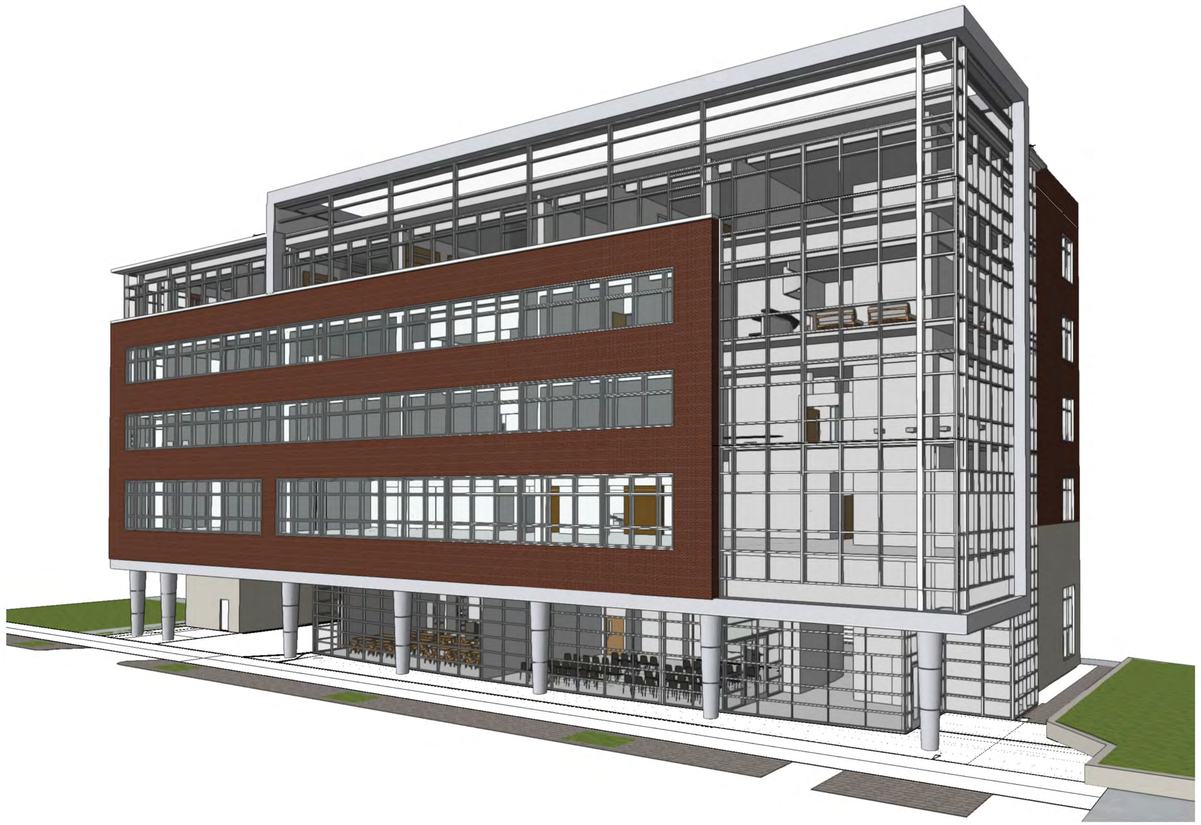
Cape Fear Community College
Health and Human Services Building

Interior Renovations - Phase Two

319 N 3rd Street, Wimington, North Carolina 28401

Construction Documents Submittal-
06.07.24

SCO # 23-27149-01A NCCCS # 2772



SHEET INDEX

GENERAL:

G1	Cover Sheet
G2	Appendix B
G3	Life Safety Plans
G4	Life Safety Plans
G5	Life Safety Plans
G6	UL Assemblies
G7	UL Assemblies

ARCHITECTURAL:

AD 101	First Floor - Demolition Plan
AD 102	Second & Third Floor - Demolition Plan
AD 103	Fourth & Fifth Floor - Demolition Plan
A100	Architectural Site Plan
A101	First Floor Renovation
A102	Second Floor Renovation
A103	Third Floor Renovation
A104	Fourth Floor Renovation
A105	Fifth Floor Renovation
A106	Roof Plan
A201	Enlarged Second Floor Plan - Hospital Lab
A202	Enlarged Third Floor Plan - Nursing Lab
A203	Enlarged Third Floor Plan - Dental
A204	Enlarged Fourth Floor Plan - Dental
A205	Enlarged Fourth Floor Plan - Dental
A300	Building Elevations
A400	Building Section
A401	Partition Types
A500	Enlarged Restroom Plans and Elevations
A501	Enlarged Millwork Elevations
A600	Door Schedule, Window & Door Elevations & Details
A601	Room Finishes Schedule
A700	Millwork Sections and Details, Headwall Design
A802	Second Floor Reflected Ceiling Plan
A803	Third Floor Reflected Ceiling Plan
A804	Fourth Floor Reflected Ceiling Plan
A805	Fifth Floor Reflected Ceiling Plan

MECHANICAL:

M001	Schedules, Legends & Notes
M002	Schedules, Legends & Notes
M003	Schedules, Legends & Notes
M121	Demolition Plan - Second Floor
M131	Demolition Plan - Third Floor
M141	Demolition Plan - Fourth Floor
M151	Demolition Plan - Fifth Floor
M161	Demo Roof Plan
M211	Mechanical Plan - First Floor
M221	Mechanical Plan - Second Floor
M231	Mechanical Plan - Third Floor
M241	Mechanical Plan - Fourth Floor
M251	Mechanical Plan - Fifth Floor
M261	Mechanical Plan - Roof

PLUMBING:

P001	Schedules, Legends & Notes
P002	Schedules, Legends & Notes
P003	Schedules, Legends & Notes
P004	Schedules, Legends & Notes
PD131	DEMOLITION PLAN – THIRD FLOOR
PD141	DEMOLITION PLAN – FOURTH FLOOR
PD151	DEMOLITION PLAN – FIFTH FLOOR
P111	Water Piping Plan - First Floor
P121	Water Piping Plan - Second Floor
P131	Water Piping Plan - Third Floor
P141	Water Piping Plan - Fourth Floor
P151	Water Piping Plan - Fifth Floor
P211	D.W.V. Piping Plan - First Floor
P221	D.W.V. Piping Plan - Second Floor
P231	D.W.V. Piping Plan - Third Floor
P241	D.W.V. Piping Plan - Fourth Floor
P251	D.W.V. Piping Plan - Fifth Floor
P321	Mechanical Vacuum and Compressed Air Piping Plan - Second Floor
P331	Mechanical Vacuum and Compressed Air Piping Plan - Third Floor
P341	Mechanical Vacuum and Compressed Air Piping Plan - Fourth Floor

ELECTRICAL:

E001	Schedules, Legend & Notes
E002	Electrical Schedules
ED121	Demolition Plan - Second Floor
ED131	Demolition Plan - Third Floor
ED141	Demolition Plan - Fourth Floor
ED151	Demolition Plan - Fifth Floor
ED161	Demolition Plan – Roof
E101	Overall Electrical Plans
E221	Partial Lighting Plan - Second Floor
E222	Partial Lighting Plan - Second Floor
E231	Partial Lighting Plan - Third Floor
E232	Partial Lighting Plan - Third Floor
E241	Partial Lighting Plan - Fourth Floor
E242	Partial Lighting Plan - Fourth Floor
E251	Partial Lighting Plan - Fifth Floor
E252	Partial Lighting Plan - Fifth Floor
E321	Partial Power Plan - Second Floor
E322	Partial Power Plan - Second Floor
E331	Partial Power Plan - Third Floor
E332	Partial Power Plan - Third Floor
E341	Partial Power Plan - Fourth Floor
E342	Partial Power Plan - Fourth Floor
E351	Partial Power Plan - Fifth Floor
E352	Partial Power Plan - Fifth Floor
E361	Power Plan – Roof
E401	Single Line - Demo
E402	Single Line - New Work
E501	Panel Schedules
E502	Panel Schedules
E503	Panel Schedules
E601	Electrical Details
E602	Electrical Details
E603	Electrical Details

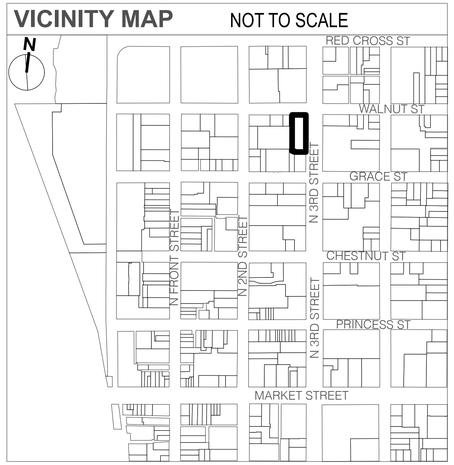
FIRE ALARM:

FA001	Fire Alarm Schedules, Legend & Notes
FA111	Fire Alarm Plan - First Floor
FA121	Fire Alarm Plan - Second Floor
FA131	Fire Alarm Plan - Third Floor
FA141	Fire Alarm Plan - Fourth Floor
FA151	Fire Alarm Plan - Fifth Floor

REFERENCE RAWINGS - OWNER FURNISHED DENTAL EQUIPMENT:

HCV	Cover Sheet
HA0.3	Dental Equipment Third Floor Plan
HA0.4	Dental Equipment Fourth Floor Plan
HA1.3	Dental Dimension & Reinforcement - 3rd Flr
HA1.4	Dental Dimension & Reinforcement - 4th Flr
HA2.3	Tre. Rm. Ceiling Plan - 3rd Flr
HA2.4	Tre. Rm. Ceiling Plan - 4th Flr
HP1.3	Dental Plumbing Specifications - 3rd Flr
HP1.4	Dental Plumbing Specifications - 4th Flr
HE1.3	Dental Electrical Specifications - 3rd Flr
HE1.4	Dental Electrical Specifications - 4th Flr
HED.1	Dental Equipment Details
HED.2	Dental Equipment Details
HED.3	Dental Equipment Details
HED.4	Dental Equipment Details
HED.5	Dental Equipment Details
HDC.1	Manufacturer's Dental Cabinet Drawings
HDC.2	Manufacturer's Dental Cabinet Drawings

VICINITY MAP NOT TO SCALE



CONTACT:

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BRUCE F. BOWMAN REGISTERED ARCHITECT 5951 NORTH CAROLINA WILMINGTON, NC

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NO.	DATE	ISSUE NOTE

Project Manager	Drawn By M. PRICE
Date 06-07-2024	Reviewed By B. BOWMAN
Project ID	

Sheet Title

Cover Sheet

Sheet No.

G1

2018 APPENDIX B - BUILDING CODE SUMMARY
Zoning: CHANGE OF USE TO PARTIALLY INCLUDE: SCHOOL VOCATIONAL COLLEGE
NO EXTERIOR ALTERATIONS INCLUDED
See Sheet A002 for Life Safety Plan

Name of Project: *CFCC HEALTH AND HUMAN SERVICES - INTERIOR RENOVATIONS*
Address: *319 North 3rd St, Wilmington, NC* Zip Code *28401*
Owner/Authorized Agent: *David Kanoy* Phone #: *(910)362-7695* E-mail: *ghkanoy647@mail.cfcc.edu*
Owned By: ■ City / County ☐ Private ☐ State
Code Enforcement Jurisdiction ■ City *Wilmington* ☐ County *New Hanover* ☐ State

CONTACT: Text

DESIGNER	FIRM	NAME	LICENSE #	TELE #	E-MAIL
Architectural	*BMH Architects*	*Bruce Bowman*	*5951*	*(910)362-7695*	*bowman@bmharch.com*
Civil	*N/A*				
Electrical	*DSA Engineering*	*Dave Facinelli*	*040879*	*(315)382-7389*	*davef@dsaeng.com*
Fire Alarm	*DSA Engineering*	*Dave Facinelli*	*040879*	*(315)382-7389*	*davef@dsaeng.com*
Plumbing	*DSA Engineering*	*Blake Smith*	*041471*	*(316)371-3705*	*blake.smith@dsaeng.com*
Mechanical	*DSA Engineering*	*Blake Smith*	*041471*	*(316)371-3705*	*blake.smith@dsaeng.com*
Sprinkler-Standpipe	*DSA Engineering*	*Dave Facinelli*	*040879*	*(315)382-7389*	*davef@dsaeng.com*
Structural	*N/A*				
Retaining Walls	*N/A*				
Other	*N/A*				

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

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

CONSTRUCTED (date): *2008* **ORIGINAL OCCUPANCY**(S) (CH. 3) *Business/Assembly*
RENOVATED (date): *2023 (partially)* **CURRENT OCCUPANCY**(S) (CH. 3) *Business/Assembly*

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

	Existing (SF)	New (SF)	Reno / Alter (SF)	Sub-Total	
5th Floor	11,936 SF	N/A	6,150 SF	11,936 SF	
4th Floor	12,189 SF	N/A	12,189 SF	12,189 SF	
3rd Floor	12,189 SF	N/A	9,600 SF	12,189 SF	
2nd Floor	12,189 SF	N/A	7,700 SF	12,189 SF	
1st Floor	7,165 SF	N/A	N/A	7,165 SF	NO WORK
Total	55,668 SF		35,639 SF	55,668 SF	

ALLOWABLE AREA*

Primary Occupancy Classification
Assembly ☐ A-1 ☐ A-2 ☐ A-3 ☐ A-4 ☐ A-5
Business ■
Educational ☐
Factory ☐ F-1 Moderate ☐ F-2 Low
Hazardous ☐ H-1 ☐ H-2 ☐ H-3 ☐ H-4 ☐ H-5
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 ☐ S-2 ☐ High piled
☐ Parking Garage ☐ Open ☐ Enclosed ☐ Repair Garage
Utility & Misc ☐

Accessory Occupancy Classification(s): *A-3 ASSEMBLY (LESS THAN 10% AREA LEVEL 2)*
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: *1HR* Exception: *TABLE 508.4*

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

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

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

$$\frac{N/A}{} + \frac{N/A}{} \leq 1.00$$

Story No.	Description and Use	(A) Bldg Area per Story (Actual)	(B) Table 506.2 [4] Area	(C) Area for Frontage Increase [1,5]	(D) Allowable Area per Story or Unlimited [2,3]
1	*A-3 LECTURE*	*7,165 SF*	*28,500 SF*	*NA*	*28,500 SF*
2	*BUSINESS*	*11,089 SF*	*69,000 SF*	*NA*	*69,000 SF*
3	*BUSINESS*	*11,089 SF*	*69,000 SF*	*NA*	*69,000 SF*
4	*BUSINESS*	*12,189 SF*	*69,000 SF*	*NA*	*69,000 SF*
5	*BUSINESS*	*11,963 SF*	*69,000 SF*	*NA*	*69,000 SF*

[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 If = 100 [F/P - 0.25] x 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	SHOWN ON PLANS	CODE REFERENCE [1]
BUILDING HEIGHT IN FEET (TABLE 504.3) [2]	*75'*	*75'*	-
BUILDING HEIGHT IN STORIES (TABLE 504.4) [3]	*5*	*B - 4 A3 - 3*	*2006 NCBC 504.2 BUSINESS 5 STORY*

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

FIRE PROTECTION REQUIREMENTS

BUILDING ELEMENT	FIRE SEPARATION DISTANCE (FEET)	RATING REQ'D	RATING PROVIDED (W/ ____* reduction)	DETAIL # AND SHEET #	DESIGN # FOR RATED ASSEMBLY	DESIGN # FOR RATED PENETRATION	DESIGN # FOR RATED JOINTS
Structural Frame, including columns, girders and trusses	-	*2*	*2*	*EXISTING*	*UL X701* *UL D916*		
Bearung Walls Exterior							
North	-	*0*	-				
East	-	*0*	-				
West	-	*0*	-				
South	-	*0*	-				
Nonbearing Walls and Partitions Exterior							
North	*> 30'*	*0*	*0*				
East	*> 30'*	*0*	*0*				
West	*> 20'*	*0*	*0*			*28% unprotected openings (exist.)*	
South	*> 10'*	*1*	*1*	*EXISTING*	*UL U419*	*9% unprotected openings (exist.)*	
Interior Walls & Partitions	*NA*	*0*	*0*				
Floor Construction Including Support Beams and Joists	-	*0*	*2*	*EXISTING*	*UL D416*	*SUPPORTING 2H SHAFTS*	
Floor Ceiling Assembly	-	-	-				
Column Supporting Floors	-	*0*	*2*	*EXISTING*	*UL X701*	*SUPPORTING 2H SHAFTS*	
Roof Construction Including Supporting Beams & Joists	-	*0*	*0*				
Roof Ceiling Assembly	-	-	-				
Column Supporting Roof	-	*0*	*0*				
Shaft Enclosure - Exit	-	*2*	*2*	*EXISTING*			
Shaft Enclosure - Other	-	*2*	*2*	*EXISTING*	*UL U415*		
Corridor Separation	-	*0*	*0*				
Occupancy / Fire Barrier Separation	-	*1*	*2*	*EXISTING*	*UL D916*		
Party/Fire Wall Separation	-	*NA*	*NA*				
Smoke Barrier Separation	-	*NA*	*NA*				
Smoke Partition	-	*NA*	*NA*				
Tenant/Dwelling Unit / Sleeping Unit Separation	-	*NA*	*NA*				
Incidental Use Separation	-	*NA*	*NA*				

** See engineering drawings for rated penetration designs - protect all penetrations to match

LIFE SAFETY SYSTEM REQUIREMENTS

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

LIFE SAFETY PLAN REQUIREMENTS

Life Safety Plan Sheets G3-G5 :
■ 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
■ Max. calc.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 separxxation 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

ACCESSIBLE PARKING
(Section 1106)

LOT OR PARKING AREA	TOTAL # OF PARKING SPACES		# OF ACCESSIBLE SPACES PROVIDED			TOTAL ACCESSIBLE UNITS
	REQUIRED	PROVIDED	REG. WITH 5' ACCESS AISLE	VAN SPACE WIDTH 132" ACCESS AISLE	VAN SPACE WIDTH 8' ACCESS AISLE	
REAR ENTRY	*0*	*11*	-	-	*1*	*1*
TOTAL	*NO CHANGE TO EXISTING*					

PROJECT IS PROXIMATE TO PUBLIC PARKING DECK

PLUMBING FIXTURE REQUIREMENTS
(TABLE 2902.1)

		WATERCLOSETS			URINALS	LAVATORIES			SHOWER / TUBS	DRINKING FOUNTAINS	
		MALE	FEMALE	UNISEX		MALE	FEMALE	UNISEX		REGULAR	ACCES.
TOTAL	EXIST'G	*7*	*16*	*0*	*9**	*12*	*12*	*0*		*5*	*5*
	NEW	*1*	*6*	*0*		*1*	*4*	*0*		*0*	*0*
	TOTAL	*8*	*22*	*0*	*9*	*13*	*16*	*0*		*5*	*5*
	REQ'D	*15*	*15*	*0*	*0*	*11*	*11*	*0*		*5*	*5*

*50% URINAL SUBSTITUTION FOR WATER CLOSET AS PER NCPC SECTION 403.9.5.3

SPECIAL APPROVALS

Special Approval: (Local Jurisdiction, Department of Insurance, SCO, DPI, DHHS, ICC, etc., describe below)
NHC BUILDING INSPECTIONS
NC SCO STATE CONSTRUCTION OFFICE
NC DCC DEPARTMENT OF COMMUNITY COLLEGE
NC DOI DEPARTMENT OF INSURANCE - NOT REQUIRED

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
☐ Performance ☐
(If "Other" specify source here) _____

MECHANICAL SUMMARY
MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT

```
METHOD OF COMPLIANCE          PRESCRIPTIVE
ENERGY COST BUDGET

THERMAL ZONE                  3A
EXTERIOR DESIGN CONDITIONS
     WINTER DRY BULB              27.5°F
     SUMMER DRY BULB              91.2°F
INTERIOR DESIGN CONDITIONS
     WINTER DRY BULB              70°F
     SUMMER DRY BULB              75°F
     RELATIVE HUMIDITY          50% - 60%

BUILDING HEATING LOAD         1,019,400 BTUH

BUILDING COOLING LOAD         1,045,100 BTUH

MECHANICAL SPACING CONDITIONING SYSTEM
  UNITARY
     DESCRIPTION OF UNIT -
     HEATING EFFICIENCY -
     COOLING EFFICIENCY -         SEE EQUIPMENT SCHEDULE
     HEAT OUTPUT OF UNIT -
     COOLING OUTPUT OF UNIT -


BOILER
     TOTAL BOILER OUTPUT (IF OVERSIZED     N/A
     STATE REASON)

CHILLER
     TOTAL CHILLER CAPACITY              N/A

LIST EQUIPMENT EFFICIENCIES        SEE EQUIPMENT SCHEDULE

EQUIPMENT SCHEDULES WITH MOTORS
     (MECHANICAL  SYSTEM)
     MOTOR HORSEPOWER          N/A
     NUMBER OF PHASES          N/A
     MINIMUM EFFICIENCY        N/A
     MOTOR TYPE                N/A
     # OF POLES                N/A
```

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: (See Electrical Plans)
Number of lamps in fixture: (See Electrical Plans)
Ballast type used in the fixture: (See Electrical Plans)
Number of ballasts in fixture: (See Electrical Plans)
Total wattage per fixture: (See Electrical Plans)

Total interior wattage specified vs allowed
Specified = 17,770 WATTS; Allowed = 28,362 WATTS

Total exterior wattage specified vs allowed
N/A (EXISTING)

Additional Prescriptive Compliance
☐ 406.2 More Efficient Mechanical Equipment
■ 406.3 Reduced Lighting Power Density
☐ 406.4 Enhanced Digital Lighting Controls
☐ 406.5 On-Site Renewable Energy
☐ 406.6 Dedicated Outdoor Air System
☐ 406.7 Reduced Energy Use in Service Water Heating

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BRUCE F. BOWMAN — REGISTERED ARCHITECT — 5951 — 6.7.24

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Drawn By: M. PRICE
Date: 06-07-2024
Reviewed By: B. BOWMAN
Project ID

Sheet Title
Appendix B

Sheet No.
G2

First Floor Exising Program and Occpancy Load

No.	Space Name	Net Area	Gross Area	Occupancy Type	Function of Space	Occupancy Load	Calculated No. of Occ.	No. of Occ.
100	Bldg Lobby	807.2	807.2	support space				
101	Classroom	1465.7	1525.3	ASSEMBLY A3 - Lecture Hall	Classroom	1/15 sf	97.7	98
102	Classroom	1453.2	1453.2	ASSEMBLY A3 - Lecture Hall	Classroom	1/15 sf	96.9	97
103	Toilet	57.5	64.2	support space				
104	Toilet	52.0	58.2	support space				
105	Men's	120.9	120.9	support space				
106	Women's	126.8	128.8	support space				
107	Storage	79.4	93.5	support space				
108	Lobby	744.8	744.8	support space				
109	Storage	82.6	92.9	support space				
	TOTAL SF:	**4990 sq ft**	**5089 sq ft**				**TOTAL:**	**195**

LEVEL 1 **195 occ.** 98 male 98 female		WATERCLOSETS		LAVATORIES		DRINKING FOUNTAINS		SERVICE SINK
		MALE	FEMALE	MALE	FEMALE	REGULAR	ACCESSIBLE	
TOTAL	EXIST'G	2+1 urinal	3	3	3	1	1	1
	NEW	-	-	-	-	-	-	-
	REQ'D	1	2	1	1	1	1	1

Second Floor - Existing Program and Occupancy Load

No.	Space Name	Net Area	Gross Area	Occupancy Type	Function of Space	Occupancy Load	Calculated No. of Occ.	No. of Occ.
201	Corridor	830.0	830.0	support space				
202	Control rm. 1	136.8	136.8	BUSINESS	Educational vocational room	1/50 sf	2.7	3
203	Patient Rm. 1	150.6	168.3	BUSINESS	Educational vocational room	1/50 sf	3.4	4
204	Control rm. 2	70.8	76.1	BUSINESS	Educational vocational room	1/50 sf	1.5	2
205	Patient Rm. 2	142.7	142.7	BUSINESS	Educational vocational room	1/50 sf	2.9	3
206	Control Rm. 3	70.8	76.1	BUSINESS	Educational vocational room	1/50 sf	1.5	2
207	Patient Rm. 3	149.2	149.2	BUSINESS	Educational vocational room	1/50 sf	3.0	3
208	Control Rm. 4	62.9	62.9	BUSINESS	Educational vocational room	1/50 sf	1.3	2
209	Patient Rm. 4	138.0	138.0	BUSINESS	Educational vocational room	1/50 sf	2.8	3
210	Storage	160.7	177.6	BUSINESS	Accessory mech. equip. room	1/300 sf	0.6	1
211	Repair / Charging Station	233.0	233.0	BUSINESS	Educational vocational room	1/50 sf	4.7	5
212	PAR/Linen	120.2	120.2	BUSINESS	Storage	1/300 sf	0.4	1
213	Nursing Station	226.6	239.5	BUSINESS	Educational vocational room	1/50 sf	4.8	5
214	Debriefing Room	467.6	467.6	BUSINESS	Classroom	1/20 sf	23.4	24
215	Utility	63.3	63.3	BUSINESS		1/100 sf	0.6	1
216	Corridor	339.5	339.5	BUSINESS		1/100 sf	3.4	4
217	Office 1	137.1	149.9	BUSINESS		1/100 sf	1.5	2
218	Office 2	136.4	136.4	BUSINESS		1/100 sf	1.4	2
219	Office 3	139.5	139.5	BUSINESS		1/100 sf	1.4	2
220	Seminar Room	386.0	416.3	BUSINESS	Classroom/ Conference	1/20 sf	20.8	21
221	Office	148.9	148.9	BUSINESS		1/100 sf	1.5	2
222	Mech.	90.6	90.6	BUSINESS		1/100 sf	0.9	1
	TOTAL SF:	**4401 sq ft**	**4502 sq ft**				**TOTAL:**	**93**

Second Floor - Phase 2 - Program and Occupancy Load

No.	Space Name	Net Area	Gross Area	Occupancy Type	Function of Space	Occupancy Load	Calculated No. of Occ.	No. of Occ.
200	Elev. Lobby	159.3	159.3	support space		1/0 sf	#DIV 0!	#DIV 0!
200	2nd Floor Corridor	1062.4	1062.4	support space		1/0 sf	#DIV 0!	#DIV 0!
223	Classroom	721.4	721.4	BUSINESS	Classroom	1/20 sf	36.1	37
224	Hospital Simulation Lab.	1568.3	1568.3	BUSINESS	Educational vocational room	1/50 sf	31.4	32
225	Patients Room	281.0	281.0	BUSINESS	Educational vocational room	1/50 sf	5.6	6
226	Restroom Instruction	96.7	96.7	BUSINESS	Educational vocational room	1/50 sf	1.9	2
227	CTRL Room	87.7	87.7	BUSINESS	Educational vocational room	1/50 sf	1.8	2
228	PAR/ Linen/ Meds	169.8	169.8	BUSINESS	Storage	1/300 sf	0.6	1
229	CTRL Room	85.3	85.3	BUSINESS	Educational vocational room	1/50 sf	1.7	2
230	Debriefing	499.2	525.9	BUSINESS	Classroom	1/20 sf	26.3	27
231	Sim. Lab. Support/ Charging	263.6	263.6	BUSINESS	Educational vocational room	1/50 sf	5.3	6
232	Mech.	57.4	64.0	BUSINESS		1/300 sf	0.2	1
234	Mech.	51.4	51.4	BUSINESS		1/300 sf	0.2	1
235	Mech.	48.6	48.6	BUSINESS		1/300 sf	0.2	1
236	Mech.	34.3	39.4	BUSINESS		1/300 sf	0.1	1
	TOTAL SF:	**5186 sq ft**	**5225 sq ft**				**TOTAL:**	**119**

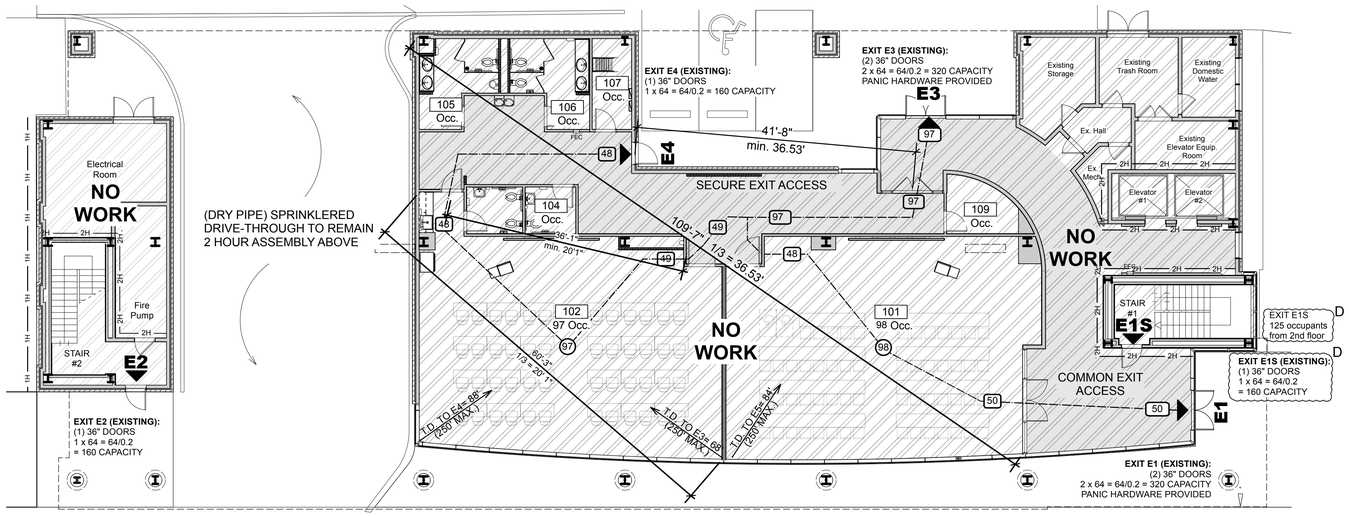
Second Floor - Phase 3 - Classroom

No.	Space Name	Net Area	Gross Area	Occupancy Type	Function of Space	Occupancy Load	Calculated No. of Occ.	No. of Occ.
233	Classroom	1051.1	1098.6	ASSEMBLY A3 - Lecture Hall	Assembly without fixed seats, unconcentrated (tables abd chairs)	1/15 sf	70.1	71
	TOTAL SF:	**1051 sq ft**	**1099 sq ft**				**TOTAL:**	**71**

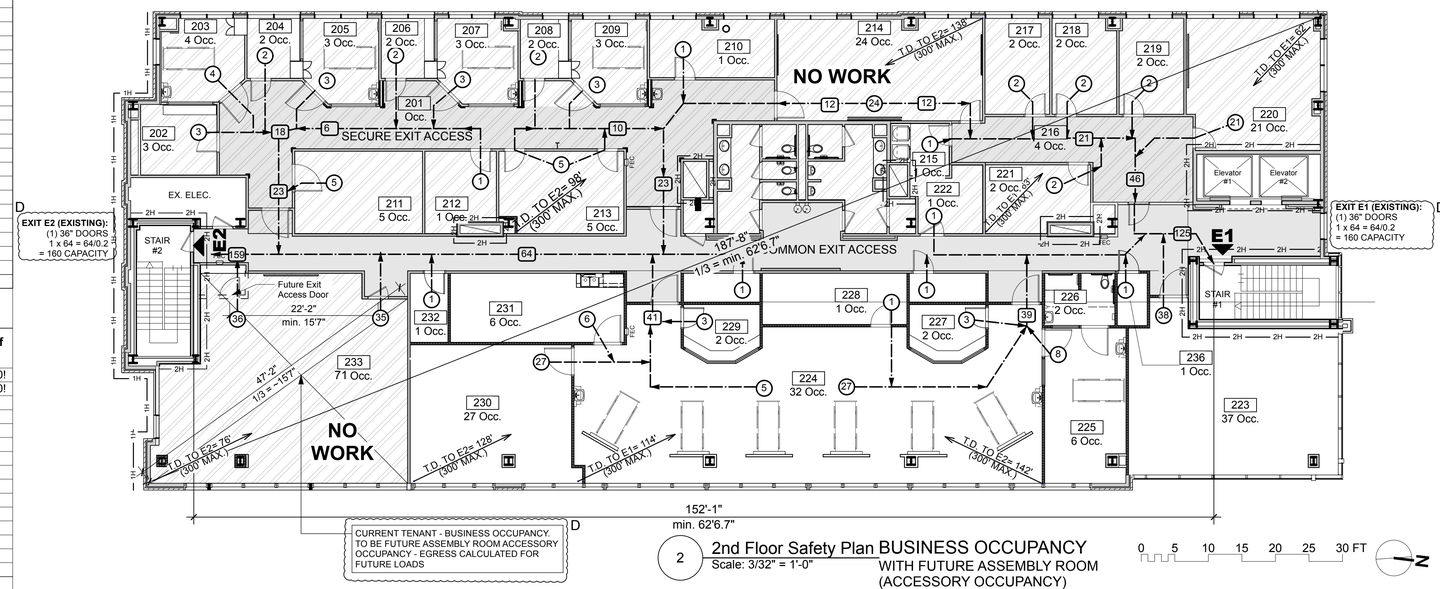
BUSINESS + ASSEMBLY TOTAL: 283

LEVEL 2 **283** 142 male 142 female		WATERCLOSETS		LAVATORIES		DRINKING FOUNTAINS		SERVICE SINK
		MALE	FEMALE	MALE	FEMALE	REGULAR	ACCESSIBLE	
TOTAL	EXIST'G	1+2 urinals	3	2	2	1	1	1
	NEW		-		-	-	-	-
	REQ'D	4	4*	3	3*	1	1	1

* Proposed Enlarged Female Restroom with extra fixtures located on adjascent First and Third Floors



1 1st Floor Safety Plan — Scale: 3/32" = 1'-0" — SEPARATED MIXED OCCUPANCY - LEVEL 1



2 2nd Floor Safety Plan BUSINESS OCCUPANCY — Scale: 3/32" = 1'-0" — WITH FUTURE ASSEMBLY ROOM (ACCESSORY OCCUPANCY)

EGRESS WIDTH PER STAIR

	REQUIRED	PROVIDED
LEVEL 2	74P x .2"/P = 14.8"	45"
LEVEL 3	59P x .2"/P = 11.8"	45"
LEVEL 4	61P x .2"/P = 12.2"	45"
LEVEL 5	60P x .2"/P = 12"	45"

LEVEL 2 MAXIMUM OCCUPANT LOAD - MINIMUM WIDTH 44" GOVERNS.

STAIRCASE MAX LOAD
45" / .2" = 225 people each staircase

EGRESS WIDTH OTHER - HORIZONTAL

	REQUIRED	PROVIDED
LEVEL 2	74P x .15"/P = 11.1"	33" clear
LEVEL 3	59P x .15"/P = 8.85"	33" clear
LEVEL 4	61P x .15"/P = 9.15"	33" clear
LEVEL 5	60P x .15"/P = 9"	33" clear

LEVEL 2 MAXIMUM OCCUPANT LOAD - MINIMUM WIDTH 44" GOVERNS.

LEVEL 2 OCCUPANT AND EGRESS LOAD EXCEEDS LEVELS 4 OR 5 AND GOVERNS FOR STAIR WIDTH.

LEGEND

- T.D. TO E1= 40' (250' MAX.) — TRAVEL DISTANCE MARK
- (1) — ROOM OCCUPANCY LOAD
- 50 — COLLECTIVE OCCUPANCY LOAD
- FEC — FIRE EXTINGUISHER CABINET COORDINATE LOCATION WITH FIRE MARSHALL PRIOR TO INSTALLATION
- 2H — 2H RATED WALL
- 1H — 1H RATED WALL
- NO PROPOSED WORK TO EXISTING
- EXIT ACCESS

2ND FLOOR
ACCESSORY OCCUPANCY ASSEMBLY A-3
AREA CALCULATIONS

2nd Floor TOTAL 11089 SF

Classroom 233 1051 SF (9.5%) < 10% allowed

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BRUCE F. BOWMAN — REGISTERED ARCHITECT — 5951

7-24

NOT FOR CONSTRUCTION

Cape Fear Community College
Health and Human Services Building
Interior Renovation – Phase Two
319 N 3rd Stree, Wilmington, North Carolina 28401
NCCCS # 2772
SCO # 23-27149-01A

REV.	DATE	DESCRIPTION
D	06/07/24	CD Submittal
C	5/24/24	CD Estimating Set
B	3/13/24	DD Submittal
A	2/16/24	DD Estimating Set

NO.	DATE	ISSUE NOTE

Project Manager	Drawn By
	M. PRICE
Date	Reviewed By
06-07-2024	B. BOWMAN
Project ID	

Sheet Title

Life Safety Plans

Sheet No.

G3

Third Floor - Existing Program and Occupancy Load

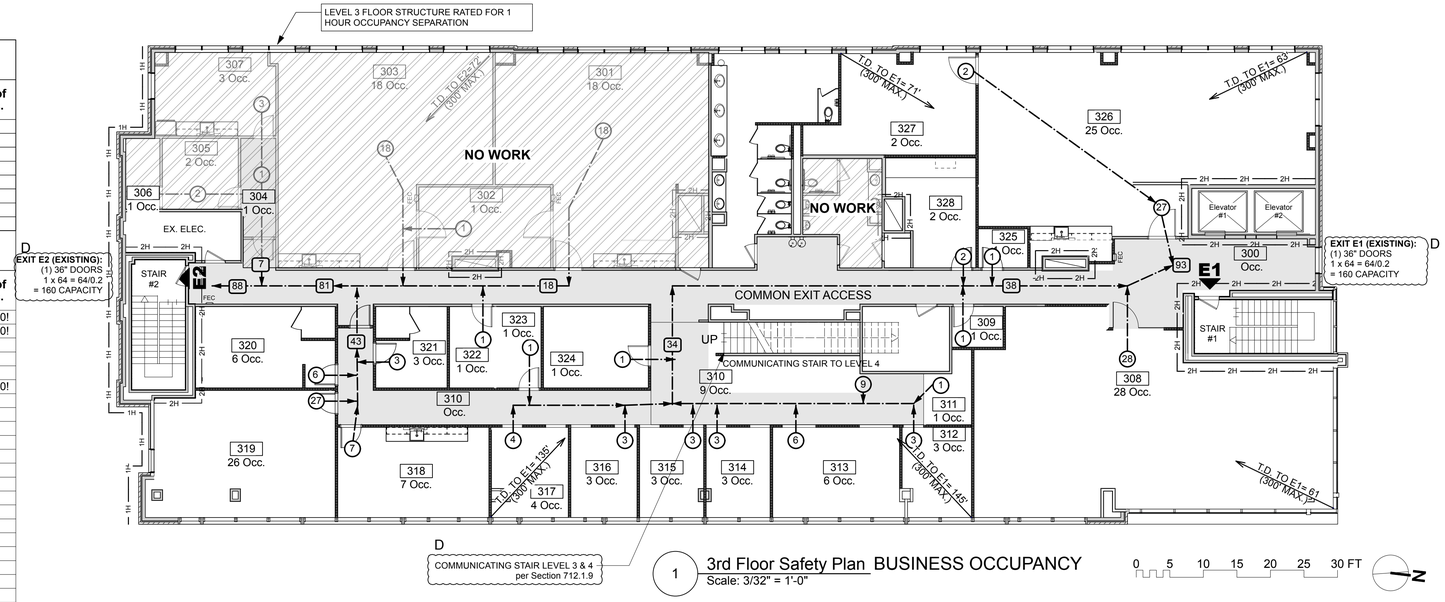
No.	Space Name	Net Area	Gross Area	Occupancy Type	Function of Space	Occupancy Load	Calculated No. of Occ.	No. of Occ.
301	Nursing Lab. #1	855.3	855.3	BUSINESS	Educational vocational room	1/50 sf	17.1	18
302	Storage	222.8	237.1	BUSINESS	Accessory storage	1/300 sf	0.8	1
303	Nursing Lab. #2	893.5	893.5	BUSINESS	Educational vocational room	1/50 sf	17.9	18
304	Hall	76.1	76.1	BUSINESS		1/100 sf	0.8	1
305	PT Office	118.9	127.9	BUSINESS		1/100 sf	1.3	2
306	Mech.	54.0	62.8	BUSINESS	Accessory mech. equip. room	1/300 sf	0.2	1
307	Break Room	229.7	229.7	BUSINESS		1/100 sf	2.3	3
	TOTAL SF:	**2450 sq ft**	**2482 sq ft**				**TOTAL:**	**44**

Third Floor - Phase 2 Program

No.	Space Name	Net Area	Gross Area	Occupancy Type	Function of Space	Occupancy Load	Calculated No. of Occ.	No. of Occ.
300	3rd Floor Corridor	1004.0	1004.0	support space		1/0 sf	#DIV 0!	#DIV 0!
300	Elev. Lobby	159.3	159.3	support space		1/0 sf	#DIV 0!	#DIV 0!
308	Dental Simulation Lab	1374.9	1374.9	BUSINESS	Educational vocational room	1/50 sf	27.5	28
309	Mech.	46.4	46.4	BUSINESS		1/300 sf	0.2	1
310	Dental Open Space	446.1	446.1	BUSINESS	Educational vocational room	1/50 sf	8.9	9
310	Hallway	288.5	288.5	support space		1/0 sf	#DIV 0!	#DIV 0!
311	Storage	61.4	68.9	BUSINESS		1/300 sf	0.2	1
312	Bay 1	137.8	137.8	BUSINESS	Educational vocational room	1/50 sf	2.8	3
313	Bay 2 - DEMO	264.6	264.6	BUSINESS	Educational vocational room	1/50 sf	5.3	6
314	Bay 3	127.7	135.2	BUSINESS	Educational vocational room	1/50 sf	2.7	3
315	Bay 4	127.7	135.2	BUSINESS	Educational vocational room	1/50 sf	2.7	3
316	Bay 5	132.2	144.9	BUSINESS	Educational vocational room	1/50 sf	2.9	3
317	Bay 6	153.4	167.2	BUSINESS	Educational vocational room	1/50 sf	3.3	4
318	Breakroom/ Meetings	302.2	323.8	BUSINESS	Educational vocational room	1/50 sf	6.5	7
319	Case Study Room	506.0	506.0	BUSINESS	Classroom	1/20 sf	25.3	26
320	Women's Locker	251.6	265.3	BUSINESS	Educational vocational room	1/50 sf	5.3	6
321	Men's Locker	128.1	128.1	BUSINESS	Educational vocational room	1/50 sf	2.6	3
322	Mech.	79.7	87.5	BUSINESS		1/300 sf	0.3	1
323	Storage	79.7	87.5	BUSINESS		1/300 sf	0.3	1
324	Dental Equip. Storage	200.4	200.4	BUSINESS		1/300 sf	0.7	1
325	Mech.	42.3	47.8	BUSINESS		1/300 sf	0.2	1
326	Nursing Lab #3	1209.2	1209.2	BUSINESS	Educational vocational room	1/50 sf	24.2	25
327	Storage	331.5	331.5	BUSINESS		1/300 sf	1.1	2
328	Laundry	183.0	195.9	BUSINESS		1/100 sf	2.0	2
	TOTAL SF:	**7638 sq ft**	**7756 sq ft**				**TOTAL:**	**136**

3RD FLOOR TOTAL: 181

LEVEL 3 **181 occ.** 91 male 91 female		WATERCLOSETS		LAVATORIES		DRINKING FOUNTAINS		SERVICE SINK
		MALE	FEMALE	MALE	FEMALE	REGULAR	ACCESSIBLE	
TOTAL	EXIST'G	1+2 urinals	3	2	2	1	1	1
	NEW	-	3	-	3	-	-	-
	REQ'D	3	3	2	2	1	1	1



1 3rd Floor Safety Plan BUSINESS OCCUPANCY
Scale: 3/32" = 1'-0"

0 5 10 15 20 25 30 FT

LEVEL 4 **178 occ.** 89 male 89 female		WATERCLOSETS		LAVATORIES		DRINKING FOUNTAINS		SERVICE SINK
		MALE	FEMALE	MALE	FEMALE	REGULAR	ACCESSIBLE	
TOTAL	EXIST'G	1+2 urinals	3	2	2	1	1	1
	NEW	1	1	1	1	-	-	-
	REQ'D	3	3	2	2	1	1	1

Fourth Floor - Phase 2 Dental Program

No.	Space Name	Net Area	Gross Area	Occupancy Type	Function of Space	Occupancy Load	Calculated No. of Occ.	No. of Occ.
400	Elevators Lobby	284.8	526.8	BUSINESS		1/100 sf	5.3	6
401	Waiting Room	510.6	510.6	BUSINESS	Waiting room	1/15 sf	34.0	35
402	Office	92.5	92.5	BUSINESS		1/100 sf	0.9	1
403	Work Room	98.8	110.1	BUSINESS		1/100 sf	1.1	2
404	File Room	94.4	105.6	BUSINESS		1/100 sf	1.1	2
405	Toilet	57.1	57.1	BUSINESS		1/100 sf	0.6	1
406	Toilet	57.1	57.1	BUSINESS		1/100 sf	0.6	1
407	Storage	67.7	74.5	BUSINESS		1/300 sf	0.2	1
408	Reception	563.5	563.5	BUSINESS		1/100 sf	5.6	6
409	Instructors Workspace	248.5	248.5	BUSINESS		1/100 sf	2.5	3
410	Mech.	57.2	63.5	BUSINESS		1/300 sf	0.2	1
411	Bays 1-11	1472.5	1472.5	BUSINESS	Educational vocational room	1/50 sf	29.5	30
412	Bays 12-17	859.1	859.1	BUSINESS	Educational vocational room	1/50 sf	17.2	18
413	Mech.	37.3	42.7	BUSINESS		1/300 sf	0.1	1
414	Storage	53.6	53.6	BUSINESS	Educational vocational room	1/300 sf	0.2	1
415	Sterilization	270.9	270.9	BUSINESS		1/100 sf	2.7	3
416	Bays 18-28	1530.0	1530.0	BUSINESS	Educational vocational room	1/50 sf	30.6	31
417	Private bay 29	114.9	114.9	BUSINESS	Educational vocational room	1/50 sf	2.3	3
418	Private bay 30	115.7	128.4	BUSINESS	Educational vocational room	1/50 sf	2.6	3
419	Private bay 31	111.2	121.1	BUSINESS	Educational vocational room	1/50 sf	2.4	3
420	Private Bay 32	131.2	144.8	BUSINESS	Educational vocational room	1/50 sf	2.9	3
421	Bay 33	114.3	114.3	BUSINESS	Educational vocational room	1/50 sf	2.3	3
422	Bay 34	107.2	118.3	BUSINESS	Educational vocational room	1/50 sf	2.4	3
423	Bay 35	120.8	120.8	BUSINESS	Educational vocational room	1/50 sf	2.4	3
424	Bay 36	135.2	135.2	BUSINESS	Educational vocational room	1/50 sf	2.7	3
425	Bay 37-38	255.0	255.0	BUSINESS	Educational vocational room	1/50 sf	5.1	6
426	Dental Circulation	2704.6	2704.6	support space		1/0 sf	#DIV 0!	#DIV 0!
426	X-Ray	54.9	61.9	BUSINESS		1/100 sf	0.6	1
427	X-Ray	60.2	60.2	BUSINESS		1/100 sf	0.6	1
428	Radiography Review	115.8	115.8	BUSINESS		1/100 sf	1.2	2
429	Mech.	54.9	54.9	BUSINESS		1/300 sf	0.2	1
	TOTAL SF:	**10552 sq ft**	**10889 sq ft**				**TOTAL:**	**178**

2 4th Floor Safety Plan BUSINESS OCCUPANCY
Scale: 3/32" = 1'-0"

0 5 10 15 20 25 30 FT

LEGEND

- T.D. TO E1= 40' (250' MAX.) — TRAVEL DISTANCE MARK
- 1 — ROOM OCCUPANCY LOAD
- 50 — COLLECTIVE OCCUPANCY LOAD
- FEC — FIRE EXTINGUISHER CABINET COORDINATE LOCATION WITH FIRE MARSHALL PRIOR TO INSTALLATION
- 2H — 2H RATED WALL
- 1H — 1H RATED WALL
- NO PROPOSED WORK TO EXISTING
- EXIT ACCESS

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BRUCE F. BOWMAN REGISTERED ARCHITECT 5951

06-7-24

NOT FOR CONSTRUCTION

Cape Fear Community College
Health and Human Services Building
Interior Renovation – Phase Two
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NCCCS # 2772
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B	3/13/24	DD Submittal
A	2/16/24	DD Estimating Set
NO.	DATE	ISSUE NOTE

Project Manager	Drawn By
	M. PRICE
Date	Reviewed By
06-07-2024	B. BOWMAN

Project ID

Sheet Title

Life Safety Plans

Sheet No.

G4

Fifth Floor - Offices Suite - Existing

No.	Space Name	Net Area	Gross Area	Occupancy Type	Function of Space	Occupancy Load	Calculated No. of Occ.	No. of Occ.
500	Office Suite Hallway	981.0	1052.8	BUSINESS		1/100 sf	10.5	11
501	Office 1	192.2	213.5	BUSINESS		1/100 sf	2.1	3
502	Office 2	130.4	143.0	BUSINESS		1/100 sf	1.4	2
503	Office 3	130.4	143.0	BUSINESS		1/100 sf	1.4	2
504	Office 4	126.5	138.3	BUSINESS		1/100 sf	1.4	2
505	Office 5	130.4	143.0	BUSINESS		1/100 sf	1.4	2
506	Office 6	138.6	150.9	BUSINESS		1/100 sf	1.5	2
507	Office 7	134.8	148.9	BUSINESS		1/100 sf	1.5	2
508	Office 8	139.2	153.5	BUSINESS		1/100 sf	1.5	2
509	Office 9	137.6	151.5	BUSINESS		1/100 sf	1.5	2
510	Office 10	137.1	148.8	BUSINESS		1/100 sf	1.5	2
511	Office 11	141.5	155.9	BUSINESS		1/100 sf	1.6	2
512	Office 12	142.3	156.8	BUSINESS		1/100 sf	1.6	2
513	Office 13	245.9	270.4	BUSINESS		1/100 sf	2.7	3
514	Office 14	163.4	175.1	BUSINESS		1/100 sf	1.8	2
516	File Room	113.8	123.4	BUSINESS		1/100 sf	1.2	2
517	Breakroom	290.6	290.6	BUSINESS		1/100 sf	2.9	3
518	Office 15	132.8	142.5	BUSINESS		1/100 sf	1.4	2
519	Office 16	157.6	168.4	BUSINESS		1/100 sf	1.7	2
520	Office 17	118.6	127.8	BUSINESS		1/100 sf	1.3	2
521	Office 18	119.3	119.3	BUSINESS		1/100 sf	1.2	2
522	Work Room	110.2	120.0	BUSINESS		1/100 sf	1.2	2
	TOTAL SF:	**4114 sq ft**	**4437 sq ft**				**TOTAL:**	**56**

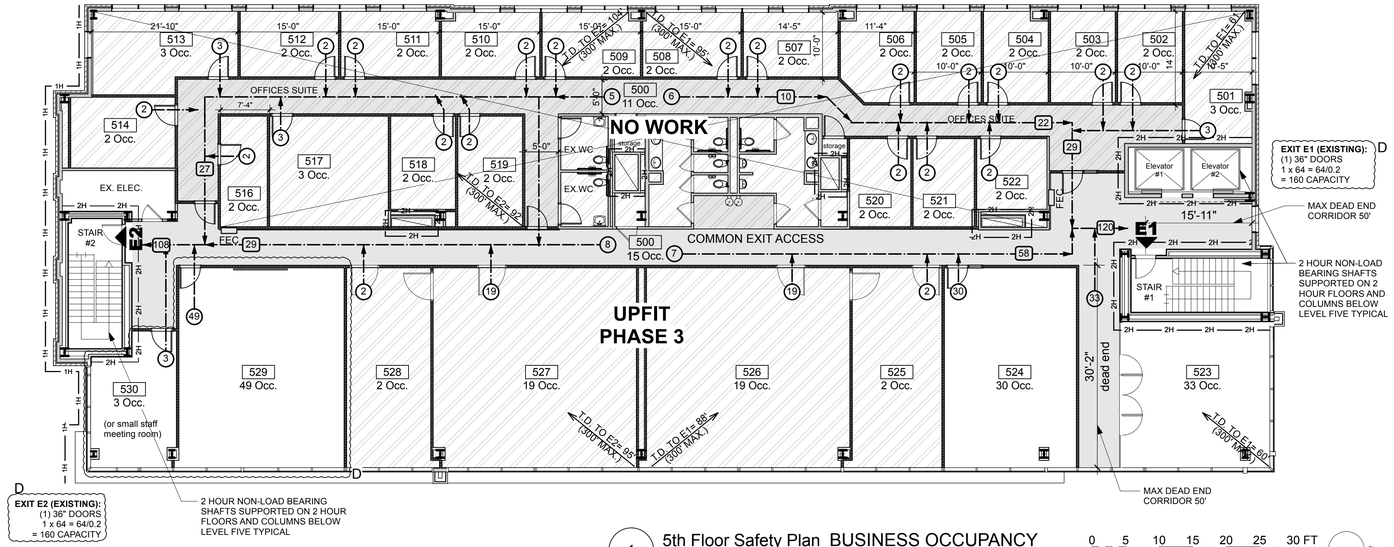
Fifth Floor - Phase 2 & future fit-out Phase 3

No.	Space Name	Net Area	Gross Area	Occupancy Type	Function of Space	Occupancy Load	Calculated No. of Occ.	No. of Occ.
500	5th floor Corridor	1226.4	1226.4	support space		1/100 sf	12.3	13
500	Elev. Lobby	159.3	159.3	support space		1/0 sf	#DIV 0!	#DIV 0!
523	Students Lounge	491.0	491.0	BUSINESS	Lounge	1/15 sf	32.7	33
524	Small Classroom	591.2	591.2	BUSINESS	Classroom	1/20 sf	29.6	30
525	Storage	402.4	414.3	BUSINESS	Accessory	1/300 sf	1.3	2
526	Nursing Lab. #1	906.8	925.1	BUSINESS	Educational vocational room	1/50 sf	18.1	19
527	Nursing Lab. #2	906.3	906.3	BUSINESS	Educational vocational room	1/50 sf	18.1	19
528	Storage	377.6	395.4	BUSINESS	Accessory	1/300 sf	1.3	2
529	Faculty Work Room	733.8	733.8	BUSINESS	Meeting Room	1/15 sf	48.9	49
530	Executive Office	228.8	228.8	BUSINESS		1/100 sf	2.3	3
	TOTAL SF:	**6024 sq ft**	**6072 sq ft**				**TOTAL:**	**170**
							5th FLOOR TOTAL:	**226**

LEVEL 5 **226 occ.** 113 male 113 female		WATERCLOSETS		LAVATORIES		DRINKING FOUNTAINS		SERVICE SINK
		MALE	FEMALE	MALE	FEMALE	REGULAR	ACCESSIBLE	
TOTAL	EXIST'G	2+2 urinals	4	3	3	1	1	1
	NEW	-	-	-	-	-	-	-
	REQ'D	4	4	3	3	1	1	1

LEGEND

T.D. TO E1= 40' (250' MAX.)	TRAVEL DISTANCE MARK
1	ROOM OCCUPANCY LOAD
50	COLLECTIVE OCCUPANCY LOAD
FEC	FIRE EXTINGUISHER CABINET COORDINATE LOCATION WITH FIRE MARSHALL PRIOR TO INSTALLATION
2H	2H RATED WALL
1H	1H RATED WALL
	NO PROPOSED WORK TO EXISTING
	EXIT ACCESS



1 5th Floor Safety Plan BUSINESS OCCUPANCY
Scale: 3/32" = 1'-0"

0 5 10 15 20 25 30 FT

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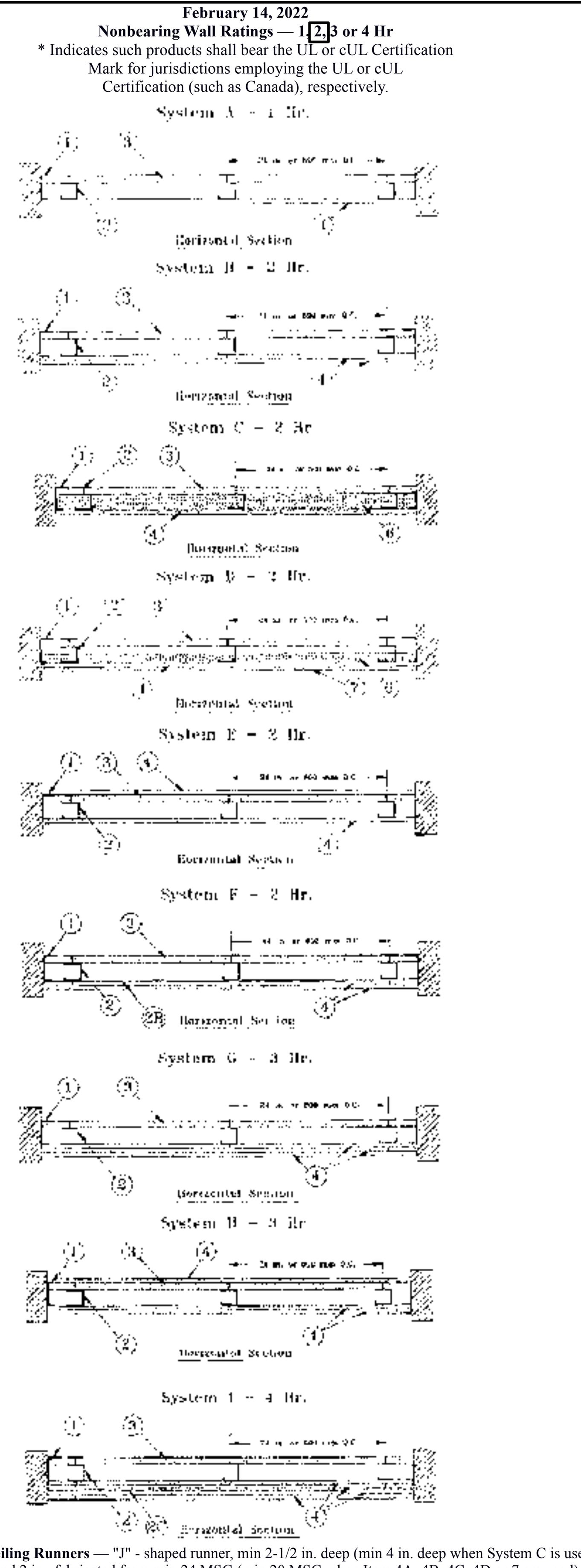
Project Manager
Drawn By: M. PRICE
Date: 06-07-2024
Reviewed By: B. BOWMAN
Project ID

Sheet Title
Life Safety Plans

Sheet No.
G5

UL U415 - EXISTING - Mech. shaft

February 14, 2022
Nonbearing Wall Ratings — 1, 2, 3 or 4 Hr
* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

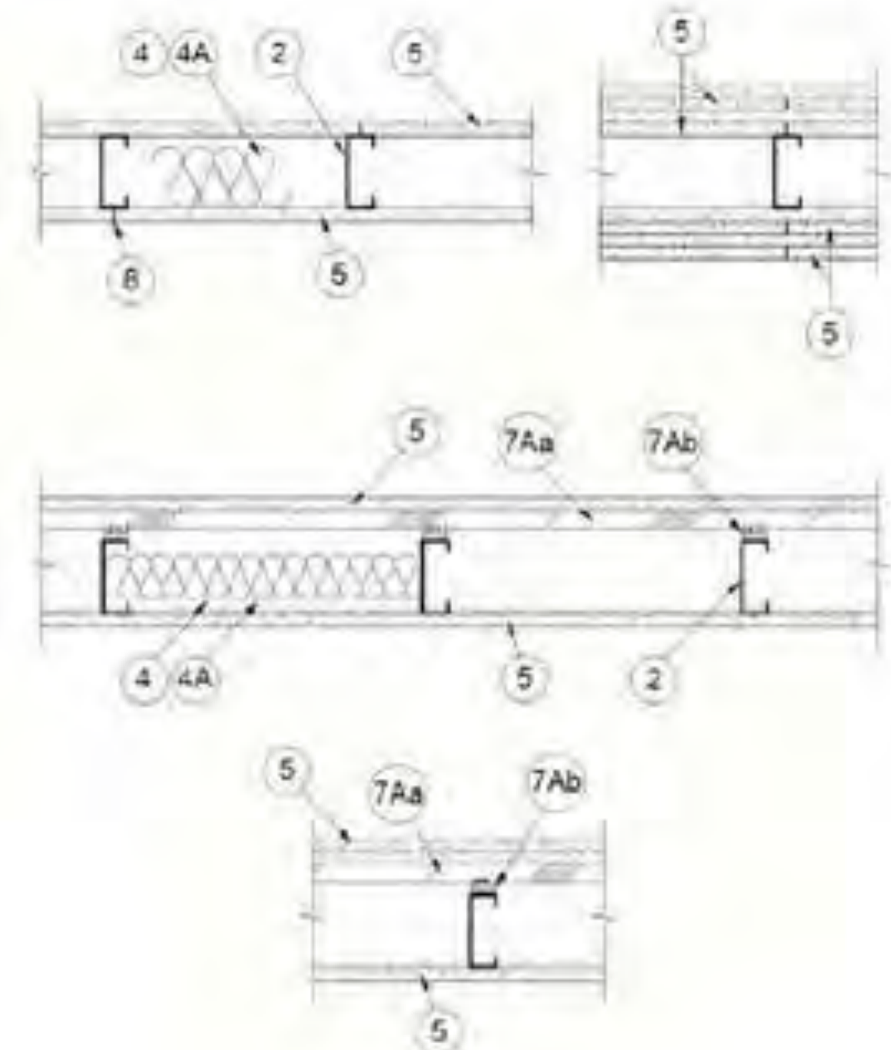


1. Floor, Side and Ceiling Runners — "J" - shaped runner, min 2-1/2 in. deep (min 4 in. deep when System C is used), with unequal legs of 1 in. and 2 in., fabricated from min 24 MSG (min 20 MSG when Item 4A, 4B, 4C, 4D or 7 are used) galv steel. Runners positioned with short leg toward finished side of wall. Runners attached to structural supports with steel fasteners located not greater than 2 in. from ends and not greater than 24 in. OC. "E" - shaped studs (Item 2A) may be used as side runners in place of "J" - shaped runners.
2. Steel Studs — "C-H" - shaped studs, min 2-1/2 in. deep (min 4 in. deep when System C is used), fabricated from min 25 MSG (min 20 MSG when Items 2D, 4A, 4B, 4C, 4D or 7 is used) galv steel. Cut to lengths 3/8 to 1/2 in. less than floorto-ceiling height and spaced 24 in. or 600 mm OC (max 16 in. OC when Items 4A, 4B, 4C, or 4D are used).
2A. Steel Studs — (Not Shown) — "E" - shaped studs installed back to back in place of "C-H" - shaped studs (Item 2) "E" - shaped studs secured together with steel screws spaced a maximum 12 in. OC. Fabricated from min 25 MSG (min 20 MSG when Item 2D, 4A, 4B or 7 is used) galv steel, min 2-1/2 in. deep (min 4 in. deep when System C is used), with one leg 1 in. long and two legs 3/4 in. long. Shorter legs 1 in. apart to engage gypsum liner panels. Cut to lengths 3/8 to 1/2 in. less than floor to ceiling heights.
2B. Furring Channels — (Optional, Not Shown) — For use with single or double layer systems. Resilient furring channels fabricated from min 25MSG corrosion protected steel, installed horizontally, and spaced vertically a max 24 in. OC. Flange portion of channel attached to each intersecting "C-H" or "E" stud on side of stud opposite the 1 in. liner panels with 1/2 in. long Type S or S-12 pan-head steel screws. When furring channels are used, wallboard to be installed vertically only. Not to be used with Type FRX-G gypsum board, lead backed gypsum boards (Items 4A-4D), or cementitious backer units (Item 7).
2C. Furring Channels — For use with System I - "Hat" - shaped, 25 MSG galv steel furring channels attached directly over the inner layers of wallboard to each stud with 2 in. long Type S pan head steel screws. Screws alternate from top flange to bottom flange at each stud intersection. Furring channels spaced vertically max 24 in. OC.
2D. Steel Framing Members* — (Optional, Not Shown) — For use with single or double layer systems. Furring channels and Steel Framing Members as described below. Not to be used with Type FRX-G gypsum board, lead backed gypsum boards (Items 4A-4D), or cementitious backer units (Item 7).
a. Furring Channels — Formed of No. 25 MSG galv steel. 2-9/16 in. or 2-23/32 in. wide by 7/8 in. deep, spaced max. 24in. OC perpendicular to studs. Channels secured to studs as described in Item b. Gypsum board installed vertically only and attached to furring channels as described in Item 4.
b. Steel Framing Members* — Used to attach furring channels (Item 2Da) to studs (Item 2 or 2A). Clips spaced max. 24in. OC., and secured to studs with No. 8 x 1-1/2 in. minimum self-drilling, S-12 steel screw through the center grommet. Furring channels are friction fitted into clips. RSIC-1 clip for use with 2-9/16 in. wide furring channels. RSIC-1 (2.75) clip for use with 2-23/32 in. wide furring channels.
PAC INTERNATIONAL L L C — Types RSIC-1, RSIC-1 (2.75)
2E. Steel Framing Members* — (Optional, Not Shown) — Furring channels and Steel Framing Members as described below. . Not to be used with Type FRX-G gypsum board, lead backed gypsum boards (Items 4A-4D), or cementitious backer units (Item 7).
a. Furring Channels — Formed of No. 25 MSG galv steel. Spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 AWG galvanized steel wire.Gypsum board attached to furring channels as described in Item 4.
b. Steel Framing Members* — Used to attach furring channels (Item 2Ea) to studs. Clips spaced 24 in. OC., and secured to studs with 2 in. coarse drywall screw with 1 in. diam washer through the center hole. Furring channels are friction fitted into clips. STUDCO BUILDING SYSTEMS — RESILMOUNT Sound Isolation Clips - Type A237R
2F. Steel Framing Members* — (Optional, Not Shown) — For use with single or double layer systems. Furring channels and Steel Framing Members as described below. Not to be used with Type FRX-G gypsum board, lead backed gypsum boards (Items 4A-4D), or cementitious backer units (Item 7).
a. Furring Channels — Formed of No. 25 MSG galv steel. 2-3/8 in. wide by 7/8 in. deep, spaced max. 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Gypsum board installed vertically only and attached to furring channels as described in Item 3.
b. Steel Framing Members* — Used to attach furring channels (Item 2Da) to studs (Item 2 or 2A). Clips spaced max. 24in. OC. GENIECLIPS secured to studs with No. 8 x 1-1/2 in. minimum self-drilling, S-12 steel screw through the center grommet. Furring channels are friction fitted into clips. PLITEQ INC — Type GENIECLIP
2G. Steel Framing Members* — (Optional, Not Shown) — Furring channels and Steel Framing Members as described below. Not to be used with Type FRX-G gypsum board, lead backed gypsum boards (Items 4A-4D), or cementitious backer units (Item 7).
a. Furring Channels — Formed of No. 25 MSG galv steel. Spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item 2Gb. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 AWG galvanized steel wire. Gypsum board attached to furring channels as described in Item 4.**b. Steel Framing Members*** — Used to attach furring channels (Item 2Ga) to studs. Clips spaced 24 in. OC., and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips. REGUPOL AMERICA — Type SonusClip
2H. Steel Framing Members* — (Optional, Not Shown) — Resilient channels and Steel Framing Members as described below. Not to be used with Type FRX-G gypsum board, lead backed gypsum boards (Items 4A-4D), or cementitious backer units (Item 7).
a. Resilient Channels — Formed of No. 25 MSG galv steel, spaced 24 in. OC, and perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and secured in place with two No. 8 15 x 1/2 in. Philips Modified Truss screws spaced 2-1/2 in. from the center of the overlap. Gypsum board attached to resilient channels as described in Item 4.
b. Steel Framing Members* — Used to attach resilient channels (Item 2Ha) to studs. Clips spaced 48 in. OC., and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center hole. Resilient channels are secured to clips with one No. 10 x 1/2 in. pan-head self-drilling screw. KEENE BUILDING PRODUCTS CO INC — Type RC+ Assurance Clip
2I. Steel Framing Members* — (Optional, Not Shown) — For use with single or double layer systems. Furring channels and Steel Framing Members as described below. Not to be used with Type FRX-G gypsum board, lead backed gypsum boards (Items 4A-4D), or cementitious backer units (Item 7).
a. Furring Channels — Formed of No. 25 MSG galv steel. 2-23/32 in. wide by 7/8 in. deep, spaced max. 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Gypsum board installed vertically only and attached to furring channels as described in Item 4.
b. Steel Framing Members* — Used to attach furring channels (Item 2Ia) to studs (Item 2 or 2A). Clips spaced max. 24 in. OC., and secured to studs with No. 8 x 1-1/2 in. minimum self-drilling, S-12 steel screw through the center grommet. Furring channels are friction fitted into clips.CLARKDIETRICH BUILDING SYSTEMS — Type ClarkDietrich Sound Clip
3. Gypsum Board* — Gypsum liner panels, nom 1 in. thick, 24 in. or 600 mm (for metric spacing) wide. Panels cut 1 in. less in length than floor to ceiling height. Vertical edges inserted in "H" portion of "C-H" studs or the gap between the two 3/4 in. legs of the "E" studs. Free edge of end panels attached to long leg of vertical "J" - runners with 1-5/8 in. long Type S steel screws spaced not greater than 12 in. OC. When wall height exceeds liner panel length, liner panel may be butted to extend to the full height of the wall. Horizontal joints need not be backed by steel framing. In System I, butt joints in liner panels are staggered min 36 in. Butt joints backed with 6 in. by 22 in. strips of 3/4 in. thick gypsum wallboard (Item 4). Wallboard strips centered over butt joints and secured to liner panels with six 1-1/2 in. long Type G steel screws, three screws along the 22 in. dimension at the top and bottom of the strips.
CGC INC — Type SLX
UNITED STATES GYPSUM CO — Type SLX; USG BORAL DRYWALL SFZ LLC — Type SLX;
USG MEXICO S A DE C V — Type SLX
4. Gypsum Board*
System A — 1 Hr. Gypsum panels, with beveled, square or tapered edges, nom 5/8 in. thick, 48 in. or 1200 mm wide, applied vertically or horizontally, attached to studs with 1 in. long Type S steel screws spaced 12 in. when installed vertically or 8 in OC when installed horizontally. Horizontal joints need not be backed by steel framing.
CGC INC — Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULIX, ULX, USGX, WRC, WRX
THE SIAM GYPSUM INDUSTRY (SONGKHLA) CO — Types C and SCX
UNITED STATES GYPSUM CO — Types AR, C, FRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SGX, SHX, ULIX, ULX, RC, WRX, USGX; USG BORAL DRYWALL SFZ LLC — Types C, SCX, SGX, USGX;
USG MEXICO S A DE C V — Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX
System B — 2 Hr Gypsum panels, with beveled, square or tapered edges, nom 1/2 in. or 5/8 in. thick, 48 in. or 1200 mm wide, applied vertically or horizontally in two layers. Inner or base layer attached to studs with 1 in. long Type S steel screws spaced 24 in. OC when installed vertically or 16 in. OC when installed horizontally. Outer or face layer attached to studs with 1-5/8 in. long Type S steel screws spaced 12 in. OC when installed vertically and staggered 12 in. from base layer screws or 8 in. OC when installed horizontally and staggered 8 in. from base layer screws. Horizontal joints between inner and outer layers staggered a min of 12 in. Horizontal joints need not be backed by steel framing. Vertical joints centered over studs and staggered 24 in.
CGC INC — 1/2 in. Type C, IP-X2, IPC-AR or WRC; 5/8 in. Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX; THE SIAM GYPSUM INDUSTRY (SONGKHLA) CO — Types C and SCX
UNITED STATES GYPSUM CO — 1/2 in. Types C, IP-X2, IPC-AR, or WRC; 5/8 in. Types AR, C, FRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SGX, SHX, ULIX, ULX, USGX, WRC, WRX.
USG BORAL DRYWALL SFZ LLC — 1/2 in. Type C; 5/8 in. Types C, SCX, SGX, USGX
USG MEXICO S A DE C V — 1/2 in. Types C, IP-X2, IPC-AR or WRC; 5/8 in. Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX
System C — 2 Hr Gypsum panels, with beveled, square or tapered edges, nom 3/4 in. thick, 48 in. or 1200 mm wide, applied vertically or horizontally, secured with 1-1/4 in. long Type S steel screws spaced 8 in. OC along vertical edges and 12 in. OC in the field when installed vertically or 8 in. OC along the vertical edges and in the field when installed horizontally. Horizontal joints need not be backed by steel framing. Screws along side joints offset 4 in. Requires min 4 in. deep framing per Items 1, 2 and 3. Requires min 3 in. thick mineral wool batts per Item 6.
CGC INC — Types IP-X3 or ULTRACODE; UNITED STATES GYPSUM CO — Types IP-X3 or ULTRACODE
USG BORAL DRYWALL SFZ LLC — Type ULTRACODE; USG MEXICO S A DE C V — Types IP-X3 or ULTRACODE
System D — 2 Hr Gypsum panels, with beveled, square or tapered edges, nom 5/8 in. thick, 48 in. or 1200 mm wide, applied vertically or horizontally, attached directly to studs with 1 in. long Type S steel screws spaced 24 in. when installed vertically or 16 in. OC when installed horizontally. Horizontal joints need not be backed by steel framing. Requires face layer of 1/2 or 5/8 in. thick cementitious backer units per Item 7 and min 1-1/2 in. thick mineral wool batts per Item 6.
CGC INC — Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX
THE SIAM GYPSUM INDUSTRY (SONGKHLA) CO — Types C and SCX
UNITED STATES GYPSUM CO — Types AR, C, FRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SGX, SHX, ULIX, ULX, USGX, WRC, WRX.
USG BORAL DRYWALL SFZ LLC — Types C, SCX, SGX, USGX
USG MEXICO S A DE C V — Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX
System E — 2 Hr Gypsum panels, with beveled, square or tapered edges, nom 1/2 in. or 5/8 in. thick, 48 in. or 1200 mm wide, applied vertically or horizontally, attached to studs with 1 in. long Type S steel screws spaced 12 in. OC when installed vertically or 8 in. when installed horizontally. Horizontal joints need not be backed by steel framing.
CGC INC — 1/2 in. Types C, IP-X2, IPC-AR; 5/8 in. Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX; THE SIAM GYPSUM INDUSTRY (SONGKHLA) CO — Types C and SCX
UNITED STATES GYPSUM CO — 1/2 in. Types C, IP-X2, IPC-AR; 5/8 in. Types AR, C, FRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SGX, SHX, ULIX, ULX, USGX, WRC, WRX.
USG BORAL DRYWALL SFZ LLC — 1/2 in. Type C; 5/8 in. Types C, SCX, SGX, USGX
USG MEXICO S A DE C V — 1/2 in. Types C, IP-X2, IPC-AR; 5/8 in. Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX
System F — 2 Hr Gypsum panels, with beveled, square or tapered edges, nom 1/2 in. or 5/8 in. thick, 48 in. or 1200 mm wide, applied vertically in two layers. Inner or base layer attached to resilient furring channels (Item 2B) with 1 in. long Type S steel screws spaced 24 in. Outer or face layer attached to resilient furring channels (Item 2B) with 1-5/8 in. long Type S steel screws spaced 12 in. OC and staggered 12in. from base layer screws. Joints between inner and outer layers staggered 24 in.
CGC INC — 1/2 in. Type C, IP-X2, IPC-AR or WRC; 5/8 in. Types AR, C, FRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX; THE SIAM GYPSUM INDUSTRY (SONGKHLA) CO — Types C and SCX;UNITED STATES GYPSUM CO — 1/2 in. Type C, IP-X2, IPC-AR or WRC; 5/8 in. Types AR, C, FRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SGX, SHX, ULIX, ULX, USGX, WRC, WRX.
USG BORAL DRYWALL SFZ LLC — 1/2 in. Type C; 5/8 in. Types C, SCX
USG MEXICO S A DE C V — 1/2 in. Types C, IP-X2, IPC-AR or WRC;
System G — 3 Hr Gypsum panels, with beveled, square or tapered edges, nom 5/8 in. thick, 48 in. or 1200 mm wide, applied vertically or horizontally in three layers. Inner or base layer attached to studs with 1 in. long Type S steel screws spaced 24 in. OC when installed vertically or 16 in OC when installed horizontally. Middle layer attached to studs with 1-5/8 in. long Type S steel screws spaced 24 in. when installed vertically or 16 in. OC when installed horizontally. Outer or face layer attached to studs with 2-1/4 in. long Type S steel screws spaced 16 in. when installed vertically or 12 in. OC when installed horizontally. Screws offset 6 in. from layer below. Horizontal joints on adjacent layers staggered a min of 12 in. . Horizontal joints need not be backed by steel framing. Vertical joints centered over studs and staggered 24 in. on adjacent layers.
CGC INC — Types C, IP-X2, IPC-AR, ULIX, WRC; THE SIAM GYPSUM INDUSTRY (SONGKHLA) CO — Type C;
UNITED STATES GYPSUM CO — Types C, IP-X2, IPC-AR, ULIX, WRC; USG BORAL DRYWALL SFZ LLC — Type C; USG MEXICO S A DE C V — Types C, IP-X2, IPC-AR, WRC
System H — 3 Hr Gypsum panels, with beveled, square or tapered edges, nom 5/8 in. thick, 48 in. or 1200 mm wide, applied vertically or horizontally, two layers over the flange of the "C" section of the studs, one layer over the flange of the "H" section of the studs. Inner or base layer attached to studs with 1 in. long Type S steel screws spaced 24 in. OC when installed vertically or 16 in. OC when installed horizontally. Face layer attached to studs with 1-5/8 in. long Type S steel screws spaced 16 in. when installed vertically or 12 in. OC when installed horizontally. Screws offset 6 in. from layer below. Horizontal joints on adjacent layers staggered a min of 12 in. Horizontal joints need not be backed by steel framing. Vertical joints centered over studs and staggered 24 in. on adjacent layers. CGC INC — Types C, IP-X2, IPC-AR, ULIX, WRC;
THE SIAM GYPSUM INDUSTRY (SONGKHLA) CO — Type C
UNITED STATES GYPSUM CO — Types C, IP-X2, IPC-AR, ULIX, WRC; USG BORAL DRYWALL SFZ LLC — Type C; USG MEXICO S A DE C V — Types C, IP-X2, IPC-AR, WRC
System I — 4 Hr Gypsum panels, with beveled, square or tapered edges, nom 3/4 in. thick, 4 ft wide (or 1200 mm for metric spacing) wallboard with square or tapered edges. Total of four layers to be used. First and second (inner) layers applied vertically or horizontally over the steel studs. Horizontal joints need not be backed by steel framing. When applied vertically, joints centered over studs and staggered min 24 in., otherwise all joints staggered min 12 in. First layer secured to studs with 1-1/4 in. long Type S self-drilling, self-tapping buglehead steel screws spaced 24 in. OC. Second layer secured to studs with 2-1/4 in. long Type S self-drilling, self-tapping bugle-head steel screws spaced 12 in. OC. Third layer applied vertically over the furring channels (Item 2C) with a 1-1/4 in. long Type S selfdrilling, self-tapping bugle-head steel screws spaced 12 in. OC. Fourth layer applied vertically or horizontally with 2-1/4 in. long Type S self-drilling, self-tapping bugle-head steel screws spaced 12 in. OC. When applied vertically, joints to be staggered min 24 in. from third layer, otherwise all joints staggered min 12 in.
CGC INC — Types IP-X3 or ULTRACODE; UNITED STATES GYPSUM CO — Types IP-X3 or ULTRACODE
USG BORAL DRYWALL SFZ LLC — Type ULTRACODE; USG MEXICO S A DE C V — Types IP-X3 or ULTRACODE
4A. **Gypsum Board*** — (As an alternate to Item 4 Systems A, B, C, D, E, G, H, and I when used as the base layer, For direct attachment only) — Nom 5/8 in. or 3/4 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over 20 MSG steel studs and staggered min 1 stud cavity on opposite sides of studs. See Items 1, 2, 2A, 2B and 2D. Wallboard secured to studs with 1-1/4 in. long Type S-12 steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. For Joint Compound see Item 5. To be used with Lead Batten Strips (see Item 9) or Lead Discs or Tabs (see Item 10). RAY-BAR ENGINEERING CORP — Type RB-LBG
4B. Gypsum Board* — (As an alternate to Item 4 Systems A, B, C, D, E, G, H, and I when used as the base layer, For direct attachment only) — Nominal 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-1/4 in. long Type S-12 (or #6 by 1-1/4 in. long bugle head fine driller) steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. NEW ENGLAND LEAD BURNING CO INC, DBA NELCO — Type Nelco
4C. Gypsum Board* — (As an alternate to Item 4 Systems A, B, C, D, E, G, H, and I when used as the base layer, For direct attachment only) — Nom 5/8 or 3/4 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over 20 MSG steel studs and staggered min 1 stud cavity on opposite sides of studs. See Items 1, 2, 2A, 2B and 2D. Wallboard secured to studs with 1-1/4 in. long Type S-12 steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. For Joint Compound see Item 5. To be used with Lead Batten Strips (see Item 9A) or Lead Discs (see Item 10A). Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations. Lead batten strips, min 2 in. wide, max 10 ft long with a max thickness of 0.140 in. placed on the face of studs and attached to the stud with two 1 in. long Type S-8 pan head steel screws, one at the top of the strip and one at the bottom of the strip. MAYCO INDUSTRIES INC — Type X-Ray Shielded Gypsum
4D. Gypsum Board* — (As an alternate to Item 4 Systems A, B, C, D, E, G, H, and I when used as the base layer, For direct attachment only) — Nom 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-1/4 in. long Type S-12 steel screws gypsum panel steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations. Lead batten strips, min 2 in. wide, max 8 ft long with a max thickness of 0.14 in. placed on the face of studs and attached to the stud with construction adhesive and two 1 in. long Type S-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead discs, nominal 3/8 in. diam by max 0.085 in. thick. Compression fitted or adhered over the screw heads. Lead batten strips and discs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C".
RADIATION PROTECTION PRODUCTS INC — Type RPP - Lead Lined Drywall
5. Joint Tape and Compound — (Not Shown) Systems A, B, C, E, F, G, H, I
Joints on outer layers of gypsum boards (Item 4 and 4A) covered with paper tape and joint compound. Paper tape and joint compound may be omitted when gypsum boards are supplied with square edges. Exposed screw heads covered with joint compound.
6. Batts and Blankets* — Systems A, B, E, F, G, H, I - (Optional) — Mineral wool or glass fiber batts partially or completely filling stud cavity. Any mineral wool or glass fiber batt mineral bearing the UL Classification Marking as to Fire Resistance.
Systems C & D - Min 3 in. (System C) and min 1-1/2 in. (System D) thick mineral wool batts, friction fitted between the studs and floor and ceiling runners.
ROCKWOOL — Type AFB, min. density 1.8 pcf / 28.8 kg/m
THERMAFIBER INC — Type SAFB, SAFB FF
7. Cementitious Backer Units* — (System D) — Nom 1/2 or 5/8 in. thick panels, square edge, attached to studs over gypsum wallboard with 1-5/8 in. long, Type S-12, corrosion resistant steel screws spaced 8 in. OC and staggered 8 in. from gypsum wall board screws. Joints covered with glass fiber mesh tape. Vertical joints staggered one stud cavity from gypsum wallboard joints. Horizontal joints staggered a min of 12 in. from the gypsum wallboard joints.
UNITED STATES GYPSUM CO — Type DCB
8. Laminating Adhesive* — (Optional, Not Shown) — Used to bond outer layer of Cementitious Backer Units (Item 7) to inner layers of Gypsum Board (Item 4) in System D. ANSI A136.1 Type 1 organic adhesive applied with 1/4 in. square notched trowel. See Adhesives (BYWR) in the Fire Resistance Directory or Adhesives (BJLZ) in the Building Materials Directory for names of Classified companies.
9. Lead Batten Strips — (Not Shown, For Use With Item 4A) — Lead batten strips, min 1-1/2 in. wide, max 10 ft long with a max thickness of 0.125 in. Strips placed on the interior face of studs and attached from the exterior face of the stud with two 1 in. long Type S-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Lead batten strips required behind vertical joints of lead backed gypsum wallboard (Item 4A) and optional at remaining stud locations. Required behind vertical joints.
9A. Lead Batten Strips — (Not Shown, for use with Item 4C) — Lead batten strips, 2 in. wide, max 10 ft long with a max thickness of 0.140 in. Strips placed on the face of studs and attached to the stud with two min. 1 in. long min. Type S-8 pan head steel screws, one at the top of the strip and one at the bottom of the strip or with one min. 1 in. long min. Type S-8 pan head steel screw at the top of the strip. Lead batten strips to have a purity of 99.5% meeting the Federal specification QQ-L-201f, Grades "B, C or D".. Lead batten strips required behind vertical joints of lead backed gypsum wallboard (Item 6) and optional at remaining stud locations.
10. Lead Discs or Tabs — (Not Shown, For Use With Item 4A) — Used in lieu of or in addition to the lead batten strips (Item 9) or optional at other locations - Max 3/4 in. diam by max 0.125 in. thick lead discs compression fitted or adhered over steel screw heads or max 1/2 in. by 1-1/4 in. by max 0.125 in. thick lead tabs placed on gypsum boards (Item 4A) underneath screw locations prior to the installation of the screws. Lead discs or tabs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C".
10A. Lead Discs — (Not Shown, for use with Item 4C) — Max 5/16 in. diam by max 0.140 in. thick lead discs compression fitted or adhered over steel screw heads. Lead discs to have a purity of 99.5% meeting the Federal Specification QQ-L-201f, Grades "B, C or D".
11. Lead Batten Strips — (Not Shown, For Use With Item 4B) — Lead batten strips, 2 in. wide, max 10 ft long with a max thickness of 0.142 in. Strips placed on the face of studs and attached to the stud with two min. 1 in. long min. Type S-8 pan head steel screws, one at the top of the strip and one at the bottom of the strip or with one min. 1 in. long min. Type S-8 pan head steel screw at the top of the strip. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Lead batten strips required behind vertical joints of lead backed gypsum wallboard (Item 4B) and optional at remaining stud locations.
12. Lead Tabs — (Not Shown, For Use With Item 4B) — 2 in. wide, 5 in. long with a max thickness of 0.142 in. Tabs friction-fit around front face of stud, the stud folded back flange, and the back face of the steel stud. Tabs required at each location where a screw (that secures the gypsum boards, Item 4B) will penetrate the steel stud. Lead tabs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Lead tabs may be held in place with standard adhesive tape if necessary.

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

UL U419 - EXISTING South exterior walls

September 5, 2022
Nonbearing Wall Ratings — 1, 2, 3 or 4 Hr (See Items 4 & 5 through 5J)
* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.



1. Floor and Ceiling Runners — (Not Shown) — For use with Item 2 — Channel shaped, fabricated from min 25 MSG corrosion-protected steel, min depth to accommodate stud size, with min 1-1/4 in. long legs, attached to floor and ceiling with fasteners 24 in. OC max.
1A. Framing Members* — Floor and Ceiling Runner — Not Shown — In lieu of Item 1 — For use with Item 2B, proprietary channel shaped runners, 3-5/8 in. deep attached to floor and ceiling with fasteners 24 in. OC max.
CALIFORNIA EXPANDED METAL PRODUCTS CO — Viper25™ Track; CRACO MFG INC — SmartTrack25™; MARINO/WARE, DIV OF WARE INDUSTRIES INC — Viper25™ Track; IMPERIAL MANUFACTURING GROUP INC — Viper25™ Track
1B. Framing Members* — Floor and Ceiling Runner — Not Shown — In lieu of Item 1 — For use with Item 2C, proprietary channel shaped runners, 1-1/4 in. wide by 3-5/8 in. deep fabricated from min 0.018 in. thick galv steel, attached to floor and ceiling with fasteners spaced 24 in. OC max.
CALIFORNIA EXPANDED METAL PRODUCTS CO — Viper20™ Track; MARINO/WARE, DIV OF WARE INDUSTRIES INC — Viper20™ Track; IMPERIAL MANUFACTURING GROUP INC — Viper20™ Track
1C. Framing Members* — Floor and Ceiling Runners — (Not Shown) — In lieu of Item 1 — Channel shaped, attached
to floor and ceiling with fasteners 24 in. OC. max. ALLSTEEL & GYPSUM PRODUCTS INC — Type SUPREME D24/30EQD and Type SUPREME D20; CONSOLIDATED FABRICATORS CORP, BUILDING PRODUCTS DIV — Type SUPREME D24/30EQD and Type SUPREME D20; QUAIL RUN BUILDING MATERIALS INC — Type SUPREME D24/30EQD and Type SUPREME D20; SCAFCO STEEL STUD MANUFACTURING CO — Type SUPREME D24/30EQD and Type SUPREME D20; STEEL CONSTRUCTION SYSTEMS INC — Type SUPREME D24/30EQD and Type SUPREME D20
TELLING INDUSTRIES L L C — Type SUPREME D24/30EQD and Type SUPREME D20; UNITED METAL PRODUCTS INC — Type SUPREME D24/30EQD and Type SUPREME D20
1D. Floor and Ceiling Runners — (Not Shown) — For use with Item 2A — Channel shaped, fabricated from min 20 MSG
corrosion-protected or galv steel, min depth to accommodate stud size, with min 1 in. long legs, attached to floor and ceiling with fasteners spaced max 24 in. OC.
1E. Framing Members* — Floor and Ceiling Runners — (Not Shown, As an alternate to Item 1) — For use with Items 2E, 5F or 5G or 5I only, channel shaped, fabricated from min. 0.015 in. (min bare metal thickness) galvanized steel, attached to floor and ceiling with fasteners 24 in. OC. max.
CLARKDIETRICH BUILDING SYSTEMS — CD ProTRAK; DMFCWBS L L C — ProTRAK; MBA METAL FRAMING — ProTRAK; RAM SALES L L C — Ram ProTRAK; STEEL STRUCTURAL PRODUCTS L L C — Tri-S ProTRAK
1F. Framing Members* — Floor and Ceiling Runner — Not Shown — In lieu of Item 1 — For use with Item 2F, proprietary channel shaped runners, minimum width to accommodate stud size, with 1- 1/8 in. long legs fabricated from min 0.015 in. (min bare metal thickness) galv steel, attached to floor and ceiling with fasteners spaced 24 in. OC max. SUPER STUD BUILDING PRODUCTS — The Edge
1G. Framing Members* — Floor and Ceiling Runner — For use with Item 2G, proprietary channel shaped runners, minimum width to accommodate stud size attached to floor and ceiling with fasteners 24 in. OC max. STUDCO BUILDING SYSTEMS — CROCSTUD Track
1H. Floor and Ceiling Runners — (Not Shown) — Channel shaped, fabricated from min 0.02 in. galv steel, min width to
accommodate stud size, with min 1 in. long legs, for use with studs specified below and fabricated from min 0.018 in. galv
steel or thicker, attached to floor and ceiling with fasteners spaced max 24 in. OC.
MARINO/WARE, DIV OF WARE INDUSTRIES INC — Viper20™ Track VT100
IMPERIAL MANUFACTURING GROUP INC — Viper20™ Track VT100
1I. Framing Members* — Floor and Ceiling Runners — (Not Shown, As an alternate to Item 1) — For use with Items 2H,
channel shaped, fabricated from min. 0.015 in. (min bare metal thickness) galvanized steel, attached to floor and ceiling
with fasteners 24 in. OC. max. TELLING INDUSTRIES L L C — TRUE-TRACK™
1J. Framing Members* — Floor and Ceiling Runner — Not Shown — In lieu of Item 1 — For use with Item 2I, proprietary channel shaped runners, 3-5/8 in. deep attached to floor and ceiling with fasteners 24 in. OC max.
1K. Framing Members* — Floor and Ceiling Runner — Not Shown — In lieu of Item 1 — For use with Item 2J, proprietary channel shaped runners, 1-1/4 in. wide by 3-5/8 in. deep fabricated from min 0.018 in. thick galv steel, attached to floor and ceiling with fasteners spaced 24 in. OC max.
1L. Framing Members* — Floor and Ceiling Runner — Not Shown — In lieu of Item 1 — For use with Item 2N, proprietary channel shaped runners, 1-1/4 in. wide by min. 3-1/2 in. deep fabricated from min 0.018 in. thick galv steel, attached to floor and ceiling with fasteners spaced 24 in. OC max. RESCUE METAL FRAMING, L L C — AlphaTRAK
1M. Framing Members* — Floor and Ceiling Runners — Not Shown — As an alternate to Item 1 — For use with Item 2O, proprietary channel shaped runners, min width to accommodate stud size, galv steel, attached to floor and ceiling with fasteners spaced 24 in. OC max. RONDO BUILDING SERVICES PTY LTD — Rondo Wall Track
1N. Framing Members* — Floor and Ceiling Runners — Not Shown — As an alternate to Item 1 — For use with Item 2P, proprietary channel shaped runners, min width to accommodate stud size, galv steel, attached to floor and ceiling with fasteners spaced 24 in. OC max. OEG BUILDING MATERIALS — OEG Track
1O. Framing Members* — Floor and Ceiling Runner — Not Shown — In lieu of Item 1 — For use with Item 2Q, proprietary channel shaped runners, min width to accommodate stud size, fabricated from min. 25 MSG (0.018 in. min. bare metal thickness), attached to floor and ceiling with fasteners spaced 24 in. OC max.
CALIFORNIA EXPANDED METAL PRODUCTS CO — Viper X Track
2. Steel Studs — Channel shaped, fabricated from min 25 MSG corrosion-protected steel, min depth as indicated under Item 5, spaced a max of 24 in. OC. Studs to be cut 3/8 to 3/4 in. less than assembly height.
2A. Steel Studs — (As an alternate to Item 2, For use with Items 5B, 5E, 5H, 5J or Type ULIX) — Channel shaped, fabricated from min 20 MSG corrosion-protected or galv steel, 3-1/2 in. min depth, spaced a max of 16 in. OC. Studs friction-fit into floor and ceiling runners. Studs to be cut 5/8 to 3/4 in. less than assembly height.
2B. Framing Members* - Steel Studs — (As an alternate to Item 2, For use with Items 5C, 5I or Type ULIX) — Proprietary channel shaped studs, 3-5/8 in. deep spaced a max of 24 in. OC. Studs to be cut 3/4 in less than the assembly height and installed with a 1/2 in. gap between the end of the stud and track at the bottom of the wall. For direct attachment of gypsum board only.
CALIFORNIA EXPANDED METAL PRODUCTS CO — Viper25™; CRACO MFG INC — SmartStud25™; MARINO/WARE, DIV OF WARE INDUSTRIES INC — Viper25™; IMPERIAL MANUFACTURING GROUP INC — Viper25™
2C. Framing Members* — Steel Studs — Not Shown — In lieu of Item 2 — proprietary channel shaped steel studs, min depth as indicated under Item 5, spaced a max if 24 in. OC, fabricated from min 0.018 in. thick galv steel. Studs cut 3/8 in. to 3/4 in. less in lengths than assembly heights.
CALIFORNIA EXPANDED METAL PRODUCTS CO — Viper20™; MARINO/WARE, DIV OF WARE INDUSTRIES INC — Viper20™; IMPERIAL MANUFACTURING GROUP INC — Viper20™
2D. Framing Members* — Steel Studs — In lieu of Item 2 — Channel shaped studs, min depth as indicated under Item 5, spaced a max of 24 in. OC. Studs to be cut 3/4 in. less than assembly height.
ALLSTEEL & GYPSUM PRODUCTS INC — Type SUPREME D24/30EQD and Type SUPREME D20; CONSOLIDATED FABRICATORS CORP, BUILDING PRODUCTS DIV — Type SUPREME D24/30EQD and Type SUPREME D20; QUAIL RUN BUILDING MATERIALS INC — Type SUPREME D24/30EQD and Type SUPREME D20; SCAFCO STEEL STUD MANUFACTURING CO — Type SUPREME D24/30EQD and Type SUPREME D20; STEEL CONSTRUCTION SYSTEMS INC — Type SUPREME D24/30EQD and Type SUPREME D20; TELLING INDUSTRIES L L C — Type SUPREME D24/30EQD and Type SUPREME D20; UNITED METAL PRODUCTS INC — Type SUPREME D24/30EQD and Type SUPREME D20
2E. Framing Members* — Steel Studs — (Not Shown, As an alternate to Item 2) — For use with Items 5F or 5G or 5I or Type ULIX only, channel shaped studs, min depth as indicated under Item 5F, 5G or 5I, fabricated from min. 0.015 in. (min bare metal thickness) galvanized steel, spaced a max of 24 in. OC. Studs to be cut 3/4 in. less than assembly height. CLARKDIETRICH BUILDING SYSTEMS — CD ProSTUD; DMFCWBS L L C — ProSTUD; MBA METAL FRAMING — ProSTUD; RAM SALES L L C — Ram ProSTUD; STEEL STRUCTURAL PRODUCTS L L C — Tri-S ProSTUD
2F. Framing Members* — Steel Studs — Not Shown — In lieu of Item 2 — proprietary channel shaped steel studs, minimum width indicated under Item 5, 1-1/4 in. deep fabricated from min 0.015 in. (min bare metal thickness) galvanized steel. Studs 3/8 in. to 3/4 in. less in lengths than assembly heights. SUPER STUD BUILDING PRODUCTS — The Edge
2G. Framing Members* — Steel Studs — Not Shown — In lieu of Item 2 — proprietary channel shaped studs, min. width indicated under Item 5, Studs to be cut 3/8 to 3/4 in less than the assembly height. STUDCO BUILDING SYSTEMS — CROCSTUD
2H. Framing Members* — Steel Studs — (Not Shown, As an alternate to Item 2) — Fabricated from min. 0.015 in. (min bare metal thickness) galvanized steel, spaced a max of 24 in. OC. Studs to be cut 3/4 in. less than assembly height. TELLING INDUSTRIES L L C — TRUE-STUD™
2I. Framing Members* — Steel Studs —
2J. Framing Members* — Metal Studs — Not Shown — In lieu of Item 2 — proprietary channel shaped steel studs, min depth as indicated under Item 5, spaced a max if 24 in. OC, fabricated from min 0.018 in. thick galv steel. Studs cut 3/8 in. to 3/4 in. less in lengths than assembly heights
2K. Framing Members* — Steel Studs — As an alternate to Item 2 — For use with Item 1, channel shaped studs, fabricated from min 25 MSG corrosion-protected steel, min depth as indicated under Item 5, spaced a max of 24 in. OC. Studs to be cut 3/8 to 3/4 in. less than assembly height. EB METAL INC — NITROSTUD
2L. Framing Members* — Steel Studs — As an alternate to Item 2 — For use with Item 1, channel shaped studs, fabricated from min 25 MSG corrosion-protected steel, min depth as indicated under Item 5, spaced a max of 24 in. OC. Studs to be cut 3/8 to 3/4 in. less than assembly height. OLMAR SUPPLY INC — PRIMESTUD
2M. Framing Members* — Steel Studs — As an alternate to Item 2 — For use with Item 1, channel shaped studs, fabricated from min 25 MSG corrosion-protected steel, min depth as indicated under Item 5, spaced a max of 24 in. OC. Studs to be cut 3/8 to 3/4 in. less than assembly height. MARINO/WARE, DIV OF WARE INDUSTRIES INC — StudRite™
2N. Framing Members*— Steel Studs — As an alternate to Item 2 — proprietary channel shaped steel studs, min depth 3-1/2 in. and as indicated under Item 5, spaced a max of 24 in. OC, fabricated from min 0.018 in. thick galv steel. Studs cut 3/8 in. to 3/4 in. less in length than assembly height. RESCUE METAL FRAMING, L L C — AlphaSTUD
2O. Framing Members* — Steel Studs — As an alternate to Item 2 — proprietary channel shaped steel studs, min width as indicated under Item 5, galv steel. Studs to be cut 3/8 to 3/4 in. less in lengths than assembly height. Spaced 24 in. OC max.
RONDO BUILDING SERVICES PTY LTD — Rondo Lipped Wall Stud
2P. Framing Members* — Steel Studs — As an alternate to Item 2 — proprietary channel shaped steel studs, min width as indicated under Item 5, min 25 MSG galv steel. Studs to be cut 3/8 to 3/4 in. less in lengths than assembly height. Spaced 24 in. OC max. OEG BUILDING MATERIALS — OEG Stud
2Q. Framing Members* — Steel Studs — Not Shown — In lieu of Item 2 — For use with Item 1O, proprietary channel shaped steel studs, min depth as indicated under Item 5, spaced a max of 24 in. OC, fabricated from min 25 MSG (0.018 in. min. bare metal thickness). Studs cut 3/8 in. to 3/4 in. less in lengths than assembly heights.
CALIFORNIA EXPANDED METAL PRODUCTS CO — Viper X
3. Wood Structural Panel Sheathing — (Optional, For use with Item 5 Only) — (Not Shown) — 4 ft wide, 7/16 in. thick oriented strand board (OSB) or 15/32 in. thick structural 1 sheathing (plywood) complying with DOC PS1 or PS2, or APA Standard PRP-108, manufactured with exterior glue, applied horizontally or vertically to the steel studs. Vertical joints centered on studs, and staggered one stud space from wallboard joints. Attached to studs with flat-head self-drilling tapping screws with a min. head diam. of 0.292 in. at maximum 6 in. OC. in the perimeter and 12 in. OC. in the field. When used, gypsum panels attached over OSB or plywood panels and fastener lengths for gypsum panels increased by min. 1/2 in. 4. Batts and Blankets* — (Required as indicated under Item 5) — Mineral wool batts, friction fitted between studs and runners. Min nom thickness as indicated under Item 5. See Batts and Blankets (BKNV or BZJZ) Categories for names of Classified companies.
4A. Batts and Blankets* — (Optional) — Placed in stud cavities, any glass fiber or mineral wool insulation bearing the UL Classification Marking as to Surface Burning Characteristics and/or Fire Resistance. See Batts and Blankets (BKNV or BZJZ) Categories for names of Classified companies.
4B. Fiber, Sprayed* — (Optional, for use with Type ULIX) Where insulation is required - Spray applied granulated mineral fiber material. The fiber is applied with adhesive at a minimum density of 4.0 pcf to completely fill the wall cavity in accordance with the application instructions supplied with the product. See Fiber, Sprayed (CCAZ).
AMERICAN ROCKWOOL MANUFACTURING, LLC — Type Rockwool Premium Plus
4C. Foamed Plastic* — (Where Batts and Blankets*, Item 4, are optional, for use with Item 5K) — Spray applied, foamed plastic insulation, at any thickness from partial fill to completely filling stud cavity, for 2 hour rated assemblies only. When foamed plastic is used, minimum stud depth shall be 3-1/2 in. CARLISLE SPRAY FOAM INSULATION — Types SealTite Pro Closed Cell (CC), SealTite Pro Open Cell (OC), SealTite Pro OCX, SealTite Pro No Trim 21, SealTite Pro One Zero, Foamsulate Closed Cell, Foamsulate OCX, Foamsulate 70, and Foamsulate HFO.
4D. Foamed Plastic* — (Where Batts and Blankets*, Item 4, are optional, for use with Item 5L) — Spray applied, foamed plastic insulation, at any thickness from partial fill to completely filling stud cavity, for up to 2 hour rated assemblies only. When foamed plastic is used, minimum stud depth shall be 3-1/2 in. with minimum 20 MSG steel thickness. BASF CORP - Enertite® NM, Enertite® G, FE178®, Spraytite® 178, Spraytite® 81206, Walltite® 200, Walltite® US, Walltite® US-N, Walltite HP+, FE137®, FE158®, Spraytite® 158, Spraytite® SP and Spraytite® 81205
5. Gypsum Board* — Gypsum panels with beveled, square or tapered edges, applied vertically or horizontally. Vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Vertical joints in adjacent layers (multilayer systems) staggered one stud cavity. Horizontal joints need not be backed by steel framing. Horizontal edge joints and horizontal butt joints on opposite sides of studs need not be staggered. Horizontal edge joints and horizontal butt joints in adjacent layers (multilayer systems) staggered a min of 12 in. Horizontal edge joints and horizontal butt joints in adjacent layers (multilayer systems) with Type ULIX need not be staggered. The thickness and number of layers for the 1 hr, 2 hr, 3 hr and 4 hr ratings are as follows:

[illegible]

[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
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[illegible]	[illegible]	[illegible]	[illegible]

CGC INC — 1/2 in. thick Type C, IP-X2 or IPC-AR; WRC, 5/8 in. thick Type AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULIX, WRX or WRC; 3/4 in. thick Types IP-X3 or ULTRACODE
THE SIAM GYPSUM INDUSTRY (SONGKHLA) CO — 1/2 in. thick Type C and 5/8 in. thick Type SCX
UNITED STATES GYPSUM CO — 1/2 in. thick Type C, IP-X2, IPC-AR or WRC; 5/8 in. thick Type SCX, SGX, SHX, ULIX, WRX, IP-X1, AR, C, WRC, FRX-G, IP-AR, IP-X2, IPC-AR; 3/4 in. thick Types IP-X3 or ULTRACODE; **USG BORAL DRYWALL SFZ LLC** — 1/2 in. Type C; 5/8 in. Types C, SCX, SGX, ULTRACODE
USG MEXICO S A DE C V — 1/2 in. thick Type C, IP-X2, IPC-AR or WRC; 5/8 in. thick Type AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, WRX, WRC or; 3/4 in. thick Types IP-X3 or ULTRACODE
When Item 7B, Steel Framing Members*, is used, Nonbearing Wall Rating is limited to 1 Hr. Min. stud depth is 3-1/2 in., min. thickness of insulation (Item 4) is 3 in., and two layers of gypsum board panels (1/2 in. or 5/8 in. thick) shall be attached to furring channels as described in Item 6. One layer of gypsum board panels (1/2 in. or 5/8 in. thick) attached to opposite side of stud without furring channels as described in Item 6.
5A. Gypsum Board* — (As an alternate to Item 5) — 5/8 in. thick, 24 to 54 in. wide, applied horizontally as the outer layer to one side of the assembly. Secured as described in Item 6. CGC INC — Type SHX; UNITED STATES GYPSUM CO — Type FRX-G, SHX; USG MEXICO S A DE C V — Type SHX.
5B. Gypsum Board* — (Not Shown) — As an alternate to Item 5 when used as the base layer on one or both sides of wall when 5/8 in or 3/4 in. thick products are specified. For direct attachment only to steel studs Item 2A, (not to be used with Item 3) — Nom 5/8 in. or 3/4 in. may be used as alternate to all 5/8 in. or 3/4 in. shown in Item 5, Wallboard Protection on Each Side of Wall table. Nom 5/8 in. or 3/4 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Gypsum board secured to 20 MSG steel studs Item 2A with 1-1/4 in. long Type S-12 steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. To be used with Lead Batten Strips (see Item 11) or Lead Discs or Tabs (see Item 12). RAY-BAR ENGINEERING CORP — Type RB-LBG
5C. Gypsum Board* — (For Use With Item 2B) — Rating Limited to 1 Hour. 5/8 in. thick, 48 in. wide, Gypsum panels with beveled, square or tapered edges, applied vertically or horizontally. (Vertical Application) - The gypsum board is to be installed on each side of the studs with 1 in. long Type S coated steel screws spaced 8 in. OC starting 4 in. from the edge of the board at the vertical edges and 12 in. OC starting 6 in. from the edge of the board at the center of each board. Gypsum boards are to be secured to the top and bottom track with screws spaced 8 in. OC starting 4 in. from the board edge. Fasteners shall not penetrate through both the stud and the track at the same time. Vertical joints are to be centered over studs and staggered one stud cavity on opposite sides of studs. (Horizontal Application) - The gypsum board is to be installed on each side of the studs with 1 in. long Type S coated steel screws spaced 8 in. OC starting 4 in. from the edge of the board at the vertical edges and 12 in. OC starting 6 in. from the edge of the board at the center of each board. Gypsum boards are to be secured to the top and bottom track with screws spaced 8 in. OC starting 4 in. from the board edge. Fasteners shall not penetrate through both the stud and the track at the same time. All horizontal joints are to be backed as outlined under section VI of Volume 1 in the Fire Resistive Directory.
CGC INC — Type SCX, ULIX.; THE SIAM GYPSUM INDUSTRY (SONGKHLA) CO — Type SCX; UNITED STATES GYPSUM CO — Type SCX, SGX, ULIX; USG BORAL DRYWALL SFZ LLC — Type SCX; USG MEXICO S A DE C V — Type SCX
5D. Gypsum Board* — (As an alternate to Item 5) — 5/8 in. thick, 48 in. wide, applied vertically or horizontally. Secured as described in Item 6. For use with Items 1 and 2 only. CGC INC — Type USGX;UNITED STATES GYPSUM CO — Type USGX; USG BORAL DRYWALL SFZ LLC — Type USGX; USG MEXICO S A DE C V — Type USGX
5E. Gypsum Board* — (Not Shown) — (As an alternate to Item 5 when used as the base layer on one or both sides of wall when 1/2 in. or 5/8 in thick products are specified, For direct attachment only to steel studs Item 2A, not to be used with Item 3). Nominal 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-1/4 in. long Type S-12 (or No. 6 by 1-1/4 in. long bugle head fine driller) steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field.
NEW ENGLAND LEAD BURNING CO INC, DBA NELCO — Nelco
5F. Gypsum Board* — (As an alternate to Item 5) — For use with Items 1E and 2E and limited to 1 Hour Rating only, Gypsum panels with beveled, square or tapered edges, applied vertically, and fastened to the steel studs with 1 in. long Type S screws spaced 8 in. OC along vertical and bottom edges and 12 in. OC in the field. Vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Steel stud depth shall be a minimum 3-5/8 in. THE SIAM GYPSUM INDUSTRY (SONGKHLA) CO — Type SCX; UNITED STATES GYPSUM CO — 5/8 in. thick Type SCX, SGX, ULIX; USG BORAL DRYWALL SFZ LLC — 5/8 in. thick Type SCX, SGX
5G. Gypsum Board* — (As an alternate to Item 5) — For use with Items 1E and 2E only, Gypsum panels with beveled, square or tapered edges, applied vertically or horizontally, as specified in the table below and fastened to the steel studs as described in Item 6. Vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Vertical joints in adjacent layers (multilayer systems) staggered one stud cavity. Horizontal joints need not be backed by steel framing. Horizontal edge joints and horizontal butt joints on opposite sides of studs need not be staggered. Horizontal edge joints and horizontal butt joints in adjacent layers (multilayer systems) staggered a min of 12 in. The thickness and number of layers for the 2 hr, 3 hr and 4 hr ratings are as follows:

[illegible]

[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]

CGC INC — 1/2 in. thick Type C, IP-X2 or IPC-AR;, 5/8 in. thick Type AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULIX or 3/4 in. thick Types IP-X3 or ULTRACODE; THE SIAM GYPSUM INDUSTRY (SONGKHLA) CO — 1/2 in. thick Types C and 5/8 in. thick SCX; UNITED STATES GYPSUM CO — 1/2 in. thick Type C, IP-X2, IPC-AR or; 5/8 in. thick Type SCX, SGX, SHX, IP-X1, AR, C, , FRX-G; IP-AR, IP-X2, IPC-AR, ULIX; 3/4 in. thick Types IP-X3 or ULTRACODE USG BORAL DRYWALL SFZ LLC — 1/2 in. Type C; 5/8 in. Types C, SCX, SGX, ULTRACODE; USG MEXICO S A DE C V — 1/2 in. thick Type C, IP-X2, IPC-AR or; 5/8 in. thick Type AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, or; 3/4 in. thick Types IP-X3 or ULTRACODE
5H. Gypsum Board* — (Not Shown) — (As an alternate to Item 5 when used as the base layer on one or both sides of wall when 5/8 or 3/4 in thick products are specified. For direct attachment only to steel studs Item 2A, (not to be used with Item 3) - Nom 5/8 or 3/4 in. may be used as alternate to all 5/8 or 3/4 in. shown in Item 5, Wallboard Protection on Each Side of Wall table. Nom 5/8 or 3/4 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over 20 MSG steel studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-1/4 in. long Type S-12 steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. Gypsum board secured to 20 MSG steel studs Item 2B with 1-1/4 in. long Type S-12 steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. For Joint Compound see Item 5. To be used with Lead Batten Strips (see Item 11A) or Lead Discs (see Item 12A). MAYCO INDUSTRIES INC — Type X-Ray Shielded Gypsum
5I. Gypsum Board* — (As an alternate to Item 5) — Nom. 5/8 in. thick gypsum panels with beveled, square or tapered edges installed as described in Item 5. Steel stud minimum depth shall be as indicated in Item 5. CGC INC — Type ULIX, ULX; UNITED STATES GYPSUM CO — Type ULIX, ULX; USG MEXICO S A DE C V — Type ULX
5J. Gypsum Board* — (Not Shown) — (As an alternate to Item 5 when used as the base layer on one or both sides of wall when 1/2 in. or 5/8 in thick products are specified, For direct attachment only to steel studs Item 2A, not to be used with Item 3). Nom 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-1/4 in. long Type S-12 steel screws gypsum panel steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations. Lead batten strips, min 2 in. wide, max 8 ft long with a max thickness of 0.14 in. placed on the face of studs and attached to the stud with construction adhesive and two 1 in. long Type S-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead discs, nominal 3/8 in. diam by max 0.085 in. thick. Compression fitted or adhered over the screw heads. Lead batten strips and discs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". RADIATION PROTECTION PRODUCTS INC — Type RPP - Lead Lined Drywall
5K. Gypsum Board* — (As an alternate to Item 5 when Foam Plastic insulation (Item 4C) is used) — Any 5/8 in. thick, 4 ft. wide, Gypsum Board listed in Item 5 above. Applied vertically with vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Gypsum panels secured to studs with 1 in. long Type S steel screws spaced 8 in. OC at perimeter and in the field. For 2 layer assemblies outer layer will be attached to studs over inner layer with the 1-5/8 in. long steel screws spaced 8 in. OC.
5L. Gypsum Board* — (As an alternate to Item 5 when Foam Plastic insulation (Item 4D) is used) — Any 5/8 in. thick, 4 ft. wide, Gypsum Board listed in Item 5 above. Applied vertically with vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Gypsum panels secured to studs with 1-1/4 in. long Type S steel screws spaced 8 in. OC at perimeter and in the field. For 2 layer assemblies outer layer will be attached to studs over inner layer with the 1-7/8 in. long steel screws spaced 8 in. OC.
6. Fasteners — (Not Shown) — For use with Items 2 and 2F - Type S or S-12 steel screws used to attach panels to studs (Item 2) or furring channels (Item 7). Single layer systems: 1 in. long for 1/2 and 5/8 in. thick panels or 1-1/4 in. long for 3/4 in. thick panels, spaced 8 in. OC when panels are applied horizontally, or 8 in. OC along vertical and bottom edges and 12 in. OC in the field when panels are applied vertically. Single layer system with Type ULIX: 1 in. long, spaced 12 in. OC in the field and perimeter, when panels are applied horizontally or vertically.Two layer systems: First layer- 1 in. long for 1/2 and 5/8 in. thick panels or 1-1/4 in. long for 3/4 in. thick panels, spaced 16 in. OC. Second layer- 1-5/8 in. long for 1/2 in., 5/8 in. thick panels or 2-1/4 in. long for 3/4 in. thick panels, spaced 16 in. OC with screws offset 8 in. from first layer.Three-layer systems: First layer- 1 in. long for 1/2 in., 5/8 in. thick panels, spaced 24 in. OC. Second layer- 1- 5/8 in. long for 1/2 in., 5/8 in. thick panels, spaced 24 in. OC. Third layer- 2-1/4 in. long for 1/2 in., 5/8 in. thick panels or 2- 5/8 in. long for 5/8 in. thick panels, spaced 12 in. OC. Screws offset min 6 in. from layer below. Four-layer systems: First layer- 1 in. long for 1/2 in., 5/8 in. thick panels, spaced 24 in. OC. Second layer- 1-5/8 in. long for 1/2 in., 5/8 in. thick panels, spaced 24 in. OC. Third layer- 2-1/4 in. long for 1/2 in. thick panels or 2-5/8 in. long for 5/8 in. thick panels, spaced 24 in. OC. Fourth layer- 2-5/8 in. long for 1/2 in. thick panels or 3 in. long for 5/8 in. thick panels, spaced 12 in. OC. Screws offset min 6 in. from layer below.
7. Furring Channels — (Optional, Not Shown, for single or double layer systems) — Resilient furring channels fabricated from min 25 MSG corrosion-protected steel, spaced vertically a max of 24 in. OC. Flange portion attached to each intersecting stud with 1/2 in. long Type S-12 steel screws. Not for use with Item 5A.
7A. Framing Members* — (Optional on one or both sides, not shown, for single or double layer systems) As an alternate to Item 7, furring channels and Steel Framing Members as described below:
a. Furring Channels — Formed of No. 25 MSG galv steel. 2-9/16 in. or 2-23/32 in. wide by 7/8 in. deep, spaced max. 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Gypsum board attached to furring channels as described in Item 6. Not for use with Item 5A.
b. Steel Framing Members* — Used to attach furring channels (Item 7Aa) to studs (Item 2). Clips spaced max. 48 in. OC. RSIC-1 and RSIC-1 (2.75) clips secured to studs with No. 8 x 1-1/2 in. minimum self-drilling, S-12 steel screw through the center grommet. RSIC-V and RSIC-V (2.75) clips secured to studs with No. 8 x 9/16 in. minimum self-drilling, S-12 steel screw through the center hole. Furring channels are friction fitted into clips. RSIC-1 and RSIC-V clips for use with 2-9/16 in. wide furring channels. RSIC-1 (2.75) and RSIC-V (2.75) clips for use with 2-23/32 in. wide furring channels. PAC INTERNATIONAL L L C — Types RSIC-1, RSIC-V, RSIC-1 (2.75), RSIC-V (2.75).
7B. Framing Members* — (Optional, Not Shown) — As an alternate to Item 7, for single or double layer systems, furring channels and Steel Framing Members on only one side of studs as described below:
a. Furring Channels — Formed of No. 25 MSG galv steel, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Batts and Blankets placed in stud cavity as described in Item 5. Two layers of gypsum board attached to furring channels as described in Item 5. Not for use with Item 5A.
b. Steel Framing Members* — Used to attach furring channels (Item 7Ba) to one side of studs (Item 2) only. Clips spaced 48in. OC., and secured to studs with two No. 8 x 2-1/2 in. coarse drywall screws, one through the hole at each end of the clip. Furring channels are friction fitted into clips. KINETICS NOISE CONTROL INC — Type Isomax
7C. Framing Members* — (Not Shown) — (Optional on one or both sides, not shown, for single or double layer systems) — As an alternate to Item 7, furring channels and Steel Framing Members as described below:
a. Furring Channels — Formed of No. 25 MSG galv steel. 2-3/8 in. wide by 7/8 in. deep, spaced max. 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Gypsum board attached to furring channels as described in Item 6. Not for use with Item 5A.
b. Steel Framing Members* — Used to attach furring channels (Item 7Ca) to studs (Item 2). Clips spaced max. 48 in. OC. GENIECLIPS secured to studs with No. 8 x 1-1/2 in. minimum self-drilling, S-12 steel screw through the center grommet. Furring channels are friction fitted into clips. PLITEQ INC — Type GENIECLIP
7D. Steel Framing Members* — (Optional on one or both sides, not shown, for single or double layer systems) — Furring channels and Steel Framing Members as described below:
a. Furring Channels — Formed of No. 25 MSG galv steel. Spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 AWG galvanized steel wire.. Gypsum board attached to furring channels as described in Item 6. Not for use with Item 5A.
b. Steel Framing Members* — Used to attach furring channels (Item 7Da) to studs. Clips spaced 48 in. OC., and secured to studs with 2 in. coarse drywall screw with 1 in. diam washer through the center hole. Furring channels are friction fitted into clips. STUDCO BUILDING SYSTEMS — RESILMOUNT Sound Isolation Clips - Type A237 or A237R
7E. Steel Framing Members* — (Optional on one or both sides, not shown, for single or double layer systems) — Furring channels and Steel Framing Members as described below:
a. Furring Channels — Formed of No. 25 MSG galv steel. Spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item 7Eb. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 AWG galvanized steel wire.. Gypsum board attached to furring channels as described in Item 6. Not for use with Item 5A and 5E.
b. Steel Framing Members* — Used to attach furring channels (Item 7Ea) to studs. Clips spaced 48 in. OC., and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips. REGUPOL AMERICA — Type SonusClip

BOWMAN MURRAY HEMINGWAY
ARCHITECTS
514 Market Street
Wilmington, NC 28401
Tel - (910) 762-2621
www.bmharch.com

BOWMAN, MURRAY, HEMINGWAY ARCHITECTS, PC — REGISTERED ARCHITECTURAL CORPORATION — NORTH CAROLINA — CERT. NO. 50424 — WILMINGTON, N.C.
BRUCE F. BOWMAN — REGISTERED ARCHITECT — 5951
6.7.24
NOT FOR CONSTRUCTION

Cape Fear Community College
Health and Human Services Building
Interior Renovation – Phase Two
319 N 3rd Stree, Wilmington, North Carolina 28401
SCO # 23-27149-01A NCCCS # 2772

REV.	DATE	DESCRIPTION

NO.	DATE	ISSUE NOTE
D	06/07/24	CD Submittal
C	5/24/24	CD Estimating Set
B	3/13/24	DD Submittal
A	2/16/24	DD Estimating Set

Project Manager	Drawn By M. PRICE
Date 06-07-2024	Reviewed By B. BOWMAN

Project ID

Sheet Title
UL Assemblies

Sheet No.
G6

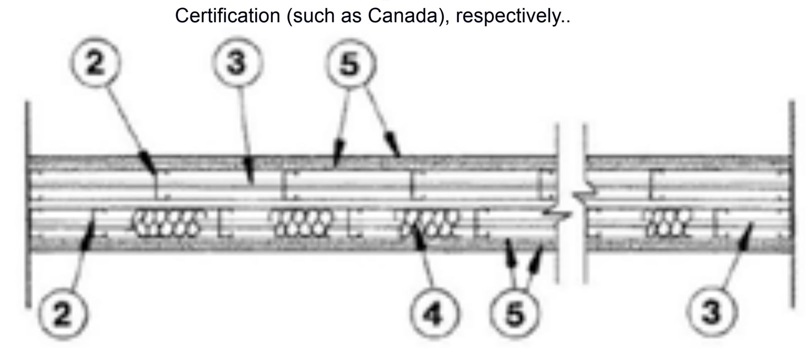
UL U419- EXISTING cont.

7F. Steel Framing Members* — (Optional on one or both sides, not shown, for single or double layer systems) — Resilient channels and Steel Framing Members as described below:
a. Resilient Channels — Formed of No. 25 MSG galv steel, spaced 24 in. OC, and perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and secured in place with two No. 8 15 x 1/2 in. Philips Modified Truss screws spaced 2-1/2 in. from the center of the overlap. Gypsum board attached to resilient channels as described in Item 5. Not for use with Item 5A and 5E.
b. Steel Framing Members* — Used to attach resilient channels (Item 7Fa) to studs. Clips spaced 48 in. OC., and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center hole. Resilient channels are secured to clips with one No. 10 x 1/2 in. pan-head self-drilling screw. KEENE BUILDING PRODUCTS CO INC — Type RC+ Assurance Clip
7G. Framing Members* — (Optional on one or both sides, not shown, for single or double layer systems) — As an alternate to Item 7, furring channels and Steel Framing Members as described below:
a. Furring Channels — Formed of No. 25 MSG galv steel. 2-23/32 in. wide by 7/8 in. deep, spaced max. 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Gypsum board attached to furring channels as described in Item 6. Not for use with Item 5A.
b. Steel Framing Members* — Used to attach furring channels (Item 7Ga) to studs (Item 2). Clips spaced max. 48 in. OC. Clips secured to studs with No. 8 x 1-1/2 in. minimum self-drilling, S-12 steel screw through the center hole. Furring channels are friction fitted into clips. CLARKDIETRICH BUILDING SYSTEMS — Type ClarkDietrich Sound Clip
8. Joint Tape and Compound — Vinyl or casein, dry or premixed joint compound applied in two coats to joints and screw heads of outer layers. Paper tape, nom 2 in. wide, embedded in first layer of compound over all joints of outer layer panels. Paper tape and joint compound may be omitted when gypsum panels are supplied with a square edge.
9. Siding, Brick or Stucco — (Optional, Not Shown) — Aluminum, vinyl or steel siding, brick veneer or stucco, meeting the requirements of local code agencies, installed over gypsum panels. Brick veneer attached to studs with corrugated metal wall ties attached to each stud with steel screws, not more than each sixth course of brick.
10. Caulking and Sealants* — (Optional, Not Shown) — A bead of acoustical sealant applied around the partition perimeter for sound control. UNITED STATES GYPSUM CO — Type AS
11. Lead Batten Strips — (Not Shown, For Use With Item 5B) — Lead batten strips, min 1-1/2 in. wide, max 10 ft long with a max thickness of 0.125 in. Strips placed on the interior face of studs and attached from the exterior face of the stud with two 1 in. long Type S-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Lead batten strips required behind vertical joints of lead backed gypsum wallboard (Item 5B) and optional at remaining stud locations. Required behind vertical joints.
11A. Lead Batten Strips — (Not Shown, For Use With Item 5H) — Lead batten strips, 2 in. wide, max 10 ft long with a max thickness of 0.140 in. Strips placed on the face of studs and attached to the stud with two min. 1 in. long min. Type S-8 pan head steel screws, one at the top of the strip and one at the bottom of the strip or with one min. 1 in. long min. Type S-8 pan head steel screw at the top of the strip. Lead batten strips to have a purity of 99.5% meeting the Federal specification QQ-L-201f, Grades "B, C or D". Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations.
12. Lead Discs or Tabs — (Not Shown, For Use With Item 5B) — Used in lieu of or in addition to the lead batten strips (Item 11) or optional at other locations - Max 3/4 in. diam by max 0.125 in. thick lead discs compression fitted or adhered over steel screw heads or max 1/2 in. by 1-1/4 in. by max 0.125 in. thick lead tabs placed on gypsum boards (Item 5B) underneath screw locations prior to the installation of the screws. Lead discs or tabs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C".
12A. Lead Discs — (Not Shown, for use with Item 5H) — Max 5/16 in. diam by max 0.140 in. thick lead discs compression fitted or adhered over steel screw heads. Lead discs to have a purity of 99.5% meeting the Federal Specification QQ-L-201f, Grades "B, C or D".
13. Lead Batten Strips — (Not Shown, For Use With Item 5E) — Lead batten strips, 2 in. wide, max 10 ft long with a max thickness of 0.142 in. Strips placed on the face of studs and attached to the stud with two min. 1 in. long min. Type S-8 pan head steel screws, one at the top of the strip and one at the bottom of the strip or with one min. 1 in. long min. Type S-8 pan head steel screw at the top of the strip. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Lead batten strips required behind vertical joints of lead backed gypsum wallboard (Item 5E) and optional at remaining stud locations.
14. Lead Tabs — (Not Shown, For Use With Item 5E) — 2 in. wide, 5 in. long with a max thickness of 0.142 in. Tabs friction-fit around front face of stud, the stud folded back flange, and the back face of the stud. Tabs required at each location where a screw (that secures the gypsum boards, Item 5E) will penetrate the steel stud. Lead tabs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Lead tabs may be held in place with standard adhesive tape if necessary.
15. Barrier Mesh — (Optional, Not Shown) - Attached to steel studs on one or both sides of the wall using Barrier Mesh Clips spaced at maximum 12 inches on center vertically, using a flat head type screw penetrating through the steel at least 3/8 of an inch. For Steel Studs less than 0.033 inches in thickness, use self-piercing screws. For Steel Studs equal to or greater than 0.033 inches in thickness, use steel drill screws (self-tapping). Gypsum Board (Item 5) to be installed directly over the Barrier Mesh using prescribed screw patterns with lengths increased by a minimum 1/8 in. Barrier Mesh may be installed with the long dimension of the diamond pattern positioned vertically or horizontally. Barrier Mesh joints may occur as butt joints at the framing members and secured using the Barrier Mesh Clips or occur in between framing members as overlapping joints secured using 18 SWG wire ties spaced a maximum 12 in. on center.
CLARKDIETRICH BUILDING SYSTEMS — Barrier Mesh, Barrier Mesh Clips

** 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 2022-09-05*
The appearance of a company's name or product in this database does not in itself assure that products so identified have been manufactured under UL Solutions' Follow - Up Service. Only those products bearing the UL Mark should be considered to be Certified and covered under UL Solutions' Follow - Up Service. Always look for the Mark on the product.

UL U493 - EXISTING - Stair shafts

June 6, 2022
Nonbearing Wall Rating — 1 or 2 Hr. (See Items 5, 5A, 5B)
* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL
Certification (such as Canada), respectively..



HORIZONTAL SECTION

1. Floor and Ceiling Runners — (For use with Item 5 and 5A) — Channel shaped, attached to floor and ceiling in two rows, a min 1 in. apart, with steel fasteners spaced 24 in. OC. Runners fabricated from min No. 25 MSG galv steel, 1-1/4 in. wide and 2-1/2 in. deep.
1A. Floor and Ceiling Runners — (As an alternate to Item 1, For use with Item 5B and 5C) — Channel shaped, attached to floor and ceiling in two rows, a min 1 in. apart. Runners fabricated from min No. 20 MSG galv steel, 1-3/16 in. wide and 2-9/16 in. deep.
1B. Framing Members* — Floor and Ceiling Runners — (Not shown for use with Item 2B) — As an alternate to Item 1 - Channel shaped, min. 2-1/2 in. deep, attached to floor and ceiling with fasteners 24 in. OC. max. ALLSTEEL & GYPSUM PRODUCTS INC — Type SUPREME D24/30EQD and Type SUPREME D20; CONSOLIDATED FABRICATORS CORP, BUILDING PRODUCTS DIV — Type SUPREME D24/30EQD and Type SUPREME D20; QUAIL RUN BUILDING MATERIALS INC — Type SUPREME D24/30EQD and Type SUPREME D20; SCAFCO STEEL STUD MANUFACTURING CO — Type SUPREME D24/30EQD and Type SUPREME D20; STEEL CONSTRUCTION SYSTEMS INC — Type SUPREME D24/30EQD and Type SUPREME D20; TELLING INDUSTRIES LLC — Type SUPREME D24/30EQD and Type SUPREME D20; UNITED METAL PRODUCTS INC — Type SUPREME D24/30EQD and Type SUPREME D20
1C. Framing Members* — Floor and Ceiling Runners — (Not Shown) — As an alternate to Item 1 for a 2 hour rating only — For use with Item 2C, channel shaped, min 2-1/2 in. deep, attached to floor and ceiling with fasteners 24 in. OC. max.
CLARKDIETRICH BUILDING SYSTEMS — CD ProTRAK; DMFCWBS LLC — ProTRAK; MBA METAL FRAMING — ProTRAK; RAM SALES L LLC— Ram ProTRAK; STEEL STRUCTURAL PRODUCTS LLC — Tri-S ProTRAK
1D. Framing Members* — Floor and Ceiling Runners — (Not Shown) — As an alternate to Item 1 - For use with Item 2D, channel shaped, min 2-1/2 in. deep, attached to floor and ceiling with fasteners 24 in. OC. max.
MARINO/WARE, DIV OF WARE INDUSTRIES INC — Viper20™ Track; IMPERIAL MANUFACTURING GROUP INC — Viper20™ Track
1E. Framing Members* — Floor and Ceiling Runners — (Not Shown) — As an alternate to Item 1 for a 2 hour rating only - For use with Item 2E, channel shaped, min 2-1/2 in. deep, attached to floor and ceiling with fasteners 24 in. OC. max.
MARINO/WARE, DIV OF WARE INDUSTRIES INC — Viper25™ Track; IMPERIAL MANUFACTURING GROUP INC — Viper25™ Track
1F. Framing Members* — Floor and Ceiling Runners — Not Shown — As an alternate to Item 1 for use with Item 2F, proprietary channel shaped, min. 3-1/2 in. wide, fabricated from min. 0.018 in. (min bare metal thickness) galvanized steel, attached to floor and ceiling with fasteners 24 in. OC max. RESCUE METAL FRAMING, L L C — AlphaTRAK
1G. Framing Members* — Floor and Ceiling Runners — (Not Shown) — As an alternate to Item 1 for use with Item 2G and for a 2 hour rating only. Channel shaped, min. 2-1/2 in. deep, attached to floor and ceiling with fasteners 24 in. OC. max.
ALLSTEEL & GYPSUM PRODUCTS INC — Type SUPREME D25; CONSOLIDATED FABRICATORS CORP, BUILDING PRODUCTS DIV — Type SUPREME D25; QUAIL RUN BUILDING MATERIALS INC — Type SUPREME D25
SCAFCO STEEL STUD MANUFACTURING CO — Type SUPREME D25; STEEL CONSTRUCTION SYSTEMS INC — Type SUPREME D25; TELLING INDUSTRIES L L C — Type SUPREME D25; UNITED METAL PRODUCTS INC — Type SUPREME D25
2. Steel Studs — (For use with Item 5 and 5A) — Channel shaped, supplied with cutouts, friction -fitted into floor and ceiling runners and spaced a max 24 in. OC. Studs cut 1/2 in. less than assembly height and evenly staggered between the two rows of floor and ceiling runners. Studs fabricated from min No. 25 MSG galv steel, min 2-1/2 in. deep by 1-5/8 in. wide with 3/8 in. folded back return flange legs.
2A. Steel Studs — (As an alternate to Item 2, For use with Items 5B, 5C, 5E, and 5F) — Channel shaped, supplied with cutouts, friction -fitted into floor and ceiling runners and spaced a max 16 in. OC. Studs cut 1/2 in. less than assembly height and staggered flush against the floor runners. Studs fabricated from min No. 20 MSG galv steel, min 2-1/2 in. deep x 1-5/8 in. wide x 3/8 in. folded back return flange legs.

