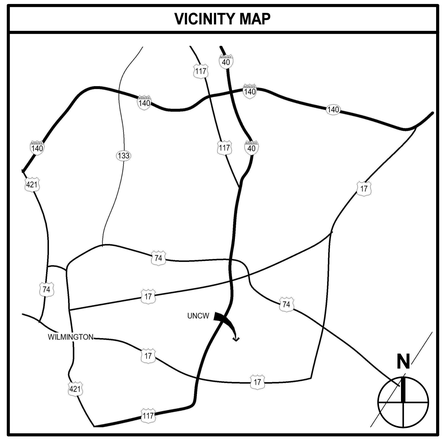
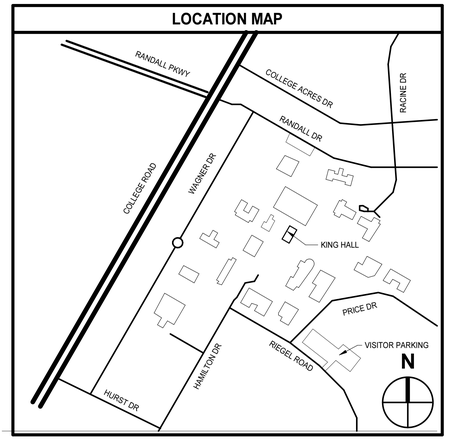
ALDERMAN AND KING HALL RENOVATIONS - KING HALL

SCO#22-24639-01A
Wilmington, NC

University of North Carolina Wilmington





MOSELEYARCHITECTS

911 N. WEST STREET, SUITE 205 RALEIGH, NORTH CAROLINA 27603
PHONE (919) 840-0091

MOSELEYARCHITECTS.COM

Palacio Collaborative	Cost Management
4819 Emperor Boulevard	Durham, NC 27703
Moseley Architects	Architect, Mechanical, Electrical, Plumbing, & Structural
911 N. West Street, Suite 205	Raleigh, NC 27603

DRAWING INDEX

AN ASBESTOS INSPECTION WAS PERFORMED AND ASBESTOS CONTAINING MATERIALS WERE FOUND GENERALLY IN THE AREAS INDICATED. THE ASBESTOS SURVEY INSPECTION REPORT IS AVAILABLE TO THE CONTRACTOR FOR HIS INFORMATION. THE ASBESTOS CONTAINING MATERIALS SHALL NOT BE DISTURBED IN THE WORK AREA EXCEPT WHERE INDICATED AND REQUIRED TO COMPLETE THE WORK DEFINED IN THESE DOCUMENTS. ASBESTOS CONTAINING MATERIALS SHALL BE REMOVED BY THE CMaR UNDER A SEPARATE CONTRACT WITH OWNER USING APPROVED METHODS AS REQUIRED.

A LEAD BASED PAINT INSPECTION WAS PERFORMED AND LEAD BASED PAINT WAS FOUND IN THE AREAS INDICATED. LEAD BASED PAINT SHALL NOT BE DISTURBED IN THE WORK EXCEPT WHERE SPECIALLY INDICATED AND REQUIRED FOR CONNECTION TO UTILITIES. WHERE SUCH CONNECTIONS ARE REQUIRED, CONTRACTOR SHALL HAVE THE OBSTRUCTIVE AND ADJACENT LEAD BASED PAINT REMOVED BY A LICENSED LEAD BASED PAINT ABATEMENT CONTRACTOR USING APPROVED PROCEDURES AS REQUIRED BY NCOSHA. THE LEAD BASED PAINT THAT REMAINS AND NEW NON LEAD BASED PAINT AREAS SHALL BE LABELED ACCORDINGLY.

THE CONTRACT DOCUMENTS ARE COMPLEMENTARY, AND WHAT IS REQUIRED BY ONE SHALL BE AS BINDING AS IF REQUIRED BY ALL.
IN CASE OF A CONFLICT, DISAGREEMENT, OR AMBIGUITY, PROVIDE THE BETTER QUALITY. IN CASE OF A CONFLICT, DISAGREEMENT, OR AMBIGUITY, PROVIDE THE GREATER QUANTITY OF WORK.

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BRADLEY J LOCKWOOD
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50149
NORTH CAROLINA
RALEIGH, NC

ALDERMAN AND KING HALL RENOVATIONS - KING HALL

University of North Carolina Wilmington
SCO#22-24639-01A
601 Hamilton Drive, Wilmington, NC 28403

PROJECT NO: 620589
DATE: FEBRUARY 10, 2023

REVISIONS	
DATE	DESCRIPTION

COVER

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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 sheet 1 or 2)

Name of Project: Alderman and King Hall Renovations - King Hall
Address: 601 Hamilton Drive Wilmington NC Zip Code 28403
Owner/Authorized Agent: David Holzinger Phone # (910) 962-7897 E-Mail holsingerd@uncw.edu
Owned By: ☐ City/County ☐ Private ☒ State
Code Enforcement Jurisdiction: ☐ City_____ ☐ County_____ ☒ State

CONTACT: _____

DESIGNER	FIRM	NAME	LICENSE #	TELEPHONE #	E-MAIL
Architectural	Moseley Architects	Brad Lockwood	14206	(919)840-0091	blockwood@moseleyarchitects.com
Civil	N/A			(____)	
Electrical	Moseley Architects	Brian Wells	040202	(804)794-7555	bwells@moseleyarchitects.com
Fire Alarm	N/A?			(____)	
Plumbing	Moseley Architects	Seth Lehman	050937	(919)840-0091	slehman@moseleyarchitects.com
Mechanical	Moseley Architects	Seth Lehman	050937	(919)840-0091	slehman@moseleyarchitects.com
Sprinkler-Standpipe	N/A			(____)	
Structural	Stephen Cooke		035434	(704)540-3755	scooke@moseleyarchitects.com
Retaining Walls >5' High	N/A			(____)	
Other	N/A			(____)	

("Others" should include firms and individuals such as truss, precast, pre-engineered, interior designers, etc.)

2018 NC CODE FOR: ☐ New Construction ☐ Addition ☒ Renovation
☐ 1st Time Interior Completion
☐ Shell/Core
☐ Phased Construction – Shell/Core
☐ Renovation

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

CONSTRUCTED:(date) 1968 **ORIGINAL OCCUPANCY(S)** (Ch. 3): B
RENOVATED: (date) 1993 **CURRENT OCCUPANCY(S)** (Ch. 3): B

RISK CATEGORY (table 1604.5) **Current:** ☐ I ☐ II ☒ III ☐ IV
Proposed: ☐ I ☐ II ☒ III ☐ IV

BASIC BUILDING DATA
Construction Type: (check all that apply) ☐ I-A ☐ I-B ☐ II-A ☒ II-B ☐ III-A ☐ III-B ☐ IV ☐ V-A ☐ 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 (Primary) **Flood Hazard Area:** ☐ No ☐ Yes
Special Inspections Required: ☒ No ☐ Yes

Gross Building Area:

FLOOR	EXISTING (SQ FT)	NEW (SQ FT)	RENO/ALTER (SQ.FT)	SUB-TOTAL
6th Floor				
5th Floor				
4th Floor				
3rd Floor				
2nd Floor	11,150 sf	0 sf	5,240 sf	
Mezzanine				
1st Floor	11,150 sf	0 sf	1,367 sf	
Basement				
TOTAL	**22,300 sf**		**6,607 sf**	

ALLOWABLE AREA
Primary Occupancy Classification: SELECT ONE
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
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): N/A
Incidental Uses (Table 509): N/A
Special Uses (Chapter 4 – List Code Sections) N/A
Special Provisions: (Chapter 5 – List Code Sections): N/A
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.

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

_____ + _____ + ... = _____ ≤ 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]
			N/A		

[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 $I_f = 100 \times (F/P) \times (W - 30) =$ _____ (%)
N/A
[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 (TABLE 503)	SHOWN ON PLANS	CODE REFERENCE
Building Height in Feet (Table 504.3)	N/A		
Building Height in Stories (Table 504.4)			

[1] Provide code reference if the "Show on Plans" quantity is not listed 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	DESIGN # FOR RATED PENETRATION	DESIGN # FOR RATED JOINTS
Structural Frame, including columns, girders, trusses		0					
Bearing Walls							
Exterior		N/A					
North		N/A					
East		N/A					
West		N/A					
South		N/A					
Interior		N/A					
Nonbearing Walls and Partitions							
Exterior walls							
North	>30'	0	0				
East	>30'	0	0				
West	>30'	0	0				
South	>30'	0	0				
Interior walls and partitions		0	0				
Floor Construction Including supporting beams and joists		0	0				
Floor Ceiling Assembly		0	0				
Column Supporting Floors		0	0				
Roof Construction, including supporting beams and joists		0	0				
Roof Ceiling Assembly		0	0				
Column Supporting Roof		0	0				
Shaft Enclosures - Exit		1	1 EXISTING				
Shaft Enclosures - Other		1	2 EXISTING				
Corridor Separation		N/A					
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 PERPERTY LINES	DEGREES OF OPENINGS PROTECTION (TABLE 705.8)	ALLOWABLE AREA (%)	ACTUAL SHOWN ON PLANS (%)
>30'	UNSPRINKLERED	NO LIMIT	NO LIMIT

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 #: LS2.1 AND LS 2.2

☐ 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 types for each area as it relates to occupant load calculation (Table 1004.1.2)
☒ Occupant loads for each area
☒ Exit access travel distances (1017)
☐ Common path of travel distances (1006.2.1 & 2006.3.2(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 and supporting construction for a fire barrier/fire partition/smoke barrier.
☒ 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

Section/Table/Note	Title

ACCESSIBLE DWELLING UNITS
(SECTION 1107)

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
			N/A				

ACCESSIBLE PARKING

(SECTION 1106)

LOT OR PARKING AREA	TOTAL # OF PARKING SPACES		# OF ACCESSIBLE SPACES PROVIDED			TOTAL # ACCESSIBLE PROVIDED
	REQUIRED	PROVIDED	REGULAR WITH 5' ACCESS AISLE	VAN SPACES WITH 132" ACCESS AISLE	8' ACCESS AISLE	
			N/A			
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				N/A						
	NEW										
	REQ'D										

PER SECTION 810.1 WE ARE NOT INCREASING THE OCCUPANT LOAD BY MORE THAN 20% THERFORE WE DO NOT HAVE TO CALCULATE FIXTURES. EXISTING OCCUPANT LOAD 529. ANTICIPATED OCCUPANT LOAD AFTER RENOVATION 490.

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

ENERGY SUMMARY

ENERGY REQUIREMENTS:
The following data shall be considered minimum and any special attribute required to meet the **North Carolina Energy Conservation 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" specify source here) _____

THERMAL ENVELOPE (Prescriptive method only)

Roof/ceiling Assembly (each assembly)
Description of assembly: Existing to Remain
U-Value of total assembly: _____
R-Value of insulation: _____
Skylights in each assembly: _____
U-Value of skylight: _____
Total square footage of skylights in each assembly: _____

Exterior Walls (each assembly)
Description of assembly: Existing to Remain
U-Value of total assembly: _____
R-Value of insulation: _____
Openings (windows or doors with glazing)
U-Value of assembly: _____
Solar heat gain coefficient: _____
Projection factor: _____
Door R-Values: _____

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

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

Floors slab on grade
Description of assembly: Existing to Remain
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) N/A
Seismic (I_E) _____

Live Loads: Roof N/A psf
Mezzanine _____ psf
Floor _____ psf

Ground Snow Load: N/A psf

Wind Load: Ultimate Wind Speed 155 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 _____ %g S_1 _____ %g
Site Classification (ASCE 7) ☐ A ☐ B ☐ C ☐ D ☐ E ☐ F
Data Source: ☐ Geotechnical Report ☐ Presumptive ☐ Historical Data
Basic structural system ☐ 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: Earthquake ☐ Wind ☐

SOIL BEARING CAPACITIES:
Field Test (provide copy of test report) N/A psf
Presumptive Bearing capacity _____ psf
Pile size, type, and capacity _____

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

MECHANICAL SUMMARY

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT

Thermal Zone
winter dry bulb: 24.2°F
summer dry bulb: 93.4°F

Interior design conditions
winter dry bulb: 70°F
summer dry bulb: 75°F
relative humidity: 50% RH

Building heating load: 511.2 MBH

Building cooling load: 83.1 Tons

Mechanical Spacing Conditioning System
Unitary
description of unit: VAV AHU's with chilled and hot water from campus energy plant
heating efficiency: _____
cooling efficiency: _____
size category of unit: _____
Boiler
Size category. If oversized, state reason.: From Existing to Remain Central Plant
Chiller
Size category. If oversized, state reason.: From Existing to Remain Central Plant

List equipment efficiencies: _____

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: ☒ Prescriptive ☐ Performance
ASHRAE 90.1: ☐ Prescriptive ☐ Performance

Lighting schedule (each fixture type)
lamp type required in fixture
number of lamps in fixture
ballast type used in the fixture
number of ballasts in fixture
total wattage per fixture
total interior wattage specified vs. allowed (whole building or space by space) 9913W vs 19401W
total exterior wattage specified vs. allowed N/A

Additional Efficiency Package Options
(When using the 2018 NCECC; not required for ASHRAE 90.1)
☐ C406.2 More Efficient Mechanical Equipment
☒ 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

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ALDERMAN AND KING HALL RENOVATIONS - KING HALL

University of North Carolina Wilmington
SCO#22-24639-01A
601 Hamilton Drive, Wilmington, NC 28403

PROJECT NO: 820589
DATE: FEBRUARY 10, 2023
REVISIONS
DATE DESCRIPTION

APPENDIX B - CODE SUMMARY

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PROJECT N POLAR

SECOND FLOOR WORK AREA DIAGRAM

1/8" = 1'-0"

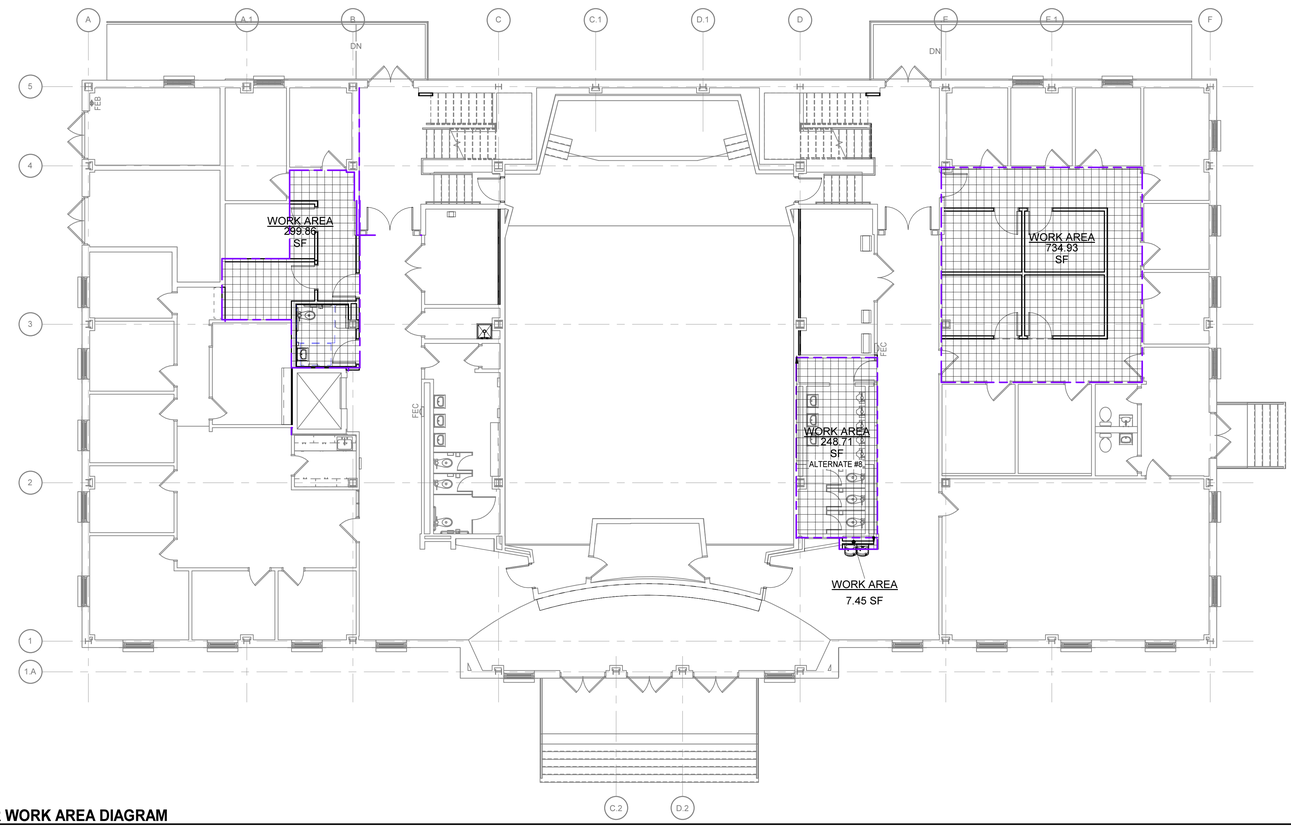
AREAS

WORK AREA

WORK AREA

WORK AREA	
WORK AREA FLOOR 1	1,042.24 SF
WORK AREA FLOOR 2	6,310.62 SF
TOTAL WORK AREA	**7,352.86 SF**
WORK AREA ALTERNATES	260.71 SF
TOTAL WORK AREA INCLUDING ALTERNATES	**7,613.57 SF**
BUILDING AREA	
TOTAL BUILDING AREA	**22,300 SF**

50% OF 22,300 = 11,150 SF BASE BID AND ALTERNATE WORK AREAS ARE < 50%



PROJECT N POLAR

FIRST FLOOR WORK AREA DIAGRAM

1/8" = 1'-0"

0' 2' 4' 8' 16'

1/8" = 1'-0"

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PROJECT NO: 820589
DATE: FEBRUARY 10, 2023

REVISIONS	
DATE	DESCRIPTION

WORK AREA DIAGRAMS

LS1.1

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OCCUPANCY SCHEDULE FIRST FLOOR

SPACE NUMBER	SPACE NAME	USE CLASSIFICATION	USED TO DETERMINE OCCUPANCY FACTOR ONLY	FLOOR AREA PER OCCUPANT	AREA SF	AREA GROSS	AREA NET	OCCUPANCY LOAD TABULAR	OCCUPANCY LOAD ACTUAL	OCCUPANCY LOAD DESIGN
100	LOBBY	A3	ASSEMBLY, UNCONCENTRATED	15 SF	106		•	8		8
101	LECTURE	A3	ASSEMBLY, FIXED SEATING	0 SF	1924			168	168	168
101.1	STAGE	A3	ASSEMBLY, UNCONCENTRATED	15 SF	167		•	12		12
101B	PROJECTION	B	BUSINESS AREA	100 SF	101	•		2		2
102	OFFICE	B	BUSINESS AREA	100 SF	359	•		4		4
102A	OFFICE	B	BUSINESS AREA	100 SF	91	•		1		1
102B	OFFICE	B	BUSINESS AREA	100 SF	96	•		1		1
102C	OFFICE	B	BUSINESS AREA	100 SF	166	•		2		2
102D	OFFICE	B	BUSINESS AREA	100 SF	95	•		1		1
102E	OFFICE	B	BUSINESS AREA	100 SF	98	•		1		1
102F	WORKROOM	B	BUSINESS AREA	100 SF	137	•		2		2
102G	OFFICE	B	BUSINESS AREA	100 SF	99	•		1		1
102I	OFFICE	B	BUSINESS AREA	100 SF	93	•		1		1
102K	KITCHEN	B	BUSINESS, CONCENTRATED	50 SF	53	•		2		2
103A	OFFICE	B	BUSINESS AREA	100 SF	84	•		1		1
103B	OFFICE	B	BUSINESS AREA	100 SF	117	•		2		2
103C	OFFICE	B	BUSINESS AREA	100 SF	83	•		1		1
103D	OFFICE	B	BUSINESS AREA	100 SF	81	•		1		1
104	CLASSROOM	B	EDUCATIONAL, CLASSROOM	20 SF	727		•	37		37
104A	WORK AREA	B	BUSINESS AREA	100 SF	146	•		2		2
104B	URR	B	BUSINESS AREA	100 SF	31	•		1		1
104C	URR	B	BUSINESS AREA	100 SF	30	•		1		1
106A	OFFICE	B	BUSINESS AREA	100 SF	81	•		1		1
106B	OFFICE	B	BUSINESS AREA	100 SF	111	•		2		2
106C	OFFICE	B	BUSINESS AREA	100 SF	82	•		1		1
106D	OFFICE	B	BUSINESS AREA	100 SF	111	•		2		2
106E	OFFICE	B	BUSINESS AREA	100 SF	78	•		1		1
106F	OFFICE	B	BUSINESS AREA	100 SF	73	•		1		1
106G	OFFICE	B	BUSINESS AREA	100 SF	123	•		2		2
106H	OFFICE	B	BUSINESS AREA	100 SF	87	•		1		1
106I	OFFICE	B	BUSINESS AREA	100 SF	82	•		1		1
106J	OFFICE	B	BUSINESS AREA	100 SF	80	•		1		1
106K	OFFICE	B	BUSINESS AREA	100 SF	82	•		1		1
106L	OFFICE	B	BUSINESS AREA	100 SF	80	•		1		1
C100	CORR	B	BUSINESS AREA	100 SF	589	•		6		6
C102	CORR	B	BUSINESS AREA	100 SF	83	•		1		1
C103	COOR	B	BUSINESS AREA	100 SF	98	•		1		1
C103	CORR	B	BUSINESS AREA	100 SF	572	•		6		6
C106	CORR	B	BUSINESS AREA	100 SF	347	•		4		4
H100	HSKPNG	S2	ACCESSORY STORAGE & MECHANICAL EQUIPMENT ROOM	300 SF	38	•		1		1
M100	MECH/ELEC	B	ACCESSORY STORAGE & MECHANICAL EQUIPMENT ROOM	300 SF	170	•		1		1
M101	MECH	B	ACCESSORY STORAGE & MECHANICAL EQUIPMENT ROOM	300 SF	195	•		1		1
M102	MECH	B	ACCESSORY STORAGE & MECHANICAL EQUIPMENT ROOM	300 SF	119	•		1		1
M103	MECH	B	ACCESSORY STORAGE & MECHANICAL EQUIPMENT ROOM	300 SF	181	•		1		1
R100	WRR	B	BUSINESS AREA	100 SF	208	•		3		3
R101	MRR	B	BUSINESS AREA	100 SF	175	•		2		2
R102	UNISEX RR	B	BUSINESS AREA	100 SF	60	•		1		1
S100	STAIR	B	BUSINESS AREA	100 SF	325	•		4		4
S101	STAIR	B	BUSINESS AREA	100 SF	328	•		4		4
										304

FIRE RATED ASSEMBLIES

REPRESENTED BY Xn

THE ASSEMBLIES REFERENCED ARE BASIS OF DESIGN; EQUIVALENT COMPATIBLE TESTED ASSEMBLIES WILL BE ACCEPTABLE IF APPROVED BY THE LAHJ

MARK	FIRE RATING	APPLIES TO	UL DESIGN OR CODE REFERENCE	REMARKS
X1	1 HOUR FIRE BARRIER	GYPSUM CEILING MEMBRANE	UL BUXV I504	INDICATES AREA WHERE OCCURS
X2	1 HOUR FIRE BARRIER	INTERIOR CMU WALLS EXISTING AND PATCH	NORTH CAROLINA CONSTRUCTION CODE TABLE 721.1(2) ITEM NUMBER 3-1.2	--

LIFE SAFETY SYMBOL LEGEND

APPLIES TO LS SERIES OF DRAWINGS ONLY

DESIGNATOR MATRIX

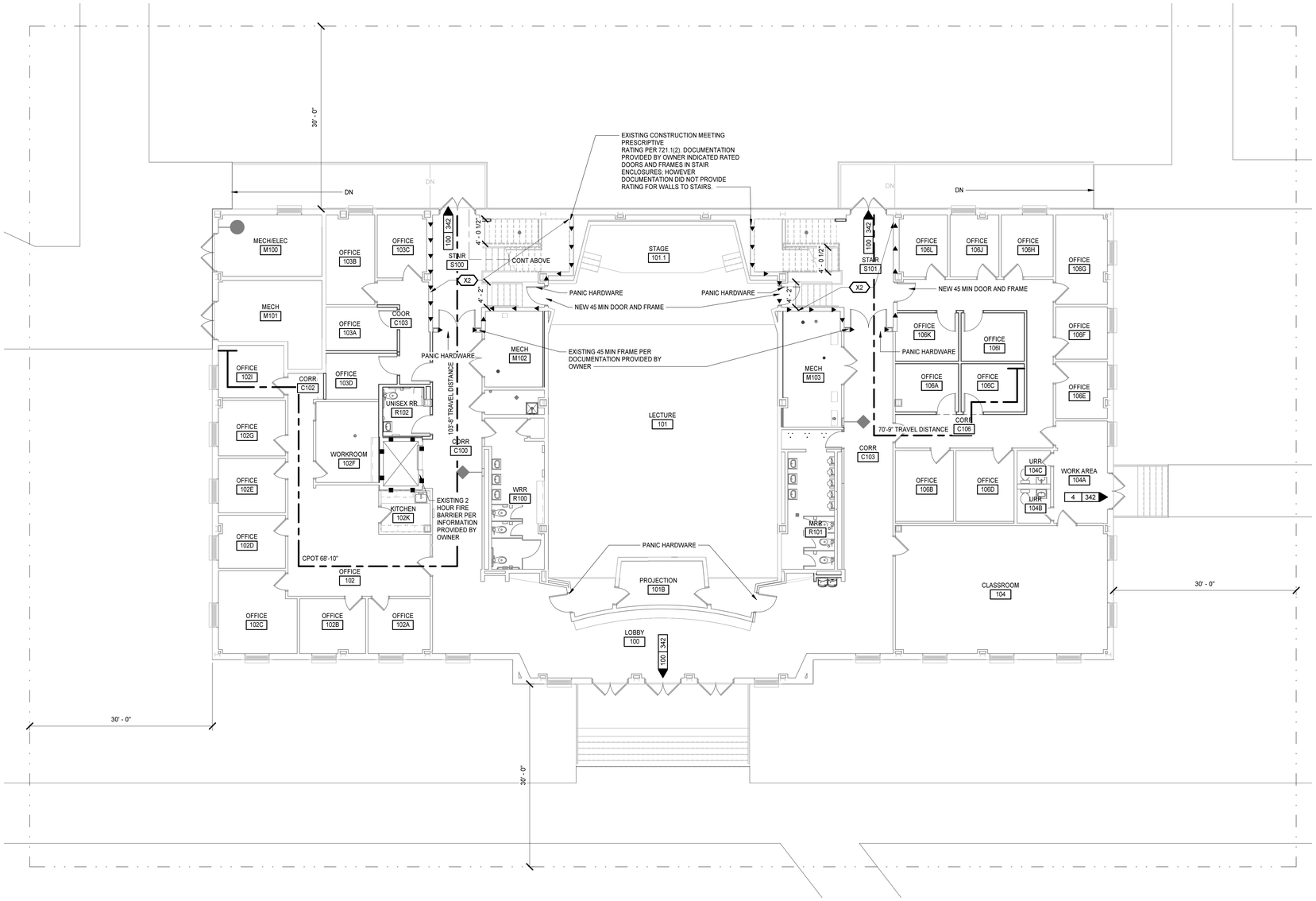
	BARRIER	NOTES
1 HR FIRE	▶▶▶▶▶	EXISTING CONSTRUCTION MEETING PRESCRIPTIVE REQUIREMENTS OF TABLE 721.1(2)
2 HR FIRE	■■■■■	PER DOCUMENTATION PROVIDED BY OWNER

SYMBOLS

- 1205 — ROOM NUMBER
- 798 1280 — DIRECTION OF EGRESS, EGRESS LOAD CAPACITY, NUMBER OF OCCUPANTS
- DIRECTION OF EGRESS, NUMBER OF OCCUPANTS, EGRESS LOAD CAPACITY — 798 1280
- XXX'-X" — MAXIMUM TRAVEL DISTANCE
- XXX'-X" CPOT — COMMON PATH OF TRAVEL
- ASSUMED PROPERTY LINE
- EXISTING TO REMAIN FIRE EXTINGUISHER CABINET
- EXISTING TO REMAIN FIRE EXTINGUISHER BRACKET

NOTES:

1. WALL DESIGNATIONS ON THE LS SERIES OF DRAWINGS ARE FOR GRAPHICAL PURPOSES ONLY AND MAY NOT REPRESENT THE ACTUAL WALL/PARTITION CONSTRUCTION.
2. REFER TO THE CONTRACT DOCUMENTS, INCLUDING THE LIFE SAFETY SYMBOLS LEGEND AND A0, A1 AND, A2 SERIES OF DRAWINGS, FOR ACTUAL WALL/PARTITION TYPES AND CONSTRUCTION REQUIREMENTS.
3. RATING OF BEARING OR NON-BEARING WALLS ARE PER TABLE 601 AND SECTION 602.1 AND DO NOT REQUIRE PROTECTED OPENINGS.



PROJECT N POLAR

LIFE SAFETY PLAN - FIRST FLOOR

1/8" = 1'-0"

0' 2' 4' 8' 16'

1/8" = 1'-0"

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ALDERMAN AND KING HALL RENOVATIONS - KING HALL

University of North Carolina Wilmington
SCO#22-24639-01A
601 Hamilton Drive, Wilmington, NC 28403

PROJECT NO: 620589
DATE: FEBRUARY 10, 2023

REVISIONS	
DATE	DESCRIPTION

LIFE SAFETY PLAN - FIRST FLOOR

LS2.1

3/24/2023 8:33:33 AM

OCCUPANCY SCHEDULE SECOND FLOOR

SPACE NUMBER	SPACE NAME	USE CLASSIFICATION	USED TO DETERMINE OCCUPANCY FACTOR ONLY	FLOOR AREA PER OCCUPANT	AREA SF	AREA GROSS	AREA NET	OCCUPANCY LOAD TABULAR	OCCUPANCY LOAD ACTUAL	OCCUPANCY LOAD DESIGN
200A	CORRIDOR	B	BUSINESS AREA	100 SF	125	•		2		2
201	CLASSROOM	B	EDUCATIONAL, CLASSROOM	20 SF	616		•	31		31
201A	STUDY LOUNGE	B	BUSINESS, CONCENTRATED	50 SF	1109	•		23	30	30
202	HONORS CLASSROOM	B	EDUCATIONAL, CLASSROOM	20 SF	703		•	36		36
203	AV	B	ACCESSORY STORAGE & MECHANICAL EQUIPMENT ROOM	300 SF	80	•		1		1
204	CORRIDOR	B	BUSINESS AREA	100 SF	472	•		5		5
204A	RECEPTION	B	BUSINESS AREA	100 SF	58	•		1		1
204B	OFFICE	B	BUSINESS, CONCENTRATED	50 SF	90	•		2		2
204C	OFFICE	B	ACCESSORY STORAGE & MECHANICAL EQUIPMENT ROOM	300 SF	90	•		1		1
204D	BUS OFFICE	B	BUSINESS AREA	100 SF	112	•		2		2
204E	OPEN OFFICE	B	BUSINESS AREA	100 SF	561	•		6		6
204F	AS. DIRECTOR	B	BUSINESS AREA	100 SF	100	•		1		1
204F	DIRECTOR	B	BUSINESS AREA	100 SF	130	•		2		2
204G	AS. DIRECTOR	B	BUSINESS AREA	100 SF	99	•		1		1
204H	AS. DIRECTOR	B	BUSINESS AREA	100 SF	103	•		2		2
204I	FELLOWSHIP	B	BUSINESS, CONCENTRATED	50 SF	150	•		4		4
204J	BREAK	B	BUSINESS, CONCENTRATED	50 SF	212	•		5		5
204K	WORKROOM	B	BUSINESS AREA	100 SF	154	•		2		2
204L	DIRECTOR	B	BUSINESS AREA	100 SF	141	•		2		2
204N	OPEN OFFICE	B	BUSINESS AREA	100 SF	412	•		5		5
204O	AS. DIRECTOR	B	BUSINESS AREA	100 SF	100	•		1		1
205	TELCOM	B	ACCESSORY STORAGE & MECHANICAL EQUIPMENT ROOM	300 SF	94	•		1		1
206	CONFERENCE	B	BUSINESS, CONCENTRATED	50 SF	249	•		5	8	8
209A	OFFICE	B	BUSINESS AREA	100 SF	333	•		4		4
209B	OFFICE	B	BUSINESS AREA	100 SF	132	•		2		2
209C	OFFICE	B	BUSINESS AREA	100 SF	151	•		2		2
209D	CORRIDOR	B	BUSINESS AREA	100 SF	393	•		4		4
209E	CORRIDOR	B	BUSINESS AREA	100 SF	242	•		3		3
209F	CORRIDOR	B	BUSINESS AREA	100 SF	620	•		7		7
210	2 + 2 LAB	B	EDUCATIONAL, SHOP & VOCATIONAL	50 SF	644		•	13		13
212	2 + 2 CLASSROOM	B	EDUCATIONAL, CLASSROOM	20 SF	690		•	35		35
ELV200	EX ELEV	B	BUSINESS AREA	100 SF	42	•		1		1
H200	HSK	B	ACCESSORY STORAGE & MECHANICAL EQUIPMENT ROOM	300 SF	61	•		1		1
M200	EX ELEV EQUIP	B	ACCESSORY STORAGE & MECHANICAL EQUIPMENT ROOM	300 SF	35	•		1		1
M201	MECH	B	ACCESSORY STORAGE & MECHANICAL EQUIPMENT ROOM	300 SF	209	•		1		1
R200	UNISEX RR	B	BUSINESS AREA	100 SF	55	•		1		1
R201	UNISEX RR	B	BUSINESS AREA	100 SF	55	•		1		1
S200	STAIR	B	BUSINESS AREA	100 SF	199	•		2		2
S201	STAIR	B	BUSINESS AREA	100 SF	199	•		2		2
										231

LIFE SAFETY SYMBOL LEGEND

APPLIES TO LS SERIES OF DRAWINGS ONLY

DESIGNATOR MATRIX

	BARRIER	NOTES
1 HR FIRE	▶▶▶▶▶▶	EXISTING CONSTRUCTION MEETING PRESCRIPTIVE REQUIREMENTS OF TABLE 721.1(2)
2 HR FIRE	■■■■■■	PER DOCUMENTATION PROVIDED BY OWNER

NOTES:

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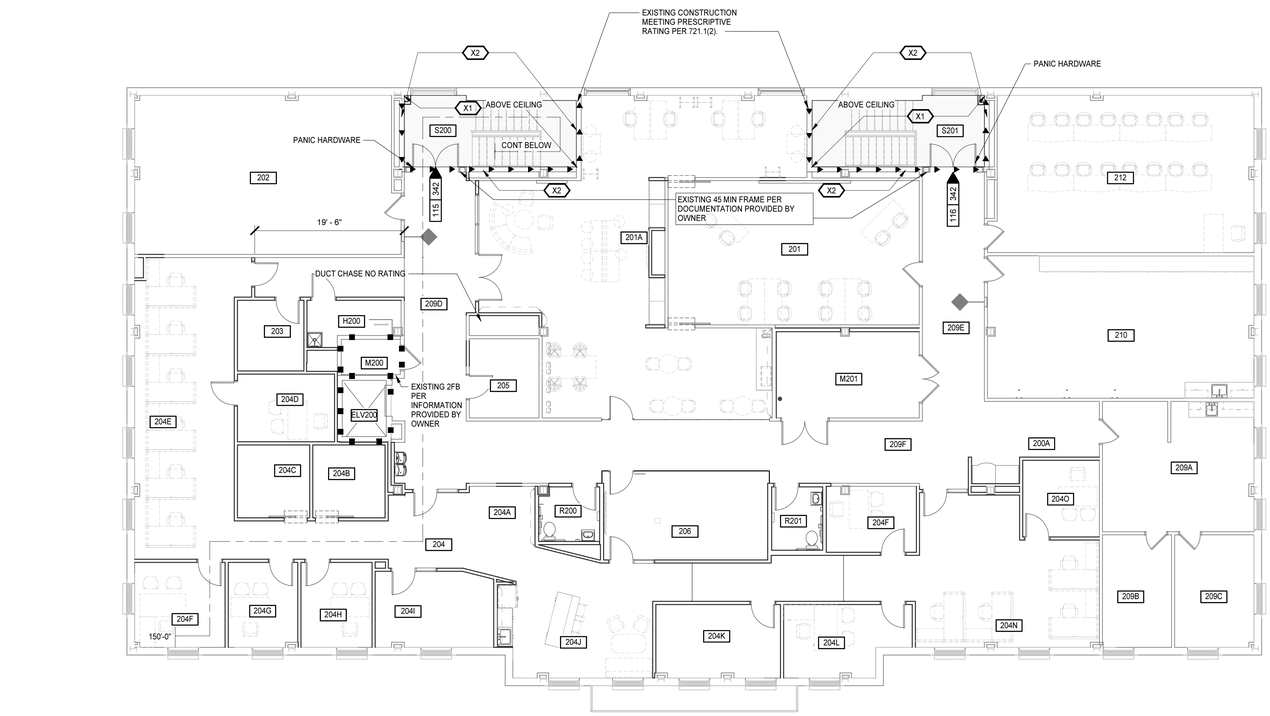
2. REFER TO THE CONTRACT DOCUMENTS, INCLUDING THE LIFE SAFETY SYMBOLS LEGEND AND A0, A1 AND, A2 SERIES OF DRAWINGS, FOR ACTUAL WALL/PARTITION TYPES AND CONSTRUCTION REQUIREMENTS.

3. RATING OF BEARING OR NON-BEARING WALLS ARE PER TABLE 601 AND SECTION 602.1 AND DO NOT REQUIRE PROTECTED OPENINGS.

SYMBOLS

- 1205 — ROOM NUMBER
- 798 | 1280 — DIRECTION OF EGRESS; EGRESS LOAD CAPACITY; NUMBER OF OCCUPANTS
- DIRECTION OF EGRESS; NUMBER OF OCCUPANTS; EGRESS LOAD CAPACITY — 798 | 1280
- XXX'-X" — MAXIMUM TRAVEL DISTANCE
- XXX'-X" CPOT — COMMON PATH OF TRAVEL
- ASSUMED PROPERTY LINE
- EXISTING TO REMAIN FIRE EXTINGUISHER CABINET
- EXISTING TO REMAIN FIRE EXTINGUISHER BRACKET



PROJECT N / POLAR

SECOND FLOOR PLAN

1/8" = 1'-0"

0' 2' 4' 8' 16'

1/8" = 1'-0"

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ALDERMAN AND KING HALL RENOVATIONS - KING HALL

University of North Carolina Wilmington
SCO#22-24639-01A
601 Hamilton Drive, Wilmington, NC 28403

PROJECT NO: 620589
DATE: FEBRUARY 10, 2023

REVISIONS	
DATE	DESCRIPTION

LIFE SAFETY PLAN - SECOND FLOOR

LS2.2

3/24/2023 8:33:36 AM

X1

Fire-resistance Ratings - ANSI/UL 263

BXUV - Fire Resistance Ratings - ANSI/UL 263 Certified for United States
BXUV7 - Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada

See General Information for Fire-resistance Ratings - ANSI/UL 263 Certified for United States
Design Criteria and Allowable Variances

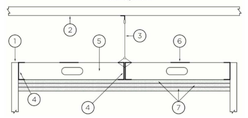
See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada
Design Criteria and Allowable Variances

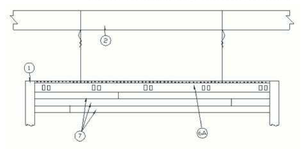
Design No. I504

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 Hour System





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.

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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ALDERMAN AND KING HALL RENOVATIONS - KING HALL

University of North Carolina Wilmington
SCO#22-24639-01A
601 Hamilton Drive, Wilmington, NC 28403

PROJECT NO: 620589
DATE: FEBRUARY 10, 2023

REVISIONS	
DATE	DESCRIPTION

FIRE RESISTANCE ASSEMBLIES

LS3.1

3/24/2023 8:33:37 AM

UL Product iQ®

XHEZ.W-J-1020 - Through-penetration Firestop Systems

Design/System/Construction/Assembly Usage Disclaimer

- Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Certified products, equipment, system, devices, and materials.
- Authorities Having Jurisdiction should be consulted before construction.
- Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field.
- When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction.
- Only products which bear UL's Mark are considered Certified.

XHEZ - Through-penetration Firestop Systems
XHEZ7 - Through-penetration Firestop Systems Certified for Canada

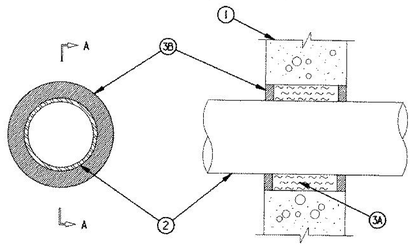
See General Information for Through-penetration Firestop Systems

See General Information for Through-penetration Firestop Systems Certified for Canada

System No. W-J-1020

January 22, 2015

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Rating — 2 Hr	F Rating — 2 Hr
T Rating — 0 and 1/4 Hr (See Item 3B)	FT Rating — 0 and 1/4 Hr (See Item 3B)
L Rating At Ambient — Less Than 1 CFM/sq ft	FH Rating — 2 Hr
L Rating At 400 F — 4 CFM/sq ft	FTH Rating — 0 and 1/4 Hr (See Item 3B)
	L Rating At Ambient — Less Than 1 CFM/sq ft
	L Rating At 400 F — 4 CFM/sq ft



SECTION A-A

1. **Wall Assembly —** Min 5 in. (127 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m^3) concrete. Wall may also be constructed of any UL Classified **Concrete Blocks***. Max diam of opening is 8 in. (203 mm).
See **Concrete Blocks** (CAZT) category in the Fire Resistance Directory for names of manufacturers.

2. **Through Penetrants —** One metallic pipe, conduit or tubing to be installed either concentrically or eccentrically within the firestop system. Pipe, conduit or tubing to be rigidly supported on both sides of wall assembly. The annular space between pipe, conduit or tubing and periphery of opening shall be min 3/4 in. (19 mm) to max 3-1/2 in. (89 mm). The following types and sizes of metallic pipes, conduits or tubing may be used:

A. **Conduit —** Nom 4 in. (102 mm) diam (or smaller) electrical metallic tubing or steel conduit.

B. **Copper Tubing —** Nom 4 in. (102 mm) diam (or smaller) Type L (or heavier) copper tubing.

C. **Copper Pipe —** Nom 4 in. (102 mm) diam (or smaller) Regular (or heavier) copper pipe.

3. **Firestop System —** The hourly Ratings for the firestop systems are dependent upon the type and size of pipe, annular space, fill material thickness and fill material type as described in the table below. When the annular space in the table shows a range of distances, the penetrating item may be installed either concentrically or eccentrically within the firestop system. The firestop systems shall consist of the following:

A. **Packing Material —** Mineral wool batt insulation firmly packed into opening as a permanent form. As an option to the above, backer rod and/or foamed plastic backer material may be used. Packing material to be recessed from both surfaces of wall to accommodate the required thickness of fill material.

B. **Fill, Void or Cavity Material — Sealant* —** Applied within the annulus, flush with both surfaces of wall as shown in the table below:

Pipe Type	Min Fill Mtl Thkns In. (mm)	F, FH Rating Hr	T Rating Hr
2A	1/4 (6)	2	1/4

2B	1/2 (13)	2	0

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-One Sealant or FS-ONE MAX Intumescent Sealant

*** 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 2015-01-22

UL Product iQ®

XHEZ.W-J-5013 - Through-penetration Firestop Systems

Design/System/Construction/Assembly Usage Disclaimer

- Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Certified products, equipment, system, devices, and materials.
- Authorities Having Jurisdiction should be consulted before construction.
- Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field.
- When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction.
- Only products which bear UL's Mark are considered Certified.

XHEZ - Through-penetration Firestop Systems

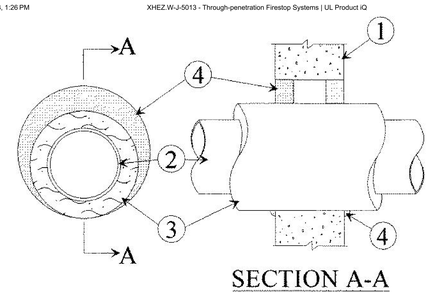
See General Information for Through-penetration Firestop Systems

System No. W-J-5013

September 08, 2004

F Ratings — 1 and 2 Hr (See Item 4)

T Ratings — 1 and 1-1/2 Hr (See Item 4)



SECTION A-A

1. **Wall Assembly —** Min 4-1/2 in. thick lightweight or normal weight (100-150 pcf) concrete. Wall may also be constructed of any UL Classified **Concrete Blocks***. Max diam of opening is 8-1/2 in.
See **Concrete Blocks** (CAZT) category in the Fire Resistance Directory for names of manufacturers.

2. **Through Penetrants —** One metallic pipe or tubing installed either concentrically or eccentrically within the firestop system. Pipe, conduit or tubing to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes, conduits or tubing may be used:

A. **Steel Pipe —** Nom 4 in. diam (or smaller) Schedule 10 (or heavier) steel pipe.

B. **Copper Tubing —** Nom 4 in. diam (or smaller) Type L (or heavier) copper tubing.

C. **Copper Pipe —** Nom 4 in. diam (or smaller) Regular (or heavier) copper pipe.

3. **Pipe Covering* —** Nom 1-1/2 in. thick hollow cylindrical heavy density (min 3.5 pcf) glass fiber units jacketed on the outside with an all service jacket. Longitudinal joints sealed with metal fasteners or factory-applied SSL tape. Transverse joints secured with metal fasteners or with butt tape supplied with the product. The annular space between the insulated pipe and the edge of the through opening shall be min zero in. (continuous point contact) to max 1-1/4 in.
See **Pipe and Equipment Covering — Materials** (BRGU) category in the Building Materials Directory for names of manufacturers. Any pipe covering material meeting the above specifications and bearing the UL Classification Marking with a Flame Spread Index of 25 or less and a Smoke Developed Index of 50 or less may be used.

4. **Fill, Void or Cavity Materials* — Caulk or Sealant —** Min thickness of 5/8 in. and 1-1/4 in. of caulk or putty for 1 and 2 hr rated wall assemblies, respectively, applied within annulus between pipe covering and periphery of the opening, flush with both surfaces of wall assembly. A min 1/2 in. diam bead of caulk shall be applied to the pipe covering/wall interface at the point contact location on both sides of wall. **The hourly F and T Ratings of the firestop system are 1 hr when installed in 1 hr fire rated wall assemblies. The hourly F Rating of the firestop system is 2 hr when installed in 2 hr fire rated wall assemblies. When installed in 2 hr fire rated wall assemblies, T Rating is 1 hr when copper tube is used and 1-1/2 hr when steel pipe is used.**
3M COMPANY — *CP 25WB+ or FB-3000 WT*

5. **Packing Material —** (Optional) — Mineral wool or fiberglass insulation or polyethylene backer rod firmly packed into opening as a permanent form. Packing material to be recessed from both surfaces of wall as required to accommodate the required thickness of caulk fill material.

*** 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 2004-09-08

UL Product iQ®

XHEZ.W-J-5187 - Through-penetration Firestop Systems

Design/System/Construction/Assembly Usage Disclaimer

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- Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field.
- When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction.
- Only products which bear UL's Mark are considered Certified.

XHEZ - Through-penetration Firestop Systems

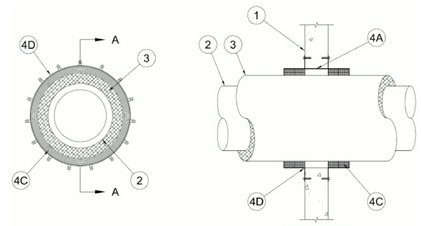
See General Information for Through-penetration Firestop Systems

System No. W-J-5187

June 28, 2017

F Rating — 2 Hr

T Rating — 2 Hr



SECTION A-A

1. **Wall Assembly —** Min 5 in. (127 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m^3) concrete. Wall may also be constructed of any UL Classified **Concrete Blocks***. Max diam of opening is 19-1/2 in. (495 mm).
See **Concrete Blocks** (CAZT) category in the Fire Resistance Directory for names of manufacturers.

2. **Through Penetrants —** One nonmetallic pipe to be installed within the opening. Pipe to be rigidly supported on both sides of the wall assembly. The following types and sizes of nonmetallic pipe may be used:

A. **Polypropylene (PP-R) Pipe —** Nom 12 in. diam - 315 mm OD (or smaller) SDR 11 Aquatherm Blue Pipe MF for use in closed (process or supply) piping systems.

B. **Polypropylene (PP-R) Pipe —** Nom 12 in. diam - 315 mm OD (or smaller) SDR 11 Aquatherm Green Pipe S for use in closed (process or supply) piping systems.

3. **Pipe Covering Materials* — Cellular Glass Insulation —** Nom 2 in. (51 mm) thick cellular glass units sized to the outside diam of the through-penetrant and supplied in nom 24 in. (610 mm) long half sections or nom 18 in. (457 mm) long segments. Pipe insulation installed on pipe in accordance with the manufacturer's instructions. Transverse joints located within 36 in. (914 mm) of wall surfaces secured using min 1/2 in. (13 mm) wide by 0.028 in. (0.7 mm) thick stainless steel hose clamps offset 1 in. (25 mm) from joint on each side of joint. A nom annular space of 1-9/16 in. (40 mm) is required within the firestop system.

4. **Firestop System —** The firestop system shall consist of the following:

A. **Steel Sleeve —** Cylindrical sleeve fabricated from min 0.016 in. (0.4 mm) thick (30 gauge) galv sheet steel and having a 2 in. (51 mm) lap along the longitudinal seam. Length of steel sleeve to be 4 in. (102 mm) greater than the thickness of the wall. Sleeve installed by coiling the sheet steel to a diam smaller than the through opening, inserting the coil through the opening and releasing the coil to let it uncoil against the circular opening within the wall assembly. The ends of the sleeve shall extend 2 in. (51 mm) beyond each surface of the wall.

B. **Fill, Void or Cavity Material — Sealant or Putty —** (Not Shown) Min 3/8 in. (10 mm) diam bead of fill material applied around circumference of steel sleeve at its egress from the concrete wall on each side of the wall.
SPECIFIED TECHNOLOGIES INC — SpecSeal Series SSS Sealant, SpecSeal LCI Sealant or SpecSeal Putty

C. **Fill, Void or Cavity Materials* — Wrap Strip —** Nom 3/16 in. (4.8 mm) thick intumescent material faced on both sides with a plastic film, supplied in 2 in. (51 mm) wide strips. Two stacks (4 in. (102 mm) stack height) of wrap strips are individually or continuously wrapped around the through penetrant. Each stack shall consist of seven layers of wrap

strip. When wrap strips are individually wrapped, ends of wrap strips shall be butted and held in place with tape. Butted ends in successive layers may be aligned or offset. The first stack of wrap strips shall be slid along the through penetrant into the sleeve such that the outside edges of the wrap strip layers are flush with the end of the sleeve. The second stack of wrap strips shall be installed such that the edges of the wrap strip layers abut the first stack. Two stacks of wrap strips are required on each side of the wall.
SPECIFIED TECHNOLOGIES INC — SpecSeal BLU Wrap Strip

D. **Steel Collar —** Collar fabricated from coils of precut 0.029 in. (0.7 mm) thick (No. 22 MSG) galv sheet steel available from wrap strip manufacturer. Collar shall be nom 4 in. (102 mm) deep with a min of six 1 in. (25 mm) wide by 2 in. (51 mm) long anchor tabs for securement to the wall. Retainer tabs, 3/4 in. (19 mm) wide tapering down to 3/8 in. (10 mm) wide and located opposite the anchor tabs, are folded 90 degrees toward through penetrant surface to maintain the annular space around wrap strips and through penetrant and to retain the wrap strips. Two steel collars wrapped around wrap strips and through penetrant with a min 1 in. (25 mm) wide overlap at the end of each collar along its perimeter joint with the adjacent steel collar. Steel collars tightened around wrap strips and through penetrant using min 1/2 in. (13 mm) wide by 0.028 in. (0.7 mm) thick stainless steel hose clamps located 1 in. (25 mm) and 3 in. (76 mm) from wall surface. Collars to be secured to wall surfaces with 1/4 in. (6 mm) diam by min 1-1/4 in. (32 mm) long steel concrete screws in conjunction with min 1 in. (25 mm) diam steel fender washers through each of a min of twelve symmetrically-located anchor tabs. As an alternate to the steel concrete screws, steel collars secured to steel sleeve with twelve No. 8 by 3/8 in. (10 mm) long sheet metal screws, symmetrically located around the perimeter of the steel collar. Steel collars installed on both sides of the wall assembly.

*** 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 2017-06-28

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ALDERMAN AND KING HALL RENOVATIONS - KING HALL

University of North Carolina Wilmington
SCO#22-24639-01A
601 Hamilton Drive, Wilmington, NC 28403

PROJECT NO: 620589
DATE: FEBRUARY 10, 2023

REVISIONS

DATE	DESCRIPTION

FIRE RESISTANCE ASSEMBLIES - PENETRATIONS

LS4.1

3/24/2023 8:33:39 AM

UL Product iQ®

XHEZ.W-L-2606 - Through-penetration Firestop Systems

Design/System/Construction/Assembly Usage Disclaimer

- Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Certified products, equipment, system, devices, and materials.
- Authorities Having Jurisdiction should be consulted before construction.
- Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field.
- When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction.
- Only products which bear UL's Mark are considered Certified.

XHEZ - Through-penetration Firestop Systems
XHEZ7 - Through-penetration Firestop Systems Certified for Canada

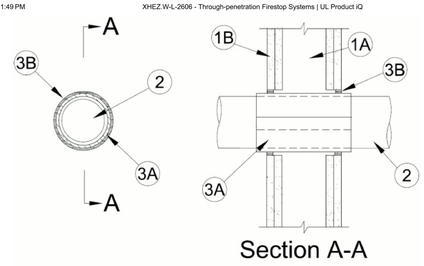
See General Information for Through-penetration Firestop Systems

See General Information for Through-penetration Firestop Systems Certified for Canada

System No. W-L-2606

June 04, 2015

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Ratings — 1 and 2 Hr (See Item 1)	F Ratings — 1 and 2 Hr (See Item 1)
T Ratings — 1 and 2 Hr (See Item 1)	FT Ratings — 1 and 2 Hr (See Item 1)
	FH Ratings — 1 and 2 Hr (See Item 1)
	FTH Ratings — 1 and 2 Hr (See Item 1)



System tested with a pressure differential of 50 Pa between the exposed and the unexposed surfaces with the higher pressure on the exposed side.

1. **Wall Assembly —** The 1 or 2 hr fire-rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300, U400, V400 or W400 Series Wall and Partition Design in the UL Fire Resistance Directory and shall include the following construction features:

A. **Studs —** Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) OC. Steel studs to be min 3-1/2 in. (89 mm) wide and spaced max 24 in. (610 mm) OC.

B. **Gypsum Board* —** Min 5/8 in. (16 mm) with square or tapered edges. Thickness, type, number of layers and fasteners as specified in the individual Wall and Partition Design. Diam of opening shall be max 1-11/16 in. (43 mm) larger than OD of through penetrant. Max diam of opening is 8 in. (203 mm).

The hourly F, FT, FH and FTH Rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.

2. **Through Penetrants —** One nonmetallic pipe to be installed concentrically within the firestop system. The annular space between the pipe and periphery of opening shall be max 7/8 in. (22 mm). Pipe to be rigidly supported on both sides of the wall assembly. The following types and sizes of nonmetallic pipes may be used:

A. **Polypropylene (PP-R) Pipe —** Nom 6 in. diam - 160 mm OD (or smaller) SDR 17.6 MF Aquatherm Blue Pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.

3. **Firestop System —** The firestop system shall consist of the following:

A. **Firestop Device* —** Galv steel sleeve lined with an intumescent material sized to fit the specific diam of the through penetrant. Device to be installed in accordance with the manufacturer's installation instructions along with the following: Device to be wrapped around outer circumference of through penetrant and installed through the annular space of the opening. The device may be temporarily secured by means of tape or tie wires around the outer circumference of through penetrant to allow for installation of the fill material (Item 3B). The device shall be centered within the wall and extend equally beyond each surface of the wall.
RECTORSEAL — FlameSafe® Intumescent Sleeve 68, Metacaulk Intumescent Sleeve 68 or Biostop Intumescent Sleeve 68

B. **Fill, Void or Cavity Material* — Sealant —** Min 1/2 in. (13 mm) thickness of fill material applied within the annulus, flush with both surfaces of wall.
RECTORSEAL — Metacaulk 1000, Metacaulk 150+, Biostop 500+, Biostop 150+, FlameSafe 1900

*** 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 2015-06-04

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ALDERMAN AND KING HALL RENOVATIONS - KING HALL

University of North Carolina Wilmington
SCO#22-24639-01A
601 Hamilton Drive, Wilmington, NC 28403

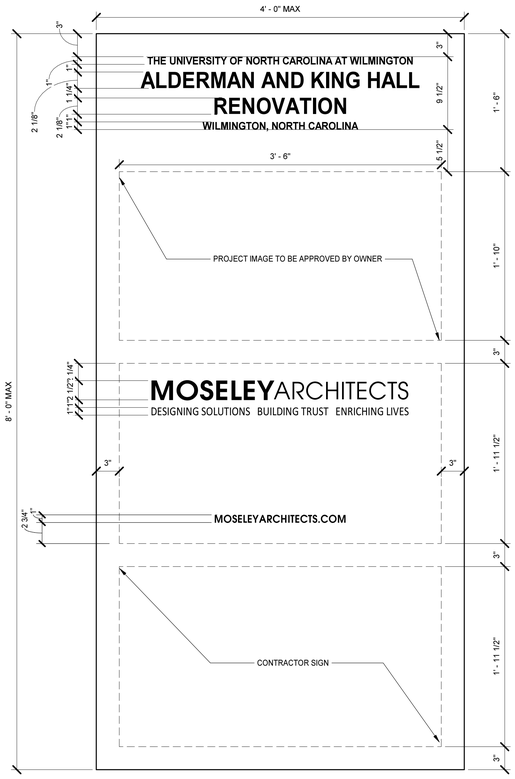
PROJECT NO: 820589
DATE: FEBRUARY 10, 2023

REVISIONS	
DATE	DESCRIPTION

FIRE RESISTANCE ASSEMBLIES - PENETRATIONS

LS4.2

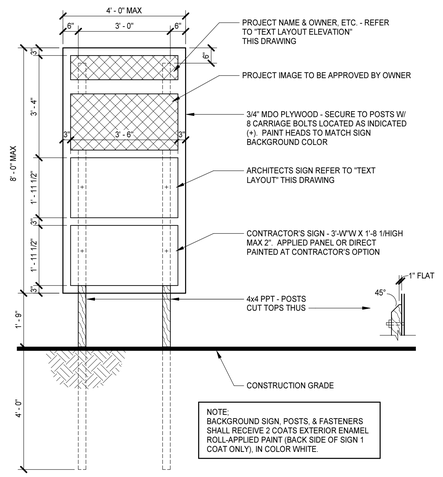
3/24/2023 8:33:40 AM



NOTE: CONSTRUCTION PROJECT SIGN TO BE PROVIDED BY THE UNIVERSITY USING THE TEMPLATE ABOVE

TEXT LAYOUT ELEVATION

1 1/2" = 1'-0"



PROJECT SIGN ELEVATION

1/2" = 1'-0"

ARCHITECTURAL ABBREVIATIONS

A-PT	ACCENT PAINT
ABS	AIR BARRIER SYSTEM
ABV	ABOVE
ACP	ACOUSTICAL CEILING PANEL
ACT	ACOUSTICAL CEILING TILE
ACW	ALUMINUM CLAD WINDOW
ADJ	ADJUSTABLE
AFF	ABOVE FINISHED FLOOR
AGS	ALL GLASS STOREFRONT
AHJ	AUTHORITY HAVING JURISDICTION
AHU	AIR HANDLING UNIT
ALT	ALTERNATE
ALUM	ALUMINUM
AP	ACCESS PANEL
APC	ARCHITECTURAL PRECAST CONCRETE
ARC	ABUSE RESISTANT COATING
AS	ALUMINUM STOREFRONT
AUTO	AUTOMATIC
AVG	AVERAGE
AW	ALUMINUM WINDOW
AWC	ACOUSTICAL WALL COVERING
AWP	ACOUSTICAL WALL PANEL
BD	BOARD
BF	BARRIER FREE (ADA or A117.1)
BLDG	BUILDING
BLKG	BLOCKING
BOT	BOTTOM
BRG	BEARING
BTWN	BETWEEN
BUR	BUILT-UP ROOF
C	CARPET
C-TILE	CARPET TILE
CAB	CABINET
CB	CHALKBOARD
CCTV	CLOSED CIRCUIT TELEVISION
CEM	CEMENT
CFSF-NS	COLD FORMED STEEL FRAMING, NON-STRUCTURAL
CFSF-S	COLD FORMED STEEL FRAMING, STRUCTURAL
CG	CORNER GUARD
CI	CONTINUOUS INSULATION
CIPC	CAST IN PLACE CONCRETE
CJ	CONTROL JOINT
CL	CLOSET
CLG	CEILING
CLR	CLEAR
CM	CENTIMETER
CMBD	CEMENT BOARD
CMU	CONCRETE MASONRY UNIT
CMU-A	CONCRETE MASONRY UNIT - ACOUSTICAL
CMU-GF	CONCRETE MASONRY UNIT - GROUND FACE
CMU-GLZ	CONCRETE MASONRY UNIT - GLAZED
CMU-SPLF	CONCRETE MASONRY UNIT - SPLIT FACE
CO	CLEANOUT
COL	COLUMN
CONC	CONCRETE
CONC-LH	CONCRETE WITH LIQUID HARDENER/SEALER
CONC-PMT	CONCRETE WITH PIGMENT
CONC-POL	CONCRETE - POLISHED
CONC-SLR	CONCRETE WITH CURE & SEAL
CONC-ST	CONCRETE WITH STAIN
CONST	CONSTRUCTION
CONT	CONTINUOUS
CONTR	CONTRACTOR
CORR	CORRIDOR
CSMU	CAST STONE MASONRY UNIT
CT	CERAMIC TILE
CTSK	COUNTERSINK, COUNTERSUNK
CU FT	CUBIC FEET / FOOT
CUST	CUSTODIAN / CUSTODIAL
CW	ALUMINUM CURTAIN WALL
CWFD	CEMENTITIOUS WOOD FIBER DECK
D	DEPTH/DEEP
DBL	DOUBLE
DEMO	DEMOLITION
DETE	DETENTION
DF	DRINKING FOUNTAIN
DG	DOOR GRILLE
DHM	DETENTION HOLLOW METAL
DIA	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DIV	DIVISION
DL	DOOR LOUVER
DN	DOWN
DP	DAMPPROOFING
DR	DISPLAY RAIL
DS	DOWNSPOUT
DTL	DETAIL
DWG	DRAWING
DWR	DRAWER
EA	EACH
EF	EXHAUST FAN
EFS	EXTERIOR FINISH SYSTEM
EIFS	EXTERIOR INSULATION & FINISH SYSTEM
EJ	EXPANSION JOINT
EL	ELEVATION
ELAS	ELASTOMERIC
ELEC	ELECTRICAL
ELEV	ELEVATOR
EMER	EMERGENCY
EPS	EXPANDED POLYSTYRENE
EPX	EPOXY
EQ	EQUAL
EQUIP	EQUIPMENT
ETR	EXISTING TO REMAIN
EVCT	ENHANCED VINYL COMPOSITION TILE
EWC	ELECTRIC WATER COOLER
EX	EXISTING
EXH	EXHAUST
EXP	EXPANSION
EXPC	EXPOSED CONSTRUCTION
EXT	EXTERIOR
FAAF	FLUID APPLIED ATHLETIC FLOORING
FD	FLOOR DRAIN
FDN	FOUNDATION
FE	FIRE EXTINGUISHER
FEB	FIRE EXTINGUISHER BRACKET
FEC	FIRE EXTINGUISHER CABINET
FF	FINISHED FLOOR
FGL	FIBERGLASS
FH	FIRE HYDRANT
FHC	FIRE HOSE CABINET
FHVC	FIRE HOSE VALVE CABINET
FIN	FINISHED
FLR	FLOOR
FLRG	FLOORING
FO	FACE OF
FRM	FRAME
FRP	FIBERGLASS REINFORCED PLASTIC
FRT	FIRE RETARDANT TREATED
FT	FOOT, FEET
FTG	FOOTING
FURN	FURNITURE
FVC	FIRE VALVE CABINET
FWC	FABRIC WALL COVERING
GA	GAUGE
GAL	GALLON
GALV	GALVANIZED
GB	GYPSUM BOARD
GB-AR	GYPSUM BOARD - ABUSE RESISTANT
GB-IR	GYPSUM BOARD - IMPACT RESISTANT
GB-S	GYPSUM BOARD - SECURITY
GFRC	GLASS FIBER REINFORCED CONCRETE
GFRG	GLASS FIBER REINFORCED GYPSUM
GL	GLASS, GLAZING
GL-BLK	GLASS BLOCK
GPM	GALLONS PER MINUTE
GRT	GROUT
GSFT	GLAZED STRUCTURAL FACING TILE
GT	GLASS TILE
GWT	GLAZED WALL TILE
GYP	GYPSUM
H	HIGH
HB	HOSE BIBB
HBD	HARDBOARD
HDC	HOLD DOWN CLIPS
HDNR	HARDENER
HDWD	HARDWOOD
HDWR	HARDWARE
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HPC	HIGH PERFORMANCE COATINGS
HPFP	HIGH PERFORMANCE FLOOR PAINT
HT	HEIGHT
HVAC	HEATING, VENTILATING, AIR CONDITIONING
ID	INSIDE DIAMETER
IN	INCH, INCHES
INCL	INCLUDE, INCLUDING
INFO	INFORMATION
INST	INSTALLATION
INSUL	INSULATION
INT	INTERIOR
IRWC	IMPACT RESISTANT WALL COVERING
IWB	INTERACTIVE WHITE BOARD
JAN	JANITOR
JCT	JUNCTION
JT	JOINT
L	LENGTH/LONG
LAB	LABORATORY
LAHJ	LOCAL AUTHORITY HAVING JURISDICTION
LAM	LAMINATE
LAV	LAVATORY
LH	LEFT HAND
LIN	LINOLEUM
LKR	LOCKER
LMC	LINEAR METAL CEILING
LPS	LAMINATE PANEL SYSTEM
LT	LIGHT
LVR	LOUVER
M	METER
MACH	MACHINE
MAS	MASONRY
MATL	MATERIAL
MAX	MAXIMUM
MB	MARKERBOARD
MCM	METAL COMPOSITE MATERIAL
MCP	METAL CEILING PANEL
MDO	MEDIUM DENSITY OVERLAY
MECH	MECHANICAL
MED	MEDIUM
MEMB	MEMBRANE
MFR	MANUFACTURER
MIF	MULTICOLOR INTERIOR FINISHING
MIN	MINIMUM
MIR	MIRROR
MISC	MISCELLANEOUS
MLDG	MOLDING
MO	MASONRY OPENING
MPS	MANUAL PROJECTION SCREEN
MR	MAP RAIL
MT	MOUNT
MTD	MOUNTED
MTL	METAL
NA	NOT APPLICABLE
NIC	NOT IN CONTRACT
NO	NUMBER
NOM	NOMINAL
NRC	NOISE REDUCTION COEFFICIENT
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
OPNG	OPENING
OPP HD	OPPOSITE HAND
OVHD	OVERHEAD
P-TILE	PORCELAIN TILE
PC	PRECAST
PERF	PERFORATED, PERFORATION(S)
PERIM	PERIMETER
PIP	POURED IN PLACE
PLAM	PLASTIC LAMINATE
PLAS	PLASTER
PLWD	PLASTIC LAMINATE WOOD
PLYWD	PLYWOOD
PNL	PANEL, PANELING
POLY	POLYETHYLENE
PPS	POWER PROJECTION SCREEN
PPT	PRESSURE- OR PRESERVATIVE-TREATED
PR	PAIR
PREFAB	PREFABRICATED
PREFIN	PREFINISHED
PREP	PREPARE / PREPARATION
PS	PROJECTION SCREEN
PSB	PENCIL SHARPENER BLOCK
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	PAINT
PTN	PARTITION
PTS	PNEUMATIC TUBE SYSTEM
PVC	POLYVINYL CHLORIDE
PVMT	PAVEMENT
PVWC	PERFORATED VINYL WALL COVERING
QSM	QUARTZ SURFACING MATERIAL
QT	QUARRY TILE
QTY	QUANTITY
R	RISER, RADIUS
R/W	RIGHT OF WAY
RAD	RADIUS
RAF	RESILIENT ATHLETIC FLOORING
RB	RESILIENT BASE
RCP	REFLECTED CEILING PLAN
RD	ROOF DRAIN
REFG	REFRIGERATOR
REINF	REINFORCING, REINFORCE(D)
REM	RECESSED ENTRY MAT
REQ'D	REQUIRED
RES	RESINOUS FLOORING
RFT	RUBBER FLOOR TILE
RH	RIGHT HAND
RL	RAIN LEADER
RM	ROOM
RO	ROUGH OPENING
RSF	RUBBER SHEET FLOORING
RSR	RESILIENT STAIR RISER
RST	RESILIENT STAIR TREAD
RT	RIGHT
RTU	ROOFTOP UNIT
SAB	SOUND ATTENUATION BLANKET
SC-PLK	SECURITY CEILING PLANK
SC-PNL	SECURITY CEILING PANEL
SCH	SCHEDULE
SF	SQUARE FEET / FOOT
SFRM	SPRAYED FIRE RESISTANT MATERIAL
SHM	SECURITY HOLLOW METAL
SHTG	SHEATHING
SIM	SIMILAR
SPEC	SPECIFICATION
SPF	SPRAYED POLYURETHANE FOAM
SPR	SPRINKLER
SQ	SQUARE
SQ FT	SQUARE FEET / FOOT
SRD	SECONDARY ROOF DRAIN
SS	STAINLESS STEEL
SSM	SOLID SURFACE MATERIAL
ST	STREET
STC	SOUND TRANSMISSION COEFFICIENT
STD	STANDARD
STL	STEEL
STRUCT	STRUCTURAL
SUSP	SUSPENDED
SV	SHEET VINYL
SWM	SECURITY WOVEN MESH / WOVEN ROD
SYM	SYMMETRICAL
T	TREAD
T&G	TONGUE & GROOVE
T.O.	TOP OF
TB	TACKBOARD
TCF	TEXTILE COMPOSITE FLOORING
TEL	TELEPHONE
TERR-C	TERRAZZO CEMENTITIOUS
TERR-E	TERRAZZO EPOXY
TERR-R	TERRAZZO RUBBERIZED
THHD	THRESHOLD
THK	THICKNESS, THICK
TOS	TOP OF STEEL
TOW	TOP OF WALL
TS	TACK STRIP
TV	TELEVISION
TYP	TYPICAL
UC	UNDERCUT
UG	UNDERGROUND
UH	UNIT HEATER
UNO	UNLESS NOTED (INDICATED) OTHERWISE
VAT	VINYL ASBESTOS TILE
VB	VAPOR BARRIER
VCT	VINYL COMPOSITION TILE
VDB	VISUAL DISPLAY BOARD
VERT	VERTICAL
VEST	VESTIBULE
VFCT	VINYL FREE COMPOSITION TILE
VFWC	VINYL FREE WALLCOVERING
VR	VAPOR RETARDER
VT	VINYL TILE
VTR	VENT THROUGH ROOF
VW	VINYL WINDOW
VWC	VINYL WALL COVERING
W	WIDE, WIDTH
W/	WITH
W/O	WITHOUT
WC	WATER CLOSET
WCP	WOOD CEILING PANEL
WD	WOOD
WDW	WINDOW
WP	WATERPROOFING
WPT	WORKING POINT
WSCT	WAINSCOT
WSF	WOOD SPORTS FLOORING
WT	WEIGHT
WWF	WELDED WIRE FABRIC
XPS	EXTRUDED POLYSTYRENE

KEYNOTES

n — KEYNOTE (1 TO 2 DIGITS)

nnn — KEYNOTE (3 DIGITS ONLY)

n n/n" — SIZE: THICKNESS: OR OTHER DESCRIPTIVE INFORMATION

1. KEYNOTES ARE GENERALLY ASSOCIATED WITH A SERIES OF DRAWINGS (e.g., A3.2:n, A5.1:n); THEREFORE KEYNOTE NUMBERS FROM SERIES TO SERIES WILL VARY (i.e., KEYNOTE NO. 1 IN THE A3.2:n SERIES WILL BE DIFFERENT FROM KEYNOTE NO. 1 IN THE A5.1:n SERIES).

ARCHITECTURAL GRAPHIC SYMBOL LEGEND

REFER TO A3.0.1 FOR FINISH SCHEDULE — SUPERVISOR'S OFFICE (A101, 100 SF): SPACE NAME, SPACE NUMBER, SQUARE FOOTAGE, IF INDICATED; BUILDING "PART" NUMBER IN MULTI-PART BUILDING: SPACE

REFER TO A3.1.1 FOR SCHEDULE — A101C, 60: DOOR; FIRE RATING IN MINUTES (IF INDICATED); DOOR SUFFIX LETTER WHEN MORE THAN ONE DOOR PER SPACE; SPACE NUMBER

REFER TO A3.1.n FOR TYPES — STL 11': STEEL FRAME NUMBER

REFER TO A3.1.n FOR TYPES — AW 11': ALUMINUM WINDOW NUMBER

REFER TO A3.1.n FOR TYPES — AS 11': ALUMINUM STOREFRONT NUMBER

REFER TO A3.1.n FOR TYPES — VW 11': VINYL WINDOW NUMBER

REFER TO A3.1.n FOR TYPES — CW 11': CURTAIN WALL NUMBER

REFER TO A3.1.n FOR TYPES — VR 11': LOUVER NUMBER

REFER TO A3.1.n FOR TYPES — GBLK 11': GLASS BLOCK NUMBER

REFER TO A0.2 FOR LEGEND — JOINT

REFER TO A0.2 FOR LEGEND — X=n: WALL PARTITION TYPE; FIRE RESISTANCE RATING IN HOURS

REFER TO A0.2 FOR LEGEND — X=XX: WALL PARTITION TYPE; SB=SMOKE BARRIER SP=SMOKE PARTITION IU=INCIDENTAL USE

REFER TO A8.1.1 FOR ELEVATIONS — A8.3 (9, 10) / A8.1 (8): INTERIOR ARCHITECTURAL WOODWORK (CASEWORK) ELEVATION

REFER TO A10.1 FOR LEGEND — RFAn: ROOF ASSEMBLY

REFER TO LS1.1 FOR LEGEND — Xn: FIRE-RATED ASSEMBLY

REFER TO A5.1.1 FOR LEGEND — WAn: WALL ASSEMBLY

REFER TO A7.1.1 FOR LEGEND — TAn: TOILET ASSEMBLY

REFER TO A3.1.n FOR LEGEND — n: GLAZING/GLASS TYPES

1T: EQUIPMENT TYPE

N: PLAN NORTH (MAY DIFFER FROM POLAR NORTH)

MATCH LINE

WPT: WORKING POINT

DATUM POINT

C: CENTERLINE

P: PLATE

FEC: SURFACE MOUNT FEC: TOP OF CABINET AT 4'-0" AFF

FEC: SEMI-RECESSED FEC: T.O. MASONRY OPENING AT 4'-0" AFF

FEC: FULLY-RECESSED FEC: T.O. MASONRY OPENING AT 4'-0" AFF

FEB: BRACKET: MOUNT BRACKET AT 4'-0" AFF

1 / A: STRUCTURAL GRID LINE WITH DESIGNATIONS

A2.1 — WALL OR MISC SECTION WHERE CUT: WALL SECTION NUMBER; DRAWING NUMBER WHERE WALL SECTION IS INDICATED

A2.1 — DETAIL OR ENLARGED PLAN WHERE CUT: DETAIL OR ENLARGED PLAN NUMBER; DRAWING NUMBER WHERE DETAIL OR ENLARGED PLAN IS INDICATED

A2.1 / A2.1 — BUILDING SECTION WHERE CUT: SECTION NUMBER; DRAWING NUMBER WHERE SECTION IS INDICATED

A7.1 (1, 2, 3, 4) — INTERIOR OR EXTERIOR ELEVATION WHERE CUT: ELEVATION NUMBER; DRAWING NUMBER WHERE ELEVATION IS INDICATED; MULTIPLE ELEVATIONS

PLAN TITLE

1/8"=1'-0"

A — ELEVATION OR BUILDING SECTION TITLE

1/4"=1'-0"

A2.0.1, A2.0.2, A2.0.3 / A4.1

- ELEVATION OR BUILDING SECTION LETTER
- DRAWING NUMBER WHERE ELEVATION OR BUILDING SECTION IS INDICATED
- DRAWING NUMBER WHERE ELEVATION OR BUILDING SECTION IS CUT
- ADDITIONAL DRAWING NUMBERS WHERE ELEVATION OR BUILDING SECTION IS CUT

1 — ENLARGED PLAN OR WALL SECTION TITLE

1/4"=1'-0"

A2.1 / A7.1 / A2.3 / A2.6

- ENLARGED PLAN OR WALL SECTION NUMBER
- DRAWING NUMBER WHERE ENLARGED PLAN OR WALL SECTION IS INDICATED
- DRAWING NUMBER WHERE ENLARGED PLAN OR WALL SECTION IS CUT
- ADDITIONAL DRAWING NUMBERS WHERE ENLARGED PLAN OR WALL SECTION IS CUT

3 — DETAIL TITLE

1/2"=1'-0"

A5.1 / A5.2 / A5.3 / A5.7

- DETAIL NUMBER OR LETTER
- DRAWING NUMBER WHERE DETAIL IS INDICATED
- DRAWING NUMBER WHERE DETAIL IS CUT
- ADDITIONAL DRAWING NUMBERS WHERE DETAIL IS CUT

1 — CASEWORK TITLE

1/4"=1'-0"

- CASEWORK ELEVATION NUMBER

ARCHITECTURAL GENERAL NOTES

A. THE CONTRACT DOCUMENTS ARE COMPLEMENTARY AND WHAT IS REQUIRED BY ONE SHALL BE AS BINDING AS IF REQUIRED BY ALL. IN THE CASE OF A CONFLICT, DISAGREEMENT, OR AMBIGUITY, PROVIDE THE BETTER QUALITY. IN THE CASE OF A CONFLICT, DISAGREEMENT, OR AMBIGUITY, PROVIDE THE GREATER QUANTITY OF WORK.

B. ELEMENTS THAT ARE IDENTIFIED BY OTHER DISCIPLINES (e.g., CIVIL, STRUCTURAL, PLUMBING, FIRE PROTECTION, MECHANICAL, ELECTRICAL) ELSEWHERE WITHIN THE ARCHITECTURAL SERIES OF DRAWINGS AND/OR SPECIFICATIONS, OR IDENTIFIED OR COVERED BY DEFAULTS (e.g., SIZES, THICKNESS, SPACING, MATERIALS) IN THE SPECIFICATIONS MAY NOT BE ANNOTATED (NOTE OR KEYNOTED) ON THESE DRAWINGS.

C. ELEMENTS IDENTIFIED IN "LEGENDS" AND/OR "GENERAL NOTES" MAY NOT BE NOTED IN DETAILS, OR SECTIONS, AS THESE ELEMENTS ARE IDENTIFIED IN THE LEGENDS (e.g. FACE BRICK, CMU, WINDOWS)

D. REFER TO "ASSEMBLIES" FOR MATERIALS AND COMPONENTS THAT MAKE UP THAT PARTICULAR ASSEMBLY (e.g., EXTERIOR WALL ASSEMBLIES, ROOF ASSEMBLIES, AND FIRE-RATED ASSEMBLIES). ONCE A PARTICULAR ASSEMBLY HAS BEEN IDENTIFIED ON ONE DRAWING, THAT SAME ASSEMBLY GRAPHIC SHALL APPLY TO ALL OTHER SIMILAR LOCATIONS UNLESS SPECIFICALLY INDICATED OTHERWISE. PROVIDE THAT SAME ASSEMBLY AT THE SIMILAR LOCATION WHETHER THE ASSEMBLY GRAPHIC SYMBOL IS SHOWN OR NOT.

E. VERIFY ALL DIMENSIONS, INCLUDING DIMENSIONS ON STRUCTURAL DRAWINGS AND OTHER ARCHITECTURAL DRAWINGS. IMMEDIATELY NOTIFY ARCHITECT OF ANY DISCREPANCIES.

F. PROVIDE CONCRETE HOUSEKEEPING PADS FOR ALL EQUIPMENT INDICATED TO BE MOUNTED OR OTHERWISE REQUIRED TO BE MOUNTED TO THE FLOOR. WHERE PADS ARE NOT SHOWN, PROVIDE 6" THICK CONCRETE PADS W/ 3/4" CHAMFERED EDGES (ALL SIDES). REINFORCE WITH MESH EQUIVALENT TO FLOOR SLAB REINFORCING REQUIREMENTS.

ARCHITECTURAL MATERIALS LEGEND

- EARTH
- POROUS FILL
- CONCRETE
- FACE BRICK
- SPLIT-FACE BLOCK
- CONCRETE MASONRY UNIT
- GROUTED SOLID CONCRETE MASONRY UNIT

NOTE: PROVIDE 100% SOLID, PLANT-CAST UNITS WHERE CORE HOLES WOULD BE VISIBLE WITHIN FINISH SPACE (E.G., WINDOW SILLS)

- ARCHITECTURAL PRECAST CONCRETE
- CAST STONE MASONRY
- RIGID INSULATION
- BATT INSULATION
- SPRAYED POLYURETHANE FOAM
- WOOD SHIM
- WOOD BLOCKING - CONTINUOUS
- FINISHED WOOD
- PLYWOOD
- GYPSUM BOARD / SHEATHING
- STONE

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ALDERMAN AND KING HALL RENOVATIONS - KING HALL

University of North Carolina Wilmington
SCO#22-24639-01A
601 Hamilton Drive, Wilmington, NC 28403

PROJECT NO: 620589
DATE: FEBRUARY 10, 2023

REVISIONS	
DATE	DESCRIPTION

GENERAL ARCHITECTURAL INFORMATION

A0.1

3/24/2023 4:15:14 PM

TERMINATION GENERAL NOTES

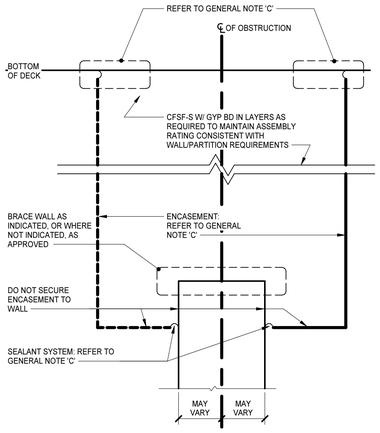
A. AT FIRE-, SMOKE-, AND ACOUSTICALLY RATED WALLS: SEAL ALL NON-OBSTRUCTED HEAD-OF-WALL CONDITIONS IN ACCORDANCE WITH JOINT SYSTEM MANUFACTURER'S RECOMMENDATIONS BASED ON CONDITION ENCOUNTERED (E.G., CMU-TO-DECK (PARALLEL OR PERPENDICULAR TO FLUTES); OR CFSF-TO-DECK (PARALLEL OR PERPENDICULAR TO FLUTES) TO MAINTAIN ASSEMBLY RATING CONSISTENT WITH WALL/PARTITION REQUIREMENTS. BRACE WALL AS INDICATED OR REQUIRED.

B. AT ALL OTHER WALLS INDICATED TO EXTEND TO UNDERSIDE OF FLOOR/ROOF DECK/CAP: SEAL ALL NON-OBSTRUCTED HEAD-OF-WALL CONDITIONS IN ACCORDANCE WITH JOINT SYSTEM MANUFACTURER'S RECOMMENDATIONS BASED ON CONDITION ENCOUNTERED (E.G., CMU-TO-DECK (PARALLEL OR PERPENDICULAR TO FLUTES); OR CFSF-TO-DECK (PARALLEL OR PERPENDICULAR TO FLUTES). BRACE WALL AS INDICATED OR REQUIRED.

C. AT ALL WALLS PREVENTED FROM TERMINATING AT THE UNDERSIDE OF FLOOR/ROOF DECK BY OBSTRUCTIONS, COMPLY WITH THE FOLLOWING:

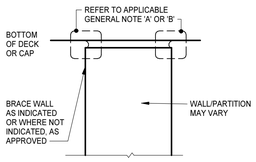
- AT FIRE-, SMOKE-, AND ACOUSTICALLY-RATED WALLS: ENCASE OBSTRUCTION(S) TO MAINTAIN ASSEMBLY RATING CONSISTENT WITH WALL/PARTITION REQUIREMENTS.
- AT SECURITY WALLS: TERMINATE IN ACCORDANCE WITH SECURITY PARTITION REQUIREMENTS.
- AT OTHER WALLS: ENCASE OBSTRUCTION(S) ON ONE SIDE.
- SEAL ENCASEMENT TO WALL AND SEAL ENCASEMENT TO DECK IN ACCORDANCE WITH JOINT SYSTEM MANUFACTURER'S RECOMMENDATIONS AND TO MAINTAIN ASSEMBLY RATING CONSISTENT WITH WALL/PARTITION REQUIREMENTS.

TERMINATIONS



HEAD-OF-WALL TERMINATION @ OBSTRUCTION

OBSTRUCTION MAY VARY (BEAM, JOIST, GIRDER, CHANNEL, DUCTWORK, PIPING)



HEAD-OF-WALL TERMINATION @ NON-OBSTRUCTION

WALL JOINT GENERAL NOTES

A. LOCATE CONTROL JOINTS IN INTERIOR AND EXTERIOR WALLS AS INDICATED ON DRAWINGS.

B. JOINTS ARE INDICATED THUS ◄ ON PLANS AND ELEVATIONS.

C. WALLS AND JOINT TYPES/DETAILS ARE DIAGRAMMATIC. ADJUST JOINT TYPES/DETAILS IN ACCORDANCE WITH ACTUAL FIELD CONDITIONS.

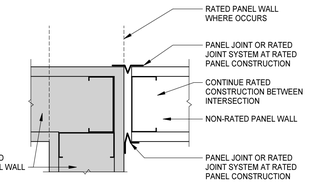
D. PROVIDE TESTED JOINT ASSEMBLIES AT FIRE-, SMOKE-, AND ACOUSTICAL-RATED WALLS.

E. WHEN USED HEREIN "RATED" MEANS: FIRE, SMOKE, AND/OR ACOUSTICAL.

F. REFER TO SPECIFICATIONS FOR ADDITIONAL WALL JOINT REQUIREMENTS.

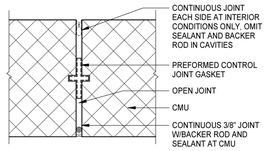
WALL JOINTS

RATED/ NON-RATED CFSF/ PANELS

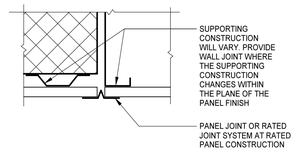


NOTE:
RATED WALL SHADED FOR CLARITY THIS DETAIL

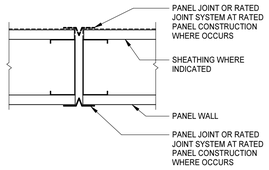
CMU



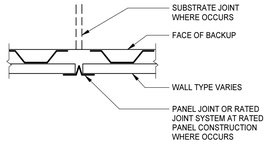
CMU/ CFSF



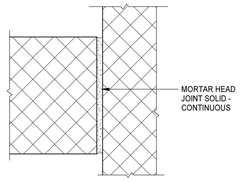
CFSF/ PANELS



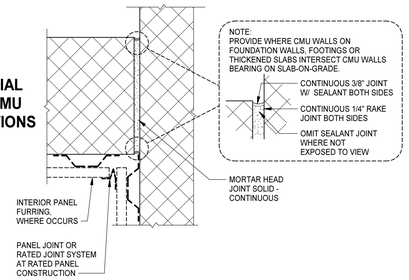
PANEL



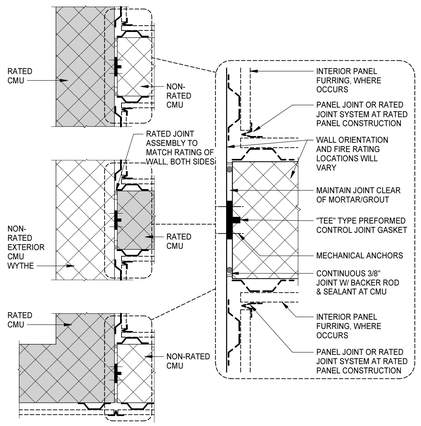
EQUAL BEARING CMU INTERSECTIONS



DIFFERENTIAL BEARING CMU INTERSECTIONS



RATED/ NON-RATED CMU



NOTE:
RATED WALLS SHADED FOR CLARITY THIS DETAIL

WALL/PARTITION TYPE GENERAL NOTES

A. PLAN DIMENSIONS ARE TO FACE OF WALL OR PARTITION. WHERE APPLIED FINISHES OCCUR-SUCH AS CERAMIC TILE-DIMENSIONS ARE TO FACE OF APPLIED FINISH. FOR WAINSCOTS, FLOOR PLAN DIMENSIONS ARE TO FACE OF WAINSCOT MATERIAL. APPLIED FINISHES ARE NOT ALLOWED TO REDUCE CLEAR DIMENSIONS. "APPLIED FINISHES" IN THIS CASE DO NOT INCLUDE TRIM, BASE, AND ACOUSTIC WALL PANELS.

B. REFER TO REFLECTED CEILING PLANS LEGEND ON A2.2 FOR HEIGHT OF PARTITIONS.

C. ALL INTERIOR MASONRY UNIT PARTITIONS: M1 UNLESS INDICATED OTHERWISE.

D. ALL INTERIOR CFSF PANEL PARTITIONS: P1 UNLESS INDICATED OTHERWISE.

E. REFER TO STRUCTURAL DRAWINGS AND RELATED SPECIFICATIONS FOR SOLID MASONRY, GROUTING, AND REINFORCEMENT REQUIREMENTS INCLUDING BUT MAY NOT BE LIMITED TO:

- MASONRY WALLS/PARTITIONS
- LINTELS
- LINTEL BEARING CONDITIONS
- BOND BEAMS
- SHELF BEARING CONDITIONS
- STRUCTURAL REINFORCING REQUIREMENTS
- CHANGES IN WYTHE

F. THE TERMS "WALL" AND "PARTITION" MAY BE USED INTERCHANGEABLY THROUGHOUT THE CONTRACT DOCUMENTS.

G. EXTEND ALL FIRE-, SMOKE-, INCIDENTAL USE-, AND ACOUSTICAL-RATED WALLS/PARTITIONS TO UNDERSIDE OF FLOOR DECK, ROOF DECK, STRUCTURAL ELEMENT ENCASEMENT OR SOLID CAP ABOVE.

- SEAL AND TERMINATE IN ACCORDANCE WITH JOINT SYSTEM TESTED ASSEMBLIES FOR RESPECTIVE TYPE OF WALLS/PARTITIONS, AND THE APPROPRIATE FIRE RATING.

H. PARTITIONS THAT DO NOT EXTEND TO UNDERSIDE OF DECK OR CAP ABOVE:

- EXTEND 4 INCHES MINIMUM ABOVE HIGHEST ADJACENT FINISH CEILING UNLESS INDICATED OTHERWISE.

I. DO NOT CONNECT TIES, ANCHORS, OR REINFORCING TO SINGLE CANTILEVERED FIRE WALL OR BETWEEN DOUBLE FIRE WALLS.

J. SEAL AROUND ALL PENETRATIONS.

K. COMPLY WITH TERMINATION, WALL JOINT, AND MISCELLANEOUS DETAILS FOR THOSE CONDITIONS WHERE APPLICABLE. COMPLY WITH REFERENCED STANDARDS WHERE DETAILS ARE NOT IDENTIFIED IN THE DRAWINGS.

L. WALL/PARTITION TYPES DO NOT ADDRESS WALL FINISHES. REFER TO FINISH SCHEDULE.

M. FINISHED SPACES: PROVIDE CHASES AROUND ALL EXPOSED VERTICAL COMPONENTS, INCLUDING BUT NOT LIMITED TO: DUCTWORK, PIPING, AND CONDUIT, UNLESS COMPONENTS ARE SPECIFICALLY INDICATED TO REMAIN EXPOSED. IF NOT OTHERWISE INDICATED, PROVIDE P2 CHASE CONSTRUCTION.

- HOLD CHASES TIGHT TO COMPONENTS ALLOWING FOR ACCESS, INSULATION, AND TOLERANCES.
- EXTEND CHASES FROM FLOOR TO 4 INCHES MINIMUM ABOVE FINISH CEILING OR IF NO CEILING IS INDICATED, EXTEND CHASES TO UNDERSIDE OF FLOOR DECK, ROOF DECK, OR SOLID CAP ABOVE AND TERMINATE ACCORDINGLY.

N. PROVIDE BACKER BOARD/UNIT OF SAME THICKNESS INDICATED IN LIEU OF GYPSUM BOARD PANEL AT PORTIONS OF WALLS/PARTITIONS TO RECEIVE TILE.

