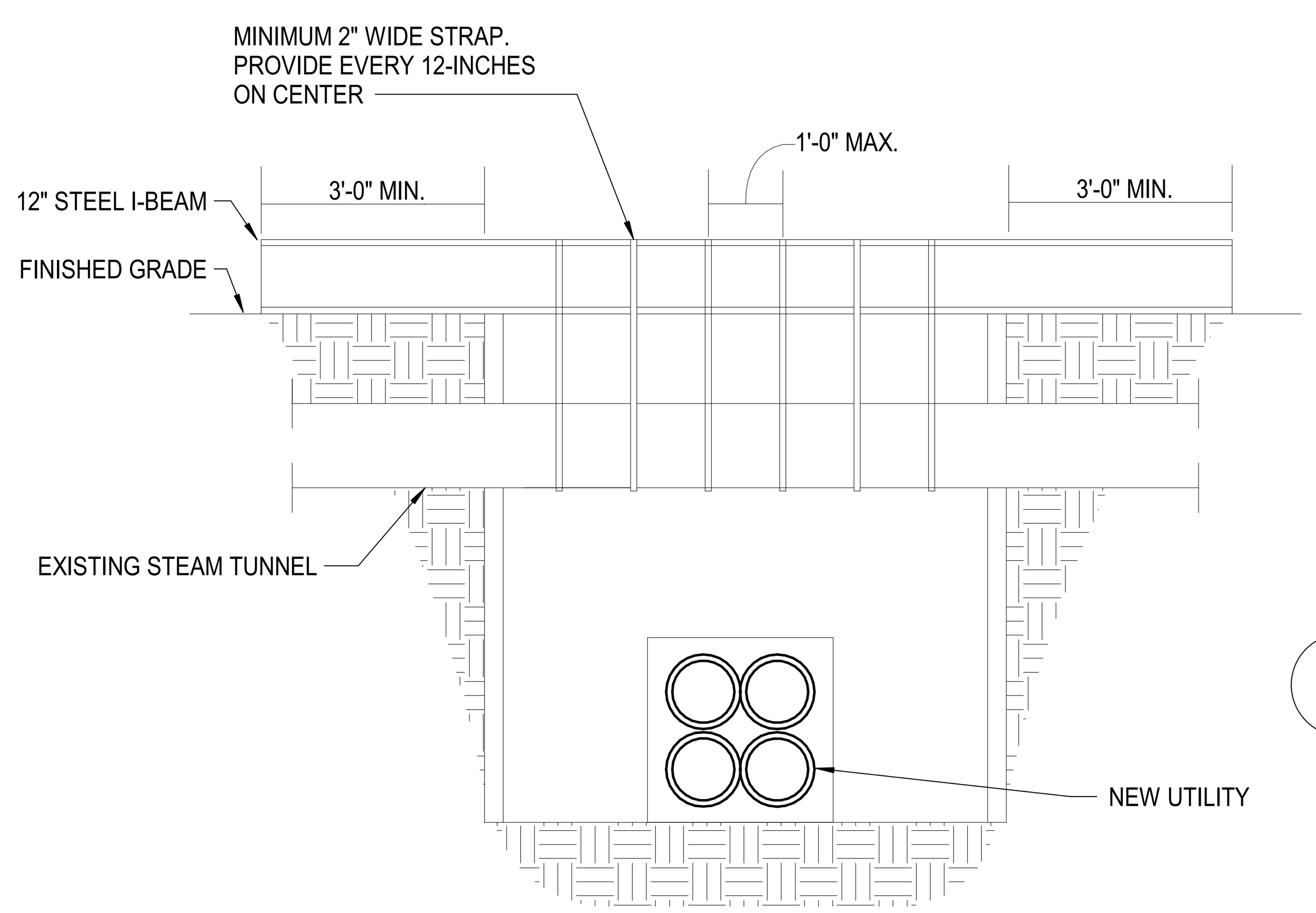
NOTES:
1. INSTALL WARNING TAPE NO LESS THAN 6" AND NO MORE THAN 12" ABOVE TOP OF DUCTBANK CONCRETE. REFER TO SECTION 260010 FOR MORE INFORMATION.
2. PRIMARY DUCTBANK SPACERS SHALL BE UNDERGROUND DEVICES INC. WUNPEECE OR EQUAL APPROVED BY UNC ELECTRICAL DISTRIBUTION SYSTEMS.
3. WATERPROOF MARKING CORD SHALL BE INSTALLED USING 1/2 INCH WIDE, 1250-POUND TENSILE TEST CORD (MARKED AT LEAST EVERY FOOT), EQUIVALENT TO NEPTCO INC. MULETAP PART #WP1250P, IN ALL DUCTS, INCLUDING SPARES, AFTER THOROUGHLY ROODING, CLEARING AND SWABBING ALL LINES FREE OF ANY AND ALL OBSTRUCTIONS. ONLY WHOLE, UNBROKEN LENGTHS OF MULETAP SHALL BE INSTALLED, NO SPLICING OF SHORTER LENGTHS IS ALLOWED.

3 PRIMARY CONCRETE-ENCASED DUCTBANK - A
NO SCALE



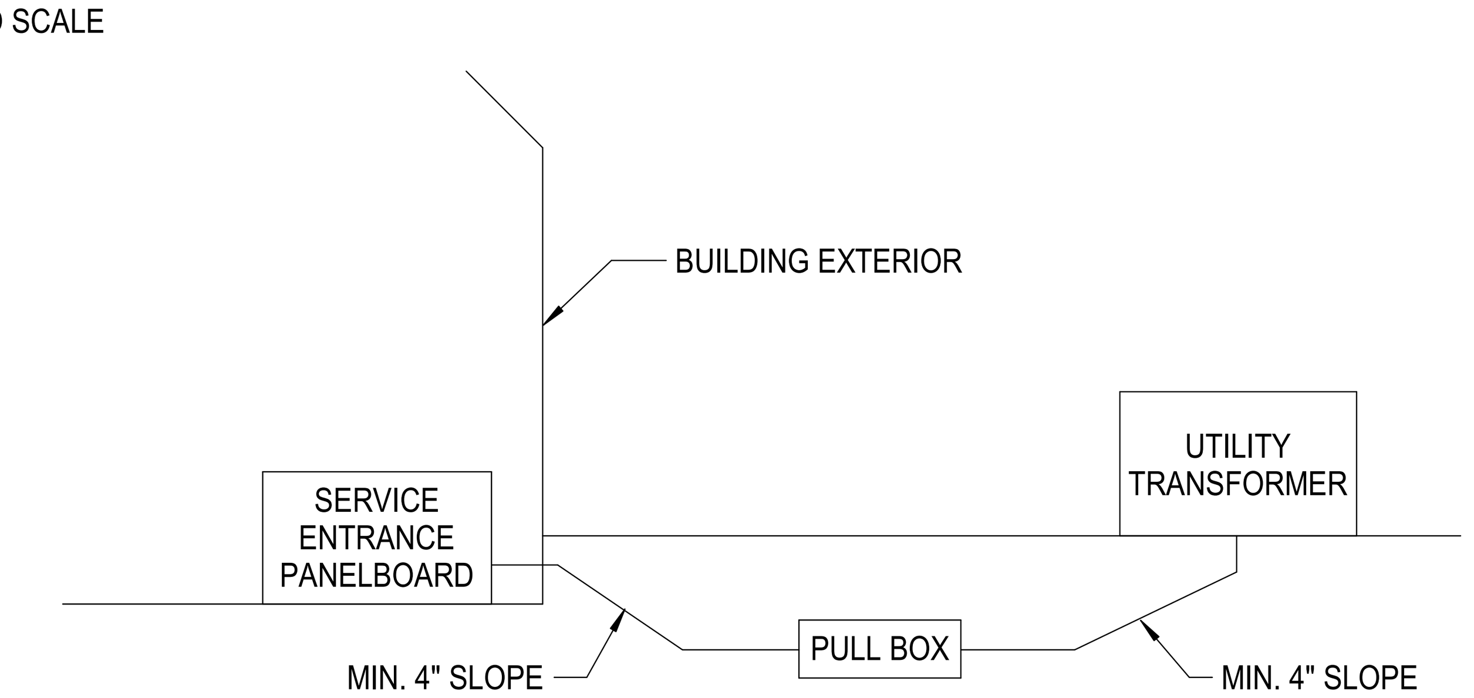
NOTES:
1. INSTALL WARNING TAPE NO LESS THAN 6" AND NO MORE THAN 12" ABOVE TOP OF DUCTBANK CONCRETE. REFER TO SPECIFICATION SECTION 260010 FOR MORE INFORMATION.
2. THE FEEDERS ON THE LEFT HALF OF THE DUCTBANK SHALL FEED THE GREENLAW BUILDING. THE FEEDERS ON THE RIGHT HALF OF THE DUCTBANK SHALL FEED BINGHAM HALL.

4 SECONDARY CONCRETE-ENCASED DUCTBANK - B
NO SCALE

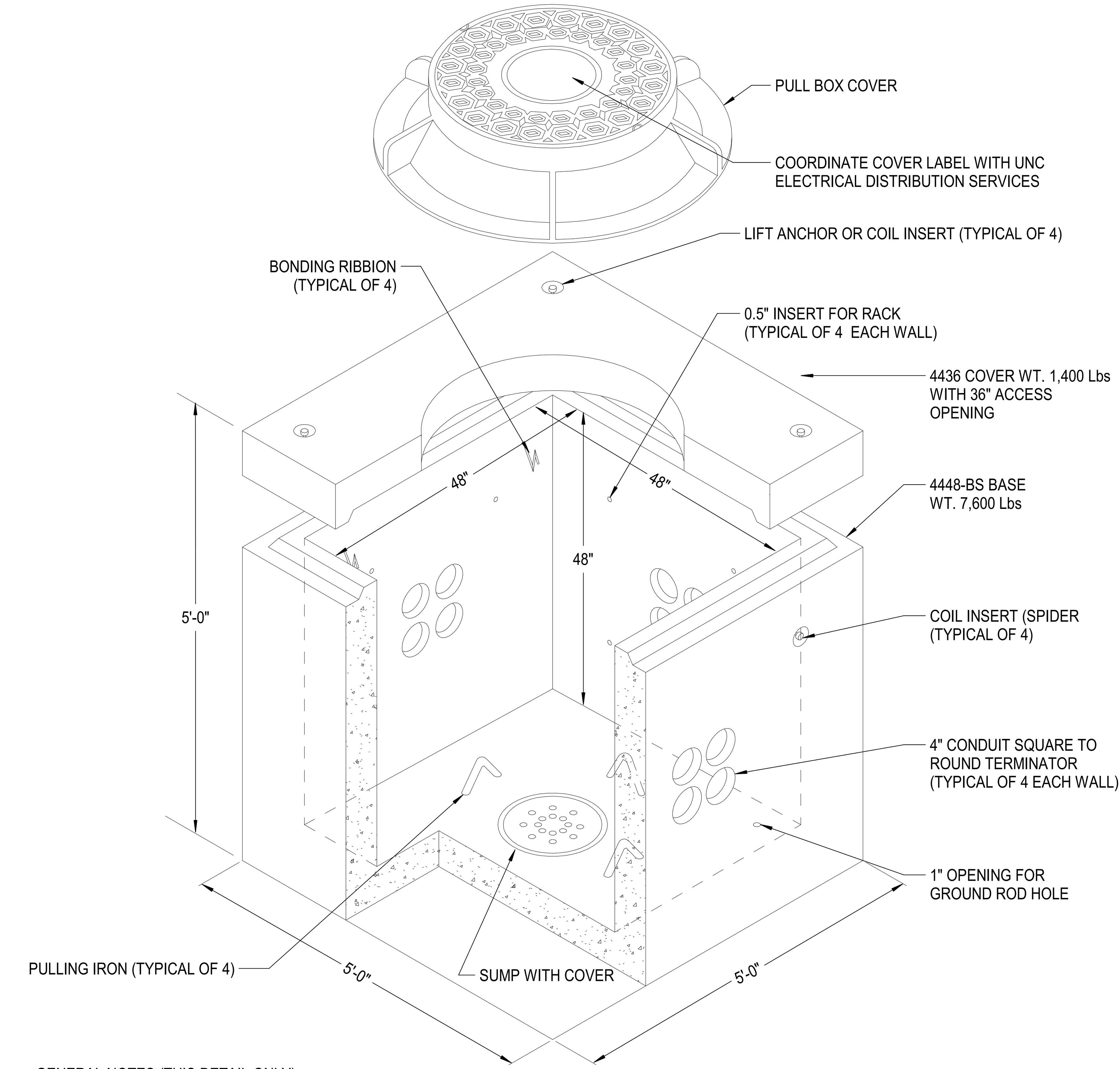


NOTES:
1. SUPPORT BEAM SHALL NOT BE PLACED DIRECTLY ON TOP OF STEAM TUNNEL AND EACH BEAM END SHALL SIT ON UNDISTURBED SOIL FOR A MINIMUM OF 3'.
2. STEAM TUNNEL SHALL BE SUPPORTED IN A SEQUENTIAL MANNER AND IN A WAY THAT NO MORE THAN 12" OF TUNNEL IS UNSUPPORTED AT ONCE. A SMALL PORTION OF DIRT SHALL BE REMOVED BY HAND UNDER THE TUNNEL THAT ALLOWS THE SUPPORT STRAP TO BE FED THROUGH. TIGHTEN STRAP AND REPEAT PROCESS AS EXCAVATION OCCURS.
3. DURING BACKFILLING, PROVIDE FLOWABLE FILL IN FULL CONTACT WITH THE TUNNEL. SUPPORT STRAPS SHALL REMAIN UNTIL FLOWABLE FILL HAS SET FOR 24 HOURS. ONCE SET, SUPPORT STRAPS SHALL BE CUT AND REMOVED WHERE ABOVE THE FLOWABLE FILL.

7 STEAM TUNNEL SUPPORT
NO SCALE



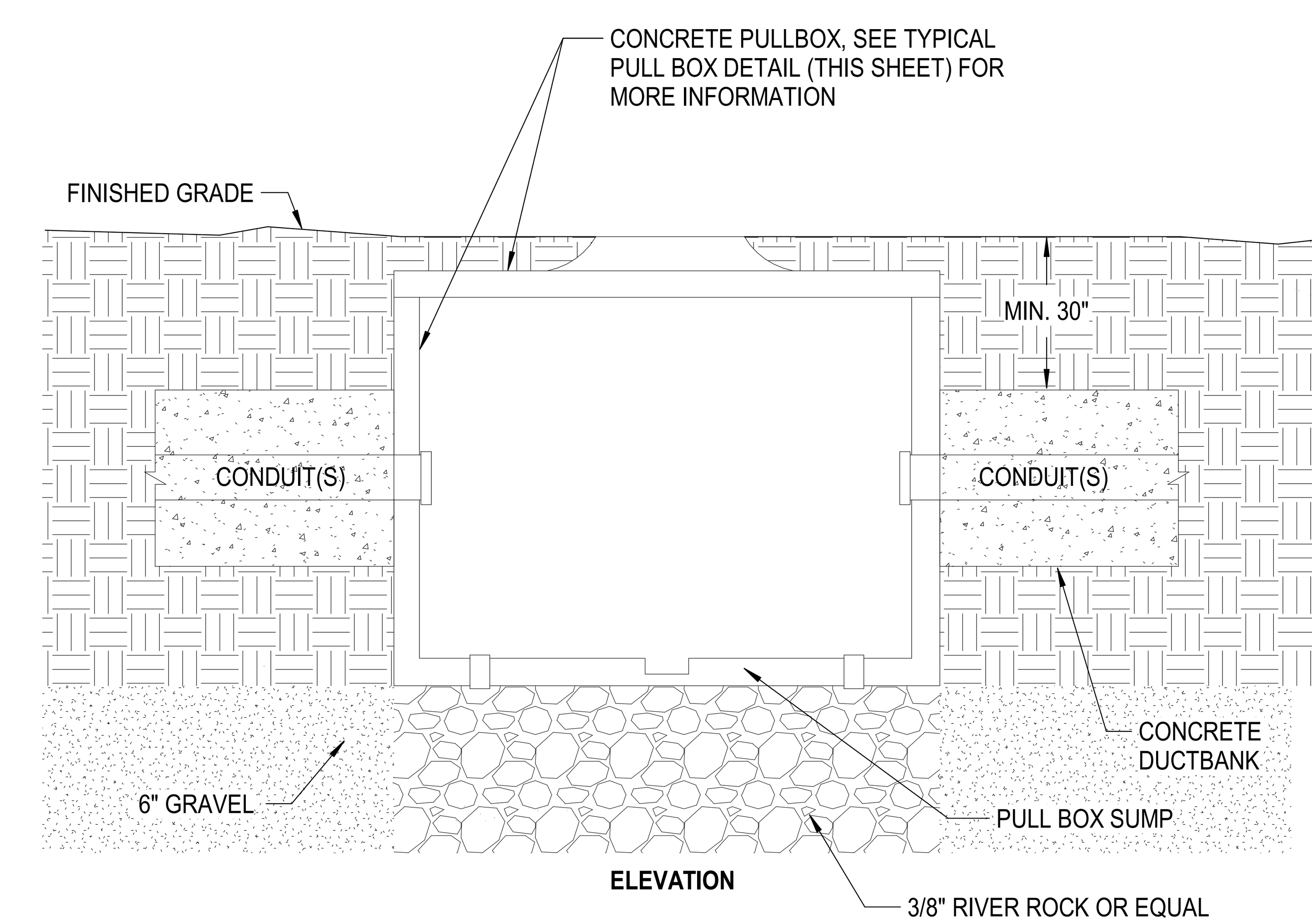
5 DUCTBANK SLOPED BETWEEN PULL BOXES
NO SCALE



GENERAL NOTES (THIS DETAIL ONLY):

1. PROVIDE LOCKABLE PULL BOX COVER SUITABLE FOR H-20 WHEEL LOADING.
2. PROVIDE 5/8" MINIMUM CONDUIT GALVANIZED IRON / STEEL OR COPPER CLAD GROUNDING ROD WITH A MINIMUM LENGTH OF 9'.
3. PROVIDE IN-FLOOR CAST SUMP WITH APPROXIMATE OPENING OF 13", 4" DEPTH AND COVERED BY PERFORATED OR PUNCH PLATE FOR DRAINAGE.
4. GROUND ROD TO BE INSTALLED THROUGH 1" GROUND ROD HOLE AND SHALL BE BONDED TO THE PULLING IRONS.

1 TYPICAL PULL BOX DETAIL
NO SCALE



2 TYPICAL PULL BOX PROFILE
NO SCALE

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5425 Page Road Suite 215 Durham, NC 27703 NB Contact: Reade Daniel N&B PROJECT: 21N242 Newcomb & Boyd, LLP Firm Lic. # F-0312

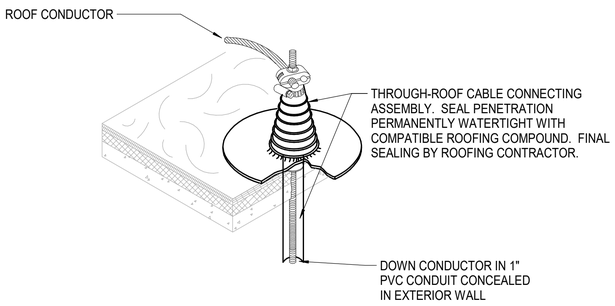
SHEET TITLE: ELECTRICAL DETAILS - SITE

SCALE (U.N.O.): As indicated

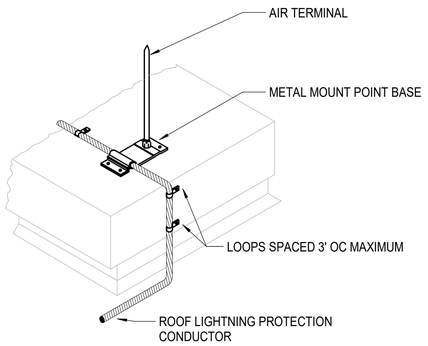
JOB NAME: University of North Carolina - Chapel Hill
SCO#: 21-23548-02A
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

SEAL
DocuSigned by: Richard Dozier
SEAL 044143 ENGINEER RICHARD O. DOZIER, III
Signed on 01/03/2024 using a Digital Signature.

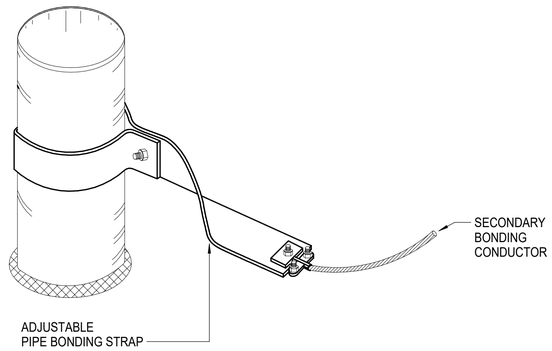
ISSUE DATE: 1/8/2024
JOB NO.: 11706-00
DWG. NO.: E506



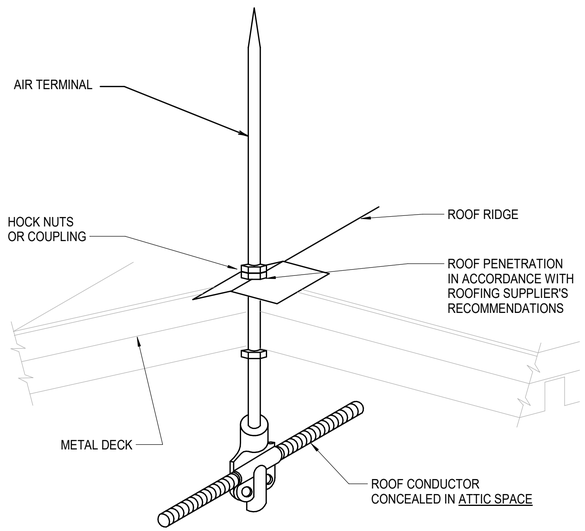
3 THROUGH-ROOF FITTING
NO SCALE



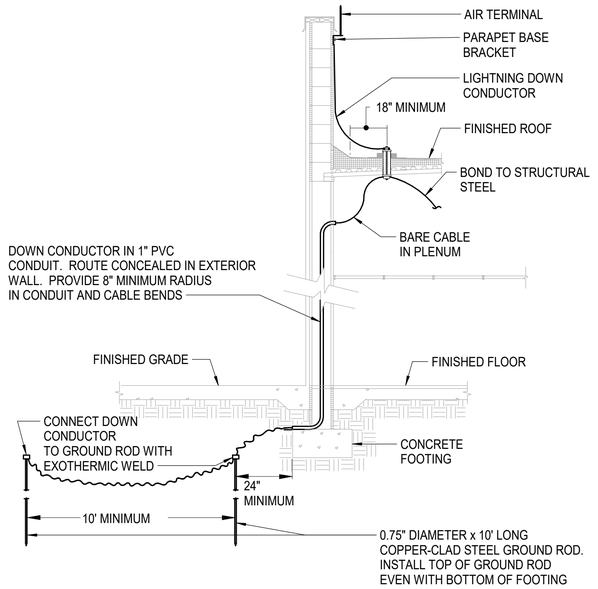
1 AIR TERMINALS ON METAL ROOFTOP EQUIPMENT
NO SCALE



4 VENT PIPE BONDING STRAPS
NO SCALE



5 THROUGH-RIDGE AIR TERMINALS
NO SCALE



NOTES:
1. NO BEND OF A CONDUCTOR SHALL FORM AN INCLUDED ANGLE OF LESS THAN 90 DEGREES OR HAVE A RADIUS OF BEND LESS THAN 8".
2. CONSULTANT TEAMS SHALL REVIEW ANY BUILDING INTERFACES AND PENETRATIONS.

SYMBOL: △

2 LIGHTNING DOWN CONDUCTORS
NO SCALE

LORD AECK SARGENT

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Newcomb & Boyd, LLP
Firm Lic # P0312

SHEET TITLE: ELECTRICAL DETAILS - LIGHTNING PROTECTION
SCALE (U.N.O.): NO SCALE

JOB NAME: University of North Carolina - Chapel Hill
SCD#: 21-2354820A
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

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ENGINEER RICHARD O. DOZIER, III
Signed on 01/03/2024 using a Digital Signature.

ISSUE DATE: 1/8/2024
OB. NO.: 11706-00
DWG. NO.: E507

LUMINAIRE SCHEDULE

TYPE	MANUFACTURER	MODEL	SOURCE INFORMATION				ELECTRICAL INFORMATION				MOUNTING	FINISH	DESCRIPTION	ALTERNATE MANUFACTURER 1	ALTERNATE MANUFACTURER 2
			TYPE	MIN CRI	LUMEN OUTPUT	COLOR TEMP (K)	VOLTAGE	LOAD (W)	LOAD (W/FT)	DRIVER TYPE					
A1	DAYBRITE	FSS	LED	80	3000LM	3500K	UNV	21.8	--	0-10V DIMMING	CEILING, SUSPENDED	PER ARCHITECT	4' LONG SUSPENDED LED STRIP LIGHT FIXTURE, DROP LENS, HANGER CHAIN ACCESSORY.	COLUMBIA MPS	METALUX SNLED
A2	DAYBRITE	FSS	LED	80	5000LM	3500K	UNV	40.6	--	0-10V DIMMING	CEILING, SUSPENDED	PER ARCHITECT	SAME AS TYPE A1, EXCEPT HIGHER LUMEN OUTPUT.	COLUMBIA MPS	METALUX SNLED
A3	DAYBRITE	FSS	LED	80	5000LM	3500K	UNV	40.6	--	0-10V DIMMING	CEILING, SUSPENDED	PER ARCHITECT	SAME AS TYPE A2, EXCEPT WITH WIRE LENS GUARD ACCESSORY.	COLUMBIA MPS	METALUX SNLED
A4	DAYBRITE	FSS	LED	80	5000LM	3500K	UNV	40.6	--	0-10V DIMMING	SURFACE, WALL	PER ARCHITECT	SAME AS TYPE A2, EXCEPT WITH SURFACE WALL-MOUNTING ACCESSORY.	COLUMBIA MPS	METALUX SNLED
B1	DAYBRITE	FSW	LED	80	4000LM	3500K	UNV	29.2	--	DALI-2	CEILING, SURFACE	PER ARCHITECT	4' LONG SURFACE MOUNT WRAPAROUND LED FIXTURE, INTEGRAL PIR/MICROPHONICS DUAL TECHNOLOGY OCCUPANCY SENSOR CAPABLE OF AUTOMATICALLY DIMMING LIGHT OUTPUT AFTER A PERIOD OF NO OCCUPANCY, DALI DRIVER.	COLUMBIA MPS	METALUX SNX
C4	HE WILLIAMS	4DR-TL	LED	80	1000LM	3500K	UNV	9	--	DALI-2	CEILING, RECESSED	PER ARCHITECT	4.5" DIA. RECESSED LED DOWNLIGHT. GENERAL ILLUMINATION LIGHTING WITH 1.0 S/MH AND 55 DEGREE CUTOFF. L70 AT 60,000 HOURS. DALI DRIVER.	PRESCOLITE LTR-4RD	PORTFOLIO LD4B
E1	ANP LIGHTING	LA810	LED	90	2000LM	4000K	UNV	19	--	DALI-2	SURFACE, WALL	PER ARCHITECT	26" EXTERIOR WALL MOUNTED LATERN FIXTURE, WIDE DISTRIBUTION, CLEAR ACRYLIC LENS, WALL BRACKET ACCESSORY WM5161.	MAIN STREET LIGHTING	EVERGREEN LIGHTING
F1	HE WILLIAMS	PT	LED	80	2600LM	3500K	UNV	21.3	--	DALI-2	CEILING, RECESSED	PER ARCHITECT	2'W X 2'L RECESSED LED SHALLOW PLENUM TROFFER, ROUND, RIBBED ACRYLIC DIFFUSER. L80 AT 60,000 HOURS. DALI DRIVER.	DAY-BRITE EVOGRID	METALUX ENCOUNTER
F2	HE WILLIAMS	PT	LED	80	4300LM	3500K	UNV	34.7	--	DALI-2	CEILING, RECESSED	PER ARCHITECT	SAME AS TYPE F1, EXCEPT HIGHER LUMEN OUTPUT.	DAY-BRITE EVOGRID	METALUX ENCOUNTER
F3	HE WILLIAMS	PT	LED	80	6100LM	3500K	UNV	48.5	--	DALI-2	CEILING, RECESSED	PER ARCHITECT	2'W X 4'L RECESSED LED SHALLOW PLENUM TROFFER, ROUND, RIBBED ACRYLIC DIFFUSER. L80 AT 60,000 HOURS. DALI DRIVER.	DAY-BRITE EVOGRID	METALUX ENCOUNTER
F4	HE WILLIAMS	PT	LED	80	9000LM	3500K	UNV	66.6	--	DALI-2	CEILING, RECESSED	PER ARCHITECT	SAME AS TYPE F3, EXCEPT HIGHER LUMEN OUTPUT.	DAY-BRITE EVOGRID	METALUX ENCOUNTER
L1	COOPER	NEO-RAY DEFINE 2	LED	80	290LM/FT	3500K	UNV	--	3	DALI-2	CEILING, RECESSED	PER ARCHITECT	4' LINEAR RECESSED LED FIXTURE, FLAT DIFFUSE SATIN ACRYLIC OPTIC, DALI DRIVER.	FOCAL POINT SEEM 2	AXIS LIGHTING BEAM 2
L2	COOPER	NEO-RAY DEFINE 2	LED	80	290LM/FT	3500K	UNV	--	3	DALI-2	CEILING, RECESSED	PER ARCHITECT	4' LINEAR RECESSED LED FIXTURE, FLAT DIFFUSE ACRYLIC OPTIC WITH ASYMMETRIC WALL WASH OPTIC, DALI DRIVER.	FOCAL POINT SEEM 2	AXIS LIGHTING BEAM 2
L3	COOPER	NEO-RAY DEFINE 2	LED	80	675LM/FT	3500K	UNV	--	6	DALI-2	CEILING, RECESSED	PER ARCHITECT	SAME AS TYPE L1, EXCEPT HIGHER LUMEN OUTPUT.	FOCAL POINT SEEM 2	AXIS LIGHTING BEAM 2
L4	COOPER	NEO-RAY DEFINE 2	LED	80	1005LM/FT	3500K	UNV	--	10.6	DALI-2	CEILING, RECESSED	PER ARCHITECT	SAME AS TYPE L1, EXCEPT HIGHER LUMEN OUTPUT.	FOCAL POINT SEEM 2	AXIS LIGHTING BEAM 2
V1	HE WILLIAMS	LLM	LED	80	1000LM	3500K	UNV	6.7	--	DALI-2	SURFACE, WALL	PER ARCHITECT	2' LONG WALL MOUNTED SLIMLINE FIXTURE, SQUARE FROSTED ACRYLIC DIFFUSER. L70 AT 60,000 HOURS.DALI DRIVER.	LITECONTROL 67L-W-D	DAY-BRITE FLUXSPACE
W1	HE WILLIAMS	WPS2	LED	80	2600LM	5000K	UNV	28	--	DALI-2	SURFACE, WALL	PER ARCHITECT	WALL MOUNTED LED WALL PACK FIXTURE, INTEGRAL MOTION SENSOR.	INVUE CLEARCURVE	KIM LIGHTING WDS
W2	HE WILLIAMS	WPS2	LED	80	2600LM	5000K	UNV	28	--	DALI-2	SURFACE, WALL	PER ARCHITECT	WALL MOUNTED LED WALL PACK FIXTURE.	INVUE CLEARCURVE	KIM LIGHTING WDS
X1	CHLORIDE	44R	LED	N/A	N/A	N/A	UNV	3	--	N/A	UNIVERSAL	PER ARCHITECT	EDGE LIT LED EXIT SIGN, AC POWER ONLY, GREEN LETTERS. NUMBER OF FACES, TYPE OF MOUNTING AND DIRECTIONAL ARROWS AS INDICATED ON LIGHTING PLANS.	COMPASS CEL	SURE-LITES LPX

LIGHTING INVERTER SCHEDULE

DESIGNATON	SYSTEM INPUT VOLTAGE			BATTERY		SYSTEM OUTPUT VOLTAGE			POWER RATING VA	TOTAL SYSTEM DIMENSIONS
	VOLTS	PHASE	WIRES (NOTE 1)	RUNTIME, MINUTES	TYPE	VOLTS	PHASE	WIRES (NOTE 1)		
INV-B-1	277	1	2	90	Lead-Calcium	277	1	2	250	27"W x 12"L x 8"D
INV-B-2	277	1	2	90	Lead-Calcium	277	1	2	750	24"W x 20"L x 15"D
INV-B-3	277	1	2	90	Lead-Calcium	277	1	2	750	24"W x 20"L x 15"D
INV-B-4	277	1	2	90	Lead-Calcium	277	1	2	750	24"W x 20"L x 15"D
INV-1-1	277	1	2	90	Lead-Calcium	277	1	2	750	24"W x 20"L x 15"D
INV-1-2	277	1	2	90	Lead-Calcium	277	1	2	750	24"W x 20"L x 15"D
INV-2-1	277	1	2	90	Lead-Calcium	277	1	2	750	24"W x 20"L x 15"D
INV-2-2	277	1	2	90	Lead-Calcium	277	1	2	750	24"W x 20"L x 15"D
INV-3-1	277	1	2	90	Lead-Calcium	277	1	2	750	24"W x 20"L x 15"D
INV-3-2	277	1	2	90	Lead-Calcium	277	1	2	750	24"W x 20"L x 15"D

NOTES:
1. PLUS EQUIPMENT GROUND.
2. 90 MINUTE, UL 924 LISTED EMERGENCY LIGHTING INVERTER. INVERTER SHALL BE PROVIDED WITH POWER RATING AND VOLTAGE AS INDICATED ABOVE. EQUIPMENT SHALL BE PROVIDED WITH MINIMUM 3 YEAR BATTERY WARRANTY. MANUFACUTERS: MYERS EMERGENCY POWER SYSTEMS, IOTA, DUAL-LITE. PROVIDE SELF TESTING FEATURE FOR AUTOMATIC MONTHLY AND ANNUAL BATTERY TESTING. SYSTEM SHALL ENSURE OPERATIONAL READINESS AND LOG TEST, EVENT, AND ALARM DATA.

LORD AECK SARGENT

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Firm Lic. # P-0212

SHEET TITLE: ELECTRICAL SCHEDULES
SCALE (U.N.O.):

JOB NAME: University of North Carolina - Chapel Hill
SCD#: 21-035482-02A
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

SEAL: NORTH CAROLINA PROFESSIONAL ENGINEER RICHARD O. DOZIER
DocuSigned by: 8B290DD3BCE3457...
Signed on 01/04/2024 using a Digital Signature.

ISSUE DATE: 1/8/2024
JOB. NO.: 11706-00
DWG. NO.: E600

MECHANICAL AND PLUMBING EQUIPMENT CONNECTION SCHEDULE

NAME	DESCRIPTION	LOAD	CONNECTION INFO		MOTOR INFO		HOMERUN INFO		DISCONNECT	STARTER	NOTES
			VOLTAGE	NUMBER OF POLES	QUANTITY	HP	PANEL	CIRCUIT			
AHU-3-1	AIR HANDLING UNIT	44.0 kVA	480 V	3	4	10	MDH0	5		VFD	
AHU-B-1	AIR HANDLING UNIT	22.0 kVA	480 V	3	2	10	MDH0	4		VFD	
CRU-B-1	CONDENSATE RETURN UNIT	4.0 kVA	480 V	3	1	3	MH1	1,3,5	30/3/F/1		6
E-1	ELEVATOR	43.2 kVA	480 V	3	1	40	MDP	5	200/3/F/3R		6
F-1-1	EXHAUST FAN	0.3 kVA	480 V	3	1	0.0625	MH1	19,21,23	30/3/F/1		6
F-3-1	EXHAUST FAN	11.6 kVA	480 V	3	1	10	MH3	7,9,11		VFD	
F-3-2	EXHAUST FAN	2.5 kVA	480 V	3	1	2	MH3	13,15,17		VFD	
F-B-2	EXHAUST FAN	0.5 kVA	480 V	3	1	0.25	MH1	7,9,11	30/3/F/1		6
F-B-3	EXHUAST FAN	0.3 kVA	480 V	3	1	0.0625	MH1	13,15,17	30/3/F/1		6
FCU-1-1	FAN COIL UNIT	1.0 kVA	120 V	1	1	0.08	ML1	1	TOGGLE		
FCU-1-2	FAN COIL UNIT	1.0 kVA	120 V	1	1	0.08	ML1	3	TOGGLE		
FCU-2-1	FAN COIL UNIT	1.0 kVA	120 V	1	1	0.08	ML3	1	TOGGLE		
FCU-3-1	FAN COIL UNIT	1.0 kVA	120 V	1	1	0.08	ML3	3	TOGGLE		
FCU-3-2	FAN COIL UNIT	1.0 kVA	120 V	1	1	0.08	ML3	5	TOGGLE		
FCU-3-3	FAN COIL UNIT	1.0 kVA	120 V	1	1	0.08	ML3	7	TOGGLE		
FCU-B-1	FAN COIL UNIT	1.0 kVA	120 V	1	1	0.08	ML0	7	TOGGLE		
FCU-B-2	FAN COIL UNIT	1.0 kVA	120 V	1	1	0.08	ML0	9	TOGGLE		
FCU-B-3	FAN COIL UNIT	1.0 kVA	120 V	1	1	0.08	ML0	11	TOGGLE		
FCU-B-4	FAN COIL UNIT	1.2 kVA	120 V	1	1	0.5	ML0	13	TOGGLE		
HT-1	HEAT TRACE	1.2 kVA	277 V	1	1	0	MH1	8	INTEGRAL		
P-1-1	INLINE PUMP	17.5 kVA	480 V	3	1	10	MH1	2,4,6		VFD	
P-3-1	INLINE PUMP	0.1 kVA	120 V	1	1	0.125	ML3	15			6
P-B-1	INLINE PUMP	9.1 kVA	480 V	3	1	3	MH1	10,12,14		VFD	
P-B-2	INLINE PUMP	9.1 kVA	480 V	3	1	3	MH1	16,18,20		VFD	
P-B-3	INLINE PUMP	0.1 kVA	120 V	1	1	0.125	ML0	41			6
SP-0-1	SUMP PUMP	1.0 kVA	120 V	1	1	0.5	ML0	15	INTEGRAL		
SP-0-2	SUMP PUMP	1.0 kVA	120 V	1	1	0.5	ML0	17	30/1/F/3R		6
SP-0-3	SUMP PUMP	1.0 kVA	120 V	1	1	0.5	ML0	19	INTEGRAL		
UH-1-1	UNIT HEATER	5.5 kVA	277 V	1	--	0	MH1	27	INTEGRAL		
UH-1-2	UNIT HEATER	6.5 kVA	277 V	1	--	0	MH1	29	INTEGRAL		
UH-B-1	UNIT HEATER	1.0 kVA	277 V	1	--	0	MH1	25	INTEGRAL		
WH-1-1	WATER HEATER	4.2 kVA	277 V	1	--	0	MH1	31	30/1/F/3R		6
WH-1-2	WATER HEATER	4.2 kVA	277 V	1	--	0	MH1	33	30/1/F/3R		6
WH-1-3	WATER HEATER	4.2 kVA	277 V	1	--	0	MH1	35	30/1/F/3R		6
WH-1-4	WATER HEATER	4.2 kVA	277 V	1	--	0	MH1	37	30/1/F/3R		6
WH-2-1	WATER HEATER	8.3 kVA	480 V	2	--	0	MH3	19,21	30/2/F/3R		6
WH-2-2	WATER HEATER	8.3 kVA	480 V	2	--	0	MH3	23,25	30/2/F/3R		6
WH-2-3	WATER HEATER	4.2 kVA	277 V	1	--	0	MH3	27	30/1/F/3R		6
WH-3-1	WATER HEATER	4.2 kVA	277 V	1	--	0	MH3	29	30/1/F/3R		6
WH-3-2	WATER HEATER	4.2 kVA	277 V	1	--	0	MH3	31	30/1/F/3R		6
WH-B-1	WATER HEATER	75.0 kVA	480 V	3	--	0	MDH0	6	200/3/F/3R		6

MECHANICAL AND PLUMBING EQUIPMENT CONNECTION SCHEDULE NOTES:

1. STARTER:

   VFD - VARIABLE FREQUENCY DRIVE

2. STARTERS WILL BE FURNISHED UNDER OTHER DIVISIONS OF THIS WORK AND MOUNTED AND INSTALLED BY DIVISION 26. COORDINATE THE LOCATIONS OF STARTERS OR OTHER CONTROL DEVICES WITH THE EQUIPMENT BEING CONTROLLED, AND IN ACCORDANCE WITH NFPA 70 - 2020. THE INSTALLED LOCATION OF MOTORS, EQUIPMENT, AND ASSOCIATED DUCTWORK SHALL BE CONSIDERED TO ENSURE CLEARANCE, ACCESS, AND SIGHT REQUIREMENTS.

3. SEE ELECTRICAL PANELBOARD SCHEDULES FOR CIRCUIT OCPD, CONDUCTOR, AND RACEWAY SIZES.

4. PROVIDE DISCONNECT SWITCH AS INDICATED. IF EQUIPMENT IS PROVIDED WITH INTEGRAL DISCONNECT SWITCH, AN ADDITIONAL DISCONNECT SWITCH IS NOT REQUIRED EXCEPT FOR LOCATIONS WHERE VFD IS LOCATED OUT OF SIGHT OF THE EQUIPMENT, THEN A SEPARATE DISCONNECT SHALL BE PROVIDED AS NOTED.

5. PROVIDE FUSES SIZED PER MANUFACTURER REQUIREMENTS.

6. PROVIDE LIQUID TIGHT CONDUIT CONNECTIONS TO DISCONNECTS.

LORD AECK SARGENT

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Firm Lic. # P-0212

SHEET TITLE: ELECTRICAL SCHEDULES

SCALE: (U.N.O.)

JOB NAME: University of North Carolina - Chapel Hill

SCO#: 21-23548-02A

BINGHAM HALL RENOVATION

LOCATION: 386 Lenoir Drive, Chapel Hill, NC 27514

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Signed on 01/03/2024 using a Digital Signature.

ISSUE DATE: 1/8/2024

OB. NO.: 11706-00

DWG. NO.: E601

DISTRIBUTION PANELBOARD "MDP" SCHEDULE

VOLTS: 480/277 Wye
PHASES: 3
WIRE: 4
BUS: 800 A
MAIN: 800A/3P MCB
SCCR: 25KAIC
MOUNTING: SURFACE
LOCATION: ELEC B026

NOTES:
1. PROVIDE 100% RATED, LSI TYPE MAIN CIRCUIT BREAKER.
2. PROVIDE INTEGRAL TO PANELBOARD SURGE PROTECTION DEVICE.
3. PROVIDE INTEGRAL TO PANELBOARD POWER METERING DEVICE AT MAIN CIRCUIT BREAKER.
4. SEE TRANSFORMER FEEDER SCHEDULE.

CKT #	LOAD DESCRIPTION	POLES	FRAME	TRIP	Load	REMARKS	FEEDER
1	MDH0	3	400 A	400 A	281 kVA	LSI	SEE RISER DIAGRAM
2	PDL0 (VIA T-PDL0)	3	250 A	175 A	105 kVA		NOTE 4
3	LH0	3	250 A	150 A	13 kVA		SEE RISER DIAGRAM
4	PL0T (VIA T-PL0T)	3	100 A	70 A	5 kVA		NOTE 4
5	ELEVATOR	3	100 A	90 A	43 kVA		3#2 & 1#8G ~ 1.5"C
6	SPARE	3	100 A	100 A	0 kVA		--
7	SPARE	3	100 A	100 A	0 kVA		--
8	SPARE	3	150 A	150 A	0 kVA		--
9	SPACE	3	--	--	--		--
10	SPACE	3	--	--	--		--
11	SPACE	3	--	--	--		--
12	SPACE	3	--	--	--		--

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	CALCULATED LOAD
Lighting	12.8 kVA	100.00%	12.8 kVA
Other	314.6 kVA	100.00%	314.6 kVA
Power	46.0 kVA	100.00%	46.0 kVA
Receptacle	73.2 kVA	56.83%	41.6 kVA

CONNECTED LOAD: 537 A 447 kVA
CALCULATED LOAD: 499 A 415 kVA

DISTRIBUTION PANELBOARD "MDH0" SCHEDULE

VOLTS: 480/277 Wye
PHASES: 3
WIRE: 4
BUS: 400 A
MAIN: MLO
SCCR: 25KAIC
MOUNTING: SURFACE
LOCATION: ELEC B026

NOTES:
1. PROVIDE INTEGRAL TO PANELBOARD SURGE PROTECTION DEVICE.
2. PROVIDE INTEGRAL TO PANELBOARD POWER METERING DEVICE.
3. SEE TRANSFORMER FEEDER SCHEDULE.

CKT #	LOAD DESCRIPTION	POLES	FRAME	TRIP	Load	REMARKS	FEEDER
1	ML0 (VIA T-ML0)	3	100 A	70 A	20 kVA		NOTE 3
2	MH1	3	250 A	150 A	72 kVA		SEE RISER DIAGRAM
3	MH3	3	250 A	150 A	49 kVA		SEE RISER DIAGRAM
4	AHU-B-1 (2 x 10HP)	3	100 A	70 A	22 kVA		3#4 & 1#8G ~ 1.25"C
5	AHU-3-1 (4 x 10HP)	3	125 A	100 A	44 kVA		3#2 & 1#8G ~ 1.5"C
6	WH-B-1	3	150 A	125 A	75 kVA		3#1/0 & 1#G ~ "C
7	SPARE	3	100 A	100 A	0 kVA		--
8	SPARE	3	100 A	60 A	0 kVA		--
9	SPARE	3	60 A	30 A	0 kVA		--
10	SPACE	3	--	--	--		--
11	SPACE	3	--	--	--		--
12	SPACE	3	--	--	--		--

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	CALCULATED LOAD
Other	269.3 kVA	100.00%	269.3 kVA
Power	12.0 kVA	100.00%	12.0 kVA

CONNECTED LOAD: 338 A 281 kVA
CALCULATED LOAD: 338 A 281 kVA

DISTRIBUTION PANELBOARD "PDL0" SCHEDULE

VOLTS: 120/208 Wye
PHASES: 3
WIRE: 4
BUS: 400 A
MAIN: 400A/3P MCB
SCCR: 10KAIC
MOUNTING: SURFACE
LOCATION: ELEC B026

NOTES:
1. PROVIDE LSI TYPE MAIN CIRCUIT BREAKER.
2. PROVIDE INTEGRAL TO PANELBOARD SURGE PROTECTION DEVICE.
3. PROVIDE INTEGRAL TO PANELBOARD POWER METERING DEVICE AT MAIN CIRCUIT BREAKER.

CKT #	LOAD DESCRIPTION	POLES	FRAME	TRIP	Load	REMARKS	FEEDER
1	PL1A	3	250 A	225 A	19 kVA		SEE RISER DIAGRAM
2	PL1B	3	250 A	225 A	18 kVA		SEE RISER DIAGRAM
3	PL2A	3	250 A	225 A	19 kVA		SEE RISER DIAGRAM
4	PL2B	3	250 A	225 A	17 kVA		SEE RISER DIAGRAM
5	PL3A	3	250 A	225 A	20 kVA		SEE RISER DIAGRAM
6	PL3B	3	250 A	225 A	11 kVA		SEE RISER DIAGRAM
7	SPARE	3	250 A	225 A	0 kVA		--
8	SPARE	3	250 A	225 A	0 kVA		--
9	SPACE (250AF/3P PROVISIONAL)	3	--	--	--		--
10	SPACE (250AF/3P PROVISIONAL)	3	--	--	--		--
11	SPACE (250AF/3P PROVISIONAL)	3	--	--	--		--
12	SPACE (250AF/3P PROVISIONAL)	3	--	--	--		--

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	CALCULATED LOAD
Other	2.2 kVA	100.00%	2.2 kVA
Power	32.5 kVA	100.00%	32.5 kVA
Receptacle	69.9 kVA	57.15%	40.0 kVA

CONNECTED LOAD: 290 A 105 kVA
CALCULATED LOAD: 207 A 75 kVA

LOAD CALCULATION

LOAD TYPE	CONNECTED (KVA)	DEMAND FACTOR	DEMAND (KVA)
RECEPTACLE	78	FIRST 10 kVA @ 100%, REST AT 50%	44.0
LIGHTING	12.8	100%	12.5
MECHANICAL	196.6	100%	196.6
ELEVATOR	43.2	100%	43.2
INSTANTANEOUS WATER HEATERS	121	100%	121
TOTAL (KVA)	451.6		417.3
TOTAL (AMPS)	543.2		501.9

LORD AECK SARGENT

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SHEET TITLE: ELECTRICAL SCHEDULES
SCALE (U.N.O.)

JOB NAME: University of North Carolina - Chapel Hill
SCI#: 21-235492A
LOCATION: BINGHAM HALL RENOVATION
36 Lenoir Drive, Chapel Hill, NC 27514

SEAL
DocuSigned by:
88290D03BCE3457...
SEAL 044143 ENGINEER RICHARD O. DOZIER III
Signed on 01/03/2024 using a Digital Signature.

ISSUE. DATE: 1/8/2024
OB. NO.: 11706-00
DWG. NO.: E602

PANELBOARD "LH0" SCHEDULE

VOLTS: 480/277 Wye **BUS:** 225 A **MOUNTING:** SURFACE
PHASES: 3 **MAIN:** MLO **SECTIONS:**
WIRE: 4 **SCCR:** 25 KAIC **LOCATION:** ELEC B026

NOTES:
1. ROUTE BRANCH CIRCUITS TO LIGHTING INVERTER AS INDICATED IN LOAD DESCRIPTION.

LOAD DESCRIPTION	WIRE & CONDUIT	CB TRIP / POLES	CKT #	A	B	C	CKT #	CB TRIP / POLES	WIRE & CONDUIT	LOAD DESCRIPTION
LTG - LV 0	2#12 & 1#12G ~ 0.75"C	20 A 1	1	0.3 3.1			2	3 100 A	SEE RISER DIAGRAM	PANEL LH2
LTG - LV 0 CORR	2#12 & 1#12G ~ 0.75"C	20 A 1	3		0.0 2.1		4	-- --	--	--
INV-B-2 - LTG SITE (1)	2#12 & 1#12G ~ 0.75"C	20 A 1	5			0.4 2.3	6	-- --	--	--
LTG - LV 1	2#12 & 1#12G ~ 0.75"C	20 A 1	7	1.2 0.0			8	1 20 A	--	SPARE
LTG - LV 1 CORR	2#12 & 1#12G ~ 0.75"C	20 A 1	9		1.2 0.0		10	1 20 A	--	SPARE
INV-B-1 -EMG LTG 1 (1)	2#12 & 1#12G ~ 0.75"C	20 A 1	11			0.1 0.0	12	1 20 A	--	SPARE
INV-1-1 -EMG LTG 1 (1)	2#12 & 1#12G ~ 0.75"C	20 A 1	13	0.6 --			14	1 --	--	SPACE
INV-1-2 -EMG LTG 1 (1)	2#12 & 1#12G ~ 0.75"C	20 A 1	15		0.6 --		16	1 --	--	SPACE
LTG - STEAM VAULT	2#12 & 1#12G ~ 0.75"C	20 A 1	17			0.1 --	18	1 --	--	SPACE
INV-B-3 - LTG S ST (1)	2#12 & 1#12G ~ 0.75"C	20 A 1	19	0.2 --			20	1 --	--	SPACE
INV-B-3 - LTG S ST (1)	2#12 & 1#12G ~ 0.75"C	20 A 1	21		0.2 --		22	1 --	--	SPACE
INV-B-4 - LTG N ST (1)	2#12 & 1#12G ~ 0.75"C	20 A 1	23			0.2 --	24	1 --	--	SPACE
INV-B-4 - LTG N ST (1)	2#12 & 1#12G ~ 0.75"C	20 A 1	25	0.2 --			26	1 --	--	SPACE
SPARE	--	20 A 1	27		0.0 --		28	1 --	--	SPACE
SPARE	--	20 A 1	29			0.0 --	30	1 --	--	SPACE
		PHASE TOTALS:		5.5 kVA	4.2 kVA	3.1 kVA				

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	CALCULATED LOAD
Lighting	12.8 kVA	100.00%	12.8 kVA

CONNECTED LOAD: 15.3 A 12.8 kVA
CALCULATED LOAD: 15.3 A 12.8 kVA

PANELBOARD "ML0" SCHEDULE

VOLTS: 120/208 Wye **BUS:** 225 A **MOUNTING:** SURFACE
PHASES: 3 **MAIN:** 150A/3P MCB **SECTIONS:**
WIRE: 4 **SCCR:** 10 KAIC **LOCATION:** ELEC B026

NOTES:
1. PROVIDE GFCI TYPE CIRCUIT BREAKER.
2. CIRCUIT BREAKER SHALL BE PROVIDED WITH A BREAKER HANDLE LOCK-ON DEVICE AND IDENTIFIED WITH A 1/4" PERMANENT RED DOT APPLIED TO EXPOSED BODY AREA PER NC SCO GUIDELINES.

LOAD DESCRIPTION	WIRE & CONDUIT	CB TRIP / POLES	CKT #	A	B	C	CKT #	CB TRIP / POLES	WIRE & CONDUIT	LOAD DESCRIPTION
ML1	SEE RISER DIAGRAM	70 A 3	1	1.5 0.0			2	1 15 A	2#12 & 1#12G ~ 0.75"C	PWR - TRAP PRIM PNL
--	--	-- --	3		1.0 0.0		4	1 20 A	--	SPARE
--	--	-- --	5			0.5 0.0	6	1 20 A	--	SPARE
FCU-B-1 (0.08HP)	2#12 & 1#12G ~ 0.75"C	20 A 1	7	1.0 0.0			8	1 20 A	--	SPARE
FCU-B-2 (0.08HP)	2#12 & 1#12G ~ 0.75"C	20 A 1	9		1.0 0.0		10	1 20 A	--	SPARE
FCU-B-3 (0.08HP)	2#12 & 1#12G ~ 0.75"C	20 A 1	11			1.0 0.0	12	1 20 A	--	SPARE
FCU-B-4 (0.08HP)	2#12 & 1#12G ~ 0.75"C	20 A 1	13	1.2 0.0			14	1 20 A	--	SPARE
SP-0-1 (0.5 HP) (1)	2#12 & 1#12G ~ 0.75"C	20 A 1	15		1.0 0.0		16	1 20 A	--	SPARE
SP-0-2 (0.5 HP) (1)	2#12 & 1#12G ~ 0.75"C	20 A 1	17			1.0 0.0	18	1 20 A	--	SPARE
SP-0-3 (0.5 HP) (1)	2#12 & 1#12G ~ 0.75"C	20 A 1	19	1.0 0.0			20	1 20 A	--	SPARE
PWR - AHU-B-1 LTG	2#12 & 1#12G ~ 0.75"C	20 A 1	21		0.5 --		22	1 --	--	SPACE
PWR - AHU-B-1 UV LTG	2#12 & 1#12G ~ 0.75"C	20 A 1	23			0.5 --	24	1 --	--	SPACE
PWR - BAS B029	2#12 & 1#12G ~ 0.75"C	20 A 1	25	0.5 --			26	1 --	--	SPACE
PWR - SUMP 1 CNTRL	2#12 & 1#12G ~ 0.75"C	20 A 1	27		0.5 --		28	1 --	--	SPACE
PWR - SUMP 2 CNTRL	2#12 & 1#12G ~ 0.75"C	20 A 1	29			0.5 --	30	1 --	--	SPACE
PWR - SUMP 3 CNTRL	2#12 & 1#12G ~ 0.75"C	20 A 1	31	0.5 --			32	1 --	--	SPACE
PWR - HT-1	2#10 & 1#10G ~ 0.75"C	30 A 2	33		2.5 --		34	1 --	--	SPACE
--	--	-- --	35			2.5 --	36	1 --	--	SPACE
PWR - FP AIR COMP (2)	2#12 & 1#12G ~ 0.75"C	20 A 1	37	0.5 --			38	1 --	--	SPACE
PWR - HOTBOX (1)	2#10 & 1#10G ~ 1"C	20 A 1	39		1.0 --		40	1 --	--	SPACE
P-B-3 (0.125 HP)	2#12 & 1#12G ~ 0.75"C	20 A 1	41			0.1 --	42	1 --	--	SPACE
		PHASE TOTALS:		6.2 kVA	7.5 kVA	6.1 kVA				

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	CALCULATED LOAD
Other	9.2 kVA	100.00%	9.2 kVA
Power	10.5 kVA	100.00%	10.5 kVA

CONNECTED LOAD: 54.8 A 19.8 kVA
CALCULATED LOAD: 54.8 A 19.8 kVA

PANELBOARD "LH2" SCHEDULE

VOLTS: 480/277 Wye **BUS:** 100 A **MOUNTING:** SURFACE
PHASES: 3 **MAIN:** MLO **SECTIONS:**
WIRE: 4 **SCCR:** 14 KAIC **LOCATION:** ELEC 2026A

NOTES:
1. ROUTE BRANCH CIRCUITS TO LIGHTING INVERTER AS INDICATED IN LOAD DESCRIPTION.

LOAD DESCRIPTION	WIRE & CONDUIT	CB TRIP / POLES	CKT #	A	B	C	CKT #	CB TRIP / POLES	WIRE & CONDUIT	LOAD DESCRIPTION
LTG - LV 2	2#12 & 1#12G ~ 0.75"C	20 A 1	1	1.1 0.0			2	1 20 A	--	SPARE
LTG - LV 2	2#12 & 1#12G ~ 0.75"C	20 A 1	3		0.8 0.0		4	1 20 A	--	SPARE
LTG - LV 2 CORR	2#12 & 1#12G ~ 0.75"C	20 A 1	5			0.9 0.0	6	1 20 A	--	SPARE
INV-2-1 - EM LTG 2 (1)	2#12 & 1#12G ~ 0.75"C	20 A 1	7	0.7 --			8	1 --	--	SPACE
INV-2-2 - EM LTG 2 (2)	2#12 & 1#12G ~ 0.75"C	20 A 1	9		0.5 --		10	1 --	--	SPACE
LTG - LV 3	2#12 & 1#12G ~ 0.75"C	20 A 1	11			0.9 --	12	1 --	--	SPACE
LTG - LV 3	2#12 & 1#12G ~ 0.75"C	20 A 1	13	0.6 --			14	1 --	--	SPACE
LTG - LV 3 CORR	2#12 & 1#12G ~ 0.75"C	20 A 1	15		0.8 --		16	1 --	--	SPACE
INV-3-1 - EMG - LTG 3 (3)	2#12 & 1#12G ~ 0.75"C	20 A 1	17			0.5 --	18	1 --	--	SPACE
INV-3-2 - EMG - LTG 3 (4)	2#12 & 1#12G ~ 0.75"C	20 A 1	19	0.7 --			20	1 --	--	SPACE
SPARE	--	20 A 1	21		0.0 --		22	1 --	--	SPACE
SPARE	--	20 A 1	23			0.0 --	24	1 --	--	SPACE
SPARE	--	20 A 1	25	0.0 --			26	1 --	--	SPACE
SPARE	--	20 A 1	27		0.0 --		28	1 --	--	SPACE
SPARE	--	20 A 1	29			0.0 --	30	1 --	--	SPACE
		PHASE TOTALS:		3.1 kVA	2.1 kVA	2.3 kVA				

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	CALCULATED LOAD
Lighting	7.5 kVA	100.00%	7.5 kVA

CONNECTED LOAD: 9.1 A 7.5 kVA
CALCULATED LOAD: 9.1 A 7.5 kVA

PANELBOARD "PL0T" SCHEDULE

VOLTS: 120/208 Wye **BUS:** 225 A **MOUNTING:** SURFACE
PHASES: 3 **MAIN:** 150A/3P MCB **SECTIONS:**
WIRE: 4 **SCCR:** 10 KAIC **LOCATION:** ELEC B026

NOTES:
1. CIRCUIT BREAKER SHALL BE PROVIDED WITH A BREAKER HANDLE LOCK-ON DEVICE AND IDENTIFIED WITH A 1/4" PERMANENT RED DOT APPLIED TO EXPOSED BODY AREA PER NC SCO GUIDELINES.