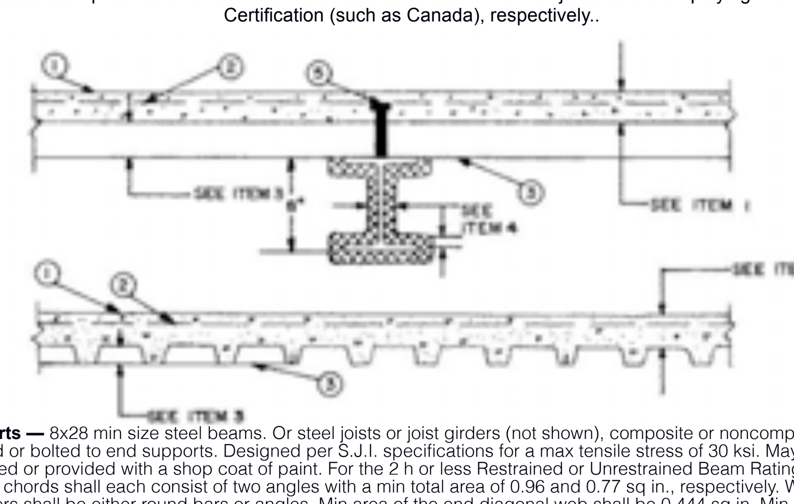
2B. Framing Members* — Steel Studs — As an alternate to Item 2 — Channel shaped studs, min. 2-1/2 in. deep, spaced a max of 24 in. OC. Studs to be cut 3/4 in. less than assembly height. ALLSTEEL & GYPSUM PRODUCTS INC — Type SUPREME D24/30EQD and Type SUPREME D20; CONSOLIDATED FABRICATORS CORP, BUILDING PRODUCTS DIV — Type SUPREME D24/30EQD and Type SUPREME D20; OLMAR SUPPLY INC — PRIMESTUD; QUAIL RUN BUILDING MATERIALS INC — Type SUPREME D24/30EQD and Type SUPREME D20; SCAFCO STEEL STUD MANUFACTURING CO — Type SUPREME D24/30EQD and Type SUPREME D20; STEEL CONSTRUCTION SYSTEMS INC — Type SUPREME D24/30EQD and Type SUPREME D20; TELLING INDUSTRIES LLC — Type SUPREME D24/30EQD and Type SUPREME D20; UNITED METAL PRODUCTS INC — Type SUPREME D24/30EQD and Type SUPREME D20
2C. Framing Members* — Steel Studs — As an alternate to Item 2 for a 2 hour rating only — For use with Item 1C, channel shaped studs, min 2-1/2 in. deep, spaced a max of 24 in. OC. Studs to be cut 3/4 in. less than assembly height. CLARKDIETRICH BUILDING SYSTEMS — CD ProSTUD; DMFCWBS LLC — ProSTUD; MBA METAL FRAMING — ProSTUD; RAM SALES LLC — Ram ProSTUD; STEEL STRUCTURAL PRODUCTS LL C — Tri-S ProSTUD
2D. Framing Members* — Steel Studs — As an alternate to Item 2 — For use with Item 1D, channel shaped studs, min 2-1/2 in. deep, spaced a max of 24 in. OC. Studs to be cut 3/4 in. less than assembly height. MARINO/WARE, DIV OF WARE INDUSTRIES INC — Viper20™; IMPERIAL MANUFACTURING GROUP INC — Viper20™
2E. Framing Members* — Steel Studs — As an alternate to Item 2 for a 2 hour rating only — For use with Item 1E, channel shaped studs, min 2-1/2 in. deep, spaced a max of 24 in. OC. Studs to be cut 3/4 in. less than assembly height. MARINO/WARE, DIV OF WARE INDUSTRIES INC — Viper25™; IMPERIAL MANUFACTURING GROUP INC — Viper25™
2F. Framing Members* — Steel Studs — As an alternate to Item 2, for use with Item 1F, proprietary channel shaped studs, min. 3-1/2 in. wide, fabricated from min. 0.018 in. (min bare metal thickness) galvanized steel, spaced a max of 24 in. OC. Studs to be cut 3/4 in. less than assembly height. RESCUE METAL FRAMING, L L C — AlphaSTUD
2G. Framing Members* — Steel Studs — As an alternate to Item 2 for use Item 1G and for a 2 hour rating only — Channel shaped studs, min 2-1/2 in. deep, spaced a max of 24 in. OC. Studs to be cut 3/4 in. less than assembly height. ALLSTEEL & GYPSUM PRODUCTS INC — Type SUPREME D25; CONSOLIDATED FABRICATORS CORP, BUILDING PRODUCTS DIV — Type SUPREME D25; QUAIL RUN BUILDING MATERIALS INC — Type SUPREME D25; SCAFCO STEEL STUD MANUFACTURING CO — Type SUPREME D25; STEEL CONSTRUCTION SYSTEMS INC — Type SUPREME D25; TELLING INDUSTRIES L L C — Type SUPREME D25; UNITED METAL PRODUCTS INC — Type SUPREME D25
3. Lateral Bracing — The bracing shall be in accordance with the SSMA Technical Note Dated March 2000 Referencing Unsheathed Flange Bracing.
3A. Lateral Bracing — (Not Shown) — Right angle- shaped, supplied with notches spaced 12, 16, or 24 in. OC., frictionfitted to the cutouts in steel studs, supplied in 7/8 in. by 7/8 in. by 50 in. lengths. Lateral bracing bars fabricated from min. 20 MSG galvanized steel. The bracing shall be located a maximum of 5 ft on center in accordance with the manufacturers published literature. CLARKDIETRICH BUILDING SYSTEMS — TradeReady Spazzer 9200 bar
4. Batts and Blankets — Optional — Glass fiber batts may be friction-fitted to completely fill the stud cavities on one or both rows of studs. See Batts and Blankets Category (BZJZ) for names of manufacturers.
4A. Deleted.
4B. Foamed Plastic* —(Optional) — Not Shown — As an alternate to Item 4. For use with Item 5I. Spray applied, foamed plastic insulation, at any thickness from partial fill to completely filling stud cavity. When foamed plastic is used, minimum stud depth shall be 3-1/2 in. CARLISLE SPRAY FOAM INSULATION — Types SealTite Pro Closed Cell (CC), SealTite Pro Open Cell (OC), SealTite Pro OCX, SealTite Pro No Trim 21, SealTite Pro One Zero, Foamsulate Closed Cell, Foamsulate OCX, Foamsulate 70, and Foamsulate HFO.
5. Gypsum Board* — Nom 5/8 in. thick, 4 ft. wide, gypsum panels with beveled, square or tapered edges, applied vertically or horizontally. Single layer installed on each side of the steel studs for the 1-hr system, two layers installed on each side of the studs for the 2-hr system. Vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Vertical joints in adjacent layers (2-hr system) staggered one stud cavity. Horizontal edge joints and horizontal butt joints need not be backed by framing. Horizontal edge joints and horizontal butt joints on opposite sides of studs need not be staggered. Horizontal edge joints and horizontal butt joints in adjacent layers (2-hr system) staggered a minimum of 6 in. Horizontal edge joints and horizontal butt joints in adjacent layers (2-hr system) need not be staggered with Type ULIX. For the single layer system: panels attached to steel studs and floor runner with 1 in. long Type S steel screws spaced 8 in. OC when applied horizontally, or 8 in. OC along vertical and bottom edges and 12 in. OC in the field when applied vertically. For the single layer system with ULIX, panels attached to steel studs and floor runners with 1 in. long Type S screws spaced 12 in. OC when applied vertically or horizontally. Horizontal joints need not be staggered on opposite sides of studs. For the double layer system: base layer panels attached to steel studs and floor runner with 1 in. long Type S steel screws spaced 16 in., face layer panels attached to steel studs and floor runner with 1-5/8 in. long Type S steel screws spaced 12 in. When used in widths other than 48 in., gypsum panels to be installed horizontally. When Steel Framing Members* (Item 7 or any alternate clips) are used: For the 1-hr system, gypsum panels attached vertically to furring channels with 1 in. long Type S-12 screws spaced 12 in. OC. Vertical joints offset min 12 in. from layer on other side of wall. For the 2-hr system, inner layer of gypsum panels attached vertically to furring channels with 1 in. Type S-12 screws spaced 16 in. OC, outer layer with 1-5/8 in. Type S-12 screws spaced 12 in. OC. Inner layer to be applied vertically. Outer layer to be applied vertically with joints offset a minimum 12 in. from inner layer joints.
CGC INC — Type SCX, SHX, IP-X1, WRX, AR, IP-AR, C, WRC, IP-X2, IPC-AR, ULIX, USGX (Joint tape and compound, Item 6, optional for use with Type USGX); THE SIAM GYPSUM INDUSTRY (SONGKHLA) CO — Types C and SCX
UNITED STATES GYPSUM CO — Type AR, C, FRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SGX, SHX, ULIX, USGX, WRX, WRC (Joint tape and compound, Item 6, optional for use with Type USGX); USG BORAL DRYWALL SFZ LLC — Types C, SCX, SGX, USGX (Joint tape and compound, Item 6, optional for use with Type USGX); USG MEXICO S A DE C V — Type SCX, SHX, IP-X1, WRX, AR, IP-AR, C, WRC, IP-X2, or IPC-AR, USGX (Joint tape and compound, Item 6, optional for use with Type USGX)
5A. Gypsum Board* — (As an alternate to Item 5) — Single layer installed on each side of the steel studs for the 1-hr system, two layers installed on each side of the studs for the 2-hr system. Nom 3/4 in. thick, 4 ft wide, installed as described in Item 5 with screw length increased to 1-1/4 in. for base layer (or for 1 hr. configuration) 2-1/4 in. for face layer. CGC INC — Types AR, IP-AR; UNITED STATES GYPSUM CO — Types AR, IP-AR; USG MEXICO S A DE C V — Types AR, IP-AR
5B. Gypsum Board* — (As an alternate to Item 5 may be used as the base layer on one or both sides of wall, For direct attachment only) — Nom 5/8 in. or 3/4 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over min 20 MSG galvanized steel studs and staggered min 1 stud cavity on opposite sides of studs. See Item 2A. Wallboard secured to studs with 1-1/4 in. long Type S-12 steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. To be used with Lead Batten Strips (see Item 8) or Lead Discs or Tabs (see Item 9). RAY-BAR ENGINEERING CORP — Type RB-LBG
5C. Gypsum Board* — (As an alternate to Item 5 may be used as the base layer on one or both sides of wall, For direct attachment only) — Nominal 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-1/4 in. long Type S-12 (or #6 by 1-1/4 in. long bugle head fine driller) steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. NEW ENGLAND LEAD BURNING CO INC, DBA NELCO — Nelco
5D. Gypsum Board* — (As an alternate to Item 5, not for use with Items 1C and 2C) — Nom. 5/8 in. thick, 4 ft. wide gypsum panels with beveled, square or tapered edges installed as described in Item 5. CGC INC — Type ULX; UNITED STATES GYPSUM CO — Type ULX; USG MEXICO S A DE C V — Type ULX
5E. Gypsum Board* — (As an alternate to Item 5 may be used as the base layer on one or both sides of wall, For direct attachment only). Nom 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over min 20 MSG galvanized steel studs and staggered min 1 stud cavity on opposite sides of studs. See Item 2A. Wallboard secured to studs with 1-1/4 in. long Type S-12 steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations. Lead batten strips, min 2 in. wide, max 8 ft long with a max thickness of 0.14 in. placed on the face of studs and attached to the stud with construction adhesive and two 1 in. long Type S-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead discs, nominal 3/8 in. diam by max 0.085 in. thick. Compression fitted or adhered over the screw heads. Lead batten strips and discs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". RADIATION PROTECTION PRODUCTS INC — Type RPP - Lead Lined Drywall
5F. Gypsum Board* — (As an alternate to Items 4) — For Direct Application to studs Only — For use as the base layer or as the face layer. Nom 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-1/4 in. long Type S-12 steel screws spaced 8 in. OC at perimeter and in the field when applied as the base layer. When applied as the face layer screw length to be increased to 2-1/2 in. Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations. Lead batten strips, min 2 in. wide, max 10 ft long with a max thickness of 0.140 in. placed on the face of studs and attached to the stud with two 1 in. long Type S-8 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead discs, max 5/16 in. diam by max 0.140 in. thick compression fitted or adhered over the screw heads. Lead batten strips and discs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grades "A, B, C or D". Fasteners for face layer gypsum panels (Items 5) when installed over lead backed board to be min 2-1/2 in. Type S-12 bugle head steel screws spaced as described in Item 5. MAYCO INDUSTRIES INC — "X-Ray Shielded Gypsum"
5G. Deleted.
5H. Gypsum Board* — Nom 5/8 in. thick, 4 ft. wide, gypsum panels with beveled, square or tapered edges, applied vertically or horizontally. Single layer installed on each side of the steel studs for the 1-hr system, two layers installed on each side of the studs for the 2-hr system. Vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Vertical joints in adjacent layers (2-hr system) staggered one stud cavity. Horizontal edge joints and horizontal butt joints need not be backed by framing. Horizontal edge joints and horizontal butt joints on opposite sides of studs need not be staggered. Horizontal edge joints and horizontal butt joints in adjacent layers (2-hr system) staggered a minimum of 6 in. For the single layer system: panels attached to steel studs and floor runner with 1 in. long Type S steel screws spaced 8 in. OC when applied horizontally, or 8 in. OC along vertical and bottom edges and 12 in. OC in the field when applied vertically. For the double layer system: base layer panels attached to steel studs and floor runner with 1 in. long Type S steel screws spaced 16 in., face layer panels attached to steel studs and floor runner with 1-5/8 in. long Type S steel screws spaced 12 in. When used in widths other than 48 in., gypsum panels to be installed horizontally. When Steel Framing Members* (Item 7-7B) are used: For the 1-hr system, gypsum panels attached vertically to furring channels with 1 in. long Type S-12 screws spaced 12 in. OC. Vertical joints offset min 12 in. from layer on other side of wall. For the 2-hr system, inner layer of gypsum panels attached vertically to furring channels with 1 in. Type S-12 screws spaced 16 in. OC, outer layer with 1-5/8 in. Type S-12 screws spaced 12 in. OC. Inner layer to be applied vertically. Outer layer to be applied vertically with joints offset a minimum 12 in. from inner layer joints. NATIONAL GYPSUM CO — Riyadh, Saudi Arabia — Type FR.
5I. Gypsum Board* — (For use when Foam Plastic insulation (Item 4B) is used) — Any 5/8 in. thick, 4 ft. wide, Gypsum Board listed in Item 5 above. Applied vertically with vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Gypsum panels secured to studs with 1 in. long Type S steel screws spaced 8 in. OC at perimeter and in the field. For 2 layer assemblies outer layer will be attached to studs over inner layer with the 1-5/8 in. long steel screws spaced 8 in. OC. All joints in outer layers staggered from joints in inner layers.
6. Joint Tape and Compound — (Not Shown) — Outer layer joints covered with joint compound and paper or mesh tape. Screw heads covered with joint compound. Paper tape and joint compound may be omitted when gypsum boards are supplied with square edges.
7. Steel Framing Members* — (Not Shown) — (Optional on one or both sides, not shown, for single or double layer systems) — Furring channels and Steel Framing Members as described below:
a. Furring Channels — Formed of No. 25 MSG galv steel. 2-9/16 in. or 2-23/32 in. wide by 7/8 in. deep, spaced max. 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Gypsum board attached to furring channels as described in Item 5. May not be used with items 5B, 5C, 5E or 5F.
b. Steel Framing Members* — Used to attach furring channels (Item 7a) to studs (Item 2). Clips spaced max. 48 in. OC., and secured to studs with No. 8 x 1-1/2 in. minimum self-drilling, S-12 steel screw through the center grommet. Furring channels are friction fitted into clips. RSIC-1 clip for use with 2-9/16 in. wide furring channels. RSIC-1 (2.75) clip for use with 2-23/32 in. wide furring channels. PAC INTERNATIONAL L L C — Types RSIC-1, RSIC-1 (2.75)

7A. Steel Framing Members* — (Optional, Not Shown, As an alternate to Item 7) — Furring channels and Steel Framing Members as described below:
a. Furring Channels — Formed of No. 25 MSG galv steel. Spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 AWG galvanized steel wire.Gypsum board attached to furring channels as described in Item 5. May not be used with items 5B, 5C, 5E or 5F.
b. Steel Framing Members* — Used to attach furring channels (Item 7Aa) to studs. Clips spaced 48 in. OC., and secured to studs 2 in. coarse drywall screw with 1 in. diam washer through the center hole. Furring channels are friction fitted into clips.
STUDCO BUILDING SYSTEMS — RESILMOUNT Sound Isolation Clips - Type A237R
7B. Steel Framing Members* — (Optional, Not Shown, As an alternate to Item 7) — Furring channels and Steel Framing Members as described below:
a. Furring Channels — Formed of No. 25 MSG galv steel, spaced 24 in. OC, and perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and secured in place with a double strand of No. 18 AWG twisted steel wire. Gypsum board attached to furring channels as described in Item 5. May not be used with Items 5B, 5C, 5E, or 5F.
b. Steel Framing Members* — Used to attach furring channels (Item 7Ba) to studs. Clips spaced 48 in. OC, and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips. REGUPOL AMERICA — Type SonusClip
7C. Steel Framing Members* — (Optional, Not Shown, As an alternate to Item 7) — Resilient channels and Steel Framing Members as described below:
a. Resilient Channels — Formed of No. 25 MSG galv steel, spaced 24 in. OC, and perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and secured in place with two No. 8 15 x 1/2 in. Philips Modified Truss screws spaced 2-1/2 in. from the center of the overlap. Gypsum board attached to resilient channels as described in Item 5. May not be used with Items 5B, 5C, 5E, or 5F.
b. Steel Framing Members* — Used to attach resilient channels (Item 7Ca) to studs. Clips spaced 48 in. OC., and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center hole. Resilient channels are secured to clips with one No. 10 x 1/2 in. pan-head self-drilling screw. KEENE BUILDING PRODUCTS CO INC — Type RC+ Assurance Clip
7D Steel Framing Members* — (Optional, Not Shown, As an alternate to Item 7) — Furring channels and Steel Framing Members as described below:
a Furring Channels — Formed of No. 25 MSG galv steel. 2-23/32 in. wide by 7/8 in. deep, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping #6 framing screws, min. 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Gypsum board attached to furring channels as described in Item 5.
b Steel Framing Members* — Used to attach furring channels (Item 7Da) to studs. Clips spaced maximum 48 in. OC. Clips secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center grommet. Furring channels are friction fitted into clips. CLARKDIETRICH BUILDING SYSTEMS — Type ClarkDietrich Sound Clip
8. Lead Batten Strips — (Not Shown, For Use With Item 5B) — Lead batten strips, min 1-1/2 in. wide, max 10 ft long with a max thickness of 0.125 in. Strips placed on the interior face of studs and attached from the exterior face of the stud with two 1 in. long Type S-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Lead batten strips required behind vertical joints of lead backed gypsum wallboard (Item 5B) and optional at remaining stud locations. Required behind vertical joints.
9. Lead Discs or Tabs — (Not Shown, For Use With Item 5B) — Used in lieu of or in addition to the lead batten strips (Item 8) or optional at other locations - Max 3/4 in. diam by max 0.125 in. thick lead discs compression fitted or adhered over steel screw heads or max 1/2 in. by 1-1/4 in. by max 0.125 in. thick lead tabs placed on gypsum boards (Item 5B) underneath screw locations prior to the installation of the screws. Lead discs or tabs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C".
10. Lead Batten Strips — (Not Shown, For Use With Item 5C) — Lead batten strips, 2 in. wide, max 10 ft long with a max thickness of 0.142 in. Strips placed on the face of studs and attached to the stud with two min. 1 in. long min. Type S-8 pan head steel screws, one at the top of the strip and one at the bottom of the strip or with one min. 1 in. long min. Type S-8 pan head steel screw at the top of the strip. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Lead batten strips required behind vertical joints of lead backed gypsum wallboard (Item 5C) and optional at remaining stud locations.
11. Lead Tabs — (Not Shown, For Use With Item 5C) — 2 in. wide, 5 in. long with a max thickness of 0.142 in. Tabs friction-fit around front face of stud, the stud folded back flange, and the back face of the stud. Tabs required at each location where a screw (that secures the gypsum boards, Item 5C) will penetrate the steel stud. Lead tabs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Lead tabs may be held in place with standard adhesive tape if necessary.
12. Wall and Partition Facings and Accessories* — (Optional, Not Shown) — For use with Items 5 or 5A — Nominal ½ in. thick, 4 ft wide panels, for optional use as an additional layer on one or both sides of the assembly. Panels attached in accordance with manufacturer's recommendations. When the QR-500 or QR-510 panel is installed between the steel framing and the UL Classified gypsum board, the required UL Classified gypsum board layer(s) is/are to be installed as indicated as to fastener type and spacing, except that the required fastener length shall be increased by a minimum of ½ in. Not evaluated or intended as a substitute for the required layer(s) of UL Classified Gypsum Board. PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRock QR-500 and QR-510
13. Barrier Mesh — (Optional, Not Shown) - Attached to steel studs on one or both sides of the wall using Barrier Mesh Clips spaced at maximum 12 inches on center vertically, using a flat head type screw penetrating through the steel at least 3/8 of an inch. For Steel Studs less than 0.033 inches in thickness, use self-piercing screws. For Steel Studs equal to or greater than 0.033 inches in thickness, use steel drill screws (self-tapping). Gypsum Board (Item 5) to be installed directly over the Barrier Mesh using prescribed screw patterns with lengths increased by a minimum 1/8 in. Barrier Mesh may be installed with the long dimension of the diamond pattern positioned vertically or horizontally. Barrier Mesh joints may occur as butt joints at the framing members and secured using the Barrier Mesh Clips or occur in between framing members as overlapping joints secured using 18 SWG wire ties spaced a maximum 12 in. on center. CLARKDIETRICH BUILDING SYSTEMS — Barrier Mesh, Barrier Mesh Clips

** 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 2022-09-05*
The appearance of a company's name or product in this database does not in itself assure that products so identified have been manufactured under UL Solutions' Follow - Up Service. Only those products bearing the UL Mark should be considered to be Certified and covered under UL Solutions' Follow - Up Service. Always look for the Mark on the product.

UL D916 - EXISTING 3rd Floor shaft support occupancy separation

November 19, 2022
Restrained Assembly Ratings — 3/4, 1, 1-1/2, 2 or 3 Hr. (See Items 1, 6, 7, 8 and 11)
Unrestrained Assembly Rating — 0 Hr. (See Items 3, 4 and 4A)
Unrestrained Beam Ratings — 1, 1-1/2, 2 and 3 Hr. (See Items 4, 4A, 7 and 11)
This design was evaluated using a load design method other than the Limit States Design Method (e.g., Working Stress Design Method). For jurisdictions employing the Limit States Design Method
* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively..



Supports — 8x28 min size steel beams. Or steel joists or joist girders (not shown), composite or noncomposite. Welded or bolted to end supports. Designed per S.J.I. specifications for a max tensile stress of 30 ksi. May be either uncoated or provided with a shop coat of paint. For the 2 h or less Restrained or Unrestrained Beam Ratings, top and bottom chords shall each consist of two angles with a min total area of 0.96 and 0.77 sq in., respectively. Web members shall be either round bars or angles. Min area of the end diagonal web shall be 0.444 sq in. Min area of each of the first six interior diagonal webs shall be 0.406 sq in. All other interior webs shall have a min area of 0.196 sq in. For the 3 h Restrained or Unrestrained Beam Ratings, each of the top and bottom chords shall each consist of two angles with a min total area of 1.74 sq in. Web members shall be either round bars or angles. Min area of each of the first five end diagonal webs shall be 0.886 sq in. All other interior webs shall have a min area of 0.441 sq in. Bridging per S.J.I. specifications is required when noncomposite joists are used. For noncomposite joists, steel filler pieces of proper size, 1 to 2 in. long shall be welded to and between the top chord angles at midway between all top chord panel points.
1. Normal Weight or Lightweight Concrete — Normal weight concrete carbonate or siliceous aggregate, 3500 psi compressive strength, vibrated. Lightweight concrete, expanded shale, or slate aggregate by rotary-kiln method, or expanded clay aggregate by rotary-kiln or sintered-grate method, or pelletized expanded blast furnace slag aggregate, 3000 psi compressive strength, vibrated, 4 to 7 percent entrained air.

Restrained Assembly Rating Hr	Concrete (Type)	Concrete Unit Weight pcf	Concrete Thkns In.
1	Normal Weight	147-153	3-1/2
1-1/2	Normal Weight	147-153	4
2	Normal Weight	147-153	4-1/2
3	Normal Weight	147-153	5-1/4
3/4 or 1 (See Item 6)	Lightweight	107-113	2-1/2
1	Lightweight	107-120	2-5/8
1-1/2	Lightweight	107-113	3
2	Lightweight	107-113	3-1/4
2	Lightweight	107-116	3-1/2*
2	Lightweight	114-120	3-1/2
3	Lightweight	107-113	4-3/16
3	Lightweight	114-120	4-7/16

2. Welded Wire Fabric — 6x6 - W1.4xW1.4.
3. Steel Floor and Form Units* — Composite or non-composite, 1-1/2, 1-5/8, 1-13/16, 2 or 3 in. deep galv units or 4-1/2 in. deep noncomposite galvanized units. Fluted units may be uncoated or phosphatized/painted. Min gauges are 22 MSG for fluted and 20/20 MSG for cellular units. The following combinations of units may be used:
(1) all 18, 24, 26, 28 or 36 in. wide cellular; (2) all fluted; (3) one or two 3 in. deep, 12 in. wide, 18/18 MSG min cellular units, alternating with 3 in. deep fluted or other cellular; (4) any blend of fluted and 18, 24, 26, 28, or 36 in. wide cellular; (5) 3 in. deep, 30 in. wide cellular with 8-1/8 in. wide valley along side joints may be used when 3/8 in. diam reinforcing bars are placed 1-1/2 in. to each side of side joints and 1 in. above bottom of unit.
(6) Corrugated, 1-5/16 in. deep, 30 in. wide, 24 MSG min galv units with shear wires factory welded to deck corrugations. Welded to supports 12 in. OC. through welding washers. For shear wire spacing of 8 in. or less the steel deck stress shall not exceed 20 KSI. For shear wire spacing greater than 8 in. OC. but less than or equal to 12 in. OC., steel deck stress shall not exceed 12 KSI.
ASC STEEL DECK, DIV OF ASC PROFILES L L C — 32 in. wide Types NH-32, NHN-32, NHF-32; 36 in. wide Types BH-36, BHN-36, BHN-35-1/4, BHF-36, BHF-36A, 2WH-36, 2WHS-36, 2WHF-36, 2WHF-36A, 3WxH-36, 3WxHF-36, 3WxHF-36A, 3WH-36, 3WHF-36, 3WHF-36A, 3W-36, 3WF-36, DG3W-36, DG3WF-36. All units may be galvanized or Prime Shield. Non-cellular decks may be vented designated with a "V" suffix to the product name. Cellular deck top and bottom sections may be riveted together (designated with "Fr") vs. arc spot welded, "F".; CANAM GROUP INC — 36 in. wide Type P-3623, P-3606, P-3615 and 24 in wide Type P-2432 composite; 24 or 36 in. wide Type 3 in. LOK-Floor; 36 in. wide Types 1.5B, 1.5BI, 1.5BL and 1.5BL; CANAM STEEL CORP — 24 in. wide, Types 1-1/2 , 2 or 3 in. LOK-Floor and LOK-Floor Cell; 36 in. wide, Types 2 or 3 in. LOK-Floor and LOK-Floor Cell; 24 in. wide, Types N-LOK and N-LOK Cell; 24, 30 or 36 in. wide, Type 1-1/2 in. B-LOK and B-LOK Cell.; KAM INDUSTRIES LTD, DBA CORDECK — QL Types, 24 in. wide 3 or 3 inverted, UKX, UKX-3, 2 in. 99, AKX, 21 or 21 inverted, 121, NKX, TKX; 24 or 30 in. wide GKX, GKXH, GKX-A; 36 in. wide 99, AKX, WKX; 24, 26, or 36 in. wide NKX; 1.5NKC, NKC, AKX, 2 or 3 in. TKC; 12 in. wide noncomposite Sec. 12; 17 in. wide 21; 26 or 28 in. wide UKX, 87.5 cm wide. Side joints of QL, 99, 121, WKX, TKX, TKC, and Metric units - QL-77-900; QLC-78-900 may be welded together 60 in. OC. Side joints of 99, AKX, WKX, GKX, GKX-A, TKX and Metric units - QL-77-900 and QLC-78-900 may be fastened together with min 1 in. long No. 12x14 self-drilling, self-tapping steel screws 36 in. OC.; CHIA TEH CONSTRUCTION MATERIAL CO LTD — 24 or 36 in. wide Mac-Lok 3; 24 in. wide CFD-3.; NEW MILLENNIUM BUILDING SYSTEMS L L C — 24 in. wide Type Versa-Dek; DECK WEST INC — 36 in. wide Type B-DW, Inverted B-DW, BA-DW, Inverted BA-DW, 2-DW or 3-DW. Side joints of Type 2-DW and 3-DW may be fastened together with min 1 in. long No. 12 x 14 self-drilling, self-tapping steel screws 36 in. OC.; DESIGN ASSISTANCE CONSTRUCTION SYSTEMS INC — 36 in. wide Type DACS1.5CD, or 24 in. wide Type DACS2.0CD, or DACS3.0CD.; EPIC METALS CORP — 24 in. wide Types EC150, ECP150, EC300, ECP300, EC366, ECP366, EC150, EC300 inverted, ECA, 30 in. wide Types ECB150, ECBR150; 36 in. wide Type EC266.; HAMBRO STRUCTURAL SYSTEMS, DIV OF CANAM STEEL CORP — 36 in. wide, 1-1/2 in. Type P3615HB. The max superimposed loadings for Type P3615HB units shall not exceed 250 PSF. For single spans, the use of the units shall be limited to 5 ft 6 in., 6 ft 0 in. and 6 ft 6 in. max spans for the 22, 20 and 18 gauge units, respectively. For multiple spans, 18 gauge units may be used on a max 7 ft 6 in. spans with a max total superimposed loading of 240 PSF; INTSEL STEEL EAST LLC — 36 in. wide Types 1.5" COMPOSITE/FLOOR, 2" COMPOSITE/FLOOR, 3" COMPOSITE/FLOOR; KAM INDUSTRIES LTD, DBA CORDECK — 24 in. wide, Types 2 or 3 in. WDR; MARLYN STEEL DECKS INC — Type 1.5 CF, 2.0 CF or 3.0 CF; NEW MILLENNIUM BUILDING SYSTEMS L L C — 24 or 36 in. wide Types 2.0CD, 3.0CD, 2.0CFD, 3.0CFD, 3.0CFDES; 24, 30 or 36 in. wide Types 1.5CD, 1.5CDI, 1.5CDR, 1.5CFD. Fluted units may be phos/painted or galvanized; ROOF DECK INC — 36 in. wide Types LOK 1 1/2, LOK 1 1/2 R; 24 in. wide Types LOK-2, LOK-3. STEEL MASTERS INTERNATIONAL DEPENDABLE STEEL — 36 in. wide Types 2WH-36, 3WH-36. Units may be phos/painted or galvanized; TATA STEEL INTERNATIONAL MIDDLE EAST FZE — 36 in. wide, Type ComFlor 46. VALLEY JOIST+DECK — 24 or 36 in. wide Types WVC 1-1/2 or WVC 2; VERCO DECKING INC - A NUCOR CO — FORMLOK™ deck types PLB, B, BR, PLN3, N3, PLN, N, PLW2, W2, PLW3, W3. Units may be galvanized, phos./ptd., or mill finish. Units may be cellular or acoustical cellular, with the suffix "CD" or "CD-AC" added to the product name, respectively. All non-cellular deck may be vented or non-vented. 12 in. wide PLW2, W2, PLW3 or W3 units may be blended with 24 or in. wide PLW2, W2, PLW3 or W3 units, respectively; or Types N3, PLN3. VICWEST INC. — Types HB938, HB938CL, HB938-INV, HB308-INV, HB306, HB30V; Types HBS938, HBS938CL and HBS938CL-IN Composite Steel Decks; Types RDS938, RDS938CL and RDS938CL-IN Non-Composite Steel Decks; VULCRAFT, DIV OF NUCOR CORP — 24, 30 or 36 in. wide Types 1.5VL, 1.5VLI, 1.5PLVLI, 1.5VLP, 1.5PLVLP, 1.5VLR; 24 or 36 in. wide Types 1.5VLPA, 1.5PLVLPA, 2VLI, 2.0PLVLI, 2VLJ, 2VLP, 2.0PLVLP, 2VLPA, 2.0PLVLPA, 3VLI, 3.0PLVLI, 3VLJ, 3VLP, 3.0PLVLP, 3VLPA, 3.0PLVLPA. Types 1.5VL, 1.5VLI, 1.5PLVLI, 1.5VLR, 2VLI, 2.0PLVLI, 2VLJ, 3VLI, 3.0PLVLI, 3VLJ units may be phos/ptd. 24 or 36 in. wide Types 2VLJ, 3VLJ units ++ may be used for max 2 hr Restrained Assembly Rating. Side joints of Type 1.5VL may be fastened together with min 1 in. long No. 12x14 self-drilling, self-tapping steel screws 36 in. OC max. 36 in. wide Types 1.5 SB, 1.5 SBR; 24 or 36 in wide Types 2.0 SB, 3.0 SB, 36 in. wide Type High Strength 1.5 SBI, 36 in. wide Type High Strength 1.5 SBN. Spacing of welds attaching units to supports shall be 12 in. OC for 12, 24, and 36 in. wide units, four welds per sheet for 30 in. wide units, 6 in. OC for 18 in. wide and Sec. 12 units. Unless noted otherwise, adjacent units button-punched or welded together 36 in. OC along side joints. Adjacent 18 in. wide units welded together 30 in. OC along side joints. For 3 Hr. Rating, units with overlapping type side joints welded together 24 in. OC max. When a superimposed load of 250 PSF is desired the spacing of welds or button-punches shall not exceed 24 in. OC along side joints. Side joints of Types 2VLJ or 3VLJ units may be fastened together with No. 8, 3/4 in. long self-drilling Tek screws driven diagonally from the top side through the joint of the units at 36 in. O. C. max. The Unrestrained Assembly Rating is equal to the Unrestrained Beam Rating for a max of 3 Hr. and is limited to the following units and limitations:
(a) 1-1/2 in. deep, 24 or 36 in. wide, 22 MSG or thicker fluted with clear spans not more than 7 ft 8 in.
(b) 1-1/2 in. deep, 24 or 36 in. wide, 20 MSG or thicker fluted with clear spans not more than 8 ft 8 in.
(c) 1-1/2 in. deep, 24 or 36 in. wide, 16 MSG or thicker fluted and 18/18 MSG or thicker cellular with clear spans not more than 9 ft 11 in.
(d) 3 in. deep, 36 in. wide, 18 MSG or thicker fluted and 24 in. wide, 20/18 MSG or thicker cellular with clear spans not more than 13 ft 2 in.

4. Spray-Applied Fire Resistive Materials* — Applied by mixing with water and spraying in one or more coats to a final thickness as shown in the tables below, in the tables below to steel beam surfaces which must be clean and free of dirt, loose scale and oil. Min avg and min ind density of 15/14 pcf respectively. Min avg and min ind density of 19/18 pcf respectively for Type 7GP and 7HD. For method of density determination, refer to Design Information Section.

Restrained Assembly Rating Hr	Unrestrained Assembly Rating Hr	Unrestrained Beam Rating Hr	Spray Applied Fire Resistive Mtl Thkns on Beam In.
1	1	1	1/2
1-1/2	1	1	1/2
1-1/2	1-1/2	1-1/2	13/16
2	1	1	1/2
2	2	2	1-1/16
3	1-1/2	1-1/2	13/16
3	3	3	1-9/16

The thicknesses of Spray-Applied Fire Resistive Materials shown in the table below are applicable when the thickness applied to the beams' lower flange edges is reduced by 1/2 that shown in the table:

Restrained Assembly Rating Hr	Unrestrained Assembly Rating Hr	Unrestrained Beam Rating Hr	Spray Applied Fire Resistive Mtl Thkns on Beam In.
1	1	1	9/16
1-1/2	1	1	9/16
1-1/2	1-1/2	1-1/2	7/8
2	1	1	9/16
2	2	2	1-3/16
3	1-1/2	1-1/2	7/8
3	3	3	1-3/4

The thicknesses of Spray-Applied Fire Resistive Materials shown in the table below are applicable when the thickness applied to the beams' lower flange edges is reduced by 1/2 that shown in the table and the beams are supporting all fluted floor or form units w/lightweight concrete only:

+Thickness applied to beams' lower flange edge to be 1/4 in. min.

Restrained Assembly Rating Hr	Unrestrained Assembly Rating Hr	Unrestrained Beam Rating Hr	Spray Applied Fire Resistive Mtl Thkns on Beam In.
1	0	1	3/16+
1-1/2	0	1	3/16+
1-1/2	1-1/2	1-1/2	3/4
2	0	1	3/16+
2	2	2	1
3	1-1/2	1-1/2	3/4
3	3	3	1-9/16

The thickness of material required on the steel joist for the various ratings are shown in the following table:

Restrained or Unrestrained Assembly Rating Hr	Unrestrained Beam Rating Hr	Spray Applied Fire Resistive Mtl Thkns on Joist & Bridging In.
1	1	1-1/8
1-1/2	1-1/2	1-3/4
2	2	2-1/4
3	3	2-7/8

4A. Alternate Spray-Applied Fire Resistive Materials* — Applied by mixing with water and spraying in one or more coats to a final thickness as shown in the tables below to steel beam surfaces which must be clean and free of dirt, loose scale and oil. When fluted steel deck is used the area between the steel deck and the beams top flange shall be sprayed min avg and min ind density of 19/18 pcf, respectively for Types 7GP, 7HD, 105. Min avg and min ind density of 22/19 pcf, respectively for Types Z-106, Z-106/G, Z-106/HY. For method of density determination, refer to Design Information Section.

Restrained Assembly Rating Hr	Unrestrained Assembly Rating Hr	Unrestrained Beam Rating Hr	Spray Applied Fire Resistive Mtl Thkns on Beam In.
1	1	1	1/2
1-1/2	1	1	1/2
1-1/2	1-1/2	1-1/2	13/16
2	1	1	1/2
2	2	2	1-1/16
3	1-1/2	1-1/2	13/16
3	3	3	1-9/16

The thickness of material required on the steel joist for the various Ratings are shown in the following table:

Restrained or Unrestrained Assembly Rating Hr	Unrestrained Beam Rating Hr	Type of Concrete Slab	Spray Applied Fire Resistive Mtl Thkns In. Joist & Bridging
1	1	NW or LW	1-1/8
1-1/2	1-1/2	NW or LW	1-3/4
2	2	NW or LW	2-1/4
3	3	NW or LW	2-7/8

The thicknesses of Spray-Applied Fire Resistive Materials shown in the table below are applicable when the beams are supporting all fluted floor or form units w/lightweight concrete only:
+Thickness applied to beams lower flange edge to be 1/4 in. min.

Restrained Assembly Rating Hr	Unrestrained Assembly Rating Hr	Unrestrained Beam Rating Hr	Spray Applied Fire Resistive Mtl Thkns on Beam In.
1	1	1	3/16
1-1/2	1	1	3/16
1-1/2	1-1/2	1-1/2	3/4
2	1	1	3/16
2	2	2	1
3	1-1/2	1-1/2	3/4
3	3	3	1-9/16

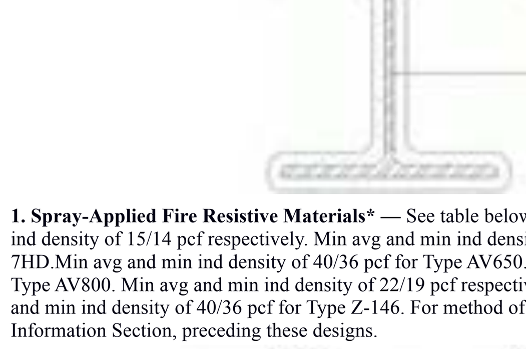
4B. Alternate Spray-Applied Fire Resistive Materials — Applied by mixing with water and spraying in one or more coats to a final thickness as shown in the tables below to steel beam surfaces which must be clean and free of dirt, loose scale and oil. The thicknesses shown in the table below are applicable to beams supporting all fluted floor or form units. Min avg and min ind density of 40/36 pcf, respectively. Min avg and min ind density of 40/36 pcf respectively for Types Z-146, -146PC and Z-146T cementitious mixture. Min avg and min ind density of 50/45 pcf respectively for Types Z-156, Z-156T and Z-156PC. For density determination refer to Design Information Section.

Unrestrained Beam Rating Hr	Restrained Assembly Rating Hr	Concrete Type	Spray Applied Fire Resistive Mtl Thkns on Beam In.
1	1, 1-1/2, 2	LW	9/16
1-1/2	1, 1-1/2, 2, 3	LW	7/8
1	1, 1-1/2, 2	LW	3/4
1-1/2	1, 1-1/2, 2, 3	LW	1

5. Shear-Connector Studs — Optional — Studs 3/4 in. diam by 3 in. long, for 1-1/2 in. deep form units to 5-1/4 in. long for 3 in. deep form units, headed type or equivalent per AISC specifications. Welded to the top flange of the beam through the steel form units.
6. Electrical Inserts — (Not shown) Classified as "Outlet Boxes and Fittings Classified for Fire Resistance."
KAM INDUSTRIES LTD, DBA CORDECK — Preset Inserts. For use with 2-1/2 in. lightweight concrete topping over QL-WKX steel floor units. Installed over factory-punched holes in floor units per accompanying installation instructions. Spacing shall not be more than one insert in each 14 sq ft. of floor area with spacing along floor units not less than 48 in. OC. The holes cut in insert cover for passage of wires shall be no more than 1/8 in. larger diam. than wire. Restrained Assembly Rating is 3/4 hr with Tapmate II-FS-1 and 1 hr with Tapmate II-FS-2 inserts.
KAM INDUSTRIES LTD, DBA CORDECK — Tapmate II-FS-1, II-FS-2; Series KEB.
(2) Wiremold Co. — After set Inserts. Single-service after set inserts installed per accompanying installation instructions in 2-1/2 in. diam hole core-drilled through min 3-1/4 in. thick concrete topping to top of cell of any min 3 in. deep cellular steel floor unit specified under Item 3. Spacing shall be no more than one insert in each 10 sq ft of floor area in each span with a min center to center spacing of 16 in. If the high potential and low potential raceways of the cellular steel floor unit are separated by a valley filled with concrete, the center to center spacing of the high potential and low potential single-service after set inserts may be reduced to a min of 7-1/2 in. Restrained Assembly Rating is 2hr or less with internally protected type 436 after set insert with Type M4-, M6- or M8- Series single-service activation fitting. WIREMOLD CO — Internally protected Type 436 after set insert with Type M4-, M6- or M8- Series single-service activation fitting.
7. Mineral and Fiber Boards* — (Optional, not shown). Applied over concrete floor with no restriction on board thickness. When mineral and fiber boards are used, the unrestrained beam rating shall be increased by a minimum of 1/2 hr. See Mineral and Fiber Board (CERZ) category for names of manufacturers.
8. Roof Covering Materials* — (Optional, not shown)Consisting of materials compatible with insulations described herein which provide Class A, B or C coverings. See Built-Up Roof Covering Materials in Building Materials Directory.
9. Insulating Concrete — (not shown) Optional. Various types of insulating concrete prepared and applied in the thickness indicated:
A. Vermiculite Concrete — (not shown) Optional.
1. Blend 6 to 8 cu. ft. of Vermiculite Aggregate* to 94 lb. Portland Cement and air entraining agent. Min thickness of 2in. as measured to the top surface of the structural concrete or foamed plastic (Item10) when it is used.
ELASTIZELL CORP OF AMERICA; SIPLAST INC; VERMICULITE PRODUCTS INC
2. Blend 3.5 cu. ft. of Type NVC Concrete Aggregate* or Type NVS Vermiculite Aggregate* coat, 1/8 in. thickness beneath foamed plastic (Item 10) when used, 1 in. min topping thickness.
SIPLAST INC
VERMICULITE PRODUCTS INC Vermiculite concrete may be covered with Roof Covering Materials (Item 8).
B. Cellular Concrete — Roof Topping Mixture* — concentrate mixed with water and Portland cement per manufacturers specifications. Min. thickness of 2-in. as measured to the top surface of the structural concrete or foamed plastic (Item 10A) when used. Cast dry density and 28— day min. compressive strength of 190 psi as determined with ASTM C495— 66.
AERIX INDUSTRIES — Cast dry density of 37 (+ or -) 3.0 pcf.; CELCORE INC — Type Celcore with cast dry density of 31 (+ or - 3.0) pcf or Type Celcore MF with cast dry density of 29 (+ or - 3.0) pcf.; ELASTIZELL CORP OF AMERICA — Type II. Mix #1 of cast dry density 39 (+ or -) 3.0 pcf, Mix #2 of cast dry density 40 (+ or -) 3.0 pcf, Mix #3 of cast dry density 47 (+ or -) 3.0 pcf.
C. Cellular Concrete-Roof Topping Mixture* — Concentrate mixed with water and Portland cement per manufacturers specifications. 28-day min. compressive strength of 190 psi as determined with ASTM C495-66.
SIPLAST INC — Mix No. 1 or 2. Cast dry density of 32+3 (Mix No. 1) or 36+3 (Mix No. 2) pcf.
D. Perlite Concrete — 6 cu ft. of Perlite Aggregate* to 94 lb of Portland Cement and 1-1/2 pt air entraining agent. Min. thickness 2 in. as measured to the top surface of structural concrete or foamed plastic (Item 10A) when it is used. See Perlite Aggregate (CFFX) in Fire Resistance Directory for names of manufacturers.
E. Cellular Concrete — Roof Topping Mixture* — Foam Concentrate mixed with water, Portland Cement and UL Classified Vermiculite Aggregate per manufacturer's application instructions. Cast dry density of 33 (+ or -) 3.0 pcf and 28-day compressive strength of min 250 psi as determined in accordance with ASTM C495-86.
AERIX INDUSTRIES — Mix No. 3.; SIPLAST INC — Mix No. 3.
F. Floor Topping Mixture* — (Optional, not shown) — Approx 4.5 gal of water to 41 lbs of NVS Premix floor topping mixture. Slurry coat 1/8 in. thickness beneath foamed plastic (Item 10) when used , 1 in. min topping thickness.; SIPLAST INC Floor Topping Mixture may be covered with Built-Up or Single Membrane Roof Covering.
10. Foamed Plastic* — (optional — Not Shown) For use only with vermiculite (Item 9A) or cellular (Item 9C) concretes — Rigid polystyrene foamed plastic insulation having slots and/or holes sandwiched between vermiculite concrete slurry which is applied to the normal or lightweight concrete surface and vermiculite concrete topping (Item 9A).SIPLAST INC; VERMICULITE PRODUCTS INC
10A. Foamed Plastic* — For use only with cellular concrete. Nominal 24 by 48 in. polystyrene foamed plastic insulation boards having a density of 1.0 + 0.1 pcf encapsulated within cellular concrete topping (Item 9B). Each insulation board shall contain six nominal 3 in. diameter holes oriented in two rows of three holes each with the holes spaced 12 in. OC, transversely and 16 in. OC longitudinally.
See Foamed Plastic* (BRYX) category in Building Materials Directory or Foamed Plastic* (CCVW) category in Fire Resistance Directory for list of manufacturers.
11. Foamed Plastic* — (Optional, not shown). Polyisocyanurate roof insulation, applied over concrete floor with no restriction on insulation thickness. When polyisocyanurate insulation is used, the unrestrained beam rating shall be increased by a minimum of 1/2 hr.
12. Metal Lath — (Not Shown) — (Required with Z-146, Z-146T, Z146PC, Z-156, Z-156T and Z-156PC, otherwise optional) - Metal lath may be used to facilitate the spray application of Spray-Applied Fire Resistive Materials on steel bar joist and trusses. The diamond mesh, 3/8 in. expanded steel lath, 1.7 to 3.4 lb per sq yd is secured to both sides of each steel joist with No. 18 SWG galv steel wire at joist web and bottom chord members spaced 15 in. OC max. When used, the metal lath is to be fully covered with Spray-Applied Fire Resistive. See Foamed Plastic (CCVW) category for list of manufacturers.

UL X701 - EXISTING - Columns

OCTOBER 26, 2017
Rating — 1, 2, 3 and 4HR
* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively..



1. Spray-Applied Fire Resistive Materials* — See table below for appropriate thickness. Min avg and min ind density of 15/14 pcf respectively. Min avg and min ind density of 19/18 pcf respectively for Types 7GP and 7HD.Min avg and min ind density of 40/36 pcf for Type AV650. Min avg and min ind density of 50/45 pcf for Type AV800. Min avg and min ind density of 22/19 pcf respectively for Types Z-106 and Z106/HY. Min avg and min ind density of 40/36 pcf for Type Z-146. For method of density determination, refer to Design Information Section, preceding these designs.

Rating Hr	Min Thkns In.
4	2-1/2
3	1-11/16
2	1-1/8
1-1/2	7/8
1	11/16

The thicknesses contained in the table below are applicable when the Spray-Applied Fire Resistive Materials applied to columns flange tips are reduced to one-half that shown in the table below:

Rating Hr	Min Thkns In.
4	2-7/8
3	2-1/16
2	1-3/8
1-1/2	1-1/16
1	13/16

ARABIAN VERMICULITE INDUSTRIES — Types AV650 and AV800 evaluated for Exterior Exposure; GCP KOREA INC — Types MK-6/CBF, MK-6/ED, MK-6/HY, MK-6s, Monokote Acoustic 1; PYROK INC — Type LD; SOUTHWEST FIREPROOFING PRODUCTS CO — Types 4, 5, 5EF, 5GP, 5MD, 7GP, 7HD, 8EF, 8GP, 8MD, 9EF, 9GP, 9MD; GCP APPLIED TECHNOLOGIES INC — Types MK-6/HY, MK-6s, Monokote Acoustic 1, RG, Z-106, Z-106/HY and Z-146.

2. Steel Column — Minimum size of column, W10x49, with outside dimensions of 10x10 in., a flange thickness of 9/16 in., a web thickness of 5/16 in., and a cross-sectional area of 14.4 sq in.

* 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 2017-10-26
The appearance of a company's name or product in this database does not in itself assure that products so identified have been manufactured under UL Solutions' Follow - Up Service. Only those products bearing the UL Mark should be considered to be Certified and covered under UL Solutions' Follow - Up Service. Always look for the Mark on the product.

BOWMAN MURRAY HEMINGWAY ARCHITECTS
514 Market Street
Wilmington, NC 28401
Tel - (910) 762-2621
www.bmharch.com

NOT FOR CONSTRUCTION

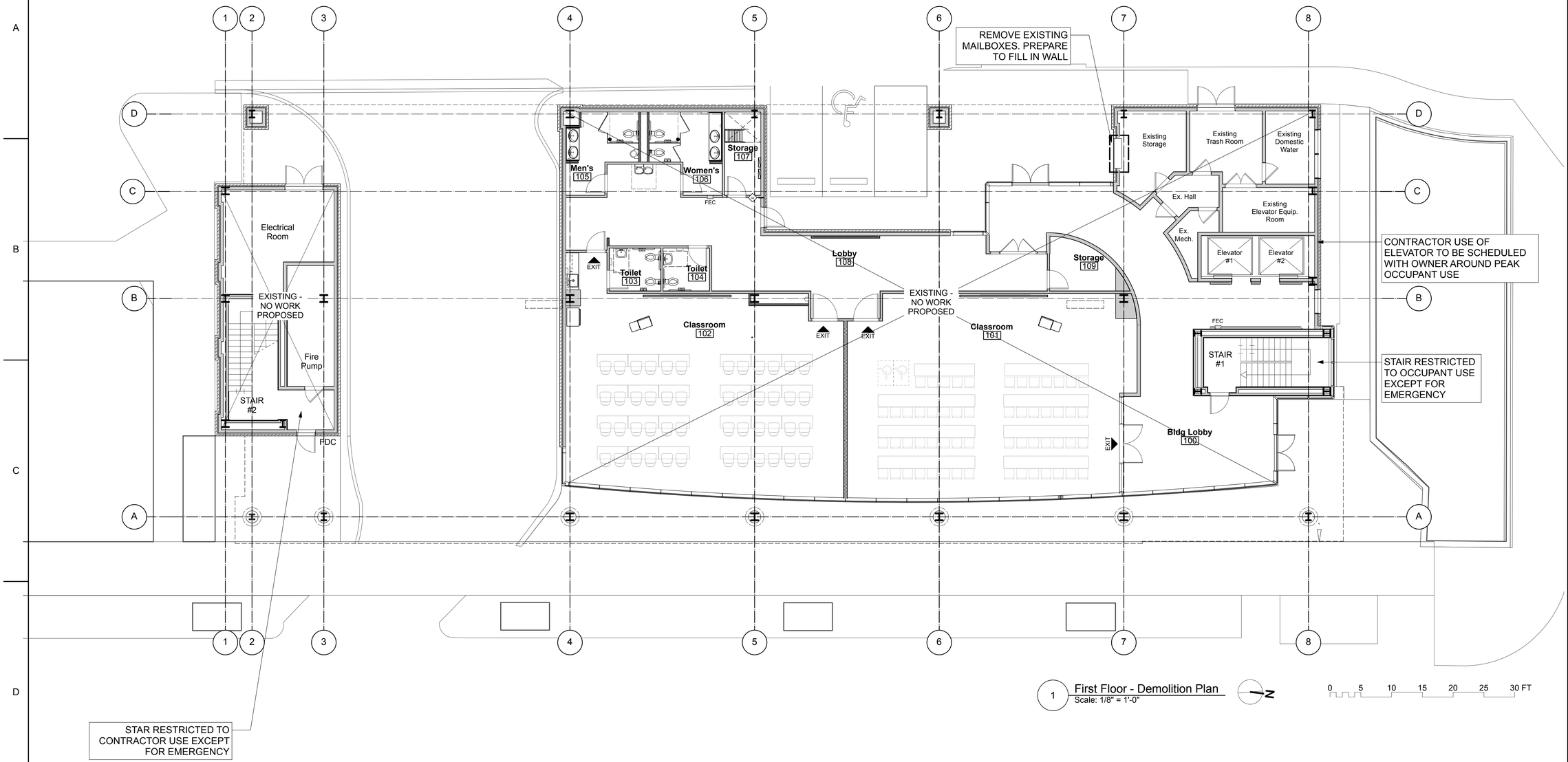
Cape Fear Community College
Health and Human Services Building
Interior Renovation – Phase Two
319 N 3rd Stree, Wilmington, North Carolina 28401
SCO # 23-27149-01A NCCCS # 2772

REV.	DATE	DESCRIPTION
D	06/07/24	CD Submittal
C	5/24/24	CD Estimating Set
B	3/13/24	DD Submittal
A	2/16/24	DD Estimating Set
NO.	DATE	ISSUE NOTE

Project Manager	Drawn By M. PRICE
Date 06-07-2024	Reviewed By B. BOWMAN
Project ID	

Sheet Title
UL Assemblies

Sheet No.
G7



1 First Floor - Demolition Plan
Scale: 1/8" = 1'-0"

N

0 5 10 15 20 25 30 FT

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BRUCE F. BOWMAN REGISTERED ARCHITECT 5951 6.7.24

NOT FOR CONSTRUCTION

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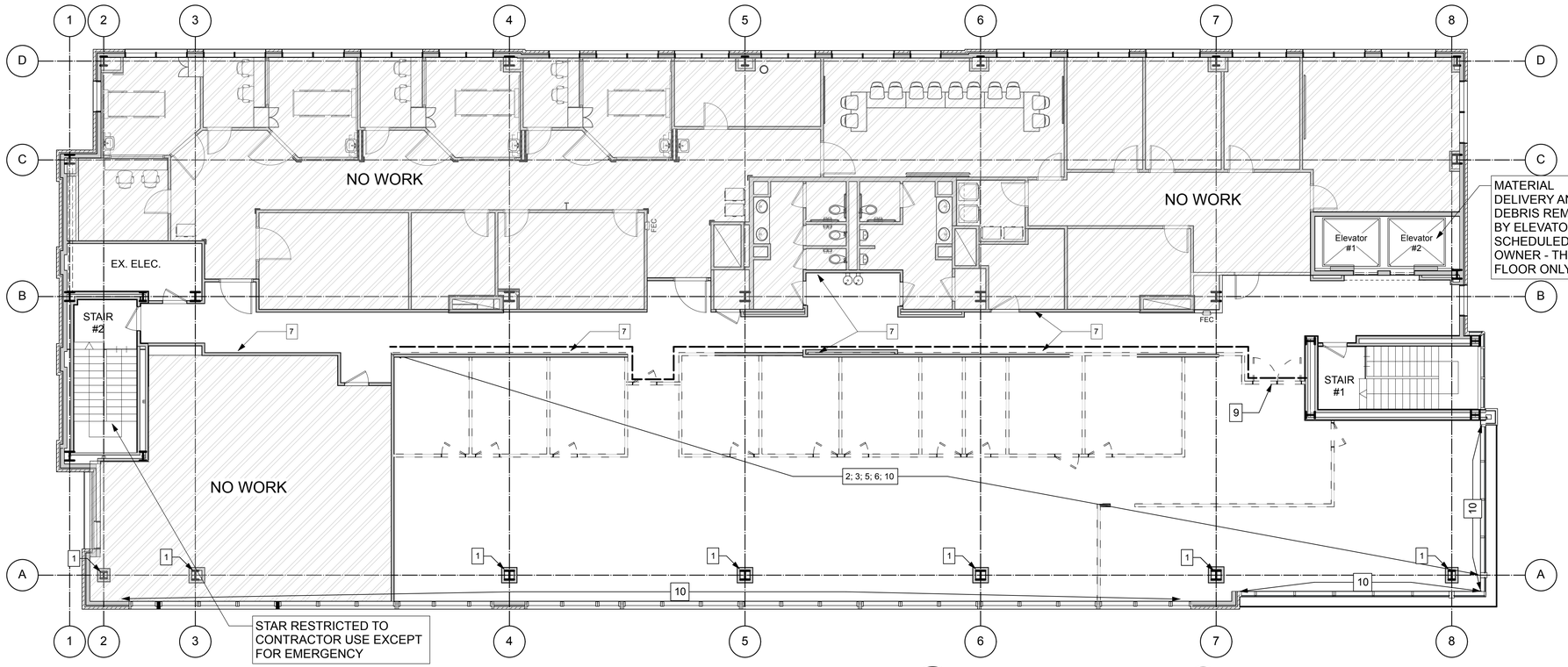
Project Manager	Drawn By: M. PRICE
Date: 06-07-2024	Reviewed By: B. BOWMAN
Project ID	

Sheet Title

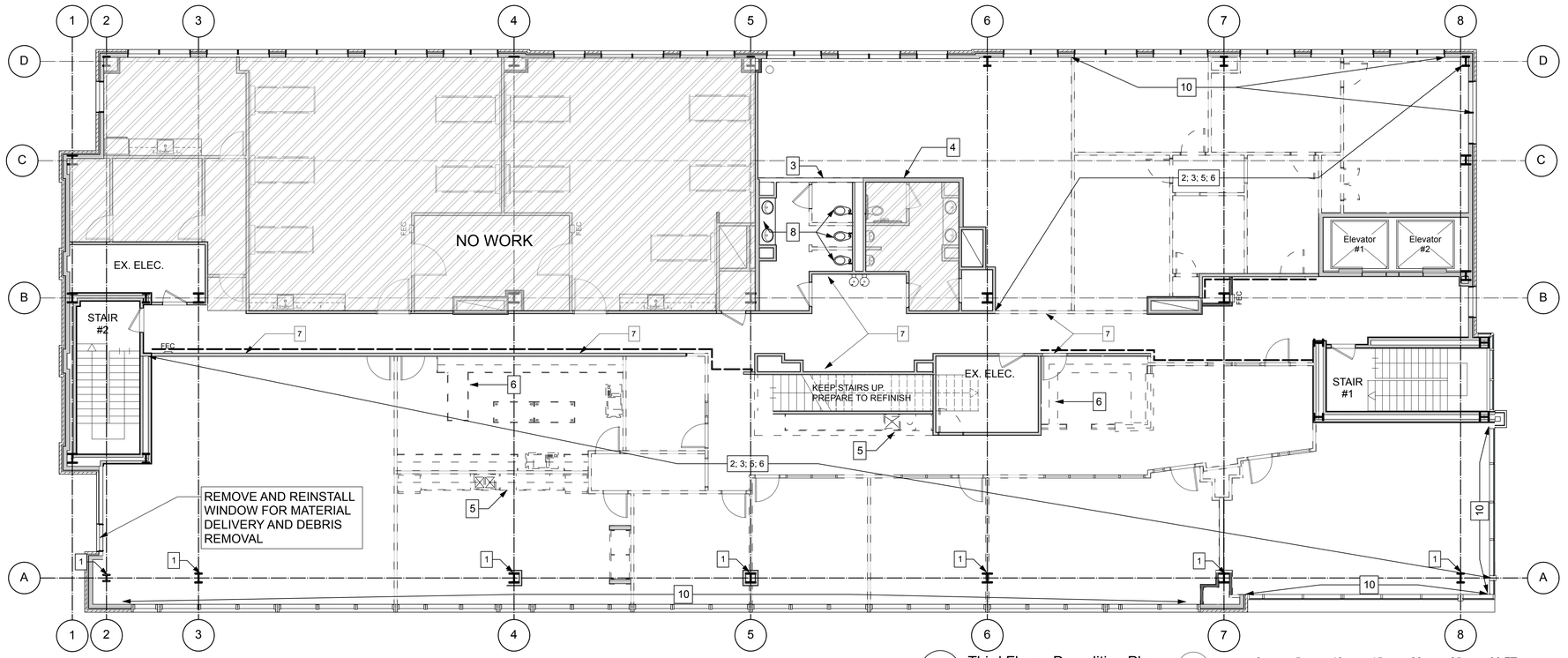
First Floor- Demolition Plan

Sheet No.

AD 101



1 Second Floor Demolition Plan
Scale: 1/8" = 1'-0"



2 Third Floor - Demolition Plan
Scale: 1/8" = 1'-0"

GENERAL DEMOLITION NOTES:

1. DEMOLITION NOTES ARE TO DEFINE INTENT. DEMOLITION SHALL INCLUDE ALL ITEMS INDICATED IN THE DEMOLITION PLANS AND ALL OTHER ITEMS REQUIRED TO BE DEMOLISHED TO ACCOMPLISH NEW CONSTRUCTION AND FINISH INDICATED THROUGHOUT SET OF CONTRACT DOCUMENTS.
2. **THE INFORMATION ON THIS DEMOLITION SHEET IS DIAGRAMMATIC AND DOES NOT PURPORT TO SHOW EACH AND EVERY CONDITION OF THE EXISTING BUILDING.**
3. FIELD VERIFY EXISTING CONDITIONS AND INFORM THE ARCHITECT IMMEDIATELY UPON DISCOVERING CONDITIONS SIGNIFICANTLY DIFFERENT FROM THOSE SHOWN IN THE DEMOLITION DRAWING.
4. **ALL EQUIPMENT AND MATERIALS REMOVED BY CONTRACTOR SHALL BE DISPOSED OF BY CONTRACTOR AT AN APPROVED OFF-SITE LOCATION, UNLESS OTHERWISE NOTED.**
5. PATCHING OF EXISTING WALLS IS TO MATCH INTEGRITY OF ADJACENT CONSTRUCTION UNLESS NOTED OTHERWISE.
6. **REPAIR AND FINISH ANY HOLES IN WALLS LEFT FROM REMOVAL OF DUCTS, PIPES, CONDUIT, AND RESTORE WALLS TO ORIGINAL INTEGRITY.**
7. REMOVE ALL PARTITIONS INDICATED ON PLANS. ALL FLOOR BASE AND CEILING FINISHES ARE TO BE REMOVED TO STRUCTURE, UNLESS OTHERWISE NOTED.
8. **CONTRACTOR TO REMOVE ALL EXISTING FLOOR MATERIALS WITHIN LIMITS OF CONSTRUCTION, UNLESS OTHERWISE NOTED.**
9. CONTRACTOR TO PATCH AND GRIND ALL CONCRETE FLOORS AS REQUIRED TO PROVIDE A CLEAN SMOOTH SURFACE TO ACCEPT NEW FLOORING PER MANUFACTURER'S SURFACE PREPARATION REQUIREMENTS.
10. **CONTRACTOR IS TO PROTECT AND MAINTAIN EXISTING PLUMBING, ELEC., LIGHTING, AND FIRE PROTECTION REQUIRED TO REMAIN IN SERVICE.**
11. PROVIDE TEMPORARY AIR TIGHT DUST PARTITIONS TO SEPARATE AREAS OF DEMOLITION AND CONSTRUCTION FROM OCCUPIED AREAS.
12. **COORDINATE ALL WORK WITH OWNER, AS BUILDING WILL CONTINUE TO BE IN OPERATION DURING CONSTRUCTION.**
13. REMOVE ALL EXISTING PLUMBING FIXTURES SHOWN DASHED INCLUDING ASSOCIATED CONNECTIONS UNLESS NOTED OTHERWISE.
14. **DASHED CASEWORK, MECHANICAL/ELECTRICAL EQUIPMENT ARE TO BE REMOVED UNLESS NOTED OTHERWISE.**
15. CONTRACTORS SHALL CLOSE OFF ABOVE CEILING AREAS NOT SEPARATED BY EXISTING WALLS AT PROJECT LIMITS.
16. **MAINTAIN INTEGRITY OF EXISTING FIRE PROTECTION WHEN REMOVING INTERSECTING ELEMENTS.**
17. SEE ENGINEERING PLANS FOR ADDITIONAL DEMOLITION INFORMATION.
18. **WORK BEYOND THE PROJECT LIMITS IDENTIFIED SHALL BE SCHEDULED IN ADVANCE WITH THE OWNER.**
19. ISOLATE CONSTRUCTION FROM EXISTING AREAS IN USE IN COMPLIANCE WITH NCBC CHAPTER 33

KEYED NOTES:

1. REMOVE EXISTING SHEETROCK FROM COLUMN ENCLOSURES. KEEP ENCLOSURES METAL FRAMEWORK WHERE POSSIBLE. PREPARE FOR NEW SHEETROCK.
2. REMOVE EXISTING CARPET. PREPARE FOR NEW FLOORS
3. REMOVE PARTITIONS
4. REMOVE SHEETROCK FROM EXISTING WALL. REMOVE DECORATIVE FINISHES IF ANY. PREPARE FOR NEW SHEETROCK.
5. REMOVE CASEWORK AND EXISTING APPLIANCES. PREPARE FOR NEW.
6. REMOVE EXISTING MILLWORK.
7. KEEP CORRIDOR WALLS DURING CONSTRUCTION TO MAINTAIN EGRESS FOR FINISHED PARTS OF THE FLOOR . PREPARE FOR NEW OPENINGS. REPLACE/REPAIR SHEETROCK WHERE NECESSARY.
8. REMOVE BATHROOM FIXTURES AND FINISHES. PREPARE FOR NEW.
9. REMOVE EXISTING GLASS DOOR TO REUSE ON THE 4TH FLOOR DENTAL ENTRY
10. KEEP EXISTING WINDOW TREATMENTS (BLINDS ETC)

LEGEND:

- 1 — KEYED NOTE
- MAINTAIN DUST AND CONSTRUCTION BARRIER
- EXISTING DOOR AND FRAME TO TO BE REMOVED
- EXISTING EXTERNAL WALLS TO REMAIN - INTERNAL GYPROCK TO BE REMOVED. PREPARE FOR NEW
- EXISTING INTERNAL WALLS TO REMAIN - GYPROCK FACING FITOUT SPACE TO BE REMOVED. PREPARE FOR NEW
- NO WORK — HATCHED EXISTING FLOOR SPACES TO REMAIN - NO WORK PROPOSED
- EXISTING WALLS TO BE REMOVED
- EXISTING WINDOWS TO REMAIN.

SEE PLUMBING,MECHANICAL & ELECTRICAL DEMOLITION SHEETS FOR ADDITIONAL REQUIREMENTS

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BRUCE F. BOWMAN — REGISTERED ARCHITECT — 5951 — 6.7.24

NOT FOR CONSTRUCTION

Cape Fear Community College
Health and Human Services Building
Interior Renovation – Phase Two
319 N 3rd Stree, Wilmington, North Carolina 28401
SCO # 23-27149-01A NCCCS # 2772

REV.	DATE	DESCRIPTION
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C	5/24/24	CD Estimating Set
B	3/13/24	DD Submittal
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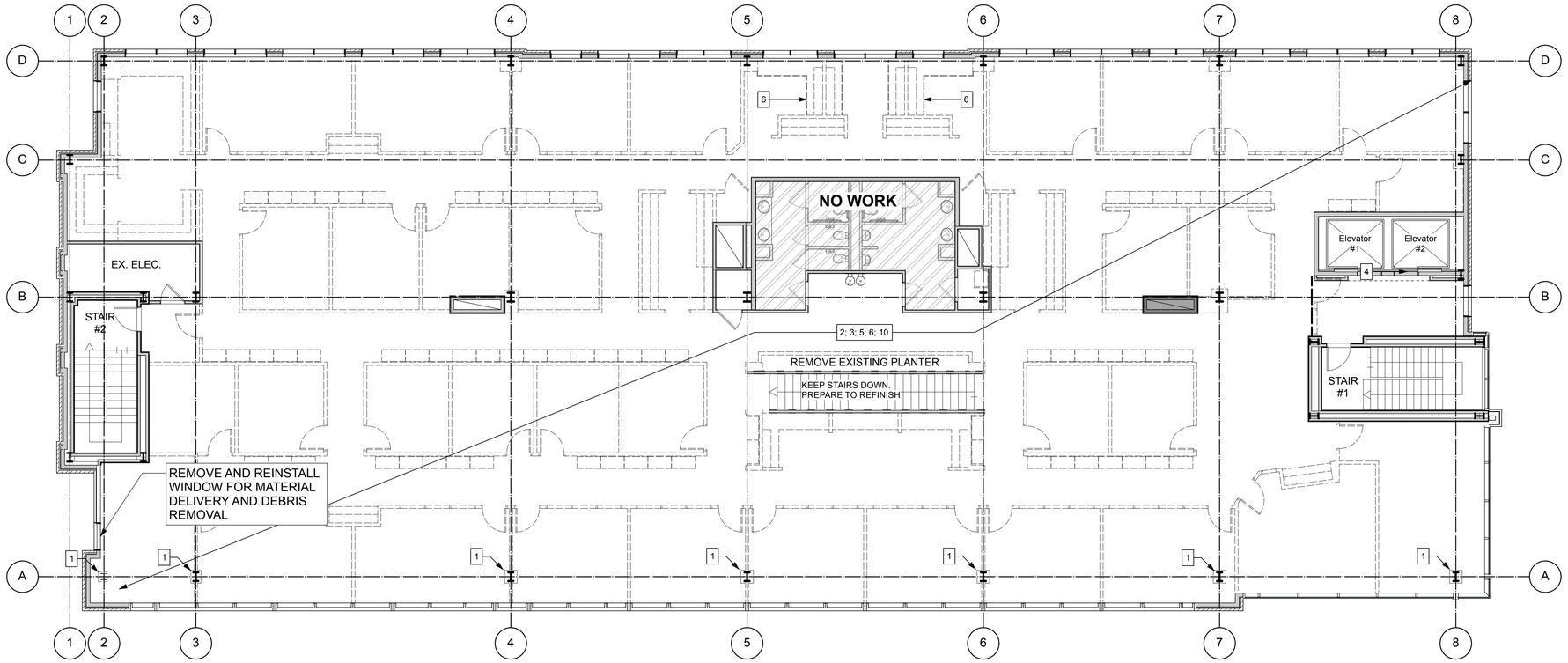
Project Manager	Drawn By: M. PRICE
Date: 06-07-2024	Reviewed By: B. BOWMAN
Project ID	

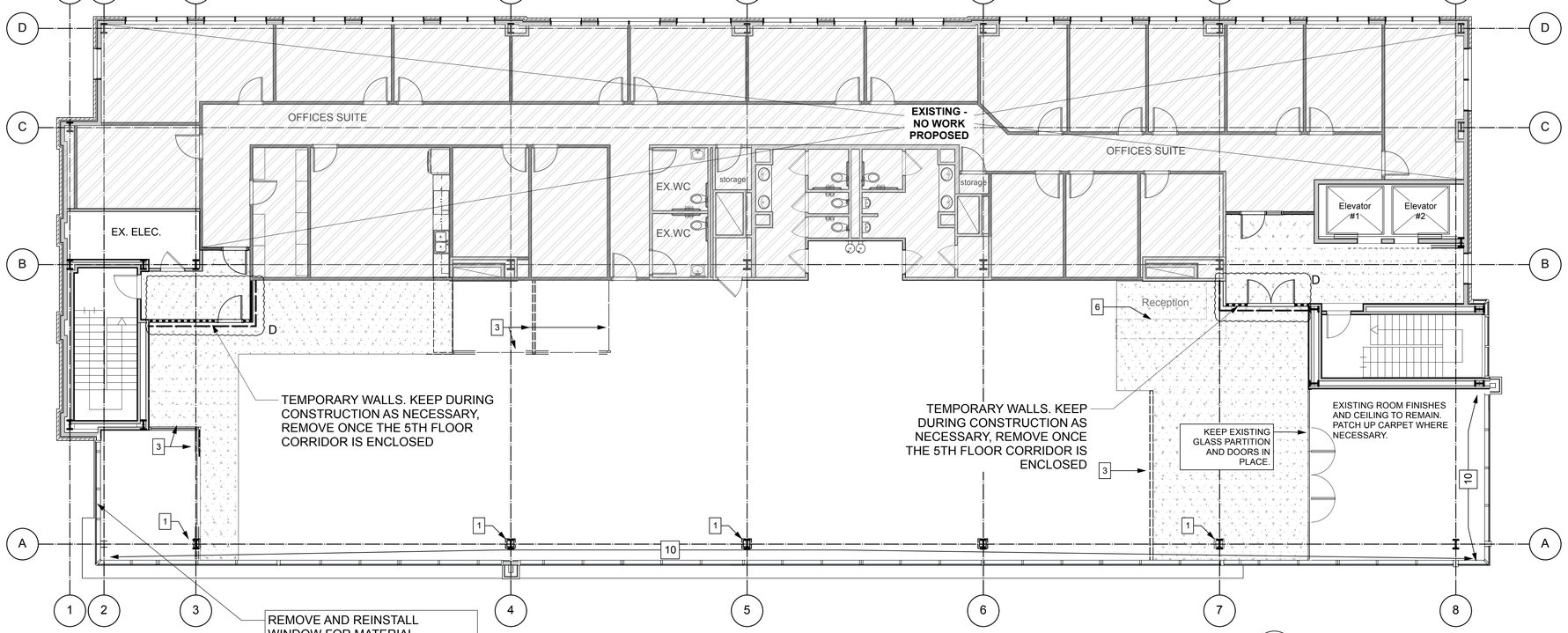
Sheet Title
Second & Third Floor - Demolition Plan

Sheet No.
AD 102



1 Fourth Floor - Demolition Plan
Scale: 1/8" = 1'-0"

0 5 10 15 20 25 30 FT



0 5 10 15 20 25 30 FT

2 Fifth Floor - Demolition Plan
Scale: 1/8" = 1'-0"

GENERAL DEMOLITION NOTES:

1. DEMOLITION NOTES ARE TO DEFINE INTENT. DEMOLITION SHALL INCLUDE ALL ITEMS INDICATED IN THE DEMOLITION PLANS AND ALL OTHER ITEMS REQUIRED TO BE DEMOLISHED TO ACCOMPLISH NEW CONSTRUCTION AND FINISH INDICATED THROUGHOUT SET OF CONTRACT DOCUMENTS.
2. **THE INFORMATION ON THIS DEMOLITION SHEET IS DIAGRAMMATIC AND DOES NOT PURPORT TO SHOW EACH AND EVERY CONDITION OF THE EXISTING BUILDING.**
3. FIELD VERIFY EXISTING CONDITIONS AND INFORM THE ARCHITECT IMMEDIATELY UPON DISCOVERING CONDITIONS SIGNIFICANTLY DIFFERENT FROM THOSE SHOWN IN THE DEMOLITION DRAWING.
4. **ALL EQUIPMENT AND MATERIALS REMOVED BY CONTRACTOR SHALL BE DISPOSED OF BY CONTRACTOR AT AN APPROVED OFF-SITE LOCATION, UNLESS OTHERWISE NOTED.**
5. PATCHING OF EXISTING WALLS IS TO MATCH INTEGRITY OF ADJACENT CONSTRUCTION UNLESS NOTED OTHERWISE.
6. **REPAIR AND FINISH ANY HOLES IN WALLS LEFT FROM REMOVAL OF DUCTS, PIPES, CONDUIT, AND RESTORE WALLS TO ORIGINAL INTEGRITY.**
7. REMOVE ALL PARTITIONS INDICATED ON PLANS. ALL FLOOR BASE AND CEILING FINISHES ARE TO BE REMOVED TO STRUCTURE, UNLESS OTHERWISE NOTED.
8. **CONTRACTOR TO REMOVE ALL EXISTING FLOOR MATERIALS WITHIN LIMITS OF CONSTRUCTION, UNLESS OTHERWISE NOTED.**
9. CONTRACTOR TO PATCH AND GRIND ALL CONCRETE FLOORS AS REQUIRED TO PROVIDE A CLEAN SMOOTH SURFACE TO ACCEPT NEW FLOORING PER MANUFACTURER'S SURFACE PREPARATION REQUIREMENTS.
10. **CONTRACTOR IS TO PROTECT AND MAINTAIN EXISTING PLUMBING, ELEC., LIGHTING, AND FIRE PROTECTION REQUIRED TO REMAIN IN SERVICE.**
11. PROVIDE TEMPORARY AIR TIGHT DUST PARTITIONS TO SEPARATE AREAS OF DEMOLITION AND CONSTRUCTION FROM OCCUPIED AREAS.
12. **COORDINATE ALL WORK WITH OWNER, AS BUILDING WILL CONTINUE TO BE IN OPERATION DURING CONSTRUCTION.**
13. REMOVE ALL EXISTING PLUMBING FIXTURES SHOWN DASHED INCLUDING ASSOCIATED CONNECTIONS UNLESS NOTED OTHERWISE.
14. **DASHED CASEWORK, MECHANICAL/ELECTRICAL EQUIPMENT ARE TO BE REMOVED UNLESS NOTED OTHERWISE.**
15. CONTRACTORS SHALL CLOSE OFF ABOVE CEILING AREAS NOT SEPARATED BY EXISTING WALLS AT PROJECT LIMITS.
16. **MAINTAIN INTEGRITY OF EXISTING FIRE PROTECTION WHEN REMOVING INTERSECTING ELEMENTS.**
17. SEE ENGINEERING PLANS FOR ADDITIONAL DEMOLITION INFORMATION.
18. **WORK BEYOND THE PROJECT LIMITS IDENTIFIED SHALL BE SCHEDULED IN ADVANCE WITH THE OWNER.**
19. ISOLATE CONSTRUCTION FROM EXISTING AREAS IN USE IN COMPLIANCE WITH NCBC CHAPTER 33

KEYED NOTES:

1. REMOVE EXISTING SHEETROCK FROM COLUMN ENCLOSURES WHERE NECESSARY. KEEP ENCLOSURES METAL FRAMEWORK AND SHEETROCK WHERE POSSIBLE. PREPARE FOR NEW SHEETROCK.
2. REMOVE EXISTING CARPET. PREPARE FOR NEW FLOORS
3. REMOVE PARTITIONS
4. REMOVE SHEETROCK FROM EXISTING WALL. REMOVE DECORATIVE FINISHES IF ANY. PREPARE FOR NEW SHEETROCK.
5. REMOVE CASEWORK AND EXISTING APPLIANCES.
6. REMOVE EXISTING MILLWORK.
7. N/A
8. N/A
9. N/A
10. KEEP EXISTING WINDOW TREATMENTS (BLINDS ETC)
11. N/A

LEGEND:

- 1 — KEYED NOTE
- MAINTAIN DUST AND CONSTRUCTION BARRIER
- EXISTING DOOR AND FRAME TO TO BE REMOVED
- EXISTING EXTERNAL WALLS TO REMAIN - INTERNAL GYPROCK TO BE REMOVED. PREPARE FOR NEW
- EXISTING INTERNAL WALLS TO REMAIN - GYPROCK FACING FITOUT SPACE TO BE REMOVED. PREPARE FOR NEW
- NO WORK — HATCHED EXISTING FLOOR SPACES TO REMAIN - NO WORK PROPOSED
- EXISTING WALLS TO BE REMOVED
- EXISTING WINDOWS TO REMAIN.

SEE PLUMBING,MECHANICAL & ELECTRICAL DEMOLITION SHEETS FOR ADDITIONAL REQUIREMENTS

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BRUCE F. BOWMAN — REGISTERED ARCHITECT — 5951 — 6.7.24

NOT FOR CONSTRUCTION

Cape Fear Community College
Health and Human Services Building
Interior Renovation – Phase Two
319 N 3rd Stree, Wilmington, North Carolina 28401

NCCCS # 2772

SCO # 23-27149-01A

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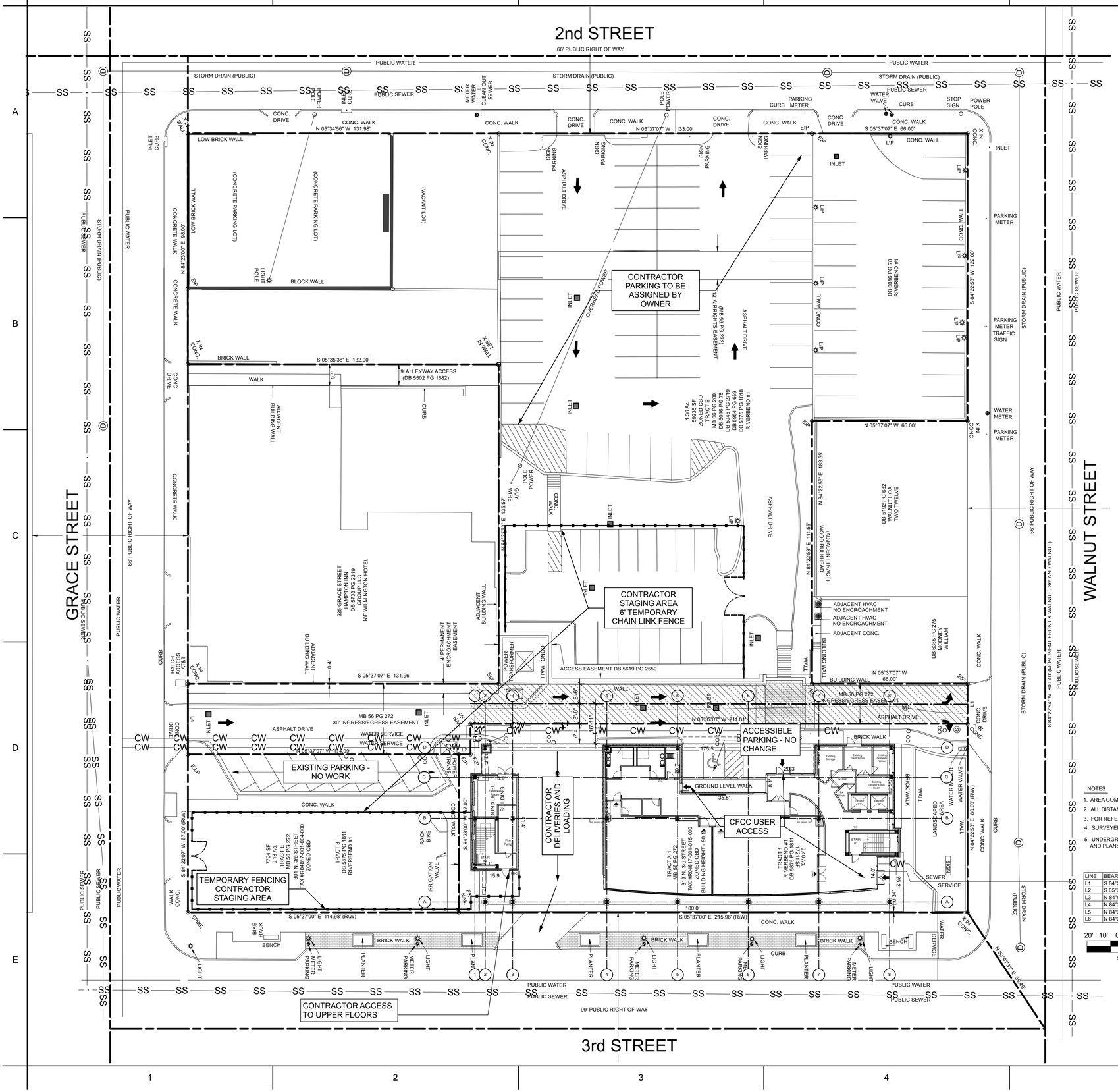
Project Manager	Drawn By: M. PRICE
Date: 06-07-2024	Reviewed By: B. BOWMAN
Project ID	

Sheet Title

Fourth & Fifth Floor - Demolition Plan

Sheet No.

AD 103



LINE	BEARING	DISTANCE
L1	S 84°22'53" W	17.00'
L2	S 05°37'07" E	5.00'
L3	N 84°09'25" E	12.99'
L4	N 84°20'26" E	30.00'
L5	N 84°23'00" E	32.00'
L6	N 84°22'53" E	15.97'

NOTES

1. AREA COMPUTED BY COORDINATE METHOD
2. ALL DISTANCES ARE HORIZONTAL
3. FOR REFERENCE SEE AS NOTED
4. SURVEYED OCT. - NOV. 2022
5. UNDERGROUND UTILITIES FROM FIELD LOCATIONS AND PLANS PROVIDED BY OTHERS

20' 10' 0 20'
SCALE IN FEET
1" = FT. 20

NOTES:

1. ARCHITECTURAL SITE PLAN IS BASED ON INFORMATION PROVIDED ON HANOVER DESIGN SERVICES, P.A. DATED 11.9.2022

2. PARCELS PREVIOUSLY HELD BY RIVERBEND #1 HAVE BEEN CONVEYED TO NEW HANOVER COUNTY FOR CAPE FEAR COMMUNITY COLLEGE, APRIL 2023

D 3. ISOLATE CONSTRUCTION FROM EXISTING AREAS IN USE IN COMPLIANCE WITH NCBC CHAPTER 33

LEGEND:

- 17' INGRESS/EGRESS EASEMENT
- PROPERTY LINE
- ASSUMED PROPERTY LINE
- CONTRACTOR STAGING FENCE

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BRUCE F. BOWMAN REGISTERED ARCHITECT 5951

6.7.24

NOT FOR CONSTRUCTION

Cape Fear Community College Health and Human Services Building Interior Renovation – Phase Two

319 N 3rd Stree, Wilmington, North Carolina 28401

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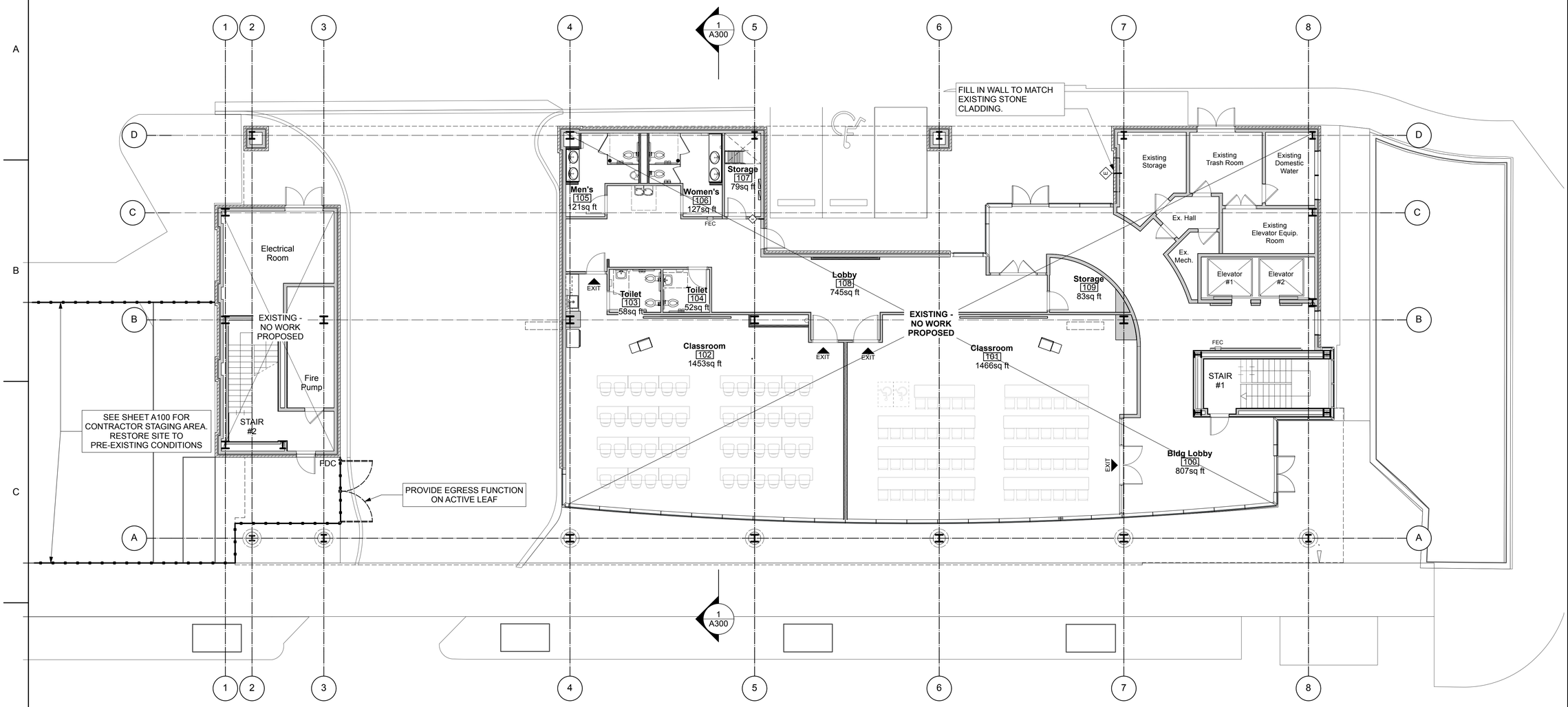
Project Manager	Drawn By
	M. PRICE
Date	Reviewed By
06-07-2024	B. BOWMAN
Project ID	

Sheet Title

Architectural Site Plan

Sheet No.

A100



1 First Floor Plan
Scale: 1/8" = 1'-0"

N

0 5 10 15 20 25 30 FT

First Floor Exising Program and Occpancy Load

No.	Space Name	Net Area	Gross Area	Occupancy Type	Function of Space	Occupancy Load	Calculated No. of Occ.	No. of Occ.
100	Bldg Lobby	807.2	807.2	support space		1/0 sf	#DIV 0!	#DIV 0!
101	Classroom	1465.7	1525.3	ASSEMBLY A3 - Lecture Hall	Classroom	1/15 sf	97.7	98
102	Classroom	1453.2	1453.2	ASSEMBLY A3 - Lecture Hall	Classroom	1/15 sf	96.9	97
103	Toilet	57.5	64.2	support space		1/0 sf	#DIV 0!	#DIV 0!
104	Toilet	52.0	58.2	support space		1/0 sf	#DIV 0!	#DIV 0!
105	Men's	120.9	120.9	support space		1/0 sf	#DIV 0!	#DIV 0!
106	Women's	126.8	128.8	support space		1/0 sf	#DIV 0!	#DIV 0!
107	Storage	79.4	93.5	support space		1/0 sf	#DIV 0!	#DIV 0!
108	Lobby	744.8	744.8	support space		1/0 sf	#DIV 0!	#DIV 0!
109	Storage	82.6	92.9	support space		1/0 sf	#DIV 0!	#DIV 0!
	TOTAL SF:	**4990 sq ft**	**5089 sq ft**				**TOTAL:**	**195**

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BRUCE F. BOWMAN REGISTERED ARCHITECT 5951 6.7.24

NOT FOR CONSTRUCTION

Cape Fear Community College
Health and Human Services Building
Interior Renovation – Phase Two

319 N 3rd Stree, Wilmington, North Carolina 28401

NCCCS # 2772

SCO # 23-27149-01A

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Project Manager	Drawn By
	M. PRICE
Date	Reviewed By
06-07-2024	B. BOWMAN

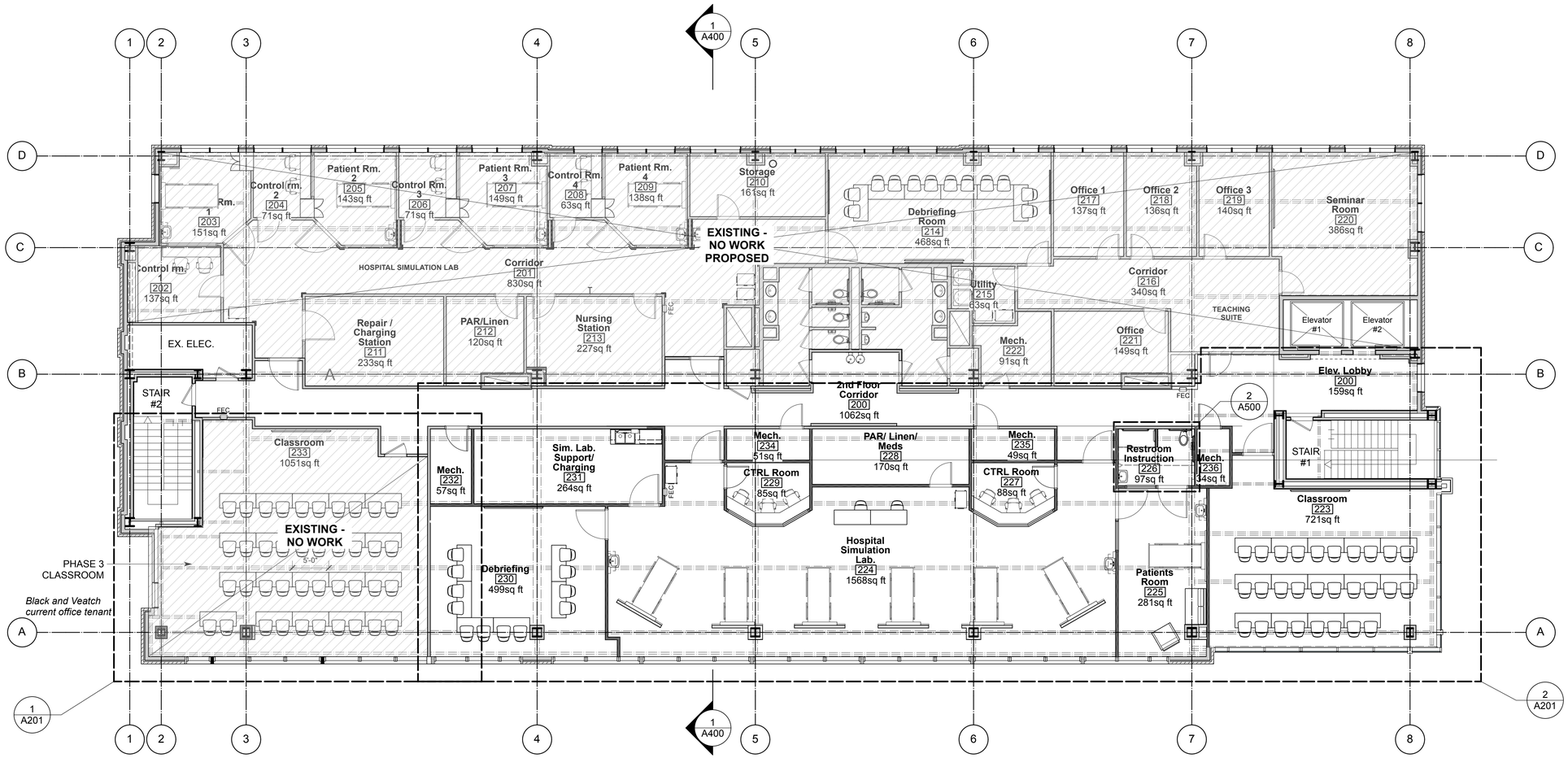
Project ID

Sheet Title

First Floor Renovation

Sheet No.

A101



1 Second Floor Renovation
Scale: 1/8" = 1'-0"

N 0 5 10 15 20 25 30 FT

KEYED NOTES - EQUIPMENT AND FURNISHINGS		
(#)	**Description:**	**Comments:**
(01)	FLAT PANEL TV/ MONITOR	SEPARATE TECH. CONTRACT
(02)	MOTORIZED PROJECTION SCREEN	SEPARATE TECH. CONTRACT
(03)	CEILING MOUNTED PROJECTOR	SEPARATE TECH. CONTRACT
(04)	PATIENTS ROOM MONITOR - WALL MOUNTED	
(05)	A/V LECTERN	SEPARATE TECH. CONTRACT
(06)	COMPUTER TABLE WITH INTEGRAL POWER/DATA	CHAIRS - OWNER FURNISH OWNER INSTAL
(07)	SEMINAR TABLE WITH INTEGRAL POWER/DATA	CHAIRS - OWNER FURNISH OWNER INSTAL
(08)	EXISTING SHADING DEVICES TO REMAIN	EXISTING TO REMAIN
(09)	HOSPITAL SIMULATION BED	OWNER FURNISH OWNER INSTAL
(10)	BUILT IN BED HEADWALL - FULL HEIGHT	DETAIL SHEET A700
(11)	BUILT IN BED HEADWALL - HALF HEIGHT	DETAIL SHEET A700
(12)	CUBICLE CURTAIN ON BUILT-IN TRACK	BY CONTRACTOR
(13)	WASHER	OWNER FURNISH OWNER INSTAL
(14)	DRYER	OWNER FURNISH OWNER INSTAL
(15)	FRIDGE	OWNER FURNISH OWNER INSTAL
(16)	CRASH CARTS	OWNER FURNISH
(17)	FIRE EXTINGUISHER AND CABINET	BY CONTRACTOR UNLESS EXISTING
(18)	SOAP DISPENSER	OWNER FURNISH OWNER INSTAL
(19)	PAPER TOWEL DISPENSER	OWNER FURNISH OWNER INSTAL
(20)	DOUBLE LOCKERS	OWNER FURNISH OWNER INSTAL
(21)	MOVABLE CLOTHES RACK	OWNER FURNISH OWNER INSTAL
(22)	BUILT-IN WALL FILTRINE WATER BOTTLE FILING STATION	BY CONTRACTOR
(23)	MOBILE INSTRUCTORS DESK	OWNER FURNISH, CONTRACTOR PROVIDE FLOOR POWER OUTLET

GENERAL NOTES:

1. THE CONTRACTOR IS TO FIELD VERIFY ALL DIMENSIONS AND REPORT ANY DISCREPANCIES TO THE ARCHITECT.
2. ALL INTERIOR METAL STUD PARTITION ARE DIMENSIONED TO FACE OF STUD (UNLESS IDENTIFIED AS CLEAR DIMENSION)
3. ALL PARTITION WALLS EXTEND TO STRUCTURE ABOVE UNLESS NOTED OTHERWISE
4. FOR ACOUSTICAL REASONS WALLS SHALL EXTEND TO STRUCTURE ABOVE AND SEAL TIGHT AS SHOWN ON REFLECTED CEILING PLANS.
5. THE CONTRACTOR SHALL PROVIDE ALL BLOCKING REQUIRED TO ANCHOR ALL WALL OR CEILING MOUNTED ITEMS, INCLUDING BUT NOT LIMITED TO CASEWORK, MILLWORK, DOORSTOPS & EQUIPMENT.
6. THE CONTRACTOR SHALL CONFIRM AND COORDINATE ALL MECHANICAL, ELECTRICAL, AND PLUMBING ITEMS.
7. PROVIDE WALL FURRING AS REQUIRED TO ENCLOSE ANY INCIDENTAL ENGINEERING ELEMENTS NOT SHOWN - SEE ENGINEERING DRAWINGS.
8. PROVIDE CORNER GUARDS AT ALL OUTSIDE CORNERS AS SHOWN 48" HIGH
9. EQUIPMENT LABELED ON ENLARGED FLOOR PLANS.

LEGEND:

- EXISTING EXTERNAL WALL
- EXISTING INTERNAL METAL STUD
- NEW INTERNAL PARTITION
- EXISTING STEEL BEAM BELOW
- PARTITION TYPE TAG SEE SHEET A400
- NEW DOOR TAG SEE SHEET A600
- INTERNAL WINDOW TAG
- (01) EQUIPMENT TAG
- DETAIL DRAWING TAGS
- NO WORK HATCHED SPACES TO REMAIN - NO WORK PROPOSED
- CORNER GUARDS

Second Floor - Phase 2 Program

No.	Space Name	Net Area	Gross Area	Occupancy Type	Function of Space	Occupancy Load	Calculated No. of Occ.	No. of Occ.
200	Elev. Lobby	159.3	159.3	support space		1/0 sf	#DIV 0!	#DIV 0!
200	2nd Floor Corridor	1062.4	1062.4	support space		1/0 sf	#DIV 0!	#DIV 0!
223	Classroom	721.4	721.4	BUSINESS	Classroom	1/20 sf	36.1	37
224	Hospital Simulation Lab.	1568.3	1568.3	BUSINESS	Educational vocational room	1/50 sf	31.4	32
225	Patients Room	281.0	281.0	BUSINESS	Educational vocational room	1/50 sf	5.6	6
226	Restroom Instruction	96.7	96.7	BUSINESS	Educational vocational room	1/50 sf	1.9	2
227	CTRL Room	87.7	87.7	BUSINESS	Educational vocational room	1/50 sf	1.8	2
228	PAR/ Linen/ Meds	169.8	169.8	BUSINESS	Storage	1/300 sf	0.6	1
229	CTRL Room	85.3	85.3	BUSINESS	Educational vocational room	1/50 sf	1.7	2
230	Debriefing	499.2	525.9	BUSINESS	Classroom	1/20 sf	25.0	25
231	Sim. Lab. Support/ Charging	263.6	263.6	BUSINESS	Educational vocational room	1/50 sf	5.3	6
232	Mech.	57.4	64.0	BUSINESS		1/300 sf	0.2	1
234	Mech.	51.4	51.4	BUSINESS		1/300 sf	0.2	1
235	Mech.	48.6	48.6	BUSINESS		1/300 sf	0.2	1
236	Mech.	34.3	39.4	BUSINESS		1/300 sf	0.1	1
	TOTAL SF:	**5186 sq ft**	**5225 sq ft**				**TOTAL:**	**117**

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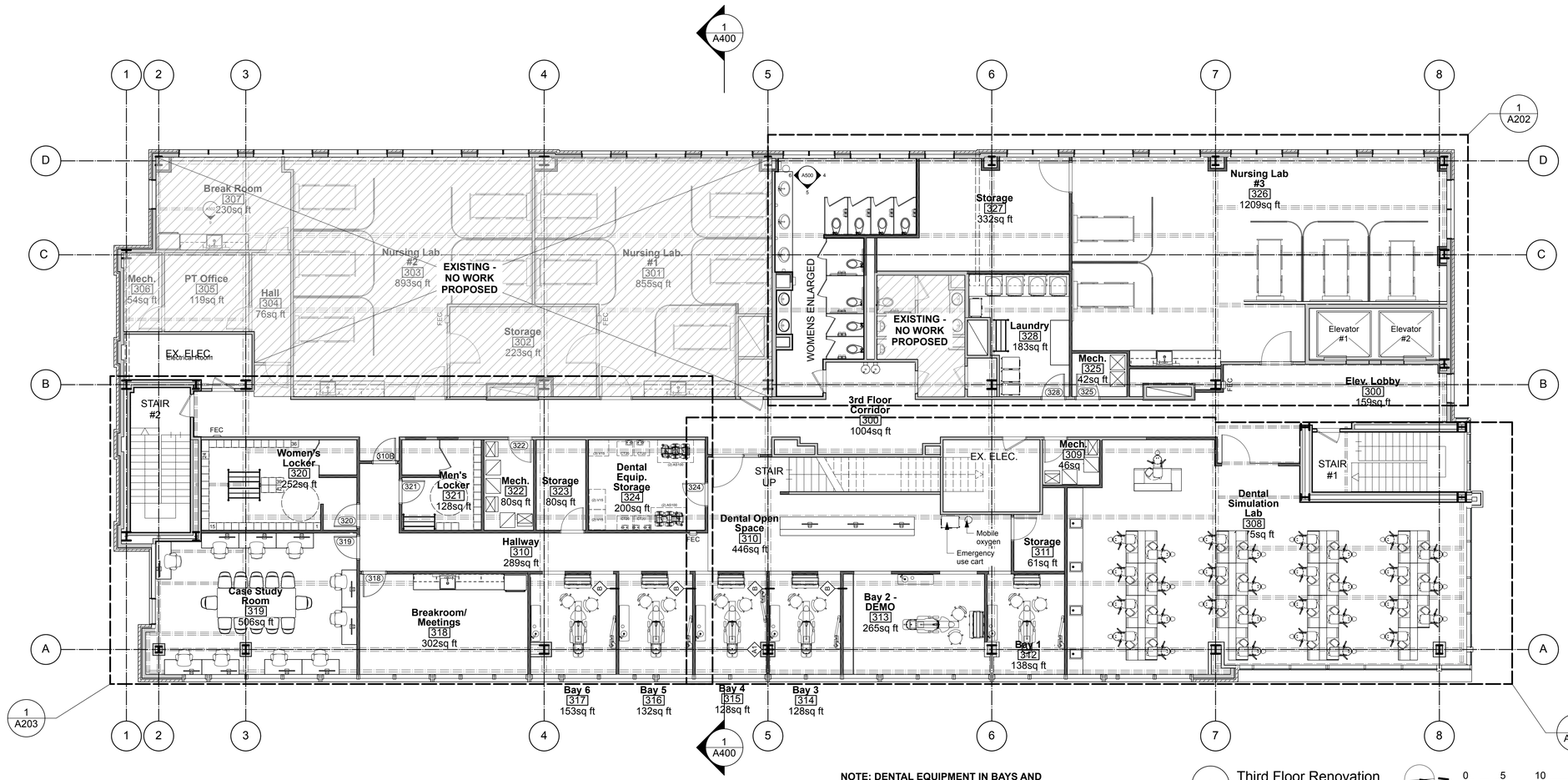
Project Manager	Drawn By M. PRICE
Date 06-07-2024	Reviewed By B. BOWMAN
Project ID	

Sheet Title

Second Floor Renovation

Sheet No.

A102



1 Third Floor Renovation
Scale: 1/8" = 1'-0"

0 5 10 15 20 25 30 FT

NOTE: DENTAL EQUIPMENT IN BAYS AND DENTAL SIMULATION LAB UNDER SEPERATE CONTARCT

KEYED NOTES - EQUIPMENT AND FURNISHINGS

(#)	Description:	Comments:
01	FLAT PANEL TV/ MONITOR	SEPARATE TECH. CONTRACT
02	MOTORIZED PROJECTION SCREEN	SEPARATE TECH. CONTRACT
03	CEILING MOUNTED PROJECTOR	SEPARATE TECH. CONTRACT
04	PATIENTS ROOM MONITOR - WALL MOUNTED	
05	A/V LECTERN	SEPARATE TECH. CONTRACT
06	COMPUTER TABLE WITH INTEGRAL POWER/DATA	CHAIRS - OWNER FURNISH OWNER INSTAL
07	SEMINAR TABLE WITH INTEGRAL POWER/DATA	CHAIRS - OWNER FURNISH OWNER INSTAL
08	EXISTING SHADING DEVICES TO REMAIN	EXISTING TO REMAIN
09	HOSPITAL SIMULATION BED	OWNER FURNISH OWNER INSTAL
10	BUILT IN BED HEADWALL - FULL HEIGHT	DETAIL SHEET A700
11	BUILT IN BED HEADWALL - HALF HEIGHT	DETAIL SHEET A700
12	CUBICLE CURTAIN ON BUILT-IN TRACK	BY CONTRACTOR
13	WASHER	OWNER FURNISH OWNER INSTAL
14	DRYER	OWNER FURNISH OWNER INSTAL
15	FRIDGE	OWNER FURNISH OWNER INSTAL
16	CRASH CARTS	OWNER FURNISH
17	FIRE EXTINGUISHER AND CABINET	BY CONTRACTOR UNLESS EXISTING
18	SOAP DISPENSER	OWNER FURNISH OWNER INSTAL
19	PAPER TOWEL DISPENSER	OWNER FURNISH OWNER INSTAL
20	DOUBLE LOCKERS	OWNER FURNISH OWNER INSTAL
21	MOVABLE CLOTHES RACK	OWNER FURNISH OWNER INSTAL
22	BUILT-IN WALL FILTRINE WATER BOTTLE FILING STATION	BY CONTRACTOR
23	MOBILE INSTRUCTORS DESK	OWNER FURNISH, CONTRACTOR PROVIDE FLOOR POWER OUTLET

GENERAL NOTES:

1. THE CONTRACTOR IS TO FIELD VERIFY ALL DIMENSIONS AND REPORT ANY DISCREPANCIES TO THE ARCHITECT.
2. ALL INTERIOR METAL STUD PARTITION ARE DIMENSIONED TO FACE OF STUD (UNLESS IDENTIFIED AS CLEAR DIMENSION)
3. ALL PARTITION WALLS EXTEND TO STRUCTURE ABOVE UNLESS NOTED OTHERWISE
4. FOR ACOUSTICAL REASONS WALLS SHALL EXTEND TO STRUCTURE ABOVE AND SEAL TIGHT AS SHOWN ON REFLECTED CEILING PLANS.
5. THE CONTRACTOR SHALL PROVIDE ALL BLOCKING REQUIRED TO ANCHOR ALL WALL OR CEILING MOUNTED ITEMS, INCLUDING BUT NOT LIMITED TO CASEWORK, MILLWORK, DOORSTOPS & EQUIPMENT.
6. THE CONTRACTOR SHALL CONFIRM AND COORDINATE ALL MECHANICAL, ELECTRICAL, AND PLUMBING ITEMS.
7. PROVIDE WALL FURRING AS REQUIRED TO ENCLOSE ANY INCIDENTAL ENGINEERING ELEMENTS NOT SHOWN - SEE ENGINEERING DRAWINGS.
8. PROVIDE CORNER GUARDS AT ALL OUTSIDE CORNERS AS SHOWN 48" HIGH
9. EQUIPMENT LABELED ON ENLARGED FLOOR PLANS.

LEGEND:

- EXISTING EXTERNAL WALL
- EXISTING INTERNAL METAL STUD
- NEW INTERNAL PARTITION
- EXISTING STEEL BEAM BELOW
- PARTITION TYPE TAG SEE SHEET A400
- NEW DOOR TAG SEE SHEET A600
- INTERNAL WINDOW TAG
- EQUIPMENT TAG
- DETAIL DRAWING TAGS
- NO WORK — HATCHED SPACES TO REMAIN - NO WORK PROPOSED
- CORNER GUARDS

Third Floor - Phase 2 Program

No.	Space Name	Net Area	Gross Area	Occupancy Type	Function of Space	Occupancy Load	Calculated No. of Occ.	No. of Occ.
300	3rd Floor Corridor	1004.0	1004.0	support space		1/0 sf	#DIV 0!	#DIV 0!
300	Elev. Lobby	159.3	159.3	support space		1/0 sf	#DIV 0!	#DIV 0!
308	Dental Simulation Lab	1374.9	1374.9	BUSINESS	Educational vocational room	1/50 sf	27.5	28
309	Mech.	46.4	46.4	BUSINESS		1/300 sf	0.2	1
310	Dental Open Space	446.1	446.1	BUSINESS	Educational vocational room	1/50 sf	8.9	9
310	Hallway	288.5	288.5	support space		1/0 sf	#DIV 0!	#DIV 0!
311	Storage	61.4	68.9	BUSINESS		1/300 sf	0.2	1
312	Bay 1	137.8	137.8	BUSINESS	Educational vocational room	1/50 sf	2.8	3
313	Bay 2 - DEMO	264.6	264.6	BUSINESS	Educational vocational room	1/50 sf	5.3	6
314	Bay 3	127.7	135.2	BUSINESS	Educational vocational room	1/50 sf	2.7	3
315	Bay 4	127.7	135.2	BUSINESS	Educational vocational room	1/50 sf	2.7	3
316	Bay 5	132.2	144.9	BUSINESS	Educational vocational room	1/50 sf	2.9	3
317	Bay 6	153.4	167.2	BUSINESS	Educational vocational room	1/50 sf	3.3	4
318	Breakroom/ Meetings	302.2	323.8	BUSINESS	Educational vocational room	1/50 sf	6.5	7
319	Case Study Room	506.0	506.0	BUSINESS	Classroom	1/20 sf	25.3	26
320	Women's Locker	251.6	265.3	BUSINESS	Educational vocational room	1/50 sf	5.3	6
321	Men's Locker	128.1	128.1	BUSINESS	Educational vocational room	1/50 sf	2.6	3
322	Mech.	79.7	87.5	BUSINESS		1/300 sf	0.3	1
323	Storage	79.7	87.5	BUSINESS		1/300 sf	0.3	1
324	Dental Equip. Storage	200.4	200.4	BUSINESS		1/300 sf	0.7	1
325	Mech.	42.3	47.8	BUSINESS		1/300 sf	0.2	1
326	Nursing Lab #3	1209.2	1209.2	BUSINESS	Educational vocational room	1/50 sf	24.2	25
327	Storage	331.5	331.5	BUSINESS		1/300 sf	1.1	2
328	Laundry	183.0	195.9	BUSINESS		1/100 sf	2.0	2
	TOTAL SF:	7638 sq ft	7756 sq ft				TOTAL:	136

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BRUCE F. BOWMAN REGISTERED ARCHITECT 5951

6.7.24

NOT FOR CONSTRUCTION

Cape Fear Community College
Health and Human Services Building
Interior Renovation – Phase Two

319 N 3rd Stree, Wilmington, North Carolina 28401

SCO # 23-27149-01A NCCCS # 2772

REV.	DATE	DESCRIPTION
D	06/07/24	CD Submittal
C	5/24/24	CD Estimating Set
B	3/13/24	DD Submittal
A	2/16/24	DD Estimating Set
NO.	DATE	ISSUE NOTE

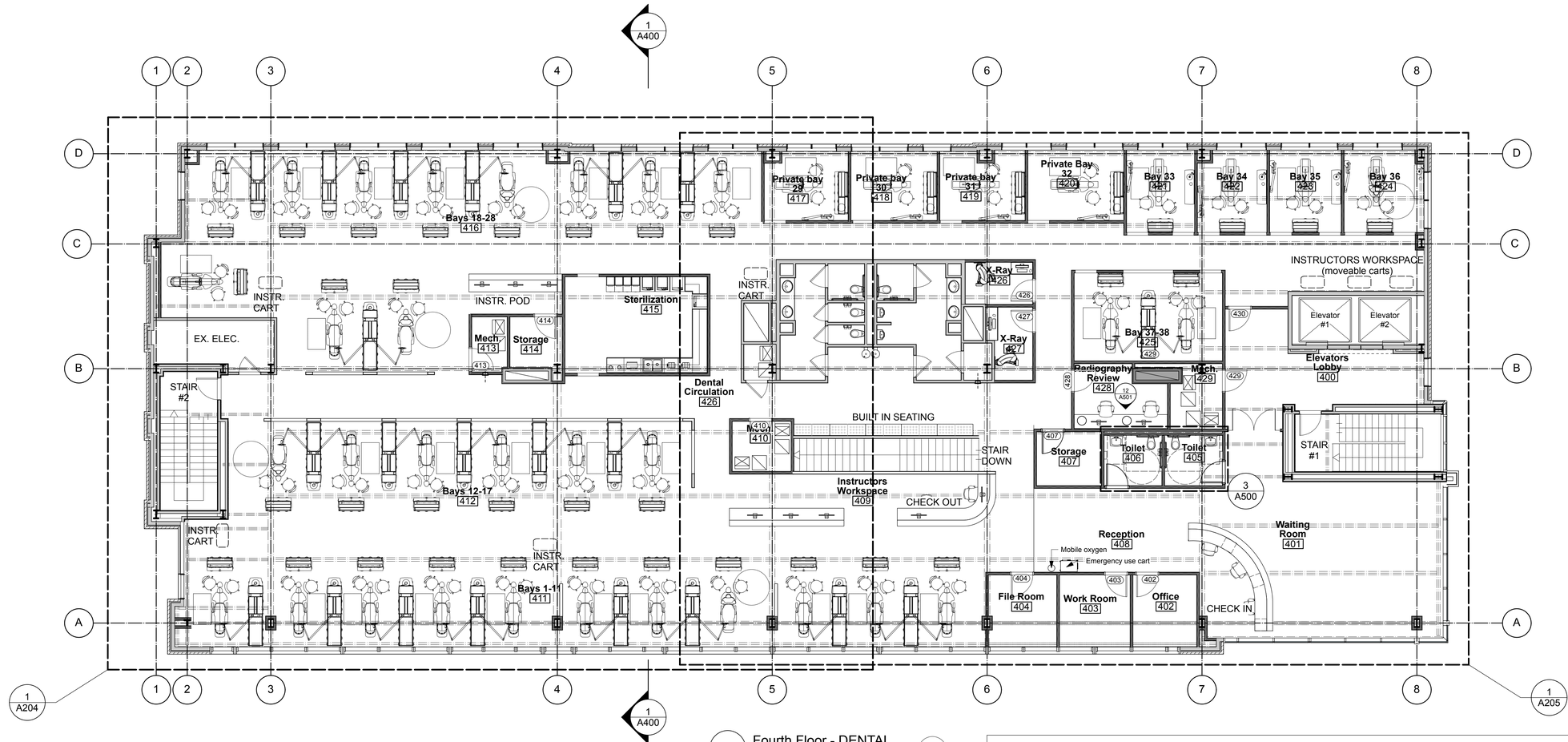
Project Manager	Drawn By: M. PRICE
Date: 06-07-2024	Reviewed By: B. BOWMAN
Project ID	

Sheet Title

Third Floor Renovation

Sheet No.

A103



1 Fourth Floor - DENTAL
Scale: 1/8" = 1'-0"

0 5 10 15 20 25 30 FT

NOTE: ALL DENTAL EQUIPMENT UNDER SEPERATE CONTARCT

KEYED NOTES - EQUIPMENT AND FURNISHINGS

#	Description:	Comments:
01	FLAT PANEL TV/ MONITOR	SEPARATE TECH. CONTRACT
02	MOTORIZED PROJECTION SCREEN	SEPARATE TECH. CONTRACT
03	CEILING MOUNTED PROJECTOR	SEPARATE TECH. CONTRACT
04	PATIENTS ROOM MONITOR - WALL MOUNTED	
05	A/V LECTERN	SEPARATE TECH. CONTRACT
06	COMPUTER TABLE WITH INTEGRAL POWER/DATA	CHAIRS - OWNER FURNISH OWNER INSTAL
07	SEMINAR TABLE WITH INTEGRAL POWER/DATA	CHAIRS - OWNER FURNISH OWNER INSTAL
08	EXISTING SHADING DEVICES TO REMAIN	EXISTING TO REMAIN
09	HOSPITAL SIMULATION BED	OWNER FURNISH OWNER INSTAL
10	BUILT IN BED HEADWALL - FULL HEIGHT	DETAIL SHEET A700
11	BUILT IN BED HEADWALL - HALF HEIGHT	DETAIL SHEET A700
12	CUBICLE CURTAIN ON BUILT-IN TRACK	BY CONTRACTOR
13	WASHER	OWNER FURNISH OWNER INSTAL
14	DRYER	OWNER FURNISH OWNER INSTAL
15	FRIDGE	OWNER FURNISH OWNER INSTAL
16	CRASH CARTS	OWNER FURNISH
17	FIRE EXTINGUISHER AND CABINET	BY CONTRACTOR UNLESS EXISTING
18	SOAP DISPENSER	OWNER FURNISH OWNER INSTAL
19	PAPER TOWEL DISPENSER	OWNER FURNISH OWNER INSTAL
20	DOUBLE LOCKERS	OWNER FURNISH OWNER INSTAL
21	MOVABLE CLOTHES RACK	OWNER FURNISH OWNER INSTAL
22	BUILT-IN WALL FILTRINE WATER BOTTLE FILING STATION	BY CONTRACTOR
23	MOBILE INSTRUCTORS DESK	OWNER FURNISH, CONTRACTOR PROVIDE FLOOR POWER OUTLET

GENERAL NOTES:

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8. PROVIDE CORNER GUARDS AT ALL OUTSIDE CORNERS AS SHOWN 48" HIGH
9. EQUIPMENT LABELED ON ENLARGED FLOOR PLANS.

LEGEND:

- EXISTING EXTERNAL WALL
- EXISTING INTERNAL METAL STUD
- NEW INTERNAL PARTITION
- EXISTING STEEL BEAM BELOW
- PARTITION TYPE TAG SEE SHEET A400
- NEW DOOR TAG SEE SHEET A600
- INTERNAL WINDOW TAG
- EQUIPMENT TAG
- DETAIL DRAWING TAGS
- NO WORK — HATCHED SPACES TO REMAIN - NO WORK PROPOSED
- CORNER GUARDS

Fourth Floor - Phase 2 Dental Program

No.	Space Name	Net Area	Gross Area	Occupancy Type	Function of Space	Occupancy Load	Calculated No. of Occ.	No. of Occ.
400	Elevators Lobby	284.8	526.8	BUSINESS		1/100 sf	5.3	6
401	Waiting Room	510.6	510.6	BUSINESS	Waiting room	1/15 sf	34.0	35
402	Office	92.5	92.5	BUSINESS		1/100 sf	0.9	1
403	Work Room	98.8	110.1	BUSINESS		1/100 sf	1.1	2
404	File Room	94.4	105.6	BUSINESS		1/100 sf	1.1	2
405	Toilet	57.1	57.1	BUSINESS		1/100 sf	0.6	1
406	Toilet	57.1	57.1	BUSINESS		1/100 sf	0.6	1
407	Storage	67.7	74.5	BUSINESS		1/300 sf	0.2	1
408	Reception	563.5	563.5	BUSINESS		1/100 sf	5.6	6
409	Instructors Workspace	248.5	248.5	BUSINESS		1/100 sf	2.5	3
410	Mech.	57.2	63.5	BUSINESS		1/300 sf	0.2	1
411	Bays 1-11	1472.5	1472.5	BUSINESS	Educational vocational room	1/50 sf	29.5	30
412	Bays 12-17	859.1	859.1	BUSINESS	Educational vocational room	1/50 sf	17.2	18
413	Mech.	37.3	42.7	BUSINESS		1/300 sf	0.1	1
414	Storage	53.6	53.6	BUSINESS	Educational vocational room	1/300 sf	0.2	1
415	Sterilization	270.9	270.9	BUSINESS		1/100 sf	2.7	3
416	Bays 18-28	1530.0	1530.0	BUSINESS	Educational vocational room	1/50 sf	30.6	31
417	Private bay 29	114.9	114.9	BUSINESS	Educational vocational room	1/50 sf	2.3	3
418	Private bay 30	115.7	128.4	BUSINESS	Educational vocational room	1/50 sf	2.6	3
419	Private bay 31	111.2	121.1	BUSINESS	Educational vocational room	1/50 sf	2.4	3
420	Private Bay 32	131.2	144.8	BUSINESS	Educational vocational room	1/50 sf	2.9	3
421	Bay 33	114.3	114.3	BUSINESS	Educational vocational room	1/50 sf	2.3	3
422	Bay 34	107.2	118.3	BUSINESS	Educational vocational room	1/50 sf	2.4	3
423	Bay 35	120.8	120.8	BUSINESS	Educational vocational room	1/50 sf	2.4	3
424	Bay 36	135.2	135.2	BUSINESS	Educational vocational room	1/50 sf	2.7	3
425	Bay 37-38	255.0	255.0	BUSINESS	Educational vocational room	1/50 sf	5.1	6
426	Dental Circulation	2704.6	2704.6	support space		1/0 sf	#DIV 0!	#DIV 0!
426	X-Ray	54.9	61.9	BUSINESS		1/100 sf	0.6	1
427	X-Ray	60.2	60.2	BUSINESS		1/100 sf	0.6	1
428	Radiography Review	115.8	115.8	BUSINESS		1/100 sf	1.2	2
429	Mech.	54.9	54.9	BUSINESS		1/300 sf	0.2	1
	TOTAL SF:	10552 sq ft	10889 sq ft				TOTAL:	178

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BRUCE F. BOWMAN — REGISTERED ARCHITECT — 5951 — 6.7.24

NOT FOR CONSTRUCTION

Cape Fear Community College
Health and Human Services Building
Interior Renovation – Phase Two
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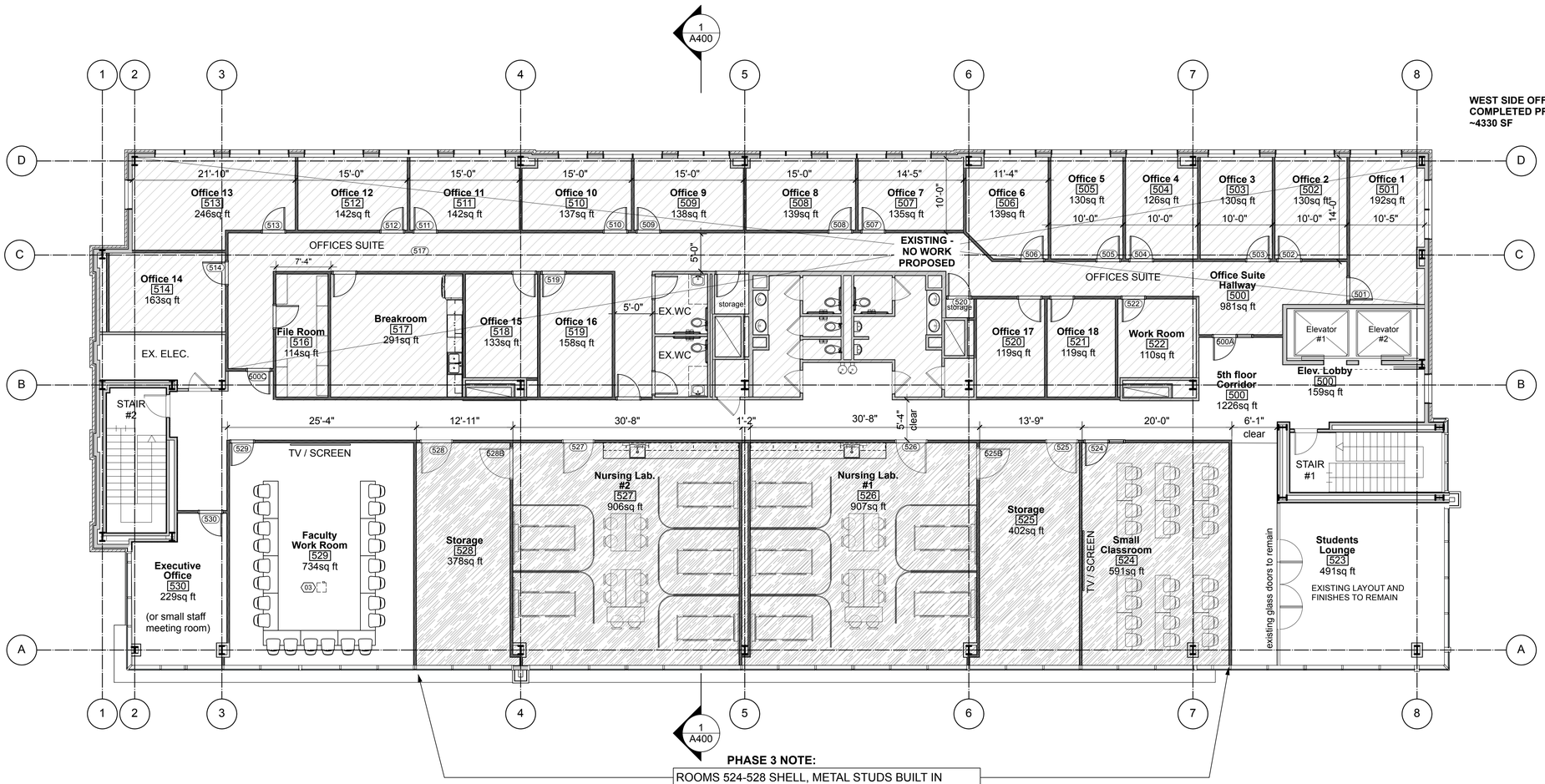
Project Manager	Drawn By: M. PRICE
Date: 06-07-2024	Reviewed By: B. BOWMAN
Project ID	

Sheet Title

Fourth Floor Renovation

Sheet No.

A104



WEST SIDE OFFICES SUITE COMPLETED PRIOR TO PHASE II. ~4330 SF

PHASE 3 NOTE:

ROOMS 524-528 SHELL, METAL STUDS BUILT IN PHASE 2. INSTALL DOORS IN PHASE 2. PROVIDE WATER CONNECTION TO FUTURE SINKS.

SPACES FIT-OUT, INTERNAL SHEETROCK, PAINT, MILLWORK, FURNITURE, FLOOR FINISHES TO BE COMPLETED AT LATER PHASE 3.

1 Fifth Floor - Renovation
Scale: 1/8" = 1'-0"

0 5 10 15 20 25 30 FT N

KEYED NOTES - EQUIPMENT AND FURNISHINGS

#	Description:	Comments:
01	FLAT PANEL TV/ MONITOR	SEPARATE TECH. CONTRACT
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04	PATIENTS ROOM MONITOR - WALL MOUNTED	
05	A/V LECTERN	SEPARATE TECH. CONTRACT
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07	SEMINAR TABLE WITH INTEGRAL POWER/DATA	CHAIRS - OWNER FURNISH OWNER INSTAL
08	EXISTING SHADING DEVICES TO REMAIN	EXISTING TO REMAIN
09	HOSPITAL SIMULATION BED	OWNER FURNISH OWNER INSTAL
10	BUILT IN BED HEADWALL - FULL HEIGHT	DETAIL SHEET A700
11	BUILT IN BED HEADWALL - HALF HEIGHT	DETAIL SHEET A700
12	CUBICLE CURTAIN ON BUILT-IN TRACK	BY CONTRACTOR
13	WASHER	OWNER FURNISH OWNER INSTAL
14	DRYER	OWNER FURNISH OWNER INSTAL
15	FRIDGE	OWNER FURNISH OWNER INSTAL
16	CRASH CARTS	OWNER FURNISH
17	FIRE EXTINGUISHER AND CABINET	BY CONTRACTOR UNLESS EXISTING
18	SOAP DISPENSER	OWNER FURNISH OWNER INSTAL
19	PAPER TOWEL DISPENSER	OWNER FURNISH OWNER INSTAL
20	DOUBLE LOCKERS	OWNER FURNISH OWNER INSTAL
21	MOVABLE CLOTHES RACK	OWNER FURNISH OWNER INSTAL
22	BUILT-IN WALL FILTRINE WATER BOTTLE FILING STATION	BY CONTRACTOR
23	MOBILE INSTRUCTORS DESK	OWNER FURNISH, CONTRACTOR PROVIDE FLOOR POWER OUTLET

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8. PROVIDE CORNER GUARDS AT ALL OUTSIDE CORNERS AS SHOWN 48" HIGH
9. EQUIPMENT LABELED ON ENLARGED FLOOR PLANS.

LEGEND:

- EXISTING EXTERNAL WALL
- EXISTING INTERNAL METAL STUD
- NEW INTERNAL PARTITION
- EXISTING STEEL BEAM BELOW
- PARTITION TYPE TAG SEE SHEET A400
- NEW DOOR TAG SEE SHEET A600
- INTERNAL WINDOW TAG
- EQUIPMENT TAG
- DETAIL DRAWING TAGS
- HATCHED SPACES TO REMAIN - NO WORK PROPOSED
- CORNER GUARDS

Fifth Floor - Phase 2 & future fit-out Phase 3

No.	Space Name	Net Area	Gross Area	Occupancy Type	Function of Space	Occupancy Load	Calculated No. of Occ.	No. of Occ.
500	5th floor Corridor	1226.4	1226.4	support space		1/100 sf	12.3	13
500	Elev. Lobby	159.3	159.3	support space		1/0 sf	#DIV 0!	#DIV 0!
523	Students Lounge	491.0	491.0	BUSINESS	Lounge	1/15 sf	32.7	33
524	Small Classroom	591.2	591.2	BUSINESS	Classroom	1/20 sf	29.6	30
525	Storage	402.4	414.3	BUSINESS	Accessory	1/300 sf	1.3	2
526	Nursing Lab. #1	906.8	925.1	BUSINESS	Educational vocational room	1/50 sf	18.1	19
527	Nursing Lab. #2	906.3	906.3	BUSINESS	Educational vocational room	1/50 sf	18.1	19
528	Storage	377.6	395.4	BUSINESS	Accessory	1/300 sf	1.3	2
529	Faculty Work Room	733.8	733.8	BUSINESS	Meeting Room	1/15 sf	48.9	49
530	Executive Office	228.8	228.8	BUSINESS		1/100 sf	2.3	3
	TOTAL SF:	6024 sq ft	6072 sq ft				TOTAL:	170

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BRUCE F. BOWMAN REGISTERED ARCHITECT 5951 NORTH CAROLINA

6.7.24

NOT FOR CONSTRUCTION

Cape Fear Community College
Health and Human Services Building
Interior Renovation – Phase Two
319 N 3rd Stree, Wilmington, North Carolina 28401
NCCCS # 2772
SCO # 23-27149-01A

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NO.	DATE	ISSUE NOTE

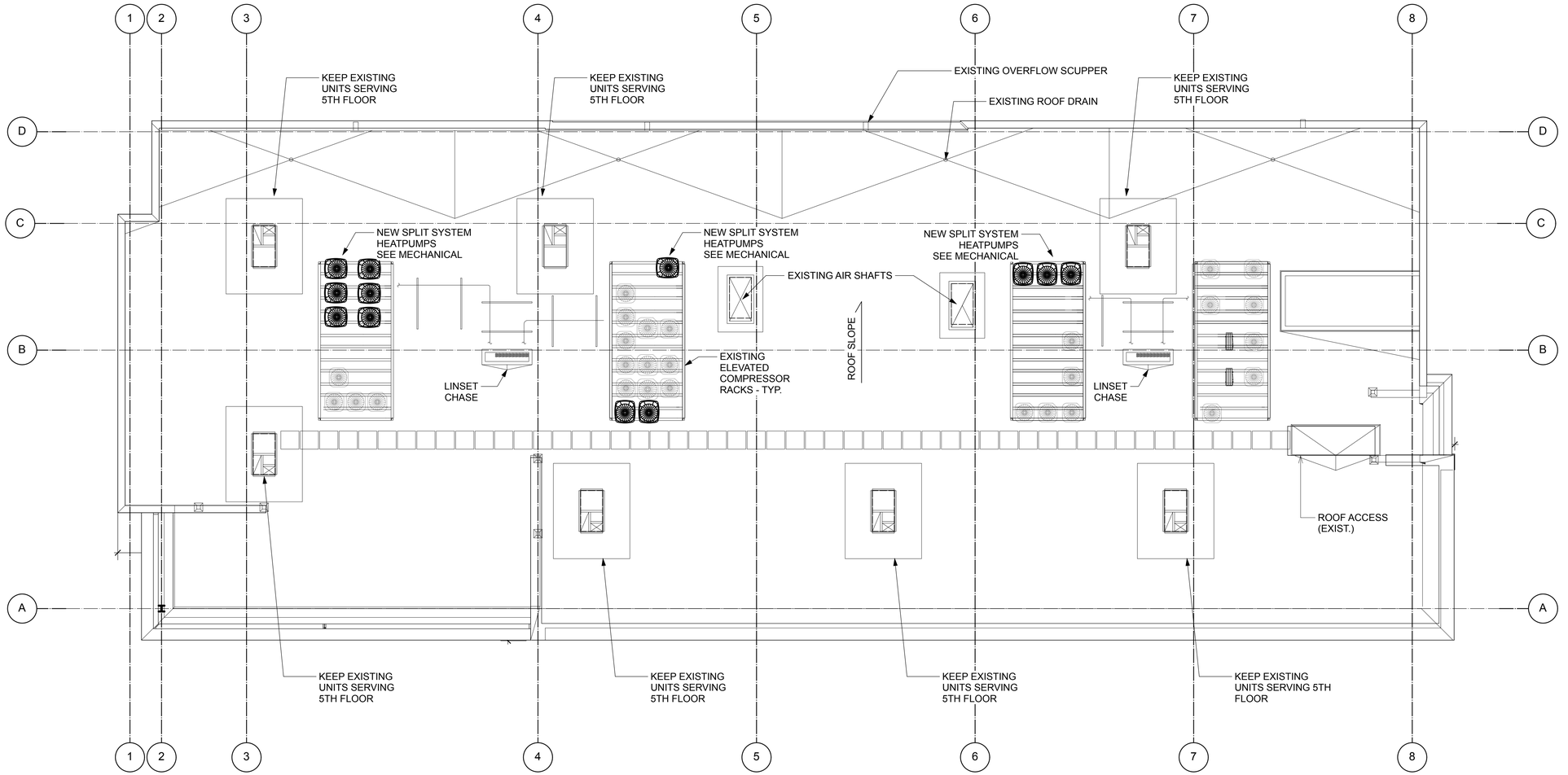
Project Manager	Drawn By M. PRICE
Date 06-07-2024	Reviewed By B. BOWMAN
Project ID	

Sheet Title

Fifth Floor Renovation

Sheet No.

A105



1 Roof Plan
Scale: 1/8" = 1'-0"

0 5 10 15 20 25 30 FT

N

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BRUCE F. BOWMAN REGISTERED ARCHITECT 5951 6.7.24

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Project Manager	Drawn By
	M. PRICE
Date	Reviewed By
06-07-2024	B. BOWMAN

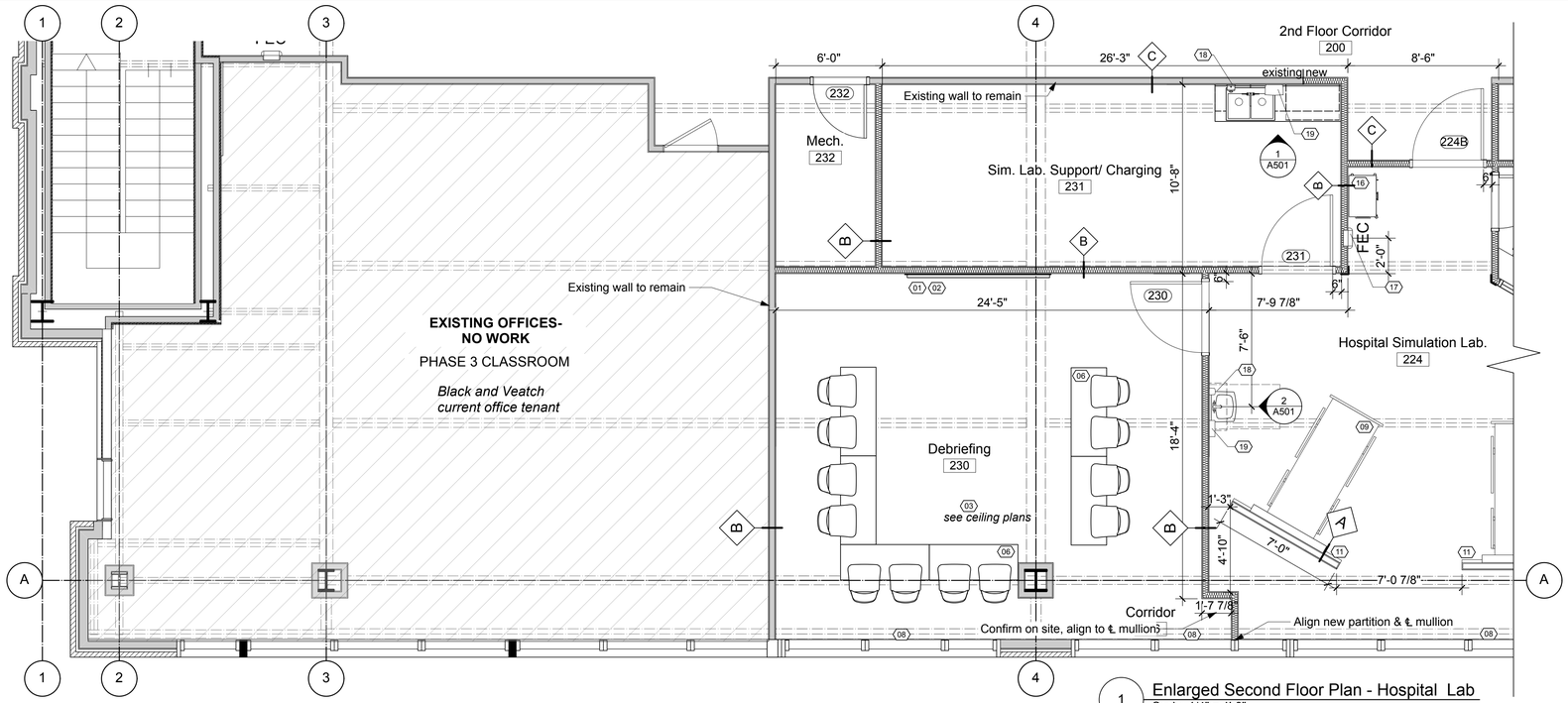
Project ID

Sheet Title

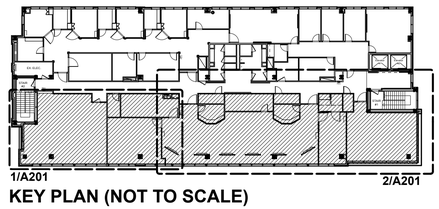
Roof Plan

Sheet No.