MASONRY UNIT WALL/PARTITION TYPES

REPRESENTED BY Xnn

MARK	FIRE RATED ASSEMBLY (REFER TO LS 2.1 FOR RATED ASSEMBLIES LEGEND)	REMARKS	INFORMATION
M1	X2	1FB	7 5/8" — 8" CMU

PANEL WALL/PARTITION TYPES

REPRESENTED BY Xnn

MARK	FIRE RATED ASSEMBLY (REFER TO LS 2.1 FOR RATED ASSEMBLIES LEGEND)	REMARKS	INFORMATION
P1	--	--	5 1/2" @P1A; 4 7/8" — 5/8" GYPSUM BOARD, BOTH SIDES; 3-5/8" CFSF-NS; SOUND ATTENUATION BLANKETS
P1A	--	(2) LAYERS OF GYP ONE SIDE @ P1A	
P2	--	--	5 1/2" @P2B; 4 7/8" @P2A; 4 1/4" — 5/8" GYPSUM BOARD; 3-5/8" CFSF-NS; SOUND ATTENUATION BLANKETS
P2A	--	(2) LAYERS GYP @P2A	
P2B	--	(3) LAYERS GYP @ P2 B	
P3	--	--	6 1/8" — (2) LAYERS 5/8" GYPSUM BOARD, BOTH SIDES; 3-5/8" CFSF-NS; SOUND ATTENUATION BLANKETS
P4	--	--	4 1/4" — 5/8" BACKER BOARD; MORTAR; 3-5/8" CFSF-NS; TILE; SOUND ATTENUATION BLANKETS
P5	--	--	3/4" MIN; 4 7/8"; 3/4" MIN — 5/8" BACKER BOARD; MORTAR; 3-5/8" CFSF-NS; TILE; SOUND ATTENUATION BLANKETS; 5/8"

PANEL WALL/PARTITION TYPES

REPRESENTED BY Xnn

MARK	FIRE RATED ASSEMBLY (REFER TO LS 2.1 FOR RATED ASSEMBLIES LEGEND)	REMARKS	INFORMATION
P6	--	--	VARIES; 1 3/8" MIN — EXISTING STEEL STUDS; 5/8" BACKER BOARD; MORTAR; TILE
P7	--	--	EXISTING CMU WALL; MORTAR; TILE
P8	--	--	1 1/2"; 5/8" BACKER BOARD; MORTAR; 7/8" FURRING; TILE; SUBSTRATE TYPE VARIES
P9	--	--	4 7/8"; 3/4" MIN — 5/8" GYPSUM BOARD; 5/8" BACKER BOARD; MORTAR; 3-5/8" CFSF-NS; TILE; SOUND ATTENUATION BLANKETS
P10	--	--	7 1/4"; 3/4" MIN — 5/8" GYPSUM BOARD; 5/8" BACKER BOARD; MORTAR; 6" CFSF-NS; TILE; SOUND ATTENUATION BLANKETS
P11	--	--	5/8" GYP BOARD; 7/8" FURRING; SUBSTRATE TYPE VARIES
P12	--	--	3 1/8"; 5/8" GYPSUM BOARD; 2-1/2" CFSF-NS; SUBSTRATE TYPE VARIESSNKETS
P13	--	--	5 1/2"; 3/4" MIN — (2) LAYERS 5/8" GYPSUM BOARD; 5/8" BACKER BOARD; MORTAR; 3-5/8" CFSF-NS; TILE; SOUND ATTENUATION BLANKETS
P14	--	--	4 1/4" VIF; 1 7/8" — (3) LAYERS 5/8" GYPSUM BOARD; EXISTING STUD CAVITY; VERIFY SIZE IN FIELD AND FILL WITH SAB; EXISTING WALL TO REMAIN
P15	--	--	2 1/4" — 5/8" GYP BOARD; RESILIENT CHANNELS; 7/8" FURRING; EXISTING CMU WALL SAB, FILL CAVITY

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ALDERMAN AND KING HALL RENOVATIONS - KING HALL

University of North Carolina Wilmington
SCO#22-24639-01A
601 Hamilton Drive, Wilmington, NC 28403

PROJECT NO: 620589
DATE: FEBRUARY 10, 2023

DATE	REVISIONS DESCRIPTION

WALL/PARTITION TYPES, WALL JOINTS AND TERMINATIONS

A0.2

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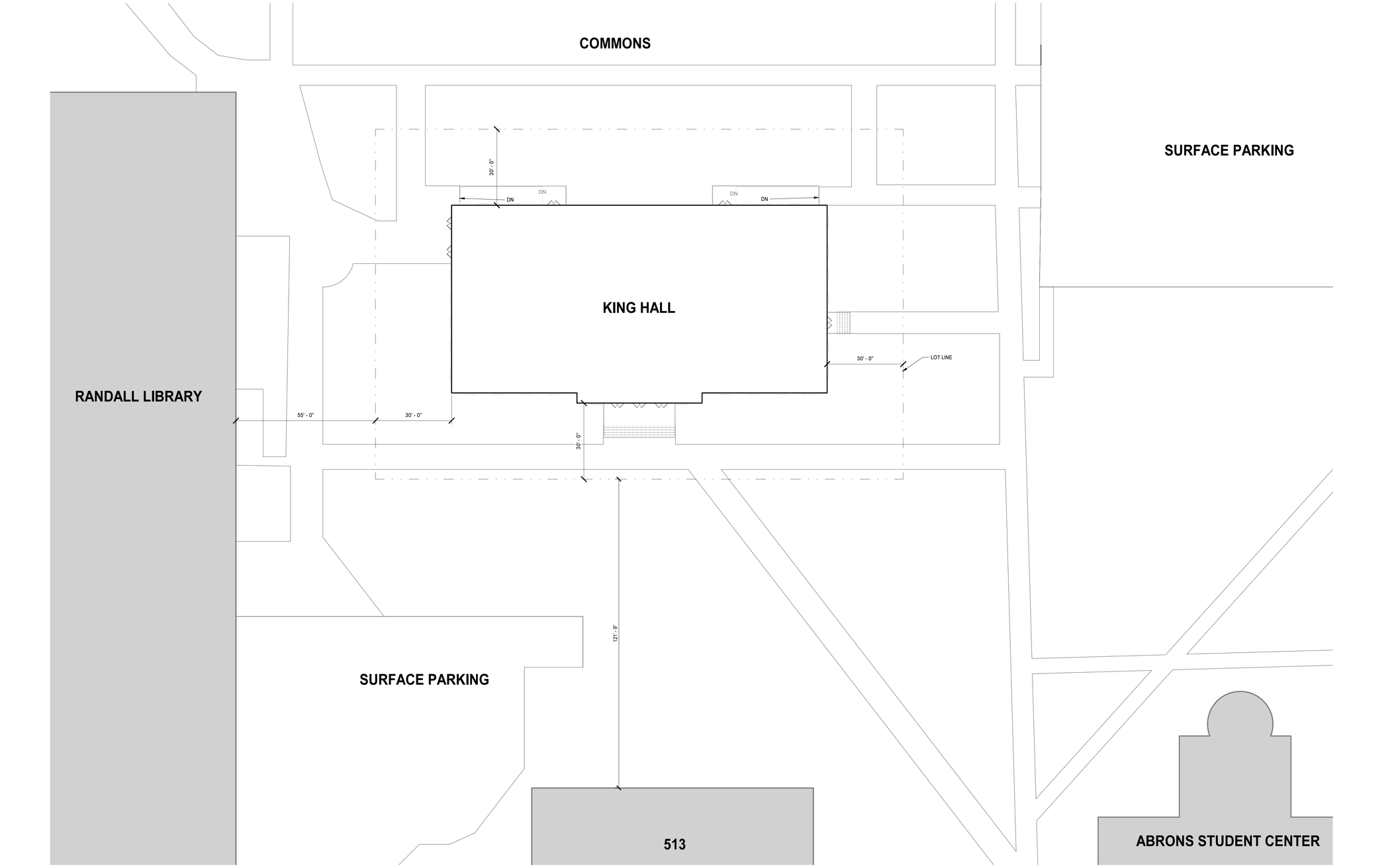

PROJECT N POLAR

SITE PLAN
1/16" = 1'-0"

0' 4' 8' 16' 32'
1/16" = 1'-0"

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ALDERMAN AND KING HALL RENOVATIONS - KING HALL

University of North Carolina Wilmington
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PROJECT NO: 620589
DATE: FEBRUARY 10, 2023

REVISIONS

DATE	DESCRIPTION

SITE PLAN

A1.0

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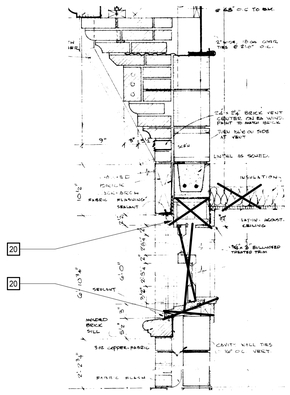
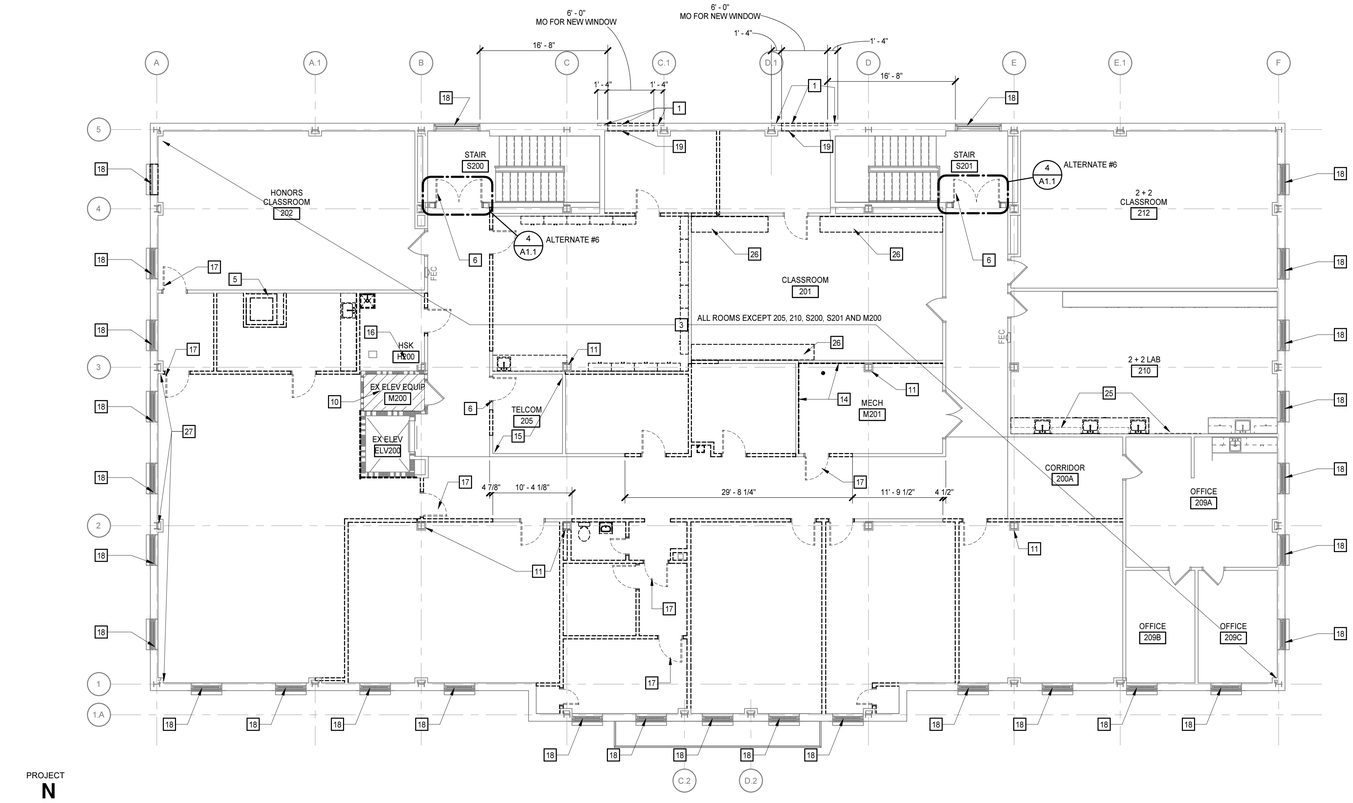


TYP SECTION @ EXISTING WINDOWS; VIF

ALTERNATE #1 DEMOLITION DETAIL

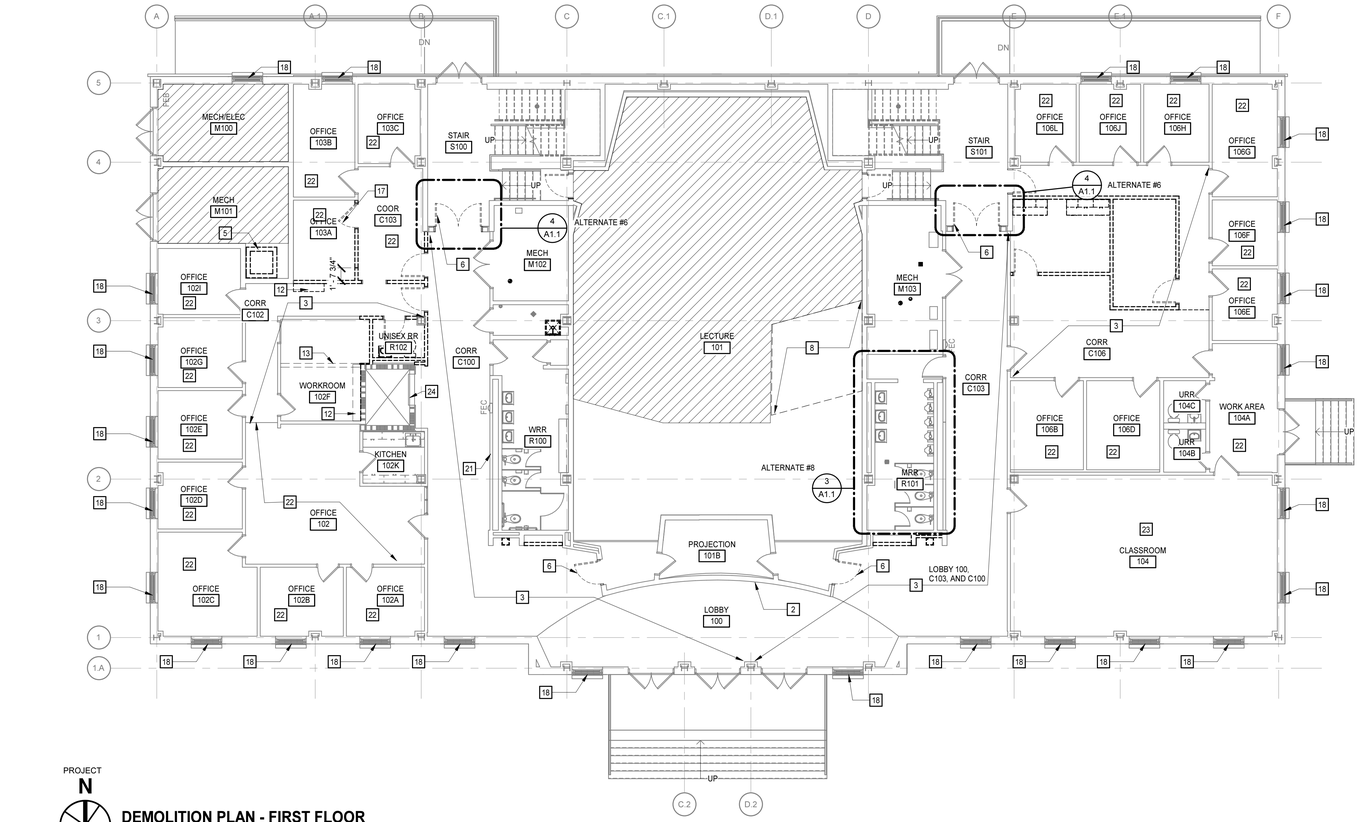
NO SCALE

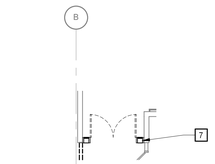


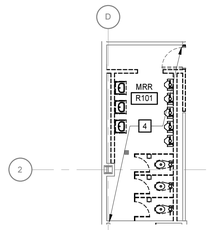
PROJECT NORTH
POLAR

DEMOLITION PLAN - SECOND FLOOR

1/8" = 1'-0"







ALTERNATE 6 DEMOLITION PLAN

4 A1.1 A1.1 — 1/8" = 1'-0"

ALTERNATE 8 DEMOLITION PLAN

3 A1.1 A1.1 — 1/8" = 1'-0"

PROJECT NORTH
POLAR

DEMOLITION PLAN - FIRST FLOOR

1/8" = 1'-0"

DEMOLITION PLAN LEGEND

APPLIES TO DRAWINGS A1.1 - A1.2

- EXISTING PARTITION/ WALL/ ITEM TO REMAIN
- REMOVE EXISTING PARTITION/WALL/ITEM
- REMOVE EXISTING WINDOW ASSEMBLY AND FRAMING, INCLUDING ANCHORS
- REMOVE EXISTING DOOR AND FRAME ASSEMBLY INCLUDING DOOR HARDWARE, ANCHORS, AND THRESHOLD (WHERE OCCURS).
- REMOVE EXISTING PLUMBING FIXTURE. REFER TO PLUMBING DEMOLITION PLAN FOR ADDITIONAL INFORMATION.
- EXISTING CEILING ABOVE TO REMAIN

DEMOLITION PLAN GENERAL NOTES

A. ALL DEMOLITION WORK INDICATED IN THESE DRAWINGS INVOLVE REMOVAL OF EXISTING CONSTRUCTION UNDER THIS CONTRACT AND SHALL BE COORDINATED WITH CORRESPONDING PLUMBING, MECHANICAL, AND ELECTRICAL DRAWINGS.

B. REMOVE EXISTING CONSTRUCTION AS INDICATED. DEMOLITION SHALL BE TO THE LEAST EXTENT POSSIBLE IN ORDER TO COMPLETE THE WORK. DO NOT PERFORM DEMOLITION BEYOND THE SCOPE OF CONSTRUCTION. FLOOR SLABS UNDER FLOORING REMOVED SHALL BE CLEAN OF ADHESIVES AND CHEMICAL RESIDUE.

C. FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS INDICATED ON THE DRAWINGS. COORDINATE THE SCOPE, DIMENSIONS, AND EXTENT OF THE DEMOLITION WORK TO BE PERFORMED WITH THE WORK.

D. PLAN DIMENSIONS FOR EXISTING CONDITIONS ARE TO FACE OF FINISH OR CENTERLINE OF STRUCTURAL FRAMING, UNLESS OTHERWISE NOTED. ALL DIMENSIONS SHOWN FOR EXISTING CONSTRUCTION ARE APPROXIMATE.

E. DAMAGE OCCURING DURING SCOPE OF WORK SHALL BE PATCHED, REPAIRED, AND FINISHED TO MATCH ADJACENT SIMILAR CONDITIONS.

F. ACTUAL FIELD CONDITONS WHICH ARE CONCEALED BY EXISTING CONSTRUCTION MAY VARY FROM THOSE INDICATED ON THE DRAWINGS. NOTIFY ARCHITECT AND OWNER OF ANY DISCREPANCIES.

G. REMOVE EXISTING CEILINGS, UNLESS OTHERWISE NOTED.

H. ALL COLUMN WRAPS TO REMAIN.

I. ALL VOICE, DATA, AND CATV CABLING MUST BE DEMOLISHED BY THE CERTIFIED VOICE AND DATA CONTRACTOR FOR THE SYSTIMAX COMMSCOPE SOLUTION.

J. FIRE EXTINGUISHERS TO REMAIN IN CURRENT LOCATIONS. ANY EXTINGUISHERS THAT NEED TO BE REMOVED TO PERFORM THE WORK CONTRACTOR IS TO CONTACT EH&S AT UNCW TO COORDINATE STORAGE.

KING HALL ALTERNATE SUMMARY

ALTERNATE #1: REPLACE EXISTING WINDOWS AND WINDOW SHADES
REFER TO A1.1, A2.1, A3.1.1, AND A3.2.2

ALTERNATE #2: RECOAT FLATROOF
REFER TO A2.2

ALTERNATE #3: PROVIDE CARPET PAINT AND BASE IN FIRST FLOOR OFFICES
REFER TO A1.1 AND A3.0.1

ALTERNATE #3A: PROVIDE CARPET PAINT AND BASE IN FIRST FLOOR CLASSROOM 104
REFER TO A1.1 AND A3.0.1

ALTERNATE #4: PROVIDE 2 NEW EXTERIOR WINDOWS AND WINDOW SHADES AT ROOM 201A
REFER TO A1.1, A2.1, A3.1.1, A3.2.1, AND A4.1

ALTERNATE #5: SCRAPE AND PAINT EXTERIOR TRIM
REFER TO A4.1

ALTERNATE #6: REPLACE HOLLOW METAL FRAMES @ DOORS S100, S101.2, S200, AND S201
REFER TO A2.1, A3.1.1, AND A3.2.1

ALTERNATE #7: CUSTOM WAYFINDING
REFER TO A3.0.1

ALTERNATE #8: RECONFIGURE AND UPDATE MENS TOILET ROOM
REFER TO A1.1, A2.1, AND A2.3

DEMOLITION PLAN KEYNOTES

REPRESENTED BY n

APPLIES TO DRAWINGS A1.1-A1.2

1	ALTERNATE #4 REMOVE EXTERIOR FACE BRICK AND STORE FOR REINSTALLATION
2	REMOVE CURTAIN AND TRACK
3	REMOVE FLOORING
4	REMOVE TILE FLOOR
5	REMOVE MASONRY CHIMNEY
6	REMOVE DOOR PANEL(S) FRAME TO REMAIN
7	ALTERNATE # 6: REMOVE DOOR FRAME
8	REMOVE HARD CEILING ABOVE AS REQUIRED TO INSTALL NEW DUCTWORK
9	REMOVE ROOF AS REQUIRED TO ACCOMODATE MECHANICAL EQUIPMENT; COORDINATE WITH FINAL MECHANICAL EQUIPMENT SELECTIONS
10	2 FB HORIZONTAL ASSEMBLY ABOVE TO REMAIN
11	GYPSUM COLUMN WRAP TO REMAIN
12	REMOVE AND REINSTALL WALL MOUNTED SHELVING
13	REMOVE ABANDONED ROOM DIVIDER TRACK ABOVE
14	REMOVE GYPSUM BOARD M201 SIDE OF WALL
15	PROTECT EQUIPMENT AS NEEDED TO PERFORM WORK
16	EXISTING ATTIC AND ROOF ACCESS LADDER TO REMAIN. PROTECT AS REQUIRED
17	REMOVE REFURBISH AND REINSTALL DOOR PANEL
18	ALTERNATE # 1 REMOVE EXISTING WINDOW AND TRIM; REFER TO ALTERNATE 1 DEMOLITION DETAIL FOR ADDITIONAL INFORMATION
19	ALTERNATE #4 REMOVE EXTERIOR WALL AS REQUIRED TO INSTALL NEW WINDOW AW1
20	ALTERNATE # 1 REMOVE EXISTING TRIM
21	REMOVE GYPSUM BOARD AS REQUIRED TO INSTALL PIPE
22	ALTERNATE #3: REMOVE FLOORING
23	ALTERNATE #3A: REMOVE FLOORING
24	REMOVE DOOR REOPENING DEVICE
25	REMOVE CASEWORK, SHELVING, SINKS, PEG BOARDS AND WHITEBOARD
26	REMOVE CASEWORK
27	REPAIR COLUMN WRAPS

0' 2' 4' 8' 16'
1/8" = 1'-0"

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ALDERMAN AND KING HALL RENOVATIONS - KING HALL

University of North Carolina Wilmington
SCO#22-24639-01A
601 Hamilton Drive, Wilmington, NC 28403

PROJECT NO: 620589
DATE: FEBRUARY 10, 2023

REVISIONS	
DATE	DESCRIPTION

DEMOLITION PLANS

A1.1

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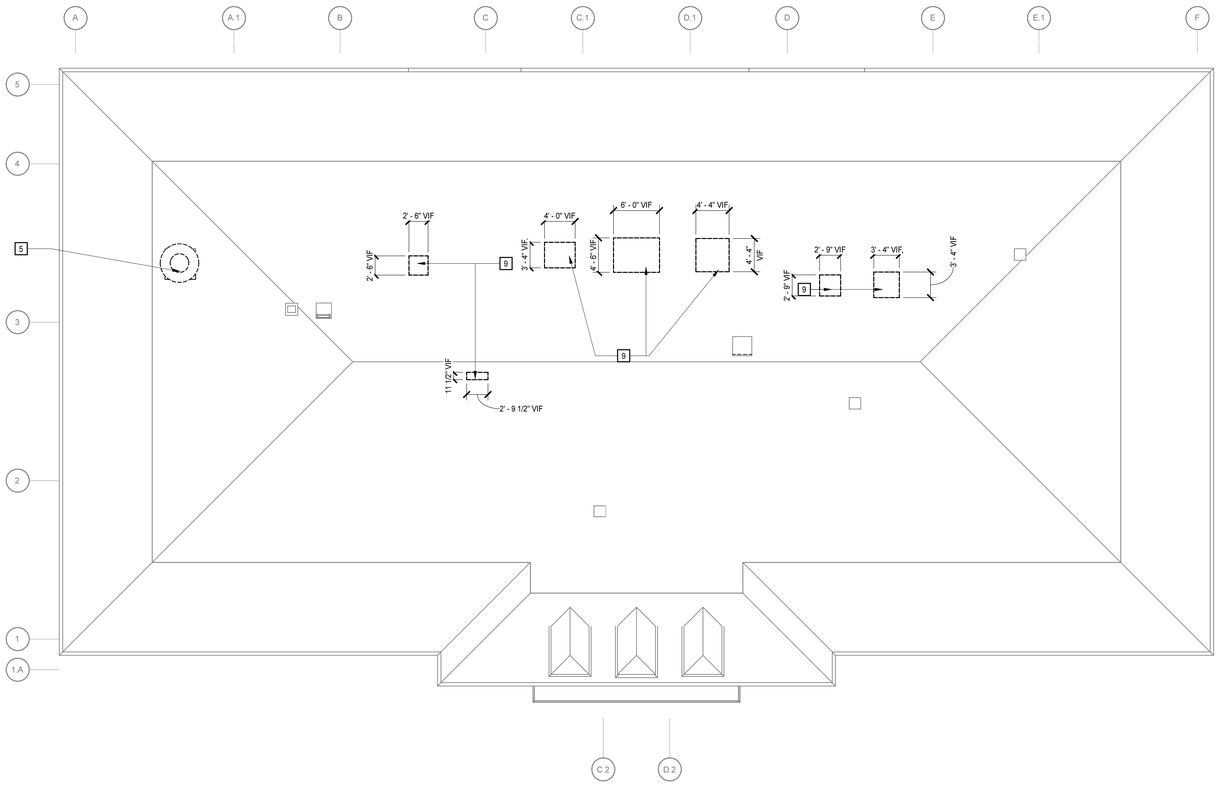
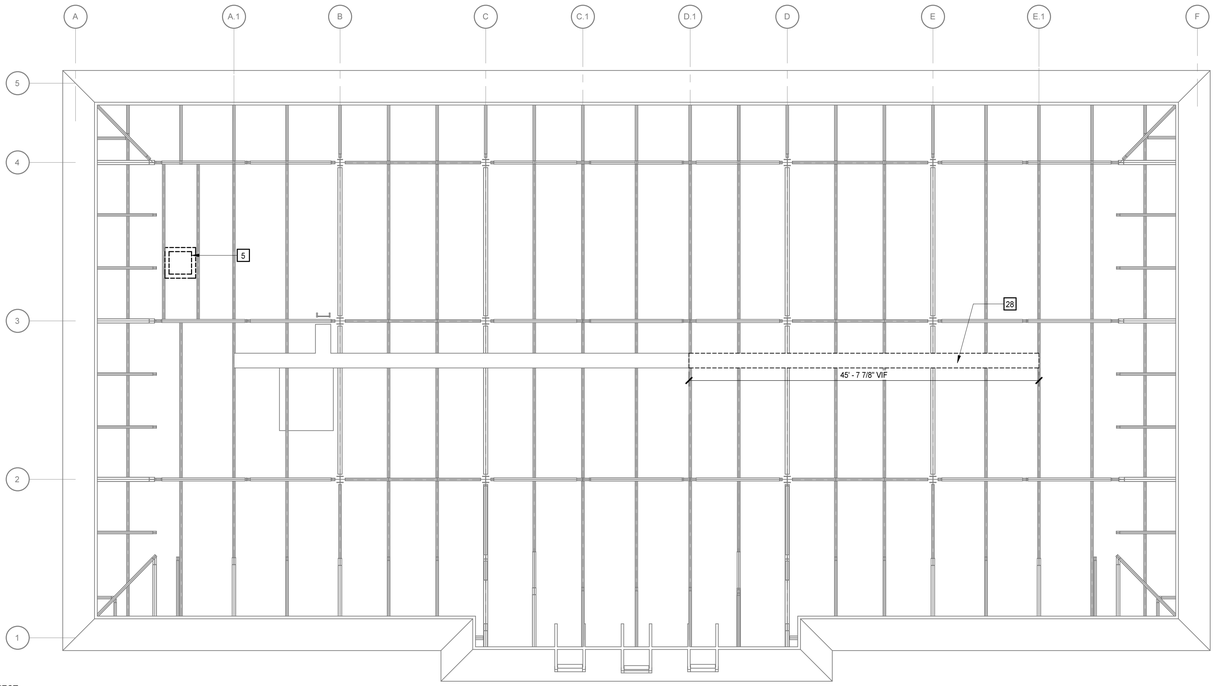


PROJECT N POLAR

ROOF DEMOLITION PLAN

1/8" = 1'-0"



PROJECT N POLAR

ATTIC DEMOLITION PLAN

1/8" = 1'-0"

DEMOLITION PLAN LEGEND

APPLIES TO DRAWINGS A1.1 - A1.2

- EXISTING PARTITION/ WALL/ ITEM TO REMAIN
- REMOVE EXISTING PARTITION/WALL/ITEM
- REMOVE EXISTING WINDOW ASSEMBLY AND FRAMING, INCLUDING ANCHORS
- REMOVE EXISTING DOOR AND FRAME ASSEMBLY INCLUDING DOOR HARDWARE, ANCHORS, AND THRESHOLD (WHERE OCCURS).
- REMOVE EXISTING PLUMBING FIXTURE. REFER TO PLUMBING DEMOLITION PLAN FOR ADDITIONAL INFORMATION.
- EXISTING CEILING ABOVE TO REMAIN

DEMOLITION PLAN GENERAL NOTES

A. ALL DEMOLITION WORK INDICATED IN THESE DRAWINGS INVOLVE REMOVAL OF EXISTING CONSTRUCTION UNDER THIS CONTRACT AND SHALL BE COORDINATED WITH CORRESPONDING PLUMBING, MECHANICAL, AND ELECTRICAL DRAWINGS.

B. REMOVE EXISTING CONSTRUCTION AS INDICATED. DEMOLITION SHALL BE TO THE LEAST EXTENT POSSIBLE IN ORDER TO COMPLETE THE WORK. DO NOT PERFORM DEMOLITION BEYOND THE SCOPE OF CONSTRUCTION. FLOOR SLABS UNDER FLOORING REMOVED SHALL BE CLEAN OF ADHESIVES AND CHEMICAL RESIDUE.

C. FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS INDICATED ON THE DRAWINGS. COORDINATE THE SCOPE, DIMENSIONS, AND EXTENT OF THE DEMOLITION WORK TO BE PERFORMED WITH THE WORK.

D. PLAN DIMENSIONS FOR EXISTING CONDITIONS ARE TO FACE OF FINISH OR CENTERLINE OF STRUCTURAL FRAMING, UNLESS OTHERWISE NOTED. ALL DIMENSIONS SHOWN FOR EXISTING CONSTRUCTION ARE APPROXIMATE.

E. DAMAGE OCCURING DURING SCOPE OF WORK SHALL BE PATCHED, REPAIRED, AND FINISHED TO MATCH ADJACENT SIMILAR CONDITIONS.

F. ACTUAL FIELD CONDITONS WHICH ARE CONCEALED BY EXISTING CONSTRUCTION MAY VARY FROM THOSE INDICATED ON THE DRAWINGS. NOTIFY ARCHITECT AND OWNER OF ANY DISCREPANCIES.

G. REMOVE EXISTING CEILINGS, UNLESS OTHERWISE NOTED.

H. ALL COLUMN WRAPS TO REMAIN.

I. ALL VOICE, DATA, AND CATV CABLING MUST BE DEMOLISHED BY THE CERTIFIED VOICE AND DATA CONTRACTOR FOR THE SYSTIMAX COMMSCOPE SOLUTION.

J. FIRE EXTINGUISHERS TO REMAIN IN CURRENT LOCATIONS. ANY EXTINGUISHERS THAT NEED TO BE REMOVED TO PERFORM THE WORK CONTRACTOR IS TO CONTACT EH&S AT UNCW TO COORDINATE STORAGE.

DEMOLITION PLAN KEYNOTES

REPRESENTED BY [n]

APPLIES TO DRAWINGS A1.1-A1.2

1	ALTERNATE #4 REMOVE EXTERIOR FACE BRICK AND STORE FOR REINSTALLATION
2	REMOVE CURTAIN AND TRACK
3	REMOVE FLOORING
4	REMOVE TILE FLOOR
5	REMOVE MASONRY CHIMNEY
6	REMOVE DOOR PANEL(S) FRAME TO REMAIN
7	ALTERNATE # 6; REMOVE DOOR FRAME
8	REMOVE HARD CEILING ABOVE AS REQUIRED TO INSTALL NEW DUCTWORK
9	REMOVE ROOF AS REQUIRED TO ACCOMODATE MECHANICAL EQUIPMENT; COORDINATE WITH FINAL MECHANICAL EQUIPMENT SELECTIONS
10	2 FB HORIZONTAL ASSEMBLY ABOVE TO REMAIN
11	GYPSUM COLUMN WRAP TO REMAIN
12	REMOVE AND REINSTALL WALL MOUNTED SHELVING
13	REMOVE ABANDONED ROOM DIVIDER TRACK ABOVE
14	REMOVE GYPSUM BOARD MD01 SIDE OF WALL
15	PROTECT EQUIPMENT AS NEEDED TO PERFORM WORK
16	EXISTING ATTIC AND ROOF ACCESS LADDER TO REMAIN. PROTECT AS REQUIRED.
17	REMOVE REFURBISH AND REINSTALL DOOR PANEL
18	ALTERNATE # 1 REMOVE EXISTING WINDOW AND TRIM; REFER TO ALTERNATE 1 DEMOLITION DETAIL FOR ADDITIONAL INFORMATION
19	ALTERNATE #4 REMOVE EXTERIOR WALL AS REQUIRED TO INSTALL NEW WINDOW AW1
20	ALTERNATE # 1 REMOVE EXISTING TRIM
21	REMOVE GYPSUM BOARD AS REQUIRED TO INSTALL PIPE
22	ALTERNATE #3: REMOVE FLOORING
23	ALTERNATE #3A: REMOVE FLOORING
24	REMOVE DOOR REOPENING DEVICE
25	REMOVE CASEWORK, SHELVING, SINKS, PEG BOARDS AND WHITEBOARD
26	REMOVE CASEWORK
27	REPAIR COLUMN WRAPS

0' 2' 4' 8' 16'

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ALDERMAN AND KING HALL RENOVATIONS - KING HALL

University of North Carolina Wilmington
SCO#22-24639-01A
601 Hamilton Drive, Wilmington, NC 28403

PROJECT NO: 620589
DATE: FEBRUARY 10, 2023

REVISIONS

DATE	DESCRIPTION

ATTIC AND ROOF DEMOLITION PLAN

A1.2

3/24/2023 4:15:22 PM

PROJECT
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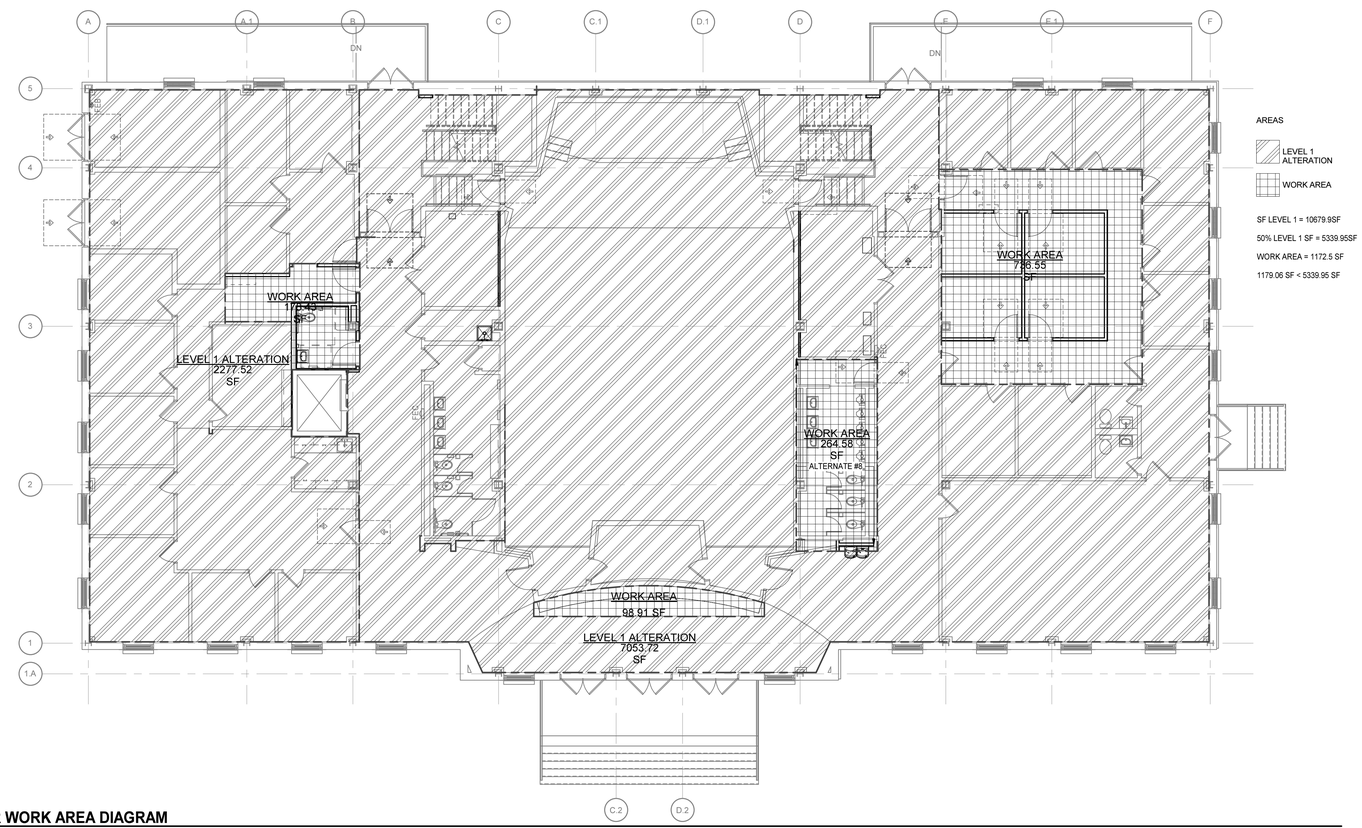
POLAR

SECOND FLOOR WORK AREA DIAGRAM
1/8" = 1'-0"



PROJECT
N
POLAR

FIRST FLOOR WORK AREA DIAGRAM
1/8" = 1'-0"

0' 2' 4' 8' 16'
1/8" = 1'-0"

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ALDERMAN AND KING HALL RENOVATIONS - KING HALL

University of North Carolina Wilmington
SCO#22-24639-01A
601 Hamilton Drive, Wilmington, NC 28403

PROJECT NO: 820589
DATE: NOVEMBER 18, 2022

REVISIONS	
DATE	DESCRIPTION

WORK AREA DIAGRAMS

A1.3

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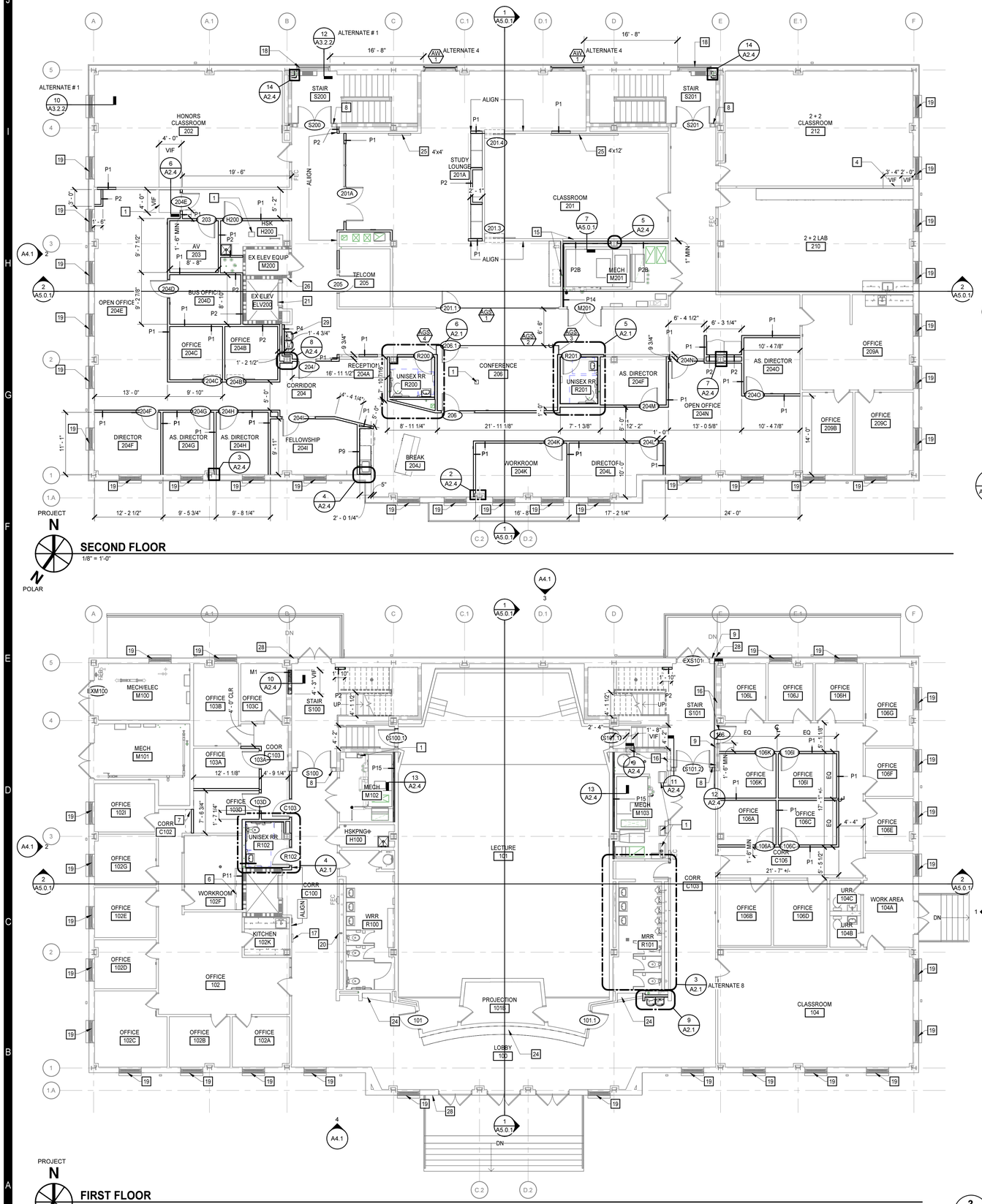


KING HALL ALTERNATE SUMMARY

ALTERNATE #1: REPLACE EXISTING WINDOWS AND WINDOW SHADES
REFER TO A1.1, A2.1, A3.1.1, AND A3.2.2

ALTERNATE #2: RECOAT FLATROOF
REFER TO A2.2

ALTERNATE #3: PROVIDE CARPET PAINT AND BASE IN FIRST FLOOR OFFICES
REFER TO A1.1 AND A5.0.1

ALTERNATE #3A: PROVIDE CARPET PAINT AND BASE IN FIRST FLOOR CLASSROOM 104
REFER TO A1.1 AND A5.0.1

ALTERNATE #4: PROVIDE 2 NEW EXTERIOR WINDOWS AND WINDOW SHADES AT ROOM 201A
REFER TO A1.1, A2.1, A3.1.1, A3.2.1, AND A4.1

ALTERNATE #5: SCRAPE AND PAINT EXTERIOR TRIM
REFER TO A4.1

ALTERNATE #6: REPLACE HOLLOW METAL FRAMES @ DOORS S100, S101.2, S200, AND S201
REFER TO A2.1, A3.1.1, AND A3.2.1

ALTERNATE #7: CUSTOM WAYFINDING
REFER TO A3.0.1

ALTERNATE #8: RECONFIGURE AND UPDATE MENS TOILET ROOM
REFER TO A1.1, A2.1, AND A2.3

FLOOR PLAN GENERAL NOTES

A. REFER TO A3.0.1 FOR FINISH SCHEDULE AND PLANS FOR CASEWORK AND FINISH INFORMATION
B. REFER TO LS2.1 FOR RATED ASSEMBLIES LEGEND INDICATED BY (X#)

FLOOR PLAN KEYNOTES

REPRESENTED BY (n)
APPLIES TO DRAWINGS A2.1 - A2.nn

1 CONCRETE SLAB INFILL; REFER TO FLOOR INFILL SUPPORT DETAIL S1.1 FOR ADDITIONAL INFORMATION
2 PATCH ROOF; REFER TO DETAIL 3/A2.2
3 6" CFSF-S FILLED WITH BATT INSULATION
4 REPAIR GYP WALL PATCH; FINISH TO MATCH EXISTING ADJACENT
5 EXISTING RATED HORIZONTAL ASSEMBLIES TO REMAIN
6 REINSTALL SHELVING
7 REINSTALL SHELVING
8 ALTERNATE #6 INSTALL NEW 45 MIN HOLLOW METAL FRAME REFER TO A3.1.1 FOR ADDITIONAL INFORMATION
9 AUTO OPERATOR
10 ROOF MEMBRANE
11 1/2" COVER BOARD
12 1 1/2" MIN TAPERED POLYISOCYANURATED INSULATION
13 2 1/2" CORRUGATED METAL DECK; REFER TO ROOF INFILL DETAIL ON S1.1 FOR ADDITIONAL INFORMATION
14 UNISTRUT, REFER TO ROOF INFILL DETAIL ON S1.1 FOR ADDITIONAL INFORMATION
15 FILL EXISTING STUD CAVITY WITH SOUND ATTENTUATION BLANKETS
16 PATCH CMU WALL ABOVE WHERE DUCTWORK WAS REMOVED; VERIFY DIMENSIONS AND LOCATIONS OF OPENINGS IN FIELD
17 OFCI SEMI RECESSED AED CABINET; 3'-8" AFF MAX TO LATCH
18 ALTERNRATE #1 REPLACE EXISTING WINDOW WITH AW 1; REFER TO A3.1.1 AND 12/A3.2.2 FOR ADDITIONAL INFORMATION
19 ALTERNRATE #1 REPLACE EXISTING WINDOW WITH AW 1; REFER TO A3.1.1 AND 10/A3.2.2 FOR ADDITIONAL INFORMATION
20 PATCH AND REPAIR WALL WHERE PIPE INSTALLATION OCCURS
21 INSTALL DOOR REOPENING DEVICE
22 EXISTING COLUMN WRAP TO REMAIN
23 VERIFY LOCATION OF JOISTS BELOW AND COORDINATE PLUMBING PENITRATIONS
24 BENCH REFER TO 8/A8.1 FOR ADDITIONAL INFORMATION
25 MARKER BOARD
26 SIGN TYPE 5; REFER TO A3.3.0
28 KNOX BOX
29 MOUNTING HEIGHT FOR ACCESSIBLE SPOUT SHALL BE 36" MAX ABOVE FLOOR
30 EXISTING CATWALK
31 NEW CATWALK
32 1 1/2" PAINTED STEEL PIPE POST 4'-0" OC MAX
33 1 1/2" PAINTED STEEL PIPE RAIL
34 42" HIGH GUARDRAIL GUARD AROUND PERIMETER OF CATWALK

TOILET ASSEMBLIES

APPLIES TO DRAWING A2.1
REPRESENTED BY (TAn)

MARK	REMARKS	PLAN
TA1		2'-10" CLEAR, UNO; * 1'-3" MIN; 5'-0" CLEAR; TOILET PARTITION OR WALL; WATER CLOSET
TA2	OMIT (E)	
BARRIER FREE TA3		5'-0" CLEAR; 4" MAX; 5'-0" CLEAR; 1'-5"; TOILET PARTITION OR WALL; WATER CLOSET
BARRIER FREE TA4	OMIT (E)	
BARRIER FREE TA7		WATER CLOSET
BARRIER FREE TA8	OMIT (E)	WATER CLOSET
TA9	NOTE D	URINAL SCREEN; 2'-8" CLR UNO; 16" MIN; WALL, TOILET PARTITION, OR URINAL SCREEN; 1'-10" MIN; 1'-4"; 1'-4"; URINAL
BARRIER FREE TA10	(G) NOTE D	URINAL SCREEN; 3'-0"; CLEAR; WALL, TOILET PARTITION, OR URINAL SCREEN; 1'-10" MIN; 3'-0" MIN; 1'-6" MIN; 1'-6" MIN; URINAL
TA11	CENTER OVER LAVATORY	(G) (F); 1'-3" MIN; LAVATORY

LEGEND NOTES:

A. HANDING/ORIENTATION MAY VARY. REFER TO PLANS FOR PROPER ORIENTATION.

B. PLUMBING FIXTURE GRAPHICS IN THIS LEGEND ARE REPRESENTATIVE ONLY. ACTUAL PLUMBING FIXTURES MAY VARY.

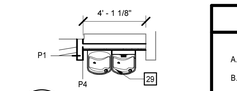
C. COAT/ROBE HOOKS INDICATED ON THE BACK OF TOILET COMPARTMENT DOORS ARE PART OF THE TOILET COMPARTMENT ASSEMBLY AND ARE NOT CONSIDERED A TOILET ACCESSORY.

D. URINAL PARTITIONS SHALL EXTEND NOT LESS THAN 1'-10" OR TO A POINT NOT LESS THAN 6" BEYOND THE OUTERMOST FRONT LIP OF THE URINAL AS MEASURED FROM THE FINISHED BACK WALL SURFACE, WHICHEVER IS GREATER

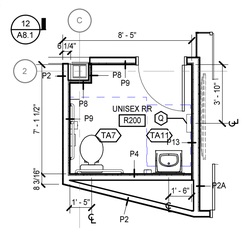
TOILET ACCESSORIES SCHEDULE

MARK	DESCRIPTION	MOUNTING HEIGHT	REMARKS
A	36" HORIZONTAL GRAB BAR	REFER TO WATER CLOSET ELEVATIONS	
B	42" HORIZONTAL GRAB BAR	REFER TO WATER CLOSET ELEVATIONS	
C	18" VERTICAL GRAB BAR	REFER TO WATER CLOSET ELEVATIONS	
D	TOILET TISSUE DISPENSER	REFER TO WATER CLOSET ELEVATIONS	OWNER FURNISHED CONTRACTOR INSTALLED
E	SANITARY NAPKIN DISPOSAL	REFER TO WATER CLOSET ELEVATIONS	OWNER FURNISHED CONTRACTOR INSTALLED
F	SOAP DISPENSER	3'-4" AFF TO DISPENSING OUTLET	OWNER FURNISHED CONTRACTOR INSTALLED
G	MIRROR (24" x 48"), OVER LAV AND CONTERTOP	3'-4" AFF TO BOTTOM OF REFLECTIVE SURFACE	
O	PAPER TOWEL DISPENSER	3'-4" AFF TO DISPENSING OUTLET	OWNER FURNISHED CONTRACTOR INSTALLED
R	CHANGING STATION	3'-8" MAX AFF TO LATCH	

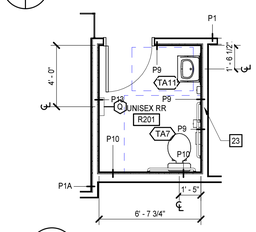
1. ACCESSORY ITEMS ARE IDENTIFIED BY (⬡) ON PLANS. LETTERS CORRESPOND TO SCHEDULE ABOVE.
2. ACTUAL DIMENSIONS OF ACCESSORIES MAY VARY. COORDINATE DIFFERENCES, IF ANY.
3. REFER TO ALL CASEWORK ELEVATIONS FOR ADDITIONAL TOILET ACCESSORY LOCATIONS.
4. PROVIDE MOP AND BROOM HOLDER W/ SHELF (⬡) AT ALL CUSTODIAL/JANITORIAL SINKS. MOUNT AT 5'-0" AFF TO CENTERLINE AND LOCATE ON SIDE WALL OF SINK (NOT ON WALL ABOVE FAUCET).
5. PROVIDE ROBE HOOK ON INTERIOR FACE OF ALL TOILET ROOM DOORS WHEREIN ONLY ONE WATER CLOSET IS PROVIDED. MOUNT AT 3'-11" AFF TO TOP.



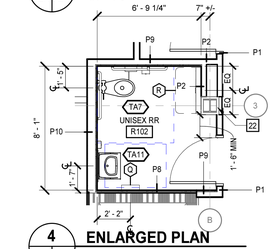
9 A2.1 A2.1 ENLARGED PLAN
1/4" = 1'-0"



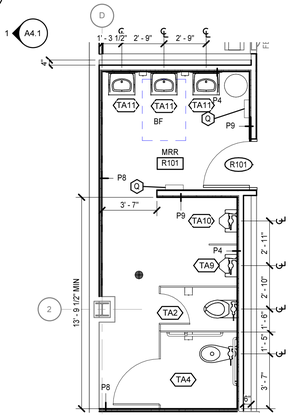
6 A2.1 A2.1 ENLARGED PLAN
1/4" = 1'-0"



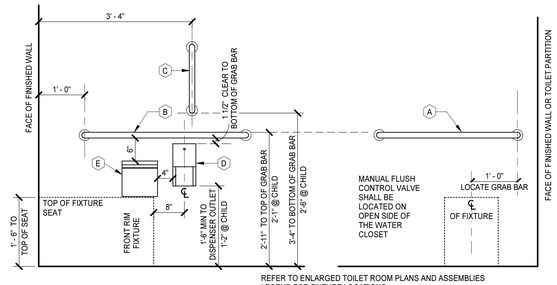
5 A2.1 A2.1 ENLARGED PLAN
1/4" = 1'-0"



4 A2.1 A2.1 ENLARGED PLAN
1/4" = 1'-0"



3 A2.1 A2.1 ALTERNATE 8 MENS TOILET ROOM PLAN
1/4" = 1'-0"



REFER TO ENLARGED TOILET ROOM PLANS AND ASSEMBLIES LEGEND FOR FIXTURE LOCATIONS

WATER CLOSET ELEVATIONS

NO SCALE

1/8" = 1'-0" 1/4" = 1'-0"

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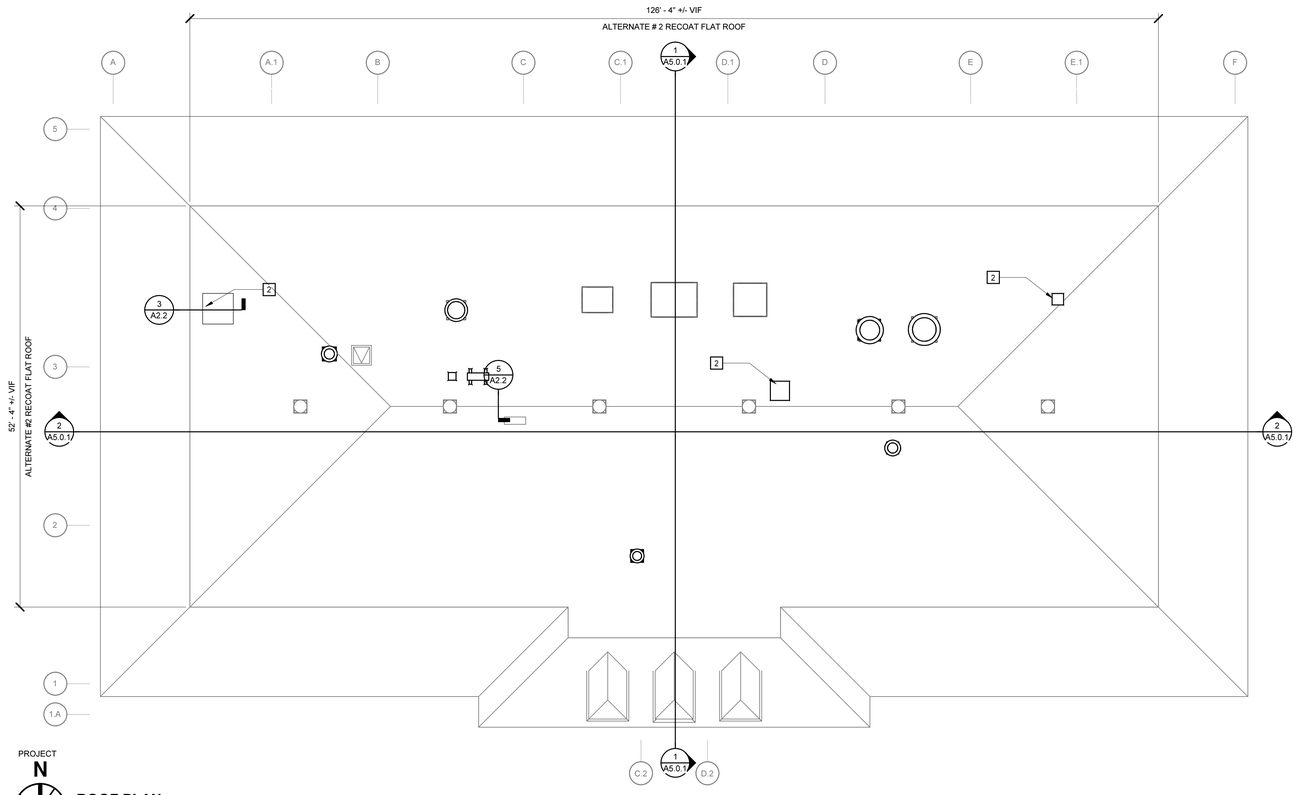
REVISIONS	
DATE	DESCRIPTION

FLOOR PLANS AND ENLARGED PLANS

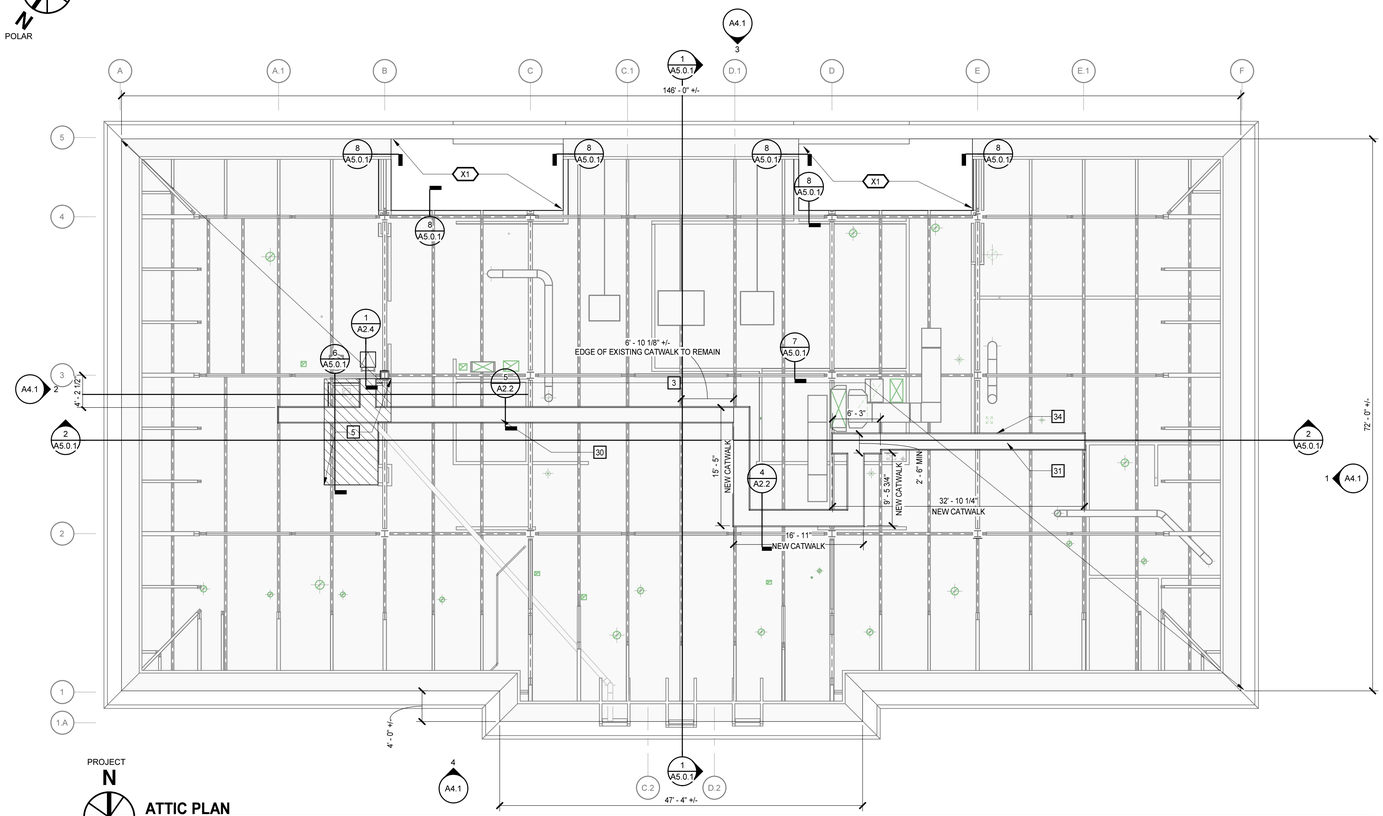
A2.1

3/24/2023 4:15:28 PM



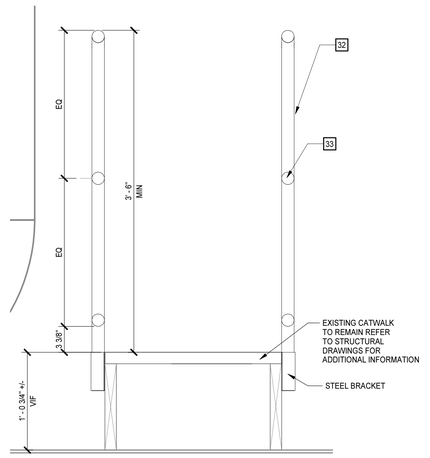
PROJECT N POLAR

ROOF PLAN
1/8" = 1'-0"

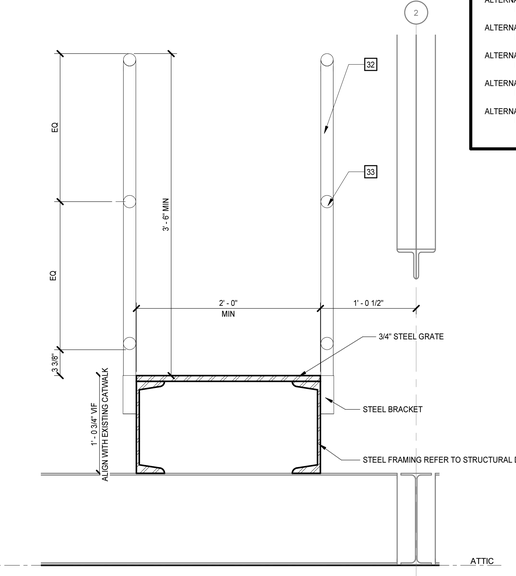


PROJECT N POLAR

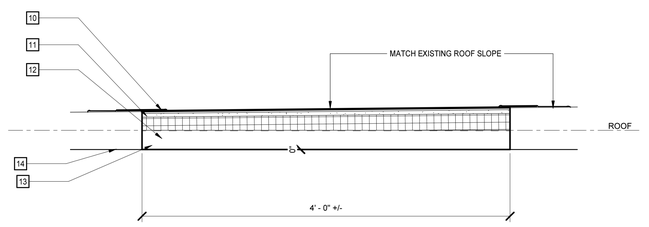
ATTIC PLAN
1/8" = 1'-0"



5 A2.2 A2.2 EXISTING CATWALK DETAIL
1 1/2" = 1'-0"



4 A2.2 A2.2 CATWALK DETAIL
1 1/2" = 1'-0"



3 A2.2 A2.2 ROOF DETAIL
1 1/2" = 1'-0"

0' 2' 4' 8' 16'
1/8" = 1'-0"

FLOOR PLAN KEYNOTES
REPRESENTED BY n

APPLIES TO DRAWINGS A2.1 - A2.nn

1 CONCRETE SLAB INFILL; REFER TO FLOOR INFILL SUPPORT DETAIL S1.1 FOR ADDITIONAL INFORMATION
2 PATCH ROOF; REFER TO DETAIL 3/A2.2
3 6" CFSF-S FILLED WITH BATT INSULATION
4 REPAIR GYP WALL PATCH; FINISH TO MATCH EXISTING ADJACENT
5 EXISTING RATED HORIZONTAL ASSEMBLIES TO REMAIN
6 REINSTALL SHELVING
7 REINSTALL SHELVING
8 ALTERNATE #6 INSTALL NEW 45 MIN HOLLOW METAL FRAME REFER TO A3.1.1 FOR ADDITIONAL INFORMATION
9 AUTO OPERATOR
10 ROOF MEMBRANE
11 1/2" COVER BOARD
12 1 1/2" MIN TAPERED POLYISOCYANURATED INSULATION
13 2 1/2" CORRUGATED METAL DECK; REFER TO ROOF INFILL DETAIL ON S1.1 FOR ADDITIONAL INFORMATION
14 UNISTRUT; REFER TO ROOF INFILL DETAIL ON S1.1 FOR ADDITIONAL INFORMATION
15 FILL EXISTING STUD CAVITY WITH SOUND ATTENTUATION BLANKETS
16 PATCH CMU WALL ABOVE WHERE DUCTWORK WAS REMOVED; VERIFY DIMENSIONS AND LOCATIONS OF OPENINGS IN FIELD
17 OFCI SEMI RECESSED AED CABINET; 3'-8" AFF MAX TO LATCH
18 ALTERNRATE #1 REPLACE EXISTING WINDOW WITH AW 1; REFER TO A3.1.1 AND 12/A3.2.2 FOR ADDITIONAL INFORMATION
19 ALTERNRATE #1 REPLACE EXISTING WINDOW WITH AW 1; REFER TO A3.1.1 AND 10/A3.2.2 FOR ADDITIONAL INFORMATION
20 PATCH AND REPAIR WALL WHERE PIPE INSTALLATION OCCURS
21 INSTALL DOOR REOPENING DEVICE
22 EXISTING COLUMN WRAP TO REMAIN
23 VERIFY LOCATION OF JOISTS BELOW AND COORDINATE PLUMBING PENITRATIONS
24 BENCH REFER TO 8/A8.1 FOR ADDITIONAL INFORMATION
25 MARKER BOARD
26 SIGN TYPE 5; REFER TO A3.3.0
28 KNOX BOX
29 MOUNTING HEIGHT FOR ACCESSIBLE SPOUT SHALL BE 36" MAX ABOVE FLOOR
30 EXISTING CATWALK
31 NEW CATWALK
32 1 1/2" PAINTED STEEL PIPE POST 4'-0" OC MAX
33 1 1/2" PAINTED STEEL PIPE RAIL
34 PAINTED STEEL GUARD AROUND PERIMETER OF CATWALK

KING HALL ALTERNATE SUMMARY

ALTERNATE #1: REPLACE EXISTING WINDOWS AND WINDOW SHADES
REFER TO A1.1, A2.1, A3.1.1, AND A3.2.2

ALTERNATE #2: RECOAT FLATROOF
REFER TO A2.2

ALTERNATE #3: PROVIDE CARPET PAINT AND BASE IN FIRST FLOOR OFFICES
REFER TO A1.1 AND A3.0.1

ALTERNATE #3A: PROVIDE CARPET PAINT AND BASE IN FIRST FLOOR CLASSROOM 104
REFER TO A1.1 AND A3.0.1

ALTERNATE #4: PROVIDE 2 NEW EXTERIOR WINDOWS AND WINDOW SHADES AT ROOM 201A
REFER TO A1.1, A2.1, A3.1.1, A3.2.1, AND A4.1

ALTERNATE #5: SCRAPE AND PAINT EXTERIOR TRIM
REFER TO A4.1

ALTERNATE #6: REPLACE HOLLOW METAL FRAMES @ DOORS S100, S101.2, S200, AND S201
REFER TO A2.1, A3.1.1, AND A3.2.1

ALTERNATE #7: CUSTOM WAYFINDING
REFER TO A3.0.1

ALTERNATE #8: RECONFIGURE AND UPDATE MENS TOILET ROOM
REFER TO A1.1, A2.1, AND A2.3

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ALDERMAN AND KING HALL RENOVATIONS - KING HALL

University of North Carolina Wilmington
SCO#22-24639-01A
601 Hamilton Drive, Wilmington, NC 28403

PROJECT NO: 620589
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DATE	DESCRIPTION

ATTIC AND ROOF PLAN

A2.2

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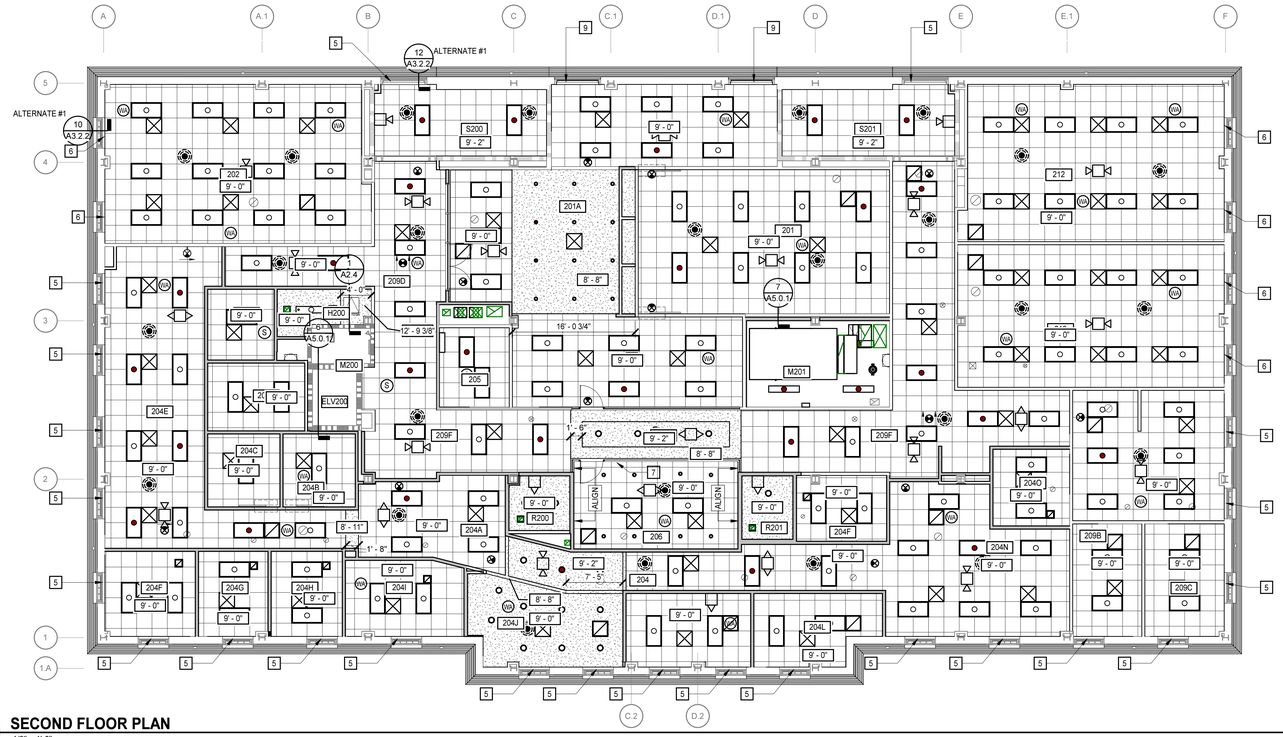


SECOND FLOOR PLAN

1/8" = 1'-0"

FIRST FLOOR PLAN

1/8" = 1'-0"

KING HALL ALTERNATE SUMMARY

ALTERNATE #1: REPLACE EXISTING WINDOWS AND WINDOW SHADES
REFER TO A1.1, A2.1, A3.1.1, AND A3.2.2

ALTERNATE #2: RECOAT FLATROOF
REFER TO A2.2

ALTERNATE #3: PROVIDE CARPET PAINT AND BASE IN FIRST FLOOR OFFICES
REFER TO A1.1 AND A3.0.1

ALTERNATE #3A: PROVIDE CARPET PAINT AND BASE IN FIRST FLOOR CLASSROOM 104
REFER TO A1.1 AND A3.0.1

ALTERNATE #4: PROVIDE 2 NEW EXTERIOR WINDOWS AND WINDOW SHADES AT ROOM 201A
REFER TO A1.1, A2.1, A3.1.1, A3.2.1, AND A4.1

ALTERNATE #5: SCRAPE AND PAINT EXTERIOR TRIM
REFER TO A4.1

ALTERNATE #6: REPLACE HOLLOW METAL FRAMES @ DOORS S100, S101.2, S200, AND S201
REFER TO A2.1, A3.1.1, AND A3.2.1

ALTERNATE #7: CUSTOM WAYFINDING
REFER TO A3.0.1

ALTERNATE #8: RECONFIGURE AND UPDATE MENS TOILET ROOM
REFER TO A1.1, A2.1, AND A2.3

REFLECTED CEILING PLAN LEGEND

APPLIES TO DRAWING A2.3

REFER TO M, E & FP DRAWINGS FOR REFLECTED CEILING PLAN SYMBOLS NOT INDICATED BELOW

A101 — SPACE NUMBER
nn'-nn" — CEILING HEIGHT, AFF UNO

INTERIOR APPLICATIONS: GYPSUM BOARD CEILING
EXTERIOR APPLICATIONS: GYPSUM SOFFIT BOARD OR GYPSUM SHEATHING

2'-0" x 2'-0" LAY-IN ACOUSTICAL CEILING PANELS IN SUSPENDED GRID

AP — ACCESS PANEL

WITH OPENING — EXTERIOR WALL

WITH OPENING — INTERIOR WALL/PARTITION TO UNDERSIDE OF DECK

WITH OPENING — INTERIOR WALL/PARTITION TO ATTIC CAP ABOVE REFER TO A5.0.1 FOR ADDITIONAL DETAILING.

WITH OPENING — INTERIOR WALL/PARTITION 4" MIN ABOVE HIGHEST ADJACENT CEILING. IF NECESSARY TO ACHIEVE RESULTS DESIRED, EXTEND WALL HEIGHT SO WALL BRACING IS NOT EXPOSED TO VIEW IN FINISHED SPACES

EXISTING TO REMAIN. VERIFY VERTICAL EXTENTS WHERE THE HEIGHT IMPACTS THE WORK

(S) SMOKE DETECTOR. REFER TO ELECTRICAL LEGENDS AND DRAWINGS FOR ADDITIONAL INFORMATION

EXIT SIGN. CEILING MOUNT. DIRECTIONAL ARROWS AS INDICATED. SHADING INDICATES FACE(S) OF SIGN. REFER TO ELECTRICAL LEGENDS AND DRAWINGS FOR ADDITIONAL INFORMATION.

REFLECTED CEILING PLAN/DETAIL GENERAL NOTES

A. ALL CEILING HEIGHTS SHALL BE 9'-0" AFF UNLESS INDICATED OTHERWISE.

B. DRAWINGS INDICATE GRID LAYOUT DIAGRAMMATICALLY. REFER TO SPECIFICATIONS FOR SPECIFIC GRID LAYOUT CRITERIA AT PERIMETER CONDITIONS THAT MAY DIFFER FROM GRID LAYOUT INDICATED ON DRAWINGS.

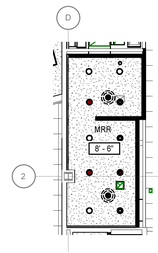
C. CENTER CEILING MOUNTED ITEMS WITHIN CEILING PANELS, UNLESS INDICATED OTHERWISE.

REFLECTED CEILING PLAN KEYNOTES

REPRESENTED BY n

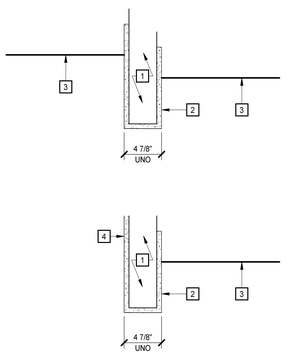
APPLIES TO DRAWING A2.3

1	CFSF-S
2	5/8" GYP BD, TERMINATE 4" ABV FIN CLG
3	FIN CLG: FINISH AND/OR HEIGHT AFF VARIES
4	GYP BD: EXTEND FULL HEIGHT, UNLESS INDICATED OTHERWISE
5	ALTERNATE # 1 PROVIDE INTERIOR MOUNTED LOUVER BLINDS
6	ALTERNATE # 1 PROVIDE JAMB MOUNTED BLACK OUT SHADE AND WALL MOUNTED LOUVER BLIND
7	WALL MOUNTED LOUVER BLINDS
9	ALTERNATE # 4 PROVIDE INTERIOR MOUNTED LOUVER BLINDS



4 A2.3 A2.3 ALTERNATE 8 REFLECTED CEILING PLAN

1/8" = 1'-0"



BULKHEAD DETAILS

NO SCALE

0' 2' 4' 8' 16'
1/8" = 1'-0"

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REFLECTED CEILING PLAN

A2.3

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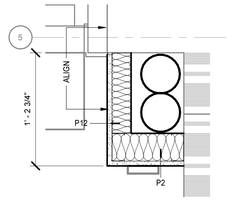
FLOOR PLAN KEYNOTES

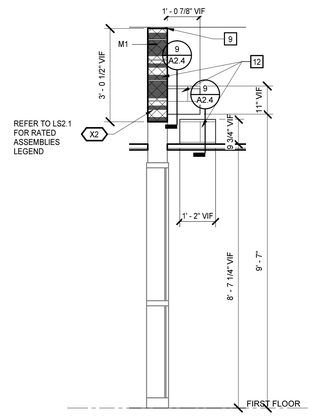
REPRESENTED BY n

APPLIES TO DRAWINGS A2.4

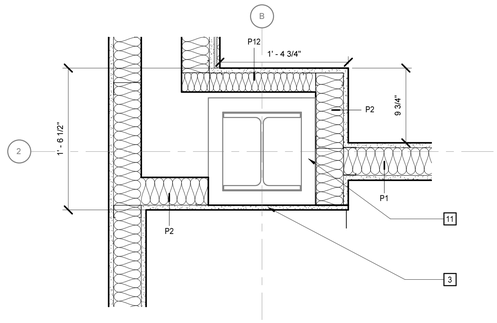
1	CONTINUOUS SEALANT
2	2'-0" X 2'-0" ACCESS HATCH
3	5/8" GYPSUM BOARD
4	6" CFSF-S
5	6" MINERAL WOOL INSULATION
6	CONCRETE SLAB INFILL; REFER TO FLOOR INFILL SUPPORT DETAIL S1.1 FOR ADDITIONAL INFORMATION
7	STRUCTURAL STEEL; REFER TO FLOOR INFILL SUPPORT DETAIL S1.1 FOR ADDITIONAL INFORMATION
8	FINISH FLOOR AS SCHEDULED
9	CONTINUOUS SEALANT AND BACKER ROD
10	FILL CAVITY WITH SOUND ATTENTUATION BLANKETS
11	EXISTING COLUMN WRAP TO REMAIN
12	8" CMU TOOTH IN
13	CFSF-NS



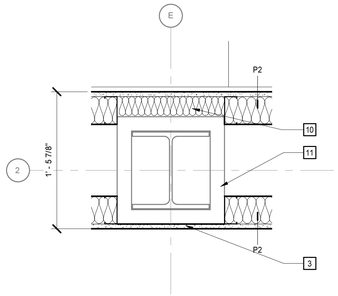
14 A2.1 A2.4 **DETAIL**
1 1/2" = 1'-0"



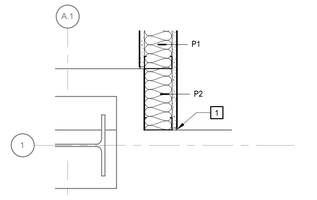
11 A2.1 A2.4 **DETAIL**
1/2" = 1'-0"



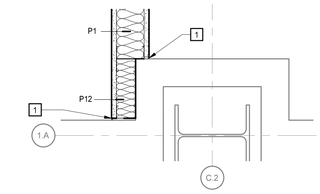
8 A2.1 A2.4 **PLAN DETAIL**
1 1/2" = 1'-0"



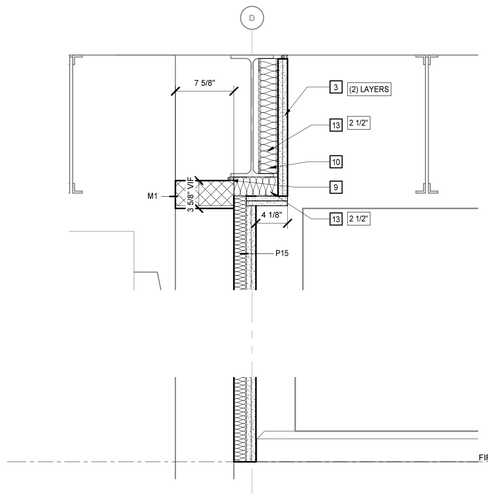
7 A2.1 A2.4 **PLAN DETAIL**
1 1/2" = 1'-0"



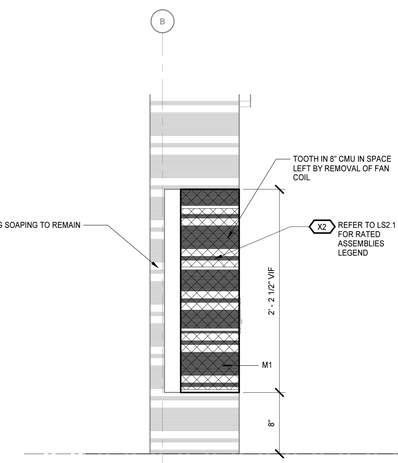
3 A2.1 A2.4 **PLAN DETAIL**
1 1/2" = 1'-0"



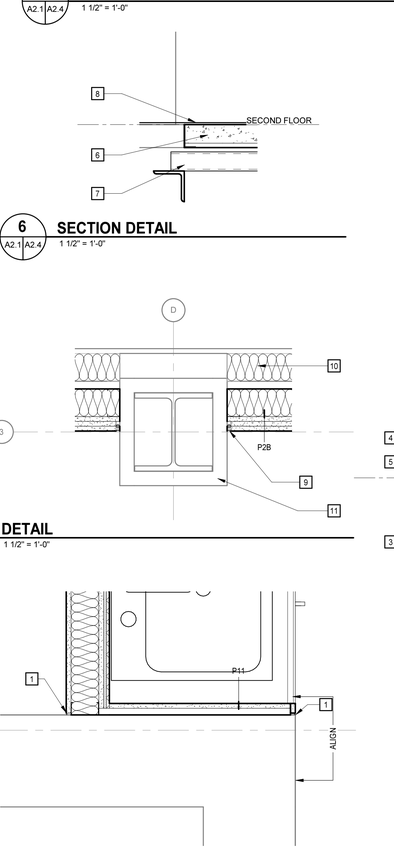
2 A2.1 A2.4 **PLAN DETAIL**
1 1/2" = 1'-0"



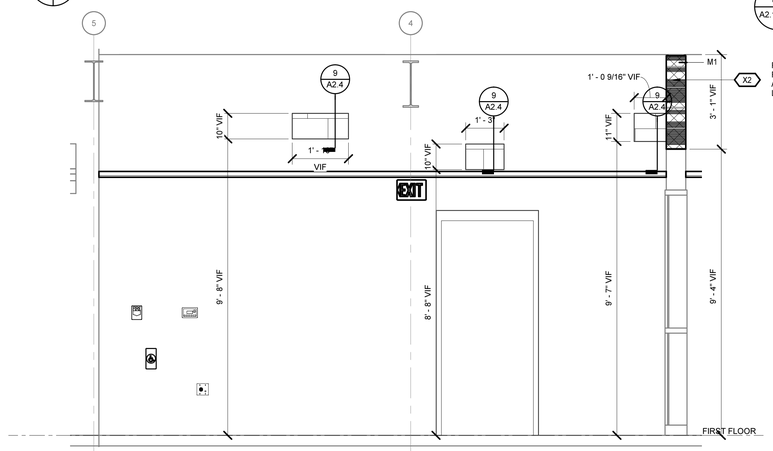
13 A2.1 A2.4 **DETAIL**
1 1/2" = 1'-0"



10 A2.1 A2.4 **DETAIL**
1 1/2" = 1'-0"

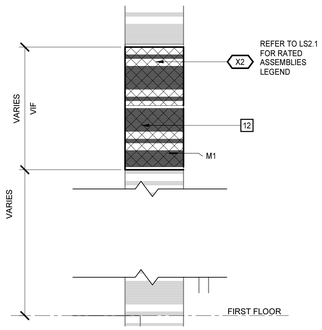


6 A2.1 A2.4 **SECTION DETAIL**
1 1/2" = 1'-0"



12 A2.1 A2.4 **DETAIL**
1/2" = 1'-0"

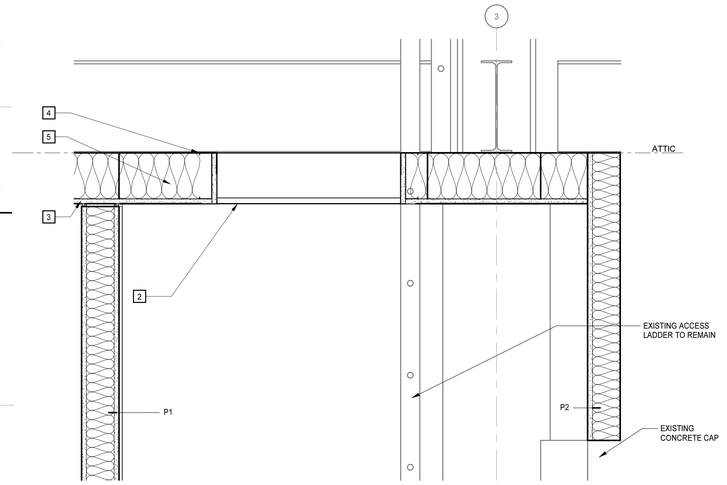
NOTE: REFER TO 11/A2.4 FOR ADDITIONAL NOTES



9 A2.1 A2.4 **DETAIL**
1 1/2" = 1'-0"

5 A2.1 A2.4 **DETAIL**
1 1/2" = 1'-0"

4 A2.1 A2.4 **PLAN DETAIL**
1 1/2" = 1'-0"



1 A2.2 A2.4 **SECTION DETAIL**
1 1/2" = 1'-0"

0" 3" 6" 1' 1'-4"
1½" = 1'-0"

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DETAILS

A2.4

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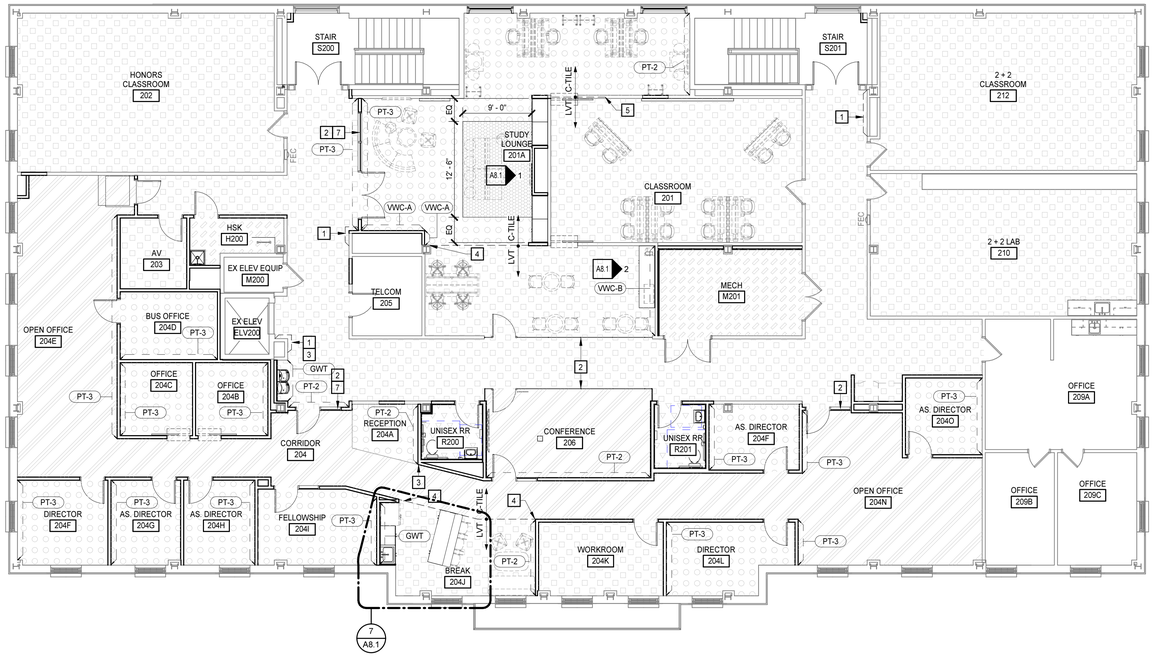
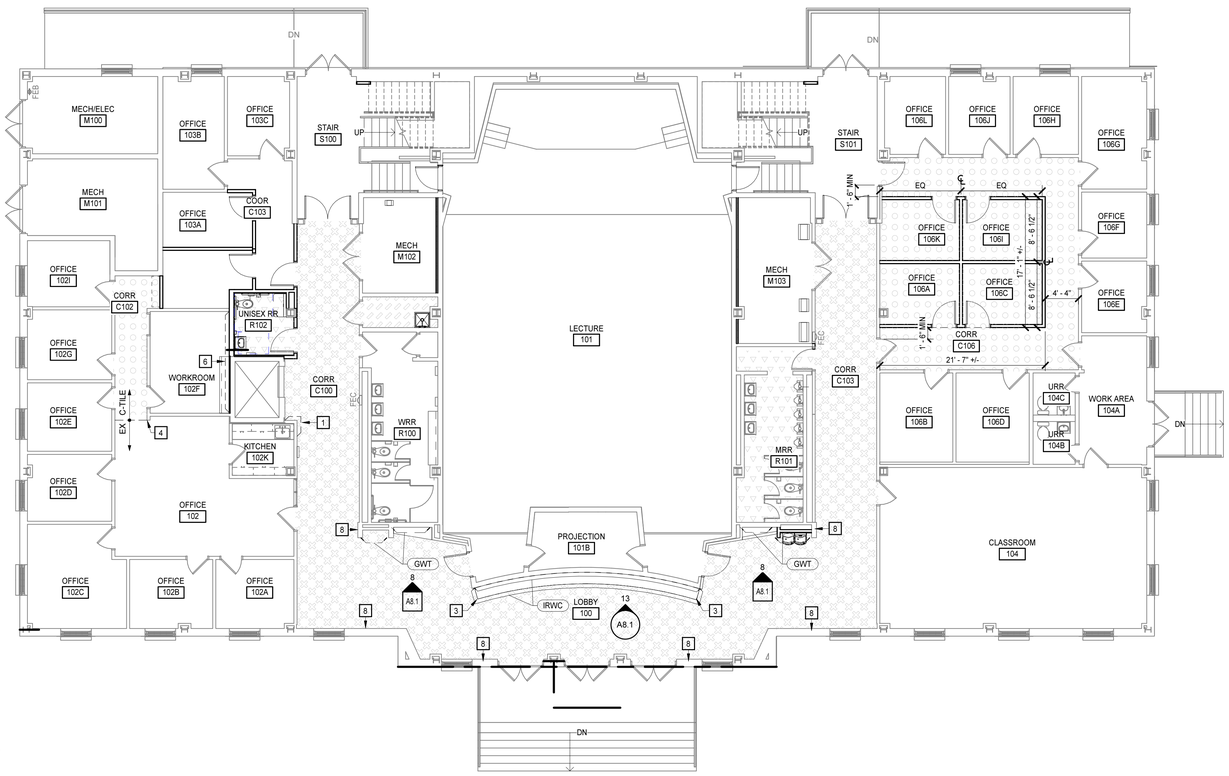


PROJECT N POLAR

SECOND FLOOR - ACCENT FINISH PLAN

1/8" = 1'-0"



PROJECT N POLAR

FIRST FLOOR - ACCENT FINISH PLAN

1/8" = 1'-0"

FINISH PLAN KEYNOTES

REPRESENTED BY n

APPLIES TO DRAWINGS A3.0.1

1	ALTERNATE #7 WAYFINDING ACCENT, VWC-B, DIGITAL GRAPHIC PATTERN TO BE SELECTED
2	DECORATIVE WINDOW FILM
3	METAL TRIM AT EXTERIOR CORNERS OF VWC APPLICATIONS
4	ALIGN FLOORING TRANSITION WITH EXTERIOR CORNER
5	ALIGN FLOORING TRANSITION WITH CENTER OF WALL
6	RB ALONG WALL, MATCH AND ALIGN WITH EXISTING ON ADJACENT WALLS
7	PAINT METAL FRAMES TO MATCH WALL.
8	INTERIOR WALLS: PAINT EXPOSED BRICK PT-1, TYPICAL

FINISH PLAN LEGEND

- VWC — WALL FINISH EXTENTS
- QT-3 QT-1 — FLOOR FINISH TRANSITION, CHANGE OF MATERIAL
- C-TILE-A
- C-TILE-B
- C-TILE-C
- CONC-SLR
- EX
- LVT-A
- LVT-B
- P-TILE

*UNO. HATCHES DO NOT INDICATE FLOOR INSTALLATION PATTERN. METHOD OR DIRECTION. HATCHES INDICATE START AND STOP OF FINISHES ONLY.

FINISH SCHEDULE GENERAL NOTES

A. FINISH SCHEDULE DESCRIBES ONLY THE BASIC OR PREDOMINANT SURFACE FINISH.

B. PROVIDE SAME FINISHES AS THE ADJACENT SPACE IN ALCOVES AND CONTINUOUS SPACES WITHOUT DESIGNATED SPACE NUMBERS.

C. CASEWORK FINISHES ARE NOT NOTED IN THE FINISH SCHEDULE. REFER TO CASEWORK ELEVATIONS AND SPECIFICATIONS FOR MATERIALS AND FINISHES.

D. DIRECTIONAL WALL FINISH INDICATORS (NORTH, EAST, SOUTH, WEST) REFER TO THE "PLAN" NORTH ORIENTATION.

E. BULKHEADS AND SOFFITS MAY NOT BE INDICATED IN FINISH SCHEDULES. REFER TO RCP DETAILS, AND OTHER DOCUMENTS FOR EXTENT.

F. PROVIDE CONTINUOUS SEALANT BETWEEN INTERIOR SLAB-ON-GRADE AND VERTICAL ELEMENT WHERE JOINT IS NOT CONCEALED BY FINISH BASE OR OTHER CONSTRUCTION

G. REFER TO SPECIFICATIONS FOR INFORMATION ON FINISH FIRE CLASSIFICATION RATING..

FINISH PLAN GENERAL NOTES

A. REFER TO A0.1 FOR ABBREVIATION LEGEND.

B. WHERE ONE FINISH IS LISTED ON ALL WALLS OF THE ROOM, THE FINISH PLANS DO NOT SHOW EXTENT OF FINISH. FINISH PLANS AND ELEVATIONS SHOW EXTENT OF MATERIALS WHERE FINISH SCHEDULE LISTS MULTIPLE FINISHES IN ONE ROOM.

C. WHERE DIFFERENT FLOORING MATERIALS TRANSITION WITHIN AN OPENING, THE TRANSITION SHALL OCCUR AT THE CENTER OF THE OPENING, UNO. FOR OPENINGS THAT INCLUDE A DOOR, THE TRANSITION SHALL ALIGN UNDER THE DOOR.