LOAD DESCRIPTION	WIRE & CONDUIT	CB TRIP / POLES	CKT #	A	B	C	CKT #	CB TRIP / POLES	WIRE & CONDUIT	LOAD DESCRIPTION
REC- COORI-B00/29/34	2#12 & 1#12G ~ 0.75"C	20 A 1	1	0.9 0.0			2	1 20 A	--	SPARE
REC-TELECOM B031	2#12 & 1#12G ~ 0.75"C	20 A 1	3		0.4 0.0		4	1 20 A	--	SPARE
REC-TELECOM B031	2#12 & 1#12G ~ 0.75"C	20 A 1	5			0.4 0.0	6	1 20 A	--	SPARE
REC-TELECOM B031	2#12 & 1#12G ~ 0.75"C	20 A 1	7	0.4 0.0			8	1 20 A	--	SPARE
REC-ELEC RM B026	2#12 & 1#12G ~ 0.75"C	20 A 1	9		0.2 0.0		10	1 20 A	--	SPARE
REC-ELEVATOR PIT	2#12 & 1#12G ~ 0.75"C	20 A 1	11			0.2 0.0	12	1 20 A	--	SPARE
REC-ELEV. RM B026A	2#12 & 1#12G ~ 0.75"C	20 A 1	13	0.2 0.0			14	1 20 A	--	SPARE
REC-STEAM RM B004	2#10 & 1#10G ~ 0.75"C	20 A 1	15		0.2 --		16	1 --	--	SPACE
REC-CRAWL SPACE	2#12 & 1#12G ~ 0.75"C	20 A 1	17			0.2 --	18	1 --	--	SPACE
REC-TELE RM B031	2#12 & 1#12G ~ 0.75"C	20 A 1	19	0.2 --			20	1 --	--	SPACE
REC-TELE RM B031	2#12 & 1#12G ~ 0.75"C	20 A 1	21		0.2 --		22	1 --	--	SPACE
PWR - FA FACP (1)	2#12 & 1#12G ~ 0.75"C	20 A 1	23			0.5 --	24	1 --	--	SPACE
PWR - FA AMP (1)	2#12 & 1#12G ~ 0.75"C	20 A 1	25	0.5 --			26	1 --	--	SPACE
PWR - FA RAT (1)	2#12 & 1#12G ~ 0.75"C	20 A 1	27		0.5 --		28	1 --	--	SPACE
SPARE	--	20 A 1	29			0.0 --	30	1 --	--	SPACE
SPARE	--	20 A 1	31	0.0 --			32	1 --	--	SPACE
SPARE	--	20 A 1	33		0.0 --		34	1 --	--	SPACE
SPARE	--	20 A 1	35			0.0 --	36	1 --	--	SPACE
SPARE	--	20 A 1	37	0.0 --			38	1 --	--	SPACE
SPARE	--	20 A 1	39		0.0 --		40	1 --	--	SPACE
SPARE	--	20 A 1	41			0.0 --	42	1 --	--	SPACE
		PHASE TOTALS:		2.1 kVA	1.4 kVA	1.2 kVA				

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	CALCULATED LOAD
Power	1.5 kVA	100.00%	1.5 kVA
Receptacle	3.2 kVA	100.00%	3.2 kVA

CONNECTED LOAD: 13.2 A 4.7 kVA
CALCULATED LOAD: 13.2 A 4.7 kVA

SCHEDULE LEGEND	
LH0	ML0
LH2	PL0T

LORD AECK SARGENT

REVISION:

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Firm Lic. # P-0212

SHEET TITLE: ELECTRICAL SCHEDULES
SCALE (U.N.O.)

JOB NAME: University of North Carolina - Chapel Hill
SCO#: 21-035482-0A
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

SEAL
DocuSigned by:
88290DD38DE3457...
SEAL 044143
ENGINEER
RICHARD O. DOZIER, III
Signed on 01/03/2024 using a Digital Signature.

ISSUE DATE: 1/8/2024
OB. NO.: 11706-00
DWG. NO.: E603

PANELBOARD "PL2A" SCHEDULE

VOLTS: 120/208 Wye **BUS:** 225 A **MOUNTING:** SURFACE
PHASES: 3 **MAIN:** MLO **SECTIONS:** 1
WIRE: 4 **SCCR:** 10 KAIC **LOCATION:**

NOTES:
1. PROVIDE GFCI BREAKER.
2. CIRCUIT BREAKER SHALL BE PROVIDED WITH A BREAKER HANDLE LOCK-ON DEVICE AND IDENTIFIED WITH A 1/4" PERMANENT RED DOT APPLIED TO EXPOSED BODY AREA PER NC SCO GUIDELINES.

LOAD DESCRIPTION	WIRE & CONDUIT	CB TRIP / POLES		CKT #	A		B		C		CKT #	CB TRIP / POLES		WIRE & CONDUIT	LOAD DESCRIPTION
REC-CORRI 2000/2000B	2#12 & 1#12G ~ 0.75"C	20 A	1	1	0.7	0.4					2	1	20 A	2#12 & 1#12G ~ 0.75"C	REC-WORK RM 2026
REC-CLASS RM 2029	2#12 & 1#12G ~ 0.75"C	20 A	1	3			0.7	1.5			4	1	20 A	2#12 & 1#12G ~ 0.75"C	PWR-TOIL. LV 2022/24(2)
REC-CLASS RM 2029	2#12 & 1#12G ~ 0.75"C	20 A	1	5					0.5	1.5	6	1	20 A	2#12 & 1#12G ~ 0.75"C	PWR - TU S201-203
REC-TV 2029	2#12 & 1#12G ~ 0.75"C	20 A	1	7	0.4	1.0					8	1	20 A	2#12 & 1#12G ~ 0.75"C	PWR - TU S204-205
PT-CLASS RM 2029	2#12 & 1#12G ~ 0.75"C	20 A	1	9			0.4	2.0			10	1	20 A	2#12 & 1#12G ~ 0.75"C	PWR - TU S213-216
REC-LACT. 2027	2#12 & 1#12G ~ 0.75"C	20 A	1	11					0.5	0.2	12	1	20 A	2#12 & 1#12G ~ 0.75"C	REC - MICROWAVE 2026
REC- OFFICE 2025	2#12 & 1#12G ~ 0.75"C	20 A	1	13	0.7	1.2					14	1	20 A	2#12 & 1#12G ~ 0.75"C	REC - MICROWAVE 2026
REC- OFFICE 2021	2#12 & 1#12G ~ 0.75"C	20 A	1	15			0.7	0.5			16	1	20 A	2#12 & 1#12G ~ 0.75"C	PWR - NAC 2026A (2)
REC- OFFICE 2017	2#12 & 1#12G ~ 0.75"C	20 A	1	17					0.7	0.5	18	1	20 A	2#12 & 1#12G ~ 0.75"C	PWR - DALI/KNX 2026A
REC- OFFICE 2015	2#12 & 1#12G ~ 0.75"C	20 A	1	19	0.7	0.0					20	1	20 A	--	SPARE
REC- OFFICE 2013	2#12 & 1#12G ~ 0.75"C	20 A	1	21			0.7	0.0			22	1	20 A	--	SPARE
REC- OFFICE 2011	2#12 & 1#12G ~ 0.75"C	20 A	1	23					0.7	0.0	24	1	20 A	--	SPARE
REC-ELEC 2026A	2#12 & 1#12G ~ 0.75"C	20 A	1	25	0.2	0.0					26	1	20 A	--	SPARE
PWR- WATER CLR (1)	2#12 & 1#12G ~ 0.75"C	20 A	1	27			0.5	0.0			28	1	20 A	--	SPARE
REC-TOILETS 2022/24	2#12 & 1#12G ~ 0.75"C	20 A	1	29					0.7	0.0	30	1	20 A	--	SPARE
REC- FRIDGE 2026	2#12 & 1#12G ~ 0.75"C	20 A	1	31	0.2	0.0					32	1	20 A	--	SPARE
REC- FRIDGE 2026	2#12 & 1#12G ~ 0.75"C	20 A	1	33			0.2	0.0			34	1	20 A	--	SPARE
REC-COPIER	2#12 & 1#12G ~ 0.75"C	20 A	1	35					0.2	0.0	36	1	20 A	--	SPARE
REC-WORK RM 2026	2#12 & 1#12G ~ 0.75"C	20 A	1	37	1.0	0.0					38	1	20 A	--	SPARE
REC - N ELEC CLOSET	2#12 & 1#12G ~ 0.75"C	20 A	1	39			0.2	0.0			40	1	20 A	--	SPARE
SPARE	--	20 A	1	41					0.0	0.0	42	1	20 A	--	SPARE
		PHASE TOTALS:			6.4 kVA		7.4 kVA		5.6 kVA						

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	CALCULATED LOAD
Power	7.5 kVA	100.00%	7.5 kVA
Receptacle	11.9 kVA	91.95%	11.0 kVA

CONNECTED LOAD: 53.9 A 19.4 kVA
CALCULATED LOAD: 51.2 A 18.5 kVA

PANELBOARD "PL1A" SCHEDULE

VOLTS: 120/208 Wye **BUS:** 225 A **MOUNTING:** SURFACE
PHASES: 3 **MAIN:** MLO **SECTIONS:** 1
WIRE: 4 **SCCR:** 10 KAIC **LOCATION:**

NOTES:
1. PROVIDE GFCI BREAKER.
2. CIRCUIT BREAKER SHALL BE PROVIDED WITH A BREAKER HANDLE LOCK-ON DEVICE AND IDENTIFIED WITH A 1/4" PERMANENT RED DOT APPLIED TO EXPOSED BODY AREA PER NC SCO GUIDELINES.

LOAD DESCRIPTION	WIRE & CONDUIT	CB TRIP / POLES		CKT #	A		B		C		CKT #	CB TRIP / POLES		WIRE & CONDUIT	LOAD DESCRIPTION
REC-CORRI 1000/1000B	2#12 & 1#12G ~ 0.75"C	20 A	1	1	0.9	3.0					2	1	20 A	2#12 & 1#12G ~ 0.75"C	PWR - TU S101-106
REC-CLASS RM 1029	2#12 & 1#12G ~ 0.75"C	20 A	1	3			0.9	2.0			4	1	20 A	2#12 & 1#12G ~ 0.75"C	PWR - TU S107-110
REC-TV 1029	2#12 & 1#12G ~ 0.75"C	20 A	1	5					0.4	2.0	6	1	20 A	2#12 & 1#12G ~ 0.75"C	PWR - TU S111-114
REC-CLASS RM 1029	2#12 & 1#12G ~ 0.75"C	20 A	1	7	0.7	0.0					8	1	20 A	--	SPARE
REC-TV 1029	2#12 & 1#12G ~ 0.75"C	20 A	1	9			0.4	0.0			10	1	20 A	--	SPARE
PT- CLASS RM 1029	2#12 & 1#12G ~ 0.75"C	20 A	1	11					0.4	0.0	12	1	20 A	--	SPARE
PWR - DOOR 1000	2#12 & 1#12G ~ 0.75"C	20 A	1	13	0.5	0.0					14	1	20 A	--	SPARE
REC-HUDDLE 1021	2#12 & 1#12G ~ 0.75"C	20 A	1	15			0.9	0.0			16	1	20 A	--	SPARE
REC-HUDDLE 1017	2#12 & 1#12G ~ 0.75"C	20 A	1	17					0.4	0.0	18	1	20 A	--	SPARE
REC-TOILETS 1022/26	2#12 & 1#12G ~ 0.75"C	20 A	1	19	0.7	0.0					20	1	20 A	--	SPARE
REC-ELEC RM 1026A	2#12 & 1#12G ~ 0.75"C	20 A	1	21			0.2	0.0			22	1	20 A	--	SPARE
PWR-WATER CLR (1)	2#12 & 1#12G ~ 0.75"C	20 A	1	23					0.5	0.0	24	1	20 A	--	SPARE
PWR-TOILET LV 1026 (2)	2#12 & 1#12G ~ 0.75"C	20 A	1	25	1.5	0.0					26	1	20 A	--	SPARE
PWR-TOILET LV 1022 (2)	2#12 & 1#12G ~ 0.75"C	20 A	1	27			1.0	--			28	1	--	--	SPACE
PWR - DOOR 1000B	2#12 & 1#12G ~ 0.75"C	20 A	1	29					0.5	--	30	1	--	--	SPACE
PWR - NAC 1026A (2)	2#12 & 1#12G ~ 0.75"C	20 A	1	31	0.5	--					32	1	--	--	SPACE
PWR - DALI/KNX 1026A	2#12 & 1#12G ~ 0.75"C	20 A	1	33			0.5	--			34	1	--	--	SPACE
REC - AV RACK 1029	2#12 & 1#12G ~ 0.75"C	20 A	1	35					1.0	--	36	1	--	--	SPACE
REC - N ELEC CLOSET	2#12 & 1#12G ~ 0.75"C	20 A	1	37	0.2	--					38	1	--	--	SPACE
SPARE	--	20 A	1	39			0.0	--			40	1	--	--	SPACE
SPARE	--	20 A	1	41					0.0	--	42	1	--	--	SPACE
		PHASE TOTALS:			8.0 kVA		5.8 kVA		5.1 kVA						

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	CALCULATED LOAD
Power	12.0 kVA	100.00%	12.0 kVA
Receptacle	6.9 kVA	100.00%	6.9 kVA

CONNECTED LOAD: 52.6 A 18.9 kVA
CALCULATED LOAD: 52.6 A 18.9 kVA

PANELBOARD "PL2B" SCHEDULE

VOLTS: 120/208 Wye **BUS:** 225 A **MOUNTING:** SURFACE
PHASES: 3 **MAIN:** MLO **SECTIONS:** 1
WIRE: 4 **SCCR:** 10 KAIC **LOCATION:**

NOTES:

LOAD DESCRIPTION	WIRE & CONDUIT	CB TRIP / POLES		CKT #	A		B		C		CKT #	CB TRIP / POLES		WIRE & CONDUIT	LOAD DESCRIPTION
REC-CORRI 2000	2#12 & 1#12G ~ 0.75"C	20 A	1	1	0.9	0.5					2	1	20 A	2#12 & 1#12G ~ 0.75"C	REC-STAFF 2006
REC-TV	2#12 & 1#12G ~ 0.75"C	20 A	1	3			0.4	0.5			4	1	20 A	2#12 & 1#12G ~ 0.75"C	REC-STAFF 2006
REC-OFFICE 2007	2#12 & 1#12G ~ 0.75"C	20 A	1	5					0.7	0.5	6	1	20 A	2#12 & 1#12G ~ 0.75"C	REC-STAFF 2006
REC-OFFICE 2005C	2#12 & 1#12G ~ 0.75"C	20 A	1	7	0.7	0.5					8	1	20 A	2#12 & 1#12G ~ 0.75"C	PWR - DALI/KNX
REC-OFFICE 2005B	2#12 & 1#12G ~ 0.75"C	20 A	1	9			0.9	0.0			10	1	20 A	--	SPARE
REC-OFFICE 2005A	2#12 & 1#12G ~ 0.75"C	20 A	1	11					1.1	0.0	12	1	20 A	--	SPARE
REC-OFFICE 2005D	2#12 & 1#12G ~ 0.75"C	20 A	1	13	0.7	0.0					14	1	20 A	--	SPARE
REC-RECEPTION 2005	2#12 & 1#12G ~ 0.75"C	20 A	1	15			0.5	0.0			16	1	20 A	--	SPARE
REC-STAFF 2006	2#12 & 1#12G ~ 0.75"C	20 A	1	17					0.5	0.0	18	1	20 A	--	SPARE
REC-OFFICE 2006A	2#12 & 1#12G ~ 0.75"C	20 A	1	19	0.7	0.0					20	1	20 A	--	SPARE
REC-OFFICE 2006B	2#12 & 1#12G ~ 0.75"C	20 A	1	21			0.7	0.0			22	1	20 A	--	SPARE
REC-OFFICE 2006C	2#12 & 1#12G ~ 0.75"C	20 A	1	23					0.7	0.0	24	1	20 A	--	SPARE
REC-OFFICE 2006D	2#12 & 1#12G ~ 0.75"C	20 A	1	25	0.7	0.0					26	1	20 A	--	SPARE
REC-OFFICE 2014	2#12 & 1#12G ~ 0.75"C	20 A	1	27			0.9	0.0			28	1	20 A	--	SPARE
REC-OFFICE	2#12 & 1#12G ~ 0.75"C	20 A	1	29					0.9	0.0	30	1	20 A	--	SPARE
REC-GRAD 2014	2#12 & 1#12G ~ 0.75"C	20 A	1	31	1.3	0.0					32	1	20 A	--	SPARE
REC-OFFICE	2#12 & 1#12G ~ 0.75"C	20 A	1	33			0.9	0.0			34	1	20 A	--	SPARE
REC-MEETING	2#12 & 1#12G ~ 0.75"C	20 A	1	35					0.7	0.0	36	1	20 A	--	SPARE
REC-OFFICE	2#12 & 1#12G ~ 0.75"C	20 A	1	37	0.9	0.0					38	1	20 A	--	SPARE
REC - S ELEC CLOSET	2#12 & 1#12G ~ 0.75"C	20 A	1	39			0.2	0.0			40	1	20 A	--	SPARE
SPARE	--	20 A	1	41					0.0	0.0	42	1	20 A	--	SPARE
		PHASE TOTALS:			7.0 kVA		5.0 kVA		5.2 kVA						

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	CALCULATED LOAD
Power	0.5 kVA	100.00%	0.5 kVA
Receptacle	16.7 kVA	79.87%	13.4 kVA

CONNECTED LOAD: 47.9 A 17.2 kVA
CALCULATED LOAD: 38.5 A 13.9 kVA

PANELBOARD "PL1B" SCHEDULE

VOLTS: 120/208 Wye **BUS:** 225 A **MOUNTING:** SURFACE
PHASES: 3 **MAIN:** MLO **SECTIONS:** 1
WIRE: 4 **SCCR:** 10 KAIC **LOCATION:** ELECTRICAL CLOSET 1010A

NOTES:

LOAD DESCRIPTION	WIRE & CONDUIT	CB TRIP / POLES		CKT #	A		B		C		CKT #	CB TRIP / POLES		WIRE & CONDUIT	LOAD DESCRIPTION
REC-TV 1005	2#12 & 1#12G ~ 0.75"C	20 A	1	1	0.4	0.4					2	1	20 A	2#12 & 1#12G ~ 0.75"C	PT-CLASS RM 1014
REC-CORRI 1000/1000A	2#12 & 1#12G ~ 0.75"C	20 A	1	3			0.9	0.4			4	1	20 A	2#12 & 1#12G ~ 0.75"C	PWR-PROJ. 1014
REC-CLASS RM 1005	2#12 & 1#12G ~ 0.75"C	20 A	1	5					0.9	0.4	6	1	20 A	2#12 & 1#12G ~ 0.75"C	PWR-PROJ. 1014
REC-TV 1005	2#12 & 1#12G ~ 0.75"C	20 A	1	7	0.4	0.4					8	1	20 A	2#12 & 1#12G ~ 0.75"C	PWR-PROJ. 1014
REC-CLASS RM 1005	2#12 & 1#12G ~ 0.75"C	20 A	1	9			0.9	0.4			10	1	20 A	2#12 & 1#12G ~ 0.75"C	PWR-PROJ. 1014
PWR - DOOR 1000A	2#12 & 1#12G ~ 0.75"C	20 A	1	11					0.5	0.5	12	1	20 A	2#12 & 1#12G ~ 0.75"C	PWR-PRO. SCR. 1014
PT-CLASS RM 1005	2#12 & 1#12G ~ 0.75"C	20 A	1	13	0.4	0.5					14	1	20 A	2#12 & 1#12G ~ 0.75"C	PWR-PRO. SCR. 1014
REC-HUDDLE 1011	2#12 & 1#12G ~ 0.75"C	20 A	1	15			0.9	0.5			16	1	20 A	2#12 & 1#12G ~ 0.75"C	PWR-PRO. SCR. 1014
REC-HUDDLE 1013	2#12 & 1#12G ~ 0.75"C	20 A	1	17					0.4	0.5	18	1	20 A	2#12 & 1#12G ~ 0.75"C	PWR-PRO. SCR. 1014
REC-CLASS RM 1006	2#12 & 1#12G ~ 0.75"C	20 A	1	19	0.7	0.2					20	1	20 A	2#12 & 1#12G ~ 0.75"C	REC - S ELEC CLOSET
REC-TV 1006	2#12 & 1#12G ~ 0.75"C	20 A	1	21			0.7	0.5			22	1	20 A	2#12 & 1#12G ~ 0.75"C	PWR - DALI/KNX
REC-TV CORRID 1000	2#12 & 1#12G ~ 0.75"C	20 A	1	23					0.4	0.0	24	1	20 A	--	SPARE
PT-CLASS RM 1006	2#12 & 1#12G ~ 0.75"C	20 A	1	25	0.4	0.0					26	1	20 A	--	SPARE
REC-TV 1014	2#12 & 1#12G ~ 0.75"C	20 A	1	27			0.4	0.0			28	1	20 A	--	SPARE
REC-UTILITY 1010	2#12 & 1#12G ~ 0.75"C	20 A	1	29					0.2	0.0	30	1	20 A	--	SPARE
REC-CLASS RM 1014	2#12 & 1#12G ~ 0.75"C	20 A	1	31	0.7	0.0					32	1	20 A	--	SPARE
REC-CLASS RM 1014	2#12 & 1#12G ~ 0.75"C	20 A	1	33			0.7	0.0			34	1	20 A	--	SPARE
REC-CLASS RM 1014	2#12 & 1#12G ~ 0.75"C	20 A	1	35					0.5	0.0	36	1	20 A	--	SPARE
REC - AV RACK 1014	2#12 & 1#12G ~ 0.75"C	20 A	1	37	1.0	0.0					38	1	20 A	--	SPARE
REC - AV RACK 1006	2#12 & 1#12G ~ 0.75"C	20 A	1	39			1.0	0.0			40	1	20 A	--	SPARE
REC - AV RACK 1005	2#12 & 1#12G ~ 0.75"C	20 A	1	41					1.0	0.0	42	1	20 A	--	SPARE
		PHASE TOTALS:			5.3 kVA		7.2 kVA		5.2 kVA						

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	CALCULATED LOAD
Other	1.4 kVA	100.00%	1.4 kVA
Power	3.0 kVA	100.00%	3.0 kVA
Receptacle	13.3 kVA	87.71%	11.6 kVA

CONNECTED LOAD: 49.1 A 17.7 kVA
CALCULATED LOAD: 44.6 A 16.1 kVA

SCHEDULE LEGEND	
PL2A	PL1A
PL2B	PL1B

SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER RICHARD O. DOTHER
DocuSigned by: 5B290D03BCE3457...
Signed on 01/04/2024 using a Digital Signature.

LORD AECK SARGENT

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N&B PROJECT: 21N242
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SHEET TITLE: ELECTRICAL SCHEDULES
SCALE (U.N.O.)

JOB NAME: University of North Carolina - Chapel Hill
SCO#: 21-235482-0A
LOCATION: BINGHAM HALL RENOVATION
36 Lenoir Drive, Chapel Hill, NC 27514

ISSUE DATE: 1/8/2024
JOB. NO. 11706-00
DWG. NO. E604

Autodesk Docs://11706-00 UNC Bingham Hall/MEP_UNC Bingham Hall_R22.rvt
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PANELBOARD "PL3A" SCHEDULE

VOLTS: 120/208 Wye
PHASES: 3
WIRE: 4
BUS: 225 A
MAIN: MLO
SCCR: 10 KAIC
MOUNTING: SURFACE
SECTIONS: 1
LOCATION: ELECTRICAL CLOSET 3033

NOTES:
1. PROVIDE GFCI BREAKER.
2. CIRCUIT BREAKER SHALL BE PROVIDED WITH A BREAKER HANDLE LOCK-ON DEVICE AND IDENTIFIED WITH A 1/4" PERMANENT RED DOT APPLIED TO EXPOSED BODY AREA PER NC SCO GUIDELINES.

LOAD DESCRIPTION	WIRE & CONDUIT	CB TRIP / POLES	CKT #	A		B		C		CKT #	CB TRIP / POLES	WIRE & CONDUIT	LOAD DESCRIPTION
REC - CORRI 3000	2#12 & 1#12G ~ 0.75"C	20 A 1	1	0.5	1.0					2	1 20 A	2#12 & 1#12G ~ 0.75"C	PWR - TU S301-302
REC - OFFICE 3031	2#12 & 1#12G ~ 0.75"C	20 A 1	3			0.7	1.5			4	1 20 A	2#12 & 1#12G ~ 0.75"C	PWR - TU S303-305
REC - OFFICE 3029	2#12 & 1#12G ~ 0.75"C	20 A 1	5					0.7	1.5	6	1 20 A	2#12 & 1#12G ~ 0.75"C	PWR - TU S306-308
REC - OFFICE 3027	2#12 & 1#12G ~ 0.75"C	20 A 1	7	0.7	2.0					8	1 20 A	2#12 & 1#12G ~ 0.75"C	PWR - TU S309-312
REC - OFFICE 3025	2#12 & 1#12G ~ 0.75"C	20 A 1	9			0.7	0.2			10	1 20 A	2#12 & 1#12G ~ 0.75"C	REC-TELE RM 3026
REC - OFFICE 3021	2#12 & 1#12G ~ 0.75"C	20 A 1	11					0.7	0.2	12	1 20 A	2#12 & 1#12G ~ 0.75"C	REC-TELE RM 3026
REC - OFFICE 3017	2#12 & 1#12G ~ 0.75"C	20 A 1	13	0.7	0.2					14	1 20 A	2#12 & 1#12G ~ 0.75"C	REC-TELE RM 3026
REC - TOILETS 3022/24	2#12 & 1#12G ~ 0.75"C	20 A 1	15			0.4	0.5			16	1 20 A	2#12 & 1#12G ~ 0.75"C	PWR-TOILET LV 3024(2)
PWR- WATER CLR (1)	2#12 & 1#12G ~ 0.75"C	20 A 1	17					0.5	0.2	18	1 20 A	2#12 & 1#12G ~ 0.75"C	REC - N ELEC CLOSET
REC - TELE 3026	2#12 & 1#12G ~ 0.75"C	20 A 1	19	0.4	0.0					20	1 20 A	--	SPARE
REC - TELE 3026	2#12 & 1#12G ~ 0.75"C	20 A 1	21			0.4	0.0			22	1 20 A	--	SPARE
PWR - NAC 3028A (2)	2#12 & 1#12G ~ 0.75"C	20 A 1	23					0.5	0.0	24	1 20 A	--	SPARE
PWR - DALI/KNX 3028A	2#12 & 1#12G ~ 0.75"C	20 A 1	25	0.5	0.0					26	1 20 A	--	SPARE
REC - ELEV 3030A	2#12 & 1#12G ~ 0.75"C	20 A 1	27			0.2	0.0			28	1 20 A	--	SPARE
REC - ELEC 3028A	2#12 & 1#12G ~ 0.75"C	20 A 1	29					0.2	0.0	30	1 20 A	--	SPARE
REC - MECH 3028	2#12 & 1#12G ~ 0.75"C	20 A 1	31	0.4	0.0					32	1 20 A	--	SPARE
REC - CLASS 3014	2#12 & 1#12G ~ 0.75"C	20 A 1	33			0.7	0.0			34	1 20 A	--	SPARE
REC - CLASS 3014	2#12 & 1#12G ~ 0.75"C	20 A 1	35					1.3	0.0	36	1 20 A	--	SPARE
REC - CLASS 3014	2#12 & 1#12G ~ 0.75"C	20 A 1	37	1.3	0.0					38	1 20 A	--	SPARE
REC - PT 3014	2#12 & 1#12G ~ 0.75"C	20 A 1	39			0.4	0.0			40	1 20 A	--	SPARE
REC - AV RACK 3014	2#12 & 1#12G ~ 0.75"C	20 A 1	41					1.0	0.0	42	1 20 A	--	SPARE
		PHASE TOTALS:		7.6 kVA		5.6 kVA		6.7 kVA					

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	CALCULATED LOAD
Power	8.0 kVA	100.00%	8.0 kVA
Receptacle	12.0 kVA	91.74%	11.0 kVA

CONNECTED LOAD:	55.5 A	20.0 kVA
CALCULATED LOAD:	52.7 A	19.0 kVA

PANELBOARD "PL3B" SCHEDULE

VOLTS: 120/208 Wye
PHASES: 3
WIRE: 4
BUS: 225 A
MAIN: MLO
SCCR: 10 KAIC
MOUNTING: SURFACE
SECTIONS: 1
LOCATION:

NOTES:

LOAD DESCRIPTION	WIRE & CONDUIT	CB TRIP / POLES	CKT #	A		B		C		CKT #	CB TRIP / POLES	WIRE & CONDUIT	LOAD DESCRIPTION
REC - CORRI 3000	2#12 & 1#12G ~ 0.75"C	20 A 1	1	0.9	0.0					2	1 20 A	--	SPARE
REC - OFFICE 3015	2#12 & 1#12G ~ 0.75"C	20 A 1	3			0.7	0.0			4	1 20 A	--	SPARE
REC - OFFICE 3013	2#12 & 1#12G ~ 0.75"C	20 A 1	5					0.7	0.0	6	1 20 A	--	SPARE
REC - OFFICE 3011	2#12 & 1#12G ~ 0.75"C	20 A 1	7	0.7	0.0					8	1 20 A	--	SPARE
REC - OFFICE 3007	2#12 & 1#12G ~ 0.75"C	20 A 1	9			0.7	0.0			10	1 20 A	--	SPARE
REC - OFFICE 3007	2#12 & 1#12G ~ 0.75"C	20 A 1	11					0.7	0.0	12	1 20 A	--	SPARE
REC - OFFICE 3005	2#12 & 1#12G ~ 0.75"C	20 A 1	13	0.7	0.0					14	1 20 A	--	SPARE
REC - OFFICE 3001	2#12 & 1#12G ~ 0.75"C	20 A 1	15			0.7	0.0			16	1 20 A	--	SPARE
REC - CLASS RM 3006	2#12 & 1#12G ~ 0.75"C	20 A 1	17					0.9	0.0	18	1 20 A	--	SPARE
REC - CLASS RM 3006	2#12 & 1#12G ~ 0.75"C	20 A 1	19	0.7	0.0					20	1 20 A	--	SPARE
PWR - PROJ. 3006	2#12 & 1#12G ~ 0.75"C	20 A 1	21			0.4	0.0			22	1 20 A	--	SPARE
PWR - PROJ. 3006	2#12 & 1#12G ~ 0.75"C	20 A 1	23					0.4	0.0	24	1 20 A	--	SPARE
PT - CLASS RM 3006	2#12 & 1#12G ~ 0.75"C	20 A 1	25	0.4	0.0					26	1 20 A	--	SPARE
PWR-PROJ. SCR. 3006	2#12 & 1#12G ~ 0.75"C	20 A 1	27			0.5	0.0			28	1 20 A	--	SPARE
PWR-PROJ. SCR. 3006	2#12 & 1#12G ~ 0.75"C	20 A 1	29					0.5	--	30	1 --	--	SPACE
REC - AV RACK 3006	2#12 & 1#12G ~ 0.75"C	20 A 1	31	1.0	--					32	1 --	--	SPACE
REC - S ELEC CLOSET	2#12 & 1#12G ~ 0.75"C	20 A 1	33			0.2	--			34	1 --	--	SPACE
PWR - DALI/KNX	2#12 & 1#12G ~ 0.75"C	20 A 1	35					0.5	--	36	1 --	--	SPACE
SPARE	--	20 A 1	37	0.0	--					38	1 --	--	SPACE
SPARE	--	20 A 1	39			0.0	--			40	1 --	--	SPACE
SPARE	--	20 A 1	41					0.0	--	42	1 --	--	SPACE
		PHASE TOTALS:		4.4 kVA		3.2 kVA		3.7 kVA					

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	CALCULATED LOAD
Other	0.7 kVA	100.00%	0.7 kVA
Power	1.5 kVA	100.00%	1.5 kVA
Receptacle	9.1 kVA	100.00%	9.1 kVA

CONNECTED LOAD:	31.4 A	11.3 kVA
CALCULATED LOAD:	31.4 A	11.3 kVA

SCHEDULE LEGEND	
	PL3A
	PL3B

SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER RICHARD O. DOZIER
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Signed on 01/04/2024 using a Digital Signature.

REVISION:

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N&B PROJECT: 21N242
Newcomb & Boyd, LLP
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SHEET TITLE: ELECTRICAL SCHEDULES
SCALE: (U.N.O.)

JOB NAME: University of North Carolina - Chapel Hill
SCO#: 21-284-809A
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

ISSUE DATE: 1/8/2024
JOB. NO.: 11706-00
DWG. NO.: E605

PANELBOARD "MH3" SCHEDULE

VOLTS: 480/277 Wye **BUS:** 225 A **MOUNTING:** SURFACE
PHASES: 3 **MAIN:** 150A/3P MCB **SECTIONS:**
WIRE: 4 **SCCR:** 18 KAIC **LOCATION:** ELEC 3028A

NOTES:
1. SEE TRANSFORMER FEEDER SCHEDULE.

LOAD DESCRIPTION	WIRE & CONDUIT	CB TRIP / POLES		CKT #	A		B		C		CKT #	CB TRIP / POLES		WIRE & CONDUIT	LOAD DESCRIPTION
ML3 (VIA T-ML3)	NOTE 1	20 A	3	1	2.5	0.0					2	1	20 A	--	SPARE
--	--	--	--	3			1.6	0.0			4	1	20 A	--	SPARE
--	--	--	--	5					1.5	0.0	6	1	20 A	--	SPARE
F-3-1	3#10 & 1#12G ~ 0.75"C	30 A	3	7	3.9	0.0					8	1	20 A	--	SPARE
--	--	--	--	9			3.9	0.0			10	1	20 A	--	SPARE
--	--	--	--	11					3.9	0.0	12	1	20 A	--	SPARE
F-3-2	3#12 & 1#12G ~ 0.75"C	20 A	3	13	0.8	0.0					14	1	20 A	--	SPARE
--	--	--	--	15			0.8	0.0			16	1	20 A	--	SPARE
--	--	--	--	17					0.8	0.0	18	1	20 A	--	SPARE
WH-2-1	3#10 & 1#10G ~ 0.75"C	30 A	2	19	4.2	0.0					20	1	20 A	--	SPARE
--	--	--	--	21			4.2	--			22	1	--	--	SPACE
WH-2-2	3#10 & 1#10G ~ 0.75"C	30 A	2	23					4.2	--	24	1	--	--	SPACE
--	--	--	--	25	4.2	--					26	1	--	--	SPACE
WH-2-3	2#10 & 1#10G ~ 0.75"C	20 A	1	27			4.2	--			28	1	--	--	SPACE
WH-3-1	2#10 & 1#10G ~ 0.75"C	30 A	1	29					4.2	--	30	1	--	--	SPACE
WH-3-2	2#10 & 1#10G ~ 0.75"C	30 A	1	31	4.2	--					32	1	--	--	SPACE
SPARE	--	20 A	1	33			0.0	--			34	1	--	--	SPACE
SPARE	--	20 A	1	35					0.0	--	36	1	--	--	SPACE
SPARE	--	20 A	1	37	0.0	--					38	1	--	--	SPACE
SPARE	--	20 A	1	39			0.0	--			40	1	--	--	SPACE
SPARE	--	20 A	1	41					0.0	--	42	1	--	--	SPACE
				PHASE TOTALS:	19.7 kVA		14.7 kVA		14.5 kVA						

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	CALCULATED LOAD
Other	47.3 kVA	100.00%	47.3 kVA
Power	1.5 kVA	100.00%	1.5 kVA

CONNECTED LOAD: 58.7 A 48.8 kVA
CALCULATED LOAD: 58.7 A 48.8 kVA

PANELBOARD "MH1" SCHEDULE

VOLTS: 480/277 Wye **BUS:** 225 A **MOUNTING:** SURFACE
PHASES: 3 **MAIN:** MLO **SECTIONS:**
WIRE: 4 **SCCR:** 14 KAIC **LOCATION:** ELEC 1026A

NOTES:
1. PROVIDE GFCI BREAKER.

LOAD DESCRIPTION	WIRE & CONDUIT	CB TRIP / POLES		CKT #	A		B		C		CKT #	CB TRIP / POLES		WIRE & CONDUIT	LOAD DESCRIPTION
CRU-B-1	3#10 & 1#12G ~ 0.75"C	20 A	3	1	1.3	5.8					2	3	30 A	3#10 & 1#10G ~0.75"C	P-1-1 (10 HP)
--	--	--	--	3			1.3	5.8			4	--	--	--	--
--	--	--	--	5					1.3	5.8	6	--	--	--	--
F-B-2	3#10 & 1#12G ~ 0.75"C	20 A	3	7	0.2	1.2					8	1	20 A	2#10 & 1#10G ~ 0.75"C	HT-1 (1)
--	--	--	--	9			0.2	3.0			10	3	20 A	3#12 & 1#12G ~ 0.75"C	P-B-1 (3 HP)
--	--	--	--	11					0.2	3.0	12	--	--	--	--
F-B-3	3#10 & 1#12G ~ 0.75"C	20 A	3	13	0.1	3.0					14	--	--	--	--
--	--	--	--	15			0.1	3.0			16	3	20 A	3#12 & 1#12G ~ 0.75"C	P-B-2 (3 HP)
--	--	--	--	17					0.1	3.0	18	--	--	--	--
F-1-1	3#10 & 1#12G ~ 0.75"C	20 A	3	19	0.1	3.0					20	--	--	--	--
--	--	--	--	21			0.1	0.0			22	1	20 A	--	SPARE
--	--	--	--	23					0.1	0.0	24	1	20 A	--	SPARE
UH-B-1	2#12 & 1#12G ~ 0.75"C	20 A	1	25	1.0	0.0					26	1	20 A	--	SPARE
UH-1-1	2#10 & 1#10G ~ 0.75"C	30 A	1	27			5.5	0.0			28	1	20 A	--	SPARE
UH-1-2	2#10 & 1#10G ~ 0.75"C	30 A	1	29					6.5	0.0	30	1	20 A	--	SPARE
WH-1-1	2#10 & 1#10G ~ 0.75"C	30 A	1	31	4.2	0.0					32	1	20 A	--	SPARE
WH-1-2	2#10 & 1#10G ~ 0.75"C	30 A	1	33			4.2	--			34	1	--	--	SPACE
WH-1-3	2#10 & 1#10G ~ 0.75"C	30 A	1	35					4.2	--	36	1	--	--	SPACE
WH-1-4	2#10 & 1#10G ~ 0.75"C	30 A	1	37	4.2	--					38	1	--	--	SPACE
SPARE	--	20 A	1	39			0.0	--			40	1	--	--	SPACE
SPARE	--	20 A	1	41					0.0	--	42	1	--	--	SPACE
				PHASE TOTALS:	24.2 kVA		23.3 kVA		24.3 kVA						

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	CALCULATED LOAD
Other	71.7 kVA	100.00%	71.7 kVA

CONNECTED LOAD: 86.3 A 71.7 kVA
CALCULATED LOAD: 86.3 A 71.7 kVA

PANELBOARD "ML3" SCHEDULE

VOLTS: 120/208 Wye **BUS:** 225 A **MOUNTING:** SURFACE
PHASES: 3 **MAIN:** 100A/3P MCB **SECTIONS:**
WIRE: 4 **SCCR:** 10 KAIC **LOCATION:** ELEC 3028A

NOTES:

LOAD DESCRIPTION	WIRE & CONDUIT	CB TRIP / POLES		CKT #	A		B		C		CKT #	CB TRIP / POLES		WIRE & CONDUIT	LOAD DESCRIPTION
FCU-2-1 (0.08HP)	2#12 & 1#12G ~ 0.75"C	20 A	1	1	1.0	0.0					2	1	20 A	--	SPARE
FCU-3-1 (0.08HP)	2#12 & 1#12G ~ 0.75"C	20 A	1	3			1.0	--			4	1	--	--	SPACE
FCU-3-2 (0.08HP)	2#12 & 1#12G ~ 0.75"C	20 A	1	5					1.0	--	6	1	--	--	SPACE
FCU-3-3 (0.08HP)	2#12 & 1#12G ~ 0.75"C	20 A	1	7	1.0	--					8	1	--	--	SPACE
PWR - AHU-3-1 LTG	2#12 & 1#12G ~ 0.75"C	20 A	1	9			0.5	--			10	1	--	--	SPACE
PWR - AHU-3-1 UV LTG	2#12 & 1#12G ~ 0.75"C	20 A	1	11					0.5	--	12	1	--	--	SPACE
PWR - BAS 3028	2#12 & 1#12G ~ 0.75"C	20 A	1	13	0.5	--					14	1	--	--	SPACE
P-3-1 (0.125 HP)	2#12 & 1#12G ~ 0.75"C	20 A	1	15			0.1	--			16	1	--	--	SPACE
SPARE	--	20 A	1	17					0.0	--	18	1	--	--	SPACE
SPARE	--	20 A	1	19	0.0	--					20	1	--	--	SPACE
SPARE	--	20 A	1	21			0.0	--			22	1	--	--	SPACE
SPARE	--	20 A	1	23					0.0	--	24	1	--	--	SPACE
SPARE	--	20 A	1	25	0.0	--					26	1	--	--	SPACE
SPARE	--	20 A	1	27			0.0	--			28	1	--	--	SPACE
SPARE	--	20 A	1	29					0.0	--	30	1	--	--	SPACE
SPARE	--	20 A	1	31	0.0	--					32	1	--	--	SPACE
SPARE	--	20 A	1	33			0.0	--			34	1	--	--	SPACE
SPARE	--	20 A	1	35					0.0	--	36	1	--	--	SPACE
SPARE	--	20 A	1	37	0.0	--					38	1	--	--	SPACE
SPARE	--	20 A	1	39			0.0	--			40	1	--	--	SPACE
SPARE	--	20 A	1	41					0.0	--	42	1	--	--	SPACE
				PHASE TOTALS:	2.5 kVA		1.6 kVA		1.5 kVA						

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	CALCULATED LOAD
Other	4.1 kVA	100.00%	4.1 kVA
Power	1.5 kVA	100.00%	1.5 kVA

CONNECTED LOAD: 15.5 A 5.6 kVA
CALCULATED LOAD: 15.5 A 5.6 kVA

PANELBOARD "ML1" SCHEDULE

VOLTS: 120/208 Wye **BUS:** 100 A **MOUNTING:** SURFACE
PHASES: 3 **MAIN:** MLO **SECTIONS:**
WIRE: 4 **SCCR:** 10 KAIC **LOCATION:** ELEC 1026A

NOTES:

LOAD DESCRIPTION	WIRE & CONDUIT	CB TRIP / POLES		CKT #	A		B		C		CKT #	CB TRIP / POLES		WIRE & CONDUIT	LOAD DESCRIPTION
FCU-1-1 (0.08)	2#12 & 1#12G ~ 0.75"C	20 A	1	1	1.0	--					2	1	--	--	SPACE
FCU-1-2 (0.08)	2#12 & 1#12G ~ 0.75"C	20 A	1	3			1.0	--			4	1	--	--	SPACE
PWR - BAS 1010	2#12 & 1#12G ~ 0.75"C	20 A	1	5					0.5	--	6	1	--	--	SPACE
PWR - BFP HB 1010	2#12 & 1#12G ~ 0.75"C	20 A	1	7	0.5	--					8	1	--	--	SPACE
SPARE	--	20 A	1	9			0.0	--			10	1	--	--	SPACE
SPARE	--	20 A	1	11					0.0	--	12	1	--	--	SPACE
SPARE	--	20 A	1	13	0.0	--					14	1	--	--	SPACE
SPARE	--	20 A	1	15			0.0	--			16	1	--	--	SPACE
SPARE	--	20 A	1	17					0.0	--	18	1	--	--	SPACE
SPARE	--	20 A	1	19	0.0	--					20	1	--	--	SPACE
SPARE	--	20 A	1	21			0.0	--			22	1	--	--	SPACE
SPARE	--	20 A	1	23					0.0	--	24	1	--	--	SPACE
SPARE	--	20 A	1	25	0.0	--					26	1	--	--	SPACE
SPARE	--	20 A	1	27			0.0	--			28	1	--	--	SPACE
SPARE	--	20 A	1	29					0.0	--	30	1	--	--	SPACE
SPARE	--	20 A	1	31	0.0	--					32	1	--	--	SPACE
SPARE	--	20 A	1	33			0.0	--			34	1	--	--	SPACE
SPARE	--	20 A	1	35					0.0	--	36	1	--	--	SPACE
SPACE	--	--	1	37	--	--					38	1	--	--	SPACE
SPACE	--	--	1	39			--	--			40	1	--	--	SPACE
SPACE	--	--	1	41					--	--	42	1	--	--	SPACE
				PHASE TOTALS:	1.5 kVA		1.0 kVA		0.5 kVA						

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	CALCULATED LOAD
Other	2.0 kVA	100.00%	2.0 kVA
Power	1.0 kVA	100.00%	1.0 kVA

CONNECTED LOAD: 8.3 A 3.0 kVA
CALCULATED LOAD: 8.3 A 3.0 kVA

SCHEDULE LEGEND	
MH3	MH1
ML3	ML1

LORD AECK SARGENT

REVISION:

NEWCOMB & BOYD
5425 Page Road
Suite 215
Durham, NC 27703
NB Contact: Reade Daniel
N&B PROJECT: 21N242
Newcomb & Boyd, LLP
Firm Lic. # F-0312

SHEET TITLE
ELECTRICAL SCHEDULES
SCALE (U.N.O.)

JOB NAME
University of North Carolina - Chapel Hill
SCO#: 21-23548-02A
BINGHAM HALL RENOVATION
LOCATION
36 Lenoir Drive, Chapel Hill, NC 27514

SEAL
DocuSigned by:
8B290DD3BCE3457...
SEAL 044143 ENGINEER RICHARD O. DOZIER, III
Signed on 01/03/2024 using a Digital Signature.

ISSUE DATE
1/8/2024
OB. NO.
11706-00
DWG. NO.
E606

1 FIRE ALARM GENERAL NOTES
NO SCALE

A. DESCRIPTION/SCOPE OF WORK
1. GENERAL PROVISIONS AND OTHER FIRE ALARM RELATED SYSTEMS ARE SPECIFIED IN SPECIFICATION PACKAGE.
2. THESE NOTES COVER THE INTELLIGENT FIRE ALARM AND EMERGENCY COMMUNICATION SYSTEM.
3. THESE NOTES COVER THE EMERGENCY RESPONDER RADIO COVERAGE SYSTEM INFRASTRUCTURE.
4. THESE NOTES COVER ALL EMERGENCY AREA OF RESCUE TWO-WAY COMMUNICATION SYSTEMS.

B. QUALITY ASSURANCE
1. FIRE ALARM SYSTEMS SHALL BE INSTALLED BY A COMPANY REGULARLY ENGAGED IN THE INSTALLATION OF THE FIRE ALARM EVAC SYSTEM AND EMERGENCY COMMUNICATION SYSTEMS AND WHICH HOLDS A CURRENT CONTRACTOR'S LICENSE FROM THE STATE OF NORTH CAROLINA. SUBMITTAL SHOP DRAWINGS SHALL BEAR THE COMPANIES REQUIRED LICENSE INFORMATION AND LICENSE NUMBER OF THE INSTALLING CONTRACTOR.
2. SHOP DRAWINGS SHALL BE PREPARED UNDER THE SUPERVISION OF A PROFESSIONAL ENGINEER LICENSED OR A NICET LEVEL III TECHNICIAN CERTIFIED IN FIRE ALARM SYSTEMS IN THE STATE OF NORTH CAROLINA. SUBMITTALS, DRAWINGS, AND CALCULATIONS SHALL BEAR THE STAMP OF THE SUPERVISING PROFESSIONAL ENGINEER & SIGNATURE OR NICET TECHNICIANS'S CERTIFICATION NUMBER, EXPIRATION DATE, NICET LEVEL, AND SIGNATURE.
3. MATERIALS AND EQUIPMENT USED FOR SIMILAR APPLICATIONS SHALL BE THE PRODUCTS OF ONE MANUFACTURER.
4. CAMPUS FIRE ALARM SYSTEM PREFERRED VENDOR IS CRS BUILDING AUTOMATION SYSTEMS. CONTRACTOR WILL NEED TO CONSULT WITH OWNER ON FINAL SYSTEM AND VENDOR. MANUFACTURERS/MODELS PERMITTED ARE:
   A. EDWARDS SYSTEM TECHNOLOGY - EST3, EST3X
   B. NOTIFIER; DIV. OF PITTWAY CORP. - NFS2-640, NFS2-3030
   C. SEIMENS, INC. - FIRE FINDER XLS
   D. SIMPLEX - 4100ES (ONLY FOR SMALL INSTALLATIONS DEEMED APPROPRIATE BY OWNER.
5. PRODUCTS AND COMPONENTS INSTALLED IN THE SYSTEM SHALL BE LISTED BY UNDERWRITERS LABORATORIES (UL) AND APPROVED BY FACTORY MUTUAL ENGINEERING (FM).

C. BASIS OF DESIGN
1. SIGNALING LINE CIRCUITS (SLC) SHALL BE ARRANGED FOR CLASS A & NOTIFICATION APPLIANCE CIRCUIT (NAC) SHALL BE ARRANGED FOR CLASS B, OPERATION IN ACCORDANCE WITH NFPA 72.
2. PROVIDE ONE DEDICATED SLC FOR THE BUILDING. CIRCUITS SHALL BE ARRANGED SO THAT THE CONNECTED LOAD ON ANY CIRCUIT DOES NOT EXCEED 75% OF THE RATED CAPACITY.
3. STROBE INTENSITIES SHALL MEET REQUIREMENTS OF NFPA 72
4. ALL STROBE LIGHTS IN THE BUILDING SHALL FLASH AT A SYNCHRONIZED RATE. THE SYNCHRONIZING MECHANISM MAY BE LOCATED WITHIN THE CONTROL PANEL OR WITHIN THE INDIVIDUAL LIGHTS.
5. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS TO COORDINATE FINAL LOCATION OF CEILING MOUNTED FIRE ALARM DEVICES. WHERE VARIANCE IN QUANTITY OF DEVICES EXISTS BETWEEN ARCHITECTURAL AND FIRE ALARM DRAWINGS, THE FIRE ALARM DRAWINGS SHALL GOVERN.
6. REFER TO ARCHITECTURAL ELEVATIONS AND CASEWORK PLANS FOR EXACT LOCATIONS AND MOUNTING HEIGHTS OF WALL MOUNTED FIRE ALARM DEVICES. WHERE VARIANCE IN QUANTITY OF DEVICES EXISTS BETWEEN ARCHITECTURAL AND FIRE ALARM DRAWINGS, THE FIRE ALARM DRAWINGS SHALL GOVERN.
7. SMOKE DETECTORS SHALL BE LOCATED AT LEAST 3'-0" FROM ANY AIR MOVEMENT DEVICE, INCLUDING BUT NOT LIMITED TO SUPPLY DIFFUSERS, RETURN AND EXHAUST GRILLES.
8. PROVIDE A SURGE PROTECTIVE DEVICE ON ALL SIGNALING LINE OR NOTIFYING APPLIANCE CIRCUITS LEAVING THE BUILDING, ON POWER SUPPLIES, AND CONTROL UNITS.
9. VALVES SHALL BE MONITORED IN THE OPEN POSITION UNLESS NOTED OTHERWISE. VALVES INDICATED AS "NORMALLY CLOSED" SHALL BE MONITORED SUCH THAT A SUPERVISORY SIGNAL IS GENERATED WHEN THE VALVE IS NOT FULLY CLOSED.
10. ALL FIRE ALARM DEVICES LOCATED ON THE EXTERIOR SHALL BE WEATHERPROOF GASKET-BOX TYPE.
11. THE EXTERIOR OF ALL FIRE ALARM SYSTEM JUNCTION BOXES SHALL BE PAINTED RED.
12. ALL PENETRATIONS IN WALLS, CEILINGS, AND FLOORS SHALL BE SEALED TO THE FULL THICKNESS OF THE PENETRATION WITH SPECIFIED FIRE STOPPING MATERIAL.
13. LOCATE INTERFACE MODULES WITHIN 3'-0" OF DEVICE THAT IS CONTROLLED.
14. TO AVOID DUST CONTAMINATION IN THE SMOKE DETECTORS, THE DETECTORS SHALL BE INSTALLED AT THE END OF CONSTRUCTION AT A TIME FIT FOR SCHEDULE AND INSTALLATION ACCESS. DETECTORS SHALL THEN BE COVERED WITH PLASTIC COVERS UNTIL THE CONSTRUCTION IS CONSIDERED COMPLETE.
15. ALL FIRE ALARM SYSTEM WIRING SHALL BE CLEARED FROM OPENS, SHORTS, AND GROUNDS.
16. WHERE CONDUCTORS ARE RUN IN CONDUIT, USE ONLY APPROVED CABLE WITHIN RACEWAYS, PIPES, OR CONDUITS. ALL SHIELDED WIRE SHALL BE CONTINUOUS THROUGHOUT CIRCUIT. ALL SHIELDS SHALL BE ISOLATED FROM THE GROUND WIRE. ALL SHIELDED WIRE SHALL TERMINATE AT THE FIRE ALARM CONTROL PANEL.
17. EMT PATHWAYS SHALL BE A MINIMUM OF 3/4 IN. AND RED.
18. EACH FIRE ALARM SYSTEM MUST BE PROVIDED WITH A POWER CONDITIONER TO PROTECT THE FIRE ALARM SYSTEM FROM ELECTRICAL SURGES, SPIKES, OVER-VOLTAGES, AND ELECTRICAL NOISE. THE POWER CONDITIONER MUST BE SIZED BY THE APPROVED EQUIPMENT MANUFACTURER'S ENGINEERING AND DESIGN TEAM TO PROVIDE THE CORRECT POWER SUPPLY INCLUDING A SAFETY FACTOR. THE POWER CONDITIONER MUST BE U.L. LISTED AND MUST HAVE BUILT IN OVERLOAD PROTECTION.
19. EACH WATERFLOW SWITCH MUST BE SEPARATELY ANNUNCIATED AT THE MAIN FIRE ALARM CONTROL UNIT AND ALL REQUIRED ANNUNCIATORS.
20. FIRE ALARM SYSTEM IS PERMITTED TO BE INTEGRATED WITH OTHER BUILDING SYSTEMS SUCH AS BUILDING AUTOMATION, ENERGY MANAGEMENT, SECURITY, ETC BUT NONE WILL BE PERMITTED TO CONTROL FIRE ALARM SYSTEM. CONNECTION IS ONLY TO MONITOR STATUS OF FIRE ALARM SYSTEM.
21. FIRE ALARM SYSTEM WILL CONNECT TO LIGHTING CONTROL PANEL AND DISENGAGE ANY CONTROLS DURING FIRE EMERGENCY THAT AFFECT EGRESS LIGHTING.
22. FIRE ALARM SYSTEM WILL CONNECT TO ANY AV PUBLIC ADDRESS SYSTEM AND DISENGAGE THE PUBLIC ADDRESS SYSTEM DURING ALARM CONDITIONS AND LIVE VOICE NOTIFICATION.
23. ALL FIRE ALARM SIGNALS (I.E. ALARM, SUPERVISORY, AND TROUBLE) MUST BE AUTOMATICALLY TRANSMITTED TO A SUPERVISING STATION EVALUATED BY UNDERWRITERS LABORATORIES (UL) TO UL STANDARD 827, CENTRAL STATION ALARM SERVICES UUFX CATEGORY CODE. THE COMMUNICATION METHODS USED TO TRANSMIT SIGNALS TO THE SUPERVISING STATION MUST MEET THE REQUIREMENTS IN NFPA 72. TWO DIFFERENT COMMUNICATION PATHS ARE REQUIRED TO BE PROVIDED.
24. TEST AND ACCEPTANCE PROCEDURE SHALL FOLLOW GUIDELINES OF PART 4 OF "C-24 FIRE ALARM SYSTEMS".
25. REFER TO ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR RACEWAY REQUIREMENTS. FIRE ALARM RACEWAYS WILL BE INSTALLED RECESSED WITHIN EXTERIOR WALLS AND INSTALLATION SHALL BE COORDINATED WITH ARCHITECTURAL DETAILS SHOWN ON DRAWING A621.
26. AUDIBILITY IS REQUIRED TO MEET 15 DB ABOVE AMBIENT IN ALL OCCUPIABLE SPACES IN THE BUILDING.
27. INTELLIGIBILITY IS NOT REQUIRED IN ANY AREA OF THE BUILDING.

D. SHOP DRAWINGS & CALCULATIONS
1. SHOP DRAWING SUBMITTALS SHALL HAVE A WIRE TYPE LEGEND THAT INCLUDES SPECIFIC LINE TYPES CORRELATED WITH EACH SPECIFIC WIRE TYPE USED ON THE PROJECT. DRAWINGS MUST BE BLACK AND WHITE. COLOR DRAWINGS ARE NOT PERMITTED.
2. PROVIDE MINIMUM ONE MASTER CONTROL MODULE (AOM) TO UNLOCK ALL DOORS AND ONE MASTER CONTROL MODULE (AOM) TO RELEASE ALL DOOR HOLD OPENS.
3. PROVIDE AND INDICATE LOCATION OF ACCESS PANELS FOR DUCT DETECTORS AND EQUIPMENT ABOVE CEILING REQUIRING ACCESS AND MAINTENANCE IN HARD CEILINGS. PROVIDE LOCATION ON FIRE ALARM SHOP DRAWINGS WITH REMOTE LED ALARM AND KEY TEST SWITCHES.
4. SHOP DRAWINGS MUST INCLUDE CIRCUIT PATHWAYS AND IDENTIFY DEVICES WITH SPECIFIC IDENTIFICATION TAGS.
5. A RISER DIAGRAM SHALL BE INCLUDED AND HAVE ALL DEVICES IDENTIFIED WITH MATCHING FLOORPLAN TAGS.
6. CALCULATIONS MUST INCLUDE AMPLIFIER SIZING, VOLTAGE DROP, BATTERY CALCULATIONS.
7. PROVIDE SCHEDULES WITH SLC DEVICE ADDRESS, DEVICE TYPE LABEL, AND LOCATION/ROOM NAME FOR EACH SLC LOOP.
8. PROVIDE SCHEDULES WITH NAC VISUAL DEVICE ADDRESS, DEVICE TYPE LABEL, AND LOCATION/ROOM NAME FOR EACH NAC VISUAL CIRCUIT.
9. PROVIDE SCHEDULES WITH NAC SPEAKER DEVICE ADDRESS, DEVICE TYPE LABEL, AND LOCATION/ROOM NAME FOR EACH NAC SPEAKER CIRCUIT.
10. PROVIDE FIRE ALARM DEVICE WIRING DETAILS AND MOUNTING ELEVATIONS OF EQUIPMENT AND DEVICES.
11. PROVIDE CONTRACTOR CREATED FIRE ALARM MATRIX OF OPERATION SEQUENCE. THE EXISTING FIRE ALARM MATRIX IS TO REMAIN UNCHANGED UNLESS OTHERWISE NOTED. INCLUDE PHASE 2 FIRE SERVICE (FLASH HAT) IF THE ELEVATOR CONTROLLER IS NOT PREPARED FOR TIE IN, COORDINATE WITH ELEVATOR MANUFACTURER .

E. CODES
1. THIS SUBMITTAL SHALL FOLLOW THE 2018 NORTH CAROLINA BUILDING CODE AND 2018 INTERNATIONAL FIRE CODE AND CONFORM TO THE FOLLOW STANDARDS: NFPA 70-2020, NFPA 72-2013, NFPA 90A, NFPA 101-2013, NFPA 241-2013.
2. THIS SUBMITTAL SHALL FOLLOW THE NORTH CAROLINA STATE CONSTRUCTION OFFICE "FIRE ALARM GUIDELINES AND POLICIES.
3. THIS SUBMITTAL SHALL FOLLOW THE UNC CHAPEL HILL "C-24 FIRE ALARM SYSTEMS" CRITERIA.