A106



1 Enlarged Second Floor Plan - Hospital Lab
Scale: 1/4" = 1'-0"
0 5 10 15 FT



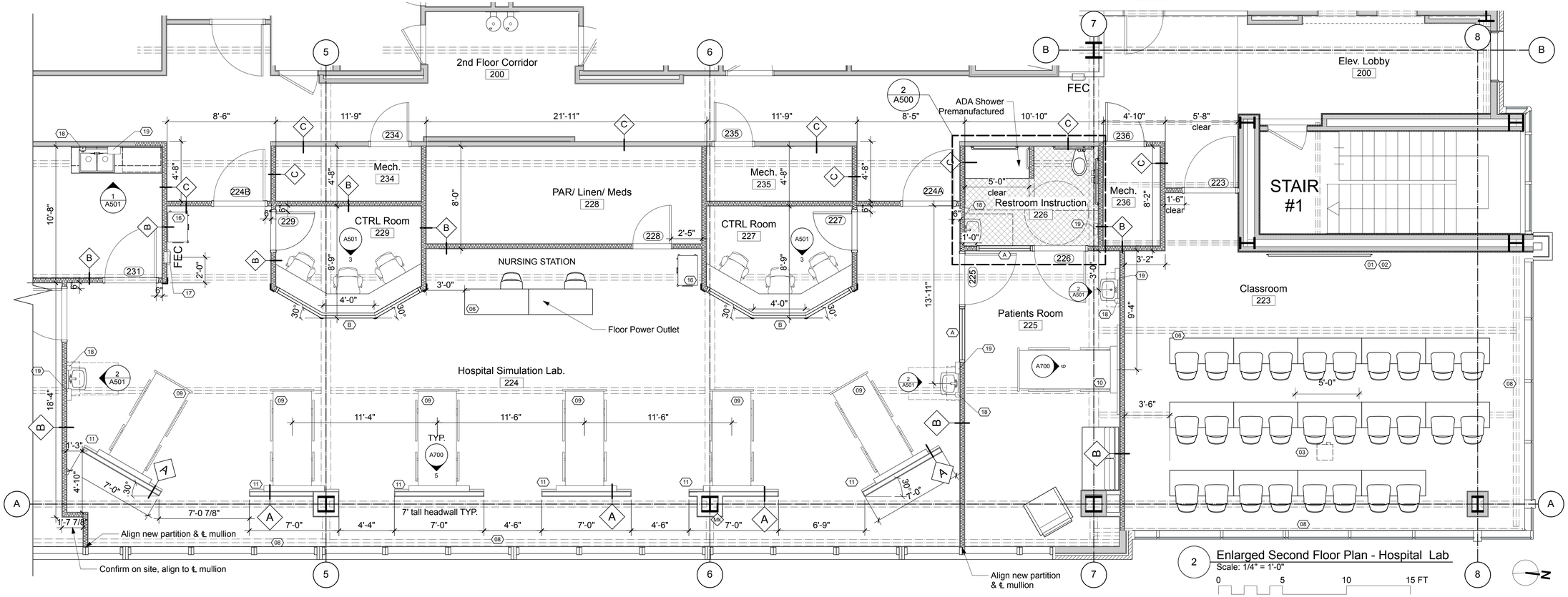
KEY PLAN (NOT TO SCALE)

GENERAL NOTES, KEYED TAGS AND LEGENDS - SEE PAGE A102

LEGEND:

- EXISTING EXTERNAL WALL
- EXISTING INTERNAL METAL STUD
- NEW INTERNAL PARTITION
- EXISTING STEEL BEAM BELOW
- PARTITION TYPE TAG SEE SHEET A400
- NEW DOOR TAG SEE SHEET A600
- INTERNAL WINDOW TAG
- EQUIPMENT TAG
- DETAIL DRAWING TAGS
- NO WORK — HATCHED SPACES TO REMAIN - NO WORK PROPOSED
- CORNER GUARDS

1" CEMENT FLOOR TOPPTING
2% MAX SLOPE TO SHOWER



2 Enlarged Second Floor Plan - Hospital Lab
Scale: 1/4" = 1'-0"
0 5 10 15 FT

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BRUCE F. BOWMAN REGISTERED ARCHITECT 5951

7.24

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NO.	DATE	ISSUE NOTE

Project Manager	Drawn By: M. PRICE
Date: 06-07-2024	Reviewed By: B. BOWMAN
Project ID	

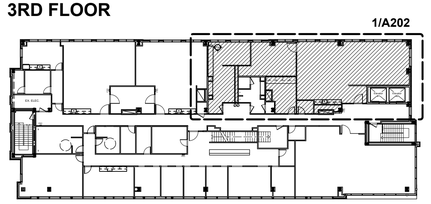
Sheet Title

Enlarged Second Floor Plan - Hospital Lab

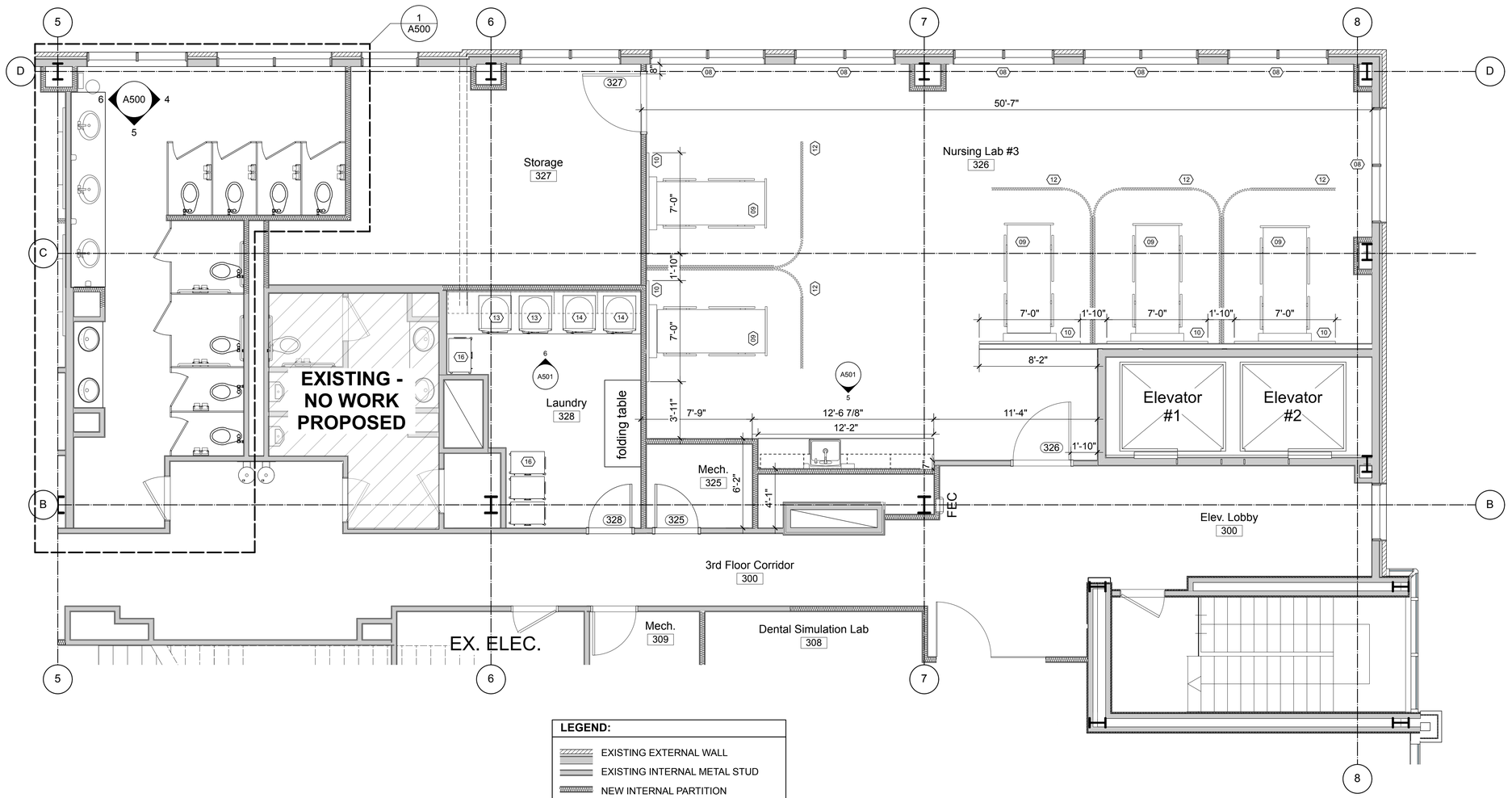
Sheet No.

A201

3RD FLOOR



KEY PLAN (NOT TO SCALE)



LEGEND:

- EXISTING EXTERNAL WALL
- EXISTING INTERNAL METAL STUD
- NEW INTERNAL PARTITION
- EXISTING STEEL BEAM BELOW
- PARTITION TYPE TAG SEE SHEET A400
- NEW DOOR TAG SEE SHEET A600
- INTERNAL WINDOW TAG
- EQUIPMENT TAG
- DETAIL DRAWING TAGS
- HATCHED SPACES TO REMAIN - NO WORK PROPOSED
- CORNER GUARDS

GENERAL NOTES, KEYED TAGS AND LEGENDS - SEE PAGE A103

1 Enlarged Third Floor Plan - Nursing Lab
Scale: 1/4" = 1'-0"

0 5 10 15 FT

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BRUCE F. BOWMAN REGISTERED ARCHITECT 5951 NORTH CAROLINA

6.7.24

NOT FOR CONSTRUCTION

Cape Fear Community College
Health and Human Services Building
Interior Renovation – Phase Two

319 N 3rd Stree, Wilmington, North Carolina 28401

NCCCS # 2772

SCO # 23-27149-01A

REV.	DATE	DESCRIPTION
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Project Manager	Drawn By
	M. PRICE
Date	Reviewed By
06-07-2024	B. BOWMAN

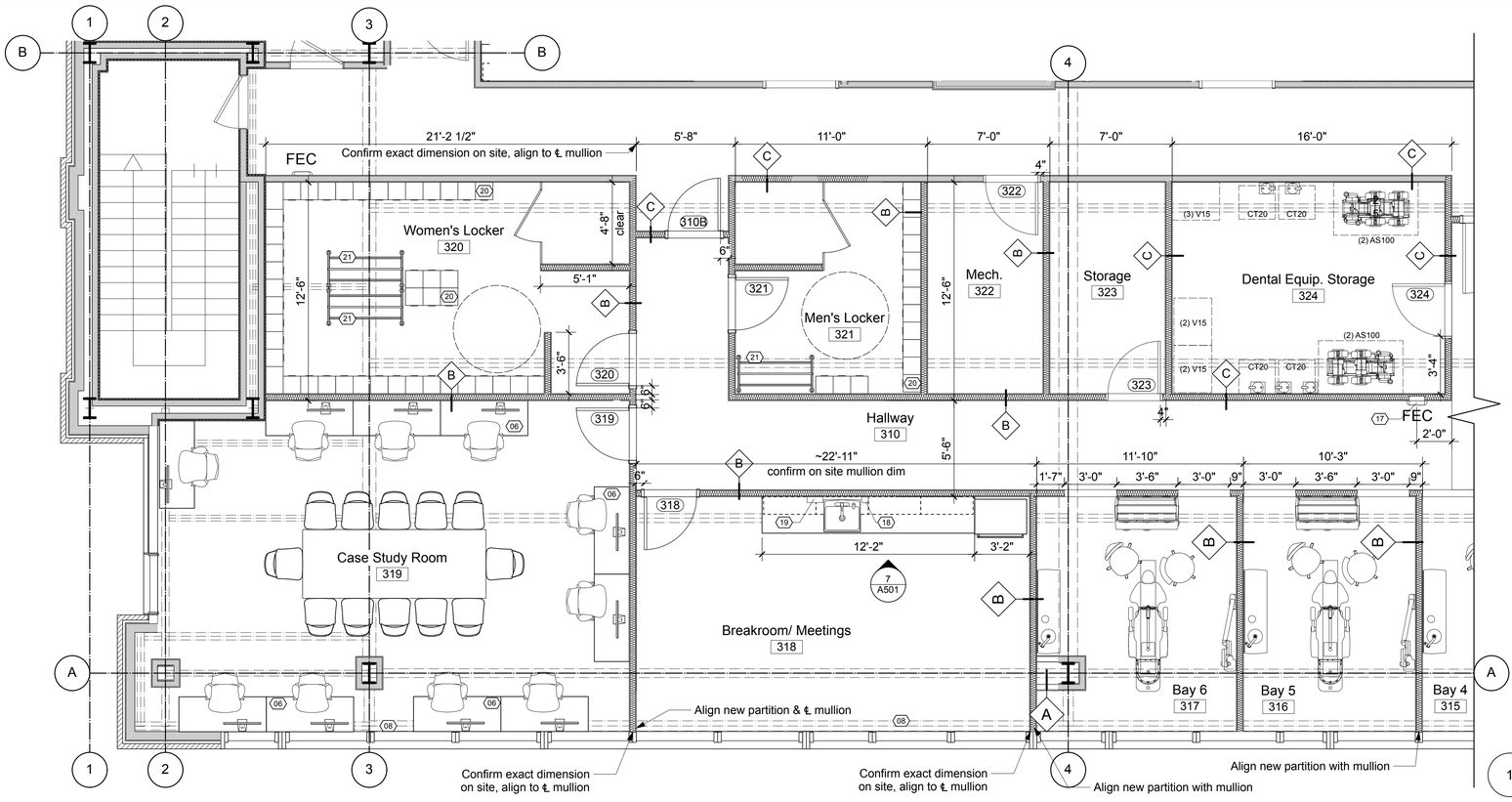
Project ID

Sheet Title

Enlarged Third Floor Plan - Nursing Lab

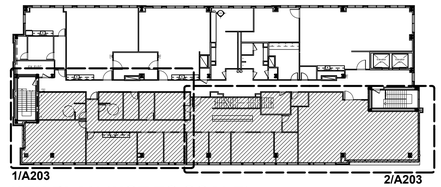
Sheet No.

A202



1 Enlarged Third Floor Plan - Dental
Scale: 1/4" = 1'-0"
0 5 10 15 FT

3RD FLOOR



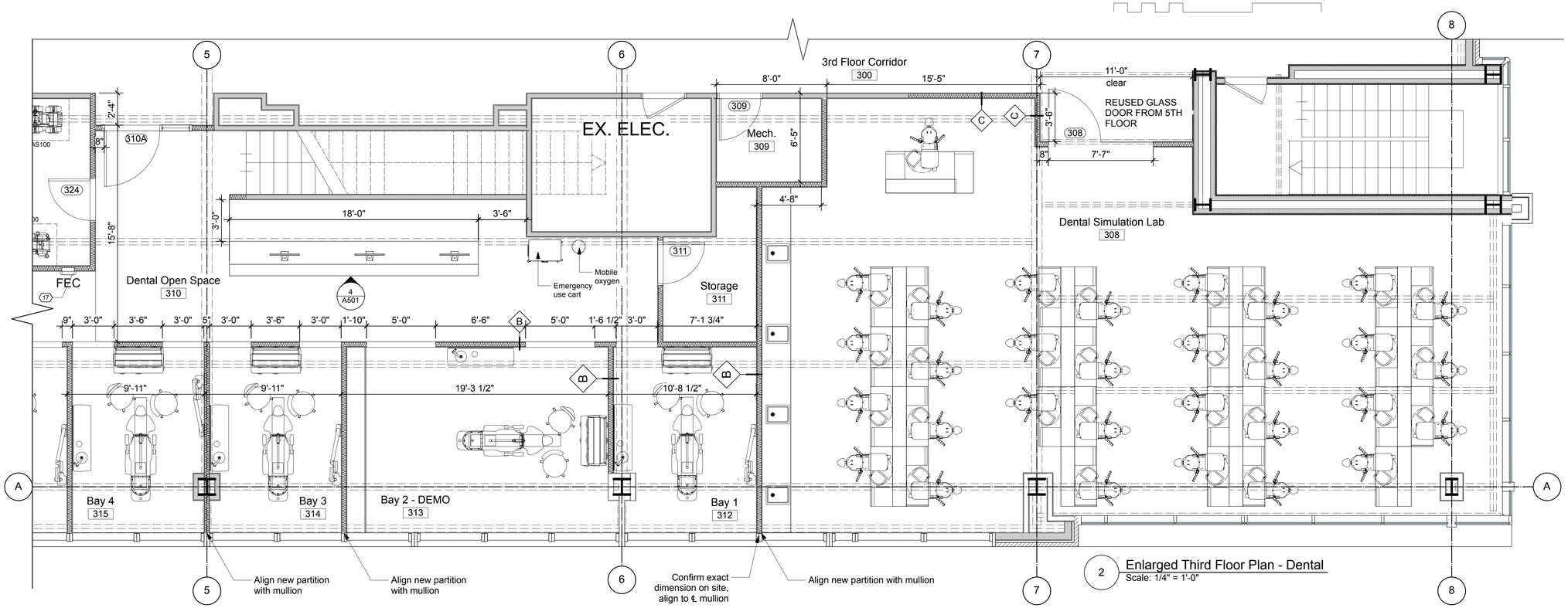
KEY PLAN (NOT TO SCALE)

GENERAL NOTES, KEYED TAGS AND LEGENDS - SEE PAGE A103

SEE ATTACHED REFERENCE DRAWINGS FOR ADDITIONAL INFORMATION RELATED TO OWNERS DENTAL EQUIPMENT PRVIDER, HENRY SCHEIN/ADEC.

LEGEND:

- EXISTING EXTERNAL WALL
- EXISTING INTERNAL METAL STUD
- NEW INTERNAL PARTITION
- EXISTING STEEL BEAM BELOW
- PARTITION TYPE TAG SEE SHEET A400
- NEW DOOR TAG SEE SHEET A600
- INTERNAL WINDOW TAG
- EQUIPMENT TAG
- DETAIL DRAWING TAGS
- NO WORK — HATCHED SPACES TO REMAIN - NO WORK PROPOSED
- CORNER GUARDS



2 Enlarged Third Floor Plan - Dental
Scale: 1/4" = 1'-0"

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BRUCE F. BOWMAN REGISTERED ARCHITECT 5951 NORTH CAROLINA 6.7.24

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Cape Fear Community College
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Interior Renovation – Phase Two
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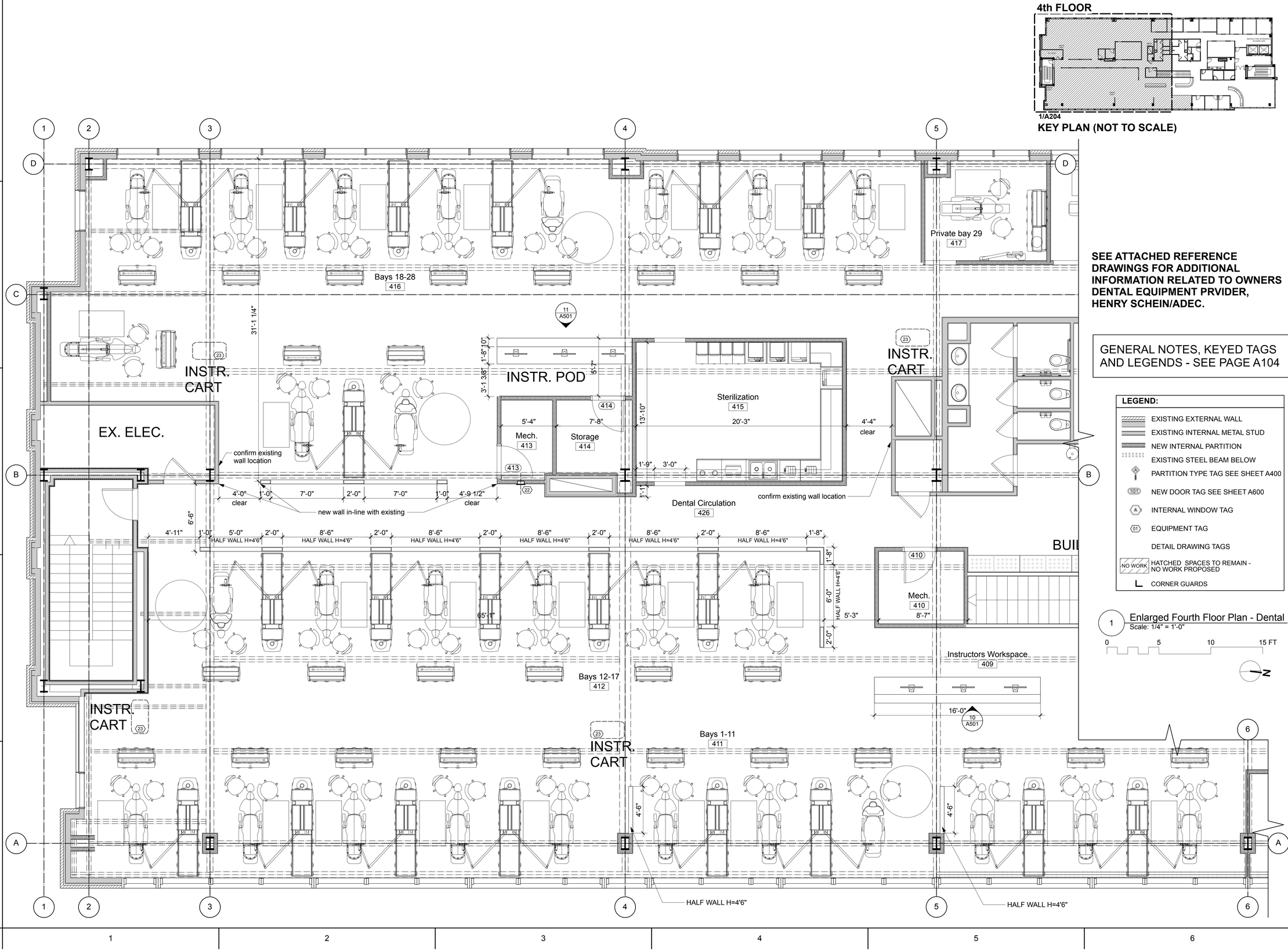
Project Manager	Drawn By: M. PRICE
Date: 06-07-2024	Reviewed By: B. BOWMAN
Project ID	

Sheet Title

Enlarged Third Floor Plan - Dental

Sheet No.

A203



4th FLOOR

1/A204

KEY PLAN (NOT TO SCALE)

SEE ATTACHED REFERENCE DRAWINGS FOR ADDITIONAL INFORMATION RELATED TO OWNERS DENTAL EQUIPMENT PRVIDER, HENRY SCHEIN/ADEC.

GENERAL NOTES, KEYED TAGS AND LEGENDS - SEE PAGE A104

LEGEND:

- EXISTING EXTERNAL WALL
- EXISTING INTERNAL METAL STUD
- NEW INTERNAL PARTITION
- EXISTING STEEL BEAM BELOW
- PARTITION TYPE TAG SEE SHEET A400
- NEW DOOR TAG SEE SHEET A600
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1 Enlarged Fourth Floor Plan - Dental
Scale: 1/4" = 1'-0"

0 5 10 15 FT

N

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Project Manager	Drawn By: M. PRICE
Date: 06-07-2024	Reviewed By: B. BOWMAN
Project ID	

Sheet Title

Enlarged Fourth Floor Plan - Dental

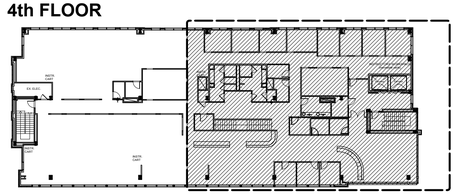
Sheet No.

A204

GENERAL NOTES, KEYED TAGS AND LEGENDS - SEE PAGE A104

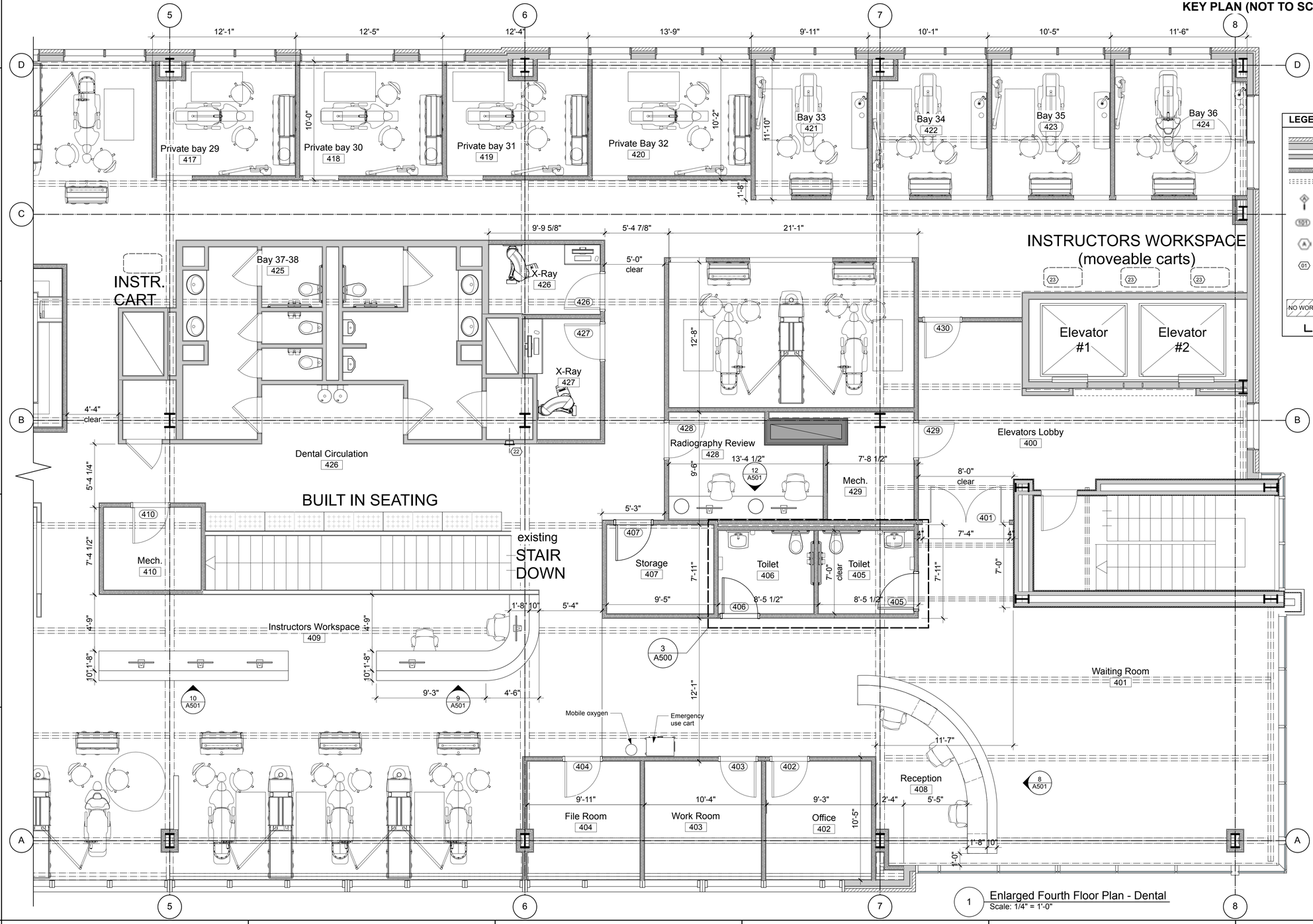
SEE ATTACHED REFERENCE DRAWINGS FOR ADDITIONAL INFORMATION RELATED TO OWNERS DENTAL EQUIPMENT PRVIDER, HENRY SCHEIN/ADEC.

4th FLOOR



1/A205

KEY PLAN (NOT TO SCALE)



1 Enlarged Fourth Floor Plan - Dental
Scale: 1/4" = 1'-0"

LEGEND:

- EXISTING EXTERNAL WALL
- EXISTING INTERNAL METAL STUD
- NEW INTERNAL PARTITION
- EXISTING STEEL BEAM BELOW
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- NEW DOOR TAG SEE SHEET A600
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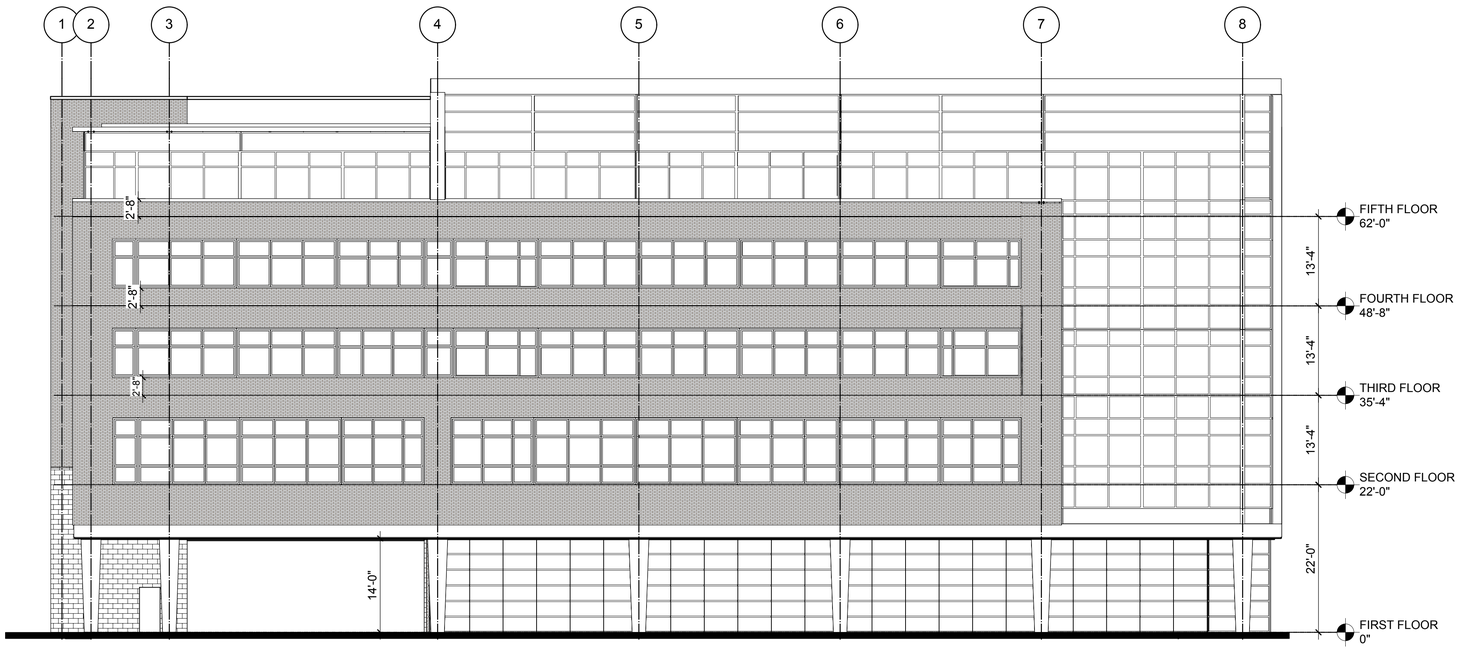
Project Manager	Drawn By: M. PRICE
Date: 06-07-2024	Reviewed By: B. BOWMAN
Project ID	

Sheet Title

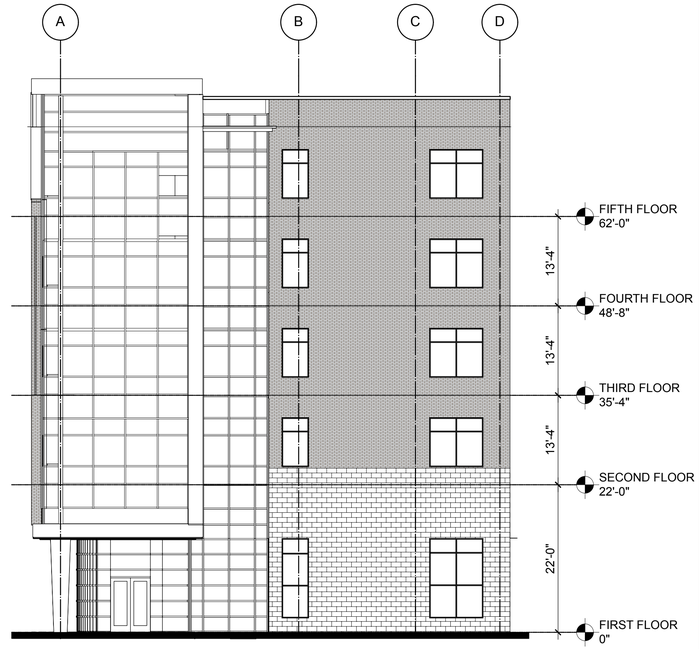
Enlarged Fourth Floor Plan - Dental

Sheet No.

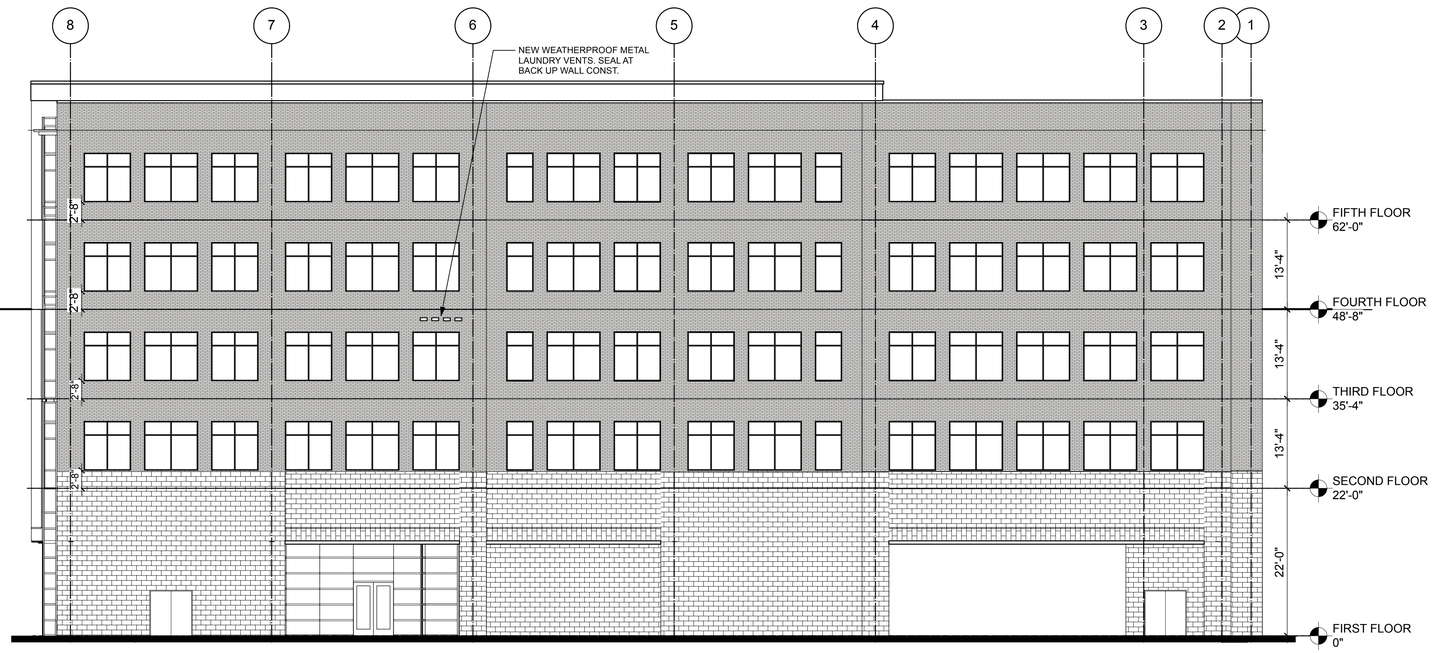
A205



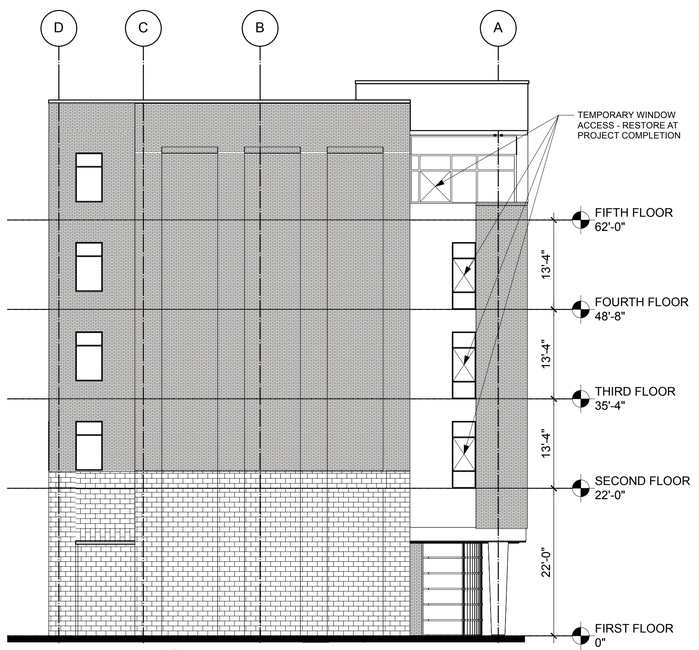
1 EAST ELEVATION
Scale: 3/32" = 1'-0"



2 NORTH ELEVATION
Scale: 3/32" = 1'-0"



3 WEST ELEVATION
Scale: 3/32" = 1'-0"



4 SOUTH ELEVATION
Scale: 3/32" = 1'-0"

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WILMINGTON, N.C.

BRUCE F. BOWMAN
REGISTERED ARCHITECT
5951
NORTH CAROLINA
6-7-24

NOT FOR CONSTRUCTION

Cape Fear Community College
Health and Human Services Building
Interior Renovation – Phase Two
319 N 3rd Stree, Wilmington, North Carolina 28401

SCO # 23-27149-01A NCCCS # 2772

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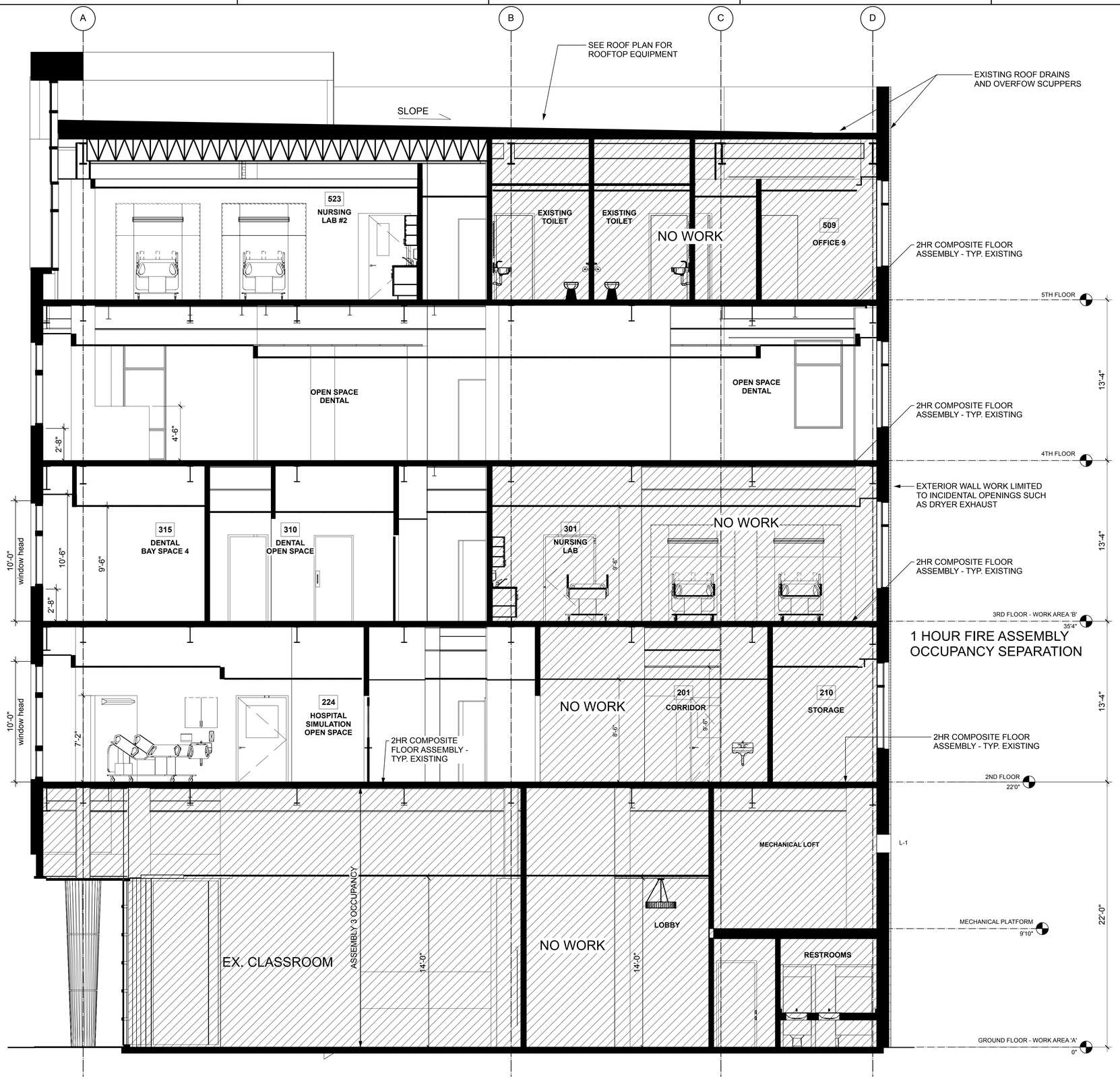
Project Manager	Drawn By: M. PRICE
Date: 06-07-2024	Reviewed By: B. BOWMAN

Project ID

Sheet Title
Elevations

Sheet No.
A300



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

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Interior Renovation – Phase Two
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SCO # 23-27149-01A NCCCS # 2772

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NO.	DATE	ISSUE NOTE

Project Manager	Drawn By
	M. PRICE
Date	Reviewed By
06-07-2024	B. BOWMAN

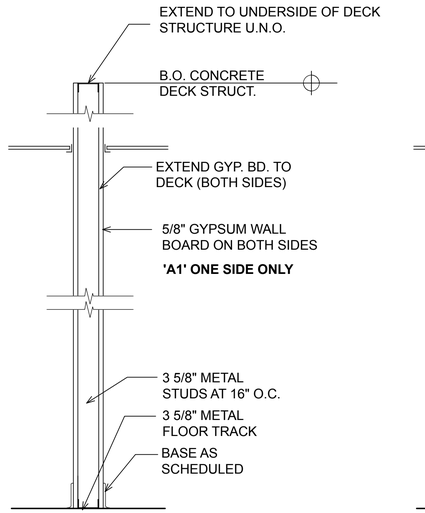
Project ID

Sheet Title

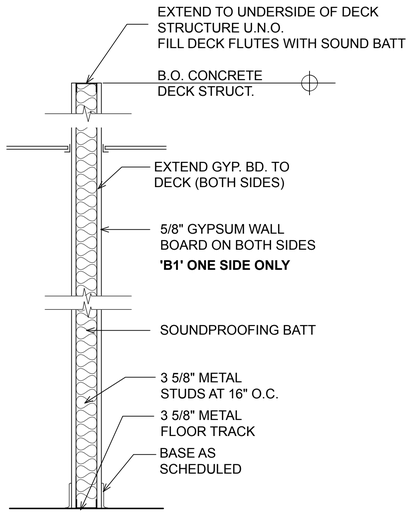
Building Section, Section Details

Sheet No.

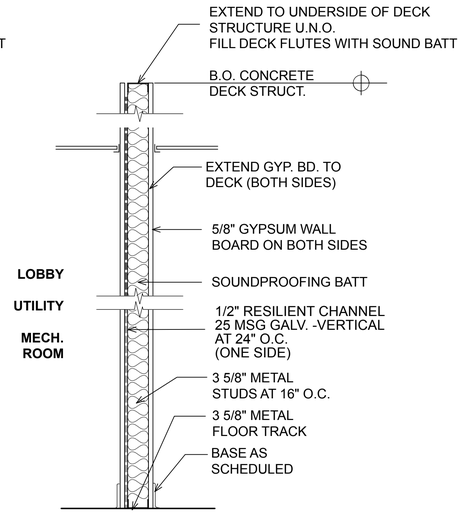
A400



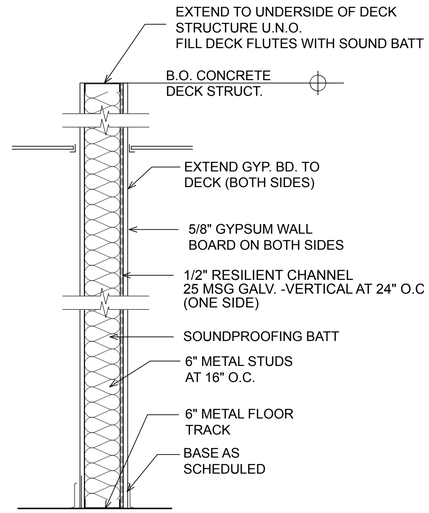
WALL ASSEMBLY TYPE 'A'



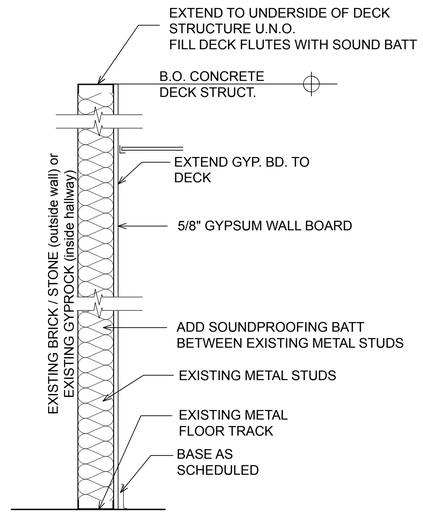
WALL ASSEMBLY TYPE 'B' & 'B1'



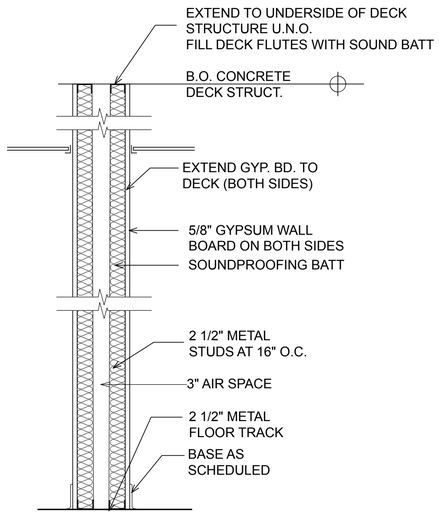
WALL ASSEMBLY TYPE 'C'



WALL ASSEMBLY TYPE 'D'



WALL ASSEMBLY TYPE 'E'
existing walls



WALL ASSEMBLY TYPE 'F'
CHASE WALL

1 PARTITION TYPES
Scale: 1" = 1'-0"

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BRUCE F. BOWMAN — REGISTERED ARCHITECT — 5951 — 6·7·24

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Cape Fear Community College
Health and Human Services Building
Interior Renovation – Phase Two

319 N 3rd Stree, Wilmington, North Carolina 28401

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Project Manager	Drawn By: M. PRICE
Date: 06-07-2024	Reviewed By: B. BOWMAN

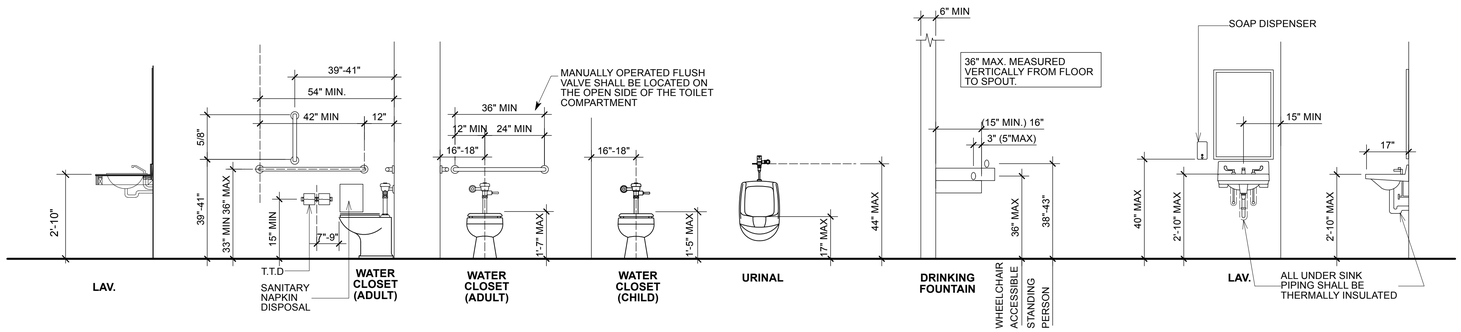
Project ID

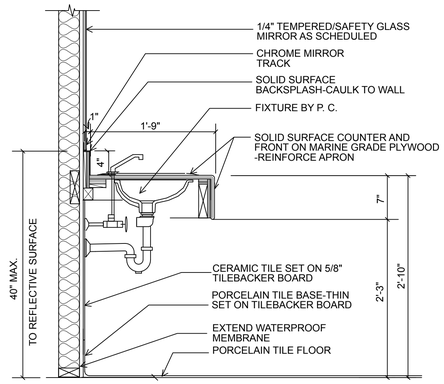
Sheet Title

Partition Types

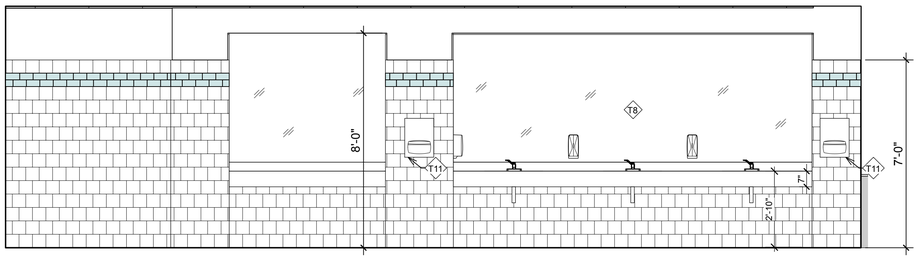
Sheet No.

A401





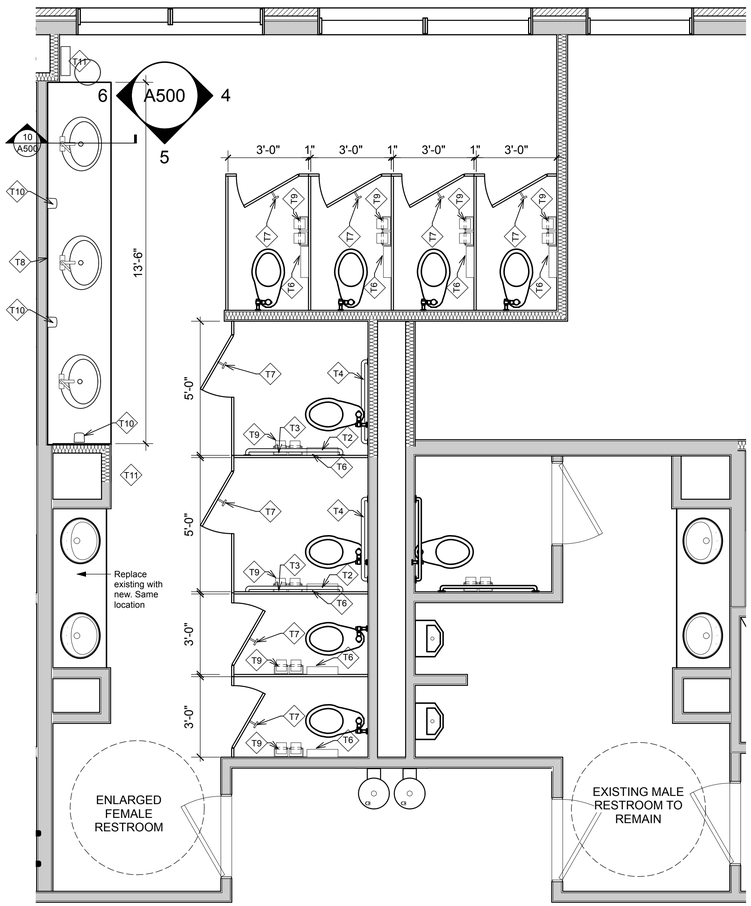
10 / A500 Lavatory Sink Detail
Scale: 1" = 1'-0"



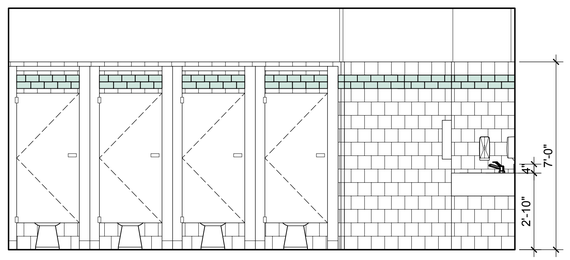
6 Elevation @ Toilet Room
Scale: 3/8" = 1'-0"

	TOILET ACCESSORIES	MNTG. HT.
T1	Handicapped Grab Bar-24" (TOILET)	36"
T2	Handicapped Grab Bar-42" (TOILET)	36"
T3	Vertical Handicapped Grab Bar-18" (TOILET)	40"
T4	Handicapped Grab Bar-36" (TOILET)	36"
T5	Frame Mirror - 2'-0" Wide x 3'-0"	40" (bottom)
T6	Sanitary napkin disposal	18"
T7	Clothes Hook	48"
T8	Full Mirror (confirm size on site prior installation)	38" (bottom)
T9	Toilet Tissue Dispenser- Double Roll	18"
T10	Wall Mt. Soap Dispenser	40" (bottom)
T11	Paper Towel Dispenser	48"

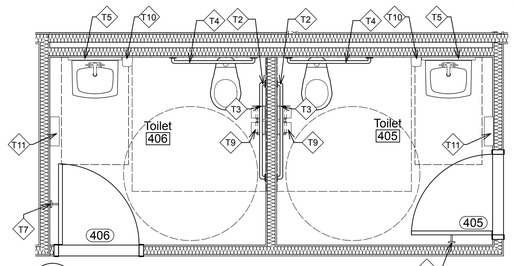
NOTE: Mounting heights are to operating mechanism where applicable.



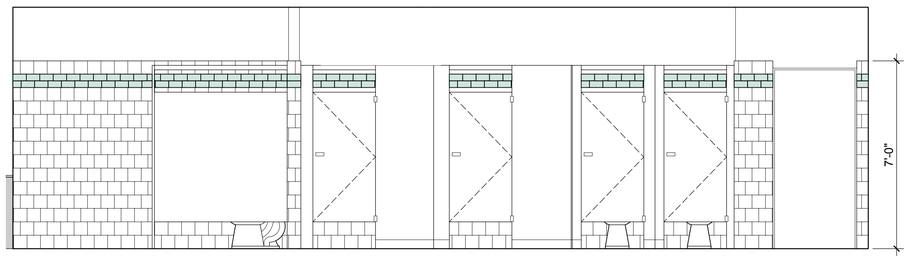
1 / A500 Enlarged Plan @ Toilet Rooms 3rd Floor
Scale: 3/8" = 1'-0"



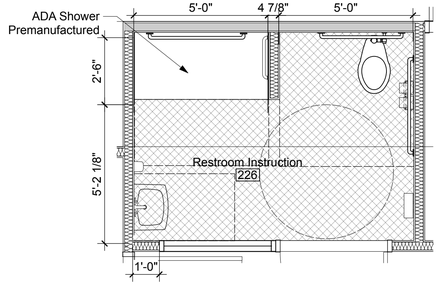
5 Elevation @ Toilet Room
Scale: 3/8" = 1'-0"



3 / A500 Enlarged Plan @ Toilet Rooms 4th Floor
Scale: 3/8" = 1'-0"



4 Elevation @ Toilet Room
Scale: 3/8" = 1'-0"



2 Enlarged Plan @ Instruction Restroom 2nd Floor
Scale: 3/8" = 1'-0"

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BRUCE F. BOWMAN REGISTERED ARCHITECT 5951 6.7.24

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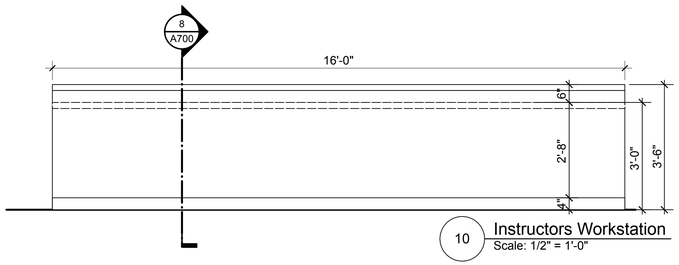
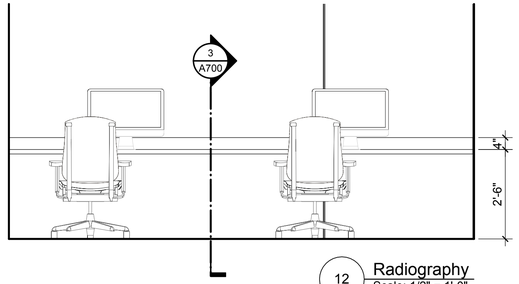
Project Manager	Drawn By M. PRICE
Date 06-07-2024	Reviewed By B. BOWMAN
Project ID	

Sheet Title
Enlarged Room Plans and Elevations

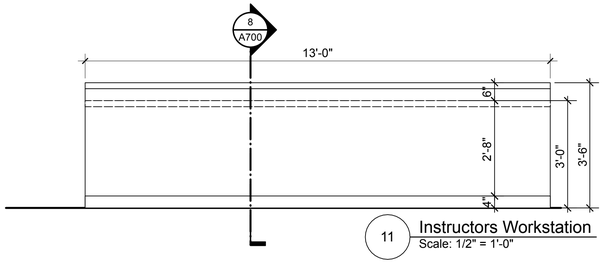
Sheet No.
A500



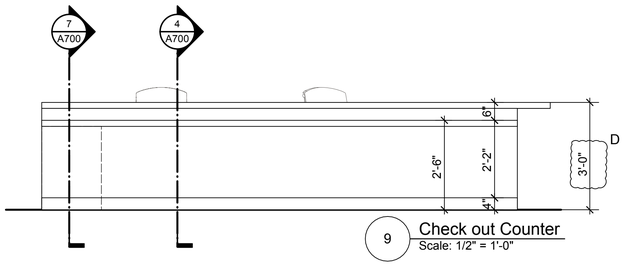
10 Instructors Workstation
Scale: 1/2" = 1'-0"



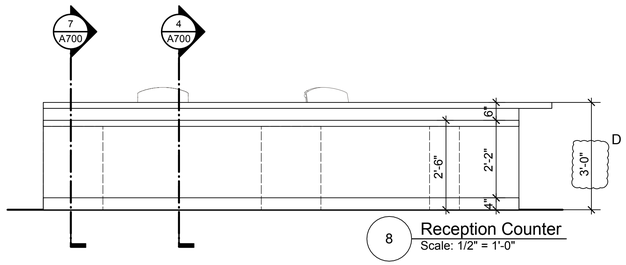
12 Radiography
Scale: 1/2" = 1'-0"



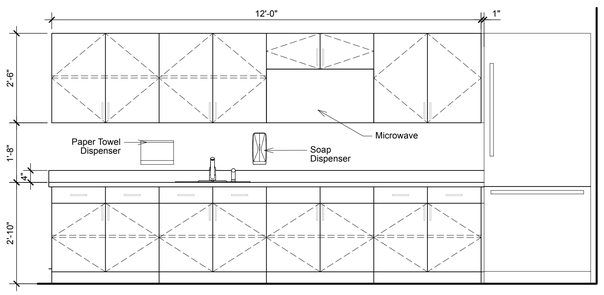
11 Instructors Workstation
Scale: 1/2" = 1'-0"



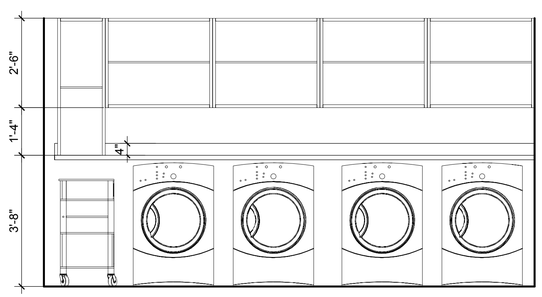
9 Check out Counter
Scale: 1/2" = 1'-0"



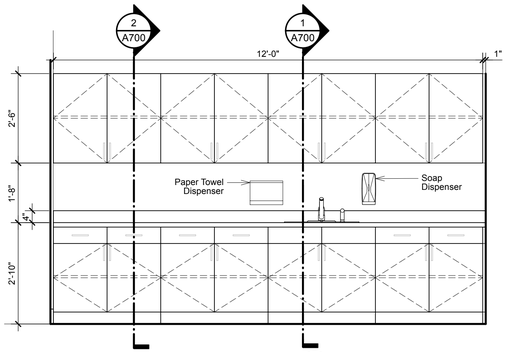
8 Reception Counter
Scale: 1/2" = 1'-0"



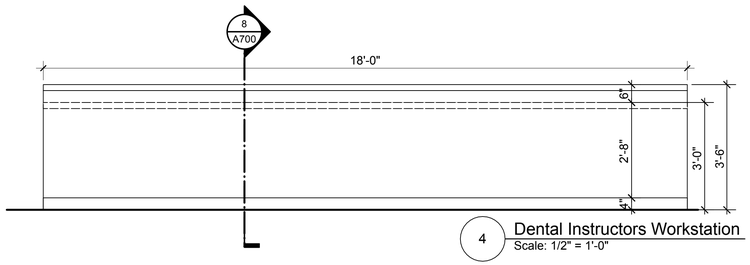
7 Breakroom Dental
Scale: 1/2" = 1'-0"



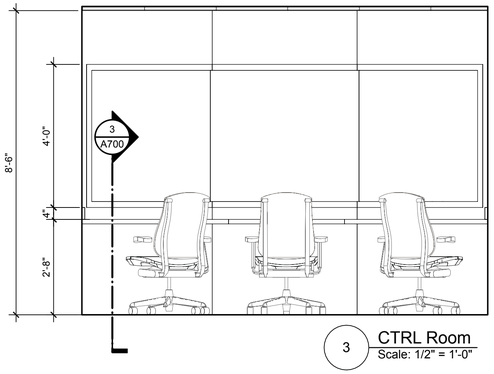
6 Laundry
Scale: 1/2" = 1'-0"



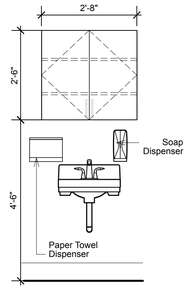
5 Nursing Lab - 3rd Floor
Scale: 1/2" = 1'-0"



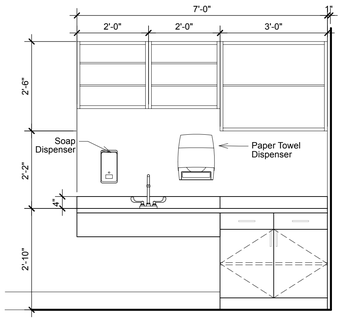
4 Dental Instructors Workstation
Scale: 1/2" = 1'-0"



3 CTRL Room
Scale: 1/2" = 1'-0"



2 Hand Sink Elev.
Scale: 1/2" = 1'-0"



1 Charging Station
Scale: 1/2" = 1'-0"

BOWMAN MURRAY HEMINGWAY ARCHITECTS
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NOT FOR CONSTRUCTION

Cape Fear Community College
Health and Human Services Building
Interior Renovation – Phase Two

319 N 3rd Stree, Wilmington, North Carolina 28401

NCCCS # 2772

SCO # 23-27149-01A

REV.	DATE	DESCRIPTION
D	06/07/24	CD Submittal
C	5/24/24	CD Estimating Set
B	3/13/24	DD Submittal
A	2/16/24	DD Estimating Set
NO.	DATE	ISSUE NOTE

Project Manager	Drawn By: M. PRICE
Date: 06-07-2024	Reviewed By: B. BOWMAN
Project ID	

Sheet Title

Enlarged Millwork Elevations

Sheet No.

A501

DOOR SCHEDULE

NO.	OPENING LEAVES	OPENING SIZE WxHxT	DOOR MATERIAL	DOOR FINISH	DOOR ELEV.	FRAME MATERIAL	FRAME FINISH	FRAME ELEVATION	HEAD DTL	JAMB DTL	SILL DTL	GLAZING	HW SET	Fire Rating	REMARKS
SECOND FLOOR															
223	SINGLE	4'0" x 7'0" x 1 3/4"	SOLID CORE WOOD FLASH PANEL	STAIN/SEAL	D-2	HOLLOW METAL	PAINTED	F-1	DH-1	DJ-1	DS-1	1/4" TEMPERED	DHW-1		CLASSROOM
224A	SINGLE	4'0" x 7'0" x 1 3/4"	SOLID CORE WOOD FLASH PANEL	STAIN/SEAL	D-2	HOLLOW METAL	PAINTED	F-1	DH-1	DJ-1	DS-1	1/4" TEMPERED	DHW-9		HOSPITAL SIMULATION ENTRY
224B	SINGLE	4'0" x 7'0" x 1 3/4"	SOLID CORE WOOD FLASH PANEL	STAIN/SEAL	D-2	HOLLOW METAL	PAINTED	F-1	DH-1	DJ-1	DS-1	1/4" TEMPERED	DHW-9		HOSPITAL SIMULATION ENTRY
225	SINGLE	4'0" x 7'0" x 1 3/4"	SOLID CORE WOOD FLASH PANEL	STAIN/SEAL	D-3	HOLLOW METAL	PAINTED	F-1	DH-1	DJ-1	DS-1	1/4" TEMPERED	DHW-4		PATIENTS ROOM
226	SINGLE	4'0" x 7'0" x 1 3/4"	SOLID CORE WOOD FLASH PANEL	STAIN/SEAL	D-3	HOLLOW METAL	PAINTED	F-1	DH-1	DJ-1	DS-1	1/4" TEMPERED	DHW-3		INSTRUCTIONAL RESTROOM
227	SINGLE	3'0" x 7'0" x 1 3/4"	SOLID CORE WOOD FLASH PANEL	STAIN/SEAL	D-1	HOLLOW METAL	PAINTED	F-1	DH-1	DJ-1	DS-1	-	DHW-5		CONTROL ROOM
228	SINGLE	3'0" x 7'0" x 1 3/4"	SOLID CORE WOOD FLASH PANEL	STAIN/SEAL	D-1	HOLLOW METAL	PAINTED	F-1	DH-1	DJ-1	DS-1	-	DHW-8		PAR/ LINEN/ MED. ROOM
229	SINGLE	3'0" x 7'0" x 1 3/4"	SOLID CORE WOOD FLASH PANEL	STAIN/SEAL	D-1	HOLLOW METAL	PAINTED	F-1	DH-1	DJ-1	DS-1	-	DHW-5		CONTROOL ROOM
230	SINGLE	4'0" x 7'0" x 1 3/4"	SOLID CORE WOOD FLASH PANEL	STAIN/SEAL	D-2	HOLLOW METAL	PAINTED	F-1	DH-1	DJ-1	DS-1	1/4" TEMPERED	DHW-6		DEBRIEFING ROOM
231	SINGLE	4'0" x 7'0" x 1 3/4"	SOLID CORE WOOD FLASH PANEL	STAIN/SEAL	D-1	HOLLOW METAL	PAINTED	F-1	DH-1	DJ-1	DS-1	-	DHW-8		STORAGE/ CHARGING
232	SINGLE	3'0" x 7'0" x 1 3/4"	SOLID CORE WOOD FLASH PANEL	STAIN/SEAL	D-1	HOLLOW METAL	PAINTED	F-1	DH-1	DJ-1	DS-1	-	DHW-8		MECHANICAL
234	SINGLE	3'0" x 7'0" x 1 3/4"	SOLID CORE WOOD FLASH PANEL	STAIN/SEAL	D-1	HOLLOW METAL	PAINTED	F-1	DH-1	DJ-1	DS-1	-	DHW-8		MECHANICAL
235	SINGLE	3'0" x 7'0" x 1 3/4"	SOLID CORE WOOD FLASH PANEL	STAIN/SEAL	D-1	HOLLOW METAL	PAINTED	F-1	DH-1	DJ-1	DS-1	-	DHW-8		MECHANICAL
236	SINGLE	3'0" x 7'0" x 1 3/4"	SOLID CORE WOOD FLASH PANEL	STAIN/SEAL	D-1	HOLLOW METAL	PAINTED	F-1	DH-1	DJ-1	DS-1	-	DHW-8		MECHANICAL
THIRD FLOOR															
308	PAIR	7'7" x 9'0" x 3/4"	GLASS ENTRANCE	existing reused				F-5				existing reused			DENTAL LAB ENTRY
310A	SINGLE	4'0" x 7'0" x 1 3/4"	SOLID CORE WOOD FLASH PANEL	STAIN/SEAL	D-1	ALUMINUM	FACTORY FINISH	F-3	DH-3	DJ-3	DS-3	1/2" TEMPERED	DHW-9		DENTAL SUITE ENTRY
310B	SINGLE	3'0" x 7'0" x 1 3/4"	SOLID CORE WOOD FLASH PANEL	STAIN/SEAL	D-2	HOLLOW METAL	PAINTED	F-1	DH-1	DJ-1	DS-1	1/4" TEMPERED	DHW-9		DENTAL SUITE HALLWAY
311	SINGLE	3'0" x 7'0" x 1 3/4"	SOLID CORE WOOD FLASH PANEL	STAIN/SEAL	D-1	HOLLOW METAL	PAINTED	F-1	DH-1	DJ-1	DS-1	-	DHW-8		MECHANICAL
318	SINGLE	3'0" x 7'0" x 1 3/4"	SOLID CORE WOOD FLASH PANEL	STAIN/SEAL	D-2	HOLLOW METAL	PAINTED	F-1	DH-1	DJ-1	DS-1	1/4" TEMPERED	DHW-7		BREAKROOM
319	SINGLE	3'0" x 7'0" x 1 3/4"	SOLID CORE WOOD FLASH PANEL	STAIN/SEAL	D-2	HOLLOW METAL	PAINTED	F-1	DH-1	DJ-1	DS-1	1/4" TEMPERED	DHW-6		CASE STUDY ROOM
320	SINGLE	3'0" x 7'0" x 1 3/4"	SOLID CORE WOOD FLASH PANEL	STAIN/SEAL	D-1	HOLLOW METAL	PAINTED	F-1	DH-1	DJ-1	DS-1	-	DHW-7		WOMENS LOCKER
321	SINGLE	3'0" x 7'0" x 1 3/4"	SOLID CORE WOOD FLASH PANEL	STAIN/SEAL	D-1	HOLLOW METAL	PAINTED	F-1	DH-1	DJ-1	DS-1	-	DHW-7		MENS LOCKER
322	SINGLE	3'0" x 7'0" x 1 3/4"	SOLID CORE WOOD FLASH PANEL	STAIN/SEAL	D-1	HOLLOW METAL	PAINTED	F-1	DH-1	DJ-1	DS-1	-	DHW-8		MECHANICAL
323	SINGLE	3'0" x 7'0" x 1 3/4"	SOLID CORE WOOD FLASH PANEL	STAIN/SEAL	D-1	HOLLOW METAL	PAINTED	F-1	DH-1	DJ-1	DS-1	-	DHW-8		MECHANICAL
324	SINGLE	3'0" x 7'0" x 1 3/4"	SOLID CORE WOOD FLASH PANEL	STAIN/SEAL	D-1	HOLLOW METAL	PAINTED	F-1	DH-1	DJ-1	DS-1	-	DHW-8		MECHANICAL
325	SINGLE	3'0" x 7'0" x 1 3/4"	SOLID CORE WOOD FLASH PANEL	STAIN/SEAL	D-1	HOLLOW METAL	PAINTED	F-1	DH-1	DJ-1	DS-1	-	DHW-8		MECHANICAL
326	SINGLE	4'0" x 7'0" x 1 3/4"	SOLID CORE WOOD FLASH PANEL	STAIN/SEAL	D-2	HOLLOW METAL	PAINTED	F-1	DH-1	DJ-1	DS-1	1/4" TEMPERED	DHW-9		NURSING LAB
327	SINGLE	4'0" x 7'0" x 1 3/4"	SOLID CORE WOOD FLASH PANEL	STAIN/SEAL	D-1	HOLLOW METAL	PAINTED	F-1	DH-1	DJ-1	DS-1	-	DHW-8		STORAGE
328	SINGLE	3'0" x 7'0" x 1 3/4"	SOLID CORE WOOD FLASH PANEL	STAIN/SEAL	D-1	HOLLOW METAL	PAINTED	F-1	DH-1	DJ-1	DS-1	-	DHW-8		LAUNDRY
FOURTH FLOOR - DENTAL															
401	PAIR	(2) 3'0" x 9'0" x 3/4"	GLASS ENTRANCE	existing reused		existing	existing	F-2				existing	existing		DENTAL SUITE ENTRY
402	SINGLE	3'0" x 7'0" x 1 3/4"	SOLID CORE WOOD FLASH PANEL	STAIN/SEAL	D-1	HOLLOW METAL	PAINTED	F-1	DH-1	DJ-1	DS-1	-	DHW-6		OFFICE
403	SINGLE	3'0" x 7'0" x 1 3/4"	SOLID CORE WOOD FLASH PANEL	STAIN/SEAL	D-1	HOLLOW METAL	PAINTED	F-1	DH-1	DJ-1	DS-1	-	DHW-6		OFFICE
404	SINGLE	3'0" x 7'0" x 1 3/4"	SOLID CORE WOOD FLASH PANEL	STAIN/SEAL	D-1	HOLLOW METAL	PAINTED	F-1	DH-1	DJ-1	DS-1	-	DHW-6		OFFICE
405	SINGLE	3'0" x 7'0" x 1 3/4"	SOLID CORE WOOD FLASH PANEL	STAIN/SEAL	D-1	HOLLOW METAL	PAINTED	F-1	DH-1	DJ-1	DS-1	-	DHW-3		TOILET
406	SINGLE	3'0" x 7'0" x 1 3/4"	SOLID CORE WOOD FLASH PANEL	STAIN/SEAL	D-1	HOLLOW METAL	PAINTED	F-1	DH-1	DJ-1	DS-1	-	DHW-3		TOILET
407	SINGLE	3'0" x 7'0" x 1 3/4"	SOLID CORE WOOD FLASH PANEL	STAIN/SEAL	D-1	HOLLOW METAL	PAINTED	F-1	DH-1	DJ-1	DS-1	-	DHW-3		TOILET
410	SINGLE	3'0" x 7'0" x 1 3/4"	SOLID CORE WOOD FLASH PANEL	STAIN/SEAL	D-1	HOLLOW METAL	PAINTED	F-1	DH-1	DJ-1	DS-1	-	DHW-8		MECHANICAL ROOM
413	SINGLE	3'0" x 7'0" x 1 3/4"	SOLID CORE WOOD FLASH PANEL	STAIN/SEAL	D-1	HOLLOW METAL	PAINTED	F-1	DH-1	DJ-1	DS-1	-	DHW-8		MECHANICAL ROOM
414	SINGLE	3'0" x 7'0" x 1 3/4"	SOLID CORE WOOD FLASH PANEL	STAIN/SEAL	D-1	HOLLOW METAL	PAINTED	F-1	DH-1	DJ-1	DS-1	-	DHW-8		MECHANICAL ROOM
426	SINGLE	3'0" x 7'0" x 1 3/4"	SOLID CORE WOOD FLASH PANEL	STAIN/SEAL	D-1	HOLLOW METAL	PAINTED	F-1	DH-1	DJ-1	DS-1	-	DHW-7		X-RAY
427	SINGLE	3'0" x 7'0" x 1 3/4"	SOLID CORE WOOD FLASH PANEL	STAIN/SEAL	D-1	HOLLOW METAL	PAINTED	F-1	DH-1	DJ-1	DS-1	-	DHW-7		X-RAY
428	SINGLE	3'0" x 7'0" x 1 3/4"	SOLID CORE WOOD FLASH PANEL	STAIN/SEAL	D-1	HOLLOW METAL	PAINTED	F-1	DH-1	DJ-1	DS-1	-	DHW-7		RADIOGRAPHY REVIEW
429	SINGLE	3'0" x 7'0" x 1 3/4"	SOLID CORE WOOD FLASH PANEL	STAIN/SEAL	D-1	HOLLOW METAL	PAINTED	F-1	DH-1	DJ-1	DS-1	-	DHW-8		MECHANICAL ROOM
430	SINGLE	3'0" x 7'0" x 1 3/4"	SOLID CORE WOOD FLASH PANEL	STAIN/SEAL	D-2	HOLLOW METAL	PAINTED	F-1	DH-1	DJ-1	DS-1	1/2" TEMPERED	DHW-9		DENTAL SUITE EXIT
FIFTH FLOOR - EAST															
524	SINGLE	3'0" x 7'0" x 1 3/4"	SOLID CORE WOOD FLASH PANEL	STAIN/SEAL	D-1	ALUMINUM	FACTORY FINISH	F-3	DH-3	DJ-3	DS-3	1/2" TEMPERED	DHW-12		OFFICE SUITE ENTRY
525	SINGLE	4'0" x 7'0" x 1 3/4"	SOLID CORE WOOD FLASH PANEL	STAIN/SEAL	D-1	HOLLOW METAL	PAINTED	F-1	DH-1	DJ-1	DS-1	-	DHW-8		STORAGE
525B	SINGLE	4'0" x 7'0" x 1 3/4"	SOLID CORE WOOD FLASH PANEL	STAIN/SEAL	D-1	HOLLOW METAL	PAINTED	F-1	DH-1	DJ-1	DS-1	-	DHW-8		STORAGE
526	SINGLE	4'0" x 7'0" x 1 3/4"	SOLID CORE WOOD FLASH PANEL	STAIN/SEAL	D-2	HOLLOW METAL	PAINTED	F-1	DH-1	DJ-1	DS-1	1/4" TEMPERED	DHW-9		NURSING LAB
527	SINGLE	4'0" x 7'0" x 1 3/4"	SOLID CORE WOOD FLASH PANEL	STAIN/SEAL	D-2	HOLLOW METAL	PAINTED	F-1	DH-1	DJ-1	DS-1	1/4" TEMPERED	DHW-9		NURSING LAB
528	SINGLE	4'0" x 7'0" x 1 3/4"	SOLID CORE WOOD FLASH PANEL	STAIN/SEAL	D-1	HOLLOW METAL	PAINTED	F-1	DH-1	DJ-1	DS-1	-	DHW-8		STORAGE
528B	SINGLE	4'0" x 7'0" x 1 3/4"	SOLID CORE WOOD FLASH PANEL	STAIN/SEAL	D-1	HOLLOW METAL	PAINTED	F-1	DH-1	DJ-1	DS-1	-	DHW-8		STORAGE
529	SINGLE	3'0" x 7'0" x 1 3/4"	SOLID CORE WOOD FLUSH PANEL	STAIN/SEAL	D-1	HOLLOW METAL	PAINTED	F-1	DH-1	DJ-1	DS-1	-	DHW-6		OFFICE
530	SINGLE	3'0" x 7'0" x 1 3/4"	SOLID CORE WOOD FLUSH PANEL	STAIN/SEAL	D-1	HOLLOW METAL	PAINTED	F-1	DH-1	DJ-1	DS-1	-	DHW-6		OFFICE

DOOR HARDWARE SCHEDULE

DWH#1 Large Classroom Entry
1 1/2 Pair Hinges
1 Rim Panic Device - Classroom Function
1 Closer
1 Door Stop

DWH#2 Group Toilet
1 1/2 Pair Hinges
1 Push/Pull Set
1 Closer
1 Door Stop

DWH#3 Single Toilet
1 1/2 Pair Hinges
1 Lockset – Privacy Function
1 Door Stop
1 Hook

DWH#4 Patient Room Simulation
2 Pair Hinges
1 Lockset – Health Care Paddles -Passage Function
1 Door Stop

DWH#5 Control Room
1 1/2 Pair Hinges
1 Lockset – Entrance Function
1 Door Stop

DWH#6 Office
1 1/2 Pair Hinges
1 Lockset – Office Function
1 Door Stop

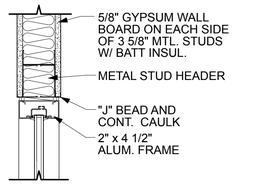
DWH#7 Breakroom
1 1/2 Pair Hinges
1 Lockset – Entrance Function
1 Door Stop
1 Closer

DWH#8 Storage - Mech
1 1/2 Pair Hinges
1 Lockset – Classroom Function
1 Door Stop

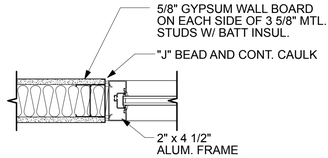
DWH#9 Suite Entrances
2 Pair Hinges
1 Rim Panic Device - Classroom Function
1 Closer
1 Door Stop

DWH#10 Small Classroom
1 1/2 Pair Hinges
1 Lockset – Classroom
1 Door Stop

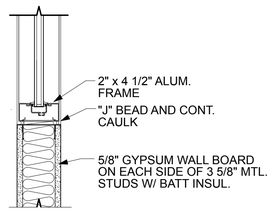
DWH#12 Alum. Entrance (Interior)
All Hardware Provided by Alum. Provider
1 Alum threshold
1 Pair Pivot Hinges
1 Integral Closer
1 Rim Panic Device – Entrance Function



WH-1 - HEAD DETAIL

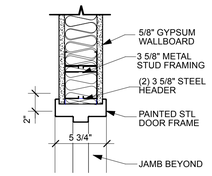


WJ-1 - JAMB DETAIL

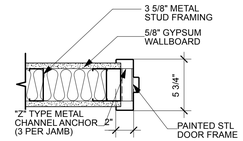


WS-1 - SILL DETAIL

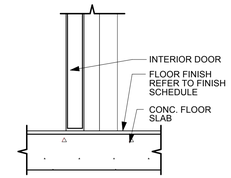
5 A600 Window Details
Scale: 1 1/2" = 1'-0"



DH-1 - HEAD DETAIL

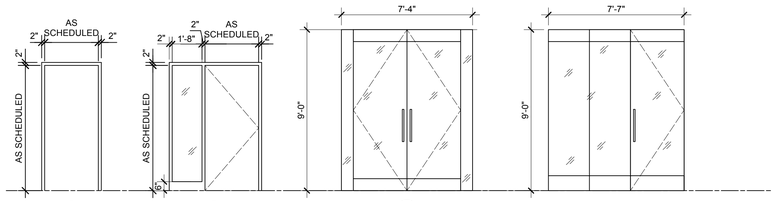


DJ-1 - JAMB DETAIL

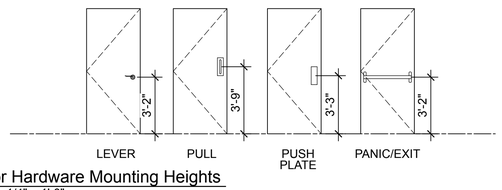


DS-1 - SILL DETAIL

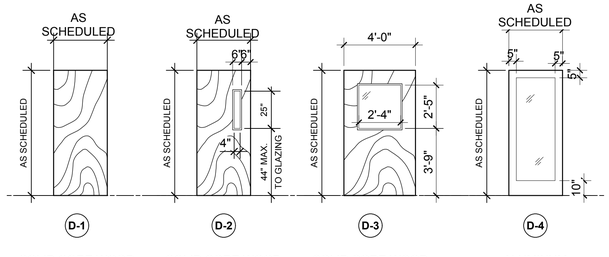
6 A600 Door Frame Details
Scale: 1 1/2" = 1'-0"



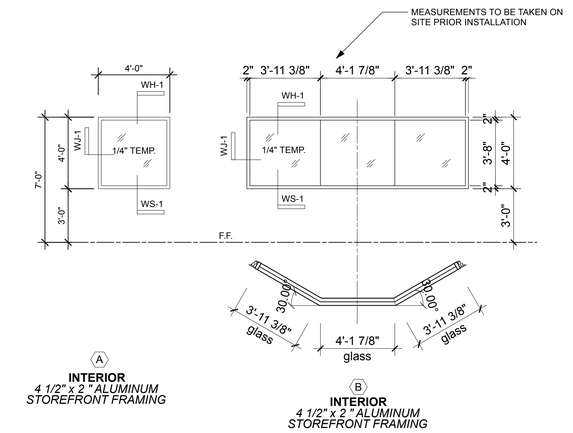
4 A600 Door Frame Elevations
Scale: 1/4" = 1'-0"



3 A600 Door Hardware Mounting Heights
Scale: 1/4" = 1'-0"



2 A600 Door Elevations
Scale: 1/4" = 1'-0"



1 A600 Window Elevations
Scale: 1/4" = 1'-0"

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CERT NO. 5424 NORTH CAROLINA WILMINGTON, N.C.

BRUCE F. BOWMAN REGISTERED ARCHITECT 5951

6-7-24

NOT FOR CONSTRUCTION

Cape Fear Community College
Health and Human Services Building
Interior Renovation – Phase Two
319 N 3rd Stree, Wilmington, North Carolina 28401

NCCCS # 2772
SCO # 23-27149-01A

REV.	DATE	DESCRIPTION
D	06/07/24	CD Submittal
C	5/24/24	CD Estimating Set
B	3/13/24	DD Submittal
A	2/16/24	DD Estimating Set
NO.	DATE	ISSUE NOTE

Project Manager	Drawn By M. PRICE
Date 06-07-2024	Reviewed By B. BOWMAN
Project ID	

Sheet Title
Door Schedule, Window & Door Elevations & Details

Sheet No.
A600

FINISHES SCHEDULE

Rm #	Room Name	Floor	Base	Walls	Ceiling	Counter-tops	Cabinets	Remarks
Second Floor								
200	Elev. Lobby	PTF 1,2	PTB 1	PNT 1	GB-1, PNT 2			
200	2nd Floor Corridor	RTF1,2,3	RBS 1	PNT 1	AT 1, GB-1, PNT 2			
223	Classroom	RTF1,2,3	RBS 1	PNT 1	AT 1, GB-1, PNT 2			
224	Hospital Simulation Lab.	RSF 1,2,3	RSF 1	PNT 1	AT 1, GB-1, PNT 2			
225	Patients Room	RSF 1	RSF 1	PNT 1	AT 1, GB-1, PNT 2			
226	Restroom Instruction	PTF 3	PTB 2	PNT 1	AT 1			
227	CTRL Room	RSF 2	RSF 1	PNT 1	AT 1			
228	PAR/ Linen/ Meds	RSF 2	RSF 1	PNT 1	AT 1			
229	CTRL Room	RSF 2	RSF 1	PNT 1	AT 1			
230	Debriefing	RTF1,2,3	RBS 1	PNT 1	AT 1, GB-1, PNT 2			
231	Sim. Lab. Support/ Charging	RTF1,2,3	RBS 1	PNT 1	AT 1			
232	Mech.	SC	RBS 2	PNT 1	open to structure			
234	Mech.	SC	RBS 2	PNT 1	open to structure			
235	Mech.	SC	RBS 2	PNT 1	open to structure			
236	Mech.	SC	RBS 2	PNT 1	open to structure			
Third Floor								
300	3rd Floor Corridor	PTF 1,2	PTB 1	PNT 1	GB-1, PNT 2			
300	Elev. Lobby	RTF1,2,3	RBS 1	PNT 1	AT 1, GB-1, PNT 2			
308	Dental Simulation Lab	RTF1,2,3	RBS 1	PNT 1	AT 1, GB-1, PNT 2			
309	Mech.	RTF1,2,3	RBS 1	PNT 1	open to structure			
310	Dental Open Space	RTF1,2,3	RBS 1	PNT 1	AT 1, GB-1, PNT 2			
310	Hallway	RTF1,2,3	RBS 1	PNT 1	AT 1			
311	Storage	RTF1,2,3	RBS 1	PNT 1	AT 1, GB-1, PNT 2			
312	Bay 1	RTF1,2,3	RBS 1	PNT 1	AT 1, GB-1, PNT 2			
313	Bay 2 - DEMO	RTF1,2,3	RBS 1	PNT 1	AT 1, GB-1, PNT 2			
314	Bay 3	RTF1,2,3	RBS 1	PNT 1	AT 1, GB-1, PNT 2			
315	Bay 4	RTF1,2,3	RBS 1	PNT 1	AT 1, GB-1, PNT 2			
316	Bay 5	RTF1,2,3	RBS 1	PNT 1	AT 1, GB-1, PNT 2			
317	Bay 6	RTF1,2,3	RBS 1	PNT 1	AT 1, GB-1, PNT 2			
318	Breakroom/ Meetings	RTF1,2,3	RBS 1	PNT 1	AT 1, GB-1, PNT 2			
319	Case Study Room	RTF1,2,3	RBS 1	PNT 1	AT 1			
320	Women's Locker	RTF1,2,3	RBS 1	PNT 1	AT 1			
321	Men's Locker	RTF1,2,3	RBS 1	PNT 1	AT 1			
322	Mech.	SC	RBS 2	PNT 1	open to structure			
323	Storage	RTF1,2,3	RBS 1	PNT 1	AT 1			
324	Dental Equip. Storage	RTF1,2,3	RBS 1	PNT 1	AT 1			
325	Mech.	SC	RBS 2	PNT 1	open to structure			
326	Nursing Lab #3	RTF1,2,3	RBS 1	PNT 1	AT 1, GB-1, PNT 2			
327	Storage	RTF1,2,3	RBS 1	PNT 1	AT 1, GB-1, PNT 2			
328	Laundry	RTF1,2,3	RBS 1	PNT 1	AT 1			
Fourth Floor								
400	Elevators Lobby	PTF 1,2	PTB 1	PNT 1	GB-1, PNT 2			
401	Waiting Room	CPT 1	RBS 2	PNT 1	AT 1, GB-1, PNT 2			
402	Office	CPT 2	RBS 2	PNT 1	AT 1, GB-1, PNT 2			
403	Work Room	CPT 2	RBS 2	PNT 1	AT 1, GB-1, PNT 2			
404	File Room	CPT 2	RBS 2	PNT 1	AT 1, GB-1, PNT 2			
405	Toilet	PTF 3	PTB 2	PNT 1, CTW1, CTW 2	AT 1			
406	Toilet	PTF 3	PTB 2	PNT 1, CTW1, CTW 2	AT 1			
407	Storage	SC	RBS 2	PNT 1	AT 1			
408	Reception	RTF1,2,3	RBS 1	PNT 1	AT 1, GB-1, PNT 2			
409	Instructors Workspace	RTF1,2,3	RSF 1	PNT 1	AT 1			
410	Mech.	SC	RBS 2	PNT 1	open to structure			
411	Bays 1-11	RTF1,2,3	RBS 1	PNT 1	AT 1, GB-1, PNT 2			
412	Bays 12-17	RTF1,2,3	RBS 1	PNT 1	AT 1			
413	Mech.	SC	RBS 2	PNT 1	open to structure			
414	Storage	RTF1,2,3	RBS 1	PNT 1	AT 1			
415	Sterilization	RTF1,2,3	RBS 1	PNT 1, CTW1, CTW 2	AT 1			
416	Bays 18-28	RTF1,2,3	RBS 1	PNT 1	AT 1, GB-1, PNT 2			
417	Private bay 29	RTF1,2,3	RBS 1	PNT 1	AT 1, GB-1, PNT 2			
418	Private bay 30	RTF1,2,3	RBS 1	PNT 1	AT 1, GB-1, PNT 2			
419	Private bay 31	RTF1,2,3	RBS 1	PNT 1	AT 1, GB-1, PNT 2			
420	Private Bay 32	RTF1,2,3	RBS 1	PNT 1	AT 1, GB-1, PNT 2			
421	Bay 33	RTF1,2,3	RBS 1	PNT 1	AT 1, GB-1, PNT 2			
422	Bay 34	RTF1,2,3	RBS 1	PNT 1	AT 1, GB-1, PNT 2			
423	Bay 35	RTF1,2,3	RBS 1	PNT 1	AT 1, GB-1, PNT 2			
424	Bay 36	RTF1,2,3	RBS 1	PNT 1	AT 1, GB-1, PNT 2			
425	Bay 37-38	RTF1,2,3	RBS 1	PNT 1	AT 1, GB-1, PNT 2			
426	Dental Circulation	RTF1,2,3	RBS 1	PNT 1	AT 1			
426	X-Ray	RTF1,2,3	RBS 1	PNT 1	AT 1			
427	X-Ray	RTF1,2,3	RBS 1	PNT 1	AT 1			
428	Radiography Review	RTF1,2,3	RBS 1	PNT 1	AT 1			
429	Mech.	SC	RBS 2	PNT 1	open to structure			
Fifth Floor - East								
500	5th floor Corridor	RTF1,2,3	RBS 1	PNT 1	AT 1, GB-1, PNT 2			
500	Elev. Lobby	PTF 1,2	PTB 1	PNT 1	GB-1, PNT 2			
523	Students Lounge	CPT 1	RBS 2	PNT 1	AT 1, GB-1, PNT 2			
524	Small Classroom	RTF1,2,3	RBS 1	PNT 1	AT 1, GB-1, PNT 2			
525	Storage	RTF1,2,3	RBS 1	PNT 1	AT 1, GB-1, PNT 2			
526	Nursing Lab. #1	RTF1,2,3	RBS 1	PNT 1	AT 1, GB-1, PNT 2			
527	Nursing Lab. #2	RTF1,2,3	RBS 1	PNT 1	AT 1, GB-1, PNT 2			
528	Storage	RTF1,2,3	RBS 1	PNT 1	AT 1, GB-1, PNT 2			
529	Faculty Work Room	CPT 1	RBS 2	PNT 1	AT 1, GB-1, PNT 2			
530	Executive Office	CPT 1	RBS 2	PNT 1	AT 1, GB-1, PNT 2			

FINISHES LEGEND

#	Finish Description	Finish Specification - Basis of Design	Remarks
		FLOOR	
[CPT-1] [CPT-2]	Carpet; install monolithic; color 1 Carpet; install monolithic; color 2	Milliken - Style: Nordic Stories, Color: Malmo Ferry, Pattern: Isogard loop, 25cm x1m plank, V. Ashlar pattern Milliken - Style: Nordic Stories, Color: Malmo Ferry, Tectonic tip shear, 50x50cm tile, Monolithic pattern	
[PTF-1] [PTF-2] [PTF-3]	Porcelain Tile Floor - 12"x24" Porcelain Tile Floor - accent tile 6"x24" Porcelain Tile Floor - Restrooms 12"x12" *	Daltile Volume 1.0 Daltile Volume 1.0 Daltile Volume 1.0 INTENSITY PEBBLE VL72 12"x12"	 Stack bond pattern
[RSF-1] [RSF-2] [RSF-3]	Resilient sheet floor; color 1 Resilient sheet floor; color 2 Resilient sheet floor; color 3	Armstrong - Meditone (alternate AHF Homogeneus Sheet) Armstrong - Meditone (alternate AHF Homogeneus Sheet) Armstrong - Meditone (alternate AHF Homogeneus Sheet)	
[RTF-1] [RTF-2] [RTF-3]	Resilient tile floor; 24" x 24"; color 1 Resilient tile floor; 24" x 24"; color 2 Resilient tile floor; 24" x 24"; color 3	KAHRS Vinyl Floor 24"x24" Tile KAHRS Vinyl Floor 24"x24" Tile KAHRS Vinyl Floor 24"x24" Tile	
[SC]	Sealed concrete		
		BASE	
[RBS-1] [RBS-2]	Rubber Base; 4"H Rubber Base; 4"H	ROPPE 700 Series 4" Cove Wall Base (for RTF floors) ROPPE 700 Series 4" Straight Edge Base (for carpets)	
[RSF-1]	Resilient sheet floor integral cove base		
[PTB-1] [PTB-2]	Porcelain Tile Base Porcelain Tile Base	Daltile Volume 1.0 Daltile Volume 1.0	Lobby; non-cove base; 4" Restrooms; cove base; 4"
		WALLS*	
		* all renovation walls gypsum board, primed and painted	
[PNT-1] [CTW-1] [CTW-2]	Wall Paint; Satin; Color 1 Ceramic Tile Wall Ceramic Tile Wall - Accent	Shervin Williams Dover White DALTILE Wall Classic DALTILE Wall Classic	 Restrooms; 6"x6" 1/3 offset Restrooms; 3"x6" 1/3 offset
		CEILING	
[AT-1] [GB-1] [PNT-2]	Acoustical Ceiling Tile; 24"x24"; White Gypsum Board Ceiling Bulkheads Ceiling White Paint; Satin	White Armstrong 1940 Ultima High NRC Shervin Williams Pure White	Square Edge 2x2 Tile Color: White primed and painted [PNT-2]

*Grout — Mapei 19, Color: Pearl Gray

FINISHES - CABINETS

WILSONART Laminate
Salentina Nero Glaze Finish
matching 3mm edgebanding
White melamine interiors

FINISHES - COUNTERTOPS

WILSONART Quartz
Rio Upano, pencil edge

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BRUCE F. BOWMAN — REGISTERED ARCHITECT — 5951 — 6.7.24

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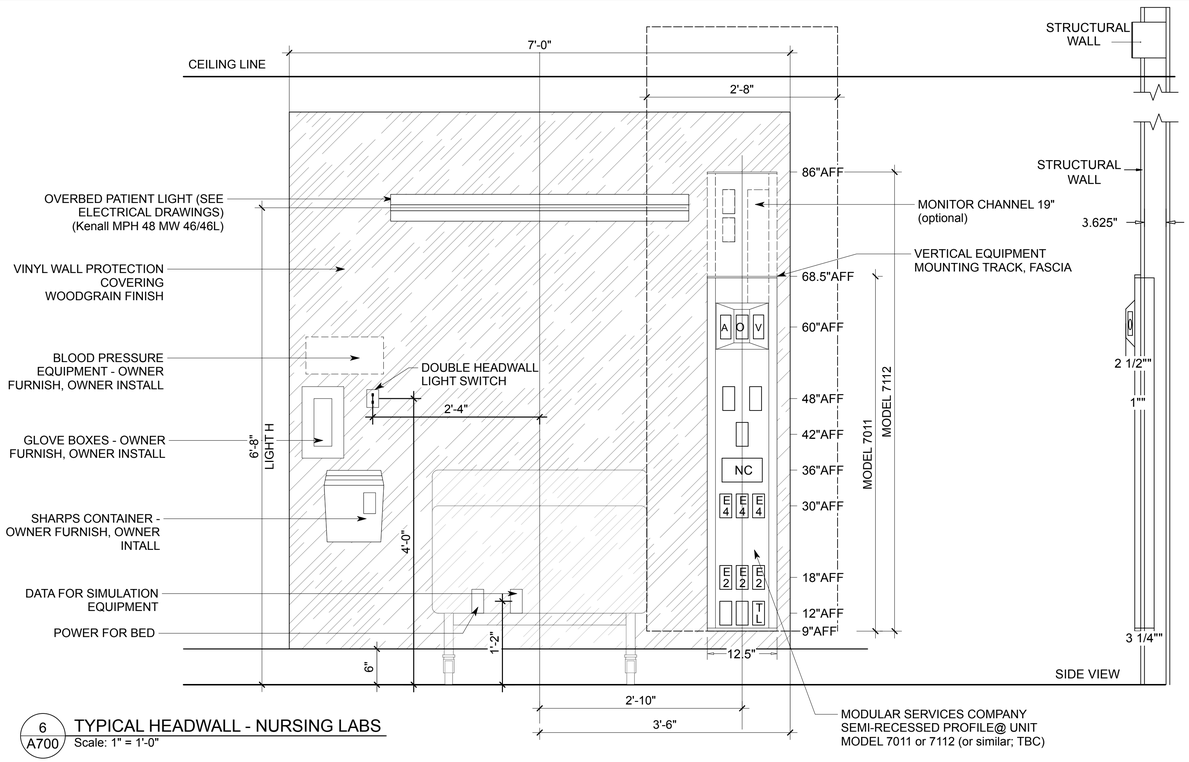
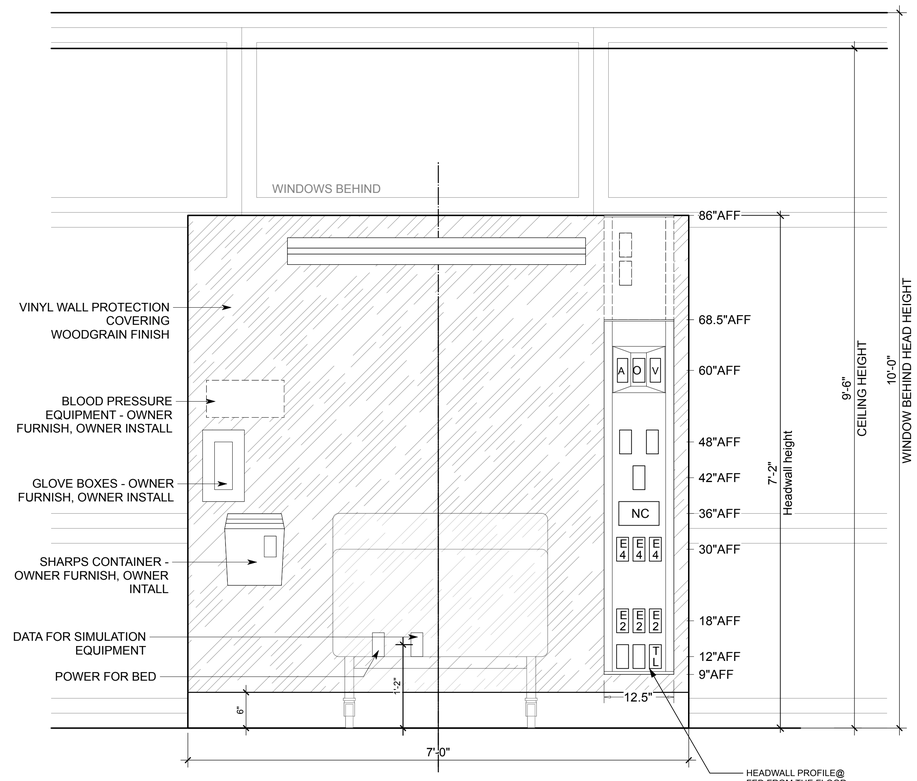
Project Manager	Drawn By: M. PRICE
Date: 06-07-2024	Reviewed By: B. BOWMAN
Project ID	

Sheet Title: **Room Finishes Schedule**

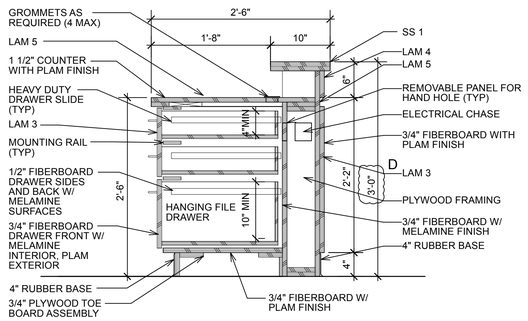
Sheet No.: A601



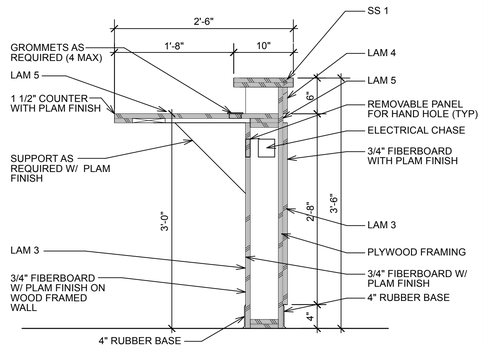
6 A700 TYPICAL HEADWALL - NURSING LABS
Scale: 1" = 1'-0"



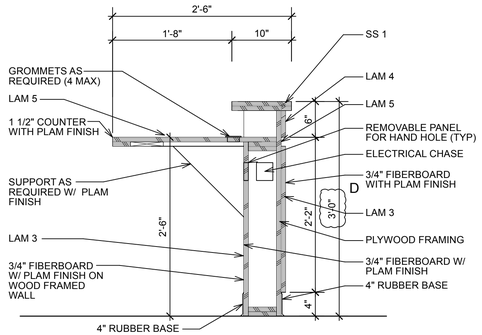
5 A700 TYPICAL HEADWALL - HOSPITAL SIMULATION
Scale: 1" = 1'-0"



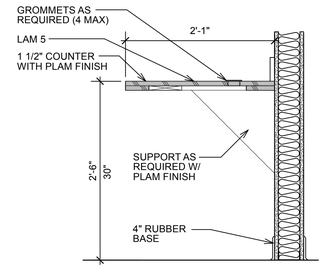
7 A700 Millwork Section - Reception Counter
Scale: 1" = 1'-0"



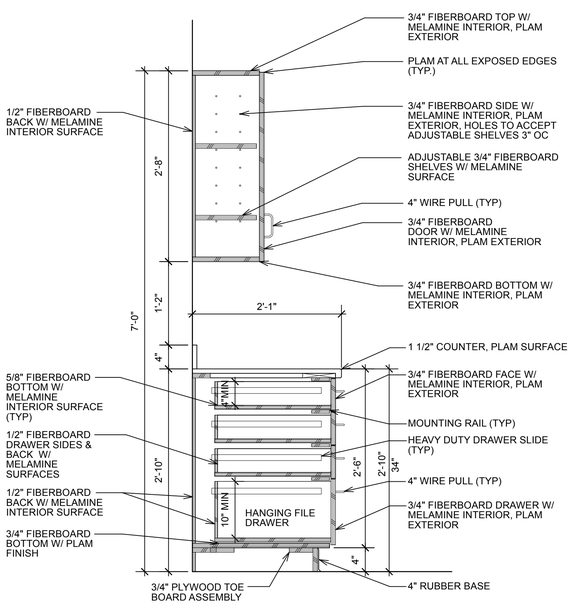
8 A700 Millwork Section - Reception Counter
Scale: 1" = 1'-0"



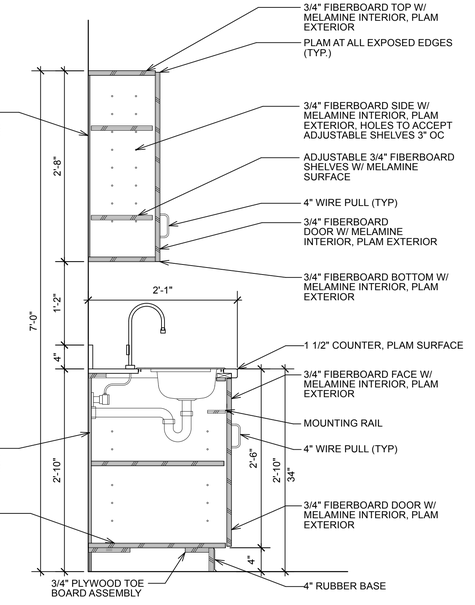
4 A700 Millwork Section - Reception Counter
Scale: 1" = 1'-0"



3 A700 Millwork Section - work counter top
Scale: 1" = 1'-0"



2 A700 Section @ Millwork
Scale: 1" = 1'-0"



1 A700 Section @ Millwork
Scale: 1" = 1'-0"

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BRUCE F. BOWMAN REGISTERED ARCHITECT 5951 6.7.24

NOT FOR CONSTRUCTION

Cape Fear Community College
Health and Human Services Building
Interior Renovation – Phase Two
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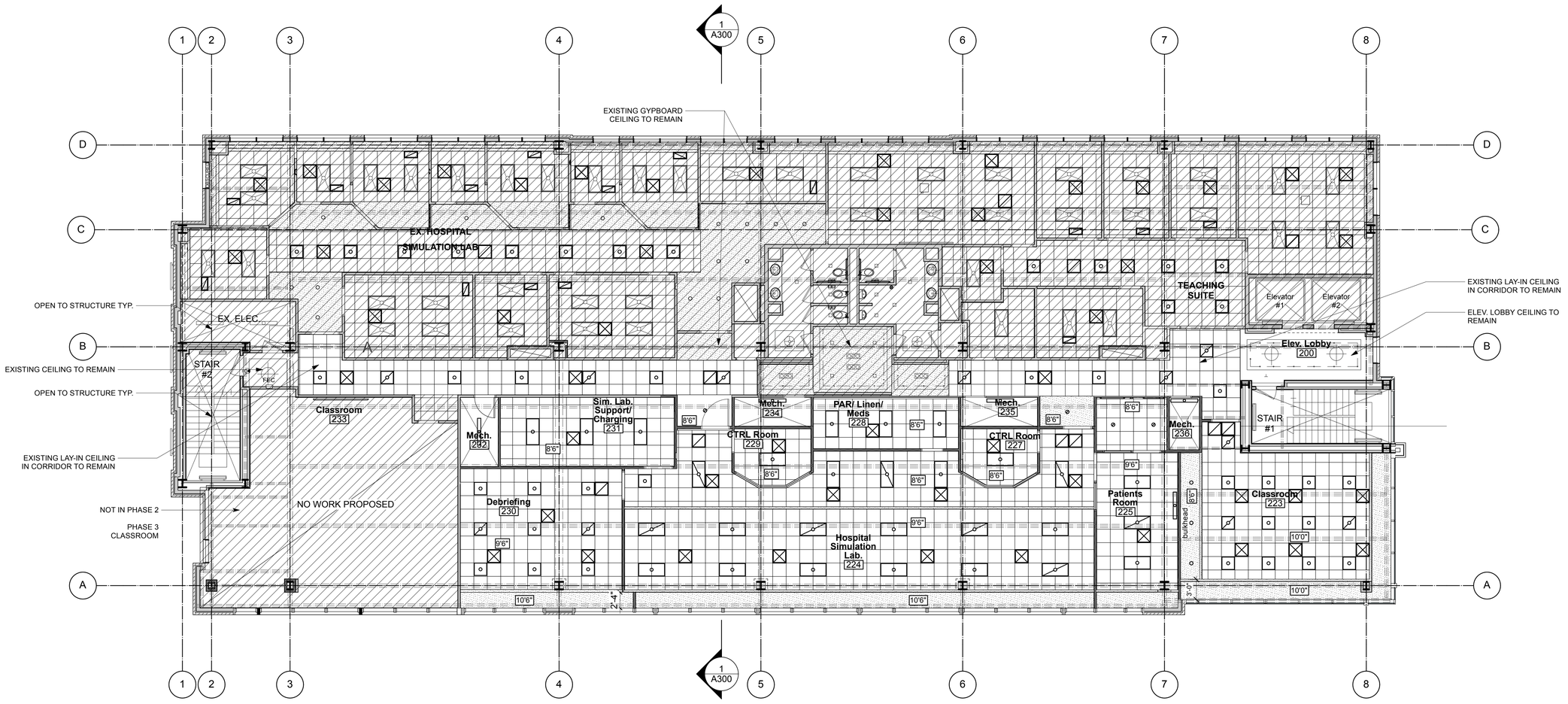
Project Manager	Drawn By M. PRICE
Date 06-07-2024	Reviewed By B. BOWMAN
Project ID	

Sheet Title
Millwork Sections and Details, Headwall Design

Sheet No.
A700



1 Second Floor Reflected Ceiling Plan
Scale: 1/8" = 1'-0"

0 5 10 15 20 25 30 FT

GRAPHIC LEGEND

- LED LAYIN FIXTURES (existing)
- 2x4 LED LAYIN FIXTURE
- 2x2 LED LAYIN FIXTURE
- LED FIXTURES ON EMERGENCY POWER (min. 90 min.)
- RECESSED LED DOWN LIGHT
- NEW PENDANT LIGHT
- WALL MOUNTED LIGHT
- FLUORESCENT SUSPENDED FIXTURE
- CEILING HEIGHT TAG
- NEW 2'-0" x 2'-0" LAYIN CEILING
- GYP. BOARD
- SUPPLY AIR DIFFUSER 2' x 2'
- SUPPLY AIR DIFFUSER RESTROOMS
- RETURN AIR DIFFUSER 2' x 2'
- RETURN AIR DIFFUSER 1' x 2'
- EXIT LIGHT LOCATION SEE ELEC. FOR DIRECTION

NO WORK PROPOSED

ROOM NAME AND NUMBER

REFLECTED CEILING PLAN NOTES

1. CEILING TILE TO BE REGULAR EDGE FISSURED 2'X2' LAY-IN 15/16" WHITE CEILING GRID.
2. CENTER GRID IN ROOMS AS SHOWN. CUT TILES SHALL BE MINIMUM 3" WIDE AT WALL EDGE.
3. THE CONTRACTOR SHALL CONFIRM AND COORDINATE ALL MECHANICAL, ELECTRICAL AND PLUMBING ITEMS
4. VERIFY CEILING CLEARANCES PRIOR TO BEGINNING GRID AND FIXTURE PLACEMENT.
5. SEE ENGINEERING DRAWINGS FOR ADDITIONAL INFORMATION. COORDINATE CLEARANCES WITH ALL TRADES PRIOR TO INSTALLING GRID. NOTIFY ARCHITECT OF ANY DISCREPANCIES.

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BOWMAN MURRAY, HEMINGWAY, ARCHITECTS, PA REGISTERED ARCHITECTURE, ENGINEERING NORTH CAROLINA WILMINGTON, N.C. CERT NO. 5424

BRUCE F. BOWMAN REGISTERED ARCHITECT 5951 NORTH CAROLINA

6.7.24

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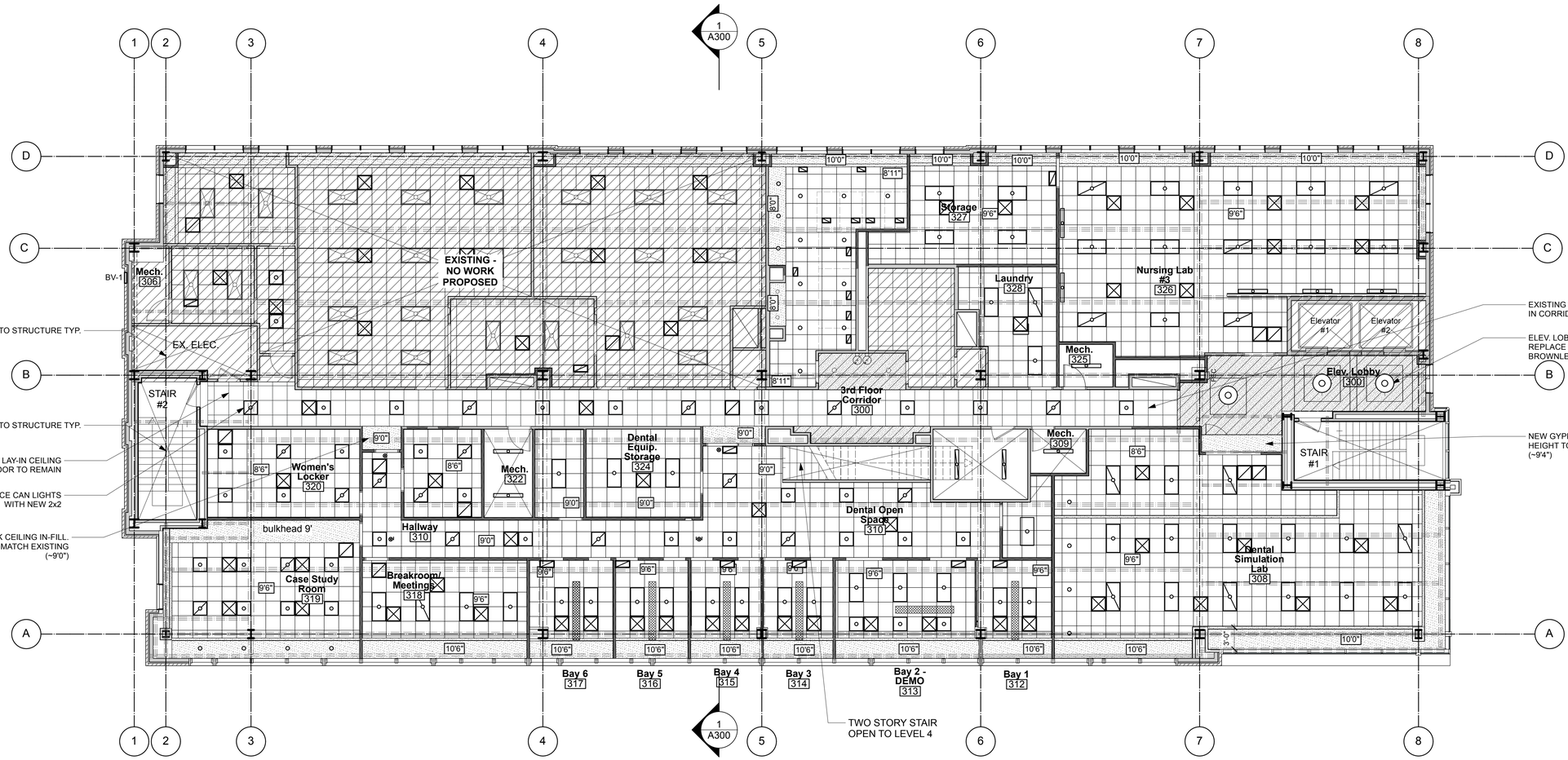
Project Manager	Drawn By M. PRICE
Date 06-07-2024	Reviewed By B. BOWMAN
Project ID	

Sheet Title

Second Floor Reflected Ceiling Plan

Sheet No.

A802



1 Third Floor Reflected Ceiling Plan
Scale: 1/8" = 1'-0"

N

0 5 10 15 20 25 30 FT

GRAPHIC LEGEND

- LED LAYIN FIXTURES (existing)
- 2x4 LED LAYIN FIXTURE
- 2x2 LED LAYIN FIXTURE
- LED FIXTURES ON EMERGENCY POWER (min. 90 min.)
- RECESSED LED DOWN LIGHT
- NEW PENDANT LIGHT
- WALL MOUNTED LIGHT
- FLUORESCENT SUSPENDED FIXTURE
- CEILING HEIGHT TAG
- NEW 2'-0" x 2'-0" LAYIN CEILING
- GYP. BOARD
- SUPPLY AIR DIFFUSER 2' x 2'
- SUPPLY AIR DIFFUSER RESTROOMS
- RETURN AIR DIFFUSER 2' x 2'
- RETURN AIR DIFFUSER 1' x 2'
- EXIT LIGHT LOCATION SEE ELEC. FOR DIRECTION

NO WORK PROPOSED

ROOM NAME AND NUMBER

REFLECTED CEILING PLAN NOTES

1. CEILING TILE TO BE REGULAR EDGE FISSURED 2'X2' LAY-IN 15/16" WHITE CEILING GRID.
2. CENTER GRID IN ROOMS AS SHOWN. CUT TILES SHALL BE MINIMUM 3" WIDE AT WALL EDGE.
3. THE CONTRACTOR SHALL CONFIRM AND COORDINATE ALL MECHANICAL, ELECTRICAL AND PLUMBING ITEMS
4. VERIFY CEILING CLEARANCES PRIOR TO BEGINNING GRID AND FIXTURE PLACEMENT.
5. SEE ENGINEERING DRAWINGS FOR ADDITIONAL INFORMATION. COORDINATE CLEARANCES WITH ALL TRADES PRIOR TO INSTALLING GRID. NOTIFY ARCHITECT OF ANY DISCREPANCIES.

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BRUCE F. BOWMAN REGISTERED ARCHITECT 5951 6.7.24

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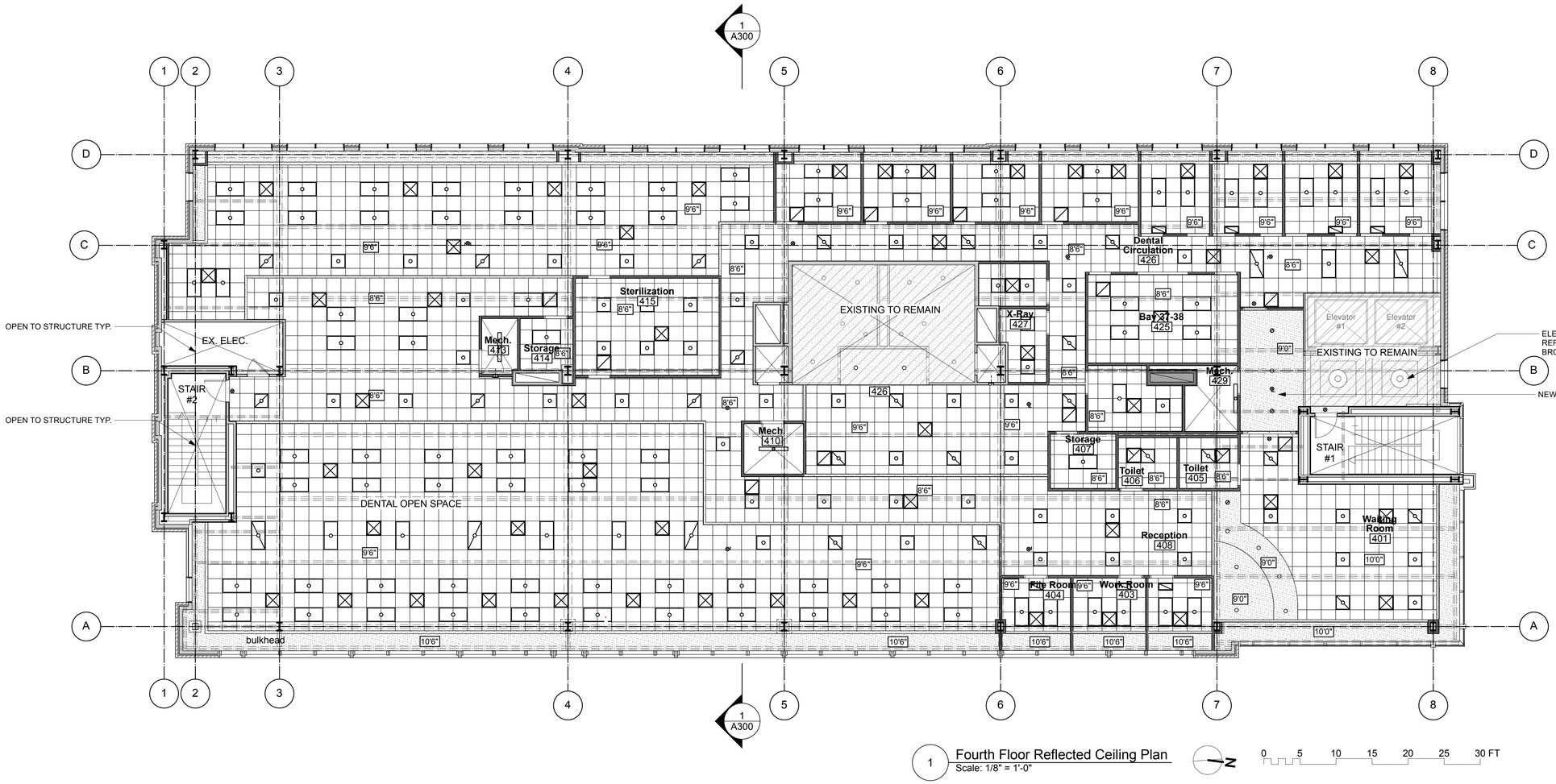
Project Manager	Drawn By: M. PRICE
Date: 06-07-2024	Reviewed By: B. BOWMAN
Project ID	

Sheet Title

Third Floor Reflected Ceiling Plan

Sheet No.

A803



1 Fourth Floor Reflected Ceiling Plan
Scale: 1/8" = 1'-0"

N

0 5 10 15 20 25 30 FT

GRAPHIC LEGEND

- LED LAYIN FIXTURES (existing)
- 2x4 LED LAYIN FIXTURE
- 2x2 LED LAYIN FIXTURE
- LED FIXTURES ON EMERGENCY POWER (min. 90 min.)
- RECESSED LED DOWN LIGHT
- NEW PENDANT LIGHT
- WALL MOUNTED LIGHT
- FLUORESCENT SUSPENDED FIXTURE
- CEILING HEIGHT TAG
- NEW 2'-0" x 2'-0" LAYIN CEILING
- GYP. BOARD
- SUPPLY AIR DIFFUSER 2' x 2'
- SUPPLY AIR DIFFUSER RESTROOMS
- RETURN AIR DIFFUSER 2' x 2'
- RETURN AIR DIFFUSER 1' x 2'
- EXIT LIGHT LOCATION SEE ELEC. FOR DIRECTION

NO WORK PROPOSED

ROOM NAME AND NUMBER

REFLECTED CEILING PLAN NOTES

1. CEILING TILE TO BE REGULAR EDGE FISSURED 2'X2' LAY-IN 15/16" WHITE CEILING GRID.
2. CENTER GRID IN ROOMS AS SHOWN. CUT TILES SHALL BE MINIMUM 3" WIDE AT WALL EDGE.
3. THE CONTRACTOR SHALL CONFIRM AND COORDINATE ALL MECHANICAL, ELECTRICAL AND PLUMBING ITEMS
4. VERIFY CEILING CLEARANCES PRIOR TO BEGINNING GRID AND FIXTURE PLACEMENT.
5. SEE ENGINEERING DRAWINGS FOR ADDITIONAL INFORMATION. COORDINATE CLEARANCES WITH ALL TRADES PRIOR TO INSTALLING GRID. NOTIFY ARCHITECT OF ANY DISCREPANCIES.

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BOWMAN MURRAY HEMINGWAY ARCHITECTS PA REGISTERED ARCHITECTURE ENGINEERING NORTH CAROLINA CERT NO. 3424 WILMINGTON, N.C.

BRUCE F. BOWMAN REGISTERED ARCHITECT 5951

06.7.24

NOT FOR CONSTRUCTION

Cape Fear Community College
Health and Human Services Building
Interior Renovation – Phase Two
319 N 3rd Stree, Wilmington, North Carolina 28401

SCO # 23-27149-01A NCCCS # 2772

REV.	DATE	DESCRIPTION
D	06/07/24	CD Submittal
C	5/24/24	CD Estimating Set
B	3/13/24	DD Submittal
A	2/16/24	DD Estimating Set
NO.	DATE	ISSUE NOTE

Project Manager	Drawn By: M. PRICE
Date: 06-07-2024	Reviewed By: B. BOWMAN

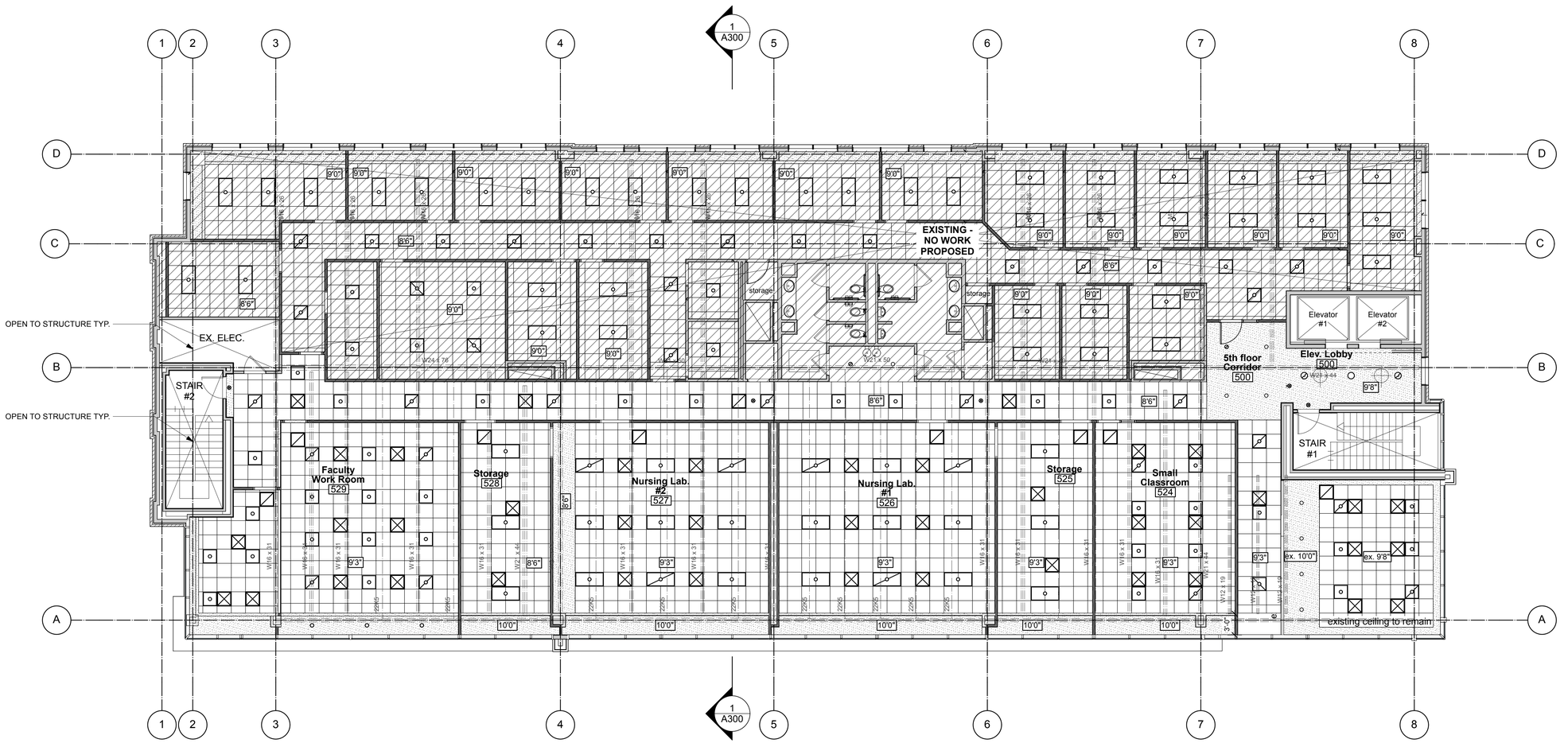
Project ID

Sheet Title

Fourth Floor Reflected Ceiling Plan

Sheet No.

A804



1 Fifth Floor Reflected Ceiling Plan
Scale: 1/8" = 1'-0"

N

0 5 10 15 20 25 30 FT

GRAPHIC LEGEND

- LED LAYIN FIXTURES (existing)
- 2x4 LED LAYIN FIXTURE
- 2x2 LED LAYIN FIXTURE
- LED FIXTURES ON EMERGENCY POWER (min. 90 min.)
- RECESSED LED DOWN LIGHT
- NEW PENDANT LIGHT
- WALL MOUNTED LIGHT
- FLUORESCENT SUSPENDED FIXTURE
- CEILING HEIGHT TAG
- NEW 2'-0" x 2'-0" LAYIN CEILING
- GYP. BOARD
- SUPPLY AIR DIFFUSER 2' x 2'
- SUPPLY AIR DIFFUSER RESTROOMS
- RETURN AIR DIFFUSER 2' x 2'
- RETURN AIR DIFFUSER 1' x 2'
- EXIT LIGHT LOCATION SEE ELEC. FOR DIRECTION

NO WORK PROPOSED

ROOM NAME AND NUMBER

REFLECTED CEILING PLAN NOTES

1. CEILING TILE TO BE REGULAR EDGE FISSURED 2'X2' LAY-IN 15/16" WHITE CEILING GRID.
2. CENTER GRID IN ROOMS AS SHOWN. CUT TILES SHALL BE MINIMUM 3" WIDE AT WALL EDGE.
3. THE CONTRACTOR SHALL CONFIRM AND COORDINATE ALL MECHANICAL, ELECTRICAL AND PLUMBING ITEMS
4. VERIFY CEILING CLEARANCES PRIOR TO BEGINNING GRID AND FIXTURE PLACEMENT.
5. SEE ENGINEERING DRAWINGS FOR ADDITIONAL INFORMATION, COORDINATE CLEARANCES WITH ALL TRADES PRIOR TO INSTALLING GRID. NOTIFY ARCHITECT OF ANY DISCREPANCIES.

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BRUCE F. BOWMAN REGISTERED ARCHITECT 5951 6-7-24

NOT FOR CONSTRUCTION

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NO.	DATE	ISSUE NOTE

Project Manager	Drawn By M. PRICE
Date 06-07-2024	Reviewed By B. BOWMAN
Project ID	

Sheet Title

Fifth Floor Reflected Ceiling Plan

Sheet No.

A805

GENERAL NOTES

1. COMPLY WITH ALL APPLICABLE NORTH CAROLINA CODES FOR ALL WORK UNDER THIS CONTRACT.
2. INSTALL REFRIGERANT PIPING PER MANUFACTURER'S RECOMMENDATIONS AND PROVIDE PIPE ROUTING SUBMITTAL ALONG WITH PRESSURE DROP CALCULATIONS. ALL REFRIGERANT PIPING SHALL HAVE ELASTOMERIC INSULATION. ALL EXTERIOR PIPING INSULATION SHALL HAVE RIGID ALUMINUM JACKETS.
3. FABRICATE ALL DUCTWORK IN ACCORDANCE WITH SMACNA STANDARDS. ALL DUCTWORK SHALL BE A MINIMUM OF 26 GAUGE.
4. PROVIDE ACCESS DOORS IN INACCESSIBLE CEILINGS TO ACCESS MEP DEVICES ABOVE CEILINGS NOT OTHERWISE ACCESSIBLE.
5. INSTALL FLEXIBLE DUCTS IN ACCORDANCE WITH SMACNA STANDARDS AND PROJECT SPECIFICATIONS. THE MAXIMUM ALLOWABLE FLEXIBLE DUCT LENGTH SHALL BE FIVE (5) FEET.
6. PROVIDE MANUAL BALANCING DAMPERS AT EACH DUCT BRANCH LEADING TO AN OUTLET/INLET OPENING. INSTALL DAMPERS AS FAR AS POSSIBLE FROM THE DIFFUSER/GRILLE.
7. REFER TO AIR DEVICE SCHEDULE FOR INLET DUCT SIZES UNLESS OTHERWISE INDICATED.
8. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF ALL CEILING AIR DEVICES.
9. VERIFY ARCHITECTURAL REFLECTED CEILING PLANS FOR CEILING TYPES AND LOCATIONS OF AIR DEVICES.
10. REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATIONS OF EXTERIOR WALL AND ROOF PENETRATIONS.
11. COORDINATE FINAL EQUIPMENT/FIXTURE LOCATIONS WITH THE GENERAL CONTRACTOR. THE LOCATION AS INDICATED ON THE DRAWINGS IS APPROXIMATE. INSTALL ALL MECHANICAL EQUIPMENT SUCH THAT THE MANUFACTURER'S CLEARANCES ARE MAINTAINED.
12. COORDINATE ALL ROOF PENETRATION SIZES AND LOCATIONS WITH APPROVED EQUIPMENT SHOP DRAWINGS.
13. COORDINATE ALL MECHANICAL, PLUMBING, AND ELECTRICAL WORK WITH STRUCTURAL MEMBERS AND ALL OTHER TRADES.
14. RUN ALL PIPING CONCEALED ABOVE CEILINGS EXCEPT WHERE INDICATED.
15. PROVIDE INSULATED, TRAPPED HVAC CONDENSATE DRAINS WITH AIR GAPS FROM COOLING COIL DRAIN PANS TO NEAREST FLOOR DRAIN, STORM DRAIN, OR TO THE OUTDOORS AS INSTRUCTED BY THE ENGINEER.
16. PROVIDE FLEXIBLE DUCT CONNECTIONS BETWEEN EACH DUCT FAN CONNECTION.
17. PROVIDE VFDS, STARTERS, AND DISCONNECT SWITCHES FOR ALL MECHANICAL EQUIPMENT WHICH COMPLY WITH SPECIFICATIONS FOR MANUFACTURER, QUALITY, CONFORMANCE, AND OPTIONS.
18. COORDINATE FINAL THERMOSTAT LOCATIONS WITH INTERIOR FINISH AND FURNITURE EQUIPMENT DRAWINGS PRIOR TO INSTALLATION. MOUNT SENSORS 48" AFF TO THE TOP OF THE DEVICE.
19. THE CONTRACTOR SHALL PROVIDE A COMPLETE HVAC SYSTEM TO INCLUDE ALL LABOR, MATERIALS, TOOLS, AND EQUIPMENT FOR A COMPLETE AND FUNCTIONAL SYSTEM INCLUDING ALL NECESSARY APPURTENCES CUSTOMARILY INCLUDED IF NOT SPECIFICALLY CALLED OUT.
20. THE ENTIRE INSTALLATION, INCLUDING MATERIALS, EQUIPMENT, AND WORKMANSHIP SHALL CONFORM WITH ALL APPLICABLE LAWS, CODES, AND REGULATIONS OF MUNICIPAL, STATE, AND FEDERAL AUTHORITIES.
21. THIS PROJECT SHALL CONFORM TO APPLICABLE ASHRAE, NFPA, AND SMACNA STANDARDS AND OTHER REGULATORY BODIES HAVING JURISDICTION OVER THE CLASS OF WORK.
22. MATERIALS AND EQUIPMENT SHALL HAVE STAMPS OR SEALS OF ARI, ASME, UL, AND/OR ASTM.
23. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS, LICENSES, DOCUMENTS, AND SERVICES RELATED TO THE INSTALLATION OF THE WORK.
24. THE CONTRACTOR SHALL COORDINATE HIS WORK WITH THE OTHER TRADES IN ORDER TO RESOLVE ANY CONFLICT THAT MIGHT ARISE DUE TO THE LOCATION OF EQUIPMENT OR THE USE OF SPACE.
25. RUN ALL HORIZONTAL PIPING AND DUCTWORK ABOVE CEILING UNLESS OTHERWISE NOTED.
26. EQUIPMENT OF HIGHER ELECTRICAL CHARACTERISTICS MAY BE FURNISHED PROVIDED SUCH PROPOSED EQUIPMENT IS APPROVED IN WRITING AND CONNECTING ELECTRICAL SERVICE, BREAKERS, AND CONDUIT SIZES ARE APPROPRIATELY MODIFIED AT NO COST TO THE OWNER.
27. MAKE DUCT PENETRATIONS OF WALLS WITH SHEET METAL DUCTS. FLEXIBLE DUCT PENETRATIONS OF WALLS ARE NOT ACCEPTABLE.
28. DUCTWORK SIZES SHOWN ON DRAWINGS ARE INSIDE CLEAR DIMENSIONS.
29. DO NOT INSTALL PIPING OR DUCTWORK OVER ANY ELECTRICAL EQUIPMENT OR ELECTRICAL SERVICE SPACE.
30. LAYOUT OF PIPING AND DUCTWORK IS DIAGRAMMATIC. RUN ALL PIPING AND DUCTWORK AS HIGH AS POSSIBLE UNLESS OTHERWISE NOTED. ALLOW FOR RISES, DROPS, AND OFFSETS AS REQUIRED.
31. REFER TO ELECTRICAL DRAWINGS FOR VOLTAGE AND PHASE REQUIREMENTS FOR ALL EQUIPMENT REQUIRING AN ELECTRICAL CONNECTION.
32. THE CONTRACTOR SHALL MAKE TESTS FOR ACCEPTANCE AND APPROVAL AS REQUIRED BY CODE AND THE REQUIREMENTS OF APPLICABLE REGULATORY AGENCIES. REQUIRED TESTS SHALL BE PERFORMED IN THE PRESENCE OF THE DESIGNER AND/OR OWNER UNLESS OTHERWISE NOTED IN THE DRAWINGS AND SPECIFICATIONS.
33. ALL TESTS SHALL BE COMPLETED BEFORE ANY MECHANICAL EQUIPMENT, DUCTWORK, OR PIPING INSULATION IS APPLIED.
34. ALL THREADED RODS USED FOR HANGERS SHALL NOT EXTEND MORE THAN 1/2" BELOW SUPPORT.