D. REFER TO ACCENT FINISH PLAN FOR LOCATION OF ACCENT PAINT COLORS.

E. FURNITURE AND APPLIANCES INDICATED WITH A DASHED LINE ARE BY OWNER. SUPPLY AND INSTALL.

FINISH SCHEDULE

NUMBER	NAME	FLOOR	BASE	WALLS NORTH	WALLS EAST	WALLS SOUTH	WALLS WEST	WAINSCOT	CEILING	NOTES
102H	WORKROOM	EX	EX / RB	PT-1	PT-1	PT-1	PT-1	- -	ACP	1
100	LOBBY	LVT-A	RB	VARIES	PT-1	PT-1	PT-1	- -	VARIES	
101	LECTURE	EX	EX	EX	EX	EX	EX	- -	VARIES	
101.1	STAGE									
101B	PROJECTION	EX	EX	EX	EX	EX	EX	- -	ACP	
102	OFFICE	EX	EX	EX	EX	EX	EX	- -	ACP	2
102A	OFFICE	EX	EX	EX	EX	EX	EX	- -	ACP	2
102B	OFFICE	EX	EX	EX	EX	EX	EX	- -	ACP	2
102C	OFFICE	EX	EX	EX	EX	EX	EX	- -	ACP	2
102D	OFFICE	EX	EX	EX	EX	EX	EX	- -	ACP	2
102E	OFFICE	EX	EX	EX	EX	EX	EX	- -	ACP	2
102F	WORKROOM	EX	EX / RB	PT	PT	PT	PT	- -	ACP	1
102G	OFFICE	EX	EX	EX	EX	EX	EX	- -	ACP	2
102I	OFFICE	EX	EX	EX	EX	EX	EX	- -	ACP	2
102K	KITCHEN	EX	EX	EX	EX	EX	EX	- -	ACP	
103A	OFFICE	EX	RB	PT-1	PT-1	PT-1	PT-1	- -	ACP	3
103B	OFFICE	EX	EX	EX	EX	EX	EX	- -	ACP	2
103C	OFFICE	EX	EX	EX	EX	EX	EX	- -	ACP	2
103D	OFFICE									
104	CLASSROOM	EX	EX	EX	EX	EX	EX	- -	ACP	4
104A	WORK AREA	EX	EX	EX	EX	EX	EX	- -	ACP	
104B	URR	EX	EX	EX	EX	EX	EX	- -	GB PT	
104C	URR	EX	EX	EX	EX	EX	EX	- -	GB PT	
106A	OFFICE	C-TILE-A	RB	PT-1	PT-1	PT-1	PT-1	- -	ACP	
106B	OFFICE	EX	EX	EX	EX	EX	EX	- -	ACP	2
106C	OFFICE	C-TILE-A	RB	PT-1	PT-1	PT-1	PT-1	- -	ACP	
106D	OFFICE	EX	EX	EX	EX	EX	EX	- -	ACP	2
106E	OFFICE	EX	EX	EX	EX	EX	EX	- -	ACP	2
106F	OFFICE	EX	EX	EX	EX	EX	EX	- -	ACP	2
106G	OFFICE	EX	EX	EX	EX	EX	EX	- -	ACP	2
106H	OFFICE	EX	EX	EX	EX	EX	EX	- -	ACP	2
106I	OFFICE	C-TILE-A	RB	PT-1	PT-1	PT-1	PT-1	- -	ACP	
106J	OFFICE	EX	EX	EX	EX	EX	EX	- -	ACP	2
106K	OFFICE	C-TILE-A	RB	PT-1	PT-1	PT-1	PT-1	- -	ACP	
106L	OFFICE	EX	EX	EX	EX	EX	EX	- -	ACP	2
C100	CORR	LVT-A	RB	PT-1	PT-1	PT-1	PT-1	- -	ACP	
C102	CORR	C-TILE-A	RB	PT-1	PT-1	PT-1	PT-1	- -	ACP	
C103	COOR	EX	RB	PT-1	PT-1	PT-1	PT-1	- -	ACP	3
C103	CORR	LVT-A	RB	PT-1	PT-1	PT-1	PT-1	- -	ACP	
C106	CORR	C-TILE-A	RB	PT-1	PT-1	PT-1	PT-1	- -	ACP	
H100	HSKPNG	CONC-SLR	RB	PT-1	PT-1	PT-1	PT-1		ACP	
M100	MECH/ELEC	EX	EX	EX	EX	EX	EX	- -	EX	
M101	MECH	EX	EX	EX	EX	EX	EX	- -	EX	
M102	MECH	EX	EX	EX	EX	EX	EX	- -	ACP	
M103	MECH	EX	EX	EX	EX	EX	EX	- -	ACP	5
R100	WRR	EX	EX	EX	EX	EX	EX	- -	GB PT	
R101	MRR	P-TILE	GWT	GWT	GWT	GWT	GWT	- -	GB PT	
R102	UNISEX RR	P-TILE	GWT	GWT	GWT	GWT	GWT	- -	GB PT	
S100	STAIR	EX	EX	PT-1	PT-1	PT-1	PT-1	- -	ACP	
S101	STAIR	EX	EX	PT-1	PT-1	PT-1	PT-1	- -	ACP	
200A	CORRIDOR	LVT-B	RB	PT-1	PT-1	PT-1	PT-1	- -	VARIES	
201	CLASSROOM	LVT-B	RB	PT-1	PT-1	PT-1	PT-1	- -	ACP	
201A	STUDY LOUNGE	VARIES	RB	PT-1	PT-1	PT-1	PT-1	- -	VARIES	
202	HONORS CLASSROOM	LVT-B	RB	PT-1	PT-1	PT-1	PT-1		ACP	
203	AV	LVT-B	RB	PT-1	PT-1	PT-1	PT-1	- -	ACP	
204	CORRIDOR	C-TILE-B	RB	PT-1	PT-1	PT-1	PT-1	- -	ACP	
204A	RECEPTION	C-TILE-A	RB	PT-1	PT-1	PT-1	PT-1	- -	ACP	
204B	OFFICE	C-TILE-A	RB	PT-1	PT-1	PT-1	PT-1	- -	ACP	
204C	OFFICE	C-TILE-A	RB	PT-1	PT-1	PT-1	PT-1	- -	ACP	
204D	BUS OFFICE	C-TILE-A	RB	PT-1	PT-1	PT-1	PT-1	- -	ACP	
204E	OPEN OFFICE	C-TILE-B	RB	PT-1	PT-1	PT-1	PT-1	- -	ACP	
204F	AS. DIRECTOR	C-TILE-A	RB	PT-1	PT-1	PT-1	PT-1	- -	ACP	
204F	DIRECTOR	C-TILE-A	RB	PT-1	PT-1	PT-1	PT-1	- -	ACP	
204G	AS. DIRECTOR	C-TILE-A	RB	PT-1	PT-1	PT-1	PT-1	- -	ACP	
204H	AS. DIRECTOR	C-TILE-A	RB	PT-1	PT-1	PT-1	PT-1	- -	ACP	
204I	FELLOWSHIP	C-TILE-A	RB	PT-1	PT-1	PT-1	PT-1	- -	ACP	
204J	BREAK	LVT-B	RB	--	PT-1	PT-1	GWT / PT-1	- -	GB PT	
204K	WORKROOM	LVT-B	RB	PT-1	PT-1	PT-1	PT-1	- -	ACP	
204L	DIRECTOR	C-TILE-A	RB	PT-1	PT-1	PT-1	PT-1	- -	ACP	
204N	OPEN OFFICE	C-TILE-B	RB	PT-1	PT-1	PT-1	PT-1	- -	ACP	
204O	AS. DIRECTOR	C-TILE-A	RB	PT-1	PT-1	PT-1	PT-1	- -	ACP	
205	TELCOM	EX	RB	PT-1	PT-	PT-1	PT-1	- -	ACP	
206	CONFERENCE	C-TILE-B	RB	PT-1	PT-1	PT-1	-	- -	ACP	
209A	OFFICE	EX	EX	EX	EX	EX	EX	- -	ACP	
209B	OFFICE	EX	EX	EX	EX	EX	EX	- -	ACP	
209C	OFFICE	EX	EX	EX	EX	EX	EX	- -	ACP	
209D	CORRIDOR	LVT-B	RB	PT-1	PT-1	PT-1	PT-1	- -	VARIES	
209E	CORRIDOR	LVT-B	RB	PT-1	PT-1	PT-1	PT-1	- -	VARIES	
209F	CORRIDOR	LVT-B	RB	PT-1	PT-1	PT-1	PT-1	- -	VARIES	
210	2 + 2 LAB	LVT-B	RB	PT-1	PT-1	PT-1	PT-1		ACP	
212	2 + 2 CLASSROOM	LVT-B	RB	PT-1	PT-1	PT-1	PT-1		ACP	
ELV200	EX ELEV	EX	EX	EX	EX	EX	EX	- -	EX	
H200	HSK	CONC-SLR	RB	PT	PT	VARIES	PT	- -	GB PT	
M200	EX ELEV EQUIP	EX	EX	EX	EX	EX	EX	- -	EX	
M201	MECH	CONC-SLR	RB	PT-1	PT-1	PT-1	PT-1	- -	--	
R200	UNISEX RR	P-TILE	CT	GWT	GWT	GWT	GWT	- -	GB PT	

FINISH SCHEDULE NOTES:

1. REFER TO ACCENT FINISH PLAN FOR EXTENTS OF RB.
2. ALTERNATE #3
3. NEW CARPET AS PART OF ALTERNATE #3
4. ALTERNATE #3A
5. PAINT NORTH WALL WHERE CMU IS PATCHED

0' 2' 4' 8' 16'
1/8" = 1'-0"

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ALDERMAN AND KING HALL RENOVATIONS - KING HALL

University of North Carolina Wilmington
SCO#22-24639-01A
601 Hamilton Drive, Wilmington, NC 28403

PROJECT NO: 620589
DATE: FEBRUARY 10, 2023

REVISIONS	
DATE	DESCRIPTION

FINISH SCHEDULE AND ACCENT FINISH PLANS AND NOTES

A3.0.1

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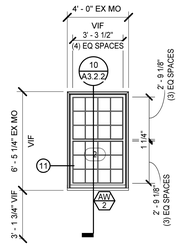
DOOR SCHEDULE

NUMBER	DOOR TYPE	SIZE (NOMINAL)	DOOR MATL	DOOR UC	FRAME TYPE	FRAME NUMBER	FRAME SECTIONS	FRAME HEAD DETAIL	FRAME JAMB DETAIL	FRAME JAMB DETAIL	FRAME SILL DETAIL	HDWR	FIRE RATING	SIGNAGE	NOTES
101	F	3' - 0" x 7' - 0" x 1 3/4"	WD		EX	--	EX	--	--	--	--	08		EX	
101.1	F	3' - 0" x 7' - 0" x 1 3/4"	WD		EX	--	EX	--	--	--	--	08		EX	
103A	F	3' - 0" x 7' - 0" x 1 3/4"	EX		STL	1	A	1	1	1	--	03		TYPE 1	REINSTALL REFERBISHED DOOR
103D	F	3' - 0" x 7' - 0" x 1 3/4"	WD		STL	1	A	1	1	1		03		TYPE 1	
106	F	3' - 0" x 7' - 0" x 1 3/4"	WD		STL	4	A	5	5	5		14	45 MIN	TYPE 2	
106A	F	3' - 0" x 7' - 0" x 1 3/4"	WD		STL	1	A	1	1	1		03		TYPE 1	
106C	F	3' - 0" x 7' - 0" x 1 3/4"	WD		STL	1	A	1	1	1		03		TYPE 1	
106I	F	3' - 0" x 7' - 0" x 1 3/4"	WD		STL	1	A	1	1	1		03		TYPE 1	
106K	F	3' - 0" x 7' - 0" x 1 3/4"	WD		STL	1	A	1	1	1		03		TYPE 1	
C103	N	3' - 0" x 7' - 0" x 1 3/4"	WD		STL	1	A	1	1	1		03		TYPE 2	
EXM100	EX	PR 3' - 0" x 7' - 0" x 1 3/4"	EX		EX	--	--	--	--	--	--	17	--	EX	EXISTING DOOR AND FRAME TO REMAIN PROVIDE PANIC HARDWARE
EXS101	EX	PR 3' - 0" x 7' - 0" x 1 3/4"	EX		EX	--	--	--	--	--	--	01	--	EX	EXUSTING DOOR AND FRAME TO REMAIN PROVIDE AUTO OPERATOR
R101	F	3' - 0" x 7' - 0" x 1 3/4"	WD	3/4"	STL	1	A	1	1	1		18		TYPE 3	ALTERNATE #8
R102	F	3' - 0" x 7' - 0" x 1 3/4"	WD	3/4"	STL	1	A	1	1	1		19		TYPE 3	
S100	NR	PR 3' - 0" x 7' - 0" x 1 3/4"	WD		EX	--	--	--	--	--	--	13	45 MIN	TYPE 4	PROVIDE PANIC HARDWARE; EXISTING AUTO OPERATOR TO REMAIN; ALTERNATE #6 FRAME TYPE STL 5
S100.1	F	3' - 0" x 7' - 0" x 1 3/4"	WD		STL	4	A	5	5	5		08	45 MIN	TYPE 2	PROVIDE PANIC HARDWARE
S101.1	F	3' - 0" x 7' - 0" x 1 3/4"	WD		STL	4	A	5	5	5		08	45 MIN	TYPE 2	PROVIDE PANIC HARDWARE
S101.2	NR	PR 3' - 0" x 7' - 0" x 1 3/4"	WD		EX	--	--	--	--	--		13	45 MIN	TYPE 4	PROVIDE PANIC HARDWARE; INSTALL AUTO OPERATOR; ALTERNATE # 6 FRAME TYPE STL 5
201.1	AG	3' - 0" x 8' - 0" x 1"	GLASS		AGS	1	--	4	4	4	3	16	--	TYPE 2	
201.3	RP6	3' - 6" x 8' - 0" x 1 3/4"	WD					15	16	16		15		TYPE 2	SLIDING BARN DOOR
201.4	RP6	3' - 6" x 8' - 0" x 1 3/4"	WD					15	16	16		15		TYPE 2	SLIDING BARN DOOR
201A	FG	PR 3' - 0" x 7' - 0" x 1 3/4"	WD		STL	3	A	1	1	1		09		TYPE 2	
203	F	3' - 0" x 7' - 0" x 1 3/4"	WD		STL	1	A	1	1	1		07		TYPE 2	
204	FG	3' - 0" x 7' - 0" x 1 3/4"	WD		STL	2	A	1	1	1		11		TYPE 2	
204B	FG	3' - 0" x 7' - 0" x 1 3/4"	WD					13	14	14		03		TYPE 1	SLIDING BARN DOOR
204C	FG	3' - 0" x 7' - 0" x 1 3/4"	WD					13	14	14		03		TYPE 1	SLIDING BARN DOOR
204D	F	3' - 0" x 7' - 0" x 1 3/4"	WD		STL	1	A	1	1	1		05		TYPE 1	
204E	F	3' - 0" x 7' - 0" x 1 3/4"	WD		STL	1	A	1	1	1		12		TYPE 2	
204F	F	3' - 0" x 7' - 0" x 1 3/4"	WD		STL	1	A	1	1	1		03		TYPE 1	
204G	F	3' - 0" x 7' - 0" x 1 3/4"	EX		STL	1	A	1	1	1		03		TYPE 1	REINSTALL REFURBISHED DOOR
204H	F	3' - 0" x 7' - 0" x 1 3/4"	EX		STL	1	A	1	1	1		03		TYPE 1	REINSTALL REFURBISHED DOOR
204I	FG	3' - 0" x 7' - 0" x 1 3/4"	WD		STL	2	A	1	1	1		04		TYPE 1	
204K	F	3' - 0" x 7' - 0" x 1 3/4"	EX		STL	1	A	1	1	1		03		TYPE 1	REINSTALL REFERBISHED DOOR
204L	F	3' - 0" x 7' - 0" x 1 3/4"	WD		STL	1	A	1	1	1		03		TYPE 1	
204M	F	3' - 0" x 7' - 0" x 1 3/4"	EX		STL	1	A	1	1	1		03		TYPE 1	REINSTALL REFURBISHED DOOR
204N	FG	3' - 0" x 7' - 0" x 1 3/4"	WD		STL	2	A	1	1	1		10		TYPE 2	
204O	F	3' - 0" x 7' - 0" x 1 3/4"	WD		STL	1	A	1	1	1		03		TYPE 1	
205	F	3' - 0" x 7' - 0" x 1 3/4"	WD		STL	1	A	1	1	1		07			
206	FG	3' - 0" x 7' - 0" x 1 3/4"	WD		STL	2	A	1	1	1		16		TYPE 2	
206.1	AG	3' - 0" x 8' - 0" x 1"	GLASS		AGS	9	--	4	4	4	3	16	--	TYPE 2	
H200	F	3' - 0" x 7' - 0" x 1 3/4"	WD		STL	1	A	1	1	1		06		TYPE 2	
M201	F	PR 3' - 0" x 7' - 0" x 1 3/4"	WD		STL	1	A	1	1	1		01			
R200	F	3' - 0" x 7' - 0" x 1 3/4"	WD	3/4"	STL	1	A	1	1	1		19		TYPE 3	
R201	F	3' - 0" x 7' - 0" x 1 3/4"	WD	3/4"	STL	1	A	1	1	1		19		TYPE 3	
S200	NR	PR 3' - 0" x 7' - 0" x 1 3/4"	WD		EX	--	--	--	--	--		13	45 MIN	TYPE 4	PROVIDE PANIC HARDWARE; ALTERNATE #6 FRAME TYPE STL6
S201	NR	PR 3' - 0" x 7' - 0" x 1 3/4"	WD		EX	--	--	--	--	--		13	45 MIN	TYPE 4	PROVIDE PANIC HARDWARE; ALTERNATE #6 FRAME TYPE STL 6

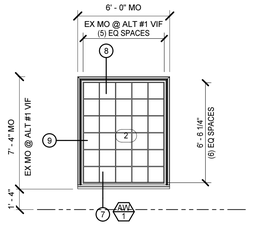
ALTERNATE 1 FRAME TYPES



ALUMINUM WINDOW ALTERNATIVE 1 ELEVATION

1/4" = 1'-0"

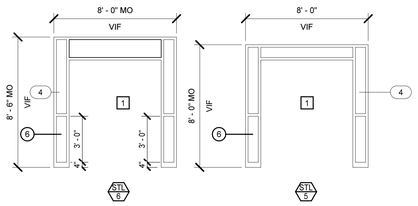
ALTERNATE 1 AND 4 FRAME TYPES



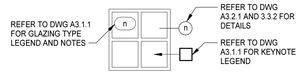
ALUMINUM WINDOW TYPES

1/4" = 1'-0"

ALTERNATE # 6 FRME ELEVATIONS



GENERAL NOTES AND LEGEND



GLAZING TYPES

REPRESENTED BY n

1. 1/4" CLEAR
2. 1" CLEAR INSULATING (ALTERNATES #1 AND #4)
3. 1/2" CLEAR
4. FIRE PROTECTIVE GLASS

NOTES:
1. ALL GLAZING IN INTERIOR FRAMES SHALL BE TYPE 1, UNO
2. ALL GLAZING IN EXTERIOR FRAMES SHALL BE TYPE 2, UNO
3. GLAZE ALL OPENINGS IN FRAMES UNLESS SPECIFICALLY INDICATED OTHERWISE
4. ALL GLAZING SHALL BE SAFETY GLASS UNLESS INDICATED OTHERWISE

DOOR, FRAME AND GLAZING TYPE KEYNOTES

REPRESENTED BY n

APPLIES TO DRAWINGS A3.1.1 - A3.1.n

1	SIZE AS REQUIRED TO ACCOMODATE FRAME AND HARWARE

KING HALL ALTERNATE SUMMARY

ALTERNATE #1: REPLACE EXISTING WINDOWS AND WINDOW SHADES
REFER TO A1.1, A2.1, A3.1.1, AND A3.2.2

ALTERNATE #2: RECOAT FLATROOF
REFER TO A2.2

ALTERNATE #3: PROVIDE CARPET PAINT AND BASE IN FIRST FLOOR OFFICES
REFER TO A1.1 AND A3.0.1

ALTERNATE #3A: PROVIDE CARPET PAINT AND BASE IN FIRST FLOOR CLASSROOM 104
REFER TO A1.1 AND A3.0.1

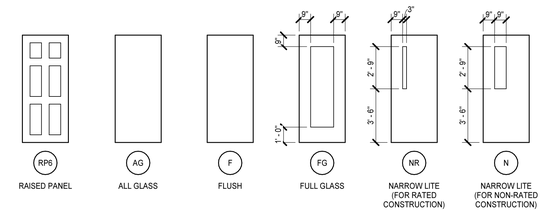
ALTERNATE #4: PROVIDE 2 NEW EXTERIOR WINDOWS AND WINDOW SHADES AT ROOM 201A
REFER TO A1.1, A2.1, A3.1.1, A3.2.1, AND A4.1

ALTERNATE #5: SCRAPE AND PAINT EXTERIOR TRIM
REFER TO A4.1

ALTERNATE #6: REPLACE HOLLOW METAL FRAMES @ DOORS S100, S101.2, S200, AND S201
REFER TO A2.1, A3.1.1, AND A3.2.1

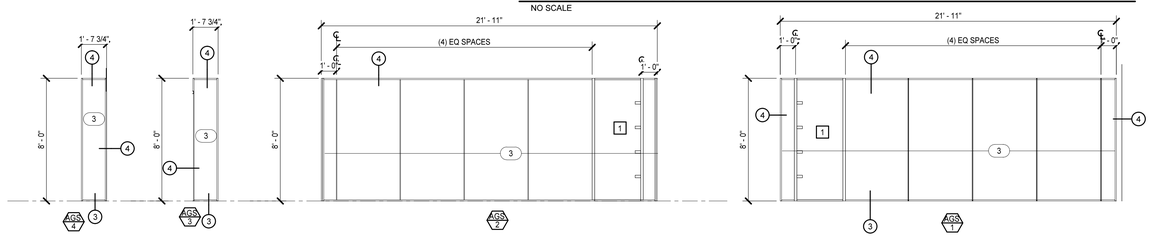
ALTERNATE #7: CUSTOM WAYFINDING
REFER TO A3.0.1

ALTERNATE #8: RECONFIGURE AND UPDATE MENS TOILET ROOM
REFER TO A1.1, A2.1, AND A2.3



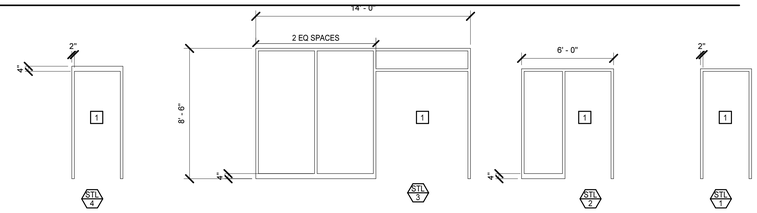
DOOR PANEL TYPES

NO SCALE



ALUMINUM GLASS FRAME TYPES

NO SCALE



STEEL FRAME TYPES

NO SCALE

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ALDERMAN AND KING HALL RENOVATIONS - KING HALL

University of North Carolina Wilmington
SCO#22-24639-01A
601 Hamilton Drive, Wilmington, NC 28403

PROJECT NO: 620589
DATE: FEBRUARY 10, 2023

REVISIONS	
DATE	DESCRIPTION

DOOR AND FRAME SCHEDULE

A3.1.1

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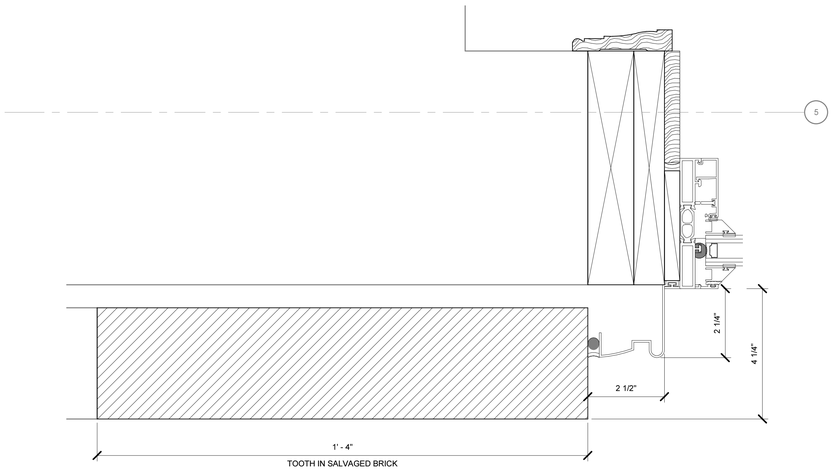
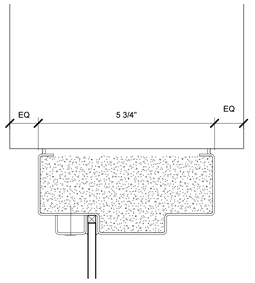
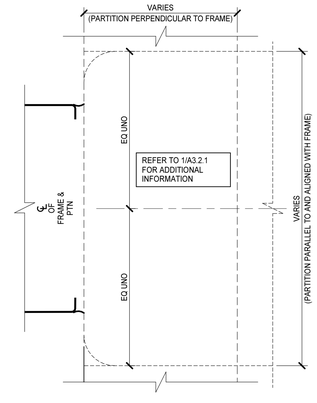


9 ALTERNATE #4 JAMB
A3.1.1 A3.2.1 — 6" = 1'-0"

NOTE: REFER TO 8/A3.2.1 FOR ADDITIONAL NOTES



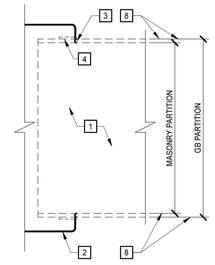
6 HEAD/JAMB DETAIL ALTERNATE # 6
A3.1.1 A3.2.1 — 6" = 1'-0"



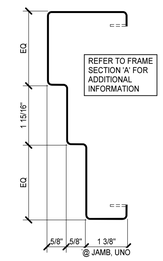
2 INTERIOR BETWEEN THE JAMB - BUTTED HEAD/JAMB/SILL
A3.2.1 — 6" = 1'-0"

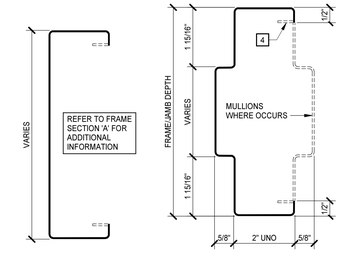
8 ALTERNATE #4 HEAD DETAIL
A3.1.1 A3.2.1 — 6" = 1'-0"

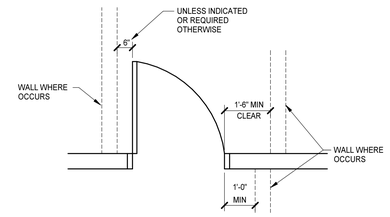
5 HEAD/JAMB DETAIL
A3.1.1 A3.2.1 — 6" = 1'-0"



1 INTERIOR WRAP HEAD/JAMB/SILL
A3.2.1 — 6" = 1'-0"



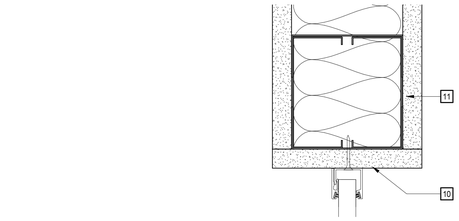




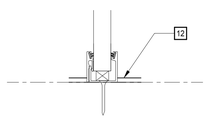
MANEUVERING CLEARANCE AT DOORS

STEEL FRAME SECTIONS

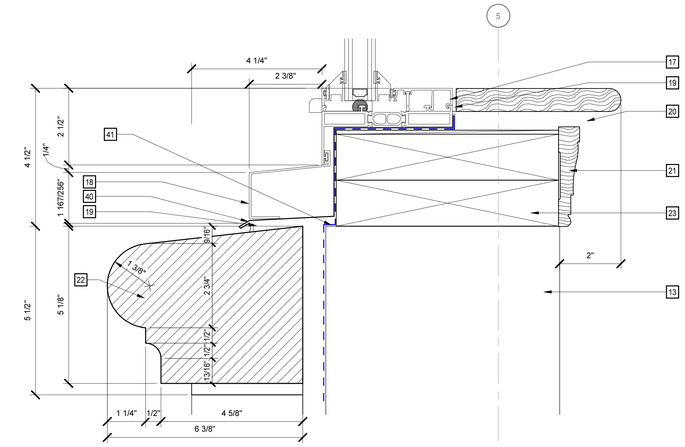
1. ALL FRAME/JAMB DEPTHS, OTHER THAN WRAP CONDITIONS, SHALL BE 5 3/4", UNO.
2. ALL FRAME/JAMB DEPTHS AT WRAP CONDITIONS SHALL BE SIZED TO SUIT PARTITION.
3. DOORS, PANELS, GLAZING, STOPS, AND OTHER FRAME INFILLS ARE NOT SHOWN IN FRAME SECTIONS AS THEY VARY - PROVIDE SAME WHERE INDICATED.



4 HEAD/JAMB DETAIL
A3.1.1 A3.2.1 — 6" = 1'-0"



3 SILL DETAIL
A3.1.1 A3.2.1 — 6" = 1'-0"



7 ALTERNATE # 4 SILL
A3.1.1 A3.2.1 — 6" = 1'-0"

DOOR AND FRAME DETAIL KEYNOTES

REPRESENTED BY n

APPLIES TO DRAWINGS A3.2.1 - A3.2.n

1	ANCHORAGES, REINFORCING, SPECIFIC PARTITION CONSTRUCTION AND/OR LINTELS ARE NOT SHOWN FOR CLARITY.
2	REFER TO FRAME SECTION IN DOOR SCHEDULE FOR TYPE.
3	SEALANT, ALL SIDES - TOOL TO 90°.
4	BACKBEND RETURN @ GB LOCATIONS ONLY.
5	9/16" @ MAS; 1/2" @ GB.
6	1/4" @ JAMBS, UNO; DIMENSION @ HEAD & SILL VARIES.
7	BULLNOSE @ CMU JAMBS & SILLS.
8	0" @ GB LOCATIONS; 1/16" @ MAS LOCATIONS.
9	GROUT SOLID
10	5/8" GYPSUM BOARD
11	PARTITION AS SCHEDULED REFER TO PLAN
12	FINISH FLOOR; TYPE VARIES REFER TO FINISH SCHEDULE AND PLANS
13	EXISTING CMU WALL
14	LOUVER BLIND
15	ROLLER BLINDS REFER TO A2.3 RCP PLANS FOR LOCATIONS
16	LOUVER BLIND LOCATION VARIES
17	ALUMINUM WINDOW
18	CUSTOM ALUMINUM SILL EXTENSION
19	CONTINUOUS SEALANT
20	WOOD SILL
21	WOOD TRIM
22	FACE BRICK SILL, COLOR AND PROFILE TO MATCH EXISTING
23	WOOD BLOCKING
24	METAL FLASHING
25	CUSTOM ALUMINUM TRIM
26	STEEL LINTEL; REFER TO STRUCTURAL DRAWINGS
27	CONTINUOUS SEALANT AND BACKER ROD
28	NOTCH EXISTING CMU TO ACCOMODATE LINTEL
29	WEEP
30	NOTCH BRICK
31	REMOVE AND PATCH GYPSUM AS REQUIRED TO FINISH OPENING AND INSTALL DOOR HARDWARE
32	ALTERNATE # 6: REMOVE DOOR FRAME REFER TO ALTERNATE 6 DEMOLITION PLAN A1.1 FOR ADDITIONAL INFORMATION
33	WOOD BLOCKING AS REQUIRED TO MOUNT DOOR TRACK
34	CFSF-NS
35	EXISTING MASONRY WALL
36	BARN DOOR TRACK
37	EXISTING BRICK SILL TO REMAIN
38	EXISTING LINTEL TO REMAIN
39	EXISTING FLASHING TO REMAIN
40	METAL FLASHING
41	PEEL AND STICK AIR BARRIER TRANSITION MEMBRANE
42	CONTINUOUS TERMINATION BAR AND SEALANT

GENERAL NOTES

A. UNLESS INDICATED OTHERWISE, ALL DETAIL NUMBERS IN THE DOOR AND FRAME SCHEDULE FOR HEAD, JAMB AND SILL CONDITIONS REFER TO DRAWINGS A3.2.1 - A3.2.n.

B. DOOR AND FRAME DETAILS INDICATE GENERAL CHARACTERISTICS OF DOOR AND FRAME SIZES AND COMPONENTS AND MAY NOT INDICATE EXACT FIELD CONDITIONS OR REQUIREMENTS. COORDINATE DETAILS WITH OTHER DRAWINGS AND SPECS TO DETERMINE ALL COMPONENTS (E.G., SEALANTS, ANCHORS, HARDWARE, LINTELS, CLIPS) REQUIRED FOR COMPLETE AND FUNCTIONAL INSTALLATION.

C. DOOR SWINGS ON FLOOR PLANS TAKE PRECEDENCE OVER SWINGS INDICATED ELSEWHERE (E.G., ELEVATIONS).

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ALDERMAN AND KING HALL RENOVATIONS - KING HALL

University of North Carolina Wilmington
SCO#22-24639-01A
601 Hamilton Drive, Wilmington, NC 28403

PROJECT NO: 620589
DATE: FEBRUARY 10, 2023

REVISIONS	
DATE	DESCRIPTION

DOOR AND FRAME DETAILS

A3.2.1

0" ½" 1" 2" 4"
6" = 1'-0"

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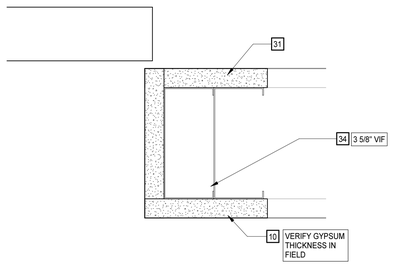
DOOR AND FRAME DETAIL KEYNOTES

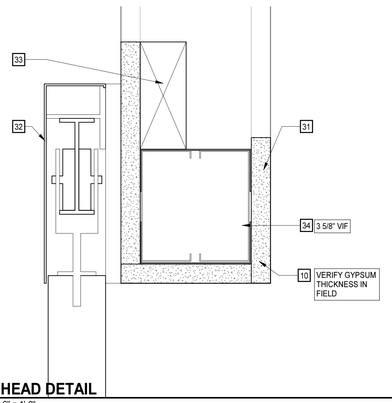
REPRESENTED BY n

APPLIES TO DRAWINGS A3.2.1 - A3.2.n

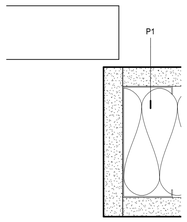
1	ANCHORAGES, REINFORCING, SPECIFIC PARTITION CONSTRUCTION AND/OR LINTELS ARE NOT SHOWN FOR CLARITY.
2	REFER TO FRAME SECTION IN DOOR SCHEDULE FOR TYPE.
3	SEALANT, ALL SIDES - TOOL TO 90°.
4	BACKBEND RETURN @ GB LOCATIONS ONLY.
5	9/16" @ MAS, 1/2" @ GB.
6	1/4" @ JAMBS, UNO; DIMENSION @ HEAD & SILL VARIES.
7	BULLNOSE @ CMU JAMBS & SILLS.
8	0" @ GB LOCATIONS, 1/16" @ MAS LOCATIONS.
9	GROUT SOLID
10	5/8" GYPSUM BOARD
11	PARTITION AS SCHEDULED REFER TO PLAN
12	FINISH FLOOR; TYPE VARIES REFER TO FINISH SCHEDULE AND PLANS
13	EXISTING CMU WALL
14	LOUVER BLIND
15	ROLLER BLINDS REFER TO A2.3 RCP PLANS FOR LOCATIONS
16	LOUVER BLIND LOCATION VARIES
17	ALUMINUM WINDOW
18	CUSTOM ALUMINUM SILL EXTENSION
19	CONTINUOUS SEALANT
20	WOOD SILL
21	WOOD TRIM
22	FACE BRICK SILL; COLOR AND PROFILE TO MATCH EXISTING
23	WOOD BLOCKING
24	METAL FLASHING
25	CUSTOM ALUMINUM TRIM
26	STEEL LINTEL; REFER TO STRUCTURAL DRAWINGS
27	CONTINUOUS SEALANT AND BACKER ROD
28	NOTCH EXISTING CMU TO ACCOMODATE LINTEL
29	WEEP
30	NOTCH BRICK
31	REMOVE AND PATCH GYPSUM AS REQUIRED TO FINISH OPENING AND INSTALL DOOR HARDWARE
32	ALTERNATE # 6; REMOVE DOOR FRAME REFER TO ALTERNATE 6 DEMOLITION PLAN A1.1 FOR ADDITIONAL INFORMATION
33	WOOD BLOCKING AS REQUIRED TO MOUNT DOOR TRACK
34	CFSF-NS
35	EXISTING MASONRY WALL
36	BARN DOOR TRACK
37	EXISTING BRICK SILL TO REMAIN
38	EXISTING LINTEL TO REMAIN
39	EXISTING FLASHING TO REMAIN
40	METAL FLASHING
41	PEEL AND STICK AIR BARRIER TRANSITION MEMBRANE
42	CONTINUOUS TERMINATION BAR AND SEALANT



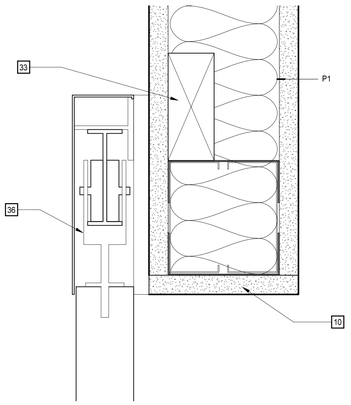
16 JAMB DETAIL
A3.1.1 A3.2.2 6" = 1'-0"



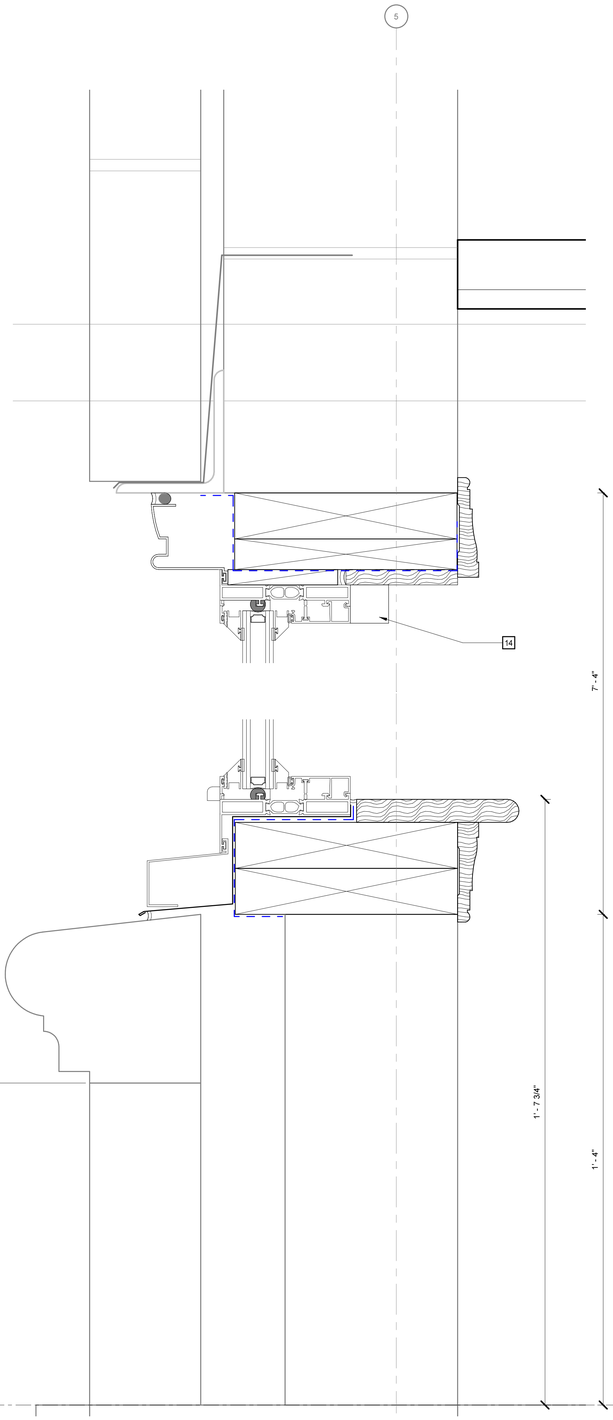
15 HEAD DETAIL
A5.0.1 A3.2.2 A3.1.1 6" = 1'-0"



14 JAMB DETAIL
A3.1.1 A3.2.2 6" = 1'-0"

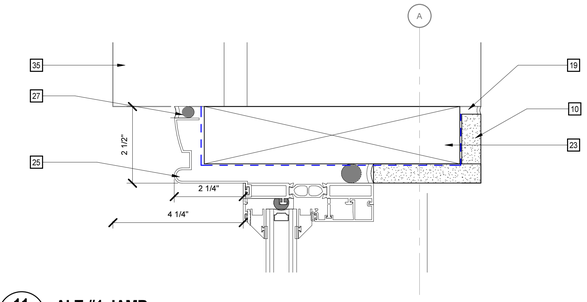


13 HEAD DETAIL
AE2.1 A3.2.2 A3.1.1 6" = 1'-0"

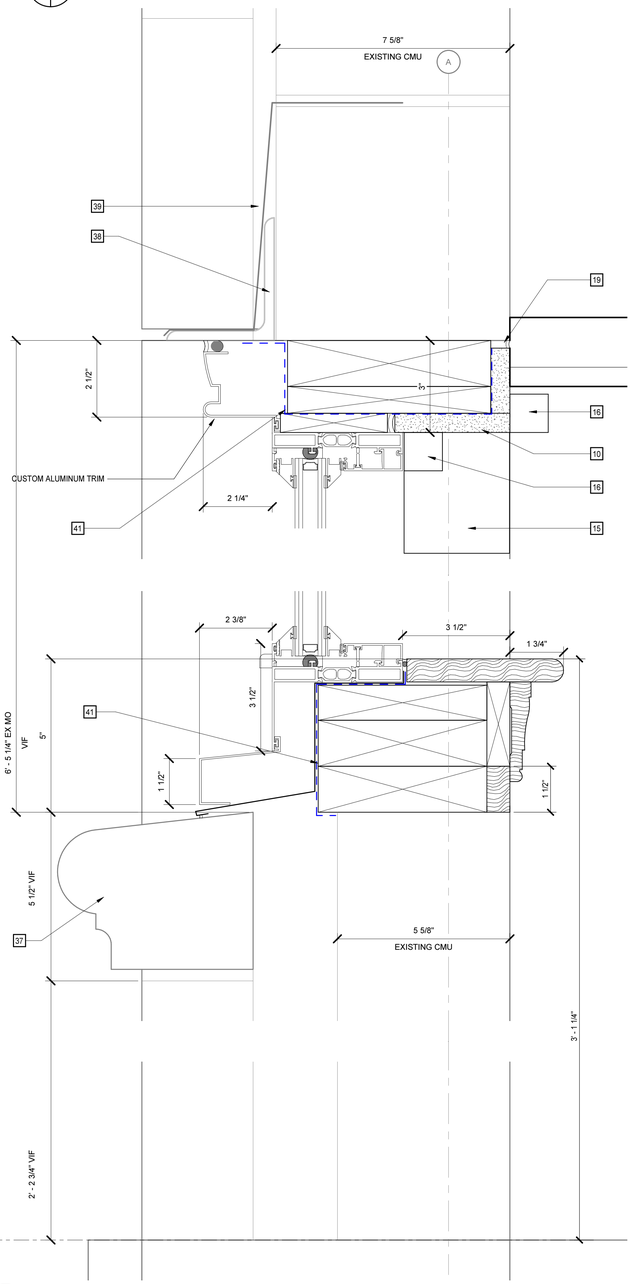


12 ALTERNATE # 1 AW 1 HEAD AND SILL
A2.1 A3.2.2 6" = 1'-0"

NOTE: REFER TO 10 AND 7/A3.2.1 FOR ADDITIONAL NOTES



11 ALT #1 JAMB
A3.1.1 A3.2.2 6" = 1'-0"



10 ALTERNATE # 1 AW 2 HEAD AND SILL
A2.1 A3.2.2 6" = 1'-0"

NOTE: REFER TO 7/A3.2.1 FOR ADDITIONAL NOTES

0" 3" 1' 2' 4'
6" = 1'-0"

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ALDERMAN AND KING HALL RENOVATIONS - KING HALL

University of North Carolina Wilmington
SCO#22-24639-01A
601 Hamilton Drive, Wilmington, NC 28403

PROJECT NO: 620589
DATE: FEBRUARY 10, 2023

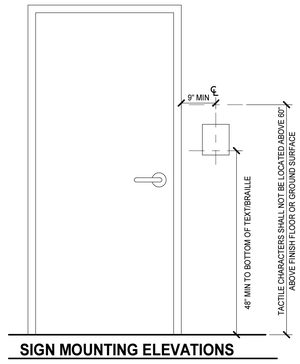
REVISIONS

DATE	DESCRIPTION

FRAME DETAILS

A3.2.2

3/24/2023 4:15:47 PM



SIGN MOUNTING ELEVATIONS

GENERAL NOTES

A. ALL INTEIROR SIGNAGE TO BE MANUFACTURED BY PHOTOMECHANICAL ETCHING PROCESS, LEAVING COPY AND BRAILLE RAISED. PLAQUE TO BE LAMINATED TO 1/8" OPAQUE ACRYLIC BASE CUT TO SIZE AND FINISHED WITH ACRYLIC POLYURETHANE ENAMEL. COLOR TBD BY OWNER.

B. SIGNS ARE UNFRAMED WITH SQUARE CORNERS

C. BRAILLE AND TEXT TO BE RAISED 1/32"

D. ROOM NUMBERS TO BE 1" HIGH

E. TEXT TO BE 5/8" HIGH ON ALL SIGNS, UNO

F. LETTER STYLE: STANDARD BOLD CONDENSED - ALL UPPER CASE LETTERS

G. FINISHED SIGNS TO BE 1/4" THICK

H. EDGE TREATMENT: BEVELED

I. PROVIDE COLOR MATCHING BLANK FOR BACK SIDE OF ALL SIGNS MOUNTED ON GLASS

J. SUPPLY AND INSTALL GRAPHIC INSERTS, WHERE REQUIRED

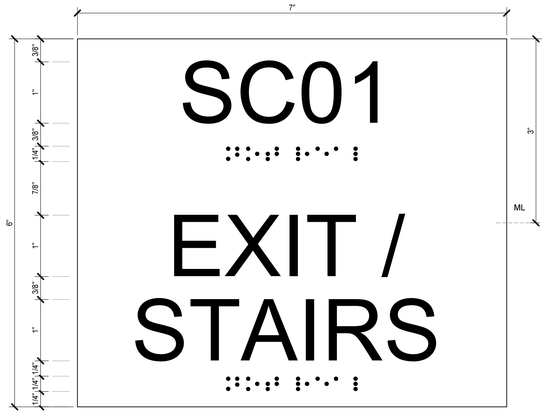
K. MOUNT ALL SIGNS TO COMPLY WITH ADA REQUIREMENTS

L. ATTACHMENT METHOD: PER MANUFACTURER RECOMMENDATIONS

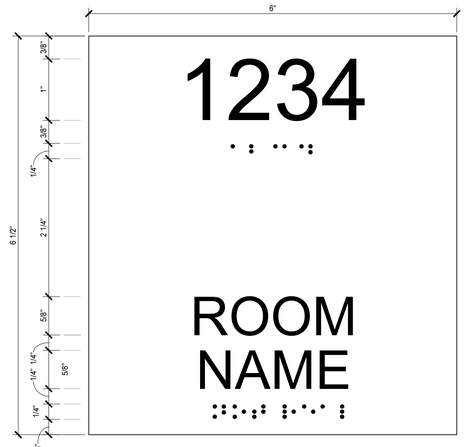
M. REFER TO DOOR SCHEUDLE FOR SIGN TYPE LOCATIONS

N. PROVIDE 12" X 12" FRAMED ACRYLIC SIGN HOLDER TO ACCEPT INSERT

O. ALL SIGNAGE REQUIREMENTS SHALL COMPLY WITH SECTION 703 OF ICC A117.1-2009



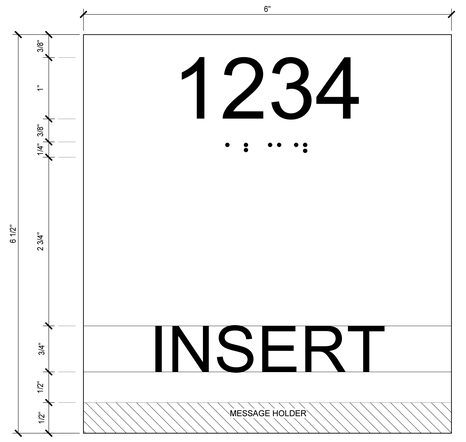
SIGN TYPE 4 PROVIDE AT ALL BUILDING EXITS



SIGN TYPE 2

SIGN TYPE 5 PROVIDE AT ELEVATOR LANDINGS

SIGN TYPE 3



SIGN TYPE 1

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ALDERMAN AND KING HALL RENOVATIONS - KING HALL

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601 Hamilton Drive, Wilmington, NC 28403

PROJECT NO: 620589
DATE: FEBRUARY 10, 2023

REVISIONS	
DATE	DESCRIPTION

SIGNAGE

A3.3.0

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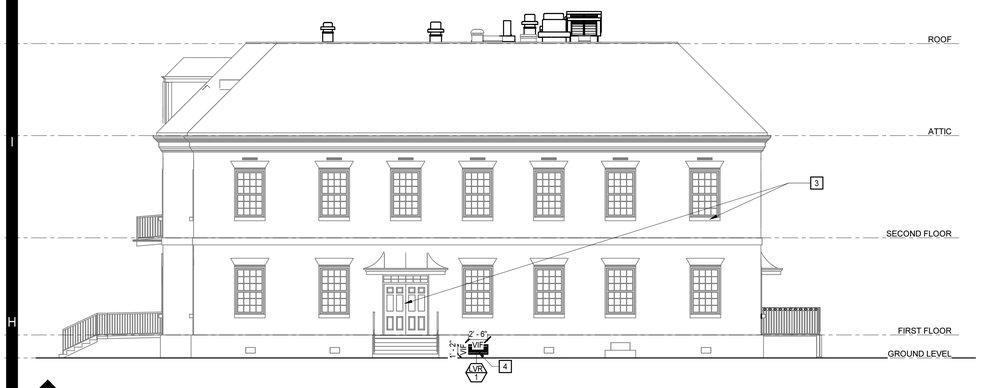
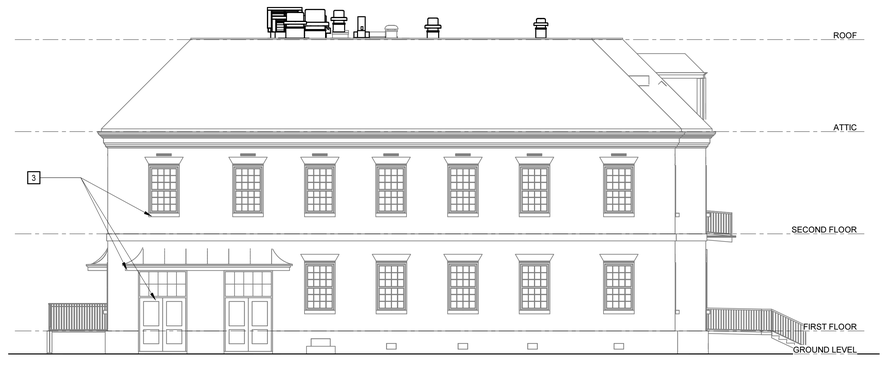


1 A2.1 A4.1 **EAST ELEVATION**
1/8" = 1'-0"



2 A2.1 A4.1 **WEST ELEVATION**
1/8" = 1'-0"

KING HALL ALTERNATE SUMMARY

ALTERNATE #1: REPLACE EXISTING WINDOWS AND WINDOW SHADES
REFER TO A1.1, A2.1, A3.1.1, AND A3.2.2

ALTERNATE #2: RECOAT FLATROOF
REFER TO A2.2

ALTERNATE #3: PROVIDE CARPET PAINT AND BASE IN FIRST FLOOR OFFICES
REFER TO A1.1 AND A3.0.1

ALTERNATE #3A: PROVIDE CARPET PAINT AND BASE IN FIRST FLOOR CLASSROOM 104
REFER TO A1.1 AND A3.0.1

ALTERNATE #4: PROVIDE 2 NEW EXTERIOR WINDOWS AND WINDOW SHADES AT ROOM 201A
REFER TO A1.1, A2.1, A3.1.1, A3.2.1, AND A4.1

ALTERNATE #5: SCRAPE AND PAINT EXTERIOR TRIM
REFER TO A4.1

ALTERNATE #6: REPLACE HOLLOW METAL FRAMES @ DOORS S100, S101.2, S200, AND S201
REFER TO A2.1, A3.1.1, AND A3.2.1

ALTERNATE #7: CUSTOM WAYFINDING
REFER TO A3.0.1

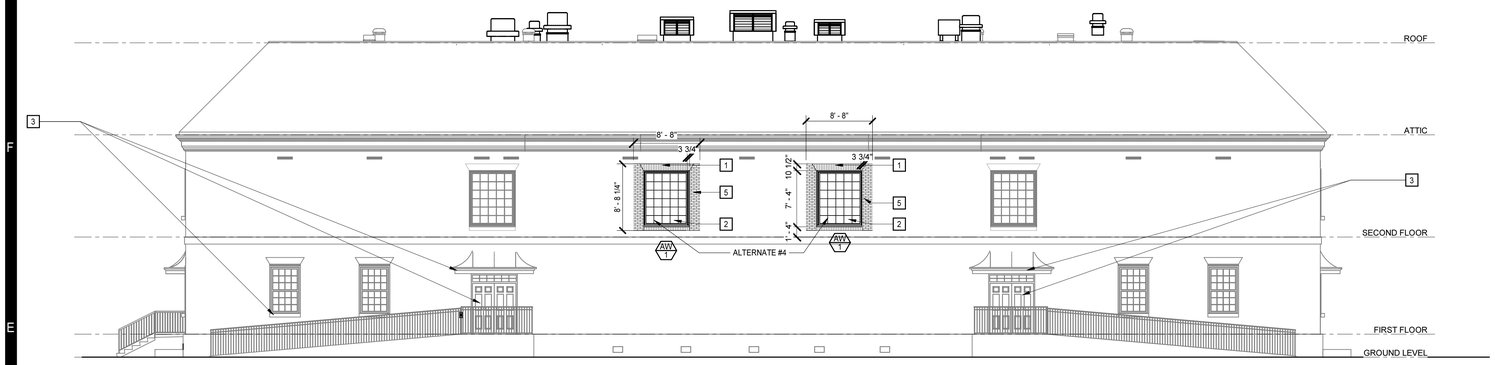
ALTERNATE #8: RECONFIGURE AND UPDATE MENS TOILET ROOM
REFER TO A1.1, A2.1, AND A2.3

BUILDING ELEVATION KEYNOTES

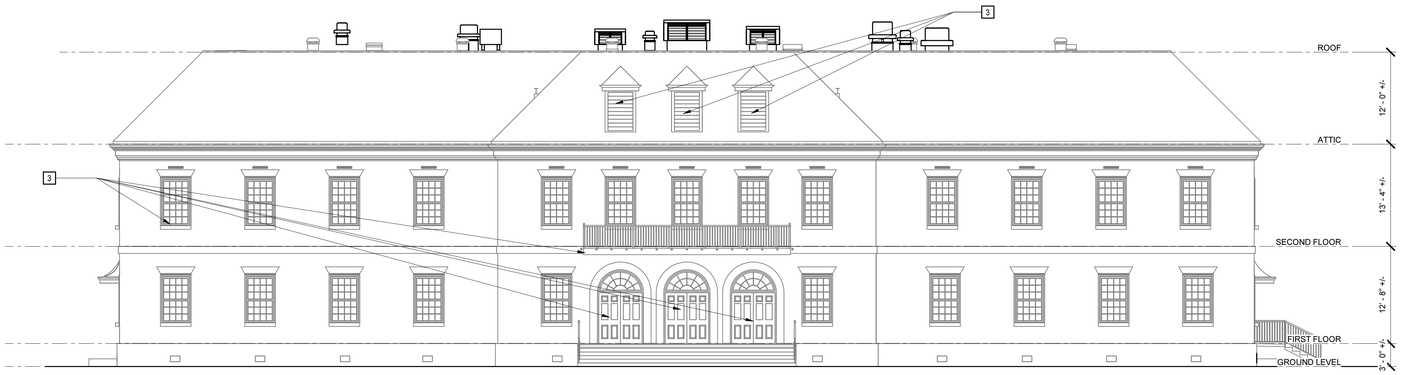
REPRESENTED BY [n]

APPLIES TO DRAWINGS A4.1 - A4.n

1	FACE BRICK SOLDIER COURSE; BRICK TO MATCH EXISTING
2	FACE BRICK SILL; BRICK TO MATCH EXISTING
3	ALTERNATE #5 SCRAPE AND PAINT EXTERIOR TRIM AT ALL WINDOWS CANOPIES AND DOORS
4	INFILL WALL OPENING WITH METAL LOUVER
5	FACE BRICK TOOTH IN BRICK; BRICK TO MATCH EXISTING

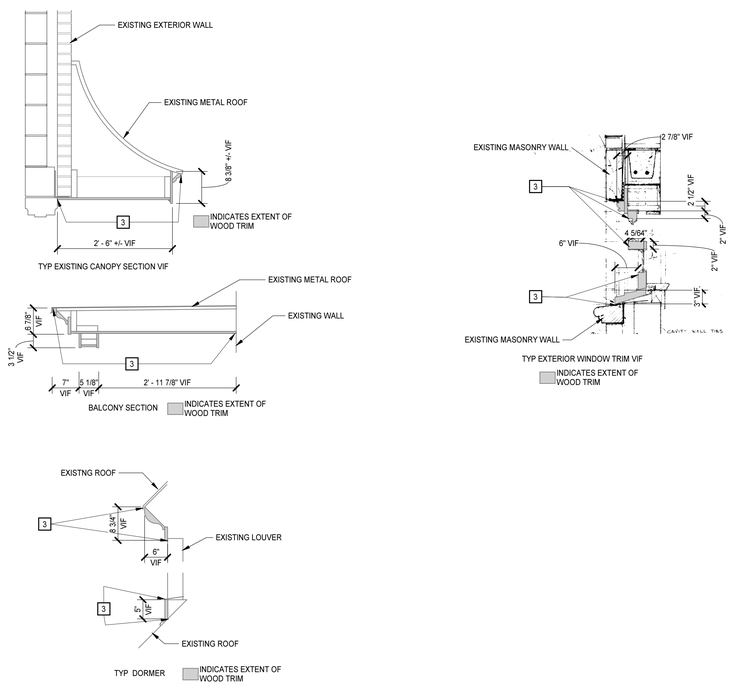


3 A2.1 A4.1 **NORTH ELEVATION**
1/8" = 1'-0"



4 A2.1 A4.1 **SOUTH ELEVATION**
1/8" = 1'-0"

ALTERNATE 5 SCRAPE AND PAINT TRIM DETAILS



ALTERNATE # 5 0RIGINAL AS BUILT DETAILS MARK UP
NO SCALE

0' 2' 4' 8' 16'
1/8" = 1'-0"

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DATE	DESCRIPTION

KING HALL - BUILDING ELEVATIONS

A4.1

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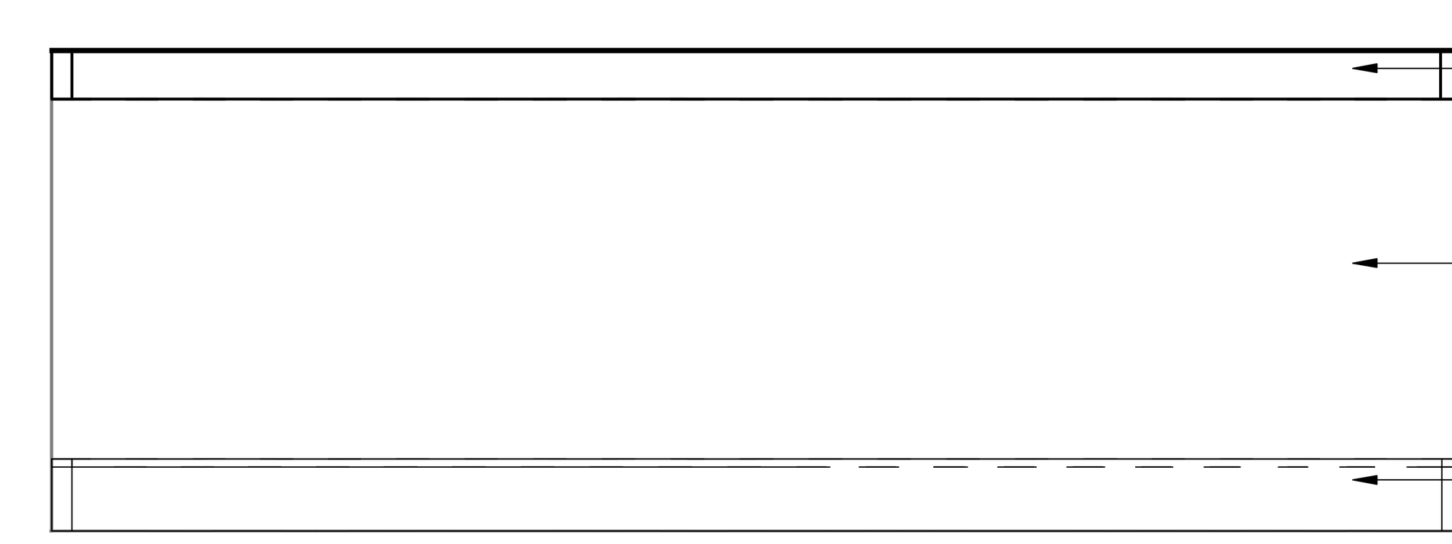

1 A3.0.1 A4.2

ELEVATION - LOBBY - 100

1/4" = 1'-0"

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SCO#22-24639-01A
601 Hamilton Drive, Wilmington, NC 28403

PROJECT NO: 620589
DATE: NOVEMBER 18, 2022

REVISIONS	
DATE	DESCRIPTION

INTERIOR ELEVATIONS

A4.2

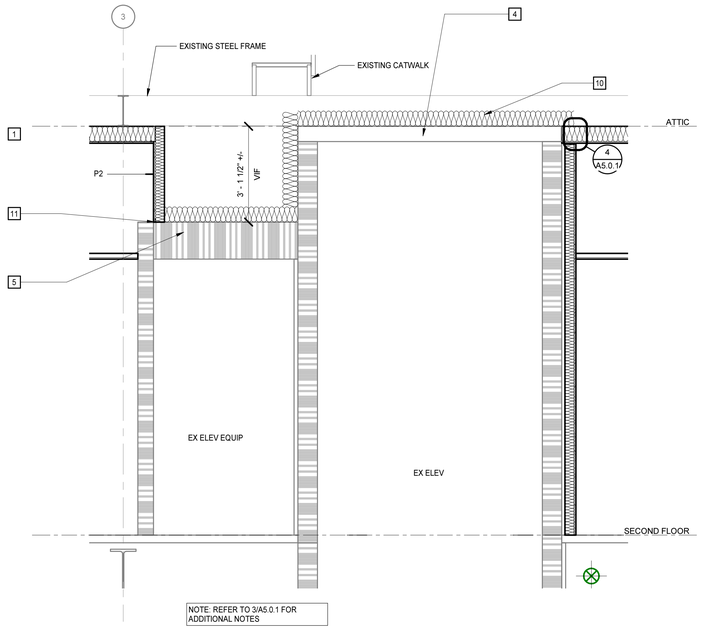
11/18/2022 8:14:24 AM

WALL SECTION KEYNOTES

REPRESENTED BY n

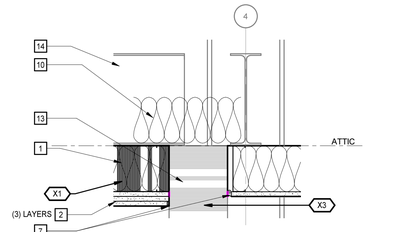
APPLIES TO DRAWINGS A5.1.0

1	6" CFSF-S FILLED WITH BATT INSULATION
2	5/8" GYPSUM BOARD; TAPE AND SEAL ALL JOINTS
3	EXISTING 2 HOUR CONSTRUCTION TO REMAIN
4	EXISTING 6" CONCRETE CAP TO REMAIN. CAP MEETS 721.1 (3) MINIMUM THICKNESS OF 5" FOR A PRESCRIPTIVE RATING
5	EXISTING ULG504 TO REMAIN
6	TAPE AND SEAL ALL JOINTS IN 5/8" GYP
7	CONTINUOUS ACOUSTIC SEALANT
8	PARTITION TYPE VARIES REFER TO FLOOR PLANS
9	EXISTING PARTITION
10	6" BATT INSULATION
11	LOCATE WALL AT EDGE OF EXISTING CONCRETE CAP
12	FILL EXISTING STUD CAVITY WITH SOUND ATTENTUATION BLANKETS
13	EXISTING WALL WITH PRESCRIPTIVE 1 HOUR RATING PER 721.1(2)
14	EXISTING JOIST BEYOND



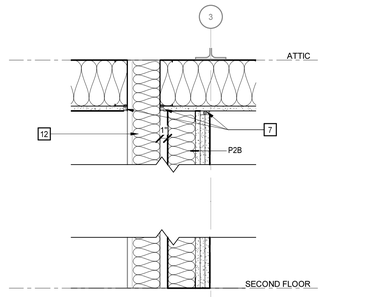
NOTE: REFER TO 3/A5.0.1 FOR ADDITIONAL NOTES

6 SECTION A2.2 A5.0.1 — 1/2" = 1'-0"



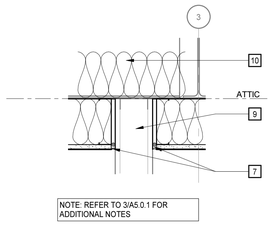
NOTE: REFER TO LS2.1 FOR UL ASSEMBLIES LEGEND INDICATED WITH X#

8 DETAIL @ STAIR A2.2 A5.0.1 — 1 1/2" = 1'-0"



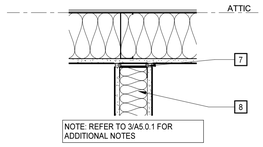
NOTE: REFER TO 3/A5.0.1 FOR ADDITIONAL NOTES

7 DETAIL A2.1 A5.0.1 — 1 1/2" = 1'-0"



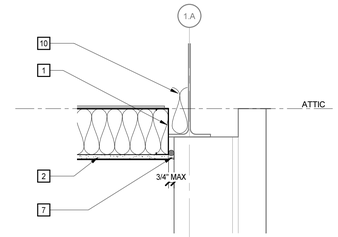
NOTE: REFER TO 3/A5.0.1 FOR ADDITIONAL NOTES

5 DETAIL @ EXISTING PARTITION A5.0.1 A5.0.1 — 1 1/2" = 1'-0"

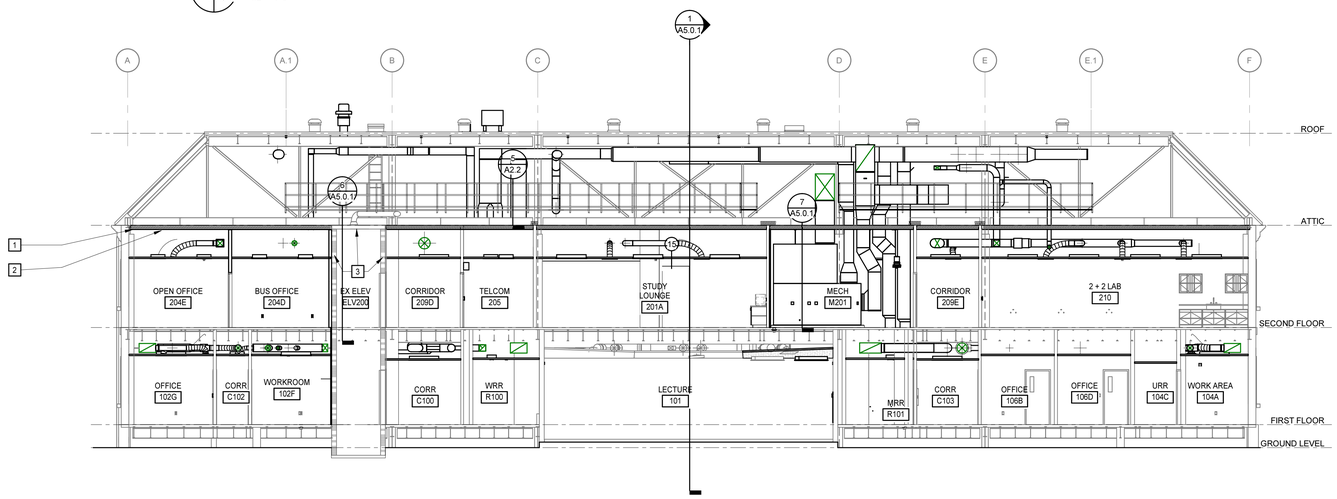


NOTE: REFER TO 3/A5.0.1 FOR ADDITIONAL NOTES

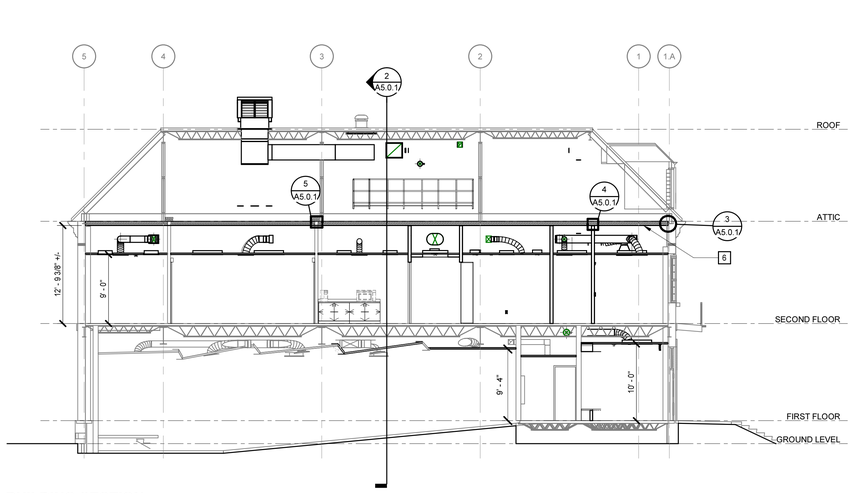
4 DETAIL @ NEW PARTITION A5.0.1 A5.0.1 — 1 1/2" = 1'-0"



3 DETAIL @ EXTERIOR A5.0.1 A5.0.1 — 1 1/2" = 1'-0"



2 BUILDING SECTION A2.1 A5.0.1 — 1/8" = 1'-0"



1 BUILDING SECTION A2.1 A5.0.1 — 1/8" = 1'-0"

1½" = 1'-0" 0" 3" 6" 1' 1'-4"

1/8" = 1'-0" 0' 2' 4' 8' 16'

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ALDERMAN AND KING HALL RENOVATIONS - KING HALL

University of North Carolina Wilmington
SCC#22-24639-01A
601 Hamilton Drive, Wilmington, NC 28403

PROJECT NO: 620589
DATE: FEBRUARY 10, 2023

REVISIONS	
DATE	DESCRIPTION

BUILDING SECTIONS

A5.0.1

3/24/2023 4:15:56 PM

CASEWORK GENERAL NOTES

A. UNLESS INDICATED OTHERWISE, ALL COUNTERTOP(S):
- 2'-10" AFF OR 2'-10" TO TOP OF RIM AT DROP-IN SINKS AND LAVATORIES WHERE OCCURS
- 2'-1" DEEP
- SOLID SURFACE
- BACKSPLASHES: 4" HIGH AT ALL SIDES AND BACK
- EXTEND COUNTERTOP 1/2" PAST BASE CABINET AT ALL EXPOSED CASEWORK ENDS

B. UNLESS INDICATED OTHERWISE, ALL BASE CABINET(S):
- 2'-0" DEEP NOMINAL
- TOE KICKS: 4" HIGH AND 3" DEEP
- SINK LOCATIONS: 3'-0" WIDE CLEAR KNEE SPACE (NO BASE CABINET) FOR BARRIER FREE ACCESS

C. UNLESS INDICATED OTHERWISE, ALL WALL CABINET(S):
- 1'-0 1/2" DEEP NOMINAL
- 2'-6" HIGH
- TOP AT 7'-0" AFF
- MINIMUM 11" CLEAR INTERIOR DEPTH

D. BUILT-IN EQUIPMENT: SIZE OPENING (HEIGHT, WIDTH, AND DEPTH) AND ROUGH-IN REQUIREMENTS AS REQUIRED BASED ON APPROVED MANUFACTURER SUBMITTED.

E. ALL SHELVES: ADJUSTABLE UNLESS INDICATED OTHERWISE.

F. PROVIDE FINISH END PANELS AT ALL EXPOSED CASEWORK ENDS.

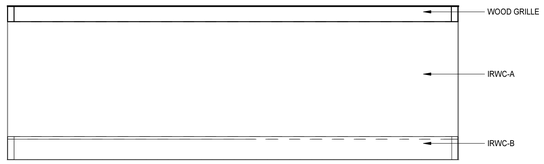
G. LOCKS: PROVIDE CABINET DOOR LOCKS, KEYED PER ROOM, TYPICAL. PROVIDE KEYS TO OWNER

CASEWORK KEYNOTES

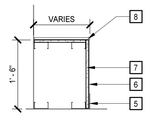
REPRESENTED BY n

APPLIES TO DRAWINGS A8.1

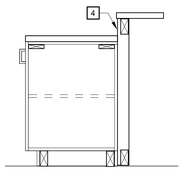
1	FULL HEIGHT FILLER
2	COUNTERTOP
3	FILLER
4	TILE
5	RUBBER BASE
6	FINISH: IRWC
7	ABUSE RESISTANT GYP WITH LEVEL 4 FINISH
8	FIXED CUSHION
9	NIC EQUIPMENT
10	NIC FURNITURE



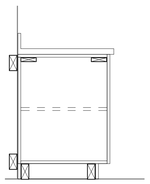
13 A3.0.1 A8.1 **ELEVATION - LOBBY**
1/4" = 1'-0"



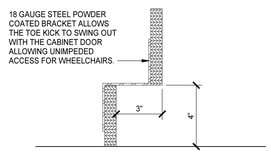
12 A2.1 A8.1 **CASEWORK SECTION - LOBBY**
3/4" = 1'-0"



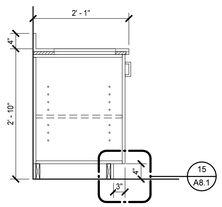
11 A8.1 A8.1 **CASEWORK SECTION - BREAK**
3/4" = 1'-0"



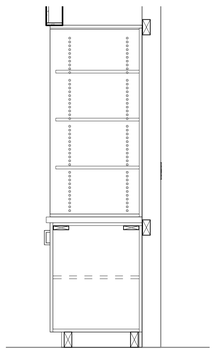
10 A8.1 A8.1 **CASEWORK SECTION**
3/4" = 1'-0"



15 A8.1 A8.1 **DETAIL - ACCESSIBLE TOEKICK**
3" = 1'-0"



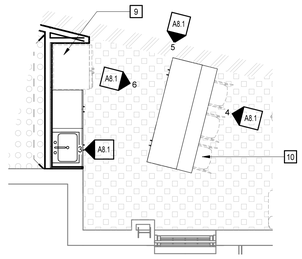
14 A8.1 A8.1 **CASEWORK SEICTION**
3/4" = 1'-0"



9 A8.1 A8.1 **CASEWORK SECTION - STUDY LOUNGE**
3/4" = 1'-0"

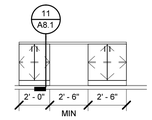
12 A8.1

8 A3.0.1 A8.1 **ELEVATION - CORRIDOR**
1/4" = 1'-0"

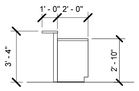


7 A3.0.1 A8.1 **BREAK ROOM**
1/4" = 1'-0"

11 A8.1

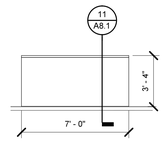


6 A8.1 A8.1 **ELEVATION - BREAK**
1/4" = 1'-0"



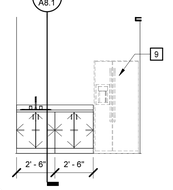
5 A8.1 A8.1 **ELEVATION - BREAK**
1/4" = 1'-0"

11 A8.1



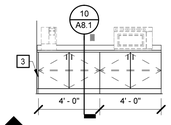
4 A8.1 A8.1 **ELEVATION - BREAK**
1/4" = 1'-0"

14 A8.1



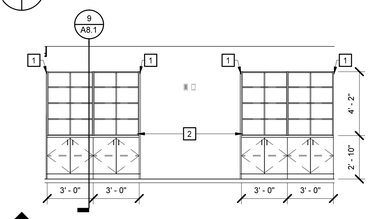
3 A8.1 A8.1 **ELEVATION - BREAK**
1/4" = 1'-0"

10 A8.1



2 A3.0.1 A8.1 **ELEVATION - STUDY LOUNGE**
1/4" = 1'-0"

9 A8.1



1 A3.0.1 A8.1 **ELEVATION - STUDY LOUNGE**
1/4" = 1'-0"

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ALDERMAN AND KING HALL RENOVATIONS - KING HALL

University of North Carolina Wilmington
SCO#22-24639-01A
601 Hamilton Drive, Wilmington, NC 28403

PROJECT NO: 620589
DATE: FEBRUARY 10, 2023

REVISIONS	
DATE	DESCRIPTION

CASEWORK AND ELEVATIONS

A8.1

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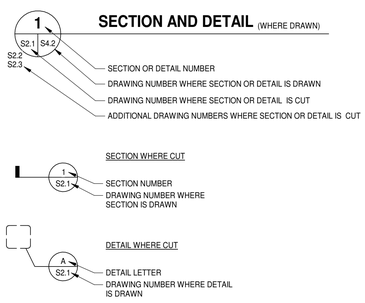
STRUCTURAL ABBREVIATIONS

AB	ANCHOR BOLT	HSS	HOLLOW STRUCTURAL SECTION
AESS	ARCHITECTURALLY EXPOSED STRUCTURAL STEEL	HT	HEIGHT
		ID	INSIDE DIAMETER
AFF	ABOVE FINISHED FLOOR	IN	INCH
ALUM	ALUMINUM	INFO	INFORMATION
APPROX	APPROXIMATE	INT	INTERIOR
ARCH	ARCHITECTURAL, ARCHITECT	JBE	JOIST BEARING ELEVATION
AVG	AVERAGE	JS	JOIST SUBSTITUTE
BLDG	BUILDING	JST	JOIST
BM	BEAM	JT	JOINT
BMC	BUILDING MOUNTED CANOPIES	K	KIP
BOT	BOTTOM	LBS	POUNDS
BRG	BEARING	LF	LINEAR FEET (FOOT)
BTWN	BETWEEN	LLH	LONG LEG HORIZONTAL
CANT	CANTILEVER	LLV	LONG LEG VERTICAL
CFSF	COLD FORMED STEEL FRAMING	M	METER(S)
CIP	CAST IN PLACE	MAS	MASONRY
CJ	CONTROL JOINT	MATL	MATERIAL
CLG	CEILING	MAX	MAXIMUM
CLR	CLEAR	MBMA	METAL BUILDING MANUFACTURER'S ASSOC
CMU	CONCRETE MASONRY UNIT		
COL	COLUMN	MBS	METAL BUILDING SYSTEM
CONC	CONCRETE	MECH	MECHANICAL
CONN	CONNECTION	MFR	MANUFACTURER
CONSTR	CONSTRUCTION	MIN	MINIMUM
CONT	CONTINUOUS	MM	MILLIMETER(S)
CTR	CENTER	NOM	NOMINAL
DBA	DEFORMED BAR ANCHOR	NS	NON SHRINK
DBL	DOUBLE	OC	ON CENTER
DIA	DIAMETER	OD	OUTSIDE DIAMETER
DIAG	DIAGONAL	OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
DIM	DIMENSION		
DN	DOWN	OPNG	OPENING
DWG	DRAWING	OPP	OPPOSITE
EA	EACH	PAF	POWDER-ACTUATED FASTENERS
EF	EACH FACE	PC CONC	PRECAST CONCRETE
EJ	EXPANSION JOINT	PFBC	PRE-FABRICATED BUILDING COLUMN
EL	ELEVATION	PLF	POUNDS PER LINEAR FOOT
ELECT	ELECTRICAL	POLY	POLYETHYLENE
ELEV	ELEVATOR	PPT	PRESSURE PRESERVATIVE TREATED
EOD	EDGE OF DECK	PSF	POUNDS PER SQUARE FOOT
EOS	EDGE OF SLAB	PTFE	POLYTETRAFLUOROETHYLENE
EQ	EQUAL	R	RADIUS
EW	EACH WAY	RD	ROOF DRAIN
EX	EXISTING	REF	REFERENCE
EXP	EXPANSION	REINF	REINFORCING, REINFORCED
EXT	EXTERIOR	REQ'D	REQUIRED
FB	FIXED BASE	SIM	SIMILAR
FD	FLOOR DRAIN	SL	SLOPE
FDN	FOUNDATION	SOG	SLAB ON GRADE
FF	FINISHED FLOOR	SPA	SPACES
FIN	FINISHED	SS	STAINLESS STEEL
FLR	FLOOR	STD	STANDARD
FOB	FACE OF BRICK	STIFF	STIFFENER
FOC	FACE OF CONCRETE	STRUCT	STRUCTURAL
FOM	FACE OF MASONRY	SUSP	SUSPENDED
FRMG	FRAMING	SYM	SYMMETRY(RICAL)
FRT	FIRE RETARDANT TREATED	T&B	TOP AND BOTTOM
FT	FOOT	T&G	TONGUE AND GROOVE
FTG	FOOTING	TF	TRANSFER FORCE
GA	GAGE	TOC	TOP OF CONCRETE
GALV	GALVANIZED	TOS	TOP OF STEEL
GB	GRADE BEAM	TOSL	TOP OF SLAB
GC	GENERAL CONTRACTOR	TOW	TOP OF WALL
GRD	GRADE	TYP	TYPICAL
HD	HEADED	UNO	UNLESS NOTED OTHERWISE
HK	HOOK	VB	VAPOR BARRIER
HORIZ	HORIZONTAL	VERT	VERTICAL
HS	HIGH STRENGTH	VR	VAPOR RETARDER
		WP	WORK POINT
		WWF	WELDED WIRE FABRIC

LEGEND FOR SECTION AND DETAIL MARKS



STRUCTURAL MATERIALS LEGEND

- EARTH
- CAST IN PLACE CONCRETE
- CLAY BRICK
- HOLLOW CONCRETE BLOCK
- SPLIT-FACE CONCRETE BLOCK
- GROUT FILLED CONCRETE BLOCK
- PRECAST CONCRETE, CAST STONE
- POROUS FILL OR GRANULAR BASE COURSE

DESIGN LOAD DATA

1. CLASSIFICATION OF BUILDING
   RISK CATEGORY (IBC TABLE 1604.5) — III
2. WIND DESIGN DATA

ULTIMATE DESIGN WIND SPEED (3 SECOND GUST)	155 MPH
EXPOSURE	B
INTERNAL PRESSURE COEFFICIENT (GCpi)	±0.18 (ENCLOSED)
HEIGHT TO EAVES	30 FT
MEAN HEIGHT	36 FT
COMPONENTS AND CLADDING WIND PRESSURE	REFER TO DIAGRAM BELOW (PER IBC & ASCE7)

GENERAL

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE NORTH CAROLINA BUILDING CODE (NCBC), 2018 EDITION.
2. THE STRUCTURAL DRAWINGS ARE INTENDED TO BE USED IN CONJUNCTION WITH THE ARCHITECTURAL DRAWINGS AND THE DRAWINGS OF THE OTHER ENGINEERING DISCIPLINES.
3. THE CONTRACT DOCUMENTS ARE COMPLEMENTARY AND WHAT IS REQUIRED BY ONE SHALL BE AS BINDING AS IF REQUIRED BY ALL. IN THE CASE OF A CONFLICT, DISAGREEMENT, OR AMBIGUITY, PROVIDE THE BETTER QUANTITY. IN THE CASE OF A CONFLICT, DISAGREEMENT, OR AMBIGUITY, PROVIDE THE GREATER QUANTITY OF WORK.
4. VERIFY AND COORDINATE MECHANICAL UNIT SUPPORTS AND OPENINGS WITH EQUIPMENT PURCHASED FOR THE PROJECT. COORDINATE REQUIREMENTS FOR SLEEVES, HANGERS, INSERTS, ANCHORS AND ALL OTHER ITEMS TO BE SET IN STRUCTURAL WORK.
5. SPECIAL INSPECTIONS ARE REQUIRED BY THE NCBC, SECTION 1704.
   REFER TO THE STATEMENT OF SPECIAL INSPECTIONS PREPARED FOR THIS PROJECT AND THE PROJECT SPECIFICATIONS FOR SPECIFIC INSPECTION REQUIREMENTS.
   REFER TO SPECIFICATION SECTION 014000 FOR GENERAL INSPECTION REQUIREMENTS. SPECIAL INSPECTOR SHALL SUBMIT INSPECTION REPORTS IN COMPLIANCE WITH IBC SECTION 1704.2.4. USE OF "GENERAL CONFORMANCE" OR "GENERAL ACCORDANCE" IS UNACCEPTABLE.
6. CONTRACTOR SHALL CONDUCT PRE-INSTALL MEETINGS ON PROJECT SITE PRIOR TO COMMENCEMENT OF WORK. REFER TO PROJECT SPECIFICATIONS FOR SPECIFIC REQUIREMENTS. MEETINGS WILL BE LED BY GENERAL CONTRACTOR AND ATTENDANCE BY MOSELEY ARCHITECTS IS FOR INFORMATIONAL PURPOSES ONLY.

STRUCTURAL STEEL

1. ALL STRUCTURAL STEEL WORK SHALL CONFORM TO THE FOLLOWING AISC DOCUMENTS:
   AISC 360 "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS"
   AISC 303 "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES"
   RCSC'S "SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH STRENGTH BOLTS"
2. STRUCTURAL STEEL SHALL COMPLY WITH THE FOLLOWING SPECIFICATIONS:

WIDE FLANGE SHAPES AND ANGLES	ASTM A992 (FY=50 KSI)
HOLLOW STRUCTURAL SECTIONS (HSS, SQUARE)	ASTM A500, GRADE C (FY=50 KSI)
MISCELLANEOUS SHAPES, PLATES, & BARS	ASTM A36 (FY=36 KSI)

3. WELDING SHALL BE IN ACCORDANCE WITH AWS D1.1 "STRUCTURAL WELDING CODE - STEEL".
4. STRUCTURAL STEEL EXPOSED TO WEATHER IN THE FINISHED WORK SHALL BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A123, UNLESS NOTED OTHERWISE.

CONCRETE MASONRY (CMU)

1. ALL MASONRY WORK SHALL CONFORM TO THE REQUIREMENTS OF TMS 402 "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES WITH COMMENTARY" AND TMS 402 "SPECIFICATIONS FOR MASONRY STRUCTURES WITH COMMENTARY".
2. MORTAR FOR CMU SHALL CONFORM TO ASTM C270, TYPE S, UNLESS NOTED OTHERWISE.
3. GROUT SHALL CONFORM TO ASTM C476 AND SHALL BE PROPORTIONED TO OBTAIN MINIMUM ULTIMATE 28 DAY COMPRESSIVE STRENGTH OF 2500 PSI.
4. PLACE GROUT IN ACCORDANCE WITH TMS 402. ALLOW A MINIMUM OF 24 HOURS FOR MASONRY TO SET PRIOR TO PLACING GROUT. HIGH LIFT GROUTING IS PROHIBITED.
5. PROVIDE VERTICAL REINFORCING STEEL OF SIZE AND SPACING INDICATED. LAP SPLICE LENGTHS SHALL BE AS FOLLOWS:

#4 BAR	26 INCHES

6. REINFORCING STEEL SHALL COMPLY WITH ASTM A615, GRADE 60.
7. DO NOT PLACE CONDUIT IN CELLS CONTAINING STRUCTURAL REINFORCING.

STEEL DECK

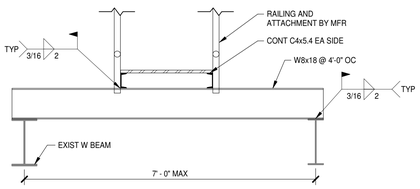
1. ALL STEEL DECK WORK SHALL CONFORM TO THE LATEST EDITION OF THE STEEL DECK INSTITUTE (SDI) "DESIGN MANUAL FOR COMPOSITE DECKS, FORM DECKS AND ROOF DECKS", AND AMERICAN IRON AND STEEL INSTITUTE (AISI) "SPECIFICATION FOR THE DESIGN OF COLD FORMED STEEL STRUCTURAL MEMBERS".
2. PERMANENT LOADS SHALL NOT BE SUSPENDED FROM STEEL ROOF DECK UNLESS APPROVED BY ENGINEER OF RECORD.
3. STEEL DECK SHALL BE 22 GA 1 1/2" WIDE RIB ROOF DECK, GALVANIZED.

RENOVATION

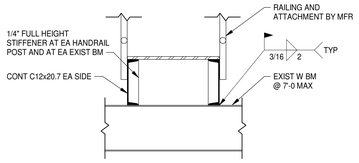
1. EXISTING CONSTRUCTION INDICATED ON THE STRUCTURAL DRAWINGS IS BASED ON INFORMATION OBTAINED FROM THE ORIGINAL DESIGN DRAWINGS AND ON LIMITED OBSERVATIONS OF EXISTING CONDITIONS. THIS INFORMATION, INCLUDING STRUCTURAL COMPONENT TYPE, SIZE AND ORIENTATION HAS NOT BEEN CONFIRMED IN ALL CASES, AND MAY NOT MATCH "AS-BUILT" EXISTING CONSTRUCTION. ALL EXISTING CONDITIONS AND DIMENSIONS RELATING TO THE NEW WORK SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO FABRICATION AND CONSTRUCTION OF STRUCTURAL ELEMENTS. DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT.
2. EXISTING CONSTRUCTION IS INDICATED USING A LIGHTER LINE WEIGHT THAN NEW CONSTRUCTION IN PLANS AND SECTIONS.

TEMPORARY SHORING

1. PROVIDE TEMPORARY SHORING AND BRACING TO MAINTAIN THE EXISTING STRUCTURE IN PROPER ALIGNMENT UNTIL PERMANENT CONSTRUCTION AND LATERAL BRACING IS IN PLACE.
2. THE TEMPORARY SHORING DIAGRAMS ARE CONCEPTUAL ONLY. DESIGN OF TEMPORARY SHORING SHALL BE PROVIDED BY THE CONTRACTOR. DESIGN CALCULATIONS AND SHORING DRAWINGS SHALL BE SUBMITTED FOR REVIEW AND SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NORTH CAROLINA.
3. CAREFULLY EVALUATE THE SITUATION WHICH EXISTS PRIOR TO COMMENCEMENT OF WORK. NOTIFY THE ARCHITECT IF ANY CONDITIONS ARE DETECTED WHICH MAY AFFECT THE STABILITY OF THE EXISTING STRUCTURE OR THE SHORING.
4. MONITOR THE PERFORMANCE OF THE TEMPORARY SHORING AT ALL TIMES DURING THIS WORK AND HAVE ADDITIONAL SHORING READILY AVAILABLE ON SITE IN THE EVENT OF DEFLECTION OR OTHER MOVEMENT OF THE SHORING.
5. REFER TO THE PHASING PLAN ON ARCH DRAWINGS. WORK SHALL BE COORDINATED TO PROHIBIT ACCESS TO FLOOR AREAS ABOVE THIS WORK DURING DEMOLITION AND UNTIL FINAL SUPPORT IS COMPLETED.



CATWALK PARALLEL TO EXISTING BEAMS

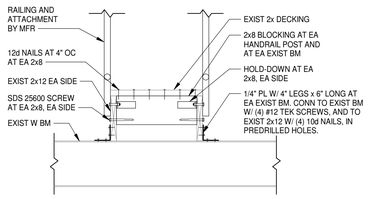


CATWALK PERPENDICULAR TO EXISTING BEAMS

CATWALK DETAILS

NO SCALE

NOTE: GC COORDINATE WITH APPROVED HANDRAIL SUBMITTAL AND EXISTING STEEL BEAM LOCATIONS.



HANDRAIL AT EXISTING CATWALK

NO SCALE

NOTE: GC COORDINATE WITH APPROVED HANDRAIL SUBMITTAL AND EXISTING STEEL BEAM LOCATIONS.

LINTEL SCHEDULE

MARK	DIAGRAM	STEEL	NOTES
L1		WT7x13 W/ 11" WIDE BOTTOM PL	4" MIN BEARING EA END

LINTEL NOTES

1. LINTELS FOR ARCHITECTURAL OPENINGS (WINDOWS, DOORS, LOUVERS) IN BEARING WALLS AND EXTERIOR WALLS ARE IDENTIFIED BY MARK NUMBER ON THE FRAMING PLAN(S) AND INCLUDED IN THE LINTEL SCHEDULE.
2. LINTELS FOR ARCHITECTURAL OPENINGS IN NON-LOAD BEARING WALLS AND OTHER WALLS WHICH ARE NOT INDICATED ON THE FRAMING PLAN(S) SHALL BE CONSTRUCTED PER NOTES A, B OR C BELOW.

   A. STEEL ANGLE LINTELS

   PROVIDE ONE ANGLE FOR EACH NOMINAL 4" OF WALL THICKNESS PER THE FOLLOWING SCHEDULE.

MASONRY OPENING	ANGLE SIZE
UP TO 5'-0"	L3 1/2x3 1/2x 5/16
5'-1" TO 6'-0"	L4x3 1/2x 5/16 (LLV)
6'-1" TO 7'-0"	L5x3 1/2x 3/8 (LLV)
OVER 7'-0"	AS DETAILED

   FOR OPENINGS IN 10" CMU, HORIZONTAL LEGS OF ANGLES SHALL BE A COMBINATION OF 5" AND 4".

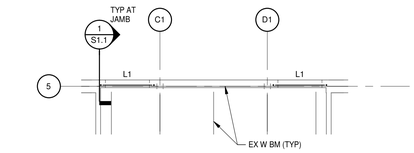
   FOR OPENINGS IN 6" CMU REQUIRING STEEL LINTELS, USE WT7x11 UP TO 7'-0" OPENING.

   B. REINFORCED BOND BEAM LINTELS

   LINTELS SHALL MATCH THICKNESS OF WALL. REINFORCE 8", 10" AND 12" BOND BEAM WITH (2) #5 BARS AT BOTTOM. REINFORCE 6" BOND BEAM WITH (1) #5 BAR AT BOTTOM. BOND BEAM SHALL BE 8" DEEP FOR OPENING WIDTH UP TO 5'-0", AND SHALL BEAR 8" ON SOLID MASONRY EACH END. BOND BEAM SHALL BE 16" DEEP FOR OPENING WIDTH UP TO 8'-0" AND SHALL BEAR 16" ON SOLID MASONRY EACH END WITH REINFORCING TOP AND BOTTOM. PLACE GROUT MONOLITHICALLY IN BOTH COURSES OF 16" DEEP BOND BEAM.

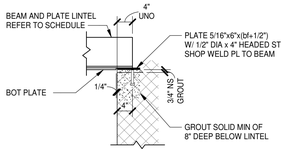
   C. PRECAST CONCRETE LINTELS

   PRECAST CONCRETE LINTELS SHALL BE 3 5/8" x 7 5/8" FOR EACH NOMINAL 4" THICKNESS OF WALL. REINFORCING SHALL BE (1) #4 TOP AND BOTTOM WITH 1 1/2" COVER. FOR OPENINGS IN 6" CMU, LINTEL SHALL BE 5 5/8" x 7 5/8", REINFORCED WITH (1) #5 TOP AND BOTTOM. MASONRY OPENING WIDTH SHALL BE 6'-0" OR LESS. DO NOT USE PRECAST CONCRETE LINTELS IN EXPOSED LOCATIONS.
3. LINTELS FOR MECHANICAL DUCTWORK PENETRATIONS NOT OTHERWISE DETAILED SHALL BE ONE OF THE ABOVE (NOTE 2A, 2B OR 2C).
4. LINTELS SHALL BEAR 8" ONTO SOLID OR GROUT FILLED MASONRY, UNLESS OTHERWISE INDICATED.
5. LINTELS ARE REQUIRED OVER ALL MASONRY OPENINGS GREATER THAN 8" IN WIDTH.
6. LINTELS ARE NOT REQUIRED ABOVE HOLLOW METAL FRAMES IN OPENINGS 3'-4" OR LESS IN 6" NON-BEARING MASONRY PARTITIONS. GROUT HEAD OF FRAMES SOLID BEFORE PLACING MASONRY.
7. ALL LINTELS IN EXTERIOR WALLS SHALL BE GALVANIZED.



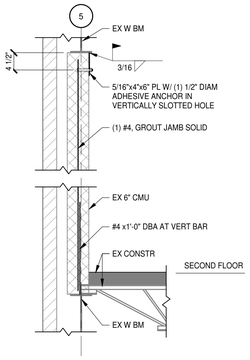
PART PLAN - ALTERNATE - ATTIC

1/8" = 1'-0"



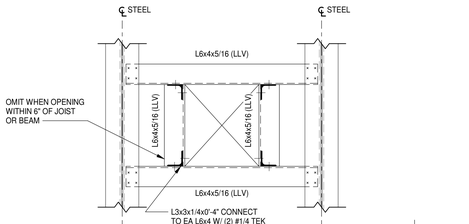
STEEL LINTEL DETAILS

NO SCALE



1 S1.1 S1.1 **SECTION**

3/4" = 1'-0"



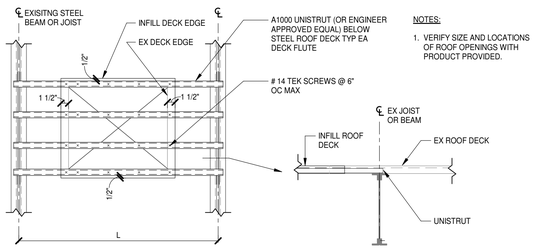
NOTES:

1. VERIFY SIZE AND LOCATIONS OF FLOOR OPENINGS WITH PRODUCT PROVIDED.
2. USE ANGLE FRAME FOR ALL FLOOR OPENINGS 6" OR LARGER NOT OTHERWISE INDICATED.
3. PRE-DRILL ANGLES AS REQUIRED.

FLOOR OPENING SUPPORT DETAIL - EXISTING CONSTRUCTION

NO SCALE

NOTE: REFER TO ARCH AND MECH DWGS FOR FLOOR OPENING LOCATIONS.



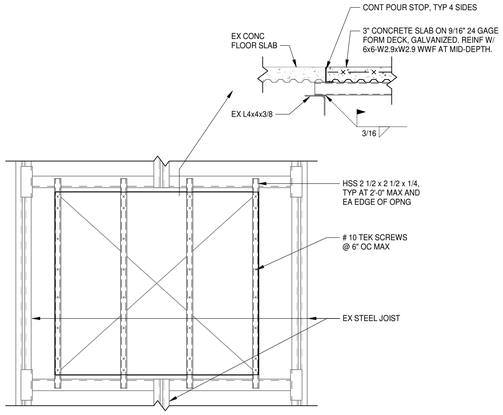
NOTES:

1. VERIFY SIZE AND LOCATIONS OF ROOF OPENINGS WITH PRODUCT PROVIDED.

UNISTRUT - ROOF INFILL SUPPORT DETAIL - EXISTING CONSTRUCTION

NO SCALE

NOTE: REFER TO ARCH AND MECH DWGS FOR ROOF INFILL LOCATIONS.



NOTE: REFER TO ARCH AND MECH DWGS FOR FLOOR INFILL LOCATIONS.

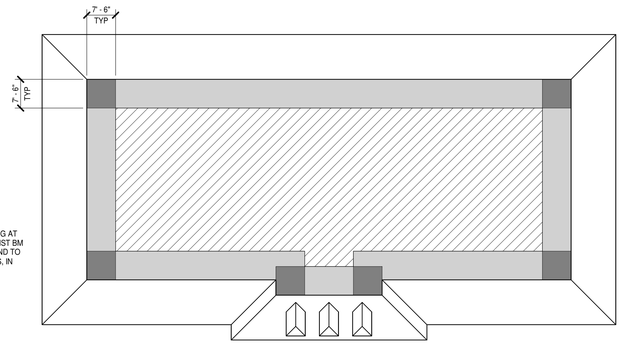
HOUSEKEEPING PAD DETAIL

NO SCALE

NOTE: REFER TO MECH DRAWINGS FOR EQUIPMENT REQUIRING HOUSEKEEPING PAD

FLOOR INFILL SUPPORT DETAIL - EXISTING CONSTRUCTION

NO SCALE



ROOF WIND PRESSURE DIAGRAM

1/16" = 1'-0"

GROSS WIND PRESSURE				
ZONE	AREA ≤ 10 FT²	AREA ≤ 20 FT²	AREA ≤ 50 FT²	AREA ≥ 100 FT²
1	+37 PSF/ -71 PSF	+32 PSF/ -63 PSF	+25 PSF/ -53 PSF	+20 PSF/ -45 PSF
2r	+37 PSF/ -111 PSF	+32 PSF/ -93 PSF	+25 PSF/ -68 PSF	+20 PSF/ -50 PSF
3	+37 PSF/ -126 PSF	+32 PSF/ -93 PSF	+25 PSF/ -50 PSF	+20 PSF/ -50 PSF
4	+50 PSF/ -54 PSF	+44 PSF/ -49 PSF	+40 PSF/ -44 PSF	+37 PSF/ -41 PSF
5	+50 PSF/ -66 PSF	+44 PSF/ -56 PSF	+40 PSF/ -47 PSF	+37 PSF/ -41 PSF

ROOF WIND PRESSURE DIAGRAM NOTES:

1. PRESSURES INDICATED ARE UNFACTORED ULTIMATE COMPONENTS AND CLADDING WIND PRESSURES PER ASCE 7.
2. ROOF ZONES WITHIN THE SCOPE OF WORK ARE INDICATED ON DIAGRAM. FOR AREAS OF ROOF INFILL WITHIN TWO ROOF ZONES, THE GREATER WIND PRESSURE SHALL APPLY.
3. EFFECTIVE WIND AREA SHALL BE DETERMINED IN ACCORDANCE WITH ASCE 7.
4. ZONE 1 IS INDICATED BY:
5. ZONE 2r IS INDICATED BY:
6. ZONE 3 IS INDICATED BY:
7. INTERIOR REGIONS OF WALLS ARE ZONE 4 AND CORNER REGIONS OF WALLS ARE ZONE 5.
8. (+) INDICATES PRESSURES ACTING TOWARDS THE ROOF OR WALL SURFACE (INWARDS). (-) INDICATES PRESSURES ACTING AWAY FROM THE ROOF OR WALL SURFACE (OUTWARDS).
9. AN ALLOWABLE ROOF DEAD LOAD MAY BE TAKEN AS 10 PSF FOR UPLIFT RESISTANCE.