2 FIRE ALARM LEGEND
NO SCALE

PANELS

FACP	FIRE ALARM CONTROL PANEL
DACT	DIGITAL COMMUNICATOR
FAD	FIRE ALARM DOCUMENT CABINET
CELL	CELLULAR DIALER
NAC	BOOSTER POWER SUPPLY
AMP	SPEAKER AMPLIFIER
FAA	FIRE ALARM ANNUNCIATOR
AOR	REMOTE CALL STATION
CDU	TWO-WAY COMMUNICATION COMMAND PANEL
ECB	EMERGENCY CALL BOX
FATC	FIRE ALARM TERMINAL CABINET
RAT	RADIO ALARM TRANSMITTER

MONITORING & ACCESSORIES

ISO	ISOLATOR
SPD	SURGE PROTECTION DEVICE
EOL	END OF LINE RESISTOR
BATT	BATTERY
AIM	ADDRESSABLE INPUT MODULE
AOM	ADDRESSABLE OUTPUT MODULE
RTS	REMOTE LED ALARM AND KEY TEST SWITCH

INITIATION

	ADDRESSABLE HEAT DETECTOR
E	ADDRESSABLE HEAT DETECTOR - ELEVATOR SHUNT TRIP
	ADDRESSABLE SMOKE DETECTOR
E	ADDRESSABLE SMOKE DETECTOR - ELEVATOR RECALL
XX	ADDRESSABLE DUCT SMOKE DETECTOR XX: RA - RETURN
F	ADDRESSABLE DUAL ACTION PULL STATION (WITH PLASTIC COVER)
WF	WATERFLOW SWITCH
PS	AIR PRESSURE SWITCH
VS	TAMPER SWITCH

NOTIFICATION

S C	CEILING MOUNTED SPEAKER
S	WALL MOUNTED SPEAKER
	CEILING MOUNTED STROBE ONLY
	WALL MOUNTED STROBE ONLY
C	CEILING MOUNTED SPEAKER STROBE
	WALL MOUNTED SPEAKER STROBE

ACRONYMS & DEFINITIONS

NAC	NOTIFICATION APPLIANCE CIRCUIT
AUD	SPEAKER CIRCUIT
SLC	SIGNALING LINE CIRCUIT
WP	WEATHERPROOF
N.C.	NORMALLY CLOSED
C.O.	CARBON MONOXIDE
## cd	CANDELA RATING
## w	WATT RATING

APPLICABLE DESIGN INFORMATION

CODES AND STANDARDS:
- BUILDING CODE: NORTH CAROLINA STATE BUILDING CODE - 2018
- MECHANICAL CODE: NORTH CAROLINA STATE MECHANICAL CODE - 2018
- PLUMBING CODE: NORTH CAROLINA STATE PLUMBING CODE - 2018
- ELECTRICAL CODE: NORTH CAROLINA STATE ELECTRICAL CODE - 2018
- FIRE CODE: NORTH CAROLINA FIRE PREVENTION CODE - 2018
- ENERGY CODE: NORTH CAROLINA STATE ENERGY CONSERVATION CODE - 2018

OCCUPANCY USE GROUP:
- A-3

CONSTRUCTION CLASSIFICATIONS:
- II-A

SPRINKLER SYSTEM:
- NATIONAL FIRE PROTECTION ASSOCIATION - 2013

OWNER GUIDELINES:
- UNIVERSITY OF NORTH CAROLINA DESIGN GUIDELINES - 2020

NORTH CAROLINA SCO GUIDELINES:
- WATER BASED FIRE PROTECTION SYSTEM GUIDELINES - 2020
- FIRE ALARM GUIDELINES - 2020
- ELECTRICAL GUIDELINES - 2020

LORD AECK SARGENT

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N&B PROJECT: 21N242
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Firm Lic. # F-0312

SHEET TITLE
FIRE ALARM GENERAL NOTES, SYMBOLS, AND ABBREVIATIONS
SCALE (U.N.O.)
As indicated

JOB NAME
University of North Carolina - Chapel Hill
SCO#: 21-23548-02A
BINGHAM HALL RENOVATION
LOCATION
36 Lenoir Drive, Chapel Hill, NC 27514

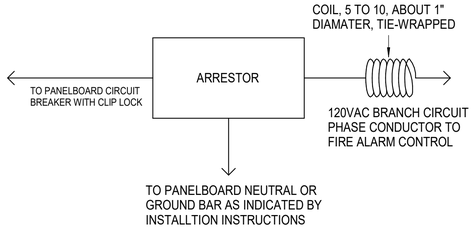
SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER ANDREW R. STRACK
DocuSigned by:
Andrew Strack
FD3295FC9082412...
Signed on 01/03/2024
using a Digital Signature.

ISSUE DATE
1/8/2024
JOB. NO.
11706-00
DWG. NO.
FA001

PROJECT DATA
PROJECT NAME: BINGHAM HALL RENOVATION
SYSTEM TYPE AND REQUIREMENTS
NEW FIRE ALARM SYSTEM: **NOTIFICATION METHODS:** SPEAKER, SPEAKER/STROBE, STROBE **INITIATION METHODS:** PULL STATION, SMOKE, HEAT, WATER FLOW SWITCH, PRESSURE SWITCH AND VALVE TAMPER SWITCH. **SLC CIRCUIT TYPE** - PATHWAY CLASS A, SURVIVABILITY CLASS 1 **NAC CIRCUIT TYPE** - PATHWAY CLASS B, SURVIVABILITY CLASS 1 **EMERGENCY RESPONDER RADIO COVERAGE SYSTEM:** SIGNAL STRENGTH TESTING TO OCCUR DURING CONSTRUCTION. INFRASTRUCTURE SHALL BE PROVIDED AS A PART OF THE PERFORMANCE DESIGN. PROVIDE TWO VERTICAL RISER/PATHWAYS AND HORIZONTAL PATHWAYS SHALL BE 2-HR RATED WITH RED EMT CONDUIT, CLASS 1 & 3 SURVIVABILITY. **ELEVATOR LOBBY TWO WAY COMMUNICATION SYSTEM:** LOCATE AT PASSENGER ELEVATOR LANDINGS. **RADIO ALARM TRANSMITTERS:** PROVIDE A RADIO ALARM TRANSMITTER (RAT) WHICH IS COMPLIANT WITH NFPA 72 CHAPTER 26.6 FOR ONE WAY RADIO SYSTEMS AND FULLY COMPATIBLE WITH THE OWNER'S PROPRIETARY ALARM RECEIVING EQUIPMENT OR THE LISTED CENTRAL STATION AS INDICATED ON THE DRAWINGS. THE RAT MUST BE CAPABLE OF INTERFACING WITH THE FACP, AND SHALL BE LISTED FOR UL 864 STANDARD FOR CONTROL UNITS AND ACCESSORIES FOR FIRE ALARM SYSTEMS AND UL 681 STANDARD FOR INSTALLATION AND CLASSIFICATION OF BURGLAR AND HOLDUP ALARM SYSTEMS.
SEISMIC DESIGN CATEGORY B.
CODES AND STANDARDS
2018 INTERNATIONAL BUILDING/FIRE CODE WITH STATE MODIFICATIONS, NFPA 70 (2020 Edition), NFPA 72 (2013 Edition), NFPA 101 (2015 Edition).
SCOPE OF WORK AND NOTES: PROVIDE NEW FIRE ALARM SYSTEM THROUGHOUT THE BUILDING. THE BUILDING SHALL HAVE ITS OWN STANDALONE SYSTEM. ALL NEW WIRING SHALL BE EMT CONDUIT.

3 FIRE ALARM PROJECT DATA
NO SCALE

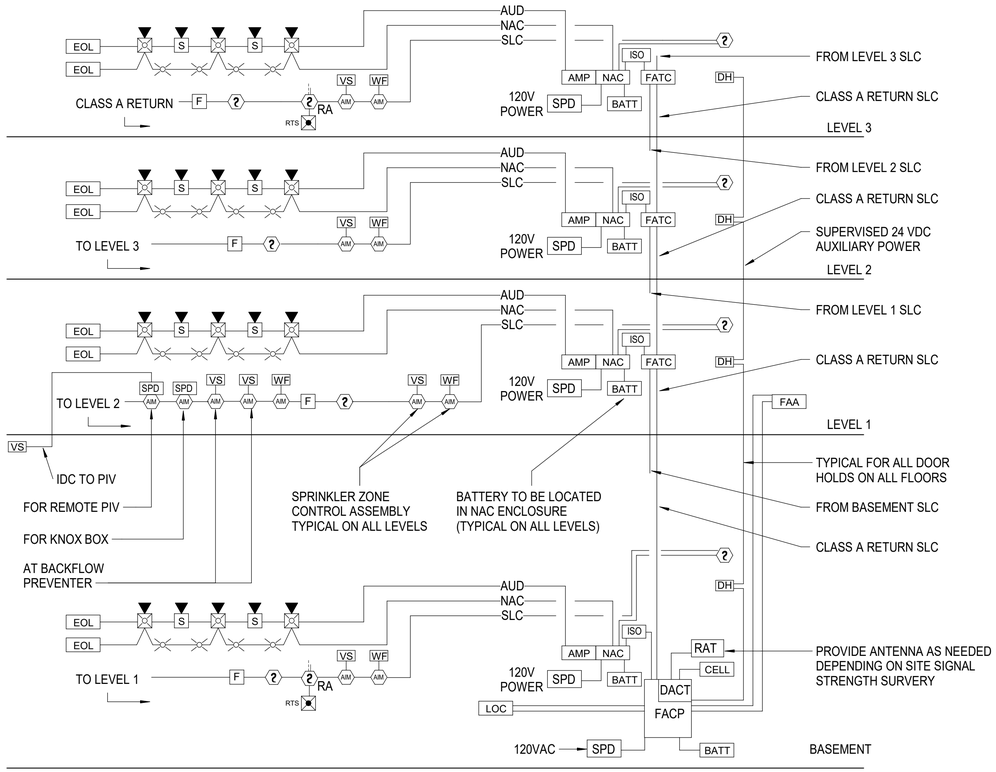
DIVISION OF WORK MATRIX						
	DESIGN	**CONDUIT/BOXES/CABLE TRAY**	**WIRING/CABLING**	**TERMINATING**	**ACTIVE SYSTEMS/WARRANTY**	**COMMISSIOING**
ELECTRICAL	FULL DESIGN BY DESIGN TEAM	ELECTRICAL CONTRACTOR, THROUGH GENERAL CONTRACTOR	ELECTRICAL CONTRACTOR, THROUGH GENERAL CONTRACTOR	ELECTRICAL CONTRACTOR, THROUGH GENERAL CONTRACTOR	ELECTRICAL CONTRACTOR, THROUGH GENERAL CONTRACTOR	BY COMMISSIONING AGENT
FIRE ALARM	FULL DESIGN BY DESIGN TEAM	ELECTRICAL CONTRACTOR, THROUGH GENERAL CONTRACTOR	FIRE ALARM CONTRACTOR, THROUGH GENERAL CONTRACTOR	FIRE ALARM CONTRACTOR, THROUGH GENERAL CONTRACTOR	FIRE ALARM CONTRACTOR, THROUGH GENERAL CONTRACTOR	BY COMMISSIONING AGENT
TELECOM (T-DRAWINGS)	DESIGN TEAM - CONDUIT/BOXES/CABLING SYSTEM, ACTIVE EQUIPMENT - UNC ITS	ELECTRICAL CONTRACTOR, THROUGH GENERAL CONTRACTOR	GENERAL CONTRACTOR TELECOM CONTRACTOR	GENERAL CONTRACTOR TELECOM CONTRACTOR	UNC ITS	N/A
SECURITY (SC-DRAWINGS)	CONDUIT/BOXES	ELECTRICAL CONTRACTOR, THROUGH GENERAL CONTRACTOR	ELECTRICAL CONTRACTOR, THROUGH GENERAL CONTRACTOR	UNC	UNC	N/A
AUDIO VISUAL (AV-DRAWINGS)	DESIGN TEAM - CONDUIT/BOXES, ACTIVE EQUIPMENT - VENDOR	ELECTRICAL CONTRACTOR, THROUGH GENERAL CONTRACTOR	UNC VENDOR, SEPARATE CONTRACT	UNC VENDOR, SEPARATE CONTRACT	UNC VENDOR, SEPARATE CONTRACT, SAME AS CABLING VENDOR.	N/A
LIGHITNG & LIGHTING CONTROLS	FULL DESIGN BY DESIGN TEAM	ELECTRICAL CONTRACTOR, THROUGH GENERAL CONTRACTOR	ELECTRICAL CONTRACTOR, THROUGH GENERAL CONTRACTOR	ELECTRICAL CONTRACTOR, THROUGH GENERAL CONTRACTOR	ELECTRICAL CONTRACTOR, THROUGH GENERAL CONTRACTOR	BY COMMISSIONING AGENT/ MANUFACTURER



NOTES:

SECURELY MOUNT TRANSIENT ARRESTOR IN ACCESSIBLE JUNCTION BOX OR PROPER METAL ENCLOSURE ADJACENT TO THE PANELBOARD. PROVIDE ENGRAVED LABEL INDICATING ITS LOCATION.

2 TRANSIENT ARRESTOR INSTALLATION DETAIL
NO SCALE



CLASS A RETURN NOTE:

HORIZONTAL LOOPS SHALL NOT EXCEED 48" AND VERTICAL LOOPS SHALL NOT EXCEED 12".

CABLING NOTE:

CABLING TO PIV SHALL BE WATERPROOF. CONDUIT SHALL BE A MINIMUM OF 18" BELOW GRADE.

ISOLATOR NOTE:

PROVIDE ISOLATORS ON OUTGOING AND RETURN SLCS AT TERMINAL CABINET OR FACP AND NOT TO EXCEED 20 DEVICES BETWEEN ISOLATORS

NOTE: NOT ALL DEVICES SHOWN

1 FIRE ALARM RISER DIAGRAM
NO SCALE

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SHEET TITLE: FIRE ALARM GENERAL NOTES, SYMBOLS, AND ABBREVIATIONS

SCALE (U.N.O.): NO SCALE

JOB NAME: University of North Carolina - Chapel Hill
SCI#: 21-23484-02A
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

SEAL: NORTH CAROLINA PROFESSIONAL ENGINEER ANDREW R. STRACK
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Signed on 01/03/2024 using a Digital Signature.

ISSUE DATE: 1/8/2024
JOB. NO.: 11706-00
DWG. NO.: FA002

SYSTEM OUTPUTS

Output	Description
A	DISPLAY MESSAGE ON FACP AND REMOTE ANNUNCIATOR PANELS
B	RECORD EVENT HISTORY LOG
C	ACTUATE AUDIBLE SIGNALS ON FACP AND REMOTE PANELS
D	ACTUATE COMMON ALARM SIGNAL INDICATOR
E	ACTUATE AUDIBLE ALARM SIGNAL
F	ACTUATE COMMON SUPERVISORY SIGNAL INDICATOR
G	ACTUATE AUDIBLE SUPERVISORY SIGNAL
H	ACTUATE COMMON TROUBLE SIGNAL INDICATOR
I	ACTUATE AUDIBLE TROUBLE SIGNAL
J	TRANSMIT ALARM SIGNAL TO SUPERVISING STATION
K	TRANSMIT SUPERVISORY SIGNAL TO SUPERVISING STATION
L	TRANSMIT TROUBLE SIGNAL TO SUPERVISING STATION
M	ACTIVATE PRERECORDED VOICE MESSAGE THROUGHOUT BUILDING
N	ACTIVATE VISIBLE NOTIFICATION THROUGHOUT BUILDING
O	SHUTDOWN EXHAUST FAN F-3-2
P	RELEASE HOLD OPEN DOORS
Q	UNLOCK SECURE DOORS
R	SHUT DOWN NON-LIFE SAFETY AUDIO SYSTEMS
S	ACTIVATE EMERGENCY LIGHTING
T	RECALL ELEVATOR TO PRIMARY FLOOR
U	RECALL ELEVATOR TO ALTERNATE FLOOR
V	FLASH FIRE HAT IN ELEVATOR CAB
W	SHUNT TRIP ELEVATOR CONTROLLER POWER ON DELAY TO REACH LANDING
X	SHUTDOWN AFFECTED HVAC UNIT
Y	INTERRUPT PRERECORDED VOICE MESSAGE AND ACTIVATE LIVE VOICE MESSAGE
Z	SILENCE AUDIBLE SIGNAL AT FACP AND REMOTE ANNUNCIATORS
AA	SILENCE VOICE MESSAGING THROUGHOUT BUILDING
BB	RESET SYSTEM TO NORMAL

	SYSTEM INPUTS		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	BB
ALARM	MANUAL PULL STATION	1	●	●	●	●	●					●			●	●	●	●	●	●	●									
	AREA-TYPE SMOKE DETECTOR	2	●	●	●	●	●					●			●	●	●	●	●	●	●									
	AREA-TYPE HEAT DETECTOR	3	●	●	●	●	●					●			●	●	●	●	●	●	●									
	WATER FLOW SWITCH - VANE TYPE	4	●	●	●	●	●					●			●	●	●	●	●	●	●									
	WATER FLOW SWITCH - PRESSURE TYPE	5	●	●	●	●	●					●			●	●	●	●	●	●	●									
	AREA-TYPE SMOKE DETECTOR - NOT PRIMARY ELEVATOR LOBBY	6	●	●	●	●	●					●			●	●	●	●	●	●	●	●								
	AREA-TYPE SMOKE DETECTOR - PRIMARY ELEVATOR LOBBY	7	●	●	●	●	●					●			●	●	●	●	●	●	●		●							
	AREA-TYPE SMOKE DETECTOR - ELEVATOR SHAFT/MACHINE ROOM	8	●	●	●	●	●					●			●	●	●	●	●	●	●	●		●						
	AREA-TYPE HEAT DETECTOR - ELEVATOR SHAFT/MACHINE ROOM	9	●	●	●	●	●					●			●	●	●	●	●	●	●	●		●	●					
SUPERVISORY	DUCT SMOKE DETECTOR	10	●	●	●			●	●				●													●				
	TAMPER SWITCH ACTIVATION	11	●	●	●			●	●				●																	
	LOW OR HIGH AIR PRESSURE SWITCH ACTIVATION	12	●	●	●			●	●				●																	
	ELEVATOR SHUNT TRIP LOSS OF POWER	13	●	●	●			●	●				●																	
	TWO WAY COMMUNICATION SYSTEM TROUBLE/FAULT	14	●	●	●			●	●				●																	
	TWO WAY COMMUNICATION SYSTEM LOSS OF POWER	15	●	●	●			●	●				●																	
TROUBLE	ANY OPEN, GROUND, OR SHORT CIRCUIT	16	●	●	●					●	●			●																
	RADIO TRANSCEIVER FAILURE	17	●	●	●					●	●			●																
	FIRE ALARM 120VAC POWER FAILURE	18	●	●	●					●	●			●																
	FIRE ALARM SYSTEM LOW BATTERY	19	●	●	●					●	●			●																
	DACT FAILURE	20	●	●	●					●	●			●																
SYSTEM FUNCTIONS	MICROPHONE PUSH BUTTON ACTIVATED	21	●	●																							●			
	ACKNOWLEDGE	22	●	●																								●		
	ALARM SIGNAL SILENCE	23	●	●																									●	
	SYSTEM RESET	24	●	●																										●

1 FIRE ALARM OPERATING SEQUENCE

NO SCALE

LORD AECK SARGENT

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SHEET TITLE: FIRE ALARM GENERAL NOTES, SYMBOLS, AND ABBREVIATIONS

SCALE (U.N.O.): NO SCALE

JOB NAME: University of North Carolina - Chapel Hill

SCO# 21-23548-02A

BINGHAM HALL RENOVATION

LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

SEAL: NORTH CAROLINA PROFESSIONAL ENGINEER ANDREW R. STRACK — DocuSigned by: Andrew Strack FD3295FC9082412...

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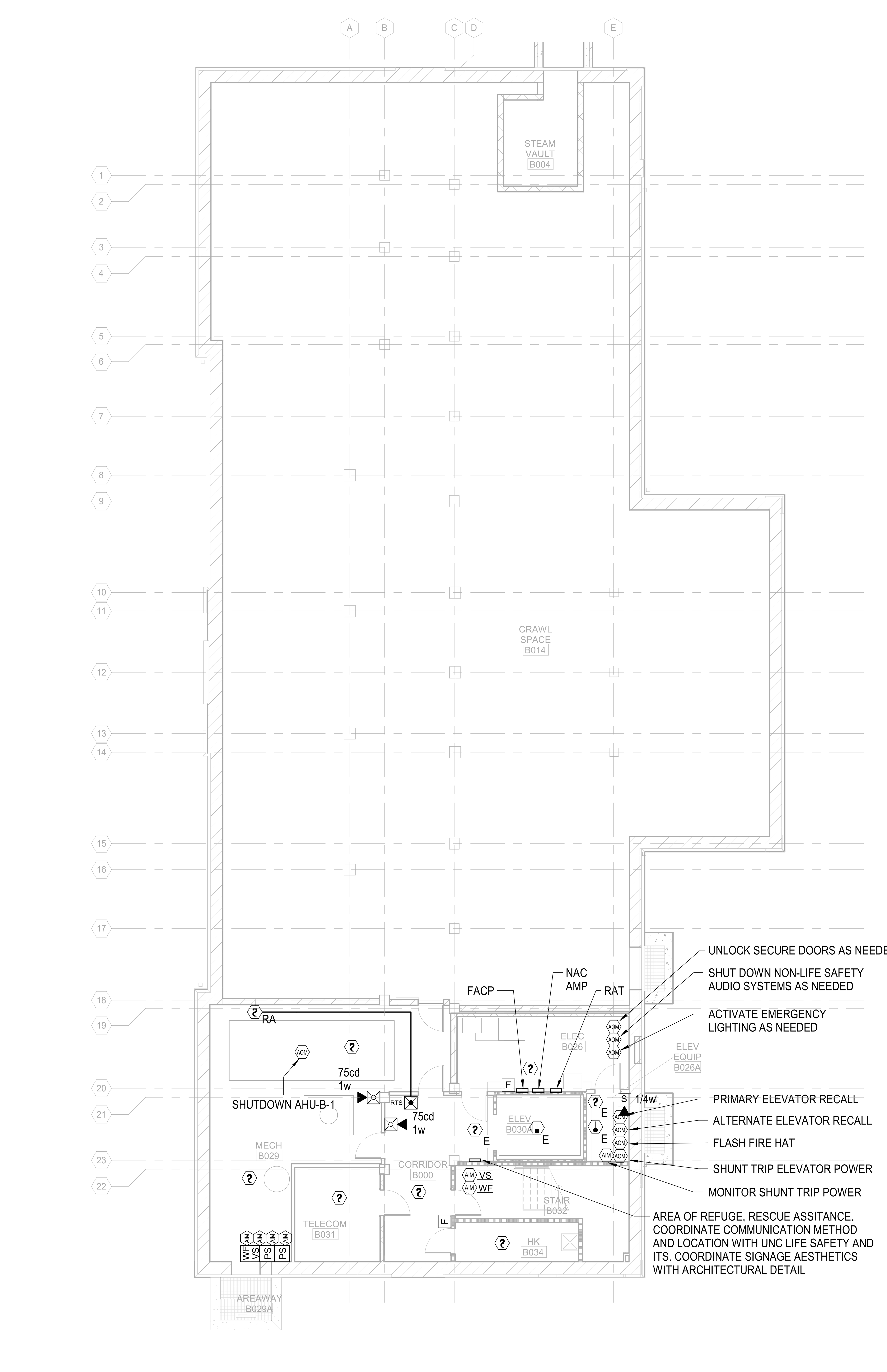
ISSUE DATE: 1/8/2024

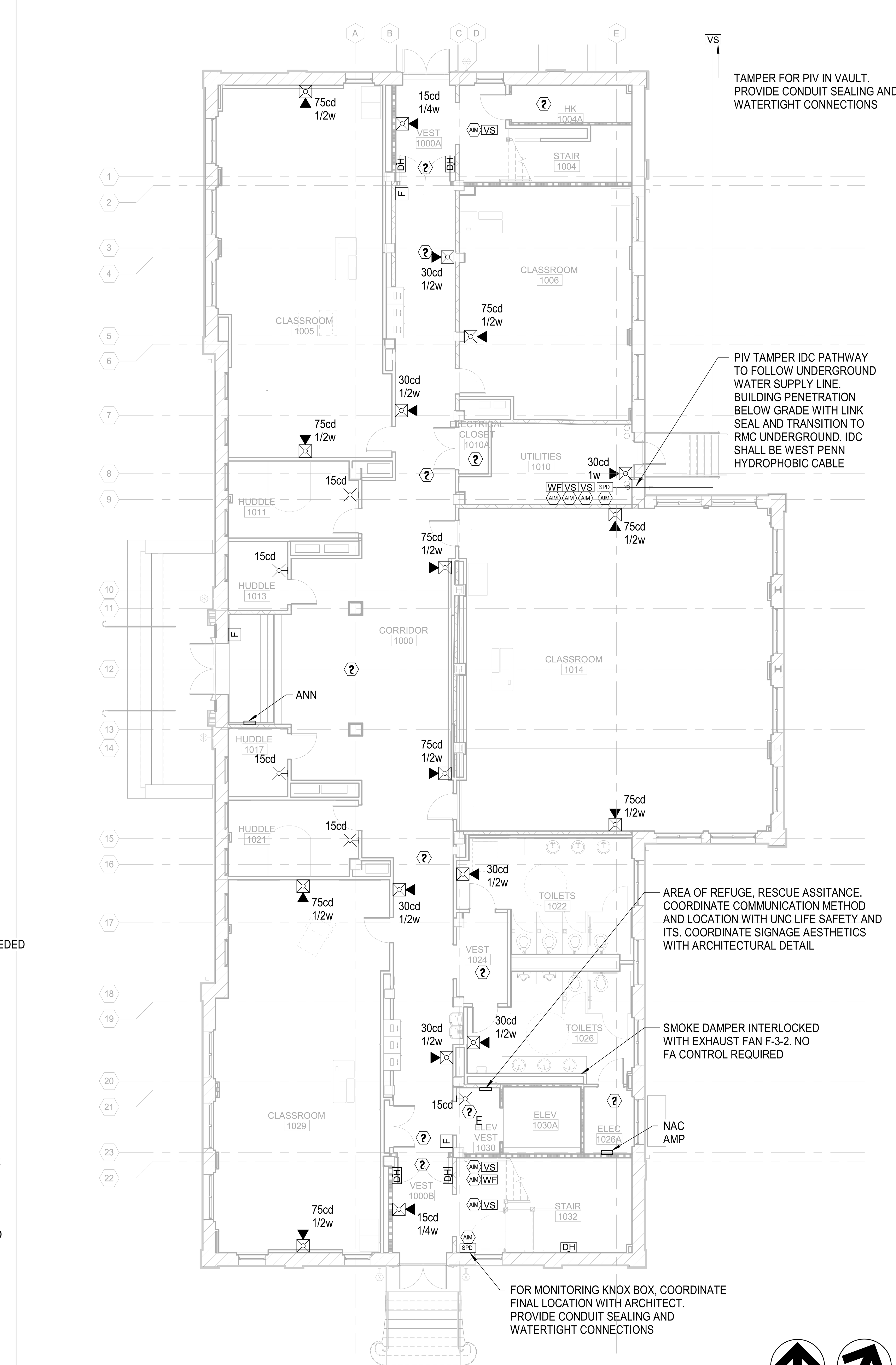
JOB. NO.: 11706-00

DWG. NO.: FA003



1 FIRE ALARM BASEMENT FLOOR PLAN

0 8 16 FT



2 FIRE ALARM FIRST FLOOR PLAN

0 8 16 FT

PROJECT NORTH

TRUE NORTH

GENERAL NOTES

DOOR HOLDERS TO BE PROVIDED BY ARCHITECT AND POWERED BY BRANCH CIRCUIT FROM ELECTRICAL ROOM.

SHEET SPECIFIC NOTES

LIFE SAFETY LEGEND

	SMOKE PARTITION
	1-HOUR RATED WALL
	2-HOUR RATED WALL
	3-HOUR RATED WALL

SEAL

NORTH CAROLINA PROFESSIONAL ENGINEER ANDREW R. STRACK

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SHEET TITLE
FIRE ALARM BASEMENT & FIRST FLOOR PLANS

SCALE (U.N.O.)
1/8" = 1'-0"

0 8 16 FT

JOB NAME
University of North Carolina - Chapel Hill
SCO#: 21-23548-02A
BINGHAM HALL RENOVATION

LOCATION
36 Lenoir Drive, Chapel Hill, NC 27514

ISSUE DATE
1/8/2024

JOB. NO.
11706-00

DWG. NO.
FA101

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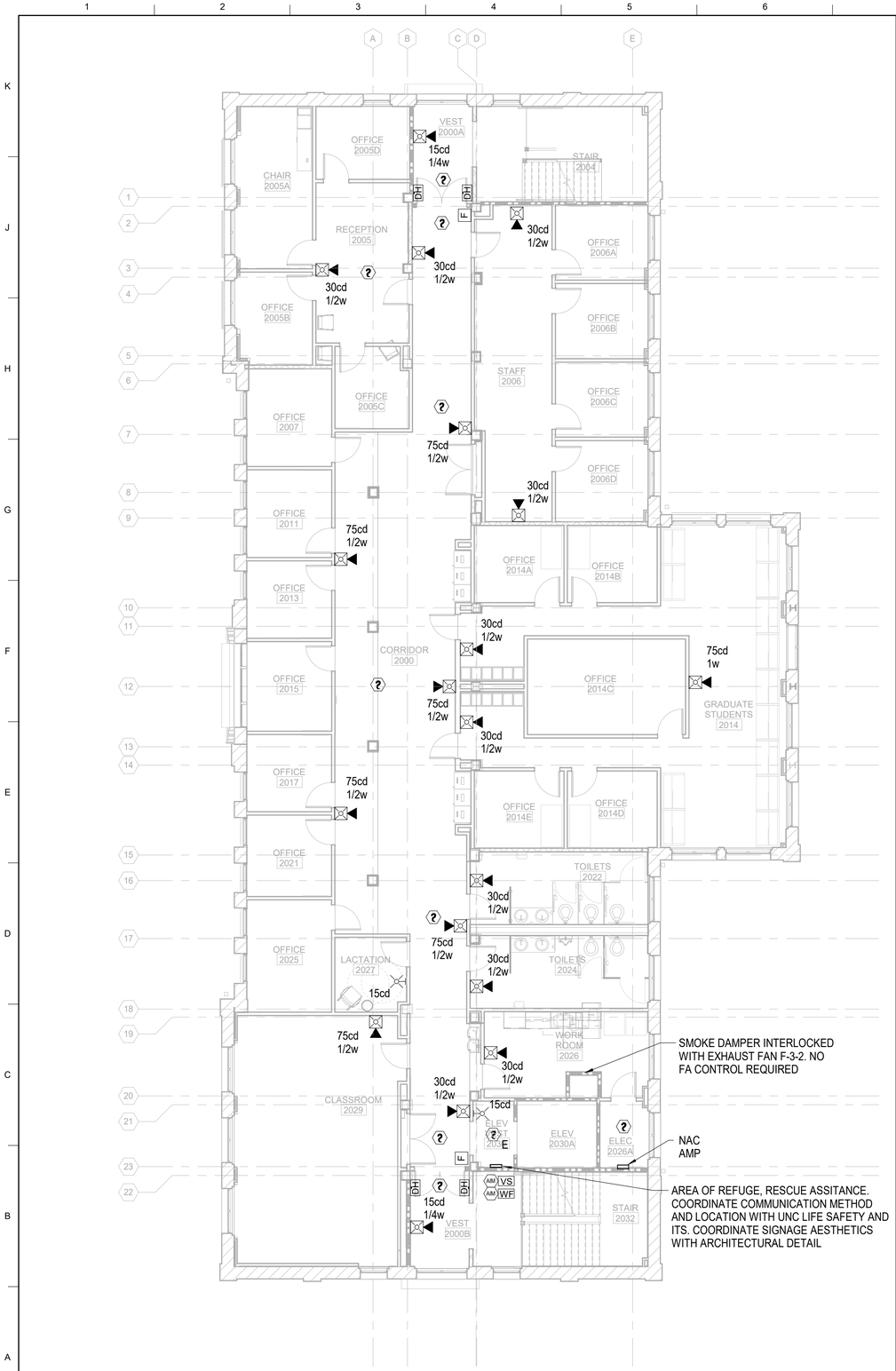
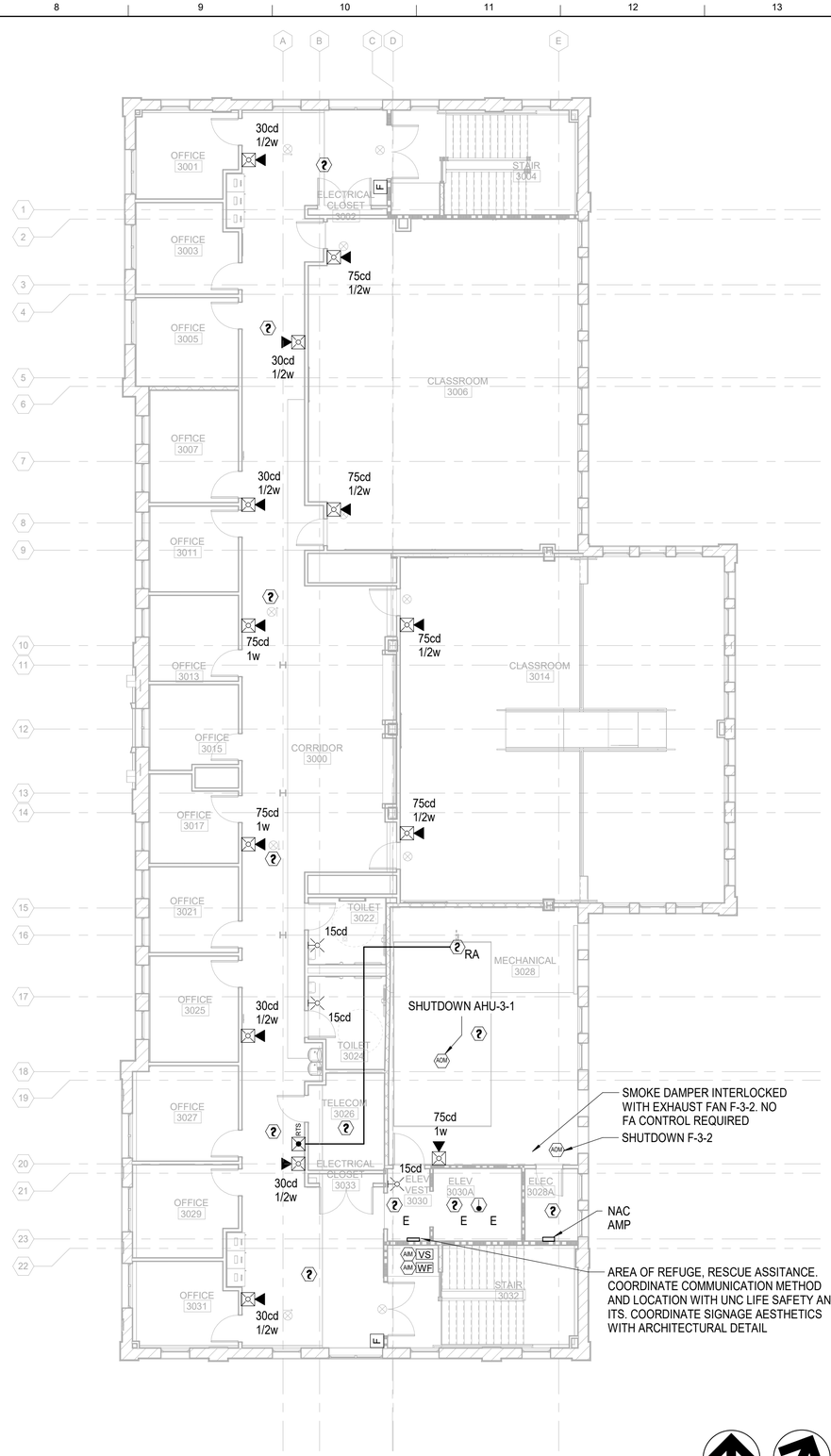


1 FIRE ALARM SECOND FLOOR PLAN

0 8 16 FT



2 FIRE ALARM THIRD FLOOR PLAN

0 8 16 FT

PROJECT NORTH TRUE NORTH

GENERAL NOTES

DOOR HOLDERS TO BE PROVIDED BY ARCHITECT AND POWERED BY BRANCH CIRCUIT FROM ELECTRICAL ROOM.

SHEET SPECIFIC NOTES

LIFE SAFETY LEGEND

- SMOKE PARTITION
- 1-HOUR RATED WALL
- 2-HOUR RATED WALL
- 3-HOUR RATED WALL

LORD AECK SARGENT

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SHEET TITLE: FIRE ALARM SECOND & THIRD FLOOR PLANS

SCALE (U.N.O.): 1/8" = 1'-0"

JOB NAME: University of North Carolina - Chapel Hill
SCI#: 21-23545-02A
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

BINGHAM HALL RENOVATION

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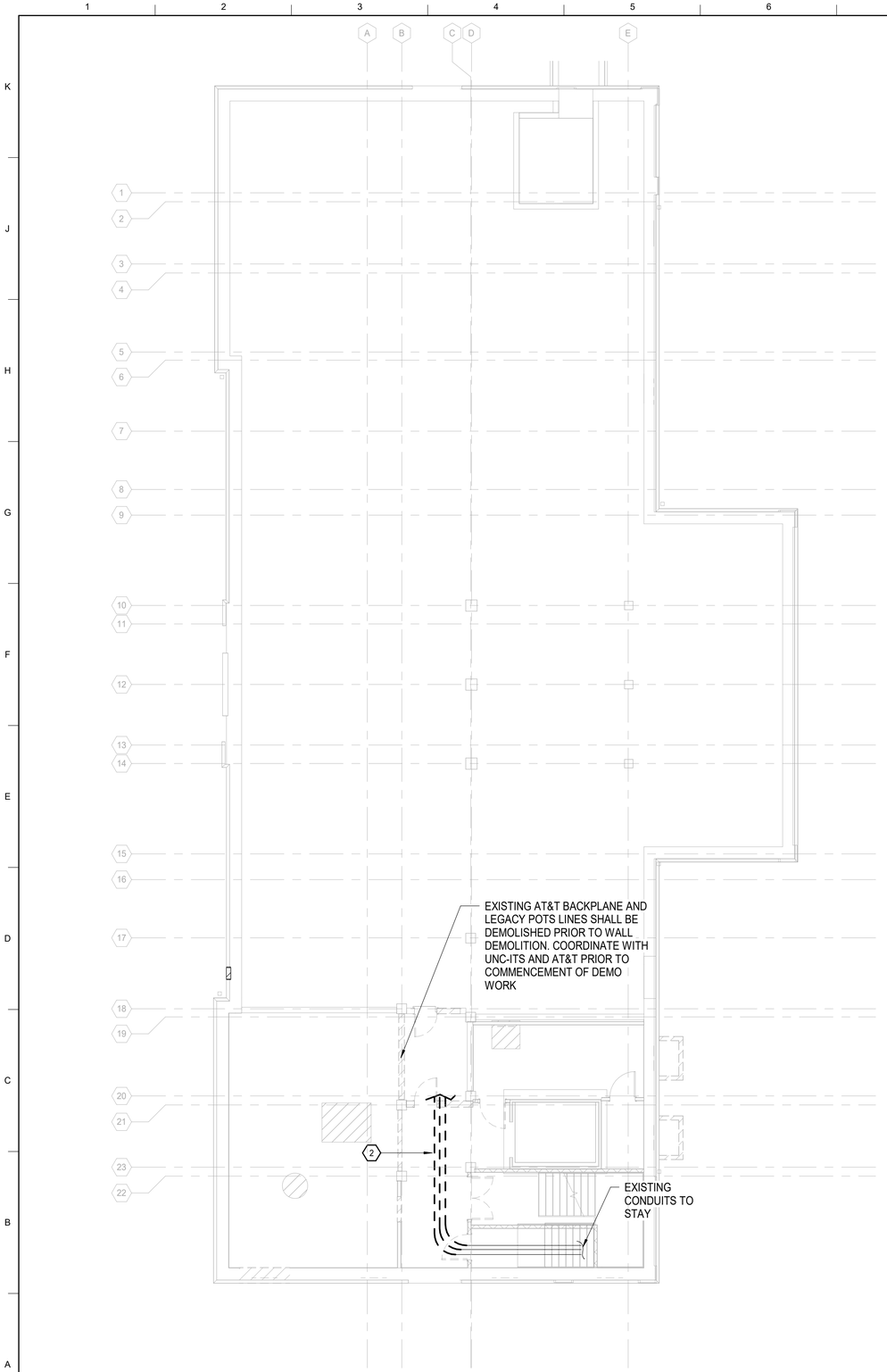
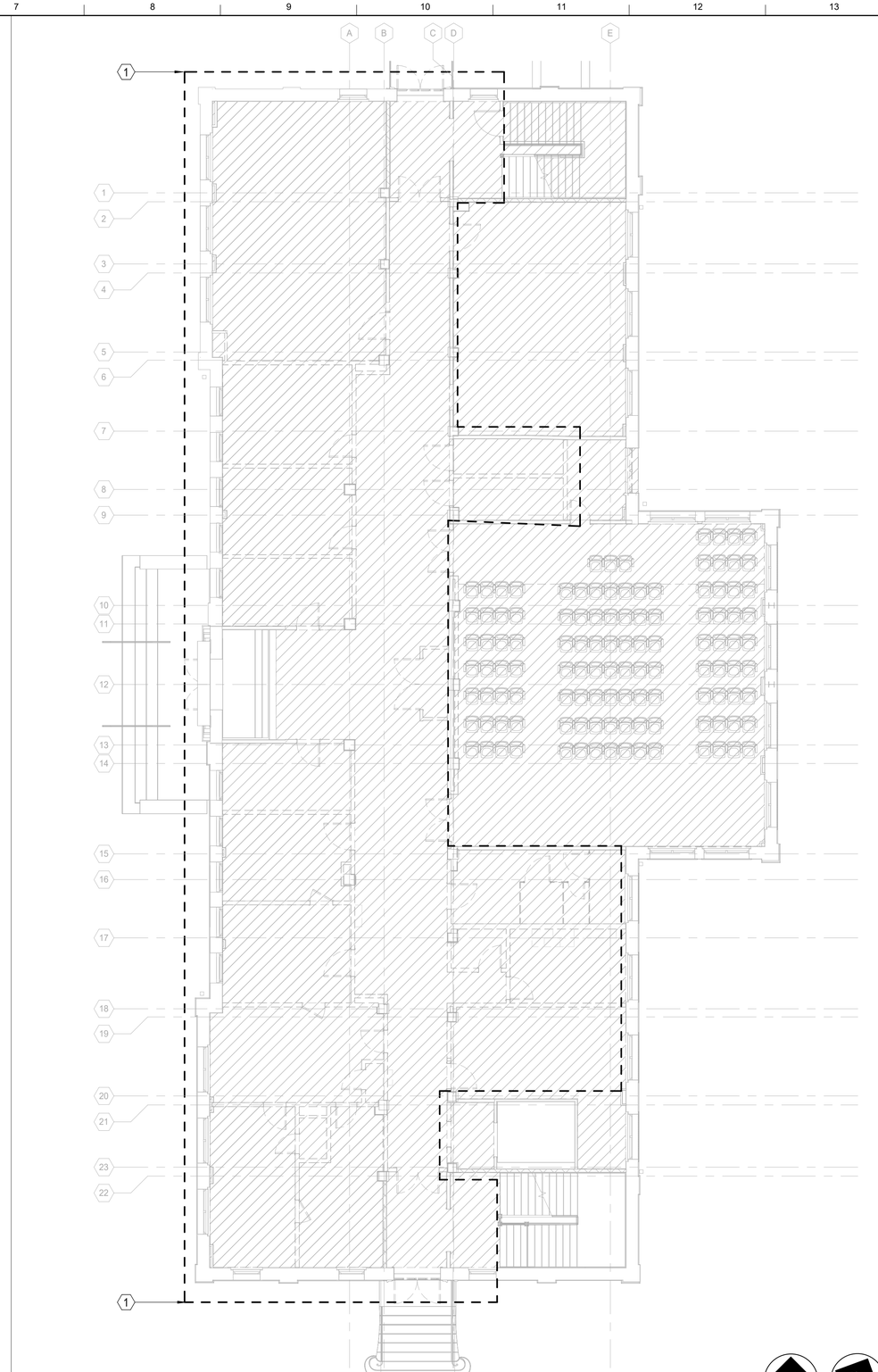
ISSUE DATE: 1/8/2024
JOB. NO.: 11706-00
DWG. NO.: FA102



1 TELECOM BASEMENT DEMOLITION PLAN

0 8 16 FT



2 TELECOM FIRST DEMOLITION PLAN

0 8 16 FT

PROJECT NORTH TRUE NORTH

GENERAL NOTES

DEMOLITION NOTES:

1. ALL DEMOLITION WORK TO BE COORDINATED WITH GENERAL CONTRACTOR, OWNERS FACILITIES DEPARTMENT, SECURITY DEPARTMENT, IT DEPARTMENT, AND OTHER TRADES. NO DEVICES SHALL BE REMOVED WITHOUT PRIOR OWNER AUTHORIZATION.
2. DEMOLITION CONTRACTOR TO FURNISH TO OWNER A LIST OF ALL DATA/VOICE CABLING REMOVED INCLUDING DROP IDENTIFIER, PATCH PANEL PORT. CONNECTING BLOCK PORT, ETC. ALL PATCH CORDS BETWEEN PATCH PANEL AND NETWORK SWITCH SHALL BE REMOVED BY OWNER'S IT DEPARTMENT.
3. REMOVE EQUIPMENT, APPARATUS, AND EXPOSED WIRING AND RACEWAYS RENDERED USELESS DUE TO CHANGES.
4. MATERIAL AND EQUIPMENT WHICH HAS BEEN REMOVED SHALL NOT BE USED IN THE NEW WORK, EXCEPT AS SPECIFIED HEREIN.
5. REMOVE EXISTING RACEWAYS THAT ARE IN POOR CONDITION, BROKEN, OR DAMAGED. THE CONTRACTOR SHALL PERFORM A WALK-THROUGH OF THE RENOVATED AREAS PRIOR TO BIDDING TO UNDERSTAND THE SCOPE. BIDS SHALL INCLUDE A LINEAR FOOT AMOUNT OF CONDUIT, CABLING AND SURGE SUPPRESSION TO BE REPLACED.
6. EXISTING TELECOM CABLING SERVING THE TELECOM OR SECURITY EQUIPMENT ON THE ROOF SHALL BE PULLED BACK TO ALLOW CONSTRUCTION AND REPULLED TO RECONNECT THE EXISTING DEVICES. DOWNTIME OF SYSTEMS AND SERVICES DUE TO CONSTRUCTION SHALL BE COORDINATED WITH THE OWNER.
7. RELOCATE THE EXISTING TELECOMMUNICATIONS EQUIPMENT/ANTENNA, INCLUDING ALL UTILITY CONNECTIONS, AND REINSTALL IN THE SAME LOCATION USING NEW EQUIPMENT SUPPORT CURBS OR RAILS AND CONDUIT RACEWAYS AS NEEDED.
8. COORDINATION WITH UNC-ITS AND AT&T WILL BE REQUIRED FOR REMOVAL OF EXISTING BUILDING SERVICE CABLES PRIOR TO THE START OF DEMOLITION

SHEET SPECIFIC NOTES

1. DEMOLISH ALL TELECOM CABLING, JACKS AND ASSOCIATED BACKBOXS, FACEPLATES AND PATHWAYS BACK TO SERVICING PATCH PANEL OR PUNCH DOWN BLOCK AND DISCARD. DO NOT ABANDON CABLING.
2. DEMOLISH EXISTING CONDUITS BACK CONNECTION UNDERSTAIRWELL. NEW CONDUITS WILL EXTEND TO NEW MDF IN NEW WORK PLAN. COORDINATE WITH UNC-ITS AND AT&T TO ENSURE ALL EXISTING CABLING IS REMOVED PRIOR TO BEGINNING OF CONDUIT WORK.

LORD AECK SARGENT

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NB Contact: Reade Daniel
N&B PROJECT : 21N242
Newcomb & Boyd, LLP
Firm Lic # P-0312

SHEET TITLE: TELECOM BASEMENT & FIRST DEMOLITION PLANS

SCALE (U.N.O.): NO SCALE

0 8 16 FT

JOB NAME: University of North Carolina - Chapel Hill
SCD#: 21-25548-02A
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

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SEAL
044143
ENGINEER
RICHARD O. DOZIER, III

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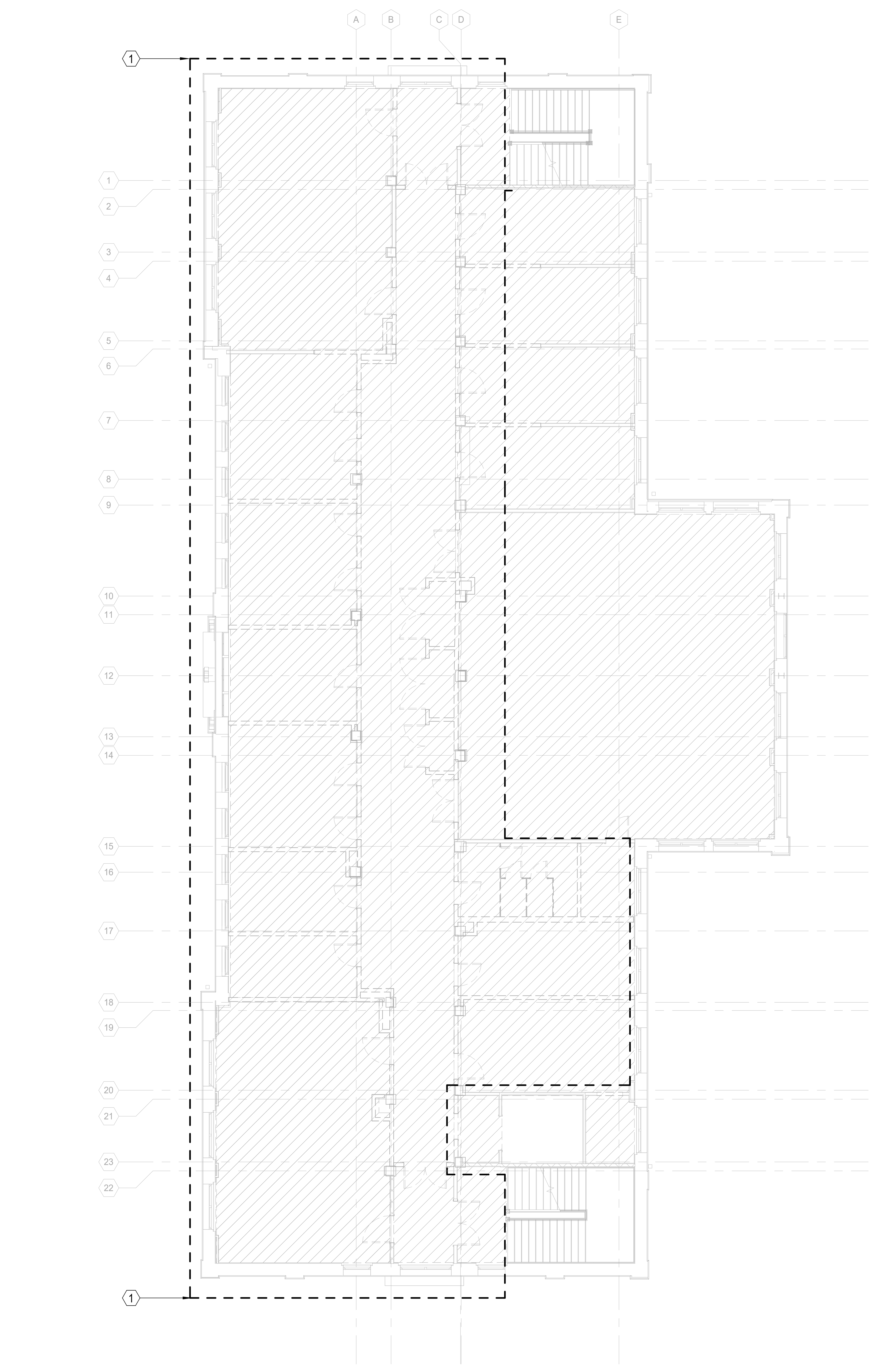
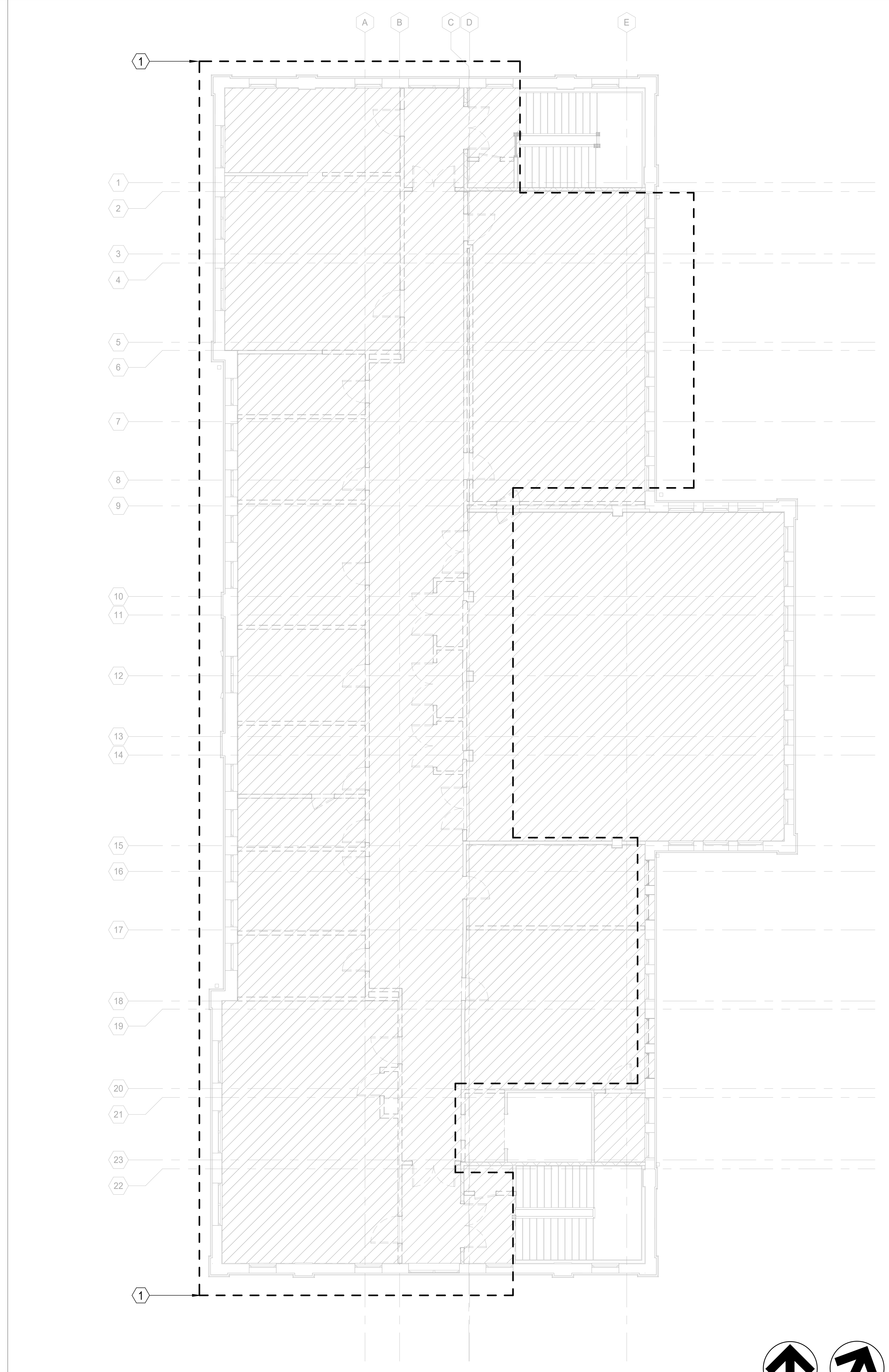
ISSUE DATE: 1/8/2024

OB. NO.: 11706-00

DWG. NO.: TD101



1 TELECOM SECOND DEMOLITION PLAN



2 TELECOM THIRD DEMOLITION PLAN

GENERAL NOTES

DEMOLITION NOTES:

1. ALL DEMOLITION WORK TO BE COORDINATED WITH GENERAL CONTRACTOR, OWNERS FACILITIES DEPARTMENT, SECURITY DEPARTMENT, IT DEPARTMENT, AND OTHER TRADES. NO DEVICES SHALL BE REMOVED WITHOUT PRIOR OWNER AUTHORIZATION.
2. DEMOLITION CONTRACTOR TO FURNISH TO OWNER A LIST OF ALL DATA/VOICE CABLING REMOVED INCLUDING DROP IDENTIFIER, PATCH PANEL PORT. CONNECTING BLOCK PORT, ETC. ALL PATCH CORDS BETWEEN PATCH PANEL AND NETWORK SWITCH SHALL BE REMOVED BY OWNER'S IT DEPARTMENT.
3. REMOVE EQUIPMENT, APPARATUS, AND EXPOSED WIRING AND RACEWAYS RENDERED USELESS DUE TO CHANGES.
4. MATERIAL AND EQUIPMENT WHICH HAS BEEN REMOVED SHALL NOT BE USED IN THE NEW WORK, EXCEPT AS SPECIFIED HEREIN.
5. REMOVE EXISTING RACEWAYS THAT ARE IN POOR CONDITION, BROKEN, OR DAMAGED. THE CONTRACTOR SHALL PERFORM A WALK-THROUGH OF THE RENOVATED AREAS PRIOR TO BIDDING TO UNDERSTAND THE SCOPE. BIDS SHALL INCLUDE A LINEAR FOOT AMOUNT OF CONDUIT, CABLING AND SURGE SUPPRESSION TO BE REPLACED.
6. EXISTING TELECOM CABLING SERVING THE TELECOM OR SECURITY EQUIPMENT ON THE ROOF SHALL BE PULLED BACK TO ALLOW CONSTRUCTION AND REPULLED TO RECONNECT THE EXISTING DEVICES. DOWNTIME OF SYSTEMS AND SERVICES DUE TO CONSTRUCTION SHALL BE COORDINATED WITH THE OWNER.
7. RELOCATE THE EXISTING TELECOMMUNICATIONS EQUIPMENT/ANTENNA, INCLUDING ALL UTILITY CONNECTIONS, AND REINSTALL IN THE SAME LOCATION USING NEW EQUIPMENT SUPPORT CURBS OR RAILS AND CONDUIT RACEWAYS AS NEEDED.
8. COORDINATION WITH UNC-ITS AND AT&T WILL BE REQUIRED FOR REMOVAL OF EXISTING BUILDING SERVICE CABLES PRIOR TO THE START OF DEMOLITION

SHEET SPECIFIC NOTES

(1) DEMOLISH ALL TELECOM CABLING, JACKS AND ASSOCIATED BACKBOXS, FACEPLATES AND PATHWAYS BACK TO SERVICING PATCH PANEL OR PUNCH DOWN BLOCK AND DISCARD. DO NOT ABANDON CABLING.

LORD AECK SARGENT

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SHEET TITLE: TELECOM SECOND & THIRD DEMOLITION PLANS

SCALE (U.N.O.): NO SCALE

JOB NAME: University of North Carolina - Chapel Hill
BINGHAM HALL RENOVATION

LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

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Signed on 01/03/2024 using a Digital Signature.