LEGEND

- SUPPLY REGISTER A/C SYSTEM
- RETURN REGISTER A/C SYSTEM
- T — THERMOSTAT
- H — HUMIDISTAT
- TH — COMBINATION THERMOSTAT / HUMIDISTAT
- 20x10 — RECTANGULAR DUCT - 20" WIDE INSIDE A/C SYSTEM 10" HIGH INSIDE
- TURNING VANES
- 10"Ø — RIGID ROUND DUCT - 10" I.D.
- 10"Ø — FLEX DUCT - 10" I.D.
- BALANCING DAMPER
- REDUCER
- VENT FAN
- A / 100 — REGISTER CFM
- —C— CONDENSATE PIPE
- —RS/RL— REFRIGERANT LIQUID/SUCTION PIPE
- POINT OF CONNECTION
- POINT OF DISCONNECTION
- FIRE / SMOKE DAMPER
- 2H RATED WALL
- 1H RATED WALL

PROJECT NAME
COMPLIANCE SCHEDULE - MECHANICAL

METHOD OF COMPLIANCE	PRESCRIPTIVE
ENERGY COST BUDGET	
THERMAL ZONE	3A
EXTERIOR DESIGN CONDITIONS	
WINTER DRY BULB	27.5°F
SUMMER DRY BULB	91.2°F
INTERIOR DESIGN CONDITIONS	
WINTER DRY BULB	70°F
SUMMER DRY BULB	75°F
RELATIVE HUMIDITY	50% - 60%
BUILDING HEATING LOAD	1,019,400 BTUH
BUILDING COOLING LOAD	1,045,100 BTUH
MECHANICAL SPACING CONDITIONING SYSTEM	
UNITARY	
DESCRIPTION OF UNIT -	
HEATING EFFICIENCY -	
COOLING EFFICIENCY -	SEE EQUIPMENT SCHEDULE
HEAT OUTPUT OF UNIT -	
COOLING OUTPUT OF UNIT -	
BOILER	
TOTAL BOILER OUTPUT (IF OVERSIZED STATE REASON)	N/A
CHILLER	
TOTAL CHILLER CAPACITY	N/A
LIST EQUIPMENT EFFICIENCIES	SEE EQUIPMENT SCHEDULE
EQUIPMENT SCHEDULES WITH MOTORS (MECHANICAL SYSTEM)	
MOTOR HORSEPOWER	N/A
NUMBER OF PHASES	N/A
MINIMUM EFFICIENCY	N/A
MOTOR TYPE	N/A
# OF POLES	N/A

DESIGNER STATEMENT
TO THE BEST OF MY KNOWLEDGE AND BELIEF, THE DESIGN OF THIS BUILDING COMPLIES WITH THE MECHANICAL SYSTEMS, SERVICE SYSTEMS, AND EQUIPMENT REQUIREMENTS OF THE NORTH CAROLINA STATE BUILDING CODE.

SIGNED: _____ 06/07/24

NAME: BLAKE A. SMITH, P.E.

TITLE: ENGINEER

BOWMAN MURRAY HEMINGWAY
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PRELIMINARY NOT FOR CONSTRUCTION

Cape Fear Community College
Health and Human Services Building
Interior Renovation – Phase Two
319 N 3rd Stree, Wilmington, North Carolina 28401

NCCCS # 2772
SCO # 23-37149-01

REV.	DATE	DESCRIPTION

NO.	DATE	ISSUE NOTE

Project Manager	Drawn By
DPF	DSA
Date	Reviewed By
03-01-2024	BAS

Project ID
23-27149-01

Sheet Title
SCHEDULES, LEGEND & NOTES

Sheet No.
M001

AIR DEVICE SCHEDULE

SYMBOL	DESCRIPTION	NECK	FACE	RUN OUT	VOLUME DAMPER	MAXIMUM AIRFLOW (CFM)	MAXIMUM APD (IN WC)	MATERIAL	COLOR	MFG. (NOTE 1)	MODEL	REMARKS
B1	SQUARE PLAQUE	6"ø	24"x24"	6"ø	NO	100	0.05	STEEL	WHITE	PRICE	SPD	NOTES 1, 2, 3, 4
B2	SQUARE PLAQUE	8"ø	24"x24"	8"ø	NO	200	0.05	STEEL	WHITE	PRICE	SPD	NOTES 1, 2, 3, 4
B3	SQUARE PLAQUE	10"ø	24"x24"	10"ø	NO	300	0.05	STEEL	WHITE	PRICE	SPD	NOTES 1, 2, 3, 4
B4	SQUARE PLAQUE	12"ø	24"x24"	12"ø	NO	450	0.05	STEEL	WHITE	PRICE	SPD	NOTES 1, 2, 3, 4
E1	PERFORATED FACE	6"ø	24"x24"	6"ø	NO	100	0.05	STEEL	WHITE	PRICE	PDS	NOTES 1, 2, 3, 4
E2	PERFORATED FACE	8"ø	24"x24"	8"ø	NO	175	0.05	STEEL	WHITE	PRICE	PDS	NOTES 1, 2, 3, 4
E3	PERFORATED FACE	10"ø	24"x24"	10"ø	NO	275	0.05	STEEL	WHITE	PRICE	PDS	NOTES 1, 2, 3, 4
G1	LOUVERED GRILLE	12"X6"	14"X8"	6"ø	NO	100	0.05	STEEL	WHITE	PRICE	500	NOTES 1, 2, 3, 4
I1	LINEAR SLOT	8"ø	(2) 3/4" SLOTS X 48"	8"ø	NO	150	0.10	STEEL	WHITE	PRICE	510	NOTES 1, 2, 4, 6, 7
K1	LAMINAR FLOW WITH HEPA FILTER	12"ø	48"X24"	12"ø	NO	280	0.25	STEEL	WHITE	PRICE	LFDC	NOTES 1, 2, 3, 4
T1	PERFORATED FACE	18"x6"	24"x12"	18"x6"	NO	380	0.05	STEEL	WHITE	PRICE	PDR	NOTES 1, 2, 4, 5
T2	PERFORATED FACE	6"ø	24"x24"	6"ø	NO	100	0.05	STEEL	WHITE	PRICE	PDR	NOTES 1, 2, 4, 5
T3	PERFORATED FACE	8"ø	24"x24"	8"ø	NO	200	0.05	STEEL	WHITE	PRICE	PDR	NOTES 1, 2, 4, 5
T4	PERFORATED FACE	10"ø	24"x24"	10"ø	NO	300	0.05	STEEL	WHITE	PRICE	PDR	NOTES 1, 2, 4, 5
T5	PERFORATED FACE	12"ø	24"x24"	12"ø	NO	450	0.05	STEEL	WHITE	PRICE	PDR	NOTES 1, 2, 4, 5
T6	PERFORATED FACE	18"x18"	24"x24"	18"x18"	NO	2000	0.05	STEEL	WHITE	PRICE	PDR	NOTES 1, 2, 4, 5
V1	LOUVERED GRILLE	12"X6"	14"X8"	12"X6"	NO	235	0.05	STEEL	WHITE	PRICE	510	NOTES 1, 2, 4

NOTES:
1. EQUALS ARE METAL-AIRE, TITUS AND KRUEGER.
2. COORDINATE FRAMES WITH ARCHITECTURAL REFLECTED CEILING PLAN.
3. PROVIDE R6 INSULATED BACKPAN.
4. SUPPORT INDEPENDENT OF CEILING.
5. PROVIDE WITH FACTORY ROUND NECK ADAPTOR.
6. PROVIDE DOUBLE DEFLECTION WITH FRONT BLADES PARALLEL TO THE LONG DIMENSION.
7. PROVIDE WITH MANUFACTURER'S INSULATED, RECTANGULAR SUPPLY AIR PLENUM.

SPLIT SYSTEM HEAT PUMP SCHEDULE

COMPRESSOR							AIR HANDLING UNIT												GENERAL	
SYMBOL	COOLING CAPACITY (TONS)	ELECTRIC				MFG.	MODEL	SYMBOL	TYPE	HEATER		ELECTRIC				MFG.	MODEL	FAN CFM	FRESH AIR INTAKE (CFM)	FRESH AIR INTAKE DUCT SIZE	ESP (IN OF H20) VERT/H.R.	SEER HSPF	REMARKS
		VOLT	PHASE	MCA	MOCP					CAPACITY (KW)	STAGES	VOLT	PHASE	MCA	MOCP								
HP-2F	5	208	1ø	32	50	TRANE	4TWR4	AHU-2F	VERTICAL	7.21	1	208	1ø	52	60	TRANE	TEM6	1790	280	10	0.7	7.80	SEE NOTES
HP-2G	5	208	1ø	32	50	TRANE	4TWR4	AHU-2G	VERTICAL	7.21	1	208	1ø	52	60	TRANE	TEM6	1975	180	8	0.7	7.80	SEE NOTES
HP-2H	5	208	1ø	32	50	TRANE	4TWR4	AHU-2H	VERTICAL	7.21	1	208	1ø	52	60	TRANE	TEM6	1910	240	10	0.7	7.80	SEE NOTES
HP-3E	5	208	1ø	32	50	TRANE	4TWR4	AHU-3E	VERTICAL	7.21	1	208	1ø	52	60	TRANE	TEM6	1975	150	8	0.7	7.80	SEE NOTES
HP-3F	4	208	1ø	26	40	TRANE	4TWR4	AHU-3F	VERTICAL	7.21	1	208	1ø	52	60	TRANE	TEM6	1220	160	8	0.7	7.80	SEE NOTES
HP-3G	4	208	1ø	26	40	TRANE	4TWR4	AHU-3G	VERTICAL	7.21	1	208	1ø	52	60	TRANE	TEM6	1220	160	8	0.7	7.80	SEE NOTES
HP-3H	5	208	1ø	32	50	TRANE	4TWR4	AHU-3H	VERTICAL	7.21	1	208	1ø	52	60	TRANE	TEM6	1450	300	10	0.7	7.80	SEE NOTES
HP-3I	3	208	1ø	18	30	TRANE	4TWR4	AHU-3I	VERTICAL	5.77	1	208	1ø	40	40	TRANE	TEM6	1100	140	8	0.7	7.50	SEE NOTES
HP-3J	4	208	1ø	26	40	TRANE	4TWR4	AHU-3J	VERTICAL	7.21	1	208	1ø	52	60	TRANE	TEM6	1260	180	8	0.7	7.80	SEE NOTES
HP-4B	5	208	1ø	32	50	TRANE	4TWR4	AHU-4B	VERTICAL	7.21	1	208	1ø	52	60	TRANE	TEM6	1780	280	8	0.7	7.80	SEE NOTES
HP-4C	5	208	1ø	32	50	TRANE	4TWR4	AHU-4C	VERTICAL	7.21	1	208	1ø	52	60	TRANE	TEM6	1780	280	8	0.7	7.80	SEE NOTES
HP-4D	5	208	1ø	32	50	TRANE	4TWR4	AHU-4D	VERTICAL	7.21	1	208	1ø	52	60	TRANE	TEM6	1780	280	8	0.7	7.80	SEE NOTES
HP-4E	5	208	1ø	32	50	TRANE	4TWR4	AHU-4E	VERTICAL	7.21	1	208	1ø	52	60	TRANE	TEM6	1780	280	8	0.7	7.80	SEE NOTES
HP-4F	5	208	1ø	32	50	TRANE	4TWR4	AHU-4F	VERTICAL	7.21	1	208	1ø	52	60	TRANE	TEM6	1780	280	8	0.7	7.80	SEE NOTES
HP-4G	5	208	1ø	32	50	TRANE	4TWR4	AHU-4G	VERTICAL	7.21	1	208	1ø	52	60	TRANE	TEM6	1780	280	8	0.7	7.80	SEE NOTES
HP-4H	5	208	1ø	32	50	TRANE	4TWR4	AHU-4H	VERTICAL	7.21	1	208	1ø	52	60	TRANE	TEM6	1780	280	8	0.7	7.80	SEE NOTES

NOTES:
1. PROVIDE GALVANIZED DRIP PANS AT EACH UNIT - SEE DETAILS.
2. PROVIDE SOLID STATE PROGRAMMABLE THERMOSTAT CAPABLE OF INTEGRATION INTO BEW BUILDING AUTOMATION SYSTEM.
3. CONTRACTOR SHALL PROVIDE MANUFACTURERS FILTER HOUSING AND PROVIDE FILTERS AT EACH AHU. FILTER SHALL BE SIZED PER MANUFACTURERS RECOMMENDATIONS.
4. PROVIDE MANUFACTURER RECOMMENDED CLEARANCES AROUND ALL INDOOR AND OUTDOOR UNITS.
5. CONSULT WITH COMPRESSOR MANUFACTURER FOR THE CORRECT SIZING OF REFRIGERANT LINES. PROVIDE MANUFACTURER RECOMMENDED EQUIPMENT FOR ANY LONG REFRIGERANT LINE LENGTHS.
6. PROVIDE LOW AMBIENT CONTROLS FOR FREEZE PROTECTION.
7. PROVIDE CONTROLS THAT PREVENT AUXILIARY HEAT STRIPS FROM BEING ACTIVATED WHEN THE HEAT PUMP CAN HANDLE THE HEATING LOAD EXCEPT DURING DEFROST CYCLE AND DEHUMIDIFICATION CYCLE.
8. PROVIDE UNITS COMPATIBLE WITH SES DEHUMIDIFICATION MODULE AND PROVIDE WALL MOUNTED THERMOSTAT WITH AUTO-CHANGEOVER AND HUMIDITY SENSING.
9. THE ENTIRE OUTDOOR UNIT (COIL, CABINET, ETC.) SHALL BE CORROSION PROTECTED TO MEET ASTM B117 5,000 HOUR SALT SPRAY STANDARD.

EXISTING PACKAGE UNIT SCHEDULE

SYMBOL	BASIS OF DESIGN MANUFACTURER	BASIS OF DESIGN MODEL	SYSTEM TYPE	COOLING (AHRI STANDARD)			HEATING (AHRI STANDARD)			AUXILIARY HEATER	EVAPORATOR FAN			ELECTRICAL			WEIGHT (LBS.)	NOTES
				TOTAL (MBH)	SENSIBLE (MBH)	EFFICIENCY	TOTAL (MBH)	EFFICIENCY		ELECTRIC (KW)	SUPPLY AIRFLOW (CFM)	OUTSIDE AIRFLOW (CFM)	ESP (IN. WG.)	POWER SUPPLY (V/PH/HZ)	MCA	MOCP		
RTU3	TRANE	WSC072	HEAT PUMP	78	56	11.4	68	COP	3.5	9.00	2250	200	1.10	208/3/60	59.8	70	835	3, 4
RTU4	TRANE	WSC060	HEAT PUMP	61	48	14.0	59	COP	3.5	6.00	2000	270	1.10	208/3/60	48.0	60	777	1, 2, 4
RTU5	TRANE	WCS072	HEAT PUMP	78	56	11.4	68	COP	3.5	9.00	2400	300	1.10	208/3/60	59.8	70	835	3, 4

NOTES:
1. EXISTING HOT GAS REHEAT FOR DEHUMIDIFICATION CYCLE.
2. REFER TO FLOOR PLANS FOR RELOCATED HUMIDISTAT AND AUTO CHANGEOVER PROGRAMMABLE THERMOSTAT.
3. REFER TO FLOOR PLANS FOR RELOCATED AUTO CHANGEOVER PROGRAMMABLE THERMOSTAT.
4. REBALANCE SUPPLY AIRFLOW AND OUTSIDE AIRFLOW VALUES.

VENTILATION SCHEDULE

SYMBOL	SYSTEM TYPE	ALL ZONES INCLUDE IN CALC?	CONDITION ANALYZED	SYSTEM FLOOR AREA (FT²)	SYSTEM POPULATION (#)	OUTDOOR AIR REQUIRED (CFM)	OUTDOOR AIR PROVIDED (CFM)	OUTDOOR AIR PROVIDED EXCEEDS REQUIRED?
AHU-2F	SINGLE ZONE	Y	HEATING	741	31	277	280	Y
AHU-2G	SINGLE ZONE	Y	HEATING	1511	14	172	180	Y
AHU-2H	SINGLE ZONE	Y	HEATING	1639	22	232	240	Y
AHU-3E	SINGLE ZONE	Y	HEATING	1790	15	150	150	Y
AHU-3F	SINGLE ZONE	Y	HEATING	714	16	159	160	Y
AHU-3G	SINGLE ZONE	Y	HEATING	714	16	159	160	Y
AHU-3H	SINGLE ZONE	Y	HEATING	1434	16	294	300	Y
AHU-3I	SINGLE ZONE	Y	HEATING	949	21	138	140	Y
AHU-3J	SINGLE ZONE	Y	HEATING	1034	10	174	180	Y
AHU-4B	SINGLE ZONE	Y	HEATING	1724	8	280	280	Y
AHU-4C	SINGLE ZONE	Y	HEATING	1062	3	275	280	Y
AHU-4D	SINGLE ZONE	Y	HEATING	1423	10	271	280	Y
AHU-4E	SINGLE ZONE	Y	HEATING	1448	25	274	280	Y
AHU-4F	SINGLE ZONE	Y	HEATING	2378	13	277	280	Y
AHU-4G	SINGLE ZONE	Y	HEATING	1724	8	280	280	Y
AHU-4H	SINGLE ZONE	Y	HEATING	1724	8	280	280	Y
						TOTAL REQUIRED OUTDOOR AIR FLOW =		3691
						TOTAL OUTDOOR AIR PROVIDED =		3750
						BUILDING PRESSURIZATION =		14.2%

NOTES:
1. VENTILATION PROVIDED BY MECHANICAL VENTILATION PER MECHANICAL CODE SECTION 403.
2. CALCULATIONS FOR NEW SYSTEMS ONLY.

EXHAUST FAN SCHEDULE

SYMBOL	DESCRIPTION	CFM SETTING	S.P. (w.g.)	VOLT	PHASE	HP	MOUNTING	MFG. (NOTE 1)	MODEL	CONTROL	REMARKS
EF-2A	CENTRIFUGAL CEILING-MOUNTED	120	0.3	115	1ø	0.02	HORIZONTAL	GREENHECK	SP-A390-VG	LIGHT SWITCH	1, 2, 3
EF-3A	CENTRIFUGAL IN-LINE	560	0.3	115	1ø	0.11	HORIZONTAL	GREENHECK	CSP-A700-VG	LIGHT SWITCH	1, 2, 3
EF-3B	CENTRIFUGAL IN-LINE	250	0.4	115	1ø	0.06	HORIZONTAL	GREENHECK	CSP-A390-VG	CONTINUOUS	1, 2, 3
EF-4A	CENTRIFUGAL IN-LINE	140	0.25	115	1ø	1/15	HORIZONTAL	GREENHECK	SQ-70-VG	CONTINUOUS	1, 2, 3
EF-4B	CENTRIFUGAL IN-LINE	265	0.35	115	1ø	0.06	HORIZONTAL	GREENHECK	CSP-A390-VG	CONTINUOUS	1, 2, 3, 4

NOTES:
1. EQUALS ARE TWIN CITY, CAPTIVE-AIRE, PENNBARRY AND LOREN COOK.
2. PROVIDE WITH DIRECT DRIVE, EC MOTOR WITH VARIABLE SPEED CONTROL FOR BALANCING.
3. PROVIDE WITH INTEGRAL BACKDRAFT DAMPER.
4. ADD-ALTERNATE

EXISTING DUCTLESS SPLIT SYSTEM HEAT PUMP SCHEDULE

SYMBOL	LOCATION	ARI COOLING 80/67/95		MIN SEER	INDOOR UNIT				OUTDOOR UNIT					NOTES
					FAN	ELECTRICAL (SINGLE POINT)		WEIGHT (LBS)	ELECTRICAL				WEIGHT (LBS)	
		TOTAL (MBH)	SENS (MBH)		SA (CFM)	VOLTAGE (V/PH/HZ)	MCA (AMPS)		VOLTAGE (V/PH/HZ)	MCA (AMPS)	MOCP (AMPS)			
EX DAHU3	302 - ELEC	1.2	-	15.2	240	208/1/60	1	29	208/1/60	13	15	82		1

NOTES:
1. INDOOR UNIT POWERED BY OUTDOOR UNIT LOCATED ON ROOF

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NCCCS # 2772

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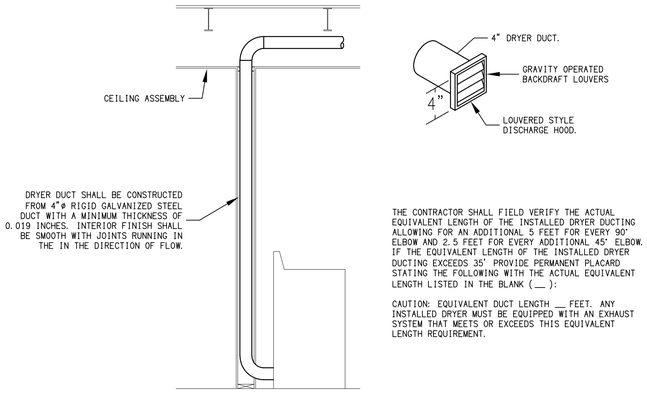
Sheet Title

SCHEDULES, LEGEND & NOTES

Sheet No.

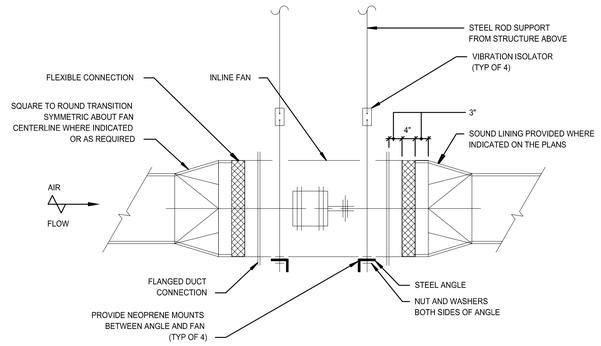
M002



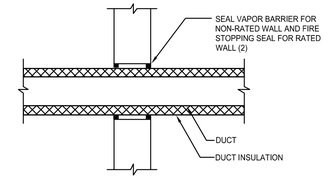
THE CONTRACTOR SHALL FIELD VERIFY THE ACTUAL EQUIVALENT LENGTH OF THE INSTALLED DRYER DUCTING ALLOWING FOR AN ADDITIONAL 5 FEET FOR EVERY 90° ELBOW AND 2.5 FEET FOR EVERY ADDITIONAL 45° ELBOW. IF THE EQUIVALENT LENGTH OF THE INSTALLED DRYER DUCTING EXCEEDS 35' PROVIDE PERMANENT PLACARD STATING THE FOLLOWING WITH THE ACTUAL EQUIVALENT LENGTH LISTED IN THE BLANK (__):

CAUTION: EQUIVALENT DUCT LENGTH __ FEET. ANY INSTALLED DRYER MUST BE EQUIPPED WITH AN EXHAUST SYSTEM THAT MEETS OR EXCEEDS THIS EQUIVALENT LENGTH REQUIREMENT.

A M003 **DRYER DETAIL**
SCALE: NTS

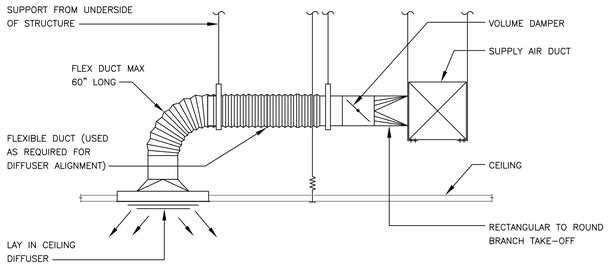


B M003 **INLINE FAN DETAIL**
SCALE: NTS



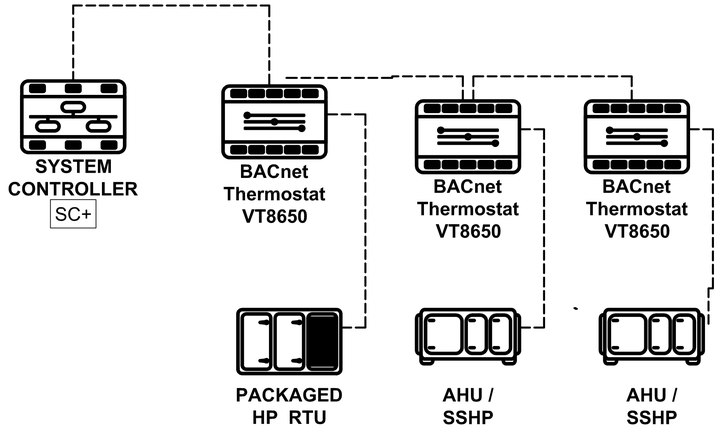
NOTES:
(1) THIS DETAIL APPLIES FOR INSULATED DUCTS THRU WALL WHERE FIRE DAMPER IS NOT REQUIRED.
(2) WHERE WALL IS FIRE RATED, REFER TO UL DETAILS.

C M003 **DUCT PENETRATION THRU INTERIOR WALL**
SCALE: NTS

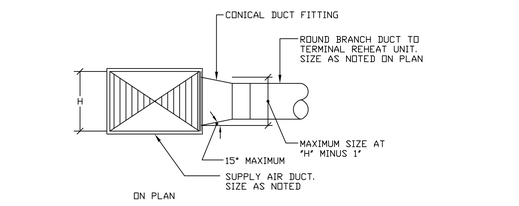


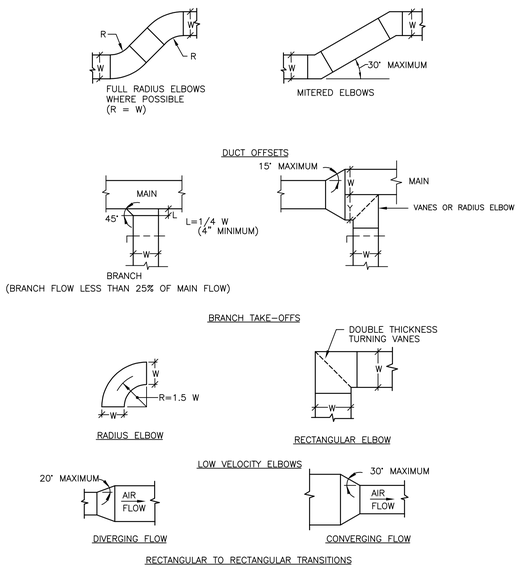
NOTE: MAXIMUM SAG 1/2" PER FOOT.

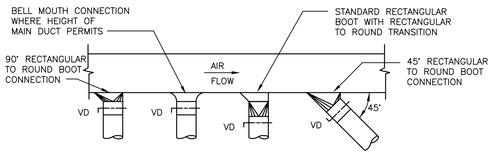
D M003 **CEILING DIFFUSER BRANCH DUCT**
SCALE: NTS



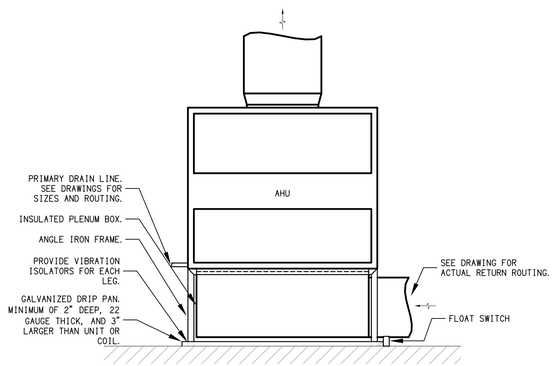
E M003 **BACNET CONTROLS WIRING DIAGRAM**
SCALE: NTS







F M003 **RECTANGULAR DUCT FITTINGS**
SCALE: NTS



G M003 **VERTICAL AHU DETAIL**
SCALE: NTS

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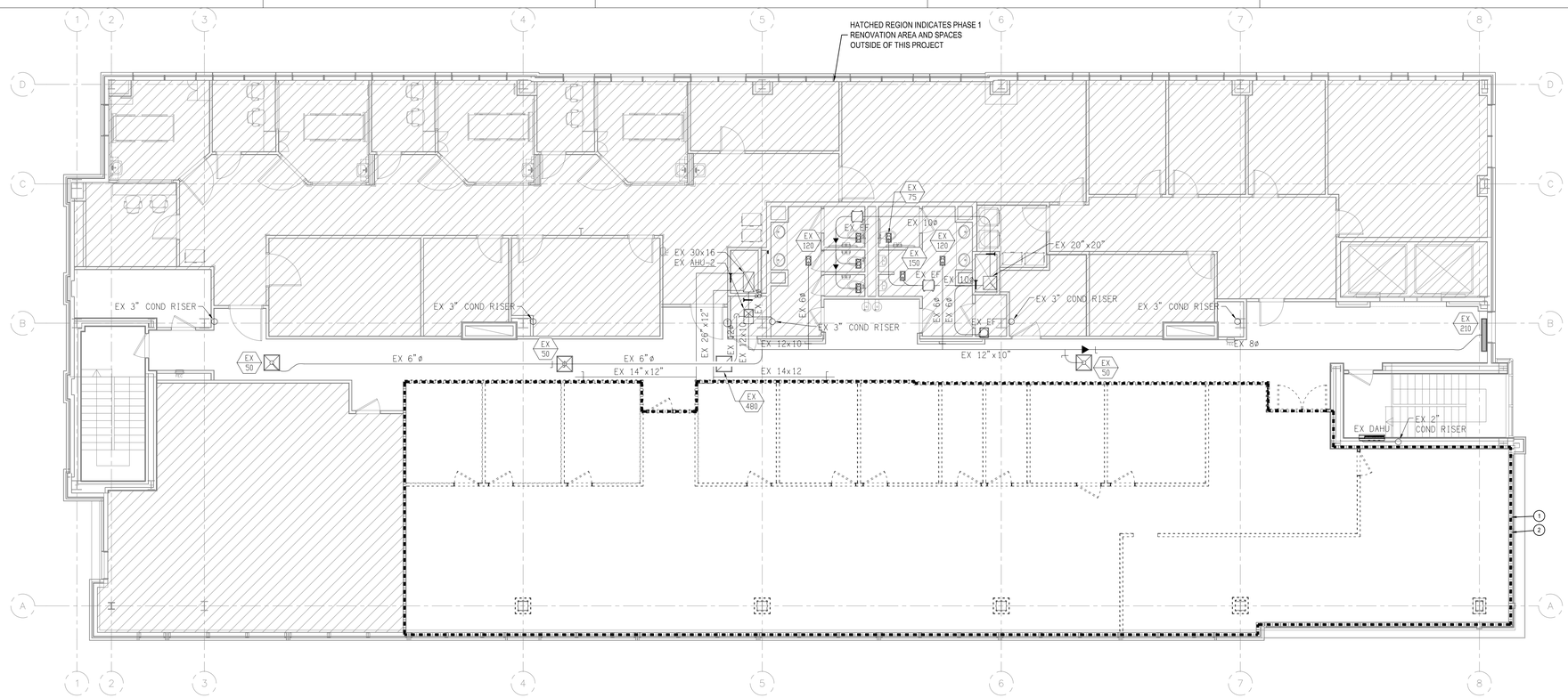
SCHEDULES, LEGEND & NOTES

Sheet No.
M003



A M121 **DEMOLITION PLAN - SECOND FLOOR**
SCALE: 1/8"=1'-0"

KEY NOTES

1. SALVAGE AND PROVIDE TO OWNER ALL EXISTING MECHANICAL EQUIPMENT INCLUDING AIR HANDLING UNITS, DUCTLESS MINI SPLITS, FANS, PUMPS, ETC WITHIN RENOVATION BOUNDARY.
2. DEMOLISH ALL DUCTWORK, PIPING, CONTROLS, HANGERS AND SUPPORTS WITHIN THE RENOVATION BOUNDARY. CORE BUILDING OUTSIDE AIR AND EXHAUST DUCTS TO REMAIN. CORE BUILDING CONDENSATE DRAIN RISERS TO REMAIN.

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Project ID
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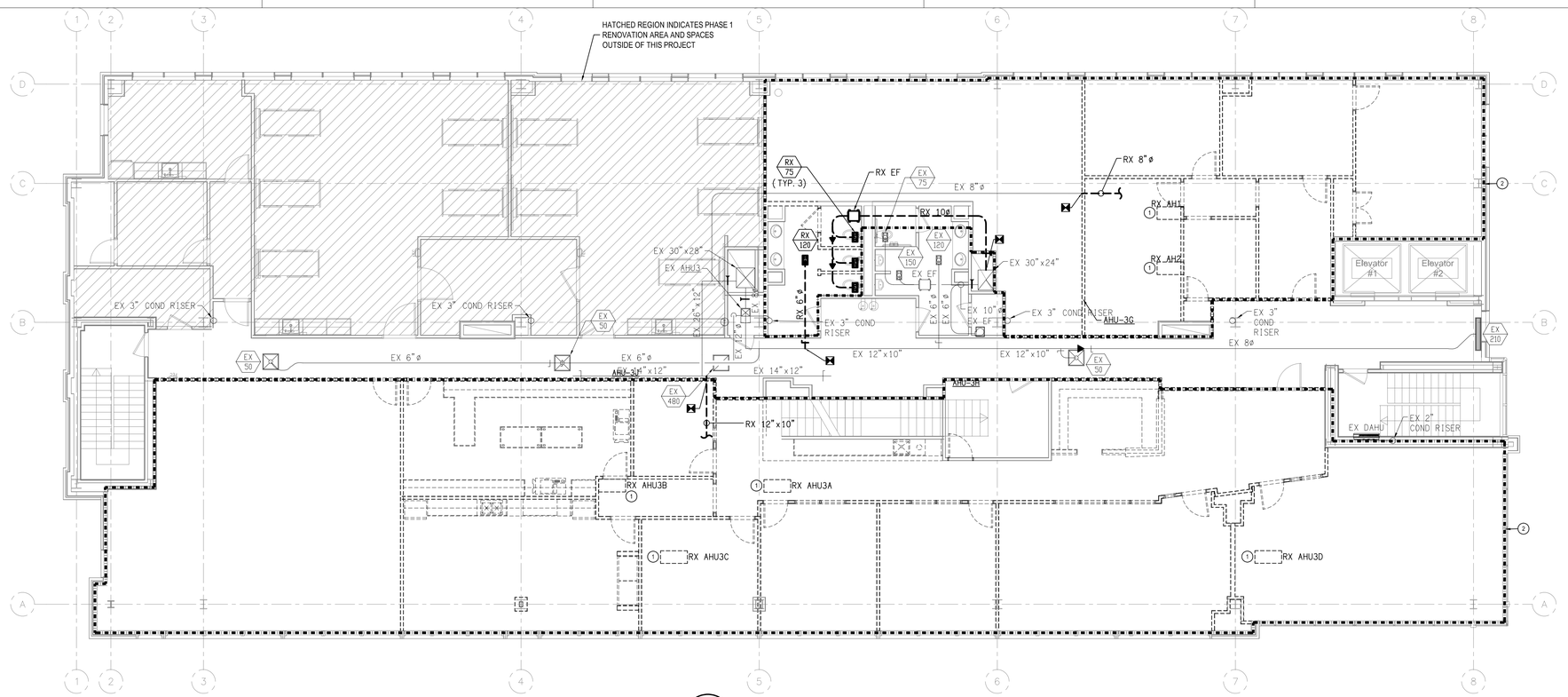
Sheet Title
DEMOLITION PLAN - SECOND FLOOR

Sheet No.
M121



A
M131

DEMOLITION PLAN - THIRD FLOOR

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

KEY NOTES

1. SALVAGE AND PROVIDE TO OWNER ALL EXISTING MECHANICAL EQUIPMENT INCLUDING AIR HANDLING UNITS, DUCTLESS MINI SPLITS, FANS, PUMPS, ETC WITHIN RENOVATION BOUNDARY.
2. DEMOLISH ALL DUCTWORK, PIPING, CONTROLS, HANGERS AND SUPPORTS WITHIN THE RENOVATION BOUNDARY. CORE BUILDING OUTSIDE AIR AND EXHAUST DUCTS TO REMAIN. CORE BUILDING CONDENSATE DRAIN RISERS TO REMAIN.

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Project ID
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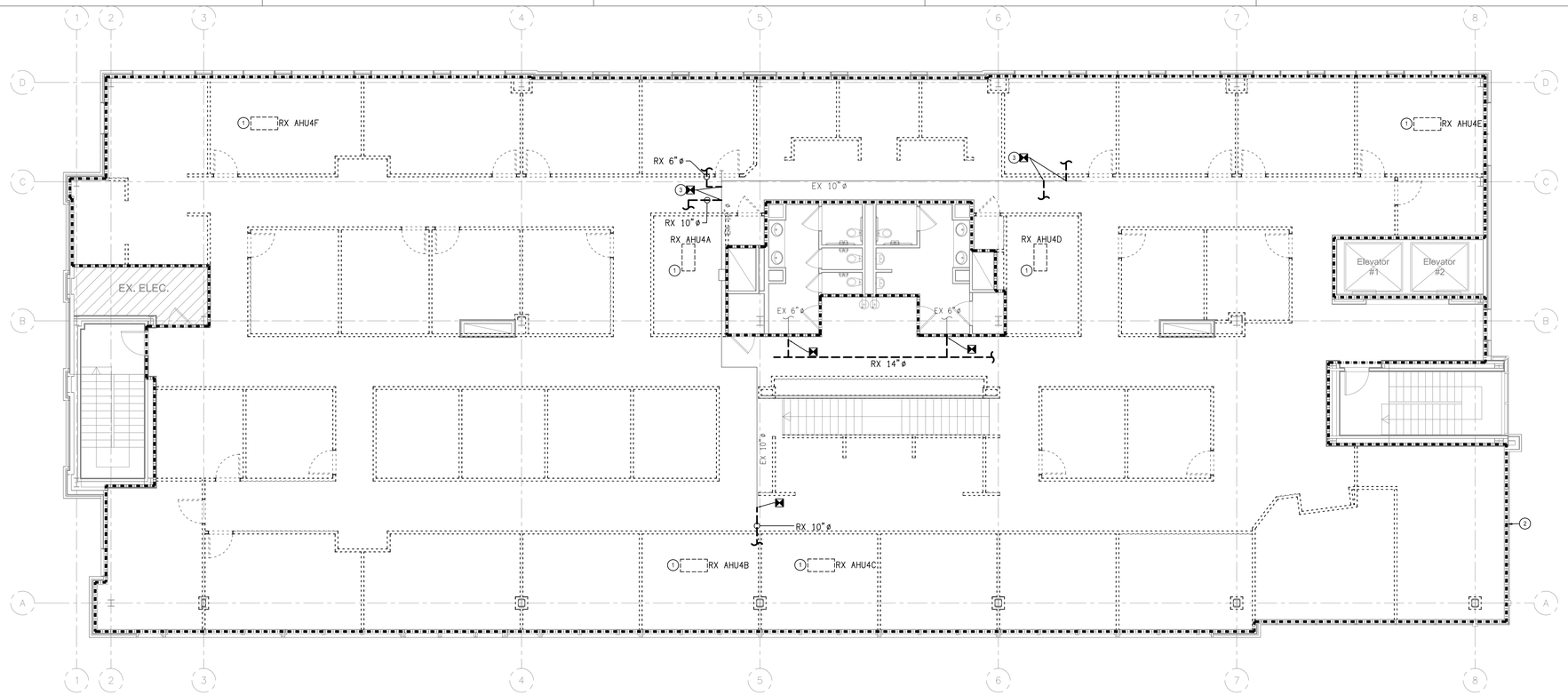
Sheet Title
DEMOLITION PLAN - THIRD FLOOR

Sheet No.
M131



A M141 **DEMOLITION PLAN - FOURTH FLOOR**
SCALE: 1/8"=1'-0"

KEY NOTES

1. SALVAGE AND PROVIDE TO OWNER ALL EXISTING MECHANICAL EQUIPMENT INCLUDING AIR HANDLING UNITS, DUCTLESS MINI SPLITS, FANS, PUMPS, ETC WITHIN RENOVATION BOUNDARY.
2. DEMOLISH ALL DUCTWORK, PIPING, CONTROLS, HANGERS AND SUPPORTS WITHIN THE RENOVATION BOUNDARY. CORE BUILDING OUTSIDE AIR AND EXHAUST DUCTS TO REMAIN. CORE BUILDING CONDENSATE DRAIN RISERS TO REMAIN.
3. REMOVE DUCTWORK UP TO POINT OF DISCONNECTION AND CAP OPEN ENDS TO BE AIRTIGHT.

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Project ID
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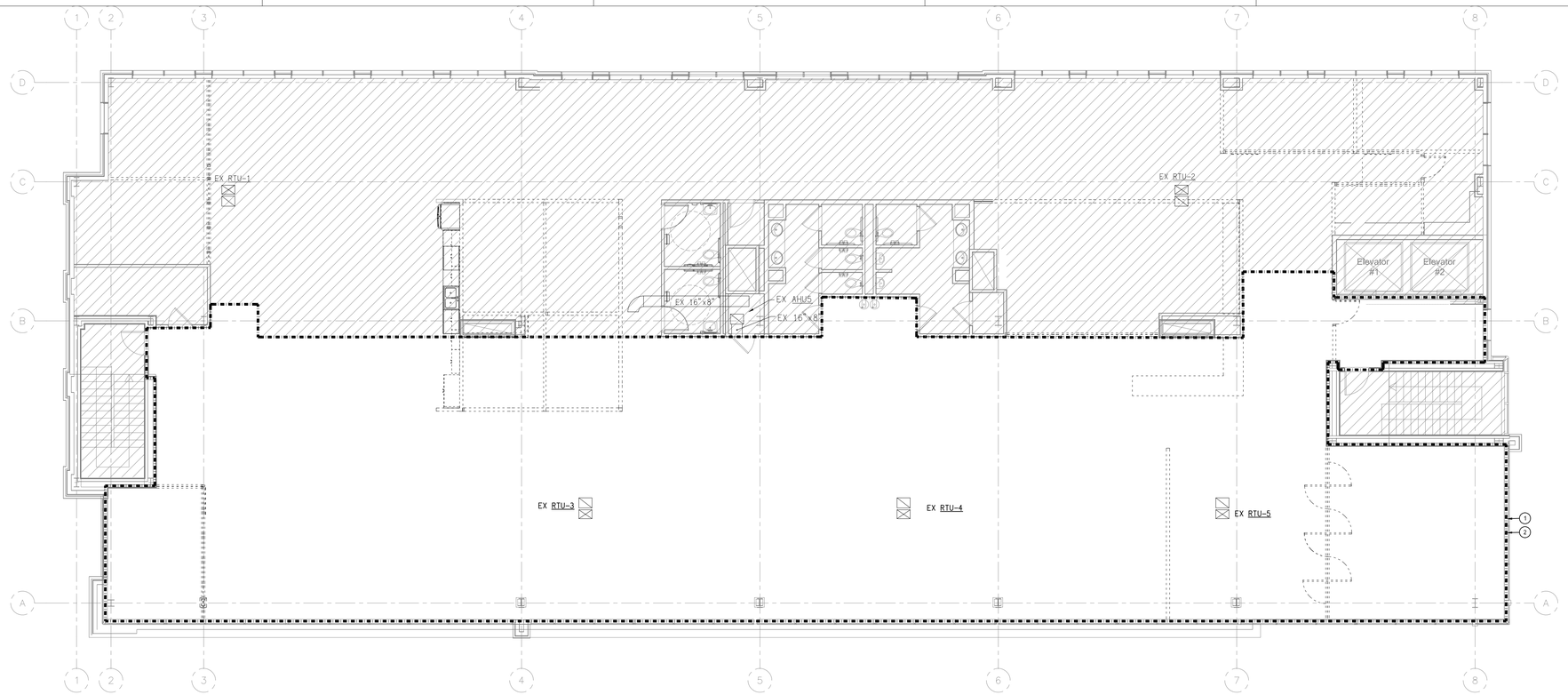
Sheet Title
DEMOLITION PLAN - FOURTH FLOOR

Sheet No.
M141



A M151 **DEMOLITION PLAN - FIIFTH FLOOR**
SCALE: 1/8"=1'-0"

KEY NOTES

1. SALVAGE AND PROVIDE TO OWNER ALL EXISTING MECHANICAL EQUIPMENT INCLUDING AIR HANDLING UNITS, DUCTLESS MINI SPLITS, FANS, PUMPS, CONTROLLERS, ETC WITHIN RENOVATION BOUNDARY.
2. DEMOLISH ALL DUCTWORK, PIPING, CONTROLS, HANGERS AND SUPPORTS WITHIN THE RENOVATION BOUNDARY. EXISTING AHU SMOKE DAMPERS IN VERTICAL RETURN AIR DUCTS TO REMAIN.

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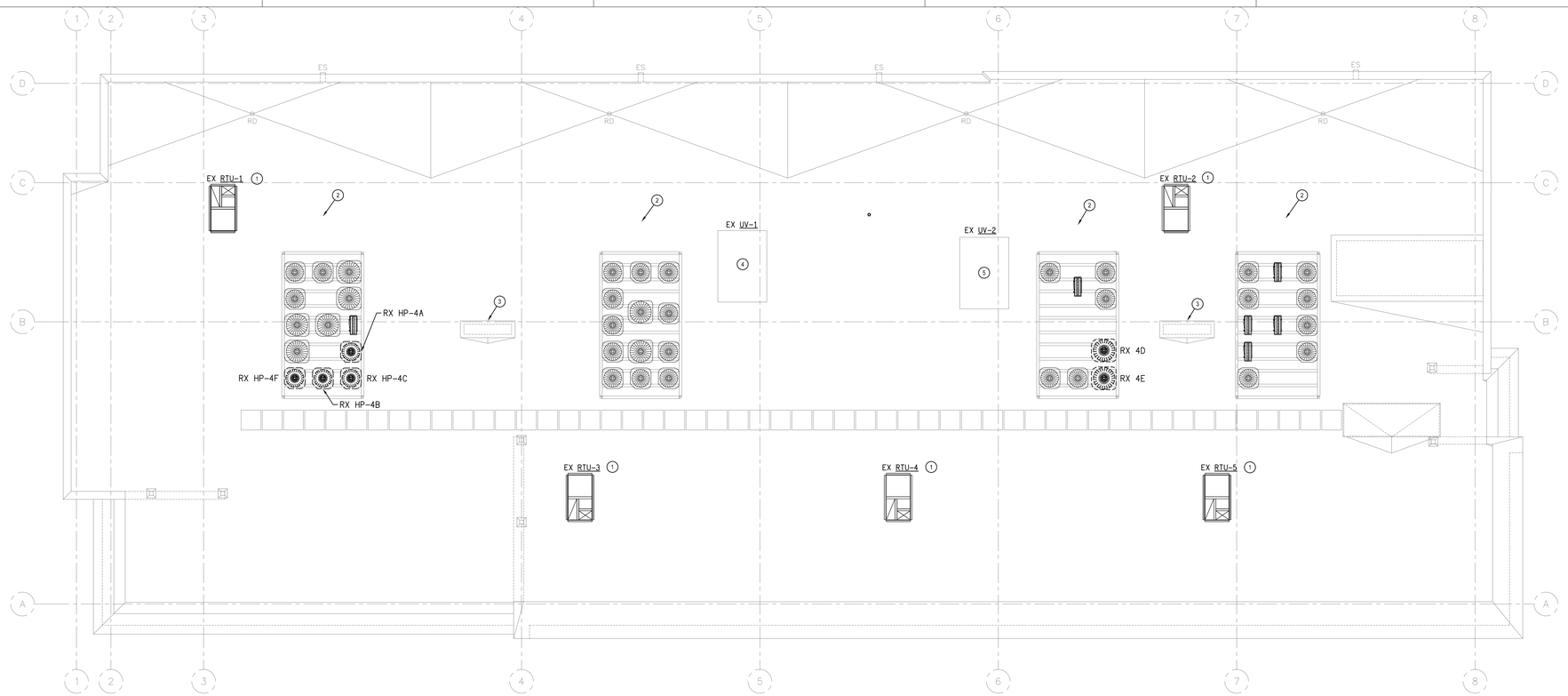
Project ID
23-27149-01

Sheet Title
DEMOLITION PLAN - FIFTH FLOOR

Sheet No.
M151



A M161 **DEMOLITION PLAN - ROOF**

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

KEY NOTES

1. EXISTING ROOFTOP UNIT TO REMAIN.
2. SALVAGE AND PROVIDE TO OWNER ALL EXISTING CONDENSING UNITS ASSOCIATED WITH REMOVED INDOOR UNITS.
3. EXISTING REFRIGERANT LINESET SHAFT TO OCCUPIED FLOORS TO REMAIN.
4. EXISTING GRAVITY INTAKE VENTILATOR FOR OUTDOOR AIR TO REMAIN.
5. EXISTING GRAVITY VENTILATOR FOR EXHAUST AIR TO REMAIN.

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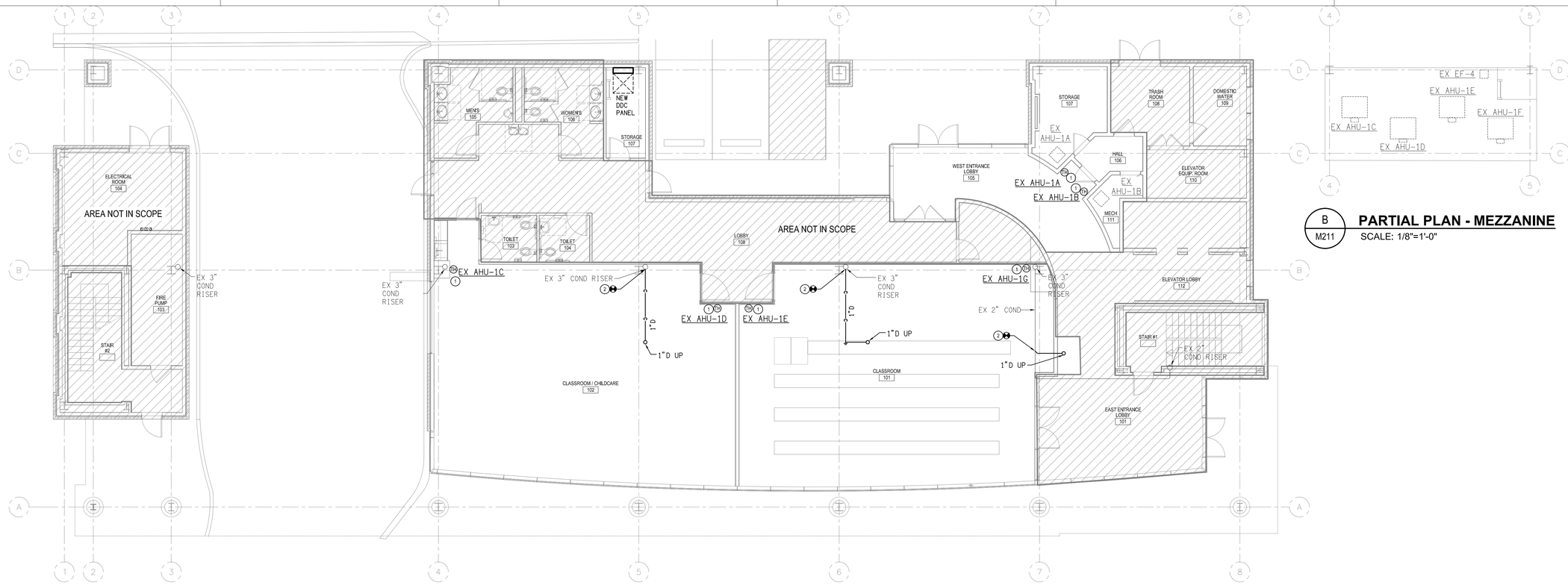
Sheet Title

DEMOLITION PLAN - ROOF

Sheet No.

M161



B M211 **PARTIAL PLAN - MEZZANINE**
SCALE: 1/8"=1'-0"

A M211 **PIPING PLAN - FIRST FLOOR**
SCALE: 1/8"=1'-0"

KEY NOTES

1. REPLACE EXISTING THERMOSTAT WITH NEW VICONICS VT8650 THERMOSTAT WITH BACNET COMMUNICATION AND DEHUMIDIFICATION CONTROL SEQUENCE. HARDWIRE THERMOSTAT BACK TO CONTROLLER.
2. ROUTE AHU CONDENSATE DRAINS TO EXISTING RISER. PROVIDE DRAIN TRAPS PER MANUFACTURERS RECOMMENDATIONS.

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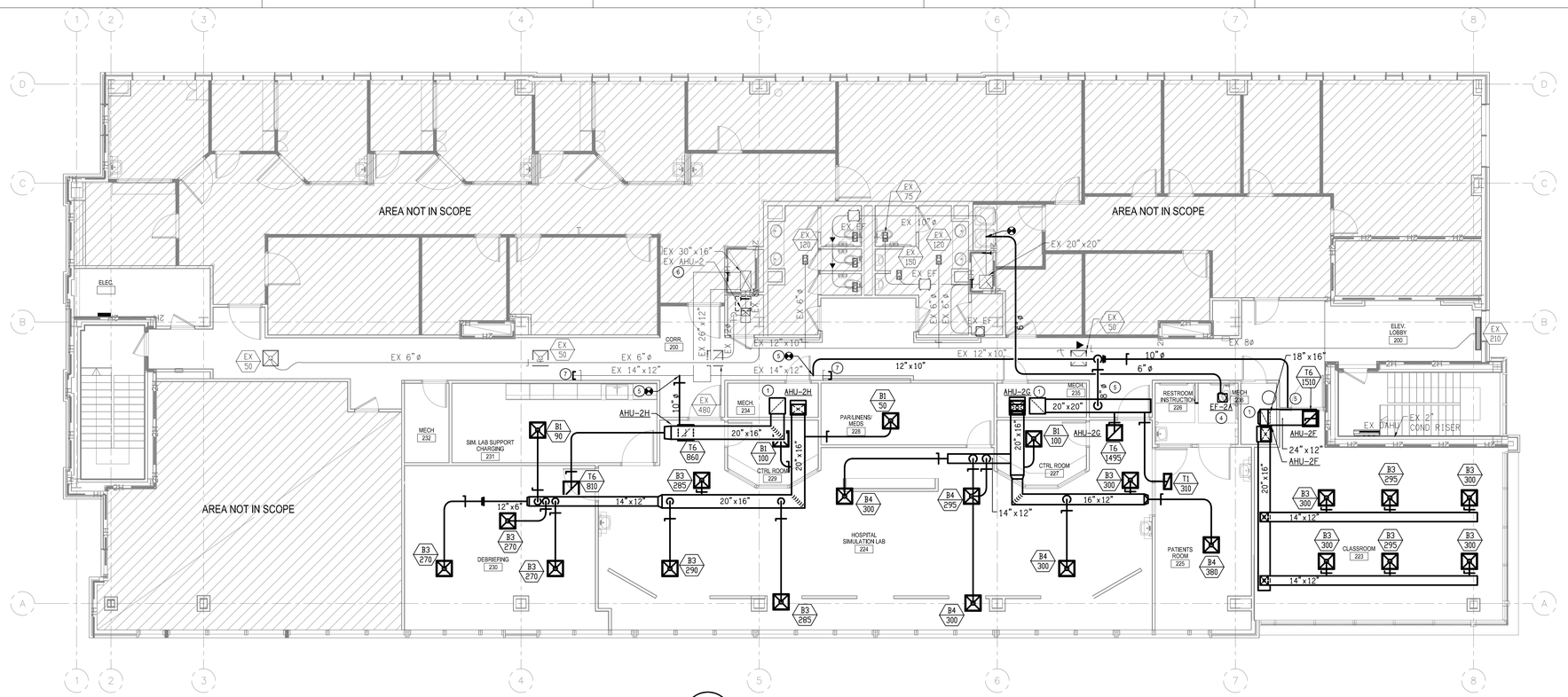
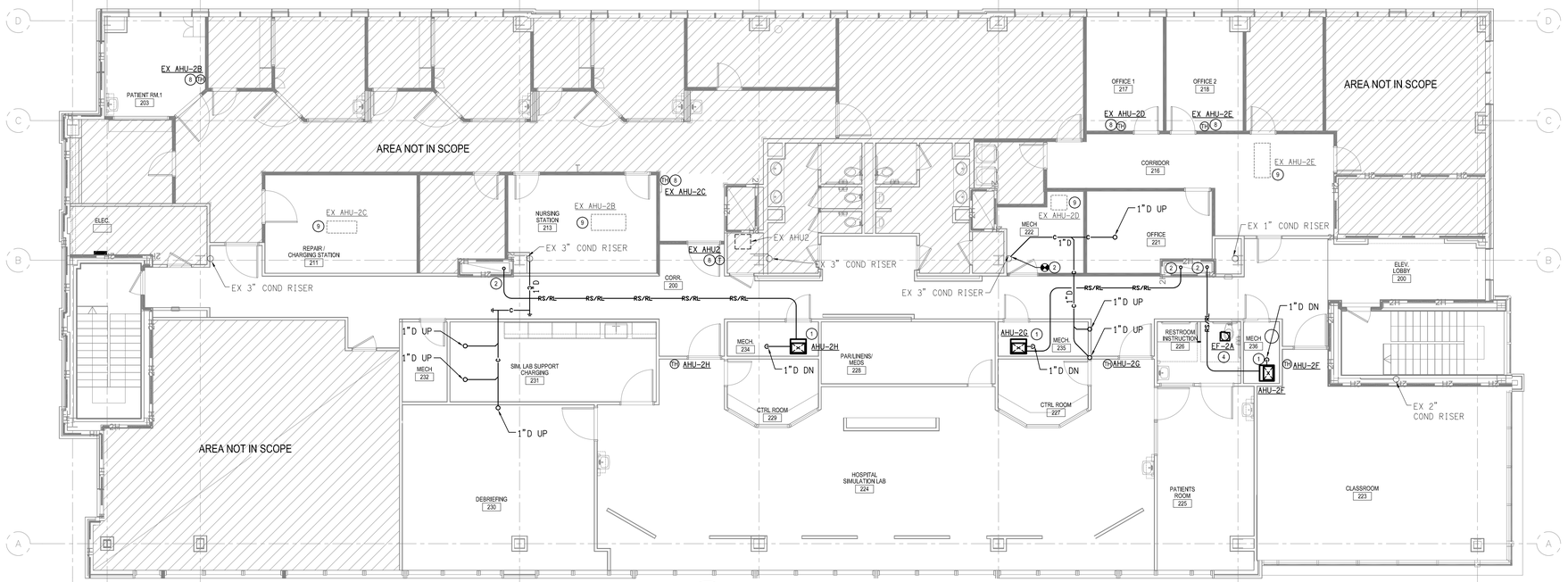
Sheet Title
MECHANICAL PLAN - FIRST FLOOR

Sheet No.
M211



A M221 **DUCTWORK PLAN - SECOND FLOOR**
SCALE: 1/8"=1'-0"



B M221 **PIPING PLAN - SECOND FLOOR**
SCALE: 1/8"=1'-0"

KEY NOTES

1. NEW VERTICAL SPLIT SYSTEM AIR HANDLING UNIT. SEE DETAIL FOR INSTALLATION REQUIREMENTS.
2. ROUTE REFRIGERANT PIPING UP TO ROOF THROUGH PIPE SHAFT. SIZE PIPING PER MANUFACTURER'S WRITTEN INSTRUCTIONS.
3. ROUTE AHU CONDENSATE DRAINS TO EXISTING RISER. PROVIDE DRAIN TRAPS PER MANUFACTURERS RECOMMENDATIONS.
4. NEW CEILING EXHAUST FAN WITH DUCTWORK ROUTED TO EXISTING EXHAUST SHAFT. INTERLOCK FAN OPERATION WITH LIGHTING FOR ROOM.
5. PROVIDE TAP INTO EXISTING OUTSIDE AIR DUCTWORK AND ROUTE TO NEW AHU RETURN AIR PLENUM. BALANCE TO CFM IN VENTILATION SCHEDULE.
6. REBALANCE EXISTING OUTSIDE AIR SERVING EX AHU2 TO 80 CFM.
7. CAP ENDS OF OUTSIDE AIR DUCT MAINS TO BE AIRTIGHT.
8. REPLACE THERMOSTAT WITH NEW VICONICS VT8650 THERMOSTAT WITH BACNET COMMUNICATION AND DEHUMIDIFICATION CONTROL SEQUENCE. HARDWIRE THERMOSTAT BACK TO CONTROLLER.
9. PROVIDE SES DEHUMIDIFICATION RELAY BOARD TO EXISTING AHU.

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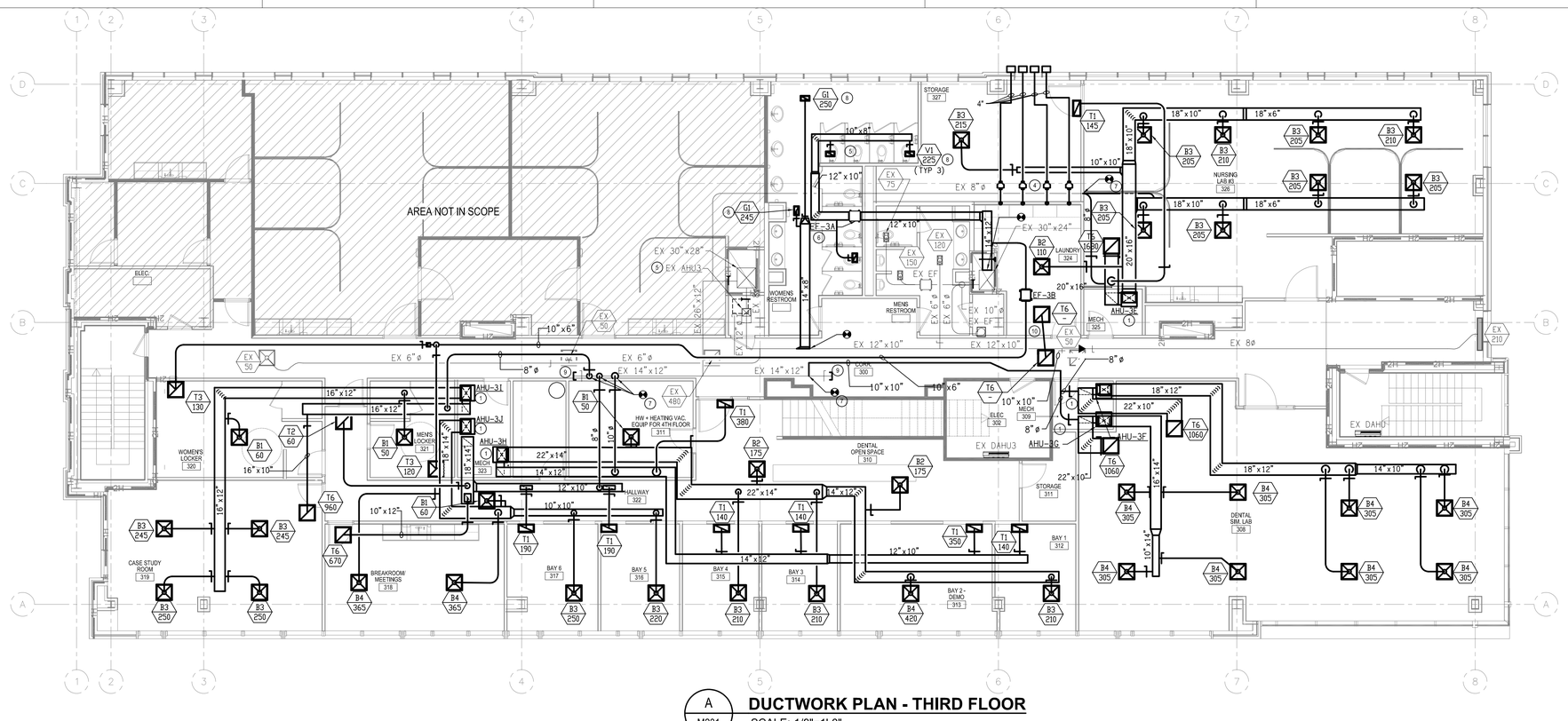
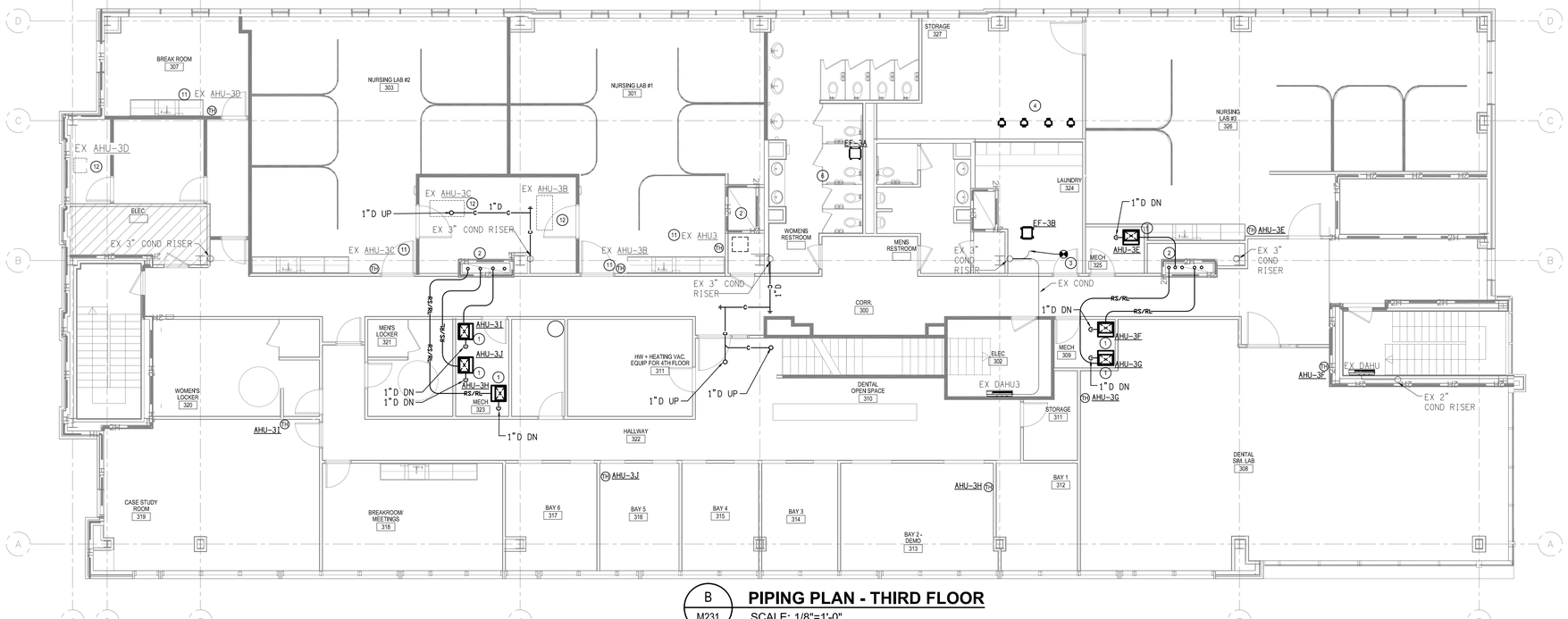
MECHANICAL PLAN - SECOND FLOOR

Sheet No.
M221



A M231 **DUCTWORK PLAN - THIRD FLOOR**
SCALE: 1/8"=1'-0"



B M231 **PIPING PLAN - THIRD FLOOR**
SCALE: 1/8"=1'-0"

KEY NOTES

1. NEW VERTICAL SPLIT SYSTEM AIR HANDLING UNIT. SEE DETAIL FOR INSTALLATION REQUIREMENT.
2. ROUTE REFRIGERANT PIPING UP TO ROOF THROUGH PIPE SHAFT. SIZE PIPING PER MANUFACTURER'S WRITTEN INSTRUCTIONS.
3. ROUTE AHU CONDENSATE DRAINS TO EXISTING RISER. PROVIDE DRAIN TRAPS PER MANUFACTURERS RECOMMENDATIONS.
4. PROVIDE DRYER WALL BOXES AND INLINE BOOSTER FANS DUCTED TO EXTERIOR WALL AND TERMINATE WITH METAL EXHAUST CAP WITH INTEGRAL BACKDRAFT DAMPER. BASIS OF DESIGN FOR BOOSTER FANS: FANTECH DBF110.
5. REBALANCE EXISTING OUTSIDE AIR SERVING EX AHU3 TO 80 CFM.
6. INTERLOCK FAN OPERATION WITH LIGHTING FOR ROOM.
7. PROVIDE TAP INTO EXISTING OUTSIDE AIR DUCTWORK AND ROUTE TO NEW AHU RETURN AIR PLENUM. BALANCE TO CFM IN VENTILATION SCHEDULE.
8. PROVIDE VOLUME DAMPER REMOTE ACTUATOR IN THE AIRSTREAM – BASIS OF DESIGN METROPOLITAN RT-150.
9. CAP ENDS OF OUTSIDE AIR DUCT MAINS TO BE AIRTIGHT.
10. 12"X12" TRANSFER DUCT.
11. REPLACE EXISTING THERMOSTAT WITH NEW VICONICS VT8650 THERMOSTAT WITH BACNET COMMUNICATION AND DEHUMIDIFICATION CONTROL SEQUENCE. HARDWIRE THERMOSTAT BACK TO CONTROLLER.
12. PROVIDE SES DEHUMIDIFICATION RELAY BOARD TO EXISTING AHU.

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NORTH CAROLINA REGISTERED ARCHITECT A. SMITH

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NCCCS # 2772
SCO # 23-37149-01

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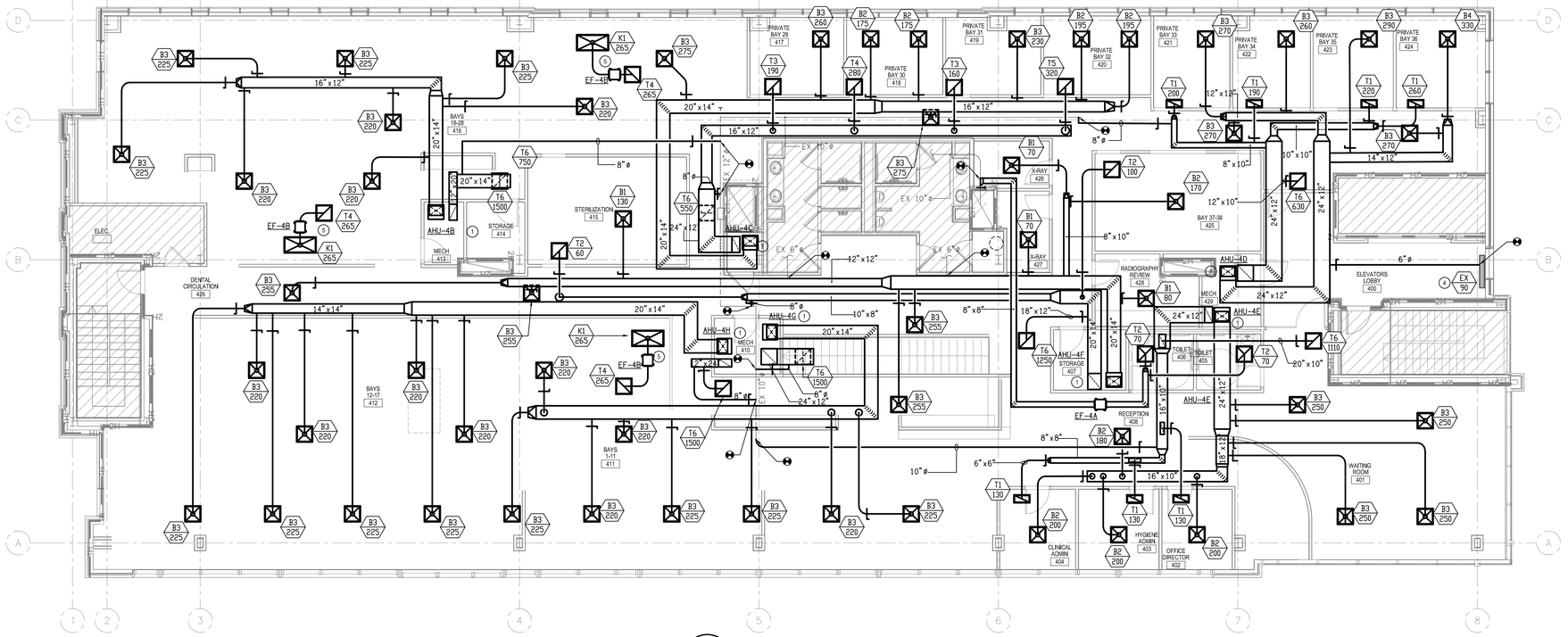
Sheet Title
MECHANICAL PLAN - THIRD

Sheet No.
M231



A M241 **DUCTWORK PLAN - FOURTH FLOOR**
SCALE: 1/8"=1'-0"

B M241 **PIPING PLAN - FOURTH FLOOR**
SCALE: 1/8"=1'-0"

KEY NOTES

1. NEW VERTICAL SPLIT SYSTEM AIR HANDLING UNIT. SEE DETAIL FOR INSTALLATION REQUIREMENTS.
2. ROUTE REFRIGERANT PIPING UP TO ROOF THROUGH PIPE SHAFT. SIZE PIPING PER MANUFACTURER'S WRITTEN INSTRUCTIONS.
3. ROUTE AHU CONDENSATE DRAINS TO EXISTING RISER. PROVIDE DRAIN TRAPS PER MANUFACTURERS RECOMMENDATIONS.
4. REBALANCE EXISTING AIR DEVICE.
5. ADD-ALTERNATE: PROVIDE LAMINAR FLOW DIFFUSERS WITH HEPA FILTERS. ROUTE TO INLINE FAN AND CEILING RETURN AIR DIFFUSER TO AID IN PARTICLE AND AEROSOL CAPTURE.

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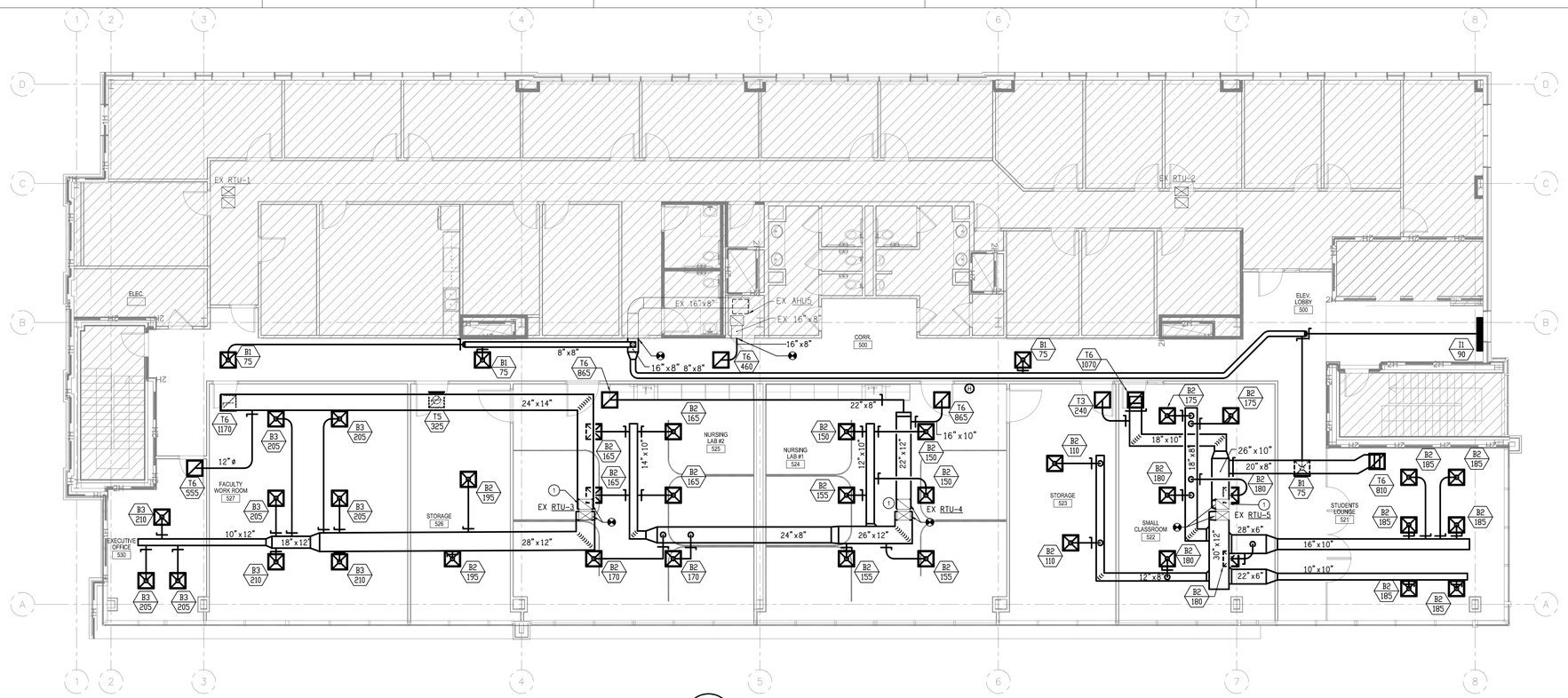
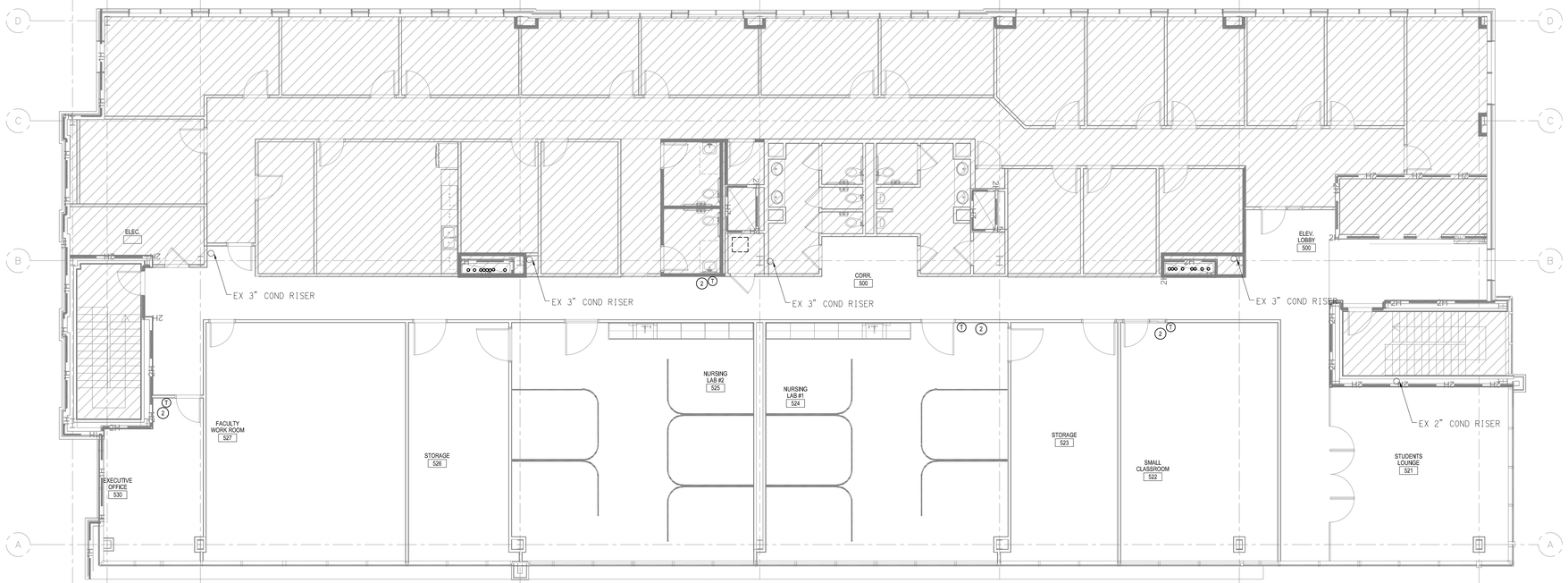
MECHANICAL PLAN - FOURTH FLOOR

Sheet No.
M241



A M251 **DUCTWORK PLAN - FIFTH FLOOR**
SCALE: 1/8"=1'-0"



B M251 **PIPING PLAN - FIFTH FLOOR**
SCALE: 1/8"=1'-0"

KEY NOTES

1. EXISTING AHU SMOKE DAMPER IN VERTICAL DUCT TO REMAIN. PROVIDE TRANSITION FITTINGS AS NECESSARY TO CONNECT NEW WORK TO EXISTING DUCT RISERS OF RTU.
2. REPLACE EXISTING THERMOSTAT WITH NEW VICONICS VT8650 THERMOSTAT WITH BACNET COMMUNICATION AND DEHUMIDIFICATION CONTROL SEQUENCE. HARDWIRE THERMOSTAT BACK TO CONTROLLER.

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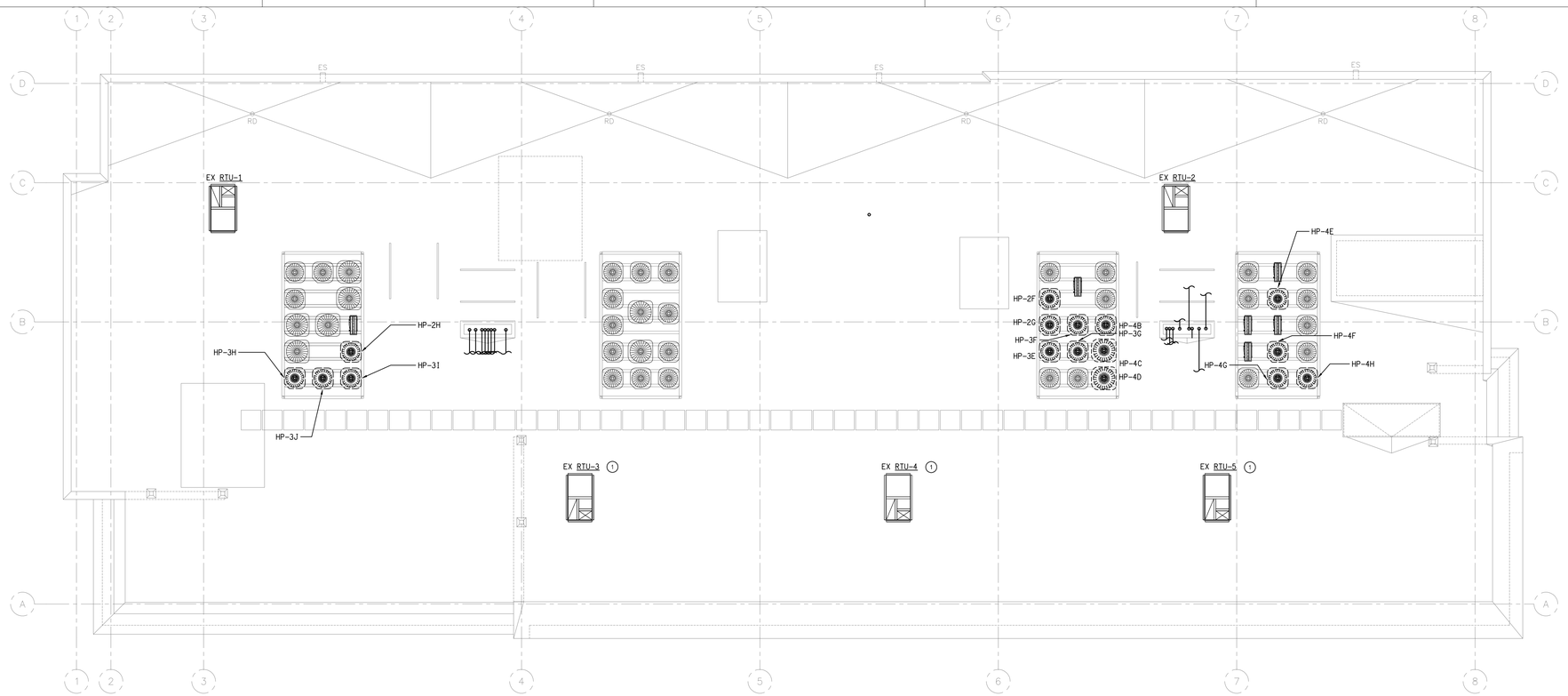
Sheet Title
MECHANICAL PLAN - FIFTH FLOOR

Sheet No.
M251



A M261 **MECHANICAL PLAN - ROOF**

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

KEY NOTES

1. BALANCE EXISTING RTU SUPPLY, RETURN, AND VENTILATION AIRFLOW RATES. SEE PLANS AND SCHEDULES FOR AIRFLOW VALUES.

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Sheet Title
MECHANICAL PLAN - ROOF

Sheet No.
M261

PLUMBING GENERAL NOTES :

A. CODES, REGULATIONS AND STANDARD INSTALLATIONS ARE TO COMPLY WITH THE LATEST EDITION OF THE NORTH CAROLINA BUILDING AND PLUMBING CODES AND ALL OTHER APPLICABLE LOCAL AND NATIONAL CODES AND ORDINANCES. IN CASE OF CONFLICT BETWEEN THE CODE AND THE DRAWINGS AND SPECIFICATIONS OR BETWEEN VARIOUS CODES, THEN THE MOST RESTRICTIVE SHALL TAKE PRECEDENT.

B. FEES AND PERMITS: PROVIDE ALL LICENSES, FEES, PERMITS, HEALTH DEPARTMENT FEES, INSURANCE, ETC., REQUIRED FOR EXECUTION OF THIS WORK.

C. THE CONTRACT DRAWINGS ARE SCHEMATIC ONLY AND ARE NOT INTENDED TO SHOW ALL FITTINGS, BOLTS, CONNECTIONS, OFFSETS, ETC., UNLESS SPECIFICALLY DIMENSIONED. THE PLUMBING CONTRACTOR SHALL FOLLOW THE DRAWING AS CLOSELY AS POSSIBLE; HOWEVER, NECESSARY ADJUSTMENTS SHALL BE MADE AS REQUIRED TO CONFORM TO STRUCTURAL CONDITIONS, WORK OF OTHER CONTRACTORS AND THE INTENT OF THE DRAWINGS WITHOUT ADDITIONAL COST TO THE OWNER. THE DRAWINGS SHALL NOT BE SCALED. SECURE DIMENSIONS FROM ARCHITECTURAL DRAWINGS FOR FIXTURE LOCATIONS.

D. THE PLUMBING CONTRACTOR SHALL PROVIDE ALL MATERIALS, PERFORM ALL WORK AND TEST AND PAY ALL FEES NECESSARY TO MAKE THE PLUMBING SYSTEM OPERABLE AND READY FOR USE BY THE OWNER.

E. GUARANTEE: ALL NEW EQUIPMENT, NEW MATERIALS AND INSTALLATION SHALL BE GUARANTEED TO BE FREE OF DEFECTS FOR A PERIOD OF ONE (1) YEAR AFTER FINAL ACCEPTANCE OF WORK OR IN ACCORDANCE WITH THE MANUFACTURER'S STANDARD GUARANTEE, IF LONGER.

F. PLUMBING CONTRACTORS SHALL BE RESPONSIBLE FOR HIS OWN CLEAN UP AND REMOVAL OF SCRAP FROM JOB SITE. PLUMBING CONTRACTOR SHALL MAINTAIN A CLEAN AND SAFE WORK AREA.

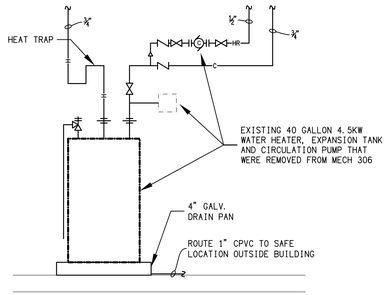
G. IN CASE OF ANY CONFLICT BETWEEN INFORMATION FOUND IN THE PLANS, OR IN THE SPECIFICATIONS, THE MOST RESTRICTIVE INTERPRETATION SHALL TAKE PRECEDENT.

H. THE PLUMBING DRAWINGS AND SPECIFICATIONS DO NOT INCLUDE THE DESIGN FOR ROOF GUTTER SYSTEMS OR ROOF DRAIN SYSTEMS.

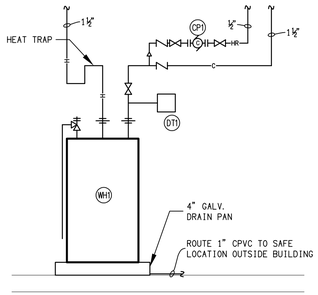
I. ALL PLUMBING COMPONENTS SHALL BE INSTALLED, SUPPORTED, AND RESTRAINED IN ACCORDANCE WITH THE NORTH CAROLINA BUILDING CODE REQUIREMENTS FOR SEISMIC DESIGN. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RETAIN A PROFESSIONAL ENGINEER COMPETENT IN THIS FIELD FOR THIS DESIGN. FOR ONE POSSIBLE SOURCE FOR THIS SERVICE CONTACT SEISMIC CONTROL AND ISOLATIONS, INC. PHONE: 910 799-5204. ALL REQUIRED INSPECTIONS FOR THESE DESIGNS SHALL BE PERFORMED BY APPROVED INSPECTORS AND AGENCIES PROVIDED BY OWNER OR OWNER'S AGENT.

J. ALL ROOF MOUNTED MECHANICAL, ELECTRICAL, AND PLUMBING COMPONENTS SHALL BE INSTALLED, SUPPORTED, AND RESTRAINED IN ACCORDANCE WITH THE NORTH CAROLINA BUILDING CODE REQUIREMENTS FOR WIND DESIGN. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RETAIN A PROFESSIONAL ENGINEER COMPETENT IN THIS FIELD FOR THIS DESIGN. FOR ONE POSSIBLE SOURCE FOR THIS SERVICE, CONTACT SEISMIC CONTROL AND ISOLATION, INC. PHONE: 910-799-5204. ALL REQUIRED INSPECTIONS FOR THESE DRAWINGS SHALL BE PERFORMED BY QUALIFIED INSPECTORS AND AGENCIES HIRED BY THE OWNER OR OWNER'S AGENT AS REQUIRED BY THE BUILDING CODE.

K. THE ENGINEER IS NOT RESPONSIBLE FOR JOB SITE SAFETY.



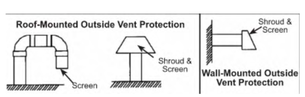
B P001 **PIPING AT WATER HEATER**
SCALE: NO SCALE

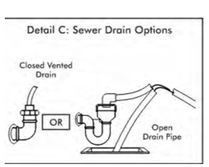


A P001 **PIPING AT WATER HEATER**
SCALE: NO SCALE

LEGEND

- WASTE PIPE - EXISTING
- WASTE PIPE
- WASTE PIPE - GREASY
- VENT PIPE - EXISTING
- VENT PIPE
- V — VACUUM PIPE
- FM — FORCE MAIN
- RD — PRIMARY ROOF DRAIN PIPE
- ED — EMERGENCY OVERFLOW ROOF DRAIN PIPE
- C — COLD WATER PIPE - BELOW GRADE - EXISTING
- C — COLD WATER PIPE - ABOVE GRADE - EXISTING
- C — COLD WATER PIPE - ABOVE GRADE
- C — COLD WATER PIPE - BELOW GRADE
- H — HOT WATER PIPE - ABOVE GRADE - 110°F - EX.
- H — HOT WATER PIPE - ABOVE GRADE - 110°F
- HR — RECIRCULATION PIPE - ABOVE GRADE - 110°F
- A — COMPRESSED AIR PIPE
- DEMOLISH/REMOVE EXISTING PIPE
- GATE VALVE
- CHECK VALVE
- HOSE BIBB
- UNION
- PIPE REDUCTION
- INTERIOR CLEANOUT
- EXTERIOR CLEANOUT
- WALL CLEANOUT
- VTR — VENT THROUGH ROOF
- CO — CLEANOUT
- ER — EXISTING TO REMAIN
- A / P1 — REFER TO PLAN OR DETAIL A ON SHEET P1
- SA / P1 — REFER TO ISOMETRIC A ON SHEET P1
- RELIEF VALVE
- PRESSURE REDUCING VALVE
- P — PRESSURE GAUGE
- FLOOR DRAIN
- RD — PRIMARY ROOF DRAIN
- ED — EMERGENCY OVERFLOW ROOF DRAIN
- HUB DRAIN
- C — RECIRCULATION PUMP
- BACKFLOW PREVENTER





C P001 **VACUUM PUMP DETAILS**
SCALE: NO SCALE

PLUMBING FIXTURE SCHEDULE -

SYM.	FIXTURE	CW	HW	DRAIN	STOPS & VALVES	MANUF.	MODEL	REMARKS
WC1	WATER CLOSET FLOOR MOUNT FLUSH VALVE	1"	-	3"	FLUSH VALVE	AMERICAN STANDARD	2234.001	INCLUDE SLOAN #8111.128-OR BATTERY POWERED SENSOR OPERATED FLUSH VALVE, CHURCH #9500CT OPEN FRONT SEAT W/O COVER.
WC2	WATER CLOSET WALL HUNG FLUSH VALVE HANDICAP	1"	-	3"	FLUSH VALVE	AMERICAN STANDARD	2257.101	INCLUDE SLOAN #8111.128-OR BATTERY POWERED SENSOR OPERATED FLUSH VALVE, CHURCH #9500CT OPEN FRONT SEAT W/O COVER. INCLUDE FIXTURE CARRIER SEE NOTES 1,2
WC3	WATER CLOSET WALL HUNG FLUSH VALVE	1"	-	3"	FLUSH VALVE	AMERICAN STANDARD	2257.101	INCLUDE SLOAN #8111.128-OR BATTERY POWERED SENSOR OPERATED FLUSH VALVE, CHURCH #9500CT OPEN FRONT SEAT W/O COVER. INCLUDE FIXTURE CARRIER
WC4	WATER CLOSET FLOOR MOUNT FLUSH VALVE HANDICAP	1"	-	3"	FLUSH VALVE	AMERICAN STANDARD	3043.001	INCLUDE SLOAN #8111.128-OR BATTERY POWERED SENSOR OPERATED FLUSH VALVE, CHURCH #9500CT OPEN FRONT SEAT W/O COVER. SEE NOTES 1,2
LV1	LAVATORY UNDERMOUNT HANDICAP	1/2"	1/2"	1-1/4"	1/2"X3/8" ANGLE	SLOAN	SS-3001	INCLUDE SLOAN SF-2450-BAT-BDM-CP-0.5GPM-MLM-IR-FCT FAUCET WITH GRID DRAIN, BRASSCRAFT R19C SUPPLY VALVES W/CHROME PLATED RISERS AND WALL FLANGES. TUBULAR P-TRAP CP. SEE NOTES 1,3
LV2	LAVATORY WALL HUNG HANDICAP	1/2"	1/2"	1-1/4"	1/2"X3/8" ANGLE	COMMERCIAL ENAMELING	551	INCLUDE SLOAN SF-2350-BAT-BDM-CP-0.5GPM-MLM-IR-FCT FAUCET WITH GRID DRAIN, BRASSCRAFT R19C SUPPLY VALVES W/CHROME PLATED RISERS AND WALL FLANGES. TUBULAR P-TRAP CP, CONCEALED ARM SUPPORTS SEE NOTES 1,3
SK1	SINK - SINGLE COMPARTMENT	1/2"	1/2"	1-1/2"	1/2"X3/8" ANGLE	JUST	SL-ADA-1921-A-GR-4.5	INCLUDE DELTA 26C3133 FAUCET, P-TRAP W/CLEANOUT, STRAINER, BRASSCRAFT R19C SUPPLY VALVES.
SK2	SINK - SINGLE COMPARTMENT HANDICAP	1/2"	1/2"	1-1/2"	1/2"X3/8" ANGLE	JUST	SL-ADA-1921-A-GR-4.5	INCLUDE DELTA 26C3133 FAUCET, P-TRAP W/CLEANOUT, STRAINER, BRASSCRAFT R19C SUPPLY VALVES. SEE NOTE 1
SK3	SINK - DOUBLE COMPARTMENT HANDICAP	1/2"	1/2"	1-1/2"	1/2"X3/8" ANGLE	JUST	DL-ADA-2233-A-GR-4.5	INCLUDE DELTA 26C3133 FAUCET, P-TRAP W/CLEANOUT, STRAINER, BRASSCRAFT R19C SUPPLY VALVES. SEE NOTE 1
DS	SINK - SINGLE DENTAL SINK	1/2"	1/2"	1-1/2"	1/2"X3/8" ANGLE	-	-	SINK AND FAUCET PROVIDED BY DENTAL EQUIPMENT SUPPLIER. PIPING AND FINAL CONNECTION BY PLUMBING CONTRACTOR. INCLUDE BRASSCRAFT R19C SUPPLY VALVES, TUBULAR P-TRAP.
CW1	CLOTHES WASHER CONNECTION	1/2"	1/2"	2"	-	-	-	INCLUDE HOT & COLD SHUTOFF VALVES , INDIRECT DRAIN AND RECESSED WALL BOX
FD1	FLOOR DRAIN - PRIMED	-	-	3"	-	WATTS	FD-100M	NIKOLAY TOP, DEEP SEAL TRAP, PROVIDE PRIMER TAP. VERIFY EXACT LOCATION AND FLOOR SLOPE BEFORE INSTALLATION BEGINS. SEE NOTE 4
FS1	FLOOR SINK	-	-	3"	-	ZURN	ZN-1900-2-23-K	HALF TOP GRATE, 12"X12" TOP, SEDIMENT BUCKET.
SH1	SHOWER ENCLOSURE WITH OPERATOR HANDICAP	1/2"	1/2"	2"	-	-	-	- - SEE NOTE 1
BF1	BOTTLE FILLING STATION	1/2"	-	2"	-	FILTRINE	B-103	SUPPLY WITH FILTERED WATER. TO BE USED FOR FILLING DENTAL CHAIR WATER BOTTLES -

NOTES:
1. MATERIAL AND INSTALLATION SHALL BE PER STATE HANDICAP CODE REQUIREMENTS AND ADA REQUIREMENTS.
2. TOILETS SHALL FLUSH ON A MAXIMUM OF 1.28 GALLONS PER FLUSH. THE USE OF OFFSET WATER CLOSET FLANGES IS PROHIBITED. MISALIGNED WATER CLOSET FLANGES MUST BE RE PIPED.
3. LAVATORIES SHALL HAVE .5 GPM FLOW AERATORS.
4. FLOOR DRAIN SHALL BE PRIMED WITH 1/2" COPPER LINE FROM NEARBY CLEAR WATER FIXTURE (LAVATORY). TAP CLEAR WATER FIXTURE TAIL PIECE WITH WATER SAVER TRAP PRIMER AND ROUTE COPPER SUPPLY LINE UNDER SLAB TO DRAIN PRIMER CONNECTION. WATER SAVER TRAP PRIMER SHALL BE ACCESSIBLE AND CODE APPROVED. IF A CLEAR WATER FIXTURE SUCH AS A LAVATORY IS NOT AVAILABLE TAP NEARBY COLD WATER LINE AND ROUTE 1/2" PRIMER LINE THROUGH PRIMER VALVE CODE APPROVED FOR WASTE/WATER CROSS CONNECTION. VALVE SHALL BE ACCESSIBLE.

PLUMBING EQUIPMENT SCHEDULE -

SYM.	FIXTURE	CW	HW	DRAIN	STOPS & VALVES	MANUF.	MODEL	REMARKS
WH1	WATER HEATER 52 GALLON ELECTRIC	1-1/4"	1-1/4"	-	GATE	A.O. SMITH	DRE-52-24	208 VOLT, 3 PHASE, 24 KW.
DT1	DIAPHRAGM TANK	3/4"	-	-	-	STATE	ETC-5X	PROVIDE PRESSURE CHARGE AS PER MANUFACTURERS INSTRUCTIONS
CP1	HOT WATER CIRCULATION PUMP	3/4"	-	-	-	TACO	005B	110 VOLT , 1/35 HP , 2 GPM @ 9' TDH. INCLUDE TIMER TO TURNOFF PUMP AT NIGHT.

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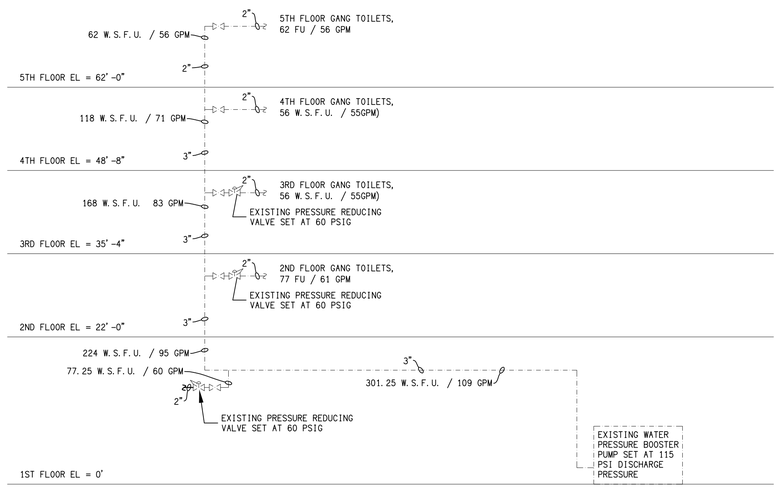
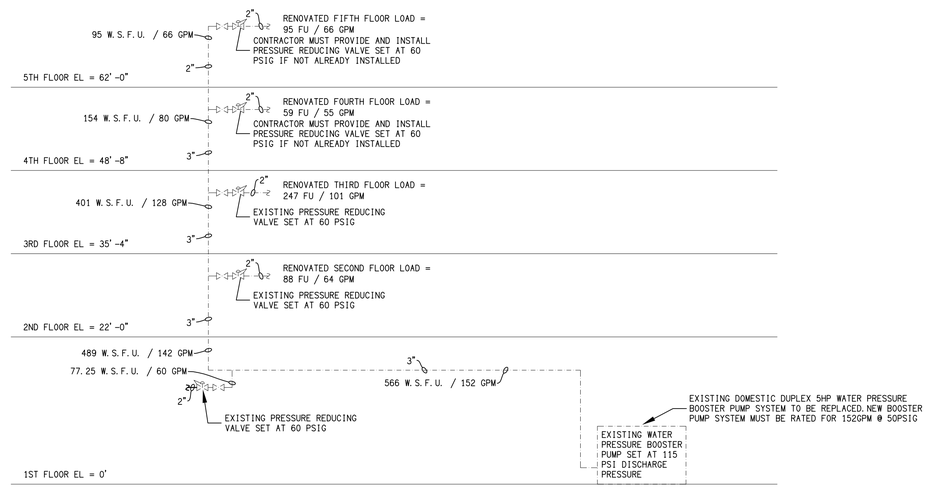
Sheet No.: P001



A P002 **WATER DISTRIBUTION RISER SCHEMATIC - EXISTING**
SCALE: NO SCALE



B P002 **WATER DISTRIBUTION RISER SCHEMATIC - RENOVATED**
SCALE: NO SCALE

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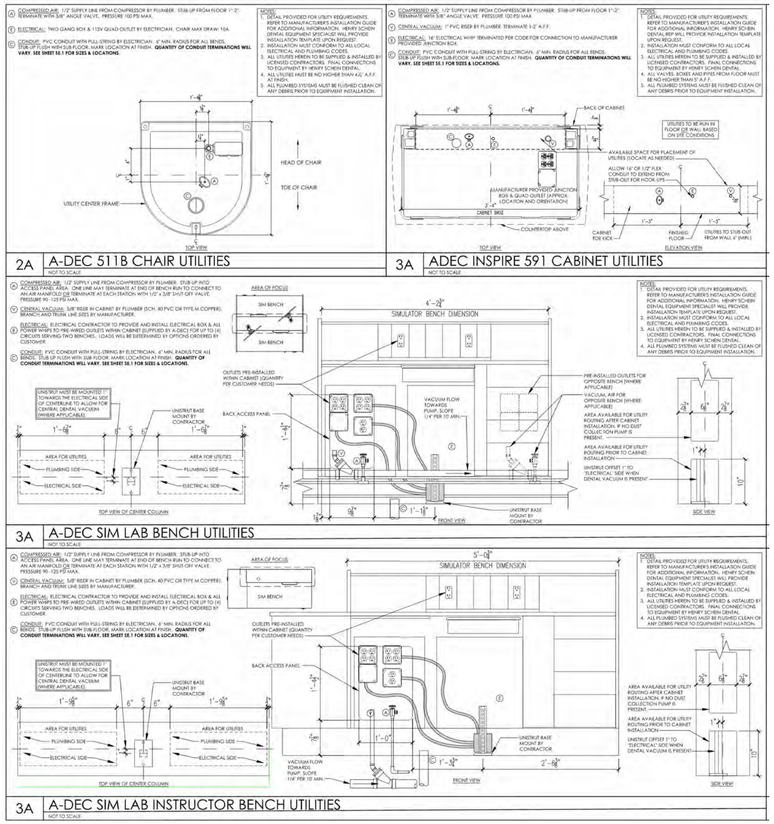
Sheet Title: **SCHEDULES, LEGEND & NOTES**

Sheet No.: P002



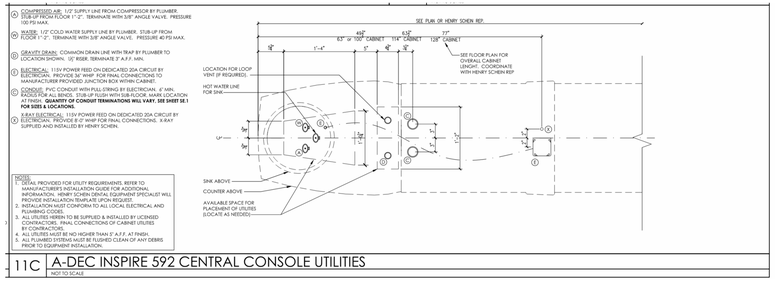
2A A-DEC 511B CHAIR UTILITIES
NOT TO SCALE

3A ADEC INSPIRE 591 CABINET UTILITIES
NOT TO SCALE

3A A-DEC SIM LAB BENCH UTILITIES
NOT TO SCALE

3A A-DEC SIM LAB INSTRUCTOR BENCH UTILITIES
NOT TO SCALE

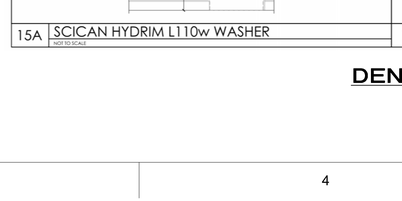
DENTAL EQUIPMENT DRAWING HED.1



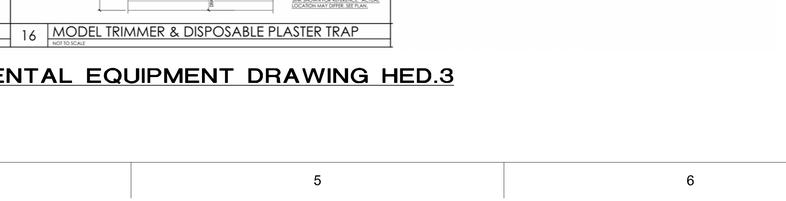
11C A-DEC INSPIRE 592 CENTRAL CONSOLE UTILITIES
NOT TO SCALE

DENTAL EQUIPMENT DRAWING HED.2

THESE DETAILS PROVIDED BY DENTAL EQUIPMENT DESIGNER. SEE DENTAL EQUIPMENT DRAWINGS INDICATED FOR MOST CURRENT DETAILS



13 DENTAL AIR LINE
NOT TO SCALE



14C A-DEC 594 INSPIRE STERILIZATION CENTER UTILITIES
NOT TO SCALE

14D VISTACOOL V7601DIRECT-TO-DRAIN SYSTEM
NOT TO SCALE

14E VISTA DRAINDOCK MULTI-PORT ADAPTER
NOT TO SCALE

15A SCICAN HYDRIM L110w WASHER
NOT TO SCALE

16 MODEL TRIMMER & DISPOSABLE PLASTER TRAP
NOT TO SCALE

DENTAL EQUIPMENT DRAWING HED.3

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SCO # 23-37149-01

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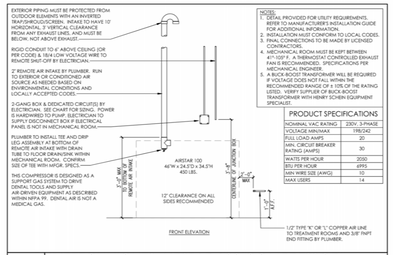
Project Manager	Drawn By
Date: 03-01-2024	Reviewed By

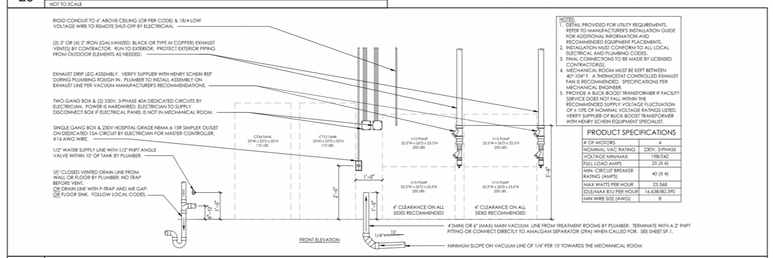
Project ID: 23-27149-01

Sheet Title: **SCHEDULES, LEGEND & NOTES**

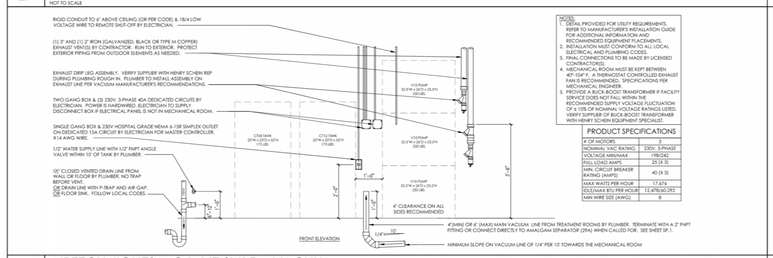
Sheet No.: P003



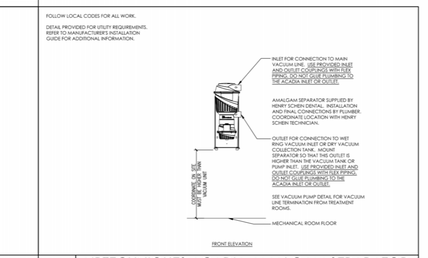
25 AIRTECHNIQUES AIRSTAR 100 COMPRESSOR
NOT TO SCALE



27 AIRTECHNIQUES MOJAVE 4V15M VACUUM
NOT TO SCALE

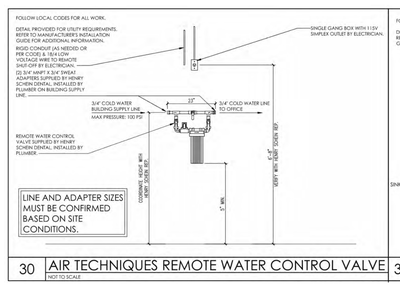


27A AIRTECHNIQUES MOJAVE 3V15M VACUUM
NOT TO SCALE

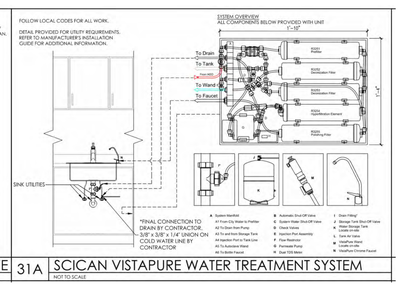


29A AIRTECHNIQUES ACADIA AMALGAM SEPARATOR
NOT TO SCALE

DENTAL EQUIPMENT DRAWING HED.4



30 AIR TECHNIQUES REMOTE WATER CONTROL VALVE
NOT TO SCALE



31A SCICAN VISTAPURE WATER TREATMENT SYSTEM
NOT TO SCALE

DENTAL EQUIPMENT DRAWING HED.5

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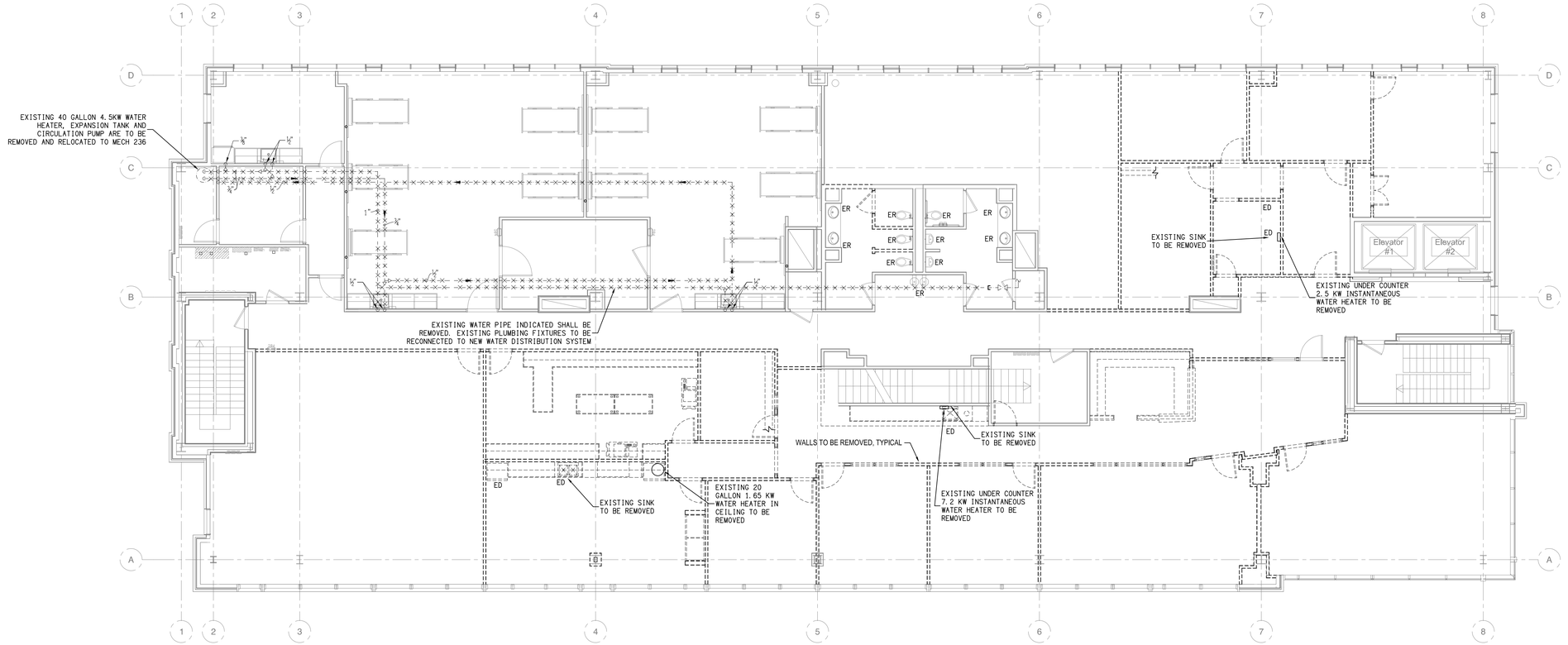
Sheet Title: **SCHEDULES, LEGEND & NOTES**

Sheet No.: P004



A1 PD131 **DEMOLITION PLAN - THIRD FLOOR**
SCALE: 1/8"=1'-0"

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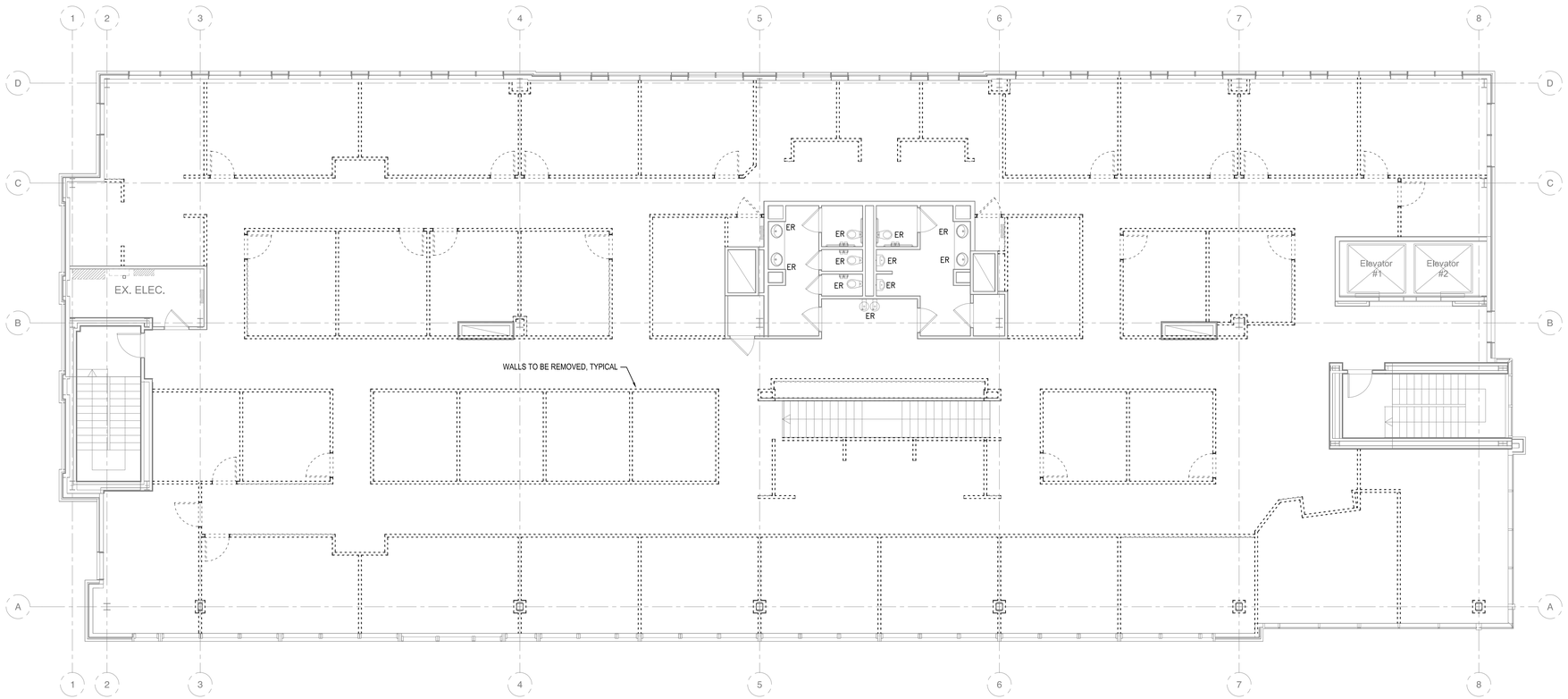
Sheet Title: **DEMOLITION PLAN - FOURTH FLOOR**

Sheet No.: PD131



A PD141 **DEMOLITION PLAN - FOURTH FLOOR**

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

NO PLUMBING DEMOLITION WORK ON THIS FLOOR

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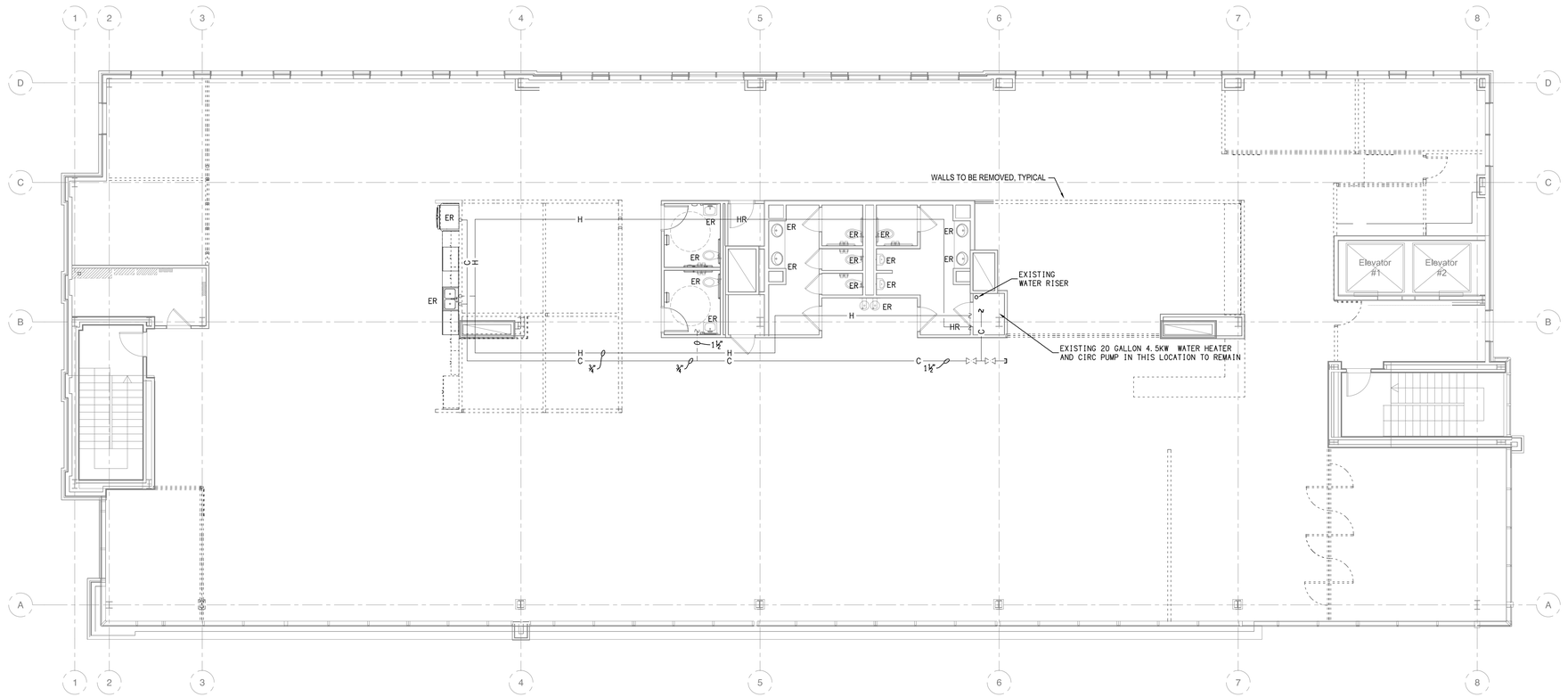
Sheet Title: **DEMOLITION PLAN - FOURTH FLOOR**

Sheet No.: PD141



A
PD151

DEMOLITION PLAN - FIIFTH FLOOR

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

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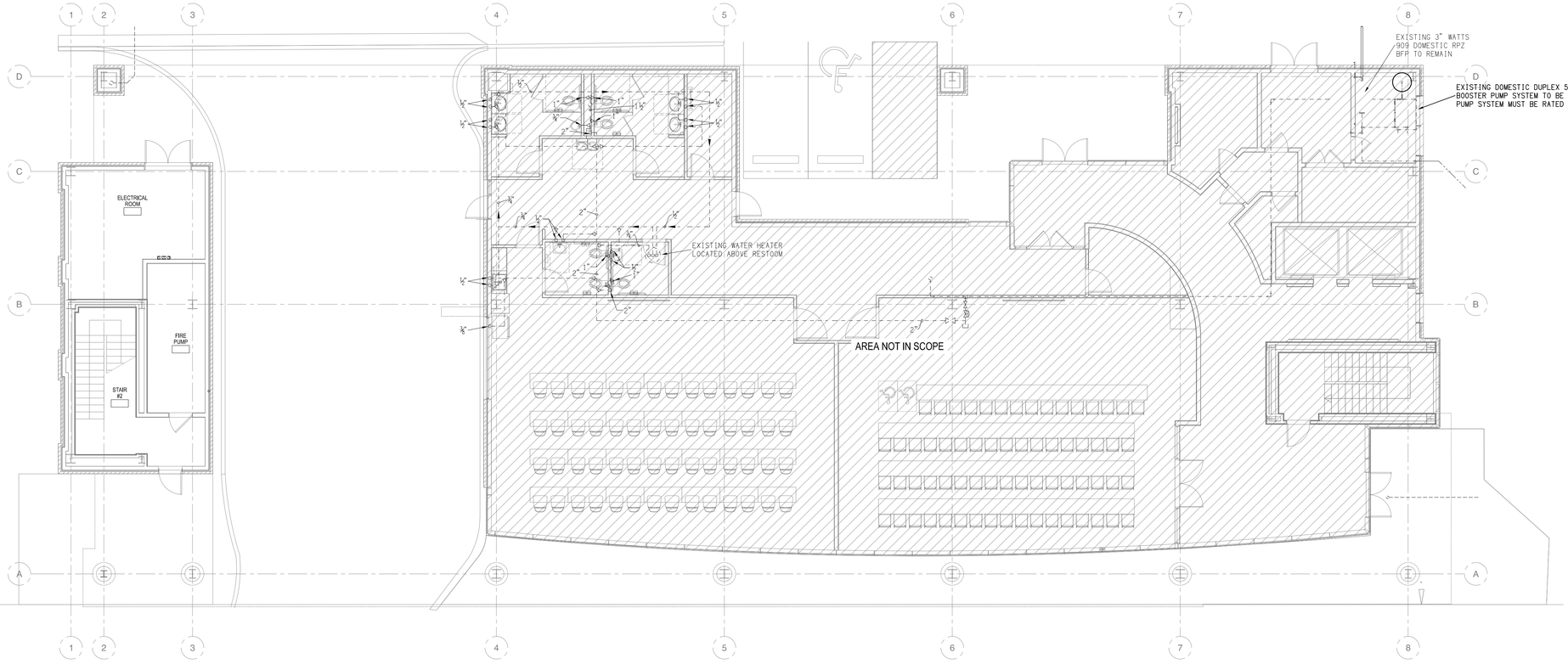
Sheet Title: **DEMOLITION PLAN - FIFTH FLOOR**

Sheet No.: PD151



A P111 **WATER PIPING PLAN - FIRST FLOOR**

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

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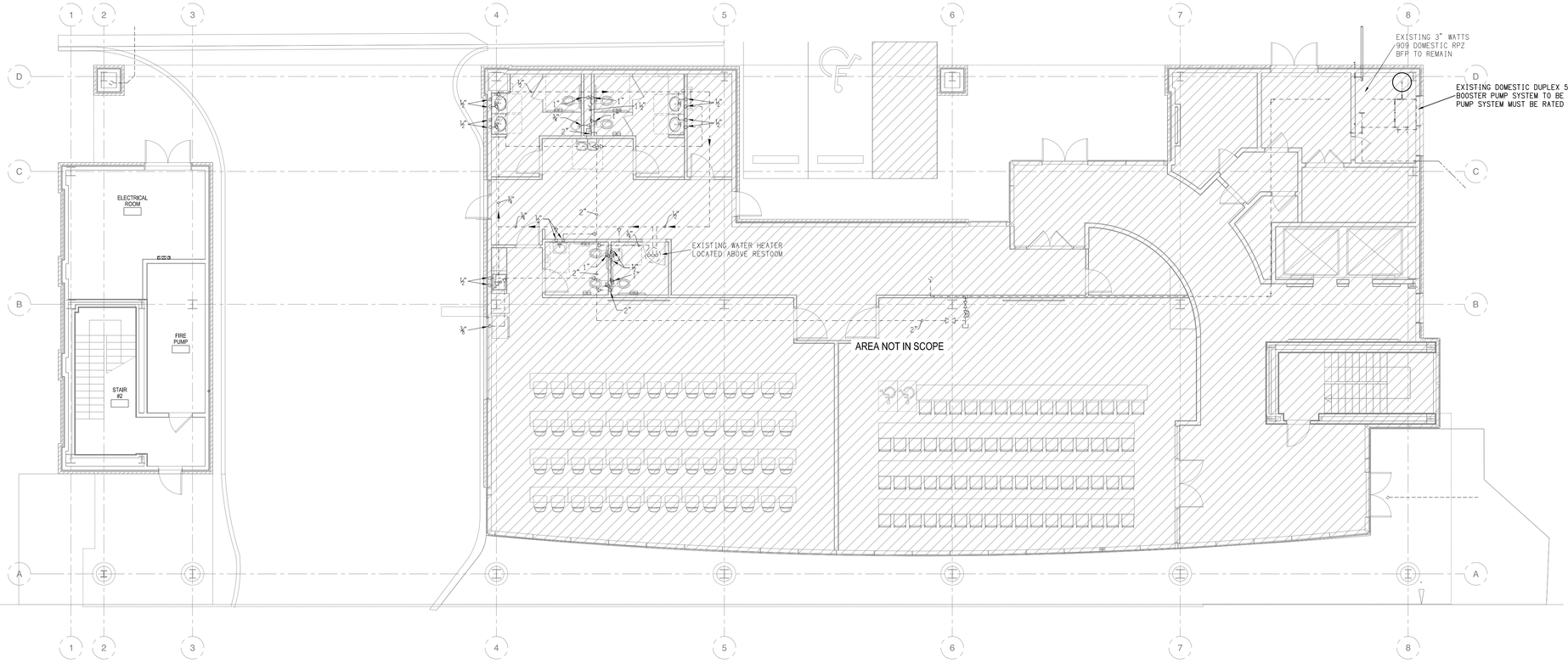
Project ID
23-27149-01

Sheet Title
WATER PIPING PLAN - FIRST FLOOR

Sheet No.
P111



A P111 **WATER PIPING PLAN - FIRST FLOOR**

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

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Sheet Title
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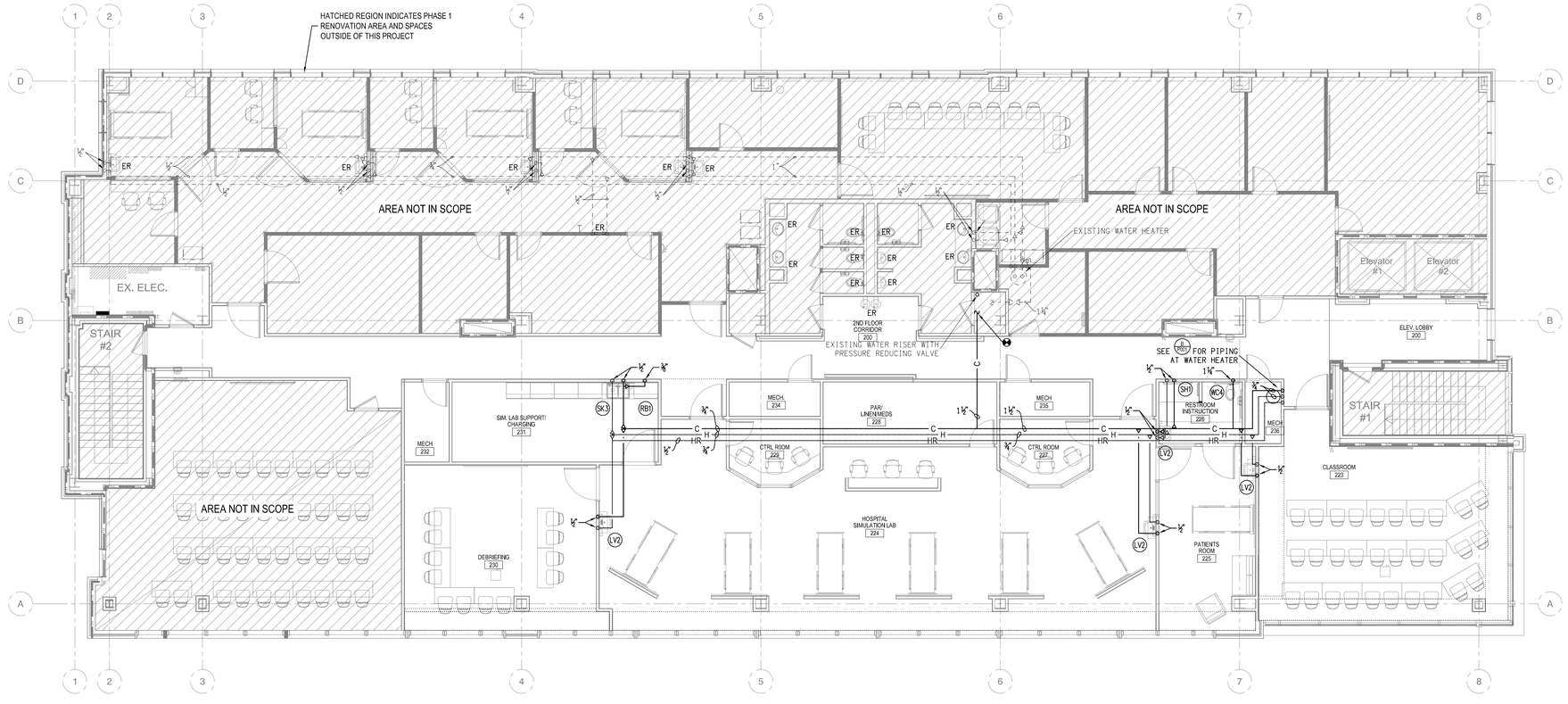
Sheet No.
P111



A P121 **WATER PIPING PLAN - SECOND FLOOR**

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

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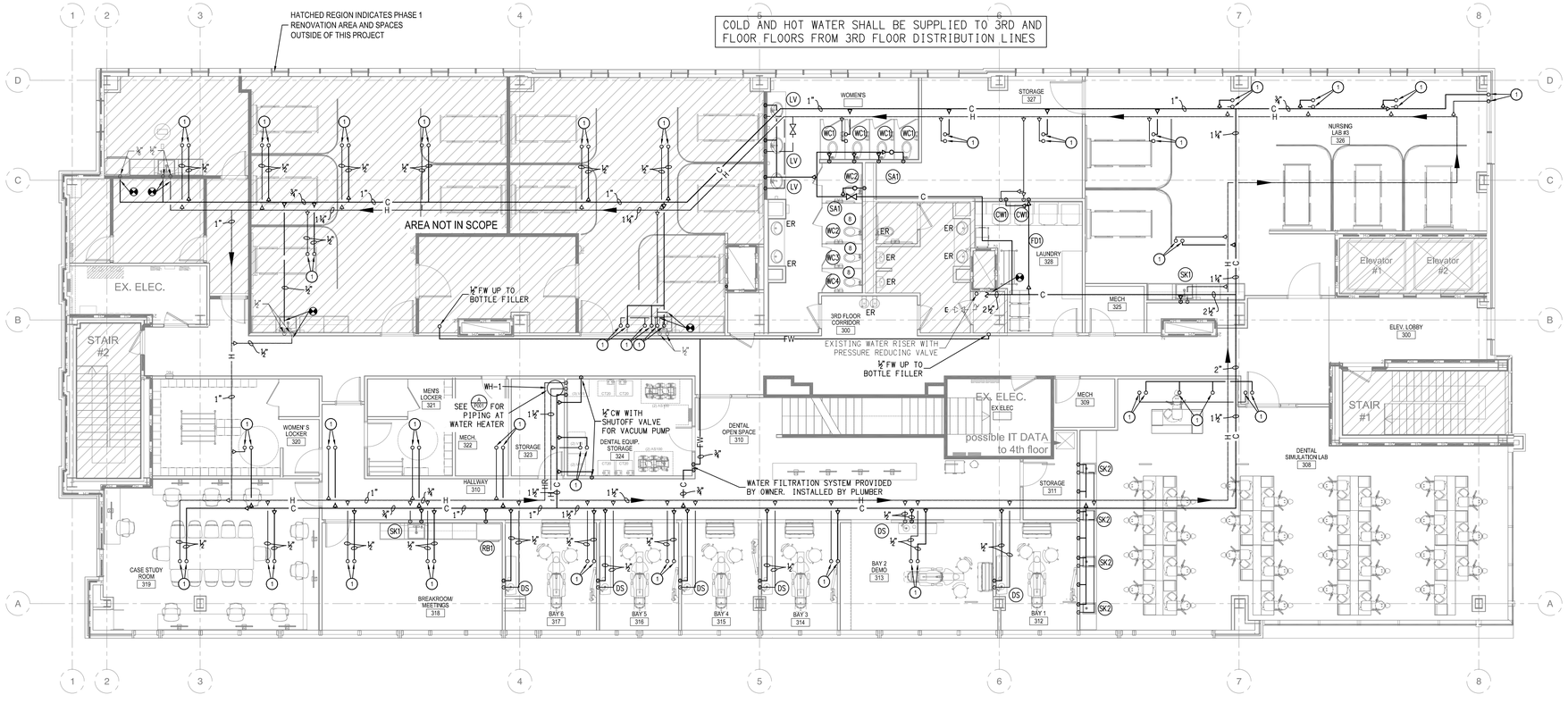
Project ID 23-27149-01

Sheet Title
WATER PIPING PLAN - SECOND FLOOR

Sheet No.
P121



A / P131 **WATER PIPING PLAN - THIRD FLOOR**

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

KEY NOTES :

1. INDICATED WATER LINE ROUTES UP TO SUPPLY FOURTH FLOOR PLUMBING FIXTURE..
2. 1" VACUUM PIPE SUPPLIED FROM BELOW FOR NURSING HEADWALL. SEE ARCHITECTURAL DRAWINGS FOR HEADWALL DIMENSIONS.
3. VACUUM PIPE FROM SECOND FLOOR CEILING SPACE SHALL STUB UP IN MECHANICAL ROOM. VERIFY EXACT LOCATION AND TERMINATION REQUIRED BEFORE INSTALLING ANY VACUUM PIPE.
4. VACUUM PIPE FROM THIRD FLOOR CEILING SPACE SHALL STUB UP IN MECHANICAL ROOM. VERIFY EXACT LOCATION AND TERMINATION REQUIRED BEFORE INSTALLING ANY VACUUM PIPE.
5. COMPRESSED AIR PIPE FROM SECOND FLOOR CEILING SPACE SHALL STUB UP IN MECHANICAL ROOM. VERIFY EXACT LOCATION AND TERMINATION REQUIRED BEFORE INSTALLING ANY COMPRESSED AIR PIPE.
6. COMPRESSED AIR PIPE FROM THIRD FLOOR CEILING SPACE SHALL STUB UP IN MECHANICAL ROOM. VERIFY EXACT LOCATION AND TERMINATION REQUIRED BEFORE INSTALLING ANY COMPRESSED AIR PIPE.
7. COMPRESSED AIR AND VACUUM PIPING ROUTE UP THROUGH FLOOR INTO SIM LAB BENCH AND DISTRIBUTE TO MULTIPLE CONNECTIONS IN CABINETS. SEE DENTAL EQUIPMENT DETAIL 3A ON SHEET P003.
8. EXISTING PLUMBING FIXTURE SHALL BE REMOVED FOR RENOVATION AND DISPOSED OF. A NEW PLUMBING FIXTURE AS INDICATED SHALL BE INSTALLED AFTER OTHER RENOVATION WORK IS COMPLETE.