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03-24-2023

ALDERMAN AND KING HALL RENOVATIONS - KING HALL

University of North Carolina Wilmington
SCO#22-24639-01
601 Hamilton Drive, Wilmington, NC 28403

PROJECT NO: 620589
DATE: FEBRUARY 10, 2023

REVISIONS	
DATE	DESCRIPTION

DETAILS, DIAGRAMS, GENERAL NOTES, AND SCHEDULES

S1.1

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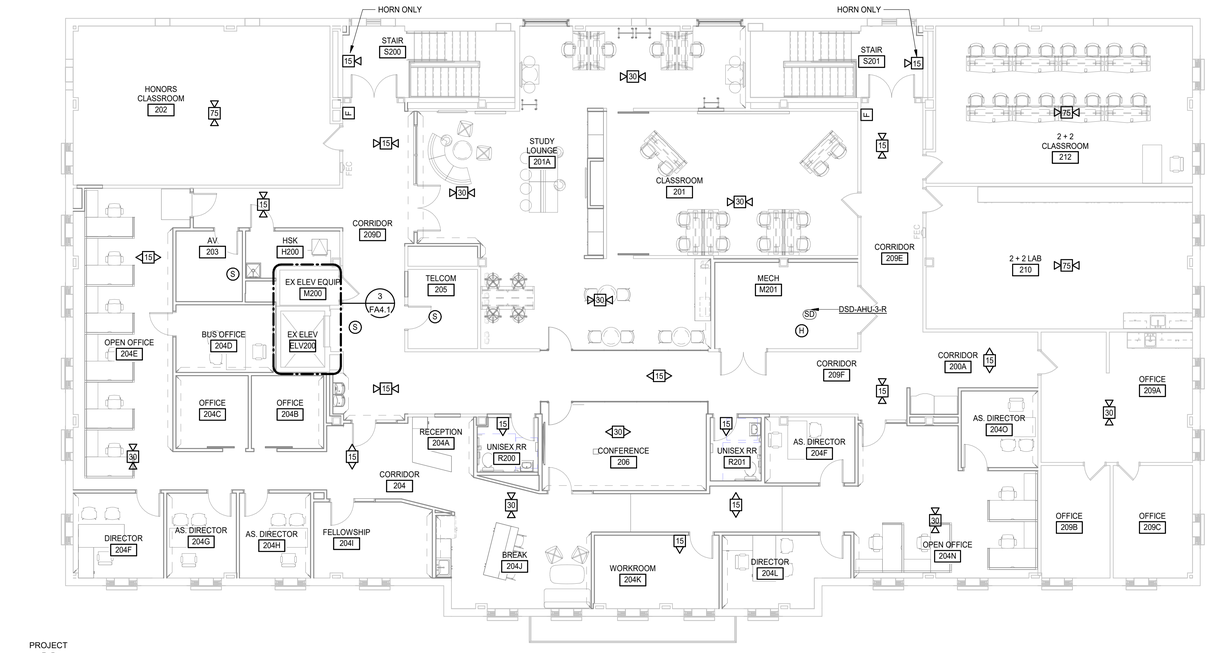
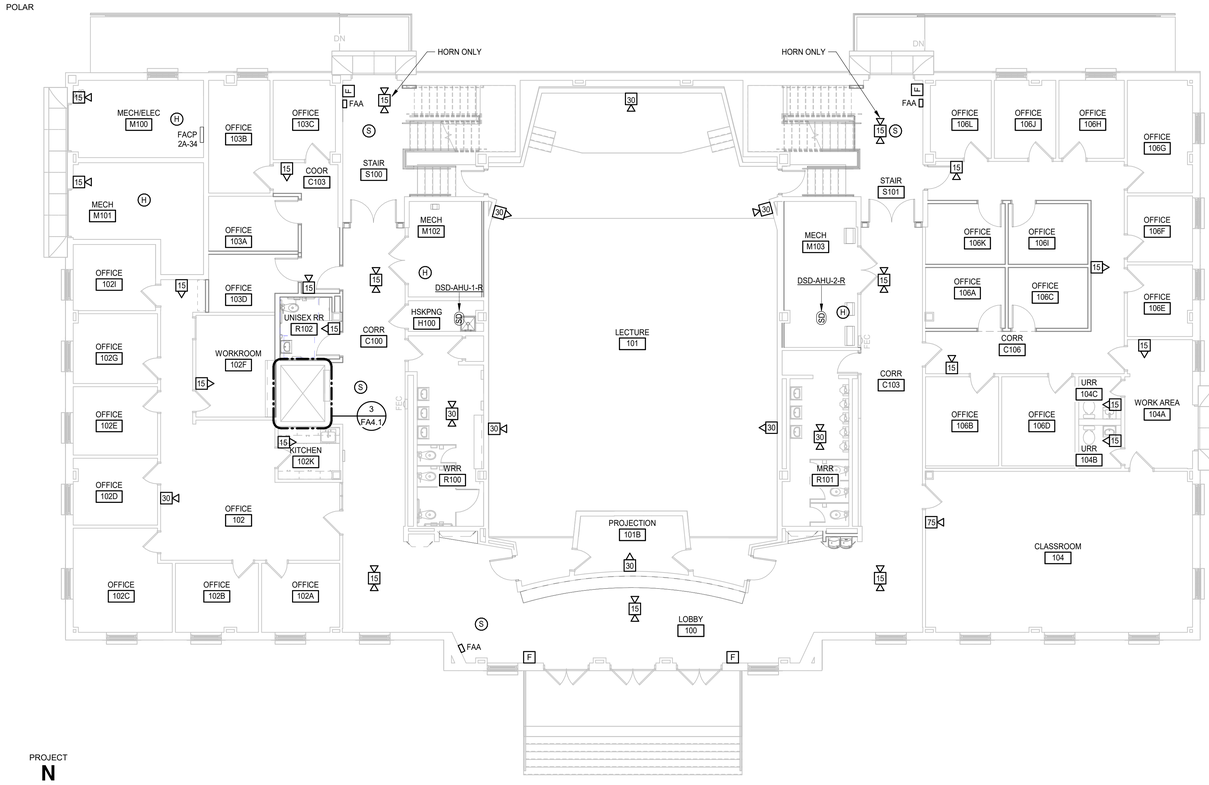


PROJECT N POLAR

SECOND FLOOR PLAN - FIRE ALARM

1/8" = 1'-0"



PROJECT N POLAR

FIRST FLOOR PLAN -FIRE ALARM

1/8" = 1'-0"

GENERAL NOTES

A. THE CONTRACT DOCUMENTS ARE COMPLEMENTARY AND WHAT IS REQUIRED BY ONE SHALL BE AS BINDING AS IF REQUIRED BY ALL. IN THE CASE OF A CONFLICT, DISAGREEMENT, OR AMBIGUITY, PROVIDE THE BETTER QUALITY. IN THE CASE OF A CONFLICT, DISAGREEMENT, OR AMBIGUITY, PROVIDE THE GREATER QUANTITY OF WORK.

B. FOLLOW MOUNTING HEIGHTS INDICATED IN THE ELECTRICAL LEGEND UNLESS OTHERWISE INDICATED. MEASURE ALL MOUNTING HEIGHTS FROM THE DEVICE CENTER LINE UNLESS OTHERWISE INDICATED.

C. FIELD VERIFY EXACT FEEDER LOCATIONS FOR MECHANICAL EQUIPMENT PRIOR TO ROUGH-IN.

D. EQUIPMENT CONNECTIONS ARE INDICATED IN THEIR APPROXIMATE LOCATIONS. VERIFY EXACT LOCATIONS OF ALL CONNECTIONS WITH OTHER TRADES SUPPLYING EQUIPMENT TO AVOID CONFLICTS AT INSTALLATION.

E. LOCATED ALL SWITCHES FOR LOCAL CONTROL OF LIGHTING ON STRIKE SIDE OF SINGLE DOORS UNLESS OTHERWISE INDICATED.

F. PROVIDE SPECIFIC BREAKER ARRANGEMENT FOR THE PANEL BOARDS WHEREVER PHYSICALLY POSSIBLE. PROVIDE AS-BUILT DRAWINGS INDICATING ACTUAL BRANCH CIRCUIT ARRANGEMENT. PROVIDE TYPE WRITTEN PANELBOARD DIRECTORIES INDICATING ACTUAL BRANCH CIRCUIT ARRANGEMENT.

G. PROVIDE AS-BUILT DRAWINGS INDICATING ACTUAL BRANCH CIRCUIT ARRANGEMENT. PROVIDE TYPEWRITTEN PANELBOARD DIRECTORIES INDICATING ACTUAL BRANCH CIRCUIT ARRANGEMENT. HAND WRITTEN SCHEDULES ARE NOT ACCEPTABLE. CONTRACTOR SHALL FIELD VERIFY EXISTING CIRCUIT SPACE NAMES AND NUMBERS AND PROVIDE FINAL DESCRIPTION IN TYPED PANELBOARD DIRECTORY.

H. ALL CONDUIT RUNS INDICATED ARE DIAGRAMMATIC, COORDINATE ROUTING IN ALL SPACES WITH OTHER TRADES.

I. ALL PANELBOARDS INDICATED ARE HOUSED IN A SINGLE WIDTH ENCLOSURE, UNO. THE CONTRACTOR SHALL FIELD VERIFY ROOM LAYOUT AND ADJUST ACCORDINGLY, AT NO COST TO THE OWNER, IF PROVIDING ANY PANELBOARD ENCLOSURES.

J. WHERE POWER AND COMMUNICATION OUTLETS ARE INDICATED IN CLOSE PROXIMITY ON THE DRAWINGS, FIELD COORDINATE THE LOCATIONS TO PLACE THE OUTLETS ADJACENT TO EACH OTHER.

K. ALL EXTERIOR RECEPTACLES SHALL BE LABELED "WR" - WEATHER RESISTANT.

L. WHEN GROUPING MULTIPLE LINE TO NEUTRAL BRANCH CIRCUITS IN A CONDUIT, PROVIDE DEDICATED COLOR CODED NEUTRAL CONDUCTORS FOR EACH CIRCUIT. DO NOT USE BREAKER TIES AND SHARED NEUTRALS EVEN THOUGH PERMITTED BY NEC.

M. PROVIDE A 2" WIDE YELLOW LINE PAINTED ON THE FLOOR INDICATING THE ELECTRICAL WORKING SPACE. IN FRONT OF ALL ELECTRICAL PANELS IN ELECTRICAL ROOMS. REFER TO PLANS FOR ELECTRICAL WORKING SPACE DETAILS. STENCIL "NO STORAGE" IN 2" HIGH, YELLOW LETTERS CENTERED IN THE OUTLINED AREA.

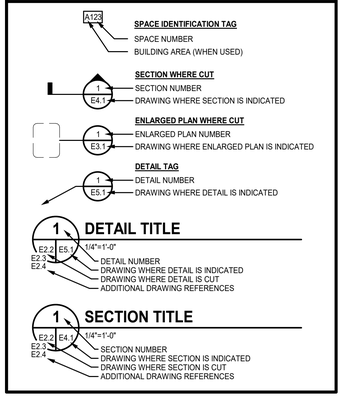
N. ALL ELECTRICAL INSPECTIONS WITH THE STATE CONSTRUCTION OFFICE INSPECTOR SHALL BE MONDAY THRU FRIDAY UNLESS SPECIFICIALLY EXEMPTED AND APPROVED BY THE STATE CONSTRUCTION OFFICE.

O. ALL VOICE, DATA AND CATV CABLING DEMOLITION AND INSTALLATION SHALL BE PERFORMED BY A CERTIFIED COMMSCOPE SYSTIMAX CONTRACTOR.

FIRE ALARM LEGEND

SYMBOL	DESCRIPTION
xx	FIRE ALARM AUDIO/VISUAL NOTIFICATION DEVICE, MOUNT AT 80" AFF AND NOT MORE THAN 96". SUBSCRIPT NUMBER INDICATES STROBE CANDELA RATING.
xx	FIRE ALARM VISUAL STROBE NOTIFICATION DEVICE, 80" AFF AND NOT MORE THAN 96". SUBSCRIPT NUMBER INDICATES STROBE CANDELA RATING.
xx	FIRE ALARM AUDIO/VISUAL NOTIFICATION DEVICE WITH DEVICE GUARD, 80" AFF AND NOT MORE THAN 96". SUBSCRIPT NUMBER INDICATES STROBE CANDELA RATING. # / # INDICATES STROBE SETTING AND REDUCED EFFECTIVE OUTPUT WHEN DEVICE GUARD IS PRESENT.
xx	FIRE ALARM VISUAL STROBE NOTIFICATION DEVICE, 80" AFF AND NOT MORE THAN 96". SUBSCRIPT NUMBER INDICATES STROBE CANDELA RATING. # / # INDICATES STROVE SETTING AND REDUCED EFFECTIVE OUTPUT WHEN DEVICE GUARD IS PRESENT.
xx	FIRE ALARM AUDIO/VISUAL NOTIFICATION DEVICE, CEILING MOUNTED. SUBSCRIPT NUMBER INDICATES STROBE CANDELA RATING.
xx	FIRE ALARM VISUAL STROBE NOTIFICATION DEVICE, CEILING MOUNTED. SUBSCRIPT NUMBER INDICATES STROBE CANDELA RATING.
xx	FIRE ALARM AUDIO/VISUAL NOTIFICATION DEVICE WITH DEVICE GUARD, CEILING MOUNTED. SUBSCRIPT NUMBER INDICATES STROBE CANDELA RATING. # / # INDICATES STROBE SETTING AND REDUCED EFFECTIVE OUTPUT WHEN DEVICE GUARD IS PRESENT.
xx	FIRE ALARM VISUAL STROBE NOTIFICATION DEVICE, CEILING MOUNTED. SUBSCRIPT NUMBER INDICATES STROBE CANDELA RATING. # / # INDICATES STROVE SETTING AND REDUCED EFFECTIVE OUTPUT WHEN DEVICE GUARD IS PRESENT.
F	FIRE ALARM MANUAL PULL STATION, MOUNT AT +3'-10"AFF.
FK	FIRE ALARM KEY OPERATED MANUAL PULL STATION, MOUNT AT +3'-10"AFF.
SD	FIRE ALARM DUCT SMOKE DETECTOR, FURNISH AND CONNECT UNDER DIVISION 28. INSTALL UNDER DIVISION 23. VERIFY LOCATION WITH DIVISION 23 PRIOR TO ROUGH-IN. PROVIDE ACCESSIBLE KEY OPERATED REMOTE TEST SWITCH FOR EACH DETECTOR.
S	SMOKE DETECTOR, CEILING MOUNT. SUBSCRIPT 'G' WHEN PRESENT INDICATES PROVIDE DEVICE GUARD.
H	HEAT DETECTOR, CEILING MOUNT. SUBSCRIPT 'G' WHEN PRESENT INDICATES PROVIDE DEVICE GUARD.
TS	FIRE ALARM TAMPER SWITCH, PROVIDE UNDER DIVISION 23, MONITOR UNDER DIVISION 28.
FS	FIRE ALARM FLOW SWITCH, PROVIDE UNDER DIVISION 23, MONITOR UNDER DIVISION 28.
PV	POST INDICATOR VALVE SWITCH, PROVIDE UNDER DIVISION 23, MONITOR UNDER DIVISION 28.
PS	FIRE ALARM PRESSURE SWITCH, PROVIDE UNDER DIVISION 23, MONITOR UNDER DIVISION 28.
RI	FIRE ALARM REMOTE INDICATOR, CEILING MOUNT.
M	FIRE ALARM MONITOR MODULE. NOT ALL MONITOR MODULES ARE INDICATED ON DRAWINGS. PROVIDE QUANTITY AND IN LOCATIONS REQUIRED TO ACCOMPLISH SPECIFIED MONITORING FUNCTIONS.
C	FIRE ALARM CONTROL MODULE. NOT ALL CONTROL MODULES ARE INDICATED ON DRAWINGS. PROVIDE QUANTITY AND IN LOCATIONS REQUIRED TO ACCOMPLISH SPECIFIED CONTROL FUNCTIONS.
B	FIRE ALARM SPRINKLER BELL, MOUNT AT +10'-0"AFF.
M	FIRE ALARM MAGNETIC DOOR HOLDER, WALL MOUNT DEVICE AT 6" BELOW TOP OF DOOR. PROVIDE HINGED MAGNETIC CATCH PLATE ON DOOR TO MATE WITH DEVICE. COORDINATE LOCATION AND LENGTH WITH DIVISION 08. PROVIDE CONCEALED 120-VOLT POWER CONNECTION AND FIRE ALARM CONTROL MODULE IF REQUIRED FOR PROPER OPERATION.
M	FIRE ALARM DOOR HOLDER/CLOSER HARDWARE UNDER DIVISION 08, MONITOR AND CONTROL INTERFACE WITH FIRE ALARM UNDER DIVISION 28.
	FIRE ALARM/POWER CONNECTION TO DIVISION 23 SMOKE OR FIRE/SMOKE DAMPER. COORDINATE WITH DIVISION 23. REFER TO TYPICAL FIRE/SMOKE DAMPER DIAGRAM.

GRAPHICS SYMBOLS LEGEND



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ALDERMAN AND KING HALL RENOVATIONS - KING HALL

University of North Carolina Wilmington
SCO#22-24639-01A
601 Hamilton Drive, Wilmington, NC 28403

PROJECT NO: 620589
DATE: FEBRUARY 10, 2023

REVISIONS	
DATE	DESCRIPTION

FIRE ALARM PLANS

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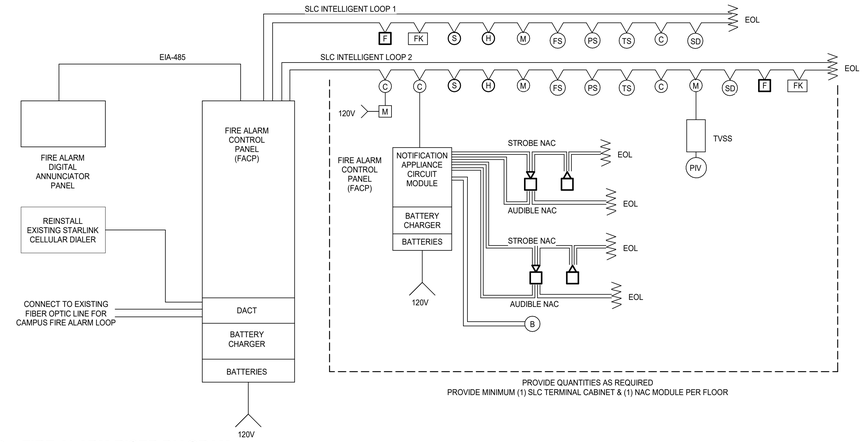
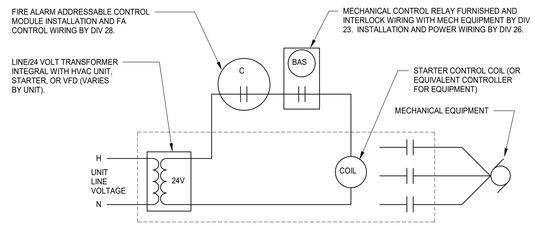
FIRE ALARM INPUT/OUTPUT MATRIX

		CONTROL UNIT ANNUNCIATION								NOTIFICATION / ACTION									
		ACTUATE COMMON ALARM SIGNAL INDICATOR	ACTUATE AUDIBLE ALARM SIGNAL	ACTUATE ALARM INDICATOR	ACTUATE COMMON SUPERVISORY SIGNAL INDICATOR	ACTUATE AUDIBLE SUPERVISORY SIGNAL	ACTUATE COMMON TROUBLE SIGNAL INDICATOR	ACTUATE AUDIBLE COMMON TROUBLE SIGNAL	ANNUNCIATE AT ANNUCIATORS	ACTUATE NOTIFICATION APPLIANCE	ACTUATE SPRINKLER FLOW BELL	DISPLAY CHANGE OF STATUS	TRANSMIT ALARM SIGNAL TO SUPERVISING STATION	TRANSMIT SUPERVISORY SIGNAL TO SUPERVISING STATION	TRANSMIT TROUBLE SIGNAL TO SUPERVISING STATION	RECALL ELEVATORTO PRIMARY LEVEL	RECALL ELEVATORTO ALTERNATE LEVEL	DE-ENERGIZE ELEVATOR EQUIPMENT	SHUT DOWN ASSOCIATED HVAC EQUIPMENT
		A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T
1	MANUAL PULL STATION	X	X	X					X	X		X	X						
2	SMOKE DETECTOR	X	X	X					X	X		X	X						
3	SMOKE DETECTOR - ELEVATOR FIRST FLOOR	X	X	X					X	X		X	X				X		
4	SMOKE DETECTOR - ELEVATOR SECOND FLOOR	X	X	X					X	X		X	X			X			
5	FLOW SWITCH - ELEVATOR FUNCTION	X	X	X					X	X	X	X	X						
6	DUCT SMOKE DETECTOR	X	X	X					X	X		X	X						X
7	HEAT DETECTOR	X	X	X					X	X		X	X					X	
9	SPRINKLER SYSTEM WATERFLOW	X	X	X					X	X	X	X	X						
10	SPRINKLER VALVE TAMPER SWITCH				X	X			X			X		X					
11	MONITOR MODULE - ELEVATOR SHUNT POWER FAULT				X	X			X			X		X					
14	FIRE ALARM AC POWER FAILURE						X	X	X			X			X				
15	FIRE ALARM SYSTEM LOW BATTERY						X	X	X			X			X				
16	FIRE ALARM OPEN CIRCUIT						X	X	X			X			X				
17	FIRE ALARM GROUND FAULT						X	X	X			X			X				
18	FIRE ALARM NOTIFICATION APPLIANCE CIRCUIT SHORT						X	X	X			X			X				
19	FIBER OPTIC COMMUNICATIONS PATH FAILURE				X														



1 FIRE ALARM RISER DIAGRAM
NO SCALE



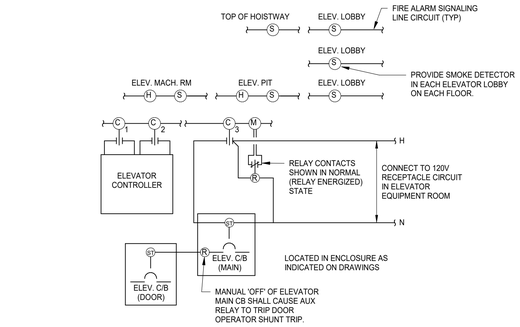
SYSTEMS WITH MULTIPLE MOTORS REQUIRE ONE SHUTDOWN RELAY FOR EACH STARTER OR VFD. THERE MAY BE MORE THAN ONE DUCT SMOKE DETECTOR PER SYSTEM, BUT ONLY ONE CONTROL MODULE IS REQUIRED PER MOTOR. SHUTDOWN IS VIA CONTROL MODULE, NOT VIA DUCT DETECTOR AUX CONTACTS. COORDINATE W/ DIV 23.

UNDER NORMAL CONDITIONS, FA SYSTEM POWERS THE NORMALLY OPEN FA CONTROL MODULE CONTACT TO THE CLOSED POSITION TO ALLOW NORMAL UNIT CONTROL BY BAS.

UPON ALARM SIGNAL FROM THE FIRE ALARM SYSTEM, THE CONTACTS IN THE FA SYSTEM RELEASES CONTROL MODULE TO OPEN POSITION, CAUSING SHUTDOWN OF ASSOCIATED HVAC EQUIPMENT. HVAC EQUIPMENT SHALL NOT BE OPERABLE UNTIL FA CONTROL MODULE IS RESET TO NORMAL CLOSED POSITION.

DIVISION 23 SHALL PROVIDE WIRING BETWEEN BETWEEN FA AND BAS CONTROL MODULES AND HVAC EQUIPMENT CONTROLLER (STARTER, VFD, OR INTEGRAL CONTROL PANEL).

2 FIRE ALARM HVAC UNIT SHUTDOWN WIRING DIAGRAM
NO SCALE



LEGEND

- NORMALLY OPEN CONTACT
- NORMALLY CLOSED CONTACT
- SHUNT TRIP COIL/BREAKER (VERIFY CONTROL VOLTAGE - PROVIDE TRANSFORMER IF 24V)
- FIRE ALARM ADDRESSABLE CONTROL MODULE
- FIRE ALARM ADDRESSABLE MONITOR MODULE
- RELAY
- SMOKE DETECTOR FOR ELEVATOR RECALL
- HEAT DETECTOR (FOR SHUNT TRIP)
- SPRINKLER FLOW SWITCH MONITOR

NOTES:

1. AN ALARM SIGNAL FROM A SMOKE DETECTOR IN THE ELEVATOR HOISTWAY, MACHINE ROOM, OR ELEVATOR LOBBY (OTHER THAN AT THE PRIMARY RECALL LEVEL) SHALL ACTUATE THE FIRST ELEVATOR CONTROL MODULE (C_1).
2. AN ALARM SIGNAL FROM A SMOKE DETECTOR IN THE ELEVATOR LOBBY AT THE PRIMARY RECALL LEVEL SHALL ACTUATE THE SECOND ELEVATOR CONTROL MODULE (C_2).
3. AN ALARM SIGNAL FROM A HEAT DETECTOR OR FLOW SWITCH SERVING THE ELEVATOR HOISTWAY OR MACHINE ROOM SHALL ACTUATE THE SHUNT TRIP CONTROL MODULE (C_3) CAUSING THE ELEVATOR MAIN CIRCUIT BREAKER TO OPEN.
4. LOSS OF CONTROL POWER TO THE SHUNT TRIP BREAKER SHALL OPEN THE RELAY CONTACTS AND INITIATE A SUPERVISORY SIGNAL ON THE FIRE ALARM SYSTEM.
5. FIRE ALARM CONTROL AND MONITOR MODULES SHALL BE MOUNTED WITHIN 36" OF THE EQUIPMENT CONTROLLED OR MONITORED.
6. A HEAT DETECTOR FOR ELEVATOR SHUNT TRIP SHALL BE PROVIDED WITHIN 24" OF EACH SPRINKLER IN THE ELEVATOR HOISTWAY AND MACHINE ROOM.

3 ELEVATOR RECALL & SHUNT TRIP DIAGRAM
NO SCALE

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ALDERMAN AND KING HALL RENOVATIONS - KING HALL

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PROJECT NO: 620589
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REVISIONS

DATE	DESCRIPTION

DETAILS

FA4.1

3/24/2023 9:43:10 AM

LIFE SAFETY SYMBOL LEGEND

DESIGNATOR MATRIX

	WALL	BARRIER	PARTITION	RATED BEARING OR NON-BEARING WALL
2 HR FIRE				
1 HR FIRE				

NOTES:
1. REFER TO LIFE SAFETY DRAWINGS FOR ALL WALL RATING DETAILS.

ABBREVIATIONS

@	AT	EWC	ELECTRIC WATER COOLER	OSD	OPEN SITE DRAIN
AAV	AIR ADMITTANCE VALVE	EWH	ELECTRIC WATER HEATER	PC	PRECAST
ABV	ABOVE	EX	EXISTING	PCF	POUNDS PER CUBIC FOOT
AC-X	AIR COMPRESSOR DESIGNATION	EXP	EXPANSION	PD	PUMP DISCHARGE
ADJ	ADJUSTABLE	FCO	FLOOR CLEANOUT	PLUMB	PLUMBING
ADNL	ADDITIONAL	FD	FLOOR DRAIN	PLYWD	PLYWOOD
AFF	ABOVE FINISHED FLOOR	FDC	FIRE DEPARTMENT CONNECTION	POLY	POLYETHYLENE
AFG	ABOVE FINISHED GRADE	FF	FINISHED FLOOR	PPT	PRESSURE PRESERVATIVE TREATED
AHU	AIR HANDLING UNIT	FFE	FINISHED FLOOR ELEVATION	PREFAB	PREFABRICATE(D)
ALT	ALTERNATE	FG	FINISHED GRADE	PROJ	PROJECT
ALUM	ALUMINUM	FH	FIRE HYDRANT	PSF	POUNDS PER SQUARE FOOT
AP	ACCESS PANEL	FHC	FIRE HOSE CABINET	PSI	POUNDS PER SQUARE INCH
APPR	APPROXIMATE	FHS	FIRE HOSE STATION	PV	PROPANE VENT
ARCH	ARCHITECTURAL	FHVC	FIRE HOSE VALVE CABINET	PVC	POLYVINYL CHLORIDE
AUTO	AUTOMATIC	FIX	FIXTURE	PVMT	PAVEMENT
AVG	AVERAGE	FLR	FLOOR	R	RISER
BFF	BELOW FINISHED FLOOR	FLSHG	FLASHING	RAD	RADIUS
BFG	BELOW FINISHED GRADE	FOR	FUEL OIL RETURN	RCP-X	RECIRCULATION PUMP DESIGNATION
BLDG	BUILDING	FOS	FUEL OIL SUPPLY	RD	ROOF DRAIN (BOTTOM OUTLET)
BO	BOTTOM OF	FOV	FUEL OIL VENT	RDS	ROOF DRAIN (SIDE OUTLET)
BOT	BOTTOM	FS	FLOOR SINK	REF	REFERENCE
BSMT	BASEMENT	FSD	FOUNDATION SUB-DRAIN	REQD	REQUIRED
BTWN	BETWEEN	FT	FOOT OR FEET	REQMT	REQUIREMENTS
CA	COMPRESSED AIR	FVC	FIRE VALVE CABINET	RL	RAIN LEADER
CI	CAST IRON	G	GAS	RM	ROOM
CIP	CAST-IN-PLACE CONCRETE	GCO	GRADE CLEANOUT	RO	ROUGH OPENING
CL	CENTERLINE	GWH	GAS WATER HEATER	RV	RADON VENT
CLG	CEILING	HB	HOSE BIBB	S	SOUTH
CLR	CLEAR	HORIZ	HORIZONTAL	SAN	SANITARY
CMP	CORRUGATED METAL PIPE	HP	HORSEPOWER	SCH	SCHEDULE
CNTR	COUNTER	HR-X	HOSE REEL DESIGNATION	SD	STORM DRAINAGE PIPING
CO	CLEANOUT	HTG	HEATING	SDN	STORM DRAIN NOZZLE
COL	COLUMN	HW	HOT WATER	SF	SQUARE FOOT/FEET
CONC	CONCRETE	HWR	HOT WATER RETURN	SHT	SHEET
CONDS	CONDENSATE	HWS	HOT WATER SUPPLY	SIM	SIMILAR
CONSTR	CONSTRUCT(ION)	ID	INSIDE DIAMETER	SLT	SEALANT
CONT	CONTINUATION	IN	INCH	SOG	SLAB ON GRADE
CONTR	CONTRACT(-OR)	INSUL	INSULATE OR INSULATION	SP	SUMP PUMP
CORR	CORRIDOR	INV	INVERT	SPEC	SPECIFICATION
CP	CIRCULATING PUMP	JAN	JANITOR	SPR	SPRINKLER
CR	CLASSROOM	KIT	KITCHEN	SQ	SQUARE
CT	COOLING TOWER	KW	KITCHEN WASTE	SRD	SECONDARY ROOF DRAIN
CU	COPPER	LAB	LABORATORY	SS	STAINLESS STEEL
CU FT	CUBIC FEET	LAV	LAVATORY	SSD	SECONDARY STORM DRAINAGE PIPING
CU YD	CUBIC YARD	LBS	POUNDS	STD	STANDARD
CW	COLD WATER	LF	LINEAR FOOT (FEET)	STL	STEEL
DB	DRY BULB	LP	PROPANE	STOR	STORAGE
DCW	DOMESTIC COLD WATER	LPV	PROPANE VENT	STRUCT	STRUCTURAL
DEMO	DEMOLISH OR DEMOLITION	MATL	MATERIAL	SUSP	SUSPENDED
DF	DRINKING FOUNTAIN	MAX	MAXIMUM	TD	TRENCH DRAIN
DHR	DOMESTIC HOT WATER RETURN	MECH	MECHANICAL	THK	THICK(-NESS)
DHR(140)	DOMESTIC HOT WATER RETURN (140°)	MED	MEDIUM	TLT	TOILET
DHW	DOMESTIC HOT WATER	MFR	MANUFACTURER	TMV	THERMOSTATIC MIXING VALVE
DHW(140)	DOMESTIC HOT WATER (140°)	MH	MANHOLE	TOSL	TOP OF SLAB
DI	DROP INLET	MIN	MINIMUM	TW	DOMESTIC TEMPERED WATER (90° F)
DIA	DIAMETER	MISC	MISCELLANEOUS	TYP	TYPICAL
DIP	DUCTILE IRON PIPE	MTD	MOUNTED	UG	UNDERGROUND
DN	DOWN	N	NORTH	UNO	UNLESS NOTED (INDICATED) OTHERWISE
DR-X	COMPRESSED AIR DRYER DESIGNATION	N/A	NOT APPLICABLE/AVAILABLE	V	VENT
DS	DOWNSPOUT	NC	NORMALLY CLOSED	VAC	VACUUM
DT	DRAIN TILE	NG	NATURAL GAS	VB	VACUUM BREAKER
DTL	DETAIL	NGV	NATURAL GAS VENT	VERT	VERTICAL
DTW	DOMESTIC TEMPERED WATER	NIC	NOT IN CONTRACT	VTR	VENT THROUGH ROOF
DWG	DRAWING	NO	NORMALLY OPEN	W	WEST
DWP	DOMESTIC WATER BOOSTER PUMP	NO., (#)	NUMBER	W/	WITH
E	EAST	NOM	NOMINAL	W/O	WITHOUT
ED	EMERGENCY SECONDARY ROOF DRAIN	OC	ON CENTER	WB	WATER HAMMER ARRESTER
ELEC	ELECTRICAL	OD	OUTSIDE DIAMETER	WC	WATER CLOSET
ELEV	ELEVATION	OFCI	OWNER FURNISHED CONTRACTOR INSTALLED	WCO	WALL CLEANOUT
EPBD	ELECTRICAL PANELBOARD	OFF	OFFICE	WSHP	WATER SOURCE HEAT PUMP
EQ	EQUAL	OH	OVERHEAD	WWF	WELDED WIRE FABRIC
EQUIP	EQUIPMENT	OPNG	OPENING	WWM	WELDED WIRE MESH
ETR	EXISTING TO REMAIN	OPP	OPPOSITE	XFMR	TRANSFORMER

GRAPHICS SYMBOLS LEGEND

X" XXX
PIPE WITH SIZE AND SERVICE
FLOW IN DIRECTION OF ARROW
1/8" FT
PITCH DOWN IN DIRECTION OF ARROW AT INDICATED SLOPE
PIPE CAP
PIPE TURNED DOWN
PIPE TURNED UP
PIPE TEE UP
PIPE TEE DOWN
UNION
CONCENTRIC PIPE REDUCTION
CO
END OF LINE CLEANOUT PLUG
CO
FLOOR CLEANOUT
WCO
WALL CLEANOUT
CO (GCO)
YARD CLEANOUT (CLEANOUT TO GRADE)
FD-1
FLOOR DRAIN WITH TAG
FS-1
FLOOR SINK WITH TAG
PRESSURE GAUGE WITH GAUGE COCK
LIQUID FILLED THERMOMETER
A
WATER HAMMER ARRESTOR (PLUMBING & DRAINAGE INSTITUTE SIZE INDICATED)
FS
FLOW SWITCH
TEMPERATURE/PRESSURE PLUG
VALVE
VALVE IN RISER
GAS COCK
VENTURI FLOW METER
MANUAL BALANCING VALVE
AUTOMATIC BALANCING VALVE WITH FLOW TAPS
SWING CHECK VALVE
PRESSURE REDUCING VALVE
S
SOLENOID OPERATED VALVE
T&P
TEMPERATURE AND PRESSURE RELIEF VALVE
BACKWATER VALVE
HOSE BIBB OR WALL HYDRANT
REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTER
DOUBLE CHECK BACKFLOW PREVENTER
PUMP

POINT OF CONNECTION TO EXISTING
LIMIT OF DEMOLITION
30
KEYNOTE
8
STRUCTURAL GRID LINE WITH DESIGNATION

A123
SPACE IDENTIFICATION TAG
SPACE NUMBER
BUILDING AREA (WHEN USED)

AHU-02
EQUIPMENT IDENTIFICATION TAG
EQUIPMENT NUMBER
UNIT DESIGNATION

A / P6.1
SECTION WHERE CUT
SECTION LETTER
DRAWING WHERE SECTION IS INDICATED

1 / P6.1
ENLARGED PLAN WHERE CUT
ENLARGED PLAN NUMBER
DRAWING WHERE ENALRGED PLAN IS INDICATED

1 / P6.1
DETAIL TAG
DETAIL NUMBER
DRAWING WHERE DETAIL IS INDICATED

S1 / P6.1
SANITARY RISER TAG
SANITARY RISER IDENTIFIER
DRAWING WHERE SANITARY RISER IS TAGGED

D1 / P6.1
DOMESTIC RISER TAG
DOMESTIC RISER IDENTIFIER
DRAWING WHERE SANITARY RISER IS TAGGED

1 — **DETAIL TITLE**
P2.2 P6.2 P2.3 P2.4
1/4"=1'-0"
DETAIL NUMBER
DRAWING WHERE DETAIL IS INDICATED
DRAWING WHERE DETAIL IS CUT
ADDITIONAL DRAWING REFERENCES

S1 — **SANITARY RISER DIAGRAM**
P2.2 P4.2 P2.3 P2.4
1/4"=1'-0"
SANITARY RISER DIAGRAM IDENTIFIER
DRAWING WHERE DOMESTIC RISER IS INDICATED
DRAWING WHERE SANITARY RISER IS TAGGED
ADDITIONAL DRAWING REFERENCES

D1 — **DOMESTIC RISER DIAGRAM**
P2.2 P5.2 P2.3 P2.4
1/4"=1'-0"
DOMESTIC RISER DIAGRAM IDENTIFIER
DRAWING WHERE DOMESTIC RISER IS INDICATED
DRAWING WHERE DOMESTIC RISER IS TAGGED
ADDITIONAL DRAWING REFERENCES

G1 — **FUEL GAS RISER DIAGRAM**
P2.2 P5.2 P2.3 P2.4
1/4"=1'-0"
FUEL GAS RISER DIAGRAM IDENTIFIER
DRAWING WHERE FUEL GAS RISER IS INDICATED
DRAWING WHERE FUEL GAS RISER IS TAGGED
ADDITIONAL DRAWING REFERENCES

GENERAL NOTES

A. THE CONTRACT DOCUMENTS ARE COMPLEMENTARY AND WHAT IS REQUIRED BY ONE SHALL BE AS BINDING AS IF REQUIRED BY ALL. IN THE CASE OF A CONFLICT, DISAGREEMENT, OR AMBIGUITY, PROVIDE THE BETTER QUALITY. IN THE CASE OF A CONFLICT, DISAGREEMENT, OR AMBIGUITY, PROVIDE THE GREATER QUANTITY OF WORK.

B. COORDINATE PIPING LOCATIONS AND INSTALLATION WITH EACH TRADE TO AVOID CONFLICTS WITH OTHER TRADES.

C. PROVIDE FLOOR CLEANOUTS INDICATED FLUSH WITH FLOOR FINISHES.

D. PROVIDE CLEANOUTS WHERE INDICATED AND ADDITIONAL CLEANOUTS AS REQUIRED BY LOCAL CODE.

E. REFER TO DRAWINGS FROM EACH DISCIPLINE BEFORE ROUGHING-IN PLUMBING FIXTURES.

F. OBTAIN DIMENSIONS AND ROUTING IN FIELD BEFORE INSTALLATION OF PLUMBING AND FIXTURES.

G. INSTALL ALL DRAINAGE PATTERN FITTINGS AND PIPING IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE, AND LOCAL CODES.

H. REFER TO STRUCTURAL DRAWINGS FOR DETAILS AND MAXIMUM SPACING REQUIREMENTS REGARDING HANGER ATTACHMENTS TO STEEL BAR JOISTS.

I. PROVIDE ISOLATION VALVES IN ACCORDANCE WITH DIAGRAMS, DETAILS, AND DIVISION 22 SPECIFICATIONS.

J. ALL PLUMBING WORK SHALL BE IN ACCORDANCE WITH THE 2018 NORTH CAROLINA PLUMBING CODE.

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ALDERMAN AND KING HALL RENOVATIONS - KING HALL

University of North Carolina Wilmington
SCO#22-24639-01A
601 Hamilton Drive, Wilmington, NC 28403

PROJECT NO. 620589
DATE: FEBRUARY 10, 2023

REVISIONS	
DATE	DESCRIPTION

LEGENDS, ABBREVIATIONS AND GENERAL NOTES

P0.1

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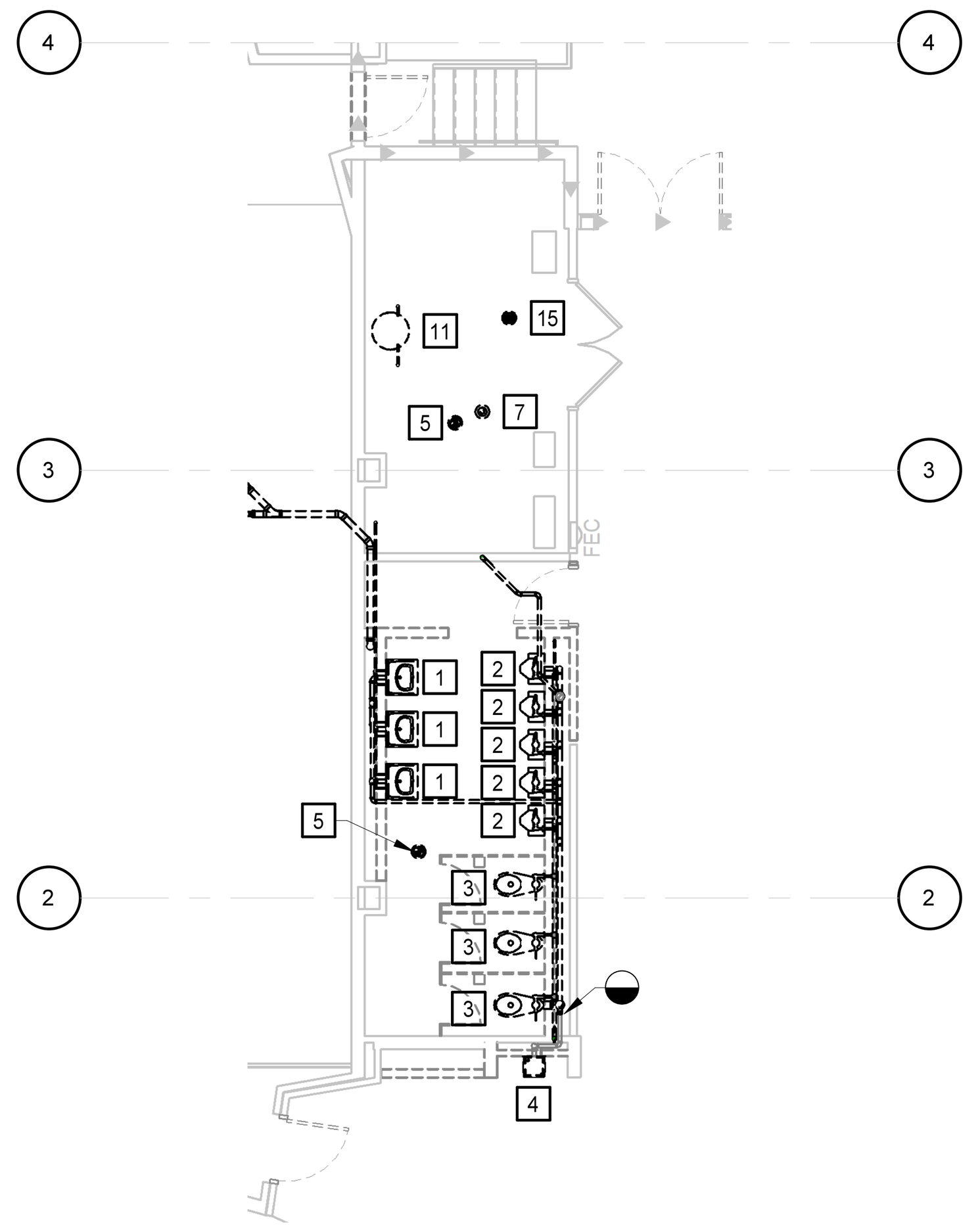
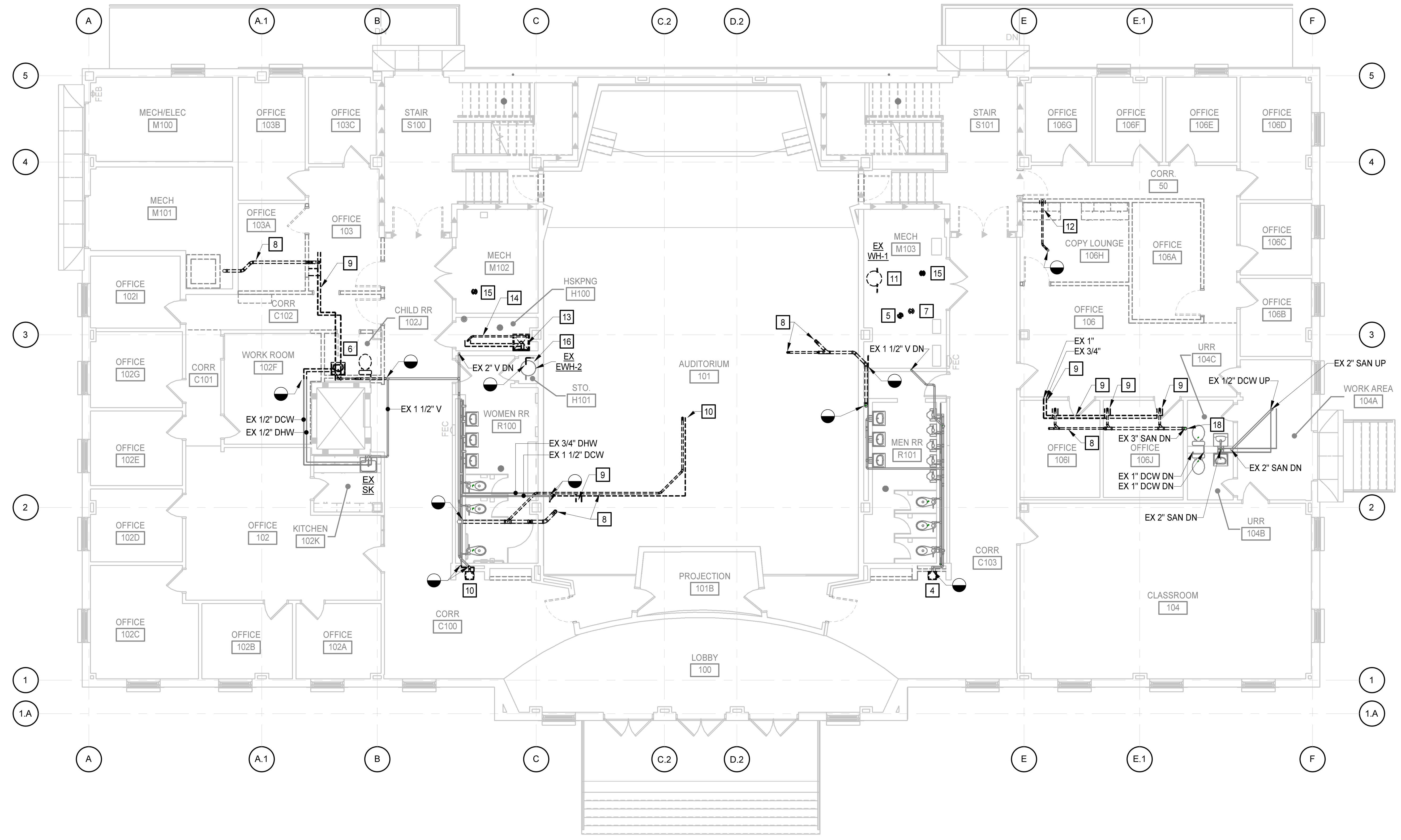


PROJECT N POLAR

FIRST FLOOR PLAN - DEMOLITION - ALTERNATE #8

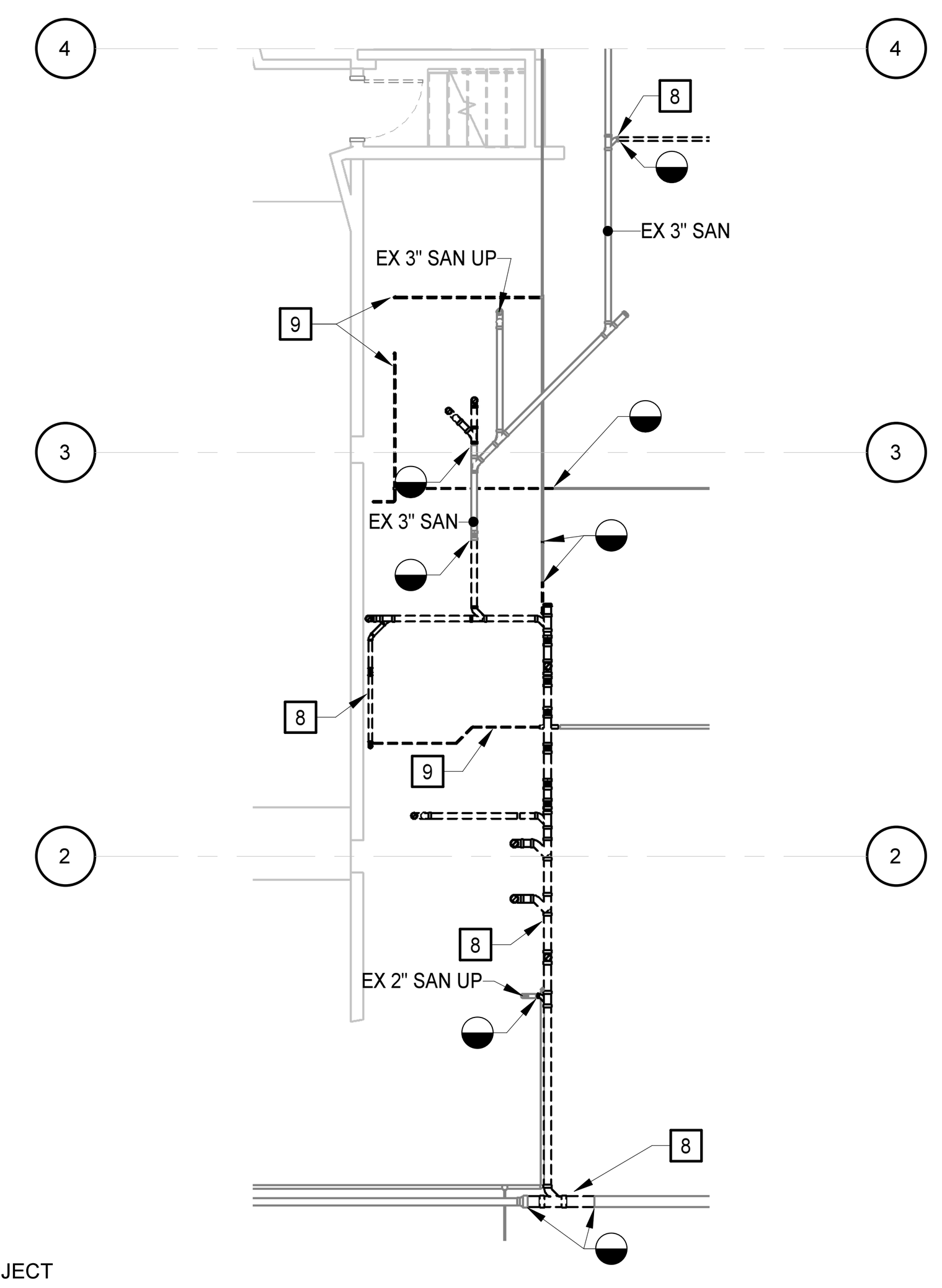
1/8" = 1'-0"



PROJECT N POLAR

FIRST FLOOR PLAN - DEMOLITION

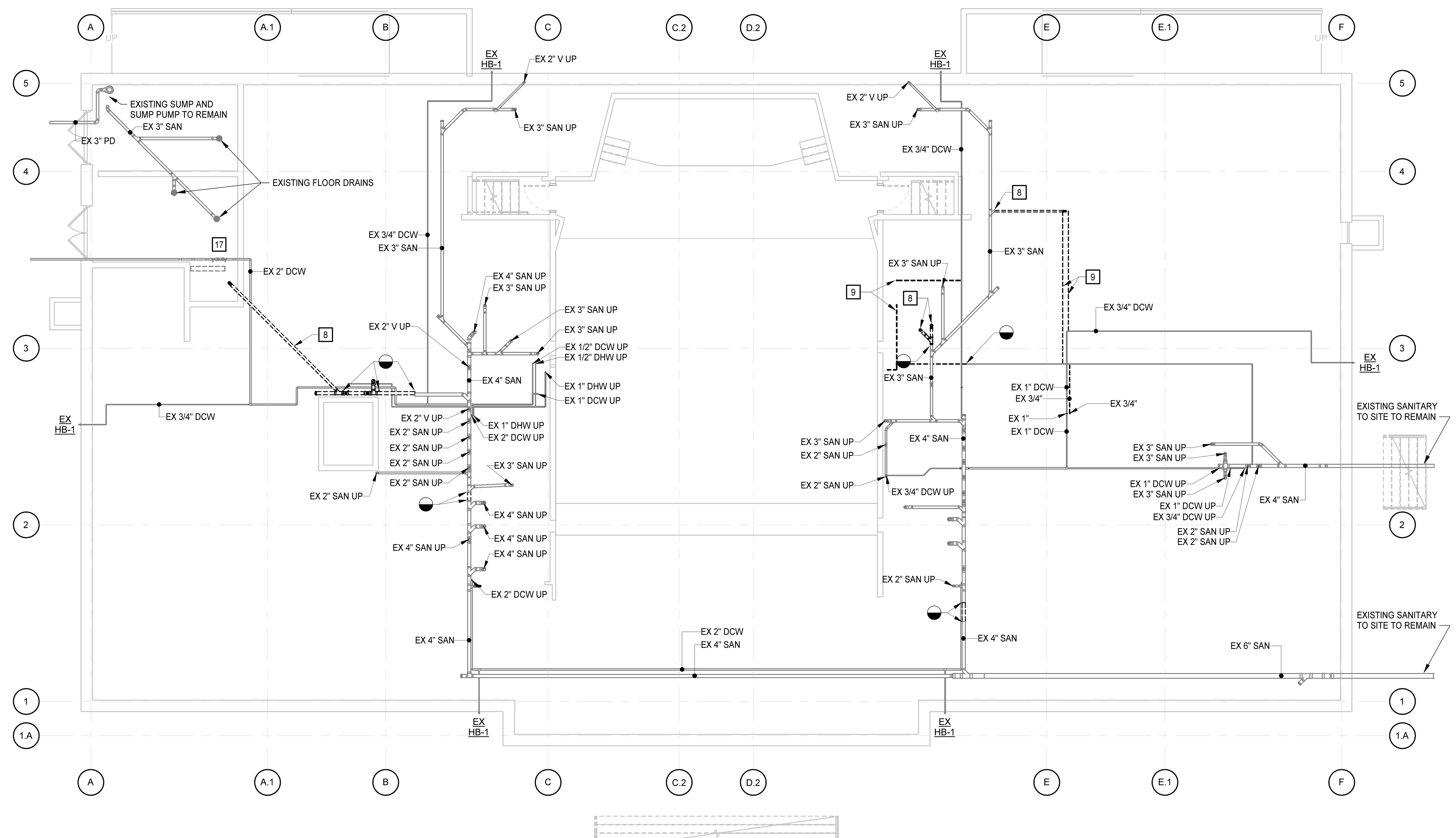
1/8" = 1'-0"



PROJECT N POLAR

CRAWL SPACE PLAN - DEMOLITION - ALTERNATE #8

1/8" = 1'-0"



PROJECT N POLAR

CRAWL SPACE PLAN - DEMOLITION

1/8" = 1'-0"

KEYNOTES

APPLIES TO THIS DRAWING REPRESENTED BY n

1. REMOVE LAVATORY AND ALL ASSOCIATED PIPING, FITTINGS, AND ACCESSORIES COMPLETE BACK TO EXTENT INDICATED AND PREPARE FOR NEW CONNECTION.
2. REMOVE URINAL AND ALL ASSOCIATED PIPING, FITTINGS, AND ACCESSORIES COMPLETE BACK TO EXTENT INDICATED AND PREPARE FOR NEW CONNECTION.
3. REMOVE WATER CLOSET AND ALL ASSOCIATED PIPING, FITTINGS, AND ACCESSORIES COMPLETE BACK TO EXTENT INDICATED AND PREPARE FOR NEW CONNECTION.
4. REMOVE WATER FOUNTAIN AND ALL ASSOCIATED PIPING, FITTINGS, AND ACCESSORIES COMPLETE BACK TO EXTENT INDICATED AND PREPARE FOR NEW CONNECTION.
5. REMOVE FLOOR DRAIN AND ALL ASSOCIATED PIPING, FITTINGS, AND ACCESSORIES COMPLETE BACK TO EXTENT INDICATED AND PREPARE FOR NEW CONNECTION.
6. REMOVE ALL BATHROOM FIXTURES AND ALL ASSOCIATED PIPING, FITTINGS, AND ACCESSORIES COMPLETE BACK TO EXTENT INDICATED AND PREPARE FOR NEW CONNECTION.
7. REMOVE FLOOR CLEANOUT AND ALL ASSOCIATED PIPING, FITTINGS, AND ACCESSORIES COMPLETE BACK TO EXTENT INDICATED AND PREPARE FOR NEW CONNECTION. INFILL FLOOR OPENING.
8. REMOVE SANITARY/VENT AND ALL ASSOCIATED PIPING, FITTINGS, AND ACCESSORIES COMPLETE BACK TO EXTENT INDICATED AND PREPARE FOR NEW CONNECTION. INFILL WALL AND FLOOR OPENINGS.
9. REMOVE DOMESTIC COLD AND HOT WATER PIPING AND ALL ASSOCIATED PIPING, FITTINGS, AND ACCESSORIES COMPLETE BACK TO EXTENT INDICATED AND PREPARE FOR NEW CONNECTION. INFILL WALL AND FLOOR OPENINGS.
10. REMOVE WATER FOUNTAIN AND ALL ASSOCIATED PIPING, FITTINGS, AND ACCESSORIES COMPLETE BACK TO EXTENT INDICATED AND CAP.
11. REMOVE ELECTRIC WATER HEATER AND ALL ASSOCIATED PIPING, FITTINGS, AND ACCESSORIES COMPLETE BACK TO EXTENT INDICATED AND PREPARE FOR NEW CONNECTION.
12. REMOVE KITCHENETTE SINK AND ALL ASSOCIATED PIPING, FITTINGS, AND ACCESSORIES COMPLETE BACK TO EXTENT INDICATED AND CAP.
13. REMOVE MOP SINK AND ALL ASSOCIATED PIPING, FITTINGS, AND ACCESSORIES COMPLETE BACK TO EXTENT INDICATED AND PREPARE FOR NEW CONNECTION. INFILL WALL AND FLOOR OPENINGS.
14. REMOVE INDIRECT WASTE PIPING FROM SINK ABOVE.
15. REMOVE EXISTING FLOOR DRAIN COMPLETE INCLUDING GRATE AND DRAIN BODY. PREPARE PIPING FOR NEW CONNECTION.
16. REMOVE PIPING AS REQUIRED TO INSTALL NEW MIXING VALVE AND RECIRCULATION PUMP.
17. TEMPORARIRLY REMOVE AND RE-INSTALL BACKFPLOW PREVENTOR AND ASSOSCIATED PIPING TO ALLOW FOR REMOVAL OF CHIMNEY OR PROTECT EXISTING PIPING AND BACKFLOW PREVENTOR IN PLACE.
18. REMOVE SANITARY AND ALL ASSOCIATED PIPING, FITTINGS, AND ACCESSORIES COMPLETE BACK TO EXTENT INDICATED. INFILL WALL AND FLOOR OPENINGS. CAP SANITARY IN WALL.

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ALDERMAN AND KING HALL RENOVATIONS - KING HALL

University of North Carolina Wilmington
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DEMOLITION PLANS - CRAWL SPACE & FIRST FLOOR

0' 2' 4' 8' 16'
1/8" = 1'-0"

P1.1

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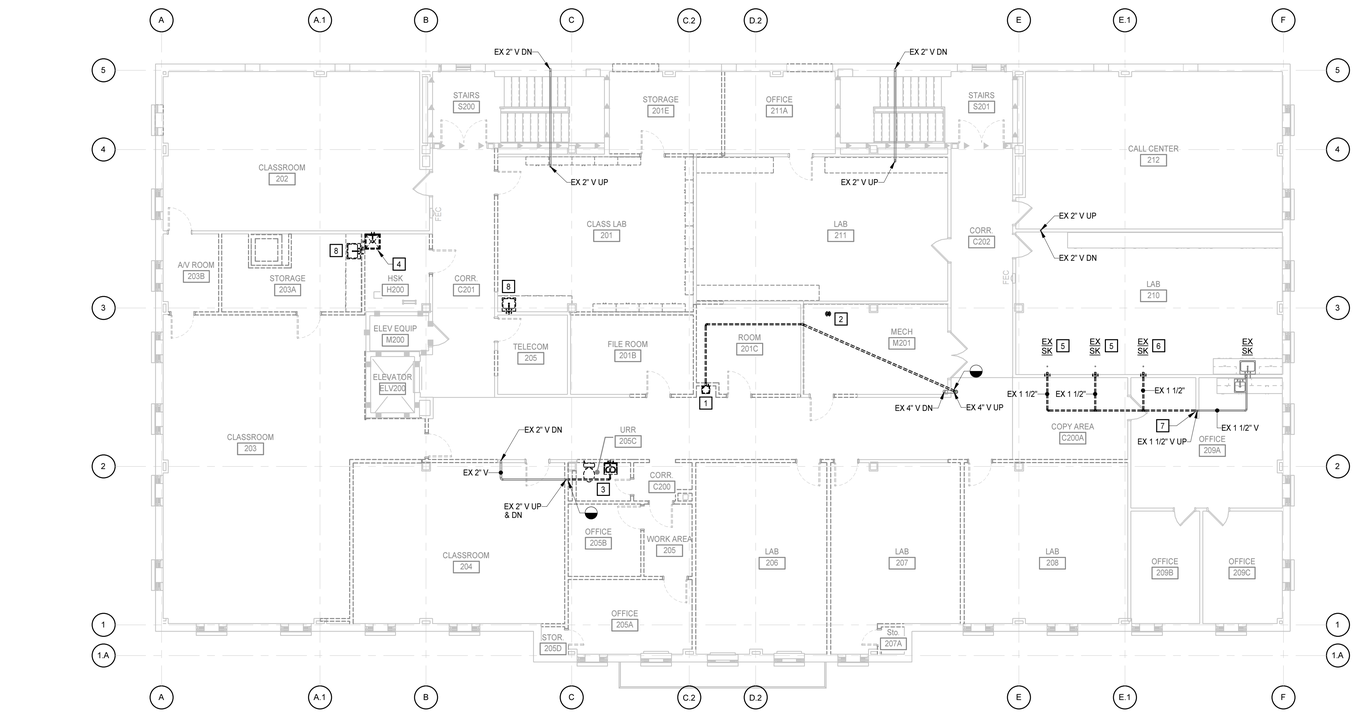
KEYNOTES

APPLIES TO THIS DRAWING
REPRESENTED BY [n]

1. REMOVE WATER FOUNTAIN AND ALL ASSOCIATED PIPING, FITTINGS, AND ACCESSORIES COMPLETE BACK TO EXTENT INDICATED AND PREPARE FOR NEW CONNECTION.
2. REMOVE FLOOR DRAIN AND ALL ASSOCIATED PIPING, FITTINGS, AND ACCESSORIES COMPLETE BACK TO EXTENT INDICATED AND PREPARE FOR NEW CONNECTION.
3. REMOVE ALL BATHROOM FIXTURES AND ALL ASSOCIATED PIPING, FITTINGS, AND ACCESSORIES COMPLETE BACK TO EXTENT INDICATED AND PREPARE FOR NEW CONNECTION.
4. REMOVE MOP SINK AND ALL ASSOCIATED PIPING, FITTINGS, AND ACCESSORIES COMPLETE BACK TO EXTENT INDICATED AND PREPARE FOR NEW CONNECTION. INFILL WALL AND FLOOR OPENINGS.
5. REMOVE SINK AND SEDIMENT TRAPS AND TURN OVER TO OWNER. REMOVE ALL ASSOCIATED PIPING, FITTINGS, AND ACCESSORIES COMPLETE BACK TO EXTENT INDICATED AND PREPARE FOR NEW CONNECTION. INFILL WALL AND FLOOR OPENINGS.
6. REMOVE SINK, EYEWASH, AND SEDIMENT TRAPS AND TURN OVER TO OWNER. REMOVE ALL ASSOCIATED PIPING, FITTINGS, AND ACCESSORIES COMPLETE BACK TO EXTENT INDICATED AND PREPARE FOR NEW CONNECTION. INFILL WALL AND FLOOR OPENINGS.
7. REMOVE VENT BACK TO VERTICAL AND CAP.
8. REMOVE SINK AND ALL ASSOCIATED PIPING, FITTINGS, AND ACCESSORIES COMPLETE BACK TO EXTENT INDICATED AND PREPARE FOR NEW CONNECTION. INFILL WALL AND FLOOR OPENINGS.



PROJECT NORTH
POLAR

SECOND FLOOR PLAN - DEMOLITION

1/8" = 1'-0"

0' 2' 4' 8' 16'
1/8" = 1'-0"

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DEMOLITION PLANS - SECOND FLOOR

P1.2

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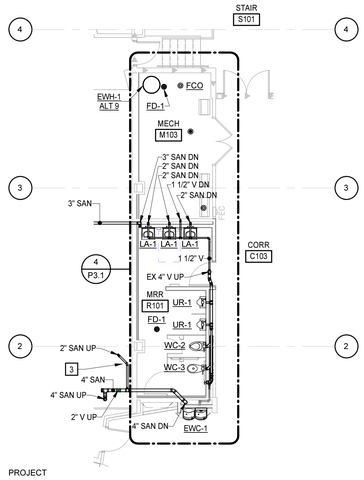
KEYNOTES

APPLIES TO THIS DRAWING
REPRESENTED BY n

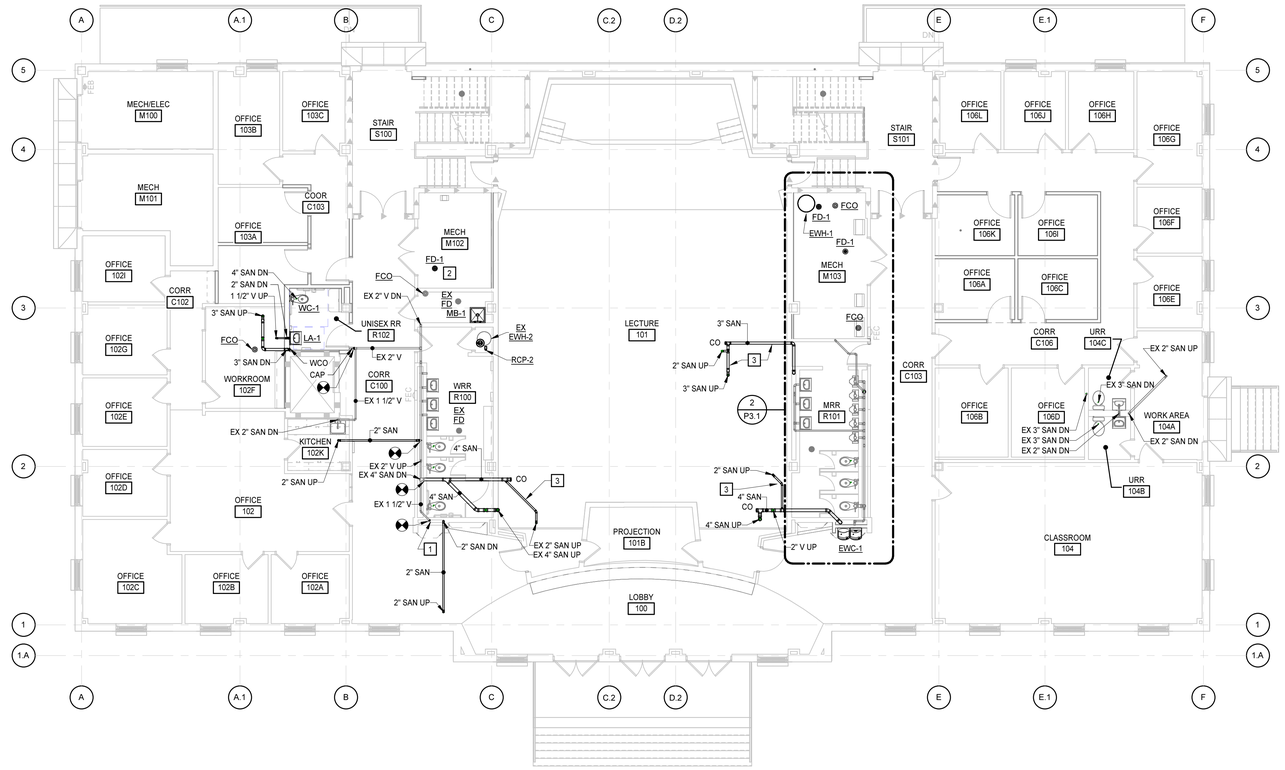
1. CAP VENT AT WALL.
2. REPLACE FLOOR DRAIN.
3. WRAP ALL SANITARY AND VENT PIPING WITHIN LECTURE ROOM CEILING WITH ACOUSTIC PIPE LAGGING. REFER TO SECTION 220700 FOR ADDITIONAL DETAILS.



PROJECT N POLAR

FIRST FLOOR PLAN - SANITARY - ALTERNATE #8

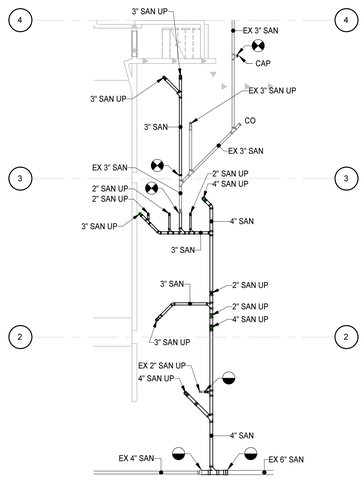
1/8" = 1'-0"



PROJECT N POLAR

FIRST FLOOR PLAN - SANITARY

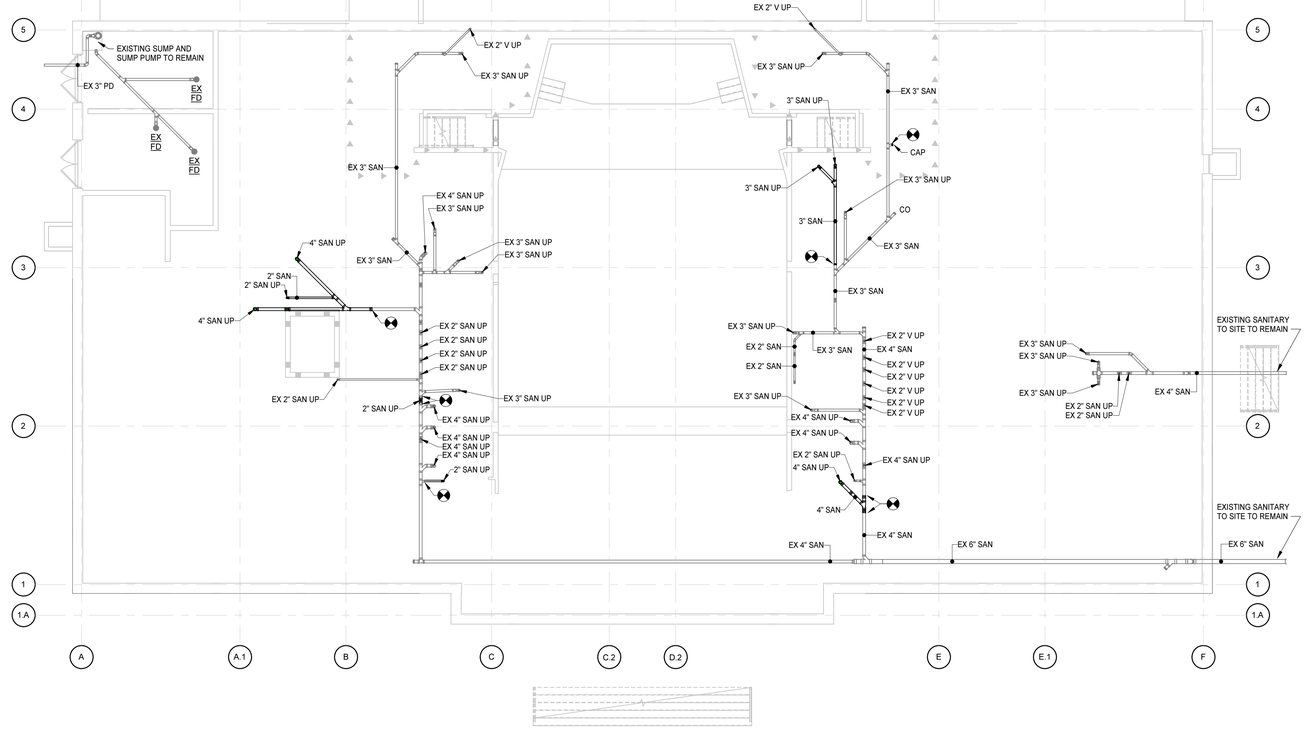
1/8" = 1'-0"



PROJECT N POLAR

CRAWL SPACE PLAN - SANITARY - ALTERNATE #8

1/8" = 1'-0"



PROJECT N POLAR

CRAWL SPACE PLAN - SANITARY

1/8" = 1'-0"

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0' 1' 2' 4' 8'
1/4" = 1'-0"

0' 2' 4' 8' 16'
1/8" = 1'-0"

CRAWL SPACE & FIRST FLOOR PLANS - SANITARY

P2.1.1

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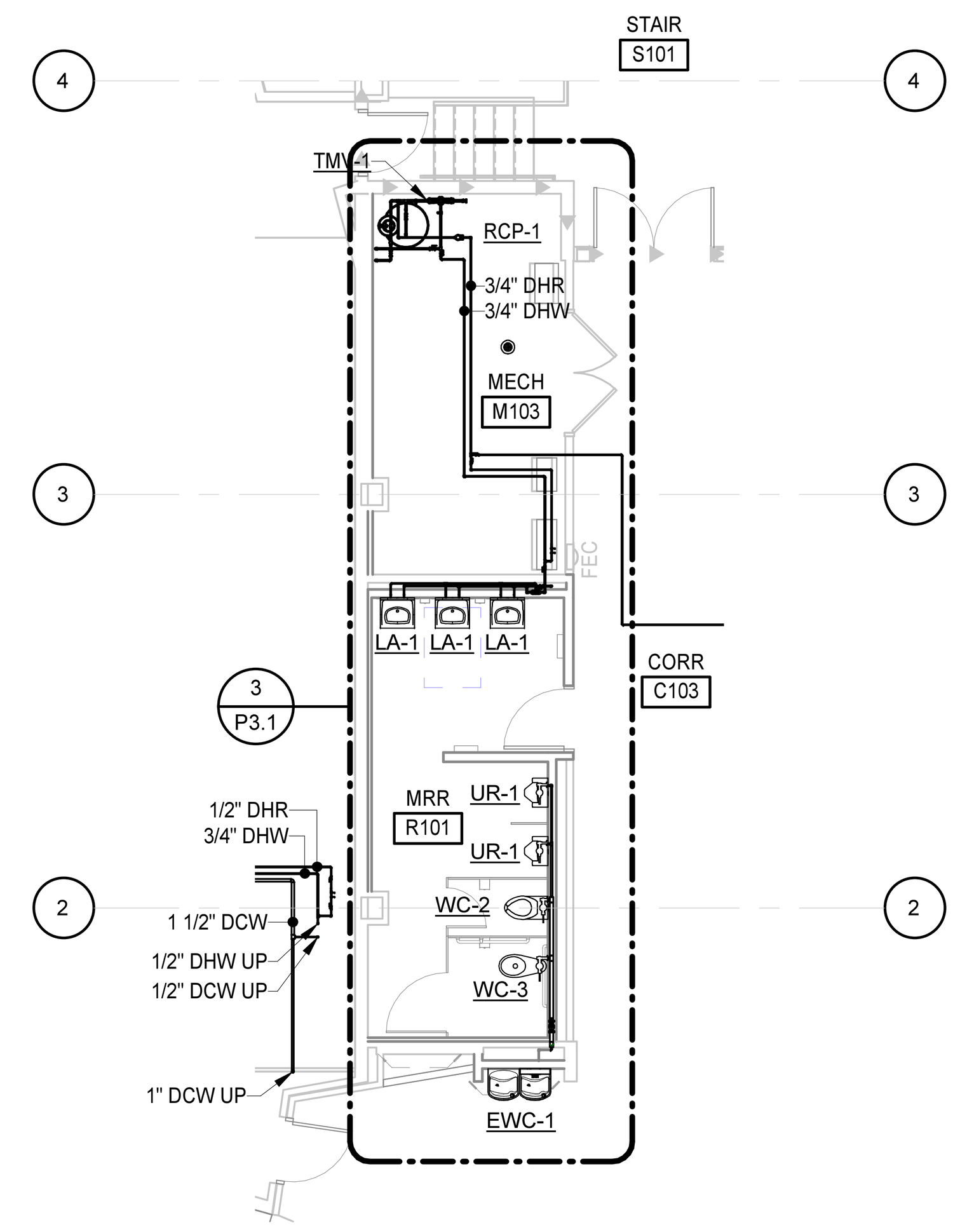
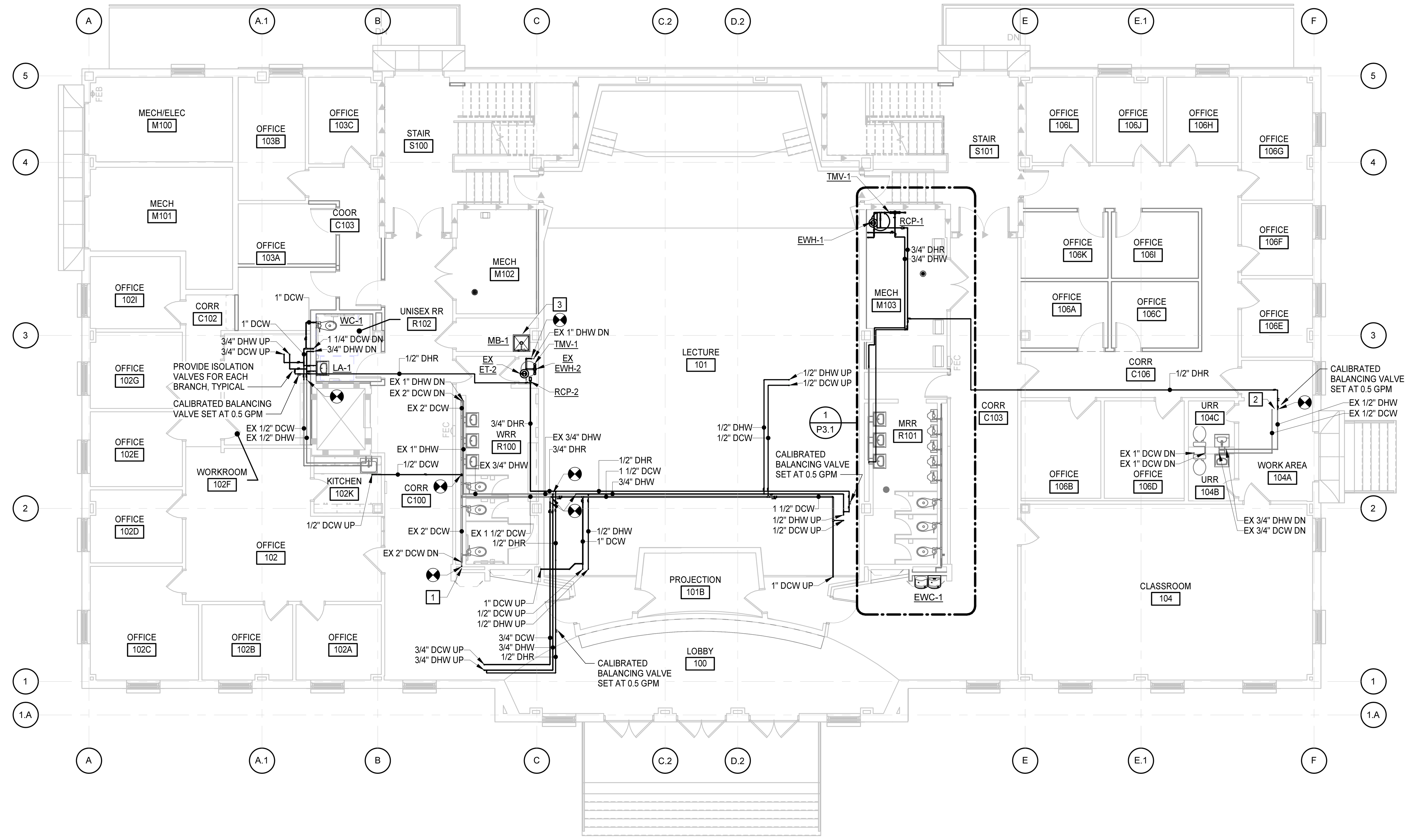


PROJECT N

FIRST FLOOR PLAN - DOMESTIC - ALTERNATE #8

1/8" = 1'-0"

POLAR N



PROJECT N

FIRST FLOOR PLAN - DOMESTIC

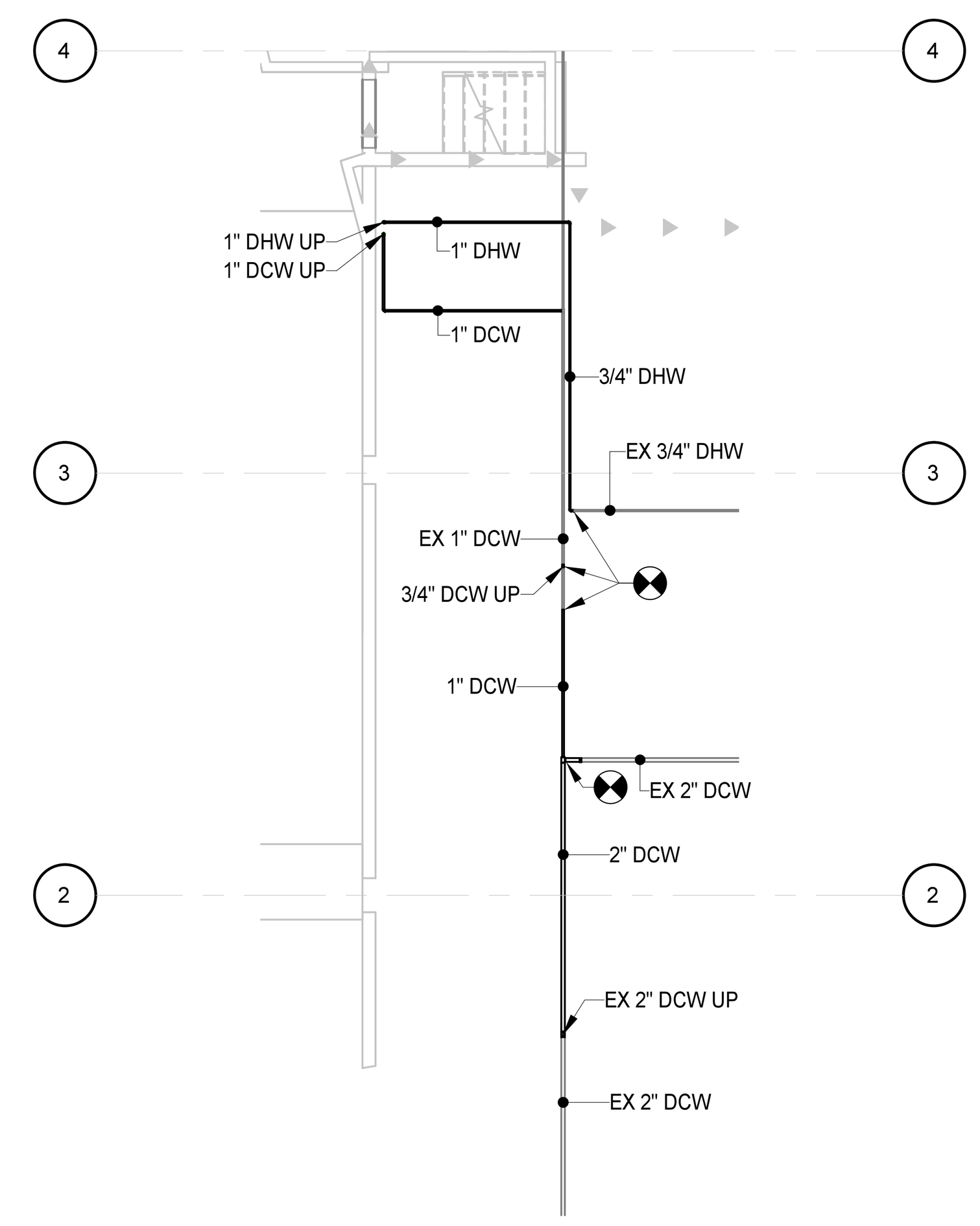
1/8" = 1'-0"

POLAR N

KEYNOTES

APPLIES TO THIS DRAWING REPRESENTED BY n

1. CAP DOMESTIC COLD WATER AT WALL.
2. EXISTING 1/2" DCW & DHW UP TO SECOND FLOOR.
3. PROVIDE NEW PIPING INSULATION ON MOP BASIN DOMESTIC HOT WATER AND COLD WATER RUNOUTS BACK TO MAIN.
4. TEMPORARIRLY REMOVE AND RE-INSTALL BACKFPLOW PREVENTOR AND ASSOSCIATED PIPING TO ALLOW FOR REMOVAL OF CHIMNEY OR PROTECT EXISTING PIPING AND BACKFLOW PREVENTOR IN PLACE.

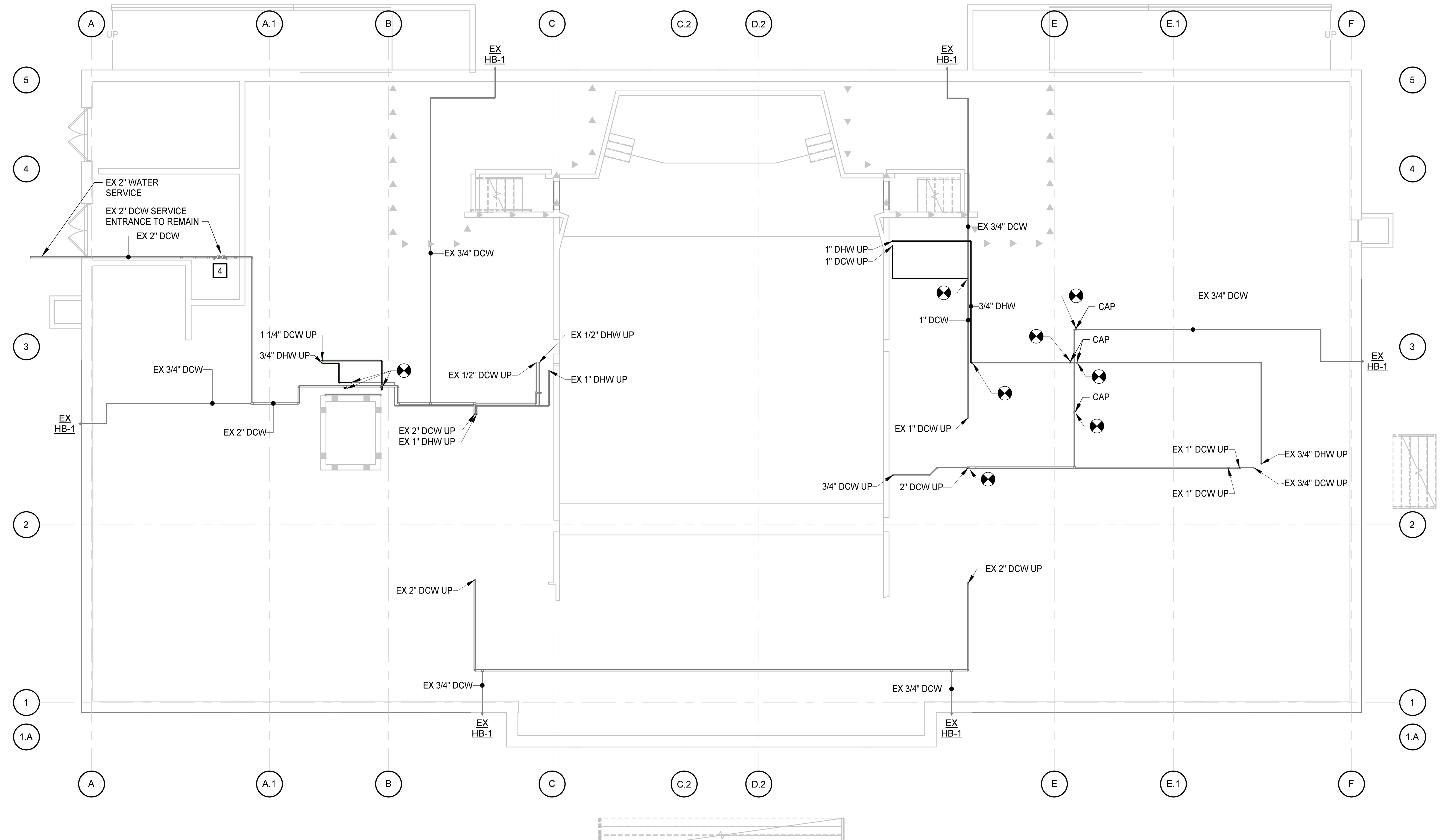


PROJECT N

CRAWL SPACE PLAN - DOMESTIC - ALTERNATE #8

1/8" = 1'-0"

POLAR N



PROJECT N

CRAWL SPACE PLAN - DOMESTIC

1/8" = 1'-0"

POLAR N

1/4" = 1'-0"

1/8" = 1'-0"

3/20/2023 3:40:35 PM

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ALDERMAN AND KING HALL RENOVATIONS - KING HALL

University of North Carolina Wilmington
SCO#22-24639-01A
601 Hamilton Drive, Wilmington, NC 28403

PROJECT NO: 620589
DATE: FEBRUARY 10, 2023

REVISIONS	
DATE	DESCRIPTION

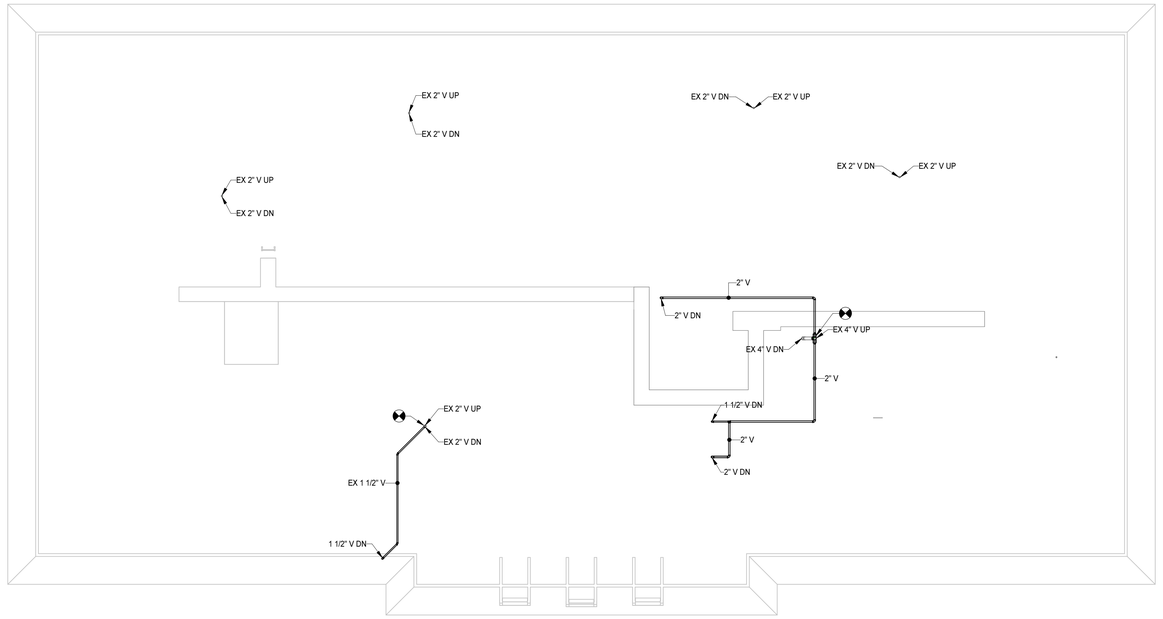
CRAWL SPACE & FIRST FLOOR PLANS - DOMESTIC

P2.1.2

KEYNOTES

APPLIES TO THIS DRAWING
REPRESENTED BY [n]

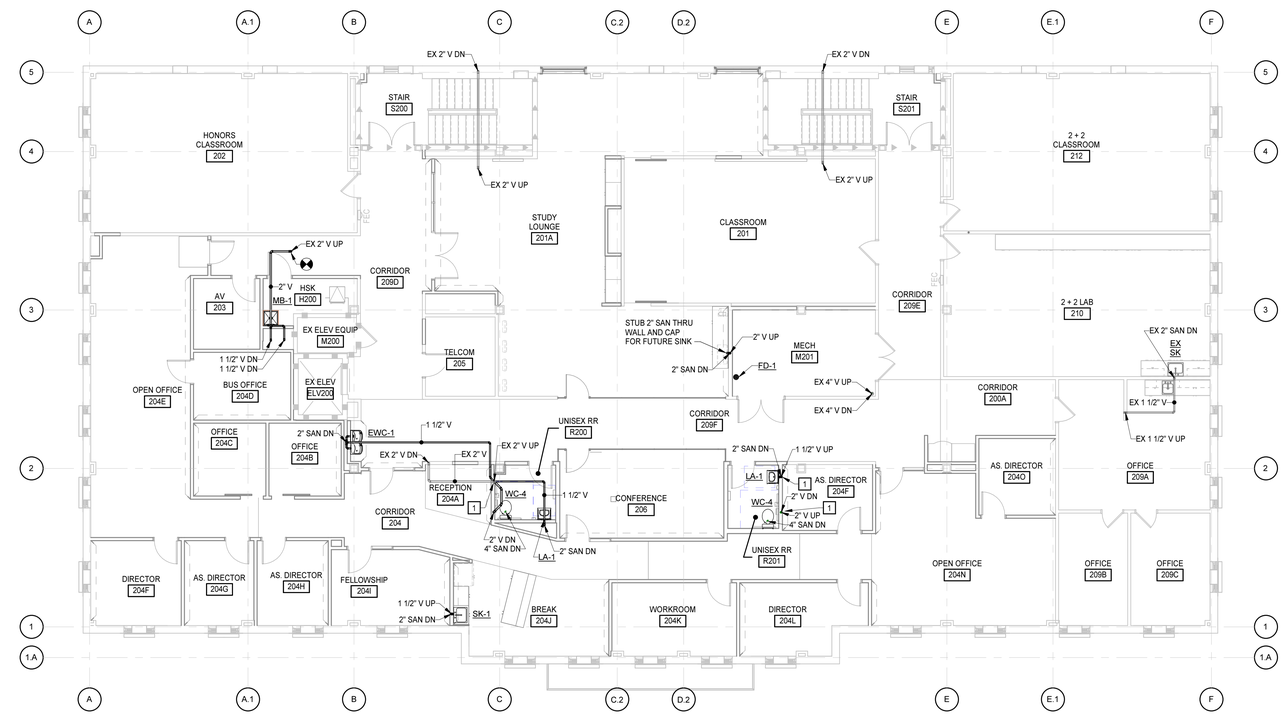
1. PROVIDE NEOPRENE PIPE CLAMPS FOR ALL SANITARY AND VENT PIPING WITHIN SHARED BATHROOM WALL TO ISOLATE PIPE VIBRATIONS FROM WALL FRAMING.