ISSUE DATE: 1/8/2024

JOB NO.: 11706-00

DWG. NO.: TD102

SCOPE GUIDANCE AND GENERAL NOTES

1. THE WORK DESCRIBED IN THESE T-SERIES DRAWINGS APPLY TO SPECIFICATION SECTIONS 27 00 10, 27 0 90, 27 10 00, 27 11 00.
2. ELECTRICAL SCOPE: THE INFRASTRUCTURE PORTION OF THESE DOCUMENTS SHALL BE PROVIDED AND INSTALLED BY THE ELECTRICAL CONTRACTOR AND SHALL INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING:
   A. TELECOM SPACES
      1. BACKBOARDS
      2. CONDUIT PULL BOXES
      3. RISER SLEEVES
      4. SLEEVES FROM TELECOM SPACES TO CABLE TRAY
      5. SLEEVES THROUGH WALL PARTITIONS ALONG CABLE TRAY ROUTE INCLUDING AIR ZONE/SPACE PARTITIONS
      6. JUNCTION BOXES
      7. FLOOR BOXES, AS SPECIFIED BY ELECTRICAL OR AUDIOVISUAL
      8. SITE WORK, DUCTBANK AND INNERDUCT FOR CAMPUS DISTRIBUTION
      9. INTERIOR INNERDUCT
      10. PROVIDE COMPLETE BUILDING-WIDE TELECOMMUNICATIONS GROUNDING, BONDING BUSBAR BACKBONE SYSTEM PER TIA-607. PROVIDE BONDING AND GROUNDING CONDUIT AND RACEWAY TO GROUND BUS PER TIA-607. BONDING OF CABLE TRAYS AND SLEEVES BY MEANS OF CONTINUOUS STRANDED BARE CONDUCTORS. TERMINATED AT THE MASTER GROUND BUS BAR.
      11. RACK POWER ON CABLE RUNWAY ABOVE RACK ROW AND CONVENIENCE POWER ON EACH WALL OF TELECOM ROOMS.
3. CABLING SCOPE: THE CABLING PORTION OF THESE DOCUMENTS SHALL BE PROVIDED AND INSTALLED BY THE COMMUNICATIONS CABLING CONTRACTOR AND SHALL INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING:
   A. TELECOM SPACES
      1. TELECOM RELAY RACKS AND EQUIPMENT CABINETS
      2. CABLE RUNWAY AND TRAY IN TELECOM ROOMS
      3. PATCH PANELS
      4. TERMINATION BLOCKS
      5. VERTICAL AND HORIZONTAL CABLING MANAGEMENT
      6. BONDING AND GROUNDING OF EQUIPMENT TO GROUND BUS (AS PROVIDED BY ELECTRICAL PORTION)
   B. CABLING AND CONNECTIVITY
      1. ALL COPPER AND FIBER CABLING PATCH CORDS
      2. ALL COPPER AND FIBER CONNECTORS AND JACKS
      3. ALL COPPER AND FIBER TERMINATIONS
      4. ALL DATA CABLING REQUIRED TO SUPPORT SECURITY AND ACCESS CONTROL INFRASTRUCTURE. (CAMERAS, CARD READERS, MEDIA CONVERTERS, ETC.)
      5. WORKSTATION FACEPLATES
      6. CONSOLIDATION POINTS
      7. EXTERIOR/OUTSIDE PLANT CABLING, INCLUDING TERMINATIONS AND TESTING.
   C. INTERIOR & EXTERIOR PATHWAYS
      1. SEALING OF TELECOM CONDUITS AND SLEEVES
   D. WIRELESS ACCESS POINTS
      1. WIRELESS ACCESS POINTS SHALL BE OWNER FURNISHED, CONTRACTOR INSTALLED
      2. STANDARD MOUNTING BRACKETS AND ACCESSORIES SHALL BE OWNER PROVIDED CONTRACTOR INSTALLED. ANY ADDITIONAL MOUNTING EQUIPMENT, FITTINGS OR ACCESSORIES NEEDED FOR A COMPLETE INSTALLATION SHALL BE PROVIDED BY THE CONTRACTOR.
      3. CONTRACTOR TO PROVIDE MOCK-UP INSTALLATION PRIOR TO ROUGH-IN OF UNITS TO BE INSTALLED IN EACH CEILING INSTALLATION TYPE.
      4. CONTRACTOR SHALL REVIEW INSTALLATION ON ALL CEILING TYPES WITH OWNER PRIOR TO ROUGH-IN
      5. CONTRACTOR TO PROVIDE ALL PATCH CORDS, LABELING, AND AS-BUILT DOCUMENTATION
      6. CONTRACTOR TO SUBMIT FOR APPROVAL ANY DEVIATIONS FROM THE DETAILS INCLUDED IN THESE DESIGN DOCUMENTS.
4. THE CONTRACTOR RESPONSIBLE FOR THE ELECTRICAL PORTION SHALL PROVIDE AND INSTALL ALL INCIDENTAL EQUIPMENT AND MATERIALS RELATED TO THEIR WORK AND REQUIRED BY THE COMMUNICATIONS CABLING DOCUMENTS. FOR EXAMPLE, INSULATING BUSHINGS FOR CONDUIT ENDS SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR.
5. THE CONTRACTOR RESPONSIBLE FOR THE CABLING PORTION SHALL PROVIDE AND INSTALL ALL INCIDENTAL EQUIPMENT AND MATERIALS RELATED TO THEIR WORK AND REQUIRED BY THE COMMUNICATION CABLING DOCUMENTS. FOR EXAMPLE, CABLE TIES NECESSARY FOR CABLE MANAGEMENT SHALL BE PROVIDED BY THE CABLING CONTRACTOR.
6. FOR THE INFRASTRUCTURE PORTION, ANY AND ALL DEVIATIONS FROM THE CONTRACT DOCUMENTS REQUIRED BY FIELD CONDITIONS SHALL BE RESOLVED THROUGH THE RFI (REQUEST FOR INFORMATION) PROCESS TO AVOID INADEQUATE OR INCORRECT INFRASTRUCTURE FOR USE BY THE CABLING CONTRACTOR.
7. THE CABLING CONTRACTOR SHALL NOTE THAT SECURITY DRAWINGS REQUIRE CABLING TO BE RUN BY THE STRUCTURED CABLING CONTRACTOR.
8. CONDUITS AND OTHER RACEWAYS USED FOR ANY PURPOSE, INCLUDING WIRING AND CABLING FOR BUILDING WITHIN ARCHITECTURAL SHAFTS AND ENCLOSURES INDICATED ON THE DRAWING OR CONCEALED WITHIN THE CONCRETE STRUCTURE, EXCEPT WHERE ROUTING IS SPECIFICALLY SHOWN OR DETAILED TO BE EXPOSED ON THE DRAWINGS. THE CONTRACTOR SHALL COORDINATE ROUTING OF RACEWAY WITHIN CONCRETE SLABS, BEAMS, AND COLUMNS WITH THE SUBCONTRACTORS. RACEWAY CONCEALED IN STRUCTURE SHALL NOT EXCEED 1" DIAMETER AND ROUTING OF SUCH RACEWAY SHALL BE MODIFIED TO COMPLY WITH THE CONCEALMENT AND SPACING REQUIREMENTS INDICATED ON THE STRUCTURAL DRAWINGS. RACEWAY SHALL NOT BE VISIBLE FROM THE FINISHED SPACE.
9. PROVIDE A SIZE AND POSITION PULL BOX PER TIA-569 IN CONDUIT PATHWAYS WHERE CONDUIT WOULD EXCEED 100' OF CONTINUOUS PATHWAY OR 180 DEGREES OF BEND BETWEEN PULLBOXES OR THE ENDS OF THE CONDUIT PATHWAY.

GENERAL NOTES (APPLIES TO ROUGH-IN MATRIX)

1. ALL INFORMATION IS TYPICAL AS INDICATED IN THIS MATRIX UNLESS OTHERWISE NOTED ELSEWHERE.
2. ALL OUTLETS SHALL BE LOCATED ADJACENT TO POWER RECEPTACLES WHERE APPLICABLE.
3. FINAL HEIGHT AND MOUNTING LOCATIONS SHALL BE COORDINATED WITH THE ARCHITECTURAL ELEVATIONS.
4. ALL DATA OUTLET CONDUITS SHALL BE ROUTED TO THE NEAREST CABLE TRAY IN ACCESSIBLE CEILING SPACE OR DIRECTLY INTO THE TELECOM ROOM, UON.
5. PROVIDE BLANK MODULES FOR ALL UNUSED PORTS.
6. REAM AND BUSH ALL CONDUIT ENDS.
7. PROVIDE SINGLE GANG PLASTER RING FOR DOUBLE GANG BOXES WITH SINGLE GANG FACEPLATES.
8. PROVIDE DOUBLE GANG PLASTER RING FOR DOUBLE GANG BOXES WITH DOUBLE GANG FACEPLATES.
9. REFER TO FACEPLATE DETAILS FOR OUTLET PORT CONFIGURATION

STANDARD ABBREVIATIONS

ABV - ABOVE
AFC/AFF/AFG/ARF - ABOVE FINISHEDCEILING/ FLOOR/ GRADE/ RAISED FLOOR
AP - ACCESS POINT
ARCH - ARCHITECT/ARCHITECTURAL
BEL - BELOW
BCKBD - BACKBOARD
BFC - BELOW FINISHED CEILING
BOD - BASIS OF DESIGN
CC - CENTER CONTACT
CCA - CEILING CONNECTOR ASSEMBLY
COL - COLUMN
CDT/C - CONDUIT
CONN - CONNECTION
CONT - CONTINUATION/CONTINUOUS
CKT - CIRCUIT
CLG - CEILING
DN - DOWN
EC - ELECTRICAL CONTRACTOR
EMT - ELECTRICAL METALLIC TUBING
EQUIP - EQUIPMENT
EXIST - EXISTING
F - FIBER
FAC - FLOOR ASSEMBLY CONNECTOR
FBO - FINISHED BY OTHERS
FA - FIRE ALARM
FL - FLOOR
FOC - FIBER OPTIC CABLING
G - GROUND
HC - HORIZONTAL CROSS-CONNECT
IDC - INSTALLATION DISPLACEMENT CONNECTOR
JB - JUNCTION BOX
MM - MULTI-MODE
MTD - MOUNTED
NA - NOT APPLICABLE
N/I - NOT ISSUED
NIC - NOT IN CONTRACT
NTS - NOT TO SCALE
OC - ON CENTER
OFCI - OWNER FURNISHED, CONTRACTOR INSTALLED
OFOI - OWNER FURNISHED, OWNER INSTALLED
OSP - OUTSIDE PLANT
PNL - PANEL
PR - PAIR
RR - RISER RATED
SBB - SECONDARY BONDING BUS BAR
SM - SINGLE MODE
SPEC - SPECIFICATION
ST - STRAND
SW - SWITCH
TBB - TELECOM BONDING BACKBONE
TBC - TELECOM BONDING CONDUCTOR
TEBC - TELECOM EQUIPMENT BONDING CONDUCTOR
TGB - TELECOM GROUNDING BUS BAR
TMGB - TELECOM MAIN GROUNDING BUS BAR
UON - UNLESS OTHERWISE NOTED
WCA - WALL CONNECTOR ASSEMBLY
WP - WEATHERPROOF
XFMR - TRANSFORMER

LOW VOLTAGE COMMONLY USED SYMBOLS LEGEND

LADDER TYPE TELECOMMUNICATIONS RUNWAY (SIZE AS SPECIFIED OR NOTED ON ENLARGED PLANS)
BASKET-TYPE CABLE TRAY (SIZE AS SPECIFIED OR NOTED ON FLOOR PLANS)
J-HOOK DIAGRAMMATIC CABLING PATHWAY (INSTALL EVERY 5FT MINIMUM)
2-POST TELECOMMUNICATIONS RACK WITH REQUIRED CLEARANCES
DOUBLE SIDED VERTICAL CABLE MANAGER (SIZE AS NOTED ON ENLARGED PLANS)
TELECOMMUNICATIONS GROUND BUS BAR (SIZE PER GROUNDING DETAIL)
WALL OUTLET (REFER TO ROUGH IN MATRIX FOR ADDITIONAL INFORMATION)
CEILING OUTLET (REFER TO ROUGH IN MATRIX FOR ADDITIONAL INFORMATION)

TELECOM OUTLET ROUGH-IN AND CABLING REQUIREMENT MATRIX

DRAWING SYMBOL	NAME	BACKBOX SIZE	MOUNTING HEIGHT AFF	CONDUIT SIZE	FACEPLATE TYPE	TERMINATION	PORT TYPE QUANTITIES			CABLING TYPE	CABLING COLOR	JACK COLOR	NOTES
							VOICE	DATA	COAX				
#D	UNIVERSAL DATA OUTLET	2G	18"	1"	SINGLE GANG 4-PORT	RJ-45		#		CAT 6	BLUE	BLUE	# INDICATED ON FLOOR PLANS REPRESENTS QUANTITY OF DATA CABLE DROPS REQUIRED.
#D	UNIVERSAL DATA OUTLET - ABOVE COUNTER	2G	SEE NOTE	1"	SINGLE GANG 4-PORT	RJ-45		#		CAT 6	BLUE	BLUE	MOUNT AT 8"-12" ABOVE COUNTER TOP. COORDINATE WITH ELECTRICAL. # INDICATED ON FLOOR PLANS REPRESENTS QUANTITY OF DATA CABLE DROPS REQUIRED.
W	STANDARD WALL PHONE OUTLET	1G	48"	1"	SINGLE GANG 1-PORT	RJ-45	1			CAT 6	BLUE	BLUE	
BAS	BUILDING AUTOMATION DATA OUTLET	2G	NA	1"	SINGLE GANG 4-PORT	RJ-45		2		CAT 6	BLUE	BLUE	TERMINATE DATA CABLE INSIDE BUILDING CONTROLS ENCLOSURE WITH 2-PORT BISCUIT HOUSING. COORDINATE INSTALLATION LOCATION AND MOUNTING HEIGHT WITH CONTROLS CONTRACTOR.
PRJ	PROJECTOR OUTLET	*	*	1"	2-PORT 1-GANG	RJ-45		2		CAT 6	BLUE	BLUE	*COORDINATE MOUNTING HEIGHT AND BACKBOX REQUIREMENTS WITH AV DRAWINGS.
AV-M	AV-MIC OUTLET	*	*	1"	SINGLE GANG 1-PORT	RJ-45		1		CAT 6	BLUE	BLUE	
CP	AV CONTROL PANEL	2G	48"	1"	SINGLE GANG 1-PORT	RJ-45		1		CAT 6	BLUE	BLUE	
DP	AV DISPLAY OUTLET	*	*	1"	SINGLE GANG 2-PORT	RJ-45		2		CAT 6	BLUE	BLUE	
AV-C	AV CAMERA OUTLET	2G	*	1"	DOUBLE GANG 1-PORT	RJ-45		1		CAT 6	BLUE	BLUE	
B PT	GENERAL SHARED POKE-THRU	*	FLOOR	1.25"	4-PORT INSERT	RJ-45		4		CAT 6	BLUE	BLUE	COORDINATE WITH DIVISION 26. EC TO PROVIDE POWER REQUIREMENTS. SEE AV FLOOR BOX & POKE-THRU DETAILS ON SHEET T504. ADDITIONAL TELECOM REQUIREMENTS MAYBE INCLUDED ON THE AV DRAWINGS. COORDINATE WITH AV DRAWINGS.
AVR	DATA OUTLET FOR AV RACK	2G	18" UON	1"	SINGLE GANG 4-PORT	RJ-45		4		CAT 6	BLUE	BLUE	SEE AV DRAWINGS FOR EXACT QUANTITY OF DATA DROPS AND LOCATION OF AV RACK.
WAP	WIRELESS ACCESS POINT	2G (3.25" D)	CEILING	1"	SINGLE GANG 2-PORT	RJ-45		2		CAT 6A	BLUE	BLUE	SEE DETAILS ON T503 FOR MORE INFORMATION. ACCESS POINT TO BE PROVIDED BY OWNER AND INSTALLED BY CONTRACTOR. (OFCI) PROVIDE 1" CONDUIT HOMERUN TO NEAREST CABLE TRAY OR TELECOM ROOM (TR)
VIM	SECURITY INTERCOM MASTER STATION	2G	18"	1"	SINGLE GANG 4-PORT	RJ-45		1		CAT 6	BLUE	BLUE	DATA DROP FOR TYPICAL INTERCOM MASTER STATION. REFERENCE SECURITY TAGS SHOWN ON THE SECURITY FLOOR PLANS AND DETAILS SHEET FOR ADDITIONAL INFORMATION.
	SECURITY AUDIO/VIDEO INTERCOM SUBSTATION	NA	NA	1"	MPTL	RJ-45		1		CAT 6	BLUE	BLUE	DATA DROP FOR TYPICAL INTERCOM STATION. REFERENCE SECURITY TAGS SHOWN ON THE SECURITY FLOOR PLANS AND DETAILS SHEET FOR ADDITIONAL INFORMATION.
	SECURITY CAMERA DATA OUTLET	2G	CEILING	1"	MPTL	RJ-45		1		CAT 6	BLUE	BLUE	REFERENCE SECURITY TAGS SHOWN ON THE SECURITY FLOOR PLANS AND DETAILS SHEET FOR ADDITIONAL INFORMATION.

DIVISION OF WORK MATRIX

	DESIGN	CONDUIT/BOXES/CABLE TRAY	WIRING/CABLING	TERMINATING	ACTIVE SYSTEMS/WARRANTY	COMMISSIOING
ELECTRICAL	FULL DESIGN BY DESIGN TEAM	ELECTRICAL CONTRACTOR, THROUGH GENERAL CONTRACTOR	ELECTRICAL CONTRACTOR, THROUGH GENERAL CONTRACTOR	ELECTRICAL CONTRACTOR, THROUGH GENERAL CONTRACTOR	ELECTRICAL CONTRACTOR, THROUGH GENERAL CONTRACTOR	BY COMMISSIONING AGENT
FIRE ALARM	FULL DESIGN BY DESIGN TEAM	ELECTRICAL CONTRACTOR, THROUGH GENERAL CONTRACTOR	FIRE ALARM CONTRACTOR, THROUGH GENERAL CONTRACTOR	FIRE ALARM CONTRACTOR, THROUGH GENERAL CONTRACTOR	FIRE ALARM CONTRACTOR, THROUGH GENERAL CONTRACTOR	BY COMMISSIONING AGENT
TELECOM (T-DRAWINGS)	DESIGN TEAM - CONDUIT/BOXES/CABLING SYSTEM, ACTIVE EQUIPMENT - UNC ITS	ELECTRICAL CONTRACTOR, THROUGH GENERAL CONTRACTOR	GENERAL CONTRACTOR TELECOM CONTRACTOR	GENERAL CONTRACTOR TELECOM CONTRACTOR	UNC ITS	N/A
SECURITY (SC-DRAWINGS)	CONDUIT/BOXES	ELECTRICAL CONTRACTOR, THROUGH GENERAL CONTRACTOR	ELECTRICAL CONTRACTOR, THROUGH GENERAL CONTRACTOR	UNC	UNC	N/A
AUDIO VISUAL (AV-DRAWINGS)	DESIGN TEAM - CONDUIT/BOXES, ACTIVE EQUIPMENT - VENDOR	ELECTRICAL CONTRACTOR, THROUGH GENERAL CONTRACTOR	UNC VENDOR, SEPARATE CONTRACT	UNC VENDOR, SEPARATE CONTRACT	UNC VENDOR, SEPARATE CONTRACT, SAME AS CABLING VENDOR.	N/A
LIGHTING & LIGHTING CONTROLS	FULL DESIGN BY DESIGN TEAM	ELECTRICAL CONTRACTOR, THROUGH GENERAL CONTRACTOR	ELECTRICAL CONTRACTOR, THROUGH GENERAL CONTRACTOR	ELECTRICAL CONTRACTOR, THROUGH GENERAL CONTRACTOR	ELECTRICAL CONTRACTOR, THROUGH GENERAL CONTRACTOR	BY COMMISSIONING AGENT/ MANUFACTURER

LORD AECK SARGENT

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SHEET TITLE: TELECOM LEGEND AND NOTES

SCALE (U.N.O.): NO SCALE

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ISSUE DATE: 1/8/2024
OB. NO.: 11706-00
DWG. NO.: T001

DEFINITIONS:

A. "PROVIDE" OR "FURNISH" MEANS TO SUPPLY, PURCHASE, TRANSPORT, PLACE, ERECT, CONNECT, LABEL, TEST AND TURN OVER TO OWNER, COMPLETE AND READY FOR REGULAR OPERATION, ALL MATERIALS, LABOR, EQUIPMENT, TESTING APPARATUS, CONTROLS, TESTS, ACCESSORIES AND ALL OTHER ITEMS CUSTOMARILY REQUIRED FOR A COMMUNICATIONS CABLING SYSTEM.
B. "SUPPLY" MEANS TO PURCHASE, PROCURE, ACQUIRE, AND DELIVER COMPLETE WITH RELATED ACCESSORIES.
C. "INSTALL" MEANS TO MOVE FROM PROPERTY LINE, SET IN PLACE, JOIN, UNITE, FASTEN, LINK, ATTACH, SET UP OR OTHERWISE CONNECT TOGETHER BEFORE TESTING AND TURNING OVER TO OWNER OF EQUIPMENT AND/OR COMPONENTS. IT MEANS THE INSTALLATION IS TO BE COMPLETE AND READY FOR REGULAR OPERATION, EXCEPT AS OTHERWISE NOTED.
D. "WIRING" OR "CABLING" INCLUDES FURNISHING, UNLESS OTHERWISE NOTED, OF ALL FITTINGS, HANGERS, SUPPORTS, SLEEVES, ETC.
E. "CONDUIT" AND "CABLE TRAY" INCLUDES FURNISHING, UNLESS OTHERWISE NOTED, OF ALL FITTINGS, HANGERS, SUPPORTS, SLEEVES, ETC.
F. "AS DIRECTED" MEANS AS INSTRUCTED BY THE PROJECT MANAGER OR HIS REPRESENTATIVE.
G. "CONCEALED" MEANS EMBEDDED IN MASONRY OR OTHER CONSTRUCTION, INSTALLED BEHIND WALL FURRING OR WITHIN DOUBLE PARTITIONS, OR INSTALLED WITHIN HUNG CEILINGS.
H. "EXPOSED" MEANS NOT INSTALLED UNDERGROUND OR "CONCEALED" AS DEFINED ABOVE.
I. "PERMANENT LINK" MEANS THE END-TO-END TEST CONFIGURATION FOR A LINK EXCLUDING TEST CORDS AND PATCH CORDS BUT INCLUDING THE MATED CONNECTION WITH THE LINK.

DESCRIPTION OF WORK:

A. IT IS THE INTENT OF THE LISTED SPECIFICATIONS TO CREATE AN ANSI/TIA-568-C COMPLIANT CABLING SYSTEM TO SUPPORT HIGH-SPEED DATA, VOICE AND VIDEO APPLICATIONS INCLUDING IEEE ETHERNET STANDARDS. SYSTEM ACCEPTANCE SHALL BE JUDGED ON ITS ABILITY TO PERFORM AS SUCH, THE SUCCESSFUL ADHERENCE TO THE INSTALLATION INSTRUCTIONS OF THIS SPECIFICATION, AND COMPLIANCE WITH PARTS AND WORKMANSHIP WARRANTIES.

B. THE WORK COVERED BY THE LISTED SPECIFICATIONS INCLUDES THE INSTALLATION OF A COMPLETE CABLING SYSTEM, INCLUDING ALL LABOR NECESSARY TO PERFORM AND COMPLETE SUCH INSTALLATION, ALL MATERIALS AND EQUIPMENT INCORPORATED OR TO BE INCORPORATED IN SUCH INSTALLATION, AND ALL SERVICES, SUPERVISION, CONSUMABLE ITEMS, FEES, LICENSES, FACILITIES, TOOLS, AND EQUIPMENT NECESSARY OR USED TO PERFORM AND COMPLETE SUCH INSTALLATION.

C. THE LISTED SPECIFICATIONS ARE MATERIAL, EQUIPMENT, AND PERFORMANCE SPECIFICATIONS. ACTUAL INSTALLATION REQUIREMENTS SHALL BE AS INDICATED ON THE DRAWINGS. INSTALLATION DETAILS INDICATED ON THE DRAWINGS SHALL GOVERN IF THEY DIFFER FROM THE SPECIFICATIONS. CONTRACTOR IS OBLIGATED TO IDENTIFY SUCH DIFFERENCES AT THE TIME OF BID SUBMISSION.

D. IT IS THE INTENT OF THE LISTED SPECIFICATIONS THAT ALL ITEMS UNDER THESE SECTIONS BE ENGINEERED, ASSEMBLED, INSTALLED AND MAINTAINED BY, AND UNDER THE FULL RESPONSIBILITY OF A SINGLE CONTRACTOR, WHETHER THESE PROCESSES ARE ACTUALLY PERFORMED BY THE CONTRACTOR OR NOT.

E. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE GOVERNMENTAL REGULATIONS AND WITH ALL FEDERAL, STATE, CITY, AND OTHER APPLICABLE CODES AND ORDINANCES. IF THE CONTRACTOR PERFORMS ANY WORK WHICH IS CONTRARY TO SUCH REGULATIONS, CODES, AND ORDINANCES, CONTRACTOR SHALL MAKE ALL CHANGES TO COMPLY THEREWITH AND BEAR ALL COSTS ARISING THERE FROM.

F. PREPARATION OF SHOP DRAWINGS, RECORD OR AS-BUILT DRAWINGS, MANUFACTURER CUT SHEETS, AND OTHER DOCUMENTATION DESCRIBED HEREIN.

G. THE WORK INCLUDED IS DEFINED BY THE FOLLOWING AND FURTHER DEFINED IN THE DRAWINGS AND SECTIONS OF DIVISION 27.
  1. PROVIDE PROJECT MANAGEMENT AND OVERSIGHT FOR THE INSTALLATION OF A COMPLETE STRUCTURED CABLING SYSTEM.

H. PREPARE AND SUBMIT COMPONENT / EQUIPMENT DOCUMENTATION SHOP DRAWINGS, OUTLET LABELING DRAWINGS, CABLE PULL/TERMINATION SCHEDULES, CABLE TEST RESULTS AND AS BUILT DRAWINGS AS DESCRIBED WITHIN THIS SPECIFICATION AND PER THE GENERAL CONDITIONS.

I. INSTALLATION OF OWNER-FURNISHED WIRELESS ACCESS POINTS

VENDOR QUALIFICATIONS

A. THE OWNER SEEKS TO IDENTIFY A QUALIFIED LOW VOLTAGE COMMUNICATIONS CABLING CONTRACTOR CAPABLE OF PERFORMING THE SCOPE OF WORK AS IDENTIFIED IN THE CONTRACT DOCUMENTS.

B. STRUCTURED CABLING SYSTEM INSTALLER SHALL CURRENTLY BE A MANUFACTURER'S CERTIFIED SYSTEM INSTALLER IN GOOD STANDING WITH FIVE YEARS MINIMUM EXPERIENCE ON PROJECTS SIMILAR IN SCOPE TO THAT SHOWN ON THE DRAWINGS AND SPECIFIED HEREIN. INSTALLATION CREW SHALL HAVE A MINIMUM OF 1 BICSI CERTIFIED LEVEL 1 INSTALLER AND 1 BICSI CERTIFIED LEVEL 2 INSTALLER PER EVERY 3 PERSONNEL, AND SYSTEM INSTALLATION SHALL BE MANAGED BY A REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER (RCDD). SUBMITTAL SHOP DRAWINGS SHALL HAVE THE RCDD REGISTRATION STAMP ON EACH SHEET.

C. CRAFT PERSONNEL WILL BE REQUIRED TO PROVIDE AND USE THE PROPER TOOLS AND TEST EQUIPMENT IN THE PERFORMANCE OF EACH ACTIVITY. THE TOOLS MUST BE IN GOOD WORKING ORDER, AND THE TEST EQUIPMENT MUST HAVE CURRENT CALIBRATION CERTIFICATES, AS APPLICABLE. THE OWNER RESERVES THE RIGHT TO REVIEW THE TOOL AND TEST EQUIPMENT LISTS AND MAINTENANCE PROCEDURES OF THE CONTRACTOR.

D. THE CONTRACTOR REPRESENTS THAT HE/SHE IS FAMILIAR WITH AND HAS EXPERTISE IN THE WORK OF THIS NATURE AND SCOPE. THE CONTRACTOR FURTHER AGREES THAT HE/SHE SHALL PROVIDE ALL WORK AS MAY BE REQUIRED TO MAKE A COMPLETE JOB OF THAT WHICH MAY NOT BE FULLY DEFINED IN THE CONTRACT DOCUMENTS.

E. CRAFT PERSONNEL SHALL BE BICSI CERTIFIED PERSONNEL QUALIFIED TO PERFORM THE WORK AND BE KNOWLEDGEABLE OF THE FOLLOWING ACTIVITIES:
  1. COLOR CODING OF STANDARD AMERICAN TELEPHONE/ DATA TELECOMMUNICATIONS CABLES.
  2. BONDING AND GROUNDING OF SHIELDS.
  3. TESTING CONDUCTORS FOR TRANSMISSION IMPAIRMENTS.
  4. TESTING CONDUCTOR INSULATION.
  5. INSTALLATION AND TERMINATION OF OPTICAL FIBER CABLING.
  6. TESTING AND VERIFICATION OF OPTICAL FIBER TRANSMISSION CHARACTERISTICS WITH A POWER METER.
  7. TELEPHONE AND DATA INDUSTRY CABLE INSTALLATION STANDARDS AND MANUFACTURER'S INSTRUCTIONS WILL BE USED FOR IN-PROCESS QUALITY CONTROL AND FINAL ACCEPTANCE OF THE WORK INSTALLATION.
  8. CABLE TRAY AND LADDER RACK INSTALLATION.

F. BONDING OF EQUIPMENT RACKS AND CABLE UNWAY (LADDER RACK) WITHIN TELECOM ROOMS.

GENERAL INSTALLATION REQUIREMENTS

A. INSTALL PLENUM RATED CABLES WHERE CABLES ARE NOT INSTALLED IN CONDUITS OR ENCLOSED WIREWAYS.

B. INSTALL CABLES DESIGNED FOR THE INSTALLATION ENVIRONMENT.
  1. FOR EACH CABLE DISTRIBUTION APPLICATION, INSTALL FIBER OPTIC AND COPPER CABLES UL LISTED FOR THE APPLICATION.
  2. FOR CABLE DISTRIBUTION APPLICATIONS INCLUDING ENCLOSURES OR RACEWAYS UNDERGROUND OR IN SLABS ON GRADE, INSTALL FIBER OPTIC AND COPPER CABLES DESIGNED FOR USE IN WET LOCATIONS.

C. PROVIDE INCIDENTAL EQUIPMENT OR DEVICES TO PROVIDE A COMPLETE AND OPERABLE SYSTEM.

D. VERIFY CORRECTNESS OF PARTS LISTS AND EQUIPMENT MODEL NUMBERS AND CONFORMANCE OF EACH COMPONENT WITH MANUFACTURER'S SPECIFICATIONS.

E. EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

F. EQUIPMENT, EXCEPT PORTABLE EQUIPMENT, SHALL BE HELD IN PLACE. THIS SHALL INCLUDE EQUIPMENT, ENCLOSURES, COMPONENTS, AND CABLES. FASTENINGS AND SUPPORTS SHALL SUPPORT THEIR LOADS WITH A SAFETY FACTOR OF AT LEAST 3 UNLESS OTHERWISE SPECIFIED HEREIN.

G. PREVENT AND GUARD AGAINST ELECTROMAGNETIC AND ELECTROSTATIC HUM, AND INSTALL THE EQUIPMENT TO PROVIDE SAFETY FOR THE OPERATOR.

H. REPAIR OR REPLACE ANY EQUIPMENT OR MATERIALS DAMAGED DURING THE CONSTRUCTION PERIOD.

I. COORDINATE ELECTRICAL RECEPTACLE LOCATIONS FOR SPECIALTY EQUIPMENT (RACKS, CABINETS, WALL-MOUNT EQUIPMENT, ETC.) WITH THE ELECTRICAL CONTRACTOR.

J. ALL INTERIOR ABOVE-GRADE CONDUITS FOR COMMUNICATIONS SHALL BE EMT, AND ALL EXTERIOR AND UNDERGROUND CONDUITS FOR COMMUNICATIONS SHALL BE RGC, UNLESS OTHERWISE NOTED. FLEXIBLE METALLIC AND NON-METALLIC CONDUITS SHALL NOT BE USED UNLESS SPECIFICALLY NOTED.

K. EXPOSED EQUIPMENT, EQUIPMENT SUPPORTS, AND COMPONENTS IN THE TELECOMMUNICATIONS ROOMS SHALL HAVE A FLAT BLACK FINISH UNLESS OTHERWISE SPECIFIED HEREIN.

L. KEEP ALL ITEMS PROTECTED BEFORE AND AFTER INSTALLATION. PROVIDE PROTECTION FOR EXPOSED CABLES ROUGHED ONTO THE FLOOR PRIOR TO THEIR INSTALLATION INTO THE FURNITURE SYSTEMS. CLEAN UP AND REMOVE ALL DEBRIS.

M. IF PRODUCTS AND MATERIALS ARE SPECIFIED HEREIN FOR A SPECIFIC ITEM OR SYSTEM, USE THOSE PRODUCTS OR MATERIALS. IF PRODUCTS AND MATERIALS ARE NOT LISTED, USE FIRST-CLASS PRODUCTS AND MATERIALS, SUBJECT TO ACCEPTANCE OF PRODUCT SUBMITTALS AND SHOP DRAWINGS.

N. THE LOCATIONS OF STRUCTURAL AND ARCHITECTURAL FEATURES, EXISTING SLEEVES, FLOOR SLOTS, TERMINATION AND CROSS CONNECT FIELDS, PANELS, RACKS AND OTHER EQUIPMENT INDICATED ON THE DRAWINGS ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY THE EXISTENCE, LOCATIONS, AND SUITABILITY OF ALL SUCH ITEMS, AND SHALL PRESENT, WITH BID RESPONSE, REQUIRED MODIFICATIONS TO CONTRACT DOCUMENTS NECESSARY TO COMPLETE THIS WORK.

O. EXAMINE AND COMPARE THE COMMUNICATIONS CABLING DRAWINGS AND SPECIFICATIONS WITH THE DRAWINGS AND SPECIFICATIONS OF OTHER TRADES; REPORT ANY DISCREPANCIES BETWEEN THEM, AND OBTAIN WRITTEN INSTRUCTIONS FOR CHANGES NECESSARY IN THE WORK.

P. CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO ASSURE THAT THE MAXIMUM TENSILE LOAD AND MINIMUM BEND RADIUS OF ALL CABLES (FIBER AND COPPER) ARE NOT EXCEEDED. WHEN TERMINATING UTP CABLE, THE CONTRACTOR MUST MAINTAIN PAIR TWISTS UP TO THE TERMINATION POINT AND THE CABLE SHEATH SHALL NOT BE REMOVED MORE THAN 0.5" FROM THE TERMINATION POINT. VELCRO WRAPS ARE TO BE HAND TIGHTENED ON CABLES TO PREVENT CRIMPING CABLE SHEATH. PLASTIC TIE WRAPS ARE NOT TO BE USED ON ANY CABLES. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING ALL CONNECTOR CABLES FROM DAMAGE BY OTHER CONTRACTORS AT THE INFORMATION OUTLET BEFORE AND AFTER INSTALLATION OF THE OUTLET FACEPLATES.

Q. EQUIPMENT OPERATED PRIOR TO THE DATE OF SUBSTANTIAL COMPLETION SHALL BE MAINTAINED IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDATIONS.

R. FURNISH, INSTALL, TERMINATE AND TEST ALL HORIZONTAL (STATION) AND BACKBONE CABLING FOR ALL FLOORS SHOWN IN THE ATTACHED AND ASSOCIATED DRAWINGS AND AS DESCRIBED BELOW:
THE CONTRACTOR SHALL ROUTE ALL COPPER AND FIBER CABLING, UNLESS OTHERWISE IDENTIFIED, VIA HUNG CEILINGS, CABLE TRAY, LADDER RACK, CONDUITS, RAISED FLOORS, POKE-TROUGHS, AND FURNITURE SYSTEMS UNLESS OTHERWISE NOTED. CONTRACTOR SHALL INSTALL ALL OVERHEAD STATION CABLE IN SUCH A MANNER THAT THE SELECTED ROUTE DOES NOT IN ANY WAY COMPROMISE CEILING INTEGRITY. CABLES THAT ARE ROUTED IN OPEN CEILING AREAS MUST BE NEATLY WRAPPED WITH VELCRO OR HOOK AND LOOP TAPE AND SUSPENDED WITH THE APPROPRIATE HANGERS. CABLES SHALL NOT BE ALLOWED TO REST ON DUCTS, PIPES AND CONDUITS. AT NO TIME WILL CABLE BE SUPPORTED FROM HUNG CEILINGS OR CEILING SUPPORT WIRES. ALL OVERHEAD CABLING MUST BE N

QUALITY ASSURANCE

A. PROVISION OF MANUFACTURED COMPONENTS, INSTALLATION, WIRING AND TESTING SHALL BE THE RESPONSIBILITY OF A SINGLE CONTRACTOR.

B. SUPPLY ONLY NEW EQUIPMENT, PARTS AND MATERIAL CURRENTLY MANUFACTURED AT THE TIME OF SUBMITTAL, AND OPERATE ONLY FOR TESTING AS PART OF INSTALLATION PROCEDURE. EQUIPMENT AND MATERIALS OF THE SAME TYPE SHALL BE A PRODUCT OF THE SAME MANUFACTURER THROUGHOUT UNLESS SPECIFICALLY EXEMPTED IN ADVANCE. A SPECIFIC EXAMPLE IS ALL PRODUCTS COMPRISING THE PERMANENT LINK (STATION CABLE, PATCH PANELS, JACKS, FACEPLATES, ETC.). ALL EQUIPMENT SHALL BE EQUAL TO OR EXCEED THE MINIMUM REQUIREMENTS OF OSHA, NEMA, IEEE, ASME, ANSI, NEC AND UNDERWRITERS LABORATORIES.

C. CONDUIT SIZES SPECIFIED HEREIN OR INDICATED ON THE DRAWINGS REFER TO THE STANDARD TRADE SIZES, ARE FOR IDENTIFICATION PURPOSES ONLY, AND ARE NOT ACTUAL DIMENSIONS.

D. CODES, STANDARDS AND REGULATIONS REFERRED TO ARE MINIMUM STANDARDS. WHERE THE REQUIREMENTS OF THESE SPECIFICATIONS OR DRAWINGS EXCEED THOSE OF THE CODES, STANDARDS AND REGULATIONS, THE DRAWINGS OR SPECIFICATIONS GOVERN. LOCAL ELECTRICAL AND BUILDING CODES IN NORTH CAROLINA MAY BE MORE STRINGENT THAN NATIONAL CODES, RECOMMENDATIONS OR PRACTICE. FOLLOW THE MOST RESTRICTIVE CODE OR RECOMMENDATIONS.

E. COMPONENT MANUFACTURER SHALL BE ISO 9001:2008 CERTIFIED AND OFFER PRODUCTS THAT ARE ROHS COMPLIANT.

F. PRIOR TO CONDUCTING ANY TRANSMISSION OR PERFORMANCE TESTING, THE FOLLOWING VISUAL INSPECTIONS WILL BE PERFORMED:
  1. VERIFY THAT ALL CABLE HAS BEEN INSTALLED TO FULL COMPLIANCE WITH THE SPECIFICATIONS AND PER MANUFACTURER RECOMMENDATIONS.
  2. CHECK FOR PHYSICAL DAMAGE TO THE COPPER AND OPTICAL FIBER DISTRIBUTION PANELS AND TERMINATION HARDWARE.
  3. CHECK THAT ALL CABLING IS PROPERLY JACKETED, INSTALLATION PROPERLY LABELED AT BOTH ENDS OF THE CABLE, INNERDUCT AND TERMINATION HARDWARE IS COMPLETED IN ALL TELECOM ROOMS AND EQUIPMENT ROOMS.
  4. VERIFY THAT ALL CABLE BENDS ARE WITHIN THE MANUFACTURER'S SPECIFIED BEND RADIUS.
  5. VERIFY THAT ALL CABINETS AND RACKS (WHICH REQUIRE GROUNDING) ARE PROPERLY GROUNDED AND COMPLY WITH THE NATIONAL AND LOCAL ELECTRICAL CODES FOR GROUNDING.
  6. VERIFY THAT THE CABLES ARE PROPERLY APPROVED AND STRUCTURALLY SUPPORTED FOR TERMINATION.
  7. VERIFY THAT THE REQUIREMENTS OF ALL AUTHORITIES HAVING JURISDICTION HAVE BEEN SATISFIED.

WARRANTY

A. EQUIPMENT SHALL BE FREE OF FAULTY WORKMANSHIP AND DEFECTS FOR A PERIOD OF 1 YEAR FROM DATE OF SUBSTANTIAL COMPLETION

B. REPLACE DEFECTIVE MATERIALS AND REPAIR FAULTY WORKMANSHIP WITHIN THREE DAYS OF NOTIFICATION AT NO COST TO THE OWNER DURING WARRANTY PERIOD.

C. IN ADDITION TO WARRANTY, PROVIDE MAINTENANCE SERVICE FOR THE WARRANTY PERIOD, INCLUDING AT LEAST 2 SEMI-ANNUAL VISITS TO SITE FOR CHECKING AND ADJUSTMENT OF EQUIPMENT. DURING THIS PERIOD, ANSWER SERVICE CALLS WITHIN 24 HOURS. DURING THIS PERIOD, MAINTENANCE CALLS SHALL BE COMPLETED WITHIN THREE DAYS OF NOTIFICATION AND AT NO COST TO THE OWNER.

D. UPON COMPLETION OF THE WORK, THE CONTRACTOR SHALL COORDINATE WITH THE MANUFACTURER THE ISSUANCE OF A FULL WARRANTY ON THE ENTIRE COPPER AND FIBER OPTIC CABLE PLANT INCLUDING THE HORIZONTAL CABLING FOR BOTH PARTS AND LABOR. THE CABLING CONTRACTOR AT HIS SOLE EXPENSE WILL CORRECT ANY DEFICIENCIES DETERMINED BY THE MANUFACTURER.

E. MANUFACTURER'S EXTENDED WARRANTY:
  1. ALL MANUFACTURER EXTENDED PRODUCT WARRANTIES SHALL BE AFFORDED TO THE OWNER. A COPY OF CERTIFICATION BY THE MANUFACTURER FOR ALL PRODUCTS LISTED IN THIS SPECIFICATION IS TO BE PROVIDED.
  2. PROVIDE A 25-YEAR MINIMUM PRODUCT WARRANTY AND SYSTEM ASSURANCE WARRANTY FOR THIS CABLING SYSTEM COVERING HARDWARE AND LABOR TO REPLACE ANY CHANNEL THAT FAILS THE PERFORMANCE REQUIREMENTS SPECIFIED HEREIN WITHIN THE WARRANTY PERIOD. PROVIDE CABLING AND CONNECTOR PRODUCTS FROM MANUFACTURERS WHO EITHER MANUFACTURE BOTH CABLE AND TERMINATING HARDWARE, OR HAVE PARTNERED WITH OTHER MANUFACTURERS TO PROVIDE SUCH AN EXTENDED WARRANTY.
  3. PRIOR TO COMMENCEMENT OF THE WORK, THE SUCCESSFUL BIDDER SHALL CONTACT AN AUTHORIZED MANUFACTURER'S REPRESENTATIVE TO INFORM THEM THAT THIS JOB IS BEING REGISTERED UNDER THE WARRANTY PROGRAM.
  4. UPON COMPLETION OF THE WORK, THE CONTRACTOR SHALL COORDINATE WITH THE MANUFACTURER THE ISSUANCE OF A FULL WARRANTY ON THE ENTIRE COPPER AND FIBER OPTIC CABLE PLANT INCLUDING THE HORIZONTAL CABLING FOR BOTH PARTS AND LABOR. THE CABLING CONTRACTOR AT HIS SOLE EXPENSE WILL CORRECT ANY DEFICIENCIES DETERMINED BY THE MANUFACTURER.

LEED REQUIREMENTS

A. FOR PROJECTS SEEKING LEED CERTIFICATION, THE FOLLOWING REQUIREMENTS APPLY:
  1. ADHESIVES AND SEALANTS
    1. ADHESIVES, SEALANTS, AND SEALANT PRIMERS USED INSIDE THE BUILDING (DEFINED AS INSIDE THE WEATHERPROOFING ENVELOPE AND APPLIED ON SITE) SHALL COMPLY WITH SCAQMD RULE 1168-2005 FOR VOLATILE ORGANIC COMPOUND CONTENT LIMITS.
    2. AEROSOL ADHESIVES SHALL COMPLY WITH GS 36-2013 FOR VOLATILE ORGANIC COMPOUND CONTENT LIMITS.
  2. PAINTS AND COATINGS
    ANTICORROSIVE AND ANTIRUST PAINTS APPLIED TO INTERIOR FERROUS METAL SHALL NOT EXCEED A VOLATILE ORGANIC COMPOUND CONTENT LIMIT OF 250 G/L PER GS 11-2015.

SPACE CONDITIONS

A. VERIFY DIMENSIONS OF EQUIPMENT, EQUIPMENT ARRANGEMENTS, SPACE AVAILABILITY (INCLUDING ANY MILLWORK OR CABINETRY PROVIDED BY OTHERS) AND PROVIDE SYSTEMS THAT WORK WITHIN THE CONSTRAINTS OF THE SPACE AVAILABLE. NOTIFY THE ARCHITECT AND/OR ENGINEER OF ANY SITUATION WHERE SPACE CONSTRAINTS ARE A PROBLEM, PRIOR TO THE ORDERING OR PURCHASE OF EQUIPMENT. THE CONTRACTOR SHALL BEAR THE EXPENSE OF PROVIDING ALTERNATE EQUIPMENT WHICH WILL WORK WITHIN THE AVAILABLE SPACE, IF SPACE AVAILABILITY PROBLEMS ARE DISCOVERED AFTER EQUIPMENT IS ORDERED.

B. DRAWINGS ARE DIAGRAMMATIC IN NATURE AND, UNLESS EXPLICITLY DIMENSIONED, INDICATE APPROXIMATE LOCATIONS OF EQUIPMENT AND COMPONENTS. CHANGES IN THE LOCATION, AND OFFSETS, OF SAME WHICH ARE NOT SHOWN ON THE DRAWINGS BUT ARE NECESSARY IN ORDER TO ACCOMMODATE BUILDING CONDITIONS AND COORDINATION WITH THE WORK OF OTHER TRADES, SHALL BE MADE DURING THE PRODUCTION OF SHOP DRAWINGS (WHERE APPLICABLE) AND PRIOR TO INITIAL INSTALLATION, WITHOUT ADDITIONAL COST TO THE OWNER.

C. REFER TO ADDITIONAL COORDINATION REQUIREMENTS LISTED IN DIVISION 01.

D. PROVIDE ACCESS TO EQUIPMENT AND COMPONENTS REQUIRING OPERATION, SERVICE OR MAINTENANCE WITHIN THE LIFE OF THE SYSTEM.

ENVIRONMENTAL REQUIREMENTS

A. SYSTEMS OR EQUIPMENT INSTALLED IN ENVIRONMENTALLY CONTROLLED AREAS SHALL MEET PERFORMANCE REQUIREMENTS SPECIFIED HEREIN IN THE FOLLOWING CONDITIONS:
  1. TEMPERATURE: 40°F TO 95°F.
  2. HUMIDITY: 20% TO 80% RH.
  3. AIR PURITY: SYSTEMS SHALL BE CAPABLE OF CONTINUOUS OPERATION IN AN ENVIRONMENT WHERE THE LEVEL OF DUST, LINT, PAPER FIBER, AND OTHER AIRBORNE PARTICLES IS EQUAL TO THAT FOUND IN A STANDARD OFFICE.

B. SYSTEMS OR EQUIPMENT INSTALLED IN INDOOR ENVIRONMENTALLY UNCONTROLLED AREAS SHALL MEET PERFORMANCE REQUIREMENTS SPECIFIED HEREIN IN THE FOLLOWING CONDITIONS:
C. TEMPERATURE: 0°F TO 120°F.
D. HUMIDITY: 5% TO 95% RH.

E. SYSTEMS OR EQUIPMENT INSTALLED IN OUTDOOR AREAS SHALL MEET PERFORMANCE REQUIREMENTS SPECIFIED HEREIN IN THE FOLLOWING CONDITIONS:
  1. WIND-DRIVEN DUST, DIRT, SAND, AND SNOW FOR 6 HOURS.
  2. RAIN AT A MAXIMUM RATE OF 4" PER HOUR.
  3. ICE LOADS UP TO 2" MEASURED RADIALLY TO EXPOSED SURFACES.
  4. WIND: 85 MPH, MAXIMUM.
  5. SLEET WITH WIND: 55 MPH, MAXIMUM.
  6. SNOW COVER: 2' MAXIMUM, MEASURED VERTICALLY.
  7. HUMIDITY: 0% TO 100% RH.
  8. TEMPERATURE: -30°F TO 150°F.

RECORD DRAWINGS

A. A RECORD OF FIELD AND AS-INSTALLED CONDITIONS SHALL BE MAINTAINED AT THE SITE, SHALL BE KEPT CURRENT THROUGHOUT THE PROJECT, AND SHALL BE USED IN PREPARATION OF THE FINAL RECORD DRAWINGS. FIELD AND AS-INSTALLED CONDITIONS SHALL BE RECORDED ON DESIGN DRAWINGS AND SHALL BE MARKED TO INCLUDE ADDENDA, CHANGE ORDERS, FIELD CHANGES AND SELECTIONS MADE DURING CONSTRUCTION.

B. UPON COMPLETION OF THE PROJECT, SUBMIT MARKED-UP DRAWINGS INDICATING FIELD AND AS-INSTALLED CONDITIONS, AND SHOP DRAWINGS INCORPORATING CHANGES MADE DURING CONSTRUCTION FOR RACEWAYS AND EQUIPMENT. SUBMIT FULL-SIZE PDF'S.

C. REFER TO ADDITIONAL RECORD DRAWING REQUIREMENTS LISTED IN DIVISION 01.

GENERAL NOTE:

PER TIA 569, STANDARD PULL BOX SIZING TO BE AS FOLLOWS:

(1) 1" CONDUIT: 16"L X 4"W X 3"D, WITH 2' ADDED TO WIDTH (W) FOR EACH ADDITIONAL 1" CONDUIT.

(1) 2" CONDUIT: 36"L X 8'W X 8"D, WITH 5' ADDED TO WIDTH (W) FOR EACH ADDITIONAL 2" CONDUIT.

(1) 4" CONDUIT: 60"L X 15"W X 8"D, WITH 8" ADDED TO WIDTH (W) FOR EACH ADDITIONAL 4" CONDUIT.

* PLACE PULL BOXES IN STRAIGHT SEGMENTS OF CONDUITS ONLY- DO NOT USE PULL BOXES IN LIEU OF BENDS.

SUBMITTALS

A. SUBMITTAL PROCEDURES
  1. WITHIN 14 DAYS AFTER NOTICE TO PROCEED, SUBMIT AN ANTICIPATED PROJECT SCHEDULE, AND A SCHEDULE INDICATING THE PROPOSED SUBMISSION DATE OF EACH SUBMITTAL SPECIFIED HEREIN. SCHEDULE SHALL ANTICIPATE THE SUBMITTAL REVIEW TIME, THE POSSIBLE NEED FOR RESUBMITTALS, AND THE TIME REQUIRED FOR FABRICATION, SHIPPING AND INTEGRATION INTO THE CONSTRUCTION SEQUENCE. ARCHITECT AND/OR ENGINEER WILL ADVISE OF ANY CONFLICTS IN REVIEWING SUBMITTALS THAT THE PROPOSED SCHEDULE PRESENTS.
  2. SUBMITTALS SHALL BE PREPARED IN A LINE-BY-LINE FORMAT CORRESPONDING TO THESE SPECIFICATIONS AND SHALL INDICATE COMPLIANCE WITH EACH REQUIREMENT SPECIFIED HEREIN AND INDICATED IN THE DRAWINGS.
  3. RESUBMITTALS THAT ARE REQUIRED TO ADDRESS REVIEW COMMENTS SHALL INCLUDE A COVER TRANSMITTAL WITH A WRITTEN EXPLANATION OF HOW EACH REVIEW COMMENT HAS BEEN ADDRESSED.
  4. SUBMITTAL DATA FOR EACH SPECIFICATION SECTION SHALL BE SUBMITTED AS A SINGLE PACKAGE.
  5. SUBMITTALS NOT SPECIFICALLY REQUIRED, OR NOT COMPLYING WITH THE FORMAT REQUIREMENTS, WILL BE RETURNED UNREVIEWED.
  6. ALL SUBMITTALS SHALL BE SUBMITTED ELECTRONICALLY IN PDF FORMAT UNLESS STATED OTHERWISE.
  7. SUBMITTALS ARE REQUIRED BEFORE INSTALLATION BEGINS. EQUIPMENT SHALL NOT BE ORDERED, AND PAY REQUESTS WILL NOT BE APPROVED PRIOR TO RECEIPT AND APPROVAL OF SUBMITTALS.

B. PRODUCT SUBMITTALS
  1. PRODUCT SUBMITTALS SHALL INCLUDE ALL EQUIPMENT, MATERIALS AND CABLES BEING UTILIZED ON THE PROJECT.
  2. DATA SHEETS SHALL CLEARLY INDICATE THE SPECIFIC MODEL OR PART NUMBER BEING SUBMITTED FOR REVIEW INCLUDING SIZES, COLOR, FINISHES, AND OTHER ATTRIBUTES TO ADEQUATELY ALLOW SUBMITTED PRODUCT TO BE REVIEWED.
  3. ALL RELATED SYSTEM COMPONENTS SHALL BE SUBMITTED AS PART OF THE SAME SUBMISSION (I.E. PATCH PANELS, JACKS, FACEPLATES, CABLE, ETC.).
  4. INDICATE MANUFACTURER'S INSTALLATION INSTRUCTIONS, WHERE APPLICABLE, INCLUDING ANY DEVIATIONS REQUIRED DUE TO PROJECT CONDITIONS.
  5. FURNISH SAMPLE PRODUCTS AS REQUIRED FOR REVIEW BY ENGINEER AND/OR ARCHITECT INCLUDING ANY ASSEMBLY MOCKUPS.

C. SHOP DRAWING SUBMITTALS
  1. REPRODUCTIONS OR ELECTRONIC VERSIONS OF DESIGN DRAWINGS SHALL NOT BE USED IN THE PREPARATION OF SHOP DRAWINGS.
  2. WIRING DIAGRAMS INDICATING PROPOSED CONNECTIONS OF EQUIPMENT, EQUIPMENT TYPES, MODEL NUMBERS, AND DESIGNATIONS FOR CABLES AND TERMINATION POINTS.
  3. FLOOR PLANS INDICATING EQUIPMENT LOCATIONS INCLUDING EQUIPMENT IDENTIFICATION AND REFERENCES TO WIRING DETAILS.
  4. MAJOR, COORDINATED CONDUIT AND CABLE TRAY PATHWAYS.
  5. SHOP DRAWINGS OF FABRICATED OR MODIFIED UNITS, IF ANY.
  6. SEISMIC AND WIND RESTRAINT DEVICES, INCLUDING CALCULATIONS, RESTRAINT SELECTION, INSTALLATION DETAILS AND WRITTEN CONFIRMATION THAT A LICENSED ENGINEER PREPARED THE CALCULATIONS.
  7. DESCRIPTION OF LABELING METHODS (INCLUDING THE LABEL SCHEME AND METHOD OF ATTACHMENT) AND SPECIFIC LABELS BEING USED FOR CABLE AND OUTLETS.
  8. SEPARATE ONE-LINE DIAGRAMS INDICATING THE PROPOSED BACKBONE DISTRIBUTION, AND THE HORIZONTAL DISTRIBUTION (TYPICALLY ONE DIAGRAM FOR EACH OUTLET TYPE).
  9. ELEVATIONS OF EQUIPMENT RACKS, CABINETS, AND TELEPHONE BACKBOARDS INDICATING EQUIPMENT PLACEMENT.
  10. DETAILED COORDINATED AND DIMENSIONED LAYOUTS OF COMMUNICATIONS ROOMS AT 1/4" = 1'-0" SCALE INDICATING EACH COMPONENT DRAWN TO SCALE, INCLUDING RACK CLEARANCES, COORDINATED POWER CONNECTIONS, LIGHTING, HVAC, AND OTHER TRADES' EQUIPMENT SUCH AS SECURITY PANELS, PAGING, FIRE ALARM PANELS, AND SERVICE PROVIDER EQUIPMENT.

D. QUALIFICATIONS SUBMITTALS AND CERTIFICATES
E. SUBMIT MANAGEMENT AND INSTALLATION TEAM REFERENCE DOCUMENTATION VERIFYING THAT:
  A. THE PROJECT MANAGER IS A RCDD IN GOOD STANDING WITH BICSI AND IS QUALIFIED TO MANAGE THE SCOPE OF WORK DESCRIBED IN THE CONTRACT DOCUMENTS AND HAS FIVE (5) YEARS OF EXPERIENCE MANAGING SIMILAR PROJECTS IN SIZE AND SCOPE. THE DOCUMENTATION SHALL INCLUDE THE RCDD REGISTRATION NUMBER.
  B. THE FIELD SUPERVISOR IS A BICSI TRAINED TECHNICIAN THAT IS QUALIFIED TO PERFORM AND OVERSEE THE WORK DESCRIBED IN THE CONTRACT DOCUMENTS.
  C. THE CONTRACTOR IS CERTIFIED BY THE MANUFACTURER OF THE STRUCTURED CABLING SYSTEM BEING INSTALLED AND IS AUTHORIZED TO ISSUE A MANUFACTURER'S WARRANTY FOR THE INSTALLED SOLUTION.

2. THE CONTRACTOR SHALL SUBMIT DOCUMENTATION THAT WITHIN THE PAST 12 MONTHS, A MINIMUM OF 75% OF ALL INSTALLATION PERSONNEL HAVE BEEN TRAINED OR CERTIFIED BY THE MANUFACTURER OF THE PRODUCTS THEY ARE INSTALLING.
3. A COPY OF THE CALIBRATION CERTIFICATE FOR ALL FIELD-TEST INSTRUMENTS INDICATING THAT THE TESTER HAS BEEN CALIBRATED WITHIN THE CALIBRATION PERIOD RECOMMENDED BY THE MANUFACTURER.

INSTRUCTION OF OPERATING PERSONNEL

A. WHERE REQUIRED FOR INSTALLED SPECIALTY SYSTEMS (I.E. PAGING SYSTEMS, CLOCK SYSTEMS, NURSE CALL, NETWORKING EQUIPMENT, ETC.), CONDUCT FORMAL INSTRUCTION SESSIONS FOR OPERATING PERSONNEL. CONDUCT 2 SIMILAR SESSIONS. THE FIRST SESSION SHALL BE CONDUCTED AT THE TIME OF START-UP AND CHECK-OUT, AND THE SECOND SESSION SHALL BE APPROXIMATELY 2 MONTHS LATER. SESSIONS SHALL BE CONDUCTED AT THE SITE.

B. PREPARE AND SUBMIT A SYLLABUS DESCRIBING AN OVERVIEW OF THE PROGRAM, DESCRIBING HOW THE PROGRAM WILL BE CONDUCTED, WHEN AND WHERE MEETINGS ARE TO BE HELD, NAMES AND COMPANY AFFILIATIONS OF LECTURERS, DESCRIPTION OF CONTENTS AND OUTLINE FOR EACH LECTURE, AND RECOMMENDED REFERENCE MATERIAL AND OUTSIDE READING. OBTAIN DIRECTION FROM THE OWNER ON WHICH OPERATING PERSONNEL SHALL BE INSTRUCTED IN EACH SYSTEM.