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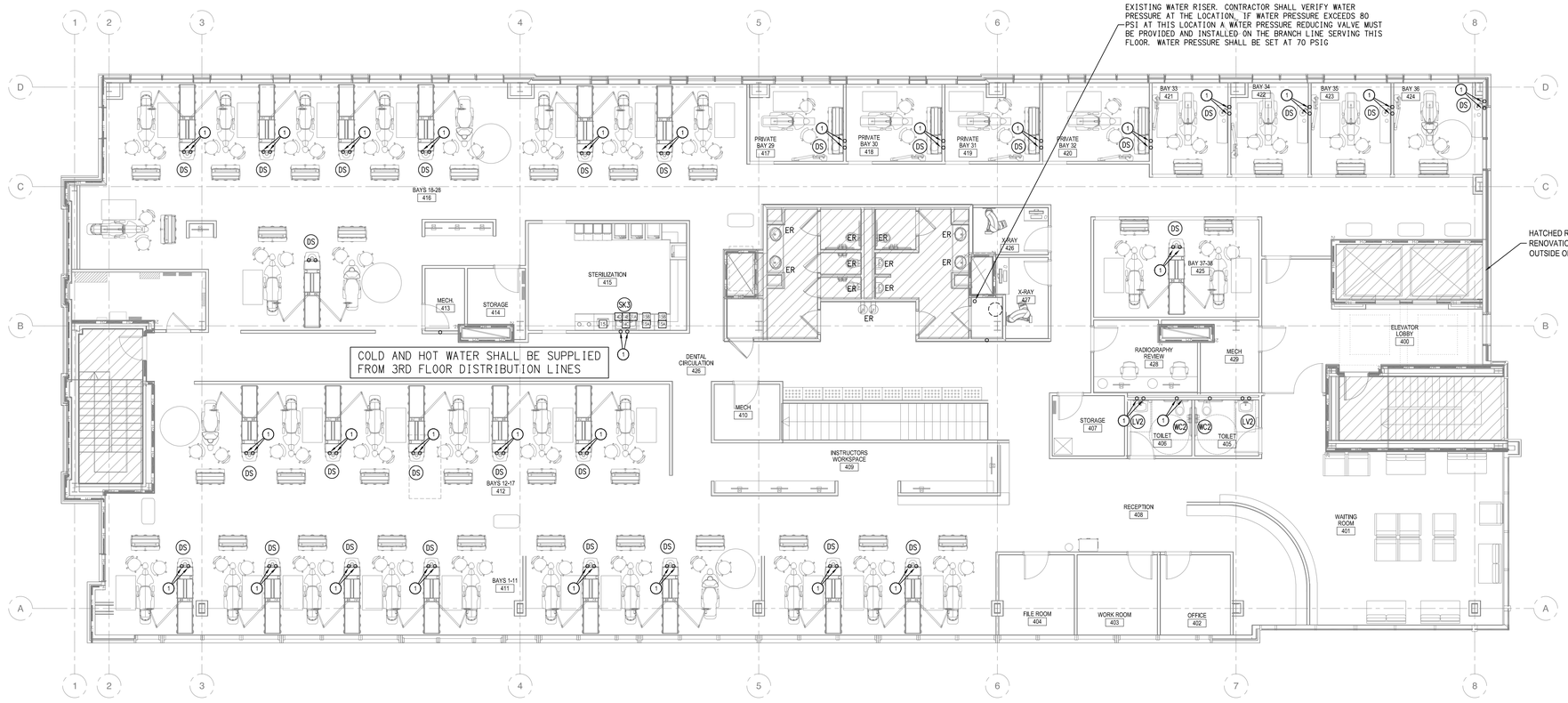
Sheet Title: **WATER PIPING PLAN - THIRD FLOOR**

Sheet No.: **P131**



A P141 **WATER PIPING PLAN - FOURTH FLOOR**

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

KEY NOTES .

1 INDICATED WATER LINE IS SUPPLIED FROM THIRD FLOOR CEILING SPACE DISTRIBUTION PIPING.

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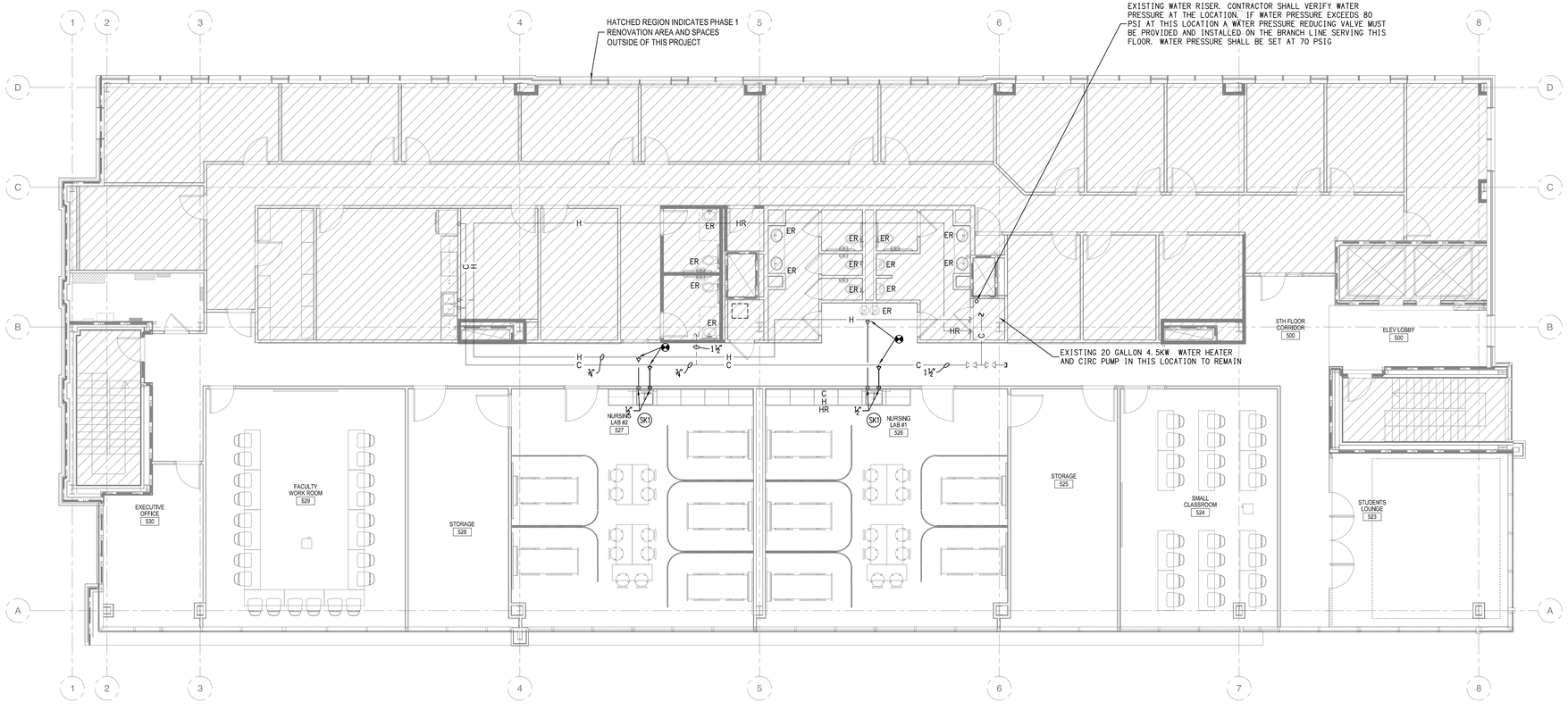
Sheet Title: **WATER PIPING PLAN - FOURTH FLOOR**

Sheet No.: P141



A P151 **WATER PIPING PLAN - FIFTH FLOOR**

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

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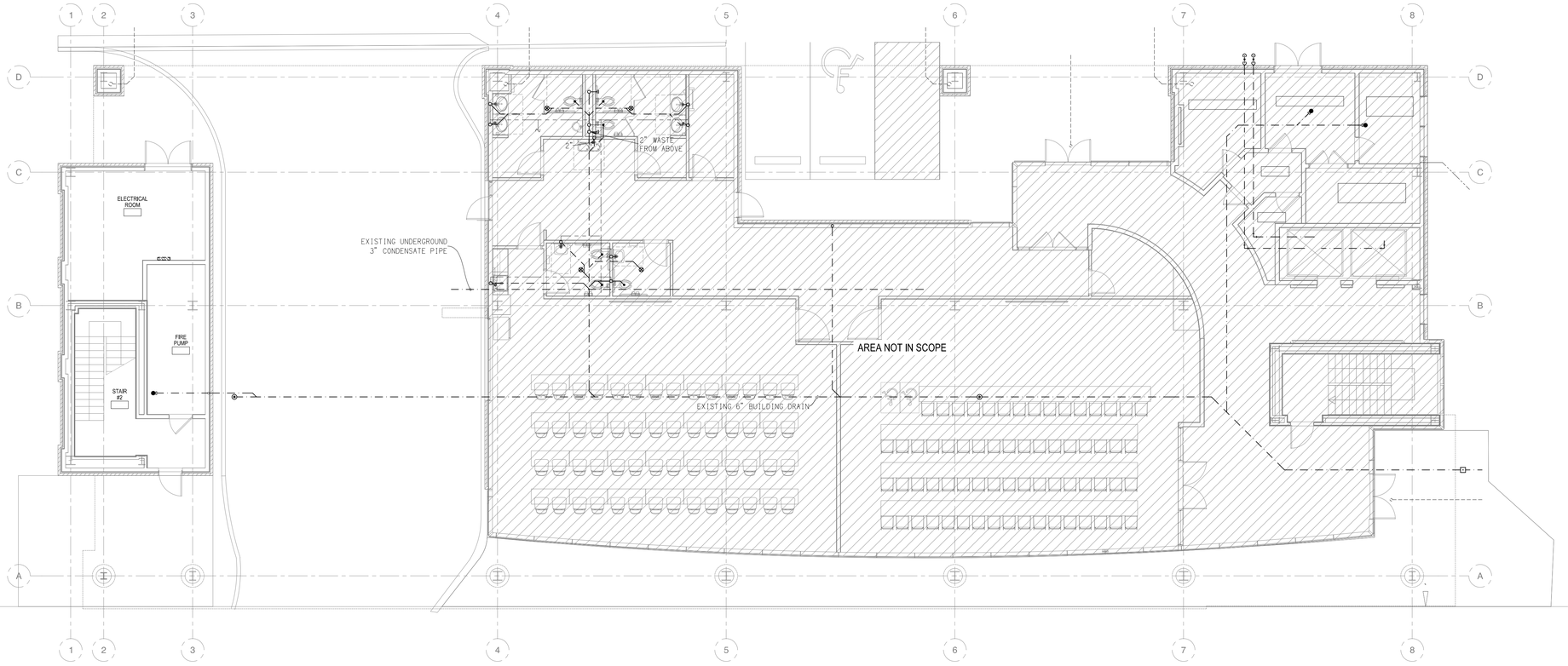
Sheet Title
WATER PIPING PLAN FIFTH FLOOR

Sheet No.
P151



A P211 **D.W.V. PLAN - FIRST FLOOR**

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

NO NEW D.W.V. WORK ON THIS FLOOR

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SCO # 23-37149-01

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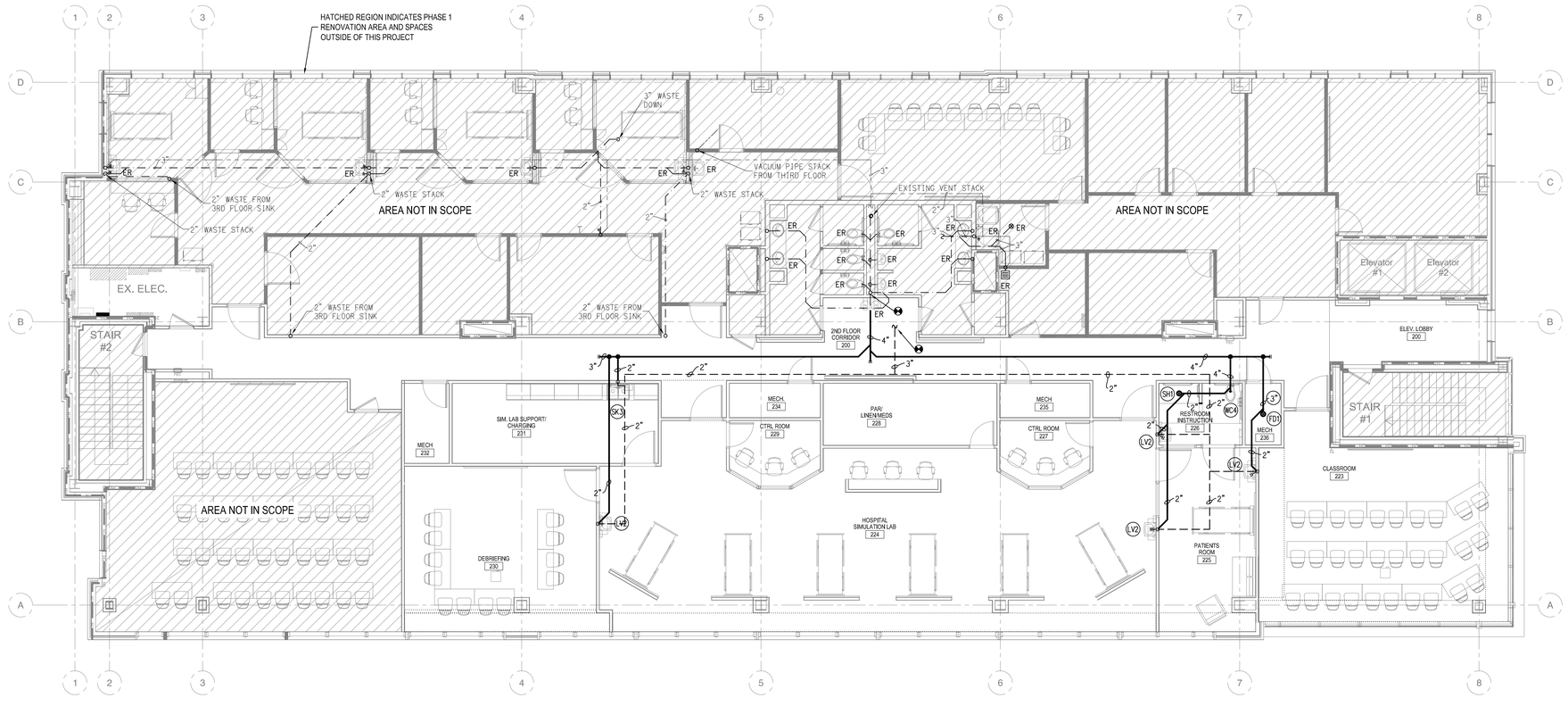
Date 03-01-2024	Reviewed By

Project ID
23-27149-01

Sheet Title
DWV PLAN - FIRST FLOOR

Sheet No.
P211



A P221 **D.W.V. PLAN - SECOND FLOOR**

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

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Interior Renovation – Phase Two
319 N 3rd Stree, Wilmington, North Carolina 28401

NCCCS # 2772
SCO # 23-37149-01

REV.	DATE	DESCRIPTION

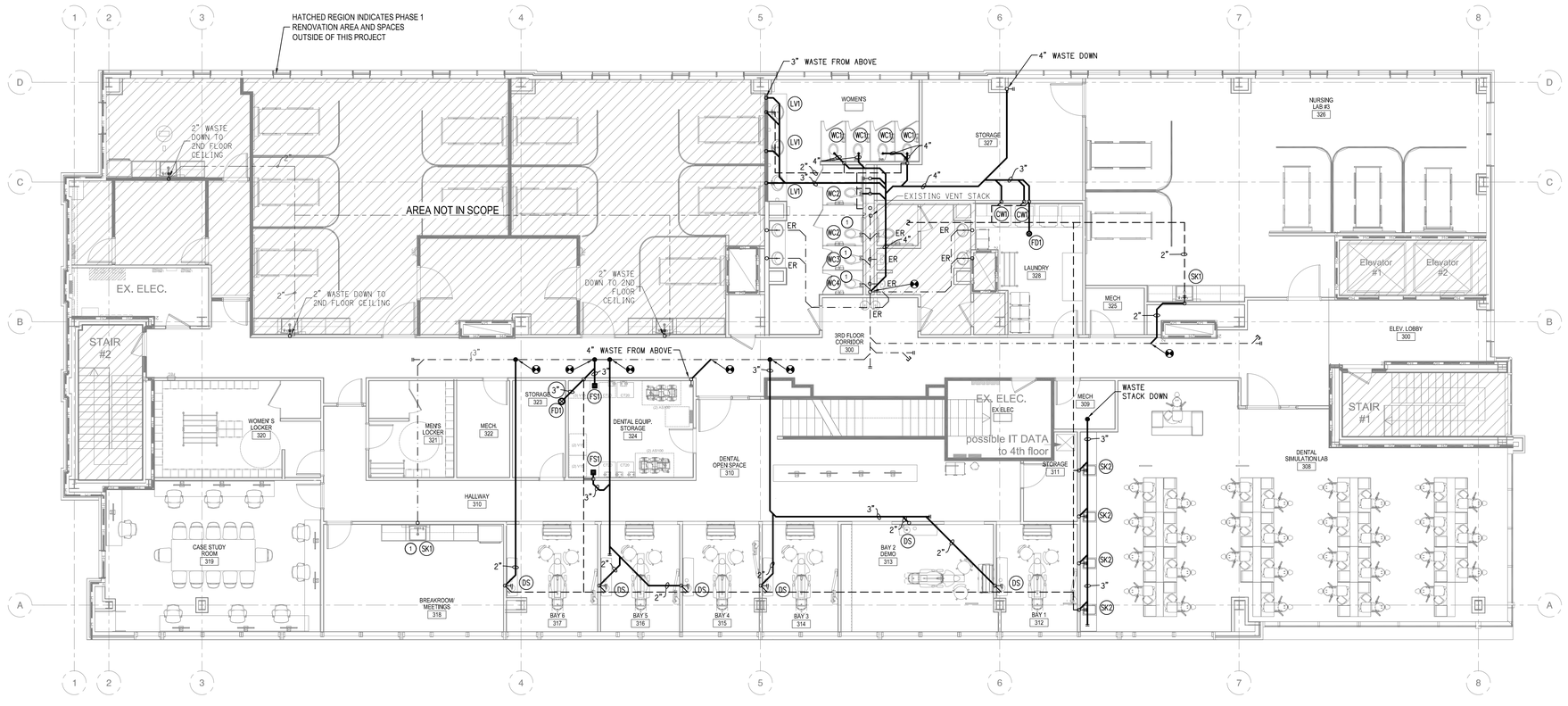
NO.	DATE	ISSUE NOTE

Project Manager	Drawn By
Date 03-01-2024	Reviewed By

Project ID
23-27149-01

Sheet Title
DWV PLAN - SECOND FLOOR

Sheet No.
P221



A P231 D.W.V. PLAN - THIRD FLOOR

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

KEY NOTES .

1 EXISTING PLUMBING FIXTURE SHALL BE REMOVED FOR RENOVATION AND DISPOSED OF. A NEW PLUMBING FIXTURE AS INDICATED SHALL BE INSTALLED AFTER OTHER RENOVATION WORK IS COMPLETE..

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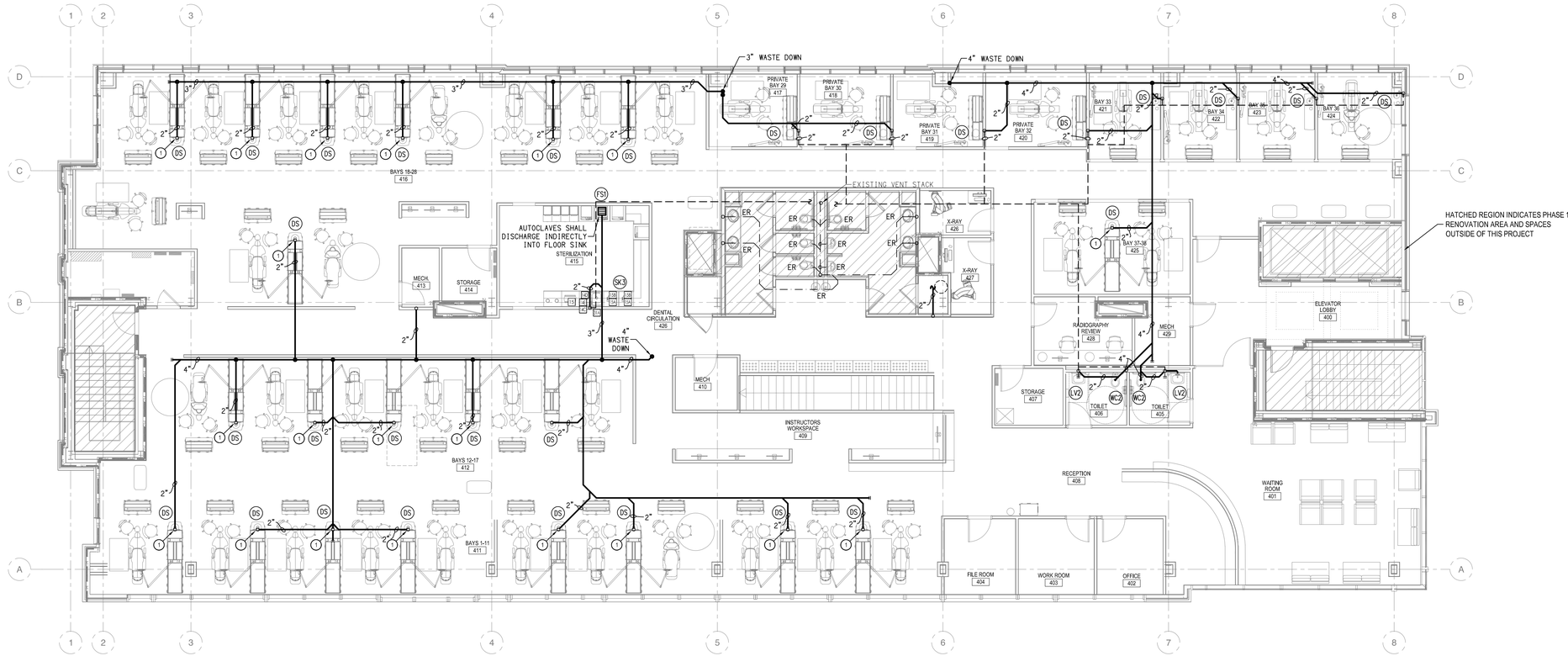
DWV PLAN - THIRD FLOOR

Sheet No.

P231



A P241 **D.W.V. PLAN - FOURTH FLOOR**

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

KEY NOTES .

(1) INSTALL WASTE STACK WITH TRAP AND A.A.V. FOR DENTAL SINK.

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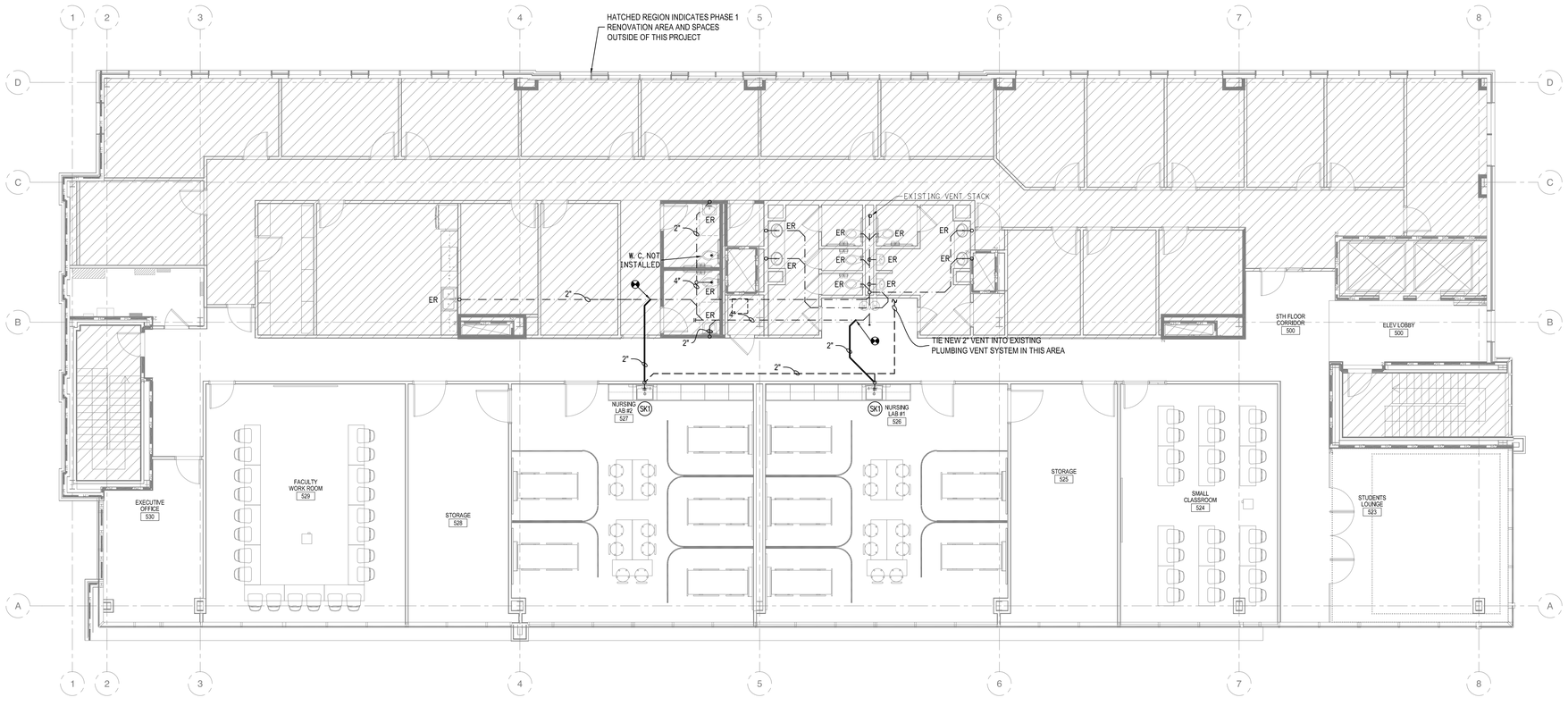
Sheet Title
DWV PLAN - FOURTH FLOOR

Sheet No.
P241



A / P251 D.W.V. PLAN - FIIFTH FLOOR

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

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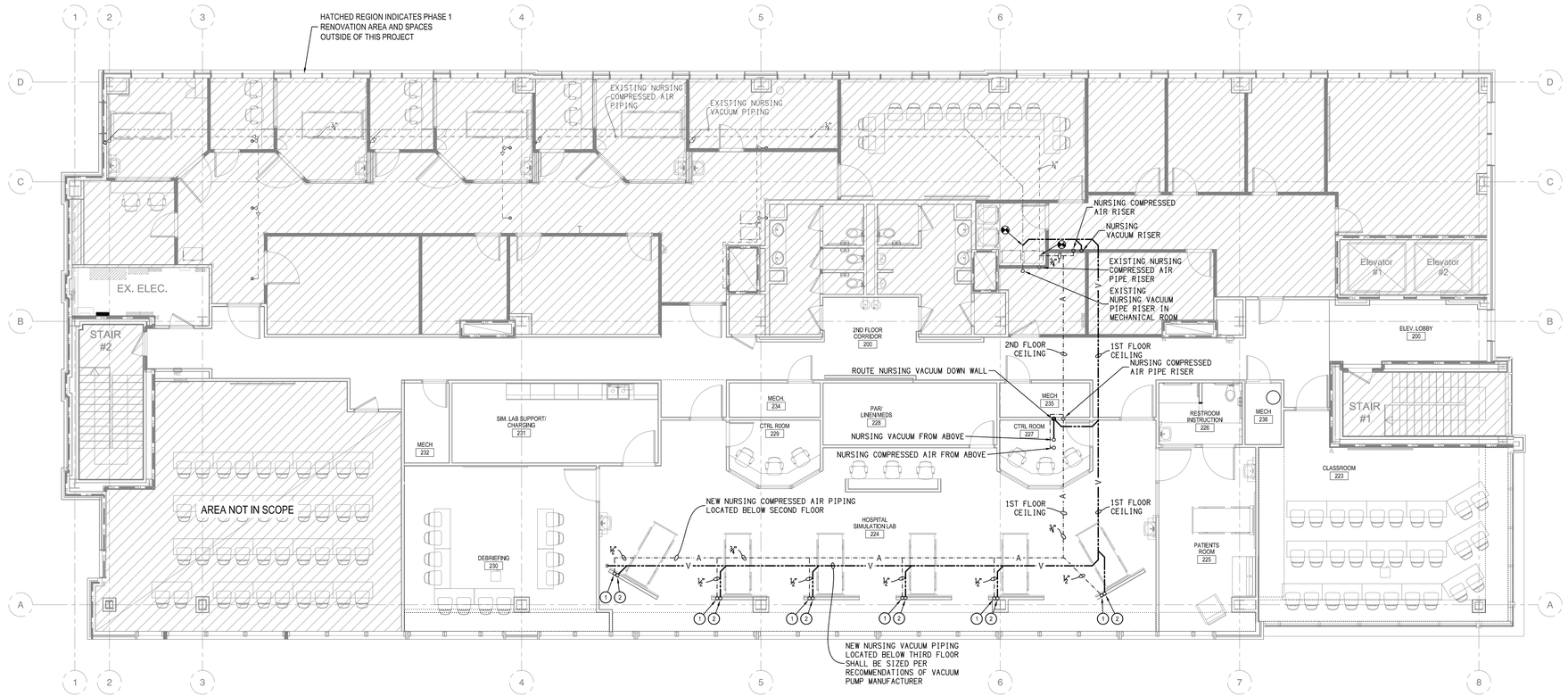
Sheet Title
DWV PLAN FIFTH FLOOR

Sheet No.
P251



A / P321 **MEDICAL VACUUM AND COMPRESSED AIR PIPING PLAN - SECOND FLOOR**

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

KEY NOTES .

1. 1/2" COMPRESSED AIR SUPPLIED FROM BELOW FOR NURSING HEADWALL. SEE ARCHITECTURAL DRAWINGS FOR HEADWALL DIMENSIONS. CONNECTORS MUST BE CHEMTRON COMPATIBLE.
2. 1" VACUUM PIPE SUPPLIED FROM BELOW FOR NURSING HEADWALL. SEE ARCHITECTURAL DRAWINGS FOR HEADWALL DIMENSIONS.

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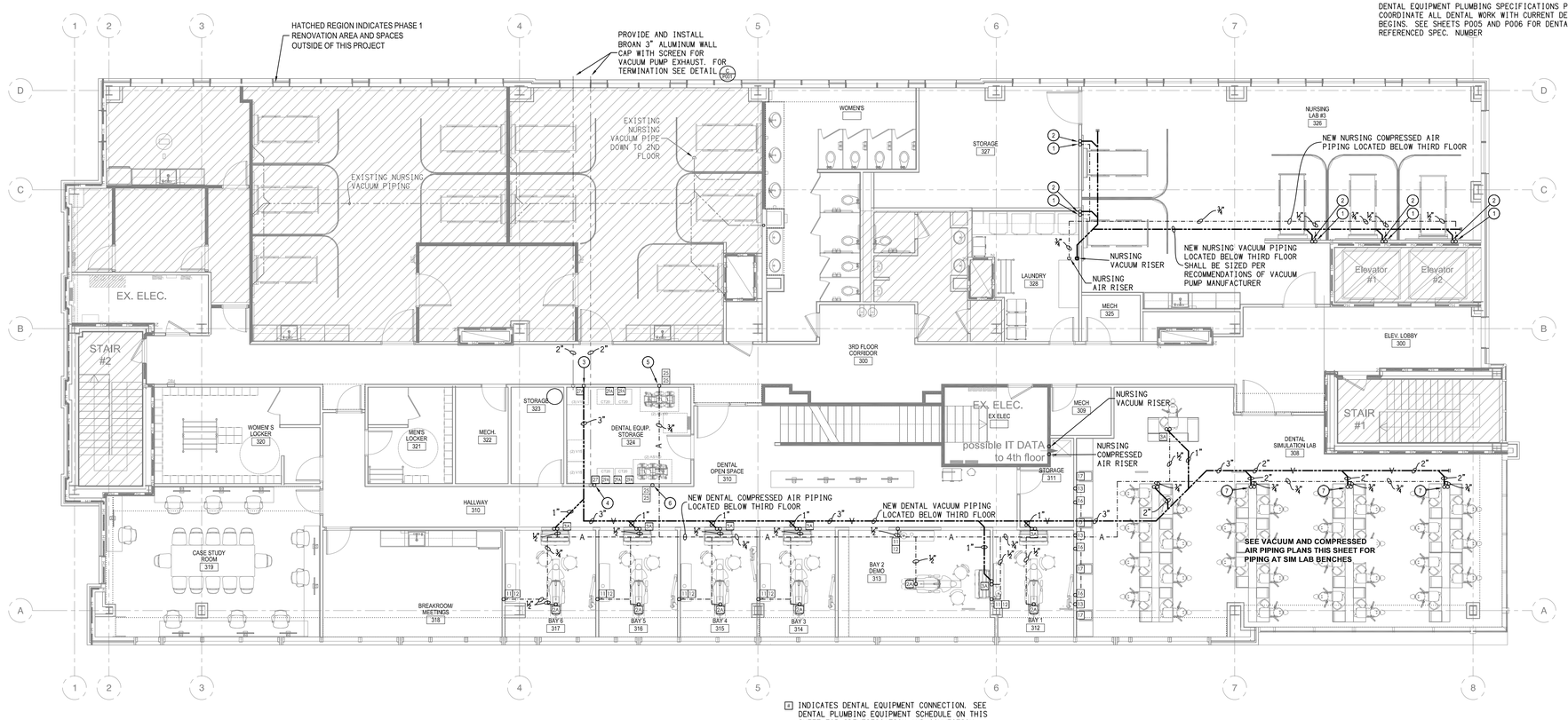
Sheet Title: **MEDICAL VACUUM AND COMPRESSED AIR PIPING PLAN - SECOND FLOOR**

Sheet No.: P321

PLUMBING SPECIFICATIONS

QUANTITY	SPEC. NUMBER	DESCRIPTION	UTILITIES: COLD WATER	HOT WATER	DRAIN	COMPRESSED AIR	VACUUM	N2O	OXYGEN	NITROGEN	VENT	DETAIL
		PLEASE NOTE: A LICENSED PLUMBING CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL REQUIRED UTILITIES. ALL REQUIREMENTS TO BE VERIFIED BY MANUFACTURER'S SPEC SHEETS PROVIDED BY HENRY SCHEIN DENTAL EQUIPMENT SPECIALIST. MANUFACTURER'S SPECS SUPERSEDE ANY AND ALL INFORMATION CONTAINED HEREIN.										
6	2A	UTILITY CENTER – SELF-CONTAINED WATER. SEE DETAIL(5). SELF-CONTAINED WATER. ALL UTILITIES MUST CONFORM TO PREVAILING LOCAL CODES.			•							2A
23	3A	UTILITY CENTER - SELF-CONTAINED WATER. SEE DETAIL(5). ALL UTILITIES MUST CONFORM TO PREVAILING LOCAL CODES.			•		•					3A
6	11	MODULAR SINKS & FAUCETS - SINK AND FAUCET SUPPLIED BY HENRY SCHEIN DENTAL. INSTALLED BY PLUMBER. FINAL CONNECTIONS BY PLUMBER.	•	•	•							
6	12	AIR POWERED SINK CONTROL – FROM (12) TO (11). SUPPLIED BY HENRY SCHEIN DENTAL. INSTALLED BY PLUMBER.			•							
3	13	COMPRESSED AIR LINE AND VALVE – ¼" AIR LINE FROM COMPRESSOR (25) BY PLUMBER. TERMINATE WITH A 3/8" ANGLE VALVE.				•						13
3	16	MODEL TRIMMER - SUPPLIED AND INSTALLED BY HENRY SCHEIN DENTAL. DO NOT TIE INTO COLD WATER LINE FOR SINK. SEE DETAIL.	•	•								16
4	17	PLASTER TRAP - SUPPLIED BY HSD, INSTALLED BY PLUMBER ON SINK DRAIN LINE. DRAIN LINE MUST BE 21" A.F.F.			•							16
4	25	DENTAL AIR COMPRESSOR - SUPPLIED BY HENRY SCHEIN DENTAL. INSTALLED BY CONTRACTOR(S). FOR DENTAL AIR DRIVEN DEVICES. PLUMBER TO PROVIDE 1/2" ID. COPPER TYPE K OR L SUPPLY LINES TO LOCATIONS THAT REQUIRE AIR. BUCK BOOST TRANSFORMER SUPPLIED AND INSTALLED BY ELECTRICIAN (IF REQ'D). FINAL CONNECTIONS BY CONTRACTOR(S).					•						25
1	27	VACUUM PUMP (DRY) - SUPPLIED BY HENRY SCHEIN DENTAL. INSTALLED BY CONTRACTOR(S). VERIFY TRUNK & BRANCH LINE SIZES WITH MFR RECOMMENDATIONS. USE SCH 40 PVC WHERE PERMITTED BY CODE. PLUMBER TO EXHAUST PUMP TO OUTSIDE. BUCK BOOST TRANSFORMER SUPPLIED AND INSTALLED BY ELECTRICIAN (IF REQ'D). DRAIN BY PLUMBER. FINAL CONNECTIONS BY CONTRACTOR(S). PLUMBER TO PROVIDE WATER LINE WITH HOSE BIB NEAR UNIT. SEE DETAIL.	•		•		•				•	27
1	27A	VACUUM PUMP (DRY) - SUPPLIED BY HENRY SCHEIN DENTAL. INSTALLED BY CONTRACTOR. VERIFY TRUNK & BRANCH LINE SIZES WITH MFR RECOMMENDATIONS. USE SCH 40 PVC WHERE PERMITTED BY CODE. EXHAUST PUMP TO OUTSIDE. BUCK BOOST TRANSFORMER SUPPLIED AND INSTALLED BY CONTRACTOR (IF REQ'D). DRAIN BY CONTRACTOR. FINAL CONNECTIONS BY CONTRACTOR. PROVIDE WATER LINE WITH HOSE BIB NEAR UNIT. SEE DETAIL.	•		•		•				•	27A
5	29A	AMALGAM SEPARATOR - SUPPLIED BY HENRY SCHEIN DENTAL. INSTALLED BY PLUMBER. VERIFY LOCATION WITH HENRY SCHEIN DENTAL EQUIPMENT SPECIALIST. CONNECT TO VACUUM LINE COMING IN FROM TREATMENT ROOMS.										29A

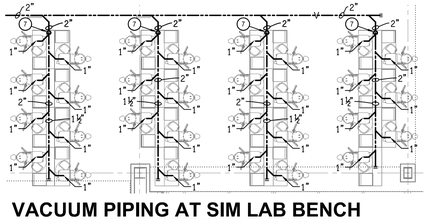
DENTAL EQUIPMENT PLUMBING SPECIFICATIONS PROVIDED BY DENTAL EQUIPMENT PROVIDER. COORDINATE ALL DENTAL WORK WITH CURRENT DENTAL EQUIPMENT DRAWINGS BEFORE ANY WORK BEGINS. SEE SHEETS P005 AND P006 FOR DENTAL EQUIPMENT SUPPLIER DETAILS WITH REFERENCED SPEC. NUMBER



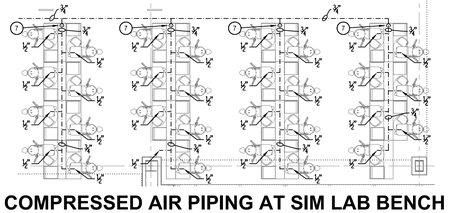
4 INDICATES DENTAL EQUIPMENT CONNECTION. SEE DENTAL PLUMBING EQUIPMENT SCHEDULE ON THIS SHEET FOR IDENTIFICATION AND CONNECTION INFORMATION. SEE SHEETS P003 AND P004 FOR DENTAL EQUIPMENT CONNECTION DETAILS

A / P331 **MEDICAL VACUUM AND COMPRESSED AIR PIPING PLAN - THIRD FLOOR**

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



VACUUM PIPING AT SIM LAB BENCH



COMPRESSED AIR PIPING AT SIM LAB BENCH

KEY NOTES :

1. 1/2" COMPRESSED AIR SUPPLIED FROM BELOW FOR NURSING HEADWALL. SEE ARCHITECTURAL DRAWINGS FOR HEADWALL DIMENSIONS. CONNECTORS MUST BE CHEMTRON COMPATIBLE.
2. 1" VACUUM PIPE SUPPLIED FROM BELOW FOR NURSING HEADWALL. SEE ARCHITECTURAL DRAWINGS FOR HEADWALL DIMENSIONS.
3. VACUUM PIPE FROM SECOND FLOOR CEILING SPACE SHALL STUB UP IN MECHANICAL ROOM FROM BELOW. VERIFY EXACT LOCATION AND TERMINATION REQUIRED BEFORE INSTALLING ANY VACUUM PIPE.
4. VACUUM PIPE FROM THIRD FLOOR CEILING SPACE SHALL STUB UP IN MECHANICAL ROOM FROM ABOVE. VERIFY EXACT LOCATION AND TERMINATION REQUIRED BEFORE INSTALLING ANY VACUUM PIPE.
5. COMPRESSED AIR PIPE FROM SECOND FLOOR CEILING SPACE SHALL STUB UP IN MECHANICAL ROOM. VERIFY EXACT LOCATION AND TERMINATION REQUIRED BEFORE INSTALLING ANY COMPRESSED AIR PIPE.
6. COMPRESSED AIR PIPE FROM THIRD FLOOR CEILING SPACE SHALL STUB UP IN MECHANICAL ROOM. VERIFY EXACT LOCATION AND TERMINATION REQUIRED BEFORE INSTALLING ANY COMPRESSED AIR PIPE.
7. COMPRESSED AIR AND VACUUM PIPING. ROUTE UP THROUGH FLOOR INTO SIM LAB BENCH AND DISTRIBUTE TO MULTIPLE CONNECTIONS IN CABINETS. SEE DENTAL EQUIPMENT DETAIL 3A ON SHEET P003. ALSO SEE PIPING PLANS THIS SHEET.

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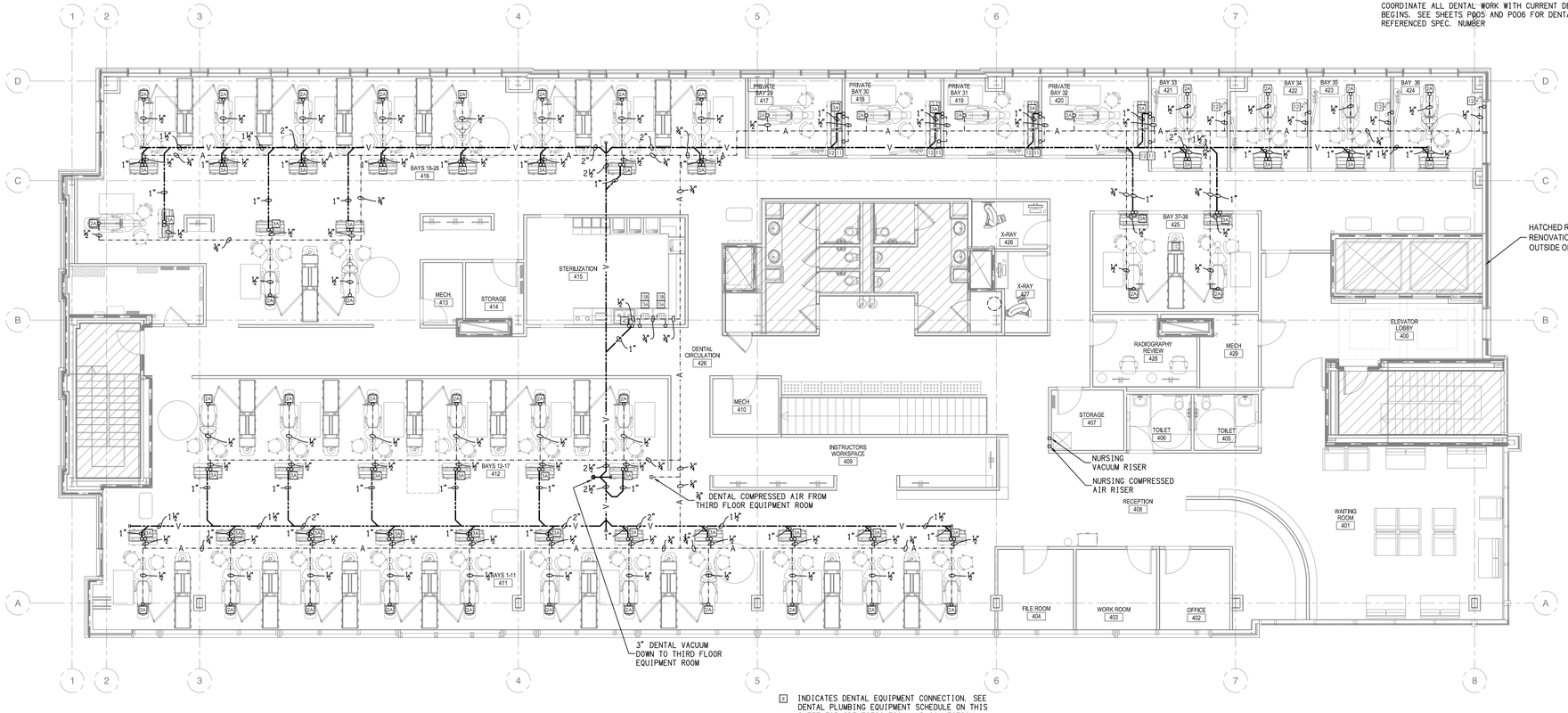
Sheet Title: **MEDICAL VACUUM AND COMPRESSED AIR PIPING PLAN - THIRD FLOOR**

Sheet No.: **P331**

PLUMBING SPECIFICATIONS

QUANTITY	SPEC. NUMBER	DESCRIPTION	UTILITIES: COLD WATER	HOT WATER	VACUUM	COMPRESSED AIR	VACUUM & CAS	WASTE	FLOOR	NITROGEN	VENT	DETAIL
		PLEASE NOTE: A LICENSED PLUMBING CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL REQUIRED UTILITIES. ALL REQUIREMENTS TO BE VERIFIED BY MANUFACTURER'S SPEC SHEETS PROVIDED BY HENRY SCHEIN DENTAL EQUIPMENT SPECIALIST. MANUFACTURER'S SPECS SUPERSEDE ANY AND ALL INFORMATION CONTAINED HEREIN.										
38	2A	UTILITY CENTER – SELF-CONTAINED WATER. SEE DETAIL(S). SELF-CONTAINED WATER. ALL UTILITIES MUST CONFORM TO PREVAILING LOCAL CODES.		•								2A
38	3A	UTILITY CENTER - SELF-CONTAINED WATER. SEE DETAIL(S). ALL UTILITIES MUST CONFORM TO PREVAILING LOCAL CODES.			•		•					3A
6	11	MODULAR SINKS & FAUCETS - SINK AND FAUCET SUPPLIED BY HENRY SCHEIN DENTAL, INSTALLED BY PLUMBER. FINAL CONNECTIONS BY PLUMBER.	•	•	•							
21	11C	CENTER ISLAND CABINET - SUPPLIED AND INSTALLED BY HENRY SCHEIN DENTAL. SINK AND FAUCET TO BE CONNECTED BY PLUMBER. FINAL CONNECTIONS OF CABINET UTILITIES BY CONTRACTOR(S).	•	•	•						•	11C
8	12	AIR POWERED SINK CONTROL - FROM (12) TO (11). SUPPLIED BY HENRY SCHEIN DENTAL, INSTALLED BY PLUMBER.			•							
1	14C	MODULAR STERILIZATION CENTER - STERI-CENTER SUPPLIED AND INSTALLED BY HENRY SCHEIN DENTAL. CONTRACTOR TO PROVIDE UTILITIES PER MANUFACTURER'S SPECIFICATIONS. EXACT LOCATIONS TO BE CONFIRMED ON-SITE BY HENRY SCHEIN DENTAL EQUIPMENT SPECIALIST. FINAL CONNECTIONS BY CONTRACTOR(S).	•	•	•	•	•				•	14C
1	14D	VISTACOOL DIRECT-TO-DRAIN SYSTEM - SUPPLIED AND INSTALLED BY HENRY SCHEIN DENTAL. TIE INTO EXISTING SINK DRAIN AND COLD WATER LINE WHERE POSSIBLE. SYSTEM SHOULD BE INSTALLED IN SINK CABINET DOWNHILL FROM STATION (14) AND UPHILL FROM CONNECTION TO DRAIN. A REMOTE WATER CONTROL VALVE IS RECOMMENDED ON FACILITY WATER LINE WHEN USING THIS SYSTEM.	•	•								14D
1	14E	VISTA DRAINDOCK MULTI-PORT DRAIN ADAPTER – ADAPTER PROVIDED BY HENRY SCHEIN, INSTALLED BY PLUMBER. FINAL CONNECTIONS BY PLUMBER.			•							14E
1	15	ULTRASONIC CLEANER - FOR EQUIPMENT LOCATION ONLY. CONTRACTOR TO PROVIDE REQ'D UTILITIES FOR STERILIZATION CENTER AT 14C LOCATION. CLEANER SUPPLIED AND INSTALLED BY HENRY SCHEIN DENTAL. CONNECTS TO SINK DRAIN.			•							14C
2	15A	WASHER DISINFECTOR - FOR EQUIPMENT LOCATION ONLY. CONTRACTOR TO PROVIDE REQ'D UTILITIES FOR STERILIZATION CENTER AT 14C LOCATION . WASHER SUPPLIED AND INSTALLED BY HENRY SCHEIN DENTAL.	•	•	•							15A
2	15B	HANDPIECE MAINTENANCE SYSTEM - FOR EQUIPMENT LOCATION ONLY. CONTRACTOR TO PROVIDE REQ'D UTILITIES FOR STERILIZATION CENTER AT 14C LOCATION. SYSTEM SUPPLIED AND INSTALLED BY HENRY SCHEIN DENTAL.				•						14C
1	31A	BOTTLE AND/OR AUTOCLAVE WATER TREATMENT SYSTEM - SUPPLIED AND INSTALLED BY HENRY SCHEIN DENTAL (WHERE PERMITTED BY CODE). UTILITIES BY CONTRACTOR. SEE MANUFACTURER SPECIFICATIONS & DETAILS.	•		•							31A

DENTAL EQUIPMENT PLUMBING SPECIFICATIONS PROVIDED BY DENTAL EQUIPMENT PROVIDER. COORDINATE ALL DENTAL WORK WITH CURRENT DENTAL EQUIPMENT DRAWINGS BEFORE ANY WORK BEGINS. SEE SHEETS P005 AND P006 FOR DENTAL EQUIPMENT SUPPLIER DETAILS WITH REFERENCED SPEC. NUMBER



[#] INDICATES DENTAL EQUIPMENT CONNECTION. SEE DENTAL PLUMBING EQUIPMENT SCHEDULE ON THIS SHEET FOR IDENTIFICATION AND CONNECTION INFORMATION. SEE SHEETS P003 AND P004 FOR DENTAL EQUIPMENT CONNECTION DETAILS

A / P341 **MEDICAL VACUUM AND COMPRESSED AIR PIPING PLAN - FOURTH FLOOR**

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

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Sheet Title: **MEDICAL VACUUM AND COMPRESSED AIR PIPING PLAN - FOURTH FLOOR**

Sheet No.: **P341**

ELECTRICAL LEGEND

	CEILING OUTLET WITH LED FIXTURE
	WALL OUTLET WITH LED FIXTURE
	CEILING OUTLET WITH LED FIXTURE
	CEILING/WALL OUTLETS WITH LED FIXTURES ON EMERGENCY POWER (MINIMUM OF 90 MINUTES)
S	SWITCH, SINGLE POLE, 120VAC, MOUNTED AT 48" AFF TO TOP OF OUTLET BOX
S3	SWITCH, THREE WAY, 120VAC, MOUNTED AT 48" AFF TO TOP OF OUTLET BOX
SOS	DUAL TECH OCCUPANCY SENSOR WITH ON/OFF SWITCH, 120VAC, MOUNTED AT 48" AFF TO TOP OF OUTLET BOX, SENSORWORX SWX-100 SERIES OR EQUAL
SLV	SWITCH FOR USE WITH POWER PACK LOW VOLTAGE SIDE, MOUNTED AT 48" AFF TO TOP OF OUTLET BOX, SENSORWORX SWX-800 SERIES OR EQUAL. CONTRACTOR MAY USE 120VAC 3 AND 4 WAY SWICHTES AS ALTERNATIVE, CONSULT WITH POWER PACK MANUFACTURER FOR WIRING.
SF	FAN CONTROL SWITCH MOUNTED AT 48" AFF TO TOP OF OUTLET BOX
SWP	SWITCH, SINGLE POLE, 120VAC, IN WEATHER PROOF ENCLOSURE, MOUNTED AT 48" AFF TO TOP OF OUTLET BOX
ST	TIMER SWITCH WITH 30 MINUTE MAX TIME LIMIT, MOUNTED AT 48" AFF TO TOP OF OUTLET BOX
S2	250V TWO POLE SWITCH, MATCH AMP RATING OF EQUIPMENT BREAKER
SM	MOTOR RATED SNAP SWITCH FOR EQUIPMENT DISCONNECTING MEANS. SWITCH RATING AS INDICATED ON PLANS AND/OR SCHEDULES
D	SLIDE DIMMER WITH ON/OFF SWITCH, SINGLE POLE, 120VAC, MOUNTED AT 48" AFF TO TOP OF OUTLET BOX
DOS	DUAL TECH OCCUPANCY SENSOR WITH DIMMING AND ON/OFF SWITCH, 120VAC, MOUNTED AT 48" AFF TO TOP OF BOX, SENSORWORX SWX-100 SERIES OR EQUAL
(XS)	DUAL TECH OCCUPANCY SENSOR, LOW VOLTAGE, CEILING MOUNT, SENSORWORX SWX-222-1 OR EQUAL
(PP)	POWER PACK FOR LOW VOLTAGE OCCUPANCY SENSORS, SENSORWORX SWX-900-AX OR EQUAL
(EC)	UL924 EMERGENCY POWER CONTROL RELAY, LVS MODEL EPC-2-D (0-10V) W/ AUTOMATIC DIAGNOSTIC FOR INSTALLATION IN INACCESSIBLE LOCATIONS
	DUPLEX CONVENIENCE RECEPTACLE, 120VAC, MOUNTED AT 18" AFF TO CENTER OF OUTLET BOX, UNO
	DUPLEX CONVENIENCE RECEPTACLE WITH (2) USB PORTS, 120VAC, MOUNTED AT 18" AFF TO CENTER OF OUTLET BOX, UNO
	QUAD CONVENIENCE RECEPTACLE, 120VAC, MOUNTED AT 18" AFF TO CENTER OF OUTLET BOX, UNO
	QUAD CONVENIENCE RECEPTACLE WITH (2) USB PORTS, 120VAC, MOUNTED AT 18" AFF TO CENTER OF OUTLET BOX, UNO
IG	DUPLEX ISOLATED GROUND RECEPTACLE, 120VAC, MOUNTED AT 18" AFF TO CENTER OF OUTLET BOX, UNO
	SIMPLEX CONVENIENCE RECEPTACLE, 120VAC, MOUNTED AT 18" AFF TO CENTER OF OUTLET BOX, UNO
	PTAC 250V SINGLE PHASE RECEPTACLE RATED FOR 20 AMPS, VERIFY NEMA TYPE REQUIRED WITH MANUFACTURER
	EQUIPMENT CONNECTION, COORDINATE CONNECTION WITH EQUIPMENT CONNECTION SCHEDULE
	CONVENIENCE RECEPTACLE, 120V, FLOOR MOUNT, COVER FLUSH W/ FINISHED FLOOR
	FLOOR MOUNT PHONE/DATA OUTLET, COVER FLUSH W/ FINISH FLOOR
	PHONE OUTLET, MOUNTED AT 18" AFF TO CENTER OF OUTLET BOX
	DATA OUTLET, MOUNTED AT 18" AFF TO CENTER OF OUTLET BOX
	PHONE/DATA OUTLET, MOUNTED AT 18" AFF TO CENTER OF OUTLET BOX
J	JUNCTION BOX
TV	TV CONNECTION, VERIFY REQUIREMENTS, MOUNT AT +18" AFF UNO
	ELECTRICAL PANEL, SURFACE
	ELECTRICAL PANEL, FLUSH
	DISCONNECT SWITCH, FUSIBLE
	FAN BY MECHANICAL CONTRACTOR
	ALWAYS HOT LIGHTING CIRCUIT FOR NIGHT LIGHTS
	CIRCUIT SWITCHED VIA UL924 RELAY

ELECTRICAL ABBREVIATIONS

NL	NIGHT LIGHT
AFF	ABOVE FINISHED FLOOR
GFI	GROUND FAULT INTERRUPTING
GFIA	GROUND FAULT INTERRUPTING WITH AUDIBLE ALARM
3R	WEATHERPROOF ENCLOSURE
UNO	UNLESS NOTED OTHERWISE
WP	WEATHERPROOF
AHU	AIR HANDLING UNIT
HP	HEAT PUMP
TBD	TO BE DETERMINED
LCP	LIGHTING CONTROL PANEL
NAC	FIRE ALARM NOTIFICATION APPLIANCE PANEL
ER	EXISTING TO REMAIN
RX	REMOVE EXISTING
CLG	CEILING MOUNTED

LIGHT FIXTURE DESIGNATIONS - "EM" AND "NL":

- LIGHT FIXTURES LABELED AS "EM" SHALL HAVE 90 MINUTES (MIN.) OF EMERGENCY BACK-UP POWER THROUGH UL924 LISTED BATTERY INVERTER OR GENERATOR ON LIFE SAFETY BRANCH OF SYSTEM.
- LIGHT FIXTURES LABELED AS "NL" (NIGHT LIGHT) ON PLANS ARE DESIGNATED FOR 24HR OPERATION, UN-SWITCHED.

LIGHT FIXTURE SCHEDULE

I.D.	DESCRIPTION	OPTICS						MANUFACTURER	MODEL NUMBER	MOUNTING	REMARKS
		# LAMPS	WATTAGE	TYPE	COLOR TEMP	LUMEN OUTPUT	VOLTAGE				
A1	2x4 LED CENTER BASKET LAY-IN	-	33	LED	3000K	3978	120	LITHONIA LIGHTING	STAK 2X4 4000LM 80CRI 30K COL MIN1 ZT MVOLT	LAY-IN	-
A2	2x4 LED CENTER BASKET LAY-IN	-	42	LED	3000K	5074	120	LITHONIA LIGHTING	STAK 2X4 5000LM 80CRI 30K COL MIN1 ZT MVOLT	LAY-IN	-
A3	2x4 LED CENTER BASKET LAY-IN	-	50	LED	3000K	5819	120	LITHONIA LIGHTING	STAK 2X4 6000LM 80CRI 30K COL MIN1 ZT MVOLT	LAY-IN	-
A4	2x4 LED CENTER BASKET LAY-IN	-	55	LED	3000K	6926	120	LITHONIA LIGHTING	STAK 2X4 7200LM 80CRI 30K COL MIN1 ZT MVOLT	LAY-IN	-
B1	2x2 LED CENTER BASKET LAY-IN	-	24	LED	3000K	3029	120	LITHONIA LIGHTING	STAK 2X2 3000LM 80CRI 30K COL MIN1 ZT MVOLT	LAY-IN	-
B2	2x2 LED CENTER BASKET LAY-IN	-	33	LED	3000K	4126	120	LITHONIA LIGHTING	STAK 2X2 4000LM 80CRI 30K COL MIN1 ZT MVOLT	LAY-IN	-
C1	4" RECESSED DOWNLIGHT WIDE DISTRIBUTION	-	13	LED	3000K	1138	120	LITHONIA LIGHTING	LBR4 ALO2 SWW1 AR LSS WD MVOLT UGZ	RECESSED	SELECTABLE WATTAGE AND CCT, SET AS SHOWN W/ THE EXCEPTION OF 3RD & 4TH FLOORS USE 3500K.
C2	4" RECESSED DOWNLIGHT WIDE DISTRIBUTION	-	19	LED	3000K	1762	120	LITHONIA LIGHTING	LBR4 ALO2 SWW1 AR LSS WD MVOLT UGZ	RECESSED	SELECTABLE WATTAGE AND CCT, SET AS SHOWN W/ THE EXCEPTION OF 3RD & 4TH FLOORS USE 3500K.
D1	5" FLUSH MOUNT DISC	-	10	LED	3000K	700	120	JUNO	JSF 5IN 7LM SWW5 90CRI 120 FRPC WH	SURFACE	SELECTABLE CCT, SET AS SHOWN WITH THE EXCEPTION OF THE 3RD & 4TH FLOORS USE 3500K.
D2	7" FLUSH MOUNT DISC	-	12	LED	3000K	1000	120	JUNO	JSF 7IN 10LM SWW5 90CRI 120 FRPC WH	SURFACE	SELECTABLE CCT, SET AS SHOWN WITH THE EXCEPTION OF THE 3RD & 4TH FLOORS USE 3500K.
D3	13" FLUSH MOUNT DISC	-	20	LED	3000K	1800	120	JUNO	JSF 13IN 18LM SWW5 90CRI 120 FRPC WH	SURFACE	SELECTABLE CCT, SET AS SHOWN WITH THE EXCEPTION OF THE 3RD & 4TH FLOORS USE 3500K.
G1	2x4 LED CENTER BASKET LAY-IN (90CRI)	-	33	LED	3500K	4126	120	LITHONIA LIGHTING	STAK 2X4 4000LM 90CRI 35K COL MIN1 ZT MVOLT	LAY-IN	-
G2	2x4 LED CENTER BASKET LAY-IN (90CRI)	-	42	LED	3500K	5262	120	LITHONIA LIGHTING	STAK 2X4 5000LM 90CRI 35K COL MIN1 ZT MVOLT	LAY-IN	-
G3	2x4 LED CENTER BASKET LAY-IN (90CRI)	-	50	LED	3500K	6035	120	LITHONIA LIGHTING	STAK 2X4 6000LM 90CRI 35K COL MIN1 ZT MVOLT	LAY-IN	-
G4	2x4 LED CENTER BASKET LAY-IN (90CRI)	-	55	LED	3500K	7184	120	LITHONIA LIGHTING	STAK 2X4 7200LM 90CRI 35K COL MIN1 ZT MVOLT	LAY-IN	-
H1	2x2 LED CENTER BASKET LAY-IN (90CRI)	-	24	LED	3500K	3141	120	LITHONIA LIGHTING	STAK 2X2 3000LM 90CRI 35K COL MIN1 ZT MVOLT	LAY-IN	-
H2	2x2 LED CENTER BASKET LAY-IN (90CRI)	-	33	LED	3500K	4126	120	LITHONIA LIGHTING	STAK 2X2 4000LM 90CRI 35K COL MIN1 ZT MVOLT	LAY-IN	-
F	4' BED LIGHT	-	97	LED	4000K	5742 UP/ 5660 DN	120	KENALL	MPH 48 MW 46/46L 40K8 DIM1 D DV	WALL	LENGTH TO BE VERIFIED.
P1	DECORATIVE PENDANT	-	49	LED	3000K	4996	120	BROWNLEE	2680-30-BL-S49-BL-BLC-30K	SUSPEND	MATCH SUSPENSION OPTION W/ EXISTING PENDANTS ON 1ST FLOOR.
U1	4' LINEAR LED UTILITY LIGHT	-	44	LED	4000K	5150	120	LITHONIA	CSS L48 ALO3 MVOLT SWW3 80CRI	WALL OR SUSPEND	SELECTABLE WATTAGE AND CCT, SET AS SHOWN. PROVIDE ALL MOUNTING HARDWARE TO SUSPEND @ +10'-0"AFF (MAX) IF NOT WALL MOUNTED.
EX	EXIT	-	-	LED	-	-	120	LITHONIA	EDGR R	CEILING OR WALL	VERIFY SINGLE OR DOUBLE FACE AND WALL MOUNT WITH SPECIFIC LOCATION ON PLAN.
EM	EMERGENCY	2	2.4	LED	-	220	120	LITHONIA	ELM2L M12	WALL @ +7'-6"AFF	-
XCD4-E	EXISTING DOWNLIGHT	1	32	FL	-	-	120	EXISTING	EXISTING	RECESSED	REPLACE LAMPS AND BALLAST AS NEEDED TO PROVIDE A FULLY FUNCTIONING FIXTURE.
XCP1	EXISTING PENDANT LIGHT	2	32	FL	-	-	120	EXISTING	EXISTING	SUSPEND	REPLACE LAMPS AND BALLAST AS NEEDED TO PROVIDE A FULLY FUNCTIONING FIXTURE.
XMS-1	EXISTING PENDANT LIGHT	3	42	CFL	-	-	120	EXISTING	EXISTING	SUSPEND	REPLACE LAMPS AND BALLAST AS NEEDED TO PROVIDE A FULLY FUNCTIONING FIXTURE.

LIGHT FIXTURE SCHEDULE NOTES:

1. ALL LAMPS SHALL BE LED AND PROVIDED BY CONTRACTOR.
2. EMERGENCY LIGHT SPACING SHOWN ON PLAN REFLECTS THE MANUFACTURER'S RECOMMENDED SPACING TO MEET NFPA 101 LIFE SAFETY REQUIREMENTS FOR EMERGENCY EGRESS ILLUMINATION. ANY SUBSTITUTIONS MADE TO THE SPECIFIED LIGHT SHALL MEET OR EXCEED THE SPACING SHOWN ON PLANS. OTHERWISE, PROVIDE ADDITIONAL FIXTURES AND FOLLOW MANUFACTURER'S RECOMMENDED SPACING FOR NFPA 101 EMERGENCY EGRESS.
3. FIXTURE SHALL BE WIRED TO OPERATE ON SWITCHED CIRCUIT (PHOTOCELL/CLOCK CONTROLLED FOR EXTERIOR LIGHTS) UNDER NORMAL POWER AND AN EMERGENCY LIGHT IN THE EVENT OF A POWER LOSS (PROVIDE UNSWITCHED HOT LEAD TO BATTERY). PROVIDE UL924 LISTED REMOTE BATTERY OR INVERTER IF INTEGRAL UL924 BATTERY NOT AVAILABLE, BODINE OR EQUAL.
4. FOR RECESSED FIXTURES LOCATED IN FIRE RATED CEILINGS PROVIDE TENMAT (OR EQUAL) COVER TO MATCH AND PRESERVE FIRE RATING OF CEILING.
5. COORDINATION OF LED DRIVER SELECTION AND DIMMER SWITCH TECHNOLOGY SHALL BE THE RESPONSIBILITY OF THE LIGHTING SUPPLIER.

INVERTER SCHEDULE

I.D.	FLOOR SERVING	WATTS	OUTPUT VOLTAGE	MANUFACTURER	MODEL NUMBER	MOUNTING	REMARKS
INV-2	2ND FLOOR	1500	120	EELP	SI-L-B-1500W	WALL	-
INV-3	3RD FLOOR	2000	120	EELP	SI-L-B-2000W	WALL	-
INV-4	4TH FLOOR	2000	120	EELP	SI-L-B-2000W	WALL	-
INV-5	5TH FLOOR	1500	120	EELP	SI-L-B-1500W	WALL	-

NOTES:

1. ALL OUTPUT CIRCUTIS SHALL BE ALWAYS ON. REMOTE RELAYS SHALL BE PROVIDED FOR SWITCHED CIRCUITS, SEE PLANS FOR LOCATIONS.

ELECTRICAL SUMMARY
ELECTRICAL SYSTEM AND EQUIPMENT

METHOD OF COMPLIANCE:

ENERGY CODE:	☑ PRESCRIPTIVE	☐ PERFORMANCE
ASHRAE 90.1	☑ PRESCRIPTIVE	☐ PERFORMANCE

LIGHTING SCHEDULE

LAMP TYPE REQUIRED IN FIXTURE	- SEE PLANS
NUMBER OF LAMPS IN FIXTURE	- SEE PLANS
BALLAST TYPE USED IN THE FIXTURE	- SEE PLANS
NUMBER OF BALLASTS IN FIXTURE	- SEE PLANS
TOTAL WATTAGE PER FIXTURE	- SEE PLANS

TOTAL INTERIOR WATTAGE SPECIFIED VS ALLOWED - SPECIFIED= 17,770 WATTS, ALLOWED= 28,362 WATTS

TOTAL EXTERIOR WATTAGE SPECIFIED VS ALLOWED - SPECIFIED= N/A

ADDITIONAL PRESCRIPTIVE COMPLIANCE:

- ☐ 406.2 MORE EFFICIENT MECHANICAL EQUIPMENT
- ☑ 406.3 REDUCED LIGHTING POWER DENSITY
- ☐ 406.4 ENHANCED DIGITAL LIGHTING CONTROLS
- ☐ 406.5 ON-SITE RENEWABLE ENERGY
- ☐ 406.6 DEDICATED OUTDOOR AIR SYSTEM
- ☐ 406.7 REDUCED ENERGY USE IN SERVICE WATER HEATING

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REV.	DATE	DESCRIPTION

NO.	DATE	ISSUE NOTE

Project Manager	Drawn By
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Project ID: 23-27149-01

Sheet Title: **SCHEDULES, LEGEND & NOTES**

Sheet No.: E001

EQUIPMENT (BY OTHERS) CONNECTION SCHEDULE

I.D.	DESCRIPTION	HP	KW	AMP	VOLT	PHASE	BKR	FEEDER		CONNECTION	REMARKS
								COND	WIRE		
25	DENTAL AIR COMPRESSOR	-	-	20	208	3	30/3	3/4"	3#10,1#10G	DIRECT	-
27	DENTAL VACUUM PUMP	-	-	25	208	3	40/3	3/4"	3#8,1#10G	DIRECT	-
9C	XRAY	-	-	10	208	1	20/2	3/4"	2#12,1#12G	-	-
15A	WASHER DISINFECTOR	-	-	6	208	1	15/2	3/4"	2#12,1#12G	-	-
DRYER	DRYER	-	-	20	208	1	30/2	3/4"	2#10,1#10G	2-POLE RECEPTACLE	-

CONNECTION SCHEDULE NOTES:

1. CONTRACTOR SHALL VERIFY ALL CONNECTIONS BEFORE RUNNING SERVICE OR ORDERING EQUIPMENT.

EQUIPMENT CONNECTION SCHEDULE

I.D.	DESCRIPTION	HP	KW	AMP	VOLT	PHASE	BKR	FEEDER		CONNECTION	REMARKS
								COND	WIRE		
HP-2F	OUTDOOR HEAT PUMP	-	-	26	208	1	50/2	1"	2#6,1#10G	NON-FUSED DISC NEMA 3R	-
AHU-2F	AIR HANDLING UNIT	-	-	42	208	1	60/2	1 1/4"	2#4,1#10G	NON-FUSED DISC NEMA 1	-
HP-2G	OUTDOOR HEAT PUMP	-	-	26	208	1	50/2	1"	2#6,1#10G	NON-FUSED DISC NEMA 3R	-
AHU-2G	AIR HANDLING UNIT	-	-	42	208	1	60/2	1 1/4"	2#4,1#10G	NON-FUSED DISC NEMA 1	-
HP-2H	OUTDOOR HEAT PUMP	-	-	26	208	1	50/2	1"	2#6,1#10G	NON-FUSED DISC NEMA 3R	-
AHU-2H	AIR HANDLING UNIT	-	-	42	208	1	60/2	1 1/4"	2#4,1#10G	NON-FUSED DISC NEMA 1	-
HP-3E	OUTDOOR HEAT PUMP	-	-	26	208	1	50/2	1"	2#6,1#10G	NON-FUSED DISC NEMA 3R	-
AHU-3E	AIR HANDLING UNIT	-	-	42	208	1	60/2	1 1/4"	2#4,1#10G	NON-FUSED DISC NEMA 1	-
HP-3F	OUTDOOR HEAT PUMP	-	-	21	208	1	40/2	3/4"	2#8,1#10G	NON-FUSED DISC NEMA 3R	-
AHU-3F	AIR HANDLING UNIT	-	-	42	208	1	60/2	1 1/4"	2#4,1#10G	NON-FUSED DISC NEMA 1	-
HP-3G	OUTDOOR HEAT PUMP	-	-	21	208	1	40/2	3/4"	2#8,1#10G	NON-FUSED DISC NEMA 3R	-
AHU-3G	AIR HANDLING UNIT	-	-	42	208	1	60/2	1 1/4"	2#4,1#10G	NON-FUSED DISC NEMA 1	-
HP-3H	OUTDOOR HEAT PUMP	-	-	26	208	1	50/2	1"	2#6,1#10G	NON-FUSED DISC NEMA 3R	-
AHU-3H	AIR HANDLING UNIT	-	-	42	208	1	60/2	1 1/4"	2#4,1#10G	NON-FUSED DISC NEMA 1	-
HP-3I	OUTDOOR HEAT PUMP	-	-	14	208	1	30/2	3/4"	2#10,1#10G	NON-FUSED DISC NEMA 3R	-
AHU-3I	AIR HANDLING UNIT	-	-	32	208	1	40/2	3/4"	2#8,1#10G	NON-FUSED DISC NEMA 1	-
HP-3J	OUTDOOR HEAT PUMP	-	-	21	208	1	40/2	3/4"	2#8,1#10G	NON-FUSED DISC NEMA 3R	-
AHU-3J	AIR HANDLING UNIT	-	-	42	208	1	60/2	1 1/4"	2#4,1#10G	NON-FUSED DISC NEMA 1	-
HP-4B	OUTDOOR HEAT PUMP	-	-	26	208	1	50/2	1"	2#6,1#10G	NON-FUSED DISC NEMA 3R	-
AHU-4B	AIR HANDLING UNIT	-	-	42	208	1	60/2	1 1/4"	2#4,1#10G	NON-FUSED DISC NEMA 1	-
HP-4C	OUTDOOR HEAT PUMP	-	-	26	208	1	50/2	1"	2#6,1#10G	NON-FUSED DISC NEMA 3R	-
AHU-4C	AIR HANDLING UNIT	-	-	42	208	1	60/2	1 1/4"	2#4,1#10G	NON-FUSED DISC NEMA 1	-
HP-4D	OUTDOOR HEAT PUMP	-	-	26	208	1	50/2	1"	2#6,1#10G	NON-FUSED DISC NEMA 3R	-
AHU-4D	AIR HANDLING UNIT	-	-	42	208	1	60/2	1 1/4"	2#4,1#10G	NON-FUSED DISC NEMA 1	-
HP-4E	OUTDOOR HEAT PUMP	-	-	26	208	1	50/2	1"	2#6,1#10G	NON-FUSED DISC NEMA 3R	-
AHU-4E	AIR HANDLING UNIT	-	-	42	208	1	60/2	1 1/4"	2#4,1#10G	NON-FUSED DISC NEMA 1	-
HP-4F	OUTDOOR HEAT PUMP	-	-	26	208	1	50/2	1"	2#6,1#10G	NON-FUSED DISC NEMA 3R	-
AHU-4F	AIR HANDLING UNIT	-	-	42	208	1	60/2	1 1/4"	2#4,1#10G	NON-FUSED DISC NEMA 1	-
HP-4G	OUTDOOR HEAT PUMP	-	-	26	208	1	50/2	1"	2#6,1#10G	NON-FUSED DISC NEMA 3R	-
AHU-4G	AIR HANDLING UNIT	-	-	42	208	1	60/2	1 1/4"	2#4,1#10G	NON-FUSED DISC NEMA 1	-
HP-4H	OUTDOOR HEAT PUMP	-	-	26	208	1	50/2	1"	2#6,1#10G	NON-FUSED DISC NEMA 3R	-
AHU-4H	AIR HANDLING UNIT	-	-	42	208	1	60/2	1 1/4"	2#4,1#10G	NON-FUSED DISC NEMA 1	-
WH1	ELECTRIC WATER HEATER	-	24	67	208	3	90/3	1 1/4"	3#3,1#8G	NON-FUSED DISC NEMA 1	-
WH2	ELECTRIC WATER HEATER	-	4.5	22	208	1	30/2	3/4"	2#10,1#10G	NON-FUSED DISC NEMA 1	-
EWH4	EXISTING ELECTRIC WATER HEATER (4TH FLOOR)	-	2.5	21	120	1	30/1	3/4"	2#10,1#10G	EXISTING DISCONNECT	-

CONNECTION SCHEDULE NOTES:

1. CONTRACTOR SHALL VERIFY ALL CONNECTIONS BEFORE RUNNING SERVICE OR ORDERING EQUIPMENT.

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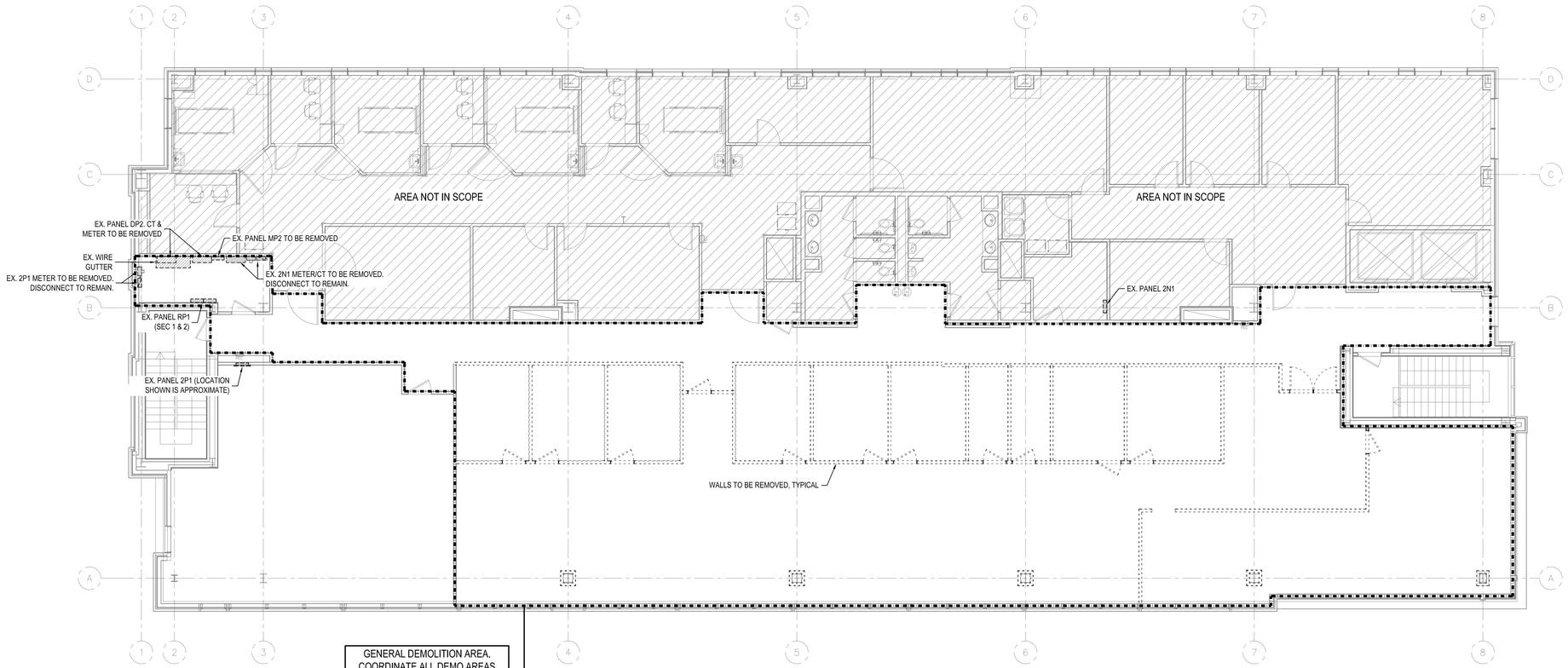
Sheet Title: **ELECTRICAL SCHEDULES**

Sheet No.: E002



A / ED121 **DEMOLITION PLAN - SECOND FLOOR**

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

DEMOLITION NOTES:

1. NOTIFY THE OWNER, IN WRITING, AT LEAST SEVEN (7) DAYS IN ADVANCE OF ALL REQUIRED SHUTDOWNS OF WATER, SEWER, GAS, ELECTRICAL SERVICE, OR OTHER UTILITIES. UPON WRITTEN RECEIPT OF APPROVAL FROM OWNER, SHUTDOWNS SHALL BE PERFORMED BETWEEN THE HOURS OF SIX (6) P.M. AND SIX (6) A.M. OR AS DIRECTED OTHERWISE BY THE OWNER AND SHALL BE ACCOMPLISHED AT NO ADDITIONAL CONTRACT COST. AT THE END OF EACH SHUT DOWN ALL SERVICES SHALL BE RESTORED SO THAT NORMAL USE OF THE UTILITIES CAN CONTINUE.
2. WHEN WORKING IN AND AROUND THE EXISTING BUILDING, EXTREME CARE SHALL BE EXERCISED WITH REGARD TO PROTECTION OF THE EXISTING STRUCTURE AND MECHANICAL AND ELECTRICAL SERVICES WHICH WILL REMAIN. REPAIR, REPLACE, OR RESTORE TO THE SATISFACTION OF THE ARCHITECT ALL EXISTING WORK DAMAGED IN THE PERFORMANCE OF DEMOLITION AND/OR NEW WORK.
3. ALL EXISTING WIRING, EQUIPMENT, CONDUITS, AND MATERIALS NOT REQUIRED FOR RE-USE OR RE-INSTALLATION (SHOWN OR OTHERWISE) SHALL BE REMOVED. ALL EXISTING MATERIALS AND EQUIPMENT WHICH ARE REMOVED AND ARE DESIRED BY THE OWNER, OR ARE INDICATED TO REMAIN THE PROPERTY OF THE OWNER, SHALL BE DELIVERED TO HIM ON THE PREMISES BY THE CONTRACTOR WHERE DIRECTED BY THE ARCHITECT. ALL OTHER MATERIALS AND EQUIPMENT WHICH ARE REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED BY THE CONTRACTOR FROM THE PREMISES.
4. EXISTING CONDITIONS, I.E., PRESENCE AND LOCATION OF PANELBOARDS, LIGHTING FIXTURES, RECEPTACLES, EQUIPMENT, AND MATERIALS, INDICATED ARE BASED ON INFORMATION OBTAINED FROM AVAILABLE RECORD DRAWINGS AND FIELD SURVEYS AND ARE NOT WARRANTED TO BE COMPLETE OR CORRECT. CONTRACTOR SHALL FIELD VERIFY EXACT LOCATION OF ALL CONDUITS, EQUIPMENT, AND MATERIALS IN THE FIELD PRIOR TO STARTING ALL WORK.
5. EXISTING EQUIPMENT SIZES NOTED ARE FOR THE CONVENIENCE OF THE CONTRACTOR ONLY AND ARE NOT WARRANTED TO BE CORRECT. CONTRACTOR SHALL VERIFY ALL SIZES IN THE FIELD IF THEY EFFECT HIS WORK.
6. WHEN EXISTING MECHANICAL AND ELECTRICAL WORK IS REMOVED, ALL CONDUITS, WIRING AND MATERIALS SHALL BE REMOVED TO A POINT BELOW THE FINISHED FLOORS OR BEHIND FINISHED WALLS AND CAPPED. SUCH POINTS SHALL BE FAR ENOUGH BEHIND FINISHED SURFACES TO ALLOW FOR THE INSTALLATION OF THE NORMAL THICKNESS OF FINISHED MATERIAL.
7. EXISTING WIRING & CONDUIT NO LONGER REQUIRED TO REMAIN IN SERVICE (SHOWN OR OTHERWISE) SHALL BE DISCONNECTED AND REMOVED BACK TO PANELBOARD UNLESS OTHERWISE INDICATED OR NOTED ON THE PLANS. REMOVE EXISTING PIPE HANGERS, SUPPORTS, CONDUIT, ETC., UNDERGROUND CONDUIT TO BE REMOVED SHALL BE LIMITED TO PIPING IN THE AREAS OCCUPIED BY THE NEW CONSTRUCTION AND FIVE FEET (5') BEYOND THE NEW CONSTRUCTION. EXISTING CONDUIT INDICATED OR REQUIRED TO REMAIN IN SERVICE OR IN PLACE SHALL BE CAPPED, PLUGGED, OTHERWISE SEALED. NO EXISTING CONDUIT SHALL BE LEFT OPEN END.
8. EXISTING MECHANICAL AND ELECTRICAL EQUIPMENT, CONDUIT, WIRING, DEVICES, AND MATERIALS AFFECTED BY DEMOLITION OR NEW WORK INSTALLATION AND REQUIRED TO REMAIN IN SERVICE SHALL BE REINSTALLED OR SUPPORTED AS REQUIRED IN ACCORDANCE WITH NEW WORK SPECIFICATION. ALL WORK SHALL BE COMPLETED TO THE SATISFACTION OF THE ARCHITECT AND AT NO ADDITIONAL CONTRACT COST.
9. PATCH TO MATCH EXISTING ALL NEW AND EXISTING OPENINGS AND WALLS, CEILINGS, ROOF, AND FLOOR SURFACES DAMAGED OR CREATED BY DEMOLITION WORK. PATCHING WHERE POSSIBLE SHALL MATCH EXISTING ADJACENT SURFACES AS TO THICKNESS, TEXTURES MATERIALS, AND COLOR. ALL PATCHING SHALL BE PERFORMED TO THE SATISFACTION OF THE ARCHITECT AND AT NO ADDITIONAL CONTRACT COST.
10. IN GENERAL ALL EQUIPMENT AND MATERIALS SHOWN "LIGHT" IS EXISTING TO REMAIN. ALL EQUIPMENT AND MATERIALS SHOWN "HEAVY AND DASHED" IS EXISTING AND SHALL BE DEMOLISHED.
11. DEMOLISH ALL ELECTRICAL CONNECTIONS TO MECHANICAL AND PLUMBING EQUIPMENT BEING REMOVED. REFER TO MECHANICAL AND PLUMBING DRAWINGS FOR EQUIPMENT TO BE DEMOLISHED. COORDINATE DEMOLITION WITH MECHANICAL AND PLUMBING CONTRACTOR. DEMO CONDUIT AND WIRE BACK TO SOURCE PANEL. PROVIDE UPDATED, TYPED CIRCUIT DIRECTORIES INDICATING CIRCUITS AS SPARES AS NECESSARY.

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Date: 03-01-2024	Reviewed By

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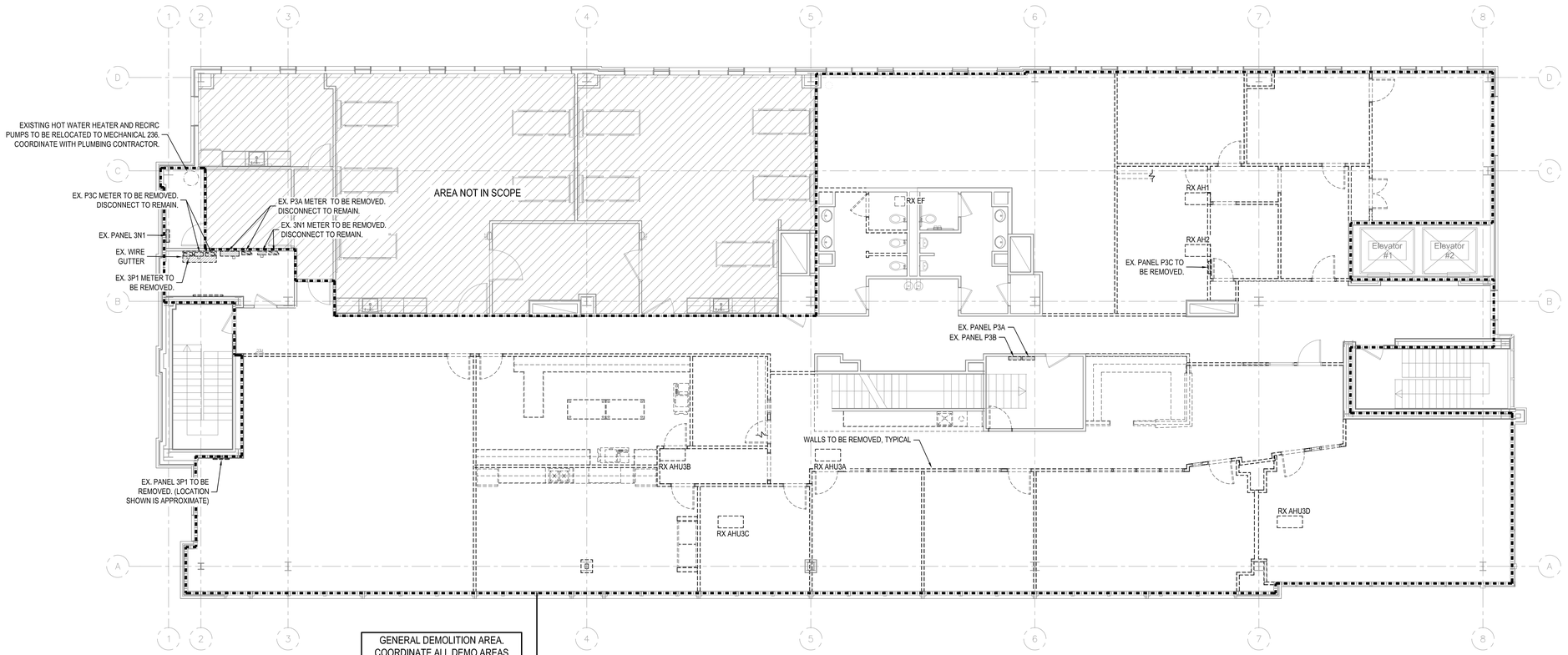
Sheet Title: **DEMOLITION PLAN - SECOND FLOOR**

Sheet No.: **ED121**



A / ED131 **DEMOLITION PLAN - THIRD FLOOR**

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

DEMOLITION NOTES:

1. NOTIFY THE OWNER, IN WRITING, AT LEAST SEVEN (7) DAYS IN ADVANCE OF ALL REQUIRED SHUTDOWNS OF WATER, SEWER, GAS, ELECTRICAL SERVICE, OR OTHER UTILITIES. UPON WRITTEN RECEIPT OF APPROVAL FROM OWNER, SHUTDOWNS SHALL BE PERFORMED BETWEEN THE HOURS OF SIX (6) P.M. AND SIX (6) A.M. OR AS DIRECTED OTHERWISE BY THE OWNER AND SHALL BE ACCOMPLISHED AT NO ADDITIONAL CONTRACT COST. AT THE END OF EACH SHUT DOWN ALL SERVICES SHALL BE RESTORED SO THAT NORMAL USE OF THE UTILITIES CAN CONTINUE.
2. WHEN WORKING IN AND AROUND THE EXISTING BUILDING, EXTREME CARE SHALL BE EXERCISED WITH REGARD TO PROTECTION OF THE EXISTING STRUCTURE AND MECHANICAL AND ELECTRICAL SERVICES WHICH WILL REMAIN. REPAIR, REPLACE, OR RESTORE TO THE SATISFACTION OF THE ARCHITECT ALL EXISTING WORK DAMAGED IN THE PERFORMANCE OF DEMOLITION AND/OR NEW WORK.
3. ALL EXISTING WIRING, EQUIPMENT, CONDUITS, AND MATERIALS NOT REQUIRED FOR RE-USE OR RE-INSTALLATION (SHOWN OR OTHERWISE) SHALL BE REMOVED. ALL EXISTING MATERIALS AND EQUIPMENT WHICH ARE REMOVED AND ARE DESIRED BY THE OWNER, OR ARE INDICATED TO REMAIN THE PROPERTY OF THE OWNER, SHALL BE DELIVERED TO HIM ON THE PREMISES BY THE CONTRACTOR WHERE DIRECTED BY THE ARCHITECT. ALL OTHER MATERIALS AND EQUIPMENT WHICH ARE REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED BY THE CONTRACTOR FROM THE PREMISES.
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NORTH CAROLINA PROFESSIONAL SEAL 040879 ENGINEER DAVID SIMS, PE
06/07/2024

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Interior Renovation – Phase Two
319 N 3rd Stree, Wilmington, North Carolina 28401

NCCCS # 2772
SCO # 23-37149-01

REV.	DATE	DESCRIPTION

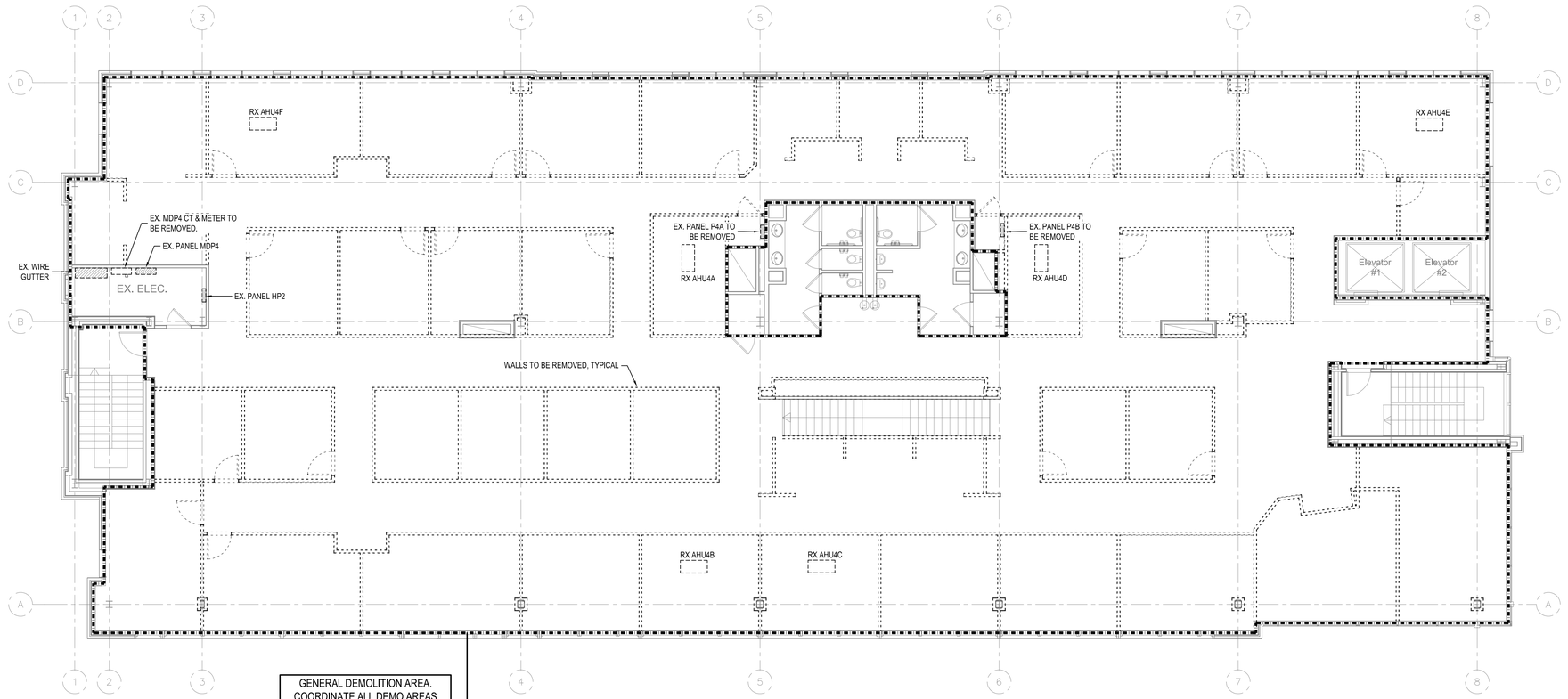
NO.	DATE	ISSUE NOTE

Project Manager	Drawn By
Date: 03-01-2024	Reviewed By

Project ID: 23-27149-01

Sheet Title: **DEMOLITION PLAN - THIRD FLOOR**

Sheet No.: **ED131**



A / ED141

DEMOLITION PLAN - FOURTH FLOOR

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

DEMOLITION NOTES:

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NCCCS # 2772
SCO # 23-37149-01

REV.	DATE	DESCRIPTION

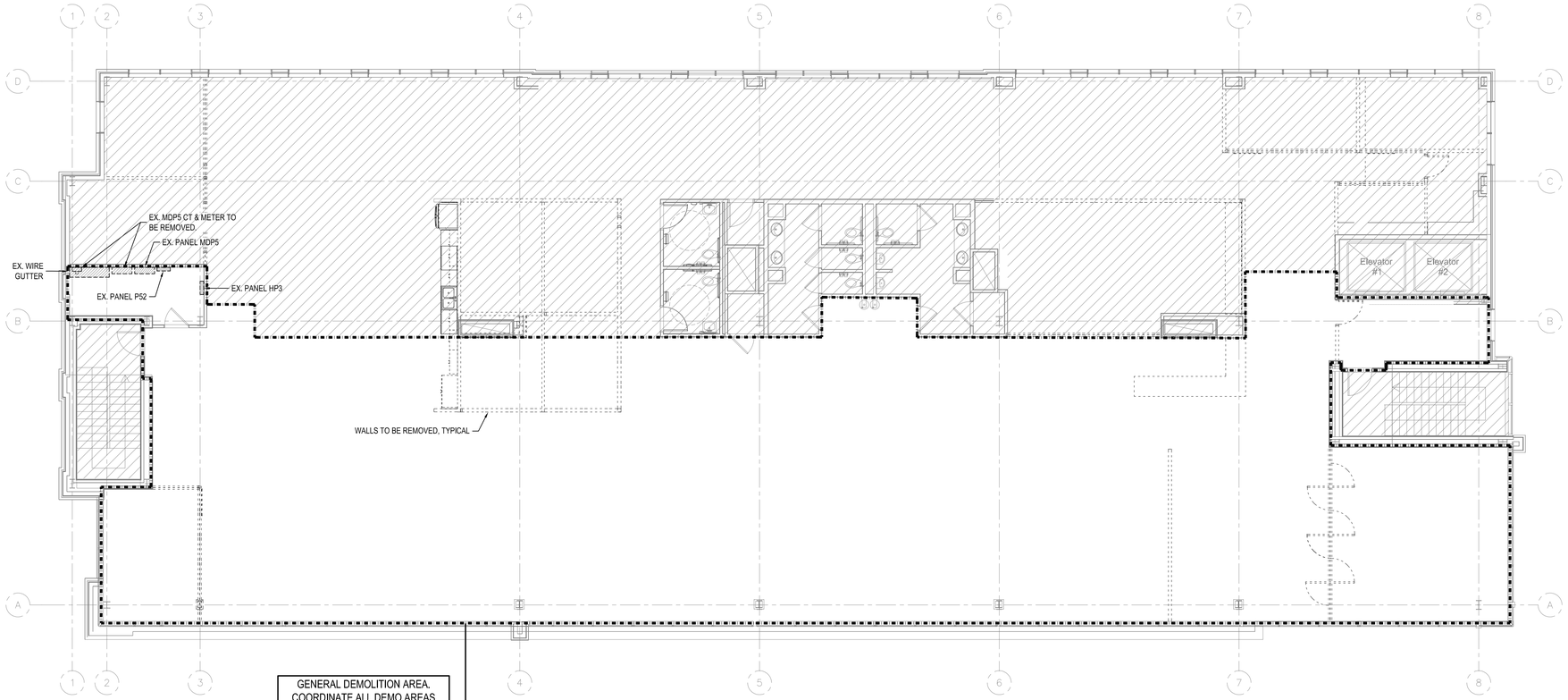
NO.	DATE	ISSUE NOTE

Project Manager	Drawn By
Date: 03-01-2024	Reviewed By

Project ID: 23-27149-01

Sheet Title: **DEMOLITION PLAN - FOURTH FLOOR**

Sheet No.: **ED141**



A / ED151 **DEMOLITION PLAN - FIFTH FLOOR**
SCALE: 1/8"=1'-0"

DEMOLITION NOTES:

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REV.	DATE	DESCRIPTION

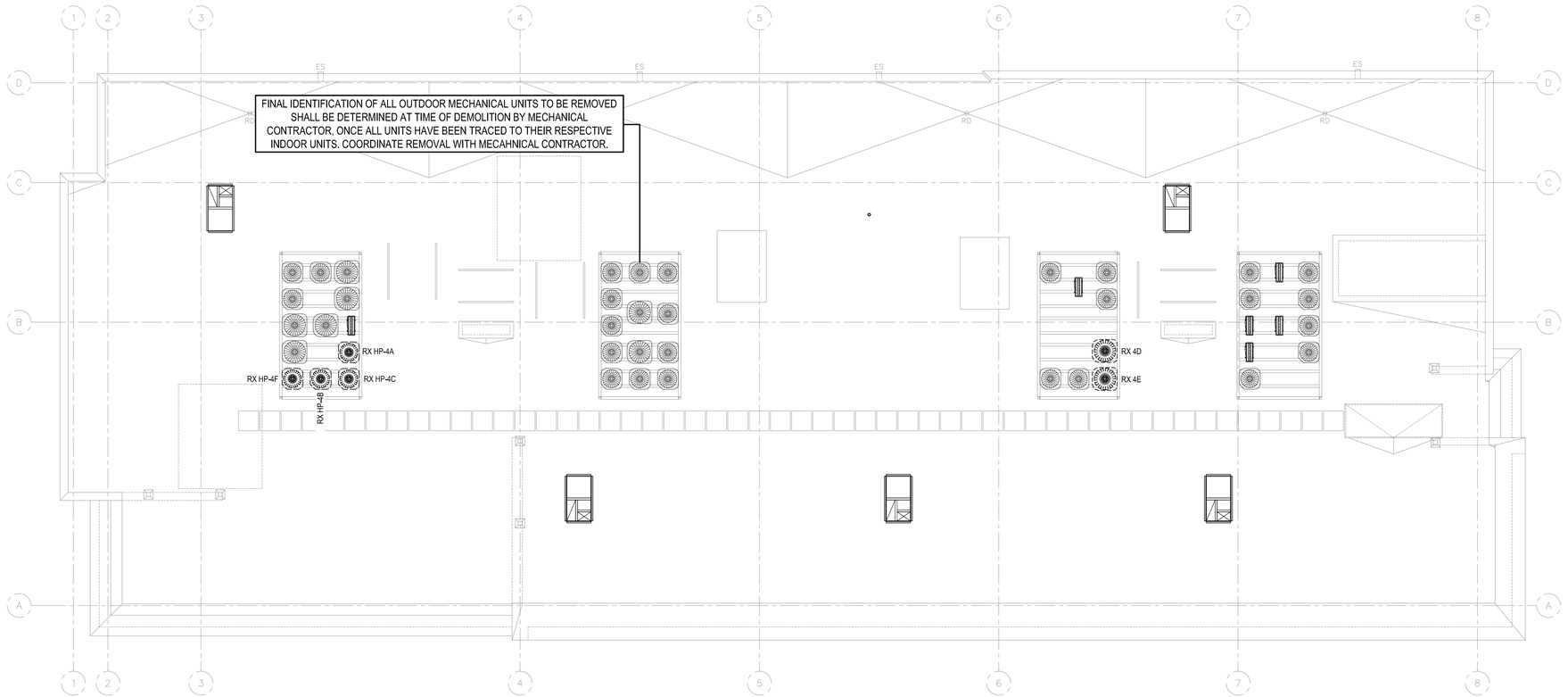
NO.	DATE	ISSUE NOTE

Project Manager	Drawn By
Date: 03-01-2024	Reviewed By

Project ID: 23-27149-01

Sheet Title: **DEMOLITION PLAN - FIFTH FLOOR**

Sheet No.: **ED151**



A / ED161 **DEMOLITION PLAN - ROOF**

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

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REV.	DATE	DESCRIPTION

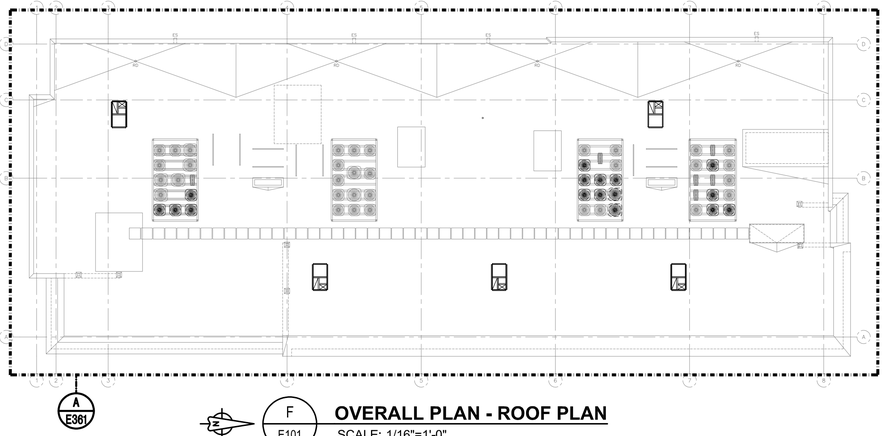
NO.	DATE	ISSUE NOTE

Project Manager	Drawn By
Date: 03-01-2024	Reviewed By

Project ID: 23-27149-01

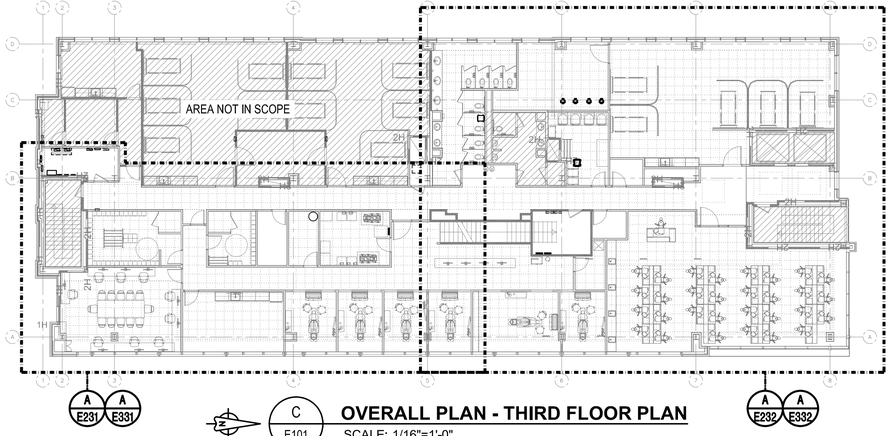
Sheet Title: **DEMOLITION PLAN - ROOF**

Sheet No.: ED161



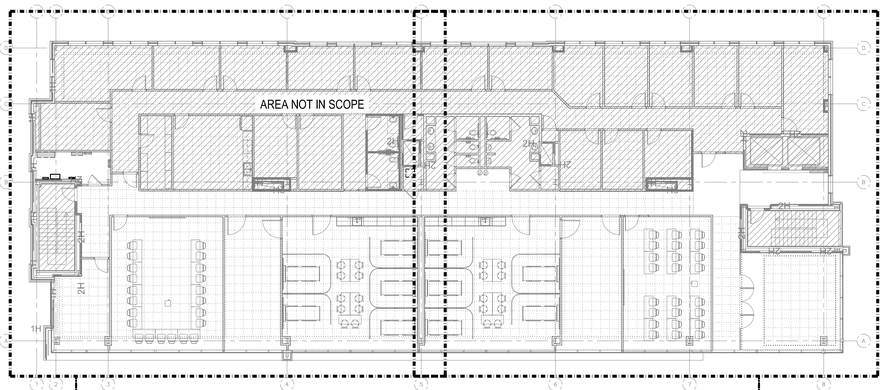
A E361

F E101 **OVERALL PLAN - ROOF PLAN**
SCALE: 1/16"=1'-0"



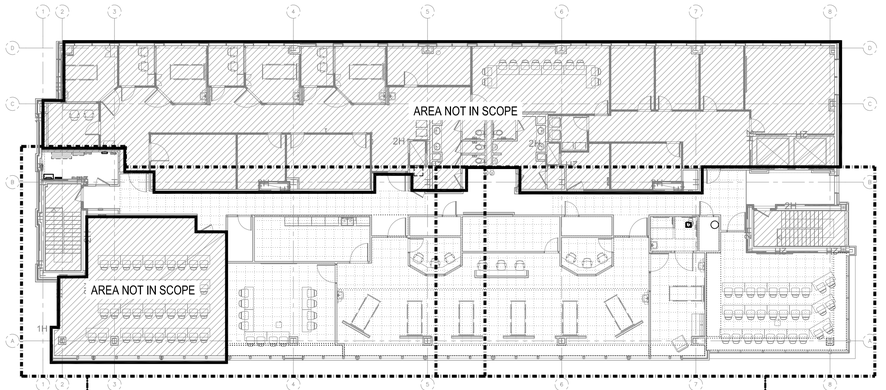
A E231 A E331 A E232 A E332

C E101 **OVERALL PLAN - THIRD FLOOR PLAN**
SCALE: 1/16"=1'-0"



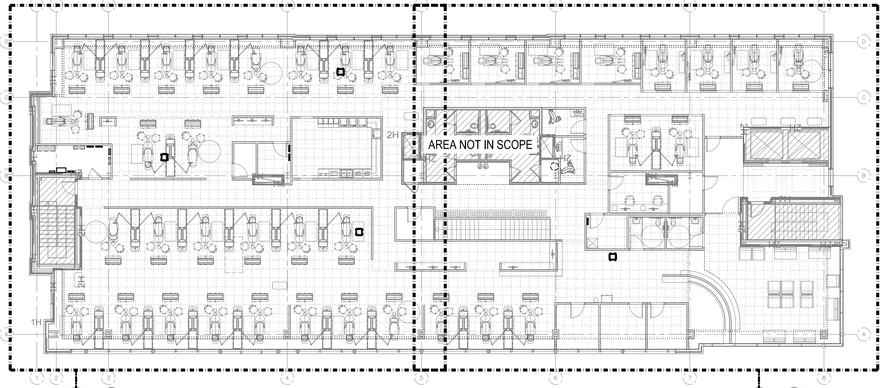
A E251 A E351 A E252 A E352

E E101 **OVERALL PLAN - FIFTH FLOOR PLAN**
SCALE: 1/16"=1'-0"



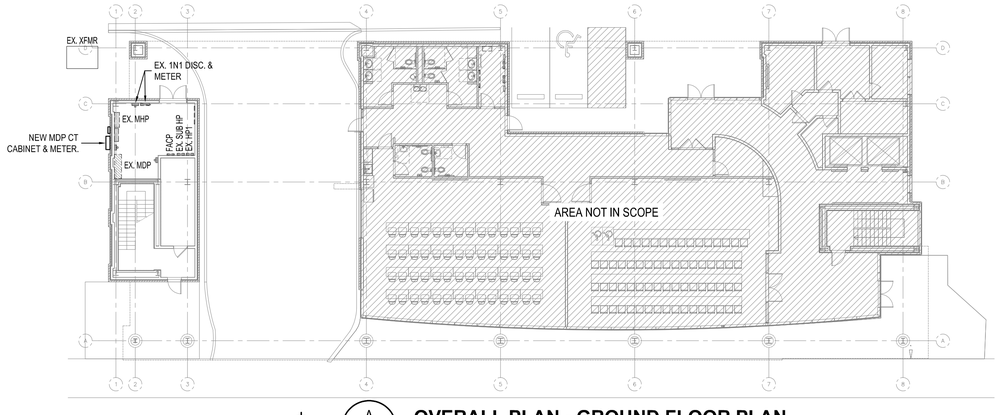
A E221 A E321 A E222 A E322

B E101 **OVERALL PLAN - SECOND FLOOR PLAN**
SCALE: 1/16"=1'-0"



A E241 A E341 A E242 A E342

D E101 **OVERALL PLAN - FOURTH FLOOR PLAN**
SCALE: 1/16"=1'-0"



A E101 **OVERALL PLAN - GROUND FLOOR PLAN**
SCALE: 1/16"=1'-0"

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319 N 3rd Stree, Wilmington, North Carolina 28401
NCCCS # 2772
SCO # 23-37149-01

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Project Manager	Drawn By
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Project ID
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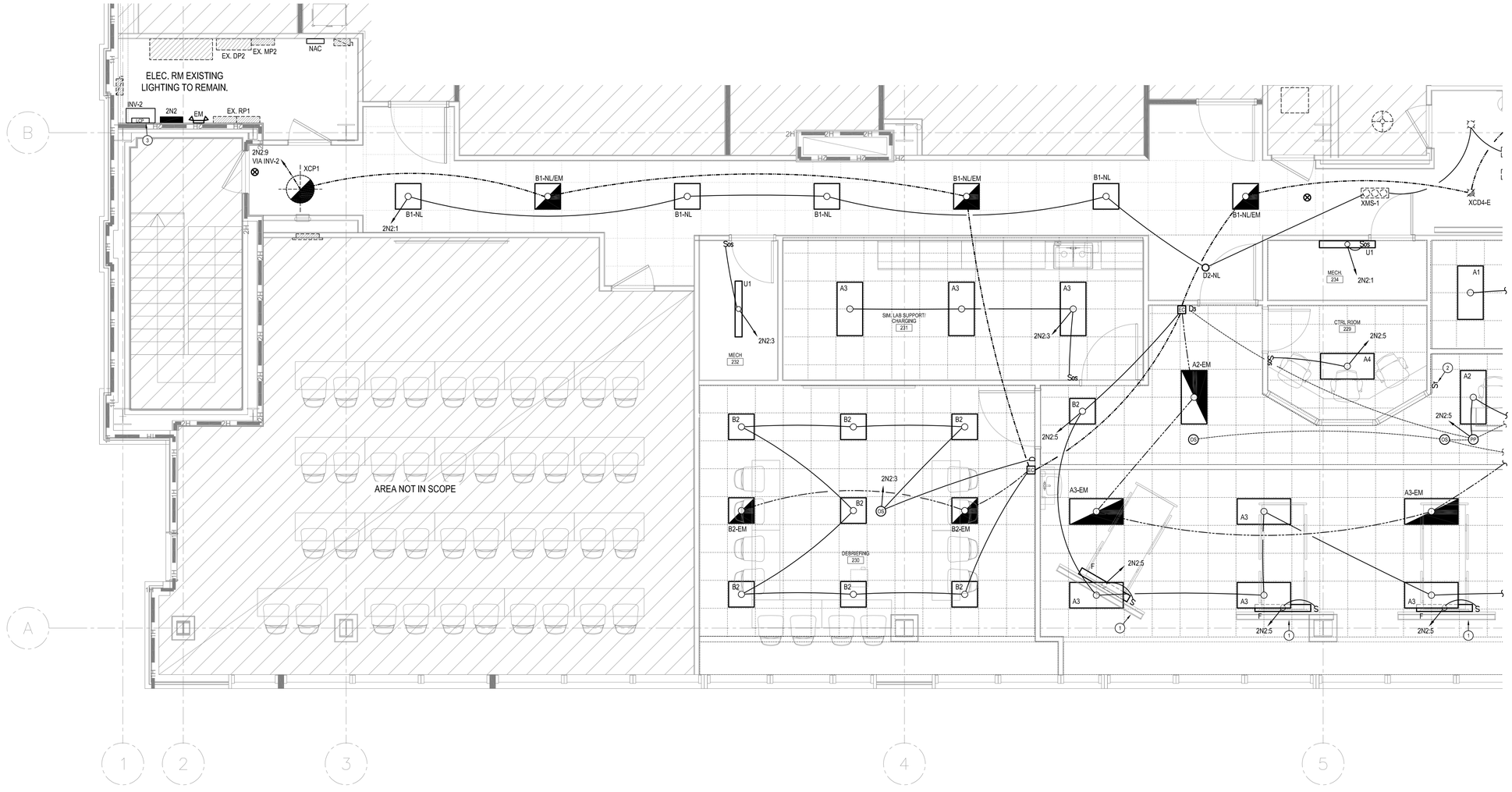
Sheet Title
OVERALL PLANS

Sheet No.
E101



PARTIAL LIGHTING PLAN - SECOND FLOOR

SCALE: 1/4"=1'-0"

GENERAL NOTES:

1. ALL NEW INTERIOR EMERGENCY AND EXIT LIGHTS TO BE FED FROM LIGHTING CIRCUIT IN SAME AREA THE FIXTURE RESIDES AND WIRED AHEAD OF ANY LOCAL SWITCHES TO PROVIDE AN ALWAYS HOT FEED. USE UN-SWITCHED NIGHT LIGHT FED FROM BATTERY INVERTER LOCATED ON SAME FLOOR.
2. ALL BRANCH CIRCUITS AND FEEDERS SHALL BE COPPER WIRE. MAXIMUM VOLTAGE DROP FOR ALL BRANCH CIRCUITS SHALL NOT EXCEED 3%.

120V CIRCUITS DIST. TO FIRST OUTLET	WIRE AWG
UP TO 50FT	#12
50FT TO 90FT	#10
ABOVE 90FT	#8

3. IN PATIENT TREATMENT AREAS PROVIDE INSULATED GROUND IN A METAL RACEWAY WITH HOSPITAL GRADE RECEPTACLES.

KEY NOTES

1. WALL IS NOT FLOOR TO CEILING. ALL ELECTRICAL LOCATED ON THIS WALL SHALL BE FED FROM BELOW FLOOR.
2. 2HR (MAX) MASTER TIMED OVERRIDE SWITCH. SWITCH SHALL BE PLACED PER NC STATE ENERGY CODE C405.2.2.1.5 ALLOWING A TWO HOUR OVERRIDE ON AREAS ZONED NO GREATER THAN 5000FT². PROVIDE ADDITIONAL SWITCHES AS REQUIRED. VERIFY EXACT LOCATION. SWITCH SHALL BE WIRED TO BY-PASS THE AUTOMATIC TIMED CONTROL DEVICE REQUIRED BY C405.2.2 AND C405.2.2.1.
3. MULTI-CIRCUIT (4,8,16,24 & 32 CIR) PROGRAMABLE LIGHTING CONTROLLER WITH ASTRONOMIC CLOCK, APPRENTICE 3 BY INTELLIGENT LIGHTING CONTROLS (OR EQUAL), TO PROVIDE AUTOMATIC SHUT OFF DURING UNOCCUPIED BUSINESS HOURS. CONTROLLER SHALL HAVE FUNCTIONS AS TO COMPLY WITH SECTION C405.2.2.1 OF THE NC STATE ENERGY CODE, AND CONTROL ALL INTERIOR LIGHTING NOT ON OCCUPANCY SENSOR CONTROL OR USED FOR EMERGENCY EGRESS (EXIT AND EMERGENCY LIGHTING). VERIFY LOCATION OF THE PANEL.

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NCCCS # 2772
SCO # 23-37149-01

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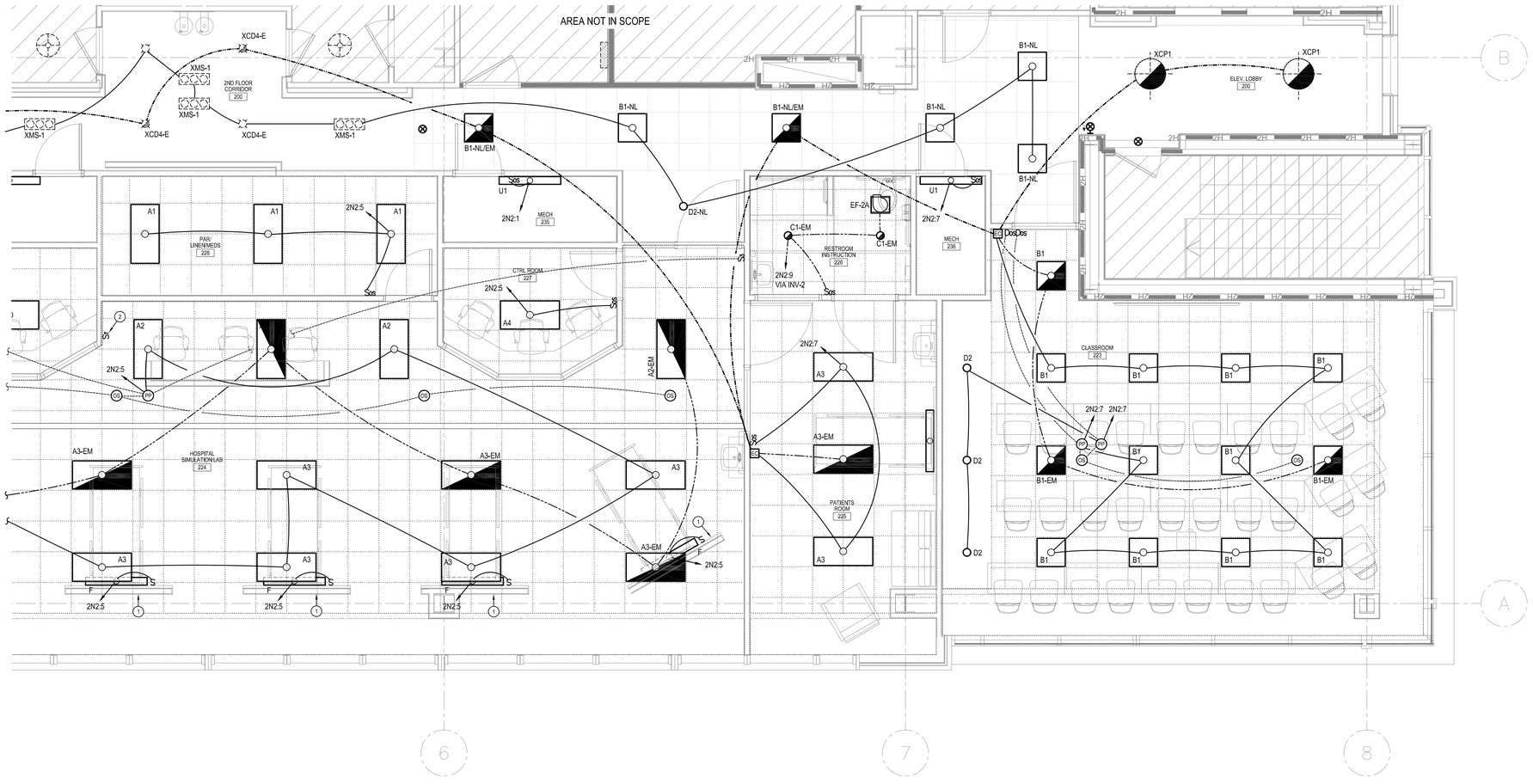
Sheet Title: **PARTIAL LIGHTING PLAN - SECOND FLOOR**

Sheet No.: E221



PARTIAL LIGHTING PLAN - SECOND FLOOR

A / E222

SCALE: 1/4"=1'-0"

GENERAL NOTES:

1. ALL NEW INTERIOR EMERGENCY AND EXIT LIGHTS TO BE FED FROM LIGHTING CIRCUIT IN SAME AREA THE FIXTURE RESIDES AND WIRED AHEAD OF ANY LOCAL SWITCHES TO PROVIDE AN ALWAYS HOT FEED. USE UN-SWITCHED NIGHT LIGHT FED FROM BATTERY INVERTER LOCATED ON SAME FLOOR.
2. ALL BRANCH CIRCUITS AND FEEDERS SHALL BE COPPER WIRE. MAXIMUM VOLTAGE DROP FOR ALL BRANCH CIRCUITS SHALL NOT EXCEED 3%.

120V CIRCUITS DIST. TO FIRST OUTLET	WIRE AWG
UP TO 50FT	#12
50FT TO 90FT	#10
ABOVE 90FT	#8

3. IN PATIENT TREATMENT AREAS PROVIDE INSULATED GROUND IN A METAL RACEWAY WITH HOSPITAL GRADE RECEPTACLES.

KEY NOTES

1. WALL IS NOT FLOOR TO CEILING. ALL ELECTRICAL LOCATED ON THIS WALL SHALL BE FED FROM BELOW FLOOR.
2. 2HR (MAX) MASTER TIMED OVERRIDE SWITCH. SWITCH SHALL BE PLACED PER NC STATE ENERGY CODE C405.2.2.1.5 ALLOWING A TWO HOUR OVERRIDE ON AREAS ZONED NO GREATER THAN 5000FT*. PROVIDE ADDITIONAL SWITCHES AS REQUIRED. VERIFY EXACT LOCATION. SWITCH SHALL BE WIRED TO BY-PASS THE AUTOMATIC TIMED CONTROL DEVICE REQUIRED BY C405.2.2 AND C405.2.2.1.
3. MULTI-CIRCUIT (4,8,16,24 & 32 CIR) PROGRAMABLE LIGHTING CONTROLLER WITH ASTRONOMIC CLOCK, APPRENTICE 3 BY INTELLIGENT LIGHTING CONTROLS (OR EQUAL), TO PROVIDE AUTOMATIC SHUT OFF DURING UNOCCUPIED BUSINESS HOURS. CONTROLLER SHALL HAVE FUNCTIONS AS TO COMPLY WITH SECTION C405.2.2.1 OF THE NC STATE ENERGY CODE, AND CONTROL ALL INTERIOR LIGHTING NOT ON OCCUPANCY SENSOR CONTROL OR USED FOR EMERGENCY EGRESS (EXIT AND EMERGENCY LIGHTING). VERIFY LOCATION OF THE PANEL.

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SCO # 23-37149-01
NCCCS # 2772

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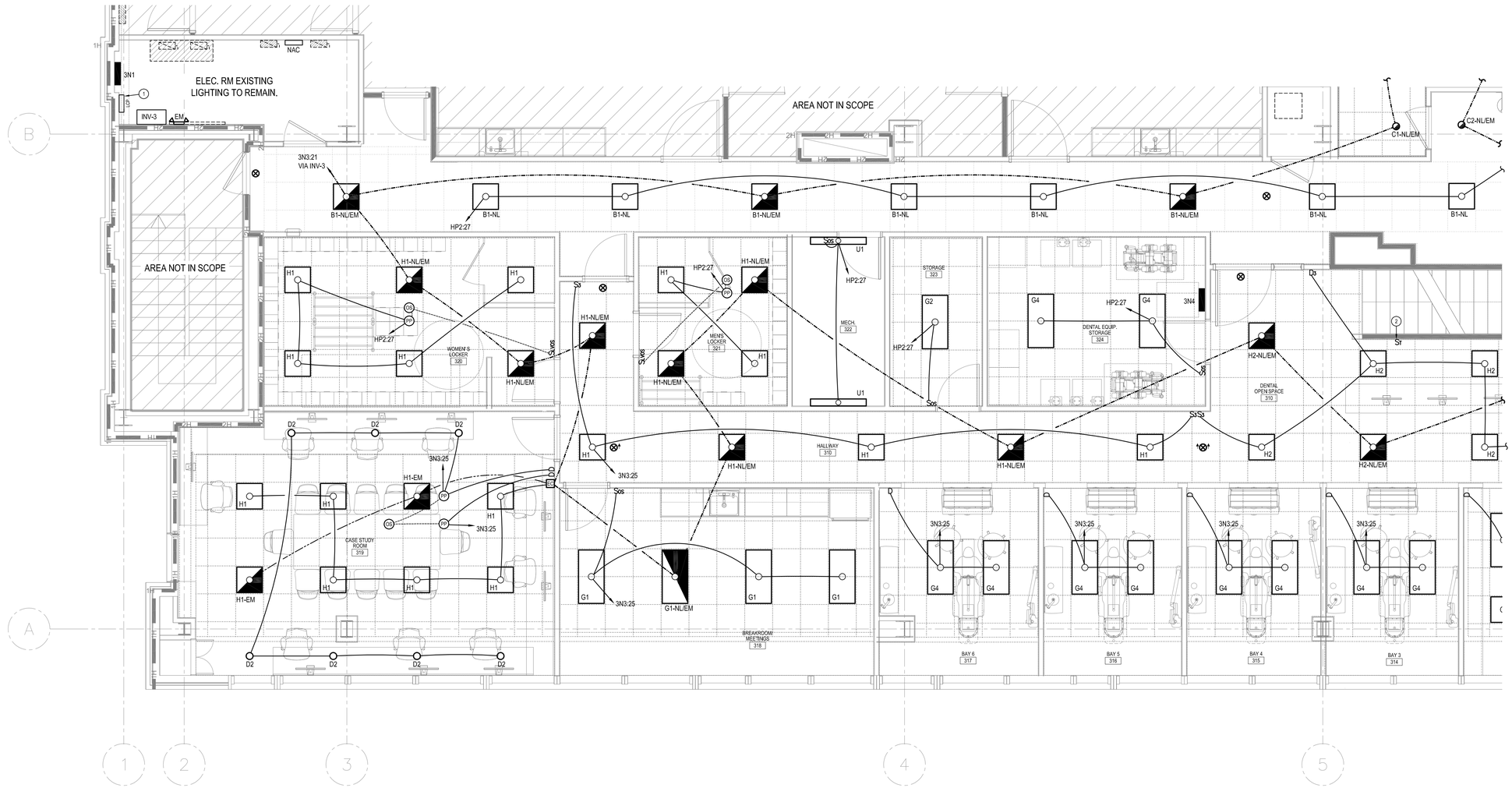
Project ID: 23-27149-01

Sheet Title: **PARTIAL LIGHTING PLAN - SECOND FLOOR**

Sheet No.: E222



A / E231 **PARTIAL LIGHTING PLAN - THIRD FLOOR**
SCALE: 1/4"=1'-0"

GENERAL NOTES:

1. ALL NEW INTERIOR EMERGENCY AND EXIT LIGHTS TO BE FED FROM LIGHTING CIRCUIT IN SAME AREA THE FIXTURE RESIDES AND WIRED AHEAD OF ANY LOCAL SWITCHES TO PROVIDE AN ALWAYS HOT FEED. USE UN-SWITCHED NIGHT LIGHT FED FROM BATTERY INVERTER LOCATED ON SAME FLOOR.
2. ALL BRANCH CIRCUITS AND FEEDERS SHALL BE COPPER WIRE. MAXIMUM VOLTAGE DROP FOR ALL BRANCH CIRCUITS SHALL NOT EXCEED 3%.

120V CIRCUITS DIST. TO FIRST OUTLET	WIRE AWG
UP TO 50FT	#12
50FT TO 90FT	#10
ABOVE 90FT	#8

3. IN PATIENT TREATMENT AREAS PROVIDE INSULATED GROUND IN A METAL RACEWAY WITH HOSPITAL GRADE RECEPTACLES.

KEY NOTES

(1) MULTI-CIRCUIT (4,8,16,24 & 32 CIR) PROGRAMABLE LIGHTING CONTROLLER WITH ASTRONOMIC CLOCK, APPRENTICE 3 BY INTELLIGENT LIGHTING CONTROLS (OR EQUAL), TO PROVIDE AUTOMATIC SHUT OFF DURING UNOCCUPIED BUSINESS HOURS. CONTROLLER SHALL HAVE FUNCTIONS AS TO COMPLY WITH SECTION C405.2.2.1 OF THE NC STATE ENERGY CODE, AND CONTROL ALL INTERIOR LIGHTING NOT ON OCCUPANCY SENSOR CONTROL OR USED FOR EMERGENCY EGRESS (EXIT AND EMERGENCY LIGHTING), VERIFY LOCATION OF THE PANEL.

(2) 2HR (MAX) MASTER TIMED OVERRIDE SWITCH. SWITCH SHALL BE PLACED PER NC STATE ENERGY CODE C405.2.2.1.5 ALLOWING A TWO HOUR OVERRIDE ON AREAS ZONED NO GREATER THAN 5000FT². PROVIDE ADDITIONAL SWITCHES AS REQUIRED. VERIFY EXACT LOCATION. SWITCH SHALL BE WIRED TO BY-PASS THE AUTOMATIC TIMED CONTROL DEVICE REQUIRED BY C405.2.2 AND C405.2.2.1.

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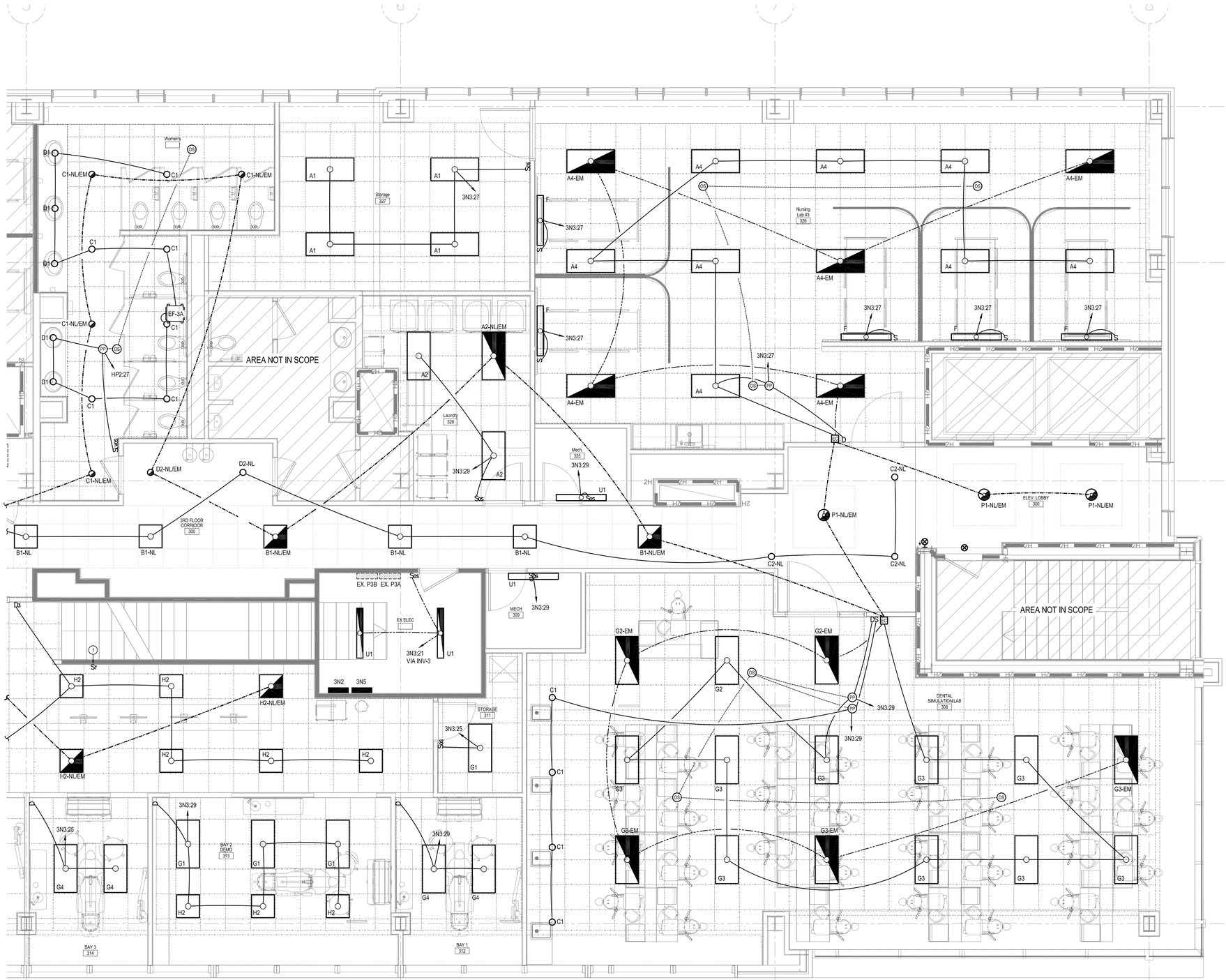
Sheet Title: **PARTIAL LIGHTING PLAN - THIRD FLOOR**

Sheet No.: **E231**



KEY NOTES

1. 2HR (MAX) MASTER TIMED OVERRIDE SWITCH. SWITCH SHALL BE PLACED PER NC STATE ENERGY CODE C405.2.2.1.5 ALLOWING A TWO HOUR OVERRIDE ON AREAS ZONED NO GREATER THAN 5000ft². PROVIDE ADDITIONAL SWITCHES AS REQUIRED. VERIFY EXACT LOCATION. SWITCH SHALL BE WIRED TO BY-PASS THE AUTOMATIC TIMED CONTROL DEVICE REQUIRED BY C405.2.2 AND C405.2.2.1.