PROJECT N POLAR

ATTIC PLAN - SANITARY

1/8" = 1'-0"



PROJECT N POLAR

SECOND FLOOR PLAN - SANITARY

1/8" = 1'-0"

0' 2' 4' 8' 16'
1/8" = 1'-0"

3/20/2023 3:40:36 PM

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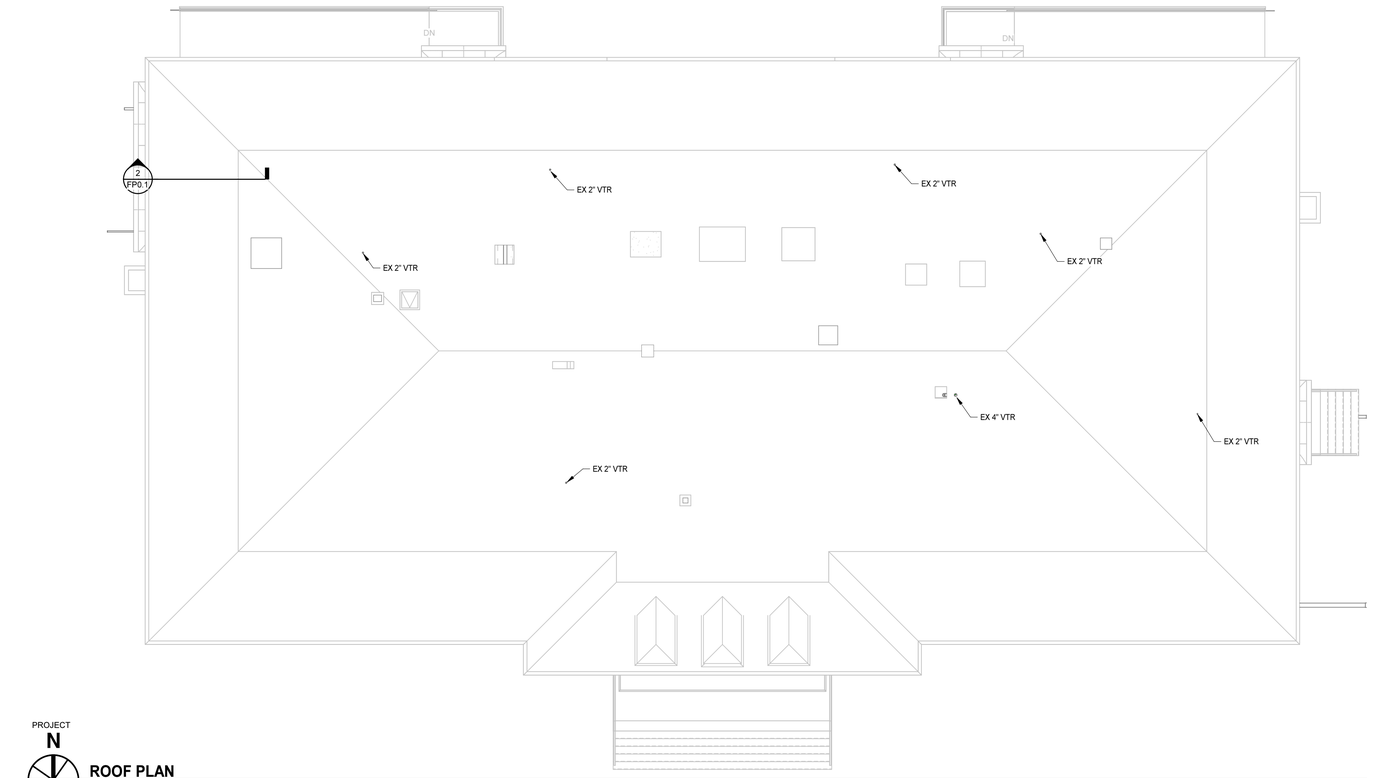
SECOND FLOOR PLAN & ATTIC PLAN - SANITARY

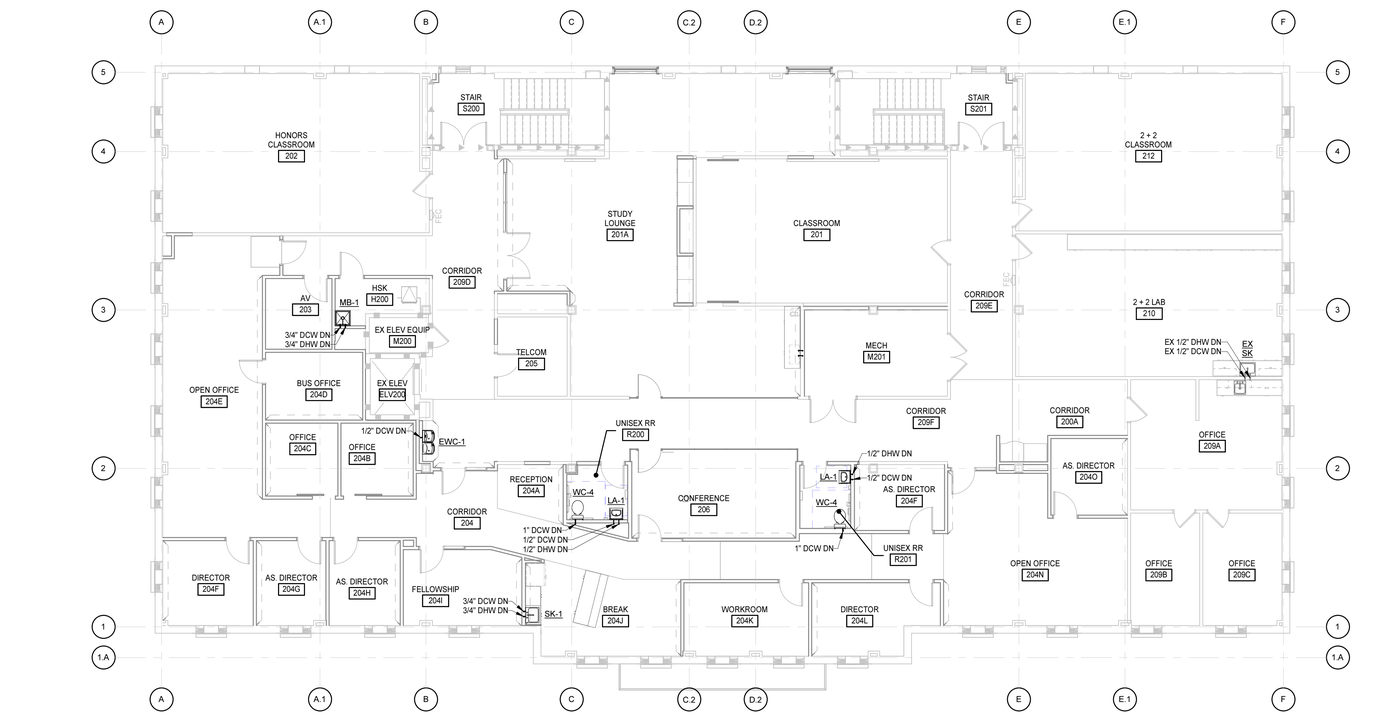
P2.2.1



PROJECT N POLAR

ROOF PLAN

1/8" = 1'-0"



PROJECT N POLAR

SECOND FLOOR PLAN - DOMESTIC

1/8" = 1'-0"

0' 2' 4' 8' 16'

1/8" = 1'-0"

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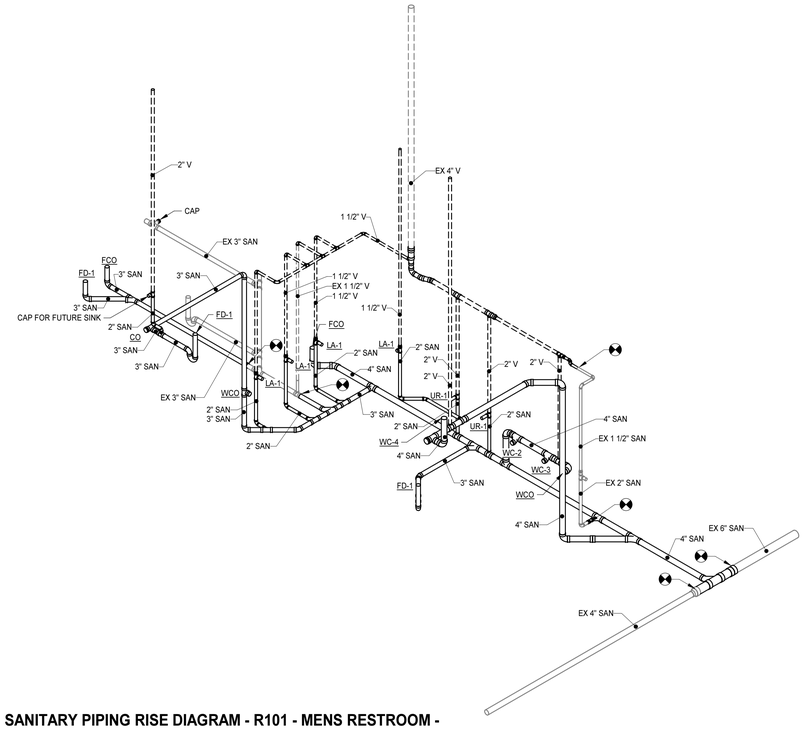
REVISIONS	
DATE	DESCRIPTION

SECOND FLOOR PLAN - DOMESTIC & ROOF PLAN

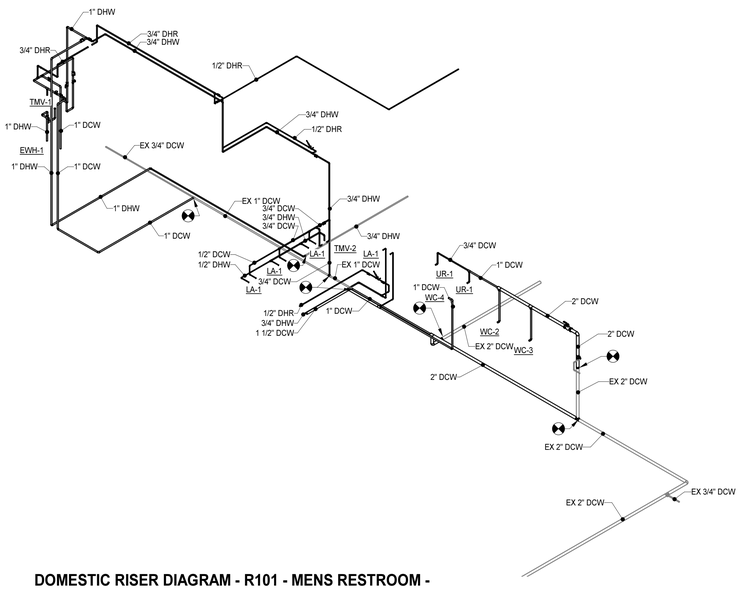
P2.2.2

3/20/2023 3:40:39 PM



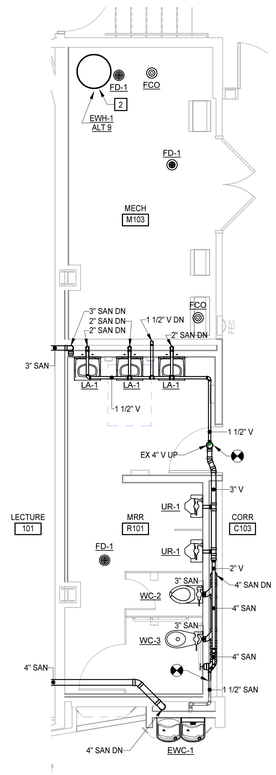
SANITARY PIPING RISE DIAGRAM - R101 - MENS RESTROOM - ALTERNATE #8

NO SCALE



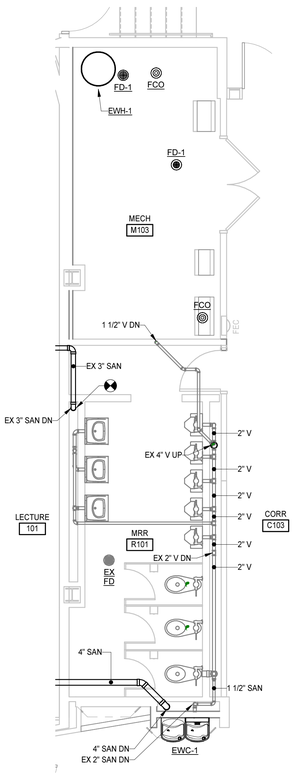
DOMESTIC RISER DIAGRAM - R101 - MENS RESTROOM - ALTERNATE #8

NO SCALE



4 P2.1.1 P3.1 **ENLARGED PLAN - R101 - MENS RESTROOM - SANITARY - ALTERNATE #8**

1/4" = 1'-0"



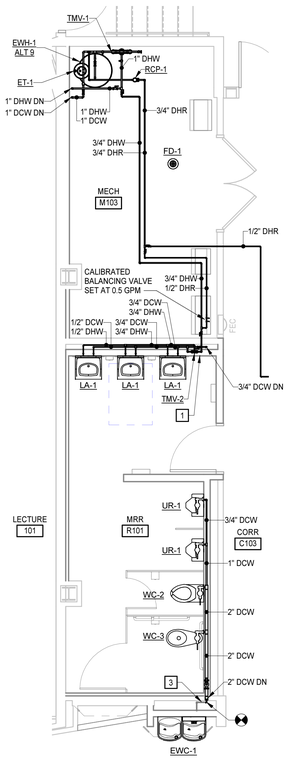
2 P2.1.1 P3.1 **ENLARGED PLAN - R101 - MENS RESTROOM - SANITARY - BASE BID**

1/4" = 1'-0"

KEYNOTES

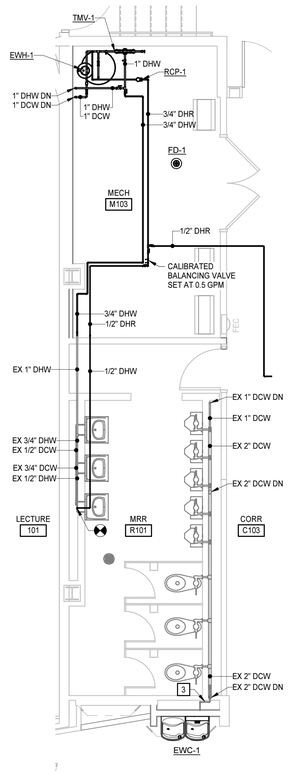
APPLIES TO THIS DRAWING REPRESENTED BY [n]

1. PROVIDE DOMESTIC COLD WATER ISOLATION BALL VALVE FOR BATHROOM GROUP. PROVIDE ACCESS PANEL IN WALL FOR ACCESS.
2. IF ALTERNATE #9 IS ACCEPTED, PROVIDE CONDENSATE DRAIN FROM WATER HEATER HEAT PUMP AND DISCHARGE TO NEAREST FLOOR DRAIN.
3. PROVIDE NEW SHUT-OFF BALL VAVLE FOR EWC-1. LOCATE VALVE UNDER EWC-1 AND PROVIDE ACCESS DOOR.



3 P2.1.2 P3.1 **ENLARGED PLAN - R101 - MENS RESTROOM - DOMESTIC - ALTERNATE #8**

1/4" = 1'-0"



1 P2.1.2 P3.1 **ENLARGED PLAN - R101 - MENS RESTROOM - DOMESTIC - BASE BID**

1/4" = 1'-0"

0' 1' 2' 4' 8'

1/4" = 1'-0"

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ALDERMAN AND KING HALL RENOVATIONS - KING HALL

University of North Carolina Wilmington
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DATE: FEBRUARY 10, 2023

REVISIONS	
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ENLARGED PLANS AND RISERS

P3.1

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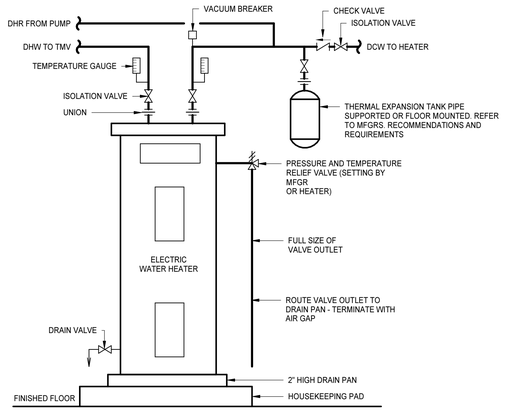
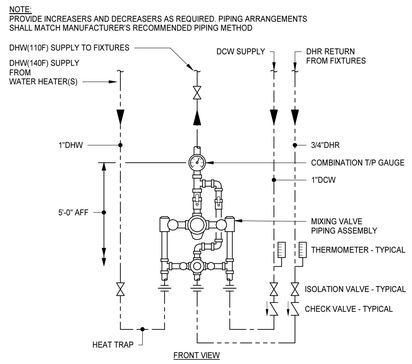
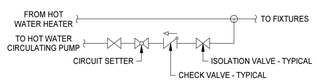


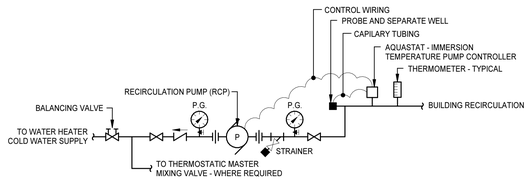
1 FLOOR MOUNTED ELECTRIC WATER HEATER DETAILL
NO SCALE



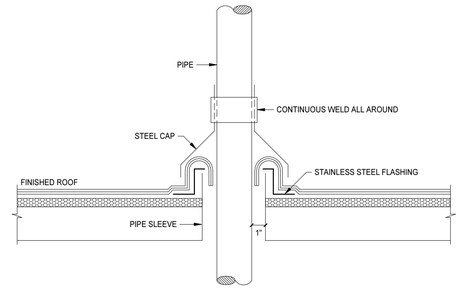
2 THERMOSTATIC MIXING VALVE DETAIL
NO SCALE



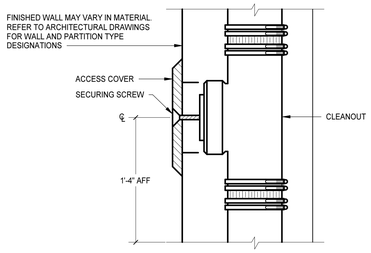
3B HOT WATER RECIRCULATION BRANCH CONNECTION DETAIL
NO SCALE



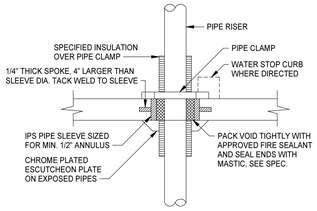
3A CIRCULATION PUMP DETAIL
NO SCALE



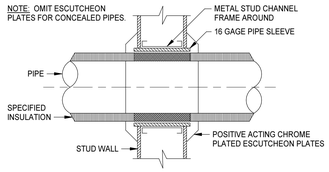
4 UNINSULATED PIPE THRU ROOF DETAIL
NO SCALE



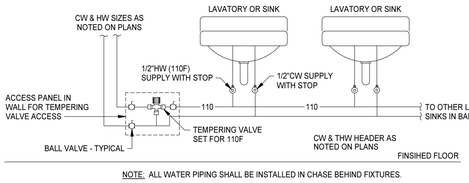
5 WALL CLEANOUT DETAIL
NO SCALE



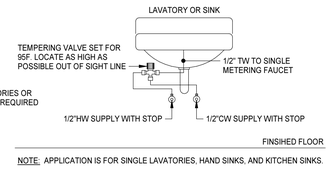
6 PIPE THRU FLOOR SLAB DETAIL
NO SCALE



7 PIPE THRU STUD WALL DETAIL
NO SCALE

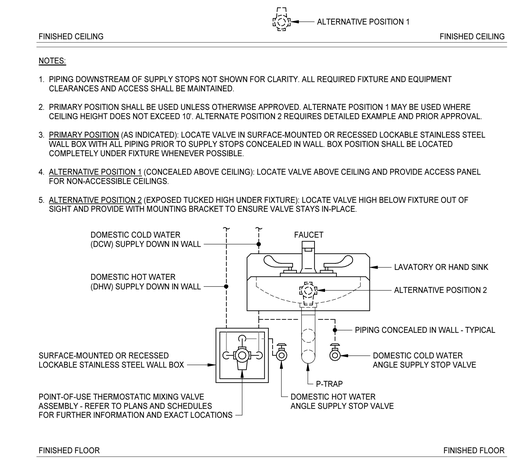


NOTE: ALL WATER PIPING SHALL BE INSTALLED IN CHASE BEHIND FIXTURES.

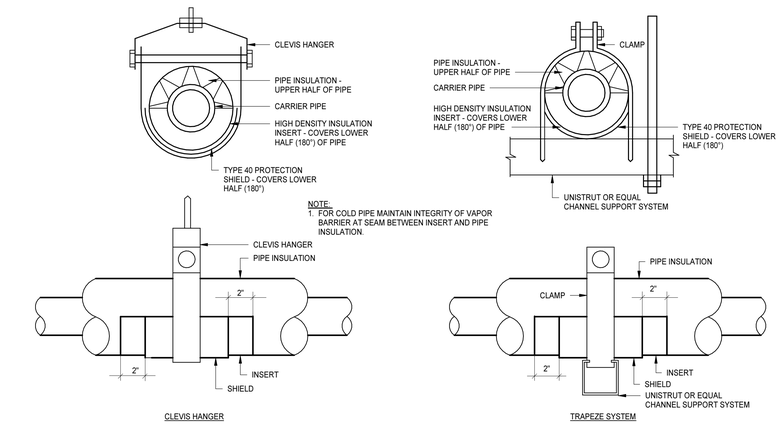


NOTE: APPLICATION IS FOR SINGLE LAVATORIES, HAND SINKS, AND KITCHEN SINKS.

8 LAVATORY SUPPLY DETAIL
NO SCALE

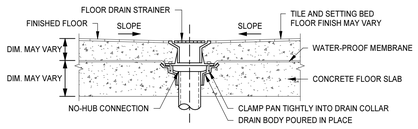


9 ASSE-1070 POINT-OF-USE VALVE DETAIL
NO SCALE



CLEVIS HANGER

10 PIPE SUPPORT AND THERMAL SHIELD DETAILS
NO SCALE



11 FLOOR DRAIN IN OPEN AREA DETAIL
NO SCALE

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ALDERMAN AND KING HALL RENOVATIONS - KING HALL

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PROJECT NO: 820589
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REVISIONS	
DATE	DESCRIPTION

DETAILS

P5.1

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PUMP SCHEDULE

TAG	BASIS OF DESIGN		LOCATION	SYSTEM TYPE	PUMP TYPE	OPERATING DATA					ELECTRICAL DATA			CONNECTION SIZE		NOTES
	MANUFACTURER	MODEL				FLOW (GPM)	PRESSURE (FT)	EFFICIENCY	POWER (HP)	SPEED (RPM)	VOLTS	PHASE	HERTZ	INLET (IN)	OUTLET (IN)	
RCP-1	TACO	007e ECM	M103-MECH	DHW	CIRCULATION	1.0	8	86	.025	3250	120	1	60	1/2"	1/2"	1
RCP-2	TACO	007e ECM	R100-WRR	DHW	CIRCULATION	1.5	8	86	.025	3250	120	1	60	1/2"	1/2"	1

1. PROVIDE ECM-CONTROLLED RECIRCULATION PUMP WITH INTEGRAL TEMPERATURE AND PRESSURE SENSORS AND LOGIC. UNIT SHALL BE FULLY ADJUSTABLE FOR VARYING FIELD CONDITIONS.

THERMOSTATIC MIXING VALVE SCHEDULE

TAG	BASIS OF DESIGN		DESIGN FLOW (GPM)	FLOW RANGE (GPM)	MAX P.D. AT DESIGN FLOW (PSI)	HW SYSTEM TEMPERATURES		CONNECTION SIZE		NOTES
	MANUFACTURER	MODEL				INLET (°F)	OUTLET (°F)	INLET (IN)	OUTLET (IN)	
TMV-1	POWERS	LFSH1434-1	5	1-127	5	140	110	1 1/4"	1 1/2"	1
TMV-2	POWERS	LFLM496-1	2	0.5-2	5	110	105	3/4"	3/4"	2

1. PROVIDE THERMOSTATIC MIXING VALVE ASSMEBLY WITH STAINLESS STEEL WALL-MOUNTED CABINET AND T/P GAUGES ON INLETS AND OUTLET.
2. PROVIDE ASSE-1070 VALVE FOR ALL PUBLIC LAVATORIES AND SINKS. UNIT SHALL BE MOUNTED CONCEALED FROM VIEW BELOW FIXTURE.

PLUMBING FIXTURE SCHEDULE

TAG	FIXTURE	HEIGHT A.F.F.	BASIS OF DESIGN	PIPE SIZE					NOTES
				COLD WATER	TEPID WATER	HOT WATER	VENT	SOIL WASTE	
EWC-1	BI-LEVEL WATER COOLER W/ BOTTLE FILLER (ACCESSIBLE)	TOP OF BUBBLER AT 39", LOWER AT 34"	FIXTURE: ELKAY LZSTL8WSSP	1/2"			1 1/2"	1 1/2"	1
LA-1	WALL-HUNG LAVATORY (ACCESSIBLE)	RIM AT 34"	FIXTURE: KOHLER K-2005 FAUCET: CHICAGO 802-E70-317XKABCP	1/2"		1/2"	1 1/2"	1 1/2"	1, 3
MB-1	MOP SINK	RIM AT 12"	FIXTURE: FIAT TSB3001 FAUCET: CHICAGO 952-12CP	1/2"		1/2"	2 1/2"	3"	4
SK-1	KITCHENETTE SINK - SINGLE BOWL (ACCESSIBLE)	COUNTER MOUNTED REFER TO ARCH DRAWINGS	FIXTURE: ELKAY LRADQ221955 FAUCET: CHICAGO 1100-317XKABCP	1/2"		1/2"	1 1/2"	1 1/2"	1
UR-1	URINAL	RIM AT 24"	FIXTURE: ZURNZ5755-U VALVE: SLOAN 186-0.5	3/4"			2"	2"	2
WC-1	FLOOR MOUNTED WATER CLOSET (ACCESSIBLE)	TOP OF SEAT 17"	FIXTURE: ZURNZ5655-BWL1 VALVE: SLOAN REGAL 111 SEAT: CHURCH 9500SSCT	1"			2"	4"	1, 2
WC-2	WALL MOUNTED WATER CLOSET	TOP OF SEAT 15"	FIXTURE: ZURNZ5615-BWL-AM VALVE: SLOAN REGAL 111 SEAT: CHURCH 9500SSCT	1"			2"	4"	2
WC-3	WALL MOUNTED WATER CLOSET (ACCESSIBLE)	TOP OF SEAT 17"	FIXTURE: ZURNZ5615-BWL-AM VALVE: SLOAN REGAL 111 SEAT: CHURCH 9500SSCT	1"			2"	4"	1, 2
WC-4	FLOOR MOUNTED WATER CLOSET (ACCESSIBLE)	TOP OF SEAT 17"	FIXTURE: KOHLER K-3427 SEAT: CHURCH 9500SSCT	1/2"			2"	4"	1, 2

1. THIS ACCESSIBLE FIXTURE, ACCESSORIES, AND INSTALLATION SHALL CONFORM TO THE NCBC AND ASAD ADA STANDARDS FOR ACCESSIBLE DESIGN.
2. LOCATE FLUSH ACTUATORS ON WIDE SIDE OF STALLS OR APPROACH AREAS.
3. PROVIDE ASSE-1070 CERTIFIED MIXING VALVE IN STAINLESS STEEL WALL CABINET, ABOVE CEILING, OR BELOW FIXTURE ACCESSIBLE BUT CONCEALED FROM VIEW.
4. PROVIDE A SEPARATE INDIVIDUAL FAUCET FOR BOTH COLD WATER AND HOT WATER.

DRAIN AND CLEANOUT SCHEDULE

TAG	BASIS OF DESIGN		STRAINER/GRATE	NOTES
	MANUFACTURER	MODEL		
EX FD	EXISTING	EXISTING		1
FCO	JOSAM	55000-1-VP	FLOOR CLEANOUT	
FD-1	JOSAM	30000-6A-49	6" ROUND	2
WCO	JOSAM	58910-19	WALL CLEANOUT	

1. DRAIN IS EXISTING TO REMAIN. PROVIDE NEW IN-LINE TRAP SEAL, SEE DETAIL.
2. PROVIDE IN-LINE TRAP SEAL, SEE DETAIL.

ELECTRIC WATER HEATER SCHEDULE

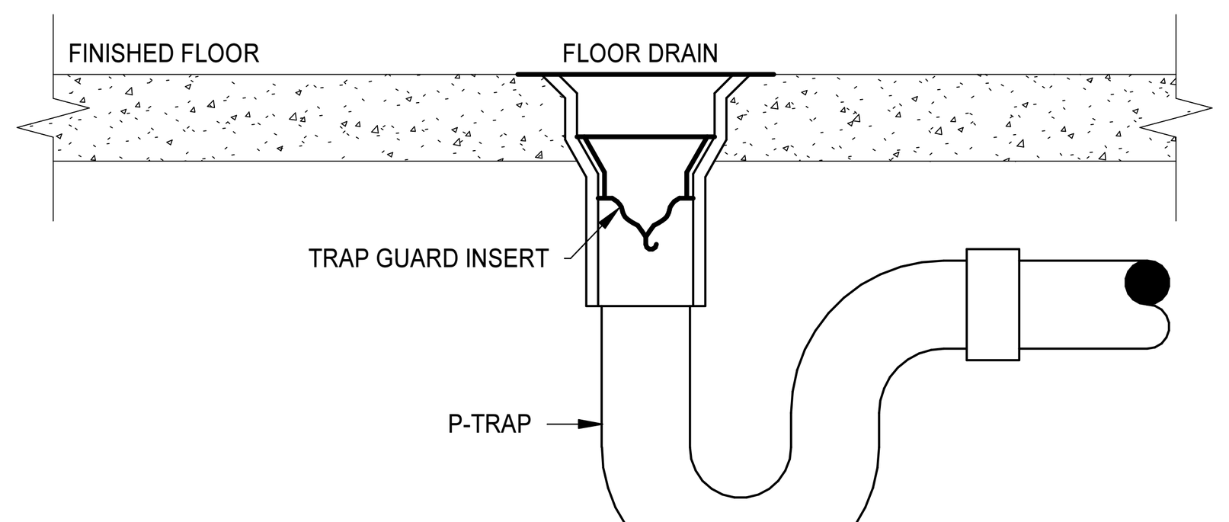
TAG	BASIS OF DESIGN		LOCATION	CAPACITY (GALLONS)	RECOVERY RATE (GPH)	TEMPERATURE RISE (°F)	TEMPERATURE SETTING (°F)	ELECTRICAL DATA				NOTES
	MANUFACTURER	MODEL						INPUT RATE (kW)	VOLTAGE	PHASE	HERTZ	
EWH-1	A.O. SMITH	DEL-50	M103-MECH	50	24	100	140	6.00	208	1	60	1
EWH-1 ALT 9	A.O. SMITH	HPTU-50CTA	M103-MECH	50	24	100	140	4.50	208	1	60	3
EX EWH-2	RHEEM	PROE36	H101-STO	36	21	100	140	3.38	208	1	60	2

1. kW INPUT RATE FOR ELECTRIC WATER HEATERS BASED ON FULL LOAD SIMULTANEOUS OPERATION. PROVIDE ELECTRIC RESISTANCE ONLY WATER HEATER UNDER BASE BID.
2. WATER HEATER IS EXISTING TO REMAIN. INFORMATION SHOWN FOR INFORMATIONAL PURPOSES ONLY.
3. IF ADD ALTERNATE #9 IS ACCEPTED, PROVIDE HEAT PUMP WATER HEATER.

TANK SCHEDULE

TAG	BASIS OF DESIGN		LOCATION	SYSTEM TYPE	TANK TYPE	OPERATING DATA			ASME CODE CONSTRUCTION (YES / NO)	CONNECTION SIZE		NOTES
	MANUFACTURER	MODEL				CAPACITY (GAL)	ACCEPTANCE (GAL)	AIR PRE-CHARGE PRESSURE (PSI)		INLET (IN)	OUTLET (IN)	
ET-1	BELL & GOSSETT	PTA-5	M103-MECH	DHW	EXPANSION	3.5	2.3	45	YES	3/4"	3/4"	1
EX ET-2	APOLLO	40XT1-04	H101-STO	DHW	EXPANSION	2.1	0.9	45	YES	3/4"	3/4"	1

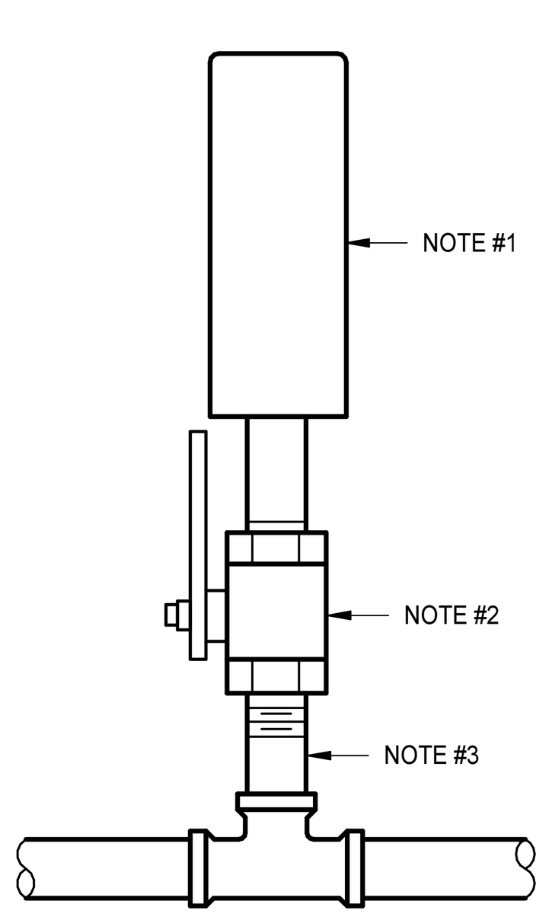
1. REFER TO MANUFACTURERS RECOMMENDATIONS FOR FINAL PIPING ARRANGEMENT.



TRAP GUARD INSERT DETAIL

1 TRAP GUARD INSERT DETAIL

NO SCALE



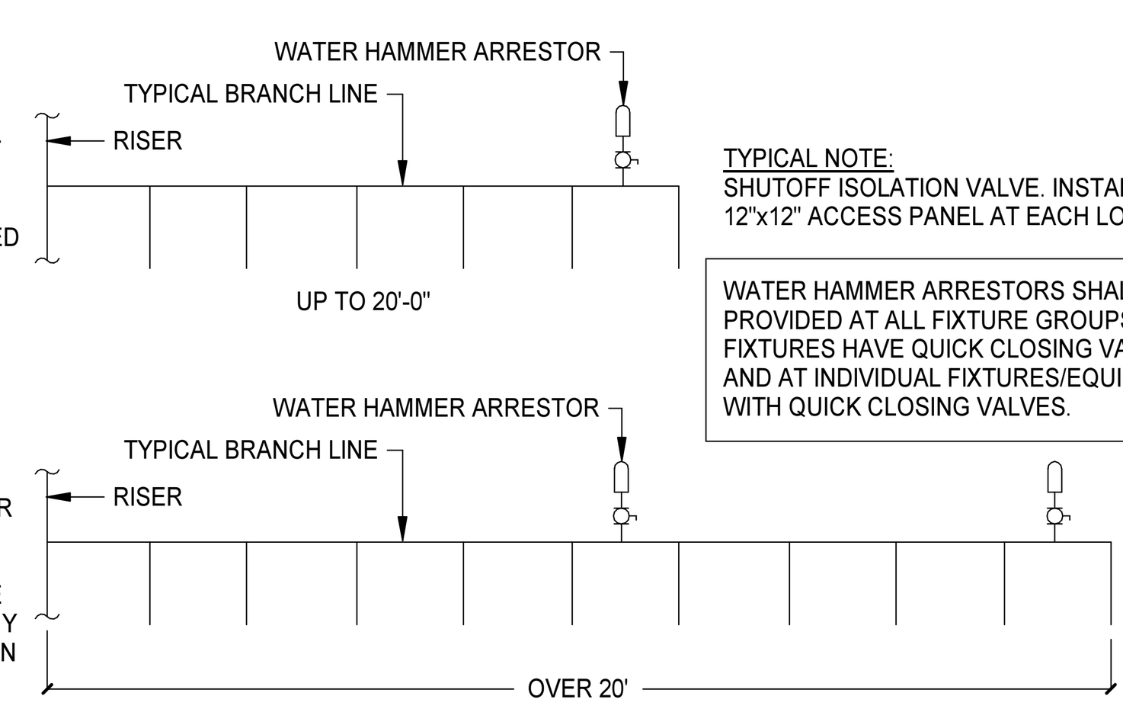
NOTES:
1. WATER HAMMER ARRESTOR.
2. BALL VALVE. VALVE SIZE SHALL BE EQUAL TO NOMINAL SIZE OF ARRESTOR OUTLET (MINIMUM 1/2").
3. BRANCH PIPE EQUAL TO NOMINAL SIZE OF ARRESTOR OUTLET (MINIMUM 1/2").

2 WATER HAMMER ARRESTOR DETAIL

NO SCALE

BRANCH LINES OF 20 FEET OR LESS: PLACE WATER HAMMER ARRESTOR AT THE END OF THE BRANCH LINE BETWEEN THE LAST TWO FIXTURES SERVED, AS SHOWN. SELECT REQUIRED MODEL USING FIXTURE UNIT SIZING.

BRANCH LINES EXCEEDING 20 FEET: PLACE AN ADDITIONAL WATER HAMMER ARRESTOR AS SHOWN AT RIGHT. SELECT REQUIRED MODELS USING FIXTURE UNIT SIZING. THE SUM OF THE FIXTURE UNIT RATING OF UNITS X AND Y SHALL BE EQUAL TO OR GREATER THAN THE DEMAND OF THE BRANCHES.



TYPICAL NOTE: SHUTOFF ISOLATION VALVE. INSTALL 12"x12" ACCESS PANEL AT EACH LOCATION.

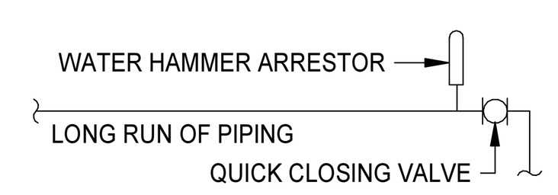
WATER HAMMER ARRESTORS SHALL BE PROVIDED AT ALL FIXTURE GROUPS WHERE FIXTURES HAVE QUICK CLOSING VALVES, AND AT INDIVIDUAL FIXTURES/EQUIPMENT WITH QUICK CLOSING VALVES.

P.D.I. WATER HAMMER ARRESTORS

LENGTH OF PIPE	NOMINAL PIPE DIAMETERS					
	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
25'	A	A	B	C	D	E
50'	A	B	C	D	E	F
75'	B	C	D	AE	F	EF
100'	C	D	E	F	CF	FF
125'	C	D	F	AF	EF	EFF
150'	D	E	F	DF	FF	FFF

WHEN LONG RUNS OF PIPING ARE EMPLOYED TO SERVE REMOTE EQUIPMENT, WATER HAMMER ARRESTOR SHOULD BE LOCATED AS CLOSE AS POSSIBLE TO THE POINT OF QUICK CLOSURE OR HAMMER SOURCE.

THE SIZE AND QUANTITY OF WATER HAMMER ARRESTORS TO BE INSTALLED IN BRANCH LINES IS SHOWN IN TABLE. WHEN FLOR PRESSURE OF 65 PSIG TO 85 PSIG ARE USED, THE NEXT LARGER SIZE SHOULD BE SELECTED.



WATER HAMMER ARRESTOR CAPACITIES

CONN. SIZE	PDI SIZE	FIXTURE UNIT CAPACITY	CUBIC INCH VOLUME
1/2"	A	1 TO 11	5
3/4"	B	12 TO 32	7
1"	C	33 TO 60	11
1"	D	61 TO 113	20
1"	E	114 TO 154	29
1"	F	155 TO 330	34

NOTE: MATCH TOTAL FIXTURE UNITS OF BRANCH LINE TO CORRECT SIZE OF WATER HAMMER ARRESTOR.

SHOCK ABSORBER SELECTION

CODE	PDI SIZE	FIXTURE UNITS
SA-1	A	1-11
SA-2	B	12-32
SA-3	C	33-60
SA-4	D	61-113
SA-5	E	114-154
SA-6	F	155-330

SHOCK ABSORBER SELECTION TABLE

3 WATER HAMMER ARRESTOR INSTALLATION & SIZING DETAIL

NO SCALE

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MOSELEY ARCHITECTS ... C-3469 ... NORTH CAROLINA RALEIGH, NC

ALDERMAN AND KING HALL RENOVATIONS - KING HALL

University of North Carolina Wilmington
SCO#22-24639-01A
601 Hamilton Drive, Wilmington, NC 28403

PROJECT NO: 620589
DATE: FEBRUARY 10, 2023

REVISIONS	
DATE	DESCRIPTION

SCHEDULES & DETAILS

P6.1

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LIFE SAFETY SYMBOL LEGEND

DESIGNATOR MATRIX

	WALL	BARRIER	PARTITION	RATED BEARING OR NON-BEARING WALL
2 HR FIRE	✖✖✖✖✖	■■■■■		
1 HR FIRE		➤➤➤➤➤	★★★★★	▬▬▬▬▬

NOTES:
1. REFER TO LIFE SAFETY DRAWINGS FOR ALL WALL RATING DETAILS.

EQUIPMENT IDENTIFICATION

AHU	AIR-HANDLING UNIT
CHWP	CHILLED WATER PUMP
FCU	FAN COIL UNIT
HWP	HOT WATER PUMP
SSI	SPLIT-SYSTEM INDOOR UNIT
SSO	SPLIT-SYSTEM OUTDOOR UNIT
TU	TERMINAL UNIT
UH	UNIT HEATER

ABBREVIATIONS

A	AMPERE(S)
AD	ACCESS DOOR
AFF	ABOVE FINISHED FLOOR
ALT	ALTERNATE
APD	AIR PRESSURE DROP
BHP	BRAKE HORSEPOWER
BTUH	BRITISH THERMAL UNITS PER HOUR
CFM	CUBIC FEET PER MINUTE
CHWR	CHILLED WATER RETURN
CHWS	CHILLED WATER SUPPLY
CLG	COOLING
COM	COMMON
D	DRAIN
DB	DRY BULB TEMPERATURE
dBA	A-WEIGHTED DECIBELS
DCW	DOMESTIC COLD WATER
DD	DIRECT DRIVE
DIA	DIAMETER
DN	DOWN
DWG	DRAWING
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EER	ENERGY EFFICIENCY RATIO
EQ	EQUAL
ESP	EXTERNAL STATIC PRESSURE
EWT	ENTERING WATER TEMPERATURE
EX	EXISTING
F	DEGREES FAHRENHEIT
FC	FAIL CLOSED
FD	FIRE DAMPER
FLA	FULL LOAD AMPS
FO	FAIL OPEN
FPM	FEET PER MINUTE
FT	FOOT, FEET
GA	GAUGE
GAL	GALLON(S)
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
HP	HORSEPOWER
HTG	HEATING
HWR	HOT WATER RETURN
HWS	HOT WATER SUPPLY
HX	HEAT EXCHANGER
HZ	HERTZ
IN	INCH
IPLV	INTEGRATED PART-LOAD VALUE
KW	KILOWATT(S)
LAT	LEAVING AIR TEMPERATURE
LBS	POUNDS
LWT	LEAVING WATER TEMPERATURE
MAX	MAXIMUM
MBH	ONE THOUSAND BTUH
MCA	MINIMUM CIRCUIT AMPACITY
MFR	MANUFACTURER
MIN	MINIMUM
MOCP	MAXIMUM OVERCURRENT PROTECTION
MOD	MOTOR-OPERATED DAMPER
NC	NORMALLY CLOSED (FOR PLANS, DETAILS)
NC	NOISE CRITERIA (FOR SCHEDULES)
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
OA	OUTSIDE AIR
OC	ON CENTER
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
PF	PLENUM FAN
PH	PHASE
PSIG	POUNDS PER SQUARE INCH GAUGE
RA	RETURN AIR
RD	REFRIGERANT DISCHARGE
RH	RELATIVE HUMIDITY
RL	REFRIGERANT LIQUID
RPM	REVOLUTIONS PER MINUTE
RS	REFRIGERANT SUCTION
SA	SUPPLY AIR
SEER	SEASONAL ENERGY EFFICIENCY RATIO
TD	TRANSFER DUCT
TYP	TYPICAL
UNO	UNLESS NOTED (INDICATED) OTHERWISE
UPD	UNIT PRESSURIZATION DIFFERENTIAL
V	VOLTAGE, VOLTS
VD	VOLUME DAMPER
VFD	VARIABLE FREQUENCY DRIVE
W	WATT(S)
W/	WITH
W/O	WITHOUT
WB	WET BULB TEMPERATURE
WC	WATER COLUMN
WPD	WATER PRESSURE DROP
WWM	WELDED WIRE MESH

GRAPHICS SYMBOLS LEGEND

A123 — **SPACE IDENTIFICATION TAG**
SPACE NUMBER
BUILDING AREA (WHEN USED)

AHU-12 — **EQUIPMENT IDENTIFICATION TAG**
EQUIPMENT NUMBER
UNIT DESIGNATION

S1 / 325 — **DIFFUSER, GRILLE OR REGISTER TAG**
TAG, REFER TO DIFFUSER, GRILLE AND REGISTER SCHEDULE
AIRFLOW (CFM)

1 / M5.1 — **DETAIL TAG**
DETAIL NUMBER
DRAWING WHERE DETAIL IS INDICATED

15 — KEYNOTE

C — STRUCTURAL GRID LINE WITH DESIGNATION

EXISTING TO BE REMOVED

1 / M2.2 / M2.3 / M2.4 / M5.1 — **DETAIL TITLE** 1/4"=1'-0"
DETAIL NUMBER
DRAWING WHERE DETAIL IS INDICATED
DRAWING WHERE DETAIL IS REFERENCED
ADDITIONAL DRAWING REFERENCES

1 / M2.2 / M2.3 / M2.4 / M4.1 — **SECTION TITLE** 1/4"=1'-0"
SECTION NUMBER
DRAWING WHERE SECTION IS INDICATED
DRAWING WHERE SECTION IS REFERENCED
ADDITIONAL DRAWING REFERENCES

1 / M4.1 — **SECTION CALLOUT**
SECTION NUMBER
DRAWING WHERE SECTION IS INDICATED

1 / M3.1 — **ENLARGED PLAN CALLOUT**
ENLARGED PLAN NUMBER
DRAWING WHERE ENLARGED PLAN IS INDICATED

MECHANICAL EQUIPMENT WITH REQUIRED SERVICE CLEARANCE INDICATED

DUCTWORK LEGEND

18x8 — RECTANGULAR DUCT (FIRST DIMENSION REFERS TO SIDE VIEWED)
18ø — ROUND DUCT SIZE
18/12 — FLAT OVAL DUCT SIZE
18ø — DOUBLE WALL, EXPOSED DUCT
18ø — FABRIC DUCT
FLEXIBLE DUCTWORK
FLEXIBLE CONNECTOR
SD — DUCT-MOUNTED SMOKE DETECTOR
DUCT WITH DUCT LINER
DUCT ACCESS DOOR
DUCT WITH END CAP
LINEAR SLOT DIFFUSER, LENGTH AS INDICATED
LINEAR BAR GRILLE, LENGTH AS INDICATED
SUPPLY DIFFUSER
RETURN OR EXHAUST GRILLE
SUPPLY DIFFUSER WITH DIRECTIONAL BLOW, SOLID HATCH INDICATES BLANK OFF PANEL
POINT OF CONNECTION TO EXISTING
LIMIT OF DEMOLITION
SUPPLY AIRFLOW ARROW
RETURN OR EXHAUST AIRFLOW ARROW

MANUAL BALANCING DAMPER IN DUCT
FIRE DAMPER IN DUCT
SMOKE DAMPER IN DUCT
COMBINATION FIRE/SMOKE DAMPER IN DUCT
M — MOTORIZED DAMPER IN DUCT
SMOKE CONTROL MANUAL BALANCING DAMPER IN DUCT
M — SMOKE CONTROL MOTORIZED DAMPER IN DUCT
SB — SECURITY BARS IN DUCT
AP — DUCT WITH ACCESS PANEL
TO / AWAY — SUPPLY/MAKEUP AIR DUCT SECTIONS
TO / AWAY — RETURN AIR DUCT SECTIONS
TO / AWAY — EXHAUST AIR DUCT SECTIONS
SD — SMOKE DETECTOR
H — HUMIDITY SENSOR
T — THERMOSTAT, LINE VOLTAGE
T — THERMOSTAT, LOW VOLTAGE
S — TEMPERATURE SENSOR
C — CARBON DIOXIDE SENSOR
O — OCCUPANCY SENSOR (INPUT FROM AUX RELAY OF LIGHTING)
SENSOR WELL
UC — DOOR UNDERCUT
DL — DOOR LOUVER

PIPING LEGEND

PIPE CAP
PIPE TURNED DOWN
PIPE TURNED UP
PIPE TEE UP
PIPE TEE DOWN
CO — END OF LINE CLEANOUT PLUG
CO — CLEANOUT PLUG
PRESSURE GAUGE WITH GAUGE COCK
T — LIQUID FILLED THERMOMETER
UNION
STRAINER WITH BLOWDOWN VALVE AND 3/4" HOSE END CONNECTION
FLEXIBLE PIPE CONNECTOR
MA — MANUAL AIR VENT

VALVE
VALVE IN RISER
MANUAL BALANCING VALVE WITH FLOW TAPS
AUTOMATIC BALANCING VALVE WITH FLOW TAPS
SWING CHECK VALVE
PRESSURE REDUCING VALVE
TRIPLE DUTY VALVE
GAS COCK
P — PRESSURE-RELIEF VALVE
M — TWO-WAY CONTROL VALVE
M — THREE-WAY CONTROL VALVE
DIRECTION OF FLOW
CONCENTRIC REDUCER
ECCENTRIC REDUCER

GENERAL NOTES

A. THE CONTRACT DOCUMENTS ARE COMPLEMENTARY AND WHAT IS REQUIRED BY ONE SHALL BE AS BINDING AS IF REQUIRED BY ALL. IN THE CASE OF A CONFLICT, DISAGREEMENT, OR AMBIGUITY, PROVIDE THE BETTER QUALITY. IN THE CASE OF A CONFLICT, DISAGREEMENT, OR AMBIGUITY, PROVIDE THE GREATER QUANTITY OF WORK.

B. DRAWINGS ARE DIAGRAMMATIC AND INTENDED TO CONVEY SCOPE AND GENERAL ARRANGEMENT ONLY. DO NOT SCALE DRAWINGS. LOCATIONS OF ALL ITEMS INDICATED ON THE DRAWINGS OR CALLED FOR IN THE SPECIFICATIONS THAT ARE NOT DEFINITIVELY FIXED BY DIMENSIONS ARE APPROXIMATE. COORDINATE CONTRACT DOCUMENTS PROJECT REQUIREMENTS, WORK OF OTHERS, AND EQUIPMENT AND MATERIALS PURCHASED WITH FIELD DIMENSIONS, MANUFACTURER'S REQUIREMENTS FOR INSTALLATION, OPERATION, AND MAINTENANCE, CONTRACTOR'S INTENDED MEANS AND METHODS OF INSTALLATION, AND CONTRACTOR'S FABRICATED ITEMS TO ENSURE A PROPER FIT AND INSTALLATION.

C. MAINTAIN MAXIMUM HEADROOM AND SPACE CONDITIONS AT ALL POINTS. WHERE HEADROOM AND SPACE CONDITIONS APPEAR INADEQUATE, NOTIFY THE ARCHITECTS PRIOR TO PROCEEDING WITH INSTALLATION. MAINTAIN A MINIMUM OF 7'-0" CLEARANCE ABOVE FINISHED FLOOR TO UNDERSIDE OF PIPES, DUCTS, CONDUITS, SUSPENDED EQUIPMENT, ETC., THROUGHOUT ACCESS ROUTES IN MECHANICAL ROOMS.

D. FIELD VERIFY AND COORDINATE ALL DUCT AND PIPING DIMENSIONS BEFORE FABRICATION. MAKE MODIFICATIONS IN THE LAYOUT AS NEEDED TO PREVENT CONFLICT WITH WORK OF OTHER TRADES OR FOR PROPER EXECUTION OF THE WORK.

E. INSTALL ALL EQUIPMENT AND APPURTENANCES IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS, CONTRACT DOCUMENTS, AND APPLICABLE CODES AND REGULATIONS.

F. COORDINATE LOCATIONS AND SIZES OF ALL FLOOR, WALL, AND ROOF OPENINGS WITH ALL OTHER TRADES. COORDINATE ALL PIPING AND EQUIPMENT SUPPORTED FROM STRUCTURE WITH GENERAL CONSTRUCTION WORK.

G. PROVIDE TRAPPED DRAIN PIPING FROM DRAIN PANS OF ALL COOLING COILS, FANS AND OTHER ACTIVE DRAINS EXPOSED TO SYSTEM AIRSTREAM. PROVIDE TRAP AT CONNECTION WITH WATER SEAL DEPTH ONE INCH GREATER THAN UNIT OPERATING PRESSURE. DIRECT DRAINS TO NEAREST FLOOR DRAIN OR OTHER LOCATION APPROVED BY THE ARCHITECT. ALL AIR HANDLING UNITS SHALL BE EQUIPPED WITH TRENT TECHNOLOGIES CXXBV CONDENSATE DRAIN.

H. INSTALL PIPING, DUCTWORK, AND CONDUIT CONCEALED IN AREAS HAVING CEILINGS AND/OR FURRED SPACES UNLESS OTHERWISE INDICATED.

I. ALL EQUIPMENT, VALVES, DAMPERS, DAMPER AND VALVE OPERATORS SHALL BE PROVIDED WITH ADEQUATE ACCESS FOR SERVICING, MAINTENANCE, AND REPLACEMENT.

J. DUCT DIMENSIONS MAY BE MODIFIED ONLY WITH PRIOR APPROVAL FROM ARCHITECT. DUCT DIMENSIONS ARE IN INCHES AND INSIDE CLEAR.

K. ELEVATION INDICATED FOR RECTANGULAR DUCT, GRILLE AND LOUVER OPENINGS IS TO THE TOP OF ROUGH OPENING UNLESS OTHERWISE INDICATED. ELEVATION INDICATED FOR ROUND DUCTWORK AND PIPING IS TO CENTERLINE.

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 050937 10/10/22 JEFFREY J LEMMO

MOSELEY ARCHITECTS, P.C. REGISTERED ENGINEERING CORPORATION C-3469 NORTH CAROLINA RALEIGH, NC

ALDERMAN AND KING HALL RENOVATIONS - KING HALL -
FURNISH AIR HANDLING UNITS
University of North Carolina Wilmington
SCO#22-24639-01A
601 Hamilton Drive, Wilmington, NC 28403

PROJECT NO: 620589
DATE: OCTOBER 10, 2022

REVISIONS	
DATE	DESCRIPTION

LEGENDS, ABBREVIATIONS AND GENERAL NOTES

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J I H G F E D C B A
1 2 3 4 5 6 7 8 9 10

LIFE SAFETY SYMBOL LEGEND

DESIGNATOR MATRIX

	WALL	BARRIER	PARTITION	RATED BEARING OR NON-BEARING WALL
2 HR FIRE	✖✖✖✖✖	■■■■■		
1 HR FIRE		➤➤➤➤➤	★★★★★	▬▬▬▬▬

NOTES:
1. REFER TO LIFE SAFETY DRAWINGS FOR ALL WALL RATING DETAILS.

EQUIPMENT IDENTIFICATION

AHU	AIR-HANDLING UNIT
BC	BUILDING AUTOMATION SYSTEM CONTROLLER
CHWP	CHILLED WATER PUMP
CP	COIL PUMP
DS	DUCT SILENCER
DSD	DUCT SMOKE DETECTOR
F	FAN
FCU	FAN COIL UNIT
HWP	HOT WATER PUMP
RF	RELIEF FAN
SSI	SPLIT-SYSTEM INDOOR UNIT
SSO	SPLIT-SYSTEM OUTDOOR UNIT
TU	TERMINAL UNIT
TU-XFMR	TERMINAL UNIT POWER TRANSFORMER
UH	UNIT HEATER
VFD	VARIABLE FREQUENCY DRIVE

CONTROLS ABBREVIATIONS

AF	AIRFLOW
AI	ANALOG INPUT TO CONTROLLER
ALM	ALARM
AMS	AIRFLOW MEASURING STATION
AO	ANALOG OUTPUT FROM CONTROLLER
ATS	AVERAGING TEMPERATURE SENSOR
BAS	BUILDING AUTOMATION SYSTEM
BI	BINARY INPUT TO CONTROLLER
BO	BINARY OUTPUT FROM CONTROLLER
CO2	CARBON DIOXIDE SENSOR
CSR	CURRENT-SENSING RELAY
DM	DAMPER MOTOR
DP	DIFFERENTIAL PRESSURE
DPT	DIFFERENTIAL PRESSURE TRANSMITTER
FM	FLOW METER
FZ	FREEZESTAT
HS	HUMIDITY SENSOR
POS	POSITION
R	RELAY
SD	SMOKE DETECTOR
SPD	SPEED
SS	START/STOP
STS	STATUS
TS	TEMPERATURE SENSOR
VFD	VARIABLE-FREQUENCY DRIVE

ABBREVIATIONS

A	AMPERE(S)
AD	ACCESS DOOR
ADJ	ADJUSTABLE
AFF	ABOVE FINISHED FLOOR
ALT	ALTERNATE
APD	AIR PRESSURE DROP
BHP	BRAKE HORSEPOWER
BTUH	BRITISH THERMAL UNITS PER HOUR
CFM	CUBIC FEET PER MINUTE
CHWR	CHILLED WATER RETURN
CHWS	CHILLED WATER SUPPLY
CLG	COOLING
COM	COMMON
D	DRAIN
DB	DRY BULB TEMPERATURE
dBA	A-WEIGHTED DECIBELS
DCW	DOMESTIC COLD WATER
DD	DIRECT DRIVE
DIA	DIAMETER
DN	DOWN
DWG	DRAWING
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EER	ENERGY EFFICIENCY RATIO
EQ	EQUAL
ESP	EXTERNAL STATIC PRESSURE
EWT	ENTERING WATER TEMPERATURE
EX	EXISTING
F	DEGREES FAHRENHEIT
FC	FAIL CLOSED
FD	FIRE DAMPER
FLA	FULL LOAD AMPS
FO	FAIL OPEN
FPM	FEET PER MINUTE
FT	FOOT, FEET
GA	GAUGE
GAL	GALLON(S)
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
HP	HORSEPOWER
HTG	HEATING
HWR	HOT WATER RETURN
HWS	HOT WATER SUPPLY
HX	HEAT EXCHANGER
HZ	HERTZ
IN	INCH
IPLV	INTEGRATED PART-LOAD VALUE
KW	KILOWATT(S)
LAT	LEAVING AIR TEMPERATURE
LBS	POUNDS
LWT	LEAVING WATER TEMPERATURE
MAX	MAXIMUM
MBH	ONE THOUSAND BTUH
MCA	MINIMUM CIRCUIT AMPACITY
MFR	MANUFACTURER
MIN	MINIMUM
MOCP	MAXIMUM OVERCURRENT PROTECTION
MOD	MOTOR-OPERATED DAMPER
NC	NORMALLY CLOSED (FOR PLANS, DETAILS)
NC	NOISE CRITERIA (FOR SCHEDULES)
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
OA	OUTSIDE AIR
OC	ON CENTER
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
PF	PLENUM FAN
PH	PHASE
PSIG	POUNDS PER SQUARE INCH GAUGE
RA	RETURN AIR
RD	REFRIGERANT DISCHARGE
RH	RELATIVE HUMIDITY
RL	REFRIGERANT LIQUID
RPM	REVOLUTIONS PER MINUTE
RS	REFRIGERANT SUCTION
SA	SUPPLY AIR
SEER	SEASONAL ENERGY EFFICIENCY RATIO
TAB	TESTING AND BALANCING
TD	TRANSFER DUCT
TYP	TYPICAL
UNO	UNLESS NOTED (INDICATED) OTHERWISE
UPD	UNIT PRESSURIZATION DIFFERENTIAL
V	VOLTAGE, VOLTS
VD	VOLUME DAMPER
VFD	VARIABLE FREQUENCY DRIVE
W	WATT(S)
W/	WITH
W/O	WITHOUT
WB	WET BULB TEMPERATURE
WC	WATER COLUMN
WPD	WATER PRESSURE DROP
WWM	WELDED WIRE MESH

GRAPHICS SYMBOLS LEGEND

A123 — **SPACE IDENTIFICATION TAG**
SPACE NUMBER
BUILDING AREA (WHEN USED)

AHU-12 — **EQUIPMENT IDENTIFICATION TAG**
EQUIPMENT NUMBER
UNIT DESIGNATION

S1 / 325 — **DIFFUSER, GRILLE OR REGISTER TAG**
TAG, REFER TO DIFFUSER, GRILLE AND REGISTER SCHEDULE
AIRFLOW (CFM)

1 / M5.1 — **DETAIL TAG**
DETAIL NUMBER
DRAWING WHERE DETAIL IS INDICATED

15 — KEYNOTE

C — STRUCTURAL GRID LINE WITH DESIGNATION

EXISTING TO BE REMOVED

1 / M2.2 / M2.3 / M2.4 / M5.1 — **DETAIL TITLE** 1/4"=1'-0"
DETAIL NUMBER
DRAWING WHERE DETAIL IS INDICATED
DRAWING WHERE DETAIL IS REFERENCED
ADDITIONAL DRAWING REFERENCES

1 / M2.2 / M2.3 / M2.4 / M4.1 — **SECTION TITLE** 1/4"=1'-0"
SECTION NUMBER
DRAWING WHERE SECTION IS INDICATED
DRAWING WHERE SECTION IS REFERENCED
ADDITIONAL DRAWING REFERENCES

1 / M4.1 — **SECTION CALLOUT**
SECTION NUMBER
DRAWING WHERE SECTION IS INDICATED

1 / M3.1 — **ENLARGED PLAN CALLOUT**
ENLARGED PLAN NUMBER
DRAWING WHERE ENLARGED PLAN IS INDICATED

MECHANICAL EQUIPMENT WITH REQUIRED SERVICE CLEARANCE INDICATED

DUCTWORK LEGEND

18x8 — RECTANGULAR DUCT (FIRST DIMENSION REFERS TO SIDE VIEWED)
18ø — ROUND DUCT SIZE
18/12 — FLAT OVAL DUCT SIZE
18ø — DOUBLE WALL, EXPOSED DUCT
18ø — FABRIC DUCT
FLEXIBLE DUCTWORK
FLEXIBLE CONNECTOR
SD — DUCT-MOUNTED SMOKE DETECTOR
DUCT WITH DUCT LINER
DUCT ACCESS DOOR
DUCT WITH END CAP
LINEAR SLOT DIFFUSER, LENGTH AS INDICATED
LINEAR BAR GRILLE, LENGTH AS INDICATED
SUPPLY DIFFUSER
RETURN OR EXHAUST GRILLE
SUPPLY DIFFUSER WITH DIRECTIONAL BLOW, SOLID HATCH INDICATES BLANK OFF PANEL
POINT OF CONNECTION TO EXISTING
LIMIT OF DEMOLITION
SUPPLY AIRFLOW ARROW
RETURN OR EXHAUST AIRFLOW ARROW

MANUAL BALANCING DAMPER IN DUCT
FIRE DAMPER IN DUCT
SMOKE DAMPER IN DUCT
COMBINATION FIRE/SMOKE DAMPER IN DUCT
M — MOTORIZED DAMPER IN DUCT
M — SMOKE CONTROL MANUAL BALANCING DAMPER IN DUCT
M — SMOKE CONTROL MOTORIZED DAMPER IN DUCT
SB — SECURITY BARS IN DUCT
AP — DUCT WITH ACCESS PANEL
TO / AWAY — SUPPLY/MAKEUP AIR DUCT SECTIONS
TO / AWAY — RETURN AIR DUCT SECTIONS
TO / AWAY — EXHAUST AIR DUCT SECTIONS
SD — SMOKE DETECTOR
H — HUMIDITY SENSOR
T — THERMOSTAT, LINE VOLTAGE
T — THERMOSTAT, LOW VOLTAGE
S — TEMPERATURE SENSOR
C — CARBON DIOXIDE SENSOR
O — OCCUPANCY SENSOR (INPUT FROM AUX RELAY OF LIGHTING)
SENSOR WELL
UC — DOOR UNDERCUT
DL — DOOR LOUVER

PIPING LEGEND

PIPE CAP
PIPE TURNED DOWN
PIPE TURNED UP
PIPE TEE UP
PIPE TEE DOWN
CO — END OF LINE CLEANOUT PLUG
CO — CLEANOUT PLUG
PRESSURE GAUGE WITH GAUGE COCK
T — LIQUID FILLED THERMOMETER
UNION
STRAINER WITH BLOWDOWN VALVE AND 3/4" HOSE END CONNECTION
FLEXIBLE PIPE CONNECTOR
MA — MANUAL AIR VENT

VALVE
VALVE IN RISER
MANUAL BALANCING VALVE WITH FLOW TAPS
AUTOMATIC BALANCING VALVE WITH FLOW TAPS
SWING CHECK VALVE
PRESSURE REDUCING VALVE
TRIPLE DUTY VALVE
GAS COCK
P — PRESSURE-RELIEF VALVE
M — TWO-WAY CONTROL VALVE
M — THREE-WAY CONTROL VALVE
DIRECTION OF FLOW
CONCENTRIC REDUCER
ECCENTRIC REDUCER

CONTROL SYSTEM SYMBOLS

CIRCULATOR OR PUMP
MOTORIZED 2-WAY VALVE
MOTORIZED 3-WAY VALVE
VFD — VARIABLE FREQUENCY DRIVE
DDC — DIRECT DIGITAL CONTROLLER
T — THERMOSTAT
FZ — FREEZESTAT
C — CONTACTOR
R — RELAY
S — SPACE TEMPERATURE SENSOR
T — LINE VOLTAGE THERMOSTAT
H / A — HAND-OFF-AUTOMATIC SWITCH
SD — DUCT-MOUNTED SMOKE DETECTOR
TRANSFORMER
FUSE

NORMALLY OPEN CONTACT
NORMALLY CLOSED CONTACT
WIRING OR DEVICE PROVIDED UNDER DIVISION 23
WIRING OR DEVICE NOT PROVIDED UNDER DIVISION 23
WIRING CONNECTION BY DIVISION 23
WIRING CONNECTION BY OTHERS
NUMBER OF CONDUCTORS INDICATED BY SLASH MARKS
MOTORIZED PARALLEL BLADE DAMPER
MOTORIZED OPPOSED BLADE DAMPER
MOTORIZED BUTTERFLY BLADE DAMPER
SUPPLY, RETURN, OR EXHAUST FAN
AIRFLOW DIRECTION

CONTROL POINT INDICATOR
AI / TS — INPUT OR OUTPUT (ANALOG INPUT) DEVICE TYPE (AIR TEMPERATURE SENSOR)

CONTROL POINT INDICATOR
AI / TS — INPUT OR OUTPUT (ANALOG INPUT) DEVICE TYPE (AIR TEMPERATURE SENSOR WITH AVERAGING ELEMENT)

CONTROL POINT INDICATOR
AI / TS — INPUT OR OUTPUT (ANALOG INPUT) DEVICE TYPE (WATER TEMPERATURE SENSOR WITH BULB TYPE ELEMENT IN PIPING WELL)

CONTROL POINT INDICATOR
AI / CSR — INPUT OR OUTPUT (ANALOG INPUT) DEVICE TYPE (CURRENT SENSING RELAY)

GENERAL NOTES

A. THE CONTRACT DOCUMENTS ARE COMPLEMENTARY AND WHAT IS REQUIRED BY ONE SHALL BE AS BINDING AS IF REQUIRED BY ALL. IN THE CASE OF A CONFLICT, DISAGREEMENT, OR AMBIGUITY, PROVIDE THE BETTER QUALITY. IN THE CASE OF A CONFLICT, DISAGREEMENT, OR AMBIGUITY, PROVIDE THE GREATER QUANTITY OF WORK.

B. DRAWINGS ARE DIAGRAMMATIC AND INTENDED TO CONVEY SCOPE AND GENERAL ARRANGEMENT ONLY. DO NOT SCALE DRAWINGS. LOCATIONS OF ALL ITEMS INDICATED ON THE DRAWINGS OR CALLED FOR IN THE SPECIFICATIONS THAT ARE NOT DEFINITIVELY FIXED BY DIMENSIONS ARE APPROXIMATE. COORDINATE CONTRACT DOCUMENTS PROJECT REQUIREMENTS, WORK OF OTHERS, AND EQUIPMENT AND MATERIALS PURCHASED WITH FIELD DIMENSIONS, MANUFACTURER'S REQUIREMENTS FOR INSTALLATION, OPERATION, AND MAINTENANCE, CONTRACTOR'S INTENDED MEANS AND METHODS OF INSTALLATION, AND CONTRACTOR'S FABRICATED ITEMS TO ENSURE A PROPER FIT AND INSTALLATION.

C. MAINTAIN MAXIMUM HEADROOM AND SPACE CONDITIONS AT ALL POINTS. WHERE HEADROOM AND SPACE CONDITIONS APPEAR INADEQUATE, NOTIFY THE ARCHITECTS PRIOR TO PROCEEDING WITH INSTALLATION. MAINTAIN A MINIMUM OF 7'-0" CLEARANCE ABOVE FINISHED FLOOR TO UNDERSIDE OF PIPES, DUCTS, CONDUITS, SUSPENDED EQUIPMENT, ETC., THROUGHOUT ACCESS ROUTES IN MECHANICAL ROOMS.

D. FIELD VERIFY AND COORDINATE ALL DUCT AND PIPING DIMENSIONS BEFORE FABRICATION. MAKE MODIFICATIONS IN THE LAYOUT AS NEEDED TO PREVENT CONFLICT WITH WORK OF OTHER TRADES OR FOR PROPER EXECUTION OF THE WORK.

E. INSTALL ALL EQUIPMENT AND APPURTENANCES IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS, CONTRACT DOCUMENTS, AND APPLICABLE CODES AND REGULATIONS.

F. COORDINATE LOCATIONS AND SIZES OF ALL FLOOR, WALL, AND ROOF OPENINGS WITH ALL OTHER TRADES. COORDINATE ALL PIPING AND EQUIPMENT SUPPORTED FROM STRUCTURE WITH GENERAL CONSTRUCTION WORK.

G. PROVIDE TRAPPED DRAIN PIPING FROM DRAIN PANS OF ALL COOLING COILS, FANS AND OTHER ACTIVE DRAINS EXPOSED TO SYSTEM AIRSTREAM. PROVIDE TRAP AT CONNECTION WITH WATER SEAL DEPTH ONE INCH GREATER THAN UNIT OPERATING PRESSURE. DIRECT DRAINS TO NEAREST FLOOR DRAIN OR OTHER LOCATION APPROVED BY THE ARCHITECT. ALL AIR HANDLING UNITS SHALL BE EQUIPPED WITH TRENT TECHNOLOGIES CXXBV CONDENSATE DRAIN.

H. INSTALL PIPING, DUCTWORK, AND CONDUIT CONCEALED IN AREAS HAVING CEILINGS AND/OR FURRED SPACES UNLESS OTHERWISE INDICATED.

I. ALL EQUIPMENT, VALVES, DAMPERS, DAMPER AND VALVE OPERATORS SHALL BE PROVIDED WITH ADEQUATE ACCESS FOR SERVICING, MAINTENANCE, AND REPLACEMENT.

J. SIZE ALL SPLIT-SYSTEM REFRIGERANT PIPING IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.

K. DUCT DIMENSIONS MAY BE MODIFIED ONLY WITH PRIOR APPROVAL FROM ARCHITECT. DUCT DIMENSIONS ARE IN INCHES AND INSIDE CLEAR.

L. FOR LOCATION OF REGISTERS, GRILLES, AND DIFFUSERS WITHIN CEILING GRID, REFER TO ARCHITECTURAL REFLECTED CEILING PLANS.

M. ELEVATION INDICATED FOR RECTANGULAR DUCT, GRILLE AND LOUVER OPENINGS IS TO THE TOP OF ROUGH OPENING UNLESS OTHERWISE INDICATED. ELEVATION INDICATED FOR ROUND DUCTWORK AND PIPING IS TO CENTERLINE.

N. BRANCH PIPING RUNOUTS TO TERMINAL UNITS SHALL BE 3/4" DIAMETER UNLESS INDICATED OTHERWISE.

O. REFER TO STRUCTURAL DRAWINGS FOR DETAILS AND MAXIMUM SPACING REQUIREMENTS REGARDING HANGER ATTACHMENTS TO STEEL BAR JOISTS.

P. ALL MECHANICAL WORK SHALL BE IN ACCORDANCE WITH THE 2018 NORTH CAROLINA MECHANICAL CODE.

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MOSELEY ARCHITECTS PROFESSIONAL CORPORATION REGISTERED ENGINEERING C-3469 RALEIGH, NC NORTH CAROLINA

ALDERMAN AND KING HALL RENOVATIONS - KING HALL

University of North Carolina Wilmington
SCO#22-24639-01A
601 Hamilton Drive, Wilmington, NC 28403

PROJECT NO: 620589
DATE: FEBRUARY 10, 2023

REVISIONS	
DATE	DESCRIPTION

LEGENDS, ABBREVIATIONS AND GENERAL NOTES

M0.1

3/20/2023 3:13:15 PM

NOTE: REFER TO M3.1 FOR AIR HANDLING UNIT SCHEDULE. AIR HANDLERS ARE PART OF EARLY EQUIPMENT PACKAGE.

FAN SCHEDULE

TAG	MANUFACTURER	MODEL NUMBER	SERVING	TYPE	AIRFLOW (CFM)	ESP (IN WC)	NORMAL OPERATION AIRFLOW (CFM)	FAN WHEEL (RPM)	DRIVE TYPE	SONES	CONTROL METHOD	MOTOR (HP)	ELECTRICAL DATA (V)	(PH)	(HZ)	WEIGHT (LBS)	NOTES
F-1	GREENHECK	G-100-VG	WEST EXHAUST	ROOF MTD. CENTRIFUGAL	600	0.41	600	1095	DIRECT	4.6	BAS SCHEDULE	1/4	120	1	60	50	1, 2, 3, 6
F-2	GREENHECK	G-090-VG	101B-PROJECTION	ROOF MTD. CENTRIFUGAL	250	0.39	250	1440	DIRECT	6.6	BAS SCHEDULE	1/10	120	1	60	50	1, 2, 3, 6
F-3	GREENHECK	G-100-VG	EAST EXHAUST	ROOF MTD. CENTRIFUGAL	700	0.43	700	1185	DIRECT	5.5	BAS SCHEDULE	1/4	120	1	60	50	1, 2, 3, 6
RF-1	GREENHECK	G-180-VG	AHU-1 RELIEF AIR	ROOF MTD. CENTRIFUGAL	2,500	0.67	0	905	DIRECT	9.9	BAS (AHU-1 RELIEF)	1	120	1	60	85	1, 2, 4, 5
RF-2	GREENHECK	G-240-VG	AHU-2 RELIEF AIR	ROOF MTD. CENTRIFUGAL	4,200	0.59	1,300	720	DIRECT	13.0	BAS (AHU-2 RELIEF)	2	208	1	60	300	1, 2, 4, 5
RF-3	GREENHECK	G-300-VG	AHU-3 RELIEF AIR	ROOF MTD. CENTRIFUGAL	9,150	0.57	2,050	695	DIRECT	8.4	BAS (AHU-3 RELIEF)	5	480	3	60	400	1, 2, 4, 5

NOTES:
1. PROVIDE WITH UNIT MOUNTED DISCONNECT SWITCH.
2. PROVIDE WITH MOTOR OPERATED DAMPER TO INTERLOCK WITH FAN OPERATION.
3. MOTOR SHALL BE ELECTRICALLY COMMUTATED MOTOR (ECM) WITH SPEED ADJUSTMENT ON MOTOR FOR BALANCING.
4. MOTOR SHALL BE ECM WITH SPEED 0-10V SIGNAL INPUT FROM BUILDING AUTOMATION SYSTEM. BUILDING AUTOMATION SYSTEM SHALL VARY FAN SPEED/FLOW PER CONTROL SEQUENCES. NORMAL OPERATION AIRFLOW IS AIRFLOW WHEN THE ASSOCIATED AIR HANDLING UNIT IS IN REGULAR OCCUPIED MODE (NOT ECONOMIZER). BALANCE AIRFLOW TO THIS VALUE UNDER NORMAL OPERATION AND BALANCE AIR HANDLING UNIT AND FAN DURING ECONOMIZER.
5. PROVIDE WITH 14" TALL ROOF CURB.
6. PROVIDE WITH CURB ADAPTER TO MOUNT ON EXISTING ROOF CURB.

PUMP SCHEDULE

TAG	MANUFACTURER	MODEL NUMBER	SERVING	LOCATION NUMBER	LOCATION NAME	TYPE	OPERATING DATA FLOW (GPM)	HEAD (FT WC)	EFFICIENCY (%)	MINIMUM FLOW (GPM)	SUCTION SIZE (IN)	DISCHARGE SIZE (IN)	IMPELLER SIZE (IN)	MOTOR SPEED (RPM)	MOTOR SIZE (HP)	ELECTRICAL DATA V	PH	HZ	NOTES
CHWP-1	BELL & GOSSETT	e-80SC 2.5x2.5x7B	BUIDLING CHILLED WATER	M100	MECH/ELEC	SPLIT COUPLED IN-LINE	127.5	40	72.0	30	2.50	2.50	6.875	1800	2	480	3	60	1
CP-AHU-1	BELL & GOSSETT	ecocirc XL 55-45	AHU-1 PREHEAT COIL	M102	MECH	ECM CIRCULATOR	4.0	15	32.3	4	1.25	1.25	2.500	2500	0.5	208	1	60	2
CP-AHU-2	BELL & GOSSETT	ecocirc XL 55-45	AHU-2 PREHEAT COIL	M103	MECH	ECM CIRCULATOR	9.0	15	35.8	9	1.25	1.25	2.500	2500	0.5	208	1	60	2
CP-AHU-3	BELL & GOSSETT	ecocirc XL 55-45	AHU-3 PREHEAT COIL	M201	MECH	ECM CIRCULATOR	13.0	15	41.8	13	1.25	1.25	2.500	2610	0.5	208	1	60	2
HWP-1	BELL & GOSSETT	e-80SC 2.5x2.5x7B	BUILDING HOT WATER	M101	MECH	SPLIT COUPLED IN-LINE	90.5	40	67.0	25	2.50	2.50	6.625	1800	2	480	3	60	1

NOTES:
1. PROVIDE WITH MOTOR SUITABLE FOR USE WITH VARIABLE FREQUENCY DRIVE. PROVIDE SHAFT GROUNDING RINGS.
2. PROVIDE WITH CIRCULATOR PUMP WITH ELECTRICALLY COMMUTATED MOTOR. PROVIDE SPEED ADJUSTMENT ON MOTOR CONTROL SCREEN FOR BALANCING.

DUCT SILENCER SCHEDULE

TAG	MANUFACTURER	MODEL NUMBER	BANK DIMENSIONS WIDTH (IN)	HEIGHT (IN)	LENGTH (IN)	CONNECTION SIZE	SERVING	AIRFLOW (CFM)	PRESSURE DROP (IN WC)	DYNAMIC INSERTION LOSS (dB) 63 HZ	125 HZ	250 HZ	500 HZ	1KHZ	2 KHZ	4 KHZ	8 KHZ	WEIGHT (LBS)
DS-AHU-2-R	PRICE	ERMT48/UF	22	32	48	22x32	AHU-2 RETURN	1,950	0.08	9	16	16	19	27	29	22	14	130
DS-TU2-01	PRICE	ERMT60/1E	24	24	60	24x24	TU2-01 SUPPLY	2,250	0.07	10	16	25	30	41	52	41	25	135

GRILLE, REGISTER, & DIFFUSER SCHEDULE

TAG	MANUFACTURER	MODEL NUMBER	MOUNTING STYLE	NECK SIZE	FACE SIZE	MAX NC LEVEL	NOTES
S1	PRICE	ASCDA-4C	LAY-IN	6ø	24x24	18	-
S2	PRICE	ASCDA-4C	LAY-IN	8ø	24x24	18	2
S3	PRICE	ASCDA-4C	LAY-IN	10ø	24x24	18	-
S4	PRICE	ASCDA-4C	LAY-IN	12ø	24x24	18	2
S5	PRICE	ASCDA-4C	SURFACE	6ø	12x12	18	-
R1	PRICE	635-TB	LAY-IN	10x10	12x12	18	1
R2	PRICE	635-TB	LAY-IN	22x22	24x24	18	1
R3	PRICE	635-TB	SURFACE	22x46	24x48	18	1
E1	PRICE	635-F	SURFACE	10x10	12x12	18	1
E2	PRICE	635-F	SURFACE	8x8	10x10	18	1

NOTES:
1. POSITION LOUVERED GRILLE SO BLADES ARE DIRECTED AT THE CLOSEST WALL, FLOOR, OR CEILING.
2. PROVIDE LAY-IN MOUNTING FRAME FOR DIFFUSERS LOCATED IN GYPSUM CEILINGS.

VARIABLE FREQUENCY DRIVE SCHEDULE

TAG	MANUFACTURER	ROOM LOCATION NUMBER	NAME	SERVING	MOUNTING	ELECTRICAL DATA MOTOR SIZE (HP)	(V)	(PH)	(HZ)	NOTES
VFD AHU-1	HONEYWELL	M102	MECH	AHU-1 SUPPLY FAN	WALL	5	480	3	60	1
VFD AHU-2	HONEYWELL	M103	MECH	AHU-2 SUPPLY FAN	WALL	7.5	480	3	60	1
VFD AHU-3A	HONEYWELL	M201	MECH	AHU-3 SUPPLY FAN	WALL	7.5	480	3	60	1, 2
VFD AHU-3B	HONEYWELL	M201	MECH	AHU-3 SUPPLY FAN	WALL	7.5	480	3	60	1, 2
VFD CHWP-1	HONEYWELL	M100	MECH/ELEC	CHWP-1	WALL	5	480	3	60	1
VFD HWP-1	HONEYWELL	M101	MECH	HWP-1	WALL	5	480	3	60	1

NOTES:
1. PROVIDE FULL MANUAL BYPASS. REFER TO SECTION 230514.
2. THERE ARE TWO SUPPLY FANS FOR AHU-3. EACH FAN SHALL BE PROVIDED WITH THEIR OWN VARIABLE FREQUENCY DRIVE. BOTH VFD's SHALL BE CONTROLLED TOGETHER TO OPERATE AT THE SAME SPEED.

TERMINAL UNIT SCHEDULE

TAG	MANUFACTURER	MODEL NUMBER	AIR VALVE INLET DIAMETER (IN)	MAXIMUM AIRFLOW (CFM)	MINIMUM AIRFLOW (CFM)	APD AT MAX AIR FLOW (IN-WC)	COIL MAX AIRFLOW (CFM)	CAPACITY (BTUH)	EAT (°F)	LAT (°F)	FLOW RATE (GPM)	WPD (FT WC)	EWT (°F)	ROWS (NO)	ELECTRICAL (V)	(PH)	(HZ)	DISCHARGE (dB) 125 HZ	250 HZ	500 HZ	1 kHZ	2 kHZ	4 kHZ	RADIATED (dB) 125 HZ	250 HZ	500 HZ	1 kHZ	2 kHZ	4 kHZ	WEIGHT (LBS)	NOTES
TU1-01	TRANE	VCWF	10	440	165	0.11	340	14,840	55	95.3	1.5	5.0	130	2	24	1	60	65	57	52	50	49	51	53	46	43	39	38	35	50	-
TU1-02	TRANE	VCWF	8	350	105	0.23	350	16,880	55	99.5	2.0	5.0	130	3	24	1	60	66	61	51	49	48	48	51	46	40	38	38	37	50	-
TU1-03	TRANE	VCWF	8	380	105	0.27	380	16,030	55	93.9	1.5	5.0	130	3	24	1	60	66	61	51	49	48	48	51	46	41	38	38	37	50	-
TU1-04	TRANE	VCWF	8	380	105	0.18	380	14,550	55	90.3	2.5	5.0	130	2	24	1	60	66	61	51	49	48	48	51	46	41	38	38	37	50	-
TU1-05	TRANE	VCWF	8	420	110	0.12	110	4,340	55	91.4	0.5	5.0	130	1	24	1	60	66	61	51	49	48	49	52	46	41	38	38	38	50	-
TU1-06	TRANE	VCWF	5	180	50	0.04	50	2,620	55	103.4	0.5	5.0	130	1	24	1	60	69	63	54	53	51	49	54	47	42	37	36	31	50	-
TU1-07	TRANE	VCWF	6	320	80	0.40	320	13,530	55	94.0	1.0	5.0	130	3	24	1	60	65	62	52	50	50	50	52	45	41	38	35	34	50	-
TU1-08	TRANE	VCWF	12	850	240	0.27	850	38,870	55	97.2	4.0	5.0	130	3	24	1	60	64	59	55	50	53	55	50	47	39	36	39	38	50	1
TU2-01	TRANE	VCWF	16	2250	1500	0.35	1500	53,150	55	87.7	5.0	5.0	130	2	24	1	60	63	58	55	51	52	55	53	49	39	35	39	39	75	1
TU2-02	TRANE	VCWF	6	310	75	0.38	310	13,340	55	94.7	1.0	5.0	130	3	24	1	60	65	62	52	50	50	50	52	45	41	38	35	33	50	-
TU2-03	TRANE	VCWF	10	630	165	0.20	480	19,070	55	91.6	2.0	5.0	130	2	24	1	60	66	56	52	50	49	52	54	46	44	41	40	37	50	-
TU2-04	TRANE	VCWF	6	290	70	0.34	290	12,930	55	96.1	1.0	5.0	130	3	24	1	60	65	62	51	50	50	49	51	45	41	38	35	33	50	-
TU2-05	TRANE	VCWF	8	670	170	0.32	670	28,050	55	93.6	2.0	5.0	130	3	24	1	60	66	56	52	50	50	52	54	46	44	41	40	38	50	-
TU2-06	TRANE	VCWF	6	375	80	0.17	80	3,270	55	92.7	0.5	5.0	130	1	24	1	60	65	62	52	50	50	49	51	45	41	38	35	33	50	-
TU2-07	TRANE	VCWF	5	160	50	0.04	50	2,620	55	103.4	0.5	5.0	130	1	24	1	60	64	61	51	49	48	46	50	45	40	37	34	32	50	-
TU2-08	TRANE	VCWF	16	1100	430	0.17	1100	46,540	55	97.9	3.0	5.0	130	3	24	1	60	62	59	55	50	52	53	51	48	39	35	37	35	100	-
TU3-01	TRANE	VCWF	12	900	420	0.30	900	36,710	55	92.6	3.0	5.0	130	3	24	1	60	64	59	55	50	53	56	50	47	39	36	39	38	60	-
TU3-02	TRANE	VCWF	12	800	240	0.24	800	34,820	55	95.1	3.0	5.0	130	3	24	1	60	64	59	55	50	53	55	50	47	39	35	39	37	60	-
TU3-03	TRANE	VCWF	6	300	80	0.26	250	9,550	55	90.2	1.0	5.0	130	2	24	1	60	65	62	52	50	50	49	51	45	41	38	35	33	50	-
TU3-04	TRANE	VCWF	5	140	40	0.04	50	2,620	55	107.1	0.5	5.0	130	1	24	1	60	64	60	50	48	48	45	49	44	39	36	33	31	50	-
TU3-05	TRANE	VCWF	5	160	40	0.03	50	2,620	55	103.4	0.5	5.0	130	1	24	1	60	63	60	50	48	47	44	48	44	39	35	33	30	50	-
TU3-06	TRANE	VCWF	8	340	180	0.22	340	15,240	55	96.3	1.5	5.0	130	3	24	1	60	66	61	51	49	48	48	51	46	40	38	38	37	50	-
TU3-07	TRANE	VCWF	10	650	165	0.31	600	24,050	55	92.0	1.5	5.0	130	3	24	1	60	66	56	52	50	50	52	54	46	44	41	40	38	50	-
TU3-08	TRANE	VCWF	10	720	175	0.36	500	22,270	55	96.1	1.5	5.0	130	3	24	1	60	66	56	51	50	50	52	54	46	44	41	40	38	50	-
TU3-09	TRANE	VCWF	8	350	190	0.23	350	15,450	55	95.7	1.5	5.0	130	3	24	1	60	66	61	51	49	48	48	51	46	40	38	38	37	50	-
TU3-10	TRANE	VCWF	6	260	70	0.28	260	12,270	55	98.5	1.0	5.0	130	3	24	1	60	64	62	51	49	49	49	51	45	40	37	35	33	50	-
TU3-11	TRANE	VCWF	5	170	50	0.05	50	2,620	55	103.4	0.5	5.0	130	1	24	1	60	65	61	52	49	49	46	51	45	41	37	34	32	50	-
TU3-12	TRANE	VCWF	8	440	110	0.34	350	15,450	55	95.7	1.5	5.0	130	3	24	1	60	67	61	51	49	48	49	52	46	41	38	38	38	50	-
TU3-13	TRANE	VCWF	6	260	100	0.13	100	3,600	55	88.2	0.5	5.0	130	1	24	1	60	64	62	51	49	49	49	51	45	40	37	35	33	50	-
TU3-14	TRANE	VCWF	5	220	60	0.13	220	8,990	55	92.7	1.0	5.0	130	2	24	1	60	67	63	53	51	50	48	53	46	42	39	36	33	50	-
TU3-15	TRANE	VCWF	8	370	100	0.26	370	17,370	55	98.3	2.0	5.0	130	3	24	1	60	66	61	51	49	48	48	51	46	41	38	38	37	50	-
TU3-16	TRANE	VCWF	8	470	120	0.38	350	15,450	55	95.7	1.5	5.0	130	3	24	1	60	67	61	51	49	48	49	52	46	41	38	38	38	50	-
TU3-17	TRANE	VCWF	12	870	310	0.32	420	16,440	55	91.1	1.5	5.0	130	2	24	1	60	64	59	55	50	53	55	50	47	39	36	39	38	50	-
TU3-18	TRANE	VCWF	12	1050	420	0.38	900	34,240	55	90.1	2.5	5.0	130	3	24	1	60	65	60	55	50	53	56	51	47	39	36	39	38	60	-
TU3-19	TRANE	VCWF	8	440	110	0.23	150	5,490	55	88.7	0.5	5.0	130	2	24	1	60	67	61	51	49	48	49	52	46	41	38	38	38	50	-
TU3-20	TRANE	VCWF	10	560	370	0.24	370	19,190	55	102.8	1.5	5.0	130	3	24	1	60	66	57	52	50	49	52	53	46	43	40	39	37	50	-
TU3-21	TRANE	VCWF	10	500	165	0.20	500	18,500	55	89.1	1.0	5.0	130	3	24	1	60	66	57	52	50	49	51	53	46	43	40	38	36	50	-
TU3-22	TRANE	VCWF	8	560	190	0.34	190	7,870	55	93.2	1.0	5.0	130	2	24	1	60	68	61	50	49	48	50	53	46	41	38	39	39	50	-

GENERAL NOTES:
A. ALL CONTROLLERS SHALL BE PROVIDED BY DIVISION 230900 AND FACTORY MOUNTED UNLESS OTHERWISE NOTED.
B. ALL HOT WATER SUPPLY AND RETURN RUNNOUTS SHALL BE MINIMUM 3/4" UNLESS OTHERWISE NOTED.
C. SELECT ALL HEATING COILS TO PROVIDE SCHEDULED DISCHARGE AIR TEMPERATURE AT DESIGN AIRFLOW, SELECT NUMBER OF COIL ROWS AS REQUIRED TO MEET DISCHARGE AIR TEMPERATURE.
D. WATER PRESSURE DROP SCHEDULED IS THE MAXIMUM WATER PRESSURE DROP ALLOWED. ACTUAL PRESSURE DROP MAY BE LESS.
E. EACH TERMINAL SHALL BE CONTROLLED BY THE BUILDING AUTOMATION SYSTEM. REFER TO CONTROLS DRAWINGS FOR ADDITIONAL DETAILS.
F. ACOUSTIC PERFORMANCE VALUES ARE AT 1.0" INLET STATIC PRESSURE TO THE TERMINAL UNIT.

NOTES:
1. HOT WATER SUPPLY AND RETURN RUNOUT SHALL BE 1" MINIMUM.

FAN COIL UNIT SCHEDULE

TAG	MFR	MODEL NUMBER	SUPPLY AIRFLOW (CFM)	FAN SPEED SETTING	ESP (IN WC)	HYDRONIC COOLING COIL TOTAL CAPACITY (BTUH)	SENSIBLE CAPACITY (BTUH)	EAT (°F DB)	EAT (°F WB)	LAT (°F DB)	LAT (°F WB)	EWT (°F)	LWT (°F)	WATER FLOW RATE (GPM)	WPD (FT WC)	HYDRONIC HEATING COIL CAPACITY (BTUH)	EAT (°F)	LAT (°F)	EWT (°F)	LWT (°F)	WATER FLOW RATE (GPM)	WPD (FT WC)	ELECTRICAL DATA MOTOR SIZE (WATTS)	MCA (A)	MOP (A)	SERVICE (V)	(PH)	(HZ)	WEIGHT (LBS)	NOTES
FCU-1	TRANE	FCCB 040	400	HIGH	0.10	13,190	9,730	80.0	67.0	57.7	56.4	42	55	2.0	10.00	9,270	60.0	81.4	130	111	1.0	10.00	150	2.0	15.0	277	1	60	109	1-5
FCU-2	TRANE	FCJB 030	400	HIGH	0.00	11,600	9,360	80.0	67.0	58.5	57.8	42	57	1.5	10.00	9,270	60.0	81.4	130	111	1.0	10.00	142	2.0	15.0	277	1	60	100	1-5
FCU-3	TRANE	FCCB030	300	HIGH	0.20	9,810	7,370	80.0	67.0	57.5	56.5	42	55	1.5	10.00	8,290	60.0	85.5	130	123	1.0	10.00	98	2.0	15.0	277	1	60	81	1-5
FCU-4	TRANE	FCCB030	300	HIGH	0.20	9,810	7,370	80.0	67.0	57.5	56.5	42	55	1.5	10.00	8,290	60.0	85.5	130	123	1.0	10.00	98	2.0	15.0	277	1	60	81	1-5
FCU-5	TRANE	FCJB 030	400	HIGH	0.00	11,600	9,360	80.0	67.0	58.5	57.8	42	57	1.5	10.00	9,270	60.0	81.4	130	111	1.0	10.00	142	2.0	15.0	277	1	60	100	1-5
FCU-6	TRANE	FCJB 030	400	HIGH	0.00	11,600	9,360	80.0	67.0	58.5	57.8	42	57	1.5	10.00	9,270	60.0	81.4	130	111	1.0	10.00	142	2.0	15.0	277	1	60	100	1-5

NOTES:
1. HEATING COIL SELECTIONS BASED ON CLEAR WATER. HEATING COIL SHALL BE IN THE PRE-HEAT POSITION.
2. COOLING COIL SELECTIONS BASED ON CLEAR WATER.
3. FAN SHALL BE DIRECT DRIVE WITH ECM MOTOR.
4. PROVIDE WITH FACTORY MOUNTED DISCONNECT SWITCH.
5. DESIGN LEAVING WATER TEMPERATURE IS 100°F, ACTUAL LEAVING WATER TEMPERATURE MAY VARY WITH THE HEATING COIL SELECTION AS SELECTED ABOVE.

SPLIT SYSTEM INDOOR UNIT SCHEDULE

TAG	MANUFACTURER	MODEL NUMBER	LOCATION	SUPPLY AIR (CFM)	TOTAL CAPACITY (BTUH)	SENSIBLE CAPACITY (BTUH)	INDOOR EAT DB (°F)	WB (°F)	ELECTRICAL DATA MCA (A)	SERVICE V	PH	HZ	WEIGHT (LBS)	NOTES
SSI-1	TRANE-MITSUBISHI	TPKA0A024	201A-TELECOM	400	24000	18480	80	67	1.2	208	1	60	175	1, 2, 3

NOTES:
1. PROVIDE WITH WALL MOUNTED WIRED THERMOSTAT. PROVIDE BACNET INTERFACE FOR CONNECTION TO BUILDING AUTOMATION SYSTEM.
2. PROVIDE WITH CONDENSATE PUMP WIRED FROM INDOOR UNIT POWER.
3. DIVISION 26 POWER WIRE INDOOR UNIT AND CONDENSATE PUMP FROM OUTDOOR UNIT.

SPLIT SYSTEM OUTDOOR UNIT SCHEDULE

TAG	MANUFACTURER	MODEL NUMBER	LOCATION	AMBIENT AIR TEMPERATURE (°F)	REFRIGERANT TYPE	CHARGE (LBS)	ELECTRICAL DATA MCA (A)	MOCP (A)	SERVICE V	PH	HZ	WEIGHT (LBS)	NOTES
SSO-1	TRANE-MITSUBISHI	TRUYA024	ROOF	95.0	R-410A	6.6	19	25	208	1	60	96	1, 2, 3

NOTES:
1. DIVISION 26 POWER WIRE INDOOR UNIT AND CONDENSATE PUMP FROM OUTDOOR UNIT.
2. MINIMUM COOLING EFFICIENCY SHALL BE 21.4 SEER.
3. PROVIDE SEACOAST MODEL CONDENSING UNIT WITH ANTI-CORROSION COATINGS. PROVIDE LOW-AMBIENT KIT FOR COOLING DOWN TO 0°F AMBIENT.

GRAVITY VENTILATOR SCHEDULE

TAG	MANUFACTURER	MODEL NUMBER	SERVING	FUNCTION	AIRFLOW (CFM)	APD (IN WC)	ROOF OPENING SIZE (IN x IN)	WEIGHT (LBS)	NOTES
IV-1	GREENHECK	ESD-635PD 36x36	AHU-1	OUTDOOR AIR INTAKE	3,300	0.087	36x28	200	1, 2
IV-2	GREENHECK	ESD-635PD 48x48	AHU-2	OUTDOOR AIR INTAKE	5,500	0.096	40x40	300	1, 2
IV-3	GREENHECK	ESD-635PD 60x42	AHU-3	OUTDOOR AIR INTAKE	10,500	0.141	60x42	350	1, 2

NOTES:
1. PROVIDE WITH 18" TALL ROOF CURB.
2. LOUVERED PENTHOUSE SHALL BE HIGH PERFORMANCE DRAINABLE BLADE DESIGN. LOUVERED PENTHOUSE SHALL BE MIAMI-DADE CERTIFIED FOR TAS 201, TAS 202, AND TAS 203. MOUNT VENTILATOR AND CURB IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS TO MAINTAIN RATINGS.