C. SESSIONS SHALL INCLUDE AND HAVE ADEQUATE DURATION TO PROVIDE:
  1. GENERAL FAMILIARIZATION AND OPERATING PROCEDURES FOR EACH SPECIALTY SYSTEMS INSTALLATION.
  2. ROUTINE MAINTENANCE PROCEDURES FOR EQUIPMENT.
  3. USER LEVEL PROGRAMMING OF PROGRAMMABLE SYSTEMS.

D. SESSIONS SHALL BE PROVIDED BY FACTORY-TRAINED TECHNICIANS OR OTHER PERSONNEL PROFICIENT IN THE OPERATION OF THE SYSTEM TRAINING BEING CONDUCTED.

E. PROVIDE MP4 FORMAT VIDEO OF TRAINING SESSIONS AND A COMPLETE RECORD COPY OF TRAINING MATERIALS, HANDOUTS, AND OTHER PRINTED MATERIALS USED IN EACH TRAINING SESSION.

F. OBTAIN RECEIPT ACKNOWLEDGING COMPLETION OF EACH ITEM OF INSTRUCTION.

OPERATIONS AND MAINTENANCE MANUALS

A. THESE OPERATION AND MAINTENANCE MANUAL REQUIREMENTS SUPPLEMENT OPERATION AND MAINTENANCE MANUAL DOCUMENTATION REQUIREMENTS OF THE PROJECT SPECIFICATIONS.

B. OPERATION AND MAINTENANCE DOCUMENTATION SHALL BE SUBMITTED IN PDF FORMAT UNLESS OTHERWISE STATED.

C. THE OPERATING AND MAINTENANCE DOCUMENTATION PACKAGE SHALL BE SUBMITTED AS ONE COMPREHENSIVE PACKAGE 3 WEEKS BEFORE SYSTEMS ACCEPTANCE TESTING, AND SHALL BE UPDATED, REVISED AND COMPLETED DURING, AND AT COMPLETION OF, PERFORMANCE VERIFICATION.

D. DOCUMENTATION SHALL BE TYPE WRITTEN AND SHALL CONTAIN, AT A MINIMUM, THE FOLLOWING INFORMATION
  1. INTRODUCTION:
  2. PROJECT NAME, CONTRACTORS' AND SUBCONTRACTORS' NAMES, ADDRESSES, TELEPHONE NUMBERS AND EMAIL ADDRESSES.
  3. INDEX.

    1. OPERATIONS AND MAINTENANCE DOCUMENTATION DIRECTORY:
    EXPLANATION OF THE IDENTIFICATION SYSTEM USED, INCLUDING LISTS OF SYSTEMS, EQUIPMENT AND COMPONENT IDENTIFIERS AND NAMES.

  1. CONTACT INFORMATION:
    A. EMERGENCY CONTACT INFORMATION FOR THE WARRANTY PERIOD.
    B. CHANNEL WARRANTY MANUFACTURER CONTACT INFORMATION FOR WARRANTY ISSUES.

4. EMERGENCY INFORMATION (FOR ACTIVE ELECTRONICS)
  A. INFORMATION FOR TECHNICAL AND NONTECHNICAL PERSONNEL ABOUT ACTIONS RECOMMENDED DURING EMERGENCY SITUATIONS TO PROTECT PROPERTY AND TO MINIMIZE DISRUPTION TO THE BUILDING OCCUPANTS. EMERGENCIES INCLUDE BUT ARE NOT LIMITED TO POWER FAILURE, HEATING FAILURE, COOLING FAILURE.

5. APPROVED SUBMITTALS.

6. MAINTENANCE MANUAL:
  A. DESCRIPTIONS (SPECIFICATIONS) OF THE EQUIPMENT AND COMPONENTS.
  B. RECOMMENDED MAINTENANCE PROCEDURES AND THEIR RECOMMENDED FREQUENCY FOR THIS PROJECT.
  C. RECOMMENDED LIST OF SPARE PARTS, PART NUMBERS, AND THE PLACE(S) FROM WHICH THEY CAN BE OBTAINED.
  D. ORIGINAL PURCHASE ORDER NUMBER; DATE OF PURCHASE; NAME, ADDRESS, AND THE TELEPHONE NUMBER OF THE VENDOR; AND WARRANTY INFORMATION.
  E. MANUFACTURERS RECOMMENDED PROCEDURES.

      1. TEST REPORTS AND CERTIFICATIONS:
  A. COMMUNICATIONS CABLE HORIZONTAL CHANNEL TEST REPORTS.
  B. BROADBAND CABLE TEST REPORTS.
  C. OTHER COPPER CABLE TEST REPORTS.
  D. FIBER OPTIC CABLE TEST REPORTS.

  1. CONSTRUCTION DOCUMENTS:
  2. RECORD DRAWINGS.
  WARRANTY CERTIFICATES.

A. AN ELECTRONIC COPY OF CONSTRUCTION DOCUMENTS SHALL BE INCLUDED ON CD-ROM WITHIN EACH OPERATION AND MAINTENANCE BINDER. CLOSE-OUT MATERIALS PROVIDED IN ELECTRONIC FORMAT SHALL INCLUDE RECORD DRAWINGS, APPROVED SUBMITTALS, WARRANTY CERTIFICATES, AND TEST REPORTS.
B. SUBMIT A RECEIPT SIGNED BY THE OWNER ACKNOWLEDGING RECEIPT OF THE OPERATION AND MAINTENANCE DOCUMENTATION PACKAGE.
C. PROVIDE AS-BUILT FLOOR PLAN IN A POSTER FRAME MOUNTED ON THE WALL OF THE ASSOCIATED COMMUNICATIONS ROOM.

LORD
AECK
SARGENT

REVISION:

NEWCOMB & BOYD

5425 Page Road
Suite 215
Durham, NC 27703
NB Contact: Reade Daniel
N&B PROJECT: 21N242
Newcomb & Boyd, LLP
Firm Lic. # F-0312

SHEET TITLE
TELECOM PROJECT GENERAL NOTES
SCALE (U.N.O.)

JOB NAME
University of North Carolina - Chapel Hill
SCO#: 21-23548-02A
BINGHAM HALL RENOVATION
LOCATION
36 Lenoir Drive, Chapel Hill, NC 27514

SEAL
DocuSigned by:
8B290DD3BCE3457...
SEAL
044143
RICHARD O. DOZIER, III
Signed on 01/03/2024
using a Digital Signature.

ISSUE DATE
1/8/2024
OB. NO.
11706-00
DWG. NO.
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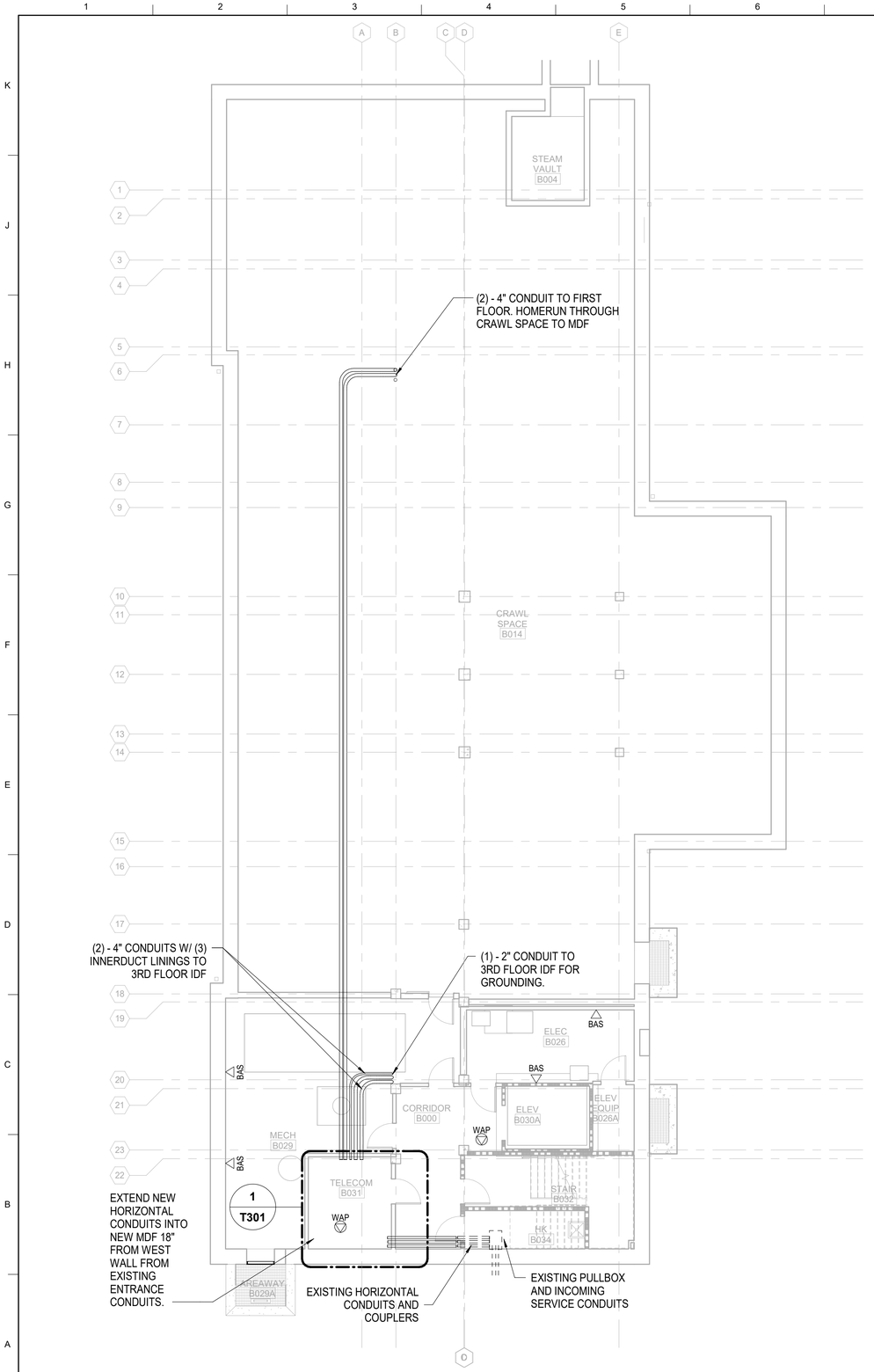
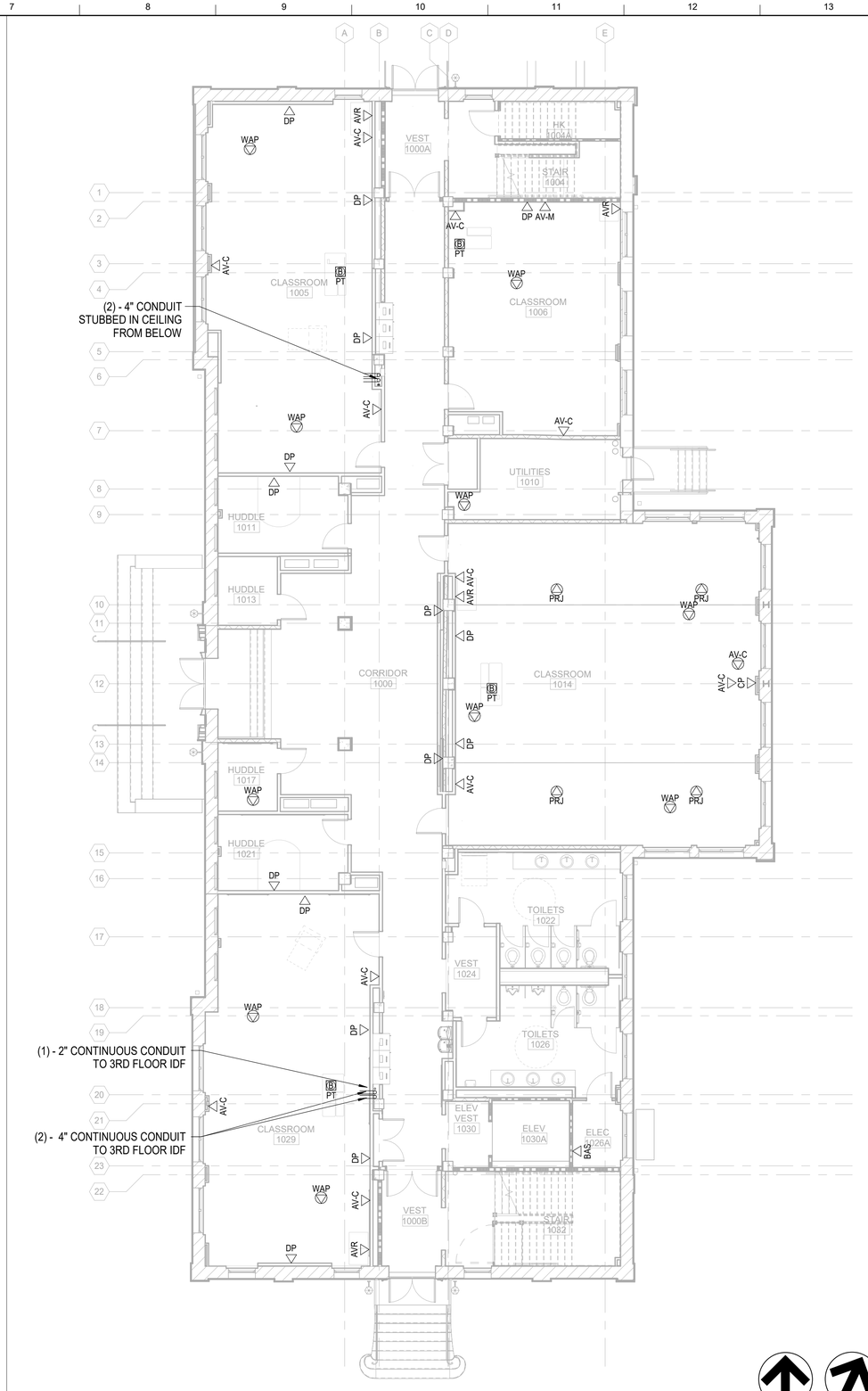


1 TELECOM BASEMENT FLOOR PLAN

0 8 16 FT



2 TELECOM FIRST FLOOR PLAN

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PROJECT NORTH TRUE NORTH

GENERAL NOTES

1. VOICE/DATA OUTLET CABLING SHOWN ON THESES FLOOR PLAN SHALL BE SERVED FROM **LEVEL 1 MDF B031.**
2. VOICE/DATA CABLING SHALL NOT EXCEED 295' BETWEEN THE ACTIVE IDF AND THE OUTLET/DEVICE LOCATION.
3. NO AV OR OTHER SYSTEMS EQUIPMENT TO BEHOUSED IN TELECOM ROOMS.
4. DRAWINGS ARE GENERALLY DIAGRAMMATIC IN NATURE AND SHALL BE USED AS SUCH. EXACT LOCATIONS AND CONDITIONS OF TELECOM DEVICES AND ASSOCIATED INFRASTRUCTURE SHALL BE FIELD COORDINATED WITH OTHER TRADES PRIOR TO INSTALLATION. REFER TO ARCHITECTURAL ELEVATIONS FOR ACTUAL LOCATIONS AND DIMENSIONED HEIGHTS.
5. ALL CONDUITS SHALL BE ROUTED TIGHT TO STRUCTURE ABOVE UON ON THE PLANS.
6. PROPERLY SEAL AND FIRESTOP ALL PENETRATIONS. CONTRACTOR SHALL INSTALL THE APPROPRIATE FIRESTOP ASSEMBLY IN ORDER TO MAINTAIN THE FIRE BARRIERS AND WALL RATINGS.
7. ALL PARTITION AND SLAB PENETRATIONS SHALL MAINTAIN THE ASSOCIATED FIRE RATING AND STC RATING OF THE PARTITION OR SLAB AT ALL TIMES.
8. CABLES SHALL BE BUNDLED IN GROUPS OF 25 OR LESS USING HOOK AND LOOP TAPE OR VELCRO. ZIP TIES ARE NOT ALLOWED.
9. HORIZONTAL CABLING ROUTED FROM THE SERVING IDF SHALL NOT SURPASS THE 295' DISTANCE LIMITATION WITH ALL VERTICALS.

CONDUIT FLOOR PLAN ROUTING NOTES

1. ROUTE OUTLET AND DEVICE CONDUITS INDICATED ON THIS FLOOR PLAN TO THE NEAREST ACCESSIBLE CABLE TRAY. OR DIRECTLY TO THE SERVING IDF/MDF.
2. PROVIDE AN ACCESSIBLE PULL BOX FOR EACH CONDUIT ROUTE WITH MORE THAN (3) - 90 DEGREE BENDS AND EVERY 100 FEET OF A STRAIGHT CONDUIT RUN.
3. BUSH ALL CONDUIT ENDS FOR CABLE PROTECTION AS SPECIFIED.

CABLE TRAY NOTES

1. CABLE TRAY SIZES SHALL BE SIZED AS NOTED ON THE FLOOR PLAN AND BE SUPPORTED ON BOTH SIDES AS SPECIFIED.
2. CABLE TRAYS SHALL MAINTAIN A MINIMUM CLEARANCE OF 6-12" ABOVE AND ON ONE SIDE AT ALL TIMES.

SHEET SPECIFIC NOTES

LIFE SAFETY LEGEND

- SMOKE PARTITION
- 1-HOUR RATED WALL
- 2-HOUR RATED WALL
- 3-HOUR RATED WALL

LORD AECK SARGENT

REVISION:

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5425 Page Road
Suite 215
Durham, NC 27703
NB Contact: Reade Daniel
N&B PROJECT : 21N242
Newcomb & Boyd, LLP
Firm Lic # P-0312

SHEET TITLE: TELECOM BASEMENT & FIRST FLOOR PLANS

SCALE (U.N.O.): 1/8" = 1'-0"

0 8 16 FT

JOB NAME: University of North Carolina - Chapel Hill

SCO#: 21-23548-02A

BINGHAM HALL RENOVATION

LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

SEAL
DocuSigned by:
Richard Dozier
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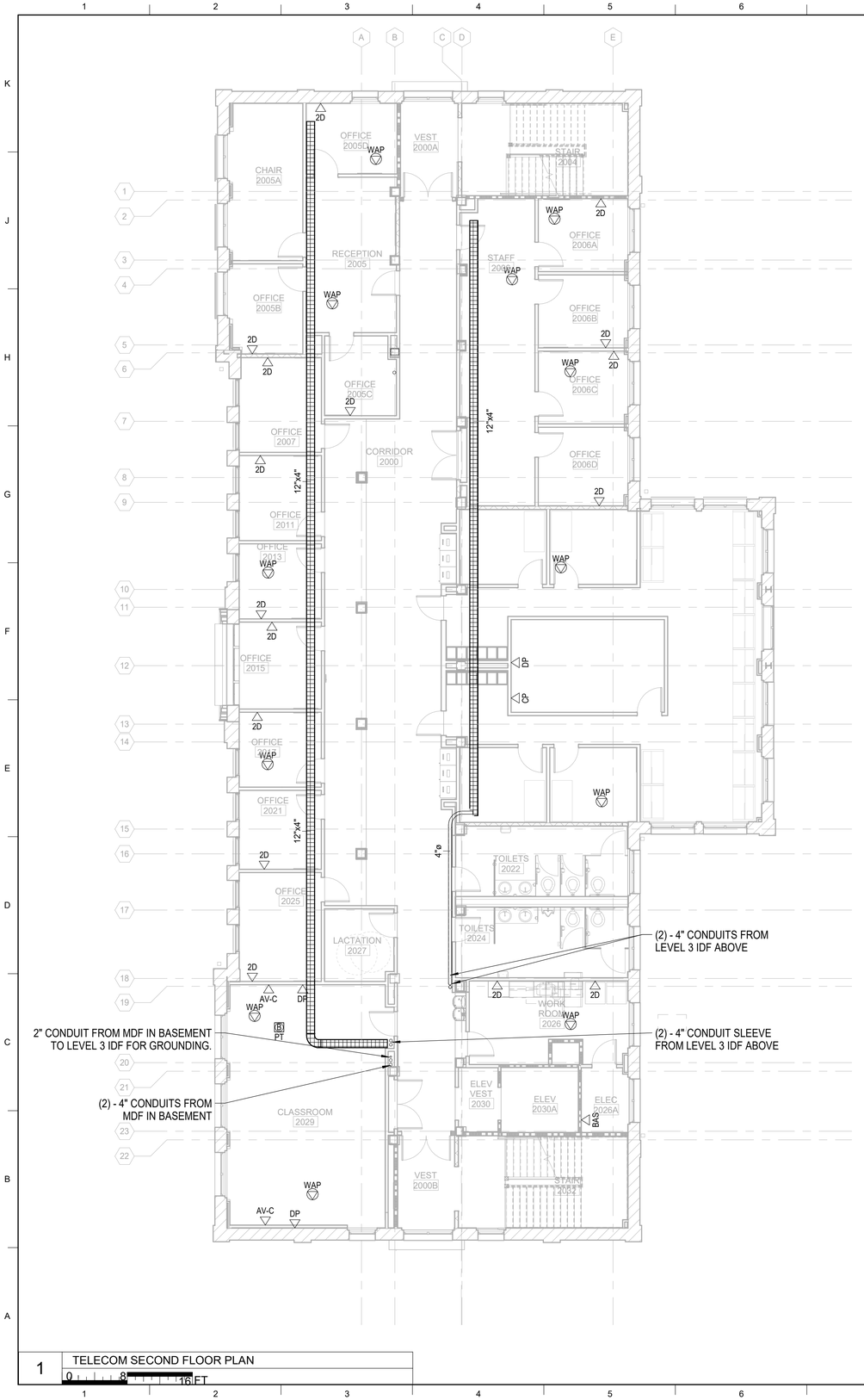
SEAL 044143
ENGINEER RICHARD O. DOZIER

Signed on 01/03/2024 using a Digital Signature.

ISSUE DATE: 1/8/2024

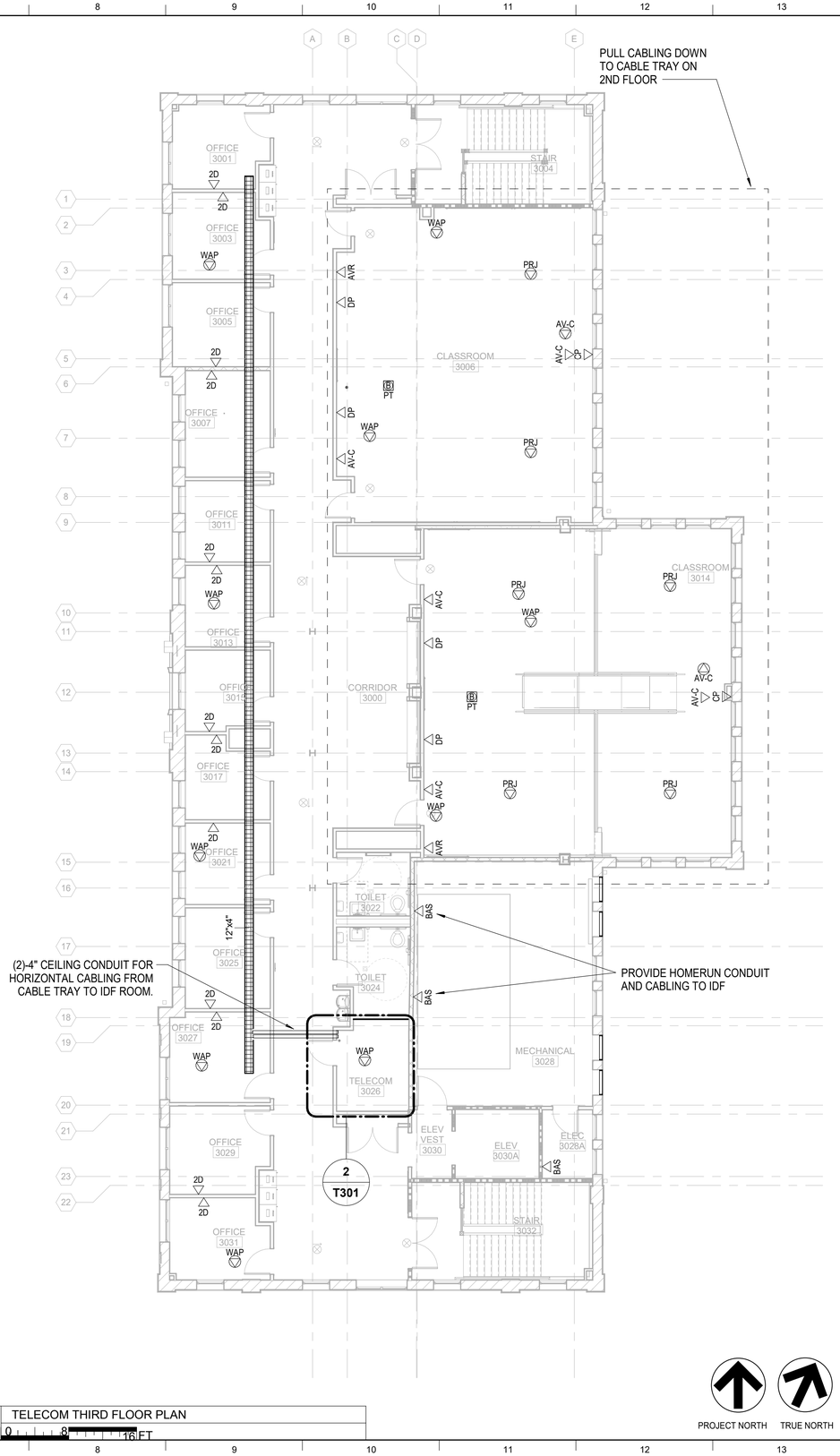
OB. NO. 11706-00

DWG. NO. T101



1 TELECOM SECOND FLOOR PLAN

0 8 16 FT



2 TELECOM THIRD FLOOR PLAN

0 8 16 FT

PROJECT NORTH TRUE NORTH

GENERAL NOTES

1. VOICE/DATA OUTLET CABLING SHOWN ON THESES FLOOR PLAN SHALL BE SERVED FROM **LEVEL 3 IDF 3026.**
2. VOICE/DATA CABLING SHALL NOT EXCEED 295' BETWEEN THE ACTIVE IDF AND THE OUTLET/DEVICE LOCATION.
3. NO AV OR OTHER SYSTEMS EQUIPMENT TO BEHOUSED IN TELECOM ROOMS.
4. DRAWINGS ARE GENERALLY DIAGRAMMATIC IN NATURE AND SHALL BE USED AS SUCH. EXACT LOCATIONS AND CONDITIONS OF TELECOM DEVICES AND ASSOCIATED INFRASTRUCTURE SHALL BE FIELD COORDINATED WITH OTHER TRADES PRIOR TO INSTALLATION. REFER TO ARCHITECTURAL ELEVATIONS FOR ACTUAL LOCATIONS AND DIMENSIONED HEIGHTS.
5. ALL CONDUITS SHALL BE ROUTED TIGHT TO STRUCTURE ABOVE UON ON THE PLANS.
6. PROPERLY SEAL AND FIRESTOP ALL PENETRATIONS. CONTRACTOR SHALL INSTALL THE APPROPRIATE FIRESTOP ASSEMBLY IN ORDER TO MAINTAIN THE FIRE BARRIERS AND WALL RATINGS.
7. ALL PARTITION AND SLAB PENETRATIONS SHALL MAINTAIN THE ASSOCIATED FIRE RATING AND STC RATING OF THE PARTITION OR SLAB AT ALL TIMES.
8. CABLES SHALL BE BUNDLED IN GROUPS OF 25 OR LESS USING HOOK AND LOOP TAPE OR VELCRO. ZIP TIES ARE NOT ALLOWED.
9. HORIZONTAL CABLING ROUTED FROM THE SERVING IDF SHALL NOT SURPASS THE 295' DISTANCE LIMITATION WITH ALL VERTICALS.

CONDUIT FLOOR PLAN ROUTING NOTES

1. ROUTE OUTLET AND DEVICE CONDUITS INDICATED ON THIS FLOOR PLAN TO THE NEAREST ACCESSIBLE CABLE TRAY. OR DIRECTLY TO THE SERVING IDF/MDF.
2. PROVIDE AN ACCESSIBLE PULL BOX FOR EACH CONDUIT ROUTE WITH MORE THAN (3) - 90 DEGREE BENDS AND EVERY 100 FEET OF A STRAIGHT CONDUIT RUN.
3. BUSH ALL CONDUIT ENDS FOR CABLE PROTECTION AS SPECIFIED.

CABLE TRAY NOTES:

1. CABLE TRAY SIZES SHALL BE SIZED AS NOTED ON THE FLOOR PLAN AND BE SUPPORTED ON BOTH SIDES AS SPECIFIED.
2. CABLE TRAYS SHALL MAINTAIN A MINIMUM CLEARANCE OF 6-12" ABOVE AND ON ONE SIDE AT ALL TIMES.

SHEET SPECIFIC NOTES

LIFE SAFETY LEGEND

- SMOKE PARTITION
- 1-HOUR RATED WALL
- 2-HOUR RATED WALL
- 3-HOUR RATED WALL

LORD AECK SARGENT

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Newcomb & Boyd, LLP
Firm Lic # P0512

SHEET TITLE: TELECOM SECOND & THIRD FLOOR PLANS

SCALE (U.N.O.): 1/8" = 1'-0"

0 8 16 FT

JOB NAME: University of North Carolina - Chapel Hill
SCI#: 21-235492A

BINGHAM HALL RENOVATION

LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

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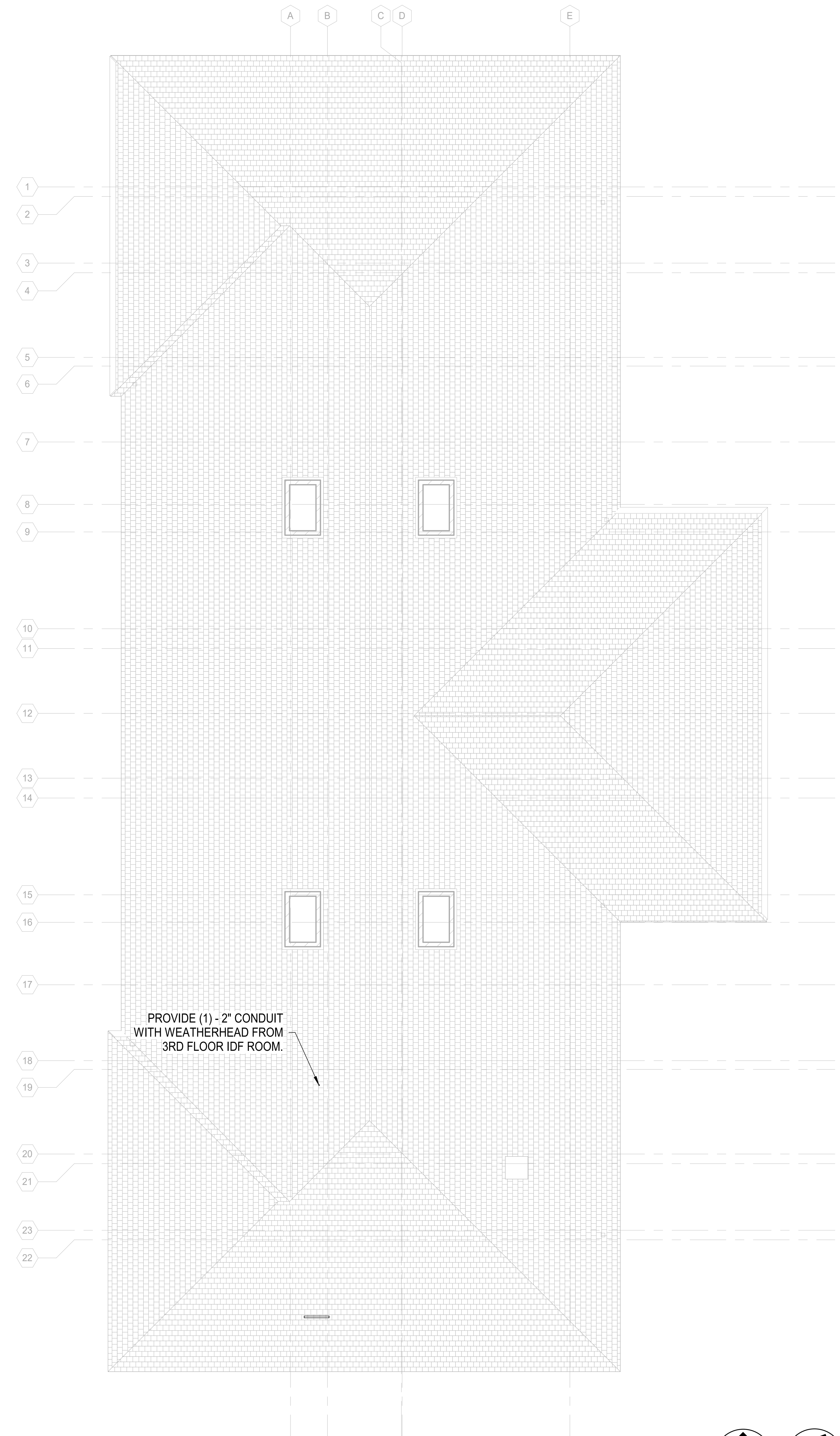
ISSUE. DATE: 1/8/2024

OB. NO.: 11706-00

DWG. NO.: T102



1 TELECOM ROOF PLAN

0 8 16 FT

PROJECT NORTH TRUE NORTH

GENERAL NOTES

SHEET SPECIFIC NOTES

LORD AECK SARGENT

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N&B PROJECT: 21N242
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Firm Lic. # F-0312

SHEET TITLE
TELECOM ROOF PLAN

SCALE (U.N.O.)
NO SCALE

JOB NAME
University of North Carolina - Chapel Hill
SCO#: 21-23548-02A
BINGHAM HALL RENOVATION

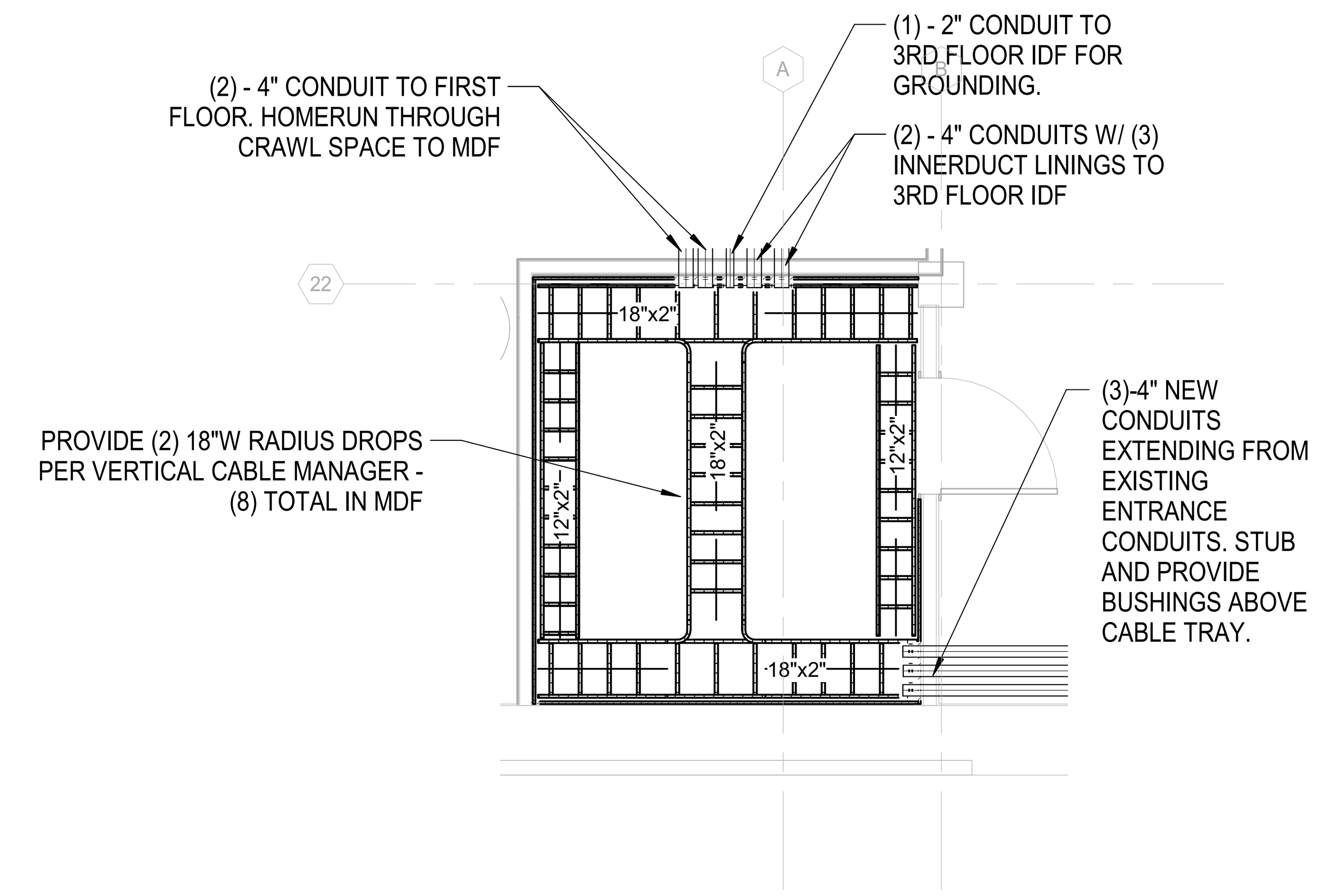
LOCATION
36 Lenoir Drive, Chapel Hill, NC 27514

SEAL
DocuSigned by:
SEAL 044143
ENGINEER
RICHARD O. DOZIER, III
Signed on 01/03/2024 using a Digital Signature.

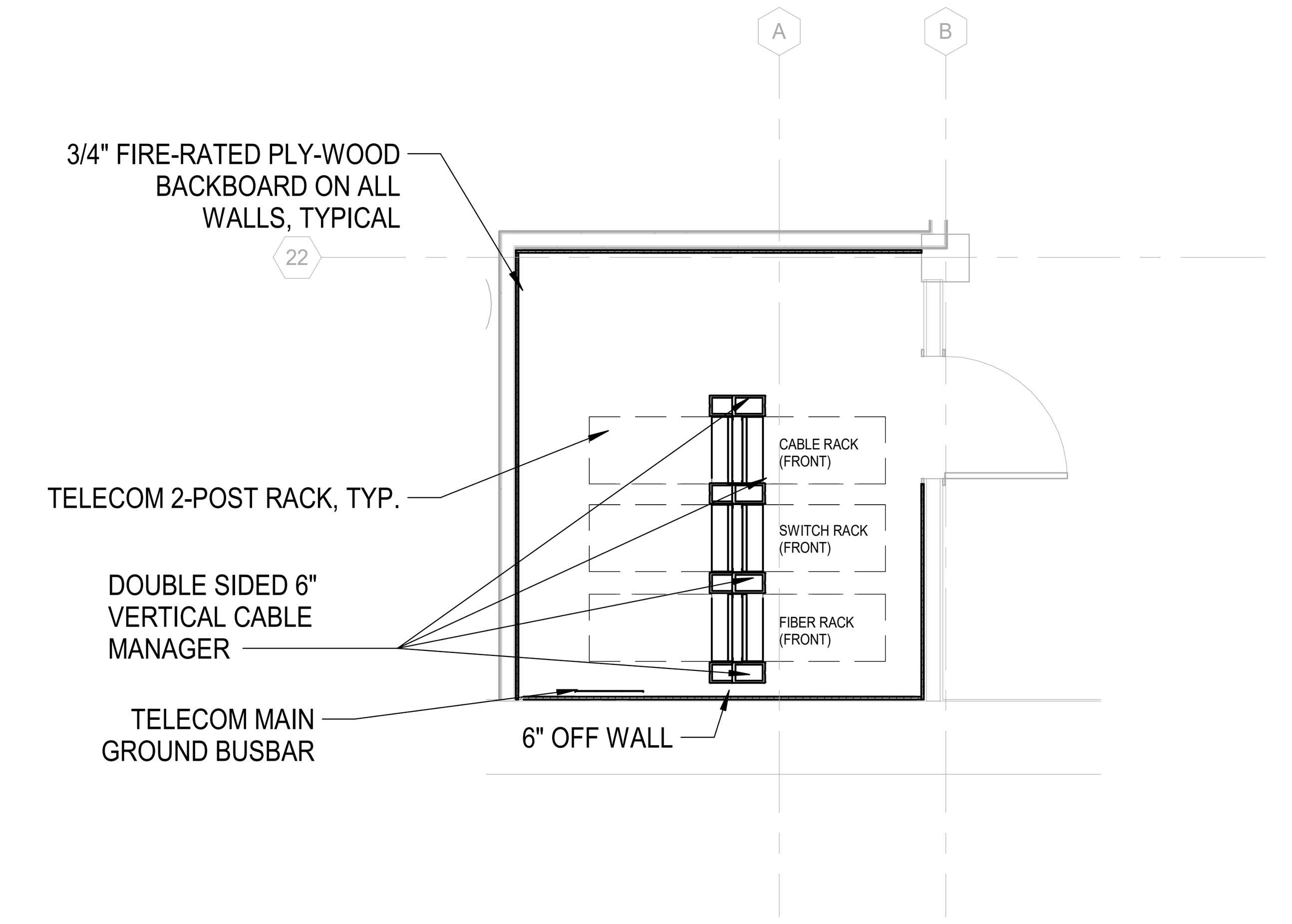
ISSUE DATE
1/8/2024

JOB. NO.
11706-00

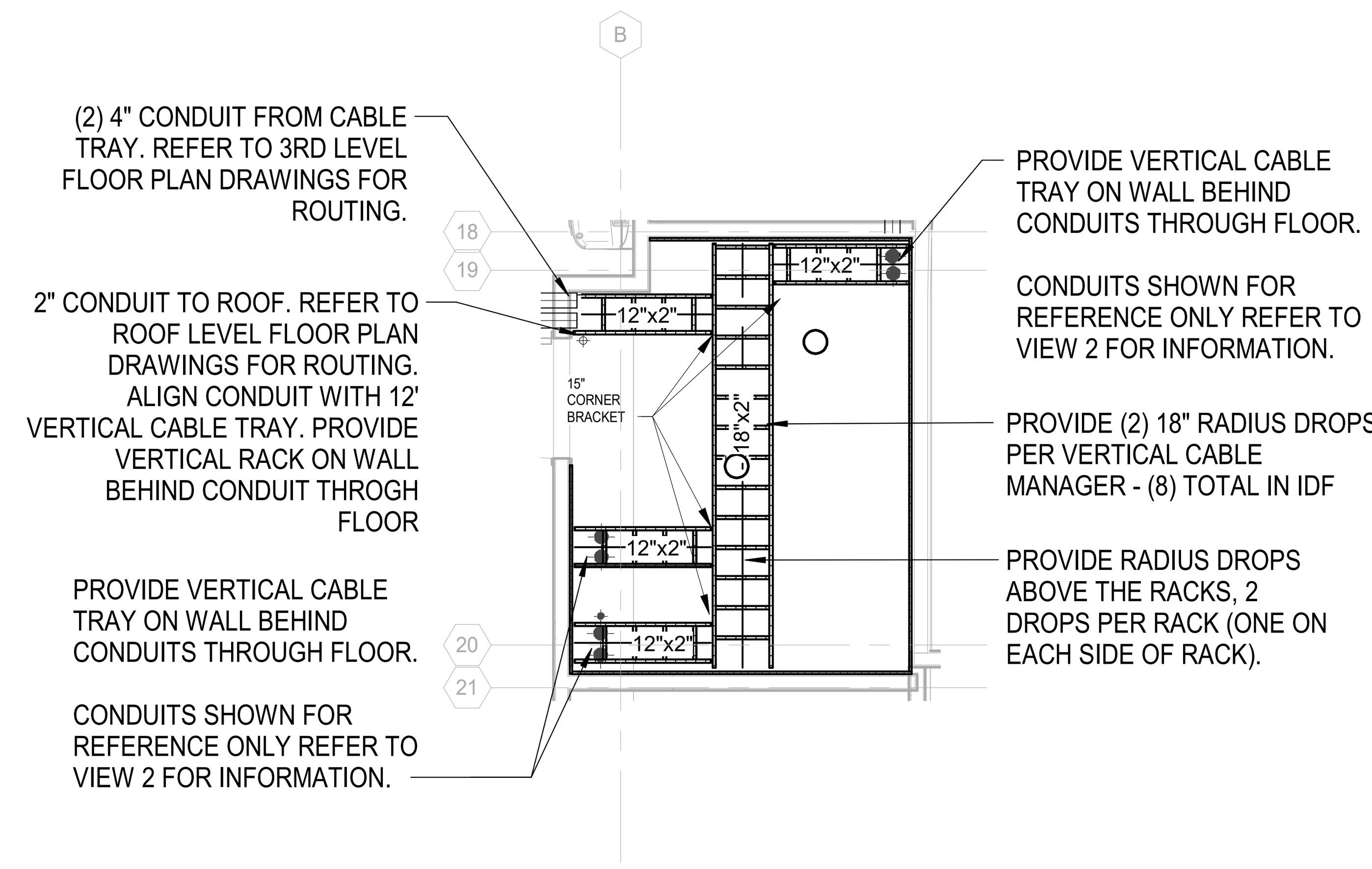
DWG. NO.
T103



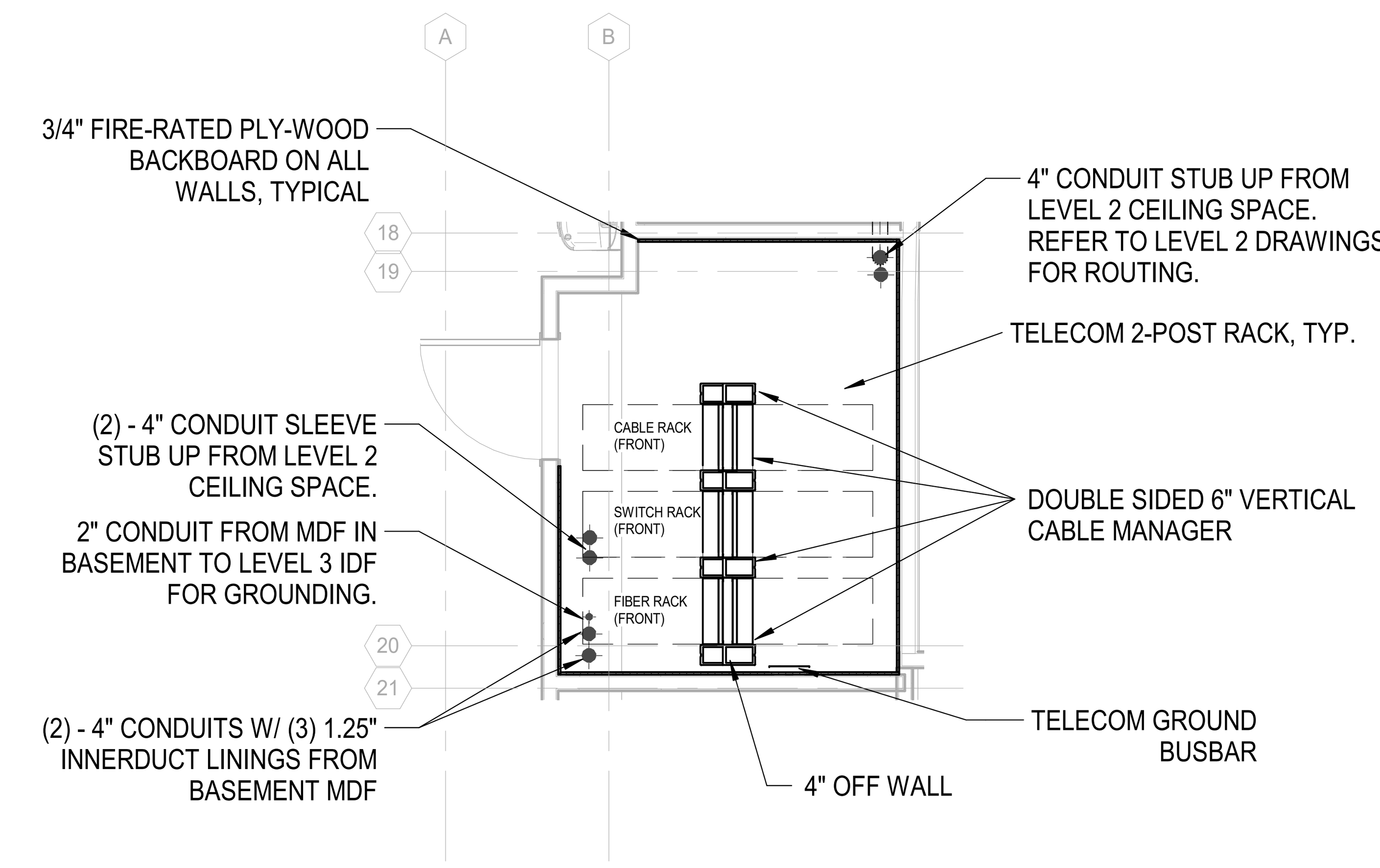
3 **BASEMENT FLOOR MDF ROOM PLAN - ABOVE 7' 6"**
1/4" = 1'-0"



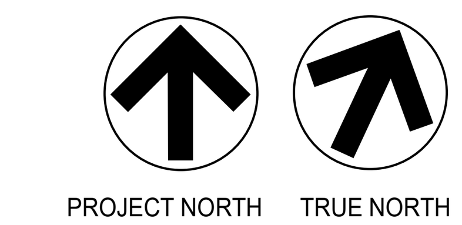
1 **BASEMENT FLOOR MDF ROOM PLAN - BELOW 7' 6"**
1/4" = 1'-0"



4 **THIRD FLOOR IDF ROOM PLAN - ABOVE 7" 6"**
1/4" = 1'-0"



2 **THIRD FLOOR IDF ROOM PLAN - BELOW 7" 6"**
1/4" = 1'-0"



GENERAL NOTES

1. NO AV OR OTHER SYSTEMS EQUIPMENT TO BEHOUSED IN TELECOM ROOMS.
2. DRAWINGS ARE GENERALLY DIAGRAMMATIC IN NATURE AND SHALL BE USED AS SUCH. EXACT LOCATIONS AND CONDITIONS OF TELECOM DEVICES AND ASSOCIATED INFRASTRUCTURE SHALL BE FIELD COORDINATED WITH OTHER TRADES PRIOR TO INSTALLATION. REFER TO ARCHITECTURAL ELEVATIONS FOR ACTUAL LOCATIONS AND DIMENSIONED HEIGHTS.
3. ALL CONDUITS SHALL BE ROUTED TIGHT TO STRUCTURE ABOVE UON ON THE PLANS.
4. PROPERLY SEAL AND FIRESTOP ALL PENETRATIONS. CONTRACTOR SHALL INSTALL THE APPROPRIATE FIRESTOP ASSEMBLY IN ORDER TO MAINTAIN THE FIRE BARRIERS AND WALL RATINGS.
5. ALL PARTITION AND SLAB PENETRATIONS SHALL MAINTAIN THE ASSOCIATED FIRE RATING AND STC RATING OF THE PARTITION OR SLAB AT ALL TIMES.
6. CABLES SHALL BE BUNDLED IN GROUPS OF 25 OR LESS USING HOOK AND LOOP TAPE OR VELCRO. ZIP TIES ARE NOT ALLOWED.
7. DASH LINES IN FRONT AND REAR OF RACK ARE 3' WORKABLE CLEARANCE.

SHEET SPECIFIC NOTES

LORD AECK SARGENT

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N&B PROJECT: 21N242
Newcomb & Boyd, LLP
Firm Lic. # F-0312

SHEET TITLE: TELECOM ENLARGED PLANS

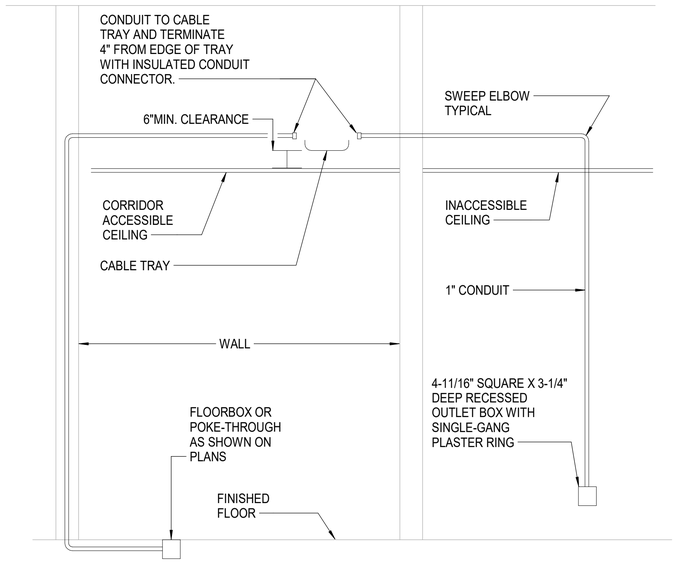
SCALE (U.N.O.): As indicated

0 4 8 FT

JOB NAME: University of North Carolina - Chapel Hill
SCO#: 21-23548-02A
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

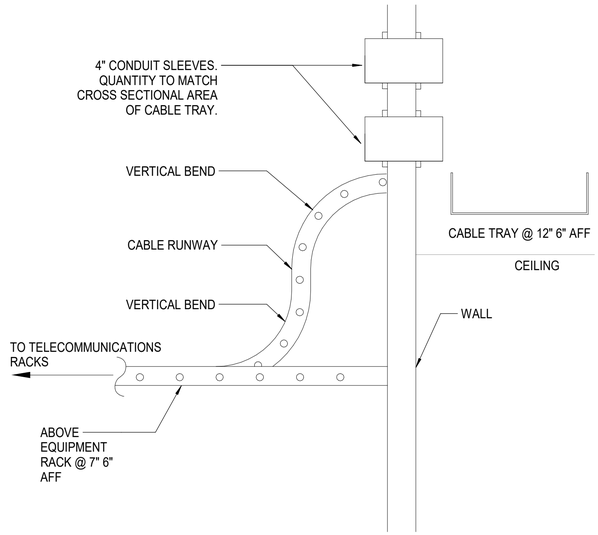
SEAL: DocuSigned by: RICHARD O. DOZIER, III ENGINEER SEAL 044143
Signed on 01/03/2024 using a Digital Signature.

ISSUE DATE: 1/8/2024
JOB NO.: 11706-00
DWG. NO.: T301



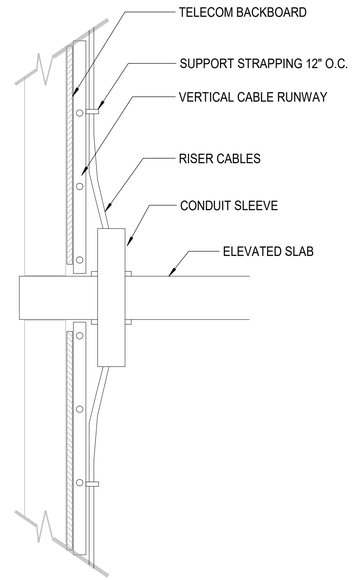
NOTES:
1. REFER TO SECTION 16130, BOXES, FOR BOXES, CONDUIT, AND FITTINGS.
2. CONDUIT SHALL BE PROVIDED TO WITHIN 4" OF CABLE TRAY EVEN IN AREAS WITH ACCESSIBLE CEILINGS.

3 TELECOM OUTLET RACEWAY DETAIL
NO SCALE



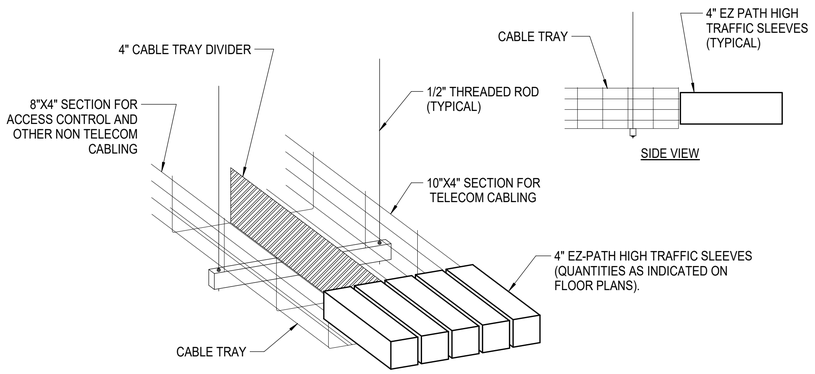
NOTES:
1. MAINTAIN FIRE RATING UTILIZING APPROVED U.L. SYSTEM WHEN PASSING THROUGH FIRE RATED PARTITION WITH CONDUIT.
2. IF THERE IS NOT ENOUGH ROOM FOR A RUNWAY RADIUS BEND, ANOTHER FORM OF VERTICAL SUPPORT MUST BE PROVIDED.

2 CONDUIT TO CABLE RUNWAY TRANSITION
NO SCALE



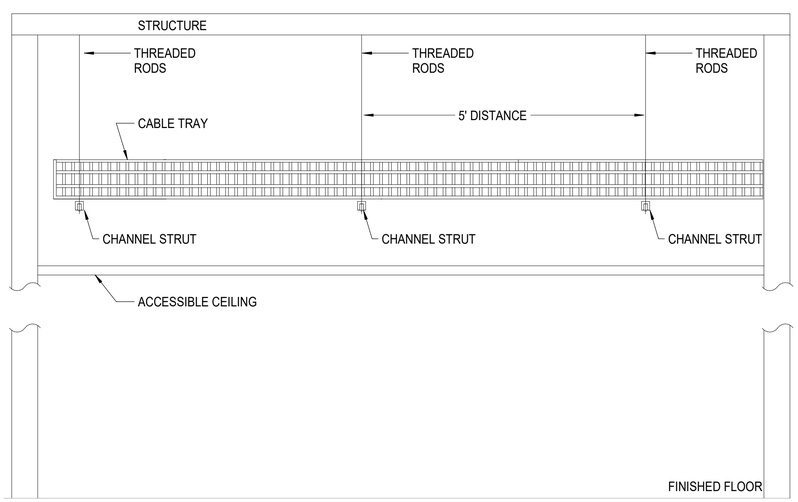
NOTES:
1. ASSEMBLY SHALL MAINTAIN FIRE RATING OF PENETRATED FLOOR.

1 TYPICAL FLOOR SLEEVE
NO SCALE

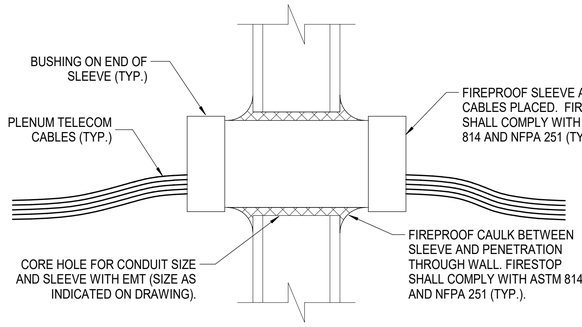


NOTES:
1. PROVIDE 4" CABLE TRAY DIVIDER FOR SEPARATION OF COMMUNICATIONS CABLING FROM ACCESS CONTROL AND CONTROLS CABLING RUNNING INSIDE THE CABLE TRAY SYSTEM. STOP THE CABLE TRAY DIVIDER 12" BEFORE THE CONDUIT TRANSITION TO ALLOW CABLES TO FEED INTO THEIR DESIGNATED 4" SLEEVES.
2. BRING CABLE TRAY TO THE BOTTOM OF THE CONDUIT. THE (2) BOTTOM CONDUITS OF THE 3x3 ARRAY SHALL BE IN CONTACT WITH THE BOTTOM OF THE CABLE TRAY.
3. ALL DISCONTINUOUS SECTIONS OF CABLE TRAY SHALL BE JUMPERED WITH A #6 AWG CONDUCTOR. RUN JUMPER ON OUTSIDE OF CONDUITS.