GENERAL NOTES:

1. ALL NEW INTERIOR EMERGENCY AND EXIT LIGHTS TO BE FED FROM LIGHTING CIRCUIT IN SAME AREA THE FIXTURE RESIDES AND WIRED AHEAD OF ANY LOCAL SWITCHES TO PROVIDE AN ALWAYS HOT FEED. USE UN-SWITCHED NIGHT LIGHT FED FROM BATTERY INVERTER LOCATED ON SAME FLOOR.
2. ALL BRANCH CIRCUITS AND FEEDERS SHALL BE COPPER WIRE. MAXIMUM VOLTAGE DROP FOR ALL BRANCH CIRCUITS SHALL NOT EXCEED 3%.

120V CIRCUITS DIST. TO FIRST OUTLET	WIRE AWG
UP TO 50FT	#12
50FT TO 90FT	#10
ABOVE 90FT	#8

3. IN PATIENT TREATMENT AREAS PROVIDE INSULATED GROUND IN A METAL RACEWAY WITH HOSPITAL GRADE RECEPTACLES.

A / E232 **PARTIAL LIGHTING PLAN - THIRD FLOOR**
SCALE: 1/4"=1'-0"

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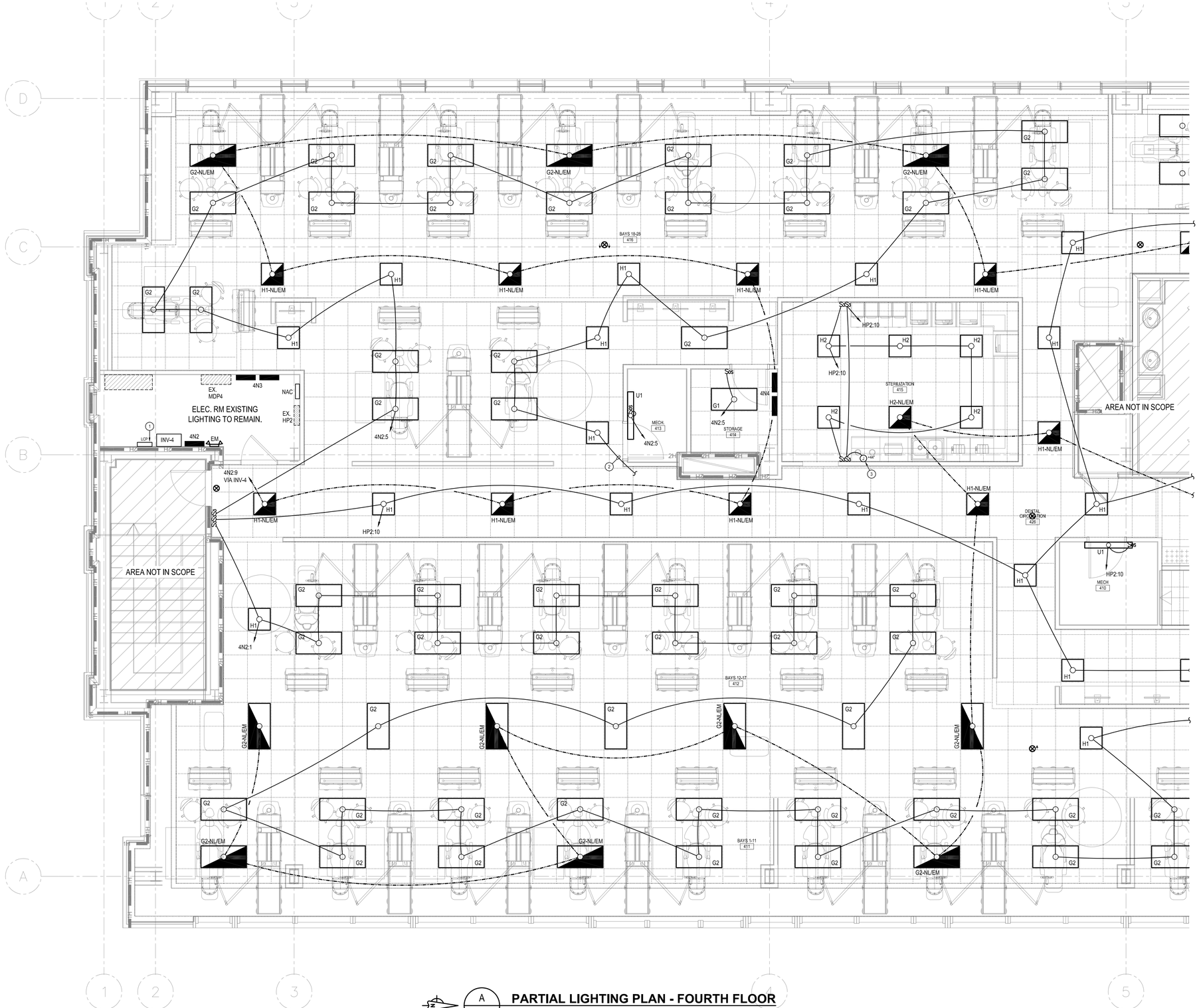
Project ID: 23-27149-01

Sheet Title: **PARTIAL LIGHTING PLAN - THIRD FLOOR**

Sheet No.: E232



KEY NOTES

1. MULTI-CIRCUIT (4,8,16,24 & 32 CIR) PROGRAMABLE LIGHTING CONTROLLER WITH ASTRONOMIC CLOCK, APPRENTICE 3 BY INTELLIGENT LIGHTING CONTROLS (OR EQUAL), TO PROVIDE AUTOMATIC SHUT OFF DURING UNOCCUPIED BUSINESS HOURS. CONTROLLER SHALL HAVE FUNCTIONS AS TO COMPLY WITH SECTION C405.2.2.1 OF THE NC STATE ENERGY CODE, AND CONTROL ALL INTERIOR LIGHTING NOT ON OCCUPANCY SENSOR CONTROL OR USED FOR EMERGENCY EGRESS (EXIT AND EMERGENCY LIGHTING). VERIFY LOCATION OF THE PANEL.
2. ROUTE TO 3-WAY DIMMER SWITCH LOCATED BEHIND RECEPTION DESK. SEE SHEET E242.
3. CONNECTION FOR UNDER CABINET LIGHTS PROVIDED BY CABINET SUPPLIER. COORDINATE FINAL LOCATION WITH SUPPLIER BEFORE ROUGH-IN.

GENERAL NOTES:

1. ALL NEW INTERIOR EMERGENCY AND EXIT LIGHTS TO BE FED FROM LIGHTING CIRCUIT IN SAME AREA THE FIXTURE RESIDES AND WIRED AHEAD OF ANY LOCAL SWITCHES TO PROVIDE AN ALWAYS HOT FEED. USE UN-SWITCHED NIGHT LIGHT FED FROM BATTERY INVERTER LOCATED ON SAME FLOOR.
2. ALL BRANCH CIRCUITS AND FEEDERS SHALL BE COPPER WIRE. MAXIMUM VOLTAGE DROP FOR ALL BRANCH CIRCUITS SHALL NOT EXCEED 3%.

120V CIRCUITS DIST. TO FIRST OUTLET	WIRE AWG
UP TO 50FT	#12
50FT TO 90FT	#10
ABOVE 90FT	#8

3. IN PATIENT TREATMENT AREAS PROVIDE INSULATED GROUND IN A METAL RACEWAY WITH HOSPITAL GRADE RECEPTACLES.

A / E241 **PARTIAL LIGHTING PLAN - FOURTH FLOOR**
SCALE: 1/4"=1'-0"

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319 N 3rd Stree, Wilmington, North Carolina 28401
NCCCS # 2772
SCO # 23-37149-01

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Date: 03-01-2024	Reviewed By

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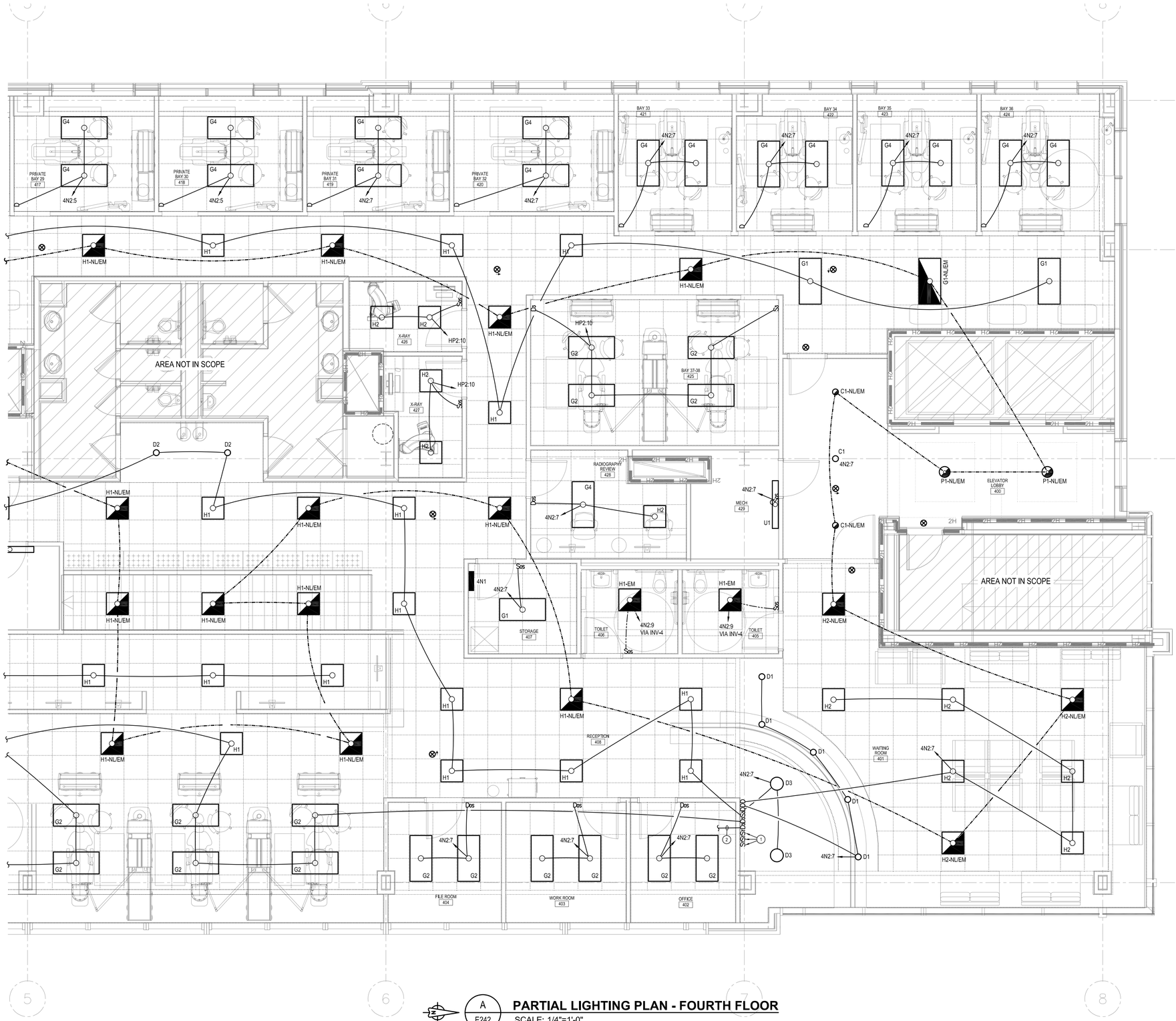
Sheet Title: **PARTIAL LIGHTING PLAN - FOURTH FLOOR**

Sheet No.: **E241**



KEY NOTES

1. 2HR (MAX) MASTER TIMED OVERRIDE SWITCH. SWITCH SHALL BE PLACED PER NC STATE ENERGY CODE C405.2.2.1.5 ALLOWING A TWO HOUR OVERRIDE ON AREAS ZONED NO GREATER THAN 5000ft². PROVIDE ADDITIONAL SWITCHES AS REQUIRED. VERIFY EXACT LOCATION. SWITCH SHALL BE WIRED TO BY-PASS THE AUTOMATIC TIMED CONTROL DEVICE REQUIRED BY C405.2.2 AND C405.2.2.1.
2. ROUTE TO LIGHTS AT BAYS 18 THROUGH 28. SEE SHEET E241.

GENERAL NOTES:

1. ALL NEW INTERIOR EMERGENCY AND EXIT LIGHTS TO BE FED FROM LIGHTING CIRCUIT IN SAME AREA THE FIXTURE RESIDES AND WIRED AHEAD OF ANY LOCAL SWITCHES TO PROVIDE AN ALWAYS HOT FEED. USE UN-SWITCHED NIGHT LIGHT FED FROM BATTERY INVERTER LOCATED ON SAME FLOOR.
2. ALL BRANCH CIRCUITS AND FEEDERS SHALL BE COPPER WIRE. MAXIMUM VOLTAGE DROP FOR ALL BRANCH CIRCUITS SHALL NOT EXCEED 3%.

120V CIRCUITS DIST. TO FIRST OUTLET	WIRE AWG
UP TO 50FT	#12
50FT TO 90FT	#10
ABOVE 90FT	#8

3. IN PATIENT TREATMENT AREAS PROVIDE INSULATED GROUND IN A METAL RACEWAY WITH HOSPITAL GRADE RECEPTACLES.

A E242 **PARTIAL LIGHTING PLAN - FOURTH FLOOR**
SCALE: 1/4"=1'-0"

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NCCCS # 2772
SCO # 23-37149-01

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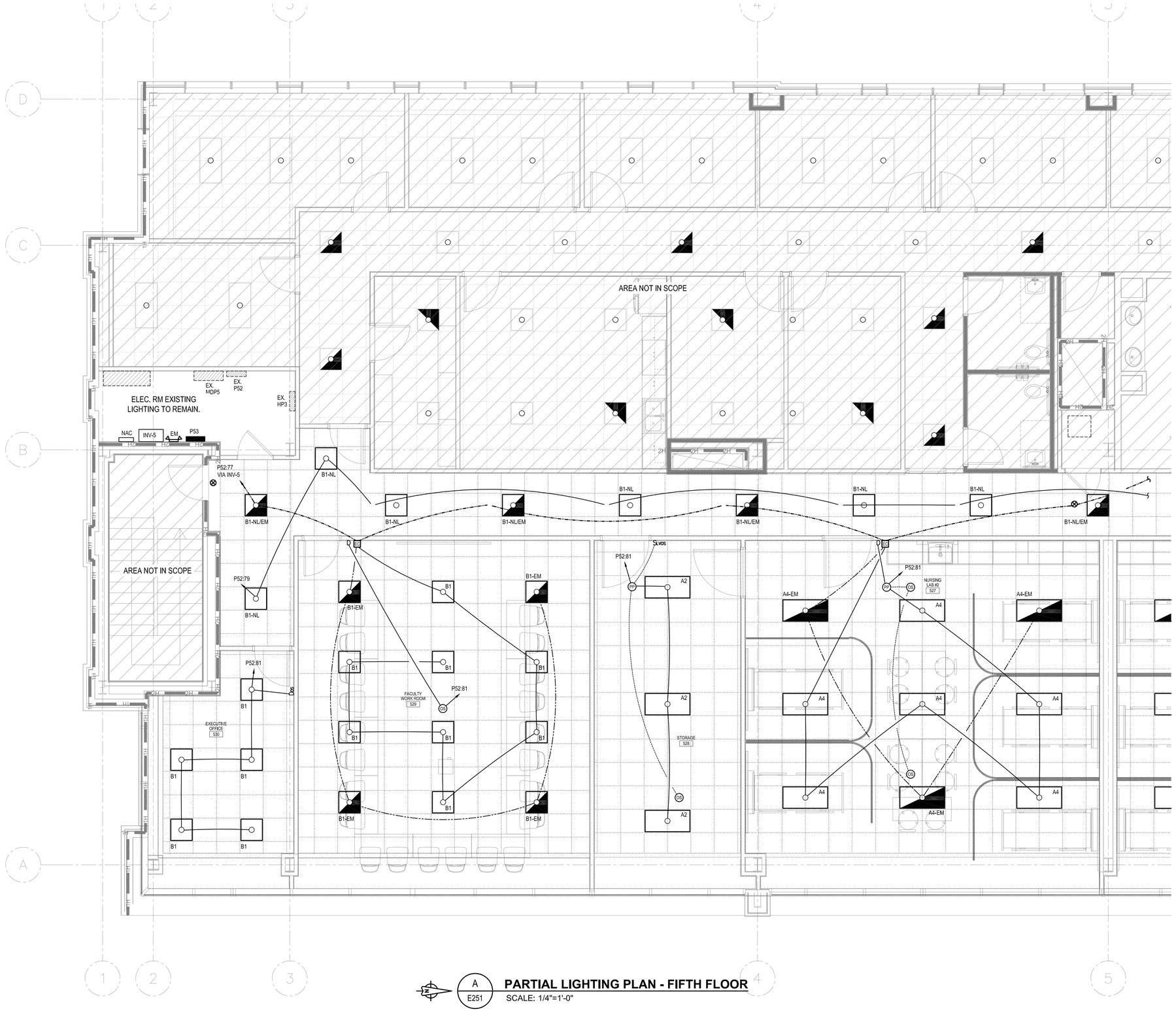
Sheet Title: **PARTIAL LIGHTING PLAN - FOURTH FLOOR**

Sheet No.: **E242**



A E251 **PARTIAL LIGHTING PLAN - FIFTH FLOOR**
SCALE: 1/4"=1'-0"

GENERAL NOTES:

1. ALL NEW INTERIOR EMERGENCY AND EXIT LIGHTS TO BE FED FROM LIGHTING CIRCUIT IN SAME AREA THE FIXTURE RESIDES AND WIRED AHEAD OF ANY LOCAL SWITCHES TO PROVIDE AN ALWAYS HOT FEED. USE UN-SWITCHED NIGHT LIGHT FED FROM BATTERY INVERTER LOCATED ON SAME FLOOR.
2. ALL BRANCH CIRCUITS AND FEEDERS SHALL BE COPPER WIRE. MAXIMUM VOLTAGE DROP FOR ALL BRANCH CIRCUITS SHALL NOT EXCEED 3%.

120V CIRCUITS DIST. TO FIRST OUTLET	WIRE AWG
UP TO 50FT	#12
50FT TO 90FT	#10
ABOVE 90FT	#8

3. IN PATIENT TREATMENT AREAS PROVIDE INSULATED GROUND IN A METAL RACEWAY WITH HOSPITAL GRADE RECEPTACLES.

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SCO # 23-37149-01 NCCCS # 2772

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Date: 03-01-2024	Reviewed By

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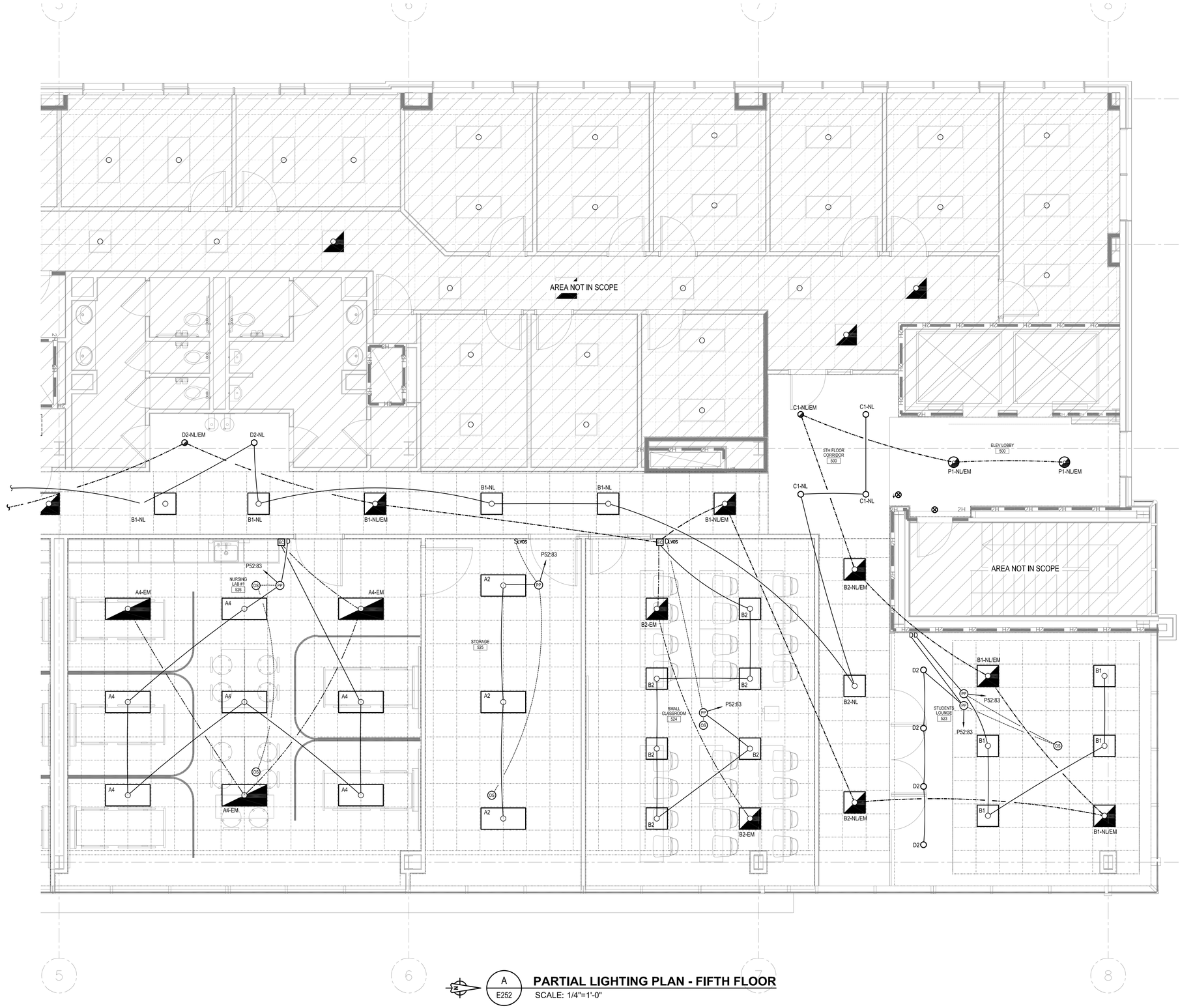
Sheet Title: **PARTIAL LIGHTING PLAN - FIFTH FLOOR**

Sheet No.: E251



A / E252 **PARTIAL LIGHTING PLAN - FIFTH FLOOR**

SCALE: 1/4"=1'-0"

GENERAL NOTES:

1. ALL NEW INTERIOR EMERGENCY AND EXIT LIGHTS TO BE FED FROM LIGHTING CIRCUIT IN SAME AREA THE FIXTURE RESIDES AND WIRED AHEAD OF ANY LOCAL SWITCHES TO PROVIDE AN ALWAYS HOT FEED. USE UN-SWITCHED NIGHT LIGHT FED FROM BATTERY INVERTER LOCATED ON SAME FLOOR.
2. ALL BRANCH CIRCUITS AND FEEDERS SHALL BE COPPER WIRE. MAXIMUM VOLTAGE DROP FOR ALL BRANCH CIRCUITS SHALL NOT EXCEED 3%.

120V CIRCUITS DIST. TO FIRST OUTLET	WIRE AWG
UP TO 50FT	#12
50FT TO 90FT	#10
ABOVE 90FT	#8

3. IN PATIENT TREATMENT AREAS PROVIDE INSULATED GROUND IN A METAL RACEWAY WITH HOSPITAL GRADE RECEPTACLES.

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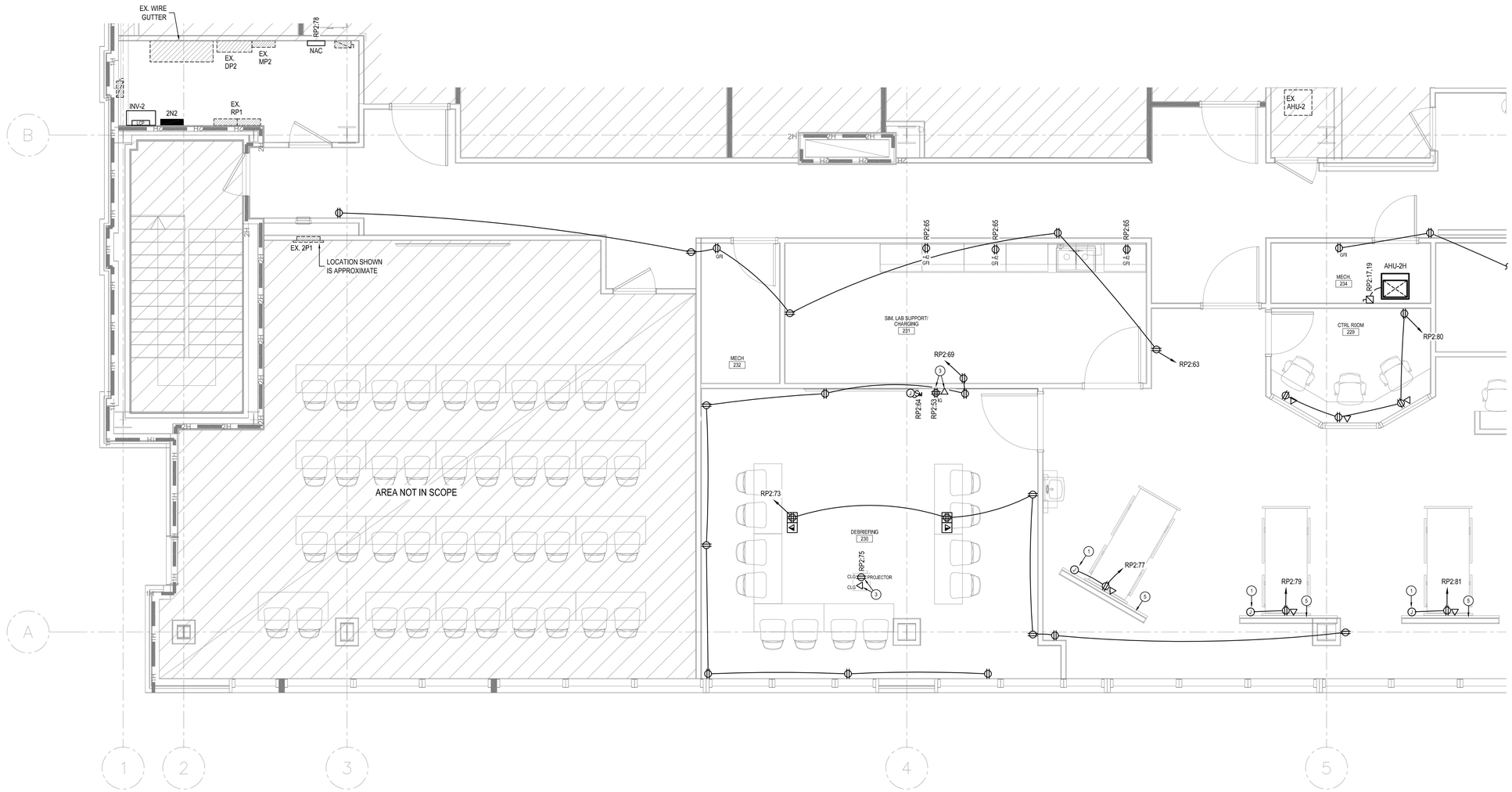
Date 03-01-2024	Reviewed By

Project ID 23-27149-01

Sheet Title
PARTIAL LIGHTING PLAN - FIFTH FLOOR

Sheet No.
E252



PARTIAL POWER PLAN - SECOND FLOOR

A / E321

SCALE: 1/4"=1'-0"

GENERAL NOTES:

1. ALL BRANCH CIRCUITS AND FEEDERS SHALL BE COPPER WIRE. MAXIMUM VOLTAGE DROP FOR ALL BRANCH CIRCUITS SHALL NOT EXCEED 3%.

120V CIRCUITS DIST. TO FIRST OUTLET	WIRE AWG
UP TO 50FT	#12
50FT TO 90FT	#10
ABOVE 90FT	#8

2. IN PATIENT TREATMENT AREAS PROVIDE INSULATED GROUND IN A METAL RACEWAY WITH HOSPITAL GRADE RECEPTACLES.
3. COORDINATE LOCATION OF ALL PANELS WITH MECHANICAL AND PLUMBING CONTRACTORS SUCH THAT DEDICATED SPACE ABOVE PANELS IS MAINTAINED PER NEC. RELOCATE PANELS AS NEEDED.

KEY NOTES

1. HEADWALL SERVICE UNIT. VERIFY LOCATION. PROVIDE SINGLE BRANCH CIRCUIT AS SHOWN. SEE DETAILS ON E800 SERIES FOR ADDITIONAL INFORMATION. PROVIDE GFI RECEPTACLES WHERE RECEPTACLE FALLS WITHIN 6FT OF SINK.
2. SHADED EQUIPMENT AND ASSOCIATED DEVICES INDICATED ARE LOCATED IN CEILING SPACE.
3. VERIFY LOCATION OF A/V CONNECTION W/ LV SUPPLIER BEFORE ROUGH-IN.
4. VERIFY LOCATION BEFORE ROUGH-IN.
5. WALL IS NOT FLOOR TO CEILING. ALL ELECTRICAL LOCATED ON THIS WALL SHALL BE FED FROM BELOW FLOOR.

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06/07/2024

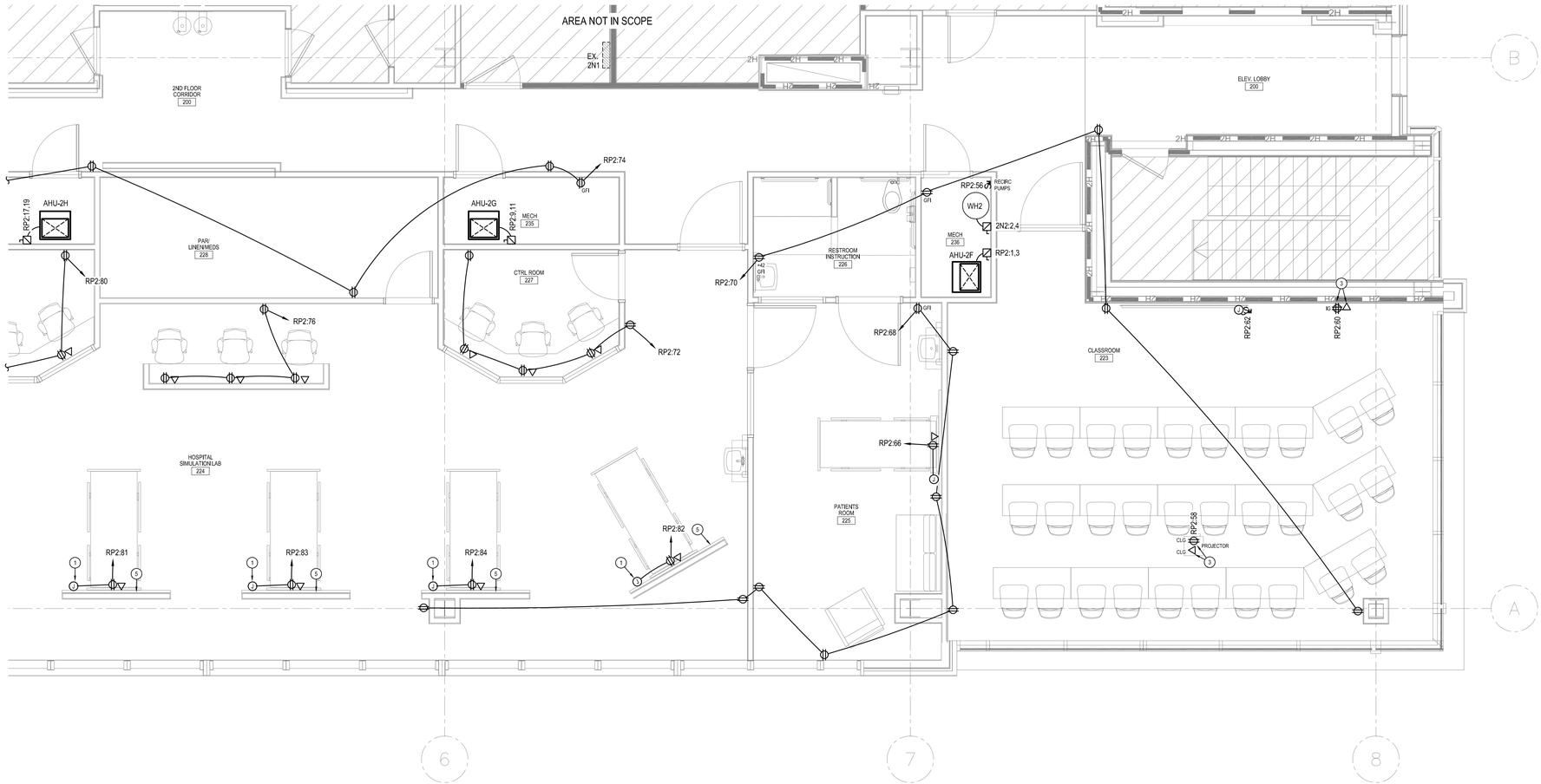
Cape Fear Community College
Health and Human Services Building
Interior Renovation – Phase Two
319 N 3rd Stree, Wilmington, North Carolina 28401

NCCCS # 2772
SCO # 23-37149-01

REV.	DATE	DESCRIPTION

NO.	DATE	ISSUE NOTE

Project Manager | Drawn By
Date: 03-01-2024 | Reviewed By
Project ID: 23-27149-01
Sheet Title: PARTIAL POWER PLAN - SECOND FLOOR
Sheet No.: E321



PARTIAL POWER PLAN - SECOND FLOOR

A / E322

SCALE: 1/4"=1'-0"

GENERAL NOTES:

1. ALL BRANCH CIRCUITS AND FEEDERS SHALL BE COPPER WIRE. MAXIMUM VOLTAGE DROP FOR ALL BRANCH CIRCUITS SHALL NOT EXCEED 3%.

120V CIRCUITS DIST. TO FIRST OUTLET	WIRE AWG
UP TO 50FT	#12
50FT TO 90FT	#10
ABOVE 90FT	#8

2. IN PATIENT TREATMENT AREAS PROVIDE INSULATED GROUND IN A METAL RACEWAY WITH HOSPITAL GRADE RECEPTACLES.
3. COORDINATE LOCATION OF ALL PANELS WITH MECHANICAL AND PLUMBING CONTRACTORS SUCH THAT DEDICATED SPACE ABOVE PANELS IS MAINTAINED PER NEC. RELOCATE PANELS AS NEEDED.

KEY NOTES

1. HEADWALL SERVICE UNIT, VERIFY LOCATION. PROVIDE SINGLE BRANCH CIRCUIT AS SHOWN. SEE DETAILS ON E600 SERIES FOR ADDITIONAL INFORMATION. PROVIDE GFI RECEPTACLES WHERE RECEPTACLE FALLS WITHIN 6FT OF SINK.
2. SHADED EQUIPMENT AND ASSOCIATED DEVICES INDICATED ARE LOCATED IN CEILING SPACE.
3. VERIFY LOCATION OF A/V CONNECTION W/ LV SUPPLIER BEFORE ROUGH-IN.
4. VERIFY LOCATION BEFORE ROUGH-IN.
5. WALL IS NOT FLOOR TO CEILING. ALL ELECTRICAL LOCATED ON THIS WALL SHALL BE FED FROM BELOW FLOOR.

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SCO # 23-37149-01
NCCCS # 2772

REV.	DATE	DESCRIPTION

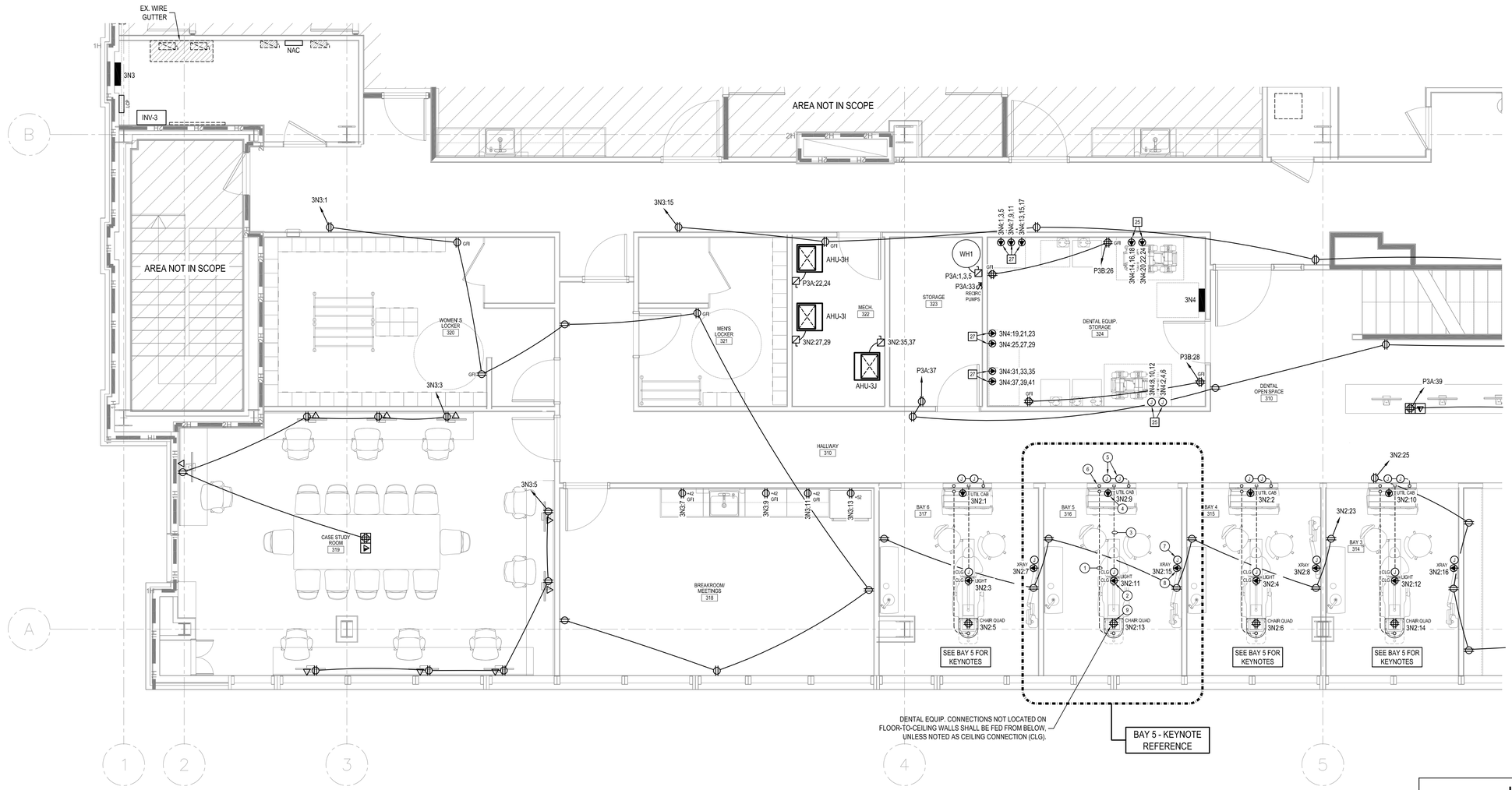
NO.	DATE	ISSUE NOTE

Project Manager	Drawn By
Date: 03-01-2024	Reviewed By

Project ID: 23-27149-01

Sheet Title: **PARTIAL POWER PLAN - SECOND FLOOR**

Sheet No.: E322



A / E331

PARTIAL POWER PLAN - THIRD FLOOR

SCALE: 1/4"=1'-0"

GENERAL NOTES:

1. ALL BRANCH CIRCUITS AND FEEDERS SHALL BE COPPER WIRE. MAXIMUM VOLTAGE DROP FOR ALL BRANCH CIRCUITS SHALL NOT EXCEED 3%.

120V CIRCUITS DIST. TO FIRST OUTLET	WIRE AWG
UP TO 50FT	#12
50FT TO 90FT	#10
ABOVE 90FT	#8

2. IN PATIENT TREATMENT AREAS PROVIDE INSULATED GROUND IN A METAL RACEWAY WITH HOSPITAL GRADE RECEPTACLES.
3. COORDINATE LOCATION OF ALL PANELS WITH MECHANICAL AND PLUMBING CONTRACTORS SUCH THAT DEDICATED SPACE ABOVE PANELS IS MAINTAINED PER NEC. RELOCATE PANELS AS NEEDED.

KEY NOTES

1	2"C WITH PULL STRING, BELOW SLAB FOR DATA PATHWAY. COORDINATE WITH HENRY SCHEIN REP AND SHOP DRAWINGS.
2	PROVIDE JUNCTION BOX W/ 6FT WHIP FOR DENTAL LIGHT CONNECTION.COORDINATE WITH HENRY SCHEIN REP AND SHOP DRAWINGS.
3	1"C WITH PULL STRING, IN CEILING SPACE. PROVIDE FROM SINGLE GANG MUD RING IN WALL TO DATA CABLING ACCESS POINT IN TRACK LIGHT. COORDINATE WITH HENRY SCHEIN REP AND SHOP DRAWINGS.
4	PROVIDE JUNCTION BOX W/ 16" WHIP FOR UTILITY CABINET CONNECTION. COORDINATE WITH HENRY SCHEIN REP AND SHOP DRAWINGS.
5	X-RAY EXPOSURE STATION. PROVIDE (2) SINGLE GANG JUNCTION BOXES WITH 1"C CONNECTING BETWEEN AND 1"C STUBBING INTO CEILING SPACE FOR LOW VOLTAGE CONNNECTION TO JUNCTION BOX ADJACENT TO XRAY. COORDINATE WITH HENRY SCHEIN REP AND SHOP DRAWINGS.
6	2"C WITH PULL STRING FROM SINGLE GANG MUD RING OR BOX AT BASE OF WALL TO STUB UP IN ACCESSIBLE CEILING SPACE FOR DATA PATHWAY. COORDINATE WITH HENRY SCHEIN REP AND SHOP DRAWINGS.
7	SINGLE GANG JUNCTION BOX WITH 1"C AND PULLSTRING STUBBED INTO ACCESSIBLE CEILING SPACE. COORDINATE WITH HENRY SCHEIN REP AND SHOP DRAWINGS.
8	SINGLE GANG JUNCTION BOX WITH 18" WHIP FOR XRAY CONNECTION. COORDINATE WITH HENRY SCHEIN REP AND SHOP DRAWINGS.
9	CHAIR UTILITY. PROVIDE 2-GANG BOX WITH QUAD RECEPTACLE. COORDINATE WITH HENRY SCHEIN REP AND SHOP DRAWINGS.

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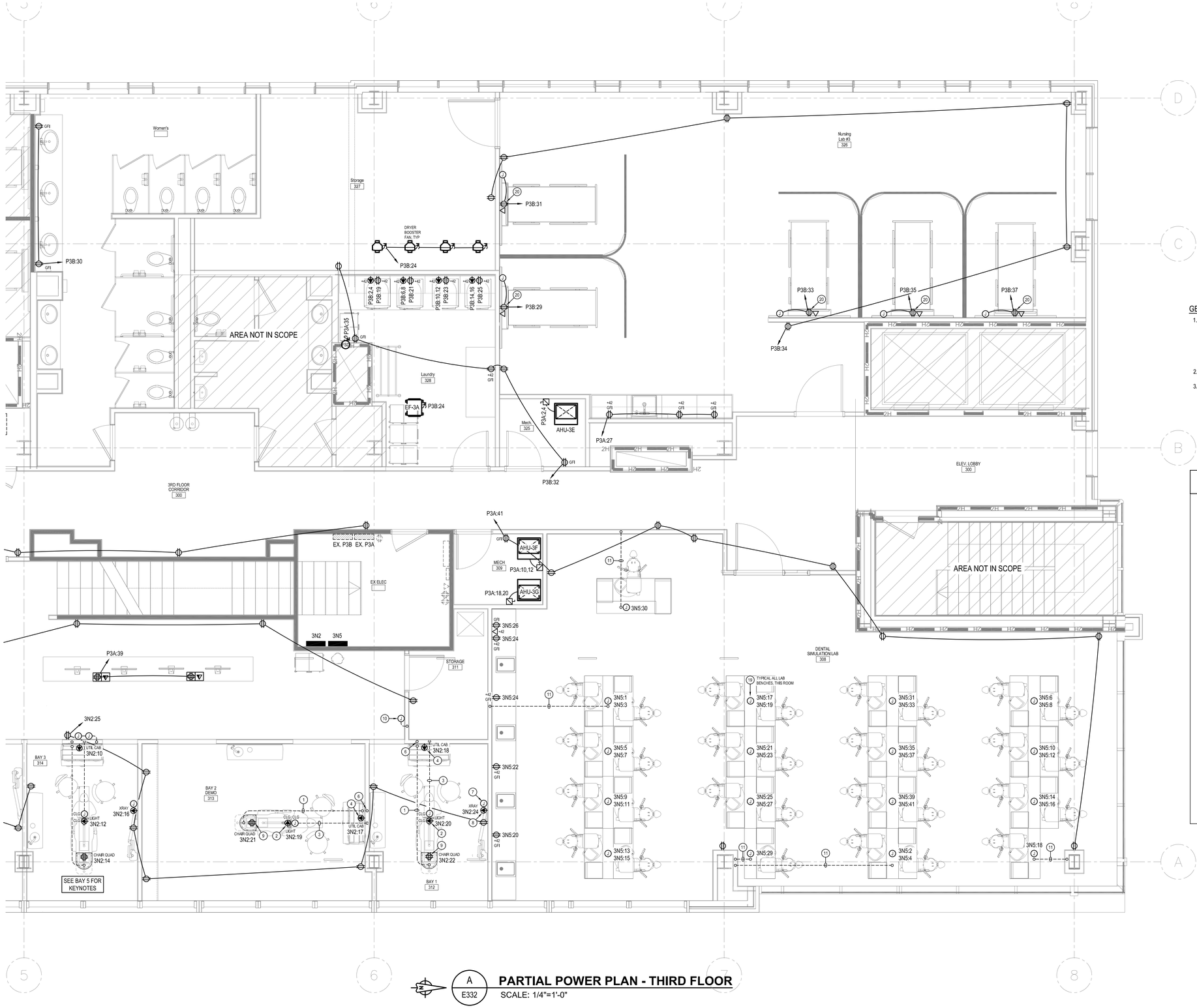
SCO # 23-37149-01

REV.	DATE	DESCRIPTION

NO.	DATE	ISSUE NOTE

Project Manager | Drawn By
Date: 03-01-2024 | Reviewed By
Project ID: 23-27149-01
Sheet Title: PARTIAL POWER PLAN - THIRD FLOOR
Sheet No.: E331



GENERAL NOTES:

1. ALL BRANCH CIRCUITS AND FEEDERS SHALL BE COPPER WIRE. MAXIMUM VOLTAGE DROP FOR ALL BRANCH CIRCUITS SHALL NOT EXCEED 3%.

120V CIRCUITS DIST. TO FIRST OUTLET	WIRE AWG
UP TO 50FT	#12
50FT TO 90FT	#10
ABOVE 90FT	#8

2. IN PATIENT TREATMENT AREAS PROVIDE INSULATED GROUND IN A METAL RACEWAY WITH HOSPITAL GRADE RECEPTACLES.
3. COORDINATE LOCATION OF ALL PANELS WITH MECHANICAL AND PLUMBING CONTRACTORS SUCH THAT DEDICATED SPACE ABOVE PANELS IS MAINTAINED PER NEC. RELOCATE PANELS AS NEEDED.

KEY NOTES

1. 2"C WITH PULL STRING, BELOW SLAB FOR DATA PATHWAY. COORDINATE WITH HENRY SCHEIN REP AND SHOP DRAWINGS.
2. PROVIDE JUNCTION BOX W/ 6FT WHIP FOR DENTAL LIGHT CONNECTION.COORDINATE WITH HENRY SCHEIN REP AND SHOP DRAWINGS.
3. 1"C WITH PULL STRING, IN CEILING SPACE. PROVIDE FROM SINGLE GANG MUD RING IN WALL TO DATA CABLING ACCESS POINT IN TRACK LIGHT. COORDINATE WITH HENRY SCHEIN REP AND SHOP DRAWINGS.
4. PROVIDE JUNCTION BOX W/ 16" WHIP FOR UTILITY CABINET CONNECTION. COORDINATE WITH HENRY SCHEIN REP AND SHOP DRAWINGS.
5. X-RAY EXPOSURE STATION. PROVIDE (2) SINGLE GANG JUNCTION BOXES WITH 1"C CONNECTING BETWEEN AND 1"C STUBBING INTO CEILING SPACE FOR LOW VOLTAGE CONNNECTION TO JUNCTION BOX ADJACENT TO XRAY. COORDINATE WITH HENRY SCHEIN REP AND SHOP DRAWINGS.
6. 2"C WITH PULL STRING FROM SINGLE GANG MUD RING OR BOX AT BASE OF WALL TO STUB UP IN ACCESSIBLE CEILING SPACE FOR DATA PATHWAY. COORDINATE WITH HENRY SCHEIN REP AND SHOP DRAWINGS.
7. SINGLE GANG JUNCTION BOX WITH 1"C AND PULLSTRING STUBBED INTO ACCESSIBLE CEILING SPACE. COORDINATE WITH HENRY SCHEIN REP AND SHOP DRAWINGS.
8. SINGLE GANG JUNCTION BOX WITH 18" WHIP FOR XRAY CONNECTION. COORDINATE WITH HENRY SCHEIN REP AND SHOP DRAWINGS.
9. CHAIR UTILITY. PROVIDE 2-GANG BOX WITH QUAD RECEPTACLE. COORDINATE WITH HENRY SCHEIN REP AND SHOP DRAWINGS.
10. X-RAY EXPOSURE STATION. PROVIDE SINGLE GANG JUNCTION BOXES WITH 1"C STUBBED INTO CEILING SPACE FOR LOW VOLTAGE CONNNECTION TO JUNCTION BOX ADJACENT TO XRAY. COORDINATE WITH HENRY SCHEIN REP AND SHOP DRAWINGS.
11. 2"C WITH PULL STRING. VERIFY NEED FOR CONDUIT WITH OWNER'S I.T. DEPARTMENT. THIS PATHWAY IS INTENDED TO CONNECT FREESTANDING CABINETS TO I.T. ROOM, IT MAY BE ACCESSED FROM CEILING BELOW THROUGH CORE-DRILL. COORDINATE WITH HENRY SCHEIN REP AND SHOP DRAWINGS.
19. SIM LAB BENCH CONNECTION. COORDINATE LOCATION OF STUB UP AND FINAL NUMBER OF DEDICATED CIRCUITS REQUIRED WITH HENRY SCHEIN REP. PRIOR TO ROUGH-IN. NUMBER OF CIRCUITS IS DEPENDANT ON FINAL EQUIPMENT ORDERED.
20. HEADWALL SERVICE UNIT, VERIFY LOCATION, PROVIDE SINGLE BRANCH CIRCUIT AS SHOWN. SEE DETAILS ON E600 SERIES FOR ADDITIONAL INFORMATION. PROVIDE GFI RECEPTACLES WHERE RECEPTACLE FALLS WITHIN 6FT OF SINK.

A E332 **PARTIAL POWER PLAN - THIRD FLOOR**
SCALE: 1/4"=1'-0"

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06/07/2024

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NCCCS # 2772
SCO # 23-37149-01

REV.	DATE	DESCRIPTION

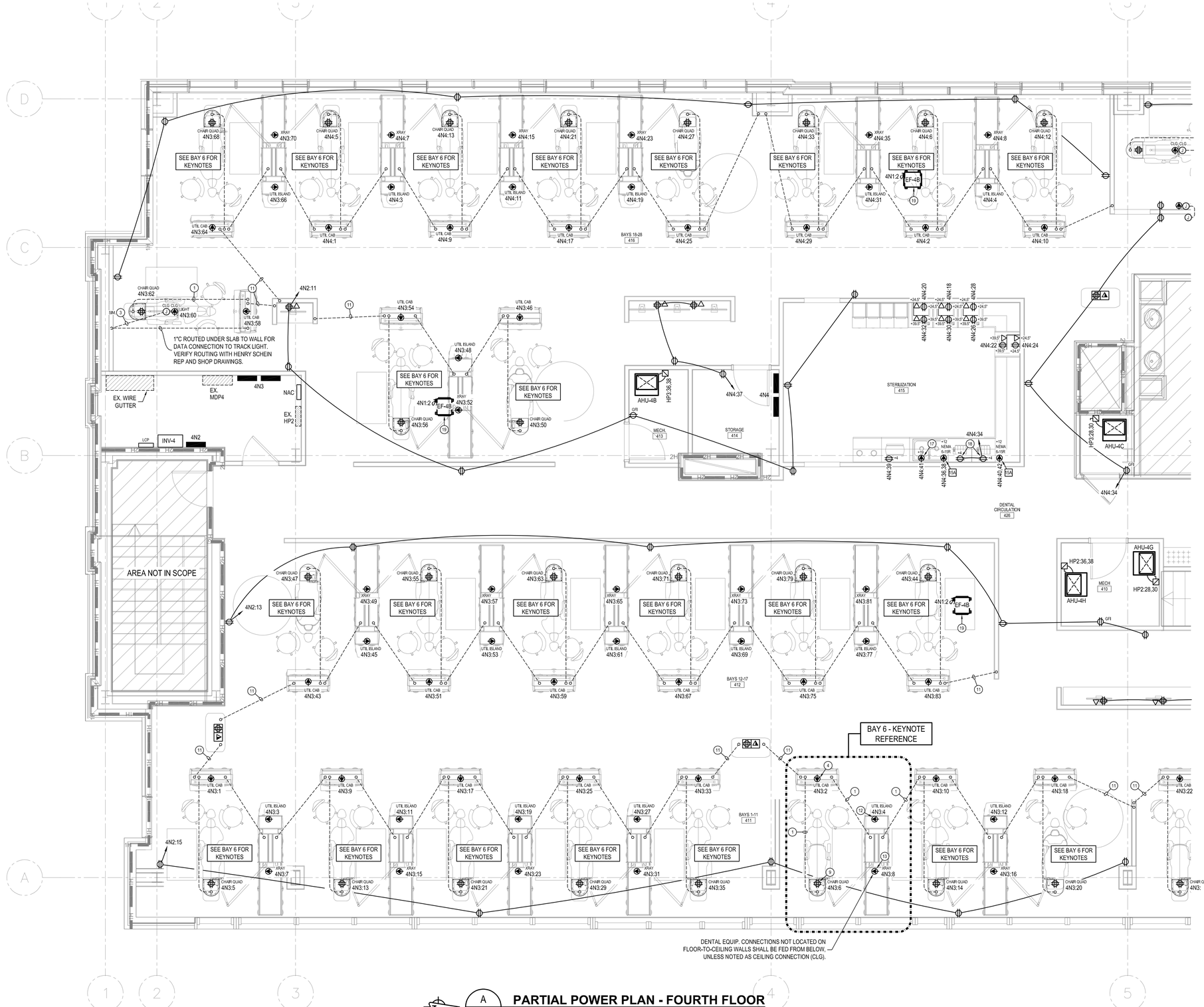
NO.	DATE	ISSUE NOTE

Project Manager	Drawn By
Date 03-01-2024	Reviewed By

Project ID 23-27149-01

Sheet Title
PARTIAL POWER PLAN - THIRD FLOOR

Sheet No.
E332



A / E341 **PARTIAL POWER PLAN - FOURTH FLOOR**
SCALE: 1/4"=1'-0"

GENERAL NOTES:

1. ALL BRANCH CIRCUITS AND FEEDERS SHALL BE COPPER WIRE. MAXIMUM VOLTAGE DROP FOR ALL BRANCH CIRCUITS SHALL NOT EXCEED 3%.

120V CIRCUITS DIST. TO FIRST OUTLET	WIRE AWG
UP TO 50FT	#12
50FT TO 90FT	#10
ABOVE 90FT	#8

2. IN PATIENT TREATMENT AREAS PROVIDE INSULATED GROUND IN A METAL RACEWAY WITH HOSPITAL GRADE RECEPTACLES.
3. COORDINATE LOCATION OF ALL PANELS WITH MECHANICAL AND PLUMBING CONTRACTORS SUCH THAT DEDICATED SPACE ABOVE PANELS IS MAINTAINED PER NEC. RELOCATE PANELS AS NEEDED.

KEY NOTES

1. 2"C WITH PULL STRING, BELOW SLAB FOR DATA PATHWAY. COORDINATE WITH HENRY SCHEIN REP AND SHOP DRAWINGS.
2. PROVIDE JUNCTION BOX W/ 6FT WHIP FOR DENTAL LIGHT CONNECTION.COORDINATE WITH HENRY SCHEIN REP AND SHOP DRAWINGS.
3. 1"C WITH PULL STRING, IN CEILING SPACE, PROVIDE FROM SINGLE GANG MUD RING IN WALL TO DATA CABLING ACCESS POINT IN TRACK LIGHT. COORDINATE WITH HENRY SCHEIN REP AND SHOP DRAWINGS.
4. PROVIDE JUNCTION BOX W/ 16" WHIP FOR UTILITY CABINET CONNECTION. COORDINATE WITH HENRY SCHEIN REP AND SHOP DRAWINGS.
5. X-RAY EXPOSURE STATION. PROVIDE (2) SINGLE GANG JUNCTION BOXES WITH 1"C CONNECTING BETWEEN AND 1"C STUBBING INTO CEILING SPACE FOR LOW VOLTAGE CONNECTION TO JUNCTION BOX ADJACENT TO XRAY. COORDINATE WITH HENRY SCHEIN REP AND SHOP DRAWINGS.
6. 2"C WITH PULL STRING FROM SINGLE GANG MUD RING OR BOX AT BASE OF WALL TO STUB UP IN ACCESSIBLE CEILING SPACE FOR DATA PATHWAY. COORDINATE WITH HENRY SCHEIN REP AND SHOP DRAWINGS.
7. SINGLE GANG JUNCTION BOX WITH 1"C AND PULLSTRING STUBBED INTO ACCESSIBLE CEILING SPACE. COORDINATE WITH HENRY SCHEIN REP AND SHOP DRAWINGS.
8. SINGLE GANG JUNCTION BOX WITH 18" WHIP FOR XRAY CONNECTION. COORDINATE WITH HENRY SCHEIN REP AND SHOP DRAWINGS.
9. CHAIR UTILITY. PROVIDE 2-GANG BOX WITH QUAD RECEPTACLE. COORDINATE WITH HENRY SCHEIN REP AND SHOP DRAWINGS.
10. X-RAY EXPOSURE STATION. PROVIDE SINGLE GANG JUNCTION BOXES WITH 1"C STUBBED INTO CEILING SPACE FOR LOW VOLTAGE CONNNECTION TO JUNCTION BOX ADJACENT TO XRAY. COORDINATE WITH HENRY SCHEIN REP AND SHOP DRAWINGS.
11. 2"C WITH PULL STRING. VERIFY NEED FOR CONDUIT WITH OWNER'S I.T. DEPARTMENT. THIS PATHWAY IS INTENDED TO CONNECT FREESTANDING CABINETS TO I.T. ROOM. IT MAY BE ACCESSED FROM CEILING BELOW THROUGH CORE-DRILL. COORDINATE WITH HENRY SCHEIN REP AND SHOP DRAWINGS.
12. PROVIDE JUNCTION BOX W/ 16" WHIP FOR UTILITY CABINET CONNECTION. COORDINATE WITH HENRY SCHEIN REP AND SHOP DRAWINGS.
13. PROVIDE JUNCTION BOX W/ 8FT WHIP FOR XRAY CONNECTION. COORDINATE WITH HENRY SCHEIN REP AND SHOP DRAWINGS.
14. X-RAY EXPOSURE STATION. PROVIDE SINGLE GANG JUNCTION BOXES WITH 1"C CONNECTING BETWEEN EXPOSURE STATION AND JUNCTION BOX ADJACENT TO XRAY (KEY NOTE 7). COORDINATE WITH HENRY SCHEIN REP AND SHOP DRAWINGS.
15. PROVIDE SINGLE GANG JUNCTION BOX AND 1"C WITH PULL STRING TO DOOR FRAME FOR DOOR INTERLOCK AND 1"C TO ACCESSIBLE CEILING SPACE FOR XRAY EXPOSURE STATION. COORDINATE WITH HENRY SCHEIN REP AND SHOP DRAWINGS.
16. PROVIDE SINGLE GANG JUNCTION BOXES WITH 1"C (EA.) TO CEILING SPACE FOR CONNECTIONS TO COMPUTER AND XRAY EXPOSURE STATION. COORDINATE WITH HENRY SCHEIN REP AND SHOP DRAWINGS.
17. PROVIDE 6FT WHIP WITH DUPLEX OUTLET ON END FOR CONNECTION TO CABINET POWER BOX. COORDINATE WITH HENRY SCHEIN REP AND SHOP DRAWINGS.
18. VERIFY ALL RECEPTACLE LOCATIONS AT CABINET WALLS BEFORE ROUGH-IN. HEIGHT AND ORIENTATION OF DENTAL HANDPIECE MAINTENANCE SYSTEM HAS BEEN ASSUMED. COORDINATE WITH HENRY SCHEIN REP AND SHOP DRAWINGS.
19. FAN IS PART OF A MECHANICAL ADD-ALTERNATE. COORDINATE WITH MECHANICAL CONTRACTOR.

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NCCCS # 2772
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REV.	DATE	DESCRIPTION

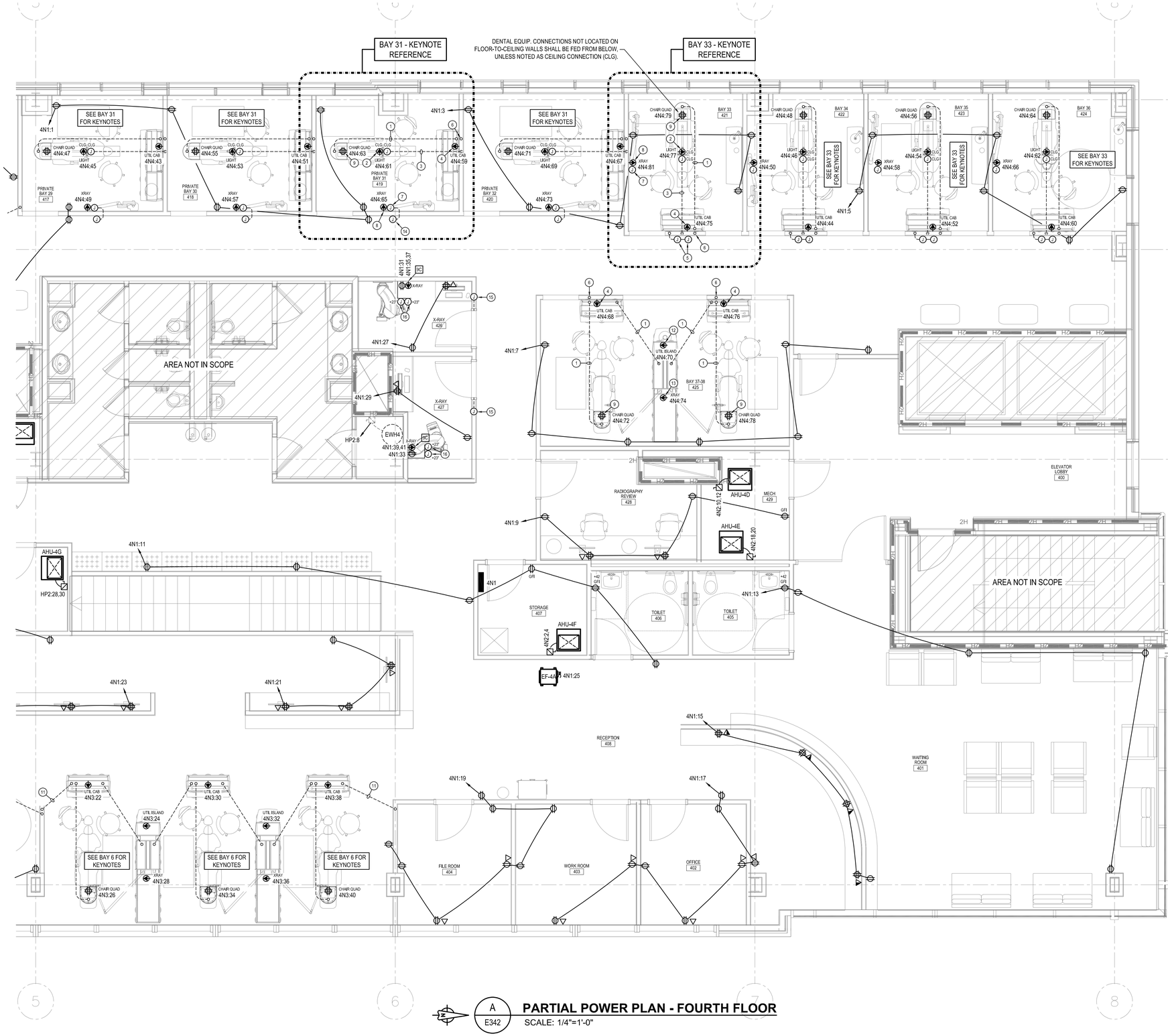
NO.	DATE	ISSUE NOTE

Project Manager	Drawn By
Date 03-01-2024	Reviewed By

Project ID 23-27149-01

Sheet Title
PARTIAL POWER PLAN - FOURTH FLOOR

Sheet No.
E341



GENERAL NOTES:

1. ALL BRANCH CIRCUITS AND FEEDERS SHALL BE COPPER WIRE. MAXIMUM VOLTAGE DROP FOR ALL BRANCH CIRCUITS SHALL NOT EXCEED 3%.

120V CIRCUITS DIST. TO FIRST OUTLET	WIRE AWG
UP TO 50FT	#12
50FT TO 90FT	#10
ABOVE 90FT	#8

2. IN PATIENT TREATMENT AREAS PROVIDE INSULATED GROUND IN A METAL RACEWAY WITH HOSPITAL GRADE RECEPTACLES.
3. COORDINATE LOCATION OF ALL PANELS WITH MECHANICAL AND PLUMBING CONTRACTORS SUCH THAT DEDICATED SPACE ABOVE PANELS IS MAINTAINED PER NEC. RELOCATE PANELS AS NEEDED.

KEY NOTES

1. 2"C WITH PULL STRING, BELOW SLAB FOR DATA PATHWAY. COORDINATE WITH HENRY SCHEIN REP AND SHOP DRAWINGS.
2. PROVIDE JUNCTION BOX W/ 6FT WHIP FOR DENTAL LIGHT CONNECTION.COORDINATE WITH HENRY SCHEIN REP AND SHOP DRAWINGS.
3. 1"C WITH PULL STRING, IN CEILING SPACE. PROVIDE FROM SINGLE GANG MUD RING IN WALL TO DATA CABLING ACCESS POINT IN TRACK LIGHT. COORDINATE WITH HENRY SCHEIN REP AND SHOP DRAWINGS.
4. PROVIDE JUNCTION BOX W/ 16" WHIP FOR UTILITY CABINET CONNECTION. COORDINATE WITH HENRY SCHEIN REP AND SHOP DRAWINGS.
5. X-RAY EXPOSURE STATION. PROVIDE (2) SINGLE GANG JUNCTION BOXES WITH 1"C CONNECTING BETWEEN AND 1"C STUBBING INTO CEILING SPACE FOR LOW VOLTAGE CONNNECTION TO JUNCTION BOX ADJACENT TO XRAY. COORDINATE WITH HENRY SCHEIN REP AND SHOP DRAWINGS.
6. 2"C WITH PULL STRING FROM SINGLE GANG MUD RING OR BOX AT BASE OF WALL TO STUB UP IN ACCESSIBLE CEILING SPACE FOR DATA PATHWAY. COORDINATE WITH HENRY SCHEIN REP AND SHOP DRAWINGS.
7. SINGLE GANG JUNCTION BOX WITH 1"C AND PULLSTRING STUBBED INTO ACCESSIBLE CEILING SPACE. COORDINATE WITH HENRY SCHEIN REP AND SHOP DRAWINGS.
8. SINGLE GANG JUNCTION BOX WITH 18" WHIP FOR XRAY CONNECTION. COORDINATE WITH HENRY SCHEIN REP AND SHOP DRAWINGS.
9. CHAIR UTILITY. PROVIDE 2-GANG BOX WITH QUAD RECEPTACLE. COORDINATE WITH HENRY SCHEIN REP AND SHOP DRAWINGS.
10. X-RAY EXPOSURE STATION. PROVIDE SINGLE GANG JUNCTION BOXES WITH 1"C STUBBED INTO CEILING SPACE FOR LOW VOLTAGE CONNNECTION TO JUNCTION BOX ADJACENT TO XRAY. COORDINATE WITH HENRY SCHEIN REP AND SHOP DRAWINGS.
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12. PROVIDE JUNCTION BOX W/ 16" WHIP FOR UTILITY CABINET CONNECTION. COORDINATE WITH HENRY SCHEIN REP AND SHOP DRAWINGS.
13. PROVIDE JUNCTION BOX W/ 8FT WHIP FOR XRAY CONNECTION. COORDINATE WITH HENRY SCHEIN REP AND SHOP DRAWINGS.
14. X-RAY EXPOSURE STATION. PROVIDE SINGLE GANG JUNCTION BOXES WITH 1"C CONNECTING BETWEEN EXPOSURE STATION AND JUNCTION BOX ADJACENT TO XRAY (KEY NOTE 7). COORDINATE WITH HENRY SCHEIN REP AND SHOP DRAWINGS.
15. PROVIDE SINGLE GANG JUNCTION BOX AND 1"C WITH PULL STRING TO DOOR FRAME FOR DOOR INTERLOCK AND 1"C TO ACCESSIBLE CEILING SPACE FOR XRAY EXPOSURE STATION. COORDINATE WITH HENRY SCHEIN REP AND SHOP DRAWINGS.
16. PROVIDE SINGLE GANG JUNCTION BOXES WITH 1"C (EA.) TO CEILING SPACE FOR CONNECTIONS TO COMPUTER AND XRAY EXPOSURE STATION. COORDINATE WITH HENRY SCHEIN REP AND SHOP DRAWINGS.
17. PROVIDE 6FT WHIP WITH DUPLEX OUTLET ON END FOR CONNECTION TO CABINET POWER BOX. COORDINATE WITH HENRY SCHEIN REP AND SHOP DRAWINGS.
18. VERIFY ALL RECEPTACLE LOCATIONS AT CABINET WALLS BEFORE ROUGH-IN. HEIGHT AND ORIENTATION OF DENTAL HANDPIECE MAINTENANCE SYSTEM HAS BEEN ASSUMED. COORDINATE WITH HENRY SCHEIN REP AND SHOP DRAWINGS.

A E342 **PARTIAL POWER PLAN - FOURTH FLOOR**
SCALE: 1/4"=1'-0"

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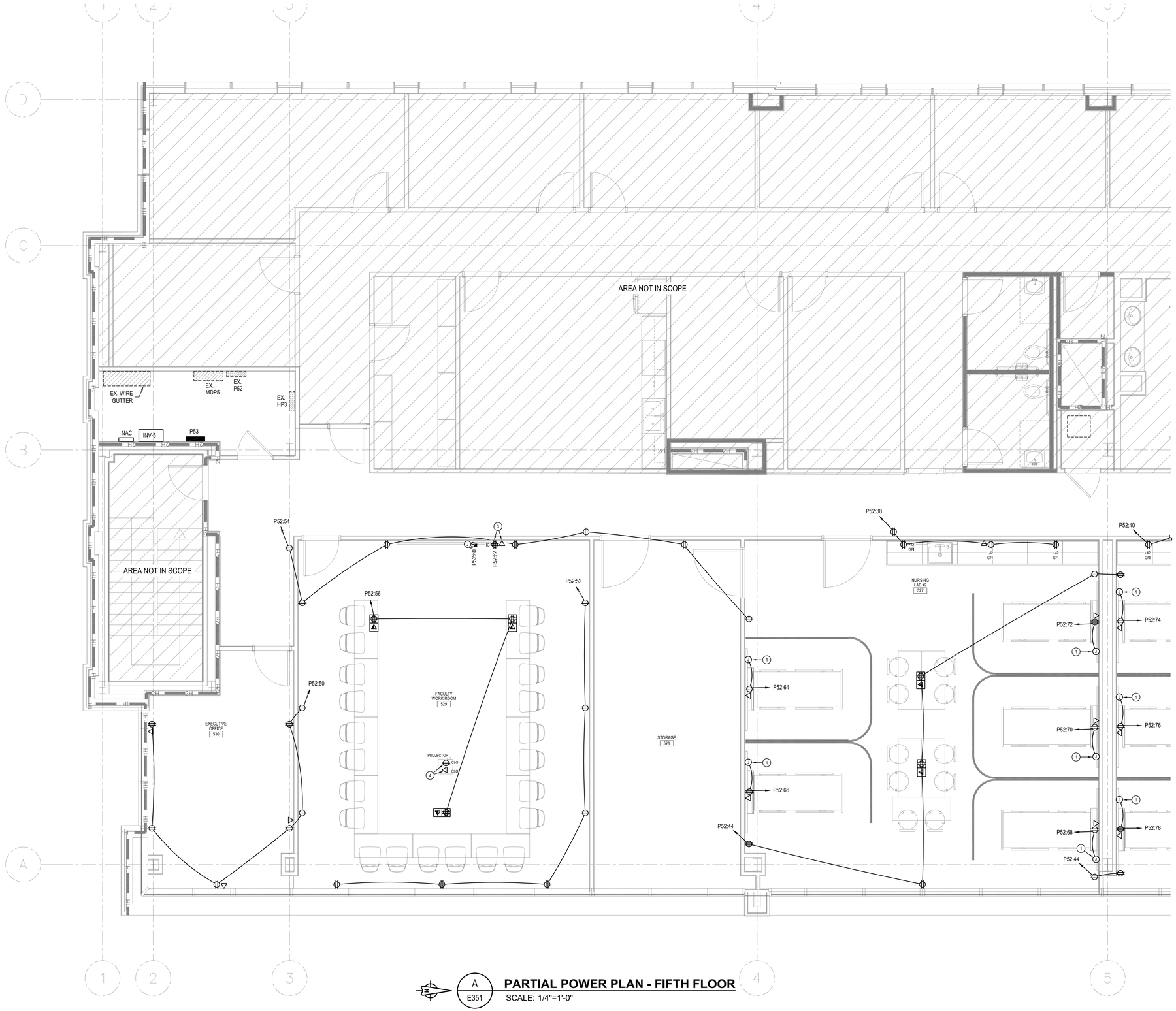
Project Manager	Drawn By
Date 03-01-2024	Reviewed By

Project ID 23-27149-01

Sheet Title
PARTIAL POWER PLAN - FOURTH FLOOR

Sheet No.
E342



A E351 **PARTIAL POWER PLAN - FIFTH FLOOR**

SCALE: 1/4"=1'-0"

GENERAL NOTES:

1. ALL BRANCH CIRCUITS AND FEEDERS SHALL BE COPPER WIRE. MAXIMUM VOLTAGE DROP FOR ALL BRANCH CIRCUITS SHALL NOT EXCEED 3%.

120V CIRCUITS DIST. TO FIRST OUTLET	WIRE AWG
UP TO 50FT	#12
50FT TO 90FT	#10
ABOVE 90FT	#8

2. IN PATIENT TREATMENT AREAS PROVIDE INSULATED GROUND IN A METAL RACEWAY WITH HOSPITAL GRADE RECEPTACLES.
3. COORDINATE LOCATION OF ALL PANELS WITH MECHANICAL AND PLUMBING CONTRACTORS SUCH THAT DEDICATED SPACE ABOVE PANELS IS MAINTAINED PER NEC. RELOCATE PANELS AS NEEDED.

KEY NOTES

1. HEADWALL SERVICE UNIT, VERIFY LOCATION. PROVIDE SINGLE BRANCH CIRCUIT AS SHOWN. SEE DETAILS ON E600 SERIES FOR ADDITIONAL INFORMATION. PROVIDE GFI RECEPTACLES WHERE RECEPTACLE FALLS WITHIN 6FT OF SINK.
2. SHADED EQUIPMENT AND ASSOCIATED DEVICES INDICATED ARE LOCATED IN CEILING SPACE.
3. VERIFY LOCATION OF A/V CONNECTION W/ LV SUPPLIER BEFORE ROUGH-IN.
4. VERIFY LOCATION BEFORE ROUGH-IN.

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NORTH CAROLINA PROFESSIONAL SEAL 040879 ENGINEER DAVID P. FALCINELLI JR.
06/07/2024

Cape Fear Community College
Health and Human Services Building
Interior Renovation – Phase Two
319 N 3rd Stree, Wilmington, North Carolina 28401
SCO # 23-37149-01 NCCCS # 2772

REV.	DATE	DESCRIPTION

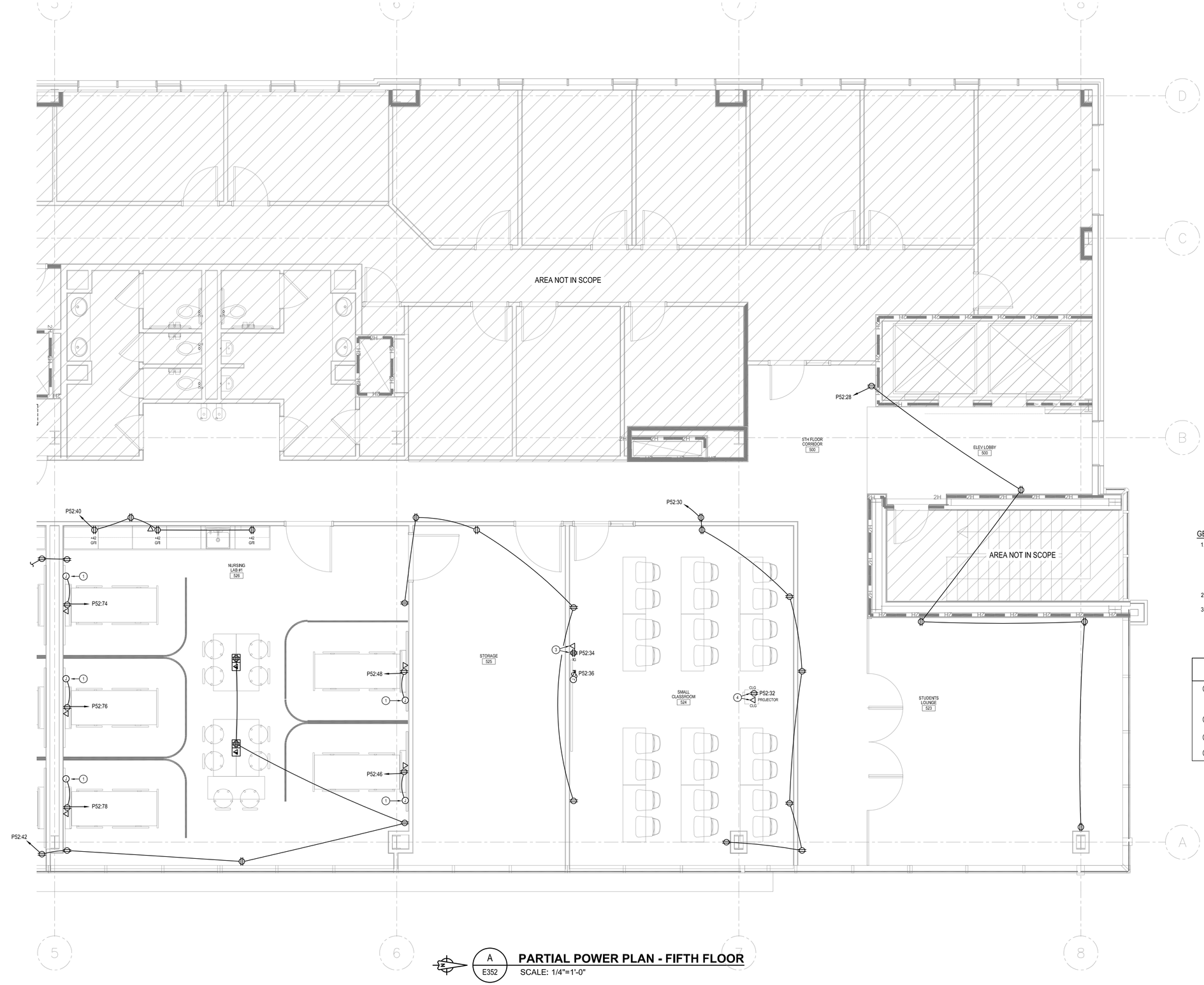
NO.	DATE	ISSUE NOTE

Project Manager	Drawn By
Date 03-01-2024	Reviewed By

Project ID 23-27149-01

Sheet Title
PARTIAL POWER PLAN - FIFTH FLOOR

Sheet No.
E351



A
E352

PARTIAL POWER PLAN - FIFTH FLOOR

SCALE: 1/4"=1'-0"

GENERAL NOTES:

1. ALL BRANCH CIRCUITS AND FEEDERS SHALL BE COPPER WIRE. MAXIMUM VOLTAGE DROP FOR ALL BRANCH CIRCUITS SHALL NOT EXCEED 3%.

120V CIRCUITS DIST. TO FIRST OUTLET	WIRE AWG
UP TO 50FT	#12
50FT TO 90FT	#10
ABOVE 90FT	#8

2. IN PATIENT TREATMENT AREAS PROVIDE INSULATED GROUND IN A METAL RACEWAY WITH HOSPITAL GRADE RECEPTACLES.
3. COORDINATE LOCATION OF ALL PANELS WITH MECHANICAL AND PLUMBING CONTRACTORS SUCH THAT DEDICATED SPACE ABOVE PANELS IS MAINTAINED PER NEC. RELOCATE PANELS AS NEEDED.

KEY NOTES

1. HEADWALL SERVICE UNIT. VERIFY LOCATION. PROVIDE SINGLE BRANCH CIRCUIT AS SHOWN. SEE DETAILS ON E600 SERIES FOR ADDITIONAL INFORMATION. PROVIDE GFI RECEPTACLES WHERE RECEPTACLE FALLS WITHIN 6FT OF SINK.
2. SHADED EQUIPMENT AND ASSOCIATED DEVICES INDICATED ARE LOCATED IN CEILING SPACE.
3. VERIFY LOCATION OF A/V CONNECTION W/ LV SUPPLIER BEFORE ROUGH-IN.
4. VERIFY LOCATION BEFORE ROUGH-IN.

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NCCCS # 2772
SCO # 23-37149-01

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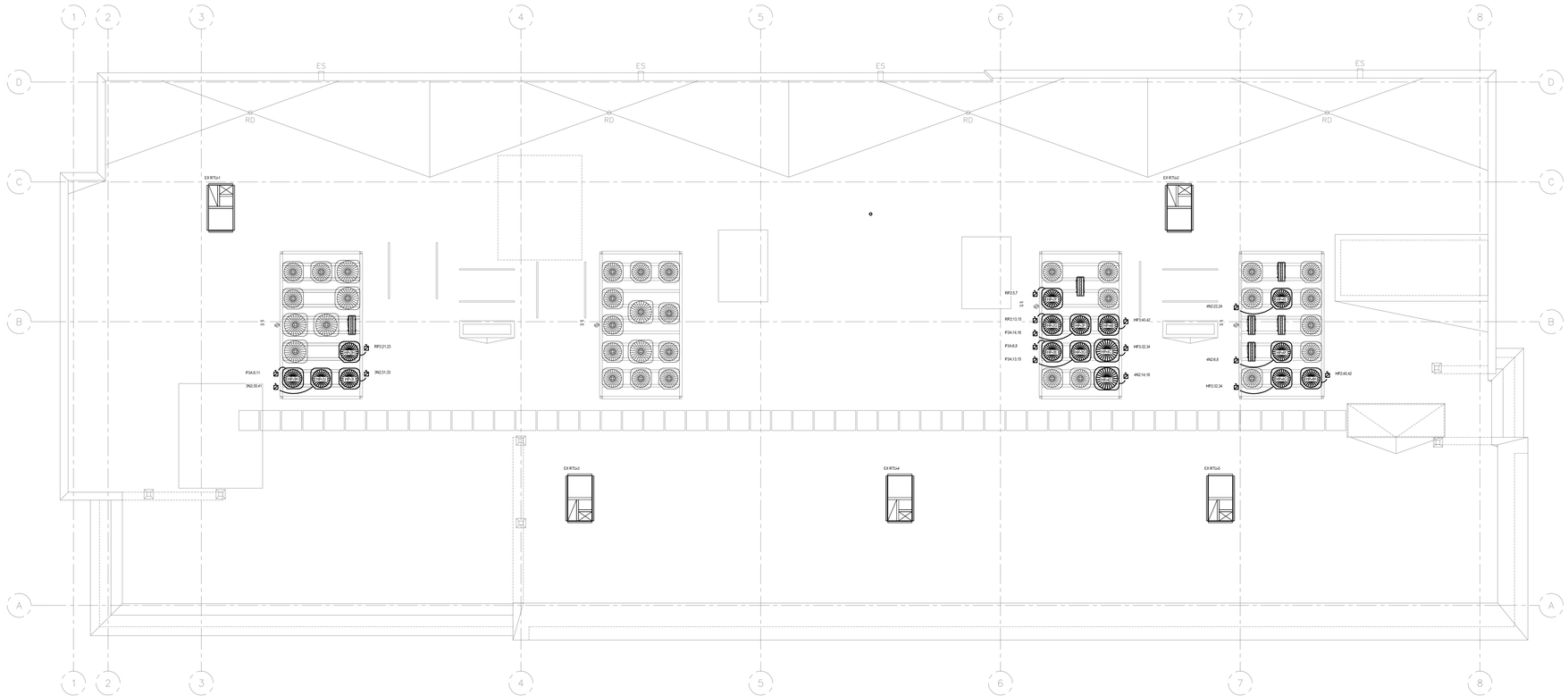
PARTIAL POWER PLAN - FIFTH FLOOR

Sheet No.
E352



A E361 **POWER PLAN - ROOF**
SCALE: 1/8"=1'-0"

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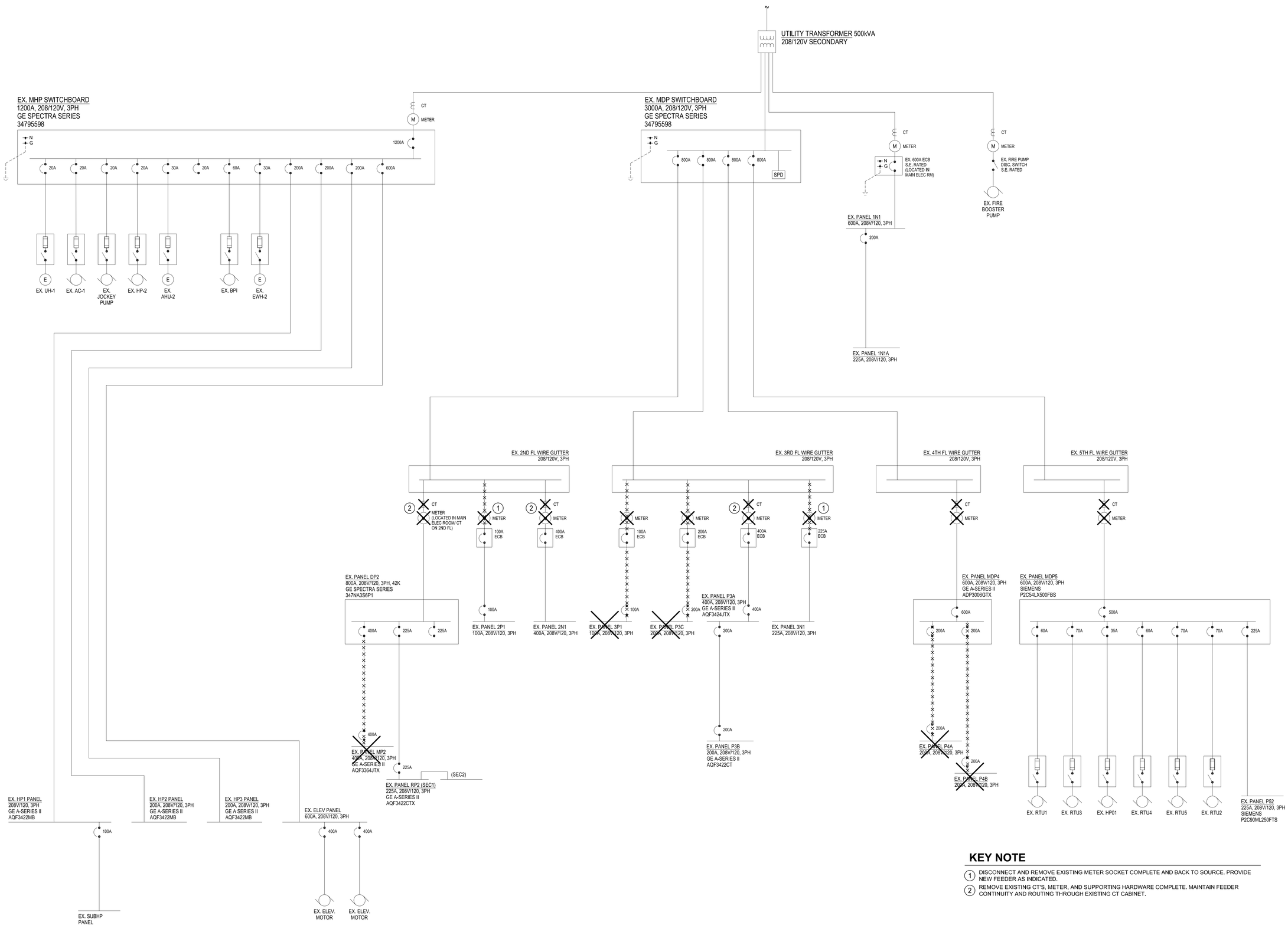
Date: 03-01-2024	Reviewed By

Project ID: 23-27149-01

Sheet Title: **POWER PLAN - ROOF**

Sheet No.: E361



KEY NOTE

1. DISCONNECT AND REMOVE EXISTING METER SOCKET COMPLETE AND BACK TO SOURCE. PROVIDE NEW FEEDER AS INDICATED.
2. REMOVE EXISTING CT'S, METER, AND SUPPORTING HARDWARE COMPLETE. MAINTAIN FEEDER CONTINUITY AND ROUTING THROUGH EXISTING CT CABINET.

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REV.	DATE	DESCRIPTION

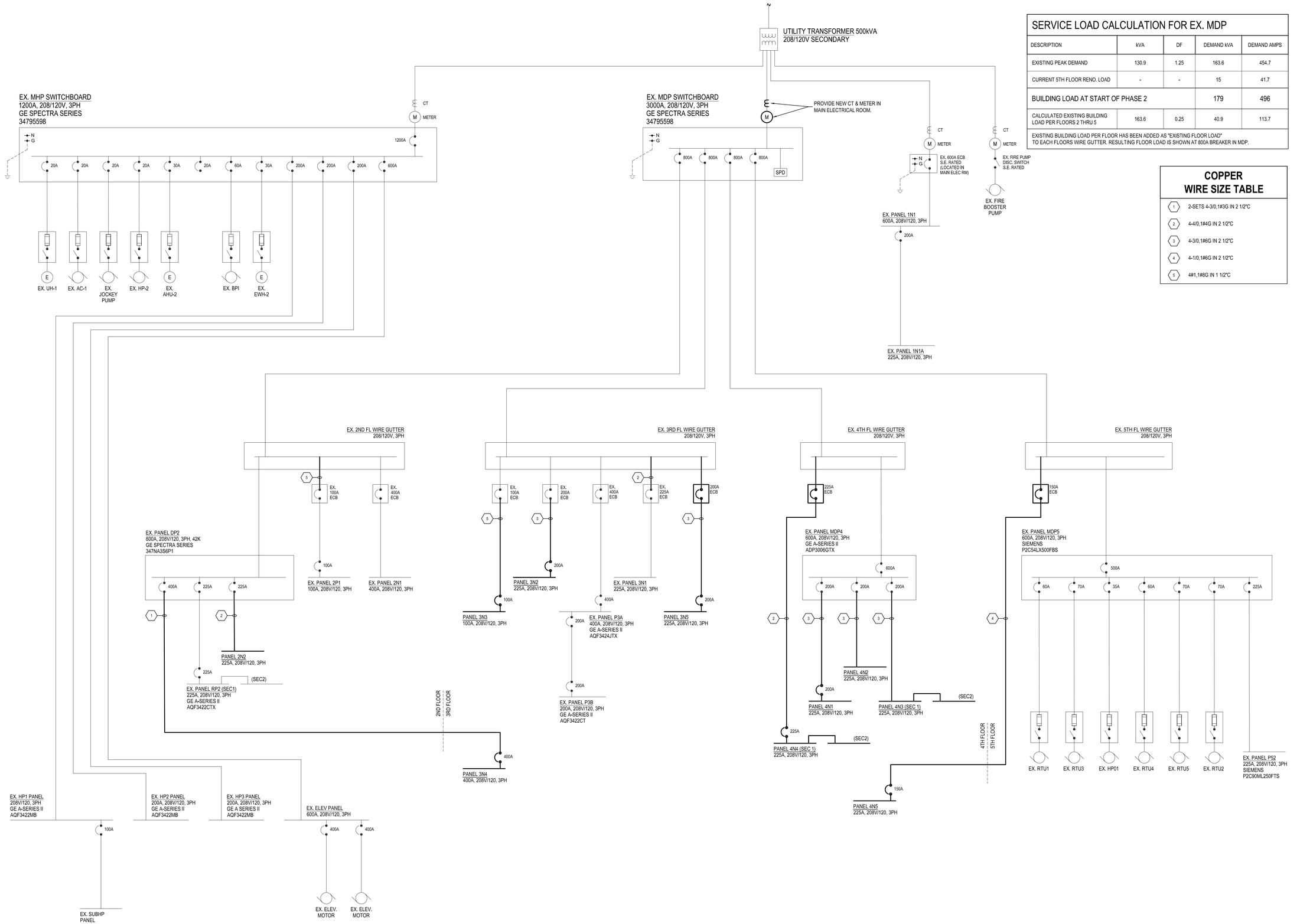
NO.	DATE	ISSUE NOTE

Project Manager	Drawn By
Date: 03-01-2024	Reviewed By

Project ID: 23-27149-01

Sheet Title: **SINGLE LINE - DEMO**

Sheet No.: E401



SERVICE LOAD CALCULATION FOR EX. MDP

DESCRIPTION	kVA	DF	DEMAND kVA	DEMAND AMPS
EXISTING PEAK DEMAND	130.9	1.25	163.6	454.7
CURRENT 5TH FLOOR RENO. LOAD	-	-	15	41.7
BUILDING LOAD AT START OF PHASE 2			179	496
CALCULATED EXISTING BUILDING LOAD PER FLOORS 2 THRU 5	163.6	0.25	40.9	113.7
EXISTING BUILDING LOAD PER FLOOR HAS BEEN ADDED AS "EXISTING FLOOR LOAD" TO EACH FLOORS WIRE GUTTER. RESULTING FLOOR LOAD IS SHOWN AT 800A BREAKER IN MDP.				

COPPER WIRE SIZE TABLE

1	2-SETS 4-3/0,1#3G IN 2 1/2"C
2	4-4/0,1#4G IN 2 1/2"C
3	4-3/0,1#6G IN 2 1/2"C
4	4-1/0,1#6G IN 2 1/2"C
5	4#1,1#8G IN 1 1/2"C

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NCCCS # 2772
SCO # 23-37149-01

REV.	DATE	DESCRIPTION

NO.	DATE	ISSUE NOTE

Project Manager	Drawn By
Date 03-01-2024	Reviewed By

Project ID
23-27149-01

Sheet Title
SINGLE LINE - NEW WORK

Sheet No.
E402

PANEL NO.: **MDP**
USAGE: **DISTRIBUTION PANEL**
LOCATION: **MAIN ELEC RM**
PHASES: **3**
L-L VOLTS **208V**
L-G VOLTS **120V**
BUS AMPS: **3000A**
MAIN CB AMPS: **MLO**
AIC RATING: **46,861 MINIMUM**

PROJECT: **CFCC HSS RENOVATION PH2**
CLIENT: -
MOUNTING: **SLAB**
PANEL TYPE: **NEMA 1**
ENGINEER: -
DSA PROJECT NO.: **23175**
FED FROM: **XFMR**

LOAD AMPS.	DESCRIPTION	NOTES	BREAKER POLE	BREAKER AMP.	CKT. #	CKT.	BREAKER AMP.	BREAKER POLE	NOTES	DESCRIPTION	LOAD AMPS.
616.4	2ND FLOOR MAIN		3	800	1 A 2		800	3		4TH FLOOR MAIN	665.6
613.4					3 B 4						609.0
595.7					5 C 6						639.1
619.2	3RD FLOOR MAIN		3	800	7 A 8		800	3		5TH FLOOR MAIN	454.7
649.8					9 B 10						463.0
642.3					11 C 12						482.8

LOAD SUMMARY	CON. KVA	%	DEM. KVA
RECEPTACLES	85.32	code	47.66
MISC	308.42	100%	308.42
LIGHTING	22.32	125%	27.9
HVAC	248.579	100%	248.579
HEAT STRIP	0	100%	0
REFRIGERATION	0	65%	0
EXISTING FLOOR LOAD	163.56	100%	163.56
COOKING	0	65%	0
WATER HEATING	28.5	125%	35.625
LARGEST MOTOR	0	125%	0
TOTAL KVA	857 KVA		832 KVA
TOTAL AMPS	2378 AMPS		2309 AMPS

PANEL NOTES:
1. PROVIDE GROUND BUS
2. PROVIDE FULL SIZE NEUTRAL BUS UNLESS NOTED OTHERWISE
3. LO - INDICATES C.B. EQUIPPED WITH "LOCK-OUT" DEVICE
4. GFI - INDICATES C.B. IS GFI TYPE (30 mA FOR EQUIPMENT, 5 mA FOR PERSONNEL)
5. ST- INDICATES C.B. EQUIPPED WITH SHUNT TRIP DEVICE
6. IG - INDICATES CIRCUIT SHALL INCLUDE ADDITIONAL ISOLATED GROUND CONDUCTOR
7. AFCI - INDICATES COMBINATION TYPE AFCI C.B.

PANEL NO.: **RP2 (SEC 1)**
USAGE: **LIGHTING AND APPLIANCE**
LOCATION: **2ND FLOOR ELEC RM**
PHASES: **3**
L-L VOLTS **208V**
L-G VOLTS **120V**
BUS AMPS: **225A**
MAIN CB AMPS: **225A**
AIC RATING: **27,975 MINIMUM**

PROJECT: **CFCC HSS RENOVATION PH2**
CLIENT: -
MOUNTING: **SURFACE**
PANEL TYPE: **NEMA 1**
ENGINEER: -
DSA PROJECT NO.: **23175**
FED FROM: **DP2**

LOAD AMPS.	DESCRIPTION	NOTES	BREAKER POLE	BREAKER AMP.	CKT. #	CKT.	BREAKER AMP.	BREAKER POLE	NOTES	DESCRIPTION	LOAD AMPS.
416	AIR HANDLER	9	2	60	1 A 2		20	1	9	SPARE	0.0
416	(AHU-2F)				3 B 4		20	1	9	SPARE	0.0
25.6	OUTDOOR HEAT PUMP	9	2	50	5 C 6		20	1	9	SPARE	0.0
25.6	(HP-2F)				7 A 8		20	1	9	SPARE	0.0
416	AIR HANDLER	9	2	60	9 B 10		20	1	9	SPARE	0.0
416	(AHU-2C)				11 C 12		20	1	9	SPARE	0.0
25.6	OUTDOOR HEAT PUMP	9	2	50	13 A 14		20	1	9	SPARE	0.0
25.6	(HP-2C)				15 B 16			1	9	SPACE	0.0
416	AIR HANDLER	9	2	60	17 C 18			1	9	SPACE	0.0
416	(AHU-2H)				19 A 20			1	9	SPACE	0.0
25.6	OUTDOOR HEAT PUMP	9	2	50	21 B 22			1	9	SPACE	0.0
25.6	(HP-2H)				23 C 24			1	9	SPACE	0.0
0.0	SPACE	9	1		25 A 26			1	9	SPACE	0.0
0.0	SPACE	9	1		27 B 28			1	9	SPACE	0.0
0.0	SPACE	9	1		29 C 30			1	9	SPACE	0.0
0.0	SPACE	9	1		31 A 32			1	9	SPACE	0.0
0.0	SPACE	9	1		33 B 34			1	9	SPACE	0.0
0.0	SPACE	9	1		35 C 36			1	9	SPACE	0.0
0.0	SPACE	9	1		37 A 38			1	9	SPACE	0.0
0.0	SPACE	9	1		39 B 40			1	9	SPACE	0.0
0.0	SPACE	9	1		41 C 42			1	9	SPACE	0.0

LOAD SUMMARY	CON. KVA	%	DEM. KVA
RECEPTACLES	16.44	code	13.22
MISC	5.28	100%	5.28
LIGHTING	0	125%	0
HVAC	41.928	100%	41.928
HEAT STRIP	0	100%	0
REFRIGERATION	0	65%	0
EXISTING FLOOR LOAD	0	100%	0
COOKING	0	65%	0
WATER HEATING	0	125%	0
LARGEST MOTOR	0	125%	0
TOTAL KVA	64 KVA		60 KVA
TOTAL AMPS	177 AMPS		168 AMPS

PANEL NOTES:
1. PROVIDE GROUND BUS
2. PROVIDE FULL SIZE NEUTRAL BUS UNLESS NOTED OTHERWISE
3. LO - INDICATES C.B. EQUIPPED WITH "LOCK-OUT" DEVICE
4. GFI - INDICATES C.B. IS GFI TYPE (30 mA FOR EQUIPMENT, 5 mA FOR PERSONNEL)
5. ST- INDICATES C.B. EQUIPPED WITH SHUNT TRIP DEVICE
6. IG - INDICATES CIRCUIT SHALL INCLUDE ADDITIONAL ISOLATED GROUND CONDUCTOR
7. AFCI - INDICATES COMBINATION TYPE AFCI C.B.
8. ALL EXISTING PREVIOUS TENANT BRANCH CIRCUITS TO BE REMOVED FROM PANEL. RELABEL BREAKER AS SPARE AND REMOVE ALL BRANCH CIRCUIT WIRE.
9. EXISTING PREVIOUS TENANT BRANCH CIRCUIT TO BE REMOVED AND REPLACED AS SHOWN.
10. ALL EXISTING CIRCUITS WITH SHARED NEUTRALS TO BE REMOVED.

PANEL NO.: **RP2 (SEC 2)** **(EXISTING PANEL)**
USAGE: **LIGHTING AND APPLIANCE**
LOCATION: **2ND FLOOR ELEC RM**
PHASES: **3**
L-L VOLTS **208V**
L-G VOLTS **120V**
BUS AMPS: **225A**
MAIN CB AMPS: **MLO**
AIC RATING: **27,457 MINIMUM**

PROJECT: **CFCC HSS RENOVATION PH2**
CLIENT: -
MOUNTING: **SURFACE**
PANEL TYPE: **NEMA 1**
ENGINEER: -
DSA PROJECT NO.: **23175**
FED FROM: **RP2 (SEC 1)**

LOAD AMPS.	DESCRIPTION	NOTES	BREAKER POLE	BREAKER AMP.	CKT. #	CKT.	BREAKER AMP.	BREAKER POLE	NOTES	DESCRIPTION	LOAD AMPS.
0.0	SPACE	9	1		43 A 44		20	1	9	SPARE	0.0
0.0	SPACE	9	1		45 B 46		20	1	9	SPARE	0.0
0.0	SPACE	9	1		47 C 48		20	1	9	SPARE	0.0
0.0	SPACE	9	1		49 A 50		20	1		NAC PANEL	2.0
0.0	SPACE	9	1		51 B 52		20	1	9	SPARE	0.0
10.0	RECPT: QUAD A/V DEBRIEFING	9	1	20	53 C 54		20	1	9	SPARE	0.0
0.0	SPARE	9	1	20	55 A 56		20	1	9	PWR: RECIRC. PUMPS	5.0
0.0	SPARE	9	1	20	57 B 58		20	1	9	RECPT: CLG PROJECTOR CLASSROOM	5.0
0.0	SPARE	9	1	20	59 C 60		20	1	9	RECPT: QUAD A/V CLASSROOM	10.0
0.0	SPARE	9	1	20	61 A 62		20	1	9	PWR: PROJECTOR SCREEN CLASSROOM	10.0
9.0	RECPT: CORR/MECH/SIM LAB	9	1	20	63 B 64		20	1	9	PWR: PROJECTOR SCREEN DEBRIEFING	10.0
2.0	RECPT: COUNTER SIM LAB SUPPORT	9	1	20	65 C 66		20	1	9	RECPT: PATIENT HEADWALL	5.0
2.0	RECPT: COUNTER SIM LAB SUPPORT	9	1	20	67 A 68		20	1	9	RECPT: SIM LAB/PATIENT RM/CLASS	12.0
2.0	RECPT: COUNTER SIM LAB SUPPORT	9	1	20	69 B 70		20	1	9	RECPT: CORR/MECH/RR/CLASS	8.0
12.0	RECPT: DEBRIEFING/LAB SUP	9	1	20	71 C 72		20	1	9	RECPT: CTRL RM 227	8.0
12.0	RECPT: DEBRIEFING/SIM LAB	9	1	20	73 A 74		20	1	9	RECPT: MECH/CORR/LINENS	8.0
5.0	RECPT: CLG PROJECTOR DEBRIEFING	9	1	20	75 B 76		20	1	9	RECPT: SIM LAB INST. DESK	6.0
5.0	RECPT: PATIENT HEADWALL	9	1	20	77 C 78		20	1	9	NAC PANEL	2.0
5.0	RECPT: PATIENT HEADWALL	9	1	20	79 A 80		20	1	9	RECPT: CTRL RM 229	6.0
5.0	RECPT: PATIENT HEADWALL	9	1	20	81 B 82		20	1	9	RECPT: PATIENT HEADWALL	5.0
5.0	RECPT: PATIENT HEADWALL	9	1	20	83 C 84		20	1	9	RECPT: PATIENT HEADWALL	5.0

LOAD SUMMARY	CON. KVA	%	DEM. KVA
RECEPTACLES	16.44	code	13.22
MISC	5.28	100%	5.28
LIGHTING	0	125%	0
HVAC	0	100%	0
HEAT STRIP	0	100%	0
REFRIGERATION	0	65%	0
EXISTING FLOOR LOAD	0	100%	0
COOKING	0	65%	0
WATER HEATING	0	125%	0
LARGEST MOTOR	0	125%	0
TOTAL KVA	22 KVA		19 KVA
TOTAL AMPS	60 AMPS		51 AMPS

PANEL NOTES:
1. PROVIDE GROUND BUS
2. PROVIDE FULL SIZE NEUTRAL BUS UNLESS NOTED OTHERWISE
3. LO - INDICATES C.B. EQUIPPED WITH "LOCK-OUT" DEVICE
4. GFI - INDICATES C.B. IS GFI TYPE (30 mA FOR EQUIPMENT, 5 mA FOR PERSONNEL)
5. ST- INDICATES C.B. EQUIPPED WITH SHUNT TRIP DEVICE
6. IG - INDICATES CIRCUIT SHALL INCLUDE ADDITIONAL ISOLATED GROUND CONDUCTOR
7. AFCI - INDICATES COMBINATION TYPE AFCI C.B.
8. ALL EXISTING PREVIOUS TENANT BRANCH CIRCUITS TO BE REMOVED FROM PANEL. RELABEL BREAKER AS SPARE AND REMOVE ALL BRANCH CIRCUIT WIRE.
9. EXISTING PREVIOUS TENANT BRANCH CIRCUIT TO BE REMOVED AND REPLACED AS SHOWN.
10. ALL EXISTING CIRCUITS WITH SHARED NEUTRALS TO BE REMOVED.

PANEL NO.: **DP2**
USAGE: **MAIN DISTRIBUTION SWITCHBOARD**
LOCATION: **2ND FLOOR ELEC RM**
PHASES: **3**
L-L VOLTS **208V**
L-G VOLTS **120V**
BUS AMPS: **800A**
MAIN CB AMPS: **800A**
AIC RATING: **39,030 MINIMUM**

PROJECT: **CFCC HSS RENOVATION PH2**
CLIENT: -
MOUNTING: **PAD**
PANEL TYPE: **NEMA 3R SWITCHBOARD**
ENGINEER: -
DSA PROJECT NO.: **23175**
FED FROM: **2ND FL GUTTER**

LOAD AMPS.	DESCRIPTION	NOTES	BREAKER POLE	BREAKER AMP.		BREAKER AMP.	BREAKER POLE	NOTES	DESCRIPTION	LOAD AMPS.
294.2	PANEL 3N4	7	3	400	A		3		SPACE	0.0
294.2					B				(OCCUPIED BY EX. MP2)	0.0
294.2					C					0.0
169.3	(EX) RP2		3	225	A	225	3		PANEL 2N2	40.9
162.7					B					45.9
171.2					C					12.5
0.0	SPACE		3		A		3		SPACE	0.0
0.0					B					0.0
0.0					C					0.0

LOAD SUMMARY	CON. KVA	%	DEM. KVA
RECEPTACLES	16.44	code	13.22
MISC	111.264	100%	111.264
LIGHTING	5.04	125%	6.3
HVAC	41.928	100%	41.928
HEAT STRIP	0	100%	0
REFRIGERATION	0	65%	0
EXISTING FLOOR LOAD	0	100%	0
COOKING	0	65%	0
TOTAL KVA	179 KVA		178 KVA
TOTAL AMPS	497 AMPS		495 AMPS

PANEL NOTES:
1. PROVIDE GROUND BUS
2. PROVIDE FULL SIZE NEUTRAL BUS UNLESS NOTED OTHERWISE
3. LO - INDICATES C.B. EQUIPPED WITH "LOCK-ON" DEVICE
4. GFI - INDICATES C.B. IS GFI TYPE (30 mA FOR EQUIPMENT, 5 mA FOR PERSONNEL)
5. ST- INDICATES C.B. EQUIPPED WITH SHUNT TRIP DEVICE
6. IG - INDICATES CIRCUIT SHALL INCLUDE ADDITIONAL ISOLATED GROUND CONDUCTOR
7. EXISTING PREVIOUS TENANT BRANCH CIRCUIT TO BE REMOVED AND REPLACED AS SHOWN.

PANEL NO.: **2N2**
USAGE: **LIGHTING AND APPLIANCE**
LOCATION: **2ND FLOOR ELEC RM**
PHASES: **3**
L-L VOLTS **208V**
L-G VOLTS **120V**
BUS AMPS: **225A**
MAIN CB AMPS: **MLO**
AIC RATING: **38,028 MINIMUM**

PROJECT: **CFCC HSS RENOVATION PH2**
CLIENT: -
MOUNTING: **SURFACE**
PANEL TYPE: **NEMA 1**
ENGINEER: -
DSA PROJECT NO.: **23175**
FED FROM: **DP2**

LOAD AMPS.	DESCRIPTION	NOTES	BREAKER POLE	BREAKER AMP.	CKT. #	CKT.	BREAKER AMP.	BREAKER POLE	NOTES	DESCRIPTION	LOAD AMPS.
9.0	LTS: CORRIDOR 2ND FL		1	20	1 A 2		30	2		HOT WATER HEATER	21.6
9.0	LTS: CLASS/DEBRIEF/LAB SUPPORT		1	20	3 B 4					(WH2)	21.6
10.0	LTS: SIM LAB/CONTROL RMS		1	20	5 C 6			1		SPACE	0.0
5.0	LTS: PATIENT RM/CLASS/MECH		1	20	7 A 8			1		SPACE	0.0
9.0	LTS: EM VIA INVERTER		1	20	9 B 10			1		SPACE	0.0
0.0	SPARE		1	20	11 C 12			1		SPACE	0.0
0.0	SPARE		1	20	13 A 14			1		SPACE	0.0
0.0	SPARE		1	20	15 B 16			1		SPACE	0.0
0.0	SPARE		1	20	17 C 18			1		SPACE	0.0
0.0	SPARE		1	20	19 A 20			1		SPACE	0.0
0.0	SPARE		1	20	21 B 22			1		SPACE	0.0
0.0	SPARE		1	20	23 C 24			1		SPACE	0.0
0.0	SPARE		1	20	25 A 26			1		SPACE	0.0
0.0	SPARE		1	20	27 B 28			1		SPACE	0.0
0.0	SPARE		1	20	29 C 30			1		SPACE	0.0

LOAD SUMMARY	CON. KVA	%	DEM. KVA
RECEPTACLES	0	code	0
MISC	0	100%	0
LIGHTING	5.04	125%	6.3
HVAC	0	100%	0
HEAT STRIP	0	100%	0
REFRIGERATION	0	65%	0
EXISTING FLOOR LOAD	0	100%	0
COOKING	0	65%	0
WATER HEATING	4.5	125%	5.625
LARGEST MOTOR	0	125%	0
TOTAL KVA	10 KVA		12 KVA
TOTAL AMPS	26 AMPS		33 AMPS

PANEL NOTES:
1. PROVIDE GROUND BUS
2. PROVIDE FULL SIZE NEUTRAL BUS UNLESS NOTED OTHERWISE
3. LO - INDICATES C.B. EQUIPPED WITH "LOCK-OUT" DEVICE
4. GFI - INDICATES C.B. IS GFI TYPE (30 mA FOR EQUIPMENT, 5 mA FOR PERSONNEL)
5. ST- INDICATES C.B. EQUIPPED WITH SHUNT TRIP DEVICE
6. IG - INDICATES CIRCUIT SHALL INCLUDE ADDITIONAL ISOLATED GROUND CONDUCTOR
7. AFCI - INDICATES COMBINATION TYPE AFCI C.B.

PANEL NO.: **P3A** **(EXISTING PANEL)**
USAGE: **LIGHTING AND APPLIANCE**
LOCATION: **3RD FLOOR IT RM**
PHASES: **3**
L-L VOLTS **208V**
L-G VOLTS **120V**
BUS AMPS: **400A**
MAIN CB AMPS: **MLO**
AIC RATING: **12,727 MINIMUM**

PROJECT: **CFCC HSS RENOVATION PH2**
CLIENT: -
MOUNTING: **SURFACE**
PANEL TYPE: **NEMA 1**
ENGINEER: -
DSA PROJECT NO.: **23175**
FED FROM: **3RD FL GUTTER**

LOAD AMPS.	DESCRIPTION	NOTES	BREAKER POLE	BREAKER AMP.	CKT. #	CKT.	BREAKER AMP.	BREAKER POLE	NOTES	DESCRIPTION	LOAD AMPS.
66.8	HOT WATER HEATER	10	3	90	1 A 2		60	2		AIR HANDLER	41.6
66.6	(WH1)				3 B 4					(AHU-3E)	41.6
66.6					5 C 6		50	2		OUTDOOR HEAT PUMP	25.6
0.0	SPACE		1		7 A 8					(HP-3E)	25.6
25.6	OUTDOOR HEAT PUMP	10	2	50	9 B 10		60	2		AIR HANDLER	41.6
25.6	(HP-3H)				11 C 12					(AHU-3F)	41.6
20.8	OUTDOOR HEAT PUMP	10	2	40	13 A 14		40	2		OUTDOOR HEAT PUMP	20.8
20.8	(HP-3G)				15 B 16					(HP-3F)	20.8
0.0	SPARE	9	1	20	17 C 18		60	2		AIR HANDLER	41.6
16.0	SERV RM A/C (INDOOR/OUTDOOR)		1	20	19 A 20					(AHU-3G)	41.6
0.0	SPARE	9	1	20	21 B 22		60	2		AIR HANDLER	41.6
0.0	SPARE	9	1	20	23 C 24					(AHU-3H)	41.6
0.0	SPARE	9	1	20	25 A 26		20	1	9	SPARE	0.0
5.0	IT RACK		1	20	27 B 28		20	1	9	SPARE	0.0
0.0	SPARE	9	1	15	29 C 30		20	1	9	SPARE	0.0
0.0	SPARE	9	1	20	31 A 32		20	1	9	SPARE	0.0
5.0	PWR: RECIRC. PUMPS	9	1	20	33 B 34		20	1	9	SPARE	0.0
1.0	PWR: FIRE SMOKE DAMPER	9	1	20	35 C 36		20	1	9	SPARE	0.0
9.0	RECPT: HALL/STG/DENTAL	10	1	20	37 A 38		20	1	9	SPARE	0.0
6.0	RECPT: POKE THRU @ INST. STA.	10	1	20	39 B 40		30	2	9	SPARE	0.0
12.0	RECPT: MECH/CORR/SIM LAB	10	1	20	41 C 42						0.0

LOAD SUMMARY	CON. KVA	%	DEM. KVA
RECEPTACLES	3.84	code	3.84
MISC	0.72	100%	0.72
LIGHTING	0	125%	0
HVAC	55.828	100%	55.828
HEAT STRIP	0	100%	0
REFRIGERATION	0	65%	0
EXISTING FLOOR LOAD	0	100%	0
COOKING	0	65%	0
WATER HEATING	24	125%	30
LARGEST MOTOR	0	125%	0
TOTAL KVA	84 KVA		90 KVA
TOTAL AMPS	234 AMPS		251 AMPS

PANEL NOTES:
1. PROVIDE GROUND BUS
2. PROVIDE FULL SIZE NEUTRAL BUS UNLESS NOTED OTHERWISE
3. LO - INDICATES C.B. EQUIPPED WITH "LOCK-OUT" DEVICE
4. GFI - INDICATES C.B. IS GFI TYPE (30 mA FOR EQUIPMENT, 5 mA FOR PERSONNEL)
5. ST- INDICATES C.B. EQUIPPED WITH SHUNT TRIP DEVICE
6. IG - INDICATES CIRCUIT SHALL INCLUDE ADDITIONAL ISOLATED GROUND CONDUCTOR
7. AFCI - INDICATES COMBINATION TYPE AFCI C.B.
8. PANEL P3B IS FED FROM 200/3 BREAKE LOCATED AT TOP SECTION OF PANEL P3A. TOTAL LOADS SHOWN REFLECT P3A AND P3B LOADS.
9. ALL EXISTING PREVIOUS TENANT BRANCH CIRCUITS TO BE REMOVED FROM PANEL, UNO. RELABEL BREAKER AS SPARE AND REMOVE ALL BRANCH CIRCUIT WIRE.
10. EXISTING PREVIOUS TENANT BRANCH CIRCUIT TO BE REMOVED AND REPLACED AS SHOWN.
11. MAINTAIN EXISTING BRANCH CIRCUITS STILL IN USE.

PANEL NO.: **P3B** **(EXISTING PANEL)**
USAGE: **LIGHTING AND APPLIANCE**
LOCATION: **3RD FLOOR IT RM**
PHASES: **3**
L-L VOLTS **208V**
L-G VOLTS **120V**
BUS AMPS: **225A**
MAIN CB AMPS: **MLO**
AIC RATING: **12,600 MINIMUM**

PROJECT: **CFCC HSS RENOVATION PH2**
CLIENT: -
MOUNTING: **SURFACE**
PANEL TYPE: **NEMA 1**
ENGINEER: -
DSA PROJECT NO.: **23175**
FED FROM: **P3A**

LOAD AMPS.	DESCRIPTION	NOTES	BREAKER POLE	BREAKER AMP.	CKT. #	CKT.	BREAKER AMP.	BREAKER POLE	NOTES	DESCRIPTION	LOAD AMPS.
3.0	RECPT: PHONE/DATA		1	20	1 A 2		30	2	GFI	DRYER	20.0
0.0	SPARE	8	1	20	3 B 4						20.0
0.0	SPARE	8	1	20	5 C 6		30	2	GFI	DRYER	20.0
0.0	SPARE	8	2	20	7 A 8						20.0
0.0					9 B 10		30	2	GFI	DRYER	20.0
0.0	SPARE	8	1	20	11 C 12						20.0
0.0	SPARE	8	1	20	13 A 14		30	2	GFI	DRYER	20.0
0.0	SPARE	8	1	20	15 B 16						20.0
0.0	SPARE	8	1	20	17 C 18		20	2	8	SPARE	0.0
10.0	WASHING MACHINE	GFI	1	20	19 A 20						0.0
10.0	WASHING MACHINE	GFI	1	20	21 B 22		20	1	9	PWR: DRYER BOOSTER FANS	2.0
10.0	WASHING MACHINE	GFI	1	20	23 C 24		20	1	9	PWR: FAN (EF-34)	5.0
10.0	WASHING MACHINE	GFI	1	20	25 A 26		20	1	9	RECPT: QUAD, DENTAL MECH RM	6.0
5.0	RECPT: N. LAB COUNTER	9	1	20	27 B 28		20	1	9	RECPT: QUAD, DENTAL MECH RM	6.0
5.0	RECPT: PATIENT HEADWALL	9	1	20	29 C 30		20	1	9	RECPT: WOMENS RR	3.0
5.0	RECPT: PATIENT HEADWALL	9	1	20	31 A 32		20	1	9	RECPT: STG/LAUNDRY/N LAB/MECH	8.0
5.0	RECPT: PATIENT HEADWALL	9	1	20	33 B 34		20	1	9	RECPT: STG/N. LAB	9.0
5.0	RECPT: PATIENT HEADWALL	9	1	20	35 C 36		20	1	8	SPARE	0.0
5.0	RECPT: PATIENT HEADWALL	9	1	20	37 A 38		20	1		SPARE	0.0
0.0	SPARE	8	2	40	39 B 40		40	2		SPARE	0.0
0.0					41 C 42						0.0

LOAD SUMMARY	CON. KVA	%	DEM. KVA
RECEPTACLES	7.8	code	7.8
MISC	22.28	100%	22.28
LIGHTING	0	125%	0
HVAC	0	100%	0
HEAT STRIP	0	100%	0
REFRIGERATION	0	65%	0
EXISTING FLOOR LOAD	0	100%	0
COOKING	0	65%	0
WATER HEATING	0	125%	0
LARGEST MOTOR	0	125%	0
TOTAL KVA	30 KVA		30 KVA
TOTAL AMPS	83 AMPS		83 AMPS

PANEL NOTES:
1. PROVIDE GROUND BUS
2. PROVIDE FULL SIZE NEUTRAL BUS UNLESS NOTED OTHERWISE
3. LO - INDICATES C.B. EQUIPPED WITH "LOCK-OUT" DEVICE
4. GFI - INDICATES C.B. IS GFI TYPE (30 mA FOR EQUIPMENT, 5 mA FOR PERSONNEL)
5. ST- INDICATES C.B. EQUIPPED WITH SHUNT TRIP DEVICE
6. IG - INDICATES CIRCUIT SHALL INCLUDE ADDITIONAL ISOLATED GROUND CONDUCTOR
7. AFCI - INDICATES COMBINATION TYPE AFCI C.B.
8. ALL EXISTING PREVIOUS TENANT BRANCH CIRCUITS TO BE REMOVED FROM PANEL, UNO. RELABEL BREAKER AS SPARE AND REMOVE ALL BRANCH CIRCUIT WIRE.
9. EXISTING PREVIOUS TENANT BRANCH CIRCUIT TO BE REMOVED AND REPLACED AS SHOWN.
10. MAINTAIN EXISTING BRANCH CIRCUITS STILL IN USE.

PANEL KEY

MDP	RP2 (SEC 1)	RP2 (SEC 2)
DP2	2N2	P3A
P3B	-	-

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Interior Renovation – Phase Two
319 N 3rd Stree, Wilmington, North Carolina 28401

NCCCS # 2772
SCO # 23-37149-01

REV.	DATE	DESCRIPTION

NO.	DATE	ISSUE NOTE

Project Manager | Drawn By
Date: 03-01-2024 | Reviewed By
Project ID: 23-27149-01
Sheet Title: **PANEL SCHEDULES**
Sheet No.: **E501**

PANEL NO.: 3N2
USAGE: LIGHTING AND APPLIANCE
LOCATION: 3RD MAIN ELEC RM
PHASES: 3
L-L VOLTS 208V
L-G VOLTS 120V
BUS AMPS: 225A
MAIN CB AMPS: 200A
AIC RATING: 10,000 MINIMUM

PROJECT: CFCC HSS RENOVATION PH2
CLIENT: -
MOUNTING: SURFACE
PANEL TYPE: NEMA 1
ENGINEER: -
DSA PROJECT NO.: 23175
FED FROM: 3RD FL GUTTER

LOAD AMPS.	DESCRIPTION	NOTES	BREAKER POLE	BREAKER AMP.	CKT. #		CKT. #	BREAKER AMP.	BREAKER POLE	NOTES	DESCRIPTION	LOAD AMPS.
4.0	PWR: DENTAL UTIL. CAB		1	20	1	A	2	20	1		PWR: DENTAL UTIL. CAB	4.0
4.0	PWR: DENTAL LIGHT		1	20	3	B	4	20	1		PWR: DENTAL LIGHT	4.0
10.0	PWR: DENTAL CHAIR QUAD		1	20	5	C	6	20	1		PWR: DENTAL CHAIR QUAD	10.0
8.0	PWR: DENTAL XRAY		1	20	7	A	8	20	1		PWR: DENTAL XRAY	8.0
4.0	PWR: DENTAL UTIL. CAB		1	20	9	B	10	20	1		PWR: DENTAL UTIL. CAB	4.0
4.0	PWR: DENTAL LIGHT		1	20	11	C	12	20	1		PWR: DENTAL LIGHT	4.0
10.0	PWR: DENTAL CHAIR QUAD		1	20	13	A	14	20	1		PWR: DENTAL CHAIR QUAD	10.0
8.0	PWR: DENTAL XRAY		1	20	15	B	16	20	1		PWR: DENTAL XRAY	8.0
4.0	PWR: DENTAL UTIL. CAB		1	20	17	C	18	20	1		PWR: DENTAL UTIL. CAB	4.0
4.0	PWR: DENTAL LIGHT		1	20	19	A	20	20	1		PWR: DENTAL LIGHT	4.0
10.0	PWR: DENTAL CHAIR QUAD		1	20	21	B	22	20	1		PWR: DENTAL CHAIR QUAD	10.0
11.0	RECPT: DENTAL BAY'S		1	20	23	C	24	20	1		PWR: DENTAL XRAY	8.0
11.0	RECPT: DENTAL BAY'S		1	20	25	A	26	20	1		SPARE	0.0
32.0	AIR HANDLER		2	40	27	B	28	20	1		SPARE	0.0
32.0	(AHU-3I)				29	C	30	20	1		SPARE	0.0
14.4	OUTDOOR HEAT PUMP		2	20	31	A	32	20	1		SPARE	0.0
14.4	(HP-3I)				33	B	34	20	1		SPARE	0.0
41.6	AIR HANDLER		2	60	35	C	36	20	1		SPARE	0.0
41.6	(AHU-3J)				37	A	38	20	1		SPARE	0.0
20.8	OUTDOOR HEAT PUMP		2	30	39	B	40	20	1		SPARE	0.0
20.8	(HP-3J)				41	C	42	20	1		SPARE	0.0

LOAD SUMMARY	CON. KVA	%	DEM. KVA
RECEPTACLES	2.64	code	2.64
MISC	17.76	100%	17.76
LIGHTING	0	125%	0
HVAC	22.63	100%	22.63
HEAT STRIP	0	100%	0
REFRIGERATION	0	65%	0
EXISTING FLOOR LOAD	0	100%	0
COOKING	0	65%	0
WATER HEATING	0	125%	0
LARGEST MOTOR	0	125%	0
TOTAL KVA	43 KVA		43 KVA
TOTAL AMPS	119 AMPS		119 AMPS

PANEL NOTES:
1 . PROVIDE GROUND BUS
2 . PROVIDE FULL SIZE NEUTRAL BUS UNLESS NOTED OTHERWISE
3 . LO - INDICATES C.B. EQUIPPED WITH "LOCK-OUT" DEVICE
4 . GFI - INDICATES C.B. IS GFI TYPE (30 mA FOR EQUIPMENT, 5 mA FOR PERSONNEL)
5 . ST- INDICATES C.B. EQUIPPED WITH SHUNT TRIP DEVICE
6 . IG - INDICATES CIRCUIT SHALL INCLUDE ADDITIONAL ISOLATED GROUND CONDUCTOR
7 . AFCI - INDICATES COMBINATION TYPE AFCI C.B.

PANEL NO.: 3N3
USAGE: LIGHTING AND APPLIANCE
LOCATION: 3RD FLOOR IT RM
PHASES: 3
L-L VOLTS 208V
L-G VOLTS 120V
BUS AMPS: 100A
MAIN CB AMPS: 100A
AIC RATING: 10,000 MINIMUM

PROJECT: CFCC HSS RENOVATION PH2
CLIENT: -
MOUNTING: SURFACE
PANEL TYPE: NEMA 1
ENGINEER: -
DSA PROJECT NO.: 23175
FED FROM: 3RD FL GUTTER

LOAD AMPS.	DESCRIPTION	NOTES	BREAKER POLE	BREAKER AMP.	CKT. #		CKT. #	BREAKER AMP.	BREAKER POLE	NOTES	DESCRIPTION	LOAD AMPS.
12.0	RECPT: LOCKERS/CORR/BREAK		1	20	1	A	2	20	1		SPARE	0.0
9.0	RECPT: CASE STUDY		1	20	3	B	4	20	1		SPARE	0.0
8.0	RECPT: CASE STUDY		1	30	5	C	6	20	1		SPARE	0.0
2.0	RECPT: BREAK RM COUNTER		1	20	7	A	8	20	1		SPARE	0.0
2.0	RECPT: BREAK RM COUNTER		1	20	9	B	10	20	1		SPARE	0.0
2.0	RECPT: BREAK RM COUNTER		1	20	11	C	12	20	1		SPARE	0.0
10.0	RECPT: REFRIGERATOR		1	40	13	A	14		1		SPACE	0.0
9.0	RECPT: CORR/MECH		1	20	15	B	16		1		SPACE	0.0
0.0	SPARE		1	20	17	C	18		1		SPACE	0.0
0.0	SPARE		1	20	19	A	20		1		SPACE	0.0
11.0	LTS: EM VIA INVERTER		1	25	21	B	22		1		SPACE	0.0
0.0	SPARE		1	20	23	C	24		1		SPACE	0.0
11.0	LTS: CASE STUDDY/BREAK/BAYS		1	20	25	A	26		1		SPACE	0.0
12.0	LTS: BAYS/DENTAL LAB		1	20	27	B	28		1		SPACE	0.0
12.0	LTS: NURSING LAB		1	20	29	C	30		1		SPACE	0.0

LOAD SUMMARY	CON. KVA	%	DEM. KVA
RECEPTACLES	5.28	code	5.28
MISC	1.2	100%	1.2
LIGHTING	5.52	125%	6.9
HVAC	0	100%	0
HEAT STRIP	0	100%	0
REFRIGERATION	0	65%	0
EXISTING FLOOR LOAD	0	100%	0
COOKING	0	65%	0
WATER HEATING	0	125%	0
LARGEST MOTOR	0	125%	0
TOTAL KVA	12 KVA		13 KVA
TOTAL AMPS	33 AMPS		37 AMPS

PANEL NOTES:
1 . PROVIDE GROUND BUS
2 . PROVIDE FULL SIZE NEUTRAL BUS UNLESS NOTED OTHERWISE
3 . LO - INDICATES C.B. EQUIPPED WITH "LOCK-OUT" DEVICE
4 . GFI - INDICATES C.B. IS GFI TYPE (30 mA FOR EQUIPMENT, 5 mA FOR PERSONNEL)
5 . ST- INDICATES C.B. EQUIPPED WITH SHUNT TRIP DEVICE
6 . IG - INDICATES CIRCUIT SHALL INCLUDE ADDITIONAL ISOLATED GROUND CONDUCTOR
7 . AFCI - INDICATES COMBINATION TYPE AFCI C.B.

PANEL NO.: 3N4
USAGE: LIGHTING AND APPLIANCE
LOCATION: DENTAL EQUIP. STG RM
PHASES: 3
L-L VOLTS 208V
L-G VOLTS 120V
BUS AMPS: 400A
MAIN CB AMPS: 400A
AIC RATING: 39,030 MINIMUM

PROJECT: CFCC HSS RENOVATION PH2
CLIENT: -
MOUNTING: SURFACE
PANEL TYPE: NEMA 1
ENGINEER: -
DSA PROJECT NO.: 23175
FED FROM: DP2

LOAD AMPS.	DESCRIPTION	NOTES	BREAKER POLE	BREAKER AMP.	CKT. #		CKT. #	BREAKER AMP.	BREAKER POLE	NOTES	DESCRIPTION	LOAD AMPS.
28.8	PWR: VACUUM PUMP		3	40	1	A	2	30	3		PWR: COMPRESSOR	23.1
28.8					3	B	4					23.1
28.8					5	C	6					23.1
28.8	PWR: VACUUM PUMP		3	40	7	A	8	30	3		PWR: COMPRESSOR	23.1
28.8					9	B	10					23.1
28.8					11	C	12					23.1
28.8	PWR: VACUUM PUMP		3	40	13	A	14	30	3		PWR: COMPRESSOR	23.1
28.8					15	B	16					23.1
28.8					17	C	18					23.1
28.8	PWR: VACUUM PUMP		3	40	19	A	20	30	3		PWR: COMPRESSOR	23.1
28.8					21	B	22					23.1
28.8					23	C	24					23.1
28.8	PWR: VACUUM PUMP		3	40	25	A	26	20	1		SPARE	0.0
28.8					27	B	28	20	1		SPARE	0.0
28.8					29	C	30	20	1		SPARE	0.0
28.8	PWR: VACUUM PUMP		3	40	31	A	32	20	1		SPARE	0.0
28.8					33	B	34	20	1		SPARE	0.0
28.8					35	C	36	20	1		SPARE	0.0
28.8	PWR: VACUUM PUMP		3	40	37	A	38	20	1		SPARE	0.0
28.8					39	B	40	20	1		SPARE	0.0
28.8					41	C	42	20	1		SPARE	0.0

LOAD SUMMARY	CON. KVA	%	DEM. KVA
RECEPTACLES	0	code	0
MISC	105.984	100%	105.984
LIGHTING	0	125%	0
HVAC	0	100%	0
HEAT STRIP	0	100%	0
REFRIGERATION	0	65%	0
EXISTING FLOOR LOAD	0	100%	0
COOKING	0	65%	0
WATER HEATING	0	125%	0
LARGEST MOTOR	0	125%	0
TOTAL KVA	106 KVA		106 KVA
TOTAL AMPS	294 AMPS		294 AMPS

PANEL NOTES:
1 . PROVIDE GROUND BUS
2 . PROVIDE FULL SIZE NEUTRAL BUS UNLESS NOTED OTHERWISE
3 . LO - INDICATES C.B. EQUIPPED WITH "LOCK-OUT" DEVICE
4 . GFI - INDICATES C.B. IS GFI TYPE (30 mA FOR EQUIPMENT, 5 mA FOR PERSONNEL)
5 . ST- INDICATES C.B. EQUIPPED WITH SHUNT TRIP DEVICE
6 . IG - INDICATES CIRCUIT SHALL INCLUDE ADDITIONAL ISOLATED GROUND CONDUCTOR
7 . AFCI - INDICATES COMBINATION TYPE AFCI C.B.