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601 Hamilton Drive, Wilmington, NC 28403

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DATE DESCRIPTION

SCHEDULES

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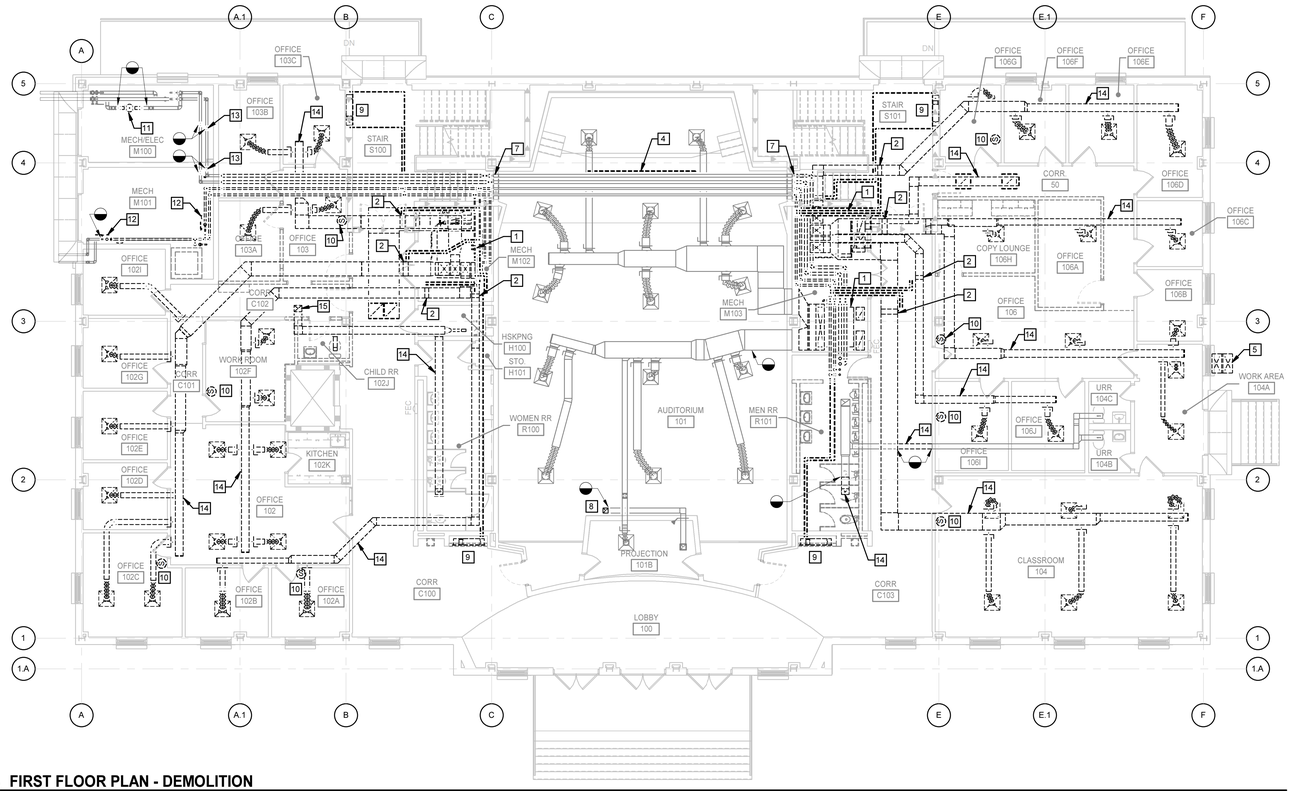
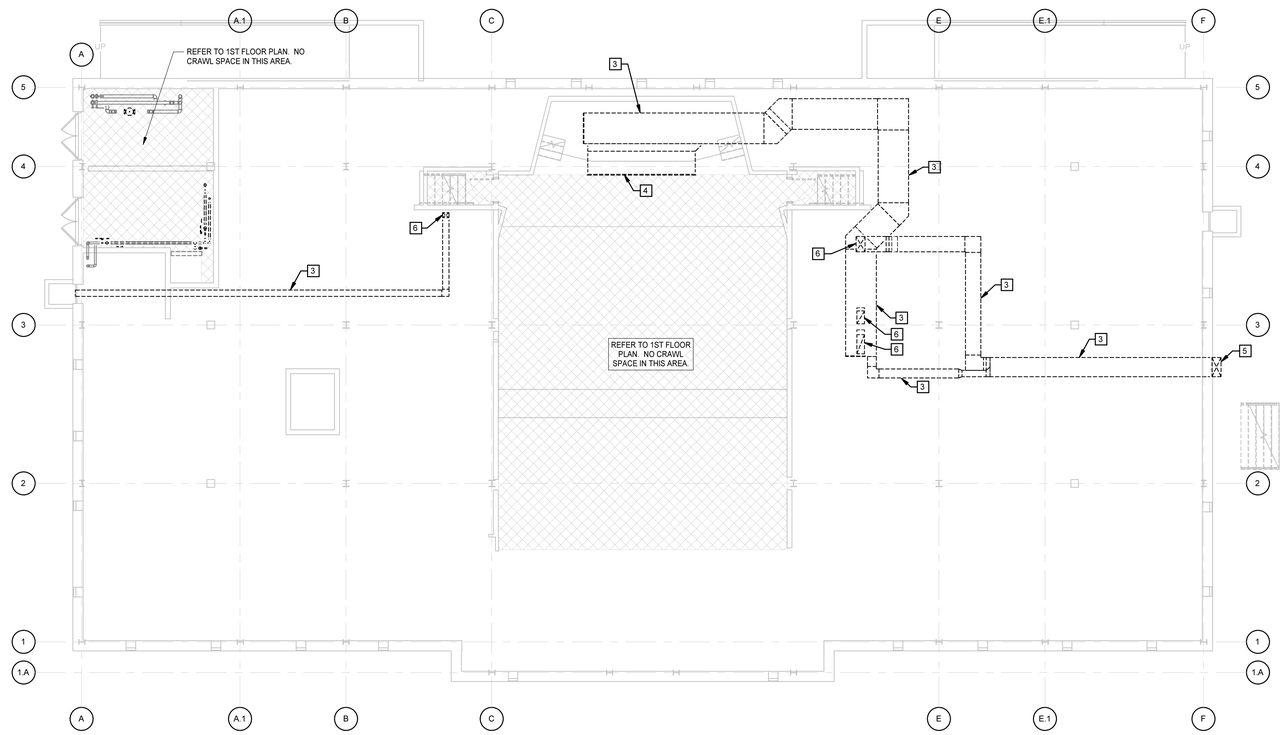


PROJECT N POLAR

FIRST FLOOR PLAN - DEMOLITION

1/8" = 1'-0"



PROJECT N POLAR

CRAWL SPACE PLAN - DEMOLITION

1/8" = 1'-0"

KEYNOTES

APPLIES TO THIS DRAWING

1. REMOVE AIR HANDLING UNIT AND ALL ASSOCIATED CONTROLS. REMOVE DUCTWORK AND PIPING TO EXTENT INDICATED. REMOVE CONCRETE HOUSEKEEPING PAD.
2. REMOVE DUCT MOUNTED HEATING COIL AND ALL ASSOCIATED PIPING AND CONTROLS.
3. REMOVE ALL DUCT IN CRAWL SPACE.
4. REMOVE RETURN GRILLE AND RETAIN. PAINT AND PROVIDE INSULATED STEEL BACK PANEL. REFER TO EXISTING STAGE RETURN GRILLE CAP DETAIL.
5. REMOVE OUTSIDE AIR GOOSENECK INTAKE. REFER TO ARCHITECTURAL DRAWINGS FOR INFILL.
6. REMOVE DUCT UP TO FIRST FLOOR. INFILL FLOOR OPENING. REFER TO ARCHITECTURAL AND STRUCTURAL DRAWINGS.
7. ABANDON IN PLACE ALL PIPING ABOVE GYPSUM CEILING. CAP PIPING AT STAIR WELL. SEAL ALL WALL PENETRATIONS AT STAIR WALLS.
8. REMOVE EXHAUST DUCT RISER. PREPARE DUCT FOR CONNECTION.
9. REMOVE FAN COIL AND ALL ASSOCIATED PIPING AND CONTROLS. CAP AND ABANDON IN PLACE ALL PIPING CONCEALED WITHIN WALLS. REFER TO ARCHITECTURAL DRAWINGS FOR INFILLING WALL.
10. REMOVE THERMOSTAT/TEMPERATURE SENSOR. RETAIN BOX AND PATHWAY FOR NEW SENSOR TO EXTENT POSSIBLE. NEW SENSOR TO BE MOUNTED AT TOP 46" ABOVE FINISHED FLOOR.
11. REMOVE CHILLED WATER BRIDGE PUMP AND ASSOCIATED PIPING AND CONTROLS TO EXTENT INDICATED. REFER TO CHILLED WATER SYSTEM SCHEMATIC FOR ADDITIONAL DETAILS.
12. REMOVE HOT WATER BRIDGE PUMP AND ASSOCIATED PIPING AND CONTROLS TO INCOMINING SHUT-OFF VALVES. REPLACE EXISTING INCOMING SHUTOFF VALVES. REFER TO HOT WATER SYSTEM SCHEMATIC FOR ADDITIONAL DETAILS.
13. PREPARE PIPING FOR CONNECTION OF NEW PIPING.
14. REMOVE ALL DUCTWORK, DIFFUSERS/GRILLES, AND FLEXIBLE DUCTWORK TO EXTENT INDICATED, TYPICAL.
15. REMOVE EXHAUST DUCT TO EXTENT INDICATED. INFILL FLOOR. REFER TO ARCHITECTURAL AND STRUCTURAL DRAWINGS.

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ALDERMAN AND KING HALL RENOVATIONS - KING HALL

University of North Carolina Wilmington
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0' 2' 4' 8' 16'
1/8" = 1'-0"

DEMOLITION PLANS - CRAWL SPACE & FIRST FLOOR

M1.1

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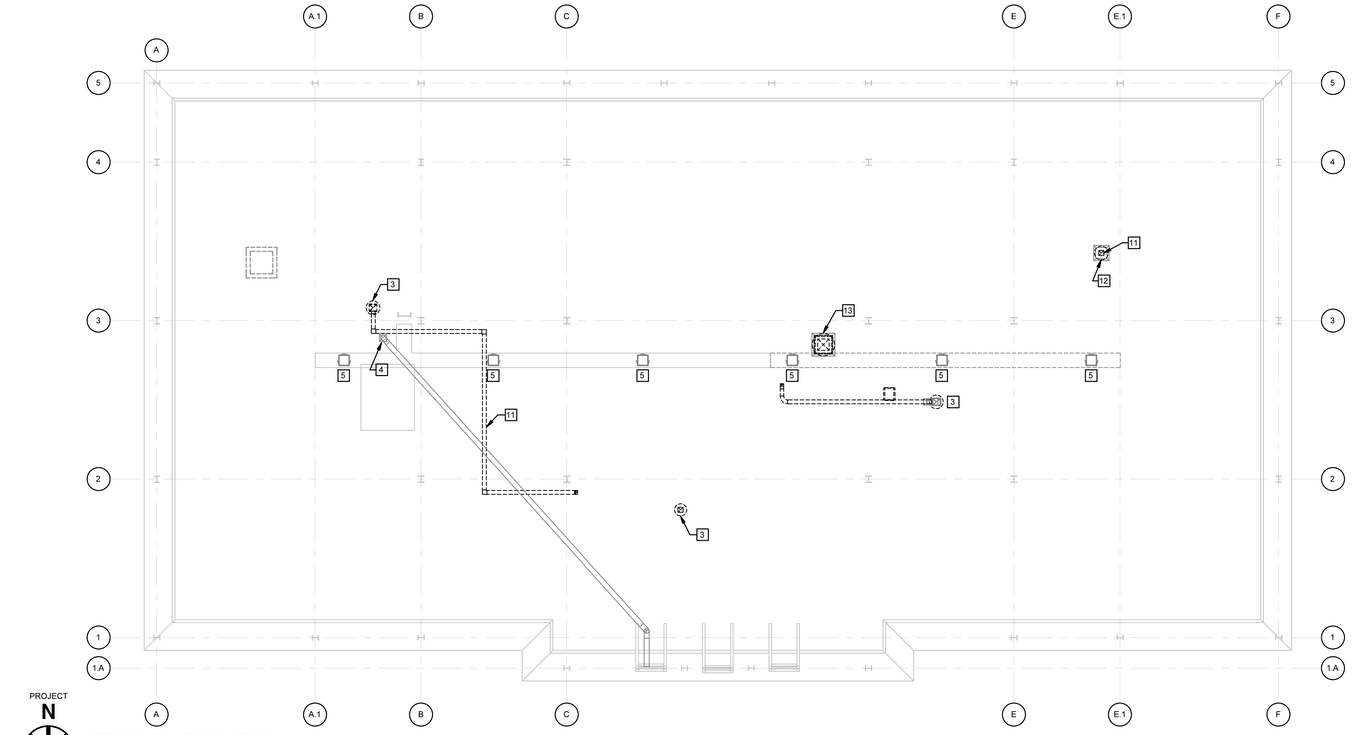


PROJECT N POLAR

ATTIC PLAN - DEMOLITION
1/8" = 1'-0"

KEYNOTES

APPLIES TO THIS DRAWING

1 REMOVE AIR HANDLING UNIT AND ALL ASSOCIATED CONTROLS. REMOVE DUCTWORK AND PIPING TO EXTENT INDICATED. REMOVE CONCRETE HOUSEKEEPING PAD.

2 REMOVE DUCT MOUNTED HEATING COIL AND ALL ASSOCIATED PIPING AND CONTROLS.

3 REMOVE FAN AND ALL ASSOCIATED DUCTWORK AND CONTROLS. RETAIN ROOF CURB FOR INSTALLATION OF NEW FAN.

4 ELEVATOR EXHAUST FAN AND DUCTWORK TO REMAIN.

5 ATTIC GRAVITY VENTILATORS TO REMAIN, TYPICAL.

6 REMOVE RETURN GRILLE AND ALL ASSOCIATED DUCTWORK AND FLEXIBLE DUCTWORK.

7 REMOVE THERMOSTAT/TEMPERATURE SENSOR. RETAIN BOX AND PATHWAY FOR NEW SENSOR TO EXTENT POSSIBLE. NEW SENSOR TO BE MOUNTED AT TOP 48" ABOVE FINISHED FLOOR.

8 REMOVE THERMOSTAT/TEMPERATURE SENSOR AND ASSOCIATED WIRING AND BOX. PATCH WALL.

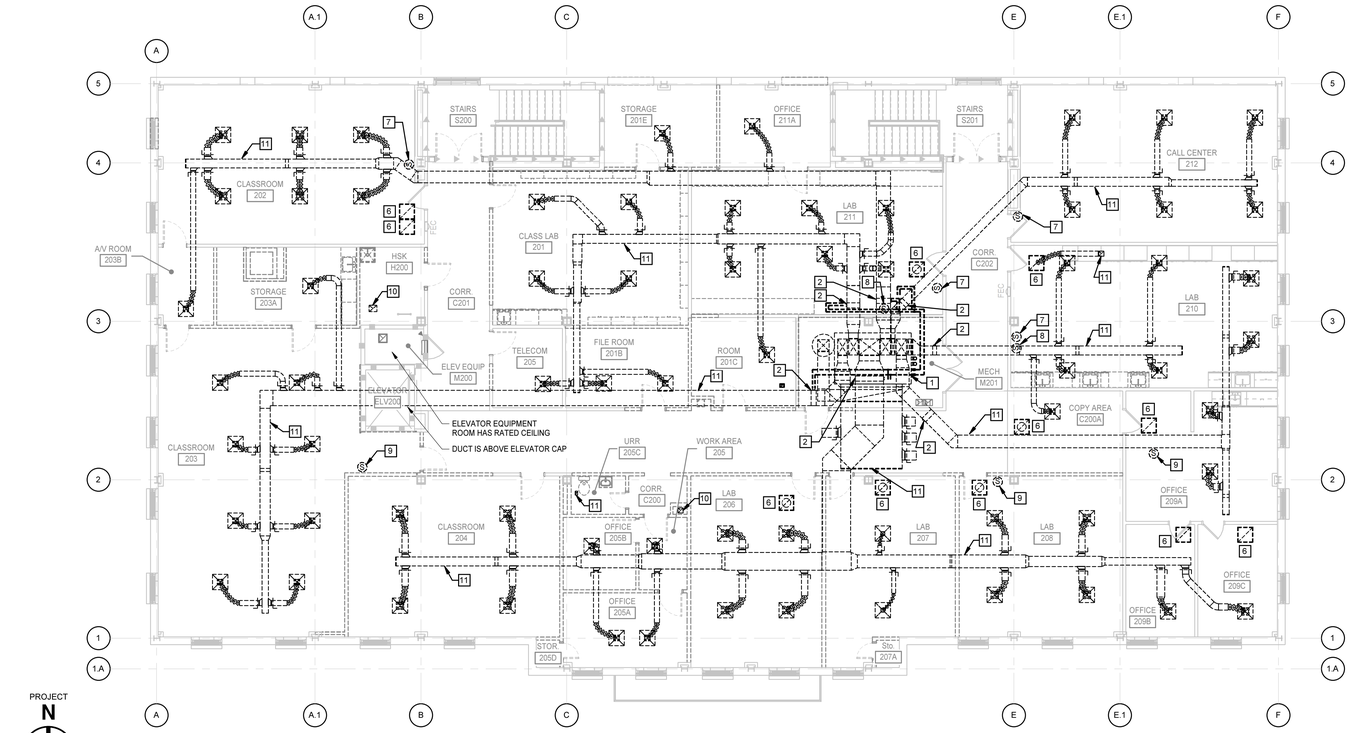
9 REMOVE THERMOSTAT/TEMPERATURE SENSOR AND ASSOCIATED WIRING AND PATHWAYS.

10 REMOVE EXHAUST DUCT TO EXTENT INDICATED. INFILL FLOOR, REFER TO ARCHITECTURAL AND STRUCTURAL DRAWINGS.

11 REMOVE ALL DUCTWORK, DIFFUSERS/GRILLES, AND FLEXIBLE DUCTWORK TO EXTENT INDICATED, TYPICAL.

12 REMOVE EXHAUST FAN AND ASSOCIATED DUCTWORK AND CONTROLS. CAP EXISTING ROOF CURB. REFER TO EXISTING ROOF CURB CAP DETAIL.

13 REMOVE GRAVITY VENTILATOR AND ALL ASSOCIATED DUCTWORK. CAP EXISTING ROOF CURB. REFER TO EXISTING ROOF CURB CAP DETAIL.



PROJECT N POLAR

SECOND FLOOR PLAN - DEMOLITION
1/8" = 1'-0"

0' 2' 4' 8' 16'
1/8" = 1'-0"

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DEMOLITION PLANS - SECOND FLOOR & ATTIC

M1.2

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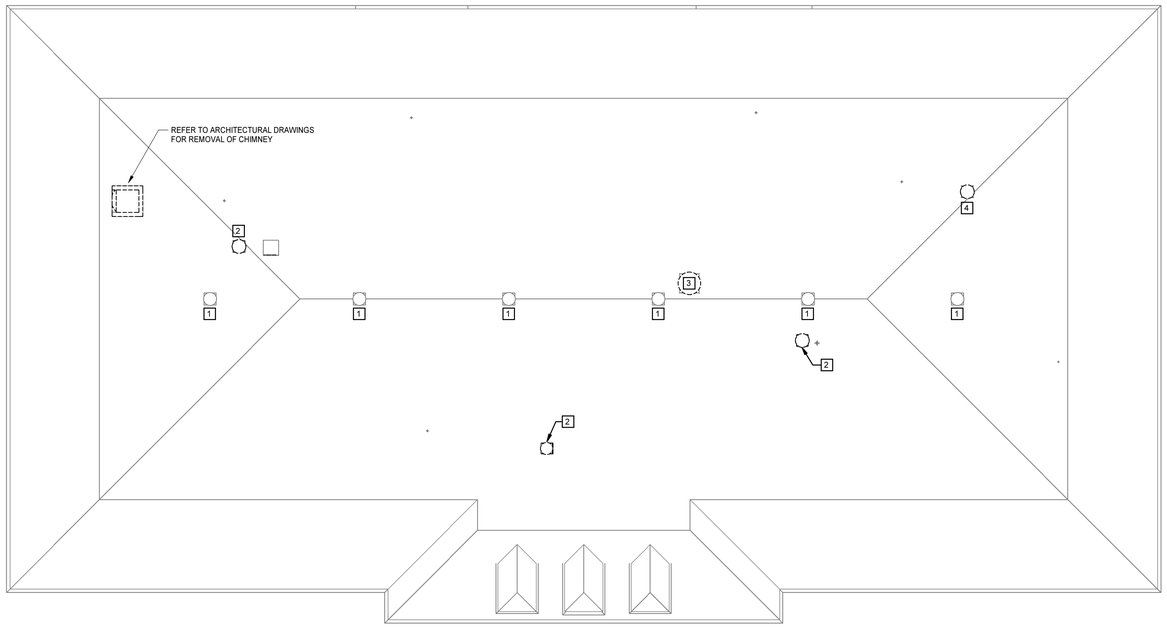
KEYNOTES

APPLIES TO THIS DRAWING

1. ATTIC GRAVITY VENTILATORS TO REMAIN, TYPICAL.
2. REMOVE FAN AND ALL ASSOCIATED DUCTWORK AND CONTROLS. RETAIN ROOF CURB FOR INSTALLATION OF NEW FAN.
3. REMOVE GRAVITY VENTILATOR AND ALL ASSOCIATED DUCTWORK. CAP EXISTING ROOF CURB. REFER TO EXISTING ROOF CURB CAP DETAIL.
4. REMOVE EXHAUST FAN AND ASSOCIATED DUCTWORK AND CONTROLS. CAP EXISTING ROOF CURB. REFER TO EXISTING ROOF CURB CAP DETAIL.



PROJECT N

POLAR

MECH ROOF PLAN - DEMOLITION

1/8" = 1'-0"

0' 2' 4' 8' 16'

1/8" = 1'-0"

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DEMOLITION PLANS - ROOF

M1.3

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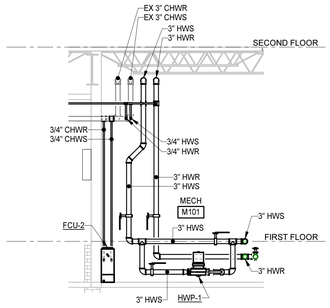
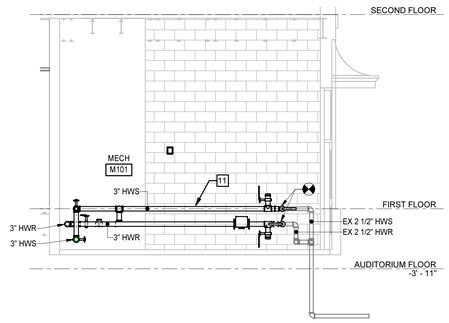
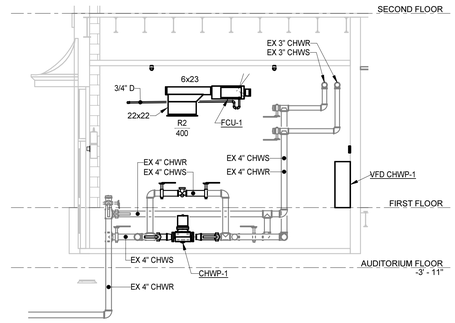


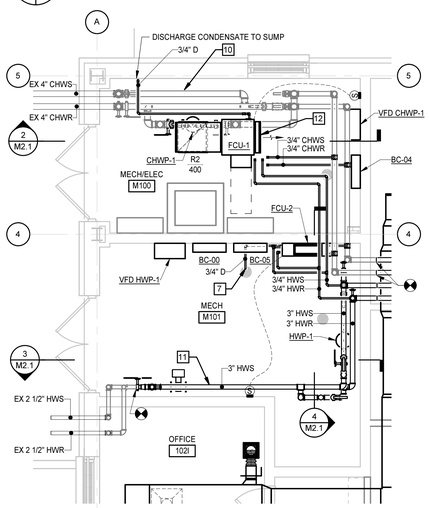
4 SECTION
M2.1 M2.1 — 1/4" = 1'-0"



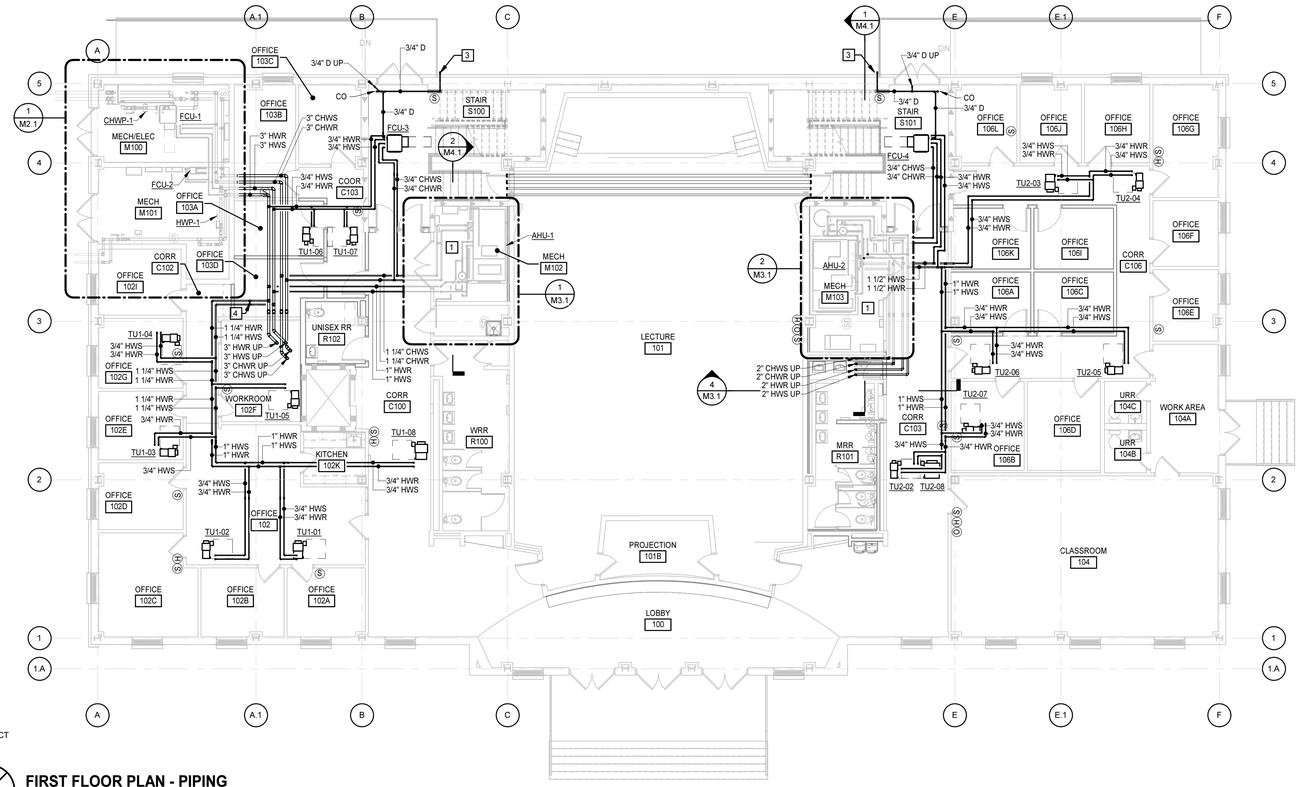
3 SECTION
M2.1 M2.1 — 1/4" = 1'-0"



2 SECTION
M2.1 M2.1 — 1/4" = 1'-0"

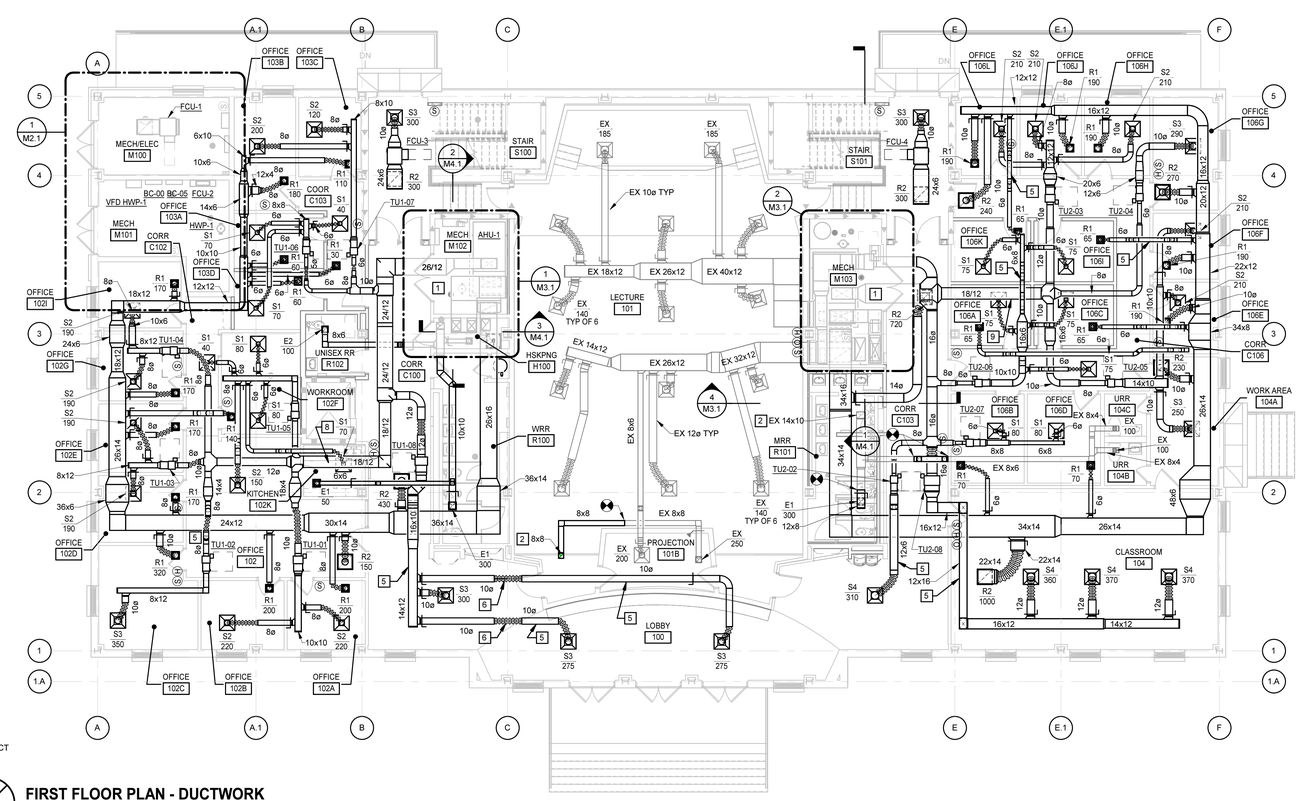


1 ENLARGED PLAN - M100, M101 - MECH/ELEC
M2.1 M2.1 — 1/4" = 1'-0"



PROJECT NORTH
POLAR

FIRST FLOOR PLAN - PIPING
1/8" = 1'-0"



PROJECT NORTH
POLAR

FIRST FLOOR PLAN - DUCTWORK
1/8" = 1'-0"

KEYNOTES
APPLIES TO THIS DRAWING

1. REFER TO ENLARGED PLAN FOR ADDITIONAL DETAILS AND SIZING.
2. DUCT UP TO SECOND FLOOR. FILL ANNULAR SPACE AROUND DUCT PENETRATION THROUGH FLOOR WITH MINERAL WOOL TO RESIST THE FREE PASSAGE OF FLAME AND THE PRODUCTS OF COMBUSTION IN ACCORDANCE WITH 717.6.3, 2 OF THE NORTH CAROLINA STATE BUILDING CODE.
3. DISCHARGE CONDENSATE DRAIN TO SPLASH BLOCK ON GRADE. PAINT EXTERIOR PIPING TO MATCH BRICK.
4. INSTALL HOT WATER DIFFERENTIAL PRESSURE SENSOR AT THIS LOCATION.
5. ROUTE DUCTWORK WITHIN JOIST SPACING OR WEBBING.
6. PROVIDE FLEXIBLE DUCT TO ROUTE UNDER BEAM.
7. DISCHARGE CONDENSATE DRAIN TO FLOOR DRAIN.
8. MOUNT DOWN DUCT STATIC PRESSURE SENSOR FOR AHU-1 AT THIS LOCATION.
9. MOUNT DOWN DUCT STATIC PRESSURE SENSOR FOR AHU-2 AT THIS LOCATION.
10. LOCATE CHILLED WATER BTU METER AT THIS LOCATION.
11. LOCATE HOT WATER BTU METER AT THIS LOCATION.
12. OPEN END DUCT, COVER WITH 1/2"x1/2" WELDED WIRE MESH.

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0' 1' 2' 4' 8'
1/4" = 1'-0"

0' 2' 4' 8' 16'
1/8" = 1'-0"

FIRST FLOOR PLANS

M2.1

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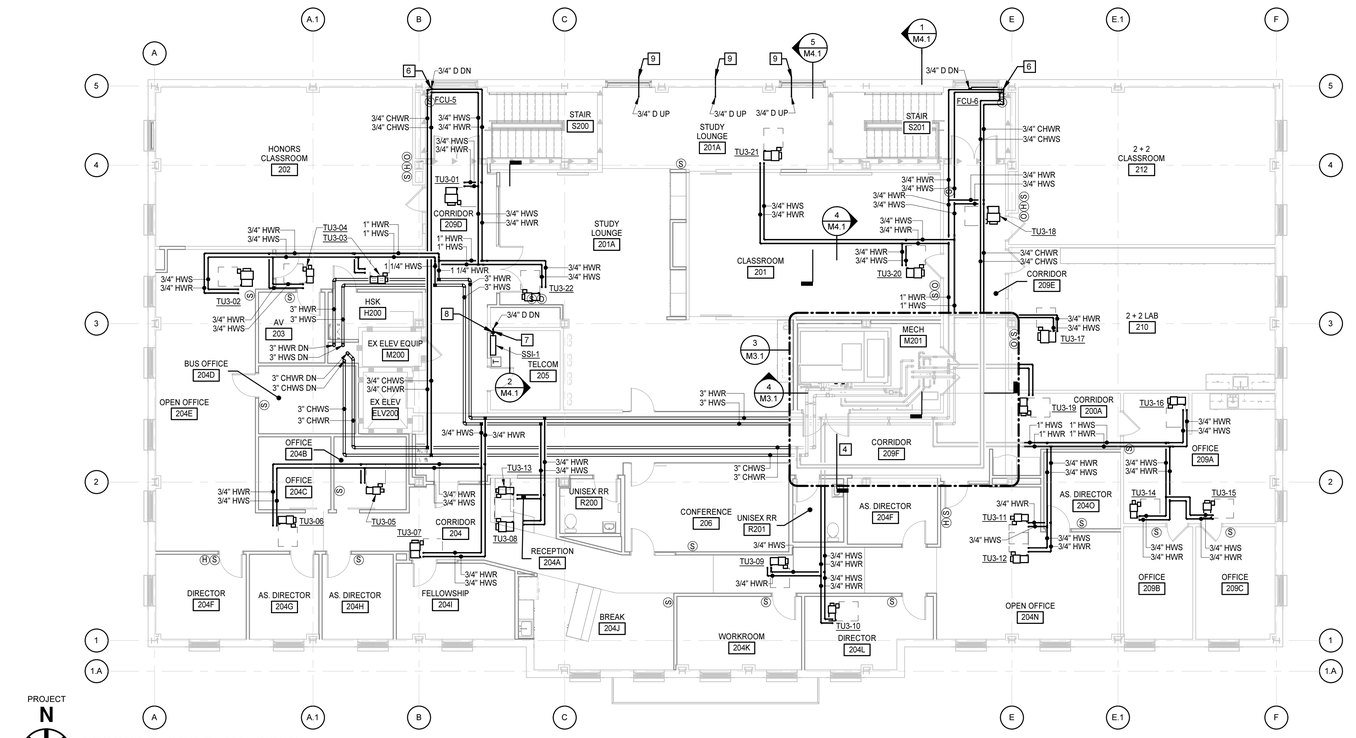
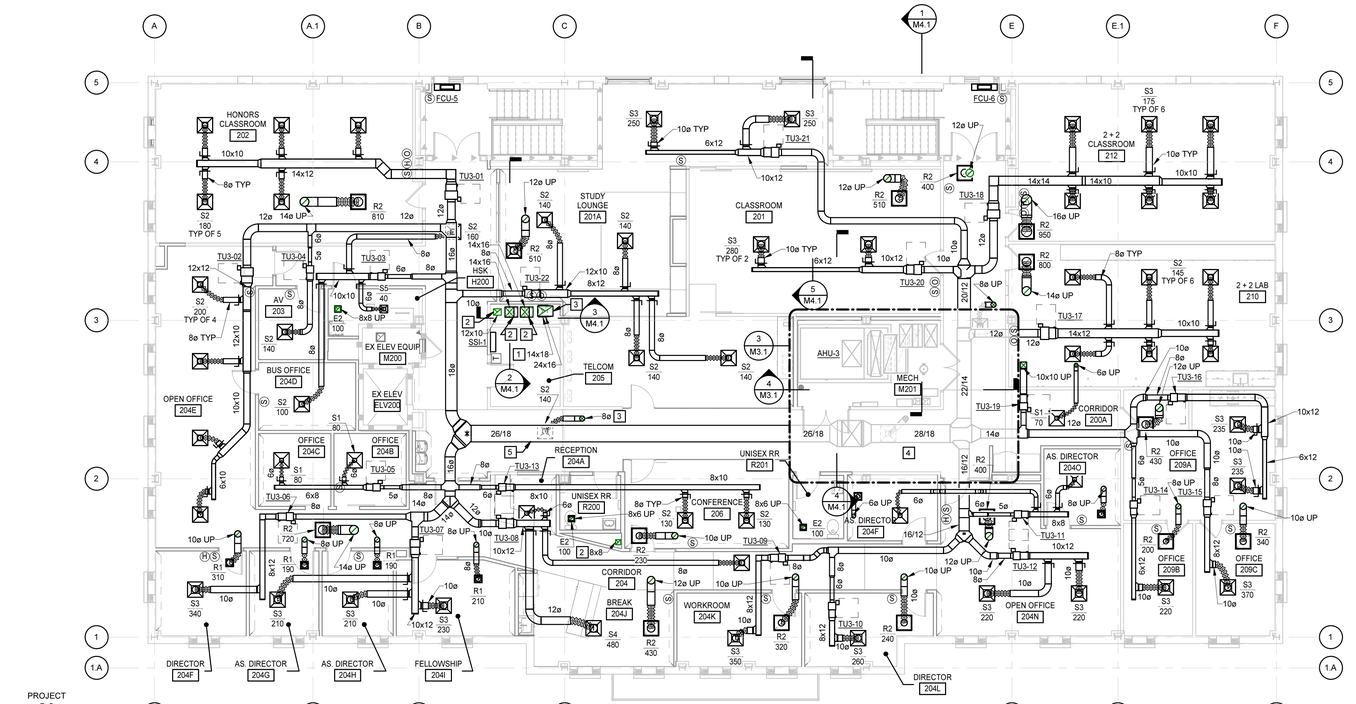
KEYNOTES

APPLIES TO THIS DRAWING

1. DUCT DOWN TO FIRST FLOOR. FILL ANNULAR SPACE AROUND DUCT PENETRATION THROUGH FLOOR WITH MINERAL WOOL TO RESIST THE FREE PASSAGE OF FLAME AND THE PRODUCTS OF COMBUSTION IN ACCORDANCE WITH 717.6.3, 2 OF THE NORTH CAROLINA STATE BUILDING CODE.
2. DUCT DOWN TO FIRST FLOOR AND UP TO ATTIC. FILL ANNULAR SPACE AROUND DUCT PENETRATION THROUGH FLOOR WITH MINERAL WOOL TO RESIST THE FREE PASSAGE OF FLAME AND THE PRODUCTS OF COMBUSTION IN ACCORDANCE WITH 717.6.3, 2 OF THE NORTH CAROLINA STATE BUILDING CODE.
3. DUCT UP TO ATTIC. REFER TO ATTIC PLAN FOR CONTINUATION.
4. REFER TO ENLARGED PLAN FOR ADDITIONAL DETAILS AND SIZING.
5. MOUNT DOWN DUCT STATIC PRESSURE SENSOR FOR AHU-3 AT THIS LOCATION.
6. ROUTE HWS, HWR, CHWS, & CHWR PIPING CONCEALED IN CHASE DOWN TO FAN COIL UNIT.
7. SIZE AND ROUTE REFRIGERANT SUCTION AND LIQUID PIPING IN ACCORDANCE WITH MANUFACTURERS'S INSTRUCTIONS.
8. ROUTE REFRIGERANT SUCTION AND LIQUID THROUGH PIPE CURB. REFER TO REFRIGERANT PIPE PENETRATION DETAIL ON DRAWING M5.2
9. DISCHARGE GRAVITY VENTILATOR OVERFLOW DRAIN OUT WALL AND TURN DOWN. CUT DISCHARGE PIPE AT 45° ANGLE. PAINT TO MATCH WALL COLOR.





0' 2' 4' 8' 16'
1/8" = 1'-0"

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SECOND FLOOR PLANS

M2.2

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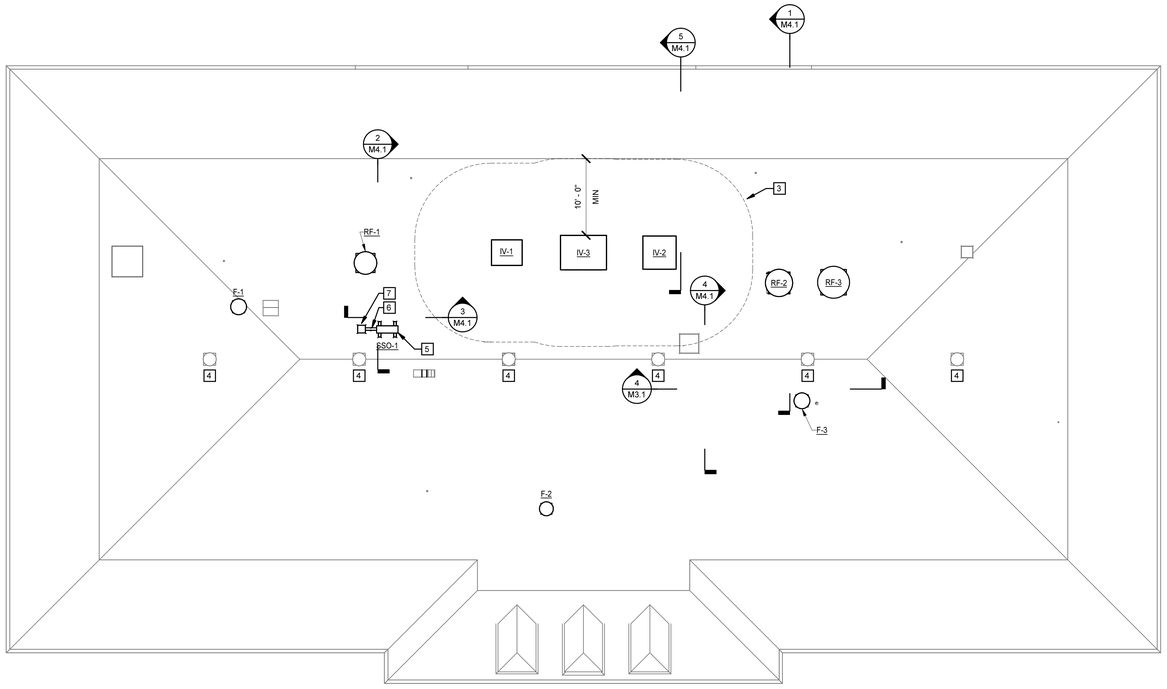
KEYNOTES

APPLIES TO THIS DRAWING

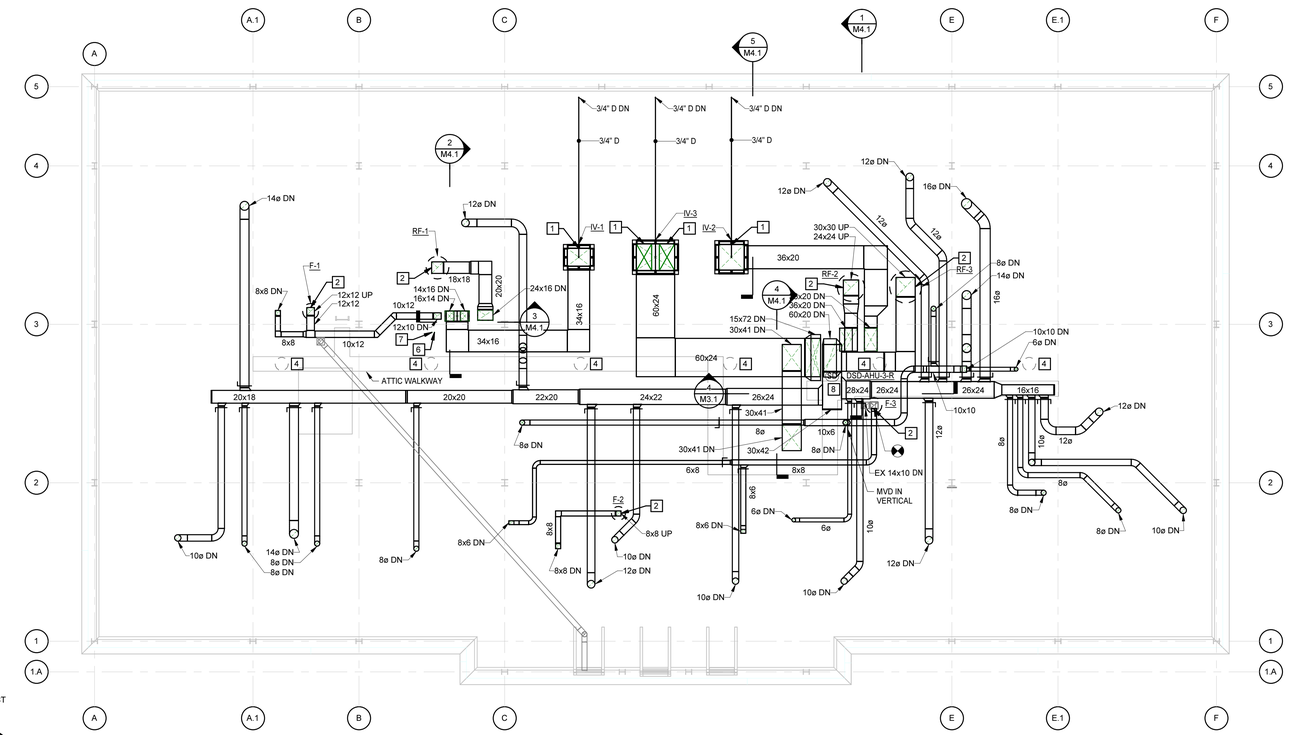
1. DUCT UP TO GRAVITY VENTILATOR ON ROOF. PROVIDE SLOPED DRAIN AT BOTTOM OF DUCT. CONNECT 3/4" DRAIN TO DUCT.
2. DUCT UP TO FAN ON ROOF.
3. MINIMUM 10' CLEARANCE FROM OUTSIDE AIR INTAKE TO ANY EXHAUST OR VENT.
4. ATTIC GRAVITY VENTILATORS TO REMAIN, TYPICAL.
5. MOUNT CONDENSING UNIT ON EQUIPMENT CURBS WITH NEOPRENE MOUNTS. REFER TO CONDENSING UNIT MOUNTING DETAIL.
6. SIZE AND ROUTE REFRIGERANT SUCTION AND LIQUID PIPING IN ACCORDANCE WITH MANUFACTURERS'S INSTRUCTIONS.
7. ROUTE REFRIGERANT SUCTION AND LIQUID THROUGH PIPE CURB. REFER TO REFRIGERANT PIPE PENETRATION DETAIL ON DRAWING M5.2
8. PROVIDE REMOTE INIDICATOR AND TEST SWITCH WITHIN MECHANICAL ROOM M201 FOR DUCT SMOKE DETECTOR.



PROJECT N POLAR

MECH ROOF PLAN

1/8" = 1'-0"



PROJECT N POLAR

ATTIC PLAN - DUCTWORK

1/8" = 1'-0"

0' 2' 4' 8' 16'

1/8" = 1'-0"

MOSELEY ARCHITECTS

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NORTH CAROLINA PROFESSIONAL SEAL 050937 ENGINEER BRETT J LEMMON 3/10/23

MOSELEY ARCHITECTS PROFESSIONAL ENGINEERS LICENSING CORPORATION SEAL C-3469 NORTH CAROLINA RALEIGH, NC

ALDERMAN AND KING HALL RENOVATIONS - KING HALL

University of North Carolina Wilmington
SCO#22-24639-01A
601 Hamilton Drive, Wilmington, NC 28403

PROJECT NO: 620589
DATE: FEBRUARY 10, 2023

REVISIONS	
DATE	DESCRIPTION

ATTIC & ROOF PLANS

M2.3

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AIR HANDLING UNIT SCHEDULE

TAG	MANUFACTURER	MODEL NUMBER	SERVING	SUPPLY FAN: DESIGN AIRFLOW (CFM)	SUPPLY FAN: ESP (IN WC)	FAN WHEEL: DIA (IN)	FAN WHEEL: TYPE	FAN WHEEL: FAN SPEED (RPM)	FAN WHEEL: MOTOR SIZE (HP)	OUTSIDE AIR DESIGN AIRFLOW (CFM)	UPD (CFM)
AHU-1	TRANE	CSAA 008	FIRST FLOOR - WEST	3,300	1.75	18.25	DD PF	2150	5.00	800	800
AHU-2	TRANE	CSAA 012	FIRST FLOOR - EAST	5,500	1.75	20.00	DD PF	2260	7.50	2,550	1,250
AHU-3	TRANE	CSAA 025	SECOND FLOOR	10,500	1.75	24.50	DD PF	1780	15.00	3,400	1,000

TAG	HYRONIC COOLING COIL: TOTAL CAPACITY (BTUH)	SENSIBLE CAPACITY (BTUH)	EAT (°F DB)	EAT (°F WB)	LAT (°F DB)	LAT (°F WB)	EWT (°F)	LWT (°F)	WATER FLOW RATE (GPM)	WPD (FT WC)
AHU-1	107,640	84,160	75.2	63.2	52.0	51.9	42	60	12	15.0
AHU-2	301,110	179,350	81.5	69.5	52.0	51.9	42	60	34	15.0
AHU-3	647,990	330,670	80.4	71.4	52.0	51.9	42	60	72	15.0

TAG	HYDRONIC HEATING COIL: DESIGN AIRFLOW (CFM)	SENSIBLE CAPACITY (BTUH)	EAT (°F)	LAT (°F)	EWT (°F)	LWT (°F)	WATER FLOW RATE (GPM)	WPD (FT WC)
AHU-1	2,800	50,240	45.0	60.0	130	100	4	5.0
AHU-2	4,500	122,010	35.0	60.0	130	100	9	5.0
AHU-3	8,100	183,280	40.0	60.0	130	100	13	5.0

TAG	ELECTRICAL DATA: MOTOR DATA: UNIT FLA (A)	UNIT MCA (A)	UNIT MOCP (A)	SERVICE: (V)	(PH)	(HZ)	WEIGHT (LBS)
AHU-1	6.7	8.4	15.0	480	3	60	2,000
AHU-2	9.8	12.3	15.0	480	3	60	2,500
AHU-3	18.1	22.6	40.0	480	3	60	4,500

TAG	ACOUSTIC PERFORMANCE: SUPPLY DISCHARGE (dB): 63 HZ	125 HZ	250 HZ	500 HZ	1 KHZ	2 KHZ	4 KHZ	8 KHZ
AHU-1	77	75	70	65	60	58	53	46
AHU-2	78	82	76	69	65	64	60	51
AHU-3	82	87	85	83	80	75	76	70

TAG	CASING RADIATED (dB): 63 HZ	125 HZ	250 HZ	500 HZ	1 KHZ	2 KHZ	4 KHZ	8 KHZ
AHU-1	83	73	76	70	65	56	51	45
AHU-2	80	79	86	76	70	59	56	47
AHU-3	80	80	85	79	77	63	58	57

TAG	RETURN INTAKE (dB): 63 HZ	125 HZ	250 HZ	500 HZ	1 KHZ	2 KHZ	4 KHZ	8 KHZ	NOTES
AHU-1	68	62	64	57	53	53	47	40	1-7
AHU-2	74	73	69	59	55	54	48	39	1-7
AHU-3	72	65	65	60	58	57	56	49	1-7

NOTES:
1. PROVIDE MOTORS RATED FOR USE WITH VARIABLE FREQUENCY DRIVE. PROVIDE GROUNDING RING ON MOTOR.
2. CHILLED WATER COIL SHALL BE SELECTED WITH MINIMUM WATER REYNOLDS NUMBER OF 5500 OR A MINIMUM TUBE VELOCITY OF 4 FPS AT DESIGN CONDITIONS. WATER PRESSURE DROP SCHEDULED IS THE MAXIMUM ALLOWABLE WATER PRESSURE DROP. MAXIMUM AIRFLOW VELOCITY AT DESIGN CONDITIONS SHALL BE 450 FPM OR LOWER.
3. PROVIDE 2" MERV-8 PRE-FILTER RACK AND 4" THICK MERV-13 FINAL FILTER RACK.
4. HEATING COIL AND COOLING COIL SELECTIONS BASED ON CLEAR WATER.
5. PROVIDE UVC LIGHTS AT COOLING COIL AND DRAIN PAN. REFER TO SECTION 237313 FOR ADDITIONAL DETAILS. UVC LIGHTS SHALL HAVE DEDICATED 120V/1ø 15A MOP POWER CIRCUIT. CIRCUIT TO HAVE DOOR INTERLOCK SWITCH THAT DISABLES UV LIGHT UPON OPENING OF SERVICE DOOR OF AIR HANDLING UNIT.
6. UNIT MANUFACTURER SHAL WIRE ALL FANS TO EXTERIOR MOUNTED JUNCTION BOX FOR CONNECTION TO FIELD MOUNTED VARIABLE FREQUENCY DRIVE. JUNCTION BOX SHALL HAVE TERMINAL CONNECTIONS. WIRE NUTS ARE NOT ACCEPTABLE.
7. PROVIDE MARINE LIGHT IN EACH SECTION. FACTORY WIRE LIGHTS TO SWITCH ON ACCESS SIDE OF UNIT.

KEYNOTES

APPLIES TO THIS DRAWING

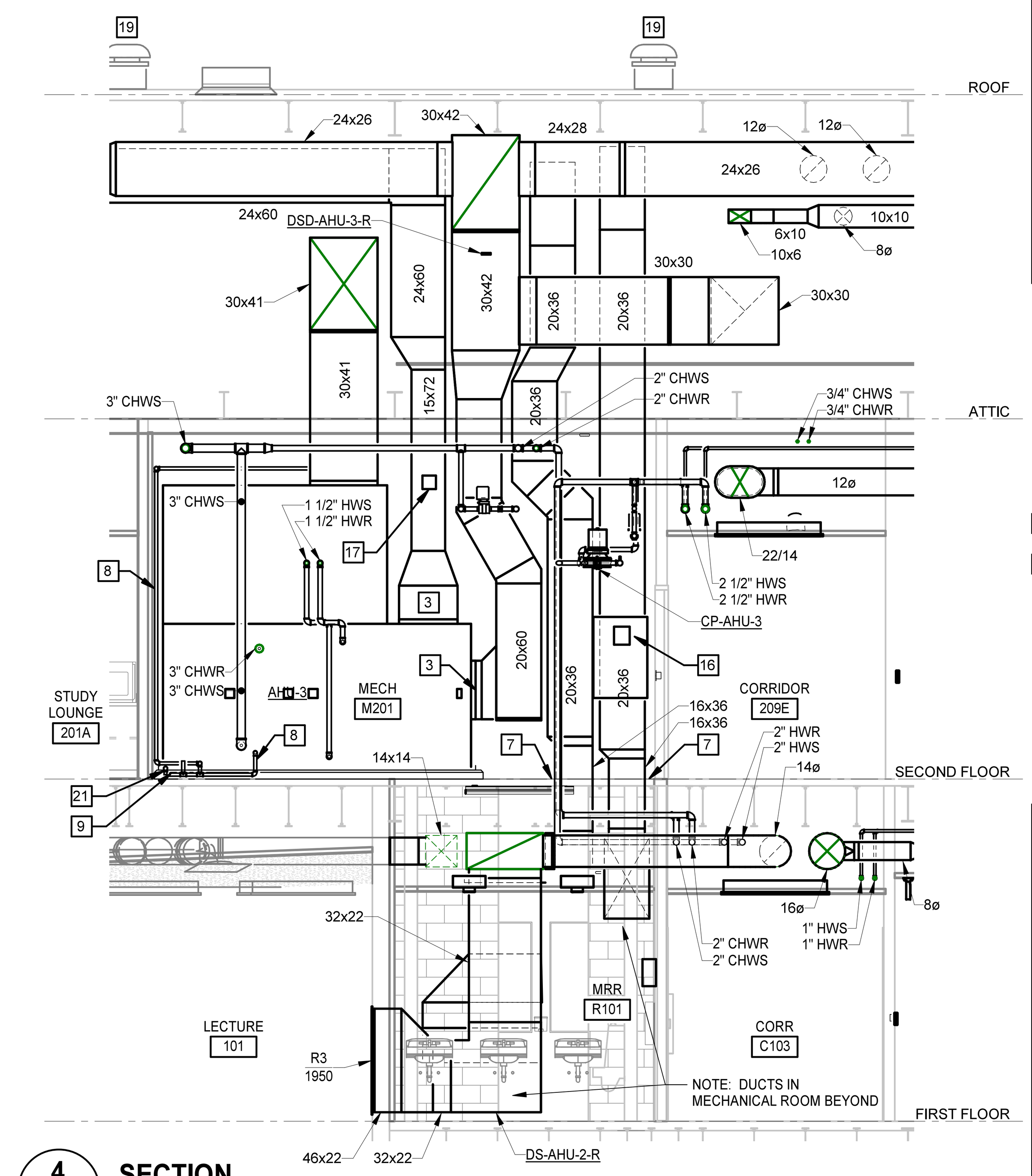
1. ELECTRICAL PANEL, NO DUCT OR PIPING ABOVE PANEL.
2. DUCT UP TO SECOND FLOOR. FILL ANNULAR SPACE AROUND DUCT PENETRATION THROUGH FLOOR WITH MINERAL WOOL TO RESIST THE FREE PASSAGE OF FLAME AND THE PRODUCTS OF COMBUSTION IN ACCORDANCE WITH 717.6.3, 2 OF THE NORTH CAROLINA STATE BUILDING CODE.
3. CONNECT TO UNIT WITH FULL SIZE OF CONNECTION. PROVIDE FLEXIBLE CONNECTOR AT EACH CONNECTION TO UNIT.
4. DUCT DOWN TO FIRST FLOOR AND UP TO ATTIC. FILL ANNULAR SPACE AROUND DUCT PENETRATION THROUGH FLOOR WITH MINERAL WOOL TO RESIST THE FREE PASSAGE OF FLAME AND THE PRODUCTS OF COMBUSTION IN ACCORDANCE WITH 717.6.3, 2 OF THE NORTH CAROLINA STATE BUILDING CODE.
5. DUCT UP TO ATTIC. REFER TO ATTIC PLAN FOR CONTINUATION.
6. PROVIDE 4" THICK CONCRETE HOUSEKEEPING PAD. REFER TO STRUCTURAL DRAWINGS FOR DETAIL.
7. DUCT PENETRATES SECOND FLOOR SLAB. FILL ANNULAR SPACE AROUND DUCT PENETRATION WITH MINERAL WOOL TO RESIST THE FREE PASSAGE OF FLAME AND THE PRODUCTS OF COMBUSTION IN ACCORDANCE WITH 717.6.3, 2 OF THE NORTH CAROLINA STATE BUILDING CODE.
8. PROVIDE TRENT TECHNOLOGIES CXXBV CONDENSATE TRAP. INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
9. DISCHARGE CONDENSATE DRAIN TO FLOOR DRAIN.
10. 2" CHWS & CHWR DOWN.
11. 2" HWS & HWR DOWN.
12. INSTALL HOT WATER DIFFERENTIAL PRESSURE SENSOR AT THIS LOCATION.
13. INSTALL CHILLED WATER DIFFERENTIAL PRESSURE SENSOR AT THIS LOCATION.
14. CHILLED WATER SYSTEM MINIMUM FLOW BYPASS VALVE. SIZE VALVE FOR MINIMUM FLOW AS SCHEDULED IN PUMP SCHEDULE.

KEYNOTES

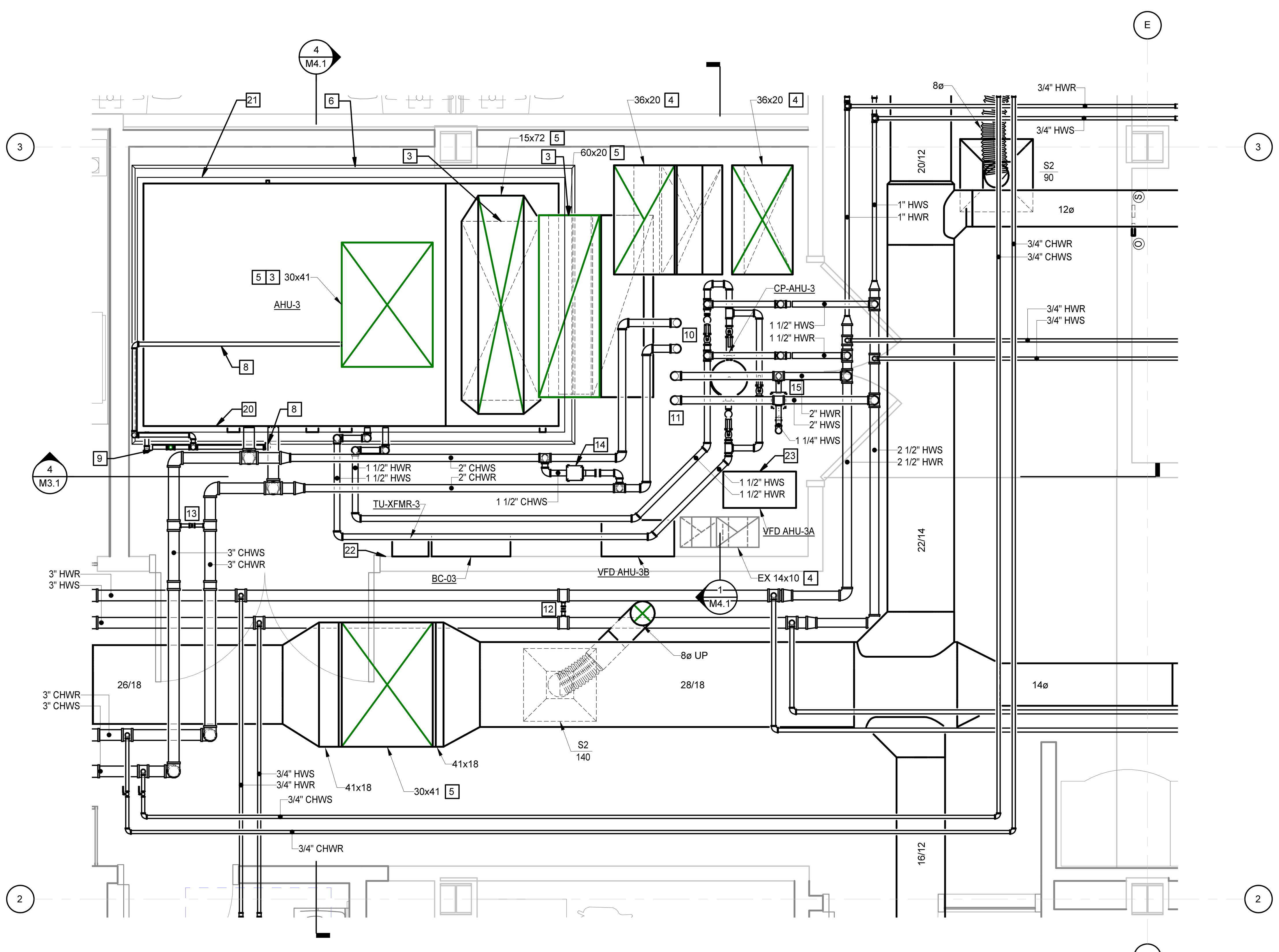
APPLIES TO THIS DRAWING

15. HOT WATER SYSTEM MINIMUM FLOW BYPASS VALVE. SIZE VALVE FOR MINIMUM FLOW AS SCHEDULED IN PUMP SCHEDULE.
16. MOUNT OUTSIDE AIRFLOW MEASURING STATION IN STRAIGHT RUN OF DUCT IN VERTICAL FOR AHU-2 AT THIS LOCATION.
17. MOUNT OUTSIDE AIRFLOW MEASURING STATION IN STRAIGHT RUN OF DUCT IN VERTICAL FOR AHU-3 AT THIS LOCATION.
18. WRAP ALL RETURN DUCTWORK WITHIN MECHANICAL ROOM WITH 1" THICK ACOUSTIC DUCT WRAP INSULATION. REFER TO SECTION 230700 FOR ADDITIONAL DETAILS.
19. ATTIC GRAVITY VENTILATORS TO REMAIN, TYPICAL.
20. PROVIDE WARNING LABEL ON SIDE OF AIR HANDLING UNIT AT ACCESS DOOR TO COOLING COIL SECTION. WARNING LABEL SHALL READ AS FOLLOWS: "CAUTION, ULTRAVIOLET LIGHT IN USE IN AIR HANDLING UNIT."
21. PROVIDE AUXILIARY DRAIN PAN UNDER ENTIRE AIR HANDLING UNIT WITH 2" LIP. PROVIDE 1" DRAIN FROM AUX PAN TO FLOOR DRAIN.
22. LOCATE REMOTE INDICATOR AND TEST SWITCH FOR AHU-03 RETURN DUCT SMOKE DETECTOR IN ATTIC AT THIS LOCATION. PROVIDE LABEL ABOVE SWITCH ON WALL.
23. MOUNT VARIABLE FREQUENCY DRIVE ON UNISTRUT RACK.

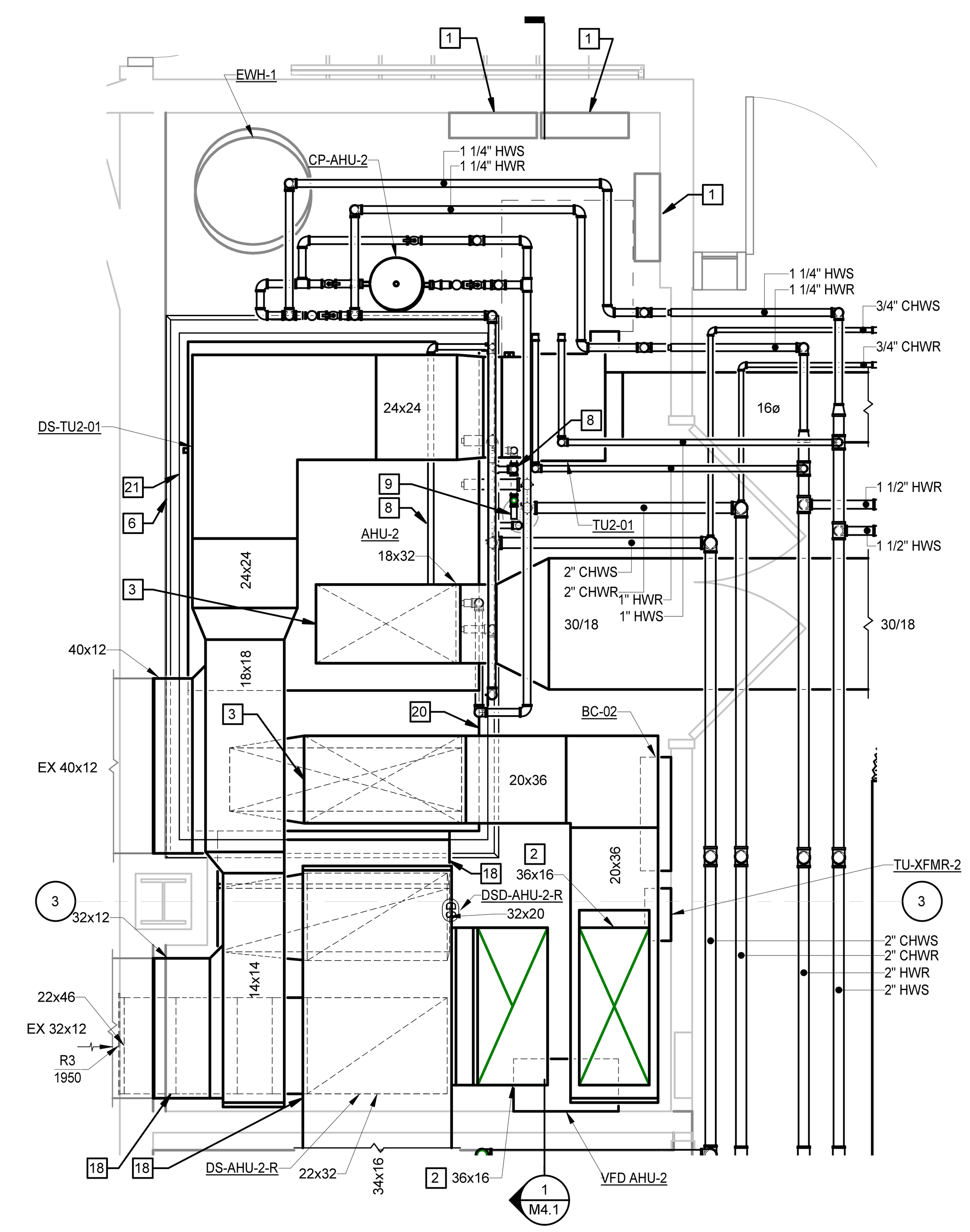
NOTE: AIR HANDLING UNITS ARE A PART OF THE EARLY EQUIPMENT PACKAGE.



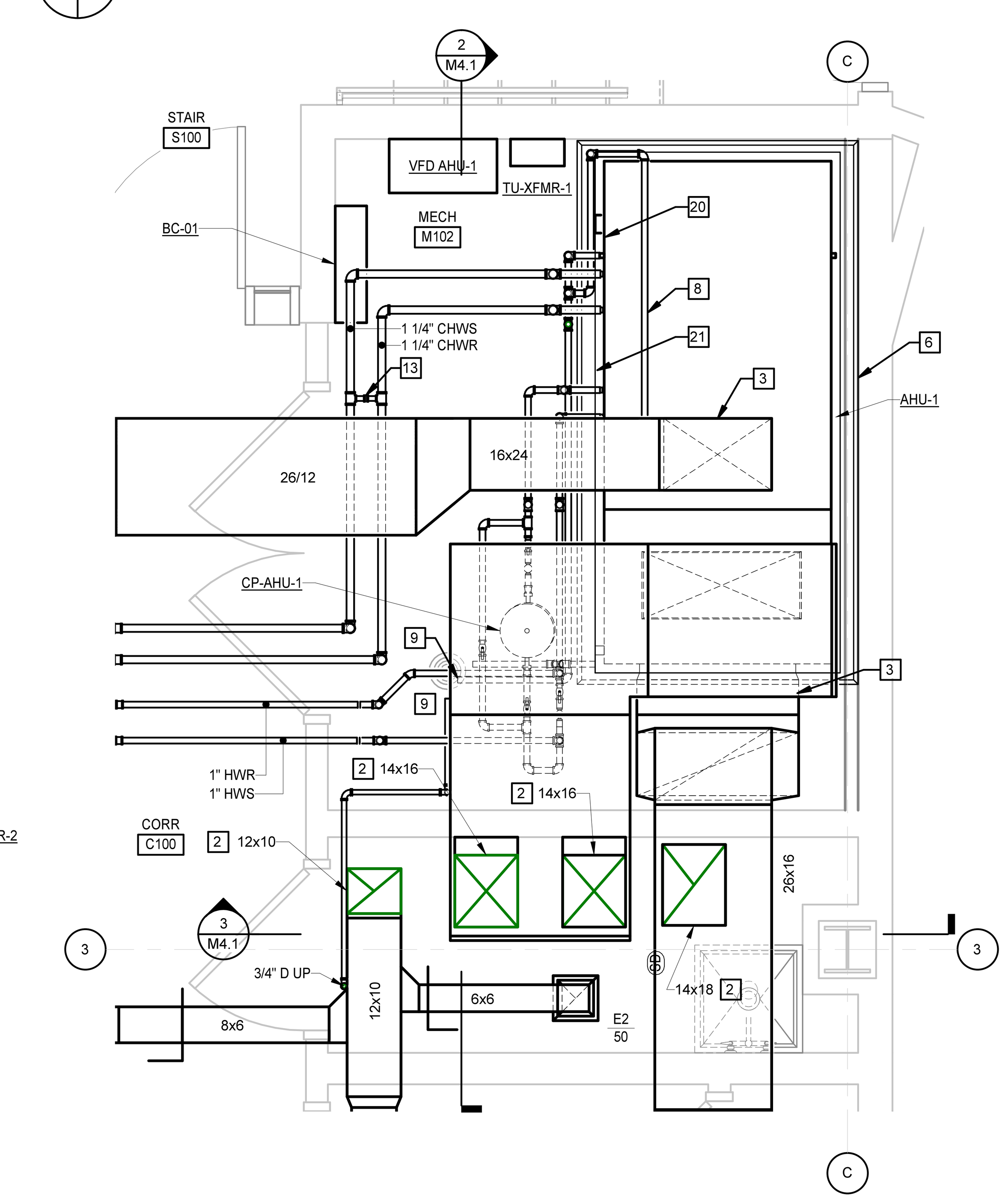
4 SECTION
M2.1 M3.1
1/4" = 1'-0"



3 ENLARGED PLAN - M201 -MECHANICAL
M2.2 M3.1
1/2" = 1'-0"



2 ENLARGED PLAN - M102 -MECHANICAL
M2.1 M3.1
1/2" = 1'-0"



1 ENLARGED PLAN - M101 - MECHANICAL
M2.1 M3.1
1/2" = 1'-0"

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

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MOSELEY ARCHITECTS PC REGISTERED ENGINEERING CORPORATION C-3469 NORTH CAROLINA RALEIGH, NC

ALDERMAN AND KING HALL RENOVATIONS - KING HALL

University of North Carolina Wilmington
SCO#22-24639-01A
601 Hamilton Drive, Wilmington, NC 28403

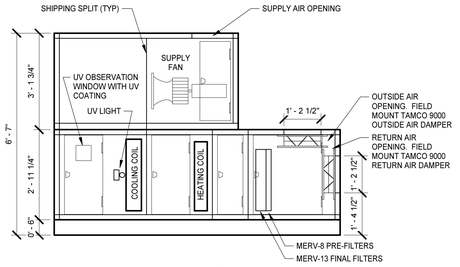
PROJECT NO: 620589
DATE: FEBRUARY 10, 2023

REVISIONS	
DATE	DESCRIPTION

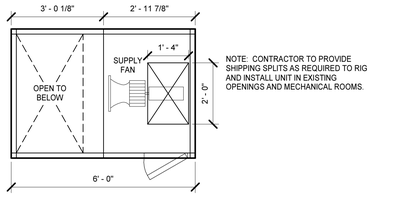
ENLARGED PLAN & EARLY EQUIPMENT SCHEDULE

M3.1

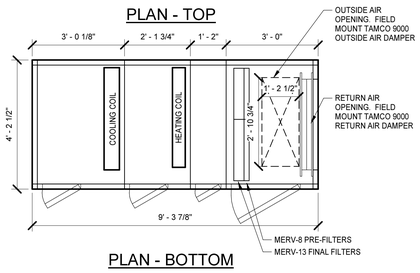
NOTE: AIR HANDLING UNITS ARE A PART OF THE EARLY EQUIPMENT PACKAGE.



ELEVATION

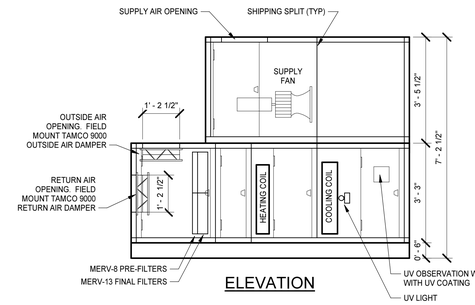


PLAN - TOP



PLAN - BOTTOM

1 **AHU-01 DETAIL**
1/2" = 1'-0"



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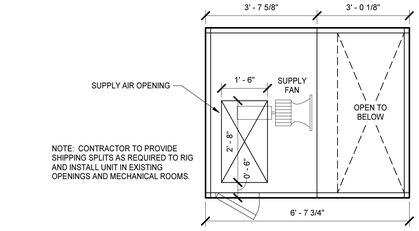
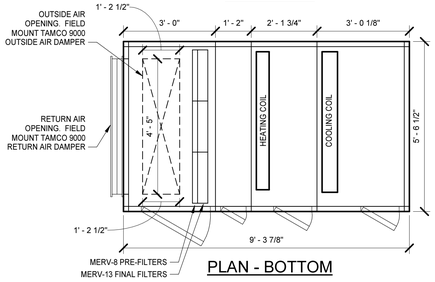
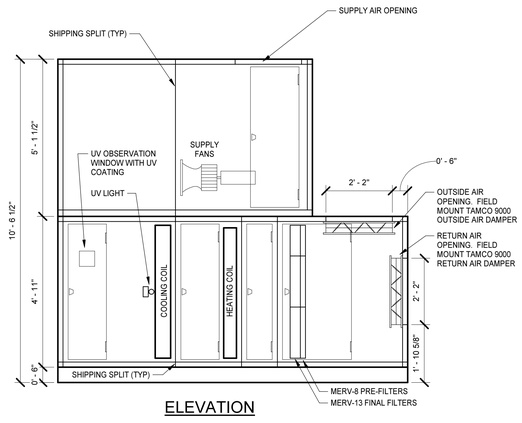


PLAN - TOP

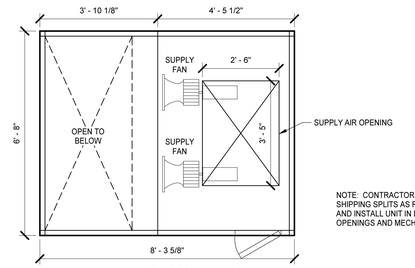


PLAN - BOTTOM

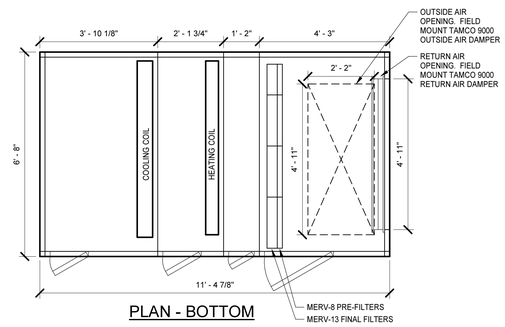
2 **AHU-02 DETAIL**
1/2" = 1'-0"



ELEVATION



PLAN - TOP



PLAN - BOTTOM

3 **AHU-03 DETAIL**
1/2" = 1'-0"

0' 6" 1' 2' 4'
1/2" = 1'-0"

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NORTH CAROLINA PROFESSIONAL SEAL 050937 ENGINEER KEITH J LEMMON 3/10/23

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ALDERMAN AND KING HALL RENOVATIONS - KING HALL

University of North Carolina Wilmington
SCO#22-24639-01A
601 Hamilton Drive, Wilmington, NC 28403

PROJECT NO: 820589
DATE: FEBRUARY 10, 2023

REVISIONS	
DATE	DESCRIPTION

UNIT LAYOUT DETAILS

M3.2

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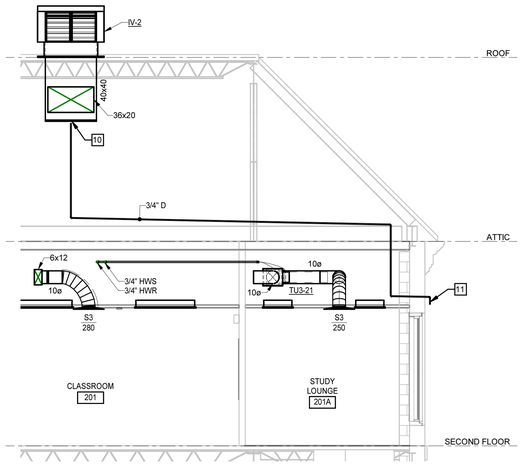
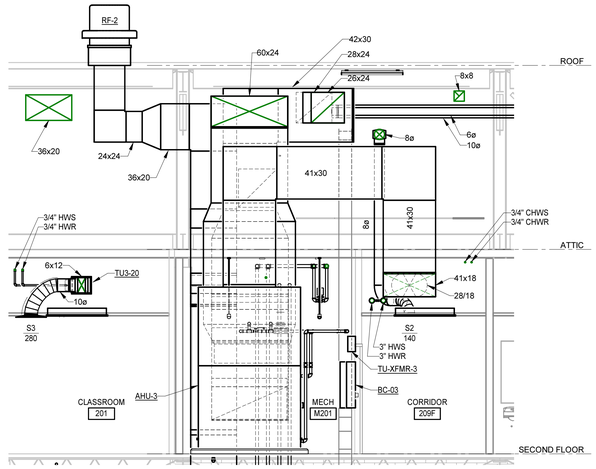
KEYNOTES

APPLIES TO THIS DRAWING

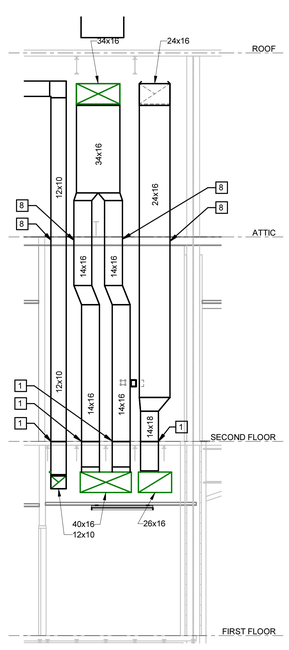
1. DUCT PENETRATES SECOND FLOOR SLAB. FILL ANNULAR SPACE AROUND DUCT PENETRATION WITH MINERAL WOOL TO RESIST THE FREE PASSAGE OF FLAME AND THE PRODUCTS OF COMBUSTION IN ACCORDANCE WITH 717.6.3, 2 OF THE NORTH CAROLINA STATE BUILDING CODE.
2. PROVIDE TRENT TECHNOLOGIES CXXBV CONDENSATE TRAP. INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
3. DISCHARGE CONDENSATE DRAIN TO FLOOR DRAIN.
4. CONNECT TO UNIT WITH FULL SIZE OF CONNECTION. PROVIDE FLEXIBLE CONNECTOR AT EACH CONNECTION TO UNIT.
5. MOUNT OUTSIDE AIRFLOW MEASURING STATION IN STRAIGHT RUN OF DUCT IN VERTICAL FOR AHU-1 AT THIS LOCATION.
6. CHILLED WATER SYSTEM MINIMUM FLOW BYPASS VALVE. SIZE VALVE FOR MINIMUM FLOW AS SCHEDULED IN PUMP SCHEDULE.
7. PIPE PENETRATION THROUGH FLOOR. SEAL ALL PENETRATIONS. REFER TO SECTION 232113 FOR ADDITIONAL DETAILS.
8. SEAL DUCTWORK PENETRATIONS OF ATTIC GYPSUM MEMBRANE.
9. PROVIDE AUXILIARY DRAIN PAN UNDER ENTIRE AIR HANDLING UNIT WITH 2" LIP. PROVIDE 1" DRAIN FROM AUX PAN TO FLOOR DRAIN.
10. DUCT UP TO GRAVITY VENTILATOR ON ROOF. PROVIDE SLOPED DRAIN AT BOTTOM OF DUCT. CONNECT 3/4" DRAIN TO DUCT.
11. DISCHARGE GRAVITY VENTILATOR OVERFLOW DRAIN OUT WALL AND TURN DOWN. CUT DISCHARGE PIPE AT 45° ANGLE. PAINT TO MATCH WALL COLOR.



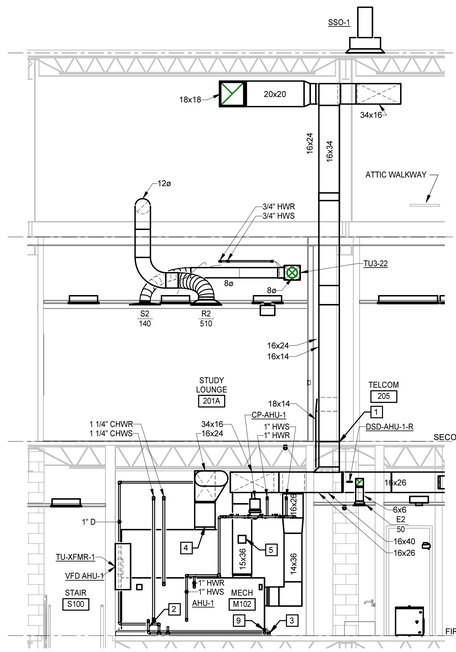
5 M2.2 M4.1 **SECTION**
1/4" = 1'-0"



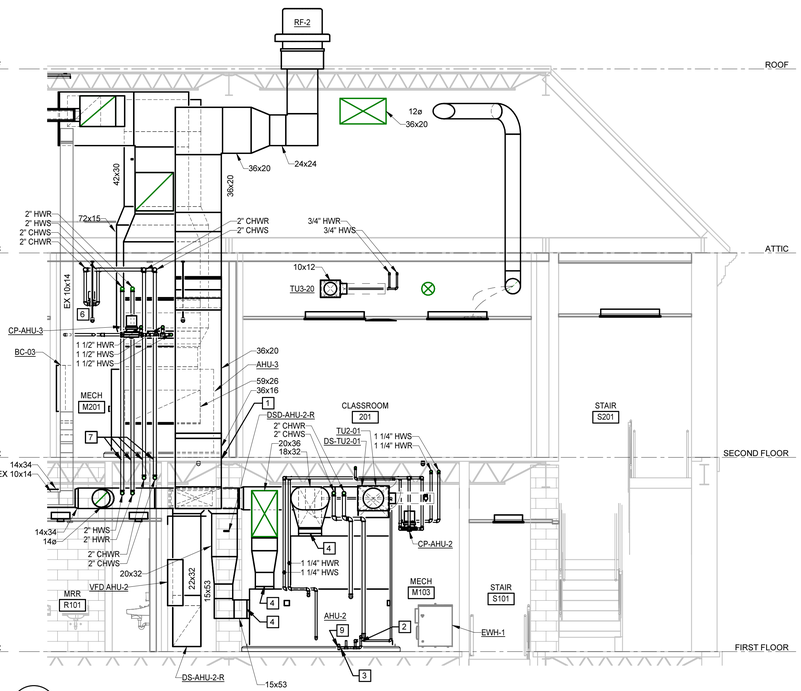
4 M2.2 M4.1 **SECTION**
1/4" = 1'-0"



3 M2.1 M4.1 **SECTION**
1/4" = 1'-0"



2 M2.1 M4.1 **SECTION**
1/4" = 1'-0"



1 M2.1 M4.1 **SECTION**
1/4" = 1'-0"

0' 1' 2' 4' 8'
1/4" = 1'-0"

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REVISIONS	
DATE	DESCRIPTION

SECTIONS

M4.1

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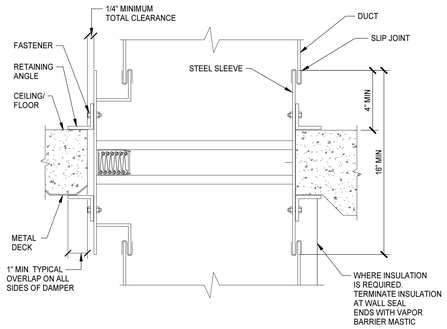
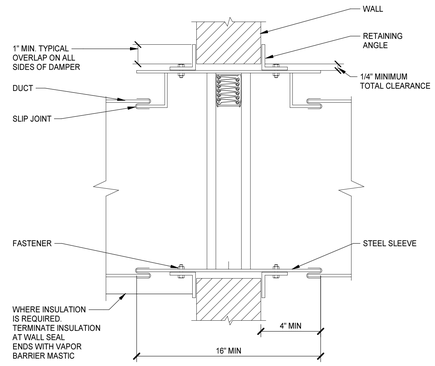


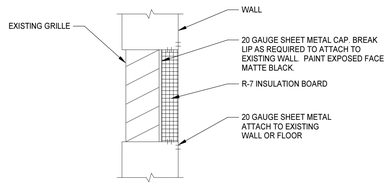
NOTE: THIS DETAIL IS BASED ON GREENHECK MODEL FD150. ALL FIRE DAMPERS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR THE MODEL USED.

1 FIRE DAMPER INSTALLATION DETAIL - TYPE B (HORIZONTAL)
NO SCALE

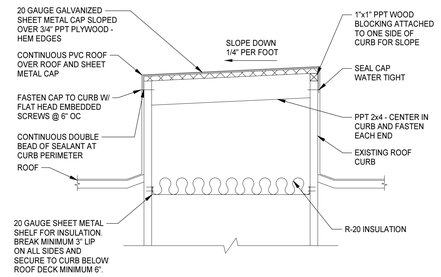


NOTE: THIS DETAIL IS BASED ON GREENHECK MODEL FD150. ALL FIRE DAMPERS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR THE MODEL USED.

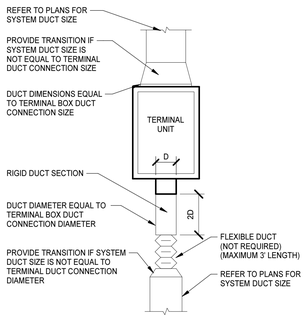
2 FIRE DAMPER INSTALLATION DETAIL - TYPE B (VERTICAL)
NO SCALE



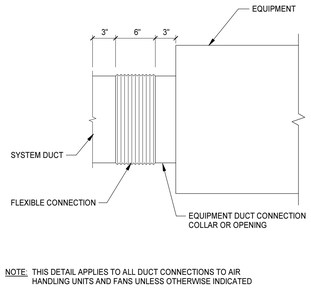
3 EXISTING STAGE RETURN GRILLE CAP DETAIL
NO SCALE



4 EXISTING ROOF CURB CAP DETAIL
NO SCALE

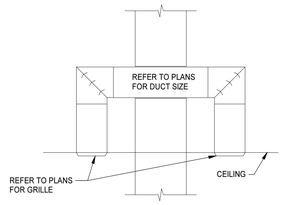


5 TERMINAL DUCT CONNECTION DETAIL
NO SCALE

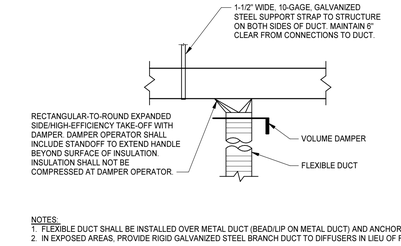


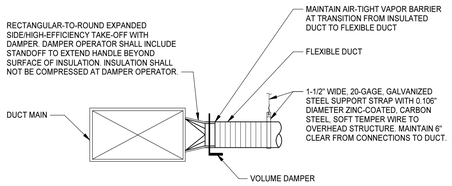
NOTE: THIS DETAIL APPLIES TO ALL DUCT CONNECTIONS TO AIR HANDLING UNITS AND FANS UNLESS OTHERWISE INDICATED

6 EQUIPMENT DUCT CONNECTION DETAIL
NO SCALE



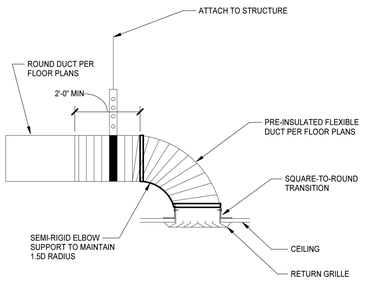
7 TRANSFER DUCT DETAIL
NO SCALE



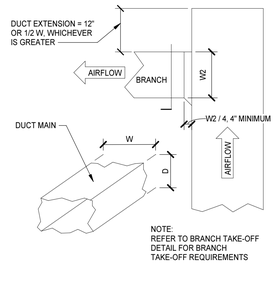


NOTES:
1. FLEXIBLE DUCT SHALL BE INSTALLED OVER METAL DUCT (BEAD/LIP ON METAL DUCT) AND ANCHORED WITH NYLON MECHANICAL BANDS OR PANDUIT STRAP.
2. IN EXPOSED AREAS, PROVIDE RIGID GALVANIZED STEEL BRANCH DUCT TO DIFFUSERS IN LIEU OF FLEXIBLE DUCT UNLESS INDICATED OTHERWISE. SUPPORT IN ACCORDANCE WITH REQUIREMENTS SPECIFIED FOR METAL DUCTS.

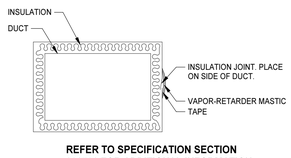
8 BRANCH CONNECTION TO DIFFUSER DETAILS
NO SCALE



9 RETURN AIR BOOT DETAIL
NO SCALE

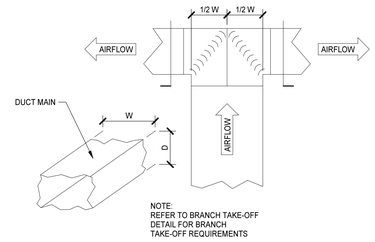


10 DUCT END OF MAIN DETAIL
NO SCALE



REFER TO SPECIFICATION SECTION 230700 FOR ADDITIONAL INFORMATION.

11 DUCT INSULATION JOINT DETAIL
NO SCALE



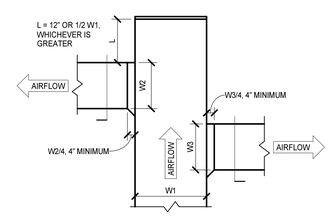
NOTE:
REFER TO BRANCH TAKE-OFF DETAIL FOR BRANCH TAKE-OFF REQUIREMENTS

NOTES:

USE WHERE "W" EXCEEDS 24" OR WHEN AIR FLOW IS IN EXCESS OF 1500 CFM.

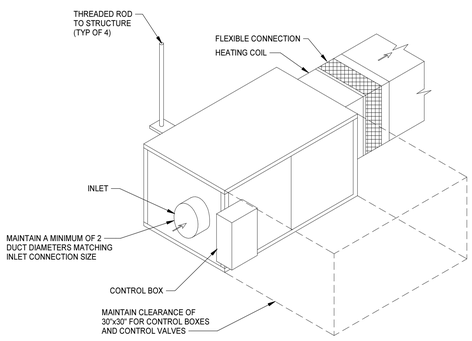
MAY BE PROPORTIONAL

12 DUCT SPLIT WITH VANES DETAIL
NO SCALE

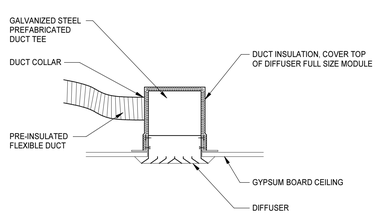


NOTE:
1. REFER TO *BRANCH CONNECTION TO DIFFUSER DETAILS* FOR BRANCH TAKE-OFF REQUIREMENTS.

13 END OF DUCT MAIN DETAIL
NO SCALE

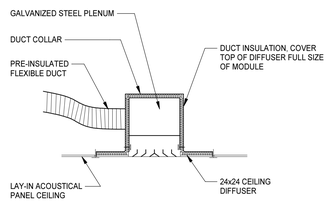


14 VAV TERMINAL UNIT DETAIL
NO SCALE

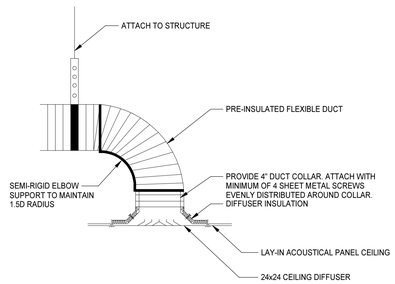


NOTE: THE DIFFUSER ASSEMBLY MAY BE SUPPORTED FROM THE CEILING FRAMING SYSTEM. THE DIFFUSER SHALL BE INSTALLED LEVEL AND TIGHT TO THE UNDERSIDE OF THE CEILING.