4 CABLE TRAY WALL PENETRATION
NO SCALE



5 UNC - CABLE TRAY SUPPORT DETAIL
NO SCALE



6 WALL PENETRATION FIRESTOP
NO SCALE

LORD AECK SARGENT

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Newcomb & Boyd, LLP
Firm Id: F-0512

SHEET TITLE: TELECOM DETAILS
SCALE (U.N.O.): NO SCALE

JOB NAME: University of North Carolina - Chapel Hill
SCI#: 21-2584-b02A
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

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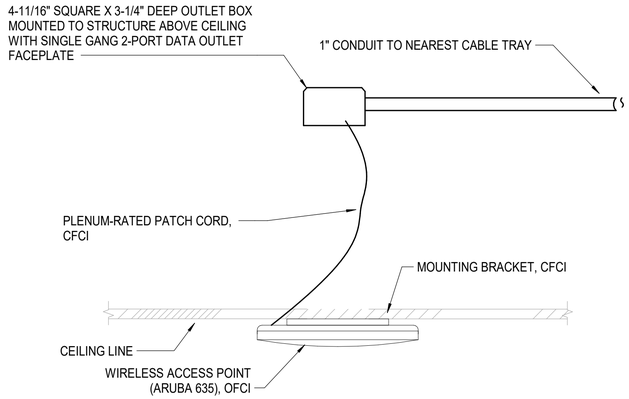
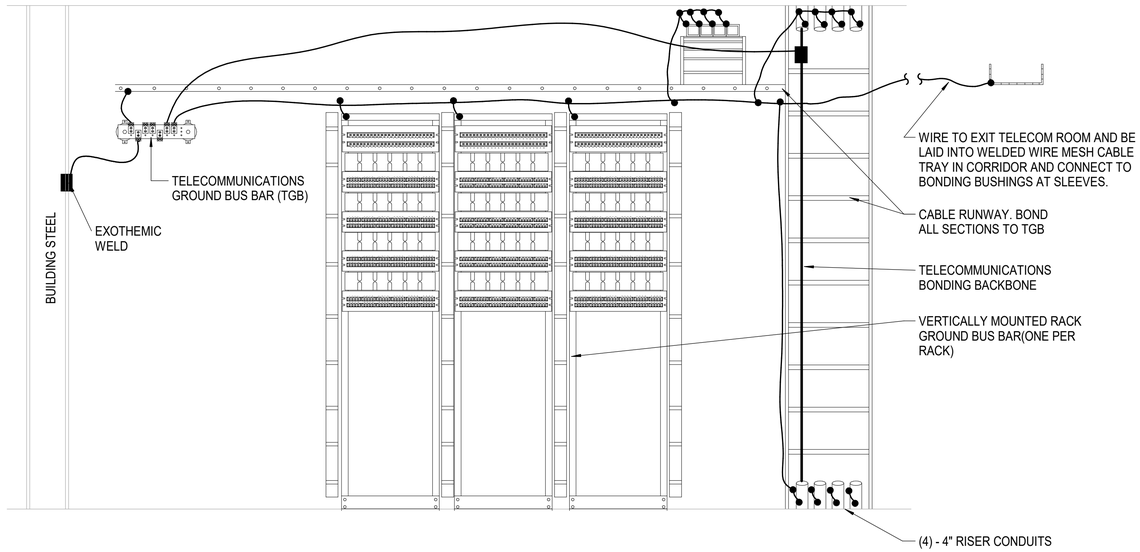
Signed on 01/03/2024 using a Digital Signature.

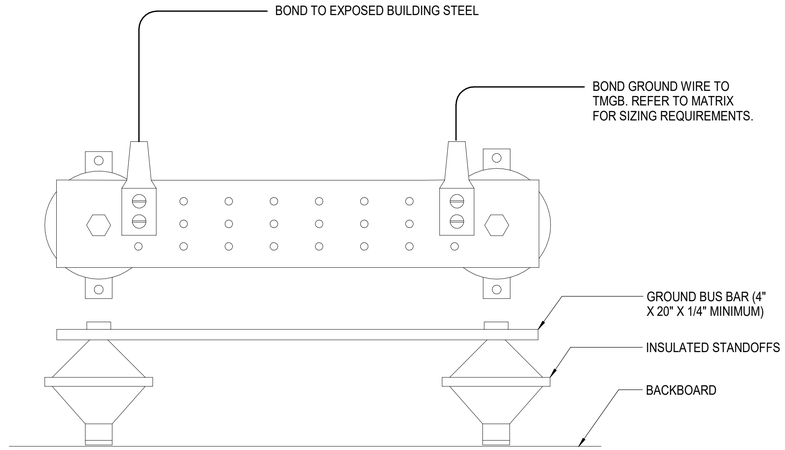
ISSUE DATE: 1/8/2024
OB. NO.: 11706-00
DWG. NO.: T501



1 INDOOR WIRELESS ACCESS POINT IN ACCESSIBLE CEILING (ACT)
NO SCALE



2 COMM ROOM GROUNDING REQUIREMENTS
NO SCALE



GROUND WIRE LENGTH LINEAR FT.	SIZE (AWG)
LESS THAN 13	6 (0.162 IN)
13 TO 20	4 (0.232 IN)
20 TO 26	3 (0.260 IN)
26 TO 33	2 (0.292 IN)
33 TO 44	1 (0.332 IN)
44 TO 52	1/0 (0.373 IN)
52 TO 66	2/0 (0.419 IN)
67 TO 84	3/0 (0.470 IN)
85 TO 105	4/0 (0.528 IN)
106 TO 125	250 kcmil (0.575 IN)
126 TO 150	300 kcmil (0.630 IN)
151 TO 175	350 kcmil (0.681 IN)
176 TO 250	500 kcmil (0.813 IN)
251 TO 300	600 kcmil (0.893 IN)
GREATER THAN 300	750 kcmil (0.998 IN)

NOTES:
1. PROVIDE (1) GROUND BUS BAR PER TELECOM ROOM.
2. BOND GROUND BUS BAR (TGB) TO THE MAIN GROUND BUS BAR (TMGB) WITH A GROUND WIRE, SIZED FROM CHART.
3. BOND MAIN GROUND BUS BAR TO MAIN ELECTRICAL GROUND (MDP). CONDUCTOR SIZE TO BE PER CHART AND NO SMALLER THAN LARGEST TBB, PER TIA-607
4. BOND GROUND WIRES TO BUS BAR WITH TERMINAL BLOCKS.
5. BOND EACH GROUND BUS BAR TO BUILDING STEEL VIA EXOTHERMIC WELD.
6. MAINTAIN MINIMUM BENDING RADIUS IN ROUTING BONDING CONDUCTORS.
7. BONDING CONDUCTORS SHOULD NOT BE SPLICED AT 90 DEGREE BENDS.
8. MOUNT TELECOM GROUND BUS BAR 6" BELOW CABLE RUNWAY IN EACH TELECOM ROOM.
9. INSTALL EACH CONDUCTOR IN SEPARATE CONDUITS.
10. PROVIDE GREEN SHEATHED BONDING CONDUCTORS.
11. COPPER COMPRESSION FITTING WITH (2) LUG CONNECTION

3 GROUND BUS BAR
NO SCALE

LORD AECK SARGENT

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Newcomb & Boyd, LLP
Firm Lic # P-0312

SHEET TITLE: TELECOM DETAILS
SCALE: (U.N.O.) NO SCALE

JOB NAME: University of North Carolina - Chapel Hill
SCD#: 21-2384502A
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

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Richard Dozier
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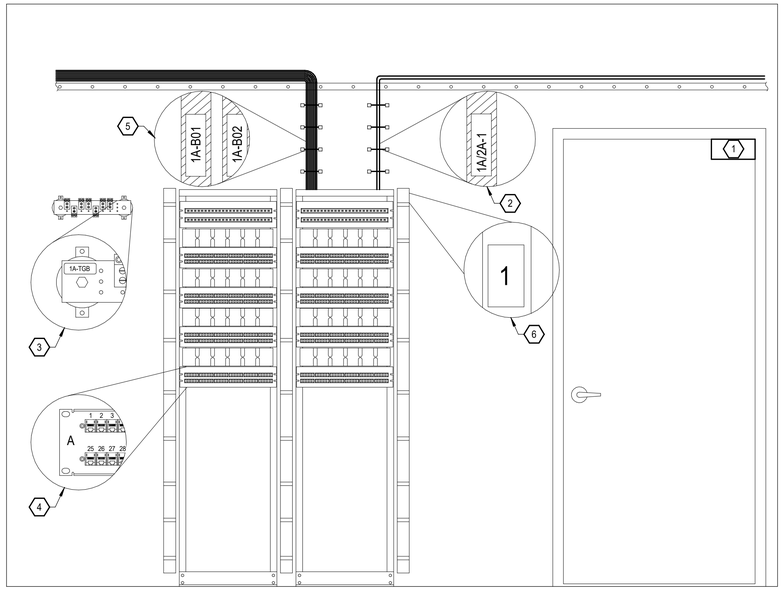
ENGINEER
RICHARD O. DOZIER
Signed on 01/03/2024 using a Digital Signature.

ISSUE DATE: 1/8/2024
OB. NO.: 11706-00
DWG. NO.: T502



GENERAL NOTES (THIS DETAIL ONLY):

1. EQUIPMENT LOCATION AND SIZE ARE OUT OF SCALE FOR CLARITY. LABLING SCHEME CONFORMS TO UNC IT GUIDELINES AND TIA-606-B

(1) ROOM IDENTIFIER:
PROVIDE A PLASTIC ENGRAVED LABEL WITH TEXT 2" HIGH. FORMAT SHALL BE "FS"
F - NUMERIC CHARACTER IDENTIFYING THE TS ON RESPECTIVE FLOOR
S - ALPHA CHARACTER IDENTIFYING THE TR (TELECOM ROOM) ON RESPECTIVE FLOOR
FOR EXAMPLE : "1A" = FIRST FLOOR, TS A.

(2) BACKBONE CABLE:
PROVIDE A MACHINE PRINTED LABEL SECURED WITH SHRINK WRAP TO EACH END OF BACKBONE CABLE. FORMAT SHALL BE "FS1/FS2 - N"
FS1 - ORIGNATION TS
FS2 - TERMINATION TS
N - CABLE NUMBER
FOR EXAMPLE : "1A/2B-1" = CABLE 1 ROUTED BETWEEN LEVEL O ER/MDF AND LEVEL 0 TR/IDF.

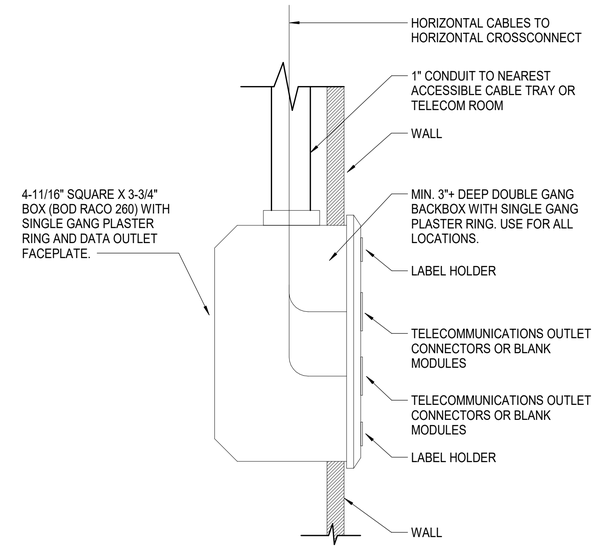
(3) GROUND BUS:
PROVIDE A MACHINE PRINTED LABEL PERMANENTLY FIXED TO THE BUSBAR. FORMAT SHALL BE "FS-TGB"
FS - TS THAT CONTAINGS THE TGB
FOR EXAMPLE : "1A-TGB" = FIRST FLOOR TS A TELECOM BONDING BUSBAR (TGB).

(4) PATCH PANELS:
PROVIDE MACHINE PRINTED LABELS PERMANENTLY FIXED TO THE PATCH PANEL. FORMAT SHALL BE "AN"
A - ALPHA NUMERIC ID
N - PATCH PANEL PORT NUMBER
FOR EXAMPLE "A07" = PATCH PANEL A, PORT POSITION 07.

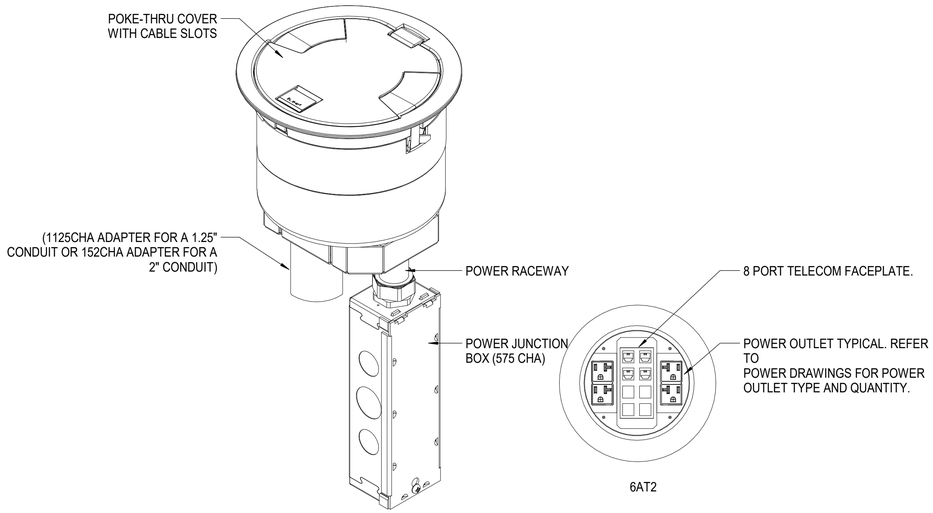
(5) HORIZONTAL CABLE:
PROVIDE MACHINE PRINTED LABEL SECURED WITH SHRINK WRAP TO EACH END OF EVERY HORIZONTAL CABLE.
FORMAT SHALL "FS-AN".
FS - TS IDENTIFIER
AN - TERMINATION LOCATION
FOR EXAMPLE "1A-B01" = TS A, PATCH PANEL B, PORT 01.

(6) RACKS:
PROVIDE MACHINE GENERATED LABEL AT LEAST 1.5" HIGH AND HAVE LETTERS ON A WHITE BACKGROUND. THE LABEL SHALL BE PLASTIC OR VINYL AND ADHEARED TO THE TOP RIGHT CORNER OF THE RACK IF POSSIBLE.
FORMAT SHALL BE SEQUENTIALLY STARTING WITH "1" AT THE RACK CLOSES TO DOOR.
FOR EXAMPLE "1" = RACK 1. "2" = RACK 2.

2 LABELING REQUIREMENTS - TIA/EIA 606-A
NO SCALE



1 TYPICAL TELECOM OUTLET
NO SCALE



(B) 3T

GENERAL NOTES (THIS DETAIL ONLY):

1. BASIS OF DESIGN: LEGRAND (WIREMOLD) 6AT2, WITH 3 HOUR FIRE RATING.
2. PROVIDE ELECTRICAL, TELECOM AND AV CONDUIT INDICATED IN THE DETAIL.
   A. ROUTE AV CONDUIT TO ACCESSIBLE CEILING IN THE ROOM OR AS INDICATED ON THE AV DRAWINGS.
   B. ROUTE TELECOM CONDUIT TO NEAREST CABLE TRAY OR TELECOM ROOM WITHIN THE ASSOCIATED DISTRIBUTION ZONE.
   C. REFER TO ELECTRICAL DRAWINGS FOR POWER REQUIREMENTS.
3. PROVIDE ALL NECESSARY DEVICE PLATES, DIVIDERS AND ACCESSORIES FOR A COMPLETE INSTALLATION.
4. REFER TO FLOOR PLANS FOR LOCATIONS, QUANTITIES AND ADDITIONAL INFO.
5. CONDUITS ROUTED IN THE CEILING BELOW SHALL STUB UP THROUGH THE NEAREST WALL AND UP TO ACCESSIBLE CEILING SPACE OF THE SAME FLOOR.
6. POKE-THRU COVER COLOR AND FINISH SHALL BE COORIDNATED WITH THE ARCHITECT PRIOR TO ORDER.
7. POKE-THRU COVER SHALL AT ALL TIMES BE FLUSH WITH THE FINISHED FLOOR.

3 TELECOM POKE THRU DETAIL (WIREMOLD 6AT2)
NO SCALE

LORD AECK SARGENT

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N&B PROJECT: 21N242
Newcomb & Boyd, LLP
Firm Id: F-0512

SHEET TITLE: TELECOM DETAILS
SCALE (U.N.O.): NO SCALE

JOB NAME: University of North Carolina - Chapel Hill
SCD#: 21-2354620A
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

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DocuSigned by:
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SEAL 044143
ENGINEER
RICHARD O. DOZIER, III
Signed on 01/03/2024 using a Digital Signature.

ISSUE DATE: 1/8/2024
OB. NO.: 11706-00
DWG. NO.: T503

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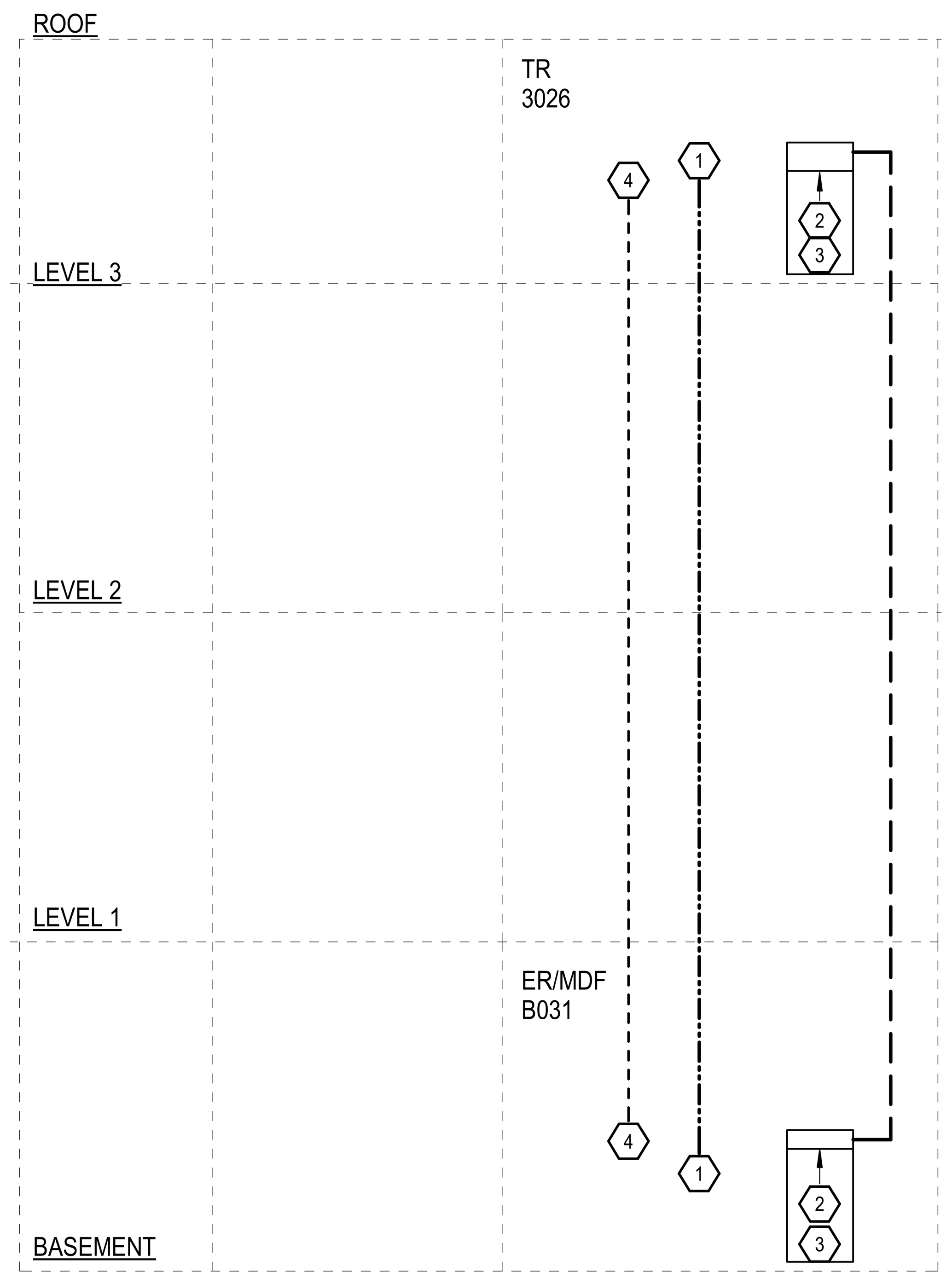


BACKBONE CABLING RISER DIAGRAM

KEYNOTES:

1. 110- VOICE WALL PUNCHDOWN BLOCK
2. FIBER SPLICE TRAY WITH CASSETTES
3. 84" 2-POST TELECOM RACK
4. .500 COAX CABLE. COIL 30' FOR FUTURE TERMINATIONS
5. 24U WALL MOUNT RACK

LEGEND:

- 25-PAIR CAT 5E VOICE CABLE HOMERUN
- (1) 24-STRAND, OS2 SINGLE MODE FIBER. TERMINATE IN LC CONNECTORS
- .500 COAX CABLE

ABBREVIATIONS:

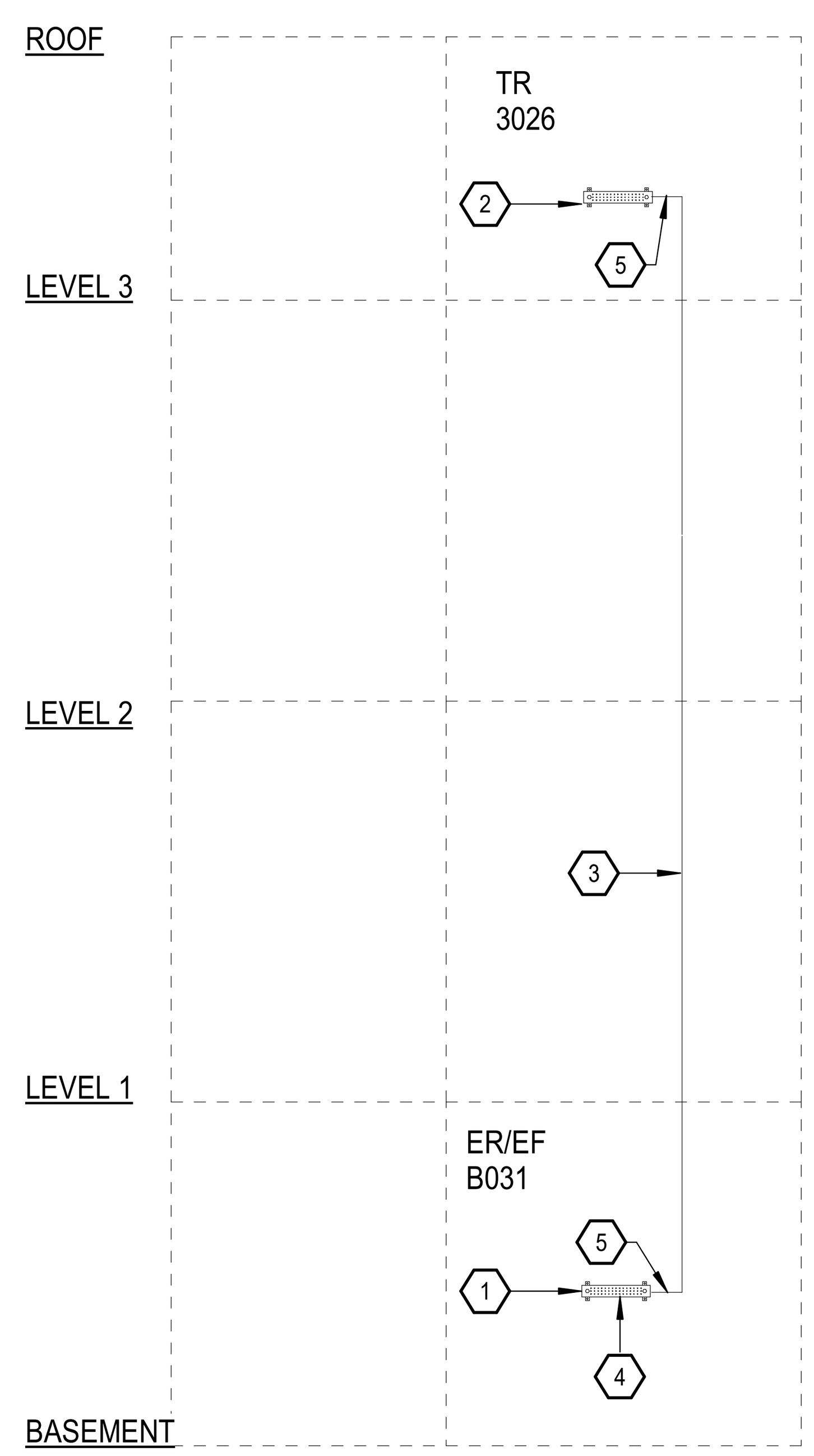
ER - EQUIPMENT ROOM

EF - ENTRANCE FACILITY

TR- TELECOM ROOM

SM-SINGLE MODE FIBER

QTY -QUANTITY



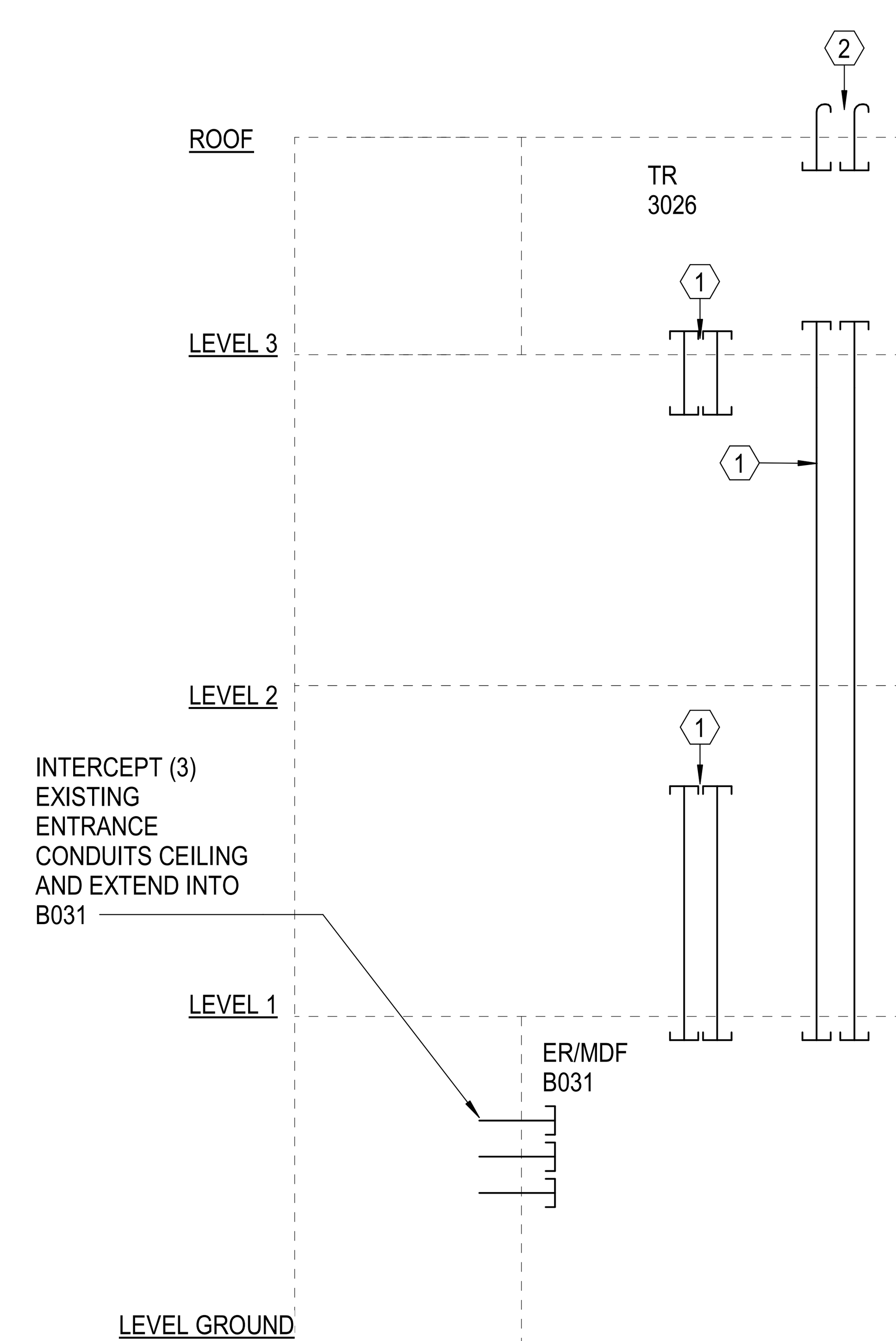
KEYNOTES:

1. TELECOM MAIN GROUNDING BUSBAR (TMGB)
2. TELECOM SECONDARY GROUNDING BUSBAR (TSGB)
3. TELECOM BONDING BACKBONE
4. CONNECT TELECOM MAIN GROUNDING BUSBAR (TMGB) TO ELECTRICAL MAIN GROUND.
5. DIRECT CONNECT WITH TELECOM MAIN GROUNDING BUSBAR (TMGB) AND SECONDARY GROUNDING BUSBAR (TSGB)

GENERAL NOTES

1. SEE GROUNDING DETAIL 5 ON SHEET T-503 FOR MORE INFORMATION AND CONDUCTOR SIZING.

GROUNDING RISER DIAGRAM



KEYNOTES:

1. (2) - 4" EMT CONDUITS WITH PLASTIC BUSHINGS
2. (2) - 2" RIGID CONDUITS WITH UL LISTED FEATHERHEAD

CONDUIT RISER DIAGRAM

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SHEET TITLE
TELECOM RISERS DIAGRAMS

SCALE (U.N.O.)
NO SCALE

JOB NAME
University of North Carolina - Chapel Hill
SCO#: 21-23548-02A
BINGHAM HALL RENOVATION

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ISSUE DATE
1/8/2024

OB. NO.
11706-00

DWG. NO.
T601

AUDIO-VISUAL INFRASTRUCTURE SYMBOL LIST

SYMBOL (XX)	NAME	BACKBOX SIZE	MOUNTING HEIGHT (INCH. AFF) (YY)	CONDUIT TYPE 1 QTY	CONDUIT TYPE 1 SIZE (INCH.)	CONDUIT TYPE 1 DEST	CONDUIT TYPE 2 QTY	CONDUIT TYPE 2 SIZE (INCH.)	CONDUIT TYPE 2 DEST	NOTES	BOX USE
AN	ANTENNA, BACK BOX	2-GANG	108 UON	1	1	STUB AFC					RF WIRELESS MIC ANTENNA EXTENSION BACK BOX
C1	BACKBOX, TYPE 1	2-GANG	SEE ELEVATION	1	1.25	STUB AFC	1	1.25	CABLE TRAY	COORIDNATE FINAL LOCATION WITH ARCHITECTUAL ELEVATIONS	PTZ CAMERA BACK BOX
CP	TOUCH PANEL BACKBOX, TYPE 1	2-GANG	SEE ELEVATION	1	1.25	STUB AFC				COORIDNATE FINAL LOCATION WITH ARCHITECTUAL ELEVATIONS	WALL MOUNTED CONTROL PANEL
D1	DISPLAY WALL BOX, TYPE 1	CHIEF PAC501B / PNRIW	SEE ELEVATION	1	1.25	STUB AFC	1	1.25	CABLE TRAY	SEE DETAIL 1 ON SHEET AV500 FOR ADDITIONAL REQUIREMENTS.	WALL MOUNTED DISPLAY
D2	DISPLAY WALL BOX, TYPE 2	CHIEF PAC526F / XTM1U	SEE ELEVATION	1	1.25	STUB AFC	1	1.25	CABLE TRAY	SEE DETAIL 2 ON SHEET AV500 FOR ADDITIONAL REQUIREMENTS.	WALL MOUNTED DISPLAY
D3	DISPLAY WALL BOX, TYPE 3	FSR PWB450	SEE ELEVATION	1	1.25	STUB AFC	1	1.25	CABLE TRAY	COORIDNATE FINAL LOCATION WITH ARCHITECTUAL ELEVATIONS	FIRE RATED DISPLAY BACKBOX FOR WALL MOUNTED DISPLAY
D4	DISPLAY WALL BOX, TYPE 4	2-GANG	SEE ELEVATION	1	1	STUB AFC	1	1	CABLE TRAY	COORIDNATE FINAL LOCATION WITH ARCHITECTUAL ELEVATIONS	WALL MOUNTED DISPLAY
S1	SURROUND WALL MOUNTED SPEAKER BACKBOX, TYPE 1	1-GANG	SEE ELEVATION	1	1	STUB AFC				COORIDNATE FINAL LOCATION WITH UNC AV AND ARCHITECT ELEVATION	SURROUND SOUND SPEAKERS
M1	MICROPHONE BAR BACKBOX, TYPE 1	1-GANG	SEE ELEVATION	1	1	STUB AFC				COORDINATE FINAL LOCATION WITH UNC AV AND REFER TO ARCHITECT ELEVATION	MICROPHONE BAR
PT	POKE-THRU, TYPE 1	WIREMOLD 10AT	FLOOR	1	2	STUB AFC	1	1.25	CABLE TRAY	SEE DETAIL 1 ON SHEET AV502 FOR ADDITIONAL REQUIREMENTS.	AV / TELECOM SHARED POKE THRU
R1	CREDENZA STYLE AV EQUIPMENT RACK	8x6x6 NEMA BOX	OUTLET HEIGHT	3	1.25	STUB AFC	1	1.25	CABLE TRAY		1-BAY CREDENZA STYLE AV EQUIPMENT RACK
R2	CREDENZA STYLE AV EQUIPMENT RACK	12x12x6 NEMA BOX	OUTLET HEIGHT	4	1.25	STUB AFC	1	1.25	CABLE TRAY		2-BAY CREDENZA STYLE AV EQUIPMENT RACK
SC	PROJECTION SCREEN LV CONTROL BOX, TYPE 1	4-GANG	SWITCH HEIGHT	1	1	STUB AFC				COORIDNATE FINAL LOCATION WITH ARCHITECTUAL ELEVATIONS	PROJECTOR SCREEN CONTROL SWITCH
W2	WALL BOX, TYPE 2	2-GANG	SEE ELEVATION	1	1	STUB AFC	1	1	CABLE TRAY		LOCAL AV INPUT

NOTES:
1. CONDUIT DESTINATIONS ARE IN SAME ROOM UNLESS OTHERWISE NOTED.
2. "CABLE TRAY" MEANS TO STUB THE CONDUIT DIRECTLY TO THE CABLE TRAY USING THE SHORTEST POSSIBLE ROUTE.
3. "STUB AFC" MEANS TO STUB CONDUIT ABOVE ACCCESSIBLE FINISHED CEILING IN THE SAME ROOM AS THE BOX, UNLESS OTHERWISE NOTED.

AUDIO-VISUAL DEVICE SYMBOL LIST

SYMBOL (XX)	NAME	BACKBOX SIZE	MOUNTING HEIGHT (INCH. AFF)	CONDUIT TYPE 1 QTY	CONDUIT TYPE 1 SIZE (INCH.)	CONDUIT TYPE 1 DEST	NOTES	DEVICE USE
S	CEILING SPEAKERS						MAKE / MODEL YET TO BE DETERMINED	SOUND REINFORCEMENT WITHIN THE ROOM
M	MICROPHONE						MAKE / MODEL YET TO BE DETERMINED	CEILING MOUNTED MICROPHONE
DC	CEILING MOUNTED DOCUMENT CAMERA						MAKE / MODEL YET TO BE DETERMINED	DOCUMENT CAPTURING
MS	MOTORIZED PROJECTION SCREEN						CONNECT POWER. COORDINATE LOW VOLTAGE CONNECTIONS WITH AV CONTRACTOR	
LS	LECTERN / STATION						MAKE / MODEL YET TO BE DETERMINED	AV LECTERN SUPPLIED BY AV CONTRATOR
P	CEILING MOUNTED PROJECTOR, USING CHIEF CMA440 SUSPENDED CEILING KIT						COORDINATE FINAL LOCATION BASED ON SELECTED PROJECTOR AND SHORT THROW LENS	AV PROJECTOR & MOUNT SUPPLIED BY AV CONTRATOR

GENERAL NOTES:

1. COORDINATE ALL POWER REQUIREMENTS WITH ELECTRICAL CONTRACTOR.
2. COORDINATE ALL DATA REQUIREMENTS WITH TELECOM CONTRACTOR.
3. COORDINATE ALL DEVICES TO BE PERMANENTLY INSTALLED IN FURNITURE WITH FURNITURE VENDOR, INCLUDING BUT NOT LIMITED TO CUSTOM CUT OUTS AND MODIFICATIONS.
4. COORDINATE ALL DEVICE MOUNTING POSITIONS WITH ARCHITECTURAL ELEVATIONS AND SURROUNDING DEVICES.
5. FIELD VERIFY ALL DIMENSIONS PRIOR TO INSTALLING EQUIPMENT.
6. PROVIDE SEPARATE RACEWAY PATH FOR MICROPHONE LEVEL SIGNALS.
7. CONDUIT ROUTING IS SHOWN FOR DESIGN INTENT ONLY. COORDINATE EXACT PATHWAY ROUTES BASED ON FIELD CONDITIONS.
8. ALL CATEGORY CABLE USED FOR THE AV SYSTEM SHALL BE BLUE.
9. REAM AND BUSH ALL CONDUIT ENDS.
10. PROVIDE BLANK PLATES FOR ANY BOX LEFT UNUSED BY THIS PROJECT AND ANY DENOTED AS BLANK.
11. ALL CATEGORY CABLE SHALL BE PLENUM RATED.
12. CEILNG SPEAKERS ARE SHOWN FOR ZONING AND CONDUIT SIZING ONLY. REFERENCE ARCHITECTURAL RCP FOR EXACT CEILING SPEAKER LOCATIONS. PROVIDE ROUGH-IN KIT FOR ALL LOCATIONS IN INACCESSIBLE CEILINGS.
13. ALL CATEGORY CABLE SHALL BE TERMINATED BY THE STRUCTURED CABLING CONTRACTOR INTO JACKS / PATCH PANEL. ALL PATCH CABLES PROVIDED BY THE AV CONTRACTOR SHALL BE PREFABRICATED. NO SHIELDED RJ-45 MALE CABLE MOUNT CONNECTORS OR BARREL COUPLERS SHALL BE USED.
14. USE VELCRO STRAPS FOR ALL CABLE MANAGEMENT APPLICATIONS. ZIP TIES SHALL NOT BE USED.
15. ELECTRICAL SCOPE – THE INFRASTRUCTURE PORTION OF THESE DOCUMENTS SHALL BE PROVIDED AND INSTALLED BY THE ELECTRICAL CONTRACTOR AND SHALL INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING:
    A. GROUNDING BUS AND GROUND BARS.
    B. EMPTY CONDUIT WITH PULL STRINGS.
    C. SLEEVES THROUGH PARTITIONS AND SLABS.
    D. JUNCTION BOXES AND BACK BOXES.
    E. POWER OUTLETS
    F. DISPLAY BACK BOXES.
16. TELECOM SCOPE – THE DATA/TELECOM CABLING PORTION OF THESE DOCUMENTS SHALL BE PROVIDED AND INSTALLED BY THE STRUCTURED CABLING CONTRACTOR AND SHALL INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING:
    A. ALL DATA CABLING FROM IDF/MDF NETWORK PATCH PANELS TO FACEPLATES OR TERMINATION BLOCKS.
    B. TERMINATIONS OF DATA CONNECTORS, JACKS, AND FACEPLATES.
17. AUDIO-VISUAL SCOPE – THE AUDIO-VISUAL PORTION OF THESE DOCUMENTS SHALL BE PROVIDED AND INSTALLED BY THE AUDIO-VISUAL CONTRACTOR AND SHALL INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING:
    A. DISPLAY DEVICES, SUCH AS FLAT PANEL TVS, PROJECTORS, AND SCREENS.
    B. AUDIO-VISUAL EQUIPMENT, SUCH AS AV RACKS, TRANSMITTERS, RECEIVERS, AND CONTROLLERS.
    C. PROPRIETARY CABLING, SUCH AS HD-BASE T, HDMI, SPEAKER, AND CONTROL CABLES.
    D. PROPRETARY AUDIO-VISUAL STORAGE AND MOUNTING DEVICES, SUCH AS PROJECTOR ENCLOSURES AND DISPLAY MOUNTS.

ABBREVIATIONS:

AAC	ABOVE ACCESSIBLE CEILING
ABV	ABOVE
AFF	ABOVE FINISHED FLOOR
ARF	ABOVE RAISED FLOOR
AFC	ABOVE FINISHED CEILING
ARCH	ARCHITECT/ARCHITECTUAL
BFC	BELOW FINISHED CEILING
BEL	BELOW
C	CONDUIT
CCA	CEILING CONNECTOR ASSEMBLY
CLG	CEILING
COL	COLUMN
CONN	CONNECT/CONNECTION
CONT	CONTINUATION/CONTINOUS
DN	DOWN
EC	EMPTY CONDUIT
FL	FLOOR
FBO	FINISHED BY OTHER
FCA	FLOOR CONNECTOR ASSEMBLY
LAN	LOCAL AREA NETWORK
N/A	NOT APPLICABLE
N/I	NOT ISSUED
NTS	NOT TO SCALE
NIC	NOT IN CONTRACT
OFE	OWNER FURNISHED EQUIPMENT
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
SCRN	PROJECTOR SCREEN
SPEC	SPECIFICATIONS
UG	UNDERGROUND
UON	UNLESS OTHERWISE NOTED
WCA	WALL CONNECTOR ASSEMBLY
NC	NORMALLY CLOSED CONTACT CLOSURE
NO	NORMALLY OPEN CONTACT CLOSURE
CC	CENTER CONTACT

DRAWING SYMBOL (REFER TO THE AUDIO VISUAL INFRASTRUCTURE SYMBOL LIST)

WALL DEVICES

- YY / XX — AV WALL BOX, XX IS AV SYMBOL, YY IS ELEVATION AFF.
- YY / XX — AV WALL JUNCTION BOX, XX IS AV SYMBOL, YY IS ELEVATION AFF.
- YY / X — AV WALL MOUNTED DEVICE, XX IS AV SYMBOL, YY IS ELEVATION AFF.
- YY / XX — WALL MOUNTED IR / RF DEVICES, XX IS AV SYMBOL, YY IS ELEVATION AFF.

CEILING DEVICES

- YY / SX — AV CEILING SPEAKER
- YY / BX — AV PENDANT SPEAKER
- XX — CEILING MOUNTED DEVICE, WHERE XX IS AV SYMBOL
- YY / JX — AV CEILING JUNCTION BOX

FLOOR DEVICES

- YY / P XX / AV — FLOOR BOX / POKE THRU, WHERE XX IS AV TYPE, YY IS TELECOM DATA DROPS, P IS ELECTRCAL SERVICE, AV IS AV REQUESTED SERVICES.
- YY / JT — FLOOR JUNCTION BOX

DIVISION OF WORK MATRIX

	DESIGN	CONDUIT/BOXES/CABLE TRAY	WIRING/CABLING	TERMINATING	ACTIVE SYSTEMS/WARRANTY	COMMISSIOING
ELECTRICAL	FULL DESIGN BY DESIGN TEAM	ELECTRICAL CONTRACTOR, THROUGH GENERAL CONTRACTOR	ELECTRICAL CONTRACTOR, THROUGH GENERAL CONTRACTOR	ELECTRICAL CONTRACTOR, THROUGH GENERAL CONTRACTOR	ELECTRICAL CONTRACTOR, THROUGH GENERAL CONTRACTOR	BY COMMISSIONING AGENT
FIRE ALARM	FULL DESIGN BY DESIGN TEAM	ELECTRICAL CONTRACTOR, THROUGH GENERAL CONTRACTOR	FIRE ALARM CONTRACTOR, THROUGH GENERAL CONTRACTOR	FIRE ALARM CONTRACTOR, THROUGH GENERAL CONTRACTOR	FIRE ALARM CONTRACTOR, THROUGH GENERAL CONTRACTOR	BY COMMISSIONING AGENT
TELECOM (T-DRAWINGS)	DESIGN TEAM - CONDUIT/BOXES/CABLING SYSTEM, ACTIVE EQUIPMENT - UNC ITS	ELECTRICAL CONTRACTOR, THROUGH GENERAL CONTRACTOR	GENERAL CONTRACTOR TELECOM CONTRACTOR	GENERAL CONTRACTOR TELECOM CONTRACTOR	UNC ITS	N/A
SECURITY (SC-DRAWINGS)	CONDUIT/BOXES	ELECTRICAL CONTRACTOR, THROUGH GENERAL CONTRACTOR	ELECTRICAL CONTRACTOR, THROUGH GENERAL CONTRACTOR	UNC	UNC	N/A
AUDIO VISUAL (AV-DRAWINGS)	DESIGN TEAM - CONDUIT/BOXES, ACTIVE EQUIPMENT - VENDOR	ELECTRICAL CONTRACTOR, THROUGH GENERAL CONTRACTOR	UNC VENDOR, SEPARATE CONTRACT	UNC VENDOR, SEPARATE CONTRACT	UNC VENDOR, SEPARATE CONTRACT, SAME AS CABLING VENDOR.	N/A
LIGHITNG & LIGHTING CONTROLS	FULL DESIGN BY DESIGN TEAM	ELECTRICAL CONTRACTOR, THROUGH GENERAL CONTRACTOR	ELECTRICAL CONTRACTOR, THROUGH GENERAL CONTRACTOR	ELECTRICAL CONTRACTOR, THROUGH GENERAL CONTRACTOR	ELECTRICAL CONTRACTOR, THROUGH GENERAL CONTRACTOR	BY COMMISSIONING AGENT/ MANUFACTURER

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SEAL 044143 ENGINEER RICHARD O. DOZIER III
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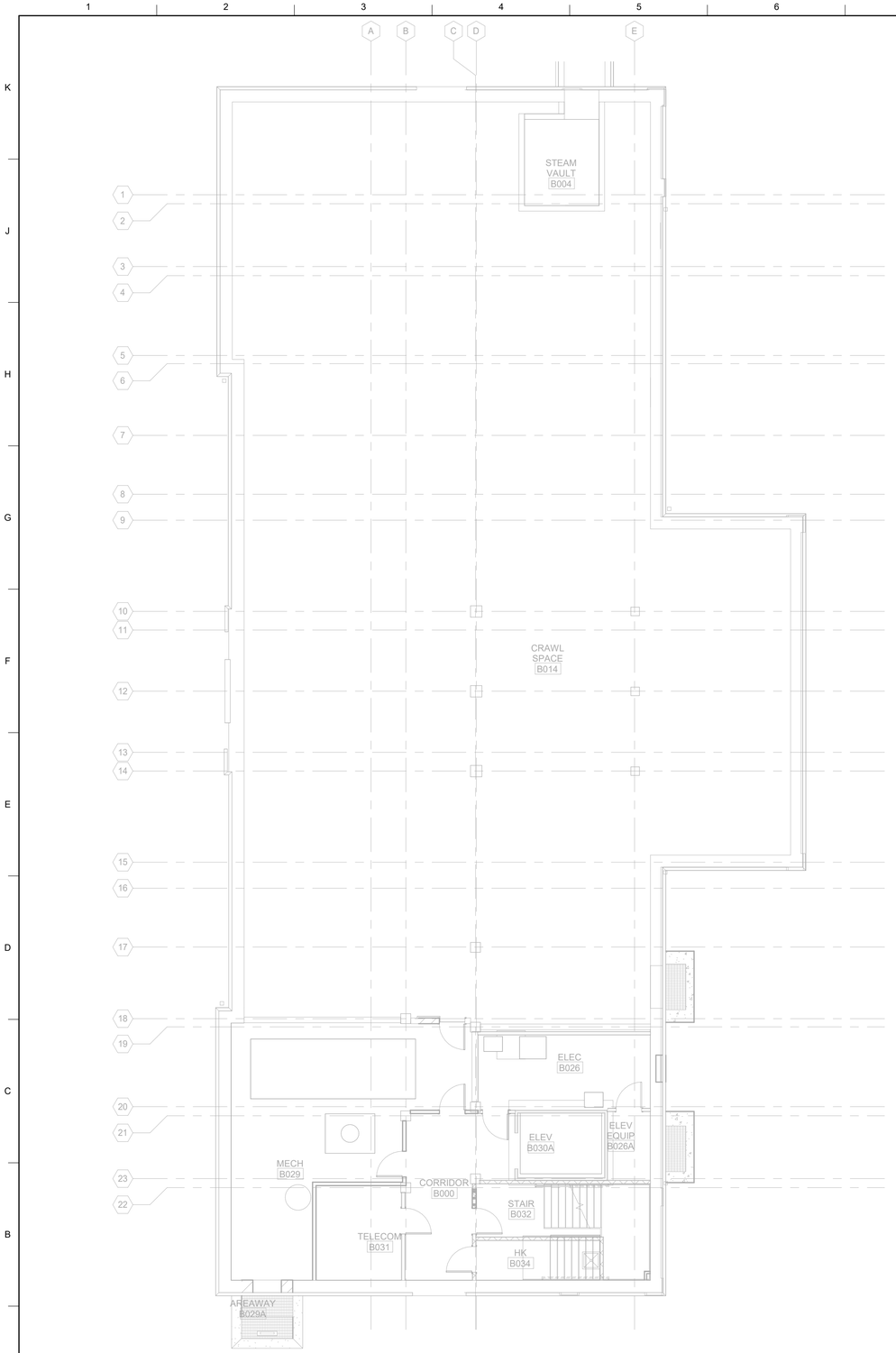
SHEET TITLE: AUDIO VISUAL - GENERAL NOTES AND LEGENDS
SCALE (U.N.O.):

JOB NAME: University of North Carolina - Chapel Hill
SCD#: 21-235482-02A
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

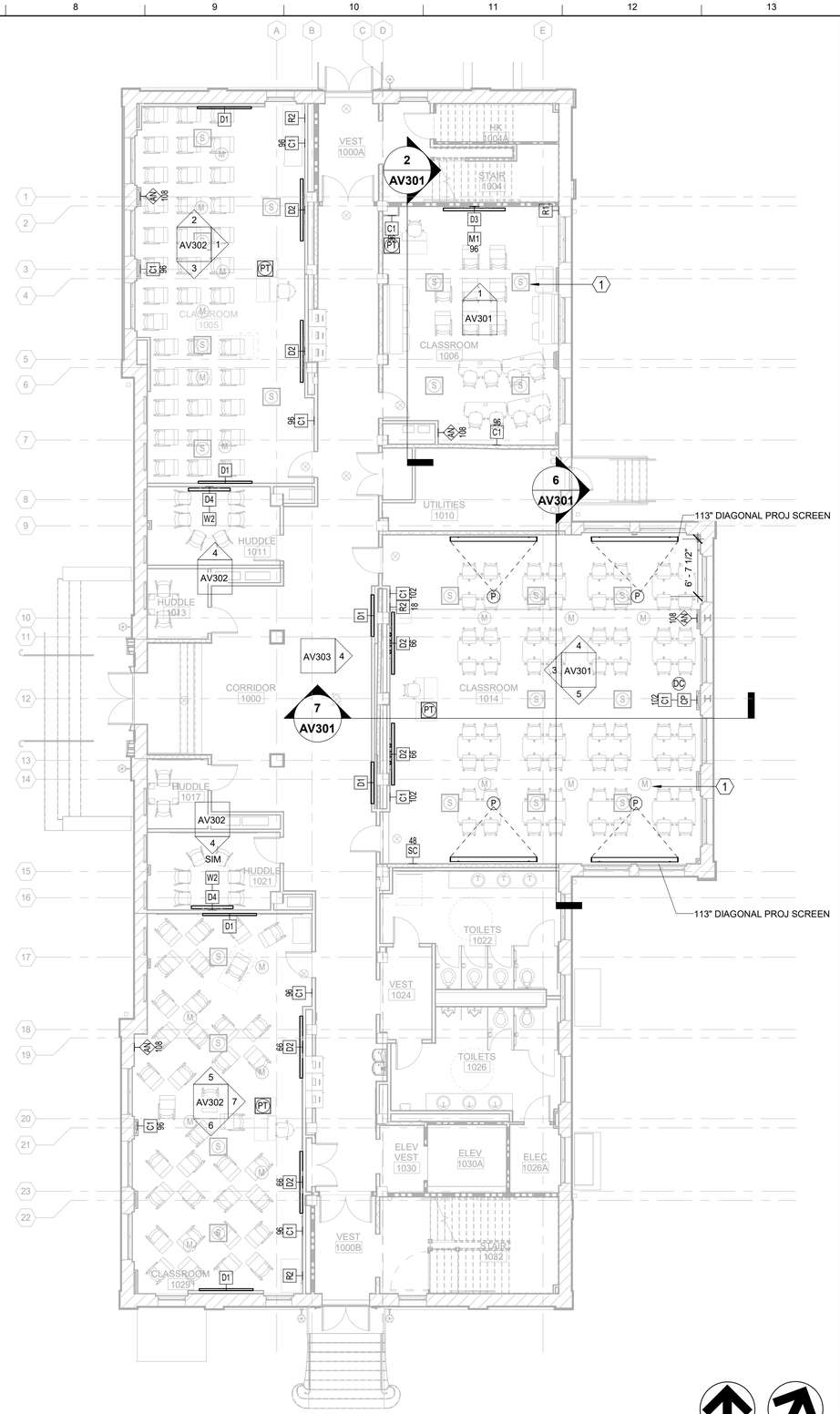
ISSUE DATE: 1/8/2024
OB. NO.: 11706-00
DWG. NO.: AV001



NOTE: NO AV SCOPE IN BASEMENT

1 AUDIO VISUAL BASEMENT FLOOR PLAN

0 8 16 FT



2 AUDIO VISUAL FIRST FLOOR PLAN

0 8 16 FT

PROJECT NORTH TRUE NORTH

GENERAL NOTES

1. REFER TO ARCHITECT ELEVATION FOR FINAL DISPLAY / PROJECTION SCREEN LOCATION.
2. REFER TO DISPLAY BLOCKING INFORMATION ON AV500 DETAIL 3 FOR MORE INFORMATION.

SHEET SPECIFIC NOTES

1. TYPICAL CEILING SPEAKERS, SHOWN FOR REFERENCE ONLY. PROVIDED AND INSTALLED BY AV CONTRACTOR.
2. TYPICAL CEILING BOUNDARY MICROPHONE, SHOWN FOR REFERENCE ONLY. PROVIDED AND INSTALLED BY AV CONTRACTOR.

LIFE SAFETY LEGEND

- SMOKE PARTITION
- 1-HOUR RATED WALL
- 2-HOUR RATED WALL
- 3-HOUR RATED WALL

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SHEET TITLE: AUDIO VISUAL BASEMENT & FIRST FLOOR PLANS

SCALE (U.N.O.): 1/8" = 1'-0"

0 8 16 FT

JOB NAME: University of North Carolina - Chapel Hill
SCI#: 21-25548-02A
BINGHAM HALL RENOVATION
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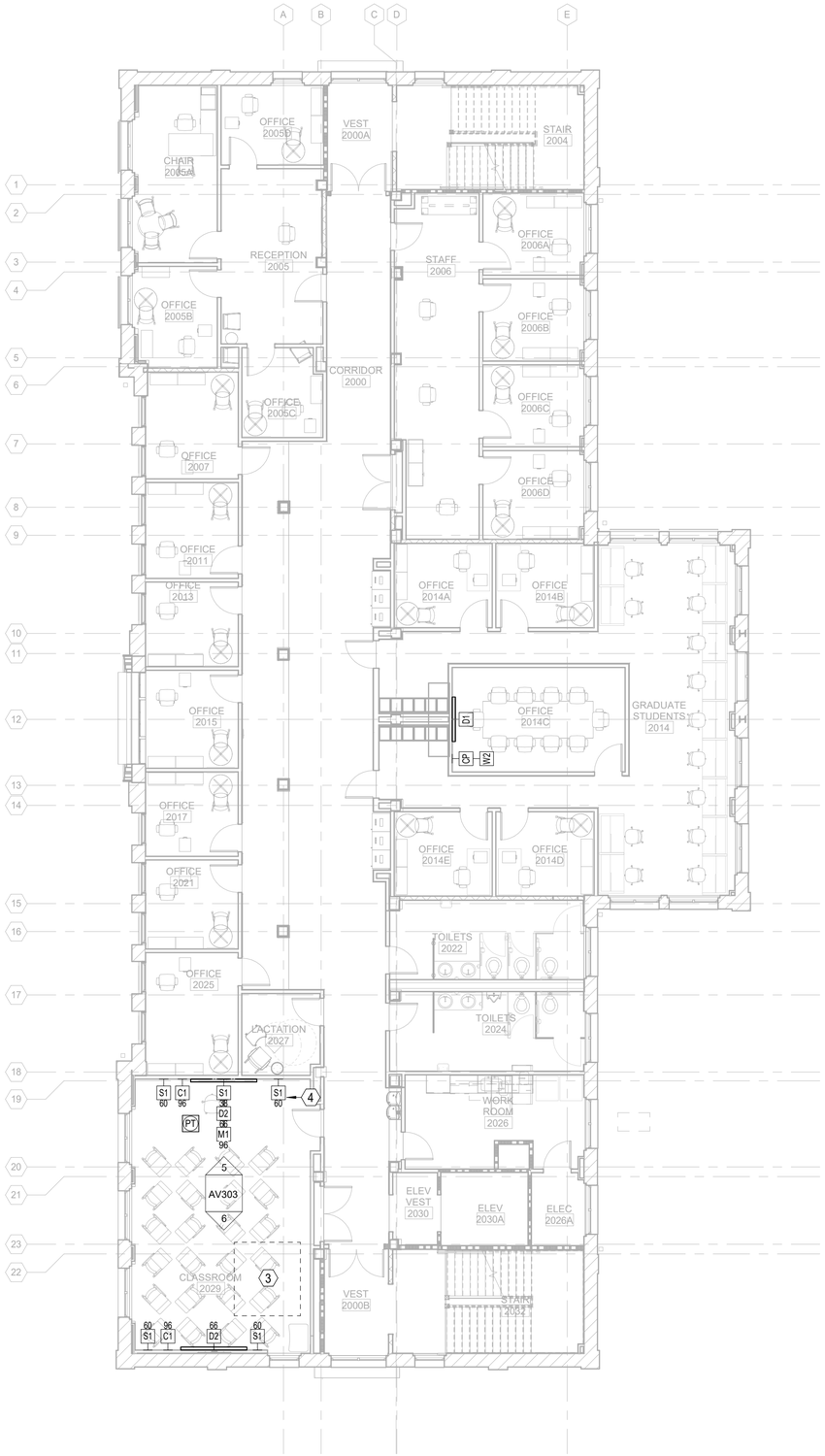
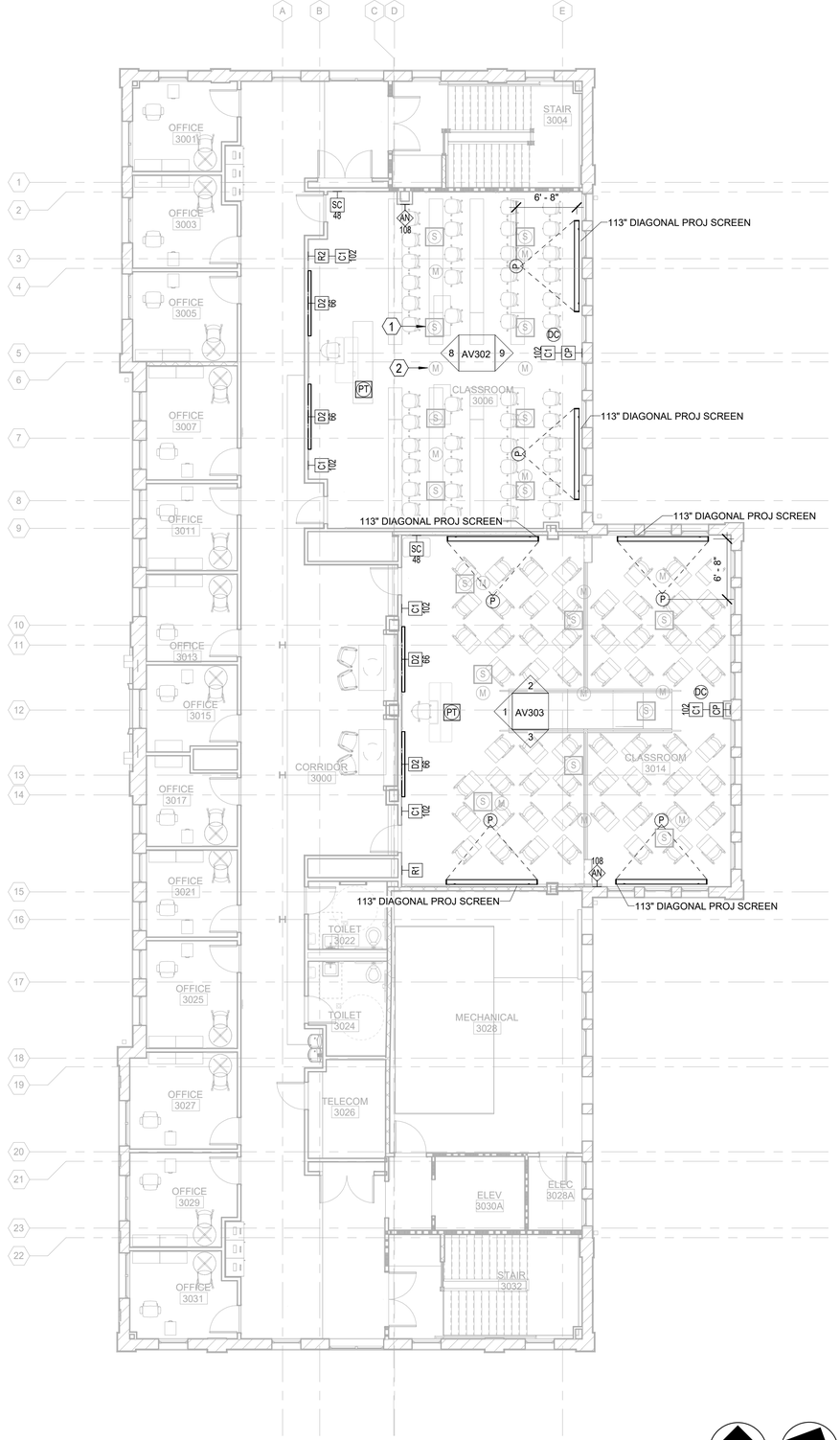
ISSUE DATE: 1/8/2024
OB. NO.: 11706-00
DWG. NO.: AV101



1 AUDIO VISUAL SECOND FLOOR PLAN

0 8 16 FT



2 AUDIO VISUAL THIRD FLOOR PLAN

0 8 16 FT

PROJECT NORTH TRUE NORTH

GENERAL NOTES

1. REFER TO ARCHITECT ELEVATION FOR FINAL DISPLAY / PROJECTION SCREEN LOCATION.
2. REFER TO DISPLAY BLOCKING INFORMATION ON AV500 DETAIL 3 FOR MORE INFORMATION.