PANEL NO.: 3N5
USAGE: LIGHTING AND APPLIANCE
LOCATION: OFFICE
PHASES: 3
L-L VOLTS 208V
L-G VOLTS 120V
BUS AMPS: 225A
MAIN CB AMPS: 200A
AIC RATING: 10,000 MINIMUM

PROJECT: CFCC HSS RENOVATION PH2
CLIENT: -
MOUNTING: SURFACE
PANEL TYPE: NEMA 1
ENGINEER: -
DSA PROJECT NO.: 23175
FED FROM: 3RD FL GUTTER

LOAD AMPS.	DESCRIPTION	NOTES	BREAKER POLE	BREAKER AMP.	CKT. #		CKT. #	BREAKER AMP.	BREAKER POLE	NOTES	DESCRIPTION	LOAD AMPS.
10.0	PWR: LAB BENCH		1	20	1	A	2	20	1		PWR: LAB BENCH	10.0
10.0	PWR: LAB BENCH		1	20	3	B	4	20	1		PWR: LAB BENCH	10.0
10.0	PWR: LAB BENCH		1	20	5	C	6	20	1		PWR: LAB BENCH	10.0
10.0	PWR: LAB BENCH		1	20	7	A	8	20	1		PWR: LAB BENCH	10.0
10.0	PWR: LAB BENCH		1	20	9	B	10	20	1		PWR: LAB BENCH	10.0
10.0	PWR: LAB BENCH		1	20	11	C	12	20	1		PWR: LAB BENCH	10.0
10.0	PWR: LAB BENCH		1	20	13	A	14	20	1		PWR: LAB BENCH	10.0
10.0	PWR: LAB BENCH		1	20	15	B	16	20	1		PWR: LAB BENCH	10.0
10.0	PWR: LAB BENCH		1	20	17	C	18	20	1		PWR: LAB BENCH	10.0
10.0	PWR: LAB BENCH		1	20	19	A	20	20	1		RECPT: MODEL TRIMMER	10.0
10.0	PWR: LAB BENCH		1	20	21	B	22	20	1		RECPT: MODEL TRIMMER	10.0
10.0	PWR: LAB BENCH		1	20	23	C	24	20	1		RECPT: MODEL TRIMMER	10.0
10.0	PWR: LAB BENCH		1	20	25	A	26	20	1		RECPT: CAD/CAM MILL	10.0
10.0	PWR: LAB BENCH		1	20	27	B	28	20	1		RECPT: U/C SUCTION UNIT	6.0
10.0	PWR: LAB BENCH		1	20	29	C	30	20	1		PWR: INSTRUCTOR LAB BENCH	10.0
10.0	PWR: LAB BENCH		1	20	31	A	32	20	1		SPARE	0.0
10.0	PWR: LAB BENCH		1	20	33	B	34	20	1		SPARE	0.0
10.0	PWR: LAB BENCH		1	20	35	C	36	20	1		SPARE	0.0
10.0	PWR: LAB BENCH		1	20	37	A	38	20	1		SPARE	0.0
10.0	PWR: LAB BENCH		1	20	39	B	40	20	1		SPARE	0.0
10.0	PWR: LAB BENCH		1	20	41	C	42	20	1		SPARE	0.0

LOAD SUMMARY	CON. KVA	%	DEM. KVA
RECEPTACLES	0	code	0
MISC	42.72	100%	42.72
LIGHTING	0	125%	0
HVAC	0	100%	0
HEAT STRIP	0	100%	0
REFRIGERATION	0	65%	0
EXISTING FLOOR LOAD	0	100%	0
COOKING	0	65%	0
WATER HEATING	0	125%	0
LARGEST MOTOR	0	125%	0
TOTAL KVA	43 KVA		43 KVA
TOTAL AMPS	119 AMPS		119 AMPS

PANEL NOTES:
1 . PROVIDE GROUND BUS
2 . PROVIDE FULL SIZE NEUTRAL BUS UNLESS NOTED OTHERWISE
3 . LO - INDICATES C.B. EQUIPPED WITH "LOCK-OUT" DEVICE
4 . GFI - INDICATES C.B. IS GFI TYPE (30 mA FOR EQUIPMENT, 5 mA FOR PERSONNEL)
5 . ST- INDICATES C.B. EQUIPPED WITH SHUNT TRIP DEVICE
6 . IG - INDICATES CIRCUIT SHALL INCLUDE ADDITIONAL ISOLATED GROUND CONDUCTOR
7 . AFCI - INDICATES COMBINATION TYPE AFCI C.B.

PANEL NO.: MDP4 (EXISTING PANEL)
USAGE: LIGHTING AND APPLIANCE
LOCATION: 4TH FLOOR ELEC RM
PHASES: 3
L-L VOLTS 208V
L-G VOLTS 120V
BUS AMPS: 600A
MAIN CB AMPS: 600A
AIC RATING: 31,205 MINIMUM

PROJECT: CFCC HSS RENOVATION PH2
CLIENT: -
MOUNTING: SURFACE
PANEL TYPE: NEMA 1
ENGINEER: -
DSA PROJECT NO.: 23175
FED FROM: 4TH FL GUTTER

LOAD AMPS.	DESCRIPTION	NOTES	BREAKER POLE	BREAKER AMP.	CKT. #		CKT. #	BREAKER AMP.	BREAKER POLE	NOTES	DESCRIPTION	LOAD AMPS.
50.6	PANEL 4N1		3	200	1	A	2		3		SPACE	0.0
55.8					3	B	4					0.0
52.9					5	C	6					0.0
158.8	PANEL 4N2		3	200	7	A	8		3		SPACE	0.0
138.2					9	B	10					0.0
144.4					11	C	12					0.0
185.9	PANEL 4N3		3	200	13	A	14		3		SPACE	0.0
151.9					15	B	16					0.0
139.9					17	C	18					0.0

LOAD SUMMARY	CON. KVA	%	DEM. KVA
RECEPTACLES	19.8	code	14.9
MISC	63.44	100%	63.44
LIGHTING	5.88	125%	7.35
HVAC	41.928	100%	41.928
HEAT STRIP	0	100%	0
REFRIGERATION	0	65%	0
EXISTING FLOOR LOAD	0	100%	0
COOKING	0	65%	0
WATER HEATING	0	125%	0
LARGEST MOTOR	0	125%	0
TOTAL KVA	131 KVA		128 KVA
TOTAL AMPS	364 AMPS		354 AMPS

PANEL NOTES:
1 . PROVIDE GROUND BUS
2 . PROVIDE FULL SIZE NEUTRAL BUS UNLESS NOTED OTHERWISE
3 . LO - INDICATES C.B. EQUIPPED WITH "LOCK-OUT" DEVICE
4 . GFI - INDICATES C.B. IS GFI TYPE (30 mA FOR EQUIPMENT, 5 mA FOR PERSONNEL)
5 . ST- INDICATES C.B. EQUIPPED WITH SHUNT TRIP DEVICE
6 . IG - INDICATES CIRCUIT SHALL INCLUDE ADDITIONAL ISOLATED GROUND CONDUCTOR
7 . AFCI - INDICATES COMBINATION TYPE AFCI C.B.

PANEL NO.: 4N1
USAGE: LIGHTING AND APPLIANCE
LOCATION: STORAGE 407
PHASES: 3
L-L VOLTS 208V
L-G VOLTS 120V
BUS AMPS: 225A
MAIN CB AMPS: 200A
AIC RATING: 10,000 MINIMUM

PROJECT: CFCC HSS RENOVATION PH2
CLIENT: -
MOUNTING: SURFACE
PANEL TYPE: NEMA 1
ENGINEER: -
DSA PROJECT NO.: 23175
FED FROM: MDP4

LOAD AMPS.	DESCRIPTION	NOTES	BREAKER POLE	BREAKER AMP.	CKT. #		CKT. #	BREAKER AMP.	BREAKER POLE	NOTES	DESCRIPTION	LOAD AMPS.
9.0	RECPT: DENTAL BAYS		1	20	1	A	2	20	1		PWR: EXHAUST FANS (ALTERNATE)	0.0
9.0	RECPT: DENTAL BAYS		1	20	3	B	4	20	1		SPARE	0.0
9.0	RECPT: DENTAL BAYS		1	20	5	C	6	20	1		SPARE	0.0
11.0	RECPT: DENTAL BAY/CORR		1	20	7	A	8	20	1		SPARE	0.0
11.0	RECPT: RADIOGRAPHY/MECH		1	20	9	B	10	20	1		SPARE	0.0
9.0	RECPT: CORR/MECH/RR		1	20	11	C	12	20	1		SPARE	0.0
8.0	RECPT: RR/WAITING AREA		1	20	13	A	14	20	1		SPARE	0.0
12.0	RECPT: RECEPTION COUNTER		1	20	15	B	16	20	1		SPARE	0.0
12.0	RECPT: OFFICE/WORK RM		1	20	17	C	18	20	1		SPARE	0.0
12.0	RECPT: WORK RM/FILE RM/RECEP		1	20	19	A	20	20	1		SPARE	0.0
11.0	RECPT: INSTRUCT STATION		1	20	21	B	22	20	1		SPARE	0.0
9.0	RECPT: INSTRUCT STATION		1	20	23	C	24	20	1		SPARE	0.0
2.0	PWR: EXHAUST FAN (EF-4A)		1	20	25	A	26	20	1		SPARE	0.0
5.0	RECPT: XRAY ROOM		1	20	27	B	28	20	1		SPARE	0.0
5.0	RECPT: XRAY ROOM		1	20	29	C	30	20	1		SPARE	0.0
8.0	RECPT: XRAY		1	20	31	A	32		1		SPACE	0.0
8.0	RECPT: XRAY		1	20	33	B	34		1		SPACE	0.0
10.0	PWR: XRAY (9C)		2	20	35	C	36		1		SPACE	0.0
10.0					37	A	38		1		SPACE	0.0
10.0	PWR: XRAY (9C)		2	20	39	B	40		1		SPACE	0.0
10.0					41	C	42		1		SPACE	0.0

LOAD SUMMARY	CON. KVA	%	DEM. KVA
RECEPTACLES	16.08	code	13.04
MISC	6.08	100%	6.08
LIGHTING	0	125%	0
HVAC	0	100%	0
HEAT STRIP	0	100%	0
REFRIGERATION	0	65%	0
EXISTING FLOOR LOAD	0	100%	0
COOKING	0	65%	0
WATER HEATING	0	125%	0
LARGEST MOTOR	0	125%	0
TOTAL KVA	22 KVA		19 KVA
TOTAL AMPS	62 AMPS		53 AMPS

PANEL NOTES:
1 . PROVIDE GROUND BUS
2 . PROVIDE FULL SIZE NEUTRAL BUS UNLESS NOTED OTHERWISE
3 . LO - INDICATES C.B. EQUIPPED WITH "LOCK-OUT" DEVICE
4 . GFI - INDICATES C.B. IS GFI TYPE (30 mA FOR EQUIPMENT, 5 mA FOR PERSONNEL)
5 . ST- INDICATES C.B. EQUIPPED WITH SHUNT TRIP DEVICE
6 . IG - INDICATES CIRCUIT SHALL INCLUDE ADDITIONAL ISOLATED GROUND CONDUCTOR
7 . AFCI - INDICATES COMBINATION TYPE AFCI C.B.

PANEL NO.: 4N2
USAGE: LIGHTING AND APPLIANCE
LOCATION: 4TH FLOOR ELEC RM
PHASES: 3
L-L VOLTS 208V
L-G VOLTS 120V
BUS AMPS: 225A
MAIN CB AMPS: MLO
AIC RATING: 22,800 MINIMUM

PROJECT: CFCC HSS RENOVATION PH2
CLIENT: -
MOUNTING: SURFACE
PANEL TYPE: NEMA 1
ENGINEER: -
DSA PROJECT NO.: 23175
FED FROM: MDP4

LOAD AMPS.	DESCRIPTION	NOTES	BREAKER POLE	BREAKER AMP.	CKT. #		CKT. #	BREAKER AMP.	BREAKER POLE	NOTES	DESCRIPTION	LOAD AMPS.
14.0	LTS: S.E. BAYS		1	20	1	A	2	60	2		AIR HANDLER	41.6
0.0	SPARE		1	20	3	B	4				(AHU-4F)	41.6
12.0	LTS: S.W. BAYS		1	20	5	C	6	50	2		OUTDOOR HEAT PUMP	25.6
13.0	LTS: RECEPTION/OFFICES/RR/MECH		1	20	7	A	8				(HP-4F)	25.6
10.0	LTS: EM VIA INVERTER		1	25	9	B	10	60	2		AIR HANDLER	41.6
12.0	RECPT: OPEN BAYS/MECH/STERL.		1	20	11	C	12				(AHU-4D)	41.6
11.0	RECPT: OPEN BAYS/MECH		1	20	13	A	14	40	2		OUTDOOR HEAT PUMP	25.6
8.0	RECPT: OPEN BAYS		1	20	15	B	16				(HP-4D)	25.6
0.0	SPARE		1	20	17	C	18	60	2		AIR HANDLER	41.6
0.0	SPARE		1	20	19	A	20				(AHU-4E)	41.6
0.0	SPARE		1	20	21	B	22	40	2		OUTDOOR HEAT PUMP	25.6
0.0	SPARE		1	20	23	C	24				(HP-4E)	25.6
0.0	SPACE		1		25	A	26		1		SPACE	0.0
0.0	SPACE		1		27	B	28		1		SPACE	0.0
0.0	SPACE		1		29	C	30		1		SPACE	0.0

LOAD SUMMARY	CON. KVA	%	DEM. KVA
RECEPTACLES	3.72	code	3.72
MISC	0	100%	0
LIGHTING	5.88	125%	7.35
HVAC	41.928	100%	41.928
HEAT STRIP	0	100%	0
REFRIGERATION	0	65%	0
EXISTING FLOOR LOAD	0	100%	0
COOKING	0	65%	0
WATER HEATING	0	125%	0
LARGEST MOTOR	0	125%	0
TOTAL KVA	52 KVA		53 KVA
TOTAL AMPS	143 AMPS		147 AMPS

PANEL NOTES:
1 . PROVIDE GROUND BUS
2 . PROVIDE FULL SIZE NEUTRAL BUS UNLESS NOTED OTHERWISE
3 . LO - INDICATES C.B. EQUIPPED WITH "LOCK-OUT" DEVICE
4 . GFI - INDICATES C.B. IS GFI TYPE (30 mA FOR EQUIPMENT, 5 mA FOR PERSONNEL)
5 . ST- INDICATES C.B. EQUIPPED WITH SHUNT TRIP DEVICE
6 . IG - INDICATES CIRCUIT SHALL INCLUDE ADDITIONAL ISOLATED GROUND CONDUCTOR
7 . AFCI - INDICATES COMBINATION TYPE AFCI C.B.

PANEL NO.: 4N5
USAGE: LIGHTING AND APPLIANCE
LOCATION: STORAGE 407
PHASES: 3
L-L VOLTS 208V
L-G VOLTS 120V
BUS AMPS: 225A
MAIN CB AMPS: 150A
AIC RATING: 29,254 MINIMUM

PROJECT: CFCC HSS RENOVATION PH2
CLIENT: -
MOUNTING: SURFACE
PANEL TYPE: NEMA 1
ENGINEER: -
DSA PROJECT NO.: 23175
FED FROM: 5TH FL GUTTER

LOAD AMPS.	DESCRIPTION	NOTES	BREAKER POLE	BREAKER AMP.	CKT. #		CKT. #	BREAKER AMP.	BREAKER POLE	NOTES	DESCRIPTION	LOAD AMPS.
0.0	SPARE		1	20	1	A	2		1		SPACE	0.0
0.0	SPARE		1	20	3	B	4		1		SPACE	0.0
0.0	SPARE		1	20	5	C	6		1		SPACE	0.0
0.0	SPARE		1	20	7	A	8		1		SPACE	0.0
0.0	SPARE		1	20	9	B	10		1		SPACE	0.0
0.0	SPARE		1	20	11	C	12		1		SPACE	0.0
0.0	SPARE		1	20	13	A	14		1		SPACE	0.0
0.0	SPARE		1	20	15	B	16		1		SPACE	0.0
0.0	SPARE		1	20	17	C	18		1		SPACE	0.0
0.0	SPARE		1	20	19	A	20		1		SPACE	0.0
0.0	SPARE		1	20	21	B	22		1		SPACE	0.0
0.0	SPARE		1	20	23	C	24		1		SPACE	0.0
0.0	SPARE		1	20	25	A	26		1		SPACE	0.0
0.0	SPARE		1	20	27	B	28		1		SPACE	0.0
0.0	SPARE		1	20	29	C	30		1		SPACE	0.0
0.0	SPARE		1	20	31	A	32		1		SPACE	0.0
0.0	SPARE		1	20	33	B	34		1		SPACE	0.0
0.0	SPARE		1	20	35	C	36		1		SPACE	0.0
0.0	SPARE		1	20	37	A	38		1		SPACE	0.0
0.0	SPARE		1	20	39	B	40		1		SPACE	0.0
0.0	SPARE		1	20	41	C	42		1		SPACE	0.0

LOAD SUMMARY	CON. KVA	%	DEM. KVA
RECEPTACLES	0	code	0
MISC	0	100%	0
LIGHTING	0	125%	0
HVAC	0	100%	0
HEAT STRIP	0	100%	0
REFRIGERATION	0	65%	0
EXISTING FLOOR LOAD	0	100%	0
COOKING	0	65%	0
WATER HEATING	0	125%	0
LARGEST MOTOR	0	125%	0
TOTAL KVA	0 KVA		0 KVA
TOTAL AMPS	0 AMPS		0 AMPS

PANEL NOTES:
1 . PROVIDE GROUND BUS
2 . PROVIDE FULL SIZE NEUTRAL BUS UNLESS NOTED OTHERWISE
3 . LO - INDICATES C.B. EQUIPPED WITH "LOCK-OUT" DEVICE
4 . GFI - INDICATES C.B. IS GFI TYPE (30 mA FOR EQUIPMENT, 5 mA FOR PERSONNEL)
5 . ST- INDICATES C.B. EQUIPPED WITH SHUNT TRIP DEVICE
6 . IG - INDICATES CIRCUIT SHALL INCLUDE ADDITIONAL ISOLATED GROUND CONDUCTOR
7 . AFCI - INDICATES COMBINATION TYPE AFCI C.B.

PANEL KEY

3N2	3N3	3N4
3N5	MDP4	4N1
4N2	4N5	-

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06/07/2024

Cape Fear Community College
Health and Human Services Building
Interior Renovation – Phase Two
319 N 3rd Stree, Wilmington, North Carolina 28401
SCO # 23-37149-01
NCCCS # 2772

REV.	DATE	DESCRIPTION

NO.	DATE	ISSUE NOTE

Project Manager
Drawn By
Date 03-01-2024
Reviewed By
Project ID 23-27149-01
Sheet Title
PANEL SCHEDULES
Sheet No.
E502

1		2		3		4		5		6	

PANEL NO.: 4N3 (SEC 1)

PANEL NO.:	4N3 (SEC 1)	PROJECT:	CFCC HSS RENOVATION PH2
USAGE:	LIGHTING AND APPLIANCE	CLIENT:	-
LOCATION:	4TH FLOOR ELEC RM	MOUNTING:	SURFACE
PHASES:	3	PANEL TYPE:	NEMA 1
L-L VOLTS	208V	ENGINEER:	-
L-G VOLTS	120V	DSA PROJECT NO.:	23175
BUS AMPS:	225A	FED FROM:	MDP4
MAIN CB AMPS:	MLO		
AIC RATING:	10,000 MINIMUM		

LOAD AMPS.	DESCRIPTION	NOTES	BREAKER POLE	BREAKER AMP.	CKT. # / CKT. #	BREAKER AMP.	BREAKER POLE	NOTES	DESCRIPTION	LOAD AMPS.
4.0	PWR: DENTAL UTIL. CAB		1	20	1 A 2	20	1		PWR: DENTAL UTIL. CAB	4.0
4.0	PWR: UTILITY CENTER ISLAND		1	20	3 B 4	20	1		PWR: UTILITY CENTER ISLAND	4.0
10.0	PWR: DENTAL CHAIR QUAD		1	20	5 C 6	20	1		PWR: DENTAL CHAIR QUAD	10.0
8.0	PWR: DENTAL XRAY		1	20	7 A 8	20	1		PWR: DENTAL XRAY	8.0
4.0	PWR: DENTAL UTIL. CAB		1	20	9 B 10	20	1		PWR: DENTAL UTIL. CAB	4.0
4.0	PWR: UTILITY CENTER ISLAND		1	20	11 C 12	20	1		PWR: UTILITY CENTER ISLAND	4.0
10.0	PWR: DENTAL CHAIR QUAD		1	20	13 A 14	20	1		PWR: DENTAL CHAIR QUAD	10.0
8.0	PWR: DENTAL XRAY		1	20	15 B 16	20	1		PWR: DENTAL XRAY	8.0
4.0	PWR: DENTAL UTIL. CAB		1	20	17 C 18	20	1		PWR: DENTAL UTIL. CAB	4.0
4.0	PWR: UTILITY CENTER ISLAND		1	20	19 A 20	20	1		PWR: DENTAL CHAIR QUAD	10.0
10.0	PWR: DENTAL CHAIR QUAD		1	20	21 B 22	20	1		PWR: DENTAL UTIL. CAB	4.0
8.0	PWR: DENTAL XRAY		1	20	23 C 24	20	1		PWR: UTILITY CENTER ISLAND	4.0
4.0	PWR: DENTAL UTIL. CAB		1	20	25 A 26	20	1		PWR: DENTAL CHAIR QUAD	10.0
4.0	PWR: UTILITY CENTER ISLAND		1	20	27 B 28	20	1		PWR: DENTAL XRAY	8.0
10.0	PWR: DENTAL CHAIR QUAD		1	20	29 C 30	20	1		PWR: DENTAL UTIL. CAB	4.0
8.0	PWR: DENTAL XRAY		1	20	31 A 32	20	1		PWR: UTILITY CENTER ISLAND	4.0
4.0	PWR: DENTAL UTIL. CAB		1	20	33 B 34	20	1		PWR: DENTAL CHAIR QUAD	10.0
10.0	PWR: DENTAL CHAIR QUAD		1	20	35 C 36	20	1		PWR: DENTAL XRAY	8.0
0.0	SPARE		1	20	37 A 38	20	1		PWR: DENTAL UTIL. CAB	4.0
0.0	SPARE		1	20	39 B 40	20	1		PWR: DENTAL CHAIR QUAD	10.0
0.0	SPARE		1	20	41 C 42	20	1		SPARE	0.0

LOAD SUMMARY	CON. KVA	%	DEM. KVA
RECEPTACLES	0	code	0
MISC	57.36	100%	57.36
LIGHTING	0	125%	0
HVAC	0	100%	0
HEAT STRIP	0	100%	0
REFRIGERATION	0	65%	0
EXISTING FLOOR LOAD	0	100%	0
COOKING	0	65%	0
WATER HEATING	0	125%	0
LARGEST MOTOR	0	125%	0
TOTAL KVA	57 KVA		57 KVA
TOTAL AMPS	159 AMPS		159 AMPS

PANEL NOTES:
1 . PROVIDE GROUND BUS
2 . PROVIDE FULL SIZE NEUTRAL BUS UNLESS NOTED OTHERWISE
3 . LO - INDICATES C.B. EQUIPPED WITH "LOCK-OUT" DEVICE
4 . GFI - INDICATES C.B. IS GFI TYPE (30 mA FOR EQUIPMENT, 5 mA FOR PERSONNEL)
5 . ST- INDICATES C.B. EQUIPPED WITH SHUNT TRIP DEVICE
6 . IG - INDICATES CIRCUIT SHALL INCLUDE ADDITIONAL ISOLATED GROUND CONDUCTOR
7 . AFCI - INDICATES COMBINATION TYPE AFCI C.B.

PANEL NO.: 4N3 (SEC 2)

PANEL NO.:	4N3 (SEC 2)	PROJECT:	CFCC HSS RENOVATION PH2
USAGE:	LIGHTING AND APPLIANCE	CLIENT:	-
LOCATION:	4TH FLOOR ELEC RM	MOUNTING:	SURFACE
PHASES:	3	PANEL TYPE:	NEMA 1
L-L VOLTS	208V	ENGINEER:	-
L-G VOLTS	120V	DSA PROJECT NO.:	23175
BUS AMPS:	100A	FED FROM:	4N3 (SEC 1)
MAIN CB AMPS:	100A		
AIC RATING:	10,000 MINIMUM		

LOAD AMPS.	DESCRIPTION	NOTES	BREAKER POLE	BREAKER AMP.	CKT. # / CKT. #	BREAKER AMP.	BREAKER POLE	NOTES	DESCRIPTION	LOAD AMPS.
4.0	PWR: DENTAL UTIL. CAB		1	20	43 A 44	20	1		PWR: DENTAL CHAIR QUAD	10.0
4.0	PWR: UTILITY CENTER ISLAND		1	20	45 B 46	20	1		PWR: DENTAL UTIL. CAB	4.0
10.0	PWR: DENTAL CHAIR QUAD		1	20	47 C 48	20	1		PWR: UTILITY CENTER ISLAND	4.0
8.0	PWR: DENTAL XRAY		1	20	49 A 50	20	1		PWR: DENTAL CHAIR QUAD	10.0
4.0	PWR: DENTAL UTIL. CAB		1	20	51 B 52	20	1		PWR: DENTAL XRAY	8.0
4.0	PWR: UTILITY CENTER ISLAND		1	20	53 C 54	20	1		PWR: DENTAL UTIL. CAB	4.0
10.0	PWR: DENTAL CHAIR QUAD		1	20	55 A 56	20	1		PWR: DENTAL CHAIR QUAD	10.0
8.0	PWR: DENTAL XRAY		1	20	57 B 58	20	1		PWR: DENTAL UTIL. CAB	4.0
4.0	PWR: DENTAL UTIL. CAB		1	20	59 C 60	20	1		PWR: DENTAL LIGHT	4.0
4.0	PWR: UTILITY CENTER ISLAND		1	20	61 A 62	20	1		PWR: DENTAL CHAIR QUAD	10.0
10.0	PWR: DENTAL CHAIR QUAD		1	20	63 B 64	20	1		PWR: DENTAL UTIL. CAB	4.0
8.0	PWR: DENTAL XRAY		1	20	65 C 66	20	1		PWR: UTILITY CENTER ISLAND	4.0
4.0	PWR: DENTAL UTIL. CAB		1	20	67 A 68	20	1		PWR: DENTAL CHAIR QUAD	10.0
4.0	PWR: UTILITY CENTER ISLAND		1	20	69 B 70	20	1		PWR: DENTAL XRAY	8.0
10.0	PWR: DENTAL CHAIR QUAD		1	20	71 C 72	20	1		SPARE	0.0
8.0	PWR: DENTAL XRAY		1	20	73 A 74	20	1		SPARE	0.0
4.0	PWR: DENTAL UTIL. CAB		1	20	75 B 76	20	1		SPARE	0.0
4.0	PWR: UTILITY CENTER ISLAND		1	20	77 C 78	20	1		SPARE	0.0
10.0	PWR: DENTAL CHAIR QUAD		1	20	79 A 80	20	1		SPARE	0.0
8.0	PWR: DENTAL XRAY		1	20	81 B 82	20	1		SPARE	0.0
4.0	PWR: DENTAL UTIL. CAB		1	20	83 C 84	20	1		SPARE	0.0

LOAD SUMMARY	CON. KVA	%	DEM. KVA
RECEPTACLES	0	code	0
MISC	27.36	100%	27.36
LIGHTING	0	125%	0
HVAC	0	100%	0
HEAT STRIP	0	100%	0
REFRIGERATION	0	65%	0
EXISTING FLOOR LOAD	0	100%	0
COOKING	0	65%	0
WATER HEATING	0	125%	0
LARGEST MOTOR	0	125%	0
TOTAL KVA	27 KVA		27 KVA
TOTAL AMPS	76 AMPS		76 AMPS

PANEL NOTES:
1 . PROVIDE GROUND BUS
2 . PROVIDE FULL SIZE NEUTRAL BUS UNLESS NOTED OTHERWISE
3 . LO - INDICATES C.B. EQUIPPED WITH "LOCK-OUT" DEVICE
4 . GFI - INDICATES C.B. IS GFI TYPE (30 mA FOR EQUIPMENT, 5 mA FOR PERSONNEL)
5 . ST- INDICATES C.B. EQUIPPED WITH SHUNT TRIP DEVICE
6 . IG - INDICATES CIRCUIT SHALL INCLUDE ADDITIONAL ISOLATED GROUND CONDUCTOR
7 . AFCI - INDICATES COMBINATION TYPE AFCI C.B.

PANEL NO.: 4N4 (SEC 1)

PANEL NO.:	4N4 (SEC 1)	PROJECT:	CFCC HSS RENOVATION PH2
USAGE:	LIGHTING AND APPLIANCE	CLIENT:	-
LOCATION:	4TH FLOOR ELEC RM	MOUNTING:	SURFACE
PHASES:	3	PANEL TYPE:	NEMA 1
L-L VOLTS	208V	ENGINEER:	-
L-G VOLTS	120V	DSA PROJECT NO.:	23175
BUS AMPS:	225A	FED FROM:	4TH FL GUTTER
MAIN CB AMPS:	225A		
AIC RATING:	31,995 MINIMUM		

LOAD AMPS.	DESCRIPTION	NOTES	BREAKER POLE	BREAKER AMP.	CKT. # / CKT. #	BREAKER AMP.	BREAKER POLE	NOTES	DESCRIPTION	LOAD AMPS.
4.0	PWR: DENTAL UTIL. CAB		1	20	1 A 2	20	1		PWR: DENTAL UTIL. CAB	4.0
4.0	PWR: UTILITY CENTER ISLAND		1	20	3 B 4	20	1		PWR: UTILITY CENTER ISLAND	4.0
10.0	PWR: DENTAL CHAIR QUAD		1	20	5 C 6	20	1		PWR: DENTAL CHAIR QUAD	10.0
8.0	PWR: DENTAL XRAY		1	20	7 A 8	20	1		PWR: DENTAL XRAY	8.0
4.0	PWR: DENTAL UTIL. CAB		1	20	9 B 10	20	1		PWR: DENTAL UTIL. CAB	4.0
4.0	PWR: UTILITY CENTER ISLAND		1	20	11 C 12	20	1		PWR: DENTAL CHAIR QUAD	10.0
10.0	PWR: DENTAL CHAIR QUAD		1	20	13 A 14	20	1		SPARE	0.0
8.0	PWR: DENTAL XRAY		1	20	15 B 16	20	1		SPARE	0.0
4.0	PWR: DENTAL UTIL. CAB		1	20	17 C 18	20	1		RECPT: SINGLE CASSETTE	8.0
4.0	PWR: UTILITY CENTER ISLAND		1	20	19 A 20	20	1		RECPT: SINGLE CASSETTE	8.0
10.0	PWR: DENTAL CHAIR QUAD		1	20	21 B 22	20	1		RECPT: AUTOCLAVE	8.0
8.0	PWR: DENTAL XRAY		1	20	23 C 24	20	1		RECPT: AUTOCLAVE	8.0
4.0	PWR: DENTAL UTIL. CAB		1	20	25 A 26	20	1		RECPT: AUTOCLAVE	8.0
10.0	PWR: DENTAL CHAIR QUAD		1	20	27 B 28	20	1		RECPT: AUTOCLAVE	8.0
4.0	PWR: DENTAL UTIL. CAB		1	20	29 C 30	20	1		RECPT: AUTOCLAVE	8.0
4.0	PWR: UTILITY CENTER ISLAND		1	20	31 A 32	20	1		RECPT: AUTOCLAVE	8.0
10.0	PWR: DENTAL CHAIR QUAD		1	20	33 B 34	20	1		RECPT: HANDPIECE MAINT. SYS'S	3.0
8.0	PWR: DENTAL XRAY		1	20	35 C 36	15	2		RECPT: WASHER DISINFECTOR	6.0
8.0	RECPT: INSTRUCTOR STA		1	20	37 A 38					6.0
5.0	RECPT: ULTRASONIC CLEANER		1	20	39 B 40	15	2		RECPT: WASHER DISINFECTOR	6.0
15.0	RECPT: PREFAB CAB POWER		1	20	41 C 42					6.0

LOAD SUMMARY	CON. KVA	%	DEM. KVA
RECEPTACLES	4.08	code	4.08
MISC	59.256	100%	59.256
LIGHTING	0	125%	0
HVAC	0	100%	0
HEAT STRIP	0	100%	0
REFRIGERATION	0	65%	0
EXISTING FLOOR LOAD	0	100%	0
COOKING	0	65%	0
WATER HEATING	0	125%	0
LARGEST MOTOR	0	125%	0
TOTAL KVA	63 KVA		63 KVA
TOTAL AMPS	176 AMPS		176 AMPS

PANEL NOTES:
1 . PROVIDE GROUND BUS
2 . PROVIDE FULL SIZE NEUTRAL BUS UNLESS NOTED OTHERWISE
3 . LO - INDICATES C.B. EQUIPPED WITH "LOCK-OUT" DEVICE
4 . GFI - INDICATES C.B. IS GFI TYPE (30 mA FOR EQUIPMENT, 5 mA FOR PERSONNEL)
5 . ST- INDICATES C.B. EQUIPPED WITH SHUNT TRIP DEVICE
6 . IG - INDICATES CIRCUIT SHALL INCLUDE ADDITIONAL ISOLATED GROUND CONDUCTOR
7 . AFCI - INDICATES COMBINATION TYPE AFCI C.B.

PANEL NO.: 4N4 (SEC 2)

PANEL NO.:	4N4 (SEC 2)	PROJECT:	CFCC HSS RENOVATION PH2
USAGE:	LIGHTING AND APPLIANCE	CLIENT:	-
LOCATION:	4TH FLOOR ELEC RM	MOUNTING:	SURFACE
PHASES:	3	PANEL TYPE:	NEMA 1
L-L VOLTS	208V	ENGINEER:	-
L-G VOLTS	120V	DSA PROJECT NO.:	23175
BUS AMPS:	225A	FED FROM:	4N4 (SEC 1)
MAIN CB AMPS:	110A		
AIC RATING:	31,995 MINIMUM		

LOAD AMPS.	DESCRIPTION	NOTES	BREAKER POLE	BREAKER AMP.	CKT. # / CKT. #	BREAKER AMP.	BREAKER POLE	NOTES	DESCRIPTION	LOAD AMPS.
4.0	PWR: DENTAL UTIL. CAB		1	20	43 A 44	20	1		PWR: DENTAL UTIL. CAB	4.0
4.0	PWR: DENTAL LIGHT		1	20	45 B 46	20	1		PWR: DENTAL LIGHT	4.0
10.0	PWR: DENTAL CHAIR QUAD		1	20	47 C 48	20	1		PWR: DENTAL CHAIR QUAD	10.0
8.0	PWR: DENTAL XRAY		1	20	49 A 50	20	1		PWR: DENTAL XRAY	8.0
4.0	PWR: DENTAL UTIL. CAB		1	20	51 B 52	20	1		PWR: DENTAL UTIL. CAB	4.0
4.0	PWR: DENTAL LIGHT		1	20	53 C 54	20	1		PWR: DENTAL LIGHT	4.0
10.0	PWR: DENTAL CHAIR QUAD		1	20	55 A 56	20	1		PWR: DENTAL CHAIR QUAD	10.0
8.0	PWR: DENTAL XRAY		1	20	57 B 58	20	1		PWR: DENTAL XRAY	8.0
4.0	PWR: DENTAL UTIL. CAB		1	20	59 C 60	20	1		PWR: DENTAL UTIL. CAB	4.0
4.0	PWR: DENTAL LIGHT		1	20	61 A 62	20	1		PWR: DENTAL LIGHT	4.0
10.0	PWR: DENTAL CHAIR QUAD		1	20	63 B 64	20	1		PWR: DENTAL CHAIR QUAD	10.0
8.0	PWR: DENTAL XRAY		1	20	65 C 66	20	1		PWR: DENTAL XRAY	8.0
4.0	PWR: DENTAL UTIL. CAB		1	20	67 A 68	20	1		PWR: DENTAL UTIL. CAB	4.0
4.0	PWR: DENTAL LIGHT		1	20	69 B 70	20	1		PWR: UTILITY CENTER ISLAND	4.0
10.0	PWR: DENTAL CHAIR QUAD		1	20	71 C 72	20	1		PWR: DENTAL CHAIR QUAD	10.0
8.0	PWR: DENTAL XRAY		1	20	73 A 74	20	1		PWR: DENTAL XRAY	8.0
4.0	PWR: DENTAL UTIL. CAB		1	20	75 B 76	20	1		PWR: DENTAL UTIL. CAB	4.0
4.0	PWR: DENTAL LIGHT		1	20	77 C 78	20	1		PWR: DENTAL CHAIR QUAD	10.0
10.0	PWR: DENTAL CHAIR QUAD		1	20	79 A 80	20	1		SPARE	0.0
8.0	PWR: DENTAL XRAY		1	20	81 B 82	20	1		SPARE	0.0
6.0	RECPT: MECH/CORR/INST. STA		1	20	83 C 84	20	1		SPARE	0.0

LOAD SUMMARY	CON. KVA	%	DEM. KVA
RECEPTACLES	0.72	code	0.72
MISC	29.76	100%	29.76
LIGHTING	0	125%	0
HVAC	0	100%	0
HEAT STRIP	0	100%	0
REFRIGERATION	0	65%	0
EXISTING FLOOR LOAD	0	100%	0
COOKING	0	65%	0
WATER HEATING	0	125%	0
LARGEST MOTOR	0	125%	0
TOTAL KVA	30 KVA		30 KVA
TOTAL AMPS	85 AMPS		85 AMPS

PANEL NOTES:
1 . PROVIDE GROUND BUS
2 . PROVIDE FULL SIZE NEUTRAL BUS UNLESS NOTED OTHERWISE
3 . LO - INDICATES C.B. EQUIPPED WITH "LOCK-OUT" DEVICE
4 . GFI - INDICATES C.B. IS GFI TYPE (30 mA FOR EQUIPMENT, 5 mA FOR PERSONNEL)
5 . ST- INDICATES C.B. EQUIPPED WITH SHUNT TRIP DEVICE
6 . IG - INDICATES CIRCUIT SHALL INCLUDE ADDITIONAL ISOLATED GROUND CONDUCTOR
7 . AFCI - INDICATES COMBINATION TYPE AFCI C.B.

PANEL NO.: HP2 (EXISTING HOUSE PANEL)

PANEL NO.:	HP2 (EXISTING HOUSE PANEL)	PROJECT:	CFCC HSS RENOVATION PH2
USAGE:	LIGHTING AND APPLIANCE	CLIENT:	-
LOCATION:	4TH FLOOR ELEC RM	MOUNTING:	SURFACE
PHASES:	3	PANEL TYPE:	NEMA 1
L-L VOLTS	208V	ENGINEER:	-
L-G VOLTS	120V	DSA PROJECT NO.:	23175
BUS AMPS:	225A	FED FROM:	MHP
MAIN CB AMPS:	MLO		
AIC RATING:	49,573 MINIMUM		

LOAD AMPS.	DESCRIPTION	NOTES	BREAKER POLE	BREAKER AMP.	CKT. # / CKT. #	BREAKER AMP.	BREAKER POLE	NOTES	DESCRIPTION	LOAD AMPS.
20.8	(EX) AHU3		2	30	1 A 2	20	1		EWC (3RD FLOOR)	4.0
20.8					3 B 4	20	1		EWC (3RD FLOOR)	4.0
0.0	SPARE	9	2	30	5 C 6	20	1		SPARE	0.0
0.0					7 A 8	30	1	8	HOT WATER HEATER (EWH4)	20.8
9.6	(EX) HP3		2	20	9 B 10	20	1	9	LTS: 4TH FL ELEC/CENTER CORR-RMS	12.0
9.6					11 C 12	20	1		LTS: 4TH FLOOR RESTROOMS	8.0
0.0	SPARE	9	2	20	13 A 14	20	1		SPARE	0.0
0.0					15 B 16	20	1		RCPS: RESTROOM 4TH FL	3.0
21.6	EWH (3RD FLOOR)		2	30	17 C 18	20	1		RCPS: TELE BOARD 4TH FL	3.0
21.6					19 A 20	20	1		RCPS: TELE BOARD 4TH FL	3.0
21.6	EWH (4TH FLOOR)		2	30	21 B 22	20	1	9	SPARE	0.0
21.6					23 C 24	20	1	9	SPARE	0.0
6.0	LTS: 3RD FL CORR/ELEC/LOCK/MECH/S	9	1	20	25 A 26	20	1		SPARE	0.0
7.0	LTS: 3RD FL RESTROOMS	9	1	20	27 B 28	60	2		AIR HANDLER	41.6
0.0	SPARE		1	20	29 C 30				(AHU-4G)	41.6
3.0	RCPS: RESTROOMS 3RD FLOOR		1	20	31 A 32	40	2		OUTDOOR HEAT PUMP	25.6
3.0	(EX)RCP. TELE BOARD 3RD FL		1	20	33 B 34				(HP-4G)	25.6
3.0	(EX)RCP. TELE BOARD 3RD FL		1	20	35 C 36	60	2		AIR HANDLER	41.6
6.0	RCPS: CORR 3RD FLOOR		1	20	37 A 38				(AHU-4H)	41.6
6.0	RCPS: CORR 3RD FLOOR		1	20	39 B 40	50	2		OUTDOOR HEAT PUMP	25.6
1.0	FIRE ALARM		1	20	41 C 42				(HP-4H)	25.6

LOAD SUMMARY	CON. KVA	%	DEM. KVA
RECEPTACLES	3.6	code	3.6
MISC	1.08	100%	1.08
LIGHTING	3.96	125%	4.95
HVAC	34.274	100%	34.274
HEAT STRIP	0	100%	0
REFRIGERATION	0	65%	0
EXISTING FLOOR LOAD	0	100%	0
COOKING	0	65%	0
WATER HEATING	11.5	125%	14.375
LARGEST MOTOR	0	125%	0
TOTAL KVA	54 KVA		58 KVA
TOTAL AMPS	151 AMPS		162 AMPS

PANEL NOTES:
1 . PROVIDE GROUND BUS
2 . PROVIDE FULL SIZE NEUTRAL BUS UNLESS NOTED OTHERWISE
3 . LO - INDICATES C.B. EQUIPPED WITH "LOCK-OUT" DEVICE
4 . GFI - INDICATES C.B. IS GFI TYPE (30 mA FOR EQUIPMENT, 5 mA FOR PERSONNEL)
5 . ST- INDICATES C.B. EQUIPPED WITH SHUNT TRIP DEVICE
6 . IG - INDICATES CIRCUIT SHALL INCLUDE ADDITIONAL ISOLATED GROUND CONDUCTOR
7 . AFCI - INDICATES COMBINATION TYPE AFCI C.B.
8 . EXISTING BREAKER AND BRANCH CIRCUIT TO BE REPLACED AS SHOWN.
9 . EXISTING BREAKER TO REMAIN, REPLACE OR MODIFY BRANCH CIRCUIT AS SHOWN.

PANEL NO.: P52 (EXISTING PANEL)

PANEL NO.:	P52 (EXISTING PANEL)	PROJECT:	CFCC HSS RENOVATION PH2
USAGE:	LIGHTING AND APPLIANCE	CLIENT:	-
LOCATION:	5TH FLOOR ELEC RM	MOUNTING:	SURFACE
PHASES:	3	PANEL TYPE:	NEMA 1
L-L VOLTS	208V	ENGINEER:	-
L-G VOLTS	120V	DSA PROJECT NO.:	23175
BUS AMPS:	400A	FED FROM:	MDP5
MAIN CB AMPS:	MLO		
AIC RATING:	27,734 MINIMUM		

LOAD AMPS.	DESCRIPTION	NOTES	BREAKER POLE	BREAKER AMP.	CKT. # / CKT. #	BREAKER AMP.	BREAKER POLE	NOTES	DESCRIPTION	LOAD AMPS.
0.0	SPARE	8	1	20	1 A 2	20	1		RECPT: OFFICE 13,14	12.0
0.0	SPARE	8	1	20	3 B 4	20	1		RECPT: OFFICE 11,12	12.0
0.0	SPARE	8	1	20	5 C 6	20	1		RECPT: OFFICE 9,10	12.0
0.0	SPARE	8	1	20	7 A 8	20	1		RECPT: OFFICE 7,8	12.0
6.0	EWC 526	GFI	1	20	9 B 10	20	1		RECPT: OFFICE 5,6	12.0
0.0	SPARE	8	1	20	11 C 12	20	1		RECPT: OFFICE 3,4	12.0
0.0	SPARE	8	1	20	13 A 14	20	1		RECPT: OFFICE 1,2	12.0
0.0	SPARE	8	1	20	15 B 16	20	1		RECPT: OFFICE 15,16	12.0
8.0	REFRIGERATOR 519		1	20	17 C 18	20	1		RECPT: OFFICE 17,18/WORK RM	12.0
2.0	RECEPTACLE 519		1	20	19 A 20	20	1	8	SPARE	0.0
2.0	RECEPTACLE 519		1	20	21 B 22	20	1	8	SPARE	0.0
2.0	RECEPTACLE 519		1	20	23 C 24	20	1	8	SPARE	0.0
10.0	DISHWASHER 519		1	20	25 A 26	20	1	8	SPARE	0.0
0.0	SPARE	8	1	20	27 B 28	20	1	8	RECPT: STUDENT LOUNGE/CORR	8.0
0.0	SPARE	8	1	20	29 C 30	20	1	9	RECPT: CLASS RM/CORR	11.0
0.0	SPARE	8	1	20	31 A 32	20	1	9	RECPT: CLG PROJECTOR CLASSROOM	5.0
0.0	SPARE	8	1	20	33 B 34	20	1	9	RECPT: QUAD A/V CLASSROOM	10.0
0.0	SPARE	8	1	20	35 C 36	20	1	9	PWR: PROJECTOR SCREEN CLASSROOM	10.0
0.0	SPARE	8	1	20	37 A 38	20	1	9	RECPT: NURSE LAB COUNTER/CORR	6.0
0.0	SPARE	8	1	20	39 B 40	20	1	9	RECPT: NURSE LAB COUNTER/CORR	6.0
3.0	RECEPTACLE TELECOM BACKBOARD 522		1	20	41 C 42	20	1	9	RECPT: NURSE LAB POKE THRU	12.0
3.0	RECEPTACLE TELECOM BACKBOARD 522		1	20	43 A 44	20	1	9	RECPT: NURSE LAB POKE THRU	12.0
0.0	SPARE	8	1	20	45 B 46	20	1	9	RECPT: PATIENT HEADWALL	5.0
0.0	SPARE	8	1	20	47 C 48	20	1	9	RECPT: PATIENT HEADWALL	5.0
0.0	SPARE	8	1	20	49 A 50	20	1		RECPT: EXEC. OFFICE/FACULTY RM	11.0
0.0	SPARE	8	1	20	51 B 52	20	1		RECPT: FACULTY WORK RM	11.0
0.0	SPARE	8	1	20	53 C 54	20	1		RECPT: CORR/FAC.RM/STG/N.LAB	11.0
0.0	SPARE	8	1	20	55 A 56	20	1		RECPT: FACULTY RM POKE THU'S	9.0
0.0	SPARE	8	1	20	57 B 58	20	1		RECPT: CLG PROJECTOR	5.0
0.0	SPARE	8	1	20	59 C 60	20	1		PWR: PROJECTOR SCREEN FACULTY RM	5.0
0.0	SPARE	8	1	20	61 A 62	20	1		RECPT: QUAD A/V FACULTY ROOM	10.0
0.0	SPARE	8	1	20	63 B 64	20	1		RECPT: PATIENT HEADWALL	5.0
0.0	SPARE	8	1	20	65 C 66	20	1		RECPT: PATIENT HEADWALL	5.0
9.0	LTS OFFICE 1-9, ALT #1		1	20	67 A 68	20	1		RECPT: PATIENT HEADWALL	5.0
7.0	LTS ROOMS 510-519		1	20	69 B 70	20	1		RECPT: PATIENT HEADWALL	5.0
4.0	LTS CORRIDOR		1	20	71 C 72	20	1		RECPT: PATIENT HEADWALL	5.0
2.0	NAC		1	20	73 A 74	20	1		RECPT: PATIENT HEADWALL	5.0
0.0	SPARE	8	1	20	75 B 76	20	1		RECPT: PATIENT HEADWALL	5.0
7.0	LTS: EM VIA INVERTER	9	1	20	77 C 78	20	1		RECPT: PATIENT HEADWALL	5.0
3.0	LTS: CORRIDOR	9	1	20	79 A 80	20	1		CIRC PUMP CP1 508	2.0
9.0	LTS: OFFICE/FACULTY RM/NURSE LAB	9	1	20	81 B 82	30	2		EWH1 508	21.6
10.0	LTS: NURSE LAB/STG/CLASS/LOUNGE	9	1	20	83 C 84					21.6

LOAD SUMMARY	CON. KVA	%	DEM. KVA
RECEPTACLES	33.24	code	21.62
MISC	12.06	100%	12.06
LIGHTING	5.88	125%	7.35
HVAC	0	100%	0
HEAT STRIP	0	100%	0
REFRIGERATION	0	65%	0
EXISTING FLOOR LOAD	0	100%	0
COOKING	0	65%	0
WATER HEATING	0	125%	0
LARGEST MOTOR	0	125%	0
TOTAL KVA	51 KVA		41 KVA
TOTAL AMPS	142 AMPS		114 AMPS

PANEL NOTES:
1 . PROVIDE GROUND BUS
2 . PROVIDE FULL SIZE NEUTRAL BUS UNLESS NOTED OTHERWISE
3 . LO - INDICATES C.B. EQUIPPED WITH "LOCK-OUT" DEVICE
4 . GFI - INDICATES C.B. IS GFI TYPE (30 mA FOR EQUIPMENT, 5 mA FOR PERSONNEL)
5 . ST- INDICATES C.B. EQUIPPED WITH SHUNT TRIP DEVICE
6 . IG - INDICATES CIRCUIT SHALL INCLUDE ADDITIONAL ISOLATED GROUND CONDUCTOR
7 . AFCI - INDICATES COMBINATION TYPE AFCI C.B.
8 . EXISTING PREVIOUS TENANT BRANCH CIRCUITS TO BE REMOVED FROM PANEL. RELABEL BREAKER AS SPARE AND REMOVE ALL BRANCH CIRCUIT WIRE.
9 . EXISTING PREVIOUS TENANT BRANCH CIRCUIT TO BE REMOVED AND REPLACED AS SHOWN.

PANEL NO.: MDP5 (EXISTING PANEL)

PANEL NO.:	MDP5 (EXISTING PANEL)	PROJECT:	CFCC HSS RENOVATION PH2
USAGE:	LIGHTING AND APPLIANCE	CLIENT:	-
LOCATION:	5TH FLOOR ELEC RM	MOUNTING:	SURFACE
PHASES:	3	PANEL TYPE:	NEMA 1
L-L VOLTS	208V	ENGINEER:	-
L-G VOLTS	120V	DSA PROJECT NO.:	23175
BUS AMPS:	600A	FED FROM:	5TH FL GUTTER
MAIN CB AMPS:	500A		
AIC RATING:	28,223 MINIMUM		

LOAD AMPS.	DESCRIPTION	NOTES	BREAKER POLE	BREAKER AMP.	CKT. # / CKT. #	BREAKER AMP.	BREAKER POLE	NOTES	DESCRIPTION	LOAD AMPS.
0.0	SPARE		1	20	1 A 2	20	1		SPARE	0.0
0.0	SPARE		1	20	3 B 4	20	1		SPARE	0.0
0.0	SPARE		1	20	5 C 6	20	1		SPARE	0.0
0.0	SPARE		1	20	7 A 8	20	1		SPARE	0.0
0.0	SPARE		1	20	9 B 10	20	1		SPARE	0.0
0.0	SPARE		1	20	11 C 12	20	1		SPARE	0.0
0.0	SPARE		1	20	13 A 14	20	1		SPARE	0.0
0.0	SPARE		1	20	15 B 16	20	1		SPARE	0.0
0.0	HR01, AH10	10	2	15	17 C 18	20	1		VAV'S MENS 509	2.0
0.0					19 A 20	35	3		HP01	18.1
0.0	SPARE	9	2	15	21 B 22					18.1
0.0					23 C 24					18.1
38.4	RTU1		3	60	25 A 26		1		SPACE	0.0
38.4					27 B 28		1		SPACE	0.0
38.4					29 C 30		1		SPACE	0.0
48.0	RTU2		3	70	31 A 32	60	3		RTU4	38.4
48.0					33 B 34					38.4
48.0					35 C 36					38.4
48.0	RTU3		3	70	37 A 38	70	3		RTU5	48.0
48.0					39 B 40					48.0
48.0					41 C 42					48.0

LOAD SUMMARY	CON. KVA	%	DEM. KVA
RECEPTACLES	33.24	code	21.62
MISC	12.06	100%	12.06
LIGHTING	5.88	125%	7.35
HVAC	86.265	100%	86.265
HEAT STRIP	0	100%	0
REFRIGERATION	0	65%	0
EXISTING FLOOR LOAD	0	100%	0
COOKING	0	65%	0
WATER HEATING	0	125%	0
LARGEST MOTOR	0	125%	0
TOTAL KVA	137 KVA		127 KVA
TOTAL AMPS	382 AMPS		353 AMPS

PANEL NOTES:
1 . PROVIDE GROUND BUS
2 . PROVIDE FULL SIZE NEUTRAL BUS UNLESS NOTED OTHERWISE
3 . LO - INDICATES C.B. EQUIPPED WITH "LOCK-OUT" DEVICE
4 . GFI - INDICATES C.B. IS GFI TYPE (30 mA FOR EQUIPMENT, 5 mA FOR PERSONNEL)
5 . ST- INDICATES C.B. EQUIPPED WITH SHUNT TRIP DEVICE
6 . IG - INDICATES CIRCUIT SHALL INCLUDE ADDITIONAL ISOLATED GROUND CONDUCTOR
7 . AFCI - INDICATES COMBINATION TYPE AFCI C.B.
8 . PANEL P52 IS FED FROM 225/3 BREAKE LOCATED AT TOP SECTION OF PANEL MDP5. TOTAL LOADS SHOWN REFLECT MDP5 AND P52 LOADS.
9 . ALL EXISTING PREVIOUS TENANT BRANCH CIRCUITS TO BE REMOVED FROM PANEL. RELABEL BREAKER AS SPARE AND REMOVE ALL BRANCH CIRCUIT WIRE.
10. EXISTING PREVIOUS TENANT BRANCH CIRCUIT TO BE REMOVED AND REPLACED OR MODIFIED AS SHOWN.

PANEL NO.: HP3 (EXISTING HOUSE PANEL)

PANEL NO.:	HP3 (EXISTING HOUSE PANEL)	PROJECT:	CFCC HSS RENOVATION PH2
USAGE:	LIGHTING AND APPLIANCE	CLIENT:	-
LOCATION:	5TH FLOOR ELEC RM	MOUNTING:	SURFACE
PHASES:	3	PANEL TYPE:	NEMA 1
L-L VOLTS	208V	ENGINEER:	-
L-G VOLTS	120V	DSA PROJECT NO.:	23175
BUS AMPS:	225A	FED FROM:	MHP
MAIN CB AMPS:	MLO		
AIC RATING:	49,573 MINIMUM		

LOAD AMPS.	DESCRIPTION	NOTES	BREAKER POLE	BREAKER AMP.	CKT. # / CKT. #	BREAKER AMP.	BREAKER POLE	NOTES	DESCRIPTION	LOAD AMPS.
20.8	AHU5		2	30	1 A 2	20	2		E WATER HEATER	21.6
20.8					3 B 4					21.6
9.6	HP5		2	20	5 C 6	20	1		WATER COOLER	3.0
9.6					7 A 8	20	1		SPARE	0.0
14.4	CU3 (DAHU3)		2	30	9 B 10	20	1		SPARE	0.0
14.4					11 C 12	20	1		SPARE	0.0
14.4	CU4 (DAHU4)		2	30	13 A 14	20	1		SPARE	0.0
14.4					15 B 16	20	1		SPARE	0.0
9.0	ROOFTOP RECEPT.'S		1	20	17 C 18	20	1		SPARE	0.0
9.0	ROOFTOP RECEPT.'S		1	20	19 A 20	20	1		SPARE	0.0
0.0	SPARE		1	20	21 B 22	20	1		SPARE	0.0
10.0	LTS 5TH FLOOR		1	20	23 C 24	20	1		SPARE	0.0
0.0	SPARE		1	20	25 A 26	20	1		SPARE	0.0
0.0	SPARE		1	20	27 B 28	60	2	8	AIR HANDLER	41.6
13.0	LTS 5TH FLOOR		1	20	29 C 30				(AHU-4C)	41.6
3.0	RESTROOM RECEPT.S 5TH		1	20	31 A 32	40	2	8	OUTDOOR HEAT PUMP	25.6
3.0	TELEBOARD RECEPT.'S 5TH		1	20	33 B 34				(HP-4C)	25.6
3.0	TELEBOARD RECEPT.'S 5TH		1	20	35 C 36	60	2	8	AIR HANDLER	41.6
6.0	5TH FLOOR ELECT. RM RECPT		1	20	37 A 38				(AHU-4B)	41.6
6.0	5TH FLOOR RECPT BY ELEV.		1	20	39 B 40	40	2	8	OUTDOOR HEAT PUMP	25.6
0.0	SPARE		1	20	41 C 42				(HP-4B)	25.6

LOAD SUMMARY	CON. KVA	%	DEM. KVA
RECEPTACLES	4.68	code	4.68
MISC	0.36	100%	0.36
LIGHTING	2.76	125%	3.45
HVAC	40.27	100%	40.27
HEAT STRIP	0	100%	0
REFRIGERATION	0	65%	0
EXISTING FLOOR LOAD	0	100%	0
COOKING	0	65%	0
WATER HEATING	4.5	125%	5.625
LARGEST MOTOR	0	125%	0
TOTAL KVA	53 KVA		54 KVA
TOTAL AMPS	146 AMPS		151 AMPS

PANEL NOTES:
1 . PROVIDE GROUND BUS
2 . PROVIDE FULL SIZE NEUTRAL BUS UNLESS NOTED OTHERWISE
3 . LO - INDICATES C.B. EQUIPPED WITH "LOCK-OUT" DEVICE
4 . GFI - INDICATES C.B. IS GFI TYPE (30 mA FOR EQUIPMENT, 5 mA FOR PERSONNEL)
5 . ST- INDICATES C.B. EQUIPPED WITH SHUNT TRIP DEVICE
6 . IG - INDICATES CIRCUIT SHALL INCLUDE ADDITIONAL ISOLATED GROUND CONDUCTOR
7 . AFCI - INDICATES COMBINATION TYPE AFCI C.B.
8 . EXISTING BREAKER AND BRANCH CIRCUIT TO BE REPLACED AS SHOWN.
9 . EXISTING BREAKER TO REMAIN, REPLACE OR MODIFY BRANCH CIRCUIT AS SHOWN.

PANEL KEY

4N3 (SEC 1)	4N3 (SEC 2)	4N4 (SEC 1)
4N4 (SEC 2)	HP2	P52
MDP5	HP3	-

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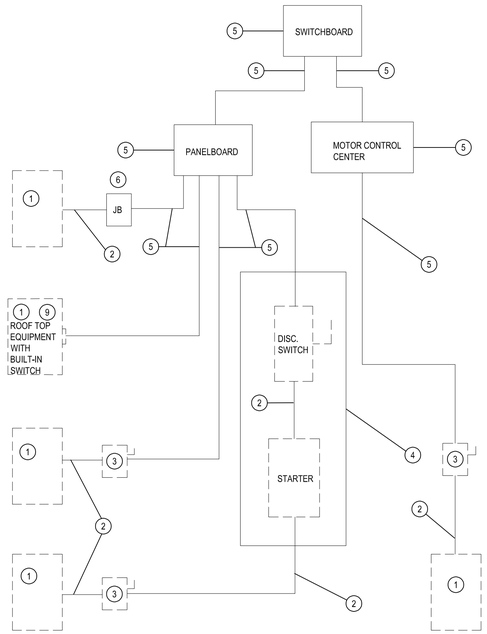
Sheet Title
PANEL SCHEDULES

Sheet No.
E503



ELECTRICAL NOTES

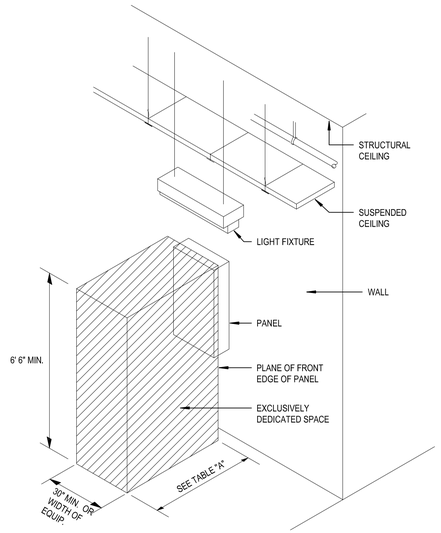
1. EQUIPMENT PROVIDED BY TRADES OTHER THAN ELECTRICAL.
2. CONDUIT & WIRING BY MECHANICAL, PLUMBING CONTRACTOR OR OTHER TRADES OTHER THAN ELECTRICAL.
3. IF AN ADDITIONAL DISCONNECT IS REQUIRED BY NEC, SHOWN ON PLANS, DETAILS, OR DIAGRAMS, IT SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR PROVIDING THE EQUIPMENT.
4. A COMBINATION STARTER OR VFD MAY BE USED IN LIEU OF A SEPARATE DISCONNECT SWITCH AND STARTER. LOCATE ADJACENT TO EQUIPMENT. DISCONNECT SWITCH, VFD AND/OR STARTER SHALL BE PROVIDED BY THE CONTRACTOR PROVIDING THE EQUIPMENT.
5. SWITCHBOARD, PANELBOARD, FEEDER CIRCUIT WIRING AND CONDUIT PROVIDED BY ELECTRICAL TRADE AS SHOWN ON THE ELECTRICAL DRAWINGS. SEE PANELBOARD SCHEDULES FOR WIRE AND BREAKER SIZES.
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, PLUMBING CONTRACTOR OR OTHER TRADES OTHER THAN ELECTRICAL.
7. FOR PROJECTS UTILIZING AN MCC, THE STARTER, CB, AND/OR THE VFD LOCATED IN THE MCC SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR.
8. IN ALL CASES THE CONTRACTOR SUPPLYING THE EQUIPMENT SHALL MAKE THE FINAL ELECTRICAL TERMINATIONS, START UP, AND TEST THE EQUIPMENT.
9. IF THE ROOF TOP EQUIPMENT IS NOT PROVIDED WITH BUILT IN DISCONNECT SWITCH, THE ELECTRICAL CONTRACTOR SHALL PROVIDE A DISCONNECT SWITCH.

A E601 **DETAIL - DIVISION OF RESPONSIBILITIES**
SCALE: NTS

TABLE 110-26,(a) WORKING SPACES			
VOLTAGE TO GROUND, NOMINAL	MINIMUM CLEAR DISTANCE (FEET)		
	CONDITION: 1	2	3
0-150	3	3	3
151-600	3	3 1/2	4

WHERE THE "CONDITIONS ARE AS FOLLOWS:

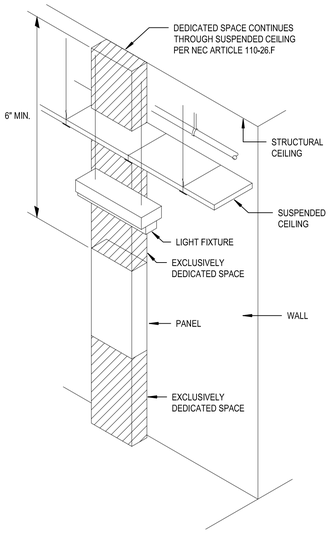
1. EXPOSED LIVE PARTS ON ONE SIDE AND NO LIVE OR GROUNDED PARTS ON THE OTHER SIDE OF THE WORKING SPACE, OR EXPOSED LIVE PARTS ON BOTH SIDES EFFECTIVELY GUARDED BY SUITABLE WOOD OR OTHER INSULATING MATERIALS. INSULATED WIRE OR INSULATED BUSBARS OPERATING AT NOT OVER 300 VOLTS SHALL NOT BE CONSIDERED LIVE PARTS.
2. EXPOSED LIVE PARTS ON ONE SIDE AND GROUNDED PARTS ON THE OTHER SIDE. CONCRETE, BRICK OR TILE SHALL BE CONSIDERED AS GROUNDED.
3. EXPOSED LIVE PARTS ON BOTH SIDES OF THE WORK SPACE (NOT GUARDED AS PROVIDED IN CONDITION 1) WITH THE OPERATOR BETWEEN.



B E601 **DETAIL - WORKING SPACES FOR EQUIPMENT**
SCALE: NTS

GENERAL NOTES:

1. THIS FIGURE ILLUSTRATES THE ADDITIONAL EXCLUSIVELY DEDICATED SPACE REQUIRED OVER AND UNDERTHE PANELBOARD FOR THE CABLES, RACEWAYS, ETC. TO AND FROM THE PANELBOARD REQUIRED BY SECTION 110-26, F OF THE NATIONAL ELECTRICALCODE.
2. NO PIPING, DUCTS OR EQUIPMENT FOREIGN TO THE ELECTRICAL EQUIPMENT OR ARCHITECTURAL APPURATENANCES SHALL BE PERMITTED TO BE INSTALLED IN, ENTER OR PASS THROUGH THE DEDICATED SPACES SHOWN.

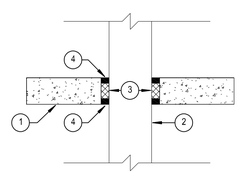


THIS DETAIL SHALL BE USED FOR ALL TWO (2) HOUR RATED CONCRETE/MASONRY WALL OR FLOOR PENETRATIONS AS DESCRIBED ABOVE FOR EMT CONDUITS EXCEPT SLAB ON GRADE.

DRAWING NOTES:

1. FLOOR OR WALL ASSEMBLY - MIN 2 1/2 IN. THICK REINFORCED LIGHTWEIGHT OR NORMAL WEIGHT (100-150 PCF) CONCRETE. WALL MAY ALSO BE CONSTRUCTED OF ANY UL CLASSIFIED CONCRETEBLOCKS *. MAX DIAM OF OPENING IS 6 IN. SEE CONCRETE BLOCK (CAZT) CATEGORY IN THE FIRE RESISTANCE DIRECTORY FOR NAMES OF MANUFACTURERS.
2. THROUGH-PENETRATS - ONE METALLIC PIPE. CONDUIT OR TUVING TO BE CENTERED WITHIN THE FIRESTOP SYSTEM. A NOM ANNULAR SPACE 3/4 IN. IS REQUIRED WITHIN THE FIRESTOP SYSTEM. PIPE, CONDUIT OR TUBING TO BE RAPIDLY SUPPORTED ON BOTH SIDES OF FLOOR OR WALL ASSEMBLY. THE FOLLOWING TYPES AND SIZES OF METALLIC PIPE, CONDUIT OR TUBING MAY BE USED:
   A. STEEL PIPE - NOM 4 IN DIAM (OR SMALLER) SCHEDULE 5 (OR HEAVIER) STEEL PIPE.
   B. CONDUIT - NOM 4 IN. DIAM (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING OR STEEL CONDUIT.
3. PACKING MATERIAL - MIN 1 1/2 IN. THICKNESS OF MIN 4 PCF MINERLA WOOL BATT INSULATION FIRMLY PACKED INTO OPENING AS A PERMANENT FORM. PACKING MATERIAL TO BE RECESSED FROM BOTH SURFACESOF FLOOR OR WALL AS REQUIRED TO ACCOMMODATE THE REQUIRED THICKNESS OF FILL MATERIAL.
4. FILL VOID OR CAVITY MATERIALS* - SEALANT - MIN 1/2 IN. THICKNESS OF FILL MATERIAL TO BE APPLIED AT BOTH SURFACES OF FLOOR OR WALL ASSEMBLY. *BEARING THE UL CLASSIFICATION MARKING.

UL DETAIL CAJ1015



F RATING - 2 HR
T RATING - 0 HR
L RATING AT AMBIENT - LESS THAN 1 CFM/SQ FT
L RATING AT 400 F - LESS THAN 1 CFM/SQ FT

C E601 **DETAIL - WALL PENETRATION - 2 HOUR CONCRETE**
SCALE: NTS

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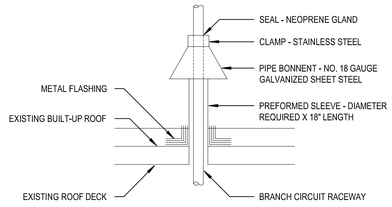
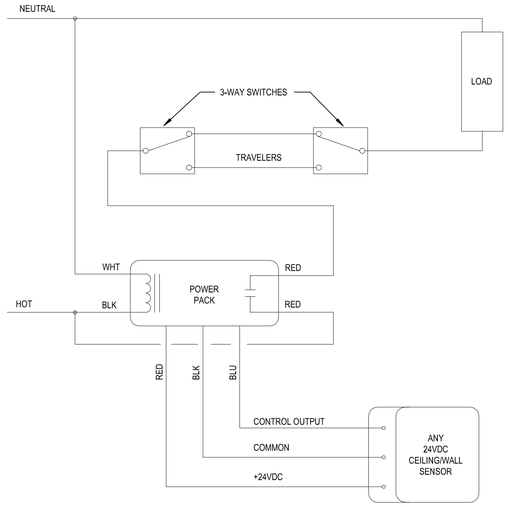
Sheet Title: **ELECTRICAL DETAILS**

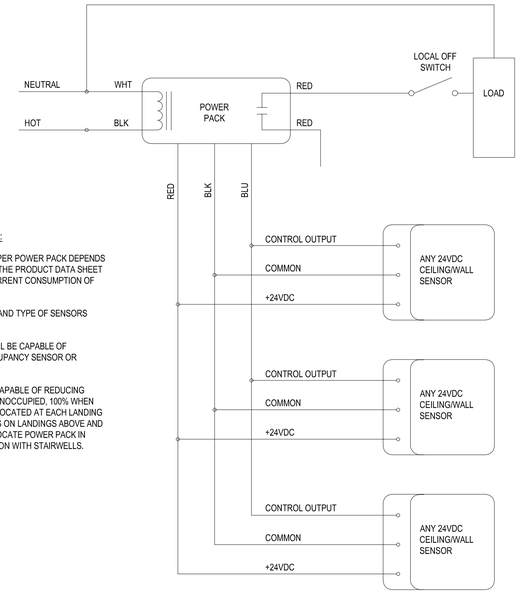
Sheet No.: E601



A E602 **DETAIL - CONDUIT ROOF PENETRATION**
SCALE: NTS



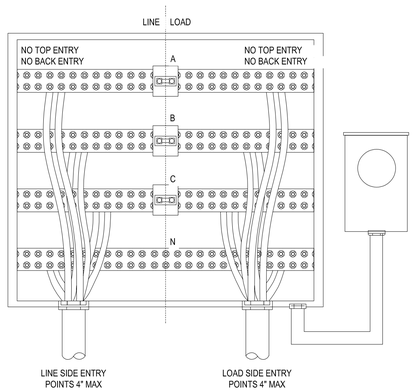
B E602 **DETAIL - OCCUPANCY SENSOR W/ 3-WAY SWITCHING**
SCALE: NTS



GENERAL OCCUPANCY SENSOR NOTES:

1. MAXIMUM NUMBER OF SENSORS PER POWER PACK DEPENDS ON THE MODEL OF SENSOR. SEE THE PRODUCT DATA SHEET TO DETERMINE THE SPECIFIC CURRENT CONSUMPTION OF EACH SENSOR.
2. REFER TO PLANS FOR QUANTITY AND TYPE OF SENSORS AND SWITCHES/DIMMERS.
3. INTELLIGENT POWER PACKS SHALL BE CAPABLE OF AUTOMATIC ACTIVATION VIA OCCUPANCY SENSOR OR MANUAL-ONLY OPERATION.
4. STAIRWELL SENSORS SHALL BE CAPABLE OF REDUCING OUTPUT TO 20% WHEN STAIR IS UNOCCUPIED, 100% WHEN OCCUPIED. SENSORS SHALL BE LOCATED AT EACH LANDING AND SHALL ACTIVATE LUMINAIRES ON LANDINGS ABOVE AND BELOW LEVEL OF OCCUPANCY. LOCATE POWER PACK IN ACCESSIBLE CONCEALED LOCATION WITH STAIRWELLS.

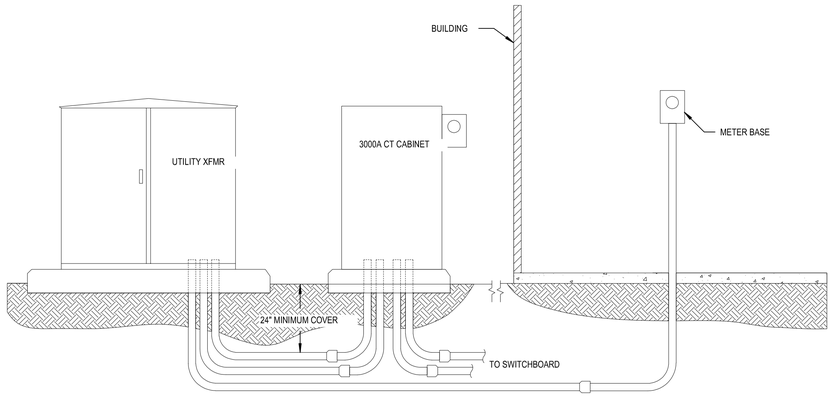
C E602 **DETAIL - OCCUPANCY SENSOR MULTIPLE**
SCALE: NTS



NOTES:

1. ALL LINE AND LOAD SIDE CONNECTIONS MADE AFTER CT IS INSTALLED UNLESS REMOVABLE LINKS ARE PROVIDED IN THE CABINET BAR. DRAWING ABOVE IS SHOWN WITHOUT REMOVABLE LINKS.
2. INSTALLATION OF THE METER BASE CAN BE TO THE RIGHT OR LEFT OF BUSBAR CABINET.
3. BUSBAR CABINET IS CUSTOMER OWNED AND INSTALLED. BUSBAR SHALL BE DUAL-RATED FOR BOTH COPPER AND ALUMINUM CONDUCTOR, WITH DOUBLE SET SCREW CONNECTIONS.
4. LINE AND LOAD MUST ENTER/EXIT FROM THE BOTTOM OF BUSBAR CABINET (4" MAX).
5. THIS DETAIL IS BASED ON FIG. 49 IN DUKE ENERGY SERVICE INSTALLATION REQUIREMENTS HANDBOOK. REFER TO DUKE ENERGY SERVICE INSTALLATION REQUIREMENTS HANDBOOK FOR FULL INSTALLATION REQUIREMENTS.

D E602 **DETAIL - HORIZONTAL BUSBAR CABINET INSTALLATION**
SCALE: NTS



NOTES:

1. THIS DETAIL IS BASED ON FIG. 28 IN DUKE ENERGY SERVICE INSTALLATION REQUIREMENTS HANDBOOK. REFER TO DUKE ENERGY SERVICE INSTALLATION REQUIREMENTS HANDBOOK FOR FULL INSTALLATION REQUIREMENTS.
2. REFER TO SINGLE LINE DIAGRAM, DETAILS, FLOOR PLANS FOR LOCATION AND CONNECTION REQUIREMENTS.

E E602 **DETAIL - TYPICAL UNDERGROUND 3-PHASE SERVICE ARRANGEMENTS (NON-RESIDENTIAL)**
SCALE: NTS

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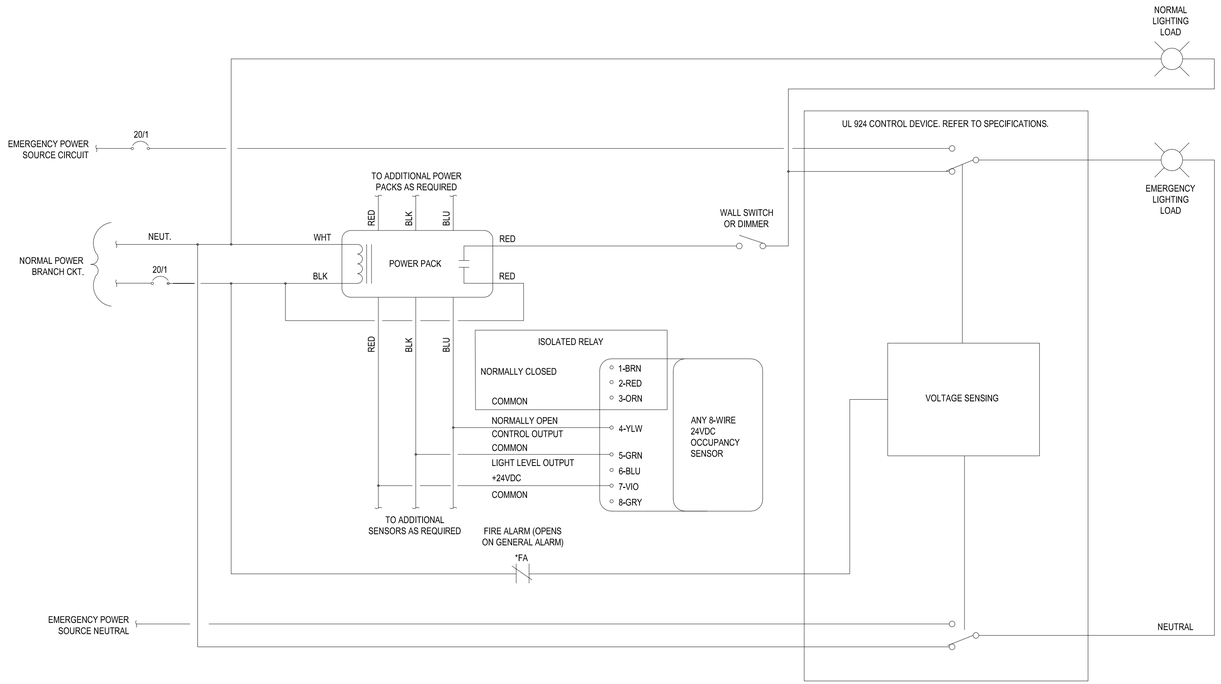
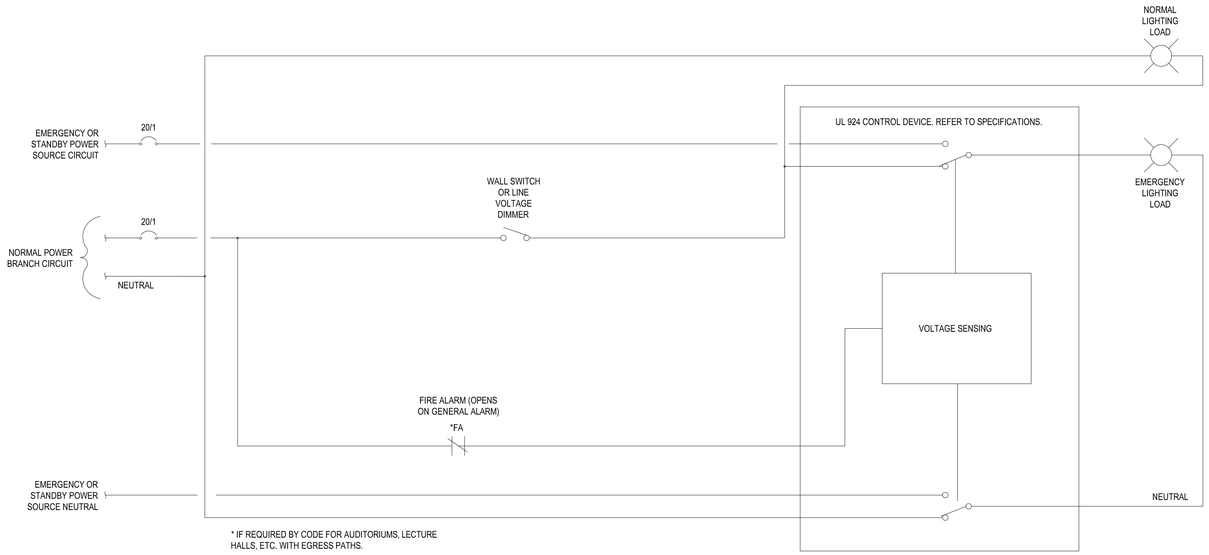


A / E603 **DETAIL - UL 924/1008 EMERGENCY LIGHT RELAY W/ OCCUPANCY SENSOR**

SCALE: NTS

UL 924-1008 EMERGENCY TRANSFER SWITCH SEQUENCE OF OPERATION

1. WHENEVER THE NORMAL SOURCE POWER IS AVAILABLE AND THE FIRE ALARM SYSTEM IS NOT IN GENRAL ALARM CONDITION. THE LIGHTING FIXTURE ON-OFF AND/OR DIMMED FUNCTION SHALL BE CONTROLELD BY THE LOCAL AREA LIGHTING SYSTEM CONTROLLER.
2. WHENEVER THE NORMAL SOURCE POWER IS DE-ENERGIZED BETWEEN THE LOCAL AREA LIGHTING SYSTEM CONTROLLER AND THE BRANCH CIRCUIT BREAKER AND/OR THE FIRE ALARM SYSTEM IS IN A GENERAL ALARM CONDITION. THE UL 924-1008 EMERGENCY TRANSFER SWITCH VOLTAGE SENSING CIRCUIT SHALL DETECT THE LOSS OF VOLTAGE AND SHALL SWITCH THE INTERNAL TRANSFER SWITCH TO THE EMERGENCY SOURCE CIRCUIT (FAIL SAFE CONDITION).
   - 2.1. THE EMERGENCY POWER SOURCE SHALL PROVIDE POWER TO THE SELECTED LIGHTING FIXTURES.
   - 2.2. ALL DIMMING FUNCTIONS FOR THE SELECTED EMERGENCY LIGHTING FIXTURES SHALL BE BYPASSED AND THE LIGHTING FIXTURES SHALL BE ENERGIZED TO THE 100% ILLUMINATION OUTPUT LEVEL.
3. WHENEVER THE NORMAL POWER SOURCE HAS RETURNED AND/OR THE FIRE ALARM GENERAL ALARM HAS RETURN TO NORMAL CONDITION. THE UL 924-1008 EMERGENCY TRANSFER SWITCH SHALL RE-TRANSFER BACK TO THE NORMAL SOURCE POWER AND ALL LIGHTING FIXTURES SHALL BE ENERGIZED AND REVERT TO THE PRESET SWITCHED OR SIMMING LEVELS THAT WERE SET PRIOR TO THE LOSS OF THE NORMAL POWER SOURCE.



* IF REQUIRED BY CODE FOR AUDITORIUMS, LECTURE HALLS, ETC. WITH EGRESS PATHS.

B / E603 **DETAIL - UL 924/1008 EMERGENCY LIGHT RELAY W/ OCCUPANCY SENSOR**

SCALE: NTS

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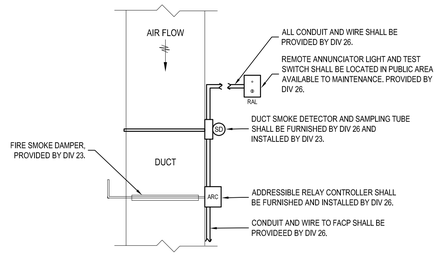
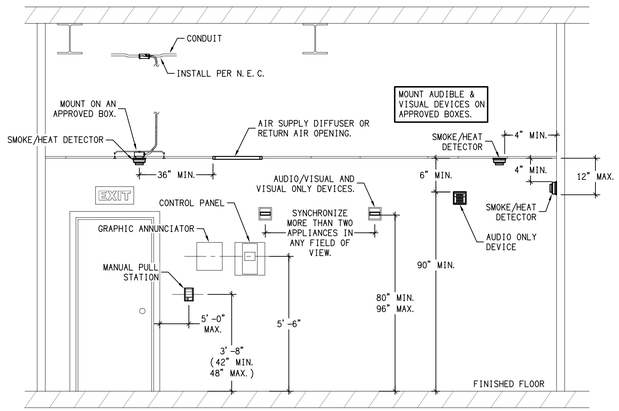
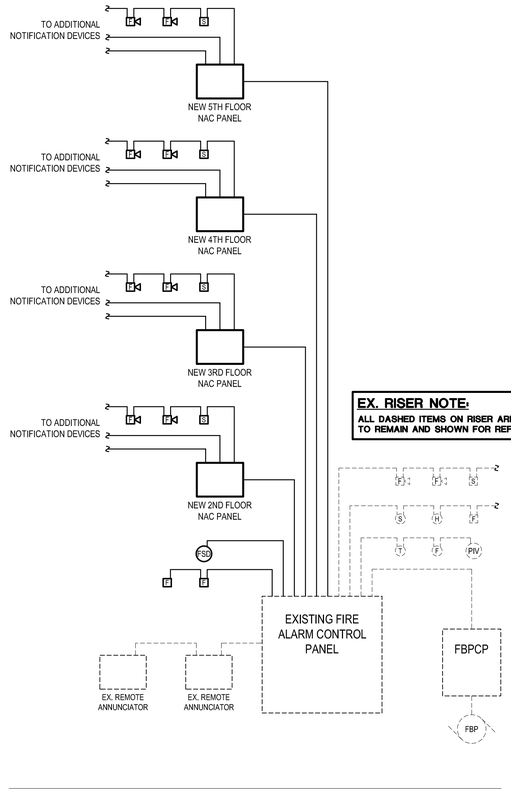


C FA001 **FSD FIRE ALARM CONNECTIONS**
SCALE: NTS



B FA001 **TYPICAL MOUNTING HEIGHT DETAIL**
SCALE: NTS



A FA001 **EX. FIRE ALARM RISER DIAGRAM - NEW WORK**
SCALE: NTS

EX. RISER NOTE:
ALL DASHED ITEMS ON RISER ARE EXISTING TO REMAIN AND SHOWN FOR REFERENCE.

FIRE ALARM SYSTEM NOTES:
1. CONNECT TO EXISTING SYSTEM.
2. VERIFY HORN DEVICE VS. CHIME. MATCH EXISTING.
3. SET ALL STROBES TO FLASH AT THE SAME FREQUENCY.
4. INSTALLATION SHALL COMPLY WITH ALL ADA REQUIREMENTS.
5. ALL DEVICES SHALL BE COMPATIBLE WITH THE EXISTING SYSTEM.
6. WIRING :
   a. 14 GA. MINIMUM FOR ALARMS.
   b. 18 GA. MINIMUM FOR SIGNALS.
   c. ALL WIRE SHALL BE COPPER.
   d. RUN WIRE IN ½" EMT CONDUIT WITH JUNCTION BOXES PAINTED RED.
   e. IF CODE ALLOWS, U.L. APPROVED FIRE ALARM CABLE MARKED FPL PER NEC 760-28 SHALL BE ALLOWED IN CONCEALED NON-PLENUM AREAS WHERE NOT EXPOSED TO MECHANICAL DAMAGE.
7. ALL ALARM CIRCUITS SHALL BE 24V.
8. MODIFY THE EXISTING FACP AS NEEDED TO ACCEPT THE NEW DEVICES.

FIRE ALARM LEGEND

S	SYSTEM SMOKE DETECTOR, SEE MOUNTING HEIGHT DETAIL (THIS SHEET) FOR MOUNTING REQUIREMENTS
FXXX	STROBE/HORN, XX CANDELA, SEE MOUNTING HEIGHT DETAIL (THIS SHEET) FOR MOUNTING REQUIREMENTS
SXX	STROBE ONLY, XX CANDELA, SEE MOUNTING HEIGHT DETAIL (THIS SHEET) FOR MOUNTING REQUIREMENTS
F	PULL STATION, SEE MOUNTING HEIGHT DETAIL (THIS SHEET) FOR MOUNTING REQUIREMENTS
T	TAMPER SWITCH BY OTHERS, CONNECTED BY FIRE ALARM CONTRACTOR
F	FLOW SWITCH BY OTHERS, CONNECTED BY FIRE ALARM CONTRACTOR
FB	WEATHERPROOF FIRE ALARM BELL, VERIFY LOCATION
PIV	POST INDICATOR VAVLE BY OTHERS, CONNECTED BY FIRE ALARM CONTRACTOR
FSD	FIRE SMOKE DAMPER
FACP	FIRE ALARM CONTROL PANEL
WP	WEATHER PROOF
CLG	CEILING MOUNTED

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06/07/2024

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319 N 3rd Stree, Wilmington, North Carolina 28401
NCCCS # 2772
SCO # 23-37149-01

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Project Manager	Drawn By
Date: 03-01-2024	Revlewed By

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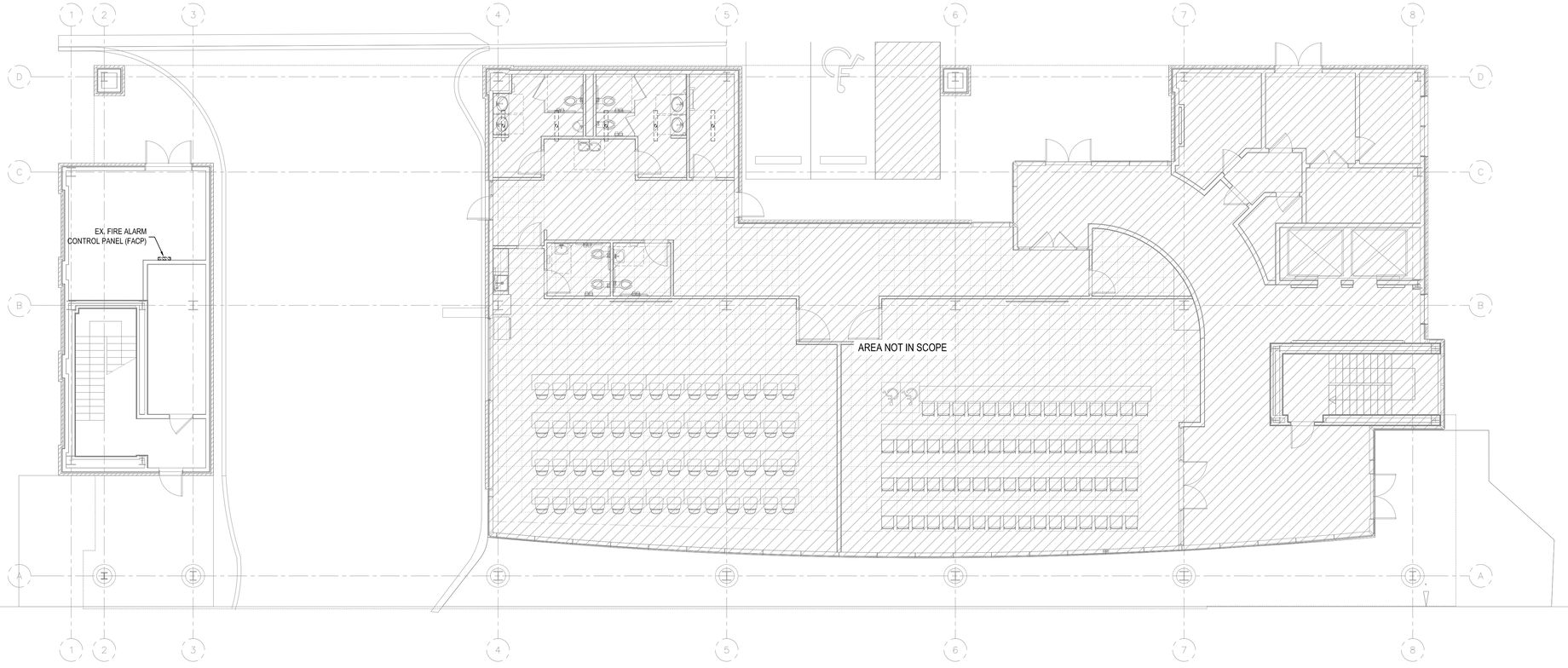
Sheet Title: **FIRE ALARM SCHEDULES, LEGEND & NOTES**

Sheet No.: FA001



A
FA111

FIRE ALARM PLAN - FIRST FLOOR

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

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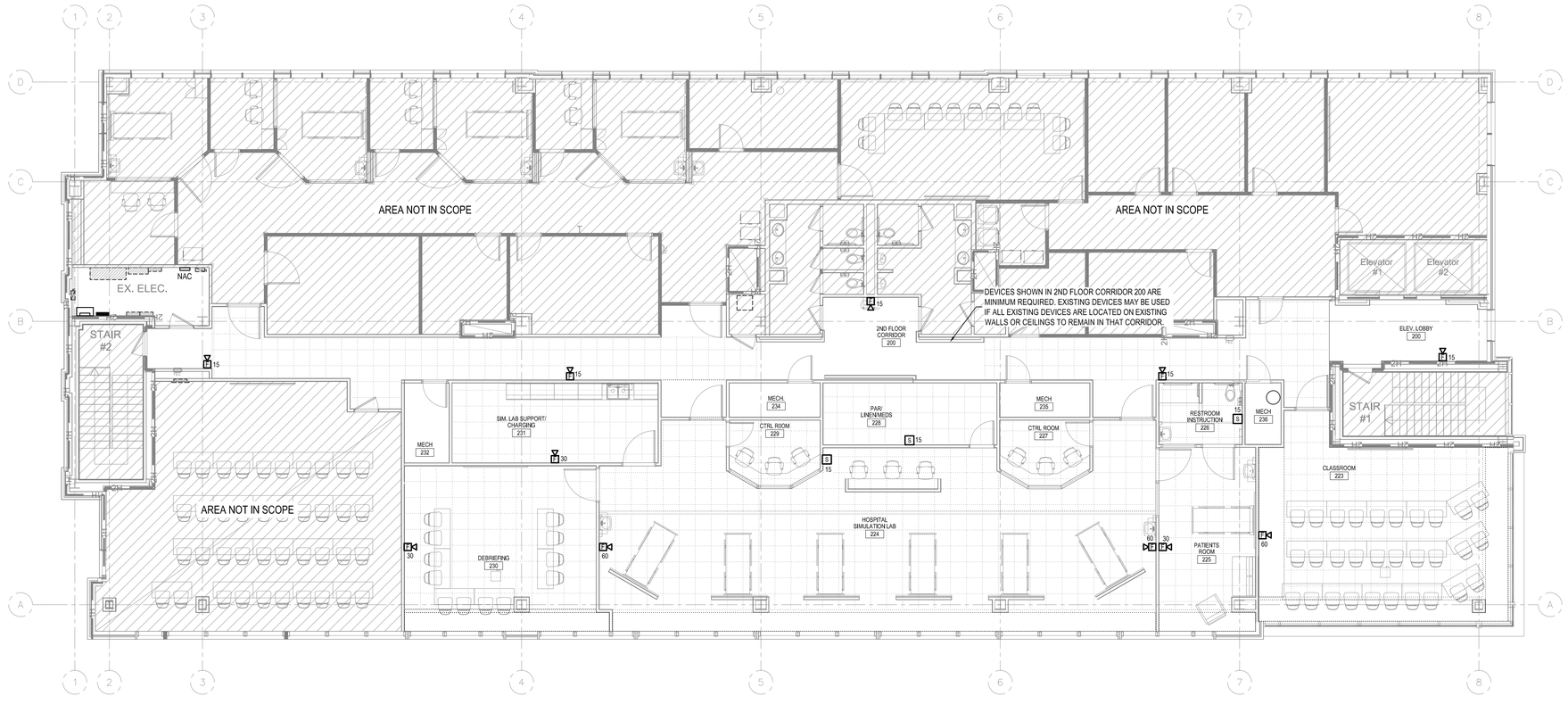
Sheet Title: **FIRE ALARM PLAN - FIRST FLOOR**

Sheet No.: FA111



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FA121

FIRE ALARM PLAN - SECOND FLOOR

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

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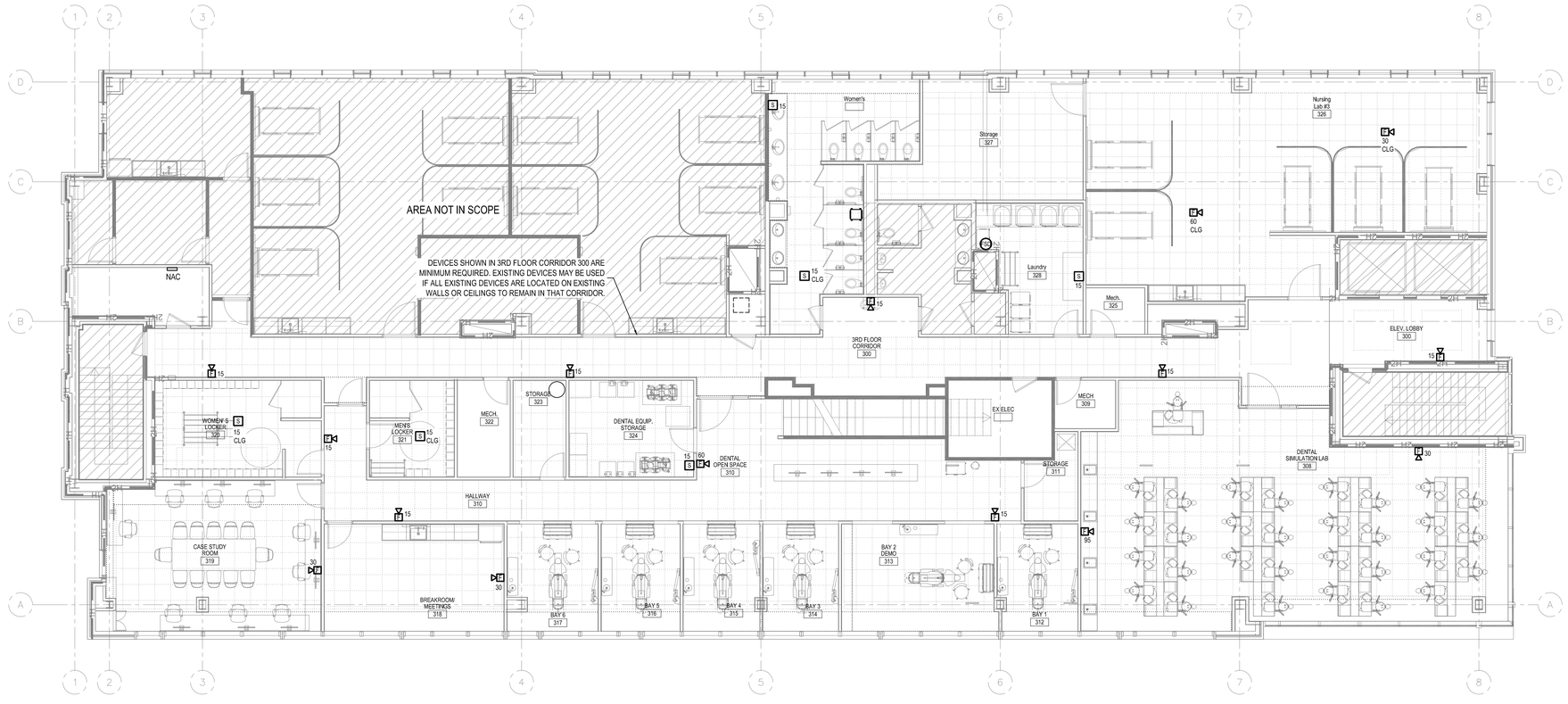
Sheet No.: FA121



A
FA131

FIRE ALARM PLAN - THIRD FLOOR

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

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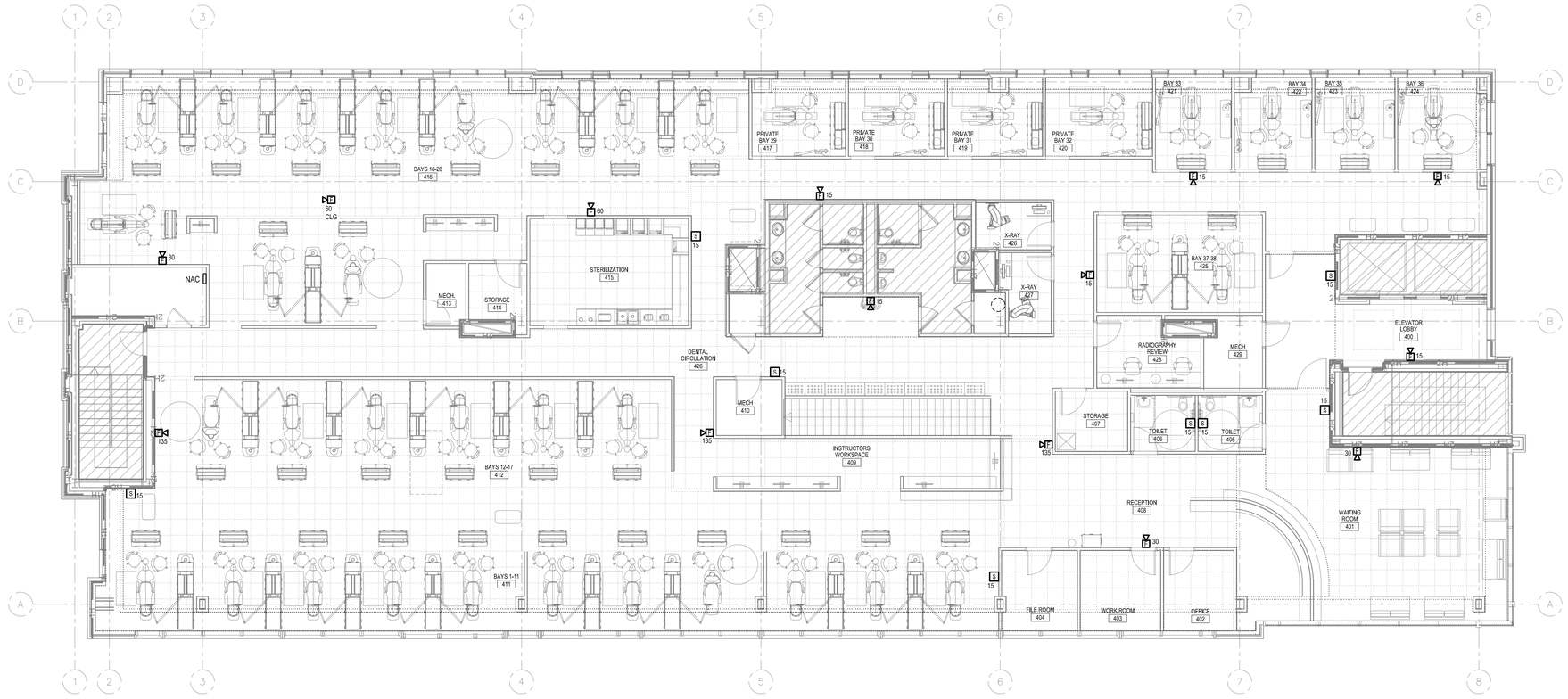

A
FA141

FIRE ALARM PLAN - FOURTH FLOOR

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

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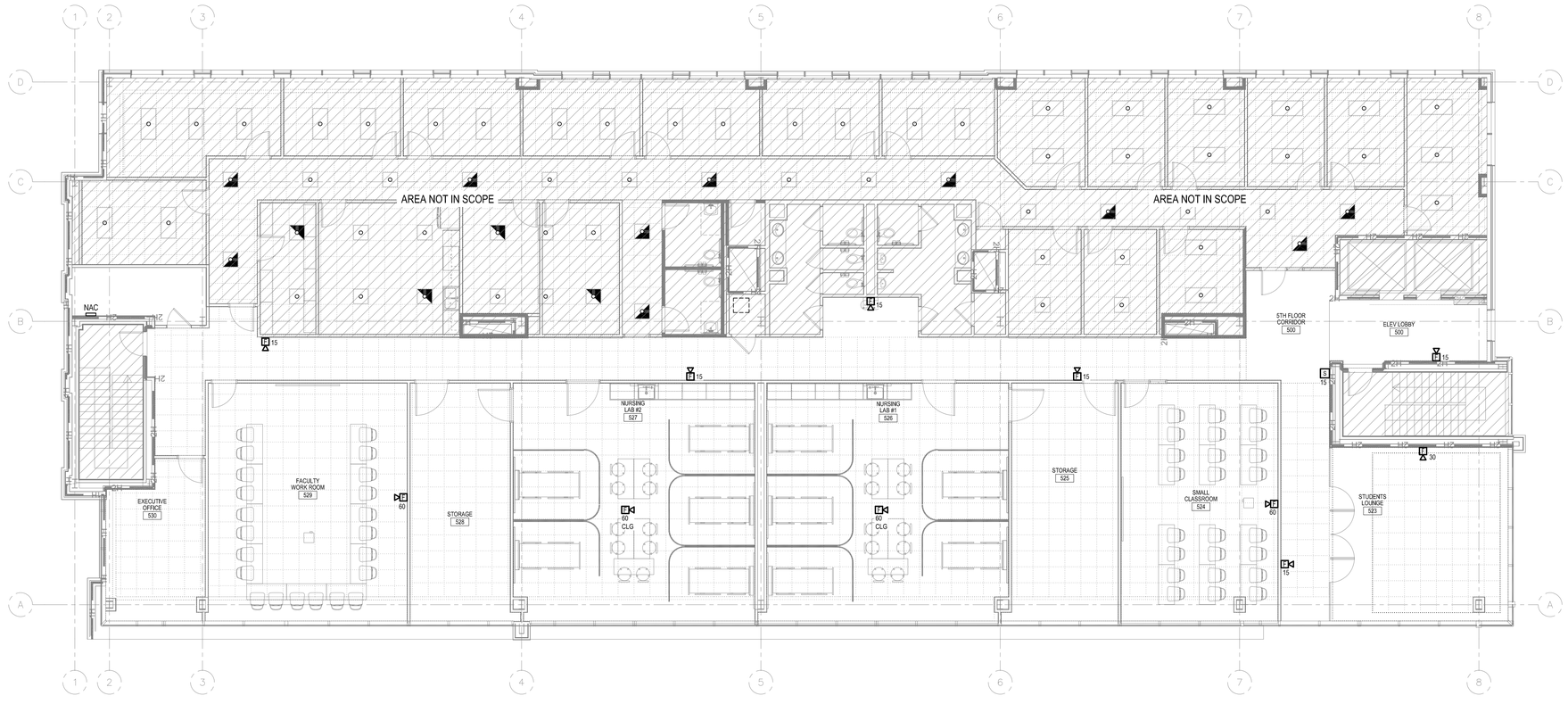
Sheet Title
FIRE ALARM PLAN - FOURTH FLOOR

Sheet No.
FA141



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FA151

FIRE ALARM PLAN - FIIFTH FLOOR

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

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Sheet Title: **FIRE ALARM PLAN - FIFTH FLOOR**

Sheet No.: FA151

PREPARED FOR:

CAPE FEAR COMMUNITY COLLEGE

PRESENTED BY: EMILY FARRELL, HENRY SCHEIN DENTAL EQUIPMENT SPECIALIST

GENERAL NOTES & CONDITIONS (ALL TRADES)

1. **DEFINITIONS**

HENRY SCHEIN, HENRY SCHEIN INC., HENRY SCHEIN DENTAL, OR HSD INC. REFERS TO THE EQUIPMENT SUPPLIER FOR THIS PROJECT ENGAGED BY THE OWNER UNDER A SEPARATE CONTRACT.

E.S. - "EQUIPMENT & TECHNOLOGY SPECIALIST" IS A HENRY SCHEIN EMPLOYEE THAT SPECIALIZES IN THE MANAGEMENT OF EQUIPMENT AND/OR TECHNOLOGY SALES AND INSTALLATIONS AND HAS ASSISTED THE OWNER IN THE PREPARATION OF DRAWINGS AND SPECIFICATIONS FOR THE CONSTRUCTION OF THE PROPOSED FACILITIES.

THE "**GENERAL CONTRACTOR**", ALSO KNOWN AS THE "**G.C.**" IS REFERRED TO AS THE PERSON(S) OR ENTITY WHO HAS ENTERED INTO A CONTRACTUAL AGREEMENT WITH THE OWNER FOR THE WORK DEFINED IN SUCH AGREEMENT. THE G.C. IS RESPONSIBLE FOR ALL WORK CARRIED OUT BY THEIR SUBCONTRACTORS OR SUBTRADES. IF THE CONSTRUCTION OF THE PROJECT IS LET UNDER SEPARATE CONTRACTS BY THE OWNER, THE RESPONSIBILITIES STIPULATED BELOW SHALL APPLY TO EACH CONTRACTOR.

THE "**OWNER**" IS REFERRED TO AS THE PERSON(S) OR ENTITY WHO OWNS OR LEASES THE PREMISES FOR WHICH A CONSTRUCTION AGREEMENT HAS BEEN ENTERED UPON WITH THE GENERAL CONTRACTOR, WHERE THE OWNER, AS REFERRED TO ABOVE, LEASES THE PREMISES THE ENTITY WHO HAS OWNERSHIP OF THE PROPERTY WILL BE REFERRED TO AS THE LANDLORD.

THE "**OWNER'S AGENT**" IS A REPRESENTATIVE OF THE AGENT ACTING ON THEIR BEHALF AND MAY HAVE THE AUTHORITY TO MAKE DECISIONS IN THEIR ABSENCE. THIS MAY BE AN OFFICE MANAGER, AN ARCHITECT, AN ENGINEER, OR A PROJECT MANAGER HIRED BY THE OWNER.

2. **DRAWINGS**

THESE DRAWINGS ARE PREPARED BY HENRY SCHEIN AS DENTAL CONSULTANTS FOR ASSISTING AN ARCHITECT/CONTRACTOR TO PRODUCE CONSTRUCTION DOCUMENTS & BUILD A DENTAL OFFICE. THEY DO NOT CONSTITUTE A COMPLETE SET OF CONSTRUCTION DOCUMENTS. ITEMS REQUIRED FOR BUILDING PERMITS OR CONSTRUCTION MAY NOT APPEAR ON THESE DRAWINGS. IF THESE DRAWINGS ARE BEING SUBMITTED FOR BUILDING PERMIT, IT REMAINS THE OWNER AND/OR GENERAL CONTRACTOR'S RESPONSIBILITY RETAIN THE PROPER CONSULTANTS TO PREPARE COMPLETE ARCHITECTURAL, STRUCTURAL, MECHANICAL AND ELECTRICAL DRAWINGS.

DOOR SPECIFICATIONS, LIGHTING DESIGN, FINAL REFLECTED CEILING PLANS, AND OTHER SPECIFICATIONS NOT COVERED IN THESE DRAWINGS ARE BY OTHERS.

RETENTION OF OTHER CONSULTANTS SUCH AS AN ARCHITECT, M.E.P. ENGINEERS, OR SECURITY CONSULTANT, ARE THE RESPONSIBILITY OF THE OWNER AND/OR GENERAL CONTRACTOR.

3. **HENRY SCHEIN, INC. RESPONSIBILITIES**

HENRY SCHEIN, INC. WILL ISSUE DETAILED DRAWINGS SHOWING CRITICAL LOCATIONS & REQUIREMENTS OF ALL DENTAL-SPECIFIC EQUIPMENT. THE E.S. WILL BE AVAILABLE FOR PERIODIC FIELD VISITS. VISITS WILL BE LIMITED TO A PRE-CONSTRUCTION ON-SITE MEETING, LAYOUT CHECKS AND INSTRUCTIONS TO THE VARIOUS TRADES IN THE CRITICAL ASPECTS OF THE WORK PERTAINING TO DENTAL AND ALLIED EQUIPMENT. ALL REQUESTS FOR FIELD VISITS SHALL ALLOW REASONABLE ADVANCED NOTICE. HENRY SCHEIN, INC. AND ITS REPRESENTATIVES WILL NOT ASSUME ANY RESPONSIBILITIES FOR DEVIATIONS FROM THESE DRAWINGS WITHOUT PRIOR WRITTEN CONSENT.

PRIOR TO CONSTRUCTION, THE E.S. WILL VERIFY THE SITE DIMENSIONS OF THE SPACE PRIOR TO ENSURE THEY COINCIDE WITH THE DETAILED DRAWINGS. DURING CONSTRUCTION, THE E.S. WILL CHECK THE JOBSITE PERIODICALLY AS REQUIRED. THE E.S. WILL BE AVAILABLE TO ASSIST THE CONTRACTOR(S)AND THE OWNER IN THE INTERPRETATION OF THESE DRAWINGS AND SPECIFICATIONS. PRIOR TO ENCLOSING WALLS, THE GENERAL CONTRACTOR AND/OR THE FRAMING SUBCONTRACTOR IS REQUIRED TO COORDINATE WITH THE E.S. AND THE HENRY SCHEIN INSTALLATION TECHNICIAN. THIS INSPECTION IS CRITICAL TO ENSURE THAT THE WALL AND/OR CEILING SUPPORTS FOR DENTAL EQUIPMENT WILL MATCH WITH ANY CHANGES THAT MAY HAVE OCCURRED WITH THE OWNER'S EQUIPMENT ORDER. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO HAVE PLUMBING, ELECTRICAL, SUPPORT BACKING, AND LEAD INSTALLATION APPROVED BY MUNICIPAL INSPECTORS BEFORE POURING SLABS, ENCLOSING PARTITIONS AND CEILING.

HENRY SCHEIN WILL NOT BE RESPONSIBLE FOR ANY UNFORESEEN CONDITIONS ARISING OUT OF, OR DURING THE COURSE OF, CONSTRUCTION NOR FOR ANY DEVIATIONS FROM DRAWINGS AND/OR SPECIFICATIONS WITHOUT PRIOR WRITTEN CONSENT.

EQUIPMENT INSTALLATION

A PRE-CONSTRUCTION MEETING IS REQUIRED WITH THE GENERAL CONTRACTOR, PLUMBER, ELECTRICIAN, CABINET MAKER, AND THE E.S. ALL TEMPLATES CRITICAL TO EQUIPMENT INSTALLATION WILL BE DISTRIBUTED AT THIS MEETING.

THE E.S. WILL INSPECT PREMISES PRIOR TO THE INSTALLATION OF ITS EQUIPMENT AT WHICH TIME ALL FINISHES (CEILINGS, FLOORING, AND PAINTING) AND MECHANICAL WORK MUST BE COMPLETED. RESPONSIBILITIES FOR THE INSTALLATION AND/OR HOOKUP OF DENTAL EQUIPMENT WILL BE DEFINED IN THE SPECIFICATIONS FOR EACH TRADE. HENRY SCHEIN DENTAL REQUIRES THAT ALL APPLICABLE TRADES BE REPRESENTED AT THE TIME OF INSTALLATION.

4. **GENERAL CONTRACTOR (G.C.) RESPONSIBILITIES**

ALL ITEMS LISTED OR NOTED HEREIN ARE FOR GUIDANCE ONLY AND DO NOT NECESSARILY CONSTITUTE THE ENTIRE EXTENT OF THE WORK TO BE CARRIED OUT UNDER THE CONTRACT. THE GENERAL CONTRACTOR IS RESPONSIBLE TO DEFINE AND PROVIDE ALL THE WORK REQUIRED TO COMPLETE THIS PROJECT TO THE TRUE INTENT OF THE CONTRACT WHETHER OR NOT IT IS SPECIFICALLY SHOWN OR SPECIFIED, WHERE THESE DOCUMENTS DO NOT PROVIDE ALL THE INFORMATION NECESSARY FOR THE COMPLETE INSTALLATION OF ANY ITEM, THEN THE MANUFACTURER'S INSTRUCTIONS FOR THE ITEM SHALL BE STRICTLY FOLLOWED.

THE GENERAL CONTRACTOR SHALL, SUPPLY AND INSTALL ALL ITEMS, ARTICLES, MATERIALS, INCLUDE ALL LABOR, EQUIPMENT AND TOOLS NECESSARY TO COMPLETE THIS PROJECT AND ALL SYSTEMS SHOWN. TEST AND VERIFY ALL EQUIPMENT INSTALLED UNDER THIS CONTRACT AND INSTRUCT THE OWNER OR OWNER'S AGENT IN THE OPERATION OF THE EQUIPMENT.

THE G.C. SHALL THOROUGHLY FAMILIARIZE HIM/HERSELF WITH THE DRAWINGS, SPECIFICATIONS, AND CONDITIONS COVERING THIS JOB. THE G.C. SHALL ADVISE THE OWNER AND THE E.S. OF ANY CONFLICT BETWEEN THESE DRAWINGS AND THE FIELD CONDITIONS BEFORE PROCEEDING WITH THE WORK.

THE G.C. SHALL COMPLY WITH ALL STATE AND MUNICIPAL LAWS, ORDINANCES, RULES, AND REGULATIONS OF AUTHORITIES HAVING JURISDICTION; ALL WORK MUST MEET OR EXCEED THE CURRENT BUILDING CODE UNDER THE JURISDICTION FOR WHICH THIS PROJECT IS LOCATED. THE G.C. SHALL FILE ALL NECESSARY APPLICATIONS AND OBTAIN AND PAY FOR ALL PERMITS, AND CERTIFICATES OF APPROVAL PERTAINING TO THE CONSTRUCTION OF THE PREMISES, INCLUDING THE FINAL INSPECTION FOR OCCUPANCY PERMIT, UNLESS OTHERWISE STATED. PERMITS OBTAINED SHALL INCLUDE THE CONNECTIONS TO ALL DENTAL EQUIPMENT AND FIXTURES WHICH ARE TO BE COMPLETED BY THE GENERAL CONTRACTOR. HVAC, SPRINKLER DRAWINGS, CORRESPONDING SPECIFICATIONS OR ANY OTHER DRAWINGS AND SPECIFICATIONS THAT MAY BE REQUIRED FOR LICENSES AND PERMITS ARE TO BE PROVIDED BY OTHERS. HENRY SCHEIN INC. WILL NOT PROVIDE OR PAY FOR THESE SERVICES OR ANY OTHER DRAWINGS AND SPECIFICATIONS THAT MAY BE REQUIRED FOR LICENSES AND PERMITS.

ALL MEASUREMENTS SHALL BE CHECKED AT THE JOB SITE. THE GENERAL CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY FOR THE ACCURACY OF FIELD MEASUREMENTS AND CONDITIONS, THEY ARE ALSO RESPONSIBLE FOR THE PROPER MODIFICATIONS TO ANY EXISTING, OR PREVIOUSLY INSTALLED WORK. WRITTEN APPROVAL MUST BE OBTAINED FROM THE E.S. BEFORE ANY CHANGES AND/OR DEVIATIONS FROM DRAWINGS AND SPECIFICATIONS ARE MADE.

THE G.C. SHALL ASSUME FULL RESPONSIBILITY FOR THE EXECUTION OF HIS/HER WORK AND FOR ANY CHANGES AND/OR DEVIATIONS FROM DRAWINGS OR SPECIFICATIONS MADE WITHOUT PRIOR WRITTEN APPROVAL FROM THE OWNER AND/OR THE E.S., THE COST OF CORRECTIONS RESULTING FROM CHANGES AND/OR DEVIATIONS SHALL BE BORNE BY THE GENERAL CONTRACTOR.

A COMPLETE SET OF UP-TO-DATE DRAWINGS MUST BE KEPT AT THE JOB SITE AT ALL TIMES AND ANY CHANGES MUST BE NOTED THEREON AND INITIALED.

THE CONTRACTOR SHALL INDEMNIFY AND HOLD HARMLESS THE OWNER AND THE OWNER'S AGENT FROM AND AGAINST ALL CLAIMS FOR DAMAGE TO PERSON AND/OR PROPERTY SUFFERED AS A RESULT OF THE PERFORMANCE OF WORK, WHETHER OR NOT, CAUSED BY NEGLIGENCE, AND PAY ANY EXPENSES (INCLUDING, WITHOUT LIMITATIONS, ATTORNEY'S FEES, AND DISBURSEMENTS) INCURRED IN THE CONNECTION THEREWITH.

OTHER REQUIREMENTS

THE G.C. SHALL PARTICIPATE AT JOB COORDINATION MEETINGS WITH THE HENRY SCHEIN REPRESENTATIVE AND ENSURE ATTENDANCE OF THE APPROPRIATE TRADES.

ALL TRADES SHALL DO THEIR OWN CUTTING. THE GENERAL CONTRACTOR SHALL DO ALL PATCHING TO CONFORM TO MATERIAL, TEXTURE, AND SURFACE ALIGNMENT WITH THE ADJOINING SURFACE AND FINAL TOUCH UP OF ALL FINISHED SURFACES.

THE GENERAL CONTRACTOR SHALL ENSURE THE PROTECTION OF ALL EQUIPMENT FURNISHED UNDER HIS/HER CONTRACT AND BY OTHERS.

THE G.C. SHALL REVIEW ALL CUSTOM CABINETRY, SUCH AT THE RECEPTION DESK, LABORATORY, AND STERILIZATION, WITH THE E.S. FOR ANY DENTAL EQUIPMENT INCORPORATION.
THE G.C. SHALL REMOVE ANY RUBBISH FROM THE CONSTRUCTION SITE AND ENSURE THAT ALL PUBLIC SPACES ARE FREE OF CONSTRUCTION MATERIALS AND DEBRIS THROUGHOUT THE DURATION OF THE CONTRACT. THE G.C. IS RESPONSIBLE FOR THE TOTAL CLEAN UP OF THE JOB SITE UPON COMPLETION OF THEIR WORK.

THE GENERAL CONTRACTOR SHALL ISSUE A WRITTEN ONE-YEAR WARRANTY CERTIFICATE ON ALL WORKMANSHIP AND MATERIALS FROM THE DATE OF OCCUPANCY, UNLESS NOTED OTHERWISE IN THE CONSTRUCTION AGREEMENT BETWEEN THE OWNER AND THE G.C., THIS CERTIFICATE SHALL BIND THE GENERAL CONTRACTOR TO PROMPTLY CORRECT, REPAIR, OR REPLACE, ANY DEFECTIVE EQUIPMENT OR WORKMANSHIP THAT WAS THE RESPONSIBILITY OF THE G.C., WITHOUT COST TO THE OWNER.

5. **SEPARATE CONTRACTS BY OWNER**

THE OWNER RESERVES THE RIGHT TO PERFORM WORK RELATED TO THE PROJECT WITH HIS/HER OWN FORCES, AND TO AWARD SEPARATE CONTRACTS IN CONNECTION WITH OTHER PORTIONS OF THE PROJECT OR ON OTHER WORK ON THE SITE UNDER THESE OR SIMILAR CONDITIONS OF CONTRACT. IF THE GENERAL CONTRACTOR CLAIMS THAT DELAY OR ADDITIONAL COST IS INVOLVED BECAUSE OF SUCH ACTION BY THE OWNER, THE G.C. MUST ENSURE THAT THEIR CLAIM WAS ORIGINALLY PART OF THEIR CONTRACT AGREEMENT.

THE G.C. SHALL AFFORD THE OWNER AND SEPARATE CONTRACTORS REASONABLE OPPORTUNITY FOR THE INTRODUCTION AND STORAGE OF THEIR MATERIALS AND EQUIPMENT AND THE EXECUTION OF THEIR WORK. THE G.C. SHALL CONNECT AND COORDINATE THEIR WORK WITH OTHERS AS REQUIRED BY THE CONTRACT DOCUMENTS. ANY COSTS CAUSED BY DEFECTIVE AND/OR ILL-TIME WORK SHALL BE BORNE BY THE PARTY RESPONSIBLE.

SEE OWNER OR OWNER'S AGENT FOR NON-DENTAL ITEMS AND AREAS NOT DETAILED IN THESE DRAWINGS (SUCH AS RECEPTION, BUSINESS AREA, OFFICES, STAFF LOUNGE, STORAGE ROOMS, OFFICE-WIDE SOUND SYSTEMS, CONTROLS, ETC.).

GENERAL NOTES

1. THESE DRAWINGS AND SPECIFICATIONS HAVE BEEN PRODUCED FOR THIS SPECIFIC PROJECT ONLY, AND SHALL REMAIN THE EXCLUSIVE PROPERTY OF HENRY SCHEIN INC. THESE DRAWINGS AND SPECIFICATIONS MAY NOT BE REPRODUCED OR USED FOR ANY OTHER PURPOSE WITHOUT EXPRESSED WRITTEN CONSENT AND FULL PAYMENT OF ANY ASSOCIATED FEES TO HENRY SCHEIN, INC.
2. ALL COMMUNICATIONS AND COORDINATION WITH TRADES SHALL BE THE RESPONSIBILITY OF THE G.C. UNLESS STATED OTHERWISE IN THE CONTRACT AGREEMENT.
3. THE G.C. MUST SIGN THIS SHEET STIPULATING THAT HE/SHE UNDERSTANDS AND WILL COMPLY WITH ALL SPECIFICATIONS BEFORE THE WORK WILL START. A SIGNED COPY OF THE PLANS ARE TO BE RETURNED TO THE OWNER AND HENRY SCHEIN DENTAL.
4. IT IS THE RESPONSIBILITY OF A SUBCONTRACTOR TO READ AND UNDERSTAND ALL NOTES AND ILLUSTRATIONS PERTAINING TO THEIR TRADE AND HOW THEIR WORK AFFECTS OTHER TRADES.
5. THE SUPPLY AND INSTALL OF THE CABINETS AND COUNTERTOPS, OTHER THAN THOSE SPECIFIED AND/OR CONTRACTED BY HENRY SCHEIN, INC., IS THE RESPONSIBILITY OF THE G.C..
6. THE OWNER SHALL MAKE ARRANGEMENTS FOR INSTALLATION OF NON-DENTAL SYSTEMS UNDER A SEPARATE CONTRACT BEFORE WALLS ARE ENCLOSED.
7. ROUGH-IN AND FINISH WORK FOR DENTAL EQUIPMENT IS TO BE ACCORDING TO TEMPLATES FURNISHED BY THE MANUFACTURERS OF EQUIPMENT BEING INSTALLED. THE E.S. WILL POSITION THE TEMPLATES IN THEIR PROPER LOCATIONS, AT WHICH TIME ALL SPECIFICATIONS ON THE PLANS WILL BE EXPLAINED TO THE GENERAL CONTRACTOR OR SUBCONTRACTOR(S). ALL SPECIFIED SIZES OF PIPES, TUBING, FITTINGS, ETC., AS WELL AS PROPER HEIGHTS MARKED, MUST BE STRICTLY FOLLOWED. ANY DEVIATIONS ON SIZES OR HEIGHTS OF PIPES, TUBING, AND/OR FITTINGS MUST BE CORRECTED BEFORE THE EQUIPMENT CAN BE INSTALLED, AND ANY SUCH EXTRA EXPENSE WILL BE THE RESPONSIBILITY OF G.C. AND/OR THE SUB TRADE.
8. THE G.C. SHALL SEAL ANY/ALL FLOOR AND FIRE PENETRATIONS MADE BY HENRY SCHEIN INSTALLERS AT THE FINISHING STAGES WITH THE APPROPRIATE MATERIAL.
9. THE G.C. SHALL PROVIDE DOOR THRESHOLDS & DOOR SEALS NECESSARY FOR DENTAL EQUIPMENT SOUND ATTENUATION.
10. THE GENERAL CONTRACTOR SHALL SUPPLY FASTENERS, ANCHORS, ACCESSORIES AND ADHESIVES REQUIRED FOR FABRICATION AND ERECTION OF THE WORK. KEEP EXPOSED FASTENERS TO A MINIMUM, NEATLY LAID OUT AND EVENLY SPACED. FLOOR FINISHES ARE TO BE CONTINUOUS UNDERNEATH MILLWORK AND EQUIPMENT. TRANSITIONS AND VARIATIONS BETWEEN FLOOR FINISHES TO BE SMOOTH AND LEVEL TO REDUCE INJURY WITH USE. PROVIDE 3/4" (19MM) PLYWOOD SUPPORT BETWEEN STUDS FOR ALL WALLS TO SUPPORT UPPER CABINETRY AND SHELVING, INCLUDING RECEPTION AND ALL TREATMENT ROOMS. WOOD SUPPORTS ABOVE THE CEILING MAY NEED TO BE FIRE RATED, FOLLOW LOCAL CODES.
11. PRIOR TO POURING THE CONCRETE FLOOR AND ENCLOSING ALL WALLS, THE GENERAL CONTRACTOR SHALL CONTACT THE E.S. AND INSTALLATION TECHNICIAN FOR FINAL INSPECTION OF PLUMBING, ELECTRICAL AND WOOD SUPPORTS.
12. ALL LABOR AND MATERIAL NECESSARY FOR CHANGES IN EXISTING PLUMBING, CARPENTRY, AND ELECTRICAL WORK MUST BE DONE AND SUPPLIED BY THE GENERAL CONTRACTOR AND IS NOT INCLUDED IN THE COST OF EQUIPMENT.
13. ALL PLUMBING AND ELECTRICAL LINES ARE TO BE CONCEALED UNLESS OTHERWISE SPECIFIED.
14. THE ELECTRICAL PANEL SHALL BE CONVENIENT AND ACCESSIBLE. MEET ELECTRICAL CODE REQUIREMENTS, AND BE LOCATED IN THE SUITE. LOCATION TO BE APPROVED BY THE OWNER AND LANDLORD. THE G.C. SHALL REVIEW THE LOCATION WITH THE E.S., AS WELL AS THE LOCATIONS OF THE TELEPHONE SYSTEM AND SERVER.
15. HENRY SCHEIN, INC. SHALL NOT BE HELD RESPONSIBLE FOR SUPPLYING UL/ULC OR CSA APPROVAL CERTIFICATES. THE G.C. MAY CONTACT THE MANUFACTURER IF REQUIRED.
16. THE ELECTRICAL SUBCONTRACTOR SHALL PROVIDE SPECIFIED TERMINATION BOXES, RECEPTACLES AND ANY HARDWIRE CIRCUITS LOCATED IN CUSTOM DENTAL CABINETRY. THEY ARE ALSO RESPONSIBLE FOR SUPPLYING GFCI RECEPTACLES WHERE REQUIRED BY CODE.
17. THE G.C. IS TO MAKE ARRANGEMENTS FOR TEMPORARY POWER AND/OR DISCONNECTION OF ELECTRICAL AND MECHANICAL SYSTEMS IF AND WHEN REQUIRED.
18. IF MULTIMEDIA SYSTEMS, SUCH AS ENTERTAINMENT TVS, MONITORS, OR NETWORK COMPUTER SYSTEMS, OR SECURITY SYSTEMS ARE SUPPLIED AND INSTALLED BY HENRY SCHEIN, INC., THEN THESE SYSTEMS WILL BE THEIR RESPONSIBILITY. WHEN THESE SYSTEMS, OR OTHER SYSTEMS, ARE NOT PROVIDED BY HENRY SCHEIN, INC., HENRY SCHEIN, INC. SHALL NOT BE HELD RESPONSIBLE FOR THEIR INSTALLATION OR COMMISSIONING.
19. HENRY SCHEIN, INC. WILL ASSEMBLE EQUIPMENT AND, WHERE SPECIFIED WITHIN THESE DRAWINGS, CONNECT TO UTILITIES PROVIDED. SUCH CONNECTIONS BY OTHER TRADES ARE SUPPLIED CORRECTLY AND COMPLETELY (WITH PROPER SHUT-OFF VALVES/FITTINGS/ OUTLETS/TERMINATIONS). VERIFY ALL CONTRACTOR RESPONSIBILITIES FOR FINAL CONNECTIONS WITH THESE DRAWINGS AND HENRY SCHEIN DENTAL E.S., DIRECT ANY QUESTIONS REGARDING CONTRACTOR RESPONSIBILITIES TO HENRY SCHEIN DENTAL E.S. PRIOR TO CONSTRUCTION.
20. WHEN APPLICABLE, THE G.C. SHALL BE RESPONSIBLE FOR PROCURING A PLUMBING SUB-CONTRACTOR THAT IS CERTIFIED TO INSTALL NITROUS OXIDE–OXYGEN CONSCIOUS SEDATION SYSTEMS AS DETAILED IN THESE PLANS. HENRY SCHEIN DENTAL IS A NITROUS OXIDE SYSTEM END USER COMPONENT SUPPLIER AND DOES NOT MANUFACTURE OR DESIGN ANY OF THESE SYSTEMS. ANY SYSTEM DESIGN SHOWN ON THESE PLANS BY HENRY SCHEIN DENTAL IS TO BE USED AS AN ILLUSTRATION ONLY FOR THE PURPOSE OF LOCATING END USER OUTLET STATIONS, CYLINDER ROOM MANIFOLD, AND ALARM PANEL. THE FINAL TRUNK SYSTEM INSTALLATION SHALL ADHERE TO THE MECHANICAL ENGINEERING DRAWINGS PREPARED BY A THIRD PARTY.
21. PLUMBING SUBCONTRACTOR SHALL PROVIDE GAS CERTIFICATION CREDENTIALS IN ACCORDANCE WITH ANY REQUESTS BY THE OWNER, GENERAL CONTRACTOR, BUILDING DEPARTMENT, OR HENRY SCHEIN DENTAL PRIOR TO COMMENCING WORK IF ANY TYPE OF NITROUS–OXIDE SYSTEM IS BEING INCORPORATED INTO THE PROJECT.

PRIOR TO POURING THE CONCRETE FLOOR AND ENCLOSING ALL WALLS AND CEILINGS, THE GENERAL CONTRACTOR SHALL CONTACT THE E.S. AND INSTALLATION TECHNICIAN FOR FINAL INSPECTION OF PLUMBING, ELECTRICAL AND WOOD SUPPORTS.

EQUIPMENT SPECIALIST (E.S.): EMILY FARRELL **TELEPHONE:** 919-740-5753

INSTALLATION TECHNICIAN: **TELEPHONE:**

SHEET INDEX

SHEET	TITLE
HCV	COVER SHEET
HA0.3	DENTAL EQUIPMENT THIRD FLOOR PLAN
HA0.4	DENTAL EQUIPMENT FOURTH FLOOR PLAN
HA1.3	DENTAL DIMENSION & REINFORCEMENT -3RD FLR
HA1.4	DENTAL DIMENSION & REINFORCEMENT -4TH FLR
HA2.3	TRE. RM. CEILING PLAN - 3RD FLR
HA2.4	TRE. RM. CEILING PLAN - 4TH FLR
HP1.3	DENTAL PLUMBING SPECIFICATIONS - 3RD FLR
HP1.4	DENTAL PLUMBING SPECIFICATIONS - 4TH FLR
HE1.3	DENTAL ELECTRICAL SPECIFICATIONS - 3RD FLR
HE1.4	DENTAL ELECTRICAL SPECIFICATIONS - 4TH FLR
HED.1	DENTAL EQUIPMENT DETAILS
HED.2	DENTAL EQUIPMENT DETAILS
HED.3	DENTAL EQUIPMENT DETAILS
HED.4	DENTAL EQUIPMENT DETAILS
HED.5	DENTAL EQUIPMENT DETAILS
HDC.1	MANUFACTURER'S DENTAL CABINET DRAWINGS
HDC.2	MANUFACTURER'S DENTAL CABINET DRAWINGS

HENRY SCHEIN®
INTEGRATED DESIGN STUDIO
10920 W LINCOLN AVE, WEST ALLIS, WI 53227
henryscheinintegrateddesign.com

PROJECT: CAPE FEAR COMMUNITY COLLEGE
LOCATION: 411 N FRONT ST, WILMINGTON, NC 28401

HENRY SCHEIN REP: EMILY FARRELL
REGION: CAROLINA NORTH
PHONE #: 919-740-5753

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PROJECT NUMBER: 24-0218
PROJECT START DATE: 01/24/2024
FINALS START DATE: 04/23/2024
DRAWN BY: ARCH
FINALS BY: MPJ
CHECKED BY: TAS

REVISIONS:

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INT.SQ.FT.= PER ARCH
SCALE: N/A
SHT. SIZE: 42 x 30

COVER SHEET

HCV

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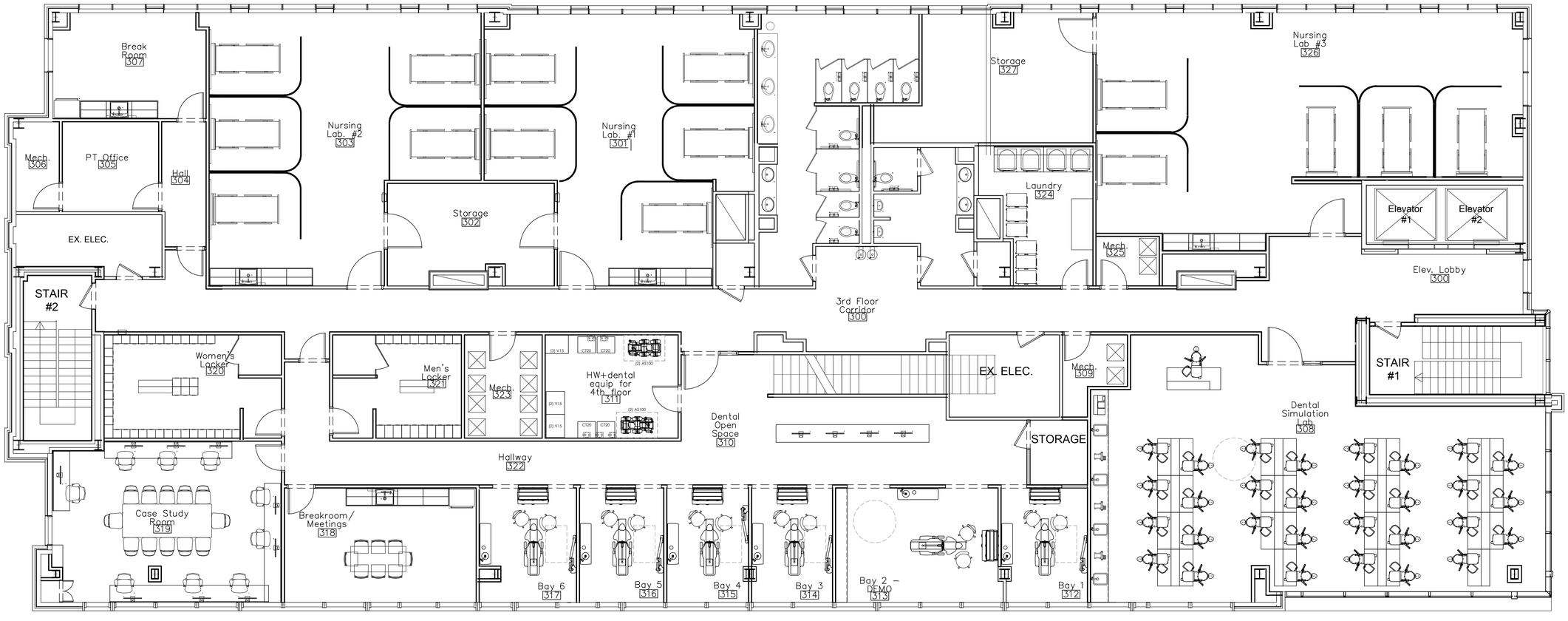

PROPOSED THIRD FLOOR PLAN

3/16"=1'-0"

THIS PLAN IS FOR THE SOLE PURPOSE OF SPECIFICATION AND INSTALLATION OF THE DENTAL EQUIPMENT SUPPLIED BY HENRY SCHEIN DENTAL. THE SPACE PLANNING AND CONCEPTUAL DESIGN HAS BEEN PROVIDED BY OTHERS.
IT IS THE ARCHITECT/CONTRACTOR'S RESPONSIBILITY TO VERIFY THAT ALL CODE RESTRICTIONS & CLEARANCES ARE MET.
DENTAL CHAIR AND CABINET UTILITIES TO BE LOCATED ON JOB-SITE PER MANUFACTURER'S TEMPLATES. LOCATIONS TO BE APPROVED BY DOCTOR AND HENRY SCHEIN EQUIPMENT SPECIALIST PRIOR TO ROUGH-IN.