15 SUPPLY DIFFUSER CONNECTION GYP
NO SCALE



16 SUPPLY DIFFUSER CONNECTION LAYIN
NO SCALE



17 SUPPLY DIFFUSER CONNECTION LAYIN-COLLAR
NO SCALE

MOSELEY ARCHITECTS
911 N. WEST STREET, SUITE 205 RALEIGH, NORTH CAROLINA 27603
PHONE (919) 840-0091
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NORTH CAROLINA PROFESSIONAL SEAL 050937 ENGINEER JEFFREY J LEMMON 3/10/23

MOSELEY ARCHITECTS PROFESSIONAL CORPORATION C-3469 RALEIGH, NC

ALDERMAN AND KING HALL RENOVATIONS - KING HALL

University of North Carolina Wilmington
SCO#22-24639-01A
601 Hamilton Drive, Wilmington, NC 28403

PROJECT NO: 620589
DATE: FEBRUARY 10, 2023

REVISIONS	
DATE	DESCRIPTION

DETAILS

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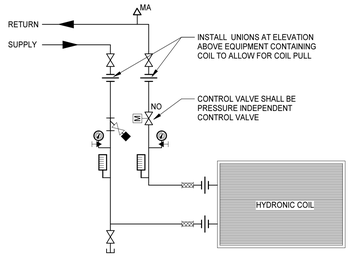
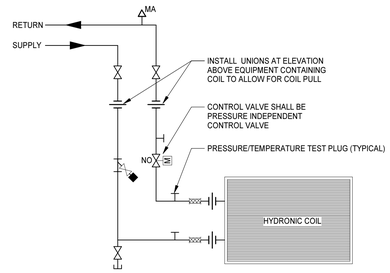
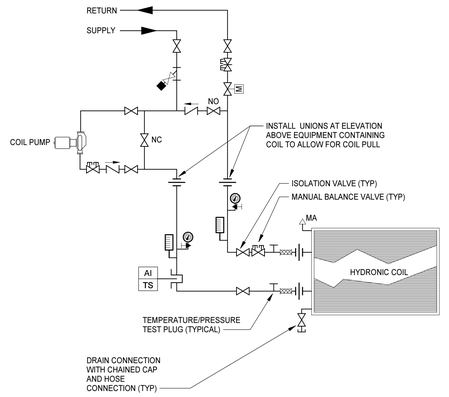


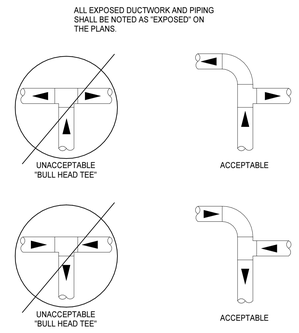
1 COOLING COIL PIPING DIAGRAM - AHU
NO SCALE



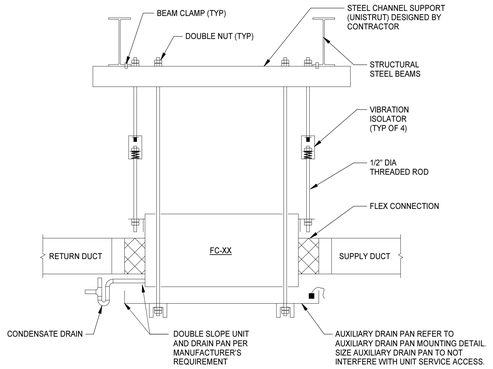
2 HYDRONIC COIL PIPING DIAGRAM - TERMINAL EQUIPMENT
NO SCALE



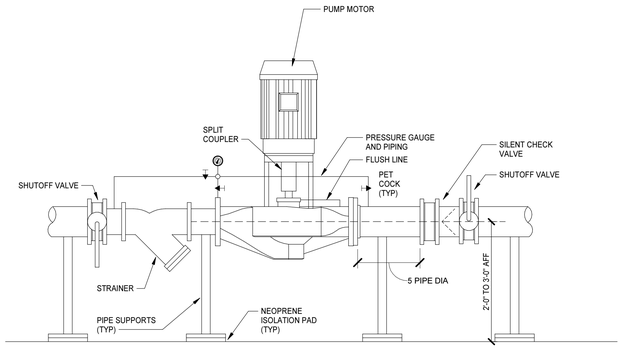
3 PRE-HEAT COIL PIPING DIAGRAM - AHU
NO SCALE



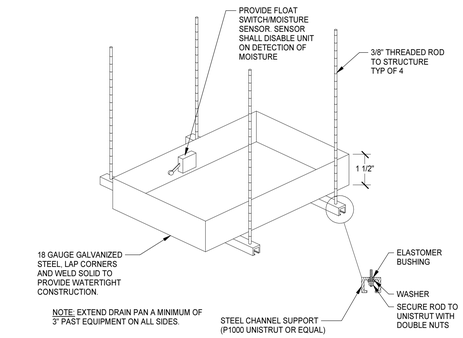
4 PIPE TEE CONFIGURATION DETAIL
NO SCALE



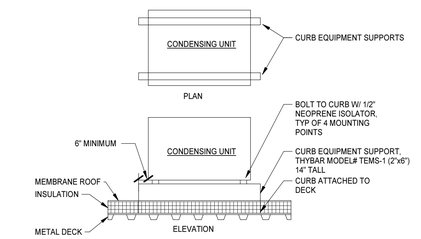
5 FAN COIL UNIT DETAIL (FC-XX)
NO SCALE



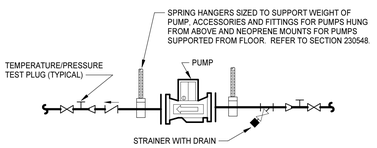
6 VERTICAL INLINE PUMP DETAIL - VARIABLE FLOW
NO SCALE



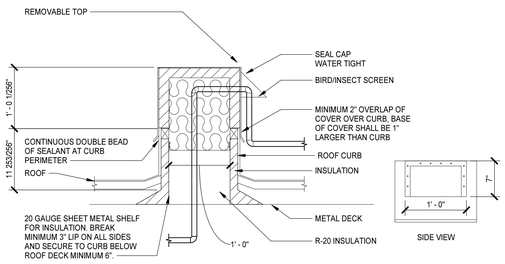
7 AUXILIARY DRAIN PAN MOUNTING DETAIL
NO SCALE



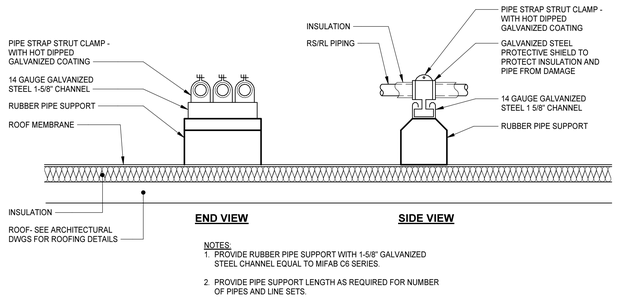
8 CONDENSING UNIT MOUNTING DETAIL
NO SCALE



9 IN LINE PUMP INSTALLATION DETAIL
NO SCALE



10 REFRIGERANT PIPE PENETRATION DETAIL
NO SCALE



11 REFRIGERANT ROOF PIPE SUPPORT DETAIL
NO SCALE

MOSELEYARCHITECTS
911 N. WEST STREET, SUITE 205 RALEIGH, NORTH CAROLINA 27603
PHONE (919) 840-0091
MOSELEYARCHITECTS.COM

NORTH CAROLINA PROFESSIONAL SEAL 050937 ENGINEER BETTY J LEMMON 3/10/23

MOSELEY ARCHITECTS PROFESSIONAL CORPORATION C-3469 NORTH CAROLINA RALEIGH, NC

ALDERMAN AND KING HALL RENOVATIONS - KING HALL

University of North Carolina Wilmington
SCO#22-24639-01A
601 Hamilton Drive, Wilmington, NC 28403

PROJECT NO: 620589
DATE: FEBRUARY 10, 2023

REVISIONS	
DATE	DESCRIPTION

DETAILS

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J I H G F E D C B A
1 2 3 4 5 6 7 8 9 10

CONTROL PANEL SCHEDULE

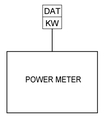
Mark	NUMBER	NAME	SERVING	NOTES
AHU-3A	M201	MECH		
AHU-3B	M201	MECH		
BC-00	M101	MECH	MAIN BUILDING CONTROLLER	
BC-01	M102	MECH	AHU-1	
BC-02	M103	MECH	AHU-2	
BC-03	M201	MECH	AHU-3	
BC-04	M100	MECH/ELEC	CHILLED WATER SYSTEM	
BC-05	M101	MECH	HOT WATER SYSTEM	
TU-XFMR-1	M102	MECH	AHU-1 TERMINAL UNITS	TRANSFORMER BANK FOR 24V POWER TO TERMINAL UNITS
TU-XFMR-2	M103	MECH	AHU-2 TERMINAL UNITS	TRANSFORMER BANK FOR 24V POWER TO TERMINAL UNITS
TU-XFMR-3	M201	MECH	AHU-3 TERMINAL UNITS	TRANSFORMER BANK FOR 24V POWER TO TERMINAL UNITS

SEQUENCES OF CONTROL: CIRCUIT POWER MONITORING:

A. Switchboard Monitoring: The BAS shall monitor main distribution panel KW, KWH and phase continuously as indicated. A communication interface, coordinated with Division 26 shall be used. Refer to section 262416 for additional requirements.

B. Phase: The BAS shall monitor for phase failure continuously. On a loss of phase the BAS shall turn off all three-phase equipment.

C. Records: For each of the three load types, records shall be maintained for each function as follows:
1. Daily:
   a. The following records shall be maintained for the building:
      1. At 12:00 AM, the BAS shall record the KW demand every 10 minutes. Records shall be maintained for the previous 30 days.
      2. At 12:00 AM, the BAS shall record the KWH used in the previous 24 hours. This record shall be kept for two years.
      3. At 12:00 AM, the BAS shall record the highest KW demand for the previous 24 hours. This record shall include the date and time. This record shall be kept for two years.
2. Weekly:
   a. The following records shall be maintained for the building:
      1. On the 1st day of the week at 12:01 AM, the BAS shall record the KWH used that week. This record shall be kept for the life of the building.
      2. On the 1st day of the week at 12:01 AM, the BAS shall record the highest KW demand for the previous week. The record shall include the date and time. This record shall be kept for the life of the building.
3. Monthly:
   a. The following records shall be maintained for the building:
      1. On the 1st of the month at 12:01 AM, the BAS shall record the KWH used that month. This record shall be kept for the life of the building.
      2. On the 1st of the month at 12:01 AM, the BAS shall record the highest KW demand for the previous month. The record shall include the date and time. This record shall be kept for the life of the building.
4. Annually:
   a. The following records shall be maintained for the building:
      1. On January 1st of each year at 12:01 AM, the BAS shall record the highest KW demand for the previous year. The record shall include the date and time. This record shall be kept for the life of the building.
      2. On January 1st of each year at 12:01 AM, the BAS shall record the total KWH used during the previous year. This record shall be kept for the life of the building.



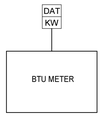
3 POWER METERING
NO SCALE

SEQUENCES OF CONTROL: THERMAL ENERGY MONITORING:

A. Chilled Water Use Monitoring: The BAS shall monitor chilled water flow in GPM continuously and building supply and return chilled water temperatures in °F to calculate BTU/HR and of chilled water continuously. BAS records shall be archived as indicated.

B. Hot Water Use Monitoring: The BAS shall monitor heating hot water flow in GPM continuously and building supply and return chilled water temperatures in °F to calculate BTU/HR and of chilled water continuously. BAS records shall be archived as indicated.

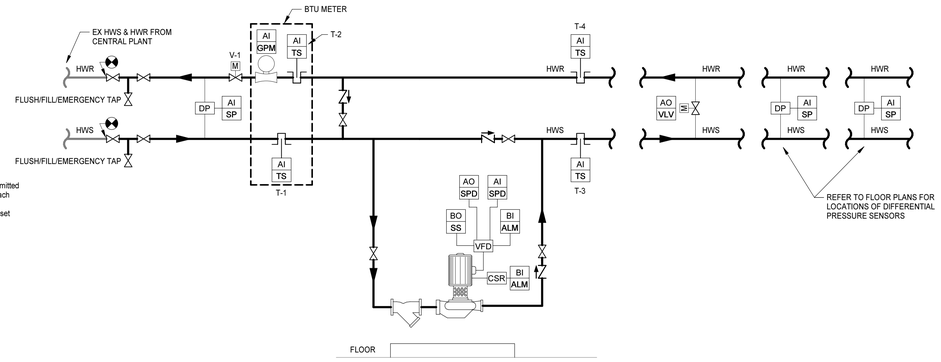
C. Records: For the chilled water and heating hot water , records shall be maintained for each function as follows or as otherwise directed by the owner:
1. Daily:
   a. The following records shall be maintained for the building:
      1. At 12:00 AM, the BAS shall record the KBTUs used in the previous 24 hours. This record shall be kept for two years.
2. Weekly:
   a. The following records shall be maintained for the building:
      1. On the 1st day of the week at 12:01 AM, the BAS shall record the KBTU's used that week. This record shall be kept for the life of the building.
3. Monthly:
   a. The following records shall be maintained for the building:
      1. On the 1st of the month at 12:01 AM, the BAS shall record the KBTU's used that month. This record shall be kept for the life of the building.
4. Annually:
   a. The following records shall be maintained for the building:
      1. On January 1st of each year at 12:01 AM, the BAS shall record the total KBTU's used during the previous year. This record shall be kept for the life of the building.



4 THERMAL ENERGY MONITORING
NO SCALE

SEQUENCES OF CONTROL: CENTRAL HEATING HOT WATER:

A. General: Hot water shall be produced by existing campus hot water plant. Hot water supply and return shall be piped from the existing loop to the mechanical room on the first floor. Hot water is pumped to coils throughout the building and then returned to the campus hot water loop.
B. Initial Set points:
1. Hot Water Return Temperature: 100°F
2. Hot Water Supply Temperature: 130°F
C. Modes of Operation:
1. Standard Operation:
   a. Hot water return control valve V-1 shall modulate to maintain the loop leaving water temperature, as measured by T-2, back to the plant at 100°F (adj).
2. Failure and Alarms:
   a. When a valve fails to open or fails to close an alarm shall be generated to the BAS
3. Pump Failure:
   a. Should the hot water pump fail, or it be off for any reason, the loop return control valve V-1 shall open fully. Each coil valve shall operate under it's normal operation to provide heating as required.
4. System Startup: On a call for heating by any hot water coil, the hot water system shall be started.
5. System Shutdown: Upon a closure of all hot water valves, the hot water pump shall be disabled.
D. Hot Water Pump Operation
1. On a call for heating, the hot water pump shall be started. The hot water pump shall be controlled as follows.
   a. Hot water pump control: The BAS shall start and stop the hot water pump and modulate its speed as required by system demands. The system shall maintain differential pressure as transmitted by remote pressure differential transmitters. The BAS shall have field programmable independent set points, the value of which shall be the optimum differential pressure as designed for each remote location. Minimum pump run time shall be 15 minutes.
   b. Minimum flow control: The system minimum flow shall be maintained by a 2-way bypass valve. If the pump is at minimum speed, and the differential pressure in the loop increases above set point, than the bypass valve shall be modulated open to maintain the system differential pressure sensors at set point.
      1. If the pump is at the minimum speed and the bypass valve is open for 15 minutes (adj), then the pump shall be disabled, and the bypass valve closed. The building shall run on plant pressure alone.
      2. If the differential pressure drops below setpoint for 15 minutes (adj), then the pump shall restart and shall follow the sequence above.
2. The control system shall include a failure alarm for the hot water pump. Pump failure alarm shall be a high level alarm to the BAS.
E. System shutdown: On a fall in demand and there are no heating coils calling for hot water, the hot water system shall be deactivated
F. Temperatures for building hot water supply/return and loop supply/return as sensed by temperature sensors shall be indicated on the BAS head end graphics.
G. Control Points / Set points
1. Control Points
   a. Hot water supply temperature, campus loop (T-1)
   b. Hot water return temperature, campus loop (T-2)
   c. Hot water supply temperature, building (T-3)
   d. Hot water return temperature, building (T-4)
   e. Hot water flow, loop
   f. Hot water pump speed
   g. Hot water pump on/off status
   h. Hot water differential pressure, campus loop
   i. Hot water zone differential pressure 1
   j. Hot water zone differential pressure 2



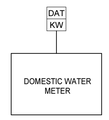
HWP-1
VARIABLE FLOW CHILLED WATER PUMP

2 HOT WATER SYSTEM SCHEMATIC
NO SCALE

SEQUENCES OF CONTROL: DOMESTIC WATER USE MONITORING:

A. General: The BAS shall monitor domestic water flow in total volume and instantaneous flow rate continuously. A communication interface shall be used. The BAS shall communicate with this device and be capable of receiving and sending data to be viewed at the head end graphics. The communication interface shall have direct Modbus by the meter manufacturer. The BAS shall record the following parameters:
a. Totalized Volume.
b. Instantaneous Flowrate.

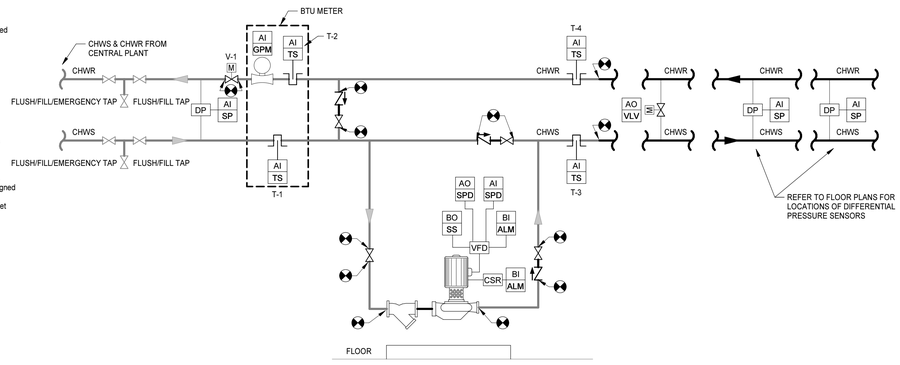
B. Records: For the chilled water and heating hot water , records shall be maintained for each function as follows or as otherwise directed by the owner:
1. Daily:
   a. The following records shall be maintained for the building:
      1. At 12:00 AM, the BAS shall record the gallons used in the previous 24 hours. This record shall be kept for two years.
2. Weekly:
   a. The following records shall be maintained for the building:
      1. On the 1st day of the week at 12:01 AM, the BAS shall record the gallons used that week. This record shall be kept for the life of the building.
3. Monthly:
   a. The following records shall be maintained for the building:
      1. On the 1st of the month at 12:01 AM, the BAS shall record the gallons used that month. This record shall be kept for the life of the building.
4. Annually:
   a. The following records shall be maintained for the building:
      1. On January 1st of each year at 12:01 AM, the BAS shall record the total gallons used during the previous year. This record shall be kept for the life of the building.



7 DOMESTIC WATER USE MONITORING
NO SCALE

SEQUENCES OF CONTROL: CENTRAL CHILLED WATER:

A. General: Chilled water shall be produced by existing campus chilled water plant. Chilled water supply and return shall be piped from the existing loop to the mechanical room on the first floor. Chilled water is pumped to coils throughout the building and then returned to the campus chilled water loop.
B. Initial Set points:
1. Chilled Water Return Temperature: 60°F
2. Chilled Water Supply Temperature: 42°F
C. Modes of Operation:
1. Standard Operation:
   a. Chilled water return control valve V-1 shall modulate to maintain the loop leaving water temperature, as measured by T-2, back to the plant at 60°F (adj).
2. Failure and Alarms:
   a. When a valve fails to open or fails to close, or when a pump fails, an alarm shall be generated to the BAS.
3. System Startup: On a call for cooling by any chilled water coil, the chilled water system shall be started.
4. Pump Failure:
   a. Should the chilled water pump fail, or it be off for any reason, the loop return control valve V-1 shall open fully. Each coil valve shall operate under it's normal operation to provide cooling as required.
D. Chilled Water Pump Operation:
1. On a call for cooling the chilled water pump shall be started. The chilled water pump shall be controlled as follows.
   a. Chilled water pump control: The BAS shall start and stop the chilled water pump and modulate its speed as required by system demands. The system shall maintain differential pressure as transmitted by remote pressure differential transmitters. The BAS shall have field programmable independent set points, the value of which shall be the optimum differential pressure as designed for each remote location. Minimum pump run time shall be 15 minutes.
   b. Minimum flow control: The system minimum flow shall be maintained by a 2-way bypass valve. If the pump is at minimum speed, and the differential pressure in the loop increases above set point, than the bypass valve shall be modulated open to maintain the system differential pressure sensors at set point.
      1. If the pump is at the minimum speed and the bypass valve is open for 15 minutes (adj), then the pump shall be disabled, and the bypass valve closed. The building shall run on plant pressure alone.
      2. If the differential pressure drops below setpoint for 15 minutes (adj), then the pump shall restart and shall follow the sequence above.
2. The control system shall include a failure alarm for the chilled water pump. Pump failure alarm shall be a high level alarm to the BAS.
E. System shutdown: On a fall in demand so no cooling coil is calling for chilled water, the chilled water system shall be deactivated and the building chilled water isolation valve shall be closed.
F. Temperatures for building chilled water supply/return and loop supply/return as sensed by temperature sensors shall be indicated on the BAS head end graphics.
G. Control Points / Set points
1. Control Points
   a. Chilled water supply temperature, campus loop (T-1)
   b. Chilled water return temperature, campus loop (T-2)
   c. Chilled water supply temperature, building (T-3)
   d. Chilled water return temperature, building (T-4)
   e. Chilled water flow, campus loop
   f. Chilled water pump speed
   g. Chilled water pump on/off status
   h. Chilled water differential pressure, campus loop
   i. Chilled water zone differential pressure 1
   j. Chilled water zone differential pressure 2



CHWP-1
VARIABLE FLOW CHILLED WATER PUMP

1 CHILLED WATER SYSTEM SCHEMATIC
NO SCALE

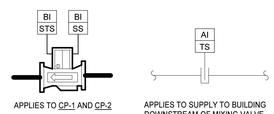
SEQUENCES OF CONTROL: DOMESTIC CIRCULATING PUMPS

A. Initial Set Points:
   1. Occupied hours: Pump On
B. Unoccupied hours: Pump Off

C. During occupied and unoccupied hours the BAS shall command the pump to set point. A separate schedule should be adjustable at the head end graphics to vary circulating pump operation hours.

SEQUENCES OF OPERATION: DOMESTIC HOT WATER TEMPERATURE

A. Description: The domestic hot temperature shall be monitored downstream of the thermostatic mixing valve. If the temperature rises above the high limit set point an alarm should be indicated on the head end graphics.
B. Initial Set Points:
   a. Alarm: 140°F (Adjustable)



6 DOMESTIC WATER PUMP AND TEMPERATURE MONITORING
NO SCALE

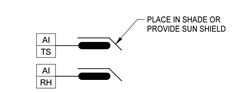
SEQUENCES OF OPERATION: OUTSIDE AIR SENSORS

A. Graphics:
   1. A system graphic similar to control diagram shall be developed and readable from the BAS head end.

B. Temperature: The BAS shall monitor outside air temperature as sensed by the outside air temperature sensor.

C. Relative Humidity: The BAS shall monitor outside air relative humidity as sensed by the outside air humidity sensor.

D. Wet Bulb:
   1. Wet bulb temperature shall be calculated based on outside dry bulb temperature and relative humidity.



5 OUTDOOR AIR SENSORS
NO SCALE

MOSELEY ARCHITECTS
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NORTH CAROLINA PROFESSIONAL SEAL 050937 ENGINEER BETH J LEMMON 3/10/23

MOSELEY ARCHITECTS, P.C. REGISTERED ENGINEERING CORPORATION C-3469 RALEIGH, NC NORTH CAROLINA

ALDERMAN AND KING HALL RENOVATIONS - KING HALL

University of North Carolina Wilmington
SCO#22-24639-01A
601 Hamilton Drive, Wilmington, NC 28403

PROJECT NO: 620589
DATE: FEBRUARY 10, 2023

REVISIONS	
DATE	DESCRIPTION

SYSTEM SCHEMATICS & CONTROLS

M6.1

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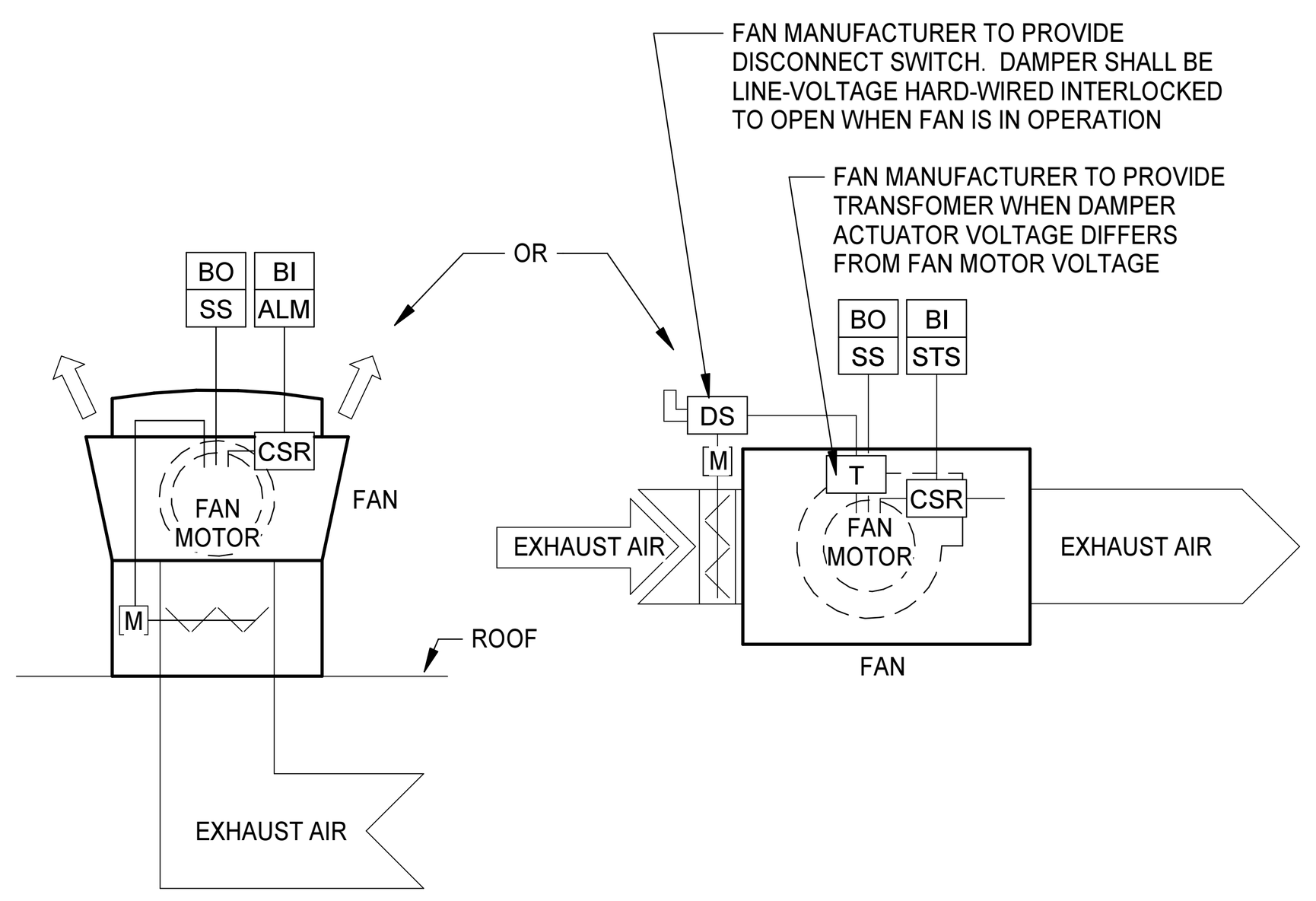


SEQUENCES OF CONTROL: INLINE EXHAUST FAN (BAS SCHEDULE)

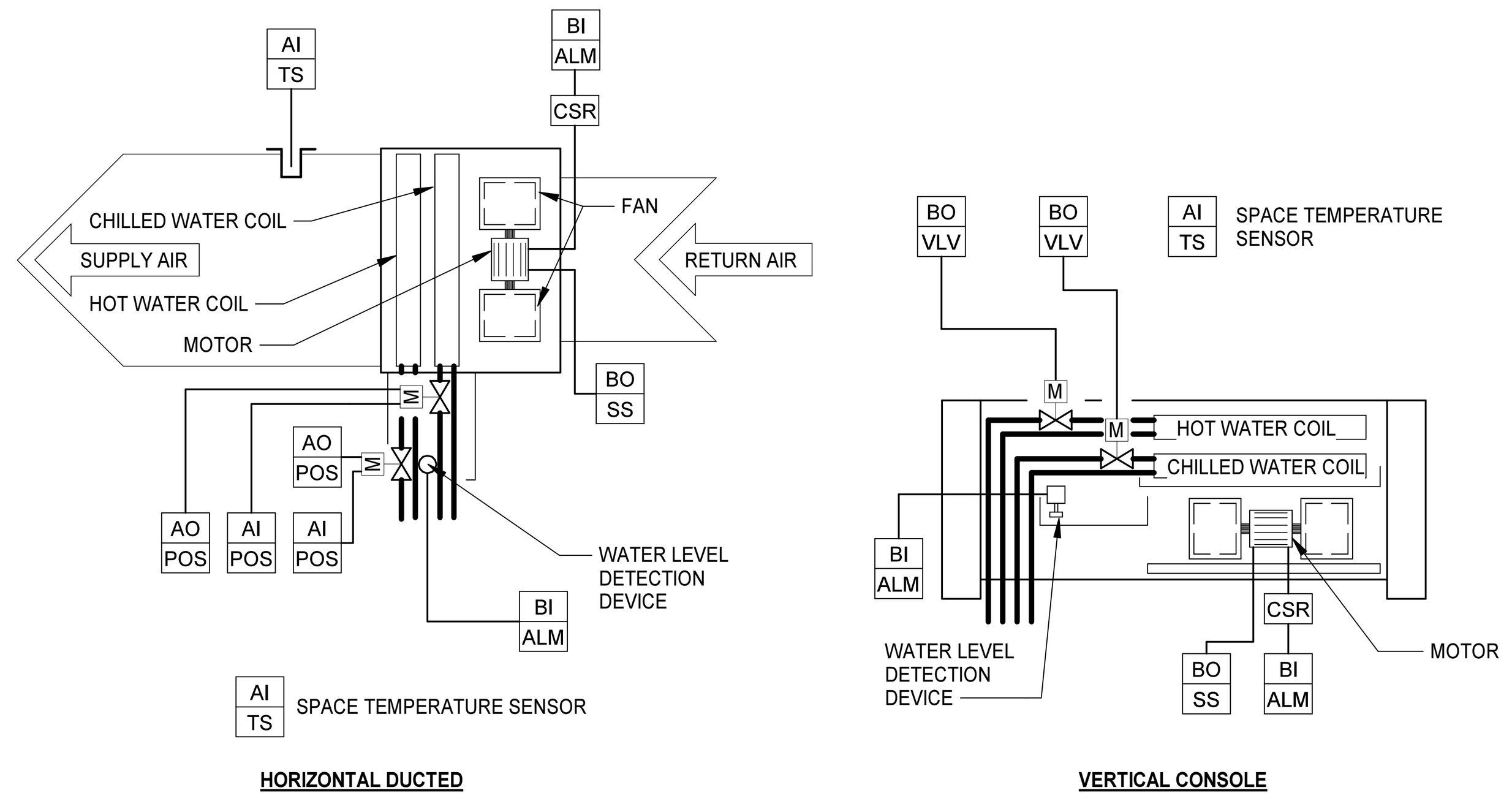
A. DESCRIPTION: Exhaust fan mounted inline at the exhaust duct termination. Ductwork connects to the inlet of the fan. The fan shall be equipped with a damper (mounted on fan inlet) and actuator located at the inlet of the fan. The damper actuator shall be directly wired to the fan motor such that the damper opens when the fan starts, however the damper actuator is not required to be directly controlled under this section (No control wiring to damper actuator).

B. Set points:
   1. Occupied mode:
      a. Fan Commanded Position: On
   2. Unoccupied:
      a. Fan Commended Position: Off

C. Start/Stop:
   1. The fan shall be Started and Stopped by the BAS on an occupancy schedule to be provided by the Owner's representative.

D. Monitoring points: The following information shall be sent to the BAS and subsequently displayed on the head end graphics.
   1. Fan alarm status:
      a. The BAS shall place the fan in alarm when the fan is commanded on, and the CSR indicates less than 66% of design power is being delivered.
      b. Examples:
         1. A broken belt.
         2. Loss of air flow.
         3. Loss of motor.

2 IN LINE EXHAUST FAN - BAS SCHEDULE
NO SCALE



SEQUENCES OF CONTROL: FAN COIL UNIT

A. General: These units are provided to control conditions in stairwells and consist of a fan, cooling coil and heating coil.

B. Initial Set Points:
   1. Space Temperature:
      a. Occupied:
         1. Cooling: 75°F.
         2. Heating: 70°F.
      b. Unoccupied:
         1. Cooling: 85°F.
         2. Heating: 55°F.

C. Space Temperature Control:
   1. Cooling: On a rise in space temperature above set point (as sensed by the space temperature sensor), the BAS shall start the fan and modulate the cooling coil control valve open. On a fall to set point, the valve shall close and the fan shall stop.
   2. Heating: On a fall in space temperature below set point (as sensed by the space temperature sensor), the BAS shall start the fan and modulate the heating coil control valve open. On a rise to set point, the valve shall close and the fan shall stop.

D. The BAS shall monitor the drain pan float water level detection device in each fan coil units' condensate drain pan. If the drain pan is not draining properly and raises to activate the water level detection device, cooling shall be disabled and an alarm issued to the head end.

E. Fan Failure Alarm: Should the supply fan fail (as sensed by its current sensing relay), an alarm shall be sent to the head end identifying the unit and stating that the supply fan has failed or air flow has ceased. The unit shall be disabled.

3 FAN COIL UNIT
NO SCALE

SEQUENCES OF CONTROL: TERMINAL UNIT WITH REHEAT COIL (VAV HEATING)

A. DESCRIPTION: Cooling & heating with modulating hot water heating coil, ceiling mounted, primary air control, variable air volume terminal unit. The unit contains a characterized damper, a pitot type velocity measuring device with transducer, and a hot water heating coil. The velocity of air, as sensed by the velocity sensor/transducer combination using a calculation with a known diameter provides flow (CFM) information to the BAS. The temperature of the space, as sensed by the space temperature sensor, allows the controller to determine the required CFM for cooling, and whether to open or close the hot water control valve.

B. Set points
   1. Occupied Mode:
      a. Air Valve Minimum Air Flow: As scheduled.
      b. Cooling: 75° F (Adj)
      c. Heating: 70° F (Adj)
      d. CO2: 1000 ppm
   2. Standby Mode: AHU Occupied Mode, Occupancy Sensor Unoccupied for Terminal Unit:
      a. Air Valve Minimum Air Flow: As scheduled.
      b. Cooling: 77°F (Adj)
      c. Heating: 68°F (Adj)
   3. Unoccupied Mode (Primary Unit Off):
      a. Air Valve Minimum Air Flow: 20% of design maximum airflow.
      b. Cooling: 80° F (Adj)
      c. Heating: 60° F (Adj)
      d. CO2: NA

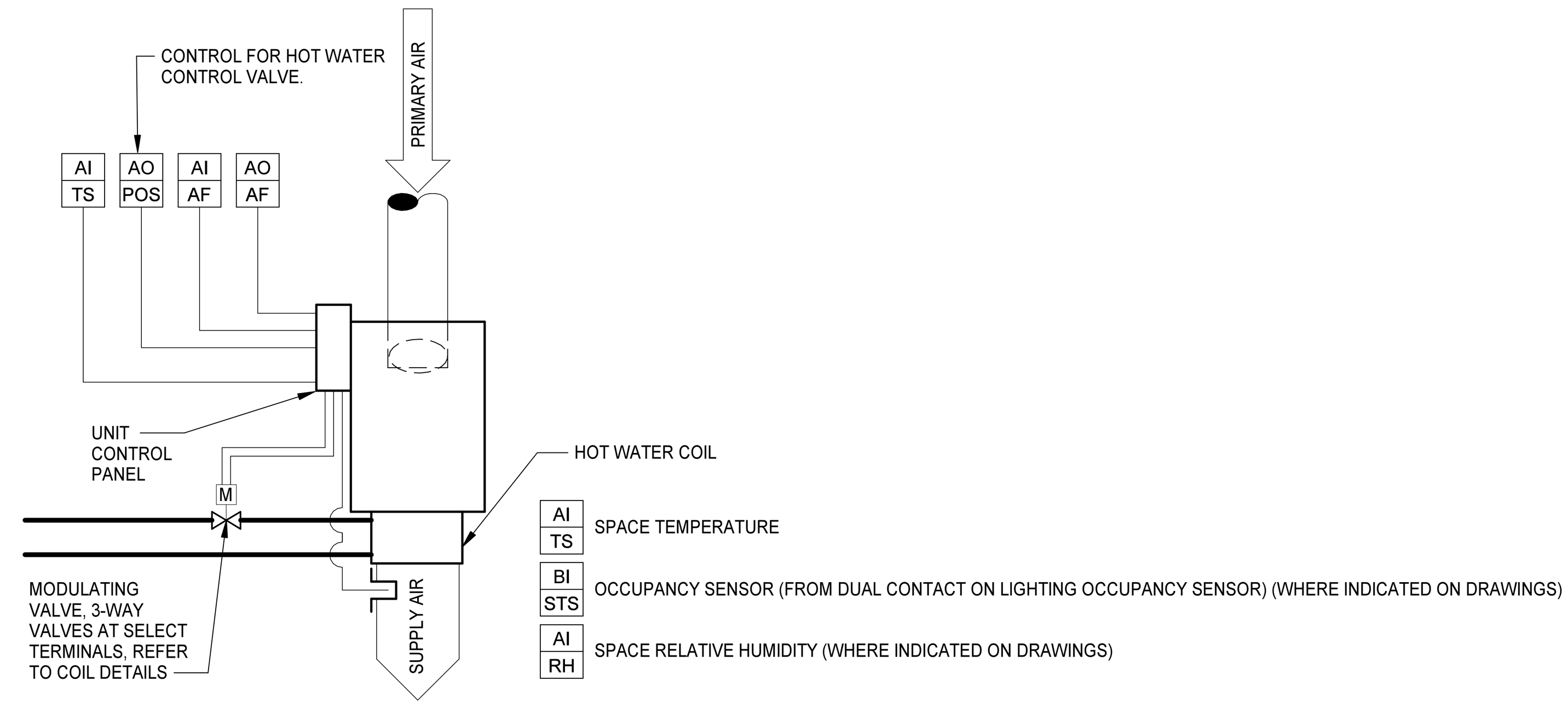
C. Cooling:
   1. On a rise in space temperature, as sensed by the space temperature sensor, above the cooling set point, the BAS shall modulate the terminal unit air valve open in response to the increase in space temperature until the maximum cooling indicated CFM is reached.
   2. On a fall in space temperature, as sensed by the space temperature sensor, the reverse shall occur until the minimum cooling indicated CFM is reached.

D. Heating:
   1. On a fall in space temperature, as sensed by the space temperature sensor, the BAS shall modulate open the hot water control valve to maintain leaving air temperature at set point as the first stage of heat with the air valve at the minimum airflow. Upon a continued fall in temperature the air valve shall be modulated from minimum to maximum heating airflow to maintain space temperature.
      a. If the associated air handling unit has chilled water cooling enabled, the maximum heating airflow shall be limited to 30% of the cooling maximum airflow or the box minimum flow, whichever is higher. If further heating capacity is needed (spaces cannot maintain set point for longer than 15 mins), the leaving air temperature shall be reset up where hot water valve can fully open.
   2. On a rise in space temperature, as sensed by the space temperature sensor, the reverse shall occur.

E. Air Valve Minimum Reset based on Occupancy Sensor (For terminal units with occupancy sensor input): The BAS shall monitor the auxiliary contact of the lighting occupancy sensor in each space indicated with an occupancy sensor. If the occupancy sensor senses movement, the terminal unit shall be set to the occupied mode with the sequences and setpoints listed above. If the occupancy sensor does not sense movement for it's schedule delay time, the BAS shall receive the vacancy signal from the lighting sensor and the BAS shall put the terminal unit in standby mode. In standby mode, the terminal unit air valve shall be closed. If the space temperature rises or falls below the Standby space temperatures, than the terminal unit shall be opened and hot water valve modulated to maintain space temperatures at the Standby Mode set points. If occupancy is sensed in the room again, the terminal unit shall be switched to the Occupied Mode.

F. Monitoring points: The following information shall be sent to the BAS by the unitary controller and subsequently displayed on the head end graphics.
   1. Measured/calculated primary air flow.

G. Deadband: A five-degree (5°F) deadband shall always be maintained between heating and cooling set points. This shall not be an adjustable value on the head end graphics.



4 TERMINAL UNIT WITH MODULATING CONTROL OF HOT WATER HEAT
NO SCALE

SEQUENCES OF CONTROL: VAV AHU SERVING TERMINAL UNITS (AHU-1, AHU-2, & AHU-3)

A. DESCRIPTION: Commercial variable volume modular indoor unit with 100% economizer capability, variable speed supply fan(s), variable speed relief fan, hot water pre-heating coil located upstream of a chilled water cooling coil serving multiple terminal units.

B. Graphics: A system graphic similar to the proposed equipment layout shall be developed and shall be readable from the BAS head end.

C. Sensed points shall be displayed on the graphic and shall readable from the BAS head end.

D. Fan operation shall be displayed on the graphic and shall be readable from the BAS head end.

E. In all modes of operation, commanded and reported position values for all control devices shall be displayed on the graphic and shall readable from the BAS head end.

F. Initial Set Points:
   1. Occupied Mode:
      a. Supply Fan(s) Start/Stop Position: Start
      b. Maximum Supply Fan(s) Motor Speed: As required under section "Testing, Adjusting, and Balancing" to supply design maximum airflow with appropriate (not necessarily all) terminal unit dampers at maximum air flow.
      c. Minimum Supply Fan(s) Motor Speed: As required by unit manufacturer
      d. Return Damper (D-2) Position: Modulating inversely with outdoor air dampers.
      e. Relief Fan Start/Stop Position: Start (RF-2 & RF-3), Stop (RF-1)
      f. Relief Air Damper Position (D-3): Fully Open (RF-2 & RF-3), Fully Closed (RF-1)
      g. Maximum Relief Fan Motor Speed: As required to maintain the space pressurization differential cfm at set point during economizer mode.
      h. Minimum Relief Fan Motor Speed: As required by unit manufacturer.
      i. Outdoor Air Damper Position (D-1): Modulating inversely with return air dampers and as required to maintain outside airflow at set point.
      j. Minimum Unit Leaving Air Temperature: 55°F
      k. Maximum Unit Leaving Air Temperature: 65ºF
      l. Maximum Unit Leaving Air Temperature During Morning Warm Up: 75ºF
      m. High Return Air Relative Humidity: 55%
      n. Supply Fan High Positive Static Pressure Limit: 4.0" water column
      o. Supply Fan High Negative Static Pressure Limit: -6.0" water column
      p. Outside Air (CFM): Refer to Schedule on Drawings.
      q. Space Pressurization Differential (CFM): Refer to Schedule on Drawings.
      r. Space Static Pressurization: 0.05" water column (Adj)
      s. Economizer high limit temperature: 68°F
      t. Down Duct Static Pressure Setpoint Range: 0.6"-1.0" (Initially set by TAB)
      u. Space Relative Humidity: 50% RH (Adj)
   2. Unoccupied Mode:
      a. Supply Fan Start/Stop Position: Stop
      b. Maximum Supply Fan Motor Speed: As required under section "Testing, Adjusting, and Balancing" to supply design maximum airflow with appropriate (not necessarily all) terminal unit dampers at maximum air flow.
      c. Minimum Supply Fan Motor Speed: As required by unit manufacturer.
      d. Return Damper (D-2) Position: Fully Open
      e. Relief Fan Start/Stop Position: Stop
      f. Relief Air Damper Position (D-3): Fully Closed
      g. Outdoor Air Damper Position (D-1): Fully Closed
      h. Minimum Unit Leaving Air Temperature: 55°F
      i. Maximum Unit Leaving Air Temperature: 65ºF
      j. Maximum Unit Leaving Air Temperature During Morning Warm Up: 75ºF
      k. High Return Air Relative Humidity: 60%
      l. Supply Fan High Positive Static Pressure Limit: 4.0" water column
      m. Supply Fan High Negative Static Pressure Limit: -6.0" water column
      n. Space Pressurization: 0" WG
      o. Outside Air (CFM): 0
      p. Space Pressurization Differential (CFM): NA
      q. Economizer high limit temperature: 68°F
      r. Space Relative Humidity: 60% RH (Adj)

G. Supply Air Temperature Reset:

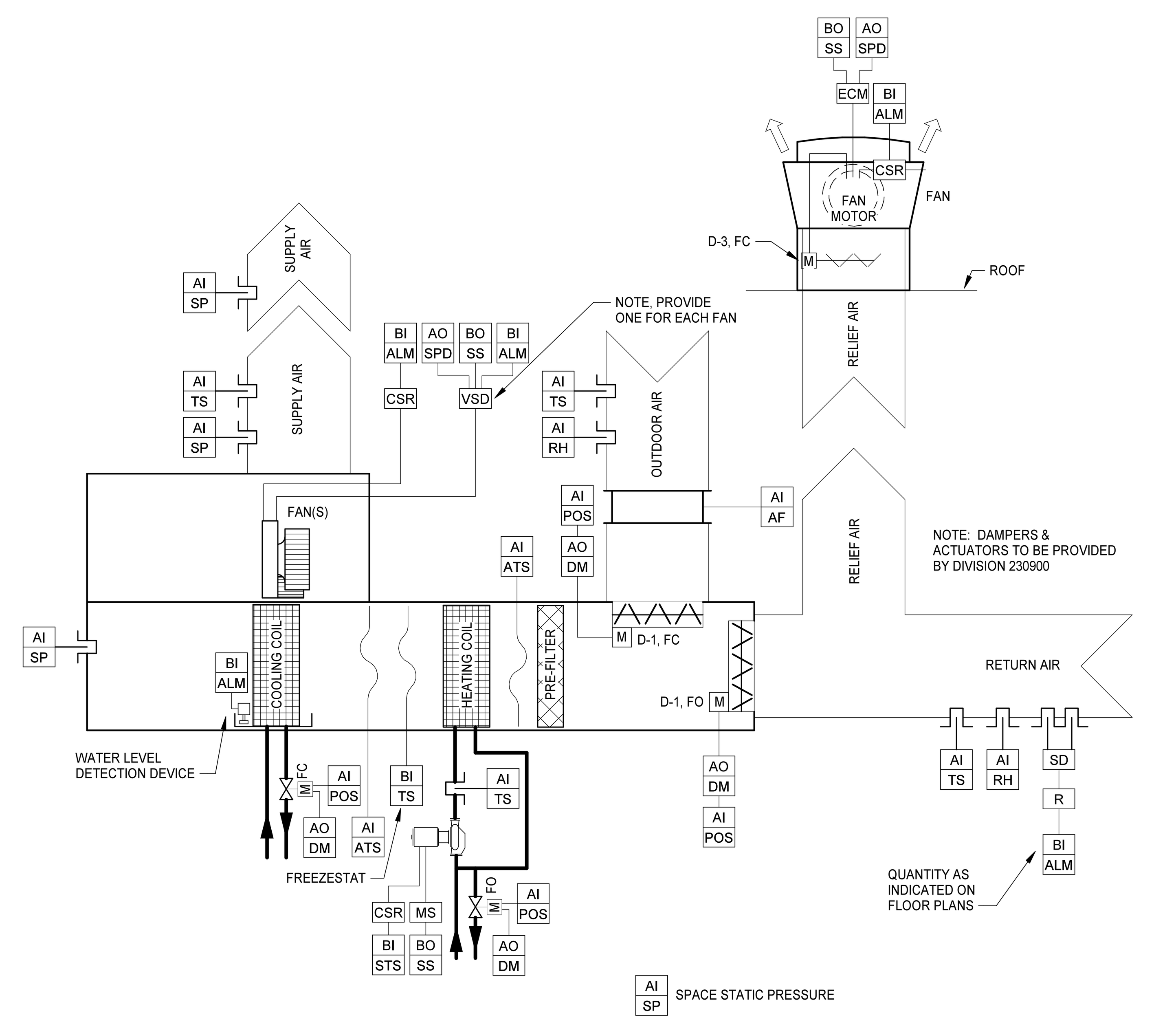
Outside Air Temperature (°F)	Leaving Air Temperature (°F)
>=90	55
85	58
80	59
75	61
70	63
<65	65

H. Start/Stop:
   1. Start: The unit shall be started in stages as follows:
      a. Stage 1: D-2 return damper shall be positioned fully open. Provide 30 Seconds for this to occur.
      b. Stage 2: The supply fan(s) shall be ramped up to operating speed and then speed shall modulate in accordance with applicable sequences.
      c. Stage 3: Operation of the entire unit shall be turned over to applicable sequences.
   2. Stop: The unit shall be stopped in stages as follows:
      a. Stage 1: Operation of the entire unit shall be taken from applicable sequences
      b. Stage 2: The supply & relief fans shall be ramped down over 15 seconds.
      c. Stage 3: The supply and relief fans shall be stopped.
      d. Stage 4: D-1 outdoor air damper shall be positioned fully closed. Provide 30 Seconds for this to occur
      e. Stage 5: D-2 recirculation damper shall remain fully open.
      f. Stage 6: Operation of the entire unit shall be turned over to applicable sequences.
   3. Emergency stop: Perform all stop stages at once.
   4. Occupied Mode Operation: During occupied hours the unit shall be started, the supply fan(s) shall be running, the cooling and heating coils shall be active with their valves modulating in accordance with applicable sequences below, and dampers shall modulate in accordance with applicable sequences below.
   5. Unoccupied Mode: During unoccupied hours, the unit shall be stopped, the supply fan(s) shall be de-energized, the heating coil control valve shall continue to modulate in accordance with applicable sequences below, the cooling coil control valve shall be closed, the return damper (D-2) shall be open, and the outdoor air damper (D-1) shall be closed.

I. Operational Overrides:
   1. Unoccupied Heating: During unoccupied mode operation should two or more terminal units require heating the BAS shall start the air handling unit with the supply air temperature at maximum set point until all the terminal units space temperature sensors indicate that space temperature has risen to 5°F above the unoccupied heating space temperature set point, at which time the BAS shall return the air handling unit to normal unoccupied mode operation.
   2. Unoccupied Cooling: During unoccupied mode operation should two or more terminal unit require cooling, the BAS shall start the air handling unit with the supply air temperature at minimum set point until all the terminal units space temperature sensors indicate that space temperature has fallen to 5°F below the unoccupied cooling space temperature set point, at which time the BAS shall return the air handling unit to normal unoccupied mode operation.
   3. Morning Warm up Operation: The BAS shall optimize early start of the unit in warm-up mode. The unit shall be started early enough for spaces to reach their occupied space heating set points a minimum of 30 minutes prior to occupied time. During warm up the relief and exhaust fan shall remain off, the supply fan shall be ramped up to satisfy all terminal units, the return damper fully open and all other dampers shall remain closed. Leaving air temperature shall be reset to its maximum morning warm up set point until occupied time when the BAS shall place the unit in occupied mode operation. During morning warm up terminal units shall be allowed to go from 100% maximum design airflow down to closed air valve position to prevent overheating interior zones.
   4. Morning Cool down Operation: The BAS shall optimize the early start of the unit in cool-down mode. The unit shall be started early enough for spaces to reach their occupied space cooling set points a minimum of 30 minutes prior to the occupied time. During cool down the relief and exhaust fans shall remain off, the supply fan shall be ramped up to satisfy all terminal units, the return damper fully open and all other dampers shall remain closed. Leaving air temperature shall be reset to its minimum set point until occupied time when the BAS shall place the unit in occupied mode operation. During morning cool down terminal units shall be allowed to go from 100% maximum design airflow down to closed air valve position to prevent overcooling zones.
   5. Unoccupied Dehumidification: During unoccupied mode operation should any of the space humidity sensors rise above the unoccupied humidity setpoint (60% RH adjustable), then the air handling unit shall run in the dehumidification mode. The outdoor air dampers shall remain closed during unoccupied dehumidification mode, unless economizer conditions exist. Refer to Dehumidification mode sequence for additional details.

J. Supply Fan(s) Control:
   1. During unoccupied hours, the fan(s) shall be cycled as necessary to maintain worst case zone set points. When fan is cycled on, control shall be similar to occupied operation.
   2. During occupied hours, the BAS shall start the supply fan at its minimum speed. The required speed shall be determined by the equipment manufacturer and shall be instituted as the minimum fan speed.
   3. Speed Control:
      a. A static pressure sensor shall be located as indicated on drawings two-thirds down main medium pressure duct. The static pressure sensor shall function as the control input to the BAS (and thus to the supply fan VFD(s)) such that a fall in down-duct static pressure will result in a proportional increase in supply fan speed to maintain set point. The static pressure set point shall be determined in accordance with "Down-duct Static Pressure Set Point" below. On a rise in down-duct static pressure, the reverse shall occur. Initial maximum static pressure set-point shall be 1.0 inches W.G. and shall be adjustable. Initial minimum static pressure set-point shall be 0.6" W.G. and shall be adjustable.
      b. Down-duct Static Pressure Set Point: The BAS shall continuously monitor the damper position (air valve) of all terminal units. When any damper opens beyond the maximum set point (initially 95%), the BAS shall reset the down-duct static pressure set point upward by 5% (adjustable) of the maximum static pressure set point. This shall occur at 10 minute (adjustable) intervals until no damper is more than 95% open, or the static pressure set point has been reset upward to the system maximum setting, or the VFD is at its maximum setting. When all dampers are opened less than the minimum set point (initially 85%), the BAS shall reset the down-duct static pressure set-point downward by 5% (adjustable) of the maximum system static pressure set point. This shall occur at 10 minute (adjustable) intervals until any damper is more than 85% open, or the VFD is at its minimum setting.
      c. High limit static pressure sensor is located in the supply fan discharge and shall function as a safety input to the BAS. An increase in fan discharge static pressure above set point shall cause the BAS to stop the supply fan. An alarm shall be sent to the BAS that the unit has been shut down due to fan excessive supply static pressure.
      d. High limit negative static pressure sensor is located upstream of the supply fan and shall function as a safety input to the BAS. An increase in fan suction static pressure above set point shall cause the BAS to stop the supply fan. An alarm shall be sent to the BAS that the unit has been shut down due to excessive suction pressure.
   4. Motor Speed Percentage: Fan motor speed shall be reported to the BAS as a percentage of full speed and it shall be indicated on the head end graphics.
   5. Drive Malfunction: Should the VFD malfunction as indicated by drive alarm circuit, an alarm shall be sent to the head end. The fan shall continue to operate unless deactivated by the VFD protection circuitry.
   6. Fan Failure Alarm: Should the supply fan fail (sensed by the VFD), the unit shall be disabled, and an alarm shall be sent to the head end identifying the unit and stating that the supply fan has failed.
   7. For AHU-3, Supply fans shall be operated in parallel with the same speed input at all times.

K. Relief Fan Control:
   1. Unoccupied: If the fan is already stopped it shall remain stopped. Otherwise the BAS shall ramp the fan down to minimum speed over 30 seconds before the stop command is issued.
   2. During occupied mode, the BAS shall ramp the fan up to minimum speed over 30 seconds and then shall modulate fan speed as indicated below. When stopping, the fan shall be ramped down to minimum speed over 30 seconds before the stop command is issued. Fan RF-1 shall be off during normal occupied mode. Fan RF-1 shall only be used during economizer operation.
   3. Speed Control:
      A. Occupied (Normal Operation): The BAS shall maintain the fan at the set speed (as determined during system testing and balancing).
      B. Occupied (Economizer Operation): The BAS shall modulate relief fan speed to maintain building static pressure at set point.
      C. Unoccupied: The fan shall be off.
   4. Motor Speed Percentage: Fan motor speed shall be reported to the BAS as a percentage of full speed and shall be indicated on head end graphics.
   5. Drive Malfunction: Should the VFD/ECM malfunction as indicated by drive alarm circuit, an alarm shall be sent to the head end. The fan shall continue to operate unless deactivated by the VFD/ECM's protection circuitry.
   6. Fan Failure Alarm: Should the relief fan fail (as sensed by its current sensing relay), an alarm shall be sent to the head end identifying the unit and stating that the relief fan has failed or air flow has ceased. The unit shall be placed in unoccupied mode and maintain occupied temperature set points.



M. Cooling Coil Control Valve:
   1. If the cooling coil control valve is commanded open the hot water coil control valve shall be closed.
   2. The valve shall modulate to maintain unit leaving air temperature at set point. On a rise in unit discharge air temperature the valve will modulate towards open. On a fall in unit discharge air temperature the valve will modulate towards closed.
   3. Unit Leaving Air Temperature: Leaving air temperature shall be sensed by a temperature sensor located in the unit discharge or in the supply air duct.

N. Heating Coil Control Valve:
   1. If the heating coil control valve is commanded open the chilled water coil control valve shall be closed.
   2. The valve shall modulate to maintain unit leaving air temperature at set point. On a rise in unit discharge air temperature the valve will modulate towards closed. On a fall in unit discharge air temperature the valve will modulate towards open.
   3. Unit Leaving Air Temperature: Leaving air temperature shall be sensed by a temperature sensor located in the unit discharge or in the supply air duct.

O. Heating Coil Pump:
   1. If the heating coil control valve is commanded open, the heating coil circulation pump shall be commanded on.
   2. The pump shall be constant volume and commanded on whenever heating is required. The coil control valve shall modulate to introduce heat as required to maintain unit discharge air temperature. Pump shall be enabled in accordance with the freeze protection sequences below.
   3. If the pump fails to start, a high-level alarm shall be sent to the head end, the outside air damper shall be closed, the return damper shall be fully opened, the relief fan and damper shall be off and closed.

P. Leaving Air Temperature Reset:
   1. The supply air temperature setpoint will be reset between 55°F and 65°F in accordance with the Supply Air Temperature Reset schedule. The BAS will reset the supply air temperature setpoint based on the current outside air temperature, but will override this reset function and return the supply air temperature setpoint to the minimum if more than two (adj.) zones begin to overheat. Also, the BAS will override this reset function whenever outdoor dew point is higher than 60.0 deg. F (adj.) or indoor humidity is higher than 60% RH (adj.).

Q. Dehumidification Mode: During occupied or unoccupied operation when the space humidity (as sensed by any of the space sensors) rises above set point, the unit shall be placed in dehumidification mode. The BAS shall reset the leaving air temperature set point to minimum. The unit shall remain in dehumidification mode until the space relative humidity drops to 5% RH below set point for all sensors at which time the BAS shall return to normal leaving air temperature reset control or unoccupied operation. Refer to applicable paragraphs for operation of valves, dampers, and fans.

R. Economizer Mode: Whenever outside air enthalpy is less than the return air enthalpy and cooling is required, economizer operation shall be enabled. The unit shall modulate outside air and return air dampers to maintain supply air temperature, open the relief air damper, enable the relief fans (if not on already). Refer to damper and fan sequences for additional details.
   1. Economizer operation shall be available twenty-four hours per day and shall override unoccupied damper controls.
   2. Economizer Mode shall be disabled during dehumidification mode.

S. Outdoor Air Damper (D-1):
   1. Unoccupied: Damper shall be fully closed.
   2. Occupied: The damper shall modulate to open inversely with the return air damper (D-2) to maintain scheduled outdoor air (as sensed by the outdoor air flow measuring station).
   3. Economizer Mode with outdoor air temperature equal to or higher than supply air temperature set point: The BAS shall fully open the damper.
   4. Economizer Mode with outdoor air temperature lower than supply air temperature set point: The BAS shall modulate the damper inversely with the return air damper (D-2) to maintain the leaving air temperature set point. The outdoor air damper shall not modulate below what is required to provide minimum outside airflow as measured by the outdoor airflow measuring station.
   5. Air Flow Measuring: Outdoor airflow shall be reported to the BAS in total CFM the intake is bringing in and it shall be indicated on the head end graphics.

T. Return Air Damper (D-2):
   1. Unoccupied: Damper shall be fully open.
   2. Occupied: The damper shall modulate to close inversely with the outdoor air damper (D-1) to maintain scheduled outdoor air (as sensed by the outdoor air flow measuring station).
   3. Economizer Mode with outdoor air temperature equal to or higher than supply air temperature set point: The BAS shall fully close the damper.
   4. Economizer Mode with outdoor air temperature lower than supply air temperature: The BAS shall modulate the damper inversely with the outdoor air damper (D-1) to maintain the leaving air temperature set point.

U. Relief Air Damper (D-3) :
   1. Unoccupied: Damper shall be fully closed.
   2. Occupied Mode: The damper shall open when the relief fan is energized.
   3. Economizer Mode: The damper shall open when the relief fan is energized.

V. Life Safety: Smoke detectors located in the return air duct, shall upon detection of products of combustion, signal the building fire alarm system, perform an emergency stop on the unit and send an alarm to the head end. This function shall be manually reset from the site and shall be so identified on the head end graphics. Life safety interlocks shall be hard-wired to the fan circuits.

W. Freeze Protection: Hot water coils shall control to leaving air temperature as described above, however when the fans are off or in unoccupied mode, the hot water coils shall use the mixed air temperature sensor upstream of the pre-heat coil as a thermostat to maintain 45°F cabinet temperature at all times. The hot water coil pumps shall be enabled any time the outside air temperature is below 35°F. This operation should be available during all modes of operation to prevent any coil from freezing, regardless if the fans are running or not. If the temperature continues to fall below 38°F (as sensed by a freezestat with an averaging bulb located downstream of heating coils) the fans shall stop and the outdoor air damper shall be closed and return air dampers shall open. A high level alarm should be issued to the head end BAS graphics. Hot water valve shall spring open upon loss of power. Hot water coil pump shall be enabled. Hardwire interlock for freeze protection for supply fans, outdoor air damper and hot water valve actuators.

X. System Safety: When the supply fan(s) is stopped or airflow ceases for any reason other than a controlled stop (as sensed by a current sensing relay) the BAS shall perform an emergency stop.

Y. Mixed Air Temperature: The BAS shall monitor mixed air temperature downstream of the final filters and shall display the temperature on the head end.

Z. Supply Air Temperature: The BAS shall monitor supply air temperature downstream of the supply fan and shall display the temperature on the head end.

AA. Return Air Temperature: The BAS shall monitor return air temperature downstream of the return air connections and shall display the temperature on the head end.

BB. Return Air Relative Humidity: The BAS shall monitor return air relative humidity downstream of the return air connections and shall display the temperature on the head end.

CC. Heating Coil Discharge Temperature: The BAS shall monitor the air temperature downstream of the heating coil and shall display the temperature on the head end.

DD. The BAS shall monitor the drain pan float water level detection device in the cooling coils condensate drain pan. If the drain pan is not draining properly and raises to activate the water level detection device, cooling shall be disabled and an alarm issued to the head end.

1 VAV AIR HANDLING UNIT SERVING TERMINAL UNITS (AHU-01, 02, & 03)
NO SCALE

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ALDERMAN AND KING HALL RENOVATIONS - KING HALL

University of North Carolina Wilmington
SCO#22-24639-01A
601 Hamilton Drive, Wilmington, NC 28403

PROJECT NO: 620589
DATE: FEBRUARY 10, 2023

REVISIONS

DATE	DESCRIPTION

CONTROLS

M7.1

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POWER LEGEND

SYMBOL	DESCRIPTION
	APPLIANCE RECEPTACLE, MOUNT AT +1'-6" AFF. PROVIDE NEMA CONFIGURATION TO MATCH PLUG FOR EQUIPMENT SERVED.
	APPLIANCE RECEPTACLE, MOUNT AT +1'-6"AFF. PROVIDE NEMA CONFIGURATION TO MATCH PLUG FOR EQUIPMENT SERVED. CONNECT TO EMERGENCY POWER, PROVIDE RED DEVICE.
	DUPLEX RECEPTACLE, NEMA 5-20R, MOUNT AT +1'-6"AFF.
	DUPLEX RECEPTACLE, NEMA 5-20R, MOUNT AT +1'-6"AFF. CONNECT TO EMERGENCY POWER, PROVIDE RED DEVICE.
	DUPLEX RECEPTACLE, NEMA 5-20R, MOUNT AT +3'-10"AFF.
	DUPLEX RECEPTACLE, NEMA 5-20R, MOUNT AT +3'-10"AFF. CONNECT TO EMERGENCY POWER, PROVIDE RED DEVICE.
	DUPLEX RECEPTACLE, NEMA 5-20R, MOUNT AT +7'-6"AFF.
	DUPLEX RECEPTACLE, NEMA 5-20R, MOUNT AT +7'-6"AFF. CONNECT TO EMERGENCY POWER, PROVIDE RED DEVICE.
	SIMPLEX RECEPTACLE, NEMA 5-20R, MOUNT AT +1'-6"AFF.
	GFCI DUPLEX RECEPTACLE, NEMA 5-20R, MOUNT AT +1'-6"AFF. PROVIDE NEMA 3R "WHILE IN USE" ENCLOSURE.
	GFCI DUPLEX RECEPTACLE, NEMA 5-20R, MOUNT AT +1'-6"AFF.
	GFCI DUPLEX RECEPTACLE, NEMA 5-20R, MOUNT AT +1'-6"AFF. CONNECT TO EMERGENCY POWER, PROVIDE RED DEVICE.
	GFCI DUPLEX RECEPTACLE, NEMA 5-20R, MOUNT AT +3'-10"AFF.
	GFCI DUPLEX RECEPTACLE, NEMA 5-20R, MOUNT AT +3'-10"AFF. CONNECT TO EMERGENCY POWER, PROVIDE RED DEVICE.
	DOUBLE DUPLEX RECEPTACLE, NEMA 5-20R, MOUNT AT +1'-6"AFF.
	DOUBLE DUPLEX RECEPTACLE, NEMA 5-20R, MOUNT AT +1'-6"AFF. CONNECT TO EMERGENCY POWER, PROVIDE RED DEVICE.
	DOUBLE DUPLEX RECEPTACLE, NEMA 5-20R, MOUNT AT +3'-10"AFF.
	DOUBLE DUPLEX RECEPTACLE, NEMA 5-20R, MOUNT AT +3'-10"AFF. CONNECT TO EMERGENCY POWER, PROVIDE RED DEVICE.
P T	RECEPTACLE MOUNTED BESIDE AN TELECOMMUNICATION OUTLET. PROVIDE RECEPTACLE BASED ON "P" IN LEFT SYMBOL BOX. "P" INSIDE LEFT SYMBOL BOX SHALL BE ONE OF THE FOLLOWING RECEPTACLE SYMBOLS ABOVE. "T" IN RIGHT SYMBOL BOX MAY DIFFER.
	ELEVATOR TWO-WAY COMMUNICATION SYSTEM INTERCOM. REFER TO DETAIL ON E4.1
	POWER/COMMUNICATIONS/AV RECESSED FLOOR BOX. REFER TO "TELECOMMUNICATIONS OUTLET CONDUIT DETAIL" FOR BOX AND CONDUIT REQUIREMENTS.
	POWER/COMMUNICATIONS/AV RECESSED POKE-THRU. REFER TO "POKE-THRU DETAIL" FOR BOX AND CONDUIT REQUIREMENTS.
SF	SYSTEM FURNITURE FLEX POWER CABLE CONNECTION VIA FLOOR BOX. COORDINATE W/ SYSTEM FURNITURE PROVIDER PRIOR TO ROUGH-IN.
SF	SYSTEM FURNITURE FLEX POWER CABLE CONNECTION VIA FLUSH WALL BOX MOUNTED 6" AFF. COORDINATE W/FURNITURE PROVIDER PRIOR TO ROUGH-IN.
	OVERHEAD DOOR CONTROLLER
	METALLIC SURFACE RACEWAY, DEVICES AS INDICATED, MOUNT AT +1'-6"AFF, UNO.
J	JUNCTION BOX, CONCEALED ABOVE CEILING, UNO.
PT	POWER FOR POWER TOWEL DISPENSER. REFER TO ARCHITECTURAL PLANS FOR HEIGHT.
	MUSHROOM SWITCH, HEAVY DUTY WITH LEGEND PLATE. MOUNT W/HANDLE AT +3'-10" AFF, UNO.
	MANUAL MOTOR STARTER, OVERLOAD PROTECTION AS REQUIRED PER NAME PLATE RATINGS, WITH 'ON' INDICATOR PILOT LIGHT. FLUSH MOUNT W/HANDLE AT +3'-10"AFF, UNO.
	DISCONNECT SWITCH, FUSIBLE OR NON-FUSIBLE AS INDICATED. MOUNT W/HANDLE AT +4'-6"AFF, UNO.
	MAGNETIC MOTOR STARTER, WITH OVERLOAD RELAYS AS REQUIRED TO SERVE MANUFACTURER REQUIREMENTS OF EQUIPMENT SERVED. PROVIDE WITH HAND-OFF-AUTOMATIC SELECTOR SWITCH AND INDICATOR LIGHTS.. MOUNT W/HANDLE AT +4'-6"AFF, UNO.
	COMBINATION MAGNETIC STARTER AND DISCONNECT SWITCH. WITH OVERLOAD ELEMENTS AND FUSING AS REQUIRED TO SERVE MANUFACTURER REQUIREMENTS OF EQUIPMENT SERVED. PROVIDE WITH HAND-OFF-AUTOMATIC SELECTOR SWITCH AND INDICATOR LIGHTS.. MOUNT W/HANDLE AT + 4'-6"AFF, UNO.
E	EQUIPMENT POWER CONNECTION.
	MOTOR CONNECTION.
M	CONNECTION TO DIV 23 MOTORIZED DAMPER, VERIFY LOCATION.
EL	POWER FOR ELECTRIC DOOR LOCK CONNECTION.
G	EMERGENCY GENERATOR.
	BRANCH CIRCUIT RUN CONCEALED, UNO. DASHED INDICATES CIRCUITRY REQUIRED TO BE RUN BELOW SLAB.
	BRANCH CIRCUIT HOME RUN TO PANELBOARD AND CIRCUIT INDICATED.
	PANELBOARD.
T	TRANSFORMER, PROVIDE CONCRETE HOUSEKEEPING PAD UNLESS NOTED OTHERWISE.
	RELAY, NORMALLY OPEN.
	RELAY, NORMALLY CLOSED.
XXX	FEEDER TAG. REFER TO FEEDER SCHEDULE ON DWG E5.1.

ONE LINE DIAGRAM LEGEND

SYMBOL	DESCRIPTION
	CIRCUIT BREAKER
	FUSED SWITCH
	TRANSFORMER
	TRANSFER SWITCH
XXX	FEEDER DESIGNATION
CT	CURRENT TRANSFORMER
PT	POTENTIAL TRANSFORMER

LIGHTING LEGEND

SYMBOL	DESCRIPTION
$	LIGHT SWITCH, RATED 120/277 VOLTS, 20-AMPS, MOUNT AT +3'-10"AFF. SUBSCRIPT/SUPERSCRIPT LETTERS, NUMBERS, AND SYMBOLS INDICATES SWITCH TYPE AS FOLLOWS: 3 INDICATES 3-WAY LIGHT SWITCH 4 INDICATES 4-WAY LIGHT SWITCH D INDICATES DIMMER SWITCH P INDICATES PILOT LIGHT, ON WHEN SWITCH IS ON K INDICATES KEY OPERATED LIGHT SWITCH OS INDICATES SWITCH WITH INTEGRAL OCCUPANCY SENSOR OD INDICATES DIMMER SWITCH WITH INTEGRAL OCCUPANCY SENSOR OS 2 INDICATES DUAL RELAY INTEGRAL OCCUPANCY SENSOR, WIRED FOR MULTI-LEVEL SWITCHING LOWER CASE LETTER INDICATES LIGHT FIXTURE CONTROL DESIGNATION
$$	INDICATES SWITCHES WIRED FOR INBOARD/OUTBOARD SWITCHING.
	OMNI-DIRECTIONAL LIGHTING CONTROL OCCUPANCY DETECTOR, CEILING MOUNT.
	DIRECTIONAL LIGHTING CONTROL OCCUPANCY DETECTOR, WALL MOUNT AT 6" BELOW FINISHED CEILING.
PE	PHOTOELECTRIC CELL FOR LIGHTING CONTROL. WALL MOUNT AT +10-0"AFF. AIM NORTH.
	LIGHT FIXTURE, CEILING MOUNT.
	LIGHT FIXTURE ON EMERGENCY POWER, CEILING MOUNT.
	LIGHTING FIXTURE.
	LIGHTING FIXTURE ON EMERGENCY POWER.
	WALL WASHER LIGHTING FIXTURE.
	LIGHT FIXTURE, WALL MOUNT, HEIGHT AS INDICATED.
	EMERGENCY EGRESS LIGHTING FIXTURE, WITH BATTERY PACK, WALL MOUNT AT +8'-0"AFF.
	EXIT SIGN, CEILING MOUNT. DIRECTIONAL ARROWS AS INDICATED. SHADING INDICATES FACE(S) OF SIGN.
	EXIT SIGN, WALL MOUNT. DIRECTIONAL ARROWS AS INDICATED. SHADING INDICATES FACE(S) OF SIGN.
	TRACK LIGHTS.
	LIGHT FIXTURE, POLE MOUNT.
	SPORTS LIGHTING POLE.

DEMOLITION LEGEND

SYMBOL	DESCRIPTION
	REMOVE DEVICES, EQUIPMENT, IN ACCORDANCE WITH THE GENERAL DEMOLITION NOTES.
	DEVICES ARE EXISTING TO REMAIN.
	WITHIN HATCHED AREAS, DISCONNECT AND REMOVE ALL ELECTRICAL MATERIALS INCLUDING BUT NOT LIMITED TO LIGHTS, DEVICES, EQUIPMENT, SPEAKERS, FIRE ALARM, COMMUNICATIONS, AND CIRCUITRY.

GENERAL DEMOLITION NOTES

A. PROVIDE ALL ELECTRICAL DEMOLITION WORK REQUIRED TO INSTALL THE WORK INDICATED. REMOVE, REROUTE, AND RECONNECT ALL BRANCH CIRCUITS THAT WILL REMAIN IN USE BUT INTERFERES WITH THE WORK.

B. REMOVE ALL EXISTING CONDUITS THAT WILL NOT BE REUSED AND WHERE THEY WILL BE EXPOSED AFTER COMPLETION. ABANDON ALL OTHERS IN THE WALLS ONLY. DISCONNECT ALL WIRING INDICATED AND/OR REQUIRED TO BE REMOVED FROM ALL POWER SOURCES. REMOVE ALL WIRING FROM ABANDONED CONDUITS AND PROVIDE BLANK COVER PLATES FOR BOXES NOT UTILIZED FOR THE WORK.

C. MAINTAIN CONTINUITY OF ALL EXISTING CIRCUITS TO REMAIN OR PORTIONS THEREOF AFFECTED BY THE WORK.

D. BEFORE DEMOLITION, VERIFY WITH THE OWNER ALL EQUIPMENT TO BE SALVAGED TO OWNER AND NOT REMOVED FROM THE SITE. FOR ALL REMAINING EQUIPMENT INDICATED FOR REMOVAL (AND NOT RELOCATED), REMOVE AND DISPOSE IN A LEGAL MANNER.

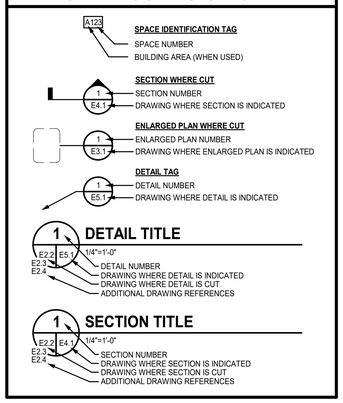
E. EXERCISE CARE IN REMOVING DEMOLITION ITEMS. REPAIR OR REPLACE ALL DAMAGE CAUSED TO EXISTING CONSTRUCTION AND EQUIPMENT TO REMAIN.

F. DRAWINGS ARE BASED UPON EXISTING PLANS AND FIELD INVESTIGATION WITHOUT DEMOLITION. VISIT THE EXISTING BUILDING AND BECOME FAMILIAR WITH ALL EXISTING CONDITIONS AND EXAMINE ALL DRAWINGS TO AVOID CONFLICTS.

G. WHERE DEMOLITION OF TELECOMMUNICATIONS DEVICES OCCUR, REMOVE CABLING NOT INDICATED TO REMAIN BACK TO POINT OF ORIGIN.

H. DEMOLITION FLOOR PLANS ARE PROVIDED FOR REFERENCE ONLY TO AID IN DEFINING THE SCOPE OF DEMOLITION WORK.

GRAPHICS SYMBOLS LEGEND



AVERAGE MAINTAINED ILLUMINATION LEVELS

TASK	FOOTCANDLES
CLASSROOMS	55
OFFICES	50
ELECTRICAL ROOMS	30
MECHANICAL ROOMS	30
LOBBIES/CORRIDORS	15
TOILETS	20

GENERAL NOTES

A. THE CONTRACT DOCUMENTS ARE COMPLEMENTARY AND WHAT IS REQUIRED BY ONE SHALL BE AS BINDING AS IF REQUIRED BY ALL. IN THE CASE OF A CONFLICT, DISAGREEMENT, OR AMBIGUITY, PROVIDE THE BETTER QUALITY. IN THE CASE OF A CONFLICT, DISAGREEMENT, OR AMBIGUITY, PROVIDE THE GREATER QUANTITY OF WORK.

B. FOLLOW MOUNTING HEIGHTS INDICATED IN THE ELECTRICAL LEGEND UNLESS OTHERWISE INDICATED. MEASURE ALL MOUNTING HEIGHTS FROM THE DEVICE CENTER LINE UNLESS OTHERWISE INDICATED.

C. FIELD VERIFY EXACT FEEDER LOCATIONS FOR MECHANICAL EQUIPMENT PRIOR TO ROUGH-IN.

D. EQUIPMENT CONNECTIONS ARE INDICATED IN THEIR APPROXIMATE LOCATIONS. VERIFY EXACT LOCATIONS OF ALL CONNECTIONS WITH OTHER TRADES SUPPLYING EQUIPMENT TO AVOID CONFLICTS AT INSTALLATION.

E. LOCATED ALL SWITCHES FOR LOCAL CONTROL OF LIGHTING ON STRIKE SIDE OF SINGLE DOORS UNLESS OTHERWISE INDICATED.

F. PROVIDE SPECIFIC BREAKER ARRANGEMENT FOR THE PANEL BOARDS WHEREVER PHYSICALLY POSSIBLE. PROVIDE AS-BUILT DRAWINGS INDICATING ACTUAL BRANCH CIRCUIT ARRANGEMENT. PROVIDE TYPE WRITTEN PANELBOARD DIRECTORIES INDICATING ACTUAL BRANCH CIRCUIT ARRANGEMENT.

G. PROVIDE AS-BUILT DRAWINGS INDICATING ACTUAL BRANCH CIRCUIT ARRANGEMENT. PROVIDE TYPEWRITTEN PANELBOARD DIRECTORIES INDICATING ACTUAL BRANCH CIRCUIT ARRANGEMENT. HAND WRITTEN SCHEDULES ARE NOT ACCEPTABLE. CONTRACTOR SHALL FIELD VERIFY EXISTING CIRCUIT SPACE NAMES AND NUMBERS AND PROVIDE FINAL DESCRIPTION IN TYPED PANELBOARD DIRECTORY.

H. ALL CONDUIT RUNS INDICATED ARE DIAGRAMMATIC, COORDINATE ROUTING IN ALL SPACES WITH OTHER TRADES.

I. ALL PANELBOARDS INDICATED ARE HOUSED IN A SINGLE WIDTH ENCLOSURE, UNO. THE CONTRACTOR SHALL FIELD VERIFY ROOM LAYOUT AND ADJUST ACCORDINGLY, AT NO COST TO THE OWNER, IF PROVIDING ANY PANELBOARD ENCLOSURES.

J. WHERE POWER AND COMMUNICATION OUTLETS ARE INDICATED IN CLOSE PROXIMITY ON THE DRAWINGS, FIELD COORDINATE THE LOCATIONS TO PLACE THE OUTLETS ADJACENT TO EACH OTHER.

K. ALL EXTERIOR RECEPTACLES SHALL BE LABELED "WR" - WEATHER RESISTANT.

L. WHEN GROUPING MULTIPLE LINE TO NEUTRAL BRANCH CIRCUITS IN A CONDUIT, PROVIDE DEDICATED COLOR CODED NEUTRAL CONDUCTORS FOR EACH CIRCUIT. DO NOT USE BREAKER TIES AND SHARED NEUTRALS EVEN THOUGH PERMITTED BY NEC.

M. PROVIDE A 2" WIDE YELLOW LINE PAINTED ON THE FLOOR INDICATING THE ELECTRICAL WORKING SPACE. IN FRONT OF ALL ELECTRICAL PANELS IN ELECTRICAL ROOMS. REFER TO PLANS FOR ELECTRICAL WORKING SPACE DETAILS. STENCIL "NO STORAGE" IN 2" HIGH, YELLOW LETTERS CENTERED IN THE OUTLINED AREA.

N. ALL ELECTRICAL INSPECTIONS WITH THE STATE CONSTRUCTION OFFICE INSPECTOR SHALL BE MONDAY THRU FRIDAY UNLESS SPECIFICIALLY EXEMPTED AND APPROVED BY THE STATE CONSTRUCTION OFFICE.

O. ALL VOICE, DATA AND CATV CABLING DEMOLITION AND INSTALLATION SHALL BE PERFORMED BY A CERTIFIED COMMSCOPE SYSTIMAX CONTRACTOR.

ABBREVIATIONS

1P	SINGLE PHASE
3P	THREE PHASE
3R	WEATHERPROOF (NEMA 3R)
A	AMPS
AFF	ABOVE FINISHED FLOOR
AL	ALUMINUM
BFC	BELOW FINISHED CEILING
BKR	BREAKER
BOT	BOTTOM OF TRAY (CABLE TRAY)
C	CONDUIT
CATV	COMMUNITY ANTENNA TELEVISION (CABLE)
CB	CIRCUIT BREAKER
CBL	CABLE
CCTV	CLOSED CIRCUIT TELEVISION
CKT	CIRCUIT
CLG	CEILING
CLR	CLEAR
CO.	COMPANY
COMB	COMBINATION
COMM	COMMUNICATIONS
CU	COPPER
DIA	DIAMETER
DISC	DISCONNECT
DIV	DIVISION
DWG	DRAWING
EBH	ELECTRIC BASEBOARD HEATER
EC	EMPTY CONDUIT
ECS	EMERGENCY COMMUNICATIONS STATION
ELEC	ELECTRICAL
ELEV	ELEVATOR
EPO	EMERGENCY POWER OFF
EQ	EQUIPMENT
ETR	EXISTING TO REMAIN
EWC	ELECTRIC WATER COOLER
EX	EXISTING
EXT	EXTERIOR
FA	FIRE ALARM
FAAP	FIRE ALARM ANNUNCIATOR PANEL
FACP	FIRE ALARM CONTROL PANEL
FLA	FULL LOAD AMPS
G	GROUND
GE	GROUND FAULT PROTECTION FOR EQUIPMENT, 6-50mA PER NEC 427.22 (PROVIDE ACCESSORY FOR INDICATED BREAKER)
GFCI	GROUND FAULT CIRCUIT INTERRUPT
GFP	GROUND FAULT PROTECTION FOR PERSONNEL, 4-6mA (PROVIDE ACCESSORY FOR INDICATED BREAKER)
HKP	HOUSEKEEPING PAD
HP	HORSEPOWER
HPS	HIGH PRESSURE SODIUM
Hz	HERTZ
IAW	IN ACCORDANCE WITH
IG	ISOLATED GROUND
J-BOX	JUNCTION BOX
KHFSS	KITCHEN HOOD FIRE SUPPRESSION SYSTEM
KHz	KILOHERTZ
KVA	KILOVOLT AMPS
KW	KILOWATTS
KWH	KILOWATT HOURS
L	LOCKOUT TO PREVENT UNAUTHORIZED SWITCHING (PROVIDE ACCESSORY FOR INDICATED BREAKER)
LC	ROUTE CIRCUIT TO LOAD VIA LIGHTING CONTACTOR, REFER TO LC SCHEDULE
LED	LIGHT EMITTING DIODE
LTG	LIGHTING
LTS	LIGHTS
MAX	MAXIMUM
MCA	MINIMUM CIRCUIT AMPACITY
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MH	METAL HALIDE
MHz	MEGAHERTZ
MIN	MINIMUM
ML	MAINTENANCE LOCK (PROVIDE ACCESSORY FOR INDICATED BREAKER)
MLO	MAIN LUG ONLY
MNS	MASS NOTIFICATION SYSTEM
MOCP	MAXIMUM OVER CURRENT PROTECTION.
MTD	MOUNTED
N	NEUTRAL
N/C	NORMALLY CLOSED
N/O	NORMALLY OPEN
NO.	NUMBER
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
P	PILOT LIGHT (AT THE SWITCH HANDLE)
PBD	PANELBOARD
PD	PROTECTIVE DEVICE
RCPT	RECEPTACLE
REC	RECEPTACLE
SEC	SECURITY
SPD	SURGE PROTECTIVE DEVICE
SPEC.	SPECIFICATION(S)
ST	SHUNT TRIP, 120V COIL (PROVIDE ACCESSORY FOR INDICATED BREAKER)
SW	SWITCH
SWBD	SWITCHBOARD
TBB	TELECOMMUNICATIONS BONDING BACKBONE
TC	TELECOMMUNICATIONS CLOSET
TELECOM	TELECOMMUNICATIONS
TGB	TELECOMMUNICATIONS GROUNDING BUS BAR
TMGB	TELECOMMUNICATIONS MAIN GROUNDING BUS BAR
TYP	TYPICAL
UNO	UNLESS NOTED (INDICATED) OTHERWISE
V	VOLTS
VFD	VARIABLE FREQUENCY DRIVE
W	WATTS
W/	WITH
WG	WIRE GUARD
WP	WEATHERPROOF
XFER	TRANSFER
XFMR	TRANSFORMER

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NORTH CAROLINA BOARD OF EXAMINERS FOR ENGINEERING AND SURVEYING CORPORATION C-3469 RALEIGH, NC

ALDERMAN AND KING HALL RENOVATIONS - KING HALL

University of North Carolina Wilmington
SCO#22-24639-01A
601 Hamilton Drive, Wilmington, NC 28403

PROJECT NO: 820589
DATE: FEBRUARY 10, 2023

REVISIONS

DATE	DESCRIPTION

LEGENDS, ABBREVIATIONS AND GENERAL NOTES

E0.1

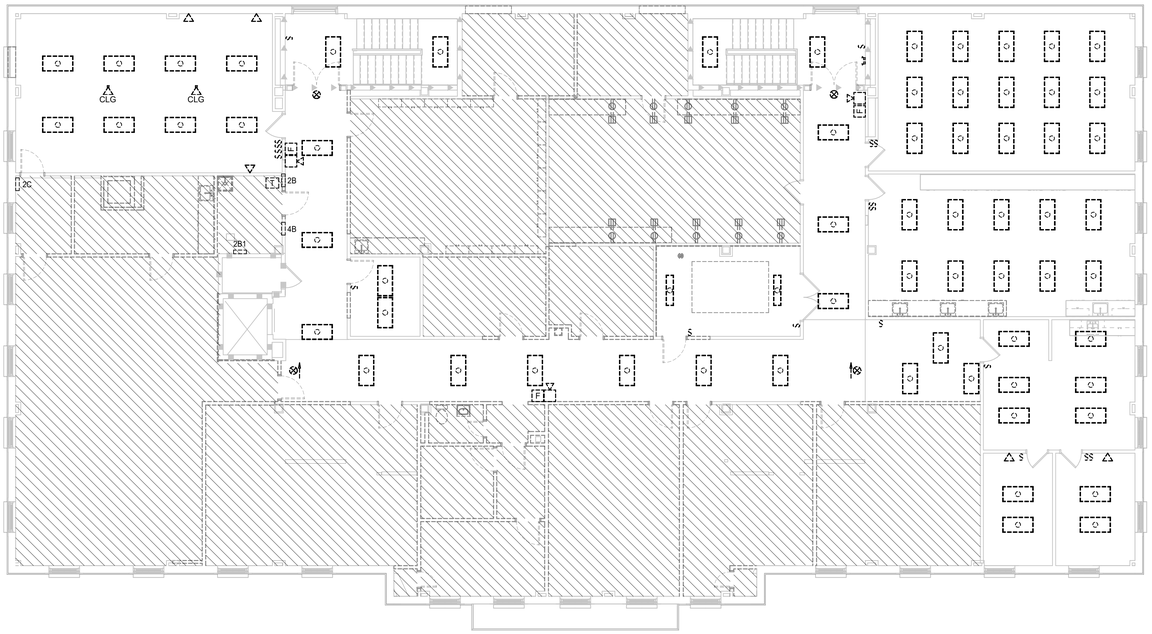
3/24/2023 9:42:16 AM

KEYNOTES

APPLIES TO THIS DRAWING

1 REMOVE & VERIFY FIXTURES ARE EQUIPPED WITH INTERNAL DISCONNECTS. REINSTALL EXISTING LIGHT FIXTURES TO ACCOMMODATE CEILING REPLACEMENT.

2 DISCONNECT & REMOVE EXISTING 150 PAIR COPPER TRUNK CABLE, LOCATED IN CRAWL SPACE BELOW, BACK TO NEAREST HAND HOLE ON SITE.



PROJECT N

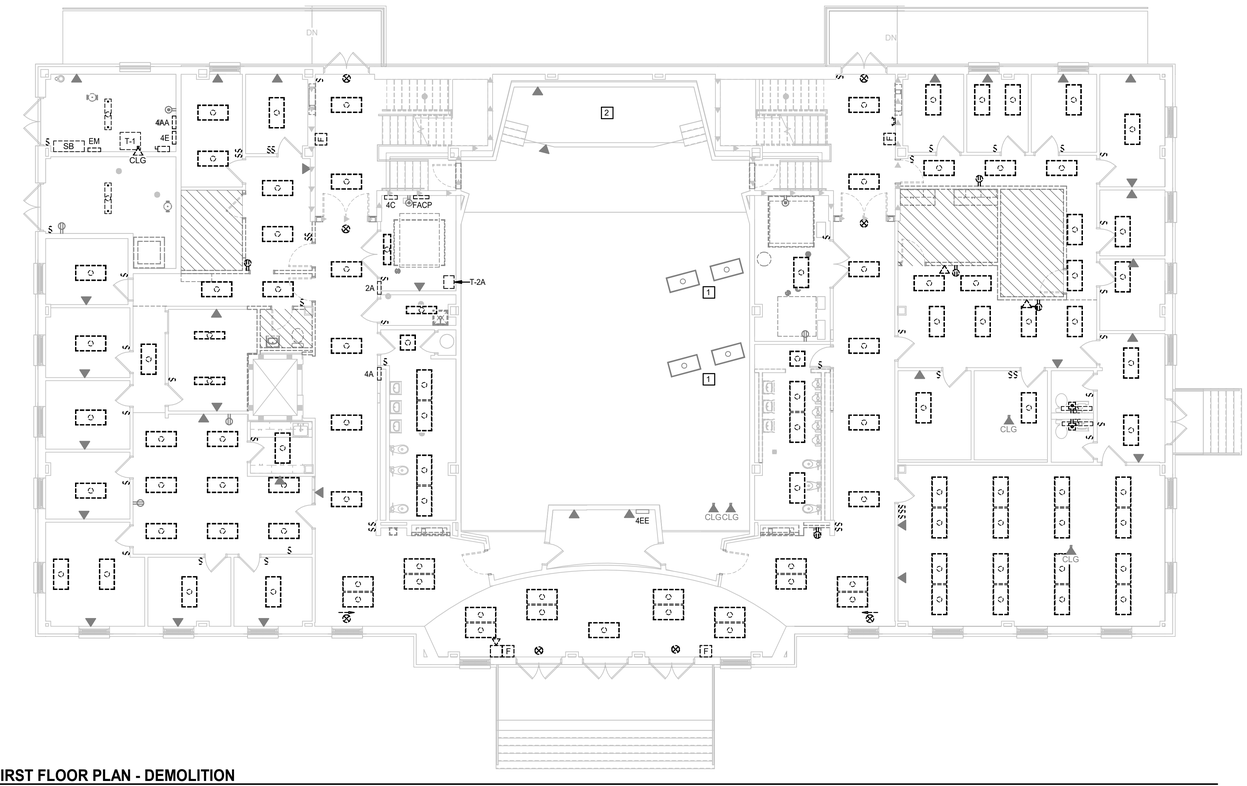
POLAR

SECOND FLOOR PLAN - DEMOLITION

1/8" = 1'-0"

TURN OVER TO OWNER

UTILITY TRANSFORMER



PROJECT N

POLAR

FIRST FLOOR PLAN - DEMOLITION

1/8" = 1'-0"

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ALDERMAN AND KING HALL RENOVATIONS - KING HALL

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SCO#22-24639-01A
601 Hamilton Drive, Wilmington, NC 28403

PROJECT NO: 620589
DATE: FEBRUARY 10, 2023

REVISIONS

DATE	DESCRIPTION

DEMOLITION PLANS

E1.1

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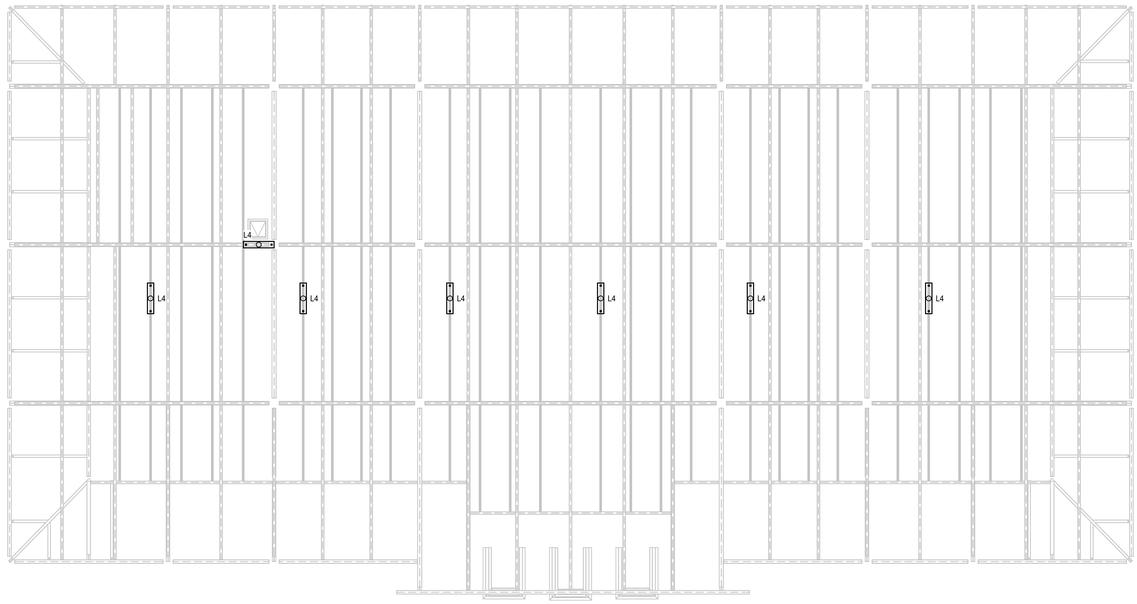

N

ATTIC PLAN - LIGHTING
1/8" = 1'-0"

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PROGRESS PRINT NOT FOR CONSTRUCTION

ALDERMAN AND KING HALL RENOVATIONS - KING HALL

University of North Carolina Wilmington
SCO#22-24639-01A
601 Hamilton Drive, Wilmington, NC 28403

PROJECT NO: 620589
DATE: September 2, 2022

REVISIONS	
DATE	DESCRIPTION

ATTIC PLAN - LIGHTING

E2.1.1

8/31/2022 11:36:57 AM

PROJECT N POLAR

SECOND FLOOR PLAN - LIGHTING

1/8" = 1'-0"

LIGHTING CALCULATION SCHEDULE

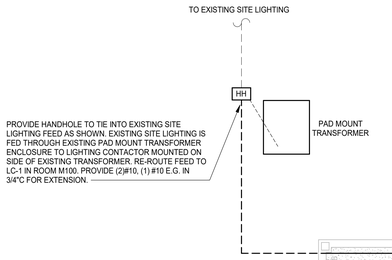
ROOM NUMBER	ROOM NAME	AVERAGE ILLUMINANCE (FC)
100	LOBBY	34 fc
102	OFFICE	51 fc
102A	OFFICE	36 fc
102B	OFFICE	34 fc
102C	OFFICE	37 fc
102D	OFFICE	34 fc
102E	OFFICE	34 fc
102F	WORKROOM	43 fc
102G	OFFICE	34 fc
102I	OFFICE	35 fc
102K	KITCHEN	50 fc
103A	OFFICE	37 fc
103B	OFFICE	46 fc
103C	OFFICE	38 fc
103D	OFFICE	18 fc
104	CLASSROOM	43 fc
104A	WORK AREA	50 fc
104B	URR	31 fc
104C	URR	31 fc
106A	OFFICE	37 fc
106B	OFFICE	50 fc
106C	OFFICE	38 fc
106D	OFFICE	50 fc
106E	OFFICE	39 fc
106F	OFFICE	42 fc
106G	OFFICE	44 fc
106H	OFFICE	37 fc
106I	OFFICE	38 fc
106J	OFFICE	38 fc
106K	OFFICE	39 fc
106L	OFFICE	39 fc
200A	CORRIDOR	26 fc
201	CLASSROOM	55 fc
201A-1	STUDY LOUNGE-1	52 fc
201A-2	STUDY LOUNGE-2	42 fc
202	HONORS CLASSROOM	44 fc
203	AV	31 fc
204	CORRIDOR	41 fc
204A	RECEPTION	38 fc
204B	OFFICE	36 fc
204C	OFFICE	36 fc
204D	BUS OFFICE	49 fc
204E	OPEN OFFICE	39 fc
204F	DIRECTOR	45 fc
204F	AS. DIRECTOR	51 fc
204G	AS. DIRECTOR	53 fc
204H	AS. DIRECTOR	52 fc
204I	FELLOWSHIP	50 fc
204J	BREAK	48 fc
204K	WORKROOM	38 fc
204L	DIRECTOR	39 fc
204N	OPEN OFFICE	65 fc
204O	AS. DIRECTOR	54 fc
205	TELCOM	34 fc
206	CONFERENCE	51 fc
209A	OFFICE	40 fc
209B	OFFICE	43 fc
209C	OFFICE	40 fc
209D	CORRIDOR	30 fc
209E	CORRIDOR	33 fc
209F	CORRIDOR	28 fc
210	2 + 2 LAB	51 fc
212	2 + 2 CLASSROOM	48 fc
C100	CORR	31 fc
C102	CORR	31 fc
C103	COOR	48 fc
C103	CORR	32 fc
C106	CORR	38 fc
H100	HSKPNG	44 fc
H200	HSK	31 fc
M100	MECH/ELEC	26 fc
M101	MECH	18 fc
M102	MECH	33 fc
R100	WRR	29 fc
R101	MRR	32 fc
R102	UNISEX RR	35 fc
R200	UNISEX RR	36 fc
R201	UNISEX RR	36 fc
S100	STAIR	26 fc
S101	STAIR	32 fc
S200	STAIR	25 fc
S201	STAIR	30 fc

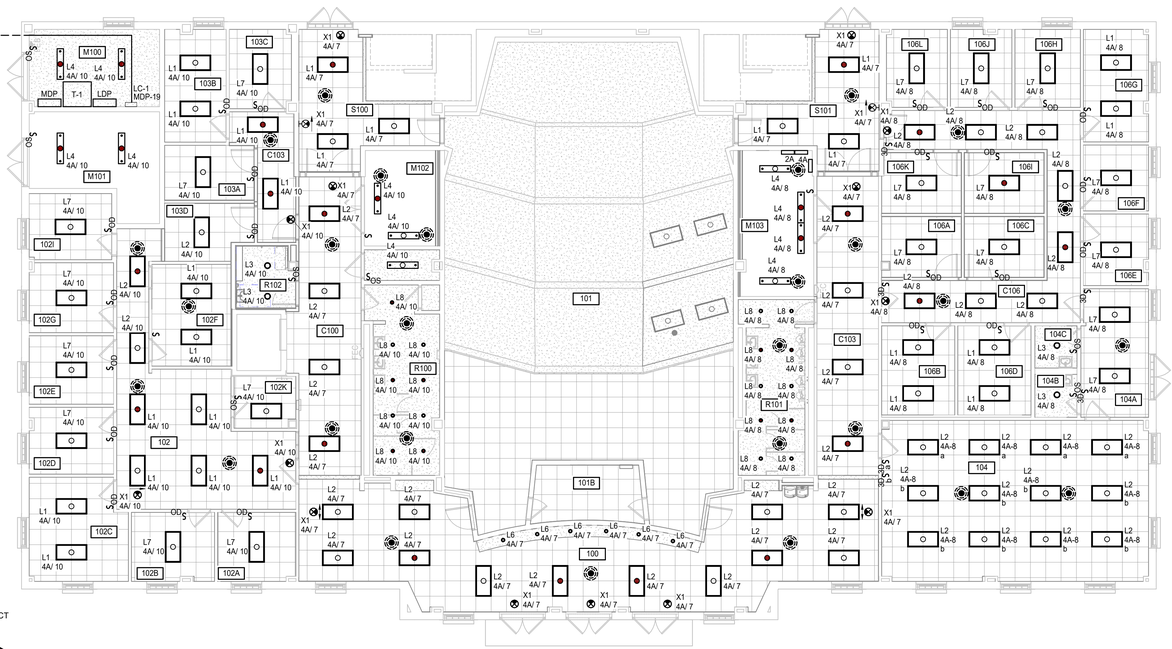
LIGHT FIXTURE SCHEDULE

FIXTURE							LAMP				
TYPE	DESCRIPTION	MANUFACTURER	SERIES NO.	VOLTAGE	WATTAGE	LUMENS	TYPE	COLOR TEMP.	MOUNTING	OPTIONS	COMMENTS
L1	2X4 ARCHITECTURAL TROFFER	HUBBELL	LCAT 24	277 V	40	5786 lm	LED	4000 K	RECESSED	1	
L2	2X4 ARCHITECTURAL TROFFER	HUBBELL	LCAT 24	277 V	26	3626 lm	LED	4000 K	RECESSED	1	
L3	4" DOWNLIGHT	ALPHABET	NU4RD	277 V	22	1730 lm	LED	4000 K	RECESSED	1, 2	
L4	STRIP FIXTURE	HUBBELL	LCL	277 V	42	5411 lm	LED	4000 K	SURFACE	1	
L6	4" WALL WASH DOWNLIGHT	ALPHABET	NU4RW	277 V	11	1460 lm	LED	4000 K	RECESSED		
L7	2X4 ARCHITECTURAL TROFFER	HUBBELL	LCAT 24	277 V	59	7321 lm	LED	4000 K	RECESSED	1	
L8	4" DOWNLIGHT	ALPHABET	NU4RD	277 V	15	1130 lm	LED	4000 K	RECESSED	1, 2	
X1	EXIT SIGN	HUBBELL	CE	277 V	1		LED		UNIVERSAL	3	

OPTIONS:
1. SELF-DIAGNOSTIC EMERGENCY BATTERY PACKS WHERE INDICATED ON FLOOR PLANS.
2. HYPERBOLIC REFLECTOR.
3. SELF-DIAGNOSTIC.