SHEET SPECIFIC NOTES

1. TYPICAL CEILING SPEAKERS, SHOWN FOR REFERENCE ONLY. PROVIDED AND INSTALLED BY AV CONTRACTOR.
2. TYPICAL CEILING BOUNDARY MICROPHONE, SHOWN FOR REFERENCE ONLY. PROVIDED AND INSTALLED BY AV CONTRACTOR.
3. LOCATION IDENTIFIED FOR PLACING SOUNDFIELD IN-CEILING SUBWOOFER EXTRON #SF 10C SUB OR EQUIVALENT ABOVE CEILING. TYPICAL SUB WOOFER DIMENSIONS IS 15.83" H x 14.23" W x 39.36" L. MOUNTED USING UNISTRUT AND AIRCRAFT CABLES. AV CONTRACTOR TO FURTHER COORDINATE WITH ARCHITECT AND PROVIDE CEILING GRILL ASSEMBLY KIT. SEE DETAIL 3 ON AV501.
4. GC/EC TO COORDINATE FINAL SURROUND SOUND SPEAKER LOCATION WITH UNC AV TEAM BEFORE FINALIZING THE S1 BACKBOXES, TOTAL OF 5 SURROUND SOUND SPEAKERS SHOWN.

LIFE SAFETY LEGEND

- SMOKE PARTITION
- 1-HOUR RATED WALL
- 2-HOUR RATED WALL
- 3-HOUR RATED WALL

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SHEET TITLE: AUDIO VISUAL SECOND & THIRD FLOOR PLANS

SCALE (U.N.O.): 1/8" = 1'-0"

0 8 16 FT

JOB NAME: University of North Carolina - Chapel Hill
SCI#: 21-235492A

LOCATION: BINGHAM HALL RENOVATION
36 Lenoir Drive, Chapel Hill, NC 27514

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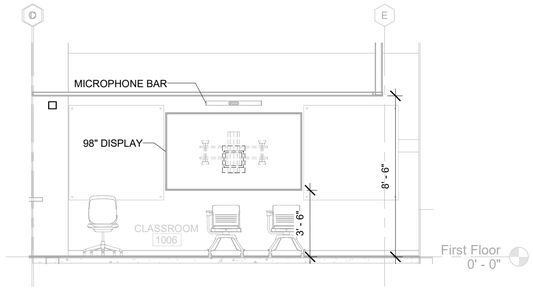
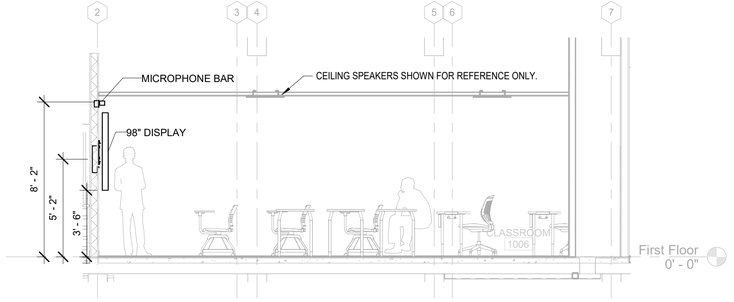
ISSUE. DATE: 1/8/2024

OB. NO.: 11706-00

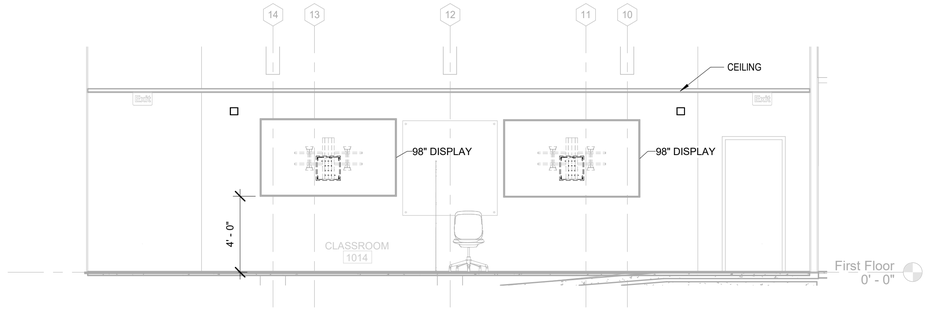
DWG. NO.: AV102



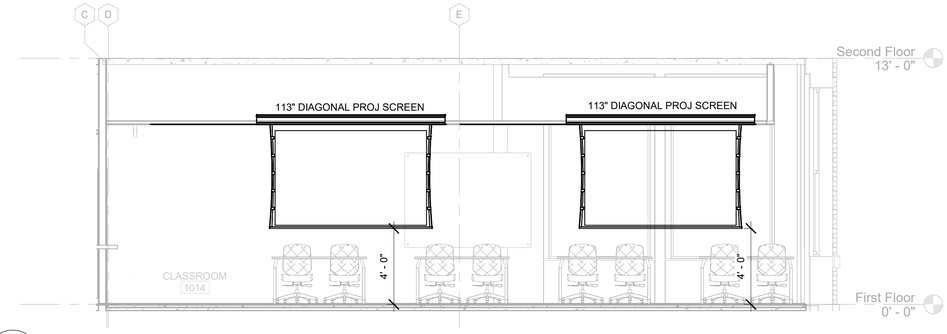
1 AV CLASSROOM 1006 FRONT WALL ELEVATION DETAILS
1/4" = 1'-0"



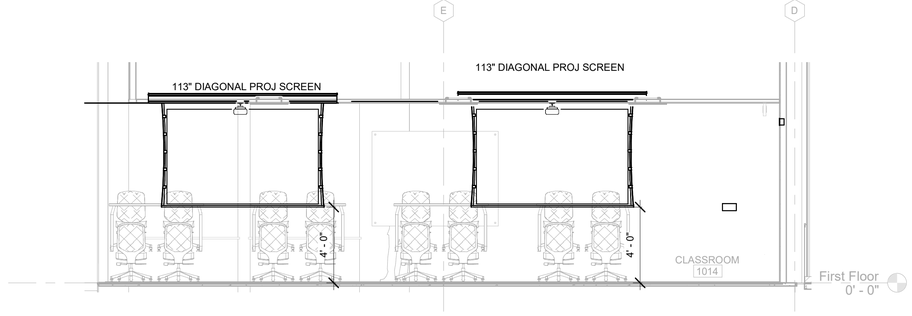
2 AV CLASSROOM 1006 SECTION ELEVATION DETAILS
1/4" = 1'-0"



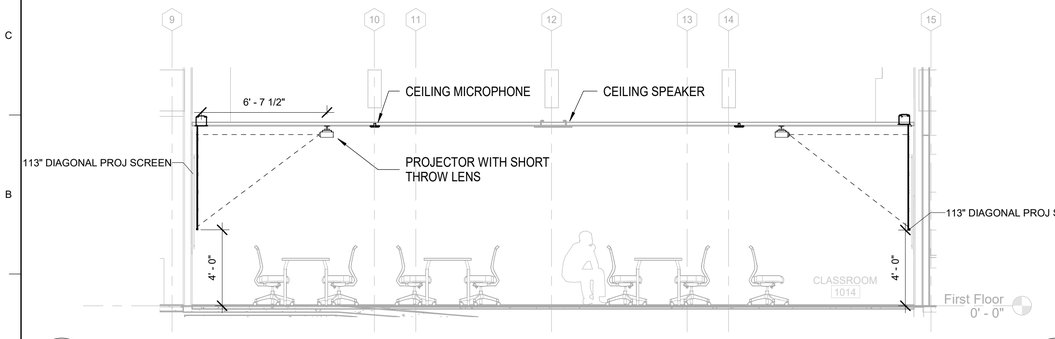
3 AV CLASSROOM 1014 FRONT WALL ELEVATION DETAILS
1/4" = 1'-0"



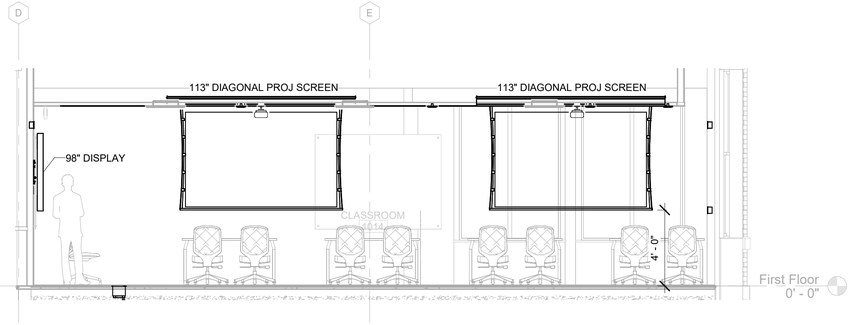
4 AV CLASSROOM 1014 NORTH WALL ELEVATION DETAILS
1/4" = 1'-0"



5 AV CLASSROOM 1014 SOUTH WALL ELEVATION DETAILS
1/4" = 1'-0"



6 AV CLASSROOM 1014 SIDE WALL SECTION ELEVATION DETAILS
1/4" = 1'-0"



7 AV CLASSROOM 1014 FRONT WALL SECTION ELEVATION DETAILS
1/4" = 1'-0"

GENERAL NOTES

SHEET SPECIFIC NOTES

LORD AECK SARGENT

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SHEET TITLE
AUDIO VISUAL ELEVATION DETAILS

SCALE (U.N.O.)
1/4" = 1'-0"

0 4 8FT

JOB NAME
University of North Carolina - Chapel Hill

SCD#: 21-235482-02A

BINGHAM HALL RENOVATION

LOCATION
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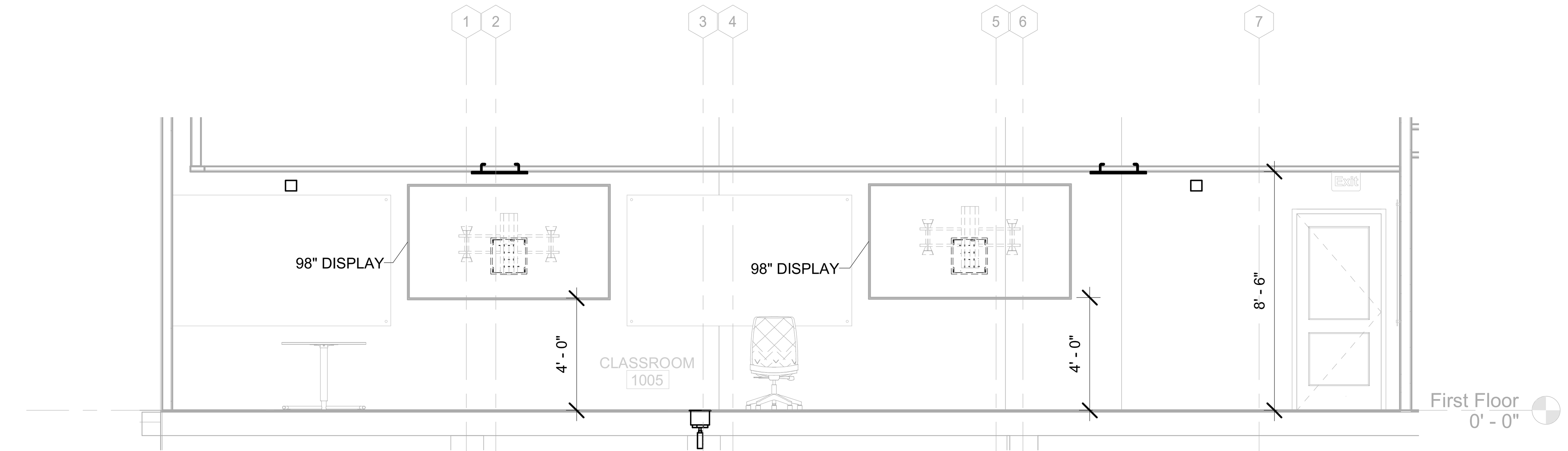
using a Digital Signature.

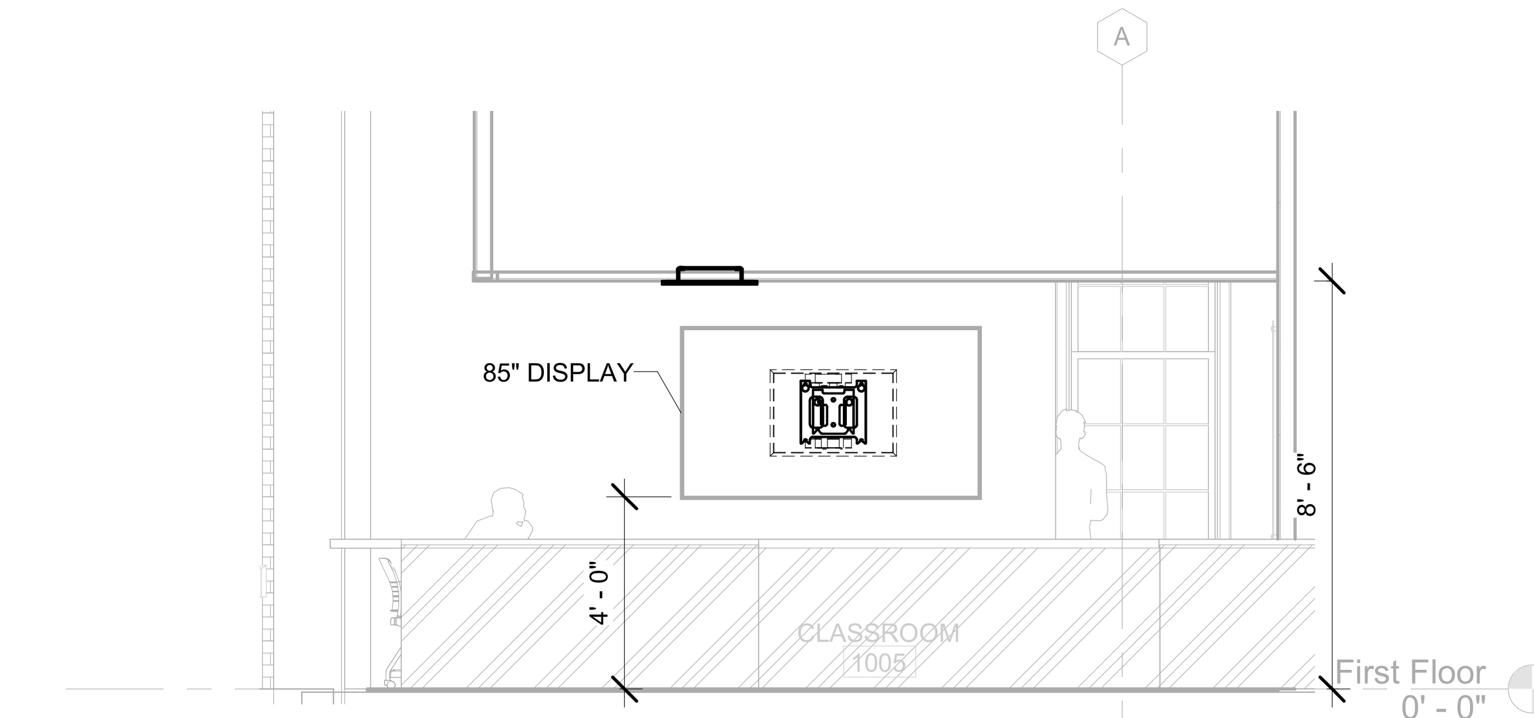
ISSUE DATE
1/8/2024

JOB. NO.
11706-00

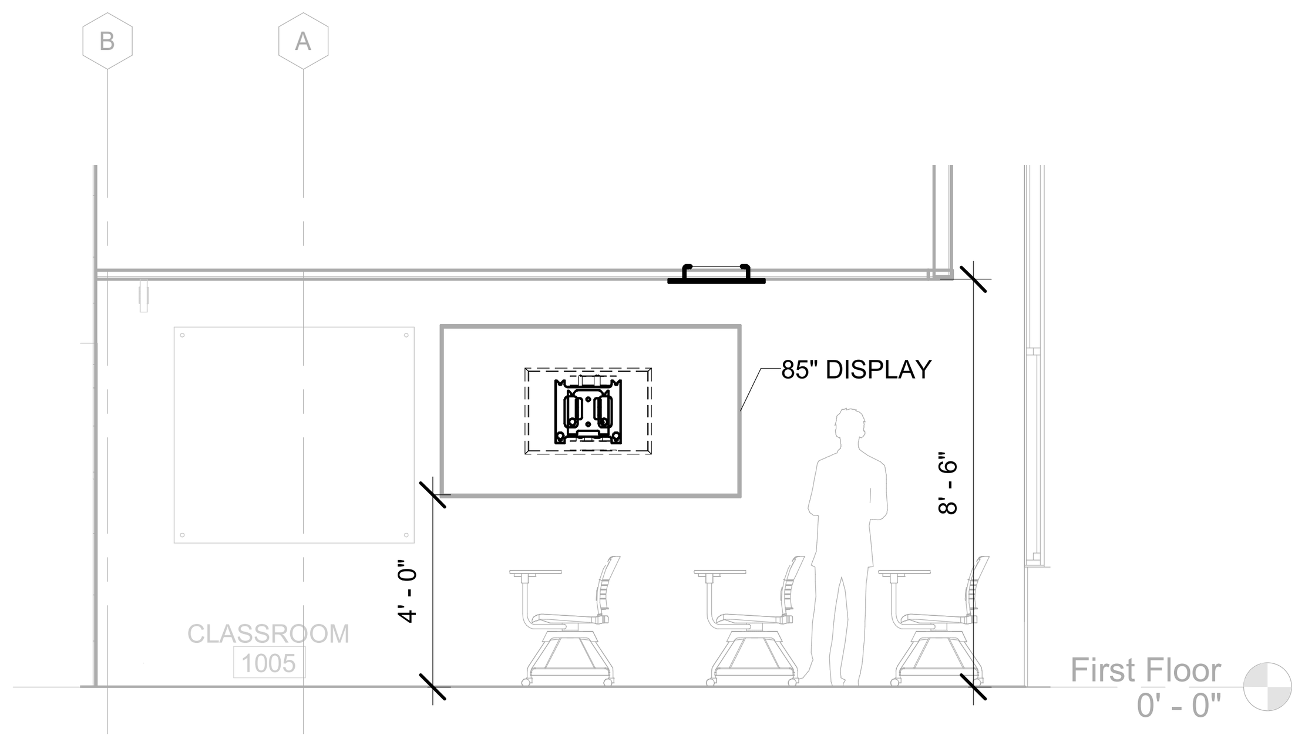
DWG. NO.
AV301



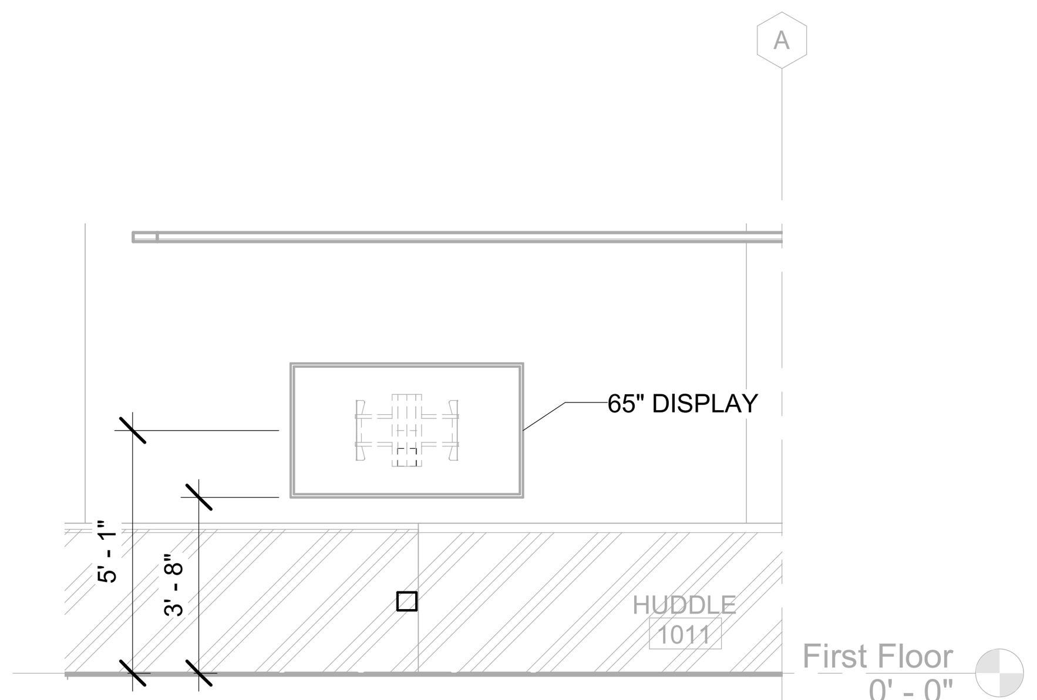
1 AV CLASSROOM 1005 FRONT WALL ELEVATION DETAILS
1/4" = 1'-0"



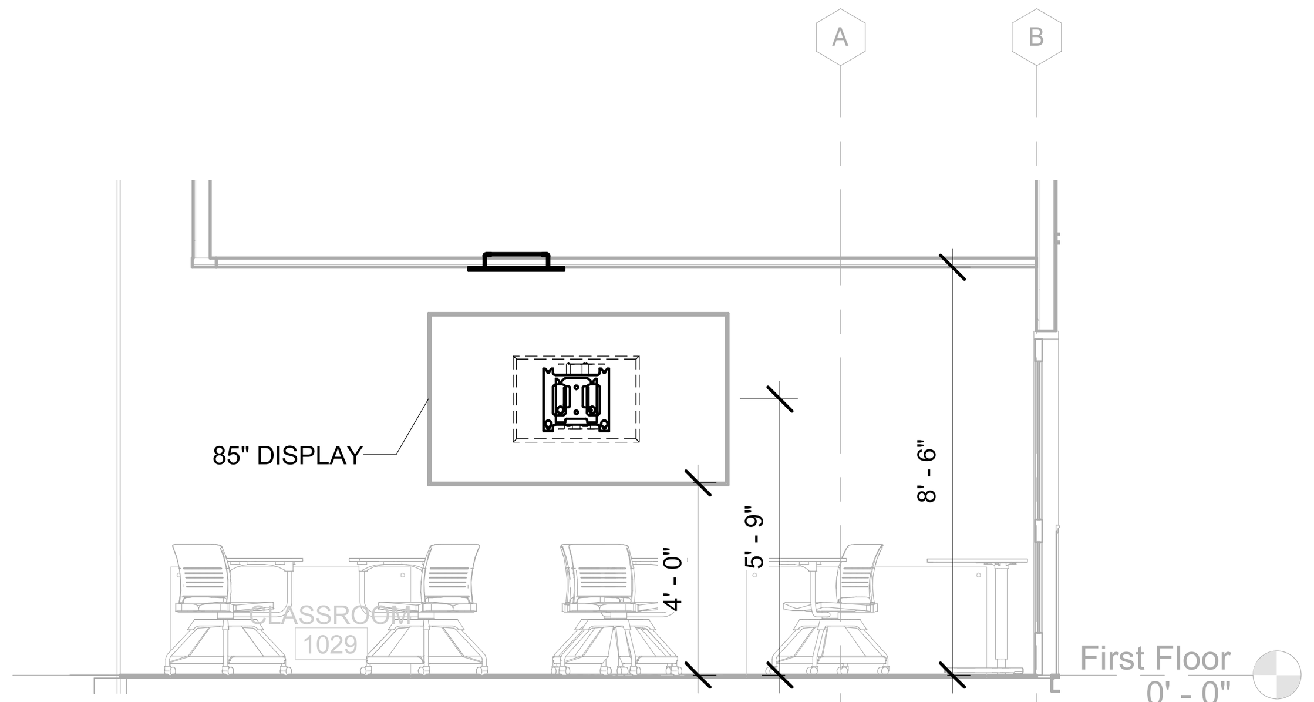
2 AV CLASSROOM 1005 NORTH WALL ELEVATION DETAILS
1/4" = 1'-0"



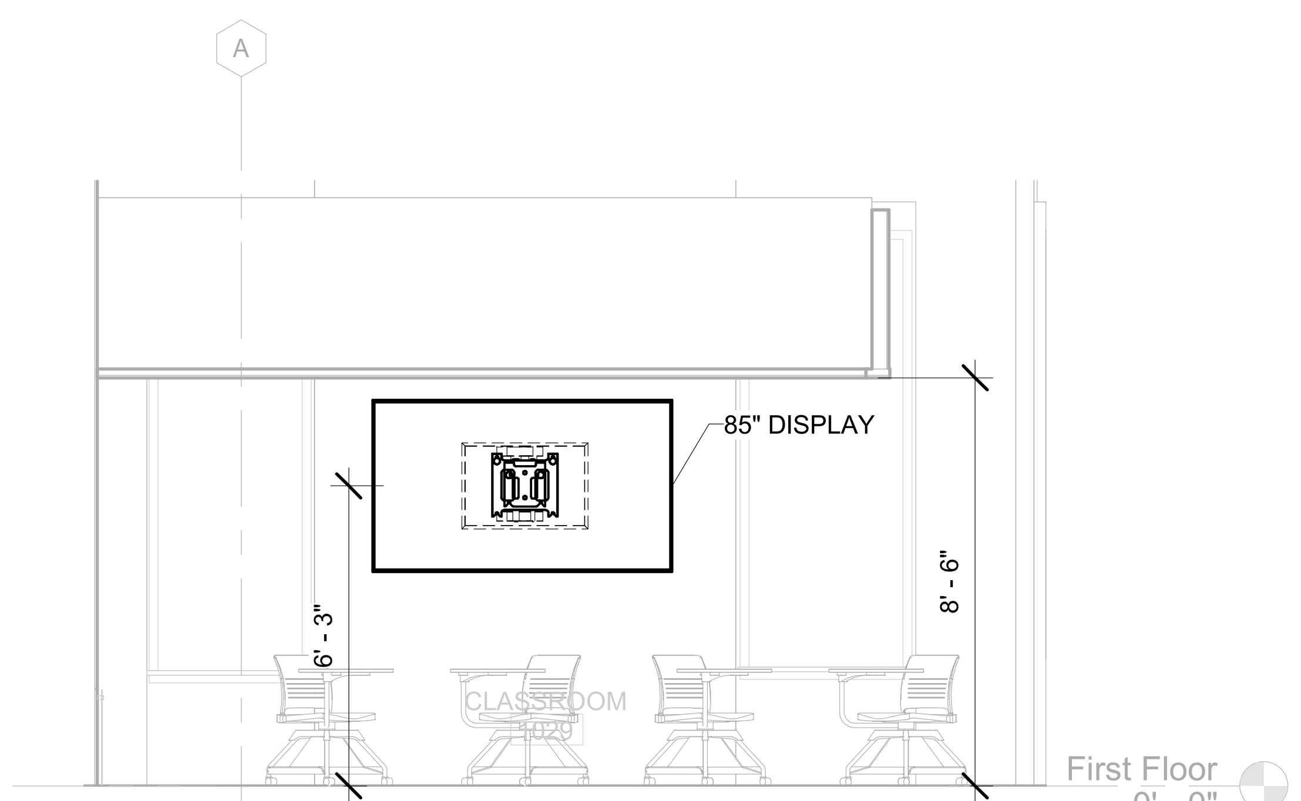
3 AV CLASSROOM 1005 SOUTH WALL ELEVATION DETAILS
1/4" = 1'-0"



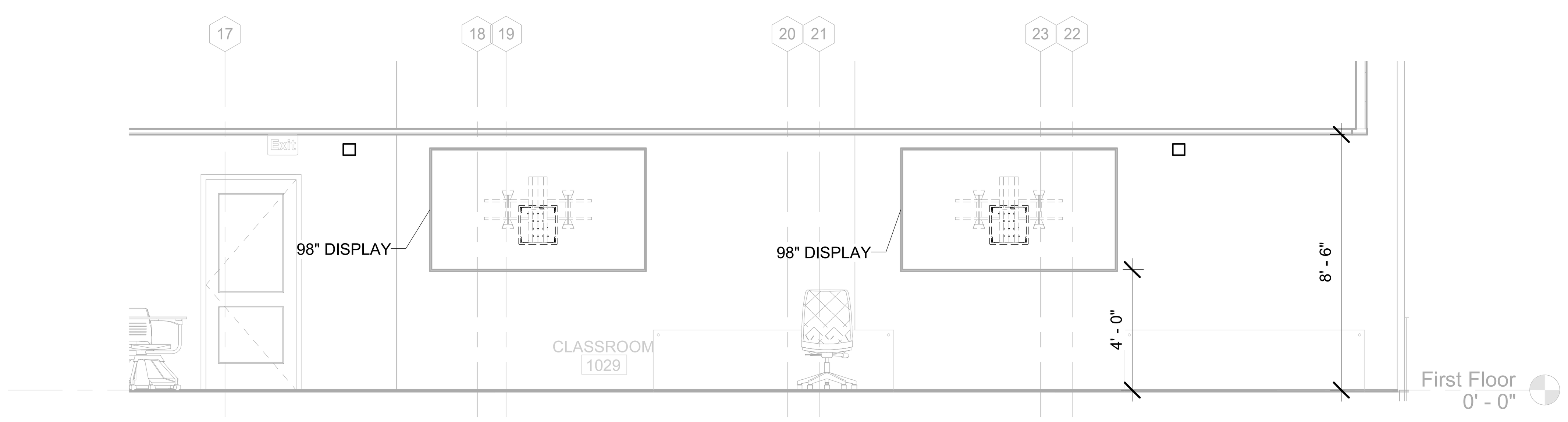
4 AV TYPICAL HUDDLE SPACE
1/4" = 1'-0"



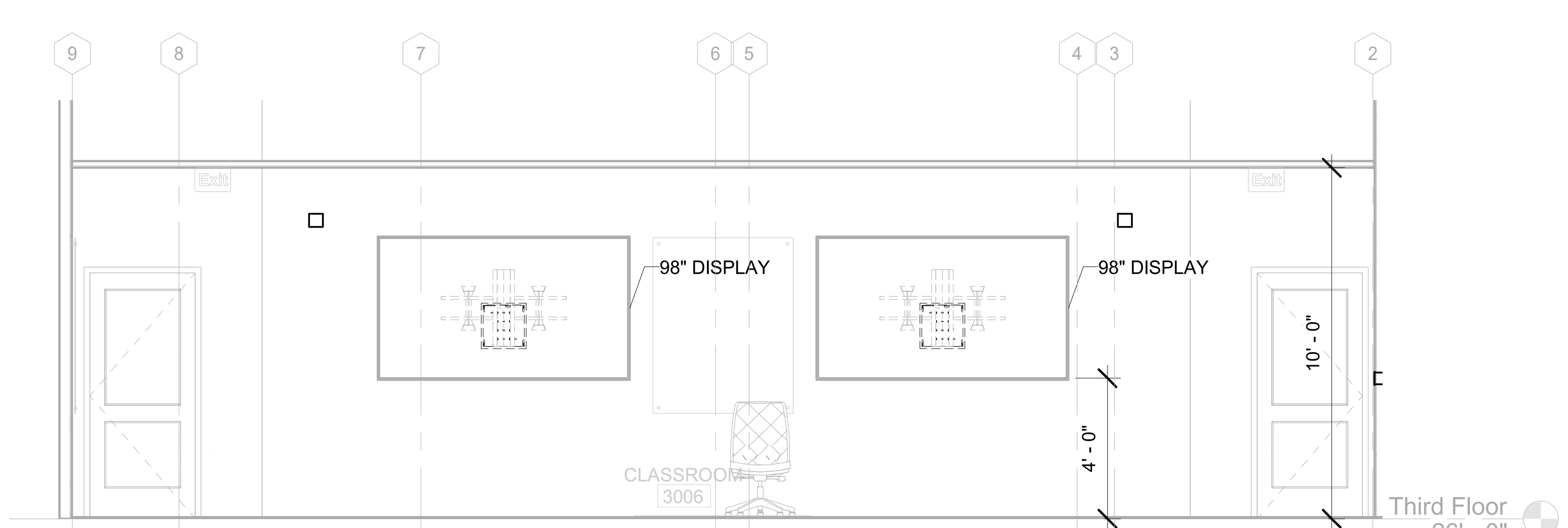
5 AV CLASSROOM 1029 NORTH SIDE WALL ELEVATION DETAILS
1/4" = 1'-0"



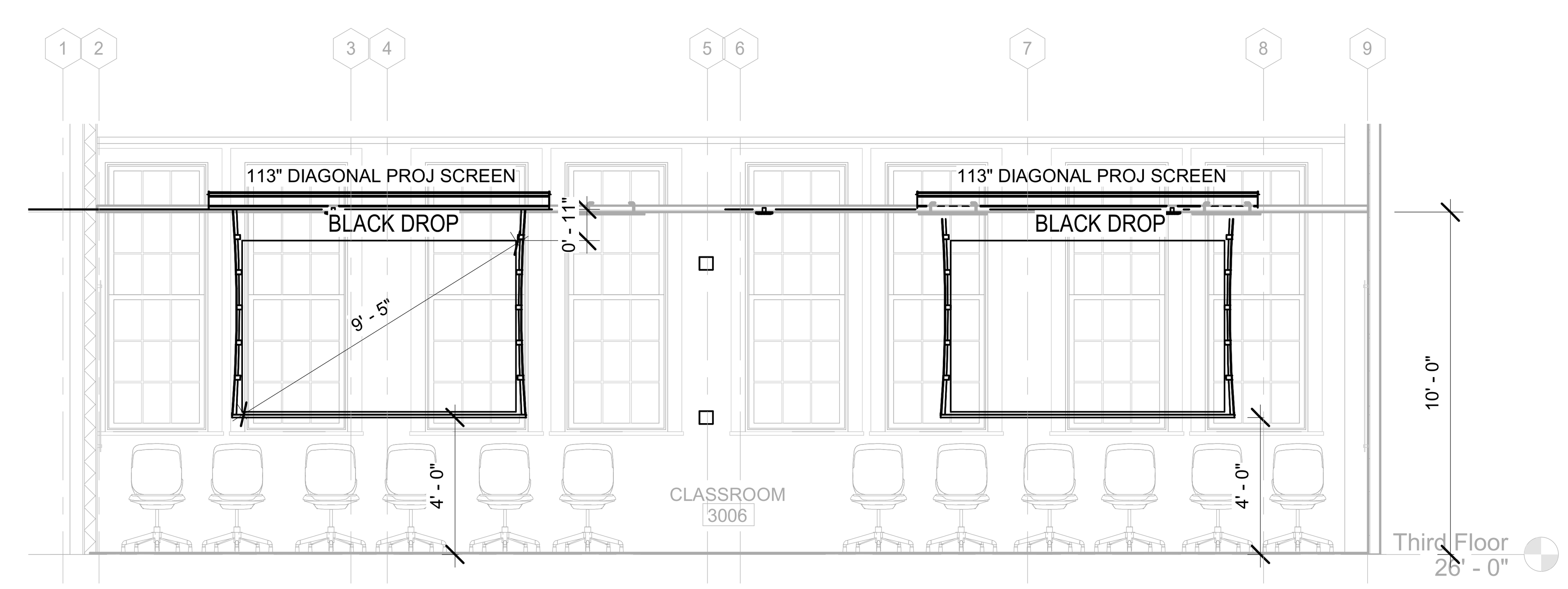
6 AV CLASSROOM 1029 SOUTH SIDE WALL ELEVATION DETAILS
1/4" = 1'-0"



7 AV CLASSROOM 1029 MAIN DISPLAY WALL ELEVATION DETAILS
1/4" = 1'-0"



8 AV CLASSROOM 3006 FRONT WALL ELEVATION DETAILS
1/4" = 1'-0"



9 AV CLASSROOM 3006 BACK WALL ELEVATION DETAILS
1/4" = 1'-0"

GENERAL NOTES

SHEET SPECIFIC NOTES

LORD AECK SARGENT

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Newcomb & Boyd, LLP
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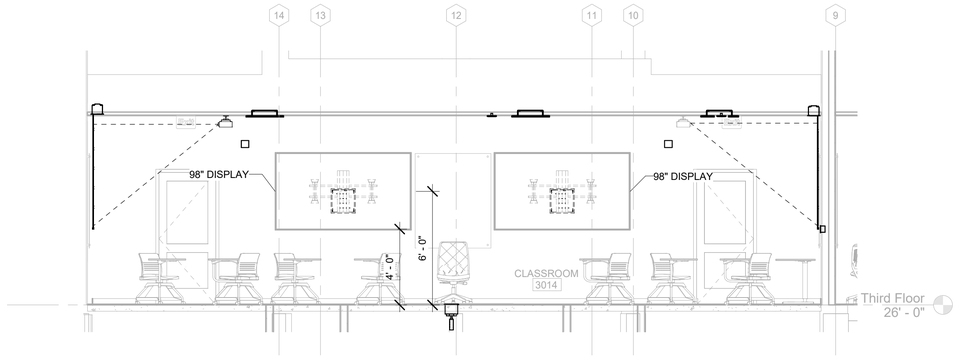
SHEET TITLE
AUDIO VISUAL ELEVATION DETAILS

SCALE (U.N.O.)
1/4" = 1'-0"

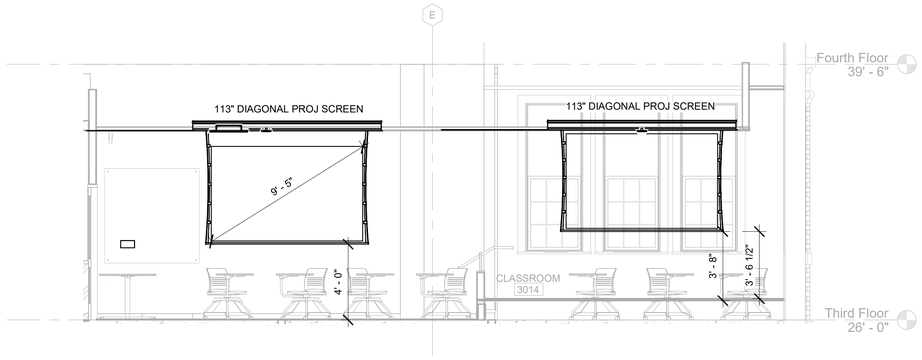
JOB NAME
University of North Carolina - Chapel Hill
SCO# 21-23548-02A
BINGHAM HALL RENOVATION
LOCATION
36 Lenoir Drive, Chapel Hill, NC 27514

SEAL
DocuSigned by: Richard Dozier
SEAL 044143 ENGINEER RICHARD O. DOZIER, III
Signed on 01/03/2024 using a Digital Signature.

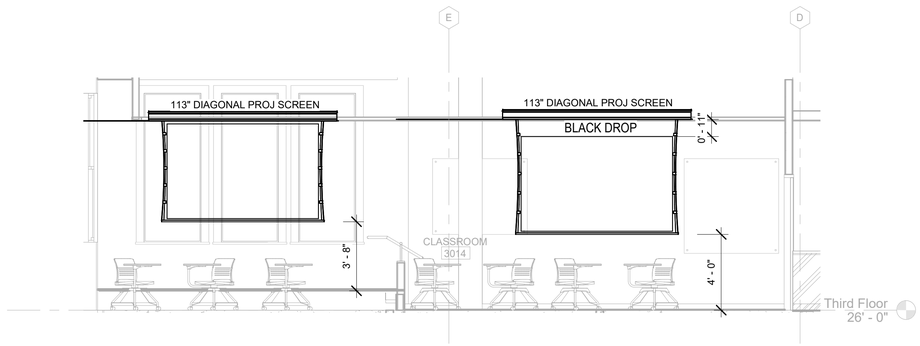
ISSUE DATE
1/8/2024
JOB NO.
11706-00
DWG. NO.
AV302



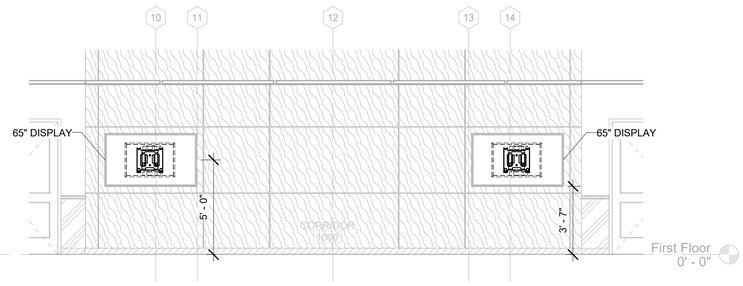
1 AV CLASSROOM 2014 FRONT WALL ELEVATION DETAILS
1/4" = 1'-0"



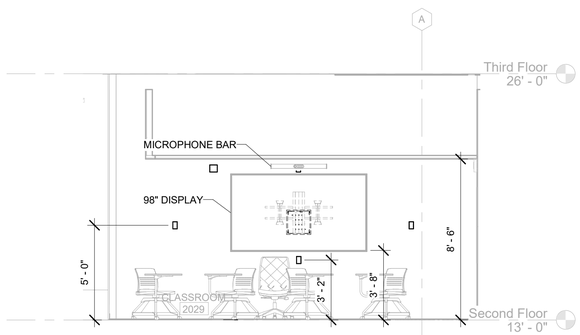
2 AV CLASSROOM 2014 NORTH WALL ELEVATION DETAILS
1/4" = 1'-0"



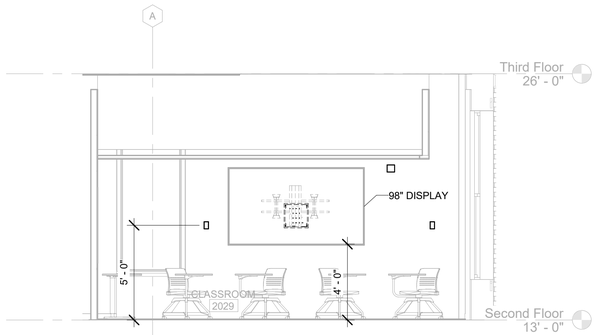
3 AV CLASSROOM 2014 SOUTH WALL ELEVATION DETAILS
1/4" = 1'-0"



4 AV CORRIDOR 1000 DISPLAY ELEVATION DETAILS
1/4" = 1'-0"



5 AV CLASSROOM 2029 NORTH WALL ELEVATION DETAIL
1/4" = 1'-0"



6 AV CLASSROOM 2029 SOUTH WALL ELEVATION DETAIL
1/4" = 1'-0"

GENERAL NOTES

SHEET SPECIFIC NOTES

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SHEET TITLE: AUDIO VISUAL ELEVATION DETAILS

SCALE (U.N.O.): 1/4" = 1'-0"

0 4 8FT

JOB NAME: University of North Carolina - Chapel Hill
SCI#: 21-2584-60A
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

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044143
ENGINEER
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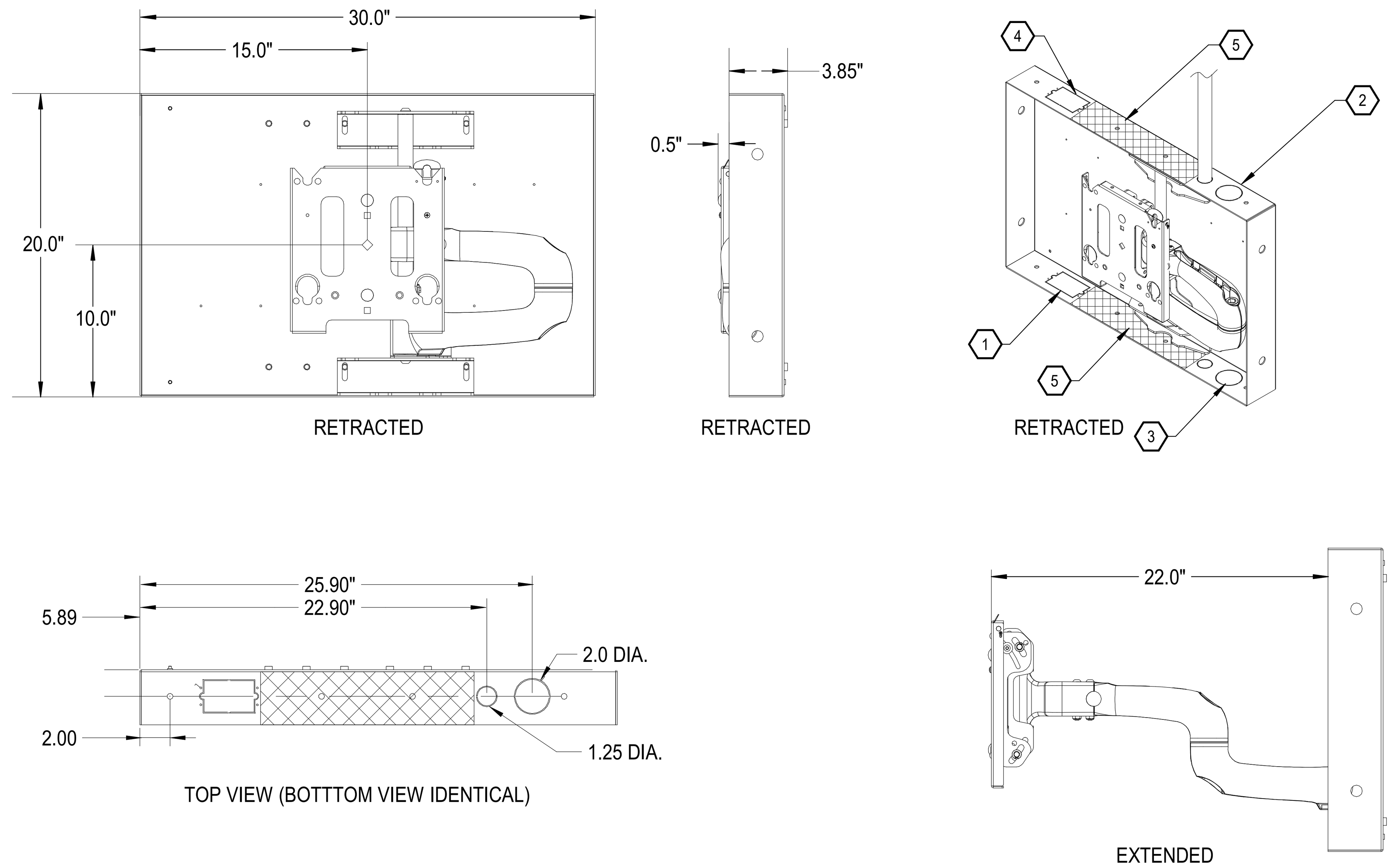
using a Digital Signature.

ISSUE DATE: 1/8/2024

OB. NO.: 11706-00

DWG. NO.: AV303



GENERAL NOTES (THIS DETAIL ONLY)

1. BASIS OF DESIGN IS THE CHIEF MANUFACTURING PAC501B (IN-WALLBACK BOX).
2. ARM ASSEMBLY BOD IS CHIEF PNRIW OR PWRIW SERIES AND IS PROVIDED BY THE AV INSTALLATION CONTRACTOR.
3. INSTALL PAC501B PER MANUFACTURER'S INSTRUCTIONS, INCLUDING WOOD FRAMING AND STRUCTURAL SUPPORT AROUND PAC501B.
4. MAINTAIN ANY ACOUSTICAL, FIRE, OR OTHER RATINGS APPLIED TO THE WALL IN WHICH PAC501B WILL BE INSTALLED. REFERENCE ARCHITECTURAL DETAILS FOR ADDITIONAL REQUIREMENTS.
5. INSTALL AND PROVIDE PROPER SUPPORT TO THE PAC501B PER MANUFACTURER'S INSTRUCTIONS.
6. CUT PENETRATIONS IN HORIZONTAL BLOCKING/FRAMING TO ALLOW CONDUIT AND ELECTRICAL BOX INSTALLATION PER MANUFACTUER'S INSTRUCTIONS.
7. PROVIDE TRIM KIT FOR PAC501B.
8. COMPLETE DISPLAY ASSEMBLY SHALL SUPPORT 200 LBS, MINIMUM.

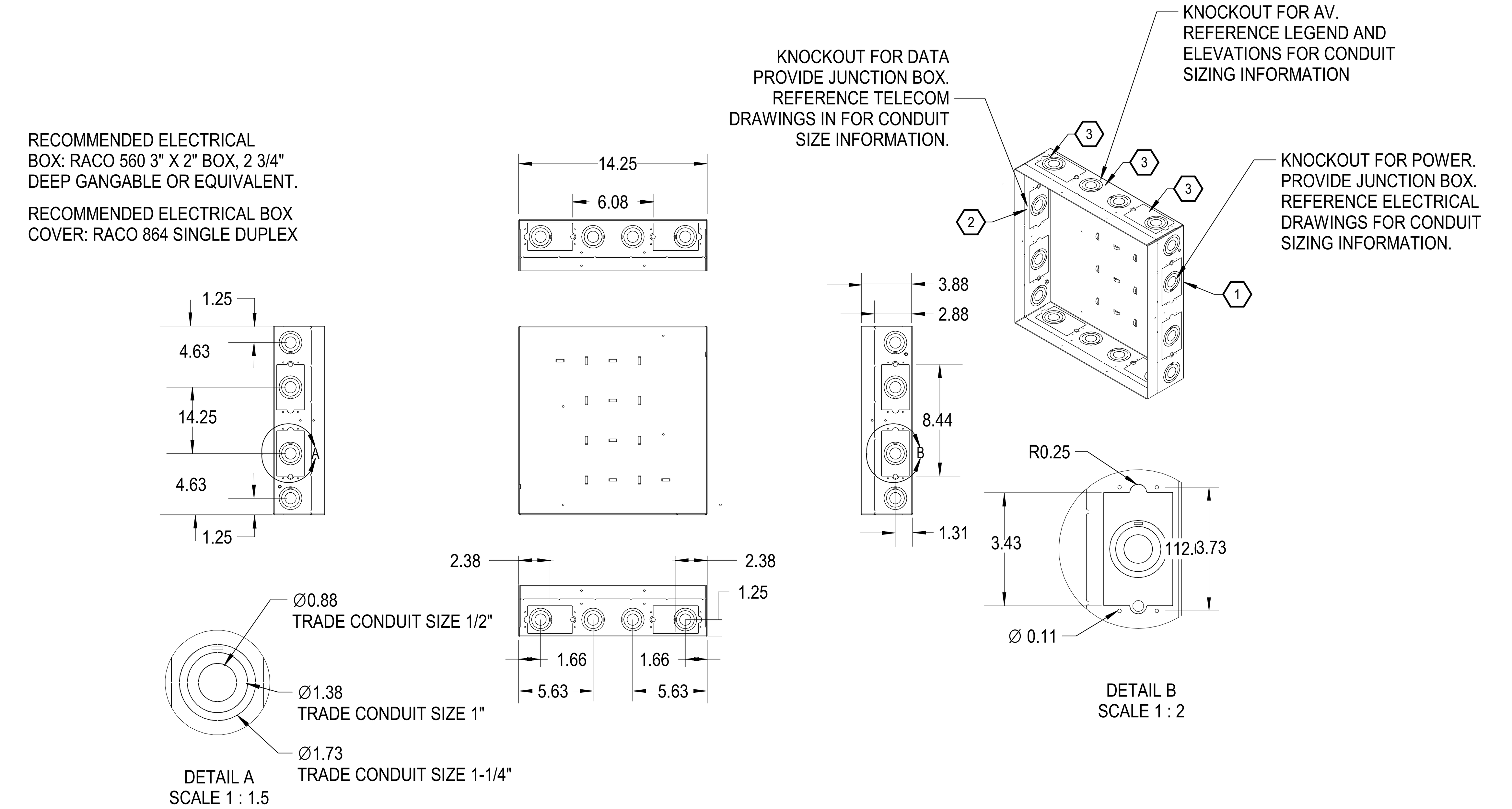
KEYED NOTES THIS DETAIL ONLY)

1. 1-GANG KNOCKOUT FOR POWER. INSTALL BOX DUPLEX, CIRCUIT, AND COVER PLATE IN DISPLAY MOUNT. ELECTRICAL BOX BOD RACO 590, STEEL CITY CY-1/2 OR SIMILAR.
2. 1.25" KNOCKOUTS FOR AV. ROUTE CONDUIT TO ABOVE ACCESSIBLE CEILING.
3. 2.0" KNOCKOUTS FOR AV CONDUITS. ROUTE TO NEAREST CABLE TRAY.
4. 1-GANG KNOCKOUT FOR DATA CABLES INSTALL BOX AND COVER PLATE IN DISPLAY MOUNT. COORDINATE DATA DROP TERMINATION WITHITN THE BOX WITH TELECOM /STRUCTURED CABLING CONTRACTOR.
5. DO NOT DRILL ADDITIONAL KNOCKOUTS IN HATCHED AREA ON TOP OR BOTTOM TO PREVENT CABLE ENTRY CONFLICT WITH MOUNT ASSEMBLY.

PROVIDE 0.75" PLYWOOD BLOCKING BETWEEN STUDS, FRAME IN PAC501B WITH DRYWALL, INCLUDING A LAYER ON THE BACK OF THE BOX. PUTTY ALL OPENINGS IN THE FRAMING WHERE CONDUIT CONNECTS TO THE BOX. PROVIDE 3.0" BATT INSULATION AROUND BOX. FURTHER COORDINATE WITH ARCHITECT.

1 AV FLAT PANEL DISPLAY PAC501 MOUNT DETAIL (TYPE 1)

NO SCALE



GENERAL NOTES (THIS DETAIL ONLY)

1. BASIS OF DESIGN IS THE CHIEF MANUFACTURING PAC526F (IN-WALL BACK BOX).
2. CENTER PAC526F AT HEIGHT INDICATED ON ELEVATIONS AND FLOOR PLANS.
3. INSTALL PAC526F PER MANUFACTURER'S INSTRUCTIONS.
4. PROVIDE PLYWOOD FRAMING AROUND PAC526F PER MANUFACTURER'S INSTRUCTIONS.
5. PROVIDE TRIM KIT FOR PAC526F.
6. COMPLETE DISPLAY ASSEMBLY SHALL SUPPORT 150 LBS, MINIMUM.
7. REFERENCE ARCHITECTURAL DETAILS FOR SOUND ISOLATION REQUIREMENTS.

NOTE: FOLLOW MANUFACTURE'S INSTALLATION INSTRUCTIONS.

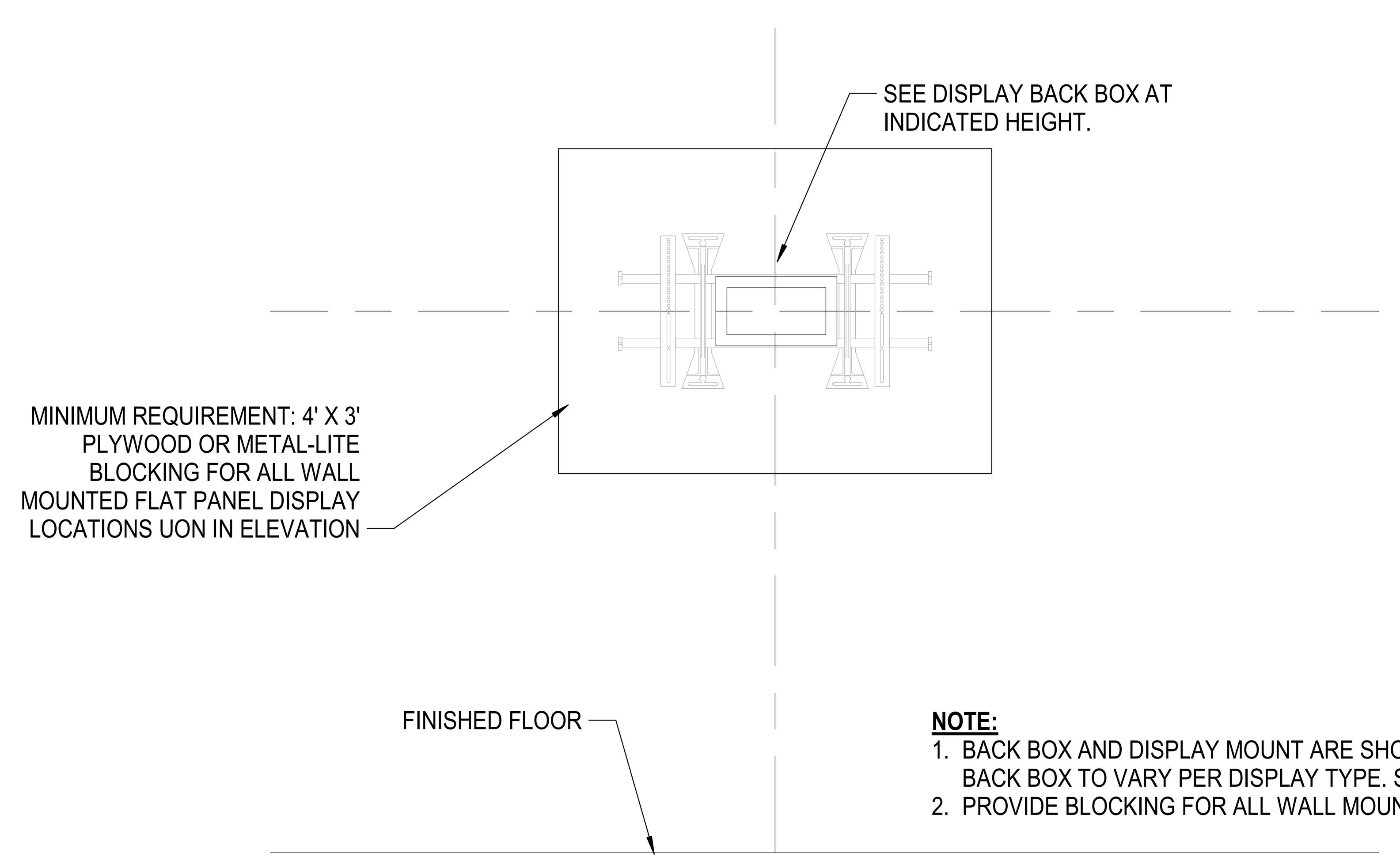
KEYED NOTES THIS DETAIL ONLY)

1. 0.75" CONDUIT TERMINATED TO JUNCTION BOX FOR POWER. INSTALL DUPLEX CIRCUIT, AND COVER PLATE IN DISPLAY MOUNT. ELECTRICAL BOX BOD RACO 590, STEEL CITY CY-1/2 OR SIMILAR.
2. 1-GANG KNOCKOUT FOR DATA CABLES, INSTALL BOX AND COVER PLATE IN DISPLAY MOUNT. COORDINATE DATA DROP & TERMINATION WITHITN THE BOX WITH TELECOM /STRUCTURED CABLING CONTRACTOR.
3. KNOCKOUTS FOR AV. ROUTE CONDUIT TO ABOVE ACCESSIBLE CEILING AND ONE TO THE NEAREST CABLE TRAY LEADING TO IDF CLOSET.

PROVIDE 0.75" PLYWOOD BLOCKING BETWEEN STUDS, FRAME IN PAC526 WITH DRYWALL, INCLUDING A LAYER ON THE BACK OF THE BOX. PUTTY ALL OPENINGS IN THE FRAMING WHERE CONDUIT CONNECTS TO THE BOX. PROVIDE 3.0" BATT INSULATION AROUND BOX. FURTHER COORDINATE WITH ARCHITECT.

2 AV FLAT PANEL DISPLAY PAC526 MOUNT DETAIL (TYPE 2)

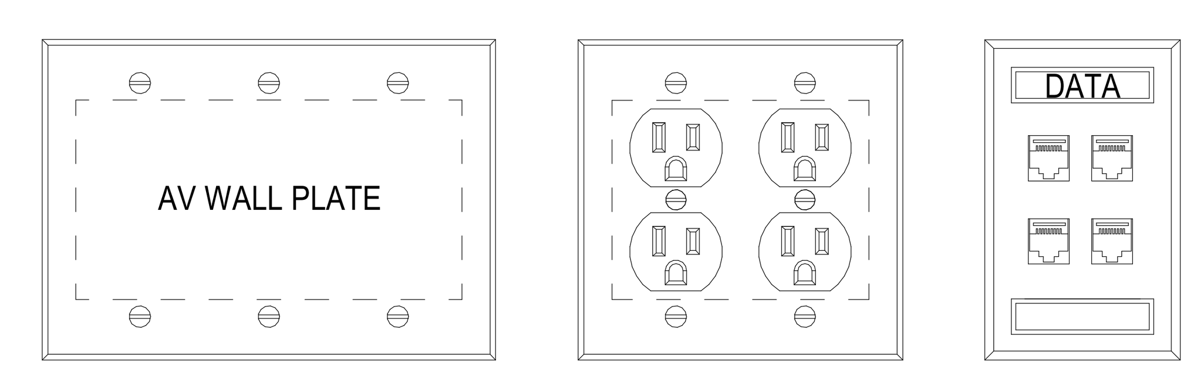
NO SCALE



NOTE:
1. BACK BOX AND DISPLAY MOUNT ARE SHOWN FOR CENTERLINE REFERENCE ONLY. MOUNT AND BACK BOX TO VARY PER DISPLAY TYPE. SEE FLOOR PLANS FOR SPECIFIC BACK BOX PER DISPLAYS.
2. PROVIDE BLOCKING FOR ALL WALL MOUNTED FLAT PANEL DISPLAYS.

3 TYPICAL AV DISPLAY BLOCKING

NO SCALE



NOTES: (THIS DETAIL ONLY)

1. CUSTOM AV PLATES PROVIDED BY AV CONTRACTOR.
2. DATA PLATE PROVIDED BY DATA CONTRACTOR.
3. POWER PLATE PROVIDED BY ELECTRICAL CONTRACTOR.
4. FOR REFERENCE ONLY. CONFIRM REQUIREMENTS FOR AV, DATA, AND POWER PER SPECIFIC TRADE DRAWINGS.
5. ENSURE AV BACK BOX IS COLLOCATED WITH POWER AND DATA PER THE LEGEND. POWER AND DATA BOXES SHALL BE LOCATED WITHIN 1 STUD FRAME OR 6" OF THE AV BACK BOX.
6. ELECTRICAL, TELECOM, AND AV SHALL NOT SHARE A SINGLE BACK BOX NOR CONDUIT.

4 AV/POWER/DATA FACEPLATE SPACING

NO SCALE

LORD AECK SARGENT

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NB Contact: Reade Daniel
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Newcomb & Boyd, LLP
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SHEET TITLE: AUDIO VISUAL DETAILS

SCALE (U.N.O.): NO SCALE

JOB NAME: University of North Carolina - Chapel Hill

SCO#: 21-23548-02A

BINGHAM HALL RENOVATION

LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

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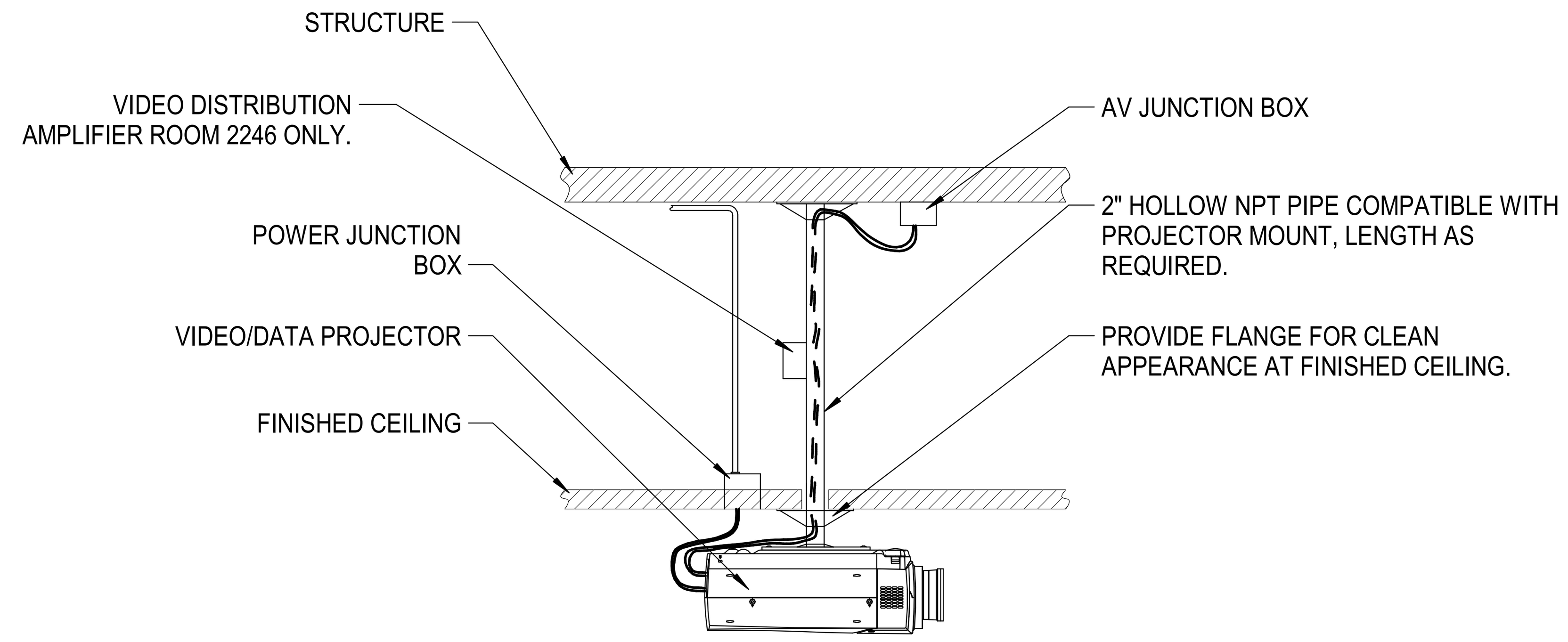
SEAL 044143 ENGINEER RICHARD O. DOZIER, III
Signed on 01/03/2024 using a Digital Signature.

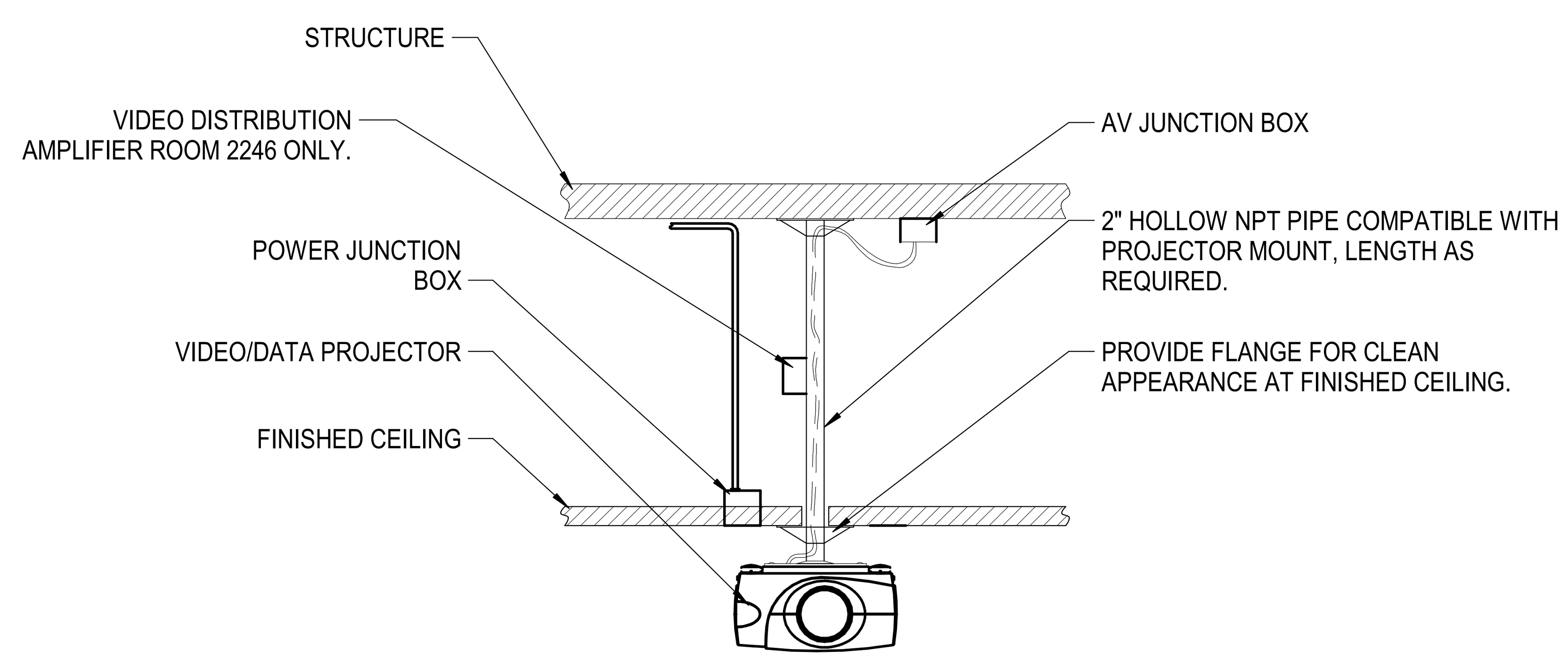
ISSUE DATE: 1/8/2024

JOB NO.: 11706-00

DWG. NO.: AV500

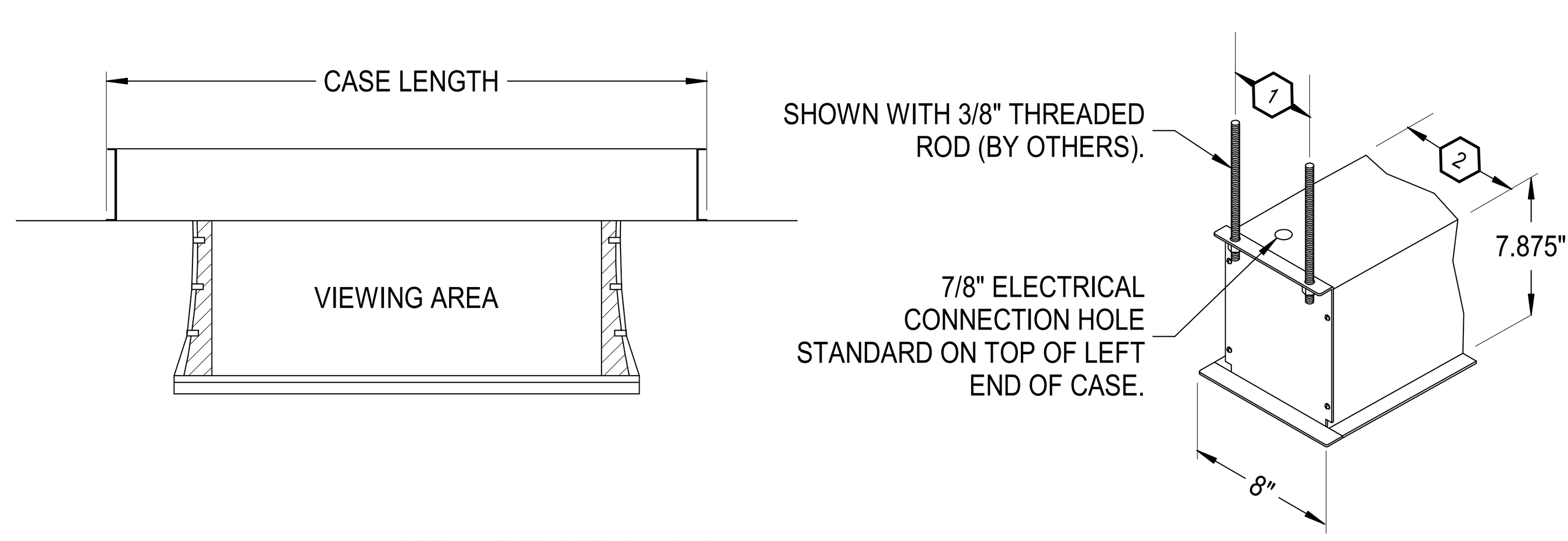


SIDE ELEVATION



FRONT ELEVATION

1 CEILING MOUNTED PROJECTOR
NO SCALE



NOTES: (THIS DETAIL ONLY)

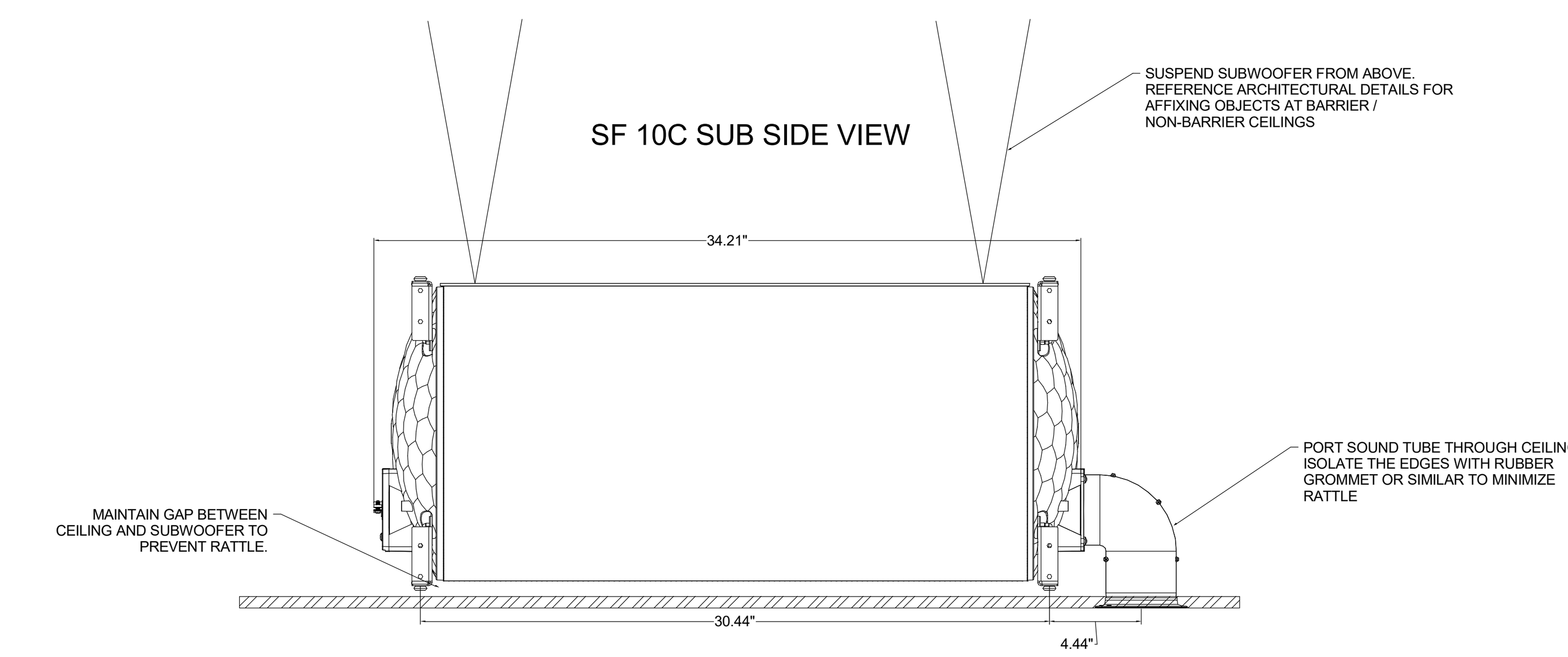
1. BASIS OF DESIGN FOR ALL LOW VOLTAGE CONTROLLED FRONT PROJECTION SCREENS IS THE DRAPER ACCESS SERIES V TAB TENSIONED PROJECTION SCREEN.

KEY NOTES: (THIS DETAIL ONLY)

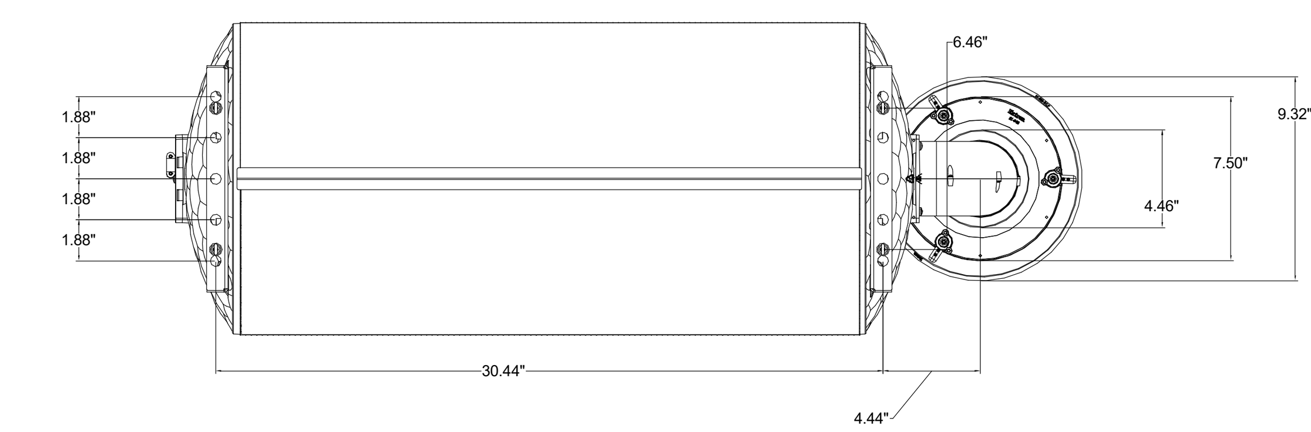
1. 4.875" SEPERATION
2. 6.875" SEPERATION

2 AV - PROJECTION SCREEN
NO SCALE

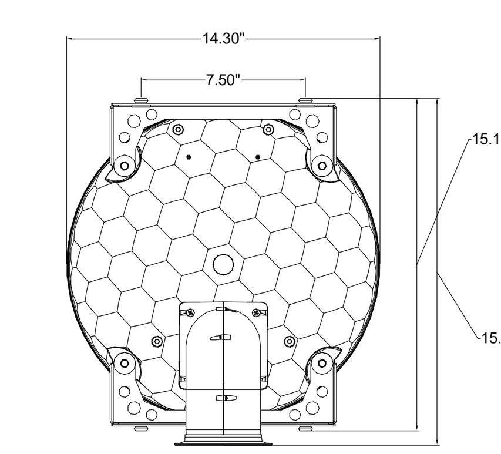
SF 10C SUB SIDE VIEW



SF 10C SUB TOP VIEW
(GRILLE MOUNT INSTALLED)



SF 10C SUB FRONT VIEW



NOTE:
FOLLOW MANUFACTURER'S INSTALLATION INSTRUCTIONS

3 SUB WOOFER DETAILS
NO SCALE

LORD AECK SARGENT

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SHEET TITLE: AUDIO VISUAL DETAILS
SCALE (U.N.O.): NO SCALE

JOB NAME: University of North Carolina - Chapel Hill
SCO#: 21-23548-02A
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

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DocuSigned by: Richard Dozier
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SEAL 044143 ENGINEER RICHARD O. DOZIER, III
Signed on 01/03/2024 using a Digital Signature.

ISSUE DATE: 1/8/2024
JOB. NO.: 11706-00
DWG. NO.: AV501

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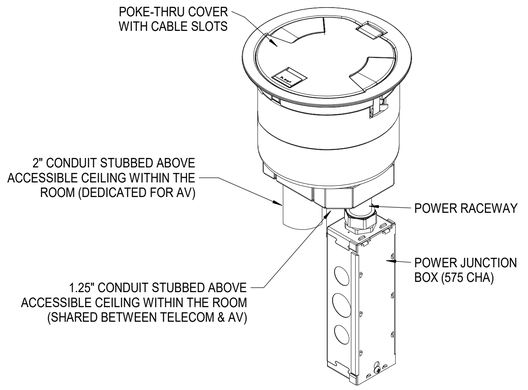
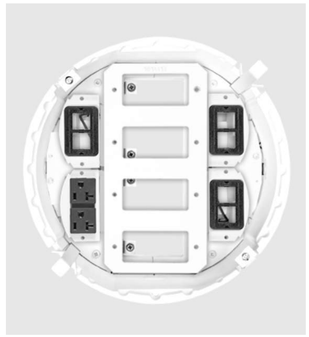
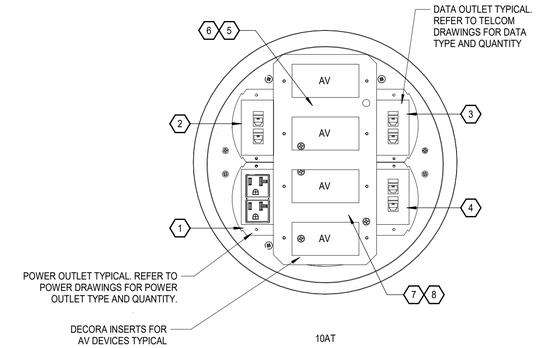
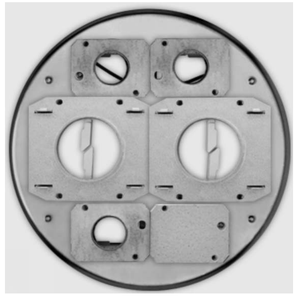








NOTES (THIS DETAIL ONLY):

BOTTOM HOUSING ASSEMBLY (EXTERNAL SPECS) :

1. COMPARTMENT 1
PROVIDE BOTTOM HOUSING 1010CHA - TERMINATE 1" ELECTRICAL CONDUIT, DEDICATED FOR ELECTRICAL SERVICE.

2. COMPARTMENT 2
PROVIDE BOTTOM HOUSING 1010CHA - TERMINATE 1" ELECTRICAL CONDUIT, DEDICATED FOR COMMUNICATION SERVICE.

3. COMPARTMENT 3
PROVIDE BOTTOM HOUSING 1010CHA - TERMINATE 1" ELECTRICAL CONDUIT, DEDICATED FOR COMMUNICATION SERVICE.

4. COMPARTMENT 4
PROVIDE BOTTOM HOUSING 10BLH - DESIGNED TO BLANK OFF THE EXTERIOR COMPARTMENT.

5 & 6. COMPARTMENT 5 & 6
PROVIDE BOTTOM HOUSING 2210CHA - TERMINATE 2" ELECTRICAL CONDUIT STUB ABOVE ACCESSIBLE CEILING WITHIN THE ROOM, DEDICATED FOR AV USE.

7 & 8. COMPARTMENT 7 & 8
PROVIDE BOTTOM HOUSING 2210CHA - TERMINATE 2" ELECTRICAL CONDUIT STUB ABOVE ACCESSIBLE CEILING WITHIN THE ROOM, DEDICATED FOR AV USE.

SELECTED PLATES (INTERNAL SPECS) :

COMPARTMENT 1
68REC - 20AMP DUPLEX RECEPTACLES MOUTING PLATE.

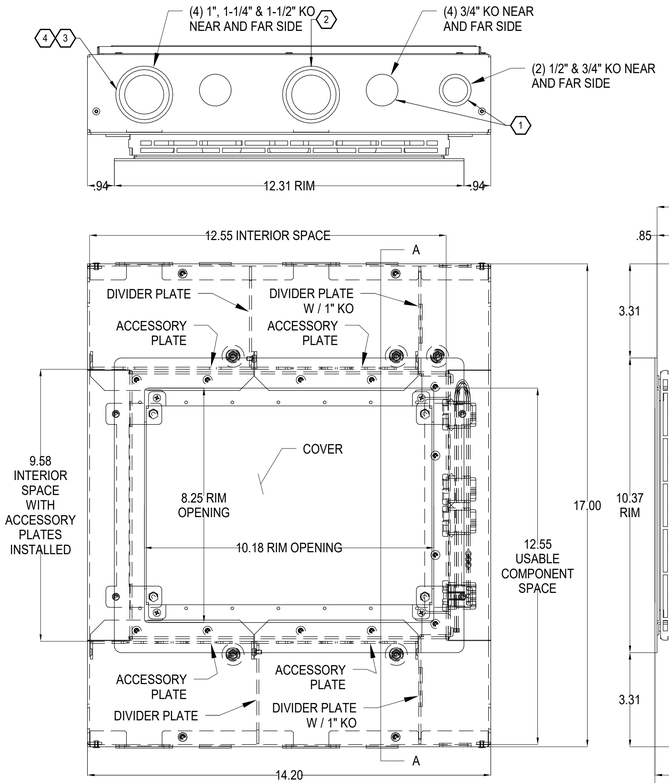
COMPARTMENT 2
682A - TWO PORT COMMUNICATION DEVICE PLATE.

COMPARTMENT 3
682A - TWO PORT COMMUNICATION DEVICE PLATE.

COMPARTMENT 4
682A - TWO PORT COMMUNICATION DEVICE PLATE.

COMPARTMENT 5 THRU 8
4GDEC - FOUR NEMA STANDARD DECOR STYLE MOUNTING PLATE.

1 POKE-THRU WIREMOLD 10AT DETAILS
NO SCALE



KEY NOTES: (THIS DETAIL ONLY)

1. 1.0" CONDUIT STUB ABOVE FOR ELECTRICAL.
2. 1.25" CONDUIT STUB TO NEAREST CABLE TRAY FOR TELECOM DATA DROPS.
3. 1.25" CONDUIT STUB ABOVE ACCESSIBLE CEILING FOR AV
4. 1.0" CONDUIT TO NEAREST CABLE TRAY FOR AV.

BASIS OF DESIGN IS THE PWB-FR-450 RECESSED WALL BOX.

NOTES: (THIS DETAIL ONLY)
1. INSTALL PER MANUFACTURER'S INSTRUCTIONS
2. ALL DIMENSIONS ARE IN INCHES .
3. PRODUCT IS UL LISTED.
4. AV FACEPLATES BY OTHERS.
5. PROVIDE BACKING, MIN. 32"W x 24"H WITH JBOX CENTERED AT LOCATION.
6. SPAN BACKING ACROSS MIN. THREE STUDS.
7. FASTEN PLYWOOD OR METAL BACKING FLUSH WITH FACE OF STUDS.

2 AV FLAT PANEL DISPLAY FSR PWB 450 MOUNT DETAIL (TYPE 3)
NO SCALE

LORD AECK SARGENT

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SHEET TITLE: AUDIO VISUAL DETAILS
SCALE (U.N.O.): NO SCALE

JOB NAME: University of North Carolina - Chapel Hill
SCI#: 21-25548-02A
LOCATION: BINGHAM HALL RENOVATION
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044143
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using a Digital Signature.

ISSUE DATE: 1/8/2024
JOB. NO.: 11706-00
DWG. NO.: AV502

SECURITY SCOPE GUIDANCE NOTES

1. THE SECURITY SYSTEMS CONTRACTOR (DIVISION 28) SHALL COORDINATE WITH THE ELECTRICAL CONTRACTOR (DIVISION 26) TO ENSURE THAT CONDUIT AND BACK BOX PROVISIONS ARE APPROPRIATE FOR THE SECURITY DEVICES INDICATED ON THE PLANS.

SECURITY GENERAL NOTES

1. PROVIDE INFRASTRUCTURE ONLY (BACKBOX, CONDUIT, AND CABLING) FOR ACCESS CONTROL SYSTEMS.
2. HOMERUNS FOR MULTIPLE LIKE DEVICES CAN BE COMBINED INTO A SINGLE CONDUIT AS LONG AS THE OVERALL CAPACITY OF THE HOMERUN IS EQUAL TO OR LARGER THAN THE CAPACITY (AREA) OF THE INDIVIDUAL CONDUITS IT INCORPORATES. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CALCULATE THE CONDUIT CAPACITY REQUIRED TO INCLUDE CABLING FROM MULTIPLE DOORS TO ENSURE THAT THE N.E.C. REQUIRED FILL IS NOT EXCEEDED.
3. JUNCTION BOXES SHALL BE INSTALLED AT LOGICAL, ACCESSIBLE LOCATIONS WITH NO MORE THAN 50 FEET BETWEEN EACH INDOOR JUNCTION BOX AND 100 FEET OUTDOORS AND NO MORE THAN 180 DEGREES OF BENDS BETWEEN PULL BOXES DURING INSTALLATIONS.
4. WALL MOUNTED SECURITY EQUIPMENT SHALL BE MOUNTED IN SUCH A MANNER THAT THEY DO NOT CROSS JOINTS OR SPAN AREAS WHERE THERE IS A MATERIAL TRANSITION.
5. DETAILS ARE DIAGRAMMATIC AND SHALL NOT BE USED TO DETERMINE EQUIPMENT LOCATIONS. FLOOR PLANS INDICATE EQUIPMENT LOCATIONS COORDINATE WITH ARCHITECTURAL AND INTERIOR DRAWINGS PRIOR TO FINAL EQUIPMENT ROUGH-IN AND INSTALLATION.

SECURITY DEVICE TAGS

ACCESS CONTROL SYSTEM:

- DOOR NUMBER
- HEAD END LOCATION (ROOM NAME/NUMBER)
- INFRASTRUCTURE DETAIL

ABBREVIATIONS:

1G - SINGLE GANG
2G - DOUBLE GANG
3G - TRIPLE GANG (NONGANGABLE
ABA - ARCHITECTURAL BARRIERS ACT OF 1968
ABAAG - ABA ACCESSIBILITY GUIDELINES
ACAMS - ACCESS CONTROL AND ALARM MONITORING SYSTEM
ACS - ACCESS CONTROL SYSTEM
ACU - ACCESS CONTROL UNIT
ADA - AMERICANS WITH DISABILITIES ACT
AFC/AFF/AFG/ARF - ABOVE FINISHED CEILING/FLOOR/GRADE/RAISED FLOOR
ARCH - ARCHITECT/ARCHITECTURAL
BCKBD - BACKBOARD
BFC - BELOW FINISHED CEILING
CDT - CONDUIT
CONN - CONNECTION
CKT - CIRCUIT
CLG - CEILING
EC - ELECTRICAL CONTRACTOR
EMT - ELECTRICAL METALLIC TUBING
EQUIP - EQUIPMENT
EXIST - EXISTING
FOC - FIBER/FIBER OPTIC CABLING
FA - FIRE ALARM
G - GROUND
IDC - INSTALLATION DISPLACEMENT CONNECTOR
IDS - INTRUSION DETECTION SYSTEM
JB - JUNCTION BOX
LAN - LOCAL AREA NETWORK
MM - MULTI-MODE
MP - MEGAPIXEL
MTD - MOUNTED
MTG - MOUNTING
N/A - NOT APPLICABLE
NEC - NATIONAL ELECTRIC CODE
NIC - NOT IN CONTRACT
NTS - NOT TO SCALE
OC - ON CENTER
OFCI - OWNER FURNISHED, CONTRACTOR INSTALLED
OFOI - OWNER FURNISHED, OWNER INSTALLED
OSP - OUTSIDE PLANT
PNL - PANEL
PTZ - PAN/TILT/ZOOM
RR - RISER RATED
RTE - REQUEST-TO-EXIT
SEC - SECURITY ENCLOSURES
SM - SINGLE MODE
SPEC - SPECIFICATION
SW - SWITCH
TGB - TELECOM GROUND BUSBAR
TMGB - TELECOM MAIN GROUND BUSBAR
WP - WEATHERPROOF
UON - UNLESS OTHERWISE NOTED
VMS - VIDEO MANAGEMENT SYSTEM
VSS - VIDEO SURVEILLANCE SYSTEM
XFMR - TRANSFORMER
1G - SINGLE GANG
2G - DOUBLE GANG
3G - TRIPLE GANG (NON-GANGABLE)

SECURITY SYMBOL LEGEND

ACCESS CONTROL SYSTEM: (PROVIDED UNDER DIVISION 28 SPECIFICATIONS):

- INFRASTRUCTURE FOR ACCESS CONTROL CARD READER
- M — INFRASTRUCTURE FOR DOOR POSITION SWITCH
- D — INFRASTRUCTURE FOR LOCKDOWN PUSH BUTTON
- DJB — 8"x8"x4" DOOR JUNCTION BOX WITH COVER AND TAMPER RESISTANT SCREWS
- SEC-"X" — INFRASTRUCTURE FOR SECURITY ENCLOSURES (ACCESS CONTROL PANELS, AND DOOR LOCKING HARDWARE POWER SUPPLIES, ETC.). "X" INDICATES ENCLOSURE DESIGNATOR. SEE FLOOR PLANS FOR PANEL DESIGNATOR.

ACCESS CONTROL SYSTEM (PROVIDED UNDER DIVISION 8 SPECIFICATIONS):

- EL — ELECTRIC MORTISE LOCK WITH INTEGRAL REQUEST-TO-EXIT SWITCH
- ED — ELECTRIC EXIT DEVICE LOCK WITH INTEGRAL REQUEST-TO-EXIT SWITCH
- PT — ELECTRIC POWER TRANSFER
- PS — DOOR HARDWARE POWER SUPPLY

DIVISION OF WORK MATRIX

	DESIGN	CONDUIT/BOXES/CABLE TRAY	WIRING/CABLING	TERMINATING	ACTIVE SYSTEMS/WARRANTY	COMMISSIOING
ELECTRICAL	FULL DESIGN BY DESIGN TEAM	ELECTRICAL CONTRACTOR, THROUGH GENERAL CONTRACTOR	ELECTRICAL CONTRACTOR, THROUGH GENERAL CONTRACTOR	ELECTRICAL CONTRACTOR, THROUGH GENERAL CONTRACTOR	ELECTRICAL CONTRACTOR, THROUGH GENERAL CONTRACTOR	BY COMMISSIONING AGENT
FIRE ALARM	FULL DESIGN BY DESIGN TEAM	ELECTRICAL CONTRACTOR, THROUGH GENERAL CONTRACTOR	FIRE ALARM CONTRACTOR, THROUGH GENERAL CONTRACTOR	FIRE ALARM CONTRACTOR, THROUGH GENERAL CONTRACTOR	FIRE ALARM CONTRACTOR, THROUGH GENERAL CONTRACTOR	BY COMMISSIONING AGENT
TELECOM (T-DRAWINGS)	DESIGN TEAM - CONDUIT/BOXES/CABLING SYSTEM, ACTIVE EQUIPMENT - UNC ITS	ELECTRICAL CONTRACTOR, THROUGH GENERAL CONTRACTOR	GENERAL CONTRACTOR TELECOM CONTRACTOR	GENERAL CONTRACTOR TELECOM CONTRACTOR	UNC ITS	N/A
SECURITY (SC-DRAWINGS)	CONDUIT/BOXES	ELECTRICAL CONTRACTOR, THROUGH GENERAL CONTRACTOR	ELECTRICAL CONTRACTOR, THROUGH GENERAL CONTRACTOR	UNC	UNC	N/A
AUDIO VISUAL (AV-DRAWINGS)	DESIGN TEAM - CONDUIT/BOXES, ACTIVE EQUIPMENT - VENDOR	ELECTRICAL CONTRACTOR, THROUGH GENERAL CONTRACTOR	UNC VENDOR, SEPARATE CONTRACT	UNC VENDOR, SEPARATE CONTRACT	UNC VENDOR, SEPARATE CONTRACT, SAME AS CABLING VENDOR.	N/A
LIGHTING & LIGHTING CONTROLS	FULL DESIGN BY DESIGN TEAM	ELECTRICAL CONTRACTOR, THROUGH GENERAL CONTRACTOR	ELECTRICAL CONTRACTOR, THROUGH GENERAL CONTRACTOR	ELECTRICAL CONTRACTOR, THROUGH GENERAL CONTRACTOR	ELECTRICAL CONTRACTOR, THROUGH GENERAL CONTRACTOR	BY COMMISSIONING AGENT/ MANUFACTURER

LORD AECK SARGENT

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SHEET TITLE: SECURITY LEGEND

SCALE (U.N.O.): NTS

JOB NAME: University of North Carolina - Chapel Hill

SCO# 21-23548-02A

BINGHAM HALL RENOVATION

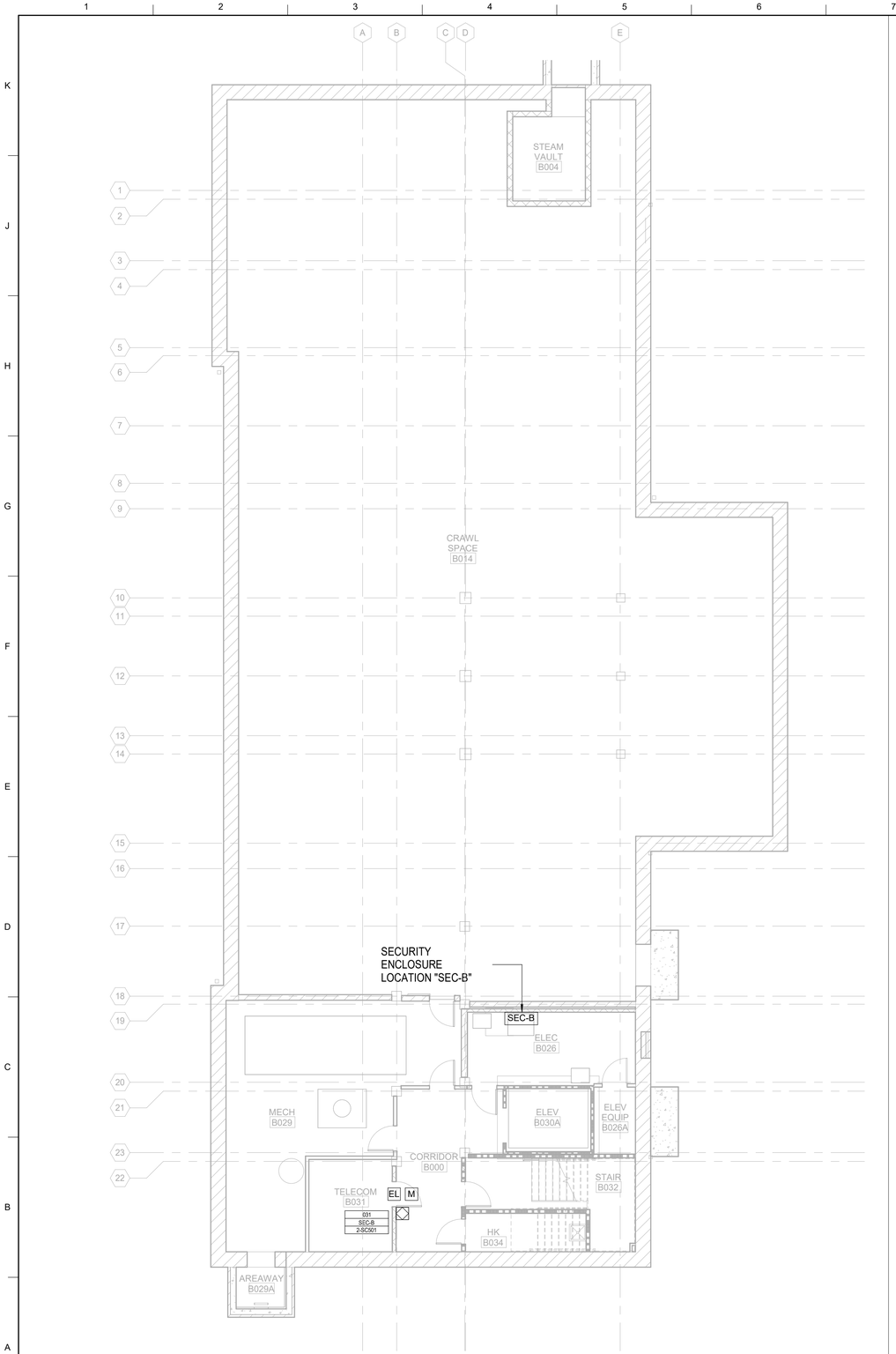
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

SEAL: DocuSigned by: SEAL 044143 ENGINEER RICHARD O. DOZIER, III
Signed on 01/03/2024 using a Digital Signature.

ISSUE DATE: 1/8/2024

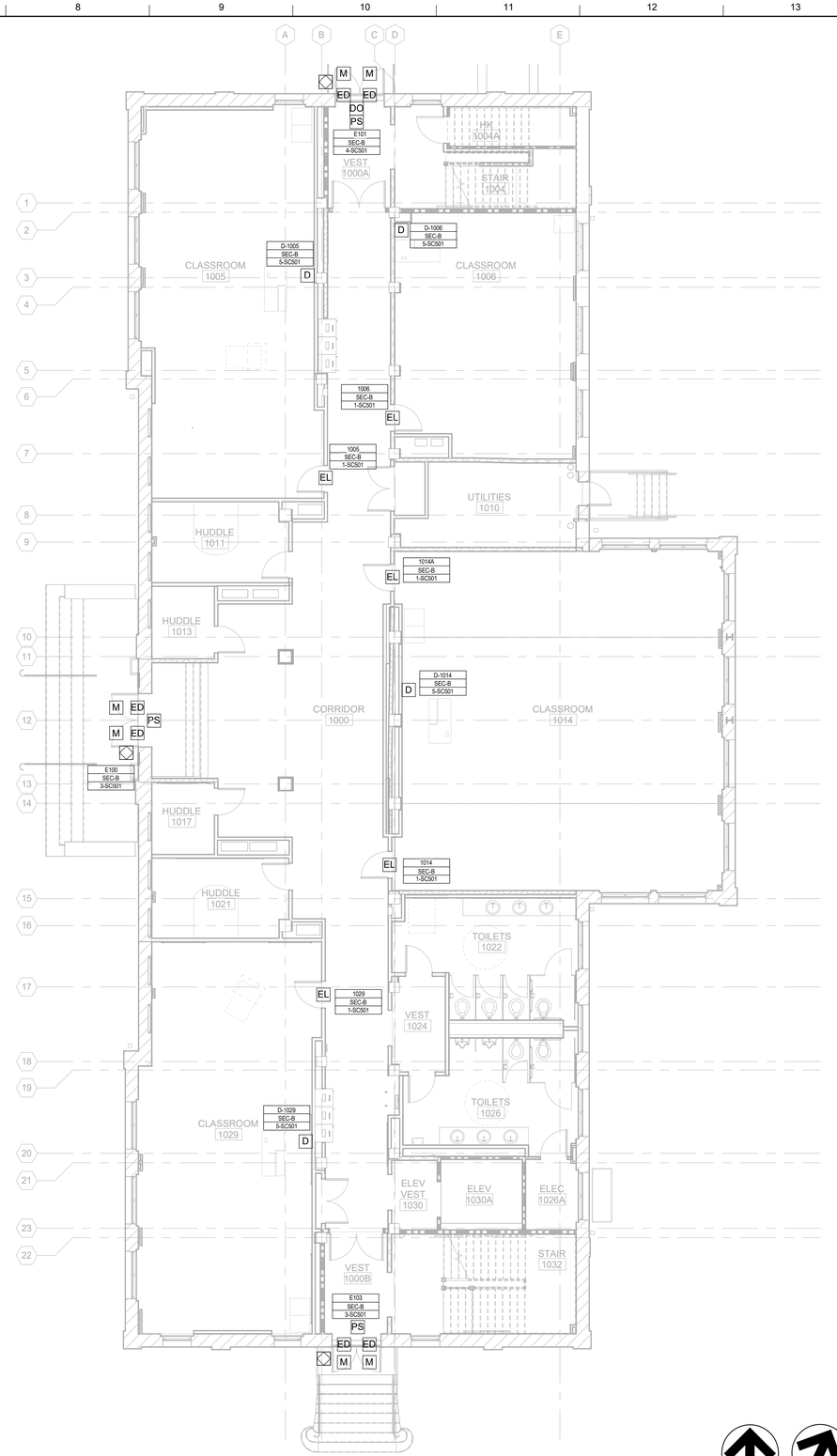
JOB NO.: 11706-00

DWG. NO.: SC001



1 SECURITY BASEMENT FLOOR PLAN

0 8 16 FT



2 SECURITY FIRST FLOOR PLAN

0 8 16 FT

PROJECT NORTH TRUE NORTH

GENERAL NOTES

1. HOMERUN SECURITY INFRASTRUCTURE FOR SECURITY DEVICES ON THE FIRST FLOOR DOWN TO ENCLOSURES "SEC-B" ON THE BASEMENT LEVEL.

SHEET SPECIFIC NOTES

LIFE SAFETY LEGEND

- SMOKE PARTITION
- 1-HOUR RATED WALL
- 2-HOUR RATED WALL
- 3-HOUR RATED WALL

LORD AECK SARGENT

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SHEET TITLE: SECURITY BASEMENT & FIRST FLOOR PLANS

SCALE (U.N.O.): 1/8" = 1'-0"

0 8 16 FT

JOB NAME: University of North Carolina - Chapel Hill

SCD#: 21-23548-02A

BINGHAM HALL RENOVATION

LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

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882960DD3BCE3457...
SEAL 044143
ENGINEER RICHARD O. DOZIER

Signed on 01/03/2024 using a Digital Signature.

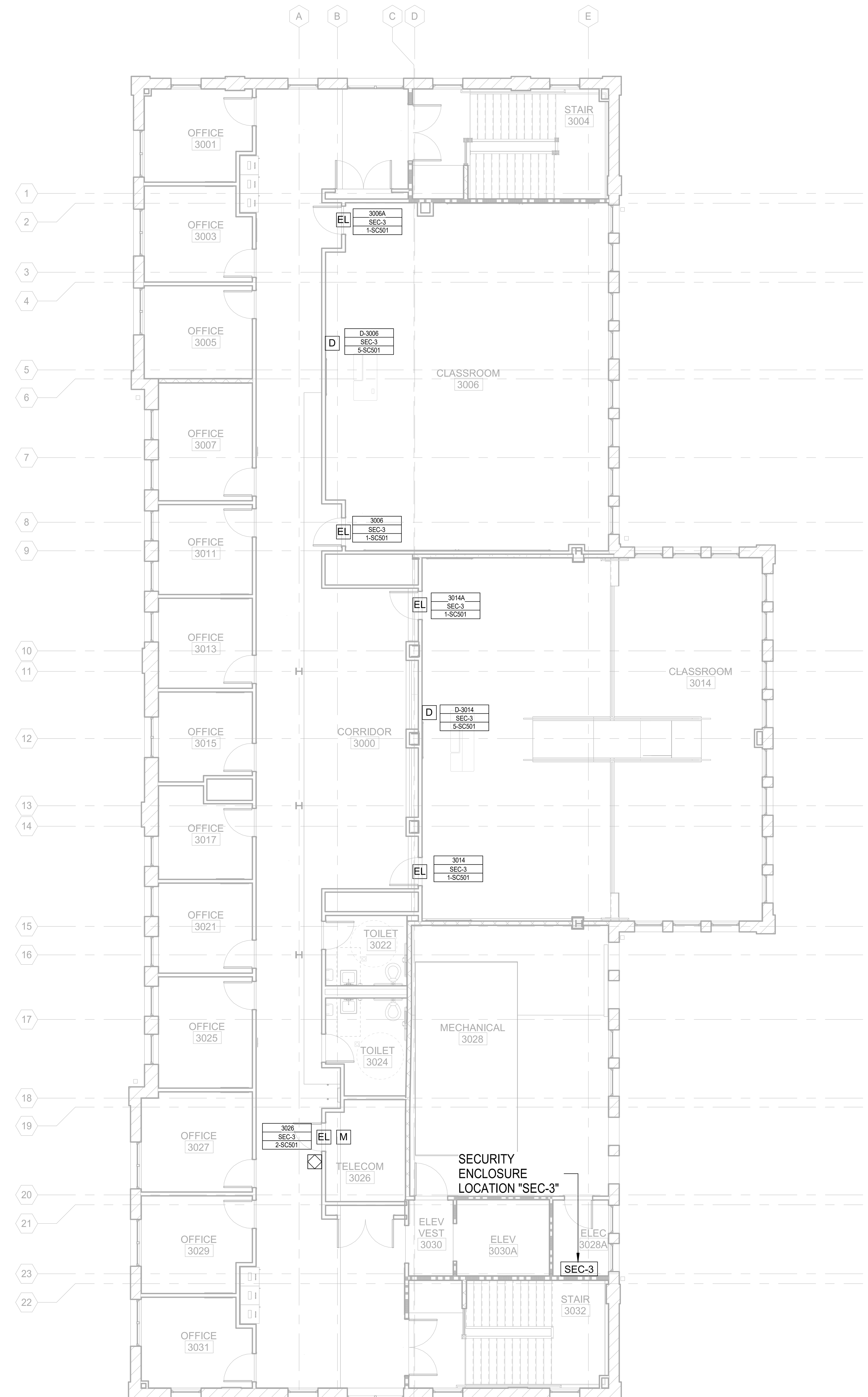
ISSUE DATE: 1/8/2024

OB. NO. 11706-00

DWG. NO. SC101

1 SECURITY SECOND FLOOR PLAN

0 8 16 FT



2 SECURITY THIRD FLOOR PLAN

0 8 16 FT

PROJECT NORTH

TRUE NORTH

GENERAL NOTES

1. HOMERUN SECURITY INFRASTRUCTURE FOR SECURITY DEVICES ON THE SECOND FLOOR UP TO ENCLOSURES "SEC-3" ON THE THIRD LEVEL.

SHEET SPECIFIC NOTES

LIFE SAFETY LEGEND

- SMOKE PARTITION
- 1-HOUR RATED WALL
- 2-HOUR RATED WALL
- 3-HOUR RATED WALL

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SHEET TITLE: SECURITY SECOND & THIRD FLOOR PLANS

SCALE (U.N.O.): 1/8" = 1'-0"

0 8 16 FT

JOB NAME: University of North Carolina - Chapel Hill
SCO# 21-23548-02A
BINGHAM HALL RENOVATION
LOCATION: 36 Lenoir Drive, Chapel Hill, NC 27514

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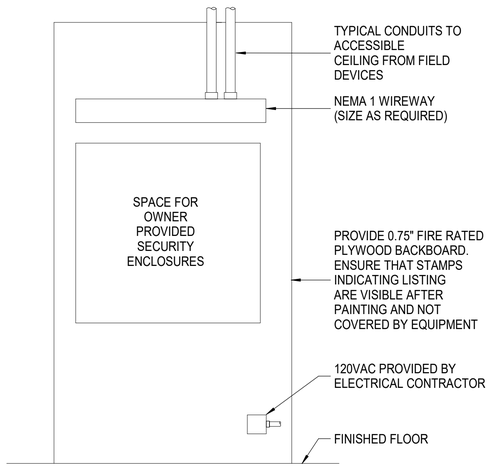
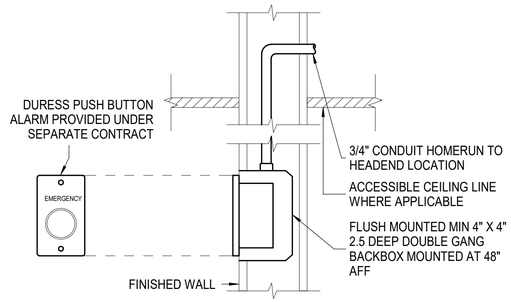
ISSUE DATE: 1/8/2024

JOB NO.: 11706-00

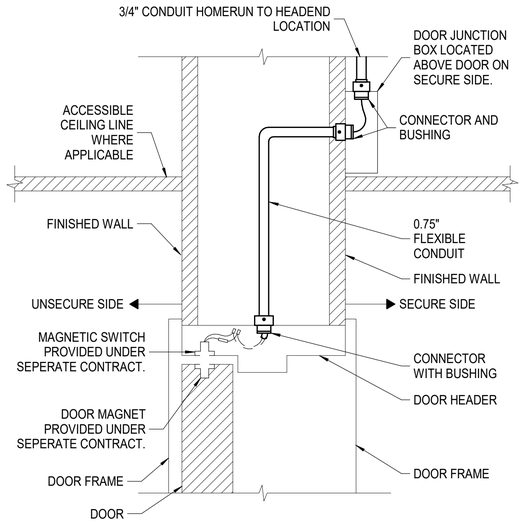
DWG. NO.: SC102



7 TYPICAL SECURITY ENCLOSURES ELEVATION
NO SCALE

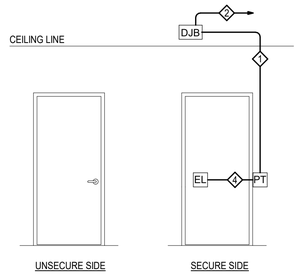


5 WALL MOUNTED LOCKDOWN PUSH BUTTON
NO SCALE

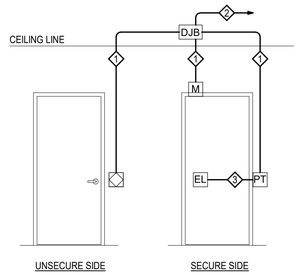


6 TYPICAL RECESSED DOOR POSITION SWITCH
NO SCALE

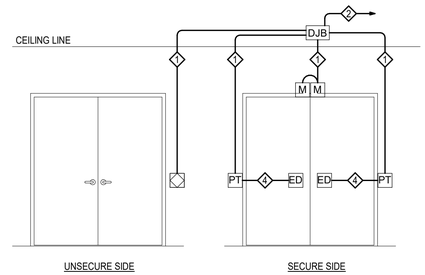
TYPICAL DEVICE ROUGH-IN REQUIREMENTS					
DEVICE	BACKBOX TYPE	SYMBOL	MOUNTING HEIGHT	NOTES	CABLING REQUIREMENTS
CARD READER	SINGLE GANG	◇	42" AFF	4" BOX + SINGLE GANG PLASTER RING	SHIELDED 22 AWG 8 CONDUCTOR STRANDED MULTI-CONDUCTOR CABLE
MAGNETIC DOOR POSITION SWITCH	N/A	M	N/A	STUB CONDUIT INTO DOOR HEADER	18 AWG 2 CONDUCTOR STRANDED MULTI-CONDUCTOR CABLE
ELECTRIC LOCK	N/A	EL	N/A	STUB CONDUIT INTO DOOR FRAME (HINGE SIDE)	18 AWG 2 CONDUCTOR STRANDED MULTI-CONDUCTOR CABLE
ELECTRIC EXIT DEVICE	N/A	ED	N/A	ROUTE CABLING THROUGH DOOR	18 AWG 2 CONDUCTOR STRANDED MULTI-CONDUCTOR CABLE
ADA DOOR OPERATOR	N/A	DO	N/A	COORDINATE WITH DIVISION 8	18 AWG 4 CONDUCTOR STRANDED MULTI-CONDUCTOR CABLE
ELECTRIC POWER TRANSFER	N/A	PT	N/A	STUB CONDUIT INTO DOOR FRAME (HINGE SIDE)	18 AWG 2 CONDUCTOR STRANDED MULTI-CONDUCTOR CABLE
DOOR POWER SUPPLIES	N/A	PS	N/A	COORDINATE WITH DOOR HARDWARE CONTRACTOR	18 AWG 2 CONDUCTOR STRANDED MULTI-CONDUCTOR CABLE
DOOR JUNCTION BOX	8"x8"x4"	DJB	N/A	LOCATE ABOVE CEILING ON SECURE SIDE OF DOOR	N/A



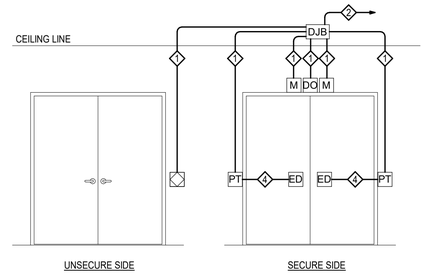
1 DOOR TYPE S1
NO SCALE



2 DOOR TYPE S2
NO SCALE



3 DOOR TYPE D1
NO SCALE



4 DOOR TYPE D2
NO SCALE

GENERAL NOTES

1. DOOR DETAILS ARE DIAGRAMMATIC AND SHALL NOT BE USED TO DETERMINE EQUIPMENT LOCATIONS. FLOOR PLANS INDICATE EQUIPMENT LOCATIONS.
2. REFERENCE FLOOR PLANS FOR HOMERUN LOCATION FOR EACH DOOR.
3. COORDINATE DOOR ROUGH-IN AND WIRING REQUIREMENTS WITH THE FINAL DOOR SCHEDULE AND DOOR HARDWARE SPECIFICATIONS.
4. RACEWAYS FOR SECURITY DEVICES MOUNTED ON EXISTING SOLID MASONRY WALLS SHALL BE SURFACE MOUNTED.
5. RACEWAYS FOR SECURITY DEVICES MOUNTED TO FRAMED DRY WALLS SHALL BE CONCEALED IN WALLS.
6. RACEWAYS FOR SECURITY DEVICES MOUNTED TO CEILINGS SHALL BE CONCEALED ABOVE CEILING.
7. COORDINATE THE WORK WITH OTHER TRADES PRIOR TO INSTALLATION.

SHEET SPECIFIC NOTES

1. 0.5" CONDUIT TO DOOR JUNCTION BOX.
2. 0.75" CONDUIT HOMERUN TO SECURITY ENCLOSURE HEAD END LOCATION.
3. WIRING BY DOOR HARDWARE CONTRACTOR.
4. 120VAC BY ELECTRICAL CONTRACTOR. REFERENCE ELECTRICAL DRAWINGS.

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SHEET TITLE: SECURITY DETAILS
SCALE (LAN.D.): NO SCALE

JOB NAME: University of North Carolina - Chapel Hill
SCI#: 21-25548-02A
BINGHAM HALL RENOVATION
LOCATION: 30 Lenoir Drive, Chapel Hill, NC 27514

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ISSUE DATE: 1/8/2024
OB. NO.: 11706-00
DWG. NO.: SC501