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HENRY SCHEIN REP:
EMILY FARRELL

REGION:
CAROLINA NORTH

PHONE #:
919-740-5753

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INT.SQ.FT.= PER ARCH

SCALE: 3/16"=1'-0"

SHT. SIZE: 42 x 30

THIRD FLOOR PLAN

HA0.3

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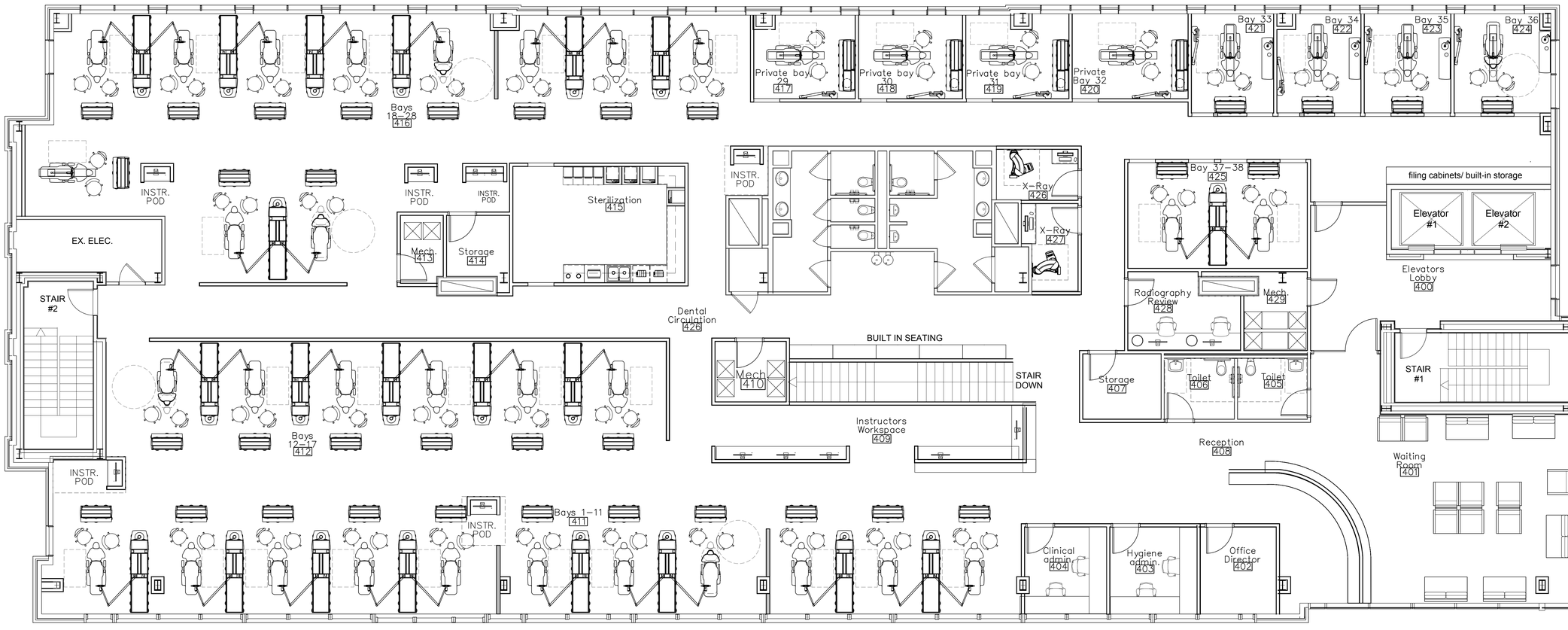

PROPOSED FOURTH FLOOR PLAN

3/16"=1'-0"

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INT.SQ.FT.= PER ARCH

SCALE: 3/16"=1'-0"
SHT. SIZE: 42 x 30

FOURTH FLOOR PLAN

HA0.4

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REINFORCEMENT SPECIFICATIONS

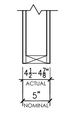
QUANTITY	SPEC. NUMBER	DESCRIPTION	DETAIL
		PLEASE NOTE: A LICENSED CONTRACTOR IS RESPONSIBLE FOR PROVIDING EQUIPMENT BLOCKING. ALL REQUIREMENTS TO BE VERIFIED BY MANUFACTURER'S SPEC SHEETS PROVIDED BY HENRY SCHEIN DENTAL EQUIPMENT SPECIALIST. MANUFACTURER'S SPEC'S SUPERSEDE ANY AND ALL INFORMATION CONTAINED HEREIN.	
6	6	DENTAL TRACK LIGHT - SUPPLIED AND INSTALLED BY HENRY SCHEIN DENTAL. BLOCKING AND ELECTRICAL BY CONTRACTOR(S).	6
5	9	WALL MOUNTED INTRAORAL X-RAY - SUPPLIED AND INSTALLED BY HENRY SCHEIN DENTAL. BLOCKING & ELECTRICAL BY CONTRACTOR(S). ELECTRICIAN TO SUPPLY AND INSTALL PIPE CHASE WITH PULL-STRING TO (9B) LOCATION(S). VERIFY SUPPLIER OF WIRING WITH HENRY SCHEIN DENTAL EQUIPMENT SPECIALIST.	9

GENERAL NOTES

1. THIS SPECIFICATION SHEET IS INTENDED AS A GUIDE FOR TRADESMEN. THE FLOOR PLANS ENCLOSED HEREIN ARE SUGGESTIONS FOR THE PLACEMENT OF DENTAL EQUIPMENT. THEY ARE NOT INTENDED FOR CONSTRUCTION.

2. VERIFY ALL DIMENSIONS WITH HENRY SCHEIN DENTAL REP. ON JOBSITE. ON SITE MODIFICATIONS MAY NEED TO BE DONE BY CONTRACTOR, BUT SHOULD BE VERIFIED BY ALL PARTIES INVOLVED.

3. 5/8" GYPSUM WALLBOARD IS RECOMMENDED THROUGHOUT THE OFFICE TO PROVIDE SOUND ATTENUATION & ADDITIONAL PROTECTION AGAINST X-RAY SCATTER RADIATION.



TYPICAL WALL

WALL LEGEND

ARCH WALL TO REMAIN

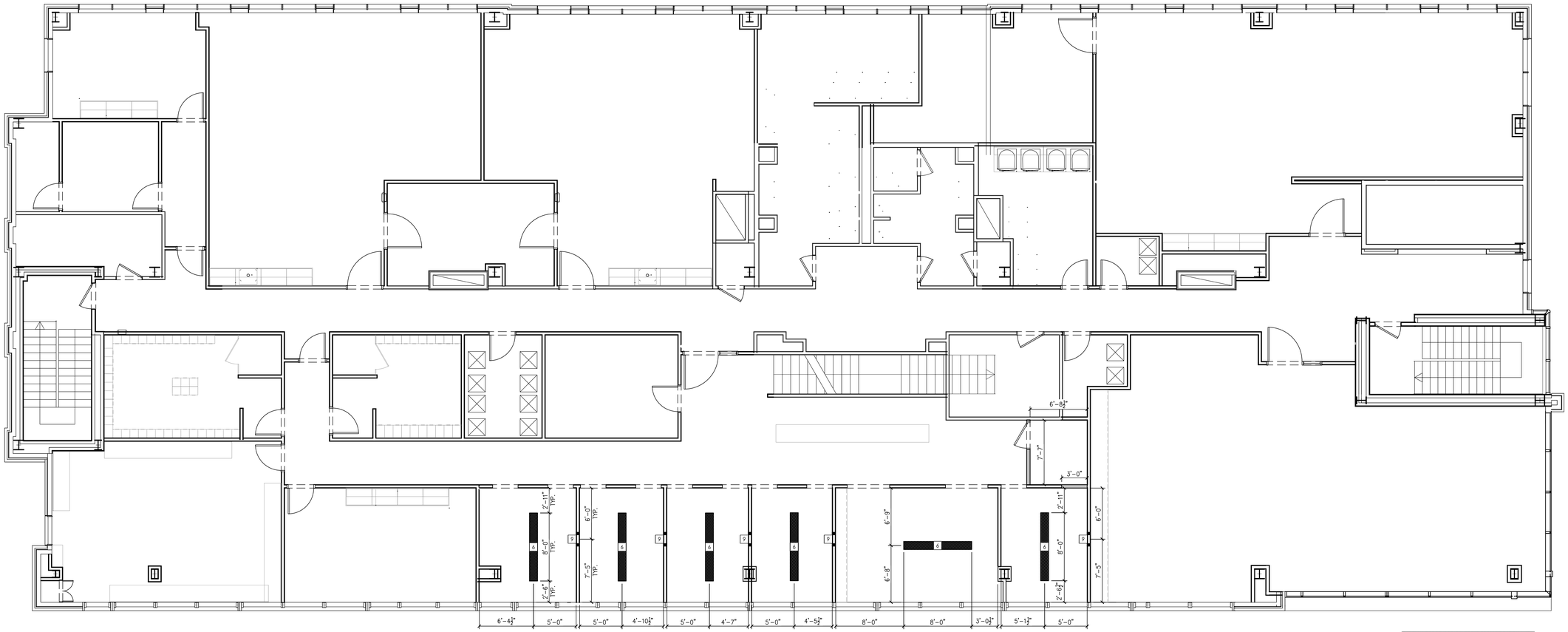
HS PROPOSED WALLS TO BE CONSTRUCTED

DOORWAY HEADER ABOVE, HEIGHT TO BE DETERMINED BY OWNER.

NEW REINFORCEMENT PLACED FOR WALL-MOUNTED EQUIPMENT. SEE "REINFORCEMENT SPECIFICATION SCHEDULE" FOR MORE INFORMATION.

NEW REINFORCEMENT PLACED FOR CEILING-MOUNTED EQUIPMENT. SEE "REINFORCEMENT SPECIFICATION SCHEDULE" FOR MORE INFORMATION.

SEE SHEETS SED.1 - SED.5 FOR DENTAL EQUIPMENT DETAILS



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DIMENSIONS & REINFORCEMENT SPECIFICATIONS - 3RD FLR

3/16"=1-0"

HENRY SCHEIN®
INTEGRATED DESIGN STUDIO
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henryscheinintegrateddesign.com

PROJECT: **CAPE FEAR COMMUNITY COLLEGE**

LOCATION: 411 N FRONT ST, WILMINGTON, NC 28401

HENRY SCHEIN REP:
EMILY FARRELL

REGION:
CAROLINA NORTH

PHONE #:
919-740-5753

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24-0218

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FINALS START DATE:
04/23/2024

DRAWN BY: ARCH
FINALS BY: MPJ
CHECKED BY: TAS

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INT.SQ.FT.= PER ARCH

SCALE: 3/16"=1'-0"

SHT. SIZE: 42 x 30

SHEET TITLE: REINFORCEMENT PLAN (3RD)

SHEET NO: HA1.3

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REINFORCEMENT SPECIFICATIONS

QUANTITY	SPEC. NUMBER	DESCRIPTION	DETAIL
		PLEASE NOTE: A LICENSED CONTRACTOR IS RESPONSIBLE FOR PROVIDING EQUIPMENT BLOCKING. ALL REQUIREMENTS TO BE VERIFIED BY MANUFACTURER'S SPEC SHEETS PROVIDED BY HENRY SCHEIN DENTAL EQUIPMENT SPECIALIST. MANUFACTURER'S SPECS SUPERSEDE ANY AND ALL INFORMATION CONTAINED HEREIN.	
9	6	DENTAL TRACK LIGHT - SUPPLIED AND INSTALLED BY HENRY SCHEIN DENTAL. BLOCKING AND ELECTRICAL BY CONTRACTOR(S).	6
8	9	WALL MOUNTED INTRAORAL X-RAY - SUPPLIED AND INSTALLED BY HENRY SCHEIN DENTAL. BLOCKING & ELECTRICAL BY CONTRACTOR(S). ELECTRICIAN TO SUPPLY AND INSTALL PIPE CHASE WITH PULL-STRING TO (9B) LOCATION(S). VERIFY SUPPLIER OF WIRING WITH HENRY SCHEIN DENTAL EQUIPMENT SPECIALIST.	9
2	9C	PANORAMIC IMAGING UNIT (2D OR 3D) - SUPPLIED AND INSTALLED BY HENRY SCHEIN DENTAL. BLOCKING & ELECTRICAL BY CONTRACTOR(S). CONFIRM POWER REQUIREMENTS WITH HENRY SCHEIN DENTAL EQUIPMENT SPECIALIST.	9C
3	35	BLOCKING - UPPER & LOWER SUPPORT - CONTRACTOR TO SUPPLY AND INSTALL BACKING FOR WALL MOUNTED DENTAL UNITS & WALL HUNG CABINETS. SEE HENRY SCHEIN DENTAL EQUIPMENT SPECIALIST FOR EXACT LOCATION.	35

GENERAL NOTES

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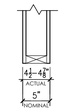


TYPICAL WALL

WALL LEGEND

ARCH WALL TO REMAIN

HS PROPOSED WALLS TO BE CONSTRUCTED

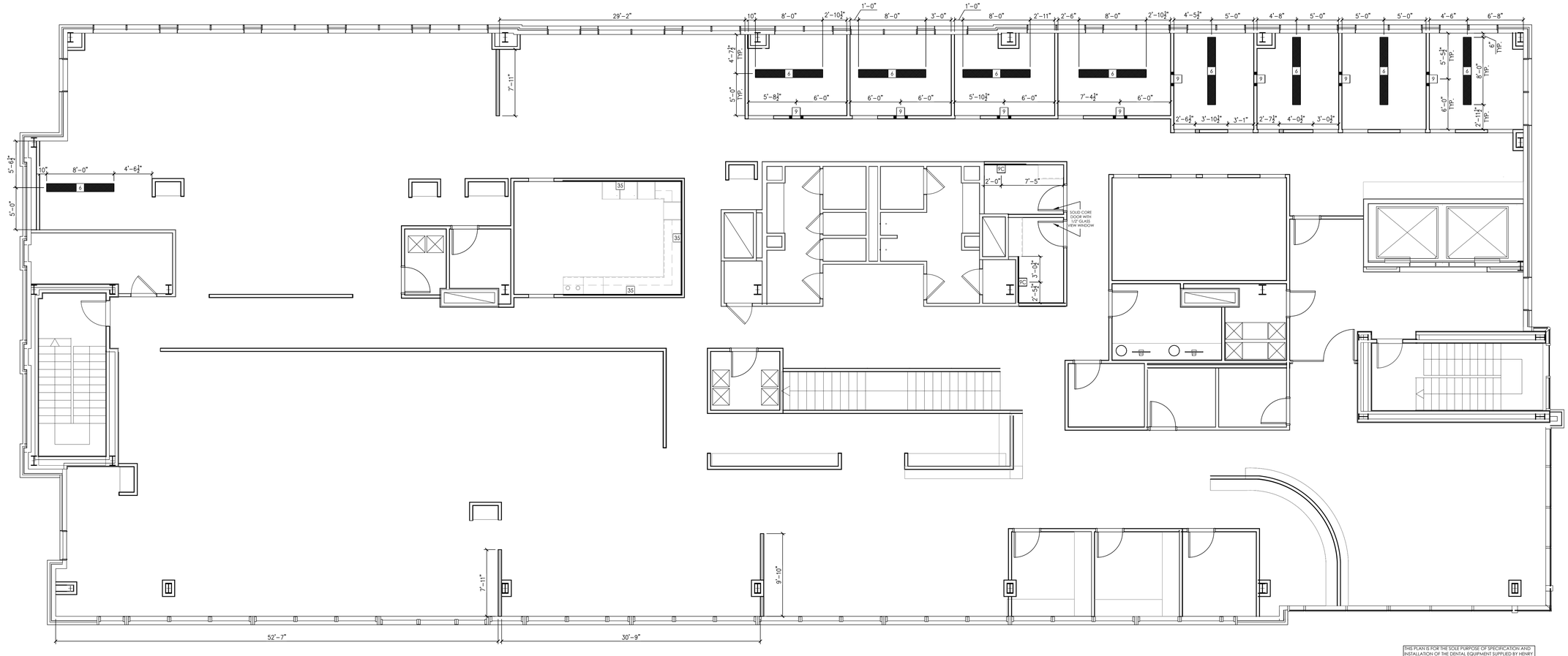
DOORWAY HEADER ABOVE, HEIGHT TO BE DETERMINED BY OWNER.

NEW REINFORCEMENT PLACED FOR WALL-MOUNTED EQUIPMENT. SEE "REINFORCEMENT SPECIFICATION SCHEDULE" FOR MORE INFORMATION.

OR

NEW REINFORCEMENT PLACED FOR CEILING-MOUNTED EQUIPMENT. SEE "REINFORCEMENT SPECIFICATION SCHEDULE" FOR MORE INFORMATION.

SEE SHEETS SED.1 - SED.5 FOR DENTAL EQUIPMENT DETAILS



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DIMENSIONS & REINFORCEMENT SPECIFICATIONS - 4TH FLR

3/16"=1'-0"

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henryscheinintegrateddesign.com

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HENRY SCHEIN REP: EMILY FARRELL
REGION: CAROLINA NORTH
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INT.SQ.FT.= PER ARCH
SCALE: 3/16"=1'-0"
SHT. SIZE: 42 x 30

REINFORCEMENT PLAN (4TH FLR)

HA1.4

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P:\...\NASA\Schools\Cape Fear Community College\CFCC-15-F

CEILING LEGEND

*ALL EXIT AND EMERGENCY LIGHTS ARE THE RESPONSIBILITY OF THE LIGHTING CONTRACTOR AND TO BE INSTALLED PER LOCAL CODE.

*GENERAL SWITCH LOCATIONS AND WIRING TO BE DETERMINED BY LIGHTING CONTRACTOR PER LOCAL CODE AND BE APPROVED BY DOCTOR.

*HVAC ENGINEER MUST TAKE CEILING & DENTAL LIGHTS WITHIN TREATMENT ROOMS INTO CONSIDERATION WHEN LAYING OUT THE AIR DISTRIBUTION SYSTEM. SEE SHEET SA.1 FOR BLOCKING LOCATIONS (WHERE APPLICABLE).

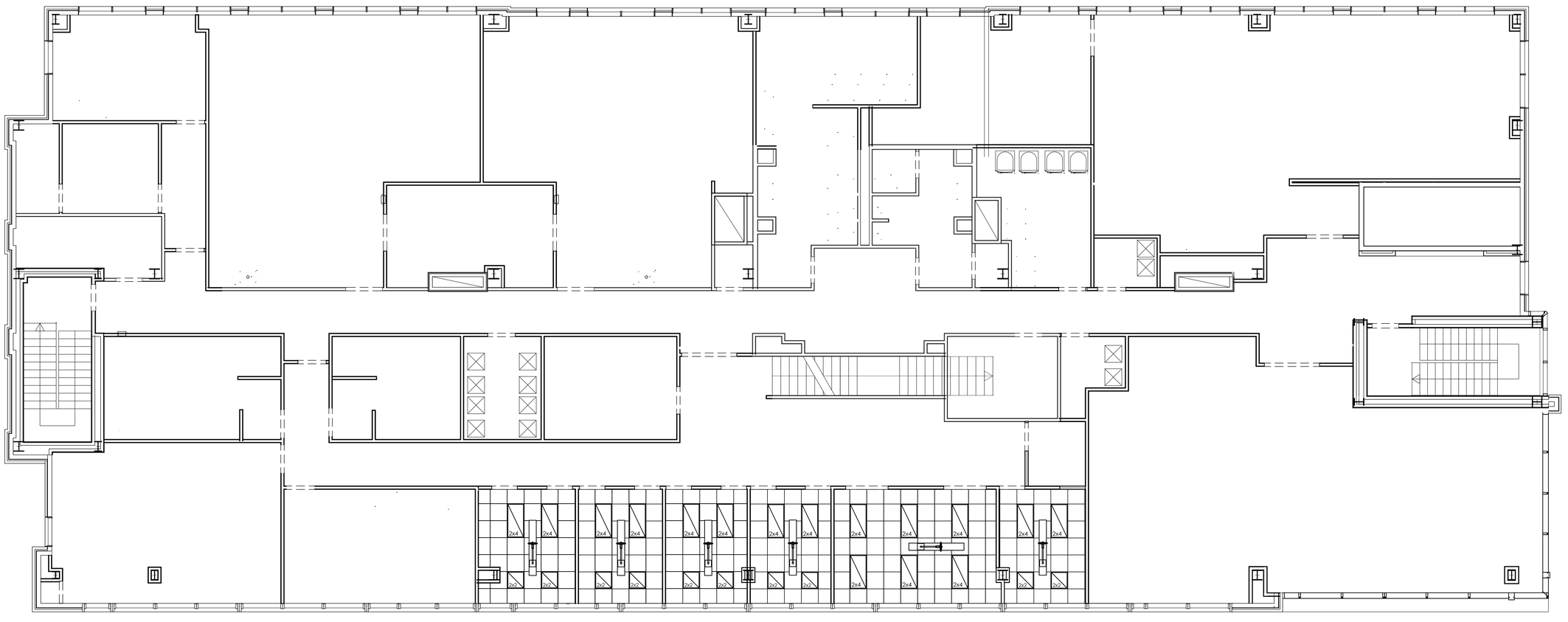
THIS CEILING PLAN IS A SUGGESTED LAYOUT, AND IS FOR REPRESENTATION ONLY, EXACT FIXTURE SPECIFICATIONS AND PLACEMENT PER OWNER AND/OR ARCHITECT.

SUSPENDED CEILING GRID

2 x 4 RECESSED LIGHT FIXTURE

2 x 2 RECESSED LIGHT FIXTURE

CEILING MOUNTED DENTAL TRACK LIGHT



PROPOSED CEILING PLAN (TREATMENT ROOMS ONLY)-3RD FLR
3/16"=1-0"

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INT.SQ.FT.= PER ARCH

SCALE: 3/16"=1-0"
SHT. SIZE: 42 x 30

CEILING PLAN
3RD FLR

HA2.3

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CEILING LEGEND

*ALL EXIT AND EMERGENCY LIGHTS ARE THE RESPONSIBILITY OF THE LIGHTING CONTRACTOR AND TO BE INSTALLED PER LOCAL CODE.

*GENERAL SWITCH LOCATIONS AND WIRING TO BE DETERMINED BY LIGHTING CONTRACTOR PER LOCAL CODE AND BE APPROVED BY DOCTOR.

*HVAC ENGINEER MUST TAKE CEILING & DENTAL LIGHTS WITHIN TREATMENT ROOMS INTO CONSIDERATION WHEN LAYING OUT THE AIR DISTRIBUTION SYSTEM. SEE SHEET SA.1 FOR BLOCKING LOCATIONS (WHERE APPLICABLE).

THIS CEILING PLAN IS A SUGGESTED LAYOUT, AND IS FOR REPRESENTATION ONLY, EXACT FIXTURE SPECIFICATIONS AND PLACEMENT PER OWNER AND/OR ARCHITECT.

SUSPENDED CEILING GRID

2 x 4 RECESSED LIGHT FIXTURE

2 x 2 RECESSED LIGHT FIXTURE

CEILING MOUNTED DENTAL TRACK LIGHT

PROPOSED CEILING PLAN (TREATMENT ROOMS ONLY)-4TH FLR
3/16"=1'-0"

HENRY SCHEIN®
INTEGRATED DESIGN STUDIO
10920 W LINCOLN AVE, WEST ALLIS, WI 53227
henryscheinintegrateddesign.com

PROJECT:
CAPE FEAR COMMUNITY COLLEGE

LOCATION:
411 N FRONT ST
WILMINGTON, NC 28401

HENRY SCHEIN REP:
EMILY FARRELL

REGION:
CAROLINA NORTH

PHONE #:
919-740-5753

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PROJECT NUMBER:
24-0218

PROJECT START DATE:
01/24/2024

FINALS START DATE:
04/23/2024

DRAWN BY: ARCH
FINALS BY: MPJ
CHECKED BY: TAS

REVISIONS:

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INT.SQ.FT.= PER ARCH

SCALE: 3/16"=1'-0"
SHT. SIZE: 42 x 30

CEILING PLAN
4TH FLR

HA2.4

P:_NAS40\School\Cape Fear Community College\CFCC-18-F

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PLUMBING SPECIFICATIONS

PLEASE NOTE: A LICENSED PLUMBING CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL REQUIRED UTILITIES. ALL REQUIREMENTS TO BE VERIFIED BY MANUFACTURER'S SPEC SHEETS PROVIDED BY HENRY SCHEIN DENTAL EQUIPMENT SPECIALIST. MANUFACTURER'S SPECS SUPERSEDE ANY AND ALL INFORMATION CONTAINED HEREIN.

QUANTITY	SPEC. NUMBER	DESCRIPTION	UTILITIES: COLD WATER	HOT WATER	DRAIN	COMPRESSED AIR	VACUUM	NATURAL GAS	N2O	OXYGEN	NITROGEN	VENT	DETAIL
6	2A	UTILITY CENTER – SELF-CONTAINED WATER. SEE DETAIL(S). SELF-CONTAINED WATER. ALL UTILITIES MUST CONFORM TO PREVAILING LOCAL CODES.				•							2A
23	3A	UTILITY CENTER - SELF-CONTAINED WATER. SEE DETAIL(S). ALL UTILITIES MUST CONFORM TO PREVAILING LOCAL CODES.				•		•					3A
6	11	MODULAR SINKS & FAUCETS - SINK AND FAUCET SUPPLIED BY HENRY SCHEIN DENTAL, INSTALLED BY PLUMBER. FINAL CONNECTIONS BY PLUMBER.	•	•	•								
6	12	AIR POWERED SINK CONTROL - FROM (12) TO (11). SUPPLIED BY HENRY SCHEIN DENTAL, INSTALLED BY PLUMBER.				•							
3	13	COMPRESSED AIR LINE AND VALVE – ½" AIR LINE FROM COMPRESSOR (25) BY PLUMBER. TERMINATE WITH A 3/8" ANGLE VALVE.				•							13
3	16	MODEL TRIMMER - SUPPLIED AND INSTALLED BY HENRY SCHEIN DENTAL. DO NOT TIE INTO COLD WATER LINE FOR SINK. SEE DETAIL.	•		•								16
4	17	PLASTER TRAP - SUPPLIED BY HSD, INSTALLED BY PLUMBER ON SINK DRAIN LINE. DRAIN LINE MUST BE 21" A.F.F.			•								16
4	25	DENTAL AIR COMPRESSOR - SUPPLIED BY HENRY SCHEIN DENTAL, INSTALLED BY CONTRACTOR(S). FOR DENTAL AIR DRIVEN DEVICES. PLUMBER TO PROVIDE 1/2" I.D. COPPER TYPE K OR L SUPPLY LINES TO LOCATIONS THAT REQUIRE AIR. BUCK BOOST TRANSFORMER SUPPLIED AND INSTALLED BY ELECTRICIAN (IF REQ'D). FINAL CONNECTIONS BY CONTRACTOR(S).				•							25
1	27	VACUUM PUMP (DRY) - SUPPLIED BY HENRY SCHEIN DENTAL, INSTALLED BY CONTRACTOR(S). VERIFY TRUNK & BRANCH LINE SIZES WITH MFR RECOMMENDATIONS. USE SCH 40 PVC WHERE PERMITTED BY CODE. PLUMBER TO EXHAUST PUMP TO OUTSIDE. BUCK BOOST TRANSFORMER SUPPLIED AND INSTALLED BY ELECTRICIAN (IF REQ'D). DRAIN BY PLUMBER. FINAL CONNECTIONS BY CONTRACTOR(S). PLUMBER TO PROVIDE WATER LINE WITH HOSE BIB NEAR UNIT. SEE DETAIL.	•		•			•				•	27
1	27A	VACUUM PUMP (DRY) - SUPPLIED BY HENRY SCHEIN DENTAL, INSTALLED BY CONTRACTOR. VERIFY TRUNK & BRANCH LINE SIZES WITH MFR RECOMMENDATIONS. USE SCH 40 PVC WHERE PERMITTED BY CODE. EXHAUST PUMP TO OUTSIDE. BUCK BOOST TRANSFORMER SUPPLIED AND INSTALLED BY CONTRACTOR (IF REQ'D). DRAIN BY CONTRACTOR. FINAL CONNECTIONS BY CONTRACTOR. PROVIDE WATER LINE WITH HOSE BIB NEAR UNIT. SEE DETAIL.	•		•			•				•	27A
5	29A	AMALGAM SEPARATOR - SUPPLIED BY HENRY SCHEIN DENTAL, INSTALLED BY PLUMBER. VERIFY LOCATION WITH HENRY SCHEIN DENTAL EQUIPMENT SPECIALIST. CONNECT TO VACUUM LINE COMING IN FROM TREATMENT ROOMS.											29A

PLUMBING NOTES

1. THIS SPECIFICATION SHEET IS INTENDED AS A GUIDE FOR TRADESMEN. THE FLOOR PLANS ENCLOSED HEREIN ARE SUGGESTIONS FOR THE PLACEMENT OF DENTAL EQUIPMENT. THEY ARE NOT INTENDED FOR CONSTRUCTION.

2. EXACT EQUIPMENT LOCATIONS MUST BE JOB SITE VERIFIED BY THE HENRY SCHEIN DENTAL EQUIPMENT SPECIALIST.

3. FOLLOW MANUFACTURER'S TEMPLATES FOR EXACT REQUIREMENTS FOR ANY EQUIPMENT SUPPLIED BY HENRY SCHEIN DENTAL. CONSULT WITH HENRY SCHEIN DENTAL REP FOR ADDITIONAL INFORMATION.

4. DENTAL AIR IS SUPPLIED THROUGH USE OF A DENTAL AIR COMPRESSOR/SUPPLY SYSTEM AND IS PERMITTED TO BE USED AS A SUPPORT GAS FOR DRIVING DENTAL TOOLS AND SUPPLYING AIR-DRIVEN EQUIPMENT AS DESCRIBED WITHIN NFPA 99. DENTAL AIR IS NOT A MEDICAL GAS.

5. WATER PRESSURE MUST NOT EXCEED 50 PSI AT ALL DENTAL UNITS.

6. ALL PLUMBING MUST CONFORM TO LOCAL PREVAILING CODES.

7. REFER TO ARCHITECT'S DRAWINGS FOR PLUMBING REQUIREMENTS IN ALL AREAS NOT INDICATED ON THIS PLAN.

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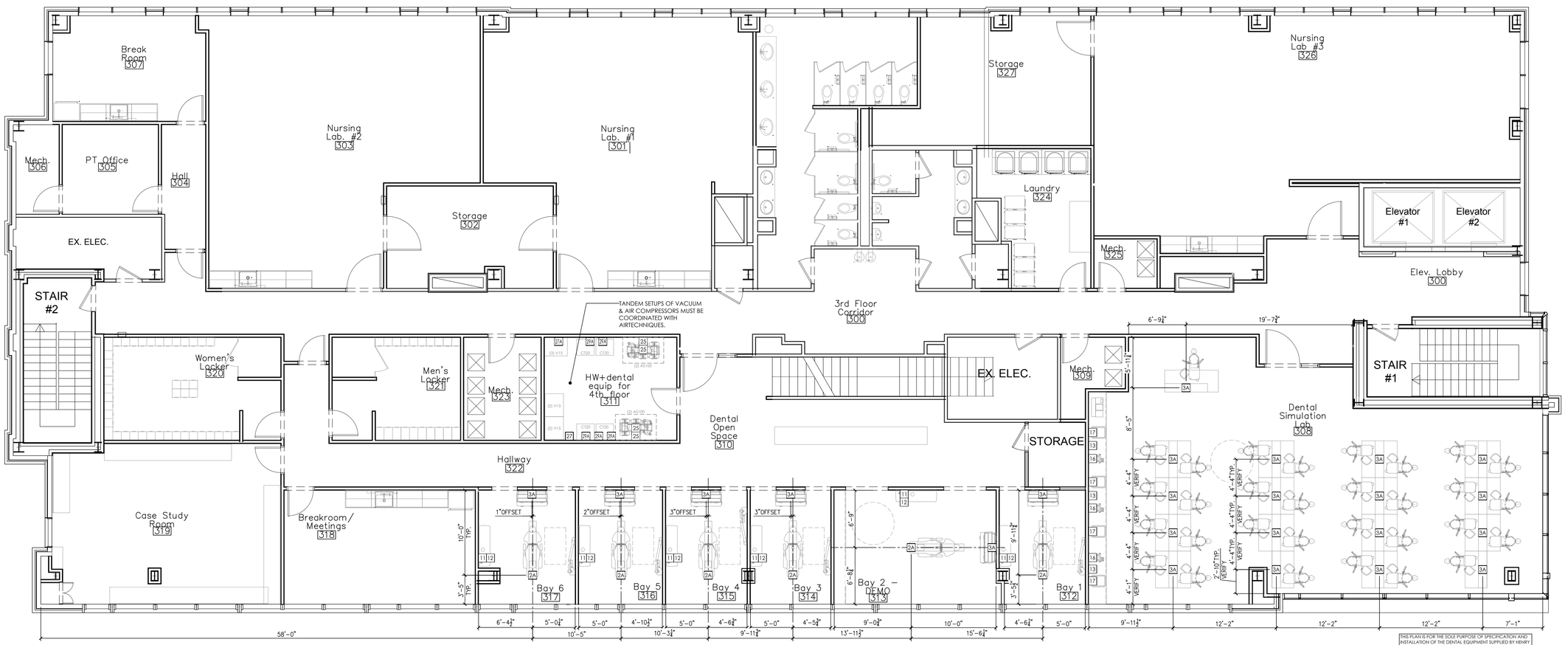
SEE SHEETS SED.1 - SED.5 FOR DENTAL EQUIPMENT DETAILS



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DENTAL CHAIR AND CABINET UTILITIES TO BE LOCATED ON JOB-SITE PER MANUFACTURER'S TEMPLATES. LOCATIONS TO BE APPROVED BY DOCTOR AND HENRY SCHEIN EQUIPMENT SPECIALIST PRIOR TO ROUGH-IN.

PROPOSED PLUMBING PLAN - 3RD FLR

3/16"=1'-0"

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PROJECT: CAPE FEAR COMMUNITY COLLEGE
LOCATION: 411 N FRONT ST WILMINGTON, NC 28401

HENRY SCHEIN REP: EMILY FARRELL
REGION: CAROLINA NORTH
PHONE #: 919-740-5753

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FINALS START DATE: 04/23/2024
DRAWN BY: ARCH
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CHECKED BY: TAS

REVISIONS:

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INT.SQ.FT.= PER ARCH
SCALE: 3/16"=1'-0"
SHT. SIZE: 42 x 30
DENTAL PLUMBING PLAN - 3RD FLR

HP1.3

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PLUMBING SPECIFICATIONS

QUANTITY	SPEC. NUMBER	DESCRIPTION	COLD WATER	HOT WATER	DRAIN	COMPRESSED AIR	VACUUM	NATURAL GAS	N2O	OXYGEN	NITROGEN	VENT	DETAIL
		PLEASE NOTE: A LICENSED PLUMBING CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL REQUIRED UTILITIES. ALL REQUIREMENTS TO BE VERIFIED BY MANUFACTURER'S SPEC SHEETS PROVIDED BY HENRY SCHEIN DENTAL EQUIPMENT SPECIALIST. MANUFACTURER'S SPECS SUPERSEDE ANY AND ALL INFORMATION CONTAINED HEREIN.	UTILITIES										
38	2A	UTILITY CENTER – SELF-CONTAINED WATER. SEE DETAIL(S). SELF-CONTAINED WATER. ALL UTILITIES MUST CONFORM TO PREVAILING LOCAL CODES.				•							2A
38	3A	UTILITY CENTER - SELF-CONTAINED WATER. SEE DETAIL(S). ALL UTILITIES MUST CONFORM TO PREVAILING LOCAL CODES.				•		•					3A
8	11	MODULAR SINKS & FAUCETS - SINK AND FAUCET SUPPLIED BY HENRY SCHEIN DENTAL, INSTALLED BY PLUMBER. FINAL CONNECTIONS BY PLUMBER.	•	•	•								
21	11C	CENTER ISLAND CABINET - SUPPLIED AND INSTALLED BY HENRY SCHEIN DENTAL. SINK AND FAUCET TO BE CONNECTED BY PLUMBER. FINAL CONNECTIONS OF CABINET UTILITIES BY CONTRACTOR(S).	•	•	•							•	11C
8	12	AIR POWERED SINK CONTROL - FROM (12) TO (11). SUPPLIED BY HENRY SCHEIN DENTAL, INSTALLED BY PLUMBER.				•							
1	14C	MODULAR STERILIZATION CENTER - STERI-CENTER SUPPLIED AND INSTALLED BY HENRY SCHEIN DENTAL. CONTRACTOR TO PROVIDE UTILITIES PER MANUFACTURER'S SPECIFICATIONS. EXACT LOCATIONS TO BE CONFIRMED ON-SITE BY HENRY SCHEIN DENTAL EQUIPMENT SPECIALIST. FINAL CONNECTIONS BY CONTRACTOR(S).	•	•	•	•		•				•	14C
1	14D	VISTACOOL DIRECT-TO-DRAIN SYSTEM - SUPPLIED AND INSTALLED BY HENRY SCHEIN DENTAL. TIE INTO EXISTING SINK DRAIN AND COLD WATER LINE WHERE POSSIBLE. SYSTEM SHOULD BE INSTALLED IN SINK CABINET DOWNHILL FROM STATIM (14) AND UPHILL FROM CONNECTION TO DRAIN. A REMOTE WATER CONTROL VALVE IS RECOMMENDED ON FACILITY WATER LINE WHEN USING THIS SYSTEM.	•		•								14D
1	14E	VISTA DRAINDOCK MULTI-PORT DRAIN ADAPTER – ADAPTER PROVIDED BY HENRY SCHEIN, INSTALLED BY PLUMBER. FINAL CONNECTIONS BY PLUMBER.			•								14E
1	15	ULTRASONIC CLEANER - FOR EQUIPMENT LOCATION ONLY. CONTRACTOR TO PROVIDE REQ'D UTILITIES FOR STERILIZATION CENTER AT 14C LOCATION. CLEANER SUPPLIED AND INSTALLED BY HENRY SCHEIN DENTAL. CONNECTS TO SINK DRAIN.			•								14C
2	15A	WASHER DISINFECTOR - FOR EQUIPMENT LOCATION ONLY. CONTRACTOR TO PROVIDE REQ'D UTILITIES FOR STERILIZATION CENTER AT 14C LOCATION . WASHER SUPPLIED AND INSTALLED BY HENRY SCHEIN DENTAL.	•	•	•								15A
2	15B	HANDPIECE MAINTENANCE SYSTEM - FOR EQUIPMENT LOCATION ONLY. CONTRACTOR TO PROVIDE REQ'D UTILITIES FOR STERILIZATION CENTER AT 14C LOCATION. SYSTEM SUPPLIED AND INSTALLED BY HENRY SCHEIN DENTAL.				•							14C
1	31A	BOTTLE AND/OR AUTOCLAVE WATER TREATMENT SYSTEM - SUPPLIED AND INSTALLED BY HENRY SCHEIN DENTAL (WHERE PERMITTED BY CODE). UTILITIES BY CONTRACTOR. SEE MANUFACTURER SPECIFICATIONS & DETAILS.	•		•								31A

PLUMBING NOTES

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5. WATER PRESSURE MUST NOT EXCEED 50 PSI AT ALL DENTAL UNITS.

6. ALL PLUMBING MUST CONFORM TO LOCAL PREVAILING CODES.

7. REFER TO ARCHITECT'S DRAWINGS FOR PLUMBING REQUIREMENTS IN ALL AREAS NOT INDICATED ON THIS PLAN.

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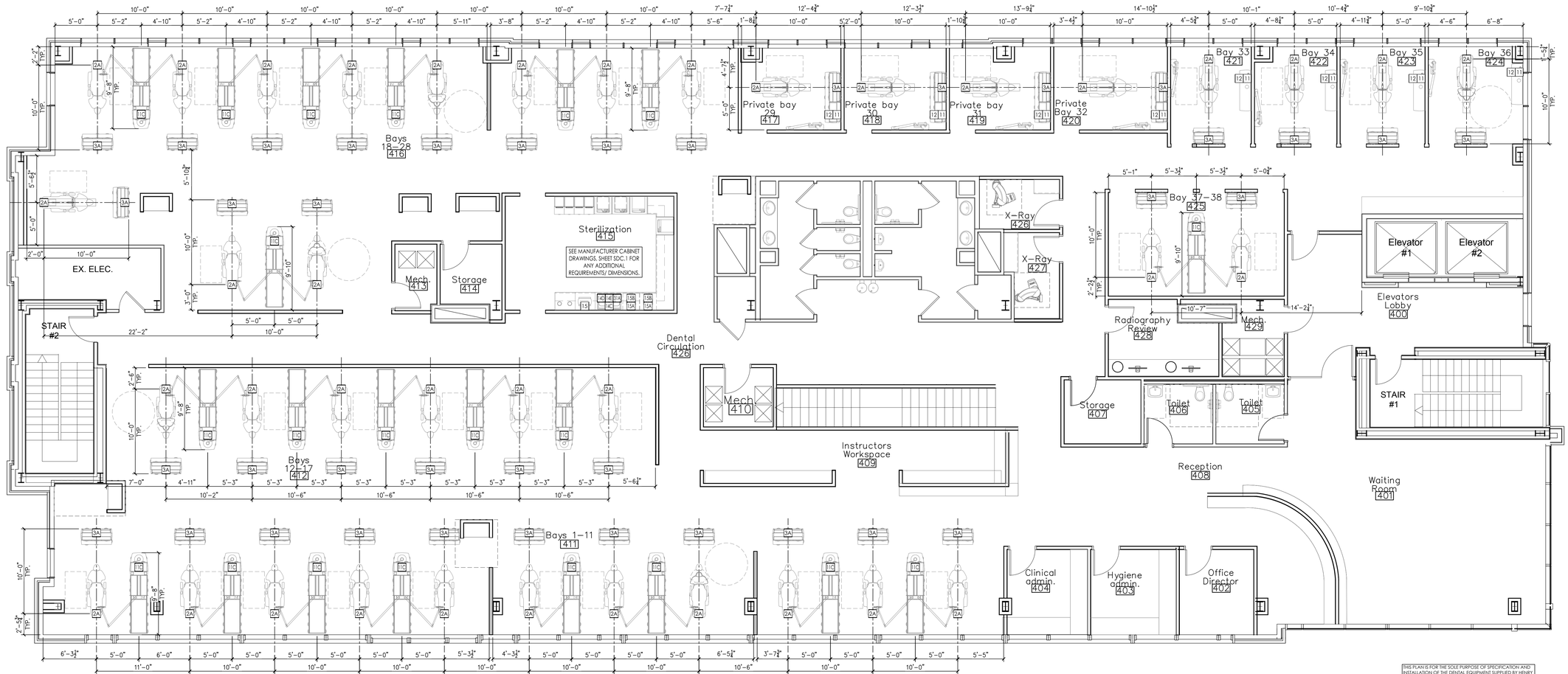
SEE SHEETS SED.1 - SED.5 FOR DENTAL EQUIPMENT DETAILS



PROPOSED PLUMBING PLAN - 4TH FLR

3/16"=1'-0"

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HENRY SCHEIN®
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PROJECT: CAPE FEAR COMMUNITY COLLEGE
LOCATION: 411 N FRONT ST, WILMINGTON, NC 28401

HENRY SCHEIN REP: EMILY FARRELL
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PHONE #: 919-740-5753

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INT.SQ.FT.= PER ARCH
SCALE: 3/16"=1'-0"
SHT. SIZE: 42 x 30
DENTAL PLUMBING PLAN - 4TH FLR

HP1.4

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P:_NAS\Schools\Cape Fear Community College\CFCC-18-F

ELECTRICAL SPECIFICATIONS

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QUANTITY	SPEC. NUMBER	DESCRIPTION	UTILITIES: POWER	DEDICATED CIRCUIT	LOW VOLTAGE CONTROL/ DATA DROP*	DETAIL
6	2A	UTILITY CENTER – SELF-CONTAINED WATER. SEE DETAIL(S). SELF-CONTAINED WATER. ALL UTILITIES MUST CONFORM TO PREVAILING LOCAL CODES.	115V			2A
23	3A	UTILITY CENTER - SELF-CONTAINED WATER. SEE DETAIL(S). ALL UTILITIES MUST CONFORM TO PREVAILING LOCAL CODES.	115V			3A
6	4A	2" SUB-FLOOR CONDUIT - SUB-FLOOR CONDUIT WITH PULL-STRING SUPPLIED & INSTALLED BY ELECTRICIAN. SWEEPING 90 DEGREE BENDS ONLY. STUB-UP FLUSH WITH SUB-FLOOR AT EACH END. MARK LOCATION AT FINISH.				4A
6	4B	2" VERTICAL CONDUIT - VERTICAL CONDUIT WITH PULL-STRING SUPPLIED AND INSTALLED BY ELECTRICIAN. RUN FROM ABOVE CEILING DOWN TO SINGLE-GANG MUD RING OR BOX AT SILL PLATE.				4B
5	4C	2" CONTINUOUS CONDUIT - CONDUIT WITH PULL-STRING SUPPLIED & INSTALLED BY ELECTRICIAN. RUN BETWEEN LOCATIONS SHOWN ON PLAN. VERIFY SIZING WITH HSD EQUIPMENT SPECIALIST. SWEEPING 90 DEGREE BENDS. SEE DETAIL FOR MORE INFORMATION.				4C
6	4D	1" CONTINUOUS CONDUIT - CONDUIT WITH PULL-STRING SUPPLIED & INSTALLED BY ELECTRICIAN. RUN BETWEEN LOCATIONS SHOWN ON PLAN. VERIFY SIZING WITH HSD EQUIPMENT SPECIALIST. SWEEPING 90 DEGREE BENDS. SEE DETAIL FOR MORE INFORMATION.				4D
6	6	DENTAL TRACK LIGHT - SUPPLIED AND INSTALLED BY HENRY SCHEIN DENTAL. BLOCKING AND ELECTRICAL BY CONTRACTOR(S).	115V			6
5	9	WALL MOUNTED INTRAORAL X-RAY - SUPPLIED AND INSTALLED BY HENRY SCHEIN DENTAL. BLOCKING & ELECTRICAL BY CONTRACTOR(S). ELECTRICIAN TO SUPPLY AND INSTALL PIPE CHASE WITH PULL-STRING TO (9B) LOCATION(S). VERIFY SUPPLIER OF WIRING WITH HENRY SCHEIN DENTAL EQUIPMENT SPECIALIST.	115V	20A	•	9
9	9B	X-RAY REMOTE EXPOSURE STATION – SUPPLIED AND INSTALLED BY HENRY SCHEIN DENTAL. ELECTRICIAN TO SUPPLY AND INSTALL PIPE CHASE WITH PULL-STRING TO (9) OR (9C) LOCATION. VERIFY SUPPLIER OF WIRING WITH HENRY SCHEIN DENTAL EQUIPMENT SPECIALIST.			•	9B
3	16	MODEL TRIMMER - SUPPLIED AND INSTALLED BY HENRY SCHEIN DENTAL. DO NOT TIE INTO COLD WATER LINE FOR SINK. SEE DETAIL.	115V			16
1	20	CAD/CAM MILL – SUPPLIED AND INSTALLED BY HENRY SCHEIN DENTAL. 2'-6" CLEARANCE REQUIRED BETWEEN COUNTERTOP AND UPPER CABINETS. UTILITIES BY CONTRACTOR(S). SEE DETAIL.	115V			20
1	23A	EXHAUST FAN FOR DENTAL MECHANICAL CLOSET - SUPPLIED AND INSTALLED BY CONTRACTOR. A THERMOSTAT CONTROLLED FAN IS REQUIRED TO KEEP ROOM TEMPERATURE WITHIN THE EQUIPMENT MANUFACTURER'S RECOMMENDED OPERATING TEMPERATURE RANGE. FAN OUTPUT (CFM) TO BE DETERMINED BY ARCHITECT/ENGINEER. VENT TO OUTSIDE.	115V	•		
4	25	DENTAL AIR COMPRESSOR - SUPPLIED BY HENRY SCHEIN DENTAL, INSTALLED BY CONTRACTOR(S). FOR DENTAL AIR DRIVEN DEVICES. PLUMBER TO PROVIDE 1/2" I.D. COPPER TYPE K OR L SUPPLY LINES TO LOCATIONS THAT REQUIRE AIR. BUCK BOOST TRANSFORMER SUPPLIED AND INSTALLED BY ELECTRICIAN (IF REQ'D). FINAL CONNECTIONS BY CONTRACTOR(S).	230V 3-PHASE	30A	•	25
1	27	VACUUM PUMP (DRY) - SUPPLIED BY HENRY SCHEIN DENTAL, INSTALLED BY CONTRACTOR(S). VERIFY TRUNK & BRANCH LINE SIZES WITH MFR RECOMMENDATIONS. USE SCH 40 PVC WHERE PERMITTED BY CODE. PLUMBER TO EXHAUST PUMP TO OUTSIDE. BUCK BOOST TRANSFORMER SUPPLIED AND INSTALLED BY ELECTRICIAN (IF REQ'D). DRAIN BY PLUMBER. FINAL CONNECTIONS BY CONTRACTOR(S). PLUMBER TO PROVIDE WATER LINE WITH HOSE BIB NEAR UNIT. SEE DETAIL.	230V	(4) 40A	•	27
1	27A	VACUUM PUMP (DRY) - SUPPLIED BY HENRY SCHEIN DENTAL, INSTALLED BY CONTRACTOR. VERIFY TRUNK & BRANCH LINE SIZES WITH MFR RECOMMENDATIONS. USE SCH 40 PVC WHERE PERMITTED BY CODE. EXHAUST PUMP TO OUTSIDE. BUCK BOOST TRANSFORMER SUPPLIED AND INSTALLED BY CONTRACTOR (IF REQ'D). DRAIN BY CONTRACTOR. FINAL CONNECTIONS BY CONTRACTOR. PROVIDE WATER LINE WITH HOSE BIB NEAR UNIT. SEE DETAIL.	230V 3-PHASE	(3) 40A	•	27A
2	32	MECHANICAL ROOM CONTROL PANEL - SUPPLIED BY HENRY SCHEIN DENTAL, INSTALLED BY ELECTRICIAN 60" A.F.F. ELECTRICIAN TO SUPPLY AND INSTALL 24V CONTROL WIRING FROM PANEL TO EACH COMPRESSOR, VACUUM AND/OR SOLENOID PER MFR SPECS.			•	32

ELECTRICAL NOTES

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4. GFCI PROTECTION OR REDUNDANT GROUND IN DENTAL CHAIR RECEPTACLES, DENTAL UTILITY CABINETS AND ANY OTHER AREAS REQUIRED BY LOCAL CODE IS THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.

5. ADDITIONAL CONVENIENCE OUTLETS REQUIRED ON JOBSITE ARE THE RESPONSIBILITY OF ELECTRICAL CONTRACTORS. FOLLOW LOCAL CODE RESTRICTIONS.

6. ALL CONDUIT LOCATIONS SHOULD BE VERIFIED WITH OWNER AND HENRY SCHEIN REP PRIOR TO ROUGH-IN.

7. ALL COMPUTER NETWORKING AND WORKSTATIONS MUST BE SPECIFIED BY CUSTOMER'S COMPUTER SUPPLIER. IF HENRY SCHEIN WILL BE SUPPLYING THE COMPUTERS & NETWORKING COMPONENTS, SEE SHEET SE.2 FOR THE OFFICE TECHNOLOGY PLAN.

8. CONTRACTOR TO PROVIDE AND INSTALL ALL EXIT SIGNS, EMERGENCY LIGHTING AND FIRE SUPPRESSION & DETECTION SYSTEMS AS PER ARCHITECT'S DRAWINGS AND LOCAL CODE.

9. REFER TO ARCHITECT'S DRAWINGS FOR ELECTRICAL REQUIREMENTS IN ALL AREAS NOT INDICATED ON THIS PLAN.

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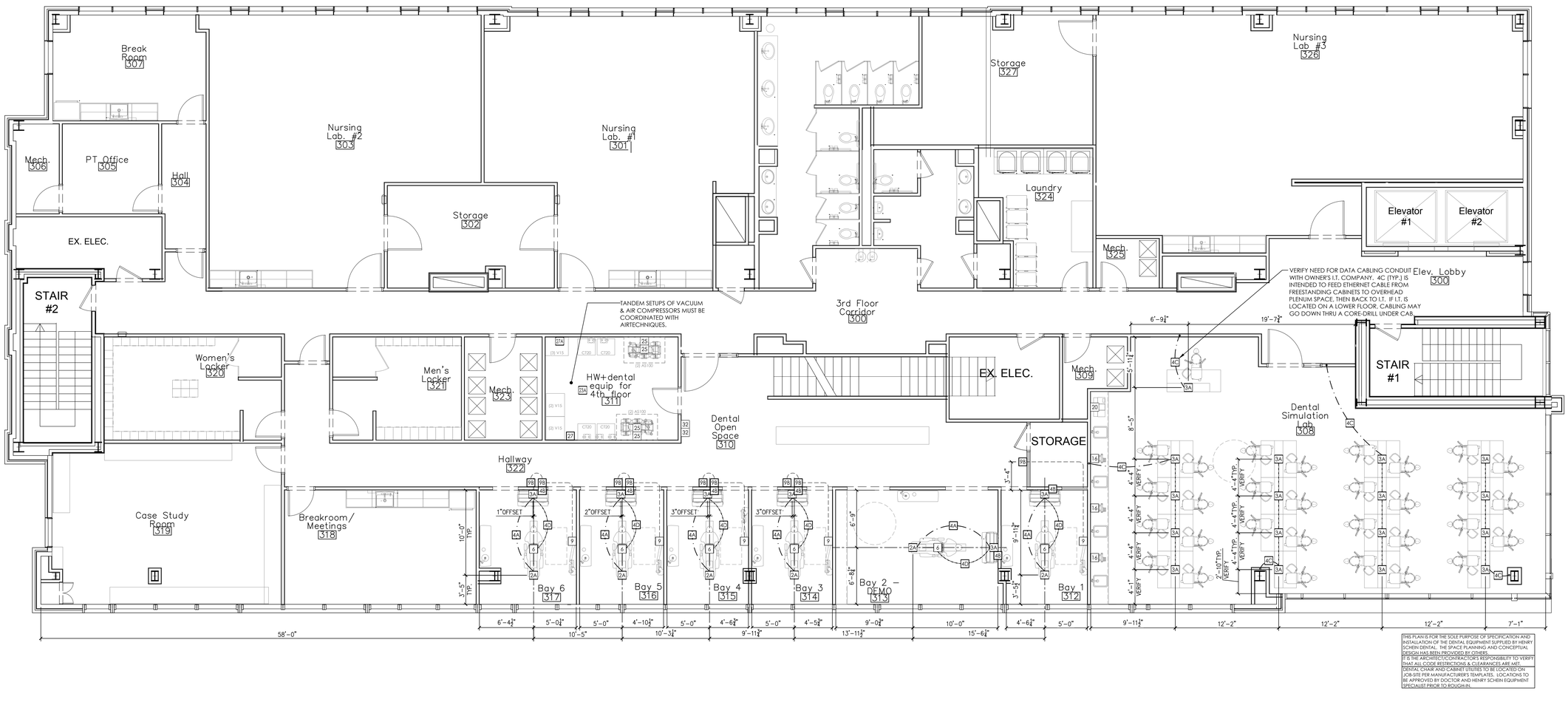
*SPECIFICATIONS MAY INCLUDE DATA, SEE ELECTRICAL SCHEDULE THIS SHEET

SEE SHEETS SED.1 - SED.5 FOR DENTAL EQUIPMENT DETAILS



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DENTAL CHAIR AND CABINET UTILITIES TO BE LOCATED ON JOB-SITE PER MANUFACTURER'S TEMPLATES. LOCATIONS TO BE APPROVED BY DOCTOR AND HENRY SCHEIN EQUIPMENT SPECIALIST PRIOR TO ROUGH-IN.

PROPOSED ELECTRICAL PLAN - 3RD FLR

3/16"=1'-0"

HENRY SCHEIN®
INTEGRATED DESIGN STUDIO
10920 W LINCOLN AVE, WEST ALLIS, WI 53227
henryscheinintegrateddesign.com

PROJECT: **CAPE FEAR COMMUNITY COLLEGE**
LOCATION: 411 N FRONT ST, WILMINGTON, NC 28401

HENRY SCHEIN REP: EMILY FARRELL
REGION: CAROLINA NORTH
PHONE #: 919-740-5753

IMPORTANT NOTE.
THIS DOCUMENT HAS BEEN PREPARED AS AN INSTRUMENT OF PROFESSIONAL SERVICE. **ACCEPTANCE OF THIS PLAN** THE IDEAS / DESIGN INCLUDED THEREIN ARE THE SOLE PROPERTY OF HENRY SCHEIN, INC. AND ARE PROTECTED UNDER COPYRIGHT. THESE PLANS MAY NOT BE USED OR REPRODUCED WITHOUT EXPRESSED WRITTEN CONSENT OF HENRY SCHEIN, INC. AND FULL PAYMENT OF ANY ASSOCIATED DESIGN FEES. **ALL DIMENSIONS ARE SUBJECT TO JOB-SITE VERIFICATION.**

PROJECT NUMBER: 24-0218
PROJECT START DATE: 01/24/2024
FINALS START DATE: 04/23/2024
DRAWN BY: ARCH
FINALS BY: MPJ
CHECKED BY: TAS

REVISIONS:

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INT.SQ.FT.= PER ARCH
SCALE: 3/16"=1'-0"
SHT. SIZE: 42 x 30
DENTAL ELEC. PLAN - 3RD FLR

HE1.3

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P:_NASA\Schools\Cape Fear Community College\CFCC-1B-F

ELECTRICAL SPECIFICATIONS

PLEASE NOTE: A LICENSED ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL REQUIRED UTILITIES. ALL REQUIREMENTS TO BE VERIFIED BY MANUFACTURER'S SPEC SHEETS PROVIDED BY HENRY SCHEIN DENTAL EQUIPMENT SPECIALIST. MANUFACTURER'S SPECS SUPERSEDE ANY AND ALL INFORMATION CONTAINED HEREIN.

QUANTITY	SPEC. NUMBER	DESCRIPTION	UTILITIES: POWER	DEDICATED CIRCUIT	LOW VOLTAGE CONTROL/ DATA DROP	DETAIL
38	2A	UTILITY CENTER – SELF-CONTAINED WATER. SEE DETAIL(S). SELF-CONTAINED WATER. ALL UTILITIES MUST CONFORM TO PREVAILING LOCAL CODES.	115V			2A
38	3A	UTILITY CENTER - SELF-CONTAINED WATER. SEE DETAIL(S). ALL UTILITIES MUST CONFORM TO PREVAILING LOCAL CODES.	115V			3A
80	4A	2" SUB-FLOOR CONDUIT - SUB-FLOOR CONDUIT WITH PULL-STRING SUPPLIED & INSTALLED BY ELECTRICIAN. SWEEPING 90 DEGREE BENDS ONLY. STUB-UP FLUSH WITH SUB-FLOOR AT EACH END. MARK LOCATION AT FINISH.				4A
10	4B	2" VERTICAL CONDUIT - VERTICAL CONDUIT WITH PULL-STRING SUPPLIED AND INSTALLED BY ELECTRICIAN. RUN FROM ABOVE CEILING DOWN TO SINGLE-GANG MUD RING OR BOX AT SILL PLATE.				4B
14	4C	2" CONTINUOUS CONDUIT - CONDUIT WITH PULL-STRING SUPPLIED & INSTALLED BY ELECTRICIAN. RUN BETWEEN LOCATIONS SHOWN ON PLAN. VERIFY SIZING WITH HSD EQUIPMENT SPECIALIST. SWEEPING 90 DEGREE BENDS. SEE DETAIL FOR MORE INFORMATION.				4C
8	4D	1" CONTINUOUS CONDUIT - CONDUIT WITH PULL-STRING SUPPLIED & INSTALLED BY ELECTRICIAN. RUN BETWEEN LOCATIONS SHOWN ON PLAN. VERIFY SIZING WITH HSD EQUIPMENT SPECIALIST. SWEEPING 90 DEGREE BENDS. SEE DETAIL FOR MORE INFORMATION.				4D
9	6	DENTAL TRACK LIGHT - SUPPLIED AND INSTALLED BY HENRY SCHEIN DENTAL. BLOCKING AND ELECTRICAL BY CONTRACTOR(S).	115V			6
29	6D	DENTAL LIGHT (CABINET MOUNTED) - SUPPLIED AND INSTALLED BY HENRY SCHEIN DENTAL. TIED IN AT POWER FOR CENTER CABINET (11C).	115V			
8	9	WALL MOUNTED INTRAORAL X-RAY - SUPPLIED AND INSTALLED BY HENRY SCHEIN DENTAL. BLOCKING & ELECTRICAL BY CONTRACTOR(S). ELECTRICIAN TO SUPPLY AND INSTALL PIPE CHASE WITH PULL-STRING TO (9B) LOCATION(S). VERIFY SUPPLIER OF WIRING WITH HENRY SCHEIN DENTAL EQUIPMENT SPECIALIST.	115V	20A	•	9
14	9B	X-RAY REMOTE EXPOSURE STATION – SUPPLIED AND INSTALLED BY HENRY SCHEIN DENTAL. ELECTRICIAN TO SUPPLY AND INSTALL PIPE CHASE WITH PULL-STRING TO (9) OR (9C) LOCATION. VERIFY SUPPLIER OF WIRING WITH HENRY SCHEIN DENTAL EQUIPMENT SPECIALIST.			•	9B
2	9C	PANORAMIC IMAGING UNIT (2D OR 3D) - SUPPLIED AND INSTALLED BY HENRY SCHEIN DENTAL. BLOCKING & ELECTRICAL BY CONTRACTOR(S). CONFIRM POWER REQUIREMENTS WITH HENRY SCHEIN DENTAL EQUIPMENT SPECIALIST.	115V & 230V	20A (X2)	•	9C
21	11C	CENTER ISLAND CABINET - SUPPLIED AND INSTALLED BY HENRY SCHEIN DENTAL. SINK AND FAUCET TO BE CONNECTED BY PLUMBER. FINAL CONNECTIONS OF CABINET UTILITIES BY CONTRACTOR(S).	115V	20A		11C
2	14	STERILIZER (SINGLE CASSETTE) - FOR EQUIPMENT LOCATION ONLY. CONTRACTOR TO PROVIDE REQ'D UTILITIES FOR STERILIZATION CENTER AT 14C LOCATION. STERILIZER SUPPLIED AND INSTALLED BY HENRY SCHEIN DENTAL.	115V	20A		14C
6	14A	STERILIZER (AUTOCLAVE) - FOR EQUIPMENT LOCATION ONLY. CONTRACTOR TO PROVIDE REQ'D UTILITIES FOR STERILIZATION CENTER AT 14C LOCATION. STERILIZER SUPPLIED AND INSTALLED BY HENRY SCHEIN DENTAL.	115V	20A		14C
1	14C	MODULAR STERILIZATION CENTER - STERI-CENTER SUPPLIED AND INSTALLED BY HENRY SCHEIN DENTAL. CONTRACTOR TO PROVIDE UTILITIES PER MANUFACTURER'S SPECIFICATIONS. EXACT LOCATIONS TO BE CONFIRMED ON-SITE BY HENRY SCHEIN DENTAL EQUIPMENT SPECIALIST. FINAL CONNECTIONS BY CONTRACTOR(S).	SEE MFR. SPECS	•		14C
1	15	ULTRASONIC CLEANER - FOR EQUIPMENT LOCATION ONLY. CONTRACTOR TO PROVIDE REQ'D UTILITIES FOR STERILIZATION CENTER AT 14C LOCATION. CLEANER SUPPLIED AND INSTALLED BY HENRY SCHEIN DENTAL. CONNECTS TO SINK DRAIN.	115V			14C
2	15A	WASHER DISINFECTOR - FOR EQUIPMENT LOCATION ONLY. CONTRACTOR TO PROVIDE REQ'D UTILITIES FOR STERILIZATION CENTER AT 14C LOCATION . WASHER SUPPLIED AND INSTALLED BY HENRY SCHEIN DENTAL.	230V	15A		15A
2	15B	HANDPIECE MAINTENANCE SYSTEM - FOR EQUIPMENT LOCATION ONLY. CONTRACTOR TO PROVIDE REQ'D UTILITIES FOR STERILIZATION CENTER AT 14C LOCATION. SYSTEM SUPPLIED AND INSTALLED BY HENRY SCHEIN DENTAL.	115V			14C
2	40	COMPUTER CIRCUIT - DUPLEX OUTLET & DATA DROP PROVIDED BY ELECTRICIAN. 1-4 OUTLETS PER DEDICATED CIRCUIT. HEIGHT SPECIFIED BY HENRY SCHEIN EQUIPMENT REP OR AS NOTED.	115V	20A	•	

ELECTRICAL NOTES

1. THIS SPECIFICATION SHEET IS INTENDED AS A GUIDE FOR TRADESMEN. THE FLOOR PLANS ENCLOSED HEREIN ARE SUGGESTIONS FOR THE PLACEMENT OF DENTAL EQUIPMENT. THEY ARE NOT INTENDED FOR CONSTRUCTION.

2. EXACT EQUIPMENT LOCATIONS MUST BE JOB SITE VERIFIED BY THE HENRY SCHEIN DENTAL EQUIPMENT SPECIALIST.

3. FOLLOW MANUFACTURER'S TEMPLATES FOR EXACT REQUIREMENTS FOR ANY EQUIPMENT SUPPLIED BY HENRY SCHEIN DENTAL. CONSULT WITH HENRY SCHEIN DENTAL REP FOR ADDITIONAL INFORMATION.

4. GFCI PROTECTION OR REDUNDANT GROUND IN DENTAL CHAIR RECEPTACLES, DENTAL UTILITY CABINETS AND ANY OTHER AREAS REQUIRED BY LOCAL CODE IS THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.

5. ADDITIONAL CONVENIENCE OUTLETS REQUIRED ON JOBSITE ARE THE RESPONSIBILITY OF ELECTRICAL CONTRACTORS. FOLLOW LOCAL CODE RESTRICTIONS.

6. ALL CONDUIT LOCATIONS SHOULD BE VERIFIED WITH OWNER AND HENRY SCHEIN REP PRIOR TO ROUGH-IN.

7. ALL COMPUTER NETWORKING AND WORKSTATIONS MUST BE SPECIFIED BY CUSTOMER'S COMPUTER SUPPLIER. IF HENRY SCHEIN WILL BE SUPPLYING THE COMPUTERS & NETWORKING COMPONENTS, SEE SHEET SE.2 FOR THE OFFICE TECHNOLOGY PLAN.

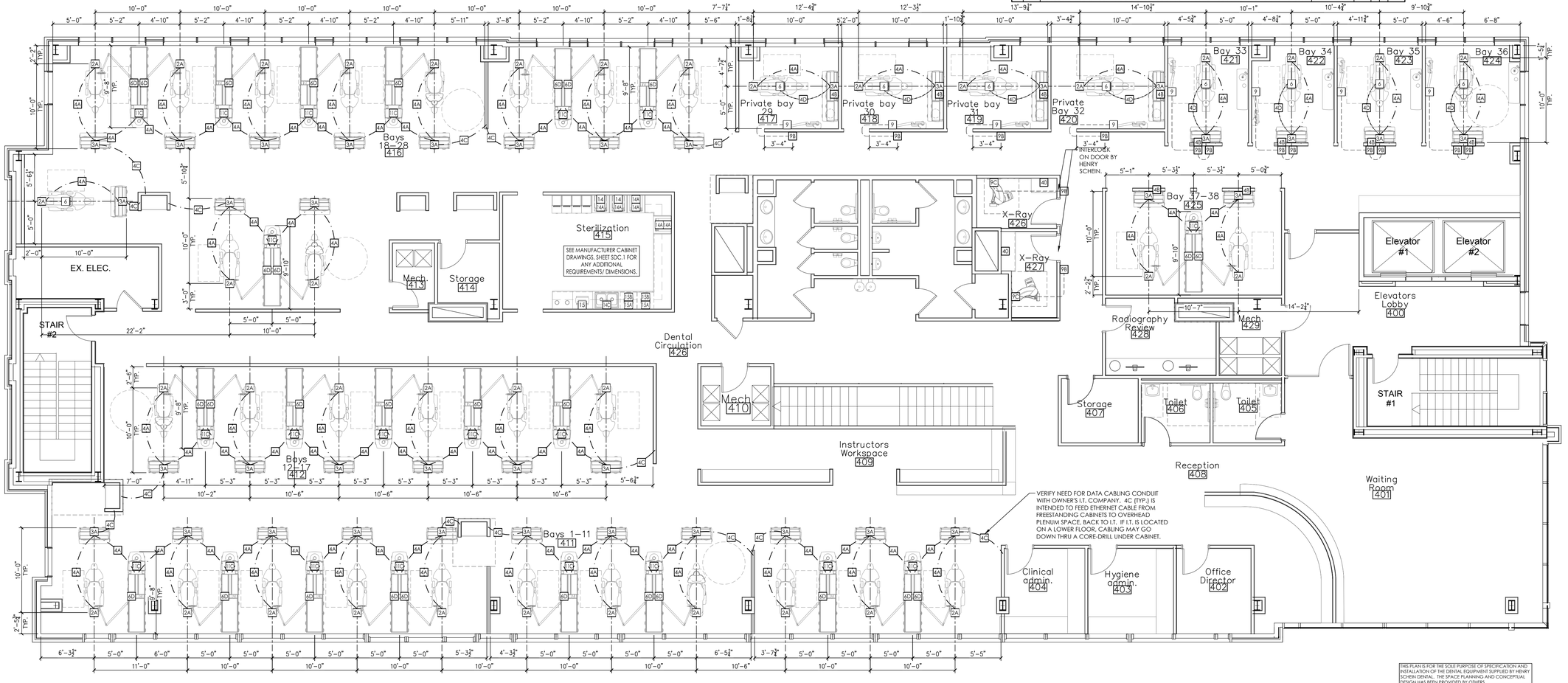
8. CONTRACTOR TO PROVIDE AND INSTALL ALL EXIT SIGNS, EMERGENCY LIGHTING AND FIRE SUPPRESSION & DETECTION SYSTEMS AS PER ARCHITECT'S DRAWINGS AND LOCAL CODE.

9. REFER TO ARCHITECT'S DRAWINGS FOR ELECTRICAL REQUIREMENTS IN ALL AREAS NOT INDICATED ON THIS PLAN.

ALL DIMENSIONS NOTED ON PLAN ARE TO THE CENTERLINE OF RECEPTACLE OR UTILITY CENTER (UNLESS SHOWN OTHERWISE)

*SPECIFICATIONS MAY INCLUDE DATA, SEE ELECTRICAL SCHEDULE THIS SHEET

SEE SHEETS SED.1 - SED.5 FOR DENTAL EQUIPMENT DETAILS



PROPOSED ELECTRICAL PLAN - 4TH FLR

3/16"=1'-0"

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henryscheinintegrateddesign.com

PROJECT: **CAPE FEAR COMMUNITY COLLEGE**

LOCATION: 411 N FRONT ST, WILMINGTON, NC 28401

HENRY SCHEIN REP: EMILY FARRELL

REGION: CAROLINA NORTH

PHONE #: 919-740-5753

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PROJECT NUMBER: 24-0218

PROJECT START DATE: 01/24/2024

FINALS START DATE: 04/23/2024

DRAWN BY: ARCH
FINALS BY: MPJ
CHECKED BY: TAS

REVISIONS:

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INT.SQ.FT.= PER ARCH

SCALE: 3/16"=1'-0"

SHT. SIZE: 42 x 30

DENTAL ELEC. PLAN - 4TH FLR

HE1.4

P: \MSA\Schools\Cape Fear Community College\CFCC-18-F

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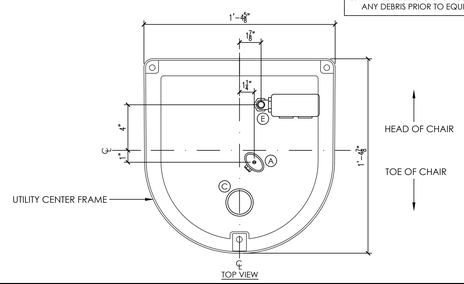
Ⓐ COMPRESSED AIR: 1/2" SUPPLY LINE FROM COMPRESSOR BY PLUMBER. STUB-UP FROM FLOOR 1"-2". TERMINATE WITH 3/8" ANGLE VALVE. PRESSURE 100 PSI MAX.

Ⓔ ELECTRICAL: TWO GANG BOX & 115V QUAD OUTLET BY ELECTRICIAN. CHAIR MAX DRAW: 10A

Ⓒ CONDUIT: PVC CONDUIT WITH PULL-STRING BY ELECTRICIAN. 6" MIN. RADIUS FOR ALL BENDS. STUB-UP FLUSH WITH SUB-FLOOR. MARK LOCATION AT FINISH. **QUANTITY OF CONDUIT TERMINATIONS WILL VARY. SEE SHEET SE.1 FOR SIZES & LOCATIONS.**

NOTES:
1. DETAIL PROVIDED FOR UTILITY REQUIREMENTS. REFER TO MANUFACTURER'S INSTALLATION GUIDE FOR ADDITIONAL INFORMATION. HENRY SCHEIN DENTAL EQUIPMENT SPECIALIST WILL PROVIDE INSTALLATION TEMPLATE UPON REQUEST.
2. INSTALLATION MUST CONFORM TO ALL LOCAL ELECTRICAL AND PLUMBING CODES.
3. ALL UTILITIES HEREIN TO BE SUPPLIED & INSTALLED BY LICENSED CONTRACTORS. FINAL CONNECTIONS TO EQUIPMENT BY HENRY SCHEIN DENTAL.
4. ALL UTILITIES MUST BE NO HIGHER THAN 4½" A.F.F. AT FINISH.
5. ALL PLUMBED SYSTEMS MUST BE FLUSHED CLEAN OF ANY DEBRIS PRIOR TO EQUIPMENT INSTALLATION.



2A A-DEC 511B CHAIR UTILITIES
NOT TO SCALE

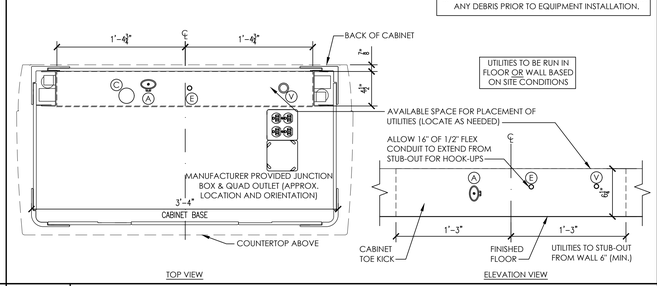
Ⓐ COMPRESSED AIR: 1/2" SUPPLY LINE FROM COMPRESSOR BY PLUMBER. STUB-UP FROM FLOOR 1"-2". TERMINATE WITH 3/8" ANGLE VALVE. PRESSURE 100 PSI MAX.

Ⓥ CENTRAL VACUUM: 1" PVC RISER BY PLUMBER. TERMINATE 1-2" A.F.F.

Ⓔ ELECTRICAL: 16" ELECTRICAL WHIP TERMINATED PER CODE FOR CONNECTION TO MANUFACTURER PROVIDED JUNCTION BOX.

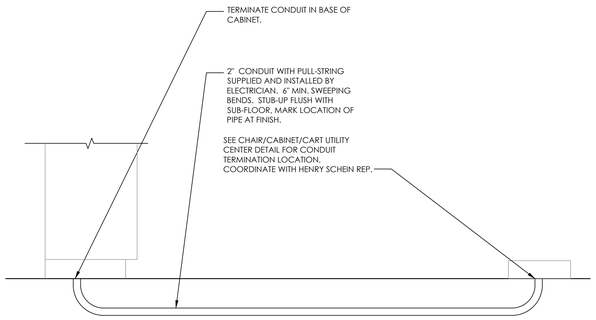
Ⓒ CONDUIT: PVC CONDUIT WITH PULL-STRING BY ELECTRICIAN. 6" MIN. RADIUS FOR ALL BENDS. STUB-UP FLUSH WITH SUB-FLOOR. MARK LOCATION AT FINISH. **QUANTITY OF CONDUIT TERMINATIONS WILL VARY. SEE SHEET SE.1 FOR SIZES & LOCATIONS.**

NOTES:
1. DETAIL PROVIDED FOR UTILITY REQUIREMENTS. REFER TO MANUFACTURER'S INSTALLATION GUIDE FOR ADDITIONAL INFORMATION. HENRY SCHEIN DENTAL REP WILL PROVIDE INSTALLATION TEMPLATE UPON REQUEST.
2. INSTALLATION MUST CONFORM TO ALL LOCAL ELECTRICAL AND PLUMBING CODES.
3. ALL UTILITIES HEREIN TO BE SUPPLIED & INSTALLED BY LICENSED CONTRACTORS. FINAL CONNECTIONS TO EQUIPMENT BY HENRY SCHEIN DENTAL.
4. ALL VALVES, BOXES AND PIPES FROM FLOOR MUST BE NO HIGHER THAN 5" A.F.F.
5. ALL PLUMBED SYSTEMS MUST BE FLUSHED CLEAN OF ANY DEBRIS PRIOR TO EQUIPMENT INSTALLATION.



3A ADEC INSPIRE 591 CABINET UTILITIES
NOT TO SCALE

FOLLOW LOCAL CODES FOR ALL WORK.



4A SUB-FLOOR CONDUIT
NOT TO SCALE

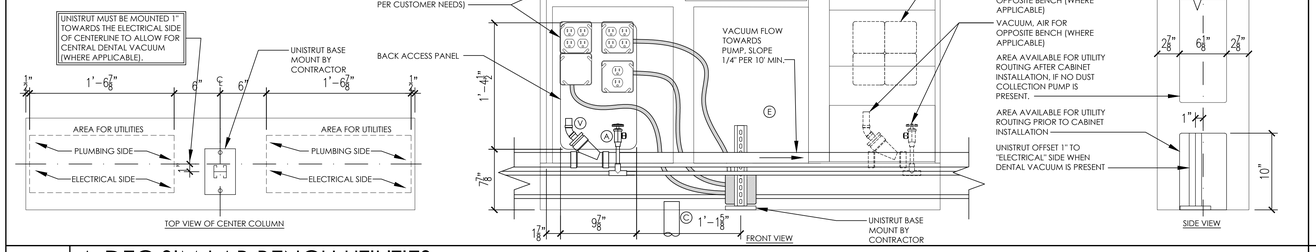
Ⓐ COMPRESSED AIR: 1/2" SUPPLY LINE FROM COMPRESSOR BY PLUMBER. STUB-UP INTO ACCESS PANEL AREA. ONE LINE MAY TERMINATE AT END OF BENCH RUN TO CONNECT TO AN AIR MANIFOLD OR TERMINATE AT EACH STATION WITH 1/2" x 3/8" SHUT-OFF VALVE. PRESSURE 90 -125 PSI MAX.

Ⓥ CENTRAL VACUUM: 5/8" RISER IN CABINET BY PLUMBER (SCH. 40 PVC OR TYPE M COPPER). BRANCH AND TRUNK LINE SIZES BY MANUFACTURER.

Ⓔ ELECTRICAL: ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL ELECTRICAL BOX & ALL POWER WHIPS TO PRE-WIRED OUTLETS WITHIN CABINET (SUPPLIED BY A-DEC) FOR UP TO (4) CIRCUITS SERVING TWO BENCHES. LOADS WILL BE DETERMINED BY OPTIONS ORDERED BY CUSTOMER.

Ⓒ CONDUIT: PVC CONDUIT WITH PULL-STRING BY ELECTRICIAN. 6" MIN. RADIUS FOR ALL BENDS. STUB-UP FLUSH WITH SUB-FLOOR. MARK LOCATION AT FINISH. **QUANTITY OF CONDUIT TERMINATIONS WILL VARY. SEE SHEET SE.1 FOR SIZES & LOCATIONS.**

NOTES:
1. DETAIL PROVIDED FOR UTILITY REQUIREMENTS. REFER TO MANUFACTURER'S INSTALLATION GUIDE FOR ADDITIONAL INFORMATION. HENRY SCHEIN DENTAL EQUIPMENT SPECIALIST WILL PROVIDE INSTALLATION TEMPLATE UPON REQUEST.
2. INSTALLATION MUST CONFORM TO ALL LOCAL ELECTRICAL AND PLUMBING CODES.
3. ALL UTILITIES HEREIN TO BE SUPPLIED & INSTALLED BY LICENSED CONTRACTORS. FINAL CONNECTIONS TO EQUIPMENT BY HENRY SCHEIN DENTAL.
4. ALL PLUMBED SYSTEMS MUST BE FLUSHED CLEAN OF ANY DEBRIS PRIOR TO EQUIPMENT INSTALLATION.



3A A-DEC SIM LAB BENCH UTILITIES
NOT TO SCALE

Ⓐ COMPRESSED AIR: 1/2" SUPPLY LINE FROM COMPRESSOR BY PLUMBER. STUB-UP INTO ACCESS PANEL AREA. ONE LINE MAY TERMINATE AT END OF BENCH RUN TO CONNECT TO AN AIR MANIFOLD OR TERMINATE AT EACH STATION WITH 1/2" x 3/8" SHUT-OFF VALVE. PRESSURE 90 -125 PSI MAX.

Ⓥ CENTRAL VACUUM: 5/8" RISER IN CABINET BY PLUMBER (SCH. 40 PVC OR TYPE M COPPER). BRANCH AND TRUNK LINE SIZES BY MANUFACTURER.

Ⓔ ELECTRICAL: ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL ELECTRICAL BOX & ALL POWER WHIPS TO PRE-WIRED OUTLETS WITHIN CABINET (SUPPLIED BY A-DEC) FOR UP TO (4) CIRCUITS SERVING TWO BENCHES. LOADS WILL BE DETERMINED BY OPTIONS ORDERED BY CUSTOMER.

Ⓒ CONDUIT: PVC CONDUIT WITH PULL-STRING BY ELECTRICIAN. 6" MIN. RADIUS FOR ALL BENDS. STUB-UP FLUSH WITH SUB-FLOOR. MARK LOCATION AT FINISH. **QUANTITY OF CONDUIT TERMINATIONS WILL VARY. SEE SHEET SE.1 FOR SIZES & LOCATIONS.**

NOTES:
1. DETAIL PROVIDED FOR UTILITY REQUIREMENTS. REFER TO MANUFACTURER'S INSTALLATION GUIDE FOR ADDITIONAL INFORMATION. HENRY SCHEIN DENTAL EQUIPMENT SPECIALIST WILL PROVIDE INSTALLATION TEMPLATE UPON REQUEST.
2. INSTALLATION MUST CONFORM TO ALL LOCAL ELECTRICAL AND PLUMBING CODES.
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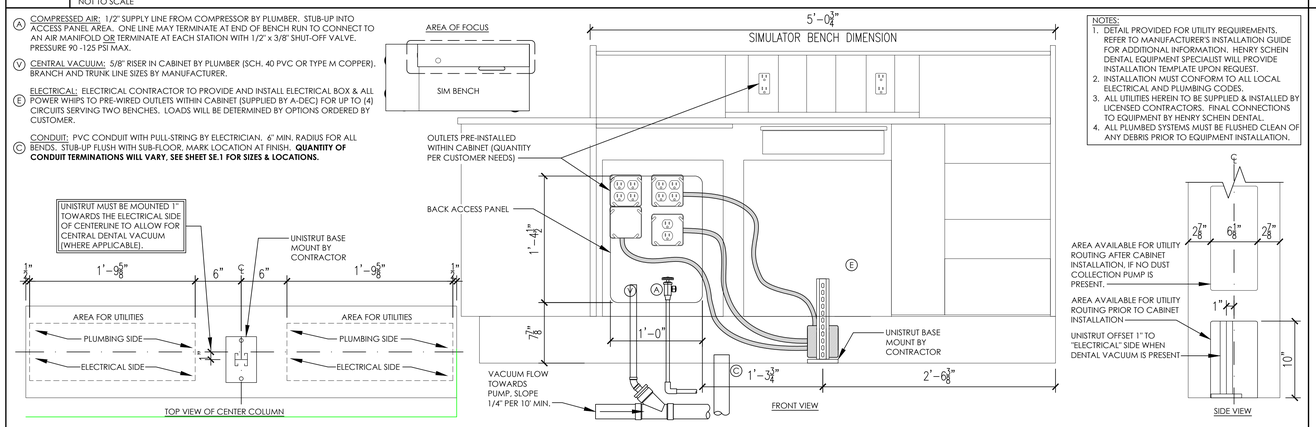
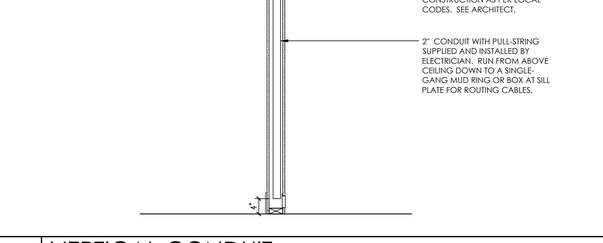
4. ALL PLUMBED SYSTEMS MUST BE FLUSHED CLEAN OF ANY DEBRIS PRIOR TO EQUIPMENT INSTALLATION.



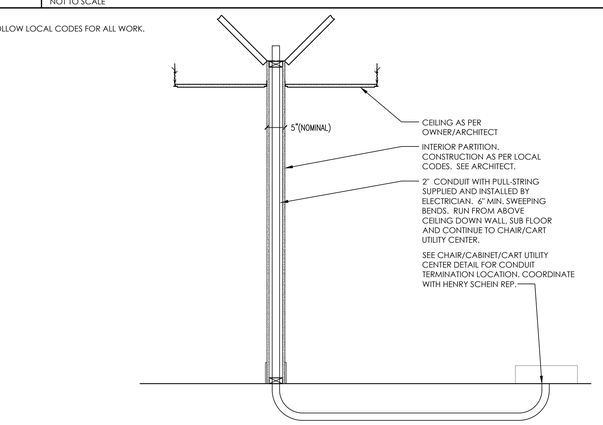
3A A-DEC SIM LAB INSTRUCTOR BENCH UTILITIES
NOT TO SCALE

FOLLOW LOCAL CODES FOR ALL WORK.



4B VERTICAL CONDUIT
NOT TO SCALE

FOLLOW LOCAL CODES FOR ALL WORK.



4C 2" CONTINUOUS CONDUIT
NOT TO SCALE

HENRY SCHEIN®
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henryscheinintegrateddesign.com

PROJECT: **CAPE FEAR COMMUNITY COLLEGE**
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HENRY SCHEIN REP:
EMILY FARRELL

REGION:
CAROLINA NORTH

PHONE #:
919-740-5753

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24-0218

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FINALS BY: MPJ
CHECKED BY: TAS

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INT.SQ.FT.= PER ARCH

SCALE: SEE DETAIL
SHT. SIZE: 42 x 30

DENTAL EQUIP. DETAILS

HED.1

P:_NASA\Schools\Cape Fear Community College\CFCC-18-0

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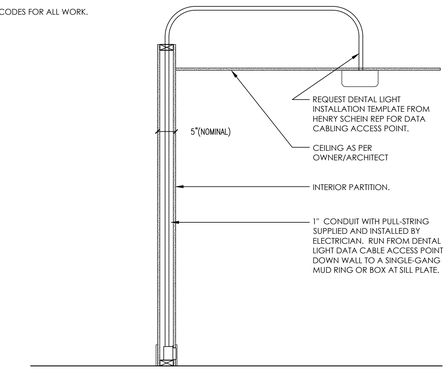
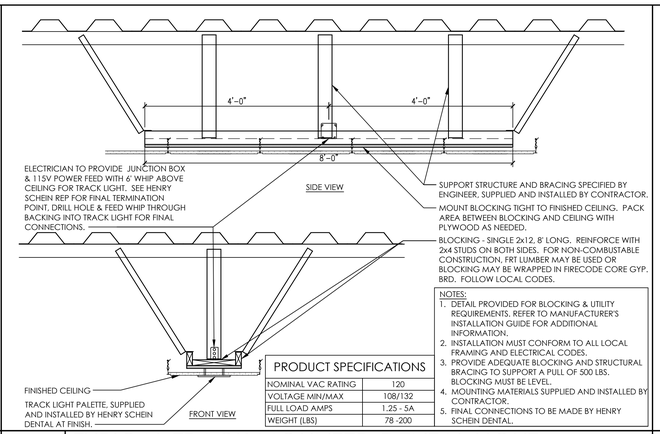
FOLLOW LOCAL CODES FOR ALL WORK.



4D 1" CONTINUOUS CONDUIT (LIGHT CONTROL WIRE)

NOT TO SCALE



NOTES:
1. DETAIL PROVIDED FOR BLOCKING & UTILITY REQUIREMENTS. REFER TO MANUFACTURER'S INSTALLATION GUIDE FOR ADDITIONAL INFORMATION.
2. INSTALLATION MUST CONFORM TO ALL LOCAL FRAMING AND ELECTRICAL CODES.
3. PROVIDE ADEQUATE BLOCKING AND STRUCTURAL BRACING TO SUPPORT A PULL OF 500 LBS. BLOCKING MUST BE LEVEL.
4. MOUNTING MATERIALS SUPPLIED AND INSTALLED BY CONTRACTOR.
5. FINAL CONNECTIONS TO BE MADE BY HENRY SCHEIN DENTAL.

PRODUCT SPECIFICATIONS	
NOMINAL VAC RATING	120
VOLTAGE MIN/MAX	108/132
FULL LOAD AMPS	1.25 - 5A
WEIGHT (LBS)	78 -200

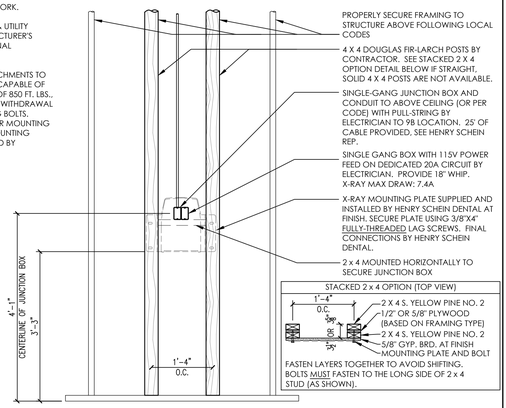
6 TYPICAL TRACK MOUNTED DENTAL LIGHT

NOT TO SCALE

FOLLOW LOCAL CODES FOR ALL WORK.

DETAIL PROVIDED FOR BLOCKING & UTILITY REQUIREMENTS. REFER TO MANUFACTURER'S INSTALLATION GUIDE FOR ADDITIONAL INFORMATION.

THE WALL FABRICATION AND ATTACHMENTS TO THE BUILDING STRUCTURE MUST BE CAPABLE OF WITHSTANDING A LOAD MOMENT OF 850 FT. LBS., 170 LB. SHEAR LOAD AND A 445 LB. WITHDRAWAL FORCE AT EACH OF THE MOUNTING BOLTS. FRAMING SHOULD ALLOW ALL FOUR MOUNTING BOLTS TO ENTER SOLID WOOD. MOUNTING MATERIALS SUPPLIED AND INSTALLED BY CONTRACTOR.

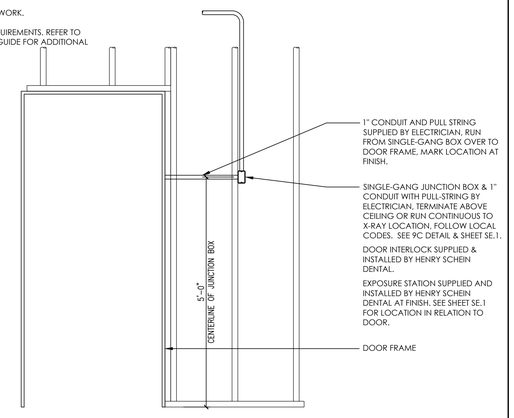


9 PLANMECA ProX X-RAY

NOT TO SCALE

FOLLOW LOCAL CODES FOR ALL WORK.

DETAIL PROVIDED FOR UTILITY REQUIREMENTS. REFER TO MANUFACTURER'S INSTALLATION GUIDE FOR ADDITIONAL INFORMATION.

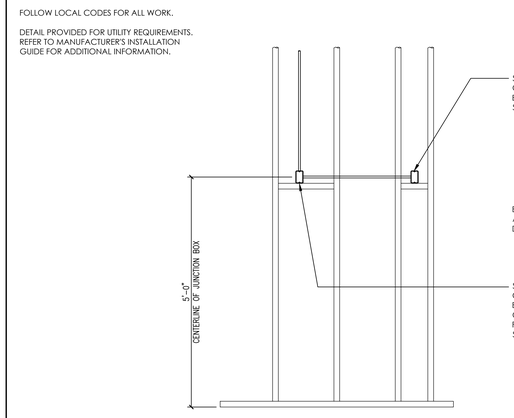


9B INTERLOCK SWITCH & X-RAY EXPOSURE STATION

NOT TO SCALE

FOLLOW LOCAL CODES FOR ALL WORK.

DETAIL PROVIDED FOR UTILITY REQUIREMENTS. REFER TO MANUFACTURER'S INSTALLATION GUIDE FOR ADDITIONAL INFORMATION.

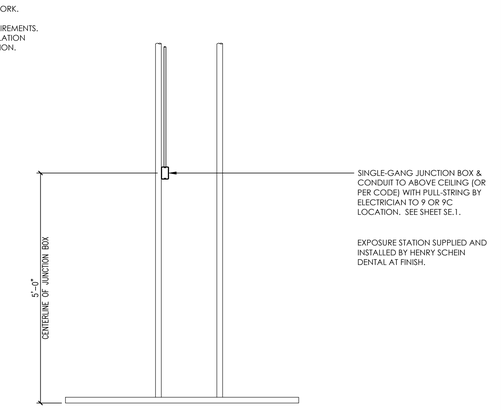


9B DUAL X-RAY EXPOSURE STATIONS

NOT TO SCALE

FOLLOW LOCAL CODES FOR ALL WORK.

DETAIL PROVIDED FOR UTILITY REQUIREMENTS. REFER TO MANUFACTURER'S INSTALLATION GUIDE FOR ADDITIONAL INFORMATION.



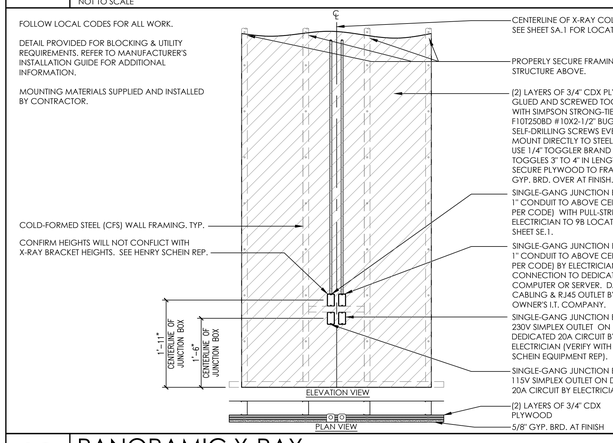
9B X-RAY EXPOSURE STATION

NOT TO SCALE

FOLLOW LOCAL CODES FOR ALL WORK.

DETAIL PROVIDED FOR BLOCKING & UTILITY REQUIREMENTS. REFER TO MANUFACTURER'S INSTALLATION GUIDE FOR ADDITIONAL INFORMATION.

MOUNTING MATERIALS SUPPLIED AND INSTALLED BY CONTRACTOR.



9C PANORAMIC X-RAY

NOT TO SCALE

Ⓐ COMPRESSED AIR: 1/2" SUPPLY LINE FROM COMPRESSOR BY PLUMBER. STUB-UP FROM FLOOR 1'-2". TERMINATE WITH 3/8" ANGLE VALVE. PRESSURE 100 PSI MAX.

Ⓦ WATER: 1/2" COLD WATER SUPPLY LINE BY PLUMBER. STUB-UP FROM FLOOR 1'-2". TERMINATE WITH 3/8" ANGLE VALVE. PRESSURE 40 PSI MAX.

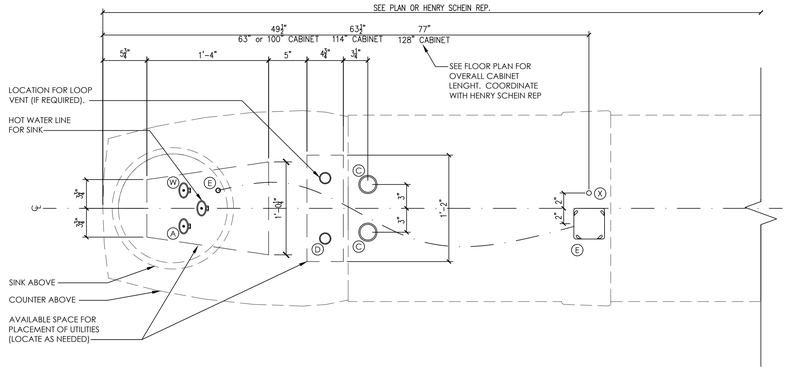
Ⓓ GRAVITY DRAIN: COMMON DRAIN LINE WITH TRAP BY PLUMBER TO LOCATION SHOWN. 1½" RISER, TERMINATE 3" A.F.F. MIN.

Ⓔ ELECTRICAL: 115V POWER FEED ON DEDICATED 20A CIRCUIT BY ELECTRICIAN. PROVIDE 36" WHIP FOR FINAL CONNECTIONS TO MANUFACTURER PROVIDED JUNCTION BOX WITHIN CABINET.

Ⓒ CONDUIT: PVC CONDUIT WITH PULL-STRING BY ELECTRICIAN. 6" MIN. RADIUS FOR ALL BENDS. STUB-UP FLUSH WITH SUB-FLOOR. MARK LOCATION AT FINISH. **QUANTITY OF CONDUIT TERMINATIONS WILL VARY, SEE SHEET SE.1 FOR SIZES & LOCATIONS.**

Ⓧ X-RAY ELECTRICAL: 115V POWER FEED ON DEDICATED 20A CIRCUIT BY ELECTRICIAN. PROVIDE 8'-0" WHIP FOR FINAL CONNECTIONS. X-RAY SUPPLIED AND INSTALLED BY HENRY SCHEIN.

NOTES:
1. DETAIL PROVIDED FOR UTILITY REQUIREMENTS. REFER TO MANUFACTURER'S INSTALLATION GUIDE FOR ADDITIONAL INFORMATION. HENRY SCHEIN DENTAL EQUIPMENT SPECIALIST WILL PROVIDE INSTALLATION TEMPLATE UPON REQUEST.
2. INSTALLATION MUST CONFORM TO ALL LOCAL ELECTRICAL AND PLUMBING CODES.
3. ALL UTILITIES HEREIN TO BE SUPPLIED & INSTALLED BY LICENSED CONTRACTORS. FINAL CONNECTIONS OF CABINET UTILITIES BY CONTRACTORS.
4. ALL UTILITIES MUST BE NO HIGHER THAN 5" A.F.F. AT FINISH.
5. ALL PLUMBED SYSTEMS MUST BE FLUSHED CLEAN OF ANY DEBRIS PRIOR TO EQUIPMENT INSTALLATION.



11C A-DEC INSPIRE 592 CENTRAL CONSOLE UTILITIES

NOT TO SCALE

HENRY SCHEIN®
INTEGRATED DESIGN STUDIO
10920 W LINCOLN AVE, WEST ALLIS, WI 53227
henryscheinintegrateddesign.com

PROJECT: **CAPE FEAR COMMUNITY COLLEGE**

LOCATION: 411 N FRONT ST WILMINGTON, NC 28401

HENRY SCHEIN REP: EMILY FARRELL

REGION: CAROLINA NORTH

PHONE #: 919-740-5753

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PROJECT NUMBER: 24-0218

PROJECT START DATE: 01/24/2024

FINALS START DATE: 04/23/2024

DRAWN BY: ARCH
FINALS BY: MPJ
CHECKED BY: TAS

REVISIONS:

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INT.SQ.FT.= PER ARCH

SCALE: SEE DETAIL

SHT. SIZE: 42 x 30

DENTAL EQUIP. DETAILS

HED.2

P:\ MASAS\Revit\Cape Fear Community College\CFCC-18-D

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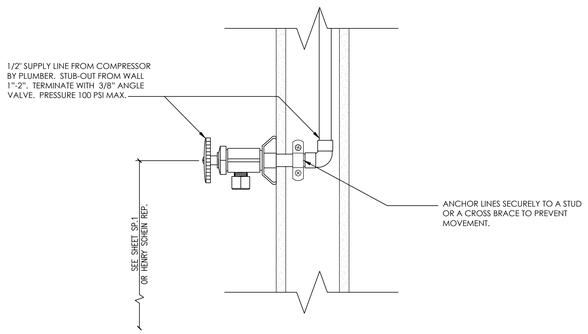
FOLLOW LOCAL CODES FOR ALL WORK.

DETAIL PROVIDED FOR UTILITY REQUIREMENTS.



13 DENTAL AIR LINE

NOT TO SCALE

(A) COMPRESSED AIR: 1/2" SUPPLY LINE FROM COMPRESSOR BY PLUMBER. STUB-OUT FROM WALL 1"-2". TERMINATE WITH 3/8" ANGLE VALVE. PRESSURE 100 PSI MAX.

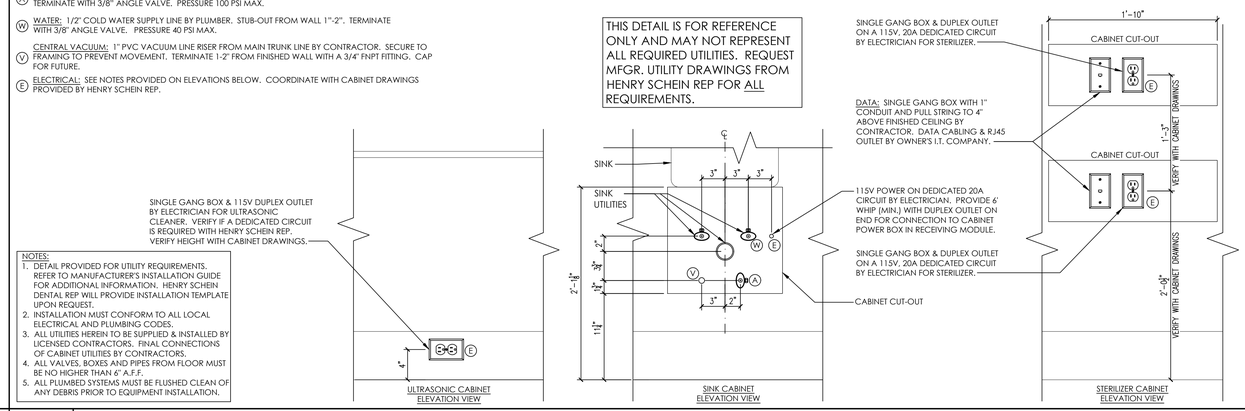
(W) WATER: 1/2" COLD WATER SUPPLY LINE BY PLUMBER. STUB-OUT FROM WALL 1"-2". TERMINATE WITH 3/8" ANGLE VALVE. PRESSURE 40 PSI MAX.

(V) CENTRAL VACUUM: 1" PVC VACUUM LINE RISER FROM MAIN TRUNK LINE BY CONTRACTOR. SECURE TO FRAMING TO PREVENT MOVEMENT. TERMINATE 1-2" FROM FINISHED WALL WITH A 3/4" FNPT FITTING. CAP FOR FUTURE.

(E) ELECTRICAL: SEE NOTES PROVIDED ON ELEVATIONS BELOW. COORDINATE WITH CABINET DRAWINGS PROVIDED BY HENRY SCHEIN REP.

THIS DETAIL IS FOR REFERENCE ONLY AND MAY NOT REPRESENT ALL REQUIRED UTILITIES. REQUEST MFGR. UTILITY DRAWINGS FROM HENRY SCHEIN REP FOR ALL REQUIREMENTS.

NOTES:
1. DETAIL PROVIDED FOR UTILITY REQUIREMENTS. REFER TO MANUFACTURER'S INSTALLATION GUIDE FOR ADDITIONAL INFORMATION. HENRY SCHEIN DENTAL REP WILL PROVIDE INSTALLATION TEMPLATE UPON REQUEST.
2. INSTALLATION MUST CONFORM TO ALL LOCAL ELECTRICAL AND PLUMBING CODES.
3. ALL UTILITIES HEREIN TO BE SUPPLIED & INSTALLED BY LICENSED CONTRACTORS. FINAL CONNECTIONS OF CABINET UTILITIES BY CONTRACTORS.
4. ALL VALVES, BOXES AND PIPES FROM FLOOR MUST BE NO HIGHER THAN 6" A.F.F.
5. ALL PLUMBED SYSTEMS MUST BE FLUSHED CLEAN OF ANY DEBRIS PRIOR TO EQUIPMENT INSTALLATION.



14C A-DEC 594 INSPIRE STERILIZATION CENTER UTILITIES

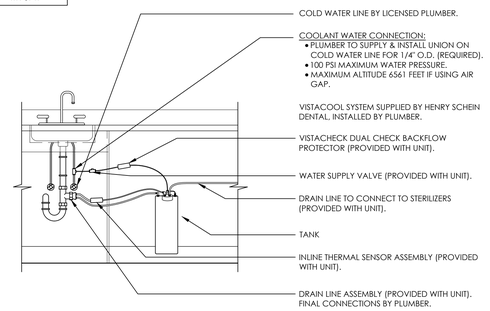
NOT TO SCALE

PRODUCT SPECIFICATIONS	
MODEL	V7601
TANK SIZE (W/O FITTINGS) W X L X H	3.5" X 3.5" X 10.75"
TANK VOLUME	.37 GALLONS
WEIGHT	5 LBS

NOTE:
ALL DRAIN AND FEED LINES PROVIDED WITH UNIT

FOLLOW LOCAL CODES FOR ALL WORK.

DETAIL PROVIDED FOR UTILITY REQUIREMENTS. REFER TO MANUFACTURER'S INSTALLATION GUIDE FOR ADDITIONAL INFORMATION.

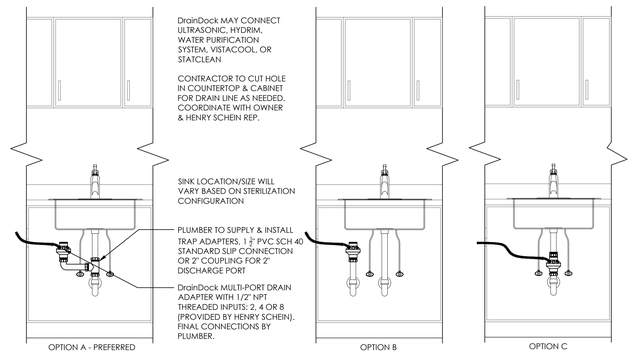


14D VISTACOOL V7601DIRECT-TO-DRAIN SYSTEM

NOT TO SCALE

FOLLOW LOCAL CODES FOR ALL WORK.

DETAIL PROVIDED FOR UTILITY REQUIREMENTS. REFER TO MANUFACTURER'S INSTALLATION GUIDE FOR ADDITIONAL INFORMATION.



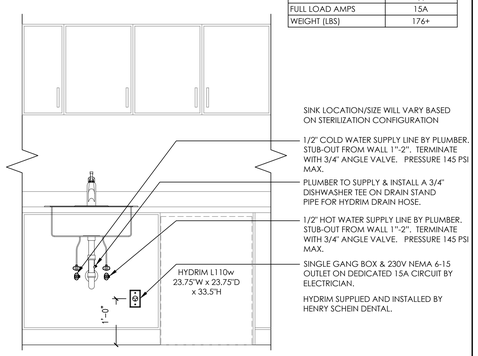
14E VISTA DRAINDOCK MULTI-PORT ADAPTER

NOT TO SCALE

FOLLOW LOCAL CODES FOR ALL WORK.

DETAIL PROVIDED FOR UTILITY REQUIREMENTS. REFER TO MANUFACTURER'S INSTALLATION GUIDE FOR ADDITIONAL INFORMATION.

PRODUCT SPECIFICATIONS	
NOMINAL VAC RATING	208-240
HERTZ	60
FULL LOAD AMPS	15A
WEIGHT (LBS)	176+



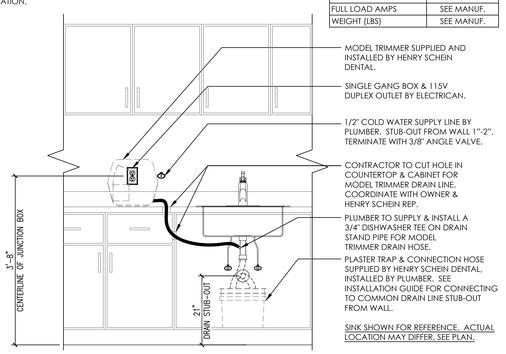
15A SCICAN HYDRIM L110w WASHER

NOT TO SCALE

FOLLOW LOCAL CODES FOR ALL WORK.

DETAIL PROVIDED FOR UTILITY REQUIREMENTS. REFER TO MANUFACTURER'S INSTALLATION GUIDE FOR ADDITIONAL INFORMATION.

PRODUCT SPECIFICATIONS	
NOMINAL VAC RATING	115
HERTZ	50/60
FULL LOAD AMPS	SEE MANUF.
WEIGHT (LBS)	SEE MANUF.



16 MODEL TRIMMER & DISPOSABLE PLASTER TRAP

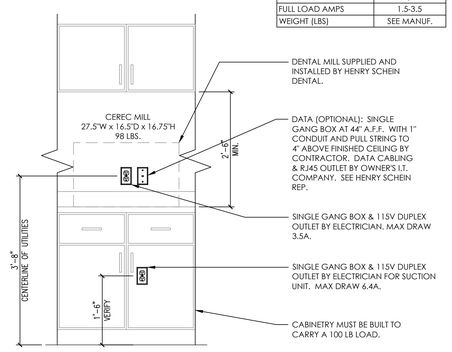
NOT TO SCALE

FOLLOW LOCAL CODES FOR ALL WORK.

DETAIL PROVIDED FOR UTILITY REQUIREMENTS. REFER TO MANUFACTURER'S INSTALLATION GUIDE FOR ADDITIONAL INFORMATION.

UNIT HAS THE ABILITY TO CONNECT TO THE OFFICE NETWORK. CONSULT WITH OWNER AND HENRY SCHEIN REP. DATA CABLING AND JACK PROVIDED BY OWNER'S I.T. COMPANY.

PRODUCT SPECIFICATIONS	
NOMINAL VAC RATING	100 - 230
HERTZ	50/60
FULL LOAD AMPS	1.5-3.5
WEIGHT (LBS)	SEE MANUF.



20 CEREC MILLING UNIT

NOT TO SCALE

HENRY SCHEIN®
INTEGRATED DESIGN STUDIO
10920 W LINCOLN AVE, WEST ALLIS, WI 53227
henryscheinintegrateddesign.com

PROJECT: CAPE FEAR COMMUNITY COLLEGE

LOCATION: 411 N FRONT ST, WILMINGTON, NC 28401

HENRY SCHEIN REP: EMILY FARRELL

REGION: CAROLINA NORTH

PHONE #: 919-740-5753

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PROJECT NUMBER: 24-0218

PROJECT START DATE: 01/24/2024

FINALS START DATE: 04/23/2024

DRAWN BY: ARCH
FINALS BY: MPJ
CHECKED BY: TAS

REVISIONS:

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INT.SQ.FT.= PER ARCH

SCALE: SEE DETAIL

SHT. SIZE: 42 x 30

DENTAL EQUIP. DETAILS

HED.3

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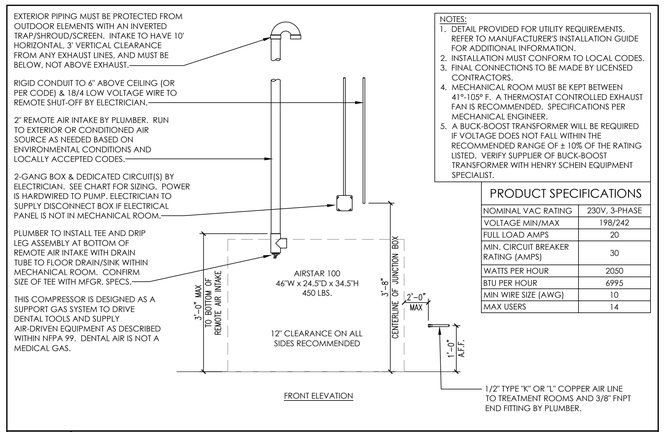
P:_1ACAD\Schools\Cape Fear Community College\CFCC-19-D



FRONT ELEVATION

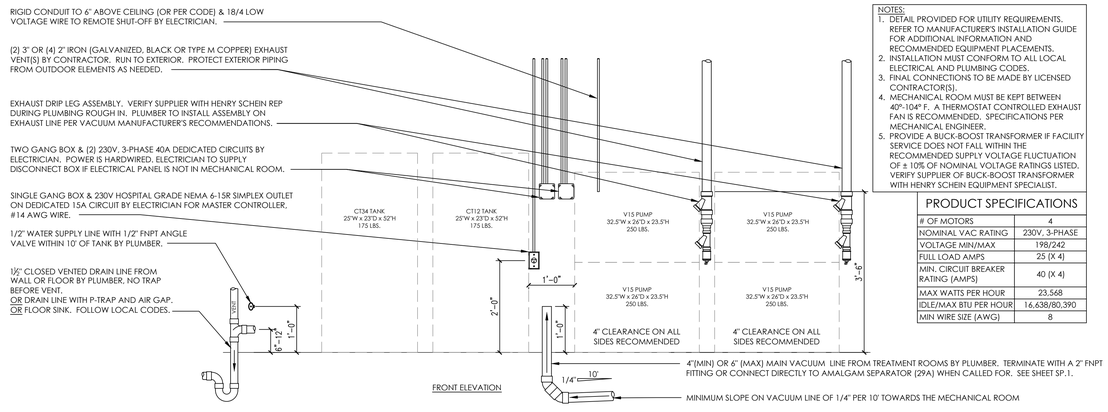
NOTES:
1. DETAIL PROVIDED FOR UTILITY REQUIREMENTS. REFER TO MANUFACTURER'S INSTALLATION GUIDE FOR ADDITIONAL INFORMATION.
2. INSTALLATION MUST CONFORM TO LOCAL CODES.
3. FINAL CONNECTIONS TO BE MADE BY LICENSED CONTRACTORS.
4. MECHANICAL ROOM MUST BE KEPT BETWEEN 41°-105° F. A THERMOSTAT CONTROLLED EXHAUST FAN IS RECOMMENDED. SPECIFICATIONS PER MECHANICAL ENGINEER.
5. A BUCK-BOOST TRANSFORMER WILL BE REQUIRED IF VOLTAGE DOES NOT FALL WITHIN THE RECOMMENDED RANGE OF ± 10% OF THE RATING LISTED. VERIFY SUPPLIER OF BUCK-BOOST TRANSFORMER WITH HENRY SCHEIN EQUIPMENT SPECIALIST.

PRODUCT SPECIFICATIONS

NOMINAL VAC RATING	230V, 3-PHASE
VOLTAGE MIN/MAX	198/242
FULL LOAD AMPS	20
MIN. CIRCUIT BREAKER RATING (AMPS)	30
WATTS PER HOUR	2050
BTU PER HOUR	6995
MIN WIRE SIZE (AWG)	10
MAX USERS	14

25 AIRTECHNIQUES AIRSTAR 100 COMPRESSOR

NOT TO SCALE



FRONT ELEVATION

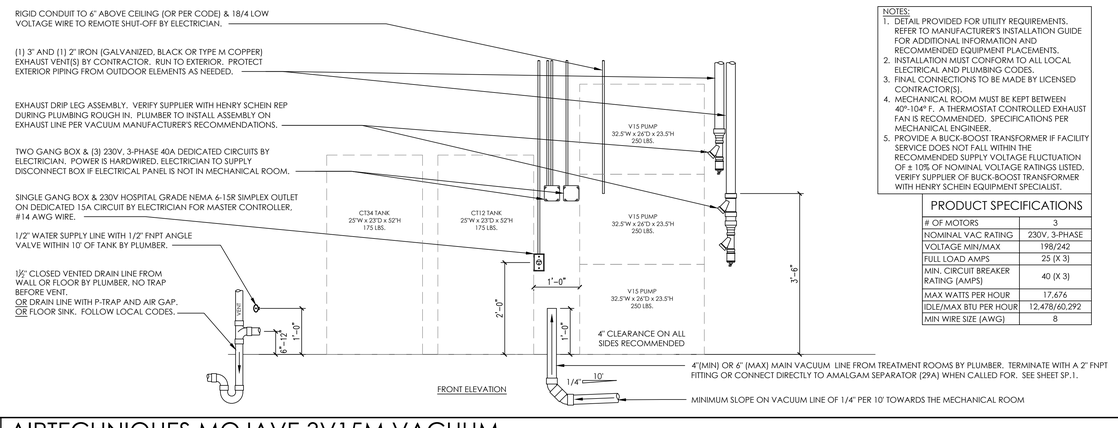
NOTES:
1. DETAIL PROVIDED FOR UTILITY REQUIREMENTS. REFER TO MANUFACTURER'S INSTALLATION GUIDE FOR ADDITIONAL INFORMATION AND RECOMMENDED EQUIPMENT PLACEMENTS.
2. INSTALLATION MUST CONFORM TO ALL LOCAL ELECTRICAL AND PLUMBING CODES.
3. FINAL CONNECTIONS TO BE MADE BY LICENSED CONTRACTOR(S).
4. MECHANICAL ROOM MUST BE KEPT BETWEEN 40°-104° F. A THERMOSTAT CONTROLLED EXHAUST FAN IS RECOMMENDED. SPECIFICATIONS PER MECHANICAL ENGINEER.
5. PROVIDE A BUCK-BOOST TRANSFORMER IF FACILITY SERVICE DOES NOT FALL WITHIN THE RECOMMENDED SUPPLY VOLTAGE FLUCTUATION OF ± 10% OF NOMINAL VOLTAGE RATINGS LISTED. VERIFY SUPPLIER OF BUCK-BOOST TRANSFORMER WITH HENRY SCHEIN EQUIPMENT SPECIALIST.

PRODUCT SPECIFICATIONS

# OF MOTORS	4
NOMINAL VAC RATING	230V, 3-PHASE
VOLTAGE MIN/MAX	198/242
FULL LOAD AMPS	25 (X 4)
MIN. CIRCUIT BREAKER RATING (AMPS)	40 (X 4)
MAX WATTS PER HOUR	23,568
IDLE/MAX BTU PER HOUR	16,638/80,390
MIN WIRE SIZE (AWG)	8

27 AIRTECHNIQUES MOJAVE 4V15M VACUUM

NOT TO SCALE



FRONT ELEVATION

NOTES:
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2. INSTALLATION MUST CONFORM TO ALL LOCAL ELECTRICAL AND PLUMBING CODES.
3. FINAL CONNECTIONS TO BE MADE BY LICENSED CONTRACTOR(S).
4. MECHANICAL ROOM MUST BE KEPT BETWEEN 40°-104° F. A THERMOSTAT CONTROLLED EXHAUST FAN IS RECOMMENDED. SPECIFICATIONS PER MECHANICAL ENGINEER.
5. PROVIDE A BUCK-BOOST TRANSFORMER IF FACILITY SERVICE DOES NOT FALL WITHIN THE RECOMMENDED SUPPLY VOLTAGE FLUCTUATION OF ± 10% OF NOMINAL VOLTAGE RATINGS LISTED. VERIFY SUPPLIER OF BUCK-BOOST TRANSFORMER WITH HENRY SCHEIN EQUIPMENT SPECIALIST.

PRODUCT SPECIFICATIONS

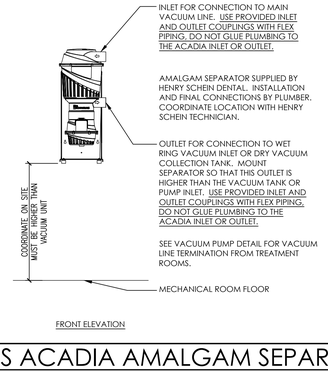
# OF MOTORS	3
NOMINAL VAC RATING	230V, 3-PHASE
VOLTAGE MIN/MAX	198/242
FULL LOAD AMPS	25 (X 3)
MIN. CIRCUIT BREAKER RATING (AMPS)	40 (X 3)
MAX WATTS PER HOUR	17,676
IDLE/MAX BTU PER HOUR	12,478/60,292
MIN WIRE SIZE (AWG)	8

27A AIRTECHNIQUES MOJAVE 3V15M VACUUM

NOT TO SCALE

FOLLOW LOCAL CODES FOR ALL WORK.

DETAIL PROVIDED FOR UTILITY REQUIREMENTS. REFER TO MANUFACTURER'S INSTALLATION GUIDE FOR ADDITIONAL INFORMATION.



FRONT ELEVATION

29A AIRTECHNIQUES ACADIA AMALGAM SEPARATOR

NOT TO SCALE

HENRY SCHEIN®
INTEGRATED DESIGN STUDIO
10920 W LINCOLN AVE, WEST ALLIS, WI 53227
henryscheinintegrateddesign.com

PROJECT:
CAPE FEAR COMMUNITY COLLEGE

LOCATION:
411 N FRONT ST
WILMINGTON, NC 28401

HENRY SCHEIN REP:
EMILY FARRELL

REGION:
CAROLINA NORTH

PHONE #:
919-740-5753

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PROJECT NUMBER:
24-0218

PROJECT START DATE:
01/24/2024

FINALS START DATE:
04/23/2024

DRAWN BY: ARCH
FINALS BY: MPJ
CHECKED BY: TAS

REVISIONS:

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INT.SQ.FT.= PER ARCH

SCALE: SEE DETAIL
SHT. SIZE: 42 x 30

DENTAL EQUIP. DETAILS

HED.4

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P:_NASA\Schools\Cape Fear Community College\CFCC-18-D

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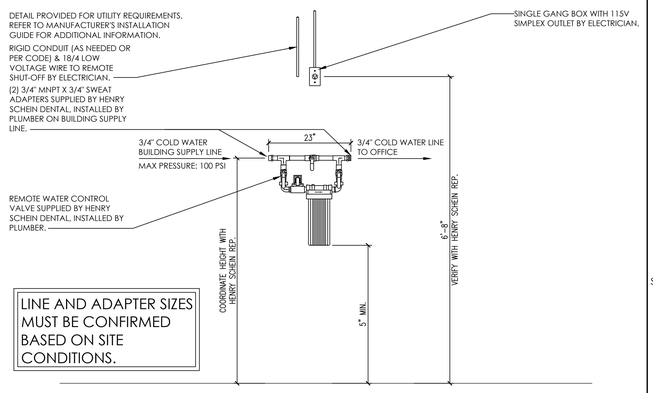


LINE AND ADAPTER SIZES MUST BE CONFIRMED BASED ON SITE CONDITIONS.

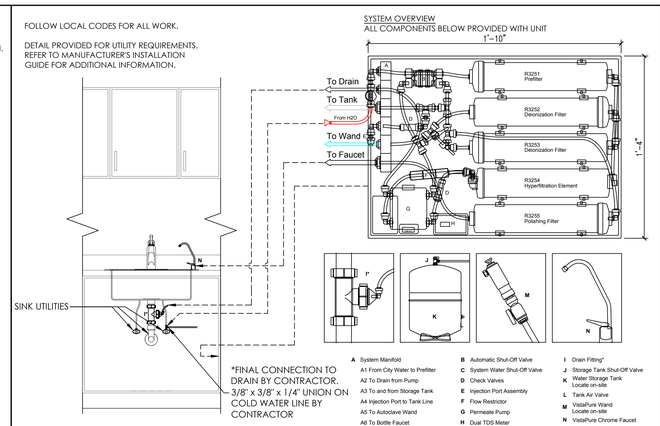
30 AIR TECHNIQUES REMOTE WATER CONTROL VALVE

NOT TO SCALE

FOLLOW LOCAL CODES FOR ALL WORK.

DETAIL PROVIDED FOR UTILITY REQUIREMENTS. REFER TO MANUFACTURER'S INSTALLATION GUIDE FOR ADDITIONAL INFORMATION.

SYSTEM OVERVIEW
ALL COMPONENTS BELOW PROVIDED WITH UNIT



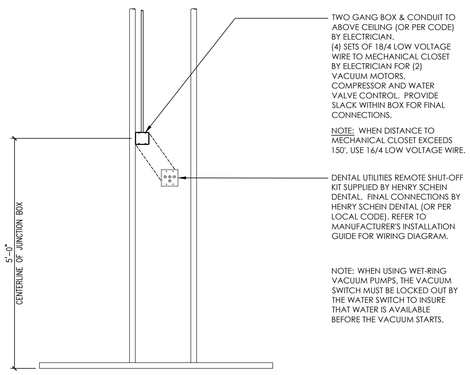
A	System Manifold	B	Automatic Shut-Off Valve	I	Drain Fitting*
A1	From City Water to Prefilter	C	System Water Shut-Off Valve	J	Storage Tank Shut-Off Valve
A2	To Drain from Pump	D	Check Valves	K	Water Storage Tank Locate on-site
A3	To and from Storage Tank	E	Injection Port Assembly	L	Tank Air Valve
A4	Injection Port to Tank Line	F	Flow Restrictor	M	VistaPure Wand Locate on-site
A5	To Autoclave Wand	G	Permeate Pump	N	VistaPure Chrome Faucet
A6	To Bottle Faucet	H	Dual TDS Meter		

31A SCICAN VISTAPURE WATER TREATMENT SYSTEM

NOT TO SCALE

FOLLOW LOCAL CODES FOR ALL WORK.

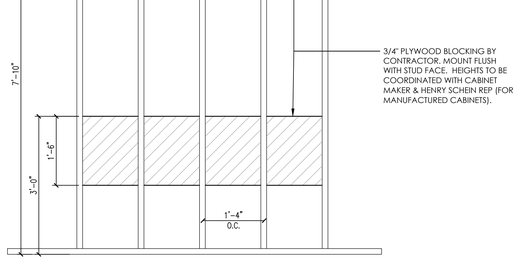
DETAIL PROVIDED FOR UTILITY REQUIREMENTS. REFER TO MANUFACTURER'S INSTALLATION GUIDE FOR ADDITIONAL INFORMATION.



32 MECHANICAL REMOTE SHUT-OFF (4 SWITCH)

NOT TO SCALE

FOLLOW LOCAL CODES FOR ALL WORK.



35 UPPER & LOWER CABINETRY BLOCKING

NOT TO SCALE

HENRY SCHEIN®
INTEGRATED DESIGN STUDIO
10920 W LINCOLN AVE, WEST ALLIS, WI 53227
henryscheinintegrateddesign.com

PROJECT: CAPE FEAR COMMUNITY COLLEGE

LOCATION: 411 N FRONT ST WILMINGTON, NC 28401

HENRY SCHEIN REP: EMILY FARRELL

REGION: CAROLINA NORTH

PHONE #: 919-740-5753

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PROJECT NUMBER: 24-0218

PROJECT START DATE: 01/24/2024

FINALS START DATE: 04/23/2024

DRAWN BY: ARCH
FINALS BY: MPJ
CHECKED BY: TAS

REVISIONS:

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INT.SQ.FT.= PER ARCH

SCALE: SEE DETAIL

SHT. SIZE: 42 x 30

DENTAL EQUIP. DETAILS

HED.5

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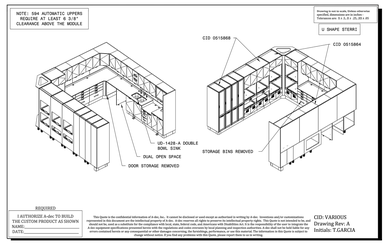
P:_MASASchools\Cape Fear Community College\CFCC-18-D

Customer Name: Cape Fear Community College
Reference: Cape Fear All ETO
Quote #: WQBFC0011180-3



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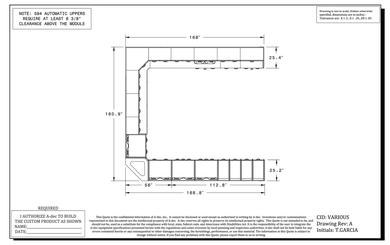

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Customer Name: Cape Fear Community College
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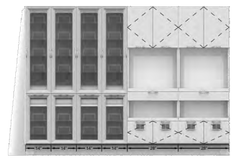
Model Dictionary

Line	Item	Label
11	594	Left wall of libart



Hinge Orientation

Product images may not reflect requested customizations.
Mark-up images to communicate desired customizations

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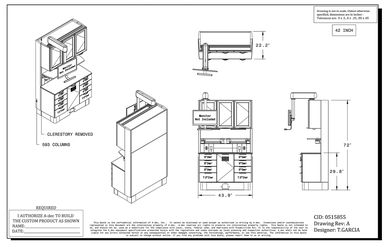
42" Rear

Customer Name: Cape Fear Community College
Reference: Cape Fear All ETO
Quote #: WQBFC0011180-3



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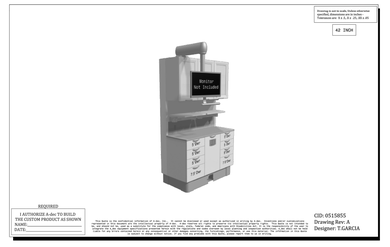

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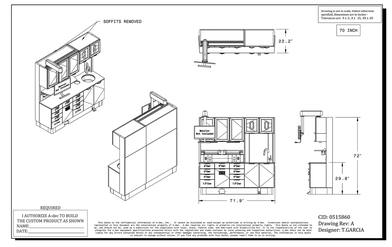

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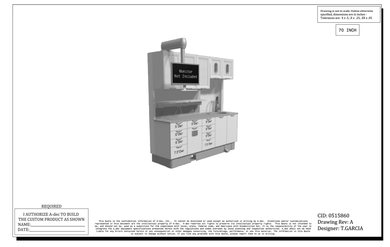

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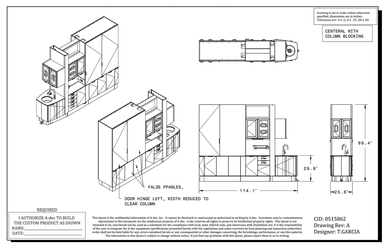

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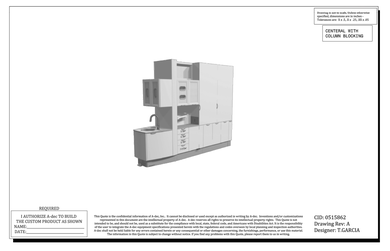

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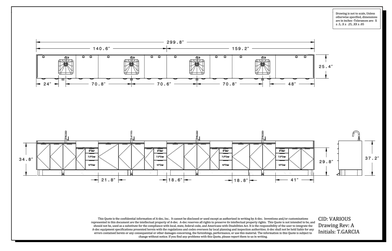

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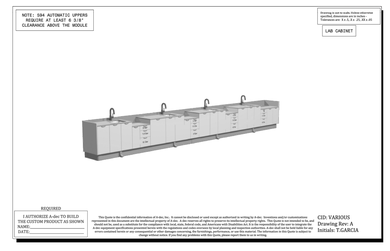

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10920 W LINCOLN AVE, WEST ALLIS, WI 53227
henryscheinintegrateddesign.com

PROJECT:
CAPE FEAR COMMUNITY COLLEGE

LOCATION:
411 N FRONT ST
WILMINGTON, NC 28401

HENRY SCHEIN REP:
EMILY FARRELL

REGION:
CAROLINA NORTH

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PROJECT NUMBER:
24-0218

PROJECT START DATE:
01/24/2024

FINALS START DATE:
04/23/2024

DRAWN BY: ARCH
FINALS BY: MPJ
CHECKED BY: TAS

REVISIONS:

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INT.SQ.FT.= PER ARCH

SCALE: N/A
SHT. SIZE: 42 x 30

DENTAL CABINET DRAWINGS

HDC.1

P:_1ASAS\Schools\Cape Fear Community College\CFCC-19-D

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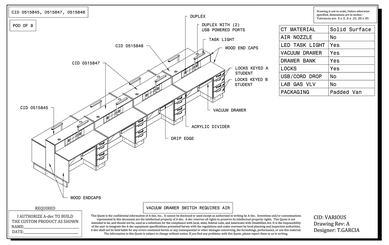
SIM #1

Customer Name: Cape Fear Community College
Reference: Cape Fear All ETO
Quote #: WQBFC0011180-3



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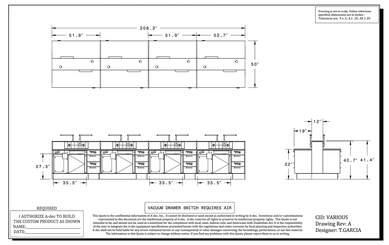

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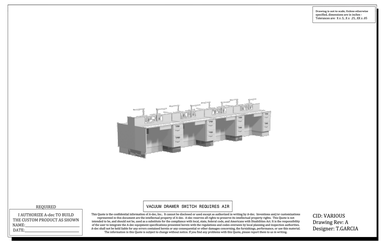

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Sim #2

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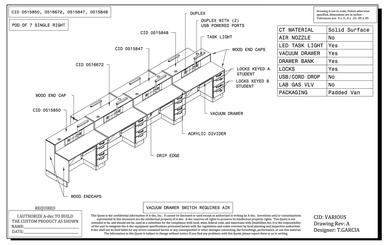

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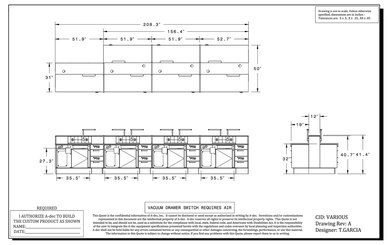

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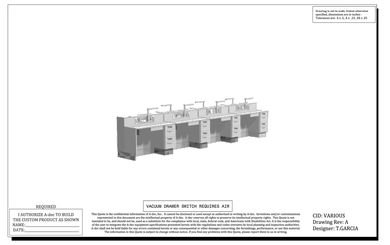

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Sim #3

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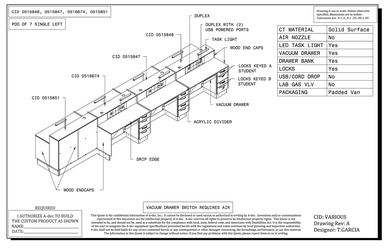

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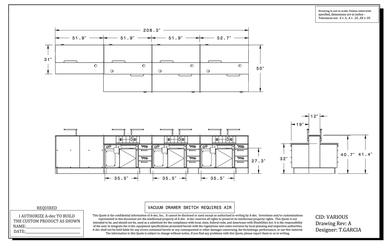

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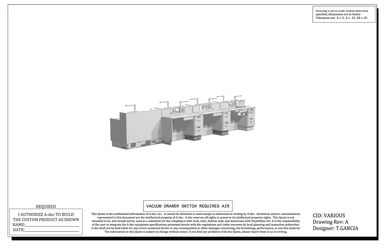

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instructor sim

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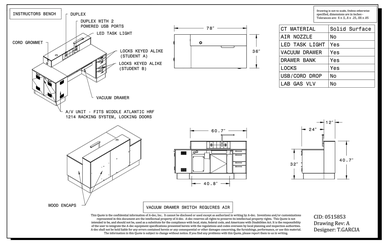

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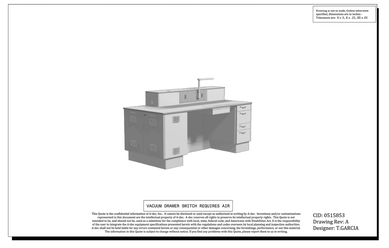

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HENRY SCHEIN REP:
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01/24/2024

FINALS START DATE:
04/23/2024

DRAWN BY: ARCH
FINALS BY: MPJ
CHECKED BY: TAS

REVISIONS:

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INT.SQ.FT.= PER ARCH

SCALE: N/A
SHT. SIZE: 42 x 30

DENTAL CABINET DRAWINGS

HDC.2

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