GENERAL NOTES:
A. MANUFACTURERS AND SERIES SPECIFIED IN FIXTURE SCHEDULE ARE SPECIFIED AS OR EQUAL.

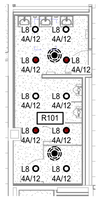




PROJECT N POLAR

FIRST FLOOR PLAN - LIGHTING

1/8" = 1'-0"



PROJECT N POLAR

MENS TOILET ROOM ALTERNATE #8 - LIGHTING

1/8" = 1'-0"

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NORTH CAROLINA PROFESSIONAL SEAL 040202 ENGINEER BRYAN C. MOSLEY 2/10/23

NORTH CAROLINA MOSELEY ARCHITECTS, P.C. ENGINEERING CORPORATION C-3469 RALEIGH, NC

ALDERMAN AND KING HALL RENOVATIONS - KING HALL

University of North Carolina Wilmington
SCO#22-24639-01A
601 Hamilton Drive, Wilmington, NC 28403

PROJECT NO: 620589
DATE: FEBRUARY 10, 2023

REVISIONS

DATE	DESCRIPTION

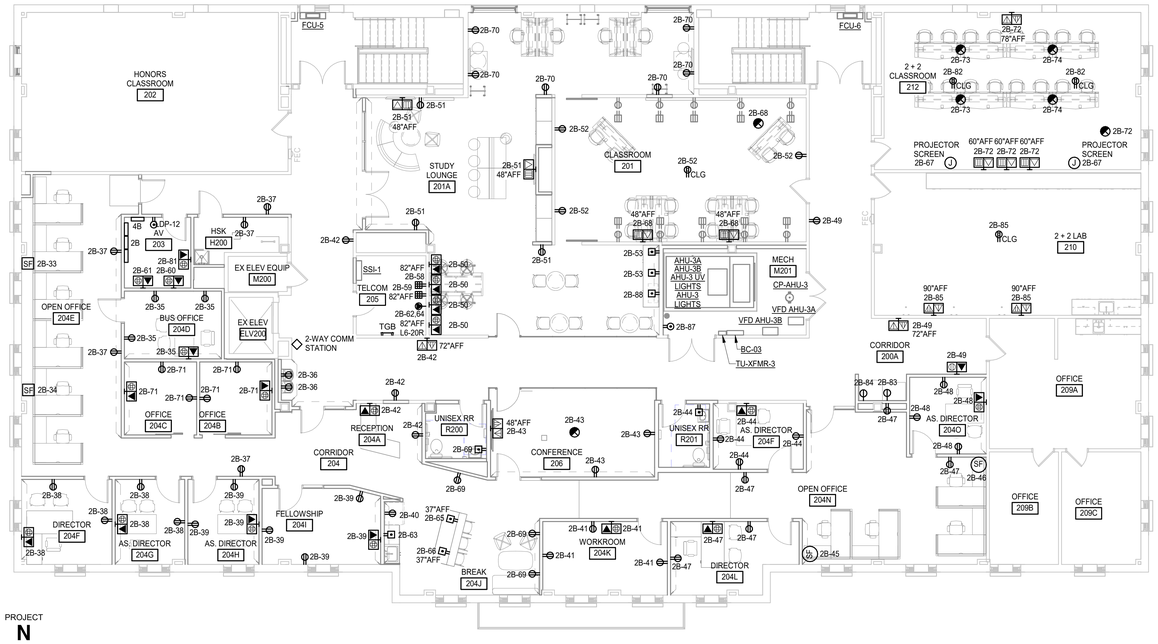
LIGHTING PLANS

E2.1

3/24/2023 9:42:25 AM

DIV 23 ELECTRICAL CONNECTION SCHEDULE E2.2

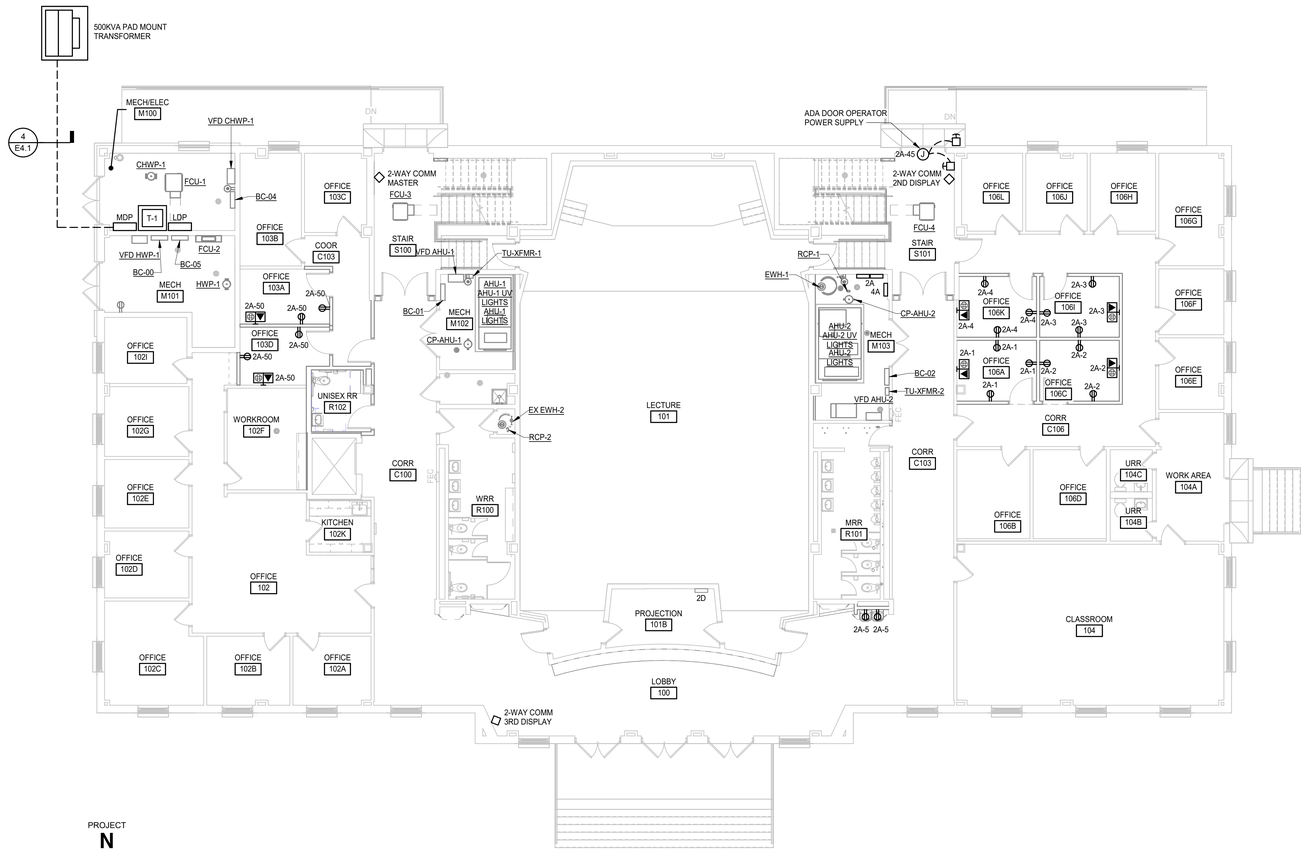
TAG	VOLTAGE	# POLES	LOAD	PANEL	CCT#	WIRE	DISCONNECTING MEANS	REMARKS
AHU-1	480 V	3	5.6 kVA	4A	1,3,5	(4) #12, (1) #12 E.G IN 3/4"C	VIA VFD BY DIV 23	ROUTE FEED THROUGH VFD
AHU-1 LIGHTS	120 V	1	0.3 kVA	2A	40	(2) #12, (1) #12 E.G IN 3/4"C	BY DIV 23	
AHU-1 UV LIGHTS	120 V	1	0.4 kVA	2A	42	(2) #12, (1) #12 E.G IN 3/4"C	BY DIV 23	
AHU-2	480 V	3	8.2 kVA	4A	2,4,6	(4) #12, (1) #12 E.G IN 3/4"C	VIA VFD BY DIV 23	ROUTE FEED THROUGH VFD
AHU-2 LIGHTS	120 V	1	0.3 kVA	2A	42	(2) #12, (1) #12 E.G IN 3/4"C	BY DIV 23	
AHU-2 UV LIGHTS	120 V	1	0.4 kVA	2A	41	(2) #12, (1) #12 E.G IN 3/4"C	BY DIV 23	
AHU-3 LIGHTS	120 V	1	0.3 kVA	2B	90	(2) #12, (1) #12 E.G IN 3/4"C	BY DIV 23	
AHU-3 UV LIGHTS	120 V	1	0.4 kVA	2B	89	(2) #12, (1) #12 E.G IN 3/4"C	BY DIV 23	
AHU-3A	480 V	3	9.1 kVA	4B	1,3,5	(4) #12, (1) #12 E.G IN 3/4"C	VIA VFD BY DIV 23	ROUTE FEED THROUGH VFD. PROVIDE UNISTRUT RACK FOR VFD-AHU-3A
AHU-3B	480 V	3	9.1 kVA	4B	7,9,11	(4) #12, (1) #12 E.G IN 3/4"C	VIA VFD BY DIV 23	ROUTE FEED THROUGH VFD
BC-00	120 V	1	0.5 kVA	LDP	10	(2) #12, (1) #12 E.G IN 3/4"C	N/A	
BC-01	120 V	1	0.5 kVA	2A	35	(2) #12, (1) #12 E.G IN 3/4"C	N/A	
BC-02	120 V	1	0.5 kVA	2A	36	(2) #12, (1) #12 E.G IN 3/4"C	N/A	
BC-03	120 V	1	0.5 kVA	2B	77	(2) #12, (1) #12 E.G IN 3/4"C	N/A	
BC-04	120 V	1	0.5 kVA	LDP	8	(2) #12, (1) #12 E.G IN 3/4"C	N/A	
BC-05	120 V	1	0.5 kVA	LDP	8	(2) #12, (1) #12 E.G IN 3/4"C	N/A	
CHWP-1	480 V	3	2.8 kVA	MDP	13,15,17	(4) #12, (1) #12 E.G IN 3/4"C	VIA VFD BY DIV 23	ROUTE FEED THROUGH VFD
CP-AHU-1	208 V	2	1.1 kVA	2A	7,9	(2) #12, (1) #12 E.G IN 3/4"C	MOTOR RATED SWITCH	
CP-AHU-2	208 V	2	1.1 kVA	2A	10,12	(2) #12, (1) #12 E.G IN 3/4"C	MOTOR RATED SWITCH	
CP-AHU-3	208 V	2	1.1 kVA	2B	54,56	(2) #12, (1) #12 E.G IN 3/4"C	MOTOR RATED SWITCH	
EWH-1	208 V	2	6.0 kVA	2A	6,8	(2) #8, (1) #10 E.G IN 3/4"C	60A/NF NEMA 1	ALT #9 - PROVIDE 30A/2P BREAKER IN LIEU OF 40A/2P
EX EWH-2	208 V	2		2A	47,49	(2) #10, (1) #10 E.G IN 3/4"C	30A/NF NEMA 1	
FCU-1	277 V	1	0.4 kVA	MDP	20	(2) #12, (1) #12 E.G IN 3/4"C	BY DIV 23	
FCU-2	277 V	1	0.4 kVA	MDP	21	(2) #12, (1) #12 E.G IN 3/4"C	BY DIV 23	
FCU-3	277 V	1	0.4 kVA	MDP	22	(2) #12, (1) #12 E.G IN 3/4"C	BY DIV 23	
FCU-4	277 V	1	0.4 kVA	4A	9	(2) #12, (1) #12 E.G IN 3/4"C	BY DIV 23	
FCU-5	277 V	1	0.4 kVA	4B	2	(2) #12, (1) #12 E.G IN 3/4"C	BY DIV 23	
FCU-6	277 V	1	0.4 kVA	4B	4	(2) #12, (1) #12 E.G IN 3/4"C	BY DIV 23	
HWP-1	480 V	3	2.8 kVA	MDP	14,16,18	(4) #12, (1) #12 E.G IN 3/4"C	VIA VFD BY DIV 23	ROUTE FEED THROUGH VFD
RCP-1	120 V	1	0.1 kVA	2A	46	(2) #12, (1) #12 E.G IN 3/4"C	MANUAL MOTOR STARTER	
RCP-2	120 V	1	0.1 kVA	2A	48	(2) #12, (1) #12 E.G IN 3/4"C	MANUAL MOTOR STARTER	
SSI-1	208 V	2	0.2 kVA	2B	55,57	(2) #12, (1) #12 E.G IN 3/4"C	MOTOR RATED SWITCH	FED FROM OUTDOOR UNIT SSO-1
TU-XFMR-1	120 V	1	0.5 kVA	2A	43	(2) #12, (1) #12 E.G IN 3/4"C	N/A	
TU-XFMR-2	120 V	1	0.5 kVA	2A	44	(2) #12, (1) #12 E.G IN 3/4"C	N/A	
TU-XFMR-3	120 V	1	0.5 kVA	2B	79	(2) #12, (1) #12 E.G IN 3/4"C	N/A	



PROJECT N POLAR

SECOND FLOOR PLAN - POWER

1/8" = 1'-0"



PROJECT N POLAR

FIRST FLOOR PLAN - POWER

1/8" = 1'-0"

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NORTH CAROLINA PROFESSIONAL SEAL 040202 ENGINEER JUSTIN C. WELLS 2/10/23

NCBELS ARCHITECTURE ENGINEERING CORPORATION C-3469 RALEIGH, NC

ALDERMAN AND KING HALL RENOVATIONS - KING HALL

University of North Carolina Wilmington
SCO#22-24639-01A
601 Hamilton Drive, Wilmington, NC 28403

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REVISIONS

DATE	DESCRIPTION

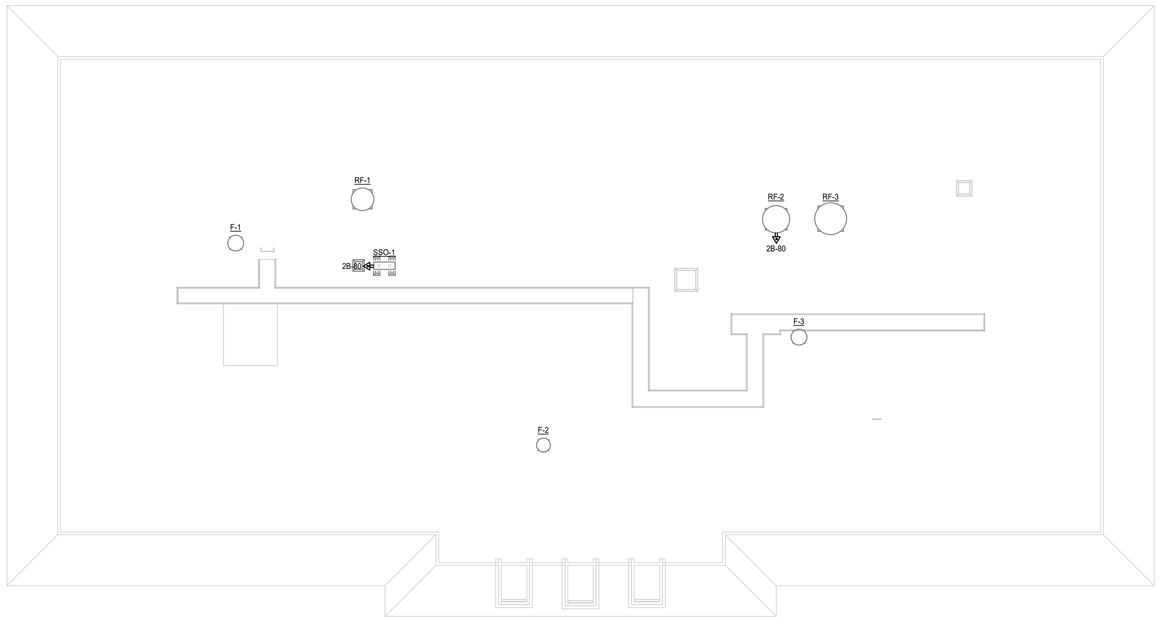
POWER PLANS

E2.2

3/24/2023 9:42:28 AM

DIV 23 ELECTRICAL CONNECTION SCHEDULE E2.3

TAG	VOLTAGE	# POLES	LOAD	PANEL	CCT#	WIRE	DISCONNECTING MEANS	REMARKS
F-1	120 V	1	0.7 kVA	2B	76	(2) #12, (1) #12 E.G IN 3/4"C	MOTOR RATED SWITCH	
F-2	120 V	1	0.3 kVA	2B	75	(2) #12, (1) #12 E.G IN 3/4"C	MOTOR RATED SWITCH	
F-3	120 V	1	0.7 kVA	2B	78	(2) #12, (1) #12 E.G IN 3/4"C	MOTOR RATED SWITCH	
RF-1	120 V	1	1.5 kVA	2A	38	(2) #12, (1) #12 E.G IN 3/4"C	BY DIV 23	
RF-2	208 V	2	2.9 kVA	2A	37,39	(2) #10, (1) #10 E.G IN 3/4"C	BY DIV 23	
RF-3	480 V	3	6.3 kVA	4B	13,15,17	(4) #12, (1) #12 E.G IN 3/4"C	BY DIV 23	
SSO-1	208 V	2	3.2 kVA	2B	55,57	(2) #10, (1) #10 E.G IN 3/4"C	30A/NF NEMA 3R	

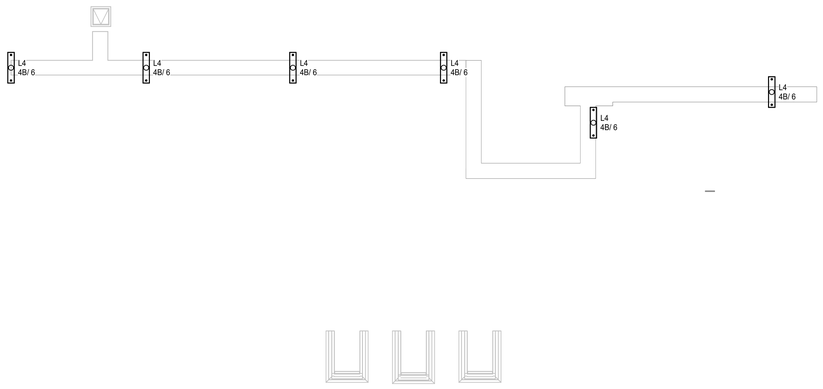


PROJECT N

POLAR

ROOF PLAN - POWER

1/8" = 1'-0"



PROJECT N

POLAR

ATTIC PLAN - LIGHTING

1/8" = 1'-0"

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ALDERMAN AND KING HALL RENOVATIONS - KING HALL

University of North Carolina Wilmington
SCO#22-24639-01A
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REVISIONS

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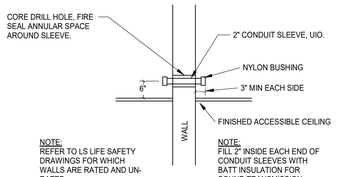
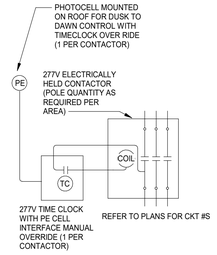
ATTIC & ROOF PLANS

E2.3

3/24/2023 9:42:29 AM



1 UN-RATED WALL CONDUIT SLEEVE DETAIL
NO SCALE



2 EXTERIOR LIGHTING CONTACTOR DETAIL LC-1
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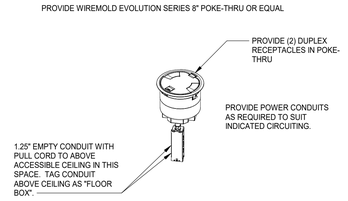
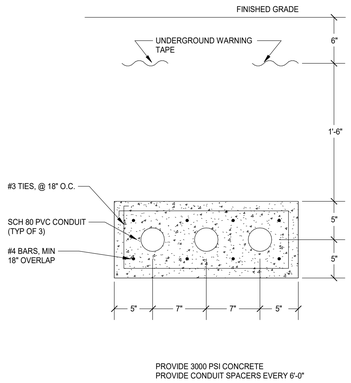
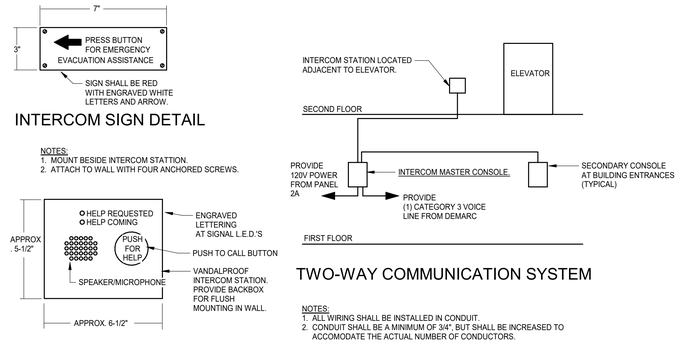


3 POKE-THRU DETAIL - POWER
NO SCALE



4 DUCTBANK SECTION - CONCRETE ENCASED
NO SCALE



5 ELEVATOR TWO-WAY COMMUNICATION RESCUE ASSISTANCE INTERCOM
NO SCALE

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NORTH CAROLINA PROFESSIONAL SEAL 040202 ENGINEER BRYAN C. WELLS 2/10/23

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ALDERMAN AND KING HALL RENOVATIONS - KING HALL

University of North Carolina Wilmington
SCO#22-24639-01A
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PROJECT NO: 820589
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REVISIONS	
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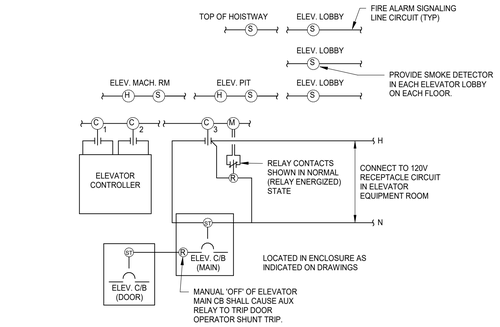
DETAILS

E4.1

3/24/2023 9:42:30 AM



LEGEND

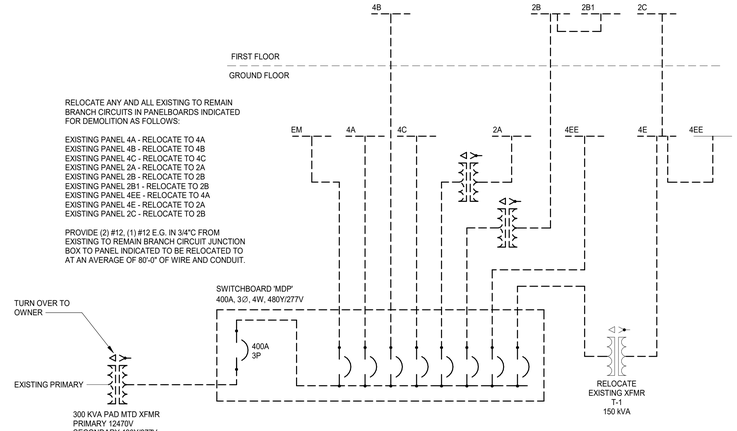
- NORMALLY OPEN CONTACT
- NORMALLY CLOSED CONTACT
- (ST) SHUNT TRIP COIL/BREAKER (VERIFY CONTROL VOLTAGE - PROVIDE TRANSFORMER IF 24V)
- (C) FIRE ALARM ADDRESSABLE CONTROL MODULE
- (M) FIRE ALARM ADDRESSABLE MONITOR MODULE
- (R) RELAY
- (S) SMOKE DETECTOR FOR ELEVATOR RECALL
- (H) HEAT DETECTOR (FOR SHUNT TRIP)
- (FS) SPRINKLER FLOW SWITCH MONITOR

NOTES:

1. AN ALARM SIGNAL FROM A SMOKE DETECTOR IN THE ELEVATOR HOISTWAY, MACHINE ROOM, OR ELEVATOR LOBBY (OTHER THAN AT THE PRIMARY RECALL LEVEL) SHALL ACTUATE THE FIRST ELEVATOR CONTROL MODULE ( ) $_{C_1}$
2. AN ALARM SIGNAL FROM A SMOKE DETECTOR IN THE ELEVATOR LOBBY AT THE PRIMARY RECALL LEVEL SHALL ACTUATE THE SECOND ELEVATOR CONTROL MODULE ( ) $_{C_2}$
3. AN ALARM SIGNAL FROM A HEAT DETECTOR OR FLOW SWITCH SERVING THE ELEVATOR HOISTWAY OR MACHINE ROOM SHALL ACTUATE THE SHUNT TRIP CONTROL MODULE ( ). CAUSING THE ELEVATOR MAIN CIRCUIT BREAKER TO OPEN. $_{C_3}$
4. LOSS OF CONTROL POWER TO THE SHUNT TRIP BREAKER SHALL OPEN THE RELAY CONTACTS AND INITIATE A SUPERVISORY SIGNAL ON THE FIRE ALARM SYSTEM.
5. FIRE ALARM CONTROL AND MONITOR MODULES SHALL BE MOUNTED WITHIN 36" OF THE EQUIPMENT CONTROLLED OR MONITORED.
6. A HEAT DETECTOR FOR ELEVATOR SHUNT TRIP SHALL BE PROVIDED WITHIN 24" OF EACH SPRINKLER IN THE ELEVATOR HOISTWAY AND MACHINE ROOM.

3 ELEVATOR RECALL & SHUNT TRIP DIAGRAM

NO SCALE



1 ONE LINE DIAGRAM - DEMOLITION

NO SCALE

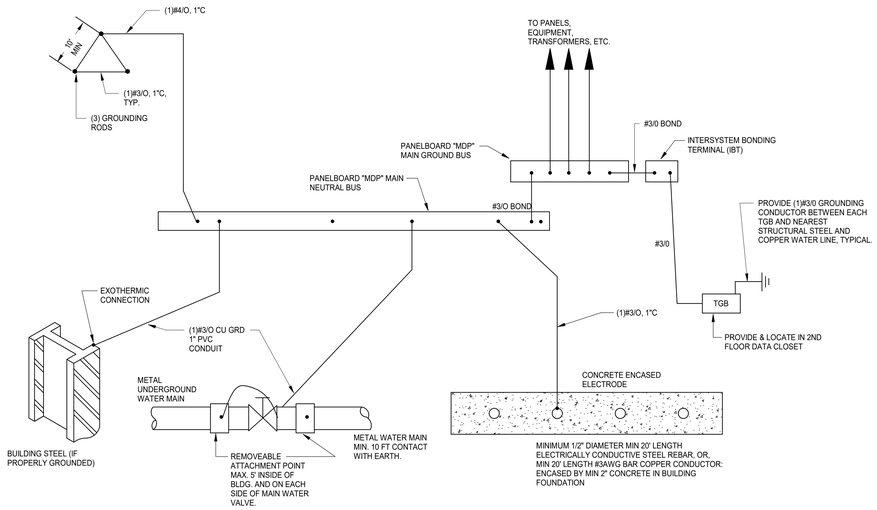
COPPER FEEDER SCHEDULE

FEEDER ID	# OF SETS	BUILDING WIRE QUANTITY & SIZE TYPE THHN - DRY TYPE THWN - WET	MINIMUM CONDUIT SIZE	FEEDER ID	# OF SETS	BUILDING WIRE QUANTITY & SIZE TYPE THHN - DRY TYPE THWN - WET	MINIMUM CONDUIT SIZE
30	1	3#10,#10 G	3/4"	30Y	1	4#10,#10 G	3/4"
35	1	3#8,#10 G	3/4"	35Y	1	4#8,#10 G	3/4"
40	1	3#8,#10 G	3/4"	40Y	1	4#8,#10 G	3/4"
45	1	3#6,#10 G	1"	45Y	1	4#6,#10 G	1"
50	1	3#6,#10 G	1"	50Y	1	4#6,#10 G	1"
60	1	3#4,#10 G	1"	60Y	1	4#4,#10 G	1"
70	1	3#4,#8 G	1 1/4"	70Y	1	4#4,#8 G	1 1/4"
80	1	3#3,#8 G	1 1/4"	80Y	1	4#3,#8 G	1 1/4"
90	1	3#2,#8 G	1 1/4"	90Y	1	4#2,#8 G	1 1/4"
100	1	3#1,#8 G	1 1/4"	100Y	1	4#1,#8 G	1 1/4"
110	1	3#2,#6 G	1 1/2"	110Y	1	4#2,#6 G	1 1/2"
125	1	3#1,#6 G	1 1/2"	125Y	1	4#1,#6 G	1 1/2"
150	1	3#1/0,#6 G	2"	150Y	1	4#1/0,#6 G	2"
175	1	3#2/0,#6 G	2"	175Y	1	4#2/0,#6 G	2"
200	1	3#3/0,#6 G	2"	200Y	1	4#3/0,#6 G	2"
225	1	3#4/0,#4 G	2 1/2"	225Y	1	4#4/0,#4 G	2 1/2"
250	1	3-250kCM,#4 G	2 1/2"	250Y	1	4-250kCM,#4 G	2 1/2"
300	1	3-350kCM,#4 G	2 1/2"	300Y	1	4-350kCM,#4 G	2 1/2"
350	2	3#2/0,#3 G	2"	350Y	2	4#2/0,#3 G	2"
400	2	3#3/0,#3 G	2"	400Y	2	4#3/0,#3 G	2"
450	2	3#4/0,#2 G	2 1/2"	450Y	2	4#4/0,#2 G	2 1/2"
500	2	3-250kCM,#2 G	2 1/2"	500Y	2	4-250kCM,#2 G	2 1/2"
600	2	3-350kCM,#1 G	3"	600Y	2	4-350kCM,#1 G	3"
700	2	3-500kCM,#1/0 G	4"	700Y	2	4-500kCM,#1/0 G	4"
800S	3	4-350kCM	3"	800Y	3	4-350kCM,#1/0 G	3"
1000	3	3-500kCM,#2/0 G	4"	1000Y	3	4-500kCM,#2/0 G	4"
1200	4	3-350kCM,#3/0 G	3"	1200Y	4	4-350kCM,#3/0 G	3"
1600	5	3-500kCM,#4/0 G	4"	1600Y	5	4-500kCM,#4/0 G	4"
2000	6	3-500kCM,#250 G	4"	2000Y	6	4-500kCM,#250 G	4"
2500	7	3-500kCM,#350 G	4"	2500Y	7	4-500kCM,#350 G	4"

NOTES:
1. ELECTRICAL CONTRACTOR TO VERIFY CONDUIT SIZE REQUIRED IF WIRE TYPES OTHER THAN THOSE LISTED ABOVE ARE USED.
2. FEEDER SIZES BASED ON TABLE 310.15(B)(16), 75º C.
3. SIZES ADJUSTED PER NEC 110.14.

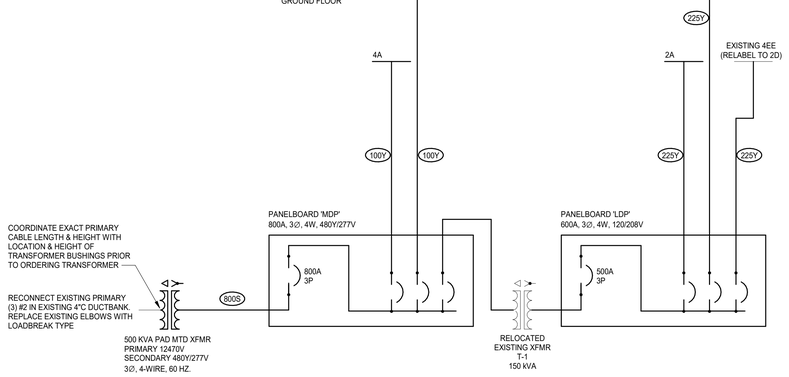
TRANSFORMER SCHEDULE

kVA	TYPE	PRIMARY	SECONDARY	COPPER PRIMARY FEEDER	COPPER SECONDARY FEEDER	BONDING CONDUCTOR
15 kVA	LINEAR	480V-3Ø	208Y/120V	3#10, #10 G, 3/4" C.	4#4, #6 G, 1-1/4" C.	#8
30 kVA	LINEAR	480V-3Ø	208Y/120V	3#6, #10 G, 1" C.	4#1, #6 G, 1-1/2" C.	#6
45 kVA	LINEAR	480V-3Ø	208Y/120V	3#4, #8 G, 1-1/4" C.	4#1/0, #6 G, 2" C.	#6
75 kVA	LINEAR	480V-3Ø	208Y/120V	3#1, #6 G, 1-1/2" C.	4-250kCM, #2 G, 2-1/2" C.	#2
112.5 kVA	LINEAR	480V-3Ø	208Y/120V	3#2/0, #6 G, 2" C.	(2 SETS) 4-3/0, #2 G, 2-1/2" C.	#2
150 kVA	LINEAR	480V-3Ø	208Y/120V	3#4/0, #4 G, 2-1/2" C.	(2 SETS) 4-250kCM, #2/0 G, 3" C.	#2/0
225 kVA	LINEAR	480V-3Ø	208Y/120V	(2 SETS) 3#2/0, #3 G, 2" C.	(3 SETS) 4-350kCM, #2/0 G, 3" C.	#2/0
300 kVA	LINEAR	480V-3Ø	208Y/120V	(2 SETS) 3#4/0, #2 G, 2-1/2" C.	(4 SETS) 4-350kCM, #4/0 G, 4" C.	#3/0
500 kVA	LINEAR	480V-3Ø	208Y/120V	(3 SETS) 3-350kCM, #1/0 G, 4" C.	(6 SETS) 4-350kCM, 300kCM G, 4" C.	#3/0



4 GROUNDING SYSTEM DIAGRAM

NO SCALE



2 ONE LINE DIAGRAM - PROPOSED

NO SCALE

MOSELEYARCHITECTS
911 N. WEST STREET, SUITE 205 RALEIGH, NORTH CAROLINA 27603
PHONE (919) 840-0091
MOSELEYARCHITECTS.COM

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 040202 2/10/23 ENGINEER KIRTAN C. PATEL

NORTH CAROLINA REGISTERED ARCHITECTURE ENGINEERING CORPORATION C-3469 RALEIGH, NC

ALDERMAN AND KING HALL RENOVATIONS - KING HALL

University of North Carolina Wilmington
SCO#22-24639-01A
601 Hamilton Drive, Wilmington, NC 28403

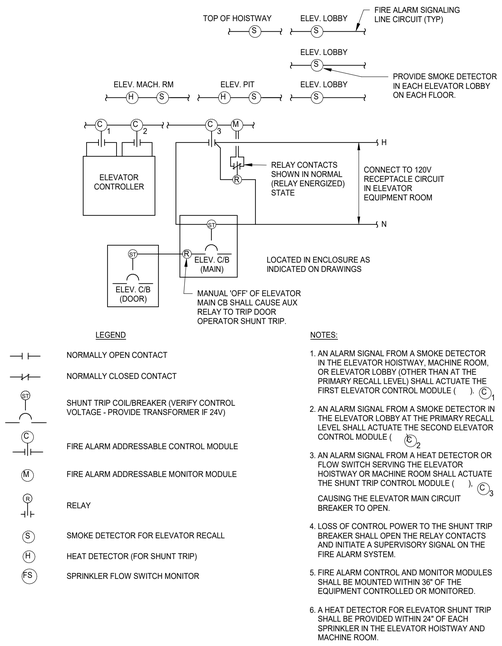
PROJECT NO: 620589
DATE: FEBRUARY 10, 2023

REVISIONS	
DATE	DESCRIPTION

DIAGRAMS

E5.1

3/24/2023 9:42:32 AM



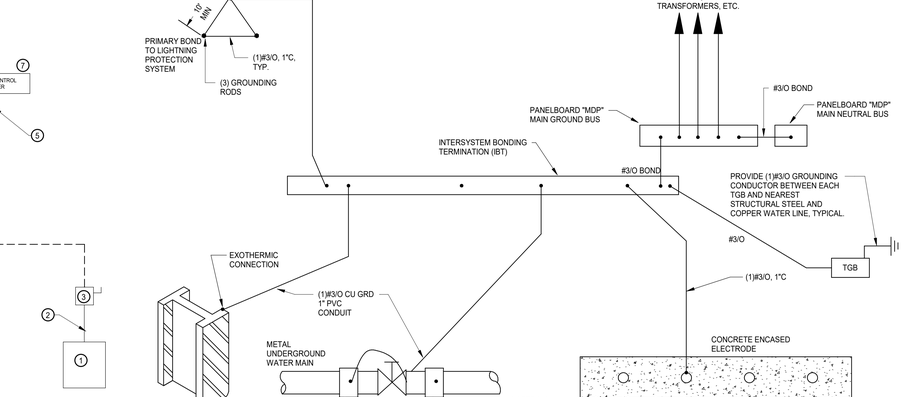
LEGEND

- NORMALLY OPEN CONTACT
- NORMALLY CLOSED CONTACT
- SHUNT TRIP COIL/BREAKER (VERIFY CONTROL VOLTAGE - PROVIDE TRANSFORMER IF 24V)
- FIRE ALARM ADDRESSABLE CONTROL MODULE
- FIRE ALARM ADDRESSABLE MONITOR MODULE
- RELAY
- SMOKE DETECTOR FOR ELEVATOR RECALL
- HEAT DETECTOR (FOR SHUNT TRIP)
- SPRINKLER FLOW SWITCH MONITOR

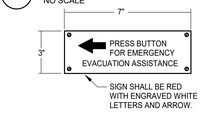
NOTES:

1. AN ALARM SIGNAL FROM A SMOKE DETECTOR IN THE ELEVATOR HOISTWAY, MACHINE ROOM, OR ELEVATOR LOBBY (OTHER THAN AT THE PRIMARY RECALL LEVEL) SHALL ACTUATE THE FIRST ELEVATOR CONTROL MODULE ( ).
2. AN ALARM SIGNAL FROM A SMOKE DETECTOR IN THE ELEVATOR LOBBY AT THE PRIMARY RECALL LEVEL SHALL ACTUATE THE SECOND ELEVATOR CONTROL MODULE ( ).
3. AN ALARM SIGNAL FROM A HEAT DETECTOR OR FLOW SWITCH SERVING THE ELEVATOR HOISTWAY OR MACHINE ROOM SHALL ACTUATE THE SHUNT TRIP CONTROL MODULE ( ). CAUSING THE ELEVATOR MAIN CIRCUIT BREAKER TO OPEN.
4. LOSS OF CONTROL POWER TO THE SHUNT TRIP BREAKER SHALL OPEN THE RELAY CONTACTS AND INITIATE A SUPERVISORY SIGNAL ON THE FIRE ALARM SYSTEM.
5. FIRE ALARM CONTROL AND MONITOR MODULES SHALL BE MOUNTED WITHIN 36" OF THE EQUIPMENT CONTROLLED OR MONITORED.
6. A HEAT DETECTOR FOR ELEVATOR SHUNT TRIP SHALL BE PROVIDED WITHIN 24" OF EACH SPRINKLER IN THE ELEVATOR HOISTWAY AND MACHINE ROOM.

1 ELEVATOR RECALL & SHUNT TRIP DIAGRAM
NO SCALE

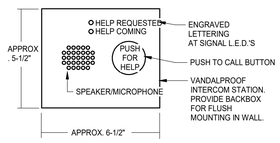


3 UN-RATED WALL CONDUIT SLEEVE DETAIL
NO SCALE



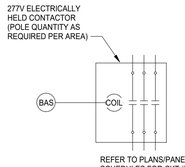
INTERCOM SIGN DETAIL

NOTES:
1. MOUNT BESIDE INTERCOM STATTION.
2. ATTACH TO WALL WITH FOUR ANCHORED SCREWS.

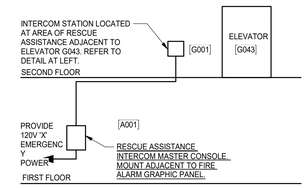


INTERCOM STATION DETAIL

4 EXTERIOR & INTERIOR LIGHTING CONTACTOR DETAIL
NO SCALE



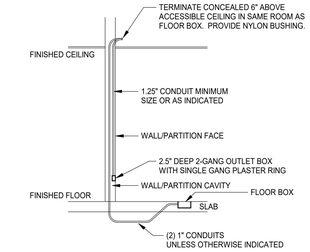
CORRIDOR LIGHTING

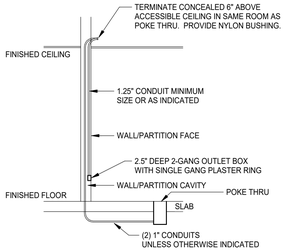


RESCUE ASSISTANCE INTERCOM SYSTEM

NOTES:
1. ALL WIRING SHALL BE INSTALLED IN CONDUIT.
2. CONDUIT SHALL BE A MINIMUM OF 3/4", BUT SHALL BE INCREASED TO ACCOMODATE THE ACTUAL NUMBER OF CONDUCTORS.
3. COORDINATE EXACT LOCATION OF AREAS OF RESCUE ASSISTANCE WITH ARCHITECTUAL PLANS PRIOR TO ROUGH-IN.

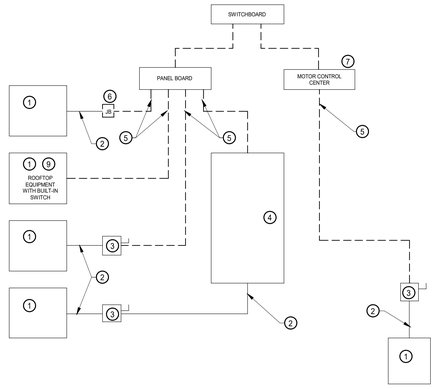
5 TELECOMMUNICATIONS OUTLET CONDUIT DETAIL - FLOOR BOX & WALL
NO SCALE





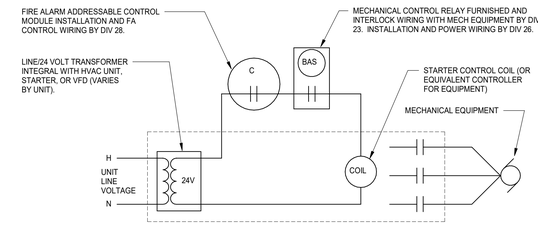
6 TELECOMMUNICATIONS OUTLET CONDUIT DETAIL - POKE THRU & WALL
NO SCALE

1. MECHANICAL EQUIPMENT
2. CONDUIT AND WIRING BY MECHANICAL CONTRACTOR.
3. IF AN ADDITIONAL DISCONNECT IS REQUIRED BY NEC, IT SHALL BE PROVIDED 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. FEEDER CIRCUIT WIRING AND CONDUIT IN ELECTRICAL WORK. SEE ELECTRICAL DRAWINGS.
6. JUNCTION BOX MAY BE SHOWN ON ELECTRICAL PLANS FOR SOME EQUIPMENT. IF NO STARTER OR DISCONNECT IS SUPPLIED, A JUNCTION BOX SHALL BE INSTALLED ADJACENT TO EQUIPMENT. THE ELECTRICAL CONTRACTOR SHALL PROVIDE LINE SIDE WIRING TO THE JUNCTION BOX. LOAD SIDE WIRING WILL BE PROVIDED BY MECHANICAL CONTRACTOR.
7. PROJECTS UTILIZING AN MCC: THE STARTER, JB, OR VFD IN THE MCC ARE PROVIDED BY THE ELECTRICAL DRAWINGS.
8. IN ALL CASES, THE EQUIPMENT CONTRACTOR SHALL MAKE FINAL CONNECTIONS, START UP, AND TEST EQUIPMENT.
9. IF THE ROOFTOP FAN IS NOT PROVIDED WITH A BUILT-IN SWITCH, THE ELECTRICAL CONTRACTOR SHALL PROVIDE A DISCONNECT SWITCH.
10. IN A SINGLE PRIME CONTRACT, IT IS THE RESPONSIBILITY OF THE PRIME CONTRACTOR TO COORDINATE BETWEEN THE ELECTRICAL AND OTHER TRADES.



7 DIVISION 23 AND 26 COORDINATION DETAIL
NO SCALE

8 GROUNDING SYSTEM DIAGRAM
NO SCALE



SYSTEMS WITH MULTIPLE MOTORS REQUIRE ONE SHUTDOWN RELAY FOR EACH STARTER OR VFD. THERE MAY BE MORE THAN ONE DUCT SMOKE DETECTOR PER SYSTEM, BUT ONLY ONE CONTROL MODULE IS REQUIRED PER MOTOR. SHUTDOWN IS VIA CONTROL MODULE, NOT VIA DUCT DETECTOR AUX CONTACTS. COORDINATE W/ DIV 23.

UNDER NORMAL CONDITIONS, FA SYSTEM POWERS THE NORMALLY OPEN FA CONTROL MODULE CONTACT TO THE CLOSED POSITION TO ALLOW NORMAL UNIT CONTROL BY BAS.

UPON ALARM SIGNAL FROM THE FIRE ALARM SYSTEM, THE CONTACTS IN THE FA SYSTEM RELEASES CONTROL MODULE TO OPEN POSITION, CAUSING SHUTDOWN OF ASSOCIATED HVAC EQUIPMENT. HVAC EQUIPMENT SHALL NOT BE OPERABLE UNTIL FA CONTROL MODULE IS RESET TO NORMAL CLOSED POSITION.

DIVISION 23 SHALL PROVIDE WIRING BETWEEN BETWEEN FA AND BAS CONTROL MODULES AND HVAC EQUIPMENT CONTROLLER (STARTER, VFD, OR INTEGRAL CONTROL PANEL).

(ST)

9 FIRE ALARM HVAC UNIT SHUTDOWN WIRING DIAGRAM
NO SCALE

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NORTH CAROLINA PROFESSIONAL SEAL 040202 ENGINEER BRIAN C. WELTY

NORTH CAROLINA BOARD OF EXAMINERS FOR ENGINEERING AND SURVEYING C-3469 NORTH CAROLINA PROFESSIONAL ENGINEER RALEIGH, NC

PROGRESS PRINT NOT FOR CONSTRUCTION

ALDERMAN AND KING HALL RENOVATIONS - KING HALL

University of North Carolina Wilmington
SCO#22-24639-01A
601 Hamilton Drive, Wilmington, NC 28403

PROJECT NO: 620589
DATE: September 2, 2022

REVISIONS	
DATE	DESCRIPTION

DETAILS

E5.2

8/31/2022 11:37:05 AM

EXISTING PANELBOARD 2D

LOCATION: PROJECTION 101B FED FROM: LDP
225 AMP MCB 120/208 Wye 3 PH 4 W MOUNT: SURFACE PANEL ASSEMBLY RATED (KAIC): 10 KAIC

CKT	BRKR	POLE	LOAD	A		B		C		LOAD	POLE	BRKR	CKT
1	20 A	1	PROJECTOR RECPT	0.5	0.8					SOUNDS RACK RECPT	1	20 A	2
3	--	1	SPACE ONLY			--	0.5			SOUND RACK RECPT	1	20 A	4
5								0.0	0.6	RECESSED CAN LTS	1	20 A	6
7	15 A	3	SURGE SUPPRESSOR	0.0	0.6					RECESSED CAN LTS	1	20 A	8
9						0.0	0.2			RECESSED LTS: ROOM 104	1	20 A	10
11	30 A	2	30A OUTLET					1.2	0.0	SPARE	2	60 A	12
13				1.2	0.0								14
15	30 A	2	SPARE			0.0	--			SPACE ONLY	1	--	16
17								0.0	--	SPACE ONLY	1	--	18
				3 kVA		1 kVA		2 kVA					
				27 A		6 A		16 A					

ALL LOADS ARE EXISTING TO REMAIN

Load Classification	Connected Load	Demand Factor	Estimated Demand
INTERIOR LIGHTING	0 VA	0.00%	0 VA
EXTERIOR LIGHTING	0 VA	0.00%	0 VA
RECEPTACLES	0 VA	0.00%	0 VA
AC / HEAT PUMP	0 VA	0.00%	0 VA
ELECTRIC HEAT	0 VA	0.00%	0 VA
KITCHEN	0 VA	0.00%	0 VA
MISCELLANEOUS	0 VA	0.00%	0 VA

Panel Totals
Total Conn. Load: 5.6 kVA
Total Est. Demand: 5.6 kVA
Total Conn. Current: 16 A
Total Est. Demand... 16 A

PANELBOARD SCHEDULE LDP

LOCATION: MECH/ELEC M100 FED FROM: T-1
500 AMP MCB 120/208 Wye 3 PH 4 W MOUNT: SURFACE PANEL ASSEMBLY RATED (KAIC): 22 KAIC

CKT	BRKR	POLE	LOAD	A		B		C		LOAD	POLE	BRKR	CKT
1				17.6	24.5								2
3	225 A	3	2A			10.4	22.1			2B	3	225 A	4
5								13.4	20.1				6
7				3.1	1.0					BAS BC-04 & 05	1	20 A	8
9	225 A	3	2D			0.7	0.5			BAS BC-00	1	20 A	10
11								1.8	0.2	REC AV 203	1	20 A	12
13	20 A	1	SPARE	0.0	0.0					SPARE	1	20 A	14
15	20 A	1	SPARE			0.0	0.0			SPARE	1	20 A	16
17	20 A	1	SPARE					0.0	0.0	SPARE	1	20 A	18
19	20 A	1	SPARE	0.0	0.0					SPARE	1	20 A	20
21	20 A	1	SPARE			0.0	0.0			SPARE	1	20 A	22
23	--	1	SPACE ONLY					--	--	SPACE ONLY	1	--	24
25	--	1	SPACE ONLY	--	--					SPACE ONLY	1	--	26
27	--	1	SPACE ONLY			--	--			SPACE ONLY	1	--	28
29	--	1	SPACE ONLY					--	--	SPACE ONLY	1	--	30
31	--	1	SPACE ONLY	--	--					SPACE ONLY	1	--	32
33	--	1	SPACE ONLY			--	--			SPACE ONLY	1	--	34
35	--	1	SPACE ONLY					--	--	SPACE ONLY	1	--	36
37	--	1	SPACE ONLY	--	--					SPACE ONLY	1	--	38
39	--	1	SPACE ONLY			--	--			SPACE ONLY	1	--	40
41	--	1	SPACE ONLY					--	--	SPACE ONLY	1	--	42
				46 kVA		34 kVA		35 kVA					
				387 A		280 A		298 A					

(GE) = PROVIDE GFCI BREAKER FOR EQUIPMENT, 6-50mA PER NEC 427.22 DED. NEUTRAL.
(GP) = PROVIDE GFCI BREAKER FOR PERSONNEL, 4-6mA PER NEC 210.8. DED. NEUTRAL.
(L) = PROVIDE LOCKOUT BREAKER TO PREVENT UNAUTHORIZED SWITCHING.
(LC) = ROUTE TO LOAD VIA LIGHTING CONTACTOR, REF DETAIL ON DWG E4.X.
(ML) = PROVIDE BREAKER WITH MAINTENANCE LOCKOUT, LOCKABLE OFF.

Load Classification	Connected Load	Demand Factor	Estimated Demand
INTERIOR LIGHTING	0 VA	0.00%	0 VA
EXTERIOR LIGHTING	0 VA	0.00%	0 VA
RECEPTACLES	39372 VA	62.70%	24686 VA
AC / HEAT PUMP	3371 VA	100.00%	3371 VA
ELECTRIC HEAT	0 VA	0.00%	0 VA
KITCHEN	0 VA	0.00%	0 VA
MISCELLANEOUS	11170 VA	100.00%	11170 VA

Panel Totals
Total Conn. Load: 115.2 kVA
Total Est. Demand: 100.6 kVA
Total Conn. Current: 320 A
Total Est. Demand... 279 A

PANELBOARD SCHEDULE 2A

LOCATION: MECH M103 FED FROM: LDP
225 AMP MCB 120/208 Wye 3 PH 4 W MOUNT: SURFACE PANEL ASSEMBLY RATED (KAIC): 10 KAIC

CKT	BRKR	POLE	LOAD	A		B		C		LOAD	POLE	BRKR	CKT
1	20 A	1	REC OFFICE 106K	0.9	0.9					REC OFFICE 106A	1	20 A	2
3	20 A	1	REC OFFICE 106L			0.9	0.9			REC OFFICE 106M	1	20 A	4
5	20 A	1	EWC (GP)					0.4	3.0	EWH-1	2	40 A	6
7	15 A	2	CP-AHU-1	0.6	3.0								8
9						0.6	0.6			CP-AHU-2	2	15 A	10
11	20 A	1	EXIST RECEPTACLE (E)					0.8	0.6				12
13	20 A	1	EXIST RECEPTACLE (E)	0.8	0.2					EXIST CLOCK CABINET (E)	1	20 A	14
15	20 A	1	EXIST RECEPTACLE (E)			0.8	0.6			EXIST LTS. STAGE (E)	1	20 A	16
17	20 A	1	EXIST RECEPTACLE (E)					1.0	0.3	EXIST LTS. EXT. FLOOD (E)	1	20 A	18
19	20 A	1	EXIST RECEPTACLE (E)	1.2	0.8					EXIST RECEPTACLE (E)	1	20 A	20
21	20 A	1	EXIST RECEPTACLE (E)			0.8	0.1			EXIST ELEVATOR PIT LIGHT (E)	1	20 A	22
23	20 A	1	EXIST RECEPTACLE (E)					1.0	1.5	EXIST EWH WOMENS BATH (E)	1	30 A	24
25	20 A	1	EXIST RECEPTACLE (E)	1.2	0.2					EXIST LTG OBSERVATION (E)	1	20 A	26
27	20 A	1	EXIST RECEPTACLE (E)			1.0	0.8			EXIST RECEPTACLE (E)	1	20 A	28
29	20 A	1	EXIST REC SUMP PUMP (E)					0.1	1.0	EXIST RECEPTACLE (E)	1	20 A	30
31	20 A	1	EXIST RECEPTACLE (E)	0.8	0.1					EXIST LTG. RAMP & ENTRY (E)	1	20 A	32
33	20 A	1	EXIST RECEPTACLE (E)			1.2	0.0			FACP (L)	1	20 A	34
35	20 A	1	BAS BC-01					0.5	0.5	BAS BC-02	1	20 A	36
37	30 A	2	RF-2	1.5	1.5					RF-1	1	20 A	38
39						1.5	0.3			AHU-1 UV LIGHT	1	20 A	40
41	20 A	1	AHU-2 UV LIGHT					0.4	0.7	AHU-1 & 2 LIGHTS	1	20 A	42
43	20 A	1	TERMINAL UNITS AHU-1	0.5	0.5					TERMINAL UNITS AHU-2	1	20 A	44
45	20 A	1	ADA POWER SUPPLY			0.5	0.1			RCP-1	1	15 A	46
47	30 A	2	EX-EWH-2					1.7	0.1	RCP-2	1	15 A	48
49				1.7	1.4					REC OFFICE 103A,103D	1	20 A	50
51	20 A	1	SPARE			0.0	0.0			SPARE	1	20 A	52
53	20 A	1	SPARE					0.0	0.0	SPARE	1	20 A	54
55	20 A	1	SPARE	0.0	0.0					SPARE	1	20 A	56
57	20 A	1	SPARE			0.0	0.0			SPARE	1	20 A	58
59	20 A	1	SPARE					0.0	0.0	SPARE	1	20 A	60
61	20 A	1	SPARE	0.0	0.0					SPARE	1	20 A	62
63	20 A	1	SPARE			0.0	0.0			SPARE	1	20 A	64
65	20 A	1	SPARE					0.0	0.0	SPARE	1	20 A	66
67	20 A	1	SPARE	0.0	0.0					SPARE	1	20 A	68
69	20 A	1	SPARE			0.0	0.0			SPARE	1	20 A	70
71	20 A	1	SPARE					0.0	0.0	SPARE	1	20 A	72
73	20 A	1	SPARE	0.0	0.0					SPARE	1	20 A	74
75	20 A	1	SPARE			0.0	0.0			SPARE	1	20 A	76
77	20 A	1	SPARE					0.0	0.0	SPARE	1	20 A	78
79	20 A	1	SPARE	0.0	0.0					SPARE	1	20 A	80
81	20 A	1	SPARE			0.0	0.0			SPARE	1	20 A	82
83	20 A	1	SPARE					0.0	0.0	SPARE	1	20 A	84
				18 kVA		10 kVA		13 kVA					
				151 A		86 A		116 A					

(E) = EXISTING CIRCUIT RELOCATED FROM PANEL 2A. PROVIDE (2) #12, #12 E.G EXTENSION TO EXISTING CIRCUIT JUNCTION BOX
(GE) = PROVIDE GFCI BREAKER FOR EQUIPMENT, 6-50mA PER NEC 427.22 DED. NEUTRAL.
(GP) = PROVIDE GFCI BREAKER FOR PERSONNEL, 4-6mA PER NEC 210.8. DED. NEUTRAL.
(L) = PROVIDE LOCKOUT BREAKER TO PREVENT UNAUTHORIZED SWITCHING. PROVIDE RED CIRCUIT BREAKER IN ACCORDANCE WITH NEC 760.41
(LC) = ROUTE TO LOAD VIA LIGHTING CONTACTOR, REF DETAIL ON DWG E4.X....

Load Classification	Connected Load	Demand Factor	Estimated Demand
INTERIOR LIGHTING	0 VA	0.00%	0 VA
EXTERIOR LIGHTING	0 VA	0.00%	0 VA
RECEPTACLES	5400 VA	100.00%	5400 VA
AC / HEAT PUMP	0 VA	0.00%	0 VA
ELECTRIC HEAT	0 VA	0.00%	0 VA
KITCHEN	0 VA	0.00%	0 VA
MISCELLANEOUS	7270 VA	100.00%	7270 VA

Panel Totals
Total Conn. Load: 41.4 kVA
Total Est. Demand: 41.4 kVA
Total Conn. Current: 115 A
Total Est. Demand... 115 A

PANELBOARD SCHEDULE 2B

LOCATION: AV 203 FED FROM: LDP
225 AMP MCB 120/208 Wye 3 PH 4 W MOUNT: SURFACE PANEL ASSEMBLY RATED (KAIC): 10 KAIC

CKT	BRKR	POLE	LOAD	A		B		C		LOAD	POLE	BRKR	CKT
1	20 A	1	EXIST RCPT RM 202 TABLES (E)	0.8	0.8					EXIST RCPT RM 202 TABLES (E)	1	20 A	2
3	20 A	1	EXIST RCPT RM 202 TABLES (E)			0.8	0.8			EXIST RCPT RM 202 TABLES (E)	1	20 A	4
5	20 A	1	EXIST RCPT RM 202 TABLES (E)					0.8	0.8	EXIST RCPT RM 202 TABLES (E)	1	20 A	6
7	20 A	1	EXIST PROJECTOR 202 (E)	0.5	0.5					EXIST PROJECTOR 202 (E)	1	20 A	8
9	20 A	1	EXIST RCPT RM 202 (E)			0.6	0.1			EXIST CAMERAS 202 (E)	1	20 A	10
11	20 A	1	EXIST RCPT RM 202 (E)					0.6	1.0	EXIST PHONE SERVER (E)	1	20 A	12
13	20 A	1	EXIST RCPT RM 202 (E)	0.6	0.6					EXIST RCPT RM 210 (E)	1	20 A	14
15	20 A	1	EXIST RCPT RM 210 (E)			1.0	0.8			EXIST RCPT RM 210 (E)	1	20 A	16
17	20 A	1	EXIST RCPT RM 210 (E)					1.0	1.0	EXIST RCPT RM 210 (E)	1	20 A	18
19	20 A	1	EXIST RCPT RM 210 (E)	0.8	0.8					EXIST RCPT RM 209 (E)	1	20 A	20
21	20 A	1	EXIST RCPT RM 209 (E)			0.8	0.8			EXIST RCPT RM 209 (E)	1	20 A	22
23	20 A	1	EXIST RCPT RM 209 (E)					0.8	0.8	EXIST RCPT RM 207 (E)	1	20 A	24
25	20 A	1	EXIST RCPT RM 209 (E)	0.8	1.0					EXIST RCPT RM 207 (E)	1	20 A	26
27	20 A	1	EXIST ELEVATOR LIGHTS (E)			0.3	0.8			EXIST RCPT RM 209 (E)	1	20 A	28
29	20 A	1	EXIST RCPT RM 211 (E)					0.6	0.6	EXIST RCPT RM 211 (E)	1	20 A	30
31	20 A	1	EXIST RCPT RM 209 (E)	0.8	0.6					EXIST RCPT RM 209 (E)	1	20 A	32
33	20 A	1	SYSTEM FURNITURE			0.5	0.5			SYSTEM FURNITURE	1	20 A	34
35	20 A	1	REC ROOM 203B, 203G					0.9	0.4	EWC (GP)	1	20 A	36
37	20 A	1	REC OPEN OFFICE, HSK H200	0.9	1.4					REC ROOM 203D, 203E	1	20 A	38
39	20 A	1	REC ROOM 203F, 204B			1.6	0.2			BREAK ROOM FRIDGE (GP)	1	20 A	40
41	20 A	1	REC ROOM 204D					0.9	1.1	REC 204A & CORRIDOR	1	20 A	42
43	20 A	1	REC CONFERENCE 205	0.9	1.1					REC ROOM 204F	1	20 A	44
45	20 A	1	REC OPEN OFFICE 206			1.1	1.1			REC 206	1	20 A	46
47	20 A	1	REC ROOM 204E, 206					1.3	0.9	REC ROOM 206A	1	20 A	48
49	20 A	1	REC CORRIDOR	0.5	1.4					REC 201-1	1	20 A	50
51	20 A	1	REC ROOM 201-1, 201-2, 211			0.9	0.7			REC 211, 201-2	1	20 A	52
53	20 A	1	REC 201-1					0.4	0.6	CP-AHU-3	2	15 A	54
55	25 A	2	SSI-1 & SSO-1	1.7	0.6								56
57						1.7	0.4			REC TELCOM 201A	1	20 A	58
59	20 A	1	REC TELCOM 201A					0.4	0.4	REC AV 203A	1	20 A	60
61	20 A	1	REC AV 203A	0.4	2.5					REC 201A	2	20 A	62
63	20 A	1	REC BREAK 204C			0.2	2.5						64
65	20 A	1	REC BREAK 204C					0.2	0.2	REC BREAK 204C	1	20 A	66
67	20 A	1	RM 212 PROJECTOR SCREENS	1.0	0.7					REC 211	1	20 A	68
69	20 A	1	REC 204, 204C, R200			0.7	1.1			REC 201-2	1	20 A	70
71	20 A	1	REC 203G, 203C					1.4	1.1	REC 212	1	20 A	72
73	20 A	1	REC 212	0.7	0.7					REC 212	1	20 A	74
75	15 A	1	F-2			0.3	0.7			F-1	1	15 A	76
77	20 A	1	BAS BC-03					0.5	0.7	F-3	1	15 A	78
79	20 A	1	TERMINAL UNITS AHU-3	0.5	0.4					RECROOF	1	20 A	80
81	20 A	1	REC AV 203			0.4	0.4			REC 212 PROJECTORS	1	20 A	82
83	20 A	1	REC 200A VENDING (GP)					0.2	0.2	REC 209F VENDING (GP)	1	20 A	84
85	20 A	1	REC ROOM 210	0.5									86
87	20 A	1	REC MECH M201			0.2	0.2			REC 201-1	1	20 A	88
89	20 A	1	AHU-3 LIGHTS					0.4	0.3	AHU-3 UV LIGHT	1	20 A	90
91	20 A	1	SPARE	0.0	0.0					SPARE	1	20 A	92
93	20 A	1	SPARE			0.0	0.0			SPARE	1	20 A	94
95	20 A	1	SPARE					0.0	0.0	SPARE	1	20 A	96
97	20 A	1	SPARE	0.0	0.0					SPARE	1	20 A	98
99	20 A	1	SPARE			0.0	0.0			SPARE	1	20 A	100
101	20 A	1	SPARE					0.0	0.0	SPARE	1	20 A	102
103	20 A	1	SPARE	0.0	0.0					SPARE	1	20 A	104
105	20 A	1	SPARE			0.0	0.0			SPARE	1	20 A	106
107	20 A	1	SPARE					0.0	0.0	SPARE	1	20 A	108
109	20 A	1	SPARE	0.0	0.0					SPARE	1	20 A	110
111	20 A	1	SPARE			0.0	0.0			SPARE	1	20 A	112
113	20 A	1	SPARE					0.0	0.0	SPARE	1	20 A	114
115	20 A	1	SPARE	0.0	0.0					SPARE	1	20 A	116
117	20 A	1	SPARE			0.0	0.0			SPARE	1	20 A	118
119	20 A	1	SPARE					0.0	0.0	SPARE	1	20 A	120
				24 kVA		22 kVA		20 kVA					
				206 A		186 A		167 A					

(E) = EXISTING CIRCUIT RELOCATED FROM PANEL 2B, 2C AND/OR 2B-1. PROVIDE (2) #12, #12 E.G EXTENSION TO EXISTING CIRCUIT JUNCTION BOX
(GE) = PROVIDE GFCI BREAKER FOR EQUIPMENT, 6-50mA PER NEC 427.22 DED. NEUTRAL.
(GP) = PROVIDE GFCI BREAKER FOR PERSONNEL, 4-6mA PER NEC 210.8. DED. NEUTRAL.
(L) = PROVIDE LOCKOUT BREAKER TO PREVENT UNAUTHORIZED SWITCHING.
(LC) = ROUTE TO LOAD VIA LIGHTING CONTACTOR, REF INTERIOR LIGHTING CONTACTOR DETAIL....

Load Classification	Connected Load	Demand Factor	Estimated Demand
INTERIOR LIGHTING	0 VA	0.00%	0 VA
EXTERIOR LIGHTING	0 VA	0.00%	0 VA
RECEPTACLES	33792 VA	64.80%	21896 VA
AC / HEAT PUMP	3371 VA	100.00%	3371 VA
ELECTRIC HEAT	0 VA	0.00%	0 VA
KITCHEN	0 VA	0.00%	0 VA
MISCELLANEOUS	3900 VA	100.00%	3900 VA

Panel Totals
Total Conn. Load: 66.6 kVA
Total Est. Demand: 54.7 kVA
Total Conn. Current: 185 A
Total Est. Demand... 152 A

PANELBOARD SCHEDULE MDP

LOCATION: MECH/ELEC M100 FED FROM: PAD MT XFMR
800 AMP MCB SE RATED 480/277 Wye 3 PH 4 W MOUNT: SURFACE PANEL ASSEMBLY RATED (KAIC): 42 KAIC

CKT	BRKR	POLE	LOAD	A		B		C		LOAD	POLE	BRKR	CKT
1				46.2	7.2								2
3	225 A	3	T-1			33.6	6.6			4A	3	100 A	4
5								35.5	4.6				6
7				8.0	10.7								8
9	40 A	3	ELEVATOR			8.0	11.0			4B	3	100 A	10
11								8.0	9.2				12
13				0.9	0.9								14
15	15 A	3	CHWP-1			0.9	0.9			HWP-1	3	15 A	16
17								0.9	0.9				18
19	20 A	1	EXISTING EXTERIOR LIGHTING	1.3	0.4					FCU-1	1	15 A	20
21	15 A	1	FCU-2			0.4	0.4			FCU-3	1	15 A	22
23	20 A	1	SPARE					0.0	0.0	SPARE	1	20 A	24
25	20 A	1	SPARE	0.0	0.0					SPARE	1	20 A	26
27	20 A	1	SPARE			0.0	0.0			SPARE	1	20 A	28
29	--	1	SPACE ONLY					--	--	SPACE ONLY	1	--	30
31	--	1	SPACE ONLY	--	--					SPACE ONLY	1	--	32
33	--	1	SPACE ONLY			--	--			SPACE ONLY	1	--	34
35	--	1	SPACE ONLY					--	--	SPACE ONLY	1	--	36
37	--	1	SPACE ONLY	--	--					SPACE ONLY	1	--	38
39	--	1	SPACE ONLY			--	--			SPACE ONLY	1	--	40
41	--	1	SPACE ONLY					--	--	SPACE ONLY	1	--	42
				75 kVA		61 kVA		59 kVA					
				273 A		224 A		212 A					

(GE) = PROVIDE GFCI BREAKER FOR EQUIPMENT, 6-50mA PER NEC 427.22 DED. NEUTRAL.
(GP) = PROVIDE GFCI BREAKER FOR PERSONNEL, 4-6mA PER NEC 210.8. DED. NEUTRAL.
(L) = PROVIDE LOCKOUT BREAKER TO PREVENT UNAUTHORIZED SWITCHING.
(LC) = ROUTE TO LOAD VIA LIGHTING CONTACTOR, REF DETAIL ON DWG E4.X.
(ML) = PROVIDE BREAKER WITH MAINTENANCE LOCKOUT, LOCKABLE OFF.

Load Classification	Connected Load	Demand Factor	Estimated Demand
INTERIOR LIGHTING	9913 VA	125.00%	12391 VA
EXTERIOR LIGHTING	1274 VA	125.00%	1593 VA
RECEPTACLES	39372 VA	62.70%	24686 VA
AC / HEAT PUMP	18085 VA	100.00%	18085 VA
ELECTRIC HEAT	0 VA	0.00%	0 VA
KITCHEN	0 VA	0.00%	0 VA
MISCELLANEOUS	35690 VA	100.00%	35690 VA

Panel Totals
Total Conn. Load: 195.5 kVA
Total Est. Demand: 183.6 kVA
Total Conn. Current: 235 A
Total Est. Demand... 221 A

PANELBOARD SCHEDULE 4A

LOCATION: MECH M103 FED FROM: MDP
100 AMP MCB 480/277 Wye 3 PH 4 W MOUNT: SURFACE PANEL ASSEMBLY RATED (KAIC): 42 KAIC

CKT	BRKR	POLE	LOAD	A		B		C		LOAD	POLE	BRKR	CKT
1				1.9	2.7								2
3	15 A	3	AHU-1			1.9	2.7			AHU-2	3	15 A	4
5								1.9	2.7				6
7	20 A	1	LTG CORRIDOR	0.8	1.8					LTG 1ST FLOOR	1	20 A	8
9	15 A	1	FCU-4			0.4	1.6			LTG 1ST FLOOR	1	20 A	10
11	20 A	1	EXIST LTS. AUD. (E)					0.0	0.0	EXIST LTS. AUD. (E)	1	20 A	12
13	20 A	1	SPARE	0.0	0.0					SPARE	1	20 A	14
15	20 A	1	SPARE			0.0	0.0			SPARE	1	20 A	16
17	20 A	1	SPARE					0.0	0.0	SPARE	1	20 A	18
19	20 A	1	SPARE	0.0	0.0					SPARE	1	20 A	20
21	20 A	1	SPARE			0.0	0.0			SPARE	1	20 A	22
23	--	1	SPACE ONLY					--	--	SPACE ONLY	1	--	24
25	--	1	SPACE ONLY	--	--					SPACE ONLY	1	--	26
27	--	1	SPACE ONLY			--	--			SPACE ONLY	1	--	28
29	--	1	SPACE ONLY					--	--	SPACE ONLY	1	--	30
31	--	1	SPACE ONLY	--	--					SPACE ONLY	1	--	32
33	--	1	SPACE ONLY			--	--			SPACE ONLY	1	--	34
35	--	1	SPACE ONLY					--	--	SPACE ONLY	1	--	36
37	--	1	SPACE ONLY	--	--					SPACE ONLY	1	--	38
39	--	1	SPACE ONLY			--	--			SPACE ONLY	1	--	40
41	--	1	SPACE ONLY					--	--	SPACE ONLY	1	--	42
				7 kVA		7 kVA		5 kVA					
				27 A		25 A		17 A					

(E) = EXISTING CIRCUIT RELOCATED FROM PANEL 4A. PROVIDE (2) #12, #12 E.G EXTENSION TO EXISTING CIRCUIT LOCATION
(GE) = PROVIDE GFCI BREAKER FOR EQUIPMENT, 6-50mA PER NEC 427.22 DED. NEUTRAL.
(GP) = PROVIDE GFCI BREAKER FOR PERSONNEL, 4-6mA PER NEC 210.8. DED. NEUTRAL.
(L) = PROVIDE LOCKOUT BREAKER TO PREVENT UNAUTHORIZED SWITCHING.
(LC) = ROUTE TO LOAD VIA LIGHTING CONTACTOR, REF DETAIL ON DWG E4.X....

Load Classification	Connected Load	Demand Factor	Estimated Demand
INTERIOR LIGHTING	4232 VA	125.00%	5290 VA
EXTERIOR LIGHTING	0 VA	0.00%	0 VA
RECEPTACLES	0 VA	0.00%	0 VA
AC / HEAT PUMP	13740 VA	100.00%	13740 VA
ELECTRIC HEAT	0 VA	0.00%	0 VA
KITCHEN	0 VA	0.00%	0 VA
MISCELLANEOUS	0 VA	0.00%	0 VA

Panel Totals
Total Conn. Load: 18.4 kVA
Total Est. Demand: 19.4 kVA
Total Conn. Current: 22 A
Total Est. Demand... 23 A

PANELBOARD SCHEDULE 4B

LOCATION: AV 203 FED FROM: MDP
100 AMP MCB 480/277 Wye 3 PH 4 W MOUNT: SURFACE PANEL ASSEMBLY RATED (KAIC): 42 KAIC

CKT	BRKR	POLE	LOAD	A		B		C		LOAD	POLE	BRKR	CKT
1				3.0	0.4					FCU-5	1	15 A	2
3	20 A	3	AHU-3 SUPPLY FAN 1			3.0	0.4			FCU-6	1	15 A	4
5								3.0	0.3	LTG 2ND FLOOR	1	20 A	6
7				3.0	2.2					LTG 2ND FLOOR	1	20 A	8
9	20 A	3	AHU-3 SUPPLY FAN 2			3.0	2.5			LTG 2ND FLOOR	1	20 A	10
11								3.0	0.7	LTG CORRIDOR	1	20 A	12
13				2.1	0.0					SPARE	1	20 A	14
15	15 A	3	RF-3			2.1	0.0			SPARE	1	20 A	16
17								2.1	0.0	SPARE	1	20 A	18
19	20 A	1	SPARE	0.0	0.0					SPARE	1	20 A	20
21	20 A	1	SPARE			0.0	0.0			SPARE	1	20 A	22
23	--	1	SPACE ONLY					--	--	SPACE ONLY	1	--	24
25	--	1	SPACE ONLY	--	--					SPACE ONLY	1	--	26
27	--	1	SPACE ONLY			--	--			SPACE ONLY	1	--	28
29	--	1	SPACE ONLY					--	--	SPACE ONLY	1	--	30
31	--	1	SPACE ONLY	--	--					SPACE ONLY	1	--	32
33	--	1	SPACE ONLY			--	--			SPACE ONLY	1	--	34
35	--	1	SPACE ONLY					--	--	SPACE ONLY	1	--	36
37	--	1	SPACE ONLY	--	--					SPACE ONLY	1	--	38
39	--	1	SPACE ONLY			--	--			SPACE ONLY	1	--	40
41	--	1	SPACE ONLY					--	--	SPACE ONLY	1	--	42
				11 kVA		11 kVA		9 kVA					
				39 A		41 A		33 A					

(GE) = PROVIDE GFCI BREAKER FOR EQUIPMENT, 6-50mA PER NEC 427.22 DED. NEUTRAL.
(GP) = PROVIDE GFCI BREAKER FOR PERSONNEL, 4-6mA PER NEC 210.8. DED. NEUTRAL.
(L) = PROVIDE LOCKOUT BREAKER TO PREVENT UNAUTHORIZED SWITCHING.
(LC) = ROUTE TO LOAD VIA LIGHTING CONTACTOR, REF DETAIL ON DWG E4.X.
(ML) = PROVIDE BREAKER WITH MAINTENANCE LOCKOUT, LOCKABLE OFF.

Load Classification	Connected Load	Demand Factor	Estimated Demand
INTERIOR LIGHTING	5681 VA	125.00%	7101 VA
EXTERIOR LIGHTING	0 VA	0.00%	0 VA
RECEPTACLES	0 VA	0.00%	0 VA
AC / HEAT PUMP	800 VA	100.00%	800 VA
ELECTRIC HEAT	0 VA	0.00%	0 VA
KITCHEN	0 VA	0.00%	0 VA
MISCELLANEOUS	24520 VA	100.00%	24520 VA

Panel Totals
Total Conn. Load: 30.8 kVA
Total Est. Demand: 32.3 kVA
Total Conn. Current: 37 A
Total Est. Demand... 39 A

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NORTH CAROLINA PROFESSIONAL SEAL 040202 2/10/23 ENGINEER BRIAN C. WELLS

MOSELEY ARCHITECTS PC REGISTERED ENGINEERING CORPORATION C-3469 NORTH CAROLINA RALEIGH, NC

ALDERMAN AND KING HALL RENOVATIONS - KING HALL

University of North Carolina Wilmington
SCO#22-24639-01A
601 Hamilton Drive, Wilmington, NC 28403

PROJECT NO: 620589
DATE: FEBRUARY 10, 2023

REVISIONS	
DATE	DESCRIPTION

PANELBOARD SCHEDULES

E6.1

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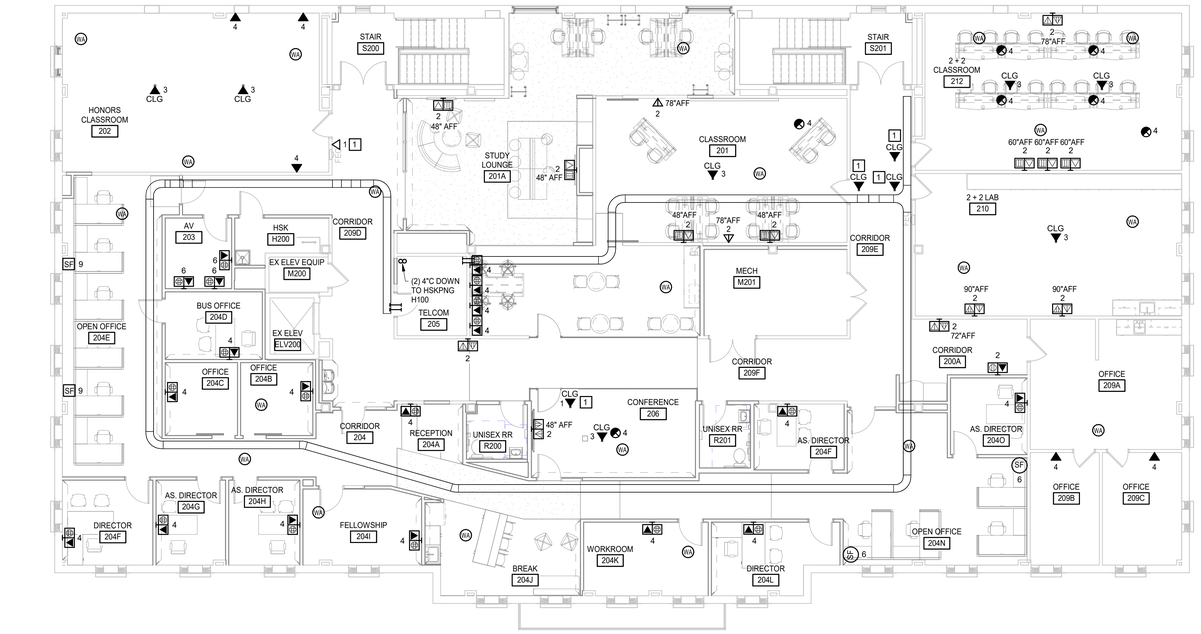
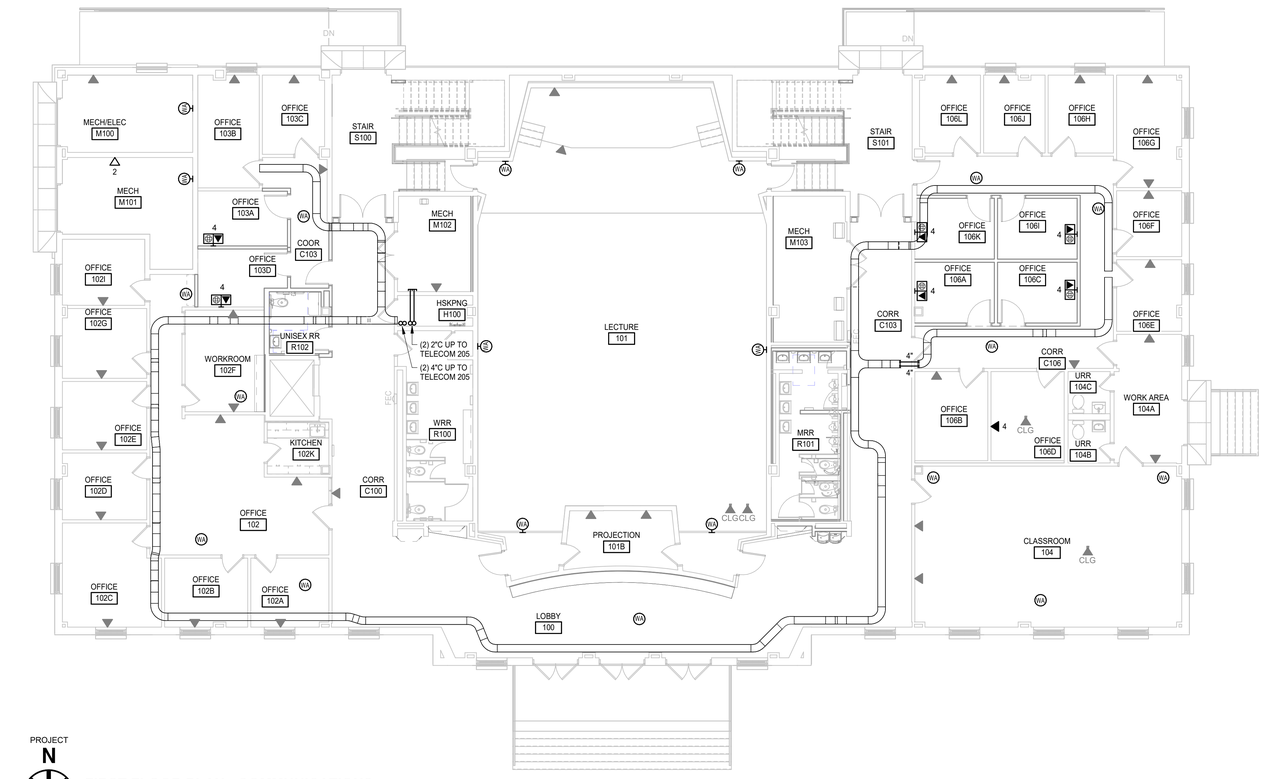


PROJECT N POLAR

SECOND FLOOR PLAN - COMMUNICATIONS

1/8" = 1'-0"



PROJECT N POLAR

FIRST FLOOR PLAN - COMMUNICATIONS

1/8" = 1'-0"

GENERAL NOTES

A. THE CONTRACT DOCUMENTS ARE COMPLEMENTARY AND WHAT IS REQUIRED BY ONE SHALL BE AS BINDING AS IF REQUIRED BY ALL. IN THE CASE OF A CONFLICT, DISAGREEMENT, OR AMBIGUITY, PROVIDE THE BETTER QUALITY. IN THE CASE OF A CONFLICT, DISAGREEMENT, OR AMBIGUITY, PROVIDE THE GREATER QUANTITY OF WORK.

B. FOLLOW MOUNTING HEIGHTS INDICATED IN THE ELECTRICAL LEGEND UNLESS OTHERWISE INDICATED. MEASURE ALL MOUNTING HEIGHTS FROM THE DEVICE CENTER LINE UNLESS OTHERWISE INDICATED.

C. EQUIPMENT CONNECTIONS ARE INDICATED IN THEIR APPROXIMATE LOCATIONS. VERIFY EXACT LOCATIONS OF ALL CONNECTIONS WITH OTHER TRADES SUPPLYING EQUIPMENT TO AVOID CONFLICTS AT INSTALLATION.

D. ALL CONDUIT AND CABLE TRAY RUNS INDICATED ARE DIAGRAMMATIC. COORDINATE ROUTING IN ALL SPACES WITH OTHER TRADES.

E. WHERE POWER AND COMMUNICATION OUTLETS ARE INDICATED IN CLOSE PROXIMITY ON THE DRAWINGS, FIELD COORDINATE THE LOCATIONS TO PLACE THE OUTLETS ADJACENT TO EACH OTHER.

F. ALL ELECTRICAL INSPECTIONS WITH THE STATE CONSTRUCTION OFFICE INSPECTOR SHALL BE MONDAY THRU FRIDAY UNLESS SPECIFICIALLY EXEMPTED AND APPROVED BY THE STATE CONSTRUCTION OFFICE.

G. ALL VOICE, DATA AND CATV CABLING DEMOLITION AND INSTALLATION SHALL BE PERFORMED BY A CERTIFIED COMMSCOPE SYSTIMAX CONTRACTOR.

H. PROVIDE RIGHT ANGLE BRACKET FOR ALL WALL MOUNTED WIRELESS ACCESS POINTS.

I. PROVIDE REPLACEMENT FACEPLATES FOR ALL EXISTING DATA OUTLETS & RELABEL WITH NEW TERMINATION ID.

COMMUNICATIONS LEGEND

NOTE: REFER TO TELECOMMUNICATIONS DETAILS ON T4.1. PROVIDE QUANTITY OF CATEGORY 6 OR CATEGORY 6A CABLES PER OUTLET LOCATION INDICATED ON FLOOR PLANS.

SYMBOL DESCRIPTION

- TELECOMMUNICATIONS OUTLET. MOUNT AT +3'-10"AFF.
- TELECOMMUNICATIONS OUTLET. MOUNT AT +1'-6"AFF.
- CLG TELECOMMUNICATIONS OUTLET ABOVE ACCESSIBLE CEILING. PROVIDE 15FT COILED LOOP ABOVE CEILING WITH BISCUIT BOX TYPE CONNECTION.
- TELECOMMUNICATIONS OUTLET MOUNTED BESIDE AN ELECTRICAL OUTLET. MOUNT AT +1'-6"AFF. "P" IN LEFT SYMBOL BOX MAY DIFFER.
- TELECOMMUNICATIONS OUTLET MOUNTED BESIDE AN ELECTRICAL OUTLET. MOUNT AT +3'-10"AFF. "P" IN LEFT SYMBOL BOX MAY DIFFER.
- TELECOMMUNICATIONS OUTLET MOUNTED BESIDE AN ELECTRICAL OUTLET. MOUNT AT +7'-6"AFF. "P" IN LEFT SYMBOL BOX MAY DIFFER.
- POWER/COMMUNICATIONS/AV RECESSED FLOOR BOX. REFER TO "TELECOMMUNICATIONS OUTLET CONDUIT DETAIL" FOR BOX AND CONDUIT REQUIREMENTS.
- SF SYSTEM FURNITURE COMMUNICATIONS CONNECTIONS VIA FLOOR BOX. PROVIDE 1.25" CONDUIT BELOW SLAB TO STUB-UP AT NEAREST COMMUNICATION BACK BOARD. COORDINATE WITH FURNITURE PROVIDER PRIOR TO ROUGH-IN.
- SF SYSTEM FURNITURE COMMUNICATIONS CONNECTION VIA FLUSH WALL BOX MOUNTED +6"AFF. PROVIDE 1.25" CONDUIT WITH BUSHING FROM BOX TO ABOVE CEILING. COORDINATE WITH FURNITURE PROVIDER PRIOR TO ROUGH-IN.
- TELECOMMUNICATIONS EQUIPMENT RACK.
- 2" EMT CONDUIT SLEEVE WITH NYLON BUSHING EACH END UNO, THRU WALL AT +6" ABOVE FINISHED CEILING.
- TGB TELECOMMUNICATIONS GROUND BUS BAR, MOUNT AT +1'-6"AFF.
- WA CEILING MOUNTED WIRELESS ACCESS POINT, FURNISHED BY OWNER, INSTALLED BY CONTRACTOR. PROVIDE (2) CATEGORY 6A CABLES.
- WA WALL MOUNTED WIRELESS ACCESS POINT, FURNISHED BY OWNER, INSTALLED BY CONTRACTOR. PROVIDE (2) CATEGORY 6A CABLES. PROVIDE RIGHT ANGLE BRACKET.

GRAPHICS SYMBOLS LEGEND

A123 **SPACE IDENTIFICATION TAG**
- SPACE NUMBER
- BUILDING AREA (WHEN USED)

1 / E4.1 **SECTION WHERE CUT**
- SECTION NUMBER
- DRAWING WHERE SECTION IS INDICATED

1 / E3.1 **ENLARGED PLAN WHERE CUT**
- ENLARGED PLAN NUMBER
- DRAWING WHERE ENLARGED PLAN IS INDICATED

1 / E5.1 **DETAIL TAG**
- DETAIL NUMBER
- DRAWING WHERE DETAIL IS INDICATED

1 **DETAIL TITLE** 1/4"=1'-0"
- E2.2, E5.1, E2.3, E2.4 — DETAIL NUMBER
- DRAWING WHERE DETAIL IS INDICATED
- DRAWING WHERE DETAIL IS CUT
- ADDITIONAL DRAWING REFERENCES

1 **SECTION TITLE** 1/4"=1'-0"
- E2.2, E4.1, E2.3, E2.4 — SECTION NUMBER
- DRAWING WHERE SECTION IS INDICATED
- DRAWING WHERE SECTION IS CUT
- ADDITIONAL DRAWING REFERENCES

KEYNOTES

APPLIES TO THIS DRAWING

1 PROVIDE TELECOMMUNICATIONS OUTLET ABOVE ACCESSIBLE CEILING, ADJACENT TO DOOR. PATCH CORD TO ROOM SCHEDULING EQUIPMENT TO BE PROVIDED BY OWNER.

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ALDERMAN AND KING HALL RENOVATIONS - KING HALL

University of North Carolina Wilmington
SCO#22-24639-01A
601 Hamilton Drive, Wilmington, NC 28403

PROJECT NO: 620589
DATE: FEBRUARY 10, 2023

REVISIONS	
DATE	DESCRIPTION

TELECOMMUNICATIONS LEGEND, GENERAL NOTES, & PLANS

T2.1

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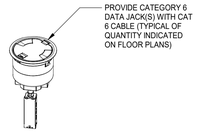
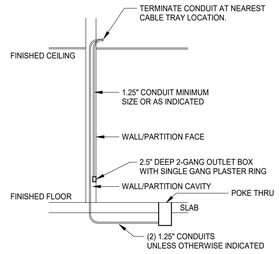


1 POKE-THRU DETAIL - TELECOMMUNICATIONS
NO SCALE

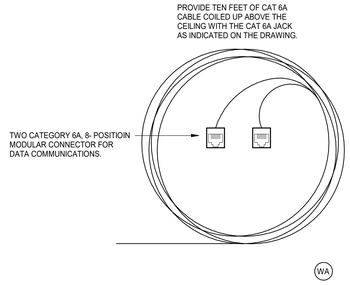


2 TELECOMMUNICATIONS OUTLET DETAIL - POKE THRU & WALL
NO SCALE

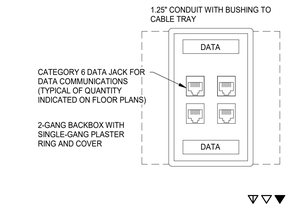
KEYNOTES
APPLIES TO THIS DRAWING

1. CUT & RETERMINATE ALL EXISTING 1ST FLOOR VOICE CABLING (CAT 6). PROVIDE PATCH PANELS AS INDICATED. TERMINATE AND TEST AT BOTH ENDS AS T568B IN LIEU OF PREVIOUS UTILIZE TERMINATION STANDARD. PROVIDE UPDATED LABEL ON FACEPLATE. PROVIDE REPLACEMENT FACEPLATE FOR END-POINT SIDE AND LABEL WITH UPDATED ID.
2. CUT & RETERMINATE ALL EXISTING 1ST FLOOR DATA CABLING (CAT 6). PROVIDE PATCH PANEL AS INDICATED. TERMINATE AND TEST AT BOTH ENDS. PROVIDE REPLACEMENT FACEPLATE FOR END-POINT SIDE AND LABEL WITH UPDATED ID.
3. PROVIDE #6 GROUNDING CONDUCTOR TO TGB. TYPICAL FOR EACH RACK.
4. PROVIDE #6 GROUNDING CONDUCTOR TO TGB FROM EXISTING LADDER RACK.

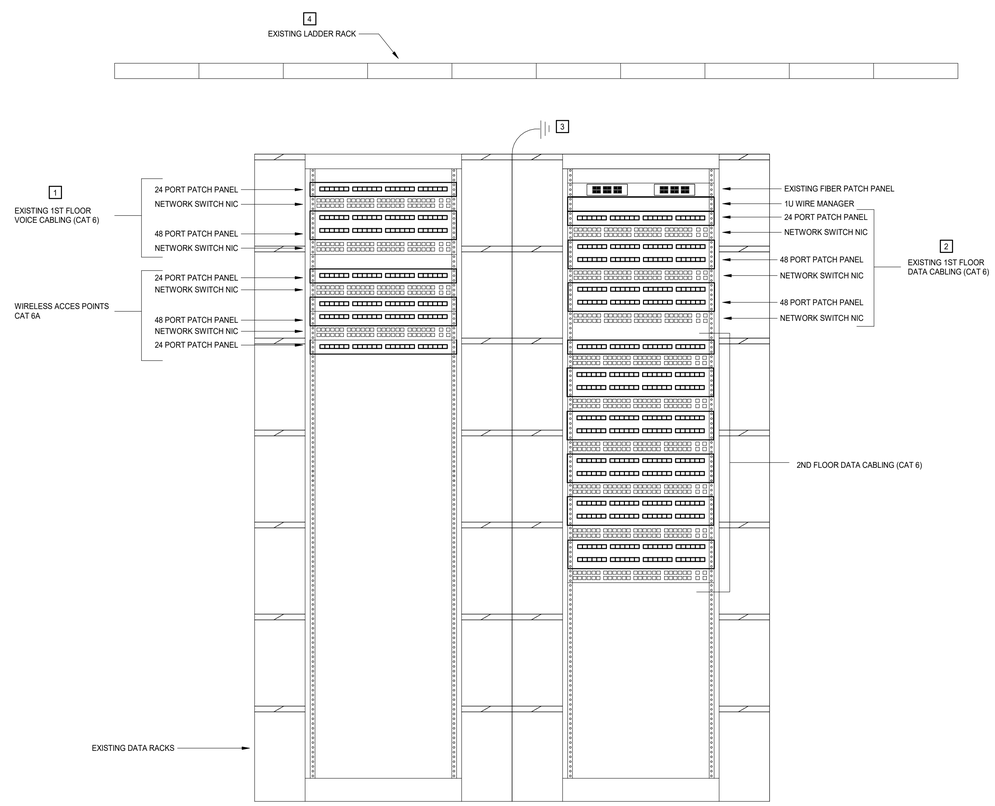
GENERAL NOTES
1. PROVIDE QUANTITY OF PATCH PANELS TO PROVIDE CABLING TO ALL DATA JACKS PLUS 25% SPARE.
2. REFER TO SPECIFICATIONS FOR PATCH CABLE REQUIREMENTS.



3 WIRELESS ACCESS POINT CABLING DETAIL
NO SCALE



4 TELECOMMUNICATION OUTLET DETAIL
NO SCALE



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ALDERMAN AND KING HALL RENOVATIONS - KING HALL

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PROJECT NO: 620589
DATE: FEBRUARY 10, 2023

REVISIONS

DATE	DESCRIPTION

DETAILS & ELEVATIONS

T4.1